

Durham York Energy Centre Spill Contingency and Emergency Response Plan

Prepared by Covanta Durham York Renewable Energy Limited Partnership

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Environmental Compliance Approval – Section 11 - Reference Matrix

	From ECA	Location in plan
(1)(a) The Owner shall develop and implement a Contingency and Emergency Response Plan in accordance with the requirements set out in the EA Approval.		
(1)(b)	Notwithstanding the requirements set out in the EA Approval, the Contingency and Emergency Response Plan shall be prepared in consultation with the District Manager or designate the local Municipality and the Fire Department.	Section 13 – Document Review
(2) In Em	addition to the requirements set out in the EA Approval, nergency Response Plan, as a minimum, shall include th	the Contingency and e following:
(2)(a)	the Site plan clearly showing the equipment layout and all storage areas for wastes and reagents;	Appendix A
(2)(b)	a list of Site personnel responsible for the implementation of the contingency measures and various emergency response tasks and their training requirements;	Section 4 – Site Personnel & Staff Training Appendix D
(2)(c)	a list of equipment and materials required for the implementation of the contingency measures and the emergency situation response;	Section 5 – Emergency Equipment Section 11 – Spills Kit Inventory
(2)(d)	maintenance and testing program for equipment required for the implementation of the contingency measures and the emergency situation response;	Section 5 – Schedule for Inspections

(2)(e)	procedures to be undertaken as part of the implementation of the contingency measures and the emergency situation response;	Section 6
(2)(f)	names and telephone numbers of waste management companies available for emergency response;	Appendix B
(2)(g)	notification protocol, with names and telephone numbers of persons to be contacted, including the Owner, the Site personnel, the Ministry of the Environment Spills Action Centre and the York Durham District, the local Fire and Police Departments, the local Municipality, the local Medical Officer of Health, and the Ministry of Labour;	Section 3 – Appendix B
(2)(h)	procedures and actions to be taken should the incoming Waste not meet the applicable quality criteria specified in this Certificate;	Section 7 –
(2)(i)	procedures and actions to be taken should the outgoing Residual Waste fail to meet the criteria specified in this Certificate;	Section 7 – Handling of Rejection Material and Bulk Waste
(2)(j)	procedures and actions to be taken should the current disposal options for the outgoing Residual Waste become unavailable;	Section 7 –
(2)(k)	design of the contingency measure, procedures and actions should the emissions from the Site, including the fugitive odour/dust emissions, cause occurrences of public Complaints;	Section 9 Section 10
(2)(l)	procedures and actions to be taken should the Owner be unable to maintain the negative pressure in the Tipping Building;	Section 9 – Procedure for Negative Pressure

(2)(m)	procedures and actions to be taken should the occurrence of Complaints require the Owner to suspend the waste processing activities at the Site; and	Section 8 - Complaints
(2)(n)	identification and risk assessment of all reasonably foreseeable incidents that may result in a discharge into the natural environment of any contaminant in an amount, concentration or level in excess of that prescribed by the Regulations and/or imposed by this Certificate, including but not limited to:	Section 10 – Risk Analysis Section 11 - Spills
(2)(n)(i)	a breakdown of the Facility/Equipment or part of the Facility/Equipment, including the APC Equipment and the CEM Systems associated with the Boilers;	Section 10 – CEMs
(2)(n)(ii)	CEM Systems indicate that the Boilers and associated APC Equipment have been out of compliance with the Performance Requirements;	Section 10 – CEMs
(2)(n)(iii)	any change in process parameters which may result in non compliance with the Performance Requirements;	Section 10 – CEMs
(2)(n)(iv)	power failure resulting in the use of the Emergency Diesel Generator or Total Power Failure;	Section 10 – Power Failures
(2)(n)(v)	description of the preventative and control measures to minimize the occurrence or impacts of the above incidents; and	Section 10 – Risk Analysis & Preventative Measures

(2)(n)(vi)	procedures for corrective measures and timelines to take to address the above incidents in a timely manner to effectively prevent or minimize the discharge of any contaminant into the natural environment and continue to maintain compliance with the EPA, the Regulations and this Certificate, including procedures for Waste Processing Rate reduction, waste feed cut-off, Controlled Shutdown or Emergency Shutdown of the Boilers as applicable.	Section 12 – Shut Down of Facility – Complete & Controlled
(3)	The Owner shall submit the finalized Contingency and Emergency Response Plan to the Director a minimum of one hundred and twenty (120) days prior to the Commencement Date of Operation, for approval.	
(4)	An up-to-date version of the Contingency and Emergency Response Plan shall be kept at the Site at all times, in a central location available to all staff, and it shall be available for inspection by a Provincial Officer upon request.	Section 1
(5)	The Owner shall ensure that the names and telephone numbers of the persons to be contacted in the event of an emergency situation are kept up-to- date and that these numbers are prominently displayed at the Site and at all times available to all staff and emergency response personnel.	
(6)	The Contingency and Emergency Response Plan shall be reviewed on a regular basis and updated, as necessary. The revised version of the Contingency and Emergency Response Plan shall be submitted to the local Municipality and the Fire Department for comments and to the District Manager for comments and concurrence.	Section 13 – Document Review Section 14 – Review Schedule
(7)	The Owner shall implement the recommendations of the updated Contingency and Emergency Response Plan, immediately upon receipt of the written concurrence from the District Manager.	

Environmental Compliance Approval – Section 12 – Reference Matrix

(1)	The Owner shall immediately take all measures necessary to contain and clean up any spill or leak which may result from the operation at this Site and manage any emergency situation in accordance with the Contingency and Emergency Response Plan.	Section 11 – Spills
(2)	The Owner shall ensure that the equipment and materials listed in the Contingency and Emergency Response Plan are immediately available at the Site, are in a good state of repair, and fully operational at all times.	Section 11 – Spills
(3)	The Owner shall ensure that all Site personnel responsible for the emergency situation response are fully trained in the use of the equipment and related materials and in the procedures to be employed in the event of an emergency.	Section 11 – Spills
(4)	All Spills as defined in the EPA shall be immediately reported to the Ministry's Spills Action Centre at 1-800- 268-6060 and shall be recorded in the log book as to the nature of the emergency situation, and the action taken for clean-up, correction and prevention of future occurrences.	Section 11 – Spills

Environmental Assessment Reference Matrix

17.	Spill	Contingency	/ and E	Emergency	Response	Plan
	• p	geney				

From EA		Location in Document
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 Ti lir	ne Spill Contingency and Emergency Response Plan shall include nited to:	, but is not
17.3 (a)	Emergency response procedures, including notification procedures in case of a spill, fires, explosions or other disruptions to the operations of the facility;	Section 5 &10
17.3 (b)	Cell and business phone numbers and work locations for all person(s) responsible for the management of the site;	Appendix B-3
17.3 (c)	Emergency phone numbers for the local ministry office, the ministry's Spills Action Centre, and the local Fire Department;	Appendix B-1 & B-2
17.3 (d)	Measures to prevent spills, fires and explosions;	Section 10 & 11
17.3 (e)	Procedures for use in the event of a fire;	Section 10
17.3 (f)	Details regarding equipment for spill clean-up and all control and safety devices;	Section 11

17.3 (g)	Shut down procedures for all operations associated with the undertaking including alternative waste disposal site locations;	Section 7 &12
17.3 (h)	Maintenance and testing program for spill clean-up equipment and fire fighting equipment;	Section 5 & 11
17.3 (i)	Training for site operators and emergency response personnel; and,	Section 4
17.3 (j)	A plan, identifying the location and nature of wastes on site.	Section 10
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.	Section 11

Glossary of Terms

ACC: Air Cooled Condenser APC: Air Pollution Control **Bridging**: This occurs in the silos when there is a layer of material formed within which stops the flow of materials out of the silo. **CE**: Chief Engineer **CEM**: Continuous Emission Monitoring **Closed System:** A closed system is one that is not open to the environment. It is totally contained and enclosed. **CRO**: Control Room Operator **DCS**: Distributed Control System **DYEC**: Durham York Energy Centre – Refers to the facility **DYRE**: Durham York Renewable Energy Limited Partnership – Refers to in the ECA as Covanta/Durham/York **EA**: Environmental Assessment **EC**: Emergency Coordinator ECA: Environmental Compliance Approval, formerly CofA **EFW**: Energy from Waste **EFWAC:** Energy from Waste Advisory Committee **EPA**: Environmental Protection Agency **FM**: Facility Manager FSC: Facility Safety Coordinator **HWIN**: Hazardous Waste Information Network **MOE**: Ministry of Environment (Ontario) **MS**: Maintenance Supervisor **MSDS:** Material Safety Data Sheets **MSW:** Municipal Solid Waste **OEM:** Original Equipment Manufacturer **OJT**: On the Job Training **Rat-Holing**: Refer to bridging. It is the same occurrence as bridging except that there is a hole in the bridge that does allow for some flow of materials but the rate is greatly reduced.

ROC: Record of Complaint

SCBA: Self Contained Breathing Apparatus

SOP: Standard Operating Procedure

SS: Shift Supervisor

TSSA: Technical Standards & Safety Authority

USEPA: United States Environmental Protection Agency

WHMIS: Workplace Hazardous Material Information System

1. Introduction

The purpose of this SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN is to outline the course of action to be taken by Covanta employees, contractors and visitors in the event of an emergency. The objective of the SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN is to provide delineation of authority, responsibilities and procedures for employees to effectively respond to an emergency in order to:

- Safeguard company personnel, visitors and contractors
- Protect the general public and community
- Mitigate adverse safety/environmental impacts
- Protect property
- Ensure timely return to normal operations after an emergency.

This SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN has been prepared to meet the requirements set forth by the EA Notice of Approval to Proceed with the Undertaking and the Environmental Compliance Approval (ECA) 7306-8FDKNX.

Site Specific SOPs are to be developed to support this plan.

A copy of this plan can be found in the Control Room, Visitor Centre and Administration Office and is available to all staff.

2. Site Plan

Site Aerial View Equipment Layout and all Storage Areas for Wastes and Reagents

See Appendix A

This site is continually evolving and changing. The appendices will be updated once project construction is completed.

Site Security

Overall facility security depends on the proper management of the following security components:

- Control of access to the facility (entrance to property).
- Identification and control of all personnel that enter the facility.

