

## **APPENDIX 14 2025 STACK TESTING REPORT**

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## AGNICO EAGLE MINES

RANKIN INLET, NUNAVUT

### INCINERATOR SOURCE TESTING PROGRAM

RWDI #2510430

March 4, 2026

#### SUBMITTED TO

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## EXECUTIVE SUMMARY

RWDI AIR Inc. (RWDI) was retained by Agnico Eagle Mines Limited (AEM) to conduct emission sampling on the exhaust of two waste incinerator at their Meliadine Gold Mine, located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut. Testing was conducted from September 27<sup>th</sup> to September 30<sup>th</sup>, 2025, under normal operating process conditions. Results from the sampling program are presented in the 'Tables' section of the report, with more detailed sampling results located in the Appendices.

The following represents a summary of the stack testing results.

		Eco Waste Incinerator	Ketek Incinerator	Emission Limit
<b>Unit</b>		<b>Gas Characteristics</b>		
Dry Reference Gas Flow Rate	Rm <sup>3</sup> /h	6388	1782	-
Actual Gas Flow Rate	m <sup>3</sup> /h	17094	5818	-
Velocity	m/s	8.27	9.32	-
Stack Temperature	°C	473	625	-
Moisture	%	5.08%	8.03%	-
Oxygen	%	15.4	10.3	-
Carbon Dioxide	%	4.36	8.11	-
Carbon Monoxide	ppm	1.05	0.841	-
Sampling Isokinetic Rate	%	97	100	-
<b>Concentration</b>				
Particulate Matter	mg/Rm <sup>3</sup>	11.2	33.6	-
Mercury	µg/Rm <sup>3</sup>	< 0.151	< 0.170	-
SO <sub>2</sub>	ppm	7.63	5.88	-
NO <sub>x</sub>	ppm	51.4	72.2	-
<b>Concentration corrected to 11% O<sub>2</sub></b>				
Particulate Matter	mg/Rm <sup>3</sup>	20.2	31.4	-
Mercury	µg/Rm <sup>3</sup>	< 0.272	< 0.159	20.0
Dioxins and Furans	pg TEQ/Rm <sup>3</sup>	< 16.2	< 82.2	80.0
SO <sub>2</sub>	mg/Rm <sup>3</sup>	35.9	14.4	-
NO <sub>x</sub>	mg/Rm <sup>3</sup>	174	127	-
<b>Emission Rate</b>				
Particulate Matter	kg/h	0.0724	0.0612	-
Mercury	g/h	< 0.000968	< 0.000307	-
Dioxins and Furans	ug/h	< 0.0572	< 0.154	-
SO <sub>2</sub>	kg/h	0.128	0.0275	-
NO <sub>x</sub>	kg/h	0.618	0.242	-



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# 1 INTRODUCTION

## 1.1 Summary of Test Program

RWDI AIR Inc. (RWDI) was retained by Agnico Eagle Mines Limited (AEM) to conduct emission sampling on the exhaust of two waste incinerator at their Meliadine Gold Mine, located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut.

Testing was conducted from September 27<sup>th</sup> to September 30<sup>th</sup>, 2025, under normal operating process conditions.

The stack testing study consisted of the following parameters:

- Particulate Matter (PM)
- Velocity, flow rate and temperature
- Metals
- Dioxins and furans and dioxin like PCB's
- Hydrogen chloride (HCl)
- Nitrogen oxides (NO<sub>x</sub>)
- Sulphur dioxide (SO<sub>2</sub>)
- Oxygen (O<sub>2</sub>)
- Carbon dioxide (CO<sub>2</sub>)
- Carbon monoxide (CO)

## 1.2 Key Personnel

RWDI's field team lead, for this test program was Oluwatobi Odumoye, M.Eng., QSTI, and Karri Legarrie was the Senior Project Manager. The primary contact for AEM was Alexandre L. Bourassa. A list of all participants is included in **Appendix I**.

# 2 SOURCE DESCRIPTION

## 2.1 Facility Description

Agnico Eagle Meliadine Gold Mine is located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut. Situated on the western shore of Hudson Bay, the mine is located on a peninsula between the east, south and west basins of Meliadine Lake on Inuit Owned Land.

## 2.2 Process Description

AEM operates two high temperature incinerators on site, used to dispose of solid domestic waste from the accommodation camp, kitchen, shops, and offices that cannot be landfilled. The incinerators at Meliadine Mine are manufactured by Eco Waste Solutions, and Ketek.

The incinerators are controlled-air batch (dual chamber) and are based on the principals of pyrolysis and complete oxidation. The incineration system is a two-stage process. In the first stage, waste is converted to gas in the primary chamber at approximately 650 to 850°C. Gases from the primary chamber enters the secondary chamber of oxygen rich and turbulent conditions, which is typically at a higher temperature around 1000°C. Combustion is completed after a minimum retention time.

## 2.3 Sample Location Description

The sampling ports are located at an “ideal” location. Two ports were used during the isokinetic sampling.

**Figure 2.1:** Eco waste Sampling Location



Figure 2.2: Ketek Sampling Location



## 3 RESULTS

### 3.1 Objective and Test Matrix

The average emission results for this study are presented in the **tables section** of this report. A minimum of three tests were performed for all the parameters tested in the study. Detailed information for each test run can be found in the appendices. The following **Table 3.1.1** identifies each sampling parameter, and identifies the corresponding table, and appendices to locate the results from the sampling program.

**Table 3.1.1:** Test Matrix Summary

Parameter	Table	Appendix
Particulate Matter and Selected Metals	4	A
Dioxins and Furan Isomers	5	B
Hydrogen Chloride	6	C
Continuous Emission Monitoring	7	D

All field notes collected during this study are presented in **Appendix E**. All laboratory results are included in **Appendix F**. All calibration information for the equipment used for this study is included in **Appendix H**.

### 3.2 Discussion of Results

Source testing was conducted to assess compliance with the emission guidelines established by the Canadian Council of Ministers of the Environment (CCME). The results indicate that all parameters measured at the Eco



Waste Incinerator were within the applicable CCME limits. However, concentrations of dioxins and furans measured at the Ketek Incinerator exceeded the applicable guideline limits.

Calculations for dioxins and furans were performed using the 2005 World Health Organization (WHO) Toxic Equivalency Factors (TEFs).

When the laboratory reported values less than their method detection limit for a specific component, the respective concentration and emission rates were calculated using the Reportable Detection Limit (RDL). This method is a conservative approach when calculating the emissions. **Table 3.2.1** below provides a summary of the results

**Table 3.2.1:** Summary of Results

		Eco Waste Incinerator	Ketek Incinerator	Emission Limit
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Particulate Matter	mg/Rm <sup>3</sup>	11.2	33.6	-
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SO <sub>2</sub>	ppm	7.63	5.88	-
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SO <sub>2</sub>	kg/h	0.128	0.0275	-
NO <sub>x</sub>	kg/h	0.618	0.242	-



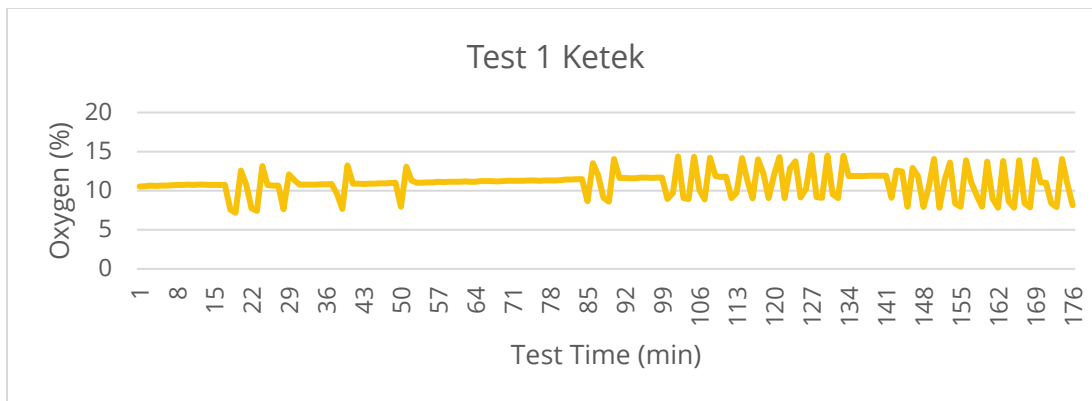
With reference to the above dioxin and furan exceedance noted on the Ketek incinerator, RWDI reviewed the emissions data in the test report and the Eco Waste report which was conducted in co-operation with the stack testing.

The dioxin and furan emission limit for the incinerator is based on the Canadian Council of Ministers of the Environment (CCME) and is set at 80 pg TEQ/Rm<sup>3</sup>. The toxic equivalency factors are based on the 2005 World Health Organization (WHO) values.

The results of the testing showed the Ketek dioxin and furan levels were 82 pg TEQ/Rm<sup>3</sup>. The measured values are marginally above the CCME limit.

The testing was conducted in triplicate, RWDI reviewed the individual test results for comparison. All three of the test results were relatively similar, and no outliers were determined, eliminating that as a possible reason for the marginal exceedance.

The data from the continuous emission analyzer was reviewed, in particular the oxygen and carbon monoxide values. Oxygen and carbon monoxide can provide insight into combustion stability and efficiency. The carbon monoxide level maintained a low concentration during the emission test runs. However, the oxygen values were sporadic. The large swings in oxygen could be a sign unsteady and poor combustion. See the graph below of test 1 showing the changes in oxygen. Similar swings in concentration were seen in Test 2 and 3.



The ECO Waste Solutions report dated October 9, 2025, included in Appendix G of the RWDI stack report was also reviewed. The ECO Waste report refers to the incinerator as the “Westland Unit”, whereas the RWDI stack report refers the same incinerator as “Ketek” The ECO Waste reported several potential contributors to the dioxin and furans measurements.

The primary chamber had one burner malfunction during the first test and would not work at temperatures above 850°C. Repairs were made to the burner prior to the second and third tests.

The report notes the temperatures in the secondary chamber were lower than expected. Test one and two had secondary chamber temperatures in the range of 810 to 860°C. Test three has slightly higher values in the range of 860 to 890°C. These values are lower than the expected ranges of 980-1100°C, as noted in the report.

In addition to the lower temperature, the report indicated that the draft pressure taken was slightly negative (-0.01 to -0.04), whereas the expected range is positive draft at +0.05-0.2 inches of water. The difference in measured draft values and expected draft values was consistent over the three test runs.



The combination of the oxygen swings, the lower than expected temperature and draft values likely all contributed to the measured dioxin and furans values, marginally exceeding the CCME limit.

In addition to addressing the above mentioned issues, RWDI would also recommend confirming the design retention time for the secondary chamber. Based on the measured flow rate and a secondary chamber volume of 2.87 m<sup>3</sup>, the retention in the chamber is approximately 1.5 seconds. Given the observed temperature, this time may not be adequate for proper destruction of volatile compounds.

### 3.3 Conclusion

Source testing was successfully conducted from September 27 to September 30, 2025. All parameters were measured in accordance with the applicable methodologies. Results indicate that concentrations of dioxins and furans at the Ketek Incinerator exceeded the applicable guideline limits.

## 4 SAMPLING METHODOLOGY

The following section provides an overview of the sampling methodologies used in this program. Table 1, located in the Tables section, summarizes the testing parameters and corresponding methodologies.

### 4.1 Stack Velocity, Temperature, and Volumetric Flow Rate Determination

The exhaust velocities and flow rates were determined following the Environment Canada EPS 1/RM/8 Method B, "Determination of Stack Gas Velocity and Volumetric Flow Rate". Velocity measurements were taken with a pre-calibrated S-Type Pitot tube and incline manometer.

Volumetric flow rates were determined following the equal area method as outlined in EPS 1/RM/8 Method B. Temperature measurements were made simultaneously with the velocity measurements and were conducted using a chromel-alumel type "k" thermocouple in conjunction with a digital temperature indicator.

The dry molecular weight of the stack gas was determined following calculations outlined in EPS 1/RM/8 Method C, "Determination of Molecular Weight by Gas Analysis". Stack moisture content was determined through direct condensation and according to EPS 1/RM/8 Method D, "Determination of Moisture Content".

### 4.2 Sampling for Particulate Matter (PM) and Metals

Sampling for PM and Metals on the incinerator exhaust was performed in accordance with Environment Canada EPS 1/RM/8 Method E, "Determination of Particulate Emissions from Stationary Sources" and U.S. EPA Method 29 "Determination of Metals Emissions from Stationary Sources", respectively. Both PM and Metals were sampled concurrently using the same sampling train.



Sampling was conducted isokinetically using the required number of traverse points across the stack diameter. The sample was drawn through a quartz glass lined sample probe and quartz fibre filter, which was maintained at a temperature of  $120 \pm 14^{\circ}\text{C}$  ( $248 \pm 25^{\circ}\text{F}$ ). The sample was then introduced into the impinger train. The impinger train included two 5%  $\text{HNO}_3$ /10%  $\text{H}_2\text{O}_2$  absorbing solution impingers, one empty impinger, two impingers containing acidified  $\text{KMnO}_4$  solution and one impinger containing silica gel. Particulate emissions are collected on the heated filter; gaseous emissions are collected in the hydrogen peroxide and acidified potassium permanganate solution impingers. Mercury is analyzed specifically in the permanganate solution and all metals including mercury are analyzed in the peroxide impingers.

Upon completion of the test, the sampling train was recovered, as in the procedures detailed in the reference method, and the samples were packaged for transport to ALS Environmental in Burlington, Ontario for analysis.

### 4.3 Sampling for Dioxin and Furan Congeners (PCDD/PCDF)

Sampling for dioxin and furan congeners was performed in accordance with Environment Canada Method 1/RM/2 (1/RM/2) "Measurement of Releases of Selected Semi-Volatile Organic Compounds from Stationary Sources".

Sampling was conducted isokinetically using the required number of traverse points across the stack diameter. The sample was drawn through a quartz glass lined sample probe and proofed glass fibre filter, which was maintained at a temperature of  $120 \pm 14^{\circ}\text{C}$  ( $248 \pm 25^{\circ}\text{F}$ ). The sample then passed through a water-cooled condenser and an XAD-2 absorbent module. The temperature of the XAD-2 module was kept below  $20^{\circ}\text{C}$ . The stack gas sample was then introduced into the impinger train. The impinger train was configured as specified in the reference method.

All glassware and filters were cleaned and proofed in accordance with procedures in 1/RM/2 prior to use in the field. Cleaning, proofing and analysis were performed by ALS Environmental in Burlington, Ontario.

Upon completion of the test, the sampling train was recovered, as in the procedures detailed in the reference method, and the samples were kept cool and packaged for transport to ALS Environmental in Burlington, Ontario for analysis. The filter, XAD-2 module, impinger catch, and all rinses were analysed for PCDD/PCDF's using high resolution gas chromatography / mass spectrometry.

### 4.4 Sampling for Hydrogen Chloride

Sampling for hydrogen chloride was completed following Environment Canada Method 1/RM/1 "Measurement of Releases of Gaseous Hydrogen Chloride from Stationary Sources". The sampling was conducted using a midget impinger sampling train. The sample was extracted from a single point near the centre of the stack over a sampling duration of 20 minutes. Sample was drawn through a quartz glass lined probe, and three-way stopcock. The sample then entered the impinger train, which consisted of three impingers, the first two impingers were filled with 15ml of dionized water.

Upon completion of the testing, samples were submitted to ALS Environmental Laboratory in Burlington, Ontario for analysis.



## 4.5 Continuous Emissions Monitoring for O<sub>2</sub>, CO<sub>2</sub>, CO, SO<sub>2</sub>, NO<sub>x</sub>

Testing for O<sub>2</sub>, CO<sub>2</sub>, CO, SO<sub>2</sub>, and NO<sub>x</sub> was accomplished using continuous emission monitors (CEM). The exhaust gas sample was withdrawn from a single point at the center of the duct using a stainless-steel probe. The sample proceeded to a heated filter, where particulate matter was removed, and then transferred via a heated Teflon line to a sample conditioner. The Teflon line was heated above the condensation temperature of the exhaust gas stream. The sample conditioner removed any moisture in the exhaust. The sample was then routed through a manifold system and introduced to the individual CEM's for measurement.

Prior to testing, sample system bias checks and instrument linearity checks (calibration error) were completed. In addition, the analysers were calibrated (zeroed and span checked) at the completion of each run. A Campbell Scientific data logger system programmed to collect and record data at 1-second intervals was used. Average 1-minute concentrations were recorded from the 1-second measurements.

## 4.6 US EPA Method 205 – Dilution System

Calibration gas was mixed using an Environics 4040 Gas Dilution System. The mass flow controllers are factory calibrated using a primary flow standard traceable to the United States National Institute of Standards and Technology (NIST). Each flow controller utilizes an 11-point calibration table with linear interpolation, to increase accuracy and reduce flow controller nonlinearity. The calibration is done yearly, and the record is included in the Source Testing Report. A multi-point EPA Method 205 check was executed in the field prior to testing to ensure accurate gas-mixtures.

The gas dilution system consists of calibrated orifices or mass flow controllers and dilutes a high-level calibration gas to within  $\pm 2\%$  of predicted values. The gas divider is capable of diluting gases at set increments and was evaluated for accuracy in the field in accordance with US EPA Method 205 "*Verification of Gas Dilution Systems for Field Instrument Calibrations*". The gas divider dilutions were measured to evaluate that the responses are within  $\pm 2\%$  of predicted values. In addition, a certified mid-level calibration gas within  $\pm 10\%$  of one of the tested dilution gases was introduced into an analyzer to ensure the response of the gas calibration is within  $\pm 2\%$  of gas divider dilution concentration.



## 5 QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES

Applicable quality assurance measures were implemented during the sampling program to ensure the integrity of the results. These measures included detailed documentation of field data, equipment calibrations for all measured parameters, completion of Chain of Custody forms when submitting laboratory samples, and submission of field blank samples to the laboratories. Table 2 presents a sample log and summarizes the sampling times, sample ID's, and filter ID's.

Quality control procedures specific to the CEM monitoring included linearity checks, to determine the instrument performance, and reproducibility checks prior to its use in the field. Regular performance checks on the analyser were also carried out during the testing program by performing hourly zero checks and span calibration checks using primary gas standards. Sample system bias checks were also done. These checks were used to verify the ongoing accuracy of the monitor and sampling system over time. Pollutant-free (zero) air was introduced to perform the zero checks, followed by a known calibration (span) gas into the monitor. The response of the monitor to pollutant-free air and the corresponding sensitivity to the span gas were recorded regularly during the tests.

Leak checks were performed on the sampling train by plugging the sample inlet and pulling a representative vacuum. This check was done before and after each test. Similar leak check procedures for pitot tube and pressure lines were also conducted. Leak checks for each test were documented on the field data sheets presented in the applicable appendices for each sample parameter.

## 6 OPERATING CONDITIONS

Operating conditions during the sampling were monitored by AEM and Eco waste solution personnel. All equipment was operated under normal conditions.

A member of the RWDI sampling team contacted the operator before each test, to ensure that the process was at normal operating conditions. **Appendix G** contains the process information supplied by AEM.



## 7 STATEMENT OF LIMITATIONS

This report entitled Incinerator Source Testing Program: RWDI Project #2510430 dated March 4, 2026, was prepared by RWDI AIR Inc. (“RWDI”) for Agnico Eagle Mines (“Client”). The findings and conclusions presented in this report have been prepared for the client and are specific to the project described herein (“Project”). The Conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilize the report and/or implement the conclusions and recommendations contained therein for any other purpose of Project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss or damage of any kind suffered by the Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the results in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the results provided.

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# TABLES

**Table 1: Summary of Sampling Parameters and Methodology**

Source Location	No. of Tests	Sampling Parameter	Sampling Method
Eco Waste Incinerator Stack	6	Velocity, Temperature and Flow Rate	ECCC <sup>[1]</sup> EPS 1/RM/8 Method B
	3	Particulate Matter	ECCC <sup>[1]</sup> EPS 1/RM/8 Method E
	3	Metals	U.S. EPA <sup>[2]</sup> Method 29
	3	Dioxins and Furans	ECCC <sup>[1]</sup> EPS 1/RM/2
	3	Oxygen	U.S. EPA <sup>[2]</sup> Method 3A (CEM)
	3	Carbon Dioxide	U.S. EPA <sup>[2]</sup> Method 3A (CEM)
	3	Carbon Monoxide	U.S. EPA <sup>[2]</sup> Method 10 (CEM)
	3	Hydrogen Chloride	ECCC <sup>[1]</sup> EPS 1/RM/1
Ketek Incinerator Stack	6	Velocity, Temperature and Flow Rate	ECCC <sup>[1]</sup> EPS 1/RM/8 Method B
	3	Particulate Matter	ECCC <sup>[1]</sup> EPS 1/RM/8 Method E
	3	Metals	U.S. EPA <sup>[2]</sup> Method 29
	3	Dioxins and Furans	ECCC <sup>[1]</sup> EPS 1/RM/2
	3	Oxygen	U.S. EPA <sup>[2]</sup> Method 3A (CEM)
	3	Carbon Dioxide	U.S. EPA <sup>[2]</sup> Method 3A (CEM)
	3	Carbon Monoxide	U.S. EPA <sup>[2]</sup> Method 10 (CEM)
	3	Hydrogen Chloride	ECCC <sup>[1]</sup> EPS 1/RM/1

**Notes:**

[1] ECCC - Environment and Climate Change Canada

[2] U.S. EPA - United States Environmental Protection Agency

**Table 2: Sampling Summary and Sample Log**

Source	Source and Test #	Sampling Date	Start Time	End Time	Filter ID / Trap ID	Lab Sample ID
Eco Waste Incinerator Stack	<b>Velocity / Particulate Matter / Metals</b>					
	Blank	-	-	-	-	BU2502917-007
	Test #1	27-Sep-25	9:58 AM	12:45 PM	QZ13329	BU2502917-001
	Test #2	28-Sep-25	12:46 PM	3:40 PM	QZ13330	BU2502917-002
	Test #3	28-Sep-25	5:25 PM	8:15 PM	QZ13333	BU2502917-003
	<b>Velocity / Dioxins and Furans</b>					
	Blank	-	-	-	-	BU2502916-007
	Test #1	27-Sep-25	9:58 AM	12:45 PM	-	BU2502916-001
	Test #2	28-Sep-25	12:46 PM	3:40 PM	-	BU2502916-002
	Test #3	28-Sep-25	5:25 PM	8:15 PM	-	BU2502916-003
	<b>Hydrogen Chloride</b>					
	Blank	-	-	-	-	BU2502915-007
	Test #1	27-Sep-25	1:32 PM	1:52 PM	-	BU2502915-001
	Test #2	28-Sep-25	3:57 PM	4:17 PM	-	BU2502915-002
	Test #3	28-Sep-25	4:20 PM	4:40 PM	-	BU2502915-003
Ketek Incinerator Stack	<b>Velocity / Particulate Matter / Metals</b>					
	Blank	-	-	-	-	BU2502917-007
	Test #1	29-Sep-25	1:13 PM	4:07 PM	QZ13331	BU2502917-004
	Test #2	30-Sep-25	8:52 AM	12:32 PM	QZ13335	BU2502917-005
	Test #3	30-Sep-25	2:49 PM	5:55 PM	QZ13332	BU2502917-006
	<b>Velocity / Dioxins and Furans</b>					
	Blank	-	-	-	-	BU2502916-007
	Test #1	29-Sep-25	1:13 PM	4:07 PM	-	BU2502916-004
	Test #2	30-Sep-25	8:52 AM	12:32 PM	-	BU2502916-005
	Test #3	30-Sep-25		5:55 PM	-	BU2502916-006
	<b>Hydrogen Chloride</b>					
	Blank	-	-	-	-	BU2502915-007
	Test #1	29-Sep-25	3:02 PM	3:22 PM	-	BU2502915-004
	Test #2	30-Sep-25	11:15 AM	11:35 AM	-	BU2502915-005
	Test #3	30-Sep-25	11:42 AM	12:02 PM	-	BU2502915-006

**Table 3A: Sampling Summary - Flow Characteristics**

Eco Waste Incinerator Stack

Stack Gas Parameter		PM <sup>[1]</sup>			SVOC <sup>[2]</sup>			AVERAGE
		Test 1	Test 2	Test 3	Test 1	Test 2	Test 3	
<b>Testing Date</b>		27-Sep-25	28-Sep-25	28-Sep-25	27-Sep-25	28-Sep-25	28-Sep-25	-
Stack Temperature	°F	827	937	887	823	936	887	<b>883</b>
	°C	441	503	475	439	502	475	<b>473</b>
Moisture	%	4.60%	5.82%	4.10%	5.60%	6.07%	4.28%	<b>5.08%</b>
Velocity	ft/s	26.3	27.5	27.3	26.6	28.0	27.1	<b>27.1</b>
	m/s	8.01	8.37	8.32	8.11	8.54	8.25	<b>8.27</b>
Actual Flow Rate	CFM	9,654	10,389	10,329	9,771	10,285	9,940	<b>10,061</b>
Referenced Flow Rate <sup>[3]</sup>	CFM	3,774	3,708	3,891	3,792	3,663	3,737	<b>3,761</b>
	m <sup>3</sup> /s	1.78	1.75	1.84	1.79	1.73	1.76	<b>1.77</b>
Sampling Isokinetic Rate	%	91	99	98	96	101	99	<b>97</b>

**Notes:**

[1] PM = Sampling for particulate matter and metals

[2] SVOC = Sampling for Semi-Volatile Organic Compounds

[3] Referenced flow rate expressed as dry at 101.3 kPa, 25 °C, and Actual Oxygen

**Table 3B: Sampling Summary - Flow Characteristics**

Ketek Incinerator Stack

Stack Gas Parameter		PM <sup>[1]</sup>			SVOC <sup>[2]</sup>			AVERAGE
		Test 1	Test 2	Test 3	Test 1	Test 2	Test 3	
<b>Testing Date</b>		29-Sep-25	30-Sep-25	30-Sep-25	29-Sep-25	30-Sep-25	30-Sep-25	-
Stack Temperature	°F	1133	1141	1179	1157	1147	1179	<b>1156</b>
	°C	612	616	637	625	620	637	<b>625</b>
Moisture	%	7.39%	8.49%	8.05%	7.73%	8.37%	8.14%	<b>8.03%</b>
Velocity	ft/s	31.6	31.0	30.1	31.2	29.1	30.3	<b>30.6</b>
	m/s	9.65	9.46	9.17	9.5	8.9	9.2	<b>9.32</b>
Actual Flow Rate	CFM	3,544	3,477	3,370	3,496	3,263	3,396	<b>3,425</b>
Referenced Flow Rate <sup>[3]</sup>	CFM	1,104	1,072	1,020	1,069	1,004	1,027	<b>1,049</b>
	m <sup>3</sup> /s	0.52	0.51	0.48	0.50	0.47	0.48	<b>0.495</b>
Sampling Isokinetic Rate	%	101	99	100	100	100	100	<b>100</b>

**Notes:**

[1] PM = Sampling for total particulate matter and metals

[2] SVOC = Sampling for Semi-Volatile Organic Compounds

[3] Referenced flow rate expressed as dry at 101.3 kPa, 25 °C, and Actual Oxygen

**Table 4A: Particulate Matter and Metals - Averaged Results**  
**Eco Waste Incinerator Stack**

Parameter	Concentration	Concentration @ 11% O <sub>2</sub>	Emission Rate	
			(mg/s)	(kg/h)
<b>Particulate</b>	<b>(mg/m<sup>3</sup>)</b>	<b>(mg/m<sup>3</sup>)</b>	<b>(mg/s)</b>	<b>(kg/h)</b>
Particulate Matter	11.2	20.2	20.1	0.0724
<b>Metals</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(mg/s)</b>	<b>(g/h)</b>
Aluminum	40.2	72.4	0.0719	0.259
Antimony	3.85	6.93	0.00684	0.0246
Arsenic	< 0.345	< 0.621	< 0.000615	< 0.00221
Barium	3.83	6.89	0.00684	0.0246
Beryllium	< 0.0615	< 0.111	< 0.000110	< 0.000396
Bismuth	< 0.156	< 0.281	< 0.000280	< 0.00101
Boron	212	382	0.378	1.36
Cadmium	< 0.066	< 0.119	< 0.000117	< 0.000421
Calcium	< 156	< 281	< 0.280	< 1.01
Chromium	1.50	2.70	0.00268	0.00965
Cobalt	0.148	0.266	0.000265	0.000954
Copper	2.42	4.36	0.00433	0.0156
Iron	< 61.5	< 111	< 0.110	< 0.396
Lead	1.36	2.45	0.00241	0.00868
Lithium	< 0.156	< 0.281	< 0.00028	< 0.00101
Magnesium	15.8	28.4	0.0283	0.102
Manganese	1.51	2.72	0.00270	0.00972
Molybdenum	4.02	7.24	0.00718	0.0258
Nickel	1.00	1.80	0.00179	0.00644
Potassium	146	263	0.263	0.947
Selenium	< 0.615	< 1.11	< 0.00110	< 0.00396
Silver	0.379	0.682	0.000676	0.00243
Sodium	360	648	0.642	2.31
Strontium	0.335	0.603	0.000599	0.00216
Thallium	< 0.0615	< 0.111	< 0.000110	< 0.000396
Tin	25.2	45.4	0.0450	0.162
Titanium	< 7.68	< 13.8	< 0.0137	< 0.0493
Vanadium	< 0.307	< 0.553	< 0.000550	< 0.00198
Zinc	22.1	39.8	0.0397	0.143
<b>Mercury</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(mg/s)</b>	<b>(g/h)</b>
Total Hg	< 0.151	< 0.272	< 0.000269	< 0.000968

**Notes:**

- Sampling followed ECCC EPS 1/RM/8 Method E (PM) and U.S. EPA 40CFR60 Method 29 (Metals)
- All referenced concentration values are expressed at 101.3kPa, 25°C,
- Average of three tests
- When laboratory analysis was below the detection limit, the Reportable Detection Limit (RDL) was used to calculate the concentration and emission rate

**Detailed sampling results including individual test results can be found in Appendix A**

**Table 4B: Particulate Matter and Metals - Averaged Results**

Ketek Incinerator Stack

Parameter	Concentration	Concentration @ 11% O <sub>2</sub>	Emission Rate	
			(mg/s)	(kg/h)
<b>Particulate</b>	<b>(mg/m<sup>3</sup>)</b>	<b>(mg/m<sup>3</sup>)</b>		
Particulate Matter	33.6	31.4	17.0	0.0612
<b>Metals</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(mg/s)</b>	<b>(g/h)</b>
Aluminum	44.3	41.4	0.022	0.0803
Antimony	1.18	1.10	0.001	0.00216
Arsenic	< 0.384	< 0.359	< 0.000	< 0.000698
Barium	3.51	3.28	0.002	0.00637
Beryllium	< 0.0623	< 0.0582	< 0.00003	< 0.000113
Bismuth	< 0.159	< 0.149	< 0.0000796	< 0.000287
Boron	16.8	15.7	0.00851	0.0306
Cadmium	< 0.0429	< 0.0401	< 0.0000217	< 7.81E-05
Calcium	< 159	< 149	< 0.0796	< 0.287
Chromium	4.01	3.75	0.00198	0.00713
Cobalt	< 0.102	< 0.0953	< 0.0000514	< 0.00018504
Copper	6.04	5.64	0.00307	0.0111
Iron	< 62.3	< 58.2	< 0.0313	< 0.113
Lead	1.9	1.77	0.000958	0.00345
Lithium	< 0.159	< 0.149	< 0.0000796	< 0.000287
Magnesium	14.8	13.8	0.00744	0.0268
Manganese	1.62	1.51	0.00081	0.00292
Molybdenum	4.24	3.96	0.00213	0.00767
Nickel	2.63	2.46	0.00132	0.00475
Potassium	417	389	0.212	0.763
Selenium	< 0.623	< 0.582	< 0.000313	< 0.00113
Silver	< 0.0704	< 0.0658	< 0.0000355	< 0.000128
Sodium	364	340	0.184	0.662
Strontium	0.294	0.275	0.000148	0.000533
Thallium	< 0.0623	< 0.0582	< 0.0000313	< 0.000113
Tin	5.33	4.98	0.00268	0.00965
Titanium	9.92	9.26	0.00503	0.0181
Vanadium	< 0.312	< 0.291	< 0.000156	< 0.000562
Zinc	17.2	16.1	0.00869	0.0313
<b>Mercury</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(µg/m<sup>3</sup>)</b>	<b>(mg/s)</b>	<b>(g/h)</b>
Total Hg	< 0.170	< 0.159	< 0.0000853	< 0.000307

**Notes:**

- Sampling followed ECCC EPS 1/RM/8 Method E (PM) and U.S. EPA 40CFR60 Method 29 (Metals)
- All referenced concentration values are expressed at 101.3kPa, 25°C,
- Average of three tests
- When laboratory analysis was below the detection limit, the Reportable Detection Limit (RDL) was used to calculate the concentration and emission rate

Detailed sampling results including individual test results can be found in Appendix A

**Table 5A: Dioxins and Furans - Main Stack Average Results**

**Eco Waste Incinerator Stack**

Parameter	Average Concentration (pg/m <sup>3</sup> )	Average Concentration @25°C and 11% O <sub>2</sub> (pg/m <sup>3</sup> )	Reg 419 Toxic Equivalency Factors			
			TEF	TEF Concentration (pg TEQ/m <sup>3</sup> )	TEF Emission Rate (pg/s) (ug/h)	
2,3,7,8-Tetra CDD *	< 0.48	< 0.87	1	< 0.870	< 0.851	< 0.00306
1,2,3,7,8-Penta CDD *	< 1.23	< 2.21	1	< 2.21	< 2.16	< 0.00778
1,2,3,4,7,8-Hexa CDD *	< 1.77	< 3.18	0.1	< 0.318	< 0.311	< 0.00112
1,2,3,6,7,8-Hexa CDD *	< 5.02	< 9.04	0.1	< 0.904	< 0.884	< 0.00318
1,2,3,7,8,9-Hexa CDD *	< 2.72	< 4.90	0.1	< 0.490	< 0.479	< 0.00172
1,2,3,4,6,7,8-Hepta CDD *	< 33.2	< 59.8	0.01	< 0.598	< 0.584	< 0.00210
1,2,3,4,6,7,8,9-Octa CDD *	44.5	80.1	0.0003	0.0240	0.0235	0.0000846
2,3,7,8-Tetra CDF **	1.33	2.39	0.1	0.239	0.234	0.000842
1,2,3,7,8-Penta CDF **	< 2.72	< 4.90	0.03	< 0.147	< 0.144	< 0.000518
2,3,4,7,8-Penta CDF **	7.23	13.0	0.3	3.90	3.82	0.0138
1,2,3,4,7,8-Hexa CDF **	< 4.32	< 7.78	0.1	< 0.778	< 0.760	< 0.00274
1,2,3,6,7,8-Hexa CDF **	< 6.96	< 12.5	0.1	< 1.25	< 1.23	< 0.00443
2,3,4,6,7,8-Hexa CDF **	15.0	27.0	0.1	2.70	2.64	0.00950
1,2,3,7,8,9-Hexa CDF **	< 4.89	< 8.80	0.1	< 0.880	< 0.861	< 0.00310
1,2,3,4,6,7,8-Hepta CDF **	42.4	76.3	0.01	0.763	0.746	0.00269
1,2,3,4,7,8,9-Hepta CDF **	< 8.50	< 15.3	0.01	< 0.153	< 0.150	< 0.000540
1,2,3,4,6,7,8,9-Octa CDF **	22.4	40.3	0.0003	0.0121	0.0118	0.0000425
<b>Total Toxic Equivalency (D &amp; F)</b>				<b>&lt; 16.2</b>	<b>&lt; 15.9</b>	<b>&lt; 0.0572</b>
	<b>(pg/m<sup>3</sup>)</b>	<b>(pg/m<sup>3</sup>)</b>		<b>(pg TEQ/m<sup>3</sup>)</b>	<b>(pg/s)</b>	<b>(ug/h)</b>
33'44'-TetraCB-(77)	112	202	0.0001	0.0202	0.0197	7.09E-05
344'5'-TetraCB-(81)	< 4.88	< 8.78	0.0003	< 0.00264	< 0.00258	< 9.29E-06
233'44'-PentaCB-(105)	159	286	0.00003	0.00859	0.00840	3.02E-05
2344'5'-PentaCB-(114)	< 10.0	< 18.0	0.00003	< 0.000540	< 0.000528	< 1.90E-06
23'44'5'-PentaCB-(118)	435	783	0.00003	0.0235	0.0230	8.28E-05
23'44'5'1'-PentaCB-(123)	< 6.23	< 11.2	0.00003	< 0.000336	< 0.000329	< 1.18E-06
33'44'5'-PentaCB-(126)	10.3	18.5	0.1	1.85	1.81	6.52E-03
HexaCB-(156)+(157)	< 28.7	< 51.7	0.00003	< 0.00155	< 0.00152	< 5.47E-06
23'44'55'-HexaCB-(167)	< 9.91	< 17.8	0.00003	< 0.00054	< 0.000523	< 1.88E-06
33'44'55'-HexaCB-(169)	< 4.16	< 7.49	0.03	< 0.225	< 0.220	< 7.92E-04
233'44'55'-HeptaCB-(189)	< 6.87	< 12.4	0.00003	< 0.000371	< 0.000363	< 1.31E-06
<b>Total Toxic Equivalency (PCBs)</b>				<b>&lt; 2.14</b>	<b>&lt; 2.09</b>	<b>&lt; 0.00752</b>

**Notes:**

-Sampling followed Environment Canada Method EPS 1/RM/2

-All referenced concentration values are expressed at 101.3kPa, 25°C

-Average of three tests

-When laboratory analysis was below the detection limit, this detection limit was used to calculate the concentration and emission rate.

\*CCD = Chloro Dibenzo-p-Dioxin,

\*\*CDF = chlorodibenzo-p-furan

\*\*\*CB = chlorobenzene

**Detailed sampling results including individual test results can be found in Appendix B**

**Table 5B: Dioxins and Furans - Main Stack Average Results**

**Ketek Incinerator Stack**

Parameter	Average Concentration	Average Concentration @25°C and 11% O <sub>2</sub>	Reg 419 Toxic Equivalency Factors			
			TEF	TEF Concentration	TEF Emission Rate	
	(pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )		(pg TEQ/m <sup>3</sup> )	(pg/s)	(ug/h)
2,3,7,8-Tetra CDD *	< 0.809	< 0.755	1	< 0.755	< 0.394	< 0.00142
1,2,3,7,8-Penta CDD *	< 5.52	< 5.15	1	< 5.15	< 2.69	< 0.00968
1,2,3,4,7,8-Hexa CDD *	12.8	11.9	0.1	1.19	0.621	0.00224
1,2,3,6,7,8-Hexa CDD *	35.4	33.1	0.1	3.31	1.73	0.00623
1,2,3,7,8,9-Hexa CDD *	16.9	15.8	0.1	1.58	0.824	0.00297
1,2,3,4,6,7,8-Hepta CDD *	357	333	0.01	3.33	1.74	0.00626
1,2,3,4,6,7,8,9-Octa CDD *	553	517	0.0003	0.155	0.0809	0.000291
2,3,7,8-Tetra CDF **	< 4.93	< 4.60	0.1	< 0.460	< 0.240	< 0.000864
1,2,3,7,8-Penta CDF **	17.7	16.5	0.03	0.496	0.259	0.000932
2,3,4,7,8-Penta CDF **	66.6	62.2	0.3	18.7	9.74	0.0351
1,2,3,4,7,8-Hexa CDF **	< 59.6	< 55.7	0.1	< 5.57	< 2.91	< 0.0105
1,2,3,6,7,8-Hexa CDF **	< 83.0	< 77.5	0.1	< 7.75	< 4.05	< 0.0146
2,3,4,6,7,8-Hexa CDF **	204	191	0.1	19.1	9.94	0.0358
1,2,3,7,8,9-Hexa CDF **	72.3	67.5	0.1	6.75	3.52	0.0127
1,2,3,4,6,7,8-Hepta CDF **	696	650	0.01	6.50	3.39	0.0122
1,2,3,4,7,8,9-Hepta CDF **	147	137	0.01	1.37	0.717	0.00258
1,2,3,4,6,7,8,9-Octa CDF **	417	390	0.0003	0.117	0.0610	0.000220
<b>Total Toxic Equivalency (D &amp; F)</b>				<b>&lt; 82.2</b>	<b>&lt; 42.9</b>	<b>&lt; 0.154</b>
	(pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )		(pg TEQ/m <sup>3</sup> )	(pg/s)	(ug/h)
33'44'-TetraCB-(77)	197	184	0.0001	0.0184	0.00960	3.46E-05
344'5-TetraCB-(81)	< 31.1	< 29.1	0.0003	< 0.00871	< 0.00455	< 1.64E-05
233'44'-PentaCB-(105)	227	212	0.00003	0.00636	0.00332	1.20E-05
2344'5-PentaCB-(114)	< 29.1	< 27.2	0.00003	< 0.000815	< 0.000426	< 1.53E-06
23'44'5-PentaCB-(118)	536	501	0.00003	0.0150	0.00784	2.82E-05
23'44'5'-PentaCB-(123)	< 19.3	< 18.0	0.00003	< 0.000541	< 0.000282	< 1.02E-06
33'44'5-PentaCB-(126)	78.5	73.3	0.1	7.33	3.83	1.38E-02
HexaCB-(156)+(157)	135	126	0.00003	0.00378	0.00197	7.09E-06
23'44'55'-HexaCB-(167)	32.1	30.0	0.00003	0.000899	0.000469	1.69E-06
33'44'55'-HexaCB-(169)	< 35.7	< 33.3	0.03	< 1.00	< 0.522	< 1.88E-03
233'44'55'-HeptaCB-(189)	140	131	0.00003	0.00392	0.00205	7.38E-06
<b>Total Toxic Equivalency (PCBs)</b>				<b>&lt; 8.39</b>	<b>&lt; 4.38</b>	<b>&lt; 0.0158</b>

**Notes:**

-Sampling followed Environment Canada Method EPS 1/RM/2

-All referenced concentration values are expressed at 101.3kPa, 25°C

-Average of three tests

-When laboratory analysis was below the detection limit, this detection limit was used to calculate the concentration and emission rate.

\*CCD = Chloro Dibenzo-p-Dioxin,

\*\*CDF = chlorodibenzo-p-furan

\*\*\*CB = chlorobenzene

**Detailed sampling results including individual test results can be found in Appendix B**

### Table 6A: Hydrogen Chloride - Averaged Results

#### Eco Waste Incinerator Stack

Parameter	Concentration	Concentration @ 11% O <sub>2</sub>	Emission Rate	
	(mg/m <sup>3</sup> )	(mg/m <sup>3</sup> )	(mg/s)	(kg/h)
Hydrogen Chloride	16.4	29.5	29.2	0.105

**Notes:**

-Sampling followed EPS 1/RM/1

-All referenced concentration values are expressed at 101.3kPa, 25°C

-Average of three tests

**Detailed sampling results including individual test results can be found in Appendix C**

### Table 6B: Hydrogen Chloride - Averaged Results

#### Ketek Incinerator Stack

Parameter	Concentration	Concentration @ 11% O <sub>2</sub>	Emission Rate	
	(mg/m <sup>3</sup> )	(mg/m <sup>3</sup> )	(mg/s)	(kg/h)
Hydrogen Chloride	30.7	28.7	15.4	0.0554

**Notes:**

-Sampling followed EPS 1/RM/1

-All referenced concentration values are expressed at 101.3kPa, 25°C

-Average of three tests

**Detailed sampling results including individual test results can be found in Appendix C**

**Table 7A: Gaseous Pollutants - Average Results****Eco Waste Incinerator Stack**

Parameter	Concentration			Emission Rate	
	Actual O <sub>2</sub>	Actual O <sub>2</sub>	11% O <sub>2</sub>		
	(ppm)	(mg/m <sup>3</sup> )	(mg/m <sup>3</sup> )	(g/s)	(kg/h)
Nitrogen Oxides, expressed as NO <sub>2</sub> (NO <sub>x</sub> )	51.4	96.7	174	0.172	0.618
Sulphur Dioxide (SO <sub>2</sub> )	7.63	20.0	35.9	0.0355	0.128
Carbon Monoxide (CO)	1.05	1.20	2.16	0.00213	0.00768
	(%)				
Oxygen (O <sub>2</sub> )	15.4	-	-	-	-
Carbon Dioxide (CO <sub>2</sub> )	4.36	-	-	-	-

**Notes:**

-Sampling followed U.S. EPA Method 3A (O<sub>2</sub> and CO<sub>2</sub>), Method 10 (CO), Method 6C (SO<sub>2</sub>), and Method 7E (NO<sub>x</sub>)

-All referenced concentration values are expressed at 101.3kPa, 25°C

-Average of all three tests

-Emission rate for Incinerator calculated based on average volumetric flow rate of all Isokinetic tests

**Detailed sampling results including individual test results can be found in Appendix D**

**Table 7B: Gaseous Pollutants - Average Results**

Ketek Incinerator Stack

Parameter	Concentration			Emission Rate	
	Actual O <sub>2</sub>	Actual O <sub>2</sub>	11% O <sub>2</sub>	(g/s)	(kg/h)
	(ppm)	(mg/m <sup>3</sup> )	(mg/m <sup>3</sup> )		
Nitrogen Oxides, expressed as NO <sub>2</sub> (NO <sub>x</sub> )	72.2	136	127	0.0673	0.242
Sulphur Dioxide (SO <sub>2</sub> )	5.88	15.4	14.4	0.00763	0.0275
Carbon Monoxide (CO)	0.841	0.963	0.900	0.000477	0.00172
	(%)				
Oxygen (O <sub>2</sub> )	10.3	-	-	-	-
Carbon Dioxide (CO <sub>2</sub> )	8.11	-	-	-	-

**Notes:**

- Sampling followed U.S. EPA Method 3A (O<sub>2</sub> and CO<sub>2</sub>), Method 10 (CO), Method 6C (SO<sub>2</sub>), and Method 7E (NO<sub>x</sub>)
- All referenced concentration values are expressed at 101.3kPa, 25°C
- Average of all three tests
- Emission rate for Incinerator calculated based on average volumetric flow rate of all Isokinetic tests

**Detailed sampling results including individual test results can be found in Appendix D**

**Table 8A: Limit Comparisons****Eco Waste Incinerator Stack**

Parameter	Stack Testing Results	ECA Limit <sup>(1)</sup>
Dioxins and Furans (TEQ)	< 16.2 pg/Rm <sup>3</sup>	80 pg/Rm <sup>3</sup>
Mercury	< 0.272 µg/Rm <sup>3</sup>	20 µg/Rm <sup>3</sup>

**Notes:**

[1] - Refer to Table 4-1 of the Incinerator Management Plan

R - Concentration referenced to 25°C, 101.3kPa, and 11% oxygen

**Table 8B: Limit Comparisons****Ketek Incinerator Stack**

Parameter	Stack Testing Results	ECA Limit <sup>(1)</sup>
Dioxins and Furans (TEQ)	< 82.2 pg/Rm <sup>3</sup>	80 pg/Rm <sup>3</sup>
Mercury	< 0.159 µg/Rm <sup>3</sup>	20 µg/Rm <sup>3</sup>

**Notes:**

[1] - Refer to Table 4-1 of the Incinerator Management Plan

R - Concentration referenced to 25°C, 101.3kPa, and 11% oxygen

The background features a large, light grey curved shape on the right side, and a blue curved shape on the left side, separated by a white curved line.

# APPENDIX A

## Sampling Results - Particulate Matter and Metals Sampling

AEM - Eco Waste Incinerator

Test : Sample Volume (Rm <sup>3</sup> ) <sup>[1]</sup> Stack Flow Rate (Rm <sup>3</sup> /s) <sup>[1]</sup>	Blank	Test #1			Test #2			Test #3			AVERAGE RESULTS	
	-	3.44	1.78		3.59	1.75		3.71	1.84		1.79	
	Lab Data (mg)	Lab Data (mg)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (mg)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (mg)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)
<b>Filterable Particulate</b>												
Particulate in Acetone Rinse	< 0.40	1.80	-	-	4.20	-	-	2.40	-	-	-	-
Particulate on Filter	< 0.60	17.5	-	-	35.0	-	-	60.5	-	-	-	-
Total Filterable Particulate	< 1.00	19.3	5.60	9.98	39.2	10.9	19.1	62.9	16.9	31.1	11.2	20.1
<b>Metals</b>												
Aluminum	85.0	154	44.7	0.0796	140	39.0	0.0683	137	36.9	0.0677	40.2	0.0719
Antimony	< 0.22	27.2	7.90	0.0141	10.9	3.04	0.00531	2.29	0.617	0.00113	3.85	0.00684
Arsenic	< 1.10	< 1.10	< 0.319	< 0.000569	1.50	0.418	0.000731	< 1.10	< 0.296	< 0.000544	< 0.345	< 0.000615
Barium	13.0	15.7	4.56	0.00812	13.1	3.65	0.00639	12.2	3.28	0.00603	3.83	0.00684
Beryllium	< 0.22	< 0.22	< 0.0639	< 0.000114	< 0.22	< 0.0613	< 0.000107	< 0.22	< 0.0592	< 0.000109	< 0.0615	< 0.000110
Bismuth	< 0.56	< 0.56	< 0.163	< 0.000290	< 0.56	< 0.156	< 0.000273	< 0.56	< 0.151	< 0.000277	< 0.156	< 0.000280
Boron	< 34.0	1240	360	0.641	680	190	0.332	326	87.8	0.161	212	0.378
Cadmium	< 0.11	< 0.11	< 0.0319	< 0.0000569	0.47	0.131	0.000229	0.13	0.0350	6.43E-05	< 0.0660	< 0.000117
Calcium	< 560	< 560	< 163	< 0.290	< 560	< 156	< 0.273	< 560	< 151	< 0.277	< 156	< 0.280
Chromium	1.50	5.70	1.65	0.00295	5.40	1.51	0.00263	5.00	1.35	0.00247	1.50	0.00268
Cobalt	< 0.22	0.54	0.157	0.000279	0.50	0.139	0.000244	0.55	0.148	0.000272	0.148	0.000265
Copper	3.00	9.00	2.61	0.00465	7.60	2.12	0.00371	9.40	2.53	0.00465	2.42	0.00433
Iron	< 220	< 220	< 63.9	< 0.114	< 220	< 61.3	< 0.107	< 220	< 59.2	< 0.109	< 61.5	< 0.110
Lead	< 0.56	4.30	1.25	0.00222	6.81	1.90	0.00332	3.42	0.921	0.00169	1.36	0.00241
Lithium	< 0.56	< 0.56	< 0.163	< 0.000290	< 0.56	< 0.156	< 0.000273	< 0.56	< 0.151	< 0.000277	< 0.156	< 0.000280
Magnesium	24.0	54.0	15.7	0.0279	55.0	15.3	0.0268	61.0	16.4	0.0301	15.8	0.0283
Manganese	0.99	4.55	1.32	0.00235	5.74	1.60	0.00280	5.97	1.61	0.00295	1.51	0.00270
Molybdenum	14.5	14.9	4.33	0.0077	13.9	3.87	0.00678	14.3	3.85	0.00707	4.02	0.00718
Nickel	0.74	3.99	1.16	0.00206	3.52	0.981	0.00172	3.21	0.864	0.00159	1.00	0.00179
Potassium	< 110	290	84.2	0.150	490	137	0.239	810	218	0.4	146	0.263
Selenium	< 2.20	< 2.20	< 0.639	< 0.00114	< 2.20	< 0.613	< 0.00107	< 2.20	< 0.592	< 0.00109	< 0.615	< 0.00110
Silver	< 0.22	1.05	0.305	0.000543	1.77	0.493	0.000863	1.26	0.339	0.000623	0.379	0.000676
Sodium	238	1640	476	0.848	1270	354	0.619	930	250	0.460	360	0.642
Strontium	0.41	1.14	0.331	0.000589	1.12	0.312	0.000546	1.34	0.361	0.000662	0.335	0.000599
Thallium	< 0.22	< 0.22	< 0.0639	< 0.000114	< 0.22	< 0.0613	< 0.000107	< 0.22	< 0.0592	< 0.000109	< 0.0615	< 0.000110
Tin	154	224	65.0	0.116	19.5	5.44	0.00951	19.6	5.28	0.00969	25.2	0.0450
Titanium	< 11.0	48.0	13.9	0.0248	22.0	6.13	0.0107	< 11.0	< 2.96	< 0.00544	< 7.68	< 0.0137
Vanadium	< 1.10	< 1.10	< 0.319	< 0.000569	< 1.10	< 0.307	< 0.000536	< 1.10	< 0.296	< 0.000544	< 0.307	< 0.000550
Zinc	10.1	55.2	16.0	0.0285	82.2	22.9	0.0401	102	27.5	0.0504	22.1	0.0397
	Lab Data (µg)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)
<b>Mercury</b>												
Filterable Hg	< 0.0220	< 0.0220	-	-	< 0.0220	-	-	< 0.0220	-	-	-	-
Non-Filterable Hg	< 0.284	< 0.473	-	-	< 0.626	-	-	< 0.457	-	-	-	-
Total Hg	< 0.306	< 0.495	< 0.144	< 0.000256	< 0.648	< 0.180	< 0.000316	< 0.479	< 0.129	< 0.000237	< 0.151	< 0.000269

**Notes:**

[1] Sample volume and volumetric flow rate based on dry referenced conditions (101.3kPa, and 25°C)

< indicates that laboratory results were below the detection limit. The detection limit was used to calculate the concentration and emission rate.

Concentration and Emission Rate has been reported to 3 significant figures.

## Particulate Matter and Metals Sampling

<b>Facility:</b> AEM <b>City:</b> Meliadine, NU <b>Source:</b> Eco Waste Incinerator <b>Reference Method:</b> USEPA M5, M29			<b>Operator:</b> PB <b>Entered by:</b> PB <b>Checked by:</b> OO		
DATA INPUTS	Symbol	Units	Test #1 PM/M29	Test #2 PM/M29	Test #3 PM/M29
Date	-	-	27-Sep-25	28-Sep-25	28-Sep-25
Start Time	-	-	9:58 AM	12:46 PM	5:25 PM
End Time	-	-	12:45 PM	3:40 PM	8:15 PM
Round Stack, Diameter	$d_s$	in	34	34	34
Standard Temperature	$T_s$	°F	77	77	77
Standard Pressure	$P_s$	in.Hg	29.9	29.9	29.9
Nozzle Diameter	$D_n$	in	0.500	0.500	0.500
Average Stack Temperature	$T_s$	°F	827	937	887
Average Meter Temperature	$T_m$	°F	70	71	72
Barometric Pressure	$P_{bar}$	" Hg	29.38	29.49	29.49
Stack Static Pressure	$P_g$	" H <sub>2</sub> O	-0.1	-0.1	-0.1
Average Delta H	dH	" H <sub>2</sub> O	2.01	2.18	2.35
Average Velocity Head (root mean square)	$dP_{rms}$	" H <sub>2</sub> O	0.09	0.09	0.10
Pitot Coefficient	$C_p$	-	0.820	0.820	0.820
	Pitot ID :		4' Inconel		
Gas Sample Volume	$V_m$	ft <sup>3</sup>	120.96	125.49	130.11
DGM Calibration Factor	Y	-	1.0070	1.0070	1.0070
	$\Delta H_{@}$	-	1.8200	1.8200	1.8200
	DGM ID:		I		
Total Sampling Time	min	minutes	160	160	160
Stack Gas Oxygen Concentration	O <sub>2</sub>	%	15.4	15.4	15.4
Stack Gas Carbon Dioxide Concentration	CO <sub>2</sub>	%	4.4	4.4	4.4
Impinger Gain	$W_w$	g	122.2	163.1	116.9

## Particulate Matter and Metals Sampling

Emissions Calculations		Symbol	Units	Test #1 PM/M29	Test #2 PM/M29	Test #3 PM/M29	AVERAGE PM/M29
Facility: AEM		Operator: PB					
City: Meliadine, NU		Entered by: PB					
Source: Eco Waste Incinerator		Checked by: OO					
Reference Method: USEPA M5, M29							
Nozzle Area	$A_n$	ft <sup>2</sup>	1.36E-03	1.36E-03	1.36E-03	-	
Stack Area	$A_s$	ft <sup>2</sup>	6.12	6.31	6.31	-	
Average Stack Temperature	$T_s$	°R	1287	1397	1347	1343	
Average DGM Temperature	$T_m$	°R	530	531	532	531	
Sample Volume at Reference Conditions	$V_{mStd}$	ft <sup>3</sup>	121.73	126.78	131.25	-	
	<b><math>V_{mmstd}</math></b>	<b>m<sup>3</sup></b>	<b>3.44</b>	<b>3.59</b>	<b>3.71</b>	-	
Vol. of Water Vapour	$V_{wStd}$	ft <sup>3</sup>	5.87	7.83	5.61	-	
Water Fraction	$B_{ws}$		4.6%	5.8%	4.1%	4.8%	
Molecular Weight, dry	$M_d$	g/mole	29.43	29.43	29.43	29.43	
Molecular Weight, wet	$M_w$	g/mole	28.90	28.76	28.96	28.87	
Absolute Stack Pressure	$P_s$	in. Hg	29.37	29.48	29.48	29.45	
Stack Gas Velocity	$U_s$	ft/s	26.29	27.46	27.30	27.02	
	<b><math>U_{sm}</math></b>	<b>m/s</b>	<b>8.01</b>	<b>8.37</b>	<b>8.32</b>	8.23	
Actual Gas Flow Rate	$Q_{act}$	acf/min	9,654	10,389	10,329	10,124	
Dry Gas Flow Rate (dry, ref)	$Q_{ref}$	dscf/min	3,774	3,708	3,891	3,791	
	<b><math>Q_{mref}</math></b>	<b>m<sup>3</sup>/min</b>	<b>107</b>	<b>105</b>	<b>110</b>	107	
	<b><math>Q_{mref (Actual O2)}</math></b>	<b>m<sup>3</sup>/s</b>	<b>1.78</b>	<b>1.75</b>	<b>1.84</b>	1.79	
Isokinetic Rate	I	%	91	99	98	96	

# Particulate Matter and Metals Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> USEPA M5, M29	<b>Test Date:</b> 27-Sep-25
<b>Run:</b> Test #1	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Box Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>											
Pre-Test Leak Check = < 0.02CFM @ 10"Hg											
1	0	0.08	1.75	0.16	762	252	42	67	-2.5	87	23.75
	5	0.09	1.95	3.59	778	253	44	66	-2.5	87	25.36
2	10	0.10	2.15	7.20	780	253	44	67	-3	87	26.75
	15	0.10	2.15	11.03	786	252	46	67	-3	87	26.81
3	20	0.11	2.35	14.83	781	252	48	67	-3.5	89	28.07
	25	0.10	2.10	18.90	796	253	49	68	-3.5	90	26.92
4	30	0.10	2.10	22.81	807	252	50	68	-3.5	88	27.04
	35	0.11	2.30	26.64	804	251	50	68	-4	88	28.32
5	40	0.11	2.35	30.63	786	251	50	69	-4	89	28.12
	45	0.10	2.30	34.70	808	252	51	69	-4	93	27.05
6	50	0.09	1.90	38.76	813	254	51	70	-3.5	91	25.71
	55	0.09	1.90	42.50	819	251	51	70	-3.5	89	25.77
7	60	0.08	1.70	46.16	820	254	51	70	-3.5	93	24.31
	65	0.08	1.70	49.76	825	255	51	71	-3.5	92	24.35
8	70	0.08	1.70	53.32	819	251	51	71	-3.5	90	24.30
	75	0.08	1.70	56.84	817	250	51	71	-3.5	89	24.28
	80	0.08		60.32							
<b>Traverse 2</b>											
1	0	0.09	2.00	60.32	819	252	51	71	-4	90	25.77
	5	0.09	2.00	64.02	823	252	51	71	-4	90	25.81
2	10	0.08	1.80	67.72	845	253	51	71	-4	95	24.54
	15	0.09	1.80	71.39	851	255	52	71	-4	90	26.09
3	20	0.10	2.05	75.04	852	252	51	72	-4	89	27.51
	25	0.11	2.30	78.85	850	252	52	72	-5	89	28.83
4	30	0.11	2.30	82.88	845	251	52	72	-5	89	28.78
	35	0.11	2.30	86.90	851	253	53	72	-5	88	28.85
5	40	0.10	2.20	90.88	850	252	53	72	-5	92	27.49
	45	0.10	2.20	94.83	854	254	53	72	-5	91	27.53
6	50	0.09	2.10	98.75	852	251	53	72	-5	96	26.10
	55	0.09	2.00	102.66	849	252	53	73	-5	94	26.07
7	60	0.09	1.90	106.51	874	249	54	73	-5	92	26.32
	65	0.08	1.80	110.23	873	251	54	73	-5	96	24.81
8	70	0.08	1.80	113.90	880	250	54	73	-5	95	24.87
	75	0.08	1.80	117.54	879	250	53	73	-5	94	24.86
	80			121.12							
Post-test Leak Check = < 0.02CFM @ 10"Hg											
Average		0.09	2.01	120.96	826.5	252.0	50.6	70.4	-	91	26.29

# Particulate Matter and Metals Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> USEPA M5, M29	<b>Test Date:</b> 28-Sep-25
<b>Run:</b> Test #2	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Box Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>											
Pre-Test Leak Check = < 0.02CFM @ 10"Hg											
1	0	0.08	1.70	0.31	903	253	49	64	-3	92	25.10
	5	0.08	1.90	3.70	903	254	52	64	-3.5	96	25.10
2	10	0.09	2.00	7.24	894	253	58	65	-3.5	93	26.53
	15	0.09	2.10	10.90	894	253	64	65	-4	98	26.53
3	20	0.09	2.10	14.75	908	252	65	65	-4	98	26.67
	25	0.08	2.00	18.58	925	251	65	66	-4	102	25.30
4	30	0.10	2.10	22.31	928	253	64	67	-4.5	96	28.32
	35	0.09	2.00	26.22	926	252	62	68	-4.5	96	26.84
5	40	0.10	2.20	29.94	933	252	60	69	-5	97	28.37
	45	0.11	2.30	33.90	939	253	59	70	-5	99	29.81
6	50	0.11	2.30	38.16	938	251	58	71	-5	97	29.80
	55	0.10	2.20	42.33	941	252	57	71	-5	96	28.45
7	60	0.09	2.10	46.28	937	253	57	72	-5	100	26.95
	65	0.10	2.20	50.19	947	252	58	72	-5	97	28.51
8	70	0.09	2.20	54.15	945	252	59	72	-5.5	101	27.03
	75	0.08	2.10	58.08	950	253	61	72	-6	105	25.53
	80	0.08		61.93							
<b>Traverse 2</b>											
1	0	0.09	2.10	61.93	950	253	61	72	-6	100	27.07
	5	0.09	2.10	65.83	947	252	62	72	-6	98	27.05
2	10	0.10	2.20	69.66	944	251	63	73	-6	96	28.48
	15	0.09	2.20	73.62	949	252	62	73	-7	100	27.06
3	20	0.08	2.10	77.52	950	251	62	71	-7	107	25.53
	25	0.09	2.00	81.42	953	252	62	73	-7	96	27.10
4	30	0.11	2.40	85.17	950	252	63	73	-8	94	29.93
	35	0.12	2.70	89.23	948	252	63	72	-9	96	31.24
5	40	0.11	2.60	93.55	942	252	64	73	-9.5	100	29.85
	45	0.10	2.40	97.85	947	253	65	73	-10	101	28.51
6	50	0.10	2.40	102.01	952	253	66	73	-10	100	28.56
	55	0.09	2.30	106.10	947	252	65	73	-9.5	103	27.05
7	60	0.09	2.20	110.13	947	252	65	73	-9.5	102	27.05
	65	0.09	2.20	114.09	945	252	66	73	-9.5	100	27.03
8	70	0.09	2.30	118.00	945	253	67	73	-10	102	27.03
	75	0.08	2.00	121.97	947	252	67	73	-10	104	25.50
	80	0.090		125.80							
Post-test Leak Check = < 0.02CFM @ 10"Hg											
Average		0.09	2.18	125.49	936.7	252.3	61.6	70.5	-	99	27.46

# Particulate Matter and Metals Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> USEPA M5, M29	<b>Test Date:</b> 28-Sep-25
<b>Run:</b> Test #3	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Box Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>											
Pre-Test Leak Check = < 0.02CFM @ 10"Hg											
1	0	0.08	1.90	0.22	904	251	52	68	-3	95	25.02
	5	0.08	2.00	3.78	903	254	49	67	-3.5	96	25.01
2	10	0.08	2.10	7.39	893	253	48	67	-4	99	24.92
	15	0.09	2.20	11.11	889	253	50	68	-4.5	97	26.39
3	20	0.10	2.30	15.01	885	252	50	68	-5	97	27.78
	25	0.10	2.30	19.10	887	249	51	69	-5	94	27.80
4	30	0.09	2.20	23.06	885	252	51	69	-5	103	26.35
	35	0.10	2.40	27.18	883	252	52	70	-7	96	27.76
5	40	0.12	2.90	31.27	880	250	52	70	-9	95	30.37
	45	0.12	2.90	35.66	882	252	53	70	-9	97	30.40
6	50	0.11	2.60	40.16	879	253	53	71	-9	98	29.07
	55	0.10	2.60	44.52	881	252	57	72	-10	101	27.74
7	60	0.09	2.40	48.81	882	251	62	73	-10	101	26.32
	65	0.10	2.40	52.91	887	252	63	73	-10	96	27.80
8	70	0.08	2.30	56.98	887	252	65	73	-10	105	24.86
	75	0.08	2.00	60.99	886	252	66	73	-10	100	24.86
	80	0.090		64.80							
<b>Traverse 2</b>											
1	0	0.10	2.20	64.80	887	251	65	73	-10	90	27.80
	5	0.10	2.40	68.65	889	251	64	73	-11.5	95	27.82
2	10	0.09	2.20	72.70	888	252	62	73	-12	100	26.38
	15	0.10	2.30	76.73	889	252	61	73	-12	94	27.82
3	20	0.11	2.50	80.74	891	253	61	73	-13.5	94	29.20
	25	0.11	2.60	84.91	883	252	60	73	-14	95	29.11
4	30	0.12	2.80	89.17	886	251	60	73	-15	94	30.44
	35	0.12	2.90	93.57	887	253	59	73	-17	97	30.45
5	40	0.10	2.80	98.07	889	252	59	73	-17	105	27.82
	45	0.11	2.50	102.52	889	252	60	73	-16.5	96	29.18
6	50	0.09	2.40	106.80	886	252	60	74	-16	103	26.36
	55	0.08	2.00	110.99	886	252	61	73	-15	104	24.86
7	60	0.09	1.90	114.97	888	253	61	73	-14.5	95	26.38
	65	0.08	2.00	118.81	887	251	62	73	-15	101	24.86
8	70	0.09	2.00	122.67	887	251	62	72	-15	95	26.37
	75	0.09	2.10	126.49	887	251	63	72	-15.5	95	26.37
	80			130.32							
Post-test Leak Check = < 0.02CFM @ 10"Hg											
Average		0.10	2.35	130.11	887.3	251.8	57.9	71.5	-	98	27.30

## Sampling Results - Particulate Matter and Metals Sampling

AEM - Ketek Incinerator

Test : Sample Volume (Rm <sup>3</sup> ) [1] Stack Flow Rate (Rm <sup>3</sup> /s) [1]	Blank	Test #1			Test #2			Test #3			AVERAGE RESULTS	
	-	3.70			3.52			3.38			0.503	
	-	0.521			0.506			0.481				
	Lab Data (mg)	Lab Data (mg)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (mg)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (mg)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)	Concentration (mg/m <sup>3</sup> )	Emission Rate (mg/s)
<b>Filterable Particulate</b>												
Particulate in Acetone Rinse	< 0.40	6.40	-	-	6.80	-	-	3.10	-	-	-	-
Particulate on Filter	< 0.60	134	-	-	134	-	-	74.4	-	-	-	-
Total Filterable Particulate	< 1.00	140	37.9	19.8	141	40.0	20.2	77.5	22.9	11.0	33.6	17.0
<b>Metals</b>	Lab Data (µg)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)
Aluminum	85.0	167	45.1	0.0235	161	45.7	0.0231	142	42.0	0.0202	44.3	0.0223
Antimony	< 0.22	6.63	1.79	0.000933	4.45	1.26	0.000639	1.60	0.473	0.000228	1.18	0.000600
Arsenic	< 1.10	1.90	0.513	0.000267	< 1.10	< 0.312	< 0.000158	< 1.10	< 0.325	< 0.000157	< 0.384	< 0.000194
Barium	13.0	12.9	3.48	0.00181	13.2	3.75	0.00190	11.2	3.31	0.00159	3.51	0.00177
Beryllium	< 0.22	< 0.22	< 0.0594	< 0.000031	< 0.22	< 0.0624	< 3.16E-05	< 0.220	< 0.0651	< 0.0000313	< 0.0623	< 0.0000313
Bismuth	< 0.56	< 0.56	< 0.15	< 0.0000788	< 0.56	< 0.159	< 8.04E-05	< 0.560	< 0.166	< 0.0000797	< 0.159	< 0.0000796
Boron	< 34.0	90.0	24.3	0.0127	41.0	11.6	0.00589	49.0	14.5	0.00697	16.8	0.00851
Cadmium	< 0.11	0.24	0.0648	0.0000338	< 0.11	< 0.0312	< 1.58E-05	< 0.110	< 0.0325	< 0.0000157	< 0.0429	< 0.0000217
Calcium	< 560	< 560	< 151	< 0.0788	< 560	< 159	< 0.0804	< 560	< 166	< 0.0797	< 159	< 0.0796
Chromium	1.50	4.50	1.22	0.000633	16.3	4.63	0.00234	20.9	6.18	0.00297	4.01	0.00198
Cobalt	< 0.22	0.23	0.0621	0.0000324	0.63	0.179	9.04E-05	< 0.220	< 0.0651	< 0.0000313	< 0.102	< 0.0000514
Copper	3.00	31.9	8.62	0.00449	21.1	5.99	0.00303	11.9	3.52	0.00169	6.04	0.00307
Iron	< 220	< 220	< 59.4	< 0.031	< 220	< 62.4	< 0.0316	< 220	< 65.1	< 0.0313	< 62.3	< 0.0313
Lead	< 0.56	6.51	1.76	0.000916	8.74	2.48	0.00125	4.95	1.46	0.000704	1.90	0.000958
Lithium	< 0.56	< 0.56	< 0.151	< 0.0000788	< 0.56	< 0.159	< 8.04E-05	< 0.560	< 0.166	< 0.0000797	< 0.159	< 0.0000796
Magnesium	24.0	58.0	15.7	0.00816	52.0	14.8	0.00747	47.0	13.9	0.00669	14.8	0.00744
Manganese	0.99	4.80	1.30	0.000675	6.51	1.85	0.000935	5.77	1.71	0.000821	1.62	0.000810
Molybdenum	14.5	14.4	3.89	0.00203	15.5	4.40	0.00223	15.0	4.44	0.00213	4.24	0.00213
Nickel	0.74	2.95	0.797	0.000415	16.0	4.54	0.00230	8.67	2.56	0.00123	2.63	0.00132
Potassium	< 110	1940	524	0.273	1690	480	0.243	840	248	0.120	417	0.212
Selenium	< 2.20	< 2.20	< 0.594	< 0.00031	< 2.20	< 0.624	< 0.000316	< 2.20	< 0.651	< 0.000313	< 0.623	< 0.000313
Silver	< 0.22	0.31	0.0837	0.0000436	< 0.22	< 0.0624	< 3.16E-05	< 0.22	< 0.0651	< 0.0000313	< 0.0704	< 0.0000355
Sodium	238	1640	443	0.231	1410	400	0.202	845	250	0.120	364	0.184
Strontium	0.41	1.11	0.300	0.000156	1.01	0.287	0.000145	1.00	0.296	0.000142	0.294	0.000148
Thallium	< 0.22	< 0.22	< 0.0594	< 0.000031	< 0.22	< 0.0624	< 3.16E-05	< 0.22	< 0.0651	< 0.0000313	< 0.0623	< 0.0000313
Tin	154	18.1	4.89	0.00255	21.6	6.13	0.00310	16.8	4.97	0.00239	5.33	0.00268
Titanium	< 11.0	37.0	9.99	0.00521	55.0	15.6	0.00790	14.0	4.14	0.00199	9.92	0.00503
Vanadium	< 1.10	< 1.10	< 0.297	< 0.000155	< 1.10	< 0.312	< 0.000158	< 1.10	< 0.325	< 0.000157	< 0.312	< 0.000156
Zinc	10.1	65.1	17.6	0.00916	75.8	21.5	0.0109	42.4	12.5	0.00603	17.2	0.00869
<b>Mercury</b>	Lab Data (µg)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Lab Data (µg)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)	Concentration (µg/m <sup>3</sup> )	Emission Rate (mg/s)
Filterable Hg	< 0.022	< 0.0220	-	-	< 0.0220	-	-	< 0.0220	-	-	-	-
Non-Filterable Hg	< 0.284	< 0.578	-	-	< 0.604	-	-	< 0.552	-	-	-	-
Total Hg	< 0.306	< 0.600	< 0.162	< 0.0000843	< 0.626	< 0.178	< 0.0000898	< 0.574	< 0.170	< 0.0000816	< 0.170	< 0.0000853

**Notes:**

[1] Sample volume and volumetric flow rate based on dry referenced conditions (101.3kPa, and 25°C)

< indicates that laboratory results were below the detection limit. The detection limit was used to calculate the concentration and emission rate.

Concentration and Emission Rate has been reported to 3 significant figures.

