



Regional Municipality of Durham  
Regional Municipality of York

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# **Durham York Energy Centre 2012 Compliance Monitoring Report**

**EAAB File No.:** EA-08-02  
Condition 5

**Date:** November 1, 2012

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## 1.0 Introduction

### 1.1 Purpose

The *Durham York Energy Centre 2012 Compliance Monitoring Report* has been prepared in accordance with Condition 5.3 of the Notice of Approval to Proceed with the Undertaking for the Durham and York Residual Waste Study (Ministry of Environment EAB File Number EA-08-02). Annual compliance reports are based on a reporting period ending November 3<sup>rd</sup> of each year, corresponding to the anniversary date of the Notice of Approval. This is the second annual compliance report covering the period from November 3, 2011 to November 2, 2012.

Annual compliance monitoring reports follow the reporting structure established in the *Durham York Energy Centre Compliance Monitoring Program* submitted to the EAB Director on October 14, 2011 in accordance with Condition 4.1 of the Notice of Approval. As outlined in the Compliance Monitoring Program, the Annual Report consists of the following three parts.

Appendix A	EA Notice of Approval Compliance Table	Documents the proponent's progress on requirements of EA Notice of Approval
Appendix B	EA Study Document Compliance Table	Documents the proponent's progress on commitments made in the EA study document
Appendix C	Advisory Committee Annual Report	Provides a report on activities of the Advisory Committee during the reporting period as required by Condition 8.2 of the Notice of Approval

### 1.2 Background

The Durham York Energy Centre is an energy from waste facility that is currently under construction in the Municipality of Clarington, Ontario. Owned by the Regional Municipality of Durham and the Regional Municipality of York ("the Regions"), the facility will process up to 140,000 tonnes of solid, non-hazardous, municipal solid waste per year. Heat generated by waste combustion will be used to generate electricity and steam. Recyclable metals will also be recovered from the ash. The facility will be designed, built, and operated by Covanta Energy Limited. The facility was approved under the *Environmental Assessment Act* by the Minister of the Environment and the Lieutenant Governor in Council on November 3, 2010. A multi-media Certificate of Approval for waste, air and noise, and stormwater was issued on June 28, 2011 (#7306-8FDKNX). Facility construction commenced in January 2012 and it is anticipated that commissioning will be completed by September 2014.

# **Appendix A**

## **EA Notice of Approval Compliance Table**

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Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
<b>1.</b>	<b>Definitions</b>			
	N/A	N/A	N/A	N/A
<b>2.</b>	<b>General Requirements</b>			
2.1	The proponent shall comply with the provisions in the environmental assessment which are hereby incorporated in this Notice of Approval by reference except as provided in these conditions and as provided in any other approval or permit that may be issued for the site or the undertaking.	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>	N/A	Ongoing
2.2	These conditions do not prevent more restrictive conditions being imposed under other statutes.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	N/A	Ongoing
2.3	A statement must accompany the submission of any documents, reporting requirements or written notices required by this Notice of Approval to be submitted to the Director or Regional Director identifying which conditions the submission is intended to address in this Notice of Approval.	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>	N/A	Ongoing
<b>3.</b>	<b>Public Record</b>			
3.1	Where a document, plan or report is required to be submitted to the ministry, the proponent shall provide two copies of the final document, plan or report to the Director: a copy for filing in the specific public record file maintained for the undertaking and a copy for staff use.	<ul style="list-style-type: none"> <li>Required by Condition 16 (1) of the Certificate of Approval</li> </ul>	N/A	Ongoing
3.2	The proponent shall provide additional copies of the documents required for the public record file to the following for access by the public: <ol style="list-style-type: none"> <li>Regional Director;</li> <li>District Manager;</li> <li>Clerks of the Regional Municipality of Durham, the Regional Municipality of York, and the Municipality of Clarington; and,</li> <li>Advisory Committee (as required in Condition 8 of this Notice of Approval).</li> </ol>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>	N/A	Ongoing
3.3	The EAAB file number EA-08-02 shall be quoted on all documents submitted by the proponent pursuant to this Condition.	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>	N/A	Ongoing
<b>4.</b>	<b>Compliance Monitoring Program</b>			
4.1	The proponent shall prepare and submit to the Director a Compliance Monitoring Program outlining how it will comply with conditions in the Notice of Approval and other commitments made in the environmental assessment	<ul style="list-style-type: none"> <li>The Compliance Monitoring Program was submitted to the Director and Advisory Committee via letter dated October 14, 2011.</li> </ul>	October 2011	Yes
4.2	A statement shall accompany the submission of the Compliance Monitoring Program indicating that the submission is intended to fulfil	<ul style="list-style-type: none"> <li>See Section 1.1 of the Compliance Monitoring Program</li> </ul>	October 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	Condition 4 of this Notice of Approval.			
4.3	The Compliance Monitoring Program shall be submitted within one year from the date of approval, or a minimum of 60 days prior to the start of construction, whichever is earlier.	<ul style="list-style-type: none"> <li>The Compliance Monitoring Program was submitted on October 14, 2011. This is within one year of November 3, 2010 approval date.</li> <li>The October 14, 2011 submission date is more than 60 days prior to the start of construction in January 2012</li> </ul>	October 2011	Yes
4.4	The Compliance Monitoring Program shall describe how the proponent will monitor its fulfilment of the provisions of the environmental assessment pertaining to the mitigation measures, public consultation, and additional studies and work to be carried out; the fulfilment of all other commitments made by the proponent during the environmental assessment process; and the conditions included in this Notice of Approval.	<ul style="list-style-type: none"> <li>Progress will be tracked on the compliance tables provided in Appendix A and Appendix B</li> </ul>	October 2011	Yes
4.5	The Compliance Monitoring Program shall contain an implementation schedule.	<ul style="list-style-type: none"> <li>See next column</li> </ul>	October 2011	Yes
4.6	The Director may require amendments to the Compliance Monitoring Program, including the implementation schedule. If any amendments are required by the Director, the Director will notify the proponent of the required amendments in writing.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	N/A	Ongoing
4.7	The proponent shall implement the Compliance Monitoring Program, as it may be amended by the Director.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	N/A	Ongoing
4.8	The proponent shall make the documentation pertaining to the Compliance Monitoring Program available to the ministry or its designate in a timely manner when requested to do so by the ministry.	<ul style="list-style-type: none"> <li>Required by Condition 14 (1) of the Certificate of Approval</li> </ul>	N/A	Ongoing
<b>5.</b>	<b>Compliance Reporting</b>			
5.1	The proponent shall prepare an annual Compliance Report which describes its compliance with the conditions of approval set out in this Notice of Approval and which describes the results of the proponent's environmental assessment Compliance Monitoring Program required by Condition 4.	<ul style="list-style-type: none"> <li>This annual report is the second annual submission in accordance with this condition</li> </ul>	November 3, 2011 and annually thereafter	Ongoing
5.2	The annual Compliance Report shall be submitted to the Director within one year from the date of approval, with the first report being due in 2011, and shall cover all activities of the previous 12 month period.	<ul style="list-style-type: none"> <li>This annual report is the second annual submission in accordance with this condition</li> </ul>	November 3, 2011 and annually thereafter	Ongoing
5.3	Subsequent compliance reports shall be submitted to the Director on or before the anniversary of the date of approval each year thereafter. Each Compliance Report shall cover all activities of the previous 12 month period.	<ul style="list-style-type: none"> <li>This annual report is the second annual submission in accordance with this condition</li> </ul>	November 3, 2011 and annually thereafter	Ongoing
5.4	The proponent shall submit annual Compliance Reports until all conditions	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	in this Notice of Approval and the commitments in the environmental assessment are satisfied.			
5.5	Once all conditions in this Notice of Approval have been satisfied, or have been incorporated into any other ministry approval, the proponent shall indicate in its annual Compliance Report that the Compliance Report is its final Compliance Report and that all conditions in this Notice of Approval have been satisfied.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing
5.6	The proponent shall retain either on site or in another location approved by the Director, a copy of each of the annual Compliance Reports and any associated documentation of compliance monitoring activities.	<ul style="list-style-type: none"> <li>Reports to be retained on site. See Section 1.3 of the Compliance Monitoring Program.</li> <li>Required by Condition 14(2) of the Certificate of Approval</li> </ul>	Ongoing	Ongoing
5.7	The proponent shall make the Compliance Reports and associated documentation available to the ministry or its designate in a timely manner when requested to do so by the ministry.	<ul style="list-style-type: none"> <li>Agreed</li> <li>Required by Condition 14(1) of the Certificate of Approval</li> </ul>	Ongoing	Ongoing
<b>6.</b>	<b>Complaint Protocol</b>			
6.1	The proponent shall prepare and implement a Complaint Protocol setting out how it will deal with and respond to inquiries and complaints received during the design, construction and operation of the undertaking.	<ul style="list-style-type: none"> <li>Protocol submitted to the Director via letter dated March 10, 2011.</li> <li>Director requested minor modifications to protocol in letter dated March 25, 2011</li> <li>Revised protocol approved by the Director via letter dated July 13, 2011</li> </ul>	March 10, 2011	Yes
6.2	The Complaint Protocol shall be provided to the advisory committee for review prior to submission to the Director.	<ul style="list-style-type: none"> <li>Protocol was reviewed by the Advisory Committee on January 20, 2011 and revised based on comments received by January 31, 2011.</li> </ul>	January 20, 2011	Yes
6.3	The proponent shall submit the Complaint Protocol to the Director within one year from the date of approval or a minimum of 60 days prior to the start of construction, whichever is earlier.	<ul style="list-style-type: none"> <li>Protocol was submitted within one year of the November 3, 2010 date of approval.</li> <li>March 10, 2011 submission date is more than 60 days prior to the start of construction in January 2012.</li> </ul>	March 10, 2011	Yes
6.4	The Director may require the proponent to amend the Complaint Protocol at any time. Should an amendment be required, the Director will notify the proponent in writing of the required amendment and date by which the amendment must be completed.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing
6.5	The proponent shall submit the amended Complaint Protocol to the Director within the time period specified by the Director in the notice.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing
<b>7.</b>	<b>Community Involvement</b>			
7.1	The proponent shall prepare and implement a Community Communications Plan. The plan shall be prepared in consultation with the	<ul style="list-style-type: none"> <li>Regions submitted a draft plan on October 9, 2012. This plan has been submitted prior to receipt of waste.</li> </ul>	Prior to receipt of non-hazardous municipal	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	EAAB and to the satisfaction of the Director.		solid waste.	
7.2	The proponent shall finalize and submit the Community Communications Plan to the Director prior to the initial receipt of non-hazardous municipal solid waste at the site.	<ul style="list-style-type: none"> <li>Agreed.</li> </ul>	Prior to receipt of non-hazardous municipal solid waste.	No
7.3	The Community Communications Plan shall include at a minimum details on: <ol style="list-style-type: none"> <li>How the proponent plans to disseminate information to interested members of the public and any Aboriginal communities;</li> <li>How interested members of the public and any Aboriginal communities will be notified and kept informed about site operations; and,</li> <li>The procedures for keeping interested members of the public and Aboriginal communities informed about information on documents related to the undertaking, and when and how the information will be made available.</li> </ol>	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Prior to receipt of non-hazardous municipal solid waste.	Yes
7.4	The proponent shall give notice of and provide information about the undertaking to interested members of the public and Aboriginal communities through an internet web site and by other means. Such information shall include: <ol style="list-style-type: none"> <li>Activities that are part of the undertaking, including monitoring activities;</li> <li>Reports and records related to the undertaking that are required to be submitted under this Notice of Approval or under any other ministry approvals that apply to the undertaking; and,</li> <li>Information on the Complaint Protocol required by Condition 6 of this Notice of Approval.</li> </ol>	<ul style="list-style-type: none"> <li>Web site is currently operational <a href="http://www.durhamyorkwaste.ca">http://www.durhamyorkwaste.ca</a></li> <li>Documents posted on the website currently include the Complaint Protocol, Certificate of Approval, Archived EA documentation, Groundwater and Surface Water Monitoring Plan, Soil Monitoring Plan, Ambient Air Monitoring Plan, Emissions Monitoring Plan, Noise Monitoring Plan, Odour Management and Mitigation Plan, Compliance Monitoring Plan, Draft Community Communications Plan, Advisory Committee advertisements, agendas, minutes.</li> <li>Additional information will be posted as it becomes available</li> </ul>	Ongoing	Ongoing
7.5	The proponent shall hold public meetings to discuss the design, construction and operation of the undertaking, including, but not limited to: <ol style="list-style-type: none"> <li>At least one meeting prior to the start of construction;</li> <li>At least one meeting prior to the receipt of non-hazardous municipal solid waste on site; and,</li> <li>At least one meeting a minimum of six months but not later than 12 months after the initial receipt of non-hazardous municipal solid waste on the site.</li> </ol>	<ul style="list-style-type: none"> <li>Pre-construction public meeting was held at the Durham Regional Offices on December 7, 2011 from 5:00 pm to 6:30 pm.</li> <li>Anticipated timing of public meeting prior to receipt of waste is April 2014.</li> <li>Anticipated timing of public meeting after receipt of waste is January 2015.</li> <li>Proposed timing assumes that "initial receipt of non-hazardous municipal solid waste on site" includes waste received for commissioning and testing purposes but prior to full scale operation.</li> </ul>	December 2011, April 2014, January 2015	Ongoing
7.6	The proponent shall provide notice of the public meetings a minimum of 15 days prior to the meeting.	<ul style="list-style-type: none"> <li>Meeting notices for the December 2011 pre-construction meeting were advertised in local newspapers during the week of November 14, 2011 and also posted on the project website.</li> </ul>	November 2011, March 2014, December 2014	Ongoing

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		<ul style="list-style-type: none"> <li>Meeting notices will be posted in local newspapers and on the project website at least 15 days prior to future meeting dates</li> </ul>		
7.7	The proponent shall give the Director written notice of the time, date and location of each of the required community meetings a minimum of 15 days prior to the meeting.	<ul style="list-style-type: none"> <li>The MOE Environmental Approvals Branch and District Office received an invitation to the December 7, 2011 pre-construction meeting on November 18,</li> <li>The MOE will receive an invitation at least 15 days prior to future meetings.</li> </ul>	November 2011 March 2014 December 2014	Ongoing
<b>8.</b>	<b>Advisory Committee</b>			
8.1	The proponent shall establish an advisory committee to ensure that concerns about the design, construction and operation of the undertaking are considered and mitigation measures are implemented where appropriate.	<ul style="list-style-type: none"> <li>Complete</li> </ul>	January 20, 2011	Yes
8.2	The proponent shall provide administrative support for the advisory committee including, at a minimum: <ol style="list-style-type: none"> <li>a) Providing a meeting space for advisory committee meetings;</li> <li>b) Recording and distributing minutes of each meeting;</li> <li>c) Preparing and distributing meeting notices; and,</li> <li>d) Preparing an annual report about the advisory committee's activities to be submitted as part of the Compliance Reports required by Condition 5 of this Notice of Approval.</li> </ol>	<ul style="list-style-type: none"> <li>Agreed</li> <li>Meeting minutes and related correspondence are posted on the project website.</li> <li>Annual report on advisory committee activities is included as Appendix C.</li> </ul>	Ongoing	Ongoing
8.3	The proponent shall invite one representative from each of the following to participate on the advisory committee: <ol style="list-style-type: none"> <li>a) Each of the lower tier municipalities in the Regional Municipality of Durham; and,</li> <li>b) Each of the lower tier municipalities in the Regional Municipality of York.</li> </ol>	<ul style="list-style-type: none"> <li>Letters of invitation dated December 15, 2010 were sent to all listed municipalities</li> </ul>	December 15, 2010	Yes
8.4	The proponent shall invite one representative from Central Lake Ontario Conservation Authority, and any other local conservation authorities that may have an interest in the undertaking to participate on the advisory committee.	<ul style="list-style-type: none"> <li>Letter of invitation dated December 15, 2010 was sent to Central Lake Ontario Conservation Authority</li> </ul>	December 15, 2010	Yes
8.5	The proponent shall invite one representative from each of the following local community groups to participate on the advisory committee: <ol style="list-style-type: none"> <li>a) DurhamCLEAR;</li> <li>b) Durham Environmental Watch</li> <li>c) Zero Waste 4 Zero Burning</li> </ol>	<ul style="list-style-type: none"> <li>Letters of invitation dated December 15, 2010 were sent to all listed local community groups.</li> </ul>	December 15, 2010	Yes
8.6	The proponent may also invite other stakeholders to participate in the	<ul style="list-style-type: none"> <li>Letters of invitation dated December 15, 2010 were sent to Durham</li> </ul>	December 15, 2010	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	advisory committee, including but not limited to, interested members of the public, Aboriginal communities, and other federal or provincial agencies.	Region Health Department and York Region Public Health Services. <ul style="list-style-type: none"> <li>Aboriginal communities received separate invitation to participate in other consultation activities. See Condition 9.1</li> </ul>		
8.7	A representative from the ministry shall be invited to attend meetings as an observer.	<ul style="list-style-type: none"> <li>Letters of invitation dated December 15, 2010 were sent to MOE District Manager.</li> </ul>	December 15, 2010	Yes
8.8	The advisory committee shall be provided with a copy of the documents listed below for information and may review the documents as appropriate and provide comments to the proponent about the documents, including the: a) Compliance Monitoring Program required by Condition 4; b) Annual Compliance Report required by Condition 5; c) Complaint Protocol required by Condition 6; d) Community Communications Plan required by Condition 7; e) The annual reports required by Condition 10; f) Ambient Air Monitoring and Reporting Plan and the results of the ambient air monitoring program required by Condition 11; g) Air Emissions Monitoring Plan required by Condition 12; h) Written report prepared and signed by the qualified professional required by Condition 16.5; i) Spill Contingency and Emergency Response Plan required by Condition 17; j) Odour Management and Mitigation Plan and the Odour Management and Mitigation Monitoring Reports required by Condition 18; k) Noise Monitoring and Reporting Plan as required by Condition 19; l) Groundwater and Surface Water Monitoring Plan, the results of the groundwater and surface water monitoring program, and the annual report on the results of the groundwater and surface water monitoring program required by Condition 20; and, m) Notice in writing of the date that municipal solid waste is first received as required by Condition 23.	Advisory Committee has reviewed and provided comments where applicable to the following documents: <ul style="list-style-type: none"> <li>Advisory Committee Terms of Reference</li> <li>Compliance Monitoring Plan</li> <li>2011 and 2012 Annual Compliance Reports</li> <li>Complaint Protocol</li> <li>Draft Community Communications Plan</li> <li>2011 and 2012 Annual Waste Diversion Reports</li> <li>Ambient Air Quality Monitoring Plan</li> <li>Air Emissions Monitoring and Reporting Plan</li> <li>Odour Management and Mitigation Plan</li> <li>Noise Monitoring and Reporting Plan</li> <li>Groundwater and Surface water Monitoring Plan</li> <li>Soil Testing Plan</li> <li>Third Party Auditor's report prepared by a qualified professional as required by Condition 16.5</li> </ul> <p><b>The following documents are to be provided as they are prepared:</b></p> <ul style="list-style-type: none"> <li>Notice in writing of the date that municipal solid waste is first received as required by Condition 23.</li> <li>Final Community Communications Plan</li> <li>Spill Contingency and Emergency Response Plan</li> <li>Future third party auditor's reports, waste diversion reports, environmental monitoring reports, and compliance reports.</li> </ul>	Ongoing	Ongoing
8.9	The proponent shall hold the first advisory committee meeting within three months of the date of approval. At the first meeting, the advisory committee shall develop a Terms of Reference outlining the governance and function of the advisory committee.	<ul style="list-style-type: none"> <li>First meeting held January 20, 2011 was within three months of November 3, 2010 date of approval</li> <li>Draft Terms of Reference were reviewed by the Committee and revised based on comments received both at the meeting or submitted in writing by February 14, 2011.</li> </ul>	January 20, 2011	Yes
8.10	The Terms of Reference shall, at minimum, include:	<ul style="list-style-type: none"> <li>Terms of Reference submitted to MOE via letter dated February 18,</li> </ul>	February 18, 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	a) Roles and responsibilities of the advisory committee members; b) Frequency of meetings; c) Member code of conduct; d) Protocol for dissemination and review of information including timing; and, e) Protocol for dissolution of the advisory committee.	2011. • Terms of Reference approved via letter from the Director dated March 3, 2011.		
8.11	The proponent shall submit the advisory committee's Terms of Reference to the Director and Regional Director.	• Terms of Reference submitted to MOE via letter dated February 18, 2011. • Terms of Reference approved via letter from the Director dated March 4, 2011.	February 18, 2011	Yes
<b>9.</b>	<b>Consultation With Aboriginal Communities</b>			
9.1	The proponent shall continue to consult with any interested Aboriginal communities during the detailed design and implementation of the undertaking.	• Letters dated March 14, 2011 were sent to 22 Aboriginal communities inviting them to meet with the project team to discuss future consultation efforts. • Letters dated October 26, 2012 to Aboriginal Communities identified in the EA to advise of project updates and the project website as a resource for continuous updates. • The MOE EAB Director, Regional Director, and Approvals Program Director were copied on all correspondence to Aboriginal Communities.	Ongoing	Ongoing
<b>10.</b>	<b>Waste Diversion</b>			
10.1	The proponent shall make a reasonable effort to work cooperatively with all lower tier municipalities to ensure that waste diversion programs, policies and targets set by the Regional Municipalities are being met.	• Both Regions continue to work with local municipalities to improve waste diversion and report waste diversion statistics to Waste Diversion Ontario annually.	Ongoing	Ongoing
10.2	The proponent shall prepare and implement a Waste Diversion Program Monitoring Plan.	• Waste Diversion Program Monitoring Plans for Durham Region and York Region were submitted to the EAB Director and Regional Director on October 21, 2011. • The EAB Director approved the Waste Diversion Program Monitoring Plans via letter dated November 25, 2011.	October 21, 2011	Yes
10.3	The Waste Diversion Program Monitoring Plan shall provide a description of monitoring and reporting which shall at minimum include: a) Results of at source diversion programs and policies to determine the waste diversion rates and practices at both the regional and lower tier municipal level within the Regional Municipalities of Durham and York. b) Progress in the diversion programs, policies, practices and targets described in the environmental assessment, at both the regional and	• Completed	October 21, 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	lower tier municipal level within the Regional Municipalities of Durham and York. c) Monitoring results for any additional diversion programs, policies, practices and targets carried out within the Regional Municipalities of Durham and York, which are not described in the environmental assessment.			
10.4	The proponent shall prepare and submit to the Director and Regional Director, commencing one year after the approval of the undertaking, annual reports detailing the results of the Waste Diversion Program Monitoring Plan.	<ul style="list-style-type: none"> <li>• First two annual monitoring reports have been submitted to the Director and Regional Director.</li> <li>• Future monitoring reports to be submitted by November 3<sup>rd</sup> of each successive year.</li> </ul>	Ongoing	Ongoing
10.5	The proponent shall post the Waste Diversion Program Monitoring Plan and the annual reports required on the proponent's web site for the undertaking.	<ul style="list-style-type: none"> <li>• Information about Durham and York's Diversion programs is currently posted on the project website at <a href="http://www.durhamyorkwaste.ca/project/project_wasteprograms.htm">http://www.durhamyorkwaste.ca/project/project_wasteprograms.htm</a></li> <li>• The Monitoring Plan and first two annual reports have been posted on the website.</li> </ul>	Ongoing	Ongoing
<b>11.</b>	<b>Ambient Air Monitoring and Reporting</b>			
11.1	The proponent shall prepare, in consultation with the ministry's Central Region Office and to the satisfaction of the Regional Director, an Ambient Air Monitoring and Reporting Plan for the undertaking.	<ul style="list-style-type: none"> <li>• Final Plan submitted to the Regional Director August 31, 2011</li> <li>• Consultation activities described under Condition 11.3</li> <li>• MOE Approval via letter dated May 30, 2012</li> <li>• MOE Approval of monitoring locations via letter dated June 5, 2012.</li> </ul>	August 31, 2011	Yes
11.2	The proponent shall submit the Ambient Air Monitoring and Reporting Plan to the Director and Regional Director a minimum of nine months prior to the start of construction or by such other date as agreed to in writing by the Regional Director.	<ul style="list-style-type: none"> <li>• Submission deadline revised to August 31, 2011 via letter from the Director dated June 30, 2011.</li> <li>• Submitted August 31, 2011</li> </ul>	August 31, 2011	Yes
11.3	The proponent shall establish a working group that will provide advice on the development of the Ambient Air Monitoring and Reporting Plan. The Regions will, at a minimum, extend an invitation to Health Canada, the Durham Region Health Department, York Region Public Health Services, one participant from the advisory committee, and any other relevant federal or provincial government agencies including the ministry.	<ul style="list-style-type: none"> <li>• Letters of invitation dated March 16, 2011 were sent to all listed working group participants with copies to the Director and Regional Director.</li> <li>• Two participants were appointed by the Advisory Committee.</li> <li>• Health Canada declined to participate. At Health Canada's suggestion, a representative from the Ontario Ministry of Health participated instead.</li> <li>• First working group meeting occurred on April 28, 2011.</li> <li>• Monitoring plan was revised based on comments received from the working group and circulated for comments to the MOE Central Region Office, the Ambient Air Monitoring Working Group, and the Advisory Committee on July 7, 2011. The monitoring plan was revised based on comments received by August 15, 2011.</li> <li>• The Final Monitoring Plan was submitted to the Regional Director on</li> </ul>	March 16, 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		August 31, 2011.		
11.4	The Ambient Air Monitoring and Reporting Plan shall include at minimum: a) An ambient air monitoring program which includes an appropriate number of sampling locations. Siting of the sampling locations shall be done in accordance with the Ministry of the Environment's Operations Manual for Air Quality Monitoring in Ontario, March 2008, as amended from time to time; b) The proposed start date for and frequency of the ambient air monitoring and reporting to be carried out; c) The contaminants that shall be monitored as part of the Ambient Air Monitoring and Reporting Plan; and, d) At least one meeting on an annual basis between the proponent and the Regional Director to discuss the plan, the results of the ambient air monitoring program and any changes that are required to be made to the plan by the Regional Director.	<ul style="list-style-type: none"> <li>The submitted document meets these requirements.</li> </ul>	May 30, 2012	Yes
11.5	The proponent shall implement the ambient air monitoring program prior to the receipt of non-hazardous municipal solid waste on the site or at such other time that may be determined by the Regional Director and communicated to the proponent in writing and shall continue the monitoring until such time as the Regional Director notifies the proponent in writing that the Ambient Air Monitoring Program is no longer required.	<ul style="list-style-type: none"> <li>Agreed</li> <li>Submitted plan includes monitoring of ambient air for one year prior to facility commissioning to establish background concentrations.</li> <li>Regions are currently in the contract procurement stage to retain an ambient air monitoring consultant.</li> </ul>	Ongoing	Ongoing
11.6	The Regional Director may require changes to be made to the Ambient Air Monitoring and Report Plan and the proponents shall implement the plan in accordance with the required changes.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing
11.7	The proponent shall report the results of the ambient air monitoring program to the Regional Director in accordance with the Ambient Air Monitoring and Reporting Plan.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing
11.8	Audits will be conducted by the ministry, as outlined in the Ministry of the Environment's Audit Manual for Air Quality Monitoring in Ontario, March 2008 to confirm that siting and performance criteria outlined in the Operations Manual are met. The proponent shall implement any recommendations set out in the audit report regarding siting of the sampling locations and performance criteria. The proponent shall implement the recommendations in the audit report within three months of the receipt of an audit report from the ministry.	<ul style="list-style-type: none"> <li>The monitoring program was written with reference to the MOE Audit Manual</li> </ul>	Ongoing	Ongoing
11.9	The proponent shall post the Ambient Air Monitoring and Reporting Plan and the results of the ambient air monitoring program on the proponent's web site for the undertaking upon submission of the plan or results of the program to the ministry.	<ul style="list-style-type: none"> <li>The Ambient Air Monitoring and Reporting Plan has been posted on the website.</li> <li>Ambient Air Monitoring Reports will be posted to the website as they are completed.</li> </ul>	Ongoing	Ongoing

