

Gate Station Assessment Report

Executive Summary

In 2019, the Gate Station 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 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 Gate Station Assessment Protocol used to demonstrate compliance has been updated to meet this requirement. The assessment was updated in accordance with the following applicable regulations and guidelines:

- 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 an updated air screening methodology for natural gas-fired combustion equipment. The updated screening assessment includes a Pre-screening Test, Insignificance Test, and Review of Existing Compressor Station ESDMs.

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 gate stations. 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 gate stations 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.

Table 2: Pre-screening Test

Station Number	Station Name	Total Site Wide Maximum Heat Input (BTU/hr)	Total Heat Input <1.6 MMBTU/hr
11H-602	167 POOL ST	246,445	Yes
45103001	AIRPORT RD TBS AND DRS	502,370	Yes
31202001	AIRPORT ROAD TBS	350,711	Yes
45101125	ALGOMA #7 FURNACE SMS	218,009	Yes
12F-201	ALLIED CHEMICAL LINE STN	246,445	Yes
04A-202	AMHERSTBURG STATION	1,421,801	Yes
16W-601	ANCASTER GATE	312,796	Yes
16W-603	ANCASTER SOUTH GATE STATION	464,455	Yes
17T-502	AYR STATION	90,047	Yes
07G-201	BALDOON TRANSMISSION STN	1,466,000	Yes
43601001	BALLS DR TBS	246,445	Yes
32Q-501R	BALMY BEACH	142,180	Yes
28403001	BARRIEFIELD CMS	74,882	Yes
28403016	BARRIEFIELD TBS & DRS	502,370	Yes
43202019	BARRYDOWN PRS	322,275	Yes
43802001	BASS LAKE TBS	398,104	Yes
06D-401	BELLE RIVER STATION	445,498	Yes
27801001	BELLEVILLE SIDNEY ST. TBS	1,467,000	Yes
06J-103	BLENHEIM NORTH GATE STN	350,711	Yes
45401004	BLIND RIVER TBS	502,370	Yes
15V-111R	BRANTFORD STANLEY & PARK NORTH	1,421,801	Yes
27403002	BRIGHTON TBS	644,550	Yes
06B-404	BRUCE AVE	315,000	Yes
07H-601	BURKE LINE STATION	502,370	Yes
44602002	BURKS FALLS TBS	70,142	Yes
14X-101	CALEDONIA GATE STN	379,147	Yes
14X-105	CALEDONIA HADDINGTON ST	140,000	Yes
43005001	CALLANDER TBS	140,000	Yes
18U-504	CAMBRIDGE EAST	748,815	Yes
15Q-603	CANADA CEMENT TRANSMISSION STN	1,500,000	Yes
14W-501I	CANADIAN GYPSUM HWY 6	255,924	Yes
18W-601	CARLISLE GATE STATION	464,455	Yes
17M-601	CENTRALIA STN	36,967	Yes
07G-601	CHATHAM NORTH	1,042,654	Yes
44301004	CHELMSFORD TBS / DRS	388,626	Yes
06B-548I	CHRYSLER PAINT SHOP PLANT 3	151,659	Yes
20M-201	CLINTON GATE STN	246,445	Yes
27301068	COBOURG EAST TBS	492,891	Yes
27301001	COBOURG TBS	748,815	Yes
41601001	COCHRANE TBS	360,190	Yes
27401001	COLBORNE TBS	246,445	Yes
43201029	CONISTON TBS	246,445	Yes
43202060	COPPER CLIFF TBS	85,308	Yes
27804001	CORBYVILLE TBS	246,445	Yes
29502083	CORN. TBS WEST	1,327,014	Yes
29501001	CORNWALL EAST T.B.S.	1,042,654	Yes
41902029	CRAWFORD ST.	246,445	Yes
28401229	CREEKFORD RD. TBS	312,796	Yes
04E-102	CTY TD 14 GATE STATION	315,000	Yes
41902024	DALTON ROAD - (MCBRIDE)	502,370	Yes
12T-201	DELHI BRANTFORD ROAD STATION	1,452,000	Yes
28103002	DESERONTO TBS	74,882	Yes
28405023	DESTEC SMS	1,500,000	Yes

