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The Regional Municipality of Durham
COUNCIL INFORMATION PACKAGE
November 4, 2022

Information Reports

2022-INFO-87 Commissioner of Works - Durham York Energy Centre 2022 Voluntary Source Test Update

2022-INFO-88 Commissioner of Planning and Economic Development – re: Monitoring of Land Division Committee Decisions of the September 12, 2022 Meeting

2022-INFO-89 Commissioner and Medical Officer of Health – re: 2022 Annual Report of the Chief Public Health Officer of Canada

Early Release Reports

There are no Early Release Reports

Staff Correspondence

1. Memorandum from John Presta, Commissioner of Works – re: Durham York Energy Centre Quarterly (Q2 - 2022) Long-Term Sampling System Report
2. Memorandum from Dr. R. J. Kyle, Commissioner and Medical Officer of Health – re: Health Information Update – October 30, 2022

Durham Municipalities Correspondence

1. City of Oshawa – re: resolution passed at their Council meeting held on September 26, 2022, regarding Amendments to Bill 3, Strong Mayors, Building Homes Act, 2022

Other Municipalities Correspondence/Resolutions

1. Municipality of Huron Shores – re: resolution passed at their Council meeting held on October 26, 2022, regarding their Opposition to Bill 3

Miscellaneous Correspondence

1. Toronto and Region Conservation Authority – re: resolution passed at their Board Meeting held on September 23, 2022, regarding 2022 Updates to the TRCA Board of Director's Administrative By-law

Advisory / Other Committee Minutes

1. 9-1-1 Management Board minutes – October 18, 2022

Members of Council – Please advise the Regional Clerk at clerks@durham.ca, if you wish to pull an item from this CIP and include on the next regular agenda of the appropriate Standing Committee. Items will be added to the agenda if the Regional Clerk is advised by Wednesday noon the week prior to the meeting, otherwise the item will be included on the agenda for the next regularly scheduled meeting of the applicable Committee.

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The Regional Municipality of Durham
Information Report

From:	Commissioner of Works
Report:	#2022-INFO-87
Date:	November 4, 2022

Subject:

Durham York Energy Centre 2022 Voluntary Source Test Update

Recommendation:

Receive for information

Report:

1. Purpose

1.1 The purpose of this report is to provide an update on the 2022 Voluntary Source Test results at the Durham York Energy Centre (DYEC).

2. Background

2.1 As directed by Regional Council, the Owners are to perform an annual Voluntary Source Test in accordance with the procedures and schedules outlined in Schedule “E” of the Environmental Compliance Approval (ECA). The Voluntary Source Test measures the rate of emission of the test contaminants from the stack.

3. Voluntary Source Test

3.1 The Voluntary Source Test was conducted between May 16, 2022, through to May 19, 2022, for all test contaminants on both Boiler #1 and Boiler #2.

3.2 The results summary of the Voluntary Source Test demonstrated that all emissions were within the limits detailed in the ECA (**Attachment #1**).

3.3 The full Voluntary Source Test Report was sent to the Ministry of Environment, Conservation and Parks (MECP) and subsequently posted to the project website.

3.4 The DYEC emissions dispersion was modeled utilizing the Voluntary Source Test data and the MECP approved CALPUFF model. The results of the contaminant concentrations at the maximum point of impingement were then compared to the limits within the Ontario Regulation 419/05 Air Pollution – Local Air Quality. Ontario Regulation 419/05 Air Pollution – Local Air Quality limits are set to be protective of human health and the environment.

3.5 All of the calculated impingement concentrations were well below the regulatory limits.

4. Owners' Consultant Reviews

4.1 Ausenco, formerly Hemmera, the Source Test peer reviewer, provided their Final Report (**Attachment #2**) to the Region on October 5, 2022. Ausenco's report concluded:

> "The review of the draft Source Testing Report, combined with our on-site observations, has not revealed any major concerns with regards to the conduct of the source testing, the analytical analysis, or the analytical calculations. Therefore, there are no concerns about the validity of the source testing data reported by Ortech especially with regard to comparisons to the relevant in-stack limits."

4.2 Ausenco's report provided several recommendations that will be considered in future source testing programs. The report has been shared with Ortech accordingly.

4.3 HDR personnel were also present during the Source Tests. In their report (**Attachment #3)** HDR indicated that:

> "HDR has completed our review of the preliminary results of the air emissions testing performed during the DYEC Spring 2022 Voluntary Test. Representatives from HDR were present at the DYEC to observe the sampling procedures and facility operations throughout the majority of the testing period that occurred between May 16 and May 19, 2022. HDR observed ORTECH following the approved stack sampling procedures and test methods. HDR also observed Covanta's plant personnel operating the DYEC under normal operating conditions and in accordance with

acceptable industry operating standards. Based on the results summarized in ORTECH's final test report (dated July 12, 2022), the air emission results of the Spring 2022 Voluntary Test demonstrated that the DYEC operated below the ECA's Schedule "C" limits."

5. Continued Demonstrated Performance

5.1 DYEC demonstrates consistent performance with the appropriate controls and monitoring in place which provide a level of safety and protection to human health and the environment.

5.2 The results of testing completed from 2018-2022 are presented in Attachment #4. The data presented indicates that the DYEC has consistently demonstrated it can safely and effectively operate within the ECA Schedule "C" limits.

5.3 A table comparison of the latest source testing results against the ECA limits and A-7 guideline is presented in Attachment #5. DYEC consistently operates and performs below regulatory limits.

6. Conclusion

6.1 The Owners' technical consultants and peer reviewers have confirmed that the Voluntary Source Test was conducted in accordance with the Ministry of the Environment, Conservation and Parks' guidelines.

6.2 All results of the Voluntary Source Test were below the concentration limits prescribed in Schedule C of the Environmental Compliance Approval.

6.3 Using CALPUFF dispersion modelling techniques, the predicted maximum point of impingement concentrations, based on the average test results for both boilers, show Durham York Energy Centre to be operating well below all current standards in Regulation 419/05 under the Environmental Protection Act and other Ministry of the Environment, Conservation and Parks criteria including guidelines and upper risk thresholds.

7. Attachments

Attachment #1: Voluntary Source Test Results Summary

Attachment #2: Ausenco 2022 Voluntary Source Test Final Report

Attachment #3: HDR Inc. 2022 Voluntary Source Test Technical Memorandum

Attachment #4: Source Test Results 2018-2022

Attachment #5: Comparison Table: 2022 Voluntary Source Test Results Compared to ECA limits and Ontario A-7 Guideline

Respectfully submitted,

Original signed by:

John Presta, P.Eng., MPA
Commissioner of Works

EXECUTIVE SUMMARY

ORTECH Consulting Inc. (ORTECH) completed a voluntary compliance emission testing program at the Durham York Energy Centre (DYEC) located in Courtice, Ontario between May 16 and May 19, 2022. The voluntary emission testing program was performed at the request of the Regions of Durham and York. The current test program is the seventh voluntary test program conducted at the facility.

Ontario Ministry of the Environment, Conservation and Parks (MECP) Amended Environmental Compliance Approval (ECA) No. 7306-8FDKNX Section 7(1) states that "the owner shall perform annual source testing, in accordance with the procedures and schedule outlined in the attached Schedule E, to determine the rates of emissions of the test contaminants from the stack. The program shall be conducted not later than six months after the commencement date of operation of the facility/equipment and subsequent source testing programs shall be conducted once every calendar year thereafter". A list of the test programs conducted by ORTECH to date is provided below:

Test Program	Test Date	ORTECH Report No.
2015 Compliance	September/October 2015	21546
2016 Voluntary	May 2016	21656
2016 Compliance	October/November 2016	21698
2017 Voluntary	May 2017	21754
2017 Compliance	October 2017	21800
2018 Voluntary	May/June 2018	21840
2018 Compliance	September 2018	21880
2019 Voluntary	June 2019	21936
2019 Compliance	September 2019	21960
2020 Voluntary	June 2020	22001
2020 Compliance	November 2020	22050
2021 Voluntary	June 2021	22081
2021 Compliance	November/December 2021	22085
2022 Voluntary	May 2022	22158

Source testing was performed on the Baghouse (BH) Outlet of Boiler No. 1 and BH Outlet of Boiler No. 2 for the test contaminants listed in Schedule D of the ECA.

Triplicate emission tests were completed for particulate matter, metals, semi-volatile organic compounds, acid gases, volatile organic compounds, aldehydes and combustion gases at the BH Outlet of each Boiler. Triplicate emission tests were also completed for total hydrocarbons at the Quench Inlet of each Boiler. The contaminant groups included in the emission test program and the reference test methods used are summarized below:

Test Groups	Reference Method
Particulate and Metals	US EPA Method 29
$PM_{2.5}$/PM_{10} and Condensable Particulate	US EPA Methods 201A and 202
Semi-Volatile Organic Compounds	Environment Canada Method EPS 1/RM/2
Volatile Organic Compounds	US EPA SW-846 Method 0030 (SLO VOST modification)
Aldehydes	NCASI Method ISS/FP-A105.01
Halides and Ammonia	US EPA Method 26A
Combustion Gases:	
Oxygen and Carbon Dioxide	Facility CEM
Carbon Monoxide	Facility CEM
Sulphur Dioxide	Facility CEM
Nitrogen Oxides	Facility CEM
Total Hydrocarbons	ORTECH per US EPA Method 25A

Schedule C of ECA No. 7306-8FDKNX lists in-stack limits for the emissions of various compounds. In-stack emissions limits are given for particulate matter, mercury, cadmium, lead, dioxins and furans and organic matter for comparison with the results from compliance source testing. In-stack emission limits are also given for hydrochloric acid, sulphur dioxide, nitrogen oxides and carbon monoxide calculated as the rolling arithmetic average of data measured by a continuous emission monitoring system (CEMS).

Since relative accuracy and system bias testing was conducted in June 2021, the data recorded by the DYEC CEMS was used to assess against the in-stack emissions limits detailed in Schedule C of the ECA for hydrochloric acid, sulphur dioxide, nitrogen oxides and carbon monoxide. Note the DYEC CEMS data for the days when isokinetic testing was performed at each unit (May 17 to May 19, 2022 for Boiler No. 1, and May 16 to May 19, 2022 for Boiler No. 2) was used to determine the minimum, average and maximum concentrations of the combustion gases listed in the ECA. Concentration data measured by ORTECH on May 16 and May 17, 2022 was used to assess against the total hydrocarbons (organic matter) in-stack emissions limit detailed in Schedule C of the ECA.

Consistent with the approach commonly required by the MECP for compliance emission testing programs, the following results are conservative in the sense that when the analytical result is reported to be below the detection limit, the full detection limit is used to calculate emission data and is shown by a "<" symbol. Also, when one or both Boiler results are reported to be below the detection limit, the detection limit was used to conservatively estimate the total emission rate for the Main Stack.

The MECP "Summary of Standards and Guidelines to Support Ontario Regulation 419/05 – Air Pollution – Local Air Quality", dated April 2012, provides an updated framework for calculating dioxin and furan toxicity equivalent concentrations which includes emission data for 12 dioxin-like PCBs. This document was replaced by "Air Contaminants Benchmarks List: standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants", with the most recent version published on April 27, 2018, however the dioxin and furan toxicity equivalent calculation methodology remains the same. The dioxins, furans and dioxin-like PCBs toxicity equivalent emission data was also calculated using half the detection limit for those compounds not detected. The half detection limit data was used to assess against the dispersion modelling Point of Impingement limit. The toxicity equivalent concentrations calculated using the full detection limit, for those compounds less than the reportable detection limit, were used to assess against the in-stack limit detailed in Schedule C of the ECA.

The average results for the tests conducted at Boiler No. 1, along with the respective in-stack emission limits, are summarized in the following table:

Parameter	Test No. 1	Test No. 2	Test No. 3	Average	In-Stack Limit
Total Power Output (MWh/day)*	-	-	-	385	-
Average Combustion Zone Temp. (°C)*	-	-	-	1258	-
Steam (tonnes/day)*	-	-	-	814	-
MSW Combusted (tonnes/day)*	-	-	-	210	-
NO_X Reagent Injection Rate (liters/day)*	-	-	-	695	-
Carbon Injection (kg/day)*	-	-	-	126	-
Lime Injection (kg/day)*	-	-	-	4109	-
Filterable Particulate (mg/Rm^3) (1)	1.09	0.67	0.84	0.87	9
PM_{10} with Condensable (mg/Rm^3) (1)	4.25	4.30	5.56	4.70	-
$PM_{2.5}$ with Condensable (mg/Rm^3) (1)	3.78	3.91	5.35	4.35	-
Hydrogen Fluoride (mg/Rm^3) (1)	<0.091	<0.10	<0.10	<0.097	-
Ammonia (mg/Rm^3) (1)	0.89	0.82	0.86	0.86	-
Cadmium (µg/Rm^3) (1)	<0.022	0.025	0.022	<0.023	7
Lead (µg/Rm^3) (1)	0.21	0.21	0.23	0.22	50
Mercury (µg/Rm^3) (1)	<0.082	<0.090	<0.094	<0.089	15
Antimony (µg/Rm^3) (1)	0.067	0.18	0.077	0.11	-
Arsenic (µg/Rm^3) (1)	<0.044	<0.045	<0.043	<0.044	-
Barium (µg/Rm^3) (1)	0.22	1.40	1.33	0.98	-
Beryllium (µg/Rm^3) (1)	<0.044	<0.045	<0.043	<0.044	-
Chromium (µg/Rm^3) (1)	0.70	0.64	0.63	0.66	-
Cobalt (µg/Rm^3) (1)	0.030	<0.045	<0.043	<0.039	-
Copper (µg/Rm^3) (1)	1.86	2.11	2.13	2.03	-
Molybdenum (µg/Rm^3) (1)	7.99	7.96	7.20	7.72	-
Nickel (µg/Rm^3) (1)	0.49	0.52	0.52	0.51	-
Selenium (µg/Rm^3) (1)	<0.22	<0.22	<0.21	<0.22	-
Silver (µg/Rm^3) (1)	<0.044	<0.045	<0.043	<0.044	-
Thallium (µg/Rm^3) (1)	<0.044	<0.045	<0.043	<0.044	-
Vanadium (µg/Rm^3) (1)	<0.022	<0.022	<0.021	<0.022	-
Zinc (µg/Rm^3) (1)	3.46	3.87	5.70	4.34	-
Dioxins and Furans (pg TEQ/Rm^3) (3)	<8.32	<8.00	<5.51	<7.28	60
Total Chlorobenzenes (ng/Rm^3) (1)	<75.1	<89.9	<103	<89.3	-
Total Chlorophenols (ng/Rm^3) (1)	<165	<165	<162	<164	-
Total PAHs (ng/Rm^3) (1)	<177	<1627	<196	<667	-
VOCs (µg/Rm^3) (1)	<1829	<536	<596	<987	-
Aldehydes (µg/Rm^3) (1)	<49.1	<40.1	<40.6	<43.3	-
Total VOCs (µg/Rm^3) (1) (4)	<1878	<576	<637	<1030	-
Quench Inlet Organic Matter (THC) (ppm, dry) (2)	0.9	0.7	0.4	0.7	50

* based on process data provided by Covanta

(1) dry at 25°C and 1 atmosphere, adjusted to 11% oxygen by volume

(2) dry basis as equivalent methane (average of each 60 minute test with data recorded in 1-minute intervals)

(3) calculated using the NATO/CCMS (1989) toxicity equivalence factors and the full detection limit for those isomers below the analytical detection limit, dry at 25°C and 1 atmosphere, adjusted to 11% oxygen by volume

(4) Includes all components from the volatile organic compounds test list in the ECA (i.e. Volatile Organic Sampling Train and Aldehyde Sampling train components).

