2020 ODOUR MANAGEMENT & MITIGATION MONITORING REPORT

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1. Executive Summary

The Durham York Energy Centre (DYEC), respectfully submits the 2020 Annual Odour Management and Mitigation Monitoring Report (OMMMR) covering operations encompassing November 1, 2019 to October 31, 2020.

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 Ministry of the Environment, Conservation and Parks (MECP), 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 within the tipping building, the smoke test was determined to provide visualization of the flow of combustion air, odours and dust, and hence demonstrate the design of DYEC to manage and mitigate odours from waste stored before combustion". The Containment Test Protocol was approved by the MECP 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 MECP York Durham Regional 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. Subsequent reports were submitted on December 23rd, 2016, November 24th, 2017, November 26th, 2018 and November 26, 2019. This OMMMR represents the sixth submittal. The scope of this OMMMR follows the activities detailed 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

2. Normal Operations Odour Control

The application of good working practices and process control is of fundamental importance in eliminating and minimizing 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 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 received for processing may include

odourous substances. 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 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 that reaches the DYEC.

All vehicles hauling municipal solid waste to the DYEC have been approved by the MECP. 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	MECP ECA #
Challenger Motor Freight Inc.	A841577
U-Pak Disposals Limited	A8597
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/closed until they enter the Tipping Hall, reducing the potential for the release of odour emissions. On an hourly basis, one MSW truck is directed to unload on the Tip Floor. Trained operating personnel perform a visual inspection and any necessary sorting of this waste, which also includes recording the presence of any extreme odours coming from the incoming MSW vehicles. These results are

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

The outdoor storage of waste, whether in or out of transport vehicles, is not permitted with the exception of compressed gas cylinders removed as Unacceptable Waste. Per the Fire Department, these are not to be stored indoors.

2.3 Thermal Treatment of Waste

Under normal operating conditions, one or two combustion trains are online. 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 across the refuse pit area prevents fugitive dust and odours from escaping into the environment. Potential malodourous 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 th 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	• the queue time of trucks onsite • Waste falling off trucks	• 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	• Outside storage • Unacceptable waste	• Waste is not stored outside anywhere on the facility • Unacceptable waste is stored in a dedicated location on the Tipping Hall floor. Compressed gas cylinders are stored outside the Tipping Hall in a dedicated cage.

Emission Source	Potential Source of Odour	Control Measures / Preventative Procedure
Tipping Hall / Refuse Building	• Fugitive odours	• 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 where the thermal treatment process destroys 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	• Both the facility thermal treatment units are off-line for an extended period	• 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. • Induced Draft (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 offline 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 schedule, track

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 (or designate) 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. He/She is also responsible for ensuring the micronutrient 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 recorded.

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

The wastewater settling basin (WWSB) is inspected on a daily basis for odour, dust and litter. The results of these inspections, including any actions taken, are recorded on the Outside Environmental Checklist. 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 or any other reporting period. During the reporting year, the WWSB was cleaned out and inspected on July 7th, 2020 per Standard Operating Procedure *DYEC-BLR-051 Settling Basin Cleaning and Maintenance*.

The Waste Screening Report is also completed by the Equipment Operator (or designate). 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 Weekly	Equipment Operator Daily Rounds DYEC Weekly Environmental Site Inspection Form
Louver Positions	Daily Weekly	Equipment Operator Daily Rounds 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 Weekly	Outside Environmental Checklist DYEC Weekly Environmental Site Inspection Form
Haul Truck Odour Inspection	Daily – every truck	Waste Screening Report
Odour Walk	As needed i.e. outages and/or odour concerns	Odour Log
Wastewater Settling Basin	Daily Weekly	Outside Environmental Checklist 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 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. A review of the OMMP was completed in 2019. No changes in the odour emission sources from facility operations have occurred. No odour complaints were attributed to the Facility. An improvement opportunities were identified with two forms. The Equipment Operator Daily Rounds form was revised to include a drawing of the louvers on the north wall of the Tipping Hall. The Odour Log was revised to provide greater space for comments.

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.