## Particulate Matter and Metals Sampling

<b>Facility:</b> AEM <b>City:</b> Meliadine, NU <b>Source:</b> Ketek Incinerator <b>Reference Method:</b> USEPA M5, M29			<b>Operator:</b> PB <b>Entered by:</b> PB <b>Checked by:</b> OO		
DATA INPUTS	Symbol	Units	Test #1 PM/M29	Test #2 PM/M29	Test #3 PM/M29
Date	-	-	29-Sep-25	30-Sep-25	30-Sep-25
Start Time	-	-	1:13 PM	8:52 AM	2:49 PM
End Time	-	-	4:07 PM	12:32 PM	5:55 PM
Round Stack, Diameter	$d_s$	in	19	19	19
Standard Temperature	$T_s$	°F	77	77	77
Standard Pressure	$P_s$	in.Hg	29.9	29.9	29.9
Nozzle Diameter	$D_n$	in	0.500	0.500	0.500
Average Stack Temperature	$T_s$	°F	1133	1141	1179
Average Meter Temperature	$T_m$	°F	72	67	70
Barometric Pressure	$P_{bar}$	" Hg	29.85	30.06	30.06
Stack Static Pressure	$P_g$	" H <sub>2</sub> O	-0.06	-0.06	-0.06
Average Delta H	dH	" H <sub>2</sub> O	2.34	2.35	2.03
Average Velocity Head (root mean square)	$dP_{rms}$	" H <sub>2</sub> O	0.11	0.11	0.10
Pitot Coefficient	$C_p$	-	0.820	0.820	0.820
	Pitot ID :		4' Inconel		
Gas Sample Volume	$V_m$	ft <sup>3</sup>	128.33	120.12	115.96
DGM Calibration Factor	Y	-	1.0070	1.0070	1.0070
	$\Delta H_{@}$	-	1.8200	1.8200	1.8200
	DGM ID:		I		
Total Sampling Time	min	minutes	160	160	160
Stack Gas Oxygen Concentration	O <sub>2</sub>	%	10.3	10.3	10.3
Stack Gas Carbon Dioxide Concentration	CO <sub>2</sub>	%	8.1	8.1	8.1
Impinger Gain	$W_w$	g	217.4	240.5	217.9

## Particulate Matter and Metals Sampling

Emissions Calculations		Symbol	Units	Test #1 PM/M29	Test #2 PM/M29	Test #3 PM/M29	AVERAGE PM/M29
Facility: AEM		Operator: PB					
City: Meliadine, NU		Entered by: PB					
Source: Ketek Incinerator		Checked by: OO					
Reference Method: USEPA M5, M29							
Nozzle Area	$A_n$	ft <sup>2</sup>	1.36E-03	1.36E-03	1.36E-03	-	
Stack Area	$A_s$	ft <sup>2</sup>	1.87	1.87	1.87	-	
Average Stack Temperature	$T_s$	°R	1593	1601	1639	1611	
Average DGM Temperature	$T_m$	°R	532	527	530	530	
Sample Volume at Reference Conditions	$V_{mStd}$	ft <sup>3</sup>	130.81	124.49	119.46	-	
	<b><math>V_{mmstd}</math></b>	<b>m<sup>3</sup></b>	<b>3.70</b>	<b>3.52</b>	<b>3.38</b>	-	
Vol. of Water Vapour	$V_{wStd}$	ft <sup>3</sup>	10.44	11.54	10.46	-	
Water Fraction	$B_{ws}$		7.4%	8.5%	8.1%	8.0%	
Molecular Weight, dry	$M_d$	g/mole	29.82	29.82	29.82	29.82	
Molecular Weight, wet	$M_w$	g/mole	28.95	28.82	28.87	28.88	
Absolute Stack Pressure	$P_s$	in. Hg	29.85	30.06	30.06	29.99	
Stack Gas Velocity	$U_s$	ft/s	31.65	31.05	30.09	30.93	
	<b><math>U_{sm}</math></b>	<b>m/s</b>	<b>9.65</b>	<b>9.46</b>	<b>9.17</b>	9.43	
Actual Gas Flow Rate	$Q_{act}$	acf/min	3,544	3,477	3,370	3,464	
Dry Gas Flow Rate (dry, ref)	$Q_{ref}$	dscf/min	1,104	1,072	1,020	1,065	
	<b><math>Q_{mref}</math></b>	<b>m<sup>3</sup>/min</b>	<b>31</b>	<b>30</b>	<b>29</b>	30	
	<b><math>Q_{mref (Actual O2)}</math></b>	<b>m<sup>3</sup>/s</b>	<b>0.52</b>	<b>0.51</b>	<b>0.48</b>	0.50	
Isokinetic Rate	I	%	101	99	100	100	

# Particulate Matter and Metals Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> USEPA M5, M29	<b>Test Date:</b> 29-Sep-25
<b>Run:</b> Test #1	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Box Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>											
Pre-Test Leak Check = < 0.02CFM @ 10"Hg											
1	0	0.06	1.20	0.29	1138	253	45	67	-2.5	99	23.31
	5	0.08	1.60	3.15	1136	253	42	68	-3.5	95	26.90
2	10	0.10	1.90	6.31	1133	253	41	68	-5	95	30.05
	15	0.11	2.20	9.85	1129	255	43	68	-6	99	31.48
3	20	0.12	2.50	13.73	1146	253	44	69	-6	103	33.05
	25	0.12	2.30	17.91	1188	244	45	70	-5.5	99	33.48
4	30	0.14	2.60	21.91	1157	251	46	71	-6	95	35.82
	35	0.15	2.90	26.10	1135	252	46	71	-7	97	36.83
5	40	0.15	3.10	30.56	1136	253	47	72	-8	100	36.84
	45	0.14	3.00	35.16	1135	252	47	73	-8	102	35.58
6	50	0.14	3.00	39.70	1133	252	48	73	-8	99	35.56
	55	0.14	3.00	44.11	1131	251	48	73	-9	104	35.53
7	60	0.12	2.70	48.71	1133	253	49	74	-9	107	32.92
	65	0.11	2.50	53.11	1129	251	49	74	-8.5	106	31.48
8	70	0.09	2.20	57.32	1134	253	49	74	-8	109	28.52
	75	0.09	2.00	61.22	1131	252	49	74	-8	105	28.49
	80	0.10		64.99							
<b>Traverse 2</b>											
1	0	0.08	1.70	64.99	1129	254	49	74	-8	104	26.84
	5	0.08	1.70	68.49	1130	252	49	74	-8	98	26.85
2	10	0.08	1.80	71.81	1137	252	48	74	-9	103	26.91
	15	0.09	2.00	75.29	1126	251	48	74	-10	102	28.45
3	20	0.10	2.20	78.95	1124	253	49	74	-11	101	29.97
	25	0.09	2.00	82.78	1140	252	51	74	-11	105	28.57
4	30	0.13	2.50	86.54	1109	252	51	74	-14	97	34.00
	35	0.12	2.40	90.75	1126	252	53	74	-13.5	104	32.85
5	40	0.13	2.60	95.03	1123	252	55	74	-13.5	101	34.16
	45	0.12	2.50	99.36	1132	251	55	73	-12.5	103	32.91
6	50	0.13	2.70	103.62	1129	251	56	73	-13	101	34.22
	55	0.13	2.70	107.96	1099	252	57	73	-13	100	33.90
7	60	0.13	2.70	112.31	1116	253	57	73	-13	101	34.08
	65	0.12	2.50	116.65	1119	253	58	73	-12.5	103	32.77
8	70	0.10	2.10	120.89	1161	253	58	73	-11.5	106	30.31
	75	0.10	2.00	124.86	1134	251	59	73	-11	100	30.06
	80	0.10		128.62							
Post-test Leak Check = < 0.02CFM @ 10"Hg											
Average		0.11	2.34	128.33	1133.1	252.0	49.7	72.4	-	101	31.65

# Particulate Matter and Metals Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> USEPA M5, M29	<b>Test Date:</b> 30-Sep-25
<b>Run:</b> Test #2	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Box Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>											
Pre-Test Leak Check = < 0.02CFM @ 10"Hg											
1	0	0.07	1.40	0.20	1181	252	34	65	-3	98	25.49
	5	0.08	1.70	3.15	1188	254	36	64	-5	105	27.30
2	10	0.09	1.90	6.52	1141	245	36	65	-5.5	106	28.54
	15	0.12	2.20	10.18	1151	251	36	65	-6	95	33.06
3	20	0.12	2.30	13.98	1135	253	37	66	-6	96	32.90
	25	0.12	2.50	17.83	1141	251	37	66	-8	97	32.96
4	30	0.13	2.70	21.71	1140	255	38	66	-12	96	34.29
	35	0.15	3.00	25.69	1127	252	38	67	-15	96	36.69
5	40	0.12	2.80	30.01	1130	252	39	67	-13	99	32.85
	45	0.12	2.80	33.98	1132	255	42	68	-13	99	32.87
6	50	0.12	2.80	37.98	1119	253	42	68	-13	100	32.73
	55	0.12	2.80	42.01	1163	251	43	68	-13	101	33.19
7	60	0.11	2.60	46.03	1147	252	42	68	-12	100	31.62
	65	0.10	2.40	49.87	1137	254	42	68	-11	99	30.05
8	70	0.09	2.30	53.52	1124	253	42	67	-11	97	28.39
	75	0.10	2.30	56.91	1143	253	42	68	-11	99	30.11
	80	0.09		60.53							
<b>Traverse 2</b>											
1	0	0.09	2.20	60.53	1127	252	43	68	-10	99	28.42
	5	0.08	2.10	64.00	1149	249	42	68	-10	100	26.98
2	10	0.08	2.10	67.27	1152	251	42	68	-10	98	27.00
	15	0.10	2.30	70.49	1148	250	43	68	-11	100	30.15
3	20	0.10	2.30	74.16	1144	253	43	68	-11	101	30.12
	25	0.10	2.30	77.86	1135	245	43	68	-11	97	30.03
4	30	0.12	2.50	81.43	1123	251	43	68	-12	100	32.77
	35	0.11	2.30	85.45	1131	252	43	68	-11.5	98	31.46
5	40	0.11	2.30	89.24	1126	250	42	68	-11.5	99	31.41
	45	0.12	2.40	93.08	1137	252	43	68	-11.5	101	32.92
6	50	0.11	2.30	97.14	1151	248	43	68	-11	100	31.65
	55	0.12	2.40	100.97	1141	253	43	68	-11.5	100	32.96
7	60	0.12	2.40	104.98	1135	252	43	68	-12	99	32.90
	65	0.12	2.40	108.98	1129	248	43	68	-12	103	32.84
8	70	0.09	2.20	113.15	1152	251	43	68	-11	100	28.64
	75	0.10	2.30	116.62	1148	249	43	68	-12	101	30.15
	80	0.09		120.32							
Post-test Leak Check = < 0.02CFM @ 10"Hg											
Average		0.11	2.35	120.12	1141.5	251.3	41.0	67.3	-	99	31.05

# Particulate Matter and Metals Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> USEPA M5, M29	<b>Test Date:</b> 30-Sep-25
<b>Run:</b> Test #3	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Box Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>											
Pre-Test Leak Check = < 0.02CFM @ 10"Hg											
1	0	0.08	1.50	0.15	1244	251	35	66	-3	96	27.74
	5	0.08	1.60	3.20	1191	253	37	66	-4	103	27.30
2	10	0.09	1.80	6.54	1193	254	36	66	-5	101	28.98
	15	0.10	2.00	10.00	1177	252	36	66	-5	100	30.40
3	20	0.11	2.20	13.62	1173	253	38	66	-6	102	31.84
	25	0.11	2.20	17.50	1178	253	39	67	-6	102	31.89
4	30	0.12	2.40	21.40	1184	252	40	67	-6.5	99	33.37
	35	0.13	2.70	25.34	1163	252	41	68	-7	102	34.51
5	40	0.13	2.70	29.57	1181	253	41	68	-7	100	34.70
	45	0.13	2.70	33.70	1177	253	42	69	-9	99	34.66
6	50	0.11	2.50	37.80	1175	253	43	70	-11	99	31.86
	55	0.10	2.30	41.60	1172	253	44	70	-14.5	102	30.35
7	60	0.10	2.30	45.34	1171	249	44	71	-17	100	30.34
	65	0.09	2.10	49.00	1166	254	45	71	-19	105	28.74
8	70	0.09	2.00	52.67	1160	252	46	71	-19.5	102	28.69
	75	0.08	1.80	56.25	1181	252	47	71	-19.5	105	27.22
	80			59.69							
<b>Traverse 2</b>											
1	0	0.08	1.70	59.69	1177	253	48	71	-19.5	103	27.19
	5	0.08	1.70	63.07	1158	250	48	71	19.5	99	27.03
2	10	0.08	1.70	66.34	1160	249	49	72	-19.5	97	27.05
	15	0.09	1.80	69.56	1162	250	50	72	-20	98	28.70
3	20	0.09	1.80	73.00	1189	250	50	72	-20	98	28.94
	25	0.10	2.00	76.40	1176	250	50	72	-21	100	30.39
4	30	0.10	2.00	80.09	1196	250	51	72	-21	99	30.57
	35	0.11	2.10	83.69	1166	252	53	73	-21	99	31.77
5	40	0.11	2.10	87.52	1165	250	53	72	-21	100	31.76
	45	0.11	2.10	91.40	1167	250	54	72	-21	98	31.78
6	50	0.10	2.00	95.19	1184	251	54	72	-19	100	30.46
	55	0.11	2.10	98.85	1178	249	55	72	-20	99	31.89
7	60	0.09	1.90	102.65	1201	250	55	72	-17	101	29.05
	65	0.09	1.90	106.13	1195	251	55	72	-17	100	29.00
8	70	0.08	1.70	109.58	1197	253	56	71	-16	100	27.35
	75	0.08	1.70	112.84	1178	252	56	71	-16	100	27.20
	80			116.11							
Post-test Leak Check = < 0.02CFM @ 10"Hg											
Average		0.10	2.03	115.96	1179.2	251.5	46.6	70.1	-	100	30.09

The background features a large, light grey curved shape on the right side, and a blue curved shape on the left side, separated by a white curved line.

# APPENDIX B

**Sampling Results - Dioxins and Furans**  
**AEM - Eco Waste Incinerator**

Parameter	Test #1		Test #2		Test #3		Average Concentration	Average Concentration @ 25 °C and 11 % O <sub>2</sub>	Reg 419 Toxic Equivalency Factors						
	Lab Data	Concentration	Lab Data	Concentration	Lab Data	Concentration			TEF	TEF Concentration	TEF Emission Rate				
Parameter	Lab Data (pg)	Concentration (pg/m <sup>3</sup> )	Lab Data (pg)	Concentration (pg/m <sup>3</sup> )	Lab Data (pg)	Concentration (pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )	-	(pg TEQ/m <sup>3</sup> )	(pg/s)				
2,3,7,8-Tetra CDD *	< 1.60	< 0.325	< 0.582	< 0.723	< 1.50	< 0.402	< 0.708	< 0.483	< 0.870	1	< 0.870	< 0.851			
1,2,3,7,8-Penta CDD *	< 0.76	< 0.515	< 0.922	7.94	< 3.90	< 1.04	< 1.84	< 1.23	< 2.21	1	< 2.21	< 2.16			
1,2,3,4,7,8-Hexa CDD *	< 0.94	< 0.461	< 0.825	< 9.40	< 2.52	< 4.35	8.69	2.33	4.10	< 1.77	< 3.18	< 0.311			
1,2,3,6,7,8-Hexa CDD *	< 0.90	< 0.651	< 1.16	< 26.0	< 6.96	< 12.0	27.8	7.44	13.1	< 5.02	< 9.04	< 0.884			
1,2,3,7,8,9-Hexa CDD *	< 0.87	< 0.597	< 1.07	18.3	4.90	8.47	< 10.0	< 2.68	< 4.72	< 2.72	< 4.90	< 0.479			
1,2,3,4,6,7,8,9-Hepta CDD *	< 1.30	< 3.25	< 5.82	149	39.9	69.0	211	56.5	99.6	< 33.2	< 59.8	< 0.584			
1,2,3,4,6,7,8,9-Octa CDD *	< 5.80	24.8	6.72	12.0	183	49.0	84.7	290	77.6	137	44.5	0.0003			
2,3,7,8-Tetra CDF **	< 1.40	5.46	1.48	2.65	5.80	1.55	2.68	3.54	0.948	1.67	1.33	2.39			
1,2,3,7,8-Penta CDF **	1.19	5.40	1.46	2.62	14.0	3.75	6.48	< 11.0	< 2.94	< 5.19	< 2.72	< 4.90			
2,3,4,7,8-Penta CDF **	< 0.74	8.16	2.21	3.96	35.0	9.37	16.2	37.8	10.1	17.8	7.23	13.0			
1,2,3,4,7,8-Hexa CDF **	< 0.68	< 2.80	< 0.759	< 1.36	24.6	6.59	11.4	< 21.0	< 5.62	< 9.91	< 4.32	< 7.78			
1,2,3,6,7,8-Hexa CDF **	< 0.65	< 3.60	< 0.976	< 1.75	33.2	8.89	15.4	41.1	11.0	19.4	< 6.96	< 12.5			
2,3,4,6,7,8-Hexa CDF **	< 0.67	6.46	1.75	3.13	67.7	18.1	31.3	94.2	25.2	44.5	15.0	27.0			
1,2,3,7,8,9-Hexa CDF **	< 0.82	< 2.90	< 0.786	< 1.41	< 19.0	< 5.09	< 8.79	32.9	8.81	15.5	< 4.89	< 8.80			
1,2,3,4,6,7,8-Hepta CDF **	0.879	16.5	4.47	8.01	170	45.5	78.7	288	77.1	136	42.4	76.3			
1,2,3,4,7,8,9-Hepta CDF **	< 0.71	3.45	0.936	1.67	< 29.0	< 7.77	< 13.4	62.8	16.8	29.6	< 8.50	< 15.3			
1,2,3,4,6,7,8,9-Octa CDF **	< 1.90	15.2	4.12	7.37	76.4	20.5	35.4	159	42.6	75.1	22.4	40.3			
									<b>Total Toxic Equivalency (D &amp; F)</b>		<b>&lt; 16.2</b>	<b>&lt; 15.9</b>			
Parameter	Lab Data (pg)	Lab Data (pg)	Concentration (pg/m <sup>3</sup> )	Emission Rate (pg/s)	Lab Data (pg)	Concentration (pg/m <sup>3</sup> )	Emission Rate (pg/s)	Lab Data (pg)	Concentration (pg/m <sup>3</sup> )	Emission Rate (pg/s)	(pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )	-	(pg TEQ/m <sup>3</sup> )	(pg/s)
33'44'-TetraCB-(77)	< 5.10	332	90.0	161	582	156	269	340	91.0	160	112	202	0.0001	0.0202	0.0197
34'45'-TetraCB-(81)	< 5.10	10.5	2.85	5.09	< 26.0	< 6.96	< 12.0	< 18.0	< 4.82	< 8.50	< 4.88	< 8.78	0.0003	< 0.00264	< 0.00258
23'34'4'-PentaCB-(105)	16.1	486	132	236	701	188	324	592	158	279	159	286	0.00003	0.00859	0.00840
23'44'5'-PentaCB-(114)	< 4.50	34.9	9.46	16.9	< 42.0	< 11.2	< 19.4	< 35.0	< 9.37	< 16.5	< 10.0	< 18.0	0.00003	< 0.000540	< 0.000528
23'44'5'-PentaCB-(118)	31.3	1260	342	611	1970	528	912	1630	436	769	435	783	0.00003	0.0235	0.0230
23'44'5'-PentaCB-(123)	< 4.50	< 20.0	< 5.42	< 9.70	< 19.0	< 5.09	< 8.79	30.6	8.19	14.4	< 6.23	< 11.2	0.00003	< 0.000336	< 0.000329
33'44'5'-PentaCB-(126)	< 4.80	21.6	5.86	10.5	53.8	14.4	24.9	39.9	10.7	18.8	10.3	18.5	0.1	1.85	1.81
HexaCB-(156)+(157)	< 4.60	64.7	17.5	31.4	136	36.4	62.9	< 120	< 32.1	< 56.6	< 28.7	< 51.7	0.00003	< 0.00155	< 0.00152
23'44'55'-HexaCB-(167)	< 3.10	27.7	7.51	13.4	< 37.0	< 9.91	< 17.1	< 46.0	< 12.3	< 21.7	< 9.91	< 17.8	0.00003	< 0.000535	< 0.000523
33'44'55'-HexaCB-(169)	< 3.30	< 9.80	< 2.66	< 4.75	21.4	5.73	9.91	15.3	4.10	7.22	< 4.16	< 7.49	0.03	< 0.225	< 0.220
23'34'45'5'-HeptaCB-(189)	< 4.00	< 6.90	< 1.87	< 3.35	< 36.0	< 9.64	< 16.7	< 34.0	< 9.10	< 16.0	< 6.87	< 12.4	0.00003	< 0.000371	< 0.000363
									<b>Total Toxic Equivalency (PCBs)</b>		<b>&lt; 2.14</b>	<b>&lt; 2.09</b>			

Notes:  
 [1] Sample volume and volumetric flow rate based on dry referenced conditions (101.3 kPa and 25°C)  
 '<' indicates that laboratory results were below the Reportable Detection Limit (RDL). This detection limit was used to calculate the concentration and emission rate.  
 Concentration and Emission Rate has been reported to 3 significant figures.  
 \*CDD = chlorodibenzo-p-dioxin  
 \*\*CDF = chlorodibenzo-p-furan  
 \*\*\*CB = chlorobenzene

## Semi-Volatile Organic Compounds Sampling

Facility: AEM City: Meliadine, NU Source: Eco Waste Incinerator Reference Method: EPS 1/RM/2			Operator: OO Entered by: PB Checked by: OO		
DATA INPUTS	Symbol	Units	Test #1 SVOC	Test #2 SVOC	Test #3 SVOC
Date	-	-	27-Sep-25	28-Sep-25	28-Sep-25
Start Time	-	-	9:58 AM	12:46 PM	5:25 PM
End Time	-	-	12:45 PM	3:40 PM	8:15 PM
Round Stack, Diameter	$d_s$	in	34	34	34
Standard Temperature	$T_s$	°F	77	77	77
Standard Pressure	$P_s$	in.Hg	29.9	29.9	29.9
Nozzle Diameter	$D_n$	in	0.500	0.500	0.500
Average Stack Temperature	$T_s$	°F	823	936	887
Average Meter Temperature	$T_m$	°F	70	70	71
Barometric Pressure	$P_{bar}$	" Hg	29.38	29.49	29.49
Stack Static Pressure	$P_g$	" H <sub>2</sub> O	-0.1	-0.1	-0.1
Average Delta H	dH	" H <sub>2</sub> O	2.33	2.41	2.43
Average Velocity Head (root mean square)	$dP_{rms}$	" H <sub>2</sub> O	0.10	0.10	0.10
Pitot Coefficient	$C_p$	-	0.820	0.820	0.820
	Pitot ID :		4ft Inconel		
Gas Sample Volume	$V_m$	ft <sup>3</sup>	132.33	133.47	133.77
DGM Calibration Factor	Y	-	0.9840	0.9840	0.9840
	$\Delta H_{@}$	-	1.9800	1.9800	1.9800
	DGM ID:		J		
Total Sampling Time	min	minutes	160	160	160
Stack Gas Oxygen Concentration	O <sub>2</sub>	%	15.4	15.4	15.4
Stack Gas Carbon Dioxide Concentration	CO <sub>2</sub>	%	4.4	4.4	4.4
Impinger Gain	$W_w$	g	160.9	177.8	123.0

## Semi-Volatile Organic Compounds Sampling

<b>Facility:</b> AEM	<b>Operator:</b> OO
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> EPS 1/RM/2	

Emissions Calculations	Symbol	Units	Test #1 SVOC	Test #2 SVOC	Test #3 SVOC	AVERAGE SVOC
Nozzle Area	$A_n$	ft <sup>2</sup>	1.36E-03	1.36E-03	1.36E-03	-
Stack Area	$A_s$	ft <sup>2</sup>	6.12	6.12	6.12	-
Average Stack Temperature	$T_s$	°R	1283	1396	1347	1342
Average DGM Temperature	$T_m$	°R	530	530	531	530
Sample Volume at Reference Conditions	$V_{mStd}$	ft <sup>3</sup>	130.31	131.96	131.99	-
	<b><math>V_{mmstd}</math></b>	<b>m<sup>3</sup></b>	<b>3.69</b>	<b>3.73</b>	<b>3.74</b>	-
Vol. of Water Vapour	$V_{wStd}$	ft <sup>3</sup>	7.72	8.53	5.90	-
Water Fraction	$B_{ws}$		5.6%	6.1%	4.3%	5.3%
Molecular Weight, dry	$M_d$	g/mole	29.43	29.43	29.43	29.43
Molecular Weight, wet	$M_w$	g/mole	28.79	28.73	28.94	28.82
Absolute Stack Pressure	$P_s$	in. Hg	29.37	29.48	29.48	29.45
Stack Gas Velocity	$U_s$	ft/s	26.61	28.01	27.07	27.23
	<b><math>U_{sm}</math></b>	<b>m/s</b>	<b>8.11</b>	<b>8.54</b>	<b>8.25</b>	8.30
Actual Gas Flow Rate	$Q_{act}$	acf/min	9,771	10,285	9,940	9,999
Dry Gas Flow Rate (dry, ref)	$Q_{ref}$	dscf/min	3,792	3,663	3,737	3,731
	<b><math>Q_{mref}</math></b>	<b>m<sup>3</sup>/min</b>	<b>107</b>	<b>104</b>	<b>106</b>	106
	<b><math>Q_{mref (Actual O2)}</math></b>	<b>m<sup>3</sup>/s</b>	<b>1.79</b>	<b>1.73</b>	<b>1.76</b>	1.76
	<b><math>Q_{mref (11% O2)}</math></b>	<b>m<sup>3</sup>/s</b>	<b>0.99</b>	<b>0.96</b>	<b>0.98</b>	0.98
Isokinetic Rate	I	%	96	101	99	99

# Semi-Volatile Organic Compounds Sampling

Facility: AEM	Operator: OO
City: Meliadine, NU	Entered by: PB
Source: Eco Waste Incinerator	Checked by: OO
Reference Method: EPS 1/RM/2	Test Date: 27-Sep-25
Run: Test #1	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Filter Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Condenser Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>												
Pre-Test Leak Check = < 0.02CFM @ 10"Hg												
1	0	0.10	2.40	2.17	753	249	39	67	41	-4	96	26.51
	5	0.10	2.40	6.50	785	249	41	66	45	-5	91	26.86
2	10	0.10	2.40	10.53	784	251	42	66	45	-5	90	26.84
	15	0.10	2.40	14.53	781	250	42	66	45	-5	92	26.81
3	20	0.09	2.20	18.62	780	248	43	66	48	-5	98	25.43
	25	0.09	2.20	22.73	789	251	43	67	49	-5	97	25.52
4	30	0.10	2.40	26.82	796	250	43	67	49	-5	97	26.97
	35	0.10	2.40	31.12	792	246	43	67	49	-5	97	26.93
5	40	0.11	2.70	35.40	800	249	44	68	52	-7	96	28.34
	45	0.11	2.70	39.84	796	249	45	69	53	-7	95	28.29
6	50	0.11	2.70	44.24	806	251	45	69	53	-7	97	28.40
	55	0.11	2.70	48.74	811	248	46	69	54	-7	96	28.46
7	60	0.08	2.00	53.17	819	250	46	69	54	-6	101	24.35
	65	0.08	2.00	57.14	806	247	48	70	54	-6	99	24.22
8	70	0.08	2.00	61.05	811	248	48	71	54	-6	96	24.27
	75	0.08	2.00	64.86	821	251	48	71	54	-6	97	24.36
	80			68.70								
<b>Traverse 2</b>												
1	0	0.10	2.40	68.70	827	251	49	71	54	-8	97	27.30
	5	0.10	2.40	72.98	830	251	49	71	54	-8	98	27.34
2	10	0.11	2.70	77.26	823	250	49	71	54	-8	96	28.59
	15	0.11	2.70	81.67	845	250	49	71	55	-9	97	28.84
3	20	0.09	2.10	86.09	846	254	50	71	55	-9	98	26.09
	25	0.09	2.10	90.15	850	250	51	72	54	-9	97	26.13
4	30	0.08	2.00	94.17	849	250	51	72	54	-8	98	24.63
	35	0.08	2.00	98.01	844	247	50	72	53	-8	97	24.58
5	40	0.10	2.40	101.82	851	251	50	72	54	-9	94	27.56
	45	0.10	2.40	105.94	853	249	50	72	54	-9	96	27.58
6	50	0.10	2.40	110.11	852	251	50	73	54	-9	95	27.57
	55	0.10	2.40	114.25	853	250	51	73	54	-9	96	27.58
7	60	0.10	2.40	118.45	849	248	51	73	53	-10	96	27.54
	65	0.10	2.40	122.65	873	250	51	73	53	-10	96	27.79
8	70	0.08	2.00	126.81	867	253	51	73	53	-10	99	24.80
	75	0.08	2.00	130.65	878	250	51	73	53	-10	99	24.90
	80			134.50								
Post-test Leak Check = < 0.02CFM @ 10"Hg												
Average		0.10	2.33	132.33	822.50	249.75	47.16	70.03	51.88	-	96	26.61

# Semi-Volatile Organic Compounds Sampling

Facility: AEM	Operator: OO
City: Meliadine, NU	Entered by: PB
Source: Eco Waste Incinerator	Checked by: OO
Reference Method: EPS 1/RM/2	Test Date: 28-Sep-25
Run: Test #2	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Filter Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Condenser Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>												
Pre-Test Leak Check = < 0.02CFM @ 10"Hg												
1	0	0.09	2.20	0.52	903	249	46	65	44	-4	96	26.63
	5	0.09	2.20	4.35	902	251	44	64	46	-4	98	26.62
2	10	0.10	2.50	8.26	903	251	46	64	56	-6	101	28.07
	15	0.10	2.50	12.50	893	254	46	65	61	-6	100	27.97
3	20	0.09	2.20	16.73	895	250	47	65	61	-6	102	26.55
	25	0.09	2.20	20.80	926	250	47	67	61	-6	102	26.86
4	30	0.10	2.50	24.85	927	250	47	67	61	-7	100	28.32
	35	0.10	2.50	29.04	927	251	46	67	62	-7	102	28.32
5	40	0.11	2.70	33.30	927	249	47	68	63	-7	99	29.70
	45	0.11	2.70	37.63	934	249	48	69	63	-8	100	29.78
6	50	0.12	2.90	42.00	938	250	48	69	63	-9	99	31.15
	55	0.12	2.90	46.50	938	251	48	71	60	-9	101	31.15
7	60	0.10	2.50	51.14	936	250	48	71	60	-9	105	28.41
	65	0.10	2.50	55.55	938	253	47	72	59	-9	103	28.43
8	70	0.08	2.00	59.86	939	250	48	72	59	-7	101	25.44
	75	0.08	2.00	63.64	946	248	48	72	59	-7	101	25.50
	80			67.42								
<b>Traverse 2</b>												
1	0	0.10	2.50	67.42	953	250	50	72	60	-9	102	28.58
	5	0.10	2.50	71.68	950	253	52	72	60	-9	101	28.55
2	10	0.09	2.20	75.91	946	253	53	72	61	-9	105	27.05
	15	0.09	2.20	80.07	943	250	53	72	62	-9	102	27.02
3	20	0.11	2.70	84.12	951	247	54	72	62	-10	100	29.96
	25	0.11	2.70	88.49	953	252	55	72	63	-10	103	29.98
4	30	0.11	2.70	92.99	952	249	55	72	63	-11	102	29.97
	35	0.11	2.70	97.44	948	251	56	72	63	-11	101	29.93
5	40	0.10	2.50	101.87	948	251	56	72	63	-11	103	28.53
	45	0.10	2.50	106.19	944	250	55	72	63	-11	101	28.49
6	50	0.09	2.20	110.41	945	253	55	72	63	-11	103	27.04
	55	0.09	2.20	114.51	952	249	55	72	62	-11	99	27.11
7	60	0.09	2.20	118.45	948	249	56	72	62	-11	99	27.07
	65	0.09	2.20	122.37	947	248	56	72	63	-11	99	27.06
8	70	0.08	2.00	126.31	945	251	56	72	63	-11	103	25.49
	75	0.08	2.00	130.18	941	248	56	72	63	-11	101	25.46
	80			133.99								
Post-test Leak Check = < 0.02CFM @ 10"Hg												
Average		0.10	2.41	133.47	935.56	250.31	50.75	70.00	60.44	-	101	28.01

# Semi-Volatile Organic Compounds Sampling

<b>Facility:</b> AEM	<b>Operator:</b> OO
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> EPS 1/RM/2	<b>Test Date:</b> 28-Sep-25
<b>Run:</b> Test #3	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Filter Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Condenser Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>												
Pre-Test Leak Check = < 0.02CFM @ 10"Hg												
1	0	0.09	2.20	0.18	904	250	47	68	38	-3	96	26.55
	5	0.09	2.20	4.10	906	251	47	68	37	-3	96	26.57
2	10	0.09	2.20	8.00	899	251	48	68	37	-4	96	26.50
	15	0.09	2.20	11.91	893	252	49	68	37	-4	98	26.44
3	20	0.08	2.00	15.90	889	250	49	68	37	-4	97	24.89
	25	0.08	2.00	19.63	886	250	50	69	37	-4	96	24.86
4	30	0.10	2.50	23.36	884	250	50	69	37	-6	99	27.78
	35	0.10	2.50	27.63	885	249	49	69	37	-6	99	27.79
5	40	0.10	2.50	31.91	880	251	49	70	37	-8	98	27.74
	45	0.10	2.50	36.18	880	251	49	70	39	-8	100	27.74
6	50	0.11	2.80	40.53	880	249	49	70	39	-10	100	29.09
	55	0.11	2.80	45.08	878	250	49	71	39	-10	98	29.07
7	60	0.10	2.50	49.55	882	249	48	72	41	-10	101	27.76
	65	0.10	2.50	53.94	881	250	48	72	41	-10	98	27.75
8	70	0.08	2.10	58.21	889	249	46	72	42	-10	102	24.89
	75	0.08	2.10	62.16	887	252	46	72	43	-10	102	24.87
	80			66.12								
<b>Traverse 2</b>												
1	0	0.10	2.50	66.12	887	248	46	72	44	-12	99	27.81
	5	0.10	2.50	70.40	890	249	46	72	44	-12	98	27.84
2	10	0.11	2.90	74.66	889	252	45	73	46	-14	100	29.19
	15	0.11	2.90	79.21	889	251	45	73	47	-14	101	29.19
3	20	0.11	2.90	83.79	891	249	45	73	47	-15	99	29.21
	25	0.11	2.90	88.29	891	251	46	73	50	-15	99	29.21
4	30	0.10	2.60	92.80	883	250	47	73	51	-15	101	27.77
	35	0.10	2.60	97.22	885	250	47	73	52	-15	100	27.79
5	40	0.10	2.60	101.56	888	251	47	73	52	-15	99	27.82
	45	0.10	2.60	105.88	885	248	47	72	54	-15	98	27.79
6	50	0.09	2.30	110.15	885	249	47	72	54	-15	101	26.36
	55	0.09	2.30	114.30	886	248	45	72	53	-15	100	26.37
7	60	0.08	2.10	118.43	887	251	44	72	53	-14	101	24.87
	65	0.08	2.10	122.35	888	249	44	72	53	-14	100	24.88
8	70	0.08	2.10	126.25	887	250	44	72	56	-14	99	24.87
	75	0.08	2.10	130.11	885	249	43	72	53	-14	99	24.85
	80			133.95								
Post-test Leak Check = < 0.02CFM @ 10"Hg												
Average		0.10	2.43	133.77	887.47	249.97	46.91	71.09	44.59	-	99	27.07

**Sampling Results - Dioxins and Furans**  
**AEM - Ketek Incinerator**

Parameter	Test #1	Test #1		Test #2			Test #3			Average Concentration	Average Concentration @ 25 °C and 11 % O <sub>2</sub>	Reg 419 Toxic Equivalency Factors			
	Sample Volume (Rm <sup>3</sup> ) <sup>(1)</sup> Stack Flow Rate (Rm <sup>3</sup> /s) <sup>(2)</sup>	Blank	Lab Data	Concentration	Emission Rate	Lab Data	Concentration	Emission Rate	Lab Data			Concentration	Emission Rate	TEF	TEF Concentration
		Lab Data	Concentration	Emission Rate	Lab Data	Concentration	Emission Rate	Lab Data	Concentration	Emission Rate	(pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )	-	(pg TEQ/m <sup>3</sup> )	(pg/s)
2,3,7,8-Tetra CDD *	< 1.60	3.74	1.06	0.532	< 3.10	< 0.929	< 0.440	< 1.50	< 0.442	< 0.214	< 0.809	< 0.755	1	< 0.76	< 0.394
1,2,3,7,8-Penta CDD *	< 0.76	30.4	8.58	4.33	< 9.90	< 2.97	< 1.41	< 17.0	< 5.01	< 2.43	< 5.52	< 5.15	1	< 5.15	< 2.69
1,2,3,4,7,8-Hexa CDD *	< 0.94	59.7	16.8	8.50	30.2	9.05	4.29	41.9	12.3	5.98	12.8	11.9	0.1	1.19	0.621
1,2,3,6,7,8-Hexa CDD *	< 0.90	163	46.0	23.2	88.9	26.6	12.6	114	33.6	16.3	35.4	33.1	0.1	3.31	1.73
1,2,3,7,8,9-Hexa CDD *	< 0.87	81.7	23.1	11.6	40.8	12.2	5.79	51.9	15.3	7.40	16.9	15.8	0.1	1.58	0.824
1,2,3,4,6,7,8-Hepta CDD *	< 1.30	1470	415	209	1100	330	156	1110	327	158	357	333	0.01	3.33	1.74
1,2,3,4,6,7,8,9-Octa CDD *	< 5.80	1740	491	248	2100	629	298	1830	539	261	553	517	0.0003	0.155	0.0809
2,3,7,8-Tetra CDF **	< 1.40	< 21.0	< 5.93	< 2.99	9.93	2.98	1.41	20.0	5.89	2.85	< 4.93	< 4.60	0.1	< 0.460	< 0.240
1,2,3,7,8-Penta CDF **	< 1.19	106	29.9	15.1	36.6	11.0	5.19	41.7	12.3	5.95	17.7	16.5	0.03	0.496	0.259
2,3,4,7,8-Penta CDF **	< 0.74	361	102	51.4	145	43.5	20.6	185	54.5	26.4	66.6	62.2	0.3	18.7	9.74
1,2,3,4,7,8-Hexa CDF **	< 0.68	< 270	< 76.2	< 38.4	154	46.2	21.9	192	56.5	27.4	< 59.6	< 55.7	0.1	< 5.57	< 2.91
1,2,3,6,7,8-Hexa CDF **	< 0.65	429	121	61.1	191	57.2	27.1	< 240	< 70.7	< 34.2	< 83.0	< 77.5	0.1	< 7.75	< 4.05
2,3,4,6,7,8-Hexa CDF **	< 0.67	1000	282	142	455	136	64.6	658	194	93.9	204	191	0.1	19.1	9.94
1,2,3,7,8,9-Hexa CDF **	< 0.82	355	100	50.5	163	48.8	23.1	230	67.7	32.8	72.3	67.5	0.1	6.75	3.52
1,2,3,4,6,7,8-Hepta CDF **	< 0.879	2690	759	383	1960	587	278	2520	742	360	696	650	0.01	6.50	3.39
1,2,3,4,7,8,9-Hepta CDF **	< 0.71	621	175	88.4	408	122	57.9	483	142	68.9	147	137	0.01	1.37	0.717
1,2,3,4,6,7,8,9-Octa CDF **	< 1.90	1590	449	226	1290	387	183	1410	415	201	417	390	0.0003	0.117	0.0610
<b>Total Toxic Equivalency (D &amp; F)</b>												<b>&lt; 82.2</b>	<b>&lt; 42.9</b>		
Parameter	Lab Data	Lab Data	Concentration	Emission Rate	Lab Data	Concentration	Emission Rate	Lab Data	Concentration	Emission Rate	(pg/m <sup>3</sup> )	(pg/m <sup>3</sup> )	-	(pg TEQ/m <sup>3</sup> )	(pg/s)
33'44'-TetraCB-(77)	< 5.10	912	257	130	426	128	60.5	703	207	100	197	184	0.0001	0.0184	0.00960
34'45'-TetraCB-(81)	< 5.10	187	52.8	26.6	53.8	16.1	7.64	< 83.0	< 24.4	< 11.8	< 31.1	< 29.1	0.0003	< 0.00871	< 0.00455
23'34'4'-PentaCB-(105)	16.1	963	272	137	619	186	87.8	764	225	109	227	212	0.00003	0.00636	0.00332
23'44'5'-PentaCB-(114)	< 4.50	< 130	< 36.7	< 18.5	73.6	22.1	10.4	< 97.0	< 28.6	< 13.8	< 29.1	< 27.2	0.00003	< 0.000815	< 0.000426
23'44'5'-PentaCB-(118)	31.3	2250	635	320	1470	441	209	1810	533	258	536	501	0.00003	0.0150	0.00784
23'44'5'-PentaCB-(123)	< 4.50	118	33.3	16.8	< 30.0	< 8.99	< 4.26	< 53.0	< 15.6	< 7.56	< 19.3	< 18.0	0.00003	< 0.000541	< 0.000282
33'44'5'-PentaCB-(126)	< 4.80	368	104	52.4	205	61.4	29.1	238	70.1	34.0	78.5	73.3	0.1	7.33	3.83
HexaCB-(156)+(157)	< 4.60	600	169	85.4	338	101	48.0	455	134	64.9	135	126	0.00003	0.00378	0.00197
23'44'55'-HexaCB-(167)	< 3.10	145	40.9	20.6	89.9	26.9	12.8	96.6	28.4	13.8	32.1	30.0	0.00003	0.000899	0.000469
33'44'55'-HexaCB-(169)	< 3.30	156	44.0	22.2	< 83.0	< 24.9	< 11.8	< 130	< 38.3	< 18.5	< 35.7	< 33.3	0.03	< 1.00	< 0.522
23'34'45'5'-HeptaCB-(189)	< 4.00	653	184	92.9	304	91.1	43.1	494	145	70.5	140	131	0.00003	0.00392	0.00205
<b>Total Toxic Equivalency (PCBs)</b>												<b>&lt; 8.39</b>	<b>&lt; 4.38</b>		

**Notes:**  
(1) Sample volume and volumetric flow rate based on dry referenced conditions (101.3 kPa and 25°C)  
< indicates that laboratory results were below the Reportable Detection Limit (RDL). This detection limit was used to calculate the concentration and emission rate.  
Concentration and Emission Rate has been reported to 3 significant figures.  
\*CDD = chlorodibenzo-p-dioxin  
\*CDF = chlorodibenzo-p-furan  
\*\*CB = chlorobenzene

## Semi-Volatile Organic Compounds Sampling

Facility: AEM City: Meliadine, NU Source: Ketek Incinerator Reference Method: EPS 1/RM/2			Operator: OO Entered by: PB Checked by: OO		
DATA INPUTS	Symbol	Units	Test #1 SVOC	Test #2 SVOC	Test #3 SVOC
Date	-	-	29-Sep-25	30-Sep-25	30-Sep-25
Start Time	-	-	1:13 PM	8:52 AM	2:49 PM
End Time	-	-	4:07 PM	12:32 PM	5:55 PM
Round Stack, Diameter	$d_s$	in	19	19	19
Standard Temperature	$T_s$	°F	77	77	77
Standard Pressure	$P_s$	in.Hg	29.9	29.9	29.9
Nozzle Diameter	$D_n$	in	0.500	0.500	0.500
Average Stack Temperature	$T_s$	°F	1157	1147	1179
Average Meter Temperature	$T_m$	°F	71	67	71
Barometric Pressure	$P_{bar}$	" Hg	29.85	30.06	30.06
Stack Static Pressure	$P_g$	" H <sub>2</sub> O	-0.06	-0.06	-0.06
Average Delta H	dH	" H <sub>2</sub> O	2.29	2.01	2.03
Average Velocity Head (root mean square)	$dP_{rms}$	" H <sub>2</sub> O	0.11	0.10	0.10
Pitot Coefficient	$C_p$	-	0.820	0.820	0.820
	Pitot ID :		4ft Inconel		
Gas Sample Volume	$V_m$	ft <sup>3</sup>	125.29	116.50	119.33
DGM Calibration Factor	Y	-	0.9840	0.9840	0.9840
	$\Delta H_{@}$	-	1.9800	1.9800	1.9800
	DGM ID:		J		
Total Sampling Time	min	minutes	160	160	160
Stack Gas Oxygen Concentration	O <sub>2</sub>	%	10.3	10.3	10.3
Stack Gas Carbon Dioxide Concentration	CO <sub>2</sub>	%	8.1	8.1	8.1
Impinger Gain	$W_w$	g	218.7	224.5	221.4

## Semi-Volatile Organic Compounds Sampling

<b>Facility:</b> AEM	<b>Operator:</b> OO
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> EPS 1/RM/2	

Emissions Calculations	Symbol	Units	Test #1 SVOC	Test #2 SVOC	Test #3 SVOC	AVERAGE SVOC
Nozzle Area	$A_n$	ft <sup>2</sup>	1.36E-03	1.36E-03	1.36E-03	-
Stack Area	$A_s$	ft <sup>2</sup>	1.87	1.87	1.87	-
Average Stack Temperature	$T_s$	°R	1617	1607	1639	1621
Average DGM Temperature	$T_m$	°R	531	527	531	529
Sample Volume at Reference Conditions	$V_{mStd}$	ft <sup>3</sup>	125.21	117.91	119.99	-
	<b><math>V_{mmstd}</math></b>	<b>m<sup>3</sup></b>	<b>3.54</b>	<b>3.34</b>	<b>3.40</b>	-
Vol. of Water Vapour	$V_{wStd}$	ft <sup>3</sup>	10.50	10.78	10.63	-
Water Fraction	$B_{ws}$		7.7%	8.4%	8.1%	8.1%
Molecular Weight, dry	$M_d$	g/mole	29.82	29.82	29.82	29.82
Molecular Weight, wet	$M_w$	g/mole	28.91	28.83	28.86	28.87
Absolute Stack Pressure	$P_s$	in. Hg	29.85	30.06	30.06	29.99
Stack Gas Velocity	$U_s$	ft/s	31.22	29.13	30.32	30.23
	<b><math>U_{sm}</math></b>	<b>m/s</b>	<b>9.52</b>	<b>8.88</b>	<b>9.24</b>	9.21
Actual Gas Flow Rate	$Q_{act}$	acf/min	3,496	3,263	3,396	3,385
Dry Gas Flow Rate (dry, ref)	$Q_{ref}$	dscf/min	1,069	1,004	1,027	1,033
	<b><math>Q_{mref}</math></b>	<b>m<sup>3</sup>/min</b>	<b>30</b>	<b>28</b>	<b>29</b>	29
	<b><math>Q_{mref (Actual O2)}</math></b>	<b>m<sup>3</sup>/s</b>	<b>0.50</b>	<b>0.47</b>	<b>0.48</b>	0.49
	<b><math>Q_{mref (11% O2)}</math></b>	<b>m<sup>3</sup>/s</b>	<b>0.54</b>	<b>0.51</b>	<b>0.52</b>	0.52
Isokinetic Rate	I	%	100	100	100	100

# Semi-Volatile Organic Compounds Sampling

Facility: AEM	Operator: OO
City: Meliadine, NU	Entered by: PB
Source: Ketek Incinerator	Checked by: OO
Reference Method: EPS 1/RM/2	Test Date: 29-Sep-25
Run: Test #1	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Filter Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Condenser Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>												
Pre-Test Leak Check = < 0.02CFM @ 10"Hg												
1	0	0.08	1.80	0.31	1140	250	46	67	44	-4	101	26.96
	5	0.08	1.80	3.73	1137	252	44	67	40	-4	103	26.93
2	10	0.08	1.80	7.23	1163	249	41	68	41	-7	104	27.15
	15	0.08	1.80	10.74	1170	248	41	68	41	-7	101	27.21
3	20	0.10	2.10	14.13	1147	250	41	68	42	-8	104	30.20
	25	0.10	2.10	18.06	1228	254	41	69	44	-8	102	30.96
4	30	0.12	2.50	21.84	1191	249	41	69	44	-9	101	33.54
	35	0.12	2.50	25.99	1162	251	41	70	44	-9	98	33.24
5	40	0.12	2.50	30.06	1143	249	41	70	44	-10	102	33.05
	45	0.12	2.50	34.29	1180	250	42	71	46	-10	101	33.42
6	50	0.13	2.70	38.45	1181	249	42	71	46	-14	102	34.80
	55	0.13	2.70	42.84	1167	249	42	72	47	-15	100	34.65
7	60	0.13	2.70	47.15	1164	248	42	72	45	-15	98	34.62
	65	0.13	2.70	51.37	1160	252	42	72	46	-17	99	34.58
8	70	0.10	2.10	55.67	1152	246	43	73	47	-15	99	30.25
	75	0.10	2.10	59.46	1168	250	43	73	47	-15	100	30.40
	80			63.24								
<b>Traverse 2</b>												
1	0	0.06	1.40	63.24	1142	249	45	71	50	-12	99	23.36
	5	0.06	1.40	66.16	1122	249	47	71	50	-12	95	23.21
2	10	0.08	1.80	69.00	1141	251	49	71	50	-14	98	26.96
	15	0.08	1.80	72.36	1145	254	49	71	50	-14	99	27.00
3	20	0.12	2.50	75.72	1148	252	49	71	51	-16	102	33.10
	25	0.12	2.50	79.95	1167	251	49	71	54	-16	100	33.29
4	30	0.11	2.30	84.08	1158	249	55	71	56	-16	97	31.79
	35	0.11	2.30	87.93	1136	251	55	71	56	-16	101	31.57
5	40	0.15	3.10	91.97	1147	248	59	71	58	-19	100	36.99
	45	0.15	3.10	96.63	1176	250	59	71	59	-19	101	37.32
6	50	0.13	2.80	101.30	1120	253	59	71	59	-18	99	34.15
	55	0.13	2.80	105.62	1165	248	59	71	59	-18	101	34.63
7	60	0.12	2.50	109.98	1167	249	60	71	59	-18	100	33.29
	65	0.12	2.50	114.14	1140	251	61	71	60	-18	101	33.01
8	70	0.09	2.00	118.35	1147	251	62	72	61	-15	99	28.65
	75	0.09	2.00	121.93	1153	252	63	72	61	-15	102	28.71
	80			125.60								
Post-test Leak Check = < 0.02CFM @ 10"Hg												
Average		0.11	2.29	125.29	1157.09	250.13	48.53	70.56	50.03	-	100	31.22

# Semi-Volatile Organic Compounds Sampling

Facility: AEM	Operator: OO
City: Meliadine, NU	Entered by: PB
Source: Ketek Incinerator	Checked by: OO
Reference Method: EPS 1/RM/2	Test Date: 30-Sep-25
Run: Test #2	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Filter Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Condenser Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>												
Pre-Test Leak Check = < 0.02CFM @ 10"Hg												
1	0	0.06	1.30	0.32	1205	248	34	65	35	-2.5	101	23.76
	5	0.06	1.30	3.20	1168	250	34	65	34	-2.5	100	23.50
2	10	0.06	1.30	6.07	1186	248	34	65	35	-5	106	23.63
	15	0.06	1.30	9.09	1166	250	36	65	35	-6	101	23.48
3	20	0.08	1.70	12.00	1161	250	36	65	35	-7	101	27.07
	25	0.08	1.70	15.37	1148	250	35	65	35	-7	101	26.96
4	30	0.11	2.20	18.75	1137	248	34	66	35	-8	102	31.51
	35	0.11	2.20	22.75	1131	251	34	66	35	-8	100	31.45
5	40	0.13	2.80	26.70	1123	253	34	67	37	-10	100	34.10
	45	0.13	2.80	31.00	1131	249	34	68	38	-10	100	34.19
6	50	0.13	2.80	35.28	1132	251	34	68	38	-13	100	34.20
	55	0.13	2.80	39.58	1131	253	34	68	39	-13	102	34.19
7	60	0.11	2.20	43.94	1147	248	34	68	38	-13	101	31.61
	65	0.11	2.20	47.90	1139	247	34	68	38	-13	100	31.53
8	70	0.08	1.70	51.83	1134	252	35	68	37	-14	100	26.85
	75	0.08	1.70	55.20	1140	254	35	68	37	-14	101	26.90
	80			58.60								
<b>Traverse 2</b>												
1	0	0.06	1.30	58.60	1130	250	36	68	37	-10	99	23.22
	5	0.06	1.30	61.50	1142	245	36	68	37	-13	99	23.31
2	10	0.08	1.70	64.39	1130	249	36	68	37	-15	100	26.81
	15	0.08	1.70	67.77	1131	251	36	68	37	-15	99	26.82
3	20	0.10	2.10	71.10	1140	253	37	68	37	-17	101	30.07
	25	0.10	2.10	74.90	1148	253	37	68	37	-17	100	30.15
4	30	0.11	2.30	78.65	1121	252	37	68	37	-17	100	31.35
	35	0.11	2.30	82.60	1146	246	37	67	38	-18	99	31.60
5	40	0.11	2.30	86.50	1153	245	37	67	38	-18	101	31.67
	45	0.11	2.30	90.45	1155	244	37	67	38	-18	100	31.69
6	50	0.12	2.50	94.37	1149	251	38	68	38	-20	101	33.03
	55	0.12	2.50	98.50	1156	254	38	68	38	-20	100	33.11
7	60	0.10	2.10	102.59	1159	253	38	68	38	-17	100	30.25
	65	0.10	2.10	106.33	1163	250	38	68	38	-17	100	30.29
8	70	0.08	1.80	110.05	1156	250	38	68	38	-17	101	27.03
	75	0.08	1.80	113.44	1150	250	38	68	38	-17	101	26.98
	80			116.82								
Post-test Leak Check = < 0.02CFM @ 10"Hg												
Average		0.10	2.01	116.50	1147.13	249.94	35.78	67.19	36.94	-	100	29.13

# Semi-Volatile Organic Compounds Sampling

<b>Facility:</b> AEM	<b>Operator:</b> OO
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Reference Method:</b> EPS 1/RM/2	<b>Test Date:</b> 30-Sep-25
<b>Run:</b> Test #3	

Pt.	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Actual Meter Vol. (ft <sup>3</sup> )	Stack Temp (°F)	Filter Temp (°F)	Imp Temp (°F)	Meter Temp (°F)	Condenser Temp (°F)	Vac Pressure ("Hg)	Percentage Isokinetic (%)	Stack Velocity (ft/sec)
<b>Traverse 1</b>												
Pre-Test Leak Check = < 0.02CFM @ 10"Hg												
1	0	0.08	1.60	0.24	1212	248	42	65	42	-3	98	27.48
	5	0.08	1.60	3.47	1211	251	40	65	39	-4	100	27.47
2	10	0.08	1.60	6.76	1190	252	40	65	39	-4	96	27.30
	15	0.08	1.60	9.92	1187	251	42	66	39	-5	101	27.28
3	20	0.10	2.00	13.25	1179	250	42	66	39	-5	101	30.42
	25	0.10	2.00	17.00	1174	251	41	66	40	-5	101	30.37
4	30	0.11	2.20	20.75	1176	252	40	67	40	-5	100	31.88
	35	0.11	2.20	24.65	1184	249	40	67	40	-5	101	31.95
5	40	0.10	2.00	28.56	1162	249	40	68	40	-5	99	30.26
	45	0.10	2.00	32.28	1156	250	40	68	41	-5	99	30.21
6	50	0.10	2.00	36.01	1174	253	40	69	40	-5	100	30.37
	55	0.10	2.00	39.73	1183	250	40	69	40	-5	101	30.46
7	60	0.12	2.40	43.51	1173	251	40	70	41	-8	102	33.26
	65	0.12	2.40	47.69	1177	246	40	70	41	-8	102	33.30
8	70	0.10	2.00	51.85	1166	250	41	71	44	-7	101	30.30
	75	0.10	2.00	55.63	1163	249	41	71	44	-7	97	30.27
	80			59.28								
<b>Traverse 2</b>												
1	0	0.07	1.50	59.28	1158	249	43	72	47	-7	96	25.29
	5	0.07	1.50	62.33	1160	251	43	72	47	-7	101	25.30
2	10	0.09	1.90	65.51	1173	250	44	73	49	-7	101	28.81
	15	0.09	1.90	69.11	1162	253	44	73	49	-7	100	28.71
3	20	0.13	2.60	72.70	1175	251	44	73	50	-11	98	34.64
	25	0.13	2.60	76.91	1172	248	45	73	50	-11	98	34.61
4	30	0.11	2.20	81.12	1153	251	45	73	51	-11	101	31.65
	35	0.11	2.20	85.15	1191	256	47	73	55	-11	101	32.02
5	40	0.11	2.20	89.13	1183	251	47	73	56	-11	101	31.94
	45	0.11	2.20	93.09	1181	251	48	74	56	-11	98	31.93
6	50	0.12	2.40	96.97	1200	250	52	75	57	-15	99	33.54
	55	0.12	2.40	101.02	1180	251	52	75	58	-15	100	33.33
7	60	0.09	1.90	105.15	1197	252	55	75	59	-15	103	29.02
	65	0.09	1.90	108.80	1181	250	55	75	59	-15	101	28.88
8	70	0.09	1.90	112.42	1198	250	57	74	59	-15	101	29.03
	75	0.09	1.90	116.00	1205	249	57	74	59	-15	101	29.09
	80			119.57								
Post-test Leak Check = < 0.02CFM @ 10"Hg												
Average		0.10	2.03	119.33	1179.25	250.47	44.59	70.63	47.19	-	100	30.32

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# APPENDIX C

## EPS 1/RM/1 - Hydrogen Chloride Sampling

ECOWASTE

Test :	Blank	Test No. 1			Test No. 2			Test No. 3			Average	
Sample ID :	BLANK-EPS 1/RM/1	EPS 1/RM/1-T1			EPS 1/RM/1-T2			EPS 1/RM/1-T3			-	
Sample Volume (Rm <sup>3</sup> ) <sup>[1]</sup> :	-	0.041			0.041			0.041			0.041	
Stack Flow Rate (Rm <sup>3</sup> /s) <sup>[2]</sup> :	-	1.79			1.74			1.80			1.78	
Parameter	Lab Data	Lab Data	Conc.	Emission Rate	Lab Data	Conc.	Emission Rate	Lab Data	Conc.	Emission Rate	Conc.	Emission Rate
	(mg)	(mg)	(mg/m <sup>3</sup> )	(mg/s)	(mg)	(mg/m <sup>3</sup> )	(mg/s)	(mg)	(mg/m <sup>3</sup> )	(mg/s)	(mg/m <sup>3</sup> )	(mg/s)
Hydrogen Chloride	<0.022	0.678	16.5	29.4	0.547	13.2	23.1	0.802	19.4	35.0	16.4	29.2

Notes:

[1] Sample volume and volumetric flow rate based on dry referenced conditions (101.3kPa, 25 °C)

[2] Flow rate based on average of isokinetic tests conducted that day

## EPS 1/RM/1 - Hydrogen Chloride Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Run:</b> Test #1	<b>Test Date:</b> Sep-27-25
<b>Method:</b> EPS 1/RM/1	<b>PBar:</b> 29.38
	<b>DGM Y:</b> 1.026

Time (min)	Orifice Press. ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°F)	Vacuum (in Hg)	Condenser Temp (°F)	Sampling Rate (L/min)
<b>START TIME:</b> 13:32		Pre-test Leak Check: Good				
0	1.0	0.0	67	0.0	17	-
5	1.0	10.01	67	0.0	17	2.00
10	1.0	20.02	67	0.0	16	2.00
15	1.0	30.03	67	0.0	16	2.00
20	1.0	40.04	67	0.0	16	2.00
<b>END TIME:</b> 13:52		Post-test Leak Check: Good				
Average	1.0		67		16	2.00
Total Volume Actual (m <sup>3</sup> )		0.040				
<b>Total Volume Ref. (Rm<sup>3</sup>)</b>		<b>0.041</b>				

## EPS 1/RM/1 - Hydrogen Chloride Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Run:</b> Test #2	<b>Test Date:</b> Sep-28-25
<b>Method:</b> EPS 1/RM/1	<b>PBar:</b> 29.49
	<b>DGM Y:</b> 1.026

Time (min)	Orifice Press. ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°F)	Vacuum (in Hg)	Condenser Temp (°F)	Sampling Rate (L/min)
<b>START TIME:</b> 15:57		Pre-test Leak Check: Good				
0	1.0	0.0	67	0.0	16	-
5	1.0	10.02	67	0.0	16	2.00
10	1.0	20.00	68	0.0	16	2.00
15	1.0	30.01	68	0.0	16	2.00
20	1.0	40.02	68	0.0	17	2.00
<b>END TIME:</b> 16:17		Post-test Leak Check: Good				
Average	1.0		68		16	2.00
Total Volume Actual (m <sup>3</sup> )		0.040				
<b>Total Volume Ref. (Rm<sup>3</sup>)</b>		<b>0.041</b>				

## EPS 1/RM/1 - Hydrogen Chloride Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Eco Waste Incinerator	<b>Checked by:</b> OO
<b>Run:</b> Test #3	<b>Test Date:</b> Sep-28-25
<b>Method:</b> EPS 1/RM/1	<b>PBar:</b> 29.49
	<b>DGM Y:</b> 1.026

Time (min)	Orifice Press. ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°F)	Vacuum (in Hg)	Condenser Temp (°F)	Sampling Rate (L/min)
<b>START TIME:</b> 16:20		Pre-test Leak Check: Good				
0	1.0	0.0	68	0.0	17	-
5	1.0	10.00	68	0.0	17	2.00
10	1.0	20.04	68	0.0	17	2.01
15	1.0	30.02	68	0.0	17	2.00
20	1.0	40.00	68	0.0	17	2.00
<b>END TIME:</b> 16:40		Post-test Leak Check: Good				
Average	1.0		68		17	2.00
Total Volume Actual (m <sup>3</sup> )		0.040				
<b>Total Volume Ref. (Rm<sup>3</sup>)</b>		<b>0.041</b>				

## EPS 1/RM/1 - Hydrogen chloride Sampling

KETEK

Test :	Blank	Test No. 1			Test No. 2			Test No. 3			Average	
Sample ID :	BLANK-EPS 1/RM/1	EPS 1/RM/1-T1			EPS 1/RM/1-T2			EPS 1/RM/1-T3			-	
Sample Volume (Rm <sup>3</sup> ) <sup>[1]</sup> :	-	0.042			0.042			0.042			0.042	
Stack Flow Rate (Rm <sup>3</sup> /s) <sup>[2]</sup> :	-	0.51			0.49			0.48			0.50	
Parameter	Lab Data	Lab Data	Conc.	Emission Rate	Lab Data	Conc.	Emission Rate	Lab Data	Conc.	Emission Rate	Conc.	Emission Rate
	(mg)	(mg)	(mg/m <sup>3</sup> )	(mg/s)	(mg)	(mg/m <sup>3</sup> )	(mg/s)	(mg)	(mg/m <sup>3</sup> )	(mg/s)	(mg/m <sup>3</sup> )	(mg/s)
Hydrogen Chloride	<0.022	2.28	54.6	28.0	0.304	7.23	3.54	1.27	30.3	14.7	30.7	15.4

Notes:

[1] Sample volume and volumetric flow rate based on dry referenced conditions (101.3kPa, 25 ° C)

[2] Flow rate based on average of isokinetic tests conducted that day

# EPS 1/RM/1 - Hydrogen Chloride Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Run:</b> Test #1	<b>Test Date:</b> Sep-29-25
<b>Method:</b> EPS 1/RM/1	<b>PBar:</b> 29.85
	<b>DGM Y:</b> 1.026

Time (min)	Orifice Press. ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°F)	Vacuum (in Hg)	Condenser Temp (°F)	Sampling Rate (L/min)
<b>START TIME:</b> 15:02		Pre-test Leak Check: Good				
0	1.0	0.0	68	0.0	16	-
5	1.0	10.01	68	0.0	16	2.00
10	1.0	20.03	68	0.0	15	2.00
15	1.0	30.05	68	0.0	15	2.00
20	1.0	40.01	68	0.0	15	1.99
<b>END TIME:</b> 15:22		Post-test Leak Check: Good				
Average	1.0		68		15	2.00
Total Volume Actual (m <sup>3</sup> )		0.040				
<b>Total Volume Ref. (Rm<sup>3</sup>)</b>		<b>0.042</b>				

## EPS 1/RM/1 - Hydrogen Chloride Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Run:</b> Test #2	<b>Test Date:</b> Sep-30-25
<b>Method:</b> EPS 1/RM/1	<b>PBar:</b> 30.06
	<b>DGM Y:</b> 1.026

Time (min)	Orifice Press. ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°F)	Vacuum (in Hg)	Condenser Temp (°F)	Sampling Rate (L/min)
<b>START TIME:</b>	11:15	Pre-test Leak Check: Good				
0	1.0	0.0	69	0.0	16	-
5	1.0	10.02	69	0.0	17	2.00
10	1.0	20.02	68	0.0	17	2.00
15	1.0	30.01	68	0.0	16	2.00
20	1.0	40.04	69	0.0	16	2.01
<b>END TIME:</b>	11:35	Post-test Leak Check: Good				
Average	1.0		69		16	2.00
Total Volume Actual (m <sup>3</sup> )		0.040				
<b>Total Volume Ref. (Rm<sup>3</sup>)</b>		<b>0.042</b>				

## EPS 1/RM/1 - Hydrogen Chloride Sampling

<b>Facility:</b> AEM	<b>Operator:</b> PB
<b>City:</b> Meliadine, NU	<b>Entered by:</b> PB
<b>Source:</b> Ketek Incinerator	<b>Checked by:</b> OO
<b>Run:</b> Test #3	<b>Test Date:</b> Sep-30-25
<b>Method:</b> EPS 1/RM/1	<b>PBar:</b> 30.06
	<b>DGM Y:</b> 1.026

Time (min)	Orifice Press. ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°F)	Vacuum (in Hg)	Condenser Temp (°F)	Sampling Rate (L/min)
<b>START TIME:</b> 11:42		Pre-test Leak Check: Good				
0	1.0	0.0	70	0.0	16	-
5	1.0	10.07	70	0.0	15	2.01
10	1.0	20.04	71	0.0	15	1.99
15	1.0	30.01	71	0.0	15	1.99
20	1.0	40.02	71	0.0	15	2.00
<b>END TIME:</b> 12:02		Post-test Leak Check: Good				
Average	1.0		71		15	2.00
Total Volume Actual (m <sup>3</sup> )		0.040				
<b>Total Volume Ref. (Rm<sup>3</sup>)</b>		<b>0.042</b>				

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# APPENDIX D

**Summary of CEM Data**  
**Agnico Eagle Meladine**  
**ECO WASTE**

Overall Average Concentrations				
O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
15.4	4.36	1.05	51.4	7.63

Test ID: 1		Date: 27-Sep-25			
Time	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
10:00 AM to 12:40 PM	15.6	4.17	0.981	48.1	8.64

Test ID: 2		Date: 28-Sep-25			
Time	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
12:45 PM to 3:25 PM	14.8	4.91	1.23	73.2	9.67

Test ID: 3		Date: 28-Sep-25			
Time	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
5:25 PM to 8:05 PM	15.8	3.99	0.938	32.9	4.57

Test: 1										
Date	27-Sep-25									
Analyzer	O2		CO2		CO		NOx		SO2	
Low										
Zero Value (Cv)	0.00		0.00		0.00		0.00		0.00	
Direct (C Dir)	0.00		0.00		0.00		0.00		0.00	
Calibration Error (ACE)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
System Initial (Csi)	0.01		0.00		0.00		0.30		0.10	
System Post (Csf)	0.07		0.02		0.30		0.11		0.21	
Average (Cm)	0.04		0.01		0.15		0.21		0.16	
System Bias Initial (SBI)	0.1%	PASS	0.0%	PASS	0.0%	PASS	0.1%	PASS	0.2%	PASS
System Bias Post (SBP)	0.4%	PASS	0.1%	PASS	0.6%	PASS	0.0%	PASS	0.4%	PASS
Drift Assessment (D)	0.30%	PASS	0.13%	PASS	0.60%	PASS	-0.06%	PASS	0.22%	PASS
Mid										
Mid Value (Cv)	10.00		7.50		25.00		150.00		25.00	
Direct (C Dir)	10.00		7.49		24.90		148.80		24.80	
Calibration Error (ACE)	0.00%	PASS	-0.07%	PASS	-0.20%	PASS	-0.40%	PASS	-0.40%	PASS
System Initial (Csi)	7.30		24.70		149.80		24.40		24.10	
System Post (Csf)	7.40		24.80		148.70		24.10		24.3	
Average (Cm)	7.35		24.75		149.8		24.3		24.3	
System Bias Initial (SBI)	N/A	-	-1.3%	PASS	-0.4%	PASS	0.3%	PASS	-0.8%	PASS
System Bias Post (SBP)	N/A	-	-0.6%	PASS	-0.2%	PASS	0.0%	PASS	-1.4%	PASS
Drift Assessment (D)	N/A	-	0.67%	PASS	0.20%	PASS	-0.37%	PASS	-0.60%	PASS
High										
High Value (Cv)	20.00		15.00		50.00		300.00		50.00	
Direct (C Dir)	20.00		15.00		50.00		300.00		50.00	
Calibration Error (ACE)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
System Initial (Csi)	19.95									
System Post (Csf)	19.98									
Average (Cm)	19.965									
System Bias Initial (SBI)	-0.3%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
System Bias Post (SBP)	-0.1%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
Drift Assessment (D)	0.15%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
Analysers Span (Range)	25		30		200		500		200	
Average	15.59	15.61	4.09	4.17	1.12	0.98	48.16	48.09	8.48	8.64
Time	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected
10:00:26	15.1	15.1	4.5	4.6	1.4	1.3	33.5	33.4	6.7	6.8
10:01:26	15.1	15.1	4.5	4.6	1.3	1.2	33.9	33.8	7.2	7.4
10:02:26	15.3	15.3	4.3	4.4	1.5	1.3	32.4	32.3	6.5	6.6
10:03:26	15.1	15.1	4.5	4.6	1.4	1.3	34.7	34.6	6.9	7.0
10:04:26	15.2	15.2	4.3	4.4	1.3	1.2	35.5	35.4	6.5	6.6
10:05:26	15.2	15.2	4.4	4.5	1.4	1.3	34.1	34.0	6.6	6.6
10:06:26	15.2	15.2	4.4	4.5	1.3	1.1	34.9	34.8	6.3	6.4
10:07:26	15.2	15.2	4.4	4.5	0.9	0.7	36.1	36.0	5.9	6.0
10:08:26	15.2	15.2	4.4	4.5	1.2	1.1	35.9	35.8	6.1	6.2
10:09:26	15.0	15.1	4.4	4.5	1.4	1.3	38.4	38.3	6.1	6.1
10:10:26	15.1	15.1	4.5	4.5	1.2	1.0	38.0	37.9	5.8	5.9
10:11:26	15.4	15.4	4.2	4.3	1.0	0.9	32.4	32.3	5.7	5.8
10:12:26	15.3	15.3	4.2	4.3	1.3	1.1	34.5	34.4	5.9	5.9
10:13:26	15.2	15.2	4.4	4.5	1.5	1.4	34.7	34.6	6.0	6.0
10:14:26	15.2	15.2	4.3	4.4	1.4	1.2	35.9	35.8	5.6	5.7
10:15:26	15.3	15.3	4.2	4.3	1.2	1.0	34.7	34.6	5.7	5.7
10:16:26	15.3	15.3	4.4	4.5	1.2	1.1	36.3	36.2	5.9	6.0
10:17:26	15.4	15.4	4.2	4.3	1.1	1.0	34.5	34.4	5.9	6.0
10:18:26	15.3	15.3	4.3	4.4	1.1	0.9	35.5	35.4	6.0	6.1
10:19:26	15.2	15.2	4.4	4.5	1.2	1.1	36.3	36.2	5.9	5.9
10:20:26	15.3	15.3	4.4	4.4	1.4	1.2	34.9	34.8	5.8	5.8
10:21:26	15.2	15.3	4.3	4.4	1.3	1.2	34.5	34.4	6.0	6.0
10:22:26	15.2	15.3	4.4	4.5	1.3	1.1	34.5	34.4	5.8	5.8
10:23:26	15.4	15.4	4.3	4.4	1.2	1.1	33.2	33.1	5.6	5.7
10:24:26	15.3	15.4	4.3	4.4	1.1	0.9	33.7	33.6	5.8	5.8
10:25:26	15.2	15.2	4.4	4.5	1.1	1.0	34.5	34.4	5.9	6.0
10:26:26	15.2	15.2	4.3	4.4	1.2	1.1	33.9	33.8	5.8	5.9
10:27:26	15.2	15.2	4.4	4.5	1.3	1.1	34.3	34.2	6.1	6.2
10:28:26	15.2	15.2	4.3	4.4	1.2	1.1	35.1	35.0	5.9	6.0
10:29:26	15.5	15.5	4.2	4.3	1.2	1.1	30.6	30.5	6.1	6.2
10:30:26	15.3	15.3	4.3	4.4	1.2	1.1	33.2	33.1	6.1	6.1
10:31:26	15.2	15.3	4.3	4.4	1.2	1.1	33.4	33.2	6.2	6.3
10:32:26	15.3	15.3	4.4	4.5	1.1	1.0	34.1	34.0	8.6	8.7
10:33:26	15.3	15.3	4.3	4.4	1.2	1.1	33.4	33.3	6.9	7.0
10:34:26	15.3	15.3	4.3	4.4	1.6	1.5	34.5	34.4	6.8	6.9
10:35:26	15.5	15.5	4.2	4.3	1.2	1.1	33.4	33.3	6.9	7.0
10:36:26	15.4	15.4	4.3	4.4	1.2	1.1	34.5	34.4	7.3	7.4
10:37:26	15.5	15.5	4.2	4.3	1.3	1.1	34.8	34.6	7.3	7.4
10:38:26	15.4	15.4	4.3	4.4	1.2	1.1	35.5	35.4	7.4	7.5
10:39:26	15.5	15.5	4.3	4.4	1.3	1.2	35.1	35.0	7.0	7.1
10:40:26	15.4	15.4	4.2	4.3	1.4	1.3	34.9	34.8	7.0	7.1
10:41:26	15.3	15.3	4.5	4.6	1.2	1.0	41.6	41.5	7.7	7.9
10:42:26	15.5	15.5	4.2	4.3	0.9	0.8	47.8	47.8	8.3	8.4
10:43:26	15.6	15.6	4.2	4.3	0.9	0.8	49.8	49.7	8.3	8.4
10:44:26	15.6	15.6	4.1	4.2	0.9	0.7	49.2	49.2	8.3	8.5
10:45:26	15.7	15.7	4.1	4.2	1.0	0.8	49.2	49.2	7.9	8.1
10:46:26	15.6	15.6	4.1	4.2	0.9	0.7	50.4	50.3	8.4	8.6
10:47:26	15.7	15.8	4.0	4.1	1.0	0.9	47.9	47.8	8.8	8.9
10:48:26	15.7	15.7	4.0	4.1	0.8	0.7	48.9	48.8	8.1	8.3
10:49:26	15.5	15.6	4.2	4.2	0.6	0.5	50.2	50.1	8.4	8.6
10:50:26	15.6	15.6	4.2	4.2	1.1	1.0	49.2	49.2	8.6	8.7
10:51:26	15.7	15.7	4.0	4.1	0.9	0.8	46.3	46.2	8.6	8.8
10:52:26	15.8	15.8	4.0	4.1	1.3	1.2	44.6	44.5	8.6	8.8
10:53:26	15.6	15.6	4.1	4.2	0.7	0.6	48.9	48.8	8.2	8.4
10:54:26	15.8	15.9	3.9	4.0	1.4	1.3	47.1	47.0	8.5	8.7
10:55:26	15.7	15.8	4.0	4.1	1.2	1.0	47.5	47.4	8.7	8.8
10:56:26	15.7	15.7	4.1	4.2	1.0	0.8	48.7	48.6	8.7	8.9
10:57:26	15.7	15.8	4.1	4.2	1.0	0.8	48.3	48.2	8.6	8.7
10:58:26	15.8	15.8	3.9	4.0	1.2	1.1	45.4	45.3	8.6	8.8
10:59:26	15.7	15.7	4.0	4.1	1.3	1.1	46.7	46.6	8.7	8.9
11:00:26	15.8	15.8	4.0	4.1	1.2	1.0	46.3	46.3	8.2	8.3
11:01:26	15.8	15.9	3.9	4.0	1.4	1.2	44.8	44.7	8.3	8.4
11:02:26	15.7	15.7	4.0	4.1	1.2	1.0	46.5	46.4	8.6	8.8
11:03:26	15.8	15.8	3.9	4.0	0.8	0.7	45.4	45.3	8.7	8.8
11:04:26	15.8	15.8	4.0	4.0	1.0	0.9	45.6	45.5	8.8	8.9
11:05:26	15.7	15.7	3.9	4.0	1.0	0.8	46.1	46.1	8.8	9.0
11:06:26	15.9	15.9	3.9	4.0	1.1	1.0	44.8	44.7	8.7	8.8
11:07:26	15.8	15.8	3.9	4.0	1.0	0.9	46.0	45.9	8.7	8.9
11:08:26	15.7	15.8	4.0	4.0	1.1	1.0	46.7	46.7	8.9	9.1

11:09:25	15.7	15.7	4.0	4.1	0.9	0.8	48.5	48.4	8.8	9.0
11:10:25	15.7	15.8	4.0	4.1	1.2	1.0	47.3	47.2	8.8	8.9
11:11:26	15.8	15.9	3.9	4.0	1.0	0.9	45.2	45.1	8.5	8.7
11:12:25	15.9	15.9	3.9	4.0	0.8	0.7	44.6	44.5	8.9	9.1
11:13:25	15.7	15.7	3.9	4.0	1.0	0.9	46.1	46.1	8.8	9.0
11:14:25	15.9	15.9	3.8	3.9	1.2	1.0	43.6	43.5	8.3	8.5
11:15:26	15.8	15.8	3.9	4.0	1.1	1.0	45.0	44.9	8.9	9.0
11:16:25	15.8	15.8	3.9	4.0	1.2	1.1	46.7	46.7	9.0	9.2
11:17:26	15.6	15.6	4.1	4.2	1.0	0.9	51.8	51.8	9.3	9.4
11:18:26	15.5	15.6	4.2	4.3	1.0	0.9	57.3	57.2	10.4	10.7
11:19:26	15.6	15.6	4.1	4.2	0.8	0.7	59.5	59.4	10.7	10.9
11:20:25	15.7	15.7	4.0	4.1	1.2	1.0	55.9	55.9	9.9	10.2
11:21:25	15.7	15.8	3.9	4.0	0.9	0.7	53.4	53.3	9.1	9.3
11:22:26	15.8	15.8	3.9	4.0	1.1	1.0	53.6	53.6	8.7	8.9
11:23:25	15.8	15.9	4.0	4.1	1.1	0.9	55.2	55.1	9.1	9.3
11:24:25	15.5	15.6	4.1	4.2	1.0	0.8	58.5	58.4	9.3	9.5
11:25:25	15.6	15.6	4.1	4.2	1.0	0.8	58.1	58.0	9.3	9.5
11:26:25	15.7	15.8	4.0	4.1	1.2	1.0	55.6	55.5	8.8	9.0
11:27:26	15.7	15.7	4.1	4.1	1.2	1.1	56.3	56.3	9.2	9.3
11:28:25	15.8	15.9	3.9	4.0	0.9	0.7	53.0	53.0	8.8	9.0
11:29:25	15.7	15.8	4.0	4.0	1.0	0.9	53.8	53.7	8.9	9.1
11:30:25	15.8	15.9	3.9	4.0	1.2	1.1	53.4	53.4	8.7	8.8
11:31:26	15.8	15.8	4.0	4.1	0.9	0.8	54.8	54.7	8.8	9.0
11:32:25	15.7	15.7	4.0	4.1	1.3	1.2	56.4	56.3	8.8	9.0
11:33:25	15.7	15.7	4.0	4.1	1.2	1.0	57.3	57.3	9.1	9.3
11:34:25	15.7	15.7	4.1	4.1	0.9	0.8	55.8	55.7	9.0	9.2
11:35:25	15.7	15.7	4.0	4.1	1.3	1.2	55.6	55.5	8.9	9.1
11:36:26	15.9	16.0	3.9	3.9	1.5	1.4	53.6	53.6	10.1	10.3
11:37:25	15.7	15.7	4.0	4.1	0.9	0.8	53.8	53.8	8.4	8.6
11:38:25	15.7	15.7	3.9	4.0	1.0	0.9	55.0	54.9	8.7	8.8
11:39:25	15.8	15.8	4.0	4.1	1.2	1.0	53.8	53.8	8.8	9.0
11:40:26	15.8	15.9	3.9	3.9	1.0	0.8	52.9	52.8	8.9	9.1
11:41:25	15.8	15.8	4.0	4.0	0.9	0.8	53.3	53.2	8.7	8.9
11:42:25	15.7	15.7	4.0	4.0	1.1	1.0	55.2	55.1	8.7	8.9
11:43:26	15.7	15.8	4.0	4.0	1.0	0.9	53.6	53.6	8.7	8.9
11:44:26	15.9	15.9	3.9	3.9	0.8	0.7	52.3	52.2	8.9	9.1
11:45:25	15.8	15.8	3.9	3.9	1.1	0.9	54.6	54.6	8.6	8.7
11:46:25	15.9	15.9	3.9	3.9	1.0	0.8	53.1	53.0	9.0	9.2
11:47:25	15.8	15.8	3.9	4.0	1.1	1.0	54.2	54.2	9.0	9.2
11:48:25	15.6	15.6	4.0	4.1	1.2	1.1	56.4	56.3	8.6	8.7
11:49:25	15.8	15.8	3.9	3.9	0.8	0.7	54.0	54.0	9.2	9.4
11:50:25	15.7	15.7	4.0	4.1	1.0	0.9	54.6	54.6	9.4	9.6
11:51:26	15.8	15.9	3.9	4.0	1.0	0.8	53.7	53.6	9.2	9.4
11:52:25	15.7	15.8	4.0	4.1	1.3	1.2	54.8	54.8	9.3	9.5
11:53:25	15.7	15.7	4.0	4.0	1.0	0.9	54.6	54.6	9.1	9.3
11:54:25	15.7	15.7	4.0	4.1	1.3	1.2	55.0	55.0	8.9	9.1
11:55:25	15.9	15.9	3.9	4.0	1.3	1.1	53.1	53.0	9.0	9.2
11:56:25	15.8	15.8	3.9	4.0	1.1	1.0	53.1	53.0	9.2	9.4
11:57:25	15.8	15.8	3.9	4.0	1.1	1.0	53.1	53.0	9.1	9.3
11:58:25	15.7	15.7	4.0	4.1	1.2	1.0	55.2	55.2	9.4	9.6
11:59:25	15.9	15.9	3.9	3.9	0.9	0.7	52.9	52.8	9.2	9.4
12:00:25	15.8	15.8	4.0	4.0	1.0	0.9	53.7	53.6	9.1	9.3
12:01:25	15.7	15.7	4.0	4.0	1.3	1.1	54.7	54.6	9.3	9.5
12:02:25	15.8	15.8	3.9	4.0	1.0	0.8	52.9	52.8	8.8	9.0
12:03:25	15.8	15.8	3.9	4.0	1.0	0.9	52.7	52.6	8.9	9.1
12:04:26	15.7	15.7	3.9	4.0	1.0	0.9	54.5	54.4	9.1	9.3
12:05:25	15.8	15.8	3.9	4.0	1.0	0.8	54.5	54.4	9.1	9.3
12:06:26	15.8	15.8	3.9	3.9	1.2	1.1	53.3	53.2	9.3	9.4
12:07:25	15.7	15.7	4.0	4.1	1.0	0.9	55.3	55.2	9.5	9.7
12:08:25	15.8	15.8	4.0	4.1	1.2	1.0	54.5	54.4	8.8	9.0
12:09:25	15.7	15.7	4.0	4.0	1.0	0.9	55.3	55.2	9.5	9.7
12:10:25	15.8	15.8	4.0	4.0	1.0	0.9	53.7	53.6	9.4	9.6
12:11:25	15.7	15.7	4.0	4.0	1.3	1.1	55.5	55.4	9.5	9.7
12:12:25	15.9	15.9	3.9	4.0	1.0	0.9	52.9	52.9	9.4	9.6
12:13:25	15.8	15.8	3.9	4.0	1.2	1.1	54.7	54.6	9.6	9.8
12:14:25	15.7	15.7	4.0	4.0	1.3	1.1	55.3	55.2	9.7	9.9
12:15:25	15.7	15.7	4.0	4.0	1.1	1.0	55.9	55.8	9.6	9.8
12:16:25	15.6	15.6	4.0	4.1	1.0	0.9	56.2	56.2	9.7	9.9
12:17:25	15.6	15.7	4.1	4.2	1.4	1.2	55.5	55.4	9.7	9.9
12:18:25	15.6	15.6	4.1	4.2	1.1	1.0	56.0	56.0	9.7	9.9
12:19:25	15.7	15.7	4.0	4.0	1.0	0.9	54.1	54.0	9.8	10.0
12:20:25	15.7	15.7	4.0	4.1	1.2	1.0	54.3	54.2	9.7	9.9
12:21:25	15.6	15.6	4.0	4.1	1.3	1.2	55.3	55.2	8.8	8.9
12:22:25	15.7	15.7	4.0	4.1	1.2	1.0	53.9	53.8	9.4	9.6
12:23:25	15.7	15.7	4.1	4.2	1.0	0.8	53.7	53.7	9.5	9.7
12:24:25	15.6	15.6	4.1	4.2	1.2	1.1	58.6	58.6	10.4	10.7
12:25:25	15.6	15.6	4.1	4.2	1.1	1.0	59.6	59.5	10.8	11.0
12:26:25	15.6	15.6	4.1	4.2	1.0	0.8	57.6	57.6	10.7	11.0
12:27:25	15.6	15.6	4.0	4.1	1.2	1.1	58.0	58.0	10.8	11.1
12:28:25	15.6	15.6	4.1	4.1	0.9	0.8	58.4	58.4	10.8	11.1
12:29:25	15.7	15.7	4.0	4.1	0.9	0.8	56.5	56.4	10.6	10.8
12:30:25	15.5	15.5	4.1	4.2	1.0	0.8	58.2	58.2	10.3	10.5
12:31:25	15.6	15.6	4.1	4.1	0.9	0.8	58.4	58.4	10.8	11.1
12:32:25	15.5	15.5	4.1	4.2	1.1	1.0	61.6	61.5	11.1	11.3
12:33:25	15.5	15.5	4.2	4.3	1.1	1.0	59.8	59.7	11.2	11.5
12:34:25	15.5	15.5	4.1	4.2	1.0	0.8	59.2	59.2	11.2	11.5
12:35:25	15.5	15.6	4.1	4.2	1.1	1.0	58.8	58.8	11.1	11.4
12:36:25	15.6	15.6	4.1	4.2	1.1	1.0	57.8	57.8	10.8	11.0
12:37:25	15.6	15.7	4.1	4.2	1.2	1.1	56.7	56.6	10.6	10.9
12:38:25	15.7	15.7	4.1	4.1	0.9	0.8	57.1	57.0	10.5	10.7
12:39:25	15.6	15.7	4.1	4.2	1.2	1.1	57.5	57.4	10.4	10.6
12:40:25	15.6	15.7	4.0	4.1	1.2	1.0	55.5	55.5	10.1	10.3

