



The Regional Municipality of Durham

COUNCIL INFORMATION PACKAGE

April 14, 2022

Information Reports

- 2022-INFO-32** Commissioner of Planning and Economic Development – re: Proposed Amendment to the Greenbelt Plan: Growing the Greenbelt, Phase 2 Consultations
- 2022-INFO-33** Acting Commissioner of Works – re: Durham York Energy Centre Source Test Update

Early Release Reports

There are no Early Release Reports

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1. Memorandum from Dr. R.J. Kyle, Commissioner and Medical Officer of Health – re: Health Information Update – April 10, 2022
2. Memorandum from J. Demanuele, Acting Commissioner of Works - re: Durham York Energy Centre – Quarterly (Q4 – 2021) Long-Term Sampling System Report

Durham Municipalities Correspondence

1. City of Oshawa – re: Resolution passed at their Council meeting held on March 28, 2022, regarding Ontario Housing Affordability Task Force

Other Municipalities Correspondence/Resolutions

There are no Other Municipalities Correspondence/Resolutions

Miscellaneous Correspondence

1. Toronto and Region Conservation Authority (TRCA) – re: Notice of Meeting to Approve the 2022 Non-Matching Levy for Toronto and Region Conservation Authority

2. Durham Regional Police Services Board – re: Public Agenda – [Tuesday April 19, 2022](#)

Advisory / Other Committee Minutes

1. Durham Region Anti-Racism Taskforce (DRART) minutes – **March 24, 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 Planning and Economic Development
Report: [#2022-INFO-32](#)
Date: April 15, 2022

Subject:

Proposed Amendment to the Greenbelt Plan: Growing the Greenbelt, Phase 2
Consultations

Recommendation:

Receive for information

Report:

1. Purpose

1.1 On March 24, 2022, the Ministry of Municipal Affairs and Housing (MMAH) posted policy proposal notice [#019-4485](#) to the Environmental Registry of Ontario (ERO) seeking feedback (the Phase 2 consultations) on proposed changes to the Greenbelt Plan, including schedules. It is a 30-day comment period ending on April 23, 2022. The proposed changes would add 13 new Urban River Valley areas to the Greenbelt, four of which are located in Durham Region. The purpose of this report is to provide an overview of these proposed changes.

2. Previous Reports and Decisions

2.1 Report [#2021-INFO-25](#) summarizes previous Regional positions on growing the Greenbelt and provides background information on Phase 1 of consultations.

3. Background

3.1 The Greenbelt Plan came into effect on February 28, 2005. The Greenbelt Plan works with the Oak Ridges Moraine Conservation Plan and Growth Plan for the

Greater Golden Horseshoe to protect the region's agricultural land base and the ecological features and functions occurring on the landscape. Over 80 percent of Durham is located within the Greenbelt.

3.2 The Regional Official Plan (ROP) was amended to conform to the Greenbelt Plan through Regional Official Plan Amendment 114, which was approved by the Ontario Municipal Board in January of 2008.

4. Proposed Amendments to the Greenbelt Plan – Growing the Greenbelt

4.1 As part of the 2017 Greenbelt Plan update, 21 Urban River Valleys were designated that connect the Greenbelt to Lake Ontario through urban areas. Nine of these existing Urban River Valleys are located within Durham (see Attachment #1), including:

- Duffins Creek;
- Carruthers Creek;
- Lynde Creek;
- **Oshawa Creek;**
- Farewell Creek/**Harmony Creek;**
- **Bowmanville Creek;**
- **Soper Creek;**
- **Wilmot Creek;** and
- Graham Creek.

Creeks identified in **bold** type are the subject of proposed Urban River Valley expansions through this Phase 2 consultation.

4.2 Policies for the Greenbelt Urban River Valley designation apply only to publicly owned lands within the boundary of the designation and focus on the use of these lands for natural heritage protection, conservation and parks and open space.

4.3 In early 2021, MMAH sought feedback (the Phase 1 consultation) on ways to grow the size of the Greenbelt that focused on the Paris-Galt Moraine in Wellington County, and new and expanded Urban River Valleys. Due to the active status of the Municipal Comprehensive Review and the fact that a request to expand the Greenbelt can be made at any time, the Region did not offer comments or suggestions through the Phase 1 consultation process. Comments were submitted by some area municipalities and conservation authorities.

- 4.4 MMAH has now launched the Phase 2 consultations, seeking feedback on proposed amendments to the [Greenbelt Plan](#) and Greenbelt Area Boundary regulation ([Ontario Regulation 59/05](#)) to add a total of 13 new Urban River Valley areas. The *Greenbelt Act, 2005* requires consultation with affected municipalities, public bodies and the public on any proposed Greenbelt Plan amendments.
- 4.5 Based on comments received during the Phase 1 consultations, the province is proposing the following four Urban River Valley (URV) expansions in Durham:
- Expansion to the Oshawa Creek URV (see Attachment #2);
 - Expansion to the Harmony Creek URV by adding McLaughlin Bay Wildlife Preserve and Darlington Provincial Park, in Oshawa and Courtice (see Attachment #2);
 - Expansion to the Soper and Bowmanville Creek URVs in Bowmanville to include Westside Marsh (see Attachment #3); and
 - Expansion to the Wilmot Creek URV in Newcastle to include additional wetlands (see Attachment #4).
- 4.6 Expanding the URVs as proposed by the province adds an extra measure of protection to these publicly owned environmental areas.

5. Relationship to Strategic Plan

- 5.1 This report aligns with/addresses Objective 1.3 under the goal of Environmental Sustainability within the Durham Region Strategic Plan:
- Protect, preserve and restore the natural environment, including greenspaces, waterways, parks, trails and farmland.

6. Conclusion

- 6.1 Regional staff will continue to monitor provincial consultation on Growing the Greenbelt, including Urban River Valley areas and will keep Regional Council informed as necessary.

7. Attachments

Attachment #1: Existing Greenbelt Urban River Valleys

Attachment #2: Proposed Additions to Greenbelt Urban River Valleys in Oshawa and Courtice

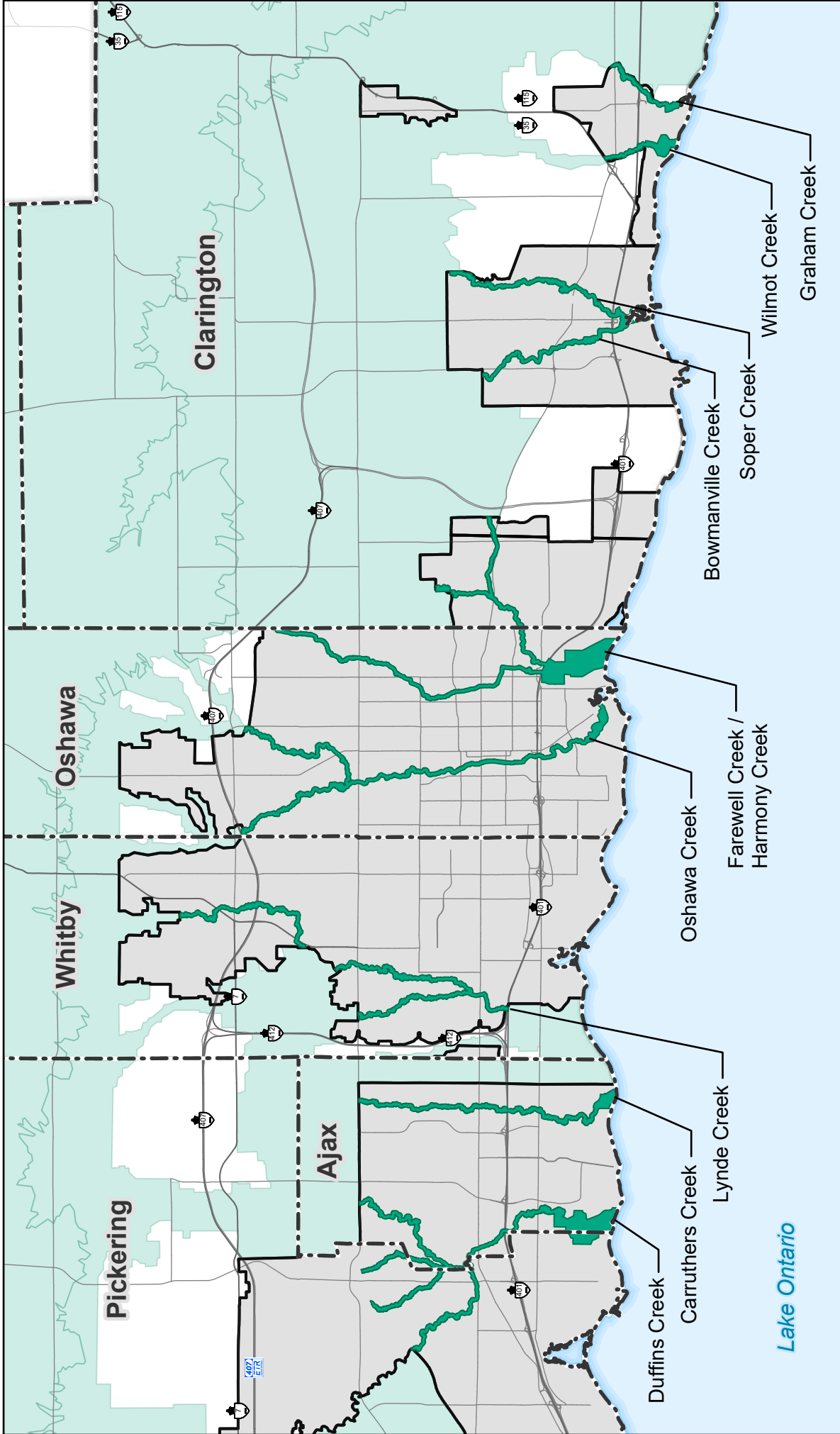

Attachment #3: Proposed Additions to Greenbelt Urban River Valleys in Bowmanville

Attachment #4: Proposed Additions to Greenbelt Urban River Valleys in Newcastle


Respectfully submitted,

Original signed by

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

0 4 Kilometres



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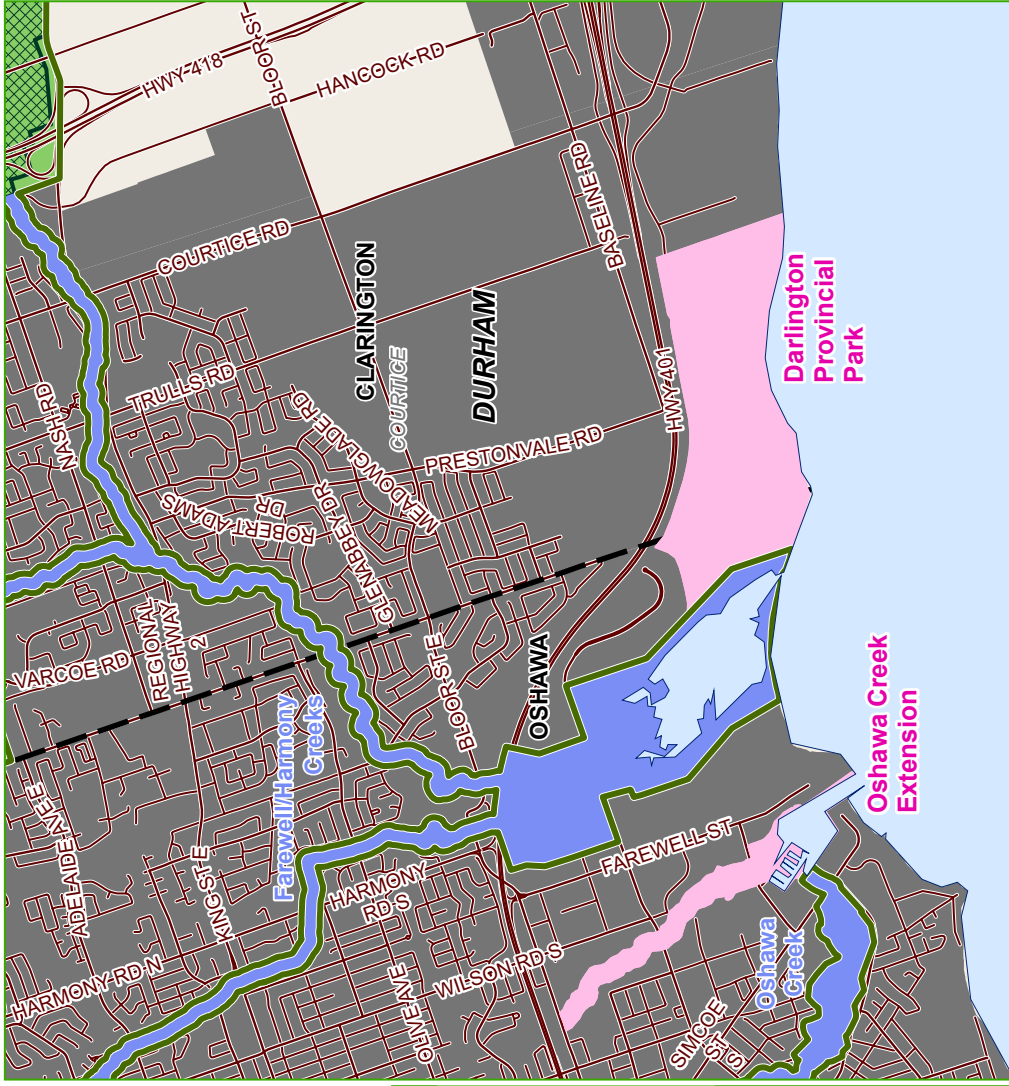
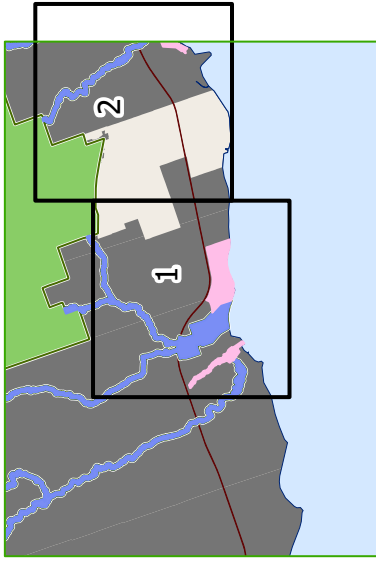
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Attachment #1 - Existing Greenbelt Urban River Valleys