The facility boundaries are delineated by fencing and access is controlled through an access gate:

- The service/truck entrance is located off Courtice Shores Road via the DYEC private access road. The gate is left open during normal business hours (7:00am until 7:00pm Monday through Saturday) and is to remain closed all other times. The gate is equipped with closed circuit television cameras that are linked to the Control Room.
- Public access to the Visitor's Centre can be accessed through the entrance located on Energy Drive.

Emergency Equipment

The exact locations of emergency equipment have yet to be determined. Their locations will be included once that has been established before the facility opens for operation.

There will be a first aid kit in the control room that can be taken to a scene if an employee or contractor is injured.

There will be two defibrillators for the facility. One in the control room and one in the visitor centre. There may be a third located in the administration building but that has yet to be determined.

There will be first aid cabinets located throughout the site.

Eye wash stations and showers will be in the areas where chemicals will be used. These will be located within reasonable proximity of potential hazards. If there is no permanent eye wash then the portable kit will be used. A list of chemicals which are used in the facility are listed on pages 38 - 41 of the plan, under the table titled: Equipment Breakdown and Control Measures.

Fire extinguishers are located according to building code. They will be stationed not more than 75 feet from any given location in an unsprinklered location and not more than 100 feet from any given location in a sprinklered location. The exact locations have yet to be determined.

Equipment Layout Drawings

See Appendix A-1

3. Contact Information

Appendix B-1 Contains a list of Key Contact Information which will be prominently displayed in the control room and available to all staff and emergency response personnel.

See Appendix B-1

Notification Protocol



4. Site Personnel

The following identifies site personnel responsibilities and reporting structure for the implementation of the emergency response plan and associated contingency measures.

The Senior Covanta Manager on site will assume responsibility for the emergency unless relieved by emergency services.



The FACILITY MANAGER holds overall responsibility for the facility during normal operations and in an emergency. The FACILITY MANAGER is responsible for generating and maintaining an up-to-date written SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN. They are also responsible for the state-of-readiness of the plant, emergency equipment and for ensuring required training is conducted. For an emergency event that occurs during normal business hours the FACILITY MANAGER or their designee is responsible and shall be in charge of the situation. For an emergency event that occurs during the evening shift, night shift or weekends the Shift Supervisor is in charge until the FACILITY MANAGER or their designee can be contacted and arrives at the facility.

Facility Manager (FM)

 Facility Manager – Overall responsibility for the SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN, including implementation and review to ensure that it meets the necessary objectives. Chief Engineer (CE)

• Chief Engineer – General responsibility to administer the SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN. In emergency situations to serve as lead person to coordinate activities, work with Shift Supervisors and outside support agencies as required.

Shift Supervisor (SS) & Control Room Operator (CRO)

 Shift Supervisors and Control Room Operators – General responsibility to understand and implement the SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN. In emergency situations, to respond as required – typically these individuals will be in charge of plant resources and coordinating outside support. As this is a 24/7 operation the Shift Supervisor may be in-charge until further assistance arrives on site.

Facility Safety Coordinator (FSC)

• Facility Safety Coordinator – General responsibility to administer *SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN*, conduct required training for employees, contractors and visitors and evaluate the effectiveness of the *SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN*. In emergency situations, to respond as required.

Maintenance Supervisor (MS)

 Maintenance Supervisor - General responsibility to provide support services to support the SPILL CONTINGENCY AND SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN and to respond as required.

Emergency Coordinator (EC)

 This is the member of management that takes charge of the situation. The EMERGENCY COORDINATOR shall communicate all response actions to those present at the scene and to the CRO, and shall remain in charge until relieved by another person capable of performing the duties at hand. The EMERGENCY COORDINATOR will notify all Regions of Durham/York personnel that are located at the facility, and advise them of the event and request them to the Assembly Area if the emergency dictates. If required on scene Emergency Service personnel e.g. Fire or Police will take charge of the scene and work with the Covanta EMERGENCY COORDINATOR. The Emergency Operating Centre will be located in the Control Room or alternate Administration Building. **Environmental Specialist (ES)**

• Their role is to be the record keeper, disperse the information internally and externally as required; they provide the guidance to the facility personnel in regards to regulatory requirements.

Essential Staff

- Essential Personnel are personnel that are directly involved in the emergency and those that are trained to assist in addressing the situation. The definition of which employees are Essential Personnel will vary depending on the circumstances. All Essential Personnel shall be trained on the SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN and their specific responsibilities during emergency events and evacuation. General responsibilities of Essential Personnel may include:
 - Assisting in evacuation by communicating evacuation routes/severe weather shelters to personnel during an emergency event.
 - If is it safe to do so, conducting sweeps of assigned areas during an emergency drill or actual emergency event.
 - Monitoring entrances to the facility.
 - Reporting the status of the evacuation to the EMERGENCY COORDINATOR.
 - Assisting the EMERGENCY COORDINATOR in emergency communications.
 - When directed by the EMERGENCY COORDINATOR, communicating to personnel when the emergency event is over and it is safe to re-enter the facility.

Non-Essential Staff

 Staff and Visitors that do not meet the definition of Essential Personnel, and include those that are not involved in the emergency and/or trained to assist during emergency situations. Non-Essential Staff should remain clear of the affected areas of the facility to ensure that they do not inadvertently become part of the emergency. In the event of an Emergency, Non-Essential staff will be directed by the EMERGENCY COORDINATOR and to report to the designated Emergency Control Centre unless the situation dictates otherwise.

Staff Training

To prepare personnel for operations and maintenance positions in the Facility, a comprehensive training program is implemented. The program combines classroom instruction, computer based training, and on the job training (OJT).

Annually, staff from Covanta, Durham and York Regions will meet with the Clarington Emergency and Fire Services personnel to review Facility Layout, alterations and communication protocol.

Initial training will provide new employees with all necessary information pertaining to company history, policies and procedures training. Initial training also covers safety procedures, Workplace Hazardous Materials Information System (WHMIS), facility systems and equipment trainings and environmental affairs training which includes applicable regulatory overview and facility permit review. Dependent upon job description, components of the training are summarized below:

- Introduction to Covanta and the Facility;
- Employee Handbook;
- Personnel Safety;
- WHMIS;
- Introduction to Facility Safety Procedures
- Lock-out/Tag-out
- Confined Space
- Respiratory Protection
- Electrical Safety
- Tipping Floor Safety
- Working at High Elevations
- Ash Discharger Safety
- Ash Hopper Safety
- Emission Compliance
- Occupational health and safety concerns pertaining to the processes and wastes to be handled;
- Management procedures including the use and operation of equipment for the processes and wastes to be handled;
- Environmental emergency and contingency procedures for the processes and wastes to be handled;
- Use and operation of the equipment to be used by the operator;
- Procedures for the refusal of unacceptable loads;
- Procedures for handling ash;
- Site specific written procedures for the control of nuisance conditions (typically noise and odour, vehicle and traffic, litter, dust, vermin and vectors and visual screening);
- Annual fire extinguisher training,
- Record keeping procedures; and

• The ECA and other regulatory requirements.

A manual including the aforementioned training will be given to each employee during training. Covanta will maintain a written record of the employee training, including the date of training, the name and signature of the employee and a description of the training provided.

Plant leadership will also complete the Health & Safety on Site Commander Training.

All employees working on site will receive relevant training as appropriate.

See Appendix D for complete training schedule.

Operating Engineers Act - Classification 1 – Chief Engineer, 2 – Shift Supervisor, 3 – Control Room Operator or Auxiliary Operator, 4 – Fuel Handlers

The Joint Health and Safety Committee

The Joint Health and Safety Committee represent the concerns of the workers and management. The Committee is made up of equal number of members representing management and workers and it is the cornerstone of the Internal Responsibility System. Committee Members are trained on Covanta Energy Corporation Safety Policies, Workplace Inspections, Hazard Recognition, and Accident Investigation. The Co-Chairs are trained Level 1 and 2 Workplace Certification.

5. Emergency Equipment and Testing

The Durham York Energy Centre is equipped with engineering safeguards and firefighting equipment to control fires.

Engineering Safeguards

The facility is equipped with a piped fire system to distribute water throughout the site. The fire piping loop is equipped with two separate feeds from the fire pump house and isolation valves to maintain continued operation even through one incident (i.e., water main rupture). There are hydrants and hose stations located throughout the loop to provide for quick external access to the water.

In addition, the fire main runs into the facility to supply the various sprinkler systems and hose stations installed. There are sprinkler systems protecting the turbine building and the refuse bunker, as well as standpipes running to hose stations on various elevations in the boiler building on both sides of the plant.

Alarms for these systems and various other temperature alarms are indicated on an annunciator panel in the Control Room. This system will help to detect a fire as quickly as possible.

Covanta Durham York Energy Centre is equipped to handle minor type fires throughout the facility. Equipment available to employees includes:

- Fire extinguishers (portable and fixed) Dry chemical and CO2
- Pressurized water system fire pump

Fire Extinguishers

Portable fire extinguishers are classified by their ability to handle specific classes and sizes of fires. Labels on extinguishers indicate the class and relative size of fire that they can be expected to handle. These units are inspected monthly to ensure their readiness. A system has been developed whereby the extinguishers will be sent out and re-charged when they are used. Replacement units are installed until replacement is complete.

Testing and Inspections of the Fire System

There will be a full fire system test and inspections done annually with the underwriter. Records will be maintained in Maintenance Management Systems and with the Underwriter. Emergency drills will be conducted at a minimum, one time per year.