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
<b>12.</b>	<b>Emissions Monitoring</b>			
12.1	The proponent shall install, operate and maintain air emissions monitoring systems that will record the concentrations of the contaminants arising from the incineration of waste.	<ul style="list-style-type: none"> <li>Requirement of Certificate of Approval Condition 7(2)</li> </ul>	Ongoing	Ongoing
12.2	The air emissions monitoring systems shall be installed and operational prior to the receipt of non-hazardous municipal solid waste at the site.	<ul style="list-style-type: none"> <li>Requirement of Certificate of Approval Condition 7(2)</li> <li>Contract requires Covanta to submit a start up procedure and schedule at least 90 days prior to start-up operations. The schedule should outline major equipment original operation dates and the contractor's best estimate as to the amount of waste required to support start-up operations activities.</li> <li>Following the start-up and phasing-in of all the process operating equipment of the facility, and before acceptance testing, all key processes and temporary instrumentation and controls required for testing and documentation will be calibrated by technicians provided by the DBO contractor, sub-contractors or suppliers.</li> <li>The testing of all emission and operating parameters will be in accordance with requirements established by the CoFA and MOE anytime during the 30 day reliability test.</li> <li>The CEMS shall be certified and used to demonstrate continuous compliance during the test period with all CEMS emission parameters. (Appendix 10, Table A10-1 of the PA)</li> </ul>	Prior to start of commissioning (~May 2014)	No
12.3	The proponent shall prepare and implement an Air Emissions Monitoring Plan. The Plan shall be prepared, in consultation with the ministry and to the satisfaction of the Director.	<ul style="list-style-type: none"> <li>Air Emissions Monitoring Plan submitted for comments to the MOE and to the Advisory Committee via letter dated July 23, 2011.</li> <li>Final plan incorporating comments from MOE and Advisory Committee submitted via letter dated August 31, 2011</li> <li>MOE provided comments via letter dated August 21, 2012.</li> <li>Regions and Covanta addressed comments via letter dated October 5, 2012.</li> </ul>	August 31, 2011	Yes
12.4	The Air Emissions Monitoring Plan shall include, at a minimum: <ol style="list-style-type: none"> <li>Identification of all sources of air emissions at the site to be monitored;</li> <li>Identification of which contaminants will be monitored by continuous emissions monitoring and which by stack testing;</li> <li>The proposed start date for and frequency of air emissions monitoring;</li> <li>The frequency of and format for reporting the results of air emissions monitoring;</li> <li>The contaminants that shall be monitored, which shall include at a minimum those contaminants set out in Schedule 1 to this Notice of</li> </ol>	<ul style="list-style-type: none"> <li>Submitted plan fulfills these requirements</li> </ul>	August 31, 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	f) Approval; and, A notification, investigation and reporting protocol to be used in the event that the concentration(s) of one or more of the contaminants released from an emission source that requires approval under Section 9 of the <i>Environmental Protection Act</i> exceeded the relevant limits.			
12.5	The proponent shall submit the Air Emissions Monitoring Plan to the Director, a minimum of six months prior to the start of construction or by such other date as agreed to in writing by the Director.	<ul style="list-style-type: none"> <li>Director revised submission deadline to August 31, 2011 via letter dated June 30, 2011.</li> <li>Plan submitted August 31, 2011</li> </ul>	August 31, 2011	Yes
12.6	The proponent shall implement the Air Emissions Monitoring Plan such that the monitoring commences when the first discharges are emitted from the facility to the air or at such other time as the Director may agree to in writing and shall continue until such time as the Director notifies the proponent in writing that the Air Emissions Monitoring Plan is no longer required.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Commissioning and Operating Periods	No
12.7	The proponent shall post the reports of the air emissions monitoring systems on the proponent's web site for the undertaking.	<ul style="list-style-type: none"> <li>Web site is operational <a href="http://www.durhamyorkwaste.ca/project/project_wasteprograms.htm">http://www.durhamyorkwaste.ca/project/project_wasteprograms.htm</a></li> <li>No emissions to report until commissioning</li> <li>Required by Condition 16 (1) (a) of the Certificate of Approval</li> </ul>	Commissioning and Operating Periods	No
12.8	For those contaminants that are monitored on a continuous basis, the proponent shall post on the proponent's website for the undertaking the results of the monitoring for each of those contaminants in real time.	<ul style="list-style-type: none"> <li>No emissions to report until commissioning</li> <li>Required by Condition 16 (2)</li> </ul>	Commissioning and Operating Periods	No
<b>13.</b>	<b>Air Emissions Operational Requirements</b>			
13.1	The proponent is expected to operate the undertaking in accordance with Schedule 1 of the Notice of Approval. If the facility is not operating in accordance with Schedule 1, the operator is required to take steps to bring the facility back within these operational requirements.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Commissioning and Operating Periods	No
13.2	Schedule 1 sets out the operational requirements the ministry expects the facility to meet during the normal operating conditions of the facility when operating under a steady state but does not include start up, shut down, or malfunction.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Commissioning and Operating Periods	No
13.3	The timing and frequency of monitoring for a contaminant in Schedule 1 shall be as required by the approval granted to the facility under the <i>Environmental Protection Act</i> , should approval be granted.	<ul style="list-style-type: none"> <li>Timing and frequency will be in accordance with Schedule C of the Certificate of Approval.</li> </ul>	Commissioning and Operating Periods	No
<b>14.</b>	<b>Daily Site Inspection</b>			
14.1	The proponent shall conduct a daily site inspection of the site including the non-hazardous municipal solid waste received at the site, each day the	<ul style="list-style-type: none"> <li>Agreed</li> <li>See Certificate of Approval Conditions 3 (6), 3 (7), 3 (8), 5 (5), 14 (3),</li> </ul>	Commissioning and Operating Periods	No

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	undertaking is in operation to confirm that: a) The site is secure; b) The operation of the undertaking is not causing any nuisance impacts; c) The operation of the undertaking is not causing any adverse effects on the environment; d) The undertaking is being operated in compliance with the conditions in this Notice of Approval and any other ministry approvals issued for the undertaking; and, e) Only non-hazardous waste is being received at the site.	and 14 (5)		
14.2	If, as a result of the daily inspection, any deficiencies are noted by the employee in regard to the factors set out in Condition 14.1 above, the deficiency shall be remedied immediately by the proponent. If necessary to remedy the deficiency, the proponent shall cease operations at the site until the deficiency has been remedied.	<ul style="list-style-type: none"> <li>• Agreed</li> <li>• See Certificate of Approval Conditions 5 (5), 14 (3), and 14 (5)</li> </ul>	Commissioning and Operating Periods	No
14.3	A record of the daily inspections shall be kept in the daily log book required in Condition 15. The information below must be recorded in the daily log book by the person completing the inspection and includes the following information: a) The name and signature of the person that conducted the daily inspection; b) The date and time of the daily inspection; c) A list of any deficiencies discovered during the daily inspection; d) Any recommendations for action; and, e) The date, time, and description of actions taken.	<ul style="list-style-type: none"> <li>• Agreed</li> <li>• See Certificate of Approval Conditions 5 (5), 14 (3), and 14 (5)</li> </ul>	Commissioning and Operating Periods	No
14.4	The proponent shall retain either on site or in another location approved by the District Manager, a copy of the daily log book and any associated documentation regarding the daily site inspections.	<ul style="list-style-type: none"> <li>• Agreed</li> <li>• See Certificate of Approval Conditions 5 (5), 14 (3), and 14 (5)</li> <li>• Required by Condition 14 (2) of the Certificate of Approval</li> </ul>	Commissioning and Operating Periods	No
<b>15.</b>	<b>Daily Record Keeping</b>			
15.1	The proponent shall maintain a written daily log which shall include the following information: a) Date; b) Types, quantities, and source of non-hazardous municipal solid waste received; c) Quantity of unprocessed, processed and residual non-hazardous municipal solid waste on the site; d) Quantities and destination of each type of residual material shipped from the site; e) The record of daily site inspections required to be maintained by	<ul style="list-style-type: none"> <li>• Agreed</li> <li>• See Certificate of Approval Conditions 5 (5), 14 (3), and 14 (5)</li> </ul>	Commissioning and Operating Periods	No

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	Condition 14.3; f) A record of any spills or process upsets at the site, the nature of the spill or process upset and the action taken for the clean up or correction of the spill or process upset, the time and date of the spill or process upset, and for spills, the time that the ministry and other persons were notified of the spill pursuant to the reporting requirements of the <i>Environmental Protection Act</i> ; g) A record of any waste that was refused at the site, including: amounts, reasons for refusal and actions taken; and, h) The name and signature of the person completing the report.			
15.2	The proponent shall retain, either on site or in another location approved by the District manager, a copy of the daily log book and any associated documentation.	<ul style="list-style-type: none"> <li>• Agreed</li> <li>• See Certificate of Approval Conditions 5 (5), 14 (3), and 14 (5)</li> </ul>	Commissioning and Operating Periods	No
15.3	The proponent shall make the daily log book and any associated documentation available to the ministry or its designate in a timely manner when requested to do so by the ministry.	<ul style="list-style-type: none"> <li>• Agreed</li> <li>• Required by Condition 14(1) of the Certificate of Approval</li> </ul>	Commissioning and Operating Periods	No
<b>16.</b>	<b>Third Party Audits</b>			
16.1	The proponent shall retain the services of a Qualified, Independent Professional Engineer to carry out an independent audit of the undertaking.	<ul style="list-style-type: none"> <li>• Selection of auditor during the construction phase of the project was approved by the Director and Regional Director via letter dated December 8, 2011.</li> </ul>	December 8, , 2011	Yes
16.2	Within six months from the date of approval or other such date as agreed to in writing by the Regional Director, the proponent shall submit to the Director and the Regional Director, the name of the Qualified, Independent Professional Engineer and the name of the company where he/she is employed.	<ul style="list-style-type: none"> <li>• Deadline to submit name of auditor revised to September 30, 2011 via letter from the Director and Regional Director dated June 30, 2011.</li> <li>• Deadline to submit name of external auditor extended to 30 days prior to the commencement of construction to allow for the ministry's comment on the draft audit plan via letter from the MOE Director and Regional Director dated September 30, 2011.</li> <li>• Regions submitted name of construction-phase auditor on November 16, 2011, more than 30 days prior to commencement of construction in January 2012.</li> <li>• Regions to submit name of auditor for acceptance testing phase at least six months prior to commencement of acceptance testing in accordance with approved audit plan.</li> <li>• Regions to submit name of auditor for operations phase at least six months prior to receipt of waste in accordance with approved audit plan</li> <li>•</li> </ul>	November 16, 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
16.3	The proponent shall submit an audit plan to the satisfaction of the Regional Director that sets out the timing of and frequency for the audits, as well as the manner in which the audits are to be carried out.	<ul style="list-style-type: none"> <li>Construction Phase Audit Plan approved by the Regional Director and Regional Director via letter dated December 8, 2011.</li> <li>Regions to submit audit plan for acceptance testing phase at least 6 months prior to commencement of acceptance testing in accordance with approved audit plan.</li> <li>Regions to submit operations phase audit plan at least 6 months prior to commencement of operations in accordance with approved audit plan.</li> </ul>	December 8, 2011	Ongoing
16.4	The audit shall include, at a minimum, the following: a) A detailed walkthrough of the entire site; b) A review of all operations used in connection with the undertaking; and, c) A detailed review of all records required to be kept by this Notice of Approval or under any other ministry approvals for the undertaking. d) The proponent shall obtain from the Qualified, Independent Professional Engineer, a written report of the audit prepared and signed by the Qualified, Independent Professional Engineer that summarizes the results of the audit.	<ul style="list-style-type: none"> <li>Construction phase audit plan complies with these requirements.</li> <li>Audit plans for future phases will also be compliant with this condition.</li> </ul>	Construction, Commissioning, and Operating Periods	Ongoing
16.5	The proponent shall submit the written report summarizing the result of the audit to the Regional Director no later than 10 business days following the completion of the audit.	<ul style="list-style-type: none"> <li>The first Construction Phase Audit was undertaken on June 1, 2012</li> <li>The audit report was submitted to the MOE on June 15, 2012, within 10 business days following the audit.</li> <li>A follow up addendum to the audit report in response to comments from the Advisory Committee was submitted via letter dated August 21, 2012.</li> </ul>	Construction, Commissioning, and Operating Periods	Ongoing
16.6	The proponent shall retain either on site or in another location approved by the Regional Director, a copy of the written audit report and any associated documentation.	<ul style="list-style-type: none"> <li>Copies of the June 2012 audit report and addendum are retained on site.</li> <li>Copies of future audit reports will be retained on site as required by Condition 14 (9)(d) of the Certificate of Approval</li> </ul>	Construction, Commissioning, and Operating Periods	Ongoing
16.7	The proponent shall make the written audit report and any associated documentation available to the ministry or its designate in a timely manner when requested to do so by the ministry.	<ul style="list-style-type: none"> <li>Agreed</li> <li>Required by Condition 14 (1) of the Certificate of Approval</li> </ul>	Construction, Commissioning, and Operating Periods	Ongoing
16.8	The proponent shall post the written audit report on the proponent's web site for the undertaking following submission of the report to the ministry.	<ul style="list-style-type: none"> <li>June 2012 audit report and addendum have been posted to the project website.</li> <li>Future reports will be posted to the website as required by Condition 16(1)(d) of the Certificate of Approval</li> </ul>	Construction, Commissioning, and Operating Periods	Ongoing
<b>17.</b>	<b>Spill Contingency and Emergency Response Plan</b>			
17.1	The proponent shall prepare and implement a Spill Contingency and	<ul style="list-style-type: none"> <li>Required by Condition 11 of the Certificate of Approval</li> </ul>	January 2014	No

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	Emergency Response Plan.			
17.2	The proponent shall submit to the Director, the Spill Contingency and Emergency Response Plan a minimum of 60 days prior to the receipt of non-hazardous municipal solid waste at the site or such other date as agreed to in writing by the Director.	<ul style="list-style-type: none"> <li>Deadline to submit plan revised to 120 days prior to the commencement date of operation by Certificate of Approval Condition 11 (3).</li> </ul>	January 2014	No
17.3	<p>The Spill Contingency and Emergency Response Plan shall include, but is not limited to:</p> <ul style="list-style-type: none"> <li>a) Emergency response procedures, including notification procedures in case of a spill, fires, explosions or other disruptions to the operations of the facility;</li> <li>b) Cell and business phone numbers and work location for all person(s) responsible for the management of the site;</li> <li>c) Emergency phone numbers for the local ministry office, the ministry's Spills Action Centre, and the local Fire Department;</li> <li>d) Measures to prevent spill, fires and explosions;</li> <li>e) Procedures for use in the event of a fire;</li> <li>f) Details regarding equipment for spill clean-up and all control and safety devices;</li> <li>g) Shut down procedures for all operations associated with the undertaking including alternative waste disposal site locations;</li> <li>h) Maintenance and testing program for spill clean-up equipment and fire fighting equipment;</li> <li>i) Training for site operators and emergency response personnel; and,</li> <li>j) A plan, identifying the location and nature of wastes on site.</li> </ul>	<ul style="list-style-type: none"> <li>Additional requirements included in Certificate of Approval Condition 11 (2).</li> </ul>	January 2014	No
17.4	The proponent shall provide the Spill Contingency and Emergency Response Plan to the District Manager, the local Municipality of Clarington and the local Municipality of Clarington Fire Department a minimum of 30 days prior to the initial receipt of non-hazardous municipal solid waste at the site or such other date as agreed to in writing by the Director.	<ul style="list-style-type: none"> <li>Deadline to submit finalized plan to the Director revised to 120 days prior to the commencement date of operation by Certificate of Approval Condition 11 (3). Document to be submitted to the District Manager, local municipality, and fire department for comments prior to final submission.</li> </ul>	November 2013	No
17.5	The proponent shall take all necessary steps to contain and clean up a spill on the site. A spill or upset shall be reported immediately to the ministry's Spills Action Centre at (416) 325-3000 or 1-800-268-6060.	<ul style="list-style-type: none"> <li>Agreed. Will be included in the Spill Contingency and Emergency Response Plan</li> <li>Required by Condition 12 of the Certificate of Approval</li> <li>Required by Condition 13(3) of the Certificate of Approval</li> </ul>	Commissioning and Operations Periods	Ongoing
<b>18.</b>	<b>Odour Management and Mitigation</b>			
18.1	The proponent shall prepare, in consultation with the ministry's Central Region Office and to the satisfaction of the Regional Director, and implement an Odour Management and Mitigation Plan for the undertaking.	<ul style="list-style-type: none"> <li>Odour Management and Mitigation Plan submitted to MOE on August 31, 2011.</li> <li>Revised Odour Management and Mitigation Plan submitted May 4, 2012.</li> </ul>	August 21, 2012	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		<ul style="list-style-type: none"> <li>Odour Management and Mitigation Plan approved by Regional Director via letter dated August 21, 2012.</li> </ul>		
18.2	The proponent shall submit the Odour Management and Mitigation Plan to the Regional Director a minimum of six months prior to the start of construction or at such other time as agreed to in writing by the Regional Director.	<ul style="list-style-type: none"> <li>Deadline to submit plan revised to August 31, 2011 via letter from the Director and Regional Director dated June 30, 2011.</li> <li>Plan submitted in draft form to MOE and Advisory Committee for comments via email dated July 25, 2010</li> <li>Plan incorporating MOE and Advisory Committee comments submitted August 31, 2011</li> </ul>	August 31, 2011	Yes
18.3	The Odour Management and Mitigation Plan shall include at a minimum: <ol style="list-style-type: none"> <li>a) Standard operating and shut down procedures;</li> <li>b) Maintenance schedules;</li> <li>c) Ongoing monitoring for and reporting of odour;</li> <li>d) Corrective action measures and other best management practices for ongoing odour control and for potential operational malfunctions;</li> <li>e) A schedule for odour testing at sensitive receptors; and,</li> <li>f) A section that specifically addresses odour control measures should operation of the undertaking be disrupted or cease.</li> </ol>	<ul style="list-style-type: none"> <li>Additional requirements listed in Certificate of Approval Condition 8 (9).</li> </ul>	August 31, 2011	Yes
18.4	The proponent shall prepare and submit the Odour Management and Mitigation Monitoring Reports annually to the Regional Director with the first report submitted beginning six months following the initial receipt of non-hazardous municipal solid waste at the site or such other date as agreed to in writing by the Regional Director.	<ul style="list-style-type: none"> <li>Final Odour Monitoring and Mitigation Plan is compliant with these requirements.</li> <li>Estimated date of first report November 2014</li> </ul>	Commissioning and Operations Period	Ongoing
18.5	The Odour Management and Mitigation Monitoring Reports shall be submitted every 12 months from the date of the submission of the first report or until such time as the Regional Director notifies the proponent in writing that the Odour Management and Mitigation Monitoring Reports are no longer required.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Commissioning and Operations Period	Ongoing
18.6	The proponent shall post the Odour Management and Mitigation Monitoring Reports on the proponent's web site for the undertaking following submission of the reports to the Regional Director.	<ul style="list-style-type: none"> <li>Odour Management and Mitigation Plan posted to the website.</li> <li>Required by Condition 16(1)(e) of Certificate of Approval.</li> </ul>	Commissioning and Operations Period	Ongoing
<b>19.</b>	<b>Noise Monitoring and Reporting</b>			
19.1	The proponent shall prepare and implement a Noise Monitoring and Reporting Plan for the undertaking.	<ul style="list-style-type: none"> <li>Noise Monitoring and Reporting Plan was submitted to the Director via letter dated September 15, 2011</li> </ul>	September 15, 2011	Yes
19.2	The proponent shall submit the Noise Monitoring and Reporting Plan to the Director a minimum of 90 days prior to the start of construction or such other date as agreed to in writing by the Director.	<ul style="list-style-type: none"> <li>Final plan submitted via letter dated September 15, 2011.</li> <li>Final submission date is more than 90 days prior to start of construction in January 2012</li> </ul>	September 15, 2011	Yes

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
19.3	The Noise Monitoring and Reporting Plan shall include a protocol to ensure that the noise emissions from the facility comply with the limits set out in the Ministry of the environment's Publication NPC-205 "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995, as amended from time to time.	<ul style="list-style-type: none"> <li>Plan includes annual acoustic audits to confirm compliance.</li> <li>Required by Condition 7(5) of Certificate of Approval.</li> </ul>	September 15, 2011	Yes
19.4	The proponent shall post the Noise Monitoring and Reporting Plan on the proponent's web site for the undertaking following submission of the plan to the Director.	<ul style="list-style-type: none"> <li>Noise Monitoring and Reporting Plan posted to the website.</li> <li>Required by Condition 16(1)(f) of the Certificate of Approval</li> </ul>	September 15, 2011	Yes
<b>20.</b>	<b>Groundwater and Surface Water Monitoring and Reporting</b>			
20.1	Prior to the start of construction, the proponent shall identify any areas where the undertaking may affect groundwater or surface water. For those areas, the proponent shall prepare and implement, in consultation with the ministry's Central Region Office and to the satisfaction of the Regional Director, a Groundwater and Surface Water Monitoring Plan.	<ul style="list-style-type: none"> <li>Groundwater and Surface Water Monitoring and Reporting Plan submitted to the Regional Director via letter dated September 15, 2011..</li> <li>Groundwater and Surface Water Monitoring Plan was approved by the Regional Director via letter dated October 14, 2011.</li> </ul>	September 15, 2011	Yes
20.2	The proponent shall provide the Groundwater and Surface Water Monitoring Plan to any other government agencies for review and comment, as may be appropriate.	<ul style="list-style-type: none"> <li>Groundwater and Surface Water Monitoring Plan was submitted to the Central Lake Ontario Conservation Authority and the Advisory Committee for comments.</li> </ul>	July 25, 2011	Yes
20.3	The Groundwater and Surface Water Monitoring Plan shall include at a minimum: <ol style="list-style-type: none"> <li>A groundwater and surface water monitoring program;</li> <li>The proposed start date and frequency of groundwater and surface water monitoring;</li> <li>The contaminants that shall be monitored as part of the groundwater and surface water monitoring program; and,</li> <li>At least one meeting each year between the proponent and the Regional Director to discuss the plan, the results of the monitoring program and any changes that are required to be made to the plan by the Regional Director.</li> </ol>	<ul style="list-style-type: none"> <li>Included in the approved plan</li> </ul>	September 15, 2011	Yes
20.4	The proponent shall submit the Groundwater and Surface Water Monitoring Plan to the Regional Director a minimum of 90 days prior to the start of construction or such other date as agreed to in writing by the Regional Director.	<ul style="list-style-type: none"> <li>September 15, 2011 submission date is more than 90 days prior to the start of construction in January 2012.</li> <li>Groundwater Surface Water Monitoring Plan approved by the Regional Director via letter dated October 14, 2011.</li> </ul>	September 15, 2011	Yes
20.5	The Regional Director may require changes to be made to the Groundwater and Surface Water Monitoring Plan and the proponent shall implement the plan in accordance with the required changes.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Ongoing	Ongoing
20.6	The groundwater and surface water monitoring program shall commence prior to the receipt of non-hazardous municipal solid waste at the site or	<ul style="list-style-type: none"> <li>Proposed Groundwater and Surface Water Monitoring Plan to commence prior to start of construction and continue until the</li> </ul>	Construction, Commissioning and	Ongoing

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	such other time as agreed to in writing by the Regional Director, and shall continue until such time as the Regional Director notifies the proponent in writing that the groundwater and surface water monitoring program is no longer required.	Regional Director notifies the Regions in writing that the monitoring program is no longer required. <ul style="list-style-type: none"> <li>Baseline groundwater sampling commenced in January 2012, prior to receipt of waste.</li> </ul>	Operations Periods	
20.7	Thirty days after waste is first received on site, the proponent shall prepare and submit to the Director and Regional Director, a report containing all of the results of the groundwater and surface water monitoring program.	<ul style="list-style-type: none"> <li>Included in the approved Groundwater and Surface Water Monitoring Plan</li> <li>Baseline groundwater analytical data is being collected in preparation for the 1<sup>st</sup> report 30 days after waste is first received.</li> </ul>	June 2014	No
20.8	The proponent shall prepare and submit to the Director and Regional Director, an annual report containing the results of the groundwater and surface water monitoring program. The first report shall be submitted 12 months from the start of the monitoring program and every year thereafter.	<ul style="list-style-type: none"> <li>Included in the approved Groundwater and Surface Water Monitoring Plan</li> <li>Annual operational report to commence 1 year after baseline report submission.</li> </ul>	Commissioning and Operations Periods	No
20.9	The proponent shall prepare and submit to the Director and Regional Director, a report containing the results of the groundwater and surface water monitoring program with 30 days of any of the following events: a) A spill occurs on site; b) A fire or explosion occurs on site; c) A process upset; or, d) Any disruption to normal operations that may directly or indirectly have an impact on groundwater or surface water.	<ul style="list-style-type: none"> <li>Included in the approved Groundwater and Surface Water Monitoring Plan</li> <li>Required by Condition 7(14)(b) of the Certificate of Approval</li> </ul>	Commissioning and Operations Periods	No
20.10	The proponent shall post the Groundwater and Surface Water Monitoring Plan and all reports required by this condition on the proponent's web site for the undertaking following submission of the plan and reports to the ministry.	<ul style="list-style-type: none"> <li>Groundwater and Surface Water Monitoring Plan posted to the website.</li> <li>Future reports will be posted to the website as they are prepared.</li> <li>Required by Condition 7(14)(c) of the Certificate of Approval</li> <li>Required by Condition 16 (1) (g) of the Certificate of Approval</li> </ul>	Ongoing	Ongoing
<b>21.</b>	<b>Types of Waste and Service Area</b>			
21.1	Only non-hazardous municipal solid waste from municipal collection within the jurisdictional boundaries of the Regional Municipality of Durham and the Regional Municipality of York may be accepted at the site.	<ul style="list-style-type: none"> <li>Agreed</li> <li>Required by Conditions 2 (1), 2 (2), and 2 (3) of the Certificate of Approval</li> </ul>	Commissioning and Operations Periods	Ongoing
21.2	Materials which have been source separated for the purposes of diversion shall not be accepted at this site. This prohibition does not apply to the non-recyclable residual waste remaining after the separation of the recyclable materials from the non-recyclable materials at a materials recycling facility or other processing facility.	<ul style="list-style-type: none"> <li>Agreed</li> <li>See Condition 2 (3) (b) of the Certificate of Approval</li> </ul>	Commissioning and Operations Periods	Ongoing
21.3	The proponent shall ensure that all incoming waste is inspected prior to	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	Commissioning and	Ongoing

Condition No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	being accepted at the site to ensure that only non-hazardous municipal solid waste is being accepted.	<ul style="list-style-type: none"> <li>See Condition 4 (2) and 4 (3) of the Certificate of Approval</li> </ul>	Operations Periods	
21.4	If any materials other than non-hazardous municipal solid waste are found during inspection or operation, the proponent shall ensure that management and disposal of the material is consistent with ministry guidelines and legislation.	<ul style="list-style-type: none"> <li>Agreed</li> <li>See Condition 4 (3) of the Certificate of Approval</li> </ul>	Commissioning and Operations Periods	Ongoing
<b>22.</b>	<b>Amount of Waste</b>			
22.1	The maximum amount of non-hazardous municipal solid waste that may be processed at the site is 140,000 tonnes per year.	<ul style="list-style-type: none"> <li>140,000 tonnes per year is the maximum annual tonnage recognized on page 1 of the Certificate of Approval</li> </ul>	Commissioning and Operations Periods	Ongoing
<b>23.</b>	<b>Notice of the Date Waste First Received</b>			
23.1	Within 15 days of the receipt of the first shipment of waste on site, the proponent shall give the Director and Regional Director written notice that the waste has been received.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	May 2014	No
<b>24.</b>	<b>Construction and Operation Contracts</b>			
24.1	In carrying out the undertaking, the proponent shall require that its contractors, subcontractors and employees: <ol style="list-style-type: none"> <li>fulfill the commitments made by the proponent in the environmental assessment process, including those made in the environmental assessment and in the proponent's responses to comments received during the environmental assessment comment periods;</li> <li>meet applicable regulatory standards, regarding the construction and operation of the undertaking;</li> <li>obtain any necessary approvals, permits or licenses; and,</li> <li>have the appropriate training to perform the requirements of their position.</li> </ol>	<ul style="list-style-type: none"> <li>Project Agreement requires Contractor to comply with all authorizations including the Environmental Assessment and Notice of Approval (incorporated by reference) the Certificates of Approval, and all applicable regulations.</li> <li>Regions will provide a full time on-site inspector during construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.</li> <li>Certificate of Approval Condition 9(1) requires Covanta is to document staff training on the EA and C of A conditions and applicable laws and regulations.</li> <li>Complaint Protocol will remain in effect throughout the construction, commissioning, and operations periods in accordance with Condition 6 of the Notice to Proceed.</li> </ul>	Construction, Commissioning, and Operations Periods	Ongoing
<b>25.</b>	<b>Amending Procedures</b>			
25.1	Prior to implementing of any proposed changes to the undertaking, the proponent shall determine what <i>Environmental Assessment Act</i> requirements are applicable to the proposed changes and shall fulfill those <i>Environmental Assessment Act</i> requirements.	<ul style="list-style-type: none"> <li>Agreed</li> </ul>	No changes contemplated at the present time	N/A

- Future completion dates are estimates based on best available information. Completion dates occurring in the past are dates of actual completion
- Anticipated construction period from January 2012 – May 2014
- Anticipated commissioning period from May 2014 – August 2014.

