Building Assessment Report

Executive Summary

In 2019, the Buildings Assessment Report was updated in order to meet the requirement set out by the Ministry of Environmental, Conservation and Parks (MECP) to update all air modelling to AERMOD by February 2020 per the Enbridge Gas Inc. operating as Union Gas (Union Gas) amended ECA Number 3973-BD5N7U condition 5.3:

"No later than February 1, 2020, the Company will update all existing ESDM Reports to confirm compliance of all Compounds of Concern with the performance limits as specified in Condition 4 of this Approval and in accordance with s.20 of O. Reg. 419/05. This includes existing ESDM Reports for Buildings and Gate Stations."

As a result, the Building Assessment and Protocol used to demonstrate compliance has been updated to meet this requirement. The Assessment Protocol was updated in accordance with the following applicable regulations and guidelines:

- Ontario Regulation 419/05 Air Pollution – Local Air Quality (updated by Ontario Regulation 309/17);
- Ontario Regulation 524/98 (Updated by Ontario Regulation 14/17) Environmental Compliance Approvals – Exemptions from Section 9 of the Act;
- Guideline A-10 "Procedure for Preparing an Emission Summary and Dispersion Modelling Report, March 2018, Version 4.1" (the Procedure);
- Guideline A-11 "Air Dispersion Modelling Guideline for Ontario, February 2017, Version 3.0" (ADMGO).

This update includes the development of updated screening assessment methods for natural gas fired space heating and domestic water heating, welding, paint spray booths, and cooling towers.

Detailed assessments using AERMOD were completed for facilities that did not meet the screening requirements.

This assessment report includes the quantification of emission rates for all significant sources of contaminants from the buildings. 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 annual values and should not be used for such purposes.

All building assessments have resulted in the demonstration of compliance with all applicable air emission standards and limits.

Note: This Report has been submitted to and reviewed by the MECP in January of 2020.

A. NOx Emissions:

Natural Gas Fired Space Heating and Domestic Water Heating

Table 1: Buildings with Exempt NOx Emissions from HVAC (<10 MMBtu/hr)

