

DURHAM YORK ENERGY CENTRE

COURTICE, ONTARIO

2024 Q3 AMBIENT AIR QUALITY MONITORING REPORT

RWDI #2505260

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SUBMITTED TO

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Regional Clerk or Designate**

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1 INTRODUCTION

RWDI AIR Inc. (RWDI) was retained by Durham Region and York Region (the Regions) to conduct discrete and continuous air quality ambient monitoring at the Durham York Energy Centre (DYEC) monitoring stations. The facility address is 1835 Energy Drive, Clarington, Ontario. The DYEC is a facility that manages post diversion municipal solid waste from Durham Region and York Region to create energy from waste combustion. Commercial operation of the DYEC commenced on February 1, 2016. The site location is shown below in Figure 1.

Condition 11 of the Environmental Assessment Notice of Approval and Condition 7(4) of the Environmental Compliance Approval (ECA) requires ambient air monitoring to be undertaken by the DYEC. An Ambient Air Monitoring and Reporting Plan was prepared and approved by the Ministry of Environment, Conservation and Parks (MECP) to satisfy these conditions. Two (2) monitoring stations were established to monitor ambient air quality around the DYEC and quantify the background ambient air quality levels and DYEC contributed emissions to ambient air quality levels.

This monitoring plan was developed based on the Regional Council mandate to provide ambient monitoring in the area of the DYEC. The purposes of the ambient monitoring program are to:

- Quantify any measurable ground level concentrations resulting from emissions from the DYEC cumulative to local air quality, including validating the predicted concentrations from the dispersion modelling conducted in the Environmental Assessment (2009a);
- Monitor concentration levels of EFW-related air contaminants in nearby residential areas; and,
- Quantify background ambient levels of air contaminants in the area.

The facility has two (2) monitoring stations which collect continuous and discrete ambient measurements, known as the Courtice station and Rundle Road station. The station locations are shown in Figure 1. The Courtice and Rundle Road stations were operational in May of 2013 and have been operated on behalf of the Region of Durham by Stantec Consulting Ltd. since that time up until July 31, 2018. RWDI has overseen the operation of the stations on behalf of the Region of Durham since August 1, 2018.

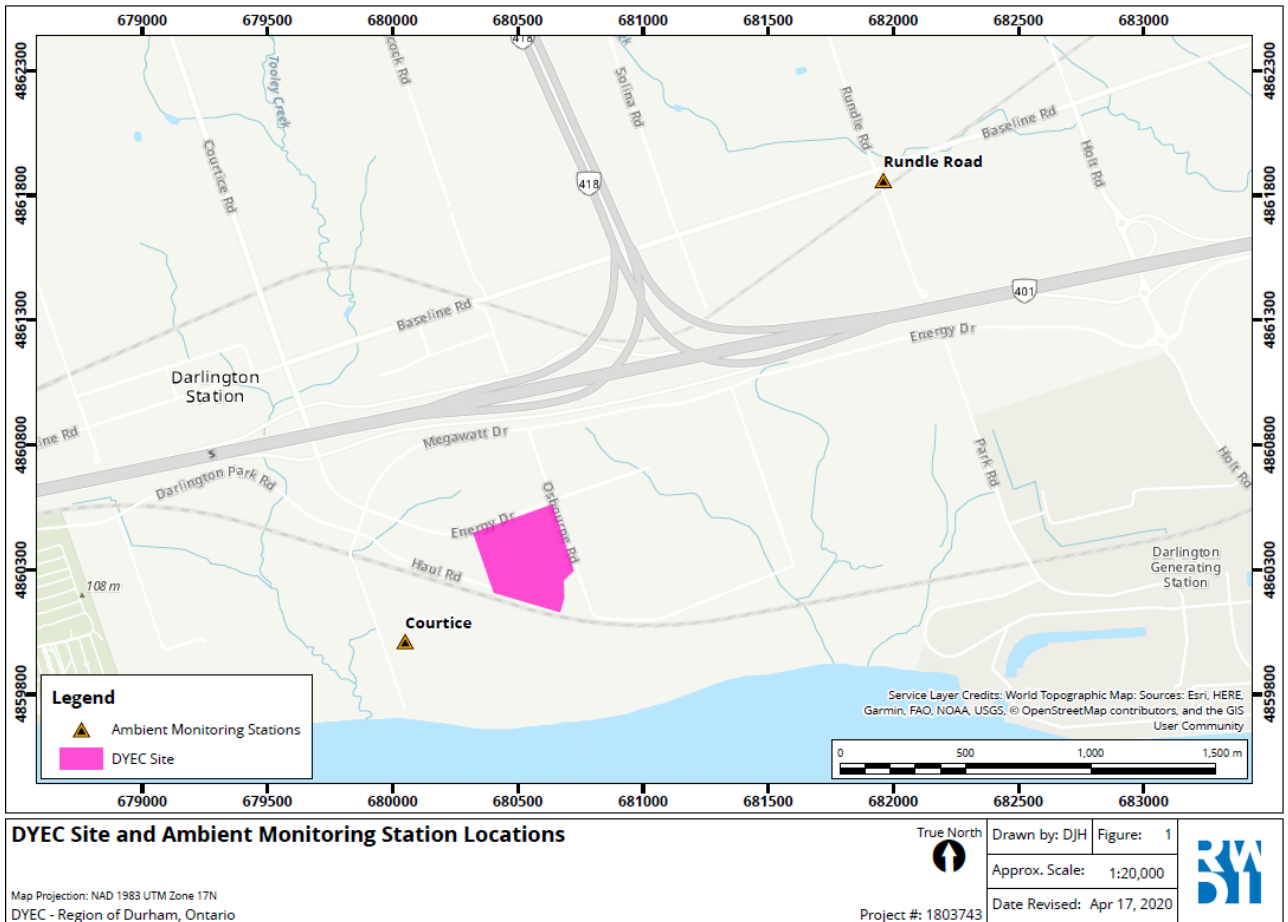
The Courtice and Rundle Road stations continuously monitor the following air quality parameters: Particulate Matter less than 2.5 microns (PM_{2.5}), Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂). In addition, both discretely monitor the following air quality parameters: Total Suspended Particulate (TSP), Metals, Dioxins and Furans (D&F) and Polycyclic Aromatic Hydrocarbons (PAHs).

Continuous meteorological data is collected at the Courtice and Rundle Road stations. The Rundle Road station collects the following meteorological parameters: wind speed, wind direction, ambient temperature, precipitation and relative humidity. The Courtice station collects the following meteorological parameters: wind speed, wind direction, ambient temperature, ambient pressure, precipitation and relative humidity. The meteorological towers at both stations are approximately 10 meters tall.



Throughout this monitoring period there were one-hundred and fifty-six (156) exceedance events of the rolling 10-minute SO₂ AAQC and seventy (70) exceedance events of the rolling 1-hour SO₂ AAQC at the Courtice station. There was only 1 exceedance of the Benzo(a) Pyrene AAQC at Rundle Road station. Data recovery rates were acceptable and valid for all measured Q3 continuous and discrete parameters.

Figure 1: DYEC Site and Ambient Monitoring Station Locations



1.1 Sampling Locations

The station sites were selected in consultation with a working group that included representatives from the MECP, the Region of Durham, York Region, and the Energy from Waste Advisory Committee (EFWAC), as required by Condition 11.3 of the Environmental Assessment Notice of Approval. The Courtice station is predominantly upwind of the DYEC and is located on the Courtice WPCP property just southwest of the DYEC. The Rundle Road station is predominantly downwind of the DYEC and is located just southeast of the intersection of Baseline Road and Rundle Road just northeast of the DYEC. Pictures of the two (2) stations are presented as **Figure 2** and **3**.

Figure 2: Rundle Road Station



Figure 3: Courtice Station



2 SAMPLING METHODOLOGY

The Rundle Road and Courtice stations are both equipped with the following continuous monitors: Thermo Scientific Model 5030 SHARP (Synchronized Hybrid Ambient Real-time Particulate) monitor (PM_{2.5} analyzer), Teledyne Nitrogen Oxides Analyzer Model T200 (NO_x analyzer), and a Teledyne Sulfur Dioxide Analyzer Model T100 (SO₂ analyzer). Both stations also have the following periodic monitors: High Volume (Hi-Vol) Air Sampler outfitted with a TSP inlet head as approved by the United States Environmental Protection Agency (U.S. EPA), and a Hi-Vol Air Sampler outfitted with a polyurethane foam plug and circular quartz filter for measuring PAH's and D&F's as approved by U.S. EPA.

2.1 Nitrogen Oxide Analyzers

The Teledyne T200 Nitrogen Oxide (NO_x) analyzers use chemiluminescence detection, coupled with microprocessor technology to provide sensitivity and stability for ambient air quality applications. The instrument determines real-time concentration of nitric oxide (NO), total nitrogen oxides (NO_x) (the sum of NO and NO₂), and nitrogen dioxide (NO₂). The amount of NO is measured by detecting the chemiluminescence reaction that occurs in the reaction cell when NO molecules are exposed to ozone (O₃). The NO and O₃ molecules collide in the reaction cell and enter a higher energy state.

When these excited molecules return to a stable energy state, they emit a photon of light which is proportional to the amount of NO in the sample stream of gas entering the analyzer.



To determine the total NO_x (NO+NO₂) measurement, sample gas is periodically bypassed through a heated molybdenum converter cartridge that converts any NO₂ molecules in the sample stream into NO (any existing NO molecules in the stream remain as is). The instrument will switch the sample stream through the converter periodically and then through the reaction cell where the same chemiluminescence reaction occurs with ozone.

The resultant response produced is now the sum of NO and converted NO₂ producing a NO_x measurement. The resultant NO₂ determination is the NO_x measurement subtracted from the NO measurement.

The NO_x analyzers were zero and span checked daily using the internal zero and span (IZS) system and calibrated once a month using either EPA protocol span gases and a dilution system or an ESA permeation tube calibrator. Automatic IZS checks were performed on a daily basis commencing at approximately 01:45 and ending at 02:15. The checks consisted of a 10-minute zero check, a 10-minute span check and a 10-minute purge. These checks provide a way to monitor daily performance of the analyzer using an external charcoal and purafil zeroing cartridge for the zero, and an internal permeation oven with a permeation tube for the span. These IZS checks are not for calibration purposes but are merely a diagnostic tool to identify instrument drift.

The instrument collects data using its own data acquisition system (DAS) on a 5-minute interval. Data is collected from the instrument directly to an EnviDAS logger at 1-min, 5-min and 60-min intervals. The logger can be accessed remotely, and all instrument parameters can be examined as well as the measurement data. This allows the tracking of instrument performance. Data was also collected at 1-minute intervals by an external datalogger using analog output connections as a back-up. The measurement data was averaged using Envista processing software over a 1-hour and 24-hour period to compare to the applicable ambient air quality criteria.

2.2 Sulphur Dioxide Analyzers

The Teledyne T100 Sulphur Dioxide (SO₂) Analyzer is a microprocessor-controlled analyzer that determines the concentration of SO₂ in a sample gas drawn through the instrument. In the sample chamber, sample gas is excited by ultraviolet light causing the SO₂ to absorb energy from the light and move to an active state (SO₂*). These active SO₂* molecules must decay into a stable state back to SO₂, and when this happens a photon of light is released which is recognized by the instrument as fluorescence. The instrument measures the amount of fluorescence to determine the amount of SO₂ present in the sample gas.

The SO₂ analyzers were zero and span checked daily using the IZS system and calibrated once a month using either EPA protocol span gases and a dilution system or an ESA permeation tube calibrator. Automatic IZS checks were performed on a daily basis commencing at approximately 01:45 and ending at 02:15. The checks consisted of a 10-minute zero check, a 10-minute span check and a 10-minute purge. These checks provide a way to monitor daily performance of the analyzer using an external charcoal and purafil zeroing cartridge for the zero, and an internal permeation oven with a permeation tube for the span. These IZS checks are not for calibration purposes but are merely a diagnostic tool to identify instrument drift.



The instrument collects data using its own data acquisition system (DAS) on a 5-minute interval. Data is collected from the instrument directly to an EnviDAS logger at 1-min, 5-min and 60-min intervals. The logger can be accessed remotely, and all instrument parameters can be examined as well as the measurement data. This allows the tracking of instrument performance. Data was also collected at 1-minute intervals by an external datalogger using analog output connections as a back-up. The measurement data was averaged using Envista processing software over a 1-hour and 24-hour period to compare to the applicable ambient air quality criteria.

2.3 SHARP 5030 PM_{2.5} Analyzers

The SHARP 5030 is a hybrid nephelometric/radiometric particulate mass monitor capable of providing precise, real-time measurements with a superior detection limit. The SHARP incorporates a high sensitivity light scattering photometer whose output signal is continuously referenced to the time-averaged measurement of an integral beta attenuating mass sensor. The SHARP also incorporates a dynamic inlet heating system designed to maintain the relative humidity of the air passing through the filter tape constant.

The SHARP is calibrated once a month to ensure accuracy and validity of its data. The PM_{2.5} inlet head and sharp cut cyclone is cleaned monthly as well to ensure proper performance. The monthly calibration process consists of the following: zeroing the nephelometer if necessary, calibration of ambient temperature, calibration of barometric pressure, and calibration of the flow.

The instrument collects data using its own data acquisition system (DAS) on a 5-minute interval. Data is collected from the instrument directly to an EnviDAS logger at 1-min, 5-min and 60-min intervals. The logger can be accessed remotely, and all instrument parameters can be examined as well as the measurement data. This allows the tracking of instrument performance. Data was also collected at 1-minute intervals by an external datalogger using analog output connections as a back-up. The measurement data was averaged using Envista processing software over a 1-hour and 24-hour period to compare to the applicable ambient air quality criteria.

2.4 TSP High Volume Air Samplers

The Tisch TE-5170 Total Suspended Particulate (TSP) high volume (Hi-Vol) air samplers were outfitted with a TSP gabled inlet capable of collecting particulate of all aerodynamic diameters. Each Hi-Vol is equipped with a mass flow controller, which ensures a flow rate of 40 cubic feet per minute (CFM), a chart recorder for measuring cfm flow throughout the run time, an elapsed timer and a wheel timer for starting and stopping each sample. In the latter part of 2019, the pin-based wheel timer was modified with an automated relay system controlled by a data logger to toggle the sampler on and off, and the chart recorder system was replaced by a digital pressure transducer to record the blower output pressure. Teflon coated glass fibre filters are outfitted at the top of the hi-vol samplers where air is drawn through the filter, thereby collecting TSP. Each Hi-Vol is calibrated quarterly (every three months) to ensure accuracy and validity of the volume of air drawn through the sampler.

The Teflon coated glass fibre filter media was pre and post weighed by ALS Laboratories in Burlington, Ontario. The filters are then analyzed for total particulate weight, metals analysis and mercury.



2.5 Polyurethane Foam Samplers

The D&F, and PAH samples were collected using Tisch TE-1000 samplers, which are listed as reference devices for U.S. EPA Methods TO-9 and TO-13. The samplers use a collection filter that is 'backed-up' by a polyurethane foam (PUF) plug. The airborne compounds present in the particulate phase are collected on the Teflon coated glass fibre filter and any compounds present in the vapour phase are absorbed in the PUF plug. Each PUF sampler is equipped with a mass flow controller, which can sustain 8 CFM of flow over the sampling period, an elapsed timer and a wheel timer for starting and stopping each sample.

In the latter part of 2019, the pin-based wheel timer was modified with an automated relay system controlled by a data logger to toggle the sampler on and off, and the chart recorder system was replaced by a digital pressure transducer to record the blower output pressure. Each PUF sampler is calibrated quarterly (every three months) to ensure accuracy and validity of the volume of air drawn through the sampler.

The filter and PUF media/glassware is proofed and analyzed by ALS Laboratories in Burlington, Ontario. The filters and PUF/XAD plugs are then analyzed for PAH's and D&F's.

2.6 Meteorological Towers

Meteorological data was collected from the Rundle Road and Courtice stations. This is done so that a vector could be associated with the applicable contaminant concentrations. The Rundle Road and Courtice stations are outfitted with a Campbell Scientific HMP60 Temperature / Relative Humidity probe, and a Texas Instruments TE525M rain gauge. Meteorological data was collected at 1-minute intervals and was averaged using Envista processing software over a 1-hour period.

3 AIR QUALITY CRITERIA AND STANDARDS

The monitored contaminant concentrations were compared to air quality criteria and standards set by the MECP and by Environment Canada. The MECP developed Ambient Air Quality Criteria (AAQCs) which are the maximum desirable concentrations in the outdoor air, based on effects to the environment and health (MECP, 2012). Not all contaminants have an applicable regulatory limit; therefore, other criteria were used for comparison. These included human health risk assessment (HHRA) criteria.

Environment Canada has established a Canadian Ambient Air Quality Standard (CAAQS) which are health-based air quality objectives for the outdoor air (Environment Canada, 2013). The current CAAQS' for PM_{2.5} are 27 µg/m³ for the 3-year average of annual 98th percentile 24-hour concentration, and 8.8 µg/m³ for the 3-year average of annual average concentrations (in effect as of 2020). The CAAQS' are listed in **Table 1**. No direct comparison to the 2020 CAAQS' is appropriate for this report, as the standards are only applicable to 3-year averaged data which is provided in the annual reports.



Table 1: PM_{2.5}, SO₂ and NO₂ CAAQS' by Implementation Year

Parameter	Averaging Time	Year Applied		Statistical Form
		2020	2025	
Fine Particulate Matter (PM _{2.5})	24-hour	27 µg/m ³		The 3-year average of the annual 98 th percentile of the daily 24-hour average concentrations
	Annual	8.8 µg/m ³		The 3-year average of the annual average of all 1-hour concentrations
Sulphur Dioxide (SO ₂)	1-hour	70 ppb	65 ppb	The 3-year average of the annual 99 th percentile of the SO ₂ daily maximum 1-hour average concentrations
	Annual	5 ppb	4 ppb	The average over a single calendar year of all 1-hour average SO ₂ concentrations
Nitrogen Dioxide (NO ₂)	1-hour	60 ppb	42 ppb	The 3-year average of the annual 98 th percentile of the daily maximum 1-hour average concentrations
	Annual	17 ppb	12 ppb	The average over a single calendar year of all 1-hour average concentrations

(CCME,2019)

All applicable criteria and standards are shown in the 'Summary of Ambient Measurements' section of this report.

4 MECP AUDITS

In Q3, there was a MECP audit conducted on August 1, 2024. All instruments met their respective audit criteria.

5 SUMMARY OF AMBIENT MEASUREMENTS

Ambient air quality monitoring results for all contaminants sampled at the Courtice and Rundle Road stations are discussed herein. Summary statistics from July to September 2024 are presented in a summary format below and in a more detailed matrix format in **Appendix A** for continuous measurements and **Appendix B** for discrete measurements.

5.1 Meteorological Station Results

5.1.1 Courtice Station Results

The Courtice station collected the following meteorological parameters: wind speed, wind direction, relative humidity, ambient temperature, ambient pressure, and precipitation. The meteorological tower at the station is at a height of approximately 10 meters tall. The Courtice station maintained an average of 97.4% of data collection for all of the parameters measured during Q3.



Hourly statistics from the meteorological station are presented in **Table 2**. A wind rose showing trends in wind speed and wind direction during Q3 is provided in **Figure 4**. A wind direction cut-off was applied for wind speeds less than or equal to 1.8 kph for the wind rose.

Figure 4: Wind Roses of Hourly Wind Speed and Wind Direction – July to September 2024

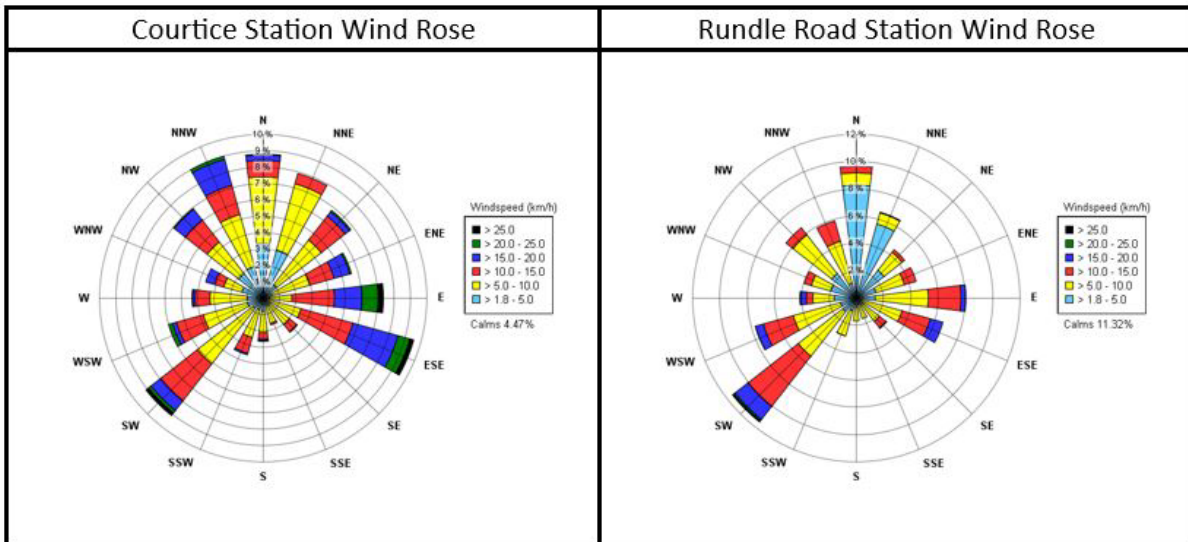


Table 2: Hourly Statistics from the Courtice Meteorological Station

Courtice Station MET Statistics	Maximum 1 hr. Mean					Minimum 1 hr. Mean					Monthly Mean					Total	% Valid hours						
	Parameter	WS	Temp	RH	Pres	Rain	WS	Temp	RH	Pres	Rain	WS	Temp	RH	Pres		Rain	Rain	WS	WD	Temp	RH	Pres
Units	(km/hr.)	(C)	(%)	Hg	mm	(km/hr.)	(C)	(%)	Hg	mm	(km/hr.)	(C)	(%)	Hg	mm	mm	(%)						
July	21.9	29.2	100.0	30.0	23.4	0.2	11.8	39.9	29.4	0.0	7.7	21.9	78.4	29.7	0.2	111.4	98.9	98.9	98.9	98.9	98.9	98.9	98.9
August	34.0	29.5	100.0	30.0	13.2	0.2	10.7	39.0	29.4	0.0	9.0	20.9	76.3	29.7	0.1	60.4	99.6	99.6	99.6	99.6	99.6	99.6	99.6
September	26.6	25.0	100.0	30.1	13.8	0.2	7.6	33.8	29.5	0.0	10.6	18.9	76.7	29.8	0.1	57.4	93.5	93.5	93.5	93.5	93.5	93.5	93.5
Q3 Arithmetic Mean											9.1	20.6	77.1	29.7	0.1	229.2	97.4	97.4	97.4	97.4	97.4	97.4	97.4

5.1.2 Rundle Road Station Results

The Rundle Road station collected the following meteorological parameters: wind speed, wind direction, relative humidity, ambient temperature, and precipitation. The meteorological tower at the station is at a height of approximately 10 meters tall. The Rundle Road station maintained a minimum average of 100.0% data collection for all of the meteorological parameters measured during Q3. Hourly statistics from the meteorological station is presented in **Table 3**. A wind rose showing trends in wind speed and wind direction during Q3 is provided in **Figure 4**. A wind direction cut-off was applied for wind speeds less than or equal to 1.8 kph for the wind rose.

Table 3: Hourly Statistics from the Rundle Road Meteorological Station

Rundle Road Station MET Statistics	Maximum 1 hr. Mean				Minimum 1 hr. Mean				Monthly Mean				Total	% Valid Hours					
	Parameter	WS	Temp	RH	Rain	WS	Temp	RH	Rain	WS	Temp	RH		Rain	Rain	WS	WD	Temp	RH
Units	(km/hr.)	(C)	(%)	mm	(km/hr.)	(C)	(%)	mm	(km/hr.)	(C)	(%)	mm	mm	(%)					
July	19.4	28.4	100.0	22.6	0.0	11.4	40.0	0.0	6.2	21.4	80.7	0.1	102.2	100.0	100.0	100.0	100.0	100.0	100.0
August	28.2	30.1	100.0	16.5	0.1	10.0	40.0	0.0	6.7	20.2	80.9	0.1	64.4	100.0	100.0	100.0	100.0	100.0	100.0
September	20.8	26.2	100.0	12.9	0.1	7.3	35.6	0.0	6.8	17.6	83.4	0.1	73.6	100.0	100.0	100.0	100.0	100.0	100.0
Q3 Arithmetic Mean									6.6	19.7	81.5	0.1	240.2	100.0	100.0	100.0	100.0	100.0	100.0

5.2 NO_x, SO₂ and PM_{2.5} Summary Table Results

Table 4 provides a summary of Maximum 1-hour Rolling Means, Maximum 24-hour Rolling Means, Monthly Means, Quarterly Means and Percent valid data for the Courtice station. **Table 5** provides a summary of Maximum 1-hour Means, Maximum 24-hour Means, Monthly Means, Quarterly Means and Percent valid data for the Rundle Road station. **Table 6** provides a summary of exceedance statistics for both Courtice and Rundle Road stations. At the Courtice station, there were one-hundred and fifty-six (156) exceedance events of the rolling 10-minute SO₂ AAQC and seventy (70) exceedance events of the 1-hour SO₂ AAQC in Q3. At the Rundle Road station, there were no exceedance events of the rolling 10-minute SO₂ AAQC or the 1-hour SO₂ AAQC in Q3.



Table 4: Summary of Courtice Station Continuous Data Statistics

Courtice Monitoring Station Data Statistics	Maximum Rolling 10 min Mean	Maximum Rolling 1 hr Mean					Maximum 24 hr Rolling Mean					Monthly Mean					% Valid Hours					
Compound	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	
Units	ppb	(µg/m ³)	ppb				(µg/m ³)	ppb				(µg/m ³)	ppb				(%)					
AAQC/CAAQS	67				200	40	27 ^A				100											
July	142.1	328.5	36.4	16.0	22.9	43.7	19.6	9.7	2.9	8.4	10.0	7.3	5.4	0.9	4.5	2.4	95.3	98.5	98.5	98.5	98.5	
August	412.2	23.2	40.3	20.8	33.9	132.1	17.7	11.2	2.8	9.9	29.9	6.9	5.4	1.1	4.4	6.1	98.9	98.9	98.9	98.9	98.9	
September	390.6	23.0	54.3	26.2	33.5	135.7	13.4	17.3	6.0	11.3	22.7	5.7	6.6	1.3	5.3	5.0	93.3	93.2	93.2	93.2	93.3	
Q3 Arithmetic Mean												6.6	5.8	1.1	4.7	4.5	95.8	96.9	96.9	96.9	96.9	

^A The 24-hour PM_{2.5} CAAQS applies to the 98th percentile over 3 consecutive years.

Table 5: Summary of Rundle Road Station Continuous Data Statistics

Rundle Road Monitoring Station Data Statistics	Maximum Rolling 10 min Mean	Maximum Rolling 1 hr Mean					Maximum 24 hr Rolling Mean					Monthly Mean					% Valid Hours					
Compound	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	
Units	ppb	(µg/m ³)	ppb				(µg/m ³)	ppb				(µg/m ³)	ppb				(%)					
AAQC/CAAQS	67				200	40	27 ^A				100											
July	2.2	21.3	135.7	91.3	44.4	1.6	12.5	23.7	13.2	10.6	0.7	6.3	4.7	1.3	3.5	0.3	96.5	99.6	99.6	99.6	97.0	
August	2.7	16.8	48.2	19.3	28.9	1.4	13.3	7.1	2.2	5.6	0.5	5.6	3.2	0.8	2.4	0.3	99.6	99.6	99.6	99.6	99.5	
September	2.2	24.9	88.1	59.7	32.3	1.2	10.2	12.3	5.5	8.2	0.5	4.8	5.0	1.5	3.6	0.3	99.9	99.6	99.6	99.6	99.7	
Q3 Arithmetic Mean												5.6	4.3	1.2	3.2	0.3	98.6	99.6	99.6	99.6	98.7	

^A The 24-hour PM_{2.5} CAAQS applies to the 98th percentile over 3 consecutive years.

Table 6: Summary of Exceedance Statistics

Event Statistics	Rolling Mean > 10 min AAQC for Courtice	Rolling Mean > 10 min AAQC for Rundle Road	Mean > 1 hr AAQC for Courtice Monitoring Station			Mean > 1 hr AAQC for Rundle Road Monitoring Station			Rolling Mean > 24 hr AAQC for Courtice Monitoring Station			Rolling Mean > 24 hr AAQC for Rundle Road Monitoring Station		
Compound	SO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂
Units	No.	No.	No.			No.			No.			No.		
July	13	0		0	4		0	0	N/A	0		N/A	0	
August	95	0		0	42		0	0	N/A	0		N/A	0	
September	48	0		0	24		0	0	N/A	0		N/A	0	
Q3 Total	156	0		0	70		0	0	N/A	0		N/A	0	



5.3 Oxides of Nitrogen Results

5.3.1 Courtice Station Results

Data recovery levels were high for oxides of nitrogen (96.9% valid data). Monitoring results were compared to the AAQC for NO₂ only, as it is the only parameter that has AAQC values for 1-hour and 24-hour averaging periods (there are no AAQC's for NO or NO_x). There were no exceedances above the AAQC values for the entirety of the sampling period for rolling 1-hour and 24-hour averaged data. The highest NO₂ value seen among the 1-hour rolling averages was 33.9 ppb, which is 17.0% of the AAQC. The highest NO₂ value seen among the rolling 24-hour averages was 11.3 ppb, which is 11.3% of the AAQC. The measurements are summarized in **Table 4** above. A pollution rose is presented in **Figure 5** for the Courtice station during Q3 composed of hourly average NO₂ concentrations. A pollution rose indicates the percentage of time that the wind originates from a given direction coupled with the pollutant measurement for that time in either ppb or micrograms per meter cubed. In order to show where possible major sources of pollutants are coming from, levels below 5 ppb were omitted from the graphic wind rose representation.

The Courtice station pollution rose in **Figure 5** shows the majority of the NO₂ impacts were largely from the north-northwest to east-northeast. The station is downwind of the DYEC when winds are from the northeast and east-northeast directions, which happened periodically during the monitoring period, therefore it is likely that the DYEC contributed to the observed concentrations from those directions. There are additional impacts from the east, and northwest, which indicates reception from surrounding industry or the highway and railway corridors.

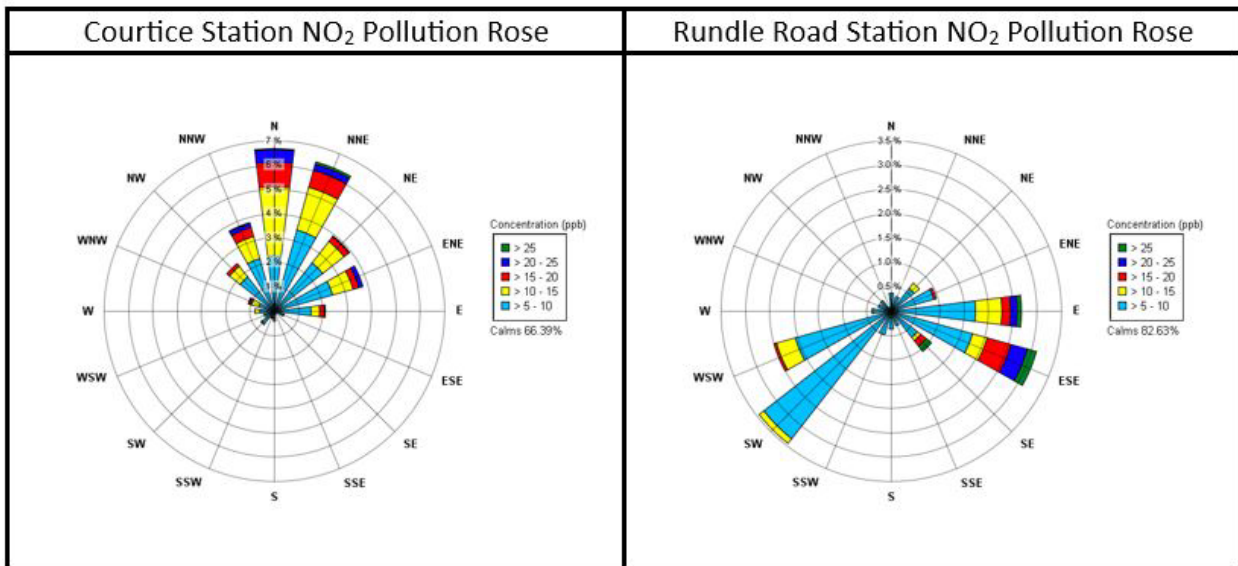
5.3.2 Rundle Road Station Results

Data recovery levels were high for oxides of nitrogen (99.6% valid data). There were no exceedances above the AAQC values for the entirety of the sampling period for rolling 1-hour and 24-hour averaged data. The highest NO₂ value seen among the 1-hour rolling averages was 44.4 ppb, which is 22.2% of the AAQC. The highest NO₂ value seen among the rolling 24-hour averages was 10.6 ppb, which is 10.6% of the AAQC. The measurements are summarized in **Table 5** above.

A pollution rose is presented in **Figure 5** for the Rundle Road station during Q3 composed of hourly average NO₂ concentrations. In order to show where possible major sources of pollutants are coming from, levels below 5 ppb were omitted from the graphic wind rose representation.

The Rundle Road station pollution rose in **Figure 5** shows that the majority of elevated NO₂ events at the Rundle Road station occurred when winds were primarily from the southwest to west-southwest and east to east-southeast directions. The station is downwind of the DYEC when winds are from the south-southwest and southwest directions. Elevated concentrations occurred occasionally from the southwest during the monitoring period, therefore it is likely that the DYEC partially contributed to the observed concentrations. There are additional impacts from the east-northeast to east-southeast which indicates reception from surrounding industry or the highway and railway corridors.