-  Major Roads
-  Existing Greenbelt Urban River Valley
-  Greenbelt
-  Municipal Boundary
-  Urban Area
-  Waterbody

Proposed Urban River Valley Map 1

Greenbelt Plan, map division and enlargement



greenbelt



LEGEND

- Greenbelt Area*
- Protected Countryside
- Natural Heritage System
- Towns/Millages
- Urban River Valleys
- Proposed Urban River Valleys
- Niagara Escarpment Plan Area
- Oak Ridges Moraine Area
- Settlement Areas Outside the Greenbelt
- Greenbelt
- Municipal Boundary
- Road or Highway

Maps are for Consultation Purposes Only

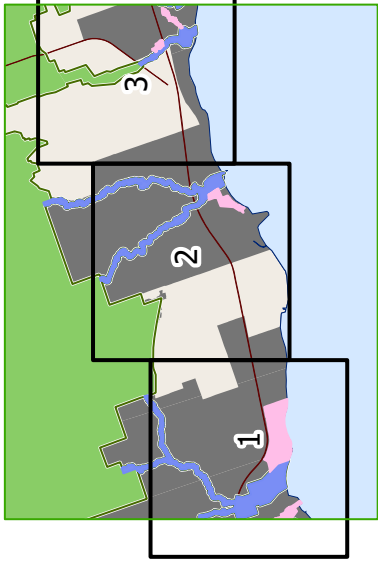
Note: While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations of features or roads. For precise boundaries and locations of Settlement Areas, including Towns/Villages and Hamlets, the appropriate municipalities should be consulted.

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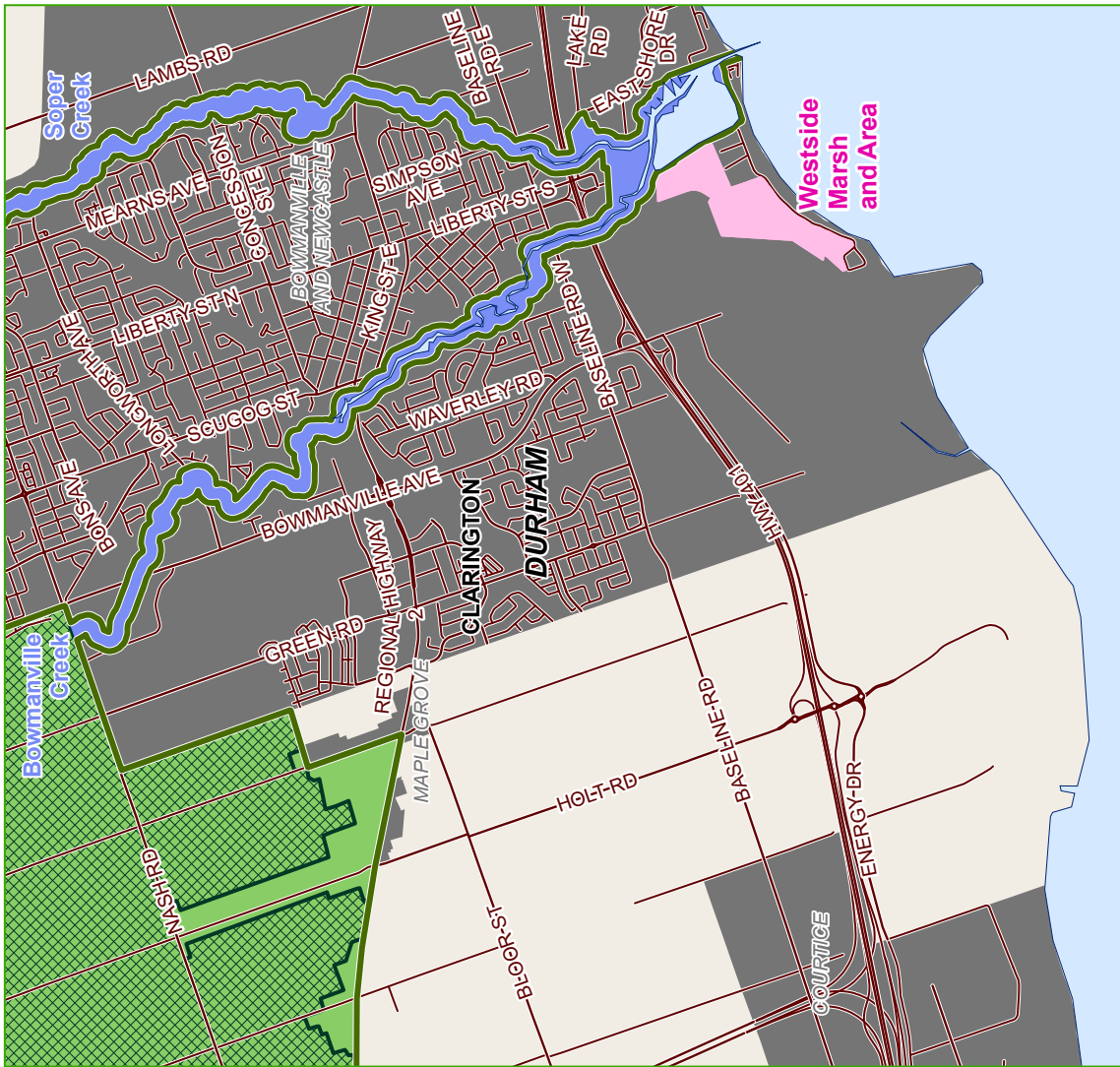
*Ontario Regulation 59/05, as amended. 0 0.3 0.6 1.2 Km
1 cm equals 394 m Map North: 0°

greenbelt



Greenbelt Plan, map division and enlargement

Proposed Urban River Valley Map 2



Ontario

LEGEND

- Greenbelt Area*
- Protected Countryside
- Natural Heritage System
- Towns/Millages
- Urban River Valleys
- Proposed Urban River Valleys
- Niagara Escarpment Plan Area
- Oak Ridges Moraine Area
- Settlement Areas Outside the Greenbelt
- Municipal Boundary
- Road or Highway

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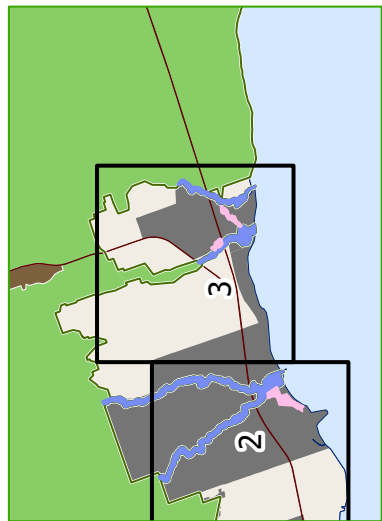
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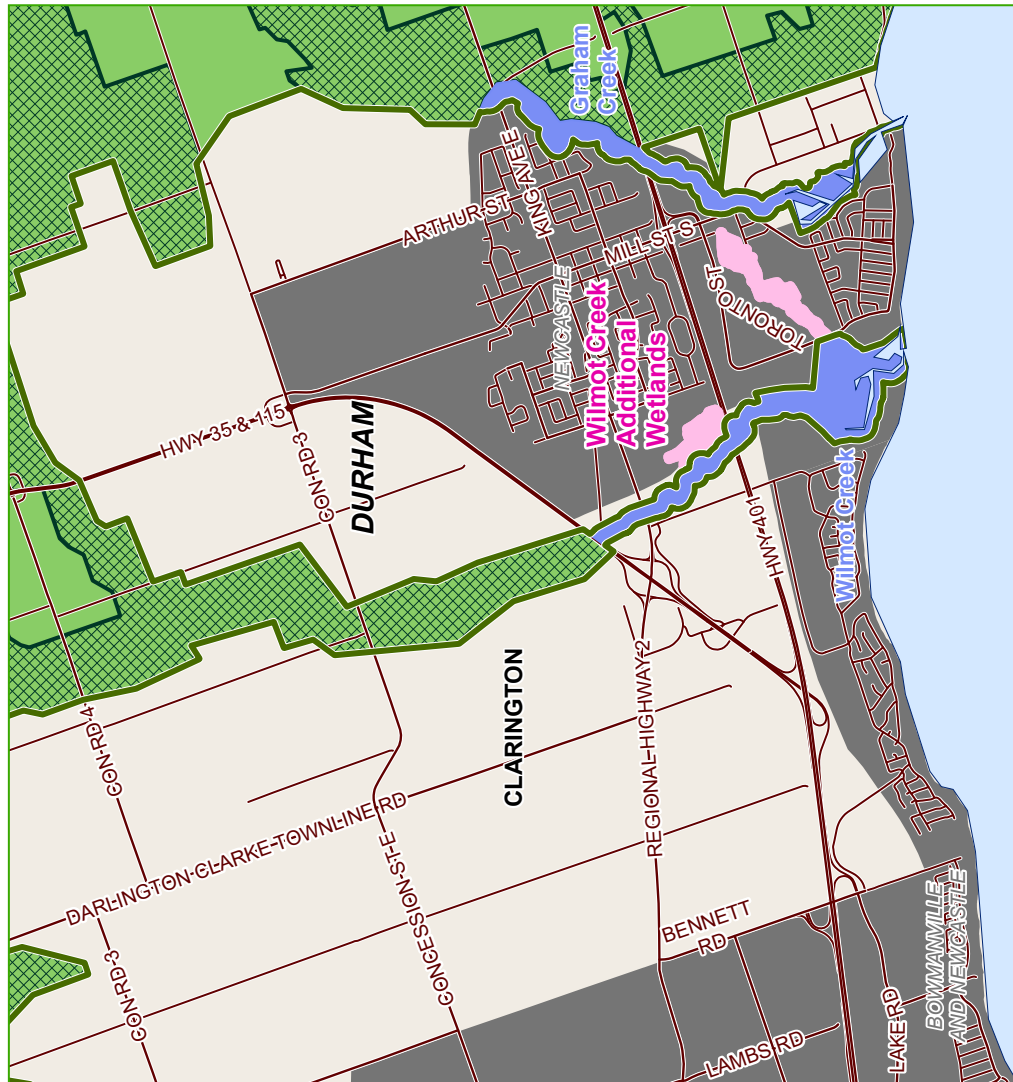
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1 cm equals 394 m Map North: 0°

Proposed Urban River Valley Map 3












Greenbelt Plan, map division and enlargement



greenbelt



LEGEND 

-  Greenbelt Area*
-  Protected Countryside
-  Natural Heritage System
-  Towns/Millages
-  Urban River Valleys
-  Proposed Urban River Valleys
-  Niagara Escarpment Plan Area
-  Oak Ridges Moraine Area
-  Settlement Areas Outside the Greenbelt
-  Municipal Boundary
-  Road or Highway

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*Ontario Regulation 59/05, as amended. 0 0.3 0.6 1.2 Km
 1 cm equals 394 m Map North: 0°

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The Regional Municipality of Durham Information Report

From: Acting Commissioner of Works
Report: #2022-INFO-33
Date: April 14, 2022

Subject:

Durham York Energy Centre Source Test Update

Recommendation:

Receive for information

Report:

1. Purpose

1.1 The purpose of this report is to provide an update on the 2021 Compliance Source Test results at the Durham York Energy Centre (DYEC).

2. Background

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

3. Compliance Source Test

3.1 The Compliance Source Test was conducted between November 26 through December 2, 2021, and December 9 and 10, 2021, for all test contaminants on both Boiler #1 and Boiler #2.

- 3.2 The results summary of the Compliance Source Test demonstrated that all emissions were within the limits detailed in the ECA (Attachment #1).
- 3.3 The full Compliance Source Test Report was submitted to the Ministry of Environment, Conservation and Parks (MECP) and will be posted to the [project website](#).
- 3.4 The DYEC emissions dispersion was modeled utilizing the Compliance 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 Airzone One Ltd., the Source Test peer reviewer, provided a memo on their preliminary findings on the Compliance Source Test sampling (Attachment #2), which concludes that:

“Based on the observations made during collection of samples, we are satisfied that Ortech collected all dioxin and furan samples according to standard operating procedures and approved methods, with the deviations from the methods/protocols already noted. Final comments concerning the results of all of the testing and compliance of the facility will be made upon review of the final stack testing report to be issued by Ortech.”

