DURHAM YORK ENERGY CENTRE

1835 Energy Drive, Courtice, Ontario L1E 2R2

SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN

Rev.#2

January 2024

Contents

Appendices

Revision History

Revision #	Description of Change	Date
0		13-Jan-2014
1	Document revision to represent actual Facility operations	18-Dec-2020
2	Reviewed information and updated to reflect Facility Operations, added facility address, updated inspection/testing of response equipment. Appendix C – Key Site Personnel and Emergency Contact numbers updated.	9-Jan-24

Glossary

APC: Air Pollution Control

BMP: Best Management Practice

CEMS: Continuous Emissions Monitoring System

DCS: Distributed Control System

District Manager: District Manager of the York-Durham District Office, MECP

DYEC: Durham York Energy Centre – Refers to the "Facility"

EA: Environmental Assessment

ECA: Environmental Compliance Approval, formerly CofA or Certificate of Approval

EFW: Energy from Waste

EPA: Environmental Protection Act

MECP: Ministry of the Environment, Conservation and Parks

MSDS / SDS: Material Safety Data Sheet / Safety Data Sheet

MSW: Municipal Solid Waste

SAC: (Ontario) Spills Action Centre

SCERP: Spill Contingency and Emergency Response Plan

SOP: Standard Operating Procedure

UPS: Uninterrupted Power Supply

Reference Matrix

Condition	Description	Location in Plan
ECA 11 (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.	See Below
ECA 11 (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.	See Below
ECA 11 (2)	In addition to the requirements set out in the EA Approval, the Contingency and Emergency Response Plan, as a minimum, shall include the following:	See Below
ECA 11 (2)(a)	the Site plan clearly showing the equipment layout and all storage areas for wastes and reagents;	Appendix A - Site Diagram – Equipment / Buildings and Access Appendix B - Site Diagram – Waste and Reagent Storage
ECA 11 (2)(b)	a list of Site personnel responsible for the implementation of the contingency measures and various emergency response tasks and their training requirements;	2.1 Site Personnel 3.4 Emergency Training
ECA 11 (2)(c)	a list of equipment and materials required for the implementation of the contingency measures and the emergency situation response;	4. Contingency / Emergency Equipment Resources & Maintenance
ECA 11 (2)(d)	maintenance and testing program for equipment required for the implementation of the contingency measures and the emergency situation response;	4.7 Testing & Inspection of Response Equipment
ECA 11 (2)(e)	procedures to be undertaken as part of the implementation of the contingency	5. Emergency Procedures

Condition	Description	Location in Plan
	measures and the emergency situation response;	6. Contingency Measures
ECA 11 (2)(f)	names and telephone numbers of waste management companies available for emergency response;	Appendix C – Key Site Personnel and Emergency Contacts
ECA 11 (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;	7. Communication and Notification Procedures Appendix C – Key Site Personnel and Emergency Contacts
ECA 11 (2)(h)	procedures and actions to be taken should the incoming Waste not meet the applicable quality criteria specified in this Certificate;	6.3 Suspected Radioactive Waste Load 6.4 Waste Screening / Handling of Unacceptable Waste
ECA 11 (2)(i)	procedures and actions to be taken should the outgoing Residual Waste fail to meet the criteria specified in this Certificate;	6.6 Residual Waste
ECA 11 (2)(j)	procedures and actions to be taken should the current disposal options for the outgoing Residual Waste become unavailable;	6.6 Residual Waste
ECA 11 (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;	7.1 Complaint Response
ECA 11 (2)(l)	procedures and actions to be taken should the Owner be unable to maintain the negative pressure in the Tipping Building;	6.8 Negative Pressure Failure

Condition	Description	Location in Plan
ECA 11 (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	6.5 Suspension of Operations
ECA 11 (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:	3.1 Risk Assessment
ECA 11 (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;	6. Contingency Measures
ECA 11 (2)(n)(ii)	CEM Systems indicate that the Boilers and associated APC Equipment have been out of compliance with the Performance Requirements;	6.1 Performance Requirements Exceedance
ECA 11 (2)(n)(iii)	any change in process parameters which may result in noncompliance with the Performance Requirements;	6.1 Performance Requirements Exceedance
ECA 11 (2)(n)(iv)	power failure resulting in the use of the Emergency Diesel Generator or Total Power Failure;	3.1 Risk Assessment 5.5 Utility Failure / Power Outage
ECA 11 (2)(n)(v)	description of the preventative and control measures to minimize the occurrence or impacts of the above incidents; and	3.1 Risk Assessment
ECA 11 (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	5. Emergency Procedures 6. Contingency Measures

Condition	Description	Location in Plan
	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.	
EA 17.3	The Spill Contingency and Emergency Response Plan shall include, but is not limited to:	See Below
EA 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;	5. Emergency Procedures 7. Communication & Notification Procedures Appendix E – Standard Operating Procedures
EA 17.3(b)	Cell and business phone numbers and work locations for all person(s) responsible for the management of the site;	Appendix C – Key Site Personnel and Emergency Contacts
EA 17.3(c)	Emergency phone numbers for the local ministry office, the ministry's Spills Action Centre, and the local Fire Department;	Appendix C – Key Site Personnel and Emergency Contacts
EA 17.3(d)	Measures to prevent spills, fires and explosions;	3. Emergency Preparedness
EA 17.3(e)	Procedures for use in the event of a fire;	5.3 Fire / Explosion
EA 17.3(f)	Details regarding equipment for spill clean-up and all control and safety devices;	4. Contingency / Emergency Equipment Resources & Maintenance Appendix D – Spill Kit Locations
EA 17.3(g)	Shut down procedures for all operations associated with the undertaking including alternative waste disposal site	5.6 Emergency Shut-down 6.5 By-Pass Waste

Condition	Description	Location in Plan
	locations;	6.6 Residual Waste
EA 17.3(h)	Maintenance and testing program for spill clean-up equipment and firefighting equipment;	4.7 Testing & Inspection of Response Equipment
EA 17.3(i)	Training for site operators and emergency response personnel; and	3.4 Emergency Training
EA 17.3(j)	A plan, identifying the location and nature of wastes on site.	Appendix B - Site Diagram – Waste and Reagent Storage

1. Purpose

Condition 11 of Environmental Compliance Approval 7306-8FDKNX and Condition 17.3 of the Notice of Approval to Proceed with the Undertaking require the completion of a contingency and emergency response plan. The purpose of this Spill Contingency and Emergency Response Plan (SCERP) is to outline the course of action to be taken by Covanta employees, contractors, and visitors in the event of an emergency.