Figure 5: Pollution Roses of Hourly Average NO₂ Concentrations – July to September 2024



5.4 Sulphur Dioxide Results

5.4.1 Courtice Station Results

Data recovery levels were high for sulphur dioxide (96.9% valid data). Monitoring results were compared to the AAQC for 10-minute and 1-hour rolling average periods. In 2024, there have been more frequent SO₂ concentrations elevated above the AAQC's than in previous years due to the new limits imposed at the start of 2020. In Q3, the highest SO₂ value seen among the 10-min rolling averages was 412.2 ppb, which is 615.2% of the AAQC. The highest SO₂ value seen among the 1-hour rolling averages was 135.7 ppb, which is 339.3% of the AAQC. There were one-hundred and fifty-six (156) exceedance events of the rolling 10-minute SO₂ AAQC and seventy (70) exceedance events of the 1-hour SO₂ AAQC. A table outlining the interpretation of the exceedance period can be found in **Appendix E**.

The SO₂ statistical results are summarized in **Table 4** above. A pollution rose is presented in **Figure 6** for the Courtice station during Q3 composed of hourly average SO₂ concentrations. In order to show where possible major sources of pollutants are coming from, levels below 5 ppb were omitted from the graphic wind rose representation. A pollution rose is presented in **Figure 7** for the Courtice station during Q3 composed of 5-minute average SO₂ concentrations with levels below 67 ppb omitted to illustrate directionality of exceedance concentrations.

The Courtice station pollution rose in **Figure 6** shows that the majority of elevated SO₂ concentrations at Courtice occurred from the north to northeast directions. The events were likely a result of emissions from surrounding industrial sources with contributions from the DYEC in the northeast direction.

The Courtice station pollution rose in **Figure 7** shows that <1.10% of the 5-min SO₂ events are elevated >67 ppb and the majority occurred from the north-northeast directions. The pollution rose indicates that the DYEC was not a major contributor to SO₂ levels at the station, since the DYEC is in the northeast direction, and that the levels may be related to other industrial activity nearby.



A Technical Memorandum summarizing the DYEC SO₂ continuous emissions monitoring system (CEMS) data during the exceedance events recorded at the Courtice and Rundle Road Ambient Monitoring stations for Q3, is included in **Appendix F**. The Memorandum indicates that based on the in-stack concentration levels measured by the CEMS, that there were no unusual levels of SO₂ emissions during the ambient station exceedance events and that the facility's impact on ambient air quality would be expected to be quite low.

5.4.2 Rundle Road Station Results

Data recovery levels were high for sulphur dioxide (98.7% valid data). Monitoring results were compared to the AAQC for 10-minute and 1-hour rolling average periods. The highest SO₂ value seen among the 10-min rolling averages was 2.7 ppb, which is 4.0% of the AAQC. The highest SO₂ value seen among the 1-hour rolling averages was 1.6 ppb, which is 4% of the AAQC.

The SO₂ statistical results are summarized in **Table 5** above. A pollution rose is presented in **Figure 6** for the Rundle Road station during Q3 composed of hourly average SO₂ concentrations. In order to show where possible major sources of pollutants are coming from, levels below 5 ppb were omitted from the graphic wind rose representation. A pollution rose is presented in **Figure 7** for the Rundle Road station during Q3 composed of 5-minute average SO₂ concentrations with levels below 67 ppb omitted to illustrate directionality of exceedance concentrations.

The Rundle Road station pollution rose in **Figure 6** shows that there were no events of elevated SO₂ at the Rundle Road during Q3 of 2024.

The Rundle Road station pollution rose in **Figure 7** shows that there were no 5-min SO₂ events that are elevated >67 ppb.



Figure 6: Pollution Roses of Hourly Average SO₂ Concentrations – July to September 2024

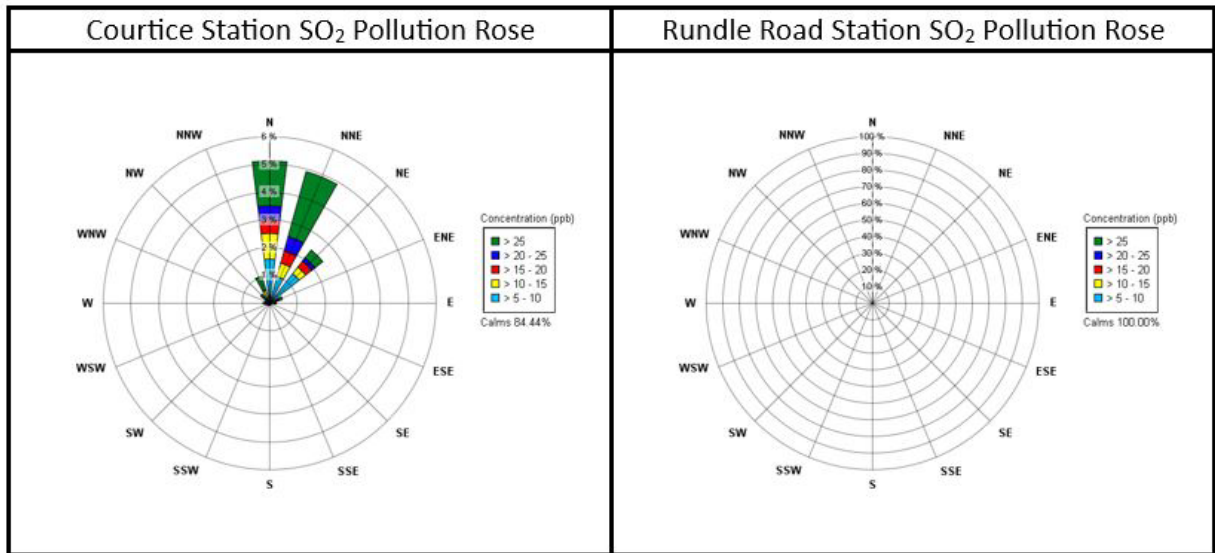
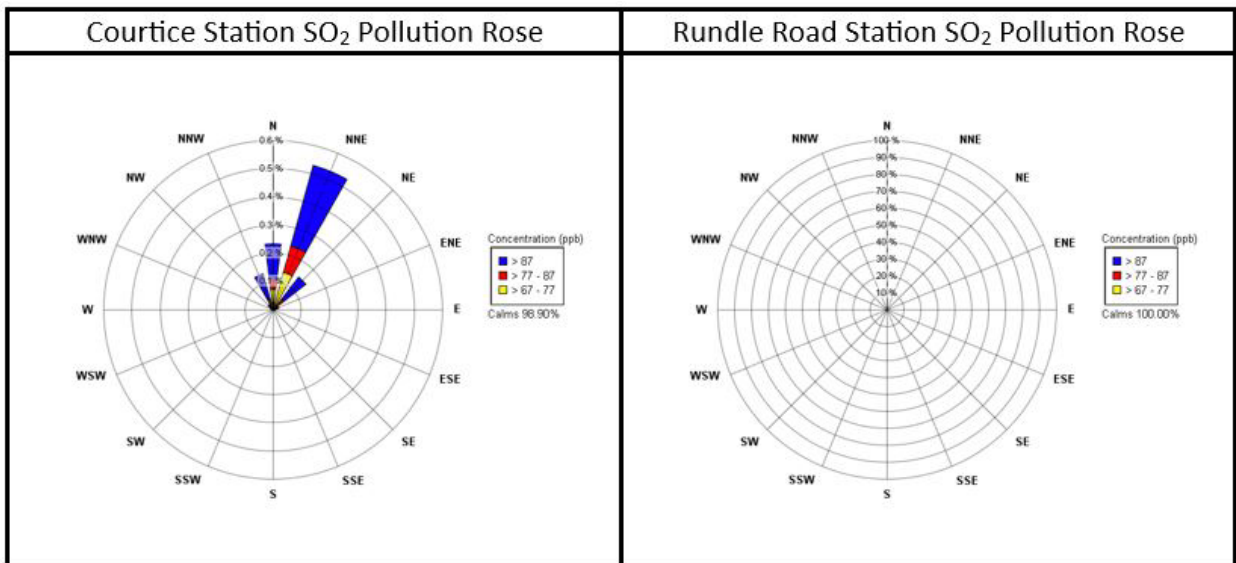


Figure 7: Pollution Roses of 5-minute Average SO₂ Concentrations >67 ppb – July to September 2024





5.5 Fine Particulate Matter (PM_{2.5}) Results

5.5.1 Courtice Station Results

Data recovery levels were high for particulate matter less than 2.5 microns (95.8% valid data). There is no 1-hour AAQC or standard for PM_{2.5}, but there is a 24-hour CAAQS of 27 µg/m³ for the 3-year average of the annual 98th percentile 24-hour concentrations, and 8.8 µg/m³ for the 3-year average of the annual average concentrations (in effect as of 2020). Note that since the reported data is only quarterly and the CAAQS is applicable to the 3-year average, the CAAQS' for PM_{2.5} was not applicable to the data. The highest PM_{2.5} value seen among the 1-hour rolling averages was 328.5 µg/m³ and the highest value seen among the 24-hour rolling averages was 19.6 µg/m³. The results are summarized in **Table 4** above. A pollution rose is presented in **Figure 8** for the Courtice station during Q3 composed of hourly average PM_{2.5} concentrations. In order to show where possible major sources of pollutants are coming from, levels below 5 µg/m³ were omitted from the graphic wind rose representation.

The Courtice station pollution rose in **Figure 8** shows that some of the elevated PM_{2.5} events at Courtice occurred when winds were from the east-northeast to east, which places the station downwind of the DYEC occasionally. Other contributions are in line with nearby industrial activity.

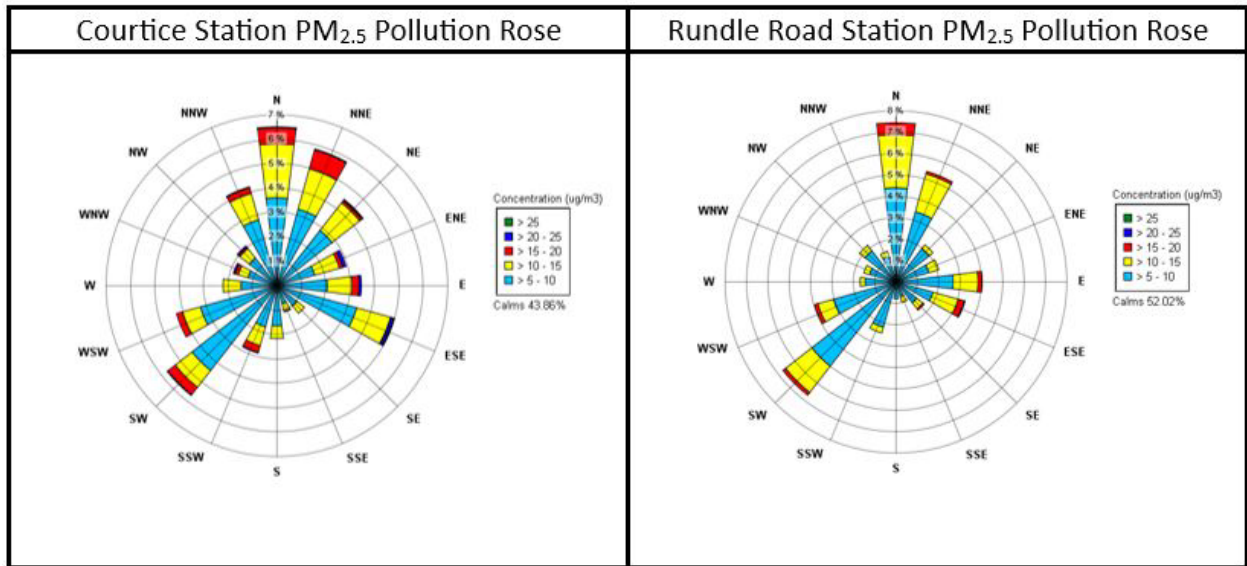
5.5.2 Rundle Road Station Results

Data recovery levels were high for particulate matter less than 2.5 microns (98.6% valid data). The highest PM_{2.5} value seen among the 1-hour rolling averages was 24.9 µg/m³ and the highest value seen among the 24-hour rolling averages was 13.3 µg/m³. The results are summarized in **Table 5** above. A pollution rose is presented in **Figure 8** for the Rundle Road station during Q3 composed of hourly average PM_{2.5} concentrations. In order to show where possible major sources of pollutants are coming from, levels below 5 µg/m³ were omitted from the graphic wind rose representation.

The Rundle Road pollution rose in **Figure 8** shows that the majority of elevated PM_{2.5} events at the Rundle Road station occurred when winds were from the north, northeast, east, east-southeast, southwest and west-southwest. Elevated concentrations were frequent from the north to northeast and southwest during the monitoring period. Therefore, it is likely that the DYEC partially contributed to the observed concentrations from the southwest. Other possible contributions include surrounding industry, nearby high traffic areas and urban background.



Figure 8: Pollution Roses of Hourly Average PM_{2.5} Concentrations – July to September 2024



5.6 TSP and Metals Hi-Vol Results

All of the TSP Hi-Vols operated on a discrete schedule every 6 days according to the NAPS schedule during Q3 with the sample days being: July 5, 11, 17, 23, 29, August 4, 10, 16, 22, 28, September 3, 9, 15, 21 and 27.

5.6.1 Courtice Station Results

Data recovery levels were high for the TSP sampler at the Courtice station (87% valid data). There were no exceedances of any of the AAQC's Criteria for TSP, mercury, or metals during Q3. **Table 7** is a summary of the statistics for this station.

Table 7: Summary of TSP Sampler Courtice Station

Contaminant	Units	MECP Criteria	No. > Criteria	Geometric Mean	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
Particulate (TSP)	µg/m ³	120	0	33.7	35.9	17.49	63.85	44.92	63.85	30.24	13	87
Total Mercury (Hg)	µg/m ³	2	0	8.29E-06	9.67E-06	2.87E-06	1.72E-05	1.72E-05	1.52E-05	1.02E-05	13	87
Aluminum (Al)	µg/m ³	-	0	2.19E-01	2.50E-01	8.84E-02	5.34E-01	4.14E-01	5.34E-01	2.96E-01	13	87
Antimony (Sb)	µg/m ³	25	0	1.16E-03	1.19E-03	7.81E-04	1.65E-03	1.65E-03	1.57E-03	1.52E-03	13	87
Arsenic (As)	µg/m ³	0.3	0	9.71E-04	1.02E-03	8.62E-04	2.41E-03	9.27E-04	9.08E-04	2.41E-03	13	87
Barium (Ba)	µg/m ³	10	0	9.72E-03	1.01E-02	5.73E-03	1.37E-02	1.37E-02	1.20E-02	1.25E-02	13	87
Beryllium (Be)	µg/m ³	0.01	0	1.50E-05	1.50E-05	1.44E-05	1.55E-05	1.55E-05	1.51E-05	1.51E-05	13	87
Bismuth (Bi)	µg/m ³	-	-	5.40E-04	5.40E-04	5.17E-04	5.56E-04	5.56E-04	5.45E-04	5.42E-04	13	87
Boron (B)	µg/m ³	120	0	5.06E-03	5.29E-03	4.31E-03	1.04E-02	1.04E-02	8.79E-03	4.52E-03	13	87
Cadmium (Cd)	µg/m ³	0.025	0	1.42E-04	1.55E-04	5.87E-05	2.96E-04	2.96E-04	1.94E-04	2.50E-04	13	87
Chromium (Cr)	µg/m ³	0.5	0	1.82E-03	2.02E-03	9.84E-04	3.40E-03	3.20E-03	3.40E-03	2.23E-03	13	87
Cobalt (Co)	µg/m ³	0.1	0	1.80E-04	2.22E-04	7.54E-05	8.39E-04	2.55E-04	3.13E-04	8.39E-04	13	87
Copper (Cu)	µg/m ³	50	0	2.03E-02	2.41E-02	6.09E-03	5.32E-02	5.32E-02	1.58E-02	2.68E-02	13	87
Iron (Fe)	µg/m ³	4	0	5.16E-01	5.53E-01	2.89E-01	9.49E-01	8.22E-01	9.49E-01	5.45E-01	13	87
Lead (Pb)	µg/m ³	0.5	0	2.69E-03	2.86E-03	1.47E-03	4.94E-03	4.39E-03	3.83E-03	4.94E-03	13	87
Magnesium (Mg)	µg/m ³	-	-	2.87E-01	3.18E-01	1.33E-01	6.56E-01	4.25E-01	6.56E-01	3.16E-01	13	87
Manganese (Mn)	µg/m ³	0.4	0	1.39E-02	1.52E-02	6.98E-03	2.68E-02	2.11E-02	2.68E-02	1.56E-02	13	87
Molybdenum (Mo)	µg/m ³	120	0	9.33E-04	9.89E-04	6.04E-04	1.59E-03	1.59E-03	8.67E-04	9.76E-04	13	87
Nickel (Ni)	µg/m ³	0.2	0	1.15E-03	1.24E-03	7.12E-04	2.73E-03	1.58E-03	1.86E-03	2.73E-03	13	87
Phosphorus (P)	µg/m ³	-	-	2.38E-01	2.43E-01	2.16E-01	4.66E-01	4.66E-01	2.27E-01	2.26E-01	13	87
Selenium (Se)	µg/m ³	10	0	4.63E-04	4.90E-04	3.74E-04	8.59E-04	8.59E-04	8.20E-04	7.84E-04	13	87
Silver (Ag)	µg/m ³	1	0	2.92E-05	3.08E-05	2.59E-05	7.59E-05	2.78E-05	2.72E-05	7.59E-05	13	87
Strontium (Sr)	µg/m ³	120	0	1.05E-02	1.20E-02	3.96E-03	2.32E-02	1.65E-02	2.32E-02	1.33E-02	13	87
Thallium (Tl)	µg/m ³	-	-	2.70E-05	2.70E-05	2.59E-05	2.78E-05	2.78E-05	2.72E-05	2.71E-05	13	87
Tin (Sn)	µg/m ³	10	0	1.18E-03	1.24E-03	6.96E-04	2.25E-03	2.25E-03	1.70E-03	1.44E-03	13	87
Titanium (Ti)	µg/m ³	120	0	9.06E-03	1.08E-02	3.18E-03	2.11E-02	1.96E-02	2.11E-02	1.26E-02	13	87
Uranium (Ur)	µg/m ³	1.5	0	1.96E-05	2.90E-05	1.85E-06	7.55E-05	7.55E-05	6.03E-05	5.81E-05	13	87
Vanadium (V)	µg/m ³	2	0	1.60E-03	1.65E-03	1.44E-03	3.46E-03	1.55E-03	3.46E-03	1.51E-03	13	87
Zinc (Zn)	µg/m ³	120	0	3.85E-02	3.95E-02	2.48E-02	5.48E-02	5.48E-02	5.39E-02	4.58E-02	13	87
Zirconium (Zr)	µg/m ³	-	0	6.00E-04	6.00E-04	5.75E-04	6.18E-04	6.18E-04	6.05E-04	6.03E-04	13	87

Note: All non-detectable results were reported as 1/2 of the detection limit

5.6.1 Rundle Road Station Results

Data recovery levels were high for the TSP sampler at the Rundle Road station (80% valid data). There were no exceedances of any of the AAQC's for TSP, mercury, or metals during Q3. **Table 8** is a summary of the station statistics.

Table 8: Summary of TSP Sampler Rundle Road Station

Contaminant	Units	MECP Criteria	No. > Criteria	Geometric Mean	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
Particulate (TSP)	µg/m ³	120	0	27.2	29.9	13.94	69.30	69.30	42.46	35.44	12	80
Total Mercury (Hg)	µg/m ³	2	0	6.45E-06	7.99E-06	2.93E-06	1.64E-05	1.64E-05	1.55E-05	1.05E-05	12	80
Aluminum (Al)	µg/m ³	-	0	2.34E-01	2.85E-01	7.38E-02	8.15E-01	8.15E-01	4.25E-01	4.91E-01	12	80
Antimony (Sb)	µg/m ³	25	0	8.87E-04	9.42E-04	4.74E-04	1.39E-03	1.22E-03	1.01E-03	1.39E-03	12	80
Arsenic (As)	µg/m ³	0.3	0	9.81E-04	1.03E-03	8.78E-04	2.40E-03	9.12E-04	9.06E-04	2.40E-03	12	80
Barium (Ba)	µg/m ³	10	0	8.90E-03	9.25E-03	5.58E-03	1.37E-02	1.37E-02	1.10E-02	1.31E-02	12	80
Beryllium (Be)	µg/m ³	0.01	0	1.63E-05	1.71E-05	1.46E-05	3.95E-05	3.95E-05	1.51E-05	1.62E-05	12	80
Bismuth (Bi)	µg/m ³	-	-	5.41E-04	5.42E-04	5.27E-04	5.83E-04	5.47E-04	5.44E-04	5.83E-04	12	80
Boron (B)	µg/m ³	120	0	4.85E-03	5.05E-03	4.39E-03	1.09E-02	1.09E-02	4.53E-03	4.86E-03	12	80
Cadmium (Cd)	µg/m ³	0.025	0	9.38E-05	1.04E-04	3.57E-05	1.75E-04	1.54E-04	1.23E-04	1.75E-04	12	80
Chromium (Cr)	µg/m ³	0.5	0	1.84E-03	2.54E-03	9.95E-04	1.12E-02	3.28E-03	1.12E-02	2.53E-03	12	80
Cobalt (Co)	µg/m ³	0.1	0	1.92E-04	2.18E-04	7.32E-05	4.60E-04	4.60E-04	2.58E-04	2.93E-04	12	80
Copper (Cu)	µg/m ³	50	0	8.50E-02	8.70E-02	6.05E-02	1.18E-01	1.18E-01	1.07E-01	8.61E-02	12	80
Iron (Fe)	µg/m ³	4	0	4.65E-01	5.19E-01	1.93E-01	1.17E+00	1.17E+00	7.04E-01	6.47E-01	12	80
Lead (Pb)	µg/m ³	0.5	0	2.62E-03	2.96E-03	1.32E-03	5.68E-03	3.99E-03	5.68E-03	5.21E-03	12	80
Magnesium (Mg)	µg/m ³	-	-	2.72E-01	2.98E-01	1.35E-01	6.38E-01	6.38E-01	4.81E-01	3.62E-01	12	80
Manganese (Mn)	µg/m ³	0.4	0	1.22E-02	1.32E-02	5.56E-03	2.84E-02	2.84E-02	1.65E-02	1.59E-02	12	80
Molybdenum (Mo)	µg/m ³	120	0	2.87E-03	3.01E-03	1.70E-03	5.79E-03	3.45E-03	3.33E-03	5.79E-03	12	80
Nickel (Ni)	µg/m ³	0.2	0	1.38E-03	1.61E-03	5.56E-04	4.61E-03	2.44E-03	4.61E-03	1.78E-03	12	80
Phosphorus (P)	µg/m ³	-	-	2.40E-01	2.47E-01	2.19E-01	4.77E-01	2.28E-01	4.77E-01	2.43E-01	12	80
Selenium (Se)	µg/m ³	10	0	4.17E-04	4.29E-04	3.80E-04	8.35E-04	3.95E-04	8.35E-04	4.21E-04	12	80
Silver (Ag)	µg/m ³	1	0	4.31E-05	4.87E-05	2.63E-05	9.49E-05	7.90E-05	7.75E-05	9.49E-05	12	80
Strontium (Sr)	µg/m ³	120	0	8.40E-03	9.66E-03	3.92E-03	2.68E-02	2.68E-02	1.51E-02	1.14E-02	12	80
Thallium (Tl)	µg/m ³	-	-	3.49E-05	3.93E-05	2.63E-05	8.51E-05	8.51E-05	2.72E-05	7.32E-05	12	80
Tin (Sn)	µg/m ³	10	0	1.27E-03	1.55E-03	5.27E-04	5.20E-03	2.07E-03	5.20E-03	1.87E-03	12	80
Titanium (Ti)	µg/m ³	120	0	9.14E-03	1.15E-02	3.22E-03	3.53E-02	3.53E-02	1.19E-02	1.75E-02	12	80
Uranium (Ur)	µg/m ³	1.5	0	2.12E-05	3.15E-05	5.51E-06	8.75E-05	8.75E-05	5.64E-05	8.23E-05	12	80
Vanadium (V)	µg/m ³	2	0	1.75E-03	1.88E-03	1.46E-03	4.56E-03	4.56E-03	1.51E-03	2.93E-03	12	80
Zinc (Zn)	µg/m ³	120	0	3.90E-02	4.11E-02	2.43E-02	8.58E-02	8.58E-02	5.20E-02	4.41E-02	12	80
Zirconium (Zr)	µg/m ³	-	0	6.02E-04	6.02E-04	5.85E-04	6.48E-04	6.08E-04	6.04E-04	6.48E-04	12	80

Note: All non-detectable results were reported as 1/2 of the detection limit



5.7 PAH Results

All of the PUF Hi-Vols operated on a discrete schedule every 12 days for PAH's according to the NAPS schedule during Q3 with the sample days being: July 5, 17, 29, August 10, 22, September 3, 15 and 27.

5.7.1 Courtice Station Results

Data recovery levels were high for the PAH results at the Courtice station (88% valid data). There were no exceedances of any of the AAQC's during Q3 of 2024. **Table 9** outlines the statistics summary for this station.

Table 9: Statistics Summary of PAH Results for Courtice Station

Contaminant	Units	MECP Criteria (µg/m³)	No. > Criteria	Arithmetic Mean	Minimum Q3 Concentration	Maximum Q3 Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m³	-	-	3.03E+00	9.48E-01	6.12E+00	3.17E+00	3.05E+00	6.12E+00	7	88
2-Methylnaphthalene	ng/m³	-	-	6.61E+00	2.38E+00	1.11E+01	8.17E+00	7.23E+00	1.11E+01	7	88
Acenaphthene	ng/m³	-	-	5.56E+00	1.73E+00	1.28E+01	5.60E+00	5.81E+00	1.28E+01	7	88
Acenaphthylene	ng/m³	-	-	4.59E-01	8.86E-02	7.53E-01	7.53E-01	6.93E-01	5.63E-01	7	88
Anthracene	ng/m³	-	-	2.55E-01	1.40E-01	3.15E-01	2.92E-01	3.15E-01	3.05E-01	7	88
Benzo(a)Anthracene	ng/m³	-	-	2.04E-02	7.25E-03	4.06E-02	3.38E-02	4.06E-02	1.64E-02	7	88
Benzo(a)fluorene	ng/m³	-	-	8.50E-02	2.62E-02	2.35E-01	2.35E-01	1.01E-01	4.88E-02	7	88
Benzo(a)Pyrene (Historically High)	ng/m³	0.05	0	1.17E-02	4.64E-03	2.20E-02	1.60E-02	1.08E-02	2.20E-02	7	88
Benzo(b)Fluoranthene	ng/m³	-	-	3.35E-02	1.55E-02	5.51E-02	5.51E-02	5.28E-02	3.87E-02	7	88
Benzo(b)fluorene	ng/m³	-	-	1.51E-02	5.31E-03	4.16E-02	4.16E-02	1.83E-02	7.63E-03	7	88
Benzo(e)Pyrene	ng/m³	-	-	2.34E-02	9.73E-03	4.34E-02	2.57E-02	4.34E-02	2.75E-02	7	88
Benzo(g,h,i)Perylene	ng/m³	-	-	2.44E-02	1.52E-02	4.38E-02	2.53E-02	4.38E-02	3.07E-02	7	88
Benzo(k)Fluoranthene	ng/m³	-	-	3.50E-02	1.06E-02	5.78E-02	4.79E-02	5.78E-02	2.81E-02	7	88
Biphenyl	ng/m³	-	-	2.74E+00	1.34E+00	4.27E+00	4.27E+00	1.89E+00	3.38E+00	7	88
Chrysene	ng/m³	-	-	8.13E-02	4.18E-02	1.31E-01	1.31E-01	1.20E-01	6.48E-02	7	88
Dibenzo(a,h)Anthracene	ng/m³	-	-	3.39E-03	1.74E-03	5.56E-03	4.38E-03	5.56E-03	4.92E-03	7	88
Fluoranthene	ng/m³	-	-	1.24E+00	7.56E-01	2.02E+00	2.02E+00	1.08E+00	9.02E-01	7	88
Fluorene	ng/m³	-	-	3.86E+00	1.98E+00	6.69E+00	5.76E+00	2.27E+00	6.69E+00	7	88
Indeno(1,2,3-cd)Pyrene	ng/m³	-	-	1.82E-02	4.28E-03	4.02E-02	1.99E-02	4.02E-02	2.71E-02	7	88
Naphthalene	ng/m³	22500	0	7.82E+00	3.15E+00	1.91E+01	6.70E+00	8.10E+00	1.91E+01	7	88
o-Terphenyl	ng/m³	-	-	1.65E-02	1.74E-03	5.00E-02	5.00E-02	2.03E-02	7.97E-03	7	88
Perylene	ng/m³	-	-	3.16E-03	1.70E-03	5.71E-03	5.71E-03	4.85E-03	1.77E-03	7	88
Phenanthrene	ng/m³	-	-	6.11E+00	3.97E+00	9.87E+00	9.87E+00	4.80E+00	6.69E+00	7	88
Pyrene	ng/m³	-	-	5.59E-01	3.76E-01	8.57E-01	8.57E-01	6.07E-01	4.42E-01	7	88
Tetralin	ng/m³	-	-	7.30E-01	3.90E-01	1.34E+00	1.34E+00	4.94E-01	9.24E-01	7	88
Total PAH	ng/m³	-	-	3.93E+01	2.23E+01	6.93E+01	4.74E+01	3.64E+01	6.93E+01	7	88

Notes: All non-detectable results were reported as 1/2 of the detection limit

5.7.2 Rundle Road Station Results

Data recovery levels were high for the PAH results at the Rundle Road station (100% valid data). There was one (1) exceedance of the BaP AAQC during Q3. All other contaminants were below their respective AAQC's during Q3 of 2024.

Table 10 outlines the statistics summary for this station.

Table 10: Statistics Summary of PAH Results for Rundle Road Station

Contaminant	Units	MECP Criteria (µg/m³)	No. > Criteria	Arithmetic Mean	Minimum Q3 Concentration	Maximum Q3 Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m³	-	-	2.82E+00	1.24E+00	4.13E+00	3.11E+00	2.21E+00	4.13E+00	8	100
2-Methylnaphthalene	ng/m³	-	-	6.47E+00	2.54E+00	1.02E+01	8.23E+00	5.21E+00	1.02E+01	8	100
Acenaphthene	ng/m³	-	-	5.58E+00	2.73E+00	7.92E+00	7.28E+00	5.14E+00	7.92E+00	8	100
Acenaphthylene	ng/m³	-	-	3.40E-01	8.00E-02	9.35E-01	9.35E-01	1.97E-01	4.96E-01	8	100
Anthracene	ng/m³	-	-	8.32E-01	4.39E-01	1.77E+00	1.77E+00	5.56E-01	8.94E-01	8	100
Benzo(a)Anthracene	ng/m³	-	-	2.79E-02	7.55E-03	9.90E-02	9.90E-02	8.00E-03	2.44E-02	8	100
Benzo(a)fluorene	ng/m³	-	-	1.32E-01	4.05E-02	3.43E-01	3.43E-01	6.95E-02	9.39E-02	8	100
Benzo(a)Pyrene (Historically High)	ng/m³	0.05	1	1.95E-02	4.46E-03	6.40E-02	2.18E-02	6.30E-03	6.40E-02	8	100
Benzo(b)Fluoranthene	ng/m³	-	-	4.74E-02	1.38E-02	1.68E-01	1.68E-01	1.94E-02	5.19E-02	8	100
Benzo(b)fluorene	ng/m³	-	-	2.30E-02	5.62E-03	7.11E-02	7.11E-02	8.07E-03	1.31E-02	8	100
Benzo(e)Pyrene	ng/m³	-	-	2.72E-02	8.17E-03	7.59E-02	7.59E-02	1.63E-02	3.31E-02	8	100
Benzo(g,h,i)Perylene	ng/m³	-	-	2.55E-02	1.45E-02	4.30E-02	3.88E-02	2.01E-02	4.30E-02	8	100
Benzo(k)Fluoranthene	ng/m³	-	-	4.04E-02	1.55E-02	1.54E-01	1.54E-01	1.99E-02	3.28E-02	8	100
Biphenyl	ng/m³	-	-	3.07E+00	6.90E-01	9.24E+00	9.24E+00	1.46E+00	4.13E+00	8	100
Chrysene	ng/m³	-	-	1.38E-01	6.45E-02	3.81E-01	3.81E-01	7.18E-02	9.98E-02	8	100
Dibenzo(a,h)Anthracene	ng/m³	-	-	4.29E-03	1.70E-03	1.22E-02	1.22E-02	1.72E-03	3.55E-03	8	100
Fluoranthene	ng/m³	-	-	3.23E+00	1.62E+00	5.91E+00	5.91E+00	2.28E+00	3.22E+00	8	100
Fluorene	ng/m³	-	-	5.19E+00	3.00E+00	8.27E+00	8.27E+00	3.09E+00	6.96E+00	8	100
Indeno(1,2,3-cd)Pyrene	ng/m³	-	-	2.05E-02	7.03E-03	3.98E-02	3.98E-02	1.02E-02	3.87E-02	8	100
Naphthalene	ng/m³	22500	0	6.38E+00	2.58E+00	1.09E+01	5.82E+00	5.11E+00	1.09E+01	8	100
o-Terphenyl	ng/m³	-	-	1.73E-02	4.09E-03	4.95E-02	4.95E-02	1.05E-02	1.55E-02	8	100
Perylene	ng/m³	-	-	3.28E-03	1.61E-03	6.33E-03	6.33E-03	3.78E-03	3.28E-03	8	100
Phenanthrene	ng/m³	-	-	1.19E+01	6.17E+00	2.04E+01	2.04E+01	9.23E+00	1.19E+01	8	100
Pyrene	ng/m³	-	-	1.47E+00	8.33E-01	2.64E+00	2.64E+00	1.05E+00	1.33E+00	8	100
Tetralin	ng/m³	-	-	7.21E-01	3.31E-01	2.29E+00	2.29E+00	3.54E-01	7.61E-01	8	100
Total PAH	ng/m³	-	-	4.85E+01	2.66E+01	6.52E+01	6.52E+01	3.50E+01	5.95E+01	8	100

Note: All non-detectable results were reported as 1/2 of the detection limit



5.8 Dioxin and Furan Results

All of the PUF Hi-Vols operated on a discrete schedule every 24 days for D&F's according to the NAPS schedule during Q3 with the sample days being: July 5, 29, August 22 and September 15.