- 4.2 HDR personnel were also present during the Compliance Source Test. In Attachment #3. HDR reported that:

“HDR has completed our review of the preliminary results of the air emissions testing performed during the DYEC Fall 2021 Annual Compliance 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 November 26 through December 2, 2021 and December 9 and 10, 2021. 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 March 8, 2022), the air emission results of the Fall 2021 Compliance Test demonstrated that the DYEC operated below the ECA's Schedule "C" limits.

5. Continued Demonstrated Performance

- 5.1 The 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 Attachment #4 presents the results of testing completed from 2018 to 2021. The data presented indicates that the DYEC has consistently demonstrated it safely and effectively operates within the ECA Schedule "C" limits.
- 5.3 Attachment #5 presents a table comparison of the latest stack testing results against the ECA limits and A-7 guideline. The DYEC consistently operates and performs below regulatory limits.

6. Conclusion

- 6.1 The Owners' technical consultants and peer reviewers have confirmed that the DYEC Compliance Source Test was conducted in accordance with the MECP guidelines.
- 6.2 All results of the DYEC Compliance Source Test were below the concentration limits prescribed in Schedule "C" of the ECA.
- 6.3 Using CALPUFF dispersion modelling techniques, the predicted maximum point of impingement concentrations, based on the average test results for both boilers, show the DYEC to be operating well below all current standards in Regulation 419/05 under the Environmental Protection Act and other MECP criteria, including guidelines and upper risk thresholds.

7. Attachments

Attachment #1: Compliance Source Test Results Summary

Attachment #2: AirZone One Ltd. Source Test: Preliminary Findings Memo

Attachment #3: HDR Inc. Source Test Assessment Memo

Attachment #4: DYEC Compliance Source Test Emission Results 2018-2021

Attachment #5: DYEC 2021 Compliance Source Test Results Compared to the
ECA and A-7

Respectfully submitted,

Original signed by:

Jenni Demanuele, CPA, CMA
Acting Commissioner of Works

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)*	-	-	-	371	-
Average Combustion Zone Temp. (°C)*	-	-	-	1246	-
Steam (tonnes/day)*	-	-	-	802	-
MSW Combusted (tonnes/day)*	-	-	-	206	-
NO _x Reagent Injection Rate (liters/day)*	-	-	-	995	-
Carbon Injection (kg/day)*	-	-	-	126	-
Lime Injection (kg/day)*	-	-	-	4175	-
Filterable Particulate (mg/Rm ³) ⁽¹⁾	0.30	0.78	<0.38	<0.48	9
PM ₁₀ with Condensable (mg/Rm ³) ⁽¹⁾	<3.34	<4.49	<3.99	<3.94	-
PM _{2.5} with Condensable (mg/Rm ³) ⁽¹⁾	<3.21	<4.29	<3.93	<3.81	-
Hydrogen Fluoride (mg/Rm ³) ⁽¹⁾	<0.10	<0.10	<0.10	<0.10	-
Ammonia (mg/Rm ³) ⁽¹⁾	0.52	0.53	0.53	0.53	-
Cadmium (µg/Rm ³) ⁽¹⁾	0.043	0.043	0.11	0.064	7
Lead (µg/Rm ³) ⁽¹⁾	0.65	0.50	0.22	0.46	50
Mercury (µg/Rm ³) ⁽¹⁾	<0.054	<0.054	<0.052	<0.053	15
Antimony (µg/Rm ³) ⁽¹⁾	0.56	0.74	0.048	0.45	-
Arsenic (µg/Rm ³) ⁽¹⁾	0.25	<0.043	0.050	<0.11	-
Barium (µg/Rm ³) ⁽¹⁾	1.82	1.53	1.53	1.63	-
Beryllium (µg/Rm ³) ⁽¹⁾	<0.043	<0.043	0.14	<0.076	-
Chromium (µg/Rm ³) ⁽¹⁾	0.91	0.82	0.71	0.81	-
Cobalt (µg/Rm ³) ⁽¹⁾	0.032	0.026	0.13	0.063	-
Copper (µg/Rm ³) ⁽¹⁾	2.46	2.06	1.88	2.13	-
Molybdenum (µg/Rm ³) ⁽¹⁾	6.96	6.76	6.56	6.76	-
Nickel (µg/Rm ³) ⁽¹⁾	0.66	0.78	0.62	0.69	-
Selenium (µg/Rm ³) ⁽¹⁾	<0.22	<0.22	<0.21	<0.21	-
Silver (µg/Rm ³) ⁽¹⁾	<0.043	<0.043	<0.042	<0.043	-
Thallium (µg/Rm ³) ⁽¹⁾	<0.043	<0.043	0.19	<0.091	-
Vanadium (µg/Rm ³) ⁽¹⁾	<0.022	0.12	0.16	<0.098	-
Zinc (µg/Rm ³) ⁽¹⁾	4.59	5.72	4.75	5.02	-
Dioxins and Furans (pg TEQ/Rm ³) ⁽³⁾	<13.0	<18.1	<12.9	<14.7	60
Total Chlorobenzenes (ng/Rm ³) ⁽¹⁾	<242	<128	<272	<214	-
Total Chlorophenols (ng/Rm ³) ⁽¹⁾	<347	<333	<349	<343	-
Total PAHs (ng/Rm ³) ⁽¹⁾	<642	<356	<756	<585	-
VOCs (µg/Rm ³) ⁽¹⁾	<114	<65.0	<86.4	<88.6	-
Aldehydes (µg/Rm ³) ⁽¹⁾	<95.8	<92.3	<105	<97.8	-
Total VOCs (µg/Rm ³) ⁽¹⁾⁽⁴⁾	<210	<157	<191	<186	-
Quench Inlet Organic Matter (THC) (ppm, dry) ⁽²⁾	0	0	0	0	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)*	-	-	-	376	-
Average Combustion Zone Temp. (°C)*	-	-	-	1311	-
Steam (tonnes/day)*	-	-	-	775	-
MSW Combusted (tonnes/day)*	-	-	-	184	-
NO _x Reagent Injection Rate (liters/day)*	-	-	-	709	-
Carbon Injection (kg/day)*	-	-	-	127	-
Lime Injection (kg/day)*	-	-	-	4169	-
Filterable Particulate (mg/Rm ³) ⁽¹⁾	0.28	<0.40	0.26	<0.31	9
PM ₁₀ with Condensable (mg/Rm ³) ⁽¹⁾	<3.69	<4.46	<6.70	<4.95	-
PM _{2.5} with Condensable (mg/Rm ³) ⁽¹⁾	<3.62	<4.25	<6.64	<4.84	-
Hydrogen Fluoride (mg/Rm ³) ⁽¹⁾	<0.10	<0.11	<0.11	<0.11	-
Ammonia (mg/Rm ³) ⁽¹⁾	0.36	0.55	1.76	0.89	-
Cadmium (µg/Rm ³) ⁽¹⁾	0.030	<0.021	0.014	<0.022	7
Lead (µg/Rm ³) ⁽¹⁾	0.26	0.15	0.11	0.17	50
Mercury (µg/Rm ³) ⁽¹⁾	<0.053	<0.052	<0.054	<0.053	15
Antimony (µg/Rm ³) ⁽¹⁾	0.40	<0.042	<0.044	<0.16	-
Arsenic (µg/Rm ³) ⁽¹⁾	<0.042	<0.042	<0.044	<0.043	-
Barium (µg/Rm ³) ⁽¹⁾	1.31	1.39	0.15	0.95	-
Beryllium (µg/Rm ³) ⁽¹⁾	<0.042	<0.042	<0.044	<0.043	-
Chromium (µg/Rm ³) ⁽¹⁾	0.72	0.62	0.87	0.74	-
Cobalt (µg/Rm ³) ⁽¹⁾	<0.042	<0.042	<0.044	<0.043	-
Copper (µg/Rm ³) ⁽¹⁾	1.96	1.67	1.94	1.86	-
Molybdenum (µg/Rm ³) ⁽¹⁾	6.52	7.01	7.12	6.88	-
Nickel (µg/Rm ³) ⁽¹⁾	0.42	0.47	1.10	0.66	-
Selenium (µg/Rm ³) ⁽¹⁾	<0.21	<0.21	<0.22	<0.21	-
Silver (µg/Rm ³) ⁽¹⁾	<0.042	<0.042	<0.044	<0.043	-
Thallium (µg/Rm ³) ⁽¹⁾	<0.042	<0.042	<0.044	<0.043	-
Vanadium (µg/Rm ³) ⁽¹⁾	<0.021	<0.021	<0.022	<0.021	-
Zinc (µg/Rm ³) ⁽¹⁾	3.16	2.65	3.21	3.01	-
Dioxins and Furans (pg TEQ/Rm ³) ⁽³⁾	<2.22	<3.35	<2.10	<2.56	60
Total Chlorobenzenes (ng/Rm ³) ⁽¹⁾	<104	<77.1	<114	<98.1	-
Total Chlorophenols (ng/Rm ³) ⁽¹⁾	<168	<165	<164	<166	-
Total PAHs (ng/Rm ³) ⁽¹⁾	<178	<215	<208	<201	-
VOCs (µg/Rm ³) ⁽¹⁾	<49.2	<55.3	<34.9	<46.5	-
Aldehydes (µg/Rm ³) ⁽¹⁾	<36.5	<37.2	<44.5	<39.4	-
Total VOCs (µg/Rm ³) ⁽¹⁾⁽⁴⁾	<85.7	<92.5	<79.4	<85.9	-
Quench Inlet Organic Matter (THC) (ppm, dry) ⁽²⁾	0	0	0	0	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⁾	6	9.7	17.5	40
	Hydrogen Chloride (mg/Rm ³) ⁽²⁾	1.7	2.2	2.5	9
	Nitrogen Oxides (mg/Rm ³) ⁽²⁾	111	111	112	121
	Sulphur Dioxide (mg/Rm ³) ⁽²⁾	0	0.3	0.6	35
Boiler No. 2	Carbon Monoxide (mg/Rm ³) ⁽¹⁾	7.3	11.7	23.0	40
	Hydrogen Chloride (mg/Rm ³) ⁽²⁾	0.5	1.8	3.1	9
	Nitrogen Oxides (mg/Rm ³) ⁽²⁾	109	110	111	121
	Sulphur Dioxide (mg/Rm ³) ⁽²⁾	0	0.2	0.8	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



Lyndsay Waller
Operations Technician

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March 24th, 2022
Project Reference #: J21042

RE: Audit of Fall 2021 Compliance Source Testing – Preliminary Findings

Dear Ms. Lyndsay Waller,

At this time, we are providing our preliminary review of the sample collection for the Fall 2021 Compliance Source Testing of the Durham York Energy Centre (DYEC). This preliminary review provides a general overview of our findings. A more detailed review of the testing campaign will be provided once the final source testing report has been reviewed. The field sampling audits were undertaken by Adomait Environmental Solutions Inc. (Adomait).

Source Sampling Audit

Adomait observed the sampling of two stack trains at the Durham York Energy Centre, focusing specifically on the sampling of semi-volatile organic compounds (SVOC). The testing on Unit 1 was conducted on December 1st and 2nd, 2021. During the first week of testing a crane became lodged, blocking the hopper supplying feedstock to the Unit 2 boiler. As a result, a day of testing on Unit 2 was lost. To accommodate this, the SVOC testing planned for Unit 2 was moved to the following week and was conducted on December 9th and 10th, 2021.

Mr. Andrew Lanesmith observed the control room parameters in the conference room as described below during the sample collection periods. Mr. Adomait was responsible for observing the stack samplers throughout the process. The observations focused primarily on the stack sampling methods and implementation procedures.

As discussed in the June 2020 audit, during previous audits, one auditor was stationed in the Process Operations Center or control room, to observe one-minute readings as they appeared on the system monitors. The auditing process involved reviewing the excel files, manually recording data on a 10-minute interval to provide continuity and consistency with previous audits, taking note 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
- NO_x: 24-hour rolling average (i.e., the portion of day that data was collected)

In the wake of the Covid-19 pandemic, policies were established to reduce the risk of infection. As a result, the auditor did not have direct access to the control room. 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 the 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 obtained from the display screen in the conference room; however, moisture data could only be accessed directly from the system monitors in the control room. Therefore, the December 2021 audit does not include the monitoring of moisture levels.

Two sets of observations are provided which correspond to the two periods outlined above. Where performance criteria specify averaging periods for certain parameters, such as for the oxygen (O₂), carbon monoxide (CO), and nitrogen oxides (NO_x), these are discussed in relation to the calculated rolling averages. The following were the observations from the audit.

1. As a general observation, parameters being recorded for this review maintained stable readings throughout the observation periods. The few deviations that were observed, such as CO spikes, were typical of previous test performance and generally did not persist beyond one minute.

Observations for December 1st to 2nd: Unit 1

2. Oxygen concentrations, calculated as a 60-minute rolling average, ranged from 7.9 to 8.8%. The ECA specifies that the oxygen concentration shall not be less than 6% as recorded by the CEM system.
3. CO concentrations were generally stable throughout the tests, ranging between 5 and 20 ppm. The calculated 4-hour average ranged from 8.6 to 13.0. Occasional spikes in CO concentration were typically less than 50 ppm and were likely cold CO spikes that may be attributed to incomplete combustion. In one instance, the CO concentration spiked to 199 ppm in Unit 1 at 9:40 am on December 1. This was likely a hot spike which is usually accompanied by a rise in the furnace temperature, although this was not observed in the data provided. In every case, whether cold or

hot CO spikes, the CO concentrations immediately returned to typical CO concentrations. The occurrence of CO spikes is normal and the immediate suppression of spikes indicates that the systems are operating effectively.

