Clarington
Leading the Way

REPORT
PLANNING SERVICES

Meeting: GENERAL PURPOSE AND ADMINISTRATION COMMITTEE

Date: Monday July 6, 2009

Report #: PSD-071-09 **File #:** PLN 33.3.10 **By-law #:**

Subject: DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT MUNICIPALITY OF CLARINGTON PEER REVIEW COMMENTS ON PRE-SUBMISSION

RECOMMENDATIONS:

It is respectfully recommended that the General Purpose and Administration Committee recommend to Council the following:

1. THAT Report PSD-071-09 be received;
2. THAT Report PSD-071-09 including Attachments 2 through 14 be ADOPTED as the Municipality of Clarington's comments on the Pre-Submission Environmental Assessment (EA) for the Residual Waste Process and Energy from Waste (EFW) Facility;
3. THAT as part of the Pre-Submission Review, Clarington Staff provide comments to the Region's Project Team on the peer review comment dispositions to assist with facilitating submission of the Environmental Assessment by July 31, 2009;
4. THAT SENES, AECOM and Steven Rowe be thanked for their efforts in completing the peer review in a timely manner;
5. THAT the Region's Project Team be requested to work closely with Clarington Staff on the detail design of Energy Park Drive, the stormwater management works and other Clarington Energy Business Park design details, the architectural concepts for the Energy from Waste facility and implementation plans for development;
6. THAT a copy of Report PSD-071-09 and Council's decision be forwarded to the Region of Durham, the Region of York and Ministry of Environment; and
7. THAT all interested parties listed in this report and any delegations be advised of Council's decision.

Submitted by: David J. Crome, MCIP, RPP
Director of Planning Services

Reviewed by: Franklin Wu,
Chief Administrative Officer

FL/sn

1.0 BACKGROUND AND PURPOSE OF REPORT

1.1 On April 16, 2007, Council adopted Resolution # C-211-07, which directed Staff to examine comprehensively the EA documentation and prepare a peer review among other items.

1.2 On May 28, 2007, Council adopted the recommendations in Staff Report PSD-070-07 which defined the scope of work for the various peer reviews and economic studies to be undertaken to assist Council in determining its position with respect to the proposed Energy from Waste (EFW) facility to ensure that the interests of the Municipality and its residents are protected.

1.3 Also included in PSD-070-07, consultants were retained to peer review various aspects of the Environmental Assessment (EA) process, including site selection, and the potential environmental effects of the proposed facility. Unlike some other peer reviews for the Municipality, Staff coordinated the peer review team and were and responsible for some specific aspects of the Residual Waste EA peer review. Staff and the peer review consultants have met with the Regions' Project Team on a number of occasions to seek clarification and probe further into the analysis and methodology of the various studies. The Regions' Project Team for the EA has been cooperative in providing information to the Municipality's peer review consultants and exploring the issues raised.

1.4 The purpose of this report is to set out the Municipality's comments on the draft EA, dated June 12 as endorsed by Durham and York Regional Councils on June 24 and 25, respectively.

The Regional Councils endorsed the Durham–York Residual Waste Study Environmental Assessment (EA) and authorized Regional Staff to submit the EA to the Ministry of the Environment by July 31, 2009 subject to such minor adjustments as deemed necessary by the Commissioner of Works, based on the ongoing process, including preliminary review and documentation by the Ministry of the Environment.

Clarington's comments will be submitted to the Region's Project Team to be addressed as part of the "fine-tuning" revisions that are being made up until July 31, 2009. A copy of this report will be forwarded to the Ministry of Environment for their information.

The Region's Project Team has had Clarington's peer review comments since June 5th 2009. Many of the comments and issues raised have been addressed by the endorsement of the Host Community Agreement by Clarington Council on May 11, 2009 and Durham Regional Council on June 24, 2009. Clarington Staff and peer review consultants met with the Region's Project Team on June 12, 2009 to clarify issues yet to be addressed. A separate meeting for the peer review consultants on the Site Specific Human Health and Ecological Risk Assessment (HHERA) took place on June 5, 2009.

2.0 YORK/DURHAM RESIDUAL WASTE EA PROCESS

2.1 Environmental Assessment Process

2.1.1 The Regions of Durham and York, jointly are currently conducting an EA to determine how to manage the residual solid waste remaining after blue box and green box diversion efforts. Key dates in the study process:

• March 2006	Ministry of Environment approval of EA Study Terms of Reference
• June 2006	Selection of preferred approach to managing residual waste (Alternatives To)
• July 2007	Issuance of Request for Qualifications (RFQ)
• October 2007	Recommendation on preferred site (Alternative Methods)
• December 2007	Durham and York Region Council approval of preferred site
• January 2008	Approval of Qualified Bidders
• August 2008	RFP issued to qualified bidders
• February 2009	RFP's received
• April 2009	Identification of Preferred Vendor
• January-May 2009	Completion of all site specific studies
• May 2009	Clarington Council Endorses Host Community Agreement (HCA)
• June 2009	Approval of final EA and HCA by Durham and York Councils
• Late July 2009	Submission of final EA to Ministry of Environment (MOE)
• 2009/2010	EA review and decision by Minister of Environment
• Initiated in 2009	EPA Applications based on EA
• 2010-2012	Construction of the 140,000 tonne EFW

2.1.2 For the EA, the purpose of the undertaking (the project), was set out in the Ministry of Environment approved Terms of Reference, as follows:

- To process – physically, biologically and/or thermally – the waste that remains after the application of both Regions' at-source waste programs in order to recover resources – both material and energy – and to minimize the amount of material requiring landfill disposal. In proceeding with this undertaking, only those approaches that will meet or exceed all regulatory requirements will be considered.

- The waste proposed to be managed will be primarily Municipal Solid Waste (MSW) from residential sources generated within Durham and York Regions remaining after at-source diversion, a portion of post-diversion Industrial, Commercial and Institutional (IC&I) waste traditionally managed by the Regions at their waste disposal facilities; and Municipal post-diversion residual waste from neighbouring non-Greater Toronto Area (GTA) municipalities that may provide disposal capacity for processing residues.

The final description of the undertaking has been refined and altered from the conceptual description based on the EA Study findings and public/stakeholder input.

2.1.3 Refinements to the description of the undertaking as the EA has progressed have resulted in the following description:

> "The Undertaking, as defined by this Environmental Assessment, is a Thermal Treatment Facility, capable of processing post-diversion residual waste and recovering materials and energy of sufficient quality and quantity to export to the marketplace (recovered metals, electricity and eventually the possibility of district heating and cooling) with a projected maximum design capacity of 400,000 tpy. The Facility will be designed, built and operated on the Clarington 01 site, located in the Municipality of Clarington, Regional Municipality of Durham."

2.2 Clarington Comments on the Environmental Assessment Process to date

2.2.1 Clarington Staff have been involved in the EA process for Residual Waste since its inception in 2005, when the initial terms of reference were being drafted and conceptual description of the undertaking was being formulated.

2.2.2 Staff Reports have dealt with various aspects of the Residual Waste EA as follows:

PSD-018-06 Feb, 13, 2006, Comments on the Terms of Reference

PSD-070-07 May 22, 2007, Municipal Peer Review and Other Studies

PSD-097-07 September 4, 2007, Update on Municipal Peer Review

PSD-141-07 December 3, 2007, Municipal Comments on Step 7 –Evaluation of Short-List of Sites and Identification of Preferred Site

PSD-141-07 Addendum, December 10, 2007.

FND-002-08 January 21, 2008, Peer Review & Economic Studies Costs to Date

FND-022-08 Addendum, February 25, 2008

CAO-002-09 May 11, 2009, Status of EFW Host Community Agreement Negotiation

CAO-022-09 Addendum, May 11, 2009

2.2.3 In addition, Council has heard many presentations on the various alternatives and specific aspects of waste management over the past three years. Council has received numerous delegations and hundreds of submissions from residents over that time period and passed a number of resolutions. Recently Council endorsed being a "willing host" for the Energy from Waste facility conditional upon the Municipality of Clarington and Region of Durham executing a Host Community Agreement to implement the Host Community Agreement as set out in the May 11, 2009 CAO Report and Addendum.

2.2.4 In preparing Clarington's comments on the Final EA, previous comments, the Region's Project Team's disposition of these comments plus the final commitments recommended to address the anticipated impacts have been taken into consideration. An EA is a

process through which it is determined whether an undertaking is conceptually and technically acceptable based on the mitigation measures, follow-up commitments, and monitoring programs that will be implemented as part of the undertaking.

2.2.5 The EA for the Energy from Waste Facility (Durham/York Residual Waste Project) is in its final stages of completion. The Pre-submission review period, extending from June 12th to July 31st, is an opportunity for the Region's Project Team to "fine tune" the document prior to submission to the Minister of Environment for approval. Clarington's peer review consultants and Staff will continue to work with the Region's Project Team in reviewing how Clarington's comments will be addressed in the EA. Clarington will also have the opportunity to comment during the review period provided by the Ministry of Environment, following EA submission; the 12 week MOE review period (Aug 1 to October 23).

2.3 Environmental Protection Act and Other Required Environmental Approvals

2.3.1 The proposed EFW facility will require at least the following approvals under the Ontario Environmental Protection Act (EPA):

- Certificate of Approval (Air and Noise) under Section 9 Part II which regulates emissions to the natural environment, in particular air.

- Certificate of Approval (Waste) under Section 27 Part V of the Act for the use, operation, establishment, alteration, enlargement or extension of a waste management facility.

The Ministry may place the EFW under a comprehensive Certificate of Approval (C of A). The specifics of the C of A have yet to be worked out between the builder (Covanta), the proponent (the Regions) and the Ministry. Because it stems from an EA process the Certificate of Approval applications could voluntarily be posted to the Environmental Bill of Rights (EBR) website, however, there is no legal requirement, no EBR appeal rights (EBR Section 32) and no EPA hearing appeal rights (EPA Reg 206/97). The Municipality will be asked to provide comments as a commenting agency.

In addition to these C of A approvals, the EFW will be required to develop a "Spill Prevention and Contingency Plan" according to O. Reg 224/07 under the EPA.

2.3.2 The conceptual facility size of 400,000 tonnes/year was used for the EA study. The EFW facility will be built in phases and EPA approval will be required for each phase. To address the requirements of the EPA and to obtain the required approvals, supporting technical studies and design plans have been completed to an appropriate level of detail to demonstrate no adverse effects on the environment and show that the applicable environmental standards will be met, providing that the mitigation measures and commitments set out in the EA documentation are carried through.

2.3.3 The Certificate of Approval applications will be required to meet the emission limits proposed by the vendor in response to the RFP. The proposed revised Ontario A-7 Guidelines for air emissions have been released by MOE for review and comment. If the proposed revised guidelines are approved, then the Certificate of Approval applications will be required to meet the more stringent of the two guidelines. Future phases of the

EFW would have to meet the emission guidelines in place when that expansion phase is undertaken and the C of A application is made.

2.3.4 Other potential environmental approvals for an EFW facility include the Ontario Water Resources Act. The Region's Project Team have indicated that based on the work completed to date, no issues have been identified that would prevent receipt of this approval or any other approvals that are required for the project to proceed.

3.0 CLARINGTON'S PEER REVIEW OF FINAL EA DOCUMENTS

3.1 Comments on the Draft Environment Assessment (EA) Study Document, June 12, 2009

3.1.1 The Peer Review consultants have provided comments on the Draft Environmental Assessment Study Document that was released on May 25, 2009 and have received verbal and written responses to these comments. Clarington's peer reviewers were SENES, AECOM and Steven Rowe supplemented by Clarington Staff for certain aspects. The peer review comments on Site Specific Studies and Draft Environmental Assessment were circulated to Council and the Region's Project Team on June 5, 2009 (except for the HHERA which was circulated on June 12, 2009). Many issues are to be addressed through additional clarification and will be addressed in revisions by the Region's Project Team, in the upcoming weeks prior to submission. The disposition of the peer review comments are in Attachments 2 through 14. Staff and the peer reviewers will continue to review the proposed wording for the final report and assist in resolving clarification issues.

3.1.2 The Draft Environmental Assessment was reviewed by Steven Rowe with assistance from AECOM and SENES. The peer review comments and Region's Project Team disposition are Attachment 2 to this report. Our peer review consultant has had the opportunity to review the Region's Project Team response and the additional information released on June 12.

3.1.3 *Section 8 – Site Identification Process.* The Peer Review team continue to have concerns over the traceability of decisions arising from Step 7, "Alternative Methods" the Site Identification Process. While some of the concerns raised in PSD-141-07 in December 2007 have been addressed through the inclusion of additional information and are resolved, others remain. The concerns expressed previously over the trading off of criteria and the traceability of how certain factors played out in the comparative analysis have, to date, not been addressed satisfactorily. Overall, the site selected (Clarington 01) has low levels of impact for the majority of factors; the baseline air quality was a concern; however, what cannot be determined from the information provided is whether it is the "best" site.

3.1.4 *Section 9 – Vendor Identification Process.* The Region's Project Team has committed to assess whether the Covanta proposal is consistent with the EA process. The peer review team will review this information when it is made available. The process to identify the preferred technology vendor does not incorporate the EA principles of traceability and transparency; however, it would be appropriate for the MOE to provide guidance on whether the RFQ/RFP process sufficiently addresses these requirements given the other issues prevalent in any bidder process.

3.1.5 *Section 10 – Identification and Description of the Undertaking.* Greater clarity could be provided within the EA documentation on the possible timing of the Phase 1 (250,000 tonnes/yr) and Phase 2 (400,000 tonnes/yr) expansions. Section 10.6 could more clearly articulate the Region's understanding of when the post-diversion residual wastes will reach the thresholds based on anticipated population growth, diversion rates, etc.

3.1.6 *Section 12 – Changes to the EA.* The Service Area of the EFW facility should be defined in the EA for each Phase of its development. The role of Clarington is currently not defined with regard to the minor and major amendments.

3.1.7 *Section 13 – Commitments.* The Region's Project Team is reviewing and where applicable revising the language with respect to the commitments and adding clauses based on the Host Community Agreement. The June 12 version of the Draft EA did not include all of the commitments that are set out in the Host Community Agreement with regard to the Site Liaison Committee, Community Relations Plan and Community Complaints System. In addition, Table 13-1 sets out commitments for construction and operations separately; however, when Phase 1 and 2 expansions are being built both the commitments for construction and operations will be in effect simultaneously. The specific role and functioning of the Site Liaison Committee should be reviewed in light of any lessons learned from the EA Site Liaison Committee when the terms of reference are being drafted.

3.1.8 *Section 14 – Monitoring.* The Environmental Assessment Compliance Monitoring Program should include the commitments made during public consultation sessions with regard to how the facility will be built, operated and expanded. A list of commitments could be compiled based on the consultation records. MOE should inform Clarington of the requirements for the compliance monitoring program and provide ongoing updates on how the monitoring is being achieved. Clarington Staff could assist the Ministry and Region's Project Team in formulating the compliance monitoring program, if requested and directed to do so by Council.

3.1.9 *Section 16 – Consultation Summary.* The June 12 Draft EA included the consultation summary and it has been reviewed by the peer reviewers and appears complete. Traceability should be noted as a key issue and will be important in the EA compliance monitoring program.

3.2 Comments on the Site Specific Studies (Appendices C1-C12), June 12, 2009

3.2.1 *Appendix C-1 Air Quality Assessment Technical Study Report*

The Air Quality Assessment was reviewed by SENES Consultants (Barrie Lawrence), the comments and Region's Project Team Disposition is Attachment 3 to this report. Our peer review consultant has had the opportunity to review the Region's Project Team responses and also the 400,000 tonne scenario which was released on June 12.

In summary the peer reviewers are satisfied that the modeling was done in a competent and professional manner. The meteorological mismatch and minor matters related to the emission rate and factors can be addressed by the Region's Project Team as they fine-tune their documentation.

The air quality assessment should be modeled to account for new or changed conditions when the proposed expansions to 250,000 and 400,000 tonnes/year are undertaken regardless of the timeframe and using the revised baseline conditions that exist at the time of each expansion.

3.2.2. *Appendix C-2 Surface Water and Groundwater Assessment Technical Study Report*

The Surface Water and Groundwater Assessment Technical Study Report were reviewed by AECOM (Will McCrae) and SENES Consultants, surface water and ground water respectively. The comments and the Region's Project Team Disposition is Attachment 4 to this report. Our peer review consultants have had the opportunity to review and meet with the Region's Project Team to discuss the more pertinent matters.

In summary the peer reviewers are satisfied that the modeling was carried out on the "worst case" scenario (all storm drainage within the site); it showed no adverse affects on the environment. The recently approved Host Community Agreement will improve the stormwater management quality treatment and remove much of the storage from the EFW site to a remote site.

The ground water comments have been addressed to the peer reviewer's satisfaction as outlined in the dispositions provided by Region's Project Team. A hydrogeological assessment will be conducted onsite as part of the detailed design to support dewatering and groundwater management.

This report would not require updating for the 400,000 tonne scenario.

3.2.3 *Appendix C-3 Facility Energy and Life Cycle Assessment*

The Facility Energy and Life Cycle Assessment was reviewed by SENES (Murali Ganapathy and Talar Sahsuvaroglu). The comments and the Region's Project Team Disposition is Attachment 5 to this report. Our peer review consultants have had the opportunity to review the disposition proposed by the Region's Project Team and accept their recommendations.

The benefits of green house gas reductions are not clear at this stage, if and/or when the facility is being expanded to the 250,000 and/or 400,000 tonne/yr., much more will be known about the other potential occupants of the Clarington Energy Business Park. As such, this study should be updated at that time to determine the potential benefits of this project.

3.2.4 *Appendix C-4 Geotechnical Investigation Technical Study Report*

The Geotechnical Investigation Technical Study Report was reviewed by AECOM (Will McCrae). The comments and the Region's Project Team Disposition is Attachment 6 to this report. The peer review team is satisfied with the responses provided by the Region's Project Team in the disposition which acknowledge additional geotechnical information will be required at the detailed design stage. For the 400,000 tonne/yr. scenario, from an EA perspective this study is acceptable and would not require updating.

3.2.5 *Appendix C-5 Acoustic Assessment Technical Study Report*

The Acoustic Assessment Technical Study Report was reviewed by SENES Consultants (Fred Bernard). The comments and the Region's Project Team Disposition is Attachment 7 to this report. Many of the comments provided were technical in nature and have been addressed to the peer reviewer's satisfaction in the disposition. To ensure transparency and traceability the formula's used and assumptions about the location of equipment should be identified.

The largest outstanding issue is whether pile driving is going to be necessary and how this would be mitigated with the possible expansions to 250,000 and 400,000 tonnes/yr. as there would be additional receptors compared to existing conditions. Since it is likely there will be more "receptors" in the immediate area at that time it is recommended that the Acoustic Assessment be revisited and updated at the time of the expansions.

3.2.6 *Appendix C-6 Visual Assessment Technical Study Report*

The Visual Assessment Technical Study Report was reviewed by Clarington Staff. The comments and the Region's Project Team Disposition is Attachment 8 to this report.

The Visual Assessment was carried out for beyond the boundaries of the Clarington Energy Business Park, it followed current practices and standards for visual impact assessments. However, the visual assessment for receptors within the CEBP is to be updated based on the peer review comments and visualizations provided to the Region's Project Team on June 12, 2009. The most current information regarding other projects (e.g. Highway 407 and OPG) and the status of the Clarington Energy Business Park will be included. Staff will work with the Region's Project Team to help finalize all of the technical comments on the visual assessment for the July 31st submission timeframe.

Details regarding the proposed measures used to mitigate the visual effect of the Facility while not available at this time should be referenced in Section 13 – Commitments of the Final EA Report. It has been duly noted that the cash allowance, no less than nine million dollars, in the RFP is described in the Host Community Agreement; however, from an economic perspective this is not a direct benefit to Clarington as it can be assumed that regardless of where this facility was sited the Regions would have made provision to ensure that the architectural treatment was world class.

As stated in the disposition comments, the visual impact assessment focused on the "worst case" scenario where the basic design specifications and dimensions were used. The actual facility will employ high quality design and architectural principles to ensure that the facility will be consistent with the prestige commercial and industrial business park that is envisioned.

Given that the 250,000 and 400,000 tonne/yr scenarios will have visual impacts within the CEBP the visual assessment should be updated at the time of these expansion phases and include the receptors that are within the CEBP at that time.

3.2.7 *Appendix C-7 Natural Environmental Assessment Technical Study Report*

The Natural Environment Assessment Technical Study Report was reviewed by SENES Consultants (Paul Patrick). The comments and the Region's Project Team Disposition is

Attachment 9 to this report. The Region's Project Team has agreed to edit/update the report based on the peer review comments which is acceptable.

3.2.8 *Appendix C-8 Social/Cultural Assessment Technical Study Report*

The Social/Cultural Assessment Technical Study Report was reviewed by SENES Consultants (Gwen Brice) with additional comments provided by AECOM and Steven Rowe. The peer review comments and the Region's Project Team Disposition is Attachment 10 to this report.

The outstanding issues with regard to this report are the types of mitigation that will be undertaken to address the social impacts of this project. The Host Community Agreement addresses a number of the economic and anticipated social/cultural impacts of the project however; given the timing of the approval of the HCA these mitigation measures were not included in the overall study. During a meeting on June 12, 2009 the Region's Project Team committed to addressing many of the outstanding issues raised in the Visual, Economic and Social/Cultural Assessments. The concerns identified from the Visual and Economic Assessments have impacts and mitigation measures that ripple through the Social/Cultural Assessment.

The peer reviewers will work with the Region's Project Team to finalize all of the technical comments on the social/cultural assessment for the July 31st submission timeframe. A review of the final documentation will be required to confirm that commitments made in the disposition table are satisfactorily addressed. Should any outstanding items remain they will be reported to Clarington Council for direct submission to MOE as part of the formal review.

3.2.9 *Appendix C-9 Stage 2 Archaeological Assessment and Built Heritage Assessment Technical Study Report*

The Stage 2 Archaeological Assessment and Built Heritage Assessment Technical Study Report was reviewed by Clarington Staff. The peer review comments and the Region's Project Team Disposition is Attachment 11 to this report. The peer review team is satisfied with the dispositions provided by the Region's Project Team.

3.2.10 *Appendix C-10 Traffic Assessment Technical Study Report*

The Traffic Assessment Technical Study Report was reviewed by AECOM (Will McCrae, Garry Pappin). The comments and the Region's Project Team Disposition is Attachment 12 to this report. The peer review team is satisfied with the majority of responses provided by the Region's Project Team in the disposition. The approval of the Host Community Agreement and Recommendation 8 of Regional Report 2009-COW-03 (acquisition/expropriation of certain lands) will mitigate and address a number of the specific issues raised by the peer review team. The Traffic Assessment is for the "worst case" scenario which is that construction access and ongoing delivery of waste would be on the existing public road system; however, the mitigation that is being suggested through the Host Community Agreement is that both of these activities occur along the private lane adjacent to the railway tracks.