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43202080	DOMTAR	502,370	Yes
08F-601	DOVER CENTRE	1,500,000	Yes
22S-401	DRAYTON TRANSMISSION STN.	113,744	Yes
16V-402R	DUNSDON ST & PARK RD N STN	320,000	Yes
27R-401	DURHAM GATE STATION	748,815	Yes
44001001	EARLTON TBS	90,047	Yes
45401005	ELLIOT LAKE TBS	502,370	Yes
20S-301	ELMIRA GATE STATION	398,104	Yes
20S-603	ELMIRA SOUTH	140,000	Yes
27802004	ELMWOOD TBS	748,815	Yes
43201009	ELOY TBS	616,114	Yes
31001015	EMO TBS	140,000	Yes
44801001	EMSDALE CMS	140,000	Yes
42601002	ENGLEHART TBS	748,815	Yes
43006032	EPCOR CO-GEN SMS	398,104	Yes
18S-374	ERB ST WEST	385,000	Yes
05C-501	ESSEX TRANSMISSION GATE STN	1,232,227	Yes
28103003	ESSROC CEMENT	322,275	Yes
21S-601	FERGUS FIRST STAGE	492,891	Yes
21U-101	FERGUS SECOND STAGE	246,445	Yes
43702002	FERGUSON RD TBS / DRS	142,180	Yes
12S-202	FERNLEA FARM	398,104	Yes
06B-607I	FORD ESSEX / NEMAK	1,421,801	Yes
15J-401	FOREST GATE STATION	1,042,654	Yes
43202039	FROOD TOWN BORDER STATION	246,445	Yes
28501001	GANANOQUE TBS	379,147	Yes
45101124	GEORGIA PACIFIC FLAKEBOARD SMS	492,891	Yes
30601002	GERALDTON TBS	151,659	Yes
21L-201	GODERICH GATE STN	246,445	Yes
41902030	GOLDCORP MINE - PRS -(1ST CUT)	85,308	Yes
41901025	GRANT WAFERBOARD -HWY-101W	246,445	Yes
45401095	GREAT NORTHERN RD TBS	502,370	Yes
18700008	GREENFIELD ETHANOL PLANT	312,796	Yes
19V-101	GUELPH GATE STATION	1,042,654	Yes
19U-201	GUELPH WEST STN	1,500,000	Yes
42801003	HAILEYBURY TBS	246,445	Yes
21X-502R	HALL ROAD DISTRIBUTION STN	312,796	Yes
13T-402	HAWTREY TRANSMISSION STATION	398,104	Yes
41301001	HEARST TBS	417,062	Yes
19S-201	HEIDLEBERG	142,180	Yes
16X-218R	HILLCREST STN	834,123	Yes
05B-205R	HOWARD & OUTER DISTRIBUTION	90,047	Yes
30103001	IGNACE TBS	70,142	Yes
43202068	INCO COPPER REFINERY SMS	748,815	Yes
43202071	INCO NICKEL REFINERY	385,000	Yes
43202050	INCO NORTH MINE	246,445	Yes
43202054	INCO SMELTER SALES STATION	1,500,000	Yes
43202069	INCO SOUTH MINE MAIN PLANT	90,047	Yes
43202052	INCO THAW SHED SMS	90,047	Yes
29201002	INGLESIDE TBS	315,000	Yes
16S-503	INNERKIP TRANSMISSION STN	140,000	Yes
13F-225I	IOL COGEN	654,028	Yes
41701002	IROQUOIS FALLS TBS	398,104	Yes
28901001	IROQUOIS T.B.S.	90,047	Yes
28409001	JOYCEVILLE TBS	246,445	Yes
41401002	KAPUSKASING TBS	398,104	Yes
31203013	KEEWATIN TOWN BORDER STATION	74,882	Yes
43202065	KELLY LAKE TOWN BORDER STN	1,042,654	Yes

