Durham York Energy Centre 2021 Streamlined Environmental Assessment in support of the Annual Waste Processing Capacity Increase from 140,000 Tonnes to 160,000 Tonnes Per Year

RECORD OF CONSULTATION SUMMARY REPORT

Date: December 20, 2021

REGION OF DURHAM | REGION OF YORK | COVANTA

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1. Introduction

The Record of Consultation describes the consultation activities undertaken during the Durham York Energy Center (DYEC) Capacity Increase from 140,000 to 160,000 tonnes per year Environmental Screening Process.

The Regional Municipalities of Durham and York (Regions), the owners of the DYEC, have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to ultimately amend the Environmental Compliance Approval for the DYEC.

2. Background

The Environmental Compliance Approval for the DYEC currently allows the facility to process up to a maximum of 140,000 tonnes per year of waste, for disposal at the site. The Regions are proposing to increase this amount by 20,000 tonnes per year, for a total of 160,000 tonnes. The facility is capable of processing 160,000 tonnes per year with its current equipment and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions. If approved, the expanded tonnage will allow for greater usage of the existing facility, reducing the reliance on alternate waste disposal facilities outside the Regions' borders.

3. Objective of the Record of Consultation

The objective of the Record of Consultation (RoC) is to document consultation activities conducted during the Environmental Assessment process. This RoC was completed as part of the Streamlined Environmental Assessment and includes input received from interested parties including the general public, government agencies, non-government organizations and Indigenous Communities, all of which have provided feedback that has been, and will continue to be, considered as the project continuous forward.

4. Consultation Plan for Streamlined EA Study

This section describes the general consultation plan, a living document which was intended to guide the consultation process of the course of the study. It includes references to the types of parties that were consulted over the course of the study and the scope of consultation that was undertaken at various milestones.

In general, there are three categories of parties that were consulted over the course of the Streamlined Environmental Assessment. These categories are considered to cover the full range or parties which have had an interest in the Study and include:

Indigenous Communities as identified by Durham and York in consultation with the MECP that may be potentially affected by the outcome of the Study.

Government and Agencies which represent the interest and mandate of various governmental departments, ministries and agencies potentially affected by the outcome of the Study.

General Public which includes all residents and businesses within the Study area, which may have a broad or general interest in the Study or may be directly affected by the Study outcome.

The Consultation Plan outlined key messaging, public education activities / community outreach, timelines and measurement tool. A copy of the Consultation Plan can be found in Appendix A.

4.1 Indigenous Communities

A detailed Indigenous Community distribution list was developed in conjunction with MECP and maintained through the duration of the EA study. A list of the Indigenous communities was continuously updated over the course of the Study. The most recent version of the contact can be found in Appendix B.

At each point of consultation in the EA, the Indigenous Communities and related organizations on the list were notified of pending consultation and invited to participate. In addition, whenever new documents became available and were distributed to the agency contact list, documents were also distributed to all Indigenous Communities on the list. The most recent version of the contact list can be found in Appendix B.

The DYEC Project Capacity Amendment, Notice of Request to Consult (dated November 18, 2019) was mailed out via registered mail to all contacts on the Indigenous Community distribution list prepared for the Project. A copy of Notice of Request to Consult can be in found in Appendix C. A second Notice of Request to Consult was issued on October 7, 2021 that accompanied the revised Environmental Screening Report; a copy of The Notice can be found in Appendix D.

Project staff called each contact on the Indigenous Community distribution list between December 6 to December 10, 2019 to ensure each contact had received the Notice of Request to Consult documents, as well as to address any questions or concerns regarding the Project and to invite the contacts to Public Information Centre's (PIC) #3.

Project staff contacted each contact on the Indigenous Community distribution list again in November/ December 2021 to ensure each contact had received the final report documents, as well as to address any questions or concerns regarding the Project.

During the Project, six (6) comments were received by various contacts from the Indigenous Community distribution list. A table summarizing these comments and copy of all First Nation's correspondence can be found in Appendix E.

A list of all Indigenous Communities contacted throughout the Study process is provide in Table 1 below.

Table 1: Indigenous Communities Contacted

Williams Treaty First Nations (group)
Chippewas of Rama First Nation
Chippewas of Georgina Island
Chippewas of Mnjikaning (Rama)
Mississaugas of Scugog Island
Batchewana First Nation
Beausoleil First Nation
Caldwell First Nation
Curve lake First Nation
Delaware First Nation (Moravian of Thames)
Mississauga of Credit First Nation
Mississaugas of Alderville First Nation
Mohawks of Bay of Quinte
Ojibways of Hiawatha First Nation
Huronne-Wendat Nation
Oneida Nation of the Thames
Six Nations of the Grand River
Wahta Mohawks
Cree-Napaski Commission
Kawartha Nishnawbe First Nation
Metis Nation of Ontario Head Office

4.2 Consultation with Government Agencies and Non-Government Organizations

Various levels of government were consulted during the Study. A list of the government agencies and non-government organizations, including their affiliation and department, were continuously updated over the course of the Study. The most recent version of the contact can be found in Appendix B.

Upon the initial submission of the Environmental Screening Report (ESR), five (5) comments were received by various contacts from the Government Agencies and Non-Government Organizations distribution list. The comments were addressed by staff and tracked on a RoC summary comments table. The comments summary table has been updated on a regular basis to reflect the most recent activities. The table is now finalized with all comments received and addressed upon the completion of the consultation period at the end of November 2021. A table summarizing these comments and copy of all Government Agencies and Non-Government Organizations correspondence can be found in Appendix F.

4.3 Consultation with General Public

Over the course of the Study, a contact list of those individuals and groups expressing interest in the Study was compiled and was continually updated as the Study proceeded. The current contact list is included as part on the Consultation Record and forms part of the RoC. The most recent version of the contact list can be found in Appendix B.

Fourteen (14) comments were received from the general public in addition to those received through the three PICs. The comments were addressed by staff and tracked on a RoC summary comments table. The comments summary table has been updated on a regular basis to reflect the most recent activities. The table has been finalized with all comments received and addressed upon the completion of the consultation period at the end of November 2021. A table summarizing these comments can be found in Appendix G.

5. Notification and Community Outreach Activities

The following section describes the notification and communication outreach activities undertaken by the Regions to inform the public of Study updates and milestones. The majority of community notification and community outreach activities were conducted during the following milestones:

- Notice of Commencement
- Public Information Centres
- Notice of Request to Consult (Indigenous Communities)

- Notice of Completion

5.1 Media Releases

Public Service Announcements were created and distributed throughout the milestones of the project. Each time a PSA is issued, it is also posted to the project website durham.ca/DYEC160K, the durham.ca/newsroom and the Waste section newsfeed at durham.ca/waste, as well as shared on the Region's Facebook and Twitter accounts. Copies are also mailed and emailed to Regional Council and Clarington staff.

The following media materials have been issued and a copy of each release has been included in their respective milestones:

- Regions proposing to increase waste processing limit by 20,000 tonnes at Durham York Energy Centre - June 27, 2019
- Regions studying capacity increase at Durham York Energy Centre, open house to be held August 21 - July 29, 2019
- Regions studying processing increase at Durham York Energy Centre, open house to be held October 23 - October 15, 2019
- Regions studying processing increase at Durham York Energy Centre, open house to be held December 12 in Bowmanville – December 2, 2019
- Durham York Energy Centre Environmental Screening Report available for public review - December 20, 2021

5.2 Newspapers Advertising

Advertisements were placed in local newspapers in each municipality, which provided information on the Notice of Commencement, public information sessions and Notice of Completion.

In addition to the placement of notices in local weekly newspapers, Public Service Announcements were issued to notify interested parties and organization throughout Durham Region.

Further details regarding the advertisement, including newspaper publication dates, are provided in the Appendix I, Appendix J and Appendix K in this document in the summary reports specific to each milestone in the Study.

5.3 Website, Email and Phone

A website (www.durhamyorkwaste.ca) was established in late 2005 to provide information about the Durham York Energy Centre. This website, hosted and regularly updated by the Region of Durham, includes news and updates about the Durham York Energy Centre and includes information about the ongoing process

to increase the DYEC throughput to 160,000 tonnes per year. Interested parties were encouraged to register to receive automatic notifications when new information is posted the Project website through the "Contact Us" page of the website.

A project designated page (www.durhamyorkwaste.ca/DYEC160K) was created for information specific to DYEC 2019 Streamlined Environmental Assessment. The address for this website has been made been made available to the public in notices, public information centre information boards and correspondence with the public. To date, (July 15, 2019 - February 11, 2020), the Project website received 1.2K pageviews, 774 unique pageviews over 460 users and 267 new users. However, to provide better access and usability to the public, the DYEC website was reconstructed in early 2020 and relaunched in November 2020. Upon relaunch, the website has received 744 pageviews, 575 unique pageviews over 470 users and 211 new users. The website will be updated to include information regarding the revised ESR including updated studies, Notice of Completion and the ECA Application process once it is appropriate to do so.

The Project email address, local phone number, and a mailing address were posted to the website. Messages and letters received from the public included questions concerning information that was distributed, requests for copies of technical Study reports, dates for planned public information sessions and general comments about the Study.

5.4 Social Media

Social media outlets, including the Region's Facebook and Twitter pages, were used throughout the Project to inform stakeholders about the Project, provide calendar reminders of Public Information Centres and obtain feedback from interested parties.

Final Stats from the social media platforms – will be provided near the end of the project to ensure we cover all periods of public consultation, including Notice of Completion.

5.5 Survey

Residents were invited to complete a brief online survey to help the Region's understand what residents think is most important for managing the Region's residential waste. The survey was available for response through the Region's website from November 1 to December 15, 2019 and included questions related to the Durham York Energy Centre and the potential future expansion of the facility. In total, 3,233 residents completed the online survey. When asked how Durham's waste should be managed, 74 per cent of respondents replied that energy should be generated from the waste through incineration and anaerobic digestion. When asked if the Durham York Energy Centre should be expanded to safely process more garbage if Durham Region growth results in more than 160,000 of garbage per year being generated, 77 per cent of respondents replied yes, the facility

should be expanded. The online survey questions and responses related to the Durham York Energy Centre have been included in Appendix H.

5.6 Direct Marketing

There was a front-page article on the DYEC 160K EA in the fall 2019 edition of the Durham Works newsletter which was distributed to all households across Durham Region via Canada Post the first week of November.

5.7 Mailing List

A preliminary mailing list was developed before the Study's consultation process began to identify key contacts within the community, government agencies, non-government organizations and Indigenous Communities. These mailing lists were updated continuously, primarily because of attendance at the public information centres where a mailing list sign-up sheet was always made available. At an individual's request, their name was placed on (or removed from) the mailing list and updates and project information would we send by either mail or email. Table 2 below summarizes the categories and number of stakeholders on the current contact list for the Study.

Table 2: Category and Number of Stakeholder on Contact List

Category of Stakeholder	Number of contacts on list
Indigenous Communities	38
Government Review Team	49
Agencies	54
Public Request	23
Regional Distribution List	75

6. Feedback Mechanism for Responding to and Incorporating Public Comment

Following each public consultation event, comments received were tabulated and addressed in draft. Comments were summarized in a table format outlining the comment and the response to the comment. These tables have been divided into three categories, Indigenous Communities, Government and Non-Government Organizations and General Public. These tables will be included in the final revision of this document once the consultation period has been completed and all comments have been addressed.

A copy of all the questions received from the public was sent out to the Project team for response and to allow for additional consideration.

7. Notice of Commencement and General Project Publications

The Notice of Commencement was released using a variety of mediums to ensure a wide distribution of information to interested stakeholders. The mediums include social medium platforms (Twitter and Facebook), local newspapers, Regional websites, mail outs (hard copy and emails) and Regional Council/Committees. The Notice of Commencement provided a brief background of the project, outlined the proposed undertaking, described the process and consultation methods, and provided a contact for questions or concerns regarding the project. A summary of the Notice of Commencement distribution can be found in Table 3. A copy of the Notice of Commencement and the correspondences are located in Appendix I.

Table 3: Notice of Commencement Distribution Summary

Date	Time	Location	Method of Distribution	Attendance
June 27, 2019	N/A	Facebook	Article posted on the Region of Durham's Facebook page - "Regions proposing to increase waste processing limit by 20,000 tonnes at the Durham York Energy Centre"	N/A
June 27, 2019	N/A	Twitter	Twitter News Release- "Regions proposing to increase waste processing limit by 20,000 tonnes at the Durham York Energy Centre"	N/A
Week of July 2-5	N/A	Website	PSA announcing Notice of Commencement was posted to the website.	N/A
July 3, 4, 10, 11	N/A	Local Newspapers	Notice of Commencement placed in the local newspapers	N/A
July 9, 2019	N/A	Mail Out - Email	Notice of Commencement mail out to Regional distribution list (email)	N/A
July 10, 2019	N/A	Facebook	Post on the Region of Durham's Facebook page - "Regions proposing to increase waste processing limit by 20,000 tonnes at the Durham York Energy Centre"	N/A

July 10, 2019	2-4PM	Durham Regional Headquarters, Council Chambers	EFWAC members were presented information on the DYEC permit amendment for 160,000 tonnes per year and the Terms of Reference for an expansion to 250,000 tonnes per year. Minutes were taken and will be posted on the DYEC website when finalized.	EFWAC is live steamed and open to the public. Four (4) public members were in attendance.
Week of July 19, 2019	N/A	Mail Out	Notice of Commencement mail out (hard copy)	N/A
August 1 and 2, 2019	N/A	Mail out - Email	Notice of Commencement mail out to Indigenous Community and Agency distribution list (email)	N/A

Table 4 General Information Publication Summary

Date	Time	Location	Method of Distribution	Attendance
August 26, 2019	N/A	Twitter	Tweet #DurhamRegion and @YorkRegionGovt are proposing to increase the amount of waste processed each year at the #DurhamYorkEnergy Centre by 20,000 tonnes. Learn more: DurhamYorkWaste.ca. #DurhamWaste.	N/A
September 25, 2019	N/A	Facebook	Post on the Region of Durham's Facebook page – "Get involved! Learn about the proposed 20,000 tonnes increase to the amount of waste processed each year at the #DurhamYorkEnergyCentre. Sign up for email updates at www.DurhamYorkWaste.ca.	N/A

			#DurhamWaste	
September 25, 2019	N/A	Twitter	Tweet “Get involved! Learn about the proposed 20,000 tonnes increase to the amount of waste processed each year at the #DurhamYorkEnergyCentre. Sign up for email updates at www.DurhamYorkWaste.ca. #DurhamWaste.	N/A
October 10, 2019	N/A	Facebook	Post on the Region of Durham’s Facebook page – “Get involved! Learn about the proposed 20,000 tonnes increase to the amount of waste processed each year at the #DurhamYorkEnergyCentre. Sign up for email updates at www.DurhamYorkWaste.ca. #DurhamWaste	N/A
October 10, 2019	N/A	Twitter	Tweet “Get involved! Learn about the proposed 20,000 tonnes increase to the amount of waste processed each year at the #DurhamYorkEnergyCentre. Sign up for email updates at www.DurhamYorkWaste.ca. #DurhamWaste	N/A
October 31, 2019	N/A	Twitter	Tweet “Questions about the Environmental Screening Process to increase the amount of waste processed at the #DurhamYorkEnergyCentre? Visit DurhamorkWaste.ca. @YorkRegionGovt #DurhamWaste	N/A
October 31, 2019	N/A	Facebook	Post on the Region of Durham’s Facebook page – “Questions about the Environmental Screening	N/A

			Process to increase the amount of waste processed at the #DurhamYorkEnergyCentre? Visit DurhamorkWaste.ca. @YorkRegionGovt #DurhamWaste	
October 2021	N/A	Mail out - Email	Submit revised ESR for comments with interested persons	N/A
November, 2021	N/A		Close consultation period for receiving comments	N/A
December 2021	N/A	Mail out - Email	Publish notice of Completion	N/A
Early 2022	N/A	N/A	60-Day Review Period	N/A
2022	N/A	Mail out - Email	Complete Statement of Completion From and submit to MECP upon completion of 60-Day review	N/A

8. Public Consultation Activities

Public consultation was held over the course of the Study including public information sessions and surveys. Public consultation events were in the form of three public information centers held within Durham Region. The Public Information Centre's (PICs) were arranged and held by the Project Team and were intended to gather and respond to public comment on the Environmental Screening Process and the preliminary findings. A brief summary of the Public Information Centre's is provided in Table 4 below. Three separate detailed reports summarizing each PIC are included in Appendix J.

Table 5: Public Information Centre Summary

PIC #	Time	Location	Date	Purpose/Focus	Number of Guests
PIC#1	5-8 p.m.	Durham Regional Headquarters, 605 Rossland Road East, Whitby	August 21, 2019	a. Describe the proposed study and purpose. b. Present the Screening Criteria Checklist. c. Identify Potential Effects. d. Identify the next steps in the EA process.	30
PIC#2	4-8 p.m.	Durham York Energy Centre, 1835 Energy Drive, Courtice	October 23, 2019	a. Update stakeholders on the project status. b. Provide an opportunity to discuss the studies completed and the assessment of potential environmental effects. c. Provide opportunity to discuss relevant impact mitigation measures. d. Identify next steps in the EA process.	18
PIC#3	4-8 p.m.	Garnet B. Rickard Recreation Complex, 2440 Durham Regional Hwy 2, Bowmanville	December 12, 2019	Presentation of Draft Report.	18

Presentations were also provided to Durham Region's Energy From Waste-Waste Management Advisory Committee and the Energy From Waste Advisory Committee.

Throughout the Study, the Region's have accommodated requests for presentations and tours of the Durham York Energy Centre. Slides dedicated to the Durham York Energy Centre 2021 Streamlined Environmental Assessment in support of the Annual Waste Processing Capacity Increase from 140,000 Tonnes to 160,000 Tonnes were incorporated into the presentation as a means to inform guests about the project and to allow staff to address any questions guest may have regarding the proposed throughput increase. Since the Notice of Commencement release on July 3, 2019, the Region has provided 25 presentation/tours for a total of 271 guests. A specific presentation/tour of the DYEC was arranged for October 10, 2019 from 10-11:30 am stemming from the EA process.

9. Notice of Completion

The Notice of Completion was released using a variety of mediums to ensure a wide distribution of information to interested stakeholders. The mediums include social medium platforms (Twitter and Facebook), local newspapers, Regional websites, mail outs (hard copy and emails) and Regional Council/Committees. The Notice of Completion provided a brief background of the project, identified the reviewing period and provided information regarding how the study documents could be obtained. A summary of the Notice of Completion distribution can be found in Table 6. A copy of the Notice of Completion can be found in Appendix K

Table 6: Notice of Completion Distribution Summary

Date	Time	Location	Method of Distribution	Attendance
December 20, 2021	N/A	Facebook	Post on the Region of Durham's Facebook page - In response to population growth, an Environmental Screening Report has been submitted to the Ontario Ministry of the Environment, Conservation and Parks for the Durham York Energy Centre (#DYEC) to process an additional 20,000 tonnes of garbage, for an annual total of 160,000 tonnes of garbage. Review the report at durhamyorkwaste.ca until **February 18, 2022**. @York Region (The Regional	N/A

			Municipality of York) #DurhamWaste”	
December 20, 2021	N/A	Twitter	Tweet - In response to population growth, an Environmental Screening Report has been submitted for the #DYEC to process an additional 20,000 tonnes of garbage. Review the report at durhamyorkwaste.ca until **February 18, 2022**. @YorkRegionGovt #DurhamWaste	N/A
December 20, 2021	N/A	Website	PSA announcing Notice of Completion was posted to the website	N/A
December 20, 2021	N/A	Mail-out	Notice of Completion mailed out to Regional Distribution list (mail)	N/A
December 23 and 30 2021, January 5, 6	N/A	Local Newspapers	Notice of Completion placed in the local newspapers	N/A
January 19, 2022	N/A	Facebook	Review our Environmental Screening Report to increase capacity at the Durham York Energy Centre (#DYEC). It is available now until February 18 for public review. Access the report at durhamyorkwaste.ca. @York Region (The Regional Municipality of York) #DurhamWaste	N/A
January 19, 2022	N/A	Twitter	Review our Environmental Screening Report to increase capacity at the #DYEC. It is available now until February 18 for public review. Access the report at durhamyorkwaste.ca. @YorkRegionGovt	N/A

			#DurhamWaste	
February 3, 2022	N/A	Facebook	Review our Environmental Screening Report to increase capacity at the Durham York Energy Centre (#DYEC). It is available now until February 18 for public review. Access the report at durhamyorkwaste.ca. @York Region (The Regional Municipality of York) #DurhamWaste	N/A
February 3, 2022	N/A	Twitter	Review our Environmental Screening Report to increase capacity at the #DYEC. It is available now until February 18 for public review. Access the report at durhamyorkwaste.ca. @YorkRegionGovt #DurhamWaste	N/A
February 8, 2022	N/A	Facebook	Additional capacity is needed at the #DYEC to accommodate population growth. Review the Environmental Screening Report at durhamyorkwaste.ca until February 18 @York Region (The Regional Municipality of York) #DurhamWaste	N/A
February 8, 2022	N/A	Twitter	Additional capacity is needed at the #DYEC to accommodate population growth. Review the Environmental Screening Report at durhamyorkwaste.ca until February 18 @YorkRegionGovt #DurhamWaste	N/A
February 17, 2022	N/A	Facebook	Last chance to review the Environmental Screening Report to increase capacity at the Durham York Energy Centre (#DYEC). The report can be accessed at durhamyorkwaste.ca until tomorrow (February 18) @York Region (The Regional	N/A

			Municipality of York) #DurhamWaste	
February 17, 2022	N/A	Twitter	Last chance to review the Environmental Screening Report to increase capacity at the #DYEC. The report can be accessed at durhamyorkwaste.ca until tomorrow (February 18). Learn more: [Link to PSA]. @YorkRegionGovt #DurhamWaste	N/A

10. Next Steps

• Publish Notice of Completion - Commence 60 Day Review period on December 20, 2021. Closing on February 18, 2022

• Respond to any MECP Question or Comments

• Submit Statement of Completion to the MECP

• Prepare & Submit ECA Amendment Application to the MECP

11. Appendices

Appendix A – The Consultation Plan

Appendix B – Contact List

Appendix C – Notice to Consult 2019

Appendix D – Notice to Consult 2021

Appendix E – Indigenous Community Comments

Appendix F – Government and NGO Comments

Appendix G – General Public Comments

Appendix H – Survey Results

Appendix I – Notice of Commence and Correspondence

Appendix J – Public Information Centre Summary Reports

Appendix K – Notice of Completion.

Appendix A

PUBLIC CONSULTATION

DURHAM/YORK THROUGHPUT INCREASE FROM 140,000 TO 160,000 TONNES PER YEAR

2021

PUBLIC CONSULTATION ACTIVITIES FOR DURHAM/YORK THROUGHPUT INCREASE FROM 140,000 TO 160,000 TONNES PER YEAR

2021

CONSULTATION IN AN ENVIRONMENTAL ASSESSMENT

In the environmental assessment process, consultation is a two-way communication process that involves affected and interested persons in the planning, implementation and monitoring of an undertaking.

The purpose of consultation is:

- To provide information to the public;
- To identify persons and Aboriginal peoples and communities who may be affected by or have an interest in the undertaking;
- To ensure that government agencies and ministries are notified and consulted early in the environmental assessment process;
- To identify concerns that might arise from the undertaking;
- To create an opportunity to develop proponent commitments in response to local input;
- To focus on and address real public concerns rather than regulatory procedures and administration;
- To provide appropriate information to the ministry to enable a fair and balanced decision;
- To expedite decision-making.

Using a consultation process to consider the views of all interested persons into project decision-making is a key principle in environmental assessment.

HOW THE MINISTRY USES INFORMATION GATHERED FROM CONSULTATION

The ministry uses the information gathered from consultation processes carried out both by the proponent and the ministry itself, to evaluate and assess the proponent's application for approval under the *Environmental Assessment Act*. The proponent's documentation of its consultation process is a key evaluative component in determining the adequacy of the planning process followed by the proponent.

For more general information about Ontario's environmental assessment process please refer to

https://www.ontario.ca/page/consultation-ontarios-environmental-assessment-process

COMMUNICATION MESSAGES

The Durham York Energy Centre (DYEC) commenced commercial operations in 2016, since then Durham has exceeded its 110,000 tonne share of waste processing. Without increased diversion, waste generation will continue to exceed the permitted DYEC capacity, with increasing cost risks associated with long-term landfill capacity, availability and price.

As constructed, the DYEC can process up to 160,000 tonnes per year without any modifications to the infrastructure, processes and services.

The Environmental Certificate of Approval (ECA) currently caps the processing capacity at 140,000 tonnes per year. With approval of an environmental screening process and an ECA amendment to allow processing of 160,000 tonnes per year from the Ministry of Environment, Conservation and Parks (MECP), Durham and York would each gain additional waste disposal capacity and allow a more efficient operation.

AUDIENCE

1) Clarington residents
2) Durham residents
3) Environmental and interest groups
4) Aboriginal Communities
5) Local businesses
6) Media
7) Regional and municipal councillors
8) Regional and municipal staff
9) Joint Waste Management Group
10) York residents
11) York Regional and municipal councillors

COMMUNICATION/EDUCATION ACTIVITIES

1) Media Relations

- Media advisories will be issued prior to an event open to the public or media; inviting them to attend.
- News releases will be issued following all events or substantial developments and milestones reached in the process to keep the media, residents and other stakeholders informed.

2) Advertising

Educate target audiences on the need and purpose of the throughput increase; gain community interest in the increased capacity and the reasoning behind decisions reached; provide consistent, coordinated communications at the political, staff and community levels. Due to the facilities location, most of the advertisements will be focused on Durham residents with publications in local papers. Residents of York Region will be notified via social media posts and public service announcements as well as via the project website. This differs from the approach used during the original Environmental Assessment due primarily to the reduced study area (area local to the facility versus the original project which covered the entire regions. Prior to all events or substantial developments in the environmental screening process the following advertising venues may be used:

- Technical ads will be placed in the local newspapers (Durham papers)
- Advertisement on the local radio stations
- Social Media advertisements and boosted posts (Durham and York)

3) Coordination with Other Projects

The waste management team has several projects that will potentially be starting or following behind the streamlined EA process, including a possible expansion to 250,000 (Durham and York), the development of a mixed waste transfer facility with Anaerobic Digestion (Durham only) and the Long-Term Waste Management Study (LTWMS) (Durham Only). As a result, it is important to keep the public informed about the other projects so that they fully understand how this project fits into the overall waste management system and plans and provide a point of education about the facility and other projects. However, this also should help to serve directing people comments to the appropriate venue, i.e. LTWMS, Consultation for Terms of Reference etc. The goal is to keep the focus on this study, while allowing some

flexibility in communications to address other topics – this is especially true during Public Information Centre (PIC) events.

Potential strategies to accomplish this:

- One or two boards at each PIC about the other projects.

- Keeping website up to date, and clearly branded with the use of friendly urls to help identify and differentiate each project while incorporating cross referencing as appropriate to other project materials.

- Ensuring key staff are updated on all project statuses (and how/why they've broken them up this way).

4) **Public Education Activities and Community Outreach**

- Notification of commencement sent out to aboriginal communities and public interest groups. (Consultation point #1)
- Significant events and deadlines will be added to the calendars on the Regions' website and social media channels. A project specific hashtag can be created to help track online updates on the project.
- Durham.ca, york.ca and durhamyorkwaste.ca website will be updated to include information about the environmental screening process and an ECA administrative amendment for up to 160,000 tonnes per year. It is recommended the information be consistent on all websites and link back to one centralised project website hosted on durhamyorkwaste.ca. The use of one centralised project website hosted on durhamyorkwaste.ca, will allow for interested parties to subscribe for email notification whenever the page is updated.

- A PIC#1 will be held at Regional Headquarters (August 21) as part of screening step 5 to consult with the public regarding the problem statement, the ESR checklist, and the potential environmental effects, concerns, and issues to be addressed. (Consultation point #2)

- A survey will be posted on durham.ca and durhamyorkwaste.ca websites. The questionnaire will ask respondents about the DYEC, an assessment of general knowledge of the waste management system and provide additional opportunities to provide comments on the material presented in PIC#1. Facebook may also be used for quick and simple survey questions, to help gauge public opinion and understanding on issues. Survey possibility of pushing notification of the survey via the Region's Waste app, significant number of households use the app.

- Following the study efforts, PIC#2 (October 23) will be held at the Durham York Energy Centre. This will cover the evaluation of the studies identified during PIC#1 – as well as

mitigation measures. Information Display set up at a consultation event to increase public education and awareness. (Consultation Point #3)

- PIC#3 (December 12) will follow the preparation of the draft Environmental Screening Report. (Garnet B. Richard Recreation Centre, 2440 Durham Regional Highway 2, Bowmanville). The purpose of the PIC is to provide an opportunity to receive and discuss comments on the draft report prior to it being posted formally (i.e. posted at the Ministry level during the 60-day review period). This also provides some additional opportunity for MECP or other agency staff to review and comment on the reports – as no formal review by MECP staff occurs under the Screening Process. (Consultation Point #4)

- Following the review of the Draft Report and inclusion of comments – the Publishing of the Notice of Completion commences a 60-day review period. (Consultation Point #5)

- Information Packages containing a series of individual fact sheets about the Durham York Energy Centre will be created to provide more specific details about the facility, in some cases staff are finding residents have a lack of knowledge regarding the facilities existence and are receiving information from sources other than the Region. The information package could be available at the Region of Durham and the Municipality of Clarington's offices. In addition, it would be handed out to the public at the consultation events and posted on the website.

- Article reviewing process and project updates in Durham Works, an external newsletter and digital blog produced by the Durham Region Works Department. The print edition is distributed to all residents of Durham Region twice a year in the spring and fall, while the digital blog is updated monthly.

- Copies of all communications issued, as well as correspondence received as well as any responses will be documented and added to the Record of Consultation for the Project.

Timing for the placement of advertising and media relations activities will be determined by following the timeline set out for the schedule of environmental screening process.

Timeline	Tool	Tactic	
July 2019	Notice of Commencement	News Release	June 27
	Notice of Commencement	Social Media	June 27
	Notice of Commencement *-Metroland & Independents*	Newspaper Ad #1	July 3 & 4

Timeline	Tool	Tactic	
	Notice of Commencement *-Metroland & Independents*	Newspaper Ad #2	July 10 & 11
	Notice of Commencement on website with outline of consultation activity	Durhamyorkwaste.ca Durham.ca York.ca	July 4
	Letters sent out to Aboriginal communities and public interest groups	Mailed and e-mailed out	
August 2019	PIC #1 Consultation Event @ Durham Region HQ	Media Advisory Social Media Radio Newspaper Website	Aug 21
	Website Survey	Durhamyorkwaste.ca Durham.ca	
September 2019	PIC#2 Consultation Event @ DYEC	Newspaper Ad Radio Social Media Media Advisory	2x Newspaper ads
October 2019	PIC#2 Consultation Event @ DYEC 1835 Energy Drive, Clarington	Event	October 23
	Article in “Durham Works”	External Newsletter	
December 2019	PIC#3 Consultation Event @ Garnet B. Richard Recreation Centre, 2440 Durham Regional Highway 2, Bowmanville	Newspaper ad Media Advisory Social media Website	2x Newspaper ads - Thursday December 12, 2019
December 20, 2021	Publish Notice of Completion of Environmental	Newspaper Ad	2x Newspapers December 23, 30 & January 5, 6.

Timeline	Tool	Tactic	
	Screening -*Metroland and Independents*		
	Notice of Completion on website	Media Advisory	December 20, 2021
	Notice of Completion	Social Media	December 20, 2021, January 19, 2022, February 3, 8 & 17, 2022
	Notice of Completion sent to aboriginal and public interest groups	Mail-out	December 20, 2021
December 20, 2021 – February 18, 2022	60 Day Review Period	-	-
January 2022	30 Day Bump up request evaluation (if required)	-	-
February 2022	Statement of Completion submission to MECP if elevation request denied	-	-

MEASUREMENT AND EVALUATION

- Monitor the number of people who attend the Public Information events, request they fill out a survey/ comment form for more information on how the public learned of the event, what information they found useful and what they would like to see at future sessions etc.

- Monitor calls and emails to Durham York Energy Centre.

- Website survey to monitor and determine any marked changes in public opinion and trends.

- Listen to the questions being asked by the public to see if their knowledge of the Durham York Energy Centre is increasing.

- Monitor project website hosted (durhamyorkwaste.ca) and obtain analytics on site visits.

NOTE

- This is intended to be a living document for the duration of the Project, as proposed dates for events and venues are determined, moved etc. this document will be updated to reflect that.

- Additionally, the Regions are interested in making use of other opportunities to communicate with the public should they become available. It is anticipated that should staff attend other community events; they will be prepared and available to speak with residents about the project. These discussions will be documented and included as part of the Record of Consultation for the Project.

Appendix B

Indigenous Communities Contact list

Title	First Name	Surname	Occupation	Organization	Branch	City	Prov.
Chief	Karry	Sandy-McKenzie	Coordinator- Barrister and Solicitor	Williams Treaty First Nation		Barrie	ON
	Shardy	James	Community Consultation Worker, Communications	Chippewas of Rama First Nation		Rama	ON
Chief	Donna	Big Canoe	Chief, Chippewas of Georgina Island	Chippewas of Georgina Island	Virginia Beach Marina	Sutton West	ON
	Natasha	Charles	Project Coordinator	Chippewas of Georgina Island	Virginia Beach Marina	Sutton West	ON
Chief	Rodney	Noganosh	Chief, Chippewas of Mnjikaning	Chippewas of Mnjikaning (Rama)		Rama	ON
Chief	Kelly Fay	LaRocca	Chief, Mississaugas of Scugog Island	Mississaugas of Scugog Island		Port Perry	ON
Grand Council Chief	Glen Hare	Wedaseh Madahbee	Grand Council Chief, Anishinabek Nation/Union of Ontario Indians	Williams Treaty	Nipissing First Nation	North Bay	ON
Grand Chief	Gord	Peters	Grand Chief, Association of Iroquois and Allied Indians, AIA	Association of Iroquois and Allied Indians (AIAI)	Batchewana, Caldwell, Delaware, Hiawatha, New Credit, Oneida, Tyendinaga, Wahta	London	ON
Chief	Dean	Sayers	Chief	Batchewana First Nation		Sault Ste. Marie	ON
Chief	Joanne	Sandy	Chief, Beausoleil First Nation	Beausoleil First Nation	Cedar Point Post Office	Christian Island	ON
Chief	Mary	Duckworth	Chief	Caldwell First Nation		Leamington	ON
	Julia	Ierullo	Consultation Coordinator	Caldwell First Nation		Leamington	ON
	Brianna	Sands	Environmental & Consultation Coordinator	Caldwell First Nation		Leamington	ON

Chief	Emily	Whetung-MacInnes	Chief, Curve Lake First Nation	Curve Lake First Nation		Curve Lake	ON
Chief	Denise	Stonefish	Chief	Delaware First Nation (Moravian of the Thames)	refer to 121 Six nations of the grand river	Thamesville	ON
Chief	Kerri	King	Chief, Mississauga of the Credit First Nation	Mississauga of the Credit First Nation		Hagersville	ON
	Mark	Laforme	Director: Department of Consultation and Accommodation (DOCA)	Mississauga of the Credit First Nation		Hagersville	ON
	Fawn	Sault	Consultation Manager: Department of Consultation and Accommodation (DOCA)	Mississauga of the Credit First Nation		Hagersville	ON
Chief	Dave	Mowat	Chief, Mississaugas of Alderville First Nation	Mississaugas of Alderville First Nation		Roseneath	ON
	Dave	Simpson	Consultation Coordinator	Mississaugas of Alderville First Nation		Roseneath	ON
Chief	R. Donald	Maracle	Chief, Mohawks of the Bay of Quinte	Mohawks of the Bay of Quinte		Tyendinaga Mohawk Territory	ON
	Lisa	Maracle	Director of Community Services	Mohawks of the Bay of Quinte		Tyendinaga Mohawk Territory	ON
	Charlotte	Gurnsey	Consultation Coordinator	Mohawks of the Bay of Quinte		Tyendinaga Mohawk Territory	ON

Chief	Laurie	Carr	Chief, Ojibways of Hiawatha First Nation	Ojibways of Hiawatha First Nation		Hiawatha	ON
	Tom	Cowie	Lands Resource Consultation Liaison	Hiawatha First Nation		Hiawatha	ON
	Sean	Davison	Lands Resource Consultation Liaison	Hiawatha First Nation		Hiawatha	ON
Grand Chief	Remy	Vincent	Grand Chief, Nation Huronne-Wendat	Huronne-Wendat Nation		Wendake	QC
	Rene W.	Picard	Picard Family Chief/ Coordinator of Projects	Huronne-Wendat Nation		Wendake	QC
Chief	Adrian	Chrisjohn	Chief	Oneida Nation of the Thames		Southwold	ON
Chief	Mark	Hill	Chief, Six Nations of the Grand River	Six Nations of the Grand River		Ohsweken	ON
	Joanne	Thomas	Consultation Supervisor	Six Nations of the Grand River		Ohsweken	ON
Chief	Philip	Franks	Chief	Wahta Mohawks		Bala	ON
Mr.	Richard	Saunders	Chairman	Cree-Napaski Commission		Ottawa	ON
Chief	Kris	Nahrgang	Chief	Kawartha Nishnawbe First Nation		Big Cedar	ON
			Métis Consultation Unit	Métis Nation of Ontario Head Office		Ottawa	ON

Government Agencies Contact list

First Name	Last Name	Title	Representing	Address	Town	Prov	Postal Code	Phone	Email
Conservation Authorities									
Leslie	Rich	Policy and Planning Liaison	Convseration Ontario	120 Bayview Parkway	Newmarket	ON	L3Y 3W3	905-895-0716 ext 226	lrich@conversationontario.ca
Chris	Darling	Chief Administrative Officer	Central Lake Conservation Authority	100 Whiting Avenue	Oshawa	ON	L1H 3T3	905-579-0411 ext. 119	cdarling@cloca.com
Chris	Jones	Director, Planning & Regulation	Central Lake Conservation Authority	100 Whiting Avenue	Oshawa	ON	L1H 3T3	905-579-0412 ext. 116	cjones@cloca.com
Rose	Catulli	Diector, Corporate Services	Central Lake Conservation Authority	100 Whiting Avenue	Oshawa	ON	L1H 3T3	905-579-0413 ext. 148	rcatulli@cloca.com
Jamie	Davidson	Director, Watershet Planning & Natural Heritage	Central Lake Conservation Authority	100 Whiting Avenue	Oshawa	ON	L1H 3T3	905-579-0414 ext. 114	jdavidson@cloca.com
Perry	Sisson	Director, Engineering and Field Operations	Central Lake Conservation Authority	100 Whiting Avenue	Oshawa	ON	L1H 3T3	905-579-0415 ext. 118	psisson@cloca.com
Patricia	Lowe	Director, Community Engagement	Central Lake Conservation Authority	100 Whiting Avenue	Oshawa	ON	L1H 3T3	905-579-0416 ext. 126	plowe@cloca.com
Office of the Fire Marshal - Local Fire Office									
Mariano	Perini	Chief	Clarington Emergency and Fire Services	2430 Highway 2	Bowmanville	ON	L1C 3K7	905-623-5126	mperini@clarington.net
Ontario Power Generation									
Tammy	Wong	Senior Environmental Specialist, Corporate Services	Ontario Power Generation	700 University Ave.	Toronto	ON	M5G 1X6	416-592-4548	tammy.wong@opg.com
Rural Planners/Regional Offices									
Jocelyn	Beatty	Rural Planner	Central-East and Northwestern Land Use Policy & Stewardship Food Safety and Environmental Policy Branch, Ministry of Agriculture, Food and Rural Affairs	Elora Resource Centre, 6484 Wellington Road 7	Elora	ON	N0B 1S0	519-546-7612	jocelyn.beatty@ontario.ca
Ministry of Community Safety and Correctional Services									
Robert	Greene	Director	Ministry of the Solicitor	25 Grosvenor Street, 13th flr	Toronto	ON	M7A 1Y6	416-277-2370	robert.greene@ontario.ca

Ministry of Economic Development, Job Creation and Trade									
Shireen	Mohammed	Manager	Corporate Policy Unit, Strategic and Corporate Policy Branch, Ministry of Economic Development, Job Creation and Trade	56 Wellesley St. W, 11th Flr	Toronto	ON	M5S 2S3	437-770-1241	shireen.mohammed@ontarioi.ca
Michael	Helfinger	Senior Policy Advisor	Corporate Policy Unit, Strategic and Corporate Policy Branch, Ministry of Economic Development, Job Creation and Trade	56 Wellesley St. W, 11th Flr	Toronto	ON	M5S 2S3	416-434-4799	michael.helfinger@ontario.ca
Ministry of Education (Local French and English Public and Catholic Boards of Education)									
Paul	Bloye	Director Capital Program Branch, Capital and Business Support Division	Ministry of Education	315 Front Street W, 15th Flr	Toronto	ON	M7A 0B8	416-325-8589	paul.bloye@ontario.ca
Rachel	Matheson	Communications Manager	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-666-6313	
		Planning and Property Department	Durham Catholic School Board	650 Rossland Road West	Oshawa	ON	L1J 7C4	905-576-6150	planning@dcdsb.ca
		Planning Services	Kawartha Pine Ridge District School Board	1994 Fisher Drive	Peterborough	ON	K9J 6X6	705-742-9773 ext 2034	kpr_info@kprdsb.ca
Tracy	Barill	Director of Education	Durham Catholic District School Board	605 Rossland Road West	Oshawa	ON	L1J 7C4	905-576-6150 ext 22317	tracy.barill@dcdsb.ca
Norah	Marsh	Director of Education	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-668-7782	norah.marsh@ddsb.ca
Rita	Russo	Director of Education and Secretary of the Board	Kawartha Pine Ridge District School Board	1994 Fisher Drive	Peterborough	ON	K9J 6X6	705-742-9773	kpr_info@kprdsb.ca
Ministry of Energy, Northen Development and Mines									
Andrea	Pastori	Cabinet Liaison and Strategic Policy Branch Coordinator, Strategic Policy and Analytics Branch, Strategic, Network and Agency Policy Divison,	Ministry of Energy, Northern Development and Mines	77 Grencill Street, 6th Floor	Toronto	ON	M7A 1B3	416-327-7276	andrea.pastori@ontario.ca

Mary	Perry	Manager, Strategic Support Unit	Ministry of Energy, Northern Development and Mines	933 Ramsey Lake Road	Sudbury	ON	P3E 6B5	705-690-0026	mary.perry@ontario.ca
Clare	Pineau	Initiatives Coordinator, Strategic Support Unit	Ministry of Energy, Northern Development and Mines	933 Ramsey Lake Road	Sudbury	ON	P3E 6B5	705-561-6912	clare.pineau@ontario.ca
Jennifer	Paetz	Initiatives Coordinator, Strategic Support Unit	Ministry of Energy, Northern Development and Mines	934 Ramsey Lake Road	Sudbury	ON	P3E 6B6	705-670-5918	jennifer.paetz@ontario.ca
Ministry of Health and Long-Term Care (Public Health Units and Medical Officers of Health)									
Dr. Robert	Kyle	Commisioner and Medical Officer of Health	Regional Municipality of Durham	PO Box 730	Whitby	ON	L1N 0B2	905-668-7711	robert.kyle@durham.ca
Ministy of Municipal Affiars and Houseing - Ontario Growth Secretariat									
Jeff	Thompson	Manager(A), Growth Policy Growth Program Policy and Delivery Unit Ontario Growth Secretariat	Ministry of Municipal Affairs and Housing	777 Bay Street, 23rd Floor, Suite 2304	Toronto	ON	M5G 2E5	416-325-6282/ 416-325-1578	jeff.thompson@ontario.ca
Stewart	Chisholm	Manager, Growth Policy Ontario Growth Secretariat	Ministry of Municipal Affairs and Housing	777 Bay Street, 13th Floor	Toronto	ON	M5G 2E5	437-225-0331	stewart.chisholm@ontario.ca
Infrastructure Ontario									
Joanna	Brown	Environmental Specialist	Infrastructure Ontario	14 Gable Lane	Kingston	ON	K7M 9A7	343-302-7392	joanna.brown@infrastructureontario.ca
Ministry of Natural Resouces and Forestry									
Ruth	Lindenburger	Land Use Planning Supervisor	Ministy of Natural Resources and Forestry, Southern Region	300 Water Street, Boz 7000, 4th Floor, South Tower	Peterborough	ON	K9J 8MS	705-755-3215	ruth.lindenburger@ontario.ca
Kelly	Belshaw	Regional Planning Coordinator	Ministy of Natural Resources and Forestry, Southern Region	300 Water Street, Boz 7000, 4th Floor, South Tower	Peterborough	ON	K9J 8MS	705-772-9329	kelly.belshaw@ontario.ca
Maria	Jawaid	District Planner	Ministy of Natural Resources and Forestry, Aurora District	50 Bloomington Road	Aurora	ON	L4G 0L8	289-380-6817	maria.jawaid@ontario.ca
Ministry of Tourism, Culture and Sport - Culture Division									
Karla	Barboza	Team Lead	Heritage Planning Unit, Programs and Services Branch, Ministry of Tourism, Culture and Sport	401 Bay Street, Suite 1700	Toronto	ON	M7A 0A7	416-314-7120	karla.barboza@ontario.ca

Dan	Minkin	Heritage Planner	Heritage Planning Unit, Programs and Services Branch, Ministry of Tourism, Culture and Sport	401 Bay Street, Suite 1700	Toronto	ON	M7A 0A8	416-314-7147	dan.minkin@ontario.ca
Laura	Hatcher	Heritage Planner	Heritage Planning Unit, Programs and Services Branch, Ministry of Tourism, Culture and Sport	401 Bay Street, Suite 1700	Toronto	ON	M7A 0A8	437-239-3404	laura.e.hatcher@ontario.ca
Ministry of Transportation									
Dawn	Irish	Manager Environmental Policy Office	Transportation Planning Branch, Ministry of Transportation	Garden City Tower, 2nd Floor, 301 St. Paul Street	St. Catharines	ON	L2R 7R4	905-380-5196	dawn.irish@ontario.ca
Ramona	Afante								ramona.afante@ontario.ca
Jason	White	Manager, Engineering Office	Central Region, Ministry of Transportation	159 Sir William Hearst Ave., 5th Floor, Building D	Toronto	ON	M3M 0B7	416-235-5575	jason.white@ontario.ca
Impact Assessment Agency of Canada (Canadian Environmental Assessment Agency)									
Anjala	Puvananathan	Director, Ontario Regional Office	Canadian Environmental Assessment Agency	55 York Street, Suite 600	Toronto	ON	M5J 1R7	416-952-1576	anjala.puvananathan@canada.ca
Canadian Environmental Assessment Agency									
Michael	Vallins	Manager, Public Works	CN Rail	1 Administration Road	Concord	ON	L4K 1B10	905-669-3265	michael.vallins@cn.ca
Fisheries and Oceans Canada									
		Fisheries Protection Program	Fisheries and Oceans Canada	867 Lakeshore Road	Burlington	ON	L7S 1A1	1-855-852-8320	FisheriesProtection@dfo-mpo.gc.ca
Health Canada									
Aurelia	Thevenot	Regional Environmental Assessment Specialist	Regulatory Operations & Regions Branch, Health Canada	180 Queens Street West	Toronto	ON	M5V 3L7	416-954-0027	aurelia.thevenot@canada.ca
Kitty	Ma	Ontario Regional Manager	Regulatory Operations & Regions Branch, Health Canada	180 Queens Street West	Toronto	ON	M5V 3L7	416-954-2206	kitty.ma@canada.ca

Julie	Boudreau	Environmental Assessment Specialist	Regulatory Operations & Regions Branch, Health Canada	180 Queens Street West	Toronto	ON	M5V 3L7	416-973-1273	julie.boudreau3@canada.ca
Dae	Y.Lee	Environmental Assessment Specialist	Regulatory Operations & Regions Branch, Health Canada	180 Queens Street West	Toronto	ON	M5V 3L7	416-954-0027	daeyoung.Lee@canada.ca
Transport Canada									
Greater Toronto Airport Authority									aviation.ont@tc.gc.ca
Steven	Thomas	Manager Environmental Services	Greater Toronto Airport Authority	Lester B. Pearson International Airport, 311 Convair Drive, PO Box 6031	Mississauga	ON	L5P 1B2	416-776-7613	steven.thomas@gtaa.com
Region of Durham									
John	Henry	Regional Chair	Regional Municipality of Durham	The Regional Municipality of Durham Headquaters, 605 Rossland Road East	Whitby	ON	L1N 6A3	905-668-7711	chair@durham.ca
Ralph	Walton	Regional Clerk	Regional Municipality of Durham	The Regional Municipality of Durham Headquaters, 605 Rossland Road East	Whitby	ON	L1N 6A4	905-668-7712	ralph.walton@durham.ca
Don	Mitchell	Works Committee Chair	Regional Municipality of Durham	575 Rossland Road East	Whitby	ON	L1N 2MB	905-430-4300 x2203	mayor@whitby.ca

NGO Contact list									
First Name	Last Name	Title	Representing	Address	Town	Prov	Postal Code	Phone	Email
Ron	Albright	Assistant Director, Engineering Services	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6		ralbright@clarington.net
Faye	Langmaid	Acting Director, Planning Services	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6		flangmaid@clarington.net
Tony	Cannella	Director, Engineering and Building Services	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6	905-623-3379	tcannella@clarington.net
Fred	Horvath	Director, Operations	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6	905-263-2291	fhorvath@clarington.net
Carlos	Salazar	Manager of Community Planning and Design	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6	905-623-3379	csalazar@clarington.net
Elected Officials									
Adrian	Foster	Mayor	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6		mayor@clarington.net
Joe	Neal	Regional Councillor	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6		jneal@clarington.net
		Clerk's Department	Municipality of Clarington	40 temperance Street	Bowmanville	ON	L1C 3A6		clerks@clarington.net
School Boards and Emergency Services									
Rachel	Matheson	Communications Manager	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-666-6313	info@dcdsb.ca
		Planning and Property Department	Durham Catholic School Board	650 Rossland Road West	Oshawa	ON	L1J 7C4	905-576-6150	
		Planning Services	Kawartha Pine Ridge District School Board	1994 Fisher Drive	Peterborough	ON	K9J 6X6	705-742-9773, ext 2370	info@Kprdsb.ca
John	Rinella	Chair of the Board and Trustee, Town of Whitby	Durham Catholic District School Board	605 Rossland Road West	Oshawa	ON	L1J 7C4	289-404-6319	john.rinella@dcdsb.ca
Tricia	Chapman	Vice-Chair of the Board and Trustee, Town of Whitby	Durham Catholic District School Board	605 Rossland Road West	Oshawa	ON	L1J 7C4	905-441-9079	tricia.chapman@dcdsb.ca
Morgan	Ste. Marie	Trustee, City of Oshawa	Durham Catholic District School Board	605 Rossland Road West	Oshawa	ON	L1J 7C4	289-404-0896	Morgan.ste.marie@dcdsb.ca

Christine	Thatcher	Trustee, Town of Whitby	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-425-0343	
Scott	Templeton	Trustee, Town of Whitby	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-442-3566	
Michael	Barrett	Chairperson, Trustee City of Oshawa	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	647-409-5249	
Ashley	Noble	Trustee City of Oshawa	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-260-9217	
Niki	Lundquist	Chairperson, Education Finance,	Durham District School	400 Taunton	Whitby	ON	L1R 2K6	289-404-9383	
Darlene	Forbes	Vice Chairperson of the Standing Committee, Trustee	Durham District School Board	400 Taunton Road East	Whitby	ON	L1R 2K6	905-213-5426	
Emergency Service Providers									
Chuck	Nash	Inspector	Durham Regional Police Department, East Division	2046 Maple Grove Road	Bowmanville	ON	L1C 3K3		clarington@drps.ca
			Region of Durham Paramedic Services	4040 Anderson Street	Whitby	ON	L1R 3P6	905-665-6313	
Business Associations									
Sheila	Hall	Executive Director	Clarington Board of Trade & Economic Development	54 King Street East, Unit 102	Bowmanville	ON	L1C 1N3	905-623-3106	sheila@cbot.ca
Bonnie	Wrightman	Manager of Business Development	Clarington Board of Trade & Economic Development	54 King St. East, Unit 102	Bowmanville	ON	L1C 1N3	905-623-3106	info@cbot.ca
Valentine	Lovekin	President	Newcastle Business Improvement Association	5-20 King Avenue East, Box #10	Newcastle	ON	L1B 1H7		villageofnewcastle@gmail.com
		Clarington Tourism	Clarington Tourism	181 Liberty Street	Bowmanville	ON	L1C2P6	1-855-779-	tourism@clarington.net
Environmental and Special Interest Groups									
			Ontario Federation of Anglers and Hunters	4601 Guthrie Drive, PO Box 2800	Peterborough	ON	K9J 8L5	705-748-6324	ofah@ofah.org
			Ducks Unlimited	PO Box 1160	Stonewall	MAN	R0C 2Z0	1-800-655-3825	
Greg	Bales	Assistant Stewardship Coordinator	Durham Land Stewardship Council c/o MNRF Aurora District	50 Blooming Road West	Aurora	ON	L4G 3G8	905-713-7375	

Lynne	Freeman	President	Ontario Field Ornithologists	PO Box 116 Station F	Toronto	ON	M4Y 2L4		president@ofo.ca
Sarah	Allin	Planner II, Planning Services	Clarington Heritage Committee	40 Temperance Street	Bowmanville	ON	L1C 3A6	905-623-3379 ext. 2419	sallin@clarington.net
Brian	Buckles	Chair	Durham Conservation Association	5335 Sideline 12	Claremont	ON	L1Y 1A1		
Karen	Arbour	Outreach & Planning Associate	Friends of the Second Marsh	206 King Street East P.O Box 26066	Oshawa	ON	L1H 8R4	905-723-5047	karbour@secondmarsh.ca
Cara	Gregory	President	North Durham Nature	18 Second Ave.	Uxbridge	ON	L9P 1J9		northdurhamnature@gmail.com
Terry	Green	Chair and President	Durham Sustain Ability	126 Water Street, Unit 3	Port Perry	ON	L9L 1B9	905-985-3279	info@sustain-ability.ca
Lois	Gillette	President	Durham Region Field Naturalists	Box 54031, 8 King St. E.	Oshawa	ON	L1H 1A9	905-725-0982	DRFN1955@hotmail.com
		CAO's Office - Durham Region	Durham Sustainability (Climate Change)	605 Rossland Road East	Whitby	ON	L1N 6A3		
Lyle	Clarke	President	Ontario Nature	214 King Street West, Suite 612	Toronto	ON	M5H 3S6	416-444-8419	info@ontarionature.org
Elizabeth	Calvin	President	Green Durham Association	5335 Sideline 12	Claremont	ON	L1Y 1A1		info@greendurham.ca
Manuel	DeSousa	President	Durham Region Home Builders Association	206 King Street East	Oshawa	ON	L1H 1C0	905-579-8080	info@drhba.com
Melissa	Claxton-Oldfield	President	Oshawa Cycling Club	PO Box 671	Whitby	ON	L1N 5V3	905-404-3715	occ@oshawacyclingclub.org
Allan	Thompson	Chair	Rural Ontario Municipal Association	200 University Ave., Suite 801	Toronto	ON	M5H 3C6	416-971-9856	roma@roma.on.ca
Ronald	Holdman	Chair	Urban Development Institute of Ontario - Durham	2025 Sheppard Avenue East, Suite 2208	Toronto	ON	M2J 1V6		
			Durham Agricultural Advisory	605 Rossland Road East	Whitby	ON	L1N 6A3		daac@durham.ca
			Durham Environmental Advisory Committee	605 Rossland Road East	Whitby	ON	L1N 6A3		deac@durham.ca

			Durham Region Federation of Agriculture	4441 Malcom Road, R.R.#1	Nestleton	ON	L0B 1L0	905986-0657	
Wendy	Giroux	Chief Executive Officer	Durham Region Association of Realtors	50 Richmond St. E., Unit 14	Oshawa	ON	L1G 7C7	905-723-8184	Eo@durhamRealEstate.org
			Building Industry and Land Development (BILD GTA)	20 Upjohn Road, Suite 100	North York	ON	M3B 2V9	416-391-3445	info@bildgta.ca
Libby	Racansky		Friends of the Farewell	3200 Hancock Road	Courtice	ON	L1E 2M1		libbyrac@gmail.com
Utilities									
Jamie	Rochford	Planning & Design Lead, Central Region East Distribution Planning and Records	Enbridge Gas Distribution Inc.	101 Honda Blvd.	Markham	ON	L6C 0M6	905-927-3150	Jamie.Rochford@enbridge.com

Residential Contact List

First Name	Last Name	Occupation	City	Province
Debbie	Meloche	Resident	Whitby	ON
Brandon	Underwood	Resident	Courtice	ON
Ed	Oegema	Resident	Bowmanville	ON
Kathleen	Ffolliot	Resident	Whitby	ON
Janet	McNeill	Resident	Toronto	ON
Gail	Fervana	Resident	Whitby	ON
Pam	Callus	Resident	Courtice	ON
Jim	Osborne	Resident	Courtice	ON
Janis	Jones	Resident	Courtice	ON
Wendy	Bracken	Resident	Newcastle	ON
Linda	Gasser	Resident	Whitby	ON
Murray	Lapp	Resident	Whitby	ON
Manuel	Jimenez	Resident	Bowmanville	ON
Michelle	Viney	Resident	Uxbridge	ON
Sally	Thurlow	Resident	Whitby	ON
Vivki	Mink	Resident	Port Hope	ON
Tracey	Ali	Resident	Bowmanville	ON
Glenda	Gies	Resident	Bowmanville	ON
Libby	Racansky	Resident	Courtice	ON
Sean	Follwell	Resident	Whitby	ON
John and Kerry	Meydam	Resident	Courtice	ON
Willie	Ehmke	Resident	Oshawa	ON
Harvey	Broersma	Resident	Bowmanville	ON

Appendix C

If you require this information in an accessible format, please contact The Regional Municipality of Durham at 1-800-372-1102 ext. 3560.

November 18, 2019

To Whom It May Concern:

RE: Durham York Energy from Waste Project Capacity Amendment
Notice of Request to Consult

The Regional Municipalities of Durham and York (Regions), the owners of the Durham York Energy Centre (DYEC), have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC to increase the approved capacity from 140,000 to 160,000 tonnes per year.

The original Environmental Assessment (EA) and Environmental Compliance Approval (ECA) for the DYEC limits waste processing capacity to 140,000 tonnes per year. The capacity amendment will not require any new infrastructure construction or upgrades but would allow the optimization of operations at the current facility. The DYEC currently operates at a reduced processing capacity for periods of the year because of the annual waste processing limit of 140,000 tonnes. The added 20,000 tonnes of allowable annual throughput will make operations more efficient and allow the equipment to operate at full capactiy through the course of the year.

The Environmental Screening Process was initiated on July 3, 2019 with the Notice of Commencement to the Ministry of Environment, Conservation and Parks (MECP), and a letter was sent July 19, 2019 informing you of the process. The first Public Information Centre (PIC) was held on August 21, 2019. The MECP screening criteria have been applied to the project to identify if the project has any potential environmental impacts. The Regions are currently undertaking consultation and preparing a Screening Report for public review and submission to the MECP.

One final Public Information Centre (PIC) for this project is scheduled for this fall. The Regions invite you to attend to gain a better understanding of the project. Details are below:

- PIC #3 – Thursday, December 12, 2019 at Garnet B. Rickard Recreation Complex; 2440 Highway 2, Bowmanville, ON, starting at 5 pm to 8 pm

If you prefer, Region staff are available to meet with you at the DYEC prior to the session or a separate meeting at an alternate time can be arranged. Please contact the Region to make arrangements via the contact listed below.

The information provided below is intended to clarify the details and timing of the proposed capacity increase in keeping with Request for Consultation requirements for several Indigenous communities.

Given the minimal environmental impacts associated with the existing facility, and that the capacity increase requires no new construction or changes to the existing building, the Regions of Durham and York believe the project has a low potential for impact to Indigenous communities.

Enclosures

The nature and scope of the proposed activity

This Environmental Screening Assessment is being conducted to increase the waste processing capacity of the DYEC from the currently approved 140,000 tonnes per year to 160,000 tonnes per year. No construction or excavation work is being conducted as part of this project and no new equipment will be installed. The waste processing capacity increase is an efficiency enhancement for the facility. A more detailed Project Description, including discussion about the opportunities for the Regions is attached (**Attachment 1**).

The timing of the proposed activity

Since there is no construction associated with this project, only an Environmental Compliance Approval amendment is required after the Screening Assessment is complete. The Screening Report is anticipated to be submitted for the required review period in late 2019 followed by an application for an ECA amendment. It is anticipated that the additional 20,000 tonnes per year of waste could be processed starting as early as 2020, after approval of the ECA amendment.

The location of the proposed activity

The DYEC is located in Courtice, between Oshawa and Bowmanville, at 1835 Energy Drive in the Municipality of Clarington. It is in an area identified as the Clarington Energy Business Park. The DYEC is north of the Region of Durham Courtice Water Pollution Control Plant and west of the Darlington Energy Complex. The attached Notice of Commencement (provided previously) includes a map of the area and the location of the DYEC (**Attachment 2**).

