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DURHAM YORK ENERGY FROM WASTE PROJECT UPDATE

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated December 16, 2010, from the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. The final *Notice of Approval to Proceed with the Undertaking* received from the Ministry of the Environment on November 19, 2010 be received for information.
2. The attached memorandum from York and Durham's joint consultant, HDR Inc., on potential cost impacts of the Environmental Assessment conditions of approval be received for information.

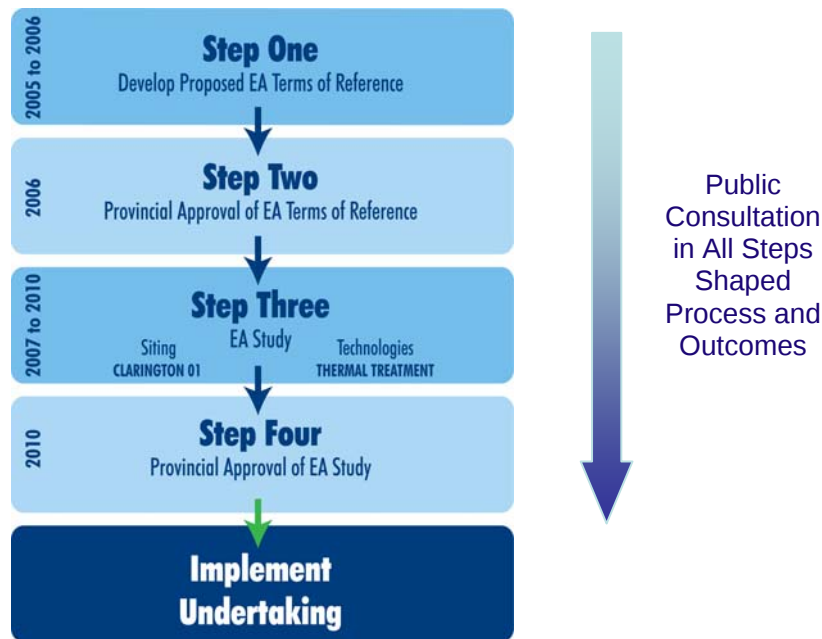
2. PURPOSE

The purpose of this report is to advise Council of the Environmental Assessment Approval and related conditions received November 19, 2010 and the execution of the Project Agreement as authorized by Council on September 23, 2010.

3. BACKGROUND

Overview of Project Background

In June 2005, York and Durham Regions established a partnership to seek local solutions to responsibly manage residual waste not captured by Regions' province-leading recycling and diversion programs. Over the past five and a half years, Durham and York have invested considerable time, money and resources to advance the project through technology selection, site selection, environmental assessment and impact studies, public consultation, and a competitive procurement process.



Environmental Assessment now approved by Province

On November 19, 2010, York and Durham received approval from the Ministry of the Environment under the Environmental Assessment Act to proceed with design, permitting, construction, and operation of a state-of-the-art mass burn incinerator to be located near Osbourne Road and Highway 401 in the Municipality of Clarington, Region of Durham (see *Attachment 1*). The facility will process 140,000 tonnes of residual waste from York and Durham Regions, while recovering recyclable metals and energy in the form of electricity and steam.

Upon obtaining Environmental Assessment Approval, York and Durham executed the Project Agreement with the Design-Build-Operate contractor, Covanta Energy Limited (Covanta). Covanta has started the facility permitting process, and will complete facility construction and commissioning in 2014. Major project milestones are summarized on Table 1.

Table 1
Project Timeline Estimate

Milestones	Date
Completed	
Province approves EA terms of reference	March 31, 2006
Energy from Waste selected as preferred method	June 22, 2006
Request for Qualification issued to thermal treatment vendors	July 12, 2007
Selection of preferred site	January 24, 2008
Request for Proposal issued to five pre-qualified vendors	August 22, 2008
Selection of preferred vendor	May 21, 2009
EA submitted to Ministry of the Environment	July 31, 2009
Revised EA submitted to Ministry of the Environment	November 27, 2009
Notification of EA approval from Ministry of the Environment	November 19, 2010
Execution of Project Agreement	November 25, 2010
Pending	
Execution of Co-Owners' & Power Purchase Agreements	January 2011
Receive EPA approvals	May 2011
Issue notice to proceed	May 2011
Complete detailed design	July 2012
Complete construction	December 2013
Facility commissioning	January to May 2014
Commercial operation	June 2014

Durham-York Environmental Assessment identifies Energy from Waste project as the most sustainable solution for the Region's residual waste

On June 23, 2005, Council agreed to partner with Durham Region to undertake an Environmental Assessment to study residual waste management options for the two Regions. Council established a Joint Waste Management Group with representation from both Regional Councils and citizens to serve as a steering committee for the initiative.

Extensive public consultation was undertaken at major steps and decision points in the process to ensure that the values and priorities of the public and stakeholders were reflected in the preferred alternative. Council approvals were obtained at major milestones such as technology selection, site selection, vendor selection, and submission of the Environmental Assessment study document. Based on a detailed evaluation of environmental, social, and economic considerations, the study identified the proposed mass burn incinerator as the most environmentally sustainable disposal option for residual waste generated in Durham and York Regions. The facility is to be constructed near Osbourne Road and Highway 401 in the Municipality of Clarington, Region of Durham.

York Region Council endorsed the Environmental Assessment on June 25, 2009, and authorized staff to make minor modifications to the document as necessary to facilitate the Ministry of the Environment's review process. The Ministry of the Environment approved the Environmental Assessment on November 19, 2010, with conditions.

Regional Chair and CAO authorized to execute Co-Owners' Agreement with Durham

On June 25, 2009, York Council authorized staff to negotiate a detailed Co-Owners' Agreement with Durham Region based on the principles outlined in a Memorandum of Understanding that was negotiated between the two Regions. The purpose of the Co-Owners' Agreement is to establish a framework for the energy from waste project and principles of the relationship between the Regions during the design, build and operating phases.

On September 23, 2010, Regional staff reported to Council the status of Co-Owners' agreement negotiations. Council authorized the Regional Chair and CAO to execute the final Co-Owners' in general accordance with the following principles upon receipt of final Environmental Assessment approval.

1. York and Durham shall pay a proportionate share of the capital and operating costs based on their respective ownership of the 140,000 tonnes per year initial processing capacity (30,000 tonnes and 110,000 tonnes, respectively) and corresponding to their respective capital contributions of 21.4% and 78.6%.
2. Each Region will be responsible for its share of the annual operating fee regardless of the actual tonnage delivered.
3. Each Region may loan its unused capacity to the other Region.
4. Each Region will compensate the other for any lost revenue resulting from a failure to deliver its share of the annual facility throughput.
5. York Region has agreed to pay 50% of the cost to oversize certain items to accommodate future facility expansions to accept up to 250,000 tonnes per year.
6. If either party elects to proceed with an expansion of the facility, the other party may be required to contribute to the cost of the upgrades if the upgrades would have otherwise been required within a five year period.
7. The facility shall be governed by a joint Management Committee including representatives from both Regions.
8. The Management Committee will develop and implement a process to address any change orders that may arise during design, construction, and operation of the facility.
9. The Regions shall jointly employ a full-time, on-site representative during the operations phase of the project.