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31201001	KENORA TOWN BORBER STATION	350,711	Yes
09H-407	KENT BRIDGE NORTH	1,155,000	Yes
12K-301	KERWOOD TRANSMISSION STATION	1,421,801	Yes
28406006	LAFARGE	113,744	Yes
41903090	LAFORST TBS	502,370	Yes
05A-203	LASALLE BOISIMER AVE	199,052	Yes
43202036	LASALLE TOWN BORDER STN	315,000	Yes
03D-301	LEAMINGTON NORTH GATE	236,967	Yes
13O-206R	LONDON BASELINE REG. STN.	767,773	Yes
13P-401	LONDON EAST TRANSMISSION	767,773	Yes
13O-402	LONDON WESTMOUNT	1,421,801	Yes
13O-401	LONDON WHITE OAKS	1,421,801	Yes
29202002	LONG SAULT T.B.S.	246,445	Yes
31101002	LONGLAC TBS	369,668	Yes
18X-101	LOWVILLE GATE	246,445	Yes
16V-604	LYNDEN GATE STATION	255,924	Yes
43902001	MADILL TBS	70,142	Yes
27805088	MADOC DRS	246,445	Yes
28702012	MAITLAND TBS	74,882	Yes
43202034	MALEY TBS	502,370	Yes
18T-402	MANNHEIM TRANSMISSION	341,232	Yes
06C-401	MANNING ROAD STATION	597,156	Yes
06A-605R	MATCHETTE & PRINCE	246,445	Yes
42301002	MATHESON TBS	142,180	Yes
44701001	MATTAWA TBS	90,047	Yes
07H-501	MAYNARD LINE TRANS STN	502,370	Yes
07K-409	MCKINLAY ROAD STN	748,815	Yes
13F-323R	MCPLANK	834,123	Yes
13N-101	MELROSE GATE STN	1,421,801	Yes
04E-401	MERSEA TWP CON 6 STATION	729,858	Yes
19X-302	MILTON SOUTH DISTRIBUTION STAT	1,421,801	Yes
19O-601	MITCHELL GATE STN	246,445	Yes
41902022	MONETA TBS	445,498	Yes
29101001	MORRISBURG TBS	246,445	Yes
31002019	MOWAT TOWN BORDER STATION	385,000	Yes
24R-201	MT FOREST GATE STN	398,104	Yes
43602001	MUSKOKA FALLS TBS	502,370	Yes
28101001	NAPANEE TBS	644,550	Yes
19T-102R	NEW BRIDGES DISTRIBUTION	464,455	Yes
17T-201	NEW DUNDEE H P GATE STATION	24,645	Yes
42701002	NEW LISKEARD TBS	246,445	Yes
30501093	NEW NIPIGON TBS	140,000	Yes
30501002	NIPIGON TBS	246,445	Yes
14S-601	NORWICH BRICK GATE STATION	331,754	Yes
13T-101	NORWICH TRANSMISSION STATION	170,616	Yes
12F-205	NOVACOR (MOORE)	315,000	Yes
12F-101	NOVACOR (ST. CLAIR) 1ST STAGE	805,687	Yes
17T-202	NTH.DUMFRIES TRANSMISSION STN.	502,370	Yes
18Y-202R	OAKVILLE TOWN BORDER STN	1,500,000	Yes
28405001	ODESSA TBS	1,155,000	Yes
11H-301	OIL CITY POOL METERING STATION	132,701	Yes
05A-305	OJIBWAY MEASUREMENT	502,370	Yes
31Q-501	OWEN SOUND GATE STATION	1,023,000	Yes
44801002	PARRY SOUND TBS	246,445	Yes
06C-502	PATILLO RD GATE STN	398,104	Yes
28103006	PICTON TBS	445,498	Yes
16S-201	PLATTSVILLE TRANS STN	140,000	Yes
29N-101	PORT ELGIN	151,659	Yes