How the proposed activity may affect Indigenous Communities and their Traditional Territory

We understand some initial concerns exist primarily about the protection of drinking water, the natural environment and cultural heritage.

Several studies were completed as part of the Environmental Assessment for the facility development. In most cases, these studies also considered the potential for a larger facility – capable of processing up to 400,000 tonnes per year of waste. These previous reports are available on the project website at durhamyorkwaste.ca. During the initial construction, appropriate mitigation measures were put in place for potential impacts both during construction and during ongoing operations to protect the surrounding environment.

The facility is co-owned by the Regions of Durham and York. Based on the results of two separate Stage 2 archaeological assessments conducted in 2009 during the original development of the facility, the likelihood of significant, intact archaeological resources on the site was considered low. No archaeological evidence or items of historical significance were found on the site during construction.

Since construction is not required as part of this capacity increase, further archaeological assessments are not planned.

A profile of the proponent(s)

The DYEC site is located at 1835 Energy Drive in the Municipality of Clarington, Ontario, Canada and has been in commercial operation since 2016. The DYEC is a waste management facility that produces energy from the combustion of residential garbage that remains after maximizing waste diversion programs in Durham and York Regions. The DYEC is owned by Durham and York Regions.

The DYEC generates enough electricity from the combustion of garbage to power approximately 10,000 homes a year. It also captures residual metals for recycling and reduces the volume of waste going to landfill up to 90 per cent.

The DYEC is currently permitted to process 140,000 tonnes of residential garbage (non-hazardous) per year that remains after all waste diversion efforts have been utilized (reducing, reusing, recycling and composting) in both Durham and York Regions. Durham Region's portion of DYEC processing capacity is 110,000 tonnes (approx. 80 per cent) and York Region's is 30,000 tonnes (approx. 20 per cent).

In 2018, the DYEC processed 140,000 tonnes of garbage, while recovering approximately 3,848 tonnes of metal and generating 85,412 MWh of electricity to the provincial grid.

By using state-of-the-art pollution control equipment and proven, reliable energy from waste technology, the DYEC meets stringent environmental standards and reduces greenhouse gas emissions compared to the landfilling option.

As part of the facility's Environmental Compliance Approval (ECA), independent stack tests to monitor all emissions from the stack occur annually in September. A second voluntary test is completed in May or June. The results from the most recent testing periods demonstrate that the facility is operating well within the DYEC's ECA requirements.

A description of the proposed consultation process, including intended activities, timelines, expectations, and limitations, if any;

For any projects undergoing the MECP's Addendum process, an environmental screening must be completed. The screening is a proponent-driven, self-assessment process that will assist in identifying any potential environmental effects because of the proposed processing capacity change. Some key steps are listed below:

- Prepare and Publish Notice of Commencement – June 2019
- Identify opportunity and develop project description – June 2019
- Complete Environmental Screening Checklist - July 2019
- Submit Project Information Form to proper MECP office - July 2019
- Describe potential environmental effects and issues to be addressed – August 2019
- Consult with interested persons – PIC August 21, 2019
- Assess potential environmental effects - June 2019 – November 2019
- Develop impact management measures - June 2019 – November 2019
- Consult with interested persons – October 23, 2019
- Prepare Environmental Screening Report - June 2019 – November 2019
- Consult with interested persons – December 12, 2019
- Publish Notice of Completion - January 2020
- Complete Statement of Completion Form and submit to MECP – February 2020

MECP approval of the environmental screening process and an ECA amendment for up to 160,000 tonnes per year, would allow Durham and York Regions to each gain additional waste disposal capacity and allow for a more efficient operation.

The documents, including applications, studies, assessments, policies, available to be reviewed which are pertinent to the proposed activity

The Environmental Screening Process requires the completion of a Screening Checklist to indicate potential negative effects of the proposed project. The completed draft checklist for the DYEC Capacity Increase is attached (**Attachment 3**). The screening checklist identified that there may be potential impacts to air due to the capacity increase. To determine the level of impact, an Emissions Summary and Dispersion Modelling (ESDM) report update was undertaken in advance of the Project. The ESDM for the capacity amendment builds on the existing air quality modelling which was completed for the original ESDM report prepared by Golder Associates in 2011. The ESDM is updated annually as part of the source testing program to predict the point of impingement (POI) concentrations (area of highest concentration) of the emissions from the DYEC and has shown that the DYEC is well within environmental compliance standards and limits. A copy of the report is included as **Attachment 4**.

The emission rates for the 160,000 tonne per year scenario were calculated using the same emission factors as the current 140,000 tonne per year scenario but the emission rate was adjusted based on recent source test data. The results of the modelling indicate that the change in predicted air emission concentrations is minor. At the 160,000 tonne per year scenario, approximately 85 per cent of the modelled concentrations show lower levels at the maximum points of impingement (POI) than from the 140,000 tonne per year scenario.

In addition to the stack emissions modelling, cumulative concentrations were also calculated by adding background ambient air quality monitoring data to the POI concentrations. The maximum potential change, which assumes the worst meteorological conditions and the facility operating at the ECA emission limit, would result in a 2 per cent increase in the POI for SO_2 and NO_x when background concentrations are also included. All other contaminants show a decrease or zero percentage change in the POI with the background levels included. Therefore, overall the capacity increase to 160,000 tonnes per year will not have a significant impact on ambient air quality. The predicted concentrations of each scenario were compared to the relevant air quality standards listed in Ontario Regulation (O.Reg.) 419/05 (MECP limits). In each scenario, predicted POI concentrations of all contaminants were significantly lower than the corresponding MECP limits.

A full Environmental Assessment was completed in 2009 prior to start of construction of the DYEC. The 2009 Environmental Assessment report and associated technical studies can be viewed on the DYEC website at the following location: durhamyorkwaste.ca/Archive/ea. This Environmental Assessment included numerous technical studies including a Surface Water and Groundwater Assessment (Appendix C-2), Natural Environment Assessment (Appendix C-7), Social/Heritage Assessment (Appendix C-8) and a Stage 2 Archaeological Assessment (Appendix C-9).

The Surface Water and Groundwater Assessment determined the site is in the Tooley Creek watershed. The building and site were designed to capture stormwater runoff in an on-site retention pond for quality control prior to discharge to Tooley Creek. No significant negative environmental effects are likely to occur. The Archaeological Assessment Technical Study Report was provided to the Ministry of Tourism, Culture and Sport and no archaeological sites were documented. The letter received from the Ministry of Tourism, Culture and Sport is attached for your reference (**Attachment 5**).

The 2009 Natural Environment Assessment determined there were no significant forested areas or permanent watercourses on the site. Prior to development, the DYEC site consisted of a combination of cultivated and fallow fields and surrounding hedgerows. No significant habitat was present for native plant species, mammalian species, avian, amphibian or reptile species. The animal and plant species that were present prior to construction are considered widespread and common throughout Ontario and are documented in the 2009 report. The closest natural area to the DYEC site is the Tooley Creek Coastal Wetland located 0.87 kilometres away. The Natural Environment Assessment established mitigation measures to ensure that facility construction and operations did not have unacceptable adverse impacts on wildlife. A wildlife corridor was established along the southern property line of the site to maintain and enhance wildlife movement. Under the direction of the Ministry of Natural Resource, the Regions completed a Development Plan for the Eastern Meadowlark. Grassland habitat was established in the restoration area to ensure adequate breeding ground

was maintained. These mitigation measures remain in effect and will not be impacted by the proposed increase in waste tonnage to 160,000 tonnes per year. The Natural Environment Assessment did not identify any significant net effects from the development of the DYEC site.

As part of the environmental screening process, the Region's are investigating the potential environmental effects associated with the increase in capacity to 160,000 tonnes per year in detail. A more detailed discussion of the various environments (natural and built) and the potential effects of the project is included as an attachment (**Attachment 6**). As part of the continuing assessment, staff are reviewing the reports prepared in support of the original construction to confirm that the study environments, assumptions, and findings remain applicable to the capacity increase. Should changes be identified, the Regions will assess if additional studies are necessary to determine the potential effects, and if additional mitigation measures are required.

Notification of the proposed capacity increase was sent to various provincial and federal agencies for review and comment including Central Lake Ontario Conservation Authority, Fisheries and Oceans Canada and Ministry of Environment Conservation and Parks. Formal comments or review documentation from contacted agencies will be included in the Environmental Screening Report which will be posted for public review.

The collateral or related processes or approvals currently underway that affect the activity

As the Region continues to grow, additional waste disposal capacity will likely be required in the future. Regional Council has directed waste management staff to begin drafting a Terms of Reference for an Environmental Assessment to potentially expand the DYEC to process up to 250,000 tonnes of waste per year. We currently estimate that the expansion of the DYEC to 250,000 tonnes of waste per year will not be needed until after 2030.

Consultations for the Terms of Reference are expected to commence in late 2019 as a separate process from the Environmental Screening Assessment and its consultations. Additional information on the Terms of Reference consultation will be provided with the notification of the commencement of that process. The Regions anticipate a higher level of interest in a potential expansion to 250,000 tonnes of waste per year and will be preparing a detailed consultation plan for the Terms of Reference and Environmental Assessment.

Documentation of any deadlines or filing dates relating to the activity or the process

The Environmental Screening Assessment is a proponent driven process and does not have any regulated deadlines or filing dates. The proposed timeline of activity is outlined above.

As the Regions are continuing to assess the potential environmental effects, we would request that specific concerns be identified in a timely manner, so that they can be considered during the assessment. We would request that if any concerns are identified they be communicated by December 20, 2019. However, should they be received at a later date, they will still be addressed to the extent possible.

Once the more detailed assessments are complete, a copy of the draft Screening Report will also be provided for comment prior to publishing the Notice of Completion and accompanying formal report review period. You will also be notified during the ECA Amendment process.

Pertinent names, addresses, and telephone numbers for contacting the relevant decision makers

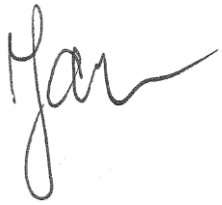
Should you have any questions or concerns, please contact the staff member listed below from the Regional Municipality of Durham, Works Department:

Andrew Evans, MASc, P.Eng
Project Manager, Waste Planning & Technical Services
Durham York Energy Centre
1835 Energy Drive

Courtice, ON L1E 2R2
905-404-0888 ext. 4130
info@durhamyorkwaste.ca

We welcome the opportunity to have further discussion about the project, any specific questions or concerns you may have and the most appropriate way to continue to consult with your community. The final consultation is planned for December 12, 2019 to provide the public the opportunity to comment on the draft Environmental Screening Report. The Regions also offer tours of the facility should they be requested.

Sincerely,



Mirka Januszkiewicz, P.Eng.
Director, Waste Management Services

The Regional Municipality of Durham
905-668-7711 extension 3464
Mirka.Januszkiewicz@durham.ca

Laura McDowell, P.Eng.
Director, Environmental Promotion and Protection
The Regional Municipality of York
905-830-4444 extension 75077
Laura.McDowell@york.ca

c. E. O'Leary, Environment and Resource Planner & EA Coordinator, Air, Pesticides and Environmental Planning, MECP

List of Attachments:

Attachment 1: Draft Project Description
Attachment 2: Notice of Commencement
Attachment 3: Draft Environmental Screening Checklist
Attachment 4: Golder Technical Memorandum – Air Quality Impact of 160,00 TPA Waste at Durham York Energy Centre
Attachment 5: Ministry of Tourism, Culture and Sport letter
Attachment 6: Draft Potential Effects Assessment

Project Description

The Regional Municipality of Durham and the Regional Municipality of York (the Regions) are proposing to increase the permitted annual waste throughput rate of the Durham York Energy Centre (DYEC) by 20,000 tonnes per year, from 140,000 tonnes to 160,000 tonnes per year. This additional capacity is needed to accommodate population growth within the two Regions while continuing to maintain and increase diversion rates. The proposed processing rate increase will also allow the DYEC to operate more efficiently and produce more energy with no modifications to existing infrastructure. If approved, the additional capacity will reduce reliance on alternate waste disposal facilities outside the Regions' borders.

Co-owned by the Regions, the DYEC is a waste management facility that produces energy from the combustion of post-diversion residential garbage. Durham Region's portion of DYEC processing capacity is 110,000 tonnes and represents the primary method of post-diversion waste disposal, while York Region's portion is 30,000 tonnes and represents one of multiple disposal facilities used by York Region.

The DYEC is subject to regulatory approvals under the *Environmental Assessment Act* (the EA Notice of Approval) and the *Environmental Protection Act* (the Environmental Compliance Approval, or ECA). The EA notice of Approval was issued in November 2010 followed by the ECA in June 2011. Facility design and construction commenced after the ECA was received, and the facility achieved commercial operation in January 2016.

The DYEC is designed to accept materials with a Higher Heating Value (HHV) of 11.0 MJ/kg to 15.0 MJ/kg and produce a Gross Electrical Output between 712 and 1030 kWh/tonne.The DYEC is capable of processing 160,000 tonnes of waste per year with its existing equipment and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions.

Problem and Opportunity Statement

The ECA and EA Notice of Approval both limit the annual tonnes processed at the DYEC to 140,000 tonnes per year. As a result of these approval limits on DYEC processing capacity, the Regions were required to by-pass waste to other disposal facilities in 2017 and 2018 that could have otherwise been processed at the DYEC (Table 1). With growth continuing in Durham and York Regions, additional disposal capacity is needed to meet current system demands and to account for long term growth

Table 1: Durham By-pass Waste Tonnes

Year	Tonnes By-passed to Other EFW Facilities	Tonnes By-passed to Landfill	Tonnes By-passed to Waste Composition Study	Total Tonnes By-passed
2017	10,170	3,487	0	13,657
2018	370	6,280	3,657	10,307

If the annual approval limit of 140,000 tonnes were to be increased, some of this additional demand could potentially be satisfied using the existing equipment at the DYEC. The maximum annual waste tonnage that an energy-from-waste facility can process when operating at full design load varies from year to year and is influenced by several factors. This maximum annual tonnage can be calculated using the following equation:

$$T_{max} = \frac{365 \times Q \times A}{HHV}$$

Where:

T_{max} = The maximum waste tonnage that can be processed in one year if the boilers operate at 100% design load whenever they are operating.

Q = The design rate of fuel energy input. For the DYEC, this value is equal to 5,668,000 megajoules per day (MJ/d) with both boilers operating at full design load.

HHV = The average Higher Heating Value of the fuel. This parameter measures the average energy content per unit of fuel mass and varies over time based on waste composition. The DYEC is designed to accept fuel with HHV ranging from 11 to 15 megajoules per kilogram (MJ/kg) which is equivalent to 11,000 to 15,000 megajoules per tonne (MJ/T).

A = The number of hours that the boilers are available to process waste expressed as a percentage of total hours in a year, referred to “boiler availability”

For example, in a year in which the DYEC achieves boiler availability of 94% using fuel with an average HHV of 12,000 MJ/tonne, the maximum number of tonnes that could be processed with the boilers operating at full design load would be:

$$\frac{(365\ days/year) \times (5{,}668{,}000\ MJ/day) \times 94\%}{(12{,}000\ MJ/tonne)} = 162{,}058\ tonnes/year$$

However, if the HHV increases to 14,000 MJ/tonne while boiler availability is reduced to 90%, the maximum number of tonnes that could be processed in one year would be:

$$\frac{(365\ days/year) \times (5{,}668{,}000\ MJ/day) \times 90\%}{(14{,}000\ MJ/tonne)} = 132{,}996\ tonnes/year$$

During the original Environmental Assessment, the DYEC's nominal annual processing capacity was set at 140,000 tonnes per year based on expected normal HHV values and conservative boiler availability estimates to allow for planned and unplanned facility maintenance. However, as illustrated by the examples above, it is possible for the facility to process more than 140,000 tonnes per year in years of higher boiler availability or lower average HHV. The proposed amendment to the maximum annual processing limit would provide the Regions with the flexibility to use this additional processing capacity when available. This in turn would reduce the quantity of waste requiring alternate disposal at facilities outside the Regions' borders.

The proposed processing limit amendment provides an opportunity to achieve significant environmental and social benefits using existing infrastructure, such as:

- Reduced reliance on landfill disposal capacity outside the Regions' borders
- Reduced highway traffic and emissions associated with long-haul transportation to remote disposal sites.
- Reduced methane emissions from landfill disposal.
- Increased energy recovery and displacement of fossil fuel electricity generation
- Reduced cost to Regional taxpayers

Through the EA screening process, the Regions will review studies, and where necessary, update modelling completed during the original EA to demonstrate that these benefits can be realized with no unacceptable environmental impacts. Several of the studies undertaken during the original process included consideration of impacts of a larger facility, with a processing capacity of up to 400,000 tonnes per year, which remain a conservative estimate for the facility operating under the increase throughput capacity.

Other Long Term Solutions

As part of its longer term efforts to manage its waste stream, Durham Region intends to construct an anaerobic digestion facility with a mixed waste transfer and presort component. The proposed facility operation is to remove a portion of the organic fraction of the wastes which are not currently being captured by the Regional Green Bin program for processing in an anaerobic digestor. Additionally, the Region intends to recover portions of the stream as recyclables, as well as remove identified inert

materials from the waste. This is intended to reduce the amount of waste that must be sent for disposal at the DYEC from the Region.

Removing additional materials from the waste stream upstream of the DYEC will delay the need for further DYEC expansion. Funding for development of the Mixed Waste Transfer/Pre-sort with Anaerobic Digestion project was approved by Durham Regional Council in June 2019, and the Region is now undertaking a siting assessment. The Region intends to have the facility in service within 3-5 years, subject to approval, procurement and construction.

Once needed, the Regions would undertake an EA and seek approval for a future expansion of the DYEC to an annual throughput of 250,000 tonnes. Assuming both the 160,000 tonnes per year throughput increase as well as the anaerobic digestion with mixed waste presort projects are successful, Durham Region is projected to exceed its permitted tonnage to the DYEC after 2032. Durham Region Council also approved staff to proceed with the drafting of a Terms of Reference for an EA for the DYEC expansion to 250,000 tonnes per year.

Durham York Energy Centre Throughput Increase

(From 140,000 to 160,000 tonnes per year)

Notice of Commencement

Works Department | **July 3, 2019** | **Public Notice**

The Regional Municipalities of Durham and York, the owners of the Durham York Energy Centre (DYEC), have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC.

The DYEC site is located at 1835 Energy Drive in the Municipality of Clarington, Ontario, Canada and has been in commercial operation since 2016. The DYEC is a waste management facility that produces energy from the combustion of residential garbage that remains after maximizing waste diversion programs in Durham and York Regions.

The Proposed Undertaking: The Environmental Compliance Approval for the DYEC currently allows the facility to process up to a maximum of 140,000 tonnes per year of waste for disposal at the site. The Regions are proposing to increase this amount by 20,000 tonnes per year for a total of 160,000 tonnes. The facility is capable of processing 160,000 tonnes per year with its current equipment and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions. If approved, the expanded tonnage will allow for greater usage of the existing facility, reducing the reliance on alternate waste disposal facilities outside the Regions' borders.

Figure 1 – EA Study Area

The Process: The proposed project is subject to the Ministry of Environment, Conservation and Park's Environmental Screening Process for Waste Management Projects in accordance with Ontario Regulation 101/07 under the Environmental Assessment Act. The results will be documented in an Environmental Screening Report, which will be released for public and agency review.

During the June 26, 2019 Durham Regional Council Meeting, Council provided the approval to conduct the Environmental Assessment Terms of Reference for a separate and possible future expansion to 250,000 tonnes per year at the DYEC. As well, Council approved plans to construct an anaerobic digestion facility with mixed waste processing. These are separate projects and will be conducted under individual approvals processes.

Consultation: There will be public consultations this summer and fall regarding the study and information will be released as the study progresses. For more information about this project visit durhamyorkwaste.ca or sign up for email updates under the What's New section on the home page.

Should you have any questions or concerns, please contact the project manager listed below:

Andrew Evans, M.A.Sc, P.Eng
Project Manager
Durham York Energy Centre
905-404-0888 ext. 4130
mailto:info@durhamyorkwaste.ca

If you require this information in an accessible format, please contact 1-800-372-1102 ext. 3560.

http://www.facebook.com/RegionOfDurham http://www.twitter.com/RegionOfDurham

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The Regional Municipality of Durham Works Department
605 Rossland Road East, Whitby, Ontario L1N 6A3
Telephone: 905-668-7711 or 1-800-372-1102
durham.ca

Criterion		Yes	No	Additional Information
1.0 Surface Water and Groundwater				
1.1	Cause negative effects on surface water quality, quantities or flow?		X	No change to surface water from existing conditions are anticipated because of the proposed increase in capacity to 160,000 tonnes.
1.2	Cause negative effects on groundwater quality, quantity or movement?		X	No change to groundwater conditions are anticipated because of the project.
1.3	Cause significant sedimentation or soil erosion or shoreline or riverbank erosion on or offsite?		X	No sedimentation, soil erosion or shoreline or riverbank erosion are anticipated because of the project.
1.4	Cause negative effects of surface or groundwater from accidental spills or releases to the environment?		X	No increased risk of spills or accidental releases to surface or groundwater are anticipated because of this project. Total haulage distance of wastes is reduced in comparison to disposal during bypass conditions.
2.0 Land				
2.1	Cause negative effects on residential, commercial, institutional or other sensitive land uses within 500 metres from the site boundary?		X	No negative effects are anticipated because of the change in permitted processing capacity.
2.2	Not be consistent with the Provincial Policy Statement, provincial land use or resource management plans?		X	The DYEC is in a designated employment area and the land use continues to be consistent with the Provincial Policy Statement as revised in 2014. The MECP's "Reducing Litter and Waste in Our Communities: Discussion Paper" identifies thermal treatment in the form of energy from waste as a potential opportunity to recover the value of resources in waste.
2.3	Be inconsistent with municipal land use policies, plans and zoning bylaws (including municipal setbacks)?		X	No changes to land use are proposed as part of the throughout increase.
2.4	Use lands not zoned as industrial, heavy industrial or waste disposal?		X	The Social/Culture Assessment Technical Study completed in 2009 confirmed the lands are zoned employment/light industrial areas which is compatible with the DYEC activity.
2.5	Use hazard lands or unstable lands subject to erosion?		X	No changes to land use are proposed as part of the throughout increase.
2.6	Cause negative effects related to the remediation of contaminated land?		X	Not applicable

3.0 Air and noise				
3.1	Cause negative effects on air quality due to emissions (for parameter such as temperature, thermal treatment exhaust flue gas volume, NO2, SO2, O2, opacity, HCl, TSP, or other contaminants)?	X		The potential for environmental effects on air quality exists because of stack emissions. The profile and dispersion characteristics of the stack may change because of the increase in facility throughput.
3.2	Cause negative effects from the emission of GHG (CO2, CO and methane)?		X	Additional CO and CO2 emissions at the facility are expected with increase waste tonnage to 160,000. However, these additional carbon emissions will be less than the emissions that would result if the same tonnage were transported and disposed of elsewhere, including methane generation in landfills as is currently occurring.
3.3	Cause negative effects from the emission of dust or odour?		X	Waste will continue to be off-loaded in a closed building under negative air pressure. There is minimal dust from truck traffic and odour as trucks drive around the exterior of the site. Any odour is like that from a garbage truck on a residential street. All driving surfaces are paved minimizing dust creation from all vehicles at the site.
3.4	Cause negative effects from the emission of noise?		X	No noticeable increase in noise from additional truck traffic or additional volume of waste processed.
3.5	Cause light pollution from trucks or other operational activities at the site?		X	No additional lighting will be placed on site.
4.0 Natural Environment				
4.1	Cause negative effects on rare or threatened or endangered species of flora or fauna or their habitat?		X	The 2009 Natural Environment Assessment for the original Environmental Assessment established mitigation measures to ensure that facility construction and operations do not have unacceptable adverse impacts on wildlife. These mitigation measures remain in effect and will not be impacted by the proposed increase in waste tonnage to 160,000 tonnes per year.
4.2	Cause negative effects on protected natural areas such as, ANSIs, ESAs or other significant natural areas?		X	No changes on protected natural areas such as ANSIs ESAs or other significant natural areas are anticipated as the result of the project.
4.3	Cause negative effects on designated wetlands?		X	No net effects are anticipated with the increase in waste tonnage to 160,000 tonnes per year.
4.4	Cause negative effects on wildlife habitat, populations, corridors or movement?		X	No negative effects on wildlife habitat, populations, corridors or movements are anticipated because of the project.

4.5	Cause negative effects on fish or their habitat, spawning, movement or environmental conditions (e.g. water temp, turbidity)?		X	The 2009 Natural Environment Assessment for the original Environmental Assessment determined there were no permanent watercourses on site and no significant net effects on aquatic species were anticipated. No changes to the assessment are anticipated because of the project.
4.6	Cause negative effects on locally important or valued ecosystems or vegetation?		X	No negative impacts on locally important or valued ecosystems or vegetation are anticipated because of the project.
4.7	Increase bird hazards within the area that could impact surrounding land uses (e.g. airports)?		X	No increase to bird hazards within the area are anticipated because of the project.
5.0 Resources				
5.1	Result in practices inconsistent with waste studies and/or waste diversion targets (e.g., result in final disposal of materials subject to diversion programs)?		X	Facility operates in accordance with the EA/ECA. All tonnage received is post diversion materials. The additional requested tonnage is still subject to waste diversion requirements. Additional capacity is not expected to decrease diversion as the waste is already being generated – but is currently by-passed to another waste disposal facility.
5.2	Result in generation of energy that cannot be captured and utilized?		X	Additional tonnage will result in additional energy generation that will be sold to the provincial grid or used for parasitic load power.
5.3	Be located a distance from required infrastructure?		X	Facility sited at an appropriate distance from waste sources with access to supporting infrastructure. No location issues are anticipated for the project.
5.4	Cause negative effects on the use of Canada Land Inventory Class 1-3, specialty crop or locally significant agricultural lands?		X	Site is located within an energy business park adjacent to Class 1 agricultural lands. No changes to land use are proposed to accommodate the processing increase.
5.5	Cause negative effects on existing agricultural production?		X	No impacts on existing agricultural production are anticipated as the result of the throughput increase.
6.0 Socio-Economic				
6.1	Cause negative effects on neighborhood or community character?		X	The Social Cultural Assessment Technical Study completed in 2009 concluded the facility would have minimal to no overall net effects on the community character of the area. No change to community character anticipated as the result of the processing capacity expansion.
6.2	Result in aesthetic impacts (e.g. visual and litter impacts)?		X	No changes to the facility structure or visual impacts are associated with the project. No additional litter is likely to result from the processing expansion.
6.3	Cause negative effects on local businesses, institutions or public facilities?		X	No impacts to local businesses, institutions or public facilities are anticipated as part of the processing increase.
6.4	Cause negative effects on recreation, cottaging or tourism?		X	No impacts to recreation or tourism are anticipated as the result of a processing increase.

6.5	Cause negative effects related to increases in the demands on community services and infrastructure?		X	No changes or negative impacts related to demands on community services or infrastructure are anticipated because of the capacity increase.
6.6	Cause negative effects on the economic base of a municipality or community?		X	The Economic Assessment Technical Study Report completed in 2009 determined the facility would have a net positive impact on the economic base of the community. The proposed increase in throughput to 160,000 tonnes will have no impact on the local economic base. Increased capacity increases DYEC efficiency and electrical and metal revenue. Cost savings are anticipated as the result of reducing the need for waste bypass.
6.7	Cause negative effects on local employment and labour supply?		X	No change in local employment is anticipated with the increased tonnage.
6.8	Cause negative effects related to traffic?		X	Approximately two additional vehicles per day will visit the site because of the increase in waste tonnage. This level of traffic already occurs during periods when the facility is operating at full capacity. No negative effects are anticipated because of the throughput increase.
6.9	Be located within 8km of an aerodome/airport reference point?	X		There is a heliport located at the Bowmanville Hospital, although air ambulance service is currently suspended to the facility, it is anticipated that a relocated facility will be established in the future. However, as no exterior changes are being made to the existing facility, and all waste handling will continue to occur indoors, no impacts are anticipated.
6.10	Interfere with flight paths due to the construction of facilities with height (stacks)?		X	No increase in stack height and no buildings are being constructed with the increased capacity.
6.11	Cause negative effects on public health and safety?		X	The Human Health and Ecological Risk Assessment completed in 2009 determined that overall the chemical emissions from the facility would not lead to any adverse health risks to residents, farmers or other receptors at the 140,000 tonnes per year operating scenario and minimal risk during upset conditions at the 400,000 tonne per year operating scenario. Additional modelling will be completed in the next stage of the screening process to confirm that no negative impacts will result from the tonnage increase to 160,000 tonnes per year.
7.0 Heritage and Culture				
7.1	Cause negative effects on heritage buildings, structures or sites, archaeological sites or areas of archaeological importance, or cultural heritage landscapes?		X	The increased processing if approved will occur within the existing structure on site, no changes to land, or new construction will occur because of the project. No impacts to cultural, heritage or archaeological sites are anticipated.

7.2	Cause negative effects on scenic or aesthetically pleasing landscapes or views?		X	The increased processing if approved will occur within the existing structure on site, no changes to land, or new construction will occur because of the project. No impacts to visual appearance of the area are anticipated.
8.0 Aboriginal				
8.1	Cause negative effects on land, resources, traditional activities or other interests of Aboriginal communities?		X	No impacts to land, resources, traditional activities or other interest of Indigenous communities are anticipated as the result of the increased processing capacity to 160,000 tonnes. Consultation and engagement with Indigenous communities will occur to determine if any concerns related to the project exist.
9.0 Other				
9.1	Result in the creation of non-hazardous waste materials requiring disposal?		X	No additional waste materials are generated because of the project. The facility will continue to process collected wastes prior to their disposal, with any residuals being sent to landfill for disposal.
9.2	Result in the creation of hazardous waste materials requiring disposal?		X	There will continue to be minimal creation of hazardous waste because of the facility operations. Bottom and treated fly ash are both managed as nonhazardous wastes.
9.3	Cause any other negative environmental effects not covered by the criteria outlined above?		X	No other effects have been identified.

GOLDER

TECHNICAL MEMORANDUM

DATE February 19, 2019 **Project No.** 19117255

TO Amanda Huxter
Covanta Durham York Renewable Energy LP

CC Anthony Ciccone

FROM Katherine Armstrong **EMAIL ksarmstrong@golder.com**

AIR QUALITY IMPACT OF 160,000 TPA WASTE AT DURHAM YORK ENERGY CENTRE

EXECUTIVE SUMMARY

Golder Associates Limited (Golder) completed an air quality dispersion modelling assessment of the Durham York Energy Centre (DYEC) at a municipal solid waste throughput of 160,0000 tonnes per annum (TPA) to assess the impact of a 20,000 TPA step change increase on predicted air quality concentrations. The results are subsequently compared to the original 140,000 TPA as found in the 2011 Emission Summary and Dispersion Modelling (ESDM) Report (dated March, 2011) which supports the Environmental Compliance Approval (ECA) for DYEC (#7306-8FDKNX).

Emission rates for the 160,000 TPA scenario were calculated using the same emission factors as the 140,000 TPA scenario but the flow rate was adjusted according to recent source testing data . Modelling was completed for the 160,000 TPA using the same model (CALPUFF), meteorological data set (2003-2007) and modelling methodology as used for the ESDM Report.

The predicted concentrations of each scenario were compared to the relevant air quality standards listed in Ontario Regulation (O.Reg.) 419/05 (MECP limits). In each scenario, predicted Point of Impingement (POI) concentrations of all contaminants were significantly lower than the corresponding MECP limits. For the 140,000 TPA scenario, the contaminant with the highest predicted concentration relative to O.Reg. 419/05 standards is Nitrogen Oxides at 7% of the relevant MECP limit (400 µg/m^3) over a 1 hour averaging period. Comparatively, for the 160,0000 TPA scenario, Nitrogen Oxides is also the highest predicted concentration relative to O.Reg. 419/05 standard but at 8% of the relevant MECP limit (400 µg/m^3) over a 1 hour averaging period.

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Background air quality concentrations from the ESDM were added to the predicted concentrations from the facility to estimate cumulative concentrations. The cumulative concentrations of all contaminants were compared to the MECP limits and are still below the relevant MECP limits for both modelled scenarios, with the exception of Benzo(a)pyrene over an annual averaging period. The background concentration of Benzo(a)pyrene is greater than the MECP limit before any contribution from DYEC is included and emissions from DYEC contribute less than 1% to the total ambient Benzo(a)pyrene concentration. O.Reg. 419/05 standards are not typically applied to cumulative concentrations, they are compliance points for predicted concentrations from individual facilities only. Cumulative concentrations are typically compared to the MECP ambient air quality criteria (AAQC) to provide an indicator of good air quality. The cumulative concentration of Benzo(a) pyrene is below the relevant AAQC for both scenarios, over an annual averaging period.

Overall, the air quality modelling results for the two scenarios result in predicted concentrations that vary by less than 8%, with some contaminants showing a decrease in predicted concentration and some contaminants showing a slight increase in concentration, depending on the averaging period. This result is caused by the combination of higher emission rates with increased flow rate and temperature, which would result in improved dispersion characteristics for some meteorological conditions and reduce the concentration of some contaminants.

In summary, the results of the 160,000 TPA scenario demonstrate that the DYEC is in compliance with O.Reg. 419/05 and the step change of 20,000 TPA results in minor changes to the theoretical maximums with 102 of the modelled concentrations decreasing from the 140,000 TPA scenario and 19 of the modelled concentrations increasing, depending on the time averaging period. Only 1 hour averaged NOx and SO_2 contribute an increased level of concentration (2%) at the POI with background.

1.0 INTRODUCTION

Covanta Durham York Renewable Energy LP (Covanta) operates the Durham York Energy Centre (DYEC) under the multi-media Environmental Compliance Approval (ECA) 7306-8FDKNX, as amended. The ECA application was supported with an Emission Summary and Dispersion Modelling (ESDM) Report prepared by Golder Associates Ltd (Golder) using the CALPUFF dispersion model version 6.263, with results compared to Ministry of Environment, Conservation and Parks (MECP) Point of Impingement (POI) standards listed in Schedule 3 of Ontario Regulation (O.Reg.) 419/05, as of 2011.

The current ECA permits the processing of a maximum of 140,000 tonnes per annum of municipal solid waste (MSW). It is understood that DYEC are currently proposing a step change increase of 20,000 tonnes to allow for processing of up to 160,000 tonnes per annum of MSW.

This memorandum summarizes the air quality modelling results for the step change increase compared to the air quality modelling results for the existing approved quantity. All modelling was completed using the same CALPUFF model and other input data sets used in the ESDM Report that supports the current ECA application, however, the results are compared to O.Reg. 419/05 limits last updated in April 2018. In addition, the same background data was used to asses the cumulative effects.

2.0 FACILITY DESCRIPTION

DYEC operates two identical combustion trains, each of which are designed to process a nominal 218 tonnes per day of MSW referenced at 13 MJ/kg specific energy content. This amounts to a total heat release of approximately 118 GJ/hour or 33.64 tonnes/hour of steam. This is defined as the maximum continuous rating (MCR) of the units. However, since the refuse will have continuously varying characteristics, the control system adjusts throughput to maintain the heat release necessary to attain a target steam production rate. The mass and heat input range of each grate is represented in the Solid Waste Refuse Firing Diagram below (Figure 1).

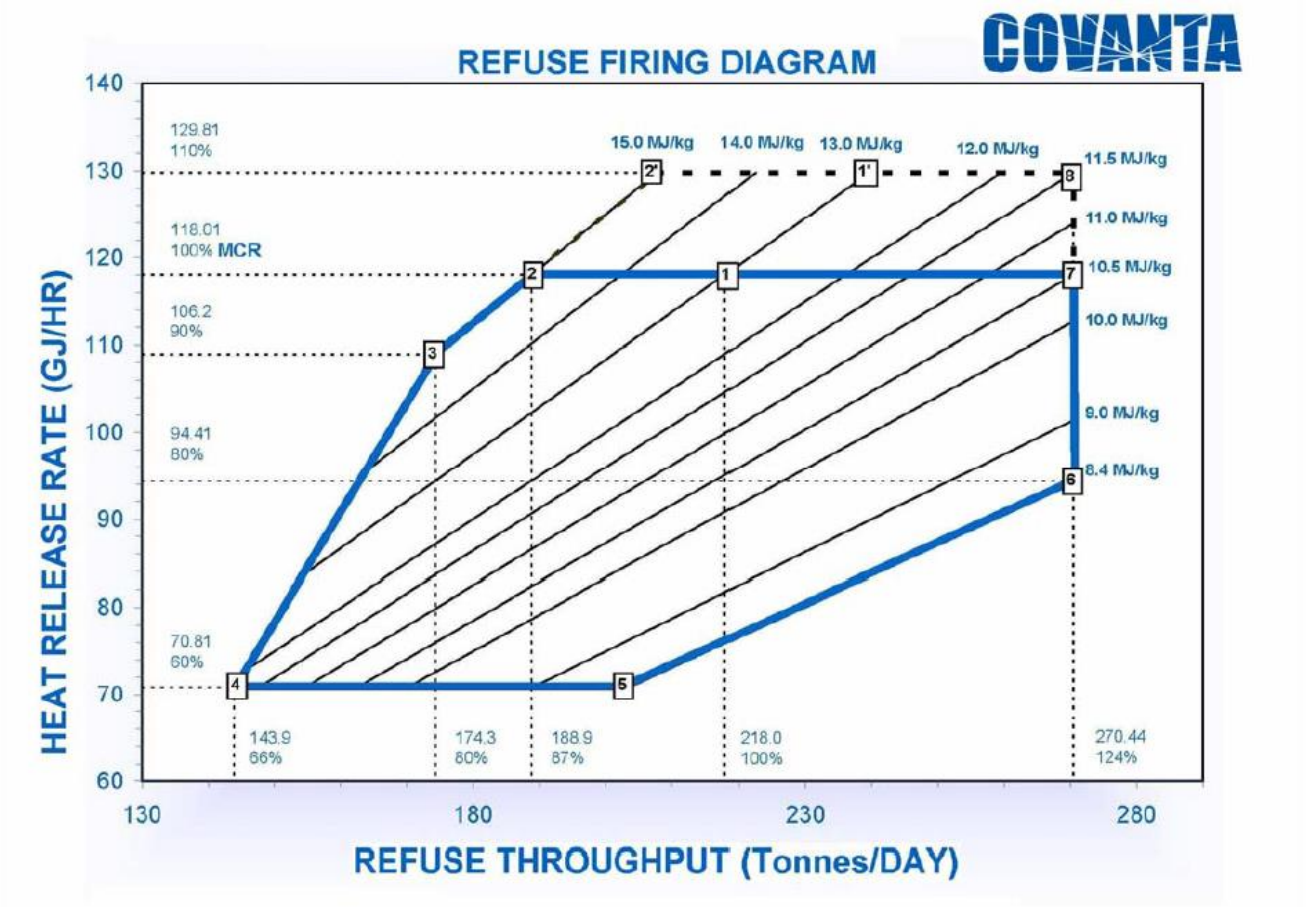

Figure 1: Base facility Refuse Diagram

For the ECA application, DYEC was modelled operating at reference point 2' as this results in the highest concentration possible for each contaminant modelled. Reference point 2' equates to the facility operating at a waste throughput of 216 tonnes per day, per unit, of MSW. This would occur for approximately 325 days per year to achieve an annual throughput of 140,000 tonnes per year This is defined as the 140,000 TPA Scenario.

The waste processing rate of 216 tonnes per unit, per day which occurs at reference point 2' is not sufficient to achieve an annual throughput of 160,000 tonnes. To achieve this MSW processing rate, DYEC would have to be operating at 110% MCR at reference point 1' to process approximately 232 tonnes per day per unit of MSW and produce 37 tonnes per hour of steam. This would occur for approximately 345 days per year to achieve an annual throughput of 160,000 tonnes per year. This is defined as the 160,000 TPA Scenario.

3.0 EMISSION RATES

For the 140,000 TPA Scenario, emission rates for contaminants with averaging periods of 30 days or less were taken from the ESDM Report which supports the current ECA. When the ESDM Report was initially prepared in March 2011, O.Reg. 419/05 did not contain any standards with annual averaging periods. As a result, annual emission results were not required to be calculated. Annual standards were introduced by the MECP in 2016 for contaminants identified as potentially having long term exposure risks. Therefore, to assess compliance against these standards for the 140,000 TPA Scenario, annual emission rates were calculated using the 1 hour emission rates and multiplying by the ratio of the maximum operating hours per year to the total number of hours per year.

For the 160,000 TPA Scenario, emission rates for contaminants with averaging periods of 30 days or less were calculated using the in-stack emission limits listed in the current ECA, where applicable, or using the emission factors listed in the ESDM Report, which are provided on a mass per flow basis at reference conditions. As the facility is now operational, the flow rate for this scenario was calculated using observed data. During source testing completed in October 2017, DYEC processed 205 tonnes per day per unit of MSW and produced 32.75 tonnes per hour of steam. As a result, the measured exhaust flow rate during source testing (corrected to reference conditions) was multiplied by the ratio of the steam production at 110% MCR to the steam production during source testing to calculate the exhaust flow rate at 110% MCR (at reference conditions). Annual emission rates were calculated using the 1 hour emission rates and multiplying by the ratio of the maximum operating hours per year to the total number of hours per year.

Emission rates for each scenario were converted to grams per second (g/s) and are provided in Appendix A – Emission Calculations. Emissions from ancillary activities such as silo filling and diesel generator testing were not included in this assessment as they will not be impacted by the proposed increase in throughput.

4.0 MODELLING

As part of the ECA application, the MECP approved the use of the CALPUFF modelling software and CALMET meteorological data to demonstrate compliance with O. Reg. 419/05 Schedule 3 standards at the DYEC. As a result, the same modelling approach has been taken for this assessment. The following models and pre- and post-processors were used in the assessment:

- CALMET diagnostic meteorological model (v. 5.8, level 070623);
- CALPUFF dispersion model (v. 6.263, level 080827);
- CALPOST post processor (v. 6.221, Level 080724);
- BPIP building downwash pre-processor (v. 04274); and
- POSTUTIL post processor (v.1.64, Level 101025).

These model versions are consistent with those used in the original ESDM Report. Dispersion Modelling inputs are described in the following subsections.

4.1 Model Domain

The CALPUFF Model domain used in this assessment is the same as the domain used in the previous Environmental Assessment (EA) and ESDM Report. It extends 40 km by 30 Km and is centred approximately 5 km north of the Site. This domain covers more than the air quality study area but will ensure that plumes are tracked beyond the furthest receptor locations to ensure the worst-case ground level concentrations are considered at all receptors.

4.2 Meteorology, Land Use and Terrain Data

The meteorology and terrain data used in this assessment is the same as the meteorology and terrain data used in the EA and ESDM Report.

4.3 Receptors

The receptors used in this assessment are the same as the receptors used in the ESDM Report. They include gridded ground level receptors to meet the requirements of O.Reg. 419/05 in addition to 400 discrete receptors to represent locations of interest. They include hospitals, nursing homes, schools, daycares, Senior citizen centres, the nearest residential receptors, specific watersheds and water bodies and parks.

4.4 Building Downwash

The buildings used in this assessment to represent building downwash are the same as the buildings used in the ESDM Report. Building wake effects were considered in this assessment using the U.S. EPA's Building Profile Input Program (BPIP-ISC). The inputs into this pre-processor include the coordinates and heights of the buildings and stacks. The output data from BPIP is used in the building wake effect calculations. No changes were made to the BPIP input or output file for this assessment.

4.5 Deposition

CALPUFF has the capability to account for wet and dry deposition of substances that would reduce ground level concentrations at Points of Impingement (POIs). However, the deposition algorithm has not been implemented for conservatism and to maintain consistency with the ESDM report and previous EA for maximum POI predictions.

4.6 Thermal Internal Boundary Layer

CALPUFF contains an option to account for sub-grid coastal influences on plume dispersion such as the development of a thermal internal boundary layer (TIBL). Given the proximity of the proposed Facility to Lake Ontario (approximately 500m) and the grid size (250m), variations in coastline location within the grid cells near the proposed facility were accounted for in the dispersion modelling. To achieve this, a digitized sub-grid coastline, extending to the boundaries of the air quality study area was included as an additional input. This is consistent with the approach used in the ESDM report.

4.7 Averaging Times and Conversions

CALPUFF can predict 1-hour average values. Many of the relevant Schedule 3 standards are based on a 24-hour averaging time, which is also provided by CALPUFF. Several of the modelled contaminants have averaging periods less than 1 hour. For these contaminants, the 1 hour average concentration was converted using the conversion factors listed in Table 4-1 of Air Dispersion Modelling Guidance for Ontario (ADMGO). For example,

the hourly concentrations can be converted to a 10-min average by multiplying the hour value by 1.65. This is consistent with the approach used in the ESDM Report.

In 2016, a number of O.Reg 419/05 standards were updated or modified to include Point of Impingement (POI) limits based on an annual averaging period. CALPUFF can predict annual average values, therefore the CALPOST input file was modified to provide this output in addition to outputs for the 1 hour, 24 hour and 30 day averaging periods already provided.

4.8 Chemical Transformation

For the purposes of assessing project contributions to Secondary Particulate Matter (SPM) formation, chemical transformation was considered in the CALPUFF modelling of particulate matter. To model the chemical transformation of emitted NO, NO_2 and SO_2 into HNO_3, NO_3 and SO_4, CALPUFFs RIVAD/ARM3 mechanism was used. The flag MCHEM is set to 3 for model runs used to produce concentrations of particulate matter. This setting requires the input of monthly background ozone concentrations. The monthly background ozone data used in the modelling of secondary particulate matter for the 140,000 TPA Scenario differ slightly from the background ozone concentrations used in the 160,000 TPA as they were updated in 2017 to correct an inconsistency between the ESDM Report and the EA. This difference is not expected to significantly impact results as this data is only used in the calculation of secondary particulate matter formulation, which accounts for less than 10% of total particulate concentration. A comparison of the two sets of ozone data is provided in Table 1, below.

Table 1: Background Ozone Concentrations used for Chemical Transformation Modelling

Month	Ozone Concentrations used in 140,000 TPA Scenario (ppb)	Ozone Concentrations used in 160,000 TPA (ppb)
January	17.30	13.70
February	14.80	18.50
March	32.70	24.22
April	33.50	11.09
May	32.90	32.29
June	37.70	33.63
July	36.50	16.32
August	33.10	21.33
September	30.10	12.63
October	21.20	15.39
November	19.10	17.10
December	16.20	20.91

Chemical transformations were only modelled to calculate additional concentrations of particulate matter that is created as part of secondary transformations. Reported concentrations of NO_2 and SO_2 do not include the effects of depletion due to chemical transformation. The flag MCHEM is set to 0 for model runs used to produce concentrations of all other contaminants. This is consistent with the approach used in the ESDM Report

4.9 Dispersion Modelling Options

The options used in the CALPUFF dispersion model are identical to those used in the ESDM Report.

4.10 Source Parameters

For the 140,000 TPA Scenario, stack exhaust temperature and flow rate were unchanged from the modelling completed for the ECA application.

For the 160,000 TPA Scenario, exhaust flow rate and stack exhaust temperature were calculated using observed data from recent stack testing campaigns. The exhaust temperature was taken from the October stack testing data and the exhaust flow rate was calculated by multiplying the measured exhaust flow rate by the ratio of steam production at 110%MCR to steam production at the time of source testing (approximately 1.13).

All other source parameters are consistent with those used in the ESDM Report. A comparison of the source parameters modelled are provided in Table 2, below:

Table 2: Comparison of Modelled Source Parameters

Scenario	Stack Height [m]	Stack Diameter [m]	Exit velocity [m/s]	Exhaust Temperature [K]
140,000 TPA	87.6	1.7	23.02	405.37
160,000 TPA	87.6	1.7	26.18	413.5

5.0 MODELLING RESULTS

The modelled POI concentrations for each scenario were compared to the Schedule 3 standards listed in O.Reg. 419/05 (MECP POI limits) and in the case of $PM_{2.5}$ and PM_{10}, the MECP ambient air quality criteria (AAQC). Meteorological anomalies were removed in accordance with ADMGO.

The MECP has recently updated the list of standards and guidelines for facilities to assess their emissions against, namely the Air Contaminants Benchmark (ACB) List, dated April 2018, which includes standards and guidelines (Benchmark 1) and screening levels (Benchmark 2). The ACB List is required to be used to assess point of impingement (POI) concentrations of contaminants released into the air.

Contaminants released by the Facility that do not have Benchmark 1 standards or guidelines in the ACB List are ‘Contaminants with No MECP POI Limits’. Where applicable, predicted POI concentrations of Contaminants with No MECP POI Limits were screened against the Benchmark 2 screening levels in the ACB List or the de minimus limit.

The modelled concentrations of all compounds assessed were below their relevant MECP limits. A copy of the Emission Summary Table for each scenario is provided in Appendix B.

For the 140,000 TPA scenario, the contaminant with the highest predicted concentration relative to O.Reg. 419/05 standard is Nitrogen Oxides at 7% of the relevant limit (400 µg/m^3) over a 1 hour averaging period.

For the 160,000 TPA scenario, the contaminant with the highest predicted concentration relative to O.Reg. 419/05 standard is Nitrogen Oxides at 8% of the relevant limit (400 µg/m^3) over a 1 hour averaging period.

6.0 BACKGROUND AMBIENT AIR QUALITY AND CUMULATIVE EFFECTS

As part of the Environmental Assessment, local air quality monitoring was conducted in the vicinity of the Site between September 2007 and December 2008. The monitoring station was located on the west side of Courtice Road, approximately 1.5 km south of Highway 401 and within the fenced area of the project office for the water pollution control plant. In addition to the ambient data taken from this station, data was also collected from monitoring networks operated under the National Air Pollution Surveillance (NAPS) Network by Environment Canada and used to characterize regional air quality. Further details about how this data was collected can be found in the Environmental Assessment (Durham-York Residual Waste Study– Appendix C-1 - Air Quality Assessment Technical Study report– pp 31-40).

Background concentrations have been added to the results of the dispersion modelling to represent the cumulative effects of other emission sources surrounding the site. The background concentrations used in this assessment are the same as those used in the ECA and EA, to allow for a like-to-like comparison. More recent air quality monitoring has been completed as part of the EA requirements for DYEC, however, this would already include contributions from DYEC and therefore may lead to double counting of contributions from DYEC.

The relevant cumulative concentrations were compared against the MECP POI limits and in the case of $PM_{2.5}$ and PM_{10}, the MECP AAQC. The cumulative concentrations of all contaminants (with background added) are still below the relevant MECP limits, with the exception of Benzo(a)pyrene over an annual averaging period, for both modelled scenarios. The background concentration of Benzo(a)pyrene is greater than the MECP limit before any contribution from DYEC is included and emissions from DYEC contribute less than 1% to the total ambient benzo(a)pyrene concentration. O.Reg. 419/05 standards are not typically applied to cumulative concentrations, they are compliance points for predicted concentrations from individual facilities only. Cumulative concentrations are typically compared to the MECP ambient air quality criteria (AAQC) to provide an indicator of good air quality. The cumulative concentration of Benzo(a)pyrene is below the relevant AAQC for both scenarios, over an annual averaging period.

7.0 COMPARISON OF MODELLED SCENARIOS

A comparison of the modelling results from the two scenarios is presented in Appendix C. The results indicate that the change in predicted concentrations between the two scenarios is small. All predicted concentrations vary by less than 8% with some contaminants showing a decrease in predicted concentration and some contaminants showing a slight increase in concentration, depending on the averaging period. This fluctuation is anticipated to be a result of higher emission rates for the 160,000 TPA combined with the increased flow rate and temperature which would improve dispersion for some meteorological conditions.

Once background concentrations are added to the predicted concentrations from DYEC, the resultant cumulative concentrations vary by even less, due to the high contribution of background concentrations. The majority of the predicted concentrations with background for the 160,000 TPA a maximum change 2% for all contaminants for which background data was available. Only two contaminants (SO_2 and NO_x) show an increase in cumulative concentrations from the 140,000 TPA scenario by about 2%.

8.0 CONCLUSIONS

Overall, the results of the modelling assessment indicate that the 160,000 TPA would result in a small overall change in the maximum predicted concentrations for all contaminants and the change in cumulative concentrations would be even less significant. DYEC would still be able to demonstrate compliance with MECP limits listed in Ontario Regulation 419/05 and cumulative concentrations of all contaminants would be below the relevant AAQC.

9.0 CLOSURE

We trust this memorandum meets your needs at this time. Should you have any questions please contact the undersigned.

original signed by

Katherine Armstrong, M.Sc.
Air Quality Specialist

original signed by

Anthony Ciccone, Ph.D., P.Eng.
Principal & Vice-President

KSA/ADC/ng

https://golderassociates.sharepoint.com/sites/104166/project files/6 deliverables/final/19117255-tm-rev0 19feb2019 covanta updated modelling memo.docx

Amanda Huxter
Covanta Durham York Renewable Energy LP

Project No. 19117255
February 19, 2019

APPENDIX A

Emission Calculations by Scenario

Main Stack - 160,000 TPA

Source Description: Emissions from the main stack under Current Maximum Operating Scenario

Operating Rate: Both boilers are operating at 110% MCR at operating point 2`.

Methodology: Engineering calculations
Source: All emission concentrations are guarantees from Covanta where available or have been taken from the Environmental Assessment

Train Parameters:

Volumetric flow rate per train (At operating point 2')	21.31	m^3/s at reference conditions of 0% Moisture, 11% Oxygen and 298.15K temperature
	26.13	m^3/s at operational conditions
Total Volumetric flow rate	52.26	m^3/s at operational conditions
Waste Processing Rate per unit	215.77	Mg/day
Annual Hours Required to Process 140, 000 tonnes per annum	7785.93	Hours

Sample Calculation 1: Particulate matter emission per train

Emission Rate [g/s] = Concentration[mg/dscm] x volumetric flow rate [dm^3/s] x 1/1000 [mg/g]

$$= \frac{22.41\ \frac{ug}{m^3} \mid 21\ \frac{m^3}{s} \mid 1\ \frac{mol}{1{,}000\ m^3}}{}$$

$$= \frac{4.78E\text{-}01\ g}{s}$$

Sample Calculation 2: Bromodichloromethane emission per train

Emission Rate [g/s] = Concentration[kg/Mg] x Processing Rate [Mg/day] x 1000 [kg/g] x 1/86400 [day/s]

$$= \frac{1.50E\text{-}03\ \frac{kg}{Mg} \mid 216\ \frac{Mg}{day} \mid 1000\ \frac{Kg}{1\ g} \mid \frac{1\ day}{86400\ s}}{}$$

$$= \frac{3.75E\text{-}03\ g}{s}$$

Sample Calculation 3: Benzene Annual Emission Rate

Emission Rate [g/s] = Hourly Emission Rate [g/s] x Annual Processing Hours [Hours/year] / Total Hours per Year [Hours/year]

$$= \frac{1.32E\text{-}03\ \frac{g}{s} \mid 7{,}786\ \frac{Hours}{Year} \mid 1\ \frac{Year}{8{,}760\ Hours}}{}$$

$$= \frac{1.17E\text{-}03\ g}{s}$$

Source Emissions:

Contaminant	CAS Number	Concentration per train	Units[(1)]	Concentration Reference	Emission Rate per Train [g/s]	Total Emission Rate [g/s]	Annual Emission Rate [g/s]
Carbon Monoxide	630-08-0	4.50E+01	mg/Rm3	ESDM Report	9.59E-01	1.92E+00	—
Sulphur Dioxide	7446-09-5	3.50E+01	mg/Rm3	ECA Limit	7.47E-01	1.49E+00	1.33E+00
Total Particulate Matter	N/A -1	2.24E+01	mg/Rm3	ESDM Report	4.78E-01	9.55E-01	—
Filterable TSP	N/A -2	9.00E+00	mg/Rm3	ECA Limit	1.92E-01	3.84E-01	—
PM10	N/A -3	2.24E+01	mg/Rm3	ESDM Report	4.78E-01	9.55E-01	—
PM2.5	N/A -4	2.10E+01	mg/Rm3	ESDM Report	4.48E-01	8.95E-01	—
VOCs as CH4	N/A -5	4.90E+01	mg/Rm3	ESDM Report	1.04E+00	2.09E+00	—
Lead	7439-92-1	5.00E-02	mg/Rm3	ECA Limit	1.07E-03	2.13E-03	—
Cadmium	7440-43-9	7.00E-03	mg/Rm3	ECA Limit	1.49E-04	2.98E-04	—
Mercury	7439-97-6	1.50E-02	mg/Rm3	ECA Limit	3.20E-04	6.39E-04	—
Hydrogen Fluoride	7664-39-3	9.00E-01	mg/Rm3	ESDM Report	1.92E-02	3.84E-02	—
PCDD (I-TEQ)	N/A -6	6.00E-08	mg/Rm3	ECA Limit	0.0013 µg TEQ/s	0.0026 µg TEQ/s	—
Hydrogen Chloride	7647-01-0	9.00E+00	mg/Rm3	ECA Limit	1.92E-01	3.84E-01	—
Ammonia	7664-41-7	9.90E+00	mg/Rm3	ESDM Report	2.11E-01	4.22E-01	—
Nitrogen Oxides	10102-44-0	1.21E+02	mg/Rm3	ECA Limit	2.57E+00	5.14E+00	—
Polychlorinated Biphenyls (PCB)	N/A -7	7.22E-05	mg/Rm3	ESDM Report	1.54E-06	3.08E-06	—
Aluminum	7429-90-5	3.98E-02	mg/Rm3	ESDM Report	8.47E-04	1.69E-03	—
Antimony	7440-36-0	2.74E-03	mg/Rm3	ESDM Report	5.84E-05	1.17E-04	—
Arsenic	7440-38-2	4.20E-04	mg/Rm3	ESDM Report	8.95E-06	1.79E-05	—
Barium	7440-39-3	2.11E-03	mg/Rm3	ESDM Report	4.51E-05	9.01E-05	—
Beryllium	7440-41-7	3.33E-04	mg/Rm3	ESDM Report	7.10E-06	1.42E-05	—
Boron	7440-42-8	1.53E-01	mg/Rm3	ESDM Report	3.26E-03	6.52E-03	—
Chromium (hexavalent)	18540-29-9	3.20E-04	mg/Rm3	ESDM Report	6.82E-06	1.36E-05	1.21E-05
Total Chromium (and compounds)	7440-47-3	2.25E-03	mg/Rm3	ESDM Report	4.79E-05	9.59E-05	—
Cobalt	7440-48-4	5.79E-03	mg/Rm3	ESDM Report	1.23E-04	2.47E-04	—
Nickel	7440-02-0	8.71E-02	mg/Rm3	ESDM Report	1.86E-03	3.71E-03	3.30E-03
Phosphorus	7723-14-0	4.60E-02	mg/Rm3	ESDM Report	9.81E-04	1.96E-03	—
Silver	7440-22-4	3.35E-03	mg/Rm3	ESDM Report	7.14E-05	1.43E-04	—
Selenium	7782-49-2	4.80E-04	mg/Rm3	ESDM Report	1.02E-05	2.05E-05	—
Thallium	7440-28-0	3.90E-02	mg/Rm3	ESDM Report	8.31E-04	1.66E-03	—
Tin	7440-31-5	1.76E-02	mg/Rm3	ESDM Report	3.75E-04	7.50E-04	—
Vanadium	7440-62-2	1.16E-03	mg/Rm3	ESDM Report	2.48E-05	4.96E-05	—
Zinc	7440-66-6	2.00E-01	mg/Rm3	ESDM Report	4.25E-03	8.50E-03	—
1,2-Dichlorobenzene	95-50-1	2.05E-03	mg/Rm3	ESDM Report	4.36E-05	8.72E-05	—
1,2,4,5-Tetrachlorobenzene	95-94-3	5.15E-05	mg/Rm3	ESDM Report	1.10E-06	2.19E-06	—
1,2,4 – Trichlorobenzene	120-82-1	5.15E-05	mg/Rm3	ESDM Report	1.10E-06	2.19E-06	—
2,3,4,6-Tetrachlorophenol	58-90-2	1.74E-04	mg/Rm3	ESDM Report	3.70E-06	7.41E-06	—
2,4,6-Trichlorophenol	88-06-2	5.23E-05	mg/Rm3	ESDM Report	1.12E-06	2.23E-06	—
2,4-Dichlorophenol	120-83-2	1.03E-04	mg/Rm3	ESDM Report	2.19E-06	4.39E-06	—
Pentachlorophenol	87-86-5	2.06E-04	mg/Rm3	ESDM Report	4.39E-06	8.79E-06	—
Hexachlorobenzene	118-74-1	5.15E-05	mg/Rm3	ESDM Report	1.10E-06	2.19E-06	—
Pentachlorobenzene	608-93-5	1.35E-04	mg/Rm3	ESDM Report	2.88E-06	5.77E-06	—
Acenaphthylene	208-96-8	1.45E-05	mg/Rm3	ESDM Report	3.09E-07	6.18E-07	—
Acenaphthene	83-32-9	1.86E-05	mg/Rm3	ESDM Report	3.96E-07	7.93E-07	—
Anthracene	120-12-7	4.07E-06	mg/Rm3	ESDM Report	8.67E-08	1.73E-07	—

Benzo(a)anthracene	56-55-3	1.50E-06	mg/Rm3	ESDM Report	3.20E-08	6.39E-08	—
Benzo(b)fluoranthene	205-99-2	3.83E-06	mg/Rm3	ESDM Report	8.16E-08	1.63E-07	—
Benzo(k)fluoranthene	207-08-9	1.01E-06	mg/Rm3	ESDM Report	2.15E-08	4.30E-08	—
Benzo(a)fluorene	238-84-6	2.76E-05	mg/Rm3	ESDM Report	5.89E-07	1.18E-06	—
Benzo(b)fluorene	243-17-4	1.89E-05	mg/Rm3	ESDM Report	4.03E-07	8.06E-07	—
Benzo(ghi)perylene	191-24-2	4.13E-05	mg/Rm3	ESDM Report	8.80E-07	1.76E-06	—
Benzo(a)pyrene	50-32-8	3.44E-06	mg/Rm3	ESDM Report	7.33E-08	1.47E-07	1.30E-07
Benzo(e)pyrene	192-97-2	8.71E-06	mg/Rm3	ESDM Report	1.86E-07	3.71E-07	—
Biphenyl	92-51-3	2.98E-03	mg/Rm3	ESDM Report	6.36E-05	1.27E-04	—
Chrysene	218-01-9	3.77E-06	mg/Rm3	ESDM Report	8.03E-08	1.61E-07	—
Dibenzo(a,c)anthracene	215-58-7	2.68E-05	mg/Rm3	ESDM Report	5.71E-07	1.14E-06	—
Dibenzo(a,h)anthracene	53-70-3	1.21E-06	mg/Rm3	ESDM Report	2.58E-08	5.16E-08	—
Fluoranthene	206-44-0	4.16E-05	mg/Rm3	ESDM Report	8.86E-07	1.77E-06	—
Fluorine	86-73-7	3.13E-05	mg/Rm3	ESDM Report	6.67E-07	1.33E-06	—
Indeno(1,2,3 – cd)pyrene	193-39-5	7.54E-06	mg/Rm3	ESDM Report	1.61E-07	3.21E-07	—
1 – methylnaphthalene	90-12-0	9.82E-05	mg/Rm3	ESDM Report	2.09E-06	4.18E-06	—
2 – methylnaphthalene	91-57-6	5.44E-04	mg/Rm3	ESDM Report	1.16E-05	2.32E-05	—
Naphthalene	91-20-3	4.23E-04	mg/Rm3	ESDM Report	9.01E-06	1.80E-05	—
Perylene	198-55-0	1.51E-06	mg/Rm3	ESDM Report	3.22E-08	6.44E-08	—
Phenanthrene	85-01-8	9.46E-05	mg/Rm3	ESDM Report	2.02E-06	4.03E-06	—
Pyrene	129-00-0	5.02E-05	mg/Rm3	ESDM Report	1.07E-06	2.14E-06	—
Tetralin	119-64-2	4.99E-04	mg/Rm3	ESDM Report	1.06E-05	2.12E-05	—
O-terphenyl	84-15-1	8.18E-05	mg/Rm3	ESDM Report	1.74E-06	3.49E-06	—
Acetaldehyde	75-07-0	4.30E-09	kg/Mg	ESDM Report	1.07E-08	2.15E-08	—
Benzene	71-43-2	3.10E-02	mg/Rm3	ESDM Report	6.61E-04	1.32E-03	1.17E-03
Bromodichloromethane	75-27-4	1.50E-03	kg/Mg	ESDM Report	3.75E-03	7.50E-03	—
Bromoform	75-25-2	4.11E-04	kg/Mg	ESDM Report	1.03E-03	2.05E-03	—
Bromomethane	74-83-9	3.60E-02	mg/Rm3	ESDM Report	7.67E-04	1.53E-03	—
Carbon tetrachloride	56-23-5	2.56E-06	kg/Mg	ESDM Report	6.39E-06	1.28E-05	—
Chloroform	67-66-3	5.10E-04	mg/Rm3	ESDM Report	1.09E-05	2.17E-05	—
Dichlorodifluoromethane	75-71-8	8.71E-02	mg/Rm3	ESDM Report	1.86E-03	3.71E-03	—
Dichloroethene, 1,1 -	75-34-3	5.65E-04	mg/Rm3	ESDM Report	1.20E-05	2.41E-05	—
Dichloromethane	75-09-2	1.76E-01	mg/Rm3	ESDM Report	3.75E-03	7.50E-03	—
Ethylbenzene	100-41-4	1.04E-03	mg/Rm3	ESDM Report	2.21E-05	4.42E-05	—
Ethylene Dibromide	106-93-4	2.41E-06	kg/Mg	ESDM Report	6.02E-06	1.20E-05	—
Formaldehyde	50-00-0	4.75E-02	mg/Rm3	ESDM Report	1.01E-03	2.02E-03	—
Tetrachloroethene	127-18-4	5.67E-03	mg/Rm3	ESDM Report	1.21E-04	2.42E-04	—
Toluene	108-88-3	5.03E-02	mg/Rm3	ESDM Report	1.07E-03	2.14E-03	—
Trichloroethane, 1,1,1 -	71-55-6	1.43E-03	mg/Rm3	ESDM Report	3.04E-05	6.08E-05	—
Trichloroethene	86-42-0	4.92E-04	mg/Rm3	ESDM Report	1.05E-05	2.10E-05	—
Trichloroethylene, 1,1,2 -	79-01-6	4.92E-04	mg/Rm3	ESDM Report	1.05E-05	2.10E-05	—
Trichlorofluoromethane	75-69-4	1.72E-01	mg/Rm3	ESDM Report	3.67E-03	7.34E-03	—
Vinyl chloride	75-01-4	4.36E-02	mg/Rm3	ESDM Report	9.29E-04	1.86E-03	—
Xylenes, m-, p- and o-	1330-20-7	6.04E-01	mg/Rm3	ESDM Report	1.29E-02	2.57E-02	—

1. Concentrations are at reference conditions of 0% Moisture, 11% Oxygen and 298.15K temperature

Main Stack - 160,000 TPA

Source Description: Emissions from the main stack under Proposed Future Operating Scenario with both boilers operational.

