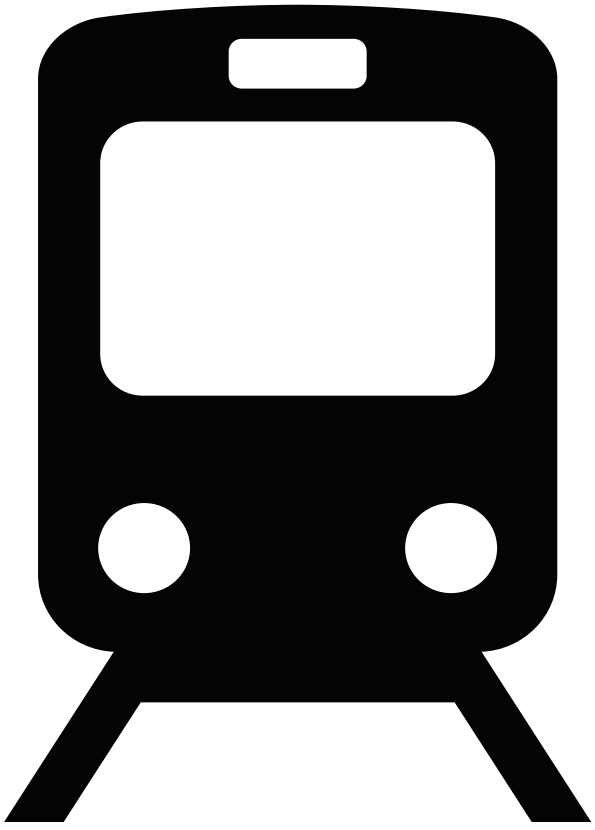
EGLINTON CROSSTOWN WEST EXTENSION

ENVIRONMENTAL PROJECT REPORT – 2020 ADDENDUM

APPENDIX C

AIR QUALITY IMPACT ASSESSMENT REPORT



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PARSONS HATCH WSP

EGLINTON CROSSTOWN WEST EXTENSION

Transit Project Assessment Process
Air Quality Impact Assessment Report

May 2020

METROLINX

Metrolinx
Eglinton Crosstown West Extension
Contract: TC85-3A

Air Quality Impact Assessment Report

Issue and Revision Record					
Rev	**Date**	**Originator**	**Checker**	**Approver**	**Description**
A	2020-03-10	Louis Caron	Tessa Mackay	Marianne Alden	Draft Report
B	2020-04-02	Louis Caron	Tessa Mackay	Marianne Alden	Draft Report
C	2020-05-29	Louis Caron	Tessa Mackay	Marianne Alden	For Information

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Acronyms

4T	4Transit, a joint venture of Hatch, Parsons and WSP
AAQC	Ambient Air Quality Criteria
ADMGO	Air Dispersion Modelling Guidelines for Ontario
AERMOD	American Meteorological Society/EPA Regulatory Model
AQIA	Air Quality Impact Assessment
AQMP	Air Quality Management Plan
B(a)P	Benzo(a)pyrene
BMPs	Best Management Practices
CAAQS	Canadian Ambient Air Quality Standard
CH_4	Methane
CNR	Canadian National Railway
CO	Carbon Monoxide
COC	Contaminant of Concern
CO_2	Carbon Dioxide
CO_{2eq}	Carbon Dioxide Equivalent
CP	Cross Passage
DMP	Dust Management Plan
EA	Environmental Assessment
EAA	Environmental Assessment Act, 1990
ECCC	Environment and Climate Change Canada
ECWE	Eglinton Crosstown West Extension
ECLRT	Eglinton Crosstown Light Rail Transit
EF	Emission Factor
EPR	Environmental Project Report
ES	Extraction Shaft
GTHA	Greater Toronto and Hamilton Area
HC	Hydrocarbon
LRT	Light Rail Transit
LS	Launch Shaft
MOE/MOEE/MOECC MECP	Ministry of the Environment/Ministry of the Environment and Energy/Ministry of the Environment and Climate Change. The Ministry of the Environment (MOE) was created in 1972 and merged with the Ministry of Energy to form the Ministry of Environment and Energy (MOEE) from 1993 to 1997 and again

	in 2002. The MOE changed its name to the Ministry of the Environment and Climate Change (MOECC) on June 24, 2014. Subsequently, only June 29, 2018 the MOECC changed its name to the Ministry of the Environment, Conservation and Parks (MECP). Thus, MOE, MOEE, MOECC, and MECP are considered to be synonymous for the purposes of this Report.
MOVES	Motor Vehicle Emission Simulator
MS	Maintenance Shaft
MTO	Ministry of Transportation
MUP	Multi-Use Path
NAAQO	National Ambient Air Quality Objectives
NAPS	National Air Pollution Surveillance
N_2O	Nitrous Oxide
NO_2	Nitrogen Dioxide
NO	Nitric Oxide
NO_x	Nitrogen Oxides
O_3	Ozone
OLM	Ozone Limiting Method
O. Reg.	Ontario Regulation
PAH	Polycyclic Aromatic Hydrocarbon
$PM_{2.5}$	Respirable Particulate Matter
PM_{10}	Inhalable Particulate Matter
PM	Particulate Matter
POI	Point of Impingement
PPUDO	Passenger Pick-up and Drop-Off
RER	Regional Express Rail
RPM	Revolutions per Minute
TBM	Tunnel Boring Machine
TPAP	Transit Project Assessment Process
TPSS	Traction Power Substation
TSP	Total Suspended Particles
TTC	Toronto Transit Commission
US EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
ZOI	Zone of Influence

1. Introduction

1.1 Project Description

On May 17, 2010, the Minister of the Environment, Conservation and Parks (previously the Minister of the Environment; the Minister) for the Province of Ontario issued a Notice to Proceed to the Toronto Transit Commission (TTC) and the City of Toronto for the Eglinton Crosstown Light Rail Transit (ECLRT) Project, a 33-kilometre electrically-powered Light Raid Transit (LRT) line extending from the Lester B. Pearson International Airport in the City of Mississauga, to Kennedy Station in the City of Toronto. The basis for that Notice was the Environmental Project Report prepared in 2010 (2010 EPR) as part of the *Transit Project Assessment Process (TPAP)* found in Ontario Regulation (*O. Reg.) 231/08* under the Ontario Environmental Assessment Act.