2. Facility Overview

The Facility is a highly automated Energy-from-Waste Facility operating 24 hours a day, seven days a week. The Facility is located on 12.1 hectares in Courtice, Ontario. To the north of the Facility and south of Highway 401 is a 200,000 square foot East Penn Canada battery warehouse, to the east is the 65,000 plus square foot Ontario Power Generation Darlington Energy Complex and to the south is the Region of Durham, Wastewater Treatment Plant, and a CN railway track. To the west of the plant is Courtice Shores Drive.

2.1. Site Personnel

The Facility Manager holds overall responsibility for the Facility during normal operations and in an emergency. The Facility Manager is also responsible for the state-of-readiness of the plant, emergency equipment and for ensuring the required training is conducted. For an emergency event that occurs during normal business hours the Facility Manager or their designee, the Operations Manager, will act as the Emergency Coordinator and 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 the Operations Manager can be contacted and arrives at the Facility. The general line of succession is as follows with contact numbers noted below.

- Facility Manager (905) 404-4039
- Operations Manager (905) 404-4035
- Shift Supervisor (905) 404-4049
- Control Room Operator (905) 404-4048

Refer to Appendix C - Key Site Personnel and Emergency Contacts

3. Emergency Preparedness

3.1. Risk Assessment

Any equipment breakdown or failure will be immediately assessed to ensure the Facility can still operate safely and within environmental compliance parameters. The following describes the relationship between frequency and magnitude of possible events at the Facility and their relationship to risk. Values of 1-5 are assigned to magnitude and frequency from lowest to greatest concern. The risk assessment is based on the multiplication of these values and categorized into low, medium, and high.

	Magnitude				
Frequency	Negligible (1)	Minor (2)	Moderate (3)	Major (4)	Extreme (5)
Rare (1)	1	2	3	4	5
Unlikely (2)	2	4	6	8	10
Moderate (3)	3	6	9	12	15
Likely (4)	4	8	12	16	20
Very Likely (5)	5	10	15	20	25
Low		Medium		High	

Equipment Breakdown and Control Measures

Incident	Magnitude	Frequency	Risk Assessment	Location	How to Reduce Risk Potential
Spill during receiving – solid reagents	3	3	9	Silos – Carbon, Lime, Slag, Cement	• Daily operator rounds • Offloading procedure • Supervised offloading • Method 22 Inspection • Preventative Maintenance

Incident	Magnitude	Frequency	Risk Assessment	Location	How to Reduce Risk Potential
Spill during receiving – 19% aqueous ammonia	4	1	4	Tank - Ammonia	• Daily operator rounds • Offloading procedure • Supervised offloading • Preventative Maintenance
++	2	1	2	Turbine Building Compressor Alley	• Daily operator rounds • Dedicated receiving locations, spill containment platforms or built-in secondary containment
Spill during receiving – diesel fuel	4	2	8	Fire Water Pump House, Rolling Stock Diesel Tank, EDG	• Daily operator rounds • Offloading procedure • Supervised offloading • Secondary containment
Spills from vehicles	3	3	9	Tip Floor, Residue Building, Ring Road	• Daily operator rounds • Vehicle Inspection Checklist • Supervised offloading (Tip Floor)
Chemical and Reagent Storage	2	2	4	Boiler Building Compressor Alley Maintenance	• Daily operator rounds • Weekly inspection • Secondary containment • Preventative Maintenance
Receiving MSW	2	5	10	Refuse Building	• Daily operator rounds • Weekly inspection
Storage of MSW	2	5	10	Refuse Building	• Daily operator rounds • Weekly inspection • Preventative Maintenance
Storage of spent batteries	1	5	5	4 locations throughout Facility	• Dedicated storage locations • Lithium batteries stored separately

Incident	Magnitude	Frequency	Risk Assessment	Location	How to Reduce Risk Potential
					• Instructions posted for proper disposal
Storage of compressed gas cylinders	4	2	8	APC Building	• Daily maintenance rounds • All cylinders secured by chains or cages
Odours	3	2	6	Refuse Building	• Daily operator rounds • Weekly inspection • Controlled by negative pressure • Odour Management and Mitigation Plan
Fire – MSW	4	3	12	Refuse Building	• Daily operator rounds • Weekly inspection • Hot load Procedure • Infrared cameras and water cannons
Fire - Truck	3	1	3	Facility Grounds Refuse Building	• Scalehouse inspection • Hot Load Procedure • Dedicated Hot Load Dumping Area • Infrared cameras and water cannons
Fire - Plant	4	2	8	Facility	• Daily operator rounds • Weekly inspection • Quarterly emergency action plan drills
Boiler Tube Failure	3	2	6	Boiler Building	• Biannual boiler outages to perform preventative maintenance • Daily Operator rounds

Incident	Magnitude	Frequency	Risk Assessment	Location	How to Reduce Risk Potential
Fabric Filter Bag Failure	2	3	6	APC Building	• Daily operator rounds • Weekly/monthly inspections • Dust monitors
Air Pollution Control Plant Failure	4	2	8	APC Building	• Daily operator rounds • Weekly/monthly inspections • Instrumentation and control system to monitor for alarm conditions and
Furnace Combustion temperature probe Failure	2	3	6	Boiler Building	• Daily Operator rounds • Instrumentation is monitored by the control room operator • Spare probes are available • Semi-annual probe sensor replacement and calibration

3.2. Emergency / Evacuation Drills

Emergency and evacuation drills are conducted to ensure personnel are thoroughly prepared to respond to emergencies. Drills are conducted quarterly with one drill per year being an evacuation. A post-drill evaluation is performed and includes a summary of the event activities and identifies successful and unsuccessful aspects. If applicable, recommendations for improvement are included. Documentation of emergency drills is kept on record for a minimum of two (2) years.

3.3. Fire Prevention

Fire prevention programs are in place and apply to any activity which may potentially expose employees to hazards requiring emergency actions, including maintenance of fire protection and emergency alarm equipment, labelling and Facility signage, employee and local fire department training and handling and storage of potential ignition sources.

3.4. Emergency Training

Employees are trained annually on fire safety, fire prevention and the use of fire extinguishers. In addition, employees who work in boiler and refuse areas are trained on the Fire Prevention and Safety Programs including the of use additional Facility fire-fighting equipment. Training is documented and kept on file by the Facility Safety Coordinator.

4. Contingency / Emergency Equipment Resources & Maintenance

4.1. Spill Kits

Spill kits include the tools and materials used to address spills in the Facility. Contents of the kits are determined by the type of spill that can occur in the area. Spill kits may include the following:

- Oil absorbent wipers
- Oil absorbent material
- Booms
- Sodium bicarbonate
- Drain cover

Refer to Appendix D – Spill Kit Locations.

A contract is in place with a local company to provide an emergency response network covering all transportation, transloading and off-site support needed in case of an incident or emergency. A Response Leader from the contracted company is available for dispatch to the Facility to assist in any situation.

