



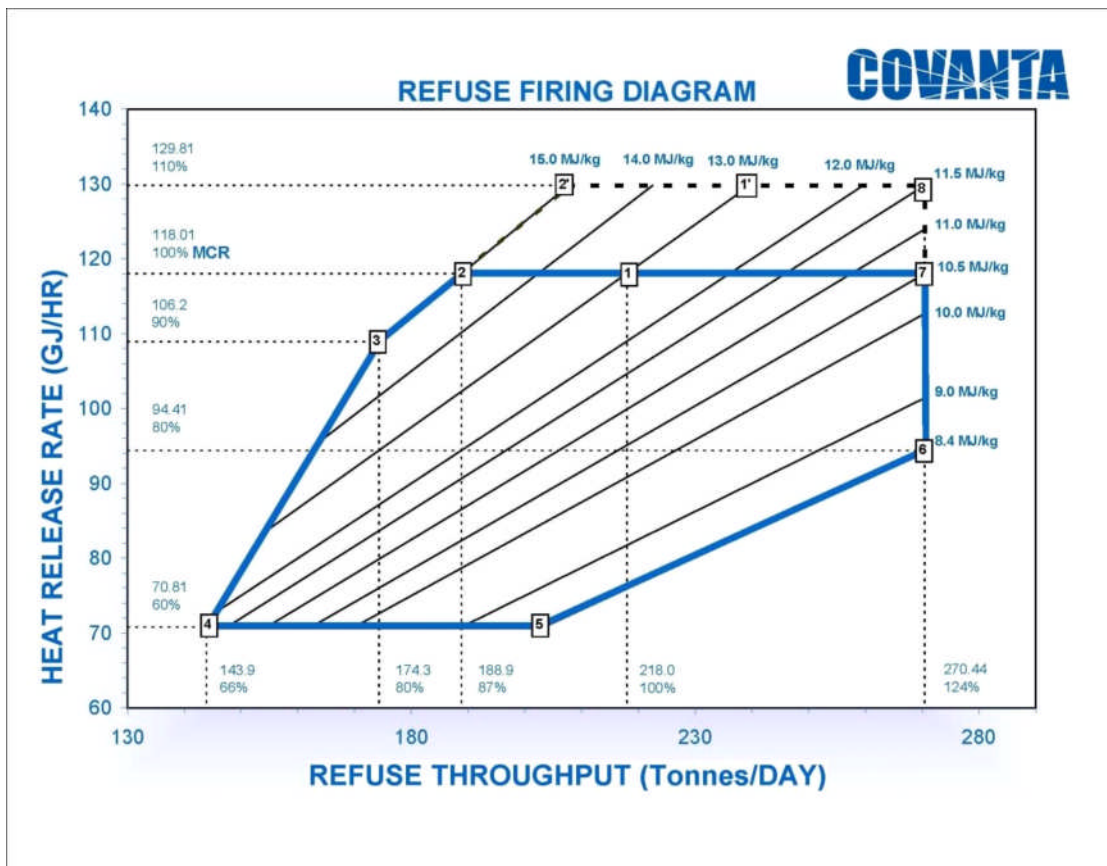
APPENDIX A

Maximum Continuous Rating (MCR)



Maximum Continuous Rating (MCR)

The grate is designed for a specific heat input and mass loading of refuse. The design heat input of a thermal treatment unit is the product of a specific flow of refuse with a specific energy content or heating value. These conditions set the Maximum Continuous Rating of a unit. The Facility's thermal treatment units are designed to process a nominal 218 tonnes/day with a nominal HHV of 13MJ/kg which amounts to a total heat release of approximately 118 GJ/hr. Since the refuse will have continuously varying characteristics, the grate's control system adjusts throughput to maintain the heat release necessary to attain a target steam production rate. The mass and heat input range of the grate is represented in the Solid Waste Refuse Firing Diagram below. The thermal treatment unit is designed for solid waste with higher heating values ranging from 8.4 MJ/kg to 15 MJ/kg as represented in the firing diagram. The "envelope" (Area 4-5-6-8-2'-3-4) is the rated continuous operating range of a thermal treatment unit. 100% of the MCR heat input is represented by any operating condition with heat input of 118 GJ/hr (e.g. points 2, 1 and 7); 110% of the MCR heat input is represented by any operating condition with heat input of 130 GJ/hr (e.g. points 2', 1' and 8); and 60% of the MCR heat input is represented by any operating condition with heat input of 71 GJ/hr (e.g. points 4 and 5).





APPENDIX B

Environmental Assessment – Notice of Approval

ENVIRONMENTAL ASSESSMENT ACT

SECTION 9

NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING

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

Proponent: The Regional Municipalities of Durham and York

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

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

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

REASONS

My reasons for giving approval are:

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

CONDITIONS

The approval is subject to the following conditions:

1. **Definitions**

For the purposes of these conditions:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2. General Requirements

- 2.1 The proponent shall comply with the provisions in the environmental assessment which are hereby incorporated in this Notice of Approval by reference except as provided in these conditions and as provided in any other approval or permit that may be issued for the site or the undertaking.

- 2.2 These conditions do not prevent more restrictive conditions being imposed under other statutes.
- 2.3 A statement must accompany the submission of any documents, reporting requirements or written notices required by this Notice of Approval to be submitted to the Director or Regional Director identifying which conditions the submission is intended to address in this Notice of Approval.

3. Public Record

- 3.1 Where a document, plan or report is required to be submitted to the ministry, the proponent shall provide two copies of the final document, plan or report to the Director: a copy for filing in the specific public record file maintained for the undertaking and a copy for staff use.
- 3.2 The proponent shall provide additional copies of the documents required for the public record file to the following for access by the public:
 - a) Regional Director;
 - b) District Manager;
 - c) Clerks of the Regional Municipality of Durham, the Regional Municipality of York, and the Municipality of Clarington; and,
 - d) Advisory Committee (as required in Condition 8 of this Notice of Approval).
- 3.3 The EAAB file number EA-08-02 shall be quoted on all documents submitted by the proponent pursuant to this Condition.

4. Compliance Monitoring Program

- 4.1 The proponent shall prepare and submit to the Director a Compliance Monitoring Program outlining how it will comply with conditions in the Notice of Approval and other commitments made in the environmental assessment.
- 4.2 A statement shall accompany the submission of the Compliance Monitoring Program indicating that the submission is intended to fulfil Condition 4 of this Notice of Approval.
- 4.3 The Compliance Monitoring Program shall be submitted within one year from the date of approval, or a minimum of 60 days prior to the start of construction, whichever is earlier.
- 4.4 The Compliance Monitoring Program shall describe how the proponent will monitor its fulfilment of the provisions of the environmental assessment pertaining to mitigation measures, public consultation, and additional studies and work to be carried out; the fulfilment of all other commitments made by the proponent during the environmental assessment process; and the conditions included in this Notice of Approval.
- 4.5 The Compliance Monitoring Program shall contain an implementation schedule.

- 4.6 The Director may require amendments to the Compliance Monitoring Program, including the implementation schedule. If any amendments are required by the Director, the Director will notify the proponent of the required amendments in writing.
- 4.7 The proponent shall implement the Compliance Monitoring Program, as it may be amended by the Director.
- 4.8 The proponent shall make the documentation pertaining to the Compliance Monitoring Program available to the ministry or its designate in a timely manner when requested to do so by the ministry.

5. Compliance Reporting

- 5.1 The proponent shall prepare an annual Compliance Report which describes its compliance with the conditions of approval set out in this Notice of Approval and which describes the results of the proponent's environmental assessment Compliance Monitoring Program required by Condition 4.
- 5.2 The annual Compliance Report shall be submitted to the Director within one year from the date of approval, with the first report being due in 2011, and shall cover all activities of the previous 12 month period.
- 5.3 Subsequent compliance reports shall be submitted to the Director on or before the anniversary of the date of approval each year thereafter. Each Compliance Report shall cover all activities of the previous 12 month period.
- 5.4 The proponent shall submit annual Compliance Reports until all conditions in this Notice of Approval and the commitments in the environmental assessment are satisfied.
- 5.5 Once all conditions in this Notice of Approval have been satisfied, or have been incorporated into any other ministry approval, the proponent shall indicate in its annual Compliance Report that the Compliance Report is its final Compliance Report and that all conditions in this Notice of Approval have been satisfied.
- 5.6 The proponent shall retain either on site or in another location approved by the Director, a copy of each of the annual Compliance Reports and any associated documentation of compliance monitoring activities.
- 5.7 The proponent shall make the Compliance Reports and associated documentation available to the ministry or its designate in a timely manner when requested to do so by the ministry.

6. Complaint Protocol

- 6.1 The proponent shall prepare and implement a Complaint Protocol setting out how it will deal with and respond to inquiries and complaints received during the design, construction and operation of the undertaking.
- 6.2 The Complaint Protocol shall be provided to the advisory committee for review prior to submission to the Director.

- 6.3 The proponent shall submit the Complaint Protocol to the Director within one year from the date of approval or a minimum of 60 days prior to the start of construction, whichever is earlier.
- 6.4 The Director may require the proponent to amend the Complaint Protocol at any time. Should an amendment be required, the Director will notify the proponent in writing of the required amendment and date by which the amendment must be completed.
- 6.5 The proponent shall submit the amended Complaint Protocol to the Director within the time period specified by the Director in the notice.

7. Community Involvement

- 7.1 The proponent shall prepare and implement a Community Communications Plan. The plan shall be prepared, in consultation with the EAAB and to the satisfaction of the Director.
- 7.2 The proponent shall finalize and submit the Community Communications Plan to the Director prior to the initial receipt of non-hazardous municipal solid waste at the site.
- 7.3 The Community Communications Plan shall include at a minimum details on:
 - a) How the proponent plans to disseminate information to interested members of the public and any Aboriginal communities;
 - b) How interested members of the public and any Aboriginal communities will be notified and kept informed about site operations; and,
 - c) The procedures for keeping interested members of the public and Aboriginal communities informed about information on documents related to the undertaking, and when and how the information will be made available.
- 7.4 The proponent shall give notice of and provide information about the undertaking to interested members of the public and Aboriginal communities through an internet web site and by other means. Such information shall include:
 - a) Activities that are part of the undertaking, including monitoring activities;
 - b) Reports and records related to the undertaking that are required to be submitted under this Notice of Approval or under any other ministry approvals that apply to the undertaking; and,
 - c) Information on the Complaint Protocol required by Condition 6 of this Notice of Approval.
- 7.5 The proponent shall hold public meetings to discuss the design, construction and operation of the undertaking, including, but not limited to:
 - a) At least one meeting prior to the start of construction;
 - b) At least one meeting prior to the receipt of non-hazardous municipal solid waste on site; and,
 - c) At least one meeting a minimum of six months but not later than 12 months after the initial receipt of non-hazardous municipal solid waste on the site.

- 7.6 The proponent shall provide notice of the public meetings a minimum of 15 days prior to the meeting.
- 7.7 The proponent shall give the Director written notice of the time, date and location of each of the required community meetings a minimum of 15 days prior to the meeting.