The 2010 Environmental Project Report (EPR) for the Eglinton Crosstown LRT was undertaken by the City of Toronto and the TTC as co-proponents. Subsequently, in 2012, Metrolinx became the sole proponent for the ECLRT Project and initiated an EPR Addendum for changes to the approved ECLRT Project between Keele Street to Jane Street, as well as the Maintenance and Storage Facility at Black Creek. Assessment of these changes to the 2010 EPR was documented in the 2013 EPR Addendum. After a 30-day public comment period, and the 35-day review by the Minister, the Minister issued a Notice to Allow a Change to the Transit Project in accordance to *O. Reg. 231/08* in December 2013. Construction of the ECLRT Project is currently underway between Kennedy Station and Mount Dennis Station.

In April 2019, the province announced a $28.5 billion expansion to Ontario's transit network in an effort to bring relief and new opportunities to transit users and commuters. This rapid transit project plan includes the new Ontario Line (formerly the Downtown Relief Line), the Yonge North Subway Extension, the three-stop Scarborough Subway Extension, and the extension for Eglinton Crosstown West between Mount Dennis Station and Renforth Drive.

Since the completion of the 2010 EPR and 2013 EPR Addendum, a number of changes have been proposed to the segment of the ECLRT project between Mount Dennis Station in the City of Toronto and Renforth Drive in the City of Mississauga, known as the Eglinton Crosstown West Extension (ECWE) (the Project) shown in Figure 1-1. The changes to the Project, were determined to be inconsistent with a previously approved EPR and requires a reassessment of the impacts associated with the project, the identification of potentially new mitigation measures, and potentially new monitoring systems, in accordance with the addendum process prescribed in *O. Reg. 231/08*.

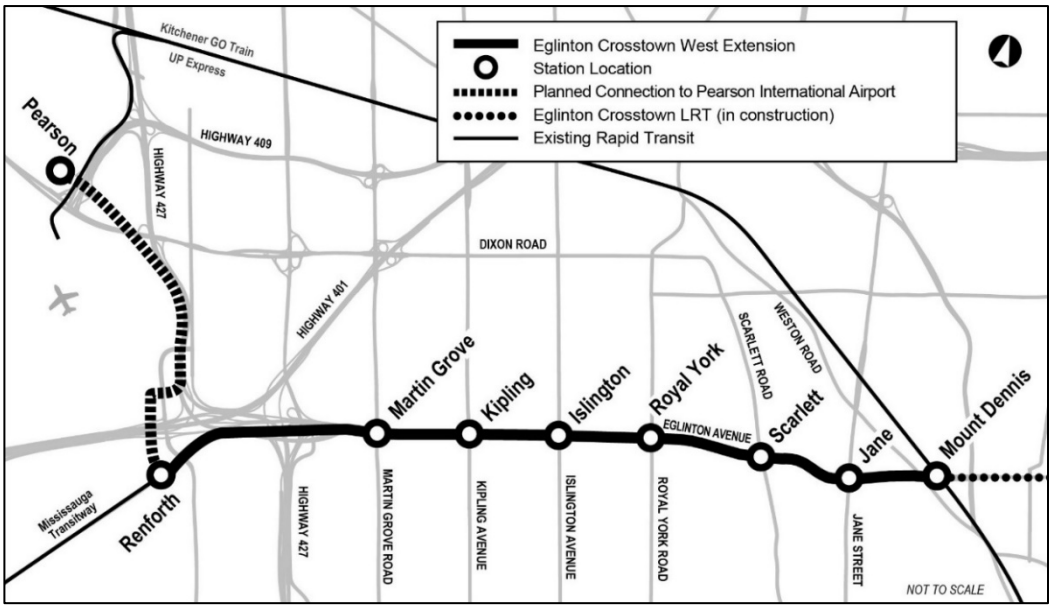

Figure 1-1: Eglinton Crosstown West Extension

A connection to Lester B. Pearson International Airport (as originally part of the 2010 ECLRT Project) is also being considered. This planned connection, between Renforth Drive and Lester B. Pearson International Airport, will be assessed separately in accordance with the addendum process prescribed in *O. Reg. 231/08*.

1.2 Summary of Proposed Design Changes

The proposed design changes currently being assessed in accordance with *O. Reg. 231/08* are as follows:

Vertical Alignment

- The Project alignment (approximately 9.2 km in length) will run mostly underground along Eglinton Avenue West from the future Mount Dennis ECLRT Station in the City of Toronto to Renforth Drive in the City of Mississauga;
- The Project will be underground from Mount Dennis Station to east of Jane Station; elevated east of Jane Street to west of Scarlett Road; underground from west of Scarlett Road to east of the Renforth portal; and transitions to partially at-grade to Renforth Station;
- The Project features three portals, which serve as approach entrances where the alignment transitions between underground and elevated, at the following locations:
  - East of Jane Street;
  - West of Scarlett Station; and
  - West of Renforth Drive.