5.8.1 Courtice Station Results

Data recovery levels were high for the D&F results at the Courtice station (100% valid data). There were no exceedances of any of the AAQC's for any of the D&F's during Q3. **Table 11** is a summary of the statistics for this station.

Table 11: Courtice Station Q3 Monitoring Results for Dioxins and Furans

Contaminant	Units	MECP Criteria	No. > Criteria	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg/m ³	-	-	6.69E-04	3.53E-04	8.87E-04	7.56E-04	8.87E-04	3.53E-04	4	100
1,2,3,7,8-PeCDD	pg/m ³	-	-	8.57E-04	3.35E-04	1.16E-03	1.16E-03	8.00E-04	3.35E-04	4	100
1,2,3,4,7,8-HxCDD	pg/m ³	-	-	1.65E-04	5.65E-05	3.36E-04	3.36E-04	2.01E-04	5.65E-05	4	100
1,2,3,6,7,8-HxCDD	pg/m ³	-	-	2.28E-04	1.02E-04	4.14E-04	2.52E-04	4.14E-04	1.45E-04	4	100
1,2,3,7,8,9-HxCDD	pg/m ³	-	-	1.62E-04	1.51E-04	1.80E-04	1.80E-04	1.51E-04	1.61E-04	4	100
1,2,3,4,6,7,8-HpCDD	pg/m ³	-	-	5.02E-04	7.50E-05	9.90E-04	9.90E-04	7.34E-04	2.10E-04	4	100
OCDD	pg/m ³	-	-	6.57E-05	2.79E-05	1.25E-04	7.86E-05	1.25E-04	3.11E-05	4	100
2,3,7,8-TCDF	pg/m ³	-	-	1.24E-04	8.28E-05	1.95E-04	1.12E-04	1.04E-04	1.95E-04	4	100
1,2,3,7,8-PeCDF	pg/m ³	-	-	4.79E-05	3.44E-05	7.56E-05	7.56E-05	3.76E-05	3.44E-05	4	100
2,3,4,7,8-PeCDF	pg/m ³	-	-	3.39E-04	3.23E-04	3.60E-04	3.37E-04	3.60E-04	3.23E-04	4	100
1,2,3,4,7,8-HxCDF	pg/m ³	-	-	2.41E-04	1.80E-04	3.62E-04	1.95E-04	3.62E-04	2.26E-04	4	100
1,2,3,6,7,8-HxCDF	pg/m ³	-	-	2.00E-04	5.89E-05	3.49E-04	3.49E-04	1.04E-04	2.88E-04	4	100
2,3,4,6,7,8-HxCDF	pg/m ³	-	-	1.31E-04	4.10E-05	2.48E-04	1.57E-04	2.48E-04	7.77E-05	4	100
1,2,3,7,8,9-HxCDF	pg/m ³	-	-	7.74E-05	4.69E-05	1.37E-04	7.74E-05	4.69E-05	1.37E-04	4	100
1,2,3,4,6,7,8-HpCDF	pg/m ³	-	-	1.11E-04	3.53E-05	1.87E-04	1.74E-04	1.87E-04	3.53E-05	4	100
1,2,3,4,7,8,9-HpCDF	pg/m ³	-	-	1.16E-05	6.71E-06	1.40E-05	1.40E-05	1.16E-05	6.71E-06	4	100
OCDF	pg/m ³	-	-	7.63E-06	2.42E-06	1.83E-05	6.79E-06	1.83E-05	3.04E-06	4	100
Total Toxic Equivalency	pg TEQ/m ³	0.1 1 ^[1]	0	3.94E-03	2.62E-03	5.18E-03	5.18E-03	4.79E-03	2.62E-03	4	100

Notes: All non-detectable results were reported as 1/2 of the detection limit

[1] O. Reg. 419/05 Schedule Upper Risk Thresholds

5.8.2 Rundle Road Station Results

Data recovery levels were acceptable for the D&F results at the Rundle Road station (100% valid data). There were no exceedances of any of the AAQC's Criteria for any of the D&F's during Q3. **Table 12** is a summary of the statistics for this station.

Table 12: Rundle Road Station Q3 Monitoring Results for Dioxins and Furans

Contaminant	Units	MECP Criteria	No. > Criteria	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg/m ³	-	-	6.10E-04	3.93E-04	7.83E-04	6.68E-04	7.83E-04	3.93E-04	4	100
1,2,3,7,8-PeCDD	pg/m ³	-	-	1.40E-03	5.47E-04	2.69E-03	2.69E-03	1.39E-03	5.47E-04	4	100
1,2,3,4,7,8-HxCDD	pg/m ³	-	-	7.93E-05	5.62E-05	1.12E-04	1.12E-04	5.62E-05	7.86E-05	4	100
1,2,3,6,7,8-HxCDD	pg/m ³	-	-	1.06E-04	6.86E-05	1.70E-04	1.70E-04	1.09E-04	7.52E-05	4	100
1,2,3,7,8,9-HxCDD	pg/m ³	-	-	9.21E-05	5.45E-05	1.70E-04	1.70E-04	5.45E-05	7.52E-05	4	100
1,2,3,4,6,7,8-HpCDD	pg/m ³	-	-	3.12E-04	2.16E-04	4.93E-04	4.93E-04	3.02E-04	2.16E-04	4	100
OCDD	pg/m ³	-	-	4.09E-05	2.33E-05	8.61E-05	8.61E-05	2.82E-05	2.60E-05	4	100
2,3,7,8-TCDF	pg/m ³	-	-	9.92E-05	6.64E-05	1.56E-04	1.56E-04	6.64E-05	8.72E-05	4	100
1,2,3,7,8-PeCDF	pg/m ³	-	-	5.90E-05	2.76E-05	1.13E-04	1.13E-04	2.76E-05	4.56E-05	4	100
2,3,4,7,8-PeCDF	pg/m ³	-	-	3.90E-04	1.28E-04	6.12E-04	6.12E-04	1.28E-04	2.41E-04	4	100
1,2,3,4,7,8-HxCDF	pg/m ³	-	-	1.54E-04	5.28E-05	3.57E-04	3.57E-04	5.28E-05	7.35E-05	4	100
1,2,3,6,7,8-HxCDF	pg/m ³	-	-	1.24E-04	7.01E-05	1.70E-04	1.70E-04	1.44E-04	7.01E-05	4	100
2,3,4,6,7,8-HxCDF	pg/m ³	-	-	1.47E-04	2.89E-05	3.42E-04	3.42E-04	2.89E-05	1.34E-04	4	100
1,2,3,7,8,9-HxCDF	pg/m ³	-	-	8.25E-05	5.11E-05	1.57E-04	1.57E-04	5.11E-05	6.32E-05	4	100
1,2,3,4,6,7,8-HpCDF	pg/m ³	-	-	6.56E-05	1.87E-05	1.11E-04	1.11E-04	1.87E-05	3.76E-05	4	100
1,2,3,4,7,8,9-HpCDF	pg/m ³	-	-	1.09E-05	6.15E-06	2.04E-05	2.04E-05	9.70E-06	7.35E-06	4	100
OCDF	pg/m ³	-	-	3.11E-06	1.05E-06	7.43E-06	7.43E-06	1.52E-06	2.45E-06	4	100
Total Toxic Equivalency	pg TEQ/m ³	0.1 [1]	0	3.78E-03	2.17E-03	6.02E-03	6.02E-03	3.25E-03	2.17E-03	4	100

Notes: All non-detectable results were reported as 1/2 of the detection limit

[1] O. Reg. 419/05 Schedule Upper Risk Thresholds



6 DATA REQUESTS

The following sections outline any instrumentation issues encountered that have caused data loss at any of the monitors at each of the stations.

Appendix C contains monthly IZS zero trends for the NO_x and SO₂ analyzers at the Courtice and Rundle Road stations.

Edit logs identifying missing data, maintenance times, calibrations and any other missing data have been included in **Appendix D**.

6.1 Continuous Monitoring

On July 28, 2024 at 08:00 till July 28, 2024 at 17:00, the Courtice station incurred 9 hours of data loss due to a power outage.

On August 2, 2024 at 14:00 till August 2, 2024 at 18:00, the Courtice station incurred 4 hours of data loss due to a power outage.

On September 8, 2024 at 12:00 till September 10, 2024 at 10:00, the Courtice station incurred 46 hours of data loss due to a computer malfunction and power outage.

6.2 Discrete Monitoring

The July 5, 11 and 17, 2024 Rundle TSP samples were invalidated due to equipment malfunctions.

The September 9, 2024 Courtice TSP sample was invalidated due to a power outage.

The September 15, 2024 Courtice D&F sample was invalidated due to contamination in the laboratory's analytical process.

The September 27, 2024 Courtice TSP sample was invalidated due to an equipment malfunction.

7 CONCLUSIONS

This Q3 report provides a summary of the ambient air quality data collected at the Courtice and Rundle Road stations. There were one-hundred and fifty-six (156) exceedance events of the rolling 10-minute SO₂ AAQC and seventy (70) exceedance events of the 1-hour SO₂ AAQC at the Courtice station. There was one (1) exceedance of the Benzo(a) Pyrene AAQC at the Rundle Road station, with no exceedances at the Courtice Station. Data recovery rates were acceptable and valid for all measured Q3 continuous and discrete parameters.



8 REFERENCES

1. Canadian Council of Ministers of the Environment (CCME), 2012. Guidance Document on Achievement Determination Canadian Ambient Air Quality Standards for Fine Particulate Matter and Ozone. PN 1483 978-1-896997-91-9 PDF
2. Canadian Council of Ministers of the Environment (CCME), 2019. Guidance Document on Air Zone Management. PN 1593978-1-77202-050-2 PDF
3. Ontario Ministry of the Environment and Climate Change, 2018. [Technical Assessment and Standards Development Branch] Ontario Air Standards for Sulphur Dioxide (SO₂). [Online]
4. Human Toxicology and Air Standards Section, Technical Assessment and Standards Development Branch, Ontario Ministry of the Environment, Conservation and Parks (MECP). 2020. Ontario's Ambient Air Quality Criteria. MECP, Toronto, ON, Canada.

9 GENERAL STATEMENT OF LIMITATIONS

This report entitled "2024 Q3 Ambient Air Quality Monitoring Report", dated November 12, 2024 was prepared by RWDI AIR Inc. ("RWDI") for The Regional Municipality of Durham ("Client"). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein ("Project"). This report was prepared using scientific principles, published methodologies and professional judgment in assessing available information and data. The findings presented within this document are based on available data within the limits of the existing information, budgeted scope of work, and schedule. The conclusions contained in this report are based on the information available to RWDI when this report was prepared; subsequent changes made by the Client after the date of this report have not been reflected in the conclusions.

This report was prepared for the exclusive use of The Regional Municipality of Durham and the MECP. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibility of such third parties. RWDI accepts no responsibility for damages, if any, suffered by any third party as result of decisions made or actions based on this report.

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APPENDIX A

Table A1: 2024 Summary Statistics for Q3

Courtice Monitoring Station Data Statistics	Maximum 10 min Rolling Mean	Maximum 1 hr Rolling Mean					Maximum 24 hr Rolling Mean					Monthly Mean					Valid Data					
		PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	
Compound	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	
Units	ppb	(µg/m ³)	ppb			(µg/m ³)	ppb			(µg/m ³)	ppb			%								
AAQC/CAAQS	67				200	40	27 ^A			100												
July	142.1	328.5	36.4	16.0	22.9	43.7	19.6	9.7	2.9	8.4	10.0	7.3	5.4	0.9	4.5	2.4	95.3	98.5	98.5	98.5	98.5	98.5
August	412.2	23.2	40.3	20.8	33.9	132.1	17.7	11.2	2.8	9.9	29.9	6.9	5.4	1.1	4.4	6.1	98.9	98.9	98.9	98.9	98.9	98.9
September	390.6	23.0	54.3	26.2	33.5	135.7	13.4	17.3	6.0	11.3	22.7	5.7	6.6	1.3	5.3	5.0	93.3	93.2	93.2	93.2	93.2	93.3
Q3 Arithmetic Mean												6.6	5.8	1.1	4.7	4.5	95.8	96.9	96.9	96.9	96.9	96.9

Rundle Monitoring Station Data Statistics	Maximum 10 min Rolling Mean	Maximum 1 hr Rolling Mean					Maximum 24 hr Rolling Mean					Monthly Mean					Valid Data					
		PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	
Compound	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	PM _{2.5}	NO _x	NO	NO ₂	SO ₂	
Units	ppb	(µg/m ³)	ppb			(µg/m ³)	ppb			(µg/m ³)	ppb			%								
AAQC/CAAQS	67				200	40	27 ^A			100												
July	2.2	21.3	135.7	91.3	44.4	1.6	12.5	23.7	13.2	10.6	0.7	6.3	4.7	1.3	3.5	0.3	96.5	99.6	99.6	99.6	99.6	97.0
August	2.7	16.8	48.2	19.3	28.9	1.4	13.3	7.1	2.2	5.6	0.5	5.6	3.2	0.8	2.4	0.3	99.6	99.6	99.6	99.6	99.6	99.5
September	2.2	24.9	88.1	59.7	32.3	1.2	10.2	12.3	5.5	8.2	0.5	4.8	5.0	1.5	3.6	0.3	99.9	99.6	99.6	99.6	99.6	99.7
Q3 Arithmetic Mean												5.6	4.3	1.2	3.2	0.3	98.6	99.6	99.6	99.6	99.6	98.7

Event Statistics	Rolling Mean > 10 min AAQC for Courtice	Rolling Mean > 10 min AAQC for Rundle	Rolling Mean > 1 hr AAQC for Courtice			Rolling Mean > 1 hr AAQC for Rundle			Rolling Mean > 24 hr AAQC for Courtice Monitoring Station			Rolling Mean > 24 hr AAQC for Rundle Monitoring Station		
			PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂
Compound	SO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂	PM _{2.5}	NO ₂	SO ₂
Units	No.	No.	No.			No.			No.			No.		
July	13	0		0	4		0	0	N/A	0		N/A	0	
August	95	0		0	42		0	0	N/A	0		N/A	0	
September	48	0		0	24		0	0	N/A	0		N/A	0	
Q3 Total	156	0		0	70		0	0	N/A	0		N/A	0	

Courtice Station MET Statistics	Maximum 1 hr Mean					Minimum 1 hr Mean					Monthly Mean					Total	Valid Data					
	WS	Temp	RH	Pres	Rain	WS	Temp	RH	Pres	Rain	WS	Temp	RH	Pres	Rain		Rain	WS	WD	Temp	RH	Pres
Parameter	WS	Temp	RH	Pres	Rain	WS	Temp	RH	Pres	Rain	WS	Temp	RH	Pres	Rain	Rain	WS	WD	Temp	RH	Pres	Rain
Units	(km/hr)	(°C)	(%)	"Hg	mm	(km/hr)	(°C)	(%)	"Hg	mm	(km/hr)	(°C)	(%)	"Hg	mm	mm	%					
July	21.9	29.2	100.0	30.0	23.4	0.2	11.8	39.9	29.4	0.0	7.7	21.9	78.4	29.7	0.2	111.4	98.9	98.9	98.9	98.9	98.9	98.9
August	34.0	29.5	100.0	30.0	13.2	0.2	10.7	39.0	29.4	0.0	9.0	20.9	76.3	29.7	0.1	60.4	99.6	99.6	99.6	99.6	99.6	99.6
September	26.6	25.0	100.0	30.1	13.8	0.2	7.6	33.8	29.5	0.0	10.6	18.9	76.7	29.8	0.1	57.4	93.5	93.5	93.5	93.5	93.5	93.5
Q3 Arithmetic Mean											9.1	20.6	77.1	29.7	0.1	229.2	97.4	97.4	97.4	97.4	97.4	97.4

Rundle Station MET Statistics	Maximum 1 hr Mean				Minimum 1 hr Mean				Monthly Mean				Total	Valid Data				
	WS	Temp	RH	Rain	WS	Temp	RH	Rain	WS	Temp	RH	Rain		Rain	WS	WD	Temp	RH
Parameter	WS	Temp	RH <td>Rain</td> <td>WS</td> <td>Temp</td> <td>RH <td>Rain</td> <td>WS</td> <td>Temp</td> <td>RH <td>Rain</td> <td>Rain</td> <td>WS</td> <td>WD</td> <td>Temp</td> <td>RH <td>Rain</td> </td></td></td>	Rain	WS	Temp	RH <td>Rain</td> <td>WS</td> <td>Temp</td> <td>RH <td>Rain</td> <td>Rain</td> <td>WS</td> <td>WD</td> <td>Temp</td> <td>RH <td>Rain</td> </td></td>	Rain	WS	Temp	RH <td>Rain</td> <td>Rain</td> <td>WS</td> <td>WD</td> <td>Temp</td> <td>RH <td>Rain</td> </td>	Rain	Rain	WS	WD	Temp	RH <td>Rain</td>	Rain
Units	(km/hr)	(°C)	(%)	mm	(km/hr)	(°C)	(%)	mm	(km/hr)	(°C)	(%)	mm	mm	%				
July	19.4	28.4	100.0	22.6	0.0	11.4	40.0	0.0	6.2	21.4	80.7	0.1	102.2	100.0	100.0	100.0	100.0	100.0
August	28.2	30.1	100.0	16.5	0.1	10.0	40.0	0.0	6.7	20.2	80.9	0.1	64.4	100.0	100.0	100.0	100.0	100.0
September	20.8	26.2	100.0	12.9	0.1	7.3	35.6	0.0	6.8	17.6	83.4	0.1	73.6	100.0	100.0	100.0	100.0	100.0
Q3 Arithmetic Mean									6.6	19.7	81.5	0.1	240.2	100.0	100.0	100.0	100.0	100.0

Table A2: 2024 Q3 Station Courtice Monitoring Results for PM2.5

Data Statistics	Rolling Mean > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	PM _{2.5}	PM _{2.5}	PM _{2.5}	PM _{2.5}	PM _{2.5}	PM _{2.5}
	No.	(ug/m ³)	(ug/m ³)	(ug/m ³)	No.	%
July	N/A	7.3	328.5	19.6	709	95.3
August	N/A	6.9	23.2	17.7	736	98.9
September	N/A	5.7	23.0	13.4	672	93.3

Table A3: 2024 Q3 Station Rundle Monitoring Results for PM2.5

Data Statistics	Rolling Mean > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	PM _{2.5}	PM _{2.5}	PM _{2.5}	PM _{2.5}	PM _{2.5}	PM _{2.5}
	No.	(ug/m ³)	(ug/m ³)	(ug/m ³)	No.	%
July	N/A	6.3	21.3	12.5	718	96.5
August	N/A	5.6	16.8	13.3	741	99.6
September	N/A	4.8	24.9	10.2	719	99.9

Table A4: 2024 Q3 Station Courtice Monitoring Results for NOx

Data Statistics	Events > 1 hr AAQC	Events > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	NO _x	NO _x	NO _x	NO _x	NO _x	NO _x	NO _x
	No.	No.	(ppb)	(ppb)	(ppb)	No.	%
July	N/A	N/A	5.4	36.4	9.7	733	98.5
August	N/A	N/A	5.4	40.3	11.2	736	98.9
September	N/A	N/A	6.6	54.3	17.3	671	93.2

Table A5: 2024 Q3 Station Rundle Monitoring Results for NOx

Data Statistics	Events > 1 hr AAQC	Events > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	NO _x	NO _x	NO _x	NO _x	NO _x	NO _x	NO _x
	No.	No.	(ppb)	(ppb)	(ppb)	No.	%
July	N/A	N/A	4.7	135.7	23.7	741	99.6
August	N/A	N/A	3.2	48.2	7.1	741	99.6
September	N/A	N/A	5.0	88.1	12.3	717	99.6

Table A6: 2024 Q3 Station Courtice Monitoring Results for NO

Data Statistics	Events > 1 hr AAQC	Events > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	NO	NO	NO	NO	NO	NO	NO
	No.	No.	(ppb)	(ppb)	(ppb)	No.	%
July	N/A	N/A	0.9	16.0	2.9	733	98.5
August	N/A	N/A	1.1	20.8	2.8	736	98.9
September	N/A	N/A	1.3	26.2	6.0	671	93.2

Table A7: 2024 Q2 Station Rundle Monitoring Results for NO

Data Statistics	Events > 1 hr AAQC	Events > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	NO	NO	NO	NO	NO	NO	NO
	No.	No.	(ppb)	(ppb)	(ppb)	No.	%
July	N/A	N/A	1.3	91.3	13.2	741	99.6
August	N/A	N/A	0.8	19.3	2.2	741	99.6
September	N/A	N/A	1.5	59.7	5.5	741	99.6

Table A8: 2024 Q3 Station Courtice Monitoring Results for NO2

Data Statistics	Events > 1 hr AAQC	Events > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	NO ₂	NO ₂	NO ₂	NO ₂	NO ₂	NO ₂	NO ₂
	No.	No.	(ppb)	(ppb)	(ppb)	No.	%
July	0	0	4.5	22.9	8.4	733	98.5
August	0	0	4.4	33.9	9.9	736	98.9
September	0	0	5.3	33.5	11.3	671	93.2

Table A9: 2024 Q3 Station Rundle Monitoring Results for NO2

Data Statistics	Events > 1 hr AAQC	Events > 24 hr AAQC	Arithmetic Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	NO ₂	NO ₂	NO ₂	NO ₂	NO ₂	NO ₂	NO ₂
	No.	No.	(ppb)	(ppb)	(ppb)	No.	%
July	0	0	3.5	44.4	10.6	741	99.6
August	0	0	2.4	28.9	5.6	741	99.6
September	0	0	3.6	32.3	8.2	717	99.6

Table A10: 2024 Q3 Station Courtice Monitoring Results for SO2

Data Statistics	Events > 10 min AAQC	Events > 1 hr AAQC	Arithmetic Mean	Maximum 10 min Rolling Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂
	No.	No.	(ppb)	(ppb)	(ppb)	(ppb)	No.	%
July	13	4	2.4	142.1	43.7	10.0	733	98.5
August	95	42	6.1	412.2	132.1	29.9	736	98.9
September	48	24	5.0	390.6	135.7	22.7	672	93.3

Table A11: 2024 Q3 Station Rundle Monitoring Results for SO2

Data Statistics	Events > 10 min AAQC	Events > 1 hr AAQC	Arithmetic Mean	Maximum 10 min Rolling Mean	Maximum 1 hr Rolling Mean	Maximum 24 hr Rolling Mean	Number of Valid Hours	Valid Data
Month	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂	SO ₂
	No.	No.	(ppb)	(ppb)	(ppb)	(ppb)	No.	%
July	0	0	0.3	2.2	1.6	0.7	722	97.0
August	0	0	0.3	2.7	1.4	0.5	740	99.5
September	0	0	0.3	2.2	1.2	0.5	718	99.7

Table A12: 2024 Q3 Courtice Meterological Station Windspeed Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Data
Month	Wind Speed	Wind Speed	Wind Speed	Wind Speed
	(km/hr)	(km/hr)	(km/hr)	(%)
July	21.9	0.2	7.7	98.9
August	34.0	0.2	9.0	99.6
September	26.6	0.2	10.6	93.5

Table A13: 2024 Q3 Rundle Meterological Station Windspeed Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Hours
Month	Wind Speed	Wind Speed	Wind Speed	Wind Speed
	(km/hr)	(km/hr)	(km/hr)	(%)
July	19.4	0.0	6.2	100.0
August	28.2	0.1	6.7	100.0
September	20.8	0.1	6.8	100.0

Table A14: 2024 Q3 Courtice Meterological Station Wind Direction Data Summary

MET Statistics	Valid Data
Month	Wind Direction (%)
July	98.9
August	99.6
September	93.5

Table A15: 2024 Q3 Rundle Meterological Station Wind Direction Data Summary

MET Statistics	Valid Data
Month	Wind Direction
	(%)
July	100.0
August	100.0
September	100.0

Table A16: 2024 Q3 Courtice Meterological Station Temperature Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Data
Month	Temperature	Temperature	Temperature	Temperature
	(°C)	(°C)	(°C)	(%)
July	29.2	11.8	21.9	98.9
August	29.5	10.7	20.9	99.6
September	25.0	7.6	18.9	93.5

Table A17: 2024 Q3 Rundle Meterological Station Temperature Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Data
Month	Temperature	Temperature	Temperature	Temperature
	(°C)	(°C)	(°C)	(%)
July	28.4	11.4	21.4	100.0
August	30.1	10.0	20.2	100.0
September	26.2	7.3	17.6	100.0

Table A18: 2024 Q3 Courtice Meterological Station Relative Humidity Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Data
Month	Relative Humidity	Relative Humidity	Relative Humidity	Relative Humidity
	(%)	(%)	(%)	(%)
July	100.0	39.9	78.4	98.9
August	100.0	39.0	76.3	99.6
September	100.0	33.8	76.7	93.5

Table A19: 2024 Q3 Rundle Meterological Station Relative Humidity Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Data
Month	Relative Humidity	Relative Humidity	Relative Humidity	Relative Humidity
	(%)	(%)	(%)	(%)
July	100.0	40.0	80.7	100.0
August	100.0	40.0	80.9	100.0
September	100.0	35.6	83.4	100.0

Table A20: 2024 Q3 Courtice Meterological Station Precipitation Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Total	Valid Data
Month	Precipitation	Precipitation	Precipitation	Precipitation	Precipitation
	(mm)	(mm)	(mm)	(mm)	%
July	23.4	0.0	0.2	111.4	98.9
August	13.2	0.0	0.1	60.4	99.6
September	13.8	0.0	0.1	57.4	93.5

Table A21: 2024 Q2 Rundle Meterological Station Precipitation Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Total	Valid Data
Month	Precipitation	Precipitation	Precipitation	Precipitation	Precipitation
	(mm)	(mm)	(mm)	(mm)	%
July	22.6	0.0	0.1	102.2	100.0
August	16.5	0.0	0.1	64.4	100.0
September	12.9	0.0	0.1	73.6	100.0

Table A22: 2024 Q3 Courtice Meterological Station Pressure Data Summary

MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Valid Data
Month	Pressure	Pressure	Pressure	Pressure
	("Hg)	("Hg)	("Hg)	(%)
July	30.0	29.4	29.7	98.9
August	30.0	29.4	29.7	99.6
September	30.1	29.5	29.8	93.5

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APPENDIX B

Table B1: Summary of Sample Flow Rate and Sample Duration for Dioxins & Furans

Sample Date	Courtice			Rundle		
	Filter ID	Sample Duration	Sample Volume	Filter ID	Sample Duration	Sample Volume
	No.	(min)	(m3)	No.	(min)	(m3)
July 5, 2024	L2756617-1	1440	278	L2756617-2	1440	294
July 29, 2024	L2756862-2	1440	280	L2756862-1	1440	284
August 22, 2024	L2757199-1	1440	288	L2757199-2	1440	294
September 15, 2024	L2757442-1	1440	283	L2757442-2	1440	293

Table B2: 2024 Courtice Station Q3 Monitoring Results for Dioxins & Furans

Contaminant	Units	MECP Criteria	HHRA Health Based Criteria	5 Jul 24	29 Jul 24	22 Aug 24	15 Sep 24	MECP Criteria (µg/m3)	No. > Criteria	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg TEQ/m3	-	-	7.56E-04	6.78E-04	8.87E-04	3.53E-04	-	-	6.69E-04	3.53E-04	8.87E-04	7.56E-04	8.87E-04	3.53E-04	4	100
1,2,3,7,8-PeCDD	pg TEQ/m3	-	-	1.13E-03	1.16E-03	8.00E-04	3.35E-04	-	-	8.57E-04	3.35E-04	1.16E-03	1.16E-03	8.00E-04	3.35E-04	4	100
1,2,3,4,7,8-HxCDD	pg TEQ/m3	-	-	3.36E-04	6.78E-05	2.01E-04	5.65E-05	-	-	1.65E-04	5.65E-05	3.36E-04	3.36E-04	2.01E-04	5.65E-05	4	100
1,2,3,6,7,8-HxCDD	pg TEQ/m3	-	-	2.52E-04	1.02E-04	4.14E-04	1.45E-04	-	-	2.28E-04	1.02E-04	4.14E-04	2.52E-04	4.14E-04	1.45E-04	4	100
1,2,3,7,8,9-HxCDD	pg TEQ/m3	-	-	1.80E-04	1.54E-04	1.51E-04	1.61E-04	-	-	1.62E-04	1.51E-04	1.80E-04	1.80E-04	1.51E-04	1.61E-04	4	100
1,2,3,4,6,7,8-HpCDD	pg TEQ/m3	-	-	9.90E-04	7.50E-05	7.34E-04	2.10E-04	-	-	5.02E-04	7.50E-05	9.90E-04	9.90E-04	7.34E-04	2.10E-04	4	100
OCDD	pg TEQ/m3	-	-	7.86E-05	2.79E-05	1.25E-04	3.11E-05	-	-	6.57E-05	2.79E-05	1.25E-04	7.86E-05	1.25E-04	3.11E-05	4	100
2,3,7,8-TCDF	pg TEQ/m3	-	-	8.28E-05	1.12E-04	1.04E-04	1.95E-04	-	-	1.24E-04	8.28E-05	1.95E-04	1.12E-04	1.04E-04	1.95E-04	4	100
1,2,3,7,8-PeCDF	pg TEQ/m3	-	-	7.56E-05	4.39E-05	3.76E-05	3.44E-05	-	-	4.79E-05	3.44E-05	7.56E-05	7.56E-05	3.76E-05	3.44E-05	4	100
2,3,4,7,8-PeCDF	pg TEQ/m3	-	-	3.35E-04	3.37E-04	3.60E-04	3.23E-04	-	-	3.39E-04	3.23E-04	3.60E-04	3.37E-04	3.60E-04	3.23E-04	4	100
1,2,3,4,7,8-HxCDF	pg TEQ/m3	-	-	1.80E-04	1.95E-04	3.62E-04	2.26E-04	-	-	2.41E-04	1.80E-04	3.62E-04	1.95E-04	3.62E-04	2.26E-04	4	100
1,2,3,6,7,8-HxCDF	pg TEQ/m3	-	-	3.49E-04	5.89E-05	1.04E-04	2.88E-04	-	-	2.00E-04	5.89E-05	3.49E-04	3.49E-04	1.04E-04	2.88E-04	4	100
2,3,4,6,7,8-HxCDF	pg TEQ/m3	-	-	1.57E-04	4.10E-05	2.48E-04	7.77E-05	-	-	1.31E-04	4.10E-05	2.48E-04	1.57E-04	2.48E-04	7.77E-05	4	100
1,2,3,7,8,9-HxCDF	pg TEQ/m3	-	-	7.74E-05	4.82E-05	4.69E-05	1.37E-04	-	-	7.74E-05	4.69E-05	1.37E-04	7.74E-05	4.69E-05	1.37E-04	4	100
1,2,3,4,6,7,8-HpCDF	pg TEQ/m3	-	-	1.74E-04	4.82E-05	1.87E-04	3.53E-05	-	-	1.11E-04	3.53E-05	1.87E-04	1.74E-04	1.87E-04	3.53E-05	4	100
1,2,3,4,7,8,9-HpCDF	pg TEQ/m3	-	-	1.40E-05	1.40E-05	1.16E-05	6.71E-06	-	-	1.16E-05	6.71E-06	1.40E-05	1.40E-05	1.16E-05	6.71E-06	4	100
OCDF	pg TEQ/m3	-	-	6.79E-06	2.42E-06	1.83E-05	3.04E-06	-	-	7.63E-06	2.42E-06	1.83E-05	6.79E-06	1.83E-05	3.04E-06	4	100
Total Toxic Equivalency	pg TEQ/m3	0.1 1[1]	-	5.18E-03	3.17E-03	4.79E-03	2.62E-03	0.1	0	3.94E-03	2.62E-03	5.18E-03	5.18E-03	4.79E-03	2.62E-03	4	100

