

DURHAM YORK ENERGY CENTRE COURTICE, ONTARIO

2025 Q1 AMBIENT AIR QUALITY MONITORING REPORT

RWDI #2505260

May 15, 2025

SUBMITTED TO

**The Director, Legislative Services-
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.

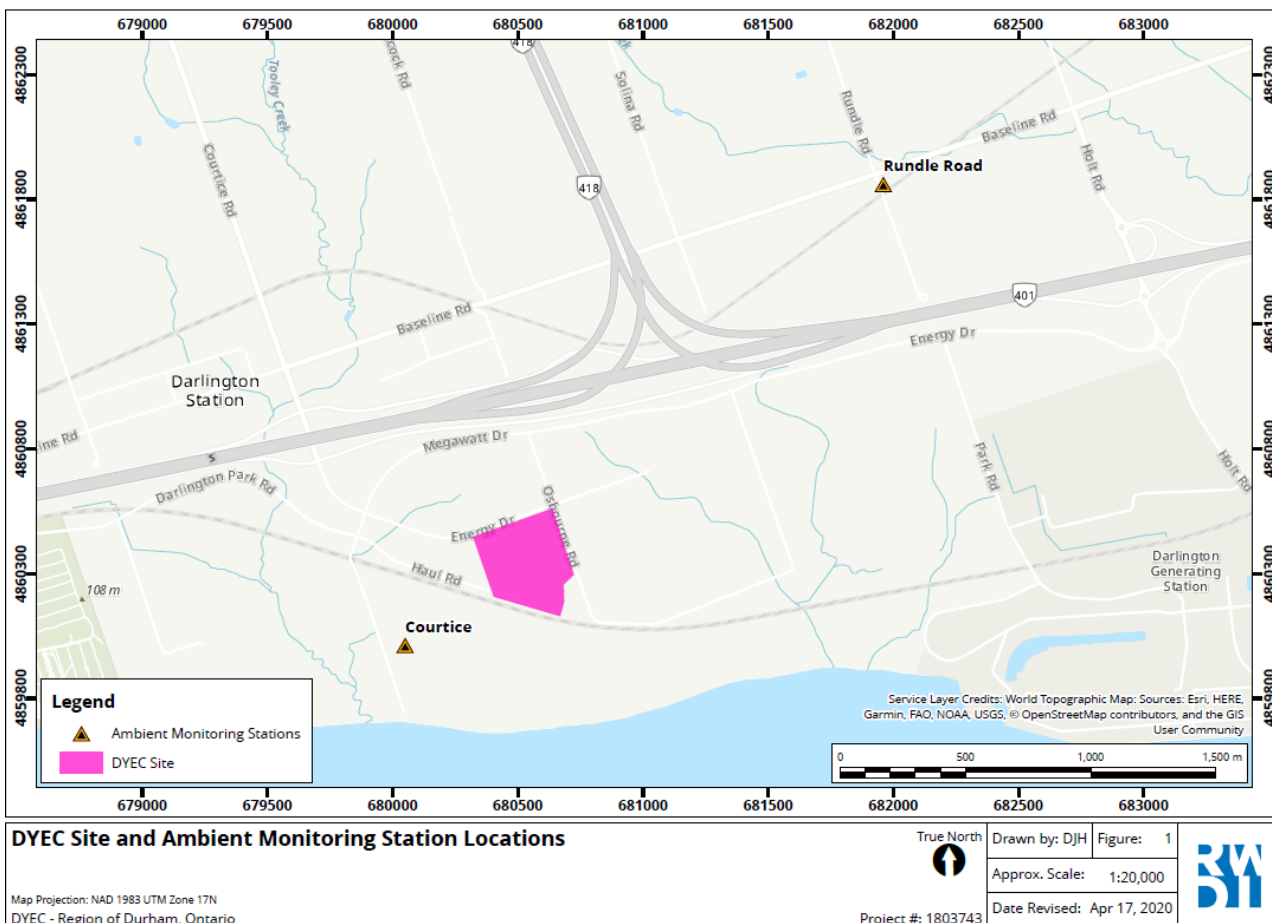
The facility has two (2) monitoring stations which collect continuous and discrete ambient measurements, known as the Courtice station and Rundle Road station. The station locations are shown in Figure 1. The Courtice and Rundle Road stations were operational in May of 2013 and have been operated on 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 forty-five (45) exceedance events of the rolling 10-minute SO₂ AAQC and twenty-two (22) exceedance events of the rolling 1-hour SO₂ AAQC at the Courtice station. Data recovery rates were acceptable and valid for all measured Q1 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 Q1, there was a MECP audit conducted on March 12, 2025. 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 January to March 2025 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 99.8% of data collection for all the parameters measured during Q1.

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Hourly statistics from the meteorological station are presented in **Table 2**. A wind rose showing trends in wind speed and wind direction during Q1 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 – January to March 2025

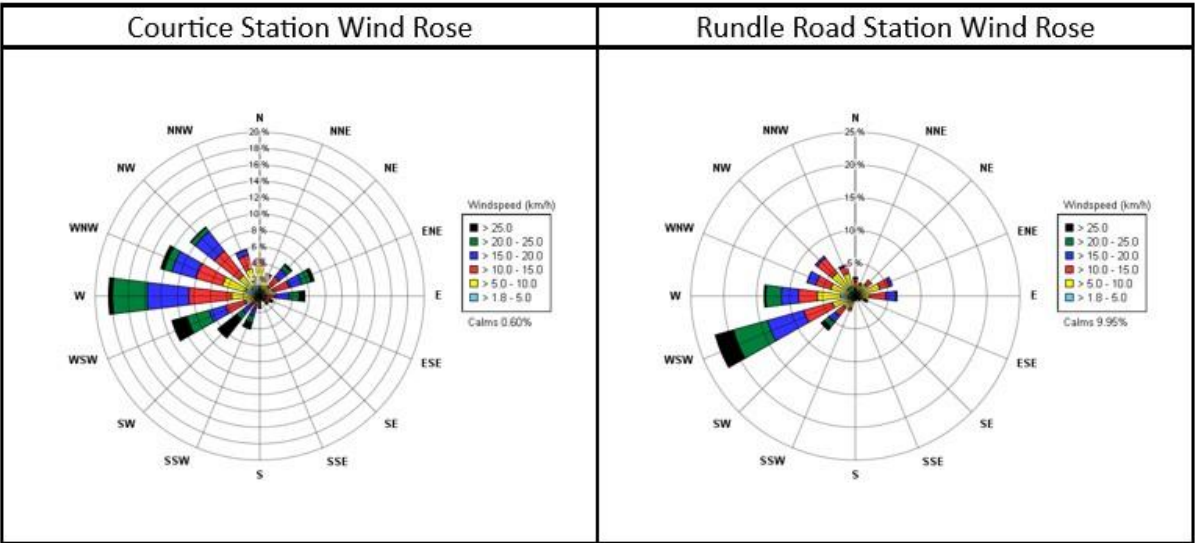




Table 2: Hourly Statistics from the Courtice Meteorological Station

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	Rain
Units	(km/hr.)	(°C)	(%)	"Hg	mm	(km/hr.)	(°C)	(%)	"Hg	mm	(km/hr.)	(°C)	(%)	"Hg	mm	mm	(%)					
January	55.1	4.8	100.0	30.2	3.2	0.4	-16.2	31.8	29.0	0.0	15.3	-4.3	66.1	29.7	0.0	17.2	99.9	99.9	99.9	99.9	99.9	100.0
February	39.4	6.3	100.0	30.3	2.4	1.1	-14.8	40.9	29.0	0.0	14.2	-4.4	70.2	29.8	0.0	13.4	100.0	100.0	100.0	100.0	100.0	100.0
March	37.5	19.0	100.0	30.0	5.1	1.0	-17.3	28.1	28.9	0.0	14.0	2.2	67.1	29.6	0.1	56.0	98.9	98.9	100.0	100.0	100.0	100.0
Q1 Arithmetic Mean											14.5	-2.1	67.7	29.7	0.0	86.6	99.6	99.6	100.0	100.0	100.0	100.0

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 95.9% data collection for all the meteorological parameters measured during Q1. Hourly statistics from the meteorological station is presented in **Table 3**. A wind rose showing trends in wind speed and wind direction during Q1 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	Rain
Units	(km/hr.)	(°C)	(%)	mm	(km/hr.)	(°C)	(%)	mm	(km/hr.)	(°C)	(%)	mm	mm	(%)				
January	48.2	4.2	100.0	2.0	0.0	-17.1	35.6	0.0	12.1	-5.3	70.3	0.0	23.9	100.0	100.0	100.0	100.0	100.0
February	37.0	5.4	100.0	2.7	0.0	-16.9	40.8	0.0	10.0	-5.5	74.1	0.0	11.4	92.4	92.4	100.0	100.0	100.0
March	30.1	19.1	100.0	6.2	0.1	-18.5	33.5	0.0	10.9	1.3	70.5	0.1	64.5	77.2	77.2	100.0	100.0	100.0
Q1 Arithmetic Mean									11.1	-3.2	71.5	0.0	99.8	89.8	89.8	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 forty-five (45) exceedance events of the rolling 10-minute SO₂ AAQC and twenty-two (22) exceedance events of the 1-hour SO₂ AAQC in Q1. At the Rundle Road station, there were no exceedance events of the rolling 10-minute SO₂ AAQC or the 1-hour SO₂ AAQC in Q1.



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											
January	54.1	31.8	85.4	53.4	34.1	24.6	19.9	28.0	10.6	19.7	4.8	5.5	7.2	1.4	5.9	0.8	99.9	99.7	99.7	99.7	99.5
February	83.4	35.1	54.4	20.3	39.3	60.9	23.0	23.8	8.6	15.8	12.0	6.2	7.8	1.1	6.6	2.8	99.7	99.4	99.4	99.4	97.2
March	186.0	29.3	64.6	33.5	35.5	121.2	13.5	19.4	4.5	14.9	20.6	4.8	6.0	1.0	5.0	3.1	99.5	99.5	99.5	99.5	84.3
Q1 Arithmetic Mean												5.5	7.0	1.2	5.9	2.2	99.7	99.5	99.5	99.5	93.5

^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											
January	4.3	35.9	43.2	17.9	33.4	3.4	19.9	23.4	4.3	19.1	1.8	5.8	6.1	1.1	5.1	0.8	99.9	99.7	99.7	99.7	99.7
February	2.3	34.0	56.2	25.5	33.3	2.1	24.1	19.4	4.6	15.2	1.7	6.5	6.7	1.6	5.5	0.5	99.9	99.3	99.3	99.3	99.7
March	1.0	36.1	54.3	21.5	32.6	0.7	15.2	14.1	2.9	11.7	0.2	4.7	5.5	1.1	4.4	0.0	99.7	98.9	98.9	98.9	99.2
Q1 Arithmetic Mean												5.7	6.1	1.3	5.0	0.4	99.8	99.3	99.3	99.3	99.5

^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.		
January	0	0		0	0		0	0	N/A	0		N/A	0	
February	10	0		0	8		0	0	N/A	0		N/A	0	
March	35	0		0	14		0	0	N/A	0		N/A	0	
Q1 Total	45	0		0	22		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 (99.5% 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 39.3 ppb, which is 19.7% of the AAQC. The highest NO₂ value seen among the rolling 24-hour averages was 19.7 ppb, which is 19.7% of the AAQC. The measurements are summarized in **Table 4** above. A pollution rose is presented in **Figure 5** for the Courtice station during Q1 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 NO₂ impacts were largely spread out from the west-southwest to the 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. The additional impacts from the west-south to the north-northeast indicates reception from surrounding industry or the highway and railway corridors.

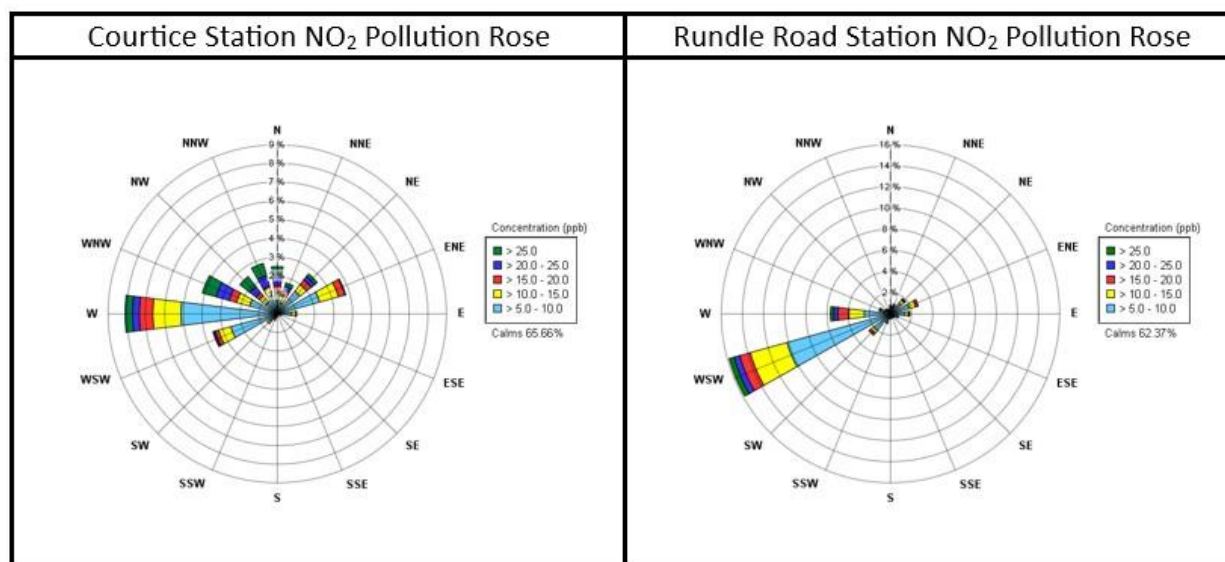
5.3.2 Rundle Road Station Results

Data recovery levels were high for oxides of nitrogen (99.3% 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 33.4 ppb, which is 16.7% of the AAQC. The highest NO₂ value seen among the rolling 24-hour averages was 19.1 ppb, which is 19.1% 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 Q1 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 NO₂ impacts were spread out from the southwest to west and north-northeast to east directions. The station is downwind of the DYEC when winds are from the south-southwest and southwest directions, which happened periodically during the monitoring period, therefore it is likely that the DYEC contributed to the observed concentrations from those directions. Since the elevated concentrations occurred from the west-southwest and west during the monitoring period, it is likely that the DYEC did not contribute to the observed concentrations. There are additional minor impacts from the north to east likely indicates reception from surrounding industry or the highway and railway corridors.

Figure 5: Pollution Roses of Hourly Average NO₂ Concentrations – January to March 2025



5.4 Sulphur Dioxide Results

5.4.1 Courtice Station Results

Data recovery levels were high for sulphur dioxide (93.5% valid data). Monitoring results were compared to the AAQC for 10-minute and 1-hour rolling average periods. Since 2020 to present, 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 Q1, the highest SO₂ value seen among the 10-min rolling averages was 186.0 ppb, which is 277.8% of the AAQC. The highest SO₂ value seen among the 1-hour rolling averages was 121.2 ppb, which is 303.0% of the AAQC. There were forty-five (45) exceedance events of the rolling 10-minute SO₂ AAQC and twenty-two (22) exceedance events of the 1-hour SO₂ AAQC in Q1. 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 Q1 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 Q1 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 these elevated SO₂ events at Courtice occurred from the north to northeast directions. These events were likely a result of emissions from surrounding industrial sources with minor contributions from the DYEC in the northeast direction.

The Courtice station pollution rose in **Figure 7** shows that <0.39% of the 5-min SO₂ events are elevated >67 ppb and the majority occurred from the north and north-northeast directions. The pollution rose indicates that the DYEC was likely not a contributor to these elevated SO₂ levels at the station from the north and north-northeast directions. These elevated 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 Q1, 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 (99.5% 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 4.3 ppb, which is 6.4% of the AAQC. The highest SO₂ value seen among the 1-hour rolling averages was 3.4 ppb, which is 8.5% 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 Q1 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 Q1 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 Q1 of 2025.

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 – January to March 2025

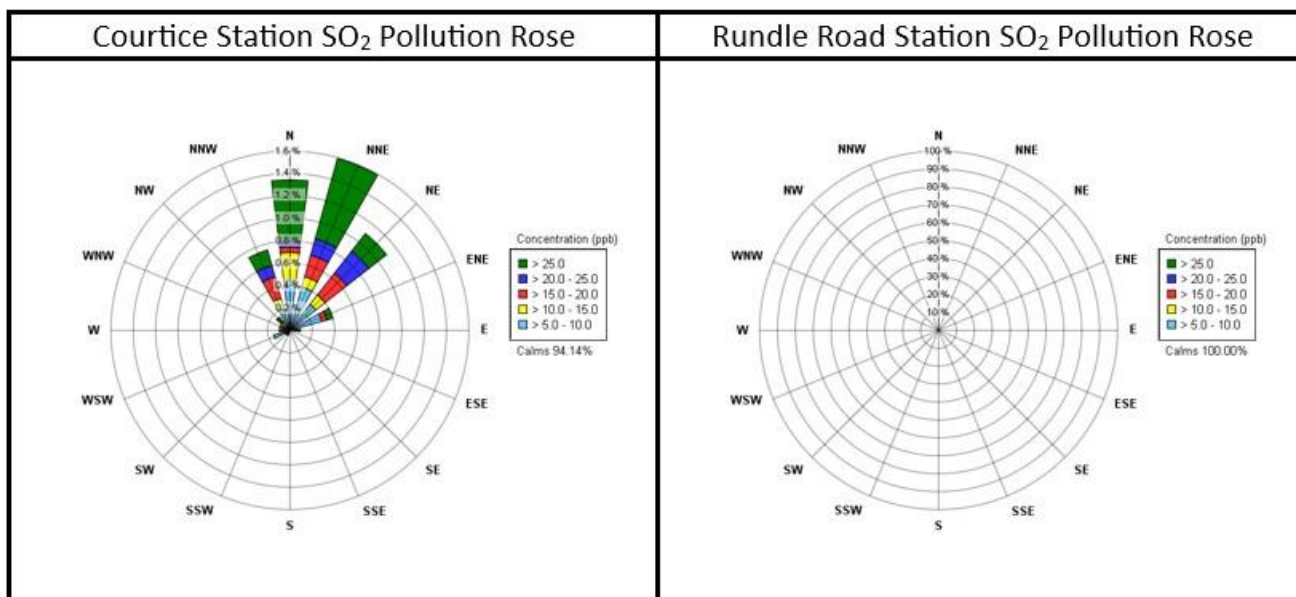
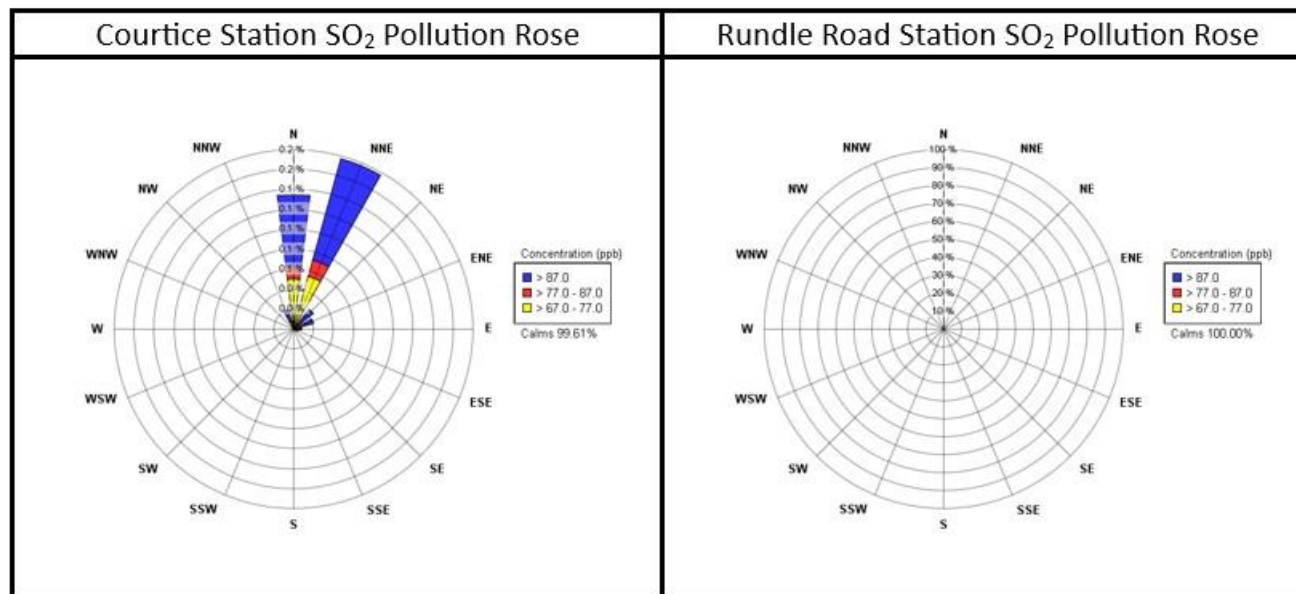


Figure 7: Pollution Roses of 5-minute Average SO₂ Concentrations >67 ppb – January to March 2025





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 (99.7% 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 35.1 µg/m³ and the highest value seen among the 24-hour rolling averages was 23.0 µg/m³. The results are summarized in **Table 4** above. A pollution rose is presented in **Figure 8** for the Courtice station during Q1 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.

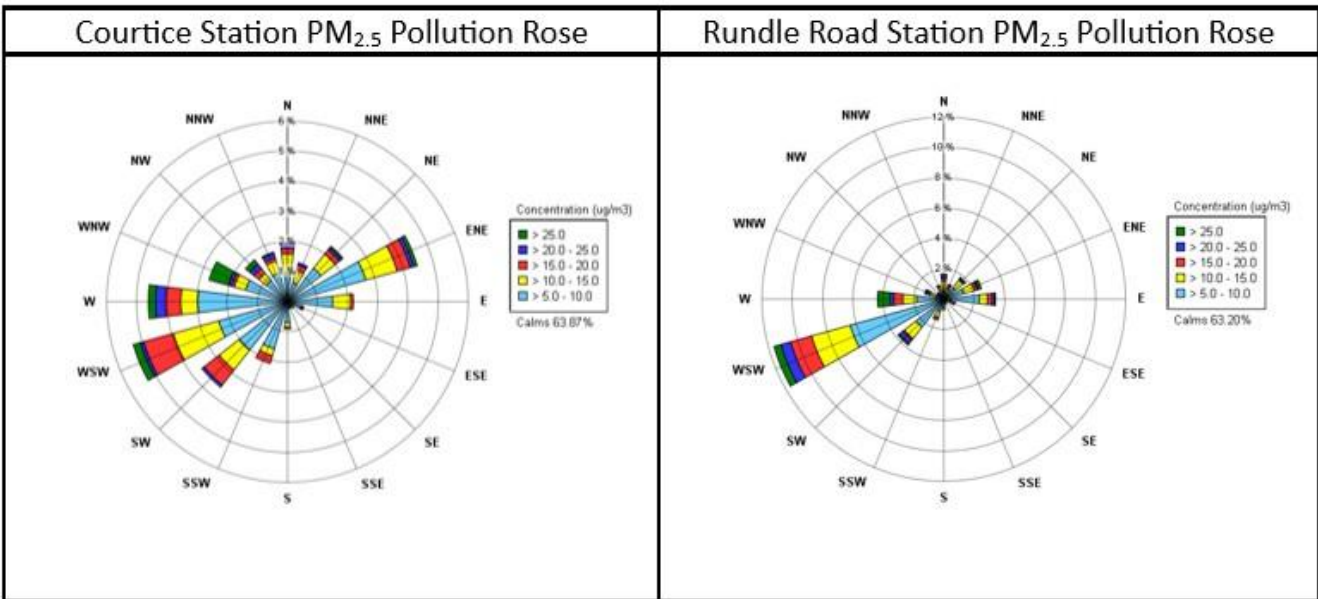
The Courtice station pollution rose in **Figure 8** shows that some of the elevated PM_{2.5} events at Courtice occurred when winds were from the southwest to west and east-northeast, which places the station downwind of the DYEC occasionally. Other contributions are in line with nearby industrial activity.

5.5.2 Rundle Road Station Results

Data recovery levels were high for particulate matter less than 2.5 microns (99.8% valid data). The highest PM_{2.5} value seen among the 1-hour rolling averages was 36.1 µg/m³ and the highest value seen among the 24-hour rolling averages was 24.1 µg/m³. The results are summarized in **Table 5** above. A pollution rose is presented in **Figure 8** for the Rundle Road station during Q1 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 west-southwest during the monitoring period. Therefore, it is not 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 – January to March 2025



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 Q1 with the sample days being: January 1, 7, 13, 19, 25, 31, February 6, 12, 18, 24, March 2, 8, 14, 20, and 26.