As stated by the Region's Project Team "refinements to the haul route would be confirmed subsequent to the EA submission, and would be addressed in the permitting

documentation reflected in conditions of approval for design and operation of the Facility".

There is a commitment in the EA to update the Traffic Assessment for future expansions of the facility if the 400,000 tonne/yr. scenario is reached prior to 2023.

Currently the Traffic Assessment assumes that all waste material arriving at the site is by transfer trailer except for packer trucks from Clarington. The Region may wish to route the packer trucks from South Oshawa to the site rather than through a transfer station. As noted in Comment 13 on the disposition sheets by the Peer Reviewers, should a revised method of haulage be chosen after the project is approved, an addendum to the report should be prepared to identify potential impacts and mitigation. This would not be a change to the EA.

3.2.11 *Appendix C-11 Economic Assessment Technical Study Report*

The Economic Assessment Technical Study Report was reviewed by SENES (Malcolm Martini). The comments and the Region's Project Team Disposition is Attachment 13 to this report. The peer reviewers to date have not received the final version of this report which is to be updated based on the Business Case prepared for the Region of Durham.

As noted in the dispositions by the Region's Project Team significant work remains to be added and clarified within the economic assessment for the report to be finalized. The peer reviewers will work with the Region's Project Team to finalize all of the technical comments on the economic assessment for the July 31st submission timeframe. Should any outstanding items remain they will be reported to Clarington Council for direct submission to MOE as part of the formal review.

There is no reason to update this study if and when the facility expands.

3.2.12 *Appendix C-12 Site Specific Human Health and Ecological Risk Assessment (HHERA) Technical Study Report*

The Site Specific Human Health and Ecological Risk Assessment (HHERA) Technical Study Report was reviewed by SENES (Harriet Phillips/Mehran Monabotti). The comments and the Region's Project Team Disposition is Attachment 14 to this report.

The peer review concluded that the Site Specific HHERA for the EFW treatment facility for the 140,000 tonne/yr. scenario is comprehensive and conforms to risk assessment guidance.

The peer review identified a number of areas where the study could be clarified to be more transparent. However, it was concluded that these changes would not change the overall conclusions of the assessment as the risks are predicted to be very low, and in fact the calculated risks would likely be lower when the appropriate technology and site is selected. A specific discussion on nano-particles was suggested to address a concern identified by the public. As well, it was suggested that a "plain-language" summary of the report be prepared so that members of the public can better understand the approach and results of the risk assessment.

If and when the facility expands to 250,000 and/or 400,000 tonne/year, these studies should be revised based on the revised baseline conditions existing in the area. This means a revised Air Quality study should be conducted and its data used for developing the HHERA. Further, effects of the EFW plant upset conditions should be studied within the scope of expanded capacities as these could have significant effects.

4.0 CONCLUSION

4.1 This report provides an overview of the peer review process, the comments provided by the peer review team, and the disposition of these comments by the Region's Project Team (Attachments 2-14). Staff have reviewed the further comments by the peer reviewers and, as such, are recommending that they be submitted to the Region's Project Team as the Municipality's comments on the Durham/York Residual Waste Environmental Assessment Pre-Submission.

4.2 Staff and the peer reviewers will work with the Region's Project Team to help finalize the technical comments for the July 31st submission timeframe.

4.3 The Residual Waste Environmental Assessment lays the foundation for many aspects of the subsequent works for the EFW. Specifically there will be a process for the determination of the architectural design of the EFW. The commitments within the EA documentation and the Host Community Agreement will be important to the overall development of the Clarington Energy Business Park as an economic driver for the Municipality and Region.

Attachments:

Attachment 1	Glossary of Terms	
Attachment 2	Disposition Sheets –	Draft Environmental Assessment
Attachment 3	Disposition Sheets –	Appendix C-1 Air Quality
Attachment 4	Disposition Sheets –	Appendix C-2 Surface Water and Groundwater
Attachment 5	Disposition Sheets –	Appendix C-3 Facility Energy and Life Cycle
Attachment 6	Disposition Sheets –	Appendix C-4 Geotechnical Investigation
Attachment 7	Disposition Sheets –	Appendix C-5 Acoustic Assessment
Attachment 8	Disposition Sheets –	Appendix C-6 Visual Assessment
Attachment 9	Disposition Sheets –	Appendix C-7 Natural Environment Assessment
Attachment 10	Disposition Sheets –	Appendix C-8 Social/Cultural Assessment
Attachment 11	Disposition Sheets –	Appendix C-9 Stage 2 Archaeological Assessment and Built Heritage Assessment
Attachment 12	Disposition Sheets –	Appendix C-10 Traffic Assessment
Attachment 13	Disposition Sheets –	Appendix C-11 Economic Assessment
Attachment 14*	Disposition Sheets –	Appendix C-12 Site Specific Human Health and Ecological Risk Assessment (HHERA)

*** (Under Separate Cover)**

List of Interested Parties to be Notified of Councils decision:

Region of York, Works
Region of Durham, Works
Jim McKay, Jacques
Whitford Stantec
Ministry of Environment
Joachim Baur
Alexandra Bennett
Barry Bracken
Kathi Bracken
Wendy Bracken
Karen Buck
Terry Caswell
Katie Clark
Shirley Crago
Kevin Diamond
Wayne Ellis
Linda Gasser
James Gibson
Glenda Gies
Tenzin Gyaltsan
Ron Hosein
Dr. Debra Jefferson
Laurie Lafrance
Lee McCue
Warren McCarthy
Cathrine McKeever
Kerry Meydam
John Mutton
Karen Nichol
Dave Renaud
Jim Richards
Andrew Robson
Yvonne Spencer
Nicole Young
Lucy Wunderlich
Ontario Power Generation
Anthony Topley
Paul Andre Larose
Don Wilkinson
Noah Hannah
Katherine Miles
Donna Mcaleer-Smith
Kristin Robinson
Steve Tharme
David Climenhage
Steve Conway
Chester Miles
Bernadine Power
Hilary Balmer
Willis & Marilyn Barrabal
Stewart and July Dayes
Maureen Dingman
Carl Zmozynski
Gaston Morin
Ann and Mike Buckley
Fraser and Cathy Grant
Jean and Wallace Mcknight
Stephanie Adams
Julie Allen-Freeman
John and Dale Cerniuk
Garland and Anne Foote
Slyvain Gagnon
Melissa Girard
Beth Hewis
Manuel Jimenez
Debbie Kuehn
John MacDonald
Ralph Machon
Mary Anne and Gerry Martin
Kristin McKinnon-Rutherford
Lorna McSwan
Bretn Mersey
Donna Packman
Devon Richard
Brian and Sharon Thompson
Bill and Lorna Turner
Doug Woods
Don Wright
Lakeridge Health
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Leslie Heinrichs
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Elaine and Vincent Ho
Ron Campbell
Stephanie Adams
Betty Robinson
Nicola Keeme
Mable M. Low
Rebecca Harrison
Charlie and Irene Briden
Nadia McLean-Gagnon
Dorothy Barnett
Marc Tepfenhart
Rosemary Davies
Wendy & Ron
Libby Racansky
Beav201
Louis
Sandra Viau
Tim Finnis
Hugh Allison
Marke Nelson
Jeremy Woodcock
Kevin LeGrand
Doug Anderson
Elaine Gillies

GLOSSARY OF TERMS

EA	Environmental Assessment
EBR	Environmental Bill of Rights
EFW	Energy From Waste
EPA	Environmental Protection Act
HHERA	Human Health and Ecological Risk Assessment
IC&I Waste	Industrial, Commercial, and Institutional waste
MOE	Ontario Ministry of the Environment
MSW	Municipal Solid Waste
RFP	Request for Proposals
RFQ	Request for Qualifications
C of A	Certificate of Approval

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Environmental Assessment (EA)
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		The comments and responses in this table arise from three peer reviews conducted on behalf of the Municipality of Clarington during the Residual Waste Study EA process. As part of these reviews, Steven Rowe Environmental Planner assessed Environmental Assessment (EA) documentation against EA planning requirements as set out in the EA Act, the approved Terms of Reference (TOR), and Codes of Practice. The first peer review comprised a review of the "Draft Report, Thermal Facility Site Selection Process, Results of Steps 1-5, Identification of the "Short List" of Alternative Sites" and related documents, prepared by MacViro Consultants Inc. (now Genivar) and Jacques Whitford Limited and dated March, 2007 (the "Site Selection Short List Draft Report"). Clarington's peer review consultants met with the proponent's team to discuss issues arising from this document in June 2007 and Steven Rowe completed an "Interim Report: Review and Gap Analysis of Site Selection Process, Durham/York Residual Waste Study" in July 2007 ("Interim Report"). Jacques Whitford responded to Mr. Rowe's comments in "Durham-York – Comments on Steven Rowe Peer Review of Siting Process to date" dated July 25, 2007 ("Response to Interim Report"). The second comprised a review of the "Results of Step 7, Evaluation of Short-List of Sites and Identification of Consultants Recommended Preferred Site", dated September 2007 (the "Step 7 Report"). Clarington's peer review team met with the proponent's team in October received written responses to their initial comments in October and November. These comments may be found in "Comments Received from Clarington Peer Reviewers in the Step 7 Preferred Site Report" on the Step 7 documents page of the proponent's website at http://www.durhamyorkwaste.ca/consultants_prefsite.php . In November 2007 Steven Rowe completed a "Review of the Step 7 Draft Report: Durham/York Residual Waste Study: Evaluation of Short-List of Sites and Identification of Consultants Recommended Preferred Site" (Step 7 Review)". The third peer review comprised review of an Interim Environmental Assessment released on April 21, 2009 the site-specific Social/Cultural Cultural Assessment Technical Report (May 16) and a Draft Environmental Assessment released on May 25, 2009. This review took place during May and June 2009. The intent of the following table is to focus on a number of themes that have arisen during the process, and how and when these were raised and responded to. These themes are identified and discussed in generally chronological fashion below. Some peer review issues that have been resolved or are of lesser significance are omitted. The original Interim Report, Step 7 Report and Jacques Whitford comments may be consulted for further details on the content of and responses to these peer reviews. This report is draft and subject to further discussion with the Region's consultants before being finalized.	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Environmental Assessment (EA)
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1		**Screening of the Study Area and Identification of Unconstrained Areas for Facility Siting** Clarington's Interim Report found that Site Selection Short List Draft Report did not provide sufficient information to support the identification of the unconstrained areas shown in Map 3-1 of the Report (Draft EA Figure 8-4). It stated that for this step of the process to be traceable, the proponent should have provided screening maps and a description of how each of the criteria was applied. Without this, it is not possible to assess whether the information used was accurate or was applied consistently. For example, there is insufficient information to demonstrate how land was screened from consideration around federally regulated airports. The screening criteria require exclusion of "areas around federally regulated airports as per Transport Canada Guidelines". The rationale for the criterion in Appendix 2, Table 2-2 of the Step 1-5 report (Table 8.2 of the Draft EA) relates to "land uses that are hazardous to aircraft operations (i.e. organic waste at waste processing sites that may either attract birds or adversely affect flight visibility)." There are at least three federally regulated airports in the study area – Pickering (proposed but already regulated), Oshawa, and Buttonville. All of these have different federal airport zoning by-laws that regulate such matters as the height of structures and the location of waste disposal facilities in their vicinity. While the height of structures is not specifically referenced in the criterion rationale, it was apparently considered based on consultation materials (e.g. the record of the PIC at the Clarington Beach Centre in Bowmanville on April 2, 2007). The areas that could potentially be excluded by this criterion are quite large, but the by-law requirements vary and are subject to interpretation in some areas. Near the Pickering airport areas were excluded from consideration when they would permit somewhat higher structures (up to 174m) than the stack height assumed for the risk assessment (64m). The Pickering Airport federal zoning regulation prohibits "land to be used for activities or uses attracting birds that create a hazard to aviation safety...". Different uses are permitted in three different zones around the airport. The proponent team's response to a Greater Toronto Airports Authority comment on this criterion (Consultation on the TOR, Table 3) suggests that impact related to birds and organic waste would be limited because all operations at the facility would be "within a closed environment". The relationship between the exclusion zone used for the screening and the mapping used by Transport Canada is unclear. Neither the Site Selection Short List Draft Report nor the Draft EA explain how these requirements were interpreted for each airport, nor what parts of the study area were excluded based on that specific criterion. In Tables 7-2, 7-5 and 7-6 to Appendix 7 of the Site Selection Short List Draft Report , the Oshawa airport is	The inclusion of the screening maps in the June 12 draft EA is appropriate and resolves the traceability issue to some degree as it relates to the screening of the study area. At the same time, the EA still does not explain how the different airport zoning regulations were applied in a consistent way that reflects the potential effect of a federal airport on the siting of the facility. Other inconsistencies remain in relation to the Oshawa airport. however these have no actual effect on the siting process. This should be addressed in the final submission.

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		identified as unregulated, and it transpired that this airport had not been considered in the screening process. At the time the Interim Review concluded that, depending on the extent of the area to be excluded, exclusion of regulated lands around the Oshawa Airport could conceivably affect the short listed sites located in Clarington. Subsequent information provided by the Region indicates that consideration of an exclusion area around the Oshawa Airport would not affect the Clarington sites, however there is still no explanation of how the requirements were interpreted. The Interim Report concluded that if all regulated airports are considered under a consistent approach this may result in the exclusion of additional lands from the study area. It should be added that unconstrained lands could have been added as well. In the Durham-York Response to the Interim Report, Jacques Whitford responded: *"The consideration of the Oshawa Airport as a federally regulated airport is under consideration and will be addressed in the final report. At this time to imply that this oversight could impact the Clarington sites is premature and potentially misleading without an analysis to support this statement."* And in responding to the conclusion: *"As per the commitment in the comment above, the Report under review will be modified to include a more detailed description of how each of the criteria were applied. This update will largely be based on Background Document 2-3, Section 2.2 which accompanied the approved EA Terms of Reference and clearly outlines the application of Step 2 Screening Criteria, the constraints and the rationale for considering these constraints."* The Interim and Draft EA (Tables 8-7, 8-10, 8-11) still show the Oshawa Airport as unregulated when it is in fact federally regulated. An "unconstrained area" lying within the Oshawa airport exclusion area identified by the Regions in the Site Selection Short List Draft Report is still shown as unconstrained on Figure 8-4 of the Draft EA. The basis for the delineation of all the airport exclusion zones by the proponent is unclear. Additional descriptive material in the Draft EA (Section 8) does not resolve these concerns. In responding to more general concerns about the way the screening process was described in the Step 1-5 Report, the proponents stated: *"The "Short-list" identification report provides a screening map in Appendix 3 with all data sources used in the generation of this map. Individual maps for each of the criteria were not included in the report as it was thought that the provision of numerous maps would be difficult to understand and potentially have a negative impact to landowners. It was our opinion that a map that clearly stated what was "constrained" and what was*	

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		"unconstrained" was a better method of presentation. Additional detail on how each of the criteria was applied can be provided in the final report." The proponent provided screening maps to the Municipality of Clarington including an updated map that showed an exclusion area around the Oshawa airport, as noted above, but has not made them available publicly or included them in the Interim or Draft EA document, or in supporting documents. Some of the types of information utilized for the screening are provided in support of the identification of alternative methods, which are not geographically specific (natural heritage information on Figure 7-17, agriculture information on Figure 7-18, settlement areas and airport lands on Figure 7-19 of the Draft EA), but not for the site selection process, where similar information was used for screening and would have been more relevant. Further information provided in the Draft EA on the application of the screening criteria does not resolve this concern. The gaps identified in the EA description Steps 1-5 of the site selection process mean that it is still not considered to be "clear, logical and traceable", in accordance with accepted EA planning practice as confirmed by the November 2008 Code of Practice on Preparing and Reviewing Environmental Assessments in Ontario (p.22). The EA should include the screening maps used in site selection process and a more comprehensive description of how they were derived and used. In response to the comment on the appropriateness of Mr. Rowe's comments on whether an issue would potentially affect the Clarington sites, the role of the peer reviewer is not to conduct analyses on behalf of the proponent but to identify gaps and deficiencies that should be addressed. **Disposition:** A number of refinements have been incorporated into the Draft EA Study Document (June 12, 2009) in direct response to the items identified above. These refinements are as follows: • The extent of the area associated with the federal zoning regulation for each of the three regulated airports, including the Oshawa Airport, has been mapped and presented in the June 12, 2009 Draft EA Study document. • Mapping for each of the screening criteria has been included in the June 12, 2009 Draft EA Study document to clarify the effect of each criterion in the delineation of the unconstrained areas at "Step 2".	

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2		**Identification of Public Lands in the Site Selection Process** The Interim Report commented on Section 5.2 of the Site Selection Short List Draft Report, which indicates that public lands were identified both through discussion with the Durham and York Region Real Estate and Economic Development Departments, and through contact with public agency representatives, as part of the identification of "willing seller" sites. Section 5.3 indicates that the November 2006 "call for willing sellers" included distribution of the "call" to area municipal contacts. This process is reported in Sections 8.5.1 and 8.5.2 of the Draft EA. The February 2007 "Request for Expressions of Interest" was identified in newspapers (local newspapers within the study area, plus the Daily Commercial News) and distributed to companies, associations and local municipalities (Appendix 5(b) of the Site Selection Short List Draft Report). There is no indication in the Site Selection Short List Draft Report or the Class EA of distribution of materials to or direct contact with other public agencies such as federal and provincial ministries and land-related agencies. Public lands identified at this step of the process are not mapped. The Site Selection Short List Draft Report does not give sufficient information to confirm that all potential siting opportunities on public land were identified and considered. If opportunities for siting on publicly owned sites other than municipal sites was not directly canvassed, there is potential for suitable sites owned by public agencies other than municipalities to have been omitted from the process. In "Durham-York – Comments on Steven Rowe Peer Review of Siting Process to Date", July 25, 2007 Jacques Whitford responded: *"All lands identified in the site identification process are mapped and included in the report which was reviewed. The maps of these sites can be found in Appendix 6."* Mr. Rowe concluded as follows in the Interim Report: "The information presented in the Site Selection Short List Draft Report does not describe a comprehensive approach to the identification of public lands. There may be public lands in the study area owned by agencies that were not directly approached as part of the process." And Jacques Whitford responded: *"Disagree – this needs to be discussed further with Clarington."* Appendix 6 does not provide mapping of the identified public lands, and no additional information has been	The comment does not question the reasonableness of the number of alternatives at this stage. The traceability issue raised in this comment remains.

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		provided on this aspect of the process in the Draft EA. The EA description of the consideration of public lands is still not considered to be "clear, logical and traceable", in accordance with accepted EA planning practice as confirmed by the November 2008 Code of Practice on Preparing and Reviewing Environmental Assessments in Ontario (p.22). **Disposition:** The "Potential Site Identification" process completed at "Step 4" yielded twelve (12) alternative sites for further consideration toward the identification of the Long-list of alternative sites. This represents a reasonable number of alternative sites for the purposes of the EA Study.	
3		**Tradeoffs among Public Health and Safety and Natural Environment Considerations** The Step 7 Review noted that the "Public Health and Safety and Natural Environmental Considerations" category has the highest rating in the evaluation. Because of the methodology adopted by the proponent, however, public health and safety and natural heritage "advantages and disadvantages" are traded off against each other in arriving at an overall rating under this category for each site. Clarington Site 1, for example, was assigned a "disadvantage" under "local meteorological conditions". This rating, however, was discounted against an "advantage" assigned in relation to emissions from haul traffic, resulting in a "neutral" level for "Potential Air Quality Impacts". This, when traded off against natural heritage ratings, resulted in an "advantage" overall for Clarington Site 1. The public may not have intended the potential air quality effects of the facility and the haulage effects on air quality to be discounted against each other and for air quality effects overall to be discounted by natural environment considerations when it assigned a high priority to this category as a whole.	The discussion of the "alternative methods" methodology in the TOR and Background Document 2-3 does not specifically describe the type of tradeoff referred to in this comment.

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		Disposition: The application of advantages and disadvantages was presented to agencies and the public as part of the development of the EA Terms of Reference and again as part of "Step 1" of the siting process. This consultation included workshops and public information sessions, as well as posting the information for comment and review. The proponent believes that all parties were given sufficient information and time to comment on the proposed evaluation process. The comments articulated above were not raised at the time as is demonstrated in the Record of Consultation. If the reviewer has specific information to support the above statement with respect public opinion, we would be pleased to receive the information and discuss this further.	
4		**Level of Detail and Interpretation of Data Used for the Short List Site Comparison** In the Step 7 Review it was noted that the description of the net effects analysis on page 3-6 of the Preferred Site Report states that the net effects analysis was done based only on available data, and yet it is clear from the annex documents that the work included field work in a number of instances. In the peer review consultants' initial responses it was suggested that a more accurate description be provided. The Regions' consultants responded that there was only limited field reconnaissance and the field studies were not considered to be sophisticated. They should still have been included in the description, however. Annex "C" to the Step 7 Report, "Public Health and Natural Environment", reports that "Jacques Whitford field biologists conducted site assessments for each of the four Short-Listed sites on July 18th, 19th and 20th, 2007. Tasks performed included identification of potentially impacted species and environments; evaluation of aquatic habitats of each of the receiving water bodies; an inventory of aquatic habitats on site; calculation of the distance from the site or haul route to the areas designated as Natural Heritage Features and Areas; evaluation of the amount of woodlands, and hedgerows affected or removed at the site and the degree of impact on the edge of a woodlot or hedgerow; followed by a relative comparison of the four sites." In particular, in the Step 7 Report Clarington Sites 01 and 05 and East Gwillimbury Site 01 were assigned a "disadvantage" rating under the "Species of Special Concern" indicator in Table 4.1 of the Step 7 Report. The supporting technical study notes that no Species of Special Concern were noted during fieldwork, and that for one of the two species potentially located on Clarington Sites 01 and one species on Clarington Site 05 and a species identified for East Gwillimbury Site 01 it is "unlikely this species would occur" since there is no appropriate habitat on site. A second potential Species of Special Concern on Clarington Site 01 was not identified.	The TOR states that "the comparative evaluation criteria will be applied based on sufficiently detailed data and analysis". The impacts identified were at variance with the data and analysis developed at this stage of the evaluation. It is quite possible to be consistent while considering information at a level of detail that enables the short-listed sites to be evaluated based on their actual environmental effects.