Operating Rate: Both boilers are operating at 110% MCR at operating point 1`.

Methodology: Engineering calculations
Source: All emission concentrations are guarantees from Covanta where available or have been taken from the Environmental Assessment

Train Parameters:

Volumetric flow rate per train (At operating point 1')	22.37	m^3/s at reference conditions of 0% Moisture, 11% Oxygen and 298.15K temperature
	26.18	m^3/s at operational conditions
Total Volumetric flow rate	52.36	m^3/s at operational conditions
Waste Processing Rate	231.65	Mg/day
Annual Hours Required to Process 160, 000 tonnes per annum	8288.37	Hours

Sample Calculation 1: Particulate matter emission per train

Emission Rate [g/s] = Concentration[mg/dscm] x volumetric flow rate [dm^3/s] x 1/1000 [mg/g]

$$= \frac{22.41\ \frac{mg}{m^3} \times 22\ \frac{m^3}{s} \times 1\ \frac{g}{1{,}000\ mg}}{}$$

$$= 5.01E\text{-}01\ \frac{g}{s}$$

Sample Calculation 2: Bromodichloromethane emission per train

Emission Rate [g/s] = Concentration[kg/Mg] x Processing Rate [Mg/day] x 1000 [kg/g] x 1/86400 [day/s]

$$= \frac{1.50E\text{-}03\ \frac{kg}{Mg} \times 232\ \frac{Mg}{day} \times 1000\ \frac{Kg}{1\ g} \times 1\ \frac{day}{86400\ s}}{}$$

$$= 4.03E\text{-}03\ \frac{g}{s}$$

Sample Calculation 3: Benzene Annual Emission Rate

Emission Rate [g/s] = Hourly Emission Rate [g/s] x Annual Processing Hours [Hours/year] / Total Hours per Year [Hours/year]

$$= \frac{8.05E\text{-}03\ \frac{g}{s} \times 8{,}288\ \frac{Hours}{Year} \times 1\ \frac{Year}{8{,}760\ Hours}}{}$$

$$= 7.62E\text{-}03\ \frac{g}{s}$$

Source Emissions:

Contaminant	CAS Number	Concentration per train	Units[(1)]	Concentration Reference	Emission Rate per Train [g/s]	Total Emission Rate [g/s]	Annual Emission Rate [g/s]
Carbon Monoxide	630-08-0	4.50E+01	mg/Rm3	ESDM Report	1.01E+00	2.01E+00	—
Sulphur Dioxide	7446-09-5	3.50E+01	mg/Rm3	ECA Limit	7.84E-01	1.57E+00	1.48E+00
Total Particulate Matter	N/A -1	2.24E+01	mg/Rm3	ESDM Report	5.01E-01	1.00E+00	—
Filterable TSP	N/A -2	9.00E+00	mg/Rm3	ECA Limit	2.01E-01	4.03E-01	—
PM10	N/A -3	2.24E+01	mg/Rm3	ESDM Report	5.01E-01	1.00E+00	—
PM2.5	N/A -4	2.10E+01	mg/Rm3	ESDM Report	4.70E-01	9.40E-01	—
VOCs as CH4	N/A -5	4.90E+01	mg/Rm3	ESDM Report	1.10E+00	2.19E+00	—
Lead	7439-92-1	5.00E-02	mg/Rm3	ECA Limit	1.12E-03	2.24E-03	—
Cadmium	7440-43-9	7.00E-03	mg/Rm3	ECA Limit	1.57E-04	3.13E-04	—
Mercury	7439-97-6	1.50E-02	mg/Rm3	ECA Limit	3.36E-04	6.71E-04	—
Hydrogen Fluoride	7664-39-3	9.00E-01	mg/Rm3	ESDM Report	2.01E-02	4.03E-02	—
PCDD (I-TEQ)	N/A -6	6.00E-02	mg/Rm3	ECA Limit	0.0013 µg TEQ/s	0.0027 µg TEQ/s	—
Hydrogen Chloride	7647-01-0	9.00E+00	mg/Rm3	ECA Limit	2.01E-01	4.03E-01	—
Ammonia	7664-41-7	9.90E+00	mg/Rm3	ESDM Report	2.22E-01	4.43E-01	—
Nitrogen Oxides	10102-44-0	1.21E+02	mg/Rm3	ECA Limit	2.71E+00	5.41E+00	—
Polychlorinated Biphenyls (PCB)	N/A -7	7.22E-05	mg/Rm3	ESDM Report	1.62E-06	3.23E-06	—
Aluminum	7429-90-5	3.98E-02	mg/Rm3	ESDM Report	8.89E-04	1.78E-03	—
Antimony	7440-36-0	2.74E-03	mg/Rm3	ESDM Report	6.13E-05	1.23E-04	—
Arsenic	7440-38-2	4.20E-04	mg/Rm3	ESDM Report	9.40E-06	1.88E-05	—
Barium	7440-39-3	2.11E-03	mg/Rm3	ESDM Report	4.73E-05	9.46E-05	—
Beryllium	7440-41-7	3.33E-04	mg/Rm3	ESDM Report	7.45E-06	1.49E-05	—
Boron	7440-42-8	1.53E-01	mg/Rm3	ESDM Report	3.42E-03	6.85E-03	—
Chromium (hexavalent)	18540-29-9	3.20E-04	mg/Rm3	ESDM Report	7.16E-06	1.43E-05	1.35E-05
Total Chromium (and compounds)	7440-47-3	2.25E-03	mg/Rm3	ESDM Report	5.03E-05	1.01E-04	—
Cobalt	7440-48-4	5.79E-03	mg/Rm3	ESDM Report	1.30E-04	2.59E-04	—
Nickel	7440-02-0	8.71E-02	mg/Rm3	ESDM Report	1.95E-03	3.90E-03	3.69E-03
Phosphorus	7723-14-0	4.60E-02	mg/Rm3	ESDM Report	1.03E-03	2.06E-03	—
Silver	7440-22-4	3.35E-03	mg/Rm3	ESDM Report	7.50E-05	1.50E-04	—
Selenium	7782-49-2	4.80E-04	mg/Rm3	ESDM Report	1.07E-05	2.15E-05	—
Thallium	7440-28-0	3.90E-02	mg/Rm3	ESDM Report	8.73E-04	1.75E-03	—
Tin	7440-31-5	1.76E-02	mg/Rm3	ESDM Report	3.94E-04	7.87E-04	—
Vanadium	7440-62-2	1.16E-03	mg/Rm3	ESDM Report	2.60E-05	5.20E-05	—
Zinc	7440-66-6	2.00E-01	mg/Rm3	ESDM Report	4.46E-03	8.93E-03	—
1,2-Dichlorobenzene	95-50-1	2.05E-03	mg/Rm3	ESDM Report	4.58E-05	9.15E-05	—
1,2,4,5-Tetrachlorobenzene	95-94-3	5.15E-05	mg/Rm3	ESDM Report	1.15E-06	2.30E-06	—
1,2,4 – Trichlorobenzene	120-82-1	5.15E-05	mg/Rm3	ESDM Report	1.15E-06	2.30E-06	—
2,3,4,6-Tetrachlorophenol	58-90-2	1.74E-04	mg/Rm3	ESDM Report	3.89E-06	7.78E-06	—
2,4,6-Trichlorophenol	88-06-2	5.23E-05	mg/Rm3	ESDM Report	1.17E-06	2.34E-06	—
2,4-Dichlorophenol	120-83-2	1.03E-04	mg/Rm3	ESDM Report	2.30E-06	4.61E-06	—
Pentachlorophenol	87-86-5	2.06E-04	mg/Rm3	ESDM Report	4.61E-06	9.23E-06	—
Hexachlorobenzene	118-74-1	5.15E-05	mg/Rm3	ESDM Report	1.15E-06	2.30E-06	—
Pentachlorobenzene	608-93-5	1.35E-04	mg/Rm3	ESDM Report	3.03E-06	6.05E-06	—
Acenaphthylene	208-96-8	1.45E-05	mg/Rm3	ESDM Report	3.24E-07	6.49E-07	—
Acenaphthene	83-32-9	1.86E-05	mg/Rm3	ESDM Report	4.16E-07	8.32E-07	—
Anthracene	120-12-7	4.07E-06	mg/Rm3	ESDM Report	9.11E-08	1.82E-07	—

Benzo(a)anthracene	56-55-3	1.50E-06	mg/Rm3	ESDM Report	3.36E-08	6.71E-08	—
Benzo(b)fluoranthene	205-99-2	3.83E-06	mg/Rm3	ESDM Report	8.57E-08	1.71E-07	—
Benzo(k)fluoranthene	207-08-9	1.01E-06	mg/Rm3	ESDM Report	2.26E-08	4.52E-08	—
Benzo(a)fluorene	238-84-6	2.76E-05	mg/Rm3	ESDM Report	6.18E-07	1.24E-06	—
Benzo(b)fluorene	243-17-4	1.89E-05	mg/Rm3	ESDM Report	4.23E-07	8.46E-07	—
Benzo(ghi)perylene	191-24-2	4.13E-05	mg/Rm3	ESDM Report	9.24E-07	1.85E-06	—
Benzo(a)pyrene	50-32-8	3.44E-06	mg/Rm3	ESDM Report	7.70E-08	1.54E-07	1.46E-07
Benzo(e)pyrene	192-97-2	8.71E-06	mg/Rm3	ESDM Report	1.95E-07	3.90E-07	—
Biphenyl	92-51-3	2.98E-03	mg/Rm3	ESDM Report	6.67E-05	1.33E-04	—
Chrysene	218-01-9	3.77E-06	mg/Rm3	ESDM Report	8.43E-08	1.69E-07	—
Dibenzo(a,c)anthracene	215-58-7	2.68E-05	mg/Rm3	ESDM Report	6.00E-07	1.20E-06	—
Dibenzo(a,h)anthracene	53-70-3	1.21E-06	mg/Rm3	ESDM Report	2.71E-08	5.41E-08	—
Fluoranthene	206-44-0	4.16E-05	mg/Rm3	ESDM Report	9.31E-07	1.86E-06	—
Fluorine	86-73-7	3.13E-05	mg/Rm3	ESDM Report	7.00E-07	1.40E-06	—
Indeno(1,2,3 – cd)pyrene	193-39-5	7.54E-06	mg/Rm3	ESDM Report	1.69E-07	3.37E-07	—
1 – methylnaphthalene	90-12-0	9.82E-05	mg/Rm3	ESDM Report	2.20E-06	4.39E-06	—
2 – methylnaphthalene	91-57-6	5.44E-04	mg/Rm3	ESDM Report	1.22E-05	2.43E-05	—
Naphthalene	91-20-3	4.23E-04	mg/Rm3	ESDM Report	9.46E-06	1.89E-05	—
Perylene	198-55-0	1.51E-06	mg/Rm3	ESDM Report	3.38E-08	6.76E-08	—
Phenanthrene	85-01-8	9.46E-05	mg/Rm3	ESDM Report	2.12E-06	4.23E-06	—
Pyrene	129-00-0	5.02E-05	mg/Rm3	ESDM Report	1.12E-06	2.25E-06	—
Tetralin	119-64-2	4.99E-04	mg/Rm3	ESDM Report	1.12E-05	2.23E-05	—
O-terphenyl	84-15-1	8.18E-05	mg/Rm3	ESDM Report	1.83E-06	3.66E-06	—
Acetaldehyde	75-07-0	4.30E-09	kg/Mg	ESDM Report	1.15E-08	2.31E-08	—
Benzene	71-43-2	3.10E-02	mg/Rm3	ESDM Report	6.94E-04	1.39E-03	1.31E-03
Bromodichloromethane	75-27-4	1.50E-03	kg/Mg	ESDM Report	4.03E-03	8.05E-03	—
Bromoform	75-25-2	4.11E-04	kg/Mg	ESDM Report	1.10E-03	2.20E-03	—
Bromomethane	74-83-9	3.60E-02	mg/Rm3	ESDM Report	8.05E-04	1.61E-03	—
Carbon tetrachloride	56-23-5	2.56E-06	kg/Mg	ESDM Report	6.86E-06	1.37E-05	—
Chloroform	67-66-3	5.10E-04	mg/Rm3	ESDM Report	1.14E-05	2.28E-05	—
Dichlorodifluoromethane	75-71-8	8.71E-02	mg/Rm3	ESDM Report	1.95E-03	3.90E-03	—
Dichloroethene, 1,1 -	75-34-3	5.65E-04	mg/Rm3	ESDM Report	1.27E-05	2.53E-05	—
Dichloromethane	75-09-2	1.76E-01	mg/Rm3	ESDM Report	3.94E-03	7.88E-03	—
Ethylbenzene	100-41-4	1.04E-03	mg/Rm3	ESDM Report	2.32E-05	4.64E-05	—
Ethylene Dibromide	106-93-4	2.41E-06	kg/Mg	ESDM Report	6.46E-06	1.29E-05	—
Formaldehyde	50-00-0	4.75E-02	mg/Rm3	ESDM Report	1.06E-03	2.13E-03	—
Tetrachloroethene	127-18-4	5.67E-03	mg/Rm3	ESDM Report	1.27E-04	2.54E-04	—
Toluene	108-88-3	5.03E-02	mg/Rm3	ESDM Report	1.12E-03	2.25E-03	—
Trichloroethane, 1,1,1 -	71-55-6	1.43E-03	mg/Rm3	ESDM Report	3.19E-05	6.39E-05	—
Trichloroethene	86-42-0	4.92E-04	mg/Rm3	ESDM Report	1.10E-05	2.20E-05	—
Trichloroethylene, 1,1,2 -	79-01-6	4.92E-04	mg/Rm3	ESDM Report	1.10E-05	2.20E-05	—
Trichlorofluoromethane	75-69-4	1.72E-01	mg/Rm3	ESDM Report	3.85E-03	7.71E-03	—
Vinyl chloride	75-01-4	4.36E-02	mg/Rm3	ESDM Report	9.76E-04	1.95E-03	—
Xylenes, m-, p- and o-	1330-20-7	6.04E-01	mg/Rm3	ESDM Report	1.35E-02	2.70E-02	—

1. Concentrations are at reference conditions of 0% Moisture, 11% Oxygen and 298.15K temperature

Amanda Huxter
Covanta Durham York Renewable Energy LP

Project No. 19117255
February 19, 2019

APPENDIX B

Emission Summary Table by Scenario

Appendix B - 140,000 TPA
Emission Summary Table

Contaminant	CAS No.	Total Facility Emission Rate [g/s]	Averaging Period	MECP POI Limit [µg/m³]	Limiting Effect	Schedule	Source	Benchmark	Maximum POI Concentration [µg/m³]	Percentage of MECP Limit [%]	Background Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Percentage of MECP Limit [%]
1 – Methylnaphthalene	90-12-0	4.18E-06	24-hour	35.5	Health	Sch. 3	SL-JSL	B2	4.10E-06	Below B2	1.30E-03	1.30E-03	Below B2
1,2,4 – Trichlorobenzene	120-82-1	2.19E-06	24-hour	400	Health	Sch. 3	Guideline	B1	2.15E-06	<1%	5.00E-02	5.00E-02	<1%
1,2,4,5-Tetrachlorobenzene	95-94-3	2.19E-06	24-hour	1	Health	Sch. 3	SL-JSL	B2	2.15E-06	Below B2	—	2.15E-06	Below B2
1,2-Dichlorobenzene	95-50-1	8.72E-05	1-hour	30500	Health	Sch. 3	Guideline	B1	5.03E-04	<1%	3.00E-02	3.05E-02	<1%
2 – Methylnaphthalene	91-57-6	2.32E-05	24-hour	0.1	—	—	De Minimus	—	2.27E-05	Below De Minimus	2.19E-03	2.21E-03	Below De Minimus
2,3,4,6-Tetrachlorophenol	58-90-2	7.41E-06	24-hour	0.75	Health	Sch. 3	SL-JSL	B2	7.26E-06	Below B2	—	7.26E-06	Below B2
2,4,6-Trichlorophenol	88-06-2	2.23E-06	24-hour	1.5	Health	Sch. 3	SL-JSL	B2	2.19E-06	Below B2	—	2.19E-06	Below B2
2,4-Dichlorophenol	120-83-2	4.39E-06	24-hour	33.5	Health	Sch. 3	SL-JSL	B2	4.30E-06	Below B2	—	4.30E-06	Below B2
Acenaphthene	83-32-9	7.93E-07	24-hour	0.1	—	—	De Minimus	—	7.77E-07	Below De Minimus	1.25E-03	1.25E-03	Below De Minimus
Acenaphthylene	208-96-8	6.18E-07	24-hour	0.1	—	—	De Minimus	—	6.06E-07	Below De Minimus	3.09E-04	3.10E-04	Below De Minimus
Acetaldehyde	75-07-0	2.15E-08	24-hour	500	Health	Sch. 3	Standard	B1	2.11E-08	<1%	1.76E+00	1.76E+00	<1%
Acetaldehyde	75-07-0	2.15E-08	1/2-hour	500	Health	Sch. 3	Standard	B1	1.49E-07	<1%	5.21E+00	5.21E+00	1%
Acetaldehyde	75-07-0	2.15E-08	24-hour	5000	—	Sch. 6	URT	—	2.11E-08	Below URT	1.76E+00	1.76E+00	Below URT
Aluminum	7429-90-5	1.69E-03	24-hour	12	Health	Sch. 3	SL-JSL	B2	1.66E-03	Below B2	2.10E-01	2.12E-01	Below B2
Ammonia	7664-41-7	4.22E-01	24-hour	100	Health	Sch. 3	Standard	B1	4.13E-01	<1%	—	4.13E-01	<1%
Ammonia	7664-41-7	4.22E-01	24-hour	1000	—	Sch. 6	URT	—	4.13E-01	Below URT	—	4.13E-01	Below URT
Anthracene	120-12-7	1.73E-07	24-hour	0.1	—	—	De Minimus	—	1.70E-07	Below De Minimus	1.63E-04	1.63E-04	Below De Minimus
Antimony	7440-36-0	1.17E-04	24-hour	25	Health	Sch. 3	Standard	B1	1.14E-04	<1%	3.02E-03	3.13E-03	<1%
Arsenic	7440-38-2	1.79E-05	24-hour	0.3	Health	Sch. 3	Guideline	B1	1.75E-05	<1%	1.81E-03	1.83E-03	<1%
Barium	7440-39-3	9.01E-05	24-hour	10	Health	Sch. 3	Guideline	B1	8.83E-05	<1%	8.18E-03	8.27E-03	<1%
Benzene	71-43-2	1.17E-03	Annual	0.45	Health	Sch. 3	Standard	B1	3.71E-05	<1%	4.00E-02	4.00E-02	9%
Benzene	71-43-2	1.32E-03	24-hour	100	—	Sch. 6	URT	—	1.29E-03	Below URT	1.18E+01	1.18E+01	Below URT
Benzene	71-43-2	1.17E-03	Annual	4.5	—	—	AAV	—	3.71E-05	<1%	4.00E-02	4.00E-02	1%
Benzo(a)anthracene	56-55-3	6.39E-08	24-hour	0.1	—	—	De Minimus	—	6.26E-08	Below De Minimus	6.77E-05	6.78E-05	Below De Minimus
Benzo(a)fluorene	238-84-6	1.18E-06	24-hour	0.1	—	—	De Minimus	—	1.15E-06	Below De Minimus	1.35E-04	1.36E-04	Below De Minimus
Benzo(a)pyrene	50-32-8	1.30E-07	Annual	0.00001	Health	Sch. 3	Standard	B1	4.12E-09	<1%	5.63E-05	5.63E-05	563%
Benzo(a)pyrene	50-32-8	1.47E-07	24-hour	0.005	—	Sch. 6	URT	—	1.44E-07	Below URT	6.77E-05	6.78E-05	Below URT
Benzo(a)pyrene	50-32-8	1.30E-07	Annual	0.0001	—	—	AAV	—	4.12E-09	<1%	5.63E-05	5.63E-05	56%
Benzo(b)fluoranthene	205-99-2	1.63E-07	24-hour	0.1	—	—	De Minimus	—	1.60E-07	Below De Minimus	1.42E-04	1.42E-04	Below De Minimus
Benzo(b)fluorene	243-17-4	8.06E-07	24-hour	0.1	—	—	De Minimus	—	7.90E-07	Below De Minimus	1.35E-04	1.36E-04	Below De Minimus
Benzo(e)pyrene	192-97-2	3.71E-07	24-hour	0.1	—	—	De Minimus	—	3.64E-07	Below De Minimus	1.35E-04	1.35E-04	Below De Minimus
Benzo(ghi)perylene	191-24-2	1.76E-06	24-hour	0.1	—	—	De Minimus	—	1.72E-06	Below De Minimus	7.07E-05	7.24E-05	Below De Minimus
Benzo(k)fluoranthene	207-08-9	4.30E-08	24-hour	0.1	—	—	De Minimus	—	4.22E-08	Below De Minimus	6.77E-05	6.77E-05	Below De Minimus
Beryllium	7440-41-7	1.42E-05	24-hour	0.01	Health	Sch. 3	Standard	B1	1.39E-05	<1%	3.02E-04	3.16E-04	3%
Biphenyl	92-51-3	1.27E-04	24-hour	175	Health	Sch. 3	SL-JSL	B2	1.25E-04	Below B2	1.36E-03	1.48E-03	Below B2
Boron	7440-42-8	6.52E-03	24-hour	120	Particulate	Sch. 3	Standard	B1	6.39E-03	<1%	8.00E-02	8.64E-02	<1%
Bromodichloromethane	75-27-4	7.50E-03	24-hour	350	Health	Sch. 3	SL-JSL	B2	7.35E-03	Below B2	2.00E-02	2.73E-02	Below B2
Bromoform	75-25-2	2.05E-03	24-hour	55	Health	Sch. 3	Guideline	B1	2.01E-03	<1%	3.00E-02	3.20E-02	<1%
Bromomethane	74-83-9	1.53E-03	24-hour	1350	Health	Sch. 3	Guideline	B1	1.50E-03	<1%	9.00E-02	9.15E-02	<1%
Cadmium	7440-43-9	2.98E-04	24-hour	0.025	Health	Sch. 3	Standard	B1	2.92E-04	1%	6.04E-04	8.96E-04	4%
Cadmium	7440-43-9	2.98E-04	24-hour	0.25	—	Sch. 6	URT	—	2.92E-04	Below URT	6.04E-04	8.96E-04	Below URT
Carbon Monoxide	630-08-0	1.92E+00	1/2-hour	6000	Health	Sch. 3	Standard	B1	1.33E+01	<1%	1.26E+03	1.27E+03	21%
Carbon tetrachloride	56-23-5	1.28E-05	24-hour	2.4	Health	Sch. 3	Standard	B1	1.25E-05	<1%	7.40E-01	7.40E-01	31%
Carbon tetrachloride	56-23-5	1.28E-05	24-hour	24	—	Sch. 6	URT	—	1.25E-05	Below URT	7.40E-01	7.40E-01	Below URT
Chloroform	67-66-3	2.17E-05	24-hour	1	Health	Sch. 3	Standard	B1	2.13E-05	<1%	2.30E-01	2.30E-01	23%
Chloroform	67-66-3	2.17E-05	24-hour	100	—	Sch. 6	URT	—	2.13E-05	Below URT	2.30E-01	2.30E-01	Below URT
Chromium (hexavalent)	18540-29-9	1.21E-05	Annual	0.00014	Health	Sch. 3	Standard	B1	3.83E-07	<1%	—	3.83E-07	<1%
Chromium (hexavalent)	18540-29-9	1.36E-05	24-hour	0.07	—	Sch. 6	URT	—	1.34E-05	Below URT	—	1.34E-05	Below URT
Chromium (hexavalent)	18540-29-9	1.21E-05	Annual	0.0014	—	—	AAV	—	3.83E-07	0%	—	3.83E-07	0%

Appendix B - 140,000 TPA
Emission Summary Table

Contaminant	CAS No.	Total Facility Emission Rate [g/s]	Averaging Period	MECP POI Limit [µg/m³]	Limiting Effect	Schedule	Source	Benchmark	Maximum POI Concentration [µg/m³]	Percentage of MECP Limit [%]	Background Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Percentage of MECP Limit [%]
Chrysene	218-01-9	1.61E-07	24-hour	0.1	—	—	De Minimus	—	1.57E-07	Below De Minimus	9.64E-05	9.66E-05	Below De Minimus
Cobalt	7440-48-4	2.47E-04	24-hour	0.1	Health	Sch. 3	Guideline	B1	2.42E-04	<1%	6.04E-04	8.46E-04	<1%
Dibenzo(a,c)anthracene	215-58-7	1.14E-06	24-hour	0.1	—	—	De Minimus	—	1.12E-06	Below De Minimus	—	1.12E-06	Below De Minimus
Dibenzo(a,h)anthracene	53-70-3	5.16E-08	24-hour	0.1	—	—	De Minimus	—	5.05E-08	Below De Minimus	6.77E-05	6.78E-05	Below De Minimus
Dichlorodifluoromethane	75-71-8	3.71E-03	24-hour	500000	Health	Sch. 3	Guideline	B1	3.64E-03	<1%	3.23E+00	3.23E+00	<1%
Dichloroethene, 1,1 -	75-34-3	2.41E-05	24-hour	165	Health	Sch. 3	Standard	B1	2.36E-05	<1%	1.00E-02	1.00E-02	<1%
Dichloroethene, 1,1 -	75-34-3	2.41E-05	24-hour	1650	—	Sch. 6	URT	—	2.36E-05	Below URT	1.00E-02	1.00E-02	Below URT
Dichloromethane	75-09-2	7.50E-03	24-hour	220	Health	Sch. 3	Standard	B1	7.35E-03	<1%	1.27E+00	1.28E+00	<1%
Dichloromethane	75-09-2	7.50E-03	24-hour	22000	—	Sch. 6	URT	—	7.35E-03	Below URT	1.27E+00	1.28E+00	Below URT
Dioxins, Furans and Dioxin- like PCBs	N/A -6	0.0026 µg TEQ/s	24-hour	0.1 pg TEQ/m³	Health	Sch. 3	Guideline	B1	0.0025 pg TEQ/m³	3%	0.0237 pg TEQ/m³	0.0262 pg TEQ/m³	26%
Ethylbenzene	100-41-4	4.42E-05	24-hour	1000	Health	Sch. 3	Standard	B1	4.33E-05	<1%	1.24E+00	1.24E+00	<1%
Ethylbenzene	100-41-4	4.42E-05	10-minute	1900	Odour	Sch. 3	Guideline	B1	4.21E-04	<1%	5.00E+00	5.00E+00	<1%
Ethylbenzene	100-41-4	4.42E-05	24-hour	10000	—	Sch. 6	URT	—	4.33E-05	Below URT	1.24E+00	1.24E+00	Below URT
Ethylene Dibromide	106-93-4	1.20E-05	24-hour	3	Health	Sch. 3	Guideline	B1	1.18E-05	<1%	5.20E-03	5.21E-03	<1%
Fluoranthene	206-44-0	1.77E-06	24-hour	0.1	—	—	De Minimus	—	1.74E-06	Below De Minimus	6.01E-04	6.03E-04	Below De Minimus
Fluorine	86-73-7	1.33E-06	24-hour	0.1	—	—	De Minimus	—	1.31E-06	Below De Minimus	—	1.31E-06	Below De Minimus
Formaldehyde	50-00-0	2.02E-03	24-hour	65	Health	Sch. 3	Standard	B1	1.98E-03	<1%	3.38E+00	3.38E+00	5%
Hexachlorobenzene	118-74-1	2.19E-06	24-hour	0.011	Health	Sch. 3	SL-JSL	B2	2.15E-06	Below B2	6.25E-05	6.47E-05	Below B2
Hydrogen Chloride	7647-01-0	3.84E-01	24-hour	20	Health	Sch. 3	Standard	B1	3.76E-01	2%	—	3.76E-01	2%
Hydrogen Chloride	7647-01-0	3.84E-01	24-hour	200	—	Sch. 6	URT	—	3.76E-01	Below URT	—	3.76E-01	Below URT
Hydrogen Fluoride	7664-39-3	3.84E-02	24-hour	1.72	Vegetation	Sch. 3	Standard	B1	3.76E-02	2%	—	3.76E-02	2%
Hydrogen Fluoride	7664-39-3	3.84E-02	30-day	0.69	Vegetation	Sch. 3	Standard	B1	4.53E-03	<1%	—	4.53E-03	<1%
Indeno(1,2,3 – cd)pyrene	193-39-5	3.21E-07	24-hour	0.1	—	—	De Minimus	—	3.15E-07	Below De Minimus	6.77E-05	6.80E-05	Below De Minimus
Lead	7439-92-1	2.13E-03	24-hour	0.5	Health	Sch. 3	Standard	B1	2.09E-03	<1%	4.98E-03	7.07E-03	1%
Lead	7439-92-1	2.13E-03	30-day	0.2	Health	Sch. 3	Standard	B1	2.52E-04	<1%	1.92E-03	2.17E-03	1%
Lead	7439-92-1	2.13E-03	24-hour	2	—	Sch. 6	URT	—	2.09E-03	Below URT	4.98E-03	7.07E-03	Below URT
Mercury	7439-97-6	6.39E-04	24-hour	2	Health	Sch. 3	Standard	B1	6.26E-04	<1%	—	6.26E-04	<1%
Naphthalene	91-20-3	1.80E-05	24-hour	22.5	Health	Sch. 3	Guideline	B1	1.77E-05	<1%	2.43E-03	2.45E-03	<1%
Naphthalene	91-20-3	1.80E-05	10-minute	50	Odour	Sch. 3	Guideline	B1	1.72E-04	<1%	9.77E-03	9.94E-03	<1%
Nickel	7440-02-0	3.30E-03	Annual	0.04	Health	Sch. 3	Standard	B1	1.04E-04	<1%	8.59E-04	9.63E-04	2%
Nickel	7440-02-0	3.71E-03	24-hour	2	—	Sch. 6	URT	—	3.64E-03	Below URT	4.49E-03	8.13E-03	Below URT
Nickel	7440-02-0	3.30E-03	Annual	0.4	—	—	AAV	—	1.04E-04	0%	2.24E-03	2.34E-03	1%
Nitrogen Oxides	10102-44-0	5.14E+00	24-hour	200	Health	Sch. 3	Standard	B1	5.04E+00	3%	5.82E+01	6.32E+01	32%
Nitrogen Oxides	10102-44-0	5.14E+00	1-hour	400	Health	Sch. 3	Standard	B1	2.97E+01	7%	6.46E+01	9.43E+01	24%
O-terphenyl	84-15-1	3.49E-06	24-hour	0.1	—	—	De Minimus	—	3.42E-06	Below De Minimus	1.35E-04	1.38E-04	Below De Minimus
Pentachlorobenzene	608-93-5	5.77E-06	24-hour	80	Health	Sch. 3	SL-JSL	B2	5.65E-06	Below B2	—	5.65E-06	Below B2
Pentachlorophenol	87-86-5	8.79E-06	24-hour	20	Health	Sch. 3	Guideline	B1	8.61E-06	<1%	8.76E-04	8.85E-04	<1%
Perylene	198-55-0	6.44E-08	24-hour	0.1	—	—	De Minimus	—	6.31E-08	Below De Minimus	1.35E-04	1.35E-04	Below De Minimus
Phenanthrene	85-01-8	4.03E-06	24-hour	0.1	—	—	De Minimus	—	3.95E-06	Below De Minimus	2.57E-03	2.57E-03	Below De Minimus
Phosphorus	7723-14-0	1.96E-03	24-hour	0.5	Health	Sch. 3	SL-MD	B2	1.92E-03	Below B2	7.00E-02	7.19E-02	Below B2
PM_{10}	N/A -3	9.55E-01	24-hour	50	Particulate	—	AAQC	—	1.05E+00	2%	—	1.05E+00	2%
$PM_{2.5}$	N/A -4	8.95E-01	24-hour	30	Particulate	—	AAQC	—	9.87E-01	3%	2.04E+01	2.14E+01	71%
Polychlorinated Biphenyls (PCB)	N/A -7	3.08E-06	24-hour	0.1	—	—	De Minimus	—	3.02E-06	Below De Minimus	4.20E-05	4.50E-05	Below De Minimus
Pyrene	129-00-0	2.14E-06	24-hour	0.1	—	—	De Minimus	—	2.10E-06	Below De Minimus	2.83E-04	2.85E-04	Below De Minimus
Selenium	7782-49-2	2.05E-05	24-hour	10	Health	Sch. 3	Guideline	B1	2.00E-05	<1%	3.02E-03	3.04E-03	<1%
Silver	7440-22-4	1.43E-04	24-hour	1	Health	Sch. 3	Standard	B1	1.40E-04	<1%	3.42E-04	4.82E-04	<1%
Sulphur Dioxide	7446-09-5	1.49E+00	24-hour	275	Health & Vegetation	Sch. 3	Standard	B1	1.46E+00	<1%	1.93E+01	2.08E+01	8%
Sulphur Dioxide	7446-09-5	1.49E+00	1-hour	690	Health & Vegetation	Sch. 3	Standard	B1	8.62E+00	1%	1.95E+01	2.81E+01	4%
Sulphur Dioxide	7446-09-5	1.49E+00	1-hour	100	Health & Vegetation	Sch. 3	Standard	B1	8.62E+00	9%	1.95E+01	2.81E+01	28%

Appendix B - 140,000 TPA
Emission Summary Table

Contaminant	CAS No.	Total Facility Emission Rate [g/s]	Averaging Period	MECP POI Limit [µg/m³]	Limiting Effect	Schedule	Source	Benchmark	Maximum POI Concentration [µg/m³]	Percentage of MECP Limit [%]	Background Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Percentage of MECP Limit [%]
Sulphur Dioxide	7446-09-5	1.33E+00	Annual	10	Health & Vegetation	Sch. 3	Standard	B1	4.20E-02	<1%	6.03E+00	6.07E+00	61%
Sulphur Dioxide	7446-09-5	1.49E+00	1-hour	690	—	Sch. 6	URT	—	8.62E+00	Below URT	1.95E+01	2.81E+01	Below URT
Tetrachloroethene	127-18-4	2.42E-04	24-hour	360	Health	Sch. 3	Standard	B1	2.37E-04	<1%	4.90E-01	4.90E-01	<1%
Tetrachloroethene	127-18-4	2.42E-04	24-hour	3600	—	Sch. 6	URT	—	2.37E-04	Below URT	4.90E-01	4.90E-01	Below URT
Tetralin	119-64-2	2.12E-05	24-hour	151.5	Health	Sch. 3	SL-JSL	B2	2.08E-05	Below B2	1.35E-04	1.56E-04	Below B2
Thallium	7440-28-0	1.66E-03	24-hour	0.5	Health	Sch. 3	SL-JSL	B2	1.63E-03	Below B2	—	1.63E-03	Below B2
Tin	7440-31-5	7.50E-04	24-hour	10	Health	Sch. 3	Standard	B1	7.35E-04	<1%	3.02E-03	3.75E-03	<1%
Toluene	108-88-3	2.14E-03	24-hour	2000	Odour	Sch. 3	Guideline	B1	2.10E-03	<1%	9.47E+00	9.47E+00	<1%
Total Chromium (and compounds)	7440-47-3	9.59E-05	24-hour	0.5	Health	Sch. 3	Standard	B1	9.40E-05	<1%	2.76E-03	2.85E-03	<1%
Total Chromium (and compounds)	7440-47-3	9.59E-05	24-hour	5	—	Sch. 6	URT	—	9.40E-05	Below URT	2.76E-03	2.85E-03	Below URT
Total Particulate Matter	N/A -1	9.55E-01	24-hour	120	Particulate	Sch. 3	Guideline	B1	1.05E+00	<1%	3.54E+01	3.64E+01	30%
Trichloroethane, 1,1,1 -	71-55-6	6.08E-05	24-hour	115000	Health	Sch. 3	Standard	B1	5.96E-05	<1%	1.10E-01	1.10E-01	<1%
Trichloroethene	86-42-0	2.10E-05	24-hour	0.1	—	—	De Minimus	—	2.05E-05	Below De Minimus	5.40E-01	5.40E-01	Above De Minimus
Trichloroethylene, 1,1,2 -	79-01-6	2.10E-05	24-hour	12	Health	Sch. 3	Standard	B1	2.05E-05	<1%	—	2.05E-05	<1%
Trichloroethylene, 1,1,2 -	79-01-6	2.10E-05	24-hour	1200	—	Sch. 6	URT	—	2.05E-05	Below URT	—	2.05E-05	Below URT
Trichlorofluoromethane	75-69-4	7.34E-03	24-hour	6000	Health	Sch. 3	Guideline	B1	7.19E-03	<1%	2.15E+00	2.16E+00	<1%
Vanadium	7440-62-2	4.96E-05	24-hour	2	Health	Sch. 3	Standard	B1	4.86E-05	<1%	1.55E-03	1.60E-03	<1%
Vinyl chloride	75-01-4	1.86E-03	24-hour	1	Health	Sch. 3	Standard	B1	1.82E-03	<1%	5.88E-03	7.70E-03	<1%
Vinyl chloride	75-01-4	1.86E-03	24-hour	100	—	Sch. 6	URT	—	1.82E-03	Below URT	5.88E-03	7.70E-03	Below URT
Xylenes, m-, p- and o-	1330-20-7	2.57E-02	24-hour	730	Health	Sch. 3	Standard	B1	2.52E-02	<1%	4.83E+00	4.86E+00	<1%
Xylenes, m-, p- and o-	1330-20-7	2.57E-02	10-minute	3000	Odour	Sch. 3	Guideline	B1	2.45E-01	<1%	1.94E+01	1.96E+01	<1%
Xylenes, m-, p- and o-	1330-20-7	2.57E-02	24-hour	7300	—	Sch. 6	URT	—	2.52E-02	Below URT	4.83E+00	4.86E+00	Below URT
Zinc	7440-66-6	8.50E-03	24-hour	120	Particulate	Sch. 3	Standard	B1	8.33E-03	<1%	4.00E-02	4.83E-02	<1%

Appendix B - 160,000 TPA
Emission Summary Table

Contaminant	CAS No.	Total Facility Emission Rate [g/s]	Averaging Period	MECP POI Limit [µg/m³]	Limiting Effect	Schedule	Source	Benchmark	Maximum POI Concentration [µg/m³]	Percentage of MECP Limit [%]	Background Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Percentage of MECP Limit [%]
1 – Methylnaphthalene	90-12-0	4.39E-06	24-hour	35.5	Health	Sch. 3	SL-JSL	B2	3.78E-06	Below B2	1.30E-03	1.30E-03	Below B2
1,2,4 – Trichlorobenzene	120-82-1	2.30E-06	24-hour	400	Health	Sch. 3	Guideline	B1	1.98E-06	<1%	5.00E-02	5.00E-02	<1%
1,2,4,5-Tetrachlorobenzene	95-94-3	2.30E-06	24-hour	1	Health	Sch. 3	SL-JSL	B2	1.98E-06	Below B2	—	1.98E-06	Below B2
1,2-Dichlorobenzene	95-50-1	9.15E-05	1-hour	30500	Health	Sch. 3	Guideline	B1	5.28E-04	<1%	3.00E-02	3.05E-02	<1%
2 – Methylnaphthalene	91-57-6	2.43E-05	24-hour	0.1	—	—	De Minimus	—	2.10E-05	Below De Minimus	2.19E-03	2.21E-03	Below De Minimus
2,3,4,6-Tetrachlorophenol	58-90-2	7.78E-06	24-hour	0.75	Health	Sch. 3	SL-JSL	B2	6.70E-06	Below B2	—	6.70E-06	Below B2
2,4,6-Trichlorophenol	88-06-2	2.34E-06	24-hour	1.5	Health	Sch. 3	SL-JSL	B2	2.02E-06	Below B2	—	2.02E-06	Below B2
2,4-Dichlorophenol	120-83-2	4.61E-06	24-hour	33.5	Health	Sch. 3	SL-JSL	B2	3.97E-06	Below B2	—	3.97E-06	Below B2
Acenaphthene	83-32-9	8.32E-07	24-hour	0.1	—	—	De Minimus	—	7.17E-07	Below De Minimus	1.25E-03	1.25E-03	Below De Minimus
Acenaphthylene	208-96-8	6.49E-07	24-hour	0.1	—	—	De Minimus	—	5.59E-07	Below De Minimus	3.09E-04	3.10E-04	Below De Minimus
Acetaldehyde	75-07-0	2.31E-08	24-hour	500	Health	Sch. 3	Standard	B1	1.99E-08	<1%	1.76E+00	1.76E+00	<1%
Acetaldehyde	75-07-0	2.31E-08	1/2-hour	500	Health	Sch. 3	Standard	B1	1.60E-07	<1%	5.21E+00	5.21E+00	1%
Acetaldehyde	75-07-0	2.31E-08	24-hour	5000	—	Sch. 6	URT	—	1.99E-08	Below URT	1.76E+00	1.76E+00	Below URT
Aluminum	7429-90-5	1.78E-03	24-hour	12	Health	Sch. 3	SL-JSL	B2	1.53E-03	Below B2	2.10E-01	2.12E-01	Below B2
Ammonia	7664-41-7	4.43E-01	24-hour	100	Health	Sch. 3	Standard	B1	3.82E-01	<1%	—	3.82E-01	<1%
Ammonia	7664-41-7	4.43E-01	24-hour	1000	—	Sch. 6	URT	—	3.82E-01	Below URT	—	3.82E-01	Below URT
Anthracene	120-12-7	1.82E-07	24-hour	0.1	—	—	De Minimus	—	1.57E-07	Below De Minimus	1.63E-04	1.63E-04	Below De Minimus
Antimony	7440-36-0	1.23E-04	24-hour	25	Health	Sch. 3	Standard	B1	1.06E-04	<1%	3.02E-03	3.13E-03	<1%
Arsenic	7440-38-2	1.88E-05	24-hour	0.3	Health	Sch. 3	Guideline	B1	1.62E-05	<1%	1.81E-03	1.83E-03	<1%
Barium	7440-39-3	9.46E-05	24-hour	10	Health	Sch. 3	Guideline	B1	8.15E-05	<1%	8.18E-03	8.26E-03	<1%
Benzene	71-43-2	1.31E-03	Annual	0.45	Health	Sch. 3	Standard	B1	3.77E-05	<1%	4.00E-02	4.00E-02	9%
Benzene	71-43-2	1.39E-03	24-hour	100	—	Sch. 6	URT	—	1.19E-03	Below URT	1.18E+01	1.18E+01	Below URT
Benzene	71-43-2	1.31E-03	Annual	4.5	—	—	AAV	—	3.77E-05	<1%	4.00E-02	4.00E-02	1%
Benzo(a)anthracene	56-55-3	6.71E-08	24-hour	0.1	—	—	De Minimus	—	5.78E-08	Below De Minimus	6.77E-05	6.78E-05	Below De Minimus
Benzo(a)fluorene	238-84-6	1.24E-06	24-hour	0.1	—	—	De Minimus	—	1.07E-06	Below De Minimus	1.35E-04	1.36E-04	Below De Minimus
Benzo(a)pyrene	50-32-8	1.46E-07	Annual	0.00001	Health	Sch. 3	Standard	B1	4.18E-09	<1%	5.63E-05	5.63E-05	563%
Benzo(a)pyrene	50-32-8	1.54E-07	24-hour	0.005	—	Sch. 6	URT	—	1.33E-07	Below URT	6.77E-05	6.78E-05	Below URT
Benzo(a)pyrene	50-32-8	1.46E-07	Annual	0.0001	—	—	AAV	—	4.18E-09	<1%	5.63E-05	5.63E-05	56%
Benzo(b)fluoranthene	205-99-2	1.71E-07	24-hour	0.1	—	—	De Minimus	—	1.48E-07	Below De Minimus	1.42E-04	1.42E-04	Below De Minimus
Benzo(b)fluorene	243-17-4	8.46E-07	24-hour	0.1	—	—	De Minimus	—	7.29E-07	Below De Minimus	1.35E-04	1.36E-04	Below De Minimus
Benzo(e)pyrene	192-97-2	3.90E-07	24-hour	0.1	—	—	De Minimus	—	3.36E-07	Below De Minimus	1.35E-04	1.35E-04	Below De Minimus
Benzo(ghi)perylene	191-24-2	1.85E-06	24-hour	0.1	—	—	De Minimus	—	1.59E-06	Below De Minimus	7.07E-05	7.23E-05	Below De Minimus
Benzo(k)fluoranthene	207-08-9	4.52E-08	24-hour	0.1	—	—	De Minimus	—	3.89E-08	Below De Minimus	6.77E-05	6.77E-05	Below De Minimus
Beryllium	7440-41-7	1.49E-05	24-hour	0.01	Health	Sch. 3	Standard	B1	1.28E-05	<1%	3.02E-04	3.15E-04	3%
Biphenyl	92-51-3	1.33E-04	24-hour	175	Health	Sch. 3	SL-JSL	B2	1.15E-04	Below B2	1.36E-03	1.47E-03	Below B2
Boron	7440-42-8	6.85E-03	24-hour	120	Particulate	Sch. 3	Standard	B1	5.90E-03	<1%	8.00E-02	8.59E-02	<1%
Bromodichloromethane	75-27-4	8.05E-03	24-hour	350	Health	Sch. 3	SL-JSL	B2	6.93E-03	Below B2	2.00E-02	2.69E-02	Below B2
Bromoform	75-25-2	2.20E-03	24-hour	55	Health	Sch. 3	Guideline	B1	1.90E-03	<1%	3.00E-02	3.19E-02	<1%
Bromomethane	74-83-9	1.61E-03	24-hour	1350	Health	Sch. 3	Guideline	B1	1.39E-03	<1%	9.00E-02	9.14E-02	<1%
Cadmium	7440-43-9	3.13E-04	24-hour	0.025	Health	Sch. 3	Standard	B1	2.70E-04	1%	6.04E-04	8.74E-04	3%
Cadmium	7440-43-9	3.13E-04	24-hour	0.25	—	Sch. 6	URT	—	2.70E-04	Below URT	6.04E-04	8.74E-04	Below URT
Carbon Monoxide	630-08-0	2.01E+00	1/2-hour	6000	Health	Sch. 3	Standard	B1	1.39E+01	<1%	1.26E+03	1.27E+03	21%
Carbon tetrachloride	56-23-5	1.37E-05	24-hour	2.4	Health	Sch. 3	Standard	B1	1.18E-05	<1%	7.40E-01	7.40E-01	31%
Carbon tetrachloride	56-23-5	1.37E-05	24-hour	24	—	Sch. 6	URT	—	1.18E-05	Below URT	7.40E-01	7.40E-01	Below URT
Chloroform	67-66-3	2.28E-05	24-hour	1	Health	Sch. 3	Standard	B1	1.97E-05	<1%	2.30E-01	2.30E-01	23%
Chloroform	67-66-3	2.28E-05	24-hour	100	—	Sch. 6	URT	—	1.97E-05	Below URT	2.30E-01	2.30E-01	Below URT
Chromium (hexavalent)	18540-29-9	1.35E-05	Annual	0.00014	Health	Sch. 3	Standard	B1	3.89E-07	<1%	—	3.89E-07	<1%
Chromium (hexavalent)	18540-29-9	1.43E-05	24-hour	0.07	—	Sch. 6	URT	—	1.23E-05	Below URT	—	1.23E-05	Below URT

Appendix B - 160,000 TPA
Emission Summary Table

Contaminant	CAS No.	Total Facility Emission Rate [g/s]	Averaging Period	MECP POI Limit [µg/m³]	Limiting Effect	Schedule	Source	Benchmark	Maximum POI Concentration [µg/m³]	Percentage of MECP Limit [%]	Background Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Percentage of MECP Limit [%]
Chromium (hexavalent)	18540-29-9	1.35E-05	Annual	0.0014	—	—	AAV	—	3.89E-07	0%	—	3.89E-07	0%
Chrysene	218-01-9	1.69E-07	24-hour	0.1	—	—	De Minimus	—	1.45E-07	Below De Minimus	9.64E-05	9.65E-05	Below De Minimus
Cobalt	7440-48-4	2.59E-04	24-hour	0.1	Health	Sch. 3	Guideline	B1	2.23E-04	<1%	6.04E-04	8.27E-04	<1%
Dibenzo(a,c)anthracene	215-58-7	1.20E-06	24-hour	0.1	—	—	De Minimus	—	1.03E-06	Below De Minimus	—	1.03E-06	Below De Minimus
Dibenzo(a,h)anthracene	53-70-3	5.41E-08	24-hour	0.1	—	—	De Minimus	—	4.66E-08	Below De Minimus	6.77E-05	6.77E-05	Below De Minimus
Dichlorodifluoromethane	75-71-8	3.90E-03	24-hour	500000	Health	Sch. 3	Guideline	B1	3.36E-03	<1%	3.23E+00	3.23E+00	<1%
Dichloroethene, 1,1 -	75-34-3	2.53E-05	24-hour	165	Health	Sch. 3	Standard	B1	2.18E-05	<1%	1.00E-02	1.00E-02	<1%
Dichloroethene, 1,1 -	75-34-3	2.53E-05	24-hour	1650	—	Sch. 6	URT	—	2.18E-05	Below URT	1.00E-02	1.00E-02	Below URT
Dichloromethane	75-09-2	7.88E-03	24-hour	220	Health	Sch. 3	Standard	B1	6.78E-03	<1%	1.27E+00	1.28E+00	<1%
Dichloromethane	75-09-2	7.88E-03	24-hour	22000	—	Sch. 6	URT	—	6.78E-03	Below URT	1.27E+00	1.28E+00	Below URT
Dioxins, Furans and Dioxin- like PCBs	N/A -6	2.68E-03	24-hour	0.1 pg TEQ/m³	Health	Sch. 3	Guideline	B1	0.0023 pg TEQ/m³	2%	0.0237 pg TEQ/m³	0.026 pg TEQ/m³	26%
Ethylbenzene	100-41-4	4.64E-05	24-hour	1000	Health	Sch. 3	Standard	B1	3.99E-05	<1%	1.24E+00	1.24E+00	<1%
Ethylbenzene	100-41-4	4.64E-05	10-minute	1900	Odour	Sch. 3	Guideline	B1	4.42E-04	<1%	5.00E+00	5.00E+00	<1%
Ethylbenzene	100-41-4	4.64E-05	24-hour	10000	—	Sch. 6	URT	—	3.99E-05	Below URT	1.24E+00	1.24E+00	Below URT
Ethylene Dibromide	106-93-4	1.29E-05	24-hour	3	Health	Sch. 3	Guideline	B1	1.11E-05	<1%	5.20E-03	5.21E-03	<1%
Fluoranthene	206-44-0	1.86E-06	24-hour	0.1	—	—	De Minimus	—	1.60E-06	Below De Minimus	6.01E-04	6.03E-04	Below De Minimus
Fluorine	86-73-7	1.40E-06	24-hour	0.1	—	—	De Minimus	—	1.21E-06	Below De Minimus	—	1.21E-06	Below De Minimus
Formaldehyde	50-00-0	2.13E-03	24-hour	65	Health	Sch. 3	Standard	B1	1.83E-03	<1%	3.38E+00	3.38E+00	5%
Hexachlorobenzene	118-74-1	2.30E-06	24-hour	0.011	Health	Sch. 3	SL-JSL	B2	1.98E-06	Below B2	6.25E-05	6.45E-05	Below B2
Hydrogen Chloride	7647-01-0	4.03E-01	24-hour	20	Health	Sch. 3	Standard	B1	3.47E-01	2%	—	3.47E-01	2%
Hydrogen Chloride	7647-01-0	4.03E-01	24-hour	200	—	Sch. 6	URT	—	3.47E-01	Below URT	—	3.47E-01	Below URT
Hydrogen Fluoride	7664-39-3	4.03E-02	24-hour	1.72	Vegetation	Sch. 3	Standard	B1	3.47E-02	2%	—	3.47E-02	2%
Hydrogen Fluoride	7664-39-3	4.03E-02	30-day	0.69	Vegetation	Sch. 3	Standard	B1	4.32E-03	<1%	—	4.32E-03	<1%
Indeno(1,2,3 – cd)pyrene	193-39-5	3.37E-07	24-hour	0.1	—	—	De Minimus	—	2.91E-07	Below De Minimus	6.77E-05	6.80E-05	Below De Minimus
Lead	7439-92-1	2.24E-03	24-hour	0.5	Health	Sch. 3	Standard	B1	1.93E-03	<1%	4.98E-03	6.91E-03	1%
Lead	7439-92-1	2.24E-03	30-day	0.2	Health	Sch. 3	Standard	B1	2.40E-04	<1%	1.92E-03	2.16E-03	1%
Lead	7439-92-1	2.24E-03	24-hour	2	—	Sch. 6	URT	—	1.93E-03	Below URT	4.98E-03	6.91E-03	Below URT
Mercury	7439-97-6	6.71E-04	24-hour	2	Health	Sch. 3	Standard	B1	5.78E-04	<1%	—	5.78E-04	<1%
Naphthalene	91-20-3	1.89E-05	24-hour	22.5	Health	Sch. 3	Guideline	B1	1.63E-05	<1%	2.43E-03	2.45E-03	<1%
Naphthalene	91-20-3	1.89E-05	10-minute	50	Odour	Sch. 3	Guideline	B1	1.80E-04	<1%	9.77E-03	9.95E-03	<1%
Nickel	7440-02-0	3.69E-03	Annual	0.04	Health	Sch. 3	Standard	B1	1.06E-04	<1%	8.59E-04	9.65E-04	2%
Nickel	7440-02-0	3.90E-03	24-hour	2	—	Sch. 6	URT	—	3.36E-03	Below URT	4.49E-03	7.85E-03	Below URT
Nickel	7440-02-0	3.69E-03	Annual	0.4	—	—	AAV	—	1.06E-04	<1%	2.24E-03	2.35E-03	1%
Nitrogen Oxides	10102-44-0	5.41E+00	24-hour	200	Health	Sch. 3	Standard	B1	4.66E+00	2%	5.82E+01	6.29E+01	31%
Nitrogen Oxides	10102-44-0	5.41E+00	1-hour	400	Health	Sch. 3	Standard	B1	3.13E+01	8%	6.46E+01	9.59E+01	24%
O-terphenyl	84-15-1	3.66E-06	24-hour	0.1	—	—	De Minimus	—	3.15E-06	Below De Minimus	1.35E-04	1.38E-04	Below De Minimus
Pentachlorobenzene	608-93-5	6.05E-06	24-hour	80	Health	Sch. 3	SL-JSL	B2	5.21E-06	Below B2	—	5.21E-06	Below B2
Pentachlorophenol	87-86-5	9.23E-06	24-hour	20	Health	Sch. 3	Guideline	B1	7.95E-06	<1%	8.76E-04	8.84E-04	<1%
Perylene	198-55-0	6.76E-08	24-hour	0.1	—	—	De Minimus	—	5.82E-08	Below De Minimus	1.35E-04	1.35E-04	Below De Minimus
Phenanthrene	85-01-8	4.23E-06	24-hour	0.1	—	—	De Minimus	—	3.65E-06	Below De Minimus	2.57E-03	2.57E-03	Below De Minimus
Phosphorus	7723-14-0	2.06E-03	24-hour	0.5	Health	Sch. 3	SL-MD	B2	1.77E-03	Below B2	7.00E-02	7.18E-02	Below B2
PM_{10}	N/A -3	1.00E+00	24-hour	50	Particulate	—	AAQC	—	9.74E-01	2%	—	9.74E-01	2%
$PM_{2.5}$	N/A -4	9.40E-01	24-hour	30	Particulate	—	AAQC	—	9.20E-01	3%	2.04E+01	2.13E+01	71%
Polychlorinated Biphenyls (PCB)	N/A -7	3.23E-06	24-hour	0.1	—	—	De Minimus	—	2.78E-06	Below De Minimus	4.20E-05	4.48E-05	Below De Minimus
Pyrene	129-00-0	2.25E-06	24-hour	0.1	—	—	De Minimus	—	1.93E-06	Below De Minimus	2.83E-04	2.85E-04	Below De Minimus
Selenium	7782-49-2	2.15E-05	24-hour	10	Health	Sch. 3	Guideline	B1	1.85E-05	<1%	3.02E-03	3.04E-03	<1%
Silver	7440-22-4	1.50E-04	24-hour	1	Health	Sch. 3	Standard	B1	1.29E-04	<1%	3.42E-04	4.71E-04	<1%
Sulphur Dioxide	7446-09-5	1.57E+00	24-hour	275	ealth & Vegetatio	Sch. 3	Standard	B1	1.35E+00	<1%	1.93E+01	2.07E+01	8%