4. Anticipated operations period from August 2014 – facility closure.

## **Appendix B**

### **EA Study Document Compliance Table**

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Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
<b>General Requirements</b>				
2	<ul style="list-style-type: none"> <li>The Proponents commit that if approval to proceed with the Undertaking is given, it will be the Proponents who are legally responsible for carrying out the Undertaking as approved.</li> </ul>	<ul style="list-style-type: none"> <li>The Regions are 100% owners under the Project Agreement</li> <li>Both Regions and the Contractor are named on the Certificate of Approval Application at the MOE's request.</li> <li>As owners, the Regions remain legally responsible for ensuring that the contractor fulfills its duties under the contract.</li> </ul>	Ongoing	Yes
11	<ul style="list-style-type: none"> <li>The Regions will undertake an evaluation of post-closure uses for the property associated with the Project, at the appropriate time when the Project is nearing the end of its life expectancy.</li> </ul>	<ul style="list-style-type: none"> <li>Required by Condition 18 of the Certificate of Approval</li> <li>Commitment reaffirmed in Section 16 of the Design and Operations Report submitted with the Waste C of A Application</li> <li>Certificate of Approval Condition 18 requires the Regions to submit a Closure Plan for approval by the MOE at least 9 months prior to facility closure.</li> </ul>	Prior to decommissioning	No
11	<ul style="list-style-type: none"> <li>Decommissioning of the Facility will be conducted in compliance with applicable regulatory requirements at the time of decommissioning.</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory requirement</li> </ul>	During decommissioning	No
11.2	<ul style="list-style-type: none"> <li>Environmental protection awareness, spill prevention planning and contingency training will be implemented for all employees as necessary and appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Spill Contingency and Emergency Response Plan to be submitted at least 120 days prior to commencement of operation as required by Condition 11 (3) of the Certificate of Approval</li> <li>Staff training requirements including regulatory compliance and emergency response provided in Certificate of Approval Condition 9 (1).</li> </ul>	Ongoing	Ongoing
15	<ul style="list-style-type: none"> <li>The Regions will prepare and submit to the Director of the EAB of the Ontario MOE an EA Compliance Monitoring Program.</li> </ul>	<ul style="list-style-type: none"> <li>Compliance Monitoring Program submitted to the Director via letter dated October 14, 2011 in accordance with Condition 4.1 of the EA Notice of Approval</li> </ul>	October 14, 2011	Yes
<b>Air Quality</b>				
11.1	<p>Air quality related mitigation/management during construction will include:</p> <ul style="list-style-type: none"> <li>Mitigation and environmental management / monitoring measures will include:</li> <li>Employment of controlled entrances and exits at the construction site to minimize the offsite tracking of mud.</li> <li>Temporary and permanent grassing in disturbed areas.</li> <li>Dust control during dry periods.</li> <li>Possible implementation of an idling protocol as required.</li> <li>Adherence to an equipment maintenance program.</li> <li>Ambient air quality monitoring for particulate matter will be undertaken to monitor the effectiveness of the mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>Project Agreement requires Contractor to comply with all authorizations including Environmental Assessment and Certificates of Approval, and all applicable regulations.</li> <li>Regions will provide a full time on-site inspector during construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.</li> <li>Complaint protocol submitted to MOE as per EA Notice to Proceed Condition 6 will be in effect throughout the construction period.</li> <li>Air Quality during construction is addressed by the contractor in their site Quality Management and/or Site Specific Health and Safety Plans</li> </ul>	Construction Period	Ongoing
11.1	<ul style="list-style-type: none"> <li>Very low NO<sub>x</sub> (VLN) system in the Facility's stoker</li> </ul>	<ul style="list-style-type: none"> <li>Commitment reaffirmed in Section 7.1.1 of the Design and Operations Report submitted with the Waste C of A Application</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>SNCR for additional NO<sub>x</sub> control</li> </ul>	<ul style="list-style-type: none"> <li>Commitment reaffirmed in Section 7.1.2 of the Design and</li> </ul>	Commissioning and	No

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		Operations Report submitted with the Waste C of A Application	Operations Period	
11.1	<ul style="list-style-type: none"> <li>Activated carbon injection after the economizer for mercury and dioxin/furan control</li> </ul>	<ul style="list-style-type: none"> <li>Commitment reaffirmed in Section 7.2 of the Design and Operations Report submitted with the Waste C of A Application</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>Acid gas scrubber the removal of gases such as SO<sub>x</sub> and HCl</li> </ul>	<ul style="list-style-type: none"> <li>Commitment reaffirmed in Section 7.3 of the Design and Operations Report submitted with the Waste C of A Application</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>A fabric filter baghouse to remove solid particulate matter</li> </ul>	<ul style="list-style-type: none"> <li>Commitment reaffirmed in Section 7.4 of the Design and Operations Report submitted with the Waste C of A Application</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>The application of design and operations pre-processing odour control measures such as enclosed loading, negative air pressure inside the Facility and fully-enclosed feedstock delivery trucks.</li> </ul>	<ul style="list-style-type: none"> <li>Commitment reaffirmed in Section 13.3 of the Design and Operations Report submitted with the Waste C of A Application</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>Provision of a Continuous Emissions Monitoring System (CEMS) at the baghouse outlet to monitor and record opacity, moisture, CO, O<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, HCL and HF. Opacity measurements will be used as the filter bag leak detection system.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.7 of the Design and Operations Report submitted with the Waste C of A Application includes all listed parameters except carbon monoxide, which is now to be monitored at the economizer outlet only (see following item). Purpose of two carbon monoxide monitors was to calculate percentage reduction achieved by air pollution control system. No longer necessary since MOE has imposed an absolute standard for CO emissions instead of a percentage reduction. Change approved through Certificate of Approval Condition 7(2)(b) and 7(2)(c)</li> <li>A continuous ammonia monitor has been added</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>Provision of a Continuous Emissions Monitoring System (CEMS) at the economizer outlet to monitor and record O<sub>2</sub>, SO<sub>2</sub> and CO.</li> </ul>	<ul style="list-style-type: none"> <li>O<sub>2</sub> and CO monitors will be provided at the economizer outlet in accordance with Certificate of Approval Condition 7(2)(c).</li> <li>Although not reflected in Certificate of Approval Condition 7(2)(c), an SO<sub>2</sub> analyzer will also be provided at the economizer outlet for process control. Not needed to evaluate compliance since final SO<sub>2</sub> standard is an absolute standard rather than a percentage reduction.</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>Provision of a Continuous Emissions Monitoring System (CEMS) to monitor and record <ul style="list-style-type: none"> <li>Flue gas temperatures at the inlet of the boiler convection section and at the baghouse inlet.</li> <li>The temperature and pressure of the feedwater and steam for each boiler.</li> <li>The mass flow rate of steam at each boiler.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Flue gas temperature measurements required as per Certificate of Approval Conditions 7(2)(a) and 7(2)(b).</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>A long-term continuous dioxins sampling device will be installed to monitor the adsorption of dioxins onto the exchangeable adsorption-resin-filled cartridge.</li> </ul>	<ul style="list-style-type: none"> <li>Required as per Condition 7(3) of the Certificate of Approval</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>Emissions (stack) testing and monitoring protocol as required for the C of A under the EPA.</li> </ul>	<ul style="list-style-type: none"> <li>As per Condition 7(1) and Schedule D of the Certificate of Approval</li> </ul>	Commissioning and Operations Period	No

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
11.1	<ul style="list-style-type: none"> <li>NPRI emissions reporting that will entail a combination of monitoring or direct measurement, mass balance, process-specific emissions factors and engineering estimates.</li> </ul>	<ul style="list-style-type: none"> <li>National Pollutant Release Inventory (NPRI) annual reporting is a requirement under the Canadian Environmental Protection Act (Federal)</li> </ul>	Commissioning and Operations Period	No
11.1	<ul style="list-style-type: none"> <li>Proposed ambient air quality monitoring in the immediate vicinity of the Facility for a 3-year period.</li> </ul>	<ul style="list-style-type: none"> <li>Ambient Air Monitoring Plan was approved by the MOE in a letter dated May 30, 2012.</li> <li>Ambient Air Monitoring Locations were approved by the MOE in a letter dated June 5, 2012</li> </ul>	Commissioning and Operations Period	No
<b>Surface Water and Groundwater</b>				
11.2	<p>Surface water and groundwater related mitigation and environmental management / monitoring measures during construction will include:</p> <ul style="list-style-type: none"> <li>Construction phase drainage will route stormwater from throughout the Site to a stormwater sedimentation pond and to the extent feasible, maintain existing drainage routes. Permanent SWM ponds may be constructed early to reduce need for sedimentation ponds.</li> <li>Use of perimeter ditching and site grading as well as silt fencing around forested areas to isolate runoff.</li> <li>Use of setback transition use areas and erosion control fencing along watercourses.</li> <li>ESC will be implemented during the construction phase to reduce potential soil loss and runoff velocities.</li> <li>During the construction phase, stormwater will be routed via conveyance swales and/or storm sewers draining catchbasins to a SWM pond in the southwest corner of the Site.</li> <li>The pond will discharge to the CN Rail swale and stormwater will subsequently be conveyed to Tooley Creek.</li> <li>In addition to the pond, lot level, and conveyance controls such as surface stabilization measures, sediment traps, and swales enhanced with rock check dams will also be employed.</li> <li>Grading plans will be designed to maintain existing drainage patterns which will ensure all captured stormwater will be routed through SWM features.</li> <li>Dewatering and excavation pumping is expected in order to establish a sufficiently dry environment to construct the Facility foundations.</li> </ul>	<ul style="list-style-type: none"> <li>Required by Condition 4(6) of the Certificate of Approval</li> <li>Project Agreement requires Contractor to comply with all authorizations including Environmental Assessment and Certificates of Approval, and all applicable regulations.</li> <li>Regions will provide a full time on-site inspector during construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.</li> <li>Groundwater and Surface Water Monitoring and Reporting Plan submitted via email September 15, 2011 in accordance with EA Condition 20 includes monitoring of water quality in Tooley Creek using continuous data loggers, and documentation of regular inspection and maintenance of check dams and other sediment controls.</li> <li>A sediment and erosion control plan has been developed by the contractor and is in effect during the construction phase which monitors surface water. Golder has been contracted by Covanta to monitor surface water and erosion and sediment control.</li> <li>Site stormwater management plan has been developed and approved by CLOCA and Clarington (Clarington Master Drainage Plan)</li> </ul>	Construction Period	Ongoing
11.2	<ul style="list-style-type: none"> <li>A series of groundwater monitoring wells may be installed within the Site to assess the Facility's effects on both groundwater quantity and quality during construction to be determined at subsequent approvals stage.</li> </ul>	<ul style="list-style-type: none"> <li>Groundwater and Surface Water Monitoring Plan approved by MOE Central Region Director on October 14, 2011 includes groundwater monitoring wells to be installed prior to facility construction and 1 well to be installed after construction.</li> <li>Groundwater wells installed in December 2011. Baseline monitoring commenced January 2012.</li> </ul>	December 2011	Yes
11.2	<ul style="list-style-type: none"> <li>Storm water pond design criteria will meet enhanced design guidance criteria found in the MOE SWM Planning and Design Manual;</li> </ul>	<ul style="list-style-type: none"> <li>The stormwater management pond design is compliant with this requirement and is provided in Section 6.2.4 of the Design Report</li> <li>Stormwater ponds have been designed and constructed on site in</li> </ul>	Construction Period	Yes

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		the southeast and southwest corners of the EFW property		
11.2	<ul style="list-style-type: none"> <li>Increase in runoff potential will be mitigated with peak flow attenuation, baseflow augmentation and SWM design that provides an enhanced level of receiving water protection;</li> </ul>	<ul style="list-style-type: none"> <li>Pond has been designed with an active storage volume greater than the entire runoff volume from the 100 year storm.</li> <li>Stormwater pond design has been approved and constructed on site.</li> </ul>	Construction Period	Yes
11.2	<ul style="list-style-type: none"> <li>Accidents and malfunctions planning and spill management redundancy and stormwater control from source to discharge will ensure the protection of surface water and groundwater resources.</li> </ul>	<ul style="list-style-type: none"> <li>Covanta will submit a Spill Contingency and Emergency Response Plan at least 120 days prior to commencement of operation (~January 2014) as required by Condition 17.1 of the Notice of Approval and Condition 11(2) of the Certificate of Approval</li> <li>Storage of waste and ash will be indoors on impervious surfaces with no drainage to outside the facility.</li> <li>Storage of all chemical reagents will be in accordance with applicable regulations. Storage of aqueous ammonia to include secondary containment.</li> <li>Outdoor surface drainage will discharge to the stormwater management ponds with gate valves on the outlets, providing an opportunity to contain and remediate any spills occurring outside the process buildings.</li> </ul>	Commissioning and Operations Period	No
11.2	<ul style="list-style-type: none"> <li>Monitoring of stormwater end-of-pipe Facility discharge quality (as required as part of C of A);</li> </ul>	<ul style="list-style-type: none"> <li>Groundwater and Surface Water Monitoring and Reporting Plan developed in consultation with MOE Central Region Office and approved by the Central Region Director on October 14, 2011.</li> </ul>	Commissioning and Operations Period	No
<b>Soils</b>				
11.2 & 11.3	<p>Soils related mitigation and environmental management / monitoring measures during construction will include:</p> <ul style="list-style-type: none"> <li>Topsoil and subsoil salvage and storage.</li> <li>Apply erosion and sedimentation control measures (also described in surface water).</li> </ul>	<ul style="list-style-type: none"> <li>Regions submitted a Soil Testing plan on September 23, 2011.</li> <li>Revised Soil Testing Plan submitted to the MOE via letter dated October 5, 2012</li> <li>Project Agreement requires Contractor to comply with all authorizations including Environmental Assessment and Certificates of Approval, and all applicable regulations.</li> <li>Regions will provide a full time on-site inspector during construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.</li> </ul>	Construction, Commissioning, and Operations Period	No
<b>Acoustic</b>				
11.4	<p>Acoustic related mitigation and environmental management / monitoring measures during construction will include:</p> <ul style="list-style-type: none"> <li>Pile driving effects will be reduced through alternative technologies (e.g., vibratory pile driving), controls, and scheduling.</li> <li>Construction vehicle traffic is predicted to be acceptable against applicable criteria, but short-term (i.e., 1-hour) effects during peak demand are possible. These peaking issues will be reduced through scheduling and planning of vehicle trips.</li> </ul>	<ul style="list-style-type: none"> <li>The Regions submitted a Noise Monitoring and Reporting Plan to the Director in accordance with Condition 19 of the Notice of Approval on September 15, 2011</li> <li>Project Agreement requires Contractor to comply with all authorizations including Environmental Assessment and Certificates of Approval, and all applicable regulations, including Clarington Noise by-law.</li> <li>Regions will provide a full time on-site inspector during</li> </ul>	Construction Period	Ongoing

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	<ul style="list-style-type: none"> <li>A monitoring program and contingency plan will be implemented to address any issues that may arise during the construction and post-closure periods of the Facility.</li> </ul>	construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.		
11.4	<p>Noise-related mitigation and environmental management/monitoring measures during operation will include:</p> <ul style="list-style-type: none"> <li>The Facility will be designed to current standards incorporating efficiencies and design enhancements that reduce sound emissions.</li> <li>Where necessary, mitigation measures will be included to ensure applicable noise criteria are met at PORs as predicted.</li> <li>Mitigation measures may include the use of equipment control options such as enclosures, local or property-line barriers, mufflers and silencers, and acoustic baffles or insulation.</li> </ul>	<ul style="list-style-type: none"> <li>The Regions submitted a Noise Monitoring and Reporting Plan in accordance with Condition 19 of the Notice of Approval on September 15, 2011</li> <li>Condition 19.3 of the Notice of Approval requires noise emissions from the facility comply with the limits set out in the Ministry of the environment's Publication NPC-205 "Sound Level Limits for Stationary Sources in Class 1 &amp; 2 Areas (Urban)", October 1995, as amended from time to time.</li> <li>Acoustic modeling submitted with the Certificate of Approval Application for Air and Noise predicts that the facility will comply with NPC-205.</li> <li>Compliance to be verified through an acoustic audit to completed within three months of the commencement of operations in accordance with Certificate of Approval Condition 7 (5).</li> </ul>	Commissioning and Operations Periods	No
	<b>Visual</b>			
11.5	<p>Visual-related mitigation and environmental management / monitoring measures during construction will include:</p> <ul style="list-style-type: none"> <li>Staging of construction activities.</li> <li>Timely removal of construction debris.</li> <li>A monitoring program and contingency plan will be implemented to address any issues that may arise during the construction of the Facility.</li> <li>Investment in architectural enhancements to the Facility.</li> </ul>	<ul style="list-style-type: none"> <li>An architectural concept for the facility has been developed in consultation with the Municipality of Clarington.</li> <li>The project agreement requires the contractor to update the construction schedules weekly with detailed staging that will be reviewed at regularly scheduled construction meetings.</li> <li>Regions will provide a full time on-site inspector during construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.</li> <li>Visual Screening addressed in Condition 8 (15) of the Certificate of Approval.</li> </ul>	Construction Period	Ongoing
11.5	<p>Visual-related mitigation and environmental management / monitoring measures during operation will include:</p> <ul style="list-style-type: none"> <li>The use of neutral external colours and effective landscaping.</li> <li>If concerns regarding Facility visibility are raised by members of the community in the vicinity of the Facility, mitigation measures will be considered such as planting trees or other suitable vegetation at the particular location to provide a screen within the line of the sight of the Facility.</li> </ul>	<ul style="list-style-type: none"> <li>An architectural concept for the facility has been developed in consultation with the Municipality of Clarington.</li> <li>Need for supplementary, off-site visual remediation will be assessed on a case-by-case basis after the facility is constructed.</li> </ul>	Operating Period	No
	<b>Natural Environment</b>			
11.6	<p>Natural environment related mitigation and environmental management / monitoring during construction will include:</p> <ul style="list-style-type: none"> <li>Protective protocols to avoid killing or harming wildlife during Project activities.</li> </ul>	<ul style="list-style-type: none"> <li>Landscape plan will be reviewed for consideration to wildlife habitat.</li> <li>Construction Site Fencing allows for a wildlife corridor to the North and South of the Site.</li> <li>Reconnaissance report prepared by Golder Associates dated</li> </ul>	Construction Period	Yes

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	<ul style="list-style-type: none"> <li>Wildlife corridor along the entire east-west length of the Facility's southern property line may be established to enhance wildlife movement.</li> <li>Native tree and shrub species will be planted and existing species allowed to grow without disturbance providing additional habitat.</li> <li>Undertake a pre-construction survey to assess bird nesting activity prior to clearing and grubbing.</li> <li>Habitat enhancement for Chimney Swifts, if present onsite, and once construction has been completed, compensation for the loss of hedgerow by incorporating native shrubs and trees into landscaping for the Facility.</li> </ul>	November 11, 2011 to address pre-construction bird nesting activities prior to start of construction		
<b>Social / Cultural</b>				
11.7, 8, 9	<p>Social / cultural related mitigation and environmental management / monitoring measures during construction will include:</p> <ul style="list-style-type: none"> <li>See Noise above for related mitigation / management measures.</li> <li>See Visual above for related mitigation / management measures</li> <li>Dust control during construction will be accomplished through a number of physical and operational methods such as construction exits, timely revegetation, watering, and staging of work.</li> <li>Deeply buried archaeological resources could still exist and standard conditions regarding discovery of human remains and/or other cultural heritage values will apply.</li> </ul>	<ul style="list-style-type: none"> <li>Contract requires Covanta to document any findings of archaeological significance and to deal with these findings as directed in writing by the owner and in accordance with applicable laws.</li> <li>Project Agreement requires Contractor to comply with all authorizations including Environmental Assessment and Certificates of Approval, and all applicable regulations.</li> <li>Regions will provide a full time on-site inspector during construction to monitor compliance with the terms and conditions of the contract, including compliance with EA conditions.</li> <li>To date no findings of archaeological significance have been found on site.</li> </ul>	Construction Period	Ongoing
	<ul style="list-style-type: none"> <li>Road/pavement improvements to the South Service Road and Osborne Road to accommodate construction vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Construction of improvements to South Service Road and Osborne Road will be undertaken as required</li> </ul>	Ongoing	Ongoing
	<ul style="list-style-type: none"> <li>Formation of a Thermal Treatment Facility Site Liaison Committee (SLC) for the construction period.</li> </ul>	<ul style="list-style-type: none"> <li>In addition to the Advisory Committee described in Notice of Approval Condition 8, the Regions have formed an Integrated Waste Management Committee (Energy from Waste-Waste Management Advisory Committee) intended to address issues of concern to the local community.</li> <li>Advertising for membership conducted September 2011</li> <li>First meeting was held December 7, 2011.</li> <li>Four meetings held to date.</li> </ul>	Construction, Commissioning and Operations Periods	Ongoing
	<ul style="list-style-type: none"> <li>Development and implementation of a Community Relations Plan (CRP) through which Durham, York, and Covanta staff will relate to the local community, including advance notification to local authorities and residents near the Facility of any planned unusual noises or activities (e.g., pile driving, steam blows) or other events that may be of concern to the local community during the construction phase. The plan will also establish contacts and procedures for providing accurate and timely information to the community in the event of an unforeseen incident that may cause concern or impact upon the community.</li> </ul>	<ul style="list-style-type: none"> <li>A requirement of the EA Notice of Approval [See Appendix A, Section 7 (Community Communications Plan)]</li> <li>Draft Community Communications Plan was submitted to the MOE on October 9, 2012.</li> </ul>	Prior to receipt of non-hazardous municipal solid waste	Yes

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
	<ul style="list-style-type: none"> <li>Development and implementation of a community complaints system for construction.</li> </ul>	<ul style="list-style-type: none"> <li>Complaint protocol approved by the MOE July 13, 2011 as per Condition 6 of the EA Notice of Approval.</li> <li>Requirement of Condition 10 of the Certificate of Approval</li> <li>Monthly reports are sent to the EFWAC and the MOE.</li> </ul>	Construction, Commissioning, and Operations Periods	Ongoing
	<ul style="list-style-type: none"> <li>Management of residual waste in enclosed vehicles and on enclosed tipping floor</li> </ul>	<ul style="list-style-type: none"> <li>Noted in Sections 5.3 and 5.8 of the Design and Operations Report and required by Certificate of Approval Condition 4(2) and 4(5)</li> </ul>	Commissioning and Operations Periods	No
	<ul style="list-style-type: none"> <li>Air from tipping floor is used as combustion air, destroying odours and maintaining negative pressure within receiving area.</li> </ul>	<ul style="list-style-type: none"> <li>Required by Condition 8 (1) of the Certificate of Approval</li> <li>Noted in Section 5.8 of the Design and Operations Report</li> </ul>	Commissioning and Operations Periods	No
	<ul style="list-style-type: none"> <li>Management of ash and residues using various measures to reduce ash emissions.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement of Condition 4 of the Certificate of Approval</li> <li>See Section 8.0 of the Design and Operation Report for additional details.</li> <li>Storage of ash, and will be indoors on impervious surfaces with no drainage to outside the facility.</li> <li>Ash is transported to the ash storage building in enclosed conveyors</li> <li>Bottom ash and fly ash handled separately.</li> <li>Building maintained under negative pressure and fully ventilated to a dust collection system</li> <li>Loading of trucks occurs indoors with the doors closed</li> <li>Fly ash is mixed with water, cement and pozzolan to render it non-hazardous and reduce dust.</li> <li>Bottom ash is immersed in quench water and retains 15-25% moisture content, reducing dust potential</li> </ul>	Commissioning and Operations Periods	No
	<ul style="list-style-type: none"> <li>Mitigation of vectors/vermin through pest/vector control.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement of Condition 8 (14) of the Certificate of Approval</li> <li>Noted in Section 13.5 of the Design and Operations Report and Condition 8(14)</li> <li>Pest/Vector control will be subcontracted to a qualified pest control company and monitored for effectiveness.</li> </ul>	Commissioning and Operations Periods	No
	<ul style="list-style-type: none"> <li>Mitigation of litter through implementation of litter control program throughout the Site.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement of Condition 8(12) of the Certificate of Approval</li> <li>Site-wide litter collection on a daily basis as per Section 13.4 of the Design and Operations Report and Certificate of Approval Condition 8(12)</li> </ul>	Commissioning and Operations Periods	No
	<ul style="list-style-type: none"> <li>Some traffic control measures (traffic signals, loop ramps, etc.) may be required to the adjacent road network to address future traffic conditions in the CEBP.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement of Condition 8(10) of the Certificate of Approval</li> <li>Will be addressed during design and approvals stage of Energy Park development.</li> </ul>	N/A	N/A
	<ul style="list-style-type: none"> <li>The Host Community Agreement between Durham and the Municipality of Clarington includes the Region assuming the cost of construction of Energy Drive from Courtice Road to Osborne Road to serve the CEBP.</li> </ul>	<ul style="list-style-type: none"> <li>Host Community Agreement executed on February 18, 2010 includes this provision</li> <li>Expropriation proceedings are underway to acquire the land to the west of the site needed to construct Energy Park Drive and separate truck access road.</li> </ul>	May 2015	No