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		The Regions' consultant's response to this concern was that: *"There is evidence to suggest that these species are known to exist in the areas and therefore, may be potentially impacted by this development....in a relative comparison of sites, a site without this potential is advantaged over another with no potential impact".* It appears that the "disadvantages" assigned for two and perhaps three sites under the Species of Special Concern indicator in Tables 4.1- 4.5 of the Step 7 Report and Table 8-40 of the Draft EA were based on historical data for the area as a whole, which was at variance with the study team's more detailed knowledge of actual site conditions. **Disposition:** For the purposes of the comparative evaluation of Short-listed sites, a conservative approach was employed based on recorded information sources regardless of the results of the site visits. The key consideration with respect to the EA Study is that this criterion was applied consistently among the Sites.	
5		**Consideration of Hazard Land** The Step 7 Review questioned the disadvantages posed by hazard lands if the facility can be accommodated on the rest of the site. The Regions' consultants responded that the presence of hazard land presents a relative disadvantage, and consideration includes the potential need for monitoring of impact to the area during construction and operation. It is still unclear, however, what the potential environmental effects would be, other than those already addressed by other criteria (e.g. water quality impacts, aquatic and terrestrial ecology). **Disposition:** A conservative approach was followed in the application of this criterion in that the presence of hazard lands in close proximity to a potential development area would pose additional issues for site development when compared to a site with no known hazard lands located in proximity to the potential development area. Again, the key consideration for the purposes of the EA Study is that this criterion was applied consistently among the Short-listed sites.	The response does not elucidate what the "additional issues" would be, so the issue remains.
6		**Economic and Financial Considerations: Discounting the Value of Region-Owned Sites** The Step 7 Review noted that acquisition costs for Clarington Site 01 and East Gwillimbury Site 01 are rated at	The interpretation of site

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		zero because they are owned by Durham and York Regions, respectively. This is inappropriate because there would be an opportunity cost to the public purse of "losing" either of these sites – they still have value that should be reflected in the site comparison. The Regions' consultants responded to this concern and the concern about including the "unusable" portion of Clarington Site 05 in the cost comparison by undertaking a sensitivity analysis that considers the opportunity costs of using the two publicly owned sites and discounts the "unusable" Clarington Site 05 land (see item 7). They found that this analysis showed that with these factors considered the overall conclusions do not change. The findings from the capital cost analysis in the Preferred Site Report and in the sensitivity analysis are compared in the following table:	development cost applied by the proponent does not lead to a consistent comparison of the short-listed sites. The exclusion of the "unusable" land from Clarington Site 05 would have assisted in optimizing the alternatives for the purpose of the comparison.

	Clarington 01	Clarington 04	Clarington 05	E. Gwillimbury 01
Capital Costs: Preferred Site Report	Site specific capital costs range from $7.6 to $11.3 million	Site specific capital costs range from $8.9 to $16.7million	Site specific capital costs range from $10.6 to $15.5 million	Site specific capital costs range from $3.8 to $11.4 million
Overall rating, Preferred Site Report:	Neutral	Disadvantage	Disadvantage	Advantage
Capital Costs: Sensitivity Analysis	Site specific capital costs range from $7.6 to $13.1 million	Site specific capital costs range from $8.9 to $16.7million	Site specific capital costs range from $8.9 to $15.5 million	Site specific capital costs range from $3.8 to $13.1 million
Overall rating, Sensitivity Analysis	Neutral	Disadvantage	Disadvantage	Advantage
Comment	Lower end of range would be $9.4m (second highest)	No change (privately owned)	Lower end of range is reduced ("unusable" land	Lower end of range would be $5.5m if land cost added

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		<table><tr><td></td><td>if land cost added</td><td></td><td>discounted) but not the higher range (would be $13.8m)</td><td></td></tr></table> It is not clear why the sensitivity analysis applied changes at only one end of each of the cost ranges affected. If the changes were applied to costs at both ends of each range Clarington Site 01 would be seen as roughly equivalent to Sites 04 and 05 from a capital cost perspective. This would, in turn, affect a present value calculation of both capital and operating costs as discussed below. While this sensitivity analysis was included in Appendix 2 to the Consultation Report for the Preferred Site, it was not included in the draft EA. **Disposition:** The results of the sensitivity analysis regarding 'opportunity costs' associated with Clarington 01 and East Gwillimbury 01 and reflecting the "unusable" portion of Clarington 05 was included in response to Peer Review comments in the November 9, 2007 memo. It was not the intent to include the sensitivity analysis in the application of the Capital Costs criterion in the application of the Short-list evaluation criteria in the EA document as: • The indicator related to capital costs clearly identifies it as being related to 'specific site development costs'. The 'opportunity' cost associated with using a municipally owned property is not a specific site development cost but a theoretical value associated with the properties being available for some future municipal purpose. • Notwithstanding that a portion of Clarington 05 would not be available for use in developing the facility it would not preclude the need to purchase the entire property. Therefore, the cost for property acquisition included in the estimated capital costs for Clarington 05 appropriately included the price of acquiring the entire property.	
7		**Economic and Financial Considerations: Trading Off Capital versus Operating Costs** The Step 7 Report also commented that the evaluation treated operational cost and capital cost "advantages and "disadvantages" as equal when there is no basis for comparing them. It was suggested that these costs be "present valued" (i.e. converted to reflect total costs over the long term, rather than capital costs versus annual	Accepted by Reviewer ☒ Yes ☐ No No further comment

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costs). The Regions' consultants responded by producing a present value calculation that shows Clarington Site 01 as preferred under their "lower" and "higher" capital cost assumptions.

	CL 01	CL 04	CL 05	EG 01
Lower Site Specific Capital Costs ($ X1000) Savings +ve and costs –ve)	$23,308	$21,610	$20,455	$22,750
Higher Site Specific Capital Costs	$19,774	$14,163	$15,760	$15,471

This calculation appears to depend on the effects of savings in long term haulage to a remote landfill site(s) over a 20-year term, which is the "no go" condition for this EA. Consideration of actual relative haul cost figures may have resulted in a different outcome.

The figures appear to generally correspond to the overall findings in the Step 7 or the draft EA Report which indicate "advantage" for CL 01, "disadvantage" for CL 04, and "neutral" for CL 05 and EG 01, although they are within a relatively narrow range.

While this sensitivity analysis was provided in Appendix 2 to the Consultation Report for the Preferred Site, it was not included in the draft EA.

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		Disposition: The results of the sensitivity analysis regarding the 'present value' of capital and operating costs, was included in response to Peer Review comments in the November 9, 2007 memo. It was not the intent to include the sensitivity analysis in the application of the Operating Costs criterion in the application of the Short-list evaluation criteria in the EA document nor as part of the overall evaluation of advantages and disadvantages as: • The method used to apply each of the criterion in the evaluation of sites, involved a consistent approach in which the rankings for each criterion would be determined, and then the overall rankings for each of the five categories of criteria would be established based on the advantages and disadvantages for the sites. Application of a 'present value' approach for economic criteria would have been inconsistent with the approach applied in the rest of the short-list evaluation process. Note however, that the results, in regards to the ranking of Clarington 01 under a 'present value' approach would have been consistent with the outcome of the approach used in the EA. • In addition, the Operating Costs criterion, included consideration of the distance from potential markets for the sale of marketable materials (i.e. heat, electricity, recovered materials) that could not be quantified and reflected in the 'present value' calculation, rendering the use of the 'present value' approach as unreasonable as it would not reflect all key indicators.	
8		**Complexity of Required Approvals and Agreements** The Interim Report (Appendix 2, Table 2-2) noted that one of the criteria for the evaluation of the short list sites would be "complexity of required agreements" which, according to the "indicators" in the *(at that time)* recently released criteria, would mean that the order of preference for sites would be a Region- owned site, willing seller sites, and expropriated sites. This is not strictly an environmental consideration, but would favour Region-owned over privately owned sites. In "Durham-York – Comments on Steven Rowe Peer Review of Siting Process to Date", July 25, 2007 Jacques Whitford responded: *"The complexity of required agreements includes a number of different factors including addressing the potential complexities of site acquisition either through a "willing-seller" or expropriation scenario. For the purposes of a relative comparison, a Regionally owned property presents less potential issues than a site where a property purchase must be negotiated or where expropriation is required."* It is questionable whether complexity of required agreements (and approvals, a second indicator) is a valid	Accepted by Reviewer ☒ Yes ☐ No Agreed that these were provided as "Preliminary Evaluation Criteria" in Appendix F of the TOR.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Environmental Assessment (EA)
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		environmental consideration under the EA Act unless it is expressed though something that falls within the definition of the environment, such as cost or increased risk of environmental effects. The proponents went on to apply these criteria in the evaluation of the short-listed sites, as reported in Section 8.8.9.5 of the Draft EA. **Disposition:** This criterion was included in the Approved Terms of Reference and was applied in compliance with that document.	
9		**Consideration of Mitigation and Net Effects** The EA Act requires proponents to consider potential mitigation and enhancement for the alternatives and the proposed undertaking. The TOR states that for the short list comparison, "Each of the potential effects identified at Step 4 will be considered with respect to the availability of measures to mitigate (i.e., measures that may be applied to reduce or eliminate a negative potential effect) or enhance (measures that may be applied to improve or increase the magnitude of a benefit or positive effect) the effects, and identify the remaining or 'net effects'." The Step 7 Review noted that the description of the process on page 3-6 (Section 8.8.5, page 8-66 of the Draft EA) describes the application of mitigation measures to determine net effects, however Table 4.1 (8-17 in the Draft EA) suggests that no site specific mitigation was considered. Supplementary text – in addition to that found in the Step 7 Report - was added in Section 8.8.5 of the Draft EA to provide further information on the application of mitigation measures, as follows: *"The intent of considering mitigation and enhancement measures was to ensure that alternatives were compared on the basis of best practices and best available technology. Given the nature of this comparative exercise and the background associated with the identification of alternative sites, all of the sites that were considered and accordingly, all of the identified effects, were assumed to innately include all reasonably available mitigative measures.* *In particular, the screening of alternative waste management approaches for environmental suitability during development of the Approved EA Terms of Reference established that any of the alternatives that were considered in the study* ***must be able to meet or exceed all regulatory requirements*** *and therefore be approvable under Ontario's stringent environmental legislation and standards.* *Similarly, sufficient operational data was available for existing state-of-the-art facilities and from that information*	We differ on the appropriate level of detail for the short-list site comparison.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

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Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		this study was able to incorporate observed net or post-mitigation effects directly into the comparison; and, *In considering the potential siting impacts of system facilities, appropriate buffer zones and land use preferences were incorporated into the comparative process.* *Because the process of applying the evaluation criteria and identifying potential effects inherently incorporated mitigation (best practices and best available technology), the presentation of net effects in this comparative process did not warrant and did not include an effect-by-effect consideration of available mitigation.* Application of best practices and setbacks does not necessarily eliminate the requirement to consider mitigation at a site-specific level in an EA comparison. Also, it is mandatory to meet regulatory requirements and this also does not exempt a proponent from considering mitigation and enhancement measures. As an example of the type of mitigation that could have been considered in the comparison, Appendix E to Annex H (Technical Memorandum on Site Size) of the Step 7 Report shows that the privately owned Clarington Site 05 included "unusable" land, separated from the rest of the site by a watercourse. This land could have been omitted from the proposed site size to reduce its cost. Also, natural areas associated with the watercourse are considered to present a "disadvantage" for this site (see description on page 8-94 of the Draft EA) when it is clear from the proponents' site plans in the Technical Memorandum that these natural areas can be avoided with substantial (100m+) setbacks when siting the facility. Interestingly, this riparian area is shown as a "Designated Natural Heritage Feature" in the screening maps originally used to identify the short-listed sites and provided to Clarington, but this did not result in the splitting or elimination of this "willing seller" site. If the site had been split, this natural area would not have been evaluated as an on-site feature. Consideration of mitigation measures such as these would have resulted in a comparison that would reflect an optimal facility configuration within the site and be more reflective of actual conditions, at a more appropriate level of detail for this final comparison of alternative sites for a major public utility. **Disposition:** The level of detail employed in the consideration of mitigation measures in the EA Study is appropriate for the level of detail required for this planning process. Consistency of application is key and this was also undertaken in a way that would comply with the EA Act.	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

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Rev. May 25, 2009

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Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
10		**Interpretation of Advantages and Disadvantages** In the Step 7 Report (Table 3.2) and the Draft EA (Table 8-15) - "Advantages and disadvantages" are defined differently to the definitions in the annex documents, suggesting that the technical consultants had a different understanding of this term than those who prepared the main report. The explanations are also unclear. The Regions' consultants replied that "the intent of a relative site comparison is achieved by both". The descriptions of advantages and disadvantages appear to be at variance with the meaning of these terms in the EA Act. The MOE "Code of Practice for Preparing and Reviewing Environmental Assessments in Ontario" (November 2008) which was finalized during the EA process but is referred to elsewhere the Draft EA reflects the EA Act requirement to identify advantages and disadvantages of the alternatives and the undertaking to the environment. An advantage cannot be a negative effect on the environment or simply an advantage to the proponent's mandate, or for one alternative over another. For example, the definitions state that alternatives with a "major advantage" or an "advantage" under a criterion can have "minimal" or "manageable" effects, respectively. The descriptions suggest that if an alternative does not require mitigation, it is preferable to one that does (i.e. where an impact is "manageable"), even though the net environmental effect is the same. In fact alternatives with the same net effect should be assessed equally – if the mitigation itself has an environmental effect (including cost) this can be taken into consideration in the comparison under the appropriate criteria. The description of the process does not make a clear distinction between environmental effects and advantages and disadvantages, whereas these are two different concepts in the EA Act. The Regions' consultants have responded that their approach did involve identifying and rating environmental effects first, followed by application of tradeoffs and interpretation of effects in terms of advantages/disadvantages. This is not clear from the report or the Draft EA. however. There is no demonstration that the "advantages" and "disadvantages" identified represent equivalent or comparable increments or magnitudes of effect. As indicated above, in the Step 7 process an "advantage" is not necessarily a positive effect but can represent a neutral effect or a lower level in a range of negative environmental effects. In the actual evaluation results are traded off against each other as if they are positive and negative effects, which they are not. In some instances a "neutral" and an "advantage" are combined to result in an "advantage", which further distorts the comparison. In addition, the evaluation uses a prioritization of criteria categories derived from public consultation as well as "professional judgement" in comparing the siting alternatives, however the application of these priorities is not	We differ on the "advantages and disadvantages" approach applied by the proponent to evaluate the short-listed sites.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

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Rev. May 25, 2009

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Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
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		explained. The Regional consultants' response to these concerns was to state that a more comprehensive description of the process will be provided in a draft EA document to be submitted to the Ministry of the Environment, however the Draft EA Report does not resolve the above issues. Further information is provided as indicated under item 7, however the comparison of the Short-Listed Sites is still not considered to be "rational, traceable and replicable – a requirement that is acknowledged in Section 8.8.1 of the Draft EA, nor is the selection of the site considered to have followed "complete analysis and evaluation against all reasonable alternatives" as stated in Section 10. At the same time, the physical location of the site results in a relatively low level of impact on the natural, social and cultural environments, while the Draft EA acknowledges in Section 8.9 that the site has a "potential disadvantage with respect to the site's close proximity to Highway 401 and the vehicular emissions related to this transportation route". **Disposition:** The consideration of potential effects, reasonable mitigation measures, resulting net effects and the relative advantages and disadvantages among the Short-listed Sites was undertaken further to the Approved EA Terms of Reference and in compliance with the EA Act.	
11		**Application of the EA Act to "Request for Proposals" Processes** The Interim Report suggested that the proponent provide information to describe how the principles and requirements of the EA Act are to be applied in the comparison and selection of vendors and technologies. Jacques Whitford responded: *"The identification of the preferred technology, can be found in the report entitled "Evaluation of 'Alternatives to' and Identification of the Preferred Residuals Processing System, May 30, 2006" which was approved by both Regional Councils in June 2006. The competitive process which is to be used to identify the preferred technology vendor will be documented and submitted along with all other approvals documentation at the time of the formal EA submission."* The report referred to identified a range of potential technologies that would be further refined through the vendor selection process. The issue of how the selection of an undertaking can conform to the EA process when	This is an issue that would benefit from further guidance from MOE regarding the role of bidding processes within environmental assessment processes.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

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Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		the vendor selection part of the process is, to a large extent, confidential is a valid one that should have been discussed further at this stage of the process. Section 9 of the Draft EA comprises new material describing the competitive bidding process that resulted in the selection of Covanta as the preferred vendor for the design, construction and operation of a thermal waste treatment facility. The process of selecting from among the four competing bids involved an initial screening based on "Mandatory Criteria". This did not involve environmental considerations. The bids were then subjected to a scoring system based on "rated criteria". Out of a total of 100 possible points, 45 could be awarded based on "technical criteria". 25 of these points can be awarded based on "environmental" criteria, i.e. meeting or exceeding environmental standards, Maximum Achievable Control Technology (MACT), and continuous dioxin sampling. Reference is made to the existing A7 Guideline for air quality in relation to incinerators, but not to the proposed revised version of the Guideline. The proponent calls the vendor identification process part of the consideration of alternative methods, and indeed it is a subset of the EA process. At the same time it is not a public part of the process, and while other parts of the EA process are required to consider the full scope of the EA definition of the environment, the vendor identification process does not do so. The specific point scores based on the rated criteria are not made public, however the description of the Covanta submission provides some comparative information on the way it was rated. It is said to have received the highest score in each of the three categories of rated criteria including the "technical" category, but only selective information on ratings against other criteria is provided. The report does not claim that the bid had the highest score against any of the environmental criteria. While the preceding steps of the process to select "alternatives to" and "alternative methods" provided some protection from selection of inappropriate technologies or sites, it is unclear whether Covanta would have been preferred if the bids had been selected and subjected to a comparison based on the requirements of the EA Act. **Disposition:** The completion of the comparative evaluation of competitive bids from vendors together with the evaluations of "Alternatives to" and "Alternative methods" (read, siting alternatives) has provided a reasonable assessment of environmental effects for the purposes of the planning process completed in accordance with the EA Act.	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

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Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
12		**Level of Commitment to Mitigation Measures** Section 11 of the Draft EA, "Assessment of the Undertaking", includes a review of the effects of the undertaking drawn from technical studies, some of which relate to subjects such as visual and acoustic effects that were not considered explicitly as criteria in the site selection process. The discussion includes a number of statements regarding mitigation, but frames them in terms of "could", "can" and "possible", rather than firm commitments. While some of these measures would likely be implemented under the Environmental Protection Act rather than the EA Act, this distinction is neither made nor explained (although "other approvals" are dealt with elsewhere in the report). The same type of terminology is used in Table 13-1 Summary of Environmental Mitigation and Commitments to Future Work. This approach is inconsistent with the definition of "commitment" in the Glossary of the Draft EA, i.e: *"Represents a guarantee from a proponent about a certain course of action, that is, "I will do this, at this time, in this way." Proponents acknowledge these guarantees by documenting obligations and responsibilities, which they agree to follow, in environmental assessment documentation (terms of reference and environmental assessment). Once the Minister and Cabinet approve an application, the commitments within the document are often made legally binding as a condition of approval."* The approach actually taken appears to be to raise possible mitigation measures and to leave it to the MOE to decide which of these to incorporate into conditions, and under which legislation. A much stronger level of commitment would have been preferred and would reflect better on the overall intent of the proponent. The description of the proposed haul route, here and elsewhere in the report, will need to be changed to correspond with the route now settled between Clarington and the proponents in the Host Community Agreement, and any resulting changes to environmental effects would have to be described.	Accepted by Reviewer ☒ Yes ☐ No The June 12 Draft EA includes stronger language in describing mitigation commitments. The changes and the proponent's response are accepted.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

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Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The language with respect to commitments is being reviewed and where applicable, language may be revised, as required, to make commitments more "firm". These types of commitments will be further considered as part of the EPA process. Regarding the haul route, at the time these comments were received by the proponent, both parties to the Host Community Agreement had not ratified the terms, only Clarington Council has resolved to accept the conditions. Therefore, at this time, no modifications to the EA Study documentation can be completed. However, should both Councils ratify this agreement updates to any studies as a result of the content of the Host Community Agreement will be completed.	
13		**Changes to the EA** The proponent volunteered to continue to conduct its process as an individual EA when it had the opportunity to switch to a new and less onerous process under a Waste Management Projects Regulation under the EA Act, number 101/07. Section 12 of the Draft EA would require "major" changes to the EA – including changes in waste management capacity or service area - to be reviewed in accordance with the required process for facility changes prescribed by Regulation 101/07. While we have no objection to this approach, we believe that certain aspects of the Draft Class EA require further clarification to enable a full understanding of when and how the Regulation 101/07 process would be implemented. Since the triggers for the Reg 101/07 Environmental Screening Process comprise increases in the daily capacity and service area of the facility, we believe that this information should be clearly set out in the definition of the undertaking in Section 10 of the Draft EA. The undertaking would be a facility with a maximum capacity of 140,000 tonnes per year, as described in Section 10. It would be capable of being expanded to 400,000 tonnes, but any further expansion beyond 140,000 tonnes would be subject to the Environmental Screening Process. Similarly, the description of the undertaking in the final EA should specify that the service area would be limited to the Region of Durham and Region of York. The final EA should not defer clear commitments regarding the capacity and service area of the facility, to a future Certificate of Approval. Section 12.5 of the Draft EA refers to supporting documents that would not require updating if an expansion to 400,000 tonnes per year is to be expanded within the next five years. First, these documents and the applicable section should be clearly specified. Second, it should be clear, that these documents would be still be subject to	Accepted by Reviewer ☒ Yes ☐ No The response is accepted, except that, without information on the proposed extent of the service area within the EA, it is difficult to determine how the "service area" trigger would be applied. A service area map defining where waste is coming from should be provided.