Test: 2										
Date	28-Sep-25									
Analyzer	O2		CO2		CO		NOx		SO2	
Low	0.00		0.00		0.00		0.00		0.00	
Zero Value (Cv)	0.02		0.00		0.20		0.00		0.00	
Direct (C Dir)	0.10		0.00		0.30		0.10		0.10	
Calibration Error (ACE)	0.10%	PASS	0.00%	PASS	0.40%	PASS	0.00%	PASS	0.00%	PASS
System Initial (Csi)	0.10		0.00		0.30		0.10		0.10	
System Post (Csf)	0.10		0.00		0.30		0.10		0.10	
Average (Cm)	0.10		0.00		0.30		0.10		0.10	
System Bias Initial (SBI)	0.4%	PASS	0.0%	PASS	0.2%	PASS	0.0%	PASS	0.2%	PASS
System Bias Post (SBP)	0.4%	PASS	0.0%	PASS	0.2%	PASS	0.0%	PASS	0.2%	PASS
Drift Assessment (D)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
Mid	10.00		7.50		25.00		150.00		25.00	
Mid Value (Cv)	9.90		7.40		25.10		151.20		24.80	
Direct (C Dir)	-0.50%		-0.67%		0.20%		0.40%		-0.40%	
Calibration Error (ACE)	-0.50%	PASS	-0.67%	PASS	0.20%	PASS	0.40%	PASS	-0.40%	PASS
System Initial (Csi)	7.40		24.40		150.70		24.60		24.60	
System Post (Csf)	7.40		24.40		150.70		24.60		24.60	
Average (Cm)	7.4		24.4		150.7		24.6		24.6	
System Bias Initial (SBI)	N/A	-	0.0%	PASS	-1.4%	PASS	-0.2%	PASS	-0.4%	PASS
System Bias Post (SBP)	N/A	-	0.0%	PASS	-1.4%	PASS	-0.2%	PASS	-0.4%	PASS
Drift Assessment (D)	N/A	-	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
High	20.00		15.00		50.00		300.00		50.00	
High Value (Cv)	20.10		15.10		49.80		300.10		49.70	
Direct (C Dir)	0.50%		0.67%		-0.40%		0.03%		-0.60%	
Calibration Error (ACE)	0.50%	PASS	0.67%	PASS	-0.40%	PASS	0.03%	PASS	-0.60%	PASS
System Initial (Csi)	19.80		-		-		-		-	
System Post (Csf)	19.80		-		-		-		-	
Average (Cm)	19.8		-		-		-		-	
System Bias Initial (SBI)	-1.5%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
System Bias Post (SBP)	-1.5%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
Drift Assessment (D)	0.00%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
Analysers Span (Range)	25		30		200		500		200	
Average	14.65	14.77	4.85	4.91	1.48	1.23	73.59	73.20	9.58	9.67
Time	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected
12:45:11	14.6	14.7	4.9	5.0	3.3	3.2	68.1	67.7	7.2	7.3
12:46:11	14.6	14.8	4.9	5.0	3.7	3.5	66.7	66.3	7.2	7.3
12:47:11	14.6	14.7	4.9	5.0	3.9	3.7	68.3	67.9	7.2	7.2
12:48:11	14.6	14.8	4.9	4.9	3.7	3.5	68.3	67.9	7.1	7.2
12:49:11	14.6	14.8	4.9	5.0	3.3	3.1	68.7	68.3	7.3	7.4
12:50:11	14.6	14.7	4.9	5.0	3.6	3.4	69.1	68.7	7.5	7.5
12:51:11	14.6	14.8	4.9	5.0	3.5	3.3	70.5	70.1	7.5	7.6
12:52:11	14.6	14.7	5.0	5.0	3.1	2.9	70.9	70.5	6.9	6.9
12:53:11	14.7	14.8	4.9	4.9	2.9	2.7	67.5	67.2	6.5	6.6
12:54:11	14.6	14.7	4.9	5.0	2.8	2.6	68.1	67.7	6.6	6.6
12:55:11	14.7	14.9	4.8	4.9	2.8	2.6	66.5	66.2	6.8	6.8
12:56:11	14.7	14.9	4.8	4.9	2.5	2.3	67.1	66.7	7.2	7.2
12:57:11	14.8	14.9	4.8	4.8	2.3	2.1	66.5	66.1	7.3	7.3
12:58:11	14.7	14.8	4.8	4.9	2.5	2.3	66.5	66.1	7.3	7.3
12:59:11	14.7	14.8	4.9	4.9	2.5	2.3	68.2	67.8	7.5	7.6
13:00:11	14.8	14.9	4.8	4.8	2.3	2.1	65.9	65.5	7.6	7.7
13:01:11	14.8	14.9	4.8	4.9	2.3	2.0	65.9	65.5	7.7	7.8
13:02:11	14.7	14.9	4.8	4.9	1.9	1.6	66.9	66.5	7.9	7.9
13:03:11	14.6	14.7	5.0	5.0	1.6	1.3	73.1	72.7	8.0	8.1
13:04:11	14.6	14.7	5.0	5.0	1.4	1.2	76.0	75.6	8.1	8.2
13:05:11	14.6	14.7	4.9	5.0	1.7	1.4	76.0	75.6	8.2	8.3
13:06:11	14.5	14.6	5.1	5.2	1.6	1.4	74.7	74.3	8.3	8.4
13:07:11	14.4	14.5	5.2	5.2	1.7	1.4	75.1	74.7	8.4	8.5
13:08:11	14.5	14.6	5.0	5.0	1.6	1.3	73.5	73.1	8.3	8.3
13:09:11	14.5	14.6	5.1	5.1	1.5	1.2	75.9	75.5	8.3	8.4
13:10:11	14.5	14.6	5.1	5.1	1.4	1.1	77.6	77.2	8.5	8.6
13:11:11	14.5	14.6	5.0	5.1	1.4	1.2	78.6	78.2	8.7	8.7
13:12:11	14.5	14.7	5.0	5.1	1.5	1.2	78.5	78.0	8.8	8.9
13:13:11	14.5	14.6	5.1	5.2	1.5	1.3	79.2	78.8	8.5	8.5
13:14:11	14.5	14.6	5.1	5.2	1.5	1.3	80.4	80.0	8.9	9.0
13:15:11	14.4	14.5	5.1	5.2	1.6	1.4	80.6	80.2	8.8	8.8
13:16:11	14.5	14.6	5.0	5.1	1.2	1.0	79.9	79.5	8.6	8.7
13:17:11	14.6	14.7	5.0	5.1	1.3	1.1	78.5	78.1	8.6	8.7
13:18:11	14.5	14.7	5.0	5.1	1.4	1.1	79.7	79.3	8.7	8.8
13:19:11	14.6	14.7	4.9	5.0	1.6	1.3	78.4	78.0	8.7	8.8
13:20:11	14.7	14.8	4.9	5.0	1.4	1.2	77.2	76.8	8.8	8.9
13:21:11	14.5	14.6	5.1	5.2	1.4	1.1	80.0	79.5	9.0	9.1
13:22:11	14.3	14.5	5.2	5.3	1.3	1.0	85.4	85.0	9.4	9.5
13:23:11	14.4	14.5	5.1	5.2	1.7	1.4	82.9	82.5	9.6	9.7
13:24:11	14.5	14.6	5.0	5.1	1.5	1.2	80.2	79.8	9.4	9.5
13:25:11	14.4	14.5	5.1	5.2	1.4	1.1	82.5	82.1	9.5	9.6
13:26:11	14.5	14.6	5.0	5.1	1.6	1.3	80.0	79.6	9.4	9.5
13:27:11	14.4	14.6	5.0	5.1	1.6	1.4	82.0	81.6	9.5	9.6
13:28:11	14.5	14.6	5.0	5.0	1.4	1.2	82.2	81.8	9.7	9.7
13:29:11	14.4	14.6	5.0	5.1	1.6	1.4	81.6	81.2	9.7	9.8
13:30:11	14.5	14.7	4.9	5.0	1.2	0.9	80.7	80.2	9.6	9.6
13:31:11	14.7	14.8	4.9	4.9	1.5	1.3	78.9	78.5	9.1	9.2
13:32:11	14.6	14.7	4.9	5.0	1.1	0.9	79.3	78.9	9.5	9.6
13:33:11	14.5	14.6	4.9	5.0	1.4	1.1	80.1	79.7	9.2	9.3
13:34:11	14.6	14.7	4.9	4.9	1.5	1.3	80.1	79.7	9.2	9.3
13:35:11	14.6	14.7	4.9	5.0	1.3	1.0	78.6	78.1	9.4	9.5
13:36:11	14.6	14.7	4.9	5.0	1.3	1.0	79.1	78.7	9.3	9.4
13:37:11	14.6	14.7	4.9	5.0	1.2	0.9	79.9	79.5	9.4	9.5
13:38:11	14.6	14.7	4.9	4.9	1.4	1.1	78.8	78.3	9.4	9.5
13:39:11	14.6	14.7	4.9	5.0	1.4	1.1	79.2	78.7	9.7	9.8
13:40:10	14.6	14.7	4.8	4.9	1.4	1.1	80.3	79.9	9.7	9.8
13:41:10	14.6	14.7	4.9	5.0	1.3	1.0	80.9	80.5	9.7	9.8
13:42:10	14.7	14.8	4.8	4.9	1.4	1.1	78.8	78.4	9.7	9.8
13:43:11	14.6	14.7	4.9	5.0	1.5	1.3	78.4	78.0	9.6	9.7
13:44:11	14.7	14.8	4.8	4.9	1.1	0.8	77.6	77.2	9.6	9.7
13:45:11	14.7	14.8	4.9	4.9	1.2	1.0	78.0	77.6	9.7	9.8
13:46:11	14.7	14.8	4.8	4.9	1.4	1.1	79.0	78.6	9.8	9.9
13:47:11	14.6	14.7	4.9	5.0	1.4	1.1	79.2	78.8	10.0	10.2
13:48:11	14.6	14.7	4.8	4.9	1.4	1.1	78.6	78.2	10.4	10.5
13:49:11	14.6	14.7	4.9	5.0	1.2	0.9	81.5	81.1	10.3	10.4
13:50:11	14.6	14.7	4.9	4.9	1.4	1.1	80.2	79.7	10.6	10.7
13:51:11	14.7	14.8	4.8	4.9	1.5	1.2	78.6	78.2	10.4	10.5
13:52:11	14.6	14.7	4.9	5.0	1.5	1.3	81.3	80.9	10.7	10.8
13:53:11	14.5	14.7	4.9	5.0	1.3	1.0	83.1	82.6	11.0	11.1

13:54:11	14.5	14.6	4.9	5.0	1.2	0.9	82.1	81.7	10.8	11.0
13:55:11	14.6	14.7	4.9	5.0	1.4	1.1	80.1	79.7	10.9	11.0
13:56:11	14.6	14.8	4.9	4.9	1.3	1.0	79.0	78.6	11.1	11.2
13:57:11	14.6	14.7	4.8	4.9	1.1	0.8	79.6	79.1	10.9	11.1
13:58:11	14.5	14.7	5.0	5.0	1.3	1.0	80.9	80.5	11.2	11.4
13:59:11	14.6	14.7	4.9	5.0	1.2	0.9	81.3	80.9	11.0	11.1
14:00:11	14.5	14.6	4.9	5.0	1.1	0.9	82.5	82.0	11.2	11.4
14:01:11	14.6	14.7	4.9	5.0	1.3	1.0	80.1	79.7	11.3	11.4
14:02:11	14.5	14.6	5.0	5.0	1.3	1.0	81.3	80.9	11.2	11.3
14:03:11	14.5	14.6	5.0	5.0	1.4	1.2	81.7	81.3	11.4	11.5
14:04:11	14.5	14.7	4.9	5.0	1.4	1.2	81.7	81.3	11.5	11.6
14:05:11	14.6	14.7	4.9	5.0	1.5	1.3	80.3	79.9	11.3	11.4
14:06:10	14.5	14.7	4.9	5.0	1.3	1.0	79.9	79.5	11.6	11.8
14:07:11	14.5	14.6	4.9	5.0	1.3	1.0	80.7	80.3	11.8	12.0
14:08:11	14.6	14.7	4.9	5.0	1.3	1.0	80.0	79.5	11.8	11.9
14:09:11	14.5	14.6	4.9	5.0	1.0	0.8	80.5	80.1	11.9	12.1
14:10:11	14.5	14.6	4.9	5.0	1.6	1.3	79.8	79.3	12.3	12.4
14:11:11	14.6	14.7	4.9	4.9	1.1	0.9	79.0	78.6	12.0	12.1
14:12:11	14.5	14.7	4.9	5.0	1.3	1.0	78.6	78.2	12.1	12.2
14:13:11	14.5	14.7	4.9	5.0	1.3	1.0	79.4	79.0	11.8	11.9
14:14:11	14.6	14.7	4.9	4.9	1.4	1.1	78.8	78.4	11.6	11.7
14:15:10	14.6	14.7	4.8	4.9	1.1	0.8	75.7	75.3	11.3	11.4
14:16:10	14.7	14.8	4.8	4.9	1.5	1.2	75.7	75.3	11.4	11.5
14:17:11	14.7	14.8	4.8	4.9	1.3	1.0	75.9	75.5	11.4	11.6
14:18:11	14.6	14.7	4.8	4.8	1.6	1.3	75.7	75.3	11.8	11.9
14:19:11	14.6	14.8	4.8	4.9	1.5	1.2	76.5	76.1	11.6	11.7
14:20:11	14.7	14.8	4.8	4.8	1.2	0.9	76.8	76.4	11.7	11.9
14:21:11	14.6	14.7	4.9	4.9	1.1	0.8	77.8	77.4	11.9	12.0
14:22:11	14.7	14.8	4.8	4.9	1.2	0.9	76.1	75.7	11.6	11.8
14:23:10	14.6	14.8	4.8	4.9	1.4	1.1	77.0	76.6	11.4	11.5
14:24:10	14.8	14.9	4.8	4.8	1.1	0.8	74.7	74.3	11.5	11.6
14:25:11	14.7	14.8	4.8	4.9	1.2	1.0	77.4	77.0	11.3	11.4
14:26:10	14.6	14.8	4.8	4.9	1.5	1.3	76.5	76.0	11.3	11.4
14:27:11	14.7	14.8	4.8	4.9	1.1	0.8	75.9	75.5	11.3	11.4
14:28:11	14.7	14.8	4.7	4.8	1.3	1.1	74.5	74.1	11.0	11.1
14:29:11	14.7	14.8	4.8	4.8	1.6	1.3	73.5	73.1	10.8	10.9
14:30:11	14.7	14.8	4.8	4.8	1.2	0.9	72.7	72.3	10.5	10.7
14:31:11	14.6	14.8	4.7	4.8	1.0	0.8	72.9	72.5	10.6	10.7
14:32:11	14.6	14.8	4.8	4.8	1.6	1.3	73.7	73.3	10.6	10.7
14:33:11	14.7	14.8	4.8	4.9	1.2	1.0	73.7	73.3	10.5	10.6
14:34:11	14.7	14.8	4.8	4.9	1.1	0.8	73.5	73.1	10.4	10.5
14:35:10	14.7	14.8	4.8	4.8	0.9	0.7	74.5	74.1	10.4	10.5
14:36:11	14.7	14.8	4.9	4.9	1.1	0.8	72.7	72.3	10.3	10.4
14:37:11	14.6	14.7	4.8	4.9	1.1	0.8	74.3	73.9	10.4	10.5
14:38:11	14.7	14.8	4.7	4.8	1.2	0.9	71.8	71.4	10.0	10.1
14:39:11	14.8	14.9	4.7	4.7	1.3	1.0	71.6	71.2	10.2	10.4
14:40:11	14.7	14.8	4.7	4.8	1.3	1.0	72.5	72.1	10.4	10.5
14:41:11	14.7	14.8	4.7	4.8	0.9	0.6	72.1	71.8	10.4	10.5
14:42:11	14.7	14.8	4.8	4.9	1.2	1.0	71.4	71.0	10.4	10.5
14:43:11	14.7	14.8	4.8	4.8	1.2	0.9	71.8	71.4	10.2	10.3
14:44:11	14.7	14.8	4.7	4.8	1.6	1.3	71.2	70.8	10.1	10.3
14:45:10	14.8	14.9	4.7	4.7	1.0	0.7	70.0	69.6	10.1	10.2
14:46:11	14.8	14.9	4.7	4.7	1.4	1.1	69.2	68.9	9.8	9.9
14:47:10	14.8	14.9	4.7	4.8	1.2	0.9	68.3	67.9	9.8	9.9
14:48:11	14.8	14.9	4.7	4.7	1.1	0.9	69.2	68.9	9.7	9.7
14:49:11	14.8	14.9	4.7	4.7	1.4	1.1	69.8	69.4	9.7	9.8
14:50:11	14.8	14.9	4.7	4.8	1.4	1.2	68.6	68.3	9.6	9.7
14:51:11	14.9	15.0	4.7	4.7	1.3	1.0	67.3	66.9	9.8	9.8
14:52:11	14.8	14.9	4.7	4.8	1.3	1.0	66.9	66.5	9.6	9.6
14:53:11	14.8	14.9	4.7	4.8	1.4	1.2	67.3	66.9	9.4	9.5
14:54:11	14.8	14.9	4.7	4.8	1.3	1.0	67.7	67.3	9.5	9.6
14:55:11	14.8	14.9	4.7	4.7	1.1	0.9	66.7	66.3	9.5	9.6
14:56:11	14.7	14.9	4.8	4.9	1.1	0.8	68.4	68.1	9.3	9.4
14:57:11	14.8	14.9	4.7	4.7	1.0	0.7	66.9	66.5	9.3	9.4
14:58:10	14.8	15.0	4.7	4.7	1.2	0.9	66.3	65.9	9.4	9.5
14:59:10	14.7	14.9	4.7	4.7	1.0	0.8	67.1	66.7	9.1	9.2
15:00:10	14.8	15.0	4.6	4.7	1.3	1.0	64.9	64.6	9.3	9.4
15:01:11	14.8	15.0	4.6	4.7	1.3	1.0	65.9	65.6	9.2	9.3
15:02:10	14.8	14.9	4.7	4.8	1.4	1.2	65.9	65.5	9.1	9.2
15:03:11	14.8	14.9	4.7	4.8	1.1	0.8	64.2	63.8	9.1	9.1
15:04:11	14.8	15.0	4.7	4.7	1.1	0.9	63.8	63.4	8.9	9.0
15:05:11	14.8	14.9	4.7	4.8	1.3	1.0	64.4	64.0	8.9	9.0
15:06:10	14.8	14.9	4.7	4.7	1.1	0.9	63.8	63.4	8.8	8.9
15:07:11	14.8	14.9	4.7	4.8	1.2	0.9	63.4	63.0	8.6	8.7
15:08:10	14.8	14.9	4.7	4.8	1.0	0.8	62.8	62.4	8.7	8.8
15:09:11	14.8	14.9	4.7	4.7	1.1	0.9	63.8	63.4	8.4	8.5
15:10:10	14.8	14.9	4.7	4.8	1.0	0.8	62.4	62.1	8.6	8.7
15:11:10	14.8	14.9	4.7	4.8	1.2	0.9	63.4	63.0	8.7	8.8
15:12:11	14.7	14.9	4.7	4.8	1.3	1.0	63.4	63.0	8.6	8.6
15:13:10	14.8	14.9	4.7	4.8	1.4	1.2	64.2	63.8	8.7	8.8
15:14:10	14.7	14.9	4.7	4.8	1.0	0.8	63.6	63.2	8.8	8.9
15:15:10	14.7	14.8	4.7	4.8	1.0	0.8	63.6	63.2	8.7	8.8
15:16:10	14.8	14.9	4.7	4.8	1.2	0.9	62.0	61.7	8.6	8.7
15:17:10	14.8	14.9	4.7	4.8	1.2	0.9	62.4	62.1	8.4	8.5
15:18:10	14.9	15.0	4.6	4.7	1.1	0.9	61.6	61.3	8.5	8.6
15:19:10	14.8	14.9	4.7	4.7	1.1	0.9	62.6	62.3	8.4	8.4
15:20:11	14.8	14.9	4.7	4.7	1.3	1.0	62.2	61.9	8.6	8.6
15:21:11	14.9	15.0	4.6	4.7	1.3	1.0	61.8	61.5	8.4	8.5
15:22:10	14.7	14.8	4.8	4.8	1.3	1.1	64.4	64.0	8.5	8.5
15:23:10	14.8	14.9	4.7	4.7	1.5	1.3	62.0	61.7	8.6	8.7
15:24:10	14.7	14.8	4.7	4.8	1.0	0.8	63.6	63.2	8.9	9.0
15:25:10	14.7	14.8	4.8	4.9	1.2	1.0	65.7	65.4	8.9	9.0

Test: 3										
Date	28-Sep-25									
Analyzer	O2		CO2		CO		NOx		SO2	
Low										
Zero Value (Cv)	0.00		0.00		0.00		0.00		0.00	
Direct (C Dir)	0.02		0.00		0.20		0.00		0.00	
Calibration Error (ACE)	0.10%	PASS	0.00%	PASS	0.40%	PASS	0.00%	PASS	0.00%	PASS
System Initial (Csi)	0.10		0.00		0.30		0.10		0.10	
System Post (Csf)	0.10		0.10		0.20		0.30		0.42	
Average (Cm)	0.10		0.05		0.25		0.20		0.26	
System Bias Initial (SBI)	0.4%	PASS	0.0%	PASS	0.2%	PASS	0.0%	PASS	0.2%	PASS
System Bias Post (SBI)	0.4%	PASS	0.7%	PASS	0.0%	PASS	0.1%	PASS	0.8%	PASS
Drift Assessment (D)	0.00%	PASS	0.67%	PASS	-0.20%	PASS	0.07%	PASS	0.64%	PASS
Mid										
Mid Value (Cv)	10.00		7.50		25.00		150.00		25.00	
Direct (C Dir)	9.90		7.40		25.10		151.20		24.80	
Calibration Error (ACE)	-0.50%	PASS	-0.67%	PASS	0.20%	PASS	0.40%	PASS	-0.40%	PASS
System Initial (Csi)			7.40		24.40		150.70		24.60	
System Post (Csf)			7.50		24.80		148.50		24.20	
Average (Cm)			7.5		24.6		150.7		24.4	
System Bias Initial (SBI)	N/A	-	0.0%	PASS	-1.4%	PASS	-0.2%	PASS	-0.4%	PASS
System Bias Post (SBI)	N/A	-	0.7%	PASS	-0.6%	PASS	-0.9%	PASS	-1.2%	PASS
Drift Assessment (D)	N/A	-	0.67%	PASS	0.80%	PASS	-0.73%	PASS	-0.80%	PASS
High										
High Value (Cv)	20.00		15.00		50.00		300.00		50.00	
Direct (C Dir)	20.10		15.10		49.80		300.10		49.70	
Calibration Error (ACE)	0.50%	PASS	0.67%	PASS	-0.40%	PASS	0.03%	PASS	-0.60%	PASS
System Initial (Csi)	19.80									
System Post (Csf)	19.84									
Average (Cm)	19.82									
System Bias Initial (SBI)	-1.5%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
System Bias Post (SBI)	-1.3%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
Drift Assessment (D)	0.20%	PASS	N/A	-	N/A	-	N/A	-	N/A	-
Analysers Span (Range)	25		30		200		500		200	
Average	15.67	15.79	3.98	3.99	1.16	0.94	33.18	32.87	4.67	4.57
Time	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected
17:25:54	15.5	15.6	4.2	4.2	1.4	1.1	31.7	31.4	5.2	5.1
17:26:54	15.4	15.6	4.2	4.2	1.3	1.0	30.9	30.6	5.0	4.9
17:27:54	15.4	15.6	4.2	4.2	1.4	1.1	30.2	29.9	5.0	4.9
17:28:54	15.4	15.6	4.2	4.2	1.4	1.1	30.9	30.6	5.0	4.9
17:29:54	15.4	15.6	4.2	4.2	1.4	1.2	31.9	31.6	5.1	5.1
17:30:54	15.4	15.5	4.2	4.2	1.3	1.0	31.1	30.8	4.8	4.7
17:31:54	15.4	15.5	4.2	4.2	1.1	0.9	30.9	30.6	5.2	5.1
17:32:54	15.4	15.5	4.2	4.2	1.2	1.0	33.7	33.4	5.0	4.9
17:33:54	15.4	15.5	4.2	4.2	1.2	1.0	33.1	32.8	5.0	4.9
17:34:54	15.4	15.5	4.2	4.2	1.2	1.0	32.1	31.8	5.0	4.9
17:35:54	15.4	15.5	4.1	4.2	1.3	1.1	31.0	30.7	5.1	5.0
17:36:54	15.4	15.5	4.2	4.2	1.5	1.3	30.4	30.1	5.1	5.0
17:37:54	15.4	15.5	4.2	4.2	1.1	0.9	30.6	30.3	4.9	4.8
17:38:54	15.4	15.5	4.2	4.2	1.4	1.1	31.0	30.7	4.9	4.8
17:39:54	15.4	15.5	4.2	4.2	1.0	0.7	30.8	30.5	5.0	4.9
17:40:54	15.4	15.5	4.2	4.2	1.1	0.9	30.4	30.1	4.8	4.8
17:41:54	15.4	15.6	4.2	4.2	1.4	1.2	30.8	30.5	5.1	5.0
17:42:54	15.4	15.5	4.2	4.2	1.2	1.0	30.4	30.1	4.8	4.7
17:43:54	15.5	15.6	4.2	4.2	1.3	1.1	30.0	29.7	4.8	4.7
17:44:54	15.5	15.6	4.1	4.2	1.2	1.0	30.0	29.7	4.8	4.7
17:45:54	15.5	15.6	4.1	4.1	1.2	1.0	30.6	30.3	4.7	4.6
17:46:54	15.5	15.6	4.1	4.1	1.5	1.2	31.0	30.7	4.8	4.7
17:47:54	15.5	15.6	4.1	4.1	1.6	1.4	30.2	29.9	4.8	4.7
17:48:54	15.4	15.6	4.2	4.2	1.3	1.1	30.8	30.5	4.7	4.6
17:49:54	15.5	15.6	4.1	4.1	1.3	1.1	30.8	30.5	4.8	4.7
17:50:54	15.5	15.6	4.1	4.1	1.2	1.0	31.0	30.7	4.7	4.6
17:51:54	15.5	15.6	4.1	4.1	1.2	1.0	30.2	29.9	4.7	4.6
17:52:54	15.5	15.7	4.1	4.1	1.0	0.8	30.4	30.1	4.7	4.6
17:53:54	15.5	15.6	4.1	4.1	1.6	1.4	30.0	29.7	4.7	4.6
17:54:54	15.6	15.7	4.1	4.1	1.0	0.8	29.6	29.3	4.7	4.6
17:55:54	15.6	15.7	4.1	4.1	1.4	1.2	30.4	30.1	4.7	4.6
17:56:54	15.6	15.7	4.1	4.1	1.0	0.8	30.0	29.7	4.7	4.6
17:57:54	15.6	15.7	4.1	4.1	1.2	0.9	30.2	29.9	4.5	4.4
17:58:54	15.5	15.6	4.1	4.1	1.2	0.9	30.4	30.1	4.7	4.6
17:59:54	15.6	15.7	4.0	4.0	1.4	1.2	30.6	30.3	4.5	4.4
18:00:54	15.6	15.7	4.0	4.0	1.3	1.0	30.2	29.9	4.6	4.5
18:01:54	15.6	15.7	4.1	4.1	1.3	1.1	30.4	30.1	4.6	4.5
18:02:54	15.6	15.7	4.0	4.0	1.0	0.8	30.2	29.9	4.6	4.5
18:03:54	15.6	15.7	4.1	4.1	1.3	1.1	30.2	29.9	4.6	4.5
18:04:54	15.6	15.7	4.1	4.1	1.3	1.1	30.6	30.3	4.6	4.5
18:05:54	15.6	15.8	4.1	4.1	1.3	1.1	30.4	30.1	4.6	4.4
18:06:54	15.6	15.8	4.0	4.0	1.3	1.0	30.6	30.3	4.6	4.4
18:07:54	15.6	15.7	4.0	4.1	1.0	0.8	31.4	31.1	4.5	4.4
18:08:54	15.6	15.7	4.0	4.0	1.0	0.8	31.2	30.9	4.5	4.4
18:09:54	15.6	15.7	4.0	4.0	1.0	0.8	31.0	30.7	4.4	4.3
18:10:54	15.6	15.7	4.0	4.0	1.0	0.8	31.4	31.1	4.5	4.4
18:11:54	15.6	15.7	4.1	4.1	1.4	1.2	32.2	31.9	4.4	4.3
18:12:54	15.5	15.7	4.1	4.1	1.3	1.1	31.4	31.1	4.4	4.2
18:13:54	15.6	15.7	4.1	4.1	1.0	0.8	32.0	31.7	4.5	4.4
18:14:54	15.6	15.8	4.1	4.1	1.0	0.8	31.6	31.3	4.5	4.3
18:15:54	15.6	15.7	4.1	4.1	1.2	0.9	31.6	31.3	4.5	4.4
18:16:54	15.7	15.8	4.0	4.0	1.4	1.2	32.0	31.7	5.2	5.1
18:17:54	15.6	15.7	4.1	4.1	1.2	0.9	33.1	32.8	4.8	4.7
18:18:54	15.6	15.7	4.0	4.0	1.3	1.1	33.0	32.6	4.7	4.6
18:19:54	15.6	15.7	4.0	4.0	1.3	1.0	32.8	32.4	4.8	4.7
18:20:53	15.6	15.7	4.0	4.0	1.3	1.0	32.2	31.9	4.9	4.8
18:21:53	15.6	15.7	4.0	4.0	1.3	1.0	32.8	32.4	5.0	5.0
18:22:54	15.6	15.8	4.0	4.0	1.1	0.9	33.0	32.6	4.8	4.7
18:23:53	15.7	15.8	4.0	4.0	1.0	0.8	32.0	31.7	4.7	4.6
18:24:53	15.6	15.7	4.0	4.0	1.1	0.9	32.2	31.9	4.7	4.6
18:25:54	15.7	15.8	4.0	4.0	1.3	1.0	33.0	32.6	4.6	4.5
18:26:53	15.7	15.8	4.0	4.0	1.1	0.9	32.4	32.1	4.8	4.7
18:27:54	15.7	15.8	4.0	4.0	1.1	0.9	32.2	31.9	4.5	4.4
18:28:54	15.7	15.8	4.0	4.0	0.9	0.6	33.2	32.8	4.5	4.4
18:29:53	15.7	15.8	4.0	4.0	1.4	1.2	33.0	32.6	4.7	4.6
18:30:54	15.7	15.8	4.0	4.0	1.1	0.9	33.5	33.2	4.6	4.5
18:31:54	15.7	15.8	4.0	4.0	1.1	0.9	32.6	32.3	4.7	4.6
18:32:53	15.7	15.8	4.0	4.0	1.0	0.8	33.0	32.6	4.5	4.4
18:33:54	15.7	15.8	4.0	4.0	1.0	0.8	32.8	32.4	4.5	4.4

18:34:54	15.7	15.8	4.0	4.0	1.1	0.9	32.6	32.3	4.6	4.5
18:35:54	15.7	15.8	4.0	4.0	1.0	0.7	32.8	32.4	4.6	4.5
18:36:54	15.7	15.8	4.0	4.0	1.1	0.9	32.6	32.3	4.7	4.6
18:37:54	15.7	15.8	4.0	4.0	1.1	0.9	33.3	33.0	4.6	4.5
18:38:53	15.7	15.8	3.9	3.9	0.8	0.6	33.1	32.8	4.8	4.7
18:39:54	15.7	15.8	3.9	4.0	1.1	0.9	32.8	32.4	4.6	4.5
18:40:54	15.7	15.9	3.9	3.9	1.2	1.0	32.6	32.3	4.6	4.5
18:41:54	15.7	15.8	4.0	4.0	1.1	0.9	33.0	32.6	4.7	4.6
18:42:53	15.7	15.8	3.9	3.9	1.1	0.9	33.0	32.6	4.7	4.6
18:43:54	15.7	15.8	3.9	3.9	1.2	1.0	32.8	32.4	4.9	4.8
18:44:54	15.7	15.8	4.0	4.0	1.2	1.0	33.5	33.2	4.7	4.6
18:45:53	15.7	15.8	3.9	3.9	1.2	1.0	33.5	33.2	4.7	4.6
18:46:54	15.7	15.8	3.9	3.9	1.4	1.1	33.1	32.8	4.7	4.6
18:47:54	15.7	15.9	3.9	3.9	1.2	1.0	33.0	32.6	4.7	4.6
18:48:53	15.7	15.9	4.0	4.0	1.2	1.0	33.0	32.6	4.7	4.6
18:49:54	15.7	15.8	4.0	4.0	1.3	1.0	33.3	33.0	4.6	4.5
18:50:54	15.7	15.8	4.0	4.0	1.1	0.9	33.1	32.8	4.6	4.5
18:51:54	15.7	15.8	3.9	3.9	1.2	1.0	33.7	33.4	4.6	4.4
18:52:53	15.8	15.9	3.9	3.9	1.0	0.7	33.1	32.8	4.5	4.4
18:53:54	15.8	15.9	3.9	3.9	1.2	1.0	33.7	33.4	4.7	4.6
18:54:53	15.7	15.9	3.9	3.9	1.0	0.7	33.3	33.0	4.6	4.5
18:55:54	15.7	15.9	3.9	3.9	1.0	0.7	33.7	33.4	4.6	4.5
18:56:54	15.7	15.9	4.0	4.0	1.0	0.7	33.9	33.6	4.6	4.5
18:57:53	15.7	15.8	3.9	3.9	1.2	1.0	33.3	33.0	4.7	4.6
18:58:53	15.8	15.9	3.9	3.9	1.5	1.2	33.1	32.8	4.7	4.6
18:59:54	15.7	15.9	4.0	4.0	1.1	0.9	33.7	33.4	4.7	4.6
19:00:53	15.7	15.8	4.0	4.0	1.1	0.9	33.7	33.4	4.7	4.6
19:01:53	15.6	15.8	4.0	4.0	1.3	1.0	34.1	33.8	4.6	4.5
19:02:54	15.7	15.8	4.0	4.0	1.2	1.0	34.1	33.8	4.7	4.6
19:03:53	15.7	15.8	4.0	4.0	0.9	0.6	34.1	33.8	4.8	4.7
19:04:54	15.7	15.8	4.0	4.0	1.1	0.9	34.3	34.0	4.8	4.7
19:05:53	15.7	15.8	3.9	3.9	1.0	0.7	33.9	33.6	4.7	4.6
19:06:54	15.7	15.8	4.0	4.0	1.0	0.8	34.1	33.8	4.6	4.5
19:07:54	15.7	15.8	4.0	4.0	1.1	0.9	33.7	33.4	4.7	4.6
19:08:53	15.8	15.9	3.9	3.9	1.1	0.9	33.5	33.2	4.7	4.6
19:09:54	15.8	15.9	3.9	3.9	1.1	0.9	34.1	33.8	4.6	4.5
19:10:53	15.7	15.9	3.9	3.9	1.2	1.0	34.1	33.8	4.5	4.4
19:11:53	15.8	15.9	3.9	3.9	1.1	0.9	34.1	33.8	4.5	4.4
19:12:54	15.7	15.9	3.9	3.9	1.0	0.7	34.3	34.0	4.6	4.5
19:13:53	15.7	15.8	3.9	3.9	1.2	1.0	34.7	34.4	4.4	4.3
19:14:53	15.7	15.8	3.9	3.9	0.9	0.7	34.3	34.0	4.7	4.6
19:15:54	15.7	15.8	4.0	4.0	1.0	0.8	34.3	34.0	4.5	4.4
19:16:53	15.7	15.8	4.0	4.0	0.9	0.6	34.7	34.4	4.7	4.6
19:17:54	15.7	15.8	3.9	3.9	1.4	1.1	35.1	34.8	4.6	4.5
19:18:53	15.7	15.8	3.9	3.9	1.0	0.7	34.9	34.6	4.6	4.4
19:19:54	15.7	15.8	4.0	4.0	1.1	0.9	34.7	34.4	4.5	4.4
19:20:53	15.7	15.8	4.0	4.0	1.1	0.9	34.7	34.4	4.5	4.4
19:21:54	15.7	15.9	3.9	3.9	0.9	0.7	34.9	34.6	4.5	4.4
19:22:53	15.8	15.9	3.9	3.9	1.4	1.1	34.1	33.8	4.6	4.4
19:23:54	15.7	15.9	3.9	3.9	1.2	1.0	35.7	35.4	4.6	4.5
19:24:53	15.8	15.9	3.9	3.9	1.0	0.7	35.1	34.8	4.6	4.4
19:25:54	15.7	15.8	3.9	3.9	1.0	0.7	34.9	34.6	4.5	4.3
19:26:53	15.7	15.8	4.0	4.0	1.1	0.9	35.1	34.8	4.6	4.5
19:27:54	15.8	15.9	3.9	3.9	1.1	0.9	35.3	35.0	4.5	4.4
19:28:53	15.7	15.8	3.9	3.9	1.1	0.8	34.7	34.4	4.5	4.4
19:29:54	15.7	15.8	3.9	3.9	1.3	1.1	35.1	34.8	4.5	4.4
19:30:53	15.7	15.9	3.9	3.9	1.3	1.1	34.9	34.6	4.6	4.4
19:31:54	15.8	15.9	3.8	3.8	1.1	0.9	34.9	34.6	4.6	4.5
19:32:53	15.8	16.0	3.9	3.9	1.2	1.0	34.3	34.0	4.6	4.5
19:33:54	15.8	16.0	3.8	3.8	1.2	0.9	35.3	35.0	4.6	4.4
19:34:53	15.8	15.9	3.9	3.9	1.2	1.0	35.5	35.2	4.5	4.4
19:35:53	15.8	15.9	3.9	3.9	1.2	1.0	35.3	35.0	4.6	4.5
19:36:53	15.8	15.9	3.9	3.9	1.4	1.1	34.9	34.6	4.7	4.6
19:37:53	15.8	15.9	3.9	3.9	1.1	0.8	35.9	35.6	4.7	4.6
19:38:54	15.8	15.9	3.8	3.8	1.2	0.9	35.3	35.0	4.6	4.5
19:39:53	15.8	15.9	3.9	3.9	1.0	0.8	35.1	34.8	4.8	4.7
19:40:53	15.8	15.9	3.9	3.9	1.1	0.8	35.9	35.6	4.6	4.5
19:41:54	15.8	15.9	3.9	3.9	1.0	0.8	35.3	35.0	4.7	4.6
19:42:53	15.8	15.9	3.8	3.9	1.4	1.2	35.3	35.0	4.8	4.7
19:43:53	15.7	15.8	4.0	4.0	1.0	0.7	36.3	36.0	4.7	4.6
19:44:53	15.8	15.9	3.9	3.9	1.2	1.0	35.9	35.6	4.6	4.5
19:45:54	15.8	16.0	3.8	3.8	1.2	0.9	35.5	35.2	4.7	4.6
19:46:53	15.9	16.0	3.9	3.9	1.2	1.0	35.3	35.0	4.5	4.4
19:47:53	15.8	15.9	3.8	3.8	1.2	0.9	35.7	35.4	4.6	4.5
19:48:54	15.8	15.9	3.9	3.9	1.1	0.8	36.1	35.8	4.7	4.6
19:49:53	15.8	15.9	3.9	3.9	1.0	0.8	35.9	35.6	4.7	4.6
19:50:53	15.8	16.0	3.8	3.8	1.0	0.8	35.5	35.2	4.6	4.5
19:51:53	15.8	15.9	3.8	3.9	0.9	0.7	35.9	35.6	4.6	4.5
19:52:54	15.8	15.9	3.8	3.9	1.2	1.0	35.7	35.4	4.7	4.6
19:53:53	15.9	16.0	3.8	3.8	1.2	0.9	35.5	35.2	4.7	4.6
19:54:53	15.9	16.0	3.8	3.8	0.9	0.7	35.7	35.4	4.7	4.6
19:55:53	15.8	16.0	3.8	3.8	1.2	0.9	35.7	35.4	4.6	4.5
19:56:53	15.9	16.0	3.8	3.8	1.0	0.8	35.7	35.4	4.6	4.5
19:57:53	15.8	16.0	3.8	3.8	0.9	0.7	35.9	35.6	4.5	4.4
19:58:54	15.9	16.0	3.8	3.8	1.2	0.9	35.7	35.4	4.6	4.5
19:59:53	15.8	15.9	3.8	3.8	1.3	1.1	36.3	36.0	4.6	4.5
20:00:53	15.8	16.0	3.8	3.8	1.0	0.8	36.1	35.8	4.6	4.5
20:01:53	15.9	16.0	3.8	3.8	1.3	1.1	35.9	35.6	4.6	4.5
20:02:54	15.9	16.0	3.8	3.8	1.0	0.8	35.7	35.4	4.7	4.6
20:03:54	15.9	16.0	3.8	3.8	1.4	1.2	36.1	35.8	4.5	4.4
20:04:53	15.9	16.1	3.8	3.8	1.1	0.9	35.7	35.4	4.6	4.5
20:05:54	15.9	16.0	3.8	3.8	1.0	0.8	36.1	35.8	4.5	4.4

**Summary of CEM Data**  
**Agnico Eagle Meladine**  
**KETEK**

Overall Average Concentrations				
O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
10.3	8.11	0.841	72.2	5.88

Test ID: 1		Date: 29-Sep-25			
Time	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
1:15 PM to 4:10 PM	10.9	7.54	0.919	63.6	4.52

Test ID: 2		Date: 30-Sep-25			
Time	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
8:50 AM to 12:30 PM	9.11	9.14	0.870	88.9	7.94

Test ID: 3		Date: 30-Sep-25			
Time	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CO (ppm)	NOx (ppm)	SO <sub>2</sub> (ppm)
2:50 PM to 5:33 PM	10.9	7.64	0.735	64.2	5.17

**KETEK**

Test: 1

Date		29-Sep-25									
Analyzer	O2		CO2		CO		NOx		SO2		
Low											
Zero Value (Cv)	0.00		0.00		0.00		0.00		0.00		
Direct (C Dir)	0.00		0.00		0.00		0.00		0.00		
Calibration Error (ACE)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	
System Initial (Csf)	0.05		0.00		0.10		0.11		0.20		
System Post (Csf)	0.03		0.10		0.14		0.13		0.15		
Average (Cm)	0.04		0.05		0.12		0.12		0.18		
System Bias Initial (SBf)	0.3%	PASS	0.0%	PASS	0.2%	PASS	0.0%	PASS	0.4%	PASS	
System Bias Post (SBf)	0.2%	PASS	0.7%	PASS	0.3%	PASS	0.0%	PASS	0.3%	PASS	
Drift Assessment (D)	-0.10%	PASS	0.67%	PASS	0.08%	PASS	0.01%	PASS	-0.10%	PASS	
Mid											
Mid Value (Cv)	10.00		7.50		25.00		150.00		25.00		
Direct (C Dir)	10.10		7.49		24.80		150.40		24.50		
Calibration Error (ACE)	0.50%	PASS	-0.07%	PASS	-0.40%	PASS	0.13%	PASS	-1.00%	PASS	
System Initial (Csf)	10.08		7.51		24.84		150.10		24.80		
System Post (Csf)	10.05		7.50		24.91		150.10		24.81		
Average (Cm)	10.07		7.51		24.88		150.1		24.8		
System Bias Initial (SBf)	-0.1%	PASS	0.1%	PASS	0.1%	PASS	-0.1%	PASS	0.6%	PASS	
System Bias Post (SBf)	-0.2%	PASS	0.1%	PASS	0.2%	PASS	-0.1%	PASS	0.6%	PASS	
Drift Assessment (D)	-0.15%	PASS	-0.07%	PASS	0.14%	PASS	0.00%	PASS	0.02%	PASS	
High											
High Value (C/Cv)	20.00		15.00		50.00		300.00		50.0		
Direct (C Dir)	20.00		15.00		50.20		300.10		49.80		
Calibration Error (ACE)	0.00%	PASS	0.00%	PASS	0.40%	PASS	0.03%	PASS	-0.40%	PASS	
System Initial (Csf)											
System Post (Csf)											
Average (Cm)											
System Bias Initial (SBf)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	
System Bias Post (SBf)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	
Drift Assessment (D)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	
Analyzer Span (Range)	25		30		200		500		200		
Average	10.94	10.87	7.54	7.54	1.03	0.92	63.69	63.58	4.63	4.52	
Time	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	
13:15:14	10.5	10.5	7.9	7.9	1.5	1.4	71.8	71.7	5.1	5.0	
13:16:14	10.6	10.5	7.9	7.9	1.2	1.1	72.5	72.4	5.4	5.3	
13:17:14	10.6	10.6	7.8	7.8	1.3	1.2	72.7	72.6	5.3	5.2	
13:18:14	10.6	10.5	7.9	7.9	1.3	1.2	72.2	72.0	5.2	5.1	
13:19:14	10.7	10.6	7.8	7.8	1.2	1.1	72.8	72.6	5.0	4.9	
13:20:14	10.7	10.6	7.8	7.8	1.3	1.2	72.9	72.8	5.1	5.0	
13:21:14	10.7	10.6	7.8	7.8	1.3	1.2	72.4	72.3	5.1	5.0	
13:22:14	10.7	10.7	7.8	7.8	1.3	1.2	73.0	72.9	5.1	5.0	
13:23:14	10.7	10.6	7.8	7.8	1.3	1.2	72.6	72.5	4.8	4.7	
13:24:14	10.8	10.7	7.7	7.7	1.8	1.7	72.0	71.9	4.8	4.7	
13:25:14	10.7	10.7	7.7	7.7	1.4	1.3	72.2	72.1	5.0	4.9	
13:26:14	10.8	10.7	7.7	7.7	1.0	0.9	71.8	71.7	4.8	4.7	
13:27:14	10.8	10.7	7.8	7.8	1.0	0.9	72.8	72.7	4.9	4.8	
13:28:14	10.7	10.7	7.8	7.8	1.3	1.2	73.2	73.1	5.0	4.9	
13:29:14	10.8	10.7	7.8	7.8	1.1	1.0	72.6	72.5	4.8	4.7	
13:30:14	10.7	10.7	7.8	7.8	0.9	0.8	72.2	72.1	4.9	4.8	
13:31:14	10.8	10.7	7.8	7.7	1.1	1.0	72.8	72.7	4.9	4.8	
13:32:14	7.6	7.5	10.4	10.5	0.8	0.7	99.5	99.4	4.9	4.8	
13:33:14	7.2	7.1	10.6	10.6	0.9	0.8	103.1	103.0	5.9	5.8	
13:34:14	12.6	12.5	6.2	6.2	1.8	1.7	84.2	84.1	5.3	5.2	
13:35:14	10.7	10.7	7.8	7.8	1.1	1.0	77.3	77.2	5.2	5.1	
13:36:14	7.7	7.7	10.2	10.2	1.1	1.0	85.0	84.9	5.2	5.1	
13:37:14	7.4	7.3	10.3	10.3	1.1	1.0	88.6	88.5	5.9	5.8	
13:38:14	13.1	13.1	5.9	5.9	2.5	2.4	94.8	94.7	5.0	4.9	
13:39:14	10.7	10.6	7.8	7.8	1.3	1.2	75.0	74.8	5.1	5.0	
13:40:14	10.7	10.6	7.8	7.8	1.2	1.1	74.4	74.3	5.1	5.0	
13:41:14	10.7	10.6	7.8	7.8	0.9	0.8	74.4	74.3	4.9	4.8	
13:42:14	7.6	7.6	10.2	10.2	1.2	1.1	84.6	84.5	5.2	5.1	
13:43:14	12.1	12.0	6.3	6.3	1.7	1.6	73.4	73.3	5.3	5.2	
13:44:14	11.4	11.3	7.6	7.6	1.3	1.2	76.8	76.7	6.0	5.9	
13:45:14	10.8	10.7	7.7	7.7	0.9	0.8	73.2	73.1	5.4	5.3	
13:46:14	10.8	10.7	7.7	7.7	1.3	1.2	72.1	72.0	5.2	5.1	
13:47:14	10.8	10.7	7.7	7.7	1.1	1.0	73.2	73.1	5.3	5.2	
13:48:14	10.8	10.7	7.7	7.7	1.2	1.0	72.8	72.7	5.5	5.4	
13:49:14	10.8	10.8	7.7	7.7	1.2	1.1	72.1	72.0	5.2	5.1	
13:50:14	10.8	10.8	7.7	7.7	0.7	0.6	71.3	71.2	5.4	5.3	
13:51:14	10.9	10.8	7.6	7.6	1.0	0.9	70.7	70.6	5.1	5.0	
13:52:14	9.6	9.6	9.5	9.5	0.8	0.7	58.5	58.4	5.0	4.9	
13:53:14	7.7	7.6	10.1	10.2	1.0	0.9	77.3	77.2	5.3	5.2	
13:54:14	13.2	13.2	5.9	5.9	2.0	1.9	83.4	83.3	5.1	5.0	
13:55:14	10.9	10.8	7.6	7.6	1.2	1.1	72.9	72.8	5.0	4.9	
13:56:14	10.9	10.8	7.6	7.6	1.1	1.0	70.3	70.2	5.1	5.0	
13:57:14	10.9	10.8	7.6	7.6	1.2	1.1	69.9	69.8	5.0	4.9	
13:58:14	10.9	10.8	7.6	7.6	1.0	0.9	69.6	69.5	4.9	4.8	
13:59:14	10.9	10.8	7.6	7.6	1.0	0.8	69.2	69.1	5.0	4.9	
14:00:14	10.9	10.9	7.6	7.6	1.2	1.1	68.4	68.3	5.0	4.9	
14:01:14	10.9	10.9	7.6	7.6	0.8	0.7	68.6	68.5	4.9	4.8	
14:02:14	11.0	10.9	7.6	7.6	1.3	1.2	68.2	68.1	4.9	4.8	
14:03:14	11.0	10.9	7.5	7.5	1.1	0.9	67.5	67.3	4.8	4.7	
14:04:14	7.9	7.9	9.9	9.9	0.8	0.7	69.2	69.1	4.6	4.5	
14:05:14	13.1	13.0	5.8	5.8	1.9	1.7	77.5	77.4	5.0	4.9	
14:06:14	11.3	11.2	7.5	7.5	1.3	1.2	73.0	72.8	4.9	4.8	
14:07:14	11.0	10.9	7.5	7.5	1.2	1.1	68.4	68.3	4.9	4.8	
14:08:14	11.0	11.0	7.5	7.5	1.0	0.9	68.0	67.9	4.8	4.7	
14:09:14	11.1	11.0	7.5	7.5	1.0	0.9	67.3	67.2	4.7	4.6	
14:10:14	11.1	11.0	7.5	7.5	1.0	0.9	66.7	66.6	4.8	4.7	
14:11:14	11.1	11.1	7.4	7.4	0.9	0.8	66.3	66.2	4.9	4.8	
14:12:14	11.1	11.0	7.4	7.4	0.7	0.6	66.7	66.6	4.8	4.7	
14:13:14	11.1	11.1	7.4	7.4	0.7	0.6	67.3	67.2	4.8	4.7	
14:14:14	11.1	11.1	7.4	7.4	0.9	0.8	66.5	66.4	4.8	4.7	
14:15:14	11.1	11.1	7.4	7.4	0.6	0.5	67.1	67.0	4.9	4.8	
14:16:14	11.2	11.1	7.4	7.4	1.1	1.0	67.9	67.8	5.0	4.9	
14:17:14	11.2	11.1	7.4	7.4	0.9	0.7	67.1	67.0	4.6	4.5	
14:18:14	11.2	11.1	7.4	7.4	1.2	1.1	66.3	66.2	4.6	4.5	
14:19:14	11.2	11.1	7.4	7.4	1.0	0.9	65.2	65.1	4.6	4.4	
14:20:14	11.2	11.2	7.3	7.3	0.8	0.7	65.6	65.4	4.6	4.5	
14:21:14	11.2	11.1	7.4	7.3	1.0	0.9	65.8	65.6	4.7	4.6	
14:22:14	11.2	11.1	7.4	7.4	0.9	0.8	65.8	65.6	4.5	4.4	

14:23:14	11.2	11.1	7.3	7.3	0.8	0.7	65.4	65.3	4.7	4.6
14:24:14	11.3	11.2	7.3	7.3	0.9	0.8	65.4	65.3	4.7	4.6
14:25:14	11.3	11.2	7.3	7.3	1.2	1.1	65.6	65.5	4.6	4.5
14:26:14	11.3	11.2	7.3	7.3	1.1	1.0	65.4	65.3	4.6	4.5
14:27:14	11.3	11.2	7.3	7.3	0.8	0.7	65.0	64.9	4.6	4.5
14:28:14	11.3	11.2	7.3	7.3	0.8	0.7	64.8	64.7	4.7	4.6
14:29:14	11.3	11.2	7.3	7.3	0.8	0.7	65.2	65.1	4.4	4.3
14:30:14	11.3	11.2	7.3	7.3	1.2	1.1	64.4	64.3	4.6	4.5
14:31:14	11.3	11.2	7.3	7.3	1.0	0.8	63.4	63.3	4.6	4.5
14:32:14	11.3	11.2	7.3	7.3	0.9	0.8	63.2	63.1	4.6	4.5
14:33:14	11.3	11.2	7.3	7.3	0.8	0.7	62.8	62.7	4.6	4.5
14:34:14	11.4	11.3	7.2	7.2	1.2	1.1	62.5	62.3	4.6	4.5
14:35:14	11.4	11.4	7.2	7.2	1.0	0.9	61.5	61.4	4.7	4.6
14:36:14	11.4	11.4	7.1	7.1	1.1	1.0	61.7	61.6	4.5	4.4
14:37:14	11.5	11.4	7.1	7.1	0.9	0.7	61.1	61.0	4.4	4.3
14:38:14	11.5	11.4	7.1	7.1	1.4	1.3	60.5	60.4	4.4	4.3
14:39:14	8.6	8.6	9.3	9.3	0.8	0.7	41.4	41.2	4.4	4.3
14:40:14	13.5	13.4	5.4	5.4	2.3	2.3	61.7	61.6	4.7	4.6
14:41:14	12.0	11.9	7.0	7.0	1.0	0.9	64.7	64.6	4.7	4.6
14:42:14	9.1	9.0	9.1	9.1	1.1	0.9	43.7	43.6	4.8	4.7
14:43:14	8.6	8.6	9.3	9.3	0.7	0.5	40.4	40.3	4.5	4.4
14:44:14	14.1	14.0	5.2	5.2	2.2	2.1	61.8	61.7	4.4	4.3
14:45:14	11.6	11.6	7.0	7.0	0.9	0.8	60.5	60.4	4.7	4.6
14:46:14	11.6	11.6	7.0	7.0	0.8	0.7	59.6	59.5	4.4	4.3
14:47:14	11.6	11.5	7.0	7.0	0.8	0.7	59.8	59.6	4.5	4.4
14:48:14	11.6	11.5	7.0	7.0	0.9	0.8	59.4	59.3	4.4	4.3
14:49:14	11.7	11.6	7.0	7.0	1.0	0.9	59.4	59.3	4.5	4.4
14:50:14	11.7	11.6	7.0	7.0	0.8	0.7	59.2	59.1	4.6	4.4
14:51:14	11.6	11.6	7.0	7.0	1.2	1.1	59.2	59.1	4.3	4.2
14:52:14	11.7	11.6	7.0	6.9	1.0	0.9	58.8	58.7	4.4	4.3
14:53:14	11.7	11.6	7.0	7.0	1.2	1.1	59.0	58.9	4.6	4.5
14:54:14	8.9	8.9	9.1	9.1	0.8	0.7	43.7	43.6	4.4	4.3
14:55:14	9.7	9.6	6.8	6.8	1.2	1.1	42.8	42.7	4.5	4.3
14:56:14	14.4	14.3	5.1	5.1	5.8	5.8	59.6	59.5	4.3	4.2
14:57:14	9.0	9.0	9.0	9.0	0.5	0.4	45.3	45.2	4.3	4.2
14:58:14	8.9	8.9	8.2	8.2	0.5	0.3	42.7	42.6	4.5	4.4
14:59:14	14.3	14.2	4.9	4.9	2.7	2.6	59.2	59.1	4.3	4.2
15:00:14	10.1	10.0	8.7	8.7	0.8	0.6	57.0	56.9	4.3	4.1
15:01:14	8.9	8.8	9.1	9.1	0.8	0.7	44.3	44.2	4.3	4.2
15:02:14	14.2	14.1	5.0	5.0	2.0	1.9	57.1	57.0	4.5	4.4
15:03:14	11.9	11.8	6.9	6.8	1.2	1.1	59.4	59.3	4.4	4.3
15:04:14	11.8	11.7	6.9	6.9	0.9	0.7	58.6	58.5	4.4	4.3
15:05:14	11.8	11.7	6.9	6.8	1.0	0.9	58.2	58.1	4.5	4.4
15:06:14	9.1	9.0	9.0	9.0	0.6	0.5	47.0	46.9	4.3	4.2
15:07:14	9.8	9.7	6.8	6.8	0.7	0.5	53.7	53.6	4.6	4.5
15:08:14	14.2	14.1	5.5	5.5	3.6	3.5	61.8	61.7	4.4	4.3
15:09:14	11.3	11.2	8.2	8.2	0.6	0.5	60.5	60.4	4.2	4.1
15:10:14	9.0	8.9	9.0	9.0	0.4	0.3	45.5	45.3	4.2	4.1
15:11:14	14.0	13.9	5.1	5.0	1.6	1.4	54.5	54.4	4.0	3.9
15:12:14	12.2	12.1	6.8	6.7	1.1	0.9	60.7	60.6	4.2	4.1
15:13:14	9.0	9.0	9.0	9.0	0.5	0.4	46.8	46.7	4.1	4.0
15:14:14	12.0	12.0	5.7	5.6	1.0	0.9	48.2	48.1	4.3	4.2
15:15:14	14.3	14.2	6.0	6.0	1.5	1.4	62.1	62.0	4.3	4.2
15:16:14	9.1	9.0	8.9	8.9	0.5	0.4	46.8	46.6	4.3	4.2
15:17:14	12.9	12.8	5.4	5.4	1.1	1.0	60.4	60.3	4.1	4.0
15:18:14	13.8	13.7	6.3	6.2	1.2	1.1	64.0	63.9	4.3	4.2
15:19:14	9.1	9.1	8.9	8.9	0.6	0.5	48.5	48.4	4.2	4.1
15:20:14	10.3	10.2	6.4	6.4	0.7	0.6	46.3	46.2	4.5	4.3
15:21:13	14.5	14.5	4.8	4.8	4.5	4.5	56.0	55.9	4.1	4.0
15:22:14	9.2	9.1	8.8	8.8	0.6	0.5	49.3	49.2	4.2	4.1
15:23:14	9.1	9.1	7.9	7.9	0.5	0.4	47.5	47.4	4.0	3.9
15:24:14	14.5	14.4	4.7	4.7	2.6	2.5	55.4	55.3	4.2	4.1
15:25:14	9.6	9.5	8.7	8.7	0.7	0.5	53.6	53.5	4.1	4.0
15:26:14	9.1	9.0	8.9	8.9	0.5	0.4	47.7	47.6	4.2	4.1
15:27:14	14.5	14.4	4.8	4.8	2.0	1.9	54.3	54.2	4.4	4.3
15:28:14	11.9	11.8	6.8	6.8	0.8	0.7	58.5	58.4	4.3	4.1
15:29:14	11.9	11.8	6.8	6.8	0.7	0.6	57.9	57.8	4.1	4.0
15:30:14	11.9	11.8	6.8	6.8	1.0	0.9	57.7	57.6	4.3	4.2
15:31:14	11.9	11.8	6.8	6.8	0.6	0.4	57.5	57.4	4.1	4.0
15:32:14	11.9	11.8	6.7	6.7	0.8	0.7	57.4	57.2	4.1	4.0
15:33:14	11.9	11.8	6.8	6.7	0.9	0.8	57.6	57.4	4.2	4.1
15:34:14	11.9	11.9	6.7	6.7	0.9	0.8	57.2	57.0	4.2	4.1
15:35:14	11.9	11.8	6.8	6.8	1.1	1.0	57.6	57.4	4.2	4.0
15:36:14	9.1	9.0	8.9	8.9	0.3	0.2	49.9	49.8	4.0	3.9
15:37:13	12.6	12.5	5.6	5.6	0.6	0.5	55.9	55.8	4.3	4.2
15:38:13	12.5	12.4	7.3	7.3	0.9	0.8	70.5	70.4	4.2	4.1
15:39:14	8.0	7.9	9.7	9.7	0.2	0.1	55.8	55.7	3.9	3.8
15:40:14	12.9	12.8	5.6	5.6	1.0	0.9	60.2	60.1	4.4	4.3
15:41:14	11.8	11.7	7.9	7.9	0.7	0.6	72.6	72.5	4.4	4.3
15:42:14	7.9	7.9	9.8	9.8	0.2	0.1	58.1	58.0	4.1	4.0
15:43:14	10.4	10.3	6.5	6.4	0.6	0.5	56.0	55.9	4.4	4.3
15:44:13	14.0	14.0	5.9	5.9	1.4	1.3	65.4	65.3	4.4	4.3
15:45:14	7.8	7.8	9.8	9.8	0.4	0.3	56.4	56.3	4.1	4.0
15:46:14	11.3	11.3	6.2	6.2	0.6	0.5	57.9	57.8	4.5	4.4
15:47:14	13.6	13.5	6.6	6.6	0.6	0.5	72.4	72.3	4.5	4.4
15:48:14	8.4	8.3	9.6	9.6	0.6	0.4	61.1	61.0	4.3	4.2
15:49:13	7.9	7.9	9.8	9.8	0.1	0.0	56.2	56.1	4.2	4.1
15:50:13	13.9	13.8	5.2	5.2	0.7	0.6	63.9	63.8	4.5	4.4
15:51:13	11.1	11.1	7.3	7.3	0.6	0.5	66.5	66.4	4.6	4.5
15:52:14	9.4	9.4	9.3	9.3	0.3	0.2	66.7	66.6	4.4	4.3
15:53:14	7.9	7.9	9.8	9.8	0.3	0.2	55.8	55.7	4.3	4.2
15:54:14	13.7	13.7	5.3	5.3	0.5	0.3	62.7	62.6	4.4	4.3
15:55:14	9.0	8.9	9.5	9.5	0.5	0.4	65.1	64.9	4.3	4.2
15:56:13	7.8	7.8	9.8	9.8	0.4	0.3	54.8	54.7	4.2	4.1
15:57:13	13.8	13.7	5.3	5.3	0.6	0.5	63.1	63.0	4.7	4.6
15:58:14	8.6	8.6	9.6	9.6	0.7	0.6	62.9	62.8	4.4	4.3
15:59:14	7.8	7.8	9.8	9.8	0.5	0.4	54.1	54.0	4.5	4.3
16:00:14	13.9	13.8	5.3	5.2	0.6	0.4	62.9	62.8	4.5	4.4
16:01:14	8.4	8.3	9.6	9.6	0.6	0.4	60.3	60.2	4.4	4.3
16:02:14	7.9	7.8	9.8	9.8	0.2	0.1	54.1	54.0	4.3	4.1
16:03:13	13.9	13.8	5.2	5.2	0.5	0.4	62.5	62.4	4.5	4.4
16:04:14	11.1	11.0	7.4	7.4	0.4	0.2	65.1	65.0	4.5	4.4
16:05:14	11.0	11.0	7.4	7.4	0.5	0.4	64.5	64.4	4.4	4.3
16:06:14	8.4	8.3	9.6	9.6	0.6	0.4	59.9	59.8	4.4	4.2
16:07:13	7.9	7.9	9.7	9.7	0.5	0.3	54.5	54.4	4.5	4.4
16:08:14	14.1	14.0	5.1	5.1	0.5	0.4	61.7	61.6	4.4	4.3
16:09:13	11.0	10.9	7.4	7.4	0.4	0.3	65.1	65.0	4.5	4.4
16:10:13	8.2	8.1	9.7	9.7	0.3	0.2	59.5	59.4	4.2	4.1

**KETEK**

Test: 2										
Date	30-Sep-25									
Analyzer	O2		CO2		CO		NOx		SO2	
Low										
Zero Value (Cv)	0.00		0.00		0.00		0.00		0.00	
Direct (C Dir)	0.00		0.00		0.00		0.00		0.00	
Calibration Error (ACE)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
System Initial (Csi)	0.01		0.00		0.20		0.21		0.10	
System Post (Csf)	0.01		0.00		0.20		0.21		0.10	
Average (Cm)	0.01		0.00		0.20		0.21		0.10	
System Bias Initial (SBI)	0.1%	PASS	0.0%	PASS	0.4%	PASS	0.1%	PASS	0.2%	PASS
System Bias Post (SBI)	0.1%	PASS	0.0%	PASS	0.4%	PASS	0.1%	PASS	0.2%	PASS
Drift Assessment (D)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
Mid										
Mid Value (Cv)	10.00		7.50		25.00		150.00		25.00	
Direct (C Dir)	10.00		7.48		24.80		148.80		24.91	
Calibration Error (ACE)	0.00%	PASS	-0.13%	PASS	-0.40%	PASS	-0.40%	PASS	-0.18%	PASS
System Initial (Csi)	9.95		7.48		24.50		149.10		24.88	
System Post (Csf)	9.95		7.48		24.50		149.10		24.88	
Average (Cm)	10.0		7.5		24.5		149.1		24.9	
System Bias Initial (SBI)	-0.3%	PASS	0.0%	PASS	-0.6%	PASS	0.1%	PASS	-0.1%	PASS
System Bias Post (SBI)	-0.3%	PASS	0.0%	PASS	-0.6%	PASS	0.1%	PASS	-0.1%	PASS
Drift Assessment (D)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
High										
High Value (Cv)	20.00		15.00		50.00		300.00		50.00	
Direct (C Dir)	20.10		15.00		49.90		300.20		50.20	
Calibration Error (ACE)	0.50%	PASS	0.00%	PASS	-0.20%	PASS	0.07%	PASS	0.40%	PASS
System Initial (Csi)										
System Post (Csf)										
Average (Cm)										
System Bias Initial (SBI)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
System Bias Post (SBI)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
Drift Assessment (D)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
Analysers Span (Range)	25		30		200		500		200	
Average	10.11	9.11	8.16	9.14	0.88	0.87	69.42	88.92	5.89	7.94
Time	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected
8:50:47	11.1	11.1	7.7	7.7	0.9	0.7	99.4	99.9	7.0	7.0
8:51:47	5.3	5.3	11.9	12.0	1.5	1.3	100.6	101.1	12.6	12.6
8:52:47	10.2	10.3	7.9	7.9	0.9	0.7	80.2	80.6	9.9	9.9
8:53:47	9.2	9.3	10.6	10.6	1.6	1.4	81.6	82.0	7.2	7.2
8:54:47	5.3	5.4	11.8	11.9	1.7	1.5	97.3	97.9	14.8	14.8
8:55:47	11.1	11.2	7.6	7.6	1.2	1.0	101.4	102.0	8.1	8.1
8:56:47	6.4	6.4	11.5	11.5	1.3	1.1	97.5	98.0	7.9	7.8
8:57:47	5.5	5.6	11.7	11.7	1.5	1.3	92.8	93.3	15.1	15.1
8:58:47	11.4	11.4	7.4	7.4	1.0	0.9	99.9	100.5	7.8	7.8
8:59:47	5.9	5.9	11.5	11.6	1.4	1.2	95.5	96.0	9.2	9.2
9:00:47	6.6	6.6	8.8	8.8	0.9	0.8	82.1	82.5	13.6	13.6
9:01:47	11.6	11.6	8.3	8.3	1.2	1.1	97.8	98.3	7.0	6.9
9:02:47	5.8	5.8	11.5	11.5	1.4	1.2	91.5	92.0	11.5	11.5
9:03:47	11.5	11.5	7.2	7.2	0.8	0.6	94.9	95.4	8.2	8.1
9:04:47	7.2	7.3	11.0	11.1	1.1	0.9	92.7	93.2	7.3	7.2
9:05:47	5.9	5.9	10.6	10.7	1.0	0.8	92.5	92.9	12.6	12.6
9:06:47	11.9	12.0	6.9	7.0	0.7	0.6	99.6	100.1	6.8	6.7
9:07:47	6.1	6.1	11.3	11.3	1.3	1.2	93.8	94.3	9.5	9.5
9:08:47	11.4	11.4	7.1	7.1	0.7	0.6	91.7	92.1	8.3	8.3
9:09:47	8.9	8.9	10.2	10.2	0.9	0.7	63.0	63.2	6.7	6.6
9:10:47	6.1	6.1	11.3	11.3	1.3	1.1	93.5	93.9	11.3	11.3
9:11:47	12.1	12.1	6.8	6.8	1.1	0.9	97.9	98.4	6.8	6.8
9:12:47	6.4	6.4	11.1	11.1	1.0	0.8	95.8	96.3	8.2	8.2
9:13:47	10.2	10.3	7.3	7.3	0.7	0.5	73.9	74.2	8.8	8.8
9:14:47	11.0	11.0	8.9	8.9	0.8	0.7	77.2	77.6	6.2	6.2
9:15:47	6.2	6.2	11.1	11.2	1.1	0.9	94.2	94.7	9.9	9.9
9:16:47	12.0	12.1	8.8	8.8	0.9	0.7	97.7	98.3	7.0	6.9
9:17:47	7.1	7.1	10.9	10.9	1.2	1.0	93.6	94.1	6.9	6.9
9:18:47	7.2	7.2	8.5	8.5	0.8	0.6	77.6	78.0	9.6	9.6
9:19:47	12.3	12.4	6.9	6.9	1.1	1.0	98.7	99.3	6.4	6.4
9:20:47	6.4	6.4	11.0	11.0	1.0	0.9	93.5	94.0	8.1	8.1
9:21:47	11.9	12.0	6.8	6.8	1.0	0.8	94.4	94.9	7.0	7.0
9:22:47	8.7	8.7	10.2	10.2	1.0	0.9	66.2	66.5	6.3	6.3
9:23:47	6.4	6.4	10.9	10.9	1.1	0.9	92.9	93.4	9.6	9.6
9:24:47	12.3	12.4	6.6	6.7	1.0	0.9	95.1	95.6	6.6	6.6
9:25:47	6.6	6.6	10.9	10.9	1.0	0.8	93.0	93.5	7.3	7.3
9:26:47	11.5	11.5	6.9	6.9	0.9	0.8	85.2	85.6	7.4	7.4
9:27:47	10.5	10.5	8.8	8.8	0.8	0.6	77.0	77.3	6.0	6.0
9:28:47	6.5	6.5	10.9	10.9	1.2	1.0	91.3	91.7	8.4	8.4
9:29:47	12.3	12.4	6.6	6.6	0.9	0.8	93.8	94.2	6.4	6.3
9:30:47	7.1	7.2	10.7	10.7	1.3	1.1	88.9	89.3	6.6	6.6
9:31:47	9.5	9.6	7.3	7.3	0.8	0.6	66.9	67.2	7.8	7.7
9:32:47	12.4	12.5	6.9	7.0	1.1	0.9	93.0	93.5	6.2	6.1
9:33:47	6.6	6.6	10.8	10.8	1.1	1.0	89.0	89.5	7.4	7.3
9:34:47	12.3	12.3	6.6	6.6	1.0	0.8	90.1	90.6	6.5	6.4
9:35:47	8.7	8.7	10.1	10.2	1.2	1.0	68.3	68.6	6.0	6.0
9:36:47	6.9	6.9	9.2	9.3	0.5	0.3	85.6	86.0	8.0	7.9
9:37:47	12.4	12.4	6.6	6.6	1.1	0.9	93.8	94.3	6.1	6.0
9:38:47	6.7	6.8	10.8	10.8	1.1	0.9	86.7	87.2	7.0	7.0
9:39:47	11.9	12.0	6.7	6.7	0.8	0.6	91.0	91.5	6.6	6.6
9:40:47	10.4	10.5	8.7	8.7	0.7	0.5	81.6	82.0	5.9	5.8
9:41:47	6.7	6.7	10.8	10.8	1.1	0.9	85.2	85.6	7.9	7.9
9:42:47	12.4	12.5	6.6	6.6	1.1	0.9	91.9	92.4	6.2	6.2
9:43:47	9.4	9.5	10.0	10.1	0.9	0.8	72.8	73.2	5.9	5.9
9:44:47	6.7	6.7	10.7	10.7	1.1	0.9	85.0	85.5	7.8	7.8
9:45:47	12.5	12.6	6.5	6.5	0.9	0.7	87.1	87.5	6.0	6.0
9:46:47	10.0	10.0	9.8	9.9	1.0	0.8	74.8	75.2	5.7	5.6
9:47:47	6.8	6.8	10.6	10.7	1.2	1.0	81.1	81.5	7.4	7.4
9:48:47	12.5	12.6	6.4	6.5	0.8	0.6	87.5	87.9	6.0	6.0
9:49:47	10.4	10.5	9.5	9.5	1.1	0.9	79.7	80.1	5.7	5.7
9:50:47	6.8		10.7		1.2		79.9		7.5	
9:51:47	12.5		6.5		1.2		85.8		6.1	
9:52:47	11.0		8.2		0.9		81.9		5.6	
9:53:47	9.8		8.5		0.9		70.2		5.7	
9:54:47	9.8		8.4		0.9		71.0		5.8	
9:55:47	9.9		8.4		0.8		71.4		5.7	
9:56:47	9.9		8.4		0.9		70.4		5.7	
9:57:47	10.0		8.2		0.7		69.5		5.7	
9:58:47	7.1		10.4		0.9		75.2		6.2	