4. The average NO_x concentrations during each day of testing ranged between 110 and 111 ppm which is below the emission limit of 121 ppm calculated as a 24-hour rolling arithmetic average.
5. 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 168°C to approximately 176°C. The outlet temperatures generally remained in the low to mid 150°C range. Based on previous source testing observations, the quench tower inlet temperatures could be expected to increase during the day (within allowable limits).
6. As a result of consistent outlet temperatures from the Quench tower, the baghouse inlet temperatures remained steady, generally between 140 and 144°C. This is the approximate midpoint of the ECA performance requirement of 120 to 185°C (Section 6(2)(h)). These readings were consistent with observations from previous stack tests (typically ranging from 138 to 145°C). Consistent temperatures in the baghouse allows comparison between data sets at different times. It is also important since increased temperatures may volatilize particle-bound dioxins and furans already captured by the baghouse.
7. Production at the plant is evaluated in terms of steam flow. Steam flow was typically in the range of 32 to 35 thousand kg/hour, with readings ranging between 31.6 and 35.5 kg/hr. The production was similar to levels observed during other stack testing campaigns. Similar production also allows comparisons between different stack tests.
8. Carbon and lime dosage were generally consistent with those in previous testing campaigns. Carbon doses ranged from approximately 5 to 6 kg/hour. The lime feed rate generally ranged from 170 and 180 kg/hour. In some instances, the lime feed rate increased from 200 and 300 kg/hr, but immediately dropped to normal levels. As noted by Covanta 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 1-minute HCl concentrations demonstrated levels well below the permit limits, indicating that the lime control and wetting mixer systems are operating effectively.
9. Airflow remained stable throughout the stack tests. Airflow for Unit 1 generally ranged between 85,000 to 91,000 m³/hour, although higher flows of up to 120,000 m³/hour were occasionally recorded.

Observations for December 9th-10th: Unit 2

10. Oxygen concentrations, calculated as a 60-minute rolling averages, ranged from 7.79 to 8.42%. The ECA specifies that the oxygen concentration shall not be less than 6% as recorded by the CEM system.
11. CO concentrations were generally stable throughout the tests, ranging between 5 and 20 ppm. The calculated 4-hour average ranged from 8.19 to 13.32. Occasional spikes in CO concentrations were typically less than 50 ppm, the highest observed being 78 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 indicates that the systems are operating effectively.
12. The average NO_x concentrations during each day of testing ranged between 110 and 112 ppm which is below the emission limit of 121 ppm calculated as a 24-hour rolling arithmetic average.
13. 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 170°C to approximately 175°C. The outlet temperatures generally ranged from the low to mid 150°C. Based on previous source testing observations, the quench tower inlet temperatures was expected to increase during the day (within allowable limits).
14. As a result of consistent outlet temperatures from the Quench tower, the baghouse inlet temperatures remained steady, generally between 140 and 145°C. On December 9th the temperature rose to 148°C for a brief period before returning to 145°C about 30 minutes later. These temperatures are approximately the midpoint of the ECA performance requirement of 120 to 185°C (Section 6(2)(h)). The readings were consistent with observations from previous stack tests (typically ranging from 138 to 145°C).
15. Production at the plant is evaluated in terms of steam flow. Steam flow was typically ranged from 32 to 35 thousand kg/hour, with recorded readings ranging between 31.5 and 35.4 kg/hr. The production was similar to levels observed during other stack testing campaigns at this plant.
16. Carbon and lime dosage were generally consistent with previous testing campaigns. Carbon doses ranged from approximately 5 to 6 kg/hour. The lime feed rate consistently ranged between 170 and 180 kg/hour, rising briefly to 201 for two minutes in one instance. This brief increase corresponded to an elevated HCL concentration that returned to normal levels immediately following the increase in lime. As noted by Covanta personnel, the lime control and wetting mixer systems are set to respond to certain setpoints and criteria to ensure the outlet emissions are well below permit limits. The acquired 1-minute HCL concentrations demonstrate

levels well below the permit limits, indicating that the lime control and wetting mixer systems are operating effectively.

17. Airflow remained stable throughout the stack tests. Airflow for Unit 2 generally ranged between 90,000 to 98,000 m³/hour, although higher flows of up to 124,000 m³/hour were occasionally recorded.

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

1. Where possible, leak checks were observed at both the start, traverse change, and at the conclusion of all SVOC tests. When the leak checks were successful, the tests were regarded as valid. The summary of field observations is shown in the tables below. Leak checks were always performed in a systematic and non-rushed manner to ensure good QA/QC. All but one leak check met the criteria for acceptance. The one failure on December 1 (Semi-Volatiles-2a) forced a repeat test on that day (Semi-Volatiles-2b).
2. Previous aberrations in the velocity measurements were reduced by using metal plates and rubber sealer plates to reduce and minimize these problems. This set-up was similar to that conducted in the last set of stack tests.
3. Impinger/XAD temperatures were checked during every reading at each sampling train. Ortech supplied plenty of ice to the crews. The temperatures were maintained in the 45- 55°F range. This was adequate as it improves adsorption of dioxins/furans on the sampling media.
4. The audit team also recorded dry gas meter correction 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 with the sampling train operating. Given the high negative pressure at these locations, it was important to ensure that the filter was not displaced prior to sampling initiation. This procedure also limits loss of any sample from the train.
6. Recoveries were not observed in the recovery trailer due to Covid-19 protocols in effect.

In conclusion, the protocols used in the field should produce consistent samples for laboratory submission. The final emission results should reflect the numbers produced by the Covanta boilers providing that analysis protocols are adhered to at the laboratory.

SVOC samples were collected following the procedures in EPS 1/RM/2 and US EPA Method 23. During the source testing, Ortech followed the sampling and recovery procedures as

specified in the methods to maintain the integrity of the samples. Ortech had adequate staff on site to collect samples and transfer the sampling media to the on-site lab for recovery and clean-up. Communications with the control room were maintained to ensure samples were collected during representative operating conditions.

Laboratory Processing Audit

At the request of the Regional Municipality of Durham, Airzone One Ltd. (Airzone) did not audit the laboratory processing samples for the testing program. Airzone will review the laboratory data provided with Ortech's final report, with specific focus on the dioxin/furan and particulate matter results.

Conclusion

Based on the observations made during collection of samples, we are satisfied that Ortech collected all dioxin and furan samples according to standard operating procedures and approved methods, with the deviations from the methods/protocols already noted. Final comments concerning the results of all the testing and compliance of the facility will be made upon review of the final stack testing report to be issued by Ortech.

Sincerely,



Margaret Matusik, B.ASc
Air Quality Modeller
Airzone One Ltd.
mmatusik@airzoneone.com

Appendix - Field Notes

	Semi-Volatiles-1	HF-3	Metals-2
Date	Dec. 1-21	Dec. 1-21	Dec. 1-21
Observation	Boiler #1	Boiler #2	Boiler #2
Nozzle Size/Type	0.2511 Glass	0.2556 Glass	0.2556 Glass
Meter Cal/ID	1.00/Aug. 12-21	0.996/Aug. 16-21	1.026/Aug. 16-21
Pitot cal	0.844	0.844	0.844
Calc Moisture	15-16%	15%	15%
Static	-10.2"	-10.6"	-10.6"
Pitot Leak Check	Yes good	Yes good	Yes good
Pre-traverse Leak Check	0.002 @15"	0.002 @17"	0.002 @17"
SVOC Test Start Time	8:36	8:33	8:31
Running On Insertion	Yes	Yes	Yes
Trap temperature	41 41,42 °F	49 °F	49 °F
Running on removal	Yes	Yes	Yes
Traverse Completed	10:37	9:33	10:01
Post-traverse Leak Check	0.003@15"	0.002@15"	0.001@15"
Pre-traverse Leak Check	0.001@15"		0.001@15"
SVOC Traverse Start Time	10:44		10:09
Trap temperature	45, 45 °F		
Traverse Completed	12:45		11:39
Final Leak Check	0.002@15'		0.002@15"
Running on removal	Yes		Yes

	Semi-Volatiles- 2a	Metals-3
Date	Dec. 1-21	Dec. 1-21
Observation	Boiler #1	Boiler #2
Nozzle Size/Type	0.2511 Glass	0.2556 Glass
Meter Cal/ID	1.00/Aug. 12- 21	1.026/Aug. 16- 21
Pitot cal	0.844	0.844
Calc Moisture	15-16%	15%
Static	-10.2"	-10.6"
Pitot Leak Check	Yes good	Yes good
Pre-traverse Leak Check	0.003 @15"	0.001 @15"
SVOC Test Start Time	13:15	12:21
Running On Insertion	Yes	Yes
Trap temperature	40, 42 °F	56, 57 °F
Running on removal	Yes	Yes
Traverse Completed	15:15	13:51
Post-traverse Leak Check	LC problems	0.001@15"
Pre-traverse Leak Check		0.001 @15"
SVOC Traverse Start Time		14:08
Trap temperature		53, 51 °F
Traverse Completed		15:38
Final Leak Check		0.001 @15"
Running on removal		Yes

Note: LC refers to leak check.

	Semi-Volatiles-2b
Date	Dec. 1-21
Observation	Boiler #1
Nozzle Size/Type	0.2511 Glass
Meter Cal/ID	1.00/Aug. 12-21
Pitot cal	0.844
Calc Moisture	15-16%
Static	-10.2"
Pitot Leak Check	Yes good
Pre-traverse Leak Check	0.001 @15"
SVOC Test Start Time	15:58
Running On Insertion	Yes
Trap temperature	44,44, 44 °F
Running on removal	Yes
Traverse Completed	17:58
Post-traverse Leak Check	0.001 @22"
Pre-traverse Leak Check	0.001 @22"
SVOC Traverse Start Time	18:07
Trap temperature	44, 44 °F
Traverse Completed	20:07
Final Leak Check	0.001@15"
Running on removal	Yes

	Semi-Volatiles-3
Date	Dec. 2-21
Observation	Boiler #1
Nozzle Size/Type	0.2511 Glass
Meter Cal/ID	1.00/Aug. 12-21
Pitot cal	0.846
Calc Moisture	16%
Static	-10.2"
Pitot Leak Check	Yes good
Pre-traverse Leak Check	0.001 @15"
SVOC Test Start Time	8:21
Running On Insertion	Yes
Trap temperature	39,38 °F
Running on removal	Yes
Traverse Completed	20:21
Post-traverse Leak Check	0.001 @16"
Pre-traverse Leak Check	0.001 @16"
SVOC Traverse Start Time	10:30
Trap temperature	41, 39 °F
Traverse Completed	10:21
Final Leak Check	0.001@16"
Running on removal	Yes

	Semi-Volatiles-1
Date	Dec. 9-21
Observation	Boiler #2
Nozzle Size/Type	0.2501 Glass
Meter Cal/ID	1.026/Aug. 16-21
Pitot cal	0.844
Calc Moisture	16%
Static	-10.2"
Pitot Leak Check	Yes good
Pre-traverse Leak Check	0.002 @17"
SVOC Test Start Time	9:37
Running On Insertion	Yes
Trap temperature	45,43,45,43 °F
Running on removal	Yes
Traverse Completed	11:37
Post-traverse Leak Check	0.001 @15"
Pre-traverse Leak Check	0.001 @15"
SVOC Traverse Start Time	11:45
Trap temperature	45 °F
Traverse Completed	13:45
Final Leak Check	0.001@17"
Running on removal	Yes

	Semi-Volatiles-2
Date	Dec. 9-21
Observation	Boiler #2
Nozzle Size/Type	0.2501 Glass
Meter Cal/ID	1.026/Aug. 16-21
Pitot cal	0.844
Calc Moisture	16%
Static	-10.2"
Pitot Leak Check	Yes good
Pre-traverse Leak Check	0.001 @17"
SVOC Test Start Time	14:31
Running On Insertion	Yes
Trap temperature	50,49,49,51,46 °F
Running on removal	Yes
Traverse Completed	16:31
Post-traverse Leak Check	0.001 @15"
Pre-traverse Leak Check	0.001 @15"
SVOC Traverse Start Time	16:41
Trap temperature	45,46,44 °F
Traverse Completed	18:41
Final Leak Check	0.001@17"
Running on removal	Yes

	Semi-Volatiles-3
Date	Dec. 10-21
Observation	Boiler #2
Nozzle Size/Type	0.2501 Glass
Meter Cal/ID	1.026/Aug. 16-21
Pitot cal	0.844
Calc Moisture	15%
Static	-10.2"
Pitot Leak Check	Yes good
Pre-traverse Leak Check	0.001 @16"
SVOC Test Start Time	8:33
Running On Insertion	Yes
Trap temperature	43,42 °F
Running on removal	Yes
Traverse Completed	10:33
Post-traverse Leak Check	0.001 @16"
Pre-traverse Leak Check	0.001 @16"
SVOC Traverse Start Time	10:39
Trap temperature	44,47,44,44,46,45,45 °F
Traverse Completed	12:39
Final Leak Check	0.001@15"
Running on removal	Yes

Technical Memorandum

To: Gioseph Anello, PEng, Region of Durham

Cc: Andrew Evans, PEng (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: March 23, 2022

Re: **Durham York Energy Centre: Fall 2021 Annual Compliance Test**
HDR Observations During Testing and Summary of Results

Introduction

During the period from November 26 through December 2 and December 9 and 10, 2021, ORTECH Consulting, Inc. (ORTECH) conducted the Annual Compliance Test at the Durham York Energy Center (DYEC) for the Regions of Durham and York. This mandatory stack testing has been performed annually since the beginning of commercial operations in 2015. 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 29, 2011. HDR personnel were on-site to observe DYEC operations and testing procedures on November 29, December 1 and December 2, and we also reviewed the operating data for the entire test period. 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 operating data and test results for the Annual Compliance Testing based on the information provided in the ORTECH Test Report dated March 8, 2022.