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27201001	PORT HOPE TBS	729,858	Yes
31Q-502	PPG INDUSTRIES	322,275	Yes
28701001	PRESCOTT TBS	445,498	Yes
11V-101	PT DOVER GATE STATION	142,180	Yes
06C-602	PUCE ROAD TRANSMISSION	142,180	Yes
43901001	RAVENSGLEN TBS	502,370	Yes
30401002	REDROCK TBS	796,209	Yes
07J-301	RIDGETOWN NORTH TRANS STN	502,370	Yes
03D-204R	ROAD 2 E DIST	770,000	Yes
23R-602	ROTHSAY TRANS	388,626	Yes
21T-301	SALEM GATE STATION	246,445	Yes
13F-220R	SARNIA VIDAL ST	1,327,014	Yes
41902031	SCHUMACHER GOLD CENTRE	246,445	Yes
20N-501	SEAFORTH GATE STN	246,445	Yes
45401002	SECOND LINE T.B.S.	331,754	Yes
13F-402	SHELL CUSTOMER STATION	1,421,801	Yes
41501002	SMOOTH ROCK FALLS TBS	1,421,801	Yes
27601030	SONOCO COGEN	246,445	Yes
44601001	SOUTH RIVER TBS	70,142	Yes
30N-501	SOUTHAMPTON	151,659	Yes
05A-304R	SPRUCEWOOD IP	1,421,801	Yes
20S-601	ST JACOBS FIRST STAGE STATION	331,754	Yes
16O-301	ST MARYS 1ST STAGE STN	1,500,000	Yes
27602005	ST. HILAIRE DRS	630,000	Yes
06E-502	STONE POINT STATION	90,047	Yes
28102001	STRATHCONA TBS	246,445	Yes
13L-601	STRATHROY GATE	1,260,000	Yes
43201014	STURGEON FALLS TBS	748,815	Yes
16W-203	SUMMIT TRANSMISSION STATION	502,370	Yes
12F-201I	SUNCOR ETHANOL	464,455	Yes
12F-106I	SUNCOR HYDROGEN(AIR PRODUCTS)	919,431	Yes
28411001	SYDENHAM ROAD TBS	74,882	Yes
43701001	TAVERNER ROAD	492,891	Yes
41401011	TCPL - 47 GOUGH RD.	445,498	Yes
24O-101R	TEESWATER	140,000	Yes
23R-601	TEVIOTDALE TRANS STN	587,678	Yes
06F-401	TILBURY NORTH	511,848	Yes
12S-101	TILLSONBURG POTTERS RD STATION	748,815	Yes
12R-601	TILLSONBURG SOUTH STATION	1,452,000	Yes
18U-101	TOYOTA STATION	1,570,000	Yes
15S-202	TOYOTA TRANSMISSION	464,455	Yes
15S-101I	TOYOTA WOODSTOCK	464,455	Yes
27601001	TRENTON TBS	1,421,801	Yes
11F-111	TRILLIUM TRANSMISSION STATION	140,000	Yes
43001016	TROUT LAKE TBS	1,327,014	Yes
09G-501	TUPPERVILLE TRANS	502,370	Yes
43202073	WALDEN TBS	502,370	Yes
43201017	WARREN TBS	85,308	Yes
17X-102R	WATERDOWN NORTH	227,488	Yes
19S-602	WATERLOO ERBSVILLE STATION	1,042,654	Yes
19S-601	WATERLOO GATE	1,042,654	Yes
19S-603	WATERLOO-LAUREL CREEK STATION	331,754	Yes
12K-401	WATFORD TRANSMISSION STATION	246,445	Yes
43004002	WEST FERRIS TBS	140,000	Yes
43801001	WEST ST. TBS	1,155,000	Yes
28401001	WESTBROOK STATION	140,000	Yes
43002001	WIDDIFIELD TBS	85,308	Yes
29301001	WINCHESTER TBS	1,042,654	Yes

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06B-403	WINDSOR CALIFORNIA AVE STN	1,232,227	Yes
06A-601	WINDSOR TITCOMBE ROAD STN	1,421,801	Yes
42501004	WOOD STREET TBS	360,190	Yes
28401002	WOODBINE TBS	1,327,014	Yes
15R-605	WOODSTOCK BEARDS LANE TRANS	312,796	Yes
41901011	XSTRATA CONCENTRATOR	1,042,654	Yes
41901010	XSTRATA MINE HWY 655	303,318	Yes
41901032	XSTRATA SMELTER	748,815	Yes

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Table 3: Insignificance Test and Existing ESDM Review

Station Number	Station Name/Street Name	Total Site Wide Maximum Heat Input (BTU/h)	Total Heat Input <1.6 MMBTU/hr	Minimum Distance From Boiler Stack to Property Line (m)	Conventional Boiler Limit Type	Conventional Boiler Limit (Btu/hr)	2019 Screening Level
05B-303	SANDWICH TRANSMISSION	6,400,000	No	22.80			Included in Sandwich Compressor ESDM
06B-401	GRAND MARAIS STN	2,200,000	No	24.00	Urban, <40	2,570,000	Insignificant
20Y-401	PARKWAY TRANSMISSION STN	4,533,000	No	80.00			Included in Parkway East Compressor ESDM

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Table 4: Detailed Assessments