Annual review of the OMMP is tracked through the online training platform. Additional refresher training is provided on an as-needed 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. Standard operating procedure *DYEC-PEO-003 Public Complaints and Enquiries* has been developed and amended to record complaints and ensure adequate information is collected to determine the cause and identify/implement mitigative actions. The SOP covers the following:

- receipt of complaints including information to be recorded and information to be released;
- processing of complaints including tracking number, meteorological conditions, maintenance and process conditions;
- form completion, follow through and notification to the MECP;

- receipt of information requests and information to be released; and
- record management

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 MECP.

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 refuse pit by combustion air fans that pull the combustion air through the intake ducts located above the cranes on the charging deck. The Distributed Control System (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 Monitoring of On-site Meteorological Data

The monitoring of real-time meteorological data is an effective tool in the management of potential odorous emissions from the facility. Certain meteorological conditions, such as cold conditions combined with low wind speeds, can result in poor dispersion of fugitive waste odours should odours be released. This can potentially lead to an increased risk of odour annoyance at sensitive receptors. The DYEC has access to two meteorological stations located to the south west (upwind) at the Courtice Water Pollution Control Plant and to the north east (downwind) at the SE corner of Rundle Road and Baseline Road. These two stations continuously measure SO_2, NO_x and $PM_{2.5}$ as well as wind speed/direction, temperature, and relative humidity. If a confirmed odour complaint is received at the facility, the resulting

investigation includes the meteorological data (wind speed/direction and temperature) from the Courtice Water Pollution Control Plant station. If required, the data collected at the Rundle Road station is also available.

4.3 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 MECP 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 complaint follow-up investigations and responses are maintained on site. See Section 6, Odour Complaint and Response Procedure, for additional details.

4.4 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 2-unit 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 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 facility's maintenance program.

During a single unit outage, the remaining unit continues to run and provides for Tipping Hall and pit area ventilation, maintaining odour control. In addition to this, Standard operating procedure *DYEC-ENV-010 Fugitive Dust and Odour Control*, for monitoring and mitigation of odours is employed. This may include the completion of perimeter odour surveys and the use of active odour suppression within the Tipping Hall.

When in a full plant outage (both units offline), Tipping Hall 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 during the reporting time frame.

Table 4: Planned Facility Outages

Unit 1	Unit 2
March 1 – March 16, 2020	February 29 – March 13, 2020
September 26 – October 5, 2020	September 27– October 10, 2020

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 works effectively to prevent fugitive odour. Aqua Fog® usage dates are documented in Table 5.

Table 5: Aqua Fog Usage Dates

Dates	Reason
March 12 - March 14, 2020	March boiler scheduled outages - Precautionary use during extended waste storage
September 29 – October 5, 2020	September boiler scheduled outages - Precautionary use during extended waste storage

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 MECP per Condition 2 (8)(b)(i) of the ECA, as amended on March 14, 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. MECP notifications of extended waste storage are archived at the site. There have been no verified odour complaints due to planned or unplanned shutdowns. Extended waste storage dates are documented in Table 6.

Table 6: Extended Waste Storage

Dates	Reason
March 7 - March 22, 2020	Spring major maintenance outages
October 1 – October 13, 2020	Fall minor maintenance outages

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 check 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 though the Regions of Durham or York or received directly at the facility. The Standard operating procedure *DYEC-PEO-003 Public Complaints and Enquiries* is based upon the *Durham/York Energy from Waste Complaint Protocol for Design, Construction & Operations* and is followed whenever an odour complaint is received. *See Appendix 2: DYEC Record of Complaint* for information collected during an investigation.

There were 6 (six) complaints/enquiries relating to odour received at the facility between November 1, 2019 and October 31, 2020. An investigation into each complaint was immediately initiated. All confirmed odour complaints must be reported to the MECP District Office by phone or email as soon as reasonably possible. None of the 6 (six) complaints/enquiries received were attributed to the DYEC. A summary of the complaints and investigations can be found in Appendix 3.

A Complaint and Inquiry report submission is provided to the MECP York Durham District Office District Manager monthly in accordance with the Complaint Protocol approved by the MECP 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: https://www.durhamyorkwaste.ca/en/operations-documents/complaint-inquiry-protocol-and-logs.aspx?_mid_=1057

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 16, 2015 that further notifications regarding odour complaints were not required.