Schedule

Device/Service/Action	Inspection Frequency Emergency Equipment Maintenance	Responsibility		
Fire Extinguishers				
Inspect Portable Extinguishers	Monthly	Operations		
Hydrostatic test – Co2/H2O	Annual	Contractor		
Hydrostatic test – Chemical	Annual	Contractor		
Smoke/Heat detectors				
Inspect and test	Monthly	Operations		
Repair and replace	As Identified	Maintenance		

Facilities	Facilities				
Facility exit lights and signs	Monthly	Operations			
Emergency lighting and	Weekly	Operations			
power supply					
Maintain entrances and	Daily	Operations			
exits void of obstructions					
Facility exterior lights	Monthly	Operations			
Repair and replace	As Identified	Maintenance			
emergency lights					
Diesel Fire Pump System	Weekly	Operations			
Plant Fire Hydrants	Annual	Insurer & Operations			
Scott Pack SCBA	Weekly visual and refill	Operations			
	with fresh Grade D air				
	every 90 days or after				
	Each Use				
Portable Air Quality	Daily	Operations			
Monitors					
Spill Kits (6)	Weekly or after Each	Operations			
	Use				
Emergency Sprinkler	Monthly	Operations			
System					
Radiation Detectors	As per OEM	Operations			
Eye Wash Stations	Weekly or after Each	Operations			
	Use				

Emergency

An Emergency may arise in the event of a Fire, spill of a chemical or fuel, severe weather, offsite activities (for example: train derailment), loss of power to facility, or equipment failure. This list is not intended to be a complete list of all scenarios which may result in an emergency. All emergencies will be acted upon in accordance with the procedures they trigger. This includes, but is not limited to evacuation and facility emergency shutdown procedures.

Emergency Drills

A documented rescue drill or practice rescue must be executed at least once every twelve months. When possible, emergency drills shall be coordinated to involve outside emergency response agencies.

A post-drill evaluation shall be performed. The drill evaluation shall include a summary of the event response activities and shall identify the aspects of the drill that were

successful as well as aspects that were not successful. The drill evaluation shall result in a report of the event with corrective actions if applicable. Corrective items identified in the drill evaluation report shall be addressed as necessary.

6. Emergency Procedures



All personnel on-site are to be accounted for during any evacuation. In order to ensure all persons on the premises are accounted for in the event of an emergency, there must be an accurate record of all people on site at any given time. The EMERGENCY COORDINATOR will notify all Regions of Durham/ York personnel that are located at the facility, and advise them of the event and request them to the Assembly Area if the emergency dictates.

The following tools shall be used to account for all persons on-site:

- Contractor sign-in sheets
- Control Room Log and recording system for confined space permits
- Visitor sign-in book

It is the responsibility of every employee to assist other employees, visitors and contractors if an evacuation takes place.

Since no two emergencies are alike, the following generic evacuation plan is to complement the standard operating procedures used for emergencies. It outlines the procedure to be used as part of the implementation of the plan.

Declaring Need for Evacuation

Upon being notified of an emergency or potential emergency situation the EMERGENCY COORDINATOR shall decide if/when an evacuation is necessary based on available information and shall address staff within the buildings via the public address system to call for evacuation when deemed necessary.

The EMERGENCY COORDINATOR shall communicate all response actions those present at the scene and shall remain in charge until relieved by another person capable of performing the duties at hand. All personnel will perform as directed by the EMERGENCY COORDINATOR. The EMERGENCY COORDINATOR will determine which emergency services and/or agencies are to be informed of the emergency. If there is a fire and it cannot be controlled by staff or if it will impact personal safety or the environment, the emergency services will be informed.



Critical Operations

Certain critical processes are those that would be severely jeopardized or create a serious/additional hazard if left unattended during an emergency evacuation. During some emergency situations it will be necessary for some assigned personnel to remain in the work areas to perform critical/shut down operations.

These critical operations are as follows:

Work Area:	Crane Pulpit	
Assignment:	Sets Fire Cannon as required	
Assigned Personnel:	Crane Operator/Field Aux	

Work Area:	Control Room	
Assignment:	Central Communications and trips breakers or Turbine	
	Generators as required	
Assigned Personnel:	Control Room Operator	

Work Area:	Fire Pump House	
Assignment:	Sets / Monitors Fire Pump Start	
Assigned Personnel:	Assistant Shift Engineer	

- Personnel involved in critical operations may remain in critical work areas by the permission of the EMERGENCY COORDINATOR.
- If the emergency situation will not permit personnel to remain in critical work areas, assigned personnel shall notify the EMERGENCY COORDINATOR and proceed with evacuation.

Declaring "All Clear"

When all personnel are accounted for and the facility is in a safe condition the "All Clear" announcement can be made by public address system, radio contact or as an announcement at the evacuation assembly location(s). The Emergency Coordinator will give the "All Clear" announcement to enter the Facility.

Evacuation Assembly Locations

The primary evacuation assembly locations at Covanta Durham York Energy Centre are:

Evacuation Centre 1 – Visitor Centre Evacuation Centre 2 – Scale House

Off Site Evacuation Centre – Across the road at the Ontario Power Generation building in their cafeteria.

Evacuation Routes

When an Evacuation is deemed necessary the EMERGENCY COORDINATOR will take into consideration such factors as weather conditions wind direction and the nature of the Emergency and direct the staff and visitors to either Evacuation Area 1 or 2

Evacuation routes are provided in Appendix G.

General Evacuation Procedure

The choice of escape route will depend on the nature of the emergency. Stairwells should be taken down to the ground level, and the nearest exit should be used to exit the building and proceed to the evacuation assembly location. **Elevators and man-lifts shall not be used for evacuation.**

- The evacuation alarm is sounded from the Control Room. The CRO shall announce a facility evacuation via the public address system, **Channel #1** on facility radios and by telephone.
- All personnel should listen for additional information and instructions.
- When outside support agencies are requested the EMERGENCY COORDINATOR shall designate a representative from Covanta to report to the main entrance to ensure emergency response vehicles enter and respond to the appropriate area(s) of the facility. This individual shall not interact with any media, but shall ensure support services get to the intended location as soon as possible. This individual should carry a portable radio and stay in contact with the EMERGENCY COORDINATOR.
- Personnel shall report to the evacuation assembly location and remain there until/unless otherwise directed.
- Facility personnel, contractors and visitors shall be accounted for using shift schedules, contractor sign-in/out logs and the visitor sign-in/out book. Each person identified as being on site by shift schedules, contractor sign-in/out logs and the visitor sign-in/out book will be designated as either "accounted for" or "missing". The facility maintains sign in logs in the control room and in the administration building and will be cross referenced in the event of an evacuation.
- The fire department will generally assume the role of Incident Commander during emergency events.
- Announcements regarding the emergency event and further direction will be made at the evacuation assembly location.

Events Requiring Local Evacuation:

Since the Durham York Energy Centre uses aqueous ammonia (19%) the risk of a release to the neighbourhood residents for evacuation is low. The EMERGENCY

COORDINATOR (EC) will advise the communities' emergency services (911) of the nature any event in the facility and if there is a risk to residents. Emergency Services would at that time notify the area residents of the event.

In the event of a spill that impacts CN Rail, they will be contacted at 1-800-465-9239 by the Emergency Coordinator.

7. Waste Procedures

MSW may be delivered to the DYEC 6 days a week from 7am to 7pm. All waste deliveries will enter through the gate and scale house. The trucks proceed to the tipping building where the refuse will be discharged into a concrete solid waste storage pit, the refuse pit. Refuse mixing and handling in the refuse pit and refuse feeding into the boilers will be handled by two refuse cranes designed to accommodate the increased processing capacity of the first expansion of the Facility.

Acceptance and bypass of refuse at the Facility is based on maintaining adequate pit inventory for current and future operating conditions; for instance single boiler operation during a scheduled maintenance outage.

Scheduled outages will be coordinated with refuse deliveries to minimize the impact of the Facility's short-term ability to accept waste, in turn, minimizing the need for bypassing refuse due to the lack of pit capacity. In the case of long-term or unscheduled outage, bypassed refuse will be directed to a licensed disposal facility.

Waste maybe received in an emergency outside of the facilities established receiving hours, however, the MOE District Office must be notified immediately.

Waste Screening Procedures

Waste will only be accepted from approved haulers that have a valid ECA, except for municipal or exempt vehicles as per Section 16(2) (a) of Regulation 347 *General – Waste Management*, made under the *Environmental Protection Act*, R.S.O. 1990.

The following materials (as defined by Regulation 347 *General – Waste Management*) represent Unacceptable Waste and are not accepted at the Facility:

- hazardous industrial waste;
- acute hazardous waste chemical;
- hazardous waste chemical;
- severely toxic waste;
- ignitable waste;
- corrosive waste;
- reactive waste;

- radioactive waste;
- pathological waste;
- leachate toxic waste;
- PCB waste; and
- liquid industrial waste.

In addition, waste which has been source separated for the purposes of diversion are Unacceptable Wastes.

Prior to hauling waste to the Facility, Durham and York Regions employ waste screening procedures to ensure that only appropriate residual waste is sent to the Facility. This includes, but is not limited to:

- Any locations that generate waste that is delivered to the Facility have access to at-source waste diversion programs;
- Durham and York Regions have municipal By-Laws that restrict generators from placing recyclable or hazardous materials in the waste stream;
- Durham and York Regions have By-Law Enforcement Officers that complete curbside checks of the waste; and
- Durham and York Region staff or contractors inspect waste being delivered to the transfer stations to ensure that it is acceptable.

All incoming waste vehicles must proceed to a weigh scale to allow the vehicle weight, waste type and source to be recorded by the scale operator. Radiation detection equipment is permanently mounted at the weigh scale in order to measure any potential radiation in incoming or outgoing loads. Additionally, trucks will be selected, at random, and screened for unacceptable waste. At a minimum one Facility personnel will be present in the tipping area while waste is being unloaded. Both the tipping area personnel and the refuse crane operator check for unacceptable waste that may be inadvertently accepted into the site.

Hourly a Load of waste will be spread on the Tip Floor and inspected for Unacceptable Waste or Hazardous Waste.

Trucks entering the tipping enclosure are directed to a specific tipping bay by a tipping floor operator and discharge their waste onto the floor for inspection by the tipping floor operators. Any Unacceptable Waste is removed and placed in a dedicated pile or area within the tipping building for subsequent disposal. Waste discharged onto the tipping floor would be for inspection purposes only.

Loads that contain the following unacceptable materials and thus would be in contravention of the site ECA and pose Health and Safety issues will be refused if detected:

- Hazardous materials (propane cylinders, full paint cans, used motor oil containers, etc.);
- Radioactive materials; and,
- Bio-medical wastes (sharps, hospital wastes, etc.).

In the unlikely event that unacceptable or prohibited waste is not detected until the waste hauler has left the site, the waste will be segregated, characterized and managed in accordance with Ontario Regulation 347.