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		<ul style="list-style-type: none"> <li>Design and approvals for Host Community Agreement commitments will commence when expropriation is complete and the Certificates of Approval and Building Permit for the Durham York Energy Centre are issued.</li> <li>Anticipated completion by commencement of operations; however, operations are not affected since site access will ultimately be provided via a private truck laneway from Courtice Road to the south edge of the property, or temporarily via South Service Road and Osborne Road.</li> </ul>		
	<ul style="list-style-type: none"> <li>Soil testing for contaminants for a minimum of three years at which time its effectiveness will be evaluated (recommendation by Durham Region Medical Officer of Health, endorsed by both Regional Councils)</li> </ul>	<ul style="list-style-type: none"> <li>Requirement of Condition 13 (4) of the Certificate of Approval</li> <li>Soil Testing plan submitted September 23, 2011</li> <li>Revised Soil Testing Plan submitted to the MOE via letter dated October 5, 2012</li> <li>Baseline (facility- pre-operation) testing will commence following MOE approval of revised plan.</li> </ul>	Commissioning and Operations Periods	No
	<ul style="list-style-type: none"> <li>Formation of a Thermal Treatment Facility Site Liaison Committee SLC for the operations period.</li> </ul>	<ul style="list-style-type: none"> <li>In addition to the Advisory Committee described in Notice of Approval Condition 8, the Regions have formed an Integrated Waste Management Committee (Energy from Waste-Waste Management Advisory Committee) intended to address issues of concern to the local community.</li> <li>Advertising for membership conducted September 2011</li> <li>First meeting was held December 7, 2011</li> <li>Four meetings held to date</li> </ul>	Construction, Commissioning and Operations Periods	Ongoing
	<ul style="list-style-type: none"> <li>See construction above regarding development and implementation of a Community Relations Plan</li> </ul>	<ul style="list-style-type: none"> <li>A requirement of the EA Notice of Approval [See Appendix A, Section 7 (Community Communications Plan)]</li> <li>A draft Community Communications Plan was submitted to the MOE on October 9, 2012.</li> </ul>	Prior to receipt of non-hazardous municipal solid waste	Yes
	<ul style="list-style-type: none"> <li>See construction above regarding development and implementation of a community complaints system for operations</li> </ul>	<ul style="list-style-type: none"> <li>Appendix A, Complaint Protocol (Notice of Approval Condition 6 applies to construction, commissioning, and operations periods</li> </ul>	Construction, Commissioning and Operations Periods	Ongoing
<b>Economic</b>				
<b>11.10</b>	<ul style="list-style-type: none"> <li>Establishment of a hazardous waste depot to serve Clarington residents.</li> </ul>	<ul style="list-style-type: none"> <li>Will commence when land expropriation for other Host Community Agreement commitments is complete and the Certificates of Approval and Building Permit for the Durham York Energy Centre are issued.</li> <li>Anticipated completion by commencement of operations; however, operations are not affected.</li> </ul>	May 2015	No
<b>11.10</b>	<ul style="list-style-type: none"> <li>Construction of Energy Drive from Courtice Road to Osborne Road to serve the Energy Park.</li> </ul>	<ul style="list-style-type: none"> <li>Expropriation proceedings are underway to acquire the land to the west of the site needed to construct Energy Park Drive and separate truck access road.</li> <li>Design and approvals for Host Community Agreement</li> </ul>	May 2015	Ongoing

Relevant EA Section No.	Requirement	Status Remarks	Actual or Estimated Completion Date <sup>1,2,3,4</sup>	Complete?
		<p>commitments will commence when expropriation is complete and the Certificates of Approval and Building Permit for the Durham York Energy Centre are issued.</p> <ul style="list-style-type: none"> <li>• Anticipated completion by commencement of operations; however, operations are not affected since site access will ultimately be provided via a private truck laneway from Courtice Road to the south edge of the property, or temporarily via South Service Road and Osborne Road.</li> <li>• Design for the construction of this road is currently underway.</li> </ul>		
11.10	<ul style="list-style-type: none"> <li>• Construction of a SWM Facility to serve the Energy Park.</li> </ul>	<ul style="list-style-type: none"> <li>• Tied to Host Community Agreement for Energy Park Drive Construction, see previous item.</li> <li>• Two on site stormwater ponds have been constructed.</li> </ul>	May 2015	No
11.10	<ul style="list-style-type: none"> <li>• Construction of a waterfront trail from Courtice Road to the eastern limit of the Durham property.</li> </ul>	<ul style="list-style-type: none"> <li>• Will commence when land expropriation for other Host Community Agreement commitments is complete and the Certificates of Approval and Building Permit for the Durham York Energy Centre are issued.</li> <li>• Anticipated completion by commencement of operations; however, operations are not affected</li> </ul>	May 2015	No
11.10	<ul style="list-style-type: none"> <li>• Transfer of 22 acres of surplus land adjacent to the Courtice WPCP to Clarington.</li> </ul>	<ul style="list-style-type: none"> <li>• Transfer will occur when land expropriation for other Host Community Agreement commitments is complete and the Certificates of Approval and Building Permit for the Durham York Energy Centre are issued.</li> </ul>	January 2014	No
11.10	<ul style="list-style-type: none"> <li>• Commencement of the EA for servicing the Clarington Science Park.</li> </ul>	<ul style="list-style-type: none"> <li>• EA will commence when land expropriation for other Host Community Agreement commitments is complete and the Certificates of Approval and Building Permit for the Durham York Energy Centre are issued</li> </ul>	January 2014	No
<b>Human Health and Ecological Risk</b>				
	<ul style="list-style-type: none"> <li>• Refer to "Air Quality" above.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to "Air Quality" above.</li> </ul>		

1. Future completion dates are estimates based on best available information. Completion dates occurring in the past are dates of actual completion
2. Anticipated construction period from January 2012 – May 2014
3. Anticipated commissioning period from May 2014 – August 2014.
4. Anticipated operations period from August 2014 – facility closure.

# **Appendix C**

**Advisory Committee Annual Report 2012**

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# **Meeting #4 Agenda**

**Advisory Committee Annual Report 2012**

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# AGENDA

## Energy from Waste Advisory Committee (EFWAC)

### Meeting #4

EFW Advisory Committee (EFWAC)	
<b>SUBJECT</b>	Meeting #4
<b>MEETING DATE</b>	Thursday, October 27, 2011, 6:00 to 9:00 PM
<b>LOCATION</b>	Regional Municipality of Durham Headquarters 605 Rossland Road East, Whitby – Meeting Room LL-C
<b>AGENDA OR REMARKS</b>	<ol style="list-style-type: none"><li>1. <b>Welcome and Introductions</b></li><li>2. <b>Administrative Items</b><ul style="list-style-type: none"><li>• Update on Energy from Waste-Waste Management Advisory Committee (EFW-WMAC)</li></ul></li><li>3. <b>Ministry of the Environment Presentations</b><ul style="list-style-type: none"><li>• Environmental Assessment Process</li><li>• Certificate of Approval Process</li><li>• District Office Role</li></ul></li><li>4. <b>Update on Environmental Assessment and Certificate of Approval Commitments</b></li><li>5. <b>Environmental Assessment Condition 5: Compliance Reporting</b></li><li>6. <b>Meeting Adjourns</b></li></ol>

Please contact Facilitator Sue Cumming, MCIP RPP, Cumming+Company at 866 611-3715 or cumming1@total.net with any questions.

# **Meeting #4 Minutes and Presentations**

**Advisory Committee Annual Report 2012**

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# Energy from Waste Advisory Committee (EFWAC) Meeting #4

## MINUTES (APPROVED)

<b>SUBJECT:</b>	Energy from Waste Advisory Committee Meeting #4	
<b>ATTENDEES:</b>	Please refer to page 5 for complete listing.	
<b>LOCATION:</b>	The Regional Municipality of Durham, Meeting Room LL-C 605 Rossland Road East, Whitby	
<b>DATE AND TIME:</b>	Thursday, October 27, 2011 at 6 p.m.	
	<b>ITEM</b>	<b>ACTION</b>
	<p><b>1. <u>WELCOME AND INTRODUCTIONS</u></b></p> <p>Sue Cumming, independent facilitator, welcomed members and confirmed quorum, also noting that there were no decision items listed on the agenda.</p> <p>Each committee, guest and staff member in attendance introduced themselves.</p> <p>The facilitator requested committee members to conduct themselves appropriately showing respect for all points of view and giving others the opportunity to speak uninterrupted.</p> <p>The facilitator reminded members of the public that their attendance to this meeting is as observers, and that questions and/or comments were not permitted, however, noted that it was an important opportunity to hear first hand the presentations, and learn various aspects of this initiative.</p> <p>Scheduled at the request of some committee members, the facilitator thanked these members for the opportunity of a first evening meeting.</p>	
	<p><b>2. <u>ADMINISTRATIVE ITEMS</u></b></p> <p><u>Update on Energy from Waste-Waste Management Advisory Committee</u></p> <p>Regional staff advised that an advertisement had been published inviting applications for membership to the Energy from Waste-Waste Management Advisory Committee (EFW-WMAC). The EFW-WMAC will be composed of nine members: five from Durham Region and four from the Municipality of Clarington. Regional Council will be determining approval of this new committee at their next</p>	<p><b>Project Team to reply to EFW- WMAC applicants</b></p>

meeting of November 2, 2011. Following Council decision, all applicants will be advised on their acceptance, or not, to this committee.

The first meeting of the EFW-WMAC will be determined following Council decision to approve the Committee. All meetings must be advertised two weeks prior to the meeting and the MOE must also be advised of the meeting two weeks prior to this meeting. Meetings will be held in the evening.

### **3. MINISTRY OF THE ENVIRONMENT PRESENTATIONS**

#### Environmental Assessment Process; Certificate of Approval Process; District Office Role

The MOE thanked the Committee for the invitation to present at this meeting and provided an overview of their role and responsibility with respect to waste management projects, the Environmental Assessment (EA) Act and Certificate of Approvals (CofA) approvals processes, how they are related and in particular how they apply to the Durham/York facility, and an overview of the MOE inspection and compliance program being the face of MOE for construction and operation of the Durham/York Facility.

The final slide of the presentation lists information sources available to the public.

A copy of the presentation is included as Attachment No. 1.

Following the MOE presentation, questions and comments from Committee members were addressed by the MOE.

The MOE confirmed that the limit found in the CofA's in-stack limit is based on Guideline A7 and is consistent with the position intended in the EA Notice of Approval.

During EA and CofA deliberations, MOE standards were discussed based on Guideline A7, being filterable, and the meaning of filterable and condensable. Further discussion ensued with regard to the Minister's Conditions of Approval and the interpretation of the requirement for 9 mg/Rm<sup>3</sup> applying to only filterable, and if so, if it meant that the Minister approved set emissions level higher than what was set for in the Health Risk assessment being a level not analyzed in the EA. The MOE indicated that further information on the internal assessment concerning the impacts of PM2.5 could be provided.

The MOE confirmed that they did not personally brief the Minister and could not comment in that regard. However, during EA and CofA deliberations, MOE standards were discussed based on Guideline A7, being filterable, and the meaning of filterable and condensable. The MOE further confirmed that it is up to the consultants to propose processes, whether it is dispersion modeling or any calculations in EA or CofA, and that the MOE does not issue or enter into agreement(s) with consultants on such processes.

The MOE advised that when a guideline or standard changes, it does not usually affect the issued approval(s), however, it does depend on what is changing,

clarifying that they cannot speculate and can only make a determination when the change does occur and is implemented.

The MOE provided additional comment on the role of the technical staff and their respective role in the EA and CofA processes, including replies to public inquiries. It was requested that, if possible, the MOE consider opportunity for a more 'face-to-face' relationship between their technical staff and members of the public, and that consideration be made that formal answers prepared by the consultant for the MOE, be forwarded by the MOE.

The MOE confirmed that for compliance purposes, the requirement in the CofA is annual stack testing, alongside a range of other monitoring processes, and is recommended by MOE engineers as an appropriate requirement for this facility. Further, monitoring made available to MOE as the regulator, will be used for consultation with appropriate MOE health experts to determine next steps based on these results and on an as required basis.

Reference was made that the MOE had publicly announced that they were undertaking a comprehensive review of their policy regarding PM2.5 with a final draft anticipated to be made available for public comment in March 2012. It was questioned if the Durham incinerator could be absolved from meeting proposed policy change requirements, further to MOE's announcement. The MOE advised that it would depend on the results of this review, the length of time to implement changes to a new or revised regulation, if any, noting that if compliance is required then compliance must be met. Durham would only be absolved to the regulation changes, if any, should these changes not apply to them.

**4. UPDATE ON ENVIRONMENTAL ASSESSMENT AND CERTIFICATE OF APPROVAL COMMITMENTS**

and

**5. ENVIRONMENTAL ASSESSMENT CONDITION 5: COMPLIANCE REPORTING**

Agenda items 4 and 5 were presented by Gioseph Anello, Manager, Waste Planning and Technical Services.

An overview of the various plans required for submission to the MOE was presented to the Committee, including an update on those plans approved by the MOE.

It was confirmed that at the appropriate time, a draft of the Community Communications Plan will be provided to EFWAC for review and comment.

In relation to the construction timeline, it was questioned if any penalties were incurred, with respect to the Project Agreement, due to the delay in construction start from fall 2011 to winter 2012, and when receipt of the building permit applications were expected.

Clarification was provided that the timelines were predicated on the Notice to Proceed and therefore provided as best estimate only – no penalties were incurred. The permitting program will begin concurrent with construction (phased) and it is Covanta's responsibility to apply for the permits.

**Project Team to  
provide draft to the  
EFWAC**

It was requested by a Committee member that Covanta's schedule be provided to the EFWAC. Upon further discussion, it was determined that the schedule would be requested from Covanta, however, should one not be able to be made available to the Committee, a summary of key milestone dates be provided instead, if possible.

The EFWAC were advised that a Waste Management By-law (46-2011) was passed at Regional Council in June 29, 2011, and two by-law officers have been hired.

Discussion ensued with regard to the 40 month construction timeline. The Committee was advised that the schedule submitted is more aggressive, with an anticipated completion prior to the contractual timeline of 40 months. It was noted however, that the schedule changes as events change and the current timeline is used as a guideline only.

The Committee was advised that AECON was part of the bid team with a two year contractual agreement, and extended from April 2009. Covanta had until the end of 2010 to close with AECON, which they did not do, and now have six firms applying to this position. Covanta is expected to award the tender in December 2011. It was confirmed that there is no delay to the project due to this change.

It was clarified for the Committee that the project website is [www.durhamyorkwaste.ca](http://www.durhamyorkwaste.ca)

It was determined that as no further reports were anticipated to be received prior to year end, the next EFWAC meeting would not be scheduled until 2012, at which time members would be made aware of upcoming key milestones and plans for review by the Committee.

Meeting adjourned.

**Project Team to  
inquire**

## **PRESENT**

Ben Kester, Director of Public Works, Township of Uxbridge  
Brian Anthony, Director, Public Works, City of Vaughan  
Suzanne Beale, Director of Public Works, Town of Whitby  
David Crome, Director of Planning, Municipality of Clarington (Alternate)  
Michelle Whitbread, Coordinator, Parks and Environmental Services, City of Oshawa (Alternate)  
Wendy Bracken, Durham Environment Watch (Alternate)  
Linda Gasser, Zero Waste 4 Zero Burning  
Doug Anderson, DurhamCLEAR  
Chris Darling, Director of Development Review and Regulation, Central Lake Ontario Conservation Authority  
Mirka Januszkiewicz, Director, Waste Management, The Regional Municipality of Durham  
Laura McDowell, Director, Environmental Promotion and Protection, The Regional Municipality of York

## **Project Team**

Dave Gordon, Manager, Waste Management Program Planning and Policy, The Regional Municipality of York  
Giuseppe Anello, Manager, Waste Planning and Technical Services, The Regional Municipality of Durham  
Greg Borchuk, Project Manager, Waste Management, The Regional Municipality of Durham  
Lyndsay Waller, Operations Technician, The Regional Municipality of Durham

## **Other**

Susan Cumming, Cumming + Company, EFWAC Facilitator  
Ian Parrott, Manager, Approval Services, Ministry of the Environment  
Dan Orr, Manager, Technical Support Section, Ministry of the Environment  
Ariane Heisey, Supervisor, Environmental Assessment and Approvals Branch, Ministry of the Environment  
Dave Fumerton, District Manager, Ministry of the Environment (Observer)  
Sandra Thomas, District Supervisor for the York Durham District Office, Ministry of the Environment (Observer)  
Ken Gorman, Director, Environmental Health, The Regional Municipality of Durham (Observer)  
Kerry Meydam, Durham Environment Watch (Member)

## **REGRETS**

Rob Flindall, Director of Engineering and Public Works, Township of King (Member)  
Robert Magloughlen, Director of Engineering and Public Works, Town of Georgina (Member)  
Terry Ricketts, Director, Environmental Services, Town of Richmond Hill (Member)  
Joe La Marca, Director, Health Protection Division, The Regional Municipality of York (Observer)  
Paul Whitehouse, Director, Public Works, Town of Whitchurch-Stouffville (Member)  
Christopher Kalimootoo, Director of Engineering and Environmental Services, Town of East Gwillimbury (Member)  
Peter Loukes, Director of Operations, Town of Markham (Member)  
Claudia Marsales, Manager, Waste Management, Town of Markham (Alternate)  
Ilmar Simanovskis, Director of Infrastructure and Environmental Services, Town of Aurora (Member)  
Brian Jones, Director, Public Works Services, Town of Newmarket (Member)  
Faye Langmaid, Manager of Special Projects, Municipality of Clarington (Member)  
Ian Roger, Director of Public Works and Parks, Township of Scugog (Member)  
Murray Gale, Manager of Solid Waste, Town of Whitby (Alternate)  
Dave Meredith, Director of Operations and Environmental Services, Town of Ajax (Member)  
Thomas Gettinby, CAO and Municipal Clerk, Township of Brock (Member)  
Nick Colucci, Director, Public Works, Township of Brock (Alternate)  
Jacob Mantle, Councillor Ward 4, Township of Uxbridge (Alternate)  
Dhaval Pandya, Coordinator of Transportation Engineering, City of Pickering (Member)  
Tracey Ali, Zero Waste 4 Zero Burning (Alternate)



Environmental Approvals for Waste Management Projects  
Presentation to the Durham-York EFW Advisory Committee  
Ministry of the Environment

October 27, 2011

# Purpose

- To provide an overview of:
  - The role and responsibilities of the Ministry with respect to waste management projects.
  - The Environmental Assessment (EA) and Certificate of Approval (CofA) Approvals processes and how they are related.
  - The Ministry's Inspection and Compliance program.

# Ministry of the Environment Mandate

- Responsible for protecting clean and safe air, land and water to ensure healthy communities, ecological protection and sustainable development for present and future generations of Ontarians.
- Responsible for setting standards and developing guidelines for air, water and land to ensure environmental protection.
- Establish and maintain an approvals and permitting program to ensure that facilities we regulate meet these standards.
- Deliver an inspection and compliance program to ensure that facilities operate in accordance with all applicable regulations and standards.

# Overview of Environmental Assessment and Certificate of Approvals Process

- Environmental Assessment
  - Systematically identifies and evaluates the potential environmental effects of a project including how potential impacts can be managed and determines whether the undertaking should be allowed to proceed.
  - Regulation 101/07 (*Waste Management Projects*) sets out Environmental Assessment requirements for waste management projects. Projects are screened into one of three process streams [Environmental Assessment Act (EAA) exempt, Environmental Screening required, or Individual EA required].
- Certificate of Approval
  - Contains enforceable requirements for each facility to ensure the protection of human health and the natural environment.
  - All applications must include supporting technical information that demonstrates compliance with applicable environmental regulations and emission limits.

# Overview of Environmental Assessment and Certificate of Approvals Process

- Certificate of Approvals (con't)
  - Regulation 419/05 (*Air Pollution – Local Air Quality*) imposes point of impingement (POI) air quality standards for a number of contaminant emissions
  - Guideline A7 entitled “Air Pollution Control, Design and Operation Guidelines for Municipal Waste Thermal Treatment Facilities”.
- Compliance and Enforcement (Post-Approval)
  - Inspections are conducted to ensure that businesses are complying with regulations and the conditions of their Certificate of Approval

# Environmental Assessment Approvals Process

- The Region of Durham volunteered to complete an Individual EA for this project.
- Terms of Reference (ToR) Submission (*December 31, 2005*)
  - Framework for the preparation and evaluation of the Environmental Assessment to meet the requirements of the Environmental Assessment Act. Defines what will be studied in the Environmental Assessment. The Terms of Reference was developed in consultation with the public. Approved in March 2006.
- Environmental Assessment Submission (*July 31, 2009*)
  - Following initial public consultation during a 7 week public comment period, an amended Environmental Assessment was submitted on November 27, 2009.

# Environmental Assessment Approvals Process

- Notice of Completion (*February 2010*)
  - This included the Ministry evaluation of the Environmental Assessment submission and took into account comments received during the public comment period. Ministry Review is published and made available to the public for a 5 week comment period.
- Environmental Assessment Decision (*November 3, 2010*)
  - The extensive review conducted by the Ministry, as well as public comments received on the Ministry review, led up to the Minister's Decision
  - The Minister of the Environment approved the Environmental Assessment subject to a number of strict conditions that will ensure the safe and environmentally responsible operation of the facility.

# Conditions of Environmental Assessment Approval

## Key Conditions:

- Ambient Air Monitoring and Reporting
- Emissions Monitoring
- Air Emissions Operational Requirements
- Daily Site Inspections, Daily Record Keeping, Third Party Audits
- Spill Contingency and Emergency Response Plan
- Odour Management and Mitigation
- Noise Monitoring and Reporting
- Ground and Surface Water Monitoring and Reporting
- Community Involvement
- Advisory Committee
- Types of Waste and Service Area
- Waste Diversion

# Certificate of Approval (CofA) Approvals Process

- Pre-consultation (*November 2010 – March 2011*)
  - Pre-consultation allowed Durham-York to meet with the Ministry to discuss the Certificate of Approval process and determine what documentation will be required to be submitted for review
- Application Submission (*March 3, 2011*)
  - Durham-York submitted applications to the Ministry for the following media:
    - Air Emissions (s.9 *Environmental Protection Act*)
    - Waste Disposal (s.27 *Environmental Protection Act*)
    - Wastewater Management (s.53 *Ontario Water Resources Act*)
- Information Posting (*May – June 2011*)
  - A notice was posted on the Environmental Registry to inform the public that applications for Certificate of Approval were submitted by Durham-York
  - Copies of all applications were made available to the public for viewing and comment

# Certificate of Approval (CofA) Approvals Process

- Engineering Review (*March – June 2011*)
  - A detailed technical review by engineers at the Ministry was undertaken to ensure that all data and emissions calculations were carried out correctly and demonstrate compliance.
  - All comments received from the public were taken into consideration during the engineering review.
- Certificate of Approval Issued (*June 28, 2011*)
  - Durham-York was issued a multi-media Certificate of Approval which included a number of conditions which are designed to ensure the safe operation of the facility.

# Certificate of Approval

## Key Conditions:

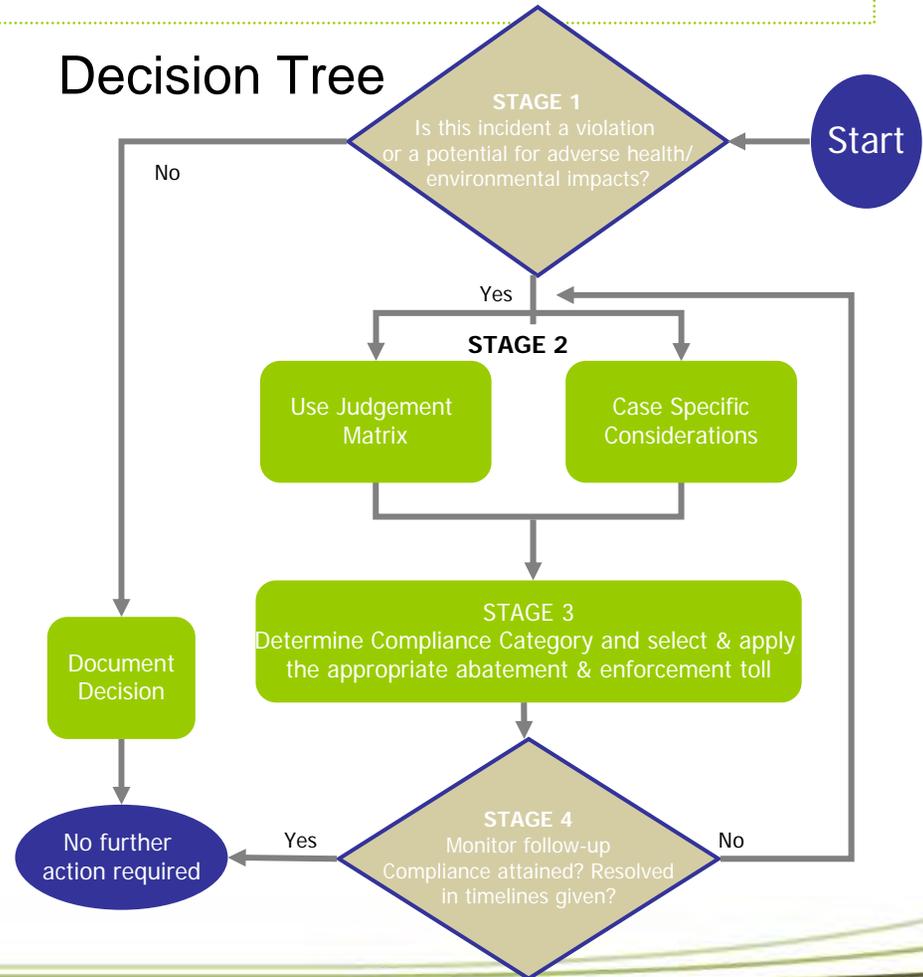
- Imposes strict in-stack limits that are more stringent than our recently revised Guidelines for Energy from Waste facilities;
- Imposes monitoring requirements that consist of both annual in-stack monitoring for contaminants as well as continuous monitoring for many process parameters;
- Additional requirements to conduct soil testing before and after operations begin;
- Conditions requiring regular reporting to the Ministry and making information available to the public via the Advisory Committee and a public website;
- Conditions requiring the owner and operator to develop and operate the facility that minimizes any impact on the community and the environment (e.g. litter, odour, traffic, noise).