Building Site	Address	Building Area (sqft)	Estimated Maximum Heat Input (BTU/hr)	HVAC <10MMBTU/hr?
Ancaster	1474 Sandhill Dr., Ancaster, L9G 4V5	5,524	552,400	Yes
Atikokan	426 O'Brien St., Atikokan, P0T 1C0	1,338	133,800	Yes
Belleville Office	RR#5, 127 Enterprise Drive, PO Box 818, Belleville, K8N 5B5	13,750	1,375,000	Yes
Bracebridge	342 Eccleston Drive, Bracebridge, P1L 1V5	980	98,000	Yes
Brantford Regional Office	348 Elgin St., Brantford, N3T 5M4	45,330	4,533,000	Yes
Burlington Office	4475 Mainway, Burlington, L7L 7P2	22,113	2,211,313	Yes
Cambridge	221 Avenue Road, Cambridge, N1K 7Z1	7,306	730,600	Yes
Chatham (555)	555 Riverview Drive, Chatham, N7M 5M1	56,220	5,622,000	Yes
Chatham Ed Centre	20 Bloomfield Road, Chatham, N7M 5M1	40,206	4,020,600	Yes
Cobourg	520 Thompson St, Cobourg	7,300	730,000	Yes
Cochrane	156 Fifth Ave., Cochrane, P0L 1C0	1,442	144,200	Yes
Cornwall Office	2910 Copeland, Box 157, Cornwall, K6H 6W2	7,000	700,000	Yes
Dryden	304 Kennedy Road, Dryden, P8N 2Y8	1,798	179,800	Yes
Dunnville	1202 Pine Street, Dunnville, N1A 2M9	6,994	699,400	Yes
Ear Falls	5 Mills St, Ear Falls, P0V 1T0	960	96,000	Yes
Elliot Lake	14 Oakland Blvd., Elliot Lake, P5A 2T1	1,961	196,100	Yes
Englehart	137 Third Avenue, Englehart, P0J 1H0	400	40,000	Yes
Fort Frances	851 McIrvine., Fort Frances, P9A 2Y8	3,500	350,000	Yes
Geraldton	1017 Main St., Geraldton, P0T 1M0	1,464	146,400	Yes
Guelph	10 Surrey Street, Guelph, NIH 3P5	6,350	635,000	Yes
Haileybury	450 Meridian Ave, Haileybury,P0J 1K0	2,196	219,600	Yes
Hamilton Park Street	133 Park Street N., Hamilton, L8N 1E7	1,300	130,000	Yes
Hamilton Pritchard Rd	335 Pritchard Road, Hamilton, L8W 3P6	7,300	730,000	Yes
Hamilton Service Centre	918 South Service Road, Hamilton, L8E 6A2	76,560	7,656,003	Yes
Hearst	51 Eighth St., Hearst, P0L 1G0	484	48,400	Yes
Huntsville	184 Main Street West, Hunstville, P1H 1Y1	463	46,300	Yes
Iroquiois Falls	522 d'Iberville Ave., Iroquois Falls, P0K 1G0	1,442	144,200	Yes
Kapuskasing	47 Burnelle Rd., Kapuskasing, P5N 2M1	2,442	244,200	Yes
Kenora	4091 Hwy #17 West, Keewatin, P0X 1C0	2,500	250,000	Yes
Kingston Office	1653 Venture Drive, Kingston, K7P 0E9	27,000	2,700,000	Yes
Kirkland Lake	14 Kirkland St. E., Kirkland Lake, P2N 3H7	2,411	241,100	Yes
Leamington	357 Oak St. Centre, Leamington, N8H 4W8	4,803	480,300	Yes
London Office	109 Commissioners Rd, London, N6A 4P1	65,081	6,508,100	Yes
Matheson	413 Park Lane, Matheson, P0K 1N0	484	48,400	Yes
Milton	8015 Fourth Line, Milton, L9T 2X8	7,000	700,000	Yes
Nipigon	2 Wadsworth Dr., Nipigon, P0T 2J0	1,282	128,200	Yes
North Bay	36 Charles Street, North Bay, P1B 8K7	44,000	4,400,000	Yes
Orillia	425 Memorial Ave, Orillia, L3V 6K2	10,075	1,007,500	Yes
Owen Sound	1602 23rd St. East, Owen Sound, N4K 0A3	7,300	730,000	Yes
Palmerston	206 Whites Rd. Palmerston, N0G 2P0	<10,000	1,000,000	Yes
Sarnia	402 Business Park Drive, Sarnia, Ontario, N7W 0A3	14,200	1,420,000	Yes
Sault Ste. Marie	10 Industrial Court, Sault Ste. Marie, P6B 5W6	8,000	800,000	Yes
Simcoe	60 Hillcrest Rd., Simcoe, N3Y 4K6	11,594	1,159,400	Yes
St. Thomas	25 Sparling Road, St. Thomas, N5P 3T5	6,638	663,800	Yes
Stratford	827 Erie St., RR #3, Stratford, N5A 6S4	7,000	700,000	Yes
Sudbury	828 Falconbridge Rd., Sudbury, P3A 4S3	36,717	3,671,700	Yes
Thunder Bay Service Center	1211 Amber Drive, Thunder Bay, P7B 6M4	44,285	4,428,500	Yes
Timmins	615 Moneta Ave., Timmins, P4N 7X4	13,681	1,368,100	Yes
Waterloo Office	603 Kumpf Drive, Waterloo, N2J 4A4	40,032	4,003,200	Yes
Windsor Office	3840 Rhodes Drive, Windsor, N8W 5C2	26,259	2,625,899	Yes
Woodstock	350 Beards Lane, Woodstock, NAS 3C2	7,509	750,900	Yes