Waste found to be leaking will be put into the appropriate bin or storage area. It will then be assessed and sent to the appropriate licensed landfill.

In Addition, the waste screening procedures are identified in *Appendix F – Points of Waste Inspection /Due Diligence.*

Handling of Unacceptable Waste

If after the normal screening procedures conducted by Durham and York Regions' waste collection and transfer programs, waste on a truck that has been unloaded in the tipping area fails to meet the applicable quality criteria specified in the ECA, the contents will be moved to a separate area within the confines of the tipping building for loading onto a waste transport vehicle to the appropriate disposal facility (assuming such material is neither leaking nor hazardous).

Hazardous material with an immediate threat (e.g. explosives, ruptured drums, etc.) will follow the procedure outlined below:

- Material should be left in place and roped off, if possible;
- Personnel and traffic should be prevented from working in the area;
- Appropriate government agency will be contacted;
- Unidentified and potentially hazardous waste will be sampled and tested at an approved laboratory;
- Specialist contactor will determine status of any suspect waste and provide specific handling procedure, if necessary,
- Removal of all hazardous materials from the facility will be accomplished in accordance to provincial and federal procedures and employing only licensed hazardous waste transporters; and
- All unacceptable or Hazardous Waste will be removed from site within 4 days

The Environmental Specialist will notify the Ministry of the Environment that the facility is bypassing waste. As well, the Ministry of the Environment will be provided with the reason and duration of the bypass.

SOP U RES 001 Unacceptable Waste Receiving Handling Storage and Disposal will identify the measures to be taken by facility staff upon finding Unacceptable waste and how it is stored, reported, and shipped off site to an approved receiver. This SOP will identify as unacceptable the waste as defined in ECA and material that is leaking liquids.

Handling of Radioactive Wastes

General Information

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

If the radiation detectors signal an alarm, the Scale house 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.

Any truck detected to contain radioactive material will be isolated on site for proper investigation and handling by Facility personnel. If a truck contains radioactive material, the entire load will be rejected. The majority of the loads will be returned to the generator or hauler. However, for approved circumstances a truck may be allowed, to be isolated in the tipping area 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.

All instances of radiation alarms will be documented and reported.

All radiation detection equipment and procedures will be followed in accordance with the Canadian Nuclear Safety Commission document titled: Alarm Response Guidelines for Radiation Portal Monitoring Systems.

Handling of Rejection Material and Bulk Waste

General

Durham York Energy Centre will receive and treat only municipal household waste, nonhazardous commercial waste, and solid waste specifically authorized by the Ontario Ministry of the Environment. The Facility will control 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. During waste receiving hours, the exit/entry point is controlled by a Security Guard. After operating hours, the exit/entry point gates are closed, with entry and exit from the Facility controlled by the Shift Supervisor.

Fugitive dust, odour, noise and debris emissions will be minimized in the Facility. The refuse will not be handled, received or stored in its unprocessed, as-delivered state at any location in the Facility, other than inside the tipping enclosure and refuse storage area.

SOP U RES 001 – Unacceptable Waste Receiving and Handling Storage and Disposal. See Appendix E.

Residual Waste Disposal & Contingency Plan

Covanta is responsible and provides for the transport and disposal of all bottom ash and conditioned fly ash produced by the DYEC. Non-hazardous bottom ash residues and conditioned fly ash residue may be transported to one or more of the following locations should the current disposal option become unavailable as part of the contingency:

- Niagara Waste Systems Landfill Thorold, Ontario
- Walkers Industrial Landfill Welland, Ontario
- Progressive Ridge Landfill Chatham Ontario

If ash testing conducted indicates that either bottom ash or conditioned fly ash exhibits characteristics that are unacceptable to the receiving landfill, offsite transport of the subject materials to that landfill will be immediately stopped. Covanta will fax an emergency request for proposals to those hazardous waste disposal firms capable of providing the services deemed necessary for handling and transporting the hazardous ash residue. Ash residues or Unacceptable Wastes identified as hazardous may be transported to one of the following locations:

- Clean Harbors Lambton Ontario Landfill
- Us Ecology Blainville Quebec Landfill

There will be agreements in place with licensed landfills in accordance with HWIN. The MOE will be notified prior to the use of any other alternative locations.

8. Complaints

To satisfy Condition 6 of the EA Approval, a Complaint Protocol has been developed which outlines how Covanta, Durham and York Regions will deal with and respond to inquiries, complaints and concerns received during the design, construction and operation of the EFW facility. All complaints will be handled through the Complaint Protocol. The general complaint management process detailed in the complaint protocol includes recording or logging the complaint, investigation into the complaint, resolution of the complaint and closing out the complaint.

General Process for Receiving Complaints or Concerns

The full complaint protocol can be accessed online at:

http://durhamyorkwaste.ca/pdfs/project/complaint/2011.06.20_Amended_DurhamYork% 20EFW%20Complaint%20Protocol.pdf

The Complaint Protocol is to be fully implemented with staff (known as First Responders) that 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.

During facility construction, or Phase 1, Durham and York Regions will act as the First Responders. Phase 2 will commence after the facility is operational and Covanta will take the role of the First Responder.

Public comments, complaints and concerns will be managed through one or more of the following means: email (direct or via project website), telephone, letter or fax. It is recognized that inquiries 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 facility phone number or email address for response and action.

The following means are available for the public to make complaints and concerns known:



Email: infod@durhamyorkwaste.ca

 Comment form from the project website: <u>http://www.durhamyorkwaste.ca/contactform.aspx</u>



- 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.
- Telephone DYEC facility operator (Covanta) 905-433-4872



Mail:

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

OR

- DYEC
- c/o Covanta
- 72 Osborne Road
- Clarington, ON
- L1E 2R2



- The Regional Municipality of York
- c/o EFW Project Team
- 17250 Yonge Street
- Newmarket, ON L3Y 6Z1

Fax:	Durham	905-666-6206
	York	905-830-6927
	Covanta	905-433-4889

General Description of Complaint Management Process

- 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 during construction and Covanta once the facility is operational.
- 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) during the construction period, and Covanta once the facility is fully operational at 905-433-4872.
- 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 Covanta 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.

Should the occurrence of a complaint require that the Owners have to suspend processing at the site, a controlled shut down will occur **SOP E ENV 020 – Emergency Shut Down of Facility**. The complaint will be verified by the FACILITY MANAGER or SHIFT SUPERVISOR. A negative draft pressure will be maintained. Waste will be diverted to an alternate licensed facility. A controlled shut down will be conducted.

9. Procedure for Negative Pressure

The Facility draws air for combustion from the Refuse Building where the incoming Waste is stored. Air flow is controlled to the Refuse Building through louvers on the face of the Refuse Building. A Negative Air Pressure is maintained in this building at all times when at least one of the Combustion Trains Induced Draft Fans is operating. This prevents odour from escaping the building and ensures its destruction through the combustion process.

The following actions are to be taken if the negative pressure cannot be maintained in the tipping floor:

- The two doors that allow traffic into and out of the building are to be closed at all times unless a vehicle is entering or exiting the Refuse Building.
- In the event odour is detected outside the building the control room operator and the shift supervisor shall be notified.
- The Facility will ensure the two vehicle doors as well as the any man-doors to the Refuse Building are closed unless in use. If the odour persists then the Building Louvers will be adjusted to further restrict air flow to the Refuse Building and thereby create a greater negative pressure in the Refuse Building.
- The exterior of the Refuse Building will then be inspected by the Shift Supervisor to ensure that no further odour is present.
10. Risk Analysis & Preventative Measures

The following describes the relationship between frequency and magnitude of events and their relationship to risk: High, Medium & Low. These risk ratings are utilized to establish the appropriate response to risk when breakdown occurs.

		Magnitude				
		Negligible	Minor	Moderate	Major	Extreme
Frequency	Rare	Low	Low	Low	Medium	Medium
	Unlikely	Low	Low	Medium	Medium	Medium
	Moderate	Low	Medium	Medium	Medium	High
	Likely	Medium	Medium	Medium	High	High
	Very Likely	Medium	Medium Medium		High	High

Equipment Breakdown and Control Measures

#	RISK	Risk Assessment 1= High, 2= Medium, 3=Low	Control Measures	Location	How to Reduce Risk Potential
1	Lime	3	Closed System	Lime Silo APC	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
2	Activated Carbon	3	Closed System	Activated Carbon Silo APC	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
3	Diesel Fuel Fire Water	2	Containment & SOP	Fire Water Pump House	Daily operator care rounds (visual inspections), weekly performance testing and the

4	Pumps Diesel Fuel Pump	1	Containment & SOP	West Side Refuge Building	use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis. Daily operator care rounds (visual inspections), and the use of a computerized maintenance management
					preventative maintenance and monitor system performance on an ongoing basis.
5	Diesel Fuel Generator	2	Containment & SOP	West Side Boiler Building	Daily operator care rounds (visual inspections), weekly performance testing, monthly performance testing under load and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
6	Cement	3	Closed System	Residue Building	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
7	Pozzolan	3	Closed System	Residue Building	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
8	Boiler Water treatment Chemical	3	Containment & SOP	Boiler Building 1st Floor	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor

					system performance on an ongoing basis.
9	Anti Scalent (RO) Inhibitor Water treatment	3	Closed System	Turbine Building 1st Floor	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
10	Sodium Bisulfite Inhibitor Water treatment	3	Closed System	Turbine Building 1st Floor	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
11	Sulfuric Acid Inhibitor Water treatment	3	Closed System	Turbine Building 1st Floor	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
12	Caustic Soda Inhibitor Boiler Water treatment	3	Closed System	Turbine Building 1st Floor	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
13	Air Compress or Oil	2	SOP	Boiler Building 1st Floor	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
14	Pump Lube Oils	2	SOP	Maintenance Shop	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to

					schedule preventative maintenance and monitor system performance on an ongoing basis.
15	Bearing an Conveyor Grease	3	SOP	Maintenance Shop	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
16	Turbine Lube Oil	3	Containment & SOP	Turbine Building	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
17	19 % Aqueous Ammonia	3	Closed System	Ammonia Receiving Area	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
18	Odour from Refuse Building	2	Plant Draft Control & Procedures	Refuse Building	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis in accordance with the odour management and mitigation plan.
19	Residue from Residue Building Dust Collection Systems	2	Equipment & SOP	Residue Building	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.

