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DURHAM YORK ENERGY CENTRE

Noise Monitoring and Reporting Plan

ECA No. 7306-8FDKNX

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Submitted to:

Ontario Ministry of the Environment and Climate Change
Director, Environmental Approval Branch
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NOISE MONITORING AND REPORTING PLAN

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1.0 INTRODUCTION

Under the Environmental Assessment Act – Notice to Proceed with Undertaking EA File No. 04-EA-02-08 (Section 19), a Noise Monitoring and Reporting Plan (NMRP) was initially prepared in accordance with the requirements set forth by the EA Notice of Approval to Proceed, Section 19 as well as Condition 7(5)(a) and (b) of the Environmental Compliance Approval (ECA) No. 7306-8FDKNX, for the Durham-York Energy Centre (DYEC). An initial preconstruction Acoustic Assessment Report (AAR) was completed by Golder Associates, dated March 2011 as part of the supporting documentation prepared to obtain an ECA. To date, one precommissioning and three operational acoustic audits have been completed. Each respective AAR concluded that the DYEC is in compliance with the NMRP and all relevant noise limitations.

The 2016 AAR and its associated transmittal letter, recommended that the NMRP be revised to revoke the requirement to carry out future annual acoustic audit measurements unless facility changes dictate or requested by the Director of the MOECC. This NMRP, therefore, accordingly revises and updates the initial plan. This revised NMRP:

1. Establishes a noise monitoring protocol to demonstrate that the DYEC complies with limits set out in the Noise Pollution Control 205 Publication (NPC-205) “Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)”, October 1995, and Environmental Noise Guideline (NPC-300) “Stationary and Transportation Sources, Approval and Planning”, Ontario Ministry of the Environment, August 2013.
2. Requires that the NMRP continue to be posted on the web-site with any relevant correspondence and subsequently collected noise monitoring data, and
3. Annually review the NMRP to determine whether any modifications are required and publish those findings in the Annual Report required by Condition 15 reporting of the ECA, as amended to date.

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2.0 FACILITY DESCRIPTION

The Facility accepts Municipal Solid Waste (MSW) from the Regions of Durham and York. The sources of waste are post-diversion residual waste collected at curbside as well as any residual waste materials collected at public drop-off centres and transfer stations. The only institutional, commercial, and industrial (IC&I) waste to be managed at the Facility will be residual waste where the Regions' will have waste management procedures in place.

The maximum thermal treatment rate for the Facility established by the ECA is 140,000 tonnes/year of waste. The DYEC operates on a continuous basis; 24 hours/day, seven (7) days/weeks, 365 days/year. Waste is delivered six (6) days per week between 7:00am to 7:00pm. The operating schedule may vary depending on demand and facility needs.

The DYEC consists of two (2) thermal treatment trains, each equipped with independently operated boilers/furnaces and air pollution control equipment. The treated exhaust gases are vented to a common 87.6 m stack and released into the atmosphere.

Waste is only accepted from approved haulers that have a valid waste management system approval except for municipal or exempt vehicles as per Section 16(2) (a) of Regulation 347 *General – Waste Management*, made under the *Environmental Protection Act*, R.S.O. 1990. All incoming waste vehicles must proceed to the weigh scale to allow the vehicle weight, waste type and source to be recorded by the scale operator. A maximum of 7,350 cubic metres of waste storage is provided within the waste pit with waste stored below and above the tipping floor elevation.

Equipment used at the DYEC that are potential noise sources include: turbine generator, HVAC units, roof ventilation units, a closed-loop cooling water cooler, a transformer, silo filling using truck mounted blowers, a silo vent dust collector, the main exhaust stack, on-site truck and front end loader traffic, an air cooled condenser, process louvers, bay doors, standby diesel generator and diesel fire pumps. On-site MSW trucking, and periodic testing of the standby diesel generator and diesel fire pumps will be limited to daytime hours only.

Table 1 presents general information about the Facility relevant to this NMRP.

