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*2017 ODOUR
MANAGEMENT &
MITIGATION
MONITORING REPORT*

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Table of Contents

1. Executive Summary.....	3
2. Normal Operations Odour Control	3
2.1 Truck Transportation	4
2.2 Handling and Storage of Waste during Normal Operations	4
2.3 Thermal Treatment of Waste.....	5
2.4 Preventative and Control Measures at the Facility	5
3. Inspection and Maintenance	7
3.1 Maintaining Combustion Air Flow	7
3.2 Inspection Frequency and Checklists.....	7
3.3 OMMP Plan Review and Continuous Improvement	9
3.4 Training	9
4. Monitoring, Recording and Reporting	9
4.1 Monitoring of Combustion Airflow	10
4.2 Complaints Monitoring	10
4.3 Source Odour Sampling	11
5. Shutdown or Disruption of Operations.....	11
5.1 Scheduled Shutdowns.....	11
5.2 Disruption / Unscheduled Shutdowns	12
5.3 Extended Waste Storage.....	12
6. Odour Complaint Response Procedure	12
7. Summary	13

Tables:

Table 1: MSW (Municipal Solid Waste) Hauler Waste Management System ECA's

Table 2: Description of Odour Preventative and Control Measures at the DYEC

Table 3: Summary of Inspections, Frequency and Forms

Table 4: 2017 Planned Facility Outages

Table 5: 2017 Aqua Fog® Usage Dates

Appendices:

Appendix 1: Inspection Forms

Appendix 2: Record of Complaint

Appendix 3: Summary of Investigated Odour Complaints (November 1st, 2016 to October 31st, 2017)

1. Executive Summary

The Durham York Energy Centre (DYEC), respectfully submits the 2017 Annual Odour Management and Mitigation Monitoring Report (OMMMR) covering operations encompassing November 1st, 2016 to October 31st, 2017.

Under the Environmental Assessment Act – Notice to Proceed with Undertaking EA File No. 04-EA-02-08 (Section 18), as well as the multi-media Environmental Compliance Approval (ECA) number 7306-8FDKNX (Condition 8. (8)) issued by the Ontario Ministry of the Environment and Climate Change (MOECC), an Odour Management and Mitigation Plan (OMMP) was required prior to construction of the DYEC or by such other date as agreed to in writing by the Director. The OMMP became effective upon initial receipt of non-hazardous municipal solid waste on February 9th, 2015.

In addition, the preparation and approval of a Containment Test Protocol was required pursuant to ECA Condition 8. (7) prior to the receipt of waste at the DYEC. The Containment Test Protocol recognized that “as it is not practicable to measure air velocity or pressure with the Tipping Hall, a smoke test was determined to provide visualization of the flow of combustion air, odours and dust and hence demonstrate the design of the DYEC to manage and mitigate odours from waste stored before combustion.” The Containment Test Protocol was approved by the MOECC on September 20th, 2014 and the DYEC was directed to conduct periodic inspections identified in the Containment Test Protocol which thus fulfills ECA Condition 8. (1)(b)(i) to undertake a test to measure the worst case scenario negative air pressure atmosphere throughout the Tipping Hall.

The OMMP requires the preparation and submission of an OMMMR to the York Durham Regional MOECC Director every 12 months until such time that the Director notifies DYEC that the OMMMR is not required. The initial OMMMR was submitted on November 26th, 2015 and included the results of odour testing and modelling of potential impacts to sensitive receptors. The second submission was on December 23rd, 2016. This OMMMR represents the third submittal. The scope of this OMMMR follows the activities enumerated by the OMMP and the Containment Test Protocol applicable to the control of odours:

-) Normal Operations Odour Control.
-) Inspection and Maintenance.
-) Monitoring, Recording and Reporting.
-) Shutdown or Disruption of Operations.
-) Odour Complaint Response Procedure.

For the period November 1st, 2016 to October 31st, 2017, the OMMP and Containment Test Protocol were effective in controlling odour release from the DYEC.

2. Normal Operations Odour Control

The application of good working practices and process control is of fundamental importance in eliminating and minimising the quantities of odours formed on site and their subsequent release to the atmosphere. Containment and mitigation of odour at the source through standard operating procedures (SOP's) is proven and effective. The overall aim in the operation of the DYEC is to apply Best Management Practices at all stages of the waste treatment processes undertaken on site. Waste brought for processing may include odourous materials. Potential odour emission sources may include truck transportation, handling

and storage of waste during normal operations and thermal treatment of waste on site. The following sections will explain mitigation procedures for potential DYEC odour sources during normal operations.

2.1 Truck Transportation

The Regions of Durham and York have advanced waste management programs for source separation and diversion of waste from landfills. Specifically, the diversion of household organic waste reduces the amount of potential odour generating waste from reaching the DYEC.

All vehicles hauling municipal solid waste to the DYEC have been approved by the Ministry of the Environment and Climate Change (MOECC). All waste under these waste management system approvals must be transported in a covered vehicle.