COMMENT AND DISPOSITION SHEET

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Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		review and possible amendment based on circumstances at the time of the screening process, and that there is no suggestion that the approval requested in this EA would include implied approval of these documents as they relate to an expansion. **Disposition:** Section 10 of the EA Study document has been revised to better describe the applicability of Ontario Regulation 101/07. Sections 10 and 11 have also been revised to include a discussion of the Facility at a projected maximum design capacity of 400,000 tpy as well as the potential effects of a facility operating at this design capacity. The "triggers" for Ontario Regulation 101/07 related to the Facility would be an increase in throughput or increase in service area that would require an Amendment to a future CofA for the Facility. Discussions with respect to the content of the CofA (waste) including permitted service area and throughput have not yet been initiated. For the purposes of defining this Undertaking, the Facility will have a maximum throughput capacity of 400,000 tpy and a service area of Durham Region, York Region and neighbouring non-GTA municipalities. Section 12.5 of the EA Study document has been revised to specifically identify the studies not requiring updating.	
14		**Sensitivity Analysis** In Section 8.8.7 of the Draft EA the Proponent states that: *"In order to undertake the comparative Short-list evaluation process without having specifically identified the preferred technology vendor, a number of assumptions were made with respect to the ultimate facility arrangement. The accuracy of these assumptions is confirmed in later sections of the EA Study document once a preferred vendor was identified, through the completion of a sensitivity analysis which compares the assumption to actual conditions/arrangements, whether it be a particular impact, etc."* Although later sections of the report discuss assumptions utilized in relation to the process and the proposed undertaking, there is no "sensitivity analysis" as such. It is possible that this will be included in the final version of the EA, however there was no opportunity to review it in the draft EA document.	This Section does not appear in the June 12 Draft EA, and so it cannot be commented on at this time.

COMMENT AND DISPOSITION SHEET

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REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Steven Rowe, Environmental Planner	Date of comments: 03/06/2009 Disposition: 26/06/2009 Peer Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The "Sensitivity Analysis" has been added to Section 9.3 of the Draft EA Study document titled "Confirmation of Assumptions Utilized in Siting Evaluation".	
15		**Consultation Summary** Section 16, "Consultation" of the Draft EA indicates that the consultation summary will be provided in the final EA. Much of the material that will be contained in this document has already been reviewed during the EA process, however we will not have had an opportunity to review the final document at the same time as the Draft EA. **Disposition:** No response required.	Accepted by Reviewer ☒ Yes ☐ No Section 16 is included in the June 12 Draft EA. Traceability should be noted as a key issue.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Environmental Assessment (EA) Study Document – Draft for Review

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03 June, 2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	7.6.1.2	Rationale for qualitative comparison of system advantages and disadvantages is sound; however the methodology may be limiting in terms of a lack of weighting for various criterion and indicators. There is some concern that in specific instances, ratings will not reflect the true impact of a criterion and thereby offer skewed representations in the final analysis. **Disposition:** The comparative evaluation was completed in compliance with the Approved EA Terms of Reference (as refined) and is, in the proponent's considered opinion, compliant with the EA Act.	Accepted by Reviewer ☐ Yes ☒ No
2	8.6.3	As above, the weighting of factors in tables 8-7 to 8-12 might have provided more discernable outcomes. Table 8-13—Comparison of Long-list Sites Relative Advantages and Disadvantages (section 8.6.4) gives the reader little information to assess any tangible differences between long-list sites. Supplemental discussion on interpretation of table 8-13 may be appropriate. **Disposition:** A weighted, more quantitative, approach was not contemplated in the Approved EA Terms of Reference and was, therefore, not followed in the completion of the EA Study.	Accepted by Reviewer ☒ Yes ☐ No
3	8.8.5 (final paragraph)	While it is understood that an effect-by-effect consideration of available mitigation would be daunting and possibly inappropriate within the scope of the EA, some formalized consideration of mitigation within the comparative process should be made available. The paragraph in question creates a sense that mitigation has not been given due consideration in the evaluation process. A specific example from an earlier review of the Report on Potential Traffic Impacts (Annex F) lies in the comparison of traffic impacts between the Clarington 01 site and the East Gwillimbury Site, where signalization was considered as a mitigating factor for Clarington 01 and where signalization was not considered for East Gwillimbury as a mitigating factor. This may have led to differences between the two sites in the final evaluation Without more formal documentation of mitigating factors, there is no way to trace how mitigating factors have been considered within the process of applying the evaluation criteria.	Accepted by Reviewer ☐ Yes ☒ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
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Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03 June, 2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Tables 8-40 to 8-44 inclusive present net effects for the purpose of identifying a "preferred" alternative Short-listed site. The consideration of potential effects and mitigation measures, as required, is documented in the sections of the EA Study document that precede the referenced tables (i.e., Section 8.8.9).	
4	8.8.7	We were unable to find the sensitivity analysis referred to in this section. Further, assumptions utilized in the short-list evaluation process are potentially an important component of the EA and should deserve more discussion. As an example, our initial review of the Report on Capital Costs, Operation and Maintenance Costs (Annex G) identified one potential flaw in the evaluation process of the short-list sites that was based on the lack of an identified preferred technology vendor, and therefore an unidentified preferred technology. There was a severe cost disadvantage for the East Gwillimbury site (in the order of $7.5 million) based on the potential preferred technology's need for sanitary sewer facilities. Choosing a technology that does not require sanitary sewer facilities may have created a more positive evaluation for the East Gwillimbury site. While assumptions utilized in the short-list evaluation process are considered to be 'conservative' as stated in this section, the impact of these assumptions may not be. Regardless, further consideration of this section is warranted.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The aspects of the "sensitivity analysis" are dealt with the Section 9 of the Draft EA Study document. The key consideration in the completion of any EA planning process is to ensure that criteria are applied consistently. This was, in the proponent's considered opinion, completed so as to be acceptable and approvable.	

COMMENT AND DISPOSITION SHEET

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Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
5	8.8.9.1 (p.8-80)	Under the heading *Distance Travelled from Main Source(s) of Waste Generation to Site*, it is stated that "each scenario was therefore defined in terms of a number of components, where each component is specified in terms of: the source and destination of the waste; the type of truck employed, and; the annual quantity of waste hauled in tpy." Later (pp.8-80–8-81) summaries of round-trip distances for each site do not differentiate the type of truck employed. This information might be helpful within the summaries. Also, some mention of the criteria used to establish distance travelled for these sites (in terms of a statement of consistency that has been applied so that each site can be evaluated on an equal footing) would be helpful in supporting the conclusions drawn in the Conclusion/Summary paragraph on p. 8-81. **Disposition:** Section 8.8.9.1 of the Draft EA Study document states that "Residual waste will be transported to the Thermal Treatment Facility in packer trucks (directly hauled from the curbside) and in transfer trailer trucks (transfer hauled from transfer stations and/or Regional drop-off depots)." The Report on Capital Costs, Operation and Maintenance Costs Potential Traffic Impacts in the draft report entitled Results of Step 7: Evaluation of Short-List of Sites and Identification of Consultants Recommended Preferred Site included how the distance travelled to these sites was determined.	Accepted by Reviewer ☒ Yes ☐ No Additional detail would assist with traceability
6	8.8.9.2 (pp. 8-106–107)	The effect of the proposed Highway 407 interchange on Clarington Site 05 is stated to have a major disadvantage in terms of the loss of land area. There are potential positive effects to be considered in terms of the Highway 407's use as a haul route, which could also benefit Clarington Site 01. **Disposition:** The evaluation of the alternative Short-listed Sites was undertaken in compliance with the Approved EA Terms of Reference and the EA Act.	Accepted by Reviewer ☒ Yes ☐ No
7	8.8.9.2 (p8-119)	It is unclear if the road upgrades referred to in the Summary of Road Improvement Costs takes into account the fact that the Secondary Plan for the Courtice Energy Business Park requires that all roads be constructed to an urban standard.	Accepted by Reviewer

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Environmental Assessment (EA) Study Document – Draft for Review

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03 June, 2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: As discussed in the Traffic Assessment Technical Report, road reconstruction/pavement improvements along the haul route may be required. Pavement testing along the haul route will be completed by the Region of Durham if the Project is approved to confirm if road reconstruction/pavement improvements are required. The details with respect to how the road may be improved and to what standard are outside the scope of the EA Study.	☒ Yes ☐ No
8	8.8.9.2 (p8-120)	For the East Gwillimbury site, the EA states that there is a site disadvantage regarding two critical movements at minor intersections and that there are no road improvements planned or required at this site. There is some potential here for mitigation of these critical movements to positively affect this site, and while this will not create a significant overall advantage for the site, some further evaluation and discussion may be warranted. **Disposition:** Analysis at this level of detail, particularly in light of the fact that it would not affect the results of this part of the EA Study, would not be warranted.	Accepted by Reviewer ☒ Yes ☐ No
9	11.0 (p. 11-3)	There is no location reference for the Record of Consultation, as discussed in the final paragraph. Should refer to Section 16. **Disposition:** A location reference will be added as per the above comment.	Accepted by Reviewer ☒ Yes ☐ No
10	7.0 (final para.)	Location reference required for "EA components and list of studies." **Disposition:** A location reference will be added as per the above comment.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Environmental Assessment (EA) Study Document – Draft for Review

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 25, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03 June, 2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
11	13.0 Table 13.1 (pp 13-8)	A commitment is made to "Road/pavement improvements to the South Service Road and Osborne Road to accommodate construction vehicles" as a mitigating measure to compensate for anticipated construction traffic on these roads. A preferable alternate mitigation lies in the construction of a site access for truck traffic from Courtice Road, running parallel to the stormwater ditch north of the CN Rail corridor. This measure would allow for more direct site access from Highway 401, the accommodation of future operational traffic for the EFW without engaging the CEBP's newly urbanized road network, the elimination of a potential conflict with the Municipality of Clarington's 2010 reconstruction schedule for Osborne Road and the elimination of EFW facility construction traffic from a newly constructed, urbanized road. **Disposition:** The proponents are currently investigating opportunities for the provision of an alternate site access point as described above. However, the provision of this site access requires property acquisition from a current private landowner. Should the proponents be able to acquire the necessary land, an alternate access route will be constructed and utilized. Establishment of this new roadway would eliminate the potential conflict with the Municipality of Clarington's 2010 reconstruction schedule for Osborne Road.	Accepted by Reviewer ☒ Yes ☐ No
12	13.0 Table 13.1 (pp. 13-9)	With regard to the second point under the Host Community Agreement, which states that the Region will assume the cost of the construction of Energy Drive from Courtice Road to Osborne Road to serve the Energy Park, the standard of construction should be confirmed to be in accordance with the Secondary Plan. **Disposition:** The negotiation of the details with respect Host Community Agreement is outside the scope of the EA.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Report – Air Quality Assessment Technical Study Report (No. 1009497)
Note: These comments are draft and subject to further discussion with the Regions consultants before being finalized.

Rev. May 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Barrie Lawrence, SENES Consultants Limited	Date of comments:31/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	Appendix D Table 2D-4	CALMET input file: The location of the Trenton station is mislocated by about 480 kilometres. The problem occurs because within the UTM coordinate system, Trenton falls into another UTM zone compared to the facility location and the other data sources in general. For modelling purposes all source of data were oriented to UTM zone 17, however Trenton falls into UTM zone 18 as the cut-line between UTM zones 17 and 18 falls just east of Cobourg. To compensate for this, the Trenton location must be redefined in the UTM zone of the facility or UTM zone 17. This was not done. As such, Trenton, which in reality is approximately 95 kilometres east of the proposed site ends up being approximately 480 kilometres to the west of the site. The coordinates listed for Pearson Airport and Toronto Island Airport are identical, which clearly they cannot be in reality. It is unclear what effect these errors have on how CALMET will generate the precipitation for the proposed site.	Accepted by Reviewer ☒ Yes ☐ No

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Reviewer's Name & Organization		Barrie Lawrence, SENES Consultants Limited	Date of comments:31/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The location of the Trenton precipitation station was defined incorrectly in the CALMET input file, however the coordinates of the Trenton surface station were entered correctly. The location of the Toronto Island Airport surface and precipitation stations were incorrectly defined in the CALMET inputs. The CALMET model was re-run to investigate what effect these miss-matches in location would have on the model results. The CALMET wind speed, wind direction, and mixing heights at the site location did not vary substantially with the change in input station locations. The predicted annual precipitation at the site location changed from 766 mm/y to 760 mm/y (a decrease of 0.8%) with the correction in the precipitation station location. This small change is due to the fact that the precipitation amounts are interpolated using an inverse distance squared formula within CALMET and the locations of the Trenton and Toronto Island stations are further away relative to stations such as Buttonville and Peterborough. Therefore these miss-located stations did not have a substantial influence on the precipitation amounts calculated by CALMET in the area in which depositions were predicted. For wind parameters, the wind fields are dominated by the prognostic "pseudo-stations" which were located within the CALMET domain. The CALPUFF model was re-run with the updated CALMET meteorological data to assess what the small changes in wind and precipitation values would have. The maximum predicted ground level concentrations and depositions over all receptors changed by less than 2% (depending on averaging period). Therefore the station miss-locations are not expected to have significantly affected the results or conclusions of the assessment. The final version of the report will however, be updated with the revised CALMET/CALPUFF runs.	
2	Appendix D 2.5.3	It is noted that two of the precipitation stations have identical coordinates (Pearson Airport and Toronto Island Airport), it is also unclear how this will affect the generation of wind fields in CALMET. Disposition: Please see the Response to Comment # 1 above.	Accepted by Reviewer ☒ Yes ☐ No
3	Appendix D Figure D2-9	When comparing windroses, the general rule of thumb is that a difference of 1 sector or 22.5° is excellent agreement and agreement within 2 sectors or 45 ° is acceptable. Given the difference is heights between the CALMET output and the tower measurements, it is expected that there would be some small added variation is the windroses. In reviewing the windroses of Figure D2-10, the patterns appear to be quite different. For example the windrose for the data measured on the tower at 47 metres indicates a strong easterly and southwest component. The CALMET generated data at 35 metres does not have the easterly component but has a strong northwest component and a weaker southwest component. As such it appears that there may be a problem with the CALMET generated windfields.	Accepted by Reviewer ☐ Yes ☐ No Items 3 thru 5 were apparently agreed upon by the MOE, and while this concurrence is

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Reviewer's Name & Organization		Barrie Lawrence, SENES Consultants Limited	Date of comments:31/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: It should be noted that the comparison shown in D2-10 is for a limited time period (8 months) at a particular location in the CALMET domain. The comparison indicates that, for the limited time period considered, the CALMET model does a reasonable job of predicting the dominant flow patterns (including lake breeze phenomena from the south). The model tends to underestimate winds from the east and overestimate winds from the northwest during this period when compared to the measurements from the Zephyr North tower. As there are no reliable long-term sources of meteorological data in the vicinity of the site, the alternative to using prognostic model winds to initialize CALMET to use data from surface weather stations more than 50 km away, which would be expected to introduce greater uncertainty than the approach used. Thus, the model predictions are considered to be the best available option for this site. The discussion of model performance will be expanded in the final Air Quality Assessment Technical Study Report to incorporate the issue raised and provide further analysis of the CALMET model performance including additional comparisons of the CALMET predictions to available ambient measurements. As discussed in the Air Quality Assessment Technical Study Report, all WRF and CALMET inputs were submitted to the Ontario MOE for review, with changes being made to meet MOE requirements. The MOE has also reviewed, requested modifications to, and approved sample WRF/CALMET output wind fields.	mentioned in the supporting documentation, it doesn't necessarily mean it is correct or the best approach. Not being privy to the discussions between the MOE and the consultant we will have to take the disposition at face value and agree to disagree on the approach;
4	Appendix D Attachment D-4	To initialize a CALMET run, the input, as presented in Attachment D-4 of Appendix D to the Air Quality Assessment was developed. Upon review of this file there are concerns with the setting of 3 parameters in this file, parameter ICOARE, IMIXH and parameter JWAT (1 & 2). ICOARE is a parameter which defines the algorithm the model will use to determine the boundary layer in the marine environment. Essentially 2 options are available, running the Coupled Ocean Atmosphere Response Experiment (COARE, circa 2000) algorithm in 1 of 5 modes, or running the Offshore & Coastal Dispersion (OCD, circa 1985) algorithm. The OCD was chosen for this assessment as opposed to the COARE option though one of the COARE options is the default. The effect using the older approach is unclear. In concert with ICOARE, the parameter IMIXH defines the method to use when calculating the convective mixing height. Effectively two options are available using either the method described by Maul and Carson circa 1980 or the method described by Batchvarova and Gryning circa 1994. The Maul-Carson method was chosen coupled with the OCD algorithm for overwater mixing heights. The effect using the older approach is unclear.	Accepted by Reviewer ☐ Yes ☐ No See Item 3

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		JWAT1 and JWAT2 are parameters to define which land use categories will have the over land temperature interpolation used and which will have the over water temperature interpolation used. In the input file, these parameters were disabled meaning all interpolation would be as if the land use was over land, which effectively removes the effect of onshore / offshore flows. Therefore, in reality data collected at the actual surface stations experience the effect of onshore / offshore flows, the generated virtual stations would have had the effects incorporated from the NAM model, however, when this data was incorporated into CALMET for interpolation between these points, the onshore / offshore effects was turned off. How the model will interpret this dichotomy is uncertain. This also could explain why the windroses of Figure D2-10 do not align well. Disposition: As discussed in the response to Comment #3 above, all CALMET model options were reviewed and approved by the Ontario MOE. While there are many different ways to initialize CALMET, the options selected are based on U.S. EPA regulatory values, model default values, and many years of experience with the CALMET model. As outlined in Input Group 1 of the CALMET input file, the MREG parameter can be used to ensure that the U.S. EPA regulatory defaults are used. This flag was turned on for all CALMET simulations in this study to ensure conformance with these recommended options. The U.S. EPA-recommended options include: 1. ICOARE = 0 (original deltaT method (OCD)) 2. IMIXH = -1 (Maul-Carson for land cells only, OCD mixing height overwater) Therefore, both these parameters have been initialized using the U.S. EPA guidance and are considered appropriate for application in this study. The Use of JWAT1 and JWAT2 causes the model to interpolate overwater temperatures separate from overland temperatures in the model. When this option is turned on, it often causes an unrealistic (and abrupt) temperature gradient between the land and water (i.e., no smoothing is performed between the two interpolated regions). Therefore, this option is generally not considered preferable unless a sufficient amount of observed temperature data is available both on-land and overwater. Therefore, for this application, since all the observed surface temperature data came from locations outside the modelling domain, this option was not used. The methodology used for implementing overwater and surface temperatures in CALMET was discussed in detail with the MOE, who also reviewed and approved these options in the input file.	
5		CALMET Summary: The review of the CALMET portion of the modelling completed for the assessment indicates that the windfields generated by the model may not accurately reflect the actual windfields at the site. The effect of this windfield inaccuracy on the CALPUFF results is uncertain. Ultimately since there is only one major emission source, the net effect will be that some receptors which indicated higher concentrations may actually have lower concentrations and vice versa. The magnitude of those differences on a short-term basis may not be significant, however the effects on longer averaging periods may be substantial. For example based on Figure D2-10 in the assessment, the easterly component of the wind flow may be underestimated by at least a factor of 2, which on a long term basis, increases the concentrations to the west of the site by this factor.	Accepted by Reviewer ☐ Yes ☐ No See Item 3

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Reviewer's Name & Organization		Barrie Lawrence, SENES Consultants Limited	Date of comments:31/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Please see the response to Comment #3 above. It should be noted that a change in the frequency of winds from a particular direction cannot be linked directly to a proportional increase in annual ground-level concentrations downwind from this direction, as other important factors, such as wind speed, mixing heights, cloud cover, turbulence, and wind direction variance also influence predicted ground-level concentrations. Given the lack of long-term reliable meteorological data in this region, the use of prognostic data in combination with the much further away surface meteorological station data is expected to provide the best representation of winds in this area as possible.	
6	Appendix D	In the Air Quality Assessment, 391 non-property line sensitive receptors are defined and the layout of the gridded receptors in the vicinity of the proposed site, and discrete receptors along the property line are presented. In comparing this layout to the information in the CALPUFF input file presented in Appendix D to the Air Quality Assessment, it appears the property line receptors and those in a grid with a density greater than 250 metres (i.e. those at 20 metre, 50 metre, 100 metre and 200 metre) have been excluded. This exclusion may skew the predicted concentration out to 1800 metres from the emission source. Disposition: The sample CALPUFF input file included in Appendix D represents a specific simulation run for the modelling study (maximum concentrations due to the 140,000 tpy design capacity for the Facility at special receptor locations). Predictions over gridded receptors (following MOE Guideline A-11 and including property fence line receptors) were done in a separate simulation. The sensitive receptor simulation was included as an example in the Appendix as it is a much smaller input file and conserves space/paper (391 receptors verses 4415). Please refer to Appendix D, Section 3.2.5 for details on the sensitive receptors and receptor grid used in the assessment.	Accepted by Reviewer ☒ Yes ☐ No
7	Executive Summary (and in general)	In the Air Quality Assessment, it is noted that the emissions are based on an annual throughput at the facility of 140,000 tonnes per year. However, the EA is for a facility that could be built to take up to 400,000 tonnes of waste per year. The Air Quality Assessment also identifies two independent yet equal waste streams which will feed the system. It is the opinion of SENES that modelling at 140,000 tonnes per year and hence only one waste stream may be perceived as modelling to be compliant today without regard for the future. To minimize this perception, modelling should have been done at a larger throughput and with both streams operating. Disposition: The Region has requested that a 400,000 tpy maximum design capacity scenario be included in the assessment and the Air Quality Assessment Technical Study Report is being updated to include this scenario in addition to the 140,000 tpy scenario.	Accepted by Reviewer ☒ Yes ☐ No

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Reviewer's Name & Organization		Barrie Lawrence, SENES Consultants Limited	Date of comments:31/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
8	Appendix E Section 2.4	It is noted that the Mobile 6.2 model is an US EPA model, and that a made in Canada version for the model is available (Mobile 6.2C). The different versions of the model exist owing to the different emission standards and timelines for adopting same within both countries. Disposition: The Mobile 6.2C model was used to estimate emissions from traffic in the Air Quality Assessment. This typo will be corrected in the final version of the Air Quality Assessment Technical Study Report.	Accepted by Reviewer ☒ Yes ☐ No
9	Summary Notes	This review was based on the information contained in Air Quality Assessment and associated Appendices. In summary: • Generally the modelling appears to have been done in a competent and professional manner. • An apparent meteorological mismatch may cause an inaccurate representation of long-term exposure. • Emission rates and factors appear to be in order. • Choosing to use a throughput of 140,000 tonnes per year is questionable. • Emission factors from MOBILE 6.2C should have been used. Disposition: See responses to individual comments regarding these issues.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Surface Water and Groundwater Assessment – Technical Study Report | Rev. Feb. 2009