# Environmental Compliance

- The ministry expects companies and individuals to operate in compliance with all applicable environmental laws and authorizing documents. The York Durham District Office is responsible for ensuring companies and individuals comply with these laws.
- The district office is responsible for inspections, abatement and enforcement. Announced and unannounced inspections and complaint response are conducted by Environmental Officers to ensure compliance with the conditions of the Certificate of Approval and all other applicable environmental legislation.
- The local district office is also responsible for responding to incidents, such as; spills, odour/noise complaints etc to ensure facilities are being operated in a manner that is protective of the environment and human health.
- Where non-compliance is identified, the district determines the appropriate compliance or enforcement option to ensure the facility acts quickly to address the violation, mitigate any impacts and take every practical measure to prevent the recurrence of the incident. There are a broad array of abatement measures and tools available to EO's and set out in environmental legislation to ensure compliance.
- A representative of the district office attends the Advisory Committee, as an observer.

# Compliance Approach

- A step-by-step process is followed to assist in selecting the most appropriate abatement and enforcement tools to use when responding to an incident or non-compliance.
- In many instances, the response may involve a combination of tools.
- This process, guides ministry staff through an evaluation of the incident by using an Informed Judgement Matrix to classify the severity of the incident, and then applying case specific considerations to determine the most appropriate compliance approach and/or enforcement tools to be utilized



# Post-Approvals Process

- The Environmental Assessment Notice of Approval requires the development of a number of specific documents which are now currently under development. These include:
  - Compliance Monitoring and Reporting Plans;
  - A Complaint Protocol;
  - A Community Communications Plan;
  - An Ambient Air Monitoring and Reporting Plan;
  - An Odour Management and Mitigation Plan;
  - A Noise Monitoring and Reporting Plan; and
  - A Groundwater and Surface Water Monitoring Plan.
- In addition, the Certificate of Approval also imposes a number of specific conditions which require submission of further information. These include:
  - Annual Report (summarizes operations from the previous calendar year)
  - Third Party Audit (includes recommendations to improve the facility operations)

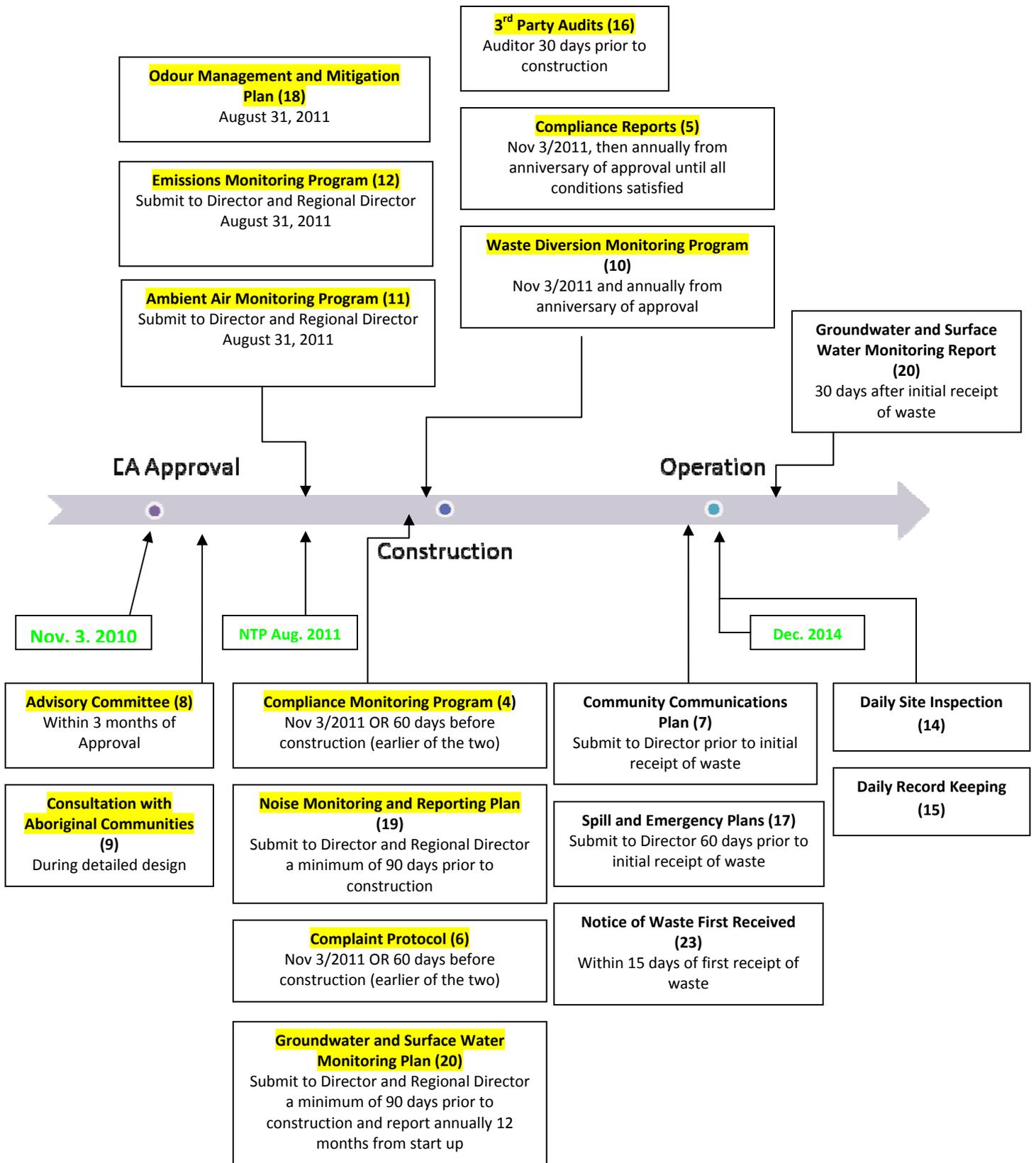
## Information Available

- E-Laws: <http://www.e-laws.gov.on.ca>
  - Environmental Assessment Act, O. Reg. 101/07 – Waste Management Projects
  - Environmental Protection Act, O. Reg. 419/05 – Air Pollution - Local Air Quality
  - Ontario Water Resources Act
- Ministry of the Environment web site: [www.ene.gov.on.ca](http://www.ene.gov.on.ca)
  - Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario
  - Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario
  - Code of Practice: Consultation in Ontario's Environmental Assessment Process
  - Guideline A-7: Air Pollution Control, Design and Operation Guidelines for Municipal Waste Thermal Treatment Facilities)

Environmental Bill of Rights Registry web site: [www.ebr.gov.on.ca](http://www.ebr.gov.on.ca)

- Copies of the Certificate of Approval – EBR Registry Number 011-3927

# EFW EA Conditions Submission and Reporting Requirements



# **Meeting #5 Agenda**

**Advisory Committee Annual Report 2012**

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# REVISED AGENDA

## Energy from Waste Advisory Committee (EFWAC)

### Meeting #5

EFW Advisory Committee (EFWAC)	
<b>SUBJECT</b>	Meeting #5
<b>MEETING DATE</b>	Wednesday, July 18 at 1:00 PM
<b>LOCATION</b>	The Regional Municipality of Durham Headquarters 605 Rossland Road East, Whitby – Meeting Room LL-C
<b>AGENDA OR REMARKS</b>	<ol style="list-style-type: none"><li><b>Welcome and Introductions</b> <i>Review of Meeting #4 Notes</i> <i>Follow up with Ian Parrott, MOE</i></li><li><b>Energy from Waste Project Update</b></li><li><b>Presentation of Doug Anderson, DurhamCLEAR on Declining Waste Volumes (10 minutes)</b></li><li><b>Presentation of Libby Racansky on behalf of Friends of Farewell (FOF) on Mitigation of the Project (10 minutes)</b></li><li><b>Third Party Audit</b></li><li><b>EFWAC Terms of Reference and EFWAC Operation Since Inception at Request of Linda Gasser</b></li><li><b>Meeting Schedule</b></li><li><b>Meeting Adjourns</b></li></ol>

Please contact Facilitator Sue Cumming, MCIP RPP, Cumming+Company at 866 611-3715 or cumming1@total.net with any questions.

# **Meeting #5 Correspondence**

**Advisory Committee Annual Report 2012**

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September 18, 2012

Mr. Ian Parrott  
Manager, Certificate of Approval Review Section  
Environmental Assessment and Approvals Branch  
Ontario Ministry of the Environment  
2 St. Clair Avenue West, Floor 12 A  
Toronto, Ontario  
M4V 1L5

Dear Mr. Parrott:

Re: Energy from Waste Advisory Committee, follow-up from October 2012 Meeting

At the meeting of the EFWAC on October 27, 2011, several members of the EFWAC spoke of their concerns relating to particulate emission limits and their view about inconsistencies between what is reported in the EA as set in the conditions of EA Approval with the emissions permitted in the Certificate of Approval. There resulted a discussion about the health risk conclusions related to the emissions variation noted in the Certificate of Approval. At the meeting MOE advised that they had determined that the emissions permitted in the Certificate of Approval would not affect the conclusions regarding the health risk reached in the EA. Further information on the specific methodology and calculations taken by MOE to reassess health risk was requested. MOE advised that information about the MOE review could be provided to EFWAC.

As a follow-up to that meeting, would you kindly share an explanation of how the MOE reconciled the particulate matter emissions limits between the EA and CofA processes and their impacts on the human health risk assessment.

Do not hesitate to contact the undersigned with any questions.

Yours very truly,  
Cumming+Company

Sue Cumming, MCIP RPP  
EFWAC Facilitator  
Cumming+Company

c.c. Members of EFWAC  
Project Team

# **Meeting #5 Minutes and Presentations**

**Advisory Committee Annual Report 2012**

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# Energy from Waste Advisory Committee (EFWAC) Meeting #5

## MINUTES (APPROVED)

<b>SUBJECT:</b>	Energy from Waste Advisory Committee Meeting #5	
<b>ATTENDEES:</b>	Please refer to page 5 for complete listing.	
<b>LOCATION:</b>	The Regional Municipality of Durham, Meeting Room LL-C 605 Rossland Road East, Whitby	
<b>DATE AND TIME:</b>	Wednesday, July 18, 2012 at 1 p.m.	
	<b>ITEM</b>	<b>ACTION</b>
	<p><b>1. <u>WELCOME AND INTRODUCTIONS</u></b></p> <p>Sue Cumming, independent Facilitator, welcomed the members of the Committee and the members of the public to the fifth meeting of the Energy from Waste Advisory Committee (EFWAC).</p> <p>The Facilitator confirmed quorum had not been obtained. The Facilitator directed that the meeting will proceed, however, without quorum, there would not be an opportunity to vote on meeting decisions, should any arise.</p> <p>Each committee and staff member in attendance introduced themselves.</p> <p>The Facilitator reviewed the Committee's ground rules.</p> <p>The proposed Agenda was reviewed with the Committee. The Facilitator advised that at the suggestion of the MOE, a presentation by Friends of Farewell, Libby Racansky and Pam Callus, has been included on the Agenda as Item 4 to discuss mitigation of the EFW Project.</p> <p>The Agenda was accepted as presented.</p> <p><u>Review of Meeting Notes #4</u></p> <p>Due to the recent receipt of the meeting notes from EFWAC Meeting #4, the Facilitator requested members to submit any revisions and comments to Melodee Smart with a copy to Sue Cumming over the next two weeks.</p>	<p><b>Members' revisions and comments due to Melodee with copy to Sue by August 3</b></p>

A member of the Committee questioned if quorum was obtained at Meeting #4. The Facilitator confirmed that 11 members, being quorum, were present, however, further advised that quorum was lost halfway through the meeting as one member had to leave early. Another member questioned if quorum was reached at the beginning of the meeting, was quorum not considered obtained for the remainder of the meeting. The Facilitator advised that she would verify the rules regarding maintaining/losing quorum and update the Committee at the next meeting.

Follow Up with Ian Parrot, MOE

As a follow-up to Meeting #4, MOE advised they had determined that the emissions permitted in the Certificate of Approval would not affect the conclusions regarding the health risk reached in the EA. Further information on what work was done by MOE to reach this conclusion was requested.

The Facilitator confirmed that she had previously contacted the MOE and received verbal confirmation that the members' questions had been addressed through a subsequent meeting held with several members of EFWAC.

The Facilitator later learned that several members of EFWAC did meet with MOE staff in November 2011 to discuss the Ambient Air Monitoring Plan and has been advised that no discussion of the Air Emissions Monitoring Plan took place. There remains an expectation for information relating to MOE's review of the health assessment.

The Facilitator will draft a letter to the MOE respectfully requesting a response to the outstanding item. A member of the Committee questioned the Facilitator if she was clear on the issue. The Facilitator confirmed that she would first forward a draft to the members of the Committee before sending the letter to MOE.

**The Facilitator will investigate and confirm rules concerning EFWAC quorum at Meeting #6**

**The Facilitator will draft a letter to the MOE as follow up to Meeting #4 and forward to the EFWAC for review**

**2. ENERGY FROM WASTE PROJECT UPDATE**

Presentation by Gioseph Anello, Manager, Waste Planning and Technical Services

An EFW Update PowerPoint presentation was provided to the Committee (Attachment No. 1).

A timeline overview explaining that following issuance of the Notice to Proceed received on August 17, 2011, contractually, there are 1,215 days for the facility to attain operation status (December 2014). The current schedule anticipates an early completion date of August 2014

It was further explained to the Committee that the Project Agreement was built around milestones, and Milestone 3 for the Completion of Site Preparation, is expected in July 2012, followed by Milestone 5, Completion of 75% Design, in late fall 2012 and Milestone 4, Completion of Foundations, by spring 2013.

The EFWAC was advised that on May 23, 2012, Durham provided an EFW budget update report to Council. Included in this update was notification of an approximate \$11 million cost increase due to HST (\$5M), escalation (\$3M) and natural gas

service connection (\$3.2M). The update also included confirmation that the project remains within the approved project budget.

The Construction Plan, as presented to the Committee, is on track for completion in 2014.

An update was also provided on the status of MOE submission plans, advising that the Emissions Monitoring Program is still being reviewed by the MOE. Further, the draft Community Communications Plan is due to the MOE prior to receipt of waste at the facility and is anticipated to be ready for review and comment in the fall 2012, the Spill and Emergency Plans are due to the MOE 60 days prior to the facility's initial receipt of waste and will be prepared for fall 2013 and the Notice of Waste First Received is due to the MOE within 15 days of first receipt of waste and will be prepared for spring 2014.

Discussion ensued with regard to the process of updating the EA Condition submissions following the MOE's review and prior to their approval. It was confirmed that the Committee is given the opportunity to review and provide comments on the draft plans and that the project team has a further obligation to consult with the MOE. Revisions/comments are incorporated by the Project Team as appropriate. Final Plans are posted to the website.

It was confirmed that the MOE's correspondence of April 11, 2012, and the May 8 revised draft of the Ambient Air Monitoring Program Plan would be posted to the project website July 18.

A member of the Committee requested clarification on Durham and York's respective authorization for the cost increases presented. York confirmed that contingency and 50/50 oversizing funding has already been authorized by York Council. Durham advised that the cost estimate of \$3.2 million was provided by Enbridge for utilities works, and confirmed that if additional funding is required, Durham will seek approval from Council.

In response to a Committee member's inquiry on the status of when the MOE would be returning the Emissions Monitoring Program, it was confirmed that the Project Team has not yet received any comments from the MOE and that they could not comment on the status of the report on behalf of the MOE.

**Project Team to provide to EFWAC and post all MOE correspondence regarding direction on submissions**

**3. PRESENTATION BY DOUG ANDERSON, DURHAMCLEAR, ON DECLINING WASTE VOLUMES**

Doug Anderson provided a PowerPoint presentation on declining waste volumes and advised that a copy of the presentation would be posted on the DurhamCLEAR and accessible at the following link:

<http://www.durhamclear.ca/sites/default/files/Efwac.pdf>

Mr. Anderson stated that the current 53% waste diversion rate reached by Durham is lower than the projected 60% by 2011 in the Deloitte Business Case of 2008, and 72.7% by 2015 as projected in the Golder and Associates report and presented to Durham Council in 2009.

Mr. Anderson stated that total waste in Durham has dropped by approximately 12,000 tonnes over the last few years, and that the gap between the actual and projected waste volumes by 2015 will be upwards of 150,000 tonnes. Current waste per capita is 14% less than what it was in 2006, and a growing trend of corporations reacting to customer requests to produce less waste in their packaging will only continue.

Mr. Anderson advised that he had presented to the Energy from Waste-Waste Management Advisory Committee (EFW-WMAC), and that the EFW-WMAC requested the Project Team to respond to how Durham can achieve 70% diversion by the early 2020s while still producing waste for an incinerator.

Mr. Anderson advised on York Region's estimated costs per tonnes for different Waste Management (i.e. blue box, yard waste, waste to landfill, waste to EFW). A member of the Committee asked if Durham had comparative financial information. The York representative stated that these cost estimates cannot be utilized without consideration of capital debenture costs. The Project Team advised that the Durham financial information for waste management is reviewed as part of the budget preparation. When the budget information becomes available, the Project Team indicated they could identify where the information is posted.

A member of the Committee discussed how municipalities are seeing total volume of waste leveling out, and advised that consideration to the impacts of light weighting of packaging materials is being addressed. This same member noted that these communities are growing with future population expected.

**Project Team to provide links to financial information when it becomes available as part of the Region's Budget cycle**

#### **4. PRESENTATION BY FRIENDS OF FAREWELL, LIBBY RACANSKY AND PAM CALLUS, ON MITIGATION OF THE EFW PROJECT**

Libby Racansky and Pam Callus, of Friends of Farewell (FOF), provided a PowerPoint presentation and source materials listing to the Committee (Attachment Nos. 2 and 3).

FOF presented recommendations on how the EFW project could reduce the impacts of emissions, and minimize air, water, soil and light pollution. FOF recommended that the natural areas be replanted to help absorb some contaminants and create a viable habitat for species.

FOF further stated they were looking for commitments which included construction of a waterfront trail, a Regional Official Plan target of 30 % forest coverage, Clarington's preservation of natural heritage, promotion of integrity and interaction of Lake Ontario wetlands, achievement of environmental sustainability and support of the creation for the Lake Ontario wildlife corridor.

Following FOF's presentation, discussion ensued with regard to where specific terrestrial or wildlife impacts are addressed in the EA Conditions. The Project Team confirmed that although terrestrial and wildlife were not specifically identified in the EA conditions, appropriate measures were taken when preparing the site for construction as required by the EA commitments. These commitments are listed in the Third Party Audit.



<p>approvals by the Auditor.</p> <p>It was confirmed that conservation authority, municipal building and Site Plan Agreement permits and inspections are not included in Third Party Audits.</p> <p>It was brought to the attention of the Project Team by a Committee member that the Emissions Monitoring Program plan was not included in the Third Party Audit Report in Appendix E. The Project Team confirmed that this will be brought to the attention of the Auditor, and reminded the Committee that this is an independent Auditor. It was also confirmed for the Committee member that EA Commitments are included in the audits.</p>	<p><b>Project Team to bring to the attention of the Auditor the missing reference to the Emissions Monitoring Program Plan</b></p>
<p><b>6. <u>EFWAC TERMS OF REFERENCE (LINDA GASSER)</u></b></p> <p>AND</p> <p><b><u>EFWAC OPERATION SINCE INCEPTION (LINDA GASSER)</u></b></p> <p>It was requested that quarterly meetings be scheduled to enable appropriate review and discussion of the many documents and reports required to be reviewed and/or received by this Committee, and to be updated on the current status of this project. It was noted that the long length of time between meetings impacts the Committee's effectiveness.</p> <p>It was confirmed that minutes would be provided to EFWAC members in a timely fashion as outlined in the Terms of Reference (ToR).</p> <p>It was also requested that, if after the EFWAC has reviewed and provided comment to the Facilitator on the draft minutes, they be circulated to members of Council and be posted on-line, subject to approval at the subsequent meeting. And that final minutes, as approved by the EFWAC, be marked final and forwarded to all members.</p> <p>Discussion ensued with respect to receiving public delegations to the EFWAC meetings and past consideration, as discussed at Meeting #1, concerning this issue, and further, that as an advisory committee, this Committee should allow the presentation of information from a variety of sources.</p> <p>The Facilitator advised that the ToR for the EFW-WMAC Committee specifically includes provisions to hear public delegations. The ToR for the EFWAC do not. There is, however, reference to presentations by the project team and guests. Discussion ensued involving who guests would be, how the Committee would determine if a presentation would be warranted and how these could proceed.</p> <p>Several members noted that they felt the Committee should be able to determine if public delegations could be heard. It was also commented on that at the April meeting, a discussion was never resolved with regard to how this Committee deals with future changes to the ToR.</p>	<p><b>Addressed under Item 7 of this Agenda</b></p> <p><b>Project Team to forward minutes to EFWAC following final approval and post</b></p> <p><b>The Facilitator will review the notes from Meeting #1, seek clarification for delegations to the EFWAC with respect to the ToR, and provide an update at the next meeting</b></p>

## **7. MEETING SCHEDULE**

Further to discussion concerning the formation of two committees, one by the MOE with a more specific mandate to the EFW, and the other by Durham Council, with a broader mandate to waste management, it was determined that the Project Team will review the EA Conditions to reconfirm that the EFWAC is meeting the requirements listed in these Conditions.

The Project Team advised of the next milestones including the Community Communications Plan anticipated in the fall 2012, the next Third Party Audit in April 2013 and the Emergency Response Plan in the fall of 2013.

It was agreed that EFWAC meetings will be arranged at the following times noted below for 2012 and 2013.

**Mid-October 2012**

**Mid-January 2013**

**Early April 2013**

**Late June 2013**

**Mid-October 2013**

Specific date options will be determined and provided to the Committee in order to confirm the above five meetings for 2012 and 2013.

Further to discussion around "a holistic view of energy park", the Project Team clarified for the Committee that the Project Team is responsible for the EFW within specified boundaries, and that this is not part of the EFWAC's mandate.

Meeting adjourned.

**The Project Team and Facilitator will review the EA Conditions and EFWAC ToR to confirm the mandate and intent of both EFWAC and EFW-WMAC Committees**

**Melodee to send date options to the members of the Committee to determine meeting dates for the remainder of 2012 and for 2013**

## **PRESENT**

### **EFWAC**

Ben Kester, Director of Public Works, Township of Uxbridge (Member)  
Michelle Whitbread, Coordinator, Parks and Environmental Services, City of Oshawa (Alternate)  
Faye Langmaid, Manager of Special Projects, Municipality of Clarington (Member)  
Nick Colucci, Director, Public Works, Township of Brock (Alternate)  
Wendy Bracken, Durham Environment Watch (Alternate)  
Linda Gasser, Zero Waste 4 Zero Burning (Member)  
Doug Anderson, DurhamCLEAR (Member)  
Ilmar Simanovskis, Director of Infrastructure and Environmental Services, Town of Aurora (Member)  
Mirka Januszkiewicz, Director, Waste Management, The Regional Municipality of Durham  
Laura McDowell, Director, Environmental Promotion and Protection, The Regional Municipality of York

### **Project Team**

Giuseppe Anello, Manager, Waste Planning and Technical Services, The Regional Municipality of Durham  
Greg Borchuk, Project Manager, Waste Management, The Regional Municipality of Durham  
Luis Carvalho, Senior Project Manager, Capital Planning and Delivery, Environmental Services, The Regional Municipality of York  
Lyndsay Waller, Operations Technician, The Regional Municipality of Durham  
Kristy Brooks, Technical Assistant, The Regional Municipality of Durham

### **Other**

Susan Cumming, Cumming + Company, EFWAC Facilitator  
Dave Fumerton, District Manager, Ministry of the Environment (Observer)  
Sandra Thomas, District Supervisor for the York Durham District Office, Ministry of the Environment (Observer)  
Ken Gorman, Director, Environmental Health, The Regional Municipality of Durham (Observer)  
Joanne Paquette, Manager, Communications (Works)  
Kerry Meydam, Durham Environment Watch (Member)

## **REGRETS**

### **EFWAC**

Rob Flindall, Director of Engineering and Public Works, Township of King (Member)  
Derek Bakshi, Senior Project Manager, Township of King (Alternate)  
Dan Pisani, Director of Operations and Engineering, Town of Georgina (Member)  
Rob Fortier, Operations Manager, Town of Georgina (Alternate)  
Rosanne Fritzsche, Waste Management Coordinator, Town of Richmond Hill (Member)  
George Flint, Manager of Air Quality, Climate Change and Waste Policy, Town of Richmond Hill (Alternate)  
Joe La Marca, Director, Health Protection Division, The Regional Municipality of York (Observer)  
Paul Whitehouse, Director, Public Works, Town of Whitchurch-Stouffville (Member)  
Christopher Kalimootoo, Director of Engineering and Environmental Services, Town of East Gwillimbury (Member)  
Peter Loukes, Director of Operations, Town of Markham (Member)  
Claudia Marsales, Manager, Waste Management, Town of Markham (Alternate)  
Brian Anthony, Director, Public Works, City of Vaughan (Member)  
Brian Jones, Director, Public Works Services, Town of Newmarket (Member)  
Ian Roger, Director of Public Works and Parks, Township of Scugog (Member)  
Suzanne Beale, Director of Public Works, Town of Whitby  
Murray Gale, Manager of Solid Waste, Town of Whitby (Alternate)  
Dave Meredith, Director of Operations and Environmental Services, Town of Ajax (Member)  
Thomas Gettinby, CAO and Municipal Clerk, Township of Brock (Member)  
Jacob Mantle, Councillor Ward 4, Township of Uxbridge (Alternate)  
Dhaval Pandya, Coordinator of Transportation Engineering, City of Pickering (Member)  
Jamie Bronsema, Director of Parks and Environmental Services, City of Oshawa (Member)  
David Crome, Director of Planning, Municipality of Clarington (Alternate)  
Tracey Ali, Zero Waste 4 Zero Burning (Alternate)  
Chris Darling, Director of Development Review and Regulation, Central Lake Ontario Conservation Authority  
Perry Sisson, Director of Engineering and Field Operations, Central Lake Ontario Conservation Authority