Attachment #1 to Report #2019-WR-4

Appendix B - 160,000 TPA
Emission Summary Table

Contaminant	CAS No.	Total Facility Emission Rate [g/s]	Averaging Period	MECP POI Limit [µg/m³]	Limiting Effect	Schedule	Source	Benchmark	Maximum POI Concentration [µg/m³]	Percentage of MECP Limit [%]	Background Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Percentage of MECP Limit [%]
Sulphur Dioxide	7446-09-5	1.57E+00	1-hour	690	ealth & Vegetatio	Sch. 3	Standard	B1	9.05E+00	1%	1.95E+01	2.86E+01	4%
Sulphur Dioxide	7446-09-5	1.57E+00	1-hour	100	ealth & Vegetatio	Sch. 3	Standard	B1	9.05E+00	9%	1.95E+01	2.86E+01	29%
Sulphur Dioxide	7446-09-5	1.48E+00	Annual	10	ealth & Vegetatio	Sch. 3	Standard	B1	4.26E-02	<1%	6.03E+00	6.07E+00	61%
Sulphur Dioxide	7446-09-5	1.57E+00	1-hour	690	—	Sch. 6	URT	—	9.05E+00	Below URT	1.95E+01	2.86E+01	Below URT
Tetrachloroethene	127-18-4	2.54E-04	24-hour	360	Health	Sch. 3	Standard	B1	2.19E-04	<1%	4.90E-01	4.90E-01	<1%
Tetrachloroethene	127-18-4	2.54E-04	24-hour	3600	—	Sch. 6	URT	—	2.19E-04	Below URT	4.90E-01	4.90E-01	Below URT
Tetralin	119-64-2	2.23E-05	24-hour	151.5	Health	Sch. 3	SL-JSL	B2	1.92E-05	Below B2	1.35E-04	1.54E-04	Below B2
Thallium	7440-28-0	1.75E-03	24-hour	0.5	Health	Sch. 3	SL-JSL	B2	1.50E-03	Below B2	—	1.50E-03	Below B2
Tin	7440-31-5	7.87E-04	24-hour	10	Health	Sch. 3	Standard	B1	6.78E-04	<1%	3.02E-03	3.70E-03	<1%
Toluene	108-88-3	2.25E-03	24-hour	2000	Odour	Sch. 3	Guideline	B1	1.94E-03	<1%	9.47E+00	9.47E+00	<1%
Total Chromium (and compounds)	7440-47-3	1.01E-04	24-hour	0.5	Health	Sch. 3	Standard	B1	8.67E-05	<1%	2.76E-03	2.85E-03	<1%
Total Chromium (and compounds)	7440-47-3	1.01E-04	24-hour	5	—	Sch. 6	URT	—	8.67E-05	Below URT	2.76E-03	2.85E-03	Below URT
Total Particulate Matter	N/A -1	1.00E+00	24-hour	120	Particulate	Sch. 3	Guideline	B1	9.74E-01	<1%	3.54E+01	3.64E+01	30%
Trichloroethane, 1,1,1 -	71-55-6	6.39E-05	24-hour	115000	Health	Sch. 3	Standard	B1	5.50E-05	<1%	1.10E-01	1.10E-01	<1%
Trichloroethene	86-42-0	2.20E-05	24-hour	0.1	—	—	De Minimus	—	1.89E-05	Below De Minimus	5.40E-01	5.40E-01	Above De Minimus
Trichloroethylene, 1,1,2 -	79-01-6	2.20E-05	24-hour	12	Health	Sch. 3	Standard	B1	1.89E-05	<1%	—	1.89E-05	<1%
Trichloroethylene, 1,1,2 -	79-01-6	2.20E-05	24-hour	1200	—	Sch. 6	URT	—	1.89E-05	Below URT	—	1.89E-05	Below URT
Trichlorofluoromethane	75-69-4	7.71E-03	24-hour	6000	Health	Sch. 3	Guideline	B1	6.64E-03	<1%	2.15E+00	2.16E+00	<1%
Vanadium	7440-62-2	5.20E-05	24-hour	2	Health	Sch. 3	Standard	B1	4.48E-05	<1%	1.55E-03	1.59E-03	<1%
Vinyl chloride	75-01-4	1.95E-03	24-hour	1	Health	Sch. 3	Standard	B1	1.68E-03	<1%	5.88E-03	7.56E-03	<1%
Vinyl chloride	75-01-4	1.95E-03	24-hour	100	—	Sch. 6	URT	—	1.68E-03	Below URT	5.88E-03	7.56E-03	Below URT
Xylenes, m-, p- and o-	1330-20-7	2.70E-02	24-hour	730	Health	Sch. 3	Standard	B1	2.33E-02	<1%	4.83E+00	4.85E+00	<1%
Xylenes, m-, p- and o-	1330-20-7	2.70E-02	10-minute	3000	Odour	Sch. 3	Guideline	B1	2.57E-01	<1%	1.94E+01	1.97E+01	<1%
Xylenes, m-, p- and o-	1330-20-7	2.70E-02	24-hour	7300	—	Sch. 6	URT	—	2.33E-02	Below URT	4.83E+00	4.85E+00	Below URT
Zinc	7440-66-6	8.93E-03	24-hour	120	Particulate	Sch. 3	Standard	B1	7.69E-03	<1%	4.00E-02	4.77E-02	<1%

Amanda Huxter
Covanta Durham York Renewable Energy LP

Project No. 19117255
February 19, 2019

APPENDIX C

Comparison of Predicted Concentrations

Appendix C
Comparion of Predicted Concentrations

Contaminant	CAS No.	Averaging Period	Background Concentration [µg/m³]	140,000 TPA			160,000 TPA			Percentage Change of Maximum POI Concentration [%]	Percentage Change of Maximum POI Concentration (Including Background) [%]
				Total Facility Emission Rate [g/s]	Maximum POI Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Total Facility Emission Rate [g/s]	Maximum POI Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]		
1 – Methylnaphthalene	90-12-0	24-hour	1.30E-03	4.18E-06	4.10E-06	1.30E-03	4.39E-06	3.78E-06	1.30E-03	-8%	0%
1,2,4 – Trichlorobenzene	120-82-1	24-hour	5.00E-02	2.19E-06	2.15E-06	5.00E-02	2.30E-06	1.98E-06	5.00E-02	-8%	0%
1,2,4,5-Tetrachlorobenzene	95-94-3	24-hour	—	2.19E-06	2.15E-06	2.15E-06	2.30E-06	1.98E-06	1.98E-06	-8%	—
1,2-Dichlorobenzene	95-50-1	1-hour	3.00E-02	8.72E-05	5.03E-04	3.05E-02	9.15E-05	5.28E-04	3.05E-02	5%	0%
2 – Methylnaphthalene	91-57-6	24-hour	2.19E-03	2.32E-05	2.27E-05	2.21E-03	2.43E-05	2.10E-05	2.21E-03	-8%	0%
2,3,4,6-Tetrachlorophenol	58-90-2	24-hour	—	7.41E-06	7.26E-06	7.26E-06	7.78E-06	6.70E-06	6.70E-06	-8%	—
2,4,6-Trichlorophenol	88-06-2	24-hour	—	2.23E-06	2.19E-06	2.19E-06	2.34E-06	2.02E-06	2.02E-06	-8%	—
2,4-Dichlorophenol	120-83-2	24-hour	—	4.39E-06	4.30E-06	4.30E-06	4.61E-06	3.97E-06	3.97E-06	-8%	—
Acenaphthene	83-32-9	24-hour	1.25E-03	7.93E-07	7.77E-07	1.25E-03	8.32E-07	7.17E-07	1.25E-03	-8%	0%
Acenaphthylene	208-96-8	24-hour	3.09E-04	6.18E-07	6.06E-07	3.10E-04	6.49E-07	5.59E-07	3.10E-04	-8%	0%
Acetaldehyde	75-07-0	24-hour	1.76E+00	2.15E-08	2.11E-08	1.76E+00	2.31E-08	1.99E-08	1.76E+00	-6%	0%
Acetaldehyde	75-07-0	1/2-hour	5.21E+00	2.15E-08	1.49E-07	5.21E+00	2.31E-08	1.60E-07	5.21E+00	7%	0%
Acetaldehyde	75-07-0	24-hour	1.76E+00	2.15E-08	2.11E-08	1.76E+00	2.31E-08	1.99E-08	1.76E+00	-6%	0%
Aluminum	7429-90-5	24-hour	2.10E-01	1.69E-03	1.66E-03	2.12E-01	1.78E-03	1.53E-03	2.12E-01	-8%	0%
Ammonia	7664-41-7	24-hour	—	4.22E-01	4.13E-01	4.13E-01	4.43E-01	3.82E-01	3.82E-01	-8%	—
Ammonia	7664-41-7	24-hour	—	4.22E-01	4.13E-01	4.13E-01	4.43E-01	3.82E-01	3.82E-01	-8%	—
Anthracene	120-12-7	24-hour	1.63E-04	1.73E-07	1.70E-07	1.63E-04	1.82E-07	1.57E-07	1.63E-04	-8%	0%
Antimony	7440-36-0	24-hour	3.02E-03	1.17E-04	1.14E-04	3.13E-03	1.23E-04	1.06E-04	3.13E-03	-8%	0%
Arsenic	7440-38-2	24-hour	1.81E-03	1.79E-05	1.75E-05	1.83E-03	1.88E-05	1.62E-05	1.83E-03	-8%	0%
Barium	7440-39-3	24-hour	8.18E-03	9.01E-05	8.83E-05	8.27E-03	9.46E-05	8.15E-05	8.26E-03	-8%	0%
Benzene	71-43-2	Annual	4.00E-02	1.17E-03	3.71E-05	4.00E-02	1.31E-03	3.77E-05	4.00E-02	2%	0%
Benzene	71-43-2	24-hour	1.18E+01	1.32E-03	1.29E-03	1.18E+01	1.39E-03	1.19E-03	1.18E+01	-8%	0%
Benzene	71-43-2	Annual	4.00E-02	1.17E-03	3.71E-05	4.00E-02	1.31E-03	3.77E-05	4.00E-02	2%	0%
Benzo(a)anthracene	56-55-3	24-hour	6.77E-05	6.39E-08	6.26E-08	6.78E-05	6.71E-08	5.78E-08	6.78E-05	-8%	0%
Benzo(a)fluorene	238-84-6	24-hour	1.35E-04	1.18E-06	1.15E-06	1.36E-04	1.24E-06	1.07E-06	1.36E-04	-8%	0%
Benzo(a)pyrene	50-32-8	Annual	5.63E-05	1.30E-07	4.12E-09	5.63E-05	1.46E-07	4.18E-09	5.63E-05	2%	0%
Benzo(a)pyrene	50-32-8	24-hour	6.77E-05	1.47E-07	1.44E-07	6.78E-05	1.54E-07	1.33E-07	6.78E-05	-8%	0%
Benzo(a)pyrene	50-32-8	Annual	5.63E-05	1.30E-07	4.12E-09	5.63E-05	1.46E-07	4.18E-09	5.63E-05	2%	0%
Benzo(b)fluoranthene	205-99-2	24-hour	1.42E-04	1.63E-07	1.60E-07	1.42E-04	1.71E-07	1.48E-07	1.42E-04	-8%	0%
Benzo(b)fluorene	243-17-4	24-hour	1.35E-04	8.06E-07	7.90E-07	1.36E-04	8.46E-07	7.29E-07	1.36E-04	-8%	0%
Benzo(e)pyrene	192-97-2	24-hour	1.35E-04	3.71E-07	3.64E-07	1.35E-04	3.90E-07	3.36E-07	1.35E-04	-8%	0%
Benzo(ghi)perylene	191-24-2	24-hour	7.07E-05	1.76E-06	1.72E-06	7.24E-05	1.85E-06	1.59E-06	7.23E-05	-8%	0%
Benzo(k)fluoranthene	207-08-9	24-hour	6.77E-05	4.30E-08	4.22E-08	6.77E-05	4.52E-08	3.89E-08	6.77E-05	-8%	0%
Beryllium	7440-41-7	24-hour	3.02E-04	1.42E-05	1.39E-05	3.16E-04	1.49E-05	1.28E-05	3.15E-04	-8%	0%
Biphenyl	92-51-3	24-hour	1.36E-03	1.27E-04	1.25E-04	1.48E-03	1.33E-04	1.15E-04	1.47E-03	-8%	-1%
Boron	7440-42-8	24-hour	8.00E-02	6.52E-03	6.39E-03	8.64E-02	6.85E-03	5.90E-03	8.59E-02	-8%	-1%
Bromodichloromethane	75-27-4	24-hour	2.00E-02	7.50E-03	7.35E-03	2.73E-02	8.05E-03	6.93E-03	2.69E-02	-6%	-2%
Bromoform	75-25-2	24-hour	3.00E-02	2.05E-03	2.01E-03	3.20E-02	2.20E-03	1.90E-03	3.19E-02	-6%	0%
Bromomethane	74-83-9	24-hour	9.00E-02	1.53E-03	1.50E-03	9.15E-02	1.61E-03	1.39E-03	9.14E-02	-8%	0%
Cadmium	7440-43-9	24-hour	6.04E-04	2.98E-04	2.92E-04	8.96E-04	3.13E-04	2.70E-04	8.74E-04	-8%	-3%
Cadmium	7440-43-9	24-hour	6.04E-04	2.98E-04	2.92E-04	8.96E-04	3.13E-04	2.70E-04	8.74E-04	-8%	-3%
Carbon Monoxide	630-08-0	1/2-hour	1.26E+03	1.92E+00	1.33E+01	1.27E+03	2.01E+00	1.39E+01	1.27E+03	5%	0%

Appendix C
Comparion of Predicted Concentrations

Contaminant	CAS No.	Averaging Period	Background Concentration [µg/m³]	140,000 TPA			160,000 TPA			Percentage Change of Maximum POI Concentration [%]	Percentage Change of Maximum POI Concentration (Including Background) [%]
				Total Facility Emission Rate [g/s]	Maximum POI Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Total Facility Emission Rate [g/s]	Maximum POI Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]		
Carbon tetrachloride	56-23-5	24-hour	7.40E-01	1.28E-05	1.25E-05	7.40E-01	1.37E-05	1.18E-05	7.40E-01	-6%	0%
Carbon tetrachloride	56-23-5	24-hour	7.40E-01	1.28E-05	1.25E-05	7.40E-01	1.37E-05	1.18E-05	7.40E-01	-6%	0%
Chloroform	67-66-3	24-hour	2.30E-01	2.17E-05	2.13E-05	2.30E-01	2.28E-05	1.97E-05	2.30E-01	-8%	0%
Chloroform	67-66-3	24-hour	2.30E-01	2.17E-05	2.13E-05	2.30E-01	2.28E-05	1.97E-05	2.30E-01	-8%	0%
Chromium (hexavalent)	18540-29-9	Annual	—	1.21E-05	3.83E-07	3.83E-07	1.35E-05	3.89E-07	3.89E-07	2%	—
Chromium (hexavalent)	18540-29-9	24-hour	—	1.36E-05	1.34E-05	1.34E-05	1.43E-05	1.23E-05	1.23E-05	-8%	—
Chromium (hexavalent)	18540-29-9	Annual	—	1.21E-05	3.83E-07	3.83E-07	1.35E-05	3.89E-07	3.89E-07	2%	—
Chrysene	218-01-9	24-hour	9.64E-05	1.61E-07	1.57E-07	9.66E-05	1.69E-07	1.45E-07	9.65E-05	-8%	0%
Cobalt	7440-48-4	24-hour	6.04E-04	2.47E-04	2.42E-04	8.46E-04	2.59E-04	2.23E-04	8.27E-04	-8%	-2%
Dibenzo(a,c)anthracene	215-58-7	24-hour	—	1.14E-06	1.12E-06	1.12E-06	1.20E-06	1.03E-06	1.03E-06	-8%	—
Dibenzo(a,h)anthracene	53-70-3	24-hour	6.77E-05	5.16E-08	5.05E-08	6.78E-05	5.41E-08	4.66E-08	6.77E-05	-8%	0%
Dichlorodifluoromethane	75-71-8	24-hour	3.23E+00	3.71E-03	3.64E-03	3.23E+00	3.90E-03	3.36E-03	3.23E+00	-8%	0%
Dichloroethene, 1,1 -	75-34-3	24-hour	1.00E-02	2.41E-05	2.36E-05	1.00E-02	2.53E-05	2.18E-05	1.00E-02	-8%	0%
Dichloroethene, 1,1 -	75-34-3	24-hour	1.00E-02	2.41E-05	2.36E-05	1.00E-02	2.53E-05	2.18E-05	1.00E-02	-8%	0%
Dichloromethane	75-09-2	24-hour	1.27E+00	7.50E-03	7.35E-03	1.28E+00	7.88E-03	6.78E-03	1.28E+00	-8%	0%
Dichloromethane	75-09-2	24-hour	1.27E+00	7.50E-03	7.35E-03	1.28E+00	7.88E-03	6.78E-03	1.28E+00	-8%	0%
Dioxins, Furans and Dioxin- like PCBs	N/A -6	24-hour	2.37E-02	2.56E-03	2.51E-03	2.62E-02	2.68E-03	2.31E-03	2.60E-02	-8%	-1%
Ethylbenzene	100-41-4	24-hour	1.24E+00	4.42E-05	4.33E-05	1.24E+00	4.64E-05	3.99E-05	1.24E+00	-8%	0%
Ethylbenzene	100-41-4	10-minute	5.00E+00	4.42E-05	4.21E-04	5.00E+00	4.64E-05	4.42E-04	5.00E+00	5%	0%
Ethylbenzene	100-41-4	24-hour	1.24E+00	4.42E-05	4.33E-05	1.24E+00	4.64E-05	3.99E-05	1.24E+00	-8%	0%
Ethylene Dibromide	106-93-4	24-hour	5.20E-03	1.20E-05	1.18E-05	5.21E-03	1.29E-05	1.11E-05	5.21E-03	-6%	0%
Fluoranthene	206-44-0	24-hour	6.01E-04	1.77E-06	1.74E-06	6.03E-04	1.86E-06	1.60E-06	6.03E-04	-8%	0%
Fluorine	86-73-7	24-hour	—	1.33E-06	1.31E-06	1.31E-06	1.40E-06	1.21E-06	1.21E-06	-8%	—
Formaldehyde	50-00-0	24-hour	3.38E+00	2.02E-03	1.98E-03	3.38E+00	2.13E-03	1.83E-03	3.38E+00	-8%	0%
Hexachlorobenzene	118-74-1	24-hour	6.25E-05	2.19E-06	2.15E-06	6.47E-05	2.30E-06	1.98E-06	6.45E-05	-8%	0%
Hydrogen Chloride	7647-01-0	24-hour	—	3.84E-01	3.76E-01	3.76E-01	4.03E-01	3.47E-01	3.47E-01	-8%	—
Hydrogen Chloride	7647-01-0	24-hour	—	3.84E-01	3.76E-01	3.76E-01	4.03E-01	3.47E-01	3.47E-01	-8%	—
Hydrogen Fluoride	7664-39-3	24-hour	—	3.84E-02	3.76E-02	3.76E-02	4.03E-02	3.47E-02	3.47E-02	-8%	—
Hydrogen Fluoride	7664-39-3	30-day	—	3.84E-02	4.53E-03	4.53E-03	4.03E-02	4.32E-03	4.32E-03	-5%	—
Indeno(1,2,3 – cd)pyrene	193-39-5	24-hour	6.77E-05	3.21E-07	3.15E-07	6.80E-05	3.37E-07	2.91E-07	6.80E-05	-8%	0%
Lead	7439-92-1	24-hour	4.98E-03	2.13E-03	2.09E-03	7.07E-03	2.24E-03	1.93E-03	6.91E-03	-8%	-2%
Lead	7439-92-1	30-day	1.92E-03	2.13E-03	2.52E-04	2.17E-03	2.24E-03	2.40E-04	2.16E-03	-5%	-1%
Lead	7439-92-1	24-hour	4.98E-03	2.13E-03	2.09E-03	7.07E-03	2.24E-03	1.93E-03	6.91E-03	-8%	-2%
Mercury	7439-97-6	24-hour	—	6.39E-04	6.26E-04	6.26E-04	6.71E-04	5.78E-04	5.78E-04	-8%	—
Naphthalene	91-20-3	24-hour	2.43E-03	1.80E-05	1.77E-05	2.45E-03	1.89E-05	1.63E-05	2.45E-03	-8%	0%
Naphthalene	91-20-3	10-minute	9.77E-03	1.80E-05	1.72E-04	9.94E-03	1.89E-05	1.80E-04	9.95E-03	5%	0%
Nickel	7440-02-0	Annual	8.59E-04	3.30E-03	1.04E-04	9.63E-04	3.69E-03	1.06E-04	9.65E-04	2%	0%
Nickel	7440-02-0	24-hour	4.49E-03	3.71E-03	3.64E-03	8.13E-03	3.90E-03	3.36E-03	7.85E-03	-8%	-3%
Nickel	7440-02-0	Annual	2.24E-03	3.30E-03	1.04E-04	2.34E-03	3.69E-03	1.06E-04	2.35E-03	2%	0%
Nitrogen Oxides	10102-44-0	24-hour	5.82E+01	5.14E+00	5.04E+00	6.32E+01	5.41E+00	4.66E+00	6.29E+01	-7%	-1%
Nitrogen Oxides	10102-44-0	1-hour	6.46E+01	5.14E+00	2.97E+01	9.43E+01	5.41E+00	3.13E+01	9.59E+01	5%	2%

Appendix C
Comparion of Predicted Concentrations

Contaminant	CAS No.	Averaging Period	Background Concentration [µg/m³]	140,000 TPA			160,000 TPA			Percentage Change of Maximum POI Concentration [%]	Percentage Change of Maximum POI Concentration (Including Background) [%]
				Total Facility Emission Rate [g/s]	Maximum POI Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]	Total Facility Emission Rate [g/s]	Maximum POI Concentration [µg/m³]	Maximum POI Concentration (Including Background) [µg/m³]		
O-terphenyl	84-15-1	24-hour	1.35E-04	3.49E-06	3.42E-06	1.38E-04	3.66E-06	3.15E-06	1.38E-04	-8%	0%
Pentachlorobenzene	608-93-5	24-hour	—	5.77E-06	5.65E-06	5.65E-06	6.05E-06	5.21E-06	5.21E-06	-8%	—
Pentachlorophenol	87-86-5	24-hour	8.76E-04	8.79E-06	8.61E-06	8.85E-04	9.23E-06	7.95E-06	8.84E-04	-8%	0%
Perylene	198-55-0	24-hour	1.35E-04	6.44E-08	6.31E-08	1.35E-04	6.76E-08	5.82E-08	1.35E-04	-8%	0%
Phenanthrene	85-01-8	24-hour	2.57E-03	4.03E-06	3.95E-06	2.57E-03	4.23E-06	3.65E-06	2.57E-03	-8%	0%
Phosphorus	7723-14-0	24-hour	7.00E-02	1.96E-03	1.92E-03	7.19E-02	2.06E-03	1.77E-03	7.18E-02	-8%	0%
PM_{10}	N/A -3	24-hour	—	9.55E-01	1.05E+00	1.05E+00	1.00E+00	9.74E-01	9.74E-01	-7%	—
$PM_{2.5}$	N/A -4	24-hour	2.04E+01	8.95E-01	9.87E-01	2.14E+01	9.40E-01	9.20E-01	2.13E+01	-7%	0%
Polychlorinated Biphenyls (PCB)	N/A -7	24-hour	4.20E-05	3.08E-06	3.02E-06	4.50E-05	3.23E-06	2.78E-06	4.48E-05	-8%	-1%
Pyrene	129-00-0	24-hour	2.83E-04	2.14E-06	2.10E-06	2.85E-04	2.25E-06	1.93E-06	2.85E-04	-8%	0%
Selenium	7782-49-2	24-hour	3.02E-03	2.05E-05	2.00E-05	3.04E-03	2.15E-05	1.85E-05	3.04E-03	-8%	0%
Silver	7440-22-4	24-hour	3.42E-04	1.43E-04	1.40E-04	4.82E-04	1.50E-04	1.29E-04	4.71E-04	-8%	-2%
Sulphur Dioxide	7446-09-5	24-hour	1.93E+01	1.49E+00	1.46E+00	2.08E+01	1.57E+00	1.35E+00	2.07E+01	-8%	-1%
Sulphur Dioxide	7446-09-5	1-hour	1.95E+01	1.49E+00	8.62E+00	2.81E+01	1.57E+00	9.05E+00	2.86E+01	5%	2%
Sulphur Dioxide	7446-09-5	1-hour	1.95E+01	1.49E+00	8.62E+00	2.81E+01	1.57E+00	9.05E+00	2.86E+01	5%	2%
Sulphur Dioxide	7446-09-5	Annual	6.03E+00	1.33E+00	4.20E-02	6.07E+00	1.48E+00	4.26E-02	6.07E+00	2%	0%
Sulphur Dioxide	7446-09-5	1-hour	1.95E+01	1.49E+00	8.62E+00	2.81E+01	1.57E+00	9.05E+00	2.86E+01	5%	2%
Tetrachloroethene	127-18-4	24-hour	4.90E-01	2.42E-04	2.37E-04	4.90E-01	2.54E-04	2.19E-04	4.90E-01	-8%	0%
Tetrachloroethene	127-18-4	24-hour	4.90E-01	2.42E-04	2.37E-04	4.90E-01	2.54E-04	2.19E-04	4.90E-01	-8%	0%
Tetralin	119-64-2	24-hour	1.35E-04	2.12E-05	2.08E-05	1.56E-04	2.23E-05	1.92E-05	1.54E-04	-8%	-1%
Thallium	7440-28-0	24-hour	—	1.66E-03	1.63E-03	1.63E-03	1.75E-03	1.50E-03	1.50E-03	-8%	—
Tin	7440-31-5	24-hour	3.02E-03	7.50E-04	7.35E-04	3.75E-03	7.87E-04	6.78E-04	3.70E-03	-8%	-2%
Toluene	108-88-3	24-hour	9.47E+00	2.14E-03	2.10E-03	9.47E+00	2.25E-03	1.94E-03	9.47E+00	-8%	0%
Total Chromium (and compounds)	7440-47-3	24-hour	2.76E-03	9.59E-05	9.40E-05	2.85E-03	1.01E-04	8.67E-05	2.85E-03	-8%	0%
Total Chromium (and compounds)	7440-47-3	24-hour	2.76E-03	9.59E-05	9.40E-05	2.85E-03	1.01E-04	8.67E-05	2.85E-03	-8%	0%
Total Particulate Matter	N/A -1	24-hour	3.54E+01	9.55E-01	1.05E+00	3.64E+01	1.00E+00	9.74E-01	3.64E+01	-7%	0%
Trichloroethane, 1,1,1 -	71-55-6	24-hour	1.10E-01	6.08E-05	5.96E-05	1.10E-01	6.39E-05	5.50E-05	1.10E-01	-8%	0%
Trichloroethene	86-42-0	24-hour	5.40E-01	2.10E-05	2.05E-05	5.40E-01	2.20E-05	1.89E-05	5.40E-01	-8%	0%
Trichloroethylene, 1,1,2 -	79-01-6	24-hour	—	2.10E-05	2.05E-05	2.05E-05	2.20E-05	1.89E-05	1.89E-05	-8%	—
Trichloroethylene, 1,1,2 -	79-01-6	24-hour	—	2.10E-05	2.05E-05	2.05E-05	2.20E-05	1.89E-05	1.89E-05	-8%	—
Trichlorofluoromethane	75-69-4	24-hour	2.15E+00	7.34E-03	7.19E-03	2.16E+00	7.71E-03	6.64E-03	2.16E+00	-8%	0%
Vanadium	7440-62-2	24-hour	1.55E-03	4.96E-05	4.86E-05	1.60E-03	5.20E-05	4.48E-05	1.59E-03	-8%	0%
Vinyl chloride	75-01-4	24-hour	5.88E-03	1.86E-03	1.82E-03	7.70E-03	1.95E-03	1.68E-03	7.56E-03	-8%	-2%
Vinyl chloride	75-01-4	24-hour	5.88E-03	1.86E-03	1.82E-03	7.70E-03	1.95E-03	1.68E-03	7.56E-03	-8%	-2%
Xylenes, m-, p- and o-	1330-20-7	24-hour	4.83E+00	2.57E-02	2.52E-02	4.86E+00	2.70E-02	2.33E-02	4.85E+00	-8%	0%
Xylenes, m-, p- and o-	1330-20-7	10-minute	1.94E+01	2.57E-02	2.45E-01	1.96E+01	2.70E-02	2.57E-01	1.97E+01	5%	0%
Xylenes, m-, p- and o-	1330-20-7	24-hour	4.83E+00	2.57E-02	2.52E-02	4.86E+00	2.70E-02	2.33E-02	4.85E+00	-8%	0%
Zinc	7440-66-6	24-hour	4.00E-02	8.50E-03	8.33E-03	4.83E-02	8.93E-03	7.69E-03	4.77E-02	-8%	-1%

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Ontario

February 3, 2012

Mr. Colin Varley
Stantec
200-2781 Lancaster Rd
Ottawa, ON
K1B 1A7

RE: Review and Acceptance into the Provincial Register of Reports: Archaeological Assessment Report Entitled, *"Stage 2 Archaeological Assessment, Clarington 01 Site, Proposed Durham/York Residual Waste Facility, Lot 27, Broken Front Concession, Township of Clarington, Regional Municipality of Durham, Ontario."*, Report Dated May 25, 2009, Report Received January 25, 2010, Revised Report Received February 8, 2010, Report Addendum Received February 3, 2012, MTCS Project Information Form Numbers P002-152-2008 and P002-270-2009, MTCS RIMS Number 18WT056

Dear Mr. Varley:

This office has reviewed the above-mentioned report, which has been submitted to this Ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review is to ensure that the licensed professional consultant archaeologist has met the terms and conditions of their archaeological licence, that archaeological sites have been identified and documented according to the 1993 technical guidelines set by the Ministry and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.*

As the result of our review, this Ministry accepts the above titled report and addendum into the Provincial register of archaeological reports. No archaeological sites were documented. It is recommended that there are no further concerns for alterations to archaeological sites for the area that has undergone archaeological assessment. This Ministry concurs with this recommendation.

Given the above, this Ministry is satisfied that concerns for archaeological sites have been met for the area of the Clarington 01 Site Limits as depicted by Figure 4.1 of the above titled report addendum.

I trust this information is of assistance. Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Andrea Williams
A/ Archaeology Review Officer

cc. Archaeological Licensing Office

* In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

Potential Effects of the Durham York Energy Centre Waste Capacity Increase to 160,000 Tonnes per Year

The screening criteria as outlined in the Ministry of the Environment, Conservation and Parks (MECP), Guide to Environmental Assessment Requirements for Waste Management Projects was applied to the Durham York Energy Centre (DYEC) waste capacity increase from 140,000 to 160,000 tonnes per year. Staff completed a review of the studies undertaken during the initial Environmental Assessment (EA) study in 2009 for the DYEC for two tonnage scenarios (140,000 tonnes per year and 400,000 tonnes per year). This review was undertaken to determine if these initial studies can be applied to the 160,000 tonnes per year scenario to identify potential concerns and determine if the monitoring and mitigation measures already in place at the DYEC facility are sufficient to mitigate any additional impacts from the 20,000 tonnes per year waste capacity increase.

1. Groundwater and Surface Water

Review of the following 2009 studies and reports that were undertaken during the initial Environmental Assessment shows there are no anticipated adverse effects or additional impacts to groundwater or surface water that will result from the 20,000 tonnes per year capacity increase as outlined in the screening criteria checklist:

- Surface Water and Groundwater Technical Study Report (Jacques Whitford, 2009, Appendix C-2)
- Natural Environment Assessment (Jacques Whitford, 2009, Appendix C-7)
- Geotechnical Investigation Technical Study Report (Jacques Whitford, 2009, Appendix C-4)
- Environmental Compliance Approval Application Submission Stormwater (Golder Associates, 2011)

- The following legislation was reviewed, and it was determined that the DYEC continues to be compliant as there have been no legislative changes which would impact the groundwater and surface water monitoring program:
- Ontario Drinking Water Standards (ODWS) (2006)
- O.Reg. 169/03: Ontario Drinking Water Quality Standards
- Provincial Water Quality Objectives (PWQO) (1994)
- Canadian Water Quality Guidelines (CWQG) (2011)
- Canadian Environmental Quality Guidelines
- Guidelines for Canadian Drinking Water Quality (June 2019)
- Environmental Compliance Approval Application for Stormwater (Golder Associates, 2011)
- Application for Section 53 Environmental Compliance Approval – Stormwater Discharge (Report 10-1151-0343 (4000) Golder Associates)

1.1 Surface Water

The increase in capacity to 160,000 tonnes per year will not direct additional surface water into the stormwater management ponds that currently exist onsite. Also, no construction is required to process the additional 20,000 tonnes per year of waste. Therefore, there are no concerns with additional on-site surface water run-off into the existing stormwater ponds which discharge into the Tooley Creek wetland.

In 2011, Sigma Engineering analyzed the site design for the stormwater based on the 2009 Surface Water and Groundwater Assessment Technical Study Report, and stated the original design included a conservative assumption that the 100-year storm is contained in the stormwater pond design and that the ponds are sized to meet governing erosion and sediment control requirements. The stormwater management design is currently oversized, as it was designed to accommodate the additional runoff associated with infrastructure to process 400,000 tonnes per year. Sigma Engineering reviewed and revised the original analysis completed for the Surface Water and Groundwater Assessment Technical Study Report, to address design changes that

occurred after the initial Environmental Assessment was completed in 2009. The revised report was submitted to the MECP as part of the Environmental Compliance Approval application and maintains the 100-year stormwater capacity along with erosion and sediment control requirements.

The initial EA proposed one on-site stormwater management pond, however, with the development of the Clarington Energy Business Park, stormwater plan modifications were made to the site stormwater design. The drainage area contributing to the stormwater ponds was reduced from 12.4 hectares to 10.1 hectares due to the construction of a new right-of-way along Energy Drive which has its own drainage system including a wider swale, providing more capacity to the onsite storage ponds. As a result of these off-site changes, the design provides a better level of stormwater management than what was proposed in the initial EA documents.

1.2 Groundwater

Groundwater monitoring results to date have confirmed the absence of any impacts to groundwater resulting from waste processing operations at the DYEC. The monitoring and mitigation plans currently in place are adequate to protect groundwater at a waste processing capacity of 160,000 tonnes per year. Groundwater monitoring results will not vary significantly as a result of the additional waste processing capacity of 160,000 tonnes per year. In addition, there will be no changes to the waste storage pit to accommodate the proposed increase, as the waste storage pit was sized to support the operations up to 250,000 tonnes per year. With no modification or construction planned for the waste storage pit, there will be no concerns with altering the integrity of the pit walls.

Several design features were incorporated into the DYEC to protect groundwater including:

- A zero-process water discharge facility.
- The waste storage pit is constructed using one metre thick concrete conforming to Canadian Standards Association (CSA) A23.1 Class C-1 performance standards

which applies to structurally reinforced concrete that is exposed to chlorides at a wide range of temperature conditions.

- The waste storage pit is lined on the exterior with a sodium bentonite waterproofing membrane to prevent leakage of water into or out of the pit.
- The waste storage pit was oversized during the original construction and has the capacity to store waste for up to four days when operating at a 250,000 tonnes per year waste processing rate.
- The waste storage pit construction includes PVC plastic water stops in the construction joints which form a continuous, watertight barrier that prevents the passage of fluid.
- Diesel tanks are of double-walled construction with a leak detection system and are checked daily per the DYEC Containment Protocol.
- A containment dyke surrounds the ammonia tank. Daily general inspection of the ammonia tank for leaks and annual calibrations of the ammonia alarm are safeguards that are included in the DYEC Containment Protocol.

In the unlikely event that a groundwater contamination issue was to develop at the site, the low rate of groundwater flow would limit the rate of contaminant dispersion and provide the Regions with sufficient time to undertake remediation. Borehole logs for the monitoring wells confirm that the facility is constructed on silty glacial till soils. Based on the hydraulic conductivities and the horizontal hydraulic gradients observed on the site, it is anticipated that surface water will infiltrate into the ground and travel at a low rate of approximately one metre per year or less.

2. Land

A review was also completed of the following 2009 study that was undertaken during the initial Environmental Assessment and show there are no effects to land as outlined in the screening criteria checklist.

The Social/Culture Assessment - Technical Study Report (Jacques Whitford, 2009, Appendix C-8) determined the following:

- The DYEC would have minimal overall net effects on residential properties, public facilities or institutions and is compatible with the development of the future Clarington Energy Business Park.
- The lands are zoned employment/light industrial areas which is compatible with the DYEC activity.
- Zoned: Business Park Map A2 Land Use Courtice Urban Area (June 2018)
- Clarington Zoning By-law 84-63 Sections 23 C – Energy Park Light Industrial and 23D Energy Park General Industrial (2015)

The DYEC continues to be located in a designated employment/ light industrial area and the land use is consistent with the 2014 Provincial Policy Statement. As no construction or alterations to the site are required for the increase in capacity to 160,000 tonnes per year, there will be no additional impacts to nearby properties.

3. Air and Noise

Review of the 2009 studies that were undertaken during the initial Environmental Assessment identified potential changes to air emissions and are outlined in the screening criteria checklist including:

- Air Quality Assessment - Technical Study Report - Appendix C1 (Jacques Whitford, 2009, Appendix C-1)
- Acoustic Assessment - Technical Study Report (Jacques Whitford, 2009, Appendix C-5)

The potential changes are attributed to the larger quantities of air and combustion gases being released through the stack as the result of processing an additional 20,000 tonnes per year. The following legislation, standards, and guidelines have been reviewed to determine the implications to the DYEC capacity increase, including:

- Guideline A-7: Air Pollution Control, Design and Operations Guidelines for Municipal Waste Thermal Treatment Facilities (2010)
- Ontario Regulation 419/05: Air Pollution - Local Air Quality (2005, as amended)
- Canadian Ambient Air Quality Standards (CAAQS) (current updates)_
- Ontario's Ambient Air Quality Criteria (AAQC) (current updates)
- CCME Canada Wide Standards (CWS) (current updates)
- Overview of Ambient Air Monitoring Programs in Durham Region, Ministry of the Environment, Conservation and Parks (MECP), Technical Memorandum (July 2018)
- MECP Publication NPC-300 Environmental Noise Guideline – Stationary and Transportation Sources (2013)
- Publication NPC-233 Information to be submitted for approval of stationary sources of sound (1995)
- Environmental Compliance Approval Application for Air and Noise (2011)

To assess the impacts of the change in emissions from the proposed capacity increase, an air quality dispersion modelling assessment for a 160,000 tonnes per year scenario was developed and compared to the original 140,000 TPA as found in the 2011 Emission Summary and Dispersion Modelling Report dated March 2011.

- Technical Memorandum - Air Quality Impact of 160,000 tonnes of waste per year at Durham York Energy Centre (Golder Associates, 2019)

3.1 Odour

The waste processed at the DYEC is a heterogeneous mixture of residential waste materials and may include odorous substances. Potential odour emission sources associated with the processing of the waste include:

- Truck transportation of waste onto the site
- Waste handling and storage onsite
- Thermal treatment of waste onsite

The waste delivery trucks are fully enclosed to reduce the potential for odour emissions while transporting waste. The tipping building is equipped with multiple bays to minimize waste truck line-ups outside the tipping building during peak truck arrival periods.

The tipping building is equipped with motor operated entrance/exit doors. The doors remain closed except when vehicles are entering or exiting the tipping building. In addition, the louvers on the north outside wall of the tipping building are closed during truck deliveries.

The air from the tipping building is drawn in through inlet ducts above the waste storage pit for use as combustion air and maintains negative pressure in the tipping building which prevents the escape of dust and odour. Drawing air from the waste storage pit eliminates ambient odour problems as the temperature in the combustion chamber ranges from 1000to 1400ºC, which is sufficient to complete the combustion of all organic vapours.

Potential odour emissions were assessed as part of the initial ECA application for Air and Noise, following the MECP Technical Bulletin Methodology for Modelling Assessments of Contaminants with 10-minute Average Standards and Guidelines under Ontario Regulation 419/05 (2008). The odour was modelled during a potential outage situation when all combustion equipment is off-line. Draft induced fans would continue to operate and draw air from the tipping building, through the system and vented out of the stack. The worst case odour concentration was 0.11 odour unit per cubic metre (ou/m^3) which is well below the MECP POI limit of 1 ou/m^3 (10-minute average) at all off property receptors.

To verify the initial modelling, a one-time odour sampling was undertaken in October 2015 in accordance with the Ontario Source Testing Code Method ON-6. As the tipping building was identified as the principal source of fugitive odours, triplicate samples were collected from the area. The air samples were analyzed by an 8-member odour panel to determine the typical odour source concentration. Dispersion of worst case potential odours through the stack during a 2-hr outage was modelled using the CALPUFF dispersion model as approved under Schedule B of the DYEC ECA. According to the model, the maximum, 10-minute odour concentration at a sensitive receptor was 0.28

Odour Units (OU) and occurred at a former house to the west of the facility. This result was well below the compliance limit of 1.0 OU.

Based on the results of odour sampling undertaken in 2015 which verified the 2011 modelling, there is not expected to be an increase in odour due to the increase in capacity to 160,000 tonnes per year. The facility has been designed to manage waste in enclosed buildings which helps contain odours. The tipping building and waste storage pit will continue to be maintained under negative pressure. Air drawn in from the tipping floor and waste storage pit areas will be used for combustion air, where odourous air will be drawn into the furnace and destroyed though high temperature oxidation. The truck entrance and exit doors and louvers will continue to be closed when there are no deliveries of waste to the facility. Additionally, staff periodically review the conditions at the perimeter of the facility to determine if detectable odours are present at the property boundary.

3.2 Noise

An Acoustic Assessment Report was completed for the initial Environmental Compliance Approval application.

- The Acoustic Assessment –Technical Study Report was completed by Jacques Whitford Stantec Limited as Appendix C-5 in support of the 2009 Environmental Assessment.

Evaluations were completed for two design capacity scenarios for the DYEC. These are the initial design capacity of 140,000 tonnes per year and a maximum design capacity of 400,000 tonnes per year. The report includes consideration of:

- Existing ambient acoustical environment;
- Sound from the facility construction;
- Sound from the facility operations;
- Potential impacts of sound on wildlife in addition to human receptors; and
- Mitigation measures to limit and manage potential effects.

The noise assessment was designed to assess the potential effects of the DYEC relative to the applicable regulatory requirements. In 2009, MECP Noise Pollution

Control (NPC) documents 205/232/233 were in effect. Evaluations of potential noise effects during the initial construction and operations were conducted which considered both the 140,000 tonnes per year and 400,000 tonnes per year scenarios.

The technical study concluded that the DYEC is located in a Class 2 (suburban) area with acoustical qualities representative of both Class 1 (urban) and Class 3 (rural) areas. Class 2 sound levels are characteristic of Class 1 areas during the daytime with background sound levels dominated by an urban hum. At nighttime, Class 2 areas have a low sound level dominated by natural environment and infrequent human activity noises. Nighttime sound levels in a Class 2 area can start as early as 1900 hours.

The technical study was conducted in July 2009 and the DYEC was predicted to meet all NPC-205 noise limits when operating at both the 140,000 tonnes per year and 400,000 tonnes per year scenarios. The technical study predicted noise mitigation might be required for the emergency generators and fire pumps but not for the regularly operating equipment.

In 2011, an additional acoustic assessment was completed in support of the ECA application for the DYEC. This acoustic assessment incorporated changes and refinements which were not initially known during the 2009 acoustic assessment undertaken in support of the EA. Proposed DYEC equipment assessed in this study included roof ventilation units on the main building and residue building, the closed-loop cooling water cooler, silo filling, silo dust collector, loader operations, bay doors and process louvers.

The worst case daytime operating scenario has all sources and both boiler trains operating simultaneously. This included ten trucks entering and exiting the DYEC per hour. Standby equipment was tested in a separate hour during the day. The worst-case night time /evening operating scenario had all sources and both boiler trains operating simultaneously, but did not include silo filling, dust collection operations, on-site traffic, tipping hall bay doors remained closed and no standby equipment operating.

Three locations were identified as the most sensitive points of reception near the DYEC:

- Two-storey single family dwelling located approximately 480 metres from the property line west of the facility.
- Two-storey single family dwelling approximately 690 metres from the property line west of the facility.
- One-storey single family dwelling approximately 870 metres from the property line north of the facility.

Sound levels from the DYEC at these identified sensitive points of reception were predicted to be at or below the applicable sound level limits as specified in NPC-205 during the predictable worst-case hour of the DYEC normal operation and during the testing of the standby diesel generator or diesel fire pumps.

Given the nature of the activities at the facility, noise impacts are minimal. There is no grinding, shredding or other pre-processing of the waste and noise mitigation measures were installed for the emergency generator and fire water pumps. An emergency generator is located outside, west of the tipping building and is equipped with an acoustic enclosure including air intake/discharge silencers and an engine exhaust muffler. The fire water pumps are housed in a building near the southeast corner of the site and are fitted with exhaust mufflers. The DYEC operating procedures require that weekly testing of the emergency generator and fire pumps only occurs during business hours (0700 to 1900) and only for a thirty minutes duration. The equipment is not tested at the same time to further reduce noise impacts.

In 2013, MECP released new noise guidelines in the publication NPC-300 Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning. NPC-300 was designed to limit the conflicts between NPC-205/232 and land use planning requirements. NPC-300 introduces new sound level limits, a new protocol for assessing impulse sounds and a requirement to consider hypothetical, potential points of reception on vacant lands that might permit a sound-sensitive land use in the future.

The ECA for the facility required an acoustic audit after construction and during normal operations. An Acoustic Audit Report was prepared in 2016 by Valcoustics Canada Limited (Valcoustics). The Acoustic Audit provided a determination of facility sound

levels during peak facility activity with both boilers operating at full thermal load. The acoustic audit also provided an assessment of the DYEC sound classification based on the surrounding site activity in 2016. Noise was assessed at three receptor locations. Audit measurements were also completed in the vicinity of these receptors. One two-storey receptor dwelling was demolished as part of the 401/418 interchange and road realignment project. However, two-storey farmhouse, identified as POR001rev, located approximately 1100 metres to the west of the DYEC property line was assessed to maintain consistency with the report. Another receptor, a two-storey family dwelling, identified as POR002, is located 690 metres east of the DYEC property line. And a third receptor, identified as POR003, is 860 metres north of the DYEC. The results of the acoustic assessment found that the DYEC facility was not audible in the vicinity of POR001rev, POR002 and POR003 in September 2016 which is in line with previous post-operational monitoring periods. These observations were made during the daytime period (0700 to 1200 hours). Additionally, during lulls in road traffic on Highway 401 (the dominant noise source at all locations), the DYEC was not audible.

Based on sound measurements and subjective observations, Valcoustics determined that the DYEC area should be considered a Class 1 (urban) area that is dominated by "urban hum". The key difference between criteria for Class 1 (urban) compared to Class 2 (suburban) areas is the sound level limits applicable in the evening between 1900 and 2300 hours. Class 2 (suburban) areas have lower sound level limits after 1900 hours. Despite the determination that the DYEC area is now a Class 1 (urban) area, the 2016 audit compared the sound levels to Class 2 (suburban) limits to be consistent with the 2009 EA and the ECA application.

Off-site sound levels from the DYEC are continuous with short-term or transient activities such as truck movements or fire water pump testing not discernable off-site. The 2016 acoustic audit demonstrated that the sound levels from the facility were not audible during the September 2016 post-operational measurement period.

Valcoustics determined that the DYEC activities are within the sound level limits stated in the MECP Publication NPC-205 and concluded that the DYEC remains in compliance with NPC-205, the updated NPC-300 and the ECA. In 2016, the MECP revoked the requirement to conduct further acoustic audit measurements.

No construction or additional equipment is necessary to increase the capacity to 160,000 tonnes per year. Sound levels will not increase and the DYEC operations will continue not to be audible at off-site receptors. It is anticipated that two to three additional trucks will access the site daily. However, since truck traffic is not discernible at off-site sensitive receptors, the increased traffic is not anticipated to negatively affect sound levels. Further, waste deliveries are restricted in the ECA to 0700 to 1900 hours meaning there will be no truck traffic after 1900 hours when the sound level limits for Class 2 (suburban) areas are lowered. The DYEC is located in the Clarington Energy Business Park which is designated for employment and light industrial land use and it is unlikely that new sensitive noise receptors would be constructed with this land use designation. There are no noise impacts to the natural environment from the DYEC capacity increase.

As a result of consultation with the MECP a need for an updated acoustic assessment was identified. This assessment will be undertaken and completed in November 2019.

3.3 Air Emissions

The Environmental Screening Criteria Checklist did indicate that the waste capacity increase to 160,000 tonnes per year could result in potential impacts to air. Air emissions are a primary concern of most stakeholders. In 2011, in support of the Environmental Compliance Approval, an Emissions Summary Dispersion Modelling (ESDM) report was completed to determine the potential for impacts at several receptors surrounding the facility. This was also a supporting component of a Human Health and Environmental Risk Assessment completed for the facility. The ESDM is updated annually following stack testing.

Air Quality Assessment Technical Study Report (Jacques Whitford, 2009, Appendix C-1)

The Air Quality Assessment Technical Study report undertaken in 2009 during the initial EA predicted the contaminant emissions from the DYEC at both the 140,000 tonnes per year and 400,000 tonnes per year scenarios. The assessments were carried out using the approved (CALMET/CALPUFF) air quality modelling system.

The assessment predicted that of all the contaminants of potential concern, the highest ground level concentration relative to its regulatory criteria (Ontario Regulation 419/05 Schedule 3 criteria for Nitrogen Oxides 400 µg/m^3 1-hour average) due to the DYEC was nitrogen dioxide at 11 per cent for the 140,000 tonnes per year scenario and 24 per cent for the 400,000 tonnes per year scenario.

This assessment demonstrated that DYEC emissions for both tonnage scenarios will meet or be below the air contaminant emission limits placed on municipal waste incinerators via the Ministry document guideline A-7 Air Pollution Control, Design, and Operation Guidelines for Municipal Waste Thermal Treatment Facilities (2004). Guideline A-7 was updated in 2010 and was considered in the DYEC ECA application. All proponents of municipal waste thermal treatment facilities must demonstrate an ability to comply with Ontario Regulation 419/05 when submitting an application for approval with to the MECP. The DYEC ECA application was approved in 2011, demonstrating the DYEC meets the updated A-7 Guideline.

Golder 2019 Emissions Summary Dispersion Modelling (ESDM) Report

In 2019, Golder Associates Limited (Golder) simulated the potential change in local air quality levels from the DYEC increasing its annual waste capacity by 20,000 tonnes per year to a maximum of 160,000 tonnes per year. The results of the Golder assessment were compared to the assessment for 140,000 tonnes per year completed in 2011, in support of the DYEC Environmental Compliance Approval application.

All simulations were carried out using the original air quality modelling system (CALMET/CALPUFF) and geophysical and meteorology data that was used in the original 140,000 tonnes per year simulations. However, the stack exhaust conditions are updated to match the recently measured data (i.e., mass emission rates, flow and temperature data). These datasets were used to simulate exhaust conditions for the 160,000 tonnes per year scenario.

The 140,000 tonnes per year model was based on a 216 tonnes per unit, per day processing rate and assumed approximately 325 days per year of operation.

The reference point utilized in the model for the ECA application was selected as the point resulting in the highest concentration possible for each contaminant modelled. The emission concentrations used for the update to 160,000 tonnes per year uses the same stack concentrations.

All predicted air quality concentrations were compared to the MECP Regulation (O.Reg.) 419/05 limits (update April 2018) and has demonstrated compliance with all regulations, guidelines and limits.

The results of the modelling for the 160,000 tonnes per year scenario demonstrated compliance with all regulations, guidelines and limits. In each scenario, predicted Point of Impingement (POI) concentrations of all contaminants were significantly lower than the corresponding MECP limits. Nitrogen oxides had the highest predicted concentration in both modelling assessments but remained below MECP limits. The 160,000 tonnes per year scenario showed nitrogen oxides at eight per cent of the MECP limit. This is one per cent higher than the 140,000 tonnes per year scenario at seven per cent of the MECP limit over a one-hour average.

Most of the modelled concentrations (approximately 85 per cent) for the 160,000 tonnes per year scenario show lower levels at the maximum POI as compared to the 140,000 tonnes per year scenario. This is anticipated to be a result of increased flow rates resulting in higher exit velocities and higher observed stack temperatures which improves dispersion.

The maximum potential change, assuming the facility is operating at the ECA limit, would result in a two per cent increase in the POI for SO_2 and NO_X when background concentrations are also included.

This modelling approach is conservative and allows for a level of safety to be built in by assuming the worst case operating and environmental conditions. Additionally, the DYEC operates below the ECA limits for all parameters which adds another layer of protection.

The modelling assessment demonstrates that the increase in capacity to 160,000 tonnes per year will comply with regulatory air quality standards. Modelling also

demonstrates that the capacity increase is not likely to have a significant impact on ambient air quality near the DYEC, as the POI for the majority of concentrations decreased as a result of improved dispersion.

From an operations perspective the DYEC typically operates well below its permitted limits. This results in the model being conservative in terms of the anticipated concentrations at the POI.

The DYEC uses Continuous Emissions Monitoring Systems (CEMS) to monitor operational and compliance parameters. CEMS is equipment which continuously analyzes and measures air emissions and provides a permanent record of emissions using a computer program to produce results in units of the applicable emission limitation or standard. The use of CEMS assists to ensure compliance with air quality guidelines.

Table 1 shows the average readings for (CEMS) parameters in 2018 compared to the permit limits. The DYEC average CEMS results from 2018 demonstrate the facility operates well below the permit limits.

Table 1: 2018 Average CEMS readings

Parameter (units)	**ECA Limit**	**Boiler #1**	**Boiler #2**
Opacity (%)	5	0	0
Opacity (%)	10	0	1
Hydrochloric Acid (mg/Rm^3)	9	2	3
Sulphur Dioxide (mg/Rm^3)	35	0	1
Nitrogen Oxides (mg/Rm^3)	121	111	111
Carbon Monoxide (mg/Rm^3)	40	14	13
Oxygen (%)	Minimum 6	8	8
Furnace Temperature (ºC)	Minimum 1000	1247	1272
Baghouse Inlet Temperature (ºC)	>120 <185	143	143

Table 2 shows the results of the fall 2018 and spring 2019 source test results compared to the stringent ECA limit, and other operating limits for Ontario (A-7 Guideline) and the European Union (EU) limits. The Regions proposed the prescribed ECA limits and included them as part of the DYEC Request for Proposal to demonstrate commitment to meet or exceed current regulatory standards. The MECP adopted those limits and

included them in the ECA. The DYEC ECA limits either meet or exceed the current legislative emission limits in both the EU and Ontario. An additional level of safety is built in with the more stringent ECA limits. Additionally, the results of the most recent source test demonstrate that the DYEC normally operates well below the stringent ECA limits.

Table 2: Comparative Emissions Limits Table

Parameter (units)	European Union (EU) Limits	Ontario A-7 Guideline	ECA Limits	Boiler #1 Source Test Results		Boiler #2 Source Test Results	
				Fall 2018	Spring 2019	Fall 2018	Spring 2019
Particulate Matter (mg/Rm^3)	9	14	9	0.34	0.62	0.32	0.38
Cadmium ($\mu g/Rm^3$)	N/A	7	7	0.14	0.10	0.04	0.08
Lead ($\mu g/Rm^3$)	N/A	60	50	0.18	0.59	0.22	0.46
Mercury ($\mu g/Rm^3$)	46	20	15	0.30	0.35	0.13	0.10
Dioxins and Furans (pg/Rm^3)	92	80	60	5.05	4.55	3.22	4.58
Hydrochloric Acid (mg/Rm^3)	9	27	9 – (24 hr avg.)	2.9	1.9	4.10	4.2
Sulphur Dioxide (mg/Rm^3)	46	56	35– (24 hr avg.)	0	0.03	0.10	0.02
Nitrogen Oxides (mg/Rm^3)	183	198	121– (24 hr avg.)	109	110	111	110
Organic matter - methane (ppmdv)	N/A	50	50	0.7	1.8	1.0	0.5
Carbon Monoxide (mg/Rm^3)	N/A	40	40 – (4 hr avg.)	13.0	13.1	13.4	12.2

3.4 Air Pollution Control

The DYEC uses air pollution control technology which assists in meeting very stringent air emissions regulatory limits. All air pollution control processes are integrated with the facility Distributed Control System (DCS). The DCS includes alarms to inform control room operators if a system is not achieving a specific setpoint. The following air pollution control systems are utilized to ensure compliance with emissions limits:

- The NO_x reduction process consists of two systems that are integrated through the DCS:
    - The Very Low NO_x (VLN ™) system
    - Selective Non-Catalytic Reduction (SNCR) system
- Combustion processes including carbon monoxide are monitored using the Martin Infrared Combustion Control (MICC) System
- Dioxin and Furan mitigation is accomplished using:
    - Furnace temperature is maintained at a minimum 1000º C, 1 second residence for dioxin and furan mitigation
    - Powder activated carbon
- Mercury is mitigated through the use of powder activated carbon.
- Acid gases, including hydrogen chloride and sulphur dioxide, are mitigated using dry hydrated lime injection with fly ash recirculation
- A fabric filter bag house comprised of over 3000 individual bags (1,560 bags per baghouse/boiler) is used for particulate matter and heavy metals (lead and cadmium) control

3.5 Ambient Air

The Air Quality Assessment Technical Study Report (Jacques Whitford, 2009, Appendix C-1) undertaken in 2009 for the initial EA predicted the potential effects to ambient air. The assessment compared the maximum model-predicted concentrations to ambient air criteria for both the 140,000 tonnes per year and 400,000 tonnes per year scenarios. The assessment was conservative as it assumed the worst-case operating scenario with the highest potential to cause environmental effects. The assessment was undertaken by considering background concentrations prior to the DYEC's construction

as well as contributions from the facility attributed to the predicted emissions during operations.

The results of the assessment demonstrated that downwind ambient air concentrations of air emitted from both the 140,000 tonnes per year and 400,000 tonnes per year scenarios met ambient air quality criteria during normal operation and during process upset conditions.

Ambient Air remains a concern to many local residents. A presentation prepared by the MECP in 2019, assessed ambient air in Clarington. The presentation noted that there are numerous sources that contribute to particulate matter ($PM_{2.5}$), nitrogen dioxide (NO_2), total suspended particulate (TSP) and benzo(a)pyrene (B(a)P) emissions.

The findings of this assessment are as follows:

1. $PM_{2.5}$ concentrations across Durham Region are similar in comparison to other urban settings across Ontario.
2. Based on field observations and pollution rose assessments, background sources have changed from 2013 to 2016 in South Clarington, mainly due to the changes in local activities near the monitors, and 407 East construction activities.
3. In every monitoring network, there are multiple sources that contribute to the measurements observed at an ambient air monitoring station. Therefore, it is almost impossible to decipher the contribution from a particular source with accuracy based on ambient air measurement data.
4. Industrial sources are not the only contributor to air quality issues. Other sources such as construction activities, residential and commercial, agricultural and transportation sources contribute significantly to the air quality measurements observed at the ambient air monitoring stations in Durham Region.
5. Meteorological variations from year to year influence the air quality measurements observed at each ambient air monitoring station. For example, particulate matter impacts are typically highest during dry summer conditions due to less rainfall events resulting in higher dust impacts if unpaved surface emissions are not mitigated. During cold winters as a result of increased heating requirements, products of combustion result in higher emissions which is seen at

the different monitoring stations across Durham Region. On the other hand, during very wet conditions or rainfall events, particulate matter typically is at its lowest. Thus, meteorology will influence the activities that occur around a specific monitoring location which in turn influences the air quality measurements.

The presentation also identified that there are contributions of transboundary pollution within Southern Ontario.