Table 1: MSW (Municipal Solid Waste) Hauler Waste Management System ECA's

Hauler	MOECC ECA
Challenger Motor Freight Inc.	A841577
U-Pak Disposals Limited	A8597
ECL Carriers GP Inc.	A800583
J.E. Culp Transport	A820843

The Scale House Operator performs a cursory inspection of hauler vehicles both upon arrival and departure, specifically ensuring covers and tarps are present and there are no obvious leaks or dripping waste. There were no hauler vehicles cited for absent covers, leaks or drips nor were there any incidents of queueing of MSW trucks outside the facility on municipal roadways during the reporting period.

Site personnel monitor the grounds and roadways for litter on a daily basis. Any waste that has fallen from the trucks is either picked up during the daily operator rounds, weekly sweeper truck rounds or monthly site wide clean-up. This work is documented in operator check sheets that are archived at the DYEC.

2.2 Handling and Storage of Waste during Normal Operations

The Tipping Hall entrance and exit are equipped with high speed doors to control potential fugitive emissions (odour or dust) during the truck unloading process. Doors remain closed at all times except to facilitate the entry, positioning and exiting of waste delivery trucks i.e. both entrance and exit doors must be closed before offloading of MSW or loading of unacceptable waste may commence. All trucks remain covered until they enter the Tipping Hall, reducing the potential for the release of odour emissions. On an hourly basis, an MSW truck is directed to unload on the Tip Floor. Trained operating personnel perform a visual inspection and sorting of this waste, which includes recording the presence of any extreme odours coming from the incoming municipal solid waste vehicles. These results are recorded

on the DYEC Waste Screening Report and are archived at the DYEC. See Appendix 1 for a copy of the DYEC Waste Screening Report.

The outdoor storage of waste, whether in or out of transport vehicles, is not permitted.

The entrance and exit doors into the Residue and the Grizzly Buildings are kept closed at all times except to permit the entry or exit of waste transport vehicles and waste handling equipment into and out of these buildings. The air from the Tipping, Residue and Grizzly Buildings and from the Equipment is exhausted through appropriate and fully functional air pollution control (APC) equipment.

2.3 Thermal Treatment of Waste

Under normal operating conditions one or two combustion trains are on line. Combustion air is drawn through the Tipping Hall by the thermal treatment units' combustion air fans through large air inlet ducts above the pit. The process of inducing combustion air flow through the Tipping Hall and refuse pit area prevents fugitive dust and odours from escaping into the environment. Potential malodorous air is drawn into the furnace and destroyed via direct exposure to the flame and high temperature oxidation that occurs during the combustion process. A system of manually adjustable louvers controls the amount of make-up air that is admitted to the Tipping Hall from the outside environment. These louvers are adjusted as necessary to ensure odours remain contained within the Tipping Hall and pit area.

2.4 Preventative and Control Measures at the Facility

The DYEC employs numerous preventative and control measures at the Facility for odour abatement as listed in Table 2 below.

Table 2 Description of Odour Preventative and Control Measures at the DYEC

Emission Source	Potential Source of Odour	Control Measures / Preventative Procedure
Trucks	<ul style="list-style-type: none"> ➤ the queue time of trucks onsite ➤ Waste falling off trucks 	<ul style="list-style-type: none"> ➤ Minimize the queue time through effective delivery protocols ➤ If necessary, communication with Transfer Stations to divert trucks to designated locations. ➤ Regional and Facility staff monitor trucks visually and record drivers that do not follow protocol. Drivers are assessed penalties for coming on to the site with uncovered vehicles. ➤ Fallen waste is recovered and moved to the Tipping Hall.
Waste Storage	<ul style="list-style-type: none"> ➤ Outside storage 	<ul style="list-style-type: none"> ➤ Waste is not stored outside anywhere on the Facility

Emission Source	Potential Source of Odour	Control Measures / Preventative Procedure
	<ul style="list-style-type: none"> ➤ Unacceptable waste 	<ul style="list-style-type: none"> ➤ Unacceptable waste is stored in a secured location on the Tipping Hall floor ➤ Unacceptable waste or waste under examination will be diverted to the Tipping Hall.
Tipping Hall / Refuse Building	<ul style="list-style-type: none"> ➤ Fugitive odours 	<ul style="list-style-type: none"> ➤ Tipping Hall entrance and exit doors are closed when waste is not being delivered. ➤ Combustion Air Fans continuously draw combustion air from the Tipping Hall and the furnaces where the thermal treatment process will destroy any odour. ➤ An alarm alerts the control room when combustion air flow into the thermal treatment units drops below low level requiring Tipping Hall air inlet investigation and possible adjustment. ➤ Calibration of Boiler Combustion Air Flow Transmitter for Louver Positioning
Both thermal treatment trains have an unexpected outage lasting a prolonged period	<ul style="list-style-type: none"> ➤ Both the Facility thermal treatment units are off-line for an extended period 	<ul style="list-style-type: none"> ➤ Facility staff communicate with Regional Transfer Stations to divert trucks from the Facility ➤ Trucks on-site will be diverted to appropriate locations ➤ Entrance and exit doors to the Tipping Hall and louvers will be closed to prevent fugitive odour escape. ➤ ID Fans will continue to operate as feasible and convey air from the Tipping Hall to the stack. ➤ In the unusual case scenario of both units being off line for an extended period, waste in the pit may be recovered and transferred in a covered haul truck to appropriate disposal areas. ➤ Active odour suppression using the facility's micronutrient misting system (See 5.1 for a description)