8. Advisory Committee

- 8.1 The proponent shall establish an advisory committee to ensure that concerns about the design, construction and operation of the undertaking are considered and mitigation measures are implemented where appropriate.
- 8.2 The proponent shall provide administrative support for the advisory committee including, at a minimum:
 - a) Providing a meeting space for advisory committee meetings;
 - b) Recording and distributing minutes of each meeting;
 - c) Preparing and distributing meeting notices; and,
 - d) Preparing an annual report about the advisory committee's activities to be submitted as part of the Compliance Reports required by Condition 5 of this Notice of Approval.
- 8.3 The proponent shall invite one representative from each of the following to participate on the advisory committee:
 - a) Each of the lower tier municipalities in the Regional Municipality of Durham; and,
 - b) Each of the lower tier municipalities in the Regional Municipality of York.
- 8.4 The proponent shall invite one representative from Central Lake Ontario Conservation Authority, and any other local conservation authorities that may have an interest in the undertaking to participate on the advisory committee.
- 8.5 The proponent shall invite one representative from each of the following local community groups to participate on the advisory committee:
 - a) DurhamCLEAR;
 - b) Durham Environmental Watch; and,
 - c) Zero Waste 4 Zero Burning.
- 8.6 The proponent may also invite other stakeholders to participate in the advisory committee, including, but not limited to, interested members of the public, Aboriginal communities, and other federal or provincial agencies.
- 8.7 A representative from the ministry shall be invited to attend meetings as an observer.
- 8.8 The advisory committee shall be provided with a copy of the documents listed below for information and may review the documents as appropriate and provide comments to the proponent about the documents, including the:

- a) Compliance Monitoring Program required by Condition 4;
- b) Annual Compliance Report required by Condition 5;
- c) Complaint Protocol required by Condition 6;
- d) Community Communications Plan required by Condition 7;
- e) The annual reports required by Condition 10;
- f) Ambient Air Monitoring and Reporting Plan and the results of the ambient air monitoring program required by Condition 11;
- g) Air Emissions Monitoring Plan required by Condition 12;
- h) Written report prepared and signed by the qualified professional required by Condition 16.5;
- i) Spill Contingency and Emergency Response Plan required by Condition 17;
- j) Odour Management and Mitigation Plan and the Odour Management and Mitigation Monitoring Reports required by Condition 18;
- k) Noise Monitoring and Reporting Plan as required by Condition 19;
- l) Groundwater and Surface Water Monitoring Plan, the results of the groundwater and surface water monitoring program, and the annual report on the results of the groundwater and surface water monitoring program required by Condition 20; and,
- m) Notice in writing of the date that municipal solid waste is first received as required by Condition 23.

8.9 The proponent shall hold the first advisory committee meeting within three months of the date of approval. At the first meeting, the advisory committee shall develop a Terms of Reference outlining the governance and function of the advisory committee.

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

- a) Roles and responsibilities of the advisory committee members;
- b) Frequency of meetings;
- c) Member code of conduct;
- d) Protocol for dissemination and review of information including timing; and,
- e) Protocol for dissolution of the advisory committee.

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

9. Consultation With Aboriginal Communities

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

10. Waste Diversion

- 10.1 The proponent shall make a reasonable effort to work cooperatively with all lower tier municipalities to ensure that waste diversion programs, policies and targets set by the Regional Municipalities are being met.
- 10.2 The proponent shall prepare and implement a Waste Diversion Program Monitoring Plan.
- 10.3 The Waste Diversion Program Monitoring Plan shall provide a description of monitoring and reporting which shall at minimum include:
 - a) Results of at source diversion programs and policies to determine the waste diversion rates and practices at both the regional and lower tier municipal level within the Regional Municipalities of Durham and York.
 - b) Progress in the diversion programs, policies, practices and targets described in the environmental assessment, at both the regional and lower tier municipal level within the Regional Municipalities of Durham and York.
 - c) Monitoring results for any additional diversion programs, policies, practices and targets carried out within the Regional Municipalities of Durham and York, which are not described in the environmental assessment.
- 10.4 The proponent shall prepare and submit to the Director and Regional Director, commencing one year after the approval of the undertaking, annual reports detailing the results of the Waste Diversion Program Monitoring Plan.
- 10.5 The proponent shall post the Waste Diversion Program Monitoring Plan and the annual reports required on the proponent's web site for the undertaking.

11. Ambient Air Monitoring and Reporting

- 11.1 The proponent shall prepare, in consultation with the ministry's Central Region Office and to the satisfaction of the Regional Director, an Ambient Air Monitoring and Reporting Plan for the undertaking.
- 11.2 The proponent shall submit the Ambient Air Monitoring and Reporting Plan to the Director and Regional Director a minimum of nine months prior to the start of construction or by such other date as agreed to in writing by the Regional Director.
- 11.3 The proponent shall establish a working group that will provide advice on the development of the Ambient Air Monitoring and Reporting Plan. The Regions will, at a minimum, extend an invitation to Health Canada, the Durham Region Health Department, York Region Public Health Services, one participant from the advisory committee, and any other relevant federal or provincial government agencies including the ministry.
- 11.4 The Ambient Air Monitoring and Reporting Plan shall include at minimum:
 - a) An ambient air monitoring program which includes an appropriate number of sampling locations. Siting of the sampling locations shall be done in accordance with the Ministry of the Environment's Operations Manual for Air Quality Monitoring in Ontario, March 2008, as amended from time to time;

- b) The proposed start date for and frequency of the ambient air monitoring and reporting to be carried out;
 - c) The contaminants that shall be monitored as part of the Ambient Air Monitoring and Reporting Plan; and,
 - d) At least one meeting on an annual basis between the proponent and the Regional Director to discuss the plan, the results of the ambient air monitoring program and any changes that are required to be made to the plan by the Regional Director.
- 11.5 The proponent shall implement the ambient air monitoring program prior to the receipt of non-hazardous municipal solid waste on the site or at such other time that may be determined by the Regional Director and communicated to the proponent in writing and shall continue the monitoring until such time as the Regional Director notifies the proponent in writing that the Ambient Air Monitoring Program is no longer required.
- 11.6 The Regional Director may require changes to be made to the Ambient Air Monitoring and Reporting Plan and the proponents shall implement the plan in accordance with the required changes.
- 11.7 The proponent shall report the results of the ambient air monitoring program to the Regional Director in accordance with the Ambient Air Monitoring and Reporting Plan.
- 11.8 Audits will be conducted by the ministry, as outlined in the Ministry of the Environment's Audit Manual for Air Quality Monitoring in Ontario, March 2008 to confirm that siting and performance criteria outlined in the Operations Manual are met. The proponent shall implement any recommendations set out in the audit report regarding siting of the sampling locations and performance criteria. The proponent shall implement the recommendations in the audit report within three months of the receipt of an audit report from the ministry.
- 11.9 The proponent shall post the Ambient Air Monitoring and Reporting Plan and the results of the ambient air monitoring program on the proponent's web site for the undertaking upon submission of the plan or results of the program to the ministry.

12. Emissions Monitoring

- 12.1 The proponent shall install, operate and maintain air emissions monitoring systems that will record the concentrations of the contaminants arising from the incineration of waste.
- 12.2 The air emissions monitoring systems shall be installed and operational prior to the receipt of non-hazardous municipal solid waste at the site.
- 12.3 The proponent shall prepare and implement an Air Emissions Monitoring Plan. The Plan shall be prepared, in consultation with the ministry and to the satisfaction of the Director.
- 12.4 The Air Emissions Monitoring Plan shall include, at a minimum:
- a) Identification of all sources of air emissions at the site to be monitored;

- b) Identification of which contaminants will be monitored by continuous emissions monitoring and which by stack testing;
 - c) The proposed start date for and frequency of air emissions monitoring;
 - d) The frequency of and format for reporting the results of air emissions monitoring;
 - e) The contaminants that shall be monitored, which shall include at a minimum those contaminants set out in Schedule 1 to this Notice of Approval; and,
 - f) A notification, investigation and reporting protocol to be used in the event that the concentration(s) of one or more of the contaminants released from an emission source that requires approval under Section 9 of the *Environmental Protection Act* exceed the relevant limits.
- 12.5 The proponent shall submit the Air Emissions Monitoring Plan to the Director, a minimum of six months prior to the start of construction or by such other date as agreed to in writing by the Director
- 12.6 The proponent shall implement the Air Emissions Monitoring Plan such that the monitoring commences when the first discharges are emitted from the facility to the air or at such other time as the Director may agree to in writing and shall continue until such time as the Director notifies the proponent in writing that the Air Emissions Monitoring Plan is no longer required.
- 12.7 The proponent shall post the reports of the air emissions monitoring systems on the proponent's web site for the undertaking.
- 12.8 For those contaminants that are monitored on a continuous basis, the proponent shall post on the proponent's website for the undertaking the results of the monitoring for each of those contaminants in real time.

13. Air Emissions Operational Requirements

- 13.1 The proponent is expected to operate the undertaking in accordance with Schedule 1 of this Notice of Approval. If the facility is not operating in accordance with Schedule 1, the operator is required to take steps to bring the facility back within these operational requirements.
- 13.2 Schedule 1 sets out the operational requirements the ministry expects the facility to meet during the normal operating conditions of the facility when operating under a steady state but does not include start up, shut down, or malfunction.
- 13.3 The timing and frequency of monitoring for a contaminant in Schedule 1 shall be as required by the approval granted to the facility under the *Environmental Protection Act*, should approval be granted.

14. Daily Site Inspection

- 14.1 The proponent shall conduct a daily inspection of the site including the non-hazardous municipal solid waste received at the site, each day the undertaking is in operation to confirm that:
- a) The site is secure;

- b) The operation of the undertaking is not causing any nuisance impacts;
 - c) The operation of the undertaking is not causing any adverse effects on the environment;
 - d) The undertaking is being operated in compliance with the conditions in this Notice of Approval and any other ministry approvals issued for the undertaking; and,
 - e) Only non-hazardous waste is being received at the site.
- 14.2 If, as a result of the daily inspection, any deficiencies are noted by the employee in regard to the factors set out in Condition 14.1 above, the deficiency shall be remedied immediately by the proponent. If necessary to remedy the deficiency, the proponent shall cease operations at the site until the deficiency has been remedied.
- 14.3 A record of the daily inspections shall be kept in the daily log book required in Condition 15. The information below must be recorded in the daily log book by the person completing the inspection and includes the following information:
- a) The name and signature of the person that conducted the daily inspection;
 - b) The date and time of the daily inspection;
 - c) A list of any deficiencies discovered during the daily inspection;
 - d) Any recommendations for action; and,
 - e) The date, time and description of actions taken.
- 14.4 The proponent shall retain either on site or in another location approved by the District Manager, a copy of the daily log book and any associated documentation regarding the daily site inspections.

15. Daily Record Keeping

- 15.1 The proponent shall maintain a written daily log which shall include the following information:
- a) Date;
 - b) Types, quantities and source of non-hazardous municipal solid waste received;
 - c) Quantity of unprocessed, processed and residual non-hazardous municipal solid waste on the site;
 - d) Quantities and destination of each type of residual material shipped from the site;
 - e) The record of daily site inspections required to be maintained by Condition 14.3;
 - f) A record of any spills or process upsets at the site, the nature of the spill or process upset and the action taken for the clean up or correction of the spill or process upset, the time and date of the spill or process upset, and for spills, the time that the ministry and other persons were notified of the spill pursuant to the reporting requirements of the *Environmental Protection Act*;

- g) A record of any waste that was refused at the site, including: amounts, reasons for refusal and actions taken; and,
 - h) The name and signature of the person completing the report.
- 15.2 The proponent shall retain, either on site or in another location approved by the District Manager, a copy of the daily log book and any associated documentation.
- 15.3 The proponent shall make the daily log book and any associated documentation available to the ministry or its designate in a timely manner when requested to do so by the ministry.

16. Third Party Audits

- 16.1 The proponent shall retain the services of a Qualified, Independent Professional Engineer to carry out an independent audit of the undertaking.
- 16.2 Within six months from the date of approval or other such date as agreed to in writing by the Regional Director, the proponent shall submit to the Director and the Regional Director, the name of the Qualified, Independent Professional Engineer and the name of the company where he/she is employed.
- 16.3 The proponent shall submit an audit plan to the satisfaction of the Regional Director that sets out the timing of and frequency for the audits, as well as the manner in which the audits are to be carried out.
- 16.4 The audit shall include, at a minimum, the following:
- a) A detailed walkthrough of the entire site;
 - b) A review of all operations used in connection with the undertaking; and,
 - c) A detailed review of all records required to be kept by this Notice of Approval or under any other ministry approvals for the undertaking.
 - d) The proponent shall obtain from the Qualified, Independent Professional Engineer, a written report of the audit prepared and signed by the Qualified, Independent Professional Engineer that summarizes the results of the audit.
- 16.5 The proponent shall submit the written report summarizing the result of the audit to the Regional Director no later than 10 business days following the completion of the audit.
- 16.6 The proponent shall retain either on site or in another location approved by the Regional Director, a copy of the written audit report and any associated documentation.
- 16.7 The proponent shall make the written audit report and any associated documentation available to the ministry or its designate in a timely manner when requested to do so by the ministry.
- 16.8 The proponent shall post the written audit report on the proponent's web site for the undertaking following submission of the report to the ministry.