As part of the DYEC's environmental monitoring programs, two ambient air stations are operated by the Region to monitor ambient air quality around the DYEC. The two stations were sited with input from the MECP and are located upwind and downwind of the DYEC based on the prevailing winds, as well as near the maximum point of impingement. These stations monitor a number of parameters including: NO_x, SO_2, $PM_{2.5}$, total suspended particulate, metals, dioxins and furans, and polycyclic aromatic hydrocarbons (PAHs), from all sources in the vicinity of the DYEC, and are not points of compliance for facility operations. As part of the operation program quarterly reports are produced for the MECP, as well as when elevated concentrations are detected when compared to the MECP's Ambient Air Quality Criteria (AAQC). When elevated concentrations are detected, an assessment is completed by Regional staff, the facility operator, and the retained ambient air consultant. This assessment reviews plant operations and meteorological conditions during the event to determine if the facility may have been a contributor, and if an increased level of risk to human health or the environment occurred due to the elevated concentration.

In 2018, the MECP revised the Ambient Air Quality Criteria and 419/05 standards for SO_2 for conditions at the point of impingement. The modelling that has been completed to assess the potential impacts of an increase to 160,000 tonnes per year included an assessment at the new standards.

The Canadian Council for the Ministers of the Environment (CCME) have released Canadian Ambient Air Quality Standards (CAAQS) for $PM_{2.5}$, O_3, SO_2, and NO_2. These standards consist of different limits for different averaging times (i.e. one hour or annual), as well as information on how some statistical averages should be

calculated (i.e. for SO_2 the one-hour averaging time reflects the three-year average of the annual 99th percentile of the SO_2 daily maximum one-hour average concentrations). Although the CAAQS have not been adopted by the MECP in terms of emissions limits, per MECP guidelines, starting in 2021 the annual ambient air reporting will also report against CAAQS for NO_2 and SO_2 based on data values from 2018, 2019 and 2020.

3.6 Greenhouse Gas Emissions

The DYEC waste capacity increase to 160,000 tonnes per year will result in an increase in the total amount of greenhouse gases (GHG) generated by the facility due to the increase in the total mass of waste processed. However, this will be offset by the reduction of GHG emissions that has been associated with the transportation and disposal of waste to landfills outside the Regions (including landfill methane generation). Consequently, the DYEC waste capacity increase is anticipated to result in a net benefit to the environment in the form of an overall reduction of GHG emissions to atmosphere. Greenhouse gas emissions are a growing concern given their contribution to climate change. The net emissions of GHGs from thermal treatment of waste versus landfill disposal were assessed as part of the initial EA for the DYEC as per the document "Supplement to Annex E-5: Comparative Analysis of Thermal Treatment and Remote Landfill on a Lifecycle Basis". This initial assessment indicated that the total GHG emissions from thermal treatment were less than those associated with landfilling and transportation related emissions and landfill methane generation.

The Air Quality Technical Assessment (Jacques Whitford, 2009, Appendix C-1) undertaken for the initial EA in 2009, predicted the DYEC contribution to the total Ontario annual GHG emissions would be 0.06 per cent for 140,000 tonnes per year facility and 0.18 percent for a 400,000 tonnes per year facility. Therefore, an additional 20,000 tonnes per year of waste processed at DYEC would contribute an additional 0.009 per cent, for a total predicted contribution to the Ontario annual GHG emissions of approximately 0.069 per cent, based on the 2010 emission levels. The DYEC contribution to the total Canadian annual GHG emissions was predicted to be 0.018 per cent for a 140,000 tonnes per year facility and 0.052 per cent for a 400,000 tonnes per

year facility. An additional 20,000 tonnes per year of waste processed at the DYEC would contribute an additional 0.003 per cent for a total predicted contribution to the Canadian annual GHG emissions of approximately 0.02 per cent based on 2010 emission levels.

An additional 20,000 tonnes per year of waste processed at the DYEC from Durham and York Regions, will remove or shorten the distance travelled by as much as 416 long haul trucks transporting waste for landfill disposal. DYEC by-passed waste has been shipped as far as Twin Creeks Landfill, over 300 kilometres from the DYEC. With an average transport truck fuel efficiency of 39.5 litres per 100 kilometres and an average of 2.62 kilograms of carbon dioxide (CO_2) generated from the combustion of 1 litre of diesel fuel, this prevents approximately 100,000 litres of diesel fuel being burned annually, avoiding the generation of approximately 262 tonnes of CO_2 as well as other transportation related emissions. Methane (CH_4) is generated from the landfilling of waste and according to the Intergovernmental Panel on Climate Change (IPCC) has twenty-eight times the global warming potential of CO_2 over a 100-year time horizon. One tonne of waste landfilled generates approximately 62 cubic metres of methane. If the 20,000 tonnes per year were landfilled without methane gas capture systems in place, approximately 1,240,000 cubic metres or 890 tonnes of methane would be generated equivalent to over 22,000 tonnes of CO_2. While modern landfills capture and either flare or use the methane to produce electricity, landfill gas capture systems are not capable of intercepting all produced methane. The “Supplement to Annex E-5: Comparative Analysis of Thermal Treatment and Remote Landfill on a Lifecycle Basis” assumed a 60 per cent recovery from landfill using gas capture. With this assumption than 534 tonnes of methane would be captured.

An additional benefit of thermal treatment over the remote landfill scenario is that it provides a local source of energy, which generates a greater quantity of energy than a remote landfill as not all landfills capture methane for energy generation. Residual waste managed by an energy from waste facility was better than remote landfill with respect to energy consumption, emissions to air of greenhouse gases, acid gases, smog precursors and emissions to water. The “Supplement to Annex E-5: Comparative Analysis of Thermal Treatment and Remote Landfill on a Lifecycle Basis” reviewed the

energy offset from landfill and energy from waste scenarios for 250,000 tonnes of waste. The energy offset for landfill with 60 per cent gas recovery was estimated at negative 137,070 gigajoules per year (GJ/year) where an energy from waste facility resulted in an energy offset of negative 1,478,313 GJ/year. The negative values represent a reduction in energy requirements. Net energy refers to energy that is offset from the grid resulting from the energy produced by the facility by energy capture or recovery, and the recycling of metals recovered by the energy from waste facility (virgin material displacement credit).

4. Natural Environment

There were no negative effects to the natural environment anticipated with the original facility construction with the implementation of mitigation measures. Since there is no new construction required to increase waste capacity to 160,000 tonnes per year, there will continue to be no negative effects anticipated to the natural environment. Review of the following studies undertaken during the initial Environmental Assessment shows there are no negative effects to the Natural Environment as outlined in the screening criteria checklist, including:

Natural Environmental Assessment Technical Study Report (Jacques Whitford, 2009, Appendix C-7)

The 2009 Natural Environment Assessment was undertaken assuming a disturbed area or “footprint” equal to a design capacity of 400,000 tonnes per year and listed the following study conclusions:

- No rare or threatened species were present on the site. This determination will not change with an increase in waste capacity to 160,000 tonnes per year.
- No significant natural areas were present. This determination will not change with an increase in waste capacity to 160,000 tonnes per year.
- Tooley Creek Coastal Wetland was identified as the closest Natural Area. The DYEC and haul routes are located at a minimum 0.87 km from any natural area and should not be directly impacted by the development of the facility. Given there will

not be any new construction or site alterations for the waste capacity increase, Tooley Creek will not be impacted.

- No permanent watercourses were found onsite and no significant net effects on aquatic species were anticipated. This assessment continues to be valid for the increased capacity to 160,000 tonnes per year.
- No significant ecosystems or vegetation were present on site. Native shrubs and trees were incorporated into the landscape plan for the facility to mitigate any potential minor impact. This approach will continue for the increase to 160,000 tonnes per year.
- No significant avian species were present, and no net effects were anticipated. A follow up Site Reconnaissance Study was undertaken in 2011 and observed ten species of birds onsite. All the observed species were common and widespread in Ontario and none were listed under the federal Species at Risk Act or the provincial Endangered Species Act. These same bird species were noted in the Natural Environment Technical Study Report (2009).

Ministry of Natural Resources and Forestry Meadowlark Clarington Energy Business Park and Energy from Waste Facility Development Plan Monitoring Reports for Eastern Meadowlark.

- As part of the Clarington Energy Business Park Development, the Ministry of Natural Resources and Forestry approved a Development Plan for the Eastern Meadowlark and their habitats pursuant to the Endangered Species Act, 2007.
- Following the construction of the DYEC, a specialized firm was retained by the Regions to monitor and make recommendations to improve grassland habitats for select avian species of concern, notably the Eastern Meadowlark. The monitoring concluded in 2018, and species have been observed in the monitored area near the DYEC.
- Despite site conditions and restoration efforts considered favourable for the Eastern Meadowlarks, none were identified within the restoration area during the 2018 breeding bird surveys. However, Bobolink, a species which has been identified as

endangered, with relatively distinct grassland habitat requirements was noted in the restoration area during the 2018 breeding bird surveys. Bobolinks were recorded during two of three surveys, indicating probable breeding status within the restoration area. The presence of this species during 2016, 2017 and 2018 suggests that restoration goals have been achieved and that functional grassland bird habitat has been created. It is expected that the established vegetation composition will increase the likelihood of Eastern Meadowlark using habitats within the Restoration Area in the future. The established restoration area will not be impacted by the capacity increase.

- The Ministry of Natural Resources and Forestry also oversaw the construction of an alternate nesting structure for the Barn Swallow following the loss of a local barn structure due to a fire in 2013

5. Resources

Review of the following studies that were undertaken during the initial Environmental Assessment show there are no negative effects to Resources as outlined in the screening criteria checklist:

- Facility Energy and Life-Cycle Assessment Technical Study Report (Jacques Whitford, 2009 Appendix C -3)
- Environmental Compliance Approval Application Design and Operations Report (Golder Associates, 2011)

The DYEC is in a designated employment and light industrial area and this land use continues to be consistent with the Provincial Policy Statement as revised in 2014.

Positive effects on Resources were identified through the study review. Approval for additional waste processing capacity is in keeping with the recent MECP discussion paper: Reducing Litter and Waste in Our Communities (2019) which states the following benefits to support increasing waste processing capacity at DYEC:

- Ontario needs to find innovative ways to reduce waste sent to landfill.

- Thermal treatment in the form of energy from waste is a potential opportunity to recover the value of resources in waste.
- Sending waste to landfill is economically inefficient and unsustainable. It puts a strain on our environment by taking up valuable land resources that could be used more productively.
- By reducing and diverting waste from landfill we can make our economy more productive through job creation.
- Reducing our reliance on landfills is an important part of meeting the greenhouse gas emission target outlined in the Made-in-Ontario Environment Plan.
- Sending waste to landfill also impacts local communities. Municipalities, often in rural areas, are hosting landfills that accept waste from locations far beyond their communities, often with limited say in their approvals.
- Residents, businesses, institutions and governments alike are moving towards viewing waste as a resource that has value and can be integrated back into the economy.
- Moving Ontario to where we produce less waste, maximize the resources from waste through reuse, recycling, or other means such as thermal treatment, and ultimately send less of our waste to landfill.

6. Socio-Economic

Review of the following studies that were prepared in 2009 during the initial Environmental Assessment were undertaken.

- Economic Assessment and Technical Study Report (Jacques Whitford, 2009 Appendix C-11)
- Socio-Cultural Assessment and Technical Study Report (Jacques Whitford, 2009 Appendix C-8)
- Traffic Impact and Assessment Technical Study Report (Jacques Whitford, 2009 Appendix C-10)

- Visual Assessment Technical Study Report (Jacques Whitford, 2009 Appendix C-6)
- Record of Consultation from initial EA

One potential effect as outlined in the screening criteria checklist was identified. The DYEC is within 8 kilometers of a helipad located at the Bowmanville Hospital. Although air ambulance service is currently suspended to the hospital, it is anticipated that a relocated helipad will be established in the future. The DYEC already has aeronautical clearance from Navigation Canada as constructed. With no new construction or increase in stack height, there are no negative effects related to the proximity of a helipad in the Bowmanville area.

Economic Assessment Technical Study Report (Jacques Whitford, 2009, Appendix C-11)

The Economic Assessment – Technical Study Report was completed in 2009 to support the Environmental Assessment for the DYEC. The report was prepared to assess the potential economic related effects associated with the development of the DYEC, potential mitigation required and net effects. Evaluations were completed for the 140,000 tonnes per year and 400,000 tonnes per year design scenarios. Since the increase in capacity to 160,000 tonnes per year does not require any new construction, the economic effects during construction do not need to be re-evaluated in this summary.

The objectives of the economic assessment are to summarize the existing economic conditions and assess the economic effects of the project during construction, operations and post closure based on the following socio-economic measures:

- Employment levels;
- Aggregate wages and salaries;
- Effects on property value;
- Municipal revenues and expenditures;
- Effects on existing businesses; and
- Business opportunities.

Employment Levels

The economic conditions in Durham Region have changed since the original assessment was completed in 2009. The economic downturn in 2009 and loss of manufacturing throughout Ontario impacted Durham and York Region manufacturing industry as well. In Durham Region the health sciences, retail, education and energy sectors continue to be primary employers.

In June 2019, Ontario Power Generation (OPG) announced the construction of a new consolidated headquarters building to be located in the Clarington Energy Business Park, north of the DYEC. The OPG office consolidation will increase the energy sector employment in the Region.

In October 2019, East Penn Canada Power Battery Sales Ltd requested amendments to Energy Park Prestige Exception (MO2-1) Zone regulations to permit a warehousing facility and office space. The proposed facility would be located North of the DYEC.

The continued operation of the DYEC and increase in capacity to 160,000 tonnes per year will have minimal effect on the overall employment conditions in the Region. No new employment is anticipated to support this capacity increase.

Effects on Property Value and Existing Businesses

Industrial property values are anticipated to increase with the district heating potential and road infrastructure provided as part of the DYEC construction. All property in the Durham Energy Business Park is zoned for light industrial usage however it is expected that agricultural uses will continue until industrial activities expand further in the area. Residential and agricultural property values are not expected to be adversely affected by the DYEC capacity increase.

Potential disruption to the use and enjoyment of businesses and agricultural farms due to odour, noise, dust, traffic and visual aesthetics were evaluated as part of the technical study. Mitigation measures were put in place during the initial facility construction to minimize off-property impacts. Odour control measures include off-loading waste in an enclosed building under negative pressure and all operations take place indoors. Dust impacts are also mitigated by paved surfaces and indoor off-loading

of waste. Visual impacts of the DYEC are mitigated by the neutral colour choices for the exterior, extensive landscaping and unobtrusive exterior lighting. Several architectural enhancements were identified and incorporated during the DYEC's initial construction to minimize any potential negative effects. The emissions stack is the most significant visual impact of the facility and its impact will continue to be minimized as the Highway 407 East construction is completed and as additional multi-level buildings are constructed in the Clarington Energy Business Park. Noise assessments completed since the facility has been operational indicate all noise levels are well below MECP regulated limits.

Municipal Revenues and Expenditures

The DYEC has an overall positive impact on municipal revenues. Based on the host community agreement with the Municipality of Clarington, payment in lieu of taxes are approximately $650,000 per year. There was also significant investment in developing the infrastructure of the Clarington Energy Business Park during the DYEC construction. The Municipality of Clarington will benefit further as industry continues to move into the Clarington Energy Business Park.

Changes to demands on local services has been minimal since most DYEC employees were already living in the Region of Durham.

The capacity increase to 160,000 tonnes per year from the current 140,000 tonnes per year waste processing will result in cost savings for the Region of Durham. Reduced Covanta operating fees for waste tonnages greater than 140,000 tonnes per year, increased revenue for electricity and metals recovery and prevent the need to by-pass waste to other disposal options will result in up to $1.3 million in annual savings in 2020 rising up to $2.1 million by 2023. DYEC capacity growth along with other Regional programs and initiatives in waste management is critical to ensure that sufficient infrastructure and waste processing capacity exists to support Regional population growth projections.

Business Opportunities

The potential for district heating within the Clarington Energy Business Park and the enhanced road infrastructure, provide an incentive for businesses to locate in the area. OPG has recently announced the construction of a consolidated headquarters building that will be adjacent to the Darlington Energy Complex as well, East Penn Canada Power Battery Sales Ltd is considering office and warehousing operations for the area.

Overall the DYEC has had a net positive impact on the economics of the local municipality and minimal impact at the regional level.

Socio-Cultural Assessment Technical Study (Jacques Whitford, 2009, Appendix C-8)

The Social-Cultural Assessment Technical Study Report that was completed in 2009, assessed the effects of the facility on the people and community within the areas surrounding the DYEC site for both the 140,000 tonnes per year and 400,000 tonnes per year scenarios. Since the site is primarily surrounded by industrial and agricultural land uses and the nearest residential development is approximately three kilometres away, the impact of the DYEC on local community character is considered minor. Only two public facilities are located in the vicinity of the DYEC and neither are considered sensitive community uses. All waste management at DYEC is conducted in enclosed building areas which minimizes the odour, dust and visual impacts of the site activities. The DYEC operations are not considered to have a negative effect on the local community character or the use of public facilities. The site is designated employment/ light industrial land use in both the Durham Region and Clarington Official Plans. The DYEC is located on a portion of land that has been designated the Clarington Energy Business Park.

The Social-Cultural Assessment also considered the effect of the DYEC on the enjoyment of cultural and recreational resources. Four recreational uses are located within the study area including the Waterfront Trail, the Darlington Sports Fields, the Lake Ontario waterfront and Darlington Provincial Park. Negative effects on the use of these recreational areas has been and will continue to be minimal given the indoor operations of the facility. There are minor visual impacts of the facility since it is visible within a one kilometre radius. During construction, a $9 million cash allowance was

included to incorporate visually pleasing design features to minimize the negative visual effect of the DYEC.

Changes to Land Use

Since the 2009 Environmental Assessment Technical Studies were completed, the following changes have occurred to the DYEC surrounding land use.

- The Darlington Energy Complex was completed, located at the southeast corner of Energy Drive and Osbourne Road, directly east of the DYEC;
- Manheim Oshawa Auctions is no longer located north of the DYEC;
- Two former residences located near the DYEC have been demolished;
- Extensive work has been completed on the new 418 interchange and connector highway between the 401 and 407 East extension, as well as the 401 interchange for Courtice Road.

The Social-Cultural Assessment reached the following conclusions based on the review of 2009 Technical Studies completed for Air Quality, Visual Impacts, Traffic Impacts, the Acoustic Assessment, litter and vermin evaluations, and the design proposal submitted by Covanta. There are little to no differences between the potential effects at the 140,000 tonnes per year scenario versus the 400,000 tonnes per year scenario. Therefore, the conclusions presented below are considered valid for both scenarios and apply to the 160,000 tonnes per year scenario:

- Considering no residential receptors are located within 500 metres, the DYEC is anticipated to have minimal overall net effects regarding the “Potential for Disruption to use and enjoyment of residential properties”.
- Considering the significant distance from the DYEC to the nearest existing and planned communities and the characteristics of the current landscape, the DYEC is anticipated to have minimal to no overall net effects regarding the “Potential for changes in Community Character”. The DYEC will be one contributor to the transition of the immediate area to commercial/light industrial land use in accordance with the planned development of the Clarington Energy Business Park.

- Considering that there are only two Public Facilities or Institutions within one kilometre, the DYEC is anticipated to have minimal overall net effects regarding the “Potential for Disruption to Use and Enjoyment of Public Facilities or Institutions”.
- Considering the limited number and type of recreational land uses in close proximity, the DYEC is anticipated to have minimal overall net effects regarding the “Potential for Disruption to Use and Enjoyment of Cultural and Recreational Resources”.
- Considering the existing and proposed land use designations, the DYEC is anticipated to have minimal overall net effects regarding the “Compatibility with Existing Land Use Designations and Proposed Land Use Changes”.

The DYEC is and will continue to be compatible with the existing landscape character and zoning of the Clarington Energy Business Park. The increased processing capacity, if approved, will occur within the existing structure onsite, no changes to land, or new construction will be undertaken for the project therefore no impacts are anticipated.

The Durham-York Energy from Waste Facility Business Case (May 15, 2008), prepared for the Region of Durham by Deloitte and Touche LLP, noted that the inclusion of district heating and site works associated with the development of the DYEC within the Clarington Energy Business Park would result in a positive effect for enterprises looking to locate their businesses in Clarington. This would essentially increase the compatibility of the DYEC with the current and future land uses in the vicinity which are likely to include commercial and light industrial uses that could benefit from the availability of district heating and potentially district cooling provided.

6.1 Traffic

The Traffic Impact and Assessment Technical Study from the 2009 EA was reviewed. The purpose of the study was to identify and address potential traffic effects that could result from the construction of the DYEC including:

- Assess existing traffic conditions at the study area intersections;
- Forecast future traffic demands as a result of the DYEC construction;

- Forecast future planned roadway network improvements and background travel demands, specifically generated by the future Clarington Energy Business Park; and,
- Identify operational concerns and recommend required mitigation measures to address potential deficiencies and meet the future traffic demand generated by the DYEC.

Three waste capacity scenarios for the DYEC were reviewed (140,000, 250,000, and 400,000 tonnes per year) and analyzed in terms of traffic operations and effects on adjacent roads.

The initial traffic assessment was based on the morning and evening road peak hours on a weekday, as this is generally the simultaneous peak for both commuter and site traffic. Traffic effects were based on the observed and forecast traffic volumes for both the weekday morning and evening peak hours. A traffic assessment study of this nature is usually based on the forecasted traffic effects associated with the usual or typical traffic conditions that are to be experienced on a day-to-day basis at the DYEC during the morning and evening peak hours.

A ten-year horizon period was selected to assess future traffic conditions. The study assumed up to 34 trucks per day at a design capacity of 140,000 tonnes per year; 51 daily truck trips at 250,000 tonnes per year; and 77 daily truck trips at 400,000 tonnes per year. The study assumed 18 trucks (inbound and outbound combined) and 22 cars during the peak hour operating at 140,000 tonnes per year. At 250,000 tonnes per year, peak hour traffic is anticipated to be 26 trucks and 22 cars, and at 400,000 tonnes per year, peak hour traffic is anticipated to be 40 trucks and 22 cars. In all three scenarios, no traffic control measures were required on the adjacent road network to accommodate traffic during operations of the DYEC. Traffic operations at the study area intersection were assessed with HCS software for unsignalized intersections. The signal warrant analysis did not require traffic signals at any of the intersections and traffic queues were not expected to extend to the Darlington Park Road and Courtice Road intersection. Overall, the studied intersections were found to operate acceptably in the morning and evening peak periods beyond the 2023 horizon year. The alternate truck

access road to the DYEC removed truck traffic from Energy Drive, which increases safety along this corridor.

As a result of changes to the development of the road network, the Traffic Assessment was updated in 2011. Changes included the DYEC truck access road no longer being Osbourne Road and instead is Courtice Road and an updated road network for the intersections of Courtice Road and Energy Drive as well as Energy Drive and Darlington Park Road. The updated 2011 Traffic Assessment noted only marginal changes in traffic volumes as a result of the changes to the road network. As the Highway 401 and 418 interchange was not finalized the study did not include an assessment of traffic operations at the then proposed interchange.

A 20,000 tonne per year capacity increase at DYEC will result in approximately three additional vehicles per day including waste delivery, residuals removal and reagent delivery trucks accessing the facility. As a result of conservative assumptions made in the Traffic Impact and Assessment Study for the initial EA regarding the number of vehicles required to enter the facility on a daily basis, the total number of vehicles, including the additional trips required for the 20,000 tonnes per year increase, is anticipated to remain below the initial study numbers. There are no concerns related to increase in vehicle traffic to the site as a result of processing an additional 20,000 tonnes per year. Operationally, the arrival of staff and deliveries to the facility frequently occurs outside of normal peak periods. Since the construction of the DYEC, OPG has announced an intention to develop an office campus northeast of the DYEC, for approximately 2,000 staff. The impacts of the proposed OPG offices on the local network are outside of the scope of this assessment.

6.2 Visual

The 2009 Visual Assessment Technical Study Report (Jacques Whitford, 2009, Appendix C-6) outlines the scope of the visual assessment that has been completed for use in the initial Environmental Assessment and includes an assessment of the following:

- The sensitivity of the landscape and the identified receptors to the potential change in the visual aesthetics that could result from the development of the DYEC;
- The magnitude of the potential effects on the landscape and the identified receptors resulting from the development of the DYEC; and,
- The anticipated overall level of effect on each identified receptor.

The initial phase of the visual impact assessment is a baseline study which describes the existing environment potentially affected within approximately one kilometre of the DYEC and within five kilometres of the DYEC.

The visual impact assessment focuses on:

- Visibility of the DYEC structures;
- Effects on receptors; and,
- Local community viewshed analysis.

The visual effects associated with the DYEC and specific facility structures that were considered during operation include the buildings and stack(s). Both the initial design capacity of 140,000 tonnes per year and potential future expansion to 400,000 tonnes per year were assessed. The 400,000 tonnes per year scenario would result in the addition of several facility buildings and an additional stack. This larger operation would be contained within the same facility footprint and the additional structures would remain adjacent to the existing structures. Overall, the visual differences between the 400,000 tonnes per year facility compared to the existing 140,000 tonnes per year facility would be minimal.

In response to a request from the Municipality of Clarington at the time of the study, potential visual effects associated with the DYEC were also assessed with regards to the planned future build-out of the Clarington Energy Business Park. These future facilities and infrastructure include the proposed Ontario Power Generation Building and Visitors Centre (identified to be situated on 61 acres of currently vacant land, northeast of the DYEC), Energy Drive (an east-west thoroughfare traversing the Clarington Energy Business Park), and the then proposed Highway 407 East extension

interchange ramps to connect with Highway 401. The cumulative effects of a 400,000 tonne per year facility, in addition to other planned and future building and construction projects surrounding the DYEC, would result in a decrease in visual impacts.

Negative visual effects are minimal based on the DYEC location in the Clarington Energy Business Park between the Courtice Water Pollution Control Plant to the south and commercial properties to the north. The completion of the Darlington Energy Complex and construction of the 407 East interchange ramps will further reduce the overall visual impact of the DYEC. With no new construction, the capacity increase to 160,000 tonnes per year will not alter the site visually from existing conditions, therefore no further visual assessments are required.

The Host Community Agreement included investment by the Region of Durham in infrastructure including roadways to support the Clarington Energy Business Park and surrounding area to serve existing and future businesses and residents.

7. Heritage and Culture

Review of the following 2009 studies that were undertaken during the initial Environmental Assessment show there are no effects to Heritage and Culture as outlined in the screening criteria checklist:

- Archeological Assessment and Built Heritage Technical Study (Jacques Whitford, 2009, Appendix C-9)

The Stage 2 Archaeological Assessment and Built Heritage Technical Study Report was prepared to assess the potential archaeological and heritage resource related impacts associated with the development of the DYEC, potential mitigation required and net effects. The assumed 400,000 tonnes per year building footprint was used to carry out the investigation. Since the capacity increase to 160,000 tonnes per year does not require any construction, the 400,000 tonnes per year building footprint evaluation continues to address all potential concerns associated with a capacity increase.

A Stage 2, below-grade survey was completed based on the determination that there was an elevated potential for the presence of archaeological resources. A Stage 1 Archaeological Assessment was completed for the construction of the Courtice Water

Pollution Control Plant located south of the DYEC. The Stage 1 assessment indicated no historic period archaeological resources in or near the site of the DYEC. The walking survey completed during the Stage 2 assessment revealed only a few small, non-diagnostic and modern artifacts as well no pre-historic artifacts or significant features were noted. Shovel test pits were completed in less accessible areas of the DYEC facility location. These investigations also indicated no artifacts, anthropogenically altered soils or other items of archaeological significance.

The Stage 2 Archaeological Assessment Technical Study Report concluded that there were no archaeological artifacts or significant sites at the DYEC. Although the location and physical characteristics of the site should have made it an attractive settlement location for Late Woodland horticulturalists, there would have been hundreds or thousands of artifacts readily identifiable at the site during the survey if it had been the site of a native village.

The Ministry of Culture issued a letter accepting the Stage 2 Archaeological Assessment Technical Study Report dated May 25, 2009 and two addendums to the report that detail additional shovel testing completed after the original study. The technical study is listed in the Provincial register of archaeological reports and no archaeological sites were documented. The Ministry of Culture agreed with the recommendation of no further concerns for alterations to archaeological sites for the study area.

The DYEC capacity increase to 160,000 tonnes per year does not require any new construction or changes to the existing building footprint. The capacity increase will not disturb any soils or expand the site beyond the previously assessed boundaries. No additional archaeological assessment is required.

8. Indigenous Communities

Consultation and engagement with Indigenous communities has occurred to determine if any concerns related to the increase in capacity at the DYEC exist as part of our legal obligation Duty to Consult with First Nations and Métis communities where decisions or

actions that may adversely impact asserted or established Aboriginal or treaty rights. A summary of the consultation efforts is included as part of the Record of Consultation.

Review of the following 2009 studies that were undertaken for the initial Environmental Assessment for any assumptions, estimates and updates are provided with known/current information where applicable:

- Review of the Record of Consultation to determine the concerns of Indigenous Communities during the initial EA. This review indicated several common themes of concern relating largely to the protection of the natural environment, and the emissions from the facility. The review of the studies completed above, and the air emissions study undertaken as part of the study as listed below review the potential impacts to the environments of concern which include:
  - Groundwater and Surface Water Technical Study Report
  - Archaeological Assessment and Built Heritage Technical Study Report
  - Natural Environment Technical Study Report
  - Updated Emissions Summary Dispersion Model (ESDM) to 160,000 tonnes per year by Golder Associates

TheThe initial Environmental Assessment was completed in 2009 prior to start of construction of the DYEC. The 2009 Environmental Assessment report and associated technical studies can be viewed on the DYEC website at the following location: www.durhamyorkwaste.ca/ea_study . This Environmental Assessment included numerous technical studies including a Surface Water and Groundwater Assessment (Appendix C-2), Natural Environment Assessment (Appendix C-7), Social/Heritage Assessment (Appendix C-8) and a Stage 2 Archaeological Assessment (Appendix C-9).

As described above, a review of groundwater and surface water, and the natural environment shows no additional negative environmental effects are likely to occur as a result of the waste capacity increase to 160,000 tonnes per year and effective mitigation and monitoring plans are in place. Current mitigation measures in place for the 140,000

tonnes per year facility are sufficient to manage an additional 20,000 tonnes of capacity with no additional impacts to the natural environment or groundwater and surface water.

The updated air quality dispersion modelling assessment by Golder Associates simulating a 160,000 tonne per year facility indicated that the predicted Point of Impingement (POI) concentrations of all contaminants were significantly lower than the corresponding regulatory limits.

Based on the results of two separate Stage 2 archaeological assessments conducted in 2009 during the original development of the facility, the likelihood of significant, intact archaeological resources on the site is low. No archaeological evidence or items of historical significance were found on the site during construction. The Archaeological Assessment Technical Study Report was provided to the Ministry of Tourism, Culture and Sport and no archaeological sites were documented. Given construction is not required as part of this capacity increase, further archaeological assessments are not planned as part of the project.

With no construction required for the capacity increase to 160,000 tonnes per year and a review of previous and current emissions assessments showing no significant impacts to land and resources, there are no impacts to Indigenous communities. The Regions will continue to consult on any project updates to potentially impacted communities.

9. Other Effects

- The Regions will see additional energy generation and financial benefit from the sale of electricity to the grid, as well as the recovery of metals from processing residues.
- There are no capital or equipment costs associated with the increase in waste processing capacity.
- Processing 160,000 tonnes per year results in increased operation efficiency. Operating each boiler at 218 tonnes per day results in the plant reaching 140,000 tonnes processed in approximately 321 days. While each boiler does have periods of downtime throughout the year to allow for cleaning and maintenance activities, these periods are typically less than 44 days per year (365 days – 321 days = 44 days) resulting in a reduction of efficiency of the plant's operations due to periods of

operations which occurs at less than full boiler load, or periods where boilers are idled as a result of reaching the current annual waste capacity limit of 140,000 tonnes per year.

- Increasing the DYEC capacity allows for full use of the existing equipment maximizing the use of the investment without requiring any additional construction or building modifications.
- Increasing the capacity will reduce or prevent the need to haul by-passed waste long distance to other disposal facilities.
- The total GHG emissions from DYEC were less than those associated with transportation related emissions and landfill methane generation when waste is landfilled.
- Being able to process all residential waste generated in Durham Region is in keeping with the Long-Term Waste Management Strategy Plan 1999-2020 goal, to manage waste within Durham Region.

Appendix D

If you require this information in an accessible format, please contact The Regional Municipality of Durham at 1-800-372-1102 ext. 3560.

October 7, 2021

To Whom it May Concern,

RE: Environmental Screening Report - Durham York Energy Centre Throughput Increase from 140,000 to 160,000 Tonnes per Year

The Regional Municipality of Durham and the Regional Municipality of York (the Regions) are conducting an Environmental Screening in accordance with *Ontario Regulation 101/07: Waste Management Projects* to increase the processing capacity of the Durham York Energy Centre from 140,000 tonnes per year to 160,000 tonnes per year. Your agency has been identified as having a potential interest in the Project, and we are providing the attached copy of the Environmental Screening Report for your review and comment. All materials generated for the Environmental Screening Process, as well as copies of the reports completed for the original 2009 Environmental Assessment are also available on the DYEC Project website (DurhamYorkWaste.ca).

The DYEC site is located at 1835 Energy Drive, in the Municipality of Clarington, Ontario, Canada, and has been in commercial operation since 2016. The DYEC is a waste management facility that produces energy from the combustion of residential garbage that remains after maximizing waste diversion programs in both Regions. Durham Region's portion of DYEC processing capacity is 110,000 tonnes (approx. 80 per cent) and York Region's is 30,000 tonnes (approx. 20 per cent).

The DYEC generates enough electricity to power approximately 10,000 homes a year. It also captures residual metals for recycling and reduces the volume of waste going to landfill up to 90 per cent. By using state-of-the-art pollution control equipment and proven, reliable energy from waste technology, the DYEC meets stringent environmental standards and reduces greenhouse gas emissions compared to the landfilling option.

The proposed undertaking to increase the maximum annual processing rate from 140,000 tonnes per year to 160,000 tonnes per year can be achieved with the existing infrastructure and does not require additional construction or installation of equipment. As further described in the Environmental Screening Report, the proposed increase is expected to have no significant impact on the environment.

The DYEC received temporary authorization from the MECP to process up to 160,000 tonnes in 2020 to allow the Regions to manage additional tonnage resulting from the COVID-19 pandemic. Based on this temporary authorization, the Regions processed 145,343 tonnes of garbage in 2020, while recovering approximately 4,168 tonnes of metal and generating 107,243 MWh of electricity to the provincial grid. Monitoring results confirm that there were no adverse environmental effects from processing tonnage at an increased rate in 2020.

Should you have any questions, comments, or concerns about the enclosed Environmental Screening Report, please contact Andrew Evans, Project Manager, Waste Planning and Technical Services, at 905-404-0888 extension 4102 or andrew.evans@durham.ca.

Sincerely,

Andrew Evans, M.A.Sc., P.Eng.
Project Manager
Waste Planning and Technical Services
The Regional Municipality of Durham
Andrew.Evans@durham.ca

Lindsay Milne, M.A.Sc.
Manager, Sustainable Waste Management
Environmental Services
The Regional Municipality of York
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Enclosure (Environmental Screening Report, dated October 2021)

If you require this information in an accessible format, please contact The Regional Municipality of Durham at 1-800-372-1102 ext. 3560.

October 7, 2021

To Whom It May Concern:

RE: Durham York Energy from Waste Project Capacity Amendment
Notice of Request to Consult

The Region of Durham and the Region of York (Regions), the owners of the Durham York Energy Centre (DYEC), commenced an Environmental Screening Process in 2019 in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC to increase the approved capacity from 140,000 to 160,000 tonnes per year.

The original Environmental Assessment (EA) and Environmental Compliance Approval (ECA) for the DYEC limits waste processing capacity to 140,000 tonnes per year. The capacity amendment will not require any new infrastructure construction or upgrades but would allow the optimization of operations at the current facility. The DYEC currently operates at a reduced processing capacity for periods of the year because of the annual waste processing limit of 140,000 tonnes. The added 20,000 tonnes of allowable annual throughput will make operations more efficient and allow the equipment to operate at full capactiy through the course of the year.

The Environmental Screening Process was initiated on July 3, 2019 with the Notice of Commencement to the Ministry of Environment, Conservation and Parks (MECP), and a letter was sent July 19, 2019 informing you of the process. The first Public Information Centre (PIC) was held on August 21, 2019. The MECP screening criteria have been applied to the project to identify if the project has any potential environmental impacts. The Regions are currently undertaking final consultation and have revised the Environmental Screening Report (ESR) for public review and subsequent submission to the MECP.

Upon submission and review of the draft ESR in 2020, the Regions received comments from the MECP including, but not limited to, a request to update the Acoustic Assessment Report, Air Impact Quality Assessment and Emission Summary and Dispersion Modelling. The Regions have revised the ESR to satisfy the MECP requirements and are ready to resubmit for approval.

Due to the current COVID-19 pandemic, no in-person meetings will be scheduled. However, if you require a meeting with Region staff, staff are available to meet with you virtually. Please contact the Region to make arrangements via the contact listed below.

The information provided below is intended to clarify the details and timing of the proposed capacity increase in keeping with Request for Consultation requirements for several Indigenous communities.

Given the minimal environmental impacts associated with the existing facility, and that the capacity increase requires no new construction or changes to the existing building, the Regions believe the project has a low potential for impact to Indigenous communities.

Nature and scope of the proposed activity

This Environmental Screening Assessment is being conducted to increase the waste processing capacity of the DYEC from the currently approved 140,000 tonnes per year to 160,000 tonnes per year. No construction or excavation work is being conducted as part of this project and no new equipment will be installed. The waste processing capacity increase is an efficiency enhancement for the facility. A more detailed Project Description, including discussion about the opportunities for the Regions is included in the ESR (**Attachment 1)**.

Timing of the proposed activity

Since there is no construction associated with this project, only an Environmental Compliance Approval amendment is required after the Screening Assessment is complete. The Screening Report is anticipated to be submitted for the required review period in late 2021 followed by an application for an ECA amendment. It is anticipated that the additional 20,000 tonnes per year of waste could be processed starting as early as 2022, after approval of the ECA amendment.

Location of the proposed activity

The DYEC is located in Courtice, between Oshawa and Bowmanville, at 1835 Energy Drive in the Municipality of Clarington. It is in an area identified as the Clarington Energy Business Park. The DYEC is north of the Region of Durham Courtice Water Pollution Control Plant and west of the Darlington Energy Complex. The attached Notice of Commencement (provided previously) includes a map of the area and the location of the DYEC (**Attachment 2**).

How the proposed activity may affect Indigenous Communities and their Traditional Territory

The Regions understand some initial concerns exist primarily about the protection of drinking water, the natural environment and cultural heritage.

Several studies were completed as part of the Environmental Assessment for the facility development. In most cases, these studies also considered the potential for a larger facility – capable of processing up to 400,000 tonnes per year of waste. These previous reports are

available on the project website at durhamyorkwaste.ca. During the initial construction, appropriate mitigation measures were put in place for potential impacts both during construction and during ongoing operations to protect the surrounding environment.

Based on the results of two separate Stage 2 archaeological assessments conducted in 2009 during the original development of the facility, the likelihood of significant, intact archaeological resources on the site was considered low. No archaeological evidence or items of historical significance were found on the site during construction.

Since construction is not required as part of this capacity increase, further archaeological assessments are not planned.

Profile of the proponent(s)

The DYEC site is located at 1835 Energy Drive in the Municipality of Clarington, Ontario, Canada, and has been in commercial operation since 2016. The DYEC is a waste management facility that produces energy from the combustion of residential garbage that remains after maximizing waste diversion programs in the Region of Durham and the Region of York (Regions). The DYEC is owned by the Regions.

The DYEC generates enough electricity from the combustion of garbage to power approximately 10,000 homes a year. It also captures residual metals for recycling and reduces the volume of waste going to landfill up to 90 per cent.

The DYEC is currently permitted to process 140,000 tonnes of residential garbage (non-hazardous) per year that remains after all waste diversion efforts have been utilized (reducing, reusing, recycling and composting) in both Regions. Durham Region's portion of DYEC processing capacity is 110,000 tonnes (approximately 80 per cent) and York Region's is 30,000 tonnes (approximately 20 per cent).

By using state-of-the-art pollution control equipment and proven, reliable energy from waste technology, the DYEC meets stringent environmental standards and reduces greenhouse gas emissions compared to the landfilling option.

As part of the facility's Environmental Compliance Approval (ECA), the DYEC monitors stack emissions continuously using a Continuous Emissions Monitoring System (CEMS) in addition to completing a mandatory independent stack test annually in September. A second voluntary stack test is completed in May or June. The Regions also monitor air quality in the local area surrounding the DYEC through an approved Ambient Air Monitoring Plan. The results of all emissions testing and ambient air monitoring are available to the public on the DYEC project website (www.durhamyorkwaste.ca). Monitoring results demonstrate that the DYEC consistently operates well within the ECA requirements.

The DYEC received temporary authorization from the MECP to process up to 160,000 tonnes in 2020 to allow the Regions to manage additional tonnage resulting from the COVID-19 pandemic. Based on this temporary authorization, the Regions processed 145,343 tonnes of garbage in 2020, while recovering approximately 4,168 tonnes of metal and generating 107,243 MWh of electricity to the provincial grid. Monitoring results confirm that there were no adverse environmental effects from processing tonnage at an increased rate in 2020.

Description of the proposed consultation process, including intended activities, timelines, expectations, and limitations, if any

Under the Waste Management Projects Regulation, Proponents seeking to increase the processing capacity of an existing energy-from-waste facility must complete an Environmental Screening Process. The screening is a proponent-driven, self-assessment process that identifies potential environmental effects resulting from the proposed processing capacity change. Some key steps are listed below:

- Prepare and Publish Notice of Commencement – June 2019
- Identify opportunity and develop project description – June 2019
- Complete Environmental Screening Checklist – July 2019
- Submit Project Information Form to proper MECP office – July 2019
- Describe potential environmental effects and issues to be addressed – August 2019
- Consult with interested persons – PIC August 21, 2019
- Assess potential environmental effects – June 2019 - August 2021
- Develop impact management measures – June 2019 -July 2021
- Prepare Environmental Screening Report – June 2019 - September 2021
- Consult with interested persons – October 2021
- Publish Notice of Completion – December 2021
- 60-Day Review Period – Early 2022
- Complete Statement of Completion Form and submit to MECP – Upon completion of 60-Day Review

MECP approval of the environmental screening process and an ECA amendment for up to 160,000 tonnes per year would increase waste disposal capacity and improve operational efficiency using existing infrastructure.

Summary of Screening Report Findings

The Environmental Screening Process includes a Screening Checklist to identify potential negative impacts of the proposed project on surface and groundwater, land, air and noise, natural environment, socio-economic, heritage and culture, aboriginal communities, and other impacts. Proponents are required to complete additional studies for criteria where potential negative impacts are identified. The completed Screening Checklist for the DYEC capacity increase is included in the ESR (Attachment 1).

The completed Screening Checklist identifies air quality as an area where additional study is required to assess the impacts of the DYEC capacity increase. For the remaining criteria, the Regions reviewed the studies that were previously completed during the original 2009 Environmental Assessment and determined that the conclusions of the original studies are still valid with no further assessment required. The 2009 Environmental Assessment report and associated technical studies can be viewed on the DYEC website at durhamyorkwaste.ca/Archive/ea. A brief summary of these assessments is provided below.

Air and Noise Assessment

Golder Associates undertook an Air Quality Impact Assessment (AQIA) in 2021 to evaluate the potential impacts of increasing the DYEC processing rate to 160,000 tonnes per year. The AQIA was undertaken using a modelling approach that was consistent with the approach used in previous DYEC air quality studies but using updated data sets to reflect current conditions. A copy of the revised AQIA report is included as (Attachment 3). The AQIA is based on very conservative assumptions with consideration of the following:

- DYEC operating at maximum capacity
- Stack emissions contaminant concentrations at maximum permitted levels
- Worst-case meteorological conditions
- Operation with and without engagement of the emergency back-up diesel generators

The results of the AQIA modelling assessment indicated that processing 160 ,000 tonnes per year would result in a small overall changes in the maximum predicted concentrations for all contaminants with even smaller changes to cumulative concentrations.

Overall, the results of the modelling assessment indicate that the 160,000 tonnes per year would result in a small overall change in the maximum predicted concentrations for all contaminants and the change in cumulative concentrations would be even less significant.

Predicted cumulative concentrations of all contaminants are below the relevant air quality criteria for all indicator compounds, with the exception of the following:

Contaminant Modeling Exceptions

Contaminant	Operating Scenario	Concentration Limit		Maximum Predicted Concentration (including background air quality)	Comment
Benzo(a)pyrene	Operating at 160,000	Annual Average	0.00001 µg/m^3	0.000026 µg/m^3	Background benzo(a)pyrene concentration exceeds standard prior to any contribution from DYEC. DYEC contributes less than 1% of total. No change to existing conditions.
		24-hour Average	0.00005 µg/m^3	0.000058 µg/m^3	
Nitrogen Dioxide	Operating at 160,000 including ancillary sources	1 hour average	79 µg/m^3	136.91 µg/m^3	Occurs only during back-up diesel generator operation. Generator testing can occur for up to one hour once per week. No change to existing conditions

The AQIA concludes the operating DYEC at up to 160,000 tonnes per year will not have a significant impact on local air quality.

Surface Water and Groundwater Assessment

The 2009 Surface Water and Groundwater Assessment determined the site is in the Tooley Creek watershed. The building and site were designed to capture stormwater runoff in an on-site retention pond for quality control prior to discharge to Tooley Creek. The Regions have implemented a groundwater and surface water monitoring program in the area surrounding the DYEC in accordance with an approved Groundwater and Surface Water Monitoring plan. The surface water portion of the monitoring program was placed on hold in 2016 due to construction activities in the area. The results of the monitoring program are available on the DYEC website and demonstrate that facility operations have not had a significant impact on local groundwater and surface water resources. The proposed increase to 160,000 tonnes per year is not expected to have any impact these results.

Archaeological Assessment

The 2009 Archaeological Assessment Technical Study Report was provided to the Ministry of Tourism, Culture and Sport and no archaeological sites were documented. The letter received from the Ministry of Tourism, Culture and Sport is attached for your reference (**Attachment 4**). Since the proposed increase to 160,000 tonnes per year does not require any new infrastructure there are no changes to the conclusions of this report.

Natural Environment Assessment

The 2009 Natural Environment Assessment determined there were no significant forested areas or permanent watercourses on the site. Prior to development, the DYEC site consisted of a combination of cultivated and fallow fields and surrounding hedgerows. No significant habitat was present for native plant species, mammalian species, avian, amphibian or reptile species. The animal and plant species that were present prior to construction are considered widespread and common throughout Ontario and are documented in the 2009 report. The closest natural area to the DYEC site is the Tooley Creek Coastal Wetland located 0.87 kilometres away. The Natural Environment Assessment established mitigation measures to ensure that facility construction and operations did not have unacceptable adverse impacts on wildlife. A wildlife corridor was established along the southern property line of the site to maintain and enhance wildlife movement. Under the direction of the Ministry of Natural Resource, the Regions completed a Development Plan for the Eastern Meadowlark. Grassland habitat was established in the restoration area to ensure adequate breeding ground was maintained. These mitigation measures remain in effect and will not be impacted

by the proposed increase in waste tonnage to 160,000 tonnes per year. The Natural Environment Assessment did not identify any significant net effects from the development of the DYEC site.

Governmental Agency Review

As part of the continuing assessment, staff have reviewed the reports prepared in support of the original construction to confirm that the study environments, assumptions, and findings remain applicable to the capacity increase and no changes were identified.

Notification of the proposed capacity increase was sent to various provincial and federal agencies for review and comment including Central Lake Ontario Conservation Authority, Fisheries and Oceans Canada and Ministry of Environment Conservation and Parks. Any additional comments or review documentation received from contacted agencies will be included in the final Environmental Screening Report which will be posted for public review.

Next Steps

The Regions request that any concerns identified be communicated to the Regions by October 29, 2021 so that they can be addressed in final ESR, which is scheduled to be submitted to the MECP in December 2021. Upon publication of the Notice of Completion, the MECP will post the final ESR for a 60-day public review period in accordance with the Waste Management Projects Regulation.

Should you have any questions or concerns, please contact the staff member listed below from the Regional Municipality of Durham, Works Department:

Andrew Evans, MASc, P.Eng
Project Manager, Waste Planning and Technical Services
Durham York Energy Centre
1835 Energy Drive
Courtice, Ontario L1E 2R2
905-404-0888 ext. 4102
andrew.evans@durham.ca

The Regions welcome the opportunity to have further discussion about the project, any specific questions or concerns you may have and the most appropriate way to continue to consult with your community.

Sincerely,

Gioseph Anello, M.Eng., P.Eng., PMP
Director, Waste Management Services

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Laura McDowell, P.Eng.
Director, Environmental Promotion and Protection
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c. E. Lee, Environment and Resource Planner & EA Coordinator, Air, Pesticides and Environmental Planning, MECP

List of Attachments:

Attachment 1: Environmental Screening Report

Attachment 2: Notice of Commencement

Attachment 3: Updated Air Quality Impact Assessment

Attachment 4: Ministry of Tourism, Culture and Sport letter

Appendix E

Appendix E – Indigenous Community Comments

Submitter	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
Chippewas of Rama First Nation	Sharday James, Community Consultation Worker, Communications shardayj@ramafirstnation.ca	7/26/2019	7/26/2019	As part of the public consultation process, I would like a tour of your facility accompanied by an adequate technical briefing. Looking forward to hearing from you.	Good Afternoon, This is a response to your request dated Wednesday July 3, 2019 regarding a tour of the Durham York Energy Centre (DYEC) as part of the public consultation process for the DYEC throughput increase (from 140,000 to 160,000 tonnes per year).As it is anticipated that more requests will be received regarding tours of the facility in relation to the public consultation, we will be consolidating requests and scheduling dedicated date(s) and time(s) to accommodate incoming requests. Once scheduled, we will notify residents that have expressed an interest in visiting the facility during the consultation phase of this project. Please contact us if you have any additional questions or concerns. (Follow-up Response) This email is to confirm your requested presentation/tour of the Durham York Energy Centre on **October 10, 2019** at **10:00 am.** Please note, **all guests are required to wear long sleeves, long pants and closed toe shoes (no heels) to enter the plant**. All other personal protective equipment is available on site. A map to the facility has been provided below for your reference. Parking is located at the front of the building. There is a call button on the left-hand side of the door for access into the building. Regards, DYEC Project Team
Chippewas of Rama First Natio	Sharday James, Community Consultation Worker, Communications shardayj@ramafirstnation.ca	11/6/2019	11/1/2019	I haven't heard from you in a while; I was looking for some updates. If there are no updates as of yet we hope that you understand that we expect updates as the project moves forward. I understand that incinerating garbage diverts waste from our landfills. That is great especially when it comes to plastic. I also understand that this process still has an environmental impact. I am interested in learning more about the benefits and how these benefits outweigh disposing waste in landfills. We would appreciate any reports you may have or reports upon their completion.	Thank you for your email regarding the Durham York Energy Centre (DYEC) dated Thursday July 4, 2019. We encourage you to continue following the Environmental Screening Process for the DYEC Throughput Increase as there will be public consultations this summer and fall regarding the study. Information will be released as the study progresses. For more information about this project visit DurhamYorkWaste.ca or sign up for email updates under the What's New section on the home page.

Submitter	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				Thank you, Sharday James	
Nation Huronne-Wendat	Maxime Picard, Project Coordinator, Ontario	8/6/2019	8/6/2019	Could you please clarify if any archaeological assessment will be initiated as part of this project?	As no construction is required for this project, we do not anticipate a requirement to perform an archaeological assessment. During the initial project construction, a Stage 2 Archaeological Assessment was performed. The report and the findings of this assessment can be found here: https://www.durhamyorkwaste.ca/Archive/pdfs/study/ea-study-docs/studydoc-july31/Appendix-C-9-Stage-2-Archaeological-Assessment-Technical-Study-Report.pdf The report summary stated "Based on the results of the 2008 and 2009 field assessments and previous studies in and around the Site it is considered likely that the current Site does not contain significant, intact archaeological or built heritage resources. The Project is considered to be cleared of archaeological conditions." If you have any further questions, please contact us.
Curve Lake First Nations	Emily Whutung, Chief		8/1/2019	Acknowledged receipt of the Notice of Commencement and recommended that we provide Karry Sandy-Mackenzie, Williams Treaty First Nation Claims Coordinator, with a copy of the Notice. They also requested a File Fee, a summary statement indicating how the project will address the following areas: possible environmental impact to their drinking water; endangerment to fish and wild game; impact on Aboriginal heritage and cultural values; and to endangered species; lands; savannas etc. Once the Region has provided this information, they have requested the Region to make arrangements to discuss the matter in more detail and possibly set up a date and time to meet with Curve Lake First Nation in person. Concerns regarding archaeological finds were also noted. They have asked to be kept apprised throughout all phases of this project.	Notice of Request to Consult with attachments (dated November 18, 2019) was sent to full Indigenous Community distribution list through registered mail on November 25, 2019.
Mississaug a of the Credit First Nation	R. Stacey Laforme, Chief	8/19/2019	8/2/2019	Based on the project description I would suggest a discussion to begin with our Duty to Consult and accommodate office. I have included the director Mark Laforme.	No additional action required; Mark Laforme was already included in the mailing distribution list.
Alderville First Nation	Dave Simpson		9/3/2019	What the long-term effect on the environment would be. E.g. Air quality, air borne matter from the facility after increase of 20,000 tonnes per year?	This request was responded to through the Notice of Request to Consult with attachments (dated November 18, 2019) which was sent to full Indigenous Community distribution list through registered mail on November 25, 2019.

Submitter	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				This waste burning facility is in our treaty area “Gunshot treaty” and the Williams treaties clause two lands. So, we are concerned with the environmental effects on the air and water and the land as well. Please keep us up to date on the progress of this process and perhaps we would like to set up a meeting at a later date with York/Durham to discuss this issue.	
Mowhawks of the Bay of Quinte	Charlotte Gurnsey/Chief R. Donald Maracle		9/18/2019	Acknowledged receipt of the Notice of Commencement. Noted that the level of impact a project may have on their people and lands will determine the level of interest the Mohawks of the Bay of Quite have in participating in the projects requiring environmental assessments, and consultation and engagement initiatives. Requested additional documentation including: 1-2-page summary of the project including potential adverse environmental impacts to the land and affected community; archaeological reports and assessments; any comments or review-type documents provided by involved government parties; and a map of the proposed project and location.	This request was responded to through the Notice of Request to Consult with attachments (dated November 18, 2019) which was sent to full Indigenous Community distribution list through registered mail on November 25, 2019.

After the 2021 Notice to Consult was mailed out, each indigenous community was contacted to confirm if they received a copy of the draft report and if they had any feedback. No comments or feedback were provided.

Appendix F

Agency	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
Ministry of the Environment, Conservation and Parks	Emilee O'Leary, Environmental Planner/Environmental Assessment Coordinator emilee.oleary@ontario.ca	7/24/2019	7/24/2019	Attached please find the response from the Ministry of the Environment, Conservation and Parks to the Notice of Commencement for the Durham York Energy Centre Throughput Increase (from 140000 to 160 000 tonnes per year) project proposed by the Regional Municipalities of Durham and York. *Please note that this serves as the ministry's formal correspondence.	This email is to confirm receipt of your response to the Notice of Commencement for the Durham York Energy Centre Throughput Increase (from 140 000 to 160 000 tonnes per year) project proposed by the Regional Municipalities of Durham and York.
Health Canada	Dae Lee, EA Specialist	8/1/2019	8/1/2019	Dae Lee and the DYEC Project Manager spoke about the project in general. They discussed how the throughput increase would be completed using the existing equipment. The Project Manager noted the development of the Terms of Reference for an EA to be undertaken for a further expansion to 250,000 tonnes per year. Dae Lee indicated that he would be discussing the project internally with his colleagues to determine if/how Health Canada would like to participate in this study. He noted that the letter indicated that they would be provided additional information as it was released, and he confirmed they would like to remain on the distribution list.	No additional action required at this time.
Health Canada	Dae Lee, EA Specialist	8/19/2019	8/7/2019	Thank you for your letter dated July 19, 2019 providing Health Canada with the Notice of Commencement for the Environmental Screening Process - Durham York Energy Centre Throughput Increase from 140,000 to 160,000 tonnes per year. Health Canada's role in Environmental Assessment (EA) is founded in statutory obligations under the Canadian Environmental Assessment Act, 2012, which provides the legal basis for the federal EA process. Health Canada is a federal department with knowledge and expertise that can be called upon by responsible authorities, review panels, Indigenous groups and/or other jurisdictions leading EAs to determine whether there are potential health risks associated with proposed projects and how to prevent, reduce or mitigate them. Upon receipt of a request from one of the above noted groups, Health Canada may participate in this EA process. Thank you for your interest in Health Canada's expertise as it relates to EA. Should you have any specific questions related to human health or Health Canada guidance documents please contact the undersigned.	No additional action required at this time.

Agency	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
Infrastructure Ontario	Vanessa Wu, Environmental Management Co-op	No Action	8/13/2019	Thank you for sending us the Notice of Commencement for the Durham York Energy Centre project in Clarington, Ontario. Our records indicate that there are no Ministry of Infrastructure property within your project's study area. Since we are not a directly affected or interested stakeholder, we would appreciate the removal of the following contact from your stakeholder list for this project: Lisa Myslicki	No additional action required at this time.
Hydro One	Secondary Land Use, Asset Optimization, Strategy & Integrated Planning	No Action	8/13/2019	Following our preliminary assessment, we confirm there are no existing Hydro One Transmission assets in the subject area. Please be advised that this is only a preliminary assessment based on current information. No further consultation with Hydro One Networks Inc. is required if no changes are made to the current information. However, if plans for the undertaking change or the study area expands beyond that shown, please contact Hydro One to assess impacts of existing or future planned electricity infrastructure. Any future communications are sent to Secondarylanduse@hydroone.com.	No additional action required at this time.
Transport Canada	Environmental Assessment Program, Ontario Region Transport Canada / Government of Canada / 4900 Yonge St., Toronto, ON M2N 6A5 EnviroOnt@tc.gc.ca / Facsimile: (416) 952-0514 / TTY: 1-888-675-6863	No Action	10/2/2019	Please note Transport Canada does not require receipt of all individual or Class EA related notifications. We are requesting project proponents to self-assess if their project: 1. Will interact with a federal property and/or waterway by reviewing the Directory of Federal Real Property, available at www.tbs-sct.gc.ca/dfrp-rbif/; and 2. Will require approval and/or authorization under any Acts administered by Transport Canada* available at http://www.tc.gc.ca/eng/acts-regulations/menu.htm. Projects that will occur on federal property prior to exercising a power, performing a function or duty in relation to that project, will be subject to a determination of the likelihood of significant adverse environmental effects, per Section 67 of the Canadian Environmental Assessment Act, 2012. If the aforementioned does not apply, the Environmental Assessment program should not be included in any further correspondence and future notifications will not receive a	No additional action required at this time.

Agency	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				response. If there is a role under the program, correspondence should be forwarded electronically to: EnviroOnt@tc.gc.ca with a brief description of Transport Canada's expected role.	
Municipality of Clarington	Amy Burk Acting Manager – Special Projects Planning Services Department Municipality of Clarington 40 Temperance Street, Bowmanville ON L1C 3A6 905-623-3379 ext. 2423 | 1-800-563-1195 and Faye Langmaid Acting Director	No Action	Email correspondence from July 26 until August 14, 2019	The Municipality of Clarington sent a letter to MECP on July 26, 2019 requesting an assessment of cumulative environmental effects for the proposed expansion of the Durham York Energy Centre and for the use of Alternative Low Carbon Fuels at the St. Mary's Cement plant in Bowmanville. They also asked for clarification on whether the approval for the planned expansion to 160 000 tonnes for the DYEC is contingent on the Regions initiating the EA process for the future expansion to 250, 000 tonnes per year. A follow-up email was sent to MECP requesting clarification on the Region's population growth.	No additional action required at this time.

Agency	Contact Information	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
Ministry of Heritage, Sport, Tourism and Culture Industries	Dan Minkin Heritage Planner Dan.minkin@ontario.ca	No response required	October 29, 2021	Section 3.12, Heritage and Culture, should be renamed Cultural Heritage in keeping with standard terminology.	The ESR has been updated with the standard terminology.
				Section 3.12 references a "Stage 2 Archaeological Assessment and Built Heritage Technical Study Report (Jacques Whitford, 2009, Appendix C-9)", as having been "prepared to assess the potential archaeological and heritage resource related impacts" of the project. The version of the report we received does not include an Appendix C-9 and the referenced report itself is not included anywhere in the appendices. Rather, Appendix F contains an MHSTCI (then MTCS) review letter for a 2009 Stage 2 Archaeological Assessment by that company (PIF # P002-152-2008 and P002-270-2009). The full title of this report includes no reference to built heritage, which is as one would expect, as built heritage is outside the scope of archaeological assessment under the *Standards and Guidelines for Consultant Archaeologists.*	Additional clarification added to Section 3.12 in accordance with comments from MHSTCI.
				Related to #2 above, there is no discussion of built heritage resources and cultural heritage landscapes in the draft ESR. As with other subject matter areas, the ESR should summarize the findings of the 2009 Environmental Assessment with respect to these resources. If the potential impacts of the project on built heritage resources and cultural heritage landscapes were screened out without technical study, this should be noted. Such screening can be completed through the *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* checklist. It may be appropriate to subdivide Section 3.12 into a subsection for archaeology and a subsection for built heritage resources and cultural heritage landscapes.	Additional clarification added to Section 3.12 in accordance with comments from MHSTCI.
				In describing the outcome of the archaeological assessment work completed in 2009, it is better to simply state what reports were completed and summarize their conclusions and recommendations, rather than attempt the sort of interpretation offered in the fourth paragraph of Section 3.12 ("Although the location and physical characteristics…").	Additional clarification added to in accordance with comments from MHSTCI.