The average results for the tests conducted at Boiler No. 2, along with the respective in-stack emission limits, are summarized in the following table:

Parameter	Test No. 1	Test No. 2	Test No. 3	Average	In-Stack Limit
Total Power Output (MWh/day)*	-	-	-	385	-
Average Combustion Zone Temp. (°C)*	-	-	-	1192	-
Steam (tonnes/day)*	-	-	-	808	-
MSW Combusted (tonnes/day)*	-	-	-	210	-
NO_X Reagent Injection Rate (liters/day)*	-	-	-	568	-
Carbon Injection (kg/day)*	-	-	-	126	-
Lime Injection (kg/day)*	-	-	-	4185	-
Filterable Particulate (mg/Rm^3) (1)	3.04	0.67	1.01	1.58	9
PM_{10} with Condensable (mg/Rm^3) (1)	4.83	5.38	<4.13	<4.78	-
$PM_{2.5}$ with Condensable (mg/Rm^3) (1)	4.28	5.10	<3.86	<4.41	-
Hydrogen Fluoride (mg/Rm^3) (1)	<0.098	<0.093	<0.10	<0.097	-
Ammonia (mg/Rm^3) (1)	0.57	0.55	3.00	1.37	-
Cadmium (µg/Rm^3) (1)	0.064	<0.021	0.033	<0.039	7
Lead (µg/Rm^3) (1)	0.38	0.21	0.25	0.28	50
Mercury (µg/Rm^3) (1)	<0.083	<0.082	<0.092	<0.086	15
Antimony (µg/Rm^3) (1)	0.27	0.14	0.044	0.15	-
Arsenic (µg/Rm^3) (1)	<0.047	<0.042	<0.040	<0.043	-
Barium (µg/Rm^3) (1)	1.56	1.42	1.86	1.62	-
Beryllium (µg/Rm^3) (1)	<0.047	<0.042	<0.040	<0.043	-
Chromium (µg/Rm^3) (1)	0.83	1.32	0.67	0.94	-
Cobalt (µg/Rm^3) (1)	0.037	0.035	0.021	0.031	-
Copper (µg/Rm^3) (1)	2.38	2.13	2.16	2.22	-
Molybdenum (µg/Rm^3) (1)	8.15	7.45	7.30	7.63	-
Nickel (µg/Rm^3) (1)	0.65	0.76	0.52	0.64	-
Selenium (µg/Rm^3) (1)	<0.24	<0.21	<0.20	<0.22	-
Silver (µg/Rm^3) (1)	<0.047	<0.042	<0.040	<0.043	-
Thallium (µg/Rm^3) (1)	<0.047	<0.042	<0.040	<0.043	-
Vanadium (µg/Rm^3) (1)	<0.024	<0.021	<0.020	<0.022	-
Zinc (µg/Rm^3) (1)	7.46	3.57	5.78	5.60	-
Dioxins and Furans (pg TEQ/Rm^3) (3)	<4.21	<4.04	<4.05	<4.10	60
Total Chlorobenzenes (ng/Rm^3) (1)	<101	<75.6	<89.1	<88.6	-
Total Chlorophenols (ng/Rm^3) (1)	<160	<158	<161	<160	-
Total PAHs (ng/Rm^3) (1)	<194	<181	<212	<196	-
VOCs (µg/Rm^3) (1)	<827	<531	<807	<722	-
Aldehydes (µg/Rm^3) (1)	<64.9	<47.7	<77.8	<63.4	-
Total VOCs (µg/Rm^3) (1) (4)	<892	<579	<885	<785	-
Quench Inlet Organic Matter (THC) (ppm, dry) (2)	1.2	1.8	1.4	1.5	50

* based on process data provided by Covanta

(1) dry at 25°C and 1 atmosphere, adjusted to 11% oxygen by volume

(2) dry basis as equivalent methane (average of each 60 minute test with data recorded in 1-minute intervals)

(3) calculated using the NATO/CCMS (1989) toxicity equivalence factors and the full detection limit for those isomers below the analytical detection limit, dry at 25°C and 1 atmosphere, adjusted to 11% oxygen by volume

(4) Includes all components from the volatile organic compounds test list in the ECA (i.e. Volatile Organic Sampling Train and Aldehyde Sampling train components).

A summary of the minimum, average and maximum concentrations for the combustion gases measured by the DYEC CEMS with in-stack limits listed in the ECA is provided below for the two units.

Boiler No.	Parameter	Minimum	Average	Maximum	In-Stack Limit
Boiler No. 1	Carbon Monoxide (mg/Rm^3) (1)	5.5	10.7	15.0	40
	Hydrogen Chloride (mg/Rm^3) (2)	0.5	1.0	1.5	9
	Nitrogen Oxides (mg/Rm^3) (2)	108	110	111	121
	Sulphur Dioxide (mg/Rm^3) (2)	0	0.02	0.1	35
Boiler No. 2	Carbon Monoxide (mg/Rm^3) (1)	9.0	15.3	29.8	40
	Hydrogen Chloride (mg/Rm^3) (2)	3.2	3.6	3.9	9
	Nitrogen Oxides (mg/Rm^3) (2)	108	110	111	121
	Sulphur Dioxide (mg/Rm^3) (2)	0	0.9	2.0	35

(1) 4-hour average measured by DYEC CEMS, dry at 25°C and 1 atmosphere adjusted to 11% oxygen by volume
(2) 24-hour average measured by DYEC CEMS, dry at 25°C and 1 atmosphere adjusted to 11% oxygen by volume

The emission data measured at each Boiler BH Outlet during the testing program was combined and used to assess the emissions from the Main Stack against the current point of impingement criteria detailed in Ontario Regulation 419/05.

Dispersion modelling was completed using the CALPUFF model (using Version 7.2.1 level 150618) by Golder Associates. A summary of the results are provided in the tables appended to this report (Appendix 27) based on calculated ground level Point of Impingement (POI) concentrations for the average total Main Stack emissions. As shown in the tables, the calculated impingement concentrations for all of the contaminants were well below the relevant MECP standards.

In summary, the key results of the emission testing program are:

- The facility was maintained within the operational parameters defined by the amended ECA that constitutes normal operation during the stack test periods. Testing was conducted at a steam production rate of greater than 807 tonnes of steam per day for each Boiler (approximately 99.9% of maximum continuous rating). The maximum continuous rating for the facility is 1614.7 tonnes of steam per day for the two Boilers combined (33.64 tonnes of steam per hour or 807.4 tonnes per day for each Boiler).
- The in-stack concentrations of the components listed in the ECA were all below the concentration limits provided in Schedule C of the ECA.
- Using CALPUFF dispersion modelling techniques, the predicted maximum point of impingement concentrations, based on the average test results for both boilers, show DYEC to be operating well below all current standards in Regulation 419/05 under the Ontario Environmental Protection Act and other MECP criteria including guidelines and upper risk thresholds.

Tables referenced in this report for the tests conducted at Boiler No. 1 and Boiler No. 2 are provided in Appendix 1 and Appendix 2, respectively.

Peer Review of DYEC Air Emissions Source Testing
Peer Review of Voluntary 2022 Source Testing

Photo Credit: https://www.plant.ca/features/cleaner-burn/

Prepared for:

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Project No. 106916-01

October 14, 2022

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Disclaimer

This work was performed in accordance with the Consulting/Professional Services agreement between Ausenco Sustainability Inc., formerly Hemmera Envirochem Inc., a wholly owned subsidiary of Ausenco Engineering Canada Inc. (Ausenco), and The Regional Municipality of Durham (Client), dated May 6, 2022 (Contract). This report has been prepared by Ausenco, based on fieldwork conducted by Ausenco, for sole benefit and use by The Regional Municipality of Durham. In performing this work, Ausenco has relied in good faith on information provided by others and has assumed that the information provided by those individuals is both complete and accurate. This work was performed to current industry standard practice for similar environmental work, within the relevant jurisdiction and same locale. The findings presented herein should be considered within the context of the scope of work and project terms of reference; further, the findings are time sensitive and are considered valid only at the time the report was produced. The conclusions and recommendations contained in this report are based upon the applicable guidelines, regulations, and legislation existing at the time the report was produced; any changes in the regulatory regime may alter the conclusions and/or recommendations.

Table of Contents

List of Appendices

List of Acronyms and Abbreviations

Acronym / Abbreviation	Definition
ADMP	Air Dispersion Modelling Plan
CARB	California Air Resources Board
CB	Chlorobenzenes
CEM	Continuous Emissions Monitoring
CO	Carbon Monoxide
CP	Chlorophenols
D/F	Dioxins and Furans
DYEC	Durham York Energy Centre
ECA	Environmental Compliance Approval
HCl	Hydrogen Chloride
HF	Hydrogen Fluoride
MECP	Ministry of the Environment, Conservation and Parks
NOx	Nitrogen Oxides
O_2	Molecular Oxygen
O. Reg. 419/05	Ontario Regulation 419/05
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
POI	Point of Impingement
QA/QC	Quality Assurance/Quality Control
SO_2	Sulfur Dioxide
SVOCs	semi-volatile organic compounds
TEQ	toxic equivalents
THC	Total Hydrocarbons

List of Symbols and Units of Measure

Symbol / Unit of Measure	Definition
g/s	gram per second
kg/hour	kilogram per hour
ppm	parts per million
m^3/hour	cubic metre per hour
tonnes/hr	tonnes per hour
µg/s	microgram per second
ng/s	nanogram per second
ng TEQ/s	nanogram of toxic equivalents per second
pg TEQ/Rm^3	picogram of toxic equivalents per reference cubic metre
°F	degrees Fahrenheit
°C	degrees Celsius
%	percent

1.0 Introduction

Ausenco Sustainability Inc. (Ausenco) was retained by The Regional Municipality of Durham (the Region) to provide oversight and expertise in air emissions source testing at the Durham York Energy Centre (DYEC) for the 2022 operating year. Voluntary Source Testing was conducted the week of May 16th, with testing for semi-volatile organic compounds (SVOCs), including dioxins/furans, occurring on May 18th and 19th. Source testing was completed by ORTECH Consulting Inc (Ortech), while laboratory analysis of the samples was completed by ALS Canada Ltd. (ALS).

As per the agreement between Ausenco and the Region, the entirety of the peer review of the draft report produced by Ortech is expected to include the following:

1. Review of Laboratory Procedures and Results (excluding audit review of actual laboratory work).
2. Review of Ortech report[1], including results and discussions from testing campaign.
3. Review of Dispersion Modelling conducted as part of ECA condition 6.1 and Schedule B (excluding odour modelling). This review will include:
    a. Ensuring that emission estimates are calculated correctly from stack testing samples and laboratory results.
    b. Ensure that dispersion modelling is conducted in accordance with O. Reg. 419/05, and related guidance, such as the MECP's "Air Dispersion Modelling Guideline for Ontario, Version 3.0", dated February 2017.

This report completes and summarizes all the above required tasks.

2.0 On-Site Source Testing Observations

On-site auditing of the testing was sub-contracted to, and completed by, Adomait Environmental Solutions Inc. (AES), led by Martin Adomait, M.Sc., P.Eng. AES staff was on on-site during stack testing for the two (2) days of sampling for SVOCs, including dioxins and furans (D/F). The on-site review of the Stack Sampling Protocol ensures that it follows sampling methods described in the Ontario Source Testing Code and includes a review of:

1. On-site assessment of testing,
2. Sampling locations,
3. Sampling procedures,
4. Sample recovery and analysis, and
5. Process parameter review.

The following sections were provided to the Region in a memorandum dated May 30th, 2022. They are replicated here for completeness and to provide the Region with a single document summarizing the entirety of the peer review.

[1] Ortech, July 12, 2022. Covanta Durham York Renewable Energy Limited Partnership, Durham York Energy Centre, 2022 Voluntary Compliance Emission Testing Program. Report No. 22158 to the Regional Municipality of Durham and Covanta Corporation. 746 pp.

2.1 Process Operations Centre Observations

Current policy, precipitated by COVID-19 pandemic health and safety measures to reduce the risk of infection, placed the control room off-limits to the auditor. Instead, the auditor was stationed in a conference room equipped with a screen to display real-time and recent data related to parameters being monitored. In addition, Excel files containing one-minute data were provided to the auditor at intervals during the stack testing events. The one-minute data corresponded to times of the stack tests for parameters monitored in previous audits, except for the quench-tower inlet/outlet temperatures and moisture levels. The temperatures were provided separately, reported at 10-minute intervals; however, moisture data could only be accessed directly from the system monitors in the control room. Therefore, the May 2022 Voluntary Source Testing audit does not include the monitoring of moisture levels.

The auditing process involved reviewing the Excel files, monitoring the real-time display of trending data, taking notes of anomalies and discussing deviations with facility staff and any measures taken as a result. In addition, rolling averages were calculated from the 1-minute data, consistent with performance requirements, as a measure of the unit's performance during the testing. The rolling averages included:

- O2 – 60-minute rolling average
- CO – 4-hour rolling average
- NOx – 24-hour rolling average (in this case, for the portion of day that data was collected)

The following observations of the Process Operations Centre were made during the stack testing:

1. As a general observation, parameters being recorded for maintained stable readings throughout the observation periods. The few deviations that were observed, such as CO spikes, were typical of previous tests and generally did not persist beyond one minute.
2. The DYEC's Environmental Compliance Approval (ECA) specifies that the oxygen concentration shall not be less than 6% as recorded by the CEM system. Oxygen concentrations, calculated as a 60-minute rolling average, ranged from 7.8 to 8.7%, and are, therefore, compliant with the facility's permit.
3. CO concentrations were generally stable throughout the tests, ranging between 5 and 25 ppm. The calculated 4-hour average ranged from 11 to 18 ppm. Occasional spikes in CO concentration were less than 50 ppm and were likely cold CO spikes that may be attributed to incomplete combustion. In every case, the CO concentrations immediately returned to typical CO concentrations. The occurrence of CO spikes is normal and the immediate suppression of spikes indicate that the systems are operating effectively.
4. The combustion zone temperatures for each boiler were maintained above the minimum temperature of 1000°C.
5. The average NOx concentrations during each day of testing ranged between 109 and 111 ppm, which is below the emission limit of 121 ppm calculated as a 24-hour rolling arithmetic average.
6. The quench tower inlet and outlet temperatures showed consistent control of the rising temperatures on both monitoring days during sample collection. The inlet temperatures rose moderately from 167°C to approximately 176°C. The outlet temperatures generally remained low, around 150°C. Based on previous source testing observations, the quench tower inlet temperatures could be expected to increase during the day (within allowable limits).
7. As a result of consistent outlet temperatures from the quench tower, the baghouse inlet temperatures remained steady, generally between 140°C and 144°C. This is approximately the midpoint of the performance requirement of 120°C to 185°C set out in the ECA (Section 6(2)(h)).

These readings were consistent with observations from previous stack tests (typically in the range of 138°C to 145°C). Consistent temperatures in the baghouse allow comparison between data sets at different times. It is also important when considering the volatilization of various dioxins and furans that may be in particle-bound form in the baghouse. Increased temperatures could volatilize dioxins and furans already captured by the baghouse in particle-bound form.

8. Production at the plant is often evaluated in terms of steam flow. Steam flow was typically in the range of 32 to 35 tonne/hr, with recorded readings ranging between 30.8 and 36.2 tonne/hr. The production was similar to levels observed during other stack testing campaigns at this plant. Similar production also makes the comparison between different stack tests possible.
9. Carbon and lime dosage were generally consistent with the previous testing campaigns. Carbon doses averaged ~5 to 6 kg/hour. The lime feed rate generally ranged between 170 and 180 kg/hour. In one instance the lime feed rate jumped to between 200 and 250 kg/hr but dropped back to normal levels within minutes. As noted by DYEC personnel, the lime control and wetting mixer systems are set up to respond to certain setpoints and criteria to ensure the outlet emissions are well below permit limits. The acquired 1-minute data for HCl concentrations demonstrate levels well below the permit limits, indicating that the lime control and wetting mixer systems are operating effectively.
10. Airflow remained stable throughout the stack tests. Airflow for Unit 1 generally ranged between 85,000 to 90,000 m^3/hour, and Unit 2 ranged between 90,000 and 100,000 m^3/hour.

2.2 Observations of the Stack Testing Operations

Observations of the stack testing procedures were undertaken during the SVOC sampling part of the program. The field observations are provided below.

1. Where possible, leak checks were observed at both the start, traverse change, and at the conclusion of all SVOC tests conducted. When the leak checks were successful, the tests could be regarded as valid. Leak checks were always performed in a systematic and non-rushed manner to ensure good QA/QC. The summary of AES field observations is provided in **Appendix A**.
2. Previous aberrations in the stack velocity measurements were reduced by using metal plates and rubber sealer plates to reduce and almost eliminate these problems. This set-up was similar to that conducted in the last stack testing exercise (Fall 2021).
3. Impinger/XAD temperatures were checked approximately every half hour at each sampling train. Ortech supplied plenty of ice to the crews. The temperatures were maintained in the range of 7.5°C to 12.5°C (45°F to 55°F), although there was one excursion. Upon notifying the testing crew, Ortech staff promptly corrected the issue. Maintaining low XAD temperatures improves adsorption of dioxins/furans on the sampling media.
4. The audit team also recorded dry gas meter corrections and pitot factors for comparison with the final report.
5. All trains operating at the baghouse outlet locations were inserted and withdrawn from the stack while the sampling train was running. Given the high negative pressure at these locations, it was important to ensure that the filter was not displaced prior to sampling beginning. It also limits loss of any sample from the train.
6. No review of the recovery procedures were performed due to COVID-19 protocols being in effect.