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 Q1. **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	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
Particulate (TSP)	µg/m³	120	0	13.6	18.2	3.90	81.30	17.34	25.65	81.30	13	87
Total Mercury (Hg)	µg/m³	2	0	0.0	6.06E-06	2.92E-06	2.18E-05	0.00	0.00	2.18E-05	13	87
Aluminum (Al)	µg/m³	-	0	0.1	1.81E-01	2.34E-02	1.23E+00	0.14	0.09	1.23E+00	13	87
Antimony (Sb)	µg/m³	25	0	0.0	8.94E-04	2.68E-04	2.19E-03	0.00	0.00	2.19E-03	13	87
Arsenic (As)	µg/m³	0.3	0	0.0	8.92E-04	8.46E-04	9.13E-04	0.00	0.00	9.11E-04	13	87
Barium (Ba)	µg/m³	10	0	0.0	6.83E-03	2.51E-03	2.47E-02	0.00	0.01	2.47E-02	13	87
Beryllium (Be)	µg/m³	0.01	0	0.0	1.77E-05	1.41E-05	5.18E-05	0.00	0.00	5.18E-05	13	87
Bismuth (Bi)	µg/m³	-	-	0.0	5.35E-04	5.07E-04	5.48E-04	0.00	0.00	5.46E-04	13	87
Boron (B)	µg/m³	120	0	0.0	4.46E-03	4.23E-03	4.57E-03	0.00	0.00	4.55E-03	13	87
Cadmium (Cd)	µg/m³	0.025	0	0.0	1.48E-04	6.48E-05	3.11E-04	0.00	0.00	2.26E-04	13	87
Chromium (Cr)	µg/m³	0.5	0	0.0	1.88E-03	9.92E-04	6.07E-03	0.00	0.00	6.07E-03	13	87
Cobalt (Co)	µg/m³	0.1	0	0.0	1.23E-04	2.68E-05	6.07E-04	0.00	0.00	6.07E-04	13	87
Copper (Cu)	µg/m³	50	0	0.0	2.06E-02	5.83E-03	4.98E-02	0.02	0.03	4.98E-02	13	87
Iron (Fe)	µg/m³	4	0	0.2	3.60E-01	1.04E-01	1.82E+00	0.29	0.37	1.82E+00	13	87
Lead (Pb)	µg/m³	0.5	0	0.0	2.21E-03	8.28E-04	5.77E-03	0.00	0.00	5.77E-03	13	87
Magnesium (Mg)	µg/m³	-	-	0.2	2.22E-01	5.65E-02	1.21E+00	0.19	0.18	1.21E+00	13	87
Manganese (Mn)	µg/m³	0.4	0	0.0	1.02E-02	3.22E-03	4.52E-02	0.01	0.01	4.52E-02	13	87
Molybdenum (Mo)	µg/m³	120	0	0.0	1.12E-03	2.64E-04	2.72E-03	0.00	0.00	2.72E-03	13	87
Nickel (Ni)	µg/m³	0.2	0	0.0	1.23E-03	5.17E-04	3.43E-03	0.00	0.00	3.43E-03	13	87
Phosphorus (P)	µg/m³	-	-	0.3	2.73E-01	2.11E-01	5.70E-01	0.57	0.53	2.28E-01	13	87
Selenium (Se)	µg/m³	10	0	0.0	5.39E-04	3.79E-04	1.40E-03	0.00	0.00	3.95E-04	13	87
Silver (Ag)	µg/m³	1	0	0.0	7.03E-05	2.63E-05	2.96E-04	0.00	0.00	2.96E-04	13	87
Strontium (Sr)	µg/m³	120	0	0.0	6.28E-03	8.93E-04	3.12E-02	0.01	0.01	3.12E-02	13	87
Thallium (Tl)	µg/m³	-	-	0.0	3.21E-05	2.54E-05	9.66E-05	0.00	0.00	9.66E-05	13	87
Tin (Sn)	µg/m³	10	0	0.0	1.21E-03	1.75E-04	3.41E-03	0.00	0.00	2.47E-03	13	87
Titanium (Ti)	µg/m³	120	0	0.0	8.39E-03	3.21E-03	4.89E-02	0.01	0.01	4.89E-02	13	87
Uranium (Ur)	µg/m³	0.3	0	0.0	1.51E-05	1.79E-06	8.66E-05	0.00	0.00	8.66E-05	13	87
Vanadium (V)	µg/m³	2	0	0.0	1.61E-03	1.41E-03	3.12E-03	0.00	0.00	3.12E-03	13	87
Zinc (Zn)	µg/m³	120	0	0.0	4.42E-02	1.24E-02	8.89E-02	0.04	0.09	7.56E-02	13	87
Zirconium (Zr)	µg/m³	-	0	0.0	6.49E-04	5.64E-04	1.30E-03	0.00	0.00	1.30E-03	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 (93% valid data). There were no exceedances of any of the AAQC's for TSP, mercury, or metals during Q1. **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	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
Particulate (TSP)	µg/m³	120	0	15.6	17.6	4.74	35.05	21.93	23.56	35.05	14	93
Total Mercury (Hg)	µg/m³	2	0	4.69E-06	5.56E-06	2.96E-06	1.24E-05	0.00	0.00	1.08E-05	14	93
Aluminum (Al)	µg/m³	-	0	9.40E-02	1.27E-01	3.64E-02	4.16E-01	0.18	0.12	4.16E-01	14	93
Antimony (Sb)	µg/m³	25	0	4.57E-04	5.57E-04	2.11E-04	1.29E-03	0.00	0.00	1.29E-03	14	93
Arsenic (As)	µg/m³	0.3	0	9.10E-04	9.10E-04	8.89E-04	9.35E-04	0.00	0.00	9.35E-04	14	93
Barium (Ba)	µg/m³	10	0	4.84E-03	5.70E-03	2.37E-03	1.43E-02	0.00	0.01	1.43E-02	14	93
Beryllium (Be)	µg/m³	0.01	0	1.52E-05	1.52E-05	1.48E-05	1.56E-05	0.00	0.00	1.56E-05	14	93
Bismuth (Bi)	µg/m³	-	-	5.46E-04	5.46E-04	5.33E-04	5.61E-04	0.00	0.00	5.61E-04	14	93
Boron (B)	µg/m³	120	0	4.55E-03	4.55E-03	4.44E-03	4.67E-03	0.00	0.00	4.67E-03	14	93
Cadmium (Cd)	µg/m³	0.025	0	1.07E-04	1.19E-04	5.41E-05	2.21E-04	0.00	0.00	1.39E-04	14	93
Chromium (Cr)	µg/m³	0.5	0	1.21E-03	1.31E-03	1.01E-03	2.95E-03	0.00	0.00	2.95E-03	14	93
Cobalt (Co)	µg/m³	0.1	0	8.69E-05	1.04E-04	3.97E-05	2.79E-04	0.00	0.00	2.79E-04	14	93
Copper (Cu)	µg/m³	50	0	4.24E-02	4.44E-02	2.35E-02	6.93E-02	0.05	0.06	6.93E-02	14	93
Iron (Fe)	µg/m³	4	0	2.14E-01	2.64E-01	9.85E-02	7.41E-01	0.23	0.27	7.41E-01	14	93
Lead (Pb)	µg/m³	0.5	0	1.91E-03	2.04E-03	9.36E-04	3.14E-03	0.00	0.00	3.14E-03	14	93
Magnesium (Mg)	µg/m³	-	-	1.85E-01	2.19E-01	5.05E-02	6.14E-01	0.21	0.23	6.14E-01	14	93
Manganese (Mn)	µg/m³	0.4	0	6.80E-03	8.25E-03	3.04E-03	2.38E-02	0.01	0.01	2.38E-02	14	93
Molybdenum (Mo)	µg/m³	120	0	1.85E-03	2.01E-03	9.78E-04	3.32E-03	0.00	0.00	3.32E-03	14	93
Nickel (Ni)	µg/m³	0.2	0	8.94E-04	9.79E-04	5.01E-04	1.79E-03	0.00	0.00	1.79E-03	14	93
Phosphorus (P)	µg/m³	-	-	3.13E-01	3.42E-01	2.22E-01	6.34E-01	0.52	0.63	2.34E-01	14	93
Selenium (Se)	µg/m³	10	0	4.51E-04	4.80E-04	3.85E-04	9.95E-04	0.00	0.00	4.05E-04	14	93
Silver (Ag)	µg/m³	1	0	3.45E-05	4.63E-05	2.67E-05	2.36E-04	0.00	0.00	2.36E-04	14	93
Strontium (Sr)	µg/m³	120	0	5.69E-03	6.50E-03	9.02E-04	1.22E-02	0.01	0.01	1.22E-02	14	93
Thallium (Tl)	µg/m³	-	-	2.95E-05	3.09E-05	2.67E-05	7.53E-05	0.00	0.00	2.80E-05	14	93
Tin (Sn)	µg/m³	10	0	7.17E-04	8.45E-04	1.83E-04	1.92E-03	0.00	0.00	1.92E-03	14	93
Titanium (Ti)	µg/m³	120	0	4.18E-03	5.05E-03	3.26E-03	1.57E-02	0.00	0.00	1.57E-02	14	93
Uranium (Ur)	µg/m³	0.3	0	9.13E-06	1.25E-05	1.81E-06	3.56E-05	0.00	0.00	3.56E-05	14	93
Vanadium (V)	µg/m³	2	0	1.52E-03	1.52E-03	1.48E-03	1.56E-03	0.00	0.00	1.56E-03	14	93
Zinc (Zn)	µg/m³	120	0	4.43E-02	5.02E-02	1.64E-02	1.13E-01	0.05	0.11	6.20E-02	14	93
Zirconium (Zr)	µg/m³	-	0	6.07E-04	6.07E-04	5.93E-04	6.23E-04	0.00	0.00	6.23E-04	14	93



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 Q1 with the sample days being: January 1, 13, 25, February 6, 18, March 2, 14 and 26. For both stations and excluding the invalid March 26 samples, all other samples previously mentioned were successfully collected and were counted towards the sample validity. However, due to a sample backlog at the analytical laboratory, the February 6, 18, and March 14 PAH results were unavailable at the time of this report will be presented in the Q2 report.

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 the BaP AAQC during Q1 from the available results. All other contaminants were below their respective AAQC's during Q1 of 2025. **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 Q1 Concentration	Maximum Q1 Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m³	-	-	2.43E+00	1.99E+00	3.18E+00	2.45E+00	-	3.18E+00	7	88
2-Methylnaphthalene	ng/m³	-	-	3.86E+00	3.01E+00	5.13E+00	3.99E+00	-	5.13E+00	7	88
Acenaphthene	ng/m³	-	-	4.43E-01	2.38E-01	6.59E-01	6.59E-01	-	5.88E-01	7	88
Acenaphthylene	ng/m³	-	-	1.87E-01	5.35E-02	3.90E-01	1.79E-01	-	3.90E-01	7	88
Anthracene	ng/m³	-	-	3.05E-02	2.08E-02	4.32E-02	4.32E-02	-	3.49E-02	7	88
Benzo(a)Anthracene	ng/m³	-	-	1.80E-02	1.14E-02	3.00E-02	1.82E-02	-	3.00E-02	7	88
Benzo(a)fluorene	ng/m³	-	-	2.28E-02	1.42E-02	3.48E-02	3.48E-02	-	1.64E-02	7	88
Benzo(a)Pyrene (Historically High)	ng/m³	0.05	0	1.96E-02	1.66E-02	2.13E-02	2.06E-02	-	2.13E-02	7	88
Benzo(b)Fluoranthene	ng/m³	-	-	5.54E-02	2.79E-02	7.36E-02	7.13E-02	-	7.36E-02	7	88
Benzo(b)fluorene	ng/m³	-	-	4.41E-03	1.61E-03	7.10E-03	7.10E-03	-	4.40E-03	7	88
Benzo(e)Pyrene	ng/m³	-	-	3.69E-02	2.39E-02	4.97E-02	3.77E-02	-	4.97E-02	7	88
Benzo(g,h,i)Perylene	ng/m³	-	-	3.79E-02	2.95E-02	4.69E-02	3.99E-02	-	4.69E-02	7	88
Benzo(k)Fluoranthene	ng/m³	-	-	8.08E-02	3.73E-02	1.72E-01	6.74E-02	-	1.72E-01	7	88
Biphenyl	ng/m³	-	-	1.87E+00	1.60E+00	2.19E+00	2.19E+00	-	1.69E+00	7	88
Chrysene	ng/m³	-	-	8.77E-02	5.51E-02	1.11E-01	1.11E-01	-	1.00E-01	7	88
Dibenzo(a,h)Anthracene	ng/m³	-	-	1.18E-02	3.48E-03	3.03E-02	9.70E-03	-	3.03E-02	7	88
Fluoranthene	ng/m³	-	-	3.63E-01	2.92E-01	4.26E-01	4.26E-01	-	2.92E-01	7	88
Fluorene	ng/m³	-	-	7.25E-01	6.57E-01	7.59E-01	7.59E-01	-	6.57E-01	7	88
Indeno(1,2,3-cd)Pyrene	ng/m³	-	-	4.08E-02	2.89E-02	5.22E-02	5.22E-02	-	4.31E-02	7	88
Naphthalene	ng/m³	22500	0	1.82E+01	1.32E+01	2.48E+01	2.04E+01	-	2.48E+01	7	88
o-Terphenyl	ng/m³	-	-	4.66E-03	1.57E-03	9.18E-03	9.18E-03	-	1.57E-03	7	88
Perylene	ng/m³	-	-	2.92E-03	1.57E-03	6.76E-03	6.76E-03	-	1.57E-03	7	88
Phenanthrene	ng/m³	-	-	1.25E+00	1.14E+00	1.34E+00	1.34E+00	-	1.14E+00	7	88
Pyrene	ng/m³	-	-	1.89E-01	1.50E-01	2.24E-01	2.24E-01	-	1.94E-01	7	88
Tetralin	ng/m³	-	-	8.99E-01	4.24E-01	1.49E+00	1.49E+00	-	4.24E-01	7	88
Total PAH	ng/m³	-	-	3.09E+01	2.43E+01	3.91E+01	3.21E+01	-	3.91E+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 (88% valid data). There was no exceedances of the BaP AAQC during Q1. All other contaminants were below their respective AAQC's during Q1 of 2025. **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 Q1 Concentration	Maximum Q1 Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m³	-	-	2.58E+00	1.66E+00	3.36E+00	3.36E+00	-	3.00E+00	7	88
2-Methylnaphthalene	ng/m³	-	-	4.11E+00	2.49E+00	5.64E+00	5.64E+00	-	4.67E+00	7	88
Acenaphthene	ng/m³	-	-	5.28E-01	4.06E-01	6.53E-01	6.53E-01	-	4.06E-01	7	88
Acenaphthylene	ng/m³	-	-	1.97E-01	7.06E-02	2.60E-01	2.60E-01	-	2.59E-01	7	88
Anthracene	ng/m³	-	-	5.55E-02	4.20E-02	7.42E-02	7.42E-02	-	6.33E-02	7	88
Benzo(a)Anthracene	ng/m³	-	-	1.80E-02	1.08E-02	2.47E-02	1.89E-02	-	2.47E-02	7	88
Benzo(a)fluorene	ng/m³	-	-	3.17E-02	1.70E-02	4.76E-02	4.76E-02	-	3.78E-02	7	88
Benzo(a)Pyrene (Historically High)	ng/m³	0.05	0	2.14E-02	1.32E-02	3.07E-02	2.50E-02	-	3.07E-02	7	88
Benzo(b)Fluoranthene	ng/m³	-	-	6.37E-02	2.14E-02	1.08E-01	6.57E-02	-	1.08E-01	7	88
Benzo(b)fluorene	ng/m³	-	-	6.33E-03	3.68E-03	9.99E-03	9.99E-03	-	7.22E-03	7	88
Benzo(e)Pyrene	ng/m³	-	-	4.09E-02	1.68E-02	5.41E-02	5.06E-02	-	5.41E-02	7	88
Benzo(g,h,i)Perylene	ng/m³	-	-	4.46E-02	2.92E-02	6.64E-02	4.60E-02	-	6.64E-02	7	88
Benzo(k)Fluoranthene	ng/m³	-	-	7.75E-02	4.60E-02	1.41E-01	7.45E-02	-	1.41E-01	7	88
Biphenyl	ng/m³	-	-	2.17E+00	1.56E+00	2.73E+00	2.73E+00	-	2.22E+00	7	88
Chrysene	ng/m³	-	-	1.13E-01	5.87E-02	1.82E-01	1.12E-01	-	1.82E-01	7	88
Dibenzo(a,h)Anthracene	ng/m³	-	-	1.22E-02	3.17E-03	3.06E-02	1.03E-02	-	3.06E-02	7	88
Fluoranthene	ng/m³	-	-	4.51E-01	3.30E-01	5.74E-01	5.74E-01	-	3.97E-01	7	88
Fluorene	ng/m³	-	-	8.22E-01	6.52E-01	9.73E-01	9.73E-01	-	6.52E-01	7	88
Indeno(1,2,3-cd)Pyrene	ng/m³	-	-	4.59E-02	1.78E-02	6.52E-02	5.68E-02	-	6.52E-02	7	88
Naphthalene	ng/m³	22500	0	2.01E+01	1.20E+01	2.61E+01	2.23E+01	-	2.61E+01	7	88
o-Terphenyl	ng/m³	-	-	4.89E-03	1.53E-03	9.99E-03	9.99E-03	-	1.54E-03	7	88
Perylene	ng/m³	-	-	2.63E-03	1.53E-03	5.86E-03	5.86E-03	-	1.54E-03	7	88
Phenanthrene	ng/m³	-	-	1.53E+00	1.33E+00	1.80E+00	1.80E+00	-	1.38E+00	7	88
Pyrene	ng/m³	-	-	2.39E-01	1.92E-01	2.85E-01	2.85E-01	-	2.71E-01	7	88
Tetralin	ng/m³	-	-	1.07E+00	4.86E-01	1.63E+00	1.63E+00	-	1.10E+00	7	88
Total PAH	ng/m³	-	-	3.44E+01	2.18E+01	4.13E+01	4.08E+01	-	4.13E+01	7	88

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 Q1 with the sample days being: January 13, February 6, March 2 and 26.

5.8.1 Courtice Station Results

Data recovery levels were acceptable for the D&F results at the Courtice station (75% valid data). There were no exceedances of any of the AAQC's for any of the D&F's during Q1. **Table 11** is a summary of the statistics for this station.

Table 11: Courtice Station Q1 Monitoring Results for Dioxins and Furans

Contaminant	Units	MECP Criteria	No. > Criteria	Arithmetic Mean	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg/m ³	-	-	5.10E-04	4.24E-04	6.21E-04	4.85E-04	6.21E-04	4.24E-04	3	75
1,2,3,7,8-PeCDD	pg/m ³	-	-	8.62E-04	4.56E-04	1.37E-03	7.61E-04	1.37E-03	4.56E-04	3	75
1,2,3,4,7,8-HxCDD	pg/m ³	-	-	1.43E-04	2.99E-05	2.81E-04	2.81E-04	1.18E-04	2.99E-05	3	75
1,2,3,6,7,8-HxCDD	pg/m ³	-	-	2.23E-04	4.72E-05	4.68E-04	1.54E-04	4.68E-04	4.72E-05	3	75
1,2,3,7,8,9-HxCDD	pg/m ³	-	-	2.62E-04	1.59E-04	4.57E-04	4.57E-04	1.59E-04	1.70E-04	3	75
1,2,3,4,6,7,8-HpCDD	pg/m ³	-	-	5.43E-04	2.65E-04	8.03E-04	8.03E-04	5.60E-04	2.65E-04	3	75
OCDD	pg/m ³	-	-	6.77E-05	5.09E-05	7.74E-05	7.74E-05	5.09E-05	7.49E-05	3	75
2,3,7,8-TCDF	pg/m ³	-	-	1.49E-04	4.87E-05	2.64E-04	1.33E-04	2.64E-04	4.87E-05	3	75
1,2,3,7,8-PeCDF	pg/m ³	-	-	6.96E-05	2.59E-05	1.26E-04	1.26E-04	5.73E-05	2.59E-05	3	75
2,3,4,7,8-PeCDF	pg/m ³	-	-	5.40E-04	2.92E-04	7.56E-04	7.56E-04	5.73E-04	2.92E-04	3	75
1,2,3,4,7,8-HxCDF	pg/m ³	-	-	1.58E-04	7.86E-05	2.68E-04	2.68E-04	1.26E-04	7.86E-05	3	75
1,2,3,6,7,8-HxCDF	pg/m ³	-	-	1.99E-04	8.83E-05	3.28E-04	8.83E-05	3.28E-04	1.80E-04	3	75
2,3,4,6,7,8-HxCDF	pg/m ³	-	-	1.64E-04	1.07E-04	2.75E-04	2.75E-04	1.11E-04	1.07E-04	3	75
1,2,3,7,8,9-HxCDF	pg/m ³	-	-	5.27E-05	3.77E-05	6.68E-05	5.36E-05	6.68E-05	3.77E-05	3	75
1,2,3,4,6,7,8-HpCDF	pg/m ³	-	-	1.12E-04	9.46E-05	1.21E-04	1.21E-04	1.20E-04	9.46E-05	3	75
1,2,3,4,7,8,9-HpCDF	pg/m ³	-	-	1.34E-05	5.19E-06	2.10E-05	1.38E-05	2.10E-05	5.19E-06	3	75
OCDF	pg/m ³	-	-	6.77E-06	1.61E-06	1.40E-05	1.61E-06	4.73E-06	1.40E-05	3	75
Total Toxic Equivalency	pg TEQ/m ³	0.1 1 ^[1]	0	4.07E-03	2.35E-03	5.02E-03	4.85E-03	5.02E-03	2.35E-03	3	75

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 (75% valid data). There were no exceedances of any of the AAQC’s Criteria for any of the D&Fs during Q1. **Table 12** is a summary of the statistics for this station.

Table 12: Rundle Road Station Q1 Monitoring Results for Dioxins and Furans

Contaminant	Units	MECP Criteria	No. > Criteria	Arithmetic Mean	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg/m³	-	-	5.47E-04	3.38E-04	8.66E-04	4.38E-04	8.66E-04	3.38E-04	3	75
1,2,3,7,8-PeCDD	pg/m³	-	-	1.03E-03	3.84E-04	1.52E-03	1.19E-03	1.52E-03	3.84E-04	3	75
1,2,3,4,7,8-HxCDD	pg/m³	-	-	1.66E-04	4.77E-05	3.07E-04	3.07E-04	1.44E-04	4.77E-05	3	75
1,2,3,6,7,8-HxCDD	pg/m³	-	-	2.73E-04	6.76E-05	5.26E-04	5.26E-04	2.24E-04	6.76E-05	3	75
1,2,3,7,8,9-HxCDD	pg/m³	-	-	1.50E-04	3.69E-05	2.08E-04	2.03E-04	2.08E-04	3.69E-05	3	75
1,2,3,4,6,7,8-HpCDD	pg/m³	-	-	5.30E-04	1.35E-04	8.73E-04	8.73E-04	5.80E-04	1.35E-04	3	75
OCDD	pg/m³	-	-	7.24E-05	2.30E-05	1.12E-04	8.26E-05	1.12E-04	2.30E-05	3	75
2,3,7,8-TCDF	pg/m³	-	-	9.05E-05	5.53E-05	1.35E-04	8.14E-05	1.35E-04	5.53E-05	3	75
1,2,3,7,8-PeCDF	pg/m³	-	-	3.82E-05	2.35E-05	4.88E-05	4.23E-05	4.88E-05	2.35E-05	3	75
2,3,4,7,8-PeCDF	pg/m³	-	-	4.93E-04	2.39E-04	7.64E-04	2.39E-04	4.76E-04	7.64E-04	3	75
1,2,3,4,7,8-HxCDF	pg/m³	-	-	1.42E-04	5.38E-05	2.32E-04	2.32E-04	1.41E-04	5.38E-05	3	75
1,2,3,6,7,8-HxCDF	pg/m³	-	-	1.69E-04	6.61E-05	3.59E-04	8.14E-05	3.59E-04	6.61E-05	3	75
2,3,4,6,7,8-HxCDF	pg/m³	-	-	7.06E-05	4.00E-05	1.20E-04	5.16E-05	1.20E-04	4.00E-05	3	75
1,2,3,7,8,9-HxCDF	pg/m³	-	-	6.33E-05	2.61E-05	1.03E-04	6.10E-05	1.03E-04	2.61E-05	3	75
1,2,3,4,6,7,8-HpCDF	pg/m³	-	-	5.35E-05	4.85E-05	5.93E-05	4.85E-05	5.93E-05	5.26E-05	3	75
1,2,3,4,7,8,9-HpCDF	pg/m³	-	-	1.97E-05	5.53E-06	4.36E-05	9.86E-06	4.36E-05	5.53E-06	3	75
OCDF	pg/m³	-	-	2.46E-06	9.22E-07	4.96E-06	1.50E-06	4.96E-06	9.22E-07	3	75
Total Toxic Equivalency	pg TEQ/m³	0.1 1 ^[1]	0	3.91E-03	2.12E-03	5.15E-03	4.47E-03	5.15E-03	2.12E-03	3	75

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 January 9, 2025 at 13:00 till 14:00, the Meteorological station incurred 1 hour of data loss due to a communication error.

On February 11, 2025 at 13:00 till 14:00, the Courtice station incurred 1 hour of data loss due to a power outage.

On February 28, 2025 at 08:00 till March 5, 2025 at 14:00, the Courtice SO₂ analyzer incurred 126 hours of data loss due to an analyzer failure.

On March 30, 2025 at 00:00 till 08:00, the Courtice wind speed and direction sensor incurred 8 hours of data loss due to a frozen propeller.