Durham York Energy Centre 160 Environmental Screening Report MECP Comments and Responses

Environmental Screening Report - Golder's Responses (Air Quality Impact Assessment)				
Document	**Reference**	**MECP Comment**	**Golder Response**	**Action**
Technical Memorandum – Air Quality Impact of 160,000 TPA Waste at Durham York Energy Centre, prepared by Golder Associated Ltd. and dated February 19, 2019	1	Emission estimates for the 160,000 TPA scenario were calculated assuming the concentration of each contaminant will remain the same as the 140,000 TPA scenario, as submitted in the original ESDM. Please provide the rationale for assuming no change in concentration with the increase in processing rate.	No changes are proposed to the equipment at the Facility. Maximum emissions occur when the equipment is operating at maximum capacity. For both the 140,000 tonnes per annum and 160,000 tonnes per annum the system was therefore assumed to operate at maximum capacity 24 hours per day. In reality, this would occur more frequently for the 160,000 tonnes per annum scenario.	N/A - this memorandum was superseded by the 2021 AQIA
	2	Emissions from the loading of the silos should be speciated based on the material being loaded or a rationale should be provided for why speciation is considered negligible.	There is no proposed change to the silo filling operations. Based on the SDS for the material, the only contaminants that may be emitted in non-negligible amounts (>1%) during silo filling that are common to emissions from the main stack are particulates.	N/A - this memorandum was superseded by the 2021 AQIA
	3	Page 2 of the Memorandum notes that the 1-hour averaged NOx and SO2 contributes a two percent (2%) increased level of concentration at the POI along with the background. However, Appendix H of the AQIA report identifies reductions of 6% and 1% for the 1-hour SO2 and 1-hour NO2, respectively. Please revise the discrepancies accordingly.	This memorandum was based on a separate modelling assessment completed using a different version of Calpuff and corresponds to the results of that assessment only. It was superseded by the 2021 AQIA which was completed using updated CALPUFF and CALMET data	N/A - this memorandum was superseded by the 2021 AQIA
	4	Emission estimates for the 160,000 TPA scenario were calculated assuming the concentration of each contaminant will remain the same as the 140,000 TPA scenario, as submitted in the original ESDM. Please provide the rationale for assuming no change in concentration with the increase in processing rate.	The emission rates used in the AQIA are not the same as the emission rates used in the ESDM. No changes are proposed to the equipment at the Facility and the maximum amount of waste processed on a daily basis is not anticipated to change, only the maximum annual tonange. Maximum emissions occur when the equipment is operating at maximum capacity. As described in Section 3.1.1 of the AQIA, the concentration of each contaminant emitted from the main stack was calculated using a combination of in-stack concentration emission limits and source testing data of in-stack concentrations. Emission rates were calculated using the corresponding exhaust flow rate, in each scenario. The use of in-stack emission limits is conservative as these represents the maximum allowable concentrations in the stack. The use of source testing data is assumed to be representative as source testing has been completed twice annually at DYEC since operations began.	Table 6 updated to identify speciated components and to clarify that only PM is modelled
	5	Emissions from the loading of the silos should be speciated based on the material being loaded or a rationale should be provided for why speciation is considered negligible.	There is no proposed change to the silo filling operations. Based on the SDS for the material, the only contaminants that may be emitted during silo filling in non- negligible amounts (>1% content) and are common to emissions from the main stack are particulates. Speciation of the particulates will be considered as part of the ESDM report to support the ECA amendment application.	No change required

Air Quality Impact Assessment, Durham York Energy Centre (Appendix E) prepared by Golder Associated Ltd. and dated September 2021	6	There are inconsistencies between the modelling meteorological data periods identified in the ESR and the AQIA report (Appendix E). The AQIA report refers to the meteorological period from 2015 to 2019 for the Courtice meteorological data set, as illustrated in Figure 2 and Section 5.2 (Meteorological Data Input) refers to the meteorological period from 2014 to 2018. However, the ESR (Section 4.3.1) refers to the 2003-2007 WRF meteorological data set. Additional clarification is required in both the ESR and AQIA report as to which meteorological period was used in the dispersion modelling scenarios for the current and future undertaking.	Figure 2 shows wind speed for the 2015-2019 period to identify the predominant wind direction and justify the selection of ambient air quality monitoring stations. As stated in section 5.2 of the AQIA, the data period used in the CALMET modelling was 2014-2018 and was selected to match the WRF data period that was previously submitted to the MECP.	The ESR has been updated to match the AQIA
	7	The methodology used in the AQIA report follows MECP's guidelines. However, it is suggested to clarify in Section 2 of the report if ambient background monitoring data covers a time series from 2013 to 2020, or 2013 to present (2021) for the various monitoring data. Additional discussions related to the ambient background monitoring data time series used in the modelling scenarios would be beneficial.	DYEC commenced operations in 2015. As stated in Appendix C, 2015-2019 data for Courtice and Rundle stations was used to estimate background air quality for compounds that are continuously monitored. Non continuous monitoring did not commence until 2016, therefore 2016-2019 data was used for compounds that are not continuously monitored.	Additional clarification added to Section 2. Table 3 has been corrected to use the correct monitoring start dates
	8	While the AQIA report assumes emergency power generator (EPG) testing to occur every day along with the facilities maximum emission scenario, this may result in conservative modelling estimates for the future scenario. Additional details with respect to assumptions made in the dispersion modelling of NOx emissions should be included in the report.	The EPG testing scenario is described in section 3.1.3 an additional section highlighting modelling conservatism has been added to Section 5.7	A section on modelling conservatism has been added as Section 5.7
	9	Additional details in the AQIA report should be included to clarify if new and proposed future sensitive receptors are included in the receptor grid of the dispersion modelling.	The locations of sensitive receptors included in the modelling are identified on Figure 7, which was updated based on available information on sensitive receptor locations at the time of the assessment however it should also be noted that a dispersion modelling grid (as described in Section 5.5 and Figure 6) was also modelled, which would capture any additional locations of future sensitive receptors. The maximum predicted concentrations presented in the report are the maximum concentrations at any modelled receptors (i.e. they include both sensitive and gridded receptors)	Section 5.5 updated to identify the sensitive receptors are both "current and proposed"
Environmental Screening Report - Golder's Responses (Comparison of Applicable Guidelines)				
Revisions to Appendix A: Comparison of Applicable Guidelines	10	Appendix A, page 2: 1,1-dichloroethene 24-hour AAQC should be 10 ug/m3 instead of 165 ug/m3.	This has been updated. Please note that this does not impact any of the conclusions and the maximum predicted concentrations are below the relevant AAQC for all scenarios assessed.	This has been updated
	11	Appendix A, page 3: the 1-hour SO2 AAQC should be 106 ug/m3 (40ppb) instead of 690 ug/m3. Also, there is no current 24-hour SO2 AAQC. Furthermore, the annual SO2 AAQC should be 10.5 ug/m3 (4ppb) instead of 55 ug/m3. Please revise the project criteria and the discussions in the AQIA report where appropriate.	Report updated to reflect the new standards. Please note that this does not impact any of the conclusions and the maximum predicted concentrations are below the relevant AAQC for all scenarios assessed.	Report updated to reflect the new standards
	12	Appendix A, page 3: PM2.5 24-hour AAQC should be 27 ug/m3 instead of 30 ug/m3, as referenced in the 2020 CAAQS.	This comment is acknowledged, please note that the CAAQS of 27 µg/m³ was used as the Project Criteria, therefore this does not affect the assessment results	Appendix A updated
Environmental Screening Report - Golder's Responses (Acoustic Assessment Report)				
Document	**Reference**	**MECP Comment**	**Golder Response**	**Action**
	13	Figure 1 (Site Location) should be replaced/supplemented by an aerial photograph (to scale) to show the actual locations of the existing facility buildings as well as the existing houses represented by points of reception POR001, POR002 and POR003	ok	Figure 1 has been updated

Acoustic Assessment Report prepared by Golder Associates Ltd. and dated August 2021	14	Please provide a rationale why the seven noise sources (Source ID: L004, L007, L008, L009, L020, L021 and L022) from Appendix C (Nose Data) were not measured on-site during the site noise measurements conducted by Golder in November 2019. These noise sources already exist on-site and operate continuously.	Source ID: L004 (Transformer) was not audible above background noise at the time of the site noise measurements. Rather than including in the list of insignificant sources Golder used conservative reference data from Golder's database of similar noise sources in the modelling. Source ID: L007, L020, L021 and L022 were measured during the site noise measurements, Appendix C 'Source' description has been updated from "Golder Database" to "Goder Measurement" for these sources. Source ID: L008 and L009 (On-site trucks and (outdoor) Loader) were not measured during the site noise measurements therefore representative noise data (of which Golder has numerous references for these more common sources of noise) was used. The noisiest component associated with the product delivery trucks (i.e., blower transferring material to the silos) was measured by Golder during the site visit as was noise associated with idling trucks and noise associated with loaders operating within the Tipping Floor Room.	Appendix C 'Source' description has been updated from "Golder Database" to "Goder Measurement" for Source ID: L007, L020, L021, L022. Source ID: L004, L008 and L009 'Source' descriptions remain unchanged.

Environmental Screening Report - Regions of Durham and York Responses

Document	Reference	MECP Comment	Regions of Durham and York Response	Action
Environmental Screening Report	15	Section 3.11.2 (Socio-Cultural Assessment) references “two public facilities” within the vicinity of the DYEC twice. Please clarify what these facilities are.	The Durham Regional Police Service unit to the north of Highway 401 and the Courtice Water Pollution Control Plant to the southwest of the DYEC are the only two public facilities or institutions located in the vicinity of the Facility. Neither of the public facilities or institutions are considered sensitive community uses	ESR revised
	16	Table 14 indicates that the maximum 24-hour BaP concentration at Rundle Station in 2020 was 0.129 ng/m3. However, the maximum 24-hour BaP concentration reported in the 2020 Quarterly Ambient Monitoring Reports was 0.182 ng/m3 on December 29, 2020. Please revise the discrepancy accordingly.	The error in Table 14 was revised by RWDI and included.	ESR revised
	17	The draft Appendix H provides a summary of the consultation program and outlines outstanding information that will be included in the final Appendix. MECP will review these materials in the final version. MECP notes that summaries and copies of the comments received will be provided in the final appendices. Please include information about how these comments have been resolved or addressed as well. Additionally, please provide a summary of any comments or concerns received during the phone calls.	Record of Consultation appendices are updated with all corresponding documents that are noted in the report.	Record of Consultation revised
	18	Please provide a brief description of how the Indigenous communities that were notified were identified.	Updated the Record of Consultant report with the following statement: “A detailed Indigenous Community distribution list was developed in conjunction with MECP and maintained through the duration of the EA study. A list of the Indigenous communities was continually updated over the course of the Study. The most recent version of the contact can be found in Appendix B.”	Record of Consultation revised

Appendix G

Appendix G – General Public Comments

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
Dean Rivando (Oshawa)	7/3/2019	7/3/2019	As part of the public consultation process, I would like a tour of your facility accompanied by an adequate technical briefing. Looking forward to hearing from you.	Good Afternoon, This is a response to your request dated Wednesday July 3, 2019 regarding a tour of the Durham York Energy Centre (DYEC) as part of the public consultation process for the DYEC throughput increase (from 140,000 to 160,000 tonnes per year).As it is anticipated that more requests will be received regarding tours of the facility in relation to the public consultation, we will be consolidating requests and scheduling dedicated date(s) and time(s) to accommodate incoming requests. Once scheduled, we will notify residents that have expressed an interest in visiting the facility during the consultation phase of this project. Please contact us if you have any additional questions or concerns. (Follow-up Response) This email is to confirm your requested presentation/tour of the Durham York Energy Centre on **October 10, 2019** at **10:00 am.** Please note, **all guests are required to wear long sleeves, long pants and closed toe shoes (no heels) to enter the plant**. All other personal protective equipment is available on site. A map to the facility has been provided below for your reference. Parking is located at the front of the building. There is a call button on the left-hand side of the door for access into the building. Regards, DYEC Project Team
Jeff May (Uxbridge)	7/4/2019	7/4/2019	Good work on the DYEC. Please continue to increase the consumption of garbage to create energy.	Thank you for your email regarding the Durham York Energy Centre (DYEC) dated Thursday July 4, 2019. We encourage you to continue following the Environmental Screening Process for the DYEC Throughput Increase as there will be public consultations this summer and fall regarding the study. Information will be released as the study progresses. For more information about this project visit DurhamYorkWaste.ca or sign up for email updates under the What's New section on the home page.
Linda Gasser	8/30/2019	8/22/2019	Noted that she expected PIC #1 info would be available prior to the PIC from her understanding of public notice dated July 29th	Good afternoon Ms. Gasser –

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
			"If you are unable to attend, all information will be available online at durham.ca/DYEC160k and questions can be submitted to info@DurhamYorkWaste.ca." (note – no comment deadline indicated) Question: on what web page(s) –please provide links -can I find the EA Screening checklist and a copy of ALL story boards from last night as well as any other related info? You ask people to comment on "problems and opportunities" – where can this be found? If not yet posted, when will that be done? She noted that asking comments to be provided by August 30th was too short of a time period from PIC#1 and asked for the timeline for comments to be extended by a month. Additional concerns re durham.ca/DYEC160k website - when accessing the durham.ca/DYEC160k website, one is automatically redirected to a page on the current DYEC website, https://www.durhamyorkwaste.ca/PublicOutreach/2019EnvironmentalAssessment.aspx She noted that she strongly believes the 160K expansion should be a stand-alone website to eliminate confusion, frustration and to make info specific to that expansion project easy to find. it was also noted that staff from Durham, York, Covanta and consultants wore badges identifying them as event staff, but with not even a first name and organization shown to help people identify who they were speaking with which lead to a question of transparency.	On behalf of Mirka Januszkiewicz, Director, Waste Management Services, Works Department, The Regional Municipality of Durham, I forward the following message: Good afternoon, I would like to acknowledge receipt of your email summarizing comments regarding last week's public information event. The August 21 public meeting was held as part of the Ministry of the Environment, Conservation and Parks' Environmental Screening Process. The materials available at the meeting (and now posted online) were designed to provide a summary of the project undertaking and identify the potential risk/benefit for expanding the facility. The project consultation is intended to be an ongoing process, comments and questions for any materials related to the project can be submitted at any time through the process, which is anticipated to extend into late 2019 / early 2020. At the same time, we asked that all participants of the August 21 public meeting return the comment forms to us by August 30, 2019. The reason for this request was to ensure that we have a complete record of public comments as we will incorporate them into our submission to the Province. All information prepared for the project will be posted to the project website. I noted that you addressed the email to the newest members of my team, the DYEC project engineer. I would appreciate that in the future, all your comments / emails are still addressed to me. Furthermore, as in the past I will be happy to meet with you and answer any questions you have. MJ
Despina Melohe		8/29/2019	This email is to follow-up on our conversation at the open house on August 21st. The plans for a biodigester seems like a good idea at this point. I would need more information to comment further. I am very concerned about the consequences of the DYEC capacity increase. Where is the incentive to decrease waste when we increase capacity? We should be working to decrease the capacity while at the same time	In addition to the capacity increase from 140,000 to 160,000 tonnes per year to meet current waste disposal demands and increase the efficiency of the plant, the Regions continue to maximize waste diversion efforts. While energy recovery is important, the Regions are first committed to improving waste diversion rates through reuse, recycling and organic waste programs. Durham Region is planning to expand its diversion programs by building a mixed

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
			expanding the blue box program. The Region needs to lobby the federal government to stop the manufacture of single-use plastics. The incinerator releases dioxins and it is unacceptable that we allow this into our air and soil and water. There have been exceedences of dioxin and CO in the past and the Region has not released the long-term dioxins sample study results. I suggest rather than increasing the capacity, we regulate the design specs for packaging and single use items. If we pass a law that requires all disposable products to be both biodegradable and recyclable, this would definitely reduce waste. Would the Region approach the provincial and federal governments to enact laws that will protect Canadians' right to a healthy environment? If a healthy environment was included in the Charter, this would create a circular economy that would ensure safety and health of future generations.	waste transfer/pre-sort facility to remove additional recyclables and organic waste from the residual waste stream and an anaerobic digestion facility to process organic waste, which together will divert up to 30,000 additional tonnes per year of material from the DYEC. In April 2020, York Region Council also demonstrated its continued commitment to waste diversion by authorizing procurement of new 20-year contracts for processing 100,000 to 140,000 tonnes per year of organic waste at privately-owned anaerobic digestion facilities. Reducing waste through development of new regulations for disposable products and packaging is a key piece of current federal and provincial waste management initiatives such as the *Canada-wide Strategy on Zero Plastic Waste* and the *Strategy for a Waste Free Ontario*. Staff from both Regions have been active participants in public consultations on these strategies and continue to advocate for reducing single use plastics and packaging and making producers responsible for end-of-life management costs for the products that they introduce into the Ontario marketplace. Persons interested in this issue should be aware that the Ontario legislature is currently considering *Bill 82, Single-Use Plastics Ban Act, 2019* which carried in its first reading. Environmental protection is a key aspect of DYEC operations. The DYEC uses proven, reliable air pollution control technology to ensure that the facility operates in a safe and environmentally responsible manner in compliance with strict emissions limits imposed by the MECP. Emissions at the stack are monitored in real time through a continuous emissions monitoring system (CEMS) in addition to annual spring and fall stack testing. The Regions also monitor ground water, soils and ambient air quality in the area surrounding the site to ensure that there are no adverse off-site impacts from facility operations. Carbon monoxide (CO) is monitored as an operational parameter indicating combustion performance and does not adversely impact health or the environment. The DYEC has experienced three exceedances of the 4-hour rolling CO standard, which were reported to the MECP and to the public. In each case, the boiler exceeding the standard was shut down immediately to correct the

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				combustion issue. It should be noted that the margin of exceedance in two of the three instances was low enough that the combined average emissions from both boilers remained in compliance with the standard. One Dioxin/Furan (D/F) exceedance occurred in Boiler#1 during the May 2016 stack test. The Regions and Covanta worked diligently with the MECP on an abatement plan to investigate and remediate the problem. Modelling completed after the failed stack test confirmed that ambient D/F concentrations remained within limits that are protective of human health and the environment. No additional D/F exceedances have occurred in the additional seven stack tests conducted since May 2016. Each of these events are detailed in the annual reports that are available on the DYEC website. Following these events, a review of the conditions leading to the exceedance is undertaken, and measures are put in place to reduce the risk of reoccurrence. The DYEC is equipped with a long-- term sampling system (LTSS) for dioxins and furans. In accordance with ECA Condition 7.(3)(b), performance of the LTSS is evaluated by comparing the results against the stack test data. To date, data obtained from the LTSS has not been consistent with data obtained from concurrent stack tests. Further refinement of the LTSS operating procedures is required to achieve consistent and accurate results. The results of the LTSS performance assessment are discussed in the DYEC ECA Annual reports to the MECP. The most recent DYEC Annual Operations Report is posted on the DYEC website.
Wendy Bracken		8/30/2019	Comments regarding PIC#1 were submitted. Comments included the need to increase diversion efforts, concerns regarding the airshed, performance of the DYEC, standards being used in modeling, greenhouse gas emissions, impacts on wildlife, etc. Concerns regarding the format of PIC#1 and timelines for submitting comment cards were also noted.	Comments were noted and addressed where appropriate.
Linda Gasser		8/30/2019	Concerns regarding PIC#1 were noted including timing for submission of comment cards, timing of posting material for PIC#1 on the website. Concerns regarding the 160,000 Streamlined EA website and format of information available to the public, 250,000	Comments were noted and addressed where appropriate.

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
			Terms of Reference, supporting material for the checklists, information regarding Durham's Long Term Waste Management Plan, performance of the DYEC, costs to manage waste in Durham, GHG emissions, carbon tax, etc.	
Louis Bertrand		8/31/2019	I am writing about the near total blackout of meaningful information about the environmental harm to be expected from the additional pollution from burning an extra 20 kilotonnes of garbage in the Durham York incinerator. The initial EA was shoddy enough (I know, I participated) but this latest round is actually contemptuous of the public and the right to know what threats we are exposed to. In case you hadn't noticed, it's no longer "business as usual" with the onset of the climate crisis. Rather than setting aggressive waste reduction and diversion targets, Durham and York regions are looking to increase the amount of waste burned for the profit of a repeat offender of pollution infractions (sadly only in the USA, our environmental regulations being too slack and generally unenforced). The level of irresponsibility on this file is stunning, even by Durham standards. Council even rejected a motion to ask staff for a cost analysis! I am also addressing officials (elected and staff) from York Region because York cannot simply let Durham carry the blame alone for this climate wrecking project. Finally, let me point out again, since it has been in the news, that the IPCC report Special Report: Global Warming of 1.5 ºC [1] shows with high confidence that we must drastically cut back our greenhouse gas emissions by 2030 if we are to avoid a global temperature rise greater than 1.5C above pre-industrial levels. I have attached the executive summary to this email. The York & Durham incinerator and its increased capacity are incompatible with keeping within the 1.5C limit. In other words, business as usual is not only a boondoggle, but also dangerous and foolish	Reduction and diversion programs including recycling, HHW management, and green bin programs remain key aspects of both Regions waste management programs as does the deployment of new technologies such as anaerobic digestion and mixed waste processing. However, continued changes to packaging as well as continued rapid growth within the Regions have and will continue to result in more waste being produced than the facility is currently permitted to accept. The proposed permit increase will allow the Regions to make the optimal use of the existing facility to manage our wastes.
Kerry Meydam		8/31/2019	Concerns were noted regarding Terms of Reference to 250,000, Long Term Waste Management Strategy Plan, human and ecological health, additional ash. Questions were raised regarding bypass waste, financial implications and concerns regarding formatting of PIC#1. Additional sampling was noted as being needed.	Comments were noted and addressed where appropriate.

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
Pam Callus		8/21/2019	If there is too much waste generated in Durham Region, why are we not addressing that? There are better ways to manage waste then burning it. Wouldn't a waste audit be helpful? More air pollution is anticipated (including CO2 which PIC#1 did not recognize). Why aren't other municipalities taking this route? Burning is the worst option for air quality. 140,000 tonnes is bad enough, 160,000 tonnes is worst and 250,000 tonnes is irresponsible.	Durham Region promotes waste diversion programs through an extensive community outreach program. The Region is committed to improving waste diversion rates and participation through reuse, recycling and composting programs. The Region has recently approved the implementation of a mixed waste transfer/pre-sort with Anaerobic Digestion facility which will further divert up to 30,000 tonnes of Green Bin organic wastes per year. Continued growth within the Region will continue to result in an increase in the quantities of materials that need to be managed by Regional programs.
Murray Lapp		8/21/2019	With no need to build additional physical plant, the increase to 160K looks to be rational, efficient and should proceed. The Region and Town need to spend more effort to solve the issues with multi-res and condo building waste management limitations	Currently, Durham Region does not collect kitchen organic wastes from multi-residential buildings. The high contamination levels in these locations does not make the material compatible with the aerobic composting process currently in place to produce Grade A compost product. The Region is working on a project to build an Anaerobic Digestion (AD) facility with a pre-sort system so that multi-residential buildings that receive Region-provided waste collection can have their waste separated into recycling, garbage and the organic portion treated by AD instead of disposed.
Linda Gasser		9/4/2019	The resident appeared before the Durham Region Works Committee with respect to the Notice of Commencement. The resident noted that the Notice was misleading regarding the Terms of Reference of the 250,000 tonne expansion. She also stated that staff must clearly describe in writing to both Council and the public how they intend to implement the Council direction regarding drafting the Terms of Reference. The resident stated that the information they received from staff at the August 21, 2019 PIC was not consistent with the Council direction on drafting the Term of Reference for expansion. The resident requested that the August 30, 2019 comment deadline be extended by at least a month to provide more time for people to respond.	Staff is following the Terms of Reference code of practice which states that the Notice of Commencement should be submitted prior to the drafting of the Terms of Reference.
Twitter	9/13/2019	9/12/2019	Is this to sort more and divert into recycling or just increase amount of landfill garbage accepted by the Region?	The DYEC is an energy from waste facility which accepts residential waste, and processes it to recover energy and metal, while reducing

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				the volume of the material. The capacity increase will allow the facility to process materials which currently go directly to landfill.
Linda Gasser		9/14/2019	An email was received by the Project Team summarizing the resident's delegation to Works Committee on September 4, 2019.	
Maryann MacPhee	12/11/2019	10/23/2019	I would like to express my concerns with the burning of more waste at the Durham York facility. Many of my friends and neighbours refuse to use the compost bin, putting all compost in the garbage. The region knows that many people do the same. However, to solve this problem they are proposing increasing burning instead of heavily penalizing those who do not compost. Here's an idea: no green bin= no garbage pick-up. Residents who customarily do not have green bin should see their property tax increased. Businesses should be also helped to find more ways and materials which are compostable. Funding should go towards expansion of compost facilities. I doubt very much more burning would be needed if everyone would just get with the program. Absolutely no burning increase until better sanctions are in place for compost avoiders!! Why should we all have to pay the price of more air pollution for those who already are insensitive about the environment?	Good Morning, This email is in response to your concerns regarding the proposed throughput increase at the Durham York Energy Center (DYEC), dated October 23, 2019. Durham and York Regions are first committed to improving waste diversion rates through reuse, recycling and composting programs. However, even with aggressive diversion targets and programs, the Region of Durham is producing approximately 10,000 tonnes of waste per year above the currently processing capacity of the DYEC. This waste surplus is primarily due to extensive population growth within the Region and convenient single-use plastic items with new products and materials being marketed at a rate higher than municipalities infrastructure and markets can handle. The proposed throughput increase is meant to address the short-term capacity issues currently experienced by the Regions, as well as prepare for additional capacity pressures as population grows within the Region. The Regions continue to support, and strives to improve, waste diversion efforts. While energy recovery is important, Durham and York Regions are first committed to improving waste diversion rates through reuse, recycling and composting programs. In 2018, Canada Fibers Limited completed a Garbage Composition Study for the Region of Durham. The results of this Study gave a comprehensive breakdown of materials in Durham's black bag garbage. The data is being used to inform decisions regarding waste diversion programs within the Region which includes how the Region can improve organics diversion.

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				In conjunction with the throughput increase, the Region is moving forward with initiatives to divert more materials from the DYEC and prolong the need for additional capacity above 160,000 tonnes per year. This includes the development of a new Long-Term Waste Management Strategy Plan and a mixed waste transfer/pre-sort with Anaerobic Digestion facilities which will divert up to 30,000 tonnes per year of organics material from the DYEC. In addition to the above efforts, the Region has four dedicated waste bylaw officers that are currently focusing on the neighborhoods with low green bin set out rates. Once low participating neighborhoods have been identified, the bylaw officers are conducting door-to-door visits to provide additional education and tools in effort to increase the use of the Region's green bin program. While the Region is proud of our current diversion rate, we are focused on continual improvement and expect to see an increase in organics diversion with the implementation of the above programs. Regards, DYEC Project Team
Facebook		10/25/2019	Just curious to know how many acres of landfill space we have available in Durham, or the area we are transporting our garbage to. Would you be able to provide an answer for me? (After response from Durham Region) Wow! That's actually amazing to hear and excellent news, I had no idea! I had no idea we were taking such an ecological and responsible approach to our excess waste management in Durham. I think it would make an excellent subject for an awareness campaign in the future. Thank you for indulging my curiosity, I certainly appreciate the timely and informational response!	After all waste diversion efforts have been utilized, Durham Region manages its remaining garbage primarily through energy recovery at a facility in Clarington. The Durham York Energy Centre (DYEC) is a waste management facility that produces energy from the combustion of garbage. The DYEC generates enough electricity to power approximately 10,000 homes a year, captures residual metals and reduces the volume of waste going to landfill by 90 per cent.
Bob Collings	12/5/2019	11/8/2019	I have had great difficulty finding a web page or email address for public input into the proposed expansion.	Good Morning,

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
			While I am not opposed to the concept of incineration, I believe that the DYEC needs to get their emissions problems fixed before expanding. Often while commuting on the 401 by the DYEC, the fumes and stench are so bad they make my eyes water. This was not a problem before the DYEC went into operation. You can see the smoke from the stack dropping to ground level and drifting over the 401 ubder certain weather conditions. This does not happen every day, but it must be corrected BEFORE expansion is allowed.	This is in response to your email dated November 8, 2019 regarding the proposed capacity increase from 140,000 tonnes to 160,000 tonnes of waste per year, stack emissions and odour monitoring the Durham York Energy Centre (DYEC). The flue gas emitted at the top of the stack at the DYEC is characterized by both temperature and water content. Due to the water content of the emissions the flue gas is noticeable when the surrounding air temperatures are near or below freezing as a result of the water vapours cooling. This is the same phenomenon that occurs when a person exhales on a cold day. The emissions from the combustion process which occurs at the DYEC, is primarily composed of carbon dioxide, nitrogen and water vapour, with particulates and other materials being removed through treatment and filtration of the exhaust gases as part of the facility's air pollution control system. The height and direction of the flue gas is dependent on the atmospheric conditions. Odours are closely monitored at the DYEC, and the facility has been designed to prevent the release of odours into the community. The tipping hall where municipal solid waste is received and unloaded is located indoors. The air in the tipping hall is drawn through large fans and used in the combustion process. This ensures the tipping hall remains under negative air pressure to contain any dust and odours generated during the delivery and storage process. By using the air from the tipping floor during combustion, the odour causing compounds are destroyed through the combustion process prior to reaching the stack. Regular odour inspections are completed by both Regional and Operator staff to ensure there are no offsite impacts due to odour from DYEC operations. All odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP) as per the facilities Environmental Compliance Approval. Once a concern has been reported, an investigation of the available data, including wind direction from meteorological data, conditions of operations, and a review of our odour inspections, is completed to determine conditions at the time of the reported incident. The MECP has

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				confirmed that no odour complaints received by the facility to date have been related to the DYEC operations. A designated project website has been created to provide details and updates on facility operations as well as the 2019 Streamlined Environmental Assessment (Durham.ca/DYEC160k). Residents and interested parties are encouraged to submit any question or comments to the project manager listed below: Andrew Evans, M.A.Sc, P.Eng. Project Manager Durham York Energy Centre 1835 Energy Drive, Courtice, ON L1E 2R2 905-404-0888 ext. 4130 info@DurhamYorkWaste.ca Please let us know if you have any additional questions or concerns. Regards, DYEC Project Team
Allison Doiron	12/17/2019	12/12/2019	I am unable to attend this evening. My question is about the smell. There is a sour, burning garbage smell some days. I live in West Bowmanville. Some days in nicer weather I have to keep my windows closed. On these same days the smell is noticeable on the 401, just at the incinerator and not west of it. I have asked in the past about the smell and was replied by the region that the readings were normal. That's great, but it still smells. Will increasing the volume each year increase this odour? Thank you for your time Allison	Good Afternoon, Thank you for your email dated December 12, 2019 regarding the Durham York Energy Centre (DYEC) Environmental Screening Process. We understand you have concerns regarding odour in your community. Our staff is committed to ensuring that odours related to the waste at our facility are contained and destroyed within the building to prevent any offsite odour impacts. Odours are closely monitored at the DYEC, and the facility has been designed to prevent the release of odours into the community. The tipping hall where municipal solid waste is received and unloaded is located indoors. The air in the tipping hall is drawn through large fans and used in the combustion process. This ensures the tipping hall remains under negative air pressure to contain any dust and odours

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				generated during the delivery and storage process. By using the air from the tipping floor during combustion, the odour causing compounds are destroyed through the combustion process prior to reaching the stack. Regular odour inspections are completed by both Regional and Operator staff to ensure there are no offsite impacts due to odour from DYEC operations. All odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP) as per the facilities Environmental Compliance Approval. Once a concern has been reported, an investigation of the available data, including wind direction from meteorological data, conditions of operations, and a review of our odour inspections, is completed to determine conditions at the time of the reported incident. The MECP has confirmed that no odour complaints received by the facility to date have been related to the DYEC operations. When an odour is reported to DYEC staff, but found not be related to DYEC operations, the MECP will assign the complaint to appropriate local MECP officer for further investigation/reporting. Please note that no changes to the amount of waste being stored at the facility are being considered as part of the proposed increase in capacity to 160,000 tonnes per year, furthermore no changes to the waste storage location, or any other component of the facility are proposed. As a result, the in-place mitigation measures are anticipated to remain effective at controlling any generated odours. A designated project website has been created to provide details and updates on facility operations as well as the 2019 Streamlined Environmental Assessment (Durham.ca/DYEC160k). Residents and interested parties are encouraged to submit any question or comments, by December 20, 2019, to the project manager listed below: Andrew Evans, M.A.Sc, P.Eng. Project Manager Durham York Energy Centre 1835 Energy Drive, Courtice, ON L1E 2R2 905-404-0888 ext. 4130

Submitter	Response Date	Date Received	Summary of Comment Received	Response Summary (if required)
				info@DurhamYorkWaste.ca We welcome you to contact us discuss your concerns further and/or schedule a visit to the DYEC for further discussion and a brief tour of the facility. Regards, DYEC Project Team

Appendix H

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.

The Regional Municipality of Durham
Information Report

From:	Commissioner of Works
Report:	#2020-INFO-21
Date:	March 20, 2020

Subject:

Results of Recent Waste Management Program Surveys

Recommendation:

Receive for information.

Report:

1. Purpose

1.1 The purpose of this report is to provide the results of recent community surveys completed by the Waste Management Division regarding waste management programs in the Regional Municipality of Durham (Region).

2. Background

2.1 Between November 1 and December 15, 2019, Waste Management staff conducted an online survey to gather information on residents' knowledge and opinions of waste management programs. The survey was promoted with banners on the Region's homepage and via postings on the Region's Facebook page. An electronic link to the survey was provided in each of these locations. Hard copies were made available on request.

2.2 A second survey specific to the waste management school education program was also conducted from December 5, 2019 to January 10, 2020. The survey link for the school program survey was emailed directly to educators in school boards within the Region.

3. Waste Management Programs Survey

3.1 Over 3,000 residents participated in the on-line survey with representation from all eight local municipalities and a wide age range. The survey consisted of 16 questions in two broad categories: “Durham York Energy Centre (DYEC)” and “Managing Waste as a Resource.”

3.2 Responses to the seven questions regarding energy-from-waste in general and the DYEC specifically, will form part of the overall consultation record for the Environmental Screening Report for the capacity increase at the DYEC to 160,000 tonnes per year and for drafting the Terms of Reference for future capacity expansion.

3.3 Responses to the remaining nine questions will be used in upcoming consultation and discussion on the Long-Term Waste Management Plan 2021-2040.

4. Waste Management School Programs Survey

4.1 A total of 107 responses were received from educators covering all grade levels, kindergarten through Grade 12 with representation from all eight local municipalities.

4.2 Responses from the elementary schools (grade levels kindergarten to eight) will be used to inform long-term school educational resource development on various waste management topics for this audience.

4.3 Responses from secondary schools (grade levels nine to twelve) will update the Region’s school education program later in 2020. A pilot is planned to focus on energy-from-waste in general, DYEC tours, managing waste as a resource and student-career connections.

5. Key Survey Results

5.1 Below are responses to several of the Waste Management Programs survey questions:

a. 99 per cent of respondent’s report using the curbside Blue Box program, 85 per cent of respondent’s report using the Green Bin program and 87 per cent report using the leaf and yard waste program. The Region has a high level of self-reported participation in its curbside collection programs.
b. 74 per cent of respondents think that energy should be generated from Durham’s waste.

c. 77 per cent of respondents agree that the DYEC should be expanded in the future if necessary to manage additional waste generated by residents.
d. 92 per cent of the survey respondents think that Durham Region should manage waste as a resource.

5.2 Below are responses to several of the Waste Management School Programs survey questions:

a. The top two topics of interest (related to Waste Management) for educators are Climate Change and Environmental Sustainability.
b. Secondary school teachers are most interested in an education program that focuses in the areas of energy from waste and managing waste as a resource.
c. Secondary school teachers also indicated interest in school education resources that can be made available on a variety of modern technologies.
d. 90 per cent of secondary school respondents are interested in bringing their classes for a tour of the DYEC.
e. Educational topics of most interest related specifically to the DYEC are Climate Change, Energy from Waste and Environmental Sustainability.
f. YouTube is the social media platform most used by educators.

5.3 Survey responses will continue to be reviewed to support developing consultation programs for upcoming projects including the Waste Pre-Sort Anaerobic Digestion project and the Long-Term Waste Management Plan 2021-2040.

6. Conclusion

6.1 The Regional Municipality of Durham received high participation from the community in two recent waste management program on-line surveys.

6.2 The information and opinions provided by survey respondents will be used by waste management staff in consultation efforts and in developing future programs.

6.3 For additional information, contact: Gioseph Anello, Acting Director, Solid Waste Management Services, at 905-668-7711, extension 3445.

Respectfully submitted,

Original signed by:

Susan Siopis, P.Eng.
Commissioner of Works

Waste Management Survey Questions October 2019

Overview

The Region's 5R hierarchy approach (rethink, reduce, reuse, recycle, recover), allows for all waste diversion efforts to be utilized. The preferred final disposal destination is energy-from-waste to maximize the benefit of capturing energy from residual waste. The Region is looking at its waste management programs and how to best use the recycling and disposal systems. The brief survey below will help the Region understand what our residents think is most important for managing the waste we create. The survey should take less than 5 minutes to complete.

1. Which of the following Region of Durham Waste Management services do you use? (check any that apply)

    a. Blue Box Recycling
    b. Green Bin
    c. Leaf and yard waste
    d. Garbage Collection
    e. Special Collections for metal goods, bulky materials, electronics, porcelain bathroom fixtures
    f. Curbside battery collection in April and/or November
    g. Regional Waste Management Facilities to drop off batteries, household hazardous waste, electronics, or garbage
    h. Special Event Saturdays (Compost give-aways, Household hazardous waste and/or electronics Saturday drop off event, Re-use Days to drop off re-usable household or renovation materials)
    i. Bin Exchange Program
    j. New Resident Diversion Kit
    k. Multi-Residential Collection
    l. Other, please specify _____

2. How do you think Durham's waste should be managed? Please select all that apply

    a. Energy should be generated from the waste (Incineration and anaerobic digestion)
    b. It should be sent to a landfill for disposal
    c. It should be managed within Durham Region
    d. It should be shipped somewhere else for landfill or incineration

e. Undecided
f. Other, please specify

Durham York Energy Centre

3. Are you aware that Durham Region's garbage is burned to make electricity in Durham's own Energy from Waste facility in Clarington? It's called the Durham York Energy Centre.

    a. Yes
    b. No

4. Did you know that the Durham York Energy Centre operates under stringent pollution control requirements as dictated by the Province?

    a. Yes
    b. No

5. Did you know that the Durham York Energy Centre is monitored continuously for many parameters?
    a. Yes
    b. No

6. Did you know that the term "energy from waste" describes a process where garbage is burned to create electricity that is fed back into power grid?

    a. Yes
    b. No

Expansion plans

The Durham York Energy Centre (DYEC) is currently allowed by the Province of Ontario to process up to 140,000 tonnes of household waste each year, however, the existing equipment could handle 160,000 tonnes per year. To handle increasing waste, Durham is requesting permission from the Province to increase approved capacity to 160,000 tonnes.

7. Were you aware that Durham is undertaking this process?
    a. Yes
    b. No

8. Do you think this is a good idea?

    a. Yes

b. No
c. Not sure
d. Other, please specify _____

9. If Durham Region growth results in more than 160,000 tonnes of garbage per year being generated in the future, do you think the Durham York Energy Centre should be expanded to safely process more garbage?

    a. Yes
    b. No
    c. I don't know

Using Waste as a Resource

The Region of Durham's next Long-Term Waste Management Strategy will determine how the Region manages its waste over the next 20 years. An important element of the Strategy is to promote the use of waste as a resource through innovation and adaptability; while keeping environmental sustainability top of mind.

10. Do you agree that waste should be managed as a resource?

    a. Yes
    b. No
    c. Undecided

11. Did you know that the term "anaerobic digestion" describes a process where organic materials are broken down by bacteria in an environment free of oxygen, that creates a biogas that can be used as an alternative fuel?

    a. Yes
    b. No

12. Which of the following do you consider an example of using waste as a resource? Please select all that apply

    a. Processing waste to become raw materials for new products
    b. Reusing or re-purposing old/unwanted goods to delay their disposal
    c. Generating energy from garbage
    d. Generating energy from food waste

13. Which of the following do you currently do, or would be willing to do to reduce the waste you generate? Please select all that apply

    a. Bring my own reusable bags when shopping

b. Use my own reusable containers at a bulk food store
c. Bring my own reusable straw, fork, knife when getting take out
d. Take my own travel mug for each trip to the coffee shop
e. Collect unwanted or worn out clothing and other textiles from home and drop off at a collection bin or re-use store
f. Participate in a community swap event
g. Shop at a second-hand store
h. Meal plan my week and buy only the food I need
i. Use sealable re-usable containers instead of single use sealable bags
j. Purchase more readily recyclable products
k. Other_____
l. None of the above

14. Do you have any comments or questions regarding the Durham York Energy Centre facility and/ or the Region's waste management programs?

_____
_____

The following information would help us keep track of the groups of people we have reached.

15. Please provide the first three digits of your postal code.

_____

16. Please indicate you age.

a. Under 18
b. 18 – 24
c. 25 – 34
d. 35 – 44
e. 45 – 54
f. 55 – 64
g. 65 or older
h. Prefer not to say

Appendix I

If you require this information in an accessible format, please contact 905-668-4113 ext. 3546.

The Regional Municipality of Durham
News Release

June 27, 2019

Regions proposing to increase waste processing limit by 20,000 tonnes at Durham York Energy Centre

Whitby, Ontario – The Regional Municipalities of Durham and York have begun the Environmental Screening Process to increase the amount of waste processed each year at the Durham York Energy Centre (DYEC) by 20,000 tonnes.

“The Environmental Compliance Approval for the Durham York Energy Centre currently allows the facility to process a maximum of 140,000 tonnes of waste per year. Durham and York Regions, who co-own the facility, are proposing to increase the Environmental Compliance Approval capacity to 160,000 tonnes,” said Mirka Januszkiewicz, Director of Waste Management. “This state-of-the-art facility is already capable of processing 160,000 tonnes per year with its current equipment and therefore will not require any additional infrastructure. This additional capacity would allow for more efficient use of the existing facility—reducing our reliance on alternate waste disposal facilities outside Durham’s borders.”

The Notice of Commencement will be available on the project website. There will be Public Information Centres in the summer and fall; watch for further communications about engagement opportunities, or sign up for email updates at DurhamYorkWaste.ca on the home page, under the What’s New section.

The DYEC, located in Courtice, is Durham Region’s primary long-term disposal option for waste and only processes the household waste remaining after Durham and York Regions’ aggressive composting, recycling and reuse programs. Both regions are leaders in waste diversion with diversion rates consistently above 60 per cent.

Learn more about the DYEC at DurhamYorkWaste.ca, call 1-800-667-5671, or email info@durhamyorkwaste.ca.

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For more information, please contact Corporate Communications.

If you require this information in an accessible format, please contact 905-668-4113 ext. 3546.

Media inquiries:

The Regional Municipality of Durham:
Corporate Communications Office (CCO)
The Regional Municipality of Durham
CorporateCommunications@durham.ca
905-668-7711 ext. 2618

Durham York Energy Centre Throughput Increase (From 140,000 to 160,000 tonnes per year)

Notice of Commencement

Works Department | **July 3, 2019** | **Public Notice**

The Regional Municipalities of Durham and York, the owners of the Durham York Energy Centre (DYEC), have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC.

The DYEC site is located at 1835 Energy Drive in the Municipality of Clarington, Ontario, Canada, and has been in commercial operation since 2016. The DYEC is a waste management facility that produces energy from the combustion of residential garbage that remains after maximizing waste diversion programs in Durham and York regions.

The Proposed Undertaking

The Environmental Compliance Approval for the DYEC currently allows the facility to process up to a maximum of 140,000 tonnes per year of waste, for disposal at the site. The Regions are proposing to increase this amount by 20,000 tonnes per year, for a total of 160,000 tonnes. The facility is capable of processing 160,000 tonnes per year with its current equipment; and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions. If approved, the expanded tonnage will allow for greater usage of the existing facility, reducing the reliance on alternate waste disposal facilities outside the Regions' borders.

The Process

The proposed project is subject to the Ministry of Environment, Conservation and Parks' Environmental Screening Process for Waste Management Projects, in accordance with Ontario Regulation 101/07 under the Environmental Assessment Act. The results will be documented in an Environmental Screening Report, which will be released for public and agency review.

During the June 26, 2019 Durham Regional Council Meeting, Council provided the approval to conduct the Environmental Assessment Terms of Reference for a separate and possible future expansion to 250,000 tonnes per year at the DYEC. As well, Council approved plans to construct an anaerobic digestion facility with mixed waste processing. These are separate projects and will be conducted under individual approvals processes.

Consultation

There will be public consultations this summer and fall regarding the study. Information will be released as the study progresses. For more information about this project visit DurhamYorkWaste.ca or sign up for email updates under the What's New section on the home page.

Under the Freedom of Information and Protection of Privacy Act and the Environmental Assessment Act, unless otherwise stated in the submission, any personal information included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

Should you have any questions or concerns, please contact the staff member listed below from the Regional Municipality of Durham, Works Department:

Andrew Evans, M.A.Sc., P.Eng.
DYEC Project Manager
905-404-0888 ext. 4102
info@durhamyorkwaste.ca

If you require this information in an accessible format, please contact 1-800-372-1102 ext. 3560.

www.facebook.com/RegionOfDurham www.twitter.com/RegionOfDurham

Figure 1: Environmental Assessment Study Area

The Regional Municipality of Durham Works Department
605 Rossland Road East, Whitby, Ontario L1N 6A3
Telephone: 905-668-7711 or 1-800-372-1102
DurhamYorkWaste.ca

Ontario

Ministry of the Environment, Conservation and Parks

Central Region

5775 Yonge Street, 8th floor
North York ON M2M 4J1
Tel.: 416 326-6700
Fax.: 416 325-6345

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Région du Centre

8e étage, 5775, rue Yonge
North York ON M2M 4J1
Tél. : 416 326-6700
Téléc. : 416 325-6345

July 24, 2019 File No.: EA 10-01

Andrew Evans (BY EMAIL ONLY)
DYEC Project Manager
The Regional Municipality of Durham
605 Rossland Road East
Whitby ON L1N 6A3

Re: **Durham York Energy Centre Throughput Increase (from 140 000 to 160 000 tonnes per year)**
Regional Municipalities of Durham and York
Waste Management Projects Regulation (O. Reg. 101/07) – Screening
Response to Notice of Commencement

Dear Mr. Evans,

This letter is in response to the Notice of Commencement for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that Durham and York Regions have indicated that the study is following the approved environmental screening process in accordance with the Waste Management Projects Regulation.

The MECP's Technical Support Section will be the one window for the screening project. It is our understanding that Durham and York Regions have been in discussions with MECP staff from the York Durham District Office and the Environmental Assessment and Permissions Branch. It is the MECP's expectation that the Regions consult us on the approach for this screening project as it relates to environmental effects assessment and review of studies/reports before commencing the work. Accordingly, **when the Regions have prepared a work plan to present and discuss with the MECP, I ask that the DYEC project team please reach out to me to set up a meeting with us.**

Guidance on Indigenous Consultation

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before the proponent may proceed with this project, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed project may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in relation to the proposed project**, the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

It is my understanding that the Regions have developed a list of communities to be consulted during the project which has been reviewed by the MECP's Environmental Assessment and Permissions Branch.

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed project are outlined in the "Code of Practice for Consultation in Ontario's Environmental Assessment Process" which can be found at the following link: https://www.ontario.ca/document/consultation-ontarios-environmental-assessment-process
Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments
Please also refer to the attached document "A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities" for further information.

The proponent must contact the Director of Environmental Assessment and Permissions Branch under the following circumstances subsequent to initial discussions with the communities identified by MECP:

- Aboriginal or treaty rights impacts are identified to the proponent by the communities;
- The proponent has reason to believe that the proposed project may adversely affect an Aboriginal or treaty right;
- Consultation has reached an impasse;
- A Part II Order request or elevation request is expected.

The Director can be notified either by email, mail or fax using the information provided below:

Email:	enviropermissions@ontario.ca Subject: Potential Duty to Consult
Fax:	416-314-8452
Address:	Environmental Assessment and Permissions Branch 135 St. Clair Avenue West, 1st Floor Toronto, ON, M4V 1P5

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role the proponent will be asked to play should additional steps and activities be required.

Should you or any members of your project team have any questions regarding the material above, please contact me at emilee.oleary@ontario.ca or 416-326-3469.

Yours truly,

Emilee O'Leary
Regional Environmental Assessment Coordinator
Technical Support Section

cc: Lubna Hussain, Manager, Technical Support Section, MECP
Paul Martin, Supervisor, Technical Support Section, MECP
Amanda Graham, Air Quality Analysis, Technical Support Section, MECP
Celeste Dugas, Manager, York Durham District Office, MECP
Phil Dunn, Sr. Environmental Officer, York Durham District Office, MECP
Gavin Battarino, Special Project Officer, Environmental Assessment and Permissions Branch, MECP
Margaret Wojcik, Sr. Waste Engineer, Environmental Assessment and Permissions Branch, MECP
Steve Mercer, Sr. Air Engineer, Environmental Assessment and Permissions Branch, MECP

Central Region EA File
A & P File

Attach: A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities

DEFINITIONS

The following definitions are specific to this document and may not apply in other contexts:

Aboriginal communities – the First Nation or Métis communities identified by the Crown for the purpose of consultation.

Consultation – the Crown's legal obligation to consult when the Crown has knowledge of an established or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. This is the type of consultation required pursuant to s. 35 of the *Constitution Act, 1982*. Note that this definition does not include consultation with Aboriginal communities for other reasons, such as regulatory requirements.

Crown – the Ontario Crown, acting through a particular ministry or ministries.

Procedural aspects of consultation – those portions of consultation related to the process of consultation, such as notifying an Aboriginal community about a project, providing information about the potential impacts of a project, responding to concerns raised by an Aboriginal community and proposing changes to the project to avoid negative impacts.

Proponent – the person or entity that wants to undertake a project and requires an Ontario Crown decision or approval for the project.

I. PURPOSE

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that may adversely impact that right. In outlining a framework for the duty to consult, the Supreme Court of Canada has stated that the Crown may delegate procedural aspects of consultation to third parties. This document provides general information about the Ontario Crown's approach to delegation of the procedural aspects of consultation to proponents.

This document is not intended to instruct a proponent about an individual project, and it does not constitute legal advice.

II. WHY IS IT NECESSARY TO CONSULT WITH ABORIGINAL COMMUNITIES?

The objective of the modern law of Aboriginal and treaty rights is the *reconciliation* of Aboriginal peoples and non-Aboriginal peoples and their respective rights, claims and interests. Consultation is an important component of the reconciliation process.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown's duty to consult is triggered when it considers issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate the potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.

III. THE CROWN'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

The Crown has the responsibility for ensuring that the duty to consult, and accommodate where appropriate, is met. However, the Crown may delegate the procedural aspects of consultation to a proponent.

There are different ways in which the Crown may delegate the procedural aspects of consultation to a proponent, including through a letter, a memorandum of understanding, legislation, regulation, policy and codes of practice.

If the Crown decides to delegate procedural aspects of consultation, the Crown will generally:

- Ensure that the delegation of procedural aspects of consultation and the responsibilities of the proponent are clearly communicated to the proponent;
- Identify which Aboriginal communities must be consulted;
- Provide contact information for the Aboriginal communities;
- Revise, as necessary, the list of Aboriginal communities to be consulted as new information becomes available and is assessed by the Crown;
- Assess the scope of consultation owed to the Aboriginal communities;
- Maintain appropriate oversight of the actions taken by the proponent in fulfilling the procedural aspects of consultation;
- Assess the adequacy of consultation that is undertaken and any accommodation that may be required;
- Provide a contact within any responsible ministry in case issues arise that require direction from the Crown; and
- Participate in the consultation process as necessary and as determined by the Crown.

IV. THE PROPONENT'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

Where aspects of the consultation process have been delegated to a proponent, the Crown, in meeting its duty to consult, will rely on the proponent's consultation activities and documentation of those activities. The consultation process informs the Crown's decision of whether or not to approve a proposed project or activity.

A proponent's role and responsibilities will vary depending on a variety of factors including the extent of consultation required in the circumstance and the procedural aspects of consultation the Crown has delegated to it. Proponents are often in a better position than the Crown to discuss a project and its potential impacts with Aboriginal communities and to determine ways to avoid or minimize the adverse impacts of a project.

A proponent can raise issues or questions with the Crown at any time during the consultation process. If issues or concerns arise during the consultation that cannot be addressed by the proponent, the proponent should contact the Crown.

a) What might a proponent be required to do in carrying out the procedural aspects of consultation?

Where the Crown delegates procedural aspects of consultation, it is often the proponent's responsibility to provide notice of the proposed project to the identified Aboriginal communities. The notice should indicate that the Crown has delegated the procedural aspects of consultation to the proponent and should include the following information:

- a description of the proposed project or activity;
- mapping;
- proposed timelines;
- details regarding anticipated environmental and other impacts;
- details regarding opportunities to comment; and
- any changes to the proposed project that have been made for seasonal conditions or other factors, where relevant.

Proponents should provide enough information and time to allow Aboriginal communities to provide meaningful feedback regarding the potential impacts of the project. Depending on the nature of consultation required for a project, a proponent also may be required to:

- provide the Crown with copies of any consultation plans prepared and an opportunity to review and comment;
- ensure that any necessary follow-up discussions with Aboriginal communities take place in a timely manner, including to confirm receipt of information, share and update information and to address questions or concerns that may arise;
- as appropriate, discuss with Aboriginal communities potential mitigation measures and/or changes to the project in response to concerns raised by Aboriginal communities;
- use language that is accessible and not overly technical, and translate material into Aboriginal languages where requested or appropriate;

- bear the reasonable costs associated with the consultation process such as, but not limited to, meeting hall rental, meal costs, document translation(s), or to address technical & capacity issues;
- provide the Crown with all the details about potential impacts on established or asserted Aboriginal or treaty rights, how these concerns have been considered and addressed by the proponent and the Aboriginal communities and any steps taken to mitigate the potential impacts;
- provide the Crown with complete and accurate documentation from these meetings and communications; and
- notify the Crown immediately if an Aboriginal community not identified by the Crown approaches the proponent seeking consultation opportunities.

b) What documentation and reporting does the Crown need from the proponent?

Proponents should keep records of all communications with the Aboriginal communities involved in the consultation process and any information provided to these Aboriginal communities.

As the Crown is required to assess the adequacy of consultation, it needs documentation to satisfy itself that the proponent has fulfilled the procedural aspects of consultation delegated to it. The documentation required would typically include:

- the date of meetings, the agendas, any materials distributed, those in attendance and copies of any minutes prepared;
- the description of the proposed project that was shared at the meeting;
- any and all concerns or other feedback provided by the communities;
- any information that was shared by a community in relation to its asserted or established Aboriginal or treaty rights and any potential adverse impacts of the proposed activity, approval or disposition on such rights;
- any proposed project changes or mitigation measures that were discussed, and feedback from Aboriginal communities about the proposed changes and measures;
- any commitments made by the proponent in response to any concerns raised, and feedback from Aboriginal communities on those commitments;
- copies of correspondence to or from Aboriginal communities, and any materials distributed electronically or by mail;
- information regarding any financial assistance provided by the proponent to enable participation by Aboriginal communities in the consultation;
- periodic consultation progress reports or copies of meeting notes if requested by the Crown;
- a summary of how the delegated aspects of consultation were carried out and the results; and
- a summary of issues raised by the Aboriginal communities, how the issues were addressed and any outstanding issues.

In certain circumstances, the Crown may share and discuss the proponent’s consultation record with an Aboriginal community to ensure that it is an accurate reflection of the consultation process.

c) Will the Crown require a proponent to provide information about its commercial arrangements with Aboriginal communities?

The Crown may require a proponent to share information about aspects of commercial arrangements between the proponent and Aboriginal communities where the arrangements:

- include elements that are directed at mitigating or otherwise addressing impacts of the project;
- include securing an Aboriginal community's support for the project; or
- may potentially affect the obligations of the Crown to the Aboriginal communities.

The proponent should make every reasonable effort to exempt the Crown from confidentiality provisions in commercial arrangements with Aboriginal communities to the extent necessary to allow this information to be shared with the Crown.

The Crown cannot guarantee that information shared with the Crown will remain confidential. Confidential commercial information should not be provided to the Crown as part of the consultation record if it is not relevant to the duty to consult or otherwise required to be submitted to the Crown as part of the regulatory process.

V. WHAT ARE THE ROLES AND RESPONSIBILITIES OF ABORIGINAL COMMUNITIES' IN THE CONSULTATION PROCESS?

Like the Crown, Aboriginal communities are expected to engage in consultation in good faith. This includes:

- responding to the consultation notice;
- engaging in the proposed consultation process;
- providing relevant documentation;
- clearly articulating the potential impacts of the proposed project on Aboriginal or treaty rights; and
- discussing ways to mitigates any adverse impacts.

Some Aboriginal communities have developed tools, such as consultation protocols, policies or processes that provide guidance on how they would prefer to be consulted. Although not legally binding, proponents are encouraged to respect these community processes where it is reasonable to do so. Please note that there is no obligation for a proponent to pay a fee to an Aboriginal community in order to enter into a consultation process.

To ensure that the Crown is aware of existing community consultation protocols, proponents should contact the relevant Crown ministry when presented with a consultation protocol by an Aboriginal community or anyone purporting to be a representative of an Aboriginal community.

VI. WHAT IF MORE THAN ONE PROVINCIAL CROWN MINISTRY IS INVOLVED IN APPROVING A PROPONENT'S PROJECT?

Depending on the project and the required permits or approvals, one or more ministries may delegate procedural aspects of the Crown's duty to consult to the proponent. The proponent may contact individual ministries for guidance related to the delegation of procedural aspects of consultation for ministry-specific permits/approvals required for the project in question. Proponents are encouraged to seek input from all involved Crown ministries sooner rather than later.

Appendix J

Durham York Energy Centre 2019 Streamlined Environmental Assessment in support of the Annual Waste Processing Capacity Increase from 140,000 Tonnes to 160,000 Tonnes

PUBLIC INFORMATION CENTRE #1 SUMMARY REPORT

REGION OF DURHAM | REGION OF YORK | COVANTA

Table of Contents

1. Introduction

The Regional Municipalities of Durham and York, the owners of the Durham York Energy Centre (DYEC), have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC.

The Environmental Compliance Approval for the DYEC currently allows the facility to process up to a maximum of 140,000 tonnes per year of waste, for disposal at the site. The Regions are proposing to increase this amount by 20,000 tonnes per year, for a total of 160,000 tonnes. The facility is capable of processing 160,000 tonnes per year with its current equipment; and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions. If approved, the expanded tonnage will allow for greater usage of the existing facility, reducing the reliance on alternate waste disposal facilities outside the Regions' borders.

This report discusses comments provided during PIC#1and related to the draft work plans.

2. Public Information Centre #1 Purpose

Public Information Centre #1 (PIC#1) was arranged by the Project Team and held at Durham Regional Headquarters on August 21, 2019, from 5:00 p.m. until 8:00 p.m. The PIC was intended to gather and respond to public comments on the process. PIC#1 focused on the following:

a. Describing the proposed study and purpose.
b. Presenting the Screening Criteria Checklist
c. Identifying Potential Effects
d. Identifying the next steps in the EA process.

3. Method of Notification

The Regions released the PIC#1 Notice using a variety of mediums to ensure a wide distribution of information to interested stakeholders. The mediums include social medium platforms (Twitter and Facebook), local newspapers, Regional websites and mail outs (emails). A summary of the PIC#1 notice distribution can be found in Table 1.

Paid advertising for PIC #1 was bought on Facebook from August 13 to August 2, 2019. The ads reached 4,886 Durham residents:

- 75 people clicked the link to get more information
- 29 people responded to indicate if they would attend the event
- 27 people shared the event on their own Facebook page
- 57 reacted to the posted ad (such as thumbs up or an emoji)

In 2019, the Facebook posts promoted this project reached approximately 5,428 people. Twitter posts have reached 5,008 people. These posts link back to durham.ca/DYEC160k website for more information.