3. Inspection and Maintenance

Planned maintenance and inspection activities are an important part of maintaining the effectiveness of odour control measures. The DYEC operations and maintenance staff ensure that all plant processes and equipment perform properly, including those that have a direct effect on the success of the odour control program. A maintenance schedule of all facility equipment is included as part of the Facility Operations and Maintenance Manual. An electronic Maintenance Management System is utilized to co-ordinate and document inspection and repair activities and ensure the availability of critical spare parts. This ensures the DYEC maintains an effective planned inspection and preventative maintenance program on equipment that is critical to odour control and abatement.

3.1 Maintaining Combustion Air Flow

While the thermal treatment units are in operation, combustion air flow is maintained through the Tipping Hall and pit area. A system of louvers is adjusted according to prevailing operating conditions, such as the number of units in operation and also whether or not MSW is being delivered. Louver positions for various unit operating scenarios were developed during the 2014 containment (smoke) test. To ensure this works effectively, regular maintenance and inspection activities are performed to ensure that doors and roof vents are closed and that the building envelope remains in good condition. The doors and louvers are inspected for proper operation on a daily basis. These activities ensure that louver adjustments effectively contain odours within the Tipping Hall and pit.

3.2 Inspection Frequency and Checklists

The DYEC has developed a comprehensive program that includes inspections of all aspects of the facility operations including buildings and the indoor waste storage facilities for the presence of odour and leaks in or near any openings, such as doorways, windows, vents or louvers and any off-site nuisance impacts from odour.

The Equipment Operator performs daily rounds of the Tipping Hall area. Items of concern include confirmation that the louvers are in the correct position, integrity of the entrance/exit doors, presence of dust, odours and leaks exiting/entering the Tipping Hall and for the presence of trash outside of the building. They are also responsible for ensuring the misting system is operable when required.

The Environmental Specialist performs an inspection of the entire facility on a weekly basis and records findings on the DYEC Weekly Environmental Site Inspection Form. In addition to odour, litter and track out of MSW are also recorded.

The Outside Environmental Checklist was designed to comply with ECA 7306-8FDKNX Condition 5 Equipment and Site Inspections and Maintenance, (5) Inspections, and includes buildings and the indoor waste storage facilities and presence of dust and odour and leaks in or near any openings, such as doorways, window, vent, louver or any other opening and off-site nuisance impacts such as odour, dust and litter.

The waste water settling basin (WWSB) is inspected on a daily basis for odour, dust and litter. The results of these inspections are recorded on the Outside Environmental Checklist, including any actions taken. On a weekly basis, the Facility's Environmental Specialist

performs an independent check. If necessary, the WWSB can be emptied and cleaned. It has not been the source of any odours during this reporting period. During the reporting year, the WWSB was cleaned out and inspected on July 13th, 2017 and October 19th, 2017.

The DYEC Waste Screening Report is also completed by the Equipment Operator. Every truck is examined for extreme odour.

Table 3 provides a summary of these facility inspections. See Appendix 1 for copies of the inspection forms.

Table 3: Summary of Inspections, Frequency and Forms

Inspection Type	Frequency	Form
Tip Floor Entrance and Exit Doors	Daily	Equipment Operator Daily Rounds
	Weekly	DYEC Weekly Environmental Site Inspection Form
Louver Positions	Daily	Equipment Operator Daily Rounds
	Weekly	DYEC Weekly Environmental Site Inspection Form
Combustion Air Flow to the Thermal Treatment Units	Continuously recorded on the Facility's Distributed Control System	Distributed Control System data historian
Environmental Inspection (as per ECA 5 (5))	Daily	Outside Environmental Checklist
	Weekly	DYEC Weekly Environmental Site Inspection Form
Haul Truck Odour Inspection	Daily – every truck	DYEC Waste Screening Report
Odour Walk	As needed i.e. outages and/or odour concerns	Odour Log
Waste Water Settling Basin	Daily	Outside Environmental Checklist
	Weekly	DYEC Weekly Environmental Site Inspection Form

In addition, the Facility has routine equipment maintenance inspections for the operation of the Facility as part of the Facility Operating and Maintenance Manual.

The following activities are performed throughout the day or on a scheduled basis to control potential sources of fugitive odour emissions:

-) The Tipping Floor is cleaned as needed between MSW truck deliveries and at the end of the day
-) No waste handling equipment or empty storage containers are stored outside, unless they have been washed
-) Equipment and storage areas that are used to handle, process and store waste (including the surfaces of the outdoor spill containment areas) are cleaned as required

3.3 OMMP Plan Review and Continuous Improvement

Inspection and monitoring procedures assist Facility personnel in maintaining an effective OMMP. The OMMP will be reviewed and updated, as follows:

-) if there are significant changes in the odour emissions sources or in Facility operations;
-) periodically, every five years (minimum); and/or
-) if there are verified complaints associated with odour emissions from the Facility.