20	Fire Refuse Building Minor Fire	1	Water Monitors & SOP	Refuse Building Plant	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
21	Plant	3	Fire Pumps & SOP	General	(visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
22	Major Fire Plant	2	Hydrants Fire Pumps & SOP Fire Dept.	Plant General	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
22	Truck Fire	1	Hydrants Fire Pumps & SOP	Plant General	Haulage contractor training and awareness.
23	Boiler Tube Failure	2	CEMs & SOP	Boiler Building and APC	Daily operator care rounds (visual inspections) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
24	I ransform er Oil	2	Inspections of transformer secondary containment on a daily basis.	I 1 switch yard.	Daily operator care rounds (visual inspection) and the use of a computerized maintenance management system to schedule preventative maintenance and monitor system performance on an ongoing basis.
25	Waste Water	1	Daily inspections of waste	Yard	Daily operator care rounds (visual inspections) and the use of a computerized maintenance

	water pond.	management system to
		schedule preventative
		maintenance and monitor
		system performance on an
		ongoing basis.

Spills clean up as prescribed in **SOP S ENV 002 Spills Clean up and Disposal** will be used. Spills Clean Up provides detailed instructions to site staff on the required actions to take should a spill occur.

- 1) Hydrated Lime is transported, transferred and stored in a Closed Systems to contain it from being released.
- 2) Carbon is transported, transferred and stored in a Closed Systems to contain it from being released.
- 3) Diesel Fuel is transported, transferred and stored in a Closed Systems to contain it from being released. Secondary Containment and SOPs controlling it dispensing are used as well. **SOP R ENV 004 directs employees in the safe receiving, handling, dispensing of diesel fuel.** The SOP also details **emergency response and clean up instructions in the event of a spill.**
- 4) Cement is transported, transferred and stored in a Closed Systems to contain it from being released.
- 5) Pozzolan is transported, transferred and stored in a Closed Systems to contain it from being released.
- 6) Boiler Treatment and Water Treatment Chemicals (Anti Scalent Bi Sodium Sulfite) are transported, transferred and stored in a Closed Systems to contain it from being released. Secondary Containment and SOPs controlling its dispensing are used as well. **SOP R ENV 003 directs employees in the safe receiving, handling, dispensing of all onsite boiler water treatment chemicals. The SOP also details emergency response and clean up instructions in the event of a spill.**
- 7) Sulfuric Acid & Caustic Soda are transported, transferred and stored in a Closed Systems to contain it from being released. Secondary Containment and SOPs controlling it dispensing are used as well. **SOP R ENV 002 directs employees** in the safe receiving, handling, dispensing of sulfuric acid and caustic soda. The SOP also details emergency response and clean up instructions in the event of a spill.
- 8) Hydraulic, Compressor, Pump & other Lubricating oils are transported, transferred and stored in a Closed Systems to contain it from being released.

SOPs controlling its dispensing are used. SOP R ENV 001 directs employees in the safe receiving, handling, dispensing of hydraulic, compressor and pump lubricants. The SOP also details emergency response and clean up instructions in the event of a spill.

- 9) Aqueous Ammonia (19%) Lime is transported, transferred and stored in a Closed Systems to contain it from being released. Secondary Containment and SOPs controlling its dispensing are used as well.
- 10) Odour from the Refuse Building is control by the negative pressure control to the Refuse Pit and Tip Floor (see Procedure for Negative Pressure (Section 9).
- 11) Residue from Residue Building Dust Collection Systems control is controlled by Preventive Maintenance Inspections and SOPs. **SOP D REF 002 directs employees in the safe operation of the dust collection systems and actions required during system upsets to negate a release.** The SOP also details **emergency response and clean up instructions in the event of a release.**
- 12) Fire Refuse Building is controlled via our Fire system and Water Monitors and SOPs. SOP R FPS 002 directs employees in the safe operation of the fire refuse building and actions required during system upsets to negate a release. The SOP also details emergency response and clean up instructions in the event of a release from this area.
- 13) Minor Fire, Plant or Truck, are controlled via our Fire system and fire hydrants in plant and SOPs. SOP M FPS 006 directs employees in the safe operations and actions required in the event of a minor fire in either the plant or an onsite truck and the actions required to negate a spill or release during this activity. The SOP also details emergency response and clean up instructions in the event of a release.
- 14) Major Fire, Plant or Truck, are controlled via Clarington Fire Department, our Fire system and fire Hydrants in plant and SOPs. SOP M FPS 005 directs employees in the safe operations and actions required in the event of a major fire in either the plant or an onsite truck and the actions required to negate a spill or release during this activity. The SOP details the co-ordinations efforts between Covanta and the Clarington Fire Services as well as details for emergency response and clean up instructions in the event of a release.
- 15) Boiler Tube Failure are controlled trough SOPs and the use of the CEMs to provide to operator control points to operate to. **SOP B BLR 034 directs employees in the safe operations and actions required in the event of a boiler tube leak and those actions required to negate a spill or release during this activity. The SOP details the operation of the CEMS to monitor**

and control the event as well as details for emergency response and clean up instructions in the event of a release.

Containment Evaluation

The scope of this evaluation is to confirm the effectiveness of the containment, in accordance with the containment test protocol. As noted by the table below, the evaluation will be conducted initially as constructed prior to the receipt of waste by the DYEC and then repeated periodically as directed by the MOE District Manager.

Containment Inspection and Testing Matrix

CONTAINMENT ENCLOSURE	MECHANISM OF CONTAINMENT	INITIAL INSPECTION	PERIODIC INSPECTION AND TESTING
Tipping Building	Negative Pressure by supplying Boiler Combustion Air	Engineering Evaluation and Review	Calibration of Boiler Combustion Air Flow meter
Refuse Pit	Water Stops in Pit	Engineering Evaluation and Review of the Pit	Groundwater monitoring
Grizzly And Residue Building	Dust Collection System	Engineering Evaluation and Review of the Dust collection system	Visual test using USEPA Method 9
Ammonia Tank	Dike And Pressure Vessel	Engineering Evaluation and Review of the tank	Visual Inspection
Carbon, Lime, Pozzolan and Silos	Bin Vent Filters	Engineering Evaluation and Review of the silos	Visual test using USEPA Method 9
Diesel Fuelling Station	Spill Containment Area	Engineering Evaluation and Review	Visual Inspection
Fire Pump Diesel Tanks	Tanks	Engineering Evaluation and Review	Visual Inspection

Exterior Bottom Ash and Fly Ash Conveyors	Silicone Gaskets and Bearing Seals	Engineering Evaluation and Review	Visual test using USEPA Method 9
Boiler Chemicals and Reverse Osmosis Chemicals	Store in Chemical Totes and Curbed Containment	Engineering Evaluation and Review	Visual Leak Inspection

Preventive Measures:

All air pollution control processes are integrated with the Facility's distributed control system (DCS). The DCS includes annunciation to inform operators if a system is not achieving a specific set point. This alarm system is designed to enable operator interface to avoid a situation where stack emissions are greater than desired. If an equipment malfunction creates a situation where the concentrations are above the maximum allowable limit, operators and the DCS will implement efforts to remedy the situation before an exceedance of the limit occurs.

To control emissions to the atmosphere during the transfer of reagents from trucks into storage units at the facility, carbon, Pozzolan, cement, and lime will have a bin-vent type dust collector.

Ammonia will vent back into the truck. In addition, the ammonia tanks will be dyked to contain any potential spillage and any spillage from the dry reagents will be clean-up.

Silos will be designed to prevent bridging and rat-holing of the reagent for consistent operation.

Storage silos for dry material will be designed such that a delivery truck mounted blower will be capable of unloading the reagent directly into the silo by means of a positive pressure conveying system through a fill pipe to the top of the silo. The conveying air will be exhausted from the bin through a silo vent type dust collector.

The dust collector will be provided complete with an exhaust fan, sized for approximately 17.4 Nm³/min, a differential pressure gauge and switch, and a pulse-jet type of dust collector system. The maximum air-to-cloth ratio will be approximately 1 m/min.

All site storm and run off water drain to pond on site. The pond will be inspected daily. In the event of a spill in the facility the absorbent sock and manhole covers would be used to prevent the spill from reaching the pond see **SOP S ENV 002 Spills Clean up and Disposal (**provides detailed instructions to site staff on the required actions to take should a spill occur) for instruction. **SOP S ENV 004 Storm Water Pond Management** (provides detailed instructions to site staff on the safe operation and monitoring of the storm water pond and those actions necessary in the event of a release to the pond) will outline the system description, the daily pond operation and measures to be taken in the event of a spill in the facility that is suspected to have made its way into the storm sewer system.

There is enough storage in the secondary containment for the entire contents of the silos plus an additional 10% capacity should there be a failure and therefore it will not enter the surrounding environment. The TSSA guidelines will be followed. Procurement will minimize the amounts of product coming onto the site. Upon expiry of the product or once used, the materials will be disposed of properly by transferring them to licensed landfills.

Maintenance and inspection logs will be maintained to document the preventative measures program.

Carbon Storage

Activated carbon will be stored in a silo. A pneumatic feed system injecting activated carbon directly into the flue gas duct-work, downstream of the economizer will be fed from a common activated carbon storage silo.

The silo will be located adjacent to the APC area and will be sized for 1 ½ truckloads, approximately 115 m3.

The silo will be able to store enough carbon for approximately 84 days of use for the Facility.

A truck fill panel, fill pipe and vent filter will be provided to convey carbon from the bulk delivery truck to the silo using the truck's conveying blower. Self-unloading carbon truck deliveries average approximately 20 tonnes per delivery. During filling, the conveying air will be exhausted from the silo through a silo vent type dust collector.

The truck unloading operation is expected to take between 2 and 3 hours to complete.

Lime Storage

Storage silo size for the lime will store approximately 40 tonnes of hydrated lime.

Lime for the APC system will be delivered to the Facility in self-unloading trucks and stored in a storage silo.

The truck unloading operation is expected to take between 2 and 3 hours to complete. Self-unloading lime truck deliveries average approximately 20 tonnes per delivery.