17. Spill Contingency and Emergency Response Plan

- 17.1 The proponent shall prepare and implement a Spill Contingency and Emergency Response Plan.
- 17.2 The proponent shall submit to the Director, the Spill Contingency and Emergency Response Plan a minimum of 60 days prior to the receipt of non-hazardous municipal solid waste at the site or such other date as agreed to in writing by the Director.
- 17.3 The Spill Contingency and Emergency Response Plan shall include, but is not limited to:
- a) Emergency response procedures, including notification procedures in case of a spill, fires, explosions or other disruptions to the operations of the facility;
 - b) Cell and business phone numbers and work locations for all person(s) responsible for the management of the site;
 - c) Emergency phone numbers for the local ministry office, the ministry's Spills Action Centre, and the local Fire Department;
 - d) Measures to prevent spills, fires and explosions;
 - e) Procedures for use in the event of a fire;
 - f) Details regarding equipment for spill clean-up and all control and safety devices;
 - g) Shut down procedures for all operations associated with the undertaking including alternative waste disposal site locations;
 - h) Maintenance and testing program for spill clean-up equipment and fire fighting equipment;
 - i) Training for site operators and emergency response personnel; and,
 - j) A plan, identifying the location and nature of wastes on site.
- 17.4 The proponent shall provide the Spill Contingency and Emergency Response Plan to the District Manager, the local Municipality of Clarington and the local Municipality of Clarington Fire Department a minimum of 30 days prior to the initial receipt of non-hazardous municipal solid waste at the site or such other date as agreed to in writing by the Director.
- 17.5 The proponent shall take all necessary steps to contain and clean up a spill on the site. A spill or upset shall be reported immediately to the ministry's Spills Action Centre at (416) 325-3000 or 1-800-268-6060.

18. Odour Management and Mitigation

- 18.1 The proponent shall prepare, in consultation with the ministry's Central Region Office and to the satisfaction of the Regional Director, and implement an Odour Management and Mitigation Plan for the undertaking.
- 18.2 The proponent shall submit the Odour Management and Mitigation Plan to the Regional Director a minimum of six months prior to the start of construction or at such other time as agreed to in writing by the Regional Director.

- 18.3 The Odour Management and Mitigation Plan shall include at a minimum:
- a) Standard operating and shut down procedures;
 - b) Maintenance schedules;
 - c) Ongoing monitoring for and reporting of odour;
 - d) Corrective action measures and other best management practices for ongoing odour control and for potential operational malfunctions;
 - e) A schedule for odour testing at sensitive receptors; and,
 - f) A section that specifically addresses odour control measures should operation of the undertaking be disrupted or cease.
- 18.4 The proponent shall prepare and submit the Odour Management and Mitigation Monitoring Reports annually to the Regional Director with the first report submitted beginning six months following the initial receipt of non-hazardous municipal solid waste at the site or such other date as agreed to in writing by the Regional Director.
- 18.5 The Odour Management and Mitigation Monitoring Reports shall be submitted every 12 months from the date of the submission of the first report or until such time as the Regional Director notifies the proponent in writing that the Odour Management and Mitigation Monitoring Reports are no longer required.
- 18.6 The proponent shall post the Odour Management and Mitigation Monitoring Reports on the proponent's web site for the undertaking following submission of the reports to the Regional Director.

19. Noise Monitoring and Reporting

- 19.1 The proponent shall prepare and implement a Noise Monitoring and Reporting Plan for the undertaking.
- 19.2 The proponent shall submit the Noise Monitoring and Reporting Plan to the Director a minimum of 90 days prior to the start of construction or such other date as agreed to in writing by the Director.
- 19.3 The Noise Monitoring and Reporting Plan shall include a protocol to ensure that the noise emissions from the facility comply with the limits set out in the Ministry of the Environment's Publication NPC-205 "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995, as amended from time to time.
- 19.4 The proponent shall post the Noise Monitoring and Reporting Plan and on the proponent's web site for the undertaking following submission of the plan to the Director.

20. Groundwater and Surface Water Monitoring and Reporting

- 20.1 Prior to the start of construction, the proponent shall identify any areas where the undertaking may affect groundwater or surface water. For those areas, the proponent shall prepare and implement, in consultation with the ministry's

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

- 20.2 The proponent shall provide the Groundwater and Surface Water Monitoring Plan to other any government agencies for review and comment, as may be appropriate.
- 20.3 The Groundwater and Surface Water Monitoring Plan shall include at a minimum:
- a) A groundwater and surface water monitoring program;
 - b) The proposed start date and frequency of groundwater and surface water monitoring;
 - c) The contaminants that shall be monitored as part of the groundwater and surface water monitoring program; and,
 - d) At least one meeting each year between the proponent and the Regional Director to discuss the plan, the results of the monitoring program and any changes that are required to be made to plan by the Regional Director.
- 20.4 The proponent shall submit the Groundwater and Surface Water Monitoring Plan to the Regional Director a minimum of 90 days prior to the start of construction or such other date as agreed to in writing by the Regional Director.
- 20.5 The Regional Director may require changes to be made to the Groundwater and Surface Water Monitoring Plan and the proponent shall implement the plan in accordance with the required changes.
- 20.6 The groundwater and surface water monitoring program shall commence prior to the receipt of non-hazardous municipal solid waste at the site or such other time as agreed to in writing by the Regional Director, and shall continue until such time as the Regional Director notifies the proponent in writing that the groundwater and surface water monitoring program is no longer required.
- 20.7 Thirty days after waste is first received on site, the proponent shall prepare and submit to the Director and Regional Director, a report containing all of the results of the groundwater and surface water monitoring program.
- 20.8 The proponent shall prepare and submit to the Director and Regional Director, an annual report containing the results of the groundwater and surface water monitoring program. The first report shall be submitted 12 months from the start of the monitoring program and every year thereafter.
- 20.9 The proponent shall prepare and submit to the Director and Regional Director, a report containing the results of the groundwater and surface water monitoring program within 30 days of any of the following events:
- a) A spill occurs on site;
 - b) A fire or explosion occurs on site;
 - c) A process upset; or
 - d) Any disruption to normal operations that may directly or indirectly have an impact on groundwater or surface water.

20.10 The proponent shall post the Groundwater and Surface Water Monitoring Plan and all reports required by this condition on the proponent's web site for the undertaking following submission of the plan and reports to the ministry.

21. Types of Waste and Service Area

- 21.1 Only non-hazardous municipal solid waste from municipal collection within the jurisdictional boundaries of the Regional Municipality of Durham and the Regional Municipality of York may be accepted at the site.
- 21.2 Materials which have been source separated for the purposes of diversion shall not be accepted at this site. This prohibition does not apply to the non-recyclable residual waste remaining after the separation of the recyclable materials from the non-recyclable materials at a materials recycling facility or other processing facility.
- 21.3 The proponent shall ensure that all incoming waste is inspected prior to being accepted at the site to ensure that only non-hazardous municipal solid waste is being accepted.
- 21.4 If any materials other than non-hazardous municipal solid waste are found during inspection or operation, the proponent shall ensure that management and disposal of the material is consistent with ministry guidelines and legislation.

22. Amount of Waste

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

23. Notice of the Date Waste First Received

- 23.1 Within 15 days of the receipt of the first shipment of waste on site, the proponent shall give the Director and Regional Director written notice that the waste has been received.

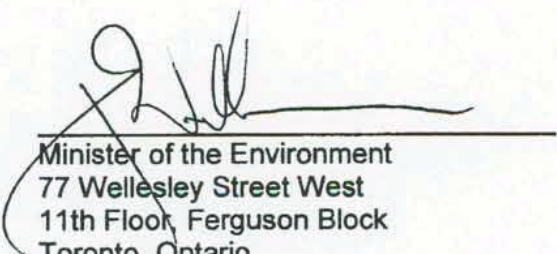
24. Construction and Operation Contracts

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

25. Amending procedures

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

Dated the 21st day of October 2010 at TORONTO.



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

Approved by O.C. No. 1514/2010

Date O.C. Approved NOVEMBER 3, 2010

Schedule 1 –Air Emissions Operational Requirements

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

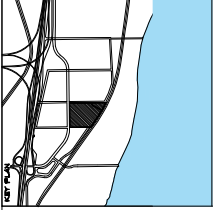
Notes:

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



APPENDIX C

Preliminary Architectural Drawings



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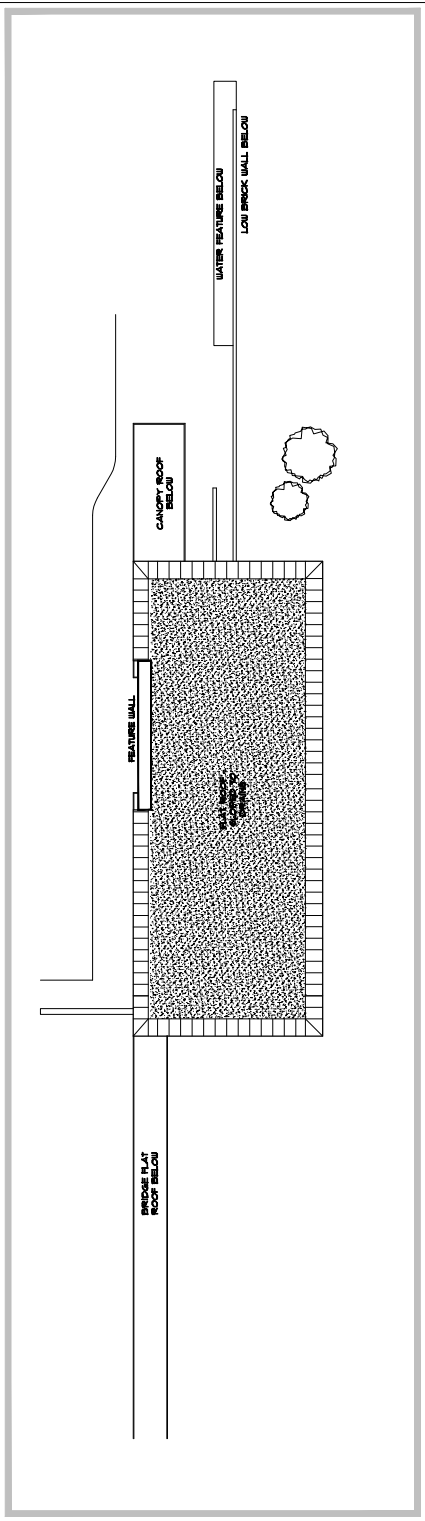
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 WASTE MANAGEMENT

York Region
 WASTE MANAGEMENT

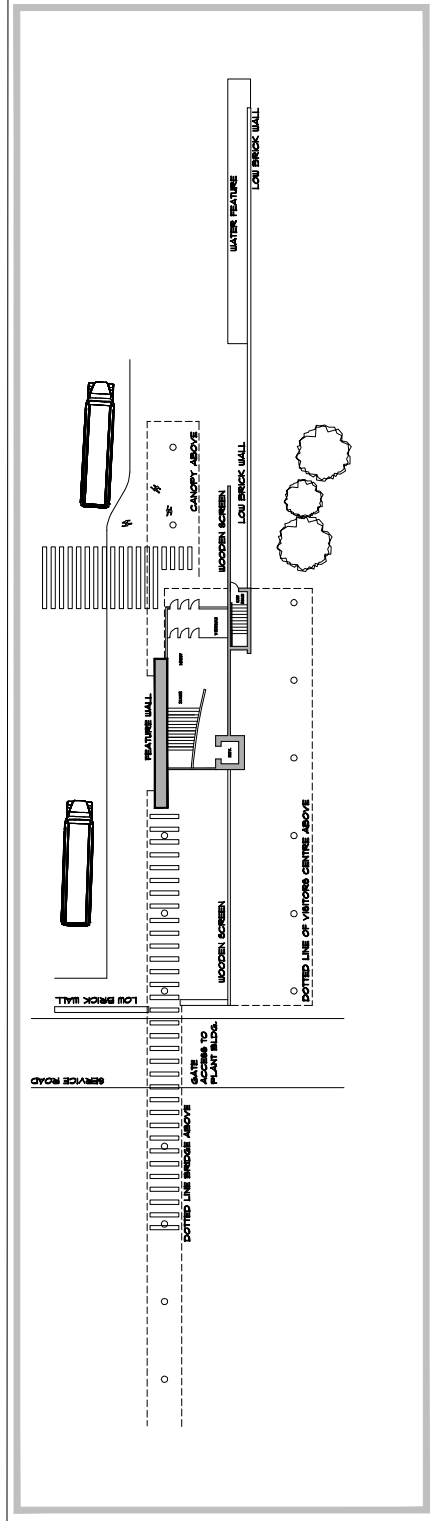
BURNHAM - YORK ENERGY FROM WASTE FACILITY FACILITY CONCEPT 2 (R1)