NOTE: All non-detectable results were reported as 1/2 of the detection limit

[1] O. Reg. 419/05 Schedule 6, Upper Risk Thresholds

Table B3: 2024 Rundle Road Station Q3 Monitoring Results for Dioxins & Furans

Contaminant	Units	MECP Criteria	HHRA Health Based Criteria	5 Jul 24	29 Jul 24	22 Aug 24	15 Sep 24	MECP Criteria (µg/m3)	No. > Criteria	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg TEQ/m3	-	-	5.95E-04	6.68E-04	7.83E-04	3.93E-04	-	-	6.10E-04	3.93E-04	7.83E-04	6.68E-04	7.83E-04	3.93E-04	4	100
1,2,3,7,8-PeCDD	pg TEQ/m3	-	-	2.69E-03	9.85E-04	1.39E-03	5.47E-04	-	-	1.40E-03	5.47E-04	2.69E-03	2.69E-03	1.39E-03	5.47E-04	4	100
1,2,3,4,7,8-HxCDD	pg TEQ/m3	-	-	1.12E-04	7.03E-05	5.62E-05	7.86E-05	-	-	7.93E-05	5.62E-05	1.12E-04	1.12E-04	5.62E-05	7.86E-05	4	100
1,2,3,6,7,8-HxCDD	pg TEQ/m3	-	-	1.70E-04	6.86E-05	1.09E-04	7.52E-05	-	-	1.06E-04	6.86E-05	1.70E-04	1.70E-04	1.09E-04	7.52E-05	4	100
1,2,3,7,8,9-HxCDD	pg TEQ/m3	-	-	1.70E-04	6.86E-05	5.45E-05	7.52E-05	-	-	9.21E-05	5.45E-05	1.70E-04	1.70E-04	5.45E-05	7.52E-05	4	100
1,2,3,4,6,7,8-HpCDD	pg TEQ/m3	-	-	4.93E-04	2.37E-04	3.02E-04	2.16E-04	-	-	3.12E-04	2.16E-04	4.93E-04	4.93E-04	3.02E-04	2.16E-04	4	100
OCDD	pg TEQ/m3	-	-	8.61E-05	2.33E-05	2.82E-05	2.60E-05	-	-	4.09E-05	2.33E-05	8.61E-05	8.61E-05	2.82E-05	2.60E-05	4	100
2,3,7,8-TCDF	pg TEQ/m3	-	-	8.67E-05	1.56E-04	6.64E-05	8.72E-05	-	-	9.92E-05	6.64E-05	1.56E-04	1.56E-04	6.64E-05	8.72E-05	4	100
1,2,3,7,8-PeCDF	pg TEQ/m3	-	-	1.13E-04	4.96E-05	2.76E-05	4.56E-05	-	-	5.90E-05	2.76E-05	1.13E-04	1.13E-04	2.76E-05	4.56E-05	4	100
2,3,4,7,8-PeCDF	pg TEQ/m3	-	-	6.12E-04	5.80E-04	1.28E-04	2.41E-04	-	-	3.90E-04	1.28E-04	6.12E-04	6.12E-04	1.28E-04	2.41E-04	4	100
1,2,3,4,7,8-HxCDF	pg TEQ/m3	-	-	3.57E-04	1.34E-04	5.28E-05	7.35E-05	-	-	1.54E-04	5.28E-05	3.57E-04	3.57E-04	5.28E-05	7.35E-05	4	100
1,2,3,6,7,8-HxCDF	pg TEQ/m3	-	-	1.70E-04	1.13E-04	1.44E-04	7.01E-05	-	-	1.24E-04	7.01E-05	1.70E-04	1.70E-04	1.44E-04	7.01E-05	4	100
2,3,4,6,7,8-HxCDF	pg TEQ/m3	-	-	8.33E-05	3.42E-04	2.89E-05	1.34E-04	-	-	1.47E-04	2.89E-05	3.42E-04	3.42E-04	2.89E-05	1.34E-04	4	100
1,2,3,7,8,9-HxCDF	pg TEQ/m3	-	-	1.57E-04	5.80E-05	5.11E-05	6.32E-05	-	-	8.25E-05	5.11E-05	1.57E-04	1.57E-04	5.11E-05	6.32E-05	4	100
1,2,3,4,6,7,8-HpCDF	pg TEQ/m3	-	-	9.52E-05	1.11E-04	1.87E-05	3.76E-05	-	-	6.56E-05	1.87E-05	1.11E-04	1.11E-04	1.87E-05	3.76E-05	4	100
1,2,3,4,7,8,9-HpCDF	pg TEQ/m3	-	-	2.04E-05	6.15E-06	9.70E-06	7.35E-06	-	-	1.09E-05	6.15E-06	2.04E-05	2.04E-05	9.70E-06	7.35E-06	4	100
OCDF	pg TEQ/m3	-	-	7.43E-06	1.05E-06	1.52E-06	2.45E-06	-	-	3.11E-06	1.05E-06	7.43E-06	7.43E-06	1.52E-06	2.45E-06	4	100
Total Toxic Equivalency	pg TEQ/m3	0.1 1[1]	-	6.02E-03	3.67E-03	3.25E-03	2.17E-03	0.1	0	3.78E-03	2.17E-03	6.02E-03	6.02E-03	3.25E-03	2.17E-03	4	100

NOTE: All non-detectable results were reported as 1/2 of the detection limit

[1] O. Reg. 419/05 Schedule 6, Upper Risk Thresholds

Table B4: Summary of Sample Flow Rate and Sample Duration for PAHs

Sample Date	Courtice			Rundle		
	Filter ID	Sample Duration	Sample Volume	Filter ID	Sample Duration	Sample Volume
	No.	(min)	(m3)	No.	(min)	(m3)
July 5, 2024	L2756617-1	1440	278	L2756617-2	1440	294
July 17, 2024	L2756752-1	1440	274	L2756752-2	1439	287
July 29, 2024	L2756862-2	1440	280	L2756862-1	1440	284
August 10, 2024	L2757019-1	1440	279	L2757019-2	1440	291
August 22, 2024	L2757199-1	1440	288	L2757199-2	1440	294
September 3, 2024	L2757290-2	1440	295	L2757290-1	1440	305
September 15, 2024	Invalid			L2757442-1	1440	293
September 27, 2024	L2757608-2	1440	283	L2757608-1	1440	310

Table B5: 2024 Courtice Station Q3 Monitoring Results for PAHs

Contaminant	Units	MECP Criteria	5 Jul 24	17 Jul 24	29 Jul 24	10 Aug 24	22 Aug 24	3 Sep 24	15 Sep 24	27 Sep 24	No. > Criteria	Arithmetic Mean	Minimum Q3 Concentration	Maximum Q3 Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m3	12000	3.17E+00	9.48E-01	2.38E+00	1.99E+00	3.05E+00	3.53E+00	Invalid	6.12E+00	0	3.03E+00	9.48E-01	6.12E+00	3.17E+00	3.05E+00	6.12E+00	7	88
2-Methylnaphthalene	ng/m3	10000	8.17E+00	2.38E+00	6.28E+00	4.13E+00	7.23E+00	6.99E+00		1.11E+01	0	6.61E+00	2.38E+00	1.11E+01	8.17E+00	7.23E+00	1.11E+01	7	88
Acenaphthene	ng/m3	-	5.18E+00	1.73E+00	5.60E+00	1.92E+00	5.81E+00	5.83E+00		1.28E+01	-	5.56E+00	1.73E+00	1.28E+01	5.60E+00	5.81E+00	1.28E+01	7	88
Acenaphthylene	ng/m3	3500	7.53E-01	8.86E-02	1.49E-01	6.93E-01	5.29E-01	4.41E-01		5.63E-01	0	4.59E-01	8.86E-02	5.63E-01	7.53E-01	6.93E-01	5.63E-01	7	88
Anthracene	ng/m3	200	2.92E-01	1.40E-01	2.32E-01	3.15E-01	2.82E-01	2.22E-01		3.05E-01	0	2.55E-01	1.40E-01	3.15E-01	2.92E-01	3.15E-01	3.05E-01	7	88
Benzo(a)Anthracene	ng/m3	-	3.38E-02	1.75E-02	7.67E-03	4.06E-02	1.98E-02	1.64E-02		7.25E-03	-	2.04E-02	7.25E-03	4.06E-02	3.38E-02	4.06E-02	1.64E-02	7	88
Benzo(a)fluorene	ng/m3	-	8.89E-02	2.35E-01	2.62E-02	1.01E-01	6.64E-02	4.88E-02		2.88E-02	-	8.50E-02	2.62E-02	2.35E-01	2.35E-01	1.01E-01	4.88E-02	7	88
Benzo(a)Pyrene	ng/m3	0.05	7.56E-03	1.60E-02	4.64E-03	1.08E-02	5.74E-03	2.20E-02		1.54E-02	0	1.17E-02	4.64E-03	2.20E-02	1.60E-02	1.08E-02	2.20E-02	7	88
Benzo(b)Fluoranthene	ng/m3	-	5.51E-02	2.90E-02	1.55E-02	5.28E-02	2.73E-02	3.87E-02		1.61E-02	-	3.35E-02	1.55E-02	5.51E-02	5.51E-02	5.28E-02	3.87E-02	7	88
Benzo(b)fluorene	ng/m3	-	1.73E-02	4.16E-02	6.07E-03	1.83E-02	9.74E-03	7.63E-03		5.31E-03	-	1.51E-02	5.31E-03	4.16E-02	4.16E-02	1.83E-02	7.63E-03	7	88
Benzo(e)Pyrene	ng/m3	-	2.57E-02	2.39E-02	1.93E-02	4.34E-02	1.41E-02	2.75E-02		9.73E-03	-	2.34E-02	9.73E-03	4.34E-02	2.57E-02	4.34E-02	2.75E-02	7	88
Benzo(g,h,i)Perylene	ng/m3	-	2.03E-02	2.53E-02	1.86E-02	4.38E-02	1.67E-02	3.07E-02		1.52E-02	-	2.44E-02	1.52E-02	4.38E-02	2.53E-02	4.38E-02	3.07E-02	7	88
Benzo(k)Fluoranthene	ng/m3	-	4.79E-02	3.17E-02	4.53E-02	5.78E-02	2.35E-02	2.81E-02		1.06E-02	-	3.50E-02	1.06E-02	5.78E-02	4.79E-02	5.78E-02	2.81E-02	7	88
Biphenyl	ng/m3	-	3.14E+00	4.27E+00	2.58E+00	1.34E+00	1.89E+00	2.55E+00		3.38E+00	-	2.74E+00	1.34E+00	4.27E+00	4.27E+00	1.89E+00	3.38E+00	7	88
Chrysene	ng/m3	-	1.31E-01	7.22E-02	4.93E-02	1.20E-01	9.01E-02	6.48E-02		4.18E-02	-	8.13E-02	4.18E-02	1.31E-01	1.31E-01	1.20E-01	6.48E-02	7	88
Dibenzo(a,h)Anthracene	ng/m3	-	1.80E-03	4.38E-03	3.57E-03	5.56E-03	1.74E-03	4.92E-03		1.77E-03	-	3.39E-03	1.74E-03	5.56E-03	4.38E-03	5.56E-03	4.92E-03	7	88
Fluoranthene	ng/m3	-	2.02E+00	1.05E+00	1.80E+00	1.04E+00	1.08E+00	7.56E-01		9.02E-01	-	1.24E+00	7.56E-01	2.02E+00	2.02E+00	1.08E+00	9.02E-01	7	88
Fluorene	ng/m3	-	5.76E+00	1.98E+00	5.03E+00	2.24E+00	2.27E+00	3.02E+00		6.69E+00	-	3.86E+00	1.98E+00	6.69E+00	5.76E+00	2.27E+00	6.69E+00	7	88
Indeno(1,2,3-cd)Pyrene	ng/m3	-	1.01E-02	1.99E-02	4.28E-03	4.02E-02	1.39E-02	2.71E-02		1.22E-02	-	1.82E-02	4.28E-03	4.02E-02	1.99E-02	4.02E-02	2.71E-02	7	88
Naphthalene	ng/m3	22500	6.70E+00	3.15E+00	4.60E+00	4.77E+00	8.10E+00	8.28E+00		1.91E+01	0	7.82E+00	3.15E+00	1.91E+01	6.70E+00	8.10E+00	1.91E+01	7	88
o-Terphenyl	ng/m3	-	1.89E-02	5.00E-02	1.11E-02	2.03E-02	1.74E-03	7.97E-03	5.49E-03	-	1.65E-02	1.74E-03	5.00E-02	5.00E-02	2.03E-02	7.97E-03	7	88	
Perylene	ng/m3	-	1.80E-03	4.56E-03	5.71E-03	4.85E-03	1.74E-03	1.70E-03	1.77E-03	-	3.16E-03	1.70E-03	5.71E-03	5.71E-03	4.85E-03	1.77E-03	7	88	
Phenanthrene	ng/m3	-	9.87E+00	4.19E+00	8.60E+00	4.63E+00	4.80E+00	3.97E+00	6.69E+00	-	6.11E+00	3.97E+00	9.87E+00	9.87E+00	4.80E+00	6.69E+00	7	88	
Pyrene	ng/m3	-	8.57E-01	4.45E-01	6.57E-01	6.07E-01	5.32E-01	3.76E-01	4.42E-01	-	5.59E-01	3.76E-01	8.57E-01	8.57E-01	6.07E-01	4.42E-01	7	88	
Tetralin	ng/m3	-	1.03E+00	1.34E+00	4.78E-01	4.56E-01	4.94E-01	3.90E-01	9.24E-01	-	7.30E-01	3.90E-01	1.34E+00	1.34E+00	4.94E-01	9.24E-01	7	88	
Total PAH[3]	ng/m3	-	4.74E+01	2.23E+01	3.86E+01	2.47E+01	3.64E+01	3.67E+01	6.93E+01	-	3.93E+01	2.23E+01	6.93E+01	4.74E+01	3.64E+01	6.93E+01	7	88	

NOTE: All non-detectable results were reported as 1/2 of the detection limit

[1] O. Reg. 419/05 Schedule 6, Upper Risk Thresholds

Table B6: 2024 Rundle Road Station Q3 Monitoring Results for PAHs

Contaminant	Units	MECP Criteria	5 Jul 24	17 Jul 24	29 Jul 24	10 Aug 24	22 Aug 24	3 Sep 24	15 Sep 24	27 Sep 24	No. > Criteria	Arithmetic Mean	Minimum Q3 Concentration	Maximum Q3 Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m3	12000	3.01E+00	2.00E+00	3.11E+00	1.24E+00	2.21E+00	2.89E+00	3.96E+00	4.13E+00	0	2.82E+00	1.24E+00	4.13E+00	3.11E+00	2.21E+00	4.13E+00	8	100
2-Methylnaphthalene	ng/m3	10000	7.86E+00	4.88E+00	8.23E+00	2.54E+00	5.21E+00	5.38E+00	1.02E+01	7.53E+00	0	6.47E+00	2.54E+00	1.02E+01	8.23E+00	5.21E+00	1.02E+01	8	100
Acenaphthene	ng/m3	-	7.14E+00	4.15E+00	7.28E+00	2.73E+00	5.14E+00	4.46E+00	7.92E+00	5.85E+00	-	5.58E+00	2.73E+00	7.92E+00	7.28E+00	5.14E+00	7.92E+00	8	100
Acenaphthylene	ng/m3	3500	9.35E-01	1.63E-01	1.63E-01	8.00E-02	1.97E-01	4.96E-01	3.45E-01	3.39E-01	0	3.40E-01	8.00E-02	9.35E-01	9.35E-01	1.97E-01	4.96E-01	8	100
Anthracene	ng/m3	200	1.37E+00	6.83E-01	1.77E+00	5.56E-01	4.39E-01	4.86E-01	8.94E-01	4.55E-01	0	8.32E-01	4.39E-01	1.77E+00	1.77E+00	5.56E-01	8.94E-01	8	100
Benzo(a)Anthracene	ng/m3	-	9.90E-02	2.60E-02	2.55E-02	7.55E-03	8.00E-03	1.82E-02	1.43E-02	2.44E-02	-	2.79E-02	7.55E-03	9.90E-02	9.90E-02	8.00E-03	2.44E-02	8	100
Benzo(a)fluorene	ng/m3	-	2.06E-01	3.43E-01	1.55E-01	4.05E-02	6.95E-02	8.80E-02	9.39E-02	6.33E-02	-	1.32E-01	4.05E-02	3.43E-01	3.43E-01	6.95E-02	9.39E-02	8	100
Benzo(a)Pyrene	ng/m3	0.05	1.50E-02	2.18E-02	6.51E-03	4.46E-03	6.30E-03	6.40E-02	2.18E-02	1.63E-02	1	1.95E-02	4.46E-03	6.40E-02	2.18E-02	6.30E-03	6.40E-02	8	100
Benzo(b)Fluoranthene	ng/m3	-	1.68E-01	3.59E-02	2.73E-02	1.94E-02	1.38E-02	5.19E-02	2.68E-02	3.62E-02	-	4.74E-02	1.38E-02	1.68E-01	1.68E-01	1.94E-02	5.19E-02	8	100
Benzo(b)fluorene	ng/m3	-	4.35E-02	7.11E-02	2.20E-02	8.07E-03	5.62E-03	1.31E-02	8.02E-03	1.23E-02	-	2.30E-02	5.62E-03	7.11E-02	7.11E-02	8.07E-03	1.31E-02	8	100
Benzo(e)Pyrene	ng/m3	-	7.59E-02	2.93E-02	1.58E-02	1.63E-02	8.17E-03	3.31E-02	1.76E-02	2.15E-02	-	2.72E-02	8.17E-03	7.59E-02	7.59E-02	1.63E-02	3.31E-02	8	100
Benzo(g,h,i)Perylene	ng/m3	-	3.88E-02	3.19E-02	1.97E-02	2.01E-02	1.60E-02	4.30E-02	1.45E-02	2.00E-02	-	2.55E-02	1.45E-02	4.30E-02	3.88E-02	2.01E-02	4.30E-02	8	100
Benzo(k)Fluoranthene	ng/m3	-	1.54E-01	3.35E-02	1.55E-02	1.68E-02	1.99E-02	3.28E-02	2.78E-02	2.21E-02	-	4.04E-02	1.55E-02	1.54E-01	1.54E-01	1.99E-02	3.28E-02	8	100
Biphenyl	ng/m3	-	2.58E+00	9.24E+00	2.23E+00	6.90E-01	1.46E+00	2.15E+00	4.13E+00	2.07E+00	-	3.07E+00	6.90E-01	9.24E+00	9.24E+00	1.46E+00	4.13E+00	8	100
Chrysene	ng/m3	-	3.81E-01	1.22E-01	2.02E-01	6.45E-02	7.18E-02	9.39E-02	7.10E-02	9.98E-02	-	1.38E-01	6.45E-02	3.81E-01	3.81E-01	7.18E-02	9.98E-02	8	100
Dibenzo(a,h)Anthracene	ng/m3	-	1.22E-02	5.93E-03	4.22E-03	1.72E-03	1.70E-03	3.28E-03	1.71E-03	3.55E-03	-	4.29E-03	1.70E-03	1.22E-02	1.22E-02	1.72E-03	3.55E-03	8	100
Fluoranthene	ng/m3	-	5.00E+00	3.43E+00	5.91E+00	2.25E+00	2.28E+00	2.11E+00	3.22E+00	1.62E+00	-	3.23E+00	1.62E+00	5.91E+00	5.91E+00	2.28E+00	3.22E+00	8	100
Fluorene	ng/m3	-	8.27E+00	4.64E+00	8.12E+00	3.09E+00	3.00E+00	3.81E+00	6.96E+00	3.62E+00	-	5.19E+00	3.00E+00	8.27E+00	8.27E+00	3.09E+00	6.96E+00	8	100
Indeno(1,2,3-cd)Pyrene	ng/m3	-	3.98E-02	2.39E-02	7.03E-03	9.44E-03	1.02E-02	3.87E-02	1.67E-02	1.79E-02	-	2.05E-02	7.03E-03	3.98E-02	3.98E-02	1.02E-02	3.87E-02	8	100
Naphthalene	ng/m3	22500	5.27E+00	5.82E+00	4.29E+00	2.58E+00	5.11E+00	1.09E+00	7.61E+00	9.43E+00	0	6.38E+00	2.58E+00	1.09E+00	5.82E+00	5.11E+00	1.09E+00	8	100
o-Terphenyl	ng/m3	-	2.74E-02	4.95E-02	1.49E-02	1.05E-02	4.09E-03	8.70E-03	1.55E-02	7.59E-03	-	1.73E-02	4.09E-03	4.95E-02	4.95E-02	1.05E-02	1.55E-02	8	100
Perylene	ng/m3	-	1.70E-03	6.10E-03	6.33E-03	3.78E-03	1.70E-03	3.28E-03	1.71E-03	1.61E-03	-	3.28E-03	1.61E-03	6.33E-03	6.33E-03	3.78E-03	3.28E-03	8	100
Phenanthrene	ng/m3	-	1.95E+01	1.21E+01	2.04E+01	9.23E+00	8.34E+00	7.65E+00	1.19E+01	6.17E+00	-	1.19E+01	6.17E+00	2.04E+01	2.04E+01	9.23E+00	1.19E+01	8	100
Pyrene	ng/m3	-	2.32E+00	1.52E+00	2.64E+00	1.05E+00	1.02E+00	1.04E+00	1.33E+00	8.33E-01	-	1.47E+00	1.04E+00	2.64E+00	2.64E+00	1.05E+00	1.33E+00	8	100
Tetralin	ng/m3	-	7.25E-01	2.29E+00	3.37E-01	3.31E-01	3.54E-01	4.79E-01	7.61E-01	4.91E-01	-	7.21E-01	3.31E-01	2.29E+00	2.29E+00	3.54E-01	7.61E-01	8	100
Total PAH[3]	ng/m3	-	6.52E+01	5.18E+01	6.50E+01	2.66E+01	3.50E+01	4.23E+01	5.95E+01	4.29E+01	-	4.85E+01	2.66E+01	6.52E+01	6.52E+01	3.50E+01	5.95E+01	8	100

NOTE: All non-detectable results were reported as 1/2 of the detection limit

[1] O. Reg. 419/05 Schedule 6, Upper Risk Thresholds

Table B7: Summary of Sample Flow Rate and Sample Duration for TSP & Metals

Sample Date	Courtice			Rundle		
	Filter ID	Sample Duration	Sample Volume	Filter ID	Sample Duration	Sample Volume
	No.	(min)	(m3)	No.	(min)	(m3)
July 5, 2024	L2756618-1	1440	1692	Invalid		
July 11, 2024	L2756753-1	1440	1618	Invalid		
July 17, 2024	L2756753-2	1440	1622	Invalid		
July 23, 2024	L2756863-4	1440	1623	L2756863-2	1440	1666
July 29, 2024	L2756863-3	1440	1630	L2756863-1	1440	1646
August 4, 2024	L2757020-2	1440	1678	L2757020-4	1440	1655
August 10, 2024	L2757020-1	1440	1728	L2757020-3	1440	1704
August 16, 2024	BU2400235-004	1440	1707	BU2400235-002	1440	1677
August 22, 2024	BU2400235-003	1440	1656	BU2400235-001	1440	1679
August 28, 2024	BU2400330-004	1440	1653	BU2400330-002	1440	1709
September 3, 2024	BU2400330-003	1440	1659	BU2400330-001	1440	1707
September 9, 2024		Invalid		BU2400487-004	1440	1719
September 15, 2024	BU2400487-005	1440	1758	BU2400487-003	1440	1515
September 21, 2024	BU2400641-003	1440	1739	BU2400330-002	1440	1542
September 27, 2024		Invalid		BU2400330-001	1440	1555

Table B8: 2024 Courtice Station Q3 Monitoring Results for TSP and Metals

Contaminant	Units	5 Jul 24	11 Jul 24	17 Jul 24	23 Jul 24	29 Jul 24	4 Aug 24	10 Aug 24	16 Aug 24	22 Aug 24	28 Aug 24	3 Sep 24	9 Sep 24	15 Sep 24	21 Sep 24	27 Sep 24	MECP Criteria (µg/m3)	No. > Criteria	Geometric Mean	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data		
Total particulate	µg/m3	44.92	21.51	31.69	43.99	41.17	49.81	29.63	63.85	43.06	17.49	24.53	Invalid	24.59	30.24	Invalid	120	0	33.7	35.9	17.49	63.85	44.92	63.85	30.24	13	87		
Mercury (Hg)	µg/m3	1.36E-05	8.65E-06	1.05E-05	1.42E-05	1.72E-05	7.15E-06	1.10E-05	1.52E-05	9.06E-06	3.03E-06	3.01E-06		1.02E-05	8.62E-06		2.21E-01	2.96E-01	4.8	0	2.19E-01	2.50E-01	8.84E-02	5.34E-01	4.14E-01	5.34E-01	2.96E-01	13	87
Aluminum (Al)	µg/m3	2.96E-01	8.84E-02	1.08E-01	3.38E-01	4.14E-01	2.31E-01	1.23E-01	5.34E-01	2.92E-01	1.40E-01	1.67E-01		1.52E-03	1.13E-03		25	0	1.16E-03	1.19E-03	7.81E-04	1.65E-03	1.65E-03	1.65E-03	1.57E-03	1.52E-03	13	87	
Antimony (Sb)	µg/m3	1.15E-03	1.03E-03	1.18E-03	1.42E-03	1.65E-03	9.59E-04	7.81E-04	1.57E-03	9.18E-04	8.11E-04	1.39E-03		2.41E-03	8.62E-04		0.3	0	9.71E-04	1.02E-03	8.62E-04	2.41E-03	9.27E-04	9.08E-04	2.41E-03	2.41E-03	13	87	
Arsenic (As)	µg/m3	8.87E-04	9.27E-04	9.25E-04	9.24E-04	9.20E-04	8.94E-04	8.68E-04	8.79E-04	9.06E-04	9.08E-04	9.04E-04		7.11E-03	7.59E-03		10	0	9.72E-03	1.01E-02	5.73E-03	1.37E-02	1.37E-02	1.37E-02	1.20E-02	1.25E-02	13	87	
Barium (Ba)	µg/m3	1.37E-02	7.85E-03	1.23E-02	1.18E-02	1.29E-02	9.12E-03	7.35E-03	1.20E-02	1.10E-02	5.73E-03	1.25E-02		1.51E-05	1.44E-05		0.01	0	1.50E-05	1.50E-05	1.44E-05	1.55E-05	1.55E-05	1.55E-05	1.51E-05	1.51E-05	13	87	
Beryllium (Be)	µg/m3	1.48E-05	1.55E-05	1.54E-05	1.54E-05	1.53E-05	1.49E-05	1.45E-05	1.46E-05	1.51E-05	1.51E-05	1.51E-05		5.42E-04	5.17E-04		-	-	5.40E-04	5.40E-04	5.17E-04	5.56E-04	5.56E-04	5.56E-04	5.45E-04	5.42E-04	13	87	
Bismuth (Bi)	µg/m3	5.32E-04	5.56E-04	5.55E-04	5.55E-04	5.52E-04	5.36E-04	5.21E-04	5.27E-04	5.43E-04	5.45E-04	5.42E-04		4.52E-03	4.31E-03		120	0	5.06E-03	5.29E-03	4.31E-03	1.04E-02	1.04E-02	8.79E-03	4.52E-03	4.52E-03	13	87	
Boron (B)	µg/m3	4.43E-03	4.64E-03	4.62E-03	4.62E-03	1.04E-02	4.47E-03	4.34E-03	8.79E-03	4.53E-03	4.54E-03	4.52E-03		0.025	0		1.42E-04	1.55E-04	5.87E-05	2.96E-04	2.96E-04	2.96E-04	2.96E-04	1.94E-04	2.50E-04	2.50E-04	13	87	
Cadmium (Cd)	µg/m3	1.83E-04	5.87E-05	1.14E-04	1.66E-04	2.96E-04	1.48E-04	1.52E-04	1.94E-04	1.43E-04	7.56E-05	9.76E-05		1.02E-03	2.01E-03		0.5	0	1.82E-03	2.02E-03	9.84E-04	3.40E-03	3.40E-03	3.20E-03	3.40E-03	2.23E-03	13	87	
Chromium (Cr)	µg/m3	2.66E-03	1.05E-03	1.05E-03	3.20E-03	3.19E-03	2.32E-03	9.84E-04	3.40E-03	2.11E-03	1.03E-03	2.23E-03		1.24E-04	8.39E-04		0.1	0	1.80E-04	2.22E-04	7.54E-05	8.39E-04	2.55E-04	3.13E-04	8.39E-04	8.39E-04	13	87	
Cobalt (Co)	µg/m3	1.98E-04	7.54E-05	1.42E-04	1.95E-04	2.55E-04	1.66E-04	9.90E-05	3.13E-04	2.29E-04	1.13E-04	1.42E-04		2.49E-02	6.09E-03		50	0	2.03E-02	2.41E-02	6.09E-03	5.32E-02	5.32E-02	1.58E-02	2.68E-02	2.68E-02	13	87	
Copper (Cu)	µg/m3	5.32E-02	1.92E-02	4.41E-02	2.94E-02	4.12E-02	1.58E-02	1.57E-02	1.10E-02	1.45E-02	1.11E-02	2.68E-02		4.19E-01	4.09E-01		4	0	5.16E-01	5.53E-01	2.89E-01	9.49E-01	8.22E-01	9.49E-01	9.49E-01	5.45E-01	13	87	
Iron (Fe)	µg/m3	7.03E-01	2.89E-01	4.19E-01	7.46E-01	8.22E-01	6.97E-01	3.47E-01	9.49E-01	5.51E-01	2.96E-01	5.45E-01		4.94E-03	3.21E-03		0.5	0	2.69E-03	2.86E-03	1.47E-03	4.94E-03	4.39E-03	3.83E-03	4.94E-03	4.94E-03	13	87	
Lead (Pb)	µg/m3	2.96E-03	2.11E-03	2.21E-03	3.16E-03	4.39E-03	2.00E-03	2.49E-03	3.83E-03	2.57E-03	1.47E-03	1.80E-03		1.50E-01	1.97E-01		-	-	2.87E-01	3.18E-01	1.33E-01	6.56E-01	6.56E-01	4.25E-01	6.56E-01	3.16E-01	13	87	
Magnesium (Mg)	µg/m3	3.54E-01	1.33E-01	2.69E-01	4.25E-01	3.87E-01	3.27E-01	2.97E-01	6.56E-01	4.65E-01	1.56E-01	3.16E-01		9.04E-03	8.80E-03		0.4	0	1.39E-02	1.52E-02	6.98E-03	2.68E-02	2.11E-02	2.68E-02	1.56E-02	1.56E-02	13	87	
Manganese (Mn)	µg/m3	2.00E-02	6.98E-03	1.17E-02	2.11E-02	1.82E-02	1.84E-02	1.36E-02	2.68E-02	1.97E-02	7.26E-03	1.56E-02		9.58E-04	6.50E-04		120	0	9.33E-04	9.89E-04	6.04E-04	1.59E-03	1.59E-03	8.67E-04	9.76E-04	9.76E-04	13	87	
Molybdenum (Mo)	µg/m3	1.44E-03	8.22E-04	1.53E-03	1.35E-03	1.59E-03	7.63E-04	6.25E-04	8.67E-04	6.04E-04	6.90E-04	9.76E-04		7.96E-04	2.73E-03		0.2	0	1.15E-03	1.24E-03	7.12E-04	2.73E-03	1.58E-03	1.86E-03	2.73E-03	2.73E-03	13	87	
Nickel (Ni)	µg/m3	1.07E-03	8.47E-04	1.17E-03	1.17E-03	1.58E-03	1.13E-03	7.12E-04	1.86E-03	1.21E-03	7.56E-04	1.05E-03		2.26E-01	2.16E-01		-	-	2.38E-01	2.43E-01	2.16E-01	4.66E-01	4.66E-01	2.27E-01	2.26E-01	2.26E-01	13	87	
Phosphorus (P)	µg/m3	2.22E-01	2.32E-01	2.31E-01	2.31E-01	4.66E-01	2.23E-01	2.17E-01	2.20E-01	2.26E-01	2.27E-01	2.26E-01		7.84E-04	3.74E-04		10	0	4.63E-04	4.90E-04	3.74E-04	8.59E-04	8.59E-04	8.20E-04	7.84E-04	7.84E-04	13	87	
Selenium (Se)	µg/m3	3.84E-04	4.02E-04	4.01E-04	4.00E-04	8.59E-04	3.87E-04	3.76E-04	8.20E-04	3.93E-04	3.93E-04	3.92E-04		7.59E-05	2.59E-05		1	0	2.92E-05	3.08E-05	2.59E-05	7.59E-05	2.78E-05	2.72E-05	7.59E-05	7.59E-05	13	87	
Silver (Ag)	µg/m3	2.66E-05	2.78E-05	2.77E-05	2.77E-05	2.76E-05	2.68E-05	2.60E-05	2.64E-05	2.72E-05	2.72E-05	2.71E-05		5.12E-03	7.82E-03		120	0	1.05E-02	1.20E-02	3.96E-03	2.32E-02	1.65E-02	2.32E-02	1.33E-02	1.33E-02	13	87	
Strontium (Sr)	µg/m3	1.12E-02	3.96E-03	7.52E-03	1.44E-02	1.65E-02	1.69E-02	1.10E-02	2.32E-02	1.90E-02	5.51E-03	1.33E-02		2.71E-05	2.59E-05		-	-	2.70E-05	2.70E-05	2.59E-05	2.78E-05	2.78E-05	2.72E-05	2.71E-05	2.71E-05	13	87	
Thallium (Tl)	µg/m3	2.66E-05	2.78E-05	2.77E-05	2.77E-05	2.76E-05	2.68E-05	2.60E-05	2.64E-05	2.72E-05	2.72E-05	2.71E-05		1.44E-03	1.32E-03		10	0	1.18E-03	1.24E-03	6.96E-04	2.25E-03	2.25E-03	1.70E-03	1.44E-03	1.44E-03	13	87	
Tin (Sn)	µg/m3	1.04E-03	7.17E-04	1.34E-03	1.17E-03	2.25E-03	8.94E-04	1.70E-03	1.44E-03	1.02E-03	6.96E-04	1.05E-03		8.44E-03	1.26E-02		120	0	9.06E-03	1.08E-02	3.18E-03	2.11E-02	1.96E-02	2.11E-02	2.11E-02	1.26E-02	13	87	
Titanium (Ti)	µg/m3	1.36E-02	3.40E-03	3.39E-03	1.73E-02	1.96E-02	8.94E-03	3.18E-03	2.11E-02	1.15E-02	8.47E-03	8.44E-03		3.85E-05	5.81E-05		1.5	0	1.96E-05	2.90E-05	1.85E-06	7.55E-05	7.55E-05	6.03E-05	5.81E-05	5.81E-05	13	87	
Uranium (U)	µg/m3	3.38E-05	1.85E-06	5.30E-06	2.50E-05	7.55E-05	1.98E-05	1.38E-05	6.03E-05	2.23E-05	9.26E-06	1.33E-05		1.51E-03	1.44E-03		2	0	1.60E-03	1.65E-03	1.44E-03	3.46E-03	1.55E-03	3.46E-03	1.51E-03	1.51E-03	13	87	
Vanadium (V)	µg/m3	1.48E-03	1.55E-03	1.54E-03	1.54E-03	1.53E-03	1.49E-03	1.45E-03	3.46E-03	1.51E-03	1.51E-03	1.51E-03	3.56E-02	2.48E-02	120	0	3.85E-02	3.95E-02	2.48E-02	5.48E-02	5.48E-02	5.39E-02	4.58E-02	4.58E-02	13	87			
Zinc (Zn)	µg/m3	5.48E-02	3.62E-02	4.19E-02	4.10E-02	3.73E-02	3.49E-02	4.48E-02	3.58E-02	5.39E-02	2.64E-02	4.58E-02	6.03E-04	5.75E-04	20	0	6.00E-04	6.00E-04	5.75E-04	6.18E-04	6.18E-04	6.05E-04	6.03E-04	6.03E-04	13	87			
Zirconium (Zr)	µg/m3	5.91E-04	6.18E-04	6.16E-04	6.16E-04	6.13E-04	5.96E-04	5.79E-04	5.86E-04	6.04E-04	6.05E-04	6.03E-04																	