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	2.0 (p.4)	Report does not reference "Technical Guidelines for Stormwater Management Submissions" by Central Lake Ontario Conservation, June 2007, which lists the preferred runoff model to be used as Visual Otthymo 2. The Jacques Whitford report uses the HEC-HMS 3.2 runoff model. Disposition: The CLOCA document has been referenced and guidelines incorporated into report where applicable. As this water resources report represents the conceptual plan for the EA submission and not the final stormwater management plan submission to CLOCA, not all requirements noted in this document are applicable in this report. Although Visual Otthymo 2 is the preferred hydrological model, HEC-HMS 3.2 is a comparable modelling program developed by USACE specifically for use in generating catchment runoff scenarios. The use of HEC-HMS is an acceptable approach to existing condition and stormwater runoff modelling necessary in this project.	Accepted by Reviewer ☒ Yes ☐ No
2	General	Digital or hard copy of hydrologic model, including input and output files have not been included to support the analysis and conclusions discussed in the report. Disposition: The runoff modelling and management recommendations provided in this report provide a strictly conceptual representation of the proposed development site (necessary for the EA planning stage) and not the final stormwater management plan or detailed design submissions required by CLOCA or MOE. During the detailed design process, specifications and final model inputs/outputs will be provided. All model input parameters for the existing and post-development scenarios have been provided in Sections 3.4.3 and 4.4.1 respectively. The key model outputs necessary for this stage of the project have been provided in the stormwater runoff modelling sections listed above.	Accepted by Reviewer ☒ Yes ☐ No
3	3.4.3	The hydrologic parameters for the existing conditions indicate that the site is composed of hydrologic Soil Group (HSG) B soils and hence an SCS Curve Number of 64 for the agricultural and rural land uses. The borehole logs for the site indicate that the upper strata is primarily composed of clayey silty sand, compact sandy silt, clayey silt, and compact to very dense silty sand. This indicates that the classification of the soil would fit in to a Hydrologic Soil Group 'C' and hence a higher SCS Curve Number, resulting in more runoff in the existing condition.	Accepted by Reviewer ☒ Yes ☐ No Reviewer: While we interpret

COMMENT AND DISPOSITION SHEET

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Rev. Feb. 2009

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Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The geotechnical investigation conducted onsite recorded the presence of a silty sand underlying the topsoil across the entire site. The topsoil and sand dominated layer ranged from ground surface to 0.3 to 0.62m in depth. In 4 of the 17 boreholes a sandy silt was discovered at approximately 0.5 mbg and in another 3 boreholes a clayey silt was discovered at between 0.32 and 0.45 mbg. According to MTO Drainage Management Manual (MTO, 1997), sand dominant soil types are classified as HSGs A and B. According to "Urban Hydrology for Small Watersheds TR-55" (USDA, 1986) from which the SCS Curve Number method is derived, sand, loamy sand and sandy loams are classified as a HSG A and silt loams or loams are HSG Bs. USDA (1986) considers a HSG C as sandy clay loams. It is our professional judgement that the upper soil strata present at the proposed development site should be classified as a HSG B. The outcome of increasing the HSG, and subsequently the SCS curve number, would be to increase the peak discharge and total storm runoff volume for all design storms during the existing condition modelling. Since the post-development stormwater management plan is designed to ensure peak stormwater discharge rates remain below those of the existing conditions modelling, increasing the existing condition SCS curve number would lead to higher discharge rates during final detailed design. In this sense, the HSG B classification can be seen as a conservative approach.	the bore hole data differently, we agree that the assumptions made would result in a conservative result.
4	Drawing #1	Boreholes should be drilled (advanced) in the area of the proposed Stormwater Management Facility. Disposition: As part of the detailed design, once the precise location and configuration of the stormwater management pond has been determined, additional boreholes will be drilled, as required, to assess groundwater elevations and soil conditions. This borehole investigation is included in recommendations for further hydrogeological investigation during the detailed design phase in Sections 3.3.2 , 5.5.2, and 7 of the Report.	Accepted by Reviewer ☒ Yes ☐ No
5	3.4.3	Hydrologic simulations for the 1-hour AES and the 24-hour SCS Type II storm distribution should be included for existing and proposed conditions.	

COMMENT AND DISPOSITION SHEET

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Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The storms selected for this conceptual stage stormwater assessment were based upon recommended guidelines in MOE (2003), MNR (2001), CLOCA (2007) and GGHACA (2006). The original stormwater runoff modeling used a suite of storms including the 50 and 100 year storms based on the 24-hour, SCS type II storm distributions. The storms below this magnitude (10yr and 25yr) were modelled with a shorter time period using the SCS type II distribution and the smallest events (10mm, 25mm, 2yr and 5yr) were modelled with a Chicago distribution type. The shortened storm length and Chicago distribution were used to generate higher peak flows than the use of the 24-hr, SCS type II distribution. This approach represented a more conservative approach. It is acknowledged that the 1-hr AES storm distribution and the 24-Hr SCS type II storm distribution are required as part of the CLOCA -Technical Guidelines for Stormwater Management Submissions. Modelling results for the above mentioned storm distributions have been added as an Appendix to the Surface Water and Groundwater Assessment for use during the completion of the final detailed design components and CLOCA Stormwater Management Plan submission.	Accepted by Reviewer ☒ Yes ☐ No
6	5.2.2	Given the proposed industrial use, an oil/grit separator would be a prudent addition to the stormwater management treatment train, upstream of the pond facilities. Disposition: According to MOE (2003), OGS are beneficial for industrial and commercial sites, and large parking areas or transit facilities. The proposed facility will have approximately 33 fulltime staff, suggesting personnel vehicular traffic will be low. Under the potential maximum design capacity of 400,000 tpy scenario, the maximum truck traffic will be approximately 77/day. There will be no waste delivery truck refuelling station onsite. This suggests that the chance for vehicular spillage is limited. OGS are only suitable for drainage areas of <2ha meaning that the proposed development site would require a minimum of 6-7 appropriately sized OGS to service the property. During detailed design the possibility of installing OGS as part of the treatment train should be considered. This has been incorporated into the Report (Section 5.2.1.1).	Accepted by Reviewer ☒ Yes ☐ No

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Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
7	General (Senes)	The report lacks some basic and essential groundwater information such as : • existing groundwater units and their descriptions, • groundwater elevations (for different groundwater units), • groundwater gradient both horizontally and vertically, • groundwater flow direction, • hydraulic conductivity test and estimations, • quantitative groundwater flow assessment • relationship between groundwater (horizontal flow from upgradient) and surface water (water bodies and surface infiltration).	Accepted by Reviewer ☒ Yes ☐ No The Author's Disposition agrees the lack of hydrogeological investigation as it stated "No hydraulic conductivity testing was completed on the proposed development site" and "No hydrogeological assessment was

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Reviewer's Name & Organization	Will McCrae, AECOM	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009

Comment Number	Section Number	REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION	DISPOSITION BY AUTHOR AND REVIEWER
		Disposition: **-existing groundwater units and their descriptions**: The site is located on a Newmarket till unit to bedrock discussed in Section 3.3.1. It does not appear that there is any other substantive hydrogeological units present onsite. **- groundwater elevations (for different groundwater units)**: As it mentions in Section 3.3.1, only one hydrogeological unit was discovered underlying the site and the adjacent Courtice WPCP. Groundwater elevations for 49 water wells and 23 piezometers located within 1 km of the site were noted in Section 3.3.2. **- groundwater gradient both horizontally and vertically**: Section 3.3.2 states that groundwater flow is generally from east to west. Considering there is one hydrogeologic unit underlying the site and no evidence of artesian conditions, the horizontal gradient is anticipated to slope from east to west. This has been clarified in Section 3.3.2. **- groundwater flow direction:** Both the regional groundwater flow direction (Section 3.3.1) and the local groundwater flow direction (Section 3.3.2) are stated in the Report. **- hydraulic conductivity test and estimations:** No hydraulic conductivity testing was completed on either the Courtice WPCP or the proposed development site. A general estimation based on the Newmarket Till unit underlying the site has been added to Section 3.3.2. We provide recommendations in Section 3.3.2 of the Report regarding further hydrogeological investigation to be conducted during the detailed design phase. **- quantitative groundwater flow assessment:** No hydrogeological assessment was completed as part of the geotechnical investigation conducted onsite. Results from the desktop hydrogeological assessment do not suggest any large scale concern with the project with regards to groundwater. The Report has integrated recommendations in Sections 3.3.2 and 5.5.2 for further field hydrogeological investigation in support of anticipated dewatering, foundation and stormwater management pond design requirements. (See comment #4). **-relationship between groundwater (horizontal flow from upgradient) and surface water (water bodies and surface infiltration):** There is no evidence of artesian conditions onsite (See comment #9) and no defined watercourse located onsite. In addition, the water balance generated for the site (Section 3.2) suggested that a low to moderate level of infiltration occurs and therefore groundwater inputs to surface water features in the area are limited. As groundwater baseflow contribution is low and groundwater flow direction is towards Tooley Creek approximately 1000m west of the Site, there are no notable groundwater-surface water interactions to discuss. Further hydrogeological investigation is recommended during the detailed design phase (Sections 3.3.2, and 7). It is our professional opinion that adequate groundwater characterization has been completed to support the level of detail required by the EA and that no reason for concern has been identified. As a potentially elevated water table has been identified on the Site, a type II PTTW may be necessary for construction of the Facility.	completed as part of the geotechnical investigation conducted onsite". As it is stated by the Author's Disposition, a hydrogeological assessment will be conducted onsite as part of the detailed design to support dewatering, etc.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Surface Water and Groundwater Assessment – Technical Study Report

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. Feb. 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
8	(Senes)	There are no monitoring wells available on site for hydrogeological investigations. It appears that the boreholes shown on Drawing No 1, were drilled for geotechnical purposes only and even the water elevations shown on the borehole logs do not represent the long-term static water levels. Disposition: No long term static water levels are available for the site as the boreholes were used as a geotechnical investigation only. However, 49 MOE water wells and 23 piezometers (installed on the Courtice Water Pollution Control Plant property) were identified within 1km of the proposed Development site. These values were used to describe the water level onsite. See comment #7.	Accepted by Reviewer ☒ Yes ☐ No See Item 7
9	5.4 Groundwater Management (Senes)	Although long-term static water levels are not available, the water elevations recorded on the borehole logs (presented on Appendix A) may suggest the presence of confined or semi-confined layers, under artesian pressure, at the deeper zone. Disposition: There is no evidence of a confined or semi-confined aquifer underlying the site. Of the 17 boreholes advanced onsite, 7 contained no groundwater at the completion of drilling, 6 boreholes suggested water levels of below 3m and only 3 showed water within 1m of grade. No artesian conditions were witnessed onsite nor reported in the geotechnical investigation report. The geotechnical and hydrogeological investigation conducted for the immediately adjacent Courtice Water Pollution Control Plant included 37 boreholes (drilled to bedrock) and 24 test pits. No artesian conditions were witnessed onsite during this study. Water levels taken from a piezometer installed north of the CN Rail corridor at the southern end of the Proposed Development Site showed water levels of approximately 0.3 mbg. This suggests that groundwater levels onsite may be shallow and this should be taken into account during the detailed design phase. The proposed facility is to reach a maximum of 7.4 mbg suggesting that the infrastructure foundations will extend below the water table onsite. A hydrogeological assessment should be conducted onsite as part of the detailed design to support permitting, construction dewatering, foundation and stormwater management design requirements. The recommendation for further hydrogeological investigation is provided in Sections 3.3.2, and 7 of the Report.	Accepted by Reviewer ☒ Yes ☐ No The presented water levels may suggest the presence of confined or semi confined layers, with high static water levels (or potentiometric surface), at the deeper zone which should be fully understood during the design for dewatering and groundwater management purposes.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Surface Water and Groundwater Assessment – Technical Study Report

Rev. Feb. 2009

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
10	3.3.2 Groundwater Levels (Senes)	The report suggests subsurface heterogeneity based on water level variations recorded on the borehole logs. However, the strata descriptions presented on the borehole logs show the presence of a consistent "compact brown silty sand with gravel" layer underlying the topsoil. This should be clarified. Disposition: There is a fairly consistent layer of silty sand underlying the topsoil onsite yet there is additional compositional and density variation present beneath this layer. Several of the borehole logs note the presence of sand, silt, clay and gravel, and variations in compaction at varying levels below grade. These factors will have an effect on water levels. The text has been adjusted to suggest that the subsurface conditions may have an effect on water levels onsite (Section 3.3.2).	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Report – Facility Energy and Life Cycle Assessment (No. MA-06-512-30-MA) | **Rev. May 2009**

Note: These comments are draft and subject to further discussion with the Regions consultants before being finalized.

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Murali Ganapathy / Talar Sahsuvaroglu, SENES Consultants Limited	Date of comments: 29/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	General	References must be used as citations in-text. Otherwise it is unclear as to what references are used to justify which data. We refer, for example, to Table 4-3 (custom energy grid) or Table 4-4 (Input Waste Composition), both of which are important inputs and accuracy needs to be justified. Otherwise, the report is not technically supported. Disposition: References will be provided where assumptions in the text are based on other published reports. In many cases, such as the allocation of the input waste composition, this was derived through analysis of the waste stream generated in Durham and York as determined through curbside audits and as adjusted for reasonable recovery rates for the municipal diversion programs.	Accepted by Reviewer ☒ Yes ☐ No
2	General	Appropriateness of references is also important. References to websites by organizations that may not have sufficiently accurate information and that have not been peer reviewed are questionable. Disposition: References to websites by organizations that may not have sufficiently accurate information will be supplemented with additional references to collaborate the originally cited information. We believe the Ontario Energy Board and Enbridge provide credible information on typical Ontario household energy consumption.	Accepted by Reviewer ☒ Yes ☐ No
3	2.2	a) Why was the MSW-DST model chosen to conduct the Life Cycle Analysis (LCA)? More justification is needed. b) Were other models tested/considered for applicability or sensitivity?	Accepted by Reviewer

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Murali Ganapathy / Talar Sahsuvaroglu, SENES Consultants Limited	Date of comments: 29/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Additional information will be included in the Final Report that discusses the choice of the MSW-DST. Essentially, this model is the most extensively used model in North America, it reflects North American conditions, and it has undergone extensive stakeholder input and peer review (including a separate review by the U.S. EPA). Other models had been used previously to complete LCA during the evaluation of "Alternatives to" including the IWM model developed by EPIC and the University of Waterloo and the ICF model for GHG emissions developed for Environment Canada. Neither model was capable of providing a full analysis of the LCA impacts for all aspects of the thermal treatment system for Durham/York and neither had been subject to the same rigor in regards to peer review.	☒ Yes ☐ No
4	4.1	It is not clear whether the proposed Clarington Energy Business Park has been designed to accommodate district cooling and/or heating. Further, the time frame of establishment of buildings and facilities to use the district heating and cooling is not mentioned. This is an important assumption, as the conclusions of the report highlight that only Scenarios 2 and 3 will result in Greenhouse Gas (GHG) credits (i.e. due to offsetting the natural gas otherwise used for heating), and these Scenarios depend on the presence of district cooling and heating. Otherwise, Scenario 1 results in an increase of GHG emissions into the atmosphere. Thus if the Clarington Energy Business Park will not include the correct infrastructure to accommodate district cooling or heating, these conclusions are invalid/inapplicable. The brief comment in Section 5 alluding to building the infrastructure at the same time as other facility services is insufficient, as there are currently no commitments for the infrastructure.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The Final Report has been revised to reflect the LCA GHG direct and indirect emissions including the avoided GHG emissions that would otherwise result if the residual waste sent to thermal treatment was instead landfilled in a modern landfill with landfill gas collection. All scenarios result in GHG emission credits, although more credits accrue to Scenarios 2 and 3. Provisions for District Heating (and potentially cooling) have been addressed to an extent in the Facility design and are discussed in the Covanta proposal. A decision to develop the district heating system, and development of the detailed design, would be undertaken when the timing for the build-out of the CEBP is understood. The development of the Clarington Energy Business Park and decision to construct district energy infrastructure will be made (a) by the Municipality of Clarington (b) in consultation between the Region of Durham and Municipality of Clarington.	

REVIEW DOCUMENT DESCRIPTION

Reviewer's Name & Organization	Murali Ganapathy / Talar Sahsuvaroglu, SENES Consultants Limited	Date of comments: 29/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009

Comment Number	Section Number	REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION	DISPOSITION BY AUTHOR AND REVIEWER
5	4.2.1.1	Table 4.3 refers to a custom energy grid in the future. However, The Ontario Power Authority and the Ministry of Energy and Infrastructure indicate that the 2025 Supply Mix is planned as indicated below. These values are different from what is in the report text. Since these values are an input to the LCA model, it is important to ensure the correct ones are used. **Energy source** / **Projected quantity (MW)** / **% of total** Gas & Cogeneration — 9,400 — 20.6% Gasification — 250 — 0.5% Renewables — 15,700 — 34.4% Conservation — 6,300 — 13.8% Nuclear — 14,000 — 30.7% **Total** — 45,650 References: OPA's IPSP Scope and Overview link: http://www.powerauthority.on.ca/Storage/24/1922_OPA_-_IPSP_Scope_and_Overview.pdf as well as Ministry of Energy and Infrastructure website link: http://www.mei.gov.on.ca.wsd6.korax.net/english/energy/electricity/index.cfm?page=nuclear-electricity-supply. Disposition: Further rationale for the proposed future grid used in the LCA analysis will be provided. . We have reviewed the selection of our grid and believe it is a reasonable estimate.	Accepted by Reviewer ☐ Yes ☒ No The grid referenced by us is the official grid as referred to by OPA and Ministry of Energy. There appears to be no justification for the consultants to select their own as the estimation of emission reductions have to be made with official baselines.
6	4.2.2.1	Regarding the residuc (bottom and bypass waste), will testing be conducted to determine whether hazardous characteristics still remain in the leachate following the encapsulating process? The specific Schedules regarding R.R. O, 1990, Reg.347 that are relevant to this process should be clearly documented, referred to within the text, and a monitoring plan committed to. Disposition: The purpose of the Energy and LCA report is not to discuss residue management, but to account for the proposed residue quantities in the analysis. Information regarding the testing as required under O. Reg. 347 and the monitoring commitments related to the bottom ash and fly ash will be addressed in the supporting documentation for the EPA approvals for the Facility.	Accepted by Reviewer ☒ Yes ☐ No
7	4.2.6	Has an analysis been done to assess the assumptions of landfills in Ontario, before using the default US values? (especially since a comparative analysis has been done previously between landfill disposal and thermal treatment in Supplement to Annex E-5 of the *'Durham/York Residual Waste Study Alternatives to'* report)	Accepted by Reviewer

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Murali Ganapathy / Talar Sahsuvaroglu, SENES Consultants Limited	Date of comments: 29/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Default U.S. values were assumed for the ash landfill that would receive the ash from the Facility, as the Covanta proposal includes disposal of the ash in U. S. sites. In regards to the assumptions for the landfill in Ontario that would have otherwise received waste, the same assumptions were used as the Base Case – Remote Landfill Scenario, as documented in the Supplement to Annex E-5 of the *'Durham/York Residual Waste Study Alternatives to'* report, with the exception being that the efficiency of landfill gas recovery was increased to 75%. Additional information regarding the landfill assumptions will be included in the Final Report.	☒ Yes ☐ No
8	4.3	Three summary tables are included (4-7 to 4-9) with details present in Appendix B. However, Appendix B contains only two tables. It is unclear what calculations or assumptions are used to separate the two scenarios combined in the 2nd table in Appendix B, into two separate tables (4-8/4-9). This needs to be described/clarified in detail. Disposition: Appendix B of the Draft Report only contained two tables. The only difference between the data provided in the summary table for Scenario 2, Table 4-8 and that for Scenario 3, Table 4-9 was that in Table 4-8 the column in Appendix B regarding the offset for district cooling was not included and for Table 4-9 it was included. Clarification will be provided in the text of the Final Report and the corresponding three tables will be provided in Appendix B.	Accepted by Reviewer ☒ Yes ☐ No
9	6.0	Summary and conclusions need to be more consistent in terms of referring to each Scenario # for each bullet point in the summary. Disposition: Reference to the Scenarios will be included to provide clarity in Section 7.0 Summary and Conclusion section of the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
10	General	The MSW-DST model also has the capability to do full-cost accounting that can assist municipalities in making solid waste management decisions. Was this application considered for developing this project? Disposition: No, as this Project was the subject of a rigorous RFP process and as the preferred Proposal and Vendor (Covanta) have provided detailed construction and operating costs for the Facility, the use of the accounting module of the MSW-DST was unnecessary.	Accepted by Reviewer ☒ Yes ☐ No
11	General	If GHG emissions, credits and offsets are being considered, then an assessment should be conducted for the applicability of issuing carbon credits/offsets from this project. There are many avenues that can be considered including the Western Climate Initiative and the Voluntary credit market. At the time of completion of the proposed project, the government will likely have a trading scheme in place, and thus these considerations should be made in advance. Disposition: The analysis presented in the Energy and Life Cycle Assessment report is intended to precede/support the determination of the GHG credits that would be associated with this Project. Financial analysis undertaken for the Project to-date has not included valuation of potential credits, and thus should be regarded as conservative. Further work would be required outside of this EA to support the process to identify and qualify for GHG credits.	Accepted by Reviewer ☒ Yes ☐ No
12	General	The assessment considers only 140,000 tpy. However, the report indicates that up to 400,000 tpy may be processed. If this is the case, then this assessment MUST be conducted at the maximum capacity, not the initial capacity.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Murali Ganapathy / Talar Sahsuvaroglu, SENES Consultants Limited	Date of comments: 29/05/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: An energy and life cycle assessment of the 400,000 tpy scenario will be included in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
13	General	The report contains no consideration of the monitoring requirements necessary to ensure and assess that emission estimates are correct. If accurate offset calculations are to be made, monitoring must be considered, referred to and documented. Disposition: As noted in Section 4.2.4.2. in regards to Facility emissions, the values guaranteed by the Vendor were used for the "Thermal Treatment Facility Stack Emission Limits"., as well as other Ontario regulatory limits, with the MSW-DST default values assumed for contaminants not specified by Ontario regulations and not guaranteed by the Vendor. Monitoring would be undertaken as broadly described in the Covanta Proposal and will be discussed in detail in the supporting documentation for the EPA approvals for the Facility.	Accepted by Reviewer ☐ Yes ☒ No For GHG reduction assessment and CER calculations, site specific monitoring plan will be required. In our opinion, this should be included as the CofA may not require this.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Geotechnical Investigation

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. Feb. 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	1.2	The Geotechnical Investigation provides a general overview only. As noted in the report, further geotechnical investigation will need to be done to satisfy specific requirements of the proposed development. Disposition: No response required	Accepted by Reviewer ☒ Yes ☐ No
2	4.1.3	The standing water elevation measured in the boreholes varies across the site from less than 1 m to over 7 m below existing grade. There are no comments of the effect that this may have on the storm water management pond or other site features. Disposition: Please refer to Appendix C-2 entitled "Surface Water and Groundwater Assessment Technical Study Report, June 2009" for a full description of potential effects on groundwater.	Accepted by Reviewer ☒ Yes ☐ No
3	General	Provision should be made to ensure that no leachate from the development is allowed to escape and enter into the groundwater. Disposition: Please refer to Appendix C-2 entitled "Surface Water and Groundwater Assessment Technical Study Report, June 2009" for a full description of the proposed on-site surface water and storm water management plans.	Accepted by Reviewer ☒ Yes ☐ No
4	Drawing #1	Additional boreholes may be required in the southwest corner of the site should the storm water management pond or other site features be proposed for this location. It may be important to know the groundwater elevation and soil conditions at this location. Disposition: As part of the detailed design, once the precise location and configuration of the storm water management pond has been determined, additional boreholes will be drilled, as required, to assess groundwater elevations and soil conditions.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Report – Acoustic Assessment Technical Study Report (No. 1009497) | **Rev. May 2009**

Note: These comments are draft and subject to further discussion with the Regions consultants before being finalized.