Throughout February and March 2025 the Rundle wind speed and direction sensor incurred a total of 206 hours of data loss due to a frozen propeller.

On March 29, 2025 at 18:00 till March 30, 2025 at 09:00, the Rundle wind speed and direction sensor incurred 15 hours of data loss due to data logger malfunction.

6.2 Discrete Monitoring

The January 25, 2025 Courtice and Rundle TSP samples was invalidated due to the sample volume being outside sampling criteria.

The March 2, 2025 Courtice and Rundle TSP samples was invalidated due to the sample volume being outside sampling criteria.

The March 26, 2025 Courtice and Rundle PAH and D&F samplers were invalidated due to a shipping error from the Laboratory which caused the sample day to be missed.

7 CONCLUSIONS

This Q1 report provides a summary of the ambient air quality data collected at the Courtice and Rundle Road stations. There were forty-five (45) exceedance events of the rolling 10-minute SO₂ AAQC and twenty-two (22) exceedance events of the 1-hour SO₂ AAQC at the Courtice station. There were no exceedances of the Benzo(a) Pyrene AAQC at the Rundle Road and Courtice station. Data recovery rates were acceptable and valid for all measured Q1 continuous and discrete parameters.



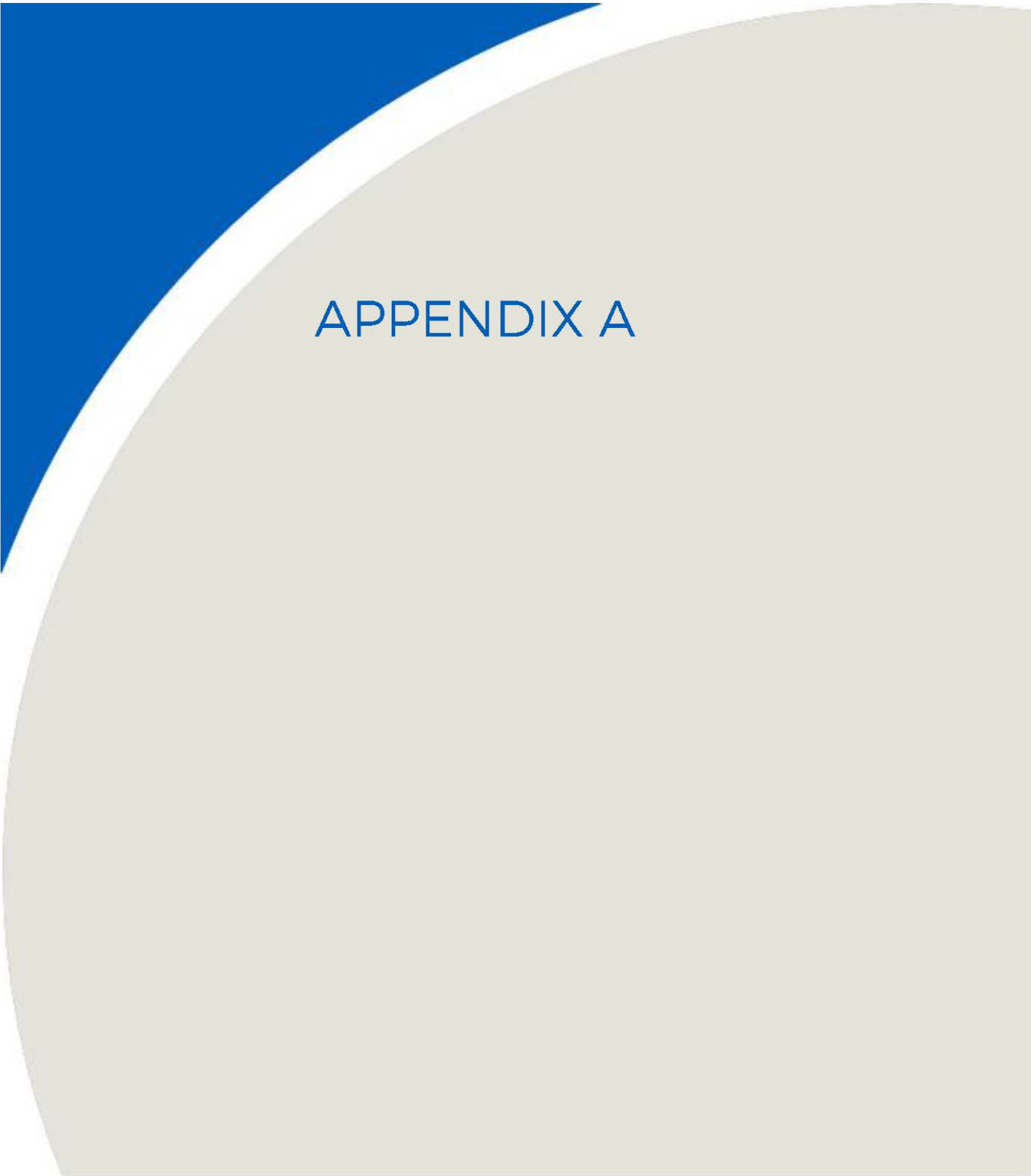
8 REFERENCES

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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 "2025 Q1 Ambient Air Quality Monitoring Report", dated May 15, 2025 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.

The background features a large, light beige circular shape on the right side. On the left, there is a blue triangular shape pointing towards the center, separated from the beige circle by a thin white curved line.

APPENDIX A

Table A1: 2025 Summary Statistics for Q1

Courtice Monitoring Station Data Statistics	Maximum 10 min Rolling Mean	Maximum 1 hr Rolling Mean					Maximum 24 hr Rolling Mean					Monthly Mean					Valid Data				
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									
January	54.1	31.8	85.4	53.4	34.1	24.6	19.9	28.0	10.6	19.7	4.8	5.5	7.2	1.4	5.9	0.8	99.9	99.7	99.7	99.7	99.5
February	83.4	35.1	54.4	20.3	39.3	60.9	23.0	23.8	8.6	15.8	12.0	6.2	7.8	1.1	6.6	2.8	99.7	99.4	99.4	99.4	97.2
March	186.0	29.3	64.6	33.5	35.5	121.2	13.5	19.4	4.5	14.9	20.6	4.8	6.0	1.0	5.0	3.1	99.5	99.5	99.5	99.5	84.3
Q1 Arithmetic Mean												5.5	7.0	1.2	5.9	2.2	99.7	99.5	99.5	99.5	93.5

Rundle Monitoring Station Data Statistics	Maximum 10 min Rolling Mean	Maximum 1 hr Rolling Mean					Maximum 24 hr Rolling Mean					Monthly Mean					Valid Data				
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									
January	4.3	35.9	43.2	17.9	33.4	3.4	19.9	23.4	4.3	19.1	1.8	5.8	6.1	1.1	5.1	0.8	99.9	99.7	99.7	99.7	99.7
February	2.3	34.0	56.2	25.5	33.3	2.1	24.1	19.4	4.6	15.2	1.7	6.5	6.7	1.6	5.5	0.5	99.9	99.3	99.3	99.3	99.7
March	1.0	36.1	54.3	21.5	32.6	0.7	15.2	14.1	2.9	11.7	0.2	4.7	5.5	1.1	4.4	0.0	99.7	98.9	98.9	98.9	99.2
Q1 Arithmetic Mean												5.7	6.1	1.3	5.0	0.4	99.8	99.3	99.3	99.3	99.5

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		
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.		
January	0	0				0	0		0	0	N/A	0		N/A	0	
February	10	0				0	8		0	0	N/A	0		N/A	0	
March	35	0				0	14		0	0	N/A	0		N/A	0	
Q1 Total	45	0				0	22		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					
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	(%)						
January	55.1	4.8	100.0	30.2	3.2	0.4	-16.2	31.8	29.0	0.0	15.3	-4.3	66.1	29.7	0.0	17.2	99.9	99.9	99.9	99.9	99.9	100.0	
February	39.4	6.3	100.0	30.3	2.4	1.1	-14.8	40.9	29.0	0.0	14.2	-4.4	70.2	29.8	0.0	13.4	100.0	100.0	100.0	100.0	100.0	100.0	
March	37.5	19.0	100.0	30.0	5.1	1.0	-17.3	28.1	28.9	0.0	14.0	2.2	67.1	29.6	0.1	56.0	98.9	98.9	100.0	100.0	100.0	100.0	
Q1 Arithmetic Mean											14.5	-2.1	67.7	29.7	0.0	86.6	99.6	99.6	100.0	100.0	100.0	100.0	

Rundle Station MET Statistics		Maximum 1 hr Mean				Minimum 1 hr Mean				Monthly Mean				Total	Valid Data				
Parameter	WS	Temp	RH	Rain	WS	Temp	RH	Rain	WS	Temp	RH	Rain	Rain	WS	WD	Temp	RH	Rain	
Units	(km/hr)	(°C)	(%)	mm	(km/hr)	(°C)	(%)	mm	(km/hr)	(°C)	(%)	mm	mm	(%)					
January	48.2	4.2	100.0	2.0	0.0	-17.1	35.6	0.0	12.1	-5.3	70.3	0.0	23.9	100.0	100.0	100.0	100.0	100.0	
February	37.0	5.4	100.0	2.7	0.0	-16.9	40.8	0.0	10.0	-5.5	74.1	0.0	11.4	92.4	92.4	100.0	100.0	100.0	
March	30.1	19.1	100.0	6.2	0.1	-18.5	33.5	0.0	10.9	1.3	70.5	0.1	64.5	77.2	77.2	100.0	100.0	100.0	
Q1 Arithmetic Mean									11.1	-3.2	71.5	0.0	99.8	89.8	89.8	100.0	100.0	100.0	

1 - No averages and totals presented due to not meeting monthly data validity criteria of >75%
A - PM2.5 CAAQS 3-year average of annual 98th percentile of the daily 24-hr average concentrations; this value is used “as is” for comparison to the 24-hour measurement of air quality data

Table A2: 2025 Q1 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.	%
January	N/A	5.5	31.8	19.9	743	99.9
February	N/A	6.2	35.1	23.0	670	99.7
March	N/A	4.8	29.3	13.5	740	99.5

Table A3: 2025 Q1 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.	%
January	N/A	5.8	35.9	19.9	743	99.9
February	N/A	6.5	34.0	24.1	671	99.9
March	N/A	4.7	36.1	15.2	742	99.7

Table A4: 2025 Q1 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.	%
January	N/A	N/A	7.2	85.4	28.0	742	99.7
February	N/A	N/A	7.8	54.4	23.8	668	99.4
March	N/A	N/A	6.0	64.6	19.4	740	99.5

Table A5:2025 Q1 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.	%
January	N/A	N/A	6.1	43.2	23.4	742	99.7
February	N/A	N/A	6.7	56.2	19.4	667	99.3
March	N/A	N/A	5.5	54.3	14.1	736	98.9

Table A6: 2025 Q1 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.	%
January	N/A	N/A	1.4	53.4	10.6	742	99.7
February	N/A	N/A	1.1	20.3	8.6	668	99.4
March	N/A	N/A	1.0	33.5	4.5	740	99.5

Table A7: 2025 Q1 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.	%
January	N/A	N/A	1.1	17.9	4.3	742	99.7
February	N/A	N/A	1.6	25.5	4.6	667	99.3
March	N/A	N/A	1.1	21.5	2.9	736	98.9

Table A8: 2025 Q1 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.	%
January	0	0	5.9	34.1	19.7	742	99.7
February	0	0	6.6	39.3	15.8	668	99.4
March	0	0	5.0	35.5	14.9	740	99.5

Table A9: 2025 Q1 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.	%
January	0	0	5.1	33.4	19.1	742	99.7
February	0	0	5.5	33.3	15.2	667	99.3
March	0	0	4.4	32.6	11.7	736	98.9

Table A10: 2025 Q1 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.	%
January	0	0	0.8	54.1	24.6	4.8	740	99.5
February	10	8	2.8	83.4	60.9	12.0	653	97.2
March	35	14	3.1	186.0	121.2	20.6	627	84.3

Table A11: 2025 Q1 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.	%
January	0	0	0.8	4.3	3.4	1.8	742	99.7
February	0	0	0.5	2.3	2.1	1.7	670	99.7
March	0	0	0.0	1.0	0.7	0.2	738	99.2

Table A12: 2025 Q1 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)	(%)
January	55.1	0.4	15.3	99.9
February	39.4	1.1	14.2	100.0
March	37.5	1.0	14.0	98.9

Table A13: 2025 Q1 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)	(%)
January	48.2	0.0	12.1	100.0
February	37.0	0.0	10.0	92.4
March	30.1	0.1	10.9	77.2

Table A14: 2025 Q1 Courtice Meterological Station Wind Direction Data Summary

MET Statistics	Valid Data
Month	Wind Direction
	(%)
January	99.9
February	100.0
March	98.9

Table A15: 2025 Q1 Rundle Meterological Station Wind Direction Data Summary

MET Statistics	Valid Data
Month	Wind Direction
	(%)
January	100.0
February	92.4
March	77.2

Table A16: 2025 Q1 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)	(%)
January	4.8	-16.2	-4.3	99.9
February	6.3	-14.8	-4.4	100.0
March	19.0	-17.3	2.2	100.0

Table A17: 2025 Q1 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)	(%)
January	4.2	-17.1	-5.3	100.0
February	5.4	-16.9	-5.5	100.0
March	19.1	-18.5	1.3	100.0

Table A18: 2025 Q1 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
	(%)	(%)	(%)	(%)
January	100.0	31.8	66.1	99.9
February	100.0	40.9	70.2	100.0
March	100.0	28.1	67.1	100.0

Table A19: 2025 Q1 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
	(%)	(%)	(%)	(%)
January	100.0	35.6	70.3	100.0
February	100.0	40.8	74.1	100.0
March	100.0	33.5	70.5	100.0

Table A20: 2025 Q1 Courtice Meterological Station Precipitation Data Summary

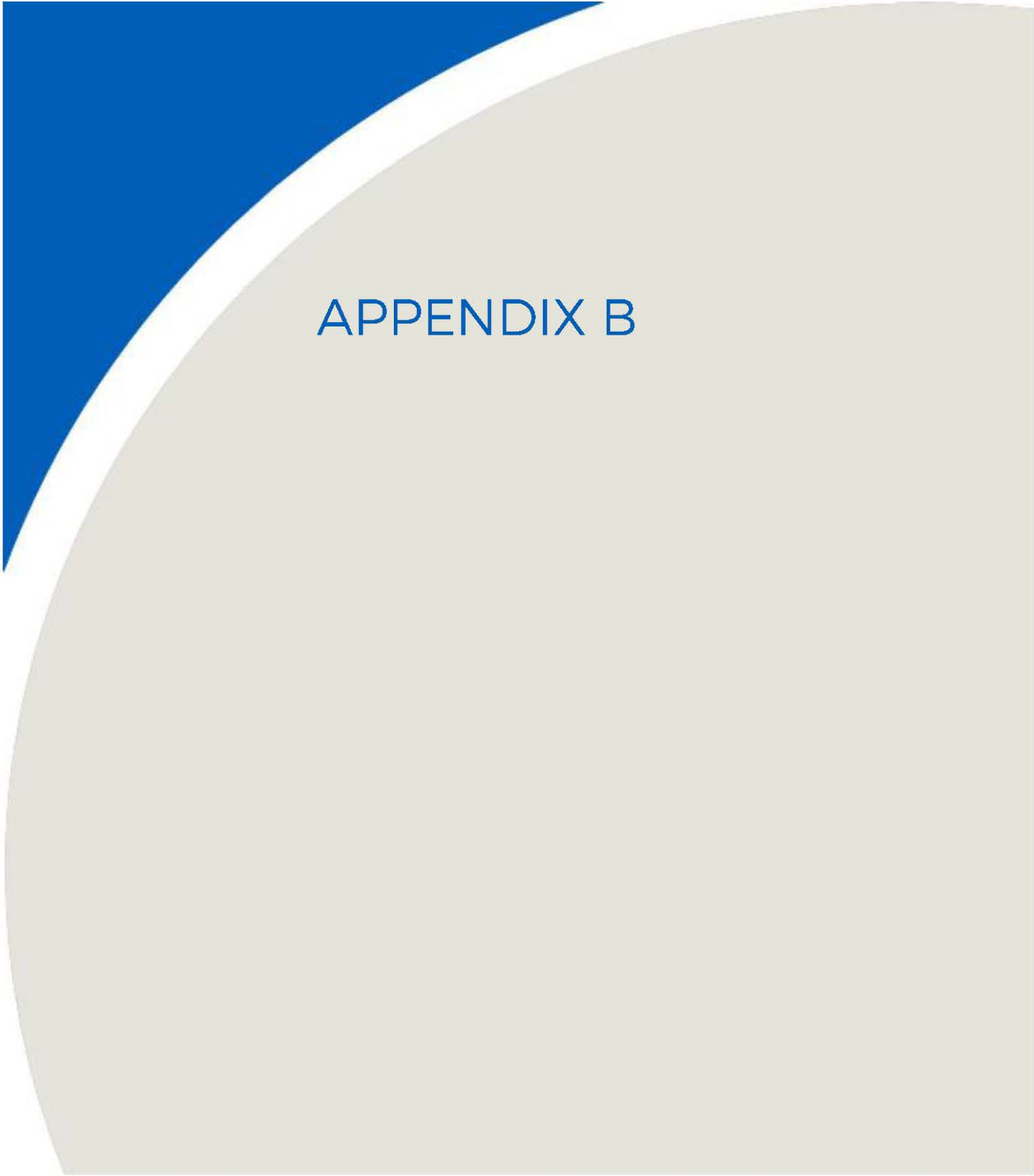
MET Statistics	Maximum 1 hr Mean	Minimum 1 hr	Monthly Mean	Total	Valid Data
Month	Precipitation	Precipitation	Precipitation	Precipitation	Precipitation
	(mm)	(mm)	(mm)	(mm)	%
January	3.2	0.0	0.0	17.2	100.0
February	2.4	0.0	0.0	13.4	100.0
March	5.1	0.0	0.1	56.0	100.0

Table A21: 2025 Q1 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)	%
January	2.0	0.0	0.0	23.9	100.0
February	2.7	0.0	0.0	11.4	100.0
March	6.2	0.0	0.1	64.5	100.0

Table A22: 2025 Q1 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)	(%)
January	30.2	29.0	29.7	99.9
February	30.3	29.0	29.8	100.0
March	30.0	28.9	29.6	100.0

A large decorative graphic on the left side of the page. It features a blue triangular shape in the top-left corner, a white curved line separating it from a large light-grey circular area, and a blue curved line separating the grey area from the rest of the page.

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)
January 13, 2025	L2758676-1	1440	289	L2758676-2	1440	319
February 6, 2025	L2758917-1	1440	314	L2758917-2	1440	312
March 2, 2025	L2759129-1	1440	318	L2759129-2	1440	325
March 26, 2025	Invalid			Invalid		

Table B2: 2025 Courtice Station Q1 Monitoring Results for Dioxins & Furans

Contaminant	Units	MECP Criteria	13-Jan-25	6-Feb-25	2-Mar-25	26-Mar-25	MECP Criteria (µg/m3)	No. > Criteria	Arithmetic Mean	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg TEQ/m3	-	4.85E-04	6.21E-04	4.24E-04	Invalid	-	-	5.10E-04	4.24E-04	6.21E-04	4.85E-04	6.21E-04	4.24E-04	3	75
1,2,3,7,8-PeCDD	pg TEQ/m3	-	7.61E-04	1.37E-03	4.56E-04		-	-	8.62E-04	4.56E-04	1.37E-03	7.61E-04	1.37E-03	4.56E-04	3	75
1,2,3,4,7,8-HxCDD	pg TEQ/m3	-	2.81E-04	1.18E-04	2.99E-05		-	-	1.43E-04	2.99E-05	2.81E-04	2.81E-04	1.18E-04	2.99E-05	3	75
1,2,3,6,7,8-HxCDD	pg TEQ/m3	-	1.54E-04	4.68E-04	4.72E-05		-	-	2.23E-04	4.72E-05	4.68E-04	1.54E-04	4.68E-04	4.72E-05	3	75
1,2,3,7,8,9-HxCDD	pg TEQ/m3	-	4.57E-04	1.59E-04	1.70E-04		-	-	2.62E-04	1.59E-04	4.57E-04	4.57E-04	1.59E-04	1.70E-04	3	75
1,2,3,4,6,7,8-HpCDD	pg TEQ/m3	-	8.03E-04	5.60E-04	2.65E-04		-	-	5.43E-04	2.65E-04	8.03E-04	8.03E-04	5.60E-04	2.65E-04	3	75
OCDD	pg TEQ/m3	-	7.74E-05	5.09E-05	7.49E-05		-	-	6.77E-05	5.09E-05	7.74E-05	7.74E-05	5.09E-05	7.49E-05	3	75
2,3,7,8-TCDF	pg TEQ/m3	-	1.33E-04	2.64E-04	4.87E-05		-	-	1.49E-04	4.87E-05	2.64E-04	1.33E-04	2.64E-04	4.87E-05	3	75
1,2,3,7,8-PeCDF	pg TEQ/m3	-	1.26E-04	5.73E-05	2.59E-05		-	-	6.96E-05	2.59E-05	1.26E-04	1.26E-04	5.73E-05	2.59E-05	3	75
2,3,4,7,8-PeCDF	pg TEQ/m3	-	7.56E-04	5.73E-04	2.92E-04		-	-	5.40E-04	2.92E-04	7.56E-04	7.56E-04	5.73E-04	2.92E-04	3	75
1,2,3,4,7,8-HxCDF	pg TEQ/m3	-	2.68E-04	1.26E-04	7.86E-05		-	-	1.58E-04	7.86E-05	2.68E-04	2.68E-04	1.26E-04	7.86E-05	3	75
1,2,3,6,7,8-HxCDF	pg TEQ/m3	-	8.83E-05	3.28E-04	1.80E-04		-	-	1.99E-04	8.83E-05	3.28E-04	8.83E-05	3.28E-04	1.80E-04	3	75
2,3,4,6,7,8-HxCDF	pg TEQ/m3	-	2.75E-04	1.11E-04	1.07E-04		-	-	1.64E-04	1.07E-04	2.75E-04	2.75E-04	1.11E-04	1.07E-04	3	75
1,2,3,7,8,9-HxCDF	pg TEQ/m3	-	5.36E-05	6.68E-05	3.77E-05		-	-	5.27E-05	3.77E-05	6.68E-05	5.36E-05	6.68E-05	3.77E-05	3	75
1,2,3,4,6,7,8-HpCDF	pg TEQ/m3	-	1.21E-04	1.20E-04	9.46E-05		-	-	1.12E-04	9.46E-05	1.21E-04	1.21E-04	1.20E-04	9.46E-05	3	75
1,2,3,4,7,8,9-HpCDF	pg TEQ/m3	-	1.38E-05	2.10E-05	5.19E-06		-	-	1.34E-05	5.19E-06	2.10E-05	1.38E-05	2.10E-05	5.19E-06	3	75
OCDF	pg TEQ/m3	-	1.61E-06	4.73E-06	1.40E-05		-	-	6.77E-06	1.61E-06	1.40E-05	1.61E-06	4.73E-06	1.40E-05	3	75
Total Toxic Equivalency	pg TEQ/m3	0.1 1[1]	4.85E-03	5.02E-03	2.35E-03		0.1	0	4.07E-03	2.35E-03	5.02E-03	4.85E-03	5.02E-03	2.35E-03	3	75

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: 2025 Rundle Road Station Q1 Monitoring Results for Dioxins & Furans