# EFWAC

## EFW UPDATE

July 18, 2012

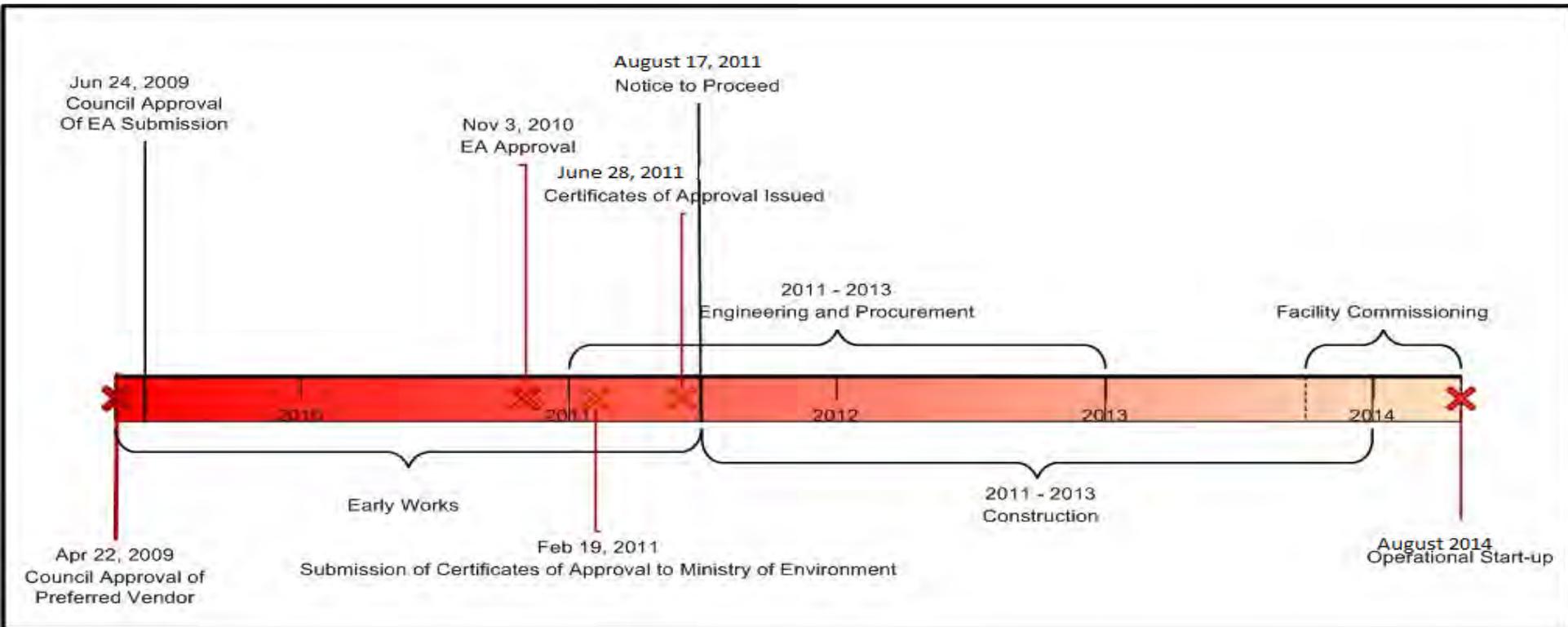
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Gioseph Anello, M.Eng., P.Eng., PMP  
Manager of Waste Planning and Technical Services  
Works Department  
The Regional Municipality of Durham





# Durham/York EFW Project Timelines 2009 - 2014



# Milestones

- Milestone 3: Completion of Site Preparation
  - Estimated completion; July 2012
- Milestone 4: Completion of Foundations
  - Estimated completion; Spring 2013
- Milestone 5: Completion of Design 75%
  - Estimated completion November 2012



# EFW Budget Update

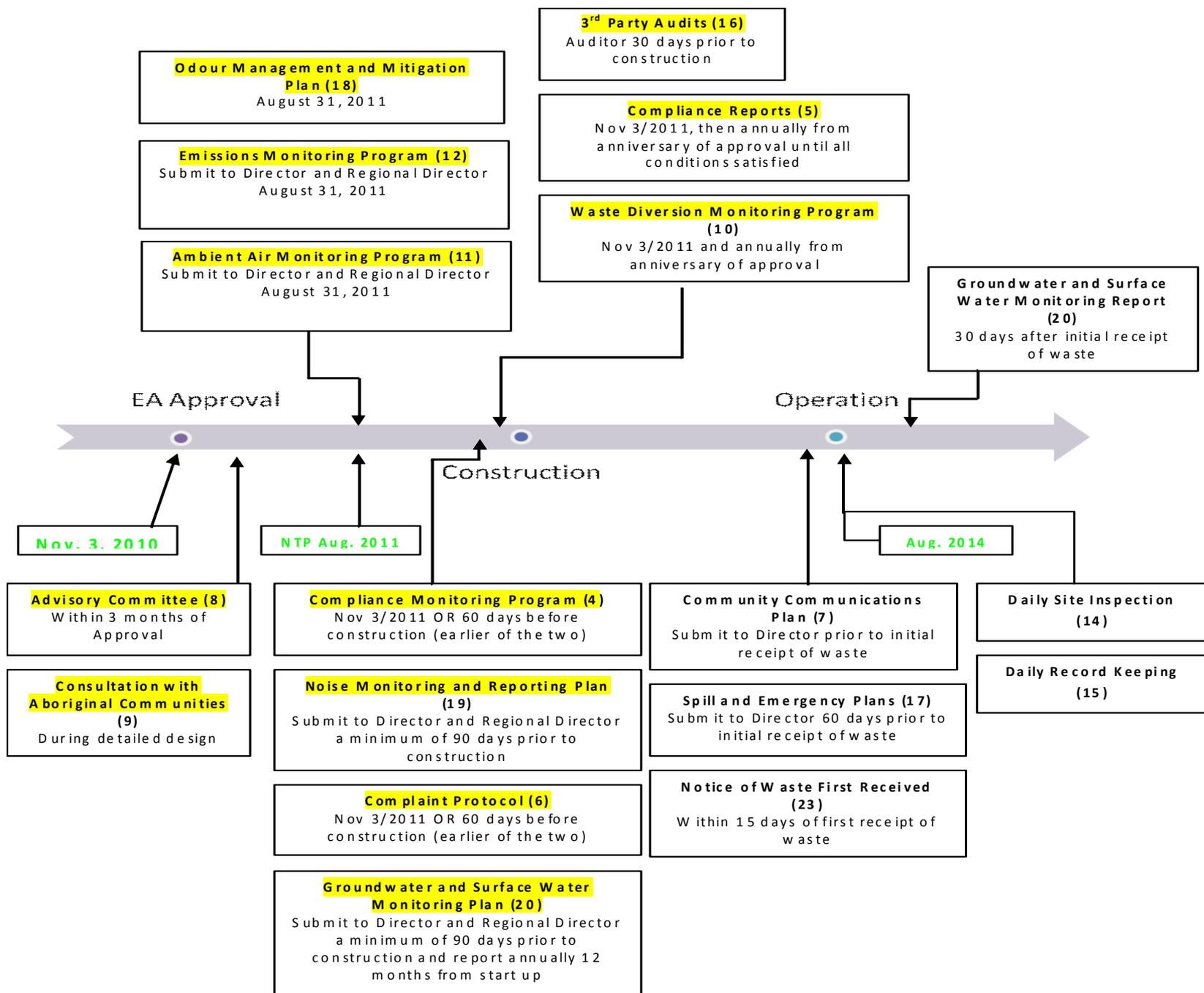
- The EFW project remains within the approved budget.
- Durham approved Capital Budget: **\$214.73 M**
- Changes
  - HST
  - Escalation
  - Utilities (Natural Gas)











# EA

- Community Communications Plan
  - Draft Plan: Fall 2012
- Spill and Emergency Plans
  - Fall 2013
- Notice of Waste First Received
  - Spring 2014



**QUESTIONS????**



# EFW Advisory Committee

July 18, 2012

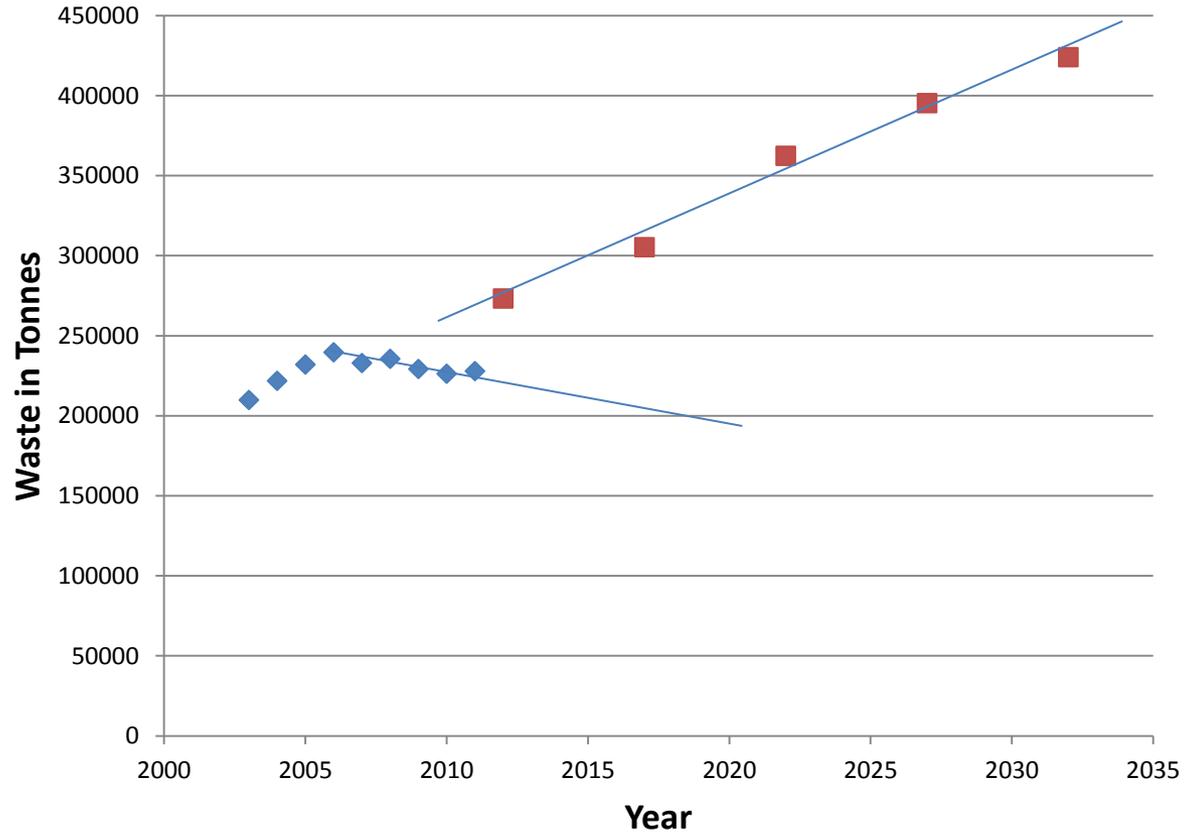
Doug Anderson, Whitby

# Region of Durham: Diversion Rate 2005-2011



YEAR	2005	2006	2007	2008	2009	2010	2011
Blue Box Recycling	47,056	55,424	55,485	53,967	50,765	50,908	53,157
Food Waste Composting	2,883	13,976	26,211	25,907	27,454	27,593	26,865
Yard Waste Composting	18,338	20,483	19,408	23,753	24,895	23,074	23,744
Combined Composting/ Grasscycling Credit	8,746	9,137	8,950	9,908	10,158	9,839	9,887
Reuse Programs	6,295	6,752	6,618	5,591	5,977	6,145	6,589
Garbage Disposal	148,709	133,895	116,285	116,464	109,999	108,000	107,670
<b>Total Waste</b>	<b>232,027</b>	<b>239,667</b>	<b>232,957</b>	<b>235,590</b>	<b>229,248</b>	<b>226,262</b>	<b>227,910</b>
Waste Diversion	36%	44%	50%	51%	52%	52%	53%

## Actual and Projected Waste Volumes - Tonnes



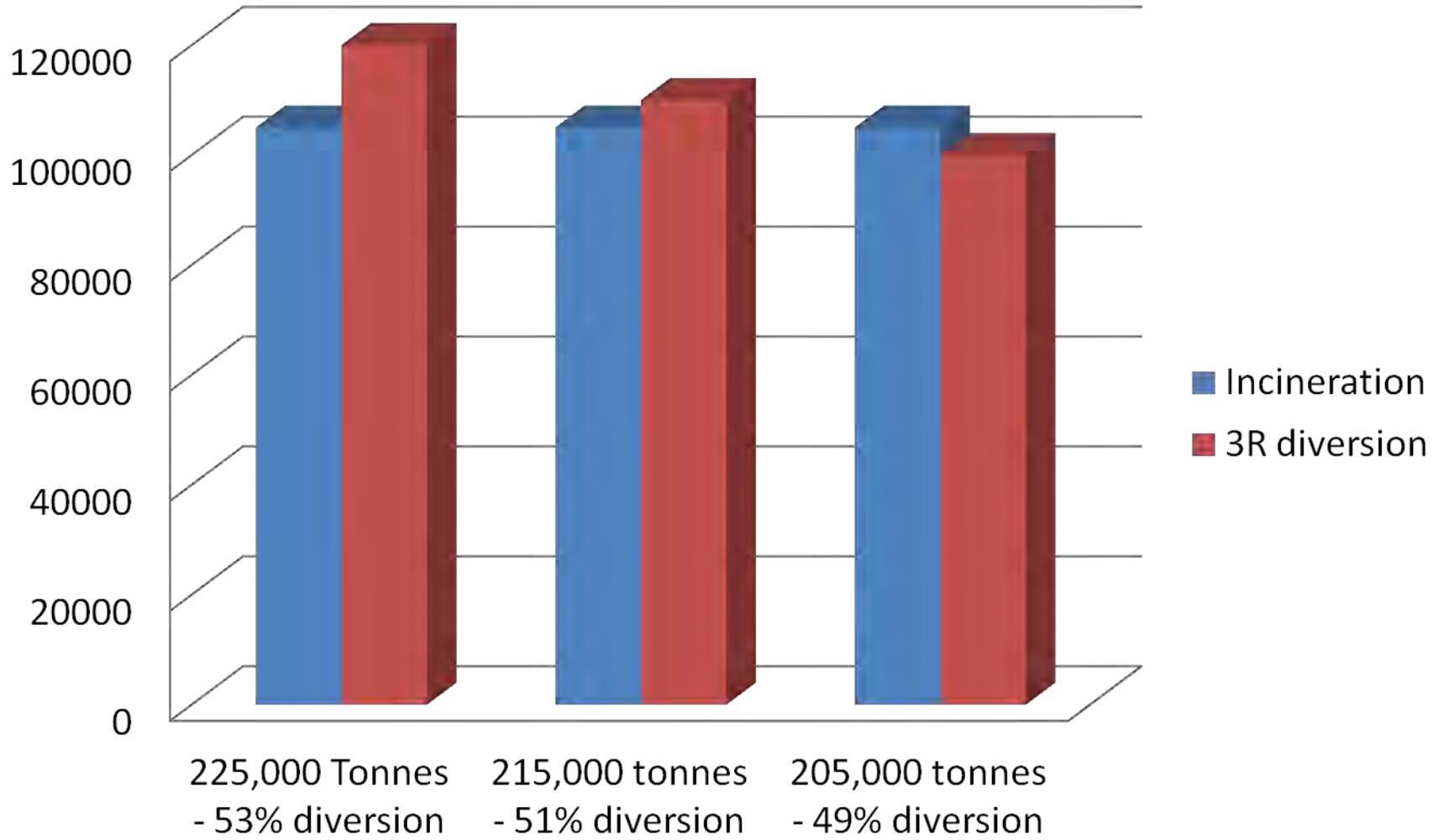
◆ Actual Waste    ■ Deloitte Waste Projection

# “Boxed In”

- Contract with Covanta requires the Region to supply between 100,000 and 110,000 tonnes of ‘residual’ waste per year
- ‘Put or Pay’ – if the Region doesn’t supply the trash, they pay anyway – standard for incineration contracts
- If total waste drops then recycling has to be curtailed in order to maintain ‘residual’ within “the box”

21.1 Only non-hazardous municipal solid waste from municipal collection within the jurisdictional boundaries of the Regional Municipality of Durham and the Regional Municipality of York may be accepted at the site.

## Affects of Declining Waste



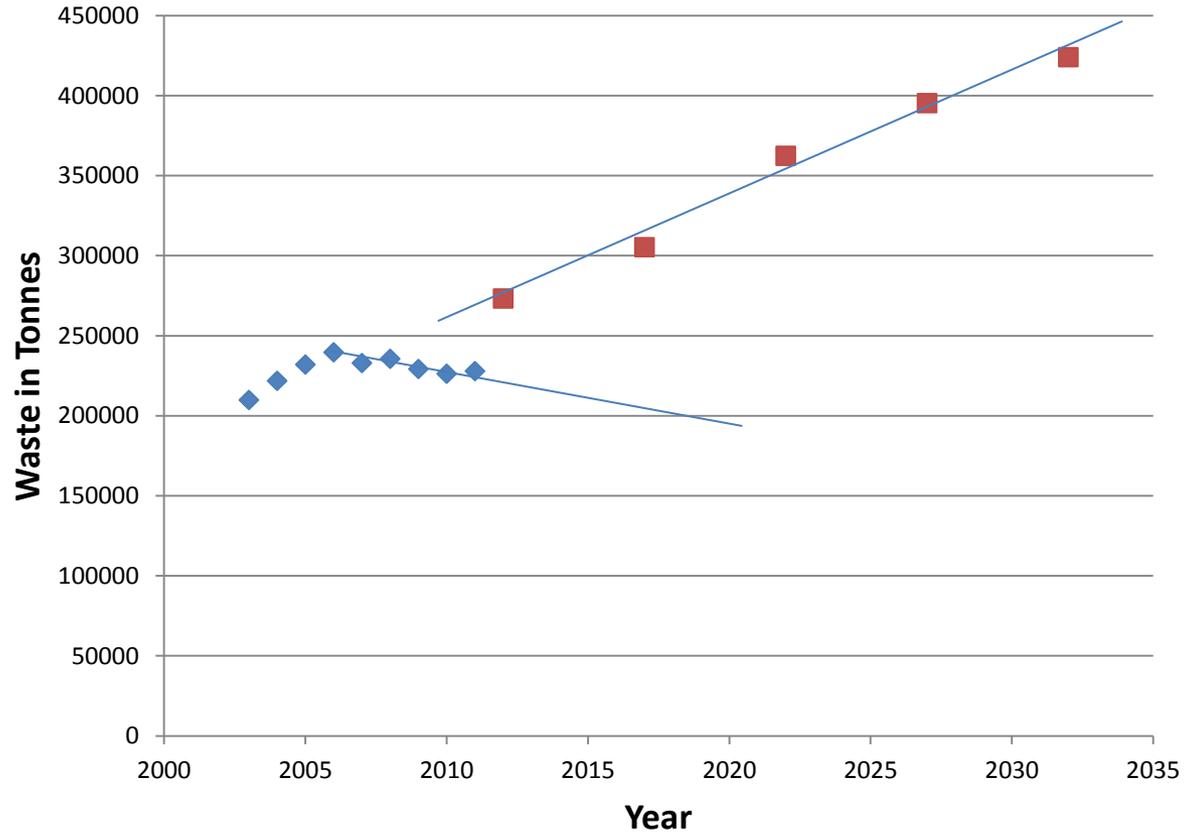
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Waste Diversion	36%	44%	50%	51%	52%	52%	53%

'Residual Waste' - within the 'box'

## Actual and Projected Waste Volumes - Tonnes



◆ Actual Waste    ■ Deloitte Waste Projection

# Waste per capita Durham

- 2006 - 408 Kg
  - 2011 - 353 Kg
- 14% reduction  
In 5 years**

# Waste per capita York

- 2006 - 356 Kg
  - 2010 - 339 Kg
- 5% reduction  
In 4 years**

# Ontario waste

WDO waste numbers for all Ontario

## Total Waste

- 2006 - 4,889,019 tonnes
  - 2010 - 4,710,838 tonnes
- 4% reduction  
In 4 years**

## Per capita

- 2006 - 399 Kg
  - 2010 - 370 Kg
- 8% reduction  
In 4 years**

# York Region Report:

Erin Mahoney, Commissioner, Env Services,

to York Region Council Dec. 16, 2010

- Blue Box **\$24 to \$40/tonne**
- Source Separated Organics **\$154 to \$253/tonne**
- Leaf and Yard Waste **\$67 to \$110/tonne**
- CEC Diversion (Re-use-it type centre) **\$153 to \$251/tonne**
- Waste to Landfill **\$96 to \$157/tonne**
- Waste to Dongara **\$123 to \$202/tonne**
- Waste to Durham-York EFW **\$154 to \$312/tonne**

**Incineration is the most expensive** apart from HHW

# Implications

- Durham's diversion rate will gradually fall behind other municipalities
- Cost of incineration will be more than double the costs of recycling – Durham will be paying an increasing amount every year for the waste that could have been recycled - on top of the carrying costs of building the incinerator



# ARTICLE 25 - SUSPENSION OF WORK OR TERMINATION FOR CONVENIENCE

## 25.1 Suspension or Termination by the Owner

- 25.1.1 The Owner may suspend performance of the Work and/or terminate this Agreement at any time and for any reason whatsoever by giving written notice to that effect to the DBO Contractor. Such suspension or termination shall be effective in the manner specified in the notice. Notwithstanding the foregoing, the Owner shall not terminate this Agreement: under this **subsection 25.1.1: (i)** prior to the achievement of Facility Substantial Completion unless the Owner is abandoning the Project; or (ii) during the period between the achievement of Facility Substantial Completion and the day before the tenth (10th) anniversary of the Service Commencement Date, unless the Owner is abandoning the Project. If the Owner terminates this Agreement where it is abandoning the Project, the DBO Contractor shall, if the Owner resumes the Project within three (3) years of the date of such termination, have the right of first refusal to complete the Work and on the same terms as this Agreement, *mutatis mutandis*, including such adjustments to the Lump Sum Price, Total Annual Operating Fee and other provisions as are appropriate and equitable under the circumstances.

## 25.2 DBO Contractor to Suspend Operations

- 25.2.1 Upon receiving the notice of suspension or termination in accordance with the provisions of **subsection 25.1.1**, the DBO Contractor shall suspend or cause the suspension of all operations except those which, in the DBO Contractor's opinion, are necessary for the safety of personnel or for the care and preservation of the Work. Subject to any directions in the notice of suspension or termination, the DBO Contractor shall discontinue or cause to be discontinued the ordering of products, material, Equipment and supplies and shall make reasonable efforts, in the event of termination of this Agreement, to cancel existing orders on the best terms available.

# Current Composition of our Waste

<b>Blue Box materials</b>		
Currently being collected	13	
Currently not being collected	3	
<b>Compostibles</b>		
Currently being collected	31	
Currently not being collected	19	
Backyard composting – estimated	2	
Grasscycling – estimated	3	
Hazardous	1	
WEEE	0.3% (actual 2007)	
Tires	0.3% (actual 2007)	
<b>Other Plastics</b>		
plastic film	9.2	
other	7.0	
polystyrene	1.2	
window glass and glassware	1.5	
mattresses	0.2	
pet waste	1.8	
diapers & sanitary products	2.3% (2008 US EPA)	<a href="http://knowaste.com/">http://knowaste.com/</a>
carpeting	>1% (US EPA estimate)	<a href="http://carpetrecovery.org/">http://carpetrecovery.org/</a>
textiles	0.5	
reusable items	3.6	
hard goods	0.2% (actual 2007)	
construction & demolition	1.4% (actual 2007)	
	<b>103.5%</b>	(greater than 100% due to different sources of information)

<http://DurhamCLEAR.ca>

**Presentation to EFW-WMAC & EFWAC**  
**Wednesday, March 28, 2012, July 18, 2012**



**Libby Racansky**

**Pam Callus**

**Friends of the Farewell**  
**(FOF)**

# **Mitigation, Monitoring and Commitments**



**TO  
REDUCE EMISSIONS AND  
MINIMIZE AIR, WATER,  
SOIL AND LIGHT  
POLLUTION**

# Triggers



## **Covanta's & EFW- WMAC community outreach & TOR:**

- **Include review of sorting, monitoring, mitigation, discussion and advice on community interests, concerns that might affect our quality of life**
- **Ministry's encouragement to bring our issues to EFW-WMAC**
- **Establishment of EFW-WMAC is to ensure that concerns about EFW will be implemented (according to Ministry)**

# Replies from the Ministry

**February 10, 2012:**

As you are aware, the approvals for this project require the establishment of the Energy from Waste Advisory Committee (EFWAC) to ensure that concerns about the design, construction and operation of the facility are considered and mitigation measures are implemented where appropriate. Most of the specific issues that you raised in your letter are topics that should be brought forward to the EFWAC for further discussion and consideration. For example, your suggestions around the planting of trees and vegetation, reconstruction of the Waterfront Trail and lighting are all ones that are within the scope of the EFWAC to consider and I encourage you to take advantage of this to express your concerns and suggestions. Also, the approvals for this project require regular monitoring of soil, ash, groundwater, surface water and air and the EFWAC is the appropriate forum for you to obtain specific details on how this monitoring will be accomplished as the project progresses. Further details regarding the EFWAC may be found at: (<http://www.durhamyorkwaste.ca/project/efw-committee.htm>).

**May 15, 2012:**

Dear Ms. Racansky and Ms. Callus,

Thank you for your letter dated April 27, 2012 in which you raised concerns regarding matters that you brought to the York-Durham Energy from Waste-Waste Management Advisory Committee (EFW-WMAC). I am pleased to hear that you brought these issues to the attention of the EFW-WMAC because, as I said in my previous letter, these are within its scope.

Although the Ministry is not in a position to direct the decisions of the Advisory Committee, I can advise you that it is reasonable to expect that the EFW-WMAC will provide a response to you. My advice is to specifically request a response at the next meeting of the EFW-WMAC.

I hope this addresses the concerns raised in your letter. Should you have further questions, please contact Mr. Ian Parrott, P.Eng., Manager, Approval Services Section, at 416-314-3636 or by e-mail at [ian.parrott@ontario.ca](mailto:ian.parrott@ontario.ca).

Yours sincerely,



Agatha Garcia-Wright  
Director  
Environmental Assessment and Approvals Branch

cc: Ms. M. Clayton, Chair, York-Durham EFW-WMAC  
c/o Ms. M. Smart, Administrative Assistant, Regional Municipality of Durham



Ministry of the Environment

Environmental Assessment and Approvals Branch

2 St. Clair Avenue West  
Floor 12A  
Toronto ON M4V 1L5  
Tel.: 416 314-8001  
Fax: 416 314-8452

Ministère de l'Environnement

Direction des évaluations et des autorisations environnementales

2, avenue St. Clair Ouest  
Étage 12A  
Toronto ON M4V 1L5  
Tél.: 416 314-8001  
Télex.: 416 314-8452

ENV1283MC-2011-1504

May 31, 2011

Ms. Libby Racansky (Friends of the Farewell)  
Ms. Pam Callus  
c/o 3452 Courtice Road  
Courtice ON L1E 2L6

Dear Ms. Racansky and Ms. Callus:

Thank you for your e-mail of May 19, 2011 to the Minister of the Environment regarding the Certificate of Approval application for the proposed Durham/York energy from waste facility in the Municipality of Clarington. I am pleased to respond on behalf of the Minister.