Appendix 1 – Inspection Forms

Equipment Operator Daily Rounds

DYEC Weekly Environmental Site Inspection Form

Outside Environmental Checklist

Waste Screening Report – Tipping Floor

Odour Log

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EQUIPMENT OPERATOR DAILY ROUNDS

Completed By: _____ **Date:** _____

At 7am, confirm louver position (see over)

Yes	No	Item	
		Inspect the Loader using the approved inspection form	
		Portable Fire Extinguishers: present and properly charged and fire hose in good condition	
		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.	
		Winterization – Confirm heat tracing is on for fire system drip leg	
		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 -
		Drain all fire system drip legs (5)	Record time -
		Halo Lights working/charging	Record time -
		Water Cannons cleaned	Record time -
		Water Cannon infra-red cameras cleaned with air	Record time -
		Coveralls bagged up	Record time -

At 7pm, confirm louver position (see over)

Additional Tasks Completed and any Comments or Issues from above

Shift Supervisor Signature: _____

Rev.9 10-Dec-19

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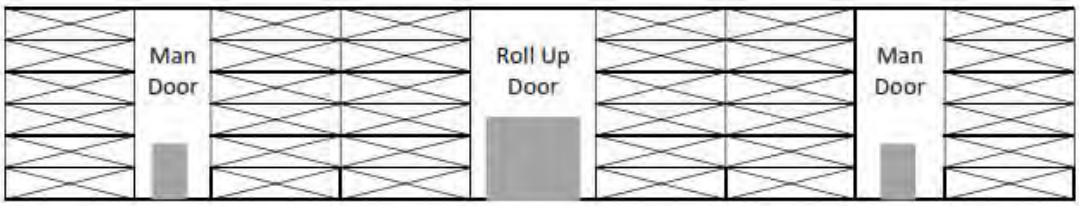
EQUIPMENT OPERATOR DAILY ROUNDS

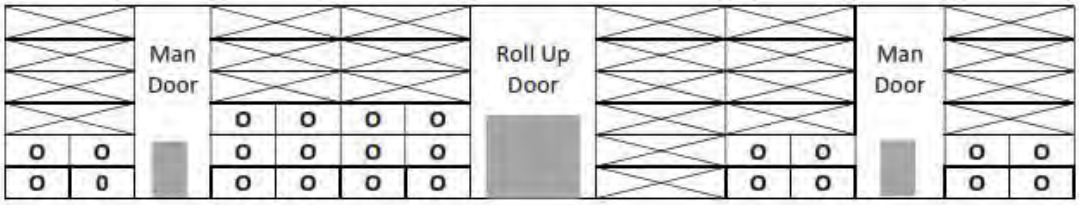
Please place 7am or 7pm on the line matching the specified conditions

_____ MSW incoming, (Boilers on or off)

_____ No MSW incoming, Both boilers off, CA fans off

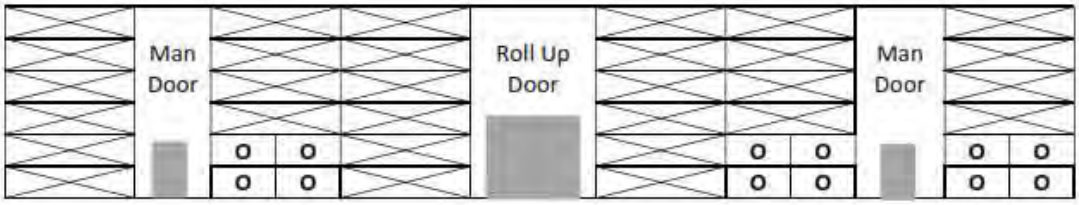


_____ No MSW incoming, Both boilers operating

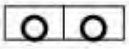


_____ No MSW incoming, Both boilers off, CA fan operating

_____ No MSW incoming, 1 boiler operating




Closed


Open

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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	☐	☐	☐	
Dust is controlled – Roadways are adequately swept	☐	☐	☐	
Overall site litter is controlled	☐	☐	☐	
No evidence of excessive soil erosion	☐	☐	☐	
Facility is maintained in a clean and sanitary condition	☐	☐	☐	
Areas adjacent to buildings are free of standing water	☐	☐	☐	
Grass/ landscaping is neatly trimmed and properly maintained	☐	☐	☐	
	☐	☐	☐	