Pozzolan and Cement Storage

Silos will be located outside of the residue building near the ash conditioning system.

Storage silo size for the Portland cement and Pozzolan will store approximately 35 tonnes of each reagent.

The silo is designed such that the delivery truck mounted blower will be capable of unloading the cement or Pozzolan directly into the silo by means of a positive pressure conveying system through a fill pipe to the top of the silo. The conveying air will be exhausted from the bin through a silo vent type dust collector.

Ammonia Storage

Ammonia will be stored in a 36 m³ storage tank located southeast of the APC building. The ammonia storage tank installation will be in accordance with *Guidelines for Environmental Protection Measures at Chemical and Waste Storage Facilities* (May 2007) and other applicable requirements.

Secondary containment will constructed with a contained volume of impoundment equal to 110% of the volume of the tank, and such that the horizontal trajectory of a potential leak from the tank will confined within the impoundment.

Aqueous ammonia solution will be delivered to the facility in tank trucks with carrying capacity of approximately 22.7 m³. Trucks will be unloaded using truck mounted transfer pumps, and vapour displaced from the receiving tank will vent back to the truck to prevent the release of ammonia vapour during the unloading process.

CEMS Exceedance

Monitoring, and Reporting of Plant Emission Values

The following "Decision Trees" outline the course of action in the event that a possible CEMs Exceedance occurs for: High Sulfur Dioxide (SO2), Baghouse Inlet Temperature, Nitrous Oxide (NOx), Opacity, High Sulfur Fuel, Carbon Monoxide (CO), Reactor Reagent Feed Failure, Hydrochloric Acid (HCL), Oxygen (O2) High & Low, and Loss of Carbon.

In accordance with ECA section 6(4):

"In the event that the CEM Systems indicate that emissions from the Boilers and the Stack exceed any Performance Requirements in Schedule "C" of the ECA for a continuous three (3) hour period, DYRE shall forthwith cut-off all Waste feeding into the affected Boiler and initiate an Emergency Shutdown, while maintaining a temperature of 1000 C, as practicable in the combustion ofthe Boiler."



BAG HOUSE INLET TEMPERATURE REDUCTION PROCEDURE







HIGH SULFUR FUEL Section 7.3 ecom manual High sulfur fuel CRO notify SS Verify Operation of CEM CRO ensure Hydrated Lime feeder system is ramped to 100%. CRO monitors 1 hour, 8 hour, 24 hour SO2 averages on the CEMS screen Are SO2 outlet YES CRO contacts crane operator and levels excessive? request a change in fuel feed. Return to normal return to normal refuse feed rate. NO Crane operator changes Fuel feed location. Continue monitoring SO2 levels a fuel feed until normal. YES Have SO2 NO YES levels decreased? Secure feeding Have SO2 trash to the unit NO levels until SO2 is decreased? under control Place gas burner in service and reduce combustion rate.



REACTOR REAGENT FEED FAILURE









LOSS OF CARBON PROCEDURE



Power Failures

The Facility includes the following design components for power disruption prevention and mitigation:

- The Facility is equipped to continue processing waste for an indefinite period of time as long as either the turbine generator is producing power or the plant is receiving back feed power from the electrical grid. In the rare event the both the turbine generator and the provincial grid power sources are unavailable, the facility can run for a short time on the standby diesel generator and battery systems that are designed to automatically engage to safely control and shut down the facility if required.
- The Facility has a purchase agreement to buy or sell electricity from Hydro One;
- A steam driven boiler feed water pump will be maintained on standby for use during emergency conditions, in the event of an electrical power failure;
- In case of a station blackout, a standby 250 kW 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 power. The stand-by diesel generator is located on the west side of Facility (Appendix A-4). A double walled fuel tank will supply the diesel generator and will provide approximately 12 hours full-load operation. The fuel tank is equipped with level control and indication and low-level alarm. In the case of a station blackout in excess of 12 hours, the tank will be refilled from a mobile fuel tank, thus allowing indefinite operation of the standby generator. The fuel tank in double walled to ensure spill containment and compliance with Technical Standards and Safety Authority (TSSA) Liquid Fuels Handling Code (2007) requirements. The diesel driven, synchronous generator is connected to a standby motor control centre. Essential loads for shutdown will be grouped on to the standby motor control centre. Upon loss of normal power, the diesel generator will start automatically and come up to speed, and an automatic transfer switch will transfer power to the standby motor control centre long enough to safely shut down the plant.
- A 125 Vdc battery distribution system will be provided to supply critical equipment and protective devices for a minimum of 4 hours following a complete loss of normal power. Typically, battery loads would include medium and low voltage switchgear breaker controls, the uninterruptible power supply system, annunciator(s), various critical control circuits, emergency lube oil pump; emergency seal oil pump, control room emergency lighting, etc. At the end of the 4-hour duration, the batteries will have capacity to close all circuit breakers required to re-energize the battery charger.

During start-up of thermal treatment process, natural gas shall be used for one (1) auxiliary burner in each furnace to raise the temperature in the furnace to above 1000°C. This process (Phase 1 – Start-up) will take about 6 hours prior to MSW being fed into the system. Phase 2 of start-up is the transition period when MSW (60% of heat

input) is initially charged to the grate and auxiliary burners (natural gas 40% of heat input) are in operation until stable steady state combustion is achieved.

During shutdown, MSW charged to the feeding grate will be discontinued. Further natural gas from the auxiliary burner will supplement the shutdown process to ensure complete burnout of MSW.

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

Fires

General Procedures shall be followed to address fires:

- 1) Determination of major or minor fire must be made. Inform the Control Room, the exact location of the fire.
- 2) Upon being notified of a fire, notification will be given via the public address system.
- 3) If the fire is believed to be minor and controllable, use appropriate personal protective equipment and isolate the fuel source without exposure to heat, smoke or poor air quality.
- 4) If the fire is believed to be minor and controllable, determine what personal protective equipment and fire extinguishing equipment is required. Obtain the proper extinguisher (A, B,C)

- 5) If the fire is believed to be minor and controllable, only trained staff may attempt to extinguish the fire if it is safe to do so.
- 6) While trying to control a fire always maintain your position to be able to escape through an available exit.
- 7) Call 911 for all fires.
- 8) The EMERGENCY COORDINATOR will notify all Regions of Durham/ York personal that are located at the facility, and advise them of the event and request them to the Assembly Area if the emergency dictates.
- 9) If electrical or other equipment is in the vicinity of the fire, shut down/secure equipment as necessary.
- 10) Shall reduce boiler loads to a minimum. If necessary close the feed chute dampers.
- 11) Prepare for major fire response procedures in the event the fire is not able to be extinguished or contained.
- 12) Instruct the Scale House operator to close the scales, clear all truck traffic and stand- by to open Scale House gate for the fire department and direct them to the fire.
- 13) Evacuate building and await emergency fire services
- 14) If the burning substance has been identified, make its MSDS readily available for the fire department when it arrives.

Major Fires

Major fire: fire which is beyond the point where it can be controlled by portable fire extinguishers or small hose systems without the need for protective clothing or breathing apparatus.

Minor Fires

Minor fire: fire which is in the initial or beginning stage and can be controlled or extinguished by portable fire extinguishers or small hose systems ($1\frac{1}{2}$ " fire hose).

Explosions

Explosions: the sudden release of energy is controlled at the facility by such measures as Housekeeping, Flame Management Systems, Pressure Relief Devices, CEMs and SOPs.

11. Spills

The EPA definition of a spill: "spill", when used with reference to a pollutant, means a discharge,

- (a) Into the natural environment,
- (b) from or out of a structure, vehicle or other container, and
- (c) that is abnormal in quality or quantity in light of all the circumstances of the discharge,

In more general terms, a spill is essentially any accidental, abnormal or unintentional release of a pollutant discharged into the natural environment from or out of a man-made container.

All necessary measures will be taken immediately to clean up and contain any spill or leak in accordance with this plan. The materials and equipment outlined in the plan will be immediately available at the site. Such mechanisms will be in a good state of repair and fully operational at all times. All site personnel responsible for the emergency situation response will be fully trained in the use of this equipment and materials as well as the procedures in the event of an emergency.

All spills shall be recorded in the log book and will include the nature of the situation, the steps taken to clean it up and the corrective and preventative measures to be taken to ensure that future occurrences will be minimized.

Reportable and Non-Reportable

Per the Environmental Protection Act (EPA), Part X, the facility will comply with the reporting guidelines as outlined in the Act.

Reportable

Section 92 of the EPA states that every spill of a pollutant must be reported. However O. Reg. 675/98 provides a number of exemptions to section 92. An important exemption provided in Ontario Regulation 675/98 permits a person, through the development of a spill prevention and contingency plan, to identify those spills that are not subject to 92 because they satisfy the regulation's requirements for "non-reportable" spills.

Please refer to O. Reg. 675/98 Classification and Exemptions for a complete list of reportable spills and the exemptions that may apply.

- All Spills as defined in the EPA shall be immediately reported to the Ministry's <u>Spills Action Centre at 1-800-268-6060</u> and shall be recorded in the log book as to the nature of the emergency situation, and the action taken for clean-up, correction and prevention of future occurrences.
- Spills report Form (see Appendix C) is to be completed prior to the end of the shift by the Shift Supervisor.

Reporting Spills to the MOE:

Per ONT Reg. 675-98

Notice shall be given immediately by telephoning the Spills Action Centre (1-800-268-6060 or 416-325-3000) and providing the information required by subsections (3) and (4) to the person who answers the telephone call. O. Reg. 225/07, s. 7.

General Procedures – Reportable Spills

- Upon being notified of the spill an announcement via the public address system will be made to notify the identity and location of the spill, and that it is considered to be "major and beyond control".
- Call MOE Spills Action Centre.
- Obtain assistance from external agency specialized in environmental remediation and containment.
- Obtain copy of MSDS for material spilled and assist those on scene as needed by providing information contained in the MSDS.
- If electrical or other equipment is in the vicinity of the spill, shut down/secure equipment as necessary.
- The EMERGENCY COORDINATOR will notify all Regions of Durham/ York personal that are located at the facility, and advise them of the event and request them to the Assembly Area if the emergency dictates.
- Prepare for evacuation procedures in the event the spill is not able to be contained. As the EMERGENCY COORDINATOR, will determine and communicate the need for additional and/or evacuation procedures to the Control Room.
- Notify Regulatory Agencies Agency notification will be made by the Environmental Specialist.