VISITORS CENTRE PLANS

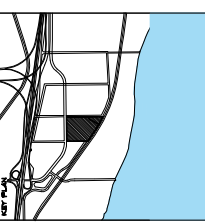
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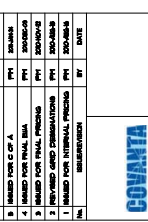
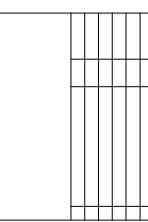
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1 VISITORS CENTRE - ENTRANCE PLAN
 10/03/18



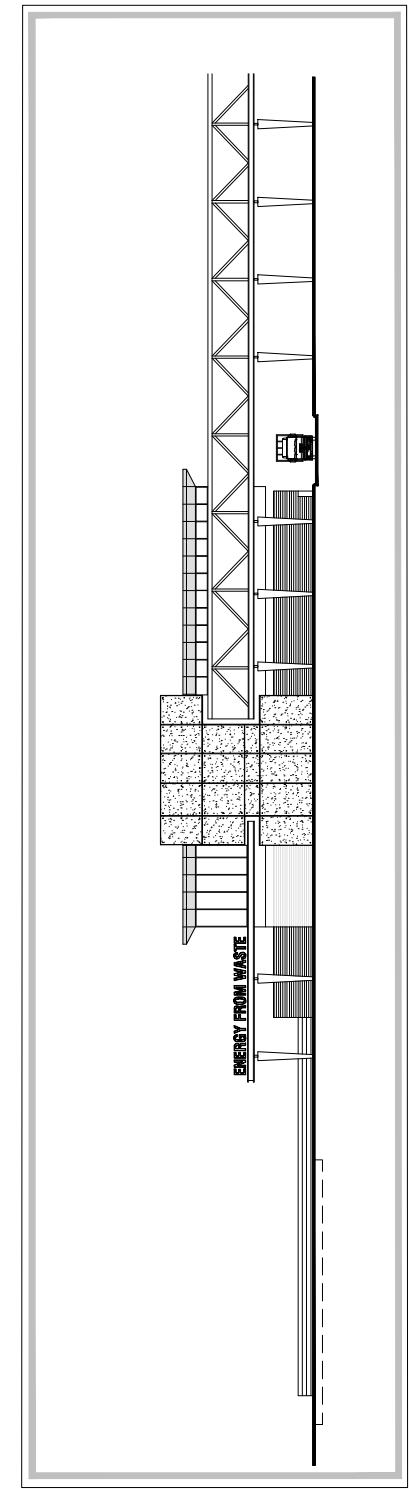
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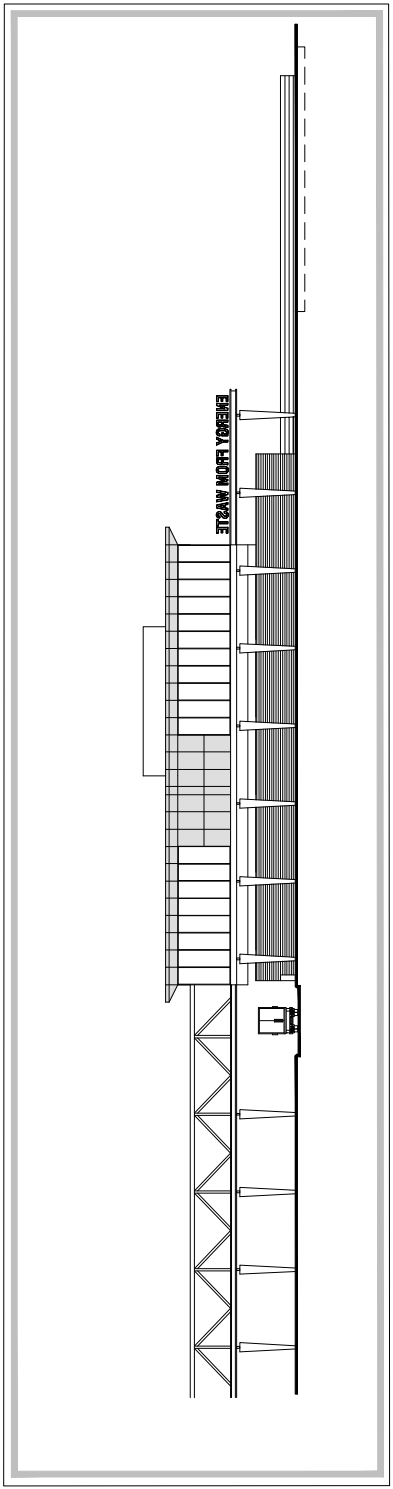
DURHAM - YORK ENERGY FROM WASTE FACILITY CONCEPT 2 (R1)

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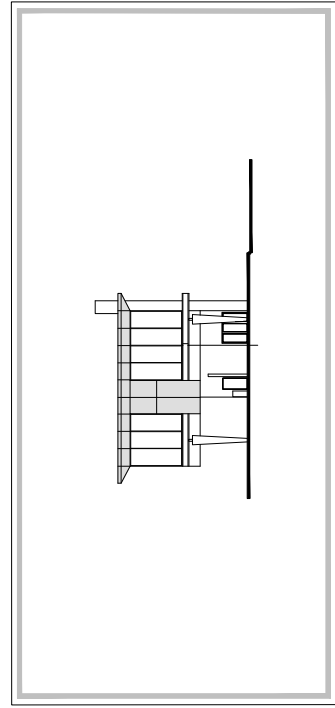
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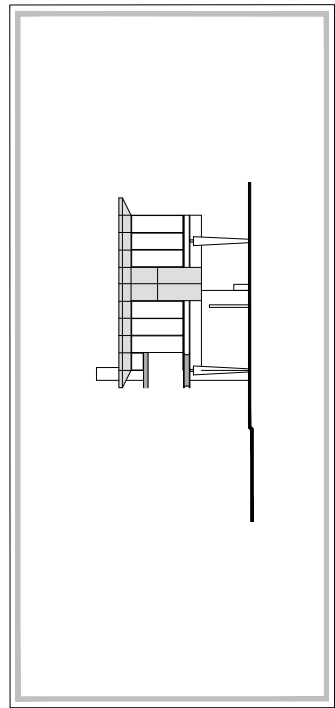
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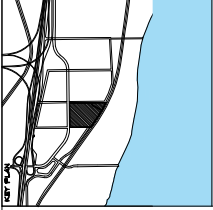
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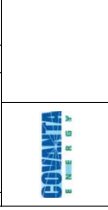
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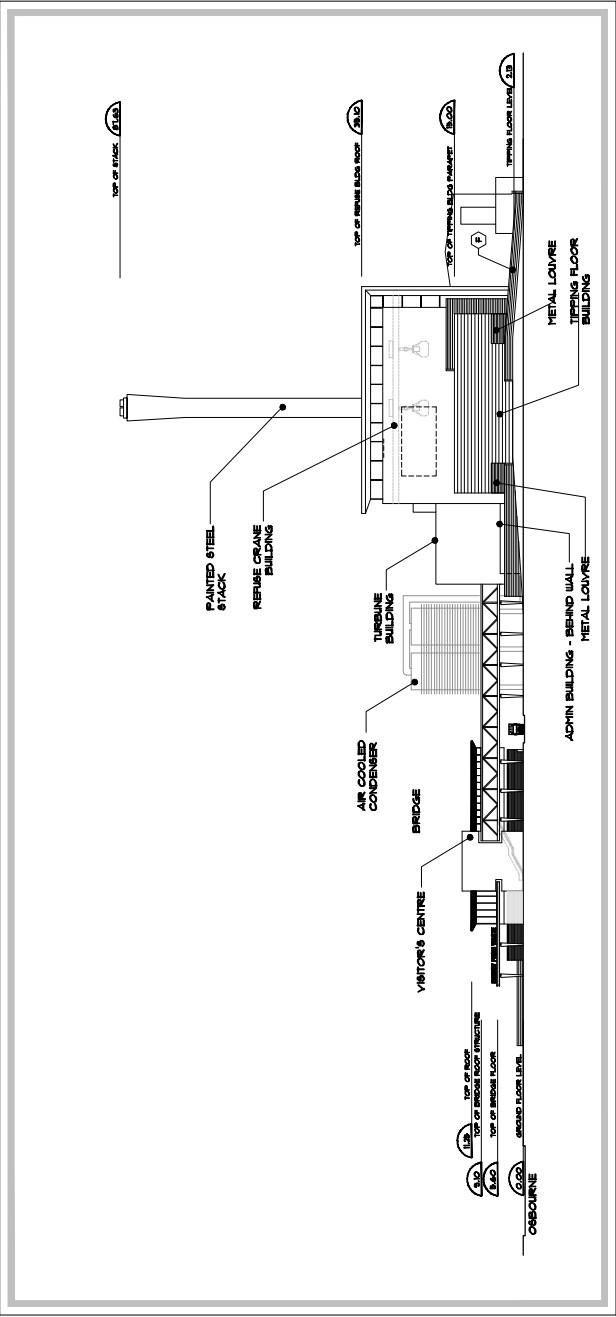
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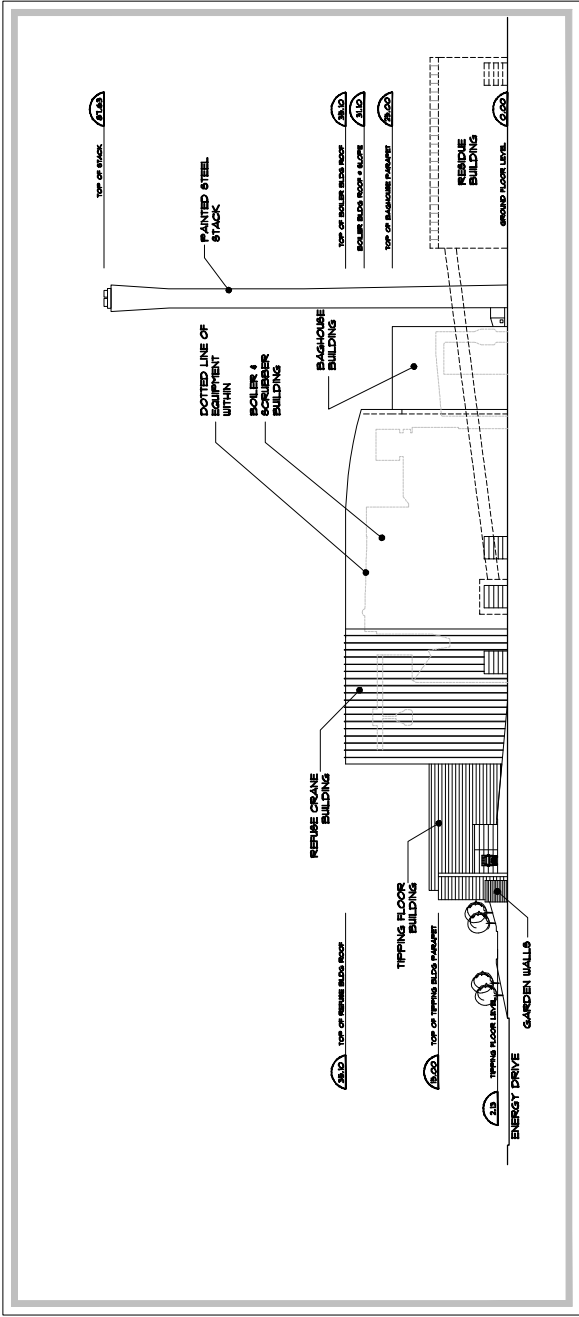
COVANTA
 YORK REGION
DURHAM - YORK ENERGY FROM WASTE FACILITY
 CONCEPT 2 (R1)