Host Community Agreement identifies Clarington as willing host for energy from waste facility

On May 11, 2009, Clarington Council approved the Host Community Agreement with the Regions indicating that they would act as a willing host for the energy from waste facility. The Regions committed to protect human health and the environment by guaranteeing emission standards. In addition, the Host Community Agreement includes shared financial concessions now estimated in the order of \$16 million.

The executed Host Community Agreement acknowledges that, provided that there is public ownership of the energy from waste facility and the site by one or more municipalities, it will be considered a “public use” for the purposes of the Zoning By-law and consequently it is not necessary to amend the Clarington Official Plan or Zoning By-law.

The Host Community Agreement was endorsed by Regional Council on June 25, 2009 and subsequently executed by Durham Region. Implementation of this agreement is subject to approval of the Environmental Assessment, approval and execution of the Co-Owners Agreement, and the Project Agreement.

Power Purchase Agreement establishes terms for sale of electricity from the energy from waste facility

On June 25, 2009, York Region Council adopted terms negotiated with Ontario Power Authority for the sale of electricity generated by the energy from waste facility to the Ontario power grid. A formal Power Purchase Agreement must be approved by Ontario Power Authority prior to execution. Finalizing the Power Purchase Agreement by the Regions was subject to approval of the Environmental Assessment and execution of the Co-Owners’ Agreement. As approved by Regional Council in September 2009, the Regional Chair and CAO will execute the Power Purchase Agreement in early 2011 after the final Co-Owners’ Agreement has been executed.

Regional Chairs executed the Project Agreement with Covanta Energy Limited in November 2010

On September 23, 2010, Regional staff reported to Council on the status of Project Agreement negotiations. Council authorized the Regional Chair and CAO to finalize and execute the Project Agreement in general accordance with the principles outlined in that report and subject to receipt of final approval of the Environmental Assessment.

The Project Agreement was executed by both Regions on November 25, 2010.

4. ANALYSIS AND OPTIONS

Environmental Assessment conditions establish stringent air emissions criteria

Air Emissions performance standards in the Project Agreement are more stringent than the Ministry of Environment Guideline A-7 standards in effect when the RFP was released. However, the Ministry of the Environment revised Guideline A-7 on October 27, 2010 and incorporated the new standards into the Environmental Assessment approval. As a result, margins that once existed between Covanta's performance guarantees and provincial regulatory standards have been reduced and standards for carbon monoxide, opacity and organic matter are now more stringent than the contract requirements.

The Owner's consultant HDR has completed a preliminary analysis of Environmental Assessment cost implications. HDR has indicated that the new requirements are achievable using existing technologies, however cost implications will depend on how Covanta proposes to mitigate risk and comply with the new standards. HDR's memo and a Fact Sheet on environmental and energy benefits of the project are attached for information (*see Attachments 2 and 3*). York Region's staff report in September of 2010 includes a \$2 million allowance to comply with Ministry of the Environment conditions.

Requirement for early submission of monitoring plans to Ministry delays project schedule

The Environmental Assessment approval requires submission of monitoring plans and protocols as summarized on Table 2.

Table 2
Monitoring Plan Submission Dates

Monitoring Plan	Submission Date
Compliance Monitoring Program	60 days before construction
Complaint Protocol	60 days before construction
Ambient Air Monitoring and Reporting Plan	9 months before construction
Air Emissions Monitoring Plan	6 months before construction
Spill Contingency and Emergency Response Plan	60 days before receipt of waste
Odour Management Plan	6 months before construction
Noise Monitoring and Reporting Plan	90 days before construction
Groundwater and Surface Water Monitoring Plan	90 days before construction

The earliest submission deadline is for the Ambient Air Monitoring Plan, which must be submitted 9 months before the start of construction. York and Durham are required to establish a working group to provide input into the plan. At minimum, the Regions must invite the Ministry of the Environment, Health Canada, Durham Region Health

Department, York Region Public Health Services, one participant from the advisory committee, and any other relevant federal or provincial government agencies to participate in the working group. Assuming that the plan can be submitted by the end of January 2011, construction could start by November 2011 – a six month delay from the contractor's current estimated start of construction.

The submission deadlines may be revised if agreed to in writing by the Director, or in some cases, the Regional Director. To minimize delays to the construction process, Staff recommend petitioning the Directors with authority to amend the dates as soon as the plans are submitted.

Final Project Agreement establishes framework for facility design, construction, and operation

Having received final Environmental Assessment approval on November 19, 2010, the Regional Chair and CAO executed the Project Agreement with Durham Region and Covanta as authorized by Council on September 23, 2010. The Project Agreement, which was signed on November 25, 2010, establishes the framework for facility design, construction, and operation. It covers such subjects as scope of work, technical specifications, performance standards, schedule, and compensation. The project agreement is consistent with Covanta's proposal, with the following noteworthy exceptions.

1. **Electricity Revenue Sharing:** Under the final Project Agreement, Covanta will receive 50% of the revenue for all electricity generation in excess of their contractual guarantees. Since the business case for the project has always assumed that Covanta will meet but not exceed the guarantees, this concession does not affect the Region's projected cost-revenue balance as previously reported. However, it does incentivize Covanta to conserve energy and exceed its guarantees, both of which could ultimately reduce costs for York and Durham.
2. **Notice to Proceed:** The RFP requires Covanta to hold its pricing for two years from the bid submission deadline (i.e. until April 20, 2011). Due to the lengthy delay by the Ministry of the Environment in issuing the Environmental Assessment approval, Covanta has been delayed to the point where its ability to start construction by April 2011 has been compromised. In exchange for agreeing to hold its pricing until December 31, 2011, York and Durham have revised the Project Agreement to allow Covanta to terminate the agreement after that date if Notice to Proceed with construction has not been issued, and receive compensation for the fair market value of work completed. Although this compromise is not ideal, York staff consider it preferable to reopening price negotiations in April 2011. Covanta is in the process of preparing its Environmental Protection Act approval application and staff anticipate that Notice to Proceed will be given in spring or early summer 2011.

York and Durham staff agree on Co-Owners' Agreement principles

Durham staff have agreed to support the following Co-Owners' Agreement principles in a report to Durham Council in February 2011. Upon Durham Council approval, York's Regional Chair and Chief Administrative Officer will execute the final Co-Owners' Agreement as authorized by Council on September 23, 2010.

1. **Land Ownership:** Durham has agreed to sell York a fifty percent interest in the facility property, and land required for site servicing and Host Community agreement commitments at a price of \$110,000 dollars per acre.
2. **Oversizing:** York has agreed to share equally with Durham the cost of the following project components to facilitate a potential future expansion by York.
 - Roadways
 - Fire protection equipment
 - On-site and off-site utilities and utility connections, and electrical substation
 - Stormwater management works
 - Waste tipping floor, storage pit, and crane
 - Ash building and ash processing equipment
 - Stack
3. **Waste Delivery:** Durham and York's respective shares of the daily, weekly, monthly, and yearly tonnage limits as per the Project Agreement shall be in proportion to their ownership interest. Each Region will be responsible for delivering its proportionate share of the minimum annual tonnage on a put or pay basis. In addition, the Regions will compensate each other for any lost electricity and other revenue that would have been payable if both Regions had met their tonnage obligations.
4. **Governance:** Under the Electricity Act, new municipal entities selling electricity to the grid must be structured as public utilities, with certain exceptions. Legal counsel for York and Durham are currently investigating whether any exemptions could apply to the energy from waste facility. In the absence of any regulatory requirement, York and Durham staff prefer not to form a public utility since this structure is most beneficial for projects that generate net revenue from their operation. Electricity revenue from the energy from waste facility only partially offsets operating costs, such that no net revenue is generated to be distributed to shareholders. A public utility would nevertheless be subject to tax reporting requirements. If the energy from waste project is exempt from the requirement to form a public utility, York and Durham staff have agreed to form a Management Committee with equal representation by both Regions. The Management Committee will be empowered to make recommendations regarding future changes to governance structure, including whether or not to form a public utility.