HDR Observations during the Compliance Source Test

The tentative testing schedule for the November/December 2021 Annual Compliance Test is included in Attachment A to this Technical Memorandum. Also included in Attachment A is a summary of the tests observed by HDR on November 29, December 1, and December 2. HDR's role on-site was to observe Covanta's operation of the DYEC during test sampling, and to observe ORTECH's sampling procedures and activities with a 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.

Tuesday, November 30th

Stack testing began on Monday, November 29th and was underway on Tuesday, November 30th when HDR arrived at the DYEC. During HDR's time on site, Unit 2 had to be taken offline and testing was suspended at around 1300 hours. Based on HDR's discussions with Covanta's Acting Plant Manager, Bill Marsden, the west-end refuse crane became disabled between the Unit 1 and Unit 2 feed hoppers which prevented Covanta's ability to supply waste to Unit 2 and sustain stable operation. During the event, the auxiliary natural gas burner tripped off repeatedly, which caused a further delay in bringing Unit 2 back online on waste. During this period the steam flows needed to be reduced until the unit could be stabilized and resulted in approximately four (4) hours of downtime for Unit 2. Due to the required length of the Dioxin/Furan test (minimum 4 hours) and ORTECH's schedule, testing was suspended for the day.

During this period, Covanta also reported that slag became dislodged from the boiler sidewalls and from the boiler tubes due to the temperature fluctuation experienced during the crane issue and operation transitions. The slag/ash dropped into the 2nd/3rd pass hopper and required an extended period of time for Covanta to clear the hopper. Based on these conditions and the need to accommodate ORTECH's testing personnel, Covanta delayed the dioxin testing on Unit 2 until the following week to allow the operators time to clear the hoppers and regain stable isokinetic operation of the boiler. The AMESA dioxin sampling units remained on-line despite the delay in performing the stack testing.

Wednesday, December 1st

Unit 1

Testing began at approximately 08:30 with run #1 for Dioxin/Furan starting at 08:37 and ending at 12:45. A second Dioxin/Furan run started at 13:15, but the sampling train failed the leak check performed during the port change and had to be aborted as required by the testing procedures. A replacement second Dioxin/Furan run started at 15:59 and was completed at 20:07 without incident. All four (4) Vost tests as well as three (3) aldehyde tests were successfully completed.

Unit 2

Unit 2 was online processing waste, but the Dioxin/Furan testing was postponed until December 9 and 10 due to the issues identified above. PM/Metals test runs #2 and #3 and Acid Gas run # 3 were completed in Unit 2 without incident.

Thursday, December 2nd

Unit 1

Testing began with run #3 for Dioxin/Furan starting at 08:21 and ending at 12:30. The third Dioxin/Furan was completed successfully without incident.

Unit 2

No testing was conducted on this day. Covanta will retest Dioxin/Furans on Unit 2 on December 9 and 10, 2021.

HDR noted that Covanta's Environmental Testing Specialist, Rick Koehler, was on-site throughout the testing period to assist with test coordination between ORTECH and the plant personnel, as well as to observe the Annual Compliance Test.

Based on HDR's observations of the Compliance Test, ORTECH conducted the testing in accordance with the applicable standards and procedures. ORTECH was observed to be carefully following acceptable testing procedures during each port change; specifically, being careful to ensure that the probe did not scrape the inside of 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 HDR's summary of the DYEC operating data recorded by Covanta's distributive control system (or DCS) during the dioxin/furan tests. This data was requested by HDR and provided by Covanta after the completion of the Compliance Test. As previously noted, HDR's review of the data indicates that the boilers and APC equipment were operated under normal conditions during the testing period. Furthermore, HDR did not observe any deviations from the approved test protocols or applicable stack test procedures during our on-site observations and review of the test report.

Summary of Results

The results of the testing program, based on ORTECH's March 8, 2022 report, are summarized in Table 1 and Figures 1 and 2. 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. As shown in Table 1, emissions of all pollutants are corrected to 11% oxygen and were substantially below the ECA's Schedule "C" limits.

Table 1 – Summary of Fall 2021 Annual Compliance Test Results

Parameter	Units	ECA Limit	Unit 1		Unit 2	
			Result	% of Limit	Result	% of Limit
Particulate Matter (PM) ⁽¹⁾	mg/Rm ³	9	0.48	5.3%	0.31	3.4%
Mercury (Hg) ⁽¹⁾	µg/Rm ³	15	0.053	0.4%	0.053	0.4%
Cadmium (Cd) ⁽¹⁾	µg/Rm ³	7	0.064	0.9%	0.022	0.3%
Lead (Pb) ⁽¹⁾	µg/Rm ³	50	0.46	0.9%	0.17	0.3%
Hydrochloric Acid (HCl) ⁽²⁾⁽³⁾	mg/Rm ³	9	2.2	24.4%	1.8	20.0%
Sulphur Dioxide (SO ₂) ⁽²⁾⁽³⁾	mg/Rm ³	35	0.3	0.9%	0.2	0.6%
Nitrogen Oxides (NO _x) ⁽²⁾⁽³⁾	mg/Rm ³	121	111	91.7%	110	90.9%
Carbon Monoxide (CO) ⁽²⁾⁽⁴⁾	mg/Rm ³	40	9.7	24.3%	11.7	29.3%
Total Hydrocarbons (THC) ⁽⁵⁾	ppm	50	0	0.0%	0	0.0%
Dioxin and Furans ⁽⁶⁾	pg TEQ/Rm ³	60	14.7	24.5%	2.56	4.3%

Notes:

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

Figure 1 - DYEC Fall 2021 Annual Compliance Test Results as a Percent of ECA Limit

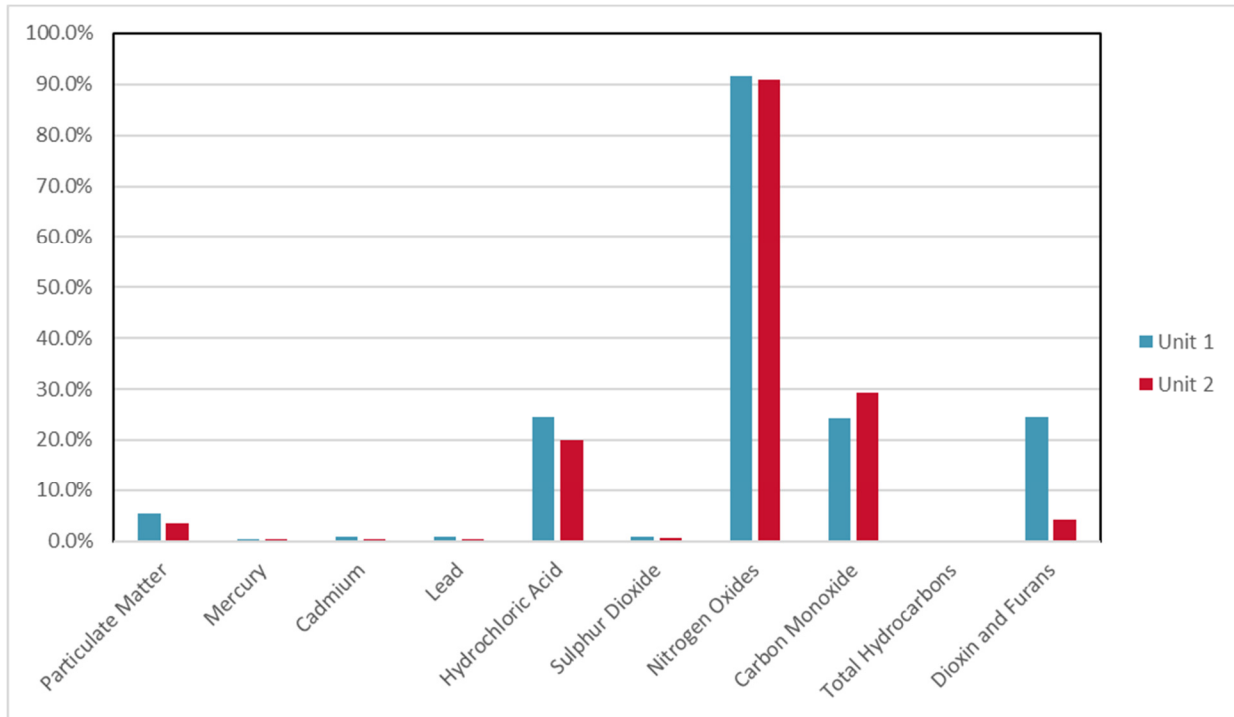
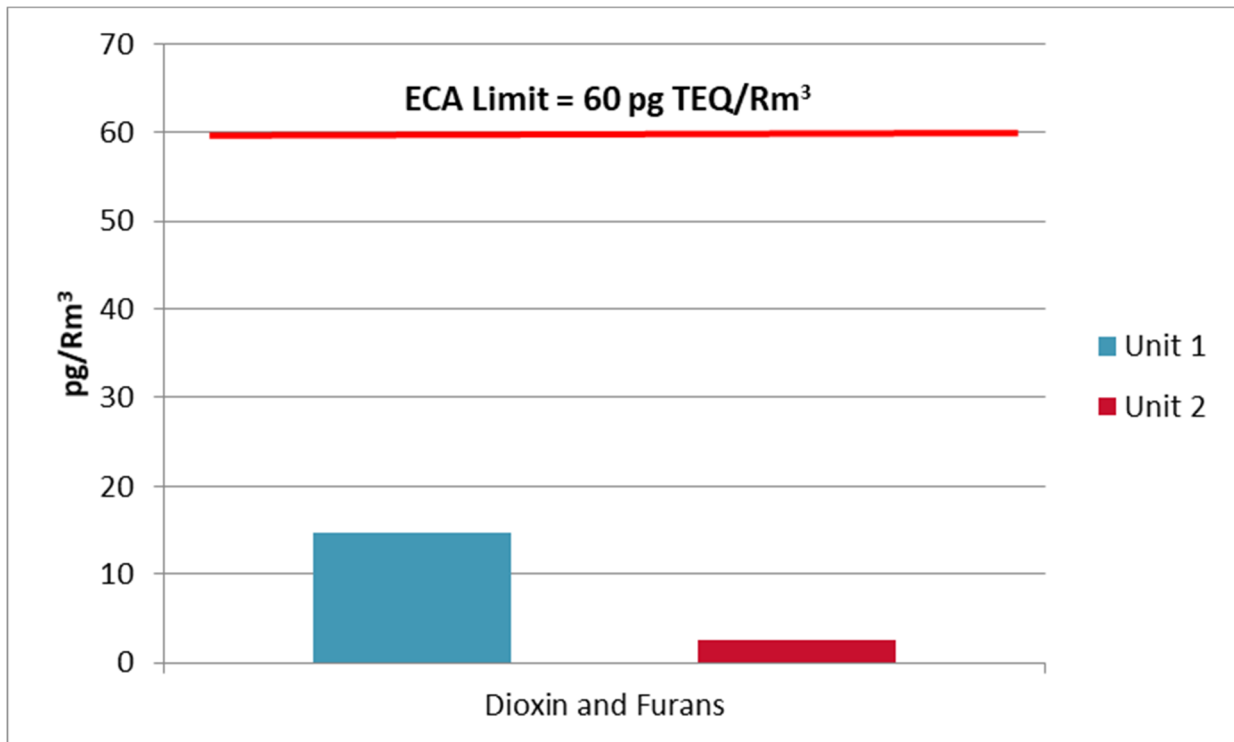


Figure 2 – Fall 2021 Annual Compliance Test Results for Dioxins and Furans



Conclusions and Recommendations

HDR has completed our review of the preliminary results of the air emissions testing performed during the DYEC Fall 2021 Annual Compliance 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 November 26 through December 2, 2021 and December 9 and 10, 2021. 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 March 8, 2022), the air emission results of the Fall 2021 Compliance Test demonstrated that the DYEC operated below the ECA's Schedule "C" limits.

Attachments:

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

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

Day/Location		Parameter	Method	# of Runs	Duration
Fri., Nov. 26	#1 & #2 APC	Setup and Prelim. Particulate	Ontario M5	2	60
Mon., Nov. 29	#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., Nov. 30	#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., Dec. 1	#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., Dec. 2	#1 APC Outlet	Dioxin/Furan	EPS 1/RM/3	1	240
	#2 APC Outlet	Dioxin/Furan	EPS 1/RM/2	1	240

Note: Friday December 3rd is reserved as a contingency test day.