Refer to Appendix C - Key Site Personnel and Emergency Contacts.

4.2. First Aid and Automated External Defibrillators (AED)

Most Facility employees are trained in basic standard first aid, CPR Level C, and the use of AEDs. The Facility has two (2) AEDs on site, one located in the Shift Supervisors office adjacent to the Control Room and the other located in the Administration area.

The Control Room serves as the First Aid Centre and is where first aid materials can be located. The First Aid Centre is not equipped to treat serious injury or provide medical treatment. Persons with injury or illness requiring more than basic standard first aid shall be sent to a medical Facility or hospital for treatment.

4.3. Fire Fighting Equipment

The Facility is equipped with engineering safeguards and fire-fighting equipment to control fires including:

- Wet piped sprinkler systems
- Dry piped sprinkler systems
- Fire protection water storage tank
- Hydrants
- Hose stations
- Siamese Y-type connection points (6) for the fire department pumper trucks
- Fire extinguishers (portable) – dry chemical and CO_2
- Water monitors (cannons)
- Infrared cameras

4.4. Eye Wash / Shower Stations

Eye wash stations and showers are located throughout the Facility within reasonable proximity of potential hazards.

4.5. AquaFog Micronutrient System

The AquaFog System uses plant based organic micronutrients which neutralize odours by oxidizing airborne odour producing compounds. In the event abnormal odours are detected, the AquaFog unit is initiated. It may also be initiated as a preventative measure during extended outages.

4.6. Radiation Detection Equipment

The Facility is fitted with a mounted radiation detection system that automatically screens all vehicles passing through the inbound scale. The mounted system, Thermo Scientific™ LFM-3 portal Radiation Detection SystemLFM-3, is designed to monitor the presence of detectable levels of gamma and x-ray radiation. There are two detector modules installed opposing each other on the inbound scale to allow material to be monitored between the two detectors. A handheld radiation detector is used to further identify suspected sources of incoming radiation.

4.7. Testing & Inspection of Response Equipment

Device / Service / Action	Inspection/Testing Frequency	Responsibility
Fire Fighting Equipment		
Portable Extinguishers	Monthly	Operations
Extinguisher Hydrostatic tests	As Needed	Contractor
Fire Hydrants	Annual	Contractor
Fire Department Connection – Hydrostatic Test	Every 5 years	Contractor
Wet and Dry Sprinklers	Annual	Contractor
Fire Water Canons	Monthly	Operations
Fire Alarm System	Monthly	Contractor
Fire Alarm System	Annual	Contractor
Standpipe Hoses	Monthly	Operations
Standpipes	Annual	Contractor
Fire Water Pump	Weekly	Operations
Fire Water Pump	Annual	Contractor
Facilities		
Facility exit lights and signs	Monthly	Operations
Emergency lighting and power supply	Monthly	Operations
Emergency Diesel Generator	Weekly	Operations
10 Minute Emergency Escape Pack	Monthly	Operations
Smoke / Heat detectors	Monthly	Contractor
Portable Air Quality Monitors Inspection	Before use	Operations
Portable Air Quality Monitors Calibration	Before use	Operations
Spill Kits	Weekly and after use	Environmental
First Aid Kits	Monthly and after use	Operations
Eye Wash / Showers	Weekly	Operations
Automated External Defibrillators	Monthly	Safety
Equipment		
Radiation Detectors Source Check	Daily	Scalehouse Staff
Radiation Detectors Calibration	Annual	Contractor

A full fire system test and inspection is done annually by a contractor and reviewed by the insurance underwriter.

5. Emergency Procedures

Refer to Appendix E for a list of Facility procedures. Detailed Standard Operating Procedures (SOPs) are available on site for MECP review.

5.1. Reporting an Emergency

Any injuries or medical emergencies must be promptly communicated to both the Shift Supervisor and the Facility Safety Coordinator, to ensure the necessary steps are taken accordingly. In the case of all other emergency situations, the person that identifies the situation should immediately pull the closest fire alarm station, inform the Control Room Operator, and provide the following information via telephone or portable radio:

- Exact location, type, and magnitude of emergency
- Answer any immediate questions by the Control Room Operator or Shift Supervisor

The Control Room Operator shall in turn announce the emergency over the public address system. At this point, they will call 911, if necessary, and will also notify the Scale house and Visitor Centre to communicate the emergency and provide directions on diverting any vehicles, need for evacuation, etc. Other emergency services will be called as required. See Appendix C – Key Site Personnel and Emergency Contacts

Off-duty personnel, regional, and corporate notification will be made by the Facility Manager or designate.

5.2. Evacuations

All personnel on-site are to be accounted for in the event of an evacuation. 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 following tools shall be used to account for all persons on-site:

- Contractor sign-in log (elevator lobby)
- Visitor sign-in log (admin building)
  Employee sign-in board (admin building)

All personnel are required to be knowledgeable of all possible escape routes, evacuation assembly location and severe weather shelter areas.

The primary evacuation assembly (muster point) location for the Facility is at the Northeast corner of Osborne Road and Energy Drive. The Shift Supervisor will determine the need for a secondary evacuation location after evaluating the hazard(s) such as wind direction.

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.

5.3. Fire / Explosion

Different types of fires / explosions require different response procedures. Types of fires include fuel-fed fires, chemical fires, and electrical fires. Fire situations that have a higher degree of probability of occurring at the Facility include fuel-fed fires and electrical fires.

Fuel-Fed Fires

In any fuel-fed fire, it is important that the source of fuel be isolated from the fire itself, if it is safe to do so. This can include shutting off natural gas supply line, shutting various valves or even clearing an area to let a gas bottle burn out. In many cases when the fuel source is shut off the fire will die out on its own.

Electrical Fires

The principle method for fighting electrical fires is de-energization. Extinguishing agents for these types of fires are CO_2 and dry chemical extinguishers as a last resort due to potential damage to electrical components.

5.4. Utility Failure / Power Outage

In the event of a Facility power outage, the following steps should be taken:

- The Shift Supervisor will respond and assume command of the situation until relieved by another Shift Supervisor.
- The Shift Supervisor will evaluate the situation/communications and direct the area evacuation of unnecessary personnel.
- To maintain coordination of effort and safety, the position or status of breakers, valves or other equipment should not be changed without the permission of the Shift Supervisor.
- The Shift Supervisor shall work with essential personnel to investigate the cause of the power outage, and log all findings regarding the status of flags, lock out relay lamps and breakers as well as any known causes. Check and log control system, CEMS and UPS status.
- Once the cause of the trip has been identified and documented, the Shift Supervisor shall coordinate activities to clear the cause, if possible.
- Lock-out relays shall not be reset without permission and knowledge of the cause of the trip.
- The Shift Supervisor shall coordinate/ensure notification of appropriate/concerned parties.