York staff expect that the costs outlined above can be managed within the existing total project budget authority of \$68.3 million as approved by Council in September 2010.

5. FINANCIAL IMPLICATIONS

York and Durham's joint consultant HDR has provided the attached memorandum which includes a preliminary cost estimate on the order of \$400,000 per year for complying with Environmental Assessment approval conditions (*see Attachment 2*). These estimates will be refined when facility permits are issued and the scope of annual monitoring activities is finalized.

In addition to ongoing annual operating costs described in HDR's memorandum, York Region will incur start-up costs related to preparing and submitting plans that define the scope of future monitoring, reporting, and community liaison activities. These start-up costs are within the \$2 million allowance for complying with Ministry of the Environment conditions authorized by Council on September 23, 2010.

6. LOCAL MUNICIPAL IMPACT

As required by the Environmental Assessment approval, one representative from each lower tier municipality in Durham and York will be invited to participate on the facility advisory committee. This requirement will help ensure that each municipality's interests continue to be fairly represented. Development of the Durham-York energy from waste facility will provide viable, diversified and sustainable options for the long term management of York Region's residual waste. York Region will continue to partner with its local municipalities to increase waste diversion and to control long term waste management costs in accordance with the Region's Sustainability Strategy.

7. CONCLUSION

York and Durham received final approval for the energy from waste project under the Environmental Assessment Act on November 19, 2010. After five years of successful collaboration, approval to develop the energy from waste facility reinforces both Region's commitment to diversion and will strengthen our long-term waste management strategy.

As authorized by Council in September 2010, the Regional Chair and CAO have started the design and construction process by executing the Project Agreement with Covanta. Regional staff have also reached an agreement on the principles of the Co-Owners' Agreement with Durham.

The energy from waste project represents a sustainable capital investment that enhances security, diversification and stability of York Region's long range waste management program. The terms of the Project Agreement and Environmental Assessment approval both ensure that the energy from waste facility will achieve these objectives while maintaining the highest achievable level of environmental protection.

For more information on this report, please contact Laura McDowell, Director of Environmental Promotion and Protection at (905)830-4444 at Ext. 5077.

The Senior Management Group has reviewed this report.

(The three attachments referred to in this clause are attached to this report.)

Ministry of the Environment

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Mr. Roger Anderson
 Regional Chair
 The Regional Municipality of Durham
 605 Rossland Road East
 Whitby ON L1N 6A3

Mr. Bill Fisch
 Chairman and Chief Executive Officer
 The Regional Municipality of York
 17250 Yonge Street
 Newmarket ON L3Y 6Z1

Dear Mr. Anderson and Mr. Fisch:

Thank you for submitting your amended environmental assessment (EA) for the Durham and York Residual Waste Study on November 27, 2009. The Ministry of the Environment (ministry) has completed its review and I wish to inform you that I have approved the undertaking as described in the EA, subject to a number of stringent conditions which are attached.

I understand that the Durham and York Residual Waste Study EA process was initiated to find a new long term, sustainable and local waste management solution, and includes the recovery of energy and materials. This ministry and other government agencies have extensively reviewed the EA documentation. The amended EA contains a sufficient explanation of the problem and opportunities that prompted the EA study and demonstrates why and how the thermal treatment waste management facility was selected. I am satisfied with the decision making process presented in the amended EA.

The Regions have evaluated a sufficient range of alternatives, using criteria that considered the *Environmental Assessment Act's* (EAA) broad definition of the

Mr. Anderson and Mr. Fisch

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environment (e.g. including natural, socio-economic, and cultural environments), while taking into consideration the purpose of the undertaking (problem or opportunity being addressed). The amended EA assessed the potential environmental effects of the alternatives and the proposed undertaking, and provided sufficient mitigation and monitoring measures to ensure that the potential negative environmental effects will be appropriately managed and minimized.

I have also concluded that there was sufficient time and opportunities for interested members of the public, the government agencies and Aboriginal communities to comment during the EA process. The Regions' consultation methods are in accordance with the requirements of the approved Terms of Reference (ToR) and the EAA. The amended EA sets out the issues and concerns raised by the public and government reviewers and how they have been considered. I am satisfied that the amended EA documents the consultation methods utilized by the Regions to engage the public, the Government Review Team and Aboriginal communities during the EA process.

In making my decision, I considered the numerous comments and concerns submitted by the many interested members of the public, government agencies and Aboriginal communities during the EA process. The majority of the submissions expressed opposition to the undertaking on the basis of the potential impacts to human health and the natural environment from the operation of the facility. The ministry also received numerous requests that I refer my decision on the amended EA to the Environmental Review Tribunal (ERT) for a hearing on the basis that potential impacts to human health and the natural environment have not been adequately determined or evaluated.

The ministry has reviewed and assessed the amended EA for consistency with the requirements of the EAA, the approved ToR and ministry guidelines, practices and procedures. The ministry also reviewed the comments received from the public, local interest groups and non-governmental organizations and the responses provided by the Regions to those comments. I am satisfied that these concerns have been adequately addressed during the preparation of the EA and that any concerns that remain outstanding will be addressed through conditions of approval and other applicable ministry legislation and regulations. Based on the foregoing, I am of the opinion that a hearing before the ERT would be unnecessary.

Based on the ministry and government agency review of the amended EA, I am satisfied that the potential environmental effects of the approved undertaking can be managed through the commitments made in the amended EA, and conditions of EAA approval.

In approving the Durham and York Residual Waste Study Amended EA, I have placed

Mr. Anderson and Mr. Fisch
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stringent conditions on the undertaking that will ensure protection of the environment and the health of the local community. For example, to help protect human health, I have imposed conditions requiring air emissions monitoring from the facility; imposed stringent operating requirements for air emissions; and, the development of monitoring and reporting plans for air, water and groundwater. I have also required the Regions to develop and implement noise and odour mitigation plans to ensure appropriate measures are taken to mitigate significant impacts, if they arise.

To ensure that the facility operates as described in the EA in a transparent way, I am also requiring daily inspections and record keeping by the Regions, and third party independent audits of the facility. All required reports about operations, inspections and audits will be made available to a public and government agency advisory committee that I am requiring the Regions to establish.

I am satisfied that all comments received have been considered and addressed as appropriate in the EA and through these conditions of approval.

The government of Ontario is committed to diverting as much waste as possible from final disposal. I am pleased that the Regions have implemented successful programs and policies to reduce and divert the amount of waste from final disposal. The EA identifies the current waste diversion practices, in each Region, and examines how diversion programs and policies could be improved. The EA documents that the Regions will be able to achieve a diversion rate of 60 percent by 2011, and through the introduction of a number of new diversion policies and practices (such as diversion programs for household hazardous wastes, electronics, construction and demolition materials, and the introduction of a mandatory recycling by-law), achieve a diversion rate of 70 percent by 2016. This has resulted in the Regions achieving some of the highest residential diversion rates in the province.