Tanks			Comments
	Leaks detected (dust or liquid)		
Carbon	Yes ☐	No ☐	
Lime	Yes ☐	No ☐	
Pozzolan	Yes ☐	No ☐	
Cement	Yes ☐	No ☐	
Diesel Tank	Yes ☐	No ☐	Spill Kit -
Ammonia	Yes ☐	No ☐	

BOILER/TURBINE BUILDING AREAS

	Sat	NI	UnSat	Comments
Tanks and drums provided with 2" containment or spill pallets	☐	☐	☐	
Floor drains/trenches are functioning properly	☐	☐	☐	
Floor is clear of spilled material and/or oil	☐	☐	☐	
Spill kits are adequately stocked (turbine and firing aisle)	☐	☐	☐	
No evidence of leaks/spills or malfunctioning equipment	☐	☐	☐	
	☐	☐	☐	

APC AREA

	Sat	NI	UnSat	Comments
Surfaces are clear of spilled material and/or oil	☐	☐	☐	
Floor drains/trenches are functioning properly	☐	☐	☐	
Baghouse systems are functioning properly	☐	☐	☐	
Ammonia tank/diking in proper working order	☐	☐	☐	
Carbon/lime/ammonia injection systems in proper working order	☐	☐	☐	
	☐	☐	☐	

CEMS PERFORMANCE

	Sat	NI	UnSat	Comments
Daily Summary Reports reviewed and any issues addressed	☐	☐	☐	
CEMS data quality issues being addressed	☐	☐	☐	
CEMS maintenance and calibrations adequately performed	☐	☐	☐	
Condition of CEMS Trailer (cleanliness, temperature)	☐	☐	☐	

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DYEC WEEKLY ENVIRONMENTAL SITE INSPECTION FORM

Sat – Satisfactory NI – Needs Improvement UnSat - Unsatisfactory

RO WATER TREATMENT AREA	Sat	NI	UnSat	Comments
Floor is clear or spilled material and/or oil	☐	☐	☐	
Spill kit is adequately stocked	☐	☐	☐	
No evidence of excessive leaks or malfunctioning equipment	☐	☐	☐	
Storage tanks/containment basins properly maintained	☐	☐	☐	
	☐	☐	☐	

STORM WATER PONDS and SETTLING BASIN	Sat	NI	UnSat	Comments
No evidence of visible sheen on ponds	☐	☐	☐	
No evidence of visible sheen on WWSB	☐	☐	☐	
Spill kits at East and West ponds are adequately stocked	☐	☐	☐	
	☐	☐	☐	

RESIDUE BUILDING AND HANDLING AREAS	Sat	NI	UnSat	Comments
Ash, ferrous and non-ferrous material is properly contained	☐	☐	☐	
Spill kit is adequately stocked	☐	☐	☐	
Floor is clear of spilled material and/or oil	☐	☐	☐	
No sign of ash track-out or leaking transport vehicles	☐	☐	☐	
No sign of ferrous/non-ferrous track out	☐	☐	☐	
No sign of ash spillage beneath outside conveyors	☐	☐	☐	
Condition of Pozzolan/Cement silo base	☐	☐	☐	
	☐	☐	☐	

GRIZZLY BUILDING & EMERGENCY DIESEL GENERATOR (EDG) AREA	Sat	NI	UnSat	Comments
Floor is clear of spilled material and/or oil	☐	☐	☐	
No sign of excessive ash spillage, NO ash track-out.	☐	☐	☐	
Spill kit is adequately stocked	☐	☐	☐	
No sign of leaks/spills around EDG	☐	☐	☐	

FIRE PUMP HOUSE	Sat	NI	UnSat	Comments
Spill kits are adequately stocked	☐	☐	☐	
Diesel tanks: no leaks visible	☐	☐	☐	
No sign of malfunctioning equipment evident	☐	☐	☐	
Water tank containment intact	☐	☐	☐	
	☐	☐	☐	