Table 1: PIC#1 Notice Distribution Summary

Date	Time	Location	Consultation Activity	Attendance
July 29, 2019	N/A	Facebook	Facebook calendar event on Durham's Facebook page regarding PIC#1	N/A
July 29, 2019	N/A	Twitter	Post on the Durham Region Twitter account "#DurhamRegion is hosting a public information centre, at Durham Regional Headquarters in August 21 from 5 to 8 p.m., about plans to increase the amount of waste processed each year at the #DurhamYorkEnergyCentre (DYEC) by 20,000 tonnes."	N/A
August 7, 8, 14 & 15, 2019	N/A	Local Newspapers	Public Information Centre #1 notice placed in the local newspapers. Metroland had both dates, however some of the smaller papers only had August 14 and 15 as they close for break over the summer.	N/A
August 16, 2019	N/A	Twitter	Post on the Durham Region Twitter account "#DurhamRegion is hosting a public information centre, at Durham Regional Headquarters on August 21 from 5 to 8 p.m., about plans to increase the amount of waste processed each year at the #DurhamYorkEnergyCentre (DYEC) by 20,000 tonnes."	N/A
August 21, 2019	5:00 p.m. until 8:00 p.m.	Public Information Centre #1	PIC#1 was held at Durham Regional Headquarters from 5 to 8 p.m.	30 guests attended the event.

Details of the date, time, location and purpose of PIC #1 was outlined in the following newspapers:

Table 2: PIC #1 Notice Publication Dates

Date	Publication
August 7 & 14	• Orono Weekly Times • Oshawa Express
August 8 & 15	• Metroland (Oshawa, Whitby, Clarington This Week, Ajax, Pickering News Advertiser, Brock Citizen, Port Perry Star, Uxbridge Times Journal, • The Standard • Uxbridge Cosmos

Notification of the PIC was sent to potentially affected Indigenous communities, review agencies and stakeholders who were identified in the initial EA study conducted for the DYEC project. A copy of the Notice of PIC #1 was also posted on both Durham and York websites, Durham's Facebook page and Durham Region's Twitter account.

Indigenous communities were provided a copy of the boards presented at PIC #1 in advance of the open house. The boards were made available on the DYEC Project Website after the completion of the PIC.

The DYEC project website can be found at:
https://durhamyorkwaste.ca/PublicOutreach/2019EnvironmentalAssessment.aspx

4. Public Meeting Format

Attendees were greeted at the door, asked to sign the registration sheet, and provided with a comment form. Boards were displayed throughout the room and presented as an 'open-house' format whereby attendees were able to review the project information and ask questions to the project staff in attendance. Project Staff in attendance included staff from the Region's of Durham and York, Covanta, and the Region's engineering consultants (HDR). Table 3 indicates the individual members of the Project Team who were in attendance. No formal presentation or question and answer period was provided.

Table 3: Project Team Members in Attendance (PIC#1)

Project Team Member	Organization/Affiliation
Mirka Januszkiewicz, Director of Waste Management	Region of Durham
Gioseph Anello, Manager of Waste Planning and Technical Services	Region of Durham
Andrew Evans, Project Manager/Engineer	Region of Durham
Peter Veiga, Supervisor, Waste Operations	Region of Durham
Angela Porteous, Supervisor, Promotion, Education and Policy	Region of Durham
Lyndsay Waller, Waste Technician, DYEC	Region of Durham
Laura Malyjasiak, Waste Technician, Policy and Planning	Region of Durham
Danielle Luciano, Waste Technician, DYEC	Region of Durham
Joanne Paquatte, Manager, Communications	Region of Durham
Melissa Westover, Communications Coordinator	Region of Durham
Seth Dittman, Supervisor, Technical Services, Waste Management, Environmental Services	Region of York
Bruce Howie, Vice President, Professional Associate Resources Business Group New York/New Jersey Area Manager	HDR (Consultant)
Mathew Neild, Plant Manager	Covanta

Project Team Member	Organization/Affiliation
Amanda Huxter, Environmental Specialist	Covanta

Participants were asked to provide input to the process by completing the available comment forms. If individuals wished to take the comment form home to fill out at a later time, they were asked to return the forms to the mailing address or email address provided on the comment sheet by August 30, 2019.

5. Participation Levels and Summary of Comments Received

A total of thirty (30) participants attended PIC #1. The project team received eight (8) completed comment sheets/emails in relation the PIC #1 and are. summarized in Table 4.

Table 4: Verbal Comments Received and DYEC Project Team Response

General Comment	DYEC Project Team Response
What was the announcement made regarding changes to the Blue Box and the province taking it over?	The announcement regarding the blue box was to highlight the start of the process to transfer full responsibility for the operation of the blue box program to producers. By 2025 the producers of blue box paper and packaging will be responsible for the curbside collection and processing for recycling of their materials. The province has stressed the importance of there being no negative impact on residents' experience with the very successful curbside blue box collection program.
Why would a facility expansion go ahead given all the exceedances and issues with the plant?	Staff discussed the dioxin/furan stack test exceedance in 2016, what was completed in the abatement plan, as well as the good test results over the next three (3) years. While a stack test failure occurred in 2016, the DYEC has passed every stack test since and has shown continuous improvement.
What is the appropriate disposal	Currently, pet waste should be placed

General Comment	DYEC Project Team Response
location for pet waste, organics or garbage?	in the garbage. The Region is working on a project to build an Anaerobic Digestion facility for the Region's organic waste. This type of facility can treat more contaminated organics like pet waste but until the new facility is completed and operational, pet waste should continue to be placed in the household garbage.
A resident had concerns about why we don't offer compost in multi-residential buildings, particularly condos where the units are owned and residents are less transient than in apartments, if a condo board or committee of residents is willing to take on resident education and monitoring of the organics bins why won't we cooperate by picking it up?	The Region currently doesn't have capacity at its aerobic composting facility for additional material from multi-residential buildings and since multi-residential material is likely to be more contaminated with plastics, it is not appropriate for aerobic composting. The Region is working on a project to build an Anaerobic Digestion facility with a pre-sort system so that multi-residential buildings that receive Region-provided waste collection can have their waste sorted and the organic portion treated by AD instead of disposed.
How can you say that CO2 emission aren't an environmental impact as a result of the 20,000 tonne increase, where are the facts to back up that statement?	The comment that explains the "no" answer in the screening checklist acknowledges that CO2 emissions from the DYEC will increase if more waste is processed. However, the alternative to processing this waste at the DYEC is to haul it 200 or more kilometers away to a landfill where it will generate methane for decades and result in an overall higher CO2 release than processing the waste at the DYEC.
Has the expansion been deferred?	There was some misunderstanding on the resident's part with regards to the permit amendment to 160K tonnes per year and the potential future expansion

General Comment	DYEC Project Team Response
	to the next phase 250,000 tonnes per year. Timelines for each of these projects were discussed.
How is the Region managing stormwater?	The resident was advised how stormwater is managed at the DYEC site including the onsite stormwater retention ponds. The resident was directed to the appropriate Region department for any further explanation on Region-wide stormwater management.
Why are there so many exceedances at the DYEC?	The Region has had one dioxin/furan exceedance and three CO exceedances. Each of these events are detailed in the annual reports that are available on the DYEC project website.
What happens to the ash produced at the DYEC?	The largest portion of the end products is an inert, non-toxic bottom ash which is reused as daily landfill cover material at selected landfills. The smaller portion is fly ash and lime residue which is captured in the air pollution control equipment. Fly ash is also tested to ensure it is inert and non-toxic and it is disposed of in a similar manner to bottom ash.
Why are we completing the EA Terms of Reference for the next phase expansion to 250,000 tonnes per year?	As required by the MECP, the Region must demonstrate that they are addressing both the short and long-term disposal options.
Does staff not realize that they cannot proceed with a notice of commencement of the Terms of Reference?	Staff is following the Terms of Reference code of practice which states that the Notice of Commencement should be submitted prior to the drafting of the Terms of Reference.
Will staff revise the notice of commencement that was released to	Staff believe that the notice of commencement as released already

General Comment	DYEC Project Team Response
the public to conform with Council's direction	conforms with Council's direction and therefore will not be revising this document.
Will staff need Council's approval to submit the EA Terms of Reference to the MECP?	Yes, it is staff's understanding that Council approval must be sought to finalize and submit the EA Term of Reference for the expansion to 250,000 tonnes per year.
Does it make sense to commence the EA Terms of Reference for the 250,000 tonnes per year if the EA will not be needed for many years to come?	As required by the MECP, the Region must demonstrate that they are addressing both the short and long-term disposal options. If the EA is further delayed into the future, then the Region will need to confirm the assumptions used in the Terms of Reference.
Will the Region increase its promotion and education budget to promote a reduction in waste generation?	Staff will be requesting an increase to the promotion and education budget for 2020.
Will the Region consider implementing a clear bags program?	Staff have reviewed existing clear bag programs implemented at other jurisdictions and has concluded that clear bags should not be implemented in Durham Region.
Why does the Region only have two bylaw officers?	The Region currently has four bylaw officers.
Why are the wetlands south of the DYEC drying up?	The DYEC collect the stormwater on site and following the prescribed retention time, this water is discharged into a swale that empties into the wetland. The quantity and quality of the water discharged to the environment is carefully monitored.
Will the Region control the invasive plant species; common reed which has been spotted close to the waterfront trail?	Staff will conduct a visual inspection and take the appropriate action.

General Comment	DYEC Project Team Response
How can the Region state that the increase in disposal capacity to 160,000 tonnes per year will not have a negative climate change impact?	The previous study undertaken by the Region shows that landfilling will create more GHGs than processing at the DYEC. Since the bypass waste is currently landfilled then once we receive approval for processing to 160K tonnes per year then the amount of green house gas emitted to the environment will decrease.
Will the Region consider assessing the environmental impacts of SO2 and NOx using the new CCME limits?	The Region will review the new CCME limits and the proposed implementation schedule for Ontario and will make a determination as to their use in our evaluation.
What is the Region doing to decrease the amount of waste that needs disposal at the DYEC?	Along with our diversion program, the Region has approved the implementation of the project for the mixed waste transfer/pre-sort with Anaerobic Digestion facilities which will further divert up to 30K tonnes per year of organics material from the DYEC.
Why the same consultants are being used repeatedly, and why aren't reports prepared by third parties?	The Regions use a number of consultants to support the facilities operations. Consultants retained by the Regions are professionals licensed to practice within Ontario, and the firms and projects teams represented possess significant experience and expertise in their relative disciplines both in terms of general knowledge of the industry and legislation, as well as in terms of specific knowledge and understanding of the DYECs development and operations. Reporting is the responsibility of the facility, and is therefore completed both by the facilities operator, Regional staff, as well as retained consultants, and submitted to Regional government, and government agencies as appropriate. Reports are reviewed by government

General Comment	DYEC Project Team Response
	agencies as part of their mandate. As part of the facilities ISO certification, the facility also undergoes third party audits.
How could carbon taxation impact the facility?	Based on the facilities operations, including the usage of natural gas for combustion control and unit startup/shutdown the facility is not subject to carbon taxation. During the EA for the facilities development, analysis of GHG emissions associated from the facility were identified to be lower on a per tonne basis when compared to the emissions associated with transportation and disposal of wastes at sites outside of the Regions.
How much metals are recovered at the DYEC on an annual basis?	Approximately 4,000 tonnes of metals are recovered at the DYEC per year.
Do Clarington residents benefit from lower electricity bills for being the host community?	No, Durham Region residents do not see a cost savings on their home electricity bills due to the Region's energy from waste facility. The electricity revenue generated by the facility offsets the annual operational costs of the DYEC.
Why didn't we choose a site location further away from residential populations?	An extensive sitting evaluation process was completed to determine the location of the facility. The current property met the predetermined criteria and was the best suited site from the short-listed properties.
What will happen with the existing diversion programs when we need to burn additional waste?	The Regions continue to support, and strives to improve, waste diversion efforts. While energy recovery is important, Durham and York Regions are first committed to improving waste diversion rates through reuse, recycling and composting programs. Diversion programs will continue to be a preferred option for waste materials

General Comment	DYEC Project Team Response
	within the Region of Durham.
This seems like a really good idea, why aren't more Canadian municipalities using this technology?	The main reason that more municipalities within Canada are not using Energy from Waste facilities is that landfilling is relatively inexpensive in the United States and Canada compared to Europe and Asia. Currently, Waste to Energy in Canada and the United States are often unable to compete with low landfill costs. However, if municipalities are looking to solve waste disposal challenges within their own boarders, Energy from Waste may prove to be a viable solution for Canadian municipalities
Why are we generating more electricity when Ontario is already over generating and needs to dump electricity?	The primary role of the DYEC is not to generate electricity, but rather to manage waste. The DYEC captures the thermal energy released during combustion converting it to electricity via a steam turbine. The facility produces a relatively small amount of energy in relation to Ontario's overall requirements, 14-17 MW versus demand requirements ranging from lows of 10,000 to 20,000 MW. Importantly, this facility contributes this power on a continuous basis to the grid while the facility is operating and contributes to the baseline power. The facility was also designed in a manner which allows it to be utilized for district heating projects, which would involve using some of the produced steam to heat neighbouring facilities.
How much material will the anaerobic digestion project remove from the DYEC?	With data available from the latest waste audit, it is anticipated that the anaerobic digestion with automated waste serration could decrease the volume of waste to the Durham York Energy Centre by 30%.

General Comment	DYEC Project Team Response
How can we make recycling easier? Residents do not have a good understanding of acceptable materials because the programs are too complicated.	The Region is committed to promotion and education of its waste management programs. The Region provides online resources, printed educational tools and in-person presentations to help make recycling easier. In addition, Durham has four full time waste management bylaw officers to help address waste issues within the community.
How much electricity is generated at the facility on an annual basis?	The DYEC generates approximately 14 MW of net electrical energy on a continuous basis, which is enough to power about 10,000 homes.

In addition to the verbal comments noted in Table 4, written comments were received as a result of the PIC notification process (described in Section 2.0), Table 5 provides a summary of these comments.

Table 5: Written Comments Received and DYEC Project Team Response.

Written Comment	DYEC Project Team Response
What was the announcement made regarding changes to the Blue Box and the province taking it over?	The announcement regarding the blue box was to highlight the start of the process to transfer full responsibility for the operation of the blue box program to producers. By 2025 the producers of blue box paper and packaging will be responsible for the curbside collection and processing for recycling of their materials. The province has stressed the importance of there being no negative impact on residents' experience with the very successful curbside blue box collection program.
Why would a facility expansion go ahead given all the exceedances and issues with the plant?	Staff discussed the dioxin/furan stack test exceedance in 2016, what was completed in the abatement plan, as well as the good test results over the next three (3) years. While a stack test failure occurred in 2016, the DYEC has passed every stack test since and has shown continuous improvement.
Where is the incentive to decrease waste when we increase capacity?	In addition to the capacity increase from 140,000 to 160,000 tonnes per year to meet current waste disposal demands and increase the efficiency of the plant, the Regions continue to maximize waste diversion efforts. While energy recovery is important, the Regions are first committed to improving waste diversion rates through reuse, recycling and organic waste programs. Durham Region is planning to expand its diversion programs by building a mixed waste transfer/pre-sort facility to remove additional recyclables and organic waste from the residual waste stream and an anaerobic digestion facility to process organic waste, which together will divert up to 30,000 additional tonnes per year of material from the DYEC. In April 2020, York Region Council also demonstrated its continued commitment to waste diversion by authorizing procurement of new 20-year contracts for processing 100,000 to 140,000 tonnes per year of organic waste at privately-owned anaerobic digestion facilities.

The Region needs to lobby the federal government to stop the manufacture of single-use plastics. Rather than increasing the capacity, we should regulate the design specs for packaging and single use items. If we pass a law that requires all disposable products to be both biodegradable and recyclable, this would reduce waste. Would the Region approach the provincial and federal governments to enact laws that will protect Canadians' right to a healthy environment?	Reducing waste through development of new regulations for disposable products and packaging is a key piece of current federal and provincial waste management initiatives such as the Canada-wide Strategy on Zero Plastic Waste and the Strategy for a Waste Free Ontario. Staff from both Regions have been active participants in public consultations on these strategies and continue to advocate for reducing single use plastics and packaging and making producers responsible for end-of-life management costs for the products that they introduce into the Ontario marketplace. Persons interested in this issue should be aware that the Ontario legislature is currently considering Bill 82, Single-Use Plastics Ban Act, 2019 which carried in its first reading.
The incinerator releases dioxins and it is unacceptable that we allow this into our air and soil and water. There have been exceedences of dioxin and CO in the past and the Region has not released the long-term dioxins sample study results.	Environmental protection is a key aspect of DYEC operations. The DYEC uses proven, reliable air pollution control technology to ensure that the facility operates in a safe and environmentally responsible manner in compliance with strict emissions limits imposed by the MECP. Emissions at the stack are monitored in real time through a continuous emissions monitoring system (CEMS) in addition to annual spring and fall stack testing. The Regions also monitor ground water, soils and ambient air quality in the area surrounding the site to ensure that there are no adverse off-site impacts from facility operations. Carbon monoxide (CO) is monitored as an operational parameter indicating combustion performance and does not adversely impact health or the environment. The DYEC has experienced three exceedances of the 4-hour rolling CO standard, which were reported to the MECP and to the public. In each case, the boiler exceeding the standard was shut down immediately to correct the combustion issue. It should be noted that the margin of exceedance in two of the three instances was low enough that the combined average emissions from both boilers remained in compliance with the standard. One Dioxin/Furan (D/F) exceedance occurred in Boiler#1 during the May 2016 stack test. The Regions and Covanta worked diligently with the MECP on an abatement plan to investigate and remediate the problem. Modelling completed after the failed stack test confirmed that ambient D/F concentrations remained within limits that are protective of human health and the environment. No additional D/F exceedances have occurred in the additional seven stack tests conducted since May 2016. Each of these events are detailed in the annual reports that are available on the DYEC website. Following these events, a

	review of the conditions leading to the exceedance is undertaken, and measures are put in place to reduce the risk of reoccurrence. The DYEC is equipped with a long-- term sampling system (LTSS) for dioxins and furans. In accordance with ECA Condition 7.(3)(b), performance of the LTSS is evaluated by comparing the results against the stack test data. To date, data obtained from the LTSS has not been consistent with data obtained from concurrent stack tests. Further refinement of the LTSS operating procedures is required to achieve consistent and accurate results. The results of the LTSS performance assessment are discussed in the DYEC ECA Annual reports to the MECP. The most recent DYEC Annual Operations Report is posted on the DYEC website.
Durham Region has stalled with its diversion and has not met the 70% diversion target set at the time of the EA.	Durham Region submits data on its waste management programs to the province annually through the Resource Productivity and Recovery Authority (RPRA) Datacall to receive funding from producers which assist with costs of operating the Blue Box Program. The Datacall is the source of data used to confirm municipal diversion rates across the province. The following are Durham Region's annual waste diversion rates since 2014: ○ 2014 – 55% ○ 2015 – 54% (1st for Urban Regional Municipalities) ○ 2016 – 55% (1st for Urban Regional Municipalities) ○ 2017 – 65% (1st for Urban Regional Municipalities, 3rd overall in the province) ○ 2018 – 63% (Pending verification) Durham Region and York Region are committed to improving waste diversion rates through reuse, recycling and composting programs. However, there are several ongoing challenges including changes to the types and weights of recyclable products that impact the amounts of materials that can be successfully collected for diversion, as well as challenges in the marketing of these materials. Durham Region is planning to expand its diversion programs by building a mixed waste transfer/pre-sort facility to remove additional recyclables and organic waste from the residual waste stream, and an anaerobic digestion facility to process organic waste, which together will divert up to 30,000 tonnes per year of additional material from the DYEC. Implementation of these facilities is anticipated to increase the diversion rate in Durham above 70%.

The Region has not been progressing on education and engaging residents and is not adequately enforcing waste policy.	Durham Region actively promotes waste diversion programs through an extensive community outreach program. Durham Region participated in the following community outreach initiatives in 2019: • Eight spring compost events, one in each municipality. • Four special waste electrical and electronic equipment drop-off events and household hazardous waste drop-off events. • Eight reuse drop-off events were held from March to October, partnering with local charities. • Promotion of waste diversion programs during National Public Works Week. • “Durham Works”, the Works Department’s external newsletter is distributed twice annually to approximately 220,000 households in the Region. In 2019 it featured information on Food Waste Reduction, Household Hazardous Waste, Durham York Energy Centre, Landfill Mining, Two-Stream Recycling, Upcoming Waste Projects and Waste Collection Safety. • Exchanged 7,240 Blue Boxes, 836 kitchen food waste containers and 6,136 curbside Green Bins for new boxes, containers or bins due to damage. • Sold 4,648 new Blue Boxes, 654 kitchen food waste containers, 1,202 curbside Green Bins and 121 backyard composters. • Responded to more than 47,000 telephone calls and almost 22,000 emails regarding waste programs. • Over 60,000 Durham Region Waste app downloads with 70,000 weekly waste setout reminders. • Launched an online waste management survey with over 3,200 responses from across the Region. We received overwhelmingly positive feedback on our programs. In 2019, Durham’s school curriculum program reached over 2,650 students across Durham’s communities. Most programs were delivered to children and youth from Kindergarten to Grade 12 via the school outreach program. Overall, 30 schools (88 classes) were visited from January to June 2019. In addition, Durham Region’s Waste Management staff provided education programming at four school board events.

	51 presentation/tours of the Durham York Energy Centre were provided to the public, resulting in approximately 563 guests visiting the site in 2019. Durham also has four designated waste bylaw enforcement officers and three waste technicians to support curbside and multi-residential unit collection contracts which support waste policies within the Region.
There are opportunities for waste reduction by launching a major Reduce, Reuse, Recycle and Compost campaign including new incentives such as clear bags.	Durham Region continues to actively promote their waste programs through our education programs, public outreach and bylaw enforcement. Staff have reviewed existing clear bag programs implemented at other jurisdictions and provided a report to Council (2014_WR-10) which concluded that the implementation of clear bags would not be as effective in increasing waste diversion as compared to expanding promotion of our current programs and implementing a mixed waste pre-sort and anaerobic digestion facility. The Region is also continuing to develop and improve our education program with the goal of reaching additional residents and improving program participation.
Durham should not be mining old landfills if capacity is such a problem.	In 2018, Durham Region diverted waste from the DYEC to undertake a mixed waste processing pilot study, which was an important step toward implementation of the full-scale mixed waste pre-sort and anaerobic digestion facilities that are currently under development in Durham Region. Over the long term, implementation of the full-scale project is expected to divert up to 30,000 tonnes of waste per year. The waste diverted to conduct the mixed waste processing pilot study in 2018 freed additional capacity at DYEC to undertake a landfill mining pilot study. When capacity is available, landfill mining presents an opportunity to reduce greenhouse gas emissions and leachate impacts on groundwater quality, as well as diverting material not previously separated for recycling, recover energy from reclaimed waste, and eliminate the need for long-term monitoring. Availability of disposal capacity for the mined materials will be a key consideration in evaluation of the suitability of other sites for landfill mining.
Major problems directly related to the proposal were omitted from the information provided at PIC#1 and the 160k website – exceedances, major equipment failures, failures to meet performance guarantees, issues with Long Term Sampling System.	The information provided at PIC#1 follows the Ministry's streamlined environmental assessments process. PIC#1 was held to introduce the project, discuss the Environmental Screening Checklist, and outline, the public consultation and detailed impact studies that will be presented at later steps in the screening process. The process for conducting an ECA screening and what information is required can be found on the Ministry website under the Title Part B Environmental Screening Process at: https://www.ontario.ca/page/guide-environmental-assessment-requirements-electricity-projects#section-3.Additionally, annual reporting on facility operations and performance including exceedances and equipment failures can be found on the DYEC website at Facility Operations Reports.

With regards to *Surface Water Criteria 1.1 and 1.2*, *Land Criteria 2.1*, *Air and Noise Criteria 3.1 and 3.2*, *Natural Environment Criteria 4.1, 4.2, 4.3, 4.4, 4.5, 4.6*, *Resources Criteria 5.4 and 5.5*, *Socio-Economic Criteria 6.1, 6.3, 6.4, 6.5, 6.11*, *Aboriginal Criteria 8.1, Other Criteria 9.1 and 9.2 and 9.3*, there was either no supporting or insufficient information provided by the Regions at Public Information Centre #1, nor on the proposal website, to support the Regions' assertion of "No" impact	Regarding, Item 3.1 of the Screening Criteria Checklist presented at PIC# 1, the Regions marked "Yes" to indicate that the proposed DYEC capacity increase to 160,000 tonnes per year has potential air quality impacts that require further assessment to be summarized in the Environmental Screening Report. The Regions also marked "Yes" for Checklist Item 6.9 because the Bowmanville Hospital has a heliport located within 8 km of the facility. The Regions marked "No" for the remaining items on the Screening Checklist because each of these items was studied in detail during the original DYEC Environmental Assessment. There are no changes under the proposed DYEC capacity increase that would affect the conclusions of the original impact studies. The capacity increase to 160,000 tonnes per year will make use of existing infrastructure and will not include any changes to existing operational limits on daily receipt or storage of materials. Additional details about the studies completed during the original Environmental Assessment and the reasons that the conclusions of these studies have not changed will be provided in the Environmental Screening Report.
Burning additional mass of waste results in additional mass of toxic emissions and greenhouse gases and additional mass of toxins in the ash land filled and all combined results in additional negative impact on the environment through air, surface and ground water, land, and agriculture over time, thus negatively impacting all living populations as well as the Earth's climate.	The DYEC operates within stringent air emissions limits that are protective of human health and the environment. No changes to these limits are proposed as part of the undertaking. The Environmental Screening Report presents an updated impact study to assess the potential air quality impact of the proposed undertaking. The EFW process reduces the volume of residential garbage by approximately 85 to 90 per cent. The largest portion of the end products is an inert, non-toxic bottom ash, which resembles crushed rock and can be reused as daily landfill cover material, reducing the use of soils for this purpose. The smaller portion is fly ash and lime residue which is captured in the air pollution control equipment. Fly ash is treated on site to encapsulate contaminants and also tested to ensure it is inert and non-toxic and it is disposed of in a same manner as bottom ash. Prior to treatment, fly ash represents about 5 per cent of the total residual ash from the garbage combustion process. EFW is recognized as a net reducer of greenhouse gas emissions by the Global Roundtable on Climate Change (GROCC), the Intergovernmental Panel on Climate Change (IPCC), the U.S. Environmental Protection Agency (U.S. EPA), the Kyoto Protocol and the European Union due to the following: • Reduced methane (CH_4) emissions from landfills. The EFW process reduces the volume of residential garbage going to landfill by up to 90 per cent thereby reducing the amount of materials that would break down over time and release methane. • Reduced carbon dioxide (CO_2) and other emissions from transportation. Local EFW facilities mean that long-haul transportation methods for shipping garbage to distant landfills are avoided hence carbon dioxide emissions are reduced. • Reduced carbon dioxide (CO_2) emissions from fossil fuel combustion. When a megawatt of electricity is

	generated by an EFW facility, carbon dioxide emissions that would have been generated by a fossil-fuel fired power plant are avoided. • Reduced carbon dioxide (CO_2) emissions from metals production. Recovering metal for recycling saves energy and avoids carbon dioxide emissions that would have been emitted if raw materials were mined and new metals were manufactured. Since DYEC bypass waste is currently landfilled, additional processing capacity at the DYEC would decrease the amount of GHG emitted to the environment.
Will staff be using new Canadian Air Quality Objectives (CAAQs) recently endorsed by the Canadian Council of Ministers of the Environment (CCME) for NO2, SO2, PM2.5 and Ozone?	The Regions are aware of the CCME CAAQS limits, reporting requirements, and implementation schedule for NO_2, SO_2, $PM_{2.5}$, and ground-level ozone. It is anticipated that air quality measured at the ambient air monitoring stations in proximity to the DYEC will meet the 2020 standards. Regional staff are working with the MECP and the consulting team to assess and implement the additional guidelines into the facility monitoring reports. It is important to note that measurements taken by the ambient air stations represent a combination of emissions from all sources in the area.
Respiratory irritants - The cumulative effect of other projects such as the proposed additional burden coming from the new highway linking to the 407 and the garbage burning proposal from St. Mary's on the local air shed must also be addressed and assessed.	Updated modelling presented in the Screening Report adds current background air quality concentrations to the predicted concentrations from the facility to estimate cumulative concentrations. The cumulative concentrations of all contaminants were compared to the regulatory limits and are still below the regulatory limits for both modelled scenarios with the exception of benzo(a)pyrene. The background concentration of benzo(a)pyrene is greater than the regulatory limit before any DYEC contribution is added. However, emissions from DYEC contribute less than 1% to the total ambient benzo(a)pyrene concentration. Regulatory standards such as O.Reg.419/05 do not apply to cumulative concentrations. Future projects or developments in the area that occur after the DYEC EA Screening will need to consider the current air quality as background to add to those project studies. Concerns with the impacts of other projects or interactions between other proposed facilities should be directed to the MECP.
More incineration is not consistent with efforts to reduce GHGs and combat the climate crisis.	EFW is recognized as a net reducer of greenhouse gas emissions by the Global Roundtable on Climate Change (GROCC), the Intergovernmental Panel on Climate Change (IPCC), the U.S. Environmental Protection Agency (U.S. EPA), the Kyoto Protocol and the European Union. The initial Environmental Assessment completed in 2009 included a Comparative Analysis of Thermal Treatment and Remote Landfill on a Lifecycle Basis, which shows that landfilling will create more GHGs than processing waste at the DYEC. A copy of the report can be found here: https://www.durhamyorkwaste.ca/en/facility-approvals/resources/Documents/Annex-E-5-Supplemental_Report.pdf.

	Since bypass waste is currently landfilled, approval for processing up to 160,000 tonnes per year at DYEC will result in a net reduction of GHGs emitted to the environment
There needs to be more investigation into potential effects on species, especially sensitive and endangered species, such as the Piping Plover, that inhabit, migrate through, nest and fledge in the adjacent Darlington Provincial Park, McLaughlin Bay and adjacent wetlands.	The 2009 Natural Environmental Assessment Technical Study Report investigated potential effects on species, including sensitive and endangered species and significant avian species. No significant species were identified on the DYEC property. Tooley Creek Coastal Wetland was identified as the closest natural area. At its nearest point, the Tooley Creek Coastal Wetland is located 0.87 km away from the DYEC property and haul route. The original study concluded that there would be no unacceptable impacts to the natural environment, including sensitive and endangered species. The proposed increase to 160,000 tonnes per year will be achieved using the same infrastructure and in compliance with the same emissions limits and daily operational limits that were contemplated in the original study. Additional details about the original studies that were completed and the reasons that their conclusions remain unchanged are provided in the Screening Report.
The Project Team did not act upon the advice of the expert Health Canada reviewer in reference to NO2 emissions during the EA.	At the time of the EA, the Owners consultants did correspond with Health Canada and detailed mitigation measures for NO_2. The DYEC monitors emissions of nitrogen oxides (NO_x) using a continuous emissions monitoring system (CEMS). The facility operates in compliance with an in-stack NO_x emissions concentration limit of 121 milligrams per cubic metre, which is more stringent than the limit of 198 milligrams per cubic metre specified in Ontario Guideline A-7. The Regions also monitor NO_x and NO_2 concentrations at off-site ambient air monitoring stations to ensure that the facility is not having an adverse impact on the community. Ambient NO_2 concentrations are consistently within limits prescribed by the MECP.
The comments of all the expert reviewers of the EA completed as part of the *Ministry Review* should be put on the Durham York website and should be available at all PICs.	Archived copies of the EA studies, comments, and responses are maintained on the project website. The Ministry Review is available online at the following address: https://www.ontario.ca/page/ministry-review-durhamyork-residual-waste-study-environmental-assessment
The Regions cannot rely solely on risk assessment to determine public health and safety as there are many shortcomings of this methodology.	The assessments completed in support of the facility are in keeping with normal practices and are reviewed and approved by the MECP.

The EA study conclusions and responses to concerns raised in submissions did not fully recognize and alert reviewers and decision makers to other inherent limitations of risk assessment – limited consideration of emerging science surrounding the health impacts of low exposure, toxicity of ultrafine particulate matter, failure to address health and environmental impact from ash residues.	The original EA was reviewed by the MECP during the evaluation of that application. Outstanding concerns with that assessment should be directed to the MECP.
The criteria provided on the checklist at PIC #1 under Criterion 1.0 Surface Water and Groundwater and Criterion 2.0 Land did not include nor assess the environmental impacts of the ash and should have and this correction needs to be made and addressed.	No impacts to surface water or groundwater are anticipated due to ash management at the DYEC. Ash generated at the facility is disposed of at licensed waste disposal sites in accordance with Conditions 4.(5)(d) and 4.(5)(e) of the ECA. These disposal sites have rigorous controls in place to protect the environment. Environmental impacts associated with ash disposal sites are addressed through the permitting and approval processes for those facilities. However, ash at these facilities commonly represents a beneficial use in that it can be incorporated as part of the sites requirements for daily cover to limit.
There was very limited medical scrutiny for the original EA and there has been no medical opinion on this 160k capacity increase proposal. Durham's Medical Officer of Health did not sign off on the proposal to increase capacity to 160,000 tonnes per year - his signature was absent from the Durham report which recommended the increase.	Approval of Durham's Medical Officer of Health (MOH) is not required as part of the Environmental Screening Process. However, the MOH has been kept apprised of the project throughout its development.
Regions have failed to consider the cumulative effects of many incinerators emitting dioxins and furans and the burden this has caused for many Indigenous people of the North.	The original EA Process considered cumulative impacts from dioxins and furans and other contaminants on human health and the natural environment. An updated assessment for the proposed increase to 160,000 tonnes per year has been completed as part of the current Screening Process. Extensive public consultation was undertaken throughout the initial EA process to ensure that the values and priorities of the general public and indigenous groups were reflected in the preferred alternative. Indigenous groups continue to be provided the opportunity to participate in the Screening Process for the throughput increase.

"No additional waste materials are generated because of the project" is simply not true. Incinerating more mass means there will be more ash residues requiring landfill. There will also be more waste associated with the production of the ammonia, activated carbon and other products and materials needed to operate the facility	The DYEC reduces the net volume of waste being sent to landfill by 90% and reduces the net mass of material requiring disposal by approximately 70% (including chemical reagent inputs and ash residue disposal). Currently the Region of Durham is producing approx. 10,000-15,000 tonnes of waste per year more than the capacity available for processing at the DYEC. This waste is currently being bypassed to other disposal options. Increasing capacity will decrease the need for bypass and therefore significantly decrease the amount of material being sent to landfill.
The August 30th deadline was not posted on the 160k website so the public who could not attend the PIC and who did not read the Comment form would be unaware of it.	The August 30, 2019 comment submission deadline noted on the PIC#1 Comment Sheet was requesting that the PIC#1 comment form be returned to the Region by this date. The public can submit comments and questions to the Regions any time throughout the EA Screening process through the project website, mail or by telephone.
PIC information was not posted in advance so that residents could form their questions, in fact the information was posted late.	The Regions have noted this concern. Residents will be able to continue to submit questions throughout the process.
Recommendation of a formal presentation instead of storyboards, followed by a Question and Answer session.	The Regions have noted this request for consideration. We note that staff from both Regions and our consultants were in attendance at PIC#1 and subsequent public consultation events to answer questions from the public.
The notice of Commencement for 160,000 tonnes per year is extremely confusing and unclear. It must be made clear that the DRAFT Terms of Reference for this is not to be sent to MECP unless or until Regional Council approves it.	Staff is following the Terms of Reference Code of Practice which states that the notice of commencement should be submitted prior to the drafting of the Terms of Reference. It is staff's understanding that Council approval must be sought to finalize and submit the Environmental Assessment Terms of Reference for the expansion to 250,000 tonnes per year. The preparation of the Terms of Reference process will require separate consultation activities as part of its preparation.
Going to a 250,000 tonnes per year Terms of Reference is premature at this time, especially before the Long-Term Waste Management Strategy is completed.	The Region must demonstrate to the MECP that both the short and long-term disposal options are being addressed. The MECP has required the Regions to commence the long-term planning solution by commencing a Terms of Reference for 250,000 tonne per year capacity at the DYEC. It should be noted that this is a separate process from the Screening Process to increase processing capacity to 160,000 tonnes per year.

What will be the difference in need for additional capacity with the Anaerobic Digestion Project and automated waste separation?	With data available from the latest waste audit, it is anticipated that the anaerobic digestion (AD) facility could decrease the volume of waste to the Durham York Energy Centre from Durham Region by up to 30%. As a result, the anaerobic digestion and mixed waste processing facility is anticipated to delay the need to expand the DYEC capacity to 250,000 tonnes per year. However, continued growth within the Region, will continue to drive an increase in waste production.
Durham's diversion rate was supposed to reach 70% but since the incinerator has been in commercial operation, we've barely had an increase at all.	Durham Region submits data on its waste management programs to the province annually through the Resource Productivity and Recovery Authority (RPRA) Datacall to receive funding from producers to assist with costs of operating the Blue Box Program. The Datacall is the source of data used to confirm municipal diversion rates across the province. The following are Durham Region's annual waste diversion rates since 2014: ○ 2014 – 55% ○ 2015 – 54% (1st for Urban Regional Municipalities) ○ 2016 – 55% (1st for Urban Regional Municipalities) ○ 2017 – 65% (1st for Urban Regional Municipalities, 3rd overall in the province) ○ 2018 – 63% (Pending verification) Durham Region and York Region are first committed to improving waste diversion rates through reuse, recycling and organic waste programs. Durham Region is planning to expand its diversion programs by building a mixed waste transfer/pre-sort facility to remove additional recyclable and organic material from the residual waste stream and an anaerobic digestion facility to process organic waste, which together are expected to divert up to 30,000 tonnes per year of additional material from the DYEC. York Region Council also demonstrated its ongoing commitment to waste diversion in April 2020 by authorizing procurement of new 20-year contracts for processing 100,000 to 140,000 tonnes per year of organic waste at privately-owned anaerobic digestion facilities. The Regions continue to develop and improve our education programs with the goal of reaching additional residents and improving program participation.

How will this reduce the reliance on landfill outside the Region's borders, when there will be more ash produced, which *is shipped* to landfill outside the Region's borders already?	The EFW process reduces the net volume of residential garbage going to landfill by up to 90 per cent and net mass by approximately 70%. These net figures include both chemical reagents added as inputs to the process as well as disposal of ash residue. As a result, the proposed throughput increase to 160,000 tonnes per year will reduce the amount of materials currently being sent to landfill as bypass waste.
When waste is by-passed, is it always because there is not enough capacity, or because of unexpected shut-downs which sometimes last for days, or even a couple of weeks? What about when we have AD? Won't much more waste be diverted that is now going to the incinerator? Will put or pay still be in place?	Bypass waste may be the result of planned or unplanned outages, as well as capacity constraints. Durham Region owns 110,000 tonnes out of the facility's current approved annual processing capacity of 140,000 tonnes per year. Durham Region residents are currently producing approximately 120,000 tonnes per year, which exceeds Durham's current capacity share by 10,000 tonnes. The capacity increase to 160,000 tonnes per year is the Region's solution to address current capacity needs. The contract with the DYEC operator will continue to include a minimum commitment of 140,000 with the 20,000 tonne capacity increase being flexible capacity. It is anticipated that the AD and presort could divert up to approximately 30 per cent of Durham Region's waste and postpone the need to expand the DYEC to 250,000 tonnes per year. Continued growth within the Regions is the primary driver for longer term capacity requirements.
The Human Health and Ecological Risk Assessment completed in 2009 needs to have very close scrutiny and parts of it need to be re-done. We need more significant testing such as in eggs, meat, vegetation, etc.	The results of the human health risk assessment and the ecological risk assessment (HHERA) undertaken in 2009, indicate that emissions from the DYEC under normal operating conditions would not lead to any adverse health or ecological impacts to local residents, farmers, other receptors or species at risk under either the initial design capacity of 140,000 tonnes or the maximum design capacity of 400,000 tonnes. Updated modeling confirming no adverse impact for the 160,000 tonne scenario is included in the Screening Report.
With SMC planning on plans to "process" anywhere from 100 to 400 tonnes per day of waste materials, are you looking at cumulative impacts rather than only on a site by site basis as has been the practice when approving these projects? MECP?	Updated modelling included in the Screening Report evaluates cumulative impacts by adding current background air quality concentrations in the study area to predicted additional concentrations resulting from DYEC operations at 160,000 tonnes per year. This updated modelling demonstrates that the cumulative impact of increasing the maximum DYEC processing rate to 160,000 tonnes per year is acceptable. Future projects or developments in the area that occur after the DYEC EA Screening Process will need to consider the current air quality as background when completing their impact assessments. Comments related to the EA and ECA process should be directed to the MECP.

Public information needs to be increased as well as much more education and promotion of organics separation, and it should be made to include multi-res.	The Regions agree that promotion and education are essential to the success of our waste management programs. Many examples of the Regions' ongoing efforts to educate our residents about the programs we offer and the steps they can take to help reduce waste are available on the Regions' websites: https://www.durham.ca/en/living-here/garbage-and-recycling.aspx https://www.york.ca/wps/portal/yorkhome/environment/yr/garbageandrecycling
A different format for PIC #2 with a presentation and Q&A would be beneficial as well as more information.	The Region has noted this request for consideration.
The August 30th comment deadline for comments was not posted on the website. How would anyone not having picked up a comment form know about this so called "deadline"?	The August 30, 2019 comment deadline referenced on the PIC#1 comment sheets was intended for the hard copy PIC#1 comments only. The deadline was provided to ensure the Region had adequate time to review comments and concerns in preparation for PIC#2. Comments, concerns and inquiries can be submitted through mail, email or phone throughout the entire EA Screening process.
There was no information other than the one main page with links to a media release and two notices on that page prior to PIC#1. Are these oversights, or sloppiness or inattention to basic details, or is there some other explanation?	It was the Region's intention to have interested parties attend PIC#1 with release of board content and additional resources/information posted afterwards for those who could not attend. While the advance posting of material is not a requirement, this concern has been taken into consideration and it is anticipated that PIC#2 boards and additional information will be posted prior to October 23, 2019.
The format of the 160K EA Screening website/pages remains confusing and the Notice of Commencement is extremely misleading around the status of any future expansion to 250K.	The Regions have noted this concern for consideration. At its meeting of June 26, 2019, Durham Regional Council authorized staff to draft Terms of Reference for potential future facility expansion to 250,000 tonnes per year. This authorization encompasses the mandatory public consultation activities associated with preparing draft Terms of Reference. The draft Terms of Reference must be approved by Regional Council as per their direction prior to final submission to the MECP.

The responses to the Screening Checklist are premature AND unsupported, given the absence of ANY additional information.	The Regions are following the Environmental Screening Process as prescribed in Ontario Regulation 101/07. The Environmental Screening Process requires use of a “Screening Criteria Checklist” to identify if the project has any potential environmental effects that require further study. The screening criteria are presented in the form of a checklist with the option of a "Yes" or "No" response. In the Screening Criteria Checklist presented at PIC#1, the Regions marked “Yes” for Checklist Item 3.1 to indicate that the proposed DYEC capacity increase to 160,000 tonnes per year has potential air quality impacts that require further assessment to be summarized in the Environmental Screening Report. The Regions also marked “Yes” for Checklist Item 6.9 because the Bowmanville Hospital has a heliport located within 8 km of the facility. The Regions marked “No” for the remaining items on the Screening Checklist because each of these items was studied in detail during the original DYEC Environmental Assessment. There are no changes under the proposed DYEC capacity increase that would affect the conclusions of the original impact studies. The capacity increase to 160,000 tonnes per year will make use of existing infrastructure and will not include any changes to existing operational limits on daily receipt or storage of materials. Additional details about the studies completed during the original Environmental Assessment and the reasons that the conclusions of these studies have not changed will be provided in the Environmental Screening Report. The proponent has the opportunity to revisit the checklist and to make adjustments based on the results of studies. This may mean the future addition of “Yes” responses to the checklist.
This EA Screening pre-empts the Durham Long Term Waste Management Plan review and discussion of matters around Durham’s existing and possible future programs. The onus is on Durham and to justify the need for additional capacity and on them to commence the LTWMP review PRIOR to undertaking any limiting action such as the EA Screening.	The proposed amendments would increase the maximum annual tonnage that may be processed at the DYEC to 160,000 tonnes per year. However, there will be no change to the Regions’ minimum annual tonnage commitment of 140,000 tonnes per year. Since the Regions will not be contractually obligated to supply additional tonnage, the proposed amendments would provide additional operational flexibility without limiting the Regions’ future options in any way. Durham Region owns 110,000 tonnes out of the facility’s current approved annual processing capacity of 140,000 tonnes per year. Durham Region residents are currently producing approximately 120,000 tonnes of waste per year, which exceeds the Region’s capacity share by 10,000 tonnes per year. The proposed 20,000 tonne capacity increase helps to address the immediate capacity shortfall with no additional minimum commitment while the Region continues to explore long-term future options through the Long-Term Waste Management Plan review. In conjunction with the 20,000 tonne capacity increase, the Region is moving forward with initiatives to divert more materials from the DYEC and prolong the need for additional capacity above 160,000 tonnes per year. This includes the

	development of a new Long-Term Waste Management Strategy Plan and a mixed waste transfer/pre-sort with Anaerobic Digestion facility which will divert up to 30,000 tonnes per year of organics material from the DYEC**.**
Where can York's current long-term waste management plan be found – please provide links to that and to their historical data from 2005, beginning of initial EA.	The SM4RT Living Plan is York Region's long-term strategy for waste management. The SM4RT Living Waste Management Master Plan was endorsed by Regional Council in 2013, and can be viewed at the following web address: https://www.york.ca/wps/wcm/connect/yorkpublic/10ba5c8d-5f7f-4e49-a06b-ab270c563fb0/SM4RTLivingMasterPlanReportAODA.pdf?MOD=AJPERES In April 2020, York Region Council endorsed the Five-Year Review of the SM4RT Living Waste Management Masterplan, which can be viewed at the following web address: https://www.york.ca/wps/portal/yorkhome/yorkregion/yr/plansreportsandstrategies/integratedwastemanagementmasterplan Information about York Region's annual tonnages and diversion programs can be found in our Annual Waste Diversion Reports, which are available at the following web address: https://durhamyorkwaste.ca/Documents/FacilityManagementPlans/WasteDiversion.aspx Total tonnages collected from 2005 through 2019 are summarized by waste stream in the following table:

Summary of York Region Tonnages by Waste Stream, 2005 - 2019

Year	Residual Waste[1]	Blue Box Collected[2]	Blue Box Residue[3]	Green Bin	Yard Waste	Household Hazardous Waste	Electronic Waste	Other Diversion	Total
2005	209,502	65,058	3,490	12,080	24,493	1,213	328	1,446	314,120
2006	191,966	77,731	5,998	24,808	28,739	1,445	440	1,690	326,819
2007	145,918	81,278	6,413	60,290	28,359	1,568	536	1,415	319,364
2008	115,115	89,435	8,158	86,266	36,374	1,697	709	1,132	330,728
2009	112,974	86,044	8,726	88,671	40,342	1,670	988	2,007	332,696
2010	115,420	88,395	9,514	91,680	39,230	1,652	1,473	2,863	340,713
2011	116,235	90,948	9,383	91,685	40,155	1,413	1,664	4,053	346,153
2012	119,648	89,488	10,364	92,260	43,688	1,316	1,691	6,657	354,748
2013	120,260	87,879	11,627	94,591	40,486	1,126	1,503	6,297	352,142
2014	124,011	87,645	11,568	94,700	52,457	1,045	1,484	4,930	366,272
2015	128,148	85,335	10,582	96,593	44,370	1,305	1,554	5,944	363,249
2016	130,400	84,468	14,136	97,044	37,407	1,268	1,460	6,196	358,243
2017	134,249	85,298	16,069	97,877	39,477	1,256	1,344	5,061	364,562
2018	124,319	83,526	19,411	99,065	42,287	1,219	1,124	2,580	354,120

	2019 | 129,144 | 78,243 | 22,366 | 100,874 | 42,814 | 1,297 | 1,117 | 2,659 | 356,148 1. Residual waste excludes blue box residue. 2. Blue box residue is included in “blue box collected” 3. Total excludes blue box residue to avoid double counting
Any discussion of Problems and Opportunities should be informed by the data produced to support the LTWMP consultations and review. They can only be responded to after the updated/revised responses to the Screening checklist i.e. AFTER they have reviewed the studies they said they would and posted these so that the public could review these BEFORE the next PIC and any subsequent commend deadline.	The ECA and EA Notice of Approval currently limit the annual tonnes processed at the DYEC to 140,000 tonnes per year. As a result of these approval limits on DYEC processing capacity, the Regions were required to by-pass waste to other disposal facilities in 2017 and 2018 that could have otherwise been processed at the DYEC. The approvals amendments proposed through this Screening Process would increase the DYEC’s maximum annual processing capacity by 20,000 tonnes without increasing the Region’s baseline minimum contractual commitment of 140,000 tonnes per year. The additional 20,000 tonnes of capacity will provide operational flexibility to help address the current capacity shortfall without limiting Durham Region’s long-term options, which are being assessed through the Long Term Waste Management Plan (LTWMP). Therefore, there is no reason to require any part of the LTWMP to be completed prior to completing the EA Screening Process. The LTWMP will look at long-term problems and opportunities within the integrated waste management system as a whole. The LTWMP will not be adversely affected by the current Screening Process, which is focused on optimizing use of existing infrastructure to meet immediate waste disposal needs. Additional supporting information related to the LTWMP will be prepared and presented as that process is completed
Where is the information found (provide links to supporting documents) re the DYEC’s built capacity which the regions claim is built to process more than 140K tpy? If the processing capacity as built is actually greater than 140K tpy, for what reason(s) was annual capacity capped at 140K tpy during the initial EA?	During the original Environmental Assessment, the DYEC’s nominal annual processing capacity was set at 140,000 tonnes per year based on the estimated average energy content of the waste and conservative boiler availability estimates to allow for planned and unplanned facility maintenance. However, it is possible for the facility to process more than 140,000 tonnes per year in years of higher boiler availability or lower average waste energy content. The boilers are built to process a nominal 218 tonnes each per day, assuming an average waste energy content of 13 MJ/kg. Figure 2 of the Design and Operations Report included in the ECA application for Waste provides more detail on the boiler nameplate capacity operating window and can be found in this link: https://www.durhamyorkwaste.ca/en/facility-approvals/environmental-compliance-approval-and-amendments.aspx The proposed amendment to the maximum annual processing limit would provide the Regions with the flexibility to use

	this additional processing capacity when available. This in turn would reduce the quantity of waste requiring alternate disposal at facilities outside the Regions' borders.

<table>
<tr>
<td>Where is the information found relating various key performance indicators for the existing incinerator, that would allow interested parties to know whether or not Covanta has MET their contract obligations over the three and a half years of commercial operations –since January 2016? E.g. Availability – Covanta guaranteed 90% availability. That was not met for 2016 and unlikely to have been met for 2017 through 2017 Reconciliation report not yet publicly available. What about 2018?</td>
<td>Reconciliation is ongoing for 2018 through 2019. In cases where one or more performance objectives are not met, the Regions are pursuing remedies as specified in the operations contract.

Boiler availability achieved by Covanta is not in dispute and is summarized in the following table:

<table>
<tr><th>Year</th><th>Boiler Availability</th></tr>
<tr><td>2017</td><td>84.9%</td></tr>
<tr><td>2018</td><td>89.2%</td></tr>
<tr><td>2019</td><td>90.2%</td></tr>
</table>

It should be noted that the DYEC processed 140,000 tonnes each year from 2017 through 2019, which is the maximum allowable under the current limits. It should also be noted that the DYEC could have achieved 90% availability in 2018 if it had not been necessary to turn boilers off at the end of the year to avoid exceeding the 140,000 tonne annual processing limit. The amendments proposed through this Screening Process would make it unnecessary to turn off boilers to maintain compliance with the annual processing limit.</td>
</tr>
<tr>
<td>Where would the public find information about the TOTAL OPERATING ANNUAL COSTS (including but not limited to: costs for by-pass and unprocessible waste costs by category, ALL legal and consulting fees including monitoring, stack testing and AMESA system, , maintenance, and costs of all monitoring and reporting, cost of ALL staff time dedicated to incinerator (Works commissioner Siopis indicated staff time is tracked)., so as to be able to evaluate total costs and thus the fiscal impacts of a potentially expanded incinerator, broken down into York and Durham costs.</td>
<td>Please refer to the annual servicing and financial reports submitted to council for costs related to the Regions waste management programs including the DYEC.

For your reference, please see the following reports:

Solid Waste Management: 2020 Strategic Issues and Financial Forecast (2020 SIFF Report)
2019 Solid Waste Management Servicing and Financing Study

</td>
</tr>
</table>

Where could interested parties easily find a list of ALL exceedances of ALL types e.g. Air Emissions - Stack test failures (e.g. 2 stack testing failures for dioxins -2015 and 2016), Ambient Air and CEMS exceedances etc., so as to evaluate the environmental performance of the incinerator?	Any emissions exceedances are detailed in the annual reports under the year the event occurred. These reports are available on the DYEC project website.
The study review should employ updated air standards/benchmarks and updated health impacts assessments and specifically comment on whether or not the DYEC could meet changes to standards for NoX and Sox.	The Environmental Screening Report includes updated modelling demonstrating that the DYEC can operate at up to 160,000 tonnes per year while maintaining compliance with all applicable air standards and benchmarks including the new CCME (CAAQS) limits and ambient air reporting requirements for NO_2 and SO_2 as well as the proposed implementation schedule. Data evaluated from 2016-2018 for SO_2 and NO_2 against the 2020 CAAQS indicate that the air quality measured at the ambient air monitoring stations monitored by the DYEC are anticipated to meet the 2020 standards. Regional staff continuously work with the MECP and the consulting team to assess and implement the additional guidelines into the facility monitoring reports.
There have been at least three report Carbon Monoxide exceedances in the last eighteen months. Have any fines/monetary or other penalties been imposed on the Regions/DYEC for any exceedances and if yes, how much for which exceedance(s)?	No monetary fines or other penalties have been imposed on the Regions, Covanta, or the DYEC for any exceedances to date.
Given St. Marys Cement has announced their plans to “process” anywhere from 100 to 400 tonnes per day of waste materials (public meeting Sept. 5.19), how will the Regions address cumulative environmental effects from that proposal, AS WELL AS from additional traffic associated with the Highway 418 link likely to be operational shortly?	Updated modelling included in the Environmental Screening Report assesses cumulative impacts by adding current background air quality concentration data to the predicted additional concentrations resulting from facility operations at 160,000 tonnes per year. Future projects or developments in the area that occur after the DYEC EA Screening will need to consider the current air quality as background to add to those project studies. Comments and concerns related to other proposed facilities are outside the scope of this project and should be directed directly to the MECP.

Regions did NOT address the impacts of incinerator ash during the initial EA. Additional waste burned means there will be more ash produced and transported to landfills outside Durham Region? Will ash management and ash tonnages to be managed be addressed during the EA Screening?	Ash management will remain consistent with the current Ash Sampling and Testing Protocol approved by the MECP in July 2014. Testing completed to date confirms that ash produced by the DYEC is non-hazardous waste. All ash produced by the DYEC is managed at licensed waste disposal facilities, which are located outside of Durham Region. Processing waste at the DYEC reduces the volume of waste requiring off-site disposal by approximately 90% while the mass reduction is approximately 70%. Therefore, processing additional waste provides a net benefit from a solids management perspective. The soil-like composition and characteristics ash are such that it can be largely incorporated into the required daily cover of the disposal facilities, reducing the need for soil cover at these sites. Specific management of these materials once accepted by the receiving facility are subject to the approvals and conditions of their permits.
Do Durham and York Regions have a GHG emissions reduction strategy and where would that and any emissions reductions TARGETS and implementation plans to achieve reductions, should such plans exist, be found?	The Durham Community Climate Change Local Action Plan (LAP) identifies programs that will allow Durham to reach its long-term GHG emissions reduction target, while making Durham an even better place to live, work and play. Information about York Region's long-term greenhouse gas reduction targets and implementation plans can be found in the 2019 update of the Region's Energy Conservation and Demand Management Plan, which can be accessed at the following address: https://www.york.ca/wps/wcm/connect/yorkpublic/21ce557a-2300-42cc-9d9d-3e4c91d518f7/2019EnergyConservationandDemandManagementPlan.pdf?MOD=AJPERES&CVID=mLVYyAj In addition, York Region is preparing a comprehensive Climate Change Action Plan, which will be presented to Council in 2020. The draft Climate Change Action Plan can be found here: https://www.york.ca/wps/wcm/connect/yorkpublic/aedb7bb9-1ccc-4caf-8008-5db8c3a199a6/19102_climateChangeActionPlanMarch2020.pdf?MOD=AJPERES&CVID=n9E1Hij
Will the DYEC be subject to federal Carbon taxes and if yes, at what amount? Do Durham and York Region have Waste Reduction Targets e.g. per capita reduction targets and where could these be found?	The DYEC is not anticipated to be subject to federal Carbon taxes. The Regions have several diversion targets as laid out through their respective waste management plans. The Region of Durham is currently initiating the process of developing a new long-term waste management strategy. Durham Region's current waste management diversion target it set at 70% diversion. Durham Region submits data on its waste management programs to the province through the Resource Productivity and Recovery Authority (RPRA) Annual Datacall to receive funding from producers to assist with costs of operating the Blue Box Program. The datacall is the

	source of data used to confirm municipal diversion rates across the province. Durham currently has a waste diversion rate of 63% (pending verification). Along with our diversion programs, the Region has approved the implementation of the project for the mixed waste transfer/pre-sort with Anaerobic Digestion facilities which will further divert up to 30,000 tonnes per year of organic material. The implementation of this facility is anticipated increase the diversion rate in Durham above 70%. The SM4RT Living Plan is York Region's long-term strategy for waste management. The SM4RT Living Plan was endorsed by Regional Council in 2013, and can be viewed at the following web address: https://www.york.ca/wps/wcm/connect/yorkpublic/10ba5c8d-5f7f-4e49-a06b-ab270c563fb0/SM4RTLivingMasterPlanReportAODA.pdf?MOD=AJPERES In April 2020, York Region Council endorsed the Five Year Review of the SM4RT Living Waste Management Masterplan, which can be viewed at the following web address: https://www.york.ca/wps/portal/yorkhome/yorkregion/yr/plansreportsandstrategies/integratedwastemanagementmasterplan. Both the original SM4RT Living Plan and the Five Year Review include targets for reductions in per-capita waste generation.

Where could one find historical waste generation data for Durham and Regions, by category, per capital and total, regional and lower tier municipal data, going back to the start of the initial EA in 2005 be found, so as to review how accurate staff and consultant predictions made at that time were and what actual results were and how this affects the rationale and justification for the requested capacity increase?