It is my expectation that the Regions will meet the diversion commitments identified in the EA and the thermal treatment facility will not detract from these commitments.

Thermal treatment technologies are an option that municipalities can consider as a means to manage residual waste remaining after efforts to reduce, reuse and recycle. The EA gives consideration to how diversion would impact the amount of waste that would ultimately be collected for management and disposal at the thermal treatment facility. I commend the Regions for incorporating the role of waste diversion as a key consideration in determining the appropriate smaller size and capacity of the thermal treatment facility by taking into account existing local and provincial waste diversion programs, and potential new or improved waste diversion programs. Conditions imposed regarding

Mr. Anderson and Mr. Fisch

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waste diversion and the types of waste to be accepted by the thermal treatment facility reconfirm my expectations of the Regions for continued waste diversion leadership. The construction of the thermal treatment waste management facility will provide sufficient waste disposal capacity, as well as energy and material recovery, for the next 35 years, while ensuring protection of public health and minimizing impacts to the natural environment. Without the undertaking, the Regions will not have sufficient long term and local waste disposal capacity.

Attached is a signed copy of the Notice of Approval to Proceed with the Undertaking. The Regional Municipality of Durham and the Regional Municipality of York must ensure that the undertaking is designed, constructed and operated in accordance with the requirements of the EA and the conditions outlined in the Notice of Approval. Failure to do so is an offence under the EAA and subject to prosecution.

Should you require further assistance please contact Ms. Agatha Garcia-Wright, Director, Environmental Assessment and Approvals Branch, at 416-314-7288 or by e-mail at agatha.garciawright@ontario.ca.

Sincerely,



John Wilkinson
Minister of the Environment

Attachment

- c: Mr. C. Curtis, P.Eng., Commissioner of Works, Regional Municipality of Durham
Ms. E. Mahoney, P. Eng., Commissioner of Environmental Services, Regional Municipality of York



Order in Council
Décret

Council Attachment 1

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and concurrence of the Executive Council, orders that:

Sur la recommandation du soussigné, le lieutenant-gouverneur, sur l'avis et avec le consentement du Conseil des ministres, décrète ce qui suit :

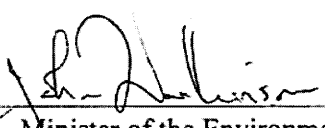
WHEREAS section 9 of the *Environmental Assessment Act* provides that the Minister of the Environment, with the approval of the Lieutenant Governor in Council, may give approval to proceed with an undertaking, give approval to proceed with an undertaking subject to such conditions as the Minister considers necessary, or refuse to give approval to proceed with the undertaking; and

WHEREAS a Notice of Completion of the Review for the environmental assessment for the Durham and York Residual Waste Study Environmental Assessment (hereafter "the undertaking") was published on February 26, 2010 and 660 submissions from 276 submitters were received before the prescribed deadline, April 2, 2010, 185 of which requested a hearing; and,

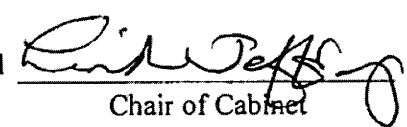
WHEREAS, having considered the purpose of the Act, the environmental assessment of the undertaking, the terms of reference, and the submissions received, the undersigned Minister of the Environment considers that a hearing is unnecessary and is of the opinion that the undertaking should be given approval to proceed, subject to the conditions specified in the attached approval,

THEREFORE, pursuant to section 9 of the *Environmental Assessment Act*, approval to proceed with the undertaking is given in the form attached, subject to the conditions specified therein.

Recommended


Minister of the Environment

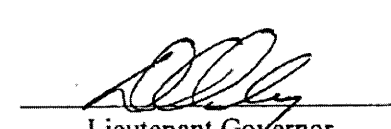
Concurred


Chair of Cabinet

Approved
and Ordered

NOV 03 2010

Date


Lieutenant Governor

O.C./Décret 1514/2010

ENVIRONMENTAL ASSESSMENT ACT**SECTION 9****NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING**

RE: The Amended Environmental Assessment for Durham and York Residual Waste Study

Proponent: The Regional Municipalities of Durham and York

EA File No.: 04-EA-02-08

TAKE NOTICE that the period for requiring a hearing, provided for in the Notice of Completion of the Review for the above-noted undertaking, expired on April 2, 2010. I received 185 submissions requesting a hearing by the Environmental Review Tribunal before the expiration date.

I consider a hearing to be unnecessary in this case. Having considered the purpose of the *Environmental Assessment Act*, the approved terms of reference, the environmental assessment, the ministry Review of the environmental assessment and submissions received, I hereby give approval to proceed with the undertaking, subject to the conditions set out below.

REASONS

My reasons for giving approval are:

- (1) The proponent has complied with the requirements of the *Environmental Assessment Act*.
- (2) The environmental assessment has been prepared in accordance with the approved Terms of Reference.
- (3) On the basis of the proponent's environmental assessment and the ministry Review, the proponent's conclusion that, on balance, the advantages of this undertaking outweigh its disadvantages appears to be valid.
- (4) No other beneficial alternative method of implementing the undertaking was identified.
- (5) The proponent has demonstrated that the environmental effects of the undertaking can be appropriately prevented, changed, mitigated or remedied.
- (6) On the basis of the proponent's environmental assessment, the ministry Review and the conditions of approval, the construction, operation and maintenance of the undertaking will be consistent with the purpose of the *Environmental Assessment Act* (section 2).
- (7) The ministry's review of: the government, public and Aboriginal community submissions on the environmental assessment; the environmental assessment; and the ministry Review has indicated no outstanding concerns that have not been addressed or that cannot be addressed through commitments made during the environmental assessment process, through the conditions set out below or through future approvals that will be required.
- (8) The submissions received after the Notice of Completion of ministry Review was published are being addressed through commitments made during the environmental assessment process, through the conditions set out below or through future approvals that will be required, where appropriate. I am not aware of any significant outstanding issues with respect to this undertaking which suggest that a hearing should be required.

CONDITIONS

The approval is subject to the following conditions:

1. Definitions

For the purposes of these conditions:

"advisory committee" means the committee established pursuant to Condition 8 of this Notice of Approval.

"CEM" means an air emissions monitoring system which continually monitors concentrations of certain contaminants emitted by the facility.

"date of approval" means the date on which the Order in Council was approved by the Lieutenant Governor in Council.

"Director" means the Director of the Environmental Assessment and Approvals Branch.

"District Manager" means the Manager of the Ministry of the Environment's York-Durham Office.

"EAAB" means the Environmental Assessment and Approvals Branch of the Ministry of the Environment.

"environmental assessment" means the document titled Durham/York Residual Waste Study Environmental Assessment Study Document (As Amended November 27, 2009).

"ministry" means the Ontario Ministry of the Environment, or successor, unless specific reference is made to another Ministry.

"non-hazardous municipal solid waste" means the waste that is generated within the municipalities of Durham and York and collected as part of the proponents municipal collection process.

"proponent" means the Regional Municipality of Durham and the Regional Municipality of York.