MAINTENANCE SHOP	Sat	NI	UnSat	Comments
No drums or drums on spill pallets	☐	☐	☐	
Floor is clear of spilled material and/or oil	☐	☐	☐	
No staining evident on paved areas outside of shop	☐	☐	☐	
Maintenance activities conducted in a manner minimizing spill potential	☐	☐	☐	

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DYEC WEEKLY ENVIRONMENTAL SITE INSPECTION FORM

Sat – Satisfactory NI – Needs Improvement UnSat - Unsatisfactory

SCALES	Sat	NI	UnSat	Comments
Spill kit is adequately stocked	☐	☐	☐	
Scales and roadway are free from MSW/dust/litter	☐	☐	☐	
	☐	☐	☐	

INTERNALLY GENERATED WASTE – COMPRESSOR ALLEY	Sat	NI	UnSat	Comments
No evidence of leaks/spills in the vicinity of the used oil storage drums	☐	☐	☐	
Tanks and drums provided with secondary containment and/or spill pallets	☐	☐	☐	
Spill kit is adequately stocked	☐	☐	☐	
IGW is properly labelled	☐	☐	☐	
	☐	☐	☐	

TIPPING FLOOR	Sat	NI	UnSat	Comments
Vectors are prevented or controlled	☐	☐	☐	
Waste volume in pit and tipping floor not excessive	☐	☐	☐	
Daily Waste Screening Reports completed	☐	☐	☐	
Spill kit is adequately stocked	☐	☐	☐	
Chemical/oil spills/debris present on floor	☐	☐	☐	
Unacceptable waste stored safely	☐	☐	☐	
No track out of MSW	☐	☐	☐	
Louvers are functioning and in correct position	☐	☐	☐	
	☐	☐	☐	

ADDITIONAL COMMENTS:

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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, trash or 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	
Trash/debris present on scales	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				
Storm Water Pooling present north of WWSB	Y / N	If yes, inform Shift Supervisor			
Basin/Pumps compromised –leaks visible	Y / N				
Water pumped from WWSB or returned to WWSB from Ammonia Containment	Y / N	If Yes, state which direction (to or from WWSB), when and how much			
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. Fly Ash and Inclined Conveyors		**Comments**			
Odour / Dust / Litter present	Y / N				
Ash leaks visible	Y / N				

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Outside Environmental Checklist

10. 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	If oil is present in containment, do not pump water. Inform Shift Supervisor.
Water Level in north containment (Pump if 2 inches or greater.)	(Inches)	Water Pumped Y / N
Water Level in south containment (Pump if 2 inches or greater.)	(Inches)	Water Pumped Y / N
11. Ammonia		**Comments**
Containment compromised (cracks/peeling present)	Y / N	
Tank/valves/pipes compromised– leaks visible	Y / N	
Water Level in Dyke (Pump at 2 inches = bottom black line)	(Inches)	Water Pumped Y / N
12. Pozzolan/ Cement/ Carbon Silos		**Comments**
Silos condition compromised – leaks visible	Y / N	
Pozzolan or Cement build up inside silo?	Y / N	
Offloading areas in clean condition	Y / N	
13. Lime Silo Panel		**Comments**
Verify lime silo panel power is on and there is no alarm	Y / N	Notify Shift Supervisor if there is no power or an alarm is present.
Make note of any off-site nuisance impacts such as odour, dust, litter etc.		

Comments:

_____

_____

_____

Shift Supervisor Signature:

_____

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

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Powering Today. Protecting Tomorrow.

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)			
7am												
8am												
9am												
10am												
11am												
12pm												
1pm												
2pm												
3pm												
4pm												
5pm												
6pm												

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

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Waste Screening Report - Tipping Floor

Please record volume/quantity of materials removed from waste stream

	Time of Inspection	**Hazaardous Wastes**	Pathological or Biological	MHSW*	Transformers / Ballasts	Chemical Wastes	Hot or Burning Load	**Unacceptable Wastes**	Compressed Gas Cylinders	Sealed Drums - Liquid Wastes	Tires - > 10	Construction - Demolition	Recycling Materials	Motor Vechicle Parts	Electronic Waste	Leaf-Yard Waste - logs and stumps	**Bulky Unprocessable Wastes**	Items > 6 feet	Description of Materials	**Storage Location**		
																				Floor/Bin	Bermed Area	Compressed Gas Cage Outside
7am																						
8am																						
9am																						
10am																						
11am																						
12pm																						
1pm																						
2pm																						
3pm																						
4pm																						
5pm																						
6pm																						

* MHSW - Municipal Hazardous and Special Wastes: pesticides/herbicides, batteries, antifreeze, solvents, light bulbs etc.