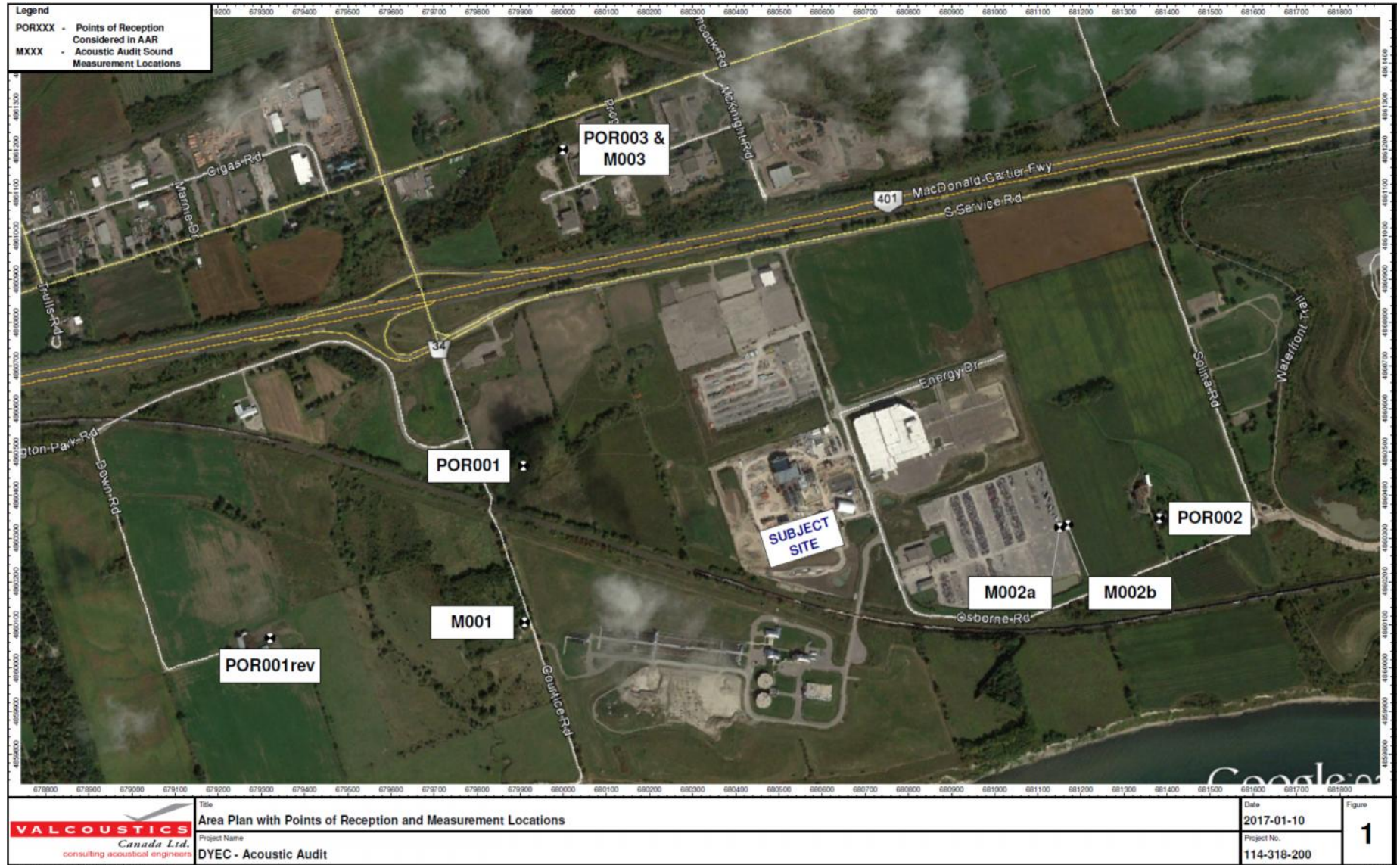
Table 1: Facility Description

Facility:	Durham-York Energy Centre
Location:	1835 Energy Drive, Courtice, Ontario, L1E 2R2 Clarington Energy Business Park, Clarington, Ontario
Main activities / equipment used:	Thermal Treatment of Solid Waste
Production:	140,000 tonnes/year (Maximum Continuous Rating (MCR)) 218 tonnes/day/train @ 13 MJ/kg.

The location of the DYEC is presented in Figure 1.

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Figure 1: Location of Durham York Energy Centre / AAR Points of Reception / Acoustic Audit Sound Measurement Locations



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3.0 RESPONSIBILITIES

The following identifies the responsibilities held by each of the employment levels at the DYEC as they pertain to this NMRP.

3.1 Facility Manager

The Facility Manager, or designate, is responsible for:

- Reviewing the effectiveness of the noise monitoring and reporting program at the DYEC; and
- Ensuring required resources are in place to execute the plan.