NOTE: All non-detectable results were reported as 1/2 of the detection limit

Table B9: 2024 Rundle Road Station Q3 Monitoring Results for TSP and Metals

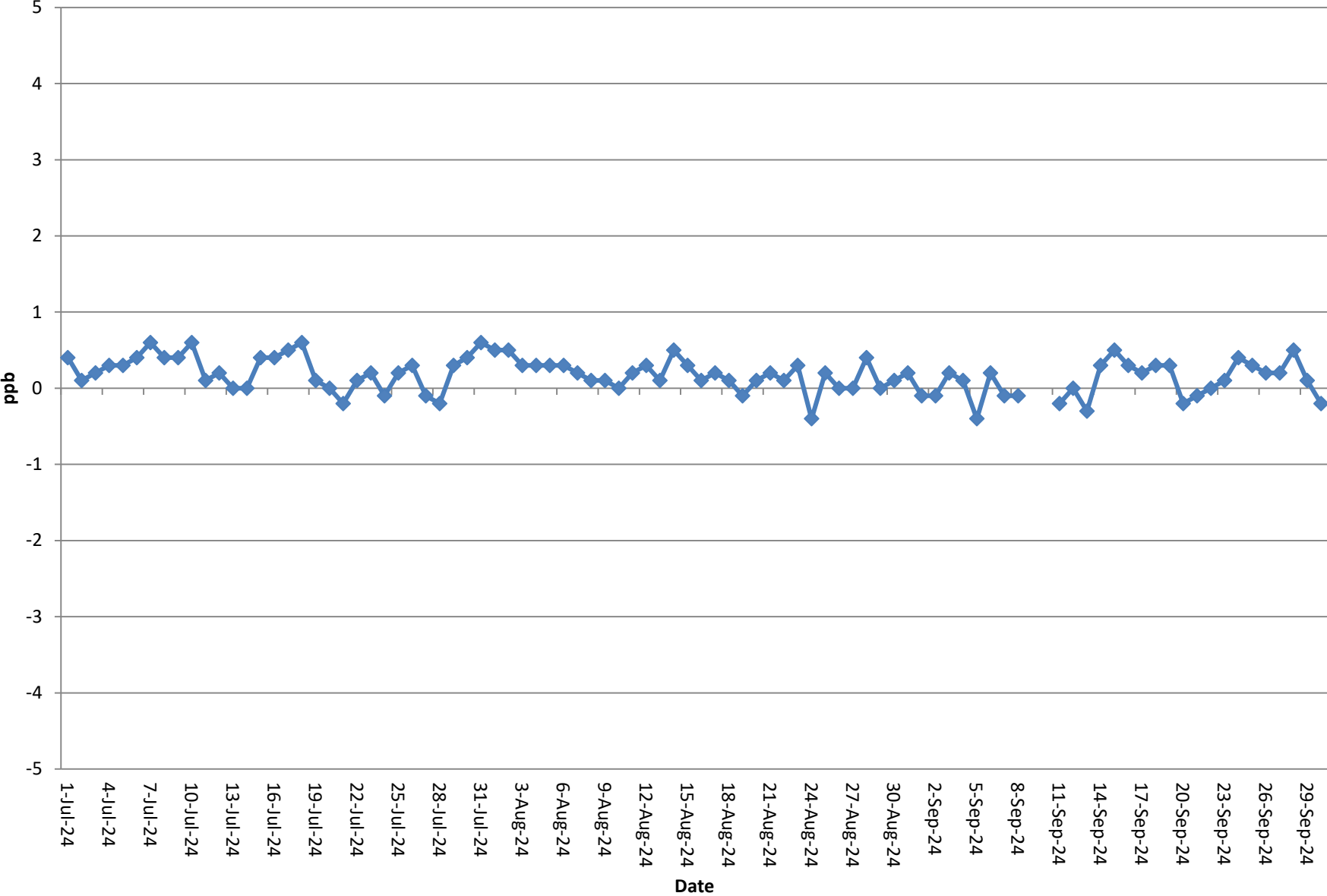
Contaminant	Units	5 Jul 24	11 Jul 24	17 Jul 24	23 Jul 24	29 Jul 24	4 Aug 24	10 Aug 24	16 Aug 24	22 Aug 24	28 Aug 24	3 Sep 24	9 Sep 24	15 Sep 24	21 Sep 24	27 Sep 24	MECP Criteria (µg/m3)	No. > Criteria	Geometric Mean	Arithmetic Mean	Q3 Minimum Concentration	Q3 Maximum Concentration	July Maximum Concentration	August Maximum Concentration	September Maximum Concentration	Number of Valid Samples	% Valid data
Total particulate	µg/m3				24.97	69.30	27.01	17.90	42.46	18.11	19.77	13.94	28.61	35.44	33.58	27.14	120	0	27.2	29.9	13.94	69.30	69.30	42.46	35.44	12	80
Mercury (Hg)	µg/m3				1.38E-05	1.64E-05	9.06E-06	8.21E-06	1.55E-05	7.15E-06	2.93E-06	2.93E-06	1.05E-05	3.24E-06	3.22E-06	2	0	6.45E-06	7.99E-06	2.93E-06	1.64E-05	1.64E-05	1.55E-05	1.05E-05	12	80	
Aluminum (Al)	µg/m3				2.08E-01	8.15E-01	1.95E-01	1.54E-01	4.25E-01	1.71E-01	1.77E-01	7.38E-02	2.04E-01	3.49E-01	4.91E-01	1.59E-01	4.8	0	2.34E-01	2.85E-01	7.38E-02	8.15E-01	8.15E-01	4.25E-01	4.91E-01	12	80
Antimony (Sb)	µg/m3				1.22E-03	1.02E-03	5.14E-04	8.21E-04	1.01E-03	6.19E-04	4.74E-04	7.67E-04	1.35E-03	1.29E-03	1.39E-03	8.17E-04	25	0	8.87E-04	9.42E-04	4.74E-04	1.39E-03	1.22E-03	1.01E-03	1.39E-03	12	80
Arsenic (As)	µg/m3				9.00E-04	9.12E-04	9.06E-04	8.80E-04	8.94E-04	8.93E-04	8.78E-04	8.79E-04	8.78E-04	2.40E-03	9.72E-04	9.65E-04	0.3	0	9.81E-04	1.03E-03	8.78E-04	2.40E-03	9.12E-04	9.06E-04	2.40E-03	12	80
Barium (Ba)	µg/m3				1.15E-02	1.37E-02	5.58E-03	7.39E-03	1.10E-02	7.98E-03	7.61E-03	6.56E-03	1.31E-02	8.49E-03	1.12E-02	6.95E-03	10	0	8.90E-03	9.25E-03	5.58E-03	1.37E-02	1.37E-02	1.10E-02	1.31E-02	12	80
Beryllium (Be)	µg/m3				1.50E-05	3.95E-05	1.51E-05	1.47E-05	1.49E-05	1.49E-05	1.46E-05	1.46E-05	1.46E-05	1.46E-05	1.62E-05	1.61E-05	0.01	0	1.63E-05	1.71E-05	1.46E-05	3.95E-05	3.95E-05	1.51E-05	1.62E-05	12	80
Bismuth (Bi)	µg/m3				5.40E-04	5.47E-04	5.44E-04	5.28E-04	5.37E-04	5.36E-04	5.27E-04	5.27E-04	5.27E-04	5.27E-04	5.83E-04	5.79E-04	-	0	5.41E-04	5.42E-04	5.27E-04	5.83E-04	5.47E-04	5.44E-04	5.83E-04	12	80
Boron (B)	µg/m3				4.50E-03	1.09E-02	4.53E-03	4.40E-03	4.47E-03	4.47E-03	4.39E-03	4.39E-03	4.39E-03	4.39E-03	4.86E-03	4.82E-03	120	0	4.85E-03	5.05E-03	4.39E-03	1.09E-02	1.09E-02	4.53E-03	4.86E-03	12	80
Cadmium (Cd)	µg/m3				1.09E-04	1.54E-04	9.67E-05	6.63E-05	1.23E-04	7.09E-05	3.57E-05	7.67E-05	1.39E-04	1.75E-04	1.60E-04	4.63E-05	0.025	0	9.38E-05	1.04E-04	3.57E-05	1.75E-04	1.54E-04	1.23E-04	1.75E-04	12	80
Chromium (Cr)	µg/m3				2.88E-03	3.28E-03	1.03E-03	9.97E-04	2.33E-03	1.01E-03	1.12E-02	9.96E-04	9.95E-04	2.23E-03	2.53E-03	1.09E-03	0.5	0	1.84E-03	2.54E-03	9.95E-04	1.12E-02	3.28E-03	1.12E-02	2.53E-03	12	80
Cobalt (Co)	µg/m3				3.06E-04	4.60E-04	1.23E-04	8.04E-05	2.58E-04	1.59E-04	2.03E-04	7.32E-05	1.86E-04	2.26E-04	2.45E-04	2.93E-04	0.1	0	1.92E-04	2.18E-04	7.32E-05	4.60E-04	4.60E-04	2.58E-04	2.93E-04	12	80
Copper (Cu)	µg/m3				1.03E-01	1.18E-01	9.49E-02	1.07E-01	8.59E-02	6.73E-02	1.06E-01	8.61E-02	6.20E-02	7.15E-02	8.17E-02	6.05E-02	50	0	8.50E-02	8.70E-02	6.05E-02	1.18E-01	1.18E-01	1.07E-01	8.61E-02	12	80
Iron (Fe)	µg/m3				6.48E-01	1.17E+00	3.89E-01	2.80E-01	7.04E-01	2.85E-01	3.32E-01	1.93E-01	5.21E-01	5.59E-01	6.47E-01	5.03E-01	4	0	4.65E-01	5.19E-01	1.93E-01	1.17E+00	1.17E+00	7.04E-01	6.47E-01	12	80
Lead (Pb)	µg/m3				3.60E-03	3.99E-03	2.00E-03	2.30E-03	5.68E-03	1.66E-03	1.53E-03	1.41E-03	2.88E-03	5.21E-03	3.94E-03	1.32E-03	0.5	0	2.62E-03	2.96E-03	1.32E-03	5.68E-03	3.99E-03	5.68E-03	5.21E-03	12	80
Magnesium (Mg)	µg/m3				3.46E-01	6.38E-01	2.27E-01	2.27E-01	4.81E-01	2.67E-01	1.68E-01	1.35E-01	3.62E-01	2.51E-01	2.74E-01	1.99E-01	-	0	2.72E-01	2.98E-01	1.35E-01	6.38E-01	6.38E-01	4.81E-01	3.62E-01	12	80
Manganese (Mn)	µg/m3				1.71E-02	2.84E-02	1.07E-02	8.16E-03	1.65E-02	1.07E-02	1.00E-02	5.56E-03	1.59E-02	1.17E-02	1.25E-02	1.18E-02	0.4	0	1.22E-02	1.32E-02	5.56E-03	2.84E-02	2.84E-02	1.65E-02	1.59E-02	12	80
Molybdenum (Mo)	µg/m3				2.81E-03	3.45E-03	2.39E-03	2.20E-03	2.52E-03	1.70E-03	3.33E-03	2.63E-03	2.47E-03	3.96E-03	5.79E-03	2.89E-03	120	0	2.87E-03	3.01E-03	1.70E-03	5.79E-03	3.45E-03	3.33E-03	5.79E-03	12	80
Nickel (Ni)	µg/m3				1.47E-03	2.44E-03	8.94E-04	7.16E-04	1.55E-03	1.57E-03	4.61E-03	5.56E-04	9.42E-04	1.78E-03	1.45E-03	1.34E-03	0.2	0	1.38E-03	1.61E-03	5.56E-04	4.61E-03	2.44E-03	4.61E-03	1.78E-03	12	80
Phosphorus (P)	µg/m3				2.25E-01	2.28E-01	2.27E-01	2.20E-01	4.77E-01	2.23E-01	2.19E-01	2.20E-01	2.19E-01	2.20E-01	2.43E-01	2.41E-01	-	0	2.40E-01	2.47E-01	2.19E-01	4.77E-01	2.28E-01	4.77E-01	2.43E-01	12	80
Selenium (Se)	µg/m3				3.90E-04	3.95E-04	3.93E-04	3.81E-04	8.35E-04	3.87E-04	3.80E-04	3.81E-04	3.80E-04	3.81E-04	4.21E-04	4.18E-04	10	0	4.17E-04	4.29E-04	3.80E-04	8.35E-04	3.95E-04	8.35E-04	4.21E-04	12	80
Silver (Ag)	µg/m3				5.64E-05	7.90E-05	5.50E-05	2.64E-05	7.75E-05	2.68E-05	2.63E-05	2.64E-05	2.63E-05	9.49E-05	6.09E-05	2.89E-05	1	0	4.31E-05	4.87E-05	2.63E-05	9.49E-05	7.90E-05	7.75E-05	9.49E-05	12	80
Strontium (Sr)	µg/m3				8.82E-03	2.68E-02	7.07E-03	4.69E-03	1.51E-02	6.79E-03	5.73E-03	3.92E-03	8.07E-03	1.14E-02	1.02E-02	7.33E-03	120	0	8.40E-03	9.66E-03	3.92E-03	2.68E-02	2.68E-02	1.51E-02	1.14E-02	12	80
Thallium (Tl)	µg/m3				2.70E-05	8.51E-05	2.72E-05	2.64E-05	2.68E-05	2.68E-05	2.63E-05	2.64E-05	2.63E-05	7.32E-05	2.92E-05	7.07E-05	-	0	3.49E-05	3.93E-05	2.63E-05	8.51E-05	8.51E-05	2.72E-05	7.32E-05	12	80
Tin (Sn)	µg/m3				1.10E-03	2.07E-03	5.20E-03	1.38E-03	1.55E-03	7.92E-04	6.96E-04	7.32E-04	1.21E-03	1.45E-03	1.87E-03	5.27E-04	10	0	1.27E-03	1.55E-03	5.27E-04	5.20E-03	2.07E-03	5.20E-03	1.87E-03	12	80
Titanium (Ti)	µg/m3				1.26E-02	3.53E-02	9.06E-03	3.23E-03	1.19E-02	3.28E-03	9.36E-03	3.22E-03	1.17E-02	1.29E-02	1.75E-02	8.36E-03	120	0	9.14E-03	1.15E-02	3.22E-03	3.53E-02	3.53E-02	1.19E-02	1.75E-02	12	80
Uranium (U)	µg/m3				1.49E-05	8.75E-05	1.41E-05	1.00E-05	5.64E-05	9.65E-06	1.08E-05	5.51E-06	1.66E-05	4.98E-05	8.23E-05	2.03E-05	1.5	0	2.12E-05	3.15E-05	5.51E-06	8.75E-05	8.75E-05	5.64E-05	8.23E-05	12	80
Vanadium (V)	µg/m3				1.50E-03	4.56E-03	1.51E-03	1.47E-03	1.49E-03	1.49E-03	1.46E-03	1.46E-03	1.46E-03	2.93E-03	1.62E-03	1.61E-03	2	0	1.75E-03	1.88E-03	1.46E-03	4.56E-03	4.56E-03	1.51E-03	2.93E-03	12	80
Zinc (Zn)	µg/m3				8.58E-02	3.23E-02	4.00E-02	5.20E-02	4.05E-02	3.06E-02	2.43E-02	3.56E-02	4.41E-02	3.36E-02	3.38E-02	4.00E-02	120	0	3.90E-02	4.11E-02	2.43E-02	8.58E-02	8.58E-02	5.20E-02	4.41E-02	12	80
Zirconium (Zr)	µg/m3				6.00E-04	6.08E-04	6.04E-04	5.87E-04	5.96E-04	5.96E-04	5.85E-04	5.86E-04	5.85E-04	5.86E-04	6.48E-04	6.43E-04	20	0	6.02E-04	6.02E-04	5.85E-04	6.48E-04	6.08E-04	6.04E-04	6.48E-04	12	80

NOTE: All non-detectable results were reported as 1/2 of the detection limit

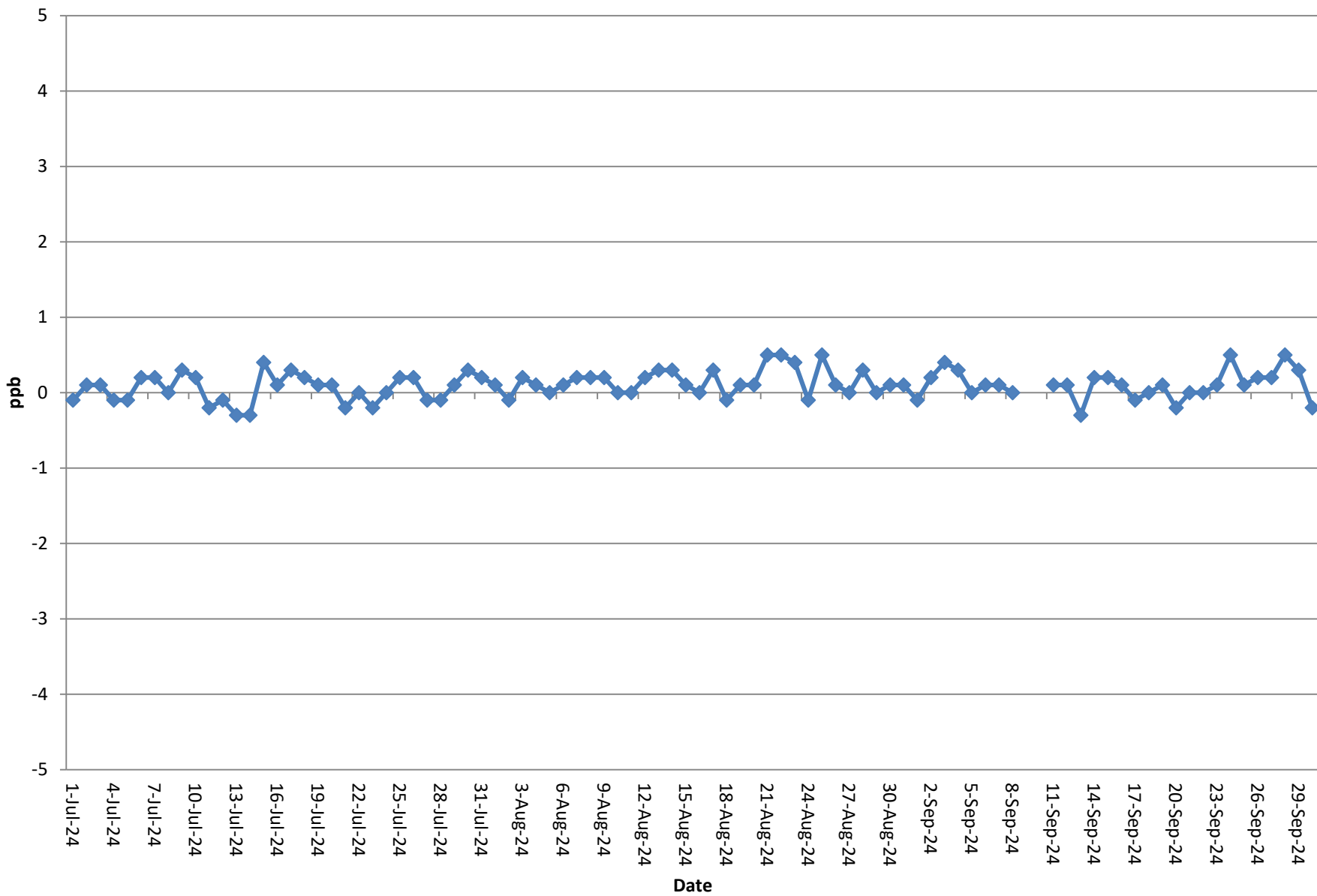
A large decorative graphic on the left side of the page, featuring a blue triangle at the top left corner and a large, light beige circular shape that overlaps the triangle and extends across the page.

APPENDIX C

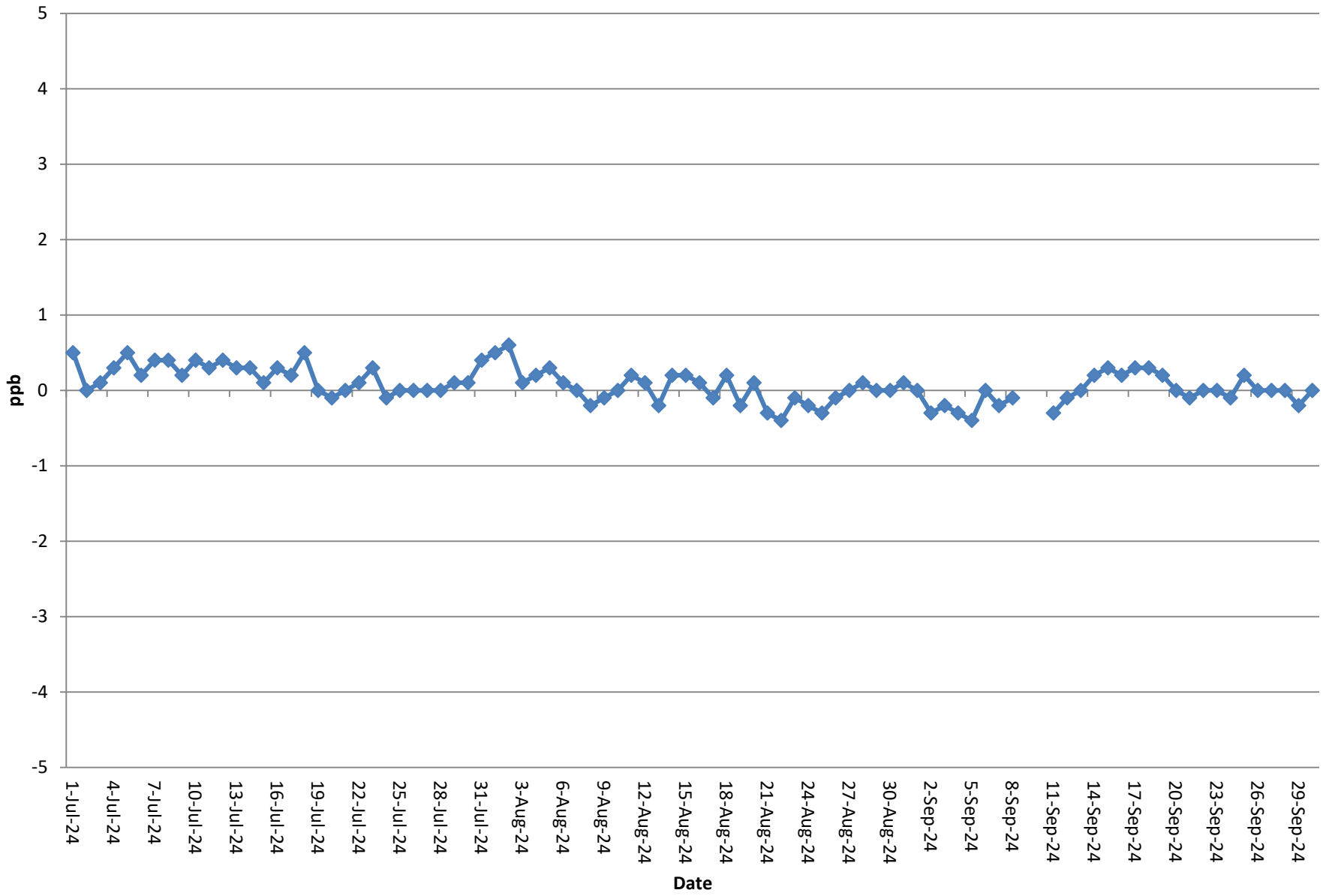
NO_x Zeros (Courtice Monitoring Station)



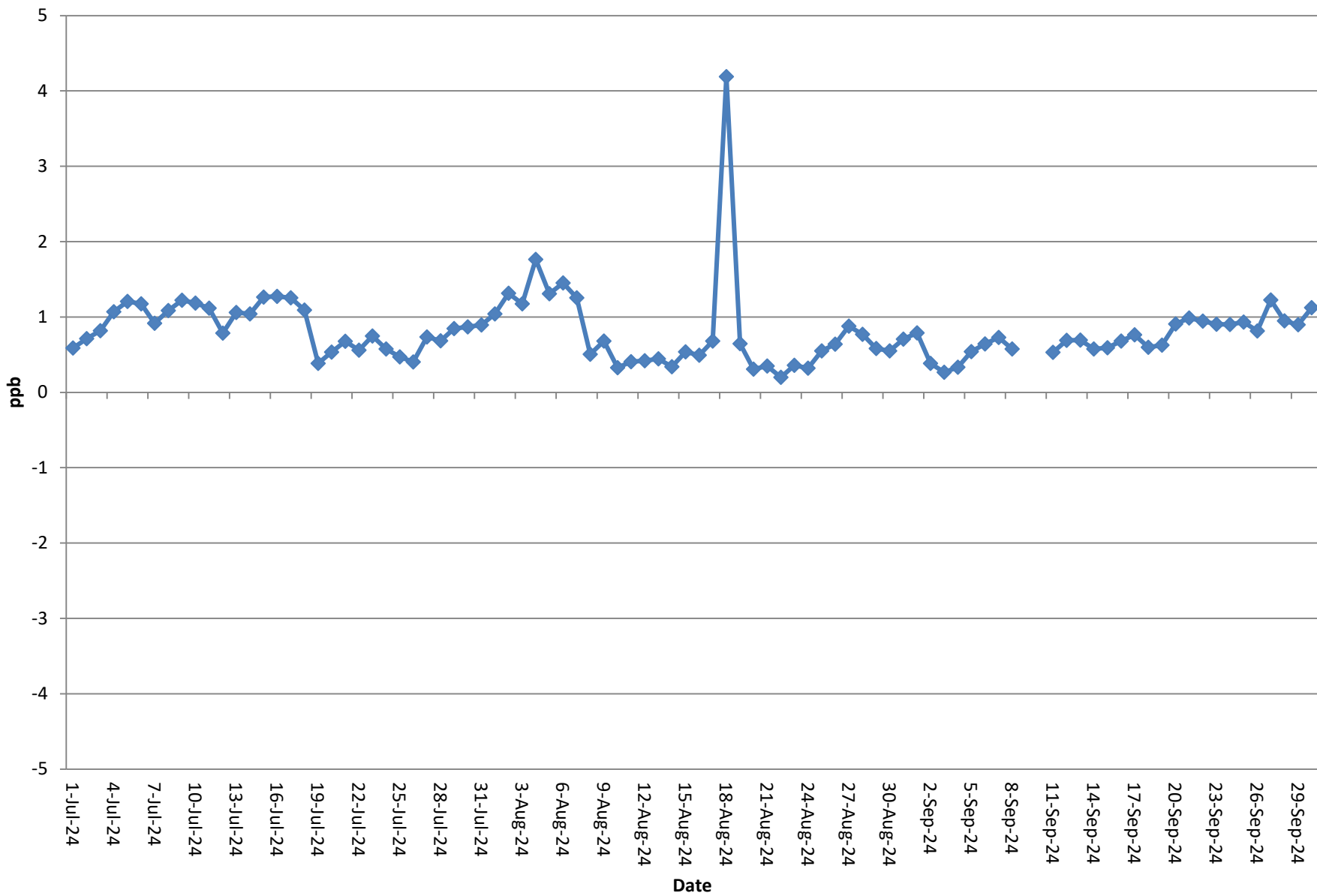
NO Zeros (Courtice Monitoring Station)



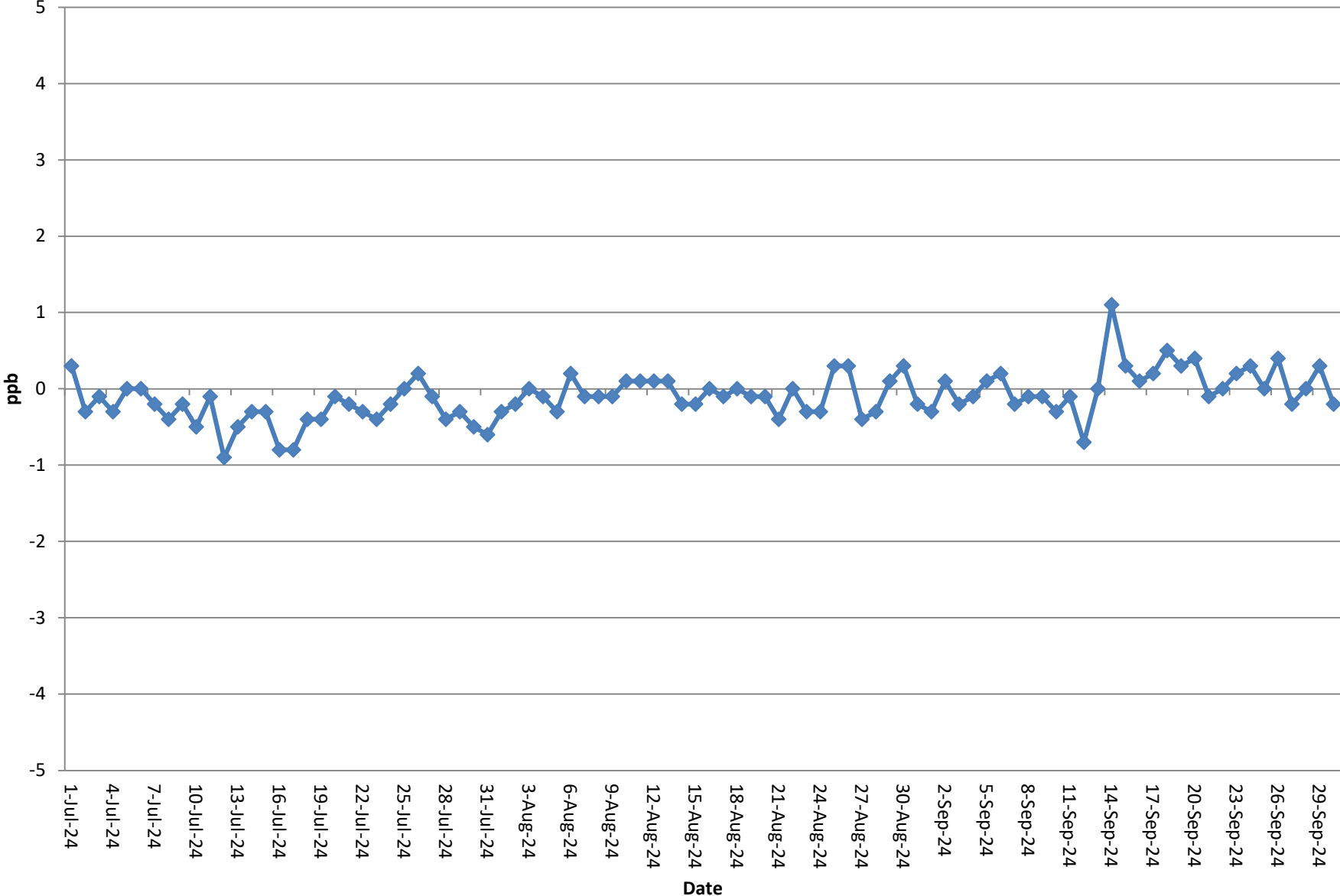
NO₂ Zeros (Courtice Monitoring Station)



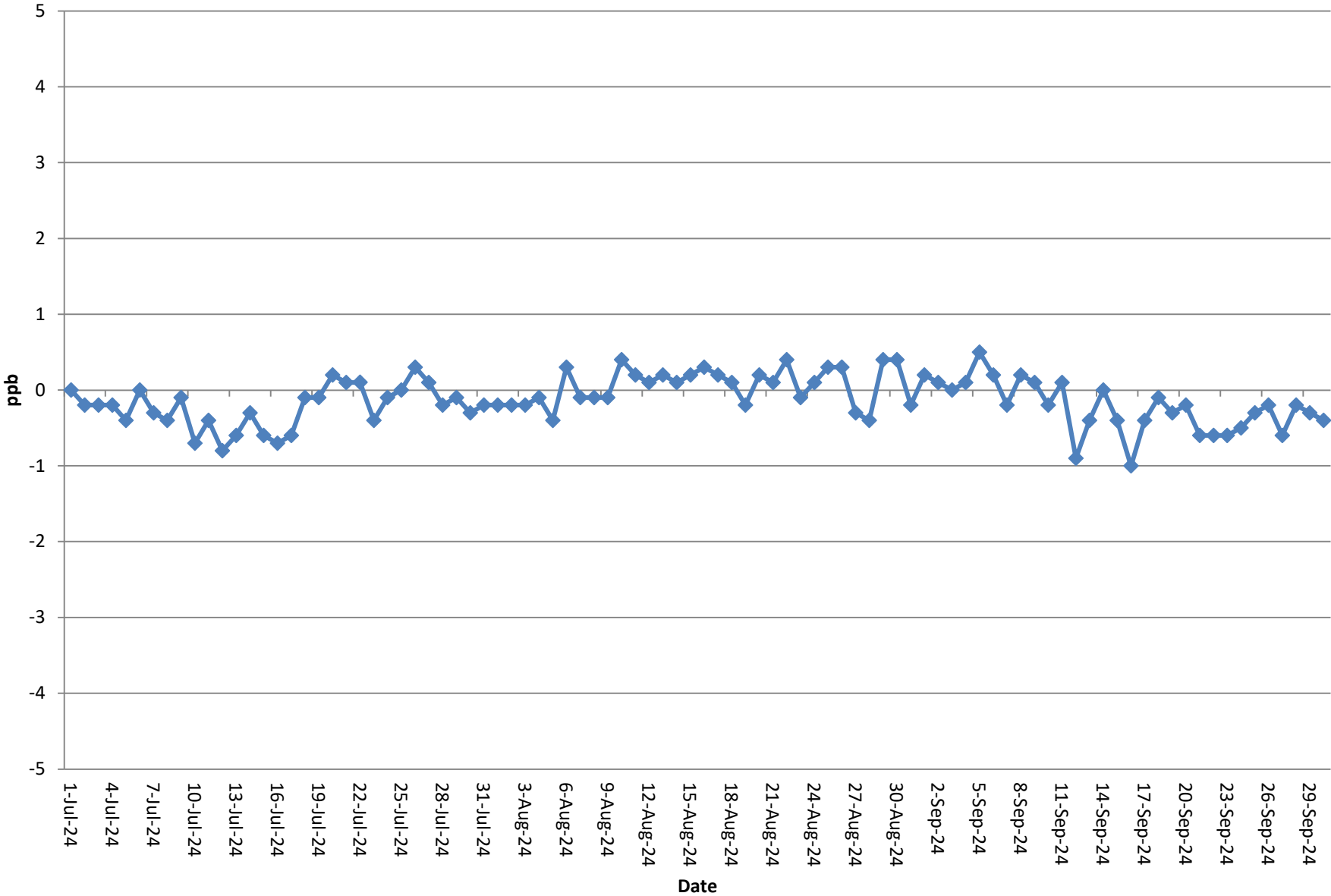
SO₂ Zeros (Courtice Monitoring Station)