Contaminant	Units	MECP Criteria	13-Jan-25	6-Feb-25	2-Mar-25	26-Mar-25	MECP Criteria (µg/m3)	No. > Criteria	Arithmetic Mean	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
2,3,7,8-TCDD	pg TEQ/m3	-	4.38E-04	8.66E-04	3.38E-04	Invalid	-	-	5.47E-04	3.38E-04	8.66E-04	4.38E-04	8.66E-04	3.38E-04	3	75
1,2,3,7,8-PeCDD	pg TEQ/m3	-	1.19E-03	1.52E-03	3.84E-04		-	-	1.03E-03	3.84E-04	1.52E-03	1.19E-03	1.52E-03	3.84E-04	3	75
1,2,3,4,7,8-HxCDD	pg TEQ/m3	-	3.07E-04	1.44E-04	4.77E-05		-	-	1.66E-04	4.77E-05	3.07E-04	3.07E-04	1.44E-04	4.77E-05	3	75
1,2,3,6,7,8-HxCDD	pg TEQ/m3	-	5.26E-04	2.24E-04	6.76E-05		-	-	2.73E-04	6.76E-05	5.26E-04	5.26E-04	2.24E-04	6.76E-05	3	75
1,2,3,7,8,9-HxCDD	pg TEQ/m3	-	2.03E-04	2.08E-04	3.69E-05		-	-	1.50E-04	3.69E-05	2.08E-04	2.03E-04	2.08E-04	3.69E-05	3	75
1,2,3,4,6,7,8-HpCDD	pg TEQ/m3	-	8.73E-04	5.80E-04	1.35E-04		-	-	5.30E-04	1.35E-04	8.73E-04	8.73E-04	5.80E-04	1.35E-04	3	75
OCDD	pg TEQ/m3	-	8.26E-05	1.12E-04	2.30E-05		-	-	7.24E-05	2.30E-05	1.12E-04	8.26E-05	1.12E-04	2.30E-05	3	75
2,3,7,8-TCDF	pg TEQ/m3	-	8.14E-05	1.35E-04	5.53E-05		-	-	9.05E-05	5.53E-05	1.35E-04	8.14E-05	1.35E-04	5.53E-05	3	75
1,2,3,7,8-PeCDF	pg TEQ/m3	-	4.23E-05	4.88E-05	2.35E-05		-	-	3.82E-05	2.35E-05	4.88E-05	4.23E-05	4.88E-05	2.35E-05	3	75
2,3,4,7,8-PeCDF	pg TEQ/m3	-	2.39E-04	4.76E-04	7.64E-04		-	-	4.93E-04	2.39E-04	7.64E-04	2.39E-04	4.76E-04	7.64E-04	3	75
1,2,3,4,7,8-HxCDF	pg TEQ/m3	-	2.32E-04	1.41E-04	5.38E-05		-	-	1.42E-04	5.38E-05	2.32E-04	2.32E-04	1.41E-04	5.38E-05	3	75
1,2,3,6,7,8-HxCDF	pg TEQ/m3	-	8.14E-05	3.59E-04	6.61E-05		-	-	1.69E-04	6.61E-05	3.59E-04	8.14E-05	3.59E-04	6.61E-05	3	75
2,3,4,6,7,8-HxCDF	pg TEQ/m3	-	5.16E-05	1.20E-04	4.00E-05		-	-	7.06E-05	4.00E-05	1.20E-04	5.16E-05	1.20E-04	4.00E-05	3	75
1,2,3,7,8,9-HxCDF	pg TEQ/m3	-	6.10E-05	1.03E-04	2.61E-05		-	-	6.33E-05	2.61E-05	1.03E-04	6.10E-05	1.03E-04	2.61E-05	3	75
1,2,3,4,6,7,8-HpCDF	pg TEQ/m3	-	4.85E-05	5.93E-05	5.26E-05		-	-	5.35E-05	4.85E-05	5.93E-05	4.85E-05	5.93E-05	5.26E-05	3	75
1,2,3,4,7,8,9-HpCDF	pg TEQ/m3	-	9.86E-06	4.36E-05	5.53E-06		-	-	1.97E-05	5.53E-06	4.36E-05	9.86E-06	4.36E-05	5.53E-06	3	75
OCDF	pg TEQ/m3	-	1.50E-06	4.96E-06	9.22E-07		-	-	2.46E-06	9.22E-07	4.96E-06	1.50E-06	4.96E-06	9.22E-07	3	75
Total Toxic Equivalency	pg TEQ/m3	0.1 1[1]	4.47E-03	5.15E-03	2.12E-03		0.1	0	3.91E-03	2.12E-03	5.15E-03	4.47E-03	5.15E-03	2.12E-03	3	75

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)
January 1, 2025	L2758575-1	1440	287	L2758575-2	1440	315
January 13, 2025	L2758676-1	1440	289	L2758676-2	1440	315
January 25, 2025	L2758810-2	1440	310	L2758810-1	1440	326
February 6, 2025	L2758793-2	1440	316	L2758793-3	1440	317
February 18, 2025	L2758866-3	1440	327	L2758866-2	1440	343
March 2, 2025	L2759129-1	1440	318	L2759129-2	1440	325
March 14, 2025	L2759088-2	1440	293	L2759088-3	1440	330
March 26, 2025	Invalid			Invalid		

Table B5: 2025 Courtice Station Q1 Monitoring Results for PAHs

Contaminant	Units	MECP Criteria	1-Jan-25	13-Jan-25	25-Jan-25	6-Feb-25	18-Feb-25	2-Mar-25	14-Mar-25	26-Mar-25	No. > Criteria	Arithmetic Mean	Minimum Q1 Concentration	Maximum Q1 Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m3	-	1.99E+00	2.45E+00	2.12E+00	N/A	N/A	3.18E+00	N/A	Invalid	-	2.43E+00	1.99E+00	3.18E+00	2.45E+00	0.00E+00	3.18E+00	7	88
2-Methylnaphthalene	ng/m3	-	3.01E+00	3.99E+00	3.32E+00	N/A	N/A	5.13E+00	N/A		-	3.86E+00	3.01E+00	5.13E+00	3.99E+00	0.00E+00	5.13E+00	7	88
Acenaphthene	ng/m3	-	6.59E-01	2.89E-01	2.38E-01	N/A	N/A	5.88E-01	N/A		-	4.43E-01	2.38E-01	6.59E-01	6.59E-01	0.00E+00	5.88E-01	7	88
Acenaphthylene	ng/m3	-	1.79E-01	1.27E-01	5.35E-02	N/A	N/A	3.90E-01	N/A		-	1.87E-01	5.35E-02	3.90E-01	1.79E-01	0.00E+00	3.90E-01	7	88
Anthracene	ng/m3	-	4.32E-02	2.32E-02	2.08E-02	N/A	N/A	3.49E-02	N/A		-	3.05E-02	2.08E-02	4.32E-02	4.32E-02	0.00E+00	3.49E-02	7	88
Benzo(a)Anthracene	ng/m3	-	1.24E-02	1.82E-02	1.14E-02	N/A	N/A	3.00E-02	N/A		-	1.80E-02	1.14E-02	3.00E-02	1.82E-02	0.00E+00	3.00E-02	7	88
Benzo(a)fluorene	ng/m3	-	3.48E-02	2.60E-02	1.42E-02	N/A	N/A	1.64E-02	N/A		-	2.28E-02	1.42E-02	3.48E-02	3.48E-02	0.00E+00	1.64E-02	7	88
Benzo(a)Pyrene (Historically High)	ng/m3	0.05[1]	1.66E-02	1.98E-02	2.06E-02	N/A	N/A	2.13E-02	N/A		0	1.96E-02	1.66E-02	2.13E-02	2.06E-02	0.00E+00	2.13E-02	7	88
Benzo(b)Fluoranthene	ng/m3	-	2.79E-02	4.89E-02	7.13E-02	N/A	N/A	7.36E-02	N/A		-	5.54E-02	2.79E-02	7.36E-02	7.13E-02	0.00E+00	7.36E-02	7	88
Benzo(b)fluorene	ng/m3	-	4.53E-03	7.10E-03	1.61E-03	N/A	N/A	4.40E-03	N/A		-	4.41E-03	1.61E-03	7.10E-03	7.10E-03	0.00E+00	4.40E-03	7	88
Benzo(e)Pyrene	ng/m3	-	2.39E-02	3.64E-02	3.77E-02	N/A	N/A	4.97E-02	N/A		-	3.69E-02	2.39E-02	4.97E-02	3.77E-02	0.00E+00	4.97E-02	7	88
Benzo(g,h)Perylene	ng/m3	-	3.55E-02	3.99E-02	2.95E-02	N/A	N/A	4.69E-02	N/A		-	3.79E-02	2.95E-02	4.69E-02	3.99E-02	0.00E+00	4.69E-02	7	88
Benzo(k)Fluoranthene	ng/m3	-	3.73E-02	4.68E-02	6.74E-02	N/A	N/A	1.72E-01	N/A		-	8.08E-02	3.73E-02	1.72E-01	6.74E-02	0.00E+00	1.72E-01	7	88
Biphenyl	ng/m3	-	1.60E+00	2.19E+00	1.99E+00	N/A	N/A	1.69E+00	N/A		-	1.87E+00	1.60E+00	2.19E+00	2.19E+00	0.00E+00	1.69E+00	7	88
Chrysene	ng/m3	-	5.51E-02	8.49E-02	1.11E-01	N/A	N/A	1.00E-01	N/A		-	8.77E-02	5.51E-02	1.11E-01	1.11E-01	0.00E+00	1.00E-01	7	88
Dibenzo(a,h)Anthracene	ng/m3	-	3.48E-03	9.70E-03	3.87E-03	N/A	N/A	3.03E-02	N/A		-	1.18E-02	3.48E-03	3.03E-02	9.70E-03	0.00E+00	3.03E-02	7	88
Fluoranthene	ng/m3	-	3.44E-01	4.26E-01	3.90E-01	N/A	N/A	2.92E-01	N/A		-	3.63E-01	2.92E-01	4.26E-01	4.26E-01	0.00E+00	2.92E-01	7	88
Fluorene	ng/m3	-	7.42E-01	7.59E-01	7.42E-01	N/A	N/A	6.57E-01	N/A		-	7.25E-01	6.57E-01	7.59E-01	7.59E-01	0.00E+00	6.57E-01	7	88
Indeno(1,2,3-cd)Pyrene	ng/m3	-	2.89E-02	3.88E-02	5.22E-02	N/A	N/A	4.31E-02	N/A		-	4.08E-02	2.89E-02	5.22E-02	5.22E-02	0.00E+00	4.31E-02	7	88
Naphthalene	ng/m3	22500	1.32E+01	1.45E+01	2.04E+01	N/A	N/A	2.48E+01	N/A		0	1.82E+01	1.32E+01	2.48E+01	2.04E+01	0.00E+00	2.48E+01	7	88
o-Terphenyl	ng/m3	-	6.27E-03	9.18E-03	1.61E-03	N/A	N/A	1.57E-03	N/A		-	4.66E-03	1.57E-03	9.18E-03	9.18E-03	0.00E+00	1.57E-03	7	88
Perylene	ng/m3	-	1.74E-03	6.76E-03	1.61E-03	N/A	N/A	1.57E-03	N/A		-	2.92E-03	1.57E-03	6.76E-03	6.76E-03	0.00E+00	1.57E-03	7	88
Phenanthrene	ng/m3	-	1.34E+00	1.26E+00	1.25E+00	N/A	N/A	1.14E+00	N/A		-	1.25E+00	1.14E+00	1.34E+00	1.34E+00	0.00E+00	1.14E+00	7	88
Pyrene	ng/m3	-	2.24E-01	1.88E-01	1.50E-01	N/A	N/A	1.94E-01	N/A		-	1.89E-01	1.50E-01	2.24E-01	2.24E-01	0.00E+00	1.94E-01	7	88
Tetralin	ng/m3	-	6.72E-01	1.49E+00	1.01E+00	N/A	N/A	4.24E-01	N/A		-	8.99E-01	4.24E-01	1.49E+00	1.49E+00	0.00E+00	4.24E-01	7	88
Total PAH	ng/m3	-	2.43E+01	2.81E+01	3.21E+01	N/A	N/A	3.91E+01	N/A		-	3.09E+01	2.43E+01	3.91E+01	3.21E+01	0.00E+00	3.91E+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

February 6, 18 and March 14 samples collected successively but sample results were not available in time for report.

Table B6: 2025 Rundle Road Station Q1 Monitoring Results for PAHs

Contaminant	Units	MECP Criteria	1-Jan-25	13-Jan-25	25-Jan-25	6-Feb-25	18-Feb-25	2-Mar-25	14-Mar-25	26-Mar-25	No. > Criteria	Arithmetic Mean	Minimum Q1 Concentration	Maximum Q1 Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
1-Methylnaphthalene	ng/m3	-	1.66E+00	3.36E+00	2.30E+00	N/A	N/A	3.00E+00	N/A	Invalid	-	2.58E+00	1.66E+00	3.36E+00	3.36E+00	0.00E+00	3.00E+00	7	88
2-Methylnaphthalene	ng/m3	-	2.49E+00	5.64E+00	3.62E+00	N/A	N/A	4.67E+00	N/A		-	4.11E+00	2.49E+00	5.64E+00	5.64E+00	0.00E+00	4.67E+00	7	88
Acenaphthene	ng/m3	-	5.02E-01	6.53E-01	5.52E-01	N/A	N/A	4.06E-01	N/A		-	5.28E-01	4.06E-01	6.53E-01	6.53E-01	0.00E+00	4.06E-01	7	88
Acenaphthylene	ng/m3	-	1.99E-01	2.60E-01	7.06E-02	N/A	N/A	2.59E-01	N/A		-	1.97E-01	7.06E-02	2.60E-01	2.60E-01	0.00E+00	2.59E-01	7	88
Anthracene	ng/m3	-	4.25E-02	7.42E-02	4.20E-02	N/A	N/A	6.33E-02	N/A		-	5.55E-02	4.20E-02	7.42E-02	7.42E-02	0.00E+00	6.33E-02	7	88
Benzo(a)Anthracene	ng/m3	-	1.08E-02	1.89E-02	1.78E-02	N/A	N/A	2.47E-02	N/A		-	1.80E-02	1.08E-02	2.47E-02	1.89E-02	0.00E+00	2.47E-02	7	88
Benzo(a)fluorene	ng/m3	-	2.43E-02	4.76E-02	1.70E-02	N/A	N/A	3.78E-02	N/A		-	3.17E-02	1.70E-02	4.76E-02	4.76E-02	0.00E+00	3.78E-02	7	88
Benzo(a)Pyrene (Historically High)	ng/m3	0.05[1]	1.32E-02	1.68E-02	2.50E-02	N/A	N/A	3.07E-02	N/A		0	2.14E-02	1.32E-02	3.07E-02	2.50E-02	0.00E+00	3.07E-02	7	88
Benzo(b)Fluoranthene	ng/m3	-	2.14E-02	5.99E-02	6.57E-02	N/A	N/A	1.08E-01	N/A		-	6.37E-02	2.14E-02	1.08E-01	6.57E-02	0.00E+00	1.08E-01	7	88
Benzo(b)fluorene	ng/m3	-	4.44E-03	9.99E-03	3.68E-03	N/A	N/A	7.22E-03	N/A		-	6.33E-03	3.68E-03	9.99E-03	9.99E-03	0.00E+00	7.22E-03	7	88
Benzo(e)Pyrene	ng/m3	-	1.68E-02	4.18E-02	5.06E-02	N/A	N/A	5.41E-02	N/A		-	4.09E-02	1.68E-02	5.41E-02	5.06E-02	0.00E+00	5.41E-02	7	88
Benzo(g,h,i)Perylene	ng/m3	-	2.92E-02	4.60E-02	3.68E-02	N/A	N/A	6.64E-02	N/A		-	4.46E-02	2.92E-02	6.64E-02	4.60E-02	0.00E+00	6.64E-02	7	88
Benzo(k)Fluoranthene	ng/m3	-	4.60E-02	4.88E-02	7.45E-02	N/A	N/A	1.41E-01	N/A		-	7.75E-02	4.60E-02	1.41E-01	7.45E-02	0.00E+00	1.41E-01	7	88
Biphenyl	ng/m3	-	1.56E+00	2.73E+00	2.20E+00	N/A	N/A	2.22E+00	N/A		-	2.17E+00	1.56E+00	2.73E+00	2.73E+00	0.00E+00	2.22E+00	7	88
Chrysene	ng/m3	-	5.87E-02	9.95E-02	1.12E-01	N/A	N/A	1.82E-01	N/A		-	1.13E-01	5.87E-02	1.82E-01	1.12E-01	0.00E+00	1.82E-01	7	88
Dibenz(a,h)Anthracene	ng/m3	-	3.17E-03	1.03E-02	4.60E-03	N/A	N/A	3.06E-02	N/A		-	1.22E-02	3.17E-03	3.06E-02	1.03E-02	0.00E+00	3.06E-02	7	88
Fluoranthene	ng/m3	-	3.30E-01	5.74E-01	5.03E-01	N/A	N/A	3.97E-01	N/A		-	4.51E-01	3.30E-01	5.74E-01	5.74E-01	0.00E+00	3.97E-01	7	88
Fluorene	ng/m3	-	7.02E-01	9.73E-01	9.60E-01	N/A	N/A	6.52E-01	N/A		-	8.22E-01	6.52E-01	9.73E-01	9.73E-01	0.00E+00	6.52E-01	7	88
Indeno[1,2,3-cd]Pyrene	ng/m3	-	1.78E-02	4.41E-02	5.68E-02	N/A	N/A	6.52E-02	N/A		-	4.59E-02	1.78E-02	6.52E-02	5.68E-02	0.00E+00	6.52E-02	7	88
Naphthalene	ng/m3	22500	1.20E+01	2.23E+01	2.01E+01	N/A	N/A	2.61E+01	N/A		0	2.01E+01	1.20E+01	2.61E+01	2.23E+01	0.00E+00	2.61E+01	7	88
o-Terphenyl	ng/m3	-	6.51E-03	9.99E-03	1.53E-03	N/A	N/A	1.54E-03	N/A		-	4.89E-03	1.53E-03	9.99E-03	9.99E-03	0.00E+00	1.54E-03	7	88
Perylene	ng/m3	-	1.59E-03	5.86E-03	1.53E-03	N/A	N/A	1.54E-03	N/A		-	2.63E-03	1.53E-03	5.86E-03	5.86E-03	0.00E+00	1.54E-03	7	88
Phenanthrene	ng/m3	-	1.33E+00	1.80E+00	1.61E+00	N/A	N/A	1.38E+00	N/A		-	1.53E+00	1.33E+00	1.80E+00	1.80E+00	0.00E+00	1.38E+00	7	88
Pyrene	ng/m3	-	1.92E-01	2.85E-01	2.07E-01	N/A	N/A	2.71E-01	N/A		-	2.39E-01	1.92E-01	2.85E-01	2.85E-01	0.00E+00	2.71E-01	7	88
Tetralin	ng/m3	-	4.86E-01	1.63E+00	1.07E+00	N/A	N/A	1.10E+00	N/A		-	1.07E+00	4.86E-01	1.63E+00	1.63E+00	0.00E+00	1.10E+00	7	88
Total PAH	ng/m3	-	2.18E+01	4.08E+01	3.37E+01	N/A	N/A	4.13E+01	N/A		-	3.44E+01	2.18E+01	4.13E+01	4.08E+01	0.00E+00	4.13E+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

February 6, 18 and March 14 samples collected successively but sample results were not available in time for report.

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

Sample Date	Courtice			Rundle		
	Filter ID	Sample Duration	Sample Volume	Filter ID	Sample Duration	Sample Volume
	No.	(min)	(m ³)	No.	(min)	(m ³)
January 1, 2025	BU2500030-003	1440	1741	BU2500030-005	1440	1564
January 7, 2025	BU2500125-002	1440	1757	BU2500125-004	1440	1579
January 13, 2025	BU2500125-001	1440	1749	BU2500125-003	1440	1517
January 19, 2025	BU2500349-006	1440	1788	BU2500349-010	1440	1563
January 25, 2025	Invalid			Invalid		
January 31, 2025	BU2500349-004	1440	1774	BU2500349-008	1440	1621
February 6, 2025	BU2500349-003	1440	1655	BU2500349-007	1440	1663
February 12, 2025	BU2500349-003	1440	1665	BU2500470-005	1440	1677
February 18, 2025	BU2500349-004	1440	1681	BU2500470-006	1440	1660
February 24, 2025	BU2500470-003	1439	1642	BU2500560-006	1440	1608
March 2, 2025	Invalid			BU2500560-005	1440	1626
March 8, 2025	BU2500686-006	1440	1647	BU2500686-004	1440	1605
March 14, 2025	BU2500686-005	1440	1697	BU2500686-003	1440	1668
March 20, 2025	BU2500926-008	1440	1707	BU2500926-003	1440	1661
March 26, 2025	BU2500926-007	1440	1675	BU2500926-003	1440	1687