Stations and Ancillary Features

- There will be a total of seven stations between Mount Dennis Station and Renforth Drive:
  - Scarlett and Jane Stations will be elevated;
  - Martin Grove, Kipling, Islington and Royal York Stations will be below grade and include associated ancillary features (e.g., vent shafts, Traction Power Substations (TPSSs); Emergency Exit Buildings (EEBs), Cross Passages (CPs)); and
  - The new terminal station at Renforth will be partially at-grade.

Emergency Exit Buildings

Six new EEBs are located along the underground portion of the alignment at the following locations:

- EEB-1 - located near 4000 Eglinton Avenue West, east of Royal York Road;
- EEB-2 - located west of Russell Road and Eden Valley Drive;
- EEB-3 - located east of Wincott Drive/Bemersyde Drive;
- EEB-4 - located west of Mimico Creek;
- EEB-5 - located between the on and off ramps of Highway 427; and
- EEB-6 - located immediately west of the hydro corridor at Eglinton Avenue West.

Construction

The underground section will be constructed using a Tunnel Boring Machine (TBM) between stations and a cut and cover method at stations and portal locations. A proposed Extraction Shaft (ES), Maintenance Shaft (MS), and Launch Shaft (LS) for the TBM will be located in the following areas:

- A LS for the TBM will be located adjacent to Renforth Station;
- A MS will be located near the west end of the Islington Station. This will be removed at the end of construction; and
- An ES for the TBM will be located west of Scarlett Road.

A new bridge across the Humber River east of Scarlett Road will be constructed as part of the elevated guideway, including two elevated stations (i.e., Jane Station and Scarlett Station).

Table 1-1 compares the project components, as assessed in the 2010 EPR and 2013 EPR Addendum, against the proposed design changes currently being assessed for this Project and provides a rationale for these changes. These changes to the Project were determined to be inconsistent with the 2010 EPR and 2013 EPR Addendum. As described in Section 15 of *O. Reg. 231/08*, any change that is inconsistent with a previously approved EPR requires a reassessment of the impacts associated with the project, the identification of potentially new mitigation measures, and potentially new monitoring systems in an Addendum to the previously approved EPR. This Air Quality Impact Assessment Report documents the reassessment of the impacts associated with the project, the identification of potentially new mitigation measures, and potentially new monitoring systems.

Table 1-1: Differences between 2010 EPR, 2013 EPR Addendum and 2020 EPR Addendum

Project Component	2010 EPR and 2013 EPR Addendum	2020 EPR Addendum	Rationale for Change
Vertical Alignment	The 2010 EPR proposed: • An at-grade alignment from Lester B. Pearson International Airport to Weston Road with a new bridge over Highway 401 to connect Convair Drive to Commerce Boulevard; and • Operational crossovers and storage (pocket) tracks between Commerce Boulevard and Renforth Drive and east of the Martin Grove Road stop to provide operational flexibility and allow LRT vehicles to change travel directions from one track to another. In the 2013 EPR Addendum, changes to the alignment were proposed including: • Revised LRT alignment between Jane Street and Keelesdale Park from surface alignment with surface stops to a completely grade-separated alignment; • Revised track alignment connecting the mainline and the proposed Black Creek Maintenance and Storage Facility from an at-grade connection to a grade-separated connection; and • New passenger tunnel connection under the GO Transit Kitchener Rail and Canadian Pacific Railway corridors.	The 2020 EPR Addendum is proposing: • Below grade alignment from Mount Dennis Station to east of Jane Street; • Elevated guideway from east of Jane Street to west of Scarlett Road; • Below grade alignment from west of Scarlett Road to west of Renforth Drive; • Partially below grade alignment from Renforth Drive to Renforth Station; • Portal located just east of Jane Street when the alignment transitions from underground to the elevated guideway; • Portal for the advanced tunnelled construction located west of Scarlett Station; and • Portal located west of Renforth Drive.	The change in alignment from at-grade to underground and elevated provides: • More reliable service due to full grade separation; • Higher level of protection from severe weather; • Increased number of Greater Toronto and Hamilton Area (GTHA) jobs accessible by transit in 45 minutes; • Greater reduction in Greenhouse Gas emissions; • Greater increase in GTHAs two-hour peak travel time savings; • Larger increase in Transitway and Crosstown weekly boarding's to reduce the connectivity gap; • Reduced property impacts; and • Reduced potential flooding impacts at the Humber River crossing.

Project Component	2010 EPR and 2013 EPR Addendum	2020 EPR Addendum	Rationale for Change
Stations and Ancillary Features	The 2010 EPR proposed: • 17 median surface stops at Jane Street, Scarlett Road, Mulham Place, Royal York Road, Russell Road/Eden Valley Drive, Islington Avenue, Wincott Drive/Bemersyde Drive, Kipling Avenue, Widdicombe Hill Boulevard/Lloyd Manor Road, Martin Grove Road, East Mall, Rangoon Road, Renforth Drive, Commerce Boulevard, Convair Drive, Silver Dart Drive, and Lester B. Pearson International Airport. In the 2013 EPR Addendum, considerations to stops and other ancillary features included: • Consolidation of the Weston Stop and the Black Creek Stop into one new underground Mount Dennis Station located at the GO Transit Kitchener Rail corridor; • Addition of the Black Creek Maintenance and Storage Facility site at Mount Dennis; and • Addition 15-bay bus terminal and Passenger Pick Up and Drop-off (PPUDO) at the Mount Dennis Station.	A total of seven stations between Mount Dennis Station and Renforth Drive: • Scarlett and Jane Stations are elevated; • Martin Grove, Kipling, Islington and Royal York Stations are below-grade with associated ancillary features (e.g., vent shafts, TPSSs, EEBs, CPs); • New terminal station at Renforth Drive is partially at-grade; and • Stations at Rangoon Road, The East Mall, Widdicombe Hill Boulevard/Lloyd Manor Road, Wincott Drive/Bemersyde Drive, Russell Road/Eden Valley Drive and Mulham Place were removed from the Project.	Change in number of stations provides benefits in terms of: • Construction complexity and cost for below-grade stations; and • Reduced property impacts.
Emergency Exit Buildings (EEB)	No emergency exits along this section in either the 2010 EPR or the 2013 EPR Addendum as the alignment was at-grade.	Six EEBs at the following approximate locations: • EEB-1 - near 4000 Eglinton Avenue West, east of Royal York Road; • EEB-2 - west of Russell Road and Eden Valley Drive;	Emergency exits for passengers and emergency access for fire fighters are required for tunnels under the National Fire Protection Agency Standard 130. The distance between EEBs and station platform