"Qualified, Independent Professional Engineer" means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act* who is not an employee of the Regional Municipality of Durham, the Regional Municipality of York, the operator of the undertaking, or the ministry, who has not been involved in the design of the undertaking or preparation of documentation as part of an application for approval of the undertaking but who is knowledgeable about the *Environmental Protection Act*, Regulation 347 and Ontario Regulation 419/05, ministry guidelines affecting thermal treatment facilities, any other ministry approval issued for the undertaking as well as being experienced at assessing compliance with environmental legislation and requirements of certificates of approval issued under the *Environmental Protection Act*.

"receipt" means the arrival and acceptance of waste at the site, whether remaining in the vehicles used to transport the waste to the site or unloaded from the vehicles used to transport the waste to the site.

"Regional Director" means the Director of the ministry's Central Regional Office.

"site" means the 12.1 hectare parcel of land referred to as Clarington 01 in the environmental assessment and is located south of Highway 401 on the west side of Osbourne Road and north of the CN Rail corridor in the Municipality of Clarington.

"start of construction" means physical construction activities including, site preparation works, but does not include the tendering of contracts.

"undertaking" means the construction and operation of a thermal treatment waste management facility on the site, as set out in the environmental assessment.

2. General Requirements

- 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.

- 2.2 These conditions do not prevent more restrictive conditions being imposed under other statutes.
- 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.

3. Public Record

- 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.
- 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:
 - a) Regional Director;
 - b) District Manager;
 - c) Clerks of the Regional Municipality of Durham, the Regional Municipality of York, and the Municipality of Clarington; and,
 - d) Advisory Committee (as required in Condition 8 of this Notice of Approval).
- 3.3 The EAAB file number EA-08-02 shall be quoted on all documents submitted by the proponent pursuant to this Condition.

4. Compliance Monitoring Program

- 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.
- 4.2 A statement shall accompany the submission of the Compliance Monitoring Program indicating that the submission is intended to fulfil 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.
- 4.4 The Compliance Monitoring Program shall describe how the proponent will monitor its fulfilment of the provisions of the environmental assessment pertaining to 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.
- 4.5 The Compliance Monitoring Program shall contain an implementation schedule.

- 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.
- 4.7 The proponent shall implement the Compliance Monitoring Program, as it may be amended by the Director.
- 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.

5. Compliance Reporting

- 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.
- 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.
- 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.
- 5.4 The proponent shall submit annual Compliance Reports until all conditions 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.
- 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.
- 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.

6. Complaint Protocol

- 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.
- 6.2 The Complaint Protocol shall be provided to the advisory committee for review prior to submission to the Director.

- 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.
- 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.
- 6.5 The proponent shall submit the amended Complaint Protocol to the Director within the time period specified by the Director in the notice.

7. Community Involvement

- 7.1 The proponent shall prepare and implement a Community Communications Plan. The plan shall be prepared, in consultation with the EAAB and to the satisfaction of the Director.
- 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.
- 7.3 The Community Communications Plan shall include at a minimum details on:
 - a) How the proponent plans to disseminate information to interested members of the public and any Aboriginal communities;
 - b) How interested members of the public and any Aboriginal communities will be notified and kept informed about site operations; and,
 - c) 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.
- 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:
 - a) Activities that are part of the undertaking, including monitoring activities;
 - b) 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,
 - c) Information on the Complaint Protocol required by Condition 6 of this Notice of Approval.
- 7.5 The proponent shall hold public meetings to discuss the design, construction and operation of the undertaking, including, but not limited to:
 - a) At least one meeting prior to the start of construction;
 - b) At least one meeting prior to the receipt of non-hazardous municipal solid waste on site; and,
 - c) 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.

- 7.6 The proponent shall provide notice of the public meetings a minimum of 15 days prior to the meeting.
- 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.

8.. Advisory Committee

- 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.
- 8.2 The proponent shall provide administrative support for the advisory committee including, at a minimum:
 - a) Providing a meeting space for advisory committee meetings;
 - b) Recording and distributing minutes of each meeting;
 - c) Preparing and distributing meeting notices; and,
 - 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.
- 8.3 The proponent shall invite one representative from each of the following to participate on the advisory committee:
 - a) Each of the lower tier municipalities in the Regional Municipality of Durham; and,
 - b) Each of the lower tier municipalities in the Regional Municipality of York.
- 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.
- 8.5 The proponent shall invite one representative from each of the following local community groups to participate on the advisory committee:
 - a) DurhamCLEAR;
 - b) Durham Environmental Watch; and,
 - c) Zero Waste 4 Zero Burning.
- 8.6 The proponent may also invite other stakeholders to participate in the advisory committee, including, but not limited to, interested members of the public, Aboriginal communities, and other federal or provincial agencies.
- 8.7 A representative from the ministry shall be invited to attend meetings as an observer.
- 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.

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.

8.10 The Terms of Reference shall, at a minimum, include:

- 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.

8.11 The proponent shall submit the advisory committee's Terms of Reference to the Director and Regional Director.

9. Consultation With Aboriginal Communities

9.1 The proponent shall continue to consult with any interested Aboriginal communities during the detailed design and implementation of the undertaking.

10. Waste Diversion

- 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.
- 10.2 The proponent shall prepare and implement a Waste Diversion Program Monitoring Plan.
- 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 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.
- 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.

11. Ambient Air Monitoring and Reporting

- 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.
- 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.
- 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.
- 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;

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- 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.
- 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.
- 11.6 The Regional Director may require changes to be made to the Ambient Air Monitoring and Reporting Plan and the proponents shall implement the plan in accordance with the required changes.
- 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.
- 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.
- 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.

12. Emissions Monitoring

- 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.
- 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.
- 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.
- 12.4 The Air Emissions Monitoring Plan shall include, at a minimum:
- a) Identification of all sources of air emissions at the site to be monitored;

- b) Identification of which contaminants will be monitored by continuous emissions monitoring and which by stack testing;
 - c) The proposed start date for and frequency of air emissions monitoring;
 - d) The frequency of and format for reporting the results of air emissions monitoring;
 - e) The contaminants that shall be monitored, which shall include at a minimum those contaminants set out in Schedule 1 to this Notice of Approval; and,
 - f) 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 *Environmental Protection Act* exceed 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
- 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.
- 12.7 The proponent shall post the reports of the air emissions monitoring systems on the proponent's web site for the undertaking.
- 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.
- 13. Air Emissions Operational Requirements**
- 13.1 The proponent is expected to operate the undertaking in accordance with Schedule 1 of this 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.
- 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.
- 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 *Environmental Protection Act*, should approval be granted.
- 14. Daily Site Inspection**
- 14.1 The proponent shall conduct a daily inspection of the site including the non-hazardous municipal solid waste received at the site, each day the undertaking is in operation to confirm that:

- a) The site is secure;

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- 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.

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.

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.

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.

15. Daily Record Keeping

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 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 *Environmental Protection Act*;

- 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.
- 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.

16. Third Party Audits

- 16.1 The proponent shall retain the services of a Qualified, Independent Professional Engineer to carry out an independent audit of the undertaking.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

17. Spill Contingency and Emergency Response Plan

- 17.1 The proponent shall prepare and implement a Spill Contingency and 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.
- 17.3 The Spill Contingency and Emergency Response Plan shall include, but is not limited to:
 - a) Emergency response procedures, including notification procedures in case of a spill, fires, explosions or other disruptions to the operations of the facility;
 - b) Cell and business phone numbers and work locations for all person(s) responsible for the management of the site;
 - c) Emergency phone numbers for the local ministry office, the ministry's Spills Action Centre, and the local Fire Department;
 - d) Measures to prevent spills, fires and explosions;
 - e) Procedures for use in the event of a fire;
 - f) Details regarding equipment for spill clean-up and all control and safety devices;
 - g) Shut down procedures for all operations associated with the undertaking including alternative waste disposal site locations;
 - h) Maintenance and testing program for spill clean-up equipment and fire fighting equipment;
 - i) Training for site operators and emergency response personnel; and,
 - j) A plan, identifying the location and nature of wastes on site.
- 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.
- 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.