3.2 Environmental Specialist

The Environmental Specialist, or designate, is responsible for:

- Coordinating and scheduling the noise monitoring program as per specified monitoring requirements; and
- Reporting data to the MOECC and the public in accordance with the plan.

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4.0 ASSESSMENT CRITERIA AND GUIDELINES

Three (3) point(s) of reception (POR(s)) in the vicinity of the DYEC (Figure 1), as identified in the 2016 AAR, were all conservatively defined as Class 2 as per NPC-205. The subject area is defined as Class 2 urban, as per, MOECC publications NPC-205 and NPC-233.

A Class 2 area can best be described as an urban/suburban blend; whereby sound levels are moderately high during the day (typically 07:00-19:00) but decrease during the evening (typically 19:00-23:00) and night-time hours (typically 23:00-07:00).

The MOECC exclusionary sound level limits for residential receptors in a Class 2 area are described as follows:

The energy averaged sound level (L_{eq}) produced by a source at a receptor location in any one hour period should not exceed the greater of; the energy averaged sound level produced by road traffic in the same hour period, or 50 dBA in the daytime period of 07:00-19:00, or 45 dBA in the evening period of 19:00-23:00 and 45 dBA in the night-time period of 23:00-07:00.

Table 2 below summarizes the exclusionary MOECC performance limits for a Class 2 area and all POR(s) in the vicinity of the DYEC. EA Condition 19 requires that the noise emissions from the DYEC comply with the limits set out in NPC-205. For the DYEC, compliance with NPC-205 also represents compliance with updated provincial guidelines NPC-300.

Table 2: Assessment Criteria

Time Period	Sound Level Limit – L_{eq} [1 hour] (dBA)
Daytime (07:00-19:00)	50
Evening (19:00-23:00)	45
Night-time (23:00-07:00)	45

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5.0 NOISE MONITORING AND REPORTING

In fulfillment of EA Condition 19, the proponent prepared and implemented a Noise Monitoring and Reporting Plan (NMRP), initially dated September 2011 which was subsequently approved by the MOECC. Operational Acoustic Audits were completed in 2015 (two) and 2016, all which demonstrated that the DYEC operations are in compliance with sound level limits in MOECC publications NPC-205 and NPC 300 and the requirements set forth by ECA Condition 7(5).

5.1 Monitoring

Noise monitoring will be conducted at the direction of the MOECC, or following any facility modifications that have the potential to increase noise impacts at nearby offsite receptors. It is expected that at a minimum, whenever monitoring is requested, noise monitors will log acoustic data every hour for the duration of the specified monitoring period. At a minimum, the data will include hourly L_{eq} and L_{90} sound levels. Noise monitoring locations will be dependent on the Facility operations and the modifications that triggered the need for monitoring and any setup access / permission.

The monitoring period should provide representative data for each of the three (3) different periods in Table 2 and peak facility activity. Field measurements may last up to one (1) week and occur during periods in which weather conditions are in accordance with MOECC generally accepted requirements. All equipment used during the monitoring period will meet MOECC requirements.

5.2 Reporting

The NMRP and all Acoustic Audit Reports which summarise noise monitoring data collected during each monitoring period at each of the monitoring locations and related MOECC correspondence are posted on the DYEC website in fulfillment of EA Condition 19.4, link provided below:

<https://www.durhamyorkwaste.ca/Documents/MonitoringPlansReports/Noise.aspx>

The noise monitoring program requirements will be reviewed annually and any modifications will be proposed to the MOECC for their consideration.

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REFERENCES

Ontario Ministry of the Environment. Noise Pollution Control 205 Publication “Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)”, October 1995.

Ontario Ministry of the Environment. Noise Pollution Control 233 Publication “Information to be Submitted for Approval of Stationary Sources of Sound”, October 1995.

Ontario Ministry of the Environment. Noise Pollution Control 300 Publication “Stationary and Transportation Sources - Approval and Planning”, August 2013.

Acoustic Audit of Durham York Energy Centre Operations, Environmental Compliance Approval No. 7306-8FDKNX”, Valcoustics Canada Ltd., Project: 114-318, May 8, 2015.

Supplemental Acoustic Audit of Durham York Energy Centre Operations, Environmental Compliance Approval No. 7306-8FDKNX”, Valcoustics Canada Ltd., Project 114-318-100. November 23, 2015.

Acoustic Audit of Durham York Energy Centre Operations, Environmental Compliance Approval No. 7306-8FDKNX”, Valcoustics Canada Ltd., Project: 114-318, January 10, 2017