Summary of Testing Observed by HDR.**Day 3 – Wednesday December 1**

Unit	Test Parameter	Test Method	Run No.	Test Start	Test Stop
Unit 1	Outlet SVOC (Dioxin/Furan)	EPS 1/RM/2	1	8:37	12:45
	Outlet SVOC (Dioxin/Furan)	EPS 1/RM/2	2	13:15	Aborted
	Outlet SVOC (Dioxin/Furan)	EPS 1/RM/2	2	15:59	20:07
	VOST	SW846-0030	1	8:38	9:18
	VOST	SW846-0030	2	9:23	10:03
	VOST	SW846-0030	3	10:09	10:49
	VOST	SW846-0030	4	10:52	11:32
	Aldehydes	NCASI Method ISS/FP-A105.01	1	12:26	13:26
	Aldehydes	NCASI Method ISS/FP-A105.01	2	13:31	14:31
	Aldehydes	NCASI Method ISS/FP-A105.01	2	14:44	15:44
Unit 2	Particulate/Metals	Ontario M5/EPA M29	2	8:31	11:39
	Particulate/Metals	Ontario M5/EPA M29	3	12:21	9:39

Day 4 – Thursday December 2

Unit	Test Parameter	Test Method	Run No.	Test Start	Test Stop
Unit 1	Outlet SVOC (Dioxin/Furan)	EPS 1/RM/2	3	8:21	12:30

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

**Fall 2021 Annual Compliance Test Dioxin Testing
Operations Data and Results**

Operating Parameter	Boiler 1			Boiler 2		
	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3
	1-Dec	1-Dec	2-Dec	9-Dec	9-Dec	10-Dec
MSW Combusted (tonnes/day)						
Steam (kg/hr)	33,436	33,395	33,461	33,330	33,557	33,399
Steam temp	497	502	502	500	501	500
Primary Air Flow	33,022	33,711	33,926	35,657	35,966	36,001
Overfire Air Flow	8,265	8,039	8,115	7,912	7,910	7,906
Tertiary Air (Fresh LN Air)	10,095	9,995	10,066	9,638	9,668	9,633
Tertiary air temperature °C	45.8	48.1	32.1	35.7	37.4	34.9
Lime Injection (kg/day)	175.2	177.0	175.8	175.1	174.7	175.1
Ammonia Injection Rate (liters/m)	0.6	0.6	0.8	0.6	0.6	0.5
Carbon Injection (kg/hr)	5.2	5.3	5.3	5.3	5.3	5.3
Combustion air preheat temp	116.7	120.0	120.0	100.0	100.0	100.0
Average Combustion Zone Temp °C	1,087	1,075	1,118	1,167	1,178	1,160
Superheater #3 Flue gas inlet Temp °C	527	534	533	486	504	649
Economizer Inlet Temp °C	344	347	346	347	348	347
Economize Outlet Temp °C	171	175	170	172	174	172
Quench Outlet Temp °C	151	153	151	152	152	152
Reactor Outlet (BH Inlet) Temp °C	140	142	141	144	144	144
Baghouse Outlet Temp °C	138	140	138	140	141	140
Tertiary Air Header Pressure mbar	60	60	60	60	60	60
Tertiary Air Left mbar	34	35	32	35	35	35
Tertiary air Right mbar	28	28	28	34	34	35
Baghouse Differential Pressure mbar	14	14	13	14	14	14
Oxygen (%) - Boiler Outlet	8.6	8.8	8.4	8.6	8.3	8.4
Oxygen (%) - Baghouse Outlet	8.5	8.2	8.8	9.0	8.8	9.0
CO -Boiler Outlet - mg/Rm3	11.0	13.4	10.0	10.1	12.8	9.4
CO - Baghouse Outlet - mg/Rm3	6.9	8.1	6.2	7.8	10.3	7.0
NOx - mg/Rm3	111.3	111.4	110.3	110.3	108.6	110.4
NH3 mg/Rm3	12.4	12.8	12.2	8.8	8.8	8.9
Flue gas moisture	19%	19%	19%	18%	17%	18%
Outlet/Stack Dioxin - NATO - (pg TEQ/Rm³)	13.00	18.10	12.90	2.22	3.35	2.10

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

Table 1: DYEC Compliance Source Test Emission Results 2018-2021

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	
		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	0.022
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
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
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
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
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	0.053
Nitrogen Oxides	121 mg/Rm ³	109	109	109	111	110	110	111	110	109	109	110	110	109	110	111	110
Organic Matter	50 ppm _{dv}	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
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
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

Table 1: DYEC 2021 Compliance Source Test Results Compared to ECA limits and Ontario A-7 limits

Parameter	Units	Boiler #1	Boiler #2	DYEC Average	DYEC ECA limit	% of ECA limit	Ontario A-7
Nitrogen Oxides	mg/ Rm ³	111	110	110	121	91%	198
Total Suspended Particulate Matter	mg/ Rm ³	0.48	0.31	0.4	9	4%	14
Sulphur Dioxide	mg/ Rm ³	0.3	0.2	0.25	35	0.7%	56
Hydrogen Chloride	mg/ Rm ³	2.2	1.8	2.0	9	22%	27
Carbon Monoxide	mg/ Rm ³	9.7	11.7	10.7	40	27%	40
Mercury	µg/Rm ³	0.053	0.053	0.053	15	0.4%	20
Cadmium	µg/Rm ³	0.064	0.022	0.043	7	0.6%	7
Lead	µg/Rm ³	0.46	0.17	0.32	50	0.6%	60
Dioxin/Furans	pg TEQ/Rm ³	14.7	2.56	8.63	60	14.4%	80



Interoffice Memorandum

Date: April 14, 2022

To: Health & Social Services Committee

From: Dr. Robert Kyle

Subject: Health Information Update – April 10, 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*

A stylized graphic of a hand or a flame in shades of blue, positioned behind the text.

UPDATES FOR HEALTH & SOCIAL SERVICES COMMITTEE
April 10, 2022

Health Department Media Releases/Publications

tinyurl.com/ytt289sy

- COVID-19 Vaccine for 5-11-year-olds: Vaccine Hesitancy (Mar 31)

tinyurl.com/2p8prthc

- Durham OHT and Primary Care Network Durham Town Hall – April 7, 2022 (Apr 6)

tinyurl.com/4f642dmy

- COVID-19 Vaccine Expanded Fourth Dose Eligibility (Apr 7)

tinyurl.com/2rbwuxwy

- Appointment bookings now open for fourth dose of COVID-19 vaccine for expanded eligibility groups (Apr 7)

GOVERNMENT OF CANADA

Canadian Food Inspection Agency

tinyurl.com/3tsevcaj

- Canada's largest science-based regulator marks 25 years of protecting food, plants and animals (Apr 4)

Department of Finance Canada

tinyurl.com/3cyz4n7r

- Government of Canada releases Budget 2022 (Apr 7)

Employment and Social Development Canada

tinyurl.com/37drc8rz

- Government of Canada announces Workforce Solutions Road Map – further changes to the Temporary Foreign Worker Program to address labour shortages across Canada (Apr 4)

Environment and Climate Change Canada

tinyurl.com/5e46ekh9

- Government of Canada advances climate action at GLOBE Forum (Apr 1)

Health Canada

tinyurl.com/2p8h8tcb

- Remarks from the Minister of Health on Backlogs Top-Up & Five Areas of Priority for the Future of Federal Provincial Relations on Health Care (Mar 25)

tinyurl.com/n85ye8n6

- Message from the Minister of Health on Oral Health Month (Apr 1)

tinyurl.com/42xpycv9

- Statement from Council of Chief Medical Officers of Health on the importance of staying up to date with COVID-19 vaccines (Apr 5)

tinyurl.com/2p8h5tkj

- Message from the Minister of Health and the Minister of Mental Health and Addictions and Associate Minister of Health on World Health Day (Apr 7)

Indigenous Services Canada

tinyurl.com/r6v8ern2

- Indigenous Services Canada COVID-19 update – Week of March 31, 2022

Prime Minister's Office

tinyurl.com/2p89x2n3

- Prime Minister announces additional funding for COVID-19 vaccination in lower-income countries (Apr 8)

Public Health Agency of Canada

tinyurl.com/3nvd67de

- Statement from the Chief Public Health Officer of Canada on March 25, 2022

tinyurl.com/4vdx67ru

- Statement from the Chief Public Health Officer of Canada on April 1, 2022

tinyurl.com/48mkcvm8

- Government of Canada launches second cycle of national survey to assess the health impacts of the COVID-19 pandemic (Apr 4)

GOVERNMENT OF ONTARIO

Ministry of Children, Community and Social Services

tinyurl.com/2p8bp2jr

- Ontario Connecting More Families with Supports for Children with Special Needs (Mar 29)

Ministry of Education

tinyurl.com/yckfs558

- \$13.2 Billion Child Care Deal will Lower Fees for Families (Mar 28)

tinyurl.com/dw3yswfj

- Ontario Expanding Access to Student Mental Health Supports (Apr 1)

Ministry of Energy

tinyurl.com/4tchkhmm

- Provinces Release Strategic Plan to Advance Small Modular Reactors (Mar 28)

Ministry of Government and Consumer Services

tinyurl.com/2p8jdp4x

- Ontario Mandating Robust PPE Stockpile to Support Plan to Stay Open (Apr 6)

Ministry of Health

tinyurl.com/4xhkxy3c

- Ontario Building a Stronger, More Resilient University Health Network (Apr 1)

tinyurl.com/2her22kx

- Ontario Expanding Fourth-Dose Eligibility (Apr 6)

Ministry of Labour, Training and Skills Development

tinyurl.com/bdxu5m2h

- Ontario Passes Working for Workers Act 2 (Apr 7)

Ministry of Long-Term Care

tinyurl.com/4mpwsp48

- Ontario Giving Long-term Care Residents More Nutritional Choices and Variety (Apr 8)

Treasury Board Secretariat

tinyurl.com/2p9d9wvf

- Ontario Introduces a Plan to Stay Open (Mar 29)

OTHER ORGANIZATIONS

Association of Local Public Health Agencies

tinyurl.com/34fkn6va

- 2022 Winter Symposium Proceedings (Mar 11)

tinyurl.com/2p92ncmr

- The Impact of COVID-19 on Public Health (Apr 6)

Canada's Premiers

tinyurl.com/5d6rrtvu

- Canada's Premiers Launch Awareness Campaign on Health Care Funding (Mar 29)

tinyurl.com/ycky4w8

- Federal Budget 2022: Federal funding for health care fails to meet Canadians' expectations (Apr 8)

Canadian Institutes of Health Research

tinyurl.com/y4btpsj9

- Government of Canada invests more than \$31M in the next generation of health researchers (Mar 31)

Canadian Medical Association

tinyurl.com/yck6fwup

- We must remain vigilant against COVID-19 (Apr 5)

tinyurl.com/nmshhnr7

- Federal budget 2022: Steps to address urgent health care system crisis modest, much more needed (Apr 8)

Canadian Ophthalmological Society

tinyurl.com/tmkpyp26

- Canadian Ophthalmological Society reminds athletes the importance of protective eyewear the Sports Eye Safety Month (Apr 5)

Children's Mental Health Ontario

tinyurl.com/d9nuc5yp

- Children's Mental Health Ontario Calls on Political Parties to Take the #KidsCantWait Pledge (Apr 5)

Financial Accountability Office of Ontario

tinyurl.com/2kfv9662

- Ontario ranks lowest in program spending per person among provinces (Apr 6)

Heart & Stroke Foundation

tinyurl.com/3xcrw6w6

- Heart & Stroke applauds health-related measures in 2022 federal budget (Apr 7)

Mental Health Commission of Canada

tinyurl.com/f5kteame

- MHCC welcomes much-needed investments in Budget 2022 to improve mental health outcomes (Apr 7)

Natural Sciences and Engineering Research Council of Canada

tinyurl.com/2p92fyxr

- Government of Canada makes additional investments in college applied research partnerships (Apr 5)

Neighbourhood Pharmacies Association of Canada

tinyurl.com/38x88rxu

- Neighbourhood Pharmacies Statement on the release of the federal budget by Finance Minister Chrystia Freeland (Apr 7)

Nuclear Waste Management Organization

tinyurl.com/jc5nc4ts

- Canada moves closer to selecting site for infrastructure project to safely store Canada's used nuclear fuel for millennia (Apr 7)

Ontario Medical Association

tinyurl.com/2p8t7kc9

- Ontario's doctors ratify new three-year agreement with province (Mar 28)

Public Health Ontario

tinyurl.com/3dd5aytr

- Ontario COVID-19 Science Advisory Table Transitions to Public Health Ontario (Mar 31)

Registered Nurses' Association of Ontario

tinyurl.com/mtpntdwh

- Nurses praise federal government commitment to dental care, child care and co-op housing; insufficient increase in health transfers and lack of attention to climate emergency deeply troubling (Apr 8)

Social Sciences and Humanities Research Council of Canada

tinyurl.com/yckjy857

- Government of Canada invests in innovative research related to the pandemic, climate change and beyond (Apr 4)

Trillium Health Partners

tinyurl.com/2p8stb8j

- Government of Canada Invests \$30 Million to Expand the CAN Health Network, Creating Jobs and Prosperity at Home (Apr 8)



The Regional
Municipality of
Durham

Works Department

Memorandum

Date: April 14, 2022

To: Regional Chair Henry and Members of Regional Council

From: Jenni Demanuele, CPA, CMA, Acting Commissioner, Works

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

Subject: Durham York Energy Centre
Quarterly (Q4 - 2021) Long-Term Sampling System Report

The attached report for the fourth quarter of 2021 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 October 13, 2021, to January 17, 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 (Q4 - 2021) Report
(October 13, 2021, to January 17, 2022)



Durham York Energy Centre
Long-Term Sampling System
Quarterly (Q4) Report
October 2021 to December 2021

Prepared by

The Regional Municipality of Durham

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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 fourth quarter of 2021 and includes AMESA data collected from October 13, 2021, to January 17, 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

Boiler #	Run #	Start Date	End Date	Duration (days)
1	66	13-Oct-21	10-Nov-21	21
2	66	13-Oct-21	10-Nov-21	28
1	67	10-Nov-21	1-Dec-21	20
2	67	10-Nov-21	30-Nov-21	19
1	69	2-Dec-21	5-Jan-22	33
2	69	13-Dec-21	17-Jan-22	21

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

Note 2: Run 68 not shown; run coincided with source testing program.