9:59:47	12.8		6.2		0.9		78.7		5.9
10:00:47	9.6		9.5		0.7		67.2		5.5
10:01:47	7.2		9.6		0.9		70.5		6.6
10:02:47	13.1		6.0		0.8		79.7		5.4
10:03:47	7.4		10.2		1.0		66.1		6.0
10:04:47	12.0		6.3		0.6		70.1		6.1
10:05:47	12.2		7.8		0.9		82.3		5.4
10:06:47	7.2		10.3		1.3		65.9		6.2
10:07:47	13.0		6.1		1.0		75.7		5.6
10:08:47	8.5		10.0		1.0		56.2		5.4
10:09:47	8.1		7.9		0.6		59.5		6.0
10:10:47	12.9		6.1		0.9		75.1		5.4
10:11:47	7.3		10.3		0.9		67.5		5.8
10:12:47	12.7		6.2		1.2		72.4		5.8
10:13:47	10.8		8.3		0.8		71.0		5.2
10:14:47	7.2		10.3		1.2		65.0		6.4
10:15:47	13.0		6.1		0.7		74.1		5.6
10:16:47	7.7		10.1		1.1		59.1		5.9
10:17:47	10.6		6.6		1.0		62.7		6.2
10:18:47	13.2		6.4		0.9		75.0		5.6
10:19:47	7.3		10.2		1.2		59.7		6.1
10:20:47	13.0		5.9		1.2		72.6		5.6
10:21:47	10.2		9.1		0.9		72.5		5.3
10:22:47	7.3		10.0		0.7		60.4		6.0
10:23:47	13.3		5.9		0.7		73.3		5.4
10:24:47	7.6		10.1		0.4		57.1		5.3
10:25:47	11.6		6.3		0.8		66.3		5.8
10:26:47	13.0		7.2		1.2		81.3		5.2
10:27:47	7.4		10.2		1.1		57.4		5.8
10:28:47	13.1		5.9		0.7		75.8		5.4
10:29:47	9.2		9.6		0.7		60.3		5.1
10:30:47	7.5		9.1		0.7		55.0		5.9
10:31:47	13.3		5.8		0.9		76.6		5.4
10:32:47	7.5		10.1		0.6		55.9		5.3
10:33:47	12.3		6.1		0.6		69.3		5.7
10:34:47	12.3		7.5		0.9		82.2		5.4
10:35:47	7.5		10.1		0.7		53.8		5.5
10:36:47	13.3		5.7		1.0		73.3		5.3
10:37:47	8.8		9.7		0.8		53.4		4.9
10:38:47	7.9		8.3		0.6		52.5		5.6
10:39:47	13.4		5.7		0.7		75.6		5.2
10:40:47	7.6		10.0		0.5		52.1		5.0
10:41:47	12.6		5.9		0.8		68.0		5.2
10:42:47	12.0		7.5		0.8		80.3		4.9
10:43:47	7.5		10.0		0.6		50.8		5.1
10:44:47	13.4		5.7		0.8		73.5		5.2
10:45:47	8.6		9.8		0.7		50.5		4.7
10:46:47	8.2		7.9		0.4		50.6		5.4
10:47:47	13.5		5.6		0.9		74.7		5.2
10:48:47	7.6		10.0		0.5		51.4		5.1
10:49:47	12.7		5.9		0.7		69.2		5.4
10:50:47	12.0		7.5		1.0		79.3		5.0
10:51:47	7.6		10.0		0.6		47.5		5.4
10:52:47	13.4		5.6		1.2		73.5		5.2
10:53:47	8.6		9.7		0.7		50.1		5.0
10:54:47	8.3		7.8		0.7		49.7		5.7
10:55:47	13.5		5.6		1.0		74.1		5.0
10:56:47	7.6		9.9		0.6		47.9		5.0
10:57:47	12.8		5.8		1.1		68.6		5.3
10:58:47	11.9		7.5		0.9		79.5		5.2
10:59:47	7.6		9.9		0.7		46.2		5.2
11:00:47	13.5		5.6		0.8		71.8		5.1
11:01:47	8.5		9.7		0.7		50.3		4.9
11:02:47	8.5		7.6		0.8		48.4		5.4
11:03:47	13.6		5.4		0.7		71.6		5.0
11:04:47	7.7		9.9		0.3		47.0		4.9
11:05:47	12.9		5.8		1.0		66.5		5.0
11:06:47	11.8		7.6		0.9		78.1		4.6
11:07:47	7.6		9.9		0.9		45.6		5.1
11:08:47	13.6		5.5		0.9		71.6		4.9
11:09:47	8.5		9.7		0.7		50.5		4.7
11:10:47	8.6		7.5		0.6		48.4		5.4
11:11:47	13.7		5.4		0.7		71.4		5.0
11:12:47	7.7		9.9		1.0		45.4		5.3
11:13:47	12.9		5.7		0.7		65.9		5.1
11:14:47	12.1		7.4		1.0		78.0		5.0
11:15:47	7.7		9.9		1.0		45.4		5.1
11:16:47	13.6		5.5		0.7		69.5		4.9
11:17:47	8.7		9.6		0.7		53.8		4.7
11:18:47	8.4		7.7		0.4		47.8		5.3
11:19:47	13.7		5.3		1.1		70.1		4.9
11:20:47	7.7		9.9		0.6		45.4		5.0
11:21:47	12.9		5.7		1.0		65.0		5.2
11:22:47	12.2		7.3		0.8		77.6		4.8
11:23:47	7.7		9.9		1.0		44.9		5.2
11:24:47	13.6		5.4		0.5		68.1		4.7
11:25:47	8.7		9.6		0.5		54.3		4.7
11:26:47	8.6		7.5		0.6		47.6		5.2
11:27:47	13.8		5.3		0.6		69.1		4.8
11:28:47	7.7		9.9		0.9		45.0		4.9
11:29:47	13.0		5.7		1.1		64.8		5.0
11:30:47	12.1		7.4		1.0		76.6		4.7
11:31:47	7.7		9.9		0.8		45.0		5.0
11:32:47	13.7		5.4		0.8		68.7		4.7
11:33:47	8.6		9.6		0.5		52.8		4.6
11:34:47	8.8		7.4		0.6		48.4		5.1
11:35:47	13.9		5.3		0.9		68.1		4.7
11:36:47	7.8		9.8		0.9		44.8		4.8
11:37:47	13.0		5.6		0.5		64.0		4.9
11:38:47	12.3		7.3		0.9		76.4		4.7
11:39:47	7.7		9.9		0.8		44.8		5.0
11:40:47	13.7		5.4		0.9		67.1		4.9
11:41:47	8.8		9.6		0.9		56.2		4.7
11:42:47	8.6		7.5		1.0		48.2		5.2
11:43:47	13.8		5.3		1.0		68.5		4.8
11:44:47	7.8		9.8		0.8		45.2		5.0
11:45:47	12.9		5.6		0.9		63.4		5.1

11:46:47	12.5		7.1		0.9		75.5		4.7
11:47:47	7.7		9.8		1.1		44.8		5.0
11:48:47	13.8		5.3		0.9		65.8		4.7
11:49:47	9.1		9.5		0.8		59.3		4.7
11:50:47	8.2		7.9		0.5		47.0		5.0
11:51:47	13.9		5.3		0.7		67.3		4.7
11:52:47	7.8		9.8		0.6		45.2		4.8
11:53:47	12.8		5.7		0.7		62.2		4.8
11:54:47	12.8		7.0		0.9		75.3		4.5
11:55:47	7.7		9.8		0.7		45.0		4.7
11:56:47	13.8		5.3		0.7		65.0		4.8
11:57:47	9.2		9.4		0.7		61.0		4.6
11:58:47	8.1		8.1		0.5		46.8		4.9
11:59:47	13.9		5.2		0.7		65.6		4.4
12:00:47	7.9		9.7		0.8		46.2		4.5
12:01:47	12.8		5.6		0.9		62.0		4.8
12:02:47	13.0		6.9		1.1		73.6		4.5
12:03:47	7.8		9.8		0.6		45.4		4.8
12:04:47	13.8		5.3		0.7		64.0		4.5
12:05:47	9.5		9.3		0.8		64.1		4.4
12:06:47	7.9		8.6		0.7		47.1		4.7
12:07:47	14.0		5.2		1.0		65.6		4.6
12:08:47	7.9		9.7		0.8		47.1		4.5
12:09:47	12.6		5.7		1.1		61.4		4.7
12:10:47	13.5		6.7		1.4		71.7		4.8
12:11:47	7.8		9.8		1.0		46.2		4.6
12:12:47	13.8		5.3		0.9		64.2		4.7
12:13:47	9.9		9.2		1.0		67.6		4.6
12:14:47	7.9		8.8		0.6		46.5		4.6
12:15:47	14.0		5.2		0.7		64.6		4.5
12:16:47	8.0		9.7		0.7		47.7		4.4
12:17:47	7.9		9.7		0.4		47.1		4.4
12:18:47	13.7		6.6		0.9		70.0		4.7
12:19:47	7.8		9.7		1.0		46.9		4.7
12:20:47	13.8		5.2		0.9		63.6		4.6
12:21:47	9.9		9.1		0.9		68.4		4.3
12:22:47	7.9		9.0		0.3		48.8		4.5
12:23:47	14.1		5.1		0.9		63.1		4.6
12:24:47	8.0		9.7		0.7		50.4		4.2
12:25:47	12.4		5.7		0.6		59.1		4.5
12:26:47	13.9		6.4		1.3		67.5		4.4
12:27:47	7.9		9.7		0.9		48.3		4.4
12:28:47	13.8		5.2		1.0		62.9		4.6
12:29:47	10.1		9.1		0.8		69.2		4.4
12:30:47	7.9		9.2		0.8		49.2		4.6

KETEK

Test: 3										
Date	30-Sep-25									
Analyzer	O2		CO2		CO		NOx		SO2	
Low										
Zero Value (Cv)	0.00		0.00		0.00		0.00		0.00	
Direct (C Dir)	0.00		0.00		0.00		0.00		0.00	
Calibration Error (ACE)	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS	0.00%	PASS
System Initial (Csi)	0.01		0.00		0.20		0.21		0.10	
System Post (Csf)	0.05		0.10		0.15		0.45		0.20	
Average (Cm)	0.03		0.05		0.18		0.33		0.15	
System Bias Initial (SBI)	0.1%	PASS	0.0%	PASS	0.4%	PASS	0.1%	PASS	0.2%	PASS
System Bias Post (SBP)	0.3%	PASS	0.7%	PASS	0.3%	PASS	0.2%	PASS	0.4%	PASS
Drift Assessment (D)	0.20%	PASS	0.67%	PASS	-0.10%	PASS	0.08%	PASS	0.20%	PASS
Mid										
Mid Value (Cv)	10.00		7.50		25.00		150.00		25.00	
Direct (C Dir)	10.00		7.48		24.80		148.80		24.91	
Calibration Error (ACE)	0.00%	PASS	-0.13%	PASS	-0.40%	PASS	-0.40%	PASS	-0.18%	PASS
System Initial (Csi)	9.95		7.48		24.50		149.10		24.88	
System Post (Csf)	9.98		7.49		24.60		148.95		24.72	
Average (Cm)	10.0		7.5		24.6		149.1		24.8	
System Bias Initial (SBI)	-0.3%	PASS	0.0%	PASS	-0.6%	PASS	0.1%	PASS	-0.1%	PASS
System Bias Post (SBP)	-0.1%	PASS	0.1%	PASS	-0.4%	PASS	0.0%	PASS	-0.4%	PASS
Drift Assessment (D)	0.15%	PASS	0.07%	PASS	0.20%	PASS	-0.05%	PASS	-0.32%	PASS
High										
High Value (Cv)	20.00		15.00		50.00		300.00		50.00	
Direct (C Dir)	20.10		15.00		49.90		300.20		50.20	
Calibration Error (ACE)	0.50%	PASS	0.00%	PASS	-0.20%	PASS	0.07%	PASS	0.40%	PASS
System Initial (Csi)										
System Post (Csf)										
Average (Cm)										
System Bias Initial (SBI)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
System Bias Post (SBP)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
Drift Assessment (D)	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-
Analysers Span (Range)	25		30		200		500		200	
Average	10.82	10.86	7.62	7.64	0.89	0.73	64.00	64.20	5.25	5.17
Time	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected	Recorded	Corrected
14:50:38	6.2	6.2	11.4	11.4	2.0	1.9	80.3	80.6	9.2	9.2
14:51:38	10.8	10.9	7.4	7.4	1.7	1.5	77.9	78.2	9.1	9.1
14:52:38	11.9	12.0	7.1	7.1	1.5	1.4	83.2	83.6	7.1	7.1
14:53:38	9.3	9.4	9.0	9.0	1.3	1.2	65.6	65.8	6.9	6.8
14:54:38	9.3	9.3	9.0	9.0	1.5	1.3	66.6	66.8	6.5	6.5
14:55:38	9.3	9.3	9.0	9.0	1.5	1.3	66.6	66.8	6.5	6.4
14:56:38	12.1	12.2	6.9	6.9	1.2	1.0	82.7	83.1	6.2	6.1
14:57:38	9.6	9.6	8.7	8.7	1.1	0.9	69.3	69.5	6.2	6.1
14:58:38	9.5	9.5	8.7	8.8	1.2	1.1	68.9	69.1	6.2	6.1
14:59:38	9.6	9.6	8.7	8.7	1.0	0.8	69.9	70.1	6.1	6.1
15:00:38	11.9	12.0	6.7	6.8	0.9	0.7	78.4	78.8	6.0	6.0
15:01:38	10.4	10.4	8.4	8.4	1.3	1.2	75.9	76.2	5.7	5.6
15:02:38	9.8	9.9	8.5	8.5	1.1	1.0	68.6	68.8	5.9	5.8
15:03:38	9.8	9.9	8.5	8.5	1.1	0.9	69.1	69.4	5.7	5.7
15:04:38	9.9	9.9	8.4	8.5	1.0	0.8	69.5	69.8	5.7	5.6
15:05:38	9.9	10.0	7.8	7.9	1.0	0.9	70.5	70.8	5.8	5.7
15:06:38	12.7	12.8	6.9	6.9	1.1	0.9	79.3	79.7	5.4	5.3
15:07:38	10.0	10.1	8.3	8.3	1.2	1.1	67.3	67.5	5.4	5.4
15:08:38	10.1	10.1	8.3	8.3	1.0	0.8	66.3	66.5	5.6	5.5
15:09:38	10.1	10.1	8.3	8.3	0.9	0.7	66.9	67.1	5.5	5.4
15:10:38	10.1	10.1	8.2	8.3	1.1	0.9	67.3	67.5	5.8	5.7
15:11:38	10.1	10.2	8.2	8.2	1.1	0.9	67.9	68.1	5.8	5.8
15:12:38	10.2	10.2	8.2	8.2	1.1	0.9	67.7	67.9	5.6	5.5
15:13:38	10.2	10.2	8.2	8.2	1.0	0.8	68.5	68.7	5.7	5.6
15:14:38	13.0	13.0	6.1	6.1	1.0	0.9	76.7	77.0	5.6	5.5
15:15:38	10.3	10.4	8.0	8.1	1.0	0.8	66.6	66.8	5.4	5.4
15:16:38	10.3	10.3	8.1	8.1	1.3	1.1	66.2	66.4	5.6	5.5
15:17:38	10.3	10.3	8.1	8.1	1.3	1.1	66.2	66.4	5.6	5.5
15:18:38	7.1	7.1	9.9	9.9	0.7	0.6	57.6	57.8	6.1	6.0
15:19:38	13.1	13.2	6.0	6.0	0.9	0.7	76.8	77.1	5.4	5.3
15:20:38	10.7	10.8	7.9	7.9	0.9	0.7	69.6	69.8	5.4	5.3
15:21:38	10.4	10.4	8.0	8.0	1.1	0.9	65.9	66.1	5.4	5.3
15:22:38	7.2	7.3	10.3	10.4	1.0	0.8	54.3	54.4	5.6	5.6
15:23:38	13.1	13.1	6.0	6.0	1.0	0.8	74.0	74.3	5.5	5.4
15:24:38	11.4	11.5	8.2	8.2	1.1	1.0	78.4	78.7	5.3	5.2
15:25:38	7.3	7.3	10.3	10.3	1.2	1.0	51.2	51.3	5.8	5.7
15:26:38	13.3	13.4	5.8	5.8	1.0	0.9	75.0	75.3	5.4	5.4
15:27:38	8.0	8.0	10.1	10.1	0.9	0.7	48.3	48.3	5.3	5.3
15:28:38	11.0	11.1	6.4	6.4	0.8	0.6	60.9	61.1	5.7	5.6
15:29:38	13.5	13.6	5.6	5.6	0.9	0.7	76.1	76.4	5.0	4.9
15:30:38	7.4	7.4	10.2	10.2	0.8	0.6	48.4	48.5	5.2	5.2
15:31:38	13.2	13.3	5.7	5.7	0.8	0.6	71.8	72.1	4.7	4.7
15:32:38	11.2	11.2	8.2	8.3	1.3	1.1	78.3	78.6	5.0	5.0
15:33:38	7.4	7.4	10.2	10.2	0.6	0.5	47.9	48.0	5.6	5.5
15:34:38	13.6	13.6	5.6	5.6	0.9	0.7	75.6	75.9	5.1	5.0
15:35:38	7.9	8.0	10.0	10.1	1.1	0.9	47.6	47.6	5.0	4.9
15:36:38	11.2	11.3	6.2	6.3	1.0	0.8	61.4	61.6	5.7	5.7
15:37:38	13.7	13.7	5.5	5.5	1.1	0.9	75.0	75.3	5.0	4.9
15:38:38	7.5	7.5	10.1	10.2	0.9	0.7	47.0	47.0	5.4	5.3
15:39:38	13.3	13.4	5.6	5.6	0.8	0.6	72.9	73.2	5.3	5.2
15:40:38	11.2	11.2	8.2	8.2	0.8	0.6	79.8	80.1	5.0	4.9
15:41:38	7.4	7.5	10.0	10.0	0.9	0.8	46.4	46.5	5.6	5.5
15:42:38	13.6	13.6	5.5	5.5	1.1	1.0	74.9	75.2	5.1	5.1
15:43:38	7.9	8.0	10.0	10.0	0.8	0.6	47.8	47.9	5.2	5.1
15:44:38	11.7	11.7	6.1	6.1	1.1	0.9	64.0	64.2	5.6	5.5
15:45:38	13.7	13.7	5.6	5.6	1.1	1.0	74.3	74.6	5.0	4.9
15:46:38	7.5	7.5	10.1	10.1	1.1	1.0	46.3	46.3	5.4	5.3
15:47:38	13.4	13.5	5.6	5.6	1.0	0.9	72.6	72.9	5.2	5.1
15:48:38	10.8	10.9	8.6	8.7	0.8	0.7	79.8	80.1	5.1	5.0
15:49:38	7.5	7.5	9.7	9.7	0.8	0.6	46.5	46.5	5.3	5.2
15:50:38	13.7	13.8	5.5	5.5	0.8	0.7	74.4	74.7	5.1	5.0
15:51:38	7.9	7.9	9.9	10.0	0.9	0.8	47.9	47.9	5.0	4.9
15:52:38	12.0	12.0	5.9	6.0	0.9	0.8	64.3	64.5	5.4	5.4
15:53:38	13.9	13.9	6.0	6.0	1.5	1.3	74.1	74.3	5.0	4.9
15:54:38	7.6	7.6	10.0	10.0	0.8	0.6	45.7	45.8	5.3	5.2
15:55:38	13.6	13.6	5.5	5.5	1.0	0.8	72.1	72.4	5.1	5.1
15:56:38	10.7	10.7	8.9	8.9	1.1	0.9	77.9	78.2	5.2	5.1
15:57:38	7.6	7.6	9.6	9.6	0.7	0.5	46.1	46.2	5.4	5.3
15:58:38	13.8	13.8	5.4	5.4	0.9	0.7	73.7	74.0	5.0	4.9

15:59:38	7.9	7.9	9.9	9.9	1.0	0.9	47.1	47.2	5.0	5.0
16:00:38	12.1	12.1	5.9	5.9	0.7	0.5	65.4	65.6	5.4	5.4
16:01:38	13.9	13.9	6.0	6.0	1.4	1.2	73.7	74.0	4.9	4.8
16:02:38	7.6	7.7	9.9	10.0	0.9	0.7	46.0	46.0	5.2	5.1
16:03:38	13.6	13.7	5.4	5.4	0.9	0.8	71.6	71.8	5.2	5.1
16:04:38	10.6	10.6	8.9	8.9	0.8	0.7	76.4	76.7	5.0	5.0
16:05:38	7.6	7.7	9.4	9.4	0.6	0.4	46.2	46.2	5.3	5.2
16:06:38	13.8	13.9	5.3	5.3	0.6	0.4	73.4	73.7	5.2	5.1
16:07:38	7.9	7.9	9.8	9.9	0.9	0.7	47.4	47.4	5.1	5.0
16:08:38	12.3	12.3	5.8	5.8	0.6	0.5	65.6	65.8	5.2	5.1
16:09:38	13.9	14.0	6.1	6.1	1.2	1.0	73.0	73.3	5.1	5.0
16:10:38	7.7	7.7	9.9	10.0	0.8	0.6	46.4	46.5	5.4	5.3
16:11:38	13.6	13.7	5.4	5.4	0.7	0.5	72.2	72.5	5.2	5.1
16:12:38	10.8	10.8	8.8	8.8	0.9	0.7	77.1	77.4	5.1	5.0
16:13:38	7.6	7.7	9.5	9.5	0.5	0.3	45.8	45.9	5.5	5.5
16:14:38	13.8	13.9	5.3	5.3	1.0	0.9	72.7	72.9	5.1	5.1
16:15:38	8.0	8.0	9.8	9.9	0.7	0.6	48.2	48.3	5.3	5.2
16:16:38	12.1	12.2	5.9	5.9	0.9	0.7	63.9	64.1	5.8	5.7
16:17:38	14.0	14.1	5.7	5.7	1.0	0.8	71.0	71.2	5.0	4.9
16:18:38	7.8	7.8	9.8	9.9	0.8	0.7	45.5	45.5	5.4	5.3
16:19:38	13.7	13.8	5.3	5.3	0.9	0.7	70.7	71.0	5.1	5.0
16:20:38	11.0	11.0	8.6	8.7	1.2	1.0	77.6	77.9	5.1	5.0
16:21:38	7.8	7.8	9.5	9.5	0.6	0.5	45.3	45.3	5.5	5.4
16:22:38	13.9	14.0	5.3	5.3	1.0	0.8	71.6	71.8	4.9	4.8
16:23:38	8.1	8.2	9.7	9.8	0.8	0.6	48.0	48.1	5.0	4.9
16:24:38	12.1	12.1	5.8	5.8	0.9	0.7	64.5	64.7	5.3	5.2
16:25:38	14.1	14.1	5.5	5.5	1.0	0.8	70.4	70.7	5.0	5.0
16:26:38	7.8	7.9	9.8	9.8	0.8	0.7	46.1	46.2	5.1	5.1
16:27:38	13.7	13.8	5.3	5.3	0.7	0.6	70.8	71.0	5.2	5.1
16:28:38	11.2	11.3	8.4	8.4	1.2	1.0	77.5	77.8	5.0	4.9
16:29:38	7.8	7.8	9.7	9.7	1.0	0.8	45.5	45.6	5.3	5.2
16:30:38	14.0	14.0	5.2	5.2	0.8	0.7	70.5	70.7	5.0	4.9
16:31:38	8.2	8.3	9.7	9.7	0.6	0.5	49.2	49.3	4.8	4.7
16:32:38	11.9	11.9	5.9	5.9	0.8	0.7	62.6	62.8	5.1	5.1
16:33:38	14.1	14.1	5.3	5.3	1.0	0.8	70.7	70.9	4.9	4.9
16:34:38	7.8	7.9	9.8	9.8	0.9	0.8	46.1	46.2	5.1	5.0
16:35:38	13.7	13.8	5.3	5.3	0.5	0.3	69.3	69.5	5.1	5.0
16:36:38	11.5	11.5	8.1	8.2	0.8	0.7	77.4	77.7	5.0	4.9
16:37:38	7.8	7.8	9.7	9.8	0.6	0.5	46.1	46.2	5.1	5.0
16:38:38	14.0	14.0	5.2	5.2	0.6	0.4	70.1	70.3	4.9	4.8
16:39:38	8.3	8.3	9.7	9.7	0.9	0.7	49.9	49.9	4.9	4.8
16:40:38	11.6	11.6	6.0	6.0	0.7	0.5	61.4	61.6	5.2	5.1
16:41:38	14.1	14.2	5.1	5.1	0.9	0.7	70.5	70.8	4.9	4.8
16:42:38	7.9	7.9	9.8	9.8	0.6	0.4	46.3	46.4	5.1	5.0
16:43:38	13.7	13.7	5.3	5.3	0.7	0.6	68.5	68.7	5.1	5.0
16:44:38	11.7	11.8	7.8	7.8	0.7	0.5	77.8	78.1	5.0	5.0
16:45:38	7.8	7.8	9.8	9.8	0.7	0.5	46.0	46.0	5.1	5.0
16:46:38	13.9	14.0	5.2	5.2	0.7	0.5	70.1	70.4	5.1	5.0
16:47:38	8.4	8.4	9.7	9.7	0.8	0.6	51.4	51.5	4.9	4.8
16:48:38	11.2	11.3	6.1	6.1	0.6	0.5	60.1	60.2	5.1	5.0
16:49:38	14.1	14.1	5.1	5.1	0.8	0.7	70.9	71.2	5.0	4.9
16:50:38	7.9	7.9	9.8	9.8	1.1	0.9	46.9	47.0	5.0	4.9
16:51:38	13.6	13.6	5.4	5.4	0.8	0.6	69.5	69.7	5.3	5.2
16:52:38	11.9	12.0	7.6	7.6	1.0	0.9	78.8	79.2	5.1	5.0
16:53:38	7.8	7.8	9.8	9.9	0.9	0.8	46.0	46.0	5.3	5.3
16:54:38	14.0	14.1	5.2	5.2	0.8	0.6	70.7	71.0	4.9	4.8
16:55:38	8.6	8.6	9.6	9.7	1.0	0.8	54.4	54.5	4.6	4.5
16:56:38	10.8	10.9	6.2	6.2	0.7	0.5	58.5	58.6	5.2	5.1
16:57:38	14.1	14.1	5.1	5.1	0.7	0.5	71.5	71.8	4.8	4.8
16:58:38	7.9	7.9	9.8	9.8	0.8	0.6	47.5	47.6	4.7	4.6
16:59:38	13.6	13.6	5.3	5.3	0.8	0.6	69.3	69.5	4.8	4.7
17:00:38	12.2	12.3	7.4	7.4	1.0	0.9	78.9	79.2	5.0	4.9
17:01:38	7.8	7.8	9.9	9.9	0.8	0.7	46.5	46.6	4.9	4.8
17:02:38	14.0	14.1	5.2	5.2	0.5	0.4	70.5	70.8	4.9	4.8
17:03:38	8.8	8.8	9.6	9.6	0.5	0.3	57.1	57.2	4.6	4.6
17:04:38	10.2	10.3	6.4	6.5	0.6	0.4	55.7	55.8	5.0	4.9
17:05:38	14.1	14.2	5.0	5.0	0.8	0.7	69.7	70.0	4.9	4.8
17:06:38	7.9	7.9	9.8	9.8	0.7	0.5	47.5	47.6	4.8	4.7
17:07:38	13.5	13.6	5.3	5.3	0.9	0.7	68.5	68.7	4.9	4.8
17:08:38	12.5	12.5	7.2	7.2	0.8	0.7	80.1	80.4	4.7	4.6
17:09:38	7.8	7.8	9.8	9.8	0.7	0.5	47.1	47.2	4.7	4.7
17:10:38	14.0	14.0	5.2	5.2	0.9	0.7	70.3	70.5	4.8	4.7
17:11:38	9.0	9.0	9.5	9.5	0.9	0.8	59.4	59.6	4.8	4.7
17:12:38	9.8	9.9	6.6	6.7	0.5	0.3	54.4	54.6	4.8	4.7
17:13:38	14.1	14.1	5.1	5.1	0.9	0.7	71.1	71.3	4.7	4.6
17:14:38	7.9	8.0	9.7	9.8	0.6	0.5	48.5	48.5	5.0	4.9
17:15:38	13.4	13.5	5.3	5.3	0.9	0.7	68.1	68.3	4.9	4.8
17:16:38	12.9	12.9	7.0	7.0	1.1	0.9	79.9	80.2	4.6	4.6
17:17:38	7.8	7.9	9.8	9.8	0.4	0.2	47.9	47.9	4.7	4.6
17:18:38	14.0	14.0	5.1	5.1	1.0	0.9	70.4	70.7	4.7	4.6
17:19:38	9.3	9.4	9.4	9.4	0.5	0.3	63.6	63.8	4.8	4.7
17:20:38	9.3	9.3	7.0	7.0	0.2	0.0	52.4	52.5	4.8	4.7
17:21:38	14.1	14.2	5.1	5.1	0.7	0.6	70.0	70.3	4.6	4.6
17:22:38	8.0	8.0	9.7	9.7	0.6	0.5	48.6	48.7	4.5	4.4
17:23:38	13.3	13.4	5.4	5.4	0.9	0.7	67.4	67.6	4.7	4.7
17:24:38	13.5	13.5	6.7	6.7	0.9	0.7	78.1	78.4	4.5	4.4
17:25:38	7.9	7.9	9.7	9.8	0.6	0.5	47.8	47.9	4.6	4.5
17:26:38	14.0	14.1	5.1	5.1	0.7	0.5	70.2	70.4	4.6	4.5
17:27:38	9.8	9.9	9.2	9.2	1.1	0.9	69.1	69.3	4.7	4.6
17:28:38	8.6	8.6	7.5	7.5	0.4	0.2	51.1	51.2	4.8	4.7
17:29:38	14.1	14.2	5.1	5.1	0.7	0.6	69.8	70.0	4.7	4.6
17:30:38	8.0	8.0	9.7	9.8	0.1	0.0	49.9	50.0	4.4	4.3
17:31:38	13.2	13.3	5.4	5.4	0.9	0.8	66.7	67.0	4.8	4.7
17:32:38	13.8	13.9	6.5	6.5	0.5	0.3	74.4	74.7	4.5	4.4
17:33:38	7.8	7.9	9.8	9.8	0.7	0.5	48.0	48.0	4.6	4.5

The page features a decorative background with a large, light gray curved shape on the right side and a blue curved shape on the left side, separated by a white border.

# APPENDIX E





CONTINUOUS EMISSION MONITORING  
SYSTEM CALIBRATION AND DRIFT CALIBRATION

Client: AEM - Meliadine				Date: <u>Sept 28, 2025</u>		
Project Number: 2510430				Start Time: <u>12:45</u>		
Sample Location: ECO WASTE				Finish Time: <u>20:05</u>		
	20	15	50	300	50	THC
	O <sub>2</sub>	CO <sub>2</sub>	CO	NO <sub>x</sub>	SO <sub>2</sub>	
	10	7.5	25	150	25	
Range						
TIME						
Direct	Zero	0.02	0.02	0.00	0.00	
	Low Span	-	-	-	-	
	Mid. Span	9.9	7.6	25.1	151.2	24.8
	High Span	20.1	15.1	49.8	700.1	49.7
TIME						
System	Zero	0.1	0.20	0.3	0.1	0.1
	Span	19.8	7.6	24.6	150.7	24.6
T2	TIME <u>12:45 - 15:25</u>					
	Zero	0.1	0	0.3	0.1	0.1
	Span	19.8	7.6	24.6	150.7	24.6
T3	TIME <u>17:28 - 20:05</u>					
	Zero	0.1	0.1	0.2	0.3	0.42
	Span	19.8	7.5	24.8	148.5	24.2
TIME						
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# ECCC EPS 1/RM/1 Sampling

Project #: 2510430	Client: AEM - Meliadine	Console ID: M308 8
Date: 27-Sep-2025	Test: ECO Waste Incinerator	Console Y: 1.026
Sample Location: Incinerator	HCl	Operator: PB

Time (min)	Orifice Press ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°C)/(°F)		Vacuum (in Hg)	Filter Box Temp (°C)/(°F)	Probe Temp (°C)/(°F)	Condensor Temp (°C)/(°F)	Sampling Rate (L/min)
			Inlet	Outlet					
Test 1 Start Time: 13:32 Date: 27-Sep-2025 Pbar: 29.38 Leak Check: ✓									
0		0.00	67	67	0			17	2
5		10.01	67	67	0			17	
10		20.02	67	67	0			16	
15		30.03	67	67	0			16	
20		40.04	67	67	0			16	↓
25									
30									
35									
40									
45									
50									
55									
60									

Test 1 End Time: 13:52 Leak Check: ✓

Test 2 Start Time: 15:57 Date: 28-Sep-2025 Pbar: 29.49 Leak Check: ✓									
0		0.00	67	67	0			16	2
5		10.02	67	67	0			16	
10		20.00	68	68	0			16	
15		30.01	68	68	0			16	
20		40.02	68	68	0			17	↓
25									
30									
35									
40									
45									
50									
55									
60									

Test 2 End Time: 16:17 Leak Check: ✓

Test 3 Start Time: 16:20 Date: 28-Sep-2025 Pbar: 29.49 Leak Check: ✓									
0		0.00	68	68	0			17	2
5		10.00	68	68	0			17	
10		20.04	68	68	0			17	
15		30.02	68	68	0			17	
20		40.00	68	68	0			12	↓
25									
30									
35									
40									
45									
50									
55									
60									

Test 3 End Time: 16:40 Leak Check: ✓



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: Sept 26 - 2025 Test: T1 - M29 - ECO  
 Filter ID: QZ 13329  
 Sample Loc. Incinerator - ECO WASTE XAD Trap ID: N/A  
 Train ID: M29  
 Pre-weights By: [Signature] Post-weights By: [Signature]

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	5%HNO3 + 10% H2O2	803.1	739.0	
2	5%HNO3 + 10% H2O2	794.6	765.4	
3	Empty	634.1	628.9	
4	H2SO4/KMnO4	746.5	746.2	
5	H2SO4/KMnO4	752.5	752.9	
6	Silica	908.1	884.2	
7				
8				
TOTAL				

**Balance QA Check:**

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.4	✓	[Signature]
Post-weights	500.0	500.1	✓	[Signature]

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.5  
 2 0.5  
 3 0.5  
 4 0.5

Avg 0.500

[Signature]  
Signature

Sept 27/2025  
Date



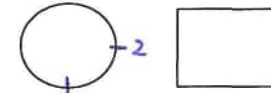
— Isokinetic Sampling Train Data Sheet —

Operator Signature: Rh

Job Name: AEM Plant: Incinerator Test No.: T1-M29  
Job Number: 2510430 Source: Elm Waste Operators: PS  
Client: AEM Traverse: 1+2 Traverse Dir.: Out 9in  
Dn: 0.50 Cp: 0.50 Bws: 10% dH@: 1.820 Y: 1.007

Start Time: 9:58  
Finish Time: 12:45  
Date: 27-JEP-2025  
Pbar: 29.38 Pstatic: -0.10

Stack D.: 33.5"  
Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
Port length: 4" Page: 1 of 1



CO<sub>2</sub>: 4.0% O<sub>2</sub>: 15.0% Pitot ID: 4' Inconel  
Console ID: SI

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments	
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.08	1.95	-	0.160	762	IN-STACK	252	42	67		-2.5		
	5	0.09	1.95	3.95	3.59	778		253	46	66		-2.5		
2	10	0.10	2.15	7.57	7.20	780		253	46	67		-3		
	15	0.10	2.15	11.40	11.03	786		252	46	67		-3		
3	20	0.11	2.35	15.22	14.83	791		252	48	67		-3.5		
	25	0.10	2.10	19.24	18.90	796		253	44	68		-3.5		
4	30	0.10	2.10	23.09	22.81	807		252	50	68		-3.5		
	35	0.11	2.30	26.98	26.64	804		251	50	68		-4		
5	40	0.11	2.35	31.02	30.63	806		251	50	69		-4		
	45	0.10	2.30	35.05	34.70	808		252	51	69		-4		
6	50	0.09	1.90	38.87	38.76	813		254	51	70		-3.5		
	55	0.09	1.90	42.72	42.50	819		251	51	70		-3.5		
7	60	0.08	1.70	46.45	46.16	820		254	51	70		-3.5		
	65	0.08	1.70	49.88	49.76	825		255	51	71		-3.5		
8	70	0.08	1.70	53.48	53.32	819		251	51	71		-3.5		
	75	0.08	1.70	57.05	56.84	817		250	51	71		-3.5		
9	80	0.09		60.57	60.32	819		252	51	71		-4		
	85	0.09	2.00		60.32	819		252	51	71		-4		
10	90	0.08	2.00	64.28	64.02	823		252	51	71		-4		
	95	0.09	1.80	67.97	67.72	845		253	51	71		-4		
11	100	0.10	1.80	71.41	71.39	851		255	52	71		-4		
	105	0.11	2.05	75.30	75.04	852		252	51	72		-4		
12	110	0.11	2.30	79.17	78.85	850		252	52	72		-5		
	115	0.11	2.30	83.18	82.88	845		251	52	72		-5		
13	120	0.10	2.30	87.22	86.90	851		253	53	72		-5		
	125	0.10	2.20	91.23	90.88	850		252	53	72		-5		
14	130	0.09	2.20	95.01	94.83	854		254	53	72		-5		
	135	0.09	2.10	98.95	98.75	852		251	53	72		-5		
15	140	0.09	2.20	102.66	102.66	849		252	53	73		-5		
	145	0.08	1.90	106.59	106.51	874		249	54	73		-5		
16	150	0.08	1.80	110.40	110.23	873		251	54	73		-5		
	155	0.08	1.80	113.90	113.90	880		250	54	73		-5		
17	160	0.08	1.80	117.56	117.54	879		250	53	73		-5		
	165	0.08		121.20	121.12									

Traverse 1

Traverse 2

Pretest Leak Check Rate (cfm) 20.02 at -40 vacuum ("Hg)  
Posttest Leak Check Rate (cfm) 20.02 at -10 vacuum ("Hg)

Leak Vol Start 0.00  
Leak Vol End 121.92

Leak Vol Start 0.162  
Leak Vol End 121.91

Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 28-Sep-2025 Test: M29-T2-ECO  
 Filter ID: QZ13330  
 Sample Loc. Incinerator - Eco waste XAD Trap ID: N/A  
 Train ID: M29  
 Pre-weights By: PB Post-weights By: OO

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	5%HNO3 + 10% H2O2	762.6	739.3	
2	5%HNO3 + 10% H2O2	855.6	780.8	
3	Empty	655.4	632.8	
4	H2SO4/KMnO4	759.3	746.4	
5	H2SO4/KMnO4	755.1	752.6	
6	Silica	934.0	908.1	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.02	✓	PB
Post-weights	500.0	500.03	✓	OO

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.500  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_

Avg 0.500

Signature

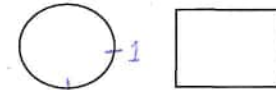
28-Sep-2025

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: RL



Job Name: AEM Plant: Incinerator Test No.: T2-M29 Start Time: 12:46 Stack D.: 33.5"  
 Job Number: 2510430 Source: Eco Waste Operators: PB Finish Time: 15:40 Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 112 Traverse Dir.: In-Outlet Date: 23-Sep-2008 Port length: 4" Page: 1 of 1  
 Dn: 0.500 Cp: 0.820 Bws: 5% dH@: 1.820 Y: 1.007 Pbar: 29.49 Pstatic: -0.1 CO<sub>2</sub>: 4% O<sub>2</sub>: 15% Pitot ID: 4' Inconel  
 Console ID: T

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)		
1	0	0.08	1.70	-	0.51	903		253	49	64		-3	
	5	0.08	1.90	4.03	3.70	908		254	52	64		-3.5	
2	10	0.09	2.00	7.42	7.24	894		253	58	65		-3.5	
	15	0.09	2.10	11.21	10.90	894		253	60	65		-4	
3	20	0.09	2.10	14.87	14.75	908		252	65	65		-4	
	25	0.08	2.00	18.70	18.58	925		251	65	66		-4	
4	30	0.10	2.10	22.29	22.01	928		253	60	67		-4.5	
	35	0.04	2.00	26.46	26.22	926		252	62	68		-4.5	
5	40	0.10	2.20	30.16	29.94	933		252	60	69		-5	
	45	0.11	2.30	34.09	33.40	934		253	59	70		-5	
6	50	0.11	2.30	38.26	38.16	938		251	58	71		-5	
	55	0.10	2.20	42.53	42.33	941		252	57	71		-5	
7	60	0.09	2.10	46.49	46.28	937		253	57	72		-5	
	65	0.10	2.20	50.24	50.19	947		252	58	72		-5	
8	70	0.09	2.20	54.35	54.15	945		252	59	72		-5.5	
	75	0.08	2.10	58.10	58.08	950		253	61	72		-6	
9	80	0.08		61.79	61.93								
	0	0.09	2.10	-	61.93	950		253	61	72		-6	
10	5	0.09	2.10	65.87	65.83	947		252	62	72		-6	
	10	0.10	2.20	69.77	69.66	944		251	63	73		-6	
11	15	0.09	2.20	73.83	73.62	949		252	62	73		-7	
	20	0.08	2.10	77.57	77.52	950		251	62	71		-7	
12	25	0.09	2.00	81.23	81.42	953		252	62	73		-7	
	30	0.11	2.40	85.36	85.17	950		252	63	73		-8	
13	35	0.12	2.30	89.53	89.23	948		252	63	72		-9	
	40	0.11	2.60	93.78	93.55	942		252	64	73		-9.5	
14	45	0.10	2.40	97.93	97.85	947		253	65	73		-10	
	50	0.10	2.40	102.01	102.01	952		253	66	73		-10	
15	55	0.09	2.30	106.17	106.10	947		252	65	73		-9.5	
	60	0.09	2.20	110.05	110.13	947		252	65	73		-9.5	
16	65	0.09	2.20	114.09	114.09	945		252	66	73		-9.5	
	70	0.09	2.30	118.04	118.00	945		253	67	73		-10	
	75	0.08	2.00	121.95	121.97	947		252	67	73		-10	
	80	0.09		125.70	125.80								

Traverse 1

Traverse 2

Pretest Leak Check Rate (cfm) 10.02 at -10 vacuum ("Hg)  
 Posttest Leak Check Rate (cfm) 10.02 at -10 vacuum ("Hg)

Leak Vol Start 0.000  
 Leak Vol End 125.80

Leak Vol. Start 0.310  
 Leak Vol. End 126.02

Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 28-Sept-2025 Test: TB-M29-60  
 Filter ID: Q213333  
 Sample Loc. Incinerator - ECO 10126 XAD Trap ID: N/A  
 Train ID: M29  
 Pre-weights By: SO Post-weights By: PB

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	5%HNO3 + 10% H2O2	735.0	738.3	
2	5%HNO3 + 10% H2O2	790.0	737.6	
3	Empty	648.8	631.3	
4	H2SO4/KMnO4	752.9	742.2	
5	H2SO4/KMnO4	755.3	755.1	
6	Silica	907.7	868.3	
7				
8				
TOTAL				

**Balance QA Check:**

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	SO
Post-weights	500.0	500.3	✓	PB

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.500  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_

Avg 0.500

Signature

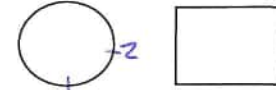
28-Sep-2025

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T3-M29 Start Time: 17:25  
Job Number: 2510430 Source: Flow Waste Operators: 98/100 Finish Time: 20:15  
Client: AEM Traverse: #2 Traverse Dir.: 090°N Date: 28-Jan-2025

Stack D.: 33.5" Pre -Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
Port length: 4" Page: 1 of 1

Dn: 0.500 Cp: 0.820 Bws: 5% dH@: 1.820 Y: 1.007 Pbar: 29.49 Pstatic: -0.1 CO<sub>2</sub>: 4% O<sub>2</sub>: 15% Pitot ID: 4' In Line 1

Console ID: I

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments	
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1 #	0	0.08	1.90	7	0.22	904		251	52	68		-3		
	5	0.08	2.00	3196	3.78	903		254	49	67		-3.5		
	10	0.08	2.10	2152	7.39	893		253	48	67		-4		
2	15	0.09	2.20	1115	11.11	889		253	50	68		-4.5		
	20	0.10	2.30	15.11	15.01	885		252	50	68		-5		
	25	0.10	2.30		19.10	887		249	51	69		-5		
3 #	30	0.09	2.20		23.06	885		252	51	69		-5		
	35	0.10	2.40		27.18	883		250	52	70		-7		
	40	0.12	2.70		31.27	880		250	52	70		-7		
4	45	0.12	2.70		35.66	882		252	53	71		-9		
	50	0.11	2.60		40.16	879		253	53	71		-9		
	55	0.10	2.60	44.58	44.52	881		252	57	72		-10		
5 #	60	0.09	2.40	48.74	48.81	882		251	62	73		-10		
	65	0.10	2.40		52.41	887		252	63	73		-10		
	70	0.08	2.30		56.98	887		252	65	73		-10		
6	75	0.08	2.00		60.99	886		252	66	73		-10		
	80	0.09			64.80									
	85	0.10	2.20		64.80	887		251	65	73		-10		
7	90	0.10	2.40		68.65	889		251	64	73		-11.5		
	95	0.09	2.20		72.70	888		252	62	73		-12		
	100	0.10	2.30		76.73	889		252	61	73		-12		
8	105	0.11	2.50		80.74	891		253	61	73		-13.5		
	110	0.11	2.60		84.91	883		252	60	73		-14		
	115	0.12	2.80		89.17	886		251	60	73		-15		
9 #	120	0.12	2.90		93.57	887		253	59	73		-17		
	125	0.10	2.80		98.07	889		252	59	73		-17		
	130	0.11	2.50		102.52	889		252	60	73		-16.5		
10	135	0.09	2.40		106.80	886		252	60	74		-16		
	140	0.08	2.00		110.80	886		252	61	73		-15		
	145	0.09	1.90		114.87	888		253	61	73		-14.5		
11	150	0.08	2.00		118.81	887		251	62	73		-15		
	155	0.09	2.00		122.67	887		251	62	72		-15		
	160	0.09	2.10		126.49	887		251	63	72		-15.5		
12	165	0.08			130.32									

Traverse 1

Traverse 2

Pretest Leak Check Rate (cfm) 60.02 at -10 vacuum ("Hg)  
Posttest Leak Check Rate (cfm) 60.02 at -10 vacuum ("Hg)

Leak Vol Start 0.00  
Leak Vol End 130.32

Leak Vol Start 0.22  
Leak Vol End 130.51

Post -Pitot Check:  (< 0.1" @ 3.0" for 15 sec)



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: SEPT 26-2025 Test: T1-SVOC - ECD  
 Filter ID: N/A  
 Sample Loc. Incinerator - ECO WASTE XAD Trap ID: -  
 Train ID: SVOC  
 Pre-weights By: W Post-weights By: W

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	Condenser	261.7	260.7	
2	XAD	340.0	337.8	
3	KO	610.9	501.7	
4	EG	772.9	742.7	
5	MT	625.3	623.7	
6	Silica Gel	866.7	850.0	
7				
8				
TOTAL				

Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.2	✓	W
Post-weights	500.0	500.1	✓	W

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.50  
 2 0.50  
 3 0.50  
 4 0.50

Avg 0.500

W  
 Signature

Sept 27/2025  
 Date

Damper On



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T11-5006 Start Time: 7:58 Stack D.: 335  
 Job Number: 2510430 Source: Flu w/brn Operators: W Finish Time: \_\_\_\_\_ Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 1 Traverse Dir.: in/out Date: Sept 27, 2015 Port length: 4 Page: 1 of 2  
 Dn: 0.50 Cp: 0.82 Bws: 107 dH@: 1.50 Y: 0.984 Pbar: 29.38 Pstatic: -0.1 CO<sub>2</sub>: 4.4 O<sub>2</sub>: 15.2 Pitot ID: 4ft InLine  
 Console ID: 5

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Cond. Temp. (°F) < 68 °F	Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.1	2.4		2.12	753	249	39	67		41	-4		
	5	0.1	2.4		6.50	785	249	41	66		45	-5		
2	10	0.1	2.4		10.53	787	251	42	66		45	-5		
	15	0.1	2.4		14.53	781	250	42	66		45	-5		
2	20	0.07	2.2		18.62	780	250	43	66		48	-5		
	25	0.07	2.2		22.73	789	251	43	67		45	-5		
4	30	0.1	2.4		26.82	796	250	43	67		45	-5		
	35	0.1	2.4		31.12	792	249	43	67		45	-5		
5	40	0.11	2.7		35.40	800	249	44	67		52	-7		
	45	0.11	2.7		39.84	776	247	45	67		53	-7		
6	50	0.11	2.7		44.24	806	251	45	67		53	-7		
	55	0.11	2.7		48.71	811	248	46	67		54	-7		
7	60	0.08	2.0		53.17	819	250	46	67		54	-6		
	65	0.08	2.0		57.14	806	247	48	70		54	-6		
8	70	0.08	2.0		61.05	811	248	48	71		54	-6		
	75	0.07	2.0		64.86	821	251	48	71		54	-6		
	80				68.7									
	85													
	90													
	95													

Pretest Leak Check Rate (cfm) 0.05 at 10 vacuum ("Hg) Leak Vol Start 0.94 Leak Vol. End 2.17 Post-Pitot Check: - (< 0.1" @ 3.0" for 15 sec)  
 Posttest Leak Check Rate (cfm) - at - vacuum ("Hg) Leak Vol Start - Leak Vol. End -



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T1-506 Start Time: 9:57 Stack D.: 320  
 Job Number: 2510430 Source: (10 um) Operators: W Finish Time: 12:45 Pre-Pitot Check:  ( $< 0.1'' @ 3.0''$  for 15 sec)  
 Client: AEM Traverse: 2 Traverse Dir.: In-Flow Date: Sept 27, 2004 Port length: 4 Page: 2 of 2  
 Dn: 10-50 Cp: 0.82 Bws: 10 dH@: 1.98 Y: 0.984 Pbar: 29.38 Pstatic: 101 CO<sub>2</sub>: 4.4 O<sub>2</sub>: 15.2 Pitot ID: 2ft Inconel  
 Console ID: 3

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Cond. Temp. (°F) < 68 °F	Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.1	2.4		68.7	827		251	49	71		54	-8	
	5	0.1	2.4		72.98	830		251	49	71		54	-8	
2	10	0.11	2.7		77.26	823		250	49	71		54	-8	
	15	0.11	2.7		81.67	845		250	49	71		54	-9	
3	20	0.09	2.4		86.09	846		251	50	71		54	-9	
	25	0.09	2.1		90.15	850		250	51	72		54	-9	
4	30	0.08	2.0		94.17	849		250	51	72		54	-8	
	35	0.08	2.0		98.01	844		247	50	72		53	-8	
5	40	0.1	2.4		101.82	851		251	50	72		54	-9	
	45	0.1	2.4		105.94	853		249	50	72		54	-9	
6	50	0.1	2.4		110.11	852		251	50	73		54	-9	
	55	0.1	2.4		114.26	853		250	51	73		54	-9	
7	60	0.1	2.4		118.45	849		248	51	73		53	-10	
	65	0.1	2.4		122.65	873		250	51	73		53	-10	
8	70	0.08	2.0		126.81	867		252	51	73		53	-10	
	75	0.08	2.0		130.65	879		250	51	73		53	-10	
9	80				134.50									
	85													
	90													
	95													

Pretest Leak Check Rate (cfm) — at 5 vacuum ("Hg)  
 Posttest Leak Check Rate (cfm) 10.52 at 15 vacuum ("Hg)

Leak Vol Start — Leak Vol. End —  
 Leak Vol Start 134.50 Leak Vol. End 135.91

Post-Pitot Check:  ( $< 0.1'' @ 3.0''$  for 15 sec)



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 09/28/25 Test: T2 - SVOC - EG  
 Filter ID: N/A  
 Sample Loc. Incinerator - EG waste XAD Trap ID: -  
 Train ID: SVOC  
 Pre-weights By: JD Post-weights By: JD

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	Condenser	262.0	262.1	
2	XAD	340.1	337.0	
3	KO	626.9	502.4	
4	EG	775.4	739.4	
5	MT	625.8	626.8	
6	Silica Gel	872.4	858.1	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	JD
Post-weights	500.0	500.1	✓	JD

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Nozzle Measurements:

1 0.500  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_  
 Avg 0.500

JD  
Signature

09/28/25  
Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T2-SJOC Start Time: 12:46 Stack D.: 23.5  
 Job Number: 2510430 Source: FlowAS76 Operators: 02 Finish Time: 15:40 Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 1,2 Traverse Dir.: Out to In Date: 09/28/2025 Port length: 4 Page: 1 of 1  
 Dn: 0.60 Cp: 0.82 Bws: 5% dH@: 1.980 Y: 0.984 Pbar: 29.49 Pstatic: -0.1 CO<sub>2</sub>: 4% O<sub>2</sub>: 15% Pitot ID: Left Inlines  
 Console ID: J

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Meter (°F)	Comp (°F)		
1	0	0.09	2.2		0.52	903		249	46	65	44	-4	
	5	0.09	2.2		4.35	902		251	44	64	46	-4	
2	10	0.1	2.5		8.26	903		251	46	64	56	-6	
	15	0.1	2.5		12.50	893		264	46	65	61	-6	
3	20	0.09	2.2		16.73	893		250	47	65	61	-6	
	25	0.09	2.2		20.80	926		250	47	67	61	-6	
4	30	0.1	2.5		24.85	927		250	47	67	61	-7	
	35	0.1	2.5		27.04	927		251	46	67	62	-7	
5	40	0.11	2.7		33.30	927		249	47	68	63	-7	
	45	0.11	2.7		37.63	934		249	47	68	63	-8	
6	50	0.12	2.9		42.00	939		250	48	69	63	-8	
	55	0.12	2.9		46.50	938		251	48	71	60	-9	
7	10	0.1	2.5		51.14	936		250	48	71	60	-9	
	15	0.1	2.5		55.55	939		253	47	72	59	-9	
8	20	0.08	2.0		59.86	939		250	48	72	59	-9	
	25	0.08	2.0		63.64	946		248	48	72	59	-7	
	30				67.42								
	35												
	40												
1	0	0.1	2.5		67.42	952		250	50	72	60	-9	
	5	0.1	2.5		71.69	950		253	52	72	60	-9	
2	10	0.09	2.2		75.91	946		253	53	72	61	-9	
	15	0.09	2.2		80.07	943		250	53	72	62	-9	
3	20	0.11	2.7		84.12	951		247	54	72	62	-10	
	25	0.11	2.7		88.49	953		252	55	72	63	-10	
4	30	0.11	2.7		92.99	952		249	55	72	63	-11	
	35	0.11	2.7		97.44	948		251	56	72	63	-11	
5	40	0.1	2.5		101.87	948		251	56	72	63	-11	
	45	0.1	2.5		106.19	944		250	56	72	63	-11	
6	50	0.09	2.2		110.41	945		253	55	72	63	-11	
	55	0.09	2.2		114.51	952		249	55	72	62	-11	
7	60	0.09	2.2		118.45	948		249	56	72	62	-11	
	65	0.09	2.2		122.57	947		248	56	72	63	-11	
8	70	0.08	2.0		126.31	945		251	56	72	63	-11	
	75	0.08	2.0		130.18	941		248	56	72	63	-11	
	80				133.99								

Pretest Leak Check Rate (cfm) 10.22 at -10 vacuum ("Hg) Leak Vol Start 0 Leak Vol. End 0.52 Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Posttest Leak Check Rate (cfm) 10.22 at -15 vacuum ("Hg) Leak Vol Start 132.95 Leak Vol. End 134.71



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM

Date: 25-2A-2025 Test: T3-SVOC-ELC

Filter ID: N/A

Sample Loc. Incinerator - ELC 10A576 XAD Trap ID: -

Train ID: SVOC

Pre-weights By: EO Post-weights By: EO

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	Condenser	262.0	262.4	
2	XAD	327.2	324.8	
3	KO	579.5	502.4	
4	EG	765.0	737.0	
5	MT	626.1	626.3	
6	Silica Gel	858.6	842.5	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	EO
Post-weights	500.0	500.1	✓	EO

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

### Nozzle Measurements:

1 0.50  
2 \_\_\_\_\_  
3 \_\_\_\_\_  
4 \_\_\_\_\_

Avg 0.500

  
Signature

28/2A/2025  
Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T3-5002 Start Time: 17:26 Stack D.: 32r  
 Job Number: 2510430 Source: ECOWASTE Operators: W Finish Time: 20:15 Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 1,2 Traverse Dir.: N-S Date: 09/28/2015 Port length: 4 Page: 1 of 1  
 Dn: 0.5 Cp: 0.82 Bws: 5% dH@: 1.98 Y: 0.984 Pbar: 29.49 Pstatic: -0.1 CO<sub>2</sub>: 4.62 O<sub>2</sub>: 15% Pitot ID: 4ft Inconel  
 Console ID: 3

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Cond. Temp. (°F) < 68 °F	Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.09	2.2		0.18	904		250	47	68		38	-3	
	5	0.09	2.2		4.10	906		251	47	68		37	-3	
2	10	0.09	2.2		8.00	899		251	47	68		37	-4	
	15	0.07	2.2		11.91	895		251	47	68		37	-4	
2	20	0.08	2.0		15.90	897		250	49	68		37	-4	
	25	0.08	2.0		19.63	886		250	50	69		37	-4	
4	30	0.1	2.5		23.36	884		250	50	69		37	-6	
	35	0.1	2.5		27.63	885		247	47	69		37	-6	
5	40	0.1	2.5		31.91	880		251	49	70		37	-8	
	45	0.1	2.5		36.18	880		251	49	70		39	-8	
6	50	0.11	2.8		40.63	880		249	49	70		39	-10	
	55	0.11	2.8		45.08	878		250	49	71		39	-10	
7	60	0.1	2.5		49.55	882		249	48	72		41	-10	
	65	0.1	2.5		53.94	881		250	48	72		41	-10	
8	70	0.08	2.1		58.21	887		249	46	72		42	-10	
	75	0.08	2.1		62.16	887		252	46	72		43	-10	
8	80				66.12									
	51													
1	0	0.10	2.5		66.12	887		248	46	72		44	-12	
	5	0.10	2.5		70.40	890		249	46	72		44	-12	
2	10	0.11	2.8		74.66	889		252	45	73		46	-14	
	15	0.11	2.9		79.21	889		251	45	73		47	-14	
3	20	0.11	2.9		83.79	891		249	45	73		47	-15	
	25	0.11	2.9		88.29	891		251	46	73		50	-15	
4	30	0.10	2.6		92.80	883		250	47	73		51	-15	
	35	0.10	2.6		97.22	885		250	47	73		52	-15	
5	40	0.10	2.6		101.56	888		251	47	73		52	-15	
	45	0.10	2.6		105.88	885		248	47	72		54	-15	
6	50	0.09	2.3		110.15	885		249	47	72		54	-15	
	55	0.09	2.3		114.37	886		248	46	72		53	-16	
7	60	0.08	2.1		118.43	887		251	44	72		53	-14	
	65	0.08	2.1		122.35	887		249	44	72		53	-14	
8	70	0.08	2.1		126.25	887		250	44	72		56	-14	
	75	0.08	2.1		130.11	885		249	43	72		53	-14	
	80				133.95									

Pretest Leak Check Rate (cfm) 0.02 at -10 vacuum ("Hg) Leak Vol Start 0 Leak Vol. End 0.18  
 Posttest Leak Check Rate (cfm) 0.02 at -17 vacuum ("Hg) Leak Vol Start 133.95 Leak Vol. End 134.15  
 Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)





**CONTINUOUS EMISSION MONITORING  
SYSTEM CALIBRATION AND DRIFT CALIBRATION**

Client: AEM - Meliadine				Date: <u>Sept 30, 2025</u>		
Project Number: 2510430				Start Time: <u>8:50</u>		
Sample Location: KETEK				Finish Time: <u>17:37</u>		
	20	15	50	700	50	THC
	O <sub>2</sub>	CO <sub>2</sub>	CO	NO <sub>x</sub>	SO <sub>2</sub>	
	10	7.5	25	150	25	
Range	25	30	200	500	200	
TIME						
Direct	Zero	0	0	0	0	
	Low Span	-	-	-	-	
	Mid. Span	10	7.48	24.8	148.8	24.81
	High Span	20.1	15	200.9	300.2	50.2
TIME						
System	Zero	0.01	0	0.2	0.21	0.1
	Span	0.95	7.48	24.5	149.1	24.88
12 TIME 8:50 - 12:30						
	Zero	0.01	0	0.2	0.21	0.1
	Span	0.95	7.48	24.5	149.1	24.88
13 TIME 12:30 - 17:37						
	Zero	0.05	0	0.15	0.45	0.2
	Span	0.98	7.49	24.6	148.95	24.72
TIME						
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# ECCC EPS 1/RM/1 Sampling

Project #: 2510430	Client: AEM - Meliadine	Console ID : M308 B
Date: 29-Sep-2025	Test: Ketok Incinerator	Console Y : 1.026
Sample Location: Incinerator	HCl	Operator : PB

Time (min)	Orifice Press ("H <sub>2</sub> O)	Meter Volume (L)	Meter Temp (°C)/(°F)		Vacuum (in Hg)	Filter Box Temp (°C)/(°F)	Probe Temp (°C)/(°F)	Condensor Temp (°C)/(°F)	Sampling Rate (L/min)
			Inlet	Outlet					
<b>Test 1</b>	Start Time: 15:02	Date: 29-Sep-2025	Pbar: 29.85		Leak Check: ✓				
0		0.00	68	68	0			16	2
5		10.01	68	68	0			16	
10		20.03	68	68	0			15	
15		30.05	68	68	0			15	
20		40.01	68	68	0			15	↓
25									
30									
35									
40									
45									
50									
55									
60									

Test 1 End Time: 15:22 Leak Check: ✓

<b>Test 2</b>	Start Time: 11:15	Date: 30-Sep-2025	Pbar: 30.06		Leak Check: ✓				
0		0.00	69	69	0			16	2
5		10.02	69	68	0			17	
10		20.02	68	68	0			17	
15		30.01	68	68	0			16	
20		40.04	69	69	0			16	↓
25									
30									
35									
40									
45									
50									
55									
60									

Test 2 End Time: 11:35 Leak Check: ✓

<b>Test 3</b>	Start Time: 11:42	Date: 30-Sep-2025	Pbar: 30.06		Leak Check: ✓				
0		0.00	70	70	0			16	2
5		10.07	70	71	0			15	
10		20.04	71	71	0			15	
15		30.01	71	71	0			15	
20		40.02	71	71	0			15	↓
25									
30									
35									
40									
45									
50									
55									
60									

Test 3 End Time: 12:02 Leak Check: ✓



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 29-Sep-2025 Test: T1-1729-Ketek  
 Filter ID: QZ13331  
 Sample Loc. Incinerator - Ketek XAD Trap ID: N/A  
 Train ID: M29  
 Pre-weights By: DD Post-weights By: PB

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	5%HNO3 + 10% H2O2	843.9	737.0	
2	5%HNO3 + 10% H2O2	826.5	764.7	
3	Empty	641.1	630.5	
4	H2SO4/KMnO4	752.1	744.9	
5	H2SO4/KMnO4	753.6	750.7	
6	Silica	877.5	850.0	
7				
8				
TOTAL				

Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	PB
Post-weights	500.0	500.2	✓	PB

Comments:

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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.500  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_

Avg 0.500

Signature

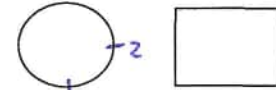
29-Sep-2025

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: Ph



Job Name: AEM Plant: Incinerator Test No.: T1-M29 Start Time: 13:13 Stack D.: 18.5"  
 Job Number: 2510430 Source: Ketek Operators: PB Finish Time: 16:07 Pre-Pitot Check:  (1 of 1)  
 Client: AEM Traverse: 1+2 Traverse Dir.: out-to-in Date: 29-Sep-2025 Port length: 6.5" Pitot ID: 4' Inland  
 Dn: 0.500 Cp: 0.820 Bws: 6% dH@: 1.820 Y: 1.007 Pbar: 29.85 Pstatic: -0.06 CO<sub>2</sub>: 8% O<sub>2</sub>: 10.3% Console ID: I

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)		
1	0	0.06	1.20		0.24	1138		253	45	67		-2.5	
	5	0.09	1.60		3.15	1136		253	42	68		-3.5	
2	10	0.10	1.90		6.31	1133		253	41	68		-5	
	15	0.11	2.20		9.85	1129		255	43	68		-6	
3	20	0.12	2.50		13.73	1126		253	44	69		-6	
	25	0.12	2.70		17.91	1188		244	45	70		-5.5	
4	30	0.14	2.60		21.91	1157		251	46	71		-6	
	35	0.15	2.90		26.10	1135		252	46	71		-7	
5	40	0.15	3.10		30.56	1136		253	47	72		-8	
	45	0.14	3.00		35.16	1135		252	47	73		-8	
6	50	0.14	3.00		39.70	1133		252	48	73		-8	
	55	0.14	3.00		44.11	1131		251	48	73		-9	
7	60	0.12	2.70		48.71	1133		253	49	74		-9	
	65	0.11	2.50		53.11	1129		251	49	74		-8.5	
8	70	0.09	2.20		57.32	1134		253	49	74		-8	
	75	0.09	2.00		61.22	1131		252	49	74		-8	
9	80	0.10			64.99								
1	0.50	0.08	1.70		68.44	1129		254	49	74		-8	
2	1.00	0.08	1.70		71.81	1130		252	49	74		-8	
3	1.50	0.09	1.80		75.24	1137		252	48	74		-9	
4	2.00	0.09	2.00		78.95	1126		251	48	74		-10	
5	2.50	0.10	2.20		82.78	1124		253	49	74		-11	
6	3.00	0.09	2.00		86.54	1140		252	51	74		-11	
7	3.50	0.13	2.50		90.75	1109		252	51	74		-14	
8	4.00	0.12	2.40		95.03	1126		252	53	74		-13.5	
9	4.50	0.13	2.60		99.36	1123		252	55	74		-13.5	
10	5.00	0.12	2.50		103.62	1132		251	55	73		-12.5	
11	5.50	0.13	2.70		107.96	1129		251	56	73		-13	
12	6.00	0.13	2.70		112.31	1099		252	57	73		-13	
13	6.50	0.13	2.70		116.65	1116		253	57	73		-13	
14	7.00	0.12	2.50		120.89	1119		253	58	73		-12.5	
15	7.50	0.10	2.10		124.86	1161		253	58	73		-11.5	
16	8.00	0.10	2.00		128.62	1134		251	59	73		-11	

Traverse 1

Traverse 2

Pretest Leak Check Rate (cfm) 0.02 at +10 vacuum ("Hg) Leak Vol Start 0.00 Leak Vol. End 0.29 Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Posttest Leak Check Rate (cfm) 0.02 at -10 vacuum ("Hg) Leak Vol Start 128.62 Leak Vol. End 130.02



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 30-Sep-2025 Test: TR- 1729 - KETEK  
 Filter ID: QZ13335  
 Sample Loc. Incinerator - KETEK XAD Trap ID: N/A  
 Train ID: M29  
 Pre-weights By: PB Post-weights By: PB

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	5%HNO3 + 10% H2O2	872.3	744.6	
2	5%HNO3 + 10% H2O2	830.6	777.6	
3	Empty	645.2	631.8	
4	H2SO4/KMnO4	756.7	750.0	
5	H2SO4/KMnO4	747.6	745.1	
6	Silica	890.0	852.8	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.2	✓	PB
Post-weights	500.0	500.3	✓	PB

Comments:

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Nozzle Measurements:

1 0.560  
 2 ↓  
 3 ↓  
 4 ↓

Avg 0.560

PB

Signature

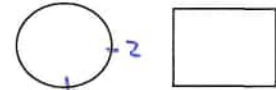
30-Sep-2025

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T2-M29 Start Time: 8:52  
Job Number: 2510430 Source: Ketek Operators: PB Finish Time: 12:32  
Client: AEM Traverse: 1F2 Traverse Dir.: Out 91N Date: 30-Sep-2025  
Dn: 0.500 Cp: 0.820 Bws: 7% dH@: 1.820 Y: 1.007 Pbar: 30.06 Pstatic: -0.06

Stack D.: 18.5"  
Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
Port length: 6.5" Page: 1 of 1  
CO<sub>2</sub>: 8% O<sub>2</sub>: 10.3% Pitot ID: 4' In 6mm

Console ID: I

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments	
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.07	1.60		0.20	1181		252	34	65		-3		
	5	0.08	1.70		3.15	1188		254	36	64		-5		
	10	0.09	1.90		6.52	1141		245	36	65		-5.5		
2	15	0.12	2.20		10.18	1151		251	36	65		-6		
	20	0.12	2.30		13.98	1135		253	37	66		-6		
	25	0.12	2.50		17.83	1141		251	37	66		-8		
3	30	0.13	2.70		21.71	1140		255	38	66		-12		
	35	0.15	3.00		25.64	1127		252	38	67		-15		
	40	0.17	2.80		30.01	1130		252	39	67		-13		
4	45	0.17	2.80		33.98	1132		255	42	68		-13		
	50	0.17	2.80		37.98	1119		253	42	68		-13		
	55	0.17	2.80		42.01	1163		251	43	68		-13		
5	60	0.11	2.60		46.03	1147		252	42	68		-12		
	65	0.10	2.40		49.87	1137		254	42	68		-11		
	70	0.09	2.30		53.52	1124		253	42	67		-11		
6	75	0.10	2.30		56.91	1143		253	42	68		-11		
	80	0.09			60.53									
	85	0.09	2.20		60.53	1127		252	43	68		-10		
7	90	0.08	2.10		64.00	1149		249	42	68		-10		
	95	0.08	2.10		67.27	1152		251	42	68		-10		
	100	0.08	2.30		70.44	1148		248	42	68		-11		
8	105	0.10	2.30		74.16	1144		253	43	68		-11		
	110	0.10	2.30		77.86	1135		245	43	68		-11		
	115	0.12	2.50		81.43	1123		251	43	68		-12		
9	120	0.11	2.30		85.45	1131		252	43	68		-11.5		
	125	0.11	2.30		89.24	1126		250	42	68		-11.5		
	130	0.12	2.40		93.03	1137		252	43	68		-11.5		
10	135	0.11	2.50		97.14	1151		248	43	68		-11		
	140	0.12	2.40		100.97	1141		253	43	68		-11.5		
	145	0.12	2.40		104.48	1135		252	43	68		-12		
11	150	0.12	2.40		108.98	1124		248	43	68		-12		
	155	0.09	2.20		113.15	1132		251	43	68		-11		
	160	0.10	2.30		116.62	1148		249	43	68		-12		
12	165	0.09			120.32									

Pretest Leak Check Rate (cfm) 60.02 at -10 vacuum ("Hg) Leak Vol Start 0.00 Leak Vol. End 0.20  
Posttest Leak Check Rate (cfm) 60.02 at -30 vacuum ("Hg) Leak Vol Start 120.32 Leak Vol. End 120.85

Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)

Traverse 1

Traverse 2



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 30-Sep-2025 Test: T3-M29-Ketuk  
 Filter ID: Q213332  
 Sample Loc. Incinerator - Ketuk XAD Trap ID: N/A  
 Train ID: M29  
 Pre-weights By: PB Post-weights By: PB

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	5%HNO3 + 10% H2O2	840.0	742.6	
2	5%HNO3 + 10% H2O2	808.0	738.8	
3	Empty	641.5	631.6	
4	H2SO4/KMnO4	752.2	760.5	
5	H2SO4/KMnO4	762.6	743.9	
6	Silica	955.4	924.2	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	PB
Post-weights	500.0	500.0	✓	PB

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.500  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_

Avg 0.500

Signature

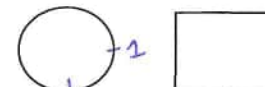
30-Sep-2025

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: PLH



Job Name: AEM Plant: Incinerator Test No.: T3-M29 Start Time: 14:49 Stack D.: 18.5"  
 Job Number: 2510430 Source: Ketek Operators: PB Finish Time: 17:55 Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 1+2 Traverse Dir.: In-Out Date: 30-Jul-2020 Port length: 6.5" Page: 1 of 1  
 Dn: 0.500 Cp: 0.820 Bws: 9.6 dH@: 1.820 Y: 1.007 Pbar: 39.06 Pstatic: -0.66 CO<sub>2</sub>: 8.10 O<sub>2</sub>: 10.34 Pitot ID: 41 Imbomat

Console ID ✓

Traverse 1

Traverse 2

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)		
1	0	0.08	1.50		0.15	1244		251	35	66		-3	
	5	0.08	1.60		0.20	1191		253	37	66		-4	
2	10	0.09	1.80		6.54	1193		254	36	66		-5	
	15	0.10	2.00		10.00	1177		252	36	66		-5	
3	20	0.11	2.20		13.62	1173		253	38	66		-6	
	25	0.11	2.20		17.50	1178		253	39	67		-6	
4	30	0.12	2.40		21.40	1184		252	40	67		-6.5	
	35	0.13	2.70		25.34	1163		252	41	68		-7	
5	40	0.13	2.70		29.57	1181		253	41	68		-7	
	45	0.13	2.70		33.70	1177		253	42	69		-9	
6	50	0.11	2.50		37.80	1125		253	43	70		-11	
	55	0.10	2.30		41.60	1172		253	44	70		-14.5	
7	60	0.10	2.30		45.34	1171		249	44	71		-17	
	65	0.09	2.10		49.00	1166		250	45	71		-19	
8	70	0.09	2.00		52.67	1160		252	46	71		-19.5	
	75	0.08	1.80		56.25	1181		252	47	71		-19.5	
9	80	0.09	1.70		59.69								
1	0	0.08	1.70		59.69	1177		253	48	71		-19.5	
	5	0.08	1.70		63.27	1152		250	48	71		-19.5	
2	10	0.08	1.70		66.34	1160		249	49	72		-19.5	
	15	0.09	1.80		69.56	1162		250	50	72		-20	
3	20	0.09	1.80		73.2	1189		250	50	72		-20	
	25	0.10	2.00		76.40	1176		250	50	72		-21	
4	30	0.10	2.00		80.09	1196		250	51	72		-21	
	35	0.11	2.10		83.69	1166		252	53	72		-21	
5	40	0.11	2.10		87.52	1163		250	53	72		-21	
	45	0.11	2.10		91.40	1167		250	54	72		-21	
6	50	0.10	2.00		95.19	1184		251	54	72		-19	
	55	0.11	2.10		98.85	1178		249	55	72		-20	
7	60	0.09	1.90		102.65	1201		250	55	72		-17	
	65	0.09	1.90		106.13	1195		251	55	72		-17	
8	70	0.08	1.70		109.58	1197		253	56	71		-16	
	75	0.08	1.70		112.84	1178		252	56	71		-16	
	80	0.09	1.70		116.11								

Pretest Leak Check Rate (cfm) 0.02 at -10 vacuum ("Hg)  
 Posttest Leak Check Rate (cfm) 0.02 at -10 vacuum ("Hg)

Leak Vol Start 0.00  
 Leak Vol End 116.11

Leak Vol. End 0.15  
 Leak Vol. End 116.29

Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 29 Sept - 2025 Test: TI-SVOC-KETEK  
 Filter ID: N/A  
 Sample Loc. Incinerator - KETEK XAD Trap ID: ---  
 Train ID: SVOC  
 Pre-weights By: PS Post-weights By: JO

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	Condenser	240.0	238.8	
2	XAD	303.1	302.2	
3	KO	654.6	498.8	
4	EG	773.0	734.8	
5	MT	653.6	653.8	
6	Silica Gel	872.3	849.5	
7				
8				
TOTAL				

**Balance QA Check:**

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.0	✓	PS
Post-weights	500.0	500.1	✓	JO

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Nozzle Measurements:

1 0.500  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_

Avg 0.500

PS

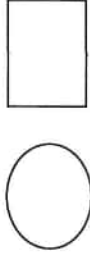
Signature

Sept 29/2025

Date



— Isokinetic Sampling Train Data Sheet —



Job Name: AEM Plant: Incinerator Test No.: T1-SWC Stack D.: 18.5  
 Job Number: 2510430 Source: KETEK Operators: 10-20-2017 Finish Time: 16:07 Pre-Pilot Check:   
 Client: AEM Traverse: 1.2 Bws: 6.7 dH@: 1.980 Y: 0.984 Traverse Dir.: 120-20-17 Date: 07/29/2017 Port length: 6.5 Page: 1 of 1  
 Dn: 0.50 Cp: 0.82 Bws: 6.7 dH@: 1.980 Y: 0.984 Pbar: 29.85 Pstatic: -0.06 CO2: 8.2 O2: 10.3% Pilot ID: 48116061

Console ID

Pt. (#)	Time (min)	Velocity Press. ("H2O)	Orifice Press. ("H2O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Cond. Temp. (°F) < 68 °F	Vac. Press. ("Hg)	Comments
				Desired (ft³)	Actual (ft³)					Inlet (°F)	Outlet (°F)			
1	0	0.08	1.9		0.31	1140		250	46	67		44	-4	
	5	0.08	1.9		3.73	1137		252	44	67		40	-4	
2	10	0.08	1.8		7.23	1173		248	41	68		41	-7	
	15	0.08	1.8		10.74	1170		250	41	68		41	-7	
3	20	0.10	2.1		14.13	1147		254	41	68		44	-8	
	25	0.10	2.1		18.06	1222								
4	30	0.12	2.5		21.84	1191		249	41	69		44	-7	
	35	0.12	2.5		25.99	1162		251	41	70		44	-7	
5	40	0.12	2.5		30.06	1143		249	41	70		44	-10	
	45	0.12	2.5		34.27	1180		249	41	71		44	-10	
6	50	0.13	2.7		38.45	1181		249	42	71		46	-14	
	55	0.13	2.7		42.87	1167		249	42	72		47	-15	
7	60	0.13	2.7		47.15	1164		248	42	72		48	-17	
	65	0.13	2.7		51.57	1160		250	42	72		46	-17	
8	70	0.10	2.1		55.67	1152		246	43	73		47	-17	
	75	0.10	2.1		59.46	1168		250	43	73		47	-15	
9	80				63.21									
1	0	0.06	1.4		63.24	1142		249	45	71		50	-12	
	5	0.06	1.4		66.16	1129		249	47	71		50	-12	
2	10	0.08	1.8		69.08	1141		251	49	71		50	-14	
	15	0.08	1.8		72.56	1145		254	49	71		50	-14	
3	20	0.12	2.5		75.72	1148		252	49	71		51	-16	
	25	0.12	2.5		79.95	1167		251	49	71		51	-16	
4	30	0.11	2.3		84.06	1158		249	55	71		56	-16	
	35	0.11	2.3		87.95	1134		251	55	71		56	-16	
5	40	0.15	3.1		91.97	1147		248	59	71		59	-19	
	45	0.15	3.1		96.63	1176		250	59	71		59	-19	
6	50	0.13	2.8		101.28	1120		252	59	71		59	-18	
	55	0.13	2.8		105.62	1165		248	59	71		59	-18	
7	60	0.12	2.5		109.97	1167		249	60	71		60	-18	
	65	0.12	2.5		114.14	1140		251	61	71		60	-18	
8	70	0.09	2.0		118.35	1147		251	62	72		61	-17	
	75	0.09	2.0		121.93	1153		252	62	72		61	-17	
9	80				125.60									

Operator Signature: \_\_\_\_\_  
 Start Time: 13:13  
 Finish Time: 16:07  
 Date: 07/29/2017  
 Pbar: 29.85 Pstatic: -0.06 CO2: 8.2 O2: 10.3% Pilot ID: 48116061  
 Console ID: \_\_\_\_\_  
 Pretest Leak Check Rate (cfm) 100 at -20 vacuum ("Hg) Leak Vol. End 0.31  
 Posttest Leak Check Rate (cfm) 100 at -20 vacuum ("Hg) Leak Vol. Start 125.60  
 Post-Pilot Check:  ( $< 0.1'' @ 3.0''$  for 15 sec)  
 Leak Vol. End 126.2 Leak Vol. Start 125.60



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM

Date: 30/Sept/2005 Test: T2- BDOC - KE TEL

Filter ID: N/A

Sample Loc. Incinerator - KE TEL XAD Trap ID: -

Train ID: SVOC

Pre-weights By: [Signature] Post-weights By: [Signature]

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	Condenser	240.0	239.5	
2	XAD	329.3	329.4	
3	KO	692.5	500.0	
4	EG	769.4	741.5	
5	MT	654.4	654.9	
6	Silica Gel	846.8	832.6	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	[Signature]
Post-weights	500.0	500.1	✓	[Signature]

### Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Nozzle Measurements:

1 0.500  
2 \_\_\_\_\_  
3 \_\_\_\_\_  
4 \_\_\_\_\_

Avg 0.500

[Signature]

Signature

30/Sept/2005

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: 72-500C Start Time: 8:52 Stack D.: 18-r  
 Job Number: 2510430 Source: KFTEL Operators: 03 Finish Time: 12:32 Pre-Pilot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 1,2 Traverse Dir.: In-Out Date: 09/30/25 Port length: 6.5 Page: 1 of 1  
 Dn: 0.50 Cp: 0.92 Bws: 7% dH@: 1.780 Y: 0.984 Pbar: 30.06 Pstatic: -0.06 CO<sub>2</sub>: 8% O<sub>2</sub>: 15.2% Pitot ID: 4ft 16mm  
 Console ID: 5

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Cond. Temp. (°F) < 68 °F	Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.06	1.3		0.38	1205		248	34	65		35	-2.5	
	5	0.06	1.3		3.20	1169		250	34	60		34	-2.1	
2	10	0.06	1.3		6.07	1186		248	34	65		35	-5	
	15	0.06	1.3		9.09	1166		250	36	60		35	-6	
2	20	0.08	1.7		12.00	1161		250	36	65		35	+7	
	25	0.08	1.7		15.37	1148		250	35	65		35	-7	
4	30	0.11	2.2		18.75	1137		248	34	66		35	-8	
	35	0.11	2.2		22.74	1131		251	34	66		35	-8	
5	40	0.13	2.8		26.70	1123		253	34	67		37	-10	
	45	0.13	2.8		31.50	1130		249	34	69		39	-10	
6	50	0.13	2.8		35.88	1132		251	34	69		39	-13	
	55	0.13	2.8		39.58	1131		253	34	69		39	-13	
7	60	0.11	2.2		43.94	1147		248	34	68		38	-13	
	65	0.11	2.2		47.90	1139		247	34	68		38	-13	
8	70	0.08	1.7		51.83	1134		252	35	68		37	-14	
	75	0.08	1.7		55.20	1140		254	35	68		37	-14	
6	80				58.60									
	51													
1	0	0.06	1.3		58.60	1130		250	36	68		37	-10	
	5	0.06	1.3		61.50	1142		245	36	68		37	-13	
2	10	0.08	1.7		64.39	1130		249	36	68		37	-15	
	15	0.08	1.7		67.77	1131		251	36	68		37	-15	
3	20	0.10	2.1		71.10	1140		253	37	69		37	-17	
	25	0.10	2.1		74.90	1148		253	37	69		37	-17	
4	30	0.11	2.3		78.65	1121		252	37	68		37	-17	
	35	0.11	2.3		82.60	1146		246	37	67		38	-18	
5	40	0.11	2.3		86.90	1153		245	37	67		38	-19	
	45	0.11	2.3		90.45	1155		244	37	67		38	-18	
6	50	0.12	2.5		94.57	1149		251	38	68		38	-18	
	55	0.12	2.5		98.50	1156		254	38	68		38	-18	
7	60	0.10	2.1		102.59	1159		253	38	68		38	-18	
	65	0.10	2.1		106.33	1163		250	38	68		38	-17	
8	70	0.08	1.7		110.05	1156		250	38	68		38	-17	
	75	0.08	1.7		113.44	1150		250	38	68		38	-17	
	80				116.82									

Pretest Leak Check Rate (cfm) 20.2 at -15 vacuum ("Hg) Leak Vol Start 0 Leak Vol. End 0.318  
 Posttest Leak Check Rate (cfm) 20.2 at -20 vacuum ("Hg) Leak Vol Start 116.82 Leak Vol. End 117.35  
 Post-Pilot Check:  (< 0.1" @ 3.0" for 15 sec)



RWDI AIR Inc.  
Consulting Engineers

## Moisture Analysis Data Sheet

Project #: 2510430 Project: AEM  
 Date: 30 / sep / 2020 Test: T3- SVOC - KETEK  
 Filter ID: N/A  
 Sample Loc. Incinerator - KETEK XAD Trap ID: -  
 Train ID: SVOC  
 Pre-weights By: oo Post-weights By: oo

Impinger #	Impinger Contents	Final Weight (g)	Initial Weight (g)	Net Condensate (g)
1	Condenser	240.1	239.8	
2	XAD	318.7	318.1	
3	KO	681.7	499.9	
4	EG	764.6	738.7	
5	MT	654.2	655.1	
6	Silica Gel	844.4	831.1	
7				
8				
TOTAL				

### Balance QA Check:

	Actual (g)	Measured (g)	Error < 0.5 g	Initials
Pre-weights	500.0	500.1	✓	PB
Post-weights	500.0	500.0	✓	PB

Comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Nozzle Measurements:

1 0.520  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_

Avg 0.500

Signature

30-sep-2020

Date



— Isokinetic Sampling Train Data Sheet —

Operator Signature: [Signature]



Job Name: AEM Plant: Incinerator Test No.: T3-SWOC Start Time: 14:49 Stack D.: 18-5  
 Job Number: 2510430 Source: KETEK Operators: 00 Finish Time: 17:55 Pre-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)  
 Client: AEM Traverse: 1,2 Traverse Dir.: 04h27a Date: 09/30/2025 Port length: 6.5 Page: 1 of 1  
 Dn: 0-50 Cp: 0-820 Bws: 8% dH@: 1.980 Y: 0.984 Pbar: 30.06 Pstatic: -0.06 CO<sub>2</sub>: 8% O<sub>2</sub>: 10% Pitot ID: 4ft Inconel

Console ID 5

Pt. (#)	Time (min)	Velocity Press. ("H <sub>2</sub> O)	Orifice Press. ("H <sub>2</sub> O)	Gas Meter Reading		Stack Temp. (°F)	Probe Temp. (°F) 223 - 273 °F	Box Temp. (°F) 223 - 273 °F	Imp. Temp. (°F) < 68 °F	Meter		Cond. Temp. (°F) < 68 °F	Vac. Press. ("Hg)	Comments
				Desired (ft <sup>3</sup> )	Actual (ft <sup>3</sup> )					Inlet (°F)	Outlet (°F)			
1	0	0.08	1.6		0.24	1212		248	42	65		42	-3	
	5	0.08	1.6		3.47	1211		251	40	65		39	-4	
2	10	0.08	1.6		6.76	1190		252	40	65		39	-4	
	15	0.08	1.6		9.92	1187		251	40	66		39	-5	
3	20	0.10	2.0		13.25	1179		250	40	66		39	-5	
	25	0.10	2.0		17.00	1174		251	41	66		40	-5	
4	30	0.11	2.2		20.75	1176		252	40	67		40	-5	
	35	0.11	2.2		24.65	1184		249	40	67		40	-5	
5	40	0.10	2.0		28.56	1162		249	40	68		40	-5	
	45	0.10	2.0		32.28	1156		250	40	68		41	-5	
6	50	0.10	2.0		36.01	1174		253	40	69		40	-8	
	55	0.10	2.0		39.73	1183		250	40	69		40	-5	
7	60	0.12	2.4		43.51	1173		251	40	70		41	-8	
	65	0.12	2.4		47.69	1177		246	40	70		41	-8	
8	70	0.10	2.0		51.85	1166		250	41	71		44	-7	
	75	0.10	2.0		55.63	1163		249	41	71		44	-7	
9	80	0			59.29									
	85													
1	0	0.07	1.5		59.28	1158		249	43	72		47	-7	
	5	0.07	1.5		62.83	1160		251	43	72		47	-7	
2	10	0.09	1.9		65.51	1173		250	44	73		49	-7	
	15	0.09	1.9		67.11	1162		253	44	73		45	-2	
3	20	0.13	2.6		72.70	1175		251	44	73		50	-11	
	25	0.13	2.6		76.91	1172		248	45	73		50	-11	
4	30	0.11	2.2		81.12	1153		251	45	73		51	-4	
	35	0.11	2.2		85.15	1191		256	47	73		55	-11	
5	40	0.11	2.2		89.13	1183		251	47	73		56	-4	
	45	0.11	2.2		93.09	1181		251	48	74		56	-11	
6	50	0.12	2.4		96.97	1200		250	52	75		57	-15	
	55	0.12	2.4		101.02	1180		251	52	75		58	-15	
7	60	0.09	1.9		105.15	1197		252	55	75		59	-15	
	65	0.09	1.9		108.80	1181		250	55	75		55	-15	
8	70	0.09	1.9		112.42	1198		250	57	74		59	-15	
	75	0.09	1.9		116.00	1205		249	57	74		59	-15	

Pretest Leak Check Rate (cfm) < 0.02 at -15 vacuum ("Hg) Leak Vol Start 0  
 Posttest Leak Check Rate (cfm) < 0.02 at -20 vacuum ("Hg) Leak Vol Start 119.57  
 Leak Vol End 0-24  
 Leak Vol End 119.72  
 Post-Pitot Check:  (< 0.1" @ 3.0" for 15 sec)

The page features a decorative background with a large, light gray curved shape on the right side and a blue curved shape on the left side, separated by a white border.