A review of the OMMP is intended to evaluate the effectiveness of the odour control practices and focus on the identification of improvement opportunities that can reduce the possibility of the release of fugitive odour emissions. Significant changes in the odour emission sources from Facility operations have not occurred.

3.4 Training

All new DYEC employees receive standard Environmental Training. This includes a presentation on the Odour Management and Mitigation Plan. Facility staff are trained to identify odour concerns. This training includes:

-) management control techniques in place for addressing odour including review of how to conduct and report an odour observation check;
-) actions to take in the event of an unexpected odour release; and
-) notification protocols.

The Facility's Environmental Specialist conducts refresher training on an as necessary basis. Training records are archived at the Facility.

4. Monitoring, Recording and Reporting

During normal operating hours, all staff are responsible to report any abnormal odour emissions at the site. If an abnormal odour is detected, Facility staff will implement reactive measures to determine the root cause of the odour. SOP – DYEC-PEO-003 External Communications – Public Complaints has been developed to record complaints and ensure adequate information is collected to determine the cause and identify/implement mitigative actions. The SOP covers the following:

-) records to be kept, including documentation of maintenance and process conditions;

-) meteorological conditions to be recorded; and
-) form completion, follow through and notification to the MOECC.

The DYEC monitors combustion air flow rates, adjusts Tipping Hall louvers as necessary and maintains equipment to meet the odour control requirements of the ECA. The following monitoring is carried out to evaluate the performance of control and reaction measures in use at the DYEC.

- a) Continuous monitoring of combustion airflow by each unit.
- b) Monthly review of meteorological data provided by the Region of Durham.
- c) Monitoring of complaints and other forms of community feedback.

On a monthly basis all complaints received directly at the DYEC are recorded and delivered to the Region of Durham for inclusion in the monthly complaint logs sent to the MOECC.

4.1 Monitoring of Combustion Airflow

The continuous monitoring of the combustion airflow rate through the Tipping Hall is a surrogate for determining whether negative pressure is being maintained within the building. Temperatures, pressures and flow rates are monitored throughout the combustion air and flue gas path. Combustion airflows (Combustion Air Flow Transmitters (1/2-FIT-4202)) in each of the two thermal treatment units are monitored continuously to ensure proper airflow (negative pressure) through the Tipping Hall is maintained. Periodic inspection and annual verification of the combustion air flow transmitters is conducted in accordance with the Containment Test Protocol.

The Facility induces airflow through the Tipping Hall and across the pit by combustion air fans that pull the combustion air through the intake ducts located above the cranes on the charging deck at Elevation 18. The DCS continuously monitors, measures and records this flowrate. As operating conditions change (i.e. shutdowns, non-delivery times), the airflow is adjusted with the use of louvers on the north wall of the Tipping Hall to maintain sufficient airflow and to prevent the odours from leaving the building. An alarm indicator in the DCS will alert the Control Room Operator of low combustion air flows requiring possible louver repositioning.

In the event that adequate airflow cannot be maintained, additional odour containment and control measures will be implemented.

4.2 Complaints Monitoring

Condition 6 of the Environmental Assessment (EA) and Condition 10 of the ECA both require that the DYEC monitors and responds to odour complaints and inquiries. These complaints may come through the Regions of Durham and York (telephone or email), through the MOECC or directly to the Facility. DYEC staff are in place to record and respond to these complaints twenty-four (24) hours per day, seven (7) days per week. Written and digital records of complaints, follow-up investigations and responses are maintained on site. See Section 6, Odour Complaint and Response Procedure, for additional details.

4.3 Source Odour Sampling

The Tipping Hall has been identified as the principal source of potential fugitive odours. On October 8th and 9th, 2015, Zorix Environmental carried out representative one-time odour sampling as per Ontario Source Testing Code Method ON-6. Triplicate samples were collected from the Tipping Hall feed chute area. These air samples were then analyzed by an 8-member odour panel to determine the typical odour source concentration. Dispersion of worst case potential odours through the stack during a complete outage was modeled using the CALPUFF dispersion model approved under Schedule B of the ECA. According to the model, the maximum 10-minute odour concentration at a sensitive receptor was 0.28 OU (odour units) and occurred at a former house to the west of the facility. This result was well within the compliance limit of 1.0 Odour Units.

5. Shutdown or Disruption of Operations

5.1 Scheduled Shutdowns

Scheduled shutdowns are used to complete unit inspection and repairs and are a key component of the Facilities' maintenance program.

During a single unit outage, the remaining unit continues to run and provides for Tipping Floor and pit area ventilation, maintaining odour control. In addition to this, SOP – D ENV 003 Fugitive Dust and odour Control, for monitoring and mitigation of odours is employed. This includes for the completion of perimeter odour surveys and may include the use of active odour suppression within the Tipping Hall.

When in a full plant outage (both units offline), Tip Floor and pit area ventilation is reduced. During this period of time, perimeter odour surveys are completed, louver positions are monitored, and the active odour suppression system may be employed. Table 4 summarizes the planned facility outages.