Table B8: 2025 Courtice Station Q1 Monitoring Results for TSP and Metals

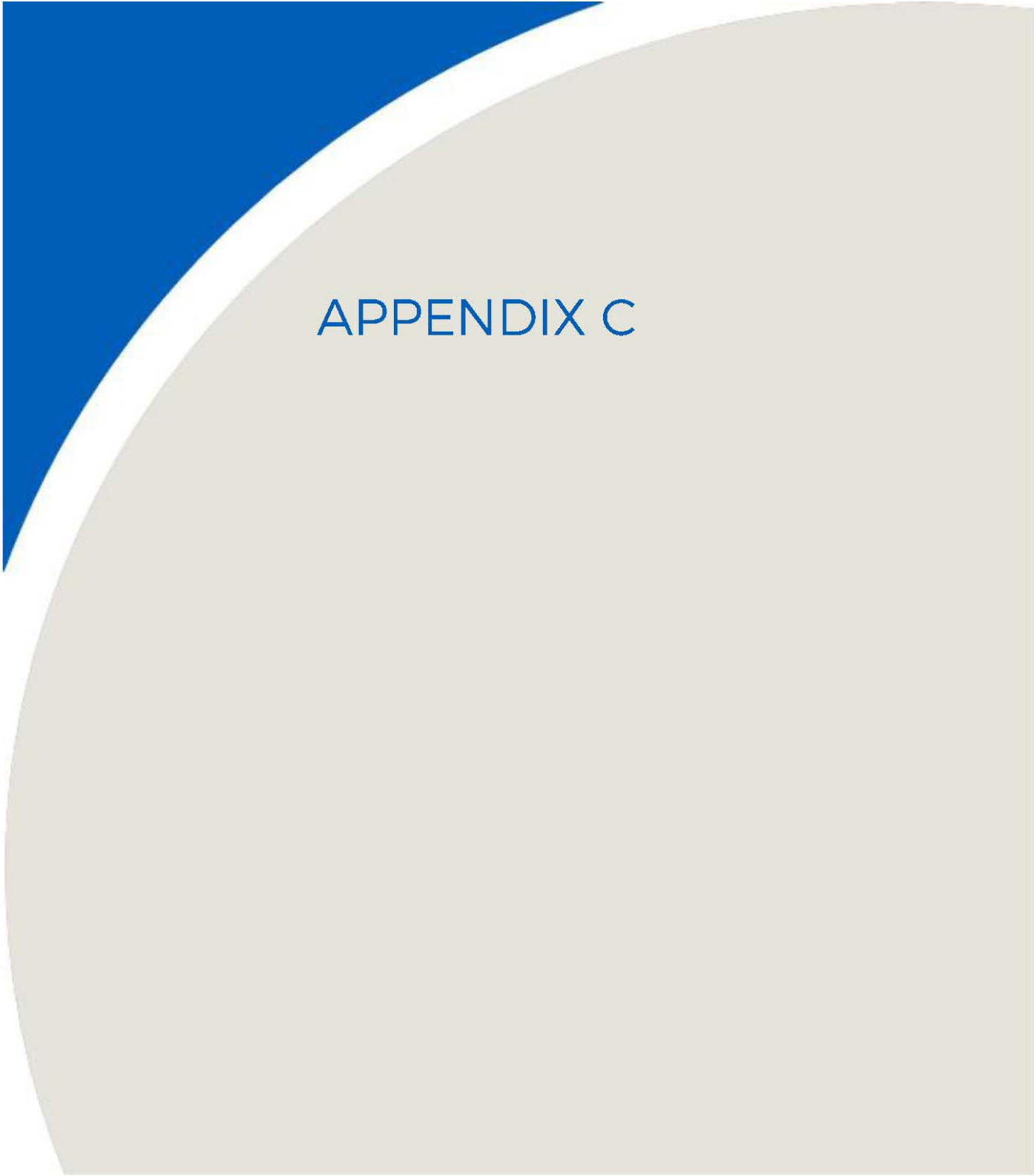
Contaminant	Units	1-Jan-25	7-Jan-25	13-Jan-25	19-Jan-25	25-Jan-25	31-Jan-25	6-Feb-25	12-Feb-25	18-Feb-25	24-Feb-25	2-Mar-25	8-Mar-25	14-Mar-25	20-Mar-25	26-Mar-25	MECP Criteria (µg/m³)	No. > Criteria	Geometric Mean	Arithmetic Mean	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
Particulate (TSP)	µg/m³	3.90	17.29	13.07	17.34	Invalid	25.65	10.70	12.91	8.03	6.64	Invalid	15.30	81.30	13.30	11.70	120	0	13.6	18.2	3.90	81.30	17.34	25.65	81.30	13	87
Mercury (Hg)	µg/m³	3.00E-06	2.97E-06	2.99E-06	2.92E-06		9.02E-06	3.02E-06	9.61E-06	2.98E-06	1.16E-05		3.04E-06	2.18E-05	2.93E-06	2.99E-06	2	0	0.0	6.06E-06	2.92E-06	2.18E-05	0.00	0.00	2.18E-05	13	87
Aluminum (Al)	µg/m³	4.78E-02	1.37E-01	5.31E-02	4.46E-02		7.61E-02	3.43E-02	8.11E-02	2.34E-02	9.01E-02		1.55E-01	1.23E+00	2.64E-01	1.27E-01	-	-	0.1	1.81E-01	2.34E-02	1.23E+00	0.14	0.09	1.23E+00	13	87
Antimony (Sb)	µg/m³	5.64E-04	3.92E-04	7.04E-04	3.50E-04		1.77E-03	4.65E-04	5.65E-04	2.68E-04	1.89E-03		5.04E-04	2.19E-03	1.23E-03	7.28E-04	25	0	0.0	8.94E-04	2.68E-04	2.19E-03	0.00	0.00	2.19E-03	13	87
Arsenic (As)	µg/m³	9.00E-04	8.91E-04	8.96E-04	8.76E-04		8.46E-04	9.07E-04	9.01E-04	8.93E-04	9.13E-04		9.11E-04	8.84E-04	8.79E-04	8.96E-04	0.3	0	0.0	8.92E-04	8.46E-04	9.13E-04	0.00	0.00	9.11E-04	13	87
Barium (Ba)	µg/m³	3.64E-03	4.01E-03	3.19E-03	2.95E-03		1.29E-02	2.51E-03	3.05E-03	3.20E-03	6.58E-03		8.26E-03	2.47E-02	6.21E-03	7.52E-03	10	0	0.0	6.83E-03	2.51E-03	2.47E-02	0.00	0.01	2.47E-02	13	87
Beryllium (Be)	µg/m³	1.50E-05	1.49E-05	1.49E-05	1.46E-05		1.41E-05	1.51E-05	1.50E-05	1.49E-05	1.52E-05		1.52E-05	5.18E-05	1.46E-05	1.49E-05	0.01	0	0.0	1.77E-05	1.41E-05	5.18E-05	0.00	0.00	5.18E-05	13	87
Bismuth (Bi)	µg/m³	5.40E-04	5.35E-04	5.37E-04	5.25E-04		5.07E-04	5.44E-04	5.41E-04	5.36E-04	5.48E-04		5.46E-04	5.30E-04	5.27E-04	5.37E-04	-	-	0.0	5.35E-04	5.07E-04	5.48E-04	0.00	0.00	5.46E-04	13	87
Boron (B)	µg/m³	4.50E-03	4.46E-03	4.48E-03	4.38E-03		4.23E-03	4.53E-03	4.50E-03	4.46E-03	4.57E-03		4.55E-03	4.42E-03	4.39E-03	4.48E-03	120	0	0.0	4.46E-03	4.23E-03	4.57E-03	0.00	0.00	4.55E-03	13	87
Cadmium (Cd)	µg/m³	1.25E-04	6.48E-05	2.12E-04	1.10E-04		1.57E-04	1.12E-04	2.24E-04	7.85E-05	3.11E-04		8.92E-05	2.26E-04	1.38E-04	7.05E-05	0.025	0	0.0	1.48E-04	6.48E-05	3.11E-04	0.00	0.00	2.26E-04	13	87
Chromium (Cr)	µg/m³	1.02E-03	1.01E-03	1.01E-03	9.92E-04		2.20E-03	1.03E-03	1.02E-03	1.01E-03	2.07E-03		2.37E-03	6.07E-03	2.40E-03	2.27E-03	0.5	0	0.0	1.88E-03	9.92E-04	6.07E-03	0.00	0.00	6.07E-03	13	87
Cobalt (Co)	µg/m³	4.02E-05	1.19E-04	6.15E-05	6.36E-05		1.05E-04	3.63E-05	5.89E-05	2.68E-05	1.50E-04		9.53E-05	6.07E-04	1.46E-04	9.61E-05	0.1	0	0.0	1.23E-04	2.68E-05	6.07E-04	0.00	0.00	6.07E-04	13	87
Copper (Cu)	µg/m³	1.85E-02	7.67E-03	6.87E-03	1.51E-02		2.99E-02	5.92E-03	5.83E-03	2.12E-02	2.35E-02		3.10E-02	4.98E-02	2.16E-02	3.11E-02	50	0	0.0	2.06E-02	5.83E-03	4.98E-02	0.02	0.03	4.98E-02	13	87
Iron (Fe)	µg/m³	1.24E-01	2.94E-01	1.57E-01	1.89E-01		3.72E-01	1.04E-01	1.63E-01	1.05E-01	2.01E-01		3.54E-01	1.82E+00	3.91E-01	4.07E-01	4	0	0.2	3.60E-01	1.04E-01	1.82E+00	0.29	0.37	1.82E+00	13	87
Lead (Pb)	µg/m³	8.28E-04	1.03E-03	2.04E-03	1.31E-03		3.63E-03	2.23E-03	2.23E-03	1.37E-03	3.26E-03		1.38E-03	5.77E-03	2.52E-03	1.16E-03	0.5	0	0.0	2.21E-03	8.28E-04	5.77E-03	0.00	0.00	5.77E-03	13	87
Magnesium (Mg)	µg/m³	9.54E-02	1.86E-01	1.19E-01	1.01E-01		1.55E-01	7.62E-02	1.51E-01	5.65E-02	1.76E-01		2.11E-01	1.21E+00	1.65E-01	1.83E-01	-	-	0.2	2.22E-01	5.65E-02	1.21E+00	0.19	0.18	1.21E+00	13	87
Manganese (Mn)	µg/m³	3.22E-03	9.15E-03	7.88E-03	3.78E-03		9.02E-03	3.70E-03	4.05E-03	6.13E-03	1.11E-02		9.47E-03	4.52E-02	1.15E-02	7.94E-03	0.4	0	0.0	1.02E-02	3.22E-03	4.52E-02	0.01	0.01	4.52E-02	13	87
Molybdenum (Mo)	µg/m³	7.98E-04	3.21E-04	4.90E-04	8.99E-04		2.02E-03	4.11E-04	2.64E-04	9.16E-04	1.75E-03		1.40E-03	2.72E-03	6.62E-04	1.96E-03	120	0	0.0	1.12E-03	2.64E-04	2.72E-03	0.00	0.00	2.72E-03	13	87
Nickel (Ni)	µg/m³	6.48E-04	8.50E-04	6.69E-04	6.54E-04		1.03E-03	5.62E-04	5.17E-04	1.02E-03	2.07E-03		1.52E-03	3.43E-03	1.42E-03	1.63E-03	0.2	0	0.0	1.23E-03	5.17E-04	3.43E-03	0.00	0.00	3.43E-03	13	87
Phosphorus (P)	µg/m³	5.70E-01	2.23E-01	2.24E-01	2.19E-01		2.11E-01	2.27E-01	5.29E-01	2.23E-01	2.28E-01		2.28E-01	2.21E-01	2.20E-01	2.24E-01	-	-	0.3	2.73E-01	2.11E-01	5.70E-01	0.57	0.53	2.28E-01	13	87
Selenium (Se)	µg/m³	3.90E-04	3.86E-04	3.88E-04	3.79E-04		1.35E-03	3.93E-04	3.90E-04	3.87E-04	1.40E-03		3.95E-04	3.83E-04	3.81E-04	3.88E-04	10	0	0.0	5.39E-04	3.79E-04	1.40E-03	0.00	0.00	3.95E-04	13	87
Silver (Ag)	µg/m³	2.70E-05	2.67E-05	2.69E-05	2.63E-05		6.71E-05	2.72E-05	2.70E-05	2.68E-05	2.74E-05		2.73E-05	2.82E-04	2.96E-04	2.69E-05	1	0	0.0	7.03E-05	2.63E-05	2.96E-04	0.00	0.00	2.96E-04	13	87
Strontium (Sr)	µg/m³	4.56E-03	6.89E-03	3.70E-03	4.03E-03		4.68E-03	3.08E-03	6.67E-03	8.93E-04	3.53E-03		4.61E-03	3.12E-02	3.28E-03	4.54E-03	120	0	0.0	6.28E-03	8.93E-04	3.12E-02	0.01	0.01	3.12E-02	13	87
Thallium (Tl)	µg/m³	2.70E-05	2.67E-05	2.69E-05	2.63E-05		2.54E-05	2.72E-05	2.70E-05	2.68E-05	2.74E-05		2.73E-05	9.66E-05	2.64E-05	2.69E-05	-	-	0.0	3.21E-05	2.54E-05	9.66E-05	0.00	0.00	9.66E-05	13	87
Tin (Sn)	µg/m³	5.64E-04	1.06E-03	3.41E-03	1.75E-04		2.33E-03	5.74E-04	6.49E-04	4.52E-04	1.16E-03		9.89E-04	2.47E-03	7.38E-04	1.09E-03	10	0	0.0	1.21E-03	1.75E-04	3.41E-03	0.00	0.00	2.47E-03	13	87
Titanium (Ti)	µg/m³	3.30E-03	7.13E-03	3.28E-03	3.21E-03		6.77E-03	3.32E-03	3.30E-03	3.27E-03	3.35E-03		9.11E-03	4.89E-02	7.61E-03	6.57E-03	120	0	0.0	8.39E-03	3.21E-03	4.89E-02	0.01	0.01	4.89E-02	13	87
Uranium (Ur)	µg/m³	4.08E-06	9.86E-06	6.21E-06	6.30E-06		9.13E-06	1.44E-05	8.41E-06	1.79E-06	1.18E-05		1.09E-05	8.66E-05	1.90E-05	7.52E-06	0.3	0	0.0	1.51E-05	1.79E-06	8.66E-05	0.00	0.00	8.66E-05	13	87
Vanadium (V)	µg/m³	1.50E-03	1.49E-03	1.49E-03	1.46E-03		1.41E-03	1.51E-03	1.50E-03	1.49E-03	1.52E-03		1.52E-03	3.12E-03	1.46E-03	1.49E-03	2	0	0.0	1.61E-03	1.41E-03	3.12E-03	0.00	0.00	3.12E-03	13	87
Zinc (Zn)	µg/m³	1.24E-02	2.04E-02	3.87E-02	1.49E-02		5.02E-02	6.04E-02	5.33E-02	2.77E-02	8.89E-02		4.26E-02	6.01E-02	7.56E-02	2.90E-02	120	0	0.0	4.42E-02	1.24E-02	8.89E-02	0.04	0.09	7.56E-02	13	87
Zirconium (Zr)	µg/m³	6.00E-04	5.94E-04	5.97E-04	5.84E-04		5.64E-04	6.04E-04	6.01E-04	5.95E-04	6.09E-04		6.07E-04	1.30E-03	5.86E-04	5.97E-04	-	-	0.0	6.49E-04	5.64E-04	1.30E-03	0.00	0.00	1.30E-03	13	87

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

Table B9: 2025 Rundle Road Station Q1 Monitoring Results for TSP and Metals

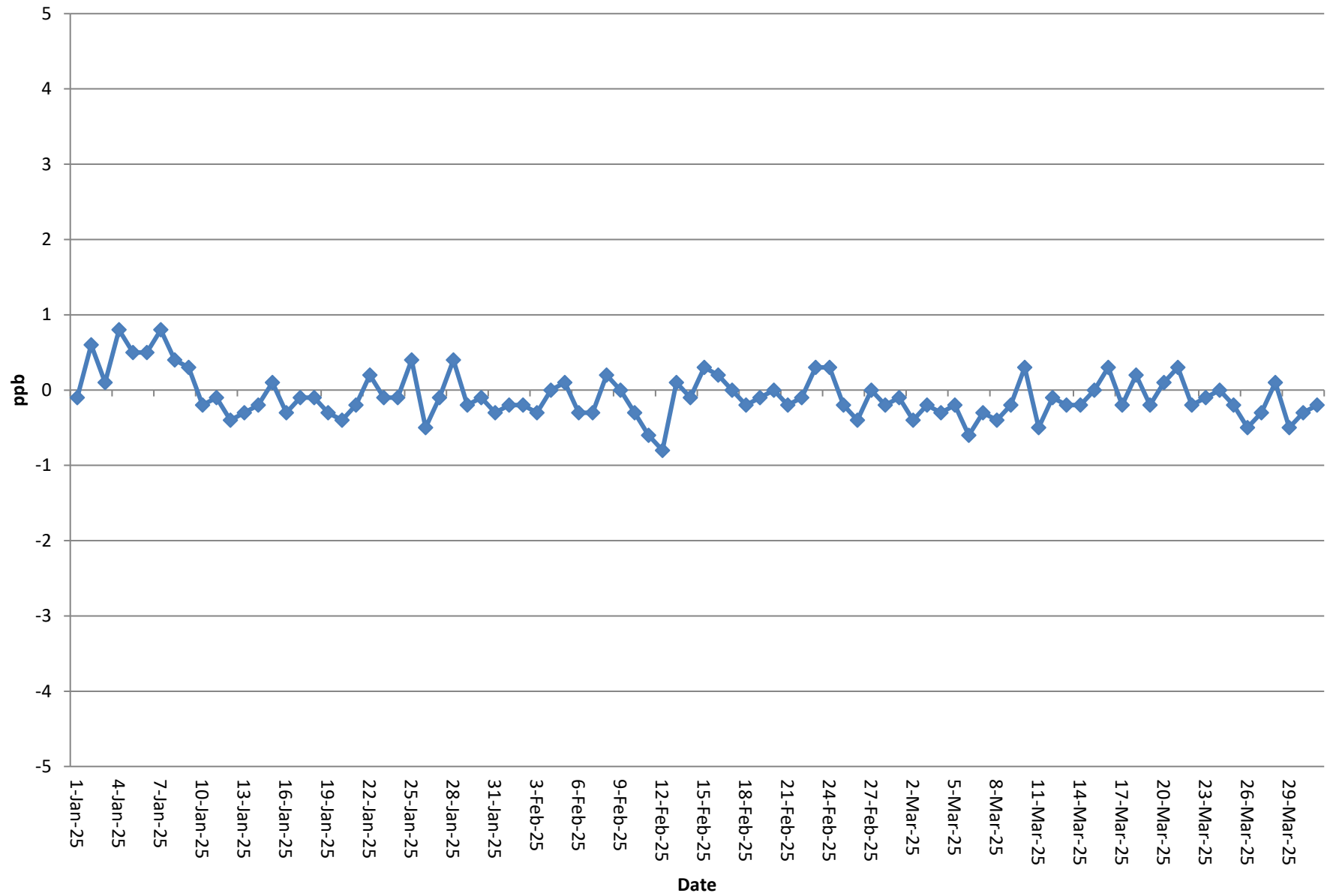
Contaminant	Units	1-Jan-25	7-Jan-25	13-Jan-25	19-Jan-25	25-Jan-25	31-Jan-25	6-Feb-25	12-Feb-25	18-Feb-25	24-Feb-25	2-Mar-25	8-Mar-25	14-Mar-25	20-Mar-25	26-Mar-25	MECP Criteria (µg/m³)	No. > Criteria	Geometric Mean	Arithmetic Mean	Q1 Minimum Concentration	Q1 Maximum Concentration	January Maximum Concentration	February Maximum Concentration	March Maximum Concentration	Number of Valid Samples	% Valid data
Particulate (TSP)	µg/m³	4.74	21.93	18.49	19.59	Invalid	23.56	11.25	10.91	13.01	16.11	15.31	14.08	34.65	35.05	8.24	120	0	15.6	17.6	4.74	35.05	21.93	23.56	35.05	14	93
Mercury (Hg)	µg/m³	3.04E-06	3.01E-06	3.13E-06	3.04E-06		3.08E-06	3.01E-06	7.16E-06	7.83E-06	1.24E-05	9.84E-06	3.12E-06	1.08E-05	3.01E-06	2.96E-06	2	0	4.69E-06	5.56E-06	2.96E-06	1.24E-05	0.00	0.00	1.08E-05	14	93
Aluminum (Al)	µg/m³	5.04E-02	1.77E-01	5.96E-02	6.69E-02		7.28E-02	3.64E-02	8.29E-02	4.13E-02	1.16E-01	5.60E-02	1.41E-01	3.21E-01	4.16E-01	6.76E-02	-	-	9.40E-02	1.27E-01	3.64E-02	4.16E-01	0.18	0.12	4.16E-01	14	93
Antimony (Sb)	µg/m³	3.22E-04	2.11E-04	5.77E-04	2.13E-04		9.68E-04	3.31E-04	2.98E-04	2.83E-04	1.19E-03	4.18E-04	3.43E-04	1.29E-03	8.55E-04	5.16E-04	25	0	4.57E-04	5.57E-04	2.11E-04	1.29E-03	0.00	0.00	1.29E-03	14	93
Arsenic (As)	µg/m³	9.12E-04	9.04E-04	9.40E-04	9.13E-04		9.25E-04	9.02E-04	8.94E-04	9.03E-04	9.33E-04	9.23E-04	9.35E-04	8.99E-04	9.03E-04	8.89E-04	0.3	0	9.10E-04	9.10E-04	8.89E-04	9.35E-04	0.00	0.00	9.35E-04	14	93
Barium (Ba)	µg/m³	2.37E-03	2.77E-03	4.49E-03	2.48E-03		8.27E-03	3.27E-03	3.76E-03	3.08E-03	7.40E-03	4.24E-03	5.60E-03	1.43E-02	1.09E-02	5.69E-03	10	0	4.84E-03	5.70E-03	2.37E-03	1.43E-02	0.00	0.01	1.43E-02	14	93
Beryllium (Be)	µg/m³	1.52E-05	1.51E-05	1.57E-05	1.52E-05		1.54E-05	1.50E-05	1.49E-05	1.51E-05	1.55E-05	1.54E-05	1.56E-05	1.50E-05	1.51E-05	1.48E-05	0.01	0	1.52E-05	1.52E-05	1.48E-05	1.56E-05	0.00	0.00	1.56E-05	14	93
Bismuth (Bi)	µg/m³	5.47E-04	5.42E-04	5.64E-04	5.48E-04		5.55E-04	5.41E-04	5.37E-04	5.42E-04	5.60E-04	5.54E-04	5.61E-04	5.39E-04	5.42E-04	5.33E-04	-	-	5.46E-04	5.46E-04	5.33E-04	5.61E-04	0.00	0.00	5.61E-04	14	93
Boron (B)	µg/m³	4.56E-03	4.52E-03	4.70E-03	4.56E-03		4.63E-03	4.51E-03	4.47E-03	4.52E-03	4.66E-03	4.61E-03	4.67E-03	4.50E-03	4.52E-03	4.44E-03	120	0	4.55E-03	4.55E-03	4.44E-03	4.67E-03	0.00	0.00	4.67E-03	14	93
Cadmium (Cd)	µg/m³	5.41E-05	1.49E-04	1.33E-04	1.39E-04		1.22E-04	1.49E-04	1.63E-04	1.37E-04	2.21E-04	5.84E-05	5.61E-05	9.89E-05	1.39E-04	5.63E-05	0.025	0	1.07E-04	1.19E-04	5.41E-05	2.21E-04	0.00	0.00	1.39E-04	14	93
Chromium (Cr)	µg/m³	1.03E-03	1.02E-03	1.07E-03	1.03E-03		1.05E-03	1.02E-03	1.01E-03	1.02E-03	1.06E-03	1.05E-03	1.06E-03	2.76E-03	2.95E-03	1.01E-03	0.5	0	1.21E-03	1.31E-03	1.01E-03	2.95E-03	0.00	0.00	2.95E-03	14	93
Cobalt (Co)	µg/m³	5.47E-05	9.34E-05	6.71E-05	5.66E-05		7.83E-05	3.97E-05	6.20E-05	7.65E-05	1.40E-04	6.27E-05	9.41E-05	2.57E-04	2.79E-04	6.34E-05	0.1	0	8.69E-05	1.04E-04	3.97E-05	2.79E-04	0.00	0.00	2.79E-04	14	93
Copper (Cu)	µg/m³	4.12E-02	3.60E-02	3.45E-02	5.08E-02		6.17E-02	2.35E-02	3.51E-02	3.85E-02	3.30E-02	6.40E-02	3.22E-02	5.26E-02	3.96E-02	6.93E-02	50	0	4.24E-02	4.44E-02	2.35E-02	6.93E-02	0.05	0.06	6.93E-02	14	93
Iron (Fe)	µg/m³	9.85E-02	2.31E-01	1.84E-01	1.48E-01		2.44E-01	1.06E-01	1.62E-01	1.64E-01	2.69E-01	1.64E-01	2.34E-01	7.07E-01	7.41E-01	1.59E-01	4	0	2.14E-01	2.64E-01	9.85E-02	7.41E-01	0.23	0.27	7.41E-01	14	93
Lead (Pb)	µg/m³	1.19E-03	1.39E-03	2.06E-03	1.75E-03		2.85E-03	1.83E-03	2.52E-03	2.01E-03	2.83E-03	1.28E-03	1.89E-03	3.14E-03	2.87E-03	9.36E-04	0.5	0	1.91E-03	2.04E-03	9.36E-04	3.14E-03	0.00	0.00	3.14E-03	14	93
Magnesium (Mg)	µg/m³	1.32E-01	2.06E-01	1.55E-01	1.46E-01		1.42E-01	5.05E-02	1.56E-01	1.28E-01	2.33E-01	2.02E-01	2.27E-01	4.20E-01	6.14E-01	1.97E-01	-	-	1.85E-01	2.19E-01	5.05E-02	6.14E-01	0.21	0.23	6.14E-01	14	93
Manganese (Mn)	µg/m³	3.12E-03	8.19E-03	6.71E-03	4.56E-03		6.23E-03	3.04E-03	3.99E-03	8.13E-03	1.05E-02	4.67E-03	7.91E-03	1.73E-02	2.38E-02	5.75E-03	0.4	0	6.80E-03	8.25E-03	3.04E-03	2.38E-02	0.01	0.01	2.38E-02	14	93
Molybdenum (Mo)	µg/m³	1.72E-03	1.45E-03	1.10E-03	2.51E-03		3.14E-03	1.06E-03	1.10E-03	1.53E-03	2.15E-03	3.32E-03	9.78E-04	2.94E-03	1.73E-03	2.45E-03	120	0	1.85E-03	2.01E-03	9.78E-04	3.32E-03	0.00	0.00	3.32E-03	14	93
Nickel (Ni)	µg/m³	5.05E-04	6.33E-04	6.58E-04	6.45E-04		6.60E-04	1.08E-03	5.01E-04	7.35E-04	1.15E-03	7.20E-04	1.41E-03	1.68E-03	1.79E-03	1.22E-03	0.2	0	8.94E-04	9.79E-04	5.01E-04	1.79E-03	0.00	0.00	1.79E-03	14	93
Phosphorus (P)	µg/m³	5.23E-01	4.58E-01	2.35E-01	2.28E-01		2.31E-01	2.26E-01	5.31E-01	4.82E-01	6.34E-01	2.31E-01	2.34E-01	2.25E-01	2.26E-01	2.22E-01	-	-	3.13E-01	3.42E-01	2.22E-01	6.34E-01	0.52	0.63	2.34E-01	14	93
Selenium (Se)	µg/m³	3.95E-04	3.92E-04	4.07E-04	3.95E-04		9.25E-04	3.91E-04	3.88E-04	3.91E-04	9.95E-04	4.00E-04	4.05E-04	3.90E-04	3.91E-04	3.85E-04	10	0	4.51E-04	4.80E-04	3.85E-04	9.95E-04	0.00	0.00	4.05E-04	14	93
Silver (Ag)	µg/m³	2.74E-05	2.71E-05	2.82E-05	2.74E-05		6.66E-05	2.71E-05	2.68E-05	2.71E-05	2.80E-05	2.77E-05	2.80E-05	2.36E-04	2.71E-05	2.67E-05	1	0	3.45E-05	4.63E-05	2.67E-05	2.36E-04	0.00	0.00	2.36E-04	14	93
Strontium (Sr)	µg/m³	4.50E-03	9.52E-03	4.70E-03	5.96E-03		4.94E-03	9.02E-04	5.96E-03	5.06E-03	8.46E-03	6.27E-03	5.73E-03	9.77E-03	1.22E-02	5.21E-03	120	0	5.69E-03	6.50E-03	9.02E-04	1.22E-02	0.01	0.01	1.22E-02	14	93
Thallium (Tl)	µg/m³	2.74E-05	2.71E-05	2.82E-05	2.74E-05		2.78E-05	2.71E-05	2.68E-05	2.71E-05	7.53E-05	2.77E-05	2.80E-05	2.70E-05	2.71E-05	2.67E-05	-	-	2.95E-05	3.09E-05	2.67E-05	7.53E-05	0.00	0.00	2.80E-05	14	93
Tin (Sn)	µg/m³	6.14E-04	9.76E-04	8.84E-04	1.83E-04		1.59E-03	4.99E-04	5.43E-04	6.62E-04	1.26E-03	5.72E-04	8.35E-04	1.92E-03	9.39E-04	3.91E-04	10	0	7.17E-04	8.45E-04	1.83E-04	1.92E-03	0.00	0.00	1.92E-03	14	93
Titanium (Ti)	µg/m³	3.35E-03	3.31E-03	3.45E-03	3.35E-03		3.39E-03	3.31E-03	3.28E-03	3.31E-03	3.42E-03	3.38E-03	3.43E-03	1.32E-02	1.57E-02	3.26E-03	120	0	4.18E-03	5.05E-03	3.26E-03	1.57E-02	0.00	0.00	1.57E-02	14	93
Uranium (Ur)	µg/m³	5.23E-06	1.19E-05	7.02E-06	6.81E-06		8.64E-06	8.42E-06	6.20E-06	1.81E-06	2.26E-05	4.98E-06	9.53E-06	3.56E-05	3.47E-05	6.64E-06	0.3	0	9.13E-06	1.25E-05	1.81E-06	3.56E-05	0.00	0.00	3.56E-05	14	93
Vanadium (V)	µg/m³	1.52E-03	1.51E-03	1.57E-03	1.52E-03		1.54E-03	1.50E-03	1.49E-03	1.51E-03	1.55E-03	1.54E-03	1.56E-03	1.50E-03	1.51E-03	1.48E-03	2	0	1.52E-03	1.52E-03	1.48E-03	1.56E-03	0.00	0.00	1.56E-03	14	93
Zinc (Zn)	µg/m³	3.35E-02	3.48E-02	5.44E-02	4.68E-02		4.75E-02	6.37E-02	1.13E-01	5.27E-02	8.96E-02	1.64E-02	3.79E-02	2.89E-02	6.20E-02	2.58E-02	120	0	4.43E-02	5.02E-02	1.64E-02	1.13E-01	0.05	0.11	6.20E-02	14	93
Zirconium (Zr)	µg/m³	6.08E-04	6.03E-04	6.27E-04	6.08E-04		6.17E-04	6.01E-04	5.96E-04	6.02E-04	6.22E-04	6.15E-04	6.23E-04	5.99E-04	6.02E-04	5.93E-04	-	-	6.07E-04	6.07E-04	5.93E-04	6.23E-04	0.00	0.00	6.23E-04	14	93