NORTH & WEST ELEVATION

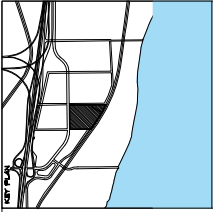
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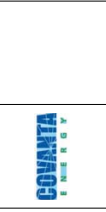
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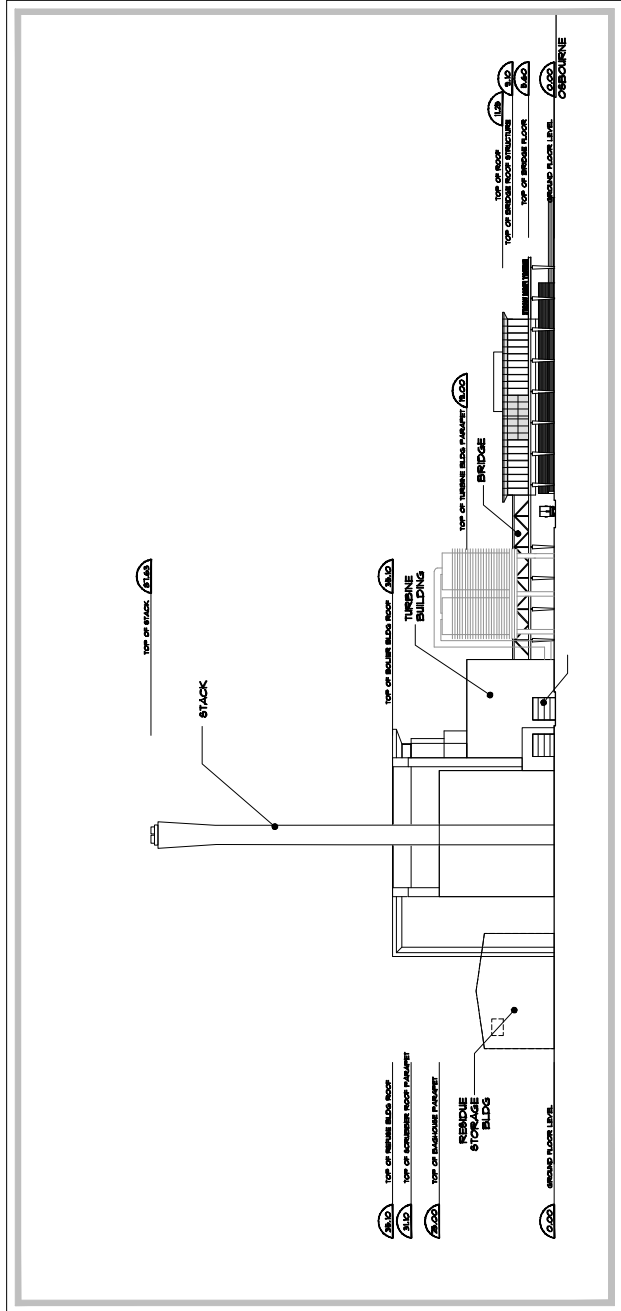
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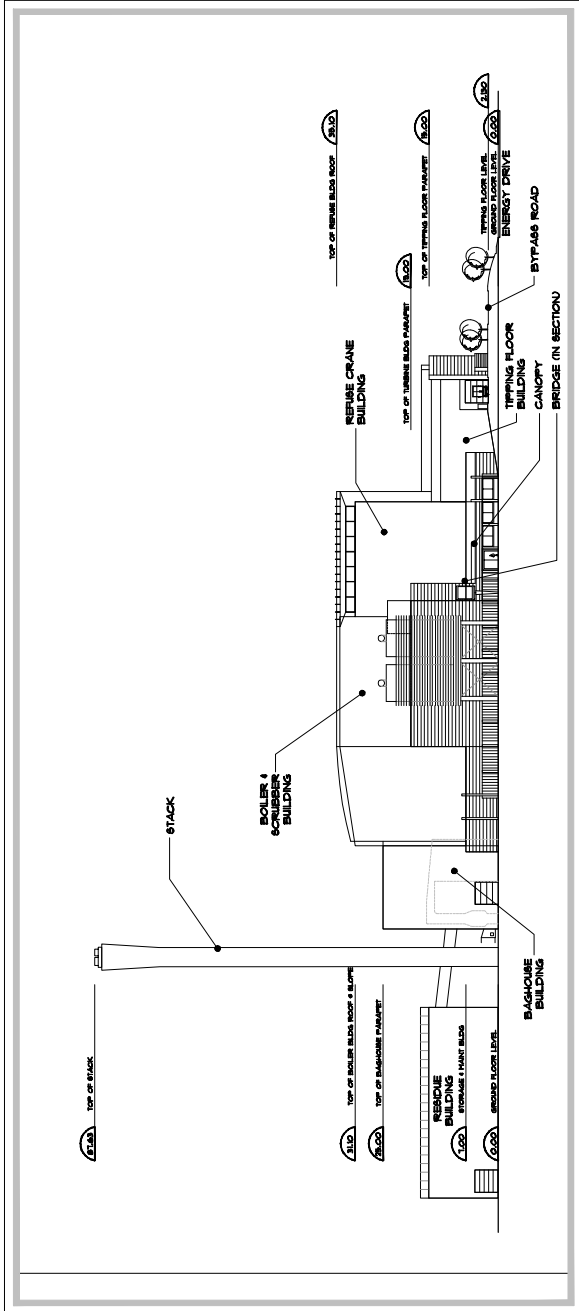
**BURNHAM - YORK
ENERGY FROM WASTE
FACILITY
CONCEPT 2 (R1)**

**SOUTH & EAST
ELEVATION**

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CHECKED BY:	P. HALL	FILE NO.	
DATE:	20/01/2010	DESCRIPTION:	A-202
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1 SOUTH ELEVATION



2 EAST ELEVATION (PLANT ONLY - VISITORS CENTRE REMOVED)



APPENDIX D

Standard Operating Procedures

Preliminary Standard Operating Procedures (SOPs)

Durham York Energy Centre

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1 SOPs for Handling of Radioactive Wastes

1.1 General Information

The Durham York Energy Centre will be equipped with radiation detection equipment located on the inbound scales and monitored at the Scalehouse. This is to ensure that no radioactive material is tipped into the Refuse Bunker.

If the radiation detectors signal an alarm, the Scalehouse operator will note the level from the monitor and contact the Control Room with the results.

A procedure to confirm the presence of radioactive material in the truck will be instituted. All other trucks are prohibited to enter the scale area until the radiation readings are completed and the action for the vehicle is determined.

1.2 Procedures

Scalehouse

- A. The Control Room is immediately notified of the radioactive waste alarm and actions taken.
- B. Alarm is verified (not background) by having the driver pull forward and back again.
- C. Driver is told to stay in the truck and directed to a designated location off the scale.
- D. A hand held radiation monitor is passed along the truck (about 2" from the surface) to confirm the detection and to determine the approximate location and level of the radiation source.
- E. Truck license is noted. Additional information is documented (example: generator, hauler, contact information, radiation reading, location of the highest reading on the truck, etc.).
- F. Driver may be asked to return to the generator or transfer station facility, as applicable.

Under approved circumstances the truck will be allowed to be isolated on site to allow for natural decay of the radioactive isotope, or the generator/hauler will be allowed to hire an outside contractor to sort through the load to remove and isolate the radioactive material at the tipping hall floor. All instances of radiation alarms will be documented and reported.

2 SOPs for Handling of Rejection Material and Bulk Waste

2.1 General

Durham York Energy Centre will receive and treat only household waste, non-hazardous commercial waste, and solid waste specifically authorized by the Ontario Ministry of the Environment.

The Facility will prevent untreatable and unacceptable waste from entering the Facility through implementation of a multi-layered plan that starts at the refuse producing households or businesses, continues through the collection process, and ends with the ultimate disposal of refuse at the Facility.

The Facility is completely fenced, providing a single entry and exit point for vehicles delivering waste to the Facility. After operating hours, the exit/entry point gates are closed, with entry and exit from the Facility controlled by the Shift Supervisor.

Refer to SOPs for handling of radioactive waste.

2.2 Identification of Untreatable and Unacceptable Waste

Plant personnel visually inspect waste loads on a regular basis to see if any untreatable or unacceptable wastes are contained on the trucks being inspected.

Periodically, the content of the truck is unloaded on the tipping floor for visual inspection. The inspections are conducted at a location on the tipping floor that will least interfere with on-going operations. Upon completion of the visual inspection, a portion of the waste load is further spread out by use of a front-end loader and re-examined for untreatable and unacceptable waste.

If untreatable or unacceptable waste is identified during the load inspection, the waste is either immediately placed back on the truck for proper disposal or, in the case of bulky waste, is separated manually or by use of a front-end loader and placed in a bulky storage pile, or a container bin, on site. The bulky waste is transferred to the residue building for storage until transportation off-site for disposal.

If suspected hazardous waste is received, it is separated from the acceptable waste and placed in the designated unacceptable waste area. The Plant environmental personnel will be notified that suspected hazardous waste has been brought on site. Once the nature of the contents has been determined, arrangements will be made for the suspected hazardous waste to be properly disposed. The suspected hazardous waste will be stored in a secure location while waiting final disposition.

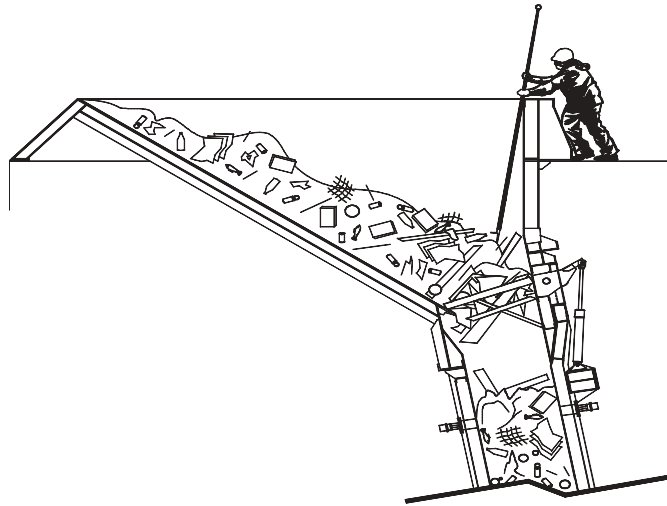
Unacceptable wastes include, but are not limited to, the following:

Type of Waste	Examples and/or Definition
BATTERIES	dry cells, mercury batteries, and vehicle batteries.
BULKY ITEMS	refrigerators, freezers, stoves, dishwashers, washers, and dryers.
WHITE GOODS	mattresses and box springs; hot water heaters and storage tanks; tires; air conditioners; oil storage tanks; propane tanks; gas barbecues; swing sets; vehicle frame parts; engines; crank cases; transmissions; lawn equipment; snow blowers; bicycles; file cabinets; furniture; rolled carpets; metal piping; fuel containers; construction and demolition debris; and logs larger than 2 inches in diameter or 4 feet long.
REGULATED MEDICAL WASTE	Any waste generated in the diagnosis, treatment, or immunization of humans or animals. It includes pathological waste (human tissue, body parts, and specimens); blood waste (liquid or dried blood and blood-saturated products); animal carcasses; and sharps (used or unused hypodermic needles, suture needles, syringes, scalpel blades, and pipettes).

3 SOPs for Feedchute Plugging (Martin Stoker System)

3.1 Description

Refuse plugging at the feedchute throat can occur due to the feedchute's design, with its inclined face giving way to the narrower feedchute, creating a bottleneck. This limits the size of material admitted to the stoker. When refuse becomes lodged in this throat, the fuel level underneath continues to fall as the feedrams push fuel onto the grates. The fuel level above the plug along the inclined face remains stationary. It is blocked from entrance to the throat by this "bridge" of refuse.



3.2 Causes

Feedchute plugs form in several ways. A common cause is a bulky item accidentally loaded to the feedchute. They tend to compress upon themselves as they descend into the feedchute throat. Plugs also occur if too much of a certain material, such as long boards, piping, or wooden pallets, is loaded at one time. These types of material cause a "logjam" affect as they descend into the feedchute throat.

3.3 Prevention

The best way to avoid feedchute plugs is for an alert crane operator to observe carefully the fuel as the operator mixes it in the pit. Separate and reject any bulky items that will not burn or cannot be broken up. Break up and scatter items or quantities of wooden pallets, boards, and piping.