- The proper sequence of events shall be followed for restoring power. A check list can be used to ensure and document that all steps are followed correctly.
- Check all systems for proper function at each step. Look, listen and smell for problems. Make sure all personnel are clear from power circuits before re-closing breakers and that equipment is ready to be energized.

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 that 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.

Should there be a total power failure or if the power failure results in the use of the emergency diesel generator resulting in a discharge into the natural environment in excess of that prescribed by the Regulations and/or imposed by this Certificate, the notification requirements of ECA Condition 13 (2) will be fulfilled.

5.5. Emergency Shutdowns

The Operations Manager has charge of and responsibility for the safe management, operation, and maintenance of the Facility. A procedure for the safe, effective, and proper boiler shutdown including its auxiliaries and associated air pollution control equipment is available and reviewed before each shutdown. See list of relevant Standard Operating Procedures in Appendix E.

In accordance with ECA Condition 6 (4), should CEMS indicate that emissions exceed any ECA Performance Requirements for a continuous 3-hour period, the Facility shall cut off all waste feed into the affected boiler and initiate an Emergency Shutdown, while maintaining a temperature of 1000°C as practicable, in the combustion zone of the boiler.

5.6. Spills

The Environmental Protection Act defines a spill, when used with reference to a pollutant, to mean 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.

A Major Spill is defined as a spill which exhibits one or more of the following characteristics:

- It cannot be fully contained

- It extends past paved or concrete surfaces (i.e., soil, gravel, or storm drainage system)
- It cannot be completely cleaned up by plant personnel due to quantity spilled, or due to its hazardous nature

Major spills are dealt with by a contractor who is on an annual retainer.

A Minor Spill is defined as any spill which does not fall into the above definition for a Major Spill.

General Procedures – Minor Spills

Attempt to clean up a spill/release only if it is safe to do so.

- Clean-up personnel shall be thoroughly familiar with the hazards of the spilled material (refer to MSDS / SDS).
- Clean-up personnel shall be trained on how to respond to spills/releases of the type and quantity of material to be cleaned.
- Clean-up personnel shall be equipped with the proper personal protective equipment and equipment needed for the job.
- All materials used in spill clean-up must be collected and placed in a labelled container for proper disposal. Do not place materials in or around regular trash.

At the Scene

- The person that discovers the spill should immediately inform the Control Room and provide the identity, quantity, and location of the spilled material, as well as their intent to clean the spill if properly equipped and trained to do so. The reporting party is in charge until relieved by the Shift Supervisor or their designee. Clean up activity will not commence until the Shift Supervisor provides verbal acknowledgement.
- If it is safe to do so:
    - take necessary action to stop and contain the spill. Secure pumps and shut isolation valves from remote locations when possible.
    - remove ignition sources from the area. If fumes or vapors are present or possible, evacuate the area and await the direction of the Shift Supervisor.
    - isolate the spill area by flagging or barricading.
- Don proper personal protective equipment and clean up the spill in accordance with procedures outlined in the MSDS / SDS.
- Communicate all activities to the Control Room Operator.
- Personnel safety is the top priority. If there is doubt or concern about the identity of the spilled material or the ability to clean it, communicate this to the Control Room and leave the area.

Motor vehicle fluid spills must be prevented from entering the storm water system. Any leaks of fuel or fluids will be cleaned up immediately. The storm water ponds have a spill kit located at the inlet to the ponds. These kits contain booms to collect any hydrocarbons that may enter the storm drains. The ponds have a reverse pipe that discharges the pond by gravity. If a spill reaches the pond, the valve must be closed to contain and prevent any spill from leaving the Facility. Should a spill reach the pond, the contractor on retainer will be called to lead the clean-up. Samples will be taken to ensure the pond water meets the Provincial Water Quality Objectives before discharge is allowed.

The Facility injects 19% aqueous ammonia into the upper furnace to control the nitrous oxide (NOx) content of the flue gas. The ammonia is stored in a 57,000 litres tank located east of the Residue Building. Refer to Appendix B for location. The worst-case release scenario involves the rupture of the ammonia tank, or delivery truck, instantaneous spilling of its contents into the containment dike and the evaporation of ammonia from this surface. The site's Emergency Action Plan describes in detail how to secure the area in readiness for the contracted spill response company to perform the clean-up. See Appendix C - Key Site Personnel and Emergency Contacts. If the spill is >100 litres regardless of if it is contained within the dike, the Ontario Spills Action Centre will be contacted.

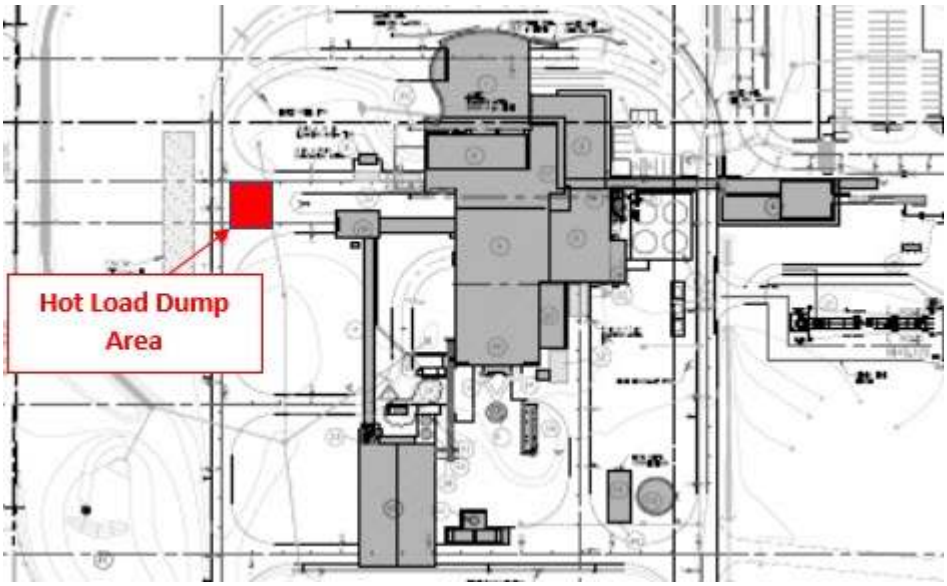
An internal Spill Reporting Form is completed in the event of a minor or a major spill. This form is used to perform a root cause analysis of the incident and to collect information for reporting to the Ontario Spills Action Centre (SAC) if necessary. The Spills Action Centre is contacted for major spills only.