Based on audit staff observations, Ortech staff followed all appropriate sampling and recovery procedures as noted by the sampling methods (EPS 1/RM/3 and US EPA Method 23).

3.0 Report Review

The Region provided Ortech's draft report (the "Report") to Ausenco on August 10th, 2022. Ausenco and AES provided a memorandum to the Region dated August 29th, 2022, which provided an initial review of the draft report. The following sections include and expand upon that initial review and include an opinion regarding the sufficiency and accuracy of the submitted analyses.

3.1 Review of Source Testing Protocols

AES has conducted a thorough review of the draft source testing report and has found no discrepancies between the methods described in the report compared to the observations made during testing. AES is satisfied that all sampling protocols were followed according to appropriate methodologies. Consequently, AES has no concerns over the validity of collected samples, prior to shipment to the laboratory for analysis.

Ausenco further reviewed the described procedures for the SVOC sampling train in light of low spike recoveries for some of the SVOCs, including dioxins and furans, as discussed in **Section 3.2** below. The following suggestions are offered for improvements during future monitoring events, or where appropriate the inclusion of relevant detail in reporting towards a high level of confidence in the reported data.

1. Per Section 2.2 of the Report, the Continuous Emissions Monitoring Systems (CEMs) provide a continuous record of stack CO, O_2, NOx, SO_2, HCl, HF, flow, opacity, and THC. As stated, the CEMS data were used to determine the range of these substances in combustion gases (minimum, average, maximum). The longer-term trends in CEMs data, however, could be evaluated and interpreted to assess whether these parameters where within the expected ranges for normal operating conditions (e.g., within one standard deviation of variation based on long-term trends) at the time that sampling was undertaken for SVOCs. This would provide assurance that the sampling event has captured the prevailing conditions with regard to emissions.
2. Methods for incorporation of the SVOC field spikes should be described in the methods section. Per Section 6.5.4, Ortech note that extraction standards are further added at ALS.
3. Per Section 4.4. of the Report, the SVOC sampling train includes "a clean and proven glass fibre filter" upstream from the XAD-2 column trap. It is implied, but not explicitly stated in Section 5 (Sample Recovery and Analysis), that the glass fibre filter is extracted in the analytical laboratory, and the extract combined with the XAD-2 trap extract, as well as rinsate from the front half of the sampling train up to the trap. An explicit description (annotated list) of the various rinsings and extractions that were combined prior to SVOC analysis would be helpful.
4. Per the last bulleted item in Section 6.3 of the Report, "Covanta was responsible for monitoring process operations during testing and notified Ortech when testing was to proceed." A more fulsome description of the specific decision criteria used by Covanta for notification to initiative testing would be appropriate, along with greater detail about the process operations and conditions monitored by Covanta.

3.2 Review of Analytical Reporting

Ausenco has conducted a thorough review of the draft source testing report. As per the contract with the Region, focus was given to SVOCs. Based on this review, Ausenco provides the following comments:

1. As per the contract with the Region, the processing, handling, and analysis of laboratory samples were not audited as part of this peer review. Therefore, no statement of efficacy is provided regarding the processing, handling, and analysis of laboratory samples.
2. It is noted that both Ortech and ALS methods for collecting and analyzing SVOCs deviate slightly from reference methods. However, the potential biases and complications from these deviations have been discussed in previous source testing reviews and are, therefore, not discussed further here.
3. Dioxins and Furans
    a. The recoveries of Field Spike Standards of 34 – 125% for D/F are outside of the acceptable range of recoveries provided in Environment Canada Reference Method EPS 1/RM/2 (70% – 130%). To account for this, the D/F emission data was calculated using a correction to account for the field spike recovery of the corresponding field spike target. This is an acceptable approach to correct samples for low recoveries of the field spike. This approach assumes that the behaviour of the field spike standard is the same as the target compounds in the sample. This assumption holds valid provided there is sufficient signal to detect the D/F in the sample.
    b. The recoveries of the Extraction Standards of 12 – 66% for D/F are outside of the acceptable range of recoveries provided in Environment Canada Reference Method EPS 1/RM/2, which is either 40% – 130% or 25 – 130%, depending on the specific D/F. Recoveries of all extraction standards (9 total) were particularly low for two of three samples from Boiler No. 1 (#1 APC Outlet) (i.e., in the range of 12% to 16%). Recoveries of extraction standards from Boiler No. 2 samples were generally higher (Test #1: range from 24% to 31%; Test #2: 28% to 34%; Test #3: 13% to 23%). The field spike and extraction standard recoveries, while low, were generally consistent across samples.

        As a result of the low extraction recoveries, the error associated with the determined concentrations may be larger than the standard error associated with the method. If the determined sample concentrations were to be corrected for the reduced recoveries (similar to the field spike correction per page 4 of Appendix 15), D/F concentrations would be corrected by a factor ranging from 3 to 8. However, based on modelling results the D/F plus coplanar PCB TEQ values are 1000x below the corresponding standards. Therefore, a correction factor of 8 would still indicate D/F levels well below the standard. While the reduced recoveries may result in increased error in the determined concentrations, there is currently no concern that the error may lead to values over and above relevant in-stack or ambient standards.
    c. D/F samples were not blank corrected based on the blank sampling train and laboratory blank results. This is an acceptable methodology and will provide an estimate of worst-case concentrations within the samples.
    d. Ausenco has conducted a review of the D/F congener group emission rate calculations (ng/s). Starting with the reported laboratory data, Ausenco was able to trace and confirm the calculations presented by Ortech provided in Section 7.9.1 (Page 45).

e. Ausenco has conducted a review of the D/F and dioxin-like PCB toxic equivalents (TEQ's) emission rate calculations (ng TEQ/s). Starting with the reported laboratory data, Ausenco was able to trace and confirm the calculations presented by Ortech provided in Section 7.9.1 (Page 47)

f. A review of the in-stack D/F dry adjusted TEQ concentration was conducted. Ausenco was able to trace and confirm the in-stack TEQ concentration calculations presented by Ortech (see Section 7.9.1, Page 47) and confirm that the D/F TEQ concentrations are below the maximum in-stack limit of 60 pgTEQ/Rm^3.

g. Throughout the report, including table captions, there should be greater clarity that "dioxins and furans" refers to all dioxin-like chlorinated SVOCs, including coplanar PCBs.

4. PCBs

   a. As indicated in the report, PCB samples also experienced low Field Spike Standard recoveries (30 – 42%). This is outside the accepted window of 70 – 130% and indicates a low bias on the samples ranging from 2.4 to 3.3. Unlike D/F samples, PCB samples concentrations were not corrected for this low bias. Consequently, as a conservative measure, concentrations could have been corrected, by a factor in the range of 2.5 to 3.0. However, the toxicity of the majority of PCB congeners compared to D/F, and especially 2,3,7,8-TCDD, is low and PCBs do not add significantly to the overall toxicity of the persistent organochlorines based on dioxin-like toxicological interactions. Consequently, as with D/F, while the reduced recoveries may result in increased error in the determined concentrations, there is currently no concern that the error may lead to values over and above relevant in-stack or ambient standards.

   b. The recoveries of the Extraction Standards of 10 – 67% for PCBs are within the acceptable range of recoveries provided in US EPA Method 1668C, which is 10% – 145%.

   c. PCB samples were not blank corrected based on the blank sampling train and laboratory blank results. This is an acceptable methodology and will provide an over-estimate the true concentrations within the samples.

5. Chlorobenzenes

   a. CB samples were not blank corrected based on the blank sampling train and laboratory blank results. This is an acceptable methodology and will provide an over-estimate of the true concentrations within the samples.

   b. Ausenco has conducted a review of the chlorobenzene emission rate calculations (µg/s). Starting with the reported laboratory data, Ausenco was able to trace and confirm the calculations presented by Ortech provided in Section 7.9.2 (Page 48).

6. Chlorophenols

   a. The lowest observed recovery of the Extraction Standards for CPs (observed range of 19 – 64% for CPs was marginally lower than the acceptable range of recoveries, which is 20% – 150%. However, only one spiked analyte, found in Test #3 for #2 APC Outlet, was outside the acceptable recovery at 19%. All other Extraction Standards were found within acceptable ranges.

   b. Given that CPs in all samples were found to be below detection limit, emission rates for each compound were estimated based on the assumption that each analyte was at a concentration

equal to the detection limit. This is an accepted methodology and provides a worst-case assumption to determine potential impacts.

c. Ausenco has conducted a review of the chlorophenol emission rate calculations (µg/s). Starting with the reported laboratory data, Ausenco was able to trace and confirm the calculations presented by Ortech provided in Section 7.9.2 (Page 49).

7. Polycyclic Aromatic Hydrocarbons

a. The recoveries of Field Spike Standards of 31.5 – 61.4% for PAHs are low, and only two analyte spikes were within the acceptable range of recoveries provided in CARB method 429 (50% – 150%). As indicated in the report, this implies a low bias on the samples ranging from 1.6 to 3.2. Unlike D/F samples, PAH samples concentrations were not corrected for this low bias. Consequently, as a conservative measure, concentrations could have been corrected. However, based on modelling results the PAH values are more than 1000x below the corresponding standards and a correction upwards of 3 would not lead to values over and above relevant in-stack or ambient standards.

b. The recoveries of the Extraction Standards of 27.3 – 67.4% for PAHs are outside the acceptable range of recoveries provided in CARB method 429, which is 50% – 150%, and indicates a low bias on the samples ranging from 1.5 to 3.6, as indicated in the report. PAH sample concentrations were not corrected for this low bias. Consequently, as a conservative measure, concentrations could have been corrected. However, based on modelling results the PAH values are more than 1000x below the corresponding standards. Consequently, as with D/F, while the reduced recoveries may result in increased error in the determined concentrations, there is currently no concern that the error may lead to values over and above relevant in-stack or ambient standards.

c. PAH samples were not blank corrected based on the blank sampling train and laboratory blank results. This is an acceptable methodology and will provide an estimate of worst-case concentrations within the samples.

d. Ausenco has conducted a review of the PAH emission rate calculations (µg/s). Starting with the reported laboratory data, Ausenco was able to trace and confirm the calculations presented by Ortech provided in Section 7.9.3 (Page 49).

3.3 Review of Dispersion Modelling

To complete the review of the modelling conducted as part of the source testing, the Region provided the most recent “Air Dispersion Modelling Plan” prepared by Golder, dated July 2020 (the “ADMP”). This report was prepared to outline the proposed dispersion modelling approach for the DYEC for future ECA amendment applications. This plan report was used for comparison to the source testing modelling, which was also completed by Golder. The Region provided Ausenco with all relevant modelling files (e.g., input files, output files, etc.) for review.

Based on this review, Ausenco provides the following comments:

1. Ausenco confirmed that the CALPUFF and CALPOST version numbers and level numbers used in the model (as indicated in the corresponding input file) matches those provided in Appendix 27 of Ortech’s draft report.

2. Ausenco confirmed that the CALPUFF options outlined in Table 2 of Appendix 27 matches Table B1 of the ADMP.
3. Ausenco also confirmed that for modelling years 2014 and 2017 all CALPUFF options and flags within the supplied input files matched Table B1 of the ADMP. The 2017 year was chosen for review as it provided the highest 1-hr, 24-hr, and annual Point of Impingement (POI) values.
4. Ausenco confirmed the source parameters provided in Table 3 of Appendix 27 relative to the source testing results.
5. For the 2016 year, Ausenco confirmed that the CALPUFF input file contained one (1) point source with stack height, diameter, velocity and exit temperature corresponding to the values in Table 3 of Appendix 27. The input file also utilized a unit emission rate (i.e., 1 g/s).
6. As a worst-case scenario, Ausenco confirmed that the Dispersion Factor (without meteorological anomaly removed) provided in Table 4 of Appendix 27 matched the maximum value provided in the CALPOST output files for all five years modelled.
7. Ausenco confirmed that the Dispersion Factors provided in Table 4 of Appendix 27 are similar to those reported in previous years. This is to be expected given that the only changes from year to year in the model are the exit velocity and exit temperature of the stack, which do not change drastically from year to year.
8. To review the Emission Summary Table provided (Appendix B of Appendix 27), a small number of critical chemicals were chosen to ensure that emission rates were multiplied by the correct Dispersion Factor provided in Table 4. In all cases, POI values were properly estimated for the corresponding averaging time. The list of substances reviewed were:
    a. Benzo(a)pyrene
    b. Chlorobenzene
    c. Dioxins, Furans, and Dioxin-like PCBs
    d. Nitrogen Oxides
9. The D/F emission rate used to estimate POI values appears to be using D/F concentrations estimated using the full detection limit approach. However, Section 7.9.1 of the report indicates that the half detection method limit approached was used for modelling. Given that the use of assumed concentrations at the detection limit would provide a conservative assessment of facility impact, we have no concern over this apparent discrepancy. Furthermore, the POI value for Dioxins, Furans, and Dioxin-like PCBs is well below the standard.

Based on the above review, there are no concerns with the conduct of the modelling. POI values presented in Appendix B of Appendix 27 of the draft report provide a conservative estimate of potential impacts and are well below MECP criteria.

4.0 Conclusions

In conclusion, the review of the draft Source Testing Report, combined with our on-site observations, has not revealed any major concerns with regards to the conduct of the source testing, the analytical analysis, or the analytical calculations. Therefore, at this time, there are no concerns about the validity of the source testing data reported by Ortech especially with regard to comparisons to the relevant in-stack limits. We recommend, however, that both Ortech and ALS further investigate reasons for the low field spike and extraction standard recoveries for future source testing campaigns. The Region has informed Ausenco that they have started these conversations with both Ortech and ALS, and that this investigation is currently underway.

Low recoveries of SVOC field spikes and extraction standards could arise from very high moisture content in the XAD-2 trap during sampling, and associated interferences with lab extractions post-sampling, as well as the presence of captured carbon in a form poorly amenable to extraction, along with any sorbed SVOCs, from the XAD-2 amberlite resin. Additional suggestions are provided in **Section 3.1** herein.

Ausenco has confirmed that Golder conducted the modelling in accordance with the facility's ECA (Condition 6.1 and Schedule B), as well as O. Reg. 419/05. We are satisfied that the facility's POI values are expected to be within the specified MECP standards, based on the provided analysis.

5.0 Closure

We have appreciated the opportunity of working with you on this project and trust that this report is satisfactory to your requirements. Please feel free to contact the undersigned regarding any questions or further information that you may require.

Report prepared by:
Ausenco Sustainability Inc.

ORIGINAL SIGNED BY

Lucas Neil, Ph.D.
Project Manager, Air Quality Services

Report prepared by:
Adomait Environmental Solutions Inc.

ORIGINAL SIGNED BY

Martin Adomait, M.Sc., P.Eng.

Appendix A

AES Field Notes

	Semi-Volatiles-1		Semi-Volatiles-1	
Date	**May 18-22**		**May 18-22**	
Observation	Boiler #1		Boiler #2	
Nozzle Size/Type	0.2511 Glass		0.2505 Glass	
Meter Cal/ID	1.008/Jan. 26-22		1.001?/Jan. 31-22	
Pitot cal	0.847		0.845	
Calc Moisture	16%		16%	
Static	-10.2”		-10.9”	
Pitot Leak Check	Yes good		Yes Good	
Pre-traverse Leak Check	0.008 @17”		0.005 @17”	
SVOC Test Start Time	8:32		8:31	
Running On Insertion	Yes		Yes	
Stack temperature ^{o}F	285		285	
Trap temperature ^{o}F	41,44,44,45		45,44,43,42	
Running on removal	Yes		Yes	
Traverse Completed	10:32		10:31	
Post-traverse Leak Check	0.001 @20”		0.002@17”	
Pre-traverse Leak Check		0.005 @20”		0.007 @16”
SVOC Traverse Start Time		10:47		10:48
Trap temperature ^{o}F		45,47,53,67,50		45,42,41,43,42
Traverse Completed		12:47		12:48
Final Leak Check		0.002@20”		0.005 @16”
Running on removal		Yes		Yes

Note: meter correction factor for Boiler 2 method 5 box may be incorrect.