3.4 Recognition

Despite the best efforts of the crane operator, feedchute plugs will occur. Early recognition and reaction decreases the time and effort necessary to clear these plugs.

3.5 Correction

When a feedchute plug occurs, it is to be addressed without delay. The feedchute will be unplugged using the following procedure:

1. Immediately inform the control room operator of the plug's nature, location, and extent.
2. Following proper safety procedures, an operator uses gaff pole to clear any obstructions
3. If the plug cannot be cleared within the first few minutes, the supervisor is to be notified for additional help
4. Control room operator to cycle the feedchute damper closed, then open. Frequently, the movement and/or the compression of the feedchute damper against the plug may cause it to collapse.
5. If the plug is caused by a bulky item, it may be necessary to lower grappling hooks by cables to seize the item. Attach the cables to the overhead crane and remove the item.
6. If the plug cannot be cleared using one of, or combination of, the procedures discussed above, the unit will be shut down so that qualified persons can enter the feedchute from above to clear the plug.

4 SOP for Conditioned Fly Ash Characterization and Testing

4.1 Purpose

Fly ash from the Durham York Energy Centre will be conditioned on site through an on-site process. The purpose of the Characterization Protocol is to identify field sample procedures and sample test scope to enable characterization of the fly ash residue.

4.2 Field Sampling

The sampling and analysis protocol is based upon the following references:

- Environmental Protection Agency, "Manual SW-846 - Test Methods for Evaluating Solid Waste - Physical/Chemical Methods," March 1992. Chapter nine "Sampling Plan" Rev 0 Sept 1986.
- Environmental Protection Agency EPA 530-R-95-036, "Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash for the Toxicity Characteristic," June 1995.

The ash sampling program consists of a minimum of seven days of sampling (2 shifts/day; 1 composite sample/shift; 14 composite samples total). Additional days may be sampled and analyzed for the purpose of extending the initial characterization period. Field sampling is intended to provide material for characterization testing that is representative of the material as it is sent to the disposal site. Sampling will occur at a location that enables personnel to secure a representative sample in a safe and non-interruptible manner.

4.3 Characterization Scope

The scope characterization testing is based on the toxicity characteristic with the analytical scope of the initial characterization program being defined by Table 1. The laboratory selected for this program will be qualified by Covanta to perform EPA *Method 1311 Toxicity Characteristic Leaching Procedure* or equivalent laboratory analysis. The Toxicity Characteristic Leaching Procedure (TCLP) will be performed in accordance with Method 1311 as detailed in the Environmental Protection Agency Manual SW-846 - Test Methods for Evaluating Solid Waste - Physical/Chemical Methods, and conform to applicable Ontario Regulations. Table 1 identifies the analytical test procedures used in analyzing the TCLP extract from each aliquot.

<u>Table 1</u>	
ANALYTICAL TEST PROCEDURES	
PARAMETER	EPA ANALYTICAL METHOD
1.0 TCLP ¹	
1.1 TCLP Metals	
Arsenic	6010 (ICP)
Barium	6010 (ICP)
Cadmium	6010 (ICP)
Chromium	6010 (ICP)
Lead	6010 (ICP)
Selenium	6010 (ICP)
Silver	6010 (ICP)
Mercury	7470 (CVVA)
2.0 Moisture	2540-G
¹ EPA Method 1311, Toxic Characterization Leaching Procedure. ICP - Inductively Coupled Plasma Spectroscopy CVVA - Cold Vapor Atomic Absorption	

The toxicity limits used to characterize the residue are defined in Schedule 4 of R.R.O. 1990, Regulation 347. The ash residue characteristics will be determined by comparing the regulatory toxicity limits with the 80 % upper confidence interval from all representative samples.

5 SOPs for Back-up Power (Standby Diesel Generator)

The Facility will be equipped with approximately 250KW standby diesel generator. In case of a station blackout, a standby diesel generator is provided to power the auxiliaries necessary to assure an orderly shutdown of the plant in the event of a total loss of station AC power. The diesel generator would be utilized in an event of a power failure from the in-plant turbine/generator and failure to draw electricity from the electric grid (Hydro One).

In the highly unlikely event, the standby diesel generator would be sufficient to provide energy to the following preliminary list of equipment:

- Main lube oil pumps (for Turbine & Generator)
- Turning gear (to protect the Turbine shaft)
- Turbine driven lube oil pumps
- Electrical room air handling units
- Battery room exhaust fan
- Passenger/Freight elevator
- Battery chargers
- Control room air conditioning unit
- Stack lighting
- Power and lighting panels



APPENDIX E

Waste Storage Calculations and Waste Quantities



SITE STORAGE DESIGN CALCULATIONS

Maximum annual intake of MSW = 140,000 Tonnes

Refuse Pit Storage Capacity

- Daily intake of MSW = 436 Tonnes
- Density of MSW = 415 kg/m³
- Storage Capacity of Refuse Pit = 7 days

Refuse Pit Size

$$(7 \text{ days}) * (436 \text{ Tonnes/day}) / (415 \text{ kg/m}^3) =$$

Approximately 7354 m³

Maximum Refuse Pit Storage Capacity Calculation, based on density of 415 kg/m³

$$(436 \text{ Tonnes / day}) * (7 \text{ days}) =$$

Approximately 3050 Tonnes at any given time

Conditioned Fly Ash Storage Capacity in Residue Building

- Number of Fly Ash Bays = 7
- Design Conditioned Fly Ash Density = 1300 kg/m³
- Conditioned Fly Ash Storage Volume needed per Bay = 75.91 m³

Maximum Conditioned Fly Ash Storage Capacity Calculation

$$(1300 \text{ kg/m}^3) * (75.91 \text{ m}^3/\text{bay}) * (7 \text{ bay}) = 690781 \text{ kg}$$

Approximately 700 Tonnes at any given time

Bottom Ash Storage Capacity in Residue Building

- Number of Bottom Ash Bays = 2
- Design Bottom Ash Density = 1280 kg/m³
- Bottom Storage Volume needed per Bay = 244.75 m³

Maximum Bottom Ash Storage Capacity Calculation

$$(1280 \text{ kg/m}^3) * (244.75 \text{ m}^3/\text{bay}) * (2 \text{ bays}) = 626560 \text{ kg}$$

Approximately 630 Tonnes at any given time



SOLID WASTE QUANTITIES

Maximum Residual of Final Disposal

- Daily Maximum Residual of Final Disposal = 400 tonnes
- Annual Maximum Residual of Final Disposal = 56,000 tonnes

Rational: The Maximum Residual for Final Disposal is estimated to be 400 tonnes/day and 56,000 tonnes annually. This rate takes into account the maximum residual production rate of the Facility, the residue disposal schedule and worst case scenario of disruptions that may occur. The maximum estimated residual production of the Facility is the product of the maximum mass throughput of the grates, approximately 540 tonnes per day and the maximum estimated percentage of inert material (i.e. ash or residue) contained in the municipal waste. The residual production rate will also include any reagents, such as lime, carbon, pozzolan or cement, utilized in the balance of the Facility operations. The residue removal schedule takes into account a 5 day workweek removal rate with a margin for fluctuations based on holidays, weather, truck availability and disposal site availability. Note that estimated normal disposal tonnage is expected to be significantly less than the maximum quantities.

Maximum Waste Received Daily

- Daily Maximum Waste Received = 1520 tonnes

Rational: The Maximum Waste Received Daily is the maximum amount of MSW that may enter the Facility on a given day, whether or not it will be processed by the thermal treatment units. The Maximum Waste Received Daily takes into account the maximum receiving capability of the Facility to allow for fluctuations in refuse availability and the refuse delivery schedule and worst case scenario disruptions that may occur. The receiving capacity of the Facility is significantly greater than the thermal processing capacity due to future considerations of accommodating an expansion of the Facility. To mitigate for worst case scenarios (e.g. weather, labor strikes, holidays or truck availability), the Facility can accept twice the tonnage per day for which it was designed. This ensures continuous operation of the Facility operation. Thus, the expected Maximum Waste Received Daily is 1520 tonnes per day.

Maximum Daily Feed Rate

- Maximum Daily Feed Rate for the Facility = 540 tonnes

Rational: The estimated Maximum Daily Feed Rate for the Facility is 540 tonnes/day. This feed rate is based on the design grate capacity. The actual processing rate will vary according to the HHV of the municipal waste as identified by Figure 2 – Refuse Diagram which identifies the expected operating boundaries as municipal waste characteristics change.



APPENDIX F

Emergency Operation and Contingency Plan

Durham York Energy Centre

Environmental Emergency and Contingency Plan

Covanta Energy Inc.

ENVIRONMENTAL EMERGENCY AND CONTINGENCY PLAN

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APPENDIX G

Facility Monitoring and Inspection Plan

Durham York Energy Centre

Facility Maintenance and Inspection Plan

Covanta Energy Inc.

FACILITY MAINTENANCE AND INSPECTION PLAN

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APPENDIX H

Complaint Protocol

**Durham/York Energy from Waste Complaint Protocol for Design,
Construction & Operations**

Date: 2011-01-31

***This document has been reviewed by the EFW Advisory Committee and
edited appropriately as required by EA Condition 6.2.***

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Introduction

The Minister of the Environment granted approval on November 3, 2010 of the Individual Environmental Assessment for the Energy from Waste (EFW) facility. One of the conditions of approval was the establishment of a detailed protocol to address concerns received from the public during design, construction and operation activities. Specifically, the Minister's Condition for the Complaint Protocol states that:

- 6.1 The proponent shall prepare and implement a Complaint Protocol setting out how it will deal with and respond to inquiries and complaints received during the design, construction and operation of the undertaking.
- 6.2 The Complaint Protocol shall be provided to the advisory committee for review prior to submission to the Director.
- 6.3 The proponent shall submit the Complaint Protocol to the Director within one year from the date of approval or a minimum of 60 days prior to the start of construction, whichever is earlier.
- 6.4 The Director may require the proponent to amend the Complaint Protocol at any time. Should an amendment be required, the Director will notify the proponent in writing of the required amendment and date by which the amendment must be completed.
- 6.5 The proponent shall submit the amended Complaint Protocol to the Director within the time period specified by the Director in the notice.

This document outlines the protocol on how Durham and York Regions will deal with and respond to inquiries, complaints and concerns received during the design, construction and operation of the Undertaking. The document will be posted on the EFW project website at www.durhamyorkwaste.ca.

Due to the nature of this Undertaking being a Design-Build-Operate project, for practical purposes the Complaint Protocol has been split into two phases:

Phase 1 – Design & Construction Phase

For the purposes of this document, inquiries, complaints or concerns from the public for the design and construction work is considered Phase 1 of the Complaint Protocol roll out. It is anticipated the majority of complaints or concerns arising during this phase will be related to EA follow-up, detailed design, early site investigation work, soil and groundwater investigations, heavy construction activity and project schedule. These inquiries will flow through the intake process as described in this document and be managed and directed as outlined in Section 2 and summarized in Figure 1.

Phase 2 – Operation Phase

Phase 2 of the Complaint Protocol will begin once the project moves from construction to the Operation Phase of the Undertaking. The Operation Phase commences after the facility is commissioned and operating as a Waste Management Facility. At that time it is anticipated the majority of complaints or concerns will be directed to facility personnel and follow the flow chart in Figure 2 of this document. Phase 2 Complaint Protocol will develop more fully as the project progresses and be amended as required to meet the future needs.

1. Complaints Received on the Energy from Waste (EFW) Project

1.1 General Process for Receiving Complaints or Concerns

Public comments, complaints and concerns will be directed to Durham Region and York Region through one or more of the following means: email (direct or via project website), telephone, letter or fax. It is recognized that inquiries of this nature could be received by local municipalities, the York Durham District office of the Ministry of the Environment (MOE) and the MOE Spills Action Centre. Appropriate staff at these organizations will be instructed to route these inquiries to the EFW phone number or email address for response and action.