5.7. Hot Loads

Although small, there exists the possibility that a waste delivery vehicle may arrive onsite with its contents in a state of combustion due to heat producing items introduced into the waste stream i.e., hot coals from an outside grill or ashes from a hot stove. Such items have the potential to propagate heat and when enclosed in a confined space, may lead to eventual combustion of the waste inside the vehicle. During dumping operations, the exposure to fresh air may accelerate the combustion and pose a threat to the Facility and its personnel. An SOP titled Hot Load Response Procedure (DYEC-REF-002) is in place for the safe, effective, and expeditious response to the arrival of a hot load, with the expressed goal of mitigating any associated potential negative events or consequences to Facility personnel, equipment, structures or to the surrounding environment.

Hauler contracts stipulate that for any enroute truck for which the driver and/or dispatch is aware of a potential hot load situation, that the truck will not attempt delivery of the waste load to the Facility. These incidents are the responsibility of the hauler and shall be handled by the hauler in accordance with their internal emergency procedures.

In consultation with the local fire department, a hot load dumping area has been established where a hot load may be safely off-loaded and extinguished by the fire department. See location below.



Should the fire department be required to apply water to the hot load, storm sewer catch basins within the vicinity will be covered by a spill cover to prevent leachate from entering during the firefighting operation. The Spills Action Centre will be called and reported as an Event and not a Spill.

6. Contingency Measures

Refer to Appendix E for a list of Facility SOPs relating to contingency measures. Detailed copies are available on site for MECP review.

For a list of Emergency Equipment, refer to Section 4.

6.1. Performance Requirements Exceedance

"Decision Trees" are in place within SOPs outlining the courses of action to take in the event that an increase in a parameter may lead to an exceedance of a Performance Requirement described in Condition 6 or Schedule C of the ECA. Should there be an exceedance to one of the ECA Performance Requirements, noted during monitoring of continuous emissions, see Section 7 Communication and Notification Procedures.

6.2. Source Test Exceedance

Following the receipt of information from the stack/source testing contractor that is of sufficient quality to confirm a probable exceedance of an applicable 'Schedule C' limitation and following an internal review by the Facility Manager, the Regions of Durham and York, followed by the MECP shall be notified in a timely manner.

6.3. Suspected Radioactive Waste Load

The Facility is fitted with a radiation detection system that automatically screens all incoming vehicles that pass through the incoming scale. See 4.6 Radiation Detection Equipment. Any trucks confirmed to be carrying radioactive material are not permitted access to the site. Scale house staff are trained on the proper method for ensuring an alarm is valid and to use a handheld radiation detector if required to further identify suspected sources of incoming radiation. The Environmental Specialist is notified when a radiation detector is triggered.

6.4. Waste Screening / Handling of Unacceptable Waste

Unacceptable waste is defined in the ECA as, "the incoming Waste received at the Site that does not meet the incoming Waste quality criteria as set out in this [ECA], is of a hazardous nature and requires caution when handling." Bulky unprocessable waste is also considered unacceptable and defined in the ECA as "incoming Waste received at the Site that cannot be processed in the Equipment".

Screening of waste begins at the scale house by visually inspecting inbound loads, to the extent possible, observing leaking trucks, odour, or any indicators of hazardous materials. Once per hour, a truck is dumped on the Tipping Hall floor to be inspected by an Operator for unacceptable, hazardous and/or bulky wastes. These wastes are removed from the waste stream using mobile equipment or with the use of long-handled poke poles. Bulky materials are stored in a dedicated waste bin. Hazardous materials are stored in the dedicated berm. Compressed gas cylinders were originally stored in the berm but relocated to a dedicated cage outside of the Tip Floor exit door based on a fire inspection in 2018. Hazardous materials are removed from the Facility within 90 days of receipt.

6.5. Suspension of Operations

Should the Facility be required to suspend waste processing activities, the following actions will occur.

1) Notification of Emergency Waste Storage – should the storage duration of waste be greater than 6 days from its receipt, the Facility Manager will notify the District Manager prior to the start of emergency storage.

2) SOP Fugitive Dust and Odour Control (DYEC-ENV-010) shall be implemented.
3) By-pass of waste to a designated landfill or other Energy from Waste Facility will commence.
4) When emergency storage is no longer required, the District Manager will be notified.

Rejected waste or waste that is diverted from the Facility due to a shutdown is shipped to a licensed landfill or EFW for final disposal.

6.6. Residual Waste

Residual waste includes bottom ash, fly ash, ferrous, and non-ferrous metals. Testing of the bottom and fly ash according to the Ash Sampling and Testing Protocol confirms it is a solid non-hazardous material before being shipped to landfill to serve as daily cover. 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. Further testing, processing, and sampling will occur until the material is deemed a solid non-hazardous waste and acceptable to the receiving landfill. An Ash Contingency Plan is in place to further delineate these requirements.

There are no testing requirements for ferrous or non-ferrous. They are sent to a local metal recycler to be shredded and then made into billets (ferrous) or for further separation (non-ferrous).

6.7. Fugitive Odour / Dust Emissions

Entrance and exit doors into the Tipping Hall and Residue and Grizzly Buildings are kept closed at all times except to permit the entry or exit of vehicles. Daily and weekly Facility walks are performed to confirm there are no dust and odour issues. Refuse is only handled, received, and/or stored within the confines of the Tipping Hall. All reagent silos undergo a quarterly observation to confirm containment.

Should odour be detected, an odour log/walk is completed at an increased frequency, noting wind direction and the presence and location of any odours whether originating from the Facility or not. Operations and maintenance are monitored to determine if the origin of the odour is from the Facility. Should an odour be deemed originating from the Facility, and has reached off site, the SOP for notifying the MECP will be initiated.

The Odour Management and Mitigation Plan was required prior to construction per the Environmental Assessment Act – Notice to Proceed with Undertaking EA File No. 04-EA-02-

08. The plan contains operating and shut down procedures for odour control; maintenance schedules; ongoing monitoring for and reporting of odour; corrective action measures and other best management practices for ongoing odour control and for potential operational malfunctions; a schedule for odour testing at sensitive receptors and a section addressing odour control measure should operation of the undertaking be disrupted or ceased. An Odour Management and Mitigation Monitoring Report is submitted annually summarizing the requirements above.

6.8. Negative Pressure Failure

The Facility draws air for combustion from the Tipping Hall where the incoming Waste is stored. Air flow is controlled to the Tipping Hall through louvers on the north face of the Refuse Building and the opening and closing of the entrance and exit doors. A negative air pressure is maintained in this building at all times when at least one of the combustion train's induced draft fans is operating. The process of drawing combustion air for the furnaces from the Tipping Hall minimizes the escape of odour from the Facility and ensures its destruction through the combustion process. The negative air pressure is continually monitored on the DCS. Should both boilers be down for maintenance and there is waste remaining in the pit, additional odour control measures are undertaken. The Fugitive Dust and Odour Control (DYEC-ENV-010) procedure outlines these measures which may include additional odour walkdowns, closing the louvers and/or initiating the micronutrient misting system.