Project Component	2010 EPR and 2013 EPR Addendum	2020 EPR Addendum	Rationale for Change
		• EEB-3 - east of Wincott Drive/Bemersyde Drive; • EEB-4 - west of Mimico Creek; • EEB-5 - between the on and off ramps of Highway 427; and • EEB-6 - immediately west of the hydro corridor at Eglinton Avenue West.	must not exceed 762 m.
Construction	The 2010 EPR proposed: • At-grade construction between Mount Dennis and Renforth Drive with dedicated runningway along the centre line of Eglinton Avenue West, Commerce Boulevard, and Convair Drive; • Cut and cover method will be used to construct stations, portals, and special track work; • Road widening, reconstruction of curb lines and associated sidewalk modifications; • Relocation of utilities and relocation of traffic signals and provision of temporary traffic signals; • Roadway resurfacing following roadway reconstruction; • Construct LRT facilities within the LRT Right-of-Way; • Construct streetscaping and urban design elements and provide bicycle lanes on both sides of the roadway;	• Elevated guideway from east of Jane Street to west of Scarlett Road; • Two elevated stations (Scarlett and Jane). There is potential for impacts to the pedestrian bridge west of Scarlett Road due to the portal; and • Underground section to be constructed using twin tunnelling method between stations and cut and cover method at stations and at portal locations. Underground tunnel construction approach: • A LS for the TBM will be located adjacent to Renforth Station, a MS will be located at the west end of Islington Station, and an ES for the TBM will be located west of Scarlett Road; • Install headwalls, where required, at both ends of EEBs and stations; • Tunnel structure constructed using precast concrete tunnel liner segments that are installed as the TBM progresses;	Construction is required to build the alignment and new stations. Refer to the rationale for change listed under Vertical Alignment and Stations and Ancillary Features above.

Project Component	2010 EPR and 2013 EPR Addendum	2020 EPR Addendum	Rationale for Change

	• Widening of the existing single span bridge structure over Mimico Creek to accommodate the LRT Right-of-Way; and
	• Construction of a multi-span structure over Highway 401.
	
	The 2013 EPR Addendum proposed:
	• Cut and cover construction at Mount Dennis Station and locations of special track work (focused to 150 m long sections at each station), tail tracks and where the LRT emerges through a tunnel portal to match back into grade along the median of Eglinton Avenue West, and in the underground section west of Weston Road.
		• Excavated soils will be removed from work site for off-site disposal and
		• EEBs will be constructed once the TBM has completed the tunnelling. Construction is similar to station construction.
		
		As part of the above ground construction:
		• A new bridge across the Humber River east of Scarlett Road will be constructed as part of the elevated guideway, including two elevated stations (i.e., Jane Station and Scarlett Station). Construction of the new bridge will include:
		  • Building foundations for piers;
		  • Constructing piers;
		  • Building and placing bridge sections; and
		  • Installing systems and track.	

1.3 Study Objectives

To satisfy the study objectives, existing and planned sensitive and critical receptors within the two study areas were confirmed and documented. The predicted air quality effects associated with the development of the ECWE have been assessed and compared to threshold limits. A sensitive receptor, for the purposes of this AQIA, is defined by the Ministry of Transportation's (MTO) Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (MTO, 2012) as a residential dwelling while a critical receptor includes a:

- Childcare facility;
- Health care facility;
- Senior citizen's residence;
- Long-term care facility; and
- School.

In cases where one of these scenarios lead to an excessive concentration of one of the selected pollutants, mitigation measures will be suggested to reduce the severity of potential effects on air quality.

1.4 Study Area

This AQIA considers a 9 km segment of the Project, from Renforth Station to Mount Dennis Station. Originally, within that segment, two study areas were selected according to the intersections with the worst combination of high traffic volumes, largest increase in traffic, and the proximity to residential areas or critical receptors, as defined in the MTO Guideline.