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

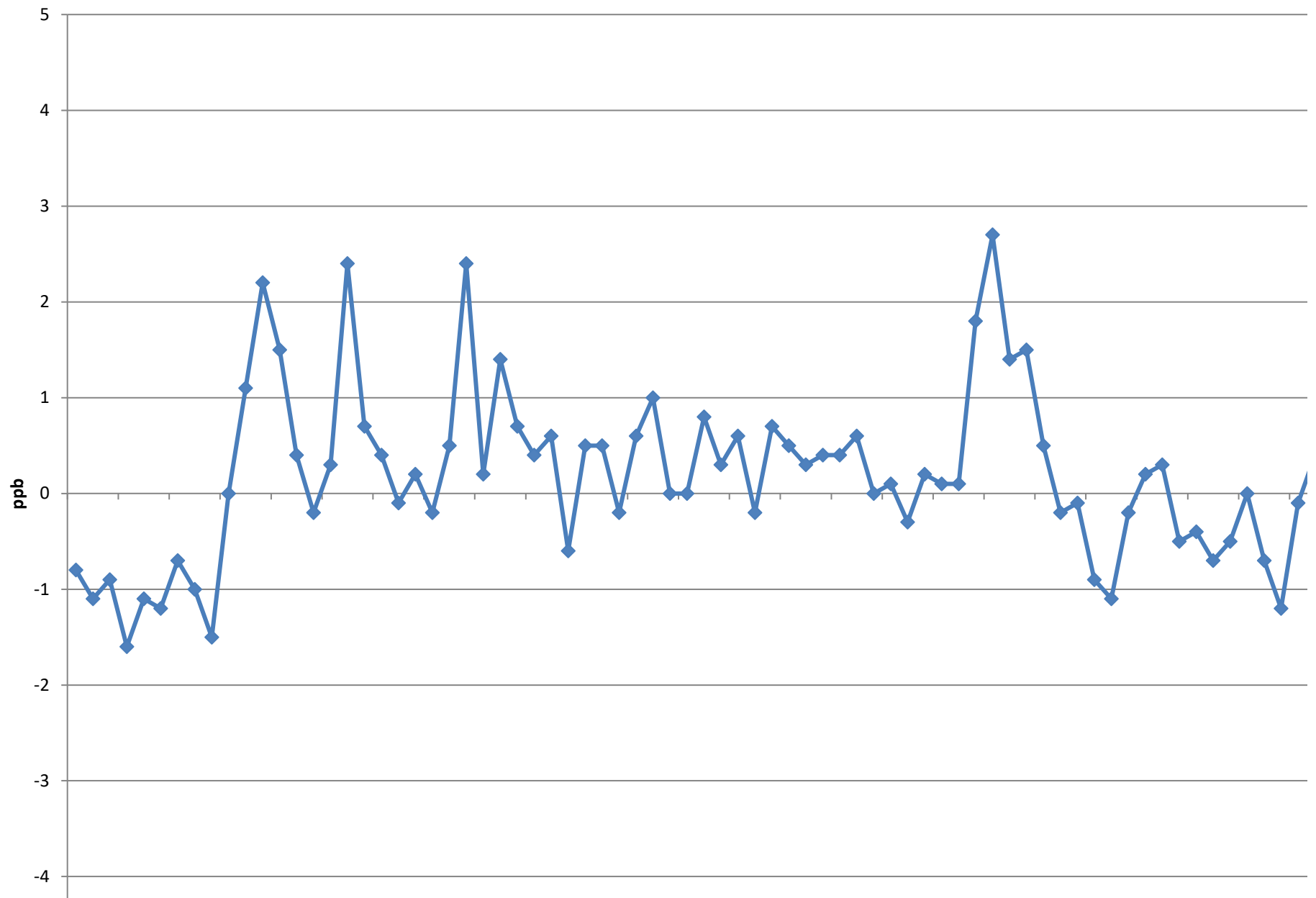
A large decorative graphic on the left side of the page. It features a blue triangular shape at the top left, which is partially covered by a large, light beige circular arc that sweeps across the page. The text 'APPENDIX C' is centered within the beige area.

APPENDIX C

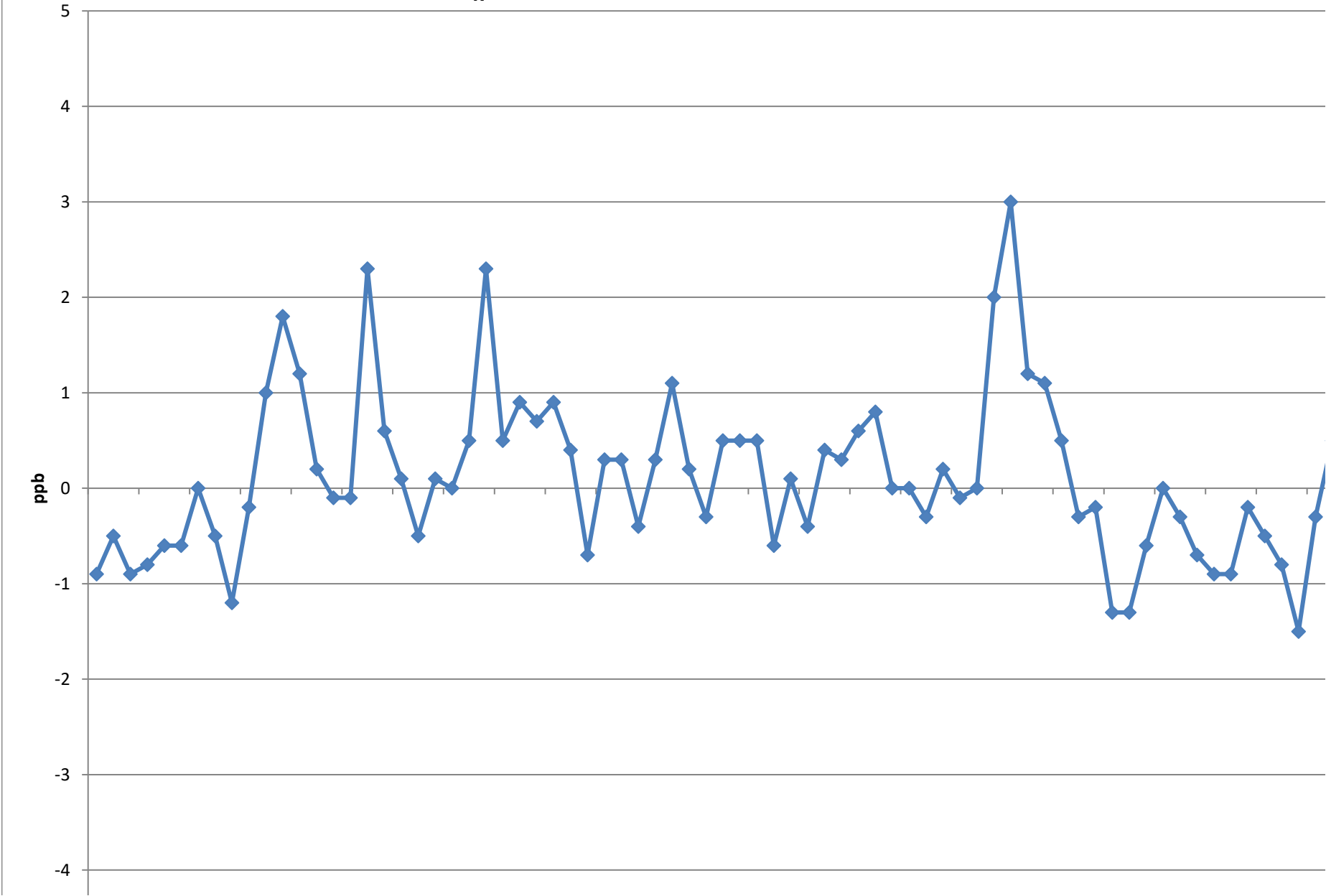
NO Zeros (Courtice Monitoring Station)



NO₂ Zeros (Courtice Monitoring Station)

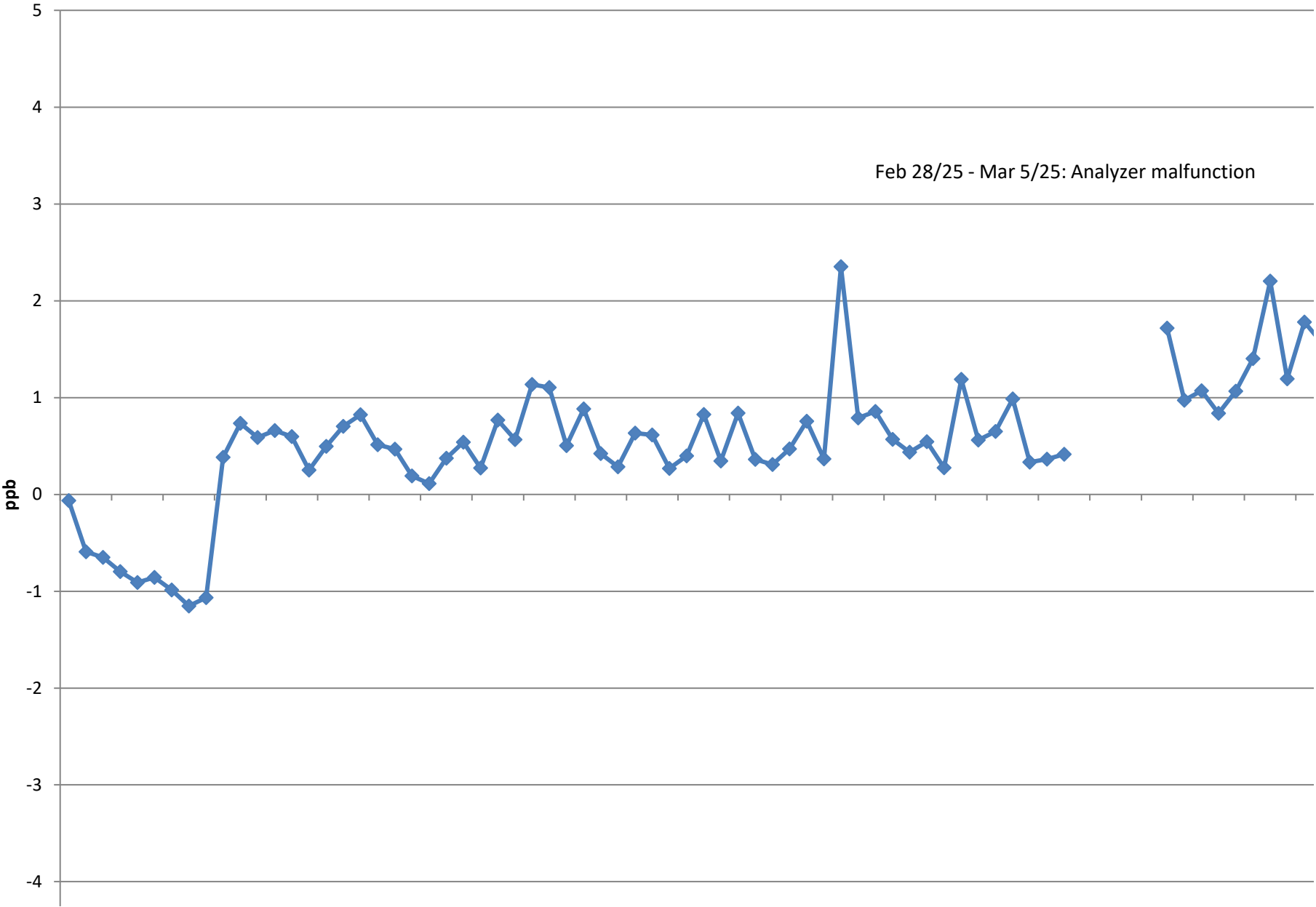


NO_x Zeros (Courtice Monitoring Station)

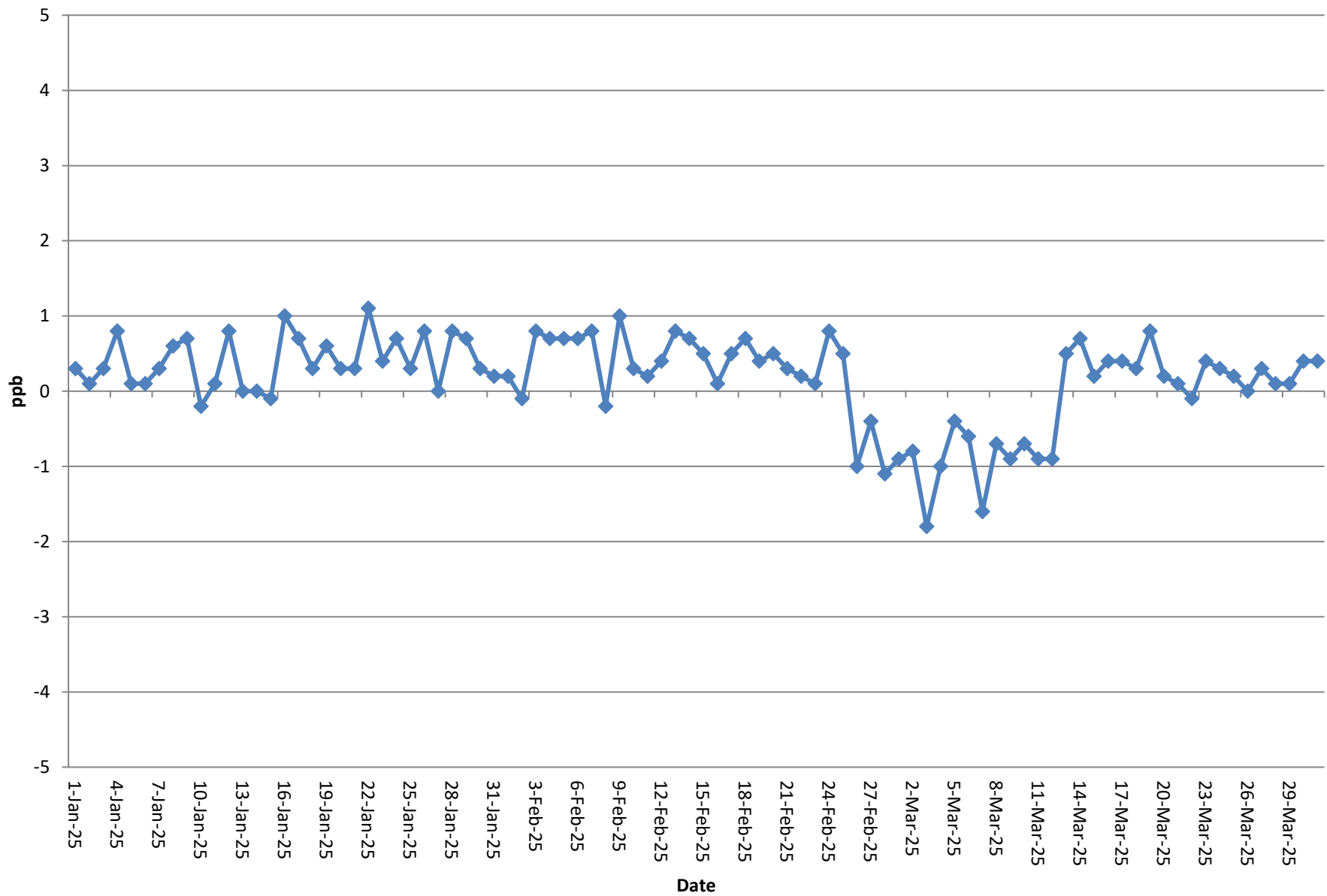


SO₂ Zeros (Courtice Monitoring Station)

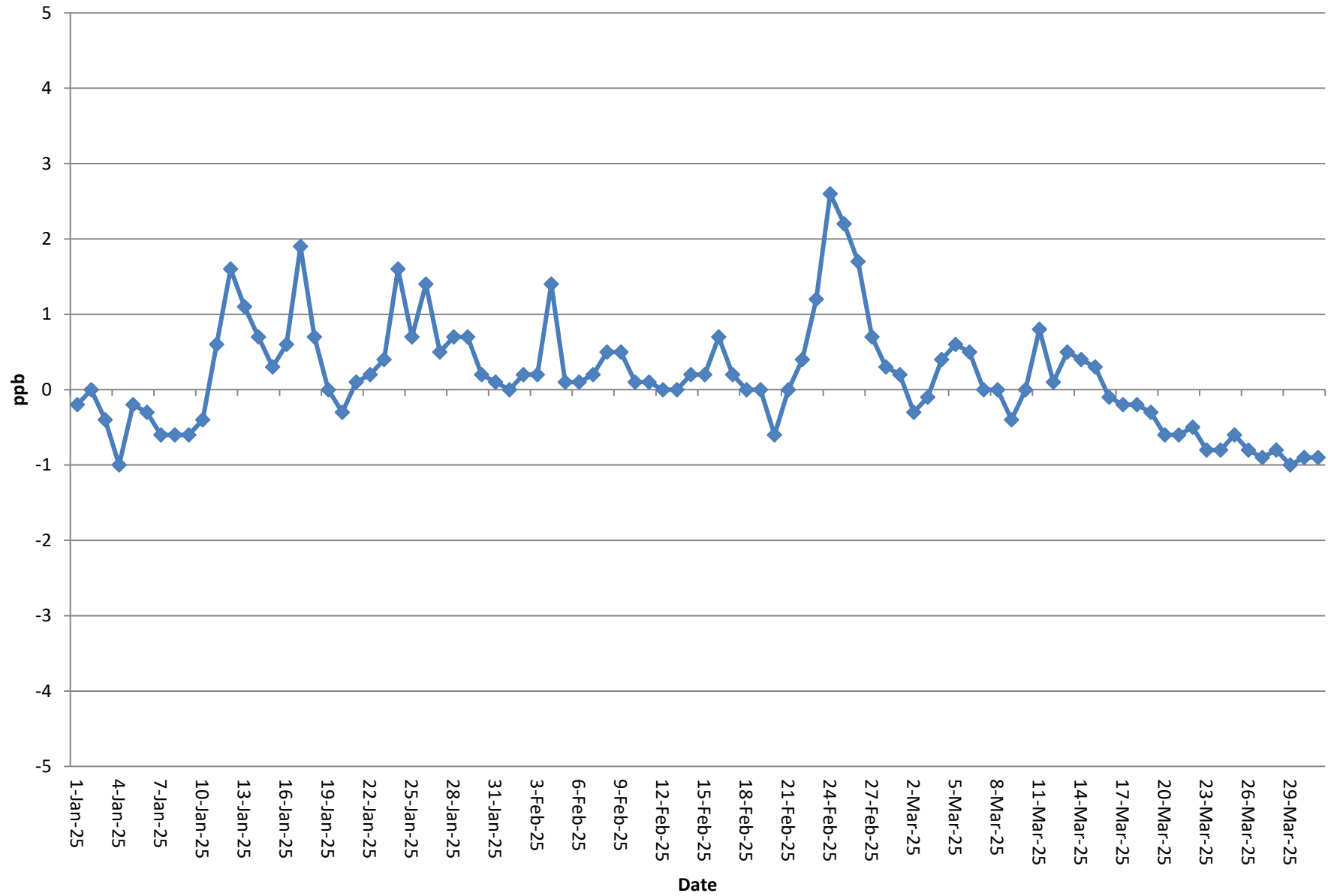
Feb 28/25 - Mar 5/25: Analyzer malfunction



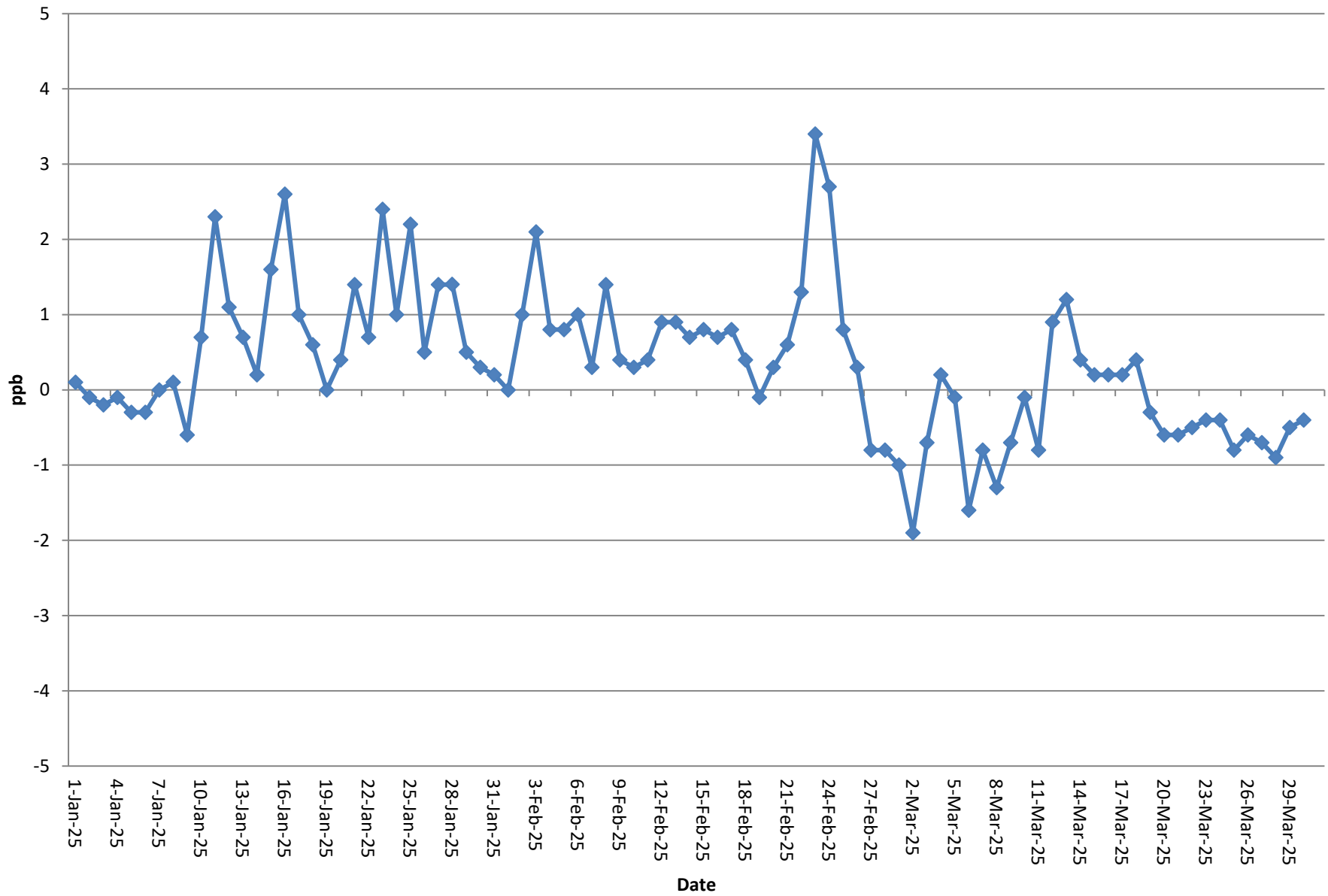
NO Zeros (Rundle Monitoring Station)



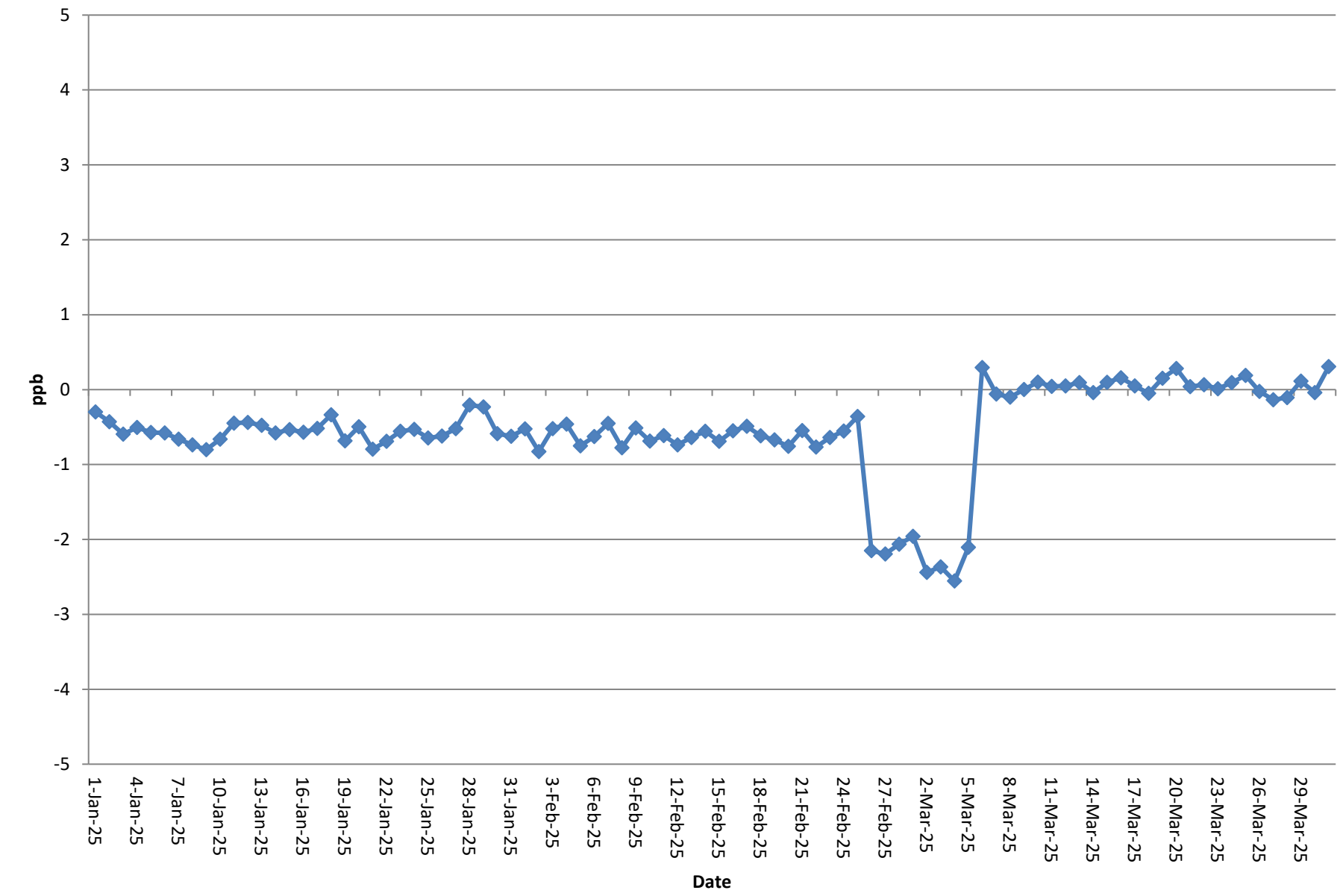
NO₂ Zeros (Rundle Monitoring Station)