	Semi-Volatiles-2		Semi-Volatiles-2	
Date	**May 18-22**		**May 18-22**	
Observation	Boiler #1		Boiler #2	
Nozzle Size/Type	0.2511 Glass		0.2505 Glass	
Meter Cal/ID	1.008/Jan. 26-22		1.001?/Jan. 31-22	
Pitot cal	0.847		0.845	
Calc Moisture	16%		16%	
Static	-10.9”		-10.9”	
Pitot Leak Check	Yes good		Yes Good	
Pre-traverse Leak Check	0.006 @20”		0.008 @15”	
SVOC Test Start Time	14:02		13:57	
Running On Insertion	Yes		Yes	
Trap temperature ^{o}F	44,44		40,45	
Traverse Completed	16:02		15:57	
Post-traverse Leak Check	0.008 @15”		0.008@15”	
Running on removal	Yes		Yes	
Pre-traverse Leak Check		0.002 @17”		0.008 @15”
SVOC Traverse Start Time		16:14		16:07
Stack temperature ^{o}F		283,283,283,283		286,286,285,281
Trap temperature ^{o}F		42,45,45,44		43,46,46,41,45
Traverse Completed		18:14		18:06
Final Leak Check		0.004 @15”		0.008 @15”
Running on removal		Yes		Yes

	Semi-Volatiles-3		Semi-Volatiles-3		Metals/Particulate-3	
Date	**May 19-22**		**May 19-22**		**May 19-22**	
Observation	Boiler #1		Boiler #2		Boiler #1	
Nozzle Size/Type	0.2511 Glass		0.2505 Glass		0.2495 Glass	
Meter Cal/ID	1.008/Jan. 26-22		1.001?/Jan. 31-22		0.995/ Jan. 18-22	
Pitot cal	0.847		0.845		0.843	
Calc Moisture	16%		16%		16%	
Static	-10.9”		-10.9”		-10.9”	
Pitot Leak Check	Yes good		Yes Good		-	
Pre-traverse Leak Check	0.002 @18”		0.004 @15”		0.009@17”	
SVOC Test Start Time	8:32		8:37		8:31	
Running On Insertion	Yes		Yes		Yes	
Stack temperature oF	285,286,284		284,286,266		-	
Trap temperature oF	39,38,41		49,50,40		-	
Traverse Completed	10:32		10:37		10:01	
Post-traverse Leak Check	0.002@19”		0.005@17”		0.002@15”	
Running on removal	Yes		Yes		Yes	
Pre-traverse Leak Check		0.002@19”		0.003 @18”		0.002@16”
SVOC Traverse Start Time		10:46		10:45		10:43
Stack temperature oF		283,288,284		286,286,267		-
Trap temperature oF		40,39,42		50,48,49		-
Traverse Completed		12:46		12:45		12:13
Final Leak Check		0.002@16’		0.004 @17”		0.002@15”
Running on removal		Yes		Yes		Yes

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Technical Memorandum

To: Andrew Evans, PEng Region of Durham

Cc: Gioseph Anello, PEng (Region of Durham)
Lyndsay Waller, (Region of Durham)

Laura McDowell, PEng (Region of York)
Muneeb Farid; Seth Dittman, PEng (Region of York)

Kirk Dunbar, Alan Cremen, John Clark (HDR)

From: Bruce Howie, PE

Date: August 30th, 2022

Re: **Durham York Energy Centre: Spring 2022 Stack Test**
HDR Observations During Testing and Summary of Results

Introduction

During the period from May 16th through May 19th, 2022, ORTECH Consulting, Inc. (ORTECH) conducted the Voluntary Source Test at the Durham York Energy Center (DYEC) for the Regions of Durham and York. This voluntary testing has been performed annually since Commercial Operation. Testing was performed in accordance with the reference methods required under Section 7(1) of the Amended Environmental Compliance Approval (ECA) No. 7306-8FDKNX, originally issued by the Ontario Ministry of Environment, Conservation and Parks (MECP) on June 29th, 2011. HDR personnel were on-site to observe DYEC operations and procedures during the testing on May 17th to May 19th. The purpose of this technical memorandum is to summarize the observations made by HDR personnel during the testing as well as to summarize our review of the results for the Source Testing based on the information provided in the ORTECH Test Report dated July 12th, 2022.

HDR Observations during the Compliance Source Test

The tentative testing schedule for the May 2022 Voluntary Source Test is included in Attachment A to this Technical Memorandum. Also included in Attachment A is a summary of the testing observed by HDR. HDR's role on-site was to observe Covanta's operations of the DYEC during test sampling, and to observe ORTECH's sampling procedures and activities. HDR personnel were on-site during the air emission testing on May 17th to May 19th, to observe the source test sampling activities with particular focus on the dioxins/furans tests for both Units 1 and 2. HDR observed the operations of the

boiler and air pollution control system to verify the DYEC was being operated under normal operating conditions during the test periods. The following is a summary of the key events and observations made by HDR during the sampling days that we were at the DYEC. Attachment A shows the start and stop times of each test.

Day 1: Monday May 16th

Stack testing commenced at 10:22 and was completed at 17:25. Tests for Unit 2 were completed as scheduled. Covanta discovered the inlet O_2 sensor on Unit 1 was down on May 14th due to the communication card failing. A new card was shipped to the site and installed putting the unit back online on May 17th to conduct tests.

Day 2: Tuesday May 17th

Stack testing commenced at 8:30 and was completed at 19:10. All tests for Unit 2 were completed as scheduled. The tests done on Unit 1 were originally scheduled for Monday, May 16th were completed on Tuesday, May 17th. HDR observed two leak tests on May 17th and both passed:

- Unit 1 at 14:00 during the Hydrogen Fluoride run 2; and
- Unit 2 at 14:15 during the Particulate/Metals run 3.

The parameters below (data collected at 15:00) were observed to be in normal range. The steam outlet temperature for Unit 2 is slightly below the normal range but this is likely due to the timing of the testing and an indication that the boiler waterwalls in the first three passes are relatively clean, which increases the heat recovery and reduces the flue gas and steam temperatures in the superheaters.

Parameter	Normal Range	Unit 1	Unit 2
Steam Load (kg/hr)	32,000-35,000	33,763	32,887
Ammonia (kg/hr)	25-80	32	27.6
Carbon (kg/hr)	4.5-5.5	5.1	5.2
Steam Outlet Temp (°C)	495-502	505	494
Steam Pressure (bar)	86-90	89.3	89.4
Combustion Temps (°C)	>1,000	1,302	1,228
Baghouse dp (mBar)	10-20	16.6	15.5

Day 3: Wednesday May 18th

Stack testing commenced at 8:32 and was completed at 19:29. Tests for both Units were completed as scheduled, as well as additional testing for Unit 1 that was originally

scheduled for Day 2. HDR observed two leak tests on Wednesday May 18th and both passed:

- Unit 1 at 16:00 during the Dioxin/Furan run 2; and
- Unit 2 at 16:05 during the Dioxin/Furan run 2.

The parameters below (average collected throughout day) were observed to be in normal range. Again the steam outlet temperature for Unit 2 is slightly below the normal range but this is likely due to the timing of the testing and an indication that the boiler waterwalls in the first three passes are relatively clean, which increases the heat recovery and reduces the flue gas and steam temperatures in the superheaters.

Parameter	Normal Range	Unit 1	Unit 2
Steam Load (kg/hr)	32,000-35,000	33,765	34,422
Ammonia (kg/hr)	25-80	26	22
Carbon (kg/hr)	4.5-5.5	5	5
Steam Outlet Temp (°C)	495-502	501	489
Steam Pressure (bar)	86-90	89	89
Combustion Temps (°C)	>1,000	1,247	1,156
Baghouse dp (mBar)	10-20	17	16

Day 4: Thursday May 19th

Stack testing commenced at 8:32 and was completed at 12:46. Tests for both Units were completed as scheduled.

The parameters below (average collected throughout day) were observed to be in normal range. The steam outlet temperature for Unit 2 is slightly below the normal range but this is likely due to the timing of the testing and an indication that the boiler waterwalls in the first three passes are relatively clean, which increases the heat recovery and reduces the flue gas and steam temperatures in the superheaters.

Parameter	Normal Range	Unit 1	Unit 2
Steam Load (kg/hr)	32,000-35,000	33,785	34,427
Ammonia (kg/hr)	25-80	26	19
Carbon (kg/hr)	4.5-5.5	5	5
Steam Outlet Temp (°C)	495-502	500	490
Steam Pressure (bar)	86-90	89	90
Combustion Temps ((°C)	>1,000	1,255	1,186
Baghouse dp (mBar)	10-20	17	15

HDR noted that Covanta's Rick Koehler was on-site throughout the testing period to assist in the coordination and to observe the Compliance Source Testing.

Based on HDR's observations of the Source Testing, ORTECH conducted the testing in accordance with the applicable standards and procedures. ORTECH was careful during each port change to ensure that the probe was not scraped inside the port during insertion and removal of the probe. In addition, sampling equipment was assembled properly, the ice used in the sample box was replenished in a timely manner, and all required leak checks were conducted. After each completed test, the sampling trains were transported to a trailer located outside the boiler building for recovery and clean up to avoid potential contamination at the test location. It should be noted that the actual clock times associated with each run are slightly longer than the run lengths indicated in the test plan. This difference is due to the time it took ORTECH to pull the probe out of the first port, leak check the sampling equipment, and insert the probe into the second port. This is typical of stack sampling practices.

Attachment B provides a summary of the DYEC operating data recorded by Covanta's distributive control system (or DCS) during the dioxin/furan tests. As previously noted, HDR did not observe any deviations from the approved test protocol or applicable stack test procedures and based on the operational data and HDR's observations, the boilers and APC equipment were operated under normal conditions during the testing.

Summary of Results

The results of the testing program, based on ORTECH's July 12th, 2022 report, are summarized in Table 1 and Figures 1 and 2. As shown, emissions of all pollutants are corrected to 11% oxygen and were below the ECA's Schedule "C" limits. All pollutants were below the ECA's schedule "C" limits. The particulate Matter (PM) result is higher than previous source tests at the plant, and in particular for Unit 2 where it is almost 18% percent of the allowable limit. While this is still well within the allowable limits, this parameter should be monitored going forward. As a part of HDR's review of the ORTECH report, we completed a review of the data presented and calculations. There were no errors in calculations found during this review.

Table 1 – Summary of May 2022 Voluntary Source Test Results

Parameter	Units	ECA Limit	Unit 1		Unit 2	
			Result	% of Limit	Result	% of Limit
Particulate Matter (PM)(1)	mg/Rm^3	9	0.87	9.7%	1.58	17.6%
Mercury (Hg)(1)	$\mu g/Rm^3$	15	0.089	0.6%	0.086	0.6%
Cadmium (Cd)(1)	$\mu g/Rm^3$	7	0.023	0.3%	0.039	0.6%
Lead (Pb)(1)	$\mu g/Rm^3$	50	0.55	1.1%	0.28	0.6%
Hydrochloric Acid (HCl)(2)(3)	mg/Rm^3	9	1	11.1%	3.6	40.0%
Sulphur Dioxide (SO_2)(2)(3)	mg/Rm^3	35	0.02	0.1%	0.9	2.6%
Nitrogen Oxides (NO_x)(2)(3)	mg/Rm^3	121	110	90.9%	110	90.9%
Carbon Monoxide (CO)(2)(4)	mg/Rm^3	40	10.7	26.8%	15.3	38.3%
Total Hydrocarbons (THC)(5)	ppm	50	0.7	1.4%	1.5	3.0%
Dioxin and Furans(6)	pg TEQ/Rm^3	60	7.28	12.1%	4.1	6.8%

(1) dry at 25ºC and 1 atmosphere, adjusted to 11% oxygen by volume

(2) based on process data or CEM data provided by Covanta

(3) maximum calculated rolling arithmetic average of 24 hours of data measured by the DYEC CEMS, dry at 25ºC and 1 atmosphere, adjusted to 11% oxygen by volume

(4) maximum calculated rolling arithmetic average of 4 hours of data measured by the DYEC CEMS, dry at 25ºC and 1 atmosphere, adjusted to 11% oxygen by volume

(5) average of three one hour tests measured at an undiluted location, reported on a dry basis expressed as equivalent methane

(6) calculated using the NATO/CCMS (1989) toxicity equivalence factors and the full detection limit for those isomers below the analytical detection limit, dry at 25ºC and 1 atmosphere, adjusted to 11% oxygen by volume

Figure 1 - DYEC Test Results as a Percent of ECA Limit

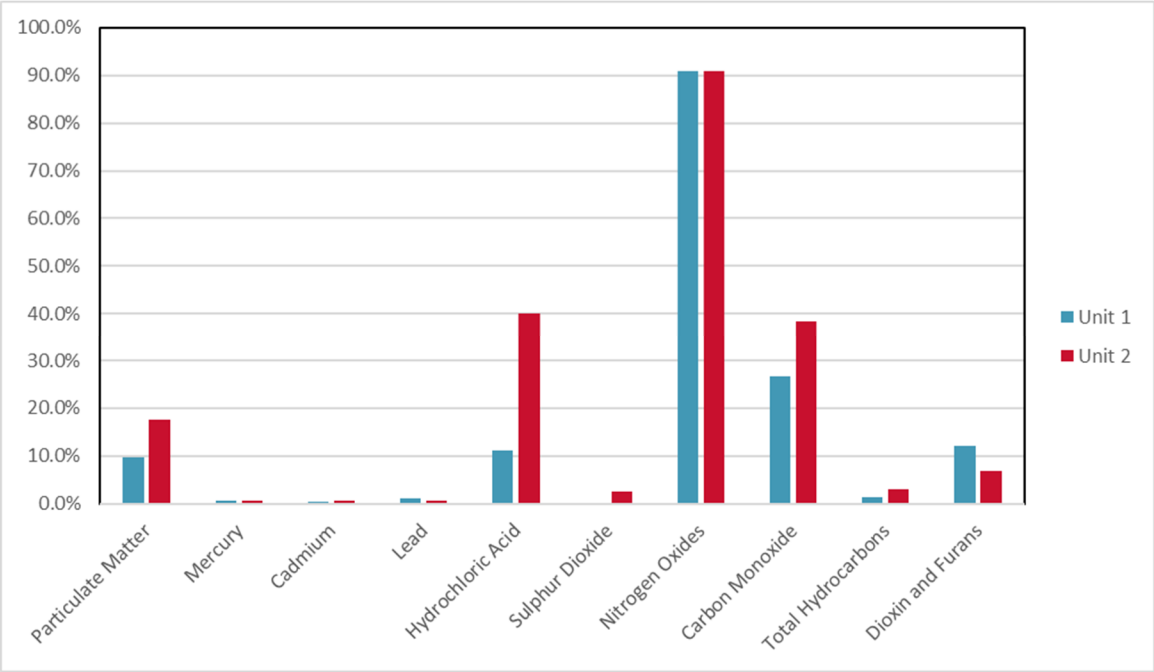
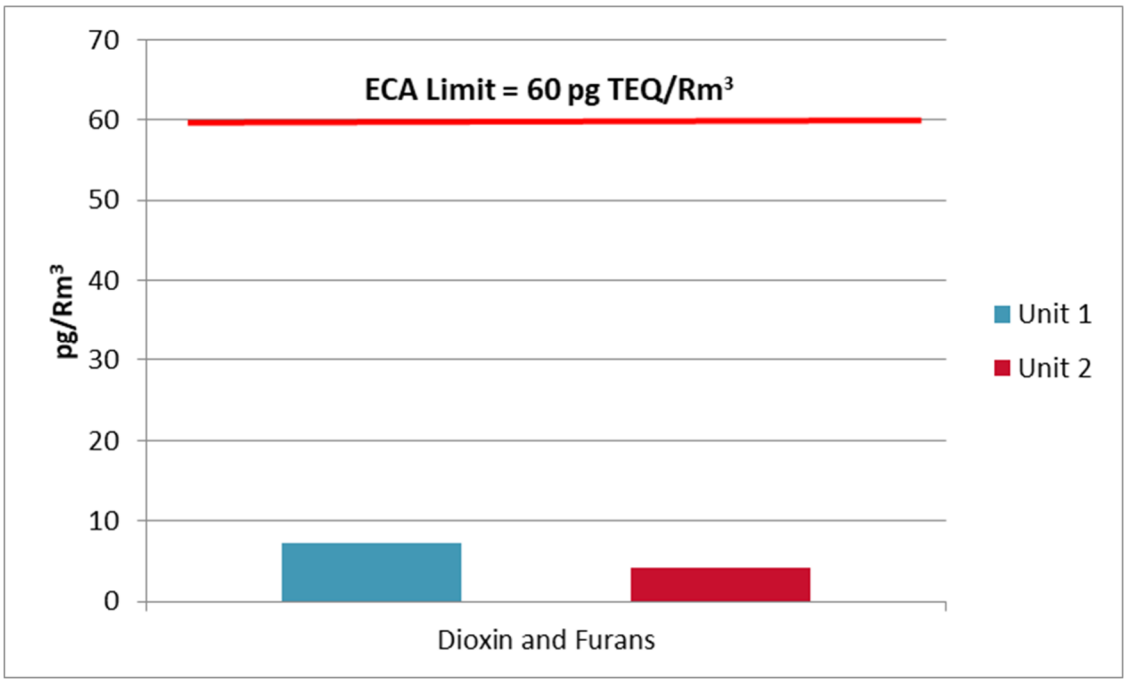


Figure 2 – Test Results for Dioxins and Furans



Conclusions and Recommendations

HDR has completed our review of the preliminary results of the air emissions testing performed during the DYEC Spring 2022 Voluntary Test. Representatives from HDR were present at the DYEC to observe the sampling procedures and facility operations throughout the majority of the testing period that occurred between May 16 and May 19, 2022. HDR observed ORTECH following the approved stack sampling procedures and test methods. HDR also observed Covanta's plant personnel operating the DYEC under normal operating conditions and in accordance with acceptable industry operating standards. Based on the results summarized in ORTECH's final test report (dated July 12th, 2022), the air emission results of the Spring 2022 Voluntary Test demonstrated that the DYEC operated below the ECA's Schedule "C" limits.