Table 4: 2017 Planned Facility Outages

Unit 1	Unit 2
February 6 th – March 21 st	January 28 th – March 16 th
August 13 th – August 20 th	August 20 th – August 28 th

The Facility's active odour suppression system consists of an Aqua Fog[®] Odour Control unit. This misting unit uses a diluted solution of a plant based organic micronutrient (SciCorp BIOLOGIC[®] SRC3) which neutralizes odour by stimulating both aerobic and anaerobic non-odour producing bacteria while competitively inhibiting sulphur-reducing and ammonia forming bacteria and enzymes. This mobile misting fan can be placed in varying positions either misting over the MSW in the pit or misting toward the entrance door. The unit, in combination with control (opening and closing) of the louvers on the north wall of the Tipping Hall work effectively to prevent fugitive odour emissions when one or both units were not operating. Aqua Fog[®] usage dates are documented in Table 5.

Table 5: 2017 Aqua Fog® Usage Dates

Dates	Reason
January 30 th – January 31 st	#1 Unit Outage
February 13 th – February 21 st	#1 and #2 Unit Outage
March 16 th – March 18 th	#1 and #2 Unit Outage
July 4 th	Internal odour concern (post long weekend)
August 29 th	Internal odour concern (burnt leachate smell)
September 5 th	Internal odour concern (post long weekend)

5.2 Disruption / Unscheduled Shutdowns

A disruption of normal facility operations leading to an unplanned outage is handled in the same way as a planned outage. Louver positions are adjusted to maintain Tipping Hall ventilation. In the event that both units are affected and adequate negative airflow cannot be maintained, additional odour containment and control measures will be implemented, including the operation of the active odour suppression system.

5.3 Extended Waste Storage

In the event the Facility experiences an abnormal / upset condition that causes the Facility to enter an extended emergency waste storage condition, the Facility will formally notify the MOECC per Condition 2 (8)(b)(i) of the ECA, as amended on March 14th, 2016. This notification will include an explanation of the issue, duration of the outage and control measures the Facility is implementing to potential odours. These mitigating actions may include reducing waste deliveries, implementing more frequent odour surveys and the operation of the active odour suppression system. MOECC notifications of extended waste storage are archived at the site.

There have been no verified odour complaints due to planned or unplanned shutdowns.

6. Odour Complaint Response Procedure

Monitoring of Complaints and Inquiries at the DYEC is a requirement of Condition 6 of the EA and Condition 10 of the ECA.

DYEC has a comprehensive system of monitoring and inspection to ensure that all odour control measures are functioning effectively. However, in the event that an odour complaint is received, it is important that complaints are properly and systematically addressed and resolved.

Complaints are directed to the DYEC through the Regions of Durham or York or received directly at the Facility. The SOP DYEC-PEO-003 External Communications – Public Complaints is based upon the *Durham/York Energy from Waste Complaint Protocol for Design, Construction & Operations* and is followed when an odour complaint is received. See *Appendix 2: DYEC Record of Complaint* for information collected during an investigation.

A register of all odour complaints regarding the site is maintained. A Complaint and Inquiry report submission is provided to the MOECC York Durham District Office District Manager on a monthly basis in accordance with the Complaint Protocol approved by the MOECC in 2011. Hard copies and digital records of complaints and the complaint investigation and responses are maintained on site. All Complaint and Inquiry logs are available to the public on the DYEC website: www.durhamyorkwaste.ca

All odour complaints made to the Facility were reported to the MOECC District Office by phone or email as soon as reasonably possible. An investigation into each complaint was immediately initiated. Between November 2016 and October 2017, there was one (1) complaint related to suspected odour emissions from the DYEC. There was also one (1) complaint recorded in July 2016 that was not reported in last year's report. Odour complaints were received on the following dates:

-) July 26th, 2016
-) November 16th, 2016

Upon investigation, it was determined that the complaints listed above were not attributable to the DYEC. A summary of the odour complaints and follow up investigations received between November 1st, 2016 and October 31st, 2017 is provided in Appendix 3.

NOTE:

Under the Odour Management and Mitigation Plan, the Regions committed to notifying the Municipality of Clarington of any odour complaints received. The Municipality advised the Regions on June 16th, 2015 that further notifications regarding odour complaints were not required.

7. Summary

For the period of November 1st, 2016 to October 31st, 2017, the OMMP and the Containment Test Protocol were effective in controlling odour release from the DYEC. The application of good working practices and process control has minimised the quantity of odours formed on site and their subsequent release into the atmosphere. Containment and mitigation of odours at the source through standard operating procedures has proven effective.