Emergency Generators at Buildings

Table 2: Buildings with Screened out Emergency Generators

Building Site	Address	Back Up Power Generator Size (kW)	<11kW Screen
St. Thomas	25 Sparling Road, St. Thomas, N5P 3T5	7.5	TRUE
Stratford	827 Erie St., RR #3, Stratford, N5A 6S4	9	TRUE

Table 3: Buildings with Emergency Generators requiring Detailed Assessment

Building Site	Address	Back Up Power Generator Size (kW)	EG (%POI)	Modelling
Brantford Regional Office	348 Elgin St., Brantford, N3T 5M4	300	1%	AERMOD
Chatham (555)	555 Riverview Drive, Chatham, N7M 5M1	70	70%	AERMOD
Dunnville	1202 Pine Street, Dunnville, N1A 2M9	18	42%	AERMOD
Hamilton Service Centre	918 South Service Road, Hamilton, L8E 6A2	300	<1%	SCREEN3*
London Office	109 Commissioners Rd, London, N6A 4P1	330	47%	SCREEN3*
North Bay	36 Charles Street, North Bay, P1B 8K7	225	60%	AERMOD
Simcoe	60 Hillcrest Rd., Simcoe, N3Y 4K6	12.5	98%	AERMOD
Sudbury	828 Falconbridge Rd., Sudbury, P3A 4S3	40	28%	AERMOD
Thunder Bay Service Center	1211 Amber Drive, Thunder Bay, P7B 6M4	310	37%	AERMOD
Timmins	615 Moneta Ave., Timmins, P4N 7X4	15	59%	AERMOD
Waterloo Office	603 Kumpf Drive, Waterloo, N2J 4A4	250	58%	SCREEN3*
Burlington Office (MicroTurbine)	4475 Mainway, Burlington, L7L 7P2	65x2	9%	AERMOD
Kingston Office (MicroTurbine)	1653 Venture Drive, Kingston, K7P 0E9	55x2	3%	AERMOD

*Separate Reports completed by Conestoga-Rovers and Associates.

B. SPM Emissions:

Welding

Table 4: Buildings with Weld Shops

Building Site	Address	Welding (SPM)	Compliance
Belleville Office	RR#5, 127 Enterprise Drive, PO Box 818, Belleville, K8N 5B5	TRUE	Insignificant
Cornwall Office	2910 Copeland, Box 157, Cornwall, K6H 6W2	TRUE	Insignificant
Hamilton Service Centre	918 South Service Road, Hamilton, L8E 6A2	TRUE	Insignificant
Kingston Office	1653 Venture Drive, Kingston, K7P 0E9	TRUE	Insignificant
London Office	109 Commissioners Rd, London, N6A 4P1	TRUE	Insignificant
North Bay	36 Charles Street, North Bay, P1B 8K7	TRUE	Insignificant*
Sudbury	828 Falconbridge Rd., Sudbury, P3A 4S3	TRUE	Insignificant
Thunder Bay Service Center	1211 Amber Drive, Thunder Bay, P7B 6M4	TRUE	Insignificant
Waterloo Office	603 Kumpf Drive, Waterloo, N2J 4A4	TRUE	Insignificant
Windsor Office	3840 Rhodes Drive, Windsor, N8W 5C2	TRUE	Insignificant
Sarnia	402 Business Park Drive, Sarnia, Ontario, N7W 0A3	TRUE	Detailed Assessment

*North Bay has a Paint Spray Booth which has additional SPM to welding; the total SPM for the site was evaluated in the North Bay Paint Spray Booth ESDM.