Attachments:

Attachment A – Tentative Stack Test Schedule and Summary of Testing Observed by HDR

Attachment B – Summary of Operating Data during Dioxin/Furan Tests

Attachment A: Tentative Stack Test Schedule & Summary of Testing Observed by HDR.

Tentative Test Schedule (TBD)

Day/Location		Parameter	Method	# of Runs	Duration
Fri., May 13	#1 & #2 APC	Setup and Prelim. Particulate	Ontario M5	2	60
Mon., May 16	#1 APC Outlet	Particulate/Metals	Ontario M5/EPA M29	2	180
		Hydrogen Fluoride	EPA M26A	3	60
	#2 APC Outlet	Particulate/Metals*	Ontario M5/EPA M29	1	180
		PM_{10}, $PM_{2.5}$ & Condensables	EPA Method 201A/202	3	120
Tues., May 17	#1 APC Outlet	PM_{10}, $PM_{2.5}$ & Condensables	EPA Method 201A/202	3	120
		Particulate/Metals*	Ontario M5/EPA M29	1	180
	#2 APC Outlet	Particulate/Metals	Ontario M5/EPA M29	2	180
		Hydrogen Fluoride	EPA M26A	3	60
Wed., May 18	#1 APC Outlet	Dioxin/Furan	EPS 1/RM/2	2	240
		VOST	SW846-0030	3	40
		Aldehydes	NCASI Method ISS/FP-A105.01	3	60
	#2 APC Outlet	Dioxin/Furan	EPS 1/RM/2	2	240
		VOST	SW846-0030	3	40
		Aldehydes	NCASI Method ISS/FP-A105.01	3	60
Thurs., May 19	#1 APC Outlet	Dioxin/Furan	EPS 1/RM/3	1	240
	#2 APC Outlet	Dioxin/Furan	EPS 1/RM/2	1	240

* Test No. 3 Particulate/Metals may alternatively be performed on the 3rd or 4th test day.

Note: Friday May 20th is reserved as a contingency test day.

Summary of Testing Program.

Day 1: Monday May 16th

Unit	Test	Run 1		Run 2		Run 3	
		Start	Stop	Start	Stop	Start	Stop
Unit 2	Particulate/Metals	10:22	13:32	14:14	17:25	-	-
Unit 2	Hydrogen Fluoride	10:23	11:23	12:01	13:01	13:32	14:32

Day 2: Tuesday May 17th

Unit	Test	Run 1		Run 2		Run 3	
		Start	Stop	Start	Stop	Start	Stop
Unit 1	Particulate/Metals	8:30	11:44	12:25	15:33	-	-
Unit 1	Hydrogen Fluoride	8:33	9:33	10:15	11:15	12:16	13:16
Unit 1	**PM10, PM2.5 Cond**	**17:18**	**19:20**	-	-	-	-
Unit 2	Particulate/Metals	-	-	-	-	16:04	19:10
Unit 2	PM10, PM2.5 Cond	8:41	10:44	11:35	13:38	14:30	16:32

Day 3: Wednesday May 18th

Unit	Test	Run 1		Run 2		Run 3	
		Start	Stop	Start	Stop	Start	Stop
Unit 1	Dioxin/Furan	8:32	12:47	14:02	18:14	-	-
Unit 1	VOST	Completed					
Unit 1	Aldehydes	Completed					
Unit 1	PM10, PM2.5 Cond	-	-	12:05	14:07	17:25	19:29
Unit 2	Dioxin/Furan	8:32	12:49	13:58	18:08	-	-
Unit 1	VOST	Completed					
Unit 1	Aldehydes	Completed					

Day 4: Thursday May 19th

Unit	Test	Run 1		Run 2		Run 3	
		Start	Stop	Start	Stop	Start	Stop
Unit 1	Dioxin/Furan	-	-	-	-	8:32	12:46
Unit 1	Particulate/Metals	-	-	-	-	8:31	12:13
Unit 2	Dioxin/Furan	-	-	-	-	8:37	12:46

Attachment B: Summary of Operating Data during the Dioxin/Furan Tests

May 2022 Voluntary Dioxin Testing
Operations Data and Results

Operating Parameter	Boiler 1			Boiler 2		
	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3
	18-May	18-May	19-May	18-May	18-May	19-May
MSW Combusted (tonnes/day)						
Steam (kg/hr)	34,012	33,699	33,752	34,020	33,631	33,976
Steam temp	496	501	501	485	491	491
Primary Air Flow	33,276	34,358	34,673	34,316	35,334	35,062
Overfire Air Flow	8,192	7,976	8,115	7,634	7,245	7,158
Tertiary Air (Fresh LN Air)	9,962	9,477	9,525	9,466	9,238	9,406
Tertiary air temperature °C	29.2	30.7	29.4	26.3	28.5	26.7
Lime Injection (kg/day)	174.2	174.0	173.7	177.0	174.8	175.5
Ammonia Injection Rate (liters/m)	0.4	0.4	0.5	0.3	0.4	0.3
Carbon Injection (kg/hr)	5.2	5.2	5.3	5.2	5.2	5.2
Combustion air preheat temp	115.0	124.6	125.0	108.6	119.5	122.3
Average Combustion Zone Temp °C	1,113	1,105	1,114	1,013	1,032	1,049
Superheater #3 Flue gas inlet Temp °C	522	530	527	512	519	518
Economizer Inlet Temp °C	339	341	340	339	341	340
Economize Outlet Temp °C	172	175	168	169	173	170
Quench Outlet Temp °C	152	153	151	152	152	151
Reactor Outlet (BH Inlet) Temp °C	140	141	143	143	144	143
Baghouse Outlet Temp °C	139	140	139	139	139	139
Tertiary Air Header Pressure mbar	60	60	60	60	60	60
Tertiary Air Left mbar	33	35	29	35	34	35
Tertiary air Right mbar	0	0	0	35	33	35
Baghouse Differential Pressure mbar	14	17	17	15	16	15
Oxygen (%) - Boiler Outlet	8.8	9.1	8.7	8.4	8.5	8.1
Oxygen (%) - Baghouse Outlet	8.3	8.2	8.1	8.8	8.5	9.0
CO -Boiler Outlet - mg/Rm3	11.0	15.3	10.0	13.9	15.6	17.3
CO - Baghouse Outlet - mg/Rm3	12.1	8.1	11.8	9.8	12.8	12.8
NOx - mg/Rm3	109.2	108.9	110.5	109.8	110.6	110.0
NH3 mg/Rm3	11.9	12.2	12.4	5.8	5.5	7.3
Flue gas moisture	16%	16%	16%	13%	13%	0%
Outlet/Stack Dioxin - NATO - (pg TEQ/Rm^3)	8.32	8.00	5.51	4.21	4.04	4.05

[1]Average Unit data for the periods corresponding to the test run times.

Attachment 4

Table 1: DYEC Source Test Emission Results 2018-2022

Parameter	Emission limit	Spring 2018 Voluntary		Fall 2018 Compliance		Spring 2019 Voluntary		Fall 2019 Compliance		Spring 2020 Voluntary		Fall 2020 Compliance		Spring 2021 Voluntary		Fall 2021 Compliance		Spring 2022 Voluntary	
		Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2	Boiler 1	Boiler 2
Cadmium	7 µg/Rm^3	0.14	0.12	0.14	0.04	0.1	0.08	0.18	0.08	0.056	0.11	0.075	0.056	0.068	0.045	0.064	0.02	0.023	0.39
Carbon Monoxide	40 mg/Rm^3	19.7	13	13	13.4	13.1	12.2	11.2	12.1	15.2	11.4	11.4	14.1	12.6	12.7	9.7	11.7	10.7	15.3
Dioxins and Furans	60 pgTEQ/Rm^3	10.4	10.5	5.05	3.22	4.55	4.58	1.51	3.24	1.82	2.53	28.7	7.26	4.10	7.35	14.7	2.56	7.28	4.10
Hydrogen Chloride	9 mg/Rm^3	2	3.8	2.9	4.1	1.9	4.2	3	5.1	4.5	5.1	3.8	3.2	3.1	2.9	2.2	1.8	1.0	3.6
Lead	50 µg/Rm^3	0.45	0.29	0.18	0.22	0.59	0.46	0.54	0.57	0.55	0.61	0.37	0.34	0.44	0.32	0.46	0.17	0.55	0.28
Mercury	15 µg/Rm^3	0.22	0.77	0.3	0.13	0.35	0.1	0.29	0.1	0.13	0.1	0.34	0.045	0.086	0.081	0.053	0.05	0.089	0.09
Nitrogen Oxides	121 mg/Rm^3	109	109	109	111	110	110	111	110	109	109	110	110	109	110	111	110	110	110
Organic Matter	50 ppmdv	0.8	1.2	0.7	1	1.8	0.5	0.8	0.3	0.2	1.7	0.5	1.1	1.0	0.4	0	0	0.7	1.5
Sulphur Dioxide	35 mg/Rm^3	0.02	0	0	0.1	0.03	0.02	0	0.01	0	0	0.1	0.1	0.3	0.7	0.3	0.2	0.02	0.9
Total Suspended Particulate Matter	9 mg/Rm^3	1.11	0.96	0.34	0.32	0.62	0.38	0.61	0.54	1.14	1.04	2.6	2	0.78	0.25	0.48	0.31	0.87	1.58

Attachment 5

Table 2: Comparison Table: 2022 Voluntary Source Test Results Compared to ECA limits and Ontario A-7 Guideline

Parameter	Units	Boiler #1	Boiler #2	DYEC Average	DYEC ECA limit	% of ECA limit	Ontario A-7 Guideline
Nitrogen Oxides	mg/ Rm^3	110	110	110	**121**	91%	198
Total Suspended Particulate Matter	mg/ Rm^3	0.87	1.58	1.23	**9**	14%	14
Sulphur Dioxide	mg/ Rm^3	0.02	0.9	0.46	**35**	1.3%	56
Hydrogen Chloride	mg/ Rm^3	1.0	3.6	2.3	**9**	26%	27
Carbon Monoxide	mg/ Rm^3	10.7	15.3	13	**40**	33%	40
Mercury	µg/Rm^3	0.089	0.09	0.089	**15**	0.6%	20
Cadmium	µg/Rm^3	0.023	0.39	0.21	**7**	3%	7
Lead	µg/Rm^3	0.55	0.28	0.42	**50**	0.8%	60
Dioxin/Furans	pg TEQ/Rm^3	7.28	4.10	5.69	**60**	9.5%	80

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2564

The Regional Municipality of Durham
Information Report

From:	Commissioner of Planning and Economic Development
Report:	#2022-INFO-88
Date:	November 4, 2022

Subject:

Monitoring of Land Division Committee Decisions of the September 12, 2022 Meeting

Recommendation:

Receive for information

Report:

1. Purpose

1.1 This report summarizes the decisions on consent applications made by the Regional Land Division Committee at its meeting of September 12, 2022 (see Attachment #1). All approved applications conform to the Durham Regional Official Plan. For the applications approved by the Land Division Committee, no appeals to the Ontario Land Tribunal are recommended.

1.2 A copy of this report will be forwarded to the Land Division Committee for its information.

2. Previous Reports and Decisions

2.1 This is a monthly report which tracks Land Division application activity.

3. Relationship to Strategic Plan

3.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Service Excellence – To provide exceptional value to Durham taxpayers through responsive, effective, and fiscally sustainable service delivery.

4. Attachments

Attachment #1: Monitoring Chart from the September 12, 2022 Meeting

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and
Economic Development

Monitoring of Land Division Committee Decisions for the Meeting Date of September 12, 2022

Appeal Deadline: October 11, 2022

LD File Number	Owner	Location	Nature of Application	Regional Official Plan	LDC Decision
LD 073/2020	Brian Clark and Heather Weston	Part Lot 56, Plan H-50020 Township of Scugog	Consent to sever a vacant 329.24 m2 residential parcel of land, retaining an 812.73 m2 residential parcel of land with an existing dwelling to remain.	Does not Conform	Denied by Committee
LD 080/2019	Steven Paradine	Lot 5, Concession 2 Township of Uxbridge	Consent to add a vacant 7,305 m2 farm related rural residential parcel of land to the north, retaining 534,621 m2 agricultural parcel of land.	Conforms	Approved by Committee
LD 095/2022	Cindy Mills	Lot 5, Concession 2 Township of Uxbridge	Consent to add a vacant 7,291 m2 non-farm related rural residential parcel of land to the south, retaining an 8,881 m2 non-farm related rural residential parcel of land.	Conforms	Approved by Committee
LD 097/2022	Coughlan Developments Ltd.	Lot 13 Registered Plan M-1157 Town of Ajax	Consent to sever a vacant 552.04 m2 residential parcel of land, retaining 2,291.39 m2 residential parcel of land with existing dwelling to be demolished.	Conforms	Approved by Committee
LD 098/2022	Coughlan Developments Ltd.	Lot 13 Registered Plan M-1157 Town of Ajax	Consent to sever a vacant 551.61 m2 residential parcel of land, retaining 1,739.78 m2 residential parcel of land with existing dwelling to be demolished.	Conforms	Approved by Committee

LD 099/2022	Coughlan Developments Ltd	Lot 13 Registered Plan M-1157 Town of Ajax	Consent to sever a vacant 551.42 m2 residential parcel of land, retaining 1,188. 36 m2 residential parcel of land with existing dwelling to be demolished.	Conforms	Approved by Committee
LD 100/2022	Coughlan Developments Ltd.	Lot 13 Registered Plan M-1157 Town of Ajax	Consent to sever a vacant 551.28 m2 residential parcel of land, retaining 637.08 m2 residential parcel of land with existing dwelling to be demolished.	Conforms	Approved by Committee
LD 101/2022	Stephanie Volpentesta	Lot 15, Concession 4 City of Oshawa	Consent to sever a vacant 2.251 ha commercial parcel of land, retaining a vacant 0.7 ha commercial parcel of land.	Conforms	Approved by Committee
LD 103/2022	Riocan Holdings Inc.	Lot 6, Concession 2 Town of Ajax	Consent to sever a 1.441 ha commercial parcel of land, retaining a 10.541 ha commercial parcel of land. Existing structures to remain.	Conforms	Approved by Committee
LD 104/2022	Riocan Holdings Inc.	Lot 6, Concession 2 Town of Ajax	Consent to grant a 0.094 ha access easement in favour of the lands to the north, east and south, retaining a 10.541 ha commercial parcel of land.	Conforms	Approved by Committee
LD 105/2022	Larry & Andrea James	Lot 25, Concession 7 Township of Uxbridge	Consent to add a vacant 32,924.1 m2 non-farm related rural parcel of land to the south, retaining a 76,165 m2 non-farm related rural parcel of land with an existing dwelling to remain.	Conforms	Approved by Committee
LD 106/2022	Halloway Developments Limited	Lots 17 and 18, Concession 1 Town of Whitby	Consent to grant a 2.328 ha access easement in favour of the property to west, retaining a 22.369 m2 industrial parcel of land.	Conforms	Approved by Committee

LD 107/2022	Al-Karim & Sholina Rhemtulla	Lot 10 & 11, RCP 820 City of Pickering	Consent to sever a vacant 655.4 m2 residential parcel of land, retaining a 3,531. m2 residential parcel of land with an existing dwelling to remain.	Conforms	Approved by Committee
LD 108/2022	Al-Karim & Sholina Rhemtulla	Lot 10 & 11, RCP 820 City of Pickering	Consent to sever a vacant 655.4 m2 residential parcel of land, retaining a 2,875.6 m2 residential parcel of land with an existing dwelling to remain.	Conforms	Approved by Committee
LD 109/2022	Al-Karim & Sholina Rhemtulla	Lot 10 & 11, RCP 820 City of Pickering	Consent to sever a vacant 656.4 m2 residential parcel of land, retaining a 2,220.2 m2 residential parcel of land with an existing dwelling to remain.	Conforms	Approved by Committee

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3111

The Regional Municipality of Durham
Information Report

From:	Commissioner & Medical Officer of Health
Report:	#2022-INFO-89
Date:	November 4, 2022

Subject:

2022 Annual Report of the Chief Public Health Officer of Canada

Recommendation:

Receive for information

Report:

1. Purpose

1.1 To provide an update on the annual report from the Chief Public Health Officer of Canada (CPHO) regarding the state of public health entitled, Mobilizing Public Health Action on Climate Change in Canada.