4. Laboratory Analysis

There were no issues identified with the AMESA sample cartridges or the analysis at the laboratory; however, the laboratory continues to experience delays in analysis and reporting.

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 schedule to discuss facility operations, and to review environmental monitoring results, trends and calculations where required for all monitoring programs and the available AMESA results.

Events regarding Boiler #1, described further in section 7 of this report, triggered the AMESA investigation checklist. The results of the investigation were shared with York Region and the Owners Engineer, HDR. See section 7 below for a description of the event, investigation and corrective actions.

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](#).

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, and the calculated result.

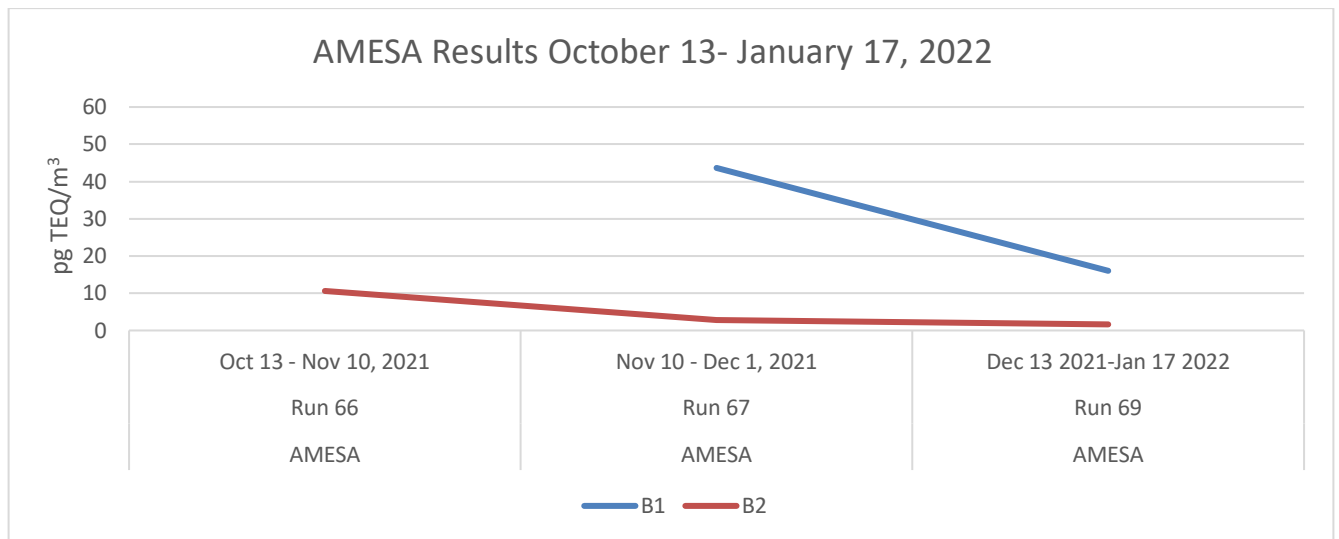
Unit #	Run #	Start Date	End Date	Calculated Result (pg TEQ/Rm ³)
1	66	13-Oct-21	10-Nov-21	Invalidated
2	66	13-Oct-21	10-Nov-21	10.609
1	67	10-Nov-21	1-Dec-21	43.647
2	67	10-Nov-21	30-Nov-21	2.837

Unit #	Run #	Start Date	End Date	Calculated Result (pg TEQ/Rm ³)
1	69	2-Dec-21	5-Jan-22	16.017
2	69	13-Dec-21	17-Jan-22	1.629

Note 3: Run 68 not shown; run coincided with source testing program.

Several incidents were identified during Run #66 which were determined to have a high potential for adverse effects on sample integrity. As a result, the graph below does not include a sample result for Boiler #1, Run 66.

While AMESA has no regulatory limit associated for compliance as it is used to supplement stack 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.



Note 4: Run 68 not shown; run coincided with source testing program.

Note 5: Boiler #1 Run 66 AMESA result invalidated.

7.1 Investigation

AMESA Run 66 result for Boiler #1 was invalidated and triggered the AMESA investigation checklist. The investigation determined there were multiple events during the time the sample cartridge was in-situ which could have contributed, to varying degrees, a potential effect on the sample value. These events include the following:

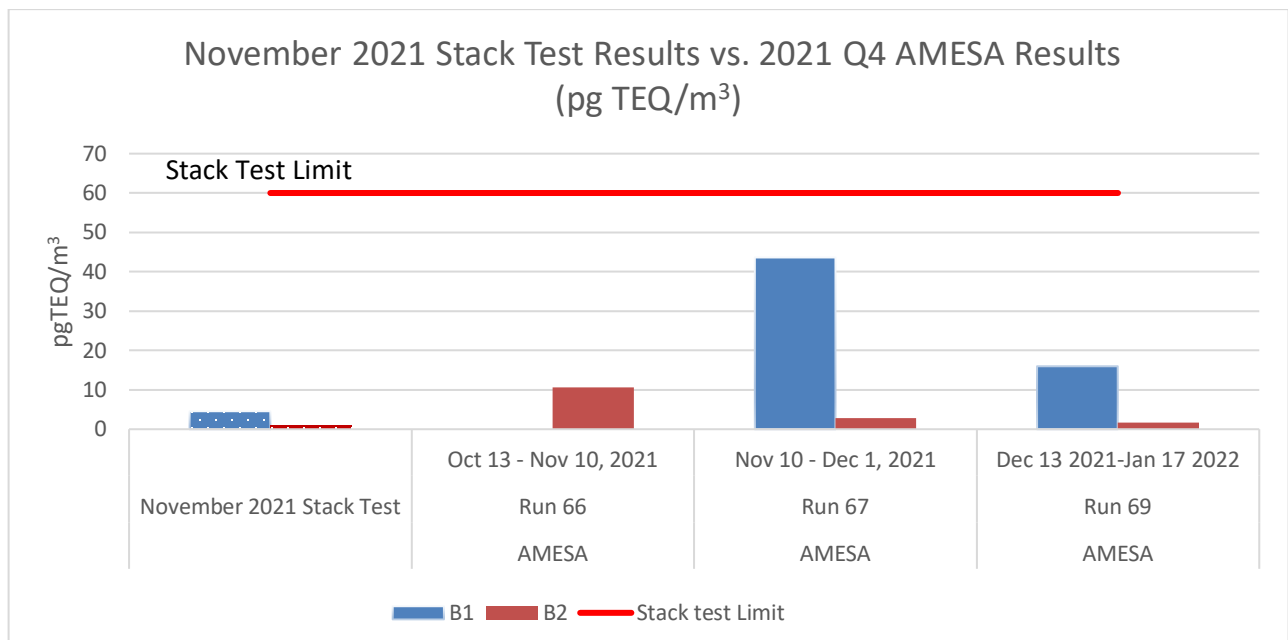
- Low internal gas recirculation (IGR) air flow occurred on October 13. When the internal gas recirculation flow rate is low, there is a higher possibility of the ash being carried over instead of “falling out” from the flue gas stream. The excess ash carryover coupled with different factors can lead to higher AMESA sample results. However, there is no way to quantify the influence on the AMESA sample result based on this situation.
- A ruptured economizer tube on October 21, 2021 which tripped the combustion air fan and resulted in non-isokinetic sampling periods.
- A fan damper failure on November 5, 2021 which tripped the combustion air fan and resulted in non-isokinetic sampling periods.
- A plugged economizer hopper was noted on November 8, 2021. A plugged economizer can lead to a temperature drop that has the potential to support de novo synthesis of Dioxins and Furans due to desorption and lead to a higher AMESA sampling result.

7.2 Opportunities for Improvement

A replacement of sections of Boiler #1 economizer tubes is planned to take place during the spring maintenance outage. A full reliability inspection will be performed on the surrounding tubes.

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

As AMESA is not a compliance tool, it is presented in the chart below to show how the Q4 calculated values compare to the most current stack testing results. The stack test compliance limit for Dioxins and Furans is 60 pgTEQ/m³. The chart below shows the AMESA Q4 results as compared to the 2021 Fall stack test results. Preliminary results from the recent Fall stack test also indicate the Dioxins and Furans result was below the regulatory compliance limit.



Note 6: Boiler #1 Run 66 AMESA result invalidated.

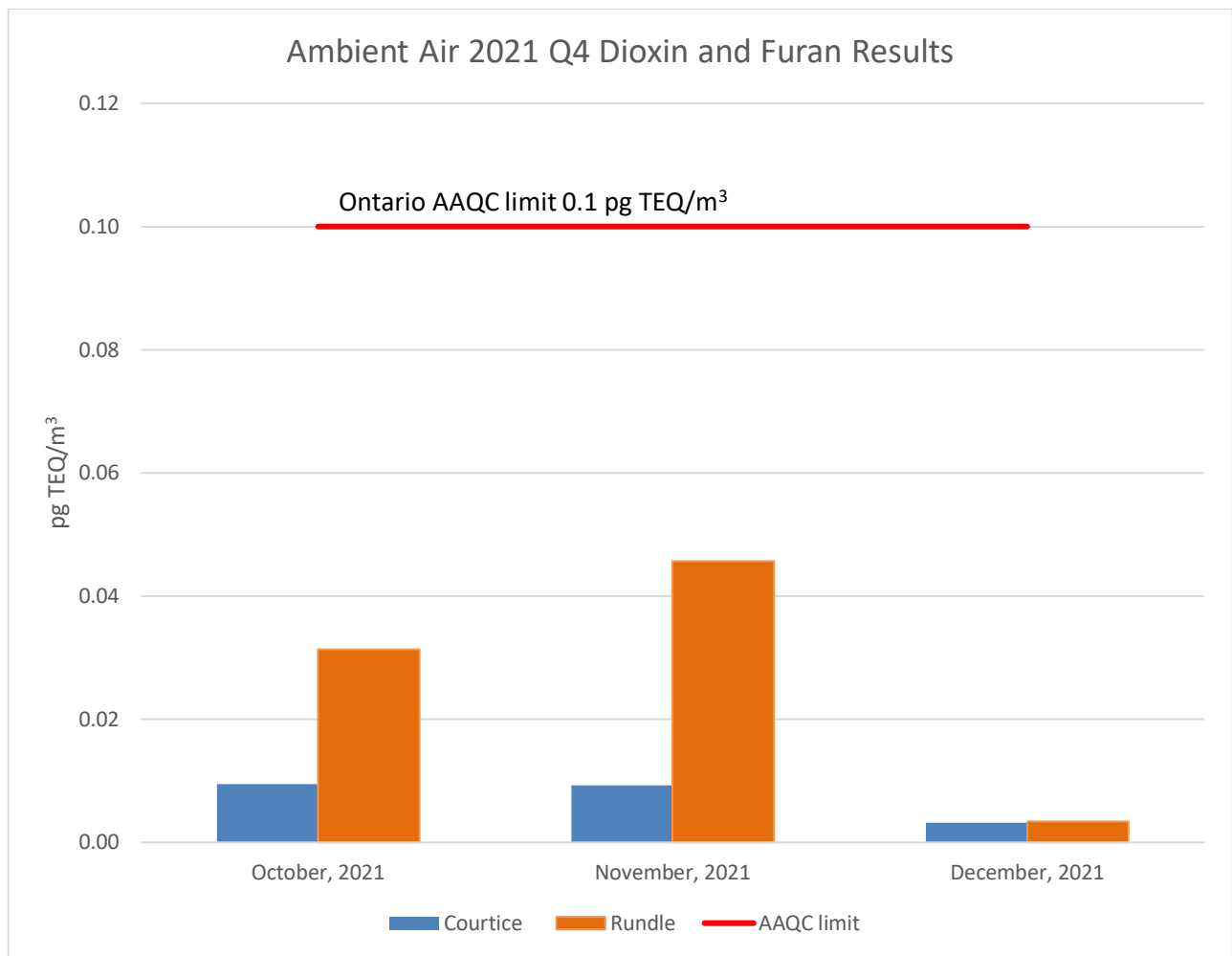
Note 7: Run 68 not shown; run coincided with source testing program.

9. Ambient Air Dioxin and Furan Results – Fourth Quarter (Q4)

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 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 well below the Ontario Ambient Air Quality Criteria of 0.1 picogram Toxic Equivalency per cubic metre (pgTEQ/m³) during the fourth quarter (Q4) of 2021.