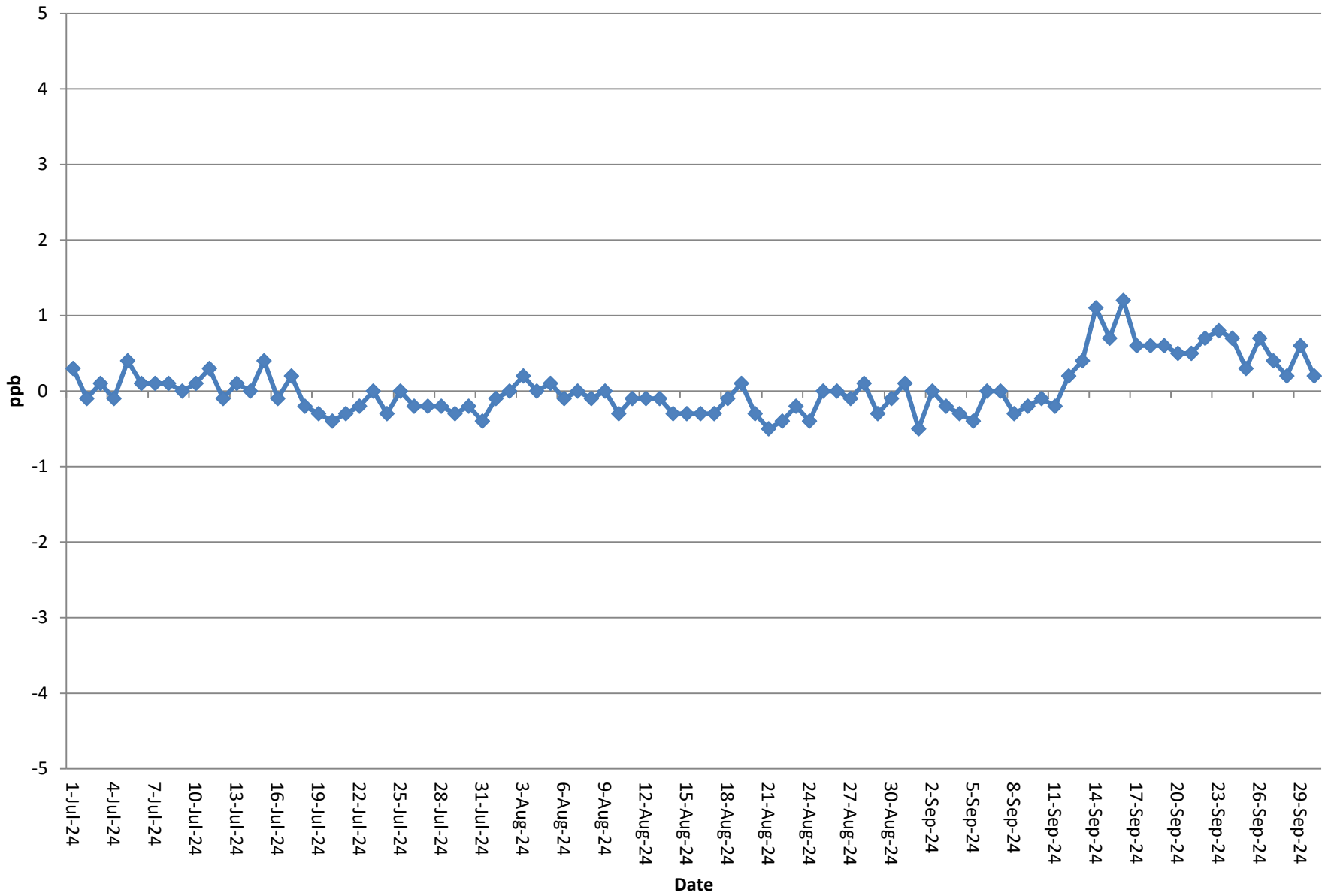
NO_x Zeros (Rundle Monitoring Station)



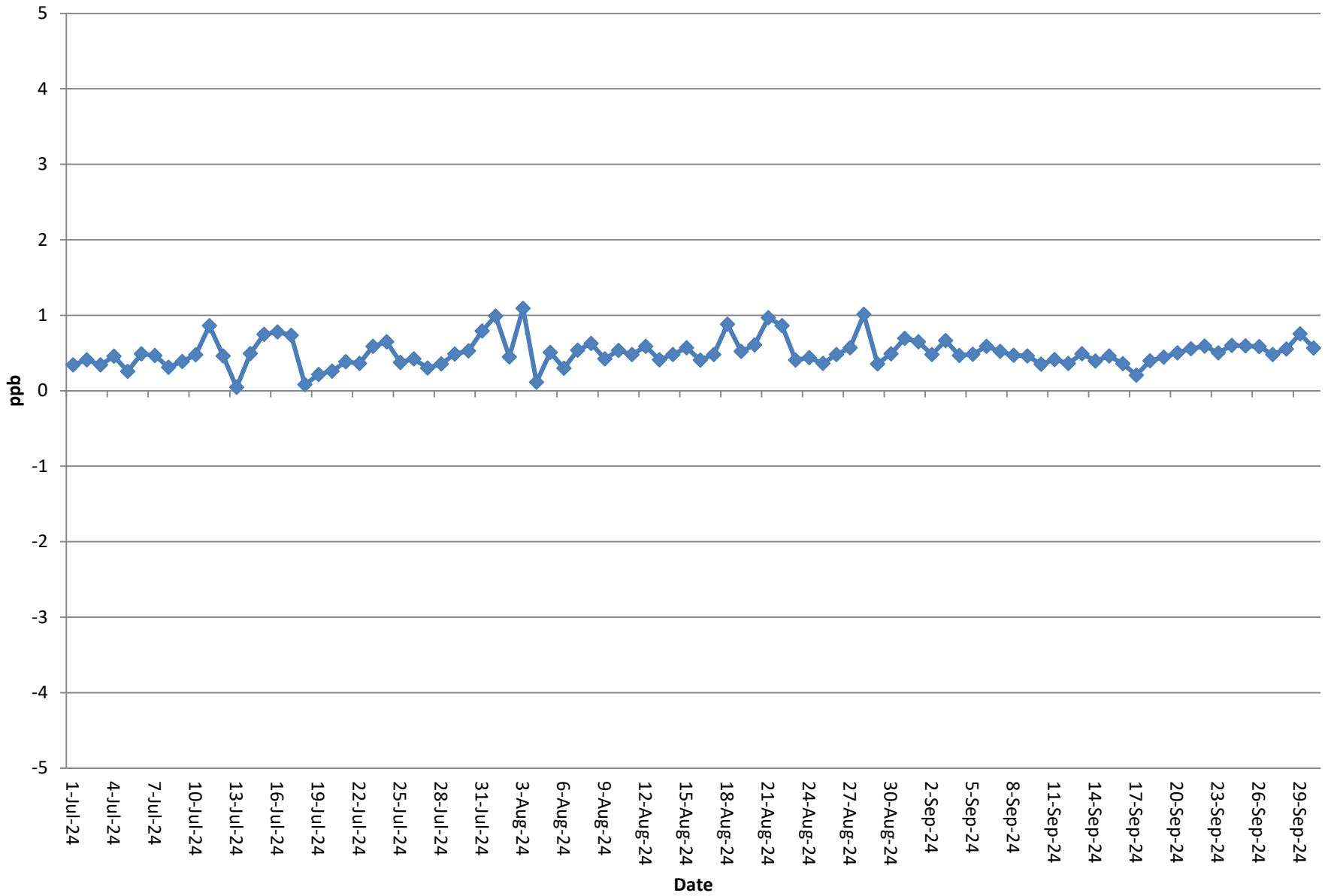
NO Zeros (Rundle Monitoring Station)



NO₂ Zeros (Rundle Monitoring Station)



SO₂ Zeros (Rundle Monitoring Station)



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APPENDIX D

Table D1: Q3 Edit Log for PM_{2.5} at Courtice Station

Emitter's Name: Durham York Energy Centre										
Contact Name: Ms. Lyndsay Waller		Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca					
Station Number: 45201				Station Name: Courtice Station						
Station Address: 100 Osbourne Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON						
Pollutants or Parameter: PM _{2.5}			Instrument Make & Model: Thermo Scientific Model 5030 SHARP Monitor				s/n: E 1563			
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor's Name	Edit Action	Starting Date (dd/mm/yyyy)	Hour (xx:xx)	Ending Date (dd/mm/yyyy)	Hour (xx:xx)	Duration Deleted Hours	Reason	
1	17/07/2024	SRS	Hours deleted	17/07/2024	12:00	18/07/2024	13:00	1	Calibration and Maintenance	
2	13/08/2024	AXT	Hours deleted	28/07/2024	08:00	28/07/2024	17:00	9	Power outage - no data	
3	31/07/2024	SRS	Hours deleted	31/07/2024	14:00	31/07/2024	15:00	1	Pre-audit check	
4	01/08/2024	SRS	Hours deleted	01/08/2024	09:00	01/08/2024	11:00	2	Quarterly Audit	
5	01/08/2024	SRS	Hours deleted	01/08/2024	12:00	01/08/2024	12:00	1	Calibration	
6	04/09/2024	AXT	Hours deleted	02/08/2024	14:00	02/08/2024	18:00	4	Power outage - no data	
7	07/08/2024	SRS	Hours deleted	07/08/2024	14:00	07/08/2024	15:00	1	Monthly calibration	
8	04/09/2024	AXT	Hours deleted	01/07/2024	00:00	01/09/2024	00:00	-	Correcting Values <0 to 0	
9	01/10/2024	AXT	Hours deleted	08/09/2024	12:00	10/09/2024	10:00	46	Computer malfunction - no data	
10	10/09/2024	SRS	Hours deleted	10/09/2024	12:00	10/09/2024	14:00	2	Monthly calibration	
11	01/10/2024	AXT	Zero Correction	01/09/2024	00:00	01/10/2024	00:00	-	Correcting Values <0 to 0	

Table D2: Q3 Edit Log for PM_{2.5} at Rundle Road Station

Emitter s Name: Durham York Energy Centre									
Contact	Name: Ms. Lyndsay Waller		Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45200				Station Name: Rundle Road Station					
Station Address: Rundle Road				Emitter Address: The Region of Durham, 605 Rosslam Road, Whitby, ON					
Pollutants or Parameter: PM _{2.5}			Instrument Make & Model: Thermo Scientific Model 5030 SHARP Monitor				s/n: E 1569		
Data Edit Period		Start Date: July 1, 2024		End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration	Reason
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)	Deleted Hours	
1	17/07/2024	SRS	Hours deleted	17/07/2024	10:00	18/07/2024	11:00	25	Monthly calibrations and maintenance
2	31/07/2024	SRS	Hours deleted	31/07/2024	14:00	31/07/2024	15:00	1	Pre-audit check
3	01/08/2024	SRS	Hours deleted	01/08/2024	11:00	01/08/2024	12:00	1	Quarterly Audit
4	07/08/2024	SRS	Hours deleted	07/08/2024	09:00	07/08/2024	11:00	2	Monthly calibration and maintenance
5	11/09/2024	SRS	Hours deleted	11/09/2024	13:00	11/09/2024	14:00	1	Monthly calibration
6	01/10/2024	AXT	Zero Correction	01/09/2024	00:00	01/10/2024	00:00	-	Correcting Values <0 to 0

Table D3: Q3 Edit Log for NO_x at Courtice Station

Emitter s Name: Durham York Energy Centre										
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45201				Station Name: Courtice Station						
Station Address: 100 Osbourne Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON						
Pollutants or Parameter: NOx			Instrument Make & Model: Teledyne Nitrogen Oxide Analyzer Model T200				s/n: 675			
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration Deleted Hours	Reason	
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)			
1	18/07/2024	SRS	Hours deleted	18/07/2024	13:00	18/07/2024	15:00	2	Monthly calibration	
2	13/08/2024	AXT	Hours deleted	28/07/2024	08:00	28/07/2024	17:00	9	Power outage - no data	
3	13/08/2024	AXT	Zero Correction	01/07/2024	00:00	01/08/2024	00:00	-	Correcting Values <0 to 0	
4	01/08/2024	SRS	Hours deleted	01/08/2024	09:00	01/08/2024	11:00	2	Quarterly Audit	
5	04/09/2024	AXT	Hours deleted	02/08/2024	14:00	02/08/2024	18:00	4	Power outage - no data	
6	07/08/2024	SRS	Hours deleted	07/08/2024	13:00	07/08/2024	15:00	2	Monthly calibration	
7	04/09/2024	AXT	Zero Correction	01/08/2024	00:00	01/09/2024	00:00	-	Correcting Values <0 to 0	
8	01/10/2024	AXT	Hours deleted	08/09/2024	12:00	10/09/2024	10:00	46	Computer malfunction - no data	
9	10/09/2024	SRS	Hours deleted	10/09/2024	10:00	10/09/2024	13:00	3	Monthly calibration	
10	01/10/2024	AXT	Zero Correction	01/09/2024	00:00	01/10/2024	00:00	-	Correcting Values <0 to 0	

Table D4: Q3 Edit Log for NO_x at Rundle Road Station

Emitter s Name: Durham York Energy Centre										
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45200				Station Name: Rundle Road Station						
Station Address: Rundle Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON						
Pollutants or Parameter: NOx			Instrument Make & Model: Teledyne Nitrogen Oxide Analyzer Model T200				s/n: 676			
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration Deleted Hours	Reason	
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)			
1	16/07/2024	SRS	Hours deleted	16/07/2024	12:00	16/07/2024	15:00	3	Monthly calibration & maintenance	
2	14/08/2024	AXT	Zero Correction	01/07/2024	00:00	01/08/2024	00:00	-	Correcting Values <0 to 0	
3	01/08/2024	SRS	Hours deleted	01/08/2024	11:00	01/08/2024	12:00	1	Quarterly Audit	
4	07/08/2024	SRS	Hours deleted	07/08/2024	08:00	07/08/2024	10:00	2	Monthly calibration	
5	04/09/2024	AXT	Zero Correction	01/08/2024	00:00	01/09/2024	00:00	-	Correcting Values <0 to 0	
6	11/09/2024	SRS	Hours deleted	11/09/2024	10:00	11/09/2024	13:00	3	Monthly calibration	
7	01/10/2024	AXT	Zero Correction	01/09/2024	00:00	01/10/2024	00:00	-	Correcting Values <0 to 0	

Table D5: Q3 Edit Log for SO₂ at Courtice Station

Emitter s Name: Durham York Energy Centre										
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45201				Station Name: Courtice Station						
Station Address: 100 Osbourne Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON						
Pollutants or Parameter: SO ₂			Instrument Make & Model: Teledyne Sulfur Dioxide Analyzer Model T100				s/n: 565			
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit Date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration Deleted Hours	Reason	
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)			
1	18/07/2024	SRS	Hours deleted	18/07/2024	12:00	18/07/2024	14:00	2	Monthly calibration	
2	13/08/2024	AXT	Hours deleted	28/07/2024	08:00	28/07/2024	17:00	9	Power outage - no data	
3	13/08/2024	AXT	Zero Correction	01/07/2024	00:00	01/08/2024	00:00	-	Correcting Values <0 to 0	
4	01/08/2024	SRS	Hours deleted	01/08/2024	09:00	01/08/2024	11:00	2	Quarterly Audit	
5	04/09/2024	AXT	Hours deleted	02/08/2024	14:00	02/08/2024	18:00	4	Power outage - no data	
6	07/08/2024	SRS	Hours deleted	07/08/2024	14:00	07/08/2024	16:00	2	Monthly calibration	
7	04/09/2024	AXT	Zero Correction	01/08/2024	00:00	01/09/2024	00:00	-	Correcting Values <0 to 0	
8	01/10/2024	AXT	Hours deleted	08/09/2024	12:00	10/09/2024	10:00	46	Computer malfunction - no data	
9	10/09/2024	SRS	Hours deleted	10/09/2024	12:00	10/09/2024	14:00	2	Monthly calibration	
10	01/10/2024	AXT	Zero Correction	01/09/2024	00:00	01/10/2024	00:00	-	Correcting Values <0 to 0	

Table D6: Q3 Edit Log for SO₂ at Rundle Road Station

Emitter's Name: Durham York Energy Centre									
Contact	Name: Ms. Lyndsay Waller		Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45200				Station Name: Rundle Road Station					
Station Address: Rundle Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON					
Pollutants or Parameter: SO ₂			Instrument Make & Model: Teledyne Sulfur Dioxide Analyzer Model T100				s/n: 566		
Data Edit Period		Start Date: July 1, 2024		End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor's Name	Edit Action	Starting		Ending		Duration Deleted Hours	Reason
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)		
1	14/08/2024	AXT	Hours deleted	03/07/2024	02:00	03/07/2024	03:00	1	Carry over from internal span
2	14/08/2024	AXT	Hours deleted	04/07/2024	02:00	04/07/2024	03:00	1	Carry over from internal span
3	14/08/2024	AXT	Hours deleted	05/07/2024	02:00	05/07/2024	03:00	1	Carry over from internal span
4	14/08/2024	AXT	Hours deleted	06/07/2024	02:00	06/07/2024	03:00	1	Carry over from internal span
5	14/08/2024	AXT	Hours deleted	07/07/2024	02:00	07/07/2024	03:00	1	Carry over from internal span
6	14/08/2024	AXT	Hours deleted	08/07/2024	02:00	08/07/2024	03:00	1	Carry over from internal span
7	14/08/2024	AXT	Hours deleted	09/07/2024	02:00	09/07/2024	03:00	1	Carry over from internal span
8	14/08/2024	AXT	Hours deleted	10/07/2024	02:00	10/07/2024	03:00	1	Carry over from internal span
9	14/08/2024	AXT	Hours deleted	11/07/2024	02:00	11/07/2024	03:00	1	Carry over from internal span
10	14/08/2024	AXT	Hours deleted	12/07/2024	02:00	12/07/2024	03:00	1	Carry over from internal span
11	14/08/2024	AXT	Hours deleted	13/07/2024	02:00	13/07/2024	03:00	1	Carry over from internal span
12	14/08/2024	AXT	Hours deleted	14/07/2024	02:00	14/07/2024	03:00	1	Carry over from internal span
13	14/08/2024	AXT	Hours deleted	15/07/2024	02:00	15/07/2024	03:00	1	Carry over from internal span
14	14/08/2024	AXT	Hours deleted	16/07/2024	02:00	16/07/2024	03:00	1	Carry over from internal span
15	16/07/2024	SRS	Hours deleted	16/07/2024	11:00	16/07/2024	15:00	4	Calibration and maintenance
16	17/07/2024	SRS	Hours deleted	17/07/2024	09:00	17/07/2024	13:00	4	Monthly calibration
17	14/08/2024	AXT	Zero Correction	01/07/2024	00:00	01/08/2024	00:00	-	Correcting Values <0 to 0
18	01/08/2024	SRS	Hours deleted	01/08/2024	11:00	01/08/2024	12:00	1	Quarterly Audit
19	07/08/2024	SRS	Hours deleted	07/08/2024	10:00	07/08/2024	13:00	3	Monthly calibration
20	04/09/2024	AXT	Zero Correction	01/08/2024	00:00	01/09/2024	00:00	-	Correcting Values <0 to 0
21	11/09/2024	SRS	Hours deleted	11/09/2024	12:00	11/09/2024	14:00	2	Monthly calibration
22	01/10/2024	AXT	Zero Correction	01/09/2024	00:00	01/10/2024	00:00	-	Correcting Values <0 to 0

Table D7: Q3 Edit Log for Meteorological Parameters at Courtice Road Station

Emitter s Name: Durham York Energy Centre										
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45201				Station Name: Courtice Station						
Station Address: 100 Osbourne Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON						
Pollutants or Parameter: WS, WD, Ambient T, P, RH and Rain			Instrument Make & Model: Miscellaneous Meterological Instrumentation				s/n: N/A			
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration	Reason	
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)	Deleted Hours		
1	14/08/2024	AXT	Hours deleted	28/07/2024	09:00	28/07/2024	17:00	8	Power outage - no data	
2	04/09/2024	AXT	Hours deleted	02/08/2024	15:00	02/08/2024	18:00	3	Power outage - no data	
3	01/10/2024	AXT	Hours deleted	08/09/2024	11:00	10/09/2024	10:00	47	Computer malfunction - no data	

Table D8: Q3 Edit Log for Meteorological Parameters at Rundle Road Station

Emitter s Name: Durham York Energy Centre										
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45200					Station Name: Rundle Station					
Station Address: Rundle Road					Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON					
Pollutants or Parameter: WS, WD, Ambient T, P, RH and Rain				Instrument Make & Model: Miscellaneous Meterological Instrumentation				s/n: N/A		
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration		Reason
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)	Deleted Hours		

Table D9: Q3 Edit Log for Discrete Sampling at Courtice Station

Emitter s Name: Durham York Energy Center									
Contact		Name: Ms. Lyndsay Waller		Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca		
Station Number: 45201				Station Name: Courtice Station					
Station Address: 100 Osbourne Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON					
Pollutants or Parameter: N/A			Instrument Make & Model: N/A				s/n:		
Data Edit Period		Start Date: July 1, 2024		End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration Deleted Hours	Reason
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)		
1	30/09/2024	AXT	Hours deleted	09/09/2024	00:00	10/09/2024	00:00	24	TSP - Invalid - station power outage
2	28/10/2024	AXT	Hours deleted	15/09/2024	00:00	16/09/2024	00:00	24	PAH - Invalid - Laboratory contamination during analysis
3	16/10/2024	AXT	Hours deleted	27/09/2024	00:00	28/09/2024	00:00	24	TSP - Invalid - equipment failure

Table D10: Q3 Edit Log for Discrete Sampling at Rundle Station

Emitter s Name: Durham York Energy Center										
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404 0888 ext 4107			Email: Lyndsay.Waller@Durham.ca			
Station Number: 45200				Station Name: Rundle Station						
Station Address: Rundle Rd				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON						
Pollutants or Parameter: N/A			Instrument Make & Model: N/A				s/n:			
Data Edit Period		Start Date: July 1, 2024			End Date: Sep 30, 2024			All testing done in EST		
Edit #	Edit date (dd/mm/yyyy)	Editor s Name	Edit Action	Starting		Ending		Duration Deleted Hours	Reason	
				Date (dd/mm/yyyy)	Hour (xx:xx)	Date (dd/mm/yyyy)	Hour (xx:xx)			
1	8/14/2024	AXT	Hours deleted	05/07/2024	00:00	06/07/2024	0:00	24	TSP - Invalid - equipment malfunction	
2	8/14/2024	AXT	Hours deleted	11/07/2024	00:00	11/07/2024	0:00	24	TSP - Invalid - equipment malfunction	
3	8/14/2024	AXT	Hours deleted	17/07/2024	00:00	17/07/2024	0:00	24	TSP - Invalid - equipment malfunction	

A large decorative graphic on the left side of the page, featuring a blue triangle in the top-left corner and a large, light beige circular shape that overlaps the triangle and extends across the page.

APPENDIX E

SO2 Exceedance Report

Table E1

Durham York Energy Centre
 Courtice, Ontario
 Courtice Station
 Baseline Corrected Data

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
07/04/2024	4:00	2	3
07/04/2024	4:05	5	4
07/04/2024	4:10	50	27
07/04/2024	4:15	90	70
07/04/2024	4:20	27	58
07/04/2024	4:25	13	20
07/04/2024	4:30	11	12
Hidden cells with no values exceeding limit.			
07/07/2024	3:25	3	3
07/07/2024	3:30	2	3
07/07/2024	3:35	2	2
07/07/2024	3:40	232	117
07/07/2024	3:45	52	142
07/07/2024	3:50	26	39
07/07/2024	3:55	16	21
Hidden cells with no values exceeding limit.			
07/12/2024	0:00	1	1
07/12/2024	0:05	1	1
07/12/2024	0:10	76	38
07/12/2024	0:15	97	87
07/12/2024	0:20	23	60
07/12/2024	0:25	17	20
07/12/2024	0:30	30	24
Hidden cells with no values exceeding limit.			
18/07/2024	23:25	2	3
18/07/2024	23:30	2	2
18/07/2024	23:35	2	2
18/07/2024	23:40	141	71
18/07/2024	23:45	58	100
18/07/2024	23:50	22	40
18/07/2024	23:55	11	16
Hidden cells with no values exceeding limit.			
20/07/2024	21:55	2	3
20/07/2024	22:00	2	2

20/07/2024	22:05	30	16
20/07/2024	22:10	171	100
20/07/2024	22:15	96	133
20/07/2024	22:20	34	65
20/07/2024	22:25	19	27
Hidden cells with no values exceeding limit.			
21/07/2024	21:40	2	3
21/07/2024	21:45	2	2
21/07/2024	21:50	3	3
21/07/2024	21:55	162	82
21/07/2024	22:00	82	122
21/07/2024	22:05	58	70
21/07/2024	22:10	43	51
21/07/2024	22:15	20	32
21/07/2024	22:20	12	16
Hidden cells with no values exceeding limit.			
22/07/2024	6:00	3	3
22/07/2024	6:05	4	3
22/07/2024	6:10	111	57
22/07/2024	6:15	169	<u>140</u>
22/07/2024	6:20	97	133
22/07/2024	6:25	54	75
22/07/2024	6:30	26	40
22/07/2024	6:35	17	22
22/07/2024	6:40	12	15
Hidden cells with no values exceeding limit.			
26/07/2024	19:05	0	0
26/07/2024	19:10	0	0
26/07/2024	19:15	103	52
26/07/2024	19:20	128	116
26/07/2024	19:25	74	101
26/07/2024	19:30	27	51
26/07/2024	19:35	20	24
Hidden cells with no values exceeding limit.			
27/07/2024	1:10	3	4
27/07/2024	1:15	8	6
27/07/2024	1:20	107	58
27/07/2024	1:25	31	69
27/07/2024	1:30	15	<u>23</u>
27/07/2024	1:35	18	17
27/07/2024	1:40	11	15
Hidden cells with no values exceeding limit.			
27/07/2024	2:50	39	35
27/07/2024	2:55	67	53

27/07/2024	3:00	47	57
27/07/2024	3:05	110	78
27/07/2024	3:10	67	88
27/07/2024	3:15	27	47
27/07/2024	3:20	17	22
Hidden cells with no values exceeding limit.			
27/07/2024	4:45	5	5
27/07/2024	4:50	4	4
27/07/2024	4:55	60	32
27/07/2024	5:00	119	89
27/07/2024	5:05	84	101
27/07/2024	5:10	50	67
27/07/2024	5:15	27	38

Notes:

D, T & V	- Date, Time & Exceedence Value Reported
Faded Values	- Not used to calculate the number of reportable exceedences
	- Range of 5-minute measurements that contribute to the Exceedence Value Reported
<u>Max</u>	- Maximum of the Range
<u>Min</u>	- Minimum of the Range

Ambient Air Quality Criteria (AAQC) for SO2 = 67 ppb for 10-minute running average

Total Number of Reportable Exceedences:

13

SO2 Exceedance Report

Table E2

Durham York Energy Centre
 Courtice, Ontario
 Courtice Station
 Baseline Corrected Data

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
01/08/2024	20:30	2	3
01/08/2024	20:35	2	2
01/08/2024	20:40	131	66
01/08/2024	20:45	554	343
01/08/2024	20:50	270	<u>412</u>
01/08/2024	20:55	78	174
01/08/2024	21:00	152	115
01/08/2024	21:05	210	181
01/08/2024	21:10	72	141
01/08/2024	21:15	40	56
01/08/2024	21:20	30	35
Hidden cells with no values exceeding limit.			
01/08/2024	21:30	13	18
01/08/2024	21:35	11	12
01/08/2024	21:40	117	64
01/08/2024	21:45	39	78
01/08/2024	21:50	19	29
01/08/2024	21:55	14	17
01/08/2024	22:00	13	14
Hidden cells with no values exceeding limit.			
01/08/2024	22:35	8	9
01/08/2024	22:40	11	9
01/08/2024	22:45	81	46
01/08/2024	22:50	97	89
01/08/2024	22:55	34	66
01/08/2024	23:00	28	31
01/08/2024	23:05	22	25
01/08/2024	23:10	16	19
01/08/2024	23:15	9	13
01/08/2024	23:20	10	9
01/08/2024	23:25	134	72
01/08/2024	23:30	200	167
01/08/2024	23:35	75	138
01/08/2024	23:40	84	80

01/08/2024	23:45	51	68
01/08/2024	23:50	61	56
01/08/2024	23:55	59	60
02/08/2024	0:00	28	43
Hidden cells with no values exceeding limit.			
02/08/2024	0:20	34	62
02/08/2024	0:25	35	35
02/08/2024	0:30	98	67
02/08/2024	0:35	107	103
02/08/2024	0:40	81	94
02/08/2024	0:45	110	96
02/08/2024	0:50	46	78
02/08/2024	0:55	30	38
02/08/2024	1:00	22	26
Hidden cells with no values exceeding limit.			
02/08/2024	2:10		
02/08/2024	2:15	26	26
02/08/2024	2:20	70	48
02/08/2024	2:25	98	84
02/08/2024	2:30	101	100
02/08/2024	2:35	46	74
02/08/2024	2:40	28	37
02/08/2024	2:45	21	25
02/08/2024	2:50	16	19
Hidden cells with no values exceeding limit.			
02/08/2024	5:15	22	13
02/08/2024	5:20	34	28
02/08/2024	5:25	30	32
02/08/2024	5:30	119	74
02/08/2024	5:35	114	116
02/08/2024	5:40	59	86
02/08/2024	5:45	23	41
02/08/2024	5:50	20	21
02/08/2024	5:55	17	19
Hidden cells with no values exceeding limit.			
05/08/2024	0:10	5	4
05/08/2024	0:15	21	13
05/08/2024	0:20	113	67
05/08/2024	0:25	57	85
05/08/2024	0:30	31	44
05/08/2024	0:35	20	25
05/08/2024	0:40	18	19
Hidden cells with no values exceeding limit.			
05/08/2024	1:00	6	7

05/08/2024	1:05	7	7
05/08/2024	1:10	61	34
05/08/2024	1:15	77	69
05/08/2024	1:20	129	103
05/08/2024	1:25	30	79
05/08/2024	1:30	37	33
05/08/2024	1:35	23	30
05/08/2024	1:40	21	22
Hidden cells with no values exceeding limit.			
05/08/2024	2:00		
05/08/2024	2:05		
05/08/2024	2:10		
05/08/2024	2:15	171	171
05/08/2024	2:20	44	107
05/08/2024	2:25	140	92
05/08/2024	2:30	59	100
05/08/2024	2:35	30	44
05/08/2024	2:40	46	38
Hidden cells with no values exceeding limit.			
05/08/2024	3:20	14	16
05/08/2024	3:25	11	13
05/08/2024	3:30	31	21
05/08/2024	3:35	152	92
05/08/2024	3:40	42	97
05/08/2024	3:45	24	33
05/08/2024	3:50	16	20
Hidden cells with no values exceeding limit.			
06/08/2024	5:15	41	50
06/08/2024	5:20	68	54
06/08/2024	5:25	55	61
06/08/2024	5:30	86	70
06/08/2024	5:35	94	90
06/08/2024	5:40	95	95
06/08/2024	5:45	76	86
06/08/2024	5:50	66	71
06/08/2024	5:55	39	53
06/08/2024	6:00	34	37
06/08/2024	6:05	32	33
Hidden cells with no values exceeding limit.			
06/08/2024	18:45	8	9
06/08/2024	18:50	7	7
06/08/2024	18:55	78	43
06/08/2024	19:00	117	98
06/08/2024	19:05	38	78

06/08/2024	19:10	31	35
06/08/2024	19:15	77	54
06/08/2024	19:20	63	70
06/08/2024	19:25	24	43
06/08/2024	19:30	37	30
06/08/2024	19:35	52	44
06/08/2024	19:40	122	87
06/08/2024	19:45	51	87
06/08/2024	19:50	78	65
06/08/2024	19:55	35	57
06/08/2024	20:00	39	37
06/08/2024	20:05	105	72
06/08/2024	20:10	56	80
06/08/2024	20:15	22	39
06/08/2024	20:20	15	18
Hidden cells with no values exceeding limit.			
06/08/2024	21:50	40	37
06/08/2024	21:55	50	45
06/08/2024	22:00	75	62
06/08/2024	22:05	105	90
06/08/2024	22:10	120	112
06/08/2024	22:15	81	100
06/08/2024	22:20	83	82
06/08/2024	22:25	68	76
06/08/2024	22:30	79	73
06/08/2024	22:35	92	86
06/08/2024	22:40	98	95
06/08/2024	22:45	73	85
06/08/2024	22:50	71	72
06/08/2024	22:55	80	76
06/08/2024	23:00	91	86
06/08/2024	23:05	103	97
06/08/2024	23:10	85	94
06/08/2024	23:15	87	86
06/08/2024	23:20	84	86
06/08/2024	23:25	72	78
06/08/2024	23:30	106	89
06/08/2024	23:35	106	106
06/08/2024	23:40	88	97
06/08/2024	23:45	88	88
06/08/2024	23:50	66	77
06/08/2024	23:55	62	64
07/08/2024	0:00	86	74
07/08/2024	0:05	75	80