18. Odour Management and Mitigation

- 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.
- 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.

- 18.3 The Odour Management and Mitigation Plan shall include at a minimum:
- a) Standard operating and shut down procedures;
 - b) Maintenance schedules;
 - c) Ongoing monitoring for and reporting of odour;
 - d) Corrective action measures and other best management practices for ongoing odour control and for potential operational malfunctions;
 - e) A schedule for odour testing at sensitive receptors; and,
 - f) A section that specifically addresses odour control measures should operation of the undertaking be disrupted or cease.
- 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.
- 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.
- 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.
- 19. Noise Monitoring and Reporting**
- 19.1 The proponent shall prepare and implement a Noise Monitoring and Reporting Plan for the undertaking.
- 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.
- 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.
- 19.4 The proponent shall post the Noise Monitoring and Reporting Plan and on the proponent's web site for the undertaking following submission of the plan to the Director.
- 20. Groundwater and Surface Water Monitoring and Reporting**
- 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

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Central Region Office and to the satisfaction of the Regional Director, a Groundwater and Surface Water Monitoring Plan.

- 20.2 The proponent shall provide the Groundwater and Surface Water Monitoring Plan to other any government agencies for review and comment, as may be appropriate.
- 20.3 The Groundwater and Surface Water Monitoring Plan shall include at a minimum:
 - a) A groundwater and surface water monitoring program;
 - b) The proposed start date and frequency of groundwater and surface water monitoring;
 - c) The contaminants that shall be monitored as part of the groundwater and surface water monitoring program; and,
 - d) 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 plan by the Regional Director.
- 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.
- 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.
- 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 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.
- 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.
- 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.
- 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 within 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.

- 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.

21. Types of Waste and Service Area

- 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.
- 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.
- 21.3 The proponent shall ensure that all incoming waste is inspected prior to being accepted at the site to ensure that only non-hazardous municipal solid waste is being accepted.
- 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.

22. Amount of Waste

- 22.1 The maximum amount of non-hazardous municipal solid waste that may be processed at the site is 140,000 tonnes per year.

23. Notice of the Date Waste First Received

- 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.

24. Construction and Operation Contracts

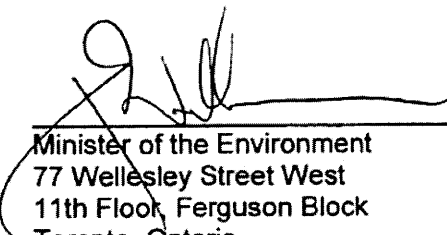
- 24.1 In carrying out the undertaking, the proponent shall require that its contractors, subcontractors and employees:
- a) fulfil the commitments made by the proponent in the environmental assessment process, including those made in the environmental assessment and in the proponent's responses to comments received during the environmental assessment comment periods;
 - b) meet applicable regulatory standards, regarding the construction and operation of the undertaking;
 - c) obtain any necessary approvals, permits or licenses; and,
 - d) have the appropriate training to perform the requirements of their position.

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25. Amending procedures

- 25.1** Prior to implementing any proposed changes to the undertaking, the proponent shall determine what *Environmental Assessment Act* requirements are applicable to the proposed changes and shall fulfill those *Environmental Assessment Act* requirements.

Dated the 21st day of October 2010 at TORONTO.



Minister of the Environment
77 Wellesley Street West
11th Floor, Ferguson Block
Toronto, Ontario
M7A 2T5

Approved by O.C. No. 1514/2010

Date O.C. Approved NOVEMBER 3, 2010

Schedule 1 –Air Emissions Operational Requirements

Item	Contaminant	Operational Requirements
1.	Particulate Matter	9 mg/Rm3
2.	Cadmium	7 ug/Rm3
3.	Lead	50 ug/Rm3
4.	Mercury	15 ug/Rm3
5.	Dioxins & Furans	60 pg/Rm3
6.	Hydrogen Chloride	9 mg/Rm3
7.	Sulphur Dioxide	35 mg/Rm3
8.	Nitrogen Oxides	121 mg/Rm3
9.	Organic Matter .	50 ppm _{dv} (33 mg/Rm3)
10.	Carbon Monoxide	35 ppm _{dv} (40 mg/Rm3)
11.	Opacity	5% (2-hour average) 10% (6-minute average)

Notes:

mg/Rm³-milligrams per reference cubic metre; ug/Rm³-micrograms per reference cubic metre; pg/Rm³-picograms per reference cubic metre; ppm_{dv}-parts per million by dry volume

Memorandum

To: Mirka Januszkiewicz, Region of Durham
Laura McDowell, Region of York
Cc: Gioseph Anello; Greg Borchuk (Region of Durham)
Dave Gordon (Region of York)
From: Jim McKay, HDR
Date: November 23, 2010
Re: **EA Conditions of Approval and Requirements to Ensure Compliance**

Background

On November 19, 2010, the Regions of Durham and York received approval under the Environmental Assessment Act to implement the Durham/York Residual Waste Study EFW undertaking. Included with this approval were a number of conditions with respect to the design, operation, and monitoring of the facility. The Regions requested that HDR provide information regarding the potential impacts of the EA Conditions of Approval provided in the Notice of Approval to the Regions by the Ministry of the Environment. The following provides an overview of the EA Conditions of Approval, the potential impacts to the Regions waste management systems, and the project agreement with Covanta. The following sections also outline the requirements of the Regions and its Contractor (Covanta Durham York Renewable Energy Ltd.) to ensure compliance with said conditions. Now that EA approval has been granted, the Regions will meet with MOE staff to ensure a common understanding of each EA condition and the requirement to ensure compliance. The following assessment is based on our current understanding of the EA conditions as presented by the MOE to the Regions.

Conditions related to the Regions Integrated Waste Management Systems

Discussion

There are a number of conditions that are related to (and impact) the Regions broader integrated waste management systems that, to ensure compliance at the facility, will require system enhancement, modifications and/or additional infrastructure. These conditions include:

EA Condition	Comments
Definitions: Non-hazardous municipal solid waste is waste that is generated within the municipalities of Durham and York and collected as part of the proponents municipal collection process.	The Regions will need to ensure that the only materials received at the facility are those under the control of the Region of Durham and York.