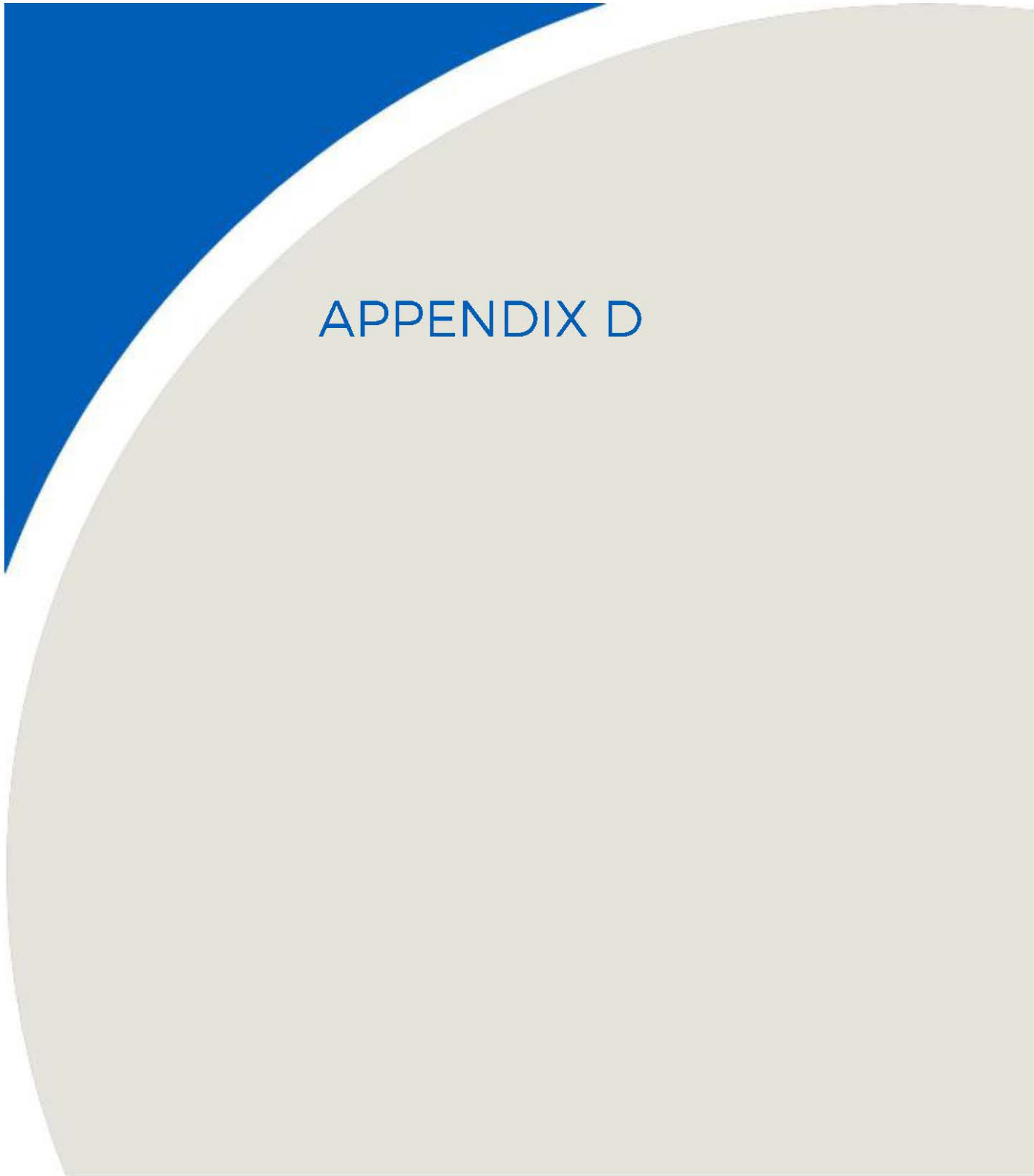


NO_x Zeros (Rundle Monitoring Station)



SO₂ Zeros (Rundle Monitoring Station)



A large decorative graphic on the left side of the page. It features a blue triangular shape in the top-left corner, a white curved line separating it from a large light-grey circular area, and the text 'APPENDIX D' centered within the grey area.

APPENDIX D

Table D1: Q1 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: January 1, 2025		End Date: March 31, 2025			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	09/01/2025	SRS	Hours Deleted	09/01/2025	14:00	09/01/2025	15:00	1	Monthly calibration
2	03/02/2025	AXT	Zero Correction	01/01/2025	0:00	01/02/2025	0:00	-	Correcting Values <0 to 0
3	03/03/2025	AXT	Hours Deleted	11/02/2025	13:00	11/02/2025	14:00	1	Power outage - no data
4	24/02/2025	SRS	Hours Deleted	24/02/2025	16:00	24/02/2025	17:00	1	Monthly calibration
5	11/03/2025	SRS	Hours Deleted	11/03/2025	12:00	11/03/2025	13:00	1	Zero Check
6	12/03/2025	SRS	Hours Deleted	12/03/2025	9:00	12/03/2025	11:00	2	Quarterly Audit
7	13/03/2025	SRS	Hours Deleted	13/03/2025	12:00	13/03/2025	13:00	1	Monthly calibration

Table D2: Q1 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 Rossland 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: January 1, 2025			End Date: March 31, 2025			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	10/01/2025	SRS	Hours Deleted	10/01/2025	12:00	10/01/2025	13:00	1	Monthly calibration
2	25/02/2025	SRS	Hours Deleted	25/02/2025	14:00	24/02/2025	15:00	1	Monthly calibration
3	13/03/2025	SRS	Hours Deleted	12/03/2025	11:00	12/03/2025	12:00	1	Quarterly Audit
4	13/03/2025	SRS	Hours Deleted	13/03/2025	10:00	13/03/2025	11:00	1	Monthly calibration

Table D3: Q1 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: January 1, 2025		End Date: March 31, 2025			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	09/01/2025	SRS	Hours Deleted	09/01/2025	13:00	09/01/2025	15:00	2	Monthly calibration
2	03/02/2025	AXT	Zero Correction	01/01/2025	0:00	01/02/2025	0:00	-	Baseline corrected based off overnight zeros
3	03/02/2025	AXT	Zero Correction	01/01/2025	0:00	01/02/2025	0:00	-	Correcting Values <0 to 0
4	03/03/2025	AXT	Hours Deleted	11/02/2025	13:00	11/02/2025	14:00	1	Power outage - no data
5	24/02/2025	SRS	Hours Deleted	24/02/2025	14:00	24/02/2025	17:00	3	Monthly calibration
6	03/03/2025	AXT	Zero Correction	01/02/2025	0:00	01/03/2025	0:00	-	Baseline corrected based off overnight zeros
7	03/03/2025	AXT	Zero Correction	01/02/2025	0:00	01/03/2025	0:00	-	Correcting Values <0 to 0
8	12/03/2025	SRS	Hours Deleted	12/03/2025	9:00	12/03/2025	11:00	2	Quarterly Audit
9	13/03/2025	SRS	Hours Deleted	13/03/2025	11:00	13/03/2025	13:00	2	Monthly calibration

Table D4: Q1 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: January 1, 2025		End Date: March 31, 2025			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	10/01/2025	SRS	Hours Deleted	10/01/2025	11:00	10/01/2025	13:00	2	Monthly calibration
2	03/02/2025	AXT	Zero Correction	01/01/2025	0:00	01/02/2025	0:00	-	Baseline corrected based off overnight zeros
3	25/02/2025	SRS	Hours Deleted	25/02/2025	12:00	24/02/2025	16:00	4	Monthly calibration
4	07/03/2025	AXT	Zero Correction	01/02/2025	0:00	01/03/2025	0:00	-	Baseline corrected based off overnight zeros
5	12/03/2025	AXT	Hours Deleted	12/03/2025	11:00	12/03/2025	12:00	1	Quarterly Audit
6	12/03/2025	AXT	Hours Deleted	12/03/2025	12:00	13/03/2025	16:00	4	Calibration attempt
7	13/03/2025	AXT	Hours Deleted	13/03/2025	8:00	13/03/2025	11:00	3	Monthly calibration
8	01/04/2025	AXT	Hours Deleted	01/03/2025	0:00	01/04/2025	0:00	-	Baseline corrected based off overnight zeros
9	01/04/2025	AXT	Zero Correction	01/01/2025	0:00	01/04/2025	0:00	-	Correcting Values <0 to 0

Table D5: Q1 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: January 1, 2025		End Date: March 31, 2025			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	03/02/2025	AXT	Hours Deleted	09/01/2025	12:00	09/01/2025	16:00	4	Maintenance & Monthly calibration
2	03/02/2025	AXT	Zero Offset Adjustment	01/01/2025	0:00	09/01/2025	12:00	-	Zero Drift Adjustment Based on 'As Found' Calibration
3	03/02/2025	AXT	Zero Correction	01/01/2025	0:00	01/02/2025	0:00	-	Correcting Values <0 to 0
4	03/03/2025	AXT	Hours Deleted	11/02/2025	13:00	11/02/2025	14:00	1	Power outage - no data
5	25/02/2025	SRS	Hours Deleted	25/02/2025	10:00	25/02/2025	12:00	2	Monthly calibration
6	07/03/2025	AXT	Hours Deleted	28/02/2025	8:00	05/03/2025	14:00	126	Analyzer failure - no data
7	05/03/2025	SRS	Hours Deleted	05/03/2025	14:00	05/03/2025	16:00	2	Spare analyzer install calibration
8	11/03/2025	SRS	Hours Deleted	11/03/2025	10:00	11/03/2025	13:00	3	Analyzer verification
9	12/03/2025	SRS	Hours Deleted	12/03/2025	9:00	12/03/2025	11:00	2	Quarterly Audit

Table D6: Q1 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: January 1, 2025		End Date: March 31, 2025			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	10/01/2025	SRS	Hours Deleted	10/01/2025	10:00	10/01/2025	12:00	2	Monthly calibration
2	25/02/2025	SRS	Hours Deleted	25/02/2025	15:00	25/02/2025	17:00	2	Monthly calibration
3	06/03/2025	AXT	Zero Offset Adjustment	10/01/2025	11:00	25/02/2025	15:00	-	Zero Drift Adjustment Based on 'As Found' Calibration
4	06/03/2025	AXT	Zero Correction	01/01/2025	0:00	01/03/2025	0:00	-	Correcting Values <0 to 0
5	05/03/2025	SRS	Hours Deleted	05/03/2025	11:00	05/03/2025	14:00	3	Maintenance and Calibration
6	12/03/2025	SRS	Hours Deleted	12/03/2025	11:00	12/03/2025	12:00	1	Quarterly Audit
7	12/03/2025	SRS	Hours Deleted	12/03/2025	14:00	12/03/2025	16:00	2	Analyzer Check / Calibration
8	01/04/2025	AXT	Hours Deleted	01/03/2025	0:00	01/04/2025	00:000	-	Correcting Values <0 to 0

Table D7: Q1 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: January 1, 2025		End Date: March 31, 2025			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	04/02/2025	AXT	Hours Deleted	09/01/2025	13:00	09/01/2025	14:00	1	WS, WD, ET, RH, BP - Communication error during site visit
2	01/04/2025	AXT	Hours Deleted	30/03/2025	0:00	30/03/2025	8:00	8	Windhead frozen - no data

Table D8: Q1 Edit Log for Meteorological Parameters at Rundle Road Station

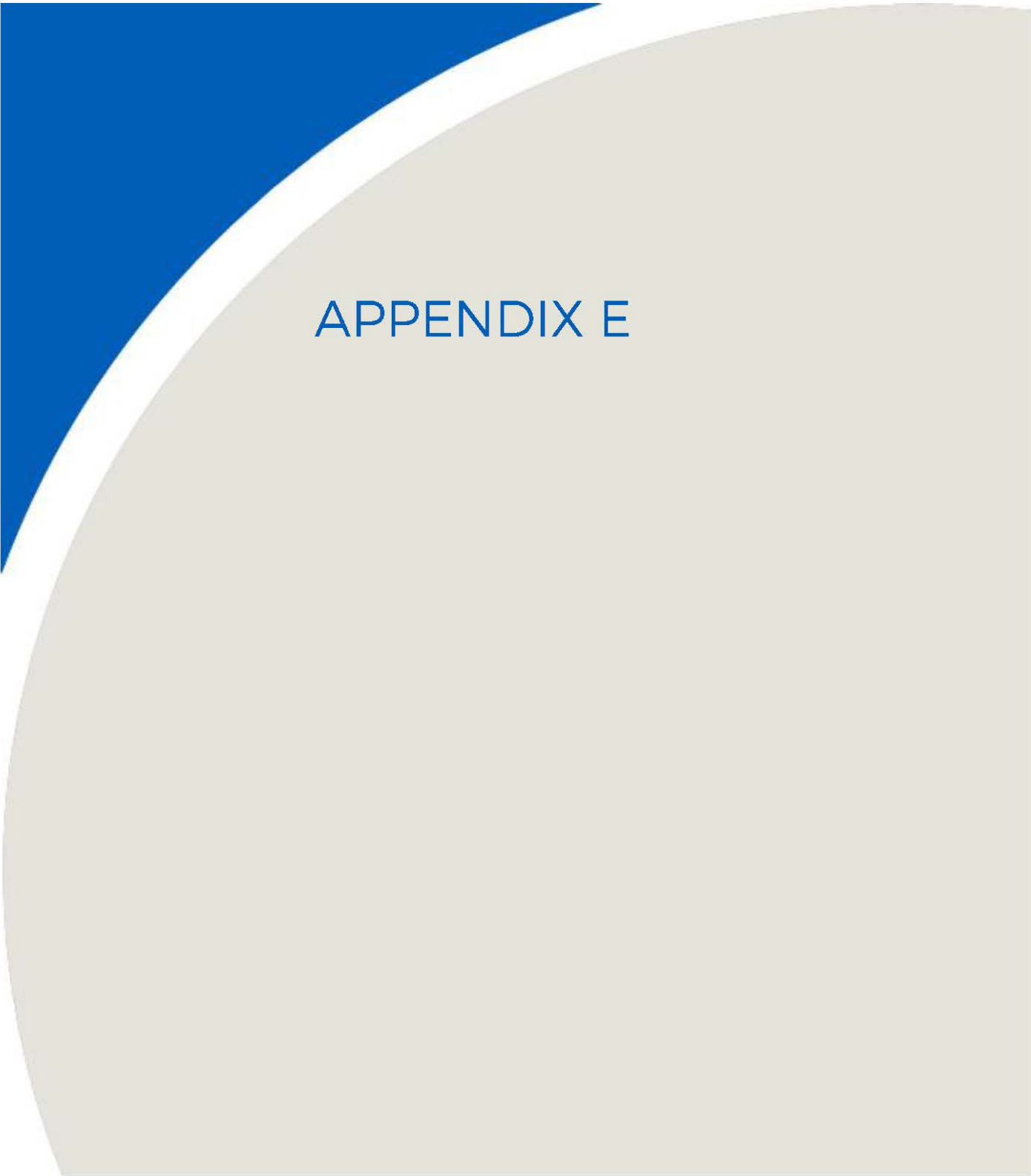
Emitter's Name: Durham York Energy Centre									
Contact	Name: Ms. Lyndsay Waller			Phone: (905) 404-0888 ext 4107			Email: Lyndsay.Waller@Durham.ca		
Station Number: 45200				Station Name: Rundle Station					
Station Address: Rundle Road				Emitter Address: The Region of Durham, 605 Rossland Road, Whitby, ON					
Pollutants or Parameter: WS, WD, Ambient T, P, RH and Rain			Instrument Make & Model: Miscellaneous Meteorological Instrumentation						s/n: N/A
Data Edit Period		Start Date: January 1, 2025		End Date: March 31, 2025			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	07/03/2025	AXT	Hours Deleted	15/02/2025	15:00	16/02/2025	18:00	27	Windhead frozen - no speed or direction data
2	07/03/2025	AXT	Hours Deleted	16/02/2025	22:00	17/02/2025	4:00	6	Windhead frozen - no speed or direction data
3	07/03/2025	AXT	Hours Deleted	22/02/2025	20:00	23/02/2025	8:00	12	Windhead frozen - no speed or direction data
4	07/03/2025	AXT	Hours Deleted	28/02/2025	4:00	28/02/2025	10:00	6	Windhead frozen - no speed or direction data
5	09/04/2025	AXT	Hours Deleted	01/03/2025	6:00	03/03/2025	9:00	51	Windhead frozen - no speed or direction data
6	09/04/2025	AXT	Hours Deleted	06/03/2025	16:00	07/06/2025	8:00	16	Windhead frozen - no speed or direction data
7	09/04/2025	AXT	Hours Deleted	08/03/2025	0:00	08/03/2025	11:00	11	Windhead frozen - no speed or direction data
8	01/04/2025	AXT	Hours Deleted	08/03/2025	19:00	09/03/2025	8:00	13	Windhead frozen - no speed or direction data
9	09/04/2025	AXT	Hours Deleted	12/03/2025	0:00	12/03/2025	9:00	9	Windhead frozen - no speed or direction data
10	01/04/2025	AXT	Hours Deleted	13/03/2025	2:00	13/03/2025	8:00	6	Windhead frozen - no speed or direction data
11	01/04/2025	AXT	Hours Deleted	13/03/2025	17:00	14/03/2025	8:00	15	Windhead frozen - no speed or direction data
12	09/04/2025	AXT	Hours Deleted	17/03/2025	6:00	17/03/2025	9:00	3	Windhead frozen - no speed or direction data
13	09/04/2025	AXT	Hours Deleted	17/03/2025	23:00	18/03/2025	7:00	8	Windhead frozen - no speed or direction data
14	01/04/2025	AXT	Hours Deleted	22/03/2025	19:00	23/03/2025	10:00	15	Windhead frozen - no speed or direction data
15	01/04/2025	AXT	Hours Deleted	27/03/2025	0:00	27/03/2025	8:00	8	Windhead frozen - no speed or direction data
16	01/04/2025	AXT	Hours Deleted	29/03/2025	18:00	30/03/2025	9:00	15	Wind Direction - data logger channel malfunction

Table D9: Q1 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: January 1, 2025		End Date: March 31, 2025			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	04/02/2025	AXT	Hours Deleted	25/01/2025	0:00	26/01/2025	0:00	24	TSP - Sample Volume outside criteria (+/- 10%)
2	14/03/2025	AXT	Hours Deleted	02/03/2025	0:00	03/05/2025	0:00	24	TSP - Sample Volume outside criteria (+/- 10%)
3	28/03/2025	AXT	Hours Deleted	26/03/2025	0:00	27/03/2025	0:00	24	PAH and D&F - Sample day missed

Table D10: Q1 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: January 1, 2025		End Date: March 31, 2025			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	2/4/2025	AXT	Hours Deleted	1/25/2025	0:00	26/01/2025	0:00	24	TSP - Sample Volume outside criteria (+/- 10%)
2	28/03/2025	AXT	Hours Deleted	26/03/2025	0:00	27/03/2025	0:00	24	PAH and D&F - Sample day missed

A large decorative graphic on the left side of the page, featuring a blue triangle and a large beige circle. The text 'APPENDIX E' is centered within the beige circle.

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)
2/5/2025	16:40	27	15
2/5/2025	16:45	54	41
2/5/2025	16:50	76	65
2/5/2025	16:55	90	<u>83</u>
2/5/2025	17:00	38	64
2/5/2025	17:05	14	26
2/5/2025	17:10	50	32
Hidden cells with no values exceeding limit.			
2/5/2025	20:05	18	17
2/5/2025	20:10	7	13
2/5/2025	20:15	87	47
2/5/2025	20:20	56	71
2/5/2025	20:25	53	54
2/5/2025	20:30	55	54
2/5/2025	20:35	53	54
Hidden cells with no values exceeding limit.			
2/15/2025	0:25	66	60
2/15/2025	0:30	24	45
2/15/2025	0:35	68	46
2/15/2025	0:40	86	77
2/15/2025	0:45	39	62
2/15/2025	0:50	45	42
2/15/2025	0:55	83	64
2/15/2025	1:00	62	73
2/15/2025	1:05	35	49
2/15/2025	1:10	24	30
2/15/2025	1:15	69	47
Hidden cells with no values exceeding limit.			
2/15/2025	2:30	9	9
2/15/2025	2:35	31	20
2/15/2025	2:40	65	48
2/15/2025	2:45	74	70
2/15/2025	2:50	59	67
2/15/2025	2:55	44	52
2/15/2025	3:00	23	34

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
2/22/2025	1:05	11	12
2/22/2025	1:10	88	49
2/22/2025	1:15	57	72
2/22/2025	1:20	38	48
2/22/2025	1:25	47	42
2/22/2025	1:30	25	36
Hidden cells with no values exceeding limit.			
2/22/2025	2:00		
2/22/2025	2:05		
2/22/2025	2:10		
2/22/2025	2:15	87	87
2/22/2025	2:20	66	77
2/22/2025	2:25	64	65
2/22/2025	2:30	43	53
2/22/2025	2:35	21	32
2/22/2025	2:40	68	45
2/22/2025	2:45	91	80
2/22/2025	2:50	70	81
2/22/2025	2:55	38	54
2/22/2025	3:00	60	49
Hidden cells with no values exceeding limit.			
2/22/2025	4:00	17	22
2/22/2025	4:05	15	16
2/22/2025	4:10	95	55
2/22/2025	4:15	72	83
2/22/2025	4:20	69	70
2/22/2025	4:25	50	59
Hidden cells with no values exceeding limit.			
2/26/2025	18:50	41	37
2/26/2025	18:55	53	47
2/26/2025	19:00	104	78
2/26/2025	19:05	54	79
2/26/2025	19:10	18	36

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:

10

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)
3/11/2025	2:40	12	17
3/11/2025	2:45	21	16
3/11/2025	2:50	92	56
3/11/2025	2:55	190	141
3/11/2025	3:00	130	160
3/11/2025	3:05	44	87
3/11/2025	3:10	42	43
3/11/2025	3:15	24	33
3/11/2025	3:20	16	20
Hidden cells with no values exceeding limit.			
3/12/2025	1:10	16	18
3/12/2025	1:15	26	21
3/12/2025	1:20	103	65
3/12/2025	1:25	59	81
3/12/2025	1:30	20	40
3/12/2025	1:35	5	13
3/12/2025	1:40	142	74
3/12/2025	1:45		142
3/12/2025	1:50		
3/12/2025	1:55		
Hidden cells with no values exceeding limit.			
3/12/2025	2:35	7	7
3/12/2025	2:40	17	12
3/12/2025	2:45	105	61
3/12/2025	2:50	151	128
3/12/2025	2:55	143	147
3/12/2025	3:00	57	100
3/12/2025	3:05	36	46
3/12/2025	3:10	16	26
3/12/2025	3:15	11	14
3/12/2025	3:20	107	59
3/12/2025	3:25	148	128
3/12/2025	3:30	176	162