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Fred Bernard, SENES Consultants Limited.	Date of comments: 02/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	2.3	First paragraph states that "receptors that are further removed from the noise source would experience less effect". While this statement is generally true, it is not always the case. The wording should be changed to "... are more likely to experience..." Disposition: This will be considered and incorporated in the final report.	Accepted by Reviewer ☒ Yes ☐ No
2	2.6.2	What adjustments were made to the STAMSON modelling to ensure that the model speed and distance limits were met? A sample calculation should be included to demonstrate the accuracy of such adjustments. Disposition: There were no model speed adjustments made, but rather minimum number of vehicles per hour (40 v/h), and maximum source receiver distance (500 m) parameters were used. This adjustment is very conservative and generally acceptable. Sample calculation of the STAMSON model is included in Appendix H. The results are consistent with the experience of the team in monitoring in similar situations.	Accepted by Reviewer ☒ Yes ☐ No
3	3.2, Table 3-1	Note 4 is unclear, requires further clarification.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Fred Bernard, SENES Consultants Limited.	Date of comments: 02/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The sound power level for this source was adopted from supplier-published data (Appendix C). However, these levels represent engine exhaust without a muffler. Generally, engines are supplied with a standard muffler that provides a noise reduction in noise levels of at least 15-20 dB. It was assumed that a standard muffler would be supplied with each unit, and this scenario was modeled accordingly.	Accepted by Reviewer ☒ Yes ☐ No
4	3.7	If the number and nature of the "smaller noise sources are not yet known," how then can they be considered "acoustically insignificant"?	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The noise sources described in this section are relatively insignificant when compared to major noise sources, and in consideration of the separation distances between these sources and points of reception. This section will be re-structured in the final report to clarify the text.	
5	4.4, Table 4.1	Instead of simply showing the measurement period, the table would be more helpful if it showed the date and time when the minimum ambient sound level was measured at each receptor. This would provide an easier link to the information contained in Appendix E.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: This will be incorporated in the final report.	
6	6.1.1	This section should also outline the scenario and assumptions used for predicting site preparation noise. Further, rather than distributing the construction equipment in an "arbitrary pattern", the equipment should have been distributed to represent a worst-case scenario, based on available information.	Accepted by Reviewer ☐ Yes ☒ No SENES Response: Worst-case situation refers to more than just the number of pieces of equipment, but is also dependent on the location of the equipment. It is understood that the locations of the equipment have not been confirmed at this point, but some assumption had to be made regarding the locations of the equipment as part of any worst case scenario. Where were the equipment located?
		Disposition: This scenario was modeled to represent the worst-case scenario, but there is no information on the equipment location at this stage of the Facility design. In general, many pieces of construction equipment are similar in sound power, therefore it is not necessary to differentiate very much in the distribution of equipment. In practice, often the equipment alternates in the duty cycle, for example trucks are loaded by an active loader, then drive off while the loader idles; in this study we have assumed a reasonable worst-case by treating all sources as concurrently active.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Fred Bernard, SENES Consultants Limited.	Date of comments: 02/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
7	5.1.3	Why is the night time sound level limit at POR02 47 dBA and not 45 dBA? Disposition: The ambient noise monitoring Location 1 (Section 4.3) was assumed to be representative of both POR1 and POR2 because of the same proximity to Highway 401 which is considered to be the main ambient noise contributor. Therefore, the same ambient noise monitoring level was applied for both receptors. Also, MOE NPC-205 guideline stipulates that the applicable criterion is the higher of the existing ambient or 45 dBA in the lowest hour during the nighttime period.	Accepted by Reviewer ☒ Yes ☐ No
8	6.1.1	It is most difficult to determine the site preparation scenario modelled from the data presented in Appendix G. There should be a clear link between the text, figures in Appendix F and the data in Appendix G. There needs to be a delineation of the data in Appendix G by the distinct scenarios. Disposition: Appendix G contains detailed output information for the operations case only. Site preparation calculation and reference will be included in the final report.	Accepted by Reviewer ☒ Yes ☐ No
9	6.1.1	As per Table 6.2, It is not clear how the % highly annoyed was calculated. Please show sample calculation. Disposition: The calculation and assessment is based on *Health Canada Draft Guidance on Noise Assessment for CEAA Projects*. The formula used is $HA=100/[1+ \exp (10.4 - 01.132\ D_{NL}))]\%$	Accepted by Reviewer ☒ Yes ☐ No SENES Response: Yes, but the formula should be included, as well a sample calculation, in this section of the report.
10	6.1.2	This section should also outline the scenario and assumptions used for structural and assembly noise. Same as with site preparation. Disposition: The structural and assembly scenario is described in Section 3.5 and Table 3.2.	Accepted by Reviewer ☐ Yes ☒ No
11	6.1.2	Since pile driving is likely to be the most significant construction noise source, there is a need to verify whether or not pile driving would be necessary.	Accepted by Reviewer

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Fred Bernard, SENES Consultants Limited.	Date of comments: 02/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The need to utilize pile driving will be confirmed as part of the detailed design, as further geotechnical studies are required to make this determination. Should pile driving be required, appropriate mitigation and monitoring programs will be identified and implemented as per Section 7 of the Appendix C-5 "Acoustic Assessment Technical Study Report".	☒ Yes ☐ No
12	6.1.3	Was the worst case/peak daytime and night time construction traffic modelled?	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The worst-case daytime construction traffic scenario was modeled, and there are no proposed night time construction activities as described in Section 6.1. Traffic would have left the site before commencement of the night time period.	
13	6.1.4	The report uses data from a standard paper which is acceptable. Pile driving is an impulsive process and hence the report should use MOE's draft document NPC-207 to assess the impact of Pile driving vibrations. The report should also include the value of the Crest Factor used in the analysis. The vibration dB scale should include the reference value used for determining the dB value.	Accepted by Reviewer ☐ Yes ☐ No SENES Response: MOE's procedure is to use NPC207, that is a set of impulse limits, evaluate the pile vibration levels at the site and predict the impulse level at the receptor locations. The blanket statement above is vague and the information in Section 6.1.4 does not support the vague statements.
		Disposition: The MOE NPC-207 provides a method for assessment of impulse vibration measured inside occupied residential buildings. Generally, vibration impact is confined to a couple of hundred metres. In this case, all critical receptors surrounding the Facility are greater than 200 m from construction, including pile driving activities within the Facility (if required). Therefore, vibration emissions from these activities should not be perceptible, based on the information presented in Section 6.1.4. The value of the Crest Factor used for construction is 4 (Section 6.1.4) More clarification on vibration dB scale and reference may be included in the final report.	
14	6.2	Are there no closer receptors, based on zoning, than the receptors identified in Table 6.8.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Based on site visits, zoning schedules, and site views, there are no closer receptors surrounding the Facility.	
15	6.4	The claim regarding future no build ambient sound levels in the third paragraph on p.40 should be substantiated.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Fred Bernard, SENES Consultants Limited.	Date of comments: 02/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The ambient noise monitoring indicated that current noise levels are in order of 50 dBA, therefore future no-build ambient sound levels at the receptors will stay the same or gradually increase with traffic volumes increase regardless of the Facility operation.	Accepted by Reviewer ☒ Yes ☐ No
16	6.5.4	With reference to the third paragraph under this section, it should be noted that wildlife may be located much closer to the noise sources than the residential receptors, therefore, the criterion of 45 dBA at the receptor location is not an appropriate comparison. In fact, it is unlikely that wildlife of concern are at the receptor location. Disposition: The noise criteria discussed in this Report are applicable to humans only. No standards have been developed for wildlife. However, based on reviewed literature the sound levels above 60 dBA at a distance of several hundred meters from the source would be necessary to affect wildlife. The wildlife of concern is assumed to be located at the Darlington Provincial Park which is far beyond the closest receptors (> 1400 m) so meeting 45 dBA criterion, applicable to humans at the shorter distance (~700 m), will almost certainly meet 60 dBA at the greater distance.	Accepted by Reviewer ☒ Yes ☐ No SENES Response: Yes, but the wording in this section of the report should be improved to reflect the response given above.
17	General	The modelling for the Acoustic Assessment was done using the CADNA-A model. Without access to the model file, or even sample calculations, it is not possible to verify the accuracy of the results in the report. Disposition: The CADNA/A modelling (Section 2.6) was based on ISO-9613-2 Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation algorithm using input data presented in Appendix C. Sample calculation at each of the representative points of reception (POR) for operation scenario are presented in Appendix G.	☐ Yes ☒ No SENES Response: SENES is familiar with the CADNA/A model and uses it for similar applications. Appendix G shows model outputs. These are not sample calculations that allow a reviewer to verify results.
18	General	Further justification is necessary for the use of 0.5 ground adsorption coefficient used in the CADNA-A modelling. Disposition: The ground absorption coefficient of 0.5 was used within the Facility boundary with conservative approach that 50 % of the Site will be covered by asphalt/concrete. The ground absorption coefficient of 0.8 to 0.95 was assumed in the receptors in proximity. Therefore the overall ground absorption was conservatively estimated to be between 0.65 and 0.75.	Accepted by Reviewer ☐ Yes ☒ No SENES Response: Absorption for concrete and asphalt is usually less than 0.1 and the use of a value of 0.5 is not justifiable. The Cadna model should be modlled properly.

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Fred Bernard, SENES Consultants Limited.	Date of comments: 02/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
19	General	The assessment considers only 140,000 tpy. However, the report indicates that up to 400,000 tpy may be processed. Disposition: Appendix C-5 "Acoustic Assessment Technical Study Report" will be updated to include a complete discussion of the potential effects associated with expansion up to a projected maximum design capacity of 400,000 tpy.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	Executive Summary	The scope of The Visual Assessment Technical Study Report as outlined in the Executive Summary is clearly stated; however, the scope of the undertaking is not clearly stated within this report. It should be clarified that the visualizations use massing not the actual design. In addition, it should be clearly stated that the visualizations are for the 140,000 tonne scenario not the ultimate build out. There should be a better description of the Facility and its component (either in the Executive Summary or in 2.3.2.1), particularly those which have visual impacts; such as the transmission yard, storage and handling areas, height of buildings and stack, height of receiving area above Energy Drive. The report has been completed for the use in the Environmental Assessment (EA) for the Proposed Thermal Treatment Facility. The study includes consideration and assessment of the potential change in the existing visual aesthetics that could result from the development of the facility within the study area. However, a number of the comments used to characterize the existing landscape are subjective and not qualified. The project was promoted on the basis of high quality landmark design and should provide a less-utilitarian look as a key mitigation for its bulk. The Clarington Energy Business Park is envisioned as prestige commercial and industrial business park not a heavy industry area.	Accepted by Reviewer ☒ Yes ☐ No Accepted subject to review of the Final Report.
		<u>Disposition:</u> Additional text regarding the technical limitations associated with the modelling will be added to the Report (i.e., visualizations use massing based on conceptual design and do not use actual design). In addition to the assessment of the initial design capacity of 140,000 tpy, the Report has been revised to include the assessment of the projected maximum design capacity of 400,000 tpy. A description of the Facility components will be added to the report. The visual characteristics of a landscape are subjective and cannot necessarily be quantified. This visual impact assessment focused on the worst-case scenario where the basic design specifications and dimensions were used. The actual facility, as illustrated by the artistic renderings, would employ high quality design and architectural principles to ensure that the facility would be consistent with the intent for the Clarington Energy Business Park to be a prestige commercial and industrial business park, as envisioned. In addition, as described in the Host Community Agreement, Durham has incorporated a cash allowance of up to nine million dollars in the RFP for the provision of architectural treatments and upgrades to the Facility.	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
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Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
2	2.1	Need to review Visual Sensibility section since when the 401/407 interchange ramps are built passing motorists will view the Energy from Waste Facility from higher level making this location a very prominent landmark with higher sensitivity than expressed. The initial and critical vista for the motoring public travelling along the 401, it is the impression that they will be left with for all of Clarington. Disposition: The Report will be revised to include additional photo montages depicting the conceptual Facility as potentially seen from a) passing motorists driving on the proposed Highway 401/407 interchange; and b) various vantage points from the proposed OPG building and Energy Park Drive based on the information provided by the Municipality.	Accepted by Reviewer ☒ Yes ☐ No Accepted subject to review of the Final Report.
3	2.2	References for the studies mentioned should be included. Studies for similar facilities often consider 20 km for the study area. Disposition: Other studies that have been directly referenced within this report have been included within the Section on references located at the end of the Report. The 1 km and 5 km study area radii were based on study areas used through the EA and in other technical study reports. References will be reviewed and updated accordingly. Based on the results of the photo montages and the viewshed analyses depicted in Figures 4-18 and 4-19 for the 140,000 tpy scenario and the recently added Figures 4-20 and 4-21 for the 400,000 tpy scenario, a 20 km study area was considered not to be necessary because the anticipated potential visual effects beyond the 5 km radius are expected to be minimal.	Accepted by Reviewer ☒ Yes ☐ No
4	2.3.1	There are a number of projects planned for the study area that are at comparable or further advanced approval stages and should be identified. This would assist with the consideration of potential visual effects. These are: a. Proposed OPG Office Building and Visitor Centre b. 401/407 interchange ramps The Secondary Plan and Official Plan policies are in force, there are conceptual plans for the Clarington Energy Business Park, these should have been used to provide for an understanding of the overall visual impacts. The OP policies and Zoning By-law require a minimum of 4 storey buildings south of the 401 near the Courtice Road interchange.	Accepted by Reviewer ☒ Yes ☐ No Accepted subject to review of the photo montages.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The Report was based on existing conditions using relatively recent photo montages of the area to conceptualize what the proposed Facility would look like within the existing landscape demonstrating the worst case potential visual effects. In addition, the visual assessment primarily focussed on the potential visual effects of the Facility on the area outside of the proposed Clarington Energy Business Park. The Report will be revised to include additional photo montages depicting the conceptual Facility as potentially seen from a) passing motorists driving on the proposed Highway 401/407 interchange; and b) various vantage points from the proposed OPG building and Energy Park Drive based on the information provided by the Municipality.	
5	2.3.2.2	• Additional photo montage and 3D renderings should be prepared to include views with the 401/407 interchange ramps and proposed OPG Office Building • Visual Simulations for Site 10, 11, 14 and 15 should include the 401/407 interchange ramps and proposed OPG Office Building. Disposition: The Report was based on existing conditions using relatively recent photo montages of the area to conceptualize what the proposed Facility would look like within the existing landscape demonstrating the worst case potential visual effects. In addition, the visual assessment primarily focussed on the potential visual effects of the Facility on the area outside of the proposed Clarington Energy Business Park. The Report will be revised to include additional photo montages depicting the conceptual Facility as potentially seen from a) passing motorists driving on the proposed Highway 401/407 interchange; and b) various vantage points from the proposed OPG building and Energy Park Drive based on the information provided by the Municipality.	Accepted by Reviewer ☒ Yes ☐ No Accepted subject to review of the photo montages.
6	3.1.1.1	The OPG Office Building and OPG Visitor Centre should be identified as a receptor.	Accepted by Reviewer ☐ Yes ☒ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The Report was based on existing conditions using relatively recent photo montages of the area to conceptualize what the proposed Facility would look like within the existing landscape demonstrating the worst case potential visual effects. In addition, the visual assessment primarily focussed on the potential visual effects of the Facility on the area outside of the proposed Clarington Energy Business Park. The Report will be revised to include additional photo montages depicting the conceptual Facility as potentially seen from a) passing motorists driving on the proposed Highway 401/407 interchange; and b) various vantage points from the proposed OPG building and Energy Park Drive based on the information provided by the Municipality.	The OPG Office Building and Visitor Centre are further along in their approvals process that the EFW and therefore should be listed as "receptors".
7	4.3	Regarding the Identification and Analysis of Potential Effects, landscape features such as trees and hedgerows located within the study area will change over time. Therefore the view of the structure and its immediate landscape features must be carefully considered and within the site. Table 4-1 which indicates the level of impact expected (future tense) at each receptor does not reflect the high sensitivity that the visual impact of this 13 plus storey project will have on the Clarington Energy Business Park, Highway 401, Waterfront Trail and CN Rail. All of which have been rated as "medium" when "high" would be more appropriate.	Accepted by Reviewer ☒ Yes ☐ No The final report should include the reasoning provided in this response.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
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Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The assessment is based on current visual characteristics and conditions at the site. While the presence of trees and hedgerows may change over time, these alterations cannot be predicted, and the various scenarios of tree removal, growth or future plantings cannot be included or accounted for in the assessment at this time. According to the definitions provided in Table 2-1, Highway 401, CN Rail and users of the Waterfront Trail may bring a higher number of viewers to the area increasing the level of the magnitude of the effect, these viewers would continue to consist primarily of individuals with a passing interest in their visual surroundings, thus continuing to warrant a medium sensitivity rating. For receptors within the Clarington Energy Business Park, these individuals will be employees or visitors to the site and will be considered to have a medium sensitivity (i.e., not as proprietary as a resident, but more interest than a passing motorist). The Report will be revised to include additional photo montages depicting the conceptual Facility as potentially seen from a) passing motorists driving on the proposed Highway 401/407 interchange; and b) various vantage points from the proposed OPG building and Park Drive based on the information provided by the Municipality. In addition, as described in the Host Community Agreement, Durham has incorporated a cash allowance of up to nine million dollars in the RFP for the provision of architectural treatments and upgrades to the Facility. This will also ensure appropriate and effective visual mitigation measures are used.	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
8	5.1	There are a number of measures that can be implemented to mitigate the visual effect of the facility. For instance: • The massing of the proposed EFW building can be reduced by locating a portion of the facility partially below ground to reduce its visual impact on the surrounding landscape. • Special treatment should be given to the façade facing Highway 401 • Minimize the visual impact by reducing the mass, angles and scale of the building. • The width of the building's north elevation (proposed Energy Drive) should be at least 40% of the lot width (Clarington Energy Business Park Secondary Plan). • To establish a consistent streetscape edge along proposed roads and landscaping within the site. • Curved sloping green roofs should be incorporated to soften the outline of the building. • The exterior colouring of the building should also assist in blending the facility in with its surrounding. • Minimize the height of the stack by using visual allusion techniques This project will be required to meet the guidelines expressed in the Official Plan, Zoning By-law and will be subject to site plan approval. The facility has many aspects including operation and service areas which can be mitigated through site design.	Accepted by Reviewer ☒ Yes ☐ No Subject to inclusion in the final report and Section 13 of the EA document under migitation.
		<u>Disposition:</u> As described in the Host Community Agreement, Durham has incorporated a cash allowance of up to nine million dollars in the RFP for the provision of architectural treatments and upgrades to the Facility. This will also ensure appropriate and effective visual mitigation measures are used. Details regarding the proposed measures used to mitigate the visual effect of the Facility will be made available once the preferred design concept is selected and detailed design work is undertaken, with this work being undertaken post-submission of the EA.	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
9	6.0	The fact that other industrial facilities are or will be visible, should be only taken into account for the analysis as a background reference. The proposed development is within the Clarington Energy Business Park and should be developed in conformity with the Principles established for Design Excellence. • The physical and business environment of the park should make it a showcase for Clarington, Durham Region and Ontario. • Celebrate its presence with an innovative design representing the modern day technology. • The design should reflect the community's vision for the future of the area.	Accepted by Reviewer ☒ Yes ☐ No Accepted, subject to review of the final report.
		Disposition: The reference to the fact that other industrial facilities are or will be as visible at the EFW Facility is used only to place this project into context with its surroundings. The mitigation measures will be revised to include consideration of the above principles for design excellence. In addition, as described in the Host Community Agreement, Durham has incorporated a cash allowance of up to nine million dollars in the RFP for the provision of architectural treatments and upgrades to the Facility. This will also ensure appropriate and effective visual mitigation measures are used.	
10	6.1	Reference to the Clarington Energy Business Park being in the planning stages is inaccurate. The Secondary Plan and zoning was completed in 2006, it is in the process of being implemented. OPG draft plan of subdivision approved in 2009. Capital works are being designed.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: This reference regarding the planning and design status of the Clarington Energy Business Park will be updated to reflect the above noted status of the CEBP.	
11	7.0	"If visual concerns are raised by receptors in the vicinity" then mitigation will be undertaken. Mitigation is the responsibility of the proponent and should be proposed and committed to as part of the EA. "The presence of the facility...could result in change to the existing local landscape". The facility will result in changes to the local landscape, therefore mitigation is necessary.	Accepted by Reviewer

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Visual Assessment
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Ruth Porras, Municipality of Clarington	Date of comments: 04/06/2009 Disposition: 26/06/2009 Reviewer: 29/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Mitigation measures will be employed at the site. Should visual concerns be raised at specific receptor locations, after such mitigation has been employed, each complaint would be addressed on a case-by-case basis. The mitigation measures will be revised to include consideration of the factors noted in comment #9 above. In addition, as described in the Host Community Agreement, Durham has incorporated a cash allowance of up to nine million dollars in the RFP for the provision of architectural treatments and upgrades to the Facility. This will also ensure appropriate and effective visual mitigation measures are used	☒ Yes ☐ No Subject to inclusion in the monitoring section of the final document .

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Report – Natural Environment Impact Assessment (No. 1009497)
Note: These comments are draft and subject to further discussion with the Regions consultants before being finalized.