General Procedures – Non-Reportable Spills

Control Room

- Upon being notified of the spill the CRO shall contact the Shift Supervisor to determine the need for additional actions, including providing additional resources to the scene.
- Obtain MSDS for material spilled and assist those on scene as needed by providing information contained in the MSDS.
- Maintain contact with someone at the scene as much as possible.

Shift Supervisor

- The Shift Supervisor shall assume command of the situation and approve and coordinate spill response activities.
- Facility Manager or designated will report to all Regulatory Agencies.

Spills Scenario

In the event of a spill, refer to **SOP S ENV 002 Spills Clean up and Disposal**. Spills Clean Up provides detailed instructions to site staff on the required actions to take should a spill occur.

Risk 1= High

3= Low

Process Chemicals and Fuels Stored on Site

The following outlines the list of equipment and materials required for the implementation of the spill contingency measures and the emergency response.

2= Medium

	Process Chemicals and Fuels Stored on Site C of A 11 (2) a	Volume	Risk C of A 11(2) a	Location
1	Lime	185,000L	3	Lime Silo APC
2	Activated Carbon	99,000L	3	Activated Carbon Silo APC
3	Diesel Fuel Fire Water Pumps	2,650 L	1	Fire Water Pump House
	Diesel Fuel Pump	4,540 L	1	West Side Refuge Building
4	Diesel Fuel Generator	1,135 L	2	West Side Boiler Building
5	Cement	65,000L	3	Residue Building
6	Pozzolan	105,000L	3	Residue Building
7	Corrosion Inhibitor Boiler Water treatment	500L	3	Boiler Building 1st Floor
8	Oxygen Scavenger Inhibitor Boiler Water treatment	500L	3	Boiler Building 1st Floor
9	Anti Scalent Inhibitor Boiler Water treatment	500L	3	Boiler Building 1st Floor
10	19 % Aqueous Ammonia	57,625L	3	Ammonia Receiving Area
11	Turbine Lube Oil	7,000L	2	Turbine Building
12	Air Compressor Oil	800L	2	Boiler Building 1st Floor
13	Pump Lube Oils	500L	2	Maintenance Shop
14	Bearing an Conveyor Grease	50L	3	Maintenance. Shop
15	Water Treatment Reagents	10 L	3	Lab 3rd Floor
16	Sulfuric Acid Inhibitor Water treatment	500L	2	Turbine Building 1st Floor
17	Caustic Soda Inhibitor Boiler Water treatment	500L	2	Turbine Building 1st Floor
18	Anti Scalent (RO) Inhibitor Water treatment	500L	2	Turbine Building 1st Floor
19	Sodium Bisulfite Inhibitor Water treatment	500L	3	Turbine Building 1st Floor

Chemical Storage Areas Appendix A

Identified Hazards of each Tank/Silo

Material	Hazard
Lime	Non-flammable with no known effects due to over exposure. Can become an airborne irritant when dust becomes concentrated.
Activated Carbon	Non-flammable but very toxic (carcinogen). Toxic. (skin and eye irritant) Harmful if inhaled or swallowed.
Diesel Fuel	Combustible liquid, non-reactive but oxidizers should be avoided. Vaporizes at 40C – vapours may cause nervous system effects.
Cement	Not a combustible. Will cause respiratory irritation in its dust form but does not cause any immediate hazard. Wet cement can cause chemical burns to skin.
Pozzolan	Non-combustible. May cause eye irritation in its dust form. Contains crystalline silica. (prolonged exposure can cause silicosis) Not compatible with oxidizers.
19% Aqueous Ammonia (NH3)	Corrosive liquid - may be fatal if swallowed. Vapor is toxic and irritating to eyes, nose, throat and skin. Liquid will burn skin and eyes. Vapor is flammable under limited conditions.

Spill Kit Inventory

The spill kits include the tools and material used to address spills in the facility.

Spill Kit Inventory			
		Contents	
Location	Amount	Items/Kit	
Residue Building Universal Spill Kit (1)	25 25 10 5 10 2 2 2 2 1 1	Universal absorbent pads (grey) Oil absorbent pads (white) Universal absorbent socks (blue) Oil absorbent socks (white) Disposal bags (clear) Large Tyvek suits 3x Large Teak suits Pair of mono-goggles Pair of goggles Neoprene drain cover Roll of caution tape	
Water Treatment Boiler Building Acid Spill Kits (3)	6 50 6 4 2 4 9 2	4kg ACD powder neutralizer w/colour Absorbent pads (grey) Absorbent socks (grey) Pair nitrile gloves Pair of safety glasses Teak coveralls Disposable bags Neoprene drain cover	
Diesel Tank Loaders	35 35 3 9 2 2 1 5	Universal absorbent pads (grey) Oil absorbent pads (white) Universal absorbent socks (grey) Hydrophobic absorbent socks (blue) Mono-goggle face shield Nitrile gloves Epoxy stick Disposal bags	

Maintenance Building	25 25 4 2 2 10 1 2 3	Universal absorbent pads (grey) Oil absorbent pads (white) Hydrophobic absorbent socks (blue) Mono-goggle face shield Nitrile gloves Disposal bags Neoprene drain cover Teak coveralls Bag of granular absorbent
Catch Basins	25 25 4 2 2 10 1 2 3 1	Universal absorbent pads (grey) Oil absorbent pads (white) Hydrophobic absorbent socks (blue) Mono-goggle face shield Nitrile gloves Disposal bags Neoprene drain cover Teak coveralls Bag of granular absorbent Oil Boom at both ponds
Scale House	25 25 4 2 2 10 1 2 3	Universal absorbent pads (grey) Oil absorbent pads (white) Hydrophobic absorbent socks (blue) Mono-goggle face shield Nitrile gloves Disposal bags Neoprene drain cover Teak coveralls Bag of granular absorbent

There will be contracts in place with clean up companies in the event that the spills are too large to be done by trained plant personnel.

Note that we do not decant or off load near storm drains.

Vendor Contact Information Appendix B-4

12. Shut Down of the Facility – Complete & Controlled

In accordance with ECA section 6(4):

"In the event that the CEM Systems indicate that emissions from the Boilers and the Stack exceed any Performance Requirements in Schedule "C" of the ECA for a continuous three (3) hour period, DYRE shall forthwith cut-off all Waste feeding into the affected Boiler and initiate an Emergency Shutdown, while maintaining a temperature of 1000 C, as practicable in the combustion ofthe Boiler." All exceedances will be reported to the MOE in accordance with the Coordinator and EA conditions.

SOP E ENV 020 – Emergency Shut Down of Facility. A negative draft pressure will be maintained. Waste will be diverted to an alternate licensed facility. A controlled shut down will be conducted.

SOP B BLR 006 – Boiler Emergency Shutdown. This SOP outlines the steps taken to shut down the boilers.

In the event that the facility shuts down and is unable to receive MSW, it will initially be diverted to the listed licensed landfills in section 7 until the transfer station can begin to divert it.

13. Document Review

This Contingency and Emergency Response Plan has been developed in consultation with the following organizations:

- Covanta
- The Ministry of the Environment
- Durham and York Regions
- Clarington Emergency & Fire Response
- CN
- Clarington Planning Department

This document was shared with EFWAC for review and comment in accordance with the ECA and EA conditions.

Subsequent reviews will be shared with key agencies that have jurisdictional mandates to the satisfaction of the MOE.

14. Review Schedule

In accordance with the ECA 11(6), The Contingency and Emergency Response Plan shall be reviewed on a regular basis and updated, as necessary. The revised version of the Contingency and Emergency Response Plan shall be submitted to the local Municipality and the Fire Department for comments and to the District Manager for comments and concurrence.

15. Reporting Requirements

In the event that there is an issue of non-compliance, SOP's will be implemented and reporting requirements as governed by the ECA will be followed.

16. Document Control

This plan will be amended from time to time to update the plan until it is finalized. Revisions will be shared with agencies that have jurisdictional agreements and mandates.

AMENDMENT NUMBER	DATE OF AMENDMENT	AMENDMENTS MADE BY (Name& Initials)
Original Issue		
Revision # and reason		

Agency	Date	Signature
Clarington Emergency & Fire		
Clarington Planning		
MOE District Office		

Appendix

- ✓ A. Equipment layout and all storage areas for wastes and reagents
- ✓ B. Key Contact Information
- ✓ C. Spill Reporting Form

Appendix A-1



- 1) NH3 Storage
- 2) Lime storage
- 3) Carbon Storage
- 4) Assembly Area #1
- 5) Assembly Area #2
- 6) Waste Storage (Refuse Building)
- 7) Ash Residue Storage

Appendix A-2



- 1) NH3 Tank
 2) Lime Silo

- 3) Carbon Silo4) Diesel Fire Pump Fuel Storage
Appendix A-3



- 1) NH3 Storage
 2) Lime Silo
- 3) Carbon Silo

Appendix A-4



- Diesel Standby Generator Fuel Storage
 Cement and Pozzolan Silos

Appendix A-5



Appendix B -1 - Key Contact Information

Name	Title	Contact #
As appointed by Covanta	Facility Manager	905-433-4872
	Chief Engineer	905-433-4885
	Shift Supervisor	
	Control Room Operator	
	Facility Safety	
	Coordinator	
	Maintenance Supervisor	

Type of Service	Organization	Contact #
Fire/Explosion, Rescue	Fire Department	911
Services		
Medical Emergencies	Ambulance	911
Natural Gas	Enbridge	1-866-763-5427
Diesel Release		
Lime		
Pozzolan		
Portland Cement		
Active Carbon		
Liquid spills or Releases	ТВА	ТВА
Alternative liquid spills or Releases	ТВА	ТВА
Spills Reporting	Ministry of Environment Spills Action Centre	1-800-268-6060
Regulatory	Ministry of Environment, York Durham District	1-800-367-4547
Regulatory	Ministry of Labour	1-877-202-0008
Fire, Non-emergency	Clarington Fire Department	905-623-5126
Police, Non-emergency	Durham Regional Police	1-888-579-1520
CN Police		1-800-465-9239
Durham Region		1-800-372-1102
Municipality of Clarington		1-800-563-1195
York Region		1-877-464-9675
Waste Haulage	*Name of waste haulage companies to be inserted	
Hazardous Waste Disposal	ТВА	

Non-Hazardous Waste Disposal	ТВА	
Durham Region Medical Officer of Health		1-800-841-2729

Appendix B -2 - Covanta Energy Durham York Energy Centre Emergency Outside Service Contact Information

Name	Services Provide	Day Phone #	After Hours/Cell Phone #
EMERGENCY	Fire, Police & EMS Emergency	911	
Lakeridge Health Centre 47 Liberty Street S. Bowmanville, On		005 600 0001	011
Courtice Urgent Care 1450 Hwy. #2 Courtice, On	Medical Clinic	905-623-3331	911
Ministry of the Environment	MOE SAC	416-325-3000	800-268-6060
Ministry of Labour	Accident Reporting	877-202-0080	
Poison Control	Poison Control	800-268-9017	
ТВА	Durham Waste Dept.		
ТВА	York Waste Dept.		