Comments:

Shift Supervisor Signature: _____

ODOUR LOG

Date	Target Time	Time Completed	Wind Direction	Odours Detected (Y/N)	If yes, identify odours (MSW, sewage, compost etc.) Direction and distance from facility odour extends. Record any additional comments below.	AquaFog Unit running (Y/N)	Micro-nutrient Added (Y/N)	Initial
	4:00 AM							
	10:00 AM							
	4:00 PM							
	10:00 PM							
	4:00 AM							
	10:00 AM							
	4:00 PM							
	10:00 PM							
	4:00 AM							
	10:00 AM							
	4:00 PM							
	10:00 PM							
	4:00 AM							
	10:00 AM							
	4:00 PM							
	10:00 PM							
	4:00 AM							
	10:00 AM							
	4:00 PM							
	10:00 PM							

Additional Comments

Rev 3: 28-Feb-20

Appendix 2 – DYEC Record of Complaint

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DYEC Record of Complaint

Tracking Number: _____ (admin use only)

[SECTION A: This area to be completed by First Responder]

Date of Complaint: _____ **Time:** _____

Complaint Received by (please print): _____

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

Name of Complainant: _____ (if provided)
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 etc.)

_____
_____
_____

Description of response immediately following the complaint:

_____
_____

Referred for Further Action to: ☐ Facility Manager ☐ Chief Engineer
☐ Environmental Specialist ☐ Other _____

[SECTION B: This area to be completed by Management]

Weather at Time of Complaint (if required):
Temperature (°C): _____ Precipitation (rain/snow & volume): _____
Wind Speed (km/h): _____ Wind Direction: _____

Were any further actions taken/required after the initial response? ☐ Yes ☐ No
Date: _____ Time: _____
Description: _____
_____

If no action was taken, specify why:

_____
_____

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DYEC Record of Complaint

Tracking Number: _____ (admin use only)

Describe actions taken to address the cause of the complaint.

_____

_____

_____

Follow Up: (Include date for completion)

_____

_____

_____

Response Method (to Complainant): ☐ Telephone ☐ In Person ☐ Email

Is the Complainant satisfied with the response and follow-up? ☐ Yes ☐ No

If No, Please provide comments/reason:

_____

_____

_____

Was the MECP contacted? ☐ Yes ☐ No

If No, Why?

_____

_____

_____

Date of MECP contact: _____ ☐ Verbal ☐ Written ☐ Both

Name of MECP contact: _____

Complaint Processor: _____ (Print) _____ (Signature)

Facility Manager: _____ (Print) _____ (Signature)

Chief Engineer: _____ (Print) _____ (Signature)

Environmental Specialist: _____ (Print) _____ (Signature)

Date Closed: _____

Appendix 3 – Summary of Investigated Odour Complaints (November 1, 2019 to October 31, 2020)

Date Received	January 31, 2020
Method	phone
Comment/ **Complaint Summary**	Staff received an odour complaint at around 11:25 AM. Strong odour -smells like garbage. Located in the area of Huntington Crescent and north to Highway 2.
DYEC Response/ **Action Taken**	Staff completed a full odour investigation, which included a drive to the area the complaint specified and a review of current operations. Staff called the resident back to discuss further. The resident was satisfied that the odour was not related to the DYEC.
DYEC Activities/ **Investigation**	Normal operating conditions; no issues requiring maintenance. All facility doors were closed with no trucks idle on site and facility was operating under typical conditions. It was concluded that the odour was not related to the DYEC and attributed to another source/operation.
Meteorological Data (wind speed and direction)	(11AM to 12PM) Average wind direction – ENE Average wind speed – 8 km/h
MECP Correspondence	January 31, 2020 – Phil Dunn, York-Durham District Office (telephone notification) DYEC staff phoned MECP Durham District officer. Officer was satisfied that the odour was not originating from the DYEC based on investigation. February 4, 2020 – Celeste Dugas, York-Durham District Office (Record of Complaint forwarded)
Further Action	Not required.
Date Responded	January 31, 2020