Rev. May 2009

REVIEW DOCUMENT DESCRIPTION

Reviewer's Name & Organization		Paul Patrick, SENES Consultants Limited	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	Executive Summary	Reference to 2007 and 2008 surveys. However, study methodology (Section 2.0) refers to only July 18-20, 2007 field studies. More details required on subsequent studies which targeted seasonal-sensitive species and features. Need to review these results. Disposition: Initial surveys were completed in 2007. References to 2008 surveys have been removed from the revised report. Methodologies related to the May 7, 2009 field work are included in the revised report.	Accepted by Reviewer ☒ Yes ☐ No
2	1.1	What about considering interactions such as from air emissions? Is there any air/or liquid release from this facility? Is there a storm water facility? If so, where is the discharge? Lake Ontario is only 400m south of the site. More detail required within this study report to support the claim of net effects. Disposition: Emissions to air and water are not discussed in this report. Rather, liquid releases and stormwater discharges are discussed in Surface Water and Groundwater Assessment, while air emissions are discussed in the Air Quality Assessment and the Human Health and Ecological Risk Assessment reports.	Accepted by Reviewer ☒ Yes ☐ No
3	1.1	There are no federal environmental triggers. However, additional studies were proposed in 2009 to investigate the ditch which likely may include fish habitat (possibility of a HADD). The results of this study should be addressed in the report.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Paul Patrick, SENES Consultants Limited	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Results of the May 7 2009 field work documenting confirmed lack of fish habitat are included in the revised version of the report.	
4	3.1.1	Although hedgerows are isolated from larger forested area, they do provide habitat especially for transient species, and are important as a corridor for wildlife.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The value of the hedgerows as movement corridors is discussed on Page 5 of the report.	
5	3.1.2	When were these bird surveys conducted in 2007 (mid-summer only?) and in 2008. This area is an important migratory route for birds. A wider variety of species was anticipated.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: As stated in the methodology, the bird species list was compiled from field visits on July 18th, 19th and 20th, 2007. Surveys were not targeted on breeding bird or migratory counts but rather, they focused on incidental species occurrences. Given the limited natural cover on site and the industrial nature of the area, this general approach to avian surveys was considered appropriate. References to 2008 surveys have been removed.	
6	3.1.2	Why is the data on bird surveys not given in an Appendix. The only data available is the OBBA record. How many species were recorded in your surveys? Data from field work in 2007 and in 2008 should be an Appendix.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Common and scientific names for 17 species of birds were documented during the 2007 field surveys, including breeding evidence of 5 species and is provided in Section 3.1.2 of the revised version of the report.. This documents bird species encountered during fieldwork that were present on Site. The OBBA data documents information gathered from other sources and as such is separated from the study-specific data in an appendix to the technical report. References to 2008 survey have been removed.	
7	3.1.4	Summary of vegetation species should be given rather than general statements. Data should be in an Appendix.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Section 3.1.5 provides a summary of all vegetation species documented during the site visits.	
8	3.1.5	Additional survey of the drainage ditch is required during the freshet period. If water present, fisheries studies should be conducted and a commitment for addressing the HADD provided.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The information gathered from the spring freshet survey for the drainage ditch is included in the revised report.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Paul Patrick, SENES Consultants Limited	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
9	Table 4.1	The hedgerow is an important feature which mammals tend to use as part of the corridor. Similarly for avian species. How will these native shrubs be placed? I would expect a loss of bird diversity- therefore an impact occurs, how is it going to be investigated?	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Functional hedgerow habitat is being compensated via the creation of an east-west wildlife corridor south of the Facility. Planting plans and species selection will be determined during detailed design phases and illustrated in a landscaping plan for the Facility.	
10	Table 4.1	Net Effects- Removal of up to 515 m of hedgerow is being offset with some shrubs/tree plantings. However, some diversity loss would be expected. Recommend follow-up studies to confirm that there is no loss of diversity. However, the baseline data must be detailed in order to make the comparison and claim "no significant net effects would be anticipated" – commitment.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Diversity on site is currently limited due to historical agricultural practices and industrial land uses surrounding the site. Overall, species richness of the hedgerow was low, and no significant tree or shrub species were noted. In fact, many of the species present were invasive. It is anticipated that species diversity is likely to increase through the landscaping plan, which incorporates native species.	
11	Table 4.1	No net effect results have to be established; without fisheries info for drainage ditch cannot be completed.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The information gathered from the spring freshet survey for the drainage ditch is included in the revised report.	
12	3.1.3-3.1.4	Should indicate the date of NHIC record for Milksnake and Bushy Cinquefoil.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Dates have been added to the report for these two species occurrences [i.e., Milksnake (1989), Bushy Cinquefoil (1980)].	
13	General	Technical data from 2007, 2008 and 2009 (recent survey) not just summary paragraphs should be available. Avian studies should be documented in spring, summer and fall. Recommend follow-up studies if hedgerow removed since only significant habitat in area and loss may result in reduction in species diversity (even after mitigation).	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Avian studies were conducted in summer of 2007 and spring of 2009. They showed little variation from year to year or season to season. Fall studies are, therefore, not anticipated to add any data of real value to the existing known avifauna. References to 2008 removed.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Paul Patrick, SENES Consultants Limited	Date of comments: 03/06/2009 Disposition: 23/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
14	General	Impacts are not specified. Impacts only seem to relate to site preparation and construction – physical disposition. What about impacts of the operation and maintenance of the facility (e.g. Air/liquid emissions to the environment)? Do not seem to be addressed but should be. Disposition: The potential effects on the natural environment "off-site" have been assessed in other technical study documents including potential effects on air, water, vegetation, wildlife, etc. Please refer to Appendix C-1 - Air Quality Assessment Technical Study Report; Appendix C-2 - Surface Water and Groundwater Assessment Technical Study Report; Appendix C-5 - Acoustic Assessment Technical Study Report; and, Appendix C-12 - Site Specific Human Health and Ecological Risk Assessment (HHERA) Technical Study Report.	Accepted by Reviewer ☒ Yes ☐ No
15	General	Construction of stormwater management facility. How will this interact with existing environment? Where is discharge? Needs to be detailed in report. Disposition: All information related to the stormwater management facility can be found in Appendix C-2 - Surface Water and Groundwater Assessment Technical Study Report, including discharge-related information.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Report – Social/Cultural Assessment Technical Study Report (No. 1009497)
Note: These comments are draft and subject to further discussion with the Regions consultants before being finalized.

Rev. May 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	Exec Summary, page ii, 2nd paragraph	"This Social/Cultural was Assessment..." should read "This Social/Cultural Assessment..." Disposition: Agreed, will be addressed in Final Report	Accepted by Reviewer ☒ Yes ☐ No
2	2.2, page 10, 6th bullet	Please provide clarification of when the two phases of expansion are estimated to occur within the 30 year operation phase. Disposition: The timing of the expansion phases during the 30 year operation phase is currently unknown, as the requirement for expansion depends on a number of factors that cannot reasonably be predicted at this time.	Accepted by Reviewer ☒ Yes ☐ No
3	2.3, page 10-11	The study areas as defined do not include near shore Lake Ontario, which may be of interest from a recreational perspective. – see comment number 9 below. Disposition: While the LSSA and CSSA were portrayed as ending at the shoreline, the Final Report will include consideration of the effects of the Undertaking on recreational activities that may occur on Lake Ontario within 1 and 5 km from the Site.	Accepted by Reviewer ☒ Yes ☐ No
4	2.1.2, page 8, last paragraph	"Generally, the results of the consultation process undertaken during the EA, particularly in regards to community attitudes toward the Project, were considered during the assessment of the potential effects on the broader community." Clarification required as to how community attitudes were considered and to what degree these attitudes influenced the assessment.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The Final Report will integrate results of the consultation regarding the assessment of the Undertaking. Additional clarification will be provided in regards to consideration of community attitudes.	
5	Figure 2-1	As it is mentioned in previous report sections that the site is located within the Clarington Energy Business Park, an outline of this area would be useful for the reader on this figure to enhance understanding of the location of the planned land use. The existing baseline photo used for Figure 2-1 shows a predominantly rural agricultural area. Disposition: Secondary Plan information regarding the intended land use in the CEBP was provided in the Report. Figure 2-1 provides an overview of current conditions.	Accepted by Reviewer ☒ Yes ☐ No
6	3.5.1 & 3.5.3	Information provided (re LOS) in 3.5.1 is repeated in 3.5.3 unnecessarily, either combine sections or edit material out of 3.5.3. Disposition: Agreed.	Accepted by Reviewer ☒ Yes ☐ No
7	3.2.1, page 18	Illustration reference not provided, as per error message. Disposition: Will be addressed in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
8	3.3, page 2, 6th bullet point	Typo- "One residences.." should read "One residence..." Disposition: Will be addressed in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
9	3.3.2, page 3	Parks and Recreational Areas discusses land-based recreation, but omits any reference to use of the lake within the LSSA, or CSSA for boating (canoeing, kayaking, motor boats), wind surfing or other water-based use. The definition of both the LSSA and CSSA ends at the shoreline, are any other recreational uses overlooked as a result? Disposition: While the LSSA and CSSA were portrayed as ending at the shoreline, the Final Report will include consideration of the effects of the Undertaking on recreational activities that may occur on Lake Ontario within 1 and 5 km from the Site.	Accepted by Reviewer ☒ Yes ☐ No
10	Table 4-1, page 17, Dust	Dust emissions from construction are described as a temporary effect on local air quality; however, under "Net Effects" only a minimal long term net effect is identified. Although a number of mitigation measures are identified to address this nuisance during construction, a temporary short term effect is probable, and as such the net effect column should reflect this.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The Final Report will note that in regards to dust emissions, that there could be 'short-term construction related net effects'.	
11	Table 4-1, page 19, Visual	Inconsistent representation of net effect. "Net effect" stated; however, not qualified, i.e. minimal, short or long term. Disposition: If an effect over the longer term (operational period) was likely, it was simply identified as a "Net effect". Further information will be provided in the Final Report to qualify the net effects.	Accepted by Reviewer ☒ Yes ☐ No
12	4.8.3,page 23, 2nd paragraph	The analysis considers the effect on the public using the facility, but does not seem to include employees at these facilities. Did the analysis include the effect of nuisance odour, noise, traffic on employees at the identified Facilities? Disposition: Final report will clarify that the assessment of net effects did include employees.	Accepted by Reviewer ☒ Yes ☐ No
13	Table 4-3, page 23, Noise	"No long term Net Effects" implies that a short term net effect is anticipated as identified under "Potential Effect". If a short term effect is anticipated, it should be stated, if not, statement should be revised to "No net effects". Disposition: The Final Report will note that in regards to noise emissions, that there could be 'short-term construction related net effects'.	Accepted by Reviewer ☒ Yes ☐ No
14	Table 4-3, page 25, Visual Net Effects	As per comment number 11 above, net effect not qualified Disposition: If an effect over the longer term (operational period) was likely, it was simply identified as a "Net effect". Further information will be provided in the Final Report to qualify the net effects.	Accepted by Reviewer ☒ Yes No
15	Table 4-6, page 30, Noise	See comment above with regard to "No long term Net Effects". Disposition: The Final Report will note that in regards to noise emissions, that there could be 'short-term construction related net effects'.	Accepted by Reviewer ☒ Yes ☐ No
16	Table 2-2, page 13	The Indicators for the social/cultural assessment includes the "Potential for Changes in community character/cohesion"; however, cohesion is not described in the baseline characterization (Section 3.1), nor is it discussed as part of the assessment. It may be that it is not applicable to this study given the location of the project site in proximity to the nearest community. If this is the case, the indicator should be revised accordingly.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: This indicator will be revised in the Final Report to reflect that the indicator as applied reflected the potential for 'Changes in Community Character'. It is not applicable to this Study to consider effects on Community Cohesion, considering that the Site is located over 3 km away from the closes community.	
17	General	Page numbering is not sequential, resets to page 1 in section 3.2.3. Disposition: Agreed, pagination will be corrected in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
18	Section 2.3.1	the report notes that: *"Consultation regarding the selection of the Preferred Site, Clarington 01, undertaken through the issuance of the Technical Study Reports for review, public information sessions and peer review on behalf of Clarington, identified opportunities to enhance the detail, readability and traceability of the EA final document but did not identify any considerations that affected the selection of Clarington 01 as the recommended preferred site."* The EA planning process peer reviews conducted for the Municipality of Clarington identified number of instances where the proponents did not provide sufficient information or a sufficiently traceable process to show that the short list of sites represented a complete list of sites that met the selection criteria at that time, or to demonstrate that Clarington Site 01 is the preferred site among the short-listed sites. These concerns generally remain with respect to the Draft Class EA and are described in the peer review of the Draft EA, provided separately. Disposition: The Final EA document will include additional information and some sections will be reorganized to address comments noted above and as provided on the Draft EA documents.	Accepted by Reviewer ☒ Yes ☐ No
19	Section 2.3.1	It is stated in Section 2.3.1 that *"The results of community polling undertaken after the announcement of the recommended Preferred Site indicated that the majority of the public (approximately 74%) agreed or somewhat agreed with the development of a thermal treatment facility although some (less than 10%) would prefer it to be located outside of Clarington"* This discussion should describe the scope of the "community" that was surveyed. If all of York and Durham Regions were surveyed, these results would be interpreted differently to a survey of Clarington residents, or residents of the locality of the proposed thermal treatment plant.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: Additional information regarding the polling and subsequent consultation with Clarington residents will be included in the Final Report.	
20	Map 2-1	Map 2-1 and other maps illustrate the location of land uses near the Clarington 01 Site and the haul route. Section 3.3.1 notes that there are two residences within one kilometre of the site whereas Section 4.8.1 notes that there are three residences within one kilometre, one of which is abandoned (and is apparently not shown on Map 2-1). Further details on these residences would have been helpful, e.g. distance from the site, tenure, whether they are active farmhouses, length of occupation, and potential for an abandoned residence to be re-occupied.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Some further information will be provided in the Final Report regarding the two occupied residences within the LSSA, including the distance from the site to the occupied residences.	
21	Map 2-1	Apparently the residence shown on Map 2-1 located to the east of Courtice Road near the CN Rail line is now abandoned. This is relevant to the consideration of potential environmental effects, especially now that the Regions and the Municipality of Clarington have agreed on a change to the haul route involving an access laneway from Courtice Road along the CN line to the proposed site as part of the Host Community Agreement. The report should be modified to reflect these recent changes.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The potential for refinements to the haul route for the site, involving an access laneway from Courtice Road, are contingent upon the outcome of an expropriation process that is regarded as a commitment made by the Region of Durham to Clarington within the Host Community Agreement, outside of the EA. Refinements to the haul route would be confirmed subsequent to the EA submission, and would be addressed in the permitting documentation reflected in the conditions of approval for design and operation of the Facility.	
22	Section 4.2.1	The terminology used to express the level of commitment to mitigation and impact management measures varies throughout Sections 4 and 5. In Section 4.2.1 there is a list of noise mitigation measures that "may include...", whereas in Section 4.3.1, "Dust During Construction", there is a list of measures that "will" be employed. There is similar variation in descriptions other effects. The descriptions should either make a clear commitment to implementing mitigation measures, or state the triggers that would require such measures if the need for them is uncertain at the present time.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The Final Report will make a clear commitment to implementing certain mitigation measures as appropriate in this stage of the approvals process. For those measures that would be contingent upon other decisions (such as agreement on a final design for the Facility) the Final Report and EA Study document will identify the appropriate timeframe and/or trigger for making a decision that such measures are required. Subsequent commitments to implement those measures would be included in the permitting documentation reflected in the conditions of approval for design and operation of the Facility.	
23	General	This document provides a summary of the results of other technical reports. Conclusions from these reports are discussed in relation to the potential impacts, however little detail is provided in this report with respect to how these conclusions were reached.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The Social/Cultural Assessment provides a summary of the relevant results of other Technical Reports, as necessary, to provide an overview of the potential physical effects of the Facility on various receptors. For details regarding the other technical studies including the methodology used for the assessments, those other reports should be reviewed.	
24	Section 4.2.3	The section on 'noise during decommissioning' in section 4.2.3 does not mention the use of blasting or hammer type equipment to demolish the proposed buildings. Is there another method of demolition that will be used? There would be substantial noise produced through the use of blasting or hoe-ram type equipment.	Accepted by Reviewer ☐ Yes ☒ No Commitment to consider surrounding land use at the time of decommissioning would be more appropriate.
		Disposition: Details regarding decommissioning equipment/methods are not available at this time, and as such it was considered reasonable to assume that the effects would be no greater than the noise effects during the construction period which reflects the potential for elevated sound levels due to pile driving and traffic.	

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
25	General	There are a number of measures that have been noted to reduce the social/cultural impacts which would have to be included in the detailed design or enforced during the operation of the facility in order to be effective. • In section 4.2.2 it is noted that mitigation measures may be required to meet the predicted noise criteria such as enclosures, local or property line barriers, mufflers and silencers, and acoustic baffles or insulation. • In section 4.3.1, it is noted that emissions from construction equipment will meet Ontario Drive Clean standards, • In section 4.4.2 it is noted that a control program will be contracted to spray and place traps at least twice per week to mitigate the potential effect of vermin. • In section 4.5.2 it is noted that litter control will be conducted on a daily basis These measures must be carried through or the conclusions that there would be little or no net effects from the proposed project may not be valid. Disposition: Mitigation measures as noted to address the potential effects of noise, air emissions, litter and vermin/vectors, are included in Section 5 of the Report (Impact Management) and are included in the Commitments as set out in Section 13 of the Draft EA Study Document.	Accepted by Reviewer ☒ Yes ☐ No
26	Section 4.6.2	Section 4.6.2 notes that the site will generate up to 77 trucks per day. No mention is made of traffic from employees at the site. Disposition: Information on passenger vehicle trips will be provided in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
27	Section 4.8	Tables 4-1 to 4-4 in section 4.8 note that no mitigation measures are required to reduce the impact of increased traffic. Table 4-6 notes that the full build-out of the CEBP will require road network improvements. The traffic from the proposed EFW facility will contribute to the need for road network improvements as it will be part of the build-out of the CEBP (8-10% of future traffic, as noted in the summary and conclusion). Disposition: The Final Report will clarify that traffic from the Facility will account for 2 to 3% of the total trips generated in the fully built-out CEBP, and that therefore the requirement for road network improvements will not be specific to the Facility.	Accepted by Reviewer ☐ Yes ☒ No Construction of Energy Drive through Host Community Agreement could be considered as adequate compensation for future traffic impacts.
28	Section 4.8.2	Section 4.8.2 states that comments from the community will be documented and addressed in the EA and will be considered as the Social/Cultural Assessment is completed. This would imply that the Social/Cultural Assessment will be updated to reflect input from the community.	Accepted by Reviewer ☒ Yes ☐ No

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Gwen Brice, SENES Consultants Limited with comments from Steve Rowe and Will McCrae	Date of comments: 01/06/2009 Disposition: 25/06/2009 Reviewer: 30/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The Final Report will integrate results of the consultation regarding the assessment of the Undertaking. Additional clarification will be provided in regards to consideration of community attitudes.	Subject to review of the final document

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Stage 2 Archaeological Assessment and Built Environment **REPORT NO. 1009497**
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. Feb 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Faye Langmaid, Municipality of Clarington	Date of comments: 26/05/2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	3.2, page 9	Built Heritage Resources have been limited to the specific site. The previous report addressed the built heritage resources within the immediate surrounding area, this information should be carried forward and discussed in this report to ensure its completeness. Disposition: The built heritage discussion for the Clarington 01 Site indicated that the nearest built heritage resource was approximately 3 km away from the Site and the Stage 1 assessment did not indicate that further work with regard to built heritage resources was necessary. The Stage 2 report is only concerned with the results of the potential impacts to possible archaeological or heritage resources within the limits of the project development area.	Accepted by Reviewer ☒ Yes ☐ No
2	3.2, page 9	It is common to discuss the impact that the project will have on the built heritage resources within the surrounding area as, on the context of those existing built heritage resources. The potential mitigation measures would be to screen the views or provide complementary architecture and context for adjacent built heritage resources. Disposition: Based on the fact that the nearest registered built heritage site is 3 km away the heritage landscape and view shed impacts of the project are considered to be minimal. The closest approximation of the view from the Samuel McClellan house is the Visual Simulation Point 14 from the View Shed analysis. From that point the facility is obscured by vegetation (tree lines) and impaired over the distance from the Site.	Accepted by Reviewer ☒ Yes ☐ No
3	5.0, page 12	Shovel test pits to be completed in Spring of 2009 and results should be added to the Assessment. Disposition: Appendix C-9 "Stage 2 Archaeological Assessment and Built Heritage Assessment Technical Study Report, June 2009" has been updated to include the shovel test pit results from the fieldwork completed in the spring of 2009.	Accepted by Reviewer ☒ Yes ☐ No
4	General	Clarington Site 01 has a "Disadvantage" under this criterion in Step 7, further study has indicated no negative impacts; how has this been addressed by the sensitivity analysis that was to be carried out?	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Stage 2 Archaeological Assessment and Built Environment REPORT NO. 1009497
Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. Feb 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Faye Langmaid, Municipality of Clarington	Date of comments: 26/05/2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: In Step 7 (Evaluation of Short-list of Sites and Identification of Consultants Recommended Preferred Site), Clarington Site 01 was found to have a "disadvantage" as the results of the Stage 1 Archaeological Assessment found that the Site had a high potential for both prehistoric and historic resources. As a result, the requirement for a Stage 2 Archaeological Assessment was identified and was undertaken during the assessment of the Undertaking. The results of the Stage 1 Archaeological Assessment were valid and therefore the potential disadvantage resulting from Step 7 of the siting process remains the same, as documented in Section 8 of the EA document. It should not be adjusted based on the results of the further assessment undertaken later in the Study process. Results from the Stage 2 Archaeological Assessment will continue to be reported as part of the overall assessment of the Undertaking.	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Traffic Assessment, Technical Study Report

Rev. May 8, 2009

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: June 3, 2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	2.0	The study methodology used for traffic forecasting and the assessment of traffic operations is acceptable, and the identified improvements to the local area road network are reasonable. It is understood that other initiatives in this area may result in additional road network improvements as related to the OPG development, Highway 401 mainline and interchange improvements, and the freeway link between Highways 401 and 407. Disposition: No response required	Accepted by Reviewer ☒ Yes ☐ No
2	General	The Site would generate very low peak-hour traffic volumes and, as such, the Site's contribution to the need to improve the local area road network would be limited from a traffic volume perspective. Improvements are triggered by the characteristics of the traffic generated by the proposed facility. Disposition: No response required.	Accepted by Reviewer ☒ Yes ☐ No
3	General	It is clear that the development of the remainder of the CEBP as well as the future OPG development will trigger the need for local area road network improvements. Disposition: No response required.	Accepted by Reviewer ☒ Yes ☐ No
4	General	While not discussed in the report, it is understood that an alternative site access route is being considered to divert waste truck traffic from Osbourne Road route. The intent would be to minimize the volume of truck traffic circulating through the CEBP, especially since the waste truck traffic may be considered incompatible with the other land uses and amenities of the CEBP. Disposition: No response required.	Accepted by Reviewer ☒ Yes ☐ No
5	3.1 (p. 4)	Second paragraph: reference is made to the "Town of Clarington." Any such references in the document should be changed to the "Municipality of Clarington."	