2. Background

2.1 The CPHO is responsible for providing an annual report to the Minister of Health for tabling in Parliament as required under Section 12(1) of the *Public Health Agency of Canada Act*.

2.2 The annual report provides an update on the state of public health in Canada and encourages discussion on priority public health issues. This year's report was released on October 25, 2022.

2.3 This year's CPHO report focuses on the health impacts of climate change and highlights public health's role in preventing and reducing these impacts.

2.4 Canada is warming at twice the global average rate, with the north warming at three to four times faster.

2.5 The CPHO echoes the World Health Organization's message that the climate crisis is the greatest health threat of our time.

3. Current Status

3.1 The 2022 CPHO annual report is organized into three sections, with a bonus section on COVID-19.

3.2 Section one describes the **urgency of climate change**.

a. Climate change is already threating human health and well-being.
b. Climate change multiplies existing population health challenges, including the spread of climate sensitive infectious diseases, food security, and health inequities.
c. Internationally, it is estimated that by 2050, 200 million people a year could need humanitarian aid due to climate change.
d. Canada is warming at a rate two times faster than the global average, and the north specifically is warming three to four times faster.
e. Canadian climate hazards identified in the report include changes in animal and plant distribution, changes in precipitation, forest fires, heat waves, increased storm surges, permafrost degradation, reduced ice cover, rising sea levels, shifts in ecosystems and biodiversity, and spread of vector-borne diseases.
f. The health risks associated with the climate hazards listed above include allergies, cardiovascular and respiratory illnesses, death, dehydration, difficulty accessing medical services, food- and water-borne illnesses, heat stroke, injury, physical and mental health issues, pregnancy complications, undernutrition and food insecurity and vector-borne diseases (i.e., Lyme disease and West Nile virus).
g. As our climate continues to change, new risks will emerge, existing health threats will intensify, and new health challenges may arise.

3.3 Section two describes **opportunities to advance climate action in public health.**

a. The CPHO highlights a roadmap for public health action on climate change, which includes:

- Implementing a range of interventions to address immediate health challenges and prevent future health risks.
- Prioritizing community expertise and engagement for equitable and effective climate action.
- Advancing knowledge to understand, predict, and respond to the health impacts of climate change.
- Collaborating across sectors for transformative climate-health action and intersectoral co-benefits that reduce greenhouse gas emission and improve health outcomes. This can be achieved by initiatives, advocacy and partnerships across sectors, jurisdictions, and policy domains to produce win-wins.
- Strengthening public health leadership for climate action and public health building blocks for climate resilience.

b. Public health functions can be applied to climate solutions in the following areas:

- Health promotion
- Health surveillance
- Population health assessment
- Disease and injury prevention
- Emergency prediction, preparedness, and response
- Shelters and other supports for displaced populations, and
- Community and mental health supports.

3.4 Section three outlines **a way forward for tackling climate change**. This includes:

a. Integrating climate considerations into public health systems.
b. Centering health in climate action.
c. Building climate resilient public health systems and workforces.

3.5 The bonus section, Appendix B, provides **an update on COVID-19 in Canada** and covers the period of August 2021 to 2022**.** Highlights include:

a. Omicron changed the trajectory of the pandemic because it was significantly more transmissible and better able to evade vaccine and infection-acquired immunity but had less severe health outcomes on an individual level.
b. COVID-19 surveillance changed over the year, shifting from testing the general population to testing targeted populations only, and monitoring trends in the general population using viral genomic, wastewater, and hospitalization surveillance instead.
c. Guidance, requirements, and recommendations shifted, starting with stricter public health measures during the first Omicron wave, followed by the gradually de-escalation of public health measures as hospitalization rates declined after February 2022.
d. Vaccine protection declined over time due to waning immunity and emerging new variants, which led to the roll-out of COVID-19 booster doses.
e. Advances were made in therapeutics for the management of COVID-19 (e.g., Health Canada authorized the use of Paxlovid to treat mild to moderate COVID-19 infections at home).
f. Some of the broader effects of COVID-19 (beyond illness and death) on Canadian society were explored, including a worsening opioid overdose crisis, surges in some sexually transmitted and blood-borne infections, increased food and financial insecurity, decreased physical activity, delayed medical procedures, changes to the flu season, decreased perceived mental health, and increased discrimination. The full range of impacts are yet to be fully understood and realized.

4. Relationship to Strategic Plan

4.1 This report relates to the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 1: Environmental Sustainability: 1.4 Demonstrate leadership in sustainability and addressing climate change.
b. Goal 2: Community Vitality: 2.4 Influence the social determinants of health to improve outcomes for vulnerable populations.

5. Conclusion

5.1 The CPHO advocates for putting health at the centre of climate action and focusing on solutions that benefit not only the environment, but health too.

a. Solutions like building safe walkable neighbourhoods, improving/increasing cycling infrastructure, adding more tree canopies in urban environments, investing in public transit, and building retrofits will improve health while also addressing the climate crisis by:

- Increasing physical activity
- Reducing chronic diseases
- Improving mental health
- Reducing injuries and death on roads
- Reducing greenhouse gas emissions, and
- Improving air quality, among other co-benefits.

5.2 The CPHO recognizes that “First Nations, Inuit, and Métis Peoples have long recognized the interconnected nature of human, animal, and environmental health. This knowledge has been central to Indigenous identity, resilience, and survival and is essential to a healthy and sustainable future for us all. It is time to embrace Indigenous ways of looking at our place in the natural world.”

5.3 Locally, Durham Region Health Department (DRHD) operates the Heat Warning and Information System (HWIS) and the Cold Warning Information System (CWIS).

a. The HWIS and CWIS can reduce heat- and cold-related illnesses during extreme weather events by alerting the public about extreme weather events, directing community response and outreach to vulnerable and priority populations, and providing individuals with information on how to prevent heat- and cold-related illnesses.

5.4 DRHD works to prevent and reduce the spread of Lyme disease in humans through tick surveillance and the investigation of human cases. Currently DRHD is not able to accept tick submissions for identification and potential testing, however, residents are asked to call DRHD if they find a tick crawling or feeding on them or a family member.

5.5 DRHD has undertaken completion of several local health vulnerability assessments (HVAs) for climate change topics such as air quality, food security, heat, ultra-violet radiation, etc. HVAs help to identify the impacts of climate change on the health of a population. The HVAs will inform adaptation planning, departmental climate change policies, program activities and Regional climate change initiatives.

5.6 DRHD's Council approved 2022 Regional Business Plan and Budget includes a new Climate Change Specialist position. With the additional capacity and climate change expertise, DRHD will be able to better align with the CPHO's vision for public health's role in climate action, and strengthen compliance with the Ontario Public Health Standards Healthy Environments and Climate Change Guideline, 2018.

Respectfully submitted,

Original signed by

R.J. Kyle, BSc, MD, MHSc, CCFP, FRCPC, FACPM
Commissioner & Medical Officer of Health

Memorandum

Date: November 4, 2022

To: Regional Chair Henry and Members of Regional Council

From: John Presta, P.Eng, MPA, Commissioner of Works

Copy: Elaine Baxter-Trahair, Chief Administrative Officer
Gioseph Anello, M.Eng., P.Eng., PMP, Director, Waste Management Services

Subject: Durham York Energy Centre
Quarterly (Q2 - 2022) Long-Term Sampling System Report

The Regional Municipality of Durham
Works Department

The attached report for the first quarter of 2022 provides details with respect to data related to the Long-Term Sampling System (LTSS) at the Durham York Energy Centre (DYEC), referred to as the AMESA system.

This report includes AMESA data collected from January 5, 2022, to March 4, 2022, and is structured as follows:

1. Sections 1 and 2 provide background,
2. Sections 3 to 8 provide specific quarterly AMESA data,
3. Section 9 provides ambient air data for the same time period, and
4. Section 10 responds to inquiries received during the quarter.

End of Memo

Attachment: DYEC LTSS Quarterly (Q2 - 2022) Report
(January 5, 2022 to March 4, 2022)

Durham York Energy Centre

Long-Term Sampling System

Quarterly (Q2) Report

April 2022 to June 2022

Prepared by

The Regional Municipality of Durham

Table of Contents

1. Introduction

This report provides additional details with respect to the reporting of data related to the Long-Term Sampling System (LTSS) at the Durham York Energy Centre (DYEC).

This report covers the second quarter of 2022 and includes AMESA data collected from March 31, 2022, to June 15, 2022.

2. Background

To meet the requirements of Environmental Compliance Approval (ECA) Condition 7(3), a continuous sampling system (the Adsorption Method for Sampling Dioxins and Furans (AMESA) LTSS), is installed on each of the two boilers at the DYEC to sample Dioxins and Furans.

The operation of the AMESA system was initiated in 2015 and has been maintained in accordance with current guidance from the AMESA manufacturer, the North American vendor ENVEA, and the AMESA Technical Manual.

The AMESA system is used only for the purpose stated in ECA Condition 7(3), which relates to Dioxins and Furans emissions trend analysis and evaluation of Air Pollution Control equipment performance. The AMESA results themselves do not constitute a compliance point for the facility operations.

ECA Condition 7(3), Testing, Monitoring and Auditing Long-Term Sampling for Dioxins and Furans, states:

(a) The Owner shall develop, install, maintain, and update as necessary a long-term sampling system, with a minimum monthly sampling frequency, to measure the concentration of Dioxins and Furans in the Undiluted Gases leaving the Air Pollution Control (APC) Equipment associated with each Boiler. The performance of this sampling system will be evaluated during the annual Source Testing programs in accordance with the principles outlined by 40 CFR 60, Appendix B, Specification 4.1

[1] 40 CFR Part 60 refers to the Code of Federal Regulations – Standards of Performance for New Stationary Sources

(b) The Owner shall evaluate the performance of the long-term sampling system in determining Dioxins and Furans emission trends and/or fluctuations as well as demonstrating the ongoing performance of the APC Equipment associated with the Boilers.

AMESA results are available at the site when requested by the Ministry of Environment, Conservation and Parks (MECP) and reported to the MECP as part of the Annual Report required by ECA Approval Condition 15 and posted to the DYEC website.

3. Cartridge Replacement Schedule

AMESA Cartridge Replacement Schedule				
Unit #	**Run #**	**Start Date**	**End Date**	**Duration (days)**
1	72	31-Mar-22	26-Apr-22	21
2	72	31-Mar-22	26-Apr-22	21
1	73	26-Apr-22	25-May-22	29
2	73	26-Apr-22	25-May-22	29
1	74	25-May-22	15-Jun-22	15
2	74	25-May-22	15-Jun-22	15

Note 1: The cartridge duration times may differ even though the start and end dates are the same for both units.

4. Laboratory Analysis

The lab advised that sample Run 73 for Unit #1 was compromised during the extraction process at the laboratory and therefore the sample was lost. Covanta followed up with the laboratory and a detailed explanation was provided as to how the sample was lost during the extraction process overnight.

5. Durham and York Regions and Covanta Monthly Data and Operations Review

Staff from Durham and York Regions meet with Covanta both weekly and monthly on an established scheduled to discuss facility operations, and to review environmental monitoring results, trends and calculations where required for all monitoring programs and the available AMESA results.

6. Oversight of AMESA Results

Durham and York Region staff and Covanta meet with the MECP on a quarterly basis to discuss all items pertinent to the ECA and the Environmental Monitoring Programs and facility operations. Any concerns which are not determined to be reportable incidents in accordance with the ECA are discussed along with day-to-day operations and monitoring.

Any events which the ECA deems reportable are done in accordance with the appropriate ECA condition.

Results of the AMESA LTSS are reported to the MECP in the DYEC Annual Reports and posted to the DYEC website. AMESA trends of validated data are presented as a 12-month rolling average together with an analysis to demonstrate the ongoing performance of the APC Equipment. The MECP has no concerns with the AMESA results detailed in the 2020 Annual Report as posted via this link: MECP Review of the DYEC 2020 Annual Report. The 2021 Annual Report has been posted to the website. There have been no comments to date from the MECP on this report.

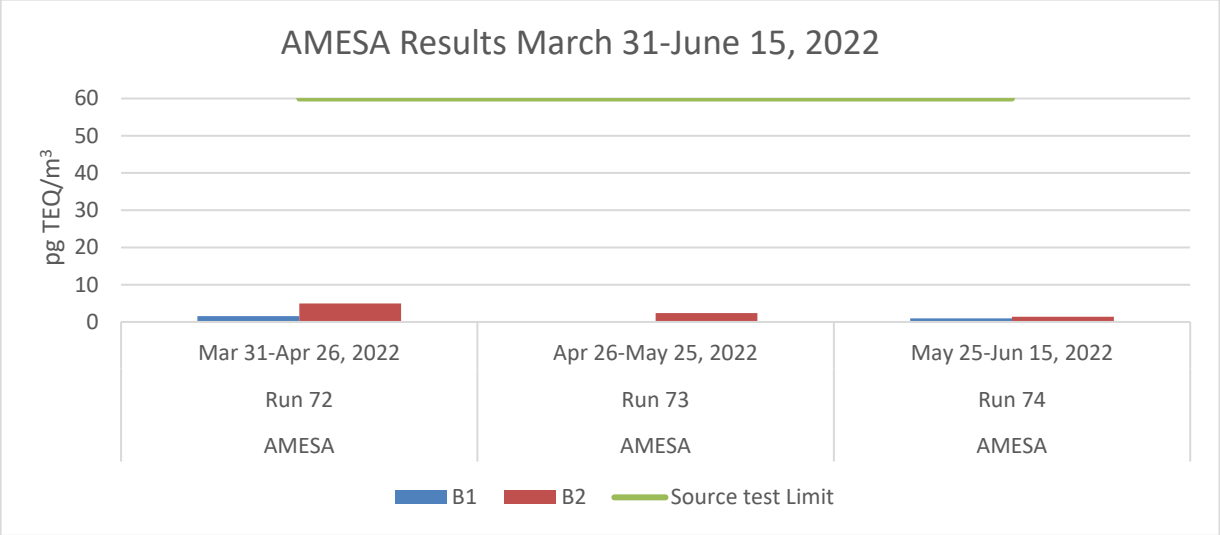
7. AMESA Performance

The measured concentrations for each of the 17 dioxin and furan congeners identified in the laboratory certificate of analysis are applied to established calculations to obtain a Calculated Result. These calculations quantify the Dioxins and Furans per reference metre cube of flue gas. Additionally, standard temperature, pressure and oxygen correction factors are also applied to the measured concentration to obtain a value for regulatory comparison. Finally, each of the 17 dioxin and furan congeners are multiplied by their respective toxic equivalency factor (TEF) and added together to obtain a total dioxin and furan total toxic equivalence (TEQ). The ECA for the DYEC specifies the use of the NATO classification scheme for Dioxins and Furans and therefore the NATO TEF factors are applied to obtain the TEQ calculation. The Table below shows each of the AMESA sampling Runs, the start and end time the cartridge was in-situ for each boiler unit, and the calculated result.

