

**Executive Summary of the
Union Gas Buildings Assessment
Dated September 21, 2015**

This report describes the screening methodology for natural gas fired comfort heating, domestic hot water equipment, microturbines operating less than 7500 hours in a 5 year period, welding operations and cooling towers at Union Gas buildings, including Service Centres, and provides the screening results.

This assessment report follows the requirements of the Ontario Regulation 419/05 Air Pollution – Local Air Quality and the Ontario Ministry of the Environment and Climate Change (MOECC) “Procedure for Preparing an Emission Summary and Dispersion Modelling Report Version 3.0” dated March 2009 (the Procedure) modified to reflect the Building Protocol (ORTECH Report 91115-3).

Emission rates that have been estimated in this report are for maximum operating scenarios as per O. Reg. 419/05 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.

The results of the natural gas fired equipment analysis indicate that the maximum NO_x Point of Impingement (POI) concentrations from space heating and domestic hot water heating are expected to range from 20 to 68 µg/m³ or from 4% to 14% of the 500 µg/m³ standard.

The results of the welding shop and cooling tower analysis indicate that, where this equipment is present, SPM POI concentrations are expected to range from 3 to 76 µg/m³ or from 3% to 76% of the 100 µg/m³ standard.

Summary of Assessment of NO_x Compliance for Buildings (>1.5 Million BTU/hr)

Building Site	Region	Address	Max. NO _x Emission Rate ⁺ (g/s)	Maximum NO _x POI Conc. (µg/m ³)	Percent of NO _x Standard of 500 µg/m ³
Chatham Corporate	WC	50 Keil Drive North, Chatham, N7M 5M1	0.24	68	14%
London Office	LW	109 Commissioners Rd, London, N6A 4P1	0.08	48	9.6%
Kingston Office	E	1653 Venture Drive, Kingston, K7P 0E9	0.05	48	9.6%
Hamilton Regional Office	HH	360 Strathearne Ave., Hamilton, L8N 3A5	0.08	48	9.5%
Chatham (555)	WC	555 Riverview Drive, Chatham, N7M 5M1	0.07	46	9.1%
Burlington Office	WB	4475 Mainway, Burlington, L7L 7P2	0.04	43	8.6%
Brantford Regional Office	WB	348 Elgin St., Brantford, N3T 5M4	0.06	42	8.4%
Thunder Bay Service Center	NW	1211 Amber Drive, Thunder Bay, P7B 6M4	0.05	42	8.4%
North Bay	NE	36 Charles Street, North Bay, P1B 8K7	0.05	42	8.3%
Chatham Ed Centre	WC	20 Bloomfield Road, Chatham, N7M 5M1	0.05	40	8.0%
Waterloo Office	WB	603 Kumpf Drive, Waterloo, N2J 4A4	0.05	40	8.0%
Sudbury	NE	828 Falconbridge Rd., Sudbury, P3A 4S3	0.05	39	7.8%
Windsor Office	WC	3840 Rhodes Drive, Windsor, N8W 5C2	0.03	34	6.8%
Hamilton Service Centre	HH	918 South Service Road, Hamilton, L8E 6A2	0.09	20	4.1%

+ Kingston and Burlington Offices include NO_x emissions from microturbines

Summary of Assessment of SPM Compliance for Buildings

Building Site	Region	Address	Total SPM Emission Rate (g/s)	Max. SPM POI Conc. (µg/m ³)	Percent of SPM Standard of 100 µg/m ³
Hamilton Service Centre	HH	918 South Service Road, Hamilton, L8E 6A2	0.036	76	76%
Dunnville	WB	1202 Pine Street, Dunnville, N1A 2M9	0.025	52	52%
Cornwall Office	E	2910 Copeland, Box 157, Cornwall, K6H 6W2	0.025	52	52%
Milton	WB	8015 Fourth Line, Milton, L9T 2X8	0.025	52	52%
Stratford	LS	827 Erie St., RR #3, Stratford, N5A 6S4	0.025	52	52%
Woodstock	WB	350 Beards Lane, Woodstock, NAS 3C2	0.025	51	51%
Windsor Office	WC	3840 Rhodes Drive, Windsor, N8W 5C2	0.036	38	38%
Kingston Office	E	1653 Venture Drive, Kingston, K7P 0E9	0.036	37	37%
Belleville Office	E	RR#5, 127 Enterprise Drive, PO Box 818, Belleville, K8N 5B5	0.025	37	37%
Brantford Regional Office	WB	348 Elgin St., Brantford, N3T 5M4	0.036	27	27%
Sudbury	NE	828 Falconbridge Rd., Sudbury, P3A 4S3	0.025	21	21%
Waterloo Office	WB	603 Kumpf Drive, Waterloo, N2J 4A4	0.025	20	20%
North Bay	NE	36 Charles Street, North Bay, P1B 8K7	0.025	19	19%
Thunder Bay Service Center	NW	1211 Amber Drive, Thunder Bay, P7B 6M4	0.025	19	19%
Chatham (555)	WC	555 Riverview Drive, Chatham, N7M 5M1	0.025	16	16%
Hamilton Regional Office	HH	360 Strathearne Ave., Hamilton, L8N 3A5	0.025	15	15%
London Office	LW	109 Commissioners Rd, London, N6A 4P1	0.025	15	15%
Chatham Ed Centre	WC	20 Bloomfield Road, Chatham, N7M 5M1	0.011	9	9%
Chatham Corporate	WC	50 Keil Drive North, Chatham, N7M 5M1	0.011	3	3%