07/08/2024	0:10	50	63
07/08/2024	0:15	58	54
07/08/2024	0:20	75	67
07/08/2024	0:25	116	95
07/08/2024	0:30	111	113
07/08/2024	0:35	126	119
07/08/2024	0:40	95	111
07/08/2024	0:45	56	76
07/08/2024	0:50	69	62
07/08/2024	0:55	72	70
07/08/2024	1:00	74	73
07/08/2024	1:05	77	75
07/08/2024	1:10	76	76
07/08/2024	1:15	39	57
07/08/2024	1:20	22	31
Hidden cells with no values exceeding limit.			
07/08/2024	19:55	1	1
07/08/2024	20:00	23	12
07/08/2024	20:05	66	45
07/08/2024	20:10	79	73
07/08/2024	20:15	74	77
07/08/2024	20:20	28	51
07/08/2024	20:25	50	39
Hidden cells with no values exceeding limit.			
07/08/2024	20:50	35	39
07/08/2024	20:55	63	49
07/08/2024	21:00	66	64
07/08/2024	21:05	77	71
07/08/2024	21:10	64	70
07/08/2024	21:15	54	59
07/08/2024	21:20	20	37
Hidden cells with no values exceeding limit.			
13/08/2024	19:35	6	10
13/08/2024	19:40	4	5
13/08/2024	19:45	7	5
13/08/2024	19:50	190	98
13/08/2024	19:55	339	264
13/08/2024	20:00	158	249
13/08/2024	20:05	103	131
13/08/2024	20:10	32	68
13/08/2024	20:15	21	27
13/08/2024	20:20	13	17
13/08/2024	20:25	9	11
13/08/2024	20:30	7	8

13/08/2024	20:35	133	70
13/08/2024	20:40	142	138
13/08/2024	20:45	48	95
13/08/2024	20:50	34	41
13/08/2024	20:55	44	39
13/08/2024	21:00	26	35
13/08/2024	21:05	15	21
13/08/2024	21:10	13	14
13/08/2024	21:15	92	52
13/08/2024	21:20	83	88
13/08/2024	21:25	29	56
13/08/2024	21:30	16	23
13/08/2024	21:35	10	13
Hidden cells with no values exceeding limit.			
13/08/2024	21:50	5	5
13/08/2024	21:55	5	5
13/08/2024	22:00	82	43
13/08/2024	22:05	113	97
13/08/2024	22:10	54	84
13/08/2024	22:15	27	41
13/08/2024	22:20	18	22
Hidden cells with no values exceeding limit.			
14/08/2024	5:50	3	2
14/08/2024	5:55	1	2
14/08/2024	6:00	60	30
14/08/2024	6:05	118	89
14/08/2024	6:10	80	99
14/08/2024	6:15	41	61
14/08/2024	6:20	24	32
Hidden cells with no values exceeding limit.			
14/08/2024	20:00	2	2
14/08/2024	20:05	1	1
14/08/2024	20:10	20	11
14/08/2024	20:15	133	76
14/08/2024	20:20	67	100
14/08/2024	20:25	110	88
14/08/2024	20:30	69	90
14/08/2024	20:35	26	48
14/08/2024	20:40	14	20
14/08/2024	20:45	10	12
14/08/2024	20:50	129	70
14/08/2024	20:55	141	135
14/08/2024	21:00	68	104
14/08/2024	21:05	150	109

14/08/2024	21:10	159	155
14/08/2024	21:15	52	106
14/08/2024	21:20	78	65
14/08/2024	21:25	48	63
14/08/2024	21:30	21	35
14/08/2024	21:35	85	53
14/08/2024	21:40	69	77
14/08/2024	21:45	32	50
14/08/2024	21:50	15	24
14/08/2024	21:55	11	13
Hidden cells with no values exceeding limit.			
15/08/2024	19:20	10	7
15/08/2024	19:25	10	10
15/08/2024	19:30	47	29
15/08/2024	19:35	101	74
15/08/2024	19:40	23	62
15/08/2024	19:45	12	17
15/08/2024	19:50	30	21
15/08/2024	19:55	15	23
15/08/2024	20:00	10	13
15/08/2024	20:05	130	70
15/08/2024	20:10	108	119
15/08/2024	20:15	142	125
15/08/2024	20:20	268	205
15/08/2024	20:25	238	253
15/08/2024	20:30	107	173
15/08/2024	20:35	89	98
15/08/2024	20:40	29	59
15/08/2024	20:45	19	24
15/08/2024	20:50	38	29
15/08/2024	20:55	146	92
15/08/2024	21:00	129	137
15/08/2024	21:05	65	97
15/08/2024	21:10	55	60
15/08/2024	21:15	48	52
15/08/2024	21:20	59	54
Hidden cells with no values exceeding limit.			
16/08/2024	2:45	99	60
16/08/2024	2:50	25	62
16/08/2024	2:55	91	58
16/08/2024	3:00	66	79
16/08/2024	3:05	96	81
16/08/2024	3:10	35	65
16/08/2024	3:15	20	27

Hidden cells with no values exceeding limit.			
16/08/2024	3:50	42	40
16/08/2024	3:55	19	30
16/08/2024	4:00	66	42
16/08/2024	4:05	76	71
16/08/2024	4:10	36	56
16/08/2024	4:15	32	34
16/08/2024	4:20	32	32
Hidden cells with no values exceeding limit.			
24/08/2024	0:45	1	1
24/08/2024	0:50	17	9
24/08/2024	0:55	30	23
24/08/2024	1:00	117	73
24/08/2024	1:05	23	70
24/08/2024	1:10	12	18
24/08/2024	1:15	8	10
Hidden cells with no values exceeding limit.			
24/08/2024	2:10		
24/08/2024	2:15	29	29
24/08/2024	2:20	75	52
24/08/2024	2:25	130	102
24/08/2024	2:30	42	86
24/08/2024	2:35	20	31
24/08/2024	2:40	51	36
Hidden cells with no values exceeding limit.			
24/08/2024	3:30	8	9
24/08/2024	3:35	7	7
24/08/2024	3:40	60	33
24/08/2024	3:45	113	86
24/08/2024	3:50	129	121
24/08/2024	3:55	96	113
24/08/2024	4:00	98	97
24/08/2024	4:05	31	64
24/08/2024	4:10	64	48
24/08/2024	4:15	134	99
24/08/2024	4:20	44	89
24/08/2024	4:25	43	44
24/08/2024	4:30	37	40
24/08/2024	4:35	32	34
24/08/2024	4:40	100	66
24/08/2024	4:45	46	73
24/08/2024	4:50	21	34
24/08/2024	4:55	45	33
24/08/2024	5:00	76	61

Hidden cells with no values exceeding limit.			
26/08/2024	19:10	14	22
26/08/2024	19:15	19	17
26/08/2024	19:20	111	65
26/08/2024	19:25	52	82
26/08/2024	19:30	22	37
26/08/2024	19:35	12	17
26/08/2024	19:40	8	10
Hidden cells with no values exceeding limit.			
26/08/2024	19:50	5	5
26/08/2024	19:55	42	23
26/08/2024	20:00	73	57
26/08/2024	20:05	141	107
26/08/2024	20:10	82	111
26/08/2024	20:15	38	60
26/08/2024	20:20	41	40
Hidden cells with no values exceeding limit.			
26/08/2024	23:05	6	7
26/08/2024	23:10	5	5
26/08/2024	23:15	5	5
26/08/2024	23:20	173	89
26/08/2024	23:25	132	153
26/08/2024	23:30	120	126
26/08/2024	23:35	50	85
26/08/2024	23:40	22	36
26/08/2024	23:45	15	19
Hidden cells with no values exceeding limit.			
27/08/2024	0:45	19	28
27/08/2024	0:50	12	16
27/08/2024	0:55	41	27
27/08/2024	1:00	128	84
27/08/2024	1:05	26	77
27/08/2024	1:10	14	20
27/08/2024	1:15	11	13
Hidden cells with no values exceeding limit.			
27/08/2024	2:40	14	22
27/08/2024	2:45	9	12
27/08/2024	2:50	54	32
27/08/2024	2:55	114	84
27/08/2024	3:00	53	83
27/08/2024	3:05	26	39
27/08/2024	3:10	33	30
27/08/2024	3:15	91	62
27/08/2024	3:20	43	67

27/08/2024	3:25	45	44
27/08/2024	3:30	38	42
27/08/2024	3:35	20	29
Hidden cells with no values exceeding limit.			
27/08/2024	4:40	9	10
27/08/2024	4:45	7	8
27/08/2024	4:50	40	24
27/08/2024	4:55	127	84
27/08/2024	5:00	65	96
27/08/2024	5:05	31	48
27/08/2024	5:10	19	25
Hidden cells with no values exceeding limit.			
29/08/2024	18:30	1	1
29/08/2024	18:35	5	3
29/08/2024	18:40	106	55
29/08/2024	18:45	118	112
29/08/2024	18:50	20	69
29/08/2024	18:55	11	16
29/08/2024	19:00	7	9
29/08/2024	19:05	5	6
29/08/2024	19:10	153	79
29/08/2024	19:15	275	214
29/08/2024	19:20	70	173
29/08/2024	19:25	24	47
29/08/2024	19:30	16	20
29/08/2024	19:35	12	14
Hidden cells with no values exceeding limit.			
29/08/2024	20:40	40	48
29/08/2024	20:45	16	28
29/08/2024	20:50	9	13
29/08/2024	20:55	127	68
29/08/2024	21:00	230	178
29/08/2024	21:05	110	170
29/08/2024	21:10	97	103
29/08/2024	21:15	91	94
29/08/2024	21:20	110	100
29/08/2024	21:25	90	100
29/08/2024	21:30	34	62
29/08/2024	21:35	18	26
29/08/2024	21:40	66	42
29/08/2024	21:45	90	78
29/08/2024	21:50	31	61
29/08/2024	21:55	41	36
29/08/2024	22:00	41	41

Hidden cells with no values exceeding limit.			
31/08/2024	20:05	1	1
31/08/2024	20:10	126	64
31/08/2024	20:15	46	86
31/08/2024	20:20	29	37
31/08/2024	20:25	51	40
31/08/2024	20:30	61	56
31/08/2024	20:35	83	72
31/08/2024	20:40	81	82
31/08/2024	20:45	33	57
31/08/2024	20:50	20	27
31/08/2024	20:55	12	16
31/08/2024	21:00	10	11
31/08/2024	21:05	9	9
31/08/2024	21:10	8	8
31/08/2024	21:15	178	93
31/08/2024	21:20	132	155
31/08/2024	21:25	41	87
31/08/2024	21:30	26	34
31/08/2024	21:35	16	21

Notes:

D, T & V	- Date, Time & Exceedence Value Reported
Faded Values	- Not used to calculate the number of reportable exceedences
	- Range of 5-minute measurements that contribute to the Exceedence Value Reported
<u>Max</u>	- Maximum of the Range
<u>Min</u>	- Minimum of the Range

Ambient Air Quality Criteria (AAQC) for SO₂ = 67 ppb for 10-minute running average

Total Number of Reportable Exceedences:

95

SO2 Exceedance Report

Table E3

Durham York Energy Centre
 Courtice, Ontario
 Courtice Station
 Baseline Corrected Data

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
01/09/2024	2:15	33	33
01/09/2024	2:20	52	42
01/09/2024	2:25	22	37
01/09/2024	2:30	113	68
01/09/2024	2:35	190	152
01/09/2024	2:40	74	132
01/09/2024	2:45	116	95
01/09/2024	2:50	136	126
01/09/2024	2:55	53	95
01/09/2024	3:00	45	49
01/09/2024	3:05	27	36
Hidden cells with no values exceeding limit.			
01/09/2024	4:05	23	20
01/09/2024	4:10	15	19
01/09/2024	4:15	73	44
01/09/2024	4:20	92	83
01/09/2024	4:25	89	91
01/09/2024	4:30	101	95
01/09/2024	4:35	36	69
01/09/2024	4:40	22	29
01/09/2024	4:45	16	19
Hidden cells with no values exceeding limit.			
01/09/2024	4:55	10	11
01/09/2024	5:00	31	21
01/09/2024	5:05	69	50
01/09/2024	5:10	156	113
01/09/2024	5:15	58	107
01/09/2024	5:20	30	44
01/09/2024	5:25	19	25
Hidden cells with no values exceeding limit.			
01/09/2024	5:35	18	16
01/09/2024	5:40	41	29
01/09/2024	5:45	75	58
01/09/2024	5:50	79	77

01/09/2024	5:55	144	111
01/09/2024	6:00	49	96
01/09/2024	6:05	49	49
01/09/2024	6:10	177	113
01/09/2024	6:15	62	119
01/09/2024	6:20	36	49
01/09/2024	6:25	23	29
Hidden cells with no values exceeding limit.			
03/09/2024	21:25	0	0
03/09/2024	21:30	24	12
03/09/2024	21:35	72	48
03/09/2024	21:40	84	78
03/09/2024	21:45	113	99
03/09/2024	21:50	69	91
03/09/2024	21:55	23	46
03/09/2024	22:00	15	19
03/09/2024	22:05	9	12
Hidden cells with no values exceeding limit.			
03/09/2024	22:20	5	5
03/09/2024	22:25	5	5
03/09/2024	22:30	9	7
03/09/2024	22:35	142	75
03/09/2024	22:40	195	168
03/09/2024	22:45	65	130
03/09/2024	22:50	84	75
03/09/2024	22:55	101	92
03/09/2024	23:00	104	102
03/09/2024	23:05	80	92
03/09/2024	23:10	40	60
03/09/2024	23:15	21	30
03/09/2024	23:20	15	18
Hidden cells with no values exceeding limit.			
04/09/2024	4:05	8	6
04/09/2024	4:10	4	6
04/09/2024	4:15	38	21
04/09/2024	4:20	97	68
04/09/2024	4:25	25	61
04/09/2024	4:30	14	19
04/09/2024	4:35	10	12
Hidden cells with no values exceeding limit.			
04/09/2024	21:15	0	1
04/09/2024	21:20	6	3
04/09/2024	21:25	79	43
04/09/2024	21:30	71	75

04/09/2024	21:35	77	74
04/09/2024	21:40	23	50
04/09/2024	21:45	13	18
Hidden cells with no values exceeding limit.			
10/09/2024	17:55	1	1
10/09/2024	18:00	1	1
10/09/2024	18:05	65	33
10/09/2024	18:10	163	114
10/09/2024	18:15	165	164
10/09/2024	18:20	101	133
10/09/2024	18:25	97	99
10/09/2024	18:30	124	110
10/09/2024	18:35	66	95
10/09/2024	18:40	42	54
10/09/2024	18:45	42	42
10/09/2024	18:50	42	42
10/09/2024	18:55	56	49
10/09/2024	19:00	138	97
10/09/2024	19:05	41	90
10/09/2024	19:10	25	33
10/09/2024	19:15	18	22
10/09/2024	19:20	12	15
10/09/2024	19:25	10	11
10/09/2024	19:30	38	24
10/09/2024	19:35	619	329
10/09/2024	19:40	162	<u>391</u>
10/09/2024	19:45	63	112
10/09/2024	19:50	84	73
10/09/2024	19:55	55	69
10/09/2024	20:00	43	49
10/09/2024	20:05	44	43
10/09/2024	20:10	18	31
10/09/2024	20:15	13	16
10/09/2024	20:20	53	33
10/09/2024	20:25	367	210
10/09/2024	20:30	108	238
10/09/2024	20:35	33	71
10/09/2024	20:40	27	<u>30</u>
10/09/2024	20:45	16	22
10/09/2024	20:50	17	16
Hidden cells with no values exceeding limit.			
10/09/2024	23:40	5	7
10/09/2024	23:45	5	5
10/09/2024	23:50	33	19

10/09/2024	23:55	178	106
11/09/2024	0:00	235	207
11/09/2024	0:05	80	158
11/09/2024	0:10	53	67
11/09/2024	0:15	25	39
11/09/2024	0:20	16	20
Hidden cells with no values exceeding limit.			
11/09/2024	4:25	3	2
11/09/2024	4:30	4	4
11/09/2024	4:35	21	13
11/09/2024	4:40	193	107
11/09/2024	4:45	105	149
11/09/2024	4:50	87	96
11/09/2024	4:55	35	61
11/09/2024	5:00	25	30
11/09/2024	5:05	16	20
Hidden cells with no values exceeding limit.			
11/09/2024	6:00	8	7
11/09/2024	6:05	5	6
11/09/2024	6:10	9	7
11/09/2024	6:15	146	77
11/09/2024	6:20	33	89
11/09/2024	6:25	21	27
11/09/2024	6:30	13	17
Hidden cells with no values exceeding limit.			
11/09/2024	20:50	3	4
11/09/2024	20:55	3	3
11/09/2024	21:00	119	61
11/09/2024	21:05	156	138
11/09/2024	21:10	39	97
11/09/2024	21:15	49	44
11/09/2024	21:20	48	48
Hidden cells with no values exceeding limit.			
12/09/2024	6:55	5	5
12/09/2024	7:00	6	6
12/09/2024	7:05	30	18
12/09/2024	7:10	142	86
12/09/2024	7:15	70	106
12/09/2024	7:20	57	63
12/09/2024	7:25	50	53
Hidden cells with no values exceeding limit.			
13/09/2024	5:20	3	3
13/09/2024	5:25	3	3
13/09/2024	5:30	3	3

13/09/2024	5:35	188	96
13/09/2024	5:40	181	185
13/09/2024	5:45	56	119
13/09/2024	5:50	26	41
13/09/2024	5:55	43	35
13/09/2024	6:00	33	38
Hidden cells with no values exceeding limit.			
26/09/2024	20:30	7	10
26/09/2024	20:35	26	17
26/09/2024	20:40	90	58
26/09/2024	20:45	52	71
26/09/2024	20:50	34	43
26/09/2024	20:55	27	30
26/09/2024	21:00	26	27
Hidden cells with no values exceeding limit.			
26/09/2024	21:35	51	58
26/09/2024	21:40	48	50
26/09/2024	21:45	73	60
26/09/2024	21:50	62	68
26/09/2024	21:55	24	43
26/09/2024	22:00	15	20
26/09/2024	22:05	12	13
Hidden cells with no values exceeding limit.			
27/09/2024	0:10	43	56
27/09/2024	0:15	49	46
27/09/2024	0:20	61	55
27/09/2024	0:25	74	68
27/09/2024	0:30	33	54
27/09/2024	0:35	19	26
27/09/2024	0:40	57	38
Hidden cells with no values exceeding limit.			
27/09/2024	1:10	46	51
27/09/2024	1:15	33	39
27/09/2024	1:20	74	53
27/09/2024	1:25	73	74
27/09/2024	1:30	77	75
27/09/2024	1:35	78	77
27/09/2024	1:40	79	78
27/09/2024	1:45		79
27/09/2024	1:50		
27/09/2024	1:55		
27/09/2024	2:00		
Hidden cells with no values exceeding limit.			
27/09/2024	2:30	48	29

27/09/2024	2:35	42	45
27/09/2024	2:40	86	64
27/09/2024	2:45	57	71
27/09/2024	2:50	45	51
27/09/2024	2:55	24	35
27/09/2024	3:00	17	20
27/09/2024	3:05	16	16
27/09/2024	3:10	130	73
27/09/2024	3:15	187	159
27/09/2024	3:20	75	131
27/09/2024	3:25	64	70
27/09/2024	3:30	46	55
27/09/2024	3:35	72	59
27/09/2024	3:40	38	55
27/09/2024	3:45	19	28
27/09/2024	3:50	119	69
27/09/2024	3:55	110	115
27/09/2024	4:00	46	78
27/09/2024	4:05	53	49
27/09/2024	4:10	46	49
27/09/2024	4:15	33	39
Hidden cells with no values exceeding limit.			
27/09/2024	6:40	12	13
27/09/2024	6:45	10	11
27/09/2024	6:50	82	46
27/09/2024	6:55	73	77
27/09/2024	7:00	69	71
27/09/2024	7:05	59	64
27/09/2024	7:10	85	72
27/09/2024	7:15	67	76
27/09/2024	7:20	49	58
27/09/2024	7:25	24	36
Hidden cells with no values exceeding limit.			
30/09/2024	0:20	7	7
30/09/2024	0:25	7	7
30/09/2024	0:30	95	51
30/09/2024	0:35	113	104
30/09/2024	0:40	61	87
30/09/2024	0:45	54	57
30/09/2024	0:50	31	42

Notes:

 - Date, Time & Exceedence Value Reported

Faded Values	- Not used to calculate the number of reportable exceedences
	- Range of 5-minute measurements that contribute to the Exceedance Value Reported
<u>Max</u>	- Maximum of the Range
<u>Min</u>	- Minimum of the Range

Ambient Air Quality Criteria (AAQC) for SO₂ = 67 ppb for 10-minute running average

Total Number of Reportable Exceedences:

48

SO2 Exceedance Report

Table E4

Durham York Energy Centre
 Courtice, Ontario
 Courtice Station
 Baseline Corrected Data

Date (dd/mm/yyyy)	Time (EST)	SO ₂	SO ₂
		5-min Avg. (ppb)	1-hr Running Avg. (ppb)
20/07/2024	21:50	3	3
20/07/2024	21:55	2	4
20/07/2024	22:00	2	4
20/07/2024	22:05	30	6
20/07/2024	22:10	171	20
20/07/2024	22:15	96	28
20/07/2024	22:20	34	31
20/07/2024	22:25	19	31
20/07/2024	22:30	10	31
20/07/2024	22:35	37	34
20/07/2024	22:40	39	37
20/07/2024	22:45	19	39
20/07/2024	22:50	19	40
20/07/2024	22:55	10	40
20/07/2024	23:00	7	41
20/07/2024	23:05	7	39
20/07/2024	23:10	6	25
20/07/2024	23:15	5	18
20/07/2024	23:20	4	15
20/07/2024	23:25	3	14
20/07/2024	23:30	4	13
20/07/2024	23:35	4	11
20/07/2024	23:40	4	8
20/07/2024	23:45	4	6
20/07/2024	23:50	3	5
20/07/2024	23:55	3	5
21/07/2024	0:00	3	4
Hidden cells with no values exceeding limit.			
22/07/2024	5:30	4	6
22/07/2024	5:35	3	6
22/07/2024	5:40	3	5
22/07/2024	5:45	3	5
22/07/2024	5:50	3	5
22/07/2024	5:55	3	5

22/07/2024	6:00	3	4
22/07/2024	6:05	4	4
22/07/2024	6:10	111	13
22/07/2024	6:15	169	26
22/07/2024	6:20	97	34
22/07/2024	6:25	54	38
22/07/2024	6:30	26	40
22/07/2024	6:35	17	41
22/07/2024	6:40	12	42
22/07/2024	6:45	10	42
22/07/2024	6:50	7	43
22/07/2024	6:55	7	43
22/07/2024	7:00	7	43
22/07/2024	7:05	6	44
22/07/2024	7:10	5	35
22/07/2024	7:15	6	21
22/07/2024	7:20	6	14
22/07/2024	7:25	5	10
22/07/2024	7:30	4	8
22/07/2024	7:35	4	7
22/07/2024	7:40	6	6
Hidden cells with no values exceeding limit.			
27/07/2024	2:05		28
27/07/2024	2:10		32
27/07/2024	2:15	15	33
27/07/2024	2:20	13	17
27/07/2024	2:25	10	14
27/07/2024	2:30	30	16
27/07/2024	2:35	27	18
27/07/2024	2:40	26	20
27/07/2024	2:45	31	22
27/07/2024	2:50	39	24
27/07/2024	2:55	67	29
27/07/2024	3:00	47	30
27/07/2024	3:05	110	38
27/07/2024	3:10	67	40
27/07/2024	3:15	27	41
27/07/2024	3:20	17	41
27/07/2024	3:25	12	42
27/07/2024	3:30	9	40
27/07/2024	3:35	8	38
27/07/2024	3:40	7	37
27/07/2024	3:45	7	35
27/07/2024	3:50	6	32

27/07/2024	3:55	4	27
27/07/2024	4:00	12	24
27/07/2024	4:05	17	16
27/07/2024	4:10	9	11
27/07/2024	4:15	7	9
Hidden cells with no values exceeding limit.			
27/07/2024	4:40	5	7
27/07/2024	4:45	5	7
27/07/2024	4:50	4	7
27/07/2024	4:55	60	12
27/07/2024	5:00	119	21
27/07/2024	5:05	84	26
27/07/2024	5:10	50	30
27/07/2024	5:15	27	31
27/07/2024	5:20	15	32
27/07/2024	5:25	11	32
27/07/2024	5:30	9	33
27/07/2024	5:35	7	33
27/07/2024	5:40	61	38
27/07/2024	5:45	47	41
27/07/2024	5:50	23	43
27/07/2024	5:55	15	39
27/07/2024	6:00	12	30
27/07/2024	6:05	11	24
27/07/2024	6:10	8	21
27/07/2024	6:15	8	19
27/07/2024	6:20	8	18
27/07/2024	6:25	8	18
27/07/2024	6:30	7	18
27/07/2024	6:35	7	18
27/07/2024	6:40	6	13
27/07/2024	6:45	7	10
27/07/2024	6:50	7	9

Notes:

D, T & V	- Date, Time & Exceedence Value Reported
Faded Values	- Not used to calculate the number of reportable exceedences
	- Range of 5-minute measurements that contribute to the Exceedence Value Reported
<u>Max</u>	- Maximum of the Range
<u>Min</u>	- Minimum of the Range

Ambient Air Quality Criteria (AAQC) for SO₂ = 40 ppb for 1-hour running average

Total Number of Reportable Exceedences:

4

SO2 Exceedance Report

Table E5

Durham York Energy Centre
 Courtice, Ontario
 Courtice Station
 Baseline Corrected Data

Date (dd/mm/yyyy)	Time (EST)	SO ₂	SO ₂
		5-min Avg. (ppb)	1-hr Running Avg. (ppb)
01/08/2024	19:40	1	1
01/08/2024	19:45	1	1
01/08/2024	19:50	1	1
01/08/2024	19:55	1	1
01/08/2024	20:00	2	1
01/08/2024	20:05	2	1
01/08/2024	20:10	2	1
01/08/2024	20:15	2	1
01/08/2024	20:20	3	2
01/08/2024	20:25	3	2
01/08/2024	20:30	2	2
01/08/2024	20:35	2	2
01/08/2024	20:40	131	13
01/08/2024	20:45	554	59
01/08/2024	20:50	270	81
01/08/2024	20:55	78	88
01/08/2024	21:00	152	100
01/08/2024	21:05	210	117
01/08/2024	21:10	72	123
01/08/2024	21:15	40	126
01/08/2024	21:20	30	129
01/08/2024	21:25	24	130
01/08/2024	21:30	13	131
01/08/2024	21:35	11	<u>132</u>
01/08/2024	21:40	117	131
01/08/2024	21:45	39	88
01/08/2024	21:50	19	67
01/08/2024	21:55	14	62
01/08/2024	22:00	13	50
01/08/2024	22:05	12	34
01/08/2024	22:10	64	33
01/08/2024	22:15	29	32
01/08/2024	22:20	22	31
01/08/2024	22:25	16	31

01/08/2024	22:30	10	30
01/08/2024	22:35	8	30
01/08/2024	22:40	11	21
01/08/2024	22:45	81	25
01/08/2024	22:50	97	31
01/08/2024	22:55	34	33
01/08/2024	23:00	28	34
01/08/2024	23:05	22	35
01/08/2024	23:10	16	31
01/08/2024	23:15	9	29
01/08/2024	23:20	10	28
01/08/2024	23:25	134	38
01/08/2024	23:30	200	54
01/08/2024	23:35	75	60
01/08/2024	23:40	84	66
01/08/2024	23:45	51	63
01/08/2024	23:50	61	60
01/08/2024	23:55	59	62
02/08/2024	0:00	28	62
02/08/2024	0:05	23	63
02/08/2024	0:10	19	63
02/08/2024	0:15	91	70
02/08/2024	0:20	34	72
02/08/2024	0:25	35	63
02/08/2024	0:30	98	55
02/08/2024	0:35	107	57
02/08/2024	0:40	81	57
02/08/2024	0:45	110	62
02/08/2024	0:50	46	61
02/08/2024	0:55	30	58
02/08/2024	1:00	22	58
02/08/2024	1:05	15	57
02/08/2024	1:10	16	57
02/08/2024	1:15	16	51
02/08/2024	1:20	16	49
02/08/2024	1:25	12	47
02/08/2024	1:30	11	40
02/08/2024	1:35	11	32
02/08/2024	1:40	10	26
02/08/2024	1:45		19
02/08/2024	1:50		16
02/08/2024	1:55		14
02/08/2024	2:00		13
02/08/2024	2:05		13

02/08/2024	2:10		13
02/08/2024	2:15	26	14
02/08/2024	2:20	70	23
02/08/2024	2:25	98	38
02/08/2024	2:30	101	53
02/08/2024	2:35	46	59
02/08/2024	2:40	28	62
02/08/2024	2:45	21	56
02/08/2024	2:50	16	51
02/08/2024	2:55	11	46
02/08/2024	3:00	11	43
02/08/2024	3:05	11	40
02/08/2024	3:10	10	37
02/08/2024	3:15	7	36
02/08/2024	3:20	6	31
02/08/2024	3:25	6	23
02/08/2024	3:30	6	15
02/08/2024	3:35	5	12
02/08/2024	3:40	4	10
02/08/2024	3:45	5	8
02/08/2024	3:50	6	7
Hidden cells with no values exceeding limit.			
05/08/2024	0:50	11	25
05/08/2024	0:55	8	25
05/08/2024	1:00	6	26
05/08/2024	1:05	7	26
05/08/2024	1:10	61	31
05/08/2024	1:15	77	35
05/08/2024	1:20	129	37
05/08/2024	1:25	30	34
05/08/2024	1:30	37	35
05/08/2024	1:35	23	35
05/08/2024	1:40	21	35
05/08/2024	1:45		37
05/08/2024	1:50		40
05/08/2024	1:55		43
05/08/2024	2:00		48
05/08/2024	2:05		54
05/08/2024	2:10		53
05/08/2024	2:15	171	69
05/08/2024	2:20	44	54
05/08/2024	2:25	140	73
05/08/2024	2:30	59	76
05/08/2024	2:35	30	78

05/08/2024	2:40	46	82
05/08/2024	2:45	40	76
05/08/2024	2:50	39	71
05/08/2024	2:55	61	70
05/08/2024	3:00	30	66
05/08/2024	3:05	85	68
05/08/2024	3:10	32	65
05/08/2024	3:15	18	52
05/08/2024	3:20	14	50
05/08/2024	3:25	11	39
05/08/2024	3:30	31	36
05/08/2024	3:35	152	47
05/08/2024	3:40	42	46
05/08/2024	3:45	24	45
05/08/2024	3:50	16	43
05/08/2024	3:55	31	41
05/08/2024	4:00	56	43
05/08/2024	4:05	26	38
05/08/2024	4:10	63	40
05/08/2024	4:15	37	42
05/08/2024	4:20	39	44
05/08/2024	4:25	19	45
05/08/2024	4:30	38	45
05/08/2024	4:35	28	35
05/08/2024	4:40	18	33
05/08/2024	4:45	16	32
05/08/2024	4:50	13	32
05/08/2024	4:55	15	31
05/08/2024	5:00	32	29
Hidden cells with no values exceeding limit.			
06/08/2024	0:30	44	37
06/08/2024	0:35	28	37
06/08/2024	0:40	23	36
06/08/2024	0:45	35	36
06/08/2024	0:50	55	38
06/08/2024	0:55	39	39
06/08/2024	1:00	34	40
06/08/2024	1:05	45	39
06/08/2024	1:10	43	40
06/08/2024	1:15	30	39
06/08/2024	1:20	43	39
06/08/2024	1:25	44	39
06/08/2024	1:30	53	39
06/08/2024	1:35	46	41

06/08/2024	1:40	47	43
06/08/2024	1:45		43
06/08/2024	1:50		42
06/08/2024	1:55		43
06/08/2024	2:00		44
06/08/2024	2:05		44
06/08/2024	2:10		44
06/08/2024	2:15	35	45
06/08/2024	2:20	40	44
06/08/2024	2:25	46	44
06/08/2024	2:30	46	43
06/08/2024	2:35	55	45
06/08/2024	2:40	50	45
06/08/2024	2:45	40	45
06/08/2024	2:50	49	45
06/08/2024	2:55	48	45
06/08/2024	3:00	51	46
06/08/2024	3:05	39	45
06/08/2024	3:10	31	44
06/08/2024	3:15	22	43
06/08/2024	3:20	25	42
06/08/2024	3:25	36	41
06/08/2024	3:30	43	41
06/08/2024	3:35	48	40
06/08/2024	3:40	65	42
06/08/2024	3:45	43	42
06/08/2024	3:50	25	40
06/08/2024	3:55	15	37
06/08/2024	4:00	30	35
06/08/2024	4:05	40	35
06/08/2024	4:10	19	34
06/08/2024	4:15	12	33
06/08/2024	4:20	10	32
06/08/2024	4:25	9	30
06/08/2024	4:30	44	30
06/08/2024	4:35	42	29
06/08/2024	4:40	32	27
06/08/2024	4:45	50	27
06/08/2024	4:50	75	32
06/08/2024	4:55	55	35
06/08/2024	5:00	41	36
06/08/2024	5:05	45	36
06/08/2024	5:10	59	39
06/08/2024	5:15	41	42