# APPENDIX F

**CERTIFICATE OF ANALYSIS**

**Work Order** : **BU2502915**  
**Client** : **RWDI Air Inc.**  
**Contact** : Oluwatobi Odumoye  
**Address** : 600 Southgate Drive  
 Guelph Ontario Canada N1G 4P6  
**Telephone** : 519 823 1311  
**Project** : 2510430 - Agnico Eagle  
**PO** : 2510430  
**C-O-C number** : ----  
**Sampler** : Preet Bhamrah  
**Site** : Agnico  
**Quote number** : BU2025RWDI1000011 - Agnico  
**No. of samples received** : 7  
**No. of samples analysed** : 7

**Laboratory** : ALS Environmental - Burlington  
**Account Manager** : Robert Chin  
**Address** : 1435 Norjohn Court, Unit 1  
 Burlington ON Canada L7L 0E6  
**E-mail** : Robert.Chin@ALSGlobal.com  
**Telephone** : +1 905 331 3111  
**Date Samples Received** : 21-Oct-2025 10:40  
**Date Analysis Commenced** : 22-Oct-2025  
**Issue Date** : 24-Oct-2025 11:45

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

**Signatories**

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Gamini Nadu	Analyst	Inorganics, Burlington, Ontario
Sabir Ahmed	Analyst	Inorganics, Burlington, Ontario



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.  
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
L	litres
mg/L	milligrams per litre
mg/sample	milligrams per sample

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	HCl-Ecowaste-T1 ----	HCl-Ecowaste-T2 ----	HCl-Ecowaste-T3 ----	HCl-Ketek-T1 ----	HCl-Ketek-T2 ----
					Client sampling date / time	27-Sep-2025 00:00	28-Sep-2025 00:00	28-Sep-2025 00:00	29-Sep-2025 00:00	30-Sep-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502915-001	BU2502915-002	BU2502915-003	BU2502915-004	BU2502915-005	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
Volume, impinger	n/a	EF003.I/BU	0.0010	L	0.0700	0.0460	0.0480	0.0530	0.0650	
<b>Inorganics</b>										
Chloride, average	16887-00-6	E252/BU	0.47	mg/L	9.42	11.6	16.2	41.8	4.54	
Chloride, replicate 1	16887-00-6	E252/BU	0.47	mg/L	9.42	11.6	16.2	41.8	4.54	
Chloride, replicate 2	16887-00-6	E252/BU	0.47	mg/L	9.42	11.6	16.2	41.8	4.55	
Hydrogen chloride, average	7647-01-0	EC252/BU	0.015	mg/sample	0.678	0.547	0.802	2.28	0.304	
Hydrogen chloride, replicate 1	7647-01-0	EC252/BU	0.015	mg/sample	0.678	0.547	0.802	2.28	0.304	
Hydrogen chloride, replicate 2	7647-01-0	EC252/BU	0.015	mg/sample	0.678	0.547	0.802	2.28	0.304	

Please refer to the General Comments section for an explanation of any qualifiers detected.



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	HCl-Ketek-T3 ----	HCl-Blank ----	----	----	----
					Client sampling date / time	30-Sep-2025 00:00	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502915-006	BU2502915-007	----	----	----	----
					Result	Result	----	----	----	----
<b>Physical Tests</b>										
Volume, impinger	n/a	EF003.I/BU	0.0010	L	0.0700	0.0450	----	----	----	----
<b>Inorganics</b>										
Chloride, average	16887-00-6	E252/BU	0.47	mg/L	17.7	<0.47	----	----	----	----
Chloride, replicate 1	16887-00-6	E252/BU	0.47	mg/L	17.7	<0.47	----	----	----	----
Chloride, replicate 2	16887-00-6	E252/BU	0.47	mg/L	17.7	<0.47	----	----	----	----
Hydrogen chloride, average	7647-01-0	EC252/BU	0.015	mg/sampl e	1.27	<0.022	----	----	----	----
Hydrogen chloride, replicate 1	7647-01-0	EC252/BU	0.015	mg/sampl e	1.27	<0.022	----	----	----	----
Hydrogen chloride, replicate 2	7647-01-0	EC252/BU	0.015	mg/sampl e	1.27	<0.022	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>BU2502915</b></p> <p><b>Client</b> : <b>RWDI Air Inc.</b></p> <p><b>Contact</b> : Oluwatobi Odumoye</p> <p><b>Address</b> : 600 Southgate Drive Guelph ON Canada N1G 4P6</p> <p><b>Telephone</b> : 519 823 1311</p> <p><b>Project</b> : 2510430 - Agnico Eagle</p> <p><b>PO</b> : 2510430</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Preet Bhamrah</p> <p><b>Site</b> : Agnico</p> <p><b>Quote number</b> : BU2025RWDI1000011 - Agnico</p> <p><b>No. of samples received</b> : 7</p> <p><b>No. of samples analysed</b> : 7</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : ALS Environmental - Burlington</p> <p><b>Account Manager</b> : Robert Chin</p> <p><b>Address</b> : 1435 Norjohn Court, Unit 1 Burlington, Ontario Canada L7L 0E6</p> <p><b>Telephone</b> : +1 905 331 3111</p> <p><b>Date Samples Received</b> : 21-Oct-2025 10:40</p> <p><b>Issue Date</b> : 24-Oct-2025 11:44</p>
---	--

---

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
  - CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
  - DQO: Data Quality Objective.
  - LOR: Limit of Reporting (detection limit).
  - RPD: Relative Percent Difference.
- 

### ***Workorder Comments***

---

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

---

### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Air

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Blank	E252	30-Sep-2025	22-Oct-2025	28 days	23 days	✔	22-Oct-2025	28 days	23 days	✔
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ketek-T2	E252	30-Sep-2025	22-Oct-2025	28 days	23 days	✔	22-Oct-2025	28 days	23 days	✔
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ketek-T3	E252	30-Sep-2025	22-Oct-2025	28 days	23 days	✔	22-Oct-2025	28 days	23 days	✔
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ketek-T1	E252	29-Sep-2025	22-Oct-2025	28 days	24 days	✔	22-Oct-2025	28 days	24 days	✔
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ecowaste-T2	E252	28-Sep-2025	22-Oct-2025	28 days	25 days	✔	22-Oct-2025	28 days	25 days	✔
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ecowaste-T3	E252	28-Sep-2025	22-Oct-2025	28 days	25 days	✔	22-Oct-2025	28 days	25 days	✔
<b>Inorganics : Ion Chromatography Analysis (M26/26A Anions)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ecowaste-T1	E252	27-Sep-2025	22-Oct-2025	28 days	26 days	✔	22-Oct-2025	28 days	26 days	✔



Matrix: Air Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Blank	EF003.I	30-Sep-2025	----	----	----		22-Oct-2025	----	----	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ecowaste-T1	EF003.I	27-Sep-2025	----	----	----		22-Oct-2025	----	----	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ecowaste-T2	EF003.I	28-Sep-2025	----	----	----		22-Oct-2025	----	----	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ecowaste-T3	EF003.I	28-Sep-2025	----	----	----		22-Oct-2025	----	----	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ketek-T1	EF003.I	29-Sep-2025	----	----	----		22-Oct-2025	----	----	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ketek-T2	EF003.I	30-Sep-2025	----	----	----		22-Oct-2025	----	----	
<b>Physical Tests : Stack Emission Impinger volume (L)</b>										
M26/A: Amber Glass (0.1N H2SO4) HCl-Ketek-T3	EF003.I	30-Sep-2025	----	----	----		22-Oct-2025	----	----	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Air**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Ion Chromatography Analysis (M26/26A Anions)	E252	2291137	1	7	14.2	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Ion Chromatography Analysis (M26/26A Anions)	E252	2291137	1	7	14.2	5.0	✔
<b>Method Blanks (MB)</b>							
Ion Chromatography Analysis (M26/26A Anions)	E252	2291137	1	7	14.2	5.0	✔
<b>Matrix Spikes (MS)</b>							
Ion Chromatography Analysis (M26/26A Anions)	E252	2291137	1	7	14.2	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ion Chromatography Analysis (M26/26A Anions)	E252 ALS Environmental - Burlington	Air	USEPA Methods 26 and 26A	Client supplied liquid samples are split and buffered (acidic media) then sub-sampled (or sub-sampled directly for basic media) for IC analysis. Results are reported as hydrogen halides (acidic media) or halogens (basic media).
Ion Chromatography Analysis (M26/26A Anions)	EC252 ALS Environmental - Burlington	Air	unit conversion	Convert mg/L to mg/sample
Stack Emission Impinger volume (L)	EF003.1 ALS Environmental - Burlington	Air		Volume of impinger contents is measured in the laboratory for use in later calculations.

## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: BU2502915</b>	<b>Page</b>	: 1 of 3
<b>Client</b>	: RWDI Air Inc.	<b>Laboratory</b>	: ALS Environmental - Burlington
<b>Contact</b>	: Oluwatobi Odumoye	<b>Account Manager</b>	: Robert Chin
<b>Address</b>	: 600 Southgate Drive Guelph ON Canada N1G 4P6	<b>Address</b>	: 1435 Norjohn Court, Unit 1 Burlington, Ontario Canada L7L 0E6
<b>Telephone</b>	: 519 823 1311	<b>Telephone</b>	: +1 905 331 3111
<b>Project</b>	: 2510430 - Agnico Eagle	<b>Date Samples Received</b>	: 21-Oct-2025 10:40
<b>PO</b>	: 2510430	<b>Date Analysis Commenced</b>	: 22-Oct-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 24-Oct-2025 11:42
<b>Sampler</b>	: Preet Bhamrah		
<b>Site</b>	: Agnico		
<b>Quote number</b>	: BU2025RWDI1000011 - Agnico		
<b>No. of samples received</b>	: 7		
<b>No. of samples analysed</b>	: 7		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Gamini Nadu	Analyst	Burlington Inorganics, Burlington, Ontario
Sabir Ahmed	Analyst	Burlington Inorganics, Burlington, Ontario



## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

- Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO = Data Quality Objective.
- LOR = Limit of Reporting (detection limit).
- RPD = Relative Percent Difference
- # = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

## Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Air

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Inorganics (QC Lot: 2291137)</b>											
BU2502915-001	HCl-Ecowaste-T1	Chloride, average	16887-00-6	E252	0.47	mg/L	9.42	9.44	0.159%	20%	----
		Chloride, replicate 1	16887-00-6	E252	0.47	mg/L	9.42	9.42	0.00425%	20%	----
		Chloride, replicate 2	16887-00-6	E252	0.47	mg/L	9.42	9.45	0.399%	20%	----



### Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Air

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Inorganics (QCLot: 2291137)</b>						
Chloride, average	16887-00-6	E252	0.47	mg/L	<0.47	----
Chloride, replicate 1	16887-00-6	E252	0.47	mg/L	<0.47	----
Chloride, replicate 2	16887-00-6	E252	0.47	mg/L	<0.47	----

### Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Air

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Inorganics (QCLot: 2291137)</b>									
Chloride, average	16887-00-6	E252	0.47	mg/L	15 mg/L	96.0	90.0	110	----
Chloride, replicate 1	16887-00-6	E252	0.47	mg/L	15 mg/L	96.3	90.0	110	----
Chloride, replicate 2	16887-00-6	E252	0.47	mg/L	15 mg/L	95.9	90.0	110	----

### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level  $\geq 1x$  spike level.

Sub-Matrix: Air

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Inorganics (QCLot: 2291137)</b>										
BU2502915-001	HCl-Ecowaste-T1	Chloride, average	16887-00-6	E252	15.7 mg/L	15 mg/L	105	90.0	110	----
		Chloride, replicate 1	16887-00-6	E252	15.7 mg/L	15 mg/L	105	90.0	110	----
		Chloride, replicate 2	16887-00-6	E252	15.7 mg/L	15 mg/L	105	90.0	110	----



<b>Report To</b>				<b>Report Format / Distribution</b>				<b>Service Requested</b>			
Company:   RWDI Air Inc.				<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other:				<input checked="" type="checkbox"/> Regular Service			
Contact:   Oluwatobi Odumoye				<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax				<input type="checkbox"/> Rush Service (with prior consultation) - surcharge applies			
Address:   600 Southgate Drive, Guelph, ON N1G 4P6				Email 1:   Oluwatobi.Odumoye@rwdi.com				<input type="checkbox"/> Other - Please contact ALS			
Phone:   519 710-0408    Fax:				Email 2:   Karri.Legarrie@rwdi.com				<b>Analysis Request</b>			
Invoice To Same as Report ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<b>Client / Project Information</b>							
Company:				Job #:   2510430				<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">US EPA METHOD 5</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">US EPA METHOD 29</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">ENV CANADA 1/APP/2</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">ENV CANADA 1/APP/1</div> </div>			
Contact:				Location:   Meliadine, NU							
Address:				PO:   2510430							
Phone:				Sampled by:   Preet Bhamrah							
Lab Work Order #				ALS Contact:							
Sample #	Sample Identification <small>(This description will appear on the report)</small>	Date <small>(dd-mmm-yy)</small>	Time <small>(hh:mm)</small>	Sample Type	US EPA METHOD 5	US EPA METHOD 29	ENV CANADA 1/APP/2	ENV CANADA 1/APP/1	Hazardous? Provide Details	Highly Contaminated?	Number of Containers
1	T1-T3- MS/M29- ECOWASTE				<	<					18
2	T1-T3- MS/M29- KETEK				<	<					18
3	T1-T3- SVOC - ECOWASTE						<				12
4	T1-T3- SVOC - KETEK						<				12
5	T1-T3- HCL - ECOWASTE						<				3
6	T1-T3- HCL - KETEK						<				3
7	Blank - MS/M29				<	<					5
8	Blank - SVOC						<				2
9	Blank - HCL						<				1
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Environmental Division  
 Burlington  
 Work Order Reference  
**BU2502915**

Telephone : + 1 905 331 3111

**Special Instructions / Regulations / Hazardous Details**

SVOC- PCDDs, PCDFs, PCBs and other SVOCs .

**By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided by ALS**

Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
Oluwatobi Odumoye	20-Oct-2025	9:00	<i>ARRAN BURLTON</i>	21-Oct-2025	10:40	19.0 °C				

**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>BU2502917</b>		
<b>Client</b>	: <b>RWDI Air Inc.</b>	<b>Laboratory</b>	: ALS Environmental - Burlington
<b>Contact</b>	: Oluwatobi Odumoye	<b>Account Manager</b>	: Robert Chin
<b>Address</b>	: 600 Southgate Drive	<b>Address</b>	: 1435 Norjohn Court, Unit 1
	: Guelph Ontario Canada N1G 4P6		: Burlington ON Canada L7L 0E6
<b>Telephone</b>	: 519 823 1311	<b>E-mail</b>	: Robert.Chin@ALSGlobal.com
<b>Project</b>	: 2510430 - Agnico Eagle	<b>Telephone</b>	: +1 905 331 3111
<b>PO</b>	: 2510430	<b>Date Samples Received</b>	: 21-Oct-2025 10:40
<b>C-O-C number</b>	: ----	<b>Date Analysis Commenced</b>	: 27-Oct-2025
<b>Sampler</b>	: Preet Bhamrah	<b>Issue Date</b>	: 13-Nov-2025 13:39
<b>Site</b>	: Agnico		
<b>Quote number</b>	: BU2025RWDI1000011 - Agnico		
<b>No. of samples received</b>	: 7		
<b>No. of samples analysed</b>	: 7		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

**Signatories**

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Gamini Nadu	Analyst	Inorganics, Burlington, Ontario
Gamini Nadu	Analyst	Metals, Burlington, Ontario
Sabir Ahmed	Analyst	Metals, Burlington, Ontario



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.  
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
g	grams
mg	milligrams
total µg	total micrograms
µg/L	micrograms per litre
µg/sample	micrograms per sample

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

## Workorder Comments

Cr recovery in the LCS is outside ALS DQOs . This is likely due to binding other elements in solution. The presence of the filter matrix has been found to mitigate this effect, so sample data is not expected to be impacted. SA 12-Nov-25.



## Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1	M5/M29-Ecowaste-T2	M5/M29-Ecowaste-T3	M5/M29-Ketek-T1	M5/M29-Ketek-T2
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Particulates</b>										
mass, acetone [FRONT]	----	E898A/BU	0.40	g	63.5	63.6	78.9	87.3	59.4	
particulate matter, acetone impinger [FRONT]	----	E897A/BU	0.4	mg	1.8	4.2	2.4	6.4	6.8	
Particulate matter, filter	----	E890/BU	0.6	mg	17.5	35.0	60.5	134	134	
<b>Metals</b>										
Aluminum	7429-90-5	EC457/BU	22	total µg	154	140	137	167	161	
Antimony	7440-36-0	EC457/BU	0.22	total µg	27.2	10.9	2.29	6.63	4.45	
Arsenic	7440-38-2	EC457/BU	1.1	total µg	<1.1	1.5	<1.1	1.9	<1.1	
Barium	7440-39-3	EC457/BU	5.6	total µg	15.7	13.1	12.2	12.9	13.2	
Beryllium	7440-41-7	EC457/BU	0.22	total µg	<0.22	<0.22	<0.22	<0.22	<0.22	
Bismuth	7440-69-9	EC457/BU	0.56	total µg	<0.56	<0.56	<0.56	<0.56	<0.56	
Boron	7440-42-8	EC457/BU	34	total µg	1240	680	326	90	41	
Cadmium	7440-43-9	EC457/BU	0.11	total µg	<0.11	0.47	0.13	0.24	<0.11	
Calcium	7440-70-2	EC457/BU	560	total µg	<560	<560	<560	<560	<560	
Chromium	7440-47-3	EC457/BU	1.1	total µg	5.7	5.4	5.0	4.5	16.3	
Cobalt	7440-48-4	EC457/BU	0.22	total µg	0.54	0.50	0.55	0.23	0.63	
Copper	7440-50-8	EC457/BU	1.1	total µg	9.0	7.6	9.4	31.9	21.1	
Iron	7439-89-6	EC457/BU	220	total µg	<220	<220	<220	<220	<220	
Lead	7439-92-1	EC457/BU	0.56	total µg	4.30	6.81	3.42	6.51	8.74	
Lithium	7439-93-2	EC457/BU	0.56	total µg	<0.56	<0.56	<0.56	<0.56	<0.56	
Magnesium	7439-95-4	EC457/BU	11	total µg	54	55	61	58	52	
Manganese	7439-96-5	EC457/BU	0.56	total µg	4.55	5.74	5.97	4.80	6.51	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1	M5/M29-Ecowaste-T2	M5/M29-Ecowaste-T3	M5/M29-Ketek-T1	M5/M29-Ketek-T2
					Client sampling date / time	27-Sep-2025 09:58	28-Sep-2025 12:46	28-Sep-2025 17:25	29-Sep-2025 13:13	30-Sep-2025 08:52
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Metals</b>										
Molybdenum	7439-98-7	EC457/BU	0.22	total µg	14.9	13.9	14.3	14.4	15.5	
Nickel	7440-02-0	EC457/BU	0.22	total µg	3.99	3.52	3.21	2.95	16.0	
Potassium	7440-09-7	EC457/BU	110	total µg	290	490	810	1940	1690	
Selenium	7782-49-2	EC457/BU	2.2	total µg	<2.2	<2.2	<2.2	<2.2	<2.2	
Silver	7440-22-4	EC457/BU	0.22	total µg	1.05	1.77	1.26	0.31	<0.22	
Sodium	7440-23-5	EC457/BU	34	total µg	1640	1270	930	1640	1410	
Strontium	7440-24-6	EC457/BU	0.22	total µg	1.14	1.12	1.34	1.11	1.01	
Thallium	7440-28-0	EC457/BU	0.22	total µg	<0.22	<0.22	<0.22	<0.22	<0.22	
Tin	7440-31-5	EC457/BU	0.34	total µg	224	19.5	19.6	18.1	21.6	
Titanium	7440-32-6	EC457/BU	11	total µg	48	22	<11	37	55	
Vanadium	7440-62-2	EC457/BU	1.1	total µg	<1.1	<1.1	<1.1	<1.1	<1.1	
Zinc	7440-66-6	EC457/BU	6.7	total µg	55.2	82.2	102	65.1	75.8	
<b>Method 29 Metals: Fraction 1A (HNO3)</b>										
Aluminum	7429-90-5	E457/BU	20	µg/sample	72	127	74	508	314	
Antimony	7440-36-0	E457/BU	0.20	µg/sample	190	96.2	28.3	47.9	29.9	
Arsenic	7440-38-2	E457/BU	1.0	µg/sample	18.1	34.9	13.5	26.9	23.6	
Barium	7440-39-3	E457/BU	5.0	µg/sample	<5.0	<5.0	<5.0	6.7	8.0	
Beryllium	7440-41-7	E457/BU	0.20	µg/sample	<0.20	<0.20	<0.20	<0.20	<0.20	
Bismuth	7440-69-9	E457/BU	0.50	µg/sample	0.61	1.60	<0.50	0.98	0.74	
Boron	7440-42-8	E457/BU	30	µg/sample	961	311	112	<30	<30	



## Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID				
					M5/M29-Ecowaste-T1	M5/M29-Ecowaste-T2	M5/M29-Ecowaste-T3	M5/M29-Ketek-T1	M5/M29-Ketek-T2
					----	----	----	----	----
Client sampling date / time					27-Sep-2025 09:58	28-Sep-2025 12:46	28-Sep-2025 17:25	29-Sep-2025 13:13	30-Sep-2025 08:52
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005
					Result	Result	Result	Result	Result
<b>Method 29 Metals: Fraction 1A (HNO3)</b>									
Cadmium	7440-43-9	E457/BU	0.10	µg/sample	1.58	7.92	2.31	4.81	2.23
Calcium	7440-70-2	E457/BU	500	µg/sample	570	2300	540	2800	1640
Chromium	7440-47-3	E457/BU	1.0	µg/sample	6.6	18.1	18.7	16.0	45.4
Cobalt	7440-48-4	E457/BU	0.20	µg/sample	1.27	0.59	0.31	0.28	0.33
Copper	7440-50-8	E457/BU	1.0	µg/sample	68.8	76.6	135	546	456
Iron	7439-89-6	E457/BU	200	µg/sample	<200	<200	<200	<200	<200
Lead	7439-92-1	E457/BU	0.50	µg/sample	34.8	89.6	77.1	119	210
Lithium	7439-93-2	E457/BU	0.50	µg/sample	3.33	4.78	5.48	6.80	6.76
Magnesium	7439-95-4	E457/BU	10	µg/sample	46	73	36	185	168
Manganese	7439-96-5	E457/BU	0.50	µg/sample	3.91	14.3	12.3	18.3	13.2
Molybdenum	7439-98-7	E457/BU	0.20	µg/sample	3.41	2.78	1.52	4.19	17.1
Nickel	7440-02-0	E457/BU	0.20	µg/sample	1.63	6.95	3.93	3.54	11.7
Potassium	7440-09-7	E457/BU	100	µg/sample	4640	10900	28300	50700	50800
Selenium	7782-49-2	E457/BU	2.0	µg/sample	<2.0	<2.0	<2.0	2.1	2.7
Silicon	7440-21-3	E457/BU	3000	µg/sample	<3000	<3000	<3000	<3000	<3000
Silver	7440-22-4	E457/BU	2.00	µg/sample	7.99	13.2	13.0	6.77	3.64
Sodium	7440-23-5	E457/BU	30	µg/sample	4120	7830	15400	36700	37600
Strontium	7440-24-6	E457/BU	0.20	µg/sample	0.90	2.44	1.13	3.94	3.96
Thallium	7440-28-0	E457/BU	0.20	µg/sample	<0.20	<0.20	0.20	<0.20	0.21



**Analytical Results**

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1	M5/M29-Ecowaste-T2	M5/M29-Ecowaste-T3	M5/M29-Ketek-T1	M5/M29-Ketek-T2
					Client sampling date / time	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Method 29 Metals: Fraction 1A (HNO3)</b>										
Tin	7440-31-5	E457/BU	0.30	µg/sample	36.2	34.3	20.3	43.0	40.0	
Titanium	7440-32-6	E457/BU	10	µg/sample	12	32	<10	49	54	
Vanadium	7440-62-2	E457/BU	1.0	µg/sample	<1.0	<1.0	<1.0	<1.0	<1.0	
Zinc	7440-66-6	E457/BU	6.0	µg/sample	247	576	645	654	1080	
<b>Method 29 Metals: Fraction 1A (HF)</b>										
Aluminum	7429-90-5	E457A/BU	20	µg/sample	115	107	105	137	133	
Antimony	7440-36-0	E457A/BU	0.20	µg/sample	27.2	10.9	2.29	6.63	4.45	
Arsenic	7440-38-2	E457A/BU	1.0	µg/sample	1.1	1.5	<1.0	1.1	<1.0	
Barium	7440-39-3	E457A/BU	5.0	µg/sample	15.7	13.1	12.2	12.9	13.2	
Beryllium	7440-41-7	E457A/BU	0.20	µg/sample	<0.20	<0.20	<0.20	<0.20	<0.20	
Bismuth	7440-69-9	E457A/BU	0.50	µg/sample	<0.50	<0.50	<0.50	<0.50	<0.50	
Boron	7440-42-8	E457A/BU	30	µg/sample	54	<30	<30	<30	<30	
Cadmium	7440-43-9	E457A/BU	0.10	µg/sample	<0.10	0.37	<0.10	0.18	<0.10	
Calcium	7440-70-2	E457A/BU	500	µg/sample	<500	<500	<500	<500	<500	
Chromium	7440-47-3	E457A/BU	1.0	µg/sample	2.4	4.3	3.6	3.6	15.2	
Cobalt	7440-48-4	E457A/BU	0.20	µg/sample	<0.20	<0.20	<0.20	<0.20	0.23	
Copper	7440-50-8	E457A/BU	1.0	µg/sample	4.0	4.7	5.2	25.4	17.4	
Iron	7439-89-6	E457A/BU	200	µg/sample	<200	<200	<200	<200	<200	
Lead	7439-92-1	E457A/BU	0.50	µg/sample	2.02	3.82	2.56	4.83	6.92	



**Analytical Results**

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1 ----	M5/M29-Ecowaste-T2 ----	M5/M29-Ecowaste-T3 ----	M5/M29-Ketek-T1 ----	M5/M29-Ketek-T2 ----
					Client sampling date / time	27-Sep-2025 09:58	28-Sep-2025 12:46	28-Sep-2025 17:25	29-Sep-2025 13:13	30-Sep-2025 08:52
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Method 29 Metals: Fraction 1A (HF)</b>										
Lithium	7439-93-2	E457A/BU	0.50	µg/sample	<0.50	<0.50	<0.50	<0.50	<0.50	
Magnesium	7439-95-4	E457A/BU	10	µg/sample	22	22	19	29	28	
Manganese	7439-96-5	E457A/BU	0.50	µg/sample	1.23	3.14	1.60	2.17	3.34	
Molybdenum	7439-98-7	E457A/BU	0.20	µg/sample	14.8	13.9	14.3	14.4	15.5	
Nickel	7440-02-0	E457A/BU	0.20	µg/sample	0.88	1.30	1.04	1.37	14.5	
Potassium	7440-09-7	E457A/BU	100	µg/sample	240	490	810	1940	1690	
Selenium	7782-49-2	E457A/BU	2.0	µg/sample	<2.0	<2.0	<2.0	<2.0	<2.0	
Silver	7440-22-4	E457A/BU	0.20	µg/sample	1.05	1.77	1.26	0.31	<0.20	
Sodium	7440-23-5	E457A/BU	30	µg/sample	243	401	480	1340	1170	
Strontium	7440-24-6	E457A/BU	0.20	µg/sample	0.51	0.57	0.50	0.62	0.59	
Thallium	7440-28-0	E457A/BU	0.20	µg/sample	<0.20	<0.20	<0.20	<0.20	<0.20	
Tin	7440-31-5	E457A/BU	0.30	µg/sample	5.36	3.91	3.58	4.12	5.01	
Titanium	7440-32-6	E457A/BU	10	µg/sample	48	22	<10	37	55	
Vanadium	7440-62-2	E457A/BU	1.0	µg/sample	<1.0	<1.0	<1.0	<1.0	<1.0	
Zinc	7440-66-6	E457A/BU	6.0	µg/sample	29.6	55.4	73.9	40.7	58.6	
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2)</b>										
Aluminum	7429-90-5	E457B/BU	10	µg/sample	39	33	32	30	28	
Antimony	7440-36-0	E457B/BU	0.10	µg/sample	<0.10	<0.10	<0.10	<0.10	<0.10	
Arsenic	7440-38-2	E457B/BU	0.50	µg/sample	<0.50	<0.50	<0.50	0.77	<0.50	



**Analytical Results**

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1 ----	M5/M29-Ecowaste-T2 ----	M5/M29-Ecowaste-T3 ----	M5/M29-Ketek-T1 ----	M5/M29-Ketek-T2 ----
					Client sampling date / time	27-Sep-2025 09:58	28-Sep-2025 12:46	28-Sep-2025 17:25	29-Sep-2025 13:13	30-Sep-2025 08:52
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2)</b>										
Barium	7440-39-3	E457B/BU	2.5	µg/sample	<2.5	<2.5	<2.5	<2.5	<2.5	
Beryllium	7440-41-7	E457B/BU	0.10	µg/sample	<0.10	<0.10	<0.10	<0.10	<0.10	
Bismuth	7440-69-9	E457B/BU	0.25	µg/sample	<0.25	<0.25	<0.25	<0.25	0.27	
Boron	7440-42-8	E457B/BU	15	µg/sample	1190	680	326	90	41	
Cadmium	7440-43-9	E457B/BU	0.050	µg/sample	0.062	0.099	0.130	0.060	0.075	
Calcium	7440-70-2	E457B/BU	250	µg/sample	360	430	490	320	290	
Chromium	7440-47-3	E457B/BU	0.50	µg/sample	3.31	1.07	1.37	0.93	1.14	
Cobalt	7440-48-4	E457B/BU	0.10	µg/sample	0.54	0.50	0.55	0.23	0.40	
Copper	7440-50-8	E457B/BU	0.50	µg/sample	4.98	2.89	4.18	6.51	3.67	
Iron	7439-89-6	E457B/BU	100	µg/sample	<100	<100	<100	<100	<100	
Lead	7439-92-1	E457B/BU	0.25	µg/sample	2.28	2.99	0.86	1.68	1.82	
Lithium	7439-93-2	E457B/BU	0.25	µg/sample	<0.25	<0.25	<0.25	<0.25	<0.25	
Magnesium	7439-95-4	E457B/BU	5.0	µg/sample	31.8	33.2	42.4	28.9	24.2	
Manganese	7439-96-5	E457B/BU	0.25	µg/sample	3.32	2.60	4.37	2.63	3.17	
Molybdenum	7439-98-7	E457B/BU	0.10	µg/sample	0.12	<0.10	<0.10	<0.10	<0.10	
Nickel	7440-02-0	E457B/BU	0.10	µg/sample	3.11	2.22	2.17	1.58	1.52	
Potassium	7440-09-7	E457B/BU	50	µg/sample	54	<50	<50	<50	<50	
Selenium	7782-49-2	E457B/BU	1.0	µg/sample	<1.0	<1.0	<1.0	<1.0	<1.0	
Silicon	7440-21-3	E457B/BU	1500	µg/sample	<1500	<1500	<1500	<1500	<1500	



**Analytical Results**

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1 ----	M5/M29-Ecowaste-T2 ----	M5/M29-Ecowaste-T3 ----	M5/M29-Ketek-T1 ----	M5/M29-Ketek-T2 ----
					Client sampling date / time	27-Sep-2025 09:58	28-Sep-2025 12:46	28-Sep-2025 17:25	29-Sep-2025 13:13	30-Sep-2025 08:52
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2)</b>										
Silver	7440-22-4	E457B/BU	0.10	µg/sample	<0.10	<0.10	<0.10	<0.10	<0.10	
Sodium	7440-23-5	E457B/BU	15	µg/sample	1400	870	450	299	244	
Strontium	7440-24-6	E457B/BU	0.10	µg/sample	0.63	0.55	0.84	0.49	0.42	
Thallium	7440-28-0	E457B/BU	0.10	µg/sample	<0.10	<0.10	<0.10	<0.10	<0.10	
Tin	7440-31-5	E457B/BU	0.15	µg/sample	219	15.6	16.0	14.0	16.6	
Titanium	7440-32-6	E457B/BU	5.0	µg/sample	<5.0	<5.0	<5.0	<5.0	<5.0	
Vanadium	7440-62-2	E457B/BU	0.50	µg/sample	<0.50	<0.50	<0.50	<0.50	<0.50	
Zinc	7440-66-6	E457B/BU	3.0	µg/sample	25.6	26.8	28.0	24.4	17.2	
<b>Method 29 Mercury: Fraction 1B (HNO3)</b>										
Mercury	7439-97-6	E521/BU	0.022	µg/sample	<0.022	<0.022	<0.022	<0.022	<0.022	
<b>Method 29 Mercury: Fraction 1B (HF)</b>										
Mercury	7439-97-6	E521A/BU	0.022	µg/sample	<0.022	<0.022	<0.022	<0.022	<0.022	
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521B/BU	0.75	µg/L	<0.75	<0.75	<0.75	<0.75	<0.75	
Mercury	7439-97-6	EC521B/BU	0.0750	µg/sample	<0.289	<0.345	<0.281	<0.401	<0.428	
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521C/BU	0.15	µg/L	<0.15	<0.15	<0.15	<0.15	<0.15	
Mercury	7439-97-6	EC521C/BU	0.015	µg/sample	<0.018	<0.015	<0.010	<0.011	<0.010	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521D/BU	0.075	µg/L	<0.075	<0.075	<0.075	<0.075	<0.075	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ecowaste-T1	M5/M29-Ecowaste-T2	M5/M29-Ecowaste-T3	M5/M29-Ketek-T1	M5/M29-Ketek-T2
					Client sampling date / time	27-Sep-2025 09:58	28-Sep-2025 12:46	28-Sep-2025 17:25	29-Sep-2025 13:13	30-Sep-2025 08:52
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-001	BU2502917-002	BU2502917-003	BU2502917-004	BU2502917-005	
					Result	Result	Result	Result	Result	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	EC521D/BU	0.0075	µg/sample	<0.0375	<0.0375	<0.0375	<0.0375	<0.0375	
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521E/BU	0.75	µg/L	<0.75	1.34	<0.75	<0.75	<0.75	
Mercury	7439-97-6	EC521E/BU	0.075	µg/sample	<0.128	0.228	<0.128	<0.128	<0.128	

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	---	---	---
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	---	---	---	
					Result	Result	---	---	---	
<b>Particulates</b>										
mass, acetone [FRONT]	---	E898A/BU	0.40	g	57.9	43.5	---	---	---	
particulate matter, acetone impinger [FRONT]	---	E897A/BU	0.4	mg	3.1	<0.4	---	---	---	
Particulate matter, filter	---	E890/BU	0.6	mg	74.4	<0.6	---	---	---	
<b>Metals</b>										
Aluminum	7429-90-5	EC457/BU	22	total µg	142	85	---	---	---	
Antimony	7440-36-0	EC457/BU	0.22	total µg	1.60	<0.22	---	---	---	
Arsenic	7440-38-2	EC457/BU	1.1	total µg	<1.1	<1.1	---	---	---	
Barium	7440-39-3	EC457/BU	5.6	total µg	11.2	13.0	---	---	---	
Beryllium	7440-41-7	EC457/BU	0.22	total µg	<0.22	<0.22	---	---	---	
Bismuth	7440-69-9	EC457/BU	0.56	total µg	<0.56	<0.56	---	---	---	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Metals</b>										
Boron	7440-42-8	EC457/BU	34	total µg	49	<34	----	----	----	
Cadmium	7440-43-9	EC457/BU	0.11	total µg	<0.11	<0.11	----	----	----	
Calcium	7440-70-2	EC457/BU	560	total µg	<560	<560	----	----	----	
Chromium	7440-47-3	EC457/BU	1.1	total µg	20.9	1.5	----	----	----	
Cobalt	7440-48-4	EC457/BU	0.22	total µg	<0.22	<0.22	----	----	----	
Copper	7440-50-8	EC457/BU	1.1	total µg	11.9	3.0	----	----	----	
Iron	7439-89-6	EC457/BU	220	total µg	<220	<220	----	----	----	
Lead	7439-92-1	EC457/BU	0.56	total µg	4.95	<0.56	----	----	----	
Lithium	7439-93-2	EC457/BU	0.56	total µg	<0.56	<0.56	----	----	----	
Magnesium	7439-95-4	EC457/BU	11	total µg	47	24	----	----	----	
Manganese	7439-96-5	EC457/BU	0.56	total µg	5.77	0.99	----	----	----	
Molybdenum	7439-98-7	EC457/BU	0.22	total µg	15.0	14.5	----	----	----	
Nickel	7440-02-0	EC457/BU	0.22	total µg	8.67	0.74	----	----	----	
Potassium	7440-09-7	EC457/BU	110	total µg	840	<110	----	----	----	
Selenium	7782-49-2	EC457/BU	2.2	total µg	<2.2	<2.2	----	----	----	
Silver	7440-22-4	EC457/BU	0.22	total µg	<0.22	<0.22	----	----	----	
Sodium	7440-23-5	EC457/BU	34	total µg	845	238	----	----	----	
Strontium	7440-24-6	EC457/BU	0.22	total µg	1.00	0.41	----	----	----	
Thallium	7440-28-0	EC457/BU	0.22	total µg	<0.22	<0.22	----	----	----	
Tin	7440-31-5	EC457/BU	0.34	total µg	16.8	154	----	----	----	
Titanium	7440-32-6	EC457/BU	11	total µg	14	<11	----	----	----	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Metals</b>										
Vanadium	7440-62-2	EC457/BU	1.1	total µg	<1.1	<1.1	----	----	----	
Zinc	7440-66-6	EC457/BU	6.7	total µg	42.4	10.1	----	----	----	
<b>Method 29 Metals: Fraction 1A (HNO3)</b>										
Aluminum	7429-90-5	E457/BU	20	µg/sample	226	<20	----	----	----	
Antimony	7440-36-0	E457/BU	0.20	µg/sample	34.2	<0.20	----	----	----	
Arsenic	7440-38-2	E457/BU	1.0	µg/sample	21.2	<1.0	----	----	----	
Barium	7440-39-3	E457/BU	5.0	µg/sample	6.8	<5.0	----	----	----	
Beryllium	7440-41-7	E457/BU	0.20	µg/sample	<0.20	<0.20	----	----	----	
Bismuth	7440-69-9	E457/BU	0.50	µg/sample	0.68	<0.50	----	----	----	
Boron	7440-42-8	E457/BU	30	µg/sample	<30	<30	----	----	----	
Cadmium	7440-43-9	E457/BU	0.10	µg/sample	1.60	<0.10	----	----	----	
Calcium	7440-70-2	E457/BU	500	µg/sample	1230	<500	----	----	----	
Chromium	7440-47-3	E457/BU	1.0	µg/sample	35.2	<1.0	----	----	----	
Cobalt	7440-48-4	E457/BU	0.20	µg/sample	0.37	<0.20	----	----	----	
Copper	7440-50-8	E457/BU	1.0	µg/sample	206	<1.0	----	----	----	
Iron	7439-89-6	E457/BU	200	µg/sample	<200	<200	----	----	----	
Lead	7439-92-1	E457/BU	0.50	µg/sample	158	<0.50	----	----	----	
Lithium	7439-93-2	E457/BU	0.50	µg/sample	8.23	<0.50	----	----	----	
Magnesium	7439-95-4	E457/BU	10	µg/sample	86	<10	----	----	----	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Method 29 Metals: Fraction 1A (HNO3)</b>										
Manganese	7439-96-5	E457/BU	0.50	µg/sample	26.9	0.68	----	----	----	
Molybdenum	7439-98-7	E457/BU	0.20	µg/sample	9.56	<0.20	----	----	----	
Nickel	7440-02-0	E457/BU	0.20	µg/sample	7.33	<0.20	----	----	----	
Potassium	7440-09-7	E457/BU	100	µg/sample	30700	<100	----	----	----	
Selenium	7782-49-2	E457/BU	2.0	µg/sample	<2.0	<2.0	----	----	----	
Silicon	7440-21-3	E457/BU	3000	µg/sample	<3000	<3000	----	----	----	
Silver	7440-22-4	E457/BU	2.00	µg/sample	3.56	<2.00	----	----	----	
Sodium	7440-23-5	E457/BU	30	µg/sample	21800	114	----	----	----	
Strontium	7440-24-6	E457/BU	0.20	µg/sample	1.94	<0.20	----	----	----	
Thallium	7440-28-0	E457/BU	0.20	µg/sample	0.22	<0.20	----	----	----	
Tin	7440-31-5	E457/BU	0.30	µg/sample	28.6	0.32	----	----	----	
Titanium	7440-32-6	E457/BU	10	µg/sample	43	<10	----	----	----	
Vanadium	7440-62-2	E457/BU	1.0	µg/sample	<1.0	<1.0	----	----	----	
Zinc	7440-66-6	E457/BU	6.0	µg/sample	755	<6.0	----	----	----	
<b>Method 29 Metals: Fraction 1A (HF)</b>										
Aluminum	7429-90-5	E457A/BU	20	µg/sample	104	85	----	----	----	
Antimony	7440-36-0	E457A/BU	0.20	µg/sample	1.60	<0.20	----	----	----	
Arsenic	7440-38-2	E457A/BU	1.0	µg/sample	<1.0	<1.0	----	----	----	
Barium	7440-39-3	E457A/BU	5.0	µg/sample	11.2	13.0	----	----	----	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Method 29 Metals: Fraction 1A (HF)</b>										
Beryllium	7440-41-7	E457A/BU	0.20	µg/sampl e	<0.20	<0.20	----	----	----	
Bismuth	7440-69-9	E457A/BU	0.50	µg/sampl e	<0.50	<0.50	----	----	----	
Boron	7440-42-8	E457A/BU	30	µg/sampl e	<30	<30	----	----	----	
Cadmium	7440-43-9	E457A/BU	0.10	µg/sampl e	<0.10	<0.10	----	----	----	
Calcium	7440-70-2	E457A/BU	500	µg/sampl e	<500	<500	----	----	----	
Chromium	7440-47-3	E457A/BU	1.0	µg/sampl e	19.0	1.5	----	----	----	
Cobalt	7440-48-4	E457A/BU	0.20	µg/sampl e	<0.20	<0.20	----	----	----	
Copper	7440-50-8	E457A/BU	1.0	µg/sampl e	6.1	<1.0	----	----	----	
Iron	7439-89-6	E457A/BU	200	µg/sampl e	<200	<200	----	----	----	
Lead	7439-92-1	E457A/BU	0.50	µg/sampl e	2.74	<0.50	----	----	----	
Lithium	7439-93-2	E457A/BU	0.50	µg/sampl e	<0.50	<0.50	----	----	----	
Magnesium	7439-95-4	E457A/BU	10	µg/sampl e	19	16	----	----	----	
Manganese	7439-96-5	E457A/BU	0.50	µg/sampl e	2.61	0.56	----	----	----	
Molybdenum	7439-98-7	E457A/BU	0.20	µg/sampl e	14.8	14.5	----	----	----	
Nickel	7440-02-0	E457A/BU	0.20	µg/sampl e	6.87	0.59	----	----	----	
Potassium	7440-09-7	E457A/BU	100	µg/sampl e	510	<100	----	----	----	
Selenium	7782-49-2	E457A/BU	2.0	µg/sampl e	<2.0	<2.0	----	----	----	
Silver	7440-22-4	E457A/BU	0.20	µg/sampl e	<0.20	<0.20	----	----	----	
Sodium	7440-23-5	E457A/BU	30	µg/sampl e	386	57	----	----	----	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Method 29 Metals: Fraction 1A (HF)</b>										
Strontium	7440-24-6	E457A/BU	0.20	µg/sample	0.45	0.41	----	----	----	
Thallium	7440-28-0	E457A/BU	0.20	µg/sample	<0.20	<0.20	----	----	----	
Tin	7440-31-5	E457A/BU	0.30	µg/sample	1.04	<0.30	----	----	----	
Titanium	7440-32-6	E457A/BU	10	µg/sample	14	<10	----	----	----	
Vanadium	7440-62-2	E457A/BU	1.0	µg/sample	<1.0	<1.0	----	----	----	
Zinc	7440-66-6	E457A/BU	6.0	µg/sample	24.8	10.1	----	----	----	
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2)</b>										
Aluminum	7429-90-5	E457B/BU	10	µg/sample	38	<10	----	----	----	
Antimony	7440-36-0	E457B/BU	0.10	µg/sample	<0.10	<0.10	----	----	----	
Arsenic	7440-38-2	E457B/BU	0.50	µg/sample	<0.50	<0.50	----	----	----	
Barium	7440-39-3	E457B/BU	2.5	µg/sample	<2.5	<2.5	----	----	----	
Beryllium	7440-41-7	E457B/BU	0.10	µg/sample	<0.10	<0.10	----	----	----	
Bismuth	7440-69-9	E457B/BU	0.25	µg/sample	<0.25	<0.25	----	----	----	
Boron	7440-42-8	E457B/BU	15	µg/sample	49	<15	----	----	----	
Cadmium	7440-43-9	E457B/BU	0.050	µg/sample	<0.050	<0.050	----	----	----	
Calcium	7440-70-2	E457B/BU	250	µg/sample	370	<250	----	----	----	
Chromium	7440-47-3	E457B/BU	0.50	µg/sample	1.87	<0.50	----	----	----	
Cobalt	7440-48-4	E457B/BU	0.10	µg/sample	0.18	<0.10	----	----	----	
Copper	7440-50-8	E457B/BU	0.50	µg/sample	5.76	2.96	----	----	----	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2)</b>										
Iron	7439-89-6	E457B/BU	100	µg/sample	<100	<100	----	----	----	
Lead	7439-92-1	E457B/BU	0.25	µg/sample	2.21	<0.25	----	----	----	
Lithium	7439-93-2	E457B/BU	0.25	µg/sample	<0.25	<0.25	----	----	----	
Magnesium	7439-95-4	E457B/BU	5.0	µg/sample	28.0	7.5	----	----	----	
Manganese	7439-96-5	E457B/BU	0.25	µg/sample	3.16	0.43	----	----	----	
Molybdenum	7439-98-7	E457B/BU	0.10	µg/sample	0.24	<0.10	----	----	----	
Nickel	7440-02-0	E457B/BU	0.10	µg/sample	1.80	0.15	----	----	----	
Potassium	7440-09-7	E457B/BU	50	µg/sample	335	<50	----	----	----	
Selenium	7782-49-2	E457B/BU	1.0	µg/sample	<1.0	<1.0	----	----	----	
Silicon	7440-21-3	E457B/BU	1500	µg/sample	<1500	<1500	----	----	----	
Silver	7440-22-4	E457B/BU	0.10	µg/sample	<0.10	<0.10	----	----	----	
Sodium	7440-23-5	E457B/BU	15	µg/sample	459	181	----	----	----	
Strontium	7440-24-6	E457B/BU	0.10	µg/sample	0.55	<0.10	----	----	----	
Thallium	7440-28-0	E457B/BU	0.10	µg/sample	<0.10	<0.10	----	----	----	
Tin	7440-31-5	E457B/BU	0.15	µg/sample	15.8	154	----	----	----	
Titanium	7440-32-6	E457B/BU	5.0	µg/sample	<5.0	<5.0	----	----	----	
Vanadium	7440-62-2	E457B/BU	0.50	µg/sample	<0.50	<0.50	----	----	----	
Zinc	7440-66-6	E457B/BU	3.0	µg/sample	17.6	<3.0	----	----	----	



### Analytical Results

Sub-Matrix: Impinger  
 (Matrix: Air)

					Client sample ID	M5/M29-Ketek-T3	M5/M29-Blank	----	----	----
					Client sampling date / time	30-Sep-2025 14:49	30-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	BU2502917-006	BU2502917-007	----	----	----	
					Result	Result	----	----	----	
<b>Method 29 Mercury: Fraction 1B (HNO3)</b>										
Mercury	7439-97-6	E521/BU	0.022	µg/sample	<0.022	<0.022	----	----	----	
<b>Method 29 Mercury: Fraction 1B (HF)</b>										
Mercury	7439-97-6	E521A/BU	0.022	µg/sample	<0.022	<0.022	----	----	----	
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521B/BU	0.75	µg/L	<0.75	<0.75	----	----	----	
Mercury	7439-97-6	EC521B/BU	0.0750	µg/sample	<0.368	<0.139	----	----	----	
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521C/BU	0.15	µg/L	<0.15	----	----	----	----	
Mercury	7439-97-6	EC521C/BU	0.015	µg/sample	<0.005	----	----	----	----	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521D/BU	0.075	µg/L	<0.075	<0.075	----	----	----	
Mercury	7439-97-6	EC521D/BU	0.0075	µg/sample	<0.0375	<0.0172	----	----	----	
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4)</b>										
Mercury	7439-97-6	E521E/BU	0.75	µg/L	0.83	<0.75	----	----	----	
Mercury	7439-97-6	EC521E/BU	0.075	µg/sample	0.141	<0.128	----	----	----	

Please refer to the General Comments section for an explanation of any qualifiers detected.

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>BU2502917</b></p> <p><b>Client</b> : <b>RWDI Air Inc.</b></p> <p><b>Contact</b> : Oluwatobi Odumoye</p> <p><b>Address</b> : 600 Southgate Drive Guelph ON Canada N1G 4P6</p> <p><b>Telephone</b> : 519 823 1311</p> <p><b>Project</b> : 2510430 - Agnico Eagle</p> <p><b>PO</b> : 2510430</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Preet Bhamrah</p> <p><b>Site</b> : Agnico</p> <p><b>Quote number</b> : BU2025RWDI1000011 - Agnico</p> <p><b>No. of samples received</b> : 7</p> <p><b>No. of samples analysed</b> : 7</p>	<p><b>Page</b> : 1 of 18</p> <p><b>Laboratory</b> : ALS Environmental - Burlington</p> <p><b>Account Manager</b> : Robert Chin</p> <p><b>Address</b> : 1435 Norjohn Court, Unit 1 Burlington, Ontario Canada L7L 0E6</p> <p><b>Telephone</b> : +1 905 331 3111</p> <p><b>Date Samples Received</b> : 21-Oct-2025 10:40</p> <p><b>Issue Date</b> : 13-Nov-2025 13:39</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
  - CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
  - DQO: Data Quality Objective.
  - LOR: Limit of Reporting (detection limit).
  - RPD: Relative Percent Difference.
- 

### ***Workorder Comments***

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Duplicate outliers occur.
- No Matrix Spike Duplicate (MSD) outliers occur - please see following pages for full details.
- Method Blank value outliers occur - please see following pages for full details.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- Analysis Holding Time Outliers exist - please see following pages for full details.

### ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



### Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: Air

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Method Blank (MB) Values</b>								
Method 29 Metals: Fraction 1A (HF)	QC-MRG2-2329392 001	----	Nickel	7440-02-0	E457A	0.73 <sup>B</sup> µg/sample	0.6 µg/sample	Blank result exceeds permitted value

### Result Qualifiers

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

Laboratory Control Sample (LCS) Recoveries								
Metals	QC-2307862-002	----	Silver	7440-22-4	E457B	75.3 % <sup>LCS-L</sup>	80.0-120%	Recovery less than lower control limit
Method 29 Metals: Fraction 1A (HF)	QC-MRG2-2329392 002	----	Chromium	7440-47-3	E457A	77.3 % <sup>RRQC</sup>	80.0-120%	Recovery less than lower control limit

### Result Qualifiers

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
RRQC	Refer to report comments for information regarding this QC result.

Matrix Spike (MS) Recoveries								
Metals	Anonymous	Anonymous	Selenium	7782-49-2	E457B	133 % <sup>K</sup>	80.0-120%	Recovery greater than upper data quality objective
Metals	Anonymous	Anonymous	Silver	7440-22-4	E457B	78.8 % <sup>MS-Ag</sup>	80.0-120%	Recovery less than lower data quality objective

### Result Qualifiers

Qualifier	Description
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
MS-Ag	Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable

Page : 4 of 18  
Work Order : BU2502917  
Client : RWDI Air Inc.  
Project : 2510430 - Agnico Eagle

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## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Air

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Blank	E521A	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T2	E521A	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T3	E521A	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T1	E521A	29-Sep-2025	11-Nov-2025	28 days	42 days	* EHT	11-Nov-2025	28 days	42 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T2	E521A	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	11-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T3	E521A	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	11-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HF) : Method 29 Mercury: Fraction 1B (HF) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T1	E521A	27-Sep-2025	11-Nov-2025	28 days	44 days	* EHT	11-Nov-2025	28 days	44 days	* EHT



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Blank	E521	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T2	E521	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T3	E521	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T1	E521	29-Sep-2025	11-Nov-2025	28 days	42 days	* EHT	11-Nov-2025	28 days	42 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T2	E521	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	11-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T3	E521	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	11-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Mercury: Fraction 1B (HNO3) : Method 29 Mercury: Fraction 1B (nitric) by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T1	E521	27-Sep-2025	11-Nov-2025	28 days	44 days	* EHT	11-Nov-2025	28 days	44 days	* EHT
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Blank	E521B	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	31-Oct-2025	28 days	27 days	* EHT
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ketek-T2	E521B	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	31-Oct-2025	28 days	27 days	* EHT



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ketek-T3	E521B	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	31-Oct-2025	28 days	27 days	* EHT
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ecowaste-T3	E521B	28-Sep-2025	27-Oct-2025	28 days	28 days	✓	31-Oct-2025	28 days	28 days	✓
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ketek-T1	E521B	29-Sep-2025	27-Oct-2025	28 days	28 days	✓	31-Oct-2025	28 days	28 days	✓
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ecowaste-T2	E521B	28-Sep-2025	27-Oct-2025	28 days	29 days	* EHT	31-Oct-2025	28 days	29 days	* EHT
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 2B by CVAAS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ecowaste-T1	E521B	27-Sep-2025	27-Oct-2025	28 days	30 days	* EHT	31-Oct-2025	28 days	30 days	* EHT
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3A by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Impinger Rinse)</b> M5/M29-Ketek-T2	E521C	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	31-Oct-2025	28 days	27 days	* EHT
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3A by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Impinger Rinse)</b> M5/M29-Ketek-T3	E521C	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	31-Oct-2025	28 days	27 days	* EHT
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3A by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Impinger Rinse)</b> M5/M29-Ecowaste-T3	E521C	28-Sep-2025	27-Oct-2025	28 days	28 days	* EHT	31-Oct-2025	28 days	28 days	* EHT
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3A by CVAAS</b>										
<b>M29 : 0.1N HNO3 (Impinger Rinse)</b> M5/M29-Ketek-T1	E521C	29-Sep-2025	27-Oct-2025	28 days	28 days	✓	31-Oct-2025	28 days	28 days	* EHT



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3A by CVAAS</b>											
<b>M29 : 0.1N HNO3 (Impinger Rinse)</b> M5/M29-Ecowaste-T2	E521C	28-Sep-2025	27-Oct-2025	28 days	29 days	* EHT	31-Oct-2025	28 days	29 days	* EHT	
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3A by CVAAS</b>											
<b>M29 : 0.1N HNO3 (Impinger Rinse)</b> M5/M29-Ecowaste-T1	E521C	27-Sep-2025	27-Oct-2025	28 days	30 days	* EHT	31-Oct-2025	28 days	30 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Blank	E521D	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	29-Oct-2025	28 days	27 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Ketek-T2	E521D	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	29-Oct-2025	28 days	27 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Ketek-T3	E521D	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	29-Oct-2025	28 days	27 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Ecowaste-T3	E521D	28-Sep-2025	27-Oct-2025	28 days	28 days	* EHT	29-Oct-2025	28 days	28 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Ketek-T1	E521D	29-Sep-2025	27-Oct-2025	28 days	28 days	✓	29-Oct-2025	28 days	28 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Ecowaste-T2	E521D	28-Sep-2025	27-Oct-2025	28 days	29 days	* EHT	29-Oct-2025	28 days	29 days	* EHT	
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3B by CVAAS</b>											
<b>M29 : 4% KMNO4 + 10% H2SO4 (Impingers)</b> M5/M29-Ecowaste-T1	E521D	27-Sep-2025	27-Oct-2025	28 days	30 days	* EHT	29-Oct-2025	28 days	30 days	* EHT	



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Blank	E521E	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	03-Nov-2025	28 days	27 days	*	EHT
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Ketek-T2	E521E	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	03-Nov-2025	28 days	27 days	*	EHT
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Ketek-T3	E521E	30-Sep-2025	27-Oct-2025	28 days	27 days	✓	03-Nov-2025	28 days	27 days	*	EHT
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Ecowaste-T3	E521E	28-Sep-2025	27-Oct-2025	28 days	28 days	*	03-Nov-2025	28 days	28 days	*	EHT
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Ketek-T1	E521E	29-Sep-2025	27-Oct-2025	28 days	28 days	✓	03-Nov-2025	28 days	28 days	*	EHT
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Ecowaste-T2	E521E	28-Sep-2025	27-Oct-2025	28 days	29 days	*	03-Nov-2025	28 days	29 days	*	EHT
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) : Method 29 Mercury: Fraction 3C by CVAAS</b>											
<b>M29 : 8N HCl (Impinger Rinse)</b> M5/M29-Ecowaste-T1	E521E	27-Sep-2025	27-Oct-2025	28 days	30 days	*	03-Nov-2025	28 days	30 days	*	EHT
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>											
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Blank	E457A	30-Sep-2025	11-Nov-2025	28 days	41 days	*	12-Nov-2025	28 days	41 days	*	EHT
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>											
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T2	E457A	30-Sep-2025	11-Nov-2025	28 days	41 days	*	12-Nov-2025	28 days	41 days	*	EHT



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T3	E457A	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	12-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T1	E457A	29-Sep-2025	11-Nov-2025	28 days	42 days	* EHT	12-Nov-2025	28 days	42 days	* EHT
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T2	E457A	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	12-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T3	E457A	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	12-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Metals: Fraction 1A (HF) : Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T1	E457A	27-Sep-2025	11-Nov-2025	28 days	44 days	* EHT	12-Nov-2025	28 days	44 days	* EHT
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Blank	E457	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T2	E457	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T3	E457	30-Sep-2025	11-Nov-2025	28 days	41 days	* EHT	11-Nov-2025	28 days	41 days	* EHT
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ketek-T1	E457	29-Sep-2025	11-Nov-2025	28 days	42 days	* EHT	11-Nov-2025	28 days	42 days	* EHT



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T2	E457	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	11-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T3	E457	28-Sep-2025	11-Nov-2025	28 days	43 days	* EHT	11-Nov-2025	28 days	43 days	* EHT
<b>Method 29 Metals: Fraction 1A (HNO3) : Method 29 Metals: Fraction 1A (nitric) by ICPMS</b>										
<b>M29 : 0.1N HNO3 (Probe Rinse)</b> M5/M29-Ecowaste-T1	E457	27-Sep-2025	11-Nov-2025	28 days	44 days	* EHT	11-Nov-2025	28 days	44 days	* EHT
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Blank	E457B	30-Sep-2025	31-Oct-2025	28 days	30 days	* EHT	03-Nov-2025	28 days	30 days	* EHT
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ketek-T2	E457B	30-Sep-2025	31-Oct-2025	28 days	30 days	* EHT	03-Nov-2025	28 days	30 days	* EHT
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ketek-T3	E457B	30-Sep-2025	31-Oct-2025	28 days	30 days	* EHT	03-Nov-2025	28 days	30 days	* EHT
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ketek-T1	E457B	29-Sep-2025	31-Oct-2025	28 days	31 days	* EHT	03-Nov-2025	28 days	31 days	* EHT
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ecowaste-T2	E457B	28-Sep-2025	31-Oct-2025	28 days	32 days	* EHT	03-Nov-2025	28 days	32 days	* EHT
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ecowaste-T3	E457B	28-Sep-2025	31-Oct-2025	28 days	32 days	* EHT	03-Nov-2025	28 days	32 days	* EHT



Matrix: Air Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Method 29 Metals: Fraction 2A (HNO3/H2O2) : Method 29 Metals: Fraction 2A by ICPMS</b>										
<b>M29 : 5% HNO3 + 10% H2O2 (Impingers)</b> M5/M29-Ecowaste-T1	E457B	27-Sep-2025	31-Oct-2025	28 days	33 days	* EHT	03-Nov-2025	28 days	33 days	* EHT
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Blank	E897A	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ecowaste-T1	E897A	27-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ecowaste-T2	E897A	28-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ecowaste-T3	E897A	28-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ketek-T1	E897A	29-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ketek-T2	E897A	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Acetone Rinse by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ketek-T3	E897A	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
<b>M5/M29 : Quartz Filter</b> M5/M29-Blank	E890	30-Sep-2025	----	----	----		03-Nov-2025	----	----	



Matrix: Air Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
M5/M29 : Quartz Filter M5/M29-Ecowaste-T1	E890	27-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
M5/M29 : Quartz Filter M5/M29-Ecowaste-T2	E890	28-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
M5/M29 : Quartz Filter M5/M29-Ecowaste-T3	E890	28-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
M5/M29 : Quartz Filter M5/M29-Ketek-T1	E890	29-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
M5/M29 : Quartz Filter M5/M29-Ketek-T2	E890	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Particulates in Stack Emission Filter by Gravimetry</b>										
M5/M29 : Quartz Filter M5/M29-Ketek-T3	E890	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
M5/M29 : Acetone (Probe Rinse) M5/M29-Blank	E898A	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
M5/M29 : Acetone (Probe Rinse) M5/M29-Ecowaste-T1	E898A	27-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
M5/M29 : Acetone (Probe Rinse) M5/M29-Ecowaste-T2	E898A	28-Sep-2025	----	----	----		03-Nov-2025	----	----	



Matrix: Air

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ecowaste-T3	E898A	28-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ketek-T1	E898A	29-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ketek-T2	E898A	30-Sep-2025	----	----	----		03-Nov-2025	----	----	
<b>Particulates : Stack Emission Acetone Rinse Mass by Gravimetry</b>										
<b>M5/M29 : Acetone (Probe Rinse)</b> M5/M29-Ketek-T3	E898A	30-Sep-2025	----	----	----		03-Nov-2025	----	----	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Air

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Method 29 Metals: Fraction 1A (nitric) by ICPMS	E457	2329389	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS	E457A	2329393	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 2A by ICPMS	E457B	2307862	1	19	5.2	5.0	✔
Method 29 Mercury: Fraction 1B (nitric) by CVAAS	E521	2329388	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 1B (HF) by CVAAS	E521A	2329392	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 2B by CVAAS	E521B	2301583	1	18	5.5	5.0	✔
Method 29 Mercury: Fraction 3A by CVAAS	E521C	2301584	1	13	7.6	5.0	✔
Method 29 Mercury: Fraction 3B by CVAAS	E521D	2301576	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 3C by CVAAS	E521E	2301577	1	10	10.0	5.0	✔
Particulates in Stack Emission Filter by Gravimetry	E890	2305606	1	10	10.0	5.0	✔
Particulates in Stack Emission Acetone Rinse by Gravimetry	E897A	2306392	1	20	5.0	5.0	✔
Stack Emission Acetone Rinse Mass by Gravimetry	E898A	2306377	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Method 29 Metals: Fraction 1A (nitric) by ICPMS	E457	2329389	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS	E457A	2329393	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 2A by ICPMS	E457B	2307862	1	19	5.2	5.0	✔
Method 29 Mercury: Fraction 1B (nitric) by CVAAS	E521	2329388	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 1B (HF) by CVAAS	E521A	2329392	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 2B by CVAAS	E521B	2301583	1	18	5.5	5.0	✔
Method 29 Mercury: Fraction 3A by CVAAS	E521C	2301584	1	13	7.6	5.0	✔
Method 29 Mercury: Fraction 3B by CVAAS	E521D	2301576	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 3C by CVAAS	E521E	2301577	1	10	10.0	5.0	✔
<b>Method Blanks (MB)</b>							
Method 29 Metals: Fraction 1A (nitric) by ICPMS	E457	2329389	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS	E457A	2329393	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 2A by ICPMS	E457B	2307862	1	19	5.2	5.0	✔
Method 29 Mercury: Fraction 1B (nitric) by CVAAS	E521	2329388	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 1B (HF) by CVAAS	E521A	2329392	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 2B by CVAAS	E521B	2301583	1	18	5.5	5.0	✔
Method 29 Mercury: Fraction 3A by CVAAS	E521C	2301584	1	13	7.6	5.0	✔
Method 29 Mercury: Fraction 3B by CVAAS	E521D	2301576	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 3C by CVAAS	E521E	2301577	1	10	10.0	5.0	✔
Particulates in Stack Emission Filter by Gravimetry	E890	2305606	1	10	10.0	5.0	✔
Particulates in Stack Emission Acetone Rinse by Gravimetry	E897A	2306392	1	20	5.0	5.0	✔
Stack Emission Acetone Rinse Mass by Gravimetry	E898A	2306377	1	20	5.0	5.0	✔



Matrix: Air

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Matrix Spikes (MS)</b>							
Method 29 Metals: Fraction 1A (nitric) by ICPMS	E457	2329389	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS	E457A	2329393	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 2A by ICPMS	E457B	2307862	1	19	5.2	5.0	✔
Method 29 Mercury: Fraction 1B (nitric) by CVAAS	E521	2329388	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 1B (HF) by CVAAS	E521A	2329392	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 2B by CVAAS	E521B	2301583	1	18	5.5	5.0	✔
Method 29 Mercury: Fraction 3A by CVAAS	E521C	2301584	1	13	7.6	5.0	✔
Method 29 Mercury: Fraction 3B by CVAAS	E521D	2301576	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 3C by CVAAS	E521E	2301577	1	10	10.0	5.0	✔
<b>Matrix Spike Duplicates (MSD)</b>							
Method 29 Metals: Fraction 1A (nitric) by ICPMS	E457	2329389	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS	E457A	2329393	1	10	10.0	5.0	✔
Method 29 Metals: Fraction 2A by ICPMS	E457B	2307862	1	19	5.2	5.0	✔
Method 29 Mercury: Fraction 1B (nitric) by CVAAS	E521	2329388	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 1B (HF) by CVAAS	E521A	2329392	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 2B by CVAAS	E521B	2301583	1	18	5.5	5.0	✔
Method 29 Mercury: Fraction 3A by CVAAS	E521C	2301584	1	13	7.6	5.0	✔
Method 29 Mercury: Fraction 3B by CVAAS	E521D	2301576	1	10	10.0	5.0	✔
Method 29 Mercury: Fraction 3C by CVAAS	E521E	2301577	1	10	10.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Method 29 Metals: Fraction 1A (nitric) by ICPMS	E457 ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 6020B (analytical)	Front-half (FH) sample fractions are combined for closed-vessel microwave digestion in nitric acid. After digestion, samples are submitted to instruments for analysis by ICP-MS.
Method 29 Metals: Fraction 1A (hydrofluoric) by ICPMS	E457A ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 6020B (analytical)	Front-half (FH) sample fractions are combined for closed-vessel microwave digestion in hydrofluoric acid. After digestion, samples are submitted to instruments for analysis by ICP-MS.
Method 29 Metals: Fraction 2A by ICPMS	E457B ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 6020B (analytical)	Back-half (BH) samples are digested using an open vessel procedure. After digestion, samples are submitted to instruments for analysis by ICP-MS.
Method 29 Mercury: Fraction 1B (nitric) by CVAAS	E521 ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 7470A (analysis)	After microwave digestion, a sub-sample is re-digested in oxidizing reagents, using an open-vessel hotblock method. Samples are treated with a reductant to facilitate analysis by CVAA.
Method 29 Mercury: Fraction 1B (HF) by CVAAS	E521A ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 7470A (analysis)	After microwave digestion, a sub-sample is re-digested in oxidizing reagents, using an open-vessel hotblock method. Samples are treated with a reductant to facilitate analysis by CVAA.
Method 29 Mercury: Fraction 2B by CVAAS	E521B ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 7470A (analytical)	A sub-sample is digested in oxidizing reagents, using an open-vessel hotblock method. Samples are treated with a reductant to facilitate analysis by CVAA.
Method 29 Mercury: Fraction 3A by CVAAS	E521C ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA 7470A (analytical)	A sub-sample is digested in oxidizing reagents, using an open-vessel hotblock method. Samples are treated with a reductant to facilitate analysis by CVAA.
Method 29 Mercury: Fraction 3B by CVAAS	E521D ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 7470A (analysis)	Samples are filtered, and rinsed, to remove solids. A sub-sample of the filtrate is digested in oxidizing reagents, using an open-vessel hotblock method. Samples are treated with a reductant to facilitate analysis by CVAA.
Method 29 Mercury: Fraction 3C by CVAAS	E521E ALS Environmental - Burlington	Air	EPA Method 29 (preparation), EPA Method 7470A (analytical)	Filter and solids from the filtration of Fraction 3B are placed into a vessel and covered with 8N HCl. This is then re-filtered and a sub-sample of the filtrate is digested in oxidizing reagents, using an open-vessel hotblock method. Samples are treated with a reductant to facilitate analysis by CVAA.
Particulates in Stack Emission Filter by Gravimetry	E890 ALS Environmental - Burlington	Air	EPA Method 5 (mod.)	Gravimetric analysis of particulate air samples collected on filters.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Particulates in Stack Emission Acetone Rinse by Gravimetry	E897A ALS Environmental - Burlington	Air	EPA Method 5 (mod.)	Gravimetric analysis of particulate air samples collected in acetone rinses.
Stack Emission Acetone Rinse Mass by Gravimetry	E898A ALS Environmental - Burlington	Air	EPA Method 5 (mod.)	Gravimetric analysis of acetone mass from rinses.
Metals in Stack Analysis (M29)	EC457 ALS Environmental - Burlington	Air	Result summation	Summation of front half and back-half to provide "combined" result.
Hg Fraction 2B (Method 29) - CALC	EC521B ALS Environmental - Burlington	Air	unit conversion	Convert ug/L to ug/sample
Hg Fraction 3A (Method 29) - CALC	EC521C ALS Environmental - Burlington	Air	unit conversion	Convert ug/L to ug/sample
Hg Fraction 3B (Method 29) - CALC	EC521D ALS Environmental - Burlington	Air	unit conversion	Convert ug/L to ug/sample
Hg Fraction 3C (Method 29) - CALC	EC521E ALS Environmental - Burlington	Air	unit conversion	Convert ug/L to ug/sample

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Sample preparation (HNO3) for Fraction 1A/1B Stack Metals	EP457 ALS Environmental - Burlington	Air	mod. EPA Method 29 (preparation)	Samples are digested using nitric acid in a closed vessel, microwave-assisted procedure. Analysis by ICP-MS (1A) or CVAA (1B) follows.
Sample preparation (HF) for Fraction 1A/1B Stack Metals	EP457A ALS Environmental - Burlington	Air	EPA Method 29 (preparation)	Samples are digested using hydrofluoric acid in a closed vessel procedure. Analysis by ICP-MS (1A) or CVAA (1B) follows.
Sample preparation for Fraction 2A/2B Stack Metals	EP457B ALS Environmental - Burlington	Air	EPA Method 29 (preparation)	Samples are digested using an open vessel procedure. Analysis by ICP-MS (2A) or CVAA (2B) follows.

## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: BU2502917</b>	<b>Page</b>	: 1 of 15
<b>Client</b>	: RWDI Air Inc.	<b>Laboratory</b>	: ALS Environmental - Burlington
<b>Contact</b>	: Oluwatobi Odumoye	<b>Account Manager</b>	: Robert Chin
<b>Address</b>	: 600 Southgate Drive Guelph ON Canada N1G 4P6	<b>Address</b>	: 1435 Norjohn Court, Unit 1 Burlington, Ontario Canada L7L 0E6
<b>Telephone</b>	: 519 823 1311	<b>Telephone</b>	: +1 905 331 3111
<b>Project</b>	: 2510430 - Agnico Eagle	<b>Date Samples Received</b>	: 21-Oct-2025 10:40
<b>PO</b>	: 2510430	<b>Date Analysis Commenced</b>	: 27-Oct-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 13-Nov-2025 13:39
<b>Sampler</b>	: Preet Bhamrah		
<b>Site</b>	: Agnico		
<b>Quote number</b>	: BU2025RWDI1000011 - Agnico		
<b>No. of samples received</b>	: 7		
<b>No. of samples analysed</b>	: 7		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Matrix Spike Duplicate (MSD) Report; Relative Percent Difference (RPD)
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Gamini Nadu	Analyst	Burlington Inorganics, Burlington, Ontario
Gamini Nadu	Analyst	Burlington Metals, Burlington, Ontario
Sabir Ahmed	Analyst	Burlington Metals, Burlington, Ontario

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Project : 2510430 - Agnico Eagle



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Air					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Particulates (QC Lot: 2305606)</b>											
BU2502902-022	Anonymous	Particulate matter, filter	----	E890	0.6	mg	351	352	0.0285%	20%	----
<b>Particulates (QC Lot: 2306377)</b>											
BU2502902-022	Anonymous	mass, acetone [FRONT]	----	E898A	0.40	g	157	157	0.00%	10%	----
<b>Particulates (QC Lot: 2306392)</b>											
BU2502902-022	Anonymous	particulate matter, acetone impinger [FRONT]	----	E897A	0.4	mg	146	146	0.00%	10%	----
<b>Metals (QC Lot: 2307862)</b>											
BU2502859-001	Anonymous	Antimony	7440-36-0	E457B	0.10	µg/sample	0.10	0.11	0.004	Diff <2x LOR	----
		Arsenic	7440-38-2	E457B	0.50	µg/sample	2.85	2.87	0.03	Diff <2x LOR	----
		Barium	7440-39-3	E457B	2.5	µg/sample	5.1	5.1	0.04	Diff <2x LOR	----
		Beryllium	7440-41-7	E457B	0.10	µg/sample	<0.10	<0.10	0	Diff <2x LOR	----
		Cadmium	7440-43-9	E457B	0.050	µg/sample	0.228	0.246	0.018	Diff <2x LOR	----
		Chromium	7440-47-3	E457B	0.50	µg/sample	4.84	4.74	0.10	Diff <2x LOR	----
		Cobalt	7440-48-4	E457B	0.10	µg/sample	4.80	4.74	1.26%	20%	----
		Copper	7440-50-8	E457B	0.50	µg/sample	34.4	34.4	0.0218%	20%	----
		Lead	7439-92-1	E457B	0.25	µg/sample	4.30	4.33	0.661%	20%	----
		Manganese	7439-96-5	E457B	0.25	µg/sample	14.2	14.5	1.90%	20%	----
		Nickel	7440-02-0	E457B	0.10	µg/sample	73.1	73.3	0.281%	20%	----
		Selenium	7782-49-2	E457B	1.0	µg/sample	5.3	5.0	0.3	Diff <2x LOR	----
		Silver	7440-22-4	E457B	0.10	µg/sample	0.89	0.92	0.02	Diff <2x LOR	----
Thallium	7440-28-0	E457B	0.10	µg/sample	<0.10	<0.10	0	Diff <2x LOR	----		
Zinc	7440-66-6	E457B	3.0	µg/sample	58.9	59.0	0.239%	20%	----		
<b>Method 29 Metals: Fraction 1A (HNO3) (QC Lot: 2329389)</b>											
BU2502902-022	Anonymous	Antimony	7440-36-0	E457	0.20	µg/sample	0.31	0.31	0.003	Diff <2x LOR	----
		Arsenic	7440-38-2	E457	1.0	µg/sample	6.9	6.8	0.07	Diff <2x LOR	----
		Barium	7440-39-3	E457	5.0	µg/sample	26.1	24.4	1.7	Diff <2x LOR	----
		Beryllium	7440-41-7	E457	0.20	µg/sample	0.25	0.24	0.02	Diff <2x LOR	----
		Cadmium	7440-43-9	E457	0.10	µg/sample	0.48	0.49	0.009	Diff <2x LOR	----
		Chromium	7440-47-3	E457	1.0	µg/sample	98.8	95.3	3.57%	20%	----
		Cobalt	7440-48-4	E457	0.20	µg/sample	5.00	4.90	2.18%	20%	----
		Copper	7440-50-8	E457	1.0	µg/sample	5.8	5.7	0.1	Diff <2x LOR	----



Sub-Matrix: Air					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Method 29 Metals: Fraction 1A (HNO3) (QC Lot: 2329389) - continued</b>											
BU2502902-022	Anonymous	Lead	7439-92-1	E457	0.50	µg/sample	157	159	1.70%	20%	----
		Manganese	7439-96-5	E457	0.50	µg/sample	868	856	1.38%	20%	----
		Nickel	7440-02-0	E457	0.20	µg/sample	42.9	41.1	4.26%	20%	----
		Selenium	7782-49-2	E457	2.0	µg/sample	6.3	6.4	0.05	Diff <2x LOR	----
		Silver	7440-22-4	E457	2.00	µg/sample	<2.00	<2.00	0	Diff <2x LOR	----
		Thallium	7440-28-0	E457	0.20	µg/sample	17.7	18.2	2.36%	20%	----
		Zinc	7440-66-6	E457	6.0	µg/sample	13.7	13.5	0.2	Diff <2x LOR	----
<b>Method 29 Metals: Fraction 1A (HF) (QC Lot: 2329393)</b>											
BU2502902-022	Anonymous	Antimony	7440-36-0	E457A	0.20	µg/sample	<0.20	<0.20	0	Diff <2x LOR	----
		Arsenic	7440-38-2	E457A	1.0	µg/sample	1.7	1.6	0.03	Diff <2x LOR	----
		Barium	7440-39-3	E457A	5.0	µg/sample	14.1	14.2	0.06	Diff <2x LOR	----
		Beryllium	7440-41-7	E457A	0.20	µg/sample	<0.20	<0.20	0	Diff <2x LOR	----
		Cadmium	7440-43-9	E457A	0.10	µg/sample	<0.10	<0.10	0	Diff <2x LOR	----
		Chromium	7440-47-3	E457A	1.0	µg/sample	74.1	72.7	2.00%	20%	----
		Cobalt	7440-48-4	E457A	0.20	µg/sample	3.10	3.14	1.25%	20%	----
		Copper	7440-50-8	E457A	1.0	µg/sample	1.4	1.3	0.1	Diff <2x LOR	----
		Lead	7439-92-1	E457A	0.50	µg/sample	3.10	3.18	0.08	Diff <2x LOR	----
		Manganese	7439-96-5	E457A	0.50	µg/sample	194	195	0.488%	20%	----
		Nickel	7440-02-0	E457A	0.20	µg/sample	23.8	23.8	0.0126%	20%	----
		Selenium	7782-49-2	E457A	2.0	µg/sample	5.4	5.6	0.1	Diff <2x LOR	----
		Silver	7440-22-4	E457A	0.20	µg/sample	<0.20	<0.20	0	Diff <2x LOR	----
		Thallium	7440-28-0	E457A	0.20	µg/sample	0.32	0.33	0.01	Diff <2x LOR	----
		Zinc	7440-66-6	E457A	6.0	µg/sample	10.3	10.4	0.09	Diff <2x LOR	----
<b>Method 29 Mercury: Fraction 1B (HNO3) (QC Lot: 2329388)</b>											
BU2502902-022	Anonymous	Mercury	7439-97-6	E521	0.022	µg/sample	<0.022	<0.022	0	Diff <2x LOR	----
<b>Method 29 Mercury: Fraction 1B (HF) (QC Lot: 2329392)</b>											
BU2502902-022	Anonymous	Mercury	7439-97-6	E521A	0.022	µg/sample	<0.022	<0.022	0	Diff <2x LOR	----
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) (QC Lot: 2301583)</b>											
BU2502902-022	Anonymous	Mercury	7439-97-6	E521B	0.75	µg/L	<0.75	<0.75	0	Diff <2x LOR	----
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) (QC Lot: 2301584)</b>											
BU2502902-022	Anonymous	Mercury	7439-97-6	E521C	0.38	µg/L	<0.38	<0.38		Diff <2x LOR	----
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) (QC Lot: 2301576)</b>											
BU2502902-022	Anonymous	Mercury	7439-97-6	E521D	0.075	µg/L	0.284	0.252	0.032	Diff <2x LOR	----
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) (QC Lot: 2301577)</b>											

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Sub-Matrix: Air					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) (QC Lot: 2301577) - continued</b>											
BU2502902-022	Anonymous	Mercury	7439-97-6	E521E	0.75	µg/L	2.55	2.52	0.03	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Air

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Particulates (QCLot: 2305606)</b>						
Particulate matter, filter	---	E890	0.6	mg	<0.6	---
<b>Particulates (QCLot: 2306377)</b>						
mass, acetone [FRONT]	---	E898A	0.4	g	41.1	---
<b>Particulates (QCLot: 2306392)</b>						
particulate matter, acetone impinger [FRONT]	---	E897A	0.4	mg	<0.4	---
<b>Metals (QCLot: 2307862)</b>						
Antimony	7440-36-0	E457B	0.1	µg/sample	<0.10	---
Arsenic	7440-38-2	E457B	0.5	µg/sample	<0.50	---
Barium	7440-39-3	E457B	2.5	µg/sample	<2.5	---
Beryllium	7440-41-7	E457B	0.1	µg/sample	<0.10	---
Cadmium	7440-43-9	E457B	0.05	µg/sample	<0.050	---
Chromium	7440-47-3	E457B	0.5	µg/sample	<0.50	---
Cobalt	7440-48-4	E457B	0.1	µg/sample	<0.10	---
Copper	7440-50-8	E457B	0.5	µg/sample	<0.50	---
Lead	7439-92-1	E457B	0.25	µg/sample	<0.25	---
Manganese	7439-96-5	E457B	0.25	µg/sample	<0.25	---
Nickel	7440-02-0	E457B	0.1	µg/sample	<0.10	---
Selenium	7782-49-2	E457B	1	µg/sample	<1.0	---
Silver	7440-22-4	E457B	0.1	µg/sample	<0.10	---
Thallium	7440-28-0	E457B	0.1	µg/sample	<0.10	---
Zinc	7440-66-6	E457B	3	µg/sample	<3.0	---
<b>Method 29 Metals: Fraction 1A (HNO3) (QCLot: 2329389)</b>						
Antimony	7440-36-0	E457	0.2	µg/sample	<0.20	---
Arsenic	7440-38-2	E457	1	µg/sample	<1.0	---
Barium	7440-39-3	E457	5	µg/sample	<5.0	---
Beryllium	7440-41-7	E457	0.2	µg/sample	<0.20	---
Cadmium	7440-43-9	E457	0.1	µg/sample	<0.10	---
Chromium	7440-47-3	E457	1	µg/sample	<1.0	---
Cobalt	7440-48-4	E457	0.2	µg/sample	<0.20	---
Copper	7440-50-8	E457	1	µg/sample	<1.0	---
Lead	7439-92-1	E457	0.5	µg/sample	<0.50	---
Manganese	7439-96-5	E457	0.5	µg/sample	<0.50	---



Sub-Matrix: Air

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Method 29 Metals: Fraction 1A (HNO3) (QCLot: 2329389) - continued</b>						
Nickel	7440-02-0	E457	0.2	µg/sample	<0.20	---
Selenium	7782-49-2	E457	2	µg/sample	<2.0	---
Silver	7440-22-4	E457	2	µg/sample	<2.00	---
Thallium	7440-28-0	E457	0.2	µg/sample	<0.20	---
Zinc	7440-66-6	E457	6	µg/sample	<6.0	---
<b>Method 29 Metals: Fraction 1A (HF) (QCLot: 2329393)</b>						
Antimony	7440-36-0	E457A	0.2	µg/sample	<0.20	---
Arsenic	7440-38-2	E457A	1	µg/sample	<1.0	---
Barium	7440-39-3	E457A	5	µg/sample	12.3	---
Beryllium	7440-41-7	E457A	0.2	µg/sample	<0.20	---
Cadmium	7440-43-9	E457A	0.1	µg/sample	<0.10	---
Chromium	7440-47-3	E457A	1	µg/sample	1.6	---
Cobalt	7440-48-4	E457A	0.2	µg/sample	<0.20	---
Copper	7440-50-8	E457A	1	µg/sample	<1.0	---
Lead	7439-92-1	E457A	0.5	µg/sample	<0.50	---
Manganese	7439-96-5	E457A	0.5	µg/sample	0.68	---
Nickel	7440-02-0	E457A	0.2	µg/sample	# 0.73	B
Selenium	7782-49-2	E457A	2	µg/sample	<2.0	---
Silver	7440-22-4	E457A	0.2	µg/sample	<0.20	---
Thallium	7440-28-0	E457A	0.2	µg/sample	<0.20	---
Zinc	7440-66-6	E457A	6	µg/sample	9.3	---
<b>Method 29 Mercury: Fraction 1B (HNO3) (QCLot: 2329388)</b>						
Mercury	7439-97-6	E521	0.022	µg/sample	<0.022	---
<b>Method 29 Mercury: Fraction 1B (HF) (QCLot: 2329392)</b>						
Mercury	7439-97-6	E521A	0.022	µg/sample	<0.022	---
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) (QCLot: 2301583)</b>						
Mercury	7439-97-6	E521B	0.75	µg/L	<0.75	---
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) (QCLot: 2301584)</b>						
Mercury	7439-97-6	E521C	0.15	µg/L	<0.15	---
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) (QCLot: 2301576)</b>						
Mercury	7439-97-6	E521D	0.075	µg/L	<0.075	---
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) (QCLot: 2301577)</b>						
Mercury	7439-97-6	E521E	0.75	µg/L	<0.75	---

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## Qualifiers

<i>Qualifier</i>	<i>Description</i>
B	<i>Method Blank exceeds ALS DQO. Associated sample results which are &lt; Limit of Reporting or &gt; 5 times blank level are considered reliable.</i>

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## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Air

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Metals (QCLot: 2307862)</b>									
Antimony	7440-36-0	E457B	0.1	µg/sample	100 µg/sample	87.8	80.0	120	----
Arsenic	7440-38-2	E457B	0.5	µg/sample	100 µg/sample	94.0	80.0	120	----
Barium	7440-39-3	E457B	2.5	µg/sample	25 µg/sample	94.0	80.0	120	----
Beryllium	7440-41-7	E457B	0.1	µg/sample	10 µg/sample	82.7	80.0	120	----
Cadmium	7440-43-9	E457B	0.05	µg/sample	10 µg/sample	89.3	80.0	120	----
Chromium	7440-47-3	E457B	0.5	µg/sample	25 µg/sample	91.7	80.0	120	----
Cobalt	7440-48-4	E457B	0.1	µg/sample	25 µg/sample	89.7	80.0	120	----
Copper	7440-50-8	E457B	0.5	µg/sample	25 µg/sample	88.6	80.0	120	----
Lead	7439-92-1	E457B	0.25	µg/sample	50 µg/sample	87.2	80.0	120	----
Manganese	7439-96-5	E457B	0.25	µg/sample	25 µg/sample	90.1	80.0	120	----
Nickel	7440-02-0	E457B	0.1	µg/sample	50 µg/sample	89.3	80.0	120	----
Selenium	7782-49-2	E457B	1	µg/sample	100 µg/sample	88.9	80.0	120	----
Silver	7440-22-4	E457B	0.1	µg/sample	10 µg/sample	# 75.3	80.0	120	LCS-L
Thallium	7440-28-0	E457B	0.1	µg/sample	100 µg/sample	90.6	80.0	120	----
Zinc	7440-66-6	E457B	3	µg/sample	50 µg/sample	91.2	80.0	120	----
<b>Method 29 Metals: Fraction 1A (HNO3) (QCLot: 2329389)</b>									
Antimony	7440-36-0	E457	0.2	µg/sample	50 µg/sample	84.7	80.0	120	----
Arsenic	7440-38-2	E457	1	µg/sample	50 µg/sample	98.5	80.0	120	----
Barium	7440-39-3	E457	5	µg/sample	12.5 µg/sample	98.4	80.0	120	----
Beryllium	7440-41-7	E457	0.2	µg/sample	5 µg/sample	97.9	80.0	120	----
Cadmium	7440-43-9	E457	0.1	µg/sample	5 µg/sample	87.2	80.0	120	----
Chromium	7440-47-3	E457	1	µg/sample	12.5 µg/sample	98.0	80.0	120	----
Cobalt	7440-48-4	E457	0.2	µg/sample	12.5 µg/sample	95.0	80.0	120	----
Copper	7440-50-8	E457	1	µg/sample	12.5 µg/sample	94.6	80.0	120	----
Lead	7439-92-1	E457	0.5	µg/sample	25 µg/sample	93.8	80.0	120	----
Manganese	7439-96-5	E457	0.5	µg/sample	12.5 µg/sample	97.9	80.0	120	----
Nickel	7440-02-0	E457	0.2	µg/sample	25 µg/sample	94.9	80.0	120	----
Selenium	7782-49-2	E457	2	µg/sample	50 µg/sample	89.5	80.0	120	----
Silver	7440-22-4	E457	2	µg/sample	5 µg/sample	81.0	80.0	120	----
Thallium	7440-28-0	E457	0.2	µg/sample	50 µg/sample	92.0	80.0	120	----
Zinc	7440-66-6	E457	6	µg/sample	25 µg/sample	90.8	80.0	120	----



Sub-Matrix: Air

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Method 29 Metals: Fraction 1A (HF) (QCLot: 2329393)</b>									
Antimony	7440-36-0	E457A	0.2	µg/sample	50 µg/sample	86.4	80.0	120	----
Arsenic	7440-38-2	E457A	1	µg/sample	50 µg/sample	98.3	80.0	120	----
Barium	7440-39-3	E457A	5	µg/sample	12.5 µg/sample	88.7	80.0	120	----
Beryllium	7440-41-7	E457A	0.2	µg/sample	5 µg/sample	87.8	80.0	120	----
Cadmium	7440-43-9	E457A	0.1	µg/sample	5 µg/sample	97.6	80.0	120	----
Chromium	7440-47-3	E457A	1	µg/sample	12.5 µg/sample	# 77.3	80.0	120	RRQC
Cobalt	7440-48-4	E457A	0.2	µg/sample	12.5 µg/sample	95.5	80.0	120	----
Copper	7440-50-8	E457A	1	µg/sample	12.5 µg/sample	91.5	80.0	120	----
Lead	7439-92-1	E457A	0.5	µg/sample	25 µg/sample	94.6	80.0	120	----
Manganese	7439-96-5	E457A	0.5	µg/sample	12.5 µg/sample	91.2	80.0	120	----
Nickel	7440-02-0	E457A	0.2	µg/sample	25 µg/sample	96.0	80.0	120	----
Selenium	7782-49-2	E457A	2	µg/sample	50 µg/sample	91.7	80.0	120	----
Silver	7440-22-4	E457A	0.2	µg/sample	5 µg/sample	81.9	80.0	120	----
Thallium	7440-28-0	E457A	0.2	µg/sample	50 µg/sample	90.9	80.0	120	----
Zinc	7440-66-6	E457A	6	µg/sample	25 µg/sample	96.1	80.0	120	----
<b>Method 29 Mercury: Fraction 1B (HNO3) (QCLot: 2329388)</b>									
Mercury	7439-97-6	E521	0.022	µg/sample	0.3 µg/sample	94.0	90.0	110	----
<b>Method 29 Mercury: Fraction 1B (HF) (QCLot: 2329392)</b>									
Mercury	7439-97-6	E521A	0.022	µg/sample	0.3 µg/sample	95.8	90.0	110	----
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) (QCLot: 2301583)</b>									
Mercury	7439-97-6	E521B	0.75	µg/L	10 µg/L	95.7	90.0	110	----
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) (QCLot: 2301584)</b>									
Mercury	7439-97-6	E521C	0.15	µg/L	2 µg/L	96.6	90.0	110	----
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) (QCLot: 2301576)</b>									
Mercury	7439-97-6	E521D	0.075	µg/L	1 µg/L	91.0	90.0	110	----
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) (QCLot: 2301577)</b>									
Mercury	7439-97-6	E521E	0.75	µg/L	10 µg/L	95.7	80.0	120	----



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## Qualifiers

Qualifier	Description
LCS-L	<i>Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.</i>
RRQC	<i>Refer to report comments for information regarding this QC result.</i>

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### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Air

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Metals (QCLot: 2307862)</b>										
BU2502859-001	Anonymous	Antimony	7440-36-0	E457B	93.4 µg/sample	100 µg/sample	93.4	80.0	120	----
		Arsenic	7440-38-2	E457B	110 µg/sample	100 µg/sample	110	80.0	120	----
		Barium	7440-39-3	E457B	24.1 µg/sample	25 µg/sample	96.2	80.0	120	----
		Beryllium	7440-41-7	E457B	8.23 µg/sample	10 µg/sample	82.3	80.0	120	----
		Cadmium	7440-43-9	E457B	9.64 µg/sample	10 µg/sample	96.4	80.0	120	----
		Chromium	7440-47-3	E457B	24.2 µg/sample	25 µg/sample	97.0	80.0	120	----
		Cobalt	7440-48-4	E457B	24.2 µg/sample	25 µg/sample	96.7	80.0	120	----
		Copper	7440-50-8	E457B	ND µg/sample	----	ND	80.0	120	----
		Lead	7439-92-1	E457B	45.6 µg/sample	50 µg/sample	91.2	80.0	120	----
		Manganese	7439-96-5	E457B	23.3 µg/sample	25 µg/sample	93.2	80.0	120	----
		Nickel	7440-02-0	E457B	ND µg/sample	----	ND	80.0	120	----
		Selenium	7782-49-2	E457B	133 µg/sample	100 µg/sample	133	80.0	120	K
		Silver	7440-22-4	E457B	7.88 µg/sample	10 µg/sample	78.8	80.0	120	MS-Ag
		Thallium	7440-28-0	E457B	95.9 µg/sample	100 µg/sample	95.9	80.0	120	----
		Zinc	7440-66-6	E457B	ND µg/sample	----	ND	80.0	120	----
<b>Method 29 Metals: Fraction 1A (HNO3) (QCLot: 2329389)</b>										
BU2502902-022	Anonymous	Antimony	7440-36-0	E457	44.8 µg/sample	50 µg/sample	89.7	80.0	120	----
		Arsenic	7440-38-2	E457	49.3 µg/sample	50 µg/sample	98.6	80.0	120	----
		Barium	7440-39-3	E457	ND µg/sample	----	ND	80.0	120	----
		Beryllium	7440-41-7	E457	4.78 µg/sample	5 µg/sample	95.5	80.0	120	----
		Cadmium	7440-43-9	E457	4.78 µg/sample	5 µg/sample	95.6	80.0	120	----
		Chromium	7440-47-3	E457	ND µg/sample	----	ND	80.0	120	----
		Cobalt	7440-48-4	E457	11.8 µg/sample	12.5 µg/sample	94.7	80.0	120	----
		Copper	7440-50-8	E457	12.8 µg/sample	12.5 µg/sample	102	80.0	120	----
		Lead	7439-92-1	E457	ND µg/sample	----	ND	80.0	120	----
		Manganese	7439-96-5	E457	ND µg/sample	----	ND	80.0	120	----
		Nickel	7440-02-0	E457	ND µg/sample	----	ND	80.0	120	----
		Selenium	7782-49-2	E457	46.8 µg/sample	50 µg/sample	93.6	80.0	120	----
		Silver	7440-22-4	E457	4.30 µg/sample	5 µg/sample	85.9	80.0	120	----
		Thallium	7440-28-0	E457	47.1 µg/sample	50 µg/sample	94.2	80.0	120	----
		Zinc	7440-66-6	E457	24.0 µg/sample	25 µg/sample	96.1	80.0	120	----
<b>Method 29 Metals: Fraction 1A (HF) (QCLot: 2329393)</b>										
BU2502902-022	Anonymous	Antimony	7440-36-0	E457A	44.0 µg/sample	50 µg/sample	88.1	80.0	120	----
		Arsenic	7440-38-2	E457A	51.0 µg/sample	50 µg/sample	102	80.0	120	----
		Barium	7440-39-3	E457A	ND µg/sample	----	ND	80.0	120	----
		Beryllium	7440-41-7	E457A	4.86 µg/sample	5 µg/sample	97.3	80.0	120	----
		Cadmium	7440-43-9	E457A	4.95 µg/sample	5 µg/sample	99.1	80.0	120	----
		Chromium	7440-47-3	E457A	ND µg/sample	----	ND	80.0	120	----
		Cobalt	7440-48-4	E457A	12.4 µg/sample	12.5 µg/sample	99.2	80.0	120	----



Sub-Matrix: Air					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Method 29 Metals: Fraction 1A (HF) (QCLot: 2329393) - continued</b>										
BU2502902-022	Anonymous	Copper	7440-50-8	E457A	12.3 µg/sample	12.5 µg/sample	98.5	80.0	120	----
		Lead	7439-92-1	E457A	23.8 µg/sample	25 µg/sample	95.1	80.0	120	----
		Manganese	7439-96-5	E457A	ND µg/sample	----	ND	80.0	120	----
		Nickel	7440-02-0	E457A	24.9 µg/sample	25 µg/sample	99.8	80.0	120	----
		Selenium	7782-49-2	E457A	48.3 µg/sample	50 µg/sample	96.7	80.0	120	----
		Silver	7440-22-4	E457A	4.21 µg/sample	5 µg/sample	84.2	80.0	120	----
		Thallium	7440-28-0	E457A	45.5 µg/sample	50 µg/sample	91.1	80.0	120	----
		Zinc	7440-66-6	E457A	25.0 µg/sample	25 µg/sample	100	80.0	120	----
<b>Method 29 Mercury: Fraction 1B (HNO3) (QCLot: 2329388)</b>										
BU2502902-022	Anonymous	Mercury	7439-97-6	E521	0.278 µg/sample	0.3 µg/sample	92.8	75.0	125	----
<b>Method 29 Mercury: Fraction 1B (HF) (QCLot: 2329392)</b>										
BU2502902-022	Anonymous	Mercury	7439-97-6	E521A	0.279 µg/sample	0.3 µg/sample	93.0	75.0	125	----
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) (QCLot: 2301583)</b>										
BU2502902-022	Anonymous	Mercury	7439-97-6	E521B	9.80 µg/L	10 µg/L	98.0	75.0	125	----
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) (QCLot: 2301584)</b>										
BU2502902-022	Anonymous	Mercury	7439-97-6	E521C	4.82 µg/L	5 µg/L	96.4	75.0	125	----
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) (QCLot: 2301576)</b>										
BU2502902-022	Anonymous	Mercury	7439-97-6	E521D	0.832 µg/L	1 µg/L	83.2	80.0	120	----
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) (QCLot: 2301577)</b>										
BU2502902-022	Anonymous	Mercury	7439-97-6	E521E	9.33 µg/L	10 µg/L	93.3	80.0	120	----

### Qualifiers

Qualifier	Description
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
MS-Ag	Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (<LOR) is reliable



### Matrix Spike Duplicate (MSD) Report

A Matrix Spike Duplicate (MSD) is a duplicate of a Matrix Spike (MS), which has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spike Duplicates provide information regarding method precision. ALS DQOs for Matrix Spike Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD).

Sub-Matrix: Air					Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	MSD Result	RPD(%) or Difference	MSD Limits	Qualifier
<b>Metals (QC Lot: 2307862)</b>											
QC-230786-005	Anonymous	Antimony	7440-36-0	E457B	0.10	µg/sample	93.5	104	10.7%	20%	----
		Arsenic	7440-38-2	E457B	0.50	µg/sample	113	115	1.80%	20%	----
		Barium	7440-39-3	E457B	2.5	µg/sample	29.2	29.6	1.96%	20%	----
		Beryllium	7440-41-7	E457B	0.10	µg/sample	8.23	8.59	4.28%	20%	----
		Cadmium	7440-43-9	E457B	0.050	µg/sample	9.86	10.3	4.66%	20%	----
		Chromium	7440-47-3	E457B	0.50	µg/sample	29.1	29.8	2.95%	20%	----
		Cobalt	7440-48-4	E457B	0.10	µg/sample	29.0	29.5	2.15%	20%	----
		Copper	7440-50-8	E457B	0.50	µg/sample	57.6	58.7	----	Diff <2x LOR	----
		Lead	7439-92-1	E457B	0.25	µg/sample	49.9	51.8	4.19%	20%	----
		Manganese	7439-96-5	E457B	0.25	µg/sample	37.5	38.0	2.02%	20%	----
		Nickel	7440-02-0	E457B	0.10	µg/sample	120	123	----	Diff <2x LOR	----
		Selenium	7782-49-2	E457B	1.0	µg/sample	138	143	2.96%	20%	K
		Silver	7440-22-4	E457B	0.10	µg/sample	8.78	9.32	6.74%	20%	----
		Thallium	7440-28-0	E457B	0.10	µg/sample	95.9	97.1	1.24%	20%	----
		Zinc	7440-66-6	E457B	3.0	µg/sample	106	108	----	Diff <2x LOR	----
<b>Method 29 Metals: Fraction 1A (HNO3) (QC Lot: 2329389)</b>											
QC-MRG2-2-005	Anonymous	Antimony	7440-36-0	E457	0.20	µg/sample	45.1	46.3	2.42%	20%	----
		Arsenic	7440-38-2	E457	1.0	µg/sample	56.2	56.8	1.21%	20%	----
		Barium	7440-39-3	E457	5.0	µg/sample	36.9	36.8	----	Diff <2x LOR	----
		Beryllium	7440-41-7	E457	0.20	µg/sample	5.03	4.94	1.80%	20%	----
		Cadmium	7440-43-9	E457	0.10	µg/sample	5.26	5.15	2.33%	20%	----
		Chromium	7440-47-3	E457	1.0	µg/sample	108	108	----	Diff <2x LOR	----
		Cobalt	7440-48-4	E457	0.20	µg/sample	16.8	16.8	0.423%	20%	----
		Copper	7440-50-8	E457	1.0	µg/sample	18.6	19.7	8.45%	20%	----
		Lead	7439-92-1	E457	0.50	µg/sample	181	178	----	Diff <2x LOR	----
		Manganese	7439-96-5	E457	0.50	µg/sample	857	878	----	Diff <2x LOR	----
		Nickel	7440-02-0	E457	0.20	µg/sample	65.0	65.2	----	Diff <2x LOR	----
		Selenium	7782-49-2	E457	2.0	µg/sample	53.1	52.0	2.49%	20%	----
		Silver	7440-22-4	E457	2.00	µg/sample	4.84	4.92	1.85%	20%	----
		Thallium	7440-28-0	E457	0.20	µg/sample	64.8	63.3	3.35%	20%	----
		Zinc	7440-66-6	E457	6.0	µg/sample	37.7	37.8	0.519%	20%	----



Sub-Matrix: Air					Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	MSD Result	RPD(%) or Difference	MSD Limits	Qualifier
<b>Method 29 Metals: Fraction 1A (HF) (QC Lot: 2329393)</b>											
QC-MRG2-2-005	Anonymous	Antimony	7440-36-0	E457A	0.20	µg/sample	44.2	45.5	2.91%	20%	----
		Arsenic	7440-38-2	E457A	1.0	µg/sample	52.7	54.2	2.90%	20%	----
		Barium	7440-39-3	E457A	5.0	µg/sample	27.4	27.8	----%	Diff <2x LOR	----
		Beryllium	7440-41-7	E457A	0.20	µg/sample	5.02	5.17	2.74%	20%	----
		Cadmium	7440-43-9	E457A	0.10	µg/sample	4.96	5.12	2.88%	20%	----
		Chromium	7440-47-3	E457A	1.0	µg/sample	86.6	88.0	----%	Diff <2x LOR	----
		Cobalt	7440-48-4	E457A	0.20	µg/sample	15.5	15.9	3.76%	20%	----
		Copper	7440-50-8	E457A	1.0	µg/sample	13.7	14.3	4.47%	20%	----
		Lead	7439-92-1	E457A	0.50	µg/sample	26.9	27.9	4.12%	20%	----
		Manganese	7439-96-5	E457A	0.50	µg/sample	208	213	----%	Diff <2x LOR	----
		Nickel	7440-02-0	E457A	0.20	µg/sample	48.8	50.3	6.03%	20%	----
		Selenium	7782-49-2	E457A	2.0	µg/sample	53.8	53.9	0.310%	20%	----
		Silver	7440-22-4	E457A	0.20	µg/sample	4.25	4.32	1.65%	20%	----
		Thallium	7440-28-0	E457A	0.20	µg/sample	45.9	47.1	2.60%	20%	----
		Zinc	7440-66-6	E457A	6.0	µg/sample	35.3	36.1	2.96%	20%	----
<b>Method 29 Mercury: Fraction 1B (HNO3) (QC Lot: 2329388)</b>											
QC-MRG2-2-005	Anonymous	Mercury	7439-97-6	E521	0.022	µg/sample	0.282	0.284	0.751%	20%	----
<b>Method 29 Mercury: Fraction 1B (HF) (QC Lot: 2329392)</b>											
QC-MRG2-2-005	Anonymous	Mercury	7439-97-6	E521A	0.022	µg/sample	0.280	0.282	0.643%	20%	----
<b>Method 29 Mercury: Fraction 2B (KMnO4/H2SO4) (QC Lot: 2301583)</b>											
QC-230158-005	Anonymous	Mercury	7439-97-6	E521B	0.75	µg/L	10.5	10.4	1.23%	20%	----
<b>Method 29 Mercury: Fraction 3A (KMnO4/H2SO4) (QC Lot: 2301584)</b>											
QC-230158-005	Anonymous	Mercury	7439-97-6	E521C	0.38	µg/L	4.90	4.82	1.88%	20%	----
<b>Method 29 Mercury: Fraction 3B (KMnO4/H2SO4) (QC Lot: 2301576)</b>											
QC-230157-005	Anonymous	Mercury	7439-97-6	E521D	0.075	µg/L	1.12	1.14	2.73%	20%	----
<b>Method 29 Mercury: Fraction 3C (KMnO4/H2SO4) (QC Lot: 2301577)</b>											
QC-230157-005	Anonymous	Mercury	7439-97-6	E521E	0.75	µg/L	11.9	11.9	0.321%	20%	----





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## Certificate of Analysis

**ALS Project Contact:** Robert Chin  
**ALS Project ID:** RWDI100  
**ALS WO#:** BU2502916  
**Date of Report:** 13-Nov-25  
**Date of Sample Receipt:** 21-Oct-25

**Client Name:** RWDI Air Inc.  
**Client Address:** 600 Southgate Drive  
Guelph, ON  
N1G 4P6  
**Client Contact:** Oluwatobi Odumoye  
**Client Project ID:** 2510430-Agnico Eagle

**COMMENTS:** PCDD/F by EPA M23

For the method blank, the recoveries of some of the labelled standards were below the method control limits. As a result, the detection limits may be elevated. The client samples are not similarly affected and are not expected to be biased.

Certified by:

A handwritten signature in black ink, appearing to read "Sabrina Jin".

Sabrina Jin  
Technical Specialist

Results in this certificate relate only to the samples as submitted to the laboratory.

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# ALS Life Sciences

## Sample Analysis summary Report

Sample Name	SVOC-Ecowaste-T1	SVOC-Ecowaste-T2	SVOC-Ecowaste-T3	SVOC-Ketek-T1	SVOC-Ketek-T2	SVOC-Ketek-T3
ALS Sample ID	BU2502916-001	BU2502916-002	BU2502916-003	BU2502916-004	BU2502916-005	BU2502916-006
Sample Size	1	1	1	1	1	1
Sample size units	Sample	Sample	Sample	Sample	Sample	Sample
Percent Moisture	n/a	n/a	n/a	n/a	n/a	n/a
Sample Matrix	Impinger	Impinger	Impinger	Impinger	Impinger	Impinger
Sampling Date	27-Sep-25	28-Sep-25	28-Sep-25	29-Sep-25	30-Sep-25	30-Sep-25
Extraction Date	28-Oct-25	28-Oct-25	28-Oct-25	28-Oct-25	28-Oct-25	28-Oct-25
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>
2,3,7,8-TCDD	<1.2	<2.7	<1.5	3.74	<3.1	<1.5
1,2,3,7,8-PeCDD	<1.9	7.94	<3.9	30.4	<9.9	<17
1,2,3,4,7,8-HxCDD	<1.7	<9.4	8.69	59.7	30.2	41.9
1,2,3,6,7,8-HxCDD	<2.4	<26	27.8	163	88.9	114
1,2,3,7,8,9-HxCDD	<2.2	18.3	<10	81.7	40.8	51.9
1,2,3,4,6,7,8-HpCDD	<12	149	211	1470	1100	1110
OCDD	24.8	183	290	1740	2100	1830
2,3,7,8-TCDF	5.46	5.80	3.54	<21	9.93	20.0
1,2,3,7,8-PeCDF	5.40	14.0	<11	106	36.6	41.7
2,3,4,7,8-PeCDF	8.16	35.0	37.8	361	145	185
1,2,3,4,7,8-HxCDF	<2.8	24.6	<21	<270	154	192
1,2,3,6,7,8-HxCDF	<3.6	33.2	41.1	429	191	<240
2,3,4,6,7,8-HxCDF	6.46	67.7	94.2	1000	455	658
1,2,3,7,8,9-HxCDF	<2.9	<19	32.9	355	163	230
1,2,3,4,6,7,8-HpCDF	16.5	170	288	2690	1960	2520
1,2,3,4,7,8,9-HpCDF	3.45	<29	62.8	621	408	483
OCDF	15.2	76.4	159	1590	1290	1410
<b>Field Spike Standards</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>
37Cl4-2,3,7,8-TCDD	94	103	99	97	97	104
13C12-1,2,3,4,7,8-HxCDD	110	108	106	106	103	103
13C12-2,3,4,7,8-PeCDF	102	109	108	102	102	103
13C12-1,2,3,4,7,8-HxCDF	102	105	105	104	100	103
13C12-1,2,3,4,7,8,9-HpCDF	89	94	91	89	90	89
<b>Extraction Standards</b>						
13C12-2,3,7,8-TCDD	92	78	84	86	106	70
13C12-1,2,3,7,8-PeCDD	83	68	73	75	90	64
13C12-1,2,3,6,7,8-HxCDD	106	90	91	99	106	81
13C12-1,2,3,4,6,7,8-HpCDD	83	75	73	78	86	62
13C12-OCDD	60	58	54	57	61	43
13C12-2,3,7,8-TCDF	77	69	73	77	92	66
13C12-1,2,3,7,8-PeCDF	78	64	68	72	88	61
13C12-1,2,3,6,7,8-HxCDF	109	92	91	103	113	84
13C12-1,2,3,4,6,7,8-HpCDF	84	75	75	82	88	64
<b>Cleanup Standard</b>						
13C12-1,2,3,7,8,9-HxCDF	85	73	74	82	87	63
<b>Homologue Group Totals</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>
Total-TCDD	9.91	18.8	17.6	86.2	26.3	14.1
Total-PeCDD	<1.9	9.71	87.3	376	91.4	271
Total-HxCDD	26.1	318	293	1750	872	1260
Total-HpCDD	<1.1	369	459	3330	2230	2460
Total-TCDF	55.4	85.0	67.7	1750	599	1090
Total-PeCDF	43.1	279	321	3820	1620	2220
Total-HxCDF	17.8	328	343	4730	2710	3600
Total-HpCDF	32.0	219	537	5150	3500	4490
<b>Toxic Equivalency - (WHO 2005)</b>						
<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	4.01	37.1	37.9	403	194	230
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	7.16	44.2	46.0	432	205	271
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	8.79	45.5	46.7	432	207	272

# ALS Life Sciences

## Sample Analysis summary Report

**Sample Name** **SVOC-Blank**

ALS Sample ID BU2502916-007

Sample Size	1
Sample size units	Sample
Percent Moisture	n/a
Sample Matrix	Impinger
Sampling Date	30-Sep-25
Extraction Date	28-Oct-25

**Target Analytes** **pg**

2,3,7,8-TCDD	<1.6
1,2,3,7,8-PeCDD	<0.76
1,2,3,4,7,8-HxCDD	<0.94
1,2,3,6,7,8-HxCDD	<0.90
1,2,3,7,8,9-HxCDD	<0.87
1,2,3,4,6,7,8-HpCDD	<1.3
OCDD	<5.8
2,3,7,8-TCDF	<1.4
1,2,3,7,8-PeCDF	1.19
2,3,4,7,8-PeCDF	<0.74
1,2,3,4,7,8-HxCDF	<0.68
1,2,3,6,7,8-HxCDF	<0.65
2,3,4,6,7,8-HxCDF	<0.67
1,2,3,7,8,9-HxCDF	<0.82
1,2,3,4,6,7,8-HpCDF	0.879
1,2,3,4,7,8,9-HpCDF	<0.71
OCDF	<1.9

**Field Spike Standards** **% Rec**

37Cl4-2,3,7,8-TCDD	97
13C12-1,2,3,4,7,8-HxCDD	105
13C12-2,3,4,7,8-PeCDF	111
13C12-1,2,3,4,7,8-HxCDF	104
13C12-1,2,3,4,7,8,9-HpCDF	100

**Extraction Standards**

13C12-2,3,7,8-TCDD	62
13C12-1,2,3,7,8-PeCDD	78
13C12-1,2,3,6,7,8-HxCDD	85
13C12-1,2,3,4,6,7,8-HpCDD	82
13C12-OCDD	66
13C12-2,3,7,8-TCDF	52
13C12-1,2,3,7,8-PeCDF	64
13C12-1,2,3,6,7,8-HxCDF	77
13C12-1,2,3,4,6,7,8-HpCDF	72

**Cleanup Standard**

13C12-1,2,3,7,8,9-HxCDF	68
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**Homologue Group Totals** **pg**

Total-TCDD	3.04
Total-PeCDD	<0.76
Total-HxCDD	<0.94
Total-HpCDD	<1.3
Total-TCDF	<1.4
Total-PeCDF	1.19
Total-HxCDF	<0.82
Total-HpCDF	0.879

**Toxic Equivalency - (WHO 2005)**

<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	0.0445
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	1.69
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	3.34

# ALS Life Sciences

## Quality Control Summary Report

Sample Name	Mehod Blank	Laboratory Control Sample
ALS Sample ID	QC-MRG2-	QC-MRG2-
Sample Size	1	1
Sample size units	Sample	n/a
Percent Moisture	n/a	n/a
Sample Matrix	QC	QC
Sampling Date	n/a	n/a
Extraction Date	28-Oct-25	28-Oct-25
<b>Target Analytes</b>	<b>pg</b>	<b>% Rec</b>
2,3,7,8-TCDD	<3.1	82
1,2,3,7,8-PeCDD	<2.1	99
1,2,3,4,7,8-HxCDD	<2.0	96
1,2,3,6,7,8-HxCDD	<1.9	93
1,2,3,7,8,9-HxCDD	<1.9	91
1,2,3,4,6,7,8-HpCDD	2.66	95
OCDD	6.99	89
2,3,7,8-TCDF	<3.7	88
1,2,3,7,8-PeCDF	<1.9	94
2,3,4,7,8-PeCDF	<1.8	99
1,2,3,4,7,8-HxCDF	<1.2	91
1,2,3,6,7,8-HxCDF	<1.2	97
2,3,4,6,7,8-HxCDF	<1.2	93
1,2,3,7,8,9-HxCDF	<1.5	99
1,2,3,4,6,7,8-HpCDF	<2.2	98
1,2,3,4,7,8,9-HpCDF	<2.7	94
OCDF	<3.5	91
<b>Field Spike Standards</b>	<b>% Rec</b>	<b>% Rec</b>
37C14-2,3,7,8-TCDD	NS	NS
13C12-1,2,3,4,7,8-HxCDD	NS	NS
13C12-2,3,4,7,8-PeCDF	NS	NS
13C12-1,2,3,4,7,8-HxCDF	NS	NS
13C12-1,2,3,4,7,8,9-HpCDF	NS	NS
<b>Extraction Standards</b>		
13C12-2,3,7,8-TCDD	28	62
13C12-1,2,3,7,8-PeCDD	38	79
13C12-1,2,3,6,7,8-HxCDD	44	93
13C12-1,2,3,4,6,7,8-HpCDD	45	92
13C12-OCDD	42	79
13C12-2,3,7,8-TCDF	23	52
13C12-1,2,3,7,8-PeCDF	31	64
13C12-1,2,3,6,7,8-HxCDF	38	83
13C12-1,2,3,4,6,7,8-HpCDF	39	83
<b>Cleanup Standard</b>		
13C12-1,2,3,7,8,9-HxCDF	34	74
<b>Homologue Group Totals</b>	<b>pg</b>	
Total-TCDD	<3.1	
Total-PeCDD	<2.1	
Total-HxCDD	<2.0	
Total-HpCDD	2.66	
Total-TCDF	<3.7	
Total-PeCDF	<1.9	
Total-HxCDF	<1.5	
Total-HpCDF	<2.7	
<b>Toxic Equivalency - (WHO 2005)</b>		
<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	0.0287	
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	3.68	
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	7.34	

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SVOC-Ecowaste-T1	Sampling Date	27-Sep-25
ALS Sample ID	BU2502916-001	Extraction Date	28-Oct-25
Analysis Method	EPA M23	Sample Size	1 Sample
Analysis Type	Sample	Percent Moisture	n/a
Sample Matrix	Impinger	Split Ratio	4

Approved:  
S.Sarhaddi  
--e-signature--  
12-Nov-2025

<b>Run Information</b>		<b>Run 1</b>	
Filename	12-251110809		
Run Date	10-Nov-25 20:24		
Final Volume	10	uL	
Dilution Factor	1		
Analysis Units	pg		
Instrument - Column	HRMS-12 ZBDX1202940		

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
2,3,7,8-TCDD	1	28.48	<1.2	1.2	M,U	1.2	20
1,2,3,7,8-PeCDD	1	31.54	<1.9	1.9	M,U	1.6	20
1,2,3,4,7,8-HxCDD	0.1	33.75	<1.7	1.7	M,U	1.3	20
1,2,3,6,7,8-HxCDD	0.1	33.82	<2.4	1.6	M,J,R	2.4	20
1,2,3,7,8,9-HxCDD	0.1	34.02	<2.2	1.6	M,J,R	2.2	20
1,2,3,4,6,7,8-HpCDD	0.01	36.33	<12	1.1	M,J,R	12	20
OCDD	0.0003	39.28	24.8	3.1	M,J,B		40
2,3,7,8-TCDF	0.1	27.94	5.46	2.4	J		20
1,2,3,7,8-PeCDF	0.03	30.83	5.40	0.62	M,J		20
2,3,4,7,8-PeCDF	0.3	31.44	8.16	0.57	M,J		20
1,2,3,4,7,8-HxCDF	0.1	33.18	<2.8	0.88	J,R	2.8	20
1,2,3,6,7,8-HxCDF	0.1	33.27	<3.6	0.85	J,R	3.6	20
2,3,4,6,7,8-HxCDF	0.1	33.70	6.46	0.87	J		20
1,2,3,7,8,9-HxCDF	0.1	34.41	<2.9	1.1	M,J,R	2.9	20
1,2,3,4,6,7,8-HpCDF	0.01	35.38	16.5	1.5	J		20
1,2,3,4,7,8,9-HpCDF	0.01	36.97	3.45	1.8	M,J		20
OCDF	0.0003	39.63	15.2	3.4	M,J		40

Field Spike Standards	pg	% Rec	Limits
37Cl4-2,3,7,8-TCDD	600	28.51	94 70-130
13C12-1,2,3,4,7,8-HxCDD	6000	33.74	110 70-130
13C12-2,3,4,7,8-PeCDF	6000	31.43	102 70-130
13C12-1,2,3,4,7,8-HxCDF	6000	33.17	102 70-130
13C12-1,2,3,4,7,8,9-HpCDF	6000	36.97	89 70-130

Extraction Standards	pg	Conc. pg	EDL pg
13C12-2,3,7,8-TCDD	4000	28.48	92 40-130
13C12-1,2,3,7,8-PeCDD	4000	31.54	83 40-130
13C12-1,2,3,6,7,8-HxCDD	4000	33.82	106 40-130
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.31	83 25-130
13C12-OCDD	8000	39.24	60 25-130
13C12-2,3,7,8-TCDF	4000	27.93	77 40-130
13C12-1,2,3,7,8-PeCDF	4000	30.81	78 40-130
13C12-1,2,3,6,7,8-HxCDF	4000	33.26	109 40-130
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.37	84 25-130

Cleanup Standard	pg	Conc. pg	EDL pg
13C12-1,2,3,7,8,9-HxCDF	4000	34.39	85 40-130

Homologue Group Totals	# peaks	Conc. pg	EDL pg
Total-TCDD	2	9.91	1.2
Total-PeCDD	0	<1.9	1.9
Total-HxCDD	3	26.1	1.7
Total-HpCDD	0	<1.1	1.1
Total-TCDF	9	55.4	2.4
Total-PeCDF	7	43.1	0.62
Total-HxCDF	3	17.8	1.1
Total-HpCDF	4	32.0	1.8

<b>Toxic Equivalency - (WHO 2005)</b>	<b>pg</b>
<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	4.01
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	7.16
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	8.79

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

J indicates that a target analyte was detected below the calibrated range.

R Indicates that the ion abundance ratio for this compound did not meet the acceptance criterion.

B Indicates that this target was detected in the blank at greater than 10% of the sample concentration.

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

EMPC Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure



# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SVOC-Ecowaste-T3	Sampling Date	28-Sep-25	
ALS Sample ID	BU2502916-003	Extraction Date	28-Oct-25	
Analysis Method	EPA M23	Sample Size	1	Sample
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	Impinger	Split Ratio	4	

Approved:  
S.Sarhaddi  
--e-signature--  
12-Nov-2025

<b>Run Information</b>		<b>Run 1</b>
Filename	12-251110B11	
Run Date	10-Nov-25 21:54	
Final Volume	10 uL	
Dilution Factor	1	
Analysis Units	pg	
Instrument - Column	HRMS-12 ZBDX1202940	

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
2,3,7,8-TCDD	1	NotFnd	<1.5	1.5	U		20
1,2,3,7,8-PeCDD	1	31.54	<3.9	2.6	M,J,R	3.9	20
1,2,3,4,7,8-HxCDD	0.1	33.74	8.69	2.8	J		20
1,2,3,6,7,8-HxCDD	0.1	33.82	27.8	2.7			20
1,2,3,7,8,9-HxCDD	0.1	34.02	<10	2.6	M,J,R	10	20
1,2,3,4,6,7,8-HpCDD	0.01	36.31	211	4.0			20
OCDD	0.0003	39.24	290	6.1			40
2,3,7,8-TCDF	0.1	27.94	3.54	2.7	M,J		20
1,2,3,7,8-PeCDF	0.03	30.81	<11	4.6	J,R	11	20
2,3,4,7,8-PeCDF	0.3	31.43	37.8	4.3			20
1,2,3,4,7,8-HxCDF	0.1	33.17	<21	2.7	R	21	20
1,2,3,6,7,8-HxCDF	0.1	33.26	41.1	2.6			20
2,3,4,6,7,8-HxCDF	0.1	33.69	94.2	2.7			20
1,2,3,7,8,9-HxCDF	0.1	34.40	32.9	3.3			20
1,2,3,4,6,7,8-HpCDF	0.01	35.37	288	3.9			20
1,2,3,4,7,8,9-HpCDF	0.01	36.97	62.8	4.8			20
OCDF	0.0003	39.60	159	4.1			40

Field Spike Standards	pg	% Rec	Limits
37C14-2,3,7,8-TCDD	600	28.50	99 70-130
13C12-1,2,3,4,7,8-HxCDD	6000	33.73	106 70-130
13C12-2,3,4,7,8-PeCDF	6000	31.41	108 70-130
13C12-1,2,3,4,7,8-HxCDF	6000	33.16	105 70-130
13C12-1,2,3,4,7,8,9-HpCDF	6000	36.95	91 70-130

Extraction Standards	pg	Conc.	EDL
13C12-2,3,7,8-TCDD	4000	28.48	84 40-130
13C12-1,2,3,7,8-PeCDD	4000	31.53	73 40-130
13C12-1,2,3,6,7,8-HxCDD	4000	33.81	91 40-130
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.30	73 25-130
13C12-OCDD	8000	39.22	54 25-130
13C12-2,3,7,8-TCDF	4000	27.93	73 40-130
13C12-1,2,3,7,8-PeCDF	4000	30.80	68 40-130
13C12-1,2,3,6,7,8-HxCDF	4000	33.25	91 40-130
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.35	75 25-130

Cleanup Standard	pg	Conc.	EDL
13C12-1,2,3,7,8,9-HxCDF	4000	34.38	74 40-130

Homologue Group Totals	# peaks	Conc. pg	EDL pg
Total-TCDD	3	17.6	1.5
Total-PeCDD	5	87.3	2.6
Total-HxCDD	5	293	2.8
Total-HpCDD	2	459	4.0
Total-TCDF	8	67.7	2.7
Total-PeCDF	9	321	4.6
Total-HxCDF	10	343	3.3
Total-HpCDF	4	537	4.8

<b>Toxic Equivalency - (WHO 2005)</b>	<b>pg</b>
<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	37.9
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	46.0
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	46.7

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor <span style="float: right;">TEQ</span> Indicates the Toxic Equivalency
M	Indicates that a peak has been manually integrated.
U	Indicates that this compound was not detected above the EDL.
J	indicates that a target analyte was detected below the calibrated range.
R	Indicates that the ion abundance ratio for this compound did not meet the acceptance criterion.
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

**Sample Name** SVOC-Ketek-T1  
 ALS Sample ID BU2502916-004  
 Analysis Method EPA M23  
 Analysis Type Sample  
 Sample Matrix Impinger

Sampling Date 29-Sep-25  
 Extraction Date 28-Oct-25  
 Sample Size 1 Sample  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 S.Sarhaddi  
 --e-signature--  
 12-Nov-2025

**Run Information** **Run 1**  
 Filename 12-251110B12  
 Run Date 10-Nov-25 22:39  
 Final Volume 10 uL  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-12 ZBDX1202940

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
2,3,7,8-TCDD	1	28.51	3.74	3.0	J		20
1,2,3,7,8-PeCDD	1	31.54	30.4	1.8			20
1,2,3,4,7,8-HxCDD	0.1	33.74	59.7	5.0			20
1,2,3,6,7,8-HxCDD	0.1	33.82	163	4.8			20
1,2,3,7,8,9-HxCDD	0.1	34.01	81.7	4.6			20
1,2,3,4,6,7,8-HpCDD	0.01	36.33	1470	9.9			20
OCDD	0.0003	39.25	1740	9.8			40
2,3,7,8-TCDF	0.1	27.96	<21	4.4	R	21	20
1,2,3,7,8-PeCDF	0.03	30.81	106	8.5			20
2,3,4,7,8-PeCDF	0.3	31.43	361	7.9			20
1,2,3,4,7,8-HxCDF	0.1	33.17	<270	8.8	M,R	270	20
1,2,3,6,7,8-HxCDF	0.1	33.27	429	8.5	M		20
2,3,4,6,7,8-HxCDF	0.1	33.69	1000	8.8			20
1,2,3,7,8,9-HxCDF	0.1	34.40	355	11			20
1,2,3,4,6,7,8-HpCDF	0.01	35.37	2690	7.2			20
1,2,3,4,7,8,9-HpCDF	0.01	36.98	621	9.0			20
OCDF	0.0003	39.63	1590	13			40

**Field Spike Standards**

pg	% Rec	Limits
37C14-2,3,7,8-TCDD	600	28.50 97 70-130
13C12-1,2,3,4,7,8-HxCDD	6000	33.74 106 70-130
13C12-2,3,4,7,8-PeCDF	6000	31.41 102 70-130
13C12-1,2,3,4,7,8-HxCDF	6000	33.16 104 70-130
13C12-1,2,3,4,7,8,9-HpCDF	6000	36.97 89 70-130

**Extraction Standards**

pg	Conc.	EDL
13C12-2,3,7,8-TCDD	4000	28.48 86 40-130
13C12-1,2,3,7,8-PeCDD	4000	31.53 75 40-130
13C12-1,2,3,6,7,8-HxCDD	4000	33.81 99 40-130
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.31 78 25-130
13C12-OCDD	8000	39.24 57 25-130
13C12-2,3,7,8-TCDF	4000	27.93 77 40-130
13C12-1,2,3,7,8-PeCDF	4000	30.80 72 40-130
13C12-1,2,3,6,7,8-HxCDF	4000	33.26 103 40-130
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.37 82 25-130

**Cleanup Standard**

pg	Conc.	EDL
13C12-1,2,3,7,8,9-HxCDF	4000	34.38 82 40-130

**Homologue Group Totals**

# peaks	Conc. pg	EDL pg
Total-TCDD	7	86.2 3.0 20
Total-PeCDD	7	376 1.8 20
Total-HxCDD	7	1750 5.0 20
Total-HpCDD	2	3330 9.9 20
Total-TCDF	17	1750 4.4 20
Total-PeCDF	13	3820 8.5 20
Total-HxCDF	13	4730 11 20
Total-HpCDF	4	5150 9.0 20

**Toxic Equivalency - (WHO 2005)** **pg**  
**Lower Bound PCDD/F TEQ (WHO 2005)** 403  
**Mid Point PCDD/F TEQ (WHO 2005)** 432  
**Upper Bound PCDD/F TEQ (WHO 2005)** 432

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency  
 M Indicates that a peak has been manually integrated.  
 J indicates that a target analyte was detected below the calibrated range.  
 R Indicates that the ion abundance ratio for this compound did not meet the acceptance criterion.  
 LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.  
 EMPC Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

**Sample Name** SVOC-Ketek-T2  
 ALS Sample ID BU2502916-005  
 Analysis Method EPA M23  
 Analysis Type Sample  
 Sample Matrix Impinger

Sampling Date 30-Sep-25  
 Extraction Date 28-Oct-25  
 Sample Size 1 Sample  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 S.Sarhaddi  
 --e-signature--  
 12-Nov-2025

**Run Information**

**Run 1**

Filename 12-251110B13  
 Run Date 10-Nov-25 23:24  
 Final Volume 10 uL  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-12 ZBDX1202940

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
2,3,7,8-TCDD	1	NotFnd	<3.1	3.1	U	20	
1,2,3,7,8-PeCDD	1	31.54	<9.9	2.1	M,J,R	9.9	20
1,2,3,4,7,8-HxCDD	0.1	33.74	30.2	3.6		20	
1,2,3,6,7,8-HxCDD	0.1	33.82	88.9	3.4		20	
1,2,3,7,8,9-HxCDD	0.1	34.02	40.8	3.4		20	
1,2,3,4,6,7,8-HpCDD	0.01	36.31	1100	7.6		20	
OCDD	0.0003	39.24	2100	9.5		40	
2,3,7,8-TCDF	0.1	27.94	9.93	2.8	J	20	
1,2,3,7,8-PeCDF	0.03	30.81	36.6	3.4		20	
2,3,4,7,8-PeCDF	0.3	31.43	145	3.2		20	
1,2,3,4,7,8-HxCDF	0.1	33.17	154	5.3		20	
1,2,3,6,7,8-HxCDF	0.1	33.26	191	5.1		20	
2,3,4,6,7,8-HxCDF	0.1	33.69	455	5.3		20	
1,2,3,7,8,9-HxCDF	0.1	34.40	163	6.5		20	
1,2,3,4,6,7,8-HpCDF	0.01	35.37	1960	7.4		20	
1,2,3,4,7,8,9-HpCDF	0.01	36.97	408	9.2		20	
OCDF	0.0003	39.61	1290	5.8		40	

**Field Spike Standards**

pg	% Rec	Limits
37C14-2,3,7,8-TCDD	600	28.50 97 70-130
13C12-1,2,3,4,7,8-HxCDD	6000	33.73 103 70-130
13C12-2,3,4,7,8-PeCDF	6000	31.42 102 70-130
13C12-1,2,3,4,7,8-HxCDF	6000	33.16 100 70-130
13C12-1,2,3,4,7,8,9-HpCDF	6000	36.95 90 70-130

**Extraction Standards**

13C12-2,3,7,8-TCDD	4000	28.48	106	40-130
13C12-1,2,3,7,8-PeCDD	4000	31.53	90	40-130
13C12-1,2,3,6,7,8-HxCDD	4000	33.81	106	40-130
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.31	86	25-130
13C12-OCDD	8000	39.23	61	25-130
13C12-2,3,7,8-TCDF	4000	27.93	92	40-130
13C12-1,2,3,7,8-PeCDF	4000	30.80	88	40-130
13C12-1,2,3,6,7,8-HxCDF	4000	33.25	113	40-130
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.35	88	25-130

**Cleanup Standard**

13C12-1,2,3,7,8,9-HxCDF	4000	34.38	87	40-130
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Homologue Group Totals	# peaks	Conc. pg	EDL pg	
Total-TCDD	2	26.3	3.1	20
Total-PeCDD	3	91.4	2.1	20
Total-HxCDD	6	872	3.6	20
Total-HpCDD	2	2230	7.6	20
Total-TCDF	18	599	2.8	20
Total-PeCDF	16	1620	3.4	20
Total-HxCDF	15	2710	6.5	20
Total-HpCDF	4	3500	9.2	20

**Toxic Equivalency - (WHO 2005)**

<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	194
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	205
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	207

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency  
 M Indicates that a peak has been manually integrated.  
 U Indicates that this compound was not detected above the EDL.  
 J indicates that a target analyte was detected below the calibrated range.  
 R Indicates that the ion abundance ratio for this compound did not meet the acceptance criterion.  
 LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.  
 EMPC Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

**Sample Name** SVOC-Ketek-T3  
 ALS Sample ID BU2502916-006  
 Analysis Method EPA M23  
 Analysis Type Sample  
 Sample Matrix Impinger

Sampling Date 30-Sep-25  
 Extraction Date 28-Oct-25  
 Sample Size 1 Sample  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
*S.Sarhaddi*  
 --e-signature--  
 12-Nov-2025

**Run Information**

**Run 1**

Filename 12-251110B14  
 Run Date 11-Nov-25 00:09  
 Final Volume 10 uL  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-12 ZBDX1202940

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
2,3,7,8-TCDD	1	28.53	<1.5	1.5	M,U	1.4	20
1,2,3,7,8-PeCDD	1	31.54	<17	1.9	M,J,R	17	20
1,2,3,4,7,8-HxCDD	0.1	33.74	41.9	3.8			20
1,2,3,6,7,8-HxCDD	0.1	33.82	114	3.7			20
1,2,3,7,8,9-HxCDD	0.1	34.01	51.9	3.6	M		20
1,2,3,4,6,7,8-HpCDD	0.01	36.31	1110	6.1			20
OCDD	0.0003	39.24	1830	9.8			40
2,3,7,8-TCDF	0.1	27.94	20.0	4.2			20
1,2,3,7,8-PeCDF	0.03	30.81	41.7	5.0			20
2,3,4,7,8-PeCDF	0.3	31.43	185	4.6			20
1,2,3,4,7,8-HxCDF	0.1	33.17	192	5.1			20
1,2,3,6,7,8-HxCDF	0.1	33.26	<240	4.9	R	240	20
2,3,4,6,7,8-HxCDF	0.1	33.69	658	5.0			20
1,2,3,7,8,9-HxCDF	0.1	34.40	230	6.2			20
1,2,3,4,6,7,8-HpCDF	0.01	35.37	2520	4.5			20
1,2,3,4,7,8,9-HpCDF	0.01	36.97	483	5.6			20
OCDF	0.0003	39.61	1410	5.4			40

**Field Spike Standards**

pg	% Rec	Limits
37C14-2,3,7,8-TCDD	600	28.50 104 70-130
13C12-1,2,3,4,7,8-HxCDD	6000	33.74 103 70-130
13C12-2,3,4,7,8-PeCDF	6000	31.43 103 70-130
13C12-1,2,3,4,7,8-HxCDF	6000	33.16 103 70-130
13C12-1,2,3,4,7,8,9-HpCDF	6000	36.95 89 70-130

**Extraction Standards**

13C12-2,3,7,8-TCDD	4000	28.48	70	40-130
13C12-1,2,3,7,8-PeCDD	4000	31.53	64	40-130
13C12-1,2,3,6,7,8-HxCDD	4000	33.81	81	40-130
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.30	62	25-130
13C12-OCDD	8000	39.23	43	25-130
13C12-2,3,7,8-TCDF	4000	27.93	66	40-130
13C12-1,2,3,7,8-PeCDF	4000	30.80	61	40-130
13C12-1,2,3,6,7,8-HxCDF	4000	33.25	84	40-130
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.35	64	25-130

**Cleanup Standard**

13C12-1,2,3,7,8,9-HxCDF	4000	34.38	63	40-130
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Homologue Group Totals	# peaks	Conc. pg	EDL pg	
Total-TCDD	4	14.1	1.5	20
Total-PeCDD	6	271	1.9	20
Total-HxCDD	6	1260	3.8	20
Total-HpCDD	2	2460	6.1	20
Total-TCDF	22	1090	4.2	20
Total-PeCDF	16	2220	5.0	20
Total-HxCDF	14	3600	6.2	20
Total-HpCDF	4	4490	5.6	20

**Toxic Equivalency - (WHO 2005)**

<b>Lower Bound PCDD/F TEQ (WHO 2005)</b>	230
<b>Mid Point PCDD/F TEQ (WHO 2005)</b>	271
<b>Upper Bound PCDD/F TEQ (WHO 2005)</b>	272

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency  
 M Indicates that a peak has been manually integrated.  
 U Indicates that this compound was not detected above the EDL.  
  
 J indicates that a target analyte was detected below the calibrated range.  
 R Indicates that the ion abundance ratio for this compound did not meet the acceptance criterion.  
  
 LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.  
 EMPC Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure



# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	Mehod Blank	Sampling Date	n/a		
ALS Sample ID	QC-MRG2-2297017001	Extraction Date	28-Oct-25		
Analysis Method	EPA M23	Sample Size	1	Sample	
Analysis Type	Blank	Percent Moisture	n/a		
Sample Matrix	QC	Split Ratio	4		

Approved:  
S.Sarhaddi  
--e-signature--  
12-Nov-2025

<b>Run Information</b>		<b>Run 1</b>	
Filename	12-251110B07	Run Date	10-Nov-25 18:54
Final Volume	10 uL	Dilution Factor	1
Analysis Units	pg	Instrument - Column	HRMS-12 ZBDX1202940

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
2,3,7,8-TCDD	1	NotFnd	<3.1	3.1	U		20
1,2,3,7,8-PeCDD	1	31.55	<2.1	2.1	M,U		20
1,2,3,4,7,8-HxCDD	0.1	NotFnd	<2.0	2.0	U		20
1,2,3,6,7,8-HxCDD	0.1	NotFnd	<1.9	1.9	U		20
1,2,3,7,8,9-HxCDD	0.1	34.02	<1.9	1.9	M,U	1.1	20
1,2,3,4,6,7,8-HpCDD	0.01	36.29	2.66	1.8	M,J		20
OCDD	0.0003	39.25	6.99	7.0	M,J		40
2,3,7,8-TCDF	0.1	NotFnd	<3.7	3.7	U		20
1,2,3,7,8-PeCDF	0.03	NotFnd	<1.9	1.9	U		20
2,3,4,7,8-PeCDF	0.3	NotFnd	<1.8	1.8	U		20
1,2,3,4,7,8-HxCDF	0.1	NotFnd	<1.2	1.2	U		20
1,2,3,6,7,8-HxCDF	0.1	NotFnd	<1.2	1.2	U		20
2,3,4,6,7,8-HxCDF	0.1	NotFnd	<1.2	1.2	U		20
1,2,3,7,8,9-HxCDF	0.1	NotFnd	<1.5	1.5	U		20
1,2,3,4,6,7,8-HpCDF	0.01	35.37	<2.2	2.2	M,U	1.6	20
1,2,3,4,7,8,9-HpCDF	0.01	NotFnd	<2.7	2.7	U		20
OCDF	0.0003	39.60	<3.5	2.7	M,J,R	3.5	40

Field Spike Standards	pg	% Rec	Limits
37Cl4-2,3,7,8-TCDD	0	NS	
13C12-1,2,3,4,7,8-HxCDD	0	NS	
13C12-2,3,4,7,8-PeCDF	0	NS	
13C12-1,2,3,4,7,8-HxCDF	0	NS	
13C12-1,2,3,4,7,8,9-HpCDF	0	NS	

Extraction Standards	pg	Conc. pg	EDL pg
13C12-2,3,7,8-TCDD	4000	28.48	28 40-130
13C12-1,2,3,7,8-PeCDD	4000	31.53	38 40-130
13C12-1,2,3,6,7,8-HxCDD	4000	33.81	44 40-130
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.31	45 25-130
13C12-OCDD	8000	39.23	42 25-130
13C12-2,3,7,8-TCDF	4000	27.93	23 40-130
13C12-1,2,3,7,8-PeCDF	4000	30.80	31 40-130
13C12-1,2,3,6,7,8-HxCDF	4000	33.26	38 40-130
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.35	39 25-130

Cleanup Standard	pg	Conc. pg	EDL pg
13C12-1,2,3,7,8,9-HxCDF	4000	34.38	34 40-130

Homologue Group Totals	# peaks	Conc. pg	EDL pg
Total-TCDD	0	<3.1	3.1 U 20
Total-PeCDD	0	<2.1	2.1 U 20
Total-HxCDD	0	<2.0	2.0 U 20
Total-HpCDD	1	2.66	1.8 20
Total-TCDF	0	<3.7	3.7 U 20
Total-PeCDF	0	<1.9	1.9 U 20
Total-HxCDF	0	<1.5	1.5 U 20
Total-HpCDF	0	<2.7	2.7 U 20

Toxic Equivalency - (WHO 2005)	pg
Lower Bound PCDD/F TEQ (WHO 2005)	0.0287
Mid Point PCDD/F TEQ (WHO 2005)	3.68
Upper Bound PCDD/F TEQ (WHO 2005)	7.34

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

NS Indicates that this compound was not spiked.

J indicates that a target analyte was detected below the calibrated range.

R Indicates that the ion abundance ratio for this compound did not meet the acceptance criterion.

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Laboratory Control Sample Analysis Report

<b>Sample Name</b>	Laboratory Control Sample	Sampling Date	n/a
ALS Sample ID	QC-MRG2-2297017002	Extraction Date	28-Oct-25
Analysis Method	EPA M23	Sample Size	1 n/a
Analysis Type	LCS	Percent Moisture	n/a
Sample Matrix	QC	Split Ratio	4

Approved:  
S.Sarhaddi  
--e-signature--  
12-Nov-2025

<b>Run Information</b>	<b>Run 1</b>
Filename	12-251110B02
Run Date	10-Nov-25 16:36
Final Volume	10 uL
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS-12 ZBDX1202940

Target Analytes	pg	Ret. Time	% Rec	Limits	Flags
2,3,7,8-TCDD	400	28.50	82	70-130	
1,2,3,7,8-PeCDD	2000	31.54	99	70-130	
1,2,3,4,7,8-HxCDD	2000	33.74	96	70-130	
1,2,3,6,7,8-HxCDD	2000	33.81	93	70-130	
1,2,3,7,8,9-HxCDD	2000	34.01	91	70-130	
1,2,3,4,6,7,8-HpCDD	2000	36.31	95	70-130	
OCDD	4000	39.23	89	70-130	
2,3,7,8-TCDF	400	27.94	88	70-130	
1,2,3,7,8-PeCDF	2000	30.81	94	70-130	
2,3,4,7,8-PeCDF	2000	31.43	99	70-130	
1,2,3,4,7,8-HxCDF	2000	33.17	91	70-130	
1,2,3,6,7,8-HxCDF	2000	33.26	97	70-130	
2,3,4,6,7,8-HxCDF	2000	33.69	93	70-130	
1,2,3,7,8,9-HxCDF	2000	34.39	99	70-130	
1,2,3,4,6,7,8-HpCDF	2000	35.35	98	70-130	
1,2,3,4,7,8,9-HpCDF	2000	36.95	94	70-130	
OCDF	4000	39.60	91	70-130	
<b>Field Spike Standards</b>	<b>pg</b>		<b>% Rec</b>	<b>Limits</b>	
37Cl4-2,3,7,8-TCDD	0		NS		
13C12-1,2,3,4,7,8-HxCDD	0		NS		
13C12-2,3,4,7,8-PeCDF	0		NS		
13C12-1,2,3,4,7,8-HxCDF	0		NS		
13C12-1,2,3,4,7,8,9-HpCDF	0		NS		
<b>Extraction Standards</b>					
13C12-2,3,7,8-TCDD	4000	28.48	62	40-130	
13C12-1,2,3,7,8-PeCDD	4000	31.53	79	40-130	
13C12-1,2,3,6,7,8-HxCDD	4000	33.81	93	40-130	
13C12-1,2,3,4,6,7,8-HpCDD	4000	36.30	92	25-130	
13C12-OCDD	8000	39.21	79	25-130	
13C12-2,3,7,8-TCDF	4000	27.93	52	40-130	
13C12-1,2,3,7,8-PeCDF	4000	30.80	64	40-130	
13C12-1,2,3,6,7,8-HxCDF	4000	33.25	83	40-130	
13C12-1,2,3,4,6,7,8-HpCDF	4000	35.35	83	25-130	
<b>Cleanup Standard</b>	<b>pg</b>				
13C12-1,2,3,7,8,9-HxCDF	4000	34.38	74	40-130	

NS Indicates that this compound was not spiked.



1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6  
Phone: 905-331-3111, FAX: 905-331-4567

## Certificate of Analysis

**ALS Project Contact:** Robert Chin  
**ALS Project ID:** RWDI100  
**ALS WO#:** BU2502916  
**Date of Report:** 12-Nov-25  
**Date of Sample Receipt:** 21-Oct-25

**Client Name:** RWDI Air Inc.  
**Client Address:** 600 Southgate Drive  
Guelph  
ON N1G 4P6  
**Client Contact:** Oluwatobi Odumoye  
**Client Project ID:** 2510430 - Agnico Eagle

**COMMENTS:** PCB Congeners by EPA 1668C

**PCB Congener Group Totals and Total PCB are a sum of all congeners that are positively identified by the criteria of the applied reference method.**

For the sample SVOC-Ketek-T1, the recovery of 13C12-PCB-95 field standard was marginally above the method control limit.  
Target analyte results, calculated via isotope dilutions are not expected to be biased.