Table 5: Buildings with historical Weld Shops

Building Site	Address	Welding (SPM)	Compliance
Brantford Regional Office	348 Elgin St., Brantford, N3T 5M4	FALSE	INACTIVE
Chatham (555)	555 Riverview Drive, Chatham, N7M 5M1	FALSE	INACTIVE
Dunnville	1202 Pine Street, Dunnville, N1A 2M9	FALSE	INACTIVE
Milton	8015 Fourth Line, Milton, L9T 2X8	FALSE	INACTIVE
Stratford	827 Erie St., RR #3, Stratford, N5A 6S4	FALSE	INACTIVE
Woodstock	350 Beards Lane, Woodstock, NAS 3C2	FALSE	INACTIVE

Cooling Tower

Table 6: Buildings with Exempt SPM Emissions from Cooling Towers

Building Site	Address	Cooling Towers (SPM)	Baffles Installed	Compliance
Brantford Regional Office	348 Elgin St., Brantford, N3T 5M4	TRUE	Yes	Exempt
Chatham Corporate	50 Keil Drive North, Chatham, N7M 5M1	TRUE	Yes	Exempt
Chatham Ed Centre	20 Bloomfield Road, Chatham, N7M 5M1	TRUE	Yes	Exempt
Hamilton Service Centre	918 South Service Road, Hamilton, L8E 6A2	TRUE	Yes	Exempt
Kingston Office	1653 Venture Drive, Kingston, K7P 0E9	TRUE	Yes	Exempt
Windsor Office	3840 Rhodes Drive, Windsor, N8W 5C2	TRUE	Yes	Exempt

Appendix A - Detailed Assessments

Table of Contents for Detailed Assessments

Brantford Regional Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.00559	AERMOD	11.8	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	1%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Chatham - 555 Riverview Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.21	AERMOD	1086	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	70%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Dunnville Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.099	AERMOD	643	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	42%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

North Bay Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.129	AERMOD	928	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	60%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Simcoe Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.069	AERMOD	1510	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	98%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Sudbury Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.22	AERMOD	431	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	28%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Thunder Bay Service Center Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.355	AERMOD	575	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	37%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Timmins Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.045	AERMOD	910	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	59%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Burlington Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.0562	AERMOD	117	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	8%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Kingston Office Detailed Assessment

Table A: Emission Summary Table

Contaminant Name	CAS#	Total Facility Maximum Emission Rate (g/s)	Air Dispersion Model Used	Max. POI Conc. (µg/m³)	Avg. Period (hr)	POI Limit (µg/m³)	Limiting Effect	Regulation Schedule # or Alternate	Max. % of POI Limit (%)
Nitrogen Oxides (as NO_2)	10102-44-0	0.048	AERMOD	52	1-hour	1,570	Health	Emergency Generator Data Sheet[1]	3%

[1] MECP ½-hour NO_X POI Limit of 1,880 µg/m³, specific to natural gas-fired emergency generators at non-sensitive receptors, converted from ½-hour to 1-hour averaging period (1,880 µg/m³ / 1.2 = 1,570 µg/m³) as per the Procedure.

Appendix B1 – Sarnia Operations Centre - Welding Emission Summary Table

Table 1A Emission Summary Table

Scenario [1]	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 # or Alternative	Percentage of Ministry POI Limit (%)
80 Rods/day (6.67 LB/day); 20,800 rods/year (1,733 LB/year) assuming 1LB/12 rods	Manganese	7439-96-5	4.48E-05	AERMOD (14134)	0.11	24	0.4	Health	3	26.9%
	Chromium	7440-47-3	2.06E-05		0.05	24	0.5	Health	3	9.9%
	Calcium Carbonate	471-34-1	1.97E-04		0.47	24	24	Health	3	2.0%
	Nickel	7440-02-0	2.24E-05		6.1E-03	annual	0.04	Health	3	15.3%

Note:
[1] The maximum weight of rod is 1LB/12 rods.
[2] Meteorological outliers have been removed from the 24hr 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, December 13, 2016, Version 1.0" (Ministry POI Limits).