Station Number	Station Name/Street Name	Total Site Wide Maximum Heat Input (BTU/hr)	Total Heat Input <1.6 MMBTU/hr	Minimum Distance From Boiler Stack to Property Line (m)	2019 Screening Level	% POI – 1 hour	% POI – 24 hour	% POI – Emergency Generator 1 hour
28107002	LENNOX SMS	24,000,000	No	7.80	DA	69%	84%	55%
28702001	DUPONT CANADA COGEN	2,936,000	No	10.00	DA	4%	1%	0%
28801001	CARDINAL T.B.S.	1,600,000	No	0.90	DA	39%	47%	55%
30101001	DRYDEN TBS	2,702,000	No	4.00	DA	41%	54%	0%
30201002	ONION LAKE PRIMARY STATION	2,000,000	No	6.20	DA	22%	31%	8%
30201003	BELROSE TBS	3,050,000	No	8.00	DA	35%	46%	93%
45101117	ALGOMA SMS	3,150,000	No	3.40	DA	29%	41%	0%
03D-200	KINGSVILLE EAST	16,000,000	No	DA	DA	50%	60%	84%
03E-105	COUNTY RD 18	5,000,000	No	DA	DA	15%	21%	50%
04D-602	MERSEA GATE STATION	2,500,000	No	1.50	DA	44%	58%	71%
05E-403	COMBER TRANSMISSION STN	3,000,000	No	1.00	DA	22%	23%	0%
06B-301	LAUZON RD	3,000,000	No	6.90	DA	63%	51%	0%
06B-502	WALKER RD TRANS STN	3,000,000	No	1.50	DA	26%	37%	0%
11W-101I	LAKE ERIE STELCO BLAST FURNACE	6,100,000	No	1.80	DA	18%	26%	0%
12F-203	NOVACOR (CORUNNA)	4,900,000	No	10.40	DA	42%	55%	28%
12F-204I	INVENERGY	4,281,000	No	5.00	DA	59%	87%	0%
12F-501	PAYNE KIMBALL STN	3,000,000	No	5.80	DA	11%	16%	97%
13F-501	SARNIA INDUSTRIAL STN	7,000,000	No	0.60	DA	14%	17%	0%
13F-502	SUNCOR	3,000,000	No	1.00	DA	8%	13%	0%
13F-503	CHURCHILL RD. STATION	3,000,000	No	9.00	DA	20%	30%	0%
13N-501	BYRON TRANS STN	7,000,000	No	6.20	DA	13%	16%	0%
14N-302	HENSALL TRANSMISSION STATION	2,000,000	No	19.8	DA	10%	12%	0%
14O-201	LONDON NORTH GATE STATION	7,000,000	No	15.20	DA	36%	44%	33%
14R-102	INGERSOLL TRANSMISSION STN	6,000,000	No	22.50	DA	21%	31%	0%
14R-104	BEACHVILLE DOMTAR TRANS	2,000,000	No	9.20	DA	10%	13%	0%

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15S-301	OXFORD STATION # 491	1,636,000	No	16.40	DA	33%	45%	0%
15X-401	CALEDONIA TRANSMISSION STN	3,050,000	No	5.00	DA	25%	25%	0%
16U-601	BRANTFORD PROPANE PLANT	8,200,000	No	19.00	DA	27%	33%	0%
16W-606	KIRKWALL/DOMINION	3,650,000	No	6.00	DA	19%	18%	36%
16X-601	HAMILTON GATE #3	14,664,000	No	12.00	DA	68%	87%	0%
17P-301	STRATFORD GATE STATION	4,890,000	No	12.00	DA	37%	51%	0%
17U-301	GALT GATE STN	3,000,000	No	26.80	DA	23%	28%	0%
17X-401/2	HAMILTON GATE STATIONS #1 and 2	18,481,000	No	24.00	DA	57%	59%	59%
18T-101	KITCHENER STATION*	2,860,000	No	13.40	DA	58%	81%	0%
18T-501	STRAUSBURG TRANSMISSION STN	8,010,000	No	21.90	DA	44%	51%	0%
18W-603	HAMILTON-TRAFALGAR TAKE-OFF	8,100,000	No	6.60	DA	62%	90%	0%
18X-601	BURLINGTON GATE STATION	13,461,000	No	9.10	DA	57%	74%	0%
19V-401	PUSLINCH TRANS STATION	4,200,000	No	2.00	DA	37%	52%	0%
19X-301	MILTON GATE STN	3,500,000	No	3.60	DA	27%	20%	0%
19Y-302	BRONTE STATION	18,000,000	No	17.40	DA	50%	69%	66%
20S-602	ST.JACOBS TRANS	3,723,000	No	16.00	DA	28%	35%	0%
20X-601I	HALTON HILLS CO-GEN (TCE)	3,080,000	No	7.00	DA	53%	82%	0%
20X-601R	MILTON EAST GATE STATION	3,260,000	No	3.20	DA	68%	94%	0%
28Q-601C	EPCOR**	385,000	Yes	DA**	DA**	5%	7%	34%

*Core Projects Design being finalized in 2020.

** Completed Detailed Assessment on site with screened heating equipment because site also has an emergency generator.