Certified by:

Sabrina Jin  
Technical Specialist

Results in this certificate relate only to the samples as submitted to the laboratory.  
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# ALS Life Sciences

## Sample Analysis Summary Report

Sample Name	SVOC-Ecowaste-T1	SVOC-Ecowaste-T2	SVOC-Ecowaste-T3	SVOC-Ketek-T1	SVOC-Ketek-T2	SVOC-Ketek-T3
ALS Sample ID	BU2502916-001	BU2502916-002	BU2502916-003	BU2502916-004	BU2502916-005	BU2502916-006
Sample Size	1	1	1	1	1	1
Sample size units	Sample	Sample	Sample	Sample	Sample	Sample
Percent Moisture	n/a	n/a	n/a	n/a	n/a	n/a
Sample Matrix	IMPINGER	IMPINGER	IMPINGER	IMPINGER	IMPINGER	IMPINGER
Sampling Date	27-Sep-25	28-Sep-25	28-Sep-25	29-Sep-25	30-Sep-25	30-Sep-25
Extraction Date	27-Oct-25	27-Oct-25	27-Oct-25	27-Oct-25	27-Oct-25	27-Oct-25
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>
PCB 081	10.5	<26	<18	187	53.8	<83
PCB 077	332	582	340	912	426	703
PCB 123	<20	<19	30.6	118	<30	<53
PCB 118	1260	1970	1630	2250	1470	1810
PCB 114	34.9	<42	<35	<130	73.6	<97
PCB 105	486	701	592	963	619	764
PCB 126	21.6	53.8	39.9	368	205	238
PCB 167	27.7	<37	<46	145	89.9	96.6
PCB 156+157	64.7	136	<120	600	338	455
PCB 169	<9.8	21.4	15.3	156	<83	<130
PCB 189	<6.9	<36	<34	653	304	494
<b>Extraction Standards</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>
PCB 081, 13C12	72	76	71	62	67	90
PCB 077, 13C12	68	78	69	60	68	88
PCB 123, 13C12	66	70	65	53	61	78
PCB 118, 13C12	69	76	71	57	66	80
PCB 114, 13C12	67	72	67	57	64	81
PCB 105, 13C12	59	72	64	55	56	79
PCB 126, 13C12	58	63	58	46	52	73
PCB 167, 13C12	73	80	70	66	66	95
PCB 156+157, 13C12	74	75	73	62	73	97
PCB 169, 13C12	66	75	66	59	72	97
PCB 189, 13C12	47	54	47	39	49	71
<b>Field Spike Standards</b>						
PCB 031, 13C12	103	104	104	104	104	105
PCB 095, 13C12	123	125	128	142	129	133
PCB 153, 13C12	109	112	106	107	111	100
<b>Cleanup Standards</b>						
PCB 028, 13C12	63	70	66	61	59	83
PCB 111, 13C12	66	73	70	59	66	86
PCB 178, 13C12	74	69	72	65	63	93
<b>Toxic Equivalency</b>						
PCB TEQ - WHO 2005 (ND=0*EDL)	2.25	6.16	4.55	41.8	20.6	24.0
PCB TEQ - WHO 2005 (ND=0.5*EDL)	2.40	6.17	4.56	41.8	21.9	25.9
PCB TEQ - WHO 2005 (ND=1*EDL)	2.55	6.18	4.56	41.8	23.1	27.9

# ALS Life Sciences

## Sample Analysis Summary Report

**Sample Name** **SVOC-Blank**

ALS Sample ID BU2502916-007

Sample Size	1
Sample size units	Sample
Percent Moisture	n/a
Sample Matrix	IMPINGER
Sampling Date	30-Sep-25
Extraction Date	27-Oct-25

**Target Analytes** **p9**

PCB 081	<5.1
PCB 077	<5.1
PCB 123	<4.5
PCB 118	31.3
PCB 114	<4.5
PCB 105	16.1
PCB 126	<4.8
PCB 167	<3.1
PCB 156+157	<4.6
PCB 169	<3.3
PCB 189	<4.0

**Extraction Standards** **% Rec**

PCB 081, 13C12	59
PCB 077, 13C12	60
PCB 123, 13C12	64
PCB 118, 13C12	67
PCB 114, 13C12	61
PCB 105, 13C12	63
PCB 126, 13C12	59
PCB 167, 13C12	74
PCB 156+157, 13C12	77
PCB 169, 13C12	81
PCB 189, 13C12	60

**Field Spike Standards**

PCB 031, 13C12	103
PCB 095, 13C12	105
PCB 153, 13C12	99

**Cleanup Standards**

PCB 028, 13C12	44
PCB 111, 13C12	61
PCB 178, 13C12	62

**Toxic Equivalency**

PCB TEQ - WHO 2005 (ND=0*EDL)	0.00142
PCB TEQ - WHO 2005 (ND=0.5*EDL)	0.292
PCB TEQ - WHO 2005 (ND=1*EDL)	0.583

# ALS Life Sciences

## Quality Control Summary Report

**Sample Name** **Method Blank**

ALS Sample ID QC-MRG2-2297017001

Sample Size	1
Sample size units	Sample
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	27-Oct-25
Reference Sample	

**Target Analytes** **pg**

PCB 081	<6.6
PCB 077	<6.8
PCB 123	<6.0
PCB 118	<5.2
PCB 114	<5.7
PCB 105	<5.3
PCB 126	<5.1
PCB 167	<4.1
PCB 156+157	<5.7
PCB 169	<4.1
PCB 189	<5.2

**Extraction Standards** **% Rec**

PCB 081, 13C12	42
PCB 077, 13C12	42
PCB 123, 13C12	43
PCB 118, 13C12	48
PCB 114, 13C12	43
PCB 105, 13C12	46
PCB 126, 13C12	50
PCB 167, 13C12	56
PCB 156+157, 13C12	61
PCB 169, 13C12	62
PCB 189, 13C12	49

**Field Spike Standards**

PCB 031, 13C12	NS
PCB 095, 13C12	NS
PCB 153, 13C12	NS

**Cleanup Standards**

PCB 028, 13C12	29
PCB 111, 13C12	41
PCB 178, 13C12	43

**Toxic Equivalency**

PCB TEQ - WHO 2005 (ND=0*EDL)	0.00
PCB TEQ - WHO 2005 (ND=0.5*EDL)	0.318
PCB TEQ - WHO 2005 (ND=1*EDL)	0.637

# ALS Life Sciences

## Quality Control Summary Report

**Sample Name** **Laboratory Control Sample**

ALS Sample ID QC-MRG2-2297017002

Sample Size	1
Sample size units	Sample
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	27-Oct-25
Reference Sample	

Target Analytes	% Rec
PCB 001	106
PCB 003	107
PCB 004	97
PCB 015	101
PCB 019	117
PCB 037	111
PCB 054	120
PCB 081	100
PCB 077	98
PCB 081	100
PCB 077	98
PCB 123	101
PCB 118	93
PCB 114	99
PCB 105	97
PCB 126	102
PCB 167	83
PCB 156+157	82
PCB 169	82
PCB 189	102

Extraction Standards	% Rec
PCB 081, 13C12	59
PCB 077, 13C12	62
PCB 123, 13C12	63
PCB 118, 13C12	68
PCB 114, 13C12	64
PCB 105, 13C12	66
PCB 126, 13C12	71
PCB 167, 13C12	81
PCB 156+157, 13C12	83
PCB 169, 13C12	94
PCB 189, 13C12	74

Field Spike Standards	% Rec
PCB 031, 13C12	NS
PCB 095, 13C12	NS
PCB 153, 13C12	NS

Cleanup Standards	% Rec
PCB 028, 13C12	42
PCB 111, 13C12	61
PCB 178, 13C12	65

ALS Life Sciences

Sample Analysis Report

**Sample Name** SVOC-Ecowaste-T1  
 ALS Sample ID BU2502916-001  
 Analysis Method EPA 1668C  
 Analysis Type Sample  
 Sample Matrix IMPINGER

Sampling Date 27-Sep-25  
 Extraction Date 27-Oct-25  
 Sample Size 1  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 E. Sabljic  
 --e-signature--  
 30-Oct-2025

**Run Information** **Analysis 1**  
 Filename 6-251029A09 GEL Run/Cup 3639997\_3  
 Run Date 29-Oct-25 22:54  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	22.41	10.5	8.5	M,[J]		10	20
PCB 077	0.0001	22.71	332	9.3			10	20
PCB 123	0.00003	23.69	<20	20	[U],F	20	10	20
PCB 118	0.00003	23.86	1260	6.1			10	20
PCB 114	0.00003	24.17	34.9	6.5			10	20
PCB 105	0.00003	24.52	486	7.3			10	20
PCB 126	0.1	26.11	21.6	7.9	M		10	20
PCB 167	0.00003	27.00	27.7	8.0	M		10	20
PCB 156+157	0.00003	27.63	64.7	12			20	40
PCB 169	0.03	NotFnd	<9.8	9.8	[U]		10	20
PCB 189	0.00003	NotFnd	<6.9	6.9	[U]		10	20

**Extraction Standards**

pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.40	72 10-145
PCB 077, 13C12	4000	22.70	68 10-145
PCB 123, 13C12	4000	23.68	66 10-145
PCB 118, 13C12	4000	23.85	69 10-145
PCB 114, 13C12	4000	24.16	67 10-145
PCB 105, 13C12	4000	24.51	59 10-145
PCB 126, 13C12	4000	26.09	58 10-145
PCB 167, 13C12	4000	26.99	73 10-145
PCB 156+157, 13C12	8000	27.63	74 10-145
PCB 169, 13C12	4000	29.27	66 10-145
PCB 189, 13C12	4000	30.56	47 10-145

**Field Spike Standards**

pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.42	103 40-135
PCB 095, 13C12	6000	19.74	123 40-135
PCB 153, 13C12	6000	24.78	109 40-135

**Cleanup Standards**

pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.58	63 5-145
PCB 111, 13C12	4000	22.61	66 10-145
PCB 178, 13C12	4000	25.67	74 10-145

**Toxic Equivalency**

PCB TEQ - WHO 2005 (ND=0*EDL)	2.25
PCB TEQ - WHO 2005 (ND=0.5*EDL)	2.40
PCB TEQ - WHO 2005 (ND=1*EDL)	2.55

**Definitions:**  
 EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor  
 LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
 LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
 EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

**Flags/Qualifiers:**  
 M Peak has been manually integrated  
 [U] The analyte was not detected above the EDL.  
 [J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
 F The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

ALS Life Sciences

Sample Analysis Report

Sample Name SVOC-Ecowaste-T2  
 ALS Sample ID BU2502916-002  
 Analysis Method EPA 1668C  
 Analysis Type Sample  
 Sample Matrix IMPINGER

Sampling Date 28-Sep-25  
 Extraction Date 27-Oct-25  
 Sample Size 1  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 E. Sabljic  
 --e-signature--  
 30-Oct-2025

Run Information Analysis 1  
 Filename 6-251029A10 GEL Run/Cup 3639997\_4  
 Run Date 29-Oct-25 23:38  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	22.42	<26	26	[U],F	26	10	20
PCB 077	0.0001	22.70	582	11		10	10	20
PCB 123	0.00003	23.69	<19	19	[U],F	19	10	20
PCB 118	0.00003	23.86	1970	5.7		10	10	20
PCB 114	0.00003	24.17	<42	42	[U],F	42	10	20
PCB 105	0.00003	24.52	701	6.5		10	10	20
PCB 126	0.1	26.09	53.8	7.7		10	10	20
PCB 167	0.00003	26.99	<37	37	[U],F	37	10	20
PCB 156+157	0.00003	27.63	136	12		20	20	40
PCB 169	0.03	29.28	21.4	8.7		10	10	20
PCB 189	0.00003	30.57	<36	36	M,[U],F	36	10	20

Extraction Standards	pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.40	76	10-145
PCB 077, 13C12	4000	22.69	78	10-145
PCB 123, 13C12	4000	23.68	70	10-145
PCB 118, 13C12	4000	23.85	76	10-145
PCB 114, 13C12	4000	24.15	72	10-145
PCB 105, 13C12	4000	24.51	72	10-145
PCB 126, 13C12	4000	26.08	63	10-145
PCB 167, 13C12	4000	26.98	80	10-145
PCB 156+157, 13C12	8000	27.60	75	10-145
PCB 169, 13C12	4000	29.27	75	10-145
PCB 189, 13C12	4000	30.56	54	10-145

Field Spike Standards	pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.42	104	40-135
PCB 095, 13C12	6000	19.73	125	40-135
PCB 153, 13C12	6000	24.76	112	40-135

Cleanup Standards	pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.58	70	5-145
PCB 111, 13C12	4000	22.61	73	10-145
PCB 178, 13C12	4000	25.66	69	10-145

Toxic Equivalency	TEQ
PCB TEQ - WHO 2005 (ND=0*EDL)	6.16
PCB TEQ - WHO 2005 (ND=0.5*EDL)	6.17
PCB TEQ - WHO 2005 (ND=1*EDL)	6.18

**Definitions:**  
 EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor  
 LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
 LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
 EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

**Flags/Qualifiers:**  
 M Peak has been manually integrated  
 [U] The analyte was not detected above the EDL.  
 [J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
 F The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SVOC-Ecowaste-T3	Sampling Date	28-Sep-25		
ALS Sample ID	BU2502916-003	Extraction Date	27-Oct-25		
Analysis Method	EPA 1668C	Sample Size	1	Sample	Approved: E. Sabljic
Analysis Type	Sample	Percent Moisture	n/a		--e-signature--
Sample Matrix	IMPINGER	Split Ratio	4		30-Oct-2025

<b>Run Information</b>		<b>Analysis 1</b>	
Filename	6-251029A11	GEL Run/Cup 3639997_5	
Run Date	30-Oct-25 00:22		
Final Volume	25 ul		
Dilution Factor	1		
Analysis Units	pg		
Instrument - Column	HRMS-6 SPBOCTYL-293713-08		

Target Analytes	TEF	Ret.	Conc.	EDL	Flags	EMPC	LOD	LOQ
	WHO 2005	Time	pg	pg		pg	pg	pg
PCB 081	0.0003	22.40	<18	18	M,[U],F	18	10	20
PCB 077	0.0001	22.69	340	8.3			10	20
PCB 123	0.00003	23.67	30.6	9.9	M		10	20
PCB 118	0.00003	23.85	1630	8.3			10	20
PCB 114	0.00003	24.16	<35	35	[U],F	35	10	20
PCB 105	0.00003	24.51	592	9.2			10	20
PCB 126	0.1	26.09	39.9	11	M		10	20
PCB 167	0.00003	26.99	<46	46	[U],F	46	10	20
PCB 156+157	0.00003	27.63	<120	120	M,[U],F	120	20	40
PCB 169	0.03	29.28	15.3	12	M,[J]		10	20
PCB 189	0.00003	30.57	<34	34	[U],F	34	10	20

Extraction Standards	pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.39	71	10-145
PCB 077, 13C12	4000	22.69	69	10-145
PCB 123, 13C12	4000	23.67	65	10-145
PCB 118, 13C12	4000	23.83	71	10-145
PCB 114, 13C12	4000	24.15	67	10-145
PCB 105, 13C12	4000	24.50	64	10-145
PCB 126, 13C12	4000	26.08	58	10-145
PCB 167, 13C12	4000	26.98	70	10-145
PCB 156+157, 13C12	8000	27.62	73	10-145
PCB 169, 13C12	4000	29.27	66	10-145
PCB 189, 13C12	4000	30.56	47	10-145

Field Spike Standards	pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.40	104	40-135
PCB 095, 13C12	6000	19.72	128	40-135
PCB 153, 13C12	6000	24.76	106	40-135

Cleanup Standards	pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.56	66	5-145
PCB 111, 13C12	4000	22.60	70	10-145
PCB 178, 13C12	4000	25.66	72	10-145

Toxic Equivalency	
PCB TEQ - WHO 2005 (ND=0*EDL)	4.55
PCB TEQ - WHO 2005 (ND=0.5*EDL)	4.56
PCB TEQ - WHO 2005 (ND=1*EDL)	4.56

<b>Definitions:</b>	EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
	TEF Indicates the Toxic Equivalency Factor
	LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.
	LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.
	EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure
<b>Flags/Qualifiers:</b>	
M	Peak has been manually integrated
[U]	The analyte was not detected above the EDL.
[J]	Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.
F	The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

ALS Life Sciences

Sample Analysis Report

**Sample Name** SVOC-Ketek-T1  
 ALS Sample ID BU2502916-004  
 Analysis Method EPA 1668C  
 Analysis Type Sample  
 Sample Matrix IMPINGER

Sampling Date 29-Sep-25  
 Extraction Date 27-Oct-25  
 Sample Size 1  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 E. Sabljic  
 --e-signature--  
 30-Oct-2025

**Run Information** **Analysis 1**  
 Filename 6-251029A12 GEL Run/Cup 3639997\_6  
 Run Date 30-Oct-25 01:06  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	22.40	187	10	M		10	20
PCB 077	0.0001	22.70	912	11			10	20
PCB 123	0.00003	23.68	118	17			10	20
PCB 118	0.00003	23.86	2250	15			10	20
PCB 114	0.00003	24.17	<130	130	[U],F	130	10	20
PCB 105	0.00003	24.52	963	16			10	20
PCB 126	0.1	26.11	368	21			10	20
PCB 167	0.00003	26.99	145	17			10	20
PCB 156+157	0.00003	27.62	600	25			20	40
PCB 169	0.03	29.28	156	20			10	20
PCB 189	0.00003	30.57	653	16			10	20

**Extraction Standards**

	pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.39	62	10-145
PCB 077, 13C12	4000	22.69	60	10-145
PCB 123, 13C12	4000	23.68	53	10-145
PCB 118, 13C12	4000	23.85	57	10-145
PCB 114, 13C12	4000	24.15	57	10-145
PCB 105, 13C12	4000	24.51	55	10-145
PCB 126, 13C12	4000	26.09	46	10-145
PCB 167, 13C12	4000	26.98	66	10-145
PCB 156+157, 13C12	8000	27.63	62	10-145
PCB 169, 13C12	4000	29.27	59	10-145
PCB 189, 13C12	4000	30.56	39	10-145

**Field Spike Standards**

	pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.41	104	40-135
PCB 095, 13C12	6000	19.73	142	40-135
PCB 153, 13C12	6000	24.76	107	40-135

**Cleanup Standards**

	pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.57	61	5-145
PCB 111, 13C12	4000	22.60	59	10-145
PCB 178, 13C12	4000	25.67	65	10-145

**Toxic Equivalency**

PCB TEQ - WHO 2005 (ND=0*EDL)	41.8
PCB TEQ - WHO 2005 (ND=0.5*EDL)	41.8
PCB TEQ - WHO 2005 (ND=1*EDL)	41.8

**Definitions:**  
 EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor  
 LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
 LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
 EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

**Flags/Qualifiers:**  
 M Peak has been manually integrated  
 [U] The analyte was not detected above the EDL.  
 [J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
 F The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

ALS Life Sciences

Sample Analysis Report

Sample Name **SVOC-Ketek-T2**  
 ALS Sample ID BU2502916-005  
 Analysis Method EPA 1668C  
 Analysis Type Sample  
 Sample Matrix IMPINGER

Sampling Date 30-Sep-25  
 Extraction Date 27-Oct-25  
 Sample Size 1  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 E. Sabljic  
 --e-signature--  
 30-Oct-2025

**Run Information** **Analysis 1**  
 Filename 6-251029A13 GEL Run/Cup 3639997\_7  
 Run Date 30-Oct-25 01:50  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	22.42	53.8	10			10	20
PCB 077	0.0001	22.71	426	10			10	20
PCB 123	0.00003	23.70	<30	30	[U],F	30	10	20
PCB 118	0.00003	23.86	1470	6.1			10	20
PCB 114	0.00003	24.17	73.6	6.4			10	20
PCB 105	0.00003	24.52	619	7.2			10	20
PCB 126	0.1	26.09	205	7.9	M		10	20
PCB 167	0.00003	26.99	89.9	9.5	M		10	20
PCB 156+157	0.00003	27.62	338	12			20	40
PCB 169	0.03	29.27	<83	83	M,[U],F	83	10	20
PCB 189	0.00003	30.56	304	14			10	20

**Extraction Standards**

pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.41	67 10-145
PCB 077, 13C12	4000	22.70	68 10-145
PCB 123, 13C12	4000	23.68	61 10-145
PCB 118, 13C12	4000	23.85	66 10-145
PCB 114, 13C12	4000	24.16	64 10-145
PCB 105, 13C12	4000	24.51	56 10-145
PCB 126, 13C12	4000	26.08	52 10-145
PCB 167, 13C12	4000	26.98	66 10-145
PCB 156+157, 13C12	8000	27.62	73 10-145
PCB 169, 13C12	4000	29.26	72 10-145
PCB 189, 13C12	4000	30.54	49 10-145

**Field Spike Standards**

pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.49	104 40-135
PCB 095, 13C12	6000	19.76	129 40-135
PCB 153, 13C12	6000	24.76	111 40-135

**Cleanup Standards**

pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.65	59 5-145
PCB 111, 13C12	4000	22.61	66 10-145
PCB 178, 13C12	4000	25.66	63 10-145

**Toxic Equivalency**

PCB TEQ - WHO 2005 (ND=0*EDL)	20.6
PCB TEQ - WHO 2005 (ND=0.5*EDL)	21.9
PCB TEQ - WHO 2005 (ND=1*EDL)	23.1

**Definitions:**  
 EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor  
 LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
 LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
 EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

**Flags/Qualifiers:**  
 M Peak has been manually integrated  
 [U] The analyte was not detected above the EDL.  
 [J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
 F The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

ALS Life Sciences

Sample Analysis Report

Sample Name **SVOC-Ketek-T3**  
 ALS Sample ID BU2502916-006  
 Analysis Method EPA 1668C  
 Analysis Type Sample  
 Sample Matrix IMPINGER

Sampling Date 30-Sep-25  
 Extraction Date 27-Oct-25  
 Sample Size 1  
 Percent Moisture n/a  
 Split Ratio 4

Approved:  
 E. Sabljic  
 --e-signature--  
 30-Oct-2025

**Run Information** **Analysis 1**  
 Filename 6-251029A14 GEL Run/Cup 3639997\_8  
 Run Date 30-Oct-25 02:34  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	22.40	<83	83	M,[U],F	83	10	20
PCB 077	0.0001	22.70	703	10			10	20
PCB 123	0.00003	23.69	<53	53	M,[U],F	53	10	20
PCB 118	0.00003	23.86	1810	9.3			10	20
PCB 114	0.00003	24.16	<97	97	[U],F	97	10	20
PCB 105	0.00003	24.52	764	9.8			10	20
PCB 126	0.1	26.09	238	11	M		10	20
PCB 167	0.00003	26.99	96.6	9.8			10	20
PCB 156+157	0.00003	27.62	455	14			20	40
PCB 169	0.03	29.28	<130	130	M,[U],F	130	10	20
PCB 189	0.00003	30.57	494	14			10	20

**Extraction Standards**

pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.39	90 10-145
PCB 077, 13C12	4000	22.69	88 10-145
PCB 123, 13C12	4000	23.68	78 10-145
PCB 118, 13C12	4000	23.85	80 10-145
PCB 114, 13C12	4000	24.15	81 10-145
PCB 105, 13C12	4000	24.50	79 10-145
PCB 126, 13C12	4000	26.08	73 10-145
PCB 167, 13C12	4000	26.98	95 10-145
PCB 156+157, 13C12	8000	27.62	97 10-145
PCB 169, 13C12	4000	29.27	97 10-145
PCB 189, 13C12	4000	30.56	71 10-145

**Field Spike Standards**

pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.40	105 40-135
PCB 095, 13C12	6000	19.72	133 40-135
PCB 153, 13C12	6000	24.76	100 40-135

**Cleanup Standards**

pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.56	83 5-145
PCB 111, 13C12	4000	22.60	86 10-145
PCB 178, 13C12	4000	25.66	93 10-145

**Toxic Equivalency**

PCB TEQ - WHO 2005 (ND=0*EDL)	24.0
PCB TEQ - WHO 2005 (ND=0.5*EDL)	25.9
PCB TEQ - WHO 2005 (ND=1*EDL)	27.9

**Definitions:**  
 EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor  
 LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
 LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
 EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

**Flags/Qualifiers:**  
 M Peak has been manually integrated  
 [U] The analyte was not detected above the EDL.  
 [J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
 F The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

ALS Life Sciences

Sample Analysis Report

Sample Name SVOC-Blank  
 ALS Sample ID BU2502916-007  
 Analysis Method EPA 1668C  
 Analysis Type Sample  
 Sample Matrix IMPINGER

Sampling Date 30-Sep-25  
 Extraction Date 27-Oct-25  
 Sample Size 1  
 Percent Moisture n/a  
 Split Ratio 4

Sample

Approved:  
 E. Sabljic  
 --e-signature--  
 30-Oct-2025

Run Information Analysis 1  
 Filename 6-251029A08 GEL Run/Cup 3639997\_9  
 Run Date 29-Oct-25 22:10  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units pg  
 Instrument - Column HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	NotFnd	<5.1	5.1	[U]		10	20
PCB 077	0.0001	NotFnd	<5.1	5.1	M,[U]		10	20
PCB 123	0.00003	NotFnd	<4.5	4.5	[U]		10	20
PCB 118	0.00003	23.86	31.3	4.0			10	20
PCB 114	0.00003	NotFnd	<4.5	4.5	[U]		10	20
PCB 105	0.00003	24.51	16.1	4.3	[J]		10	20
PCB 126	0.1	NotFnd	<4.8	4.8	[U]		10	20
PCB 167	0.00003	NotFnd	<3.1	3.1	[U]		10	20
PCB 156+157	0.00003	NotFnd	<4.6	4.6	[U]		20	40
PCB 169	0.03	NotFnd	<3.3	3.3	[U]		10	20
PCB 189	0.00003	NotFnd	<4.0	4.0	[U]		10	20

Extraction Standards	pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.38	59	10-145
PCB 077, 13C12	4000	22.69	60	10-145
PCB 123, 13C12	4000	23.68	64	10-145
PCB 118, 13C12	4000	23.85	67	10-145
PCB 114, 13C12	4000	24.15	61	10-145
PCB 105, 13C12	4000	24.50	63	10-145
PCB 126, 13C12	4000	26.08	59	10-145
PCB 167, 13C12	4000	26.98	74	10-145
PCB 156+157, 13C12	8000	27.62	77	10-145
PCB 169, 13C12	4000	29.27	81	10-145
PCB 189, 13C12	4000	30.56	60	10-145

Field Spike Standards	pg	Time	% Rec	Limits
PCB 031, 13C12	6000	16.40	103	40-135
PCB 095, 13C12	6000	19.72	105	40-135
PCB 153, 13C12	6000	24.76	99	40-135

Cleanup Standards	pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.56	44	5-145
PCB 111, 13C12	4000	22.60	61	10-145
PCB 178, 13C12	4000	25.66	62	10-145

Toxic Equivalency

PCB TEQ - WHO 2005 (ND=0*EDL)	0.00142
PCB TEQ - WHO 2005 (ND=0.5*EDL)	0.292
PCB TEQ - WHO 2005 (ND=1*EDL)	0.583

Definitions:

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
 TEF Indicates the Toxic Equivalency Factor  
 LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
 LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
 EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

Flags/Qualifiers:

M Peak has been manually integrated  
 [U] The analyte was not detected above the EDL.  
 [J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
 F The ion abundance ratio did not meet the acceptance criterion. Estimated Detection Limit for that compound has been raised to the level of the EMPC

ALS Life Sciences

Laboratory Method Blank Analysis Report

<b>Sample Name</b> ALS Sample ID Analysis Method Analysis Type Sample Matrix	<b>Method Blank</b> QC-MRG2-2297017001 EPA 1668C Blank QC	Sampling Date Extraction Date Sample Size Percent Moisture Split Ratio	n/a 27-Oct-25 1 n/a 4	Sample	Approved: E. Sabljic --e-signature-- 30-Oct-2025
--	---	--	-----------------------------------	--------	---

<b>Run Information</b>	<b>Analysis 1</b>
Filename	6-251029A07 GEL Run/Cup 3639997_1
Run Date	29-Oct-25 21:26
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-6 SPBOCTYL-293713-08

Target Analytes	TEF WHO 2005	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LOD pg	LOQ pg
PCB 081	0.0003	NotFnd	<6.6	6.6	[U]		10	20
PCB 077	0.0001	22.70	<6.8	6.8	[U]	2.2	10	20
PCB 123	0.00003	NotFnd	<6.0	6.0	[U]		10	20
PCB 118	0.00003	NotFnd	<5.2	5.2	[U]		10	20
PCB 114	0.00003	NotFnd	<5.7	5.7	[U]		10	20
PCB 105	0.00003	NotFnd	<5.3	5.3	[U]		10	20
PCB 126	0.1	NotFnd	<5.1	5.1	[U]		10	20
PCB 167	0.00003	NotFnd	<4.1	4.1	[U]		10	20
PCB 156+157	0.00003	NotFnd	<5.7	5.7	[U]		20	40
PCB 169	0.03	NotFnd	<4.1	4.1	[U]		10	20
PCB 189	0.00003	NotFnd	<5.2	5.2	[U]		10	20

Extraction Standards	pg	Time	% Rec	Limits
PCB 081, 13C12	4000	22.38	42	10-145
PCB 077, 13C12	4000	22.69	42	10-145
PCB 123, 13C12	4000	23.67	43	10-145
PCB 118, 13C12	4000	23.83	48	10-145
PCB 114, 13C12	4000	24.15	43	10-145
PCB 105, 13C12	4000	24.50	46	10-145
PCB 126, 13C12	4000	26.08	50	10-145
PCB 167, 13C12	4000	26.98	56	10-145
PCB 156+157, 13C12	8000	27.62	61	10-145
PCB 169, 13C12	4000	29.26	62	10-145
PCB 189, 13C12	4000	30.56	49	10-145

Field Spike Standards	pg	Time	% Rec	Limits
PCB 031, 13C12	0		NS	
PCB 095, 13C12	0		NS	
PCB 153, 13C12	0		NS	

Cleanup Standards	pg	Time	% Rec	Limits
PCB 028, 13C12	4000	16.56	29	5-145
PCB 111, 13C12	4000	22.59	41	10-145
PCB 178, 13C12	4000	25.66	43	10-145

Toxic Equivalency	TEQ
PCB TEQ - WHO 2005 (ND=0*EDL)	0.00
PCB TEQ - WHO 2005 (ND=0.5*EDL)	0.318
PCB TEQ - WHO 2005 (ND=1*EDL)	0.637

**Definitions:**  
EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.  
TEF Indicates the Toxic Equivalency Factor  
LOD Indicates the Limit of Detection as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level.  
LOQ Indicates the Limit of Quantification as defined in the DoD QSM and verified quarterly by the analysis of a spiked blank at this level or lower.  
EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criteria failure

**Flags/Qualifiers:**  
[U] The analyte was not detected above the EDL.  
[J] Estimated value. The reported concentration is below the calibration range of the instrument but above the EDL.  
NS Indicates that this compound was not spiked.

# ALS Life Sciences

## Laboratory Control Sample Analysis Report

<b>Sample Name</b>	<b>Laboratory Control Sample</b>	Sampling Date	n/a	
ALS Sample ID, Blank ID	QC-MRG2-22970 QC-MRG2-2297017001	Extraction Date	27-Oct-25	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	LCS	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	4	

Approved:  
E. Sabljic  
--e-signature--  
30-Oct-2025

<b>Run Information</b>	<b>Analysis 1</b>	<b>Recovery Results</b>
Filename	6-251029A03	GEL Run/Cup 339997_2
Run Date	29-Oct-25 18:31	
Final Volume	25 ul	
Dilution Factor	1	
Analysis Units	pg	
Instrument - Column	HRMS-6 SPBOCTYL-293713-08	

Target Analytes	Spiked pg	Ret. Time	Amt pg	Flags	Amt. pg	Blank Matrix	Δ	Spiked %	Rec	Limits
PCB 081	2000	22.41	2000	50-150	2000	0	2000	2000	100	0-150
PCB 077	2000	22.71	1950	50-150	1950	0	1950	2000	98	0-150
PCB 123	2000	23.70	2010	50-150	2010	0	2010	2000	101	0-150
PCB 118	2000	23.87	1860	50-150	1860	0	1860	2000	93	0-150
PCB 114	2000	24.17	1980	50-150	1980	0	1980	2000	99	0-150
PCB 105	2000	24.52	1930	50-150	1930	0	1930	2000	97	0-150
PCB 126	2000	26.11	2040	50-150	2040	0	2040	2000	102	0-150
PCB 167	2000	27.00	1650	50-150	1650	0	1650	2000	83	0-150
PCB 156+157	4000	27.64	3290	50-150	3290	0	3290	4000	82	0-150
PCB 169	2000	29.30	1630	50-150	1630	0	1630	2000	82	0-150
PCB 189	2000	30.58	2030	50-150	2030	0	2030	2000	102	0-150
<b>Extraction Standards</b>										
		<b>Time</b>	<b>% Rec</b>	<b>Limits</b>						
PCB 081, 13C12	4000	22.40	59	40-145						
PCB 077, 13C12	4000	22.69	62	40-145						
PCB 123, 13C12	4000	23.68	63	40-145						
PCB 118, 13C12	4000	23.85	68	40-145						
PCB 114, 13C12	4000	24.16	64	40-145						
PCB 105, 13C12	4000	24.51	66	40-145						
PCB 126, 13C12	4000	26.09	71	40-145						
PCB 167, 13C12	4000	26.99	81	40-145						
PCB 156+157, 13C12	8000	27.63	83	40-145						
PCB 169, 13C12	4000	29.28	94	40-145						
PCB 189, 13C12	4000	30.57	74	40-145						
<b>Field Spike Standards</b>										
PCB 031, 13C12	0			NS						
PCB 095, 13C12	0			NS						
PCB 153, 13C12	0			NS						
<b>Cleanup Standards</b>										
PCB 028, 13C12	4000	16.57	42	15-145						
PCB 111, 13C12	4000	22.61	61	40-145						
PCB 178, 13C12	4000	25.67	65	40-145						

NS Indicates that this compound was not spiked.



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# APPENDIX G



October 9, 2025

Agnico Eagle Mines Limited - Meliadine Mine  
Suite 879 - Rankin Inlet, Nunavut,  
Canada X0C 0G0

By Email:

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## **Site Visit Report: Technical Support for Waste Pre-Staging & Emissions Testing**

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The objective of the field support mission was to support the mine by assisting with sorting and pre-staging acceptable waste for incinerator emissions testing, observing the incinerator operation during testing, collecting operational and observational data, and compiling the findings for correlation with emissions results.

### **1.0 Executive Summary**

It is not possible to predict the results of the air testing program, based only on the real-time monitoring data. However, best efforts were made by all to create the right conditions. EWS personnel felt that for the most part the waste that was processed during the burn was best-case for the circumstances, and the ash burn-out in the EWS system was very good.

The following anomalies were observed that require further investigation:

- **Poor waste segregation** – inappropriate waste is not consistently separated from the incinerator waste stream. The audits revealed the presence of many inappropriate materials that can contribute to poor air emissions and ash quality. These materials include personal protective equipment (PPE), e-waste such as cordless drills and batteries, sharp metal objects, cleaning supplies (e.g., empty or partially full containers with cleaning fluids such as bleach), used/contaminated footwear, and metals of many types. The anomalies were promptly identified and segregated by EWS personnel, preventing their inclusion in the burn.
- **Improper waste mixing** – not enough attention is given to ensuring that the different waste types are mixed in the correct proportions for optimal combustion.



Too often the waste had too much of one type such as food waste, Sewage Waste, and other wet wastes without enough dry materials that can lead to poor combustion.

- **Procedural errors** - such as overloading the incinerator beyond its specified capacity, and the inclusion of inappropriate materials, were observed.

## 2.0 Project and Site Details

- **Waste Audit dates:** *[September 19, 2025 and September 21, 2025]*
- **Waste Collection and Staging:** *[September 21, 2025 and September 26, 2025]*
- **Report, Waste Audit and Waste Staging:** *[Jainam Shah, Eco Waste Solutions]*
- **Air Test Contractor:** *[Toby and Preet, Rowan Williams Davies and Irwin Inc. (RWDI)]*
- **Participants:** *[This project involved collaboration with several members of the AEM team]:*
  1. **Richard:** *Oil and Burner Technician*
  2. **Russ:** *Oil and Burner Technician*
  3. **Jeff/Paul:** *E and I Department Supervisor (Day Shift)*
  4. **Dave:** *E and I Department Supervisor (Night Shift)*
  5. **Waste Pickup Team Helpers:** *Nicolas, David, Landon, Loui, and Joe*

## 3.0 Waste Sorting and Preparation

### 3.1 Waste Collection Process

Waste was collected collaboratively by the Agnico Eagle Mine (AEM) team and Eco Waste Solutions (EWS) personnel. The team collected waste from 20 distinct locations across the mine, transporting it to the new incinerator facility. Upon delivery, the waste stream underwent inspection to identify contaminants and procedural anomalies.

### 3.2 Waste Audit and Pre-Staging

Each bag was carefully inspected, and batches containing materials suitable for efficient combustion were segregated and prepared for processing during the testing.

EWS personnel worked alongside the AEM waste loading team during the pre-sorting process to gather and filter waste from all locations, documenting anomalies and irregularities in the collected materials. Over the course of three days, a dedicated space was established within the sea cans to facilitate waste staging. During this time observations were recorded and reviewed with the team



Focus was given to ensuring that the mix of materials was as close as possible to the feedstock that the incinerators were designed to process such as cardboard, wood, paper, plastic, and kitchen organic waste, and inappropriate waste was removed, to ensure that emissions testing would be performed on the most representative waste possible with a good mix for optimal combustion.

### 3.3 Sorting and Segregation Data (EWS Unit):

- A total of 682.53 kg of waste was collected and audited from ten locations on the first day (*Sept 19, 2025*), followed by 675.7 kg from thirteen locations on the second day (*Sept 20, 2025*), and 772.98 kg from ten locations on the third day (*Sept 21, 2025*).
- On the fourth day (*September 22, 2025*), EWS personnel, along with the AEM E&I Maintenance Supervisor and the OBT, prepared an additional batch of waste. This batch was later utilized for a pilot burn on the EWS unit on the fifth day (*September 23, 2025*). This burn was to be used to identify any potential operational issues that could arise during the test program and to assess which operational parameters were being measured and displayed. For the pilot burn 650.87 kg of garbage from 128 bags was hauled and examined before loading the incinerator.

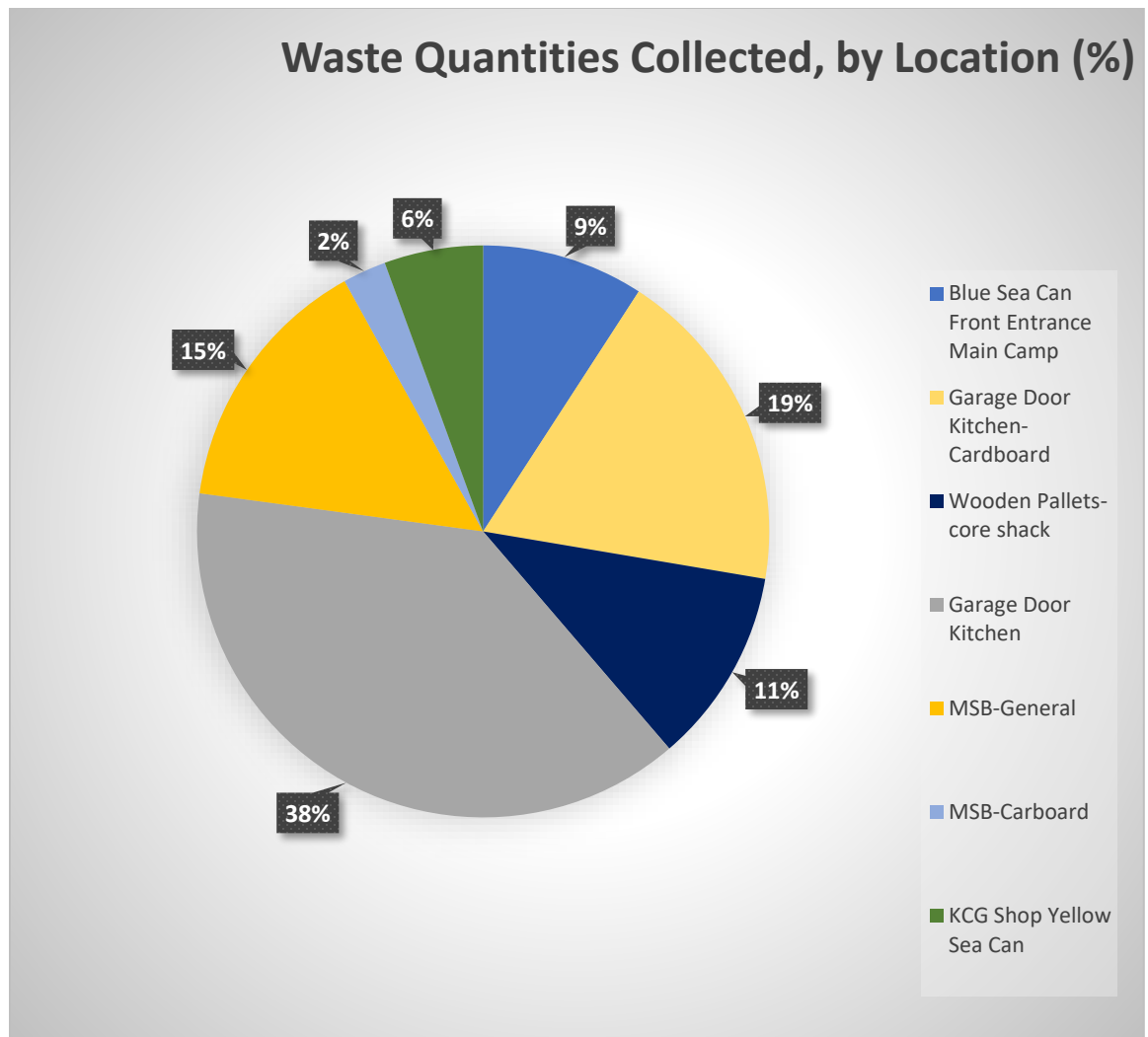
### 3.4 Waste Types

- **Waste Type Focus:** Paper, Cardboard, Plastic, Organic food and Wood.
- **Composition by Weight/Volume (%):** The waste composition for the burn included 38% organic food waste, 19% kitchen cardboard waste, 9% plastic and paper waste from the Blue Sea Can, 11% wooden pallets, 6% mixed plastic, paper, and food waste from the KCG Yellow Sea Can, 2% cardboard from the MSB area, and 15% general waste from the MSB building.
- The use of wooden pallets was very helpful to the burn, as the originally supplied grate (a consumable item) was no longer in use. The pallets make a readily available replacement for the grate, as they allow more air under the waste bed and reduce the obstruction of the air inlet holes which are critical for airflow during the burn.

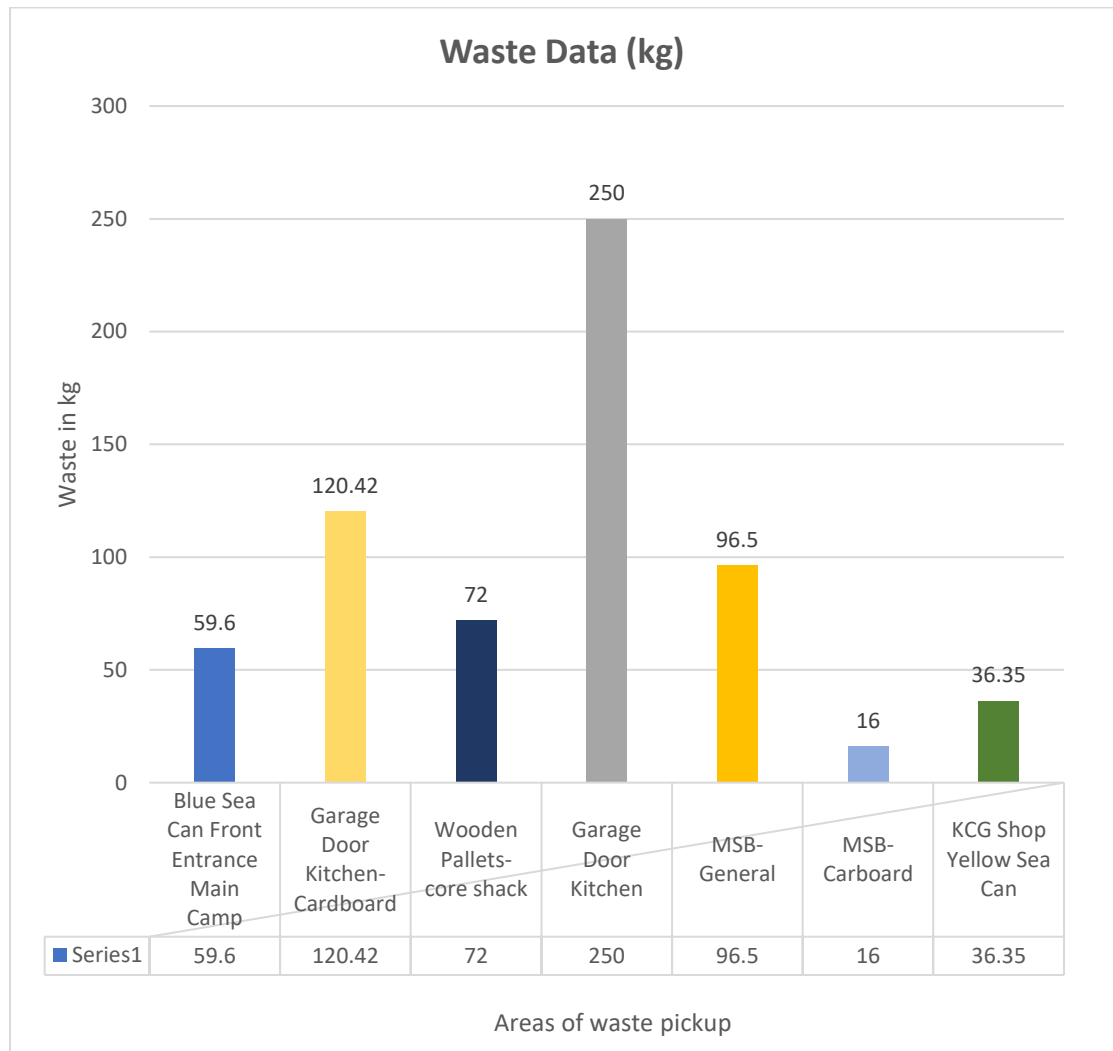
### 3.5 High-Contamination Source Locations

Waste audits identified several locations that are consistent generators of waste contamination.

- **MSB Building:** A primary source of PPE, footwear, hard hats, re-usable steel drink containers, Styrofoam, power tools, batteries.
- **Orbit Dome 3 & E and I Maintenance Office:** Key source of respiratory masks, PPE kits, sharp steel, and coffee cans.
- **Wing 11, Wing 12 & Blue Sea-can:** Locations frequently contributing to plastic bottles containing chemicals such as bleach and other cleaning products.
- **Kitchen Area:** Source of aluminum cans, foils, and food containers, and cutlery.



**Figure 1: Waste Collection by Location (%)**



**Figure 2: Waste Collection by Location (kg)**

- Sorting and Segregation Data (Westland Unit):** A total of 207.71 kg of waste was collected and audited from four locations on the sixth day (*Sept 24, 2025*), followed by 203.01 kg from four locations on the seventh day (*Sept 25, 2025*), and 200.33 kg from ten locations on the eighth day (*Sept 26, 2025*). A dedicated platform was set up within the sea cans for West Land waste to enable organized staging and ensure that appropriate waste materials were utilized during the test days.
- Preparation Process (Both Units):** Over the six-day period, Eco Waste personnel accompanied the AEM waste collection team to all potential waste collection locations. Following collection, each batch of waste was weighed and inspected for unwanted materials that could negatively impact the burn during the test days. Items removed included metals, Styrofoam, containers with bleach,



PPE, PVC, shoe covers, masks, electronics, cables/coated wires, and treated wood.

- **Anomaly Noted:** Upon arrival at the site on the first day, AEM experienced a staff shortage, which created challenges in conducting the waste audit. Additionally, communication issues arose within the E&I Operations team. On September 19, EWS personnel collected, audited, and segregated the waste, advising the day-shift supervisor not to burn or dispose of the segregated material. However, it was later discovered that the segregated waste had been incinerated in the Westland Incinerator unit.

#### **4.0 Waste Burn Test Data**

- **Burn Test Procedure:** Air tests were conducted between September 27 and September 30, 2025, comprising a total of six tests carried out across five waste batches.

#### **4.1 Pre-Inspection**

Prior to the Air Test, a comprehensive inspection was conducted to verify that the incinerators and associated equipment were in proper working condition. Each waste batch was examined to ensure compliance with testing requirements, and any restricted materials were identified, minimized, and removed before proceeding.

#### **Types of Waste Used:**

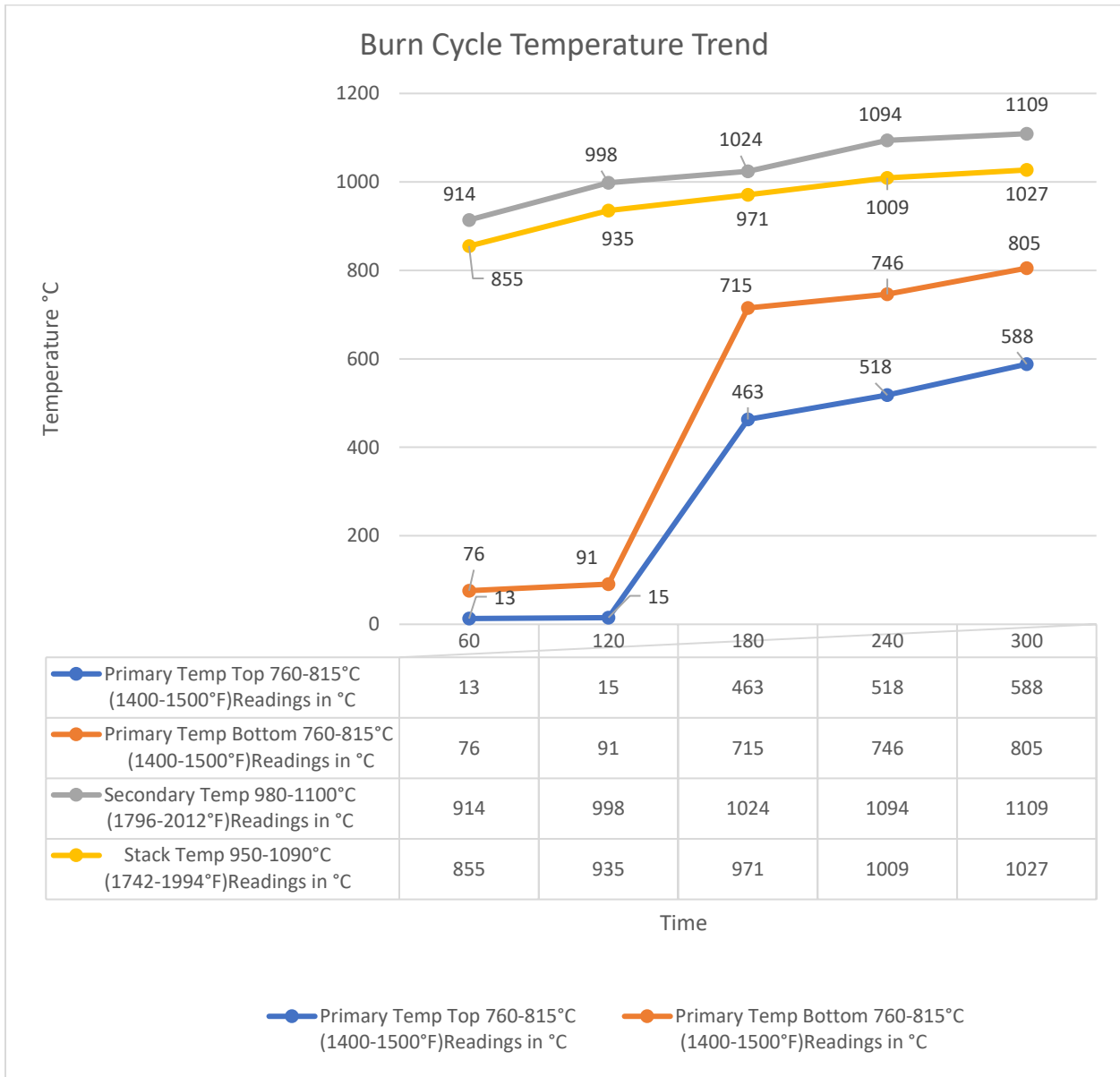
Each batch contained a controlled mixture of plastic, paper, cardboard, wood, and kitchen (food) waste. This composition was selected to provide a balanced and consistent burn throughout the testing phase.

#### **Fuel:**

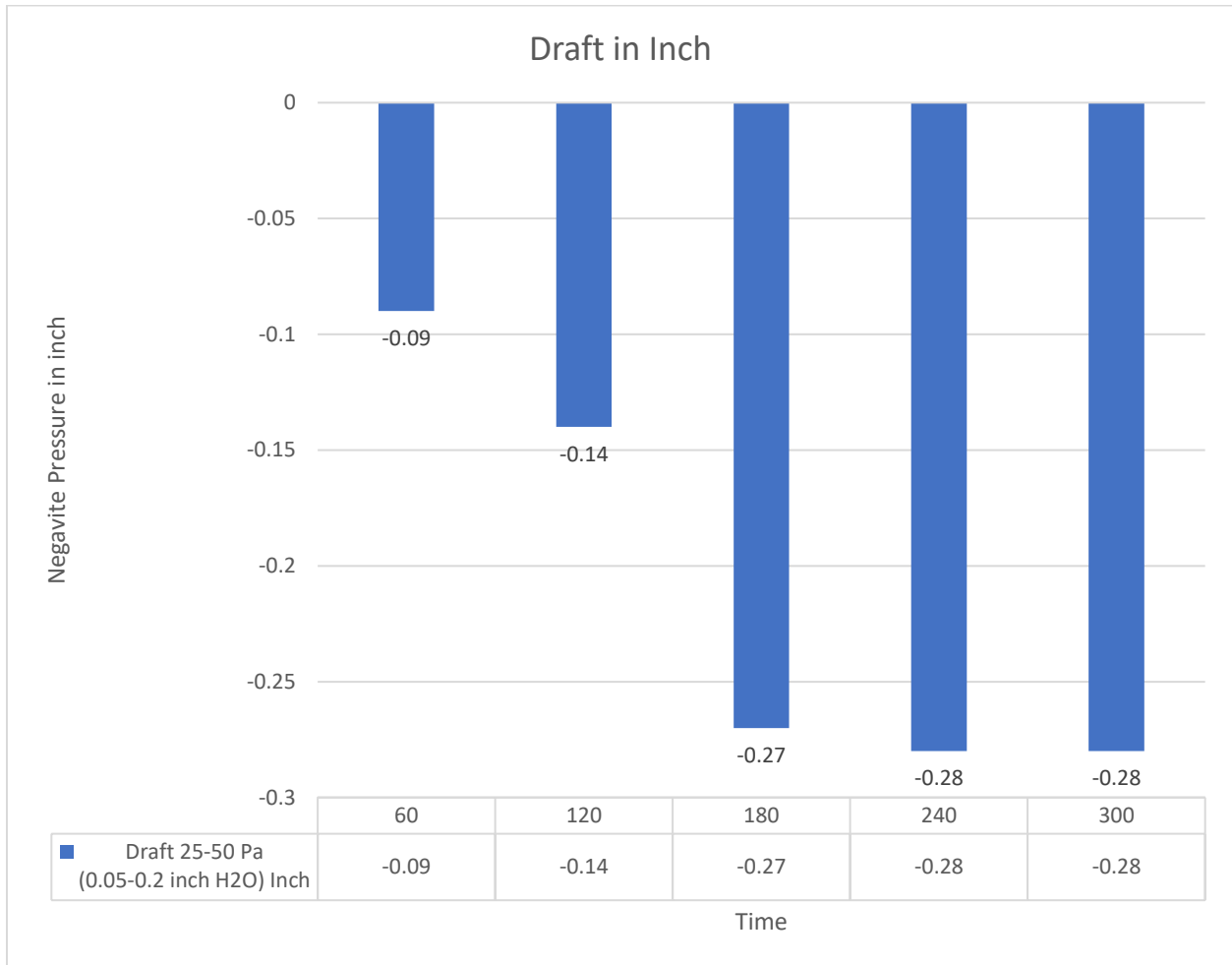
Diesel was used as the primary fuel source in place of waste oil to achieve cleaner emissions and enhance combustion efficiency.

#### **4.2 Burn Tests**

- **Eco Waste Unit (First Burn):** The first burn test was conducted on *27 September 2025*, from the pre-sorted waste stored in the sea-can during the first week, a batch was selected for the initial burn. The primary chamber was loaded with 682.53 kg of waste, comprising 138 bags. During loading, both weight and volume considerations were taken into account, and it was specifically ensured that the waste did not exceed the breach level.



**Figure 3-Temperature readings with respect to time (EWS Test-1)**



**Figure 4-Draft readings with respect to time (EWS Test-1)**

### **First Test Overview**

The first air test was conducted to monitor both the burn cycle and air emissions over a 300-minute period. The data collection began with the incinerator unit's start-up, and air emission measurements were taken 120 minutes after the primary burner started.

The top thermocouple of the primary chamber registered 11°C, the bottom thermocouple of the primary chamber was reading 14°C, the secondary chamber measured 11°C, and the stack temperature stood at 10°C. These values reflected the typical thermal conditions at initial start-up, with the system still in the early stages of reaching operational temperature. The gradual increase in temperature throughout the cycle was expected as combustion intensified and the unit moved toward stable operating conditions.



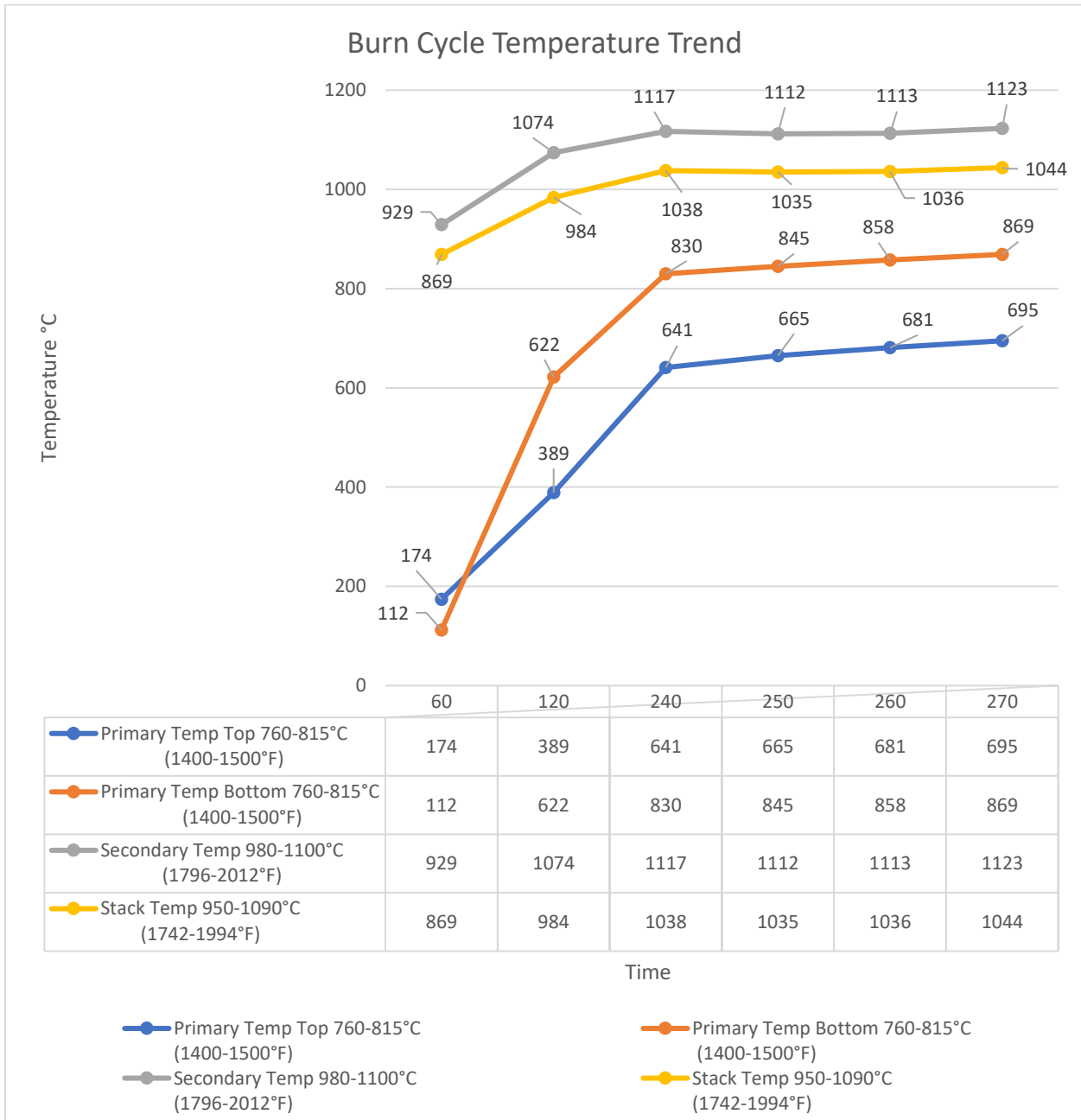
## Final Temperature Readings

By the end of the test period, the incinerator had reached substantially higher temperatures. The top of the primary chamber rose to 588°C, while the bottom of the chamber reached 805°C. The secondary chamber peaked at 1109°C, and the stack temperature climbed to 1027°C.

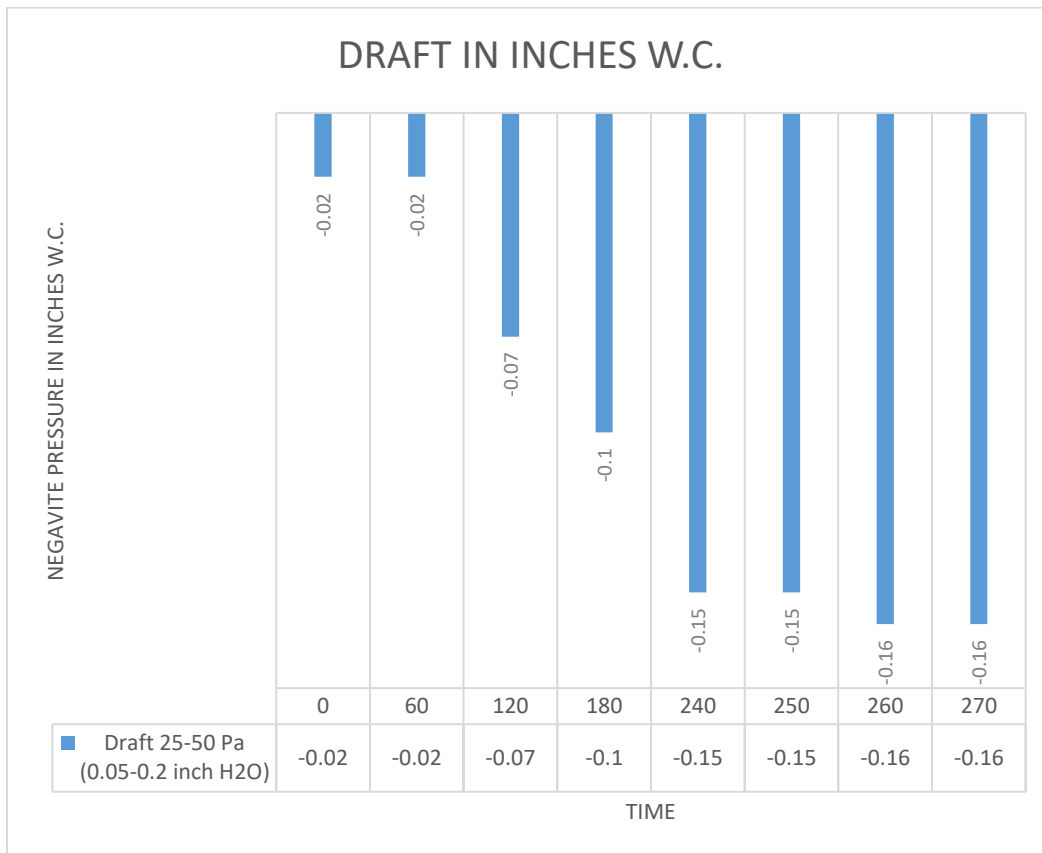
## Draft Pressure

In addition to temperature measurements, the system's draft pressure was also monitored, which was -0.28 inches w.c.

- **Eco Waste Unit (Second Burn):** The first burn test was conducted on 28 *September 2025*, on the second day of the burn, a total of 651.70 kg of waste, consisting of 137 bags, was loaded into the primary chamber. During the loading process, careful attention was given to both the weight and volume of the waste, ensuring that it did not surpass the breech level.
- During the second test, both the burn cycle and air emissions were monitored over a period of 270 minutes. Burn cycle monitoring began immediately upon unit start-up, whereas air emission measurements commenced after the 110-minute purge cycle was completed.
- At the start of the test, elevated initial temperatures were observed in the primary chamber due to the incinerator being operated without completing the recommended cooldown cycle from prior use.



**Figure 5-Temperature readings with respect to time (EWS Test-2)**



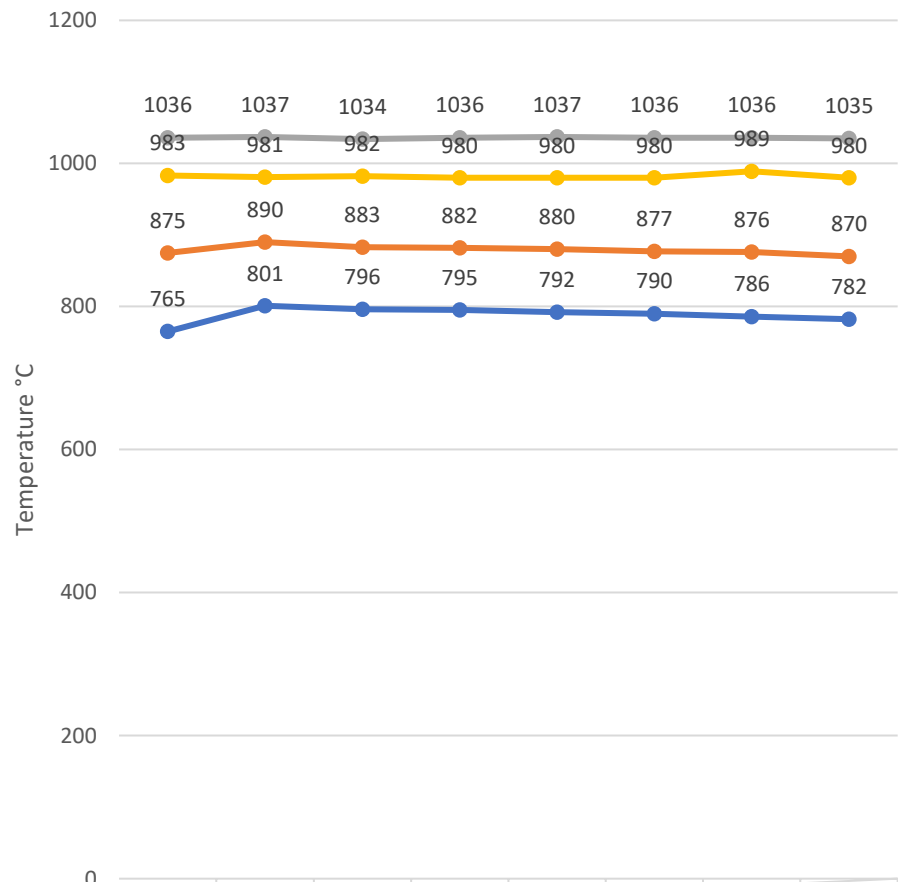
**Figure 6-Draft readings with respect to time (EWS Test-2)**

At the start of the second burn cycle, the incinerator was already in the cool down phase but the temperatures were elevated due to residual heat from a previous burn. The initial temperature at the top of the primary chamber measured at 165 °C, the bottom of the primary chamber at 119 °C, the secondary chamber at 188 °C, and the stack at 236 °C. These values indicated that the unit had not fully cooled down prior to the commencement of the new cycle.

Over the course of the 270-minute burn period, temperatures steadily increased across all monitored points as the combustion process progressed. By the end of the cycle, the top of the primary chamber had reached 695 °C, while the bottom of the chamber rose to 869 °C. The secondary chamber achieved a high of 1123 °C, and the stack temperature peaked at 1044 °C. The system's draft pressure was also monitored, which was -0.16 inches.

Eco Waste Unit (Third Burn): The third air test was conducted immediately following the second test, using the same waste batch. Burn cycle and emission monitoring commenced at unit start-up, 80 minutes after the conclusion of the second test, corresponding to the 360th minute of overall system operation.

### Burn Cycle Temperature Trend



	360	420	490	500	510	520	530	540
Primary Temp Top 760-815°C (1400-1500°F)	765	801	796	795	792	790	786	782
Primary Temp Bottom 760-815°C (1400-1500°F)	875	890	883	882	880	877	876	870
Secondary Temp 980-1100°C (1796-2012°F)	1036	1037	1034	1036	1037	1036	1036	1035
Stack Temp 950-1090°C (1742-1994°F)	983	981	982	980	980	980	989	980

Time

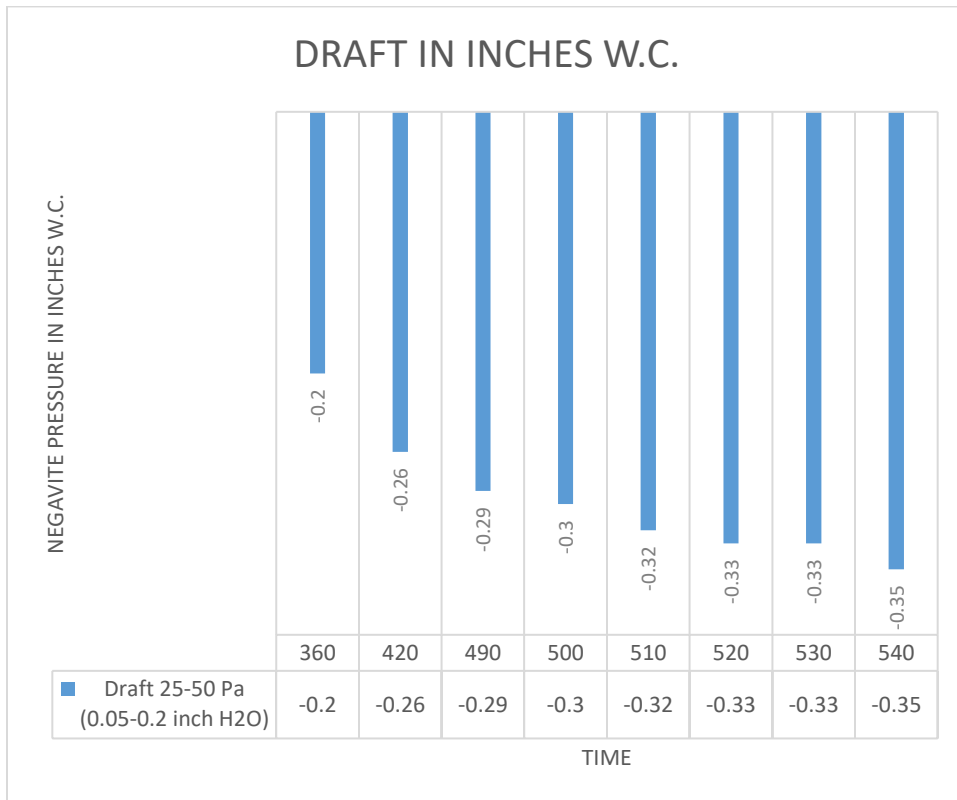
Primary Temp Top 760-815°C  
(1400-1500°F)

Primary Temp Bottom 760-815°C  
(1400-1500°F)

Secondary Temp 980-1100°C  
(1796-2012°F)

Stack Temp 950-1090°C  
(1742-1994°F)

**Figure 7-Temperature readings with respect to time (EWS Test-3)**



**Figure 8- Draft readings with respect to time (EWS Test-3)**

### Initial Temperature Readings

At the beginning of the third test, temperature readings were already operating at high thermal levels due to the ongoing continuous burn. The top of the primary chamber measured 765 °C, the bottom of the primary chamber was at 875 °C, the secondary chamber recorded 1036 °C, and the stack temperature stood at 983 °C.

### Final Temperature Readings

After 540 minutes (9 hours) of continued operation, temperature readings remained stable, with only minor variations observed. By the end of the monitoring period, the top of the primary chamber measured 782 °C, the bottom held at 870 °C, the secondary chamber registered 1035 °C, and the stack recorded 980 °C. These consistent readings indicated that the incinerator maintained a stable thermal environment throughout the extended cycle, supporting continuous and efficient waste combustion.

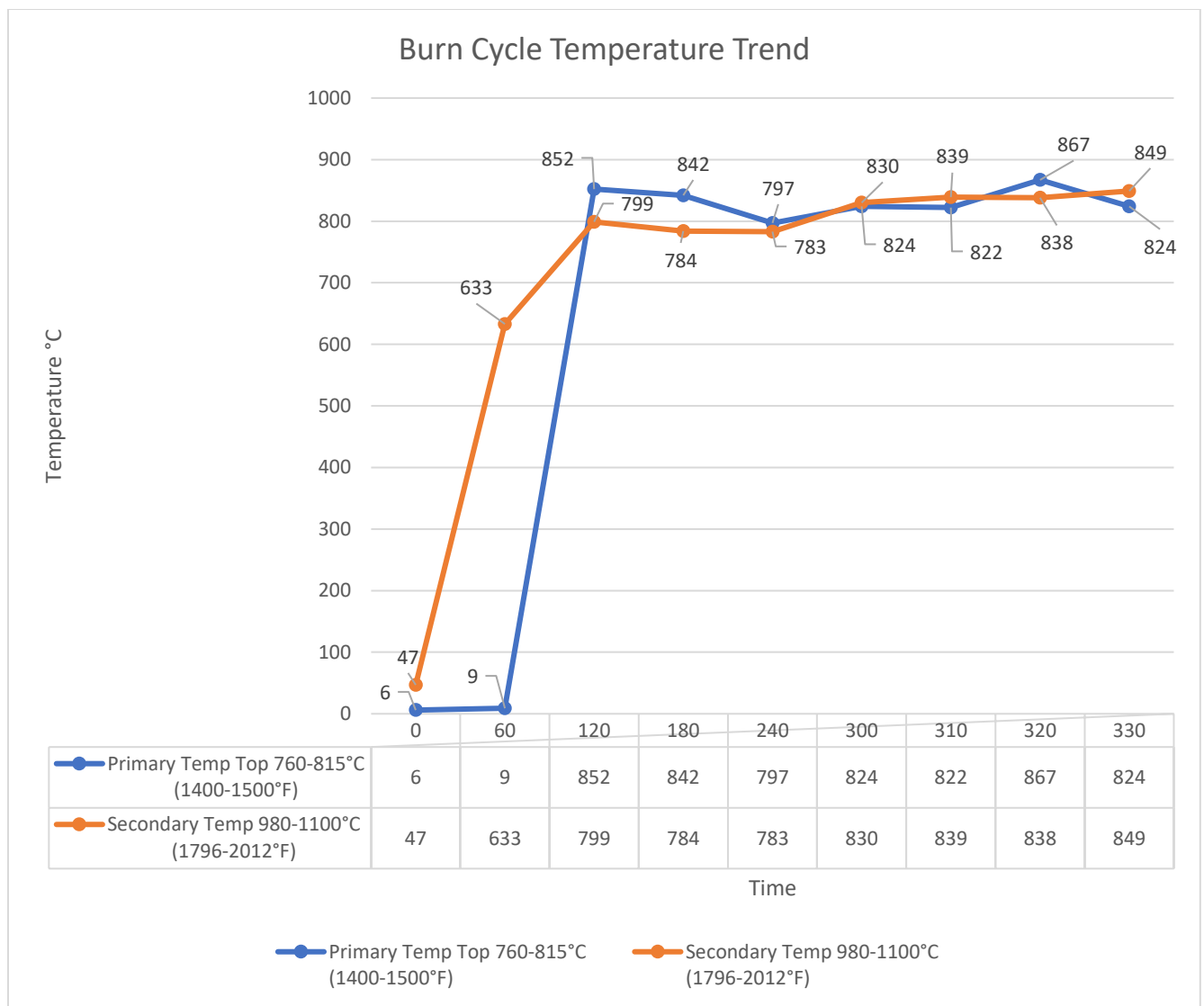


## Draft Pressure

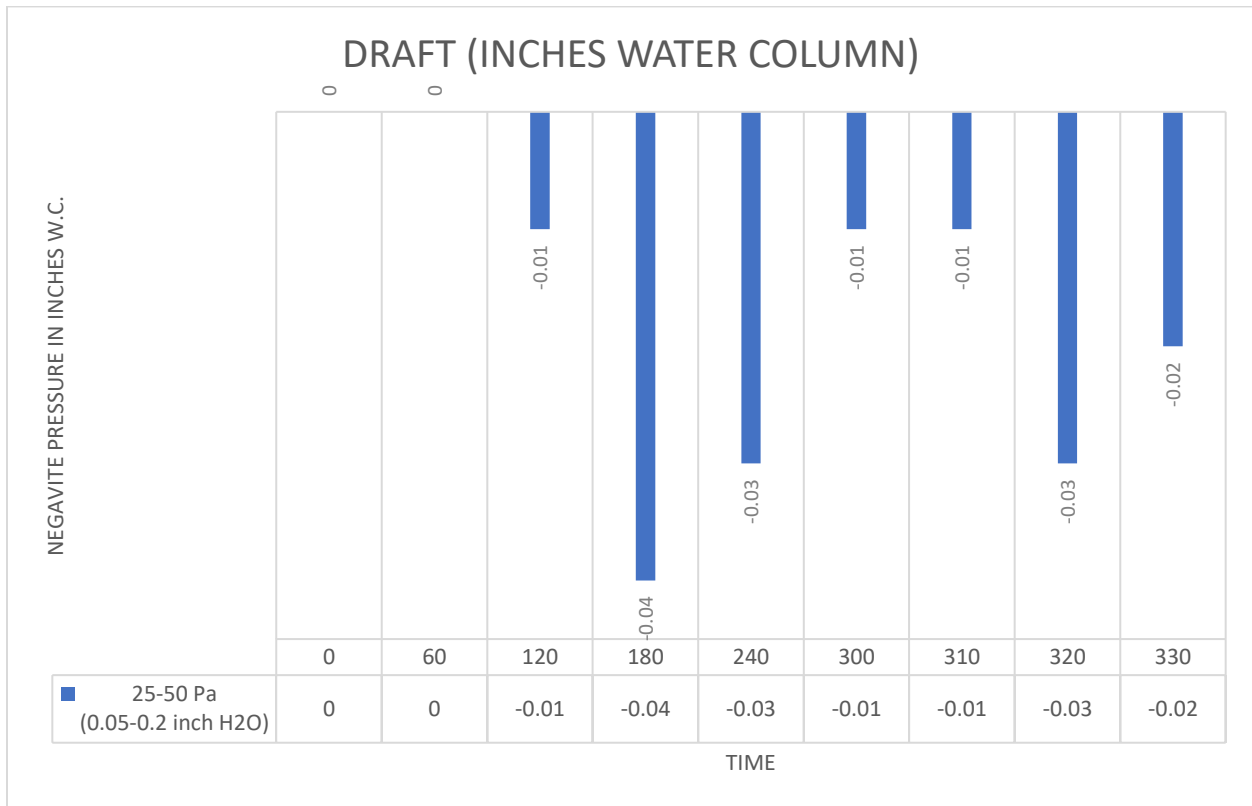
A negative draft pressure of -0.35 inches of water column was recorded at the end of the test.

**Westland Unit (First Burn):** The first burn test was conducted on *29 September 2025*, on the First day of burn on the Westland incinerator. The primary chamber was loaded with 92.71 kg of waste, comprising 32 bags. During loading, both weight and volume considerations were taken into account, and it was specifically ensured that the waste did not exceed the breach level.

During this phase one burner in the Primary chamber was malfunctioning and was not working if it goes above 850 °C temperature.