EA Condition	Comments
Waste diversion program monitoring to ensure targets are being met.	The Regions will need to demonstrate that waste diversion remains the priority in the Regions and the steps the Regions are taking to continuously improve their waste reduction and diversion programs. They will also need to demonstrate that any materials being delivered to the EFW facility for processing are being delivered from sources that have been provided full access to the Regions comprehensive waste diversion program. For materials being delivered by public or private haulers to Regional transfer facilities, the Regions will need to ensure that there are diversion opportunities at the receiving facility consistent with the Regions waste diversion programs.
Daily site inspections to ensure that only non-hazardous municipal solid waste is being received at the EFW requires Regional control of the waste prior to its delivery to the site.	The Regions will need to ensure that the only materials received at the facility are those under the control of the Region of Durham and York and will need to verify this on a daily basis.
Types of Waste and Service Area further supports the requirement for Regional control of waste.	The Regions will need to ensure that the only materials received at the facility are those under the control of the Region of Durham and York.
Amount of Waste requires Regional control to ensure total annual quantities are managed. The efficient operation of the EFW will require daily control to ensure that the waste pit does not empty.	Given the nature of the waste supply contract with Covanta, the Regions will need to ensure they have complete control over the quantities and accounting of the materials received at the facility to avoid non-compliance issues with respect to the EA approval.

Conclusion

In order to ensure compliance with these conditions, the Regions will need to:

- Have some degree of control over all materials being delivered to the facility prior to there being “received” as per the definition in conditions;
- Ensure all materials being delivered to the facility comes from sources that have been provided full access to the Regions comprehensive waste diversion programs;
- Verify the location from which the waste was generated; and,
- Verify the quantity being processed by the facility in accordance with approved processing capacity and contractual guarantees/commitments with Covanta.

In essence, the Regions will need to take full responsibility for the flow and accounting of all waste materials being delivered to, and processed at, the facility prior to their receipt.

Administrative Requirements

Discussion

There are several administrative requirements detailed in the EA conditions. The majority of the conditions require the Regions to develop a specific plan for approval by the MOE. Once the plan is approved, the Regions will need to implement and then report the outcome to the public and the MOE.

Many of the plan requirements are already covered by the EFW Project Agreement: Complaint Protocol (EMS), Air Emissions Monitoring Plan, Daily inspections and record keeping, third party audits (EMS), spill contingency and emergency response plans, odour management and mitigation plans and noise monitoring plans.

Several EA conditions will become administrative requirements handled by regional staff. These would include: EA compliance monitoring and reporting, complaints follow-up (service level adjustments), community communications plan, support to the advisory committee (\$20K annually), consultation with aboriginal communities, daily site inspections and record keeping.

The Regions will also be responsible to demonstrate their due diligence regarding the efficient operation of the EFW facility. Towards this end, annual third-party audits must be conducted by a qualified independent professional engineer (approximately \$75K/year). Covanta will also require EMS auditing once their EMS has been registered. However, the Regions will need to obtain the services of a professional engineer specializing in EFW operations to conduct annual audits of the operation.

Responsibility	Requirement	Implementation Requirement	Estimate
Durham/York	EFW Site Liaison Committee	Staff Time and Budget	\$20,000 per year
Durham/York	EA Compliance/Reporting	Staff Time	Staffing requirements will be evaluated on an annual basis and reflected in the waste management staffing section of the service and financing report and annual budget report to Council.
Durham/York	Community Communication Plan	Staff Time	Staffing requirements will be evaluated on an annual basis and reflected in the waste management staffing section of the service and financing report

Responsibility	Requirement	Implementation Requirement	Estimate
			and annual budget report to Council.
Durham/York	Aboriginal Dialogue	Staff Time	Staffing requirements will be evaluated on an annual basis and reflected in the waste management staffing section of the service and financing report and annual budget report to Council.
Durham/York	Waste Diversion Reporting	Staff Time	Staffing requirements will be evaluated on an annual basis and reflected in the waste management staffing section of the service and financing report and annual budget report to Council.
Durham/York, Third Party Independent Professional Engineer	Plant Performance (3rd party audits)	Budget/Contract: implement and maintain an environmental management system at the Facility and consistent with the ISO 14001:2004 standard or such updated standard as may be amended from time to time, and provide Owner with External Auditor's report on the Environmental Management System performance on a bi-annual basis.	Approx. \$75,000 per year
Durham/York & Covanta	Operations Reporting Site Inspections (Durham) Operations Reporting Service Level (Covanta)	Staff/Contract Administration	Staffing requirements will be evaluated on an annual basis and reflected in the waste management staffing section of the service and financing report and annual budget report to Council.
Covanta	Complaints Protocol	Contract: Part of the ISO 14001 Environmental	N/A – Part of Project Agreement

Responsibility	Requirement	Implementation Requirement	Estimate
	(service level)	Management System	
Covanta	Spills/Emergency Response	Contract: DBO Contractor to supply prior to Facility Substantial Completion	N/A – Part of Project Agreement

Note: To ensure compliance with the conditions identified above where staff time is required to implement, Durham Region Staff have estimated the need for two (2) additional full-time equivalent staff positions.

Conclusion

The administrative requirements to be imposed by the conditions of approval are not unexpected. Items for which the Regions are responsible were anticipated and have already been included in the annual operating budget estimates and in many cases already discussed publicly as part of commitments made by the Regions in the EA Document. Items for which Covanta will be responsible are addressed through the current project agreement.

Monitoring Requirements

Discussion

The EA conditions detail several monitoring requirements. The details to fulfill these obligations will be included in the plans to be developed and submitted to the MOE for approval. The EFW Project Agreement facilitates the requirements for odour, noise and air emissions monitoring. The Region of Durham anticipated the requirement for ambient air and soil monitoring in the annual operating cost budget (\$250K annually for three years). The groundwater and surface water monitoring was not anticipated. It is estimated that approximately \$50K annually will be required for this task.

Responsibility	Requirement	Implementation Requirement	Estimate
Durham/York	Ambient Air Monitoring	Budget: The Region anticipated the requirement for ambient air and soil monitoring in the annual operating cost budget (\$250K annually for three years).	Durham operating budget already includes \$250,000 per year
Durham/York	Groundwater and Surface Water Monitoring	Budget: Implement and maintain a groundwater and surface water monitoring program. The Region already has ground water monitoring wells established in the area, therefore there should be limited additional monitoring infrastructure required. Additional costs will be associated with the sampling, analysis and reporting.	Less than \$50,000 per year

Responsibility	Requirement	Implementation Requirement	Estimate
		The plan for this monitoring will be developed following EA approval.	
Covanta	Odour Monitoring	Contract: Odour Control Plan: DBO Contractor to provide prior to Facility Substantial Completion	N/A – Part of Project Agreement
Covanta	Noise Monitoring	Contract: The DBO Contractor shall carry out acoustic audit measurements on the actual noise emissions due to the operation of the entire Facility at the design rating. The noise measurements shall be performed by an Independent Acoustic Consultant in accordance with the MOE requirements. Independent Acoustic Consultant shall prepare an acoustic audit report which will be included in the Emission Test Report.	N/A – Part of Project Agreement
Covanta	Emission Monitoring	Continuous and Stack Testing (includes dioxins & furans continuous sampling system). The DBO Contractor, at its cost and expense, shall arrange for a qualified independent and impartial testing agent approved by the Owner to conduct stack emissions testing. The testing agent shall submit the test report to the MOE.	N/A – Part of Project Agreement

Conclusion

The administrative requirements to be imposed by the conditions of approval are not unexpected, with the exception of groundwater/surface water monitoring. The Region already has ground water monitoring wells established in the area, therefore there should be limited additional monitoring infrastructure required. Additional costs will be associated with the sampling, analysis and reporting, however, these costs will be borne by the Region as annual operating costs. The requirement to conduct ambient air monitoring has already been committed to by Regional Councils when the EA was approved by Councils for submission to the Ministry of the Environment. Items for which Covanta will be responsible are addressed through the current project agreement.