Appendix 1: Inspection Forms



EQUIPMENT OPERATOR DAILY ROUNDS

Completed By: _____

Date: _____

At 7am, confirm only one of the following:

Boilers On	Incoming Waste	# of Louvers Open	Check <input checked="" type="checkbox"/>
1 or 2	Yes	All closed	
1	No	One bank	
2	No	Two banks	
0	Yes	All closed	
0	No	One bank	
0 (no ID fan)	No	All closed	

Yes	No	Item
		Inspect the Loader using the approved inspection form
		Portable Fire Extinguishers: present and properly charged and fire hose in good condition
		Drain all fire system drip legs
		Floor area is clear of materials from previous shift
		Review building integrity including columns, beams, walls etc.
		Inspect, open and close entry/exit doors
		Confirm all lights are functioning. If lights are out, record in comments below.
		Dust/odours/water leaks exiting/entering the Tipping Floor. If found, record below.
		Unacceptable Wastes are stored in proper containment locations and are not stored incompatibly.
		Confirm Spill Kit is full
		Recycling placed in green recycling bin
		Trash present outside east or west Tip Floor doors. If yes, pick up.
		Is the misting system for odour control in operation?
		If misting, verify nutrient is present and reservoir does not need refilling during entire shift
		Charging Deck floor swept/cleaned. Record time -
		Yellow parapet cleaned – free of dust Record time -
		Stairwells swept/cleaned Record time -
		Firing Aisle (in front of Martin – El 8.7) cleaned Record time -
		Barn Door Areas (behind Martin – El 6) cleaned Record time -

At 7pm, confirm only one of the following:

Boilers On	Incoming Waste	# of Louvers Open	Check <input checked="" type="checkbox"/>
1 or 2	Yes	All closed	
1	No	One bank	
2	No	Two banks	
0	Yes	All closed	
0	No	One bank	
0 (no ID fan)	No	All closed	

Additional Tasks Completed and any Comments or Issues from above

Shift Supervisor Signature: _____



DYEC WEEKLY ENVIRONMENTAL SITE INSPECTION FORM

Date: _____

Completed By: _____

Sat – Satisfactory NI – Needs Improvement UnSat - Unsatisfactory

GENERAL CONDITIONS				
	Sat	NI	UnSat	Comments
Odours are controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dust is controlled – Roadways are adequately swept	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Overall site litter is controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No evidence of excessive soil erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Facility is maintained in a clean and sanitary condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Areas adjacent to buildings are free of standing water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grass/ landscaping is neatly trimmed and properly maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tanks	Comments			
	Leaks detected (dust or liquid)			
Carbon	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Lime	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Pozzolan	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Cement	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Diesel Tank	Yes <input type="checkbox"/>	No <input type="checkbox"/>		Spill Kit -
Ammonia	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
BOILER/TURBINE BUILDING AREAS				
	Sat	NI	UnSat	Comments
Tanks and drums provided with 2" containment or spill pallets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floor drains/trenches are functioning properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floor is clear of spilled material and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kits are adequately stocked (turbine and firing aisle)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No evidence of leaks/spills or malfunctioning equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
APC AREA				
	Sat	NI	UnSat	Comments
Surfaces are clear of spilled material and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floor drains/trenches are functioning properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Baghouse systems are functioning properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ammonia tank/diking in proper working order	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Carbon/lime/ammonia injection systems in proper working order	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CEMS PERFORMANCE				
	Sat	NI	UnSat	Comments
Daily Summary Reports reviewed and any issues addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CEMS data quality issues being addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CEMS maintenance and calibrations adequately performed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition of CEMS Trailer (cleanliness, temperature)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



DYEC WEEKLY ENVIRONMENTAL SITE INSPECTION FORM

Sat – Satisfactory NI – Needs Improvement UnSat - Unsatisfactory

RO WATER TREATMENT AREA				
	Sat	NI	UnSat	Comments
Floor is clear of spilled material and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kit is adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No evidence of excessive leaks or malfunctioning equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage tanks/containment basins properly maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
STORM WATER PONDS and SETTLING BASIN				
	Sat	NI	UnSat	Comments
No evidence of visible sheen on ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No evidence of visible sheen on WWSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kits at East and West ponds are adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RESIDUE BUILDING AND HANDLING AREAS				
	Sat	NI	UnSat	Comments
Ash, ferrous and non-ferrous material is properly contained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kit is adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floor is clear of spilled material and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No sign of ash track-out or leaking transport vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No sign of ferrous/non-ferrous track out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No sign of ash spillage beneath outside conveyors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition of Pozzolan/Cement silo base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GRIZZLY BUILDING & EMERGENCY DIESEL GENERATOR (EDG) AREA				
	Sat	NI	UnSat	Comments
Floor is clear of spilled material and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No sign of excessive ash spillage, NO ash track-out.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kit is adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No sign of leaks/spills around EDG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FIRE PUMP HOUSE				
	Sat	NI	UnSat	Comments
Spill kits are adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Diesel tanks: no leaks visible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No sign of malfunctioning equipment evident	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water tank containment intact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MAINTENANCE SHOP				
	Sat	NI	UnSat	Comments
No drums or drums on spill pallets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floor is clear of spilled material and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No staining evident on paved areas outside of shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Maintenance activities conducted in a manner minimizing spill potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