The approach used was based on the fact that the intent of the air quality impact assessment is to evaluate the change in air quality associated with the construction and operation of the project's components rather than to determine the exact contaminant concentration in the vicinity of the project. The important element to note is that the only emission sources considered in this assignment are on-road vehicles (roadways) and that the MTO guidelines states that the modelling emissions results tend to be very conservative for these types of sources. Thus, using the worst-impacted intersections represent the most efficient way of assessing such a large project's footprint. Additionally, by considering that the air contaminant concentrations tend to decrease over time for these worst-case intersections, it is expected that the other subsections of the corridor would also show that trend as only on-road vehicles are considered within this assessment and that the worst intersections (in terms of high traffic volumes, largest increase in traffic, as well as being into proximity to residential areas or other critical receptors) were taken into account. These two study areas are at the Islington/Eglinton Avenue West intersections as well as the Eglinton Avenue West segment between Martin Grove Road and Kipling Avenue. However, as these two areas are at proximity from one another, both study areas were merged into one larger study area. This ensures that the proximity and interactions that both areas have on each other are

considered by this assessment. The study area considered in this AQIA is presented in Figure 1-2

As previously mentioned, this study area was chosen because it comprises the two most impacted sectors associated with the Project's completion, in terms of the difference in traffic volume between the Existing and Future Case scenarios. Since the only emission source included in our model are the vehicles travelling in the vicinity of the Project (i.e., an electrical ECLRT, no bus stations associated with stations, no PPUDOs planned), the two most impacted intersections in terms of traffic growth, determined during the traffic assessment, were used in the air quality models. Considering air quality effects associated with roadways tend to drop off significantly at downwind distances greater than 300 m and that the Project's will take place on a 9 km segment, only the two most impacted sectors were selected and modelled, which represents more than the third of the entire corridor. Hence, the tier of the corridor that is expected to be the most affected by the project's completion in terms of air quality was modelled.

Furthermore, during the construction of the ECWE, temporary effects on air quality can be expected in the surrounding area of the corridor. Typically, emissions related to construction activities consist of fugitive dust emissions (Total Suspended Particles (TSP), inhalable Particulate Matter (PM_{10}) and respirable Particulate Matter ($PM_{2.5}$)) and mobile equipment emissions. Therefore, people living next to the station construction area may experience an increase in dust concentrations and other criteria air contaminants for the duration of the construction phase. However, those emissions are limited spatially and temporally. Construction emission were thus not modelled as part of this assignment and should be dealt with directly through the deployment of ambient monitoring stations and mitigation measures during the construction phase. It is recommended that, at a minimum, dust levels be monitored and as many mitigation measures as needed be applied, to reduce the effects on the surrounding receptors.

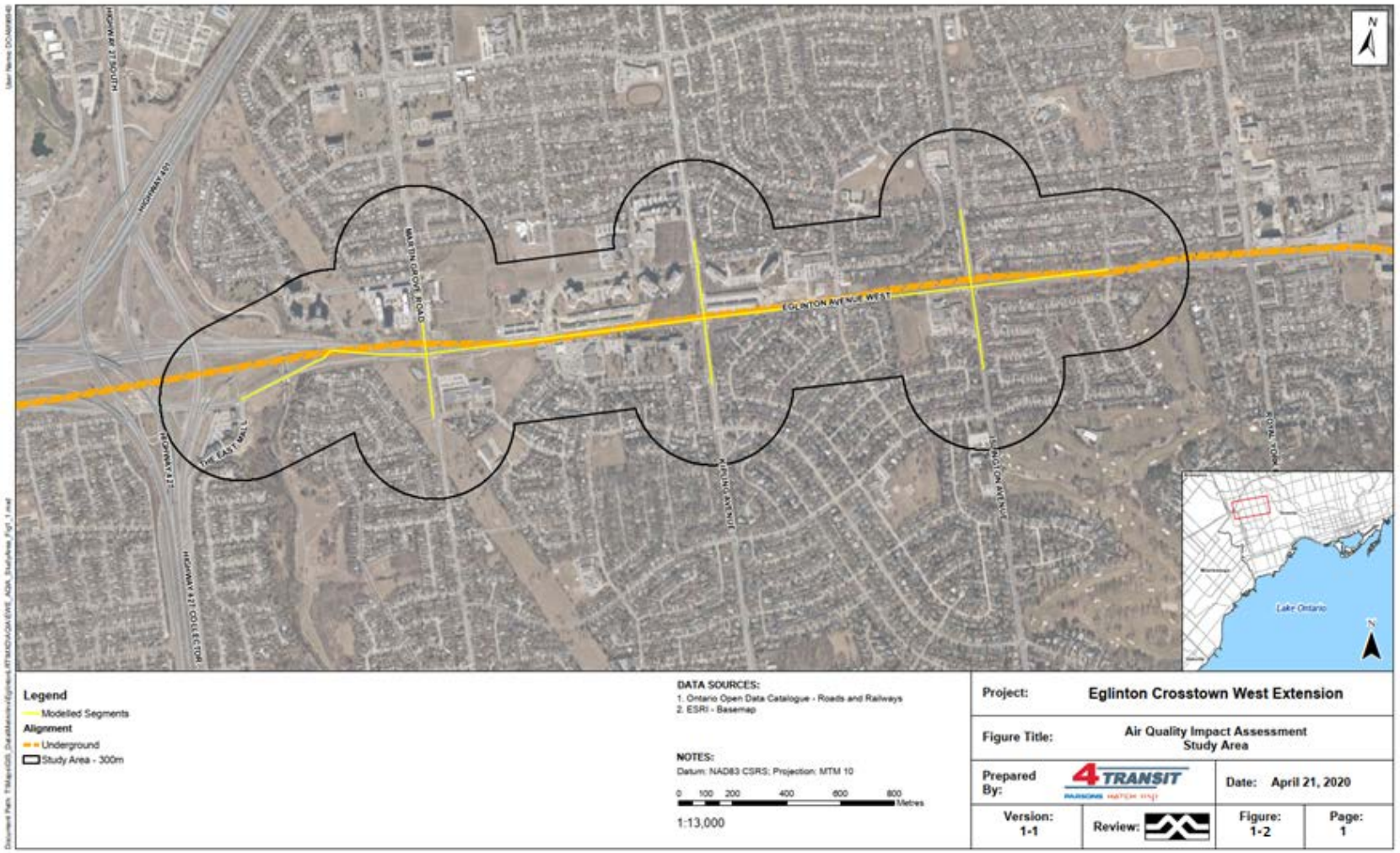

Figure 1-2: ECWE - AQIA Study Area

2. Methodology

Local air quality impacts were assessed by estimating contaminant concentrations resulting from the worst combination of high traffic volumes, largest increase in traffic, and the proximity to residential areas or critical receptors as defined in the MTO Guideline, in two scenarios:

- Existing Case scenario (2019); and
- Future Case scenario (2031), with new vehicles traffic patterns.