Applications for Certificates of Approval undergo detailed engineering assessments to ensure that facilities are capable of operating in compliance with all applicable ministry standards and legislation. Any public comments received on proposals under review are carefully considered, and as appropriate, stringent terms and conditions are imposed in any approval that is issued by the ministry. Therefore, please be assured that your comments will be considered by ministry staff during the review of the application for the Durham/York energy from waste facility. Moreover, to demonstrate the ministry's commitment to the public consultation process, this proposal has been posted on the Environmental Bill of Rights registry until June 5, 2011, to allow all interested members of the public to submit comments.

Since the ministry considers the potential for cumulative effects under the Statement of Environmental Values, please be advised that your suggestions regarding mitigation of the existing background pollution will be considered during the review of the application for the proposed Durham/York energy from waste facility.

# EFW-WMAC must consider these EA findings



Section 8: Evaluation of "Alternative methods" of Implementing the Undertaking

This would manifest itself in higher concentrations and depositions in some areas due to the persistence of the conditions over the day. It should be noted that the Cobourg wind rose is not reflective of this condition and as such this wind data, as applicable to the Clarington sites, should be viewed with caution.

The great similarity of the climatological station data surrounding the East Gwillimbury site shows that the site should have a climatology which is very similar to the climatological stations, unless there is some localized terrain or other controlling influence. In the area surrounding the East Gwillimbury 01 site there is more terrain variation, and in particular, both the King and Stouffville climatological stations are located in areas with moderate slopes. At the site itself, however, it is not expected that there is a significant microclimate induced by the terrain.

**Conclusion/Summary**

At this preliminary point in the study, and with the data currently available it is expected that the Clarington sites will likely experience elevated concentrations of criteria air contaminants relative to the East Gwillimbury 01 site, due to higher traffic emissions (and proximity to the 400 series highways) and much higher industrial emissions from sources located within 20 km of the sites. The Clarington 04 site may be more highly impacted than the Clarington 01 or 05 sites due to its location predominantly downwind of the St. Marys Cement Plant (the largest industrial emissions source within 20 km of either site).

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**Distance Travelled from Main Source(s) of Waste Generation to Site**

The following information is based on the Report on Potential Traffic Impacts, the Technical Memorandum on Haul Cost Analysis, and the Report on Capital Costs and Operation and Maintenance Costs.

To estimate the distance travelled from the main source(s) of waste generation to a particular site (i.e., haul of a particular annual quantity of waste to a particular site), the various components of haul that comprise the haul scenario were first identified. A haul component is the haul of a particular annual quantity of waste from a particular location to a particular destination in a particular type of truck.

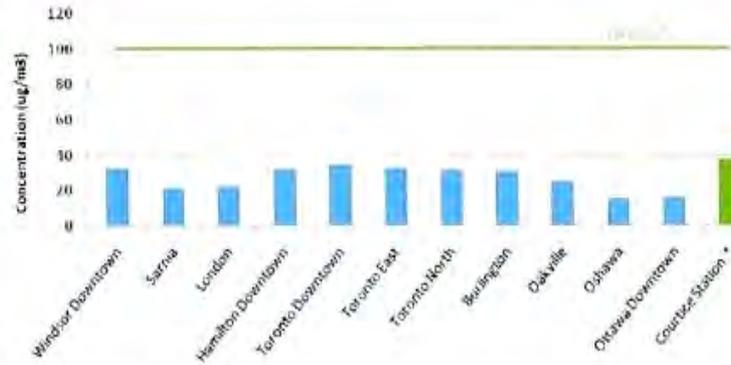
Each scenario was therefore defined in terms of a number of components, where each component is specified in terms of:

- The source and destination of the waste;
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The source and quantity of residual waste to be managed by the base case and alternative case is summarized in Table 8-19 below.



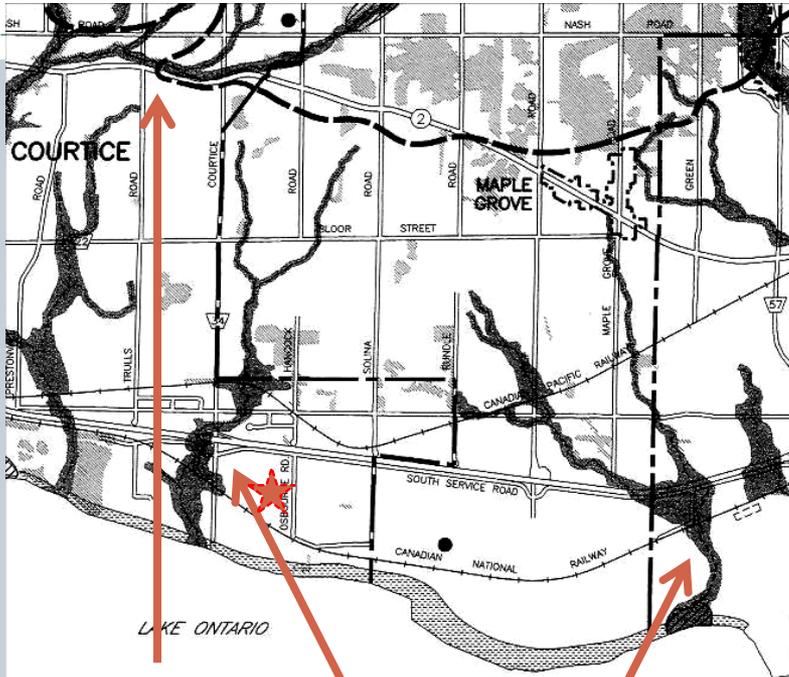
Figure A2-4 NO<sub>2</sub> Annual Means at the Courtice Station and Selected Ontario Cities



**Notes:**

- Courtice Station - 2008 annual mean concentration measured at Courtice Road monitoring station
- Annual means for other Ontario cities - 2007 annual means taken from Air Quality in Ontario 2007 Report Ontario Ministry of the Environment

# Tree planting, to create habitat and linkages (would reflect Ministry's SEV):



Black Creek  
Tooley Creek Darlington Creek  
Hedgerow

Tall grass for Bobolink (Monarch)  
Meadow for Eastern Meadowlark



# Host Community Agreement

## Commitments same as for the CWPC Plant

### HCA Summary

#### Durham Commitments (con't)

- Storm Water Management Facility
- EA for municipal services for Bowmanville Science Park
- Waterfront Trail construction
- Private truck access lane adjacent to CN railway
  - Facility Operator to:
    - comply with ISO 14001 (within 36 months of operation commencement)
    - implement an emergency management plan
    - provide Clarington with annual emissions report



# Commitments for reforestation



- **Regional OP target : 30 % forest cover**
- **Clarington Amendment # 46, 6, Energy Park, 20011:**
  - to preserve significant natural heritage
  - to promote integrity and interaction of Lake Ontario coastal wetlands (in this case Tooley Creek to Raby Head costal wetland )
  - to achieve the goal of environmental sustainability & support the creation of the Lake Ontario Wildlife Corridor between Second Marsh in Oshawa and West Marsh (including hedgerows)
- **MNR recommendations and PPS - increased forest cover around Tooley and Darlington Creeks = reduce runoff**  
**Protection of Species at Risk**



# **EFW-WMAC together with EFWAC could request Region to:**



- **Engage DEAC and Climate Change AC to prepare PLAN of MITIGATION with advice from CLOCA and or MNR**

**This could be achieved by:**

- **cooperation of all involved - Covanta, Clarington, Region, EFW, OPG, Miller Recycling, St. Mary's Cement, Enbgidge, MTO, Police and local residents (farmers) and other groups to achieve community outreach**
- (Evidence of TREE functions: absorb not only carbon dioxide but other pollutants as well; Trees Ontario)**

# Annual Soil and Produce Testing



 York Region  
Residual Waste Study

### Purpose of Baseline Environmental Study

◆ To characterize baseline environmental health risks in the area. Sampling of the following media occurred:

- ◆ Soil
- ◆ Surface Water
- ◆ Sediment
- ◆ Soil Invertebrates
- ◆ Vegetation
- ◆ Small mammals
- ◆ Produce
- ◆ Fish
- ◆ Agricultural Products (Beef, Dairy, Poultry and Eggs) *(to be collected)*

 York Region  
Residual Waste Study

### Produce Sampling Locations



Produce and Other Agricultural Products  
Sampling Locations outside 1 km Radius of the Proposed Site

0.2

# To reduce Light Pollution



**Engineering Dimensions, May/June 2011:**

- **light changes the night environment and is now considered a pollutant**
- **effects of Artificial Light at Night are tied to**
  - cancer**
  - obesity**
  - diabetes**
  - stress & depression**



- **Region could save money if lighting was limited at EFW site by such means as motion sensors**

# **Reduction of Emissions by Post Consumer Sorting**



## **Household Hazardous Waste:**

**Aerosol cans with fluids, antifreeze, batteries, brake fluid, fertilizers, fire extinguishers, fluorescent light bulbs/tubes, fuels, fungicides, gas cylinders/tanks, herbicides, insecticides, oil and filters, paints, pharmaceuticals, poisons, pool chemicals, solvents, syringes and lancets, mercury thermometers and thermostats. Ammunition and explosives, asbestos waste, fireworks, flares...**

# In Conclusion



**We would like this committee to seriously consider:**

- A PLAN of MITIGATION (reforestation, commitments)
- Annual PRODUCT AND SOIL TESTING
- SENSITIVE LIGHTING for the people and wildlife
- POST-CONSUMER SORTING

## Questions?

**Thank you**

SOURCES:

## 1. Covanta Energy Announces Community Outreach and Environmental Justice Policy

<http://www.marketwatch.com/story/covanta-energy-announces-community-outreach-and-environmental-justice-policy-2011-11-09>

Covanta Energy

Page 1 of 1



### Covanta Energy & Environmental Justice

The United States Environmental Protection Agency (EPA) defines Environmental Justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

In response to the need to ensure all communities have a fair and just opportunity to participate in the decision making process in matters impacting local environments, we maintain a community outreach and environmental justice policy to support our commitment to engage fully with local communities, to reduce discharges and minimize emissions and to do this in a manner which ensures meaningful community involvement. Developed with input from a variety of environmental justice experts, the policy extends our overall EJ commitment to involving local citizens in major permit activities that we may be considering in a given community at a given point in time.

### Covanta Community Outreach and Environmental Justice Policy

Covanta Energy Corporation is committed to engage with and support the communities in which it has or will have facilities. Covanta believes in the meaningful opportunity for all people, regardless of race, ethnicity, color, income, national origin, or education level to be knowledgeable and have the right to participate in public decisions and actions which have an impact on their environment and neighborhoods. To implement this policy, consistent with its sustainability objectives, Covanta commits:

- To reduce discharges and minimize emissions from our facilities and to reduce other potential impacts of our operations, taking into account cumulative impacts.
- To identify and engage with individuals and organizations in the communities in which we operate, or in which we may operate, that are interested in our operations.
- To have open, two-way communication with communities on issues which may be of interest or concern to them, including environmental and quality of life issues in the community. Such communication shall include participation in meetings with community members or affected groups.
- To have an enhanced public participation strategy with communities on major facility permit actions and engage in substantive conversations with community members during the early stages of the permitting process.
- To work diligently to respond to issues identified by communities in which we operate.
- To promptly and effectively notify the community in the event of situations that may adversely impact the environment or their health.

## 2. Letter1 from the Ministry excerpts:

**Ministry of the Environment**  
Environmental Assessment and  
Approvals Branch  
2 St. Clair Avenue West  
Floor 12A  
Toronto ON M4V 1L5  
Tel.: 416 314-8001  
Fax: 416 314-8452

**Ministère de l'Environnement**  
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ENV1283MC-2011-1504

May 31, 2011

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Ms. Pam Callus  
c/o 3452 Courtice Road  
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Dear Ms. Racansky and Ms. Callus:

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Since the ministry considers the potential for cumulative effects under the Statement of Environmental Values, please be advised that your suggestions regarding mitigation of the existing background pollution will be considered during the review of the application for the proposed Durham/York energy from waste facility.

What is SEV:

Ontario's *Environmental Bill of Rights* (EBR) required several ministries, including the MOE, to establish Ministerial Statements of Environmental Values (SEVs) and to take steps to "ensure that the [SEV] is considered whenever decisions that might significantly affect the environment are made in the ministry." SEVs are meant to be a means for government ministries to record their commitments to the environment and be accountable for ensuring their consideration of the environment in their decisions.

SEV holds it to three guiding principles – the Ecosystem Approach, Environmental Protection (including the precautionary principle) and Resource Conservation. The SEV states that it will be used by the MOE "as it develops Acts, regulations and policies." Since the crafting of the SEV, it has been the MOE's position that the regulations and policies it utilizes in making regulatory decisions ensure that those decisions will be made in compliance with the SEV, as they were developed with the SEV in mind.

### THE AIR POLLUTION REGULATION

The Air Pollution Regulation requires that, before being granted a Certificate of Approval, proponents undertake modeling of the worst-case emissions from the proposed facility and determine the modeled concentrations of a variety of contaminants at the "Point of Impingement" (the "POI", a point off-site of the facility where concentrations will be highest – generally the property line).

**Letter 2 from the Ministry:**

As you are aware, the approvals for this project require the establishment of the Energy from Waste Advisory Committee (EFWAC) to ensure that concerns about the design, construction and operation of the facility are considered and mitigation measures are implemented where appropriate. Most of the specific issues that you raised in your letter are topics that should be brought forward to the EFWAC for further discussion and consideration. For example, your suggestions around the planting of trees and vegetation, reconstruction of the Waterfront Trail and lighting are all ones that are within the scope of the EFWAC to consider and I encourage you to take advantage of this to express your concerns and suggestions. Also, the approvals for this project require regular monitoring of soil, ash, groundwater, surface water and air and the EFWAC is the appropriate forum for you to obtain specific details on how this monitoring will be accomplished as the project progresses. Further details regarding the EFWAC may be found at: (<http://www.durhamyorkwaste.ca/project/efw-committee.htm>).

This project was designed to manage residual waste generated within the Regional Municipalities of Durham and York and while there is no specific requirement to pre-sort all incoming waste, conditions were imposed in the Environmental Assessment Approval which requires the implementation of a Waste Diversion Program Monitoring Plan and ongoing reporting to the Ministry and the public on the results of the Waste Diversion Program Monitoring Plan.

Letter 3:

**Ministry of the Environment**

Environmental Approvals Branch

2 St. Clair Avenue West  
Floor 12A  
Toronto ON M4V 1L6  
Tel.: 416 314-8001  
Fax: 416 314-8452

**Ministère de l'Environnement**

Direction des autorisations environnementales

2, avenue St. Clair Ouest  
Étage 12A  
Toronto ON M4V 1L6  
Tél. : 416 314-8001  
Télév. : 416 314-8452



May 15, 2012

Ms. Libby Racansky  
Friends of the Farewell  
3452 Courtice Road  
Courtice ON L1E 1L6

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Yours sincerely,

A handwritten signature in black ink, appearing to read "Agatha Garcia-Wright".

Agatha Garcia-Wright  
Director  
Environmental Assessment and Approvals Branch

cc: Ms. M. Clayton, Chair, York-Durham EFW-WMAC  
c/o Ms. M. Smart, Administrative Assistant, Regional Municipality of Durham

**3. High concentration of air pollution recognized by the EA:**



Section 8: Evaluation of "Alternative methods" of Implementing the Undertaking

This would manifest itself in higher concentrations and depositions in some areas due to the persistence of the conditions over the day. It should be noted that the Cobourg wind rose is not reflective of this condition and as such this wind data, as applicable to the Clarington sites, should be viewed with caution.

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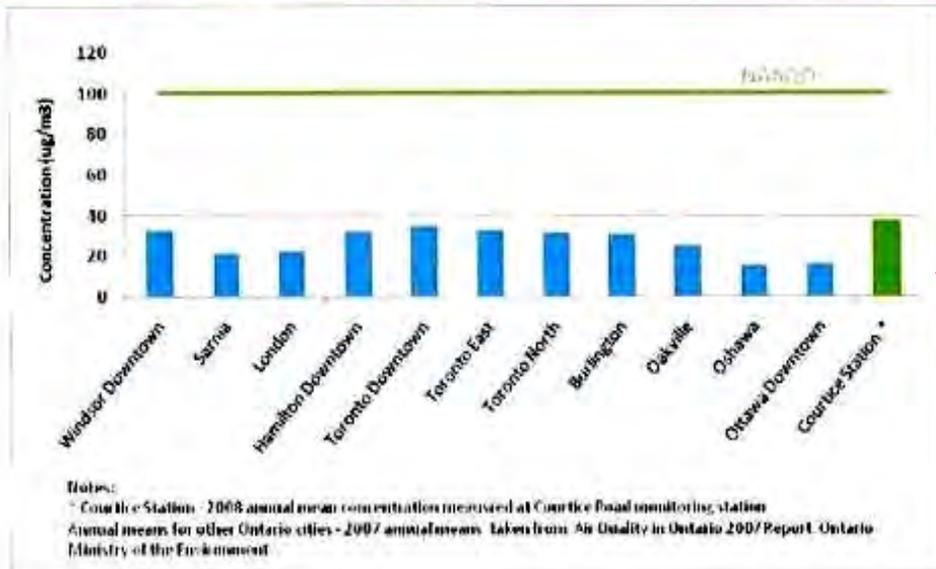
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The source and quantity of residual waste to be managed by the base case and alternative case is summarized in Table 8-19 below.



Figure A2-4 NO<sub>2</sub> Annual Means at the Courtice Station and Selected Ontario Cities



preference to resolve issues as they arise and without the assistance of an outside party. However, should this approach not work, the use of a facilitator to negotiate a resolution or use of the EAA's mediation provisions would be considered. It is recognized that unresolved issues could be referred to the Province's Environmental Review Tribunal which would make a decision on approval of the undertaking and that unresolved issues could have a bearing on that decision and that conditions of approval could be imposed to deal with certain issues.

## 8. MONITORING STRATEGY

Over the course of the Study and the application of evaluation criteria, potential effects and mitigative requirements will be identified for the proposed undertaking. It is noted that these considerations will be defined based on predictive studies and modeling and in the absence of the actual programs and/or facilities. Accordingly, over the course of completing the EA Study, Durham and York will develop a monitoring strategy and schedule for the purpose of confirming assumed or predicted impacts and the performance of mitigative measures once the undertaking is in place and operational.

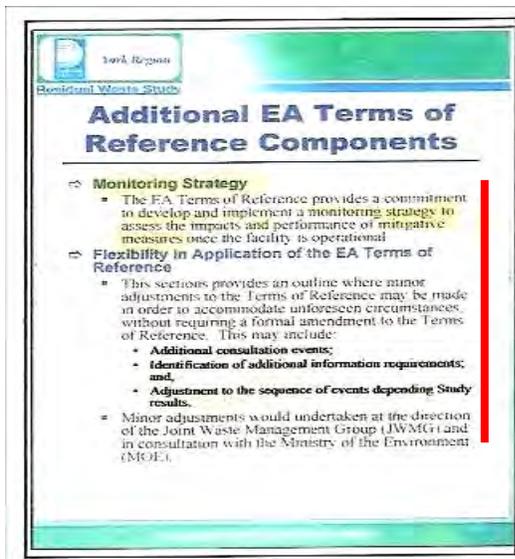
## 9. FLEXIBILITY IN APPLICATION OF THE TERMS OF REFERENCE

In the course of implementing the work proposed in this Terms of Reference, Durham and York may determine that minor adjustments to the approaches and methodologies described herein are necessary and/or appropriate. Minor adjustments may include:

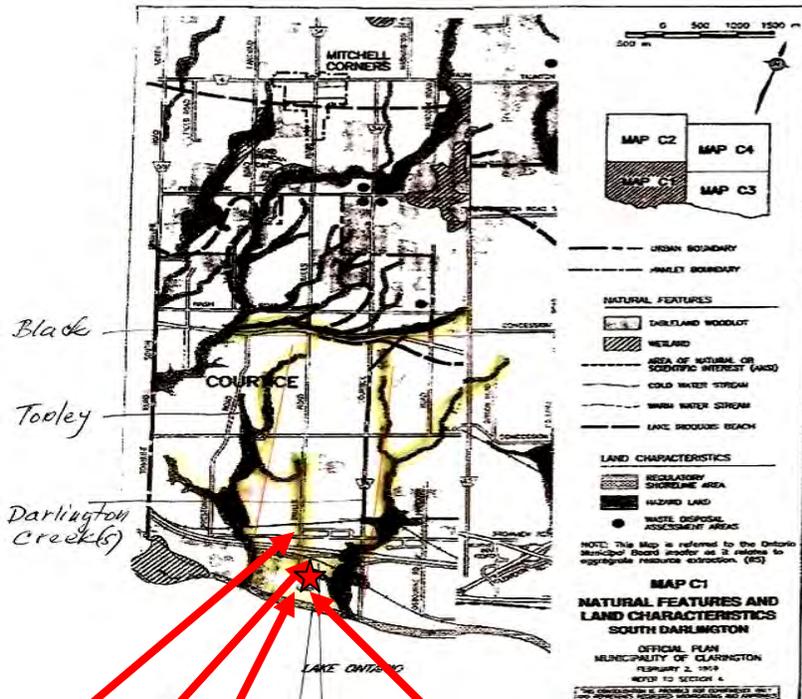
- Provision and/or identification of additional information requirements;
- Studies or consultation methods/events to address concerns expressed by the public as Study results become available; or,
- Adjustments to the sequence of Study events which may be required depending on Study results and circumstances.

Where there is a likelihood that information or circumstances will change in the coming years as the EA is completed, this EA Terms of Reference makes reference to the intent or purpose of the consideration. Details with regards to the methods or steps to be followed to achieve the intent or purpose of the consideration are included in the background documentation that is not approved by the Minister. For

### Additional EA TOR – Monitoring, Flexibility



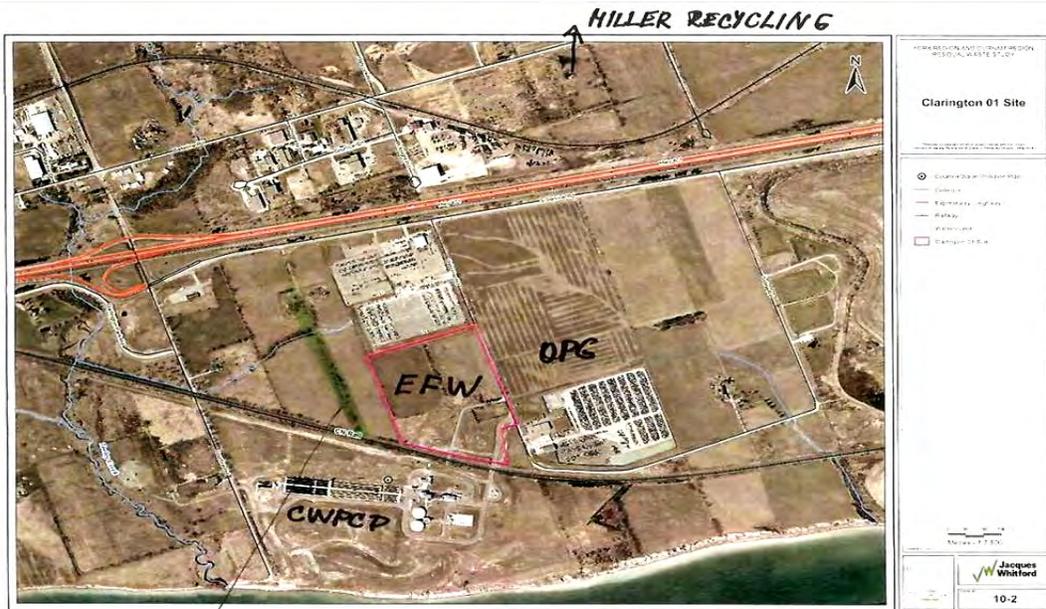
### 5: Planting trees, vegetation Map



Hedgerow EFW

Monarch habitat

Bobolink, Eastern Meadowlark habitat (tall grass/ meadow-cut)



6. Host Community Agreement Commitment –Waterfront Trail reconstruction

## HCA Summary

### Durham Commitments (con't)

- Storm Water Management Facility
- EA for municipal services for Bowmanville Science Park
- Waterfront Trail construction
- Private truck access lane adjacent to CN railway
  - Facility Operator to:
    - comply with ISO 14001 (within 36 months of operation commencement)
    - implement an emergency management plan
    - provide Clarington with annual emissions report



214

Planting could reduce increased runoff through Tooley Creek Coastal wetland (recommendation by the MNR):



Trees & pollution Conclusions (References: <http://www.coloradotrees.org/benefits.htm>):

## Carbon Sequestration:

- Heat from Earth is trapped in the atmosphere due to high levels of carbon dioxide (CO<sub>2</sub>) and other heat-trapping gases that prohibit it from releasing heat into space -- creating a phenomenon known as the "greenhouse effect." Trees remove (sequester) CO<sub>2</sub> from the atmosphere during photosynthesis to form carbohydrates that are used in plant structure/function and return oxygen back to the atmosphere as a byproduct. About half of the greenhouse effect is caused by CO<sub>2</sub>. Trees therefore act as a carbon sink by removing the carbon and storing it as cellulose in their trunk, branches, leaves and roots while releasing oxygen back into the air.
- Trees also reduce the greenhouse effect by shading our homes and office buildings. This reduces air conditioning needs up to 30%, thereby reducing the amount of fossil fuels burned to produce electricity. This combination of CO<sub>2</sub> removal from the atmosphere, carbon storage in wood, and the cooling effect makes trees a very efficient tool in fighting the greenhouse effect. [\(11\)](#)
- One tree that shades your home in the city will also save fossil fuel, cutting CO<sub>2</sub> buildup as much as 15 forest trees. [\(16\)](#)
- Approximately 800 million tons of carbon are stored in U.S. urban forests with a \$22 billion equivalent in control costs. [\(1\)](#)
- Planting trees remains one of the cheapest, most effective means of drawing excess CO<sub>2</sub> from the atmosphere. [\(15\)](#)
- A single mature tree can absorb carbon dioxide at a rate of 48 lbs./year and release enough oxygen back into the atmosphere to support 2 human beings. [\(10\)](#)
- Each person in the U.S. generates approximately 2.3 tons of CO<sub>2</sub> each year. A healthy tree stores about 13 pounds of carbon annually -- or 2.6 tons per acre each year. An acre of trees absorbs enough CO<sub>2</sub> over one year to equal the amount produced by driving a car 26,000 miles. An estimate of carbon emitted per vehicle mile is between 0.88 lb. CO<sub>2</sub>/mi. - 1.06 lb. CO<sub>2</sub>/mi. (Nowak, 1993). Thus, a car driven 26,000 miles will emit between 22,880 lbs CO<sub>2</sub> and 27,647 lbs. CO<sub>2</sub>. Thus, one acre of tree cover in Brooklyn can compensate for automobile fuel use equivalent to driving a car between 7,200 and 8,700 miles. [\(8\)](#)
- If every American family planted just one tree, the amount of CO<sub>2</sub> in the atmosphere would be reduced by one billion lbs annually. This is almost 5% of the amount that human activity pumps into the atmosphere each year. [\(17\)](#)
- The U.S. Forest Service estimates that all the forests in the United States combined sequestered a net of approximately 309 million tons of carbon per year from 1952 to 1992, offsetting approximately 25% of U.S. human-caused emissions of carbon during that period.
- Over a 50-year lifetime, a tree generates \$31,250 worth of oxygen, provides \$62,000 worth of air pollution control, recycles \$37,500 worth of water, and controls \$31,250 worth of soil erosion. [\(2\)](#)

### Reduction of Other Air Pollutants:

- Trees also remove other gaseous pollutants by absorbing them with normal air components through the stomates in the leaf surface. (3)
- Some of the other major air pollutants and their primary sources are:
  - Sulfur Dioxide (SO<sub>2</sub>)- Coal burning for electricity/home heating is responsible for about 60 percent of the sulfur dioxide in the air. Refining and combustion of petroleum products produce 21% of the SO<sub>2</sub>.
  - Ozone (O<sub>3</sub>) - is a naturally occurring oxidant, existing in the upper atmosphere. O<sub>3</sub> may be brought to earth by turbulence during severe storms, and small amounts are formed by lightning. Most O<sub>3</sub> - and another oxidant, peroxyacetylnitrate (PAN) - come from the emissions of automobiles and industries, which mix in the air and undergo photochemical reactions in sunlight. High concentrations of O<sub>3</sub> and PAN often build up where there are many automobiles.
  - Nitrogen oxides - Automotive exhaust is probably the largest producer of NO<sub>x</sub>. Oxides of nitrogen are also formed by combustion at high temperatures in the presence of two natural components of the air; nitrogen and oxygen.
  - Particulates are small (<10 microns) particles emitted in smoke from burning fuel, particular diesel, that enters our lungs and cause respiratory problems. (10)
- There is up to a 60% reduction in street level particulates with trees. (1)
- In one urban park (212 ha.) tree cover was found to remove daily 48lbs. particulates, 9 lbs nitrogen dioxide, 6 lbs sulfur dioxide, and 2 lb carbon monoxide (\$136/day value based upon pollution control technology) and 100 lbs of carbon. (1)
- One sugar maple (12" DBH) along a roadway removes in one growing season 60mg cadmium, 140 mg chromium, 820 mg nickel, and 5200 mg lead from the environment. (1)
- Planting trees and expanding parklands improves the air quality of Los Angeles county. A total of 300 trees can counter balance the amount of pollution one person produces in a lifetime. (10)

### **Trees Ontario:**

[http://www.treesontario.ca/files/Healthy\\_Dose\\_of\\_Green\\_Publication.pdf](http://www.treesontario.ca/files/Healthy_Dose_of_Green_Publication.pdf)

Trees Ontario is committed to re-greening Ontario's landscape and is the largest not-for-profit tree planting partnership in North America.