6.9. Weigh Scale Failure

Should one of the scales fail (inbound or outbound), the other scale can be used to weigh trucks in and out of the Facility. A request for maintenance will be put in immediately. If both weigh scales are down, the scale house operator will hand record values from the bill of lading accompanying the incoming trucks. In the event both scales are out of service for an extended period, consideration will be given to sourcing a portable scale. Waste trucks (ash or metals) will rely on the final scale ticket at the receiving site. All values will be reconciled at a later date.

6.10. DCS (Distributed Control System) Failure

The DCS is a "distributed control system". Component failure rather than total failure is a more likely scenario. A service contract is maintained with ABB to provide technical assistance and parts. The Boiler(s) would be shut down in the event of a serious DCS failure that prevented either safe operation of the Boiler or risked an environmental exceedance.

6.11. CEMS (Continuous Emission Monitoring System) Failure

The purpose of the CEMS is to extract a representative sample of gas from the flue gas stream, analyze the gas sample for pollutants, process and store the acquired data and generate emissions summary reports. This is accomplished by a series of analyzers. As with the DCS, component failure rather than total failure is a more likely scenario. The system undergoes routine maintenance for proper operation and longevity of the equipment. The Quality Assurance Manual establishes procedures for quality assurance and quality control. A service contract is in place for 24-hour telephone assistance and critical spare parts are available on site or readily available offsite.

7. Communication & Notification Procedures

7.1. Complaint Response

The monitoring of complaints and inquiries is a requirement of Condition 6 of the EA and Condition 10 of the ECA. A Complaint and Inquiry Log submission is provided to the MECP York Durham District Office District Manager in accordance with the "Waste Complaint Protocol for Design, Construction & Operations" approved by the MECP in July 2011. 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.

Employees have been instructed on how to effectively manage calls from external stakeholders who may wish to register a complaint. A "Record of Complaint" form, referred to within the SOP, Public Complaints and Enquiries (DYEC-PEO-003), is completed for every complaint or request for information. If the complaint is odour related and attributed to the Facility, the MECP District Manager is notified by email and the Spills Action Centre is notified by telephone. An investigation is immediately initiated. All complaints must include the following information: name, address, and telephone number of the complainant, (if known); time and date of the complaint; activities being undertaken at the time; meteorological conditions (ambient temperature, approximate wind speed and direction); determination if the complaint is attributed to activities at the site and if so, possible cause(s) and remedial actions and the schedule for those actions. Upon completed investigation, a report is submitted to the MECP District Manager within 3 business days. Hard copies and digital records of complaints and the complaint investigation and responses are maintained on site. All Complaint and Inquiry Logs are available on the DYEC website.

7.2. Emergency Storage of Waste

Waste received at the site shall be processed within six (6) days from its receipt. In accordance with Condition 2(8)(b)(i) of the ECA, should a situation occur where waste

requires storing beyond six (6) days the MECP District Office must be notified in writing. This correspondence will include proposed preventative measures for odour control. The MECP District Manager will be notified in writing when emergency storage is no longer required.

7.3. Incidents that May Result in a Discharge to the Environment

The Facility shall notify the Ontario SAC at all hours and the MECP District Manager during normal business hours as soon as reasonably possible by telephone when an event identified in ECA Condition 13(2)(a) has occurred, resulting in a discharge into the natural environment in an amount, concentration, or level in excess of that prescribed by the Regulations and/or imposed by the ECA. In addition to the telephone notification, designated Client, MECP and Facility personnel are also contacted by email as delineated in the SOP, Notification to the MECP re Condition 13(2) (DYEC-ENV-013). The Facility prepares and submits a written notification to the District Manager within five (5) calendar days of the occurrence.

7.4. Performance Requirements – Condition 6

The Performance Requirements in Condition 6 are combustion temperature (≥1000°C - one hour average), economizer outlet oxygen (≥6% - one hour average) and baghouse temperature (≥ 120°C and ≤ 185°C – one hour average).

The Facility notifies the SAC at all hours and the MECP District Manager during normal business hours as soon as reasonably possible by telephone, when a Performance Requirement as listed in Condition 6 (with the exception of Schedule C In Stack Emissions Limits) is exceeded AND one of the Operator Actions listed below is initiated.

i. Waste Processing Rate Reduction
ii. Waste Feed Cut-off
iii. Controlled Shutdown
iv. Emergency Shutdown

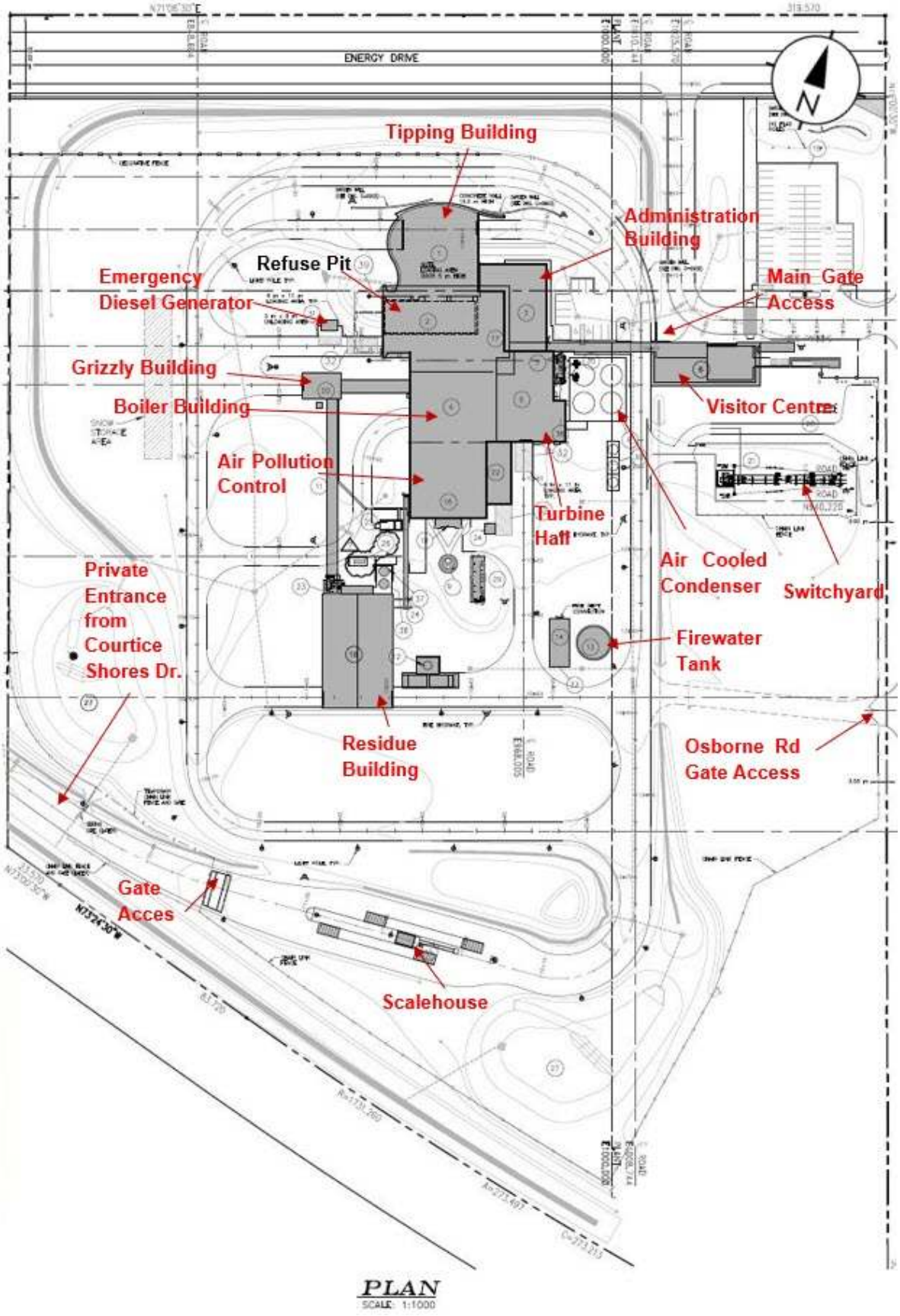
In addition to the telephone notification, designated Client, MECP and Facility personnel are also contacted by email as delineated in the SOP, Notification to the MECP re Condition 13(2) (DYEC-ENV-013): Notification to the MECP. The Facility prepares and submits a written notification to the District Manager within five (5) calendar days of the occurrence.