The Complaint Protocol is to be fully implemented with staff (known as First Responders) who will be trained to respond to queries and the prescribed Complaint Protocol process. The First Responder is the initial point of contact for the person registering a complaint or concern and is responsible for starting the record of complaint process and determining the nature of the complaint. **Direct contact between the public and the Design-Build-Operator (DBO) contractor will be discouraged in order to promote direct contact between the Regions and the public. The First Responder will be responsible for directing the RoC to the appropriate individual for response.**

The following means will be available for the public to make complaints and concerns known during the design and construction phase of the project to the EFW Project Team:

- Email: info@durhamyorkwaste.ca
- Telephone (during business hours) – toll free 1-800-667-5671
- Telephone (during after hours) – toll free project number 1-800-667-5671 to be answered by an automated system which will direct the caller appropriately if it is an Emergency or request that the caller leave the pertinent information which will be immediately transferred as a voice recording to dedicated email addresses of the EFW Project Team.

- Mail:
The Regional Municipality of Durham
c/o EFW Project Team
605 Rossland Road
Whitby, ON L1N 6A3

OR

The Regional Municipality of York
c/o EFW Project Team
17250 Yonge St.
Newmarket, ON L3Y 6Z1
- Comment form from the project website: www.durhamyorkwaste.ca
- Fax: Durham 905-666-6206
York 905-830-6927

Note: The Municipality of Clarington and the Durham Works Depot and York Operations Centre may receive calls or emails directly related to the EFW project. In this event, these concerns or complaints will be forwarded to the EFW phone number or email address.

1.2 **Informing the Public of the Complaint Process**

Durham and York Regions have committed in the IEA to undertake a comprehensive communications program to inform the public on the various ways of providing feedback, complaints or concerns regarding design, construction and operations activities. A Communications Plan will be prepared that will include some or all of the following methods of informing the public on how to communicate with the EFW Project Team:

- Project sign boards at the construction site compound will list the toll free project number and project website
- The EFW project website will include a Complaint Form and information on the toll free project number, project addresses and contacts, fax numbers and email addresses for Durham and York Regions
- Personalized letters may be sent to the project mailing list providing details on the toll free project number, project addresses and contacts, fax numbers and email addresses for Durham and York Regions
- EFW project newsletters will be used at various stages of the preconstruction and construction phases to inform the public on design and construction activities and include information on how to contact the project team as outlined in Section 2.1

- Electronic notifications to subscribers of the EFW dedicated email and other relevant social media accounts

2. **General Description of Complaint Management Process during Phase 1, Design and Construction**

- The Complaint Protocol Process for the Design and Construction Phase is shown in Figure 1.
- All complaints received from residents and stakeholders will be centralized into a 'one window' complaint system managed by the Durham and York Region EFW Project Team.
- All complaints received will be assigned a Tracking Number.
- Phone complaints or concerns will be received during daytime operation hours (Monday to Friday 8:00 to 5:00) by a live operator at the Region of Durham Waste Management Call Centre (Call Centre) who will record details and log the Originators concerns before directing all EFW related complaints or concerns to an EFW Project Team member (First Responder).
- After hours calls received on the Call Centre voicemail will ask the caller to leave a detailed message with a call back number. This message will be recorded and logged into a software database and directed to dedicated email addresses of EFW Project Team Members the next business day. Emergency calls will be redirected using touch tone options to a live operator.
- Complaints and concerns submitted via email or via the comment form on the project website will receive an automated response to acknowledge receipt of the comment.
- Complaints and concerns received via correspondence (not phone or email) shall be acknowledged within one business day by the First Responder provided that contact information for the Originator is included.
- Investigation of complaints and concerns will be conducted in a timely manner, as quickly as is reasonable considering the particular situation surrounding the complaint or concern. This may include meeting with the Originator as required to investigate the background and/or origin of the issue.

- An appropriate software package will be used to manage the information related to the Record of Complaint (RoC) including key information such as:
 - Name, address and contact information (confidentiality will be protected in the event the Originator wishes to remain anonymous)
 - Tracking number
 - Nature of the complaint or concern
 - Action taken to address or respond to the issue
 - Response provided to the Originator (if received via a municipality the municipality will be notified of the response)
 - Resolution of complaint
- A quality Assurance review of the Complaint Management Process will be undertaken annually by Durham and York Regions and modified where appropriate to ensure a high level of service to the public and stakeholders on complaints and concerns.
- A summary of issues and issue resolutions will be presented as a standing item on the EFW Advisory Committee meeting agenda.

3. General Description of Complaint Management Process during Phase 2, Operations

After major construction is complete and the facility is commissioned, the DBO will become more involved as a First responder. Complaints or concerns received via the receptors indicated in Section 1.1 above will be handled in the same manner. Durham and York Region staff will direct Facility Operational complaints or concerns to the EFW Plant via the process outlined in Section 2 above. Once the Facility is operational the DBO will have direct access to the computer software database to record, track and log all complaints so the DBO can also add complaints received at the Facility into the 'one window' system. The centralized system will be monitored by Durham and York Region.

3.1 Covanta Protocol for Complaint Management

3.1.1 Emergency Situations

Should the complaint relate to an emergency requiring immediate reaction or response, the complaint will be relayed to the Supervisor on Shift via telephone. Upon his/her assessment and verification, immediate actions will take place in accordance with Facility Emergency Action Plan. This plan covers the plant specific plans, appropriate notifications and additional actions beyond resolution of the emergency situation. The actual emergency action plan will be one of many plant specific safety procedures developed as part of the plant commissioning. It will be

developed based on plant specific conditions in accordance with a guidance document (reference tool) developed and managed by Covanta's Corporate Resources. A sample/example Table of Contents is attached.

3.1.2 Non-Emergency Situations

Non-emergency complaints will be routed through the Facility Manager and/or Business Manager, documented and assigned for evaluation and resolution to the appropriate facility management team member. Operational issues will be addressed by the Chief Engineer or his designee, Maintenance issues by the Facility Maintenance manager, and Health and Safety issues addressed by the Facility Environmental Engineer and/or Safety Coordinator. This will include follow-up communication with the compliant originator as appropriate. The results/resolution of the compliant will be directed through facility management as part of final resolution/close out of the complaint.

4. Record of Complaint (RoC)

The RoC will be entered into a complaint management software database. The software database will log the issue, track process and record the action plan and resolution of an issue. The intent of this document is to have real time information logged about the complaint or concern, status and resolution. This provides a record to allow all interested/appropriate levels of managers to be kept apprised of issues.

The RoC is maintained throughout the complaint resolution process and supports accurate data collection, timely and appropriate action and supports quality assurance and monitoring for reporting purposes. A typical RoC would include entry of the following information:

- Step 1: Nature of complaint/concern
Length of time (if applicable) of occurrence
Pertinent details – ie location of complaint
Assign Tracking Number
- Step 2: The Originator's contact information
Date/time for reporting the complaint/concern
Date/time of incident complaint/concern
- Step 3: Actions taken Owner of DBO
- Step 4: Outcome/resolution of issue and timing of completion
Recommendations for future if appropriate
Confirmation that originator has been advised as to the outcome (date/time) to ensure that calls have been

tracked to completion and calls are then considered closed

5. First Responder Roles and Responsibilities

First Responders will typically be Durham and York Region EFW Project Team members during Phase 1. When required they will direct the DBO staff to respond as First Responders - predominantly during Phase 1 construction activities and then fully transitioned by Phase 2 operations of the facility.

For clarity, First Responders are the EFW Project Team staff that will handle all complaints and they are the first point of contact, except in the case of phone calls received on the Regions Waste Call Centre 1- 800 number where they will be logged, provided a tracking number and then transferred directly to the First Responder.

5.1 Description Overview

- The First Responder(s) will be trained to have a high level of project knowledge (part of the EFW Project Team) and generally be familiar with the project status.
- The First Responder(s) reports directly to the Regional Project Manager, who is accountable to Durham and York Regions.
- The Regional Project Manager co-ordinates the First Responder(s) to ensure coverage during regular business hours and the after hours process.
- The First Responder(s) is the person who receives the complaint or concern.
- The First Responder(s) assesses and assigns the complaint to one of the Complaint Resolution Teams:
 - Construction Contractor (DBO)
 - Durham/York Regions (EFW Project Team member)
 - Subject Matter Experts
- The First Responder(s) reviews the progress of the actions of the Complaints Resolution Team to ensure that issues are being resolved and that the Originator is being apprised of the action(s) taken.
- The First Responder(s) tracks the resolution of complaints or concerns and provides reports on the management of complaints or concerns in accordance with the Complaint Protocol; these reports are compiled and assessed as part of the Service Level Performance procedure

5.2 Receipt of Complaint

- The First Responder is the initial point of contact for the person registering the complaint or concern, responsible for starting the RoC process and determining the nature of the complaint. (except for complaints or concerns via telephone which will be first processed through the Call Centre toll free number)
- The RoC will be set up using a computer complaint management system with standardized questions to ensure adequate information concerning the complaint or concern is recorded to assess and determine the initial plan of action.
- The First Responder will determine if additional information is needed to assess an appropriate action or response concerning the complaint or concern. Additional information concerning the complaint or concern may necessitate further calls to the Originator or a field investigation.
- The First Responder will have communication with the job site via telephone and email.

5.3 Issue Identification & Triage

- The First Responder will initially determine if the complaint or concern is an Emergency or can be managed under a planned response.
- The Emergency Response Protocol will follow the Standard Operation Procedure (SOP) currently established by the Emergency Management Offices of Durham and York Regions or the Covanta Emergency Response Team. The First Responder will determine the appropriate emergency response to initiate based on information collected from the Originator.
- For non-emergency complaints or concerns, the First Responder will initiate the appropriate planned Action/Response steps which involves assigning the resolution of the complaint to one of the Complaint Resolution Teams
- The Ministry of Environment will be informed of all complaints that may constitute a potential adverse effect.

6. Action/Response

6.1 Description

- Action/Response refers to the steps taken to address and/or resolve the Originator's complaint or concern.
- Following assessment of the complaint or concern by the First Responder, all non-emergency complaints would be referred to one or more of the following complaint resolution teams:

- *Durham Region Works Department:* For complaints or concerns that are directly related to Durham Regions integrated waste management plan, the First Responder will direct the issue to an appropriate party in the Waste Management Division for response under the current standard operating procedures. These would include issues related to blue box recycling or green bin organics programs, curbside collection issues, or any other waste related issues under the Region of Durham's jurisdiction and not directly related to the EFW facility.
- *York Region Environmental Services Department:* For complaints or concerns that are directly related to York Regions integrated waste management plan, the First Responder will direct the issue to an appropriate party in the Waste Management Program Planning & Policy Division for response. These would include issues related to blue box recycling or green bin organics programs, curbside collection issues, or any other waste related issues under the Region of York's jurisdiction and not directly related to the EFW facility.
- *EFW Project Team:* complaints or concern of a specific nature may require the Proponent's to involve a Subject Matter Expert.
 - Durham Region Hydrogeologist
 - Complaints or concerns related to private wells will be handled through the standard Well Interference Complaint Protocol
 - Complaints or concerns related to surface water and ground water issues
 - HDR Inc.
 - Complaints or Concerns related to Project Oversight
 - DBO - Covanta
 - Complaints or concerns related to detailed EFW design issues
 - Stantec or Covanta:
 - Complaints or concerns related to ambient air monitoring
 - Complaints or concerns related to Health Risk Assessment issue
 - Health Department:

- Complaints or concerns related to ambient air monitoring
- Complaints or concerns related to Health Risk Assessment issue
- Construction Contract Issues:
 - For complaints or concerns that are directly related to the contractor's construction operations, the First Responder will contact the DBO Construction Project Administrator. The contract conditions include "good construction practices" to manage complaints relating to annoyance issues such as dust control, noise and vibration issues. In the event of a "health and safety" issue that may impact the public, the Contractor will be directed to immediate action to resolve these types of complaints or concerns, such as general site housekeeping, traffic control and speed, idling of vehicles, hours of operation and worker conduct/courtesy.