The methodology used for this AQIA is outlined in the MTO Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (Guide) (MTO, 2012). The assessment relied on atmospheric dispersion modelling. The guidance pertaining to the technical aspects of the modelling is provided within the Ministry of the Environment, Conservation and Parks' (MECP) Air Dispersion Modelling Guideline for Ontario (ADMGO) (MECP, 2017).

2.1 Approach

For both scenarios, traffic patterns, estimated idling time, estimated Emission Factors (EFs) for each type of vehicles considered in this study, etc. were used to determine impacts at representative sensitive and critical receptors within the study area and were then compared to applicable regulatory criteria. Contaminants considered in this study included Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), acrolein, benzene, 1,3 butadiene, acetaldehyde, formaldehyde, Benzo(a)Pyrene (B(a)P) and Particulate Matter with a diameter under 2.5 microns ($PM_{2.5}$).

Table 2-2 presents the applicable thresholds, which are not regulatory, but are more of an indicator of acceptable levels of contaminants in the atmosphere. The effects were predicted using engine emission rates, modelled emission rates and air dispersion modelling. Emission and dispersion models used for this assessment were respectively the United States Environmental Protection Agency's (US EPA) Motor Vehicle Emission Simulator (MOVES) and American Meteorological Society/EPA Regulatory Model (AERMOD version 19191). The MOVES software is an MECP-approved simulator used to determine vehicle EFs for vehicle traffic on the roads considered in this assessment. It is noted that AERMOD is also an approved MECP air dispersion model under *O. Reg. 419/05 Air Pollution - Local Air Quality* (O. Reg. 419/05) (MECP, 2017). It is a steady-state dispersion model used to determine short-range dispersion of the air emissions associated with the aforementioned two scenarios. AERMOD is also composed of a meteorological data pre-processor (AERMET) and a terrain pre-processor (AERMAP).

The modelled concentrations due to the change in traffic patterns from the ECWE were added to background sources. The resulting sums were then compared to the air quality threshold in order to evaluate the potential for adverse effects. A potential for an adverse effect is considered to exist when the summed concentration for a contaminant exceeds the air quality criterion at a sensitive receptor. If the background concentration of a contaminant

already exceeds the criterion, then a potential for an adverse effect already exists, without the consideration of the Project.

2.2 Contaminants of Concern

As listed in Section 2.1, the Contaminants of Concern (COC) that were assessed in this AQIA included:

- Particulate matter less than 2.5 µm ($PM_{2.5}$);
- Volatile Organic Compounds (VOCs):
  - Acetaldehyde.
  - Acrolein.
  - Benzene.
  - 1,3-butadiene.
  - Formaldehyde.
- Polycyclic Aromatic Hydrocarbons (PAHs): B(a)P;
- Nitrogen dioxide (NO_2): nitrogen oxides (NOx) correction using available Ozone (O_3) calculations for conversion of nitric oxide (NO) to NO_2 (see section 2.5); and
- Carbon monoxide (CO).

It is important to note that PM_{10}, as prescribed on the MECP in Note 9 of the Ambient Air Quality Criteria contaminants list, is only used as a guideline for decision making. Hence, there is no legal applicability to that standard, which is why it was not included in the COCs.

2.3 Air Quality Thresholds

In order to assess the effects of the Project, the predicted cumulative effects at sensitive receptors were compared to guidelines established by government agencies. As recommended by the MTO, comparisons of predicted cumulative pollution concentrations of COCs with the Ontario Ambient Air Quality Criteria (AAQC) and the Canadian Ambient Air Quality Standards (CAAQS, formerly the Canada Wide Standards) are necessary to assess the need for mitigation (MTO, 2012).

The Ontario AAQC list desirable concentrations of contaminants in air, based on protection against adverse effects on health and/or the environment. AAQCs are developed by the MECP and have varying time weighted averaging periods (e.g., 30-minute, one hour, eight hour, 24 hour, and annual) appropriate for the adverse effect that they are intended to protect against (i.e., acute or chronic). The adverse effects considered may be related to health, odour, vegetation, soiling, visibility, or corrosion. AAQCs may be changed from time to time based on the state-of-the-science for a particular contaminant (MECP, 2012).

The CAAQS are health-based air quality objectives for pollutant concentrations in outdoor air. Under the Air Quality Management System, Environment and Climate Change Canada and Health Canada have established air quality standards for fine particulate matter, which is a concern to human health. These standards are more stringent and more comprehensive than the previous Canada Wide Standards that the CAAQS replace. The CAAQS were first

established by the Federal government in 2013 and provide more stringent objectives for outdoor air quality in Canada. The CAAQS include a long-term (annual) target for $PM_{2.5}$. Applicable standards include the 2020 CAAQS standards for $PM_{2.5}$. The annual standard is based on the 98th percentile ambient measurement (24 hour), averaged over three years. New NO_2 and SO_2 CAAQS were published by the Canadian Council of Ministers of the Environment (CCME) in November 2017. These new standards represent unparalleled ambitious long-term objectives. As objectives, they are not binding and do not directly apply to this AQIA for which highly conservative assumptions are employed to predict the worst-case potential outcomes. Table 2-1 shows the recent CAAQS for Fine Particulate Matter ($PM_{2.5}$), NO_2, Ozone and SO_2 as published on the CCME website.