06/08/2024	5:20	68	47
06/08/2024	5:25	55	51
06/08/2024	5:30	86	54
06/08/2024	5:35	94	58
06/08/2024	5:40	95	64
06/08/2024	5:45	76	66
06/08/2024	5:50	66	65
06/08/2024	5:55	39	64
06/08/2024	6:00	34	63
06/08/2024	6:05	32	62
06/08/2024	6:10	36	60
06/08/2024	6:15	63	62
06/08/2024	6:20	47	60
06/08/2024	6:25	42	59
06/08/2024	6:30	28	54
06/08/2024	6:35	31	49
06/08/2024	6:40	39	45
06/08/2024	6:45	29	41
06/08/2024	6:50	23	37
06/08/2024	6:55	31	36
06/08/2024	7:00	44	37
06/08/2024	7:05	45	38
06/08/2024	7:10	45	39
06/08/2024	7:15	36	37
06/08/2024	7:20	24	35
Hidden cells with no values exceeding limit.			
06/08/2024	18:25	10	9
06/08/2024	18:30	7	10
06/08/2024	18:35	6	10
06/08/2024	18:40	10	11
06/08/2024	18:45	8	11
06/08/2024	18:50	7	11
06/08/2024	18:55	78	15
06/08/2024	19:00	117	25
06/08/2024	19:05	38	28
06/08/2024	19:10	31	30
06/08/2024	19:15	77	35
06/08/2024	19:20	63	38
06/08/2024	19:25	24	39
06/08/2024	19:30	37	41
06/08/2024	19:35	52	45
06/08/2024	19:40	122	55
06/08/2024	19:45	51	58
06/08/2024	19:50	78	64

06/08/2024	19:55	35	60
06/08/2024	20:00	39	54
06/08/2024	20:05	105	59
06/08/2024	20:10	56	62
06/08/2024	20:15	22	57
06/08/2024	20:20	15	53
06/08/2024	20:25	11	52
06/08/2024	20:30	9	50
06/08/2024	20:35	7	46
06/08/2024	20:40	6	36
06/08/2024	20:45	6	32
06/08/2024	20:50	5	26
06/08/2024	20:55	8	24
06/08/2024	21:00	43	24
06/08/2024	21:05	28	18
06/08/2024	21:10	14	15
06/08/2024	21:15	15	14
06/08/2024	21:20	19	14
06/08/2024	21:25	15	15
06/08/2024	21:30	18	15
06/08/2024	21:35	15	16
06/08/2024	21:40	22	17
06/08/2024	21:45	35	20
06/08/2024	21:50	40	23
06/08/2024	21:55	50	26
06/08/2024	22:00	75	29
06/08/2024	22:05	105	35
06/08/2024	22:10	120	44
06/08/2024	22:15	81	49
06/08/2024	22:20	83	55
06/08/2024	22:25	68	59
06/08/2024	22:30	79	64
06/08/2024	22:35	92	71
06/08/2024	22:40	98	77
06/08/2024	22:45	73	80
06/08/2024	22:50	71	83
06/08/2024	22:55	80	85
06/08/2024	23:00	91	87
06/08/2024	23:05	103	87
06/08/2024	23:10	85	84
06/08/2024	23:15	87	84
06/08/2024	23:20	84	84
06/08/2024	23:25	72	85
06/08/2024	23:30	106	87

06/08/2024	23:35	106	88
06/08/2024	23:40	88	87
06/08/2024	23:45	88	89
06/08/2024	23:50	66	88
06/08/2024	23:55	62	87
07/08/2024	0:00	86	86
07/08/2024	0:05	75	84
07/08/2024	0:10	50	81
07/08/2024	0:15	58	78
07/08/2024	0:20	75	78
07/08/2024	0:25	116	81
07/08/2024	0:30	111	82
07/08/2024	0:35	126	83
07/08/2024	0:40	95	84
07/08/2024	0:45	56	81
07/08/2024	0:50	69	82
07/08/2024	0:55	72	82
07/08/2024	1:00	74	81
07/08/2024	1:05	77	82
07/08/2024	1:10	76	84
07/08/2024	1:15	39	82
07/08/2024	1:20	22	78
07/08/2024	1:25	15	69
07/08/2024	1:30	12	61
07/08/2024	1:35	10	51
07/08/2024	1:40	9	44
07/08/2024	1:45		43
07/08/2024	1:50		41
07/08/2024	1:55		37
07/08/2024	2:00		33
07/08/2024	2:05		26
07/08/2024	2:10		18
07/08/2024	2:15	6	12
Hidden cells with no values exceeding limit.			
07/08/2024	19:35	1	1
07/08/2024	19:40	1	1
07/08/2024	19:45	2	1
07/08/2024	19:50	1	1
07/08/2024	19:55	1	1
07/08/2024	20:00	23	3
07/08/2024	20:05	66	8
07/08/2024	20:10	79	15
07/08/2024	20:15	74	21
07/08/2024	20:20	28	23

07/08/2024	20:25	50	27
07/08/2024	20:30	54	32
07/08/2024	20:35	16	33
07/08/2024	20:40	87	40
07/08/2024	20:45	43	44
07/08/2024	20:50	35	46
07/08/2024	20:55	63	52
07/08/2024	21:00	66	55
07/08/2024	21:05	77	56
07/08/2024	21:10	64	55
07/08/2024	21:15	54	53
07/08/2024	21:20	20	52
07/08/2024	21:25	39	51
07/08/2024	21:30	36	50
07/08/2024	21:35	22	50
07/08/2024	21:40	22	45
07/08/2024	21:45	21	43
07/08/2024	21:50	18	42
07/08/2024	21:55	14	38
07/08/2024	22:00	10	33
07/08/2024	22:05	24	29
07/08/2024	22:10	51	28
07/08/2024	22:15	42	27
07/08/2024	22:20	31	28
07/08/2024	22:25	30	27
07/08/2024	22:30	46	28
07/08/2024	22:35	21	28
07/08/2024	22:40	23	28
07/08/2024	22:45	17	27
Hidden cells with no values exceeding limit.			
13/08/2024	18:50	0	0
13/08/2024	18:55	0	0
13/08/2024	19:00	0	0
13/08/2024	19:05	0	0
13/08/2024	19:10	0	0
13/08/2024	19:15	0	0
13/08/2024	19:20	5	1
13/08/2024	19:25	14	2
13/08/2024	19:30	13	3
13/08/2024	19:35	6	3
13/08/2024	19:40	4	4
13/08/2024	19:45	7	4
13/08/2024	19:50	190	20
13/08/2024	19:55	339	48

13/08/2024	20:00	158	61
13/08/2024	20:05	103	70
13/08/2024	20:10	32	73
13/08/2024	20:15	21	74
13/08/2024	20:20	13	75
13/08/2024	20:25	9	75
13/08/2024	20:30	7	74
13/08/2024	20:35	133	85
13/08/2024	20:40	142	96
13/08/2024	20:45	48	100
13/08/2024	20:50	34	87
13/08/2024	20:55	44	62
13/08/2024	21:00	26	51
13/08/2024	21:05	15	44
13/08/2024	21:10	13	42
13/08/2024	21:15	92	48
13/08/2024	21:20	83	54
13/08/2024	21:25	29	56
13/08/2024	21:30	16	56
13/08/2024	21:35	10	46
13/08/2024	21:40	8	35
13/08/2024	21:45	6	31
13/08/2024	21:50	5	29
13/08/2024	21:55	5	26
13/08/2024	22:00	82	30
13/08/2024	22:05	113	38
13/08/2024	22:10	54	42
13/08/2024	22:15	27	37
13/08/2024	22:20	18	31
13/08/2024	22:25	13	30
13/08/2024	22:30	11	29
13/08/2024	22:35	9	29
13/08/2024	22:40	8	29
13/08/2024	22:45	6	29
13/08/2024	22:50	6	29
13/08/2024	22:55	6	29
13/08/2024	23:00	8	23
13/08/2024	23:05	9	14
13/08/2024	23:10	10	11
13/08/2024	23:15	8	9
Hidden cells with no values exceeding limit.			
14/08/2024	19:45	6	3
14/08/2024	19:50	4	4
14/08/2024	19:55	3	4

14/08/2024	20:00	2	4
14/08/2024	20:05	1	4
14/08/2024	20:10	20	6
14/08/2024	20:15	133	16
14/08/2024	20:20	67	21
14/08/2024	20:25	110	30
14/08/2024	20:30	69	35
14/08/2024	20:35	26	37
14/08/2024	20:40	14	38
14/08/2024	20:45	10	38
14/08/2024	20:50	129	49
14/08/2024	20:55	141	60
14/08/2024	21:00	68	66
14/08/2024	21:05	150	78
14/08/2024	21:10	159	90
14/08/2024	21:15	52	83
14/08/2024	21:20	78	84
14/08/2024	21:25	48	79
14/08/2024	21:30	21	75
14/08/2024	21:35	85	80
14/08/2024	21:40	69	84
14/08/2024	21:45	32	86
14/08/2024	21:50	15	77
14/08/2024	21:55	11	66
14/08/2024	22:00	8	61
14/08/2024	22:05	7	49
14/08/2024	22:10	6	36
14/08/2024	22:15	6	32
14/08/2024	22:20	7	26
14/08/2024	22:25	5	23
14/08/2024	22:30	5	21
14/08/2024	22:35	4	15
14/08/2024	22:40	3	9
14/08/2024	22:45	3	7
14/08/2024	22:50	3	6
14/08/2024	22:55	3	5
Hidden cells with no values exceeding limit.			
15/08/2024	19:05	1	1
15/08/2024	19:10	3	1
15/08/2024	19:15	4	1
15/08/2024	19:20	10	2
15/08/2024	19:25	10	3
15/08/2024	19:30	47	7
15/08/2024	19:35	101	15

15/08/2024	19:40	23	17
15/08/2024	19:45	12	18
15/08/2024	19:50	30	20
15/08/2024	19:55	15	21
15/08/2024	20:00	10	22
15/08/2024	20:05	130	33
15/08/2024	20:10	108	42
15/08/2024	20:15	142	53
15/08/2024	20:20	268	75
15/08/2024	20:25	238	94
15/08/2024	20:30	107	99
15/08/2024	20:35	89	98
15/08/2024	20:40	29	98
15/08/2024	20:45	19	99
15/08/2024	20:50	38	99
15/08/2024	20:55	146	110
15/08/2024	21:00	129	120
15/08/2024	21:05	65	115
15/08/2024	21:10	55	110
15/08/2024	21:15	48	103
15/08/2024	21:20	59	85
15/08/2024	21:25	27	68
15/08/2024	21:30	17	60
15/08/2024	21:35	11	53
15/08/2024	21:40	8	52
15/08/2024	21:45	8	51
15/08/2024	21:50	26	50
15/08/2024	21:55	52	42
15/08/2024	22:00	27	34
15/08/2024	22:05	20	30
15/08/2024	22:10	11	26
15/08/2024	22:15	8	23
Hidden cells with no values exceeding limit.			
16/08/2024	2:00		28
16/08/2024	2:05		30
16/08/2024	2:10		34
16/08/2024	2:15	7	34
16/08/2024	2:20	5	27
16/08/2024	2:25	15	24
16/08/2024	2:30	15	22
16/08/2024	2:35	8	17
16/08/2024	2:40	20	12
16/08/2024	2:45	99	24
16/08/2024	2:50	25	24

16/08/2024	2:55	91	32
16/08/2024	3:00	66	35
16/08/2024	3:05	96	41
16/08/2024	3:10	35	40
16/08/2024	3:15	20	41
16/08/2024	3:20	16	42
16/08/2024	3:25	17	42
16/08/2024	3:30	26	43
16/08/2024	3:35	40	46
16/08/2024	3:40	50	48
16/08/2024	3:45	39	43
16/08/2024	3:50	42	45
16/08/2024	3:55	19	39
16/08/2024	4:00	66	39
16/08/2024	4:05	76	37
16/08/2024	4:10	36	37
16/08/2024	4:15	32	38
16/08/2024	4:20	32	40
16/08/2024	4:25	30	41
16/08/2024	4:30	34	41
16/08/2024	4:35	21	40
16/08/2024	4:40	33	38
16/08/2024	4:45	58	40
16/08/2024	4:50	41	40
16/08/2024	4:55	32	41
16/08/2024	5:00	25	38
16/08/2024	5:05	18	33
16/08/2024	5:10	17	31
16/08/2024	5:15	13	30
16/08/2024	5:20	9	28
16/08/2024	5:25	13	26
16/08/2024	5:30	14	25
Hidden cells with no values exceeding limit.			
24/08/2024	1:30	14	20
24/08/2024	1:35	19	21
24/08/2024	1:40	10	22
24/08/2024	1:45		24
24/08/2024	1:50		24
24/08/2024	1:55		24
24/08/2024	2:00		12
24/08/2024	2:05		10
24/08/2024	2:10		10
24/08/2024	2:15	29	14
24/08/2024	2:20	75	25

24/08/2024	2:25	130	46
24/08/2024	2:30	42	51
24/08/2024	2:35	20	51
24/08/2024	2:40	51	58
24/08/2024	2:45	30	54
24/08/2024	2:50	20	50
24/08/2024	2:55	19	46
24/08/2024	3:00	12	43
24/08/2024	3:05	91	47
24/08/2024	3:10	35	46
24/08/2024	3:15	22	46
24/08/2024	3:20	17	41
24/08/2024	3:25	10	31
24/08/2024	3:30	8	28
24/08/2024	3:35	7	27
24/08/2024	3:40	60	28
24/08/2024	3:45	113	34
24/08/2024	3:50	129	44
24/08/2024	3:55	96	50
24/08/2024	4:00	98	57
24/08/2024	4:05	31	52
24/08/2024	4:10	64	55
24/08/2024	4:15	134	64
24/08/2024	4:20	44	66
24/08/2024	4:25	43	69
24/08/2024	4:30	37	71
24/08/2024	4:35	32	73
24/08/2024	4:40	100	77
24/08/2024	4:45	46	71
24/08/2024	4:50	21	62
24/08/2024	4:55	45	58
24/08/2024	5:00	76	56
24/08/2024	5:05	22	55
24/08/2024	5:10	17	52
24/08/2024	5:15	87	48
24/08/2024	5:20	40	47
24/08/2024	5:25	21	45
24/08/2024	5:30	18	44
24/08/2024	5:35	19	43
24/08/2024	5:40	33	37
24/08/2024	5:45	73	39
24/08/2024	5:50	56	42
24/08/2024	5:55	33	41
24/08/2024	6:00	43	38

24/08/2024	6:05	33	39
24/08/2024	6:10	20	40
24/08/2024	6:15	19	34
24/08/2024	6:20	55	35
24/08/2024	6:25	33	36
24/08/2024	6:30	32	37
24/08/2024	6:35	37	39
24/08/2024	6:40	20	38
24/08/2024	6:45	15	33
24/08/2024	6:50	12	29
24/08/2024	6:55	11	28
Hidden cells with no values exceeding limit.			
26/08/2024	19:00	4	2
26/08/2024	19:05	29	4
26/08/2024	19:10	14	5
26/08/2024	19:15	19	7
26/08/2024	19:20	111	16
26/08/2024	19:25	52	20
26/08/2024	19:30	22	22
26/08/2024	19:35	12	23
26/08/2024	19:40	8	23
26/08/2024	19:45	5	23
26/08/2024	19:50	5	24
26/08/2024	19:55	42	27
26/08/2024	20:00	73	33
26/08/2024	20:05	141	42
26/08/2024	20:10	82	48
26/08/2024	20:15	38	49
26/08/2024	20:20	41	43
26/08/2024	20:25	39	42
26/08/2024	20:30	19	42
26/08/2024	20:35	10	42
26/08/2024	20:40	9	42
26/08/2024	20:45	8	42
26/08/2024	20:50	8	43
26/08/2024	20:55	7	40
26/08/2024	21:00	5	34
26/08/2024	21:05	6	23
26/08/2024	21:10	6	17
Hidden cells with no values exceeding limit.			
26/08/2024	22:20	20	8
26/08/2024	22:25	50	12
26/08/2024	22:30	59	15
26/08/2024	22:35	72	20

26/08/2024	22:40	53	24
26/08/2024	22:45	18	25
26/08/2024	22:50	14	26
26/08/2024	22:55	10	26
26/08/2024	23:00	8	26
26/08/2024	23:05	6	27
26/08/2024	23:10	5	27
26/08/2024	23:15	5	26
26/08/2024	23:20	173	39
26/08/2024	23:25	132	46
26/08/2024	23:30	120	51
26/08/2024	23:35	50	49
26/08/2024	23:40	22	47
26/08/2024	23:45	15	47
26/08/2024	23:50	11	46
26/08/2024	23:55	10	46
27/08/2024	0:00	8	46
27/08/2024	0:05	6	46
27/08/2024	0:10	5	47
27/08/2024	0:15	17	48
27/08/2024	0:20	24	35
27/08/2024	0:25	46	28
27/08/2024	0:30	45	22
Hidden cells with no values exceeding limit.			
27/08/2024	2:10		7
27/08/2024	2:15	32	11
27/08/2024	2:20	15	12
27/08/2024	2:25	11	12
27/08/2024	2:30	55	20
27/08/2024	2:35	30	24
27/08/2024	2:40	14	26
27/08/2024	2:45	9	24
27/08/2024	2:50	54	27
27/08/2024	2:55	114	37
27/08/2024	3:00	53	39
27/08/2024	3:05	26	37
27/08/2024	3:10	33	37
27/08/2024	3:15	91	42
27/08/2024	3:20	43	44
27/08/2024	3:25	45	47
27/08/2024	3:30	38	46
27/08/2024	3:35	20	45
27/08/2024	3:40	66	49
27/08/2024	3:45	26	51

27/08/2024	3:50	17	48
27/08/2024	3:55	12	39
27/08/2024	4:00	33	38
27/08/2024	4:05	21	37
27/08/2024	4:10	44	38
27/08/2024	4:15	26	33
27/08/2024	4:20	18	31
Hidden cells with no values exceeding limit.			
29/08/2024	18:10	1	1
29/08/2024	18:15	0	1
29/08/2024	18:20	0	1
29/08/2024	18:25	0	1
29/08/2024	18:30	1	1
29/08/2024	18:35	5	1
29/08/2024	18:40	106	10
29/08/2024	18:45	118	19
29/08/2024	18:50	20	21
29/08/2024	18:55	11	22
29/08/2024	19:00	7	23
29/08/2024	19:05	5	23
29/08/2024	19:10	153	36
29/08/2024	19:15	275	58
29/08/2024	19:20	70	64
29/08/2024	19:25	24	66
29/08/2024	19:30	16	67
29/08/2024	19:35	12	68
29/08/2024	19:40	9	60
29/08/2024	19:45	8	51
29/08/2024	19:50	6	50
29/08/2024	19:55	4	49
29/08/2024	20:00	4	49
29/08/2024	20:05	25	51
29/08/2024	20:10	13	39
29/08/2024	20:15	7	17
29/08/2024	20:20	5	11
29/08/2024	20:25	4	9
29/08/2024	20:30	31	11
29/08/2024	20:35	56	14
29/08/2024	20:40	40	17
29/08/2024	20:45	16	18
29/08/2024	20:50	9	18
29/08/2024	20:55	127	28
29/08/2024	21:00	230	47
29/08/2024	21:05	110	54

29/08/2024	21:10	97	61
29/08/2024	21:15	91	68
29/08/2024	21:20	110	77
29/08/2024	21:25	90	84
29/08/2024	21:30	34	84
29/08/2024	21:35	18	81
29/08/2024	21:40	66	83
29/08/2024	21:45	90	89
29/08/2024	21:50	31	91
29/08/2024	21:55	41	84
29/08/2024	22:00	41	68
29/08/2024	22:05	58	64
29/08/2024	22:10	54	60
29/08/2024	22:15	20	54
29/08/2024	22:20	15	47
29/08/2024	22:25	10	40
29/08/2024	22:30	9	38
29/08/2024	22:35	8	37
29/08/2024	22:40	7	32
29/08/2024	22:45	8	25
29/08/2024	22:50	6	23
29/08/2024	22:55	16	21
29/08/2024	23:00	31	20
29/08/2024	23:05	28	18
Hidden cells with no values exceeding limit.			
31/08/2024	19:35	1	1
31/08/2024	19:40	1	1
31/08/2024	19:45	1	1
31/08/2024	19:50	1	1
31/08/2024	19:55	1	1
31/08/2024	20:00	1	1
31/08/2024	20:05	1	1
31/08/2024	20:10	126	12
31/08/2024	20:15	46	15
31/08/2024	20:20	29	18
31/08/2024	20:25	51	22
31/08/2024	20:30	61	27
31/08/2024	20:35	83	34
31/08/2024	20:40	81	40
31/08/2024	20:45	33	43
31/08/2024	20:50	20	44
31/08/2024	20:55	12	45
31/08/2024	21:00	10	46
31/08/2024	21:05	9	47

31/08/2024	21:10	8	37
31/08/2024	21:15	178	48
31/08/2024	21:20	132	56
31/08/2024	21:25	41	56
31/08/2024	21:30	26	53
31/08/2024	21:35	16	47
31/08/2024	21:40	15	42
31/08/2024	21:45	13	40
31/08/2024	21:50	9	39
31/08/2024	21:55	8	39
31/08/2024	22:00	6	39
31/08/2024	22:05	72	44
31/08/2024	22:10	32	46
31/08/2024	22:15	17	32
31/08/2024	22:20	11	22
31/08/2024	22:25	38	22
31/08/2024	22:30	26	22
31/08/2024	22:35	12	22
31/08/2024	22:40	9	21
31/08/2024	22:45	7	21

Notes:

D, T & V	- Date, Time & Exceedence Value Reported
Faded Values	- Not used to calculate the number of reportable exceedences
	- Range of 5-minute measurements that contribute to the Exceedence Value Reported
<u>Max</u>	- Maximum of the Range
<u>Min</u>	- Minimum of the Range

Ambient Air Quality Criteria (AAQC) for SO2 = 40 ppb for 1-hour running average

Total Number of Reportable Exceedences:

42

SO2 Exceedance Report

Table E6

Durham York Energy Centre
 Courtice, Ontario
 Courtice Station
 Baseline Corrected Data

Date (dd/mm/yyyy)	Time (EST)	SO ₂	SO ₂
		5-min Avg. (ppb)	1-hr Running Avg. (ppb)
01/09/2024	1:30	10	19
01/09/2024	1:35	7	17
01/09/2024	1:40	6	15
01/09/2024	1:45		16
01/09/2024	1:50		16
01/09/2024	1:55		17
01/09/2024	2:00		18
01/09/2024	2:05		17
01/09/2024	2:10		11
01/09/2024	2:15	33	13
01/09/2024	2:20	52	20
01/09/2024	2:25	22	21
01/09/2024	2:30	113	39
01/09/2024	2:35	190	69
01/09/2024	2:40	74	81
01/09/2024	2:45	116	86
01/09/2024	2:50	136	92
01/09/2024	2:55	53	88
01/09/2024	3:00	45	83
01/09/2024	3:05	27	78
01/09/2024	3:10	19	73
01/09/2024	3:15	49	75
01/09/2024	3:20	48	74
01/09/2024	3:25	70	78
01/09/2024	3:30	33	72
01/09/2024	3:35	19	57
01/09/2024	3:40	25	53
01/09/2024	3:45	47	48
01/09/2024	3:50	21	38
01/09/2024	3:55	15	35
01/09/2024	4:00	16	32
01/09/2024	4:05	23	32
01/09/2024	4:10	15	32
01/09/2024	4:15	73	34

01/09/2024	4:20	92	38
01/09/2024	4:25	89	39
01/09/2024	4:30	101	45
01/09/2024	4:35	36	46
01/09/2024	4:40	22	46
01/09/2024	4:45	16	43
01/09/2024	4:50	12	43
01/09/2024	4:55	10	42
01/09/2024	5:00	31	43
01/09/2024	5:05	69	47
01/09/2024	5:10	156	59
01/09/2024	5:15	58	58
01/09/2024	5:20	30	53
01/09/2024	5:25	19	47
01/09/2024	5:30	14	39
01/09/2024	5:35	18	38
01/09/2024	5:40	41	40
01/09/2024	5:45	75	45
01/09/2024	5:50	79	50
01/09/2024	5:55	144	61
01/09/2024	6:00	49	63
01/09/2024	6:05	49	61
01/09/2024	6:10	177	63
01/09/2024	6:15	62	63
01/09/2024	6:20	36	63
01/09/2024	6:25	23	64
01/09/2024	6:30	17	64
01/09/2024	6:35	14	64
01/09/2024	6:40	12	61
01/09/2024	6:45	8	56
01/09/2024	6:50	9	50
01/09/2024	6:55	10	39
01/09/2024	7:00	9	36
01/09/2024	7:05	7	32
01/09/2024	7:10	6	18
01/09/2024	7:15	7	13
01/09/2024	7:20	7	11
01/09/2024	7:25	5	9
01/09/2024	7:30	5	8
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01/09/2024	7:40	6	7
01/09/2024	7:45	4	7
01/09/2024	7:50	5	6
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03/09/2024	21:40	84	15
03/09/2024	21:45	113	25
03/09/2024	21:50	69	30
03/09/2024	21:55	23	32
03/09/2024	22:00	15	33
03/09/2024	22:05	9	34
03/09/2024	22:10	6	35
03/09/2024	22:15	5	35
03/09/2024	22:20	5	35
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03/09/2024	22:50	84	47
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03/09/2024	23:05	80	67
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03/09/2024	23:55	4	26
04/09/2024	0:00	18	19
04/09/2024	0:05	19	14
04/09/2024	0:10	10	11
04/09/2024	0:15	11	11
04/09/2024	0:20	6	10
04/09/2024	0:25	5	9
04/09/2024	0:30	4	9
04/09/2024	0:35	3	9
04/09/2024	0:40	3	8
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04/09/2024	23:50	29	24
04/09/2024	23:55	38	26

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05/09/2024	0:05	44	33
05/09/2024	0:10	36	35
05/09/2024	0:15	45	36
05/09/2024	0:20	39	37
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05/09/2024	1:40	44	23
05/09/2024	1:45		20
05/09/2024	1:50		18
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10/09/2024	17:20	1	1
10/09/2024	17:25	1	1
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10/09/2024	18:25	97	50
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10/09/2024	18:40	42	69
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10/09/2024	19:30	38	44
10/09/2024	19:35	619	90
10/09/2024	19:40	162	100
10/09/2024	19:45	63	102
10/09/2024	19:50	84	105
10/09/2024	19:55	55	105
10/09/2024	20:00	43	97
10/09/2024	20:05	44	98
10/09/2024	20:10	18	97
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10/09/2024	20:20	53	100
10/09/2024	20:25	367	130
10/09/2024	20:30	108	<u>136</u>
10/09/2024	20:35	33	87
10/09/2024	20:40	27	76
10/09/2024	20:45	16	72
10/09/2024	20:50	17	66
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10/09/2024	21:15	9	58
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10/09/2024	21:25	7	25
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10/09/2024	22:15	3	<u>5</u>
10/09/2024	22:20	9	5
10/09/2024	22:25	4	5
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10/09/2024	23:05	3	4
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10/09/2024	23:30	10	4
10/09/2024	23:35	10	4
10/09/2024	23:40	5	4
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11/09/2024	0:20	16	54
11/09/2024	0:25	11	55
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11/09/2024	0:55	5	39
11/09/2024	1:00	4	19
11/09/2024	1:05	4	13
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11/09/2024	4:00	2	5
11/09/2024	4:05	3	4
11/09/2024	4:10	2	4
11/09/2024	4:15	2	4
11/09/2024	4:20	2	4
11/09/2024	4:25	3	3
11/09/2024	4:30	4	3
11/09/2024	4:35	21	4
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11/09/2024	4:45	105	29
11/09/2024	4:50	87	36
11/09/2024	4:55	35	38
11/09/2024	5:00	25	40
11/09/2024	5:05	16	41
11/09/2024	5:10	11	42

11/09/2024	5:15	8	43
11/09/2024	5:20	7	43
11/09/2024	5:25	6	43
11/09/2024	5:30	5	43
11/09/2024	5:35	4	42
11/09/2024	5:40	4	26
11/09/2024	5:45	3	18
11/09/2024	5:50	4	11
11/09/2024	5:55	6	8
11/09/2024	6:00	8	7
11/09/2024	6:05	5	6
Hidden cells with no values exceeding limit.			
11/09/2024	20:25	7	9
11/09/2024	20:30	6	8
11/09/2024	20:35	6	8
11/09/2024	20:40	9	8
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11/09/2024	21:50	6	42
11/09/2024	21:55	5	42
11/09/2024	22:00	4	32
11/09/2024	22:05	3	20
11/09/2024	22:10	3	17
11/09/2024	22:15	6	13
11/09/2024	22:20	35	12
11/09/2024	22:25	18	11
11/09/2024	22:30	9	10
11/09/2024	22:35	7	9
Hidden cells with no values exceeding limit.			
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13/09/2024	4:55	7	10
13/09/2024	5:00	8	9

13/09/2024	5:05	6	9
13/09/2024	5:10	4	9
13/09/2024	5:15	4	9
13/09/2024	5:20	3	9
13/09/2024	5:25	3	7
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13/09/2024	5:50	26	41
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13/09/2024	6:45	6	17
13/09/2024	6:50	7	15
13/09/2024	6:55	6	12
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26/09/2024	20:35	26	14
26/09/2024	20:40	90	21
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26/09/2024	21:40	48	42
26/09/2024	21:45	73	43
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26/09/2024	22:20	7	36
26/09/2024	22:25	81	38
26/09/2024	22:30	39	36
26/09/2024	22:35	22	34
Hidden cells with no values exceeding limit.			
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26/09/2024	23:45	28	26
26/09/2024	23:50	18	24
26/09/2024	23:55	17	21
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27/09/2024	0:05	69	26
27/09/2024	0:10	43	29
27/09/2024	0:15	49	32
27/09/2024	0:20	61	36
27/09/2024	0:25	74	39
27/09/2024	0:30	33	38
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27/09/2024	2:30	48	43

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27/09/2024	5:40	53	37
27/09/2024	5:45	37	34
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27/09/2024	6:25	24	43
27/09/2024	6:30	19	42
27/09/2024	6:35	14	37
27/09/2024	6:40	12	33
27/09/2024	6:45	10	31
27/09/2024	6:50	82	36
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27/09/2024	8:10	9	20
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27/09/2024	8:20	8	12
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30/09/2024	0:35	113	29
30/09/2024	0:40	61	30
30/09/2024	0:45	54	33
30/09/2024	0:50	31	34
30/09/2024	0:55	32	36
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30/09/2024	1:20	22	47
30/09/2024	1:25	14	48
30/09/2024	1:30	14	41

30/09/2024	1:35	25	34
30/09/2024	1:40	17	30
30/09/2024	1:45		28
30/09/2024	1:50		28
30/09/2024	1:55		27
30/09/2024	2:00		26
30/09/2024	2:05		27
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30/09/2024	2:25	52	35
30/09/2024	2:30	58	42
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30/09/2024	3:35	12	38
30/09/2024	3:40	29	35
30/09/2024	3:45	31	33
30/09/2024	3:50	19	30
30/09/2024	3:55	11	27
30/09/2024	4:00	27	24
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30/09/2024	4:10	19	22
30/09/2024	4:15	24	21
30/09/2024	4:20	52	23
30/09/2024	4:25	50	26
30/09/2024	4:30	50	29
30/09/2024	4:35	19	29

Notes:

	- Date, Time & Exceedence Value Reported
	- Not used to calculate the number of reportable exceedences
	- Range of 5-minute measurements that contribute to the Exceedence Value Reported
<u>Max</u>	- Maximum of the Range

Min

- Minimum of the Range

Ambient Air Quality Criteria (AAQC) for SO₂ = 40 ppb for 1-hour running average

Total Number of Reportable Exceedances:

24

The page features a decorative background. On the left, there is a blue right-angled triangle. A large, light grey circle overlaps the right side of the triangle and extends across the middle and bottom of the page. The text 'APPENDIX F' is centered within the grey circle.

APPENDIX F



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October 30, 2024

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**Re: Durham York Energy Centre (DYEC)
2024 Ambient Air Q3 Sulphur Dioxide Emissions
RWDI Reference No. 2505260**

In support of the 2024, Q3 Ambient Air Quality Monitoring Report prepared by RWDI Inc., the following information is provided in relation to the performance of the DYEC during the periods of elevated sulphur dioxide (SO₂) concentrations observed at the facility's Courtice and Rundle ambient air monitoring stations.

The Emission Summary and Dispersion Modelling (ESDM) report submitted as part of the DYEC ECA Application modelled SO₂ concentrations at the maximum point of impingement (POI) for a facility operating at 110% maximum continuous rating (MCR) with in-stack SO₂ concentrations at the permit limit of 35 mg/m³. Under this conservative assumed facility operating condition, the predicted maximum 1-hour average concentration at the POI was 8.62 µg/m³, which represents 8.62% of the new ambient air standard of 100 µg/m³, which was implemented in 2020.

During Q3, there were one hundred and fifty six (156) exceedance events above the rolling 10-minute SO₂ Ambient Air Quality Criteria (AAQC) and seventy (70) exceedance events above the rolling 1-hour SO₂ AAQC recorded at the Courtice station. There were no exceedance events above the rolling 10-minute SO₂ Ambient Air Quality Criteria (AAQC) or rolling 1-hour SO₂ AAQC recorded at the Rundle Road station.

Each of the date and times of the SO₂ AAQC exceedances were compared against the wind direction recorded at the ambient air stations as well as the SO₂ concentrations measured at the DYEC by the continuous emissions monitoring system (CEMS).

As indicated by RWDI in the 2024 DYEC Ambient Air Q3 Report, the Courtice Station pollution rose in **Figure 6** shows that the majority of elevated SO₂ events at Courtice occurred from the north to north-northeast directions. The events were likely a result of emissions from surrounding industrial sources with contributions from the DYEC in the northeast direction. The Courtice station pollution rose in **Figure 7** shows that <1.10% of the 5-min SO₂ events are elevated >67 ppb and the majority occurred from north-northeast direction. The pollution rose indicates that emissions were likely from surrounding industrial sources.

The Rundle Road Station pollution rose in **Figure 6** shows that there were no elevated SO₂ events at Rundle Road. The Rundle Road station pollution rose in **Figure 7** shows that there were no 5-min SO₂ events elevated >67 ppb.

During the times the SO₂ AAQC events occurred, both boilers CEMS concentrations, comprised of 24-hour rolling arithmetic average, were recorded between 0-6 mg/Rm³. The DYEC's CEMS concentrations for both boilers were below the DYEC regulatory compliance limit of 35 mg/Rm³ and the facility was operating under normal conditions.