AMESA Calculated Results				
Unit #	**Run #**	**Start Date**	**End Date**	**Calculated Result (pg TEQ/Rm^3)**
1	72	31-Mar-22	26-Apr-22	1.578
2	72	31-Mar-22	26-Apr-22	4.978
1	73	26-Apr-22	25-May-22	Note 2
2	73	26-Apr-22	25-May-22	2.375
1	74	25-May-22	15-Jun-22	0.971
2	74	25-May-22	15-Jun-22	1.406

Note 2: Run 73 Boiler Unit #1 (B1) not shown; sample compromised at the lab.

While AMESA has no regulatory limit associated for compliance as it is used to supplement source testing, the ECA directs that, "The Owner shall evaluate the performance of the long-term sampling system in determining Dioxins and Furans emission trends and/or fluctuations as well as demonstrating the ongoing performance of the APC Equipment associated with the Boilers." The Regions, their Engineering and Air Emissions oversight consultants and Covanta will continue to monitor DYEC performance as it relates to AMESA results and trends. The Table below displays the results of the AMESA runs carried out in the second quarter (Q2) of 2022.



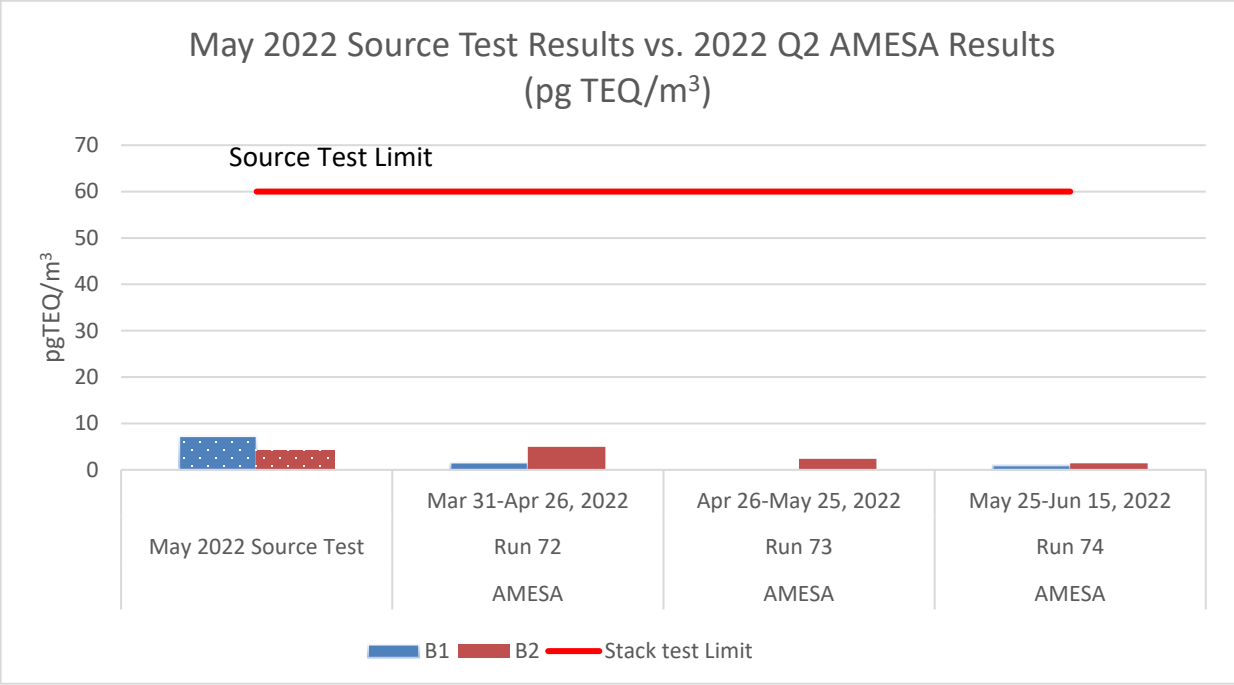
Note 3: Run 73 Boiler Unit #1 (B1) not shown; sample compromised at the lab.

7.1 Investigation

There were no results which triggered the AMESA Investigation Checklist during the second quarter (Q2) of 2022.

8. AMESA relative to most current Source Testing Dioxin and Furan Results

As AMESA is not a compliance tool, it is presented in the chart below to show how the Q2 calculated values compare to the most current source testing results. The source test compliance limit for Dioxins and Furans is 60 pgTEQ/m3. The chart below shows the AMESA Q2, 2022 results as compared to the 2022 Spring source test results. Results from the recent Spring source test also indicated the Dioxins and Furans result is below the regulatory compliance limit.



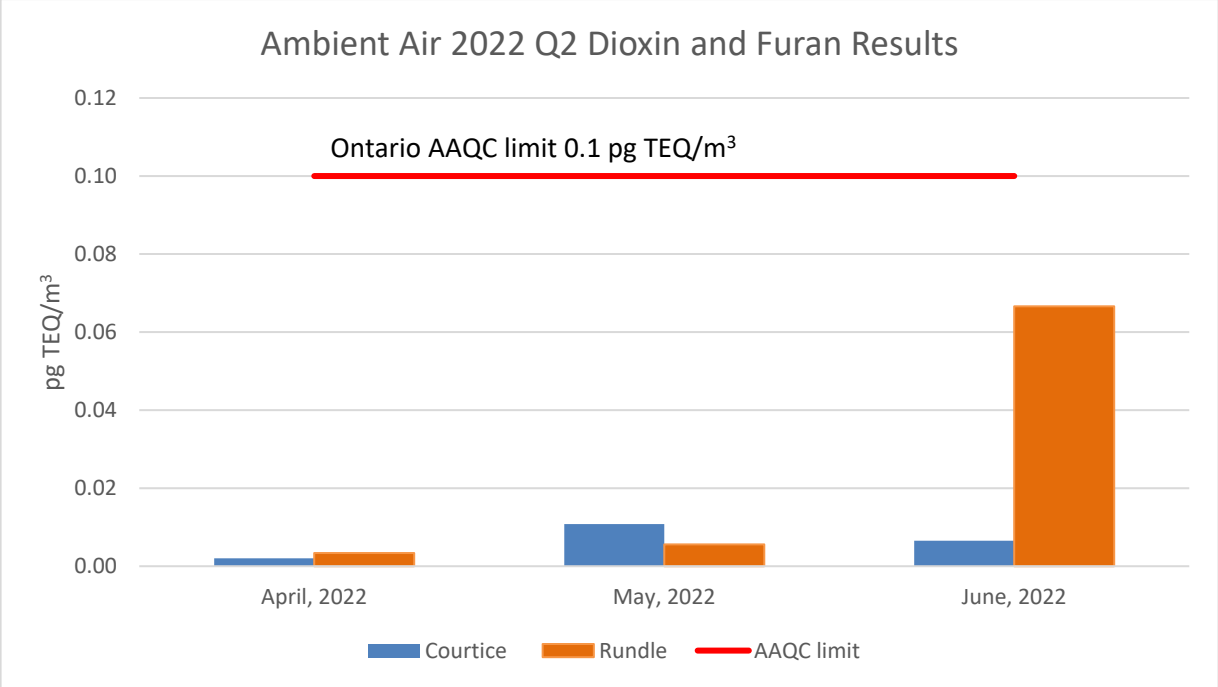
Note 4: Run 73 Boiler Unit #1 (B1) not shown; sample compromised at the lab.

9. Ambient Air Dioxin and Furan Results – Second Quarter (Q2) 2022

The Ambient Air Monitoring Program samples for Dioxins and Furans. The units of measurement and the reporting limits are prescribed differently and cannot be compared directly. Ambient Air does not measure point source emissions. The equipment samples air by capturing ambient air emissions from a variety of emissions sources in the area. The results of this monitoring advise on local air quality and may suggest contributing factors based on meteorological conditions such as wind speed and direction.

As can be seen in the graph below, the dioxin and furan results measured from both ambient air stations in the program are below the Ontario Ambient Air Quality Criteria of 0.1 picogram Toxic Equivalency per cubic metre (pgTEQ/m^3) during the second quarter (Q2) of 2022.

Of additional note, the Ontario Ambient Air Quality Criteria is 10 times lower than the Ontario Regulation 419 Upper Risk Threshold of 1 pgTEQ/m^3 for Dioxins and Furans.



10. Durham York Energy Centre Inquiries

A response from the MECP for the following correspondence had not been received to date:

- A letter dated June 11, 2021, addressed to Lisa Trevisan, MECP Director, Central Region and copied to Durham Region Council was received from three residents with concerns around the AMESA Long-Term Sampling System.

- At a meeting held on July 5, 2021, the Council of the Municipality of Clarington passed Resolution #C-266-21 in relation to the Long-Term Sampling System for the monitoring of Dioxin and Furan emissions (AMESA) from the DYEC. As a result of the Resolution, a letter dated July 9, 2021, was sent to the MECP York Durham District Manager.

End of Report

Interoffice Memorandum

Date: **November 4, 2022**

To: **Health & Social Services Committee**

From: **Dr. Robert Kyle**

Subject: **Health Information Update – October 30, 2022**

Health Department

Please find attached the latest links to health information from the Health Department and other key sources that you may find of interest. Links may need to be copied and pasted directly in your web browser to open, including the link below.

You may also wish to browse the online Health Department Reference Manual available at Board of Health Manual, which is continually updated.

Boards of health are required to "superintend, provide or ensure the provision of the health programs and services required by the [Health Protection and Promotion] Act and the regulations to the persons who reside in the health unit served by the board" (section 4, clause a, HPPA). In addition, medical officers of health are required to "[report] directly to the board of health on issues relating to public health concerns and to public health programs and services under this or any other Act" (sub-section 67.(1), HPPA).

Accordingly, the Health Information Update is a component of the Health Department's 'Accountability Framework', which also may include program and other reports, Health Plans, Quality Enhancement Plans, Durham Health Check-Ups, business plans and budgets; provincial performance indicators and targets, monitoring, compliance audits and assessments; RDPS certification; and accreditation by Accreditation Canada.

Respectfully submitted,

Original signed by

R.J. Kyle, BSc, MD, MHSc, CCFP, FRCPC, FACPM
Commissioner & Medical Officer of Health

"Service Excellence for our Communities

UPDATES FOR HEALTH & SOCIAL SERVICES COMMITTEE
October 30, 2022

Health Department Media Releases/Publications

tinyurl.com/49kbyc9z

- COVID-19 Vaccines for 12+ Years (Oct 19)

tinyurl.com/ybmmxu3t

- Bivalent COVID-19 Vaccine Booster Update (Oct 21)

tinyurl.com/46nahr77

- It's Time to Fall Back – Change your Batteries for the Fall! (Oct 24)

tinyurl.com/bdfj88ft

- What's Up Doc? Vol 15 No 3 (Oct 26)

GOVERNMENT OF CANADA

Department of Justice Canada

tinyurl.com/yc7jr7b7

- Reforming the criminal law regarding HIV non-disclosure: Government of Canada launches public consultation (Oct 21)

Health Canada

tinyurl.com/yu3kf8rc

- Statement from the Minister of Health and Minister of Mental Health and Addictions and Associate Minister of Health on the fourth anniversary of the legalization of Cannabis (Oct 17)

Innovation, Science and Economic Development Canada

tinyurl.com/muu8t5c6

- Minister Ng announces $30 million from Budget 2022 for the CAN Health Network (Oct 26)

Natural Resources Canada

tinyurl.com/y45phb7n

- Minister Wilkinson Positions Canada's Nuclear Sector as Provider of Reliable, Affordable and Non-Emitting Energy on the Global Stage (Oct 27)

Prime Minister's Office

tinyurl.com/4vf7ws8k

- Freezing the market on handguns (Oct 21)

Public Health Agency of Canada

tinyurl.com/bd96wts7

- Statement from the Chief Public Health Officer of Canada on her annual report 2022: Mobilizing Public Health Action on Climate Change in Canada (Oct 25)

GOVERNMENT OF ONTARIO

Ministry of Colleges and Universities
tinyurl.com/mrx564r3
- Ontario Supporting Safe, Respectful Learning Environments for Postsecondary Students (Oct 27)

Ministry of Education
tinyurl.com/4rpka8ue
- Province Takes Action to Ensure Students Catch Up (Oct 20)

Ministry of Health
tinyurl.com/485randm
- Ontario Doing More to Further Expand Health Workforce (Oct 27)

Ministry of Long-Term Care
tinyurl.com/4u8cjrck
- Ontario Creating Four New Specialized Units for People with Dementia and Other Complex Needs (Oct 28)

OTHER ORGANIZATIONS

Canada's Premiers
tinyurl.com/2p83kcma
- Premiers Launch Campaign to Improve Health Care for all Canadians (Oct 24)

Canadian Cardiovascular Society
tinyurl.com/bdze4dr8
- Canadian Cardiovascular Society Receives $1.6 million to Study Myocarditis and/or Pericarditis after mRNA COVID-19 Vaccination (Oct 27)

Canadian Commission on Building and Fire Codes
tinyurl.com/yc6fvn2w
- Public Review of Proposed Changes to 2020 National Model Codes Begins Today (Oct 24)

Desjardens Group
tinyurl.com/mrx88fus
- Road Safety: Open Letter from Valerie Lavoie President and COO – Desjardens General Insurance Group (Oct 20)

Evidence for Democracy
tinyurl.com/5n7hcmr9
- New report that policy-making across Canada scores low on transparency of evidence usage (Oct 17)

Financial Accountability Office of Ontario
tinyurl.com/mvb7bawb
- FAO projects budget surpluses in Ontario over the next six years (Oct 27)

Food Banks Canada
tinyurl.com/mr2awa8p
- High Inflation and Broken Social Safety Net Drive Food Bank Use Up 35% - Food Banks Canada Releases HungerCount 2022 Report (Oct 27)

Heart and Stroke Foundation
tinyurl.com/5729597v
- High and rising: Health professionals concerned about blood pressure in Canada (Oct 18)

IC/ES
tinyurl.com/3cs4enbn
- Number of family doctors stopping practice in Ontario doubled early in pandemic, study shows (Sep 26)

tinyurl.com/4h8n2exv
- Long COVID implications: increased health care use after infection with SARS-CoV-2 (Oct 17)

Mental Health Commission of Canada
tinyurl.com/5e46dutu
- Crisis in long-term care: Workers in need of psychological support (Oct 19)

Office of the Auditor General of Canada
tinyurl.com/23av53j2
- The federal government's pandemic response involved measures totalling $76 billion for 2021-22 fiscal year (Oct 27)

Ontario Medical Association
tinyurl.com/47nwuf2p
- Ontario's doctors want to work with government to fix health care (Oct 25)

ParticipACTION
tinyurl.com/mr2hwezw
- Global report finds Canadian kids rank 28th in physical activity (Oct 24)

Public Health Ontario
tinyurl.com/bdz6mfxy
- PHO Connections (Oct 27)

Transportation Safety Board of Canada
tinyurl.com/mtauzbee
- Watchlist 2022: TSB calls on stakeholders and regulator for more progress in reducing systemic transportation safety issues (Oct 26)

Corporate Services Department
City Clerk Services

File: 03-05

November 2, 2022

DELIVERED BY E-MAIL
(clerks@durham.ca)

Regional Municipality of Durham

Re: Amendments to Bill 3, Strong Mayors, Building Homes Act, 2022

Oshawa City Council considered the above matter at its meeting of September 26, 2022 and adopted the following recommendation:

"Whereas, on August 10, 2022, the Ontario government introduced Bill 3, Strong Mayors, Building Homes Act, 2022 ("Strong Mayors, Building Homes Act"), which amends the Municipal Act, 2001, the City of Toronto Act, 2006, and the Municipal Conflict of Interest Act to advance provincial priorities; and,

Whereas, the Strong Mayors, Building Homes Act provides the mayors of Toronto and Ottawa with new powers, which alters the governance and public administration of the cities of Ottawa and Toronto; and,

Whereas, changes to the Strong Mayors, Building Homes Act gives the mayors of Toronto and Ottawa, as head of council, broader scope of authority including, but not limited to, the following powers:

Direct municipal employees to:

- undertake research and provide advice to the head of council and the municipality on policies and programs of the municipality;
- carry out duties related to the exercise of the power or performance of the duty, including implementing any decisions made by the head of council;

Appoint a chief administrative officer:

- the powers of a municipality under section 229 of the Municipal Act, 2001, with respect to the chief administrative officer, are assigned to the head of council;

Powers regarding organizational structure:

- determine the organizational structure of the municipality are assigned to the head of council;

Employment matters:

- hire, dismiss or exercise any other prescribed employment powers with respect to the chief administrative officer, head of any division or the head of any other part of the organizational structure (excluding those positions appointed by statute or any other prescribed persons);

Powers re local boards:

- appoint, dismiss or revoke the appointment of chairs and vice-chairs of local boards;

Powers re committees:

- establish or dissolve committees;
- appoint, dismiss or revoke chairs and vice-chairs of committees;
- assign functions to committees;

Powers re meetings:

- despite any procedure by-law passed by the municipality, if a particular matter could potentially advance a prescribed provincial priority, the head of council may require the council to consider the matter at a meeting;

Veto powers:

- despite any procedure by-law passed by the municipality, if the head of council is of the opinion that all or part of a by-law could potentially interfere with a prescribed provincial priority, the head of council may provide written notice to the council of that municipality regarding intent to consider vetoing the by-law;

Powers and duties re budget:

- the powers and duties of a municipality with respect to proposing and adopting a budget are assigned to the head of council;
- prepare a proposed budget for the municipality and provide the proposed budget to the council for the council's consideration; and,

Whereas, these additional powers could extend to other municipal mayors; and,

Whereas, the amendments could have unintended consequences including reducing the role and responsibilities of municipal Councils on such matters, thereby detrimentally affecting local democracy; and,

Whereas, at the August 2022 AMO Conference, the Premier of Ontario stated the importance of working with municipal partners and the power of collaboration in building Ontario together; and,

Whereas, there was limited consultation with members of the public, Ontario municipalities including mayors, chief administrative officers / city managers as well as key stakeholders such as the Association of Municipalities of Ontario (“AMO:), Ontario Municipal Administrators’ Association (“OMAA”), Association of Municipal Managers, Clerks and Treasurers of Ontario (“AMCTO”); and,

Whereas, the current municipal governance is democratic and is effective and efficient in achieving provincial priorities; and,

Whereas, the changes to Bill 3 are intended to take effect on November 15, 2022,the start date of a new municipal council term;

Therefore be it resolved:

1. That Mayor Dan Carter send a letter to the Premier of Ontario, Minister of Municipal Affairs and Housing, Deputy Minister of Municipal Affairs and Housing, Secretary of the Cabinet, Head of the Ontario Public Service, Deputy Attorney General of Ontario, Attorney General, MPP Parliamentary Assistant to the Attorney General advising that:

    i. Oshawa City Council does not support the amendments to Bill 3, Strong Mayors, Building Homes Act, 2022; and,

    ii. Oshawa City Council does not support the amendments applying to the City of Oshawa;

2. That a copy of the Council resolution be provided to the Region of Durham, all Durham Region municipalities, Durham Region Members of Provincial Parliament, AMO, OMAA and AMCTO.”