It is worth noting that the statistical form required for the CAAQS, especially for the one hour averaging period, entails special processing of the output results (98th or 99th percentile of the daily maximum one hour average concentrations). This processing would remove the highest outliers as being meteorological anomalies. As all results in this report were selected as the maximum 1st ranked concentrations modelled, thus not removing outliers, the results shown in this study are a conservative comparison to the CAAQS.

Table 2-1: New CAAQS for NO_2 and SO_2

Contaminant	Averaging Period	Concentration Objective for Indicated Years		Statistical Form
		2020	2025	
Fine Particulate Matter ($PM_{2.5}$)	24 hour	27 µg/m³	-	Three-year average of the annual 98th percentile of the daily 24-hour average concentrations.
	Annual	8.8 µg/m³	-	Three-year average of the annual average of the daily 24-hour average concentrations.
NO_2	1 hour	60 ppb (119 µg/m³)	42 ppb (83 µg/m³)	Three-year average of the annual 98th percentile of the daily maximum one hour average concentrations.
	Annual	17 ppb (34 µg/m³)	12 ppb (24 µg/m³)	Average over a single calendar year of all one-hour average concentrations.
Ozone	8 hour	62 ppb (124 µg/m³)	60 ppb (120 µg/m³)	Three-year average of the annual 4th highest of the daily maximum 8-hour average concentrations.
SO_2	1 hour	70 ppb (193 µg/m³)	65 ppb (179 µg/m³)	Three-year average of the annual 99th percentile of the SO_2 daily maximum one hour average concentrations.
	Annual	5 ppb (14 µg/m³)	4 ppb (11 µg/m³)	Average over a single calendar year of all one-hour average SO_2 concentrations.

Notes:
1. *Table based on CCME website: http://airquality-qualitedelair.ccme.ca/en/*
2. *CAAQS are published in ppb. Conversions to µg/m³ were calculated for easier comparisons to results in this report. Conversions assume ambient pressure of one atmosphere and a temperature of 10 degrees Celsius.*

SO_2 was not identified as a significant contaminant of concern during development of the environmental assessment approach. Therefore, modelled results of this contaminant are not available. For NO_2, the new one hour CAAQS is more stringent and a new annual standard is introduced that was absent from the AAQC. When compared to the AAQC standards, the new one hour CAAQS brings down the air quality threshold by 80% from 400 µg/m³ to 83 µg/m³.

Comparing the maximum one-hour NO_2 cumulative concentrations shown in Table 3-2 for the Cumulative Effects of the Future Project Case scenario with the new CAAQS, several key factors should be pointed out in interpreting such a comparison:

- Applying the statistical form required for the one-hour NO_2 CAAQS would bring down the one-hour NO_2 result shown in the table, which is using the maximum concentration modelled thus conservatively treating the results;
- The NO_2 background levels calculated as the 90th percentile over the five years of data from the air quality station selected is contributing to a high percentage of the future one hour CAAQ limit value to be enforced in 2025 (62 µg/m³ for 75% of the threshold), leaving a 21 µg/m³ contribution possible for the modelling of all sources for the Future Project case scenario; and
- Public transit helps reduce pollution by reducing the total vehicle kilometres travelled in the region.

Regarding the high background contribution to the cumulative concentrations relative to the new CAAQS, the new federal CAAQS are very stringent and are taking into account future progress in the global picture of NO_2 emissions. Future background levels of NO_2 are expected to decline with the evolution of clean emissions technology. For example, the MECPs 2015 Air Quality Report (MECP, 2017) shows historic trends that all contaminant levels have continued to decrease from 2006 to 2015:

- 32% decrease for NO_2;
- 25% decrease for $PM_{2.5}$;
- 53% decrease for CO; and
- 40% decrease for benzene.

Although the rate at which these trends will continue is uncertain, the historic trend of decreasing background levels is expected to continue. In general, these decreasing trends are resulting from more stringent regulations regarding not only the concentrations of pollutants in ambient air, but to the standards of emissions at the source; industries must emit less and on-road vehicles must implement technologies to create cleaner engines. For example, prior to the cancellation of Ontario's emissions trading regulations (*O. Reg. 397/01* and *O. Reg. 194/05*), the cap and trade program is estimated to have contributed to the reduction in NO_x emissions. Nevertheless, considering the unpredictability of the continuality

of the trends, existing background levels are always used for air modelling purposes of future scenarios as a conservative practice.

The AAQC and CAAQS are collectively referred to as “air quality thresholds” in this AQIA. An exceedance of one of the air quality thresholds will cause mitigation to be considered, assuming the air quality threshold is not already exceeded by the ambient background concentration of a contaminant. Table 2-2 summarizes the air quality thresholds.