DYEC WEEKLY ENVIRONMENTAL SITE INSPECTION FORM

Sat – Satisfactory NI – Needs Improvement UnSat - Unsatisfactory

SCALES				
	Sat	NI	UnSat	Comments
Spill kit is adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Scales and roadway are free from MSW/dust/litter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
INTERNALLY GENERATED WASTE – COMPRESSOR ALLEY				
	Sat	NI	UnSat	Comments
No evidence of leaks/spills in the vicinity of the used oil storage drums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tanks and drums provided with secondary containment and/or spill pallets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kit is adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IGW is properly labelled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TIPPING FLOOR				
	Sat	NI	UnSat	Comments
Vectors are prevented or controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waste volume in pit and tipping floor not excessive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Daily Waste Screening Reports completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kit is adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chemical/oil spills/debris present on floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unacceptable waste stored safely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No track out of MSW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Louvers are functioning and in correct position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ADDITIONAL COMMENTS: _____

Outside Environmental Checklist

Date:					Operator Name:
1. Outside Surrounding Area	East	South	West	North	Comments
Fencing / Gates / Barriers intact	Y / N	Y / N	Y / N	Y / N	
Security Signage in place	Y / N	Y / N	Y / N	Y / N	
Roads/ Scale house - Leaks/drips of waste from trucks, litter, excessive dust present	Y / N	Y / N	Y / N	Y / N	
Storm Water Pooling present	Y / N	Y / N	Y / N	Y / N	
Odour/ Dust/ Litter Present	Y / N	Y / N	Y / N	Y / N	
Make note of any odours coming from the Water Pollution Control Plant or Miller Waste	Y / N	Please record time odour was noted:			
2. Ponds and Swales	East	West	Comments		
Odour / Dust / Litter present	Y / N	Y / N			
3. Residue Building	Comments				
Track out of ash or metals	Y / N				
Dust/odours exiting building	Y / N				
4. Diesel Tank - Rolling Stock	Comments				
Containment compromised – leaks visible	Y / N	Fuel Level -			
5. Waste Water Settling Basin	Comments				
Odour / Dust / Litter present	Y / N				
Basin/Pumps compromised –leaks visible	Y / N				
6. Stack	Comments				
Stack lighting is functional	Y / N Please circle light that is not functioning: NE SE SW NW				
7. Emergency Diesel Generator	Comments				
Dust/odours exiting any equipment openings	Y / N				
Coolant/Battery/Fuel leaks	Y / N	Fuel Level -			
8. Grizzly Building	Comments				
Track out of ash or metals	Y / N				
Dust/odours exiting building	Y / N				
9. ACC/ CCW	Comments				
Leaks visible – around ACC	Y / N				
Leaks visible – around CCW	Y / N				
ACC Transformer containment free of oil/debris/water	Y / N	N Water Level:		S Water Level:	
10. Flyash and Inclined Conveyors	Comments				
Odour / Dust / Litter present	Y / N				
Ash leaks visible	Y / N				

Outside Environmental Checklist

11. Ammonia		Comments
Containment compromised (cracks/peeling present)	Y / N	Water Level in Dike -
Tank/valves/pipes compromised-leaks visible	Y / N	
12. Pozzolan/ Cement/ Carbon Silos		Comments
Silos condition compromised – leaks visible	Y / N	
Offloading areas in clean condition	Y / N	
Make note of any off-site nuisance impacts such as odour, dust, litter etc.		

Comments:

Shift Supervisor Signature:

NOTE: This inspection satisfies ECA 7306-8FDKNX Condition 5 (5) Inspections



DYEC Waste Screening Report - Tipping Floor Date: _____

Once per hour, Trained Personnel shall unload the incoming Waste on the tipping floor for a manual visual inspection and sorting of the incoming Waste.
 (ECA - Condition 4 (2)(b)(ii))

Time	Waste Hauler		ID #	Extreme Odour?		Any Unacceptable Waste?		Trucks dumped directly into Pit			Inspector Initials
	Durham	York (UPAK)		Yes	No	Yes	No	ID #			
								Please place a D (Durham) or Y (York) in front of ID#			
7am											
8am											
9am											
10am											
11am											
12pm											
1pm											
2pm											
3pm											
4pm											
5pm											
6pm											

To report Unacceptable Waste please use the other side of this form.



DYEC Waste Screening Report - Tipping Floor

Time of Inspection	Explosives	Liquid Wastes	C & D (Drywall)	Large Machinery	White Goods	Sealed Drums	Pressurized Containers	Tar or Asphalt	Pathological or Biological	Logs or Stumps	Tires	Other	Description of Materials	Storage Location	
														Floor Bin	Bermed Area
Please record volume/quantity of materials removed from waste stream															
7am															
8am															
9am															
10am															
11am															
12pm															
1pm															
2pm															
3pm															
4pm															
5pm															
6pm															

Comments:

Shift Supervisor Signature: _____

ODOUR LOG

Date	Time	Wind Direction	Odours Detected (Y/N)	Location of odours (i.e. east side of admin)	Extent of odours (i.e. How far away from plant can you smell it) Any comments	Yellow Drum Level of Micronutrient (inches)	Micro-nutrient Added (Y/N)	Initial

Appendix 2: DYEC Record of Complaint



DYEC Record of Complaint

Tracking Number: _____ (admin use only)

[SECTION A: THIS AREA TO BE COMPLETED BY FIRST RESPONDER]

Date of Complaint: _____ Time: _____ am pm

Complaint Received by: _____

Method of Contact: Telephone Letter Email Facility Visit Fax
 Other _____

Name of Complainant: _____

Address: _____

Phone: _____

Email: _____

Complaint/Issue: (Be as detailed as possible including if an immediate response was requested.)