Table 1B Emission Summary Table

Scenario [1]	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 # or Alternative	Percentage of Ministry POI Limit (%)
maximum allowable daily rod consumption: 23.5 LB/day	Manganese	7439-96-5	1.58E-04	AERMOD (14134)	0.38	24	0.4	Health	3	95.0%
	Chromium	7440-47-3	7.28E-05		0.17	24	0.5	Health	3	35.0%
	Calcium Carbonate	471-34-1	6.97E-04		1.67	24	24	Health	3	7.0%
	Nickel	7440-02-0	7.92E-05		0.02	annual	0.04	Health	3	54.2%

Note:
[1] The maximum allowable daily rod consumption is calcuated based on 95 % of Ministry of POI Limit.
[2] Meteorological outliers have been removed from the 24hr 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, December 13, 2016, Version 1.0" (Ministry POI Limits).

Appendix B2 – Sarnia Operations Centre - Welding Threshold Screening Table

Table 2A Assessment of Welding Emissions based on Emission Threshold Screening Procedure

Contaminant	CAS#	Facility Total Emission Rate (g/s)	Distance to Property Line (m)	Table B-1 Dispersion Factor (µg/m^3) [1]	Ministry POI Limit (µg/m^3)	Ministry POI Limit Averaging Period (Hour)	Ministry POI Limit Reference	Ministry POI Limit Limiting Effect	Calculated Emission Threshold	% of Emission Threshold (%)	Negligible?
SPM	SPM	8.97E-04	37	3438	120	24	Sch. 3	Health	1.7E-02	5%	Y
Manganese	7439-96-5	4.48E-05	37	3438	0.4	24	Sch. 3	Health	5.8E-05	77%	Y
Chromium	7440-47-3	2.06E-05	37	3438	0.5	24	Sch. 3	Health	7.3E-05	28%	Y
Calcium Carbonate	471-34-1	1.97E-04	37	3438	24	24	Sch. 3	Health	3.5E-03	6%	Y
Nickel	7440-02-0	2.24E-05	37	671	0.04	annual	Sch. 3	Health	3.0E-05	75%	Y
Titanium dioxide	13463-67-7	4.48E-05	37	3438	34	24	Sch. 3	Health	4.9E-03	1%	Y
Crystalline silica respirable	14808-60-7	8.97E-06	37	3438	5	24	Sch. 3	Health	7.3E-04	1%	Y
Limestone	1317-65-3	4.48E-05	37	3438	24	24	Sch. 3	Health	3.5E-03	1%	Y
Carboxymethyl cellulose, sodium salt	9004-32-4	8.97E-06	37	3438	300	24	Sch. 3	Health	4.4E-02	<0.1%	Y
Iron oxide	1309-37-1	4.48E-05	37	3438	25	24	Sch. 3	Health	3.6E-03	1%	Y
Molybdenum	7439-98-7	8.97E-06	37	3438	120	24	Sch. 3	Health	1.7E-02	<0.1%	Y
Silicon dioxide (amorphous)	7631-86-9	8.97E-06	37	3438	3	24	Sch. 3	Health	4.4E-04	2%	Y
Magnesite	546-93-0	8.97E-06	37	3438	24	24	Sch. 3	Health	3.5E-03	0.3%	Y

Table 2B Conversion of Dispersion Factor

Distance from source (m)	1hr Rural Dispersion Factor (µg/m3 per g/s emission)	24hr Rural Dispersion Factor (µg/m3 per g/s emission)	Annual Rural Dispersion Factor (µg/m3 per g/s emission)
20	10000	4100	800
37	8385	3438	671
40	8100	3321	648

Note:
[1] One (1) hour rural dispersion factor based on the Procedure (Table B-1) converted to 24-hour averaging period using a factor of 0.41 from Table 4-1 of the ADMGO.
[2] One (1) hour rural dispersion factor based on the Procedure (Table B-1) converted to annual averaging period using a factor of 0.08 from Table 4-1 of the ADMGO.