Historical waste generation data for all municipalities in Ontario can be found on the Resource Productivity and Recovery Authority (RPRA), formerly Waste Diversion Ontario, website under the Datacall tab. A summary has been provided below:

DURHAM SUMMARY BY STREAM (Combined)

ACTUAL TONNES OF RESIDENTIAL WASTE MANAGED 2001-2019

Curbside & multi-residential wastes

	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Combined Garbage	131,882	114,758	96,444	96,803	89,819	88,839	89,292	90,274	91,715	92,682	92,893	92,679	94,096	94,896	93,214
Transfer Station Garbage	16,827	19,137	19,844	19,660	20,179	19,161	18,378	17,448	17,926	17,734	17,605	15,208	21,175	24,821	27,422
Total Garbage	148,709	133,895	116,288	116,463	109,998	108,000	107,670	107,722	109,641	110,416	110,498	107,887	115,271	119,717	120,636
Combined Recycling	45,793	54,426	54,595	53,152	50,061	50,908	52,554	51,099	49,860	48,956	47,680	47,363	47,226	42,545	41,132
Transfer Station Recycling	1,263	998	888	815	703	702	603	589	604	577	574	560	614	594	606
Total Recycling	47,056	55,424	55,483	53,967	50,764	51,610	53,157	51,688	50,464	49,533	48,254	47,923	47,840	43,139	41,738
Food Composting	2,882	13,976	26,212	25,907	27,454	27,593	26,865	26,899	27,486	27,007	26,796	27,612	28,318	28,446	28,522
Leaf & Yard Composting	16,736	18,446	17,758	22,031	23,108	21,427	22,149	23,778	23,593	30,033	25,588	22,865	22,955	25,128	24,375
Transfer Station Leaf & Yard Composting	1,602	2,037	1,651	1,722	1,787	1,647	1,595	1,695	1,675	2,090	1,966	1,864	2,127	2,202	2,271
Total Leaf & Yard Composting	18,338	20,483	19,409	23,753	24,895	23,074	23,744	25,473	25,268	32,123	27,554	24,729	25,082	27,330	26,646
Combined Composting & Grasscycling Credits	8,746	9,137	8,949	9,908	10,158	9,839	9,887	10,516	10,494	10,650	9,977	9,566	9,631	9,978	9,887
Reuse Programs	700	801	297	178	172	90	85	347	301	310	332	376	402	409	388
Transfer Station Reuse Programs (inc special events)	5,597	5,951	6,322	5,412	5,805	6,056	7,142	6,417	6,084	5,984	6,899	10,461	6,486	6,298	6,165
Total Reuse Programs	6,297	6,752	6,619	5,590	5,977	6,146	7,227	6,764	6,385	6,294	7,231	10,837	6,888	6,707	6,553
Total Waste	232,028	239,667	232,960	235,588	229,246	226,262	228,550	229,062	229,738	236,023	230,310	228,554	233,030	235,317	233,982

York Region

Year	Residual Waste[1]	Blue Box Collected[2]	Blue Box Residue[3]	Green Bin	Yard Waste	Household Hazardous Waste	Electronic Waste	Other Diversion	Total
2005	209,502	65,058	3,490	12,080	24,493	1,213	328	1,446	314,120
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2019	129,144	78,243	22,366	100,874	42,814	1,297	1,117	2,659	356,148

1. Residual waste excludes blue box residue.
2. Blue box residue is included in “blue box collected”
3. Total excludes blue box residue to avoid double counting

Do the Regions and/or Covanta intend to extend "put or pay" contract obligations to apply to the throughput increase to 160K? If not why not?	The 'put or pay' contract obligations will remain at 140,000 tonnes as per the current contract. This gives the Regions the flexibility to process additional waste without limiting future waste diversion options. This additional waste tonnage capacity is needed to accommodate population growth within the two Regions while continuing to maintain and increase diversion rates. The proposed processing capacity increase will also allow the DYEC to operate more efficiently and produce more energy with no modifications to existing infrastructure and no capital costs. If approved, the additional tonnage capacity will reduce reliance on alternate waste disposal facilities outside the Regions' borders.
Do the Regions intend to apply to extend the Power Purchase Agreement with Ontario for the 8 cents per kwh subsidy?	The electricity is sold to the Provincial grid as base load energy at the guaranteed price of $0.08 per kWh inflation indexed for a 20-year term. As the term is 20 years from the time of initial operations, there is no need to extend the Power Purchase Agreement due to the capacity increase to 160,000 tonnes per year. The existing terms and conditions of the Power Purchase Agreement will apply to the additional electricity generated due to the capacity increase.
Have the Regions decided how to allocate the increased 20,000 T of increased throughput they see? How much will be used by Durham, how much by York Region?	Durham Region and York Region will own the increased capacity at the same percentage allocation as the existing 140,000 tonnes. (21.4% York, 78.6% Durham). In accordance with the terms of the Co-owners' Agreement, the Regions have the ability to sell unused capacity to the other if required.
Who is the MECP project officer assigned to the 160K EA Screening and what is their full contact information? Which branch at MECP is the approval authority for this project and what is the contact information of those involved?	Questions related to the project should be provided to: Director, Environmental Assessment and Permissions Branch Ministry of the Environment, Conservation and Parks 135 St. Clair Ave. W, 1st Fl. Toronto, ON M4V 1P5 Email: enviropermissions@ontario.ca

I would like to be notified well in advance of all specific opportunities to provide comments and request that these be clearly shown on the 160K EA Screening project webpage(s).	Any person who has subscribed on the durhamyorkwaste.ca website to receive updates will get an email notification shortly after the documents have been posted. Additionally, the public is encouraged to provide comments, questions and concerns to the Project Team any time throughout the Environmental Screening process. The Project Team can be contacted through mail, email or telephone.
The Region and Town need to spend effort on solve the multi-res and condo issues that stand in the way of residents in these units being about to divert waste materials from the garbage.	Currently, Durham Region does not collect kitchen organic wastes from multi-residential buildings. The high contamination levels in these locations does not make the material compatible with the aerobic composting process currently in place to produce Grade A compost product. The Region is working on a project to build an Anaerobic Digestion (AD) facility with a pre-sort system so that multi-residential buildings that receive Region-provided waste collection can have their waste separated into recycling, garbage and the organic portion treated by AD instead of disposed.
If there is too much waste being generating in the Region, why don't we do something about that?	Durham Region promotes waste diversion programs through an extensive community outreach program. The Region is committed to improving waste diversion rates and participation through reuse, recycling and composting programs. The Region has recently approved the implementation of a mixed waste transfer/pre-sort with Anaerobic Digestion facility which will further divert up to 30,000 tonnes of Green Bin organic wastes per year. Continued growth within the Region will continue to result in an increase in the quantities of materials that need to be managed by Regional programs.
Wouldn't a waste audit be helpful?	Waste audits can be a helpful tool to understand how current waste diversion programs are performing and provide insight to where additional programs or public education could be warranted. A composition study was completed by Durham Region in 2018 in support of the proposed Anaerobic Digestion and Mixed Waste Processing facility, which when constructed is anticipated to reduce the amount of material going to the DYEC by removing organics.
There are many other ways of dealing with waste, burning it is one of the worst regarding air quality, why aren't there more municipalities taking this route?	Air quality from all disposal activities can be a challenge, as landfills produce methane heavy landfill gas for decades after the material has been placed within the facility. Energy from waste facilities are required to be equipped with several forms of air pollution control equipment and monitoring devices to ensure that emissions from the facilities are limited and well understood. There are several reasons that more municipalities within Canada are not using Energy from Waste facilities. Firstly, the cost of landfilling is relatively inexpensive in the United States and Canada compared to using energy from waste facilities, jurisdictions such as the EU and Asia with higher population densities and land values have a greater implementation of these facilities. Secondly, with only a few energy from waste facilities in Canada the capital costs and regulatory and political approvals for new facilities are time consuming, expensive and require a lot of planning. That being said, there are a number of communities across Canada which are investigating energy from waste as an alternative

	disposal option.
Rather than setting aggressive waste reduction and diversion targets, Durham and York regions are looking to increase the amount of waste burned for the profit of a repeat offender of pollution infractions.	Reduction and diversion programs including recycling, HHW management, and green bin programs remain key aspects of both Regions waste management programs as does the deployment of new technologies such as anaerobic digestion and mixed waste processing. However, continued changes to packaging as well as continued rapid growth within the Regions have and will continue to result in more waste being produced than the facility is currently permitted to accept. The proposed permit increase will allow the Regions to make the optimal use of the existing facility to manage our wastes.

Durham York Energy Centre 2019 Streamlined Environmental Assessment in support of the Annual Waste Processing Capacity Increase from 140,000 Tonnes to 160,000 Tonnes

PUBLIC INFORMATION CENTRE #2 SUMMARY REPORT

REGION OF DURHAM | REGION OF YORK | COVANTA

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1. Introduction

The Regional Municipalities of Durham and York, the owners of the Durham York Energy Centre (DYEC), have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC.

The Environmental Compliance Approval for the DYEC currently allows the facility to process up to a maximum of 140,000 tonnes per year of waste, for disposal at the site. The Regions are proposing to increase this amount by 20,000 tonnes per year, for a total of 160,000 tonnes. The facility is capable of processing 160,000 tonnes per year with its current equipment; and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions. If approved, the expanded tonnage will allow for greater usage of the existing facility, reducing the reliance on alternate waste disposal facilities outside the Regions' borders.

This report discusses comments provided during the Public Information Centre #2 (PIC#2) and related to the screening criteria checklist identifying the potential environmental effects, concerns, and issues to be addressed.

2. Public Information Centre #2 Purpose

Public Information Centre #2 (PIC#2) was arranged by the Project Team and held on October 23, 2019 at the Durham York Energy Centre, located at 1835 Energy Drive, Courtice, from 4:00 p.m. until 8:00 p.m. The Regions dedicated the 4 to 5 p.m. timeslot for interested representative from the indigenous communities to address any specific questions or concerns their communities may have had.

PIC#2 focused on the following:

a. Updating stakeholders on the project status,

b. Providing an opportunity to discuss the studies completed and the assessment of potential environmental effects,

c. Proving and opportunity to discuss relevant impact mitigation measures,

d. Identifying next steps in the EA process.

This report discusses comments provided during the PIC#2 and related to the screening criteria checklist identifying the potential environmental effects, concerns, and issues to be addressed.

3. Method of Notification

The Regions released the PIC#2 Notice using a variety of mediums to ensure a wide distribution of information to interested stakeholders. The mediums include social medium platforms (Twitter and Facebook), local newspapers, Regional websites and mail outs (emails). A summary of the PIC#2 notice distribution can be found in Table 1.

Paid advertising for PIC #2 was bought on Facebook from October 15 to October 23, 2019. The total impressions were 12,912 Durham residents:

- 83 people clicked the link to get more information
- 37 people responded to the event
- 17 people shared the event on their own Facebook page
- 40 reacted to the posted ad (such as thumbs up or an emoji)

The unpaid Facebook posts promoting this project reached approximately 5,112 people and Twitter posts have reached 3,687 people. These posts link back to durham.ca/DYEC160k website for more information.

Table 1: PIC#2 Notice Distribution Summary

Date	Time	Location	Consultation Activity	Attendance
October 9, 10, 11, 16 & 17, 2019	N/A	Local Newspapers	Public Information Centre #2 notice placed in the local newspapers.	N/A
October 15, 2019	N/A	Facebook	Facebook calendar event on Durham's Facebook page regarding PIC#2	N/A
October 15, 2019	N/A	Twitter	Post on the Durham Region Twitter account "#DurhamRegion is hosting a public information centre, on October 23 from 5 to 8 p.m. at the #DurhamYorkEnergyCentre (DYEC), to engage with residents about plans to increase the amount of waste processed each year at DYEC by 20,000 tonnes."	N/A
October	N/A	Twitter	Post on the Durham Region	N/A

22, 2019			Twitter account “Tomorrow (Oct. 22): #DurhamRegion is hosting a public information centre from 5 to 8 p.pm. at the #DurhamYorkEnergyCentre (DYEC) to engage with residents about plans to increase the amount of waste processed each year DYEC by 20,000 tonnes.”	
October 23, 2019	4:00 p.m. until 8:00 p.m.	Public Information Centre #1	PIC#2 was held at the Durham York Energy Centre from 4 to 8 p.m. The Regions dedicated the 4 to 5 p.m. timeslot for interested representative from the indigenous communities	17 guests attended the event.

Details of the date, time, location and purpose of PIC #2 was outlined in the following newspapers:

Table 2: PIC #2 Notice Publication Dates

Date	**Publication**
October 9 & 16, 2019	• The Standard • Oshawa Express
October 11, 2019	• Brooklin Crier
October 10 & 17, 2019	• Metroland (Oshawa, Whitby, Clarington This Week, Ajax, Pickering News Advertiser, Brock Citizen, Port Perry Star, Uxbridge Times Journal, • Orono Weekly Times • Uxbridge Cosmos

Notification of the PIC was sent to potentially affected Indigenous communities, review agencies and stakeholders who were identified in the initial EA study conducted for the DYEC project. A copy of the Notice of PIC #2 was also posted on both Durham and York websites, Durham’s Facebook page and Durham Region’s Twitter account.

Indigenous communities were provided a copy of the boards presented at PIC #2

in advance of the open house. The boards were made available on the DYEC Project Website prior to the PIC.

The DYEC project website can be found at:
https://durhamyorkwaste.ca/PublicOutreach/2019EnvironmentalAssessment.aspx

4. Public Meeting Format

Attendees were greeted at the door, asked to sign the registration sheet, and provided with a comment form. Boards were displayed throughout the room and presented as an 'open-house' format whereby attendees were able to review the project information and ask questions to the project staff in attendance. Project Staff in attendance included staff from the Region's of Durham and York, Covanta, and the Region's engineering consultants (HDR and Golder). Table 3 indicates the individual members of the Project Team who were in attendance. No formal presentation or question and answer period was provided. Attendees were also offered a tour of the facility which included access to the bridge, turbine window and the control room.

Table 3: Project Team Members in Attendance (PIC#2)

Project Team Member	Organization/Affiliation
Mirka Januszkiewicz, Director of Waste Management	Region of Durham
Gioseph Anello, Manager of Waste Planning and Technical Services	Region of Durham
Andrew Evans, Project Manager/Engineer	Region of Durham
Angela Porteous, Supervisor, Promotion, Education and Policy	Region of Durham
Lyndsay Waller, Waste Technician, DYEC	Region of Durham
Laura Malyjasiak, Waste Technician, Policy and Planning	Region of Durham
Danielle Luciano, Waste Technician, DYEC	Region of Durham
Joanne Paquatte, Manager, Communications	Region of Durham

Project Team Member	Organization/Affiliation
Melissa Westover, Communications Coordinator	Region of Durham
Seth Dittman, Supervisor, Technical Services, Waste Management, Environmental Services	Region of York
Mathew Neild, Plant Manager	Covanta
Amanda Huxter, Environmental Specialist	Covanta
Anthony Ciccone, Principal	Golder (Consultant)
Katherine Armstrong, Air Quality Specialist	Golder (Consultant)

Participants were asked to provide input to the process by completing the available comment forms. If individuals wished to take the comment form home to fill out at a later time, they were asked to return the forms to the mailing address or email address provided on the comment sheet by December 20, 2019.

5. Participation Levels and Summary of Comments Received

A total of eighteen (18) participants attended PIC #2. The project team did not receive any completed comment sheets/emails in relation the PIC #2. Verbal comments were noted, as summarized in Table 4. Twelve (12) attended participated in the tours of the facility.

Table 4: Verbal Comments Received and DYEC Project Team Response

General Comment	DYEC Project Team Response
How will the comments from PIC#1 be incorporated into the next steps?	Comments will be reviewed and if a change to the checklist if warranted, then the impacts of that change will be considered.
When will the draft report be available to the Public?	The Regions are working towards an end of November date for the distribution of the draft Streamline EA report.

Will the facility be increasing the mass loading of the contaminates from the emissions?	Given that the number of days of operations is expected to increase at the DYEC then a small increase in contaminant loading will be experience. From the modeling, this is considered to be insignificant. The modelled concentrations demonstrate that the impacts on the environment of these contaminants at the Point of Impingement will not increase significantly.
How can this project result in “net positive” environmental impacts?	We will be assessing both the negative and positive environmental impacts of the current disposal method (long haul landfilling) for the 20,000 tonnes and the impact of processing the 20,000 tonnes at the DYEC. If the positive impacts outweigh the negative impacts, then we will assess the overall net environmental impact as positive. A good example of this assessment is looking at the impacts to transportation. The current option will require trucks to be on the road for a 6-hour period (to and from the landfill). Taking this waste from the transfer station to the DYEC is a 10-minute drive. Therefore, the net impact on transportation would be considered positive.
In the Golder report, it appears that the two scenarios modelled (140,000 tpy and 160,000 tpy) are conducted using two wastes with different high heat values. Why is this?	The Firing diagram used by Golder was solely to establish the daily tonnage processed and the number of days of operation in order to create the 140,000 tpy and the 160,000 tpy. The high heat value and the maximum continuous rating do not impact the model inputs for either scenario.
Who provided the model inputs for the scenarios?	Golder calculated the processing rates and used the ECA limits for the contaminant concentrations existing the stack. Covanta provide the stack velocity rates for each scenario.

Will the Regions be comparing the SO2 and NOX outputs to the new Canadian Ambient Air Quality Standards (CAAQS)?	The CAAQS are not in effect at this time. There are both hourly and annual limits in the CAAQS. The hourly standards are the 3-year average of the 99 percentile for SO2 and the 98 percentile for the NOX The Regions will be assessing the impacts of applying these future standards.
The Golder report was completed in February 2019. Has there been any other work completed on the ambient air issue since that time?	The Regions asked Golder to review the new CAAQS and their potential impact on the results. We also asked Golder to review the modelling results from the source test for consistency with the project results.
Will cumulative effects in the ambient air be considered?	Golder will add the modelled impacts to the background data for each scenario.
Will the alternative fuel impacts from St Mary's Cement be considered?	The Regions have provided St Mary's Cement with our ambient air monitoring data and the report outcome for their assessment of cumulative effects.
Up to what time will the Regions be accepting comments from the public?	We will accept comment up to the end of December after which we are planning to issue the Notice of Completion. Comments received will be accepted until the end of the project as well as during the review period.
Will the Regions provide the bypass data with the diversion report that goes to the MECP November 3rd?	The bypass data will not be included in the diversion report.
Will we be taking waste from other sources to make up the additional 20,000 tonnes per year?	The Durham York Energy Centre is Durham Region's primary long-term disposal option for waste and only processes the household waste remaining after Durham and York Regions' aggressive composting, recycling and reuse programs. Our Certificate of Approval does not allow us to accept waste from any additional

	outside sources.
Are there any additional programs the Region could implement to reduce the amount of waste received by the DYEC for processing?	Along with our diversion programs and on-going promotion and education, the Region has approved the implementation of the project for the mixed waste transfer/pre-sort with Anaerobic Digestion facilities which will further divert up to 30,000 tonnes per year of organics material from the DYEC.
What type of training is required to become an operator at the DYEC?	Operators are required to obtain various levels (4th Class, 3rd Class, and 2nd Class) certifications in Operation Engineering through the Technical Standards and Safety Authority.
Will the Regions consider bringing all waste here and remove the blue box and green bin programs?	The proposed throughput increase is meant to address the short-term capacity issues currently experienced by the Regions, as well as prepare for additional capacity pressures as population grows within the Region. The Regions continue to support, and strives to improve, waste diversion efforts. While energy recovery is important, Durham and York Regions are first committed to improving waste diversion rates through reuse, recycling and composting programs. Blue and green bin programs will continue.

In addition to the verbal comments noted in Table 4, written comments were received as a result of the PIC notification process (described in Section 2.0), Table 5 provides a summary of these comments.

Table 5: Written Comments Received and DYEC Project Team Response –

Written Comment	DYEC Project Team Response
No written comments were received in relation to PIC#2. (Dates for PIC#2 and PIC#3 comments both set to Dec 20)	Not Applicable

Durham York Energy Centre 2019 Streamlined Environmental Assessment in support of the Annual Waste Processing Capacity Increase from 140,000 Tonnes to 160,000 Tonnes

PUBLIC INFORMATION CENTRE #3 SUMMARY REPORT

REGION OF DURHAM | REGION OF YORK | COVANTA

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1. Introduction

The Regional Municipalities of Durham and York, the owners of the Durham York Energy Centre (DYEC), have commenced an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the DYEC.

The Environmental Compliance Approval for the DYEC currently allows the facility to process up to a maximum of 140,000 tonnes per year of waste, for disposal at the site. The Regions are proposing to increase this amount by 20,000 tonnes per year, for a total of 160,000 tonnes. The facility is capable of processing 160,000 tonnes per year with its current equipment; and is currently being underutilized despite demand for additional waste disposal capacity for residential waste within the Regions. If approved, the expanded tonnage will allow for greater usage of the existing facility, reducing the reliance on alternate waste disposal facilities outside the Regions' borders.

This report discusses comments provided during the Public Information Centre #3 (PIC#3) and related to the screening criteria checklist identifying the potential environmental effects, concerns, and issues to be addressed.

2. Public Information Centre #3 Purpose

Public Information Centre #3 (PIC#3) was arranged by the Project Team and held on October 23, 2019 at the Durham York Energy Centre, located at Garnet B. Richard Recreation Centre, 2440 Durham Regional Highway 2, Bowmanville from 4 to 8 p.m.The Regions dedicated the 4 to 5 p.m. timeslot for interested representative from the indigenous communities to address any specific questions or concerns their communities may have had.

PIC#3 focused on the following:

a. Presenting the Draft Environmental Screening Report,

b. Providing information and answering questions from stakeholders

c. Identifying next steps in the EA process.

3. Method of Notification

The Regions released the PIC#3 Notice using a variety of mediums to ensure a wide distribution of information to interested stakeholders. The mediums include social medium platforms (Twitter and Facebook), local newspapers, Regional websites and mail outs (emails). A summary of the PIC#3 notice distribution can be found in Table 1.

Paid advertising for PIC #3 was bought on Facebook from December 4 to

December 12, 2019. The total impressions were 7,090 Durham residents:

- 49 people clicked the link to get more information,
- 24 people responded to indicate if they would attend the event,
- 8 people shared the event on their own Facebook page,
- 31 reacted to the posted ad (such as thumbs up or an emoji)

In 2019, the unpaid Facebook posts promoting this project reached approximately 4,190 people and Twitter posts have reached 4,957 people. These posts link back to durham.ca/DYEC160k website for more information.

Table 1: PIC#3 Notice Distribution Summary

Date	Time	Location	Consultation Activity	Attendance
November 22, 2019	N/A	Facebook	Durham Region Facebook page post: #DurhamRegion and York Region (The Regional Municipality of York) have begun an Environmental Screening Process to increase the amount of waste processed each year the #DurhamYorkEnergyCentre (DYEC) by 20,000 tonnes. Learn more: bit.ly/3358Scl. #DurhamWorks #DurhamWaste	N/A
December 4, 2019	N/A	Facebook	Durham Region Facebook event post: Info Session: Durham York Energy Centre Capacity Increase Study	N/A
December 4, 2019	N/A	Twitter	Durham Region Twitter post: #DurhamRegion is hosting a public information centre, at Garnet B. Rickard Recreation Complex in #Bowmanville on December 12, about plans to increase the amount of waste processed each year the #DurhamYorkEnergyCentre by 20,000 tonnes. Bit.ly363cBsF DurhamWaste	N/A
December 12, 2019	N/A	Facebook	Durham Region Facebook Event post: Info Session: Durham York Energy Centre	N/A

			Capacity Increase Study	
December 12, 2019	4:00 p.m. until 8:00 p.m.	Public Information Centre #3	PIC#3 was held at Garnet B. Richard Recreation Centre, 2440 Durham Regional Highway 2, Bowmanville from 4 to 8 p.m. The Regions dedicated the 4 to 5 p.m. timeslot for interested representatives from the Indigenous communities.	17 guests attended the event.

Details of the date, time, location and purpose of PIC #3 was outlined in the following newspapers:

Table 2: PIC #3 Notice Publication Dates

Date	Publication
November 28 & December 5, 2019	• Metroland (Oshawa, Whitby, Clarington This Week, Ajax, Pickering News Advertiser, Brock Citizen, Port Perry Star, Uxbridge Times Journal, • Uxbridge Cosmos
December 4 & 11, 2019	• Orono Weekly Times • Oshawa Express

Notification of the PIC was sent to potentially affected Indigenous communities, review agencies and stakeholders who were identified in the initial EA study conducted for the DYEC project. A copy of the Notice of PIC #3 was also posted on both Durham and York websites, Durham's Facebook page and Durham Region's Twitter account.

Indigenous communities were provided a copy of the boards presented at PIC #3 in advance of the open house. The boards were made available on the DYEC Project Website after the completion of the PIC. In addition, Project staff phoned each indigenous community between December 6, 2019 and December 10, 2019 to notify them of the upcoming PIC, to inform them of the draft reported posted on the Project website, and to ask if they had any questions or concerns regarding the Project.

The DYEC project website can be found at:
https://durhamyorkwaste.ca/PublicOutreach/2019EnvironmentalAssessment.aspx

4. Public Meeting Format

Attendees were greeted at the door, asked to sign the registration sheet, and provided with a comment form. Boards were displayed throughout the room and presented as an 'open-house' format whereby attendees were able to review the project information and ask questions to the project staff in attendance. Project Staff in attendance included staff from the Region's of Durham and York, Covanta, and the Region's engineering consultants (HDR and Golder). Table 4 indicates the individual members of the Project Team who were in attendance. No formal presentation or question and answer period was provided.

Table 4: Project Team Members in Attendance (PIC#3)

Project Team Member	Organization/Affiliation
Mirka Januszkiewicz, Director of Waste Management	Region of Durham
Gioseph Anello, Manager of Waste Planning and Technical Services	Region of Durham
Andrew Evans, Project Manager/Engineer	Region of Durham
Peter Veiga, Supervisor, Waste Operations	Region of Durham
Angela Porteous, Supervisor, Promotion, Education and Policy	Region of Durham
Laura Malyjasiak, Waste Technician, Policy and Planning	Region of Durham
Danielle Luciano, Waste Technician, DYEC	Region of Durham
Joanne Paquatte, Manager, Communications	Region of Durham
Melissa Westover, Communications Coordinator	Region of Durham
Seth Dittman, Supervisor, Technical Services, Waste Management, Environmental Services	Region of York

Project Team Member	Organization/Affiliation
Bruce Howie, Vice President, Professional Associate Resources Business Group New York/New Jersey Area Manager	HDR (Consultant)
Mathew Neild, Plant Manager	Covanta
Amanda Huxter, Environmental Specialist	Covanta
Katherine Armstrong, Air Quality Specialist	Golder (Consultant)

Participants were asked to provide input to the process by completing the available comment forms. If individuals wished to take the comment form home to fill out at a later time, they were asked to return the forms to the mailing address or email address provided on the comment sheet by December 20, 2019.

5. Participation Levels and Summary of Comments Received

A total of seventeen (17) participants attended PIC #3. In addition to the comment forms, many verbal comments were noted, as summarized in Table 4.

Table 4: Verbal Comments Received and DYEC Project Team Response

General Comment	DYEC Project Team Response
When we go to 250,000 will we be looking at newer technology for the facility and emissions controls?	The DYEC's mass burn process is based on proven technology. While the Regions monitor the industry in terms of available technologies and practices. The specific scenarios assessed will be determined through the Terms of Reference and EA processes.
Residents looking for general information i.e. How many trucks per days, how does the facility perform in terms of stack testing, how much ash	Discussed the facility in general terms including approximate number of trucks per day, recent stack testing results, approximate ash generation rates. The

is produced?	resident expressed interest in attending a tour of the facility.
What would this and future expansion look like?	Described the lack of need for any changes to the existing facility for the proposed 160,000 tonnes per year throughput project. Described the location of a potential boiler unit #3 and how the expansion would likely work, including existing oversized facility components.
Comment received that the timing of the event was poor as people are busy with the holiday season approaching.	Listened to comments and spoke about Project process and timelines.
Comment regarding the declining participation of the facility operator in community events.	Committed to following-up with the facility operators regarding community participation requirements.
Question regarding the potential for more regularly scheduled facility tours for the general public.	Committed to take this request up for further internal discussion.
Questions regarding the district heating system potential for the facility.	Discussed that the infrastructure for the system is established to the property line, including the steam extraction system on the turbine. Outlined current financial challenges to the implementation as a result of impacts to the energy guarantee of the facility's operations, as well as the currently low cost of heating alternatives (natural gas) under current market conditions.
Questions below were received at PIC but responded to through email response	
Where does the public obtain facility GHG information (specifically the natural gas burned in the boilers)?	The publicly available GHG emissions information for all obligated facilities in Ontario is found at the following weblink: https://www.ontario.ca/data/greenhouse-gas-emissions-reporting-facility Data from reporting years 2010 – 2017 is available via this link however only the total reported GHGs and the verification

	amount of GHGs are provided. Both biomass and non-biomass GHGs are calculated and reported but only the non-biomass GHGs are considered the verifiable amount and used to calculate carbon caps/emissions limits for facilities subject to those. For 2017, Covanta used the following natural gas information to calculate the GHG emissions from natural gas combustion: boiler usage: 470,829 cu metres balance of plant: 132,599 cu metres
How are the GHG emissions for transport to landfill calculated?	The discussion of GHG emissions begins on page 52 of the draft ESR. The details of GHG emissions associated with landfill vs EFW begins at the bottom of page 54. On page 56 there is a table (Table 9) of data that was used to calculate the CO2 emissions generated from transport of waste to landfill. The details regarding the number of trucks used and kilometres traveled are explained in the two paragraphs above this table (starting at the bottom of page 55). Two constants are used in calculating the CO2 released. Both are Natural Resource Canada numbers and the website is noted below the table. Using this information, calculating total CO2 emissions are a multiplication exercise to determine total fuel consumed and CO2 emissions from the fuel combustion. For your convenience, the relevant paragraph and Table 9 are copied below. <u>From the ESR, page 55 - 56</u> An additional 20,000 tonnes per year of waste processed at the DYEC from Durham and York Regions, will remove or shorten the distance travelled by trucks transporting waste for landfill disposal. Trucks arrive at the DYEC with

	loads averaging 34 tonnes per load meaning that 588 trucks would be required to haul the additional 20,000 tonnes. Processing of the material reduced the mass and volume of the material, based on 2018 ash production and truck counts, the additional 20,000 tonnes of waste would result in the generation of 5,877 tonnes of ash, requiring 163 trucks to transport the material for disposal. This results in a net reduction of 425 trucks required for hauling the material. The majority of recent DYEC by-passed waste has been shipped as far as the Twin Creeks Landfill, over 300 kilometres from the DYEC. Based on the calculations in Table 9 assuming all materials were to be transported from the DYEC to a remote landfill approximately 268 tonnes of CO2 would be avoided.
What is the IPCC position on energy from waste?	Starting with the 2007 Working Group III report (mitigation focused group), the IPCC has acknowledged the contribution of EFW to fossil fuel GHG avoidance. From the 2007 Working Group III Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change: “Incineration and industrial co-combustion for waste-to-energy provide significant renewable energy benefits and fossil fuel offsets. Currently, >130 million tonnes of waste per year are incinerated at over 600 plants (high evidence, high agreement). Thermal processes with advanced emission controls are proven technology but more costly than controlled landfilling with landfill gas recovery; however, thermal processes may become more viable as

	energy prices increase. Because landfills produce CH_4 for decades, incineration, composting and other strategies that reduce landfilled waste are complementary mitigation measures to landfill gas recovery in the short- to-medium-term" (Chapter 10 is attached) WGIII confirmed this position in the 2014 Fifth Assessment Report: "Important options for mitigation in waste management are waste reduction, followed by re-use, recycling and energy recovery (robust evidence, high agreement). Waste and wastewater accounted for 1.5 $GtCO_2eq$ in 2010. As the share of recycled or reused material is still low (e.g., globally, around 20% of municipal solid waste is recycled), waste treatment technologies and recovering energy to reduce demand for fossil fuels can result in significant direct emission reductions from waste disposal. [10.4, 10.14]" (The full report is available at this link: https://www.ipcc.ch/report/ar5/wg3/) A sixth assessment report will be finalized in 2021.

In addition to the verbal comments noted in Table 4, written comments were received as a result of the PIC notification process (described in Section 2.0), Table 5 provides a summary of these comments.

Table 5: Written Comments Received and DYEC Project Team Response

Written Comment	DYEC Project Team Response
Good afternoon, Thank you for this very helpful update. I kindly request 1 hard copy of the document. Further, can you please confirm the comment deadline? Thank you and regards, Amy Burke	Good Morning, This email is in response to your request dated December 11, 2019 regarding the Durham York Energy Centre Environmental Screening Process. Please note that we will have a hard copy of the document for you tonight at the Public Information Centre. If you are unable to attend, we will ensure we mail the report out to you. Stakeholders are encouraged to provide comments on the draft DYEC Environmental Screening Report, which can be accessed through the project website durham.ca/DYEC160k, by December 20, 2019. A revised draft will be produced following review of received comments. Regards, DYEC Project Team
I am unable to attend this evening. My question is about the smell. There is a sour, burning garbage smell some days. I live in West Bowmanville. Some days in nicer weather I have to keep my windows closed. On these same days the smell is noticeable on the 401, just at the incinerator and not west of it. I have asked in the past about the smell and was replied by the region that the readings were normal. That's great, but it still smells. Will increasing the volume each year increase this	Thank you for your email dated December 12, 2019 regarding the Durham York Energy Centre (DYEC) Environmental Screening Process. We understand you have concerns regarding odour in your community. Our staff is committed to ensuring that odours related to the waste at our facility are contained and destroyed within the building to prevent any offsite odour impacts. Odours are closely monitored at the DYEC, and the facility has been designed to prevent the release of odours into the community. The tipping hall where municipal solid waste is received and unloaded is located indoors. The air in the tipping hall is drawn through large fans and used in the combustion process. This ensures the tipping hall remains under negative air pressure to contain any dust and odours generated during the delivery and storage process. By using the air from the tipping floor during combustion, the odour causing compounds are destroyed through the combustion process prior to reaching the stack. Regular odour inspections are completed by both Regional and Operator staff to ensure there are no offsite impacts due to odour from DYEC operations. All odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP) as per the facilities Environmental Compliance Approval. Once a concern has been reported, an investigation of the available data, including wind direction from meteorological data, conditions of operations, and a review of our odour inspections, is

odour?	completed to determine conditions at the time of the reported incident. The MECP has confirmed that no odour complaints received by the facility to date have been related to the DYEC operations. When an odour is reported to DYEC staff, but found not be related to DYEC operations, the MECP will assign the complaint to appropriate local MECP officer for further investigation/reporting. Please note that no changes to the amount of waste being stored at the facility are being considered as part of the proposed increase in capacity to 160,000 tonnes per year, furthermore no changes to the waste storage location, or any other component of the facility are proposed. As a result, the in-place mitigation measures are anticipated to remain effective at controlling any generated odours. A designated project website has been created to provide details and updates on facility operations as well as the 2019 Streamlined Environmental Assessment (Durham.ca/DYEC160k). Residents and interested parties are encouraged to submit any question or comments, by December 20, 2019, to the project manager listed below: Andrew Evans, M.A.Sc, P.Eng. Project Manager Durham York Energy Centre 1835 Energy Drive, Courtice, ON L1E 2R2 905-404-0888 ext. 4130 info@DurhamYorkWaste.ca We welcome you to contact us discuss your concerns further and/or schedule a visit to the DYEC for further discussion and a brief tour of the facility.

Do you expect the additional 20,000 tonnes to generate additional 12,000MW of power?	Under the operating contract, electricity production guarantees depend on the energy content of the waste. Based on these guarantees, we would expect the additional 20,000 tonnes of throughput (if fully utilized) to generate 12,000 MWh to 18,000 MWh of net additional electrical output, depending on energy content.
Do you expect higher flow?	Steam flows at all anticipated operating points are within the design capabilities of the boilers. There is no steam flow limit in the DYEC operating permit. It is currently necessary to operate at steam flows that are lower than the intended optimum design range to maintain compliance with the 140,000 tonne annual waste processing limit. Increasing the annual processing limit will allow the facility to operate at higher steam flows that are closer to the optimum design range.
With additional trucking (both in and out) of ash, will the hours of receiving change?	The additional trucking of ash will not result in a change to the hours of receiving and shipping materials at the DYEC, which are limited to 7:00 am to 7:00 pm by the conditions of the ECA.
Will you hold back construction debris and keep only curbside trash as the 20,000 tonnes?	The additional tonnage will not result in a change to the type of materials being received at the Durham York Energy Centre. The facility will continue to receive non-hazardous resident waste, post diversion, from Durham and York Region's curbside programs and waste management facilities as currently specified in the ECA.
With the addition of other industries on surrounding land being developed, will this keep future expansions from happening?	The DYEC property is large enough to accommodate a 400,000 tonne per year facility without acquiring additional land. However, future expansion of the facility will require additional studies and would be subject to approval from the MECP.
Will all industries (i.e. Saint Mary's) be held to the same environmental air standards (i.e. opacity)?	Industrial facilities making emissions to air are required to obtain an Environmental Compliance Approval (ECA) from the Ministry of Environment, Conservation and Parks. Emission limits can vary between industries and facilities. Applicants are required to demonstrate they can operate within the emissions limits specified in their ECA without unacceptable impacts to local air quality.
Is there an opportunity to divert fly ash to St. Mary's to use as a filler product?	The operations contractor is responsible for ash management under the contract. We understand that Covanta has discussed alternative end uses of bottom ash and fly ash produced by the DYEC with St. Mary's and other potential processing facilities but has not entered into any agreements at this time. Any ash processing would be subject to its own permitting process and approval by the Regions and is outside the scope of this Environmental Screening Process.

How will the increase of capacity make the process more efficient?	The boilers and turbine are designed to be most efficient at full load operation. In 2019, the boilers were operated at an average of only 94% load, reducing electrical generating efficiency and contributing to over 13,000 tonnes (approximately 380 trucks) of waste being bypassed to landfill, instead of being processed through the DYEC to generate power and recover metals.
Will the turning of waste into energy lower our hydro payments?	Residents will not see a decrease in their hydro bills as a result of energy from waste produced at the Durham York Energy Centre. Revenue received from DYEC operations helps to offset the overall cost of waste management within the Regions, reducing departmental budget requirements which are ultimately funded through property taxes.
Will the Region plant removed vegetation by the Highway 418/407 to capture some of the emissions?	The 418/407 Project is a separate project outside of our jurisdiction and is not captured under this Screened Environmental Assessment.
How will you improve a) the natural environment around the EFW; b) groundwater and surface water?	The proposed increase to 160,000 tonnes per year will require no changes to existing infrastructure and no changes to existing daily limits on shipping hours or receipt or storage of materials. Updated air emissions modelling included in the Environmental Screening Report confirms that the facility can operate at 160,000 tonnes per year while complying with limits that are protective of human health and the environment. On this basis, the existing environmental mitigation measures and controls are expected to be sufficient. The Regions currently monitor groundwater and surface water quality in accordance with a Groundwater and Surface Water Monitoring Plan approved by the MECP. Results from this monitoring program confirm that the facility is not having an unacceptable impact on groundwater or surface water in the area. Monitoring results can be accessed on the project website using the following link: https://www.durhamyorkwaste.ca/en/environmental-monitoring/groundwater-and-surface-water.aspx#Ground-Water-and-Surface-Water-Annual-Reports
Will the EFW and Region help in rehabilitation of Tooley Creek, especially Tooley Coastal wetland?	No additional rehabilitation work is planned as part of the Project. The facility will continue to operate existing infrastructure including stormwater management ponds to protect the receiving environment.

Will you need additional new landfill?	No additional new landfill space will be required due to the Project. If approved, the Project will help reduce bypass waste sent to landfill from the DYEC. Processing waste at the DYEC results in a net waste reduction of approximately 90% by volume and 70% by mass. While ash will continue to be shipped to landfill (and thus requiring landfill space), the overall volumes and masses of waste to landfill will be significantly decreased versus the status quo.
How will the capacity increase affect our taxes since the Region will be saving money and receiving revenue?	Revenue received through the operations at the DYEC to the Region helps to offset the overall cost of managing waste within the Region.
Are you sure that no upgrades to the existing facility will be required? Explain your answer.	No new infrastructure will be constructed as a result of this project. The existing infrastructure has additional capacity that currently cannot be used due to the annual processing limit of 140,000 tonnes per year. Increasing the annual processing limit to 160,000 tonnes per year will allow the Regions to make better use of the existing equipment by avoiding periods of reduced loads and allow the equipment to operate more efficiently.
Can the northern municipalities be awarded the pre-sort and anaerobic digestion facility as farmers need this service?	The Region is currently conducting a siting investigation for the pre-sort and anaerobic digestion (AD) facility which is an independent project from the 160,000 Streamlined DYEC Environmental Assessment. Further information regarding the AD project can be found on the project website (durham.ca/ADProject).
Were the additional emissions caused by truck emissions and fuel to truck additional ash from plant -including fly ash and bottom ash included in calculations of reduced truck/fuel emissions to send other unburnable waste to landfill? At 160,000 tpy, there is anticipated to be a 14% increase in ash generation. That would be an additional 2,000 t of fly ash generated (which must be treated differently) and 3,876 additional bottom ash generated. Is this all calculated into the truck/travel/emissions scenario? Please Clarify.	The additional ash generation was accounted for in the above scenario. An additional 20,000 tonnes per year of waste processed at the DYEC from Durham and York Regions, will remove or shorten the distance travelled by trucks transporting waste for landfill disposal. Trucks arrive at the DYEC with loads averaging 34 tonnes per load meaning that 588 trucks would be required to haul the additional 20,000 tonnes. Processing of the material reduces the mass and volume of the material. Based on 2018 ash production and truck counts, the additional 20,000 tonnes of waste would result in the generation of approximately 5,877 tonnes of ash, requiring 173 trucks to transport the material for disposal. This results in a net reduction of 415 trucks required for hauling the material.

Are fuel and truck emissions combined in trucks to landfill calculations to give larger emission numbers, resulting in higher number to benefit notion that more GHG will be saved by burning more? It seems like “double dipping”. Please explain.	When calculating GHG emissions, total direct vehicle emissions are included as part of emissions produced by waste transportation whereas landfill emissions include only the emissions produced during material decomposition. The landfill emissions and waste transportation emissions are two separate calculations which is done to ensure we are not double counting in our emissions calculations.
Will POI be recalculated? Will effects be explained and calculated?	The Environmental Screening Report includes an updated Emissions Summary Dispersion Model demonstrating that contaminant concentrations at the maximum point of impingement (POI) will remain within applicable regulatory limits and standards that are protective of human health and the environment.
Why is Covanta totally in charge of this (correlation and 2 stack tests), with neither MECP nor DURHAM REGION reviewing the AMESA lab results? Why are the results not available to the public? Why in 4 years have results not been made available even though they don’t correlate? Why does Durham Region say they are meaningless?	The MECP oversees the compliance source test and the Owners retain an independent third-party consultant to oversee both the voluntary and compliance source tests, which is conducted by a third party firm. Both the Owners and the MECP are actively participating in the AMESA Long Term Sampling Work Plan. In consultation with the MECP, Covanta and the Regions are working towards developing meaningful data through establishing a correlation between the stack test results and the AMESA data. Establishing a correlation between the AMESA and the source test numbers is important both to understand how AMESA results reflect plant performance, as well as ensuring the AMESA monitoring system is functioning as intended. Without these affirmations, it is not possible to ensure that the results collected by the system represent facility operations.
WHY, if the incinerator had capacity to burn 160K, was the capacity capped at 140K. A clear and verifiable explanation MUST be provided why the cap in place and to demonstrate the incinerator does indeed have the capacity to process 160K tpy and under what operating conditions e.g. HHV, at what MCR, planned outages etc.	The original Environmental Assessment included impact assessments for two capacity scenarios: the baseline nominal capacity of 140,000 tonnes per year based on the Regions’ minimum commitment to the facility, and a future expansion scenario of 400,000 tonnes per year. Since the Regions had modelled the scenario with the greatest impact (400,000 tonnes) it was assumed that separate modelling of scenarios between 140,000 and 400,000 tonnes would not be required. Although the original Environmental Assessment demonstrated that the facility could operate safely at 400,000 tonnes per year at the time the assessment was performed, the MECP was not willing to pre-approve the expanded capacity scenario due to the long period of time that was expected to elapse before expansion to 400,000 tonnes would be required. The MECP was concerned that future changes to the study area in the years between the initial study and ultimate expansion could alter the conclusions study, so they issued approval for 140,000 tonnes per year and established a requirement for a new assessment prior to issuing approval for any additional capacity. The amendments requested through the current Screening Process would allow the Regions

	to use the full built capacity of the existing facility, rather than being limited to 140,000 tonnes per year, which was originally intended to be the Regions' minimum commitment to the facility, not the maximum limit. The updated Environmental Screening Report demonstrates that the facility can operate at 160,000 tonnes per year (as designed) without unacceptable environmental impacts. Details confirming the current facility's ability to process 160,000 tonnes per year can be found in the Design and Operations Report (DOR) submitted with the Environmental Compliance Approval application. A copy of the DOR can be accessed using the following link: https://www.durhamyorkwaste.ca/en/facility-approvals/environmental-compliance-approval-and-amendments.aspx As illustrated in Figure 2 of the DOR (Refuse Firing Diagram) the facility is designed to operate at heat release rates ranging from 70.8 to 129.8 gigajoules per boiler per hour (GJ/boiler-hr). The facility is optimized for a heat release rate of 118.0 GJ/boiler-hr), which is referred to as "100% MCR". The energy content of the waste is measured using a parameter referred to as the "higher heating value" or HHV. As noted in Section 1.1 of the DOR, the DYEC is designed for HHV values ranging from 8.4 to 15.0 megajoules per kilogram (MJ/kg) which is equivalent to 8.4 to 15.0 gigajoules per tonne (GJ/tonne). Section 1.1 also notes that the actual processing rate depends on the HHV of the waste. In addition to these two factors, the annual tonnes processed depends on the number of hours that the boilers operate in a given year. When expressed as a percentage total hours, this parameter is referred to as "boiler availability." Boiler availability should be assumed to be less than 94% to account for regularly scheduled preventative maintenance. Covanta's minimum boiler availability guarantee is 90% which includes an allowance for unplanned maintenance outages. There are many combinations within these operating ranges that would result in an annual processing rate of 160,000 tonnes per year or more. For example: Heat Release Rate: 118 GJ/boiler-hr HHV: 12.0 GJ/tonne Availability: 93%

	$$Annual\ Rate = \frac{(2\ boilers)\left(118\frac{GJ}{\text{boiler}\cdot\text{hr}}\right)\left(24\frac{hr}{day}\right)\left(365\frac{day}{year}\right)(93\%)}{\left(12.0\frac{GJ}{tonne}\right)}$$ $$= 160{,}220\frac{tonnes}{year}$$ It is important to note that the increased maximum throughput will only set the upper limit on waste that is able to be processed throughout the course of the year. This is analogous to a landfill with a maximum annual fill rate – the landfill may not utilize all its permitted capacity in a given year. Facility and waste availability as well as waste energy content will further impact the actual tonnages processed through the facility on an annual basis, with the objective of maximizing the usage of the existing facility. The requested increase was deliberately set at the high end of the achievable range so future processing rates would be limited by the facility's capabilities and good operating and engineering practice rather than being limited by the permit conditions as it is now.
There is no explanation supporting the assumption that the incinerator would achieve 90% or better availability from 2019 onward and how. It did not achieve 90% availability; how would that additional throughput be achieved and under what operating conditions?	The facility reached the existing annual processing limit of 140,000 tonnes in 2019 and 2018 while achieving boiler availability rates of 90.2% and 89.2% respectively. It was not possible to increase boiler availability further without exceeding the annual processing limit or further reducing the processing rate. The purpose of the proposed amendments is to allow boiler availability to be increased and additional waste to be processed without exceeding the annual processing limit. This is not possible with the current limits in place.

As a minimum the table should include total waste tonnage collected BY REGION and FOR EACH REGION show diverted tonnage by category e.g. blue box, green bin etc AND show the quantities bypassing the incinerator to other disposal destinations for each operating year to date from 2016 to 2019.

Historical waste generation data for all municipalities in Ontario can be found on the Resource Productivity and Recovery Authority (RPRA), formerly Waste Diversion Ontario, website under the Datacall tab:

DURHAM SUMMARY BY STREAM (Combined)

ACTUAL TONNES OF RESIDENTIAL WASTE MANAGED 2001-2019

Curbside & multi-residential wastes

	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Combined Garbage	131,882	114,758	96,444	96,803	89,819	88,839	89,292	90,274	91,715	92,682	92,893	92,679	94,096	94,896	93,214
Transfer Station Garbage	16,827	19,137	19,844	19,660	20,179	19,161	18,378	17,448	17,926	17,734	17,605	15,208	21,175	24,821	27,422
Total Garbage	148,709	133,895	116,288	116,463	109,998	108,000	107,670	107,722	109,641	110,416	110,498	107,887	115,271	119,717	120,636
Combined Recycling	45,793	54,426	54,595	53,152	50,061	50,908	52,554	51,099	49,860	48,956	47,680	47,363	47,226	42,545	41,132
Transfer Station Recycling	1,263	998	888	815	703	702	603	589	604	577	574	560	614	594	606
Total Recycling	47,056	55,424	55,483	53,967	50,764	51,610	53,157	51,688	50,464	49,533	48,254	47,923	47,840	43,139	41,738
Food Composting	2,882	13,976	26,212	25,907	27,454	27,593	26,865	26,899	27,486	27,007	26,796	27,612	28,318	28,446	28,522
Leaf & Yard Composting	16,736	18,446	17,758	22,031	23,108	21,427	22,149	23,778	23,593	30,033	25,588	22,865	22,955	25,128	24,375
Transfer Station Leaf & Yard Composting	1,602	2,037	1,651	1,722	1,787	1,647	1,595	1,695	1,675	2,090	1,966	1,864	2,127	2,202	2,271
Total Leaf & Yard Composting	18,338	20,483	19,409	23,753	24,895	23,074	23,744	25,473	25,268	32,123	27,554	24,729	25,082	27,330	26,646
Combined Composting & Grasscycling Credits	8,746	9,137	8,949	9,908	10,158	9,839	9,887	10,516	10,494	10,650	9,977	9,566	9,631	9,978	9,887
Reuse Programs	700	801	297	178	172	90	85	347	301	310	332	376	402	409	388
Transfer Station Reuse Programs (inc special events)	5,597	5,951	6,322	5,412	5,805	6,056	7,142	6,417	6,084	5,984	6,899	10,461	6,486	6,298	6,165
Total Reuse Programs	6,297	6,752	6,619	5,590	5,977	6,146	7,227	6,764	6,385	6,294	7,231	10,837	6,888	6,707	6,553
Total Waste	232,028	239,667	232,960	235,588	229,246	226,262	228,550	229,062	229,738	236,023	230,310	228,554	233,030	235,317	233,982

York Region

Year	**Residual Waste[1]**	**Blue Box Collected[2]**	**Blue Box Residue[3]**	**Green Bin**	**Yard Waste**	**Household Hazardous Waste**	**Electronic Waste**	**Other Diversion**	**Total**
2005	209,502	65,058	3,490	12,080	24,493	1,213	328	1,446	314,120
2006	191,966	77,731	5,998	24,808	28,739	1,445	440	1,690	326,819

2007	145,918	81,278	6,413	60,290	28,359	1,568	536	1,415	319,364
2008	115,115	89,435	8,158	86,266	36,374	1,697	709	1,132	330,728
2009	112,974	86,044	8,726	88,671	40,342	1,670	988	2,007	332,696
2010	115,420	88,395	9,514	91,680	39,230	1,652	1,473	2,863	340,713
2011	116,235	90,948	9,383	91,685	40,155	1,413	1,664	4,053	346,153
2012	119,648	89,488	10,364	92,260	43,688	1,316	1,691	6,657	354,748
2013	120,260	87,879	11,627	94,591	40,486	1,126	1,503	6,297	352,142
2014	124,011	87,645	11,568	94,700	52,457	1,045	1,484	4,930	366,272
2015	128,148	85,335	10,582	96,593	44,370	1,305	1,554	5,944	363,249
2016	130,400	84,468	14,136	97,044	37,407	1,268	1,460	6,196	358,243
2017	134,249	85,298	16,069	97,877	39,477	1,256	1,344	5,061	364,562
2018	124,319	83,526	19,411	99,065	42,287	1,219	1,124	2,580	354,120
2019	129,144	78,243	22,366	100,874	42,814	1,297	1,117	2,659	356,148

1. Residual waste excludes blue box residue.
2. Blue box residue is included in “blue box collected”
3. Total excludes blue box residue to avoid double counting

<table>
<tr>
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<td>Total residual waste tonnages delivered to the DYEC and bypassed are summarized for calendar years 2016 through 2019 in the following table:
<table>
<tr><th rowspan="2">Year</th><th colspan="3">Durham Region Tonnes Delivered</th><th colspan="3">York Region Tonnes Delivered</th><th colspan="3">Total Tonnes Delivered</th></tr>
<tr><th>DYEC</th><th>Bypass</th><th>Total</th><th>DYEC</th><th>Bypass</th><th>Total</th><th>DYEC</th><th>Bypass</th><th>Total</th></tr>
<tr><td>2016</td><td>96,258</td><td>12,876</td><td>109,134</td><td>32,251</td><td>111,913</td><td>144,164</td><td>128,512</td><td>124,789</td><td>253,298</td></tr>
<tr><td>2017</td><td>104,900</td><td>13,657</td><td>118,557</td><td>34,863</td><td>116,086</td><td>150,949</td><td>139,763</td><td>129,743</td><td>269,506</td></tr>
<tr><td>2018</td><td>110,775</td><td>10,307</td><td>121,082</td><td>30,005</td><td>113,550</td><td>143,555</td><td>140,780</td><td>123,857</td><td>264,637</td></tr>
<tr><td>2019</td><td>107,407</td><td>13,675</td><td>121,082</td><td>31,867</td><td>118,992</td><td>150,859</td><td>139,274</td><td>132,667</td><td>271,941</td></tr>
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<td>The final EA Screening Report must include 2019 data as this needs to be produced by Regions anyway by end February at the latest for the Covanta Annual Reconciliation process.</td>
<td>The final EA Screening Report will include all relevant 2019 data prepared prior to the release of the document.</td>
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<td>An explanation of how much waste needed to be bypassed because the incinerator was non-operational -as it was for several months in both 2016 and 2017 – as opposed to bypass required when Durham exceeded its 110K allocation or when York exceeds theirs, has not been provided though I have requested that information for Durham from Durham staff. Bypass waste results in additional annual costs and the public should be able to determine for what reasons the need to bypass the incinerator occurred and what quantities at what cost were sent to</td>
<td>Assignment of bypass, and delivered wastes are conducted during annual reconciliation for the year as a rearward-looking process. If Covanta is not able to meet its obligation, further review and assignment of financial responsibility for the delivered and bypassed materials is conducted.

Since Covanta met their throughput obligation of 140,000 tonnes per year in each year from 2017 through 2019, any bypass that occurred during those years is ultimately attributed to the Regions. This bypass was unavoidable since the current annual processing limit would have prevented processing of any additional waste at the DYEC. The amendments proposed through this Screening Process would increase the annual processing limit, making it possible to process additional waste and reduce bypass in situations where it was previously unavoidable, saving money for taxpayers.

Rates paid for disposal of bypass are commercially sensitive, as several haulers and disposal sites provide rates for the year on a competitive basis, which are then used as needed. Total residual waste tonnages delivered to the DYEC and bypassed are summarized for calendar years 2016 through 2019 in the following table:</td>
</tr>
</table>

other disposal location(s), be that landfills or other incinerators.	

Year	Durham Region Tonnes Delivered			York Region Tonnes Delivered			Total Tonnes Delivered		
	DYEC	Bypass	Total	DYEC	Bypass	Total	DYEC	Bypass	Total
2016	96,258	12,876	109,134	32,251	111,913	144,164	128,512	124,789	253,298
2017	104,900	13,657	118,557	34,863	116,086	150,949	139,763	129,743	269,506
2018	110,775	10,307	121,082	30,005	113,550	143,555	140,780	123,857	264,637
2019	107,407	13,675	121,082	31,867	118,992	150,859	139,274	132,667	271,941

Baseline conditions in the EA clearly indicated there was existing burden in the air shed/environment from ozone, NOx, PM2.5, dioxins/furans and PCBs. Since there were already problems with baseline concentrations, why would the Regions consider adding more pollution again?	Updated modelling included in the Environmental Screening Report shows that the facility can operate at 160,000 tonnes per year while maintaining compliance with regulatory limits that are protective of human health and the environment. The increased annual tonnage is achievable using existing equipment processing within its normal design operating range as it does now. The proposed increase to the annual processing limit simply allows the operator to increase total operating hours in years when trouble-free operation makes it possible to do so. The facility's contribution to ambient concentrations when operating at full load would not change significantly, but the annual processing limit increase would make it possible to operate at full load more hours per year. The Regions monitor ambient air quality in the area surrounding the DYEC in accordance with an MECP approved Ambient Air Monitoring Plan. Ambient air monitoring results are available on the project website and can be accessed using the following link: https://durhamyorkwaste.ca/Documents/MonitoringPlansReports/AmbientAir.aspx The results of the ambient air monitoring program demonstrate that air quality in area surrounding the DYEC is similar to other areas in Ontario and the Greater Toronto Area.

Appendix K

If you require this information in an accessible format, please contact The Regional Municipality of Durham at 1-800-372-1102 ext. 3560.

Sent via standard mail

December 20, 2021

To Whom it may Concern:

RE: Notice of Completion
Durham York Energy Centre
Throughput Increase from 140,000 to 160,000 Tonnes per Year

The Regional Municipalities of Durham and York (Regions), the Owners of the Durham York Energy Centre (DYEC), have completed the Environmental Screening Process in accordance with *Ontario Regulation 101/07: Waste Management Projects* of the Environmental Assessment Act for an undertaking to increase the amount of material the facility is permitted to process annually by 20,000 tonnes per year—from 140,000 tonnes per year to 160,000 tonnes per year. Please refer to the attached Notice of Completion.

The DYEC site is located at 1835 Energy Drive, in the Municipality of Clarington, Ontario, Canada, and has been in commercial operation since 2016. The DYEC is a waste management facility that produces energy from the combustion of residential garbage that remains after maximizing waste diversion programs in both Regions; Durham Region's portion of DYEC processing capacity is 110,000 tonnes (approx. 80 per cent) and York Region's portion is 30,000 tonnes (approx. 20 per cent).

This undertaking is to increase the amount of material the facility is permitted to process annually by 20,000 tonnes per year—from 140,000 tonnes per year to 160,000 tonnes per year (Project). The facility is capable of processing 160,000 tonnes per year without the requirement for additional construction or the installation of additional equipment to accommodate the increase.

As per the environmental screening process requirement, your community/organization has been identified as having a potential interest in the Project, and as such, the DYEC Project Team would like to inform you that the screening process has been completed. Additionally, the Project Team would

like to inform you that with the completion and submission of the Environmental Screening Report, the 60-day review period has commenced. Please refer to the attached Notice of Completion.

The Environmental Screening Report, technical reports and other supporting information is available for public review at www.durhamyorkwaste.ca/DYEC160K. Due to the ongoing COVID 19 Pandemic, copies of the Screening Report, technical reports and other supporting documents will not be made available in public spaces. If you require a hard copy of the report and corresponding documents, please contact the Project Manager and a copy will be made available to you.

Should you have any questions or concerns, please contact Andrew Evans, Project Manager, Waste Planning and Technical Services at 905-404-0888 extension 4130 or andrew.evans@durham.ca.

Sincerely,

Gioseph Anello, M.Eng., P.Eng., PMP.
Director, Waste Management Services

The Regional Municipality of Durham
905-668-7711 extension 3445
Gioseph.Anello@durham.ca

Laura McDowell, P.Eng.
Director, Environmental Promotion and Protection
The Regional Municipality of York
905-830-4444 extension 75077
Laura.McDowell@york.ca

Enclosure (Notice of Completion Public Notice dated December 20, 2021).

Durham York Energy Centre Throughput Increase (From 140,000 to 160,000 tonnes per year)

Notice of Completion

Works Department | **First issued: December 20, 2021** (revised) | **Public Notice**

The Regional Municipality of Durham and The Regional Municipality of York have completed an Environmental Screening Process in accordance with the Waste Management Projects Regulation (Ontario Regulation 101/07) of the Environmental Assessment Act to amend the Environmental Compliance Approval for the Durham York Energy Centre (DYEC), located at 1835 Energy Drive, Courtice, Ontario. The Regions will submit an Environmental Screening Report to the Ministry of Environment, Conservation and Parks on December 20, 2021 for review and approval.

The Environmental Screening Report has been prepared to increase the annual processing capacity at the DYEC from 140,000 tonnes per year to 160,000 tonnes per year. This additional capacity is needed to accommodate population growth within the two Regions, allow the DYEC to operate more efficiently and produce more energy. This increase in capacity will not require any modifications to existing infrastructure.

The Screening process involved identifying and applying criteria for potential environmental effects, public/external agency and Indigenous consultation and the development of measures to mitigate any identified environmental effects. The proposed capacity increase is not expected to have any significant net effects on the environment. The results of the study were documented in an Environmental Screening Report, available for a 60-calendar day review period from December 20, 2021 to February 18, 2022. The report is available for public review at durhamyorkwaste.ca If you are unable to access the digital copy of the report posted on this website or require an alternative format, please contact 1-800-667-5671.

If you have concerns or comments regarding this project, please contact The Regional Municipality of Durham (contact details below) to discuss. If concerns regarding this project cannot be resolved in discussion with The Regional Municipality of Durham or The Regional Municipality of York, a person or party may request that the Ministry of the Environment, Conservation and Parks make an order for the project to comply with Part II of the Environmental Assessment Act (referred to as a "elevation request"), which would elevate the project to an Individual Environmental Assessment. Requests for an "elevation request" must be submitted in writing to the Director, Environmental Assessment Branch and to the "Proponent" at the address listed below no later than 60-calendar days from the date of this Notice (December 20, 2021). Elevation request must be made in accordance with the provisions set out in Section B.3. of the "Guide to environmental assessment requirements for waste management projects" (ontario.ca/page/guide-environmental-assessment-requirements-waste-management-projects).

Please submit the elevation request to each of the following two contacts. If submitting a hard copy request, please advise by phone or email as well due to COVID-19 circumstances.

If no elevation requests are received by 4:30 p.m. on February 18, 2022, The Regional Municipality of Durham and The Regional Municipality of York intend to proceed with the process as scheduled.

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue W, 1st floor
Toronto, ON M4V 1P5
EABDirector@ontario.ca

Andrew Evans, M.A.Sc, P.Eng
Project Manager, Durham York Energy Centre
Regional Municipality of Durham
605 Rossland Road, East
Whitby, ON L1N 6A3
info@durhamyorkwaste.ca
905-404-0888 ext. 4130

Durham York Energy Centre Throughput Increase

(From 140,000 to 160,000 tonnes per year)

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Works Department **December 20, 2021** (revised) **Public Notice**

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- the name of the project and proponent;
- the basis of the request;
- that the project be elevated to an individual environmental assessment;
- the nature of the specific environmental concerns that remain unresolved;
- the benefits of requiring the proponent to undertake an individual environmental assessment;
- information about any efforts to discuss/resolve these concerns/environmental effects with the proponent;
- details of any correspondence between the person and the proponent; and
- any other matters considered relevant by the requesting person.

Please submit the elevation request to each of the following two contacts. If submitting a hard copy request, please advise by phone or email as well due to COVID-19 circumstances.

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All personal information included in a submission - such as name, address, telephone number and property location - is collected, maintained, and disclosed by the Ministry of the Environment, Conservation and Parks for the purpose of transparency and consultation. The information is collected under the authority of the Environmental Assessment Act or is collected and maintained for the purpose of creating a record that is available to the general public as described in s.37 of the Freedom of Information and Protection of Privacy Act (FIPPA). Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential. For more information, please contact the Ministry of the Environment, Conservation and Park's Freedom of Information and Privacy Coordinator at (416) 327-1434.