7.5. Spills

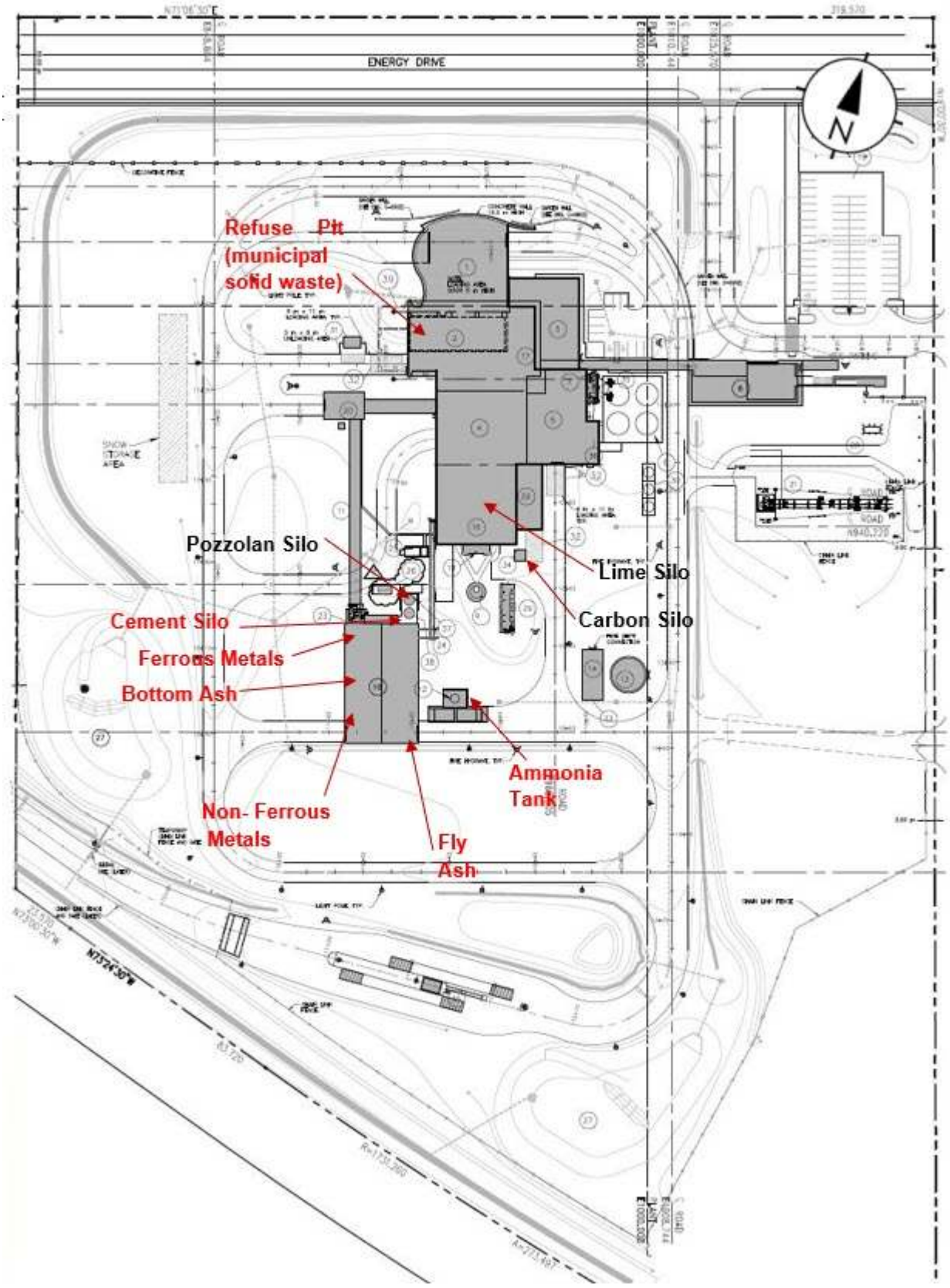
The opportunity for spills is reduced at the Facility by employee training, supervised offloading of reagents, and spill containment platforms located throughout the Facility.

In the event of a major spill as defined in the EPA and Section 5.6, a call is made to the SAC with the pertinent details of the event. A written report is submitted to the District Manager within three (3) calendar days outlining the nature of the spill, remedial measures taken, and the measures taken to prevent future occurrences at the site. An internal Spill Reporting Form is used to convey this information including weather conditions, spill location, circumstances of the spill and potential hazards. It is reviewed by the Operations Manager, Environmental Specialist, and the Facility Manager.