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/12/2025	3:35	163	169
3/12/2025	3:40	105	134
3/12/2025	3:45	63	84
3/12/2025	3:50	61	62
3/12/2025	3:55	34	48
3/12/2025	4:00	24	29
Hidden cells with no values exceeding limit.			
3/13/2025	23:55	9	14
3/14/2025	0:00	13	11
3/14/2025	0:05	117	65
3/14/2025	0:10	57	87
3/14/2025	0:15	28	42
3/14/2025	0:20	17	22
3/14/2025	0:25	12	14
Hidden cells with no values exceeding limit.			
3/14/2025	0:45	14	17
3/14/2025	0:50	25	20
3/14/2025	0:55	95	60
3/14/2025	1:00	141	118
3/14/2025	1:05	142	141
3/14/2025	1:10	130	136
3/14/2025	1:15	110	120
3/14/2025	1:20	41	76
3/14/2025	1:25	26	34
3/14/2025	1:30	76	51
3/14/2025	1:35	51	63
Hidden cells with no values exceeding limit.			
3/14/2025	2:10	Purge	
3/14/2025	2:15	165	
3/14/2025	2:20	143	154
3/14/2025	2:25	159	151
3/14/2025	2:30	134	147
3/14/2025	2:35	155	145
3/14/2025	2:40	87	121
3/14/2025	2:45	43	65
3/14/2025	2:50	30	37
3/14/2025	2:55	68	49
3/14/2025	3:00	111	89
3/14/2025	3:05	121	116
3/14/2025	3:10	47	84
3/14/2025	3:15	95	71

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/14/2025	3:20	113	104
3/14/2025	3:25	50	81
3/14/2025	3:30	34	42
3/14/2025	3:35	72	53
3/14/2025	3:40	68	70
3/14/2025	3:45	92	80
3/14/2025	3:50	40	66
3/14/2025	3:55	25	32
Hidden cells with no values exceeding limit.			
3/23/2025	4:35	47	44
3/23/2025	4:40	29	38
3/23/2025	4:45	62	45
3/23/2025	4:50	187	125
3/23/2025	4:55	69	128
3/23/2025	5:00	55	62
3/23/2025	5:05	70	63
3/23/2025	5:10	88	79
3/23/2025	5:15	43	66
3/23/2025	5:20	182	113
3/23/2025	5:25	116	149
3/23/2025	5:30	111	113
3/23/2025	5:35	110	110
3/23/2025	5:40	75	92
3/23/2025	5:45	43	59
3/23/2025	5:50	27	35
3/23/2025	5:55	59	43
3/23/2025	6:00	187	123
3/23/2025	6:05	185	186
3/23/2025	6:10	172	179
3/23/2025	6:15	187	180
3/23/2025	6:20	166	177
3/23/2025	6:25	130	148
3/23/2025	6:30	48	89
3/23/2025	6:35	72	60
3/23/2025	6:40	59	65
3/23/2025	6:45	56	58
Hidden cells with no values exceeding limit.			
3/28/2025	3:20	3	3

Date	Time	SO ₂	SO ₂
		5-min Avg.	10-minute Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/28/2025	3:25	49	26
3/28/2025	3:30	87	68
3/28/2025	3:35	26	57
3/28/2025	3:40	11	19
3/28/2025	3:45	65	38
3/28/2025	4:05	74	41
3/28/2025	4:10	37	55
3/28/2025	4:15	74	55
3/28/2025	4:20	67	70
3/28/2025	4:25	26	47
3/28/2025	4:30	15	20
3/28/2025	4:35	10	12
3/28/2025	4:40	8	9
3/28/2025	4:45	7	7
3/28/2025	4:50	141	74
3/28/2025	4:55	117	129
3/28/2025	5:00	70	94
3/28/2025	5:05	42	56
3/28/2025	5:10	88	65
Hidden cells with no values exceeding limit.			
3/28/2025	6:00	15	17
3/28/2025	6:05	12	13
3/28/2025	6:10	74	43
3/28/2025	6:15	66	70
3/28/2025	6:20	39	52
3/28/2025	6:25	61	50
Hidden cells with no values exceeding limit.			
3/28/2025	6:50	14	16
3/28/2025	6:55	65	39
3/28/2025	7:00	87	76
3/28/2025	7:05	58	73
3/28/2025	7:10	54	56

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
Max	- Maximum of the Range
Min	- Minimum of the Range

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

Total Number of Reportable Exceedences:

35

SO₂ Exceedance Report**Table E3**

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)
2/5/2025	16:20	2	7
2/5/2025	16:25	2	7
2/5/2025	16:30	11	6
2/5/2025	16:35	3	5
2/5/2025	16:40	27	7
2/5/2025	16:45	54	10
2/5/2025	16:50	76	16
2/5/2025	16:55	90	23
2/5/2025	17:00	38	26
2/5/2025	17:05	14	27
2/5/2025	17:10	50	31
2/5/2025	17:15	23	33
2/5/2025	17:20	8	33
2/5/2025	17:25	87	40
2/5/2025	17:30	25	41
2/5/2025	17:35	16	42
2/5/2025	17:40	9	41
2/5/2025	17:45	36	39
2/5/2025	17:50	11	34
2/5/2025	17:55	13	28
2/5/2025	18:00	9	25
2/5/2025	18:05	9	25
2/5/2025	18:10	52	25
2/5/2025	18:15	30	25
2/5/2025	18:20	44	28
2/5/2025	18:25	26	23
2/5/2025	18:30	18	23
Hidden cells with no values exceeding limit.			
2/5/2025	19:55	5	21
2/5/2025	20:00	16	19
2/5/2025	20:05	18	16
2/5/2025	20:10	7	12
2/5/2025	20:15	87	17
2/5/2025	20:20	56	20

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
2/5/2025	20:25	53	23
2/5/2025	20:30	55	27
2/5/2025	20:35	53	31
2/5/2025	20:40	42	33
2/5/2025	20:45	42	37
2/5/2025	20:50	29	38
2/5/2025	20:55	22	40
2/5/2025	21:00	60	44
2/5/2025	21:05	35	45
2/5/2025	21:10	23	46
2/5/2025	21:15	21	41
2/5/2025	21:20	17	38
2/5/2025	21:25	15	34
2/5/2025	21:30	10	31
2/5/2025	21:35	8	27
2/5/2025	21:40	7	24
2/5/2025	21:45	7	21
2/5/2025	21:50	7	19
2/5/2025	21:55	6	18
2/5/2025	22:00	5	13
2/5/2025	22:05	5	11
Hidden cells with no values exceeding limit.			
2/8/2025	5:55	38	15
2/8/2025	6:00	8	16
2/8/2025	6:05	29	18
2/8/2025	6:10	60	23
2/8/2025	6:15	54	27
2/8/2025	6:20	58	30
2/8/2025	6:25	29	28
2/8/2025	6:30	15	28
2/8/2025	6:35	23	28
2/8/2025	6:40	44	31
2/8/2025	6:45	52	35
2/8/2025	6:50	25	36
2/8/2025	6:55	53	38
2/8/2025	7:00	53	41
2/8/2025	7:05	24	41
2/8/2025	7:10	15	37
2/8/2025	7:15	11	33
2/8/2025	7:20	10	29
2/8/2025	7:25	7	28

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
2/8/2025	7:30	5	27
2/8/2025	7:35	5	25
2/8/2025	7:40	7	22
2/8/2025	7:45	11	19
2/8/2025	7:50	6	17
2/8/2025	7:55	13	14
2/8/2025	8:00	52	14
2/8/2025	8:05	50	16
Hidden cells with no values exceeding limit.			
2/14/2025	23:35	2	3
2/14/2025	23:40	2	3
2/14/2025	23:45	2	3
2/14/2025	23:50	2	2
2/14/2025	23:55	24	4
2/15/2025	0:00	30	6
2/15/2025	0:05	43	10
2/15/2025	0:10	39	13
2/15/2025	0:15	73	19
2/15/2025	0:20	55	23
2/15/2025	0:25	66	28
2/15/2025	0:30	24	30
2/15/2025	0:35	68	36
2/15/2025	0:40	86	43
2/15/2025	0:45	39	46
2/15/2025	0:50	45	49
2/15/2025	0:55	83	54
2/15/2025	1:00	62	57
2/15/2025	1:05	35	56
2/15/2025	1:10	24	55
2/15/2025	1:15	69	55
2/15/2025	1:20	60	55
2/15/2025	1:25	38	53
2/15/2025	1:30	42	54
2/15/2025	1:35	48	53
2/15/2025	1:40	72	51
2/15/2025	1:45		53
2/15/2025	1:50		53
2/15/2025	1:55		50
2/15/2025	2:00		49
2/15/2025	2:05		50
2/15/2025	2:10		55

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
2/15/2025	2:15	22	47
2/15/2025	2:20	13	39
2/15/2025	2:25	10	35
2/15/2025	2:30	9	29
2/15/2025	2:35	31	26
2/15/2025	2:40	65	25
2/15/2025	2:45	74	32
Hidden cells with no values exceeding limit.			
2/22/2025	1:00	13	25
2/22/2025	1:05	11	25
2/22/2025	1:10	88	30
2/22/2025	1:15	57	31
2/22/2025	1:20	38	34
2/22/2025	1:25	47	34
2/22/2025	1:30	25	33
2/22/2025	1:35	20	32
2/22/2025	1:40	25	33
2/22/2025	1:45		35
2/22/2025	1:50		35
2/22/2025	1:55		36
2/22/2025	2:00		39
2/22/2025	2:05		43
2/22/2025	2:10		35
2/22/2025	2:15	87	40
2/22/2025	2:20	66	45
2/22/2025	2:25	64	48
2/22/2025	2:30	43	51
2/22/2025	2:35	21	51
2/22/2025	2:40	68	58
2/22/2025	2:45	91	63
2/22/2025	2:50	70	64
2/22/2025	2:55	38	61
2/22/2025	3:00	60	61
2/22/2025	3:05	52	60
2/22/2025	3:10	26	57
2/22/2025	3:15	18	52
2/22/2025	3:20	14	47
2/22/2025	3:25	11	43
2/22/2025	3:30	10	40
2/22/2025	3:35	50	42
2/22/2025	3:40	24	39

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
2/22/2025	3:45	65	37
2/22/2025	3:50	62	36
2/22/2025	3:55	27	35
2/22/2025	4:00	17	31
2/22/2025	4:05	15	28
2/22/2025	4:10	95	34
2/22/2025	4:15	72	39
2/22/2025	4:20	69	43
2/22/2025	4:25	50	46
2/22/2025	4:30	32	48
2/22/2025	4:35	53	48
2/22/2025	4:40	37	49
2/22/2025	4:45	23	46
2/22/2025	4:50	21	43
2/22/2025	4:55	20	42
2/22/2025	5:00	24	42
2/22/2025	5:05	65	47
2/22/2025	5:10	64	44
2/22/2025	5:15	47	42
2/22/2025	5:20	26	38
2/22/2025	5:25	21	36
Hidden cells with no values exceeding limit.			
2/26/2025	18:40	36	4
2/26/2025	18:45	33	7
2/26/2025	18:50	41	10
2/26/2025	18:55	53	14
2/26/2025	19:00	104	23
2/26/2025	19:05	54	27
2/26/2025	19:10	18	29
2/26/2025	19:15	12	29
2/26/2025	19:20	8	30
2/26/2025	19:25	12	31
2/26/2025	19:30	39	34
2/26/2025	19:35	36	37
2/26/2025	19:40	55	39
2/26/2025	19:45	69	42
2/26/2025	19:50	23	40
2/26/2025	19:55	28	38
2/26/2025	20:00	15	31
2/26/2025	20:05	10	27
2/26/2025	20:10	26	28

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
2/26/2025	20:15	45	31
2/26/2025	20:20	26	32
2/26/2025	20:25	25	33
2/26/2025	20:30	22	32
2/26/2025	20:35	18	30
2/26/2025	20:40	22	28
2/26/2025	20:45	17	23
2/26/2025	20:50	10	22

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 Exceedance 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 Exceedances:

9

SO2 Exceedance Report**Table E4**

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

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/11/2025	1:50		14
3/11/2025	1:55		16
3/11/2025	2:00		17
3/11/2025	2:05		17
3/11/2025	2:10		16
3/11/2025	2:15	38	20
3/11/2025	2:20	13	21
3/11/2025	2:25	9	15
3/11/2025	2:30	102	29
3/11/2025	2:35	23	32
3/11/2025	2:40	12	33
3/11/2025	2:45	21	31
3/11/2025	2:50	92	39
3/11/2025	2:55	190	55
3/11/2025	3:00	130	63
3/11/2025	3:05	44	61
3/11/2025	3:10	42	60
3/11/2025	3:15	24	58
3/11/2025	3:20	16	59
3/11/2025	3:25	23	60
3/11/2025	3:30	22	53
3/11/2025	3:35	23	53
3/11/2025	3:40	14	53
3/11/2025	3:45	17	53
3/11/2025	3:50	22	47
3/11/2025	3:55	17	33
3/11/2025	4:00	9	23
Hidden cells with no values exceeding limit.			
3/12/2025	0:50	0	0
3/12/2025	0:55	0	0
3/12/2025	1:00	0	0
3/12/2025	1:05	19	2
3/12/2025	1:10	16	3
3/12/2025	1:15	26	5

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/12/2025	1:20	103	14
3/12/2025	1:25	59	19
3/12/2025	1:30	20	20
3/12/2025	1:35	5	21
3/12/2025	1:40	142	33
3/12/2025	1:45		36
3/12/2025	1:50		39
3/12/2025	1:55		43
3/12/2025	2:00		49
3/12/2025	2:05		53
3/12/2025	2:10		59
3/12/2025	2:15	86	69
3/12/2025	2:20	30	57
3/12/2025	2:25	15	50
3/12/2025	2:30	8	48
3/12/2025	2:35	7	48
3/12/2025	2:40	17	27
3/12/2025	2:45	105	38
3/12/2025	2:50	151	52
3/12/2025	2:55	143	62
3/12/2025	3:00	57	62
3/12/2025	3:05	36	59
3/12/2025	3:10	16	56
3/12/2025	3:15	11	50
3/12/2025	3:20	107	56
3/12/2025	3:25	148	67
3/12/2025	3:30	176	81
3/12/2025	3:35	163	94
3/12/2025	3:40	105	101
3/12/2025	3:45	63	98
3/12/2025	3:50	61	91
3/12/2025	3:55	34	81
3/12/2025	4:00	24	79
3/12/2025	4:05	20	77
3/12/2025	4:10	15	77
3/12/2025	4:15	17	78
3/12/2025	4:20	19	70
3/12/2025	4:25	13	59
3/12/2025	4:30	19	46
3/12/2025	4:35	12	34
3/12/2025	4:40	9	25

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/12/2025	4:45	8	21
3/12/2025	4:50	8	16
3/12/2025	4:55	10	14
3/12/2025	5:00	12	13
Hidden cells with no values exceeding limit.			
3/13/2025	23:50	18	22
3/13/2025	23:55	9	18
3/14/2025	0:00	13	14
3/14/2025	0:05	117	22
3/14/2025	0:10	57	25
3/14/2025	0:15	28	27
3/14/2025	0:20	17	28
3/14/2025	0:25	12	28
3/14/2025	0:30	56	32
3/14/2025	0:35	32	34
3/14/2025	0:40	20	33
3/14/2025	0:45	14	33
3/14/2025	0:50	25	33
3/14/2025	0:55	95	40
3/14/2025	1:00	141	51
3/14/2025	1:05	142	53
3/14/2025	1:10	130	59
3/14/2025	1:15	110	66
3/14/2025	1:20	41	68
3/14/2025	1:25	26	69
3/14/2025	1:30	76	71
3/14/2025	1:35	51	73
3/14/2025	1:40	54	75
3/14/2025	1:45		81
3/14/2025	1:50		87
3/14/2025	1:55		86
3/14/2025	2:00		79
3/14/2025	2:05		70
3/14/2025	2:10		60
3/14/2025	2:15	165	69
3/14/2025	2:20	143	86
3/14/2025	2:25	159	108
3/14/2025	2:30	134	118
3/14/2025	2:35	155	135
3/14/2025	2:40	87	141
3/14/2025	2:45	43	127

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/14/2025	2:50	30	115
3/14/2025	2:55	68	109
3/14/2025	3:00	111	110
3/14/2025	3:05	121	111
3/14/2025	3:10	47	105
3/14/2025	3:15	95	99
3/14/2025	3:20	113	97
3/14/2025	3:25	50	88
3/14/2025	3:30	34	79
3/14/2025	3:35	72	73
3/14/2025	3:40	68	71
3/14/2025	3:45	92	75
3/14/2025	3:50	40	76
3/14/2025	3:55	25	72
3/14/2025	4:00	31	65
3/14/2025	4:05	21	57
3/14/2025	4:10	16	54
3/14/2025	4:15	13	48
3/14/2025	4:20	28	40
3/14/2025	4:25	79	43
3/14/2025	4:30	32	43
3/14/2025	4:35	52	41
3/14/2025	4:40	50	40
3/14/2025	4:45	36	35
3/14/2025	4:50	20	33
3/14/2025	4:55	16	33
3/14/2025	5:00	16	31
Hidden cells with no values exceeding limit.			
3/23/2025	3:45	2	4
3/23/2025	3:50	2	4
3/23/2025	3:55	2	4
3/23/2025	4:00	1	4
3/23/2025	4:05	12	5
3/23/2025	4:10	26	7
3/23/2025	4:15	19	9
3/23/2025	4:20	24	11
3/23/2025	4:25	47	15
3/23/2025	4:30	41	17
3/23/2025	4:35	47	19
3/23/2025	4:40	29	21
3/23/2025	4:45	62	26

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/23/2025	4:50	187	42
3/23/2025	4:55	69	47
3/23/2025	5:00	55	52
3/23/2025	5:05	70	56
3/23/2025	5:10	88	62
3/23/2025	5:15	43	64
3/23/2025	5:20	182	77
3/23/2025	5:25	116	83
3/23/2025	5:30	111	88
3/23/2025	5:35	110	94
3/23/2025	5:40	75	97
3/23/2025	5:45	43	96
3/23/2025	5:50	27	82
3/23/2025	5:55	59	82
3/23/2025	6:00	187	93
3/23/2025	6:05	185	102
3/23/2025	6:10	172	109
3/23/2025	6:15	187	121
3/23/2025	6:20	166	120
3/23/2025	6:25	130	121
3/23/2025	6:30	48	116
3/23/2025	6:35	72	113
3/23/2025	6:40	59	111
3/23/2025	6:45	56	112
3/23/2025	6:50	76	116
3/23/2025	6:55	51	116
3/23/2025	7:00	42	104
3/23/2025	7:05	39	92
3/23/2025	7:10	27	79
3/23/2025	7:15	35	67
3/23/2025	7:20	19	55
3/23/2025	7:25	15	45
3/23/2025	7:30	12	42
3/23/2025	7:35	11	37
3/23/2025	7:40	8	33
3/23/2025	7:45	7	29
3/23/2025	7:50	10	23
3/23/2025	7:55	6	19
Hidden cells with no values exceeding limit.			
3/28/2025	3:15	4	27
3/28/2025	3:20	3	24

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/28/2025	3:25	49	24
3/28/2025	3:30	87	31
3/28/2025	3:35	26	30
3/28/2025	3:40	11	25
3/28/2025	3:45	65	28
3/28/2025	3:50	27	27
3/28/2025	3:55	12	26
3/28/2025	4:00	8	25
3/28/2025	4:05	74	31
3/28/2025	4:10	37	34
3/28/2025	4:15	74	40
3/28/2025	4:20	67	45
3/28/2025	4:25	26	43
3/28/2025	4:30	15	37
3/28/2025	4:35	10	36
3/28/2025	4:40	8	35
3/28/2025	4:45	7	30
3/28/2025	4:50	141	40
3/28/2025	4:55	117	49
3/28/2025	5:00	70	54
3/28/2025	5:05	42	51
3/28/2025	5:10	88	55
3/28/2025	5:15	29	52
3/28/2025	5:20	19	47
3/28/2025	5:25	13	46
3/28/2025	5:30	10	46
3/28/2025	5:35	9	46
3/28/2025	5:40	8	46
3/28/2025	5:45	9	46
3/28/2025	5:50	43	38
3/28/2025	5:55	19	30
3/28/2025	6:00	15	25
3/28/2025	6:05	12	23
3/28/2025	6:10	74	22
3/28/2025	6:15	66	25
3/28/2025	6:20	39	26
3/28/2025	6:25	61	30
3/28/2025	6:30	44	33
3/28/2025	6:35	47	36
3/28/2025	6:40	29	38
3/28/2025	6:45	18	39

Date	Time	SO ₂	SO ₂
		5-min Avg.	1-hr Running Avg.
(dd/mm/yyyy)	(EST)	(ppb)	(ppb)
3/28/2025	6:50	14	36
3/28/2025	6:55	65	40
3/28/2025	7:00	87	46
3/28/2025	7:05	58	50
3/28/2025	7:10	54	49
3/28/2025	7:15	38	46
3/28/2025	7:20	31	46
3/28/2025	7:25	19	42
3/28/2025	7:30	14	40
3/28/2025	7:35	12	37
3/28/2025	7:40	11	35
3/28/2025	7:45	10	35
3/28/2025	7:50	9	34
3/28/2025	7:55	8	29
3/28/2025	8:00	8	23

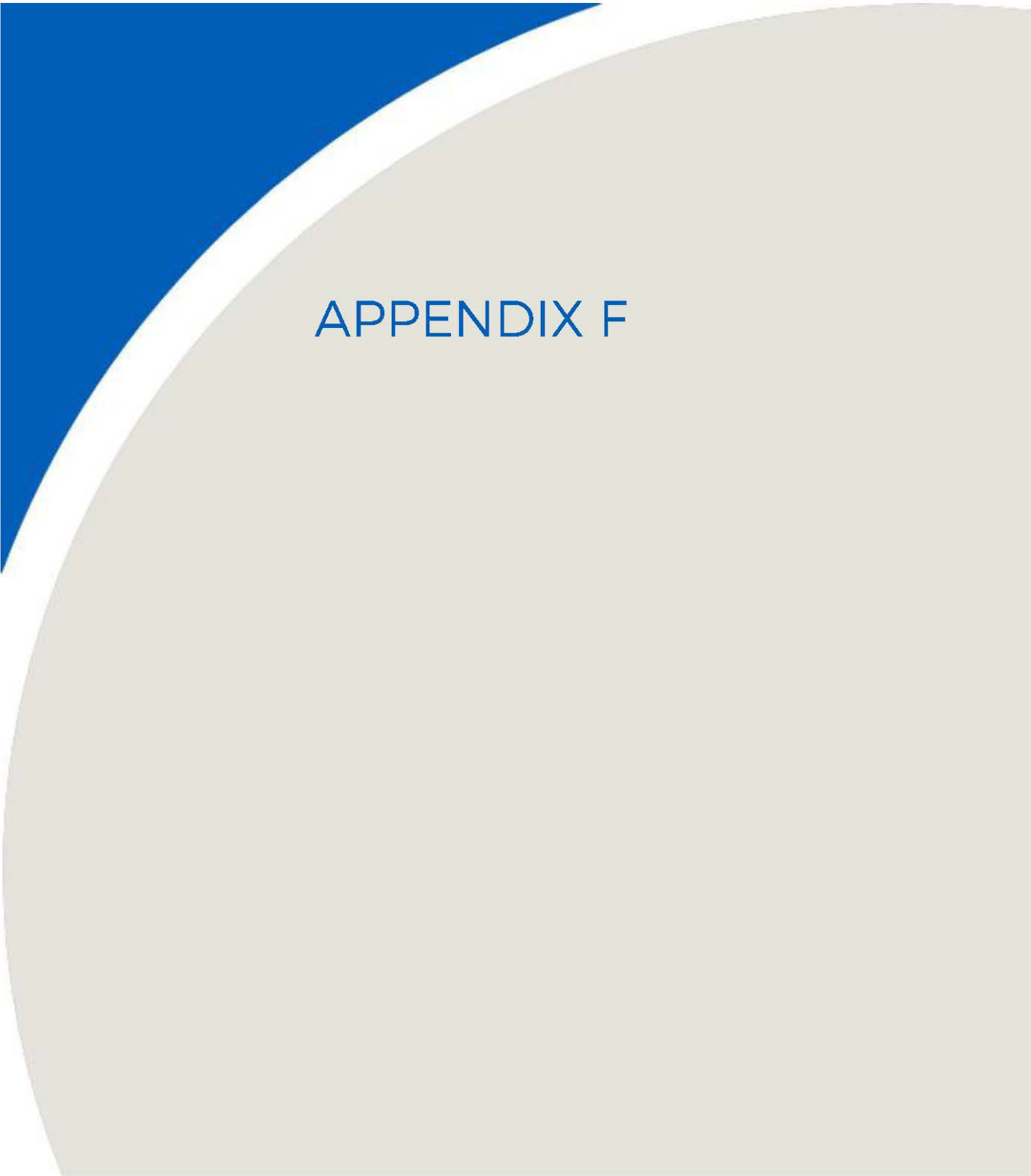
Notes:

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:

14

A large decorative graphic on the left side of the page. It features a blue triangular shape in the top-left corner, a white curved line separating it from a large light-grey circular area, and a blue curved line separating the grey area from the rest of the page.

APPENDIX F



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May 9, 2025

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**Re: Durham York Energy Centre (DYEC)
2025 Ambient Air Q1 Sulphur Dioxide Emissions
RWDI Reference No. 2505260**

In support of the 2025, Q1 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 Q1, there were forty-five (45) exceedance events above the rolling 10-minute SO₂ Ambient Air Quality Criteria (AAQC) and twenty-two (22) 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 2025 DYEC Ambient Air Q1 Report, the Courtice Station pollution rose in **Figure 6** shows that the majority of elevated SO₂ events 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 <0.39% of the 5-min SO₂ events are elevated >67 ppb and the majority occurred from the north and north-northeast directions. 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 0-16 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.