Date Received	February 4, 2020
Method	email
Comment/ **Complaint Summary**	Full comment is found in Complaint and Inquiry Logs. Long time resident since 1998. Concerned noticeable smell since incinerator has been built. Pungent smell in the air. Smell travels as far as Simcoe Ave., in Oshawa. Questions safety of facility and whether it's safe to breathe the air that it may be poisonous. Feels facility is designed poorly given impacts to air from odour. Feels more testing is needed to prove safety.
DYEC Response/ **Action Taken**	Full email response is found in Complaint and Inquiry Logs. Response detailed air modelling exercise undertaken to demonstrate safety of the facility. Explained air emissions and ambient air monitoring and oversight by the operator, the Region and Ministry of Environment, Conservation and Parks. Advised of the DYEC website for reports. Explained how the DYEC was built to manage odours. Advised odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP).

Date Received	February 4, 2020
DYEC Activities/ Investigation	DYEC Odour logs reviewed for January. Determined that there were several instances that odour was detected on DYEC property. In each of these instances, there were no operational issues at the facility, the doors were all closed, and the wind originated from a northerly direction. This suggests that the odour originates from another operation located north of the DYEC.
Meteorological Data (wind speed and direction)	Not Available
MECP Correspondence	Phil Dunn notified via phone in relation to the complaint. Phil to be copied on the response in case there are further questions.
Further Action	Not required
Date Responded	February 5, 2020

Date Received	February 21, 2020
Method	phone
Comment/ Complaint Summary	Resident smelled the odour while at Highway 2 and Green Road area.at 1:45 PM. Resident noted a conversation Original Bowmanville Community Group Facebook page (which is a private page) which is speaking to odours claiming to be from facility referencing today's date (February 21, 2020).
DYEC Response/ Action Taken	Staff called the resident back to discuss further. The resident was satisfied that the investigation as detailed regarding odour was not related to the DYEC.
DYEC Activities/ Investigation	Normal operating conditions; no issues requiring maintenance Staff completed a full odour investigation which included a drive to the area where the smell originated, and a review of DYEC operations and meteorological data. No odour was detected on DYEC property. During the drive, staff identified the odour as being consistent with the emissions from another operation in the area as has been discussed previously. The other facility has a characteristic odour associated with its processing operations which has been noted by DYEC staff during property line checks when the wind is originating from a northerly direction. The presence of odours in the area has been discussed with MECP staff previously, and the MECP is aware of the other facilities operations. It was concluded based on the location and nature of the smell, that the odour was attributed to another operation north of DYEC where odours were blowing from a westerly to southwesterly direction towards the Highway 2 and Green Road area.
Meteorological Data (wind speed and direction)	The winds were from the North West between 1 to 2pm (the time of the complaint) – but were originating from a more southwesterly direction earlier in the day.

Date Received	February 21, 2020
MECP Correspondence	Email sent to MECP (Celeste Dugas). Phil Dunn contacted. Results of the odour investigation were provided.
Further Action	Not required
Date Responded	February 24, 2020

Date Received	February 23, 2020
Method	email
Comment/ **Complaint Summary**	Full Comment is found in Complaint and Inquiry Logs. Concern of noxious odour between Bowmanville and Courtice for several months. Odour is intolerable to be outside or open a window, so must be poisonous to humans and animals. How can the Region allow this odour to continue?
DYEC Response/ **Action Taken**	Full email response is found in Complaint and Inquiry Logs. Explained detailed series of detailed studies and their results on air emissions, health, traffic, noise, ground and surface water to assess any potential effects from the DYEC to ensure that residents and the environment are protected. Explained air emissions and ambient air monitoring and oversight by the operator, the Region and Ministry of Environment, Conservation and Parks. Advised of the DYEC website for reports. Explained how the DYEC was built to manage odours. Advised odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP). Advised there have been no validated odour concerns from operations since DYEC operations commenced in 2016.
DYEC Activities/ **Investigation**	DYEC staff reviewed the odour logs for January and February and recorded several events where strong odour was detected both on-site and off site. In each instance, DYEC was operating under typical conditions. During investigations, staff identified the odour as being consistent with the emissions from another operation in the area as has been discussed previously. During the period in question similar odours were commonly detected during odour walks at the DYEC property line when winds were originating from the north.
Meteorological Data (wind speed and direction)	Not Applicable
MECP Correspondence	Not Applicable
Further Action	Not required
Date Responded	February 24, 2020