If you need further assistance concerning the above matter, please contact me at the address listed below or by telephone at 905-436-3311.

Mary Medeiros
City Clerk

/fb

c. Corporate Services Department
Durham Region Municipalities
Durham Region Members of Provincial Parliament
Association of Municipalities of Ontario
Association of Municipal Managers, Clerks and Treasurers of Ontario
Ontario Municipal Administrators’ Association

Municipality of Huron Shores
7 Bridge Street, PO Box 460
Iron Bridge, ON P0R 1H0
Tel: (705) 843-2033 Fax: (705) 843-2035

November 2, 2022

Attn: Honourable Doug Ford
Premier of Ontario
Legislative Building, Queen's Park
Toronto, Ontario
M7A 1A1

Dear Premier,

Re: Res. #22-24-16 – Opposition to Bill 3

The Council of the Corporation of the Municipality of Huron Shores passed Resolution #22-24-16 at the Regular Meeting held Wednesday, October 26th, 2022, as follows:

"WHEREAS the Government of Ontario, through the Minister of Municipal Affairs and Housing, has introduced Bill 3 which is described as "An Act to amend various statutes with respect to special powers and duties of heads of council;

AND WHEREAS this Bill, if enacted, will initially apply to the City of Toronto and the City of Ottawa, but will later be expanded to include other municipalities according to a statement made by the Premier at the 2022 AMO annual conference;

AND WHEREAS this Bill, if enacted, will give Mayors additional authority and powers, and correspondingly take away authority and powers from Councils and professional staff, and will include giving the Mayor the authority to propose and adopt the Municipal budget and to veto some decisions of Council;

AND WHEREAS this Bill, if enacted, will give authority over professional staff to the Mayor, including that of the Chief Administrative Officer;

AND WHEREAS these changes will result in a reduction of independence for professional staff including the CAO, who currently provide objective information to the Council and public and will now take direction from the Mayor alone when the Mayor so directs;

AND WHEREAS these surprising and unnecessary changes to the historical balance of power between a Mayor and Council, and which historically gave the final say in all matters to the will of the majority of the elected Council;

NOW THERERFORE BE IT RESOLVED THAT Council of the Corporation of the Municipality of Huron Shores passes this resolution to petition the Government of Ontario:

1. THAT these changes to the *Municipal Act,* 2001, are unnecessary and will negatively affect the Municipality of Huron Shores;

2. THAT if the Ontario Government deems these changes necessary in large single-tier municipalities such as Toronto and Ottawa, that such changes should not be implemented in smaller municipalities;

3. THAT the Ontario Government should enact legislation clarifying the role of Mayor, Council and Chief Administrative Officer, similar to those recommended by the Ontario Municipality Administrator's Association and those recommended by Justice Marrocco in the Collingwood judicial inquiry of 2022; and

4. THAT if the stated goal of this legislation is to construct more housing in Ontario that this can be accomplished through other means including amendment of the *Planning Act* and funding of more affordable housing;

AND BE IT FURTHER RESOLVED THAT a copy of this resolution be provided to the Premier of Ontario, the Minister of Municipal Affairs and Housing, the "Standing Committee on Heritage, Infrastructure and Cultural Policy", MP Carol Hughes, the Association of Municipalities of Ontario and all municipalities in Ontario."

Should you require anything further in order to address the above-noted resolution, please contact the undersigned.

Yours truly,

Natashia Roberts

Chief Administrative Officer (CAO)/Clerk
NR/KN

[redacted]

From: Joanne Hyde <Joanne.Hyde@trca.ca> **On Behalf Of** TRCA Clerks
Sent: November 1, 2022 6:21 PM
To: Clerks <Clerks@durham.ca>
Cc: John MacKenzie <John.MacKenzie@trca.ca>; Michael Tolensky <Michael.Tolensky@trca.ca>
Subject: Revised Toronto and Region Conservation Authority Board of Directors Administrative By-Law

Good evening Mr. Harras,

Toronto and Region Conservation Authority's Board of Directors is pleased to have endorsed the 2022 Updates to the Administrative By-Law at its meeting on September 23, 2022, adopting Resolution A#126/22.

The updates reflect a number of housekeeping amendments, including new or revised definitions for added clarification, the introduction of hybrid meetings and participation by electronic means. Further changes were made to align with Conservation Authority Act amendments and regulations that were enacted in 2021 and 2022, including adjustments to reflect the new requirement for one-year terms for Chair and the Vice Chair, and the ability for the Minister of Environment Conservation and Parks (MECP) (now the Minister of Natural Resources and Forestry) to appoint an Agricultural sector representative to the Board and the parameters around which that representative can participate in Board activities.

Revisions to the Hearing Rules were done in order to streamline and clarify rules around hearings, including new clauses to address hearings on MZO permit applications, hearings on cancellation of permits and extension of permits, provisions related to electronic hearings, and other housekeeping amendments.

Correspondence in support of the resolution and a PDF of the updated Toronto and Region Conservation Authority Board of Directors Administrative By-Law have been attached for your convenience.

Regards,

Joanne Hyde, MPA, CMO, AOMC
Clerk and Manager, Policy
Corporate Services | Clerks Office

T: (437) 880-2328
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E: joanne.hyde@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

November 1, 2022

Alexander Harras, Regional Clerk
Regional Municipality of Durham
605 Rossland Road East
Whitby, Ontario Canada L1N8Y9

Sent via email
alexandar.harras@durham.ca

RE: Revised Toronto and Region Conservation Authority Board of Directors Administrative By-Law

Toronto and Region Conservation Authority's (TRCA) Board of Directors is pleased to have endorsed the 2022 Updates to the Administrative By-Law at its meeting on September 23, 2022, adopting Resolution A#126/22 as follows:

> **THAT the proposed amendments to the TRCA Board of Directors Administrative By-Law, Included as Attachment 1, be approved;**
>
> **AND FURTHER THAT the approved amended Board of Directors Administrative By-Law be forwarded to the Minister of Environment, Conservation and Parks, the Minister of Natural Resources and Forestry, and Conservation Ontario, partner municipalities, and be posted on TRCA's website;**
>
> **AND THAT Section 5 (3) of the Administrative By-Law be amended to include "and 96 hours for unscheduled meetings (excluding weekends, holidays, and office closures)" and reference to "regularly scheduled" Friday meetings.**

A number of house-keeping amendments were made to TRCA's Board of Directors Administrative By-Law to reflect hybrid meetings and participation by electronic means. Additional changes were made to align with Conservation Authority Act amendments and regulations that were enacted in 2021 and 2022 including adjustments to reflect the new requirement for one-year terms for Chair and the Vice Chair, and the ability for the Minister of Environment Conservation and Parks (MECP) (now the Minister of Natural Resources and Forestry) to appoint an Agricultural sector representative to the Board and the parameters around which that representative can participate in Board activities.

A PDF of the updated Toronto and Region Conservation Authority Board of Directors Administrative By-Law has been attached for your convenience. If you have any questions or require additional information, please contact Joanne Hyde, Clerk and Manager, Policy at joanne.hyde@trca.ca or (437) 880-2328.

Sincerely,

Joanne Hyde

Joanne Hyde
Clerk and Manager, Policy

cc. John MacKenzie, Chief Executive Officer, TRCA
Michael Tolensky, Chief Financial and Operating Officer, TRCA
Joanne Hyde, Clerk and Manager, Policy, TRCA

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Minister of Natural Resources and Forestry, minister.mnrf@ontario.ca
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Attachment: Toronto and Region Conservation Authority Board of Directors Administrative By-Law

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2097.

The Regional Municipality of Durham

MINUTES

9-1-1 MANAGEMENT BOARD

October 18, 2022

A regular meeting of the 9-1-1 Management Board was held in the Lower Level Boardroom (LL-C), Regional Municipality of Durham Headquarters, 605 Rossland Road East, Whitby, at 9:30 A.M. In accordance with Provincial legislation, electronic participation was permitted for this meeting.

1. Roll Call

Present: M. Berney, Scugog Fire & Emergency Services (Chair)
T. Cheseboro, Region of Durham Paramedic Services
L. Kellett, Oshawa Central Ambulance Communications Centre, Ministry of Health – Emergency Health Program Management & Delivery Branch
M. Simpson, Director of Risk Management, Economic Studies and Procurement, Durham Region
J. Wichman, Communications/9-1-1 Technical Manager
* **all members of Committee participated electronically**

Absent: B. Drew, Durham Regional Council
G. Oblenes, Durham Regional Police

Staff Present: T. Fetter, Director, Business Services, Durham Regional Police Service
R. Inacio, Systems Support Specialist, Corporate Services – IT
W. Spindler, Operations Manager, Oshawa Central Ambulance Communications Centre, Ministry of Health – Emergency Health Program Management & Delivery Branch
S. Ciani, Committee Clerk, Legislative Services Division – Corporate Services Department
T. Fraser, Committee Clerk, Legislative Services Division – Corporate Services Department

2. Declarations of Interest

There were no declarations of interest.

3. Approval of Minutes

Moved by J. Wichman, Seconded by M. Simpson,
(1) That the minutes of the 9-1-1 Management Board meeting held on June 28, 2022, be adopted.

CARRIED

4. 9-1-1 Call Statistics

J. Wichman provided the statistics on calls transferred from January to September 2022. He advised that calls are trending similar to past years, with a slight drop in call volume for September.

5. 9-1-1 System Complaints reported by Technical Manager

J. Wichman advised that there were no issues to report involving the 9-1-1 system.

J. Wichman advised that Apple will be releasing a new feature for the iPhone 14 in November which will have the ability to send a text message over satellite and will only work in the event there is no cell signal or wi-fi. He advised that Durham's 9-1-1 Call Centre does not have the ability currently to receive that information and instead the call would be directed to an Apple call centre first, and then they would call the regional administration line with the details of the call such as latitude and longitude, and a brief nature of the emergency.

J. Wichman also advised that a second feature that has already been released in Canada and the United States is a crash notification from the actual cell phone. He advised that there is an issue with this feature as many calls are coming from theme parks. For example, Durham Region has had one confirmed crash notification call which was a resident who was at the Mosport racetrack and set off the notification while go-carting. J. Wichman stated that some sort of campaign to notify the public of this feature would be beneficial.

J. Wichman further advised that he is attending an Emergency Service Working Group meeting today and that Apple representatives are attending to discuss better handset-based location information, and that staff will raise their concerns regarding the new iPhone 14 features.

J. Wichman advised that there will be a planned evacuation of the 9-1-1 Call Centre in November 2022 and the intent is to have four planned evacuations in 2023, one for each platoon.

6. 2023 Meeting Schedule

The 9-1-1 Management Board members discussed and agreed to the following meeting dates for 2023:

- January 24, 2023
- April 25, 2023
- June 27, 2023
- September 26, 2023

- November 28, 2023

7. Other Departments - Comments/Concerns

a) Comments/Concerns – Regional Council

There were no comments.

b) Comments/Concerns – Durham Police

There were no comments.

c) Comments/Concerns – Fire Departments

M. Berney advised that he attended the kick off for Pulse Point at Lakeridge Health Oshawa which is an application that alerts citizens who are nearby of a cardiac arrest in a public place, the location of the cardiac arrest, and the closest Automated External Defibrillator (AED) to that location.

It was the consensus of the Committee to invite Sandra Mackie from Oshawa Fire Services to the next 9-1-1 Management Board meeting to provide a presentation on Pulse Point.

M. Berney advised that staff continue with the Next Generation 9-1-1 (NG 9-1-1) efforts at the two communication centres and will be moving to a new CAD provider in the near future.

d) Comments/Concerns – Oshawa Central Ambulance Communications Centre

L. Kellet advised that staffing challenges are improving and that seven staff members have been hired this year. She advised that the new telephony system has been implemented at the Lindsay Central Ambulance Communications Centre (CAC) and that the new PSRN radio network will be coming to Durham soon.

L. Kellett responded to a question regarding when the telephony system would be implemented at the Oshawa Central Ambulance Communications Centre.

e) Comments/Concerns – Durham Finance

M. Simpson thanked J. Wichman for liaising with staff on the new regional service, my Durham 3-1-1.

M. Simpson advised that staff are in the process of getting the Bell NG 9-1-1 agreement executed and that the last group to review it is the Privacy Office. She advised that staff have delegated authority to sign the agreement once approved.

M. Simpson reminded the Board that staff are well into budget season and that the 9-1-1 budget is currently under development.

f) Comments/Concerns – Region of Durham Paramedic Services

T. Cheseboro advised that the Ministry of Health and Long-Term Care has been researching Durham's facilities in order for the radio system to be installed and staff provided updates to the province regarding how many units will be required. The province has advised that a fair amount of work will have to go into the stations as they do not have the proper grounding for the radio antennas. He also advised that staff are struggling with cell phone communications as the cell phones are extremely outdated (flip phones) and have asked the Ministry of Health and Long-Term Care for updates.

J. Wichman advised that flip phones typically only support 3G and that 3G phones may be decommissioned in the near future now that 5G is being released. He advised that this may help staff get an upgrade for their cell phones. J. Wichman asked if staff were still using Blackline Lone Worker alarm.

T. Cheseboro advised that there is roughly 800-900 hours of off-load delay and that call volume is up roughly 10,600 calls, across all calls (Codes 1-8), and that this number will increase as the Code 8 responses for September have not been entered into the system. He advised that emergency responses are up roughly 4,442.

T. Cheseboro also advised that paramedic services are still experiencing health human resources (HHR) staffing pressures.

T. Cheseboro further advised that there is currently an Ebola outbreak in Uganda and that there are concerns about Ebola transmission into Canada, so flights are being monitored very closely.

8. Other Business

There was no other business.

9. Date of Next Meeting

The next meeting of the 9-1-1 Management Board will be held on Tuesday, January 24, 2023 at the Regional Municipality of Durham Headquarters, 605 Rossland Road East, Whitby, in Council Chambers.

10. Adjournment

Moved by M. Simpson, Seconded by T. Cheseboro,
(2) That the meeting be adjourned.

CARRIED

The meeting adjourned at 10:04 AM

M. Berney, Chair

S. Ciani, Committee Clerk