Note: Ontario Ambient Air Quality Criteria is 10 times lower than the Ontario Regulation 419 Upper Risk Threshold of 1 pgTEQ/m³ for Dioxins and Furans.



10. Durham York Energy Centre Inquiries

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.

A response has not been received from the MECP to date.

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.

A response has not been received from the MECP to date.


End of Report



April 8, 2022

DELIVERED BY E-MAIL

Regional Municipality of Durham
Email: clerks@durham.ca

 Corporate Services Department Legislative Services Division	
Date & Time Received:	April 11, 2022 9:11 am
Original To:	CIP
Copies To:	
Take Appropriate Action	<input type="checkbox"/> File <input type="checkbox"/>
Notes/Comments:	

Re: Notice of Motion - Ontario Housing Affordability Task Force (All Wards)

Oshawa City Council considered the above matter at its meeting of March 28, 2028 and adopted the following recommendation of the Development Services Committee:

“Whereas, on February 8, 2022, a “Report of the Ontario Housing Affordability Task Force” was released publicly and presented to the Honourable Steve Clark, Ontario Minister of Municipal Affairs and Housing; and,

Whereas, the Ontario Housing Affordability Task Force was formed by the provincial government and tasked with the goal of formulating a number of actionable and concrete solutions to address the housing affordability and supply crisis in Ontario; and,

Whereas, the report contains a number of recommendations aimed to address housing affordability for Ontarians, and sets an ambitious target of 1.5 million new homes to be built in Ontario in the next ten years; and,

Whereas, several of the recommendations in the report, if implemented, would result in reduced decision-making powers for municipalities when it comes to identifying and planning for appropriate residential intensification within their respective communities, as well as result in fewer opportunities for public consultation and input in the local development approval process; and,

Whereas, while it is acknowledged that Ontario is in the midst of a housing crisis and all levels of government need to identify opportunities to increase the supply of housing to meet community needs, it is also essential to respect local decision-making and the democratic process to ensure that housing is appropriately planned at a local level and through a public process;

Therefore be it resolved that:

1. City Council supports the need to increase the supply of housing within the Province of Ontario and within the City of Oshawa, where appropriately planned at a local municipal level and advanced through a public process that involves City Council in the decision-making process and supports any recommendations of the Task Force that would lead to increases in the planning department capacity of municipalities and preserves the utmost public participation in the planning process and,
2. City Council opposes those recommendations of the Ontario Housing Affordability Task Force related to such matters as limiting appeal rights, reducing public participation, limiting decision-making at the local municipal level, limiting heritage preservation efforts, reducing or eliminating minimum parking requirements, removing barriers to construction that may compromise health and safety, limiting fiscal responsibility by requiring mandatory development charge and cash in lieu of parkland exemptions and permitting increased density as-of-right without local review of appropriate locations, servicing capacities and zoning by-law standards for intensification; and,
3. Mayor Carter, on behalf of City Council, be authorized to send a letter to the Premier of the Province of Ontario and the Minister of Municipal Affairs and Housing to express the City's concerns, as generally noted in this resolution, with respect to those recommendations of the "Report of the Ontario Housing Affordability Task Force" which seek to limit public input and local decision-making power by municipalities concerning residential intensification in their respective communities; and,
4. Development Services staff report through the Development Services Committee on any subsequent recommendations or legislative changes being advanced by the Province with respect to this matter when posted on the Environmental Bill of Rights or released publicly; and,
5. A copy of this Council resolution be sent to the Region of Durham, Durham area municipalities, Durham area M.P.P.s, the Association of Municipalities of Ontario and Ontario's Big City Mayors."

If you need further assistance concerning the above matter, please contact Warren Munro, Commissioner, Development Services Department at the address listed below or by telephone at 905-436-3311.



Mary Medeiros
City Clerk

/rr

c. Development Services Department

Corporate Services Department Legislative Services Division	
Date & Time Received:	April 12, 2022 11:44 am
Original To:	CIP
Copies To:	
Take Appropriate Action	<input type="checkbox"/> File <input type="checkbox"/>
Notes/Comments:	



Toronto and Region
Conservation
Authority

Chief Executive Officer

April 11, 2022

Sent via email
clerks@durham.ca

Regional Clerk/Director of Legislative Services
Regional Municipality of Durham
Box 623, 605 Rossland Road East
Whitby, Ontario, L1N 6A3

Dear Regional Clerk:

Re: Notice of Meeting to Approve the 2022 Non-Matching Levy for Toronto and Region Conservation Authority


Pursuant to Ontario Regulation 139/96, (as amended by O.R.106/98), I hereby give notice that Toronto and Region Conservation Authority (TRCA) will be considering its 2022 budget including non-matching municipal levy on May 20, 2022.

In accordance with the "AMO/CAO Protocol Pertaining to Non-Matching Municipal Funding of Watershed Programs", we are advising the Region of the date of the Board of Directors meeting at which the budget will be considered and that it may wish to direct its appointed representatives as to how they should vote with respect to the non-matching levy. The weighted voting procedure required under Regulation 139/96 provides that each member votes in proportion to their municipality's share of current value assessment, as modified.

TRCA's 2022 operating and capital levy requirements for the Region of Durham are in accordance with the funding approved by Regional Council in 2022 in the amount of \$1,725,300. The incremental funding of \$42,371 for the new head office facility will be invoiced separately. Regional Finance staff have complete information on TRCA funding requirements.

We appreciate the continuing support and cooperation of City of Toronto in fulfillment of TRCA's vision for The Living City.

Sincerely,


John MacKenzie, M.Sc.(PI) MCIP, RPP
Chief Executive Officer

cc: Nancy Taylor, Commissioner, Finance, Region of Durham
Mary Simpson, Director – Financial Planning and Purchasing, Region of Durham
Nicole Pincombe, Director, Business Planning, Budgets & Risk Management, Region of Durham
Jennifer Innis, Chair, Board of Directors, TRCA
Kevin Ashe, Member, Board of Directors, TRCA
Joanne Dies, Member, Board of Directors, TRCA
Gord Hight, Member, Board of Directors, TRCA

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

The Regional Municipality of Durham

MINUTES

DURHAM REGION ANTI-RACISM TASKFORCE

Thursday, March 24, 2022

A meeting of the Durham Region Anti-Racism Taskforce was held on Thursday, March 24, 2022 in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 7:02 PM. Electronic participation was permitted for this meeting.

1. Traditional Territory Acknowledgment

Chair Lee read the following land acknowledgement:

We are currently located on land which has long served as a site of meeting and exchange among the Mississaugas Peoples and is the traditional and treaty territory of the Mississaugas of Scugog Island First Nation. We honour, recognize and respect this nation and Indigenous Peoples as the traditional stewards of the lands and waters on which we meet today.

2. Roll Call

Present: Councillor Lee, Regional Council, Chair
F. Ahmed, Community Member, Vice-Chair
E. Baxter-Trahair, Chief Administrative Officer
S. Bookal, Community Member
S. Caibaiosai, Industry/Association/Public Institution Representative
PG Case, Industry/Association/Public Institution Representative
L. Francis, Community Member
T. Hancock, Community Member
J. Munawa, Community Member
C. Oyeniran, Community Member
Z. Pickering, Community Member
N. Samuel, Industry/Association/Public Institution Representative
K. Vieneer, Community Member
J. Williamson, Industry/Association/Public Institution Representative
G. Wilson-Beier, Community Member

Also

Present: Councillor Anderson, Regional Council Alternate

Absent: S. Dave, Community Member

Staff

Present: D. Beaton, Commissioner of Corporate Services
A. Hector-Alexander, Director, Diversity, Equity, and Inclusion
P. Hines, Program Manager, Diversity, Equity, and Inclusion
H. Mohammed, Policy Coordinator, Diversity, Equity, and Inclusion
A. Sharma, Policy Advisor, Diversity, Equity and Inclusion

R. Inacio, Systems Support Specialist, Corporate Services – IT
K. Smith, Committee Clerk, Corporate Services – Legislative Services

3. Declarations of Interest

There were no declarations of interest.

4. Adoption of Minutes

Moved by T. Hancock, Seconded by L. Francis,
That the minutes of the Durham Region Anti-Racism Taskforce meeting
held on Thursday, February 24, 2022, be adopted.

CARRIED

5. Delegations

There were no delegations to be heard.

6. Presentations

A) Titi Katibi, Pickering Welcome Centre, re: Confronting Racism in Durham

Titi Katibi, Pickering Welcome Centre, provided a presentation with regards to Confronting Racism in Durham.

Highlights of the presentation included:

- Project Summary
- Project Deliverables
- Confronting Racism Project Phases
- Opportunities to Partner

T. Katibi advised that the Confronting Racism in Durham project is being led by the Durham Region Unemployed Help Centre, which is the lead organization for the Pickering Welcome Centre, and is being funded by the Government of Canada. T. Katibi reviewed the details of the project summary.

T. Katibi reviewed the four phases of the project that started in December 2021 and provided an overview of the following eight project deliverables: environmental scan; Durham-wide survey; focus group sessions; working group; anti-racism materials/toolkit; training; monthly newsletters and website; and, job fair.

T. Katibi advised they would like to partner with as many individuals and organizations as possible and discussed the ways in which they plan to develop the project by information sharing and promotion through social media and other platforms; opportunities to contribute to the project website and newsletters; participation in surveys; working group memberships; participation in job fairs; participation in training; and, access to diversity, equity and inclusion and anti-racism toolkits.

T. Katibi responded to questions with regards to the project covering the areas of human rights accommodation, employee rights and workplace safety.

Councillor Lee thanked T. Katibi for her presentation.

B) Eleanor McIntosh, Durham Black Educators' (DBEN), and Keishia Facey, RFWC Consulting, re: Developing the Black Community Hub in Durham

Eleanor McIntosh, Durham Black Educators' Network (DBEN), and Keishia Facey, RFWC Consulting, provided a presentation with regards to Developing the Black Community Hub in Durham.

Highlights of the presentation included:

- Background
- The Community Collective
- Executive Summary
- Hub Planning Process
- Community Collective & The Regional Municipality of Durham
- Next Steps

E. McIntosh stated that Durham Region is primed to offer a response to the community by demonstrating commitment in action through moving strategic action and recommendation forward, and is creating a space to highlight Black accomplishments and centre the development of the overall wellbeing of Black communities across Durham.

E. McIntosh discussed how the Community Collective came about and advised that hearing from the community was the most important, so they developed a survey and had over 200 responses. She advised that they used the information from the survey to partner in different ways and reach families in need; to develop partnerships with student and family advocate programs; to identify other services and supports that Black families may need in the community; and, to establish a free tutoring program for grades 5 to 12. E. McIntosh advised that in June 2021, the Collective put together their initial proposals to the Region to determine how to partner and establish something more formal around the development of the hub in Durham.

K. Facey advised that the Collective is in the beginning stages of building the hub from the ground up, and has conducted background research and will continue with environmental scans and literature reviews. K. Facey reviewed the four stages of the strategic planning process.

E. McIntosh stated they are at the beginning of stage 1 which is community conversations, targeted engagement and reviewing the objectives that the Collective is trying to achieve.

E. McIntosh advised that the Community Collective is committed to leading the development of the hub and is seeking support from the Region and community

to expedite the planning process in order to reach their goals by October 2022. She also advised they are setting up an advisory committee in April and advised they are seeking 1-2 members of the Durham Region Anti-Racism Taskforce to be on the special advisory committee to assist with the development of the hub and community consultation workplan.

E. Baxter-Trahair requested that E. McIntosh and K. Facey provide their presentation to the local Durham Region CAOs.

7. Information Items

There were no information items.

8. Discussion Items

A) Motion – DRART Letter of Support for Racialized Ukrainian Immigrants

Councillor Lee advised that racialized refugees in Ukraine are not being treated fairly and asked the Committee for their support to write a letter to ensure the immigration process is as equitable as possible.

Moved by Z. Pickering, Seconded by K. Viener,

That the Durham Region Anti-Racism Taskforce recommends to the Finance and Administration Committee for approval and subsequent recommendation to Regional Council:

That a letter be sent from the Durham Region Anti-Racism Taskforce to Regional Council and Durham MPs regarding the Federal government's decision to open the immigration programs in response to the war to Ukrainian citizens only and exclude other groups who live in Ukraine who are refugees and immigrants, and who are mostly racialized, that do not have access to come to Canada.

CARRIED

B) DRART Workplan and Sub-Working Groups

A. Hector-Alexander advised that she identified the top four priorities of the Taskforce and created a workplan to be presented to the Finance & Administration Committee on April 12, 2022 and Regional Council on April 27, 2022. A. Hector-Alexander discussed the priority areas within the workplan.

Moved by T. Hancock, Seconded by K. Viener,

That the Durham Region Anti-Racism Taskforce sub-working groups continue to work throughout the summer months.

CARRIED

9. Other Business

Councillor Lee advised that the Ajax Anti-Black Racism Taskforce launched its first Black owned business directory at the Town of Ajax.

10. Date of Next Meeting

The next regularly scheduled Durham Region Anti-Racism Taskforce meeting will be held on Thursday, April 28, 2022 at 7:00 PM in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

11. Adjournment

Moved by K. Vieneer, Seconded by J. Munawa,
That the meeting be adjourned.

CARRIED

The meeting adjourned at 8:07 PM

Respectfully submitted,

Councillor Lee, Chair

K. Smith, Committee Clerk