Date Received	February 24, 2020
Method	email
Comment/ **Complaint Summary**	Full email complaint is found in the Complaint and Inquiry Logs. Very strong odour in the air coming from the incinerator today and has been very noticeable for the past few days now. Smell is making me sick and dizzy and has gave me headaches when I am outside. Located at Home Depot, Bowmanville and everyone outside are complaining of the very strong smell. Two days ago, I was near the Ontario Power and it was just as strong. This can't be good to breathe. Why you are burning and allowing the public to breath in your waste production. Questions whether monitoring is effective. Complainant did not prefer an email with explanation. Wants the MECP putting a stop to this odour.
DYEC Response/ **Action Taken**	Full email response is found in Complaint and Inquiry Logs. Explained how the DYEC was built to manage odours. Explained how odours are managed and monitored by the Region and Covanta. Advised odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP). Advised there have been no validated odour concerns as a result of operations since DYEC operations commenced in 2016. Explained complaint and investigation process. Encouraged odours to be reported to the local district office of the Ministry of the Environment and Climate Change. MECP was copied on the response. Advised the results of investigations to date indicate that the DYEC is not the source of the odours.
DYEC Activities/ **Investigation**	DYEC staff reviewed the odour logs for January and February and recorded several events where strong odour was detected both on-site and off site. In each instance, DYEC was operating under typical conditions. During investigations, staff identified the odour as being consistent with the emissions from another operation in the area as has been discussed previously. During the period in question similar odours were commonly detected during odour walks at the DYEC property line when winds were originating from the north.
Meteorological Data (wind speed and direction)	Not applicable
MECP Correspondence	Not applicable
Further Action	As a result of the number of complaints in the area, the Region developed and implemented an expanded regular procedure which in addition to monitoring at the property line of the facility, includes travel by vehicle into the vicinity of other potential sources in the area.
Date Responded	February 26, 2020

Date Received	July 7, 2020
Method	phone
Comment/ **Complaint Summary**	The smell has been bad here all day. I need to close all the windows to prevent that smell from entering the house.
DYEC Response/ **Action Taken**	Explained how the DYEC was built to manage odours. Explained how odours are managed and monitored by the Region and Covanta. Advised odour complaints received by the DYEC are reported to the Ministry of the Environment, Conservation and Parks (MECP). Advised there have been no validated odour concerns from operations since DYEC operations commenced in 2016. Explained complaint and investigation process. Encouraged odours to be reported to the local district office of the Ministry of the Environment and Climate Change. MECP was copied on the response. Advised the results of investigations to date indicate that the DYEC is not the source of the odours. MECP was copied on the email response. Retuned response to advise of results of investigation- odours were commonly associated with other facility operations in the area. No off site odours have been noted due to operations of the DYEC facility on July 10, 2020.
DYEC Activities/ **Investigation**	Durham staff completed an odour drive in the area and confirmed the presence of an odour in the area of Trulls/Bloor identified as being likely related to another operation. Strong sweet/organic odour detected 1:45pm-2:30pm Review of the odour inspection documents from July 7, 2020 indicate no offsite odours were present from the operation of the facility at the property line. The facility was operating normally during the day in question, with no upset conditions occurring during the period. The location of the odour, as well as the nature of the odour identified by staff in the community is consistent with the operation of another facility in the area. Durham Region staff also received from Clarington staff for information, notice that they had received complaints associated with another area operation. This information was also provided to MECP staff.
Meteorological Data (wind speed and direction)	Wind Direction at time of occurrence – S/SW (9km/h)
MECP Correspondence	July 8 - Phil Dunn (MECP) contacted.
Further Action	Not required. Region is continuing to complete additional monitoring in the area by vehicle to confirm presence of odours in the area when they occur, including attempts to identify the general area where odours may be originating.
Date Responded	July 9, 2020