Company activities at the time of the complaint:
(Include process conditions, maintenance being performed etc.)

Description of response immediately following the complaint:

Referred for Further Action to:

Facility Manager Business Manager Environmental Specialist
 Other _____

[SECTION B: THIS AREA TO BE COMPLETED BY MANAGEMENT]

Complaint Processed by: _____

Weather at Time of Complaint (if required):

Source:

Courtice WPCP Weather Station

Other: _____

Temperature: _____ C Precipitation: _____ (rain/snow and volume)

Wind Speed: _____ km/h Wind Direction: _____ (direction wind is coming from)

Other Details: _____

Were any further actions taken/required after the initial response? Yes No

Date: _____ Time: _____ am pm



DYEC Record of Complaint

Tracking Number: _____ (admin use only)

If no action was taken, specify why.

Describe actions/preventative actions taken to address the cause of the complaint.

Follow Up:

(Include date for completion)

Response Method (to Complainant): Telephone In Person Email/Written

Is the Complainant satisfied with the response and follow-up?

If no, please provide reason:

Was the MOECC contacted? Yes No

If No, Why not?

Date of MOECC contact: _____ Verbal Written Both

Name of MOECC contact: _____

Contact Information: _____

Other Comments:

Complaint Processor: _____

Signature: _____

Facility Manager: _____

Signature: _____

Business Manager: _____

Signature: _____

Environmental Specialist: _____

Signature: _____

Date Closed: _____

Appendix 3: Summary of Investigated Odour Complaints (November 1st, 2016 to October 31st, 2017)

Date Received:	July 26 th , 2016**
Method:	Durham Corporate Communications to DYEC Project Team Staff
Comment Details:	There's a smell of garbage in the air hwy2/Green Rd. Yesterday was very strong around 3pm. Could it be from the incinerator?
DYEC Activities:	The complaint was received from a location 5 km NE of the facility. On July 25 th , Covanta personnel were performing regular perimeter ring road facility walk-arounds (upwind and downwind) every 6 hours in association with Unit #1 being offline. No odours were detected during the 10am or 4pm walks. At the time of the complaint (July 25 th at 3pm) the Courtice Water Pollution Control Plant weather station recorded that the prevailing winds were from the NE (the same direction as the complaint) at 5 km/h. Receipt of MSW was approximately 250 tonnes or 7 trucks. There were no MSW trucks on site between 1:41pm and 3:15pm. Unit #2 was operating under normal conditions. After reviewing the data, it was concluded that the odour did not originate from the DYEC.
MOECC Contacted:	Yes. The MOECC was contacted and advised that based on the location of the complaint, the source of the odour would likely be in close proximity to the Hwy 2 and Green Road area and not related to the DYEC
Immediate Response:	Review of operational/process data
Further Actions:	Not required. Plant operations indicate that the facility would not be a cause of the odour complaint.

**Note: This complaint was received outside of the reporting year but was omitted on last year's report.

Date Received:	November 16 th , 2016
Method:	DYEC Control Room
Comment Details:	Control Room operator received a call from the OPG building across the street. A gentleman stated he could smell a garbage like stench wafting from this direction and asked if were having issues here and could we investigate. The Complainant did not leave a name or number for a return call.
DYEC Activities:	Both units online at approximately 100% MCR. One truck had delivered MSW but had left the site at 07:25am.
MOECC Contacted:	Yes. The MOECC was called at 08:45am to inform them of the odour complaint and Covanta's investigation. The MOECC was onsite at 11:00am. Upon discussion at 12:10pm the MOECC agreed the odour was not coming from the DYEC.
Immediate Response:	A Covanta Shift Supervisor did a perimeter ring road facility walk-around (upwind and downwind) and did not identify any odours at the facility. Conditions at the time: ambient temperature 9°C, wind direction SE to NE at 0 to 5 km/h. Due to variability in wind direction, a definitive odour vector could not be ascertained. Therefore, at 08:20am, Covanta's Environmental Specialist completed a drive around the immediate facility consisting of

Date Received:	November 16 th , 2016
	Courtice Shores Drive, Osborne Road and Energy Drive. An odour was noted (which smelled akin to compost) on the north side of Energy Drive and Osbourne Road. The odour increased to the north. The Environmental Specialist continued to follow the odour by driving north on Courtice Road, east on Baseline Road and north on Hancock Road where the odour reached maximum intensity. As a result of the additional investigation, it was concluded that the odour did not originate from the DYEC.
Further Actions:	Not required. Plant operations indicated that the facility would not be a cause of the odour complaint.