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Traffic Assessment, Technical Study Report

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 8, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: June 3, 2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: All references to the "Town of Clarington" will be revised to read "Municipality of Clarington"	Accepted by Reviewer ☒ Yes ☐ No
6	4.0 (p.7)	There is a potential for conflict regarding the Municipality of Clarington's construction schedule for Osbourne Road and the proposed construction activities for the EFW Facility. Reconstruction of Osbourne Road is scheduled for the 2010 construction season. Disposition: The proponents are currently investigating opportunities for the provision of an alternate site access point as described above. However, the provision of this site access requires property acquisition from a current private landowner. Should the proponents be able to acquire the necessary land, an alternate access route will be constructed and utilized. Establishment of this new roadway would eliminate the potential conflict with the Municipality of Clarington's 2010 reconstruction schedule for Osbourne Road	Accepted by Reviewer ☒ Yes ☐ No
7	4.0 (p.12)	Final paragraph: to accommodate construction truck traffic and site-generated truck traffic once the site is operational, it is suggested that "Road reconstruction /pavement improvements may be required for the section of South Service Road between the interchange and Osbourne Road, as well as the section of Osbourne Road between South Service Road and the future site access." The language is weak in this statement. Either the road will need to be reconstructed or have the pavement improved or it will not. This should be firmly established prior to construction of the facility. Responsibility for mitigation of the impact that construction traffic will generate needs to be firmly established as well. Disposition: The following sentence will be added to the report: "Pavement testing along the haul route will be completed by the Region of Durham if the Project is approved."	Accepted by Reviewer ☒ Yes ☐ No

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Traffic Assessment, Technical Study Report

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 8, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: June 3, 2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
8	5.1 (p.13—figure 5.1)	The site plan for the Thermal Treatment Facility, as depicted in figure 5.1, appears not to have made allowances for accommodating the future Energy Drive or a proposed stormwater ditch running parallel to the CN corridor required by the SWM plan developed for the CEBP. Allowances for Energy Drive would require a 30-metre strip of land running within the length of northern extent of the property. The stormwater ditch would require a 15-metre strip of land running within the length of the southern extent of the property. Further, to offset a mitigation measure outlined in the EA regarding the need for road/pavement improvements to South Service and Osbourne Roads due to construction traffic, an alternate access road from Courtice Road to the site, following the ditch on the north side of the CN tracks has been proposed. Construction of this road would appropriately divert construction traffic as well as future operational traffic away from the prestige employment corridor that has been proposed for the CEBP.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The initial site plans have been developed to a conceptual level of detail. Factors such as the Energy Drive road allowance requirements and stormwater ditch requirements will be incorporated into the detailed design. The potential for refinements to the haul route for the site, involving an access laneway from Courtice Road, are contingent upon the outcome of an expropriation process that is regarded as a commitment made by the Region of Durham to Clarington within the Host Community Agreement, outside of the EA. Refinements to the haul route would be confirmed subsequent to the EA submission, and would be addressed in the permitting documentation reflected in the conditions of approval for design and operation of the Facility.	
9	6.1 (p.21—figure 6.1)	Energy Drive is incorrectly labelled as "Park Drive" in figure 6.1.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The label in Figure 6.1 will be revised to read "Energy Drive"	
10	Figures 6.2–6.7 & 6.9–6.12	These figures need to be revised regarding the labelling of South Service Road and Energy Drive. Figure 6.8 is correctly labelled. Any references to Park Drive within the body of the reports need to be changed to Energy Drive.	Accepted by Reviewer

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Traffic Assessment, Technical Study Report

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 8, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: June 3, 2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: All references to "Park Drive" will be revised to read "Energy Drive". All references to "Energy Drive" will be revised to read "South Service Road".	☒ Yes ☐ No
11	6.2 (p.24)	Statements regarding future improvements at the Holt Road/401 interchange, and potential EFW site access from this point may not be appropriate in terms of the desire to keep increased truck traffic under the 400,000 tpy scenario focussed through the Courtice Road interchange. Also, if access to the EFW site does shift from Osbourne Road to Courtice Road, traffic entering the site via the Holt Road interchange would be directed through the Prestige Employment Node.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: Even if the interchange at Holt Road is developed, truck traffic to the Facility will not enter the site via that interchange. The following sentences will be added to the report: "No truck traffic associated with the Project will travel to and from the site via the potential future Holt Road interchange. Therefore, no truck traffic associated with the Project was modelled to travel to and from the site via the potential future Holt Road interchange."	
12	6.6	Mention of a potential sensitivity analysis here may be warranted in terms of the possibility that diversion goals may not be reached, the 400,000 tpy scenario may be reached before the 2023 horizon year with expected traffic impacts growing beyond current estimates.	Accepted by Reviewer ☒ Yes ☐ No
		Disposition: The report will make a commitment to conduct a new traffic assessment should the 400,000 tpy scenario be reached before 2023.	
13	Appendix B Section 2.1	In relation to the sensitivity analysis discussed above, some comment regarding an interim condition where truck trips are higher due to the possibility that the Regions' may not be able to achieve predicted diversion rates would be appropriate here. Is there any chance that packer trucks rather than trailers would be used to haul garbage to the facility from south Oshawa? Would this have any impact in the conclusions of the traffic assessment?	Accepted by Reviewer ☒ Yes ☐ No Reviewer: Should a revised

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Traffic Assessment, Technical Study Report

Note: These comments are draft and subject to further discussion with the Region's consultants before being finalized.

Rev. May 8, 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Will McCrae, AECOM	Date of comments: June 3, 2009 Disposition: 23/06/2009 Reviewer: 26/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
		Disposition: The report will make a commitment to conduct a new traffic assessment should the 400,000 tpy scenario be reached before 2023. All material coming from Oshawa was assessed using transfer trailers. Collection routing scenarios, for efficient routing of material to the Facility, will be developed should the Project be approved. At that time, a decision will be made whether packer trucks will be used rather than transfer trailers from nearby communities such as Oshawa.	method of haulage be chosen after the project is approved, an addendum to the report should be prepared to identify potential impacts and mitigation.

COMMENT AND DISPOSITION SHEET

DURHAM/YORK RESIDUAL WASTE ENVIRONMENTAL ASSESSMENT
Municipality of Clarington Peer Review

Document Title: Draft Report – Economic Assessment Technical Study Report (No. 1009497)
Note: These comments are draft and subject to further discussion with the Regions consultants before being finalized.

Rev. May 2009

REVIEW DOCUMENT DESCRIPTION			
Reviewer's Name & Organization		Malcolm Martini, SENES Consultants Limited.	Date of comments: 29/05/2009 Martini Review of Disposition 24/06/2009
Comment Number	**Section Number**	**REVIEWER'S COMMENTS/AUTHOR'S DISPOSITION**	**DISPOSITION BY AUTHOR AND REVIEWER**
1	General	The report is difficult to follow. There is no summary project description and details, such as costs and scope of the project are scattered throughout the report making it difficult for the reader to know what the project really is or indeed, even where it is. Disposition: A brief description of the Project (costs, scope etc.) will be added to Section 2 of the Report.	Accepted by Reviewer ☒ Yes ☐ No
2	General	The report adds little to the material provided in the Deloitte report. The same multipliers are employed and, not surprisingly the same results are obtained. Beyond the quantification provided in the Deloitte study, there is no quantification of any impact. Overall, the description of economic impact, the multiplier effect and direct, indirect and induced effects could be better explained. Disposition: Additional analysis and discussion quantifying the economic impacts will be included in the Final version of this report, based on the updated Business Case prepared for the Region of Durham. Additional information regarding methodologies, economic impact, the multiplier effect and direct, indirect and induced effects will be provided.	Accepted by Reviewer ☒ Yes ☐ No
3	General	The multiplier of 10 jobs per million invested for indirect employment, the major employment benefit is ascribed to an Ontario Ministry of Finance figure. I was not able to track down the source for this figure and cannot vouch for its applicability to this situation. It appears that this a general figure. Normally economic impact studies use models based on expected inputs to determine impacts. Such an approach was recently used by OPG in their EA for the expansion of the Darlington Nuclear Power Station.	Accepted by Reviewer ☒ Yes ☐ No

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		Disposition: This multiplier was used in the Deloitte report. Additional analysis regarding the potential for indirect employment will be included in the Final report.	
4	General	The report concludes that there will be net benefits to Durham's tax base. In fact the Deloitte report, while recommending the project largely through an examination of risks notes that York Durham will have to apply the federal gas tax revenues to speed the payback period. These are monies which could have been applied elsewhere. Note that this comment is not to gainsay Deloitte's conclusion that this is a desirable project given the alternatives, but rather to say, that the project probably won't improve the York Durham tax base. Disposition: The Final report will clarify that there will be net benefits to the tax base for the Municipality of Clarington. Additional information regarding the impacts to the tax base in Durham and York Regions will be included.	Accepted by Reviewer ☒ Yes ☐ No Tax (assessment base) is likely to improve for both municipalities. Financial situation i.e. reference to gas tax and debentures should be eliminated from this report. It's not a financial review or report..
5	General	There is very little said about the impact on Clarington except to say that the presence of the facility will increase the tax base. In fact there are more benefits to Clarington and although this study focuses on the two regions, quite a few things have been negotiated and have yet to be ratified by the Regions. In some cases, these may be costs to the regions; however, it would be appropriate to have a separate section entitled effects on Clarington. Disposition: At the time the Draft Economic Assessment Report was prepared, information regarding the results of negotiations between Durham Region and the Municipality of Clarington was only preliminary. The Final Report will reflect the outcome of the negotiations as agreed to by Durham and Clarington Councils. Overall, the report will be restructured to discuss the economic effects within Clarington and the Region as a whole.	Accepted by Reviewer ☒ Yes ☐ No
6	General	In summary, I expect that the basic conclusion of the report that economic benefits are positive is most likely correct. Employment impact levels may well be high but it is difficult to say given the lack of a rigorous methodology. Disposition: Further rigor will be applied to finalize the determination of potential effects on employment in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
7	Glossary	One could also include a modified definition of an economic impact study. "An economic impact study is the identification of economic activity resulting from a project. Economic activity (for this project) could be defined separately as, employment (direct, indirect and induced – the last of which is not defined in the glossary though later defined and quantified), wages and salaries, the effects on the municipal finances, effects on existing business and new business opportunities. These are mostly covered in the text but need to be brought forward No definition of an economic impact study is supplied in the glossary Although it is usual for economic studies to include financial aspects such as the tax base and revenues, strictly speaking, that aspect should not be included unless one is prepared to re-analyse the Deloitte report. It is legitimate to comment on whether new industries might be attracted as a result of the project thereby expanding the tax base.	Accepted by Reviewer ☒ Yes ☐ No

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		Disposition: Additional definitions will be included as suggested. Additional text will be included to supplement the discussion regarding the potential for new industries to be attracted to the CEBP as a result of the project, thus expanding the tax base.	
8	1.1	The purpose of the undertaking is not the outcome of the EA Study but rather the project itself. Disposition The purpose of the undertaking is as described in the approved EA Terms of Reference and is "what the outcome of the EA Study (the Undertaking) is intended to do". The 'Undertaking' is the Project itself.	Accepted by Reviewer ☒ Yes ☐ No
9	Page 2	New section needed here to describe the project that is being evaluated. This should include the key project components, specifically, the EFW facility, its capacity and output, (metals, power, district heating potential etc). It should also include elements of the commitments for Clarington (land transfers etc.) An implementation schedule should be included and a map should show where the site is. Disposition: A subsection will be added to Section 2 of the Final Report that will describe the Project, key components and aspects of the project as it pertains to the economic assessment and an implementation schedule and map. Information will also be included in the Final Report regarding the elements of the agreement between Durham and Clarington, as approved by both Councils.	Accepted by Reviewer ☒ Yes ☐ No **Provide Map**
10	1.2	Economic related impacts should be defined…it is an unusual phrase. See glossary Disposition: Economic related impacts were referring to the potential effects considering the criteria and indicators outlined in Section 2.2.	Accepted by Reviewer ☒ Yes ☐ No
11	2.1	There is no map showing where the site is or of the Local study area (LESA). Disposition: A map indicating the location of the site and the Local Economic Study Area will be included in the Final Report.	Accepted by Reviewer ☒ Yes ☐ **No** **If map provided**
12	2.2	Normally the analysis would include job losses from the existing method. On the assumption that the current method is not an alternative, this is not necessary. Disposition: Normally the analysis would include job losses however, as the development of this Project would not result in any displacement of businesses or other commercial activities, job losses were not addressed.	Accepted by Reviewer ☒ Yes ☐ No

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13	2.4	The major impact of the project is in the creation of indirect employment. There are two problems with the material as presented: a. The methodology for determining the indirect and induced multiplier was not provided. There is merely a reference to the Business Case undertaken by Deloitte and Touche. Reference to Deloitte's work only mentions an Ontario Ministry of Finance Investment multiplier. There is no explanation of the relevance of this multiplier to this project, how this multiplier was developed or the limitations and caveats that should be associated with its use. For example, is this a provincial multiplier or a regional one? What size of an economy is required to produce a multiplier where 10 jobs would be created for a $1 million investment? What industry or sets of industry does this apply to? It should be for an industry similar to the project. None of this is explained in the Report so the validity of the Report's findings are not transparent and traceable. b. The statement "for every $1 million in capital invest(ed) locally, 10 indirect jobs are anticipated to be created" may not be correct. Usually the multiplier relates to all jobs created including construction. While the report indicates that approximately half of the indirect jobs can be sourced from within the region, there is no back-up for this statement. Disposition: Additional information will be provided in regards to the methodology used to determine indirect employment figures in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
14	2.5	The assumption section could fit nicely into the project description…see comment 9. Disposition: Additional information, including the information provided in Section 2.5 will be provided as part of the project description in Section 2 in order that the reader will have a good understanding of the scope and nature of the Project.	Accepted by Reviewer ☒ Yes ☐ No
15	3.1	Table 3.1 describes the employment in York Durham. These figures are at a highly aggregated level and provide little to the analysis. They do not provide sufficient evidence to make the case that 50% of the indirect jobs could be sourced in York-Durham. It is likely that any new project in York Durham will draw upon the growing unemployed labour force occasioned by the current recession generally and the decline in the automotive sector specifically. It would be helpful to have some current unemployment levels and rates. Disposition: Additional information regarding current unemployment rates in Durham/York and the availability of applicable trades in the local labour force, will be included in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No No new data is provided as of yet.
16	3.3	The businesses in the LESA should be identified and their products and employment defined. A map would help (see comment 11).	Accepted by Reviewer

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		Disposition: Additional information will be provided regarding the businesses located within the LESA in the Final Report, including a map indicating the LESA and the location of these businesses.	☒ Yes ☐ No
17	4.1.1.1	Section 4.1.1.1 provides an overview of employment during the Construction period. While peak labour demands are identified in the Report, the important figure is the total identified as in the total number of person years of construction employment by year for the duration of the construction period. Disposition: Additional information regarding the total number of person years of construction employment by year for the duration of the construction period will be provided in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
18	4.1.1.1	There should be a summary table which would show by year for each of the three phases, construction, operation and decommissioning, estimates of: a) employment, b) capital expenditures. This table can then be further developed to show direct, indirect and induced employment. Disposition: Summary tables as appropriate will be included in the Final Report. Note however, that at this time determination of employment during the decommissioning period can only be generally inferred.	Accepted by Reviewer ☒ Yes ☐ No
19	4.1.1.1	The analysis is difficult to follow. For example: a) There is no total construction cost figure given. The summary says that "up to half of the total construction cost of the facility or up to of $118 million will be spent on locally/regionally sourced goods and services." That suggests a cost of $236 million. That figure does not appear until late in the report and then as a footnote. The Ontario government reference suggests 10 jobs annually per million invested. At the very least the source of the figure should be identified and it's logic explained. That is, a justification for the application of this figure is needed. Similarly a justification saying that half of this expenditure ($100 million) can be sourced locally is required. There needs to be some evidence of what the products demanded might be to ensure that these jobs which could be generated anywhere in Ontario or indeed Canada can actually be created in the RESA. The Deloitte report from which these figures were secured provides no justification for these figures. b) Note that $100 million is over the construction period. The report says that this would generate 1000 jobs annually. Should not this figure be 1000/2.5 (30 months) or 400 jobs annually? This conclusion is consistent with the Business case study which states that "It is estimated that the $200 million capital investment would create approximately 1,000 direct and indirect jobs during construction..." Disposition: Clarification regarding construction costs and indirect employment figures will be provided in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No

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20	4.1.1.1	The estimate of induced jobs based on construction labour force expenditure seems reasonable. It ignores the inducements at the indirect level although it defines induces as including indirect employment. Note, increasingly, economists (see also the socio-economic study for Darlington II expansion) are ignoring induced impact. See also comment on Section 2.2 on the impact of employment associated with landfill – on site, transportation to the site etc. Disposition: The Draft Report only identified induced employment as related to the labour force directly employed during construction. Estimates regarding induced employment as related to the indirect employees that could result from use of local services during the construction period will also be included in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
21	4.1.1.2	The Report states that "Local hiring will be maximized during the construction period providing work for existing tradespersons and labourers in the region". It would be useful if the Report would identify "how" this is to be maximized. Disposition: The proposal by Covanta states that local employment during construction will be maximized. Details regarding hiring practices are not available at this time.	Accepted by Reviewer ☒ Yes ☐ No
22	4.1.1.2	It appears that the report uses the same multiplier for capital investment as for local sourcing. This may not be the case and the use of that figure should be justified. Disposition: The Final Report will provide justification for the multiplier used for indirect employment during the operational period.	Accepted by Reviewer ☒ Yes ☐ No
23	4.1.1.2	A summary table of employment and investment effects is required. It appears that the writers are saying that the project will generate in the RESA: a) During Construction 1. An average of direct 133 jobs at peak per year, say 300 to 400 person years of work 2. Direct employment of 400 per year (see comment 11c) for a total of 1000 person years 3. Induced employment (but see comment 12) of 60 to 80 person years. (300 to 400)/5. 4. Total employment during construction would therefore =1500 person years, or 600 per year. b) During Operations 1. Direct – 33 per year 2. Indirect – 100-114 (based on 10 to 14 million spent locally) 3. Induced – 16 4. Total 149- 163 annually. c) Closure…nothing estimated; that is reasonable d) The above figures as modified seem reasonable subject to the recalculations made for indirect construction employment and a review of the Deloitte work. Disposition: Summary tables as appropriate, including the direct, indirect and induced employment figures for the construction and operational periods will be included in the Final Report. The figures provided will be adjusted as necessary pending review of the indirect multipliers applied in the construction and operational periods.	Accepted by Reviewer ☒ Yes ☐ No

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24	4.2	The figures for wages should be included in the above table to ensure consistency and as an internal check to avoid double counting. Disposition: As the information regarding salaries, wages and benefits pertains to only the direct employees for the Facility, they will continue to be presented separately from the summary table.	Accepted by Reviewer ☒ Yes ☐ No
25	4.3	The possibility of a district heating facility is mentioned for the first time on page 13. Will there be such a facility. Are the costs for it included? What financial assumptions are made? Disposition: The potential for district heating and cooling will be included in the summary description of the project in Section 2. Provisions for a portion of the system are included in the Facility design and capital pricing. At this time as decision to implement District Heating has not yet been made and the full costs of the district heating system have not been developed.	Accepted by Reviewer ☒ Yes ☐ No
26	4.3	There is nothing in the analysis to suggest any change in property values – up or down. The brief mention of lack of deposition on crops begs the question of any other environmental effects. At the very least the report should say that no environmental effects were identified in the site Specific Risk Assessment Technical study report…if that indeed is the case. Alternatively reference should be made to section 4.8 which generally addresses these issues. Also see comment 30. Disposition: A discussion regarding the potential for change in property values will be included in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
27	4.4	While it is logical to say that an improvement in the tax base is likely the report provides no quantification. Note that the Deloitte report indicates that the Region will have to tap into the federal gas tax subsidy. That suggests that the revenue base will be weakened. This reviewer thinks that is beyond the scope of the economic impact study to review the Deloitte report and that there is no need to say anything more than that it is likely (or not) that new industries may be attracted to the area strengthening the tax base. Disposition: As noted in the comment above, it is logical, based on the investment in infrastructure associated with the CEBP that new industries may be attracted to the area thus strengthening the local and regional tax base. As noted, it is beyond the scope of this study to review the Deloitte report or to predict/quantify the level of improvement.	Accepted by Reviewer ☒ Yes ☐ No
28	4.4	The report notes that there will be an improvement to the tax base of Clarington. There are other things that Clarington will get and these should be mentioned. It is legitimate to define the benefits to Clarington as a subset of the economic study even though in some cases, e.g. the grant in lieu of taxes may in fact be a cost to the region.	Accepted by Reviewer

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		Disposition: The Final report will clarify that there will be net benefits to the tax base for the Municipality of Clarington. At the time the Draft Economic Assessment Report was prepared, information regarding the results of negotiations between Durham Region and the Municipality of Clarington was only preliminary. The Final Report will reflect the outcome of the negotiations as agreed to by Durham and Clarington Councils. Overall, the report will be restructured to discuss the economic effects within Clarington and the Region as a whole.	☒ Yes ☐ No
29	4.6	The conclusion that there will be minimal effect on the demand for municipal services seems reasonable, although the opening sentence of the section "The most significant portion of municipal servicing costs…is the requirement to provide services for increased population growth in the community from the employees working on the project" prepares the reader for a more dire conclusion. In that regard it would have been helpful if an estimate of the increased population at each phase were provided and a comparison of the growth that has been planned for and that has occurred be given. This along with the likelihood that workers would come from many communities in the region would better justify the conclusion. The conclusion would be further reinforced by the likely slower growth rates as a result of the recession. Disposition: Further rationale regarding the conclusion that there will be minimal effect on the demand for municipal services will be included in the Final Report.	Accepted by Reviewer ☒ Yes ☐ No
30	4.8	These conclusions are based on other sections of the EA and have not been reviewed here. If the other reviewers validate these sections, the conclusions of this section are reasonable. Disposition: No response required.	Accepted by Reviewer ☒ Yes ☐ No
31	General	The assessment considers only 140,000 tpy. However, the report indicates that up to 400,000 tpy may be processed. Disposition: The Final Report will include discussion regarding the potential economic effects of the 400,000 tpy expansion scenario.	Accepted by Reviewer ☒ Yes ☐ No

Note: The disposition is acceptable provided the consultants revise the report based on the comments, provide appropriate maps/ data as required to clarify the issues raised in the original peer review.