Appendix A – Site Diagram – Equipment / Buildings and Access



Appendix B – Site Diagram - Waste and Reagent Storage



Appendix C – Key Site Personnel and Emergency Contacts

NOTE: DIAL 8-1 FOR ALL OUTSIDE LOCAL AND LONG DISTANCE CALLING

Essential Personnel	Landline
Facility Manager	905-404-4039
Operations Manager	905-404-4035
Plant Superintendent	905-404-4031
Maintenance Supervisor	905-404-4037
Shift Supervisor	905-404-4049
Control Room Operator	905-404-4048
Control Room Emergency	905-728-4747
Facility Safety Coordinator	905-404-4045
Environmental Specialist	905-404-4041

Owners / Municipality

Visitor Centre, Administrator	905-404-0888 x4100
Region of Durham, Project Manager, EFW	905-404-0888 x4114 / 365-662-3268
Region of Durham, Commissioner of Works	905-668-7711
Region of York, Director, Waste Management and Forestry	905-716-3167
Region of York, Contract Management Engineer	289-716-4951
Municipality of Clarington	905-623-3379
Scale House	905-404-6742

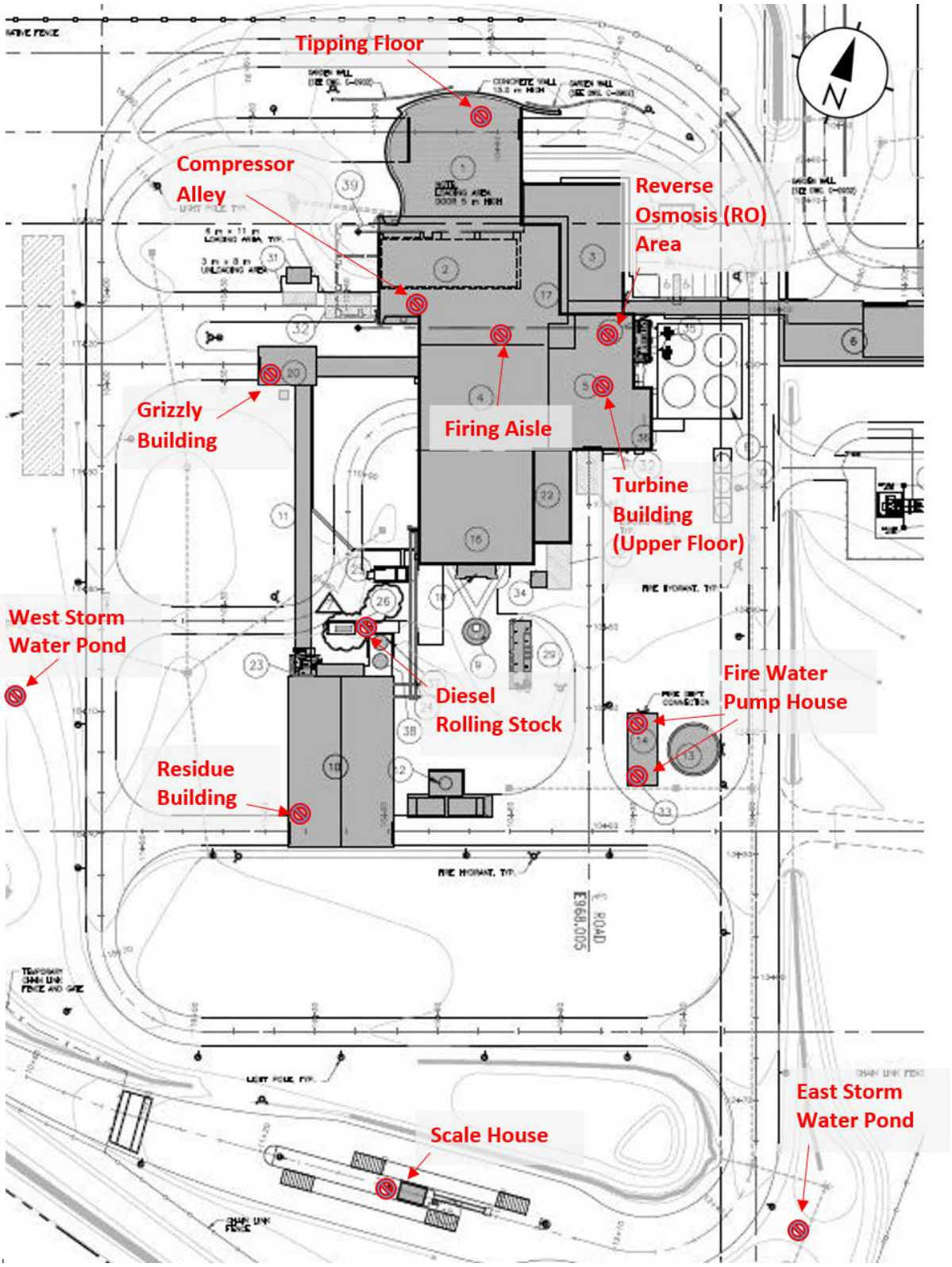
Authorities / Agencies/Services

Fire Department Dispatch	905-433-1234
Ontario Ministry of the Environment, Conservation and Parks (York-Durham District Office)	905-427-5600 after hours 800-268-6060
Ontario Spills Action Centre (SAC)	1-800-268-6060
Ontario Ministry of Labour, Training and Skills Development	416-326-7160
Medical Officer of Health	416-212-3831

Emergency Services

Emergency Fire Services	911
Ambulance Services	911
Police Services	911
Emergency Spill Response – GFL Environmental	1-877-898-7222

Appendix D – Spill Kit Locations



Appendix E – Standard Operating Procedures

DYEC-APC-002 Offloading Activated Carbon

DYEC-APC-012 Offloading Hydrated Lime

DYEC-APC-018 Baghouse Operation – Startup – Shutdown – Offline - Operation

DYEC-BLR-002 Receiving Ammonia

DYEC-BLR-049 Cold Plant Start Up 1st Boiler

DYEC-BLR-050 Cold Start-Up - 2nd Boiler

DYEC-SOP-101-Boiler Start-up

DYEC-SOP-102-Boiler Shut-down

DYEC-ENV-002 High CO

DYEC-ENV-003 High Opacity

DYEC-ENV-004 High HCl and SO2

DYEC-ENV-005 High NOx

DYEC-ENV-006 High Baghouse Inlet Temp

DYEC-ENV-007 Reagent Failure Hydrated Lime

DYEC-ENV-008 Reagent Failure Activated Carbon

DYEC-ENV-009 Low O2

DYEC-ENV-010 Fugitive Dust and Odour Control

DYEC-ENV-013 Notification to the MECP re Condition 13(2)

DYEC-ENV-015 Receiving Diesel Fuel

DYEC-ENV-016 Radiation Detection

DYEC-ENV-025 Spills Clean Up and Disposal

DYEC-PEO-003 Public Complaints and Enquiries

DYEC-REF-002 Hot Load Response Procedure

DYEC-REF-007 Unacceptable Waste Receiving, Handling, Storage and Disposal

DYEC RES 002 Loading Ash and Metal Trucks

DYEC-RES-007 Pozzolan and Portland Cement Operations Start-Up and Shut-Down