

**Executive Summary of the
Emission Summary and Dispersion Modelling Report
for the Dow A Pool Station
dated March 12, 2013**

Union Gas Limited (Union Gas) retained ORTECH Environmental (ORTECH), a division of ORTECH Consulting Inc., to prepare an Emission Summary and Dispersion Modelling (ESDM) Report for their Dow A Pool Station, located at Lots 8 and 9 of Plan 13 in Moore Township, Ontario. This report is part of a Basic Comprehensive (Air) Certificate of Approval (CofA) application for all Union Gas facilities in Ontario. The Application is for all sources of air emissions at the site including all existing combustion equipment and natural gas dehydrator unit with a reboiler.

The Dow A Pool Station is used to compress natural gas for transmission and storage purposes and storage in underground pools. The NAICS Code applicable to the facility is ‘486210 – Pipeline Transportation of Natural Gas’. Facilities described by this NAICS Code are not listed on Schedules 4 or 5 of Ontario Regulation 419/05 and are therefore not required to demonstrate air compliance using advanced modelling until February 1, 2020. However, for this facility Union Gas has requested and been approved to apply Schedule 3 standards under section 20(4) of O. Reg. 419/05 for NO_x emissions only prior to the regulatory time frames.

This ESDM Report follows the requirements of the Ontario Regulation 419/05 Air Pollution – Local Air Quality and the Ontario Ministry of the Environment (MOE) “Procedure for Preparing an Emission Summary and Dispersion Modelling Report Version 3.0” dated March 2009 (the Procedure).

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

The NO_x emission rates that have been estimated 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 annual values and should not be used for such purposes.

As shown on Table 1, all significant contaminants are expected to be below all applicable Point of Impingement (POI) criteria.

Table 1: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Maximum POI Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (hrs)	POI Limit ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Regulation Schedule # or Alternative	Maximum % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	10.8	AERMOD	309	1	400	Health	3	77%
				170	24	200	Health	3	85%