EXECUTIVE SUMMARY

Enbridge Gas Inc. operating at Union Gas (Enbridge) retained ORTECH Consulting Inc. to update the Emission Summary and Dispersion Modelling (ESDM) Report for the Parkway Compressor Station (the Facility). The Facility is located at 6626 Ninth Line, Mississauga, Ontario.

On January 24, 2007, the original ESDM Report was prepared for the provincial wide environmental compliance approval (PWECA). On March 18, 2015, the ESDM was updated to assess the changes to the Turbine A exhaust and emergency generator exhaust parameter. On June 24, 2019, the ESDM was updated to assess three (3) new Raypak boilers to replace eight (8) old Auxiliary Building comfort heating units.

This ESDM is updated to address the proposed modifications:

- change of stack diameter and stack height for turbine A;
- replacement of two (2) existing line heaters with one (1) new line heater.

The Parkway Compressor Station is intended to compress natural gas for transmission purposes. The NAICS Code applicable to the facility is '486210 – Pipeline Transportation of Natural Gas'.

This ESDM Report follows the requirements of the Ontario Regulation 419/05 Air Pollution – Local Air Quality and the Ontario Ministry of the Environment, Conservation and Parks (the Ministry) "Procedure for Preparing an Emission Summary and Dispersion Modelling Report Version 4.1" dated March 2018 (the Procedure).

The ESDM report includes the quantification of emission rates for all significant sources of contaminants, specifically oxides of nitrogen (NO_X), and an estimation of the aggregate maximum 1-hour and 24-hour point-of-impingement (POI) concentrations for NO_X.

The emission rates that have been calculated in this report are for maximum 1-hour and 24-hour operating scenarios as per O.Reg. 419/05 Schedule 3 regulatory requirements. Due to the underlying assumptions used for this scenario, the emission rates cannot be realistically extrapolated to other time periods and should not be used for such purposes.

As shown on Table 1, the predicted maximum NO_X POI concentrations resulting from the maximum emission scenario of both turbines operating at full load are below the corresponding Ministry NO_X POI limits. The maximum 1-hour NO_X POI concentration resulting from a maximum emission scenario which consists of all equipment operating at full load, as well as all emergency generators being tested simultaneously, is also below the relevant Ministry NO_X POI limits.

This ESDM Report also includes an assessment of compliance with Ministry Guideline A-5: Atmospheric Emissions from Stationary Combustion Turbines for Turbine B. The primary requirement of Guideline A-5 is achieving designated maximum concentrations of NO_X, CO and SO_2 in the exhaust flow. Turbine B meets the Guideline A-5 requirements.

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Table 1: Emission Summary Table

Scenario	Contaminant Name	Contaminant CAS #	Total Facility Emission Rate (g/s)	Air Dispersion Model Used (include version code)	Maximum POI Concentration [2] (µg/m^3)	Averaging Period (hours)	Ministry POI Limit [3] (µg/m^3)	Limiting Effect	Regulation Schedule #	Percentage of Ministry POI Limit (%)
Two Turbines	Nitrogen Oxides	10102-44-0	14.27	AERMOD 19191	122	1	400	Health	3	31%
					32	24	200	Health	3	16%
Two Turbines and Two Emergency Generators	Nitrogen Oxides	10102-44-0	15.19	AERMOD 19191	237	0.5	1,880	Health	[1]	13%

Note:

[1] From the Ministry publication 7976e "Emergency Generator Checklist, Supplement to Application for Approval, EPA s.9", November 2010.

[2] Meteorological outliers have been removed from the results in accordance with Section 6.5 of the ADMGO.

[3] "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants, April 2018, Version 2.0" and the applicable Ministry publication 7976e "Emergency Generator Checklist, Supplement to Application for Approval, EPA s.9" (Ministry POI Limits).