**Figure 9-Temperature readings with respect to time (Westland Test-4)**



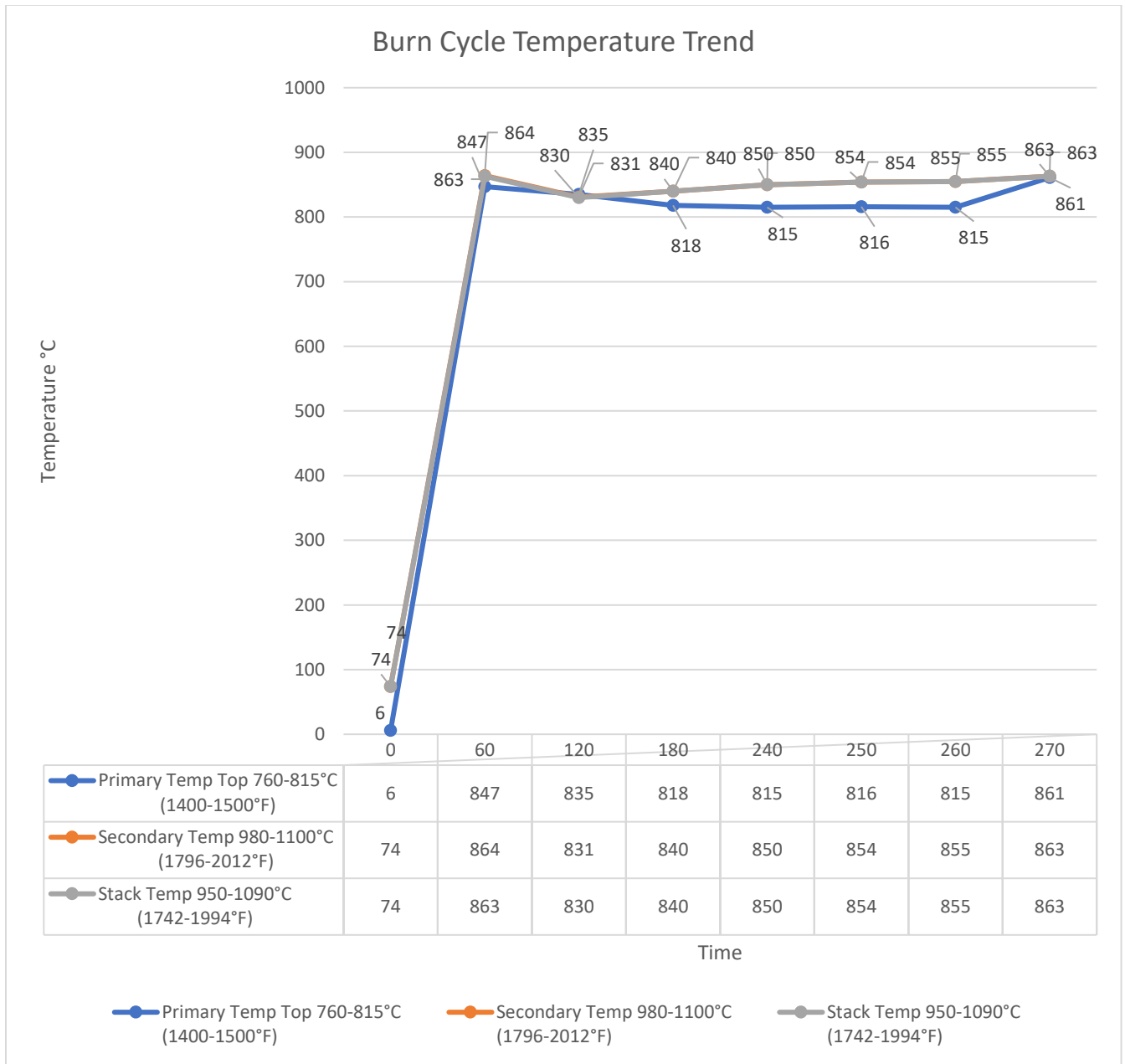
**Figure 10- Draft readings with respect to time (EWS Test-4)**

The burn cycle after Primary Chamber Burner Start (PCBS), temperature and draft readings were monitored over a period of 330 minutes.

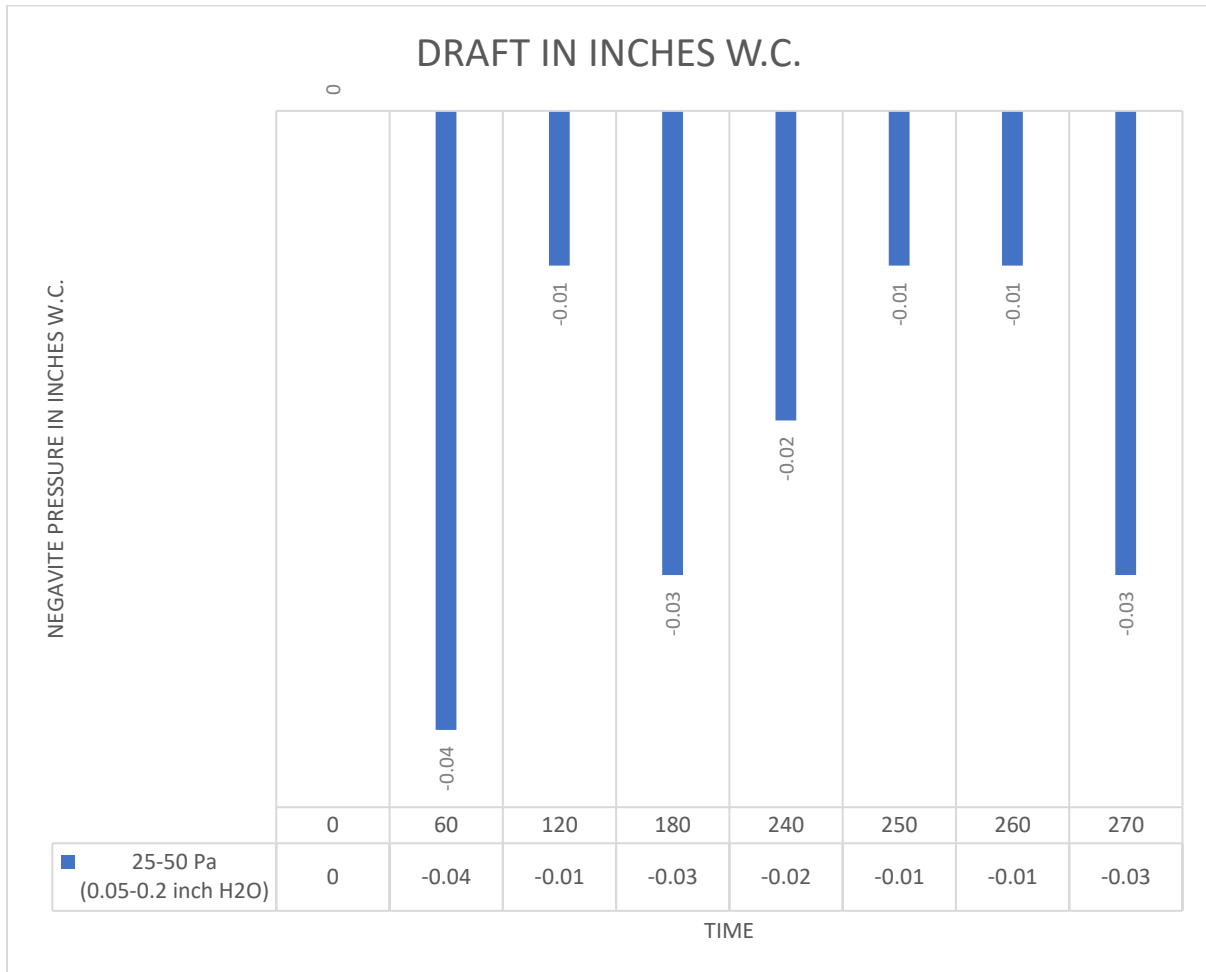
During this phase after making the repairs the burner in the Primary chamber which was malfunctioning and was working and maintaining the temperature above 850 °C temperature which was also keeping the temperatures high in the secondary chamber.

- **Between (0–60 min):** The system started from a cold state, with all temperatures at or below 47°C and no measurable draft pressure. By 60 minutes, secondary and stack temperatures rose to 633°C, indicating system warm-up.
- **Between (120–240 min):** The primary chamber temperature reached 852°C at 120 minutes. However, secondary and stack temperatures remained below their respective expected thresholds throughout this period, peaking at around 799°C and 781°C respectively. Draft pressure was slightly negative, ranging from -0.01 to -0.04 inches water column (w.c.), below the expected range of 0.05–0.2 inches.

- Between (300–330 min):** Temperatures stabilized at elevated levels: primary chamber reached up to 867°C, secondary chamber peaked at 849°C, and the stack at 849°C. Although consistent, none of the secondary or stack temperatures met the expected range of 980–1100°C and 950–1090°C respectively. Draft values remained low negative throughout, the entire process.



**Figure 11- Temperature readings with respect to time (Westland Test-5)**



**Figure 12- Draft readings with respect to time (Westland Test-5)**

The Second burn test was conducted on *30 September 2025*, on the second day of burn on the Westland unit. The primary chamber was loaded with 92.01 kg of waste, comprising 38 bags. During loading, both weight and volume considerations were taken into account, and it was specifically ensured that the waste did not exceed the breach level.

Temperature and draft readings were observed throughout a 270-minute period following the Primary Chamber Burner Start (PCBS) to evaluate incinerator performance against expected operational standards.

- **Startup Phase (0–60 min):** The system began from a cold state, with temperatures at 6°C in the primary chamber and 74°C in both the secondary chamber and stack. No draft reading was recorded at this stage. By the 60-minute mark, temperatures had increased significantly, with the primary chamber reaching 847°C, the secondary



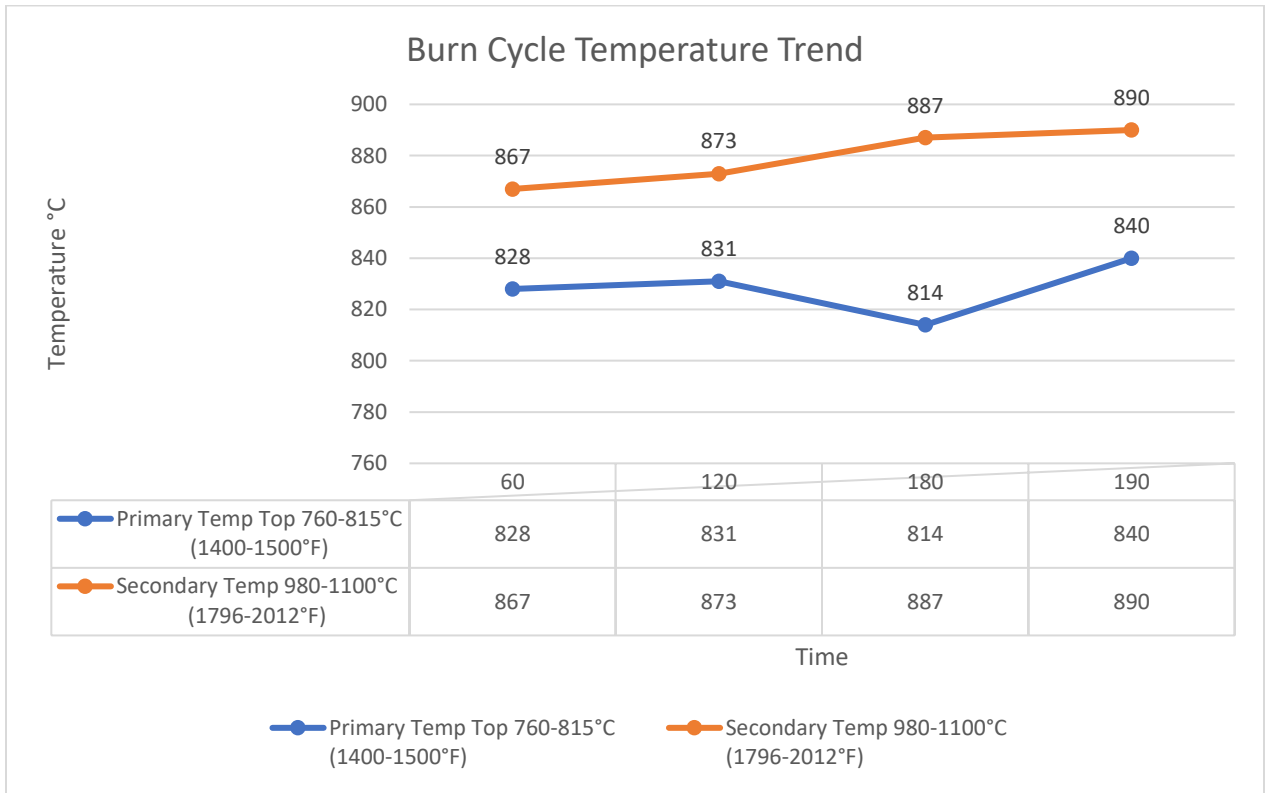
chamber 864°C, and the stack 863°C. However, the draft pressure remained low, measuring -0.04-inch.

- **Thermal Build-Up Period (120–240 min):** The primary chamber operated consistently above the upper limit of the expected range (835–815°C). The secondary chamber temperatures ranged between 831°C and 850°C, and the stack from 830°C to 850°C, remaining below their expected thresholds. Draft pressures fluctuated between -0.01 and -0.03 inch, continuing to fall short of the required positive range (0.05–0.2 inch).

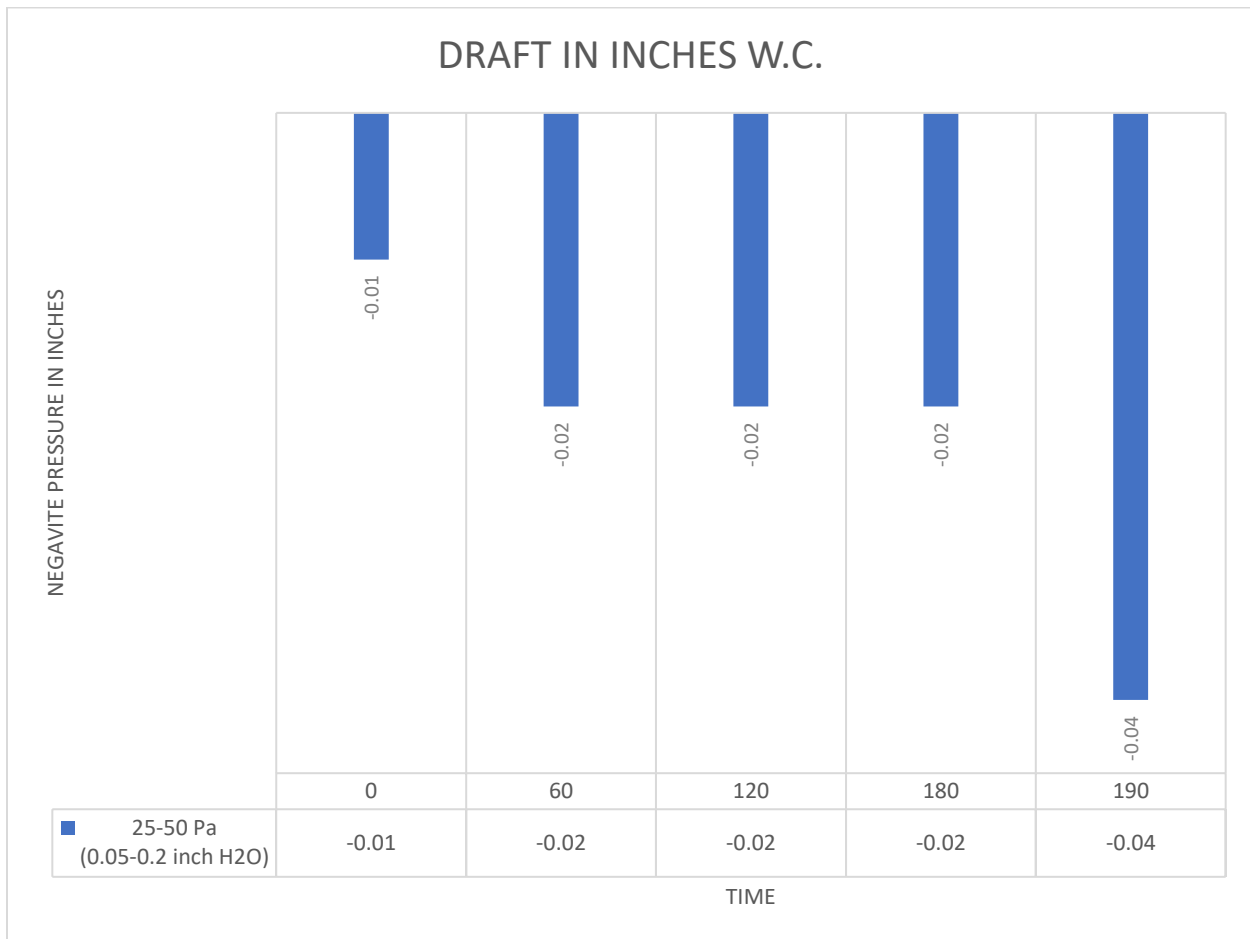
- **Performance Holding Stage (250–270 min):** During the final stage of the monitoring period. The primary chamber temperature rose to 861°C, remaining above the target range. Secondary and stack temperatures stabilized at 863°C, but still did not reach the expected minimums of 980°C and 950°C, respectively. Draft pressure stayed consistently negative, ranging between -0.01 and -0.03 inch.

Following the completion of the second air test, the Westland unit was promptly opened to allow for rapid cooling, enabling the immediate commencement of the third test. During the third air test, temperature and draft performance were monitored over a 190-minute period following the Primary Chamber Burner Start (PCBS). This test followed the rapid cooling of the unit and the loading of a new batch containing 95.33 kg of waste (37 bags).

The incinerator had been previously halted mid-cycle, which led to the accumulation of black smoke within the secondary chamber. When the new burn cycle was initiated, this residual buildup caused the stack to emit both flames and black smoke at startup, highlighting the impact of interrupted combustion on system behavior.



**Figure 13-Temperature readings with respect to time (Westland Test-6)**



**Figure 14- Draft readings with respect to time (EWS Test-6)**

- **Startup Phase (0–10 min):** At the onset of the cycle, temperatures were relatively low, with the primary chamber at 160 °C and the secondary chamber and stack both at 214 °C. Within the first 10 minutes, secondary and stack temperatures surged to 862 °C and 863 °C, respectively, while the primary chamber briefly dropped to 118 °C, likely due to thermal redistribution. Draft pressure was recorded at -0.01.
- **Thermal Build-Up Period (20–90 min):** The primary chamber quickly reached high combustion temperatures, peaking at 870 °C, exceeding its upper operational limit (815 °C). The secondary chamber and stack increased gradually to 879 °C, but still remained below the expected minimums of 980 °C and 950 °C. Throughout this stage, draft pressure remained suboptimal, fluctuating between -0.01 and -0.04 inch.
- **Performance Holding Stage (100–190 min):** From 100 minutes onward, the system demonstrated consistent temperature behavior; The primary chamber stayed within a high-performance range, varying between 814 °C and 870 °C. Secondary and stack temperatures remained steady, peaking at 894 °C and 893 °C, respectively, yet never



reached their required operational targets. Draft pressure remained negative, ranging from -0.01 to -0.04 inch.

### **5.0 Incinerator Condition**

Prior to the pilot burn, a preemptive inspection was carried out by Eco Waste personnel. Several issues were identified during the assessment:

- significant deterioration of the primary and secondary chambers - cracked refractory lining, exposed metal fragments protruding from the monolithic wall, and visible gaps between the chamber walls
- lower part of the door gasket of the primary chamber was found to be damaged and not making a good seal
- air holes intended for allowing air from the blower during cooldown were blocked with the monolithic refractory material, likely resulting from refractory repairs. This obstruction, in addition to the castable material itself, cause the cooldown period to be extended from the expected 12 hours to 36 hours.
- During the pilot cycle, a significant technical issue was identified: the air holes intended for blower operation and unit cooldown were blocked with a cement-like material, likely resulting from refractory repairs. This obstruction extended the cooldown period from the expected 12 hours to 36 hours.



## 6.0 Emissions Testing and Operational Data

Air emission testing was conducted on both the **EWS** and **Westland Incinerators**. The analysis focused on key parameters including **O<sub>2</sub>**, **CO<sub>2</sub>**, **CO**, **NO<sub>x</sub>**, and **SO<sub>x</sub>** concentrations. The recorded data includes **Oxygen and Carbon Dioxide** expressed in **percent concentration (%)**, while **CO**, **NO<sub>x</sub>**, and **SO<sub>x</sub>** values are measured in **parts per million (ppm)**.

The readings were taken **after the primary burner was turned on**, when **RWDI** started recording data during the emission test.

Time after PCBS	O2	CO2	CO	NOX	SOX
<b>Expected Range</b>	9-15%	7-15%	0-30 Ppm	ppm	ppm
120	17.24	2.7	4.2	27.4	4.6
130	15.18	4.46	1.5	27.4	4.9
140	15.27	4.48	1.3	31	8.8
150	15.19	4.1	1.3	34.7	5.9
160	15.45	4.21	1.1	33.8	5.9
170	15.15	4.42	1.4	34.7	6.1
180	15.33	4.26	1	36.1	7.4
190	15.63	4.1	0.8	50.2	8.6
200	15.83	3.95	0.9	46.5	8.6
210	15.74	3.98	0.9	46.7	8.6
220	15.56	4.15	0.9	54.2	9.7
230	15.68	4.9	1	56	9
240	15.68	4.2	0.9	54.6	8.3
250	15.75	3.9	1.1	54.8	9.1
260	15.8	3.87	1.2	53.3	9
270	15.88	3.88	1	52.1	9.2
280	15.6	4.12	1.4	56	9.7
290	15.58	4.03	1.2	58.2	10.8
300	15.66	4.04	0.8	56.5	10.3

**Table 1- Air Emission Data (Day 1 EWS-Test 1)**



Expected Range	9-15%	7-15%	0-30 Ppm	ppm	ppm
110	14.6	4.97	3	71.3	6.7
120	14.23	4.81	2.5	66.9	7.4
130	14.41	5.12	1.6	74.7	8.6
140	14.54	4.96	1.4	78.7	8.6
150	14.49	5.04	1.4	82.2	9.7
160	14.57	4.94	1.4	82.1	9.6
170	14.61	4.83	1.2	78	9.9
180	14.57	4.95	1.2	80.1	11.2
190	14.55	4.84	1.1	79.8	11.9
200	14.59	4.8	1.4	76.1	11.7
210	14.66	4.8	1.2	74.5	11
220	14.67	4.76	1.1	72.3	10.2
230	14.82	4.63	1.5	68.4	9.7
240	14.79	4.67	1.4	67.5	9.4
250	13.7	4.7	1.2	62.8	8.7
260	14.8	4.68	1.4	63	8.5
270	14.82	4.77	1.2	64.4	9.2

**Table 2- Air Emission Data (Day 2 EWS-Test 2)**



Time after PCBS	O2	CO2	CO	NOX	SOX
Expected Range	9-15%	7-15%	0-30 Ppm	ppm	ppm
360	20.95	0.04	0.5	0.2	3.1
370	20.96	0.05	0.5	0.2	3.2
380	20.96	0.04	0.5	0.2	3.4
390	15.38	4.21	1.5	31.9	5
400	15.43	4.2	1	30.8	5
410	15.43	4.2	1.3	30.6	4.7
420	15.56	4.8	1.2	30.6	4.7
430	15.6	4.02	1.1	31	4.5
440	15.9	4.03	1.3	32.2	4.7
450	15.7	4.0	1	33	4.5
460	15.71	3.96	1.1	33.3	4.7
470	15.71	3.94	1.2	34.1	4.4
480	15.73	3.94	1.1	33.7	4.7
490	15.74	3.93	1.1	34.1	4.6
500	15.69	3.97	1.2	34.1	4.7
510	15.78	3.91	1.1	35.1	4.6
520	15.82	3.86	1.1	35.1	4.6
530	15.82	3.89	1.2	35.5	4.5
540	15.84	3.83	1.1	35.9	4.5

**Table 3- Air Emission Data (Day 2 EWS-Test 3)**



Time after PCBS	O2	CO2	CO	Nox	Sox
Expected Range	9-15%	7-15%	0-30 ppm	ppm	ppm
90	3.96	13.32	20.7	232.1	14.8
100	5.75	11.84	4.8	159.3	8.6
110	5.93	11.58	4.2	153.3	7.9
120	9.91	7.64	1.4	72.8	5.7
130	9.71	8.67	1.2	62.9	5.2
140	10.5	8.36	1.6	73.2	5.2
150	10.33	8.11	1.3	71.3	5.9
160	10.54	7.95	0.8	72	5.3
170	10.79	7.72	1.1	72.4	4.9
180	12.84	6.09	1.9	96.2	5
190	10.86	7.69	1.5	73.2	5.3
200	13.14	5.9	2.2	82.6	5.1
210	8.01	9.88	0.8	69.2	4.8
220	11.25	7.31	0.9	65.4	4.5
230	11.42	7.2	1.2	62.1	4.5
240	11.72	6.99	0.9	60.2	4.5
250	8.94	9.09	0.8	43.5	4.5
260	11.76	6.84	1	58.2	4.3
270	14.42	4.88	2.4	56.3	4.1
280	14.42	4.88	2.4	56.3	4.1
290	10.32	8.75	0.7	50.3	4.1
300	11.93	6.75	1	57.6	4.3
310	7.81	9.83	0.5	56.4	4.3
320	7.91	9.76	0.1	55.2	4.3
330	7.92	9.73	0.2	54.7	4.3

**Table 4- Air Emission Data (Day 3 WestlandTest 4)**



Time after PCBS	O2	CO2	CO	Nox	Sox
<b>Expected Range</b>	9-15%	7-15%	0-30 ppm	ppm	ppm
10	2.07	14.61	29.4	32	55.8
20	8.41	9.95	2.7	79	10.7
30	10.46	8.22	1.5	77.8	7.6
40	11.01	7.7	1.1	99.9	7.2
50	5.68	11.08	1.2	80.4	11
60	6.2	11.18	1.2	92.3	10.5
70	6.6	10.92	1	93.2	8.5
80	9.17	10.16	1	80	6.5
90	12.45	6.56	0.8	93	5.7
100	9.81	8.53	0.8	70.4	5.7
110	12.75	8	0.8	74.3	5.3
120	12.9	6.17	0.8	73.2	5.3
130	11.38	6.24	0.9	73.2	5.5
140	11.38	6.2	0.9	73.9	5.6
150	7.44	10.1	1	54.2	5.6
160	13.46	5.62	0.9	73.1	5.1
170	13.29	7.29	1	78.5	5.2
180	13.04	7.29	0.6	71.2	5
190	10.38	5.64	0.9	65.9	5.2
200	7.65	9.62	0.8	47.4	5.2
210	8.33	9.81	1	45.4	4.8
220	11.51	8.81	0.9	65.1	4.8
230	13.7	5.3	0.7	65.6	4.5
240	7.84	9.75	0.7	46.4	4.7
250	14.08	6.16	1	73.6	4.7
260	11.91	5.62	0.7	61.9	4.6
270	7.87	9.73	0.5	49.2	4.5

**Table 5- Air Emission Data (Day 4 Westland -Test 5)**



Time after PCBS	O2	CO2	CO	Nox	Sox
Expected Range	9-15%	7-15%	0-30 ppm	ppm	ppm
30	8.3	10.11	6.2	79.5	13.2
40	4.8	9.95	2.8	71.5	11.8
50	11.69	7.31	1.9	84.7	7.2
60	9.58	8.71	1.1	70.4	6.1
70	10.07	8.28	0.9	66.5	5.6
80	12.39	8.14	0.9	76	5.5
90	13.36	5.73	0.8	75.7	5.2
100	9.6	5.89	0.9	71.9	5.3
110	10.07	7.58	0.8	47.8	5.5
120	9.93	7.8	0.6	46.2	5.3
130	13.6	5.12	0.8	71.2	5
140	12.07	5.5	0.8	69	5.2
150	7.77	9.85	0.7	46.7	5.1
160	0.24	9.66	0.4	50.2	4.8
170	10.31	9.35	0.9	54.9	4.8
180	7.84	9.78	0.5	47.8	4.6
190	9.6	9.51	0.6	51.3	4.4

**Table 6- Air Emission Data (Day 4 Westland-Test 6)**



## 6.0 Observations and Recommendations

### Onsite Waste Management Observations and Recommended Solutions

#### 1. Improper Sorting of Waste

**Problem:** Waste materials were occasionally mixed with restricted items such as metals, glass, PVC, electronic components, and containers with chemicals. Staff were not always aware of which materials were suitable for incineration, recycling, or landfill disposal.

**Solution:** Collect waste from designated locations and visually inspect it for restricted items. Train employees to correctly identify and segregate materials based on their disposal category.

#### 2. Ensuring a Good Mix

**Problem:** Some suitable combustible materials, like cardboard and paper-based waste, were not consistently included in the incineration feed.

**Solution:** Ensure cardboard and paper-based waste are added where appropriate. Weigh all waste and strictly follow the SOP for loading to maintain consistency and efficiency.

#### 3. Lack of Clear Guidance

**Problem:** Personnel were sometimes unsure about which waste belongs in each category, leading to misplacement and cross-contamination. Operational differences between day and night shifts, combined with new trainees being assigned multiple tasks, result in a lack of consistency and make it difficult to follow standardized procedures.

**Solution:** Install additional pictograms at key locations and provide clearly labeled waste separation bins to indicate which materials belong in each category. This helps ensure proper segregation, minimizes sorting errors, and reinforces standardized waste handling practices.

#### 4. Limited Feedback on Segregation Errors

**Problem:** Staff did not receive immediate feedback when incorrect items were placed in bins, reducing accountability and awareness. As a result, e-waste such as cordless drills, and batteries were sometimes disposed of in the incinerator bins.

**Solution:** Implement an “Oops” Sticker Program, where bins containing inappropriate materials are marked with a sticker to indicate improper segregation. This provides instant visual feedback, encourages accountability, and reinforces correct disposal practices, helping prevent safety hazards and protecting the incinerator’s performance over time.



**5. SOP Non-Compliance Leading to Equipment Damage:** The correct operating procedures for waste handling and loading were not consistently followed. Employees sometimes overload the incinerator, resulting in incomplete combustion and inefficient burns. This practice has led to damage to critical equipment such as thermostats and refractory linings, reducing operational efficiency and increasing maintenance needs.

**Solution:** Enforce strict adherence to SOPs for waste loading and handling. Train personnel on the correct loading limits and procedures to ensure complete combustion, protect equipment, and maintain safe and efficient operations. Regular monitoring and supervision should be implemented to prevent overloading and reduce equipment wear.

#### **7.0 Appendices:**

- **Photographic Evidence:** photos of waste anomalies and incinerator condition.
- **Waste Auditing Data Sheets:** raw data collected during waste sorting.
- **Operational Data:** operational data collected during the test burns.
- **Emissions Testing Data from Continuous Emissions Monitoring:** raw data recorded from the emissions monitoring equipment.

The page features a decorative background with a large, light gray curved shape on the right side and a blue curved shape on the left side, separated by a white border.

# APPENDIX H



# CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

**Customer & Order Information**

LINDE PKG PARIS P H 80271  
41 CONSOLIDATED DR  
PARIS ON N3L 3G2

Certificate Issuance Date: 08/24/2022

Linde Order Number: 77987718

Part Number: NI CD10CO35E-AS

Customer PO Number: 72170939 Kitchener

Fill Date: 08/19/2022

Lot Number: 700012231F4

Cylinder Style & Outlet: AS

CGA 590

Cylinder Pressure and Volume: 2000 psig 148 ft3

**Certified Concentration**

Expiration Date:	<b>08/24/2030</b>	NIST Traceable
Cylinder Number:	<b>DT0047098</b>	Expanded Uncertainty
<b>9.99 %</b>	<b>Oxygen</b>	<b>± 0.03 %</b>
<b>9.74 %</b>	<b>Carbon dioxide</b>	<b>± 0.06 %</b>
<b>201 ppm</b>	<b>Carbon monoxide</b>	<b>± 1 ppm</b>
<b>Balance</b>	<b>Nitrogen</b>	

**ProSpec EZ Cert**



**Certification Information:**

Certification Date: 08/24/2022

Term: 96 Months

Expiration Date: 08/24/2030

This cylinder was certified according to the 2012 EPA Traceability Protocol, Document #EPA-600/R-12/531, using Procedure G1. Uncertainty above is expressed as absolute expanded uncertainty at a level of confidence of approximately 95% with a coverage factor k = 2. Do Not Use this Standard if Pressure is less than 100 PSIG.

**Analytical Data:**

(R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

**1. Component: Oxygen**

Requested Concentration: 10.0 %  
Certified Concentration: 9.99 %  
Instrument Used: Servomex 575  
Analytical Method: Paramagnetic  
Last Multipoint Calibration: 08/05/2022

First Analysis Data:				Date				
Z:	0	R:	22.5	C:	9.99	Conc:	9.99	08/24/2022
R:	22.51	Z:	0	C:	9.99	Conc:	9.99	
Z:	0	C:	9.98	R:	22.51	Conc:	9.98	
UOM:	%		Mean Test Assay:	9.99	%			

**Reference Standard:** Type / Cylinder #: GMIS / EB0117195  
Concentration / Uncertainty: 22.51 % ±0.01 %  
Expiration Date: 12/02/2027

**Traceable to:** SRM # / Sample # / Cylinder #: 2659a / 71-D-XX / CALO15785  
SRM Concentration / Uncertainty: 20.720% / ±0.043%  
SRM Expiration Date: 08/23/2021

Second Analysis Data:				Date				
Z:	0	R:	0	C:	0	Conc:	0	
R:	0	Z:	0	C:	0	Conc:	0	
Z:	0	C:	0	R:	0	Conc:	0	
UOM:	%		Mean Test Assay:		%			

**2. Component: Carbon dioxide**

Requested Concentration: 10.0 %  
Certified Concentration: 9.74 %  
Instrument Used: Horiba VA-5000  
Analytical Method: NDIR  
Last Multipoint Calibration: 07/25/2022

First Analysis Data:				Date				
Z:	0	R:	19.99	C:	9.74	Conc:	9.74	08/24/2022
R:	20	Z:	0	C:	9.75	Conc:	9.75	
Z:	0	C:	9.74	R:	20	Conc:	9.74	
UOM:	%		Mean Test Assay:	9.74	%			

**Reference Standard:** Type / Cylinder #: PRM / DT0032694  
Concentration / Uncertainty: 19.99 % ±0.04 %  
Expiration Date: 01/02/2028

**Traceable to:** SRM # / Sample # / Cylinder #: PRM#FF276163 / PRM#FF276163 / FF276163  
SRM Concentration / Uncertainty: 20.008% / ± 0.028%  
SRM Expiration Date: 04/01/2020

Second Analysis Data:				Date				
Z:	0	R:	0	C:	0	Conc:	0	
R:	0	Z:	0	C:	0	Conc:	0	
Z:	0	C:	0	R:	0	Conc:	0	
UOM:	%		Mean Test Assay:		%			

**3. Component: Carbon monoxide**

Requested Concentration: 200 ppm  
Certified Concentration: 201 ppm  
Instrument Used: Horiba VA-5000  
Analytical Method: NDIR  
Last Multipoint Calibration: 07/25/2022

First Analysis Data:				Date				
Z:	0	R:	250.2	C:	201	Conc:	201	08/24/2022
R:	250.3	Z:	0	C:	201	Conc:	201	
Z:	0	C:	201	R:	250.2	Conc:	201	
UOM:	ppm		Mean Test Assay:	201	ppm			

**Reference Standard:** Type / Cylinder #: GMIS / EB0020579  
Concentration / Uncertainty: 250.3 ppm ±0.7 ppm  
Expiration Date: 03/16/2026

**Traceable to:** SRM # / Sample # / Cylinder #: 2636a / 57-F-15 / FF30792  
SRM Concentration / Uncertainty: 247.1 ppm / ±0.5 ppm  
SRM Expiration Date: 03/26/2018

Second Analysis Data:				Date				
Z:	0	R:	0	C:	0	Conc:	0	
R:	0	Z:	0	C:	0	Conc:	0	
Z:	0	C:	0	R:	0	Conc:	0	
UOM:	ppm		Mean Test Assay:		ppm			

Analyzed By

  
Mike Monnette

Certified By

  
Edward E Zucal



# CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

**Customer & Order Information**

LINDE PKG PARIS P H 80271  
41 CONSOLIDATED DR  
PARIS ON N3L 3G2

Certificate Issuance Date: 10/01/2024

Linde Order Number: 42685196

Part Number: NI CD25CO7E-AS

Customer PO Number: 72922393 Hamilton

Fill Date: 09/11/2024

Lot Number: 70086425501

Cylinder Style & Outlet: AS

CGA 590

Cylinder Pressure and Volume: 2000 psig 165 ft3

**Certified Concentration**

Expiration Date:	10/01/2032	NIST Traceable
Cylinder Number:	DT0011790	Expanded Uncertainty
<b>25.29 %</b>	<b>Carbon dioxide</b>	<b>± 0.07 %</b>
<b>1951 ppm</b>	<b>Carbon monoxide</b>	<b>± 7 ppm</b>
<b>20.99 %</b>	<b>Oxygen</b>	<b>± 0.06 %</b>
<b>Balance</b>	<b>Nitrogen</b>	

**ProSpec EZ Cert**



**Certification Information:**

Certification Date: 10/01/2024

Term: 96 Months

Expiration Date: 10/01/2032

This cylinder was certified according to the 2012 EPA Traceability Protocol, Document #EPA-600/R-12/531, using Procedure G1. Uncertainty above is expressed as absolute expanded uncertainty at a level of confidence of approximately 95% with a coverage factor k = 2. Do Not Use this Standard if Pressure is less than 100 PSIG.

CO2 responses have been corrected for Oxygen IR Broadening effect. CO responses have been corrected for CO2 interference. CO responses have been corrected for O2 interference. O2 responses have been corrected for CO2 interference.

**Analytical Data:**

(R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

**1. Component:**

**Carbon dioxide**

Requested Concentration: 25 %  
Certified Concentration: 25.29 %  
Instrument Used: Horiba VIA-510 S/N 20C194WK  
Analytical Method: NDIR  
Last Multipoint Calibration: 09/30/2024

First Analysis Data:				Date				
Z:	0	R:	26.96	C:	25.39	Conc:	25.36	10/01/2024
R:	27.03	Z:	0	C:	25.19	Conc:	25.16	
Z:	0	C:	25.39	R:	27	Conc:	25.36	
UOM:	%		Mean Test Assay:	25.29		%		

**Reference Standard:**

Type / Cylinder #: GMIS / CC305911

Concentration / Uncertainty: 26.96 % ±0.05 %

Expiration Date: 03/29/2031

**Traceable to:**

SRM # / Sample # / Cylinder #: RGM#CC193512 / N/A / CC193512

SRM Concentration / Uncertainty: 26.99% / ±0.05%

SRM Expiration Date: 05/15/2023

Second Analysis Data:				Date				
Z:	0	R:	0	C:	0	Conc:	0	
R:	0	Z:	0	C:	0	Conc:	0	
Z:	0	C:	0	R:	0	Conc:	0	
UOM:	%		Mean Test Assay:			%		

**2. Component:**

**Carbon monoxide**

Requested Concentration: 2000 ppm  
Certified Concentration: 1951 ppm  
Instrument Used: Horiba VIA-510 S/N 576876015  
Analytical Method: NDIR  
Last Multipoint Calibration: 09/30/2024

First Analysis Data:				Date				
Z:	0	R:	3017	C:	1951	Conc:	1950	10/01/2024
R:	3017	Z:	0	C:	1954	Conc:	1953	
Z:	0	C:	1950	R:	3021	Conc:	1949	
UOM:	ppm		Mean Test Assay:	1951		ppm		

**Reference Standard:**

Type / Cylinder #: GMIS / CC78206

Concentration / Uncertainty: 3017 ppm ±10 ppm

Expiration Date: 09/19/2031

**Traceable to:**

SRM # / Sample # / Cylinder #: SRM 2638a / 55-F-06 / FF30713

SRM Concentration / Uncertainty: 4935 PPM / ±11PPM

SRM Expiration Date: 09/30/2027

Second Analysis Data:				Date				
Z:	0	R:	0	C:	0	Conc:	0	
R:	0	Z:	0	C:	0	Conc:	0	
Z:	0	C:	0	R:	0	Conc:	0	
UOM:	ppm		Mean Test Assay:			ppm		

**3. Component:**

**Oxygen**

Requested Concentration: 21 %  
Certified Concentration: 20.99 %  
Instrument Used: Siemens Oxymat 6E S/N 7MB20211AA000CA1  
Analytical Method: Paramagnetic  
Last Multipoint Calibration: 09/04/2024

First Analysis Data:				Date				
Z:	0	R:	20.86	C:	21.01	Conc:	20.99	10/01/2024
R:	20.88	Z:	0	C:	20.99	Conc:	20.97	
Z:	0	C:	21.02	R:	20.9	Conc:	21	
UOM:	%		Mean Test Assay:	20.99		%		

**Reference Standard:**

Type / Cylinder #: GMIS / DT0040804

Concentration / Uncertainty: 20.86 % ±0.05 %

Expiration Date: 09/09/2032

**Traceable to:**

SRM # / Sample # / Cylinder #: 2659a / 71-D-23 / CAL015788

SRM Concentration / Uncertainty: 20.720 % / ±0.043%

SRM Expiration Date: 02/28/2026

Second Analysis Data:				Date				
Z:	0	R:	0	C:	0	Conc:	0	
R:	0	Z:	0	C:	0	Conc:	0	
Z:	0	C:	0	R:	0	Conc:	0	
UOM:	%		Mean Test Assay:			%		

Mir Bahena

Analyzed By

**Miriam Bahena**

Nelson Ma

Certified By

**Nelson Ma**



# CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

**Customer & Order Information**

LINDE PKG PARIS P H 80271  
41 CONSOLIDATED DR  
PARIS ON N3L 3G2

Certificate Issuance Date: 03/07/2022

Linde Order Number: 63637088

Part Number: NI NO2000S3E-AS

Customer PO Number: 71977226 KIT

Fill Date: 02/21/2022

Lot Number: 700012052WC

Cylinder Style & Outlet: AS

CGA 660

Cylinder Pressure and Volume: 2000 psig 140 ft3

**Certified Concentration**

Expiration Date:	<b>03/07/2030</b>	NIST Traceable
Cylinder Number:	<b>CC325650</b>	Expanded Uncertainty
<b>1995 ppm</b>	<b>Nitric oxide</b>	<b>± 8 ppm</b>
<b>2017 ppm</b>	<b>Sulfur dioxide</b>	<b>± 4 ppm</b>
<b>Balance</b>	<b>Nitrogen</b>	

**ProSpec EZ Cert**



**For Reference Only:** NOx 2002 ppm

**Certification Information:** Certification Date: 03/07/2022 Term: 96 Months Expiration Date: 03/07/2030

This cylinder was certified according to the 2012 EPA Traceability Protocol, Document #EPA-600/R-12/531, using Procedure G1. Uncertainty above is expressed as absolute expanded uncertainty at a level of confidence of approximately 95% with a coverage factor k = 2. Do Not Use this Standard if Pressure is less than 100 PSIG.

**Analytical Data:** (R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

**1. Component: Nitric oxide**  
Requested Concentration: 2000 ppm  
Certified Concentration: 1995 ppm  
Instrument Used: Thermo-42i HL  
Analytical Method: Chemiluminescence  
Last Multipoint Calibration: 02/21/2022

First Analysis Data:		Date	
Z: 0	R: 2910	C: 1994	Conc: 1993
R: 2910	Z: 0	C: 1992	Conc: 1991
Z: 0	C: 1994	R: 2910	Conc: 1993
UOM: ppm		Mean Test Assay: 1992 ppm	

**Reference Standard:** Type / Cylinder #: GMIS / CC109020  
Concentration / Uncertainty: 2908 ppm ±8 ppm  
Expiration Date: 12/07/2027  
**Traceable to:** SRM # / Sample # / Cylinder #: 2361a / 47-G-12 / FF22193  
SRM Concentration / Uncertainty: 2989 / ±6.5 ppm  
SRM Expiration Date: 02/20/2022

Second Analysis Data:		Date	
Z: 0	R: 2910	C: 2000	Conc: 1999
R: 2910	Z: 0	C: 2000	Conc: 1999
Z: 0	C: 2000	R: 2910	Conc: 1999
UOM: ppm		Mean Test Assay: 1999 ppm	


**2. Component: Sulfur dioxide**  
Requested Concentration: 2000 ppm  
Certified Concentration: 2017 ppm  
Instrument Used: AMETEK 921  
Analytical Method: UV Spectrometry  
Last Multipoint Calibration: 03/01/2022

First Analysis Data:		Date	
Z: 0	R: 3381	C: 2018	Conc: 2018
R: 3381	Z: 0	C: 2020	Conc: 2020
Z: 0	C: 2019	R: 3381	Conc: 2019
UOM: ppm		Mean Test Assay: 2019 ppm	

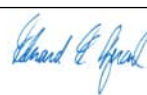
**Reference Standard:** Type / Cylinder #: GMIS / EB0023342  
Concentration / Uncertainty: 3381 ppm ±7 ppm  
Expiration Date: 01/15/2027  
**Traceable to:** SRM # / Sample # / Cylinder #: 1669a / 90-D-15 / CAL016298  
SRM Concentration / Uncertainty: 3396 ppm / ±14 ppm  
SRM Expiration Date: 01/05/2025

Second Analysis Data:		Date	
Z: 0	R: 2449	C: 1458	Conc: 2013
R: 2449	Z: 0	C: 1458	Conc: 2013
Z: 0	C: 1458	R: 2449	Conc: 2013
UOM: ppm		Mean Test Assay: 2013 ppm	

Analyzed By

  
Kanykey Karabaeva

Certified By

  
Edward E Zucal

## Dry Gas Meter Calibration Certificate

DGM Console ID: D

DGM Serial #: -

Calibration Date: 7-Feb-25

Calibrated by PB

Barometric Pressure	765.81	mmHg
	102.10	kPa
Ambient T	21.67	°C
%r.H	21.00%	
W	0.003	lb/lb
B <sub>w0</sub>	0.0048100	ft³/ft³

LEAK CHECK	DGM (ft³)	WGM (L)
initial value	0.00	Pass
final value	0.02	Pass
time (1 min)	1	1
Pass/Fail	PASS	PASS

Dry Gas Meter Values									Wet Gas Meter Values							OSTC		US EPA			
Δ H	Δ H	Initial Vol.	Final Vol.	Volume (Vd)	Temp inlet	Temp outlet	Temp Avg (td)	Time	Δ M	Δ M	Initial Vol.	Final Vol.	Volume (Vw)	Temp inlet	Temp outlet	Temp (tw)	Calibration Factors		Tolerance	Tolerance A	Tolerance B
(in. H <sub>2</sub> O)	(cm H <sub>2</sub> O)	(ft³)	(ft³)	(m³)	(°F)	(°F)	(°C)	(min)	Pa	(cm H <sub>2</sub> O)	(L)	(L)	(m³)	(°C)	(°C)	(°C)	Y	Δ H <sub>0</sub>	Y (<±2%)	(>0.95, <1.0)	Y (0.03)
0.25	0.635	0.26	5.96	0.16	70	70	21.1	20	20	0.204	144.80	307.50	0.16	22.2	22.22	22.22	0.999	1.729	-0.9%	VALID	VALID
0.25	0.635	5.96	11.68	0.16	70	72	21.7	20	20	0.204	307.50	470.20	0.16	22.2	22.78	22.49	0.997	1.729	-1.0%	VALID	VALID
0.25	0.635	11.68	17.39	0.16	72	72	22.2	20	20	0.204	470.20	632.80	0.16	22.8	22.78	22.78	0.999	1.732	-0.9%	VALID	VALID
0.5	1.270	17.39	24.87	0.21	72	74	22.8	20	20	0.204	632.80	846.20	0.21	22.8	23.33	23.055	1.001	2.013	-0.7%	VALID	VALID
0.5	1.270	24.87	32.70	0.22	74	74	23.3	20	20	0.204	846.20	1069.00	0.22	23.3	22.78	23.055	1.001	1.843	-0.7%	VALID	VALID
0.5	1.270	32.70	40.66	0.23	70	71	21.4	20	20	0.204	1069.00	1297.00	0.23	22.0	22.00	22	1.004	1.759	-0.4%	VALID	VALID
1	2.540	0.00	8.29	0.23	71	72	21.9	15	40	0.408	1297.00	1535.90	0.24	22.0	23.00	22.5	1.009	1.809	0.2%	VALID	VALID
1	2.540	0.00	8.25	0.23	72	73	22.5	15	40	0.408	1535.90	1773.60	0.24	23.0	23.00	23	1.008	1.830	0.1%	VALID	VALID
1	2.540	0.00	8.26	0.23	73	73	22.8	15	40	0.408	1773.60	2011.00	0.24	23.0	23.00	23	1.007	1.833	0.0%	VALID	VALID
2	5.080	0.00	9.30	0.26	73	73	22.8	12	60	0.612	2011.00	2280.30	0.27	23.0	23.00	23	1.013	1.831	0.5%	VALID	VALID
2	5.080	0.00	9.28	0.26	73	73	22.8	12	60	0.612	2280.30	2549.20	0.27	23.0	23.00	23	1.014	1.837	0.6%	VALID	VALID
2	5.080	0.00	9.29	0.26	73	73	22.8	12	60	0.612	2549.20	2818.00	0.27	23.0	23.00	23	1.012	1.838	0.5%	VALID	VALID
4	10.160	0.00	10.88	0.31	73	73	22.8	10	80	0.816	2818.00	3135.50	0.32	23.0	23.00	23	1.016	1.847	0.8%	VALID	VALID
4	10.160	10.88	21.78	0.31	73	73	22.8	10	80	0.816	3135.50	3453.80	0.32	23.0	23.00	23	1.017	1.838	0.9%	VALID	VALID
4	10.160	21.78	32.69	0.31	73	73	22.8	10	80	0.816	3453.80	3772.20	0.32	23.0	23.00	23	1.016	1.837	0.9%	VALID	VALID
<b>AVERAGE =</b>																	<b>1.007</b>	<b>1.820</b>			

Psychrometric Calculator

<http://www.hvac-calculator.net/index.php?v=2>

## Dry Gas Meter Calibration Certificate

DGM Console ID: J

DGM Serial #: -

Calibration Date: February 3rd, 2025

Calibrated by SM

Barometric Pressure	736.60	mmHg
	98.21	kPa
Ambient T	22	°C
%r.H	25.00%	
W	0.00425	lb/lb
B <sub>wc</sub>	0.0068005	ft³/ft³

LEAK CHECK	DGM (ft³)	WGM (L)
initial value	0.00	4.50
final value	0.15	8.60
time (1 min)	1	1
Pass/Fail	PASS	PASS

Dry Gas Meter Values									Wet Gas Meter Values							Calibration Factors		OSTC	US EPA		
Δ H	Δ H	Initial Vol.	Final Vol.	Volume (Vd)	Temp inlet	Temp outlet	Temp Avg (tc)	Time	Δ M	Δ M	Initial Vol.	Final Vol.	Volume (Vw)	Temp inlet	Temp outlet	Temp (tw)	Y	Δ H <sub>@</sub>	Tolerance	Tolerance A	Tolerance B
(in. H <sub>2</sub> O)	(cm H <sub>2</sub> O)	(ft³)	(ft³)	(m³)	(°F)	(°F)	(°C)	(min)	Pa	(cm H <sub>2</sub> O)	(L)	(L)	(m³)	(°C)	(°C)	(°C)			Y (<±2%)	>0.95, <1.0	Y (0.03)
0.25	0.635	0.00	5.30	0.15	71	70	21.4	20	20	0.204	1.20	147.70	0.15	22.0	21.50	21.75	0.969	2.217	-1.6%	VALID	VALID
0.25	0.635	0.00	5.34	0.15	70	70	21.1	20	20	0.204	147.70	295.30	0.15	21.5	21.50	21.5	0.968	2.183	-1.6%	VALID	VALID
0.25	0.635	0.00	5.33	0.15	70	71	21.4	20	20	0.204	295.30	442.20	0.15	21.5	21.50	21.5	0.967	2.202	-1.8%	VALID	VALID
0.5	1.270	0.00	7.90	0.22	71	71	21.7	20	20	0.204	442.20	663.50	0.22	21.5	21.50	21.5	0.982	1.941	-0.2%	VALID	VALID
0.5	1.270	0.00	7.95	0.23	71	73	22.2	20	20	0.204	663.50	885.30	0.22	21.5	22.00	21.75	0.980	1.932	-0.5%	VALID	VALID
0.5	1.270	0.00	7.96	0.23	73	74	23.1	20	20	0.204	885.30	1107.20	0.22	22.0	23.00	22.5	0.978	1.934	-0.6%	VALID	VALID
1	2.540	0.00	8.51	0.24	74	74	23.3	15	40	0.408	1107.20	1346.60	0.24	23.0	23.00	23	0.985	1.878	0.1%	VALID	VALID
1	2.540	0.00	8.52	0.24	74	75	23.6	15	40	0.408	1346.60	1586.20	0.24	23.0	23.00	23	0.987	1.873	0.2%	VALID	VALID
1	2.540	0.00	8.53	0.24	75	75	23.9	15	40	0.408	1586.20	1826.10	0.24	23.0	23.00	23	0.987	1.867	0.3%	VALID	VALID
2	5.080	0.00	9.34	0.26	75	74	23.6	12	60	0.612	1826.10	2090.40	0.26	23.0	23.00	23	0.990	1.980	0.6%	VALID	VALID
2	5.080	0.00	9.38	0.27	74	75	23.6	12	60	0.612	2090.40	2355.60	0.27	23.0	22.00	22.5	0.991	1.960	0.7%	VALID	VALID
2	5.080	0.00	9.37	0.27	75	75	23.9	12	60	0.612	2355.60	2620.40	0.26	22.0	22.00	22	0.993	1.957	0.9%	VALID	VALID
4	10.160	0.00	11.09	0.31	75	75	23.9	10	80	0.816	2620.40	2936.50	0.32	22.0	22.00	22	0.996	1.926	1.2%	VALID	VALID
4	10.160	0.00	11.12	0.31	75	75	23.9	10	80	0.816	2936.50	3253.10	0.32	22.0	22.00	22	0.996	1.920	1.2%	VALID	VALID
4	10.160	0.00	11.11	0.31	75	75	23.9	10	80	0.816	3253.10	3569.10	0.32	22.0	22.00	22	0.994	1.927	1.0%	VALID	VALID
<b>AVERAGE =</b>																	<b>0.984</b>	<b>1.980</b>			

Psychrometric Calculator

<http://www.hvac-calculator.net/index.php?v=2>

**RWDI- EPA Method 205 Field Evaluation (as per Section 3.2)**

High-Level Supply Gas Cylinder number: DT0011790 \_\_\_\_\_  
 Concentration: 20.99 \_\_\_\_\_ %

Environics Condition #1						
	Time	Environics Concentration	Analyzer Response	Absolute Difference	Percentage Difference <sup>1</sup>	Response Variation <sup>2</sup>
1	10:30	20.99	20.90	0.09	-0.43%	-0.24%
2	10:35	20.99	21.00	0.01	0.05%	0.24%
3	10:40	20.99	20.95	0.04	-0.19%	0.00%
Average			20.95	0.05	-0.19%	

<sup>1</sup>Analyzer response can not average more than 2% from the Environics concentration: Pass  
<sup>2</sup>No analyzer response can differ more than 2% from the average of the analyzer responses: Pass

Environics Condition #2						
	Time	Environics Concentration	Analyzer Response	Absolute Difference	Percentage Difference <sup>1</sup>	Response Variation <sup>2</sup>
1	10:50	10.00	10.10	0.10	1.00%	0.33%
2	10:55	10.00	9.98	0.02	-0.20%	-0.86%
3	11:00	10.00	10.12	0.12	1.20%	0.53%
Average			10.07	0.08	0.67%	

<sup>1</sup>Analyzer response can not average more than 2% from the Environics concentration: Pass  
<sup>2</sup>No analyzer response can differ more than 2% from the average of the analyzer responses: Pass

Direct Gas Cylinder number: DT0047098 \_\_\_\_\_  
 Concentration: 10.0 \_\_\_\_\_ %

Direct Gas Cylinder						
	Time	Cylinder Concentration	Analyzer Response	Absolute Difference	Percentage Difference <sup>1</sup>	Response Variation <sup>2</sup>
1	11:10	9.99	9.9	0.09	-0.90%	-0.24%
2	11:15	9.99	9.95	0.04	-0.40%	0.27%
3	11:20	9.99	9.92	0.07	-0.70%	-0.03%
Average			9.92	0.07	-0.67%	

<sup>1</sup>Analyzer response can not average more than 2% from the Environics concentration: Pass  
<sup>2</sup>No analyzer response can differ more than 2% from the average of the analyzer responses: Pass

DGM Console ID: 30B Console B  
 DGM Serial #: Hg-220-2131  
 Barometric Pressure: 98.85 kPa  
 W (lb/lb) 0.0028  
 %r.H 17.00% B<sub>w</sub> (ft<sup>3</sup>/ft<sup>3</sup>) 0.0045 Ambient T: 21.5 C  
 Calibration Done By: SM

Leak Check	Side A	WGM
Initial Volume	0.00	17.90
Final Volume	1.43	20.30
Time	1 min	1 min
Pass/Fail	PASS	PASS

**Side A**

Dry Gas Meter Values										Wet Gas Meter Values						Calibration		US EPA		
Δ H (° H <sub>2</sub> O)	Rotameter Middle of Band (L/min)	Volume (Vd)			Temperature			Time (min)	Δ M (hPa H <sub>2</sub> O)	Volume (Vw)			Temp (t <sub>w</sub> )			Factor Y	Tolerance ± 2%	Tolerance A >0.95, <1.0	Tolerance B Y (0.03)	
		Initial (L)	Final (L)	Total (L)	inlet (°F)	outlet (°F)	Avg (t <sub>a</sub> ) (°F)			(°C)	Initial (L)	Final (L)	Total (L)	inlet (°C)	outlet (°C)					Avg (t <sub>w</sub> ) (°C)
0.8	0.5	0.000	11.47	11.47	68	68	68.0	20.0	20	5	20.50	32.30	11.80	22.5	23	22.5	1.018	#DIV/0!	VALID	VALID
0.8	0.5	0.000	11.47	11.47	68	70	69.0	20.6	20	5	32.30	44.10	11.80	23	22	22.5	1.020	#DIV/0!	VALID	VALID
0.8	0.5	0.000	11.52	11.52	70	72	71.0	21.7	20	5	44.10	55.80	11.70	22	23	22.5	1.011	#DIV/0!	VALID	VALID
Average				11.49			69.3						11.77			22.5	1.017			
1.2	1.0	0.000	11.70	11.70	72	72	72.0	22.2	10	10	105.80	117.6	11.80	22	22	22	1.011	#DIV/0!	VALID	VALID
1.2	1.0	0.000	11.71	11.71	72	72	72.0	22.2	10	10	117.60	129.40	11.80	22	22	22	1.011	#DIV/0!	VALID	VALID
1.2	1.0	0.000	11.70	11.70	72	72	72.0	22.2	10	10	129.40	141.40	12.00	22	22	22	1.029	#DIV/0!	VALID	VALID
Average				11.71			72.0						11.87			22.0	1.017			
2.4	1.9	0.000	22.42	22.42	72	74	73.0	22.8	10	20	141.40	164.20	22.80	22	22	21.75	1.030	#DIV/0!	VALID	VALID
2.4	1.9	0.000	22.45	22.45	74	74	74.0	23.3	10	20	164.20	187.00	22.80	22	22	21.75	1.030	#DIV/0!	VALID	VALID
2.4	1.9	0.000	22.43	22.43	74	75	74.5	23.6	10	20	187.00	209.60	22.60	22	22	22	1.026	#DIV/0!	VALID	VALID
Average				22.44			73.8						22.73			21.8	1.029			
3.1	2.4	0.000	16.12	16.12	74	75	74.5	23.6	6	40	274.50	290.80	16.30	22	22	22	1.044	#DIV/0!	VALID	VALID
3.1	2.4	0.000	16.15	16.15	75	74	74.5	23.6	6	40	242.00	258.20	16.20	22	22	22	1.036	#DIV/0!	VALID	VALID
3.1	2.4	0.000	16.07	16.07	74	74	74.0	23.3	6	40	258.20	274.50	16.30	22	22	22	1.047	#DIV/0!	VALID	VALID
Average				16.11			74.3						16.27			22.0	1.042			
<b>AVERAGE =</b>																<b>1.026</b>				

Leak Check	Side B	WGM
Initial Value	0.00	290.80
Final Value	2.60	293.40
Time	1 min	1 min
Pass/Fail	PASS	PASS

**Side B**

Dry Gas Meter Values										Wet Gas Meter Values						Calibration		US EPA		
Δ H (° H <sub>2</sub> O)	Rotameter Middle of Band (L/min)	Volume (Vd)			Temperature			Time (min)	Δ M (hPa H <sub>2</sub> O)	Volume (Vw)			Temp (t <sub>w</sub> )			Factor Y	Tolerance ± 2%	Tolerance A >0.95, <1.0	Tolerance B Y (0.03)	
		Initial (L)	Final (L)	Total (L)	inlet (°F)	outlet (°F)	Avg (t <sub>a</sub> ) (°F)			(°C)	Initial (L)	Final (L)	Total (L)	inlet (°C)	outlet (°C)					Avg (t <sub>w</sub> ) (°C)
0.8	0.5	0.000	11.14	11.14	75	75	75.0	23.9	20	5	293.40	304.70	11.30	21.5	22	21.5	1.021	#DIV/0!	VALID	VALID
0.8	0.5	0.000	11.13	11.13	75	75	75.0	23.9	20	5	304.70	315.70	11.00	21.5	21	21.25	0.996	#DIV/0!	VALID	VALID
0.8	0.5	0.000	11.17	11.17	75	75	75.0	23.9	20	5	315.70	327.00	11.30	21	21	20.75	1.021	#DIV/0!	VALID	VALID
Average				11.14			75.0						11.20			21.2	1.013			
1.2	1.0	0.000	10.44	10.44	75	75	75.0	23.9	10	10	347.60	358.1	10.50	21	21	21	1.018	#DIV/0!	VALID	VALID
1.2	1.0	0.000	10.41	10.41	75	75	75.0	23.9	10	10	358.10	368.50	10.40	21	22	21.25	1.010	#DIV/0!	VALID	VALID
1.2	1.0	0.000	10.28	10.28	75	75	75.0	23.9	10	10	368.50	378.9	10.40	21.5	22	21.5	1.023	#DIV/0!	VALID	VALID
Average				10.37			75.0						10.43			21.3	1.017			
2.4	1.9	0.000	19.18	19.18	70	72	71.0	21.7	10	20	378.90	398.20	19.30	23.5	24	23.5	1.009	#DIV/0!	VALID	VALID
2.4	1.9	0.000	19.18	19.18	72	73	72.5	22.5	10	20	398.20	417.50	19.30	23.5	23	23.25	1.013	#DIV/0!	VALID	VALID
2.4	1.9	0.000	19.16	19.16	73	74	73.5	23.1	10	20	417.50	436.80	19.30	22.5	23	22.5	1.018	#DIV/0!	VALID	VALID
Average				19.18			72.3						19.30			23.1	1.013			
3.1	2.4	0.000	15.98	15.98	74	75	74.5	23.6	6	40	436.80	452.90	16.10	23	23	23	1.037	#DIV/0!	VALID	VALID
3.1	2.4	0.000	15.97	15.97	75	75	75.0	23.9	6	40	452.90	468.90	16.00	23	22	22.5	1.034	#DIV/0!	VALID	VALID
3.1	2.4	0.000	16.07	16.07	75	75	75.0	23.9	6	40	468.90	485.20	16.30	22	22	22	1.049	#DIV/0!	VALID	VALID
Average				16.00			74.8						16.13			22.5	1.040			
<b>AVERAGE =</b>																<b>1.021</b>				



## S-Type Pitot Tube Calibration

Pitot ID: 4' Inconel

Date: 1/31/2025

Calibrated By: PB

$C_{p(std)}$ : 0.998

Temperature (°F): 71.0

Static Pressure ("H<sub>2</sub>O): -0.45

Barometric Pressure ("Hg): 28.56

Average  $C_p$ : 0.820

Fan Speed (Hz)	Velocity (FPM)	$\Delta P_{(std)}$	Side A			Side B		
			$\Delta P_{(s)}$	$C_{p(s)}$	Deviation $C_{p(s)} - C_{p(avg)}$	$\Delta P_{(s)}$	$C_{p(s)}$	Deviation $C_{p(s)} - C_{p(avg)}$
20	1551	0.15	0.21	0.843	0.023	0.22	0.824	0.005
33	2686	0.45	0.65	0.830	0.010	0.63	0.843	0.024
45	3582	0.80	1.30	0.783	-0.038	1.30	0.783	-0.036
60	4566	1.30	1.90	0.826	0.005	1.90	0.826	0.007
			Average	<b>0.821</b>		Average	<b>0.819</b>	

Difference between  $C_{p(A)}$  and  $C_{p(B)}$  = **0.0016**

**PASS**



69 Industrial Park Rd E, Tolland CT 06084  
<https://www.environics.com/service-request>  
(860) 872-1111 info@environics.com

---

## SERVICE REPORT

---

**ATTN:** OLUWATOBI ODUMOYE, RWDI AIR INC.

**DATE OF SERVICE:** 2/18/2025

**MODEL NUMBER:** 4040

**SERIAL NUMBER:** 9357

**SERVICE TYPE:** RECALIBRATION

**NEXT CALIBRATION DUE:** 2/19/2026

**CONDITIONS AS OBSERVED AND WORK PERFORMED:**

- Unit powers up properly.
- Unit cleaned and Purged, data verified.
- All valves checked, ok.
- Checked for any software updates
- Voltages checked – 5v, -15v, +15v, 24v.
- Battery voltage checked.
- Unit leak tested.
- Tested all MFC's with each port.
- Zeros on each MFC checked/adjusted.
- Spans checked/adjusted on all MFCs.
- All MFCs recalibrated.
- Verified all MFCs @ 5 standard points, passed within 0.5%
- All cables and screw/nuts tightened, ok.

---

Service Technician



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### ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	4040	Temp:	32°F	MFC #:	1
Unit SN :	9357	Pressure:	29.92 in. Hg	MFC FS Flow:	10000
		Gas:	NITROGEN	MFC S/N:	1139305001

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

#### Flow Calibration Data

	Set Flow	True Flow
5%	500	525.343
10%	1000	1095.587
20%	2000	2137.615
30%	3000	3205.021
40%	4000	4221.568
50%	5000	5231.293
60%	6000	6265.122
70%	7000	7245.414
80%	8000	8231.678
90%	9000	9231.318
100%	10000	10246.148

All values in SCCM

#### Flow Verification Data

	Set Flow	True Flow	% dev
99%	9900	9920.511	0.21%
85%	8500	8516.374	0.19%
55%	5500	5510.749	0.20%
25%	2500	2498.806	-0.05%
10%	1000	999.659	-0.03%

All values in SCCM

This calibration complies with ISO 17025-2005 [non-accredited] and is traceable to the National Institute of Standards and Technology (NIST). Calibration and verification are accomplished exclusively by qualified personnel following controlled procedures under ISO 9001:2015. For questions or concerns, contact Customer Service via our website, email or by phone, weekdays from 8AM - 4PM.

Verified by: Paul Stansel

Date: 2/18/25



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### ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	4040	Temp:	32°F	MFC #:	2
Unit SN :	9357	Pressure:	29.92 in. Hg	MFC FS Flow:	10000
		Gas:	NITROGEN	MFC S/N:	1139305002

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

#### Flow Calibration Data

	Set Flow	True Flow
5%	500	485.566
10%	1000	989.496
20%	2000	1971.168
30%	3000	2949.569
40%	4000	3879.265
50%	5000	4847.373
60%	6000	5759.158
70%	7000	6772.531
80%	8000	7811.737
90%	9000	8938.426
100%	10000	10199.214

All values in SCCM

#### Flow Verification Data

	Set Flow	True Flow	% dev
99%	9900	9913.500	0.14%
85%	8500	8501.889	0.02%
55%	5500	5524.165	0.44%
25%	2500	2503.831	0.15%
10%	1000	1004.665	0.47%

All values in SCCM

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Verified by: Paul Stansel

Date: 2/18/25



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### ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	4040	Temp:	32°F	MFC #:	3
Unit SN :	9357	Pressure:	29.92 in. Hg	MFC FS Flow:	1000
		Gas:	NITROGEN	MFC S/N:	1139307001

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

#### Flow Calibration Data

	Set Flow	True Flow
5%	50	48.103
10%	100	99.793
20%	200	203.267
30%	300	307.626
40%	400	410.526
50%	500	513.362
60%	600	616.603
70%	700	718.835
80%	800	822.614
90%	900	924.398
100%	1000	1028.378

All values in SCCM

#### Flow Verification Data

	Set Flow	True Flow	% dev
99%	990	992.290	0.23%
85%	850	852.248	0.26%
55%	550	551.812	0.33%
25%	250	250.618	0.25%
10%	100	99.904	-0.10%

All values in SCCM

This calibration complies with ISO 17025-2005 [non-accredited] and is traceable to the National Institute of Standards and Technology (NIST). Calibration and verification are accomplished exclusively by qualified personnel following controlled procedures under ISO 9001:2015. For questions or concerns, contact Customer Service via our website, email or by phone, weekdays from 8AM - 4PM.

Verified by: Paul Stanse 1

Date: 2/18/25



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### ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	4040	Temp:	32°F	MFC #:	4
Unit SN :	9357	Pressure:	29.92 in. Hg	MFC FS Flow:	100
		Gas:	NITROGEN	MFC S/N:	1139309001

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

#### Flow Calibration Data

	Set Flow	True Flow
5%	5	4.855
10%	10	10.083
20%	20	20.368
30%	30	30.776
40%	40	40.987
50%	50	51.102
60%	60	61.361
70%	70	71.606
80%	80	81.733
90%	90	91.966
100%	100	102.212

All values in SCCM

#### Flow Verification Data

	Set Flow	True Flow	% dev
99%	99	99.133	0.13%
85%	85	84.995	-0.01%
55%	55	55.110	0.20%
25%	25	25.058	0.23%
10%	10	10.030	0.30%

All values in SCCM

This calibration complies with ISO 17025-2005 [non-accredited] and is traceable to the National Institute of Standards and Technology (NIST). Calibration and verification are accomplished exclusively by qualified personnel following controlled procedures under ISO 9001:2015. For questions or concerns, contact Customer Service via our website, email or by phone, weekdays from 8AM - 4PM.

Verified by: Paul Stanse

Date: 2/18/25

The page features a decorative background with a blue curved shape in the top-left corner and a large grey curved shape that dominates the lower and right portions of the page.

# APPENDIX I

## List of Participants

Individuals	Role	Company	Contact Information
Karri Legarrie	Project Management	RWDI	<a href="mailto:Karri.Legarrie@rwdi.com">Karri.Legarrie@rwdi.com</a>
Oluwatobi Odumoye, QSTI	Stack Sampling	RWDI	<a href="mailto:Oluwatobi.Odumoye@rwdi.com">Oluwatobi.Odumoye@rwdi.com</a>
Preet Bhamrah	Stack Sampling	RWDI	<a href="mailto:Preet.Bhamrah@rwdi.com">Preet.Bhamrah@rwdi.com</a>
Alexandre Langlais-Bourassa	Environmental Coordinator	Agnico Eagle Mines - Meliadine	<a href="mailto:Alexandre.Langlais-Bourassa@agnicoeagle.com">Alexandre.Langlais-Bourassa@agnicoeagle.com</a>
Robert Chin	Lab Analysis	ALS Environmental Laboratory	<a href="mailto:Robert.Chin@alsglobal.com">Robert.Chin@alsglobal.com</a>



# Source Evaluation Society

**P. O. Box 12124  
Research Triangle Park  
North Carolina 27709**

October 26, 2021

Oluwatobi O. Odumoye  
RWDI  
15 Columbus Crescent  
Guelph, Ontario N1G 3A7  
CANADA

Subject: Qualified Source Tester Certificate No. 2021-1102

**Qualification Notice - Manual Gas Volume Measurements and Isokinetic  
Particulate Sampling Methods** (exam date: 3/3/21)  
**Qualification Notice - Gaseous Pollutants Instrumental Sampling Methods**  
(exam date: 6/27/21)  
**Qualification Notice - Hazardous Metals Measurement Sampling Methods**  
(exam date: 3/26/21)

Dear Mr. Odumoye:

It is my pleasure to inform you that you have satisfied the requirements of the Source Evaluation Society Qualified Source Test Individual program for group exam(s) listed above. As a member of the successful candidates in this SES program, you should be proud of this distinction within the source emissions testing community. I am confident that you will continue to uphold the standards of technical excellence and ethical conduct embodied in the SES mission statement.

The enclosed Qualification Notice(s) and SES identification card are your permanent record of this achievement. This status is valid for the period shown on the Qualification Notices.

Congratulations on your achievement and I wish you continued success in your future endeavors.

Sincerely yours,

Peter R. Westlin  
SES QSTI/QSTO Review Committee Chairman

cc: Glenn England, SES QSTI/QSTO Review Board Member  
Karen D. Kajiya-Mills, SES QSTI/QSTO Review Board Member  
Peter S. Pakalnis, SES QSTI/QSTO Review Board Member  
Theresa M. Lowe, SES QSTI/QSTO Review Committee Administrator  
Bruce C. Randall, SES QSTI/QSTO Review Board Member  
J. Wade Bice, SES QSTI/QSTO Review Board Member  
Tina Sanderson, SES QSTI/QSTO Review Board Member



# Source Evaluation Society

**P. O. Box 12124  
Research Triangle Park  
North Carolina 27709**

An idea was introduced at the 2006 SSSAAP conference to list those individuals who have received their QSTI qualification approvals on the SES web site. The SES Board of Directors determined that individuals would have to approve in writing before making public such information. The QSTI Committee would like your permission to post the information shown below on the SES web site for public view. This information will be provided on the website as a link to an Excel spreadsheet. Your information will be listed as below or with any changes you indicate:

Name	Oluwatobi O. Odumoye		
Company	RDWI		
City/State/Zip:	Guelph, Ontario N1G 3A7		
Contact Info.:	<a href="mailto:oo@rwdi.com">oo@rwdi.com</a> ; <a href="mailto:iodumoye@gmail.com">iodumoye@gmail.com</a>		
Any Addit. Info:			
Passed:	Group 1	Exam Date: 3/3/21	Valid From - To: 03/03/2021 to 03/02/2026
	Group 3	Exam Date: 6/27/21	Valid From - To: 06/27/21 to 06/26/2026
	Group 4	Exam Date: 3/26/21	Valid From - To: 03/26/2021 to 03/25/2026
QSTI Certificate #:	2021-1102		

You may view the current spreadsheet format at the SES website at [www.sesnews.org](http://www.sesnews.org). If you agree to your name and information being posted, please sign below and email to Theresa Lowe at [gstiprogram@gmail.com](mailto:gstiprogram@gmail.com). Also, if you wish to have your contact information listed other than your email address, please note any changes above (e.g., an address, telephone or a cell phone number, etc.). Any further changes or additions will need to be made in writing and emailed to Theresa Lowe at [gstiprogram@gmail.com](mailto:gstiprogram@gmail.com).

Thank you,

Theresa Lowe  
SES QSTI/QSTO Review Committee Administrator

*I give the SES QSTI/QSTO Review Committee approval to have my name and information as outlined above to be posted on the SES web site. Any changes have been noted above. This approval extends to any future exams for which I receive a QSTI or QSTO Qualification Approval(s).*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DO YOU APPROVE SES RELEASING INFORMATION, UPON REQUEST, ABOUT WHETHER YOU HAVE PASSED A METHOD GROUP EXAM? (The information released will be if you passed an exam and the date of the exam. This information is in support of ASTM D-7036-D.) YES  NO  IF YOU AGREE, PLEASE SIGN BELOW.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# SOURCE EVALUATION SOCIETY



## Qualified Source Testing Individual

LET IT BE KNOWN THAT

### OLUWATOBI O. ODUMOYE

HAS SUCCESSFULLY PASSED A COMPREHENSIVE EXAMINATION AND SATISFIED EXPERIENCE REQUIREMENTS IN ACCORDANCE WITH THE GUIDELINES ISSUED BY THE SES QUALIFIED SOURCE TEST INDIVIDUAL REVIEW BOARD FOR

#### **MANUAL GAS VOLUME MEASUREMENTS AND ISOKINETIC PARTICULATE SAMPLING METHODS**

ISSUED THIS 3<sup>RD</sup> DAY OF MARCH 2021 AND EFFECTIVE UNTIL MARCH 2<sup>ND</sup>, 2026

Peter R. Westlin, QSTI/QSTO Review Board

Peter S. Pakalnis, QSTI/QSTO Review Board

Tina Sanderson, QSTI/QSTO Review Board

J. Wade Bice, QSTI/QSTO Review Board

Karen D. Kajiya-Mills, QSTI/QSTO Review Board

Bruce Randall QSTI/QSTO Review Board

CERTIFICATE  
NO.  
2021-1102



# SOURCE EVALUATION SOCIETY



## Qualified Source Testing Individual

LET IT BE KNOWN THAT

### OLUWATOBI O. ODUMOYE

HAS SUCCESSFULLY PASSED A COMPREHENSIVE EXAMINATION AND SATISFIED EXPERIENCE REQUIREMENTS IN ACCORDANCE WITH THE GUIDELINES ISSUED BY THE SES QUALIFIED SOURCE TEST INDIVIDUAL REVIEW BOARD FOR

#### **GASEOUS POLLUTANTS INSTRUMENTAL SAMPLING METHODS**

ISSUED THIS 27<sup>TH</sup> DAY OF JUNE 2021 AND EFFECTIVE UNTIL JUNE 26<sup>TH</sup>, 2026

Peter R. Westlin, QSTI/QSTO Review Board

Peter S. Pakalnis, QSTI/QSTO Review Board

Tina Sanderson, QSTI/QSTO Review Board

J. Wade Bice, QSTI/QSTO Review Board

Karen D. Kajiya-Mills, QSTI/QSTO Review Board

Bruce Randall QSTI/QSTO Review Board

CERTIFICATE  
NO.  
2021-1102



# SOURCE EVALUATION SOCIETY



## Qualified Source Testing Individual

LET IT BE KNOWN THAT

### OLUWATOBI O. ODUMOYE

HAS SUCCESSFULLY PASSED A COMPREHENSIVE EXAMINATION AND SATISFIED EXPERIENCE REQUIREMENTS IN ACCORDANCE WITH THE GUIDELINES ISSUED BY THE SES QUALIFIED SOURCE TEST INDIVIDUAL REVIEW BOARD FOR

#### **HAZARDOUS METALS MEASUREMENT SAMPLING METHODS**

ISSUED THIS 26<sup>TH</sup> DAY OF MARCH 2021 AND EFFECTIVE UNTIL MARCH 25<sup>TH</sup>, 2026

Peter R. Westlin, QSTI/QSTO Review Board

Peter S. Pakalnis, QSTI/QSTO Review Board

Tina Sanderson, QSTI/QSTO Review Board

J. Wade Bice, QSTI/QSTO Review Board

Karen D. Kajiya-Mills, QSTI/QSTO Review Board

Bruce Randall QSTI/QSTO Review Board

CERTIFICATE  
NO.  
2021-1102