Environmental experts say that in order to achieve a healthy ecosystem, an absolute minimum of 30 per cent forest cover is required. In some regions of southern Ontario, forest cover is as low as five per cent. To achieve a minimum forest cover in southern Ontario, at least one billion more trees must be planted.

Trees Ontario's goal is to support the planting of 10 million trees a year by 2015.

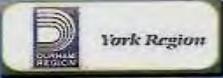
This support contributes to restoring

the entire tree planting infrastructure including tree seed forecasting and collection, technical training and mentorship opportunities for new forestry staff, community outreach, as well as tree planting subsidies.

A mounting volume of research over the past 30 years indicates that the health of our forests has a direct impact on our own personal health. Without a healthy ecosystem we can't sustain a healthy planet and we will surely compromise the health of our children and future generations. In order to improve our environment and our personal health, we must all be a part of the solution.

For more information, please visit [www.treesontario.ca](http://www.treesontario.ca).

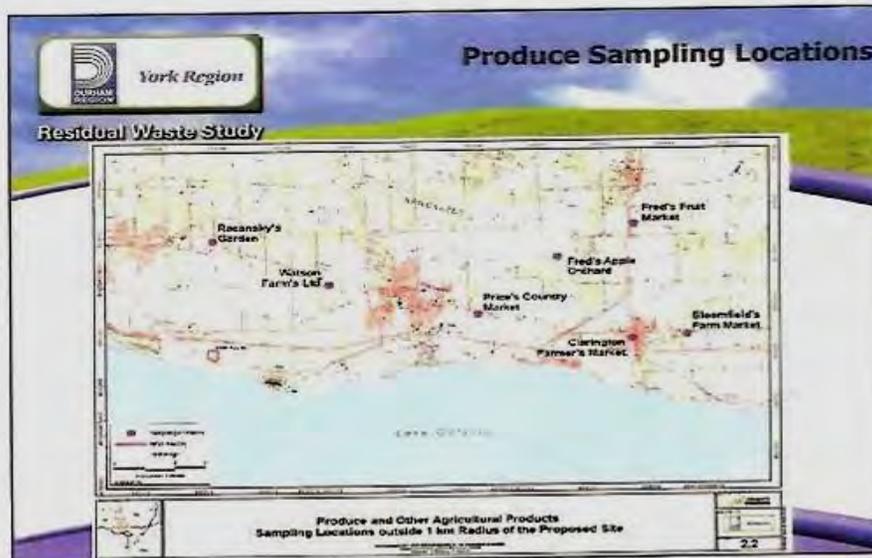
## 7. Monitoring/testing - baseline of Produce & Soil Testing:

 **York Region**  
**Residual Waste Study**

### Purpose of Baseline Environmental Study

◆ To characterize baseline environmental health risks in the area. Sampling of the following media occurred:

- ◆ Soil
- ◆ Surface Water
- ◆ Sediment
- ◆ Soil Invertebrates
- ◆ Vegetation
- ◆ Small mammals
- ◆ Produce
- ◆ Fish
- ◆ Agricultural Products (Beef, Dairy, Poultry and Eggs) (to be collected)



## 8. Light Pollution

[http://members.peo.on.ca/index.cfm/document/1/ci\\_id/58070/la\\_id/1](http://members.peo.on.ca/index.cfm/document/1/ci_id/58070/la_id/1)

ENGINEERING DIMENSIONS May/June 2011

Although we have known for more than a century that artificial light at night (ALAN) affects humans and wildlife, it has only been in the last two decades that its full impact has been appreciated. By the end of the 20th century, the annual rate of increase of ALAN has been about 6 per cent each year (Holker, 2010) for a doubling time of 12 years, or about six times Canada's growth in population (World Bank). Artificial outdoor lighting affects the health of citizens and, through energy use and pollution in the generation process, has an impact on the environment and urban sustainability.

The concept of sustainability changes the priorities we place on the services provided by municipalities. Street lighting consumes 13 per cent of a city's electricity budget (Local Authority Services Ltd.); however, current regulations may slow or prevent the adoption of some sustainability programs—specifically the reduction of urban lighting. Regulations should be more proactive to encourage new lighting policies.

### Role of regulation

Most outdoor lighting is unregulated. Although Ontario's *Municipal Act* places the responsibility of outdoor lighting on municipalities, very few cities have lighting policies or bylaws. Most governments adopt recommendations from the lighting and power industries for minimum lighting levels without question, but there are no upper limits on the brightness of lighting or limitations on the extent or colour of the light used. There is little guidance or regulatory support for municipalities that wish to reduce the use of artificial lighting in response to health and sustainability issues.

The regulation of engineering practice can be approached in two ways: codifying best practice, or taking advantage of new scientific knowledge to lead the practice. Ideally, both have their place in engineering regulations. Scientific knowledge should always support the current best practice, but there are times when scientific knowledge moves ahead more quickly than current practice. In these cases, regulations should actively encourage improvements.

### Artificial lighting

Artificial lighting has been used to increase human nighttime activity and encourage a 24/7 lifestyle. The streets of most cities are illuminated until dawn, commercial lighting is used long after stores and offices are closed, and cities actively encourage homeowners to keep outdoor lighting turned on throughout the night (*Globe and Mail*, 2010; *YongeStreet*, 2010). This practice benefits a relatively small portion of the population that is outside during the night—estimated with traffic statistics to be 10 to 14 per cent (DOT HS 809 954, UK M25 Traffic, respectively). The performance of outdoor lighting has increased throughout the 20th century. It began with incandescent lighting with a luminous efficacy of about 15 lumens/watt (Wikipedia), followed by high intensity discharge (HID) lamps in the last half of the 20th century with luminous efficacy of about 100 lumens/watt. We are now entering a new era with light emitting diodes (LEDs), whose current luminous efficiencies are comparable to HID, but promise significant improvements in the future. The increase of illumination levels is deemed necessary to reduce crime, improve safety and for aesthetics. These are admirable goals, but current illumination levels far surpass those that would provide these benefits (Clark, 2002). The reduction in energy use of ALAN has been undermined by the low cost of power and high efficiencies of luminaires.

### Light pollution

Light is now known to be a pollutant. Illuminating the night fundamentally changes the environment. However, until recently, its effects on health were not treated as seriously as air and water pollution. The slow recognition of the adverse impact of ALAN has been due, in part, to its long-term effects and the belief that light is benign.

Light pollution is characterized by three symptoms: glare, light trespass and artificial sky glow.

1. Glare refers to the reduced visibility and distraction of light that shines directly into our eyes. Even relatively little light can cause glare—far less than that needed to illuminate the ground. The best solution against glare is to shield lamps from direct view.

2. Light trespass was once considered to be just a nuisance, but it is now known to be a much greater problem. Light that shines where it is not wanted wastes energy and causes glare for motorists and pedestrians. Light trespass is now also known to affect human health.

3. Sky glow is produced by unshielded light that shines across the landscape producing glare and light trespass. Particles suspended in the air scatter the light into the sky, producing the expansive dome of light we see from the countryside. The amount of scattered light depends on the size of the scattering particles and inversely on the wavelength (Rayleigh scattering). For example, visibility is reduced for motorists when driving through dust and fog. Short wavelengths (blue light) are scattered about 50 per cent more than longer wavelengths (amber light). Sky glow over urban areas has been found to promote chemical reactions in the air over our cities. Instead of polluting gases dissipating at night, the chemicals are maintained by the absorption of artificial light, resulting in increased nitric oxides and ozone (Stark, 2010)—increasing daytime levels of photochemical smog.

### **Light at night studies**

Current engineering practice has no limit or control of how we illuminate our cities and this has made the effects of light pollution more evident in recent years. Understanding how light affects both wildlife and humans is only now being published in outside research journals and in more accessible literature on organization websites (International Dark-Sky Association; Royal Astronomical Society of Canada), online conference proceedings (Cinzano, 2002; Ecology of the Night Conference, 2003), other publicly available publications (Rich and Longcore, 2006), and in trade publications and the popular press.

The key to understanding the impact of artificial light on life is the observation that all life on Earth has been subjected to a day-night cycle—the nights were dark, being illuminated by only the stars and, periodically, the moon. Any change to the amount of nocturnal darkness fundamentally alters the environment to which all life has evolved. The impact of artificial light affects the environment in two ways: the duration of dark nights and the colour of ambient illumination. I'll briefly review these to put their impacts on human health into perspective.

### **Circadian rhythm**

Humans are daytime creatures. The rhythmic nature of our biological processes has been known since the early 1800s and documented by medical researchers throughout the 20th century. This circadian rhythm is critical to the proper functioning of our bodies and those of all wildlife. Our biochemistry takes advantage of the darkness to let us rest and repair damage acquired in our daily activity. The changing length of day over the seasons requires a cue to keep biological processes synchronized to the daily schedule of activity. Hormones required to perform these repairs are prepared in the late afternoon as determined by our circadian rhythm, but some of them are not released until after dark while we are at rest.

We subconsciously determine that it is time to sleep when non-imaging ganglion cells in our eyes with peak sensitivity to blue light detect darkness (Figure 1). This enables the release of the hormone melatonin that slows our metabolism and enables the release of hormones. These hormones have a limited shelf life and begin to break down after a few hours. Any significant delay in their release, due to elevated levels of ALAN, reduces their effectiveness, or it can abort the repairs altogether. Therefore, it's critical that our bodies detect darkness at night if we are to remain healthy.

We would like to know the light detection threshold that controls the initial release of melatonin to derive practical limits on ALAN. Illumination above this threshold will delay or inhibit these repairs.

Ethical reasons limit studies on humans, but research has been performed on laboratory and wild animals. They show that the illumination levels of approximately the full moon affect their behaviour and health (Rich and Longcore, 2006).

To put this level into perspective, city streets are illuminated from 10 to 100 times this level! The sky glow above major cities can be seen for more than 100 km and can illuminate the countryside brighter than the full moon. So, even at great distances, city lighting can impact the ecology of a large region.

The increase in ALAN in developed and developing countries has been convincingly tied to the increasing incidence of cancer (Haim, 2010). Other maladies linked to ALAN are obesity, diabetes through direct hormonal disruption and increased stress and depression (Bedrosian, 2010).

### **Effect of colour**

The colour of light is also important. Bright white light has been helpful in treating certain mental disorders. Seasonal affective disorder and jet lag have been effectively treated by exposure to bright white light in the morning. The light resets the circadian rhythm and makes us more alert and energetic (Paul, 2009). If we are exposed to white ALAN, the inappropriate timing has a similar effect but with adverse results.

The natural illumination level and spectra of artificial light is profoundly different from that during the day, and the biochemical response to this light is also different. In the late evening, bright white light with a significant amount of short-wavelength blue light in the spectra is interpreted as an extension to daylight. Although bright light will keep us alert, it will also prevent necessary biological repairs at night. This can result in the slow deterioration of our health. The blue component in white metal halide lamps and LEDs target the blue sensitivity of ganglion photoreceptor cells, which resets the circadian rhythm (Brainard, 2001). This blue component in light should be avoided at night to prevent a delay in human repair mechanisms.

## **Solutions**

There is a trend in our cities for the use of brighter illumination. We are also seeing the increased use of white light. What began as a problem for astronomers in the 20th century and a nuisance is now considered by the International Agency for Research on Cancer of the World Health Organization and the American Medical Association (AMA) as a health risk (AMA, 2009).

Most citizens are unaware of the health risks they are subjected to by artificial light shining in their windows or during nightshift work. New regulations must overrule the popular although naïve requests for more ALAN if we are to reduce the health risks to society and improve sustainability.

The dangers of ALAN are well founded and warrant our profession to take steps to lower the risks. Cost-effective technologies exist to halt the increase in light pollution and even reduce it. When phased in during scheduled infrastructure renewal (Figure 2), there is little or no extra cost to municipalities. Indeed, with improved visibility without glare, lower-wattage lamps can produce significant energy savings, as has been done in Calgary, Ottawa and other municipalities.

An additional strategic benefit is a reduced carbon footprint for municipalities with increased sustainability. Regulations and legislation should lead the movement toward more responsible and sustainable lighting practices. Specifically, we should reduce the illumination levels of urban lighting and require fully shielded fixtures to reduce glare, light trespass and sky glow. Artificial, outdoor white light should be minimized to prevent disruption of our circadian rhythm.

A number of cities are already actively reducing light pollution by setting aside older standard practices and have developed lighting policies and bylaws. Our profession can learn from the new scientific findings on the health risks from ALAN and the experiences of the municipalities that are working to actively reduce light pollution.

**To see the Figures, you have to go to the link above on page 17.**

**One of the reason of why pre-sorting would be needed:**

[file:///C:/Users/Libby/AppData/Local/Temp/75548%20\(2\).html](file:///C:/Users/Libby/AppData/Local/Temp/75548%20(2).html)

## 9. Possible cooperation with CWPC Plant and mitigation:

07-07-2005 09:09am From: FISHERIES AND OCEANS

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and Friends of the Second Marsh have expressed concern with the impact of the crossings upon fisheries and adjacent riparian habitats. The following mitigating measures are proposed:

- i) All creek crossings will be done between July 15 and November 15. The crossing of Robinson Creek, within Darlington Provincial Park, will be done between October 15 and November 15 to coincide with the park off season.
- ii) All crossings will be done in the dry.
- iii) All crossings will be done as quickly as possible.
- iv) Only half of the watercourse will be isolated at any one time when undertaking the crossings. Isolation will be accomplished with a simple cofferdam of sandbags, an Aquadam™ or sheet piling (Harmony Creek crossing).
- v) Bottom substrate will immediately be replaced and banks stabilized and revegetated once the crossing is complete.
- vi) An Environmental Inspector will be present throughout each crossing operation.
- vii) At each crossing site, an area will be temporarily set aside to isolate sediments and temporarily hold water for sediment removal from the dewatering process.
- viii) Silt fences will be erected along all watercourses prior to any work being completed adjacent to the watercourse.
- ix) Unless sod is used, erosion control matting is to be placed on all disturbed areas adjacent to watercourse crossings and remain in place until a cover crop has been established.
- x) After installation of mains, suitable river run substrate will be added to crossings areas to enhance fish habitat.

### *Wildlife Linkages*

A number of concerns were expressed with potential impacts of a new plant upon existing wildlife corridors in the South Courtice area. A number of mitigating measures will be incorporated into the design and construction of the new plant to mitigate these impacts. These will include the following:

- the majority of the construction will be confined to the existing cultivated areas to the west of the proposed plant site.
- disruption to existing treed areas associated with road construction will be minimized.
- the existing vegetative buffer to the north of the site (south side of CN Rail line) will be enhanced.
- the vegetative buffer on the south side of the site near Lake Ontario will be enhanced.
- the proposed pipeline south of the CN Rail line will be constructed south of the existing utility corridor which is the highest quality vegetated east-west linkage in the area.
- sufficient land will be acquired with the sewer easement to permit the enhancement of the existing wildlife corridor paralleling the CNR line (a minimum corridor width of 10 metres over short distances and 30 to 50 metres over longer distances).

### *Waterfront Trail*

The Waterfront Regeneration Trust asked that consideration be given to relocating the Waterfront Trail to the lakeshore as part of the plant design. They also requested that public parking be provided. The Region recognizes that a strip of land will be required along the south side of the plant site for a buffer and erosion setback. Part of this allotment could be used for the Waterfront Trail relocation. This site design feature represents a significant enhancement to the South Courtice area.

### *District Park*

A0111629\_26-000026

## Provincial requirements and mitigation:

07-07-2005 08:08am From-FISHERIES AND OCEANS

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information

the design to allow the outfall to be extended in future, if required.

### Wastewater Flow Reduction Strategies

The Region of Durham will continue to implement and improve both their water efficiency and sewer rehabilitation programmes. These programmes will be maintained to reduce future wastewater flows and therefore reduce future infrastructure expenditures as well as associated operating costs.

## ES.5 PRINCIPAL CONCERNS AND MITIGATING MEASURES

Several principal concerns were raised by the public and review agencies during the Class Environmental Assessment process. A summary of these concerns, as well as the proposed mitigation to address them, is summarized below.

### Drinking Water Quality

Durham Operations staff raised concerns regarding the potential impact of a new or expanded Water Pollution Control Plant on area drinking water treatment plant intakes. A computer modelling study was carried out to determine the anticipated impact upon area water plants for construction of a Harmony Creek WPCP expansion or new plant in South Courtice. All simulations were conducted based upon a "worst case" peak flow of 440,640 m<sup>3</sup>/d (97 MIGD) and an assumed ultimate water pollution control plant capacity of 272,600 m<sup>3</sup>/d (60 MIGD). This capacity was calculated based upon the overall size of the catchment. This approach was taken to ensure the selected plant location is acceptable from a water quality perspective far into the future regardless of any future increases in ROP "population targets" and therefore plant flows.

The proposed mitigating strategy includes locating the new effluent outfall as close as practically possible to the heated water discharge from the Darlington Generating Station. The heated water discharge at the Darlington NGS provides significant effluent dilution. In addition, the effluent outfall will be constructed to a depth of 6 m (20 feet) initially with provision to extend the outfall pipe in future, if required.

### Darlington Provincial Park

A great deal of concern was raised with regard to the potential construction and operating impacts upon users of nearby Darlington Provincial Park. The following mitigating strategies are proposed:

- i) locate the new water pollution control plant at Site No. 2 well away from the park property.
- ii) locate the new effluent outfall as close as practically possible to the heated water discharge from the Darlington Nuclear Generating Station. The heated water discharge at the Darlington NGS provides significant effluent dilution and acts to push the treated effluent further offshore.
- iii) construct the proposed interconnecting pipeline through the park during the park off season between November 15 and May 15.
- iv) incorporate odour control measures into the new plant design, as required.
- v) provide significant vegetative buffer along the north, west and south side of the plant property.

### Darlington Nuclear Generating Station Water Intake

Ontario Hydro has expressed concern with the potential impact upon the cooling water intake for the Darlington Nuclear Generating Station. The new effluent outfall will be located as close as practically possible to the heated water discharge which will push the treated effluent further offshore away from the intake. Computer modelling studies indicate that the outfall locations considered for this study will have little or no impact upon the Darlington NGS cooling water discharge. The relative impact for an outfall offshore of Courtice decreases with increasing water depth and provision will be made in the design to allow the outfall to be extended into deeper water in future, if required.

### Creek Crossings for Sanitary Forcemain

The proposed undertaking will require pipeline crossings of Harmony, Robinson and Tooley Creeks. MNR, CLOCA

A0111629\_25-000025

**Clarington's concern and mitigation:**

The Municipality of Clarington expressed concern over the potential impact of the new plant on the proposed District Park. Visual impacts will be mitigated via a treed buffer and/or berming between the plant and proposed park. The new plant facility will incorporate numerous odour control measures to mitigate potential odour concerns.

End of Provincial EA Executive Summary

Once the Courtice WPCP site was selected as a result of the provincial EA process, decisions were then required to determine the location and orientation of the Lake Ontario outfall pipe and sewage forcemain from Harmony Creek WPCP. To identify the preferred Lake Ontario outfall location, bathymetry, habitat and geotechnical investigations of the lake bottom were conducted on the three potential pipe alignments. The aquatic study work included a video of the bottom describing the surface features and fish and aquatic growth observed, and bathymetry and soil sampling and analysis. Soil investigation to shale bedrock was carried out by Geo-Canada in the lake to determine the sub surface soil conditions. These investigations concluded that the most westerly alignment for the outfall was preferred due to the following:

- Clays are present and are highly plastic, potentially reducing siltation concerns and blasting is not thought to be necessary;
- It avoids the ridge of dense sandy silt fill towards the eastern end of the shoreline;
- There is an absence of useable fish habitat; and,
- The distance to satisfactory depth of water for effective dilution of the treated effluent is shorter than the other locations.

DFO also supported this final choice for the pipe location, recognizing that this location would impact less heterogeneous lakebed habitat and less lakebed area.

Selection of the preferred method for the Lake Ontario Pipe installation then became the next review decision. The Class EA identified that open cut or tunneling techniques could be considered for the construction of the outfall. The assessment of construction methods and design of the outfall was further evaluated during conceptual design. A detailed assessment of the impacts of these construction methods was made based on criteria reflecting key environmental concerns. Mitigation measures associated with the different construction methods were also explored. Based on the detailed assessment of construction methods, open cut trenching construction method with total burial was selected as the preferred alternative for the following reasons:

- Open cut trenching is a proven construction technique that can be utilized by a number of marine contractors, therefore ensuring a competitive bidding process and the most efficient use of public funds.
- Geotechnical investigations indicated that the lakebed material was favourable for conventional trenching construction techniques, and little migration of silt is likely.
- Tunneling is subject to the availability of boring equipment in the diameter size range required.
- There will be significant generation of excess rock material from the tunneling operations that would have to be removed and disposed of off site.
- The cost of tunneling makes this option prohibitive as an estimated \$ 8,000,000 of additional costs would be incurred at the onset to construct outfall capacity which would not be required until after 2025.

Selection of the final forcemain route/alignment to the Courtice site was made in consultation with CLOCA and MNR. The route selection (described previously) took into consideration impacts on the environment, accessibility for installation and potential impacts on the community during and after installation.

32. Environmental Effects and Significance (as defined under section 2 of CEAA): Include those factors required in subsection 15(1) of CEAA (i.e., environmental effects and significance, malfunctions/accidents and cumulative environmental effects, etc.);

NRCan's Earth Science Sector (GSC) experts provided the following comments relating to groundwater:

The proposed WPCP and forcemain pipeline would be located in an area underlain predominantly by a regionally extensive fill that is generally of low permeability. Consequently, potential groundwater impacts are anticipated to be minor.

7,8 ✓  
0,32 ✓  
K. Kelly ✓

# EFWAC

## Third Party Audit

July 18, 2012

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Gioseph Anello, M.Eng., P.Eng., PMP  
Manager of Waste Planning and Technical Services  
Works Department  
The Regional Municipality of Durham



# Auditor

- EA Condition 16: Third Party Audits
- Auditor Approved by MOE:

## MALROZ Environmental Scientists & Engineers

- Mr Steve Rose, MSc., PEng., PGeo.
- Mr John Pyke, PGeo.



# Audit Scope

- The audit scope includes the construction activities at the EFW site.
- The time span of the audit is from commencement of construction activities February 27, 2012 to June 1, 2012.



# Audit Objectives

- Compliance with applicable legislation;
- Compliance with applicable approvals and permits such as the Certificate of Approval and site plan permit;
- Records verifying visual sweep for species of concern; and
- Records demonstrating adherence to protocols for archaeological aspects.



# Audit Objectives (Continued)

- Conformance with EA commitments;
  - Employment of controlled entrances and exits at the construction site to minimize the offsite tracking of mud.
  - Temporary and permanent grassing in disturbed areas.
  - Dust control during dry periods.
  - Possible implementation of an idling protocol as required.
  - Adherence to an equipment maintenance program.
  - Ambient air quality monitoring for particulate matter may be undertaken to monitor the effectiveness of the mitigation measures.



# Audit Observations

- The posted contract information within the site trailer included the incorrect project website;
  - On June 8, 2012 photo verification was received documenting that the signage had been changed to show the correct project website
- Additional information was needed to complete heritage and archeology policies on the Site Specification Plan;
  - On June 7, 2012 an updated Environmental, Health & Safety, Site Specific Environmental Plan section C5.3.21 Heritage and Archeology was provided that reflected a completed policy



# Third Party Audit Report

- Submitted to MOE: June 15, 2012
- Posted to Website
- Made available to EFWAC for information



**QUESTIONS????**



# **Meeting #6 Agenda**

**Advisory Committee Annual Report 2012**

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# AGENDA

## Energy from Waste Advisory Committee (EFWAC)

### Meeting #6

EFW Advisory Committee (EFWAC)	
<b>SUBJECT</b>	Meeting #6
<b>MEETING DATE/TIME</b>	Wednesday, October 24 from 2:00 to 4:30 p.m.
<b>LOCATION</b>	The Regional Municipality of Durham Headquarters 605 Rossland Road East, Whitby – Meeting Room LL-C
<b>AGENDA OR REMARKS</b>	<ol style="list-style-type: none"><li>1. <b>Welcome and Introductions</b> <i>Review of Meeting #5 Notes</i></li><li>2. <b>Energy from Waste Project Update</b></li><li>3. <b>Presentation of Draft Community Communications Plan</b></li><li>4. <b>Presentation of Revised Soils Testing Plan</b></li><li>5. <b>Next Meeting</b></li><li>6. <b>Meeting Adjourns</b></li></ol>

Please contact Facilitator Sue Cumming, MCIP RPP, Cumming+Company at 866 611-3715 or cumming1@total.net with any questions.