Operational Requirements

The EA conditions of Approval also prescribe several operating requirements with respect to Waste Delivery and Emissions Limits

Waste Delivery

Discussion

The EA conditions impose restrictions which must be considered in the evaluation of the EFW operations. The amount of non-hazardous municipal solid waste that may be received at the site (excluding unacceptable waste) is 140,000 tonnes per year. The Regions will provide a minimum of 140,000 tonnes of waste per year to the EFW as stipulated in the project agreement.

The energy guarantees are tied to the energy value of the waste provided. The EFW facility was designed to operate efficiently given delivery of waste within a Higher Heating Value (HHV) range of 11 to 15 MJ/Kg. If the Region does not deliver at least ninety percent (90%) of Guaranteed Annual Throughput as defined in Exhibit 1 to Appendix 19 in any Calendar Year, the Owner shall relieve the DBO Contractor of its Electricity Production Guarantee for such Calendar Year. Based on information supplied by Covanta, the Region will meet this obligation as long the HHV of the 140,000 tonnes delivered on an annual basis is equal to or greater than 11.7 MJ/Kg. Waste composition audits to date conducted by the Region indicate that the HHV will be in the range of 13.0 MJ/Kg.

Notwithstanding the foregoing, the DBO Contractor shall continue to attempt to maximize electricity production from the Facility regardless of the tonnage of Acceptable Waste delivered by the Owner.

Responsibility	Requirement	Implementation Requirement	Estimate
Durham/York	Waste Delivery	The Owner will provide to the DBO Contractor a minimum of 140,000 tonnes of Acceptable Waste per calendar year during the Term. The Owner is entitled, but not obligated, to deliver additional Acceptable Waste to the Facility if capacity is available.	N/A – Part of Project Agreement

Conclusion

The EA Conditions of Approval will provide for up to 140,000 tonnes per year of “acceptable” waste to be processed at the facility. This tonnage is consistent with the project agreement.

Emission Limits

Discussion

Based on discussions with the MOE to date, the EA conditions emission limits will be utilized as operating requirements, not regulatory enforcement limits. It is anticipated that the enforcement limits will align with the guarantees provided by Covanta in the project agreement. There are three emission limits which are currently not in line with the EA conditions and will be considered operating targets during the CofA discussions.

These three emission limits relate to: carbon monoxide (CO); organic matter (measured as methane)(OM); and, opacity and are currently addressed in the project agreement.

The EFW Facility should be able to meet the lower CO limit under most operating conditions. The new A-7 Guideline provides flexibility for start-up, shutdown, or upset periods as does the project agreement. Fluctuations in fuel quality or quantity variability or any spike in CO emissions would likely be mitigated by firing auxiliary fuel (i.e., natural gas). The proposed EFW Facility already includes gas-fired auxiliary burners for starting up the boilers, so there should not be additional capital expenditures for this change. As well, the project agreement already includes an allowance for the firing of natural gas during these periods. The need (if any) and extent of additional gas usage required to be used on occasion to meet this lower CO limit (ie. during a spike) cannot be determined at this point and would need to be assessed on a year-by-year basis.

Based on HDR's review of emissions data for OM at other EFW facilities, meeting the requirement as currently stated in the new A-7 Guideline (i.e., 33 mg/Rm³ measured via a stack test) should not be an issue for the EFW Facility.

Based on our technical review of the Covanta submission, meeting the opacity standard does not present any technical concerns.

Responsibility	Requirement	Implementation Requirement	Estimate
Covanta	Carbon Monoxide 40 mg/Rm ³	Continuous Emission Monitors (CEM) are part of contract. Potential operating costs if natural gas must be used is included as a flow-through cost in the contract	N/A – Part of Project Agreement
Covanta	Organic Matter 33 mg/Rm ³	This is identified in the contract as a stack test limit. A7 indicates that if CO is continuously monitored then the organic matter can be a stack test.	N/A – Part of Project Agreement
Covanta	Opacity 10% (6-minute average) 5% (2-hour average)	Continuous opacity monitor is part of contract. The USEPA limit is 10% (6-minute average). The other A7 limit of 5% (2-hour average) should not be a problem to meet.	N/A – Part of Project Agreement

Conclusion

As stated above, the EFW Facility should be able to meet the lower CO limit under most operating conditions. The EA Conditions of Approval provides flexibility for start-up, shutdown, or upset periods as does the project agreement. Fluctuations in fuel quality or quantity variability or any spike in CO emissions would likely be mitigated by firing auxiliary

fuel (i.e., natural gas). The proposed EFW Facility already includes gas-fired auxiliary burners for starting up the boilers, so there should not be additional capital expenditures for this change. As well, the project agreement already includes an allowance for the firing of natural gas during these periods. The need (if any) and extent of additional gas usage required to be used on occasion to meet this lower CO limit (ie. during a spike) cannot be determined at this point and would need to be assessed on a year-by-year basis.

Based on EA Conditions of Approval and HDR's review of emissions data for OM at other EFW facilities, meeting the requirement as currently stated in the EA Conditions of Approval (i.e., 33 mg/Rm₃ measured via a stack test) should not be an issue for the EFW Facility.

Based on our technical review of the Covanta submission, meeting the opacity standard does not present any technical concerns.

Overall Conclusion

Based on our review of the EA Conditions of Approval, our understanding of how they will be applied as part of the C of A, and the proposed Covanta Design and Operational procedures there are no technical reasons the proposed facility cannot be designed and operated in accordance with the EA Conditions of Approval with no impact on the current project agreement nor any impact on the capital cost projections. This statement is based on a purely technical opinion of the design and operation and does not include any speculation with respect to Covanta's view of the additional risks they may bear, if any, due to meeting operational requirements that varying slightly from their original proposal.

The majority of conditions for which Durham and York Regions will be responsible, were anticipated and have already been included in annual operating budget estimates (with the exception of groundwater and surface/water monitoring).

January 19, 2011

Energy-from-Waste (EFW) Facts

Environmental and energy benefits

- The electricity produced by the proposed 140,000 tonne-per-year facility could power approximately 10,000 homes.
- Heat produced by the proposed facility could heat the equivalent of 2,200 homes.
- The EFW facility would result in a reduction of green house gas (GHG) emissions equivalent to approximately 24,000 tonnes of carbon dioxide per year compared to landfilling the same material.

Emissions comparisons

- The annual quantity of nitrogen dioxide emissions from a 140,000 tonne-per-year facility is approximately equivalent to the quantity released from any of the following:
 - 1,300 automobiles each travelling 20,000 kilometres per year
 - 14 diesel trucks each travelling 150,000 kilometres per year
 - 5,000 homes heated with natural gas-fired residential furnaces
 - 3,400 homes heated with fuel oil-fired residential furnaces
- The annual quantity of sulphur dioxide emissions from a 140,000 tonne-per-year facility is equivalent to the quantity released from approximately:
 - 68 diesel trucks each travelling 150,000 kilometres per year
 - 660 homes heated with fuel oil-fired residential furnaces
 - 10,100 homes heated with conventional woodstoves
- The annual particulate emissions from a 140,000 tonne-per-year facility are equivalent to approximately 23 households heating their homes with woodstoves over a one-year period.
- Approximately 10% of global methane emissions from human-related sources are emitted from landfills annually.