6.2 Examples of Non-Emergency Complaints or Concerns

	Complaint Example 1	Typical Response Time	Complaint Example 2	Typical Response Time
Issue	Dirt on road from construction vehicles near project site		Well Water complaint	
Step 1 First Responder	First Responder assigns resolution to DBO Construction Administrator. Cause identified as wheel wash out of service.	Typical investigation time 3 - 5 hours	First Responder assigns resolution to hydrogeological expert	Typical assignment to hydrogeological expert is immediate
Step 2 Resolution Team Action and Resolution	Parts ordered for back in service within one week. Alternative mitigation measures implemented to have street sweeper clean affected areas daily.	Final resolution (typically within week to replace parts and put system back in service) Interim solution (immediate action to initiate street sweeper to road cleaning)	Hydrogeological expert investigates; using previously established Well Mitigation process	Subject Matter Expert to investigate. Hydrogeological expert to investigate existing well records, contact property owner and carry out site investigation. Typical investigation 1 – 2 days.
Step 3 Monitoring, Reporting and Communications	EFW Project Team monitoring the site conditions daily. Weekly updates to be provided by Complaint Resolution Team to the Originator.	Initial communication to Originator within 24 hours of initial complaint. Weekly updates on progress of final solution.	Weekly updates to be provided by Complaint Resolution Team (hydrogeological expert) to the Originator	Initial communications to Originator at end of site investigation – typically 1 – 2 days. Weekly updates on progress of final solution.

7. Quality Assurance

7.1 Description

Quality assurance is a management function. It is the activity that checks to determine if the process which has been set out and agreed upon has been followed. Quality assurance is performed by senior management through regular review, audits and analysis using software and dialogue with team members. In addition, during the long term Operating Phase the DBO is contractually responsible for registering and complying with ISO 14001 Environmental Management System. ISO compliance requires internal and external communications protocols and regular 3rd party audits to ensure quality assurance is maintained. In addition, the Regions will assess the DBO contractors' complaints performance as part of the Service Level Performance Incentive Program.

7.2 Process

- A regular review of the Complaint Protocol will be undertaken to determine if any changes or revisions are required. Weekly reviews will be conducted during the start up month of construction and thereafter the Complaint Protocol will be reviewed quarterly, or as required.
- The type and frequency of complaints or concerns will be reviewed weekly during the start up month of construction, and thereafter quarterly or as required to determine the need for changes to construction practices.
- High level summaries on types, time to respond, frequency charts, etc., can be provided to senior management of Durham and York Regions to confirm the effectiveness of the Complaint Management Protocol.
- EFW Advisory Committee will be provided regular summaries at each meeting on complaint resolutions.

Appendix A

Complaint Form

Date Received:

Received by:

Concern received by: Email Telephone Office Visit Facility Visit
Other (please specify) Referral from (individual/agency)

Complainant Contact Information (information required if a response is requested)

Name:

Address:

Telephone #:

Email address:

Complaint Details/Description:

EFW First Responder to respond or redirect complaint/concern to appropriate party for response as per Complaint Protocol	
Response/remedial action: 	
Is the concerned party satisfied with the response and follow-up? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If NO, please provide reason(s): 	
First Responder's Signature: <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> Project Manager's Signature: <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>	Date (dd-mm-yyyy): <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> Date (dd-mm-yyyy): <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>
WHEN COMPLETE, PLEASE FORWARD THIS FORM AND RELATED DOCUMENTATION TO THE (To Be Determined) FOR FILING.	

Appendix B

Complaint Log

To be developed once appropriate software is determined

Figure 1 – Design & Construction Phase

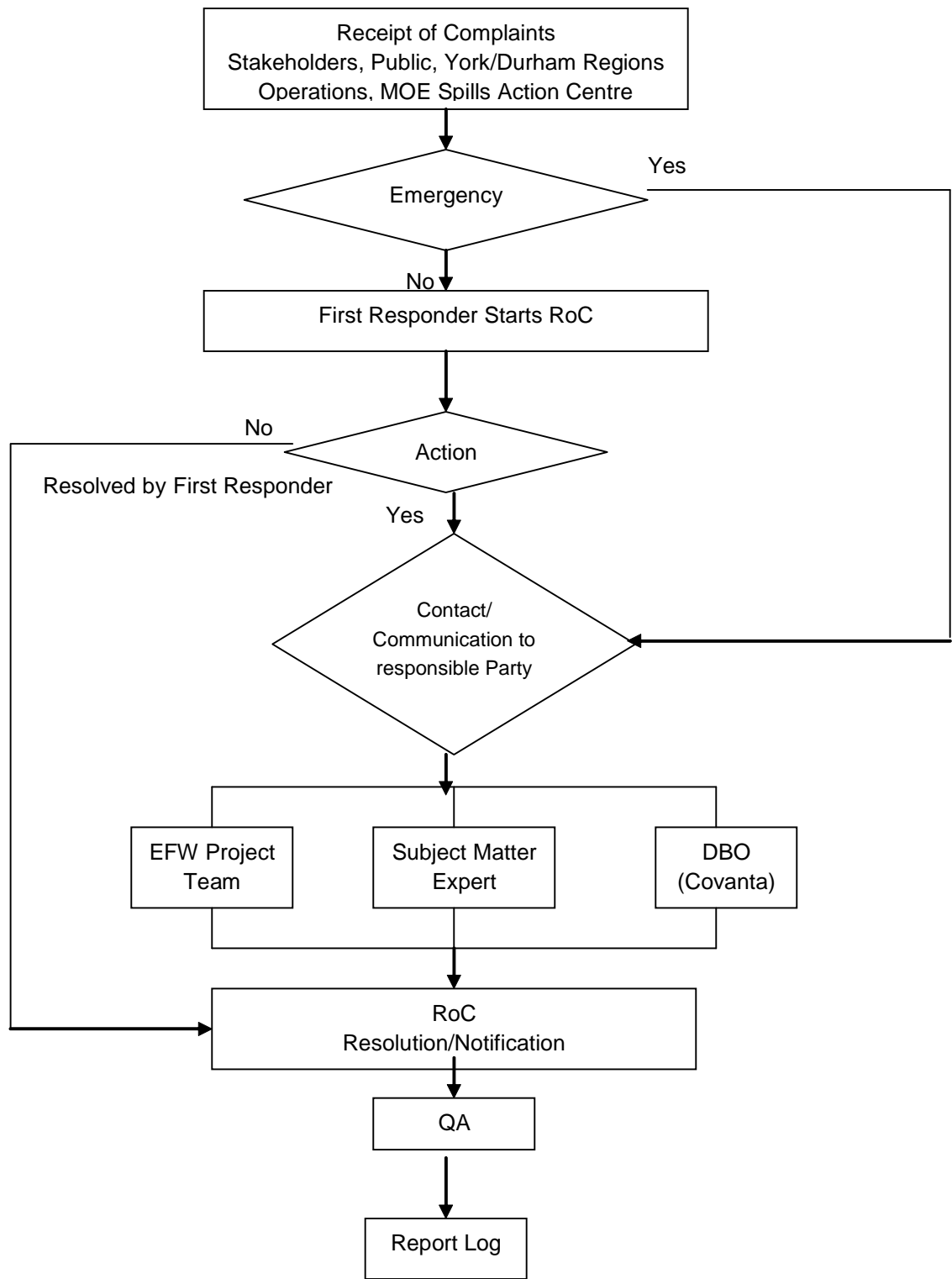
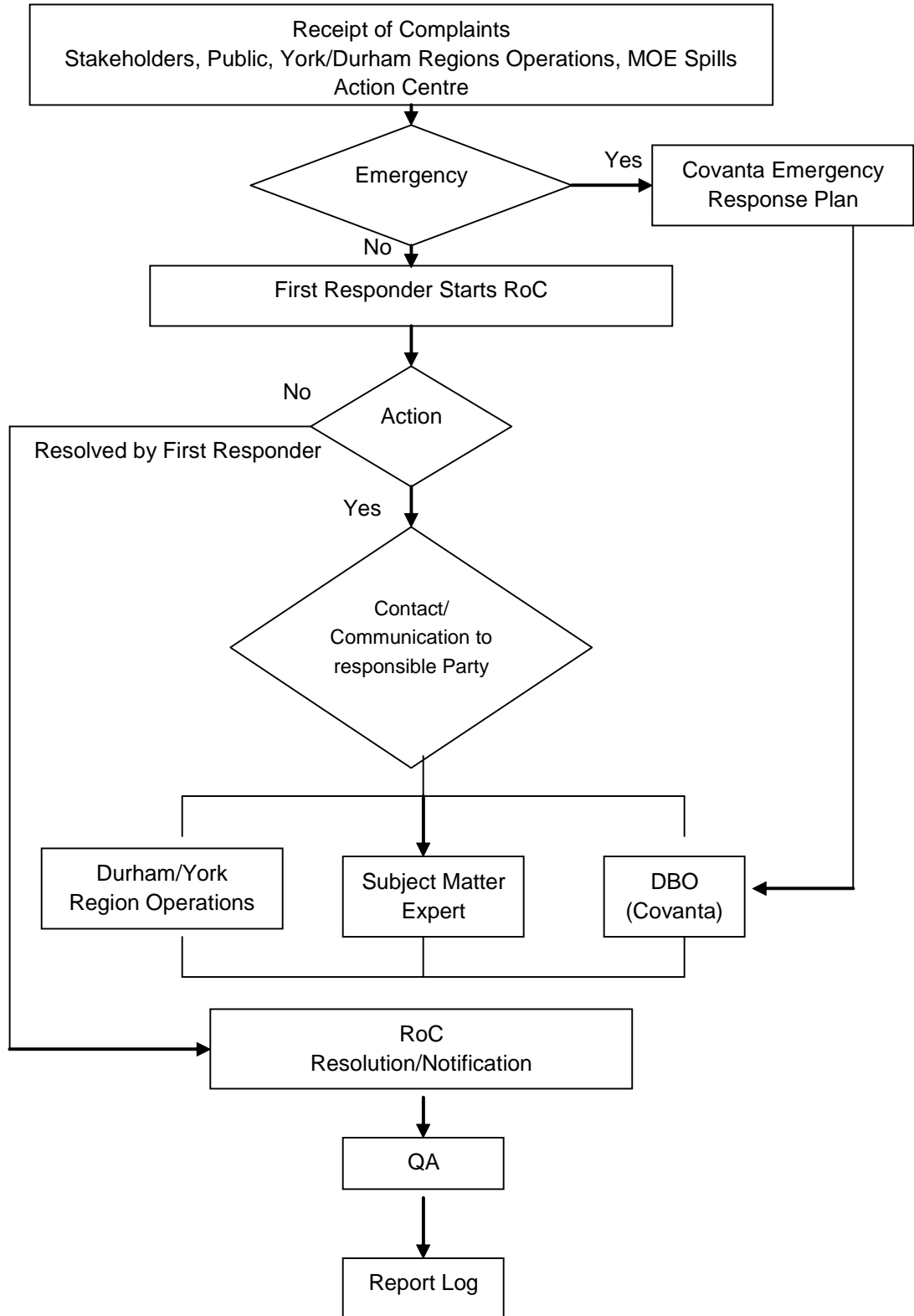


Figure 2 – Operations Phase



Appendix C



COVANTA – EMERGENCY ACTION PLAN REFERENCE TOOL Table of Contents

- 1.0 Purpose
- 2.0 Scope
- 3.0 Responsibilities
- 4.0 Situations, Assumptions, and Notification of a Emergency
- 5.0 Activating and Deactivating the Plan
- 6.0 Concepts of Operations
- 7.0 Continuity of Authority
- 8.0 Organization/Responsibilities
- 9.0 Minimum Facility Plan Requirements (based on OSHA 29 CFR 1910.38)
- 10.0 Facility Example Plan
- Appendix A Laying Out Organizational Responsibilities (Example Plan)
 - A.1 Emergency Control Center
 - A.2 Press and Media Coverage
 - A.3 Employee Center
 - A.4 Traffic Control
 - A.5 Staff Notification
 - A.6 First Aid Shelters
 - A.7 Emergency Site Coordinator
 - A.8 Transportation
 - A.9 Evacuation
 - A.10 Multiple Casualties
- Appendix B Department Procedures (Example Plan, as it applies)
 - B.1 Telephone Rosters
 - B.2 Essential Personnel
 - B.3 Unassigned Employees
 - B.4 Administration
 - B.5 E & I Department
 - B.6 Maintenance Department
 - B.7 Fleet Maintenance
- Appendix C Contacts And Telephone Numbers For Notification Of Impending Emergency
- Appendix D Covanta Event Notification Form
- Appendix E Responsibilities List
- Appendix F Locations List
- Appendix G List of Mutual Aid Agreements
- Appendix H Facility Contact List Appendix
 - H.1 Corporate Contact List

*Example Only
To Be Made Project Specific*