Appendix B-3 - Covanta Energy Durham York Energy Centre Staff Contact Information

Name	Services Provide	Day Phone #	After Hours Cell Phone #	Home Phone #	Email
Howard Titus	Facility Manager	905-433-4874	905-429-9100	905-240-3020	htitus@covantaenergy.com
John Humphrey	Chief Engineer	905-433-4885	289-685-0602	705-874-0233	jhumphrey@covantaenergy.com
Nicole Beleskey	Admin Asst.	905-433-4871	905-809-0314	905-728-9061	nbeleskey@covantaenergy.com
ТВА	Facility Safety Coordinator				
ТВА	Environmental Supervisor				
Jigar Vyas	Maintenance Supervisor	905-433- 4883	289-685- 0621		jvyas@covantaenergy.com
ТВА	Business Manager				
ТВА	Worker Health and Safety Co Chair				
Amanda Huxter	Environmental Specialist	905-433-4879	289-685-5291		ahuxter@covantaenergy.com
Jim Lynch	VP Operation Great Lakes	616-235-3210	978-337-3412		jlynch@covantaenergy.com
Joey Neuhoff	VP Business Great Lakes	862-345-5104			jneuhoff@covantaenergy.com
Matt Brown	Region Safety Administrator	317-378-8724			mbrown@covantaenergy.com
Paul Kantola	Region Environmental Manager	616-235-3210 ext. 227	862-591- 9087	231-853- 2703	pkantola@covantaenergy.com
ТВА	Durham Waste Dept.				
ТВА	York Waste Dept.				

Appendix B-4 – Covanta Energy Durham York Energy Centre Vendor Information

Contractor	Services		Home	Day	Cell	
Name	Provide	Principles	Phone #	Phone #	Phone #	Pager #
ТВА	Spills Clean Up	ТВА				
TBA	Mechanical	TBA				
	Contractor					
TBA	Boiler Repairs	ТВА				
TBA	Lime Supplier	ТВА				
TBA	Lime Hauler	ТВА				
TBA	Cement Hauler	TBA				
TBA	Cement	TBA				
	Supplier					
TBA	Pozzolan	ТВА				
	Supplier					
TBA	Pozzolan Hauler	ТВА				
TBA	NH3 Hauler	ТВА				
TBA	NH3 Supplier	ТВА				
TBA	High Voltage	TBA				
	Maintenance					
TBA	Electrical	ТВА				
	Maintenance					
TBA	Pest Control	TBA				
TBA	Animal Control	ТВА				
TBA	On Site	TBA				
	Confined Space					
	Watch					

Appendix C – Spill Reporting Form



Spills Report

Facility Covanta Energy Corporation Durham York

Date of Report	Time	
Wind Direction	Weather	
Shift Supervisor		
Name of Others Involved		
Reported To	Date and Time of Spill	
Duration of the Spill	Material Spilled	
Quantity of Material Spilled		
Did Material Escape into the Environme	ent If ves where?	
Method of Clean up	<u> </u>	
Method of Disposal		
Material Used from Spill Kits or Stores f	or Clean-up to be reordered	
What Caused the Spill?		

Durham York Energy Centre Spill Contingency & Emergency Response Plan

Corrective Actions	
Wee the MOE contented?	
By Who?	
MOE Contact Name:	
Are there any instructions or directions	given by the MOE?
Was a Waste Hauler used?	
Where was the waste taken?	
Shift Supervisor	Date
Chief Engineer	Date
Environmental Specialist	Date
Facility Manager	Date

Appendix D-1 – TRAINING ELEMENTS

		Frequency		Type of	Training	
Module			Class		Table	Shift
#	Plan review	Annual	Room	Practical	Тор	Meeting
1	Orientation	New Hire				
2	Spill Response*	Annual		x	x	x
3	Fire Response	Annual		x		x
4	Chemical Release	Annual		x		x
5	Confined Space	Annual	х	x		
6	Power Failure	Annual	х		x	x
7	Pit Fire	Annual			x	x
8	SCBA	Annual	x	x		
9	APC Failure	Annual			x	x
10	Legislation Overview	Annual				x
11	Respirator Training	Annual				x
12	WHMIS	Annual	x			
	Use of Ventilation					
13	Equipment	Annual		X		
14		New Hire	X			X
15	LOCKOUT / Tag Out	Annual		X		X
16	Rescue Training	Annual		x		x
17	Space	Annual		x		x
18	CPR/First Aid	3 years	x			
19	AED Training	3 Years	x			
20	Fork Lift Training	New Hire	x	x		x
21	Radiation Training	Annual	x			x
22	Scaffold Training	Annual	x	x		x
23	Ammonia Training	Annual			x	x
24	Torch Training	Annual	x	x		
25	Fire Extinguisher Training	Annual		x		

*Note: The staff will be trained to a level of competency on both equipment and capabilities for spill response.

Appendix D-2 – TRAINING REQUIREMENTS

Training Module Required			
FM	1,2,3,6,7,9,10,11,12,14,15,18,19,21,25		
BM	1,3,10,12,18,19		
Admin Assist	1,3,10,18,19,25		
Chief	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,21,22,23,25		
Maintenance Supervisor	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,21,22,23,24,25		
Environmental	1,2,3,4,5,9,10,11,12,14,15,21,23		
5th Shift Super/ H&S	1 to 25		
Lead E&I	1,2,3,4,5,6,7,8,9,10,11,12,14,15,16,17,21,23,25		
Lead Mech.	1,2,3,4,5,7,8,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25		
Crew A to D Shift Super	1 to 25		
Crew A to D Control Op	1,2,3,4,5,6,7,8,9,10,11,12,15,17,18,19,20,21,23,25		
Crew A to D Aux. Op	1,2,,3,3,5,6,7,8,9,10,11,13,14,15,16,17,18,19,20,21,23,25		
Crew A to D Equip Op	1,2,3,4,5,6,7,8,10,11,12,15,16,18,19,20,21,23,25		
Util. Operator (Tipping)	1,2,3,4,6,7,10,11,12,15,18,19,20,21,25		
Mech. / Welders	1,2,3,4,5,7,8,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25		
E&I Tech	1,2,3,4,5,6,7,8,9,10,11,12,14,15,16,17,21,23,25		
Util. Housekeeping Operator	1,2,3,4,7,10,11,12,14,15,16,18,19,20,25		
Buyer / Stores	1,3,10,12,18,19		
Account Assist	1,3,10,12,18,19		
Contractors	As Appropriate		
Region Staff	As Appropriate		
Scale House (Owner Staff)	1,2,3,4,10,12,21,25		

Appendix E – SOP List & Progress Matrix

SOP Number	Description	Stage of Development	Deadline for Completion
SOP U REF 001	Unacceptable Waste Receiving Handling Storage and Disposal	100%	Dec 15- 2013
SOP E ENV 020	Emergency Shut Down of Facility	0%	May 30– 2014
SOP S ENV 002	Spills Clean up and Disposal	0%	Mar 30– 2014
SOP R ENV 004	Receiving and dispensing diesel fuel	0%	Jan 31– 2014
SOP R ENV 003	Receiving and dispensing feed water chemicals	0%	Jan 31– 2014
SOP R ENV 002	Receiving Acids and Caustics	60%	Feb 28 – 2014
SOP R ENV 001	Receiving Lubricants	0%	Feb 28 – 2014
SOP D REF 002	Dust Control	0%	Apr 30 – 2014
SOP R FPS 002	Refuse Building Fire	85%	Jan 30– 2014
SOP M FPS 006	Minor Fire Response	100%	Oct 31 – 2013
SOP M FPS 005	Major Fire Response	0%	June 30 – 2014
SOP B BLR 034	Boiler Tube Leak	0%	June 30 – 2014
SOP S ENV 004	Storm Water Pond	100%	Oct 31– 2013
SOP B BLR 006	Boiler Emergency Shutdown	0%	June 30 – 2014

The SOP's will be kept on site electronically and hard copies in the Control Room. They will be controlled documents administered by the Administrative Assistant.

Appendix F – Points of Waste Inspection/Due Diligence

- Public awareness and education
- By-law and Compliance Inspectors
- Collection truck
- Transfer station gate and tipping floor staff inspection
- EFW gate inspection
- EFW tipping floor staff inspection
- EFW waste pit crane operator
- Annual waste audits

Waste Inspection and Due Diligence

There is very good public awareness of the various waste diversion initiatives offered by both Regions. It is this awareness that continues to keep both Durham and York among the municipal leaders in waste diversion in North America.

At each of the logistic points within in our existing system, materials are inspected for type of waste, weight restrictions and identification of unacceptable wastes.

Collection contracts are designed to enable collection staff to leave unacceptable materials at the curb with non-compliance stickers and a notification process for By-law and Compliance inspectors to follow up with residents.

Operations staff at each of the transfer sites and Waste Management Facilities will inspect all residual waste loads.

Annual waste audits will continue to identify capture rates, new packaging in the waste stream and opportunities for new diversion initiatives.

Appendix G – Fire Plan/Building Layout



Signatories:

Covanta	Date
Municipality of Durham	Date
Municipality of York	Date
Ministry of the Environment	Date