Table 2-2: Air Quality Thresholds for Contaminants of Concern

Contaminant	Averaging Time	Threshold Value (µg/m³)	Source
$PM_{2.5}$	24 hour	28	CAAQS
	24 hour	27	CAAQS (2020)
	Annual	10	CAAQS
	Annual	8.8	CAAQS (2020)
NO_2	one hour	400	AAQC
	one hour	119	CAAQS (2020)
	one hour	83	CAAQS (2025)
	24 hour	200	AAQC
	Annual	60	NAAQO
CO	one hour	36,200	AAQC
	eight hour	15,700	AAQC
Acrolein	one hour	4.5	AAQC
	24 hour	0.4	AAQC
Benzene	24 hour	2.3	AAQC
	Annual	0.45	AAQC
1,3-Butadiene	24 hour	10	AAQC
	Annual	2	AAQC
Acetaldehyde	30 minutes	500	AAQC
	24 hour	500	AAQC
Formaldehyde	24 hour	65	AAQC
Benzo(a)pyrene	24 hour	0.00005	AAQC
	Annual	0.00001	AAQC

The air quality thresholds represent desirable levels of contaminants in ambient air and are not enforceable within any of the jurisdictions. They represent a “road map” for AAQC and nationally (CAAQS). The air quality threshold value for each contaminant and its applicable averaging period were used to assess the predicted effect at sensitive receptors. As per the MTO Guideline, the cumulative concentration of each pollutant will be compared with the provincial AAQC for gas-phase pollutants and the CAAQS for particulate matter (MTO, 2012).

The applicable averaging periods for the contaminants are based on 30-minute, one hour, eight hour, 24 hour, and annual exposures. The different averaging periods for contaminants are based on adverse effects to human health, vegetation or animals. These effects are indicated within the AAQC (MECP, 2012). As previously mentioned, CAAQS threshold values are based on adverse effects to human health only.

2.4 Background Air Quality

By definition, background concentrations include sources that affect air quality in the study area, and generally do not include emissions from the Project itself. Thus, the MECP and National Air Pollution Surveillance (NAPS) ambient air monitoring stations were reviewed and selected based on their proximity to the study area and the fact that they are located in an area that has minimal to no influence from an existing rail corridor. This avoids double counting the ambient background levels of the COCs when processed with the dispersion modelling results. However, even though the background air quality stations selected were not necessarily close to an existing rail corridor, it is important to note that the background levels used include and double count some of the traffic modelled. The Existing case scenario (2019) models the current situation without any station from the ECWE project. The vehicles modelled for this scenario are thus already included in the background concentrations used since they currently contribute to ambient air pollutants concentrations.

A total of five MECP and NAPS ambient air monitoring stations were identified as shown in Table 2-3 and Figure 2-1. However, not all contaminant concentrations are available at every station, which is the reason five stations were selected to characterize background concentrations. One MECP station was selected to represent respirable particulate matter ($PM_{2.5}$), NO_2, CO and O_3. The Toronto West ambient air monitoring station was chosen because it is the closest station to the study area. Furthermore, its location is qualified as an urban region, which is representative of the ECWE Station's surroundings. Toronto West station was thus selected to represent the background $PM_{2.5}$, NO_2, CO and O_3 concentrations.

Four NAPS stations were selected to represent background concentrations for other representative contaminants. The Egbert monitoring station was the only station with recent data for acetaldehyde and formaldehyde and was thus selected to represent the acetaldehyde and formaldehyde background concentrations. Newmarket monitoring station was selected to represent benzene and 1,3-butadiene background concentrations. Toronto (Ruskin/Perth St) monitoring station was used for acrolein and Toronto - Gage Institute was used for B(a)P. A summary of data from these stations and the years of data used are provided in Table 2-3, while their locations are shown on Figure 2-1.

Table 2-3: Ambient Air Monitoring Station Information

Contaminant of Concern	Station ID	Station Location	Years of Data Used
Particulate Matter ($PM_{2.5}$)	MECP - 35125	Toronto West (125 Resources Road)	2013-2017
Nitrogen Dioxide (NO_2)	MECP - 35125	Toronto West (125 Resources Road)	2013-2017
Carbon Monoxide (CO)	MECP - 35125	Toronto West (125 Resources Road)	2013-2017
Ozone (O_3)	MECP - 35125	Toronto West (125 Resources Road)	2013-2017
Acrolein	NAPS - 60418	Toronto (Ruskin/Perth Street)	2002-2006
Benzene	NAPS - 65101	Newmarket (Eagle/McCaffrey Road)	2011-2015
1,3-Butadiene	NAPS - 65101	Newmarket (Eagle/McCaffrey Road)	2011-2015
Acetaldehyde	NAPS - 64401	Egbert (8^{th} Line and 10^{th} Side Road)	2006-2010
Formaldehyde	NAPS - 64401	Egbert (8^{th} Line and 10^{th} Side Road)	2006-2010
B(a)P	NAPS - 60427	Toronto - Gage Institute (223 College Street)	2009-2013

To establish an initial baseline of concentrations for the COCs, background data from the stations listed above were gathered and compiled for the most recent five consecutive years. Based on published air quality studies and common practices, the 90^{th} percentile background concentration for each COC was utilized from the stations for averaging periods of one hour, eight hours and 24 hours. For COCs with an annual averaging period, the annual mean from the ambient air monitoring stations was used. Values of interest were compiled and are presented in Table 2-4 and ambient air quality monitoring data is provided in Appendix A of this report.

It is important to note that two of the COCs, NO_2 and B(a)P, are already exceeding their applicable criterion. In fact, the background concentration of NO_2, for the annual period, exceeds its criterion by more than 40%. As far as B(a)P, both 24-hour and annual periods concentrations found at the ambient air monitoring stations represents 240 % and 770 % of their threshold limits, respectively. Furthermore, it can be noted that the annual threshold limit is very close to be reached by the background concentrations for two other contaminants of concerns, which are $PM_{2.5}$ and benzene. Therefore, exceedances for these specific contaminants can be explained by the important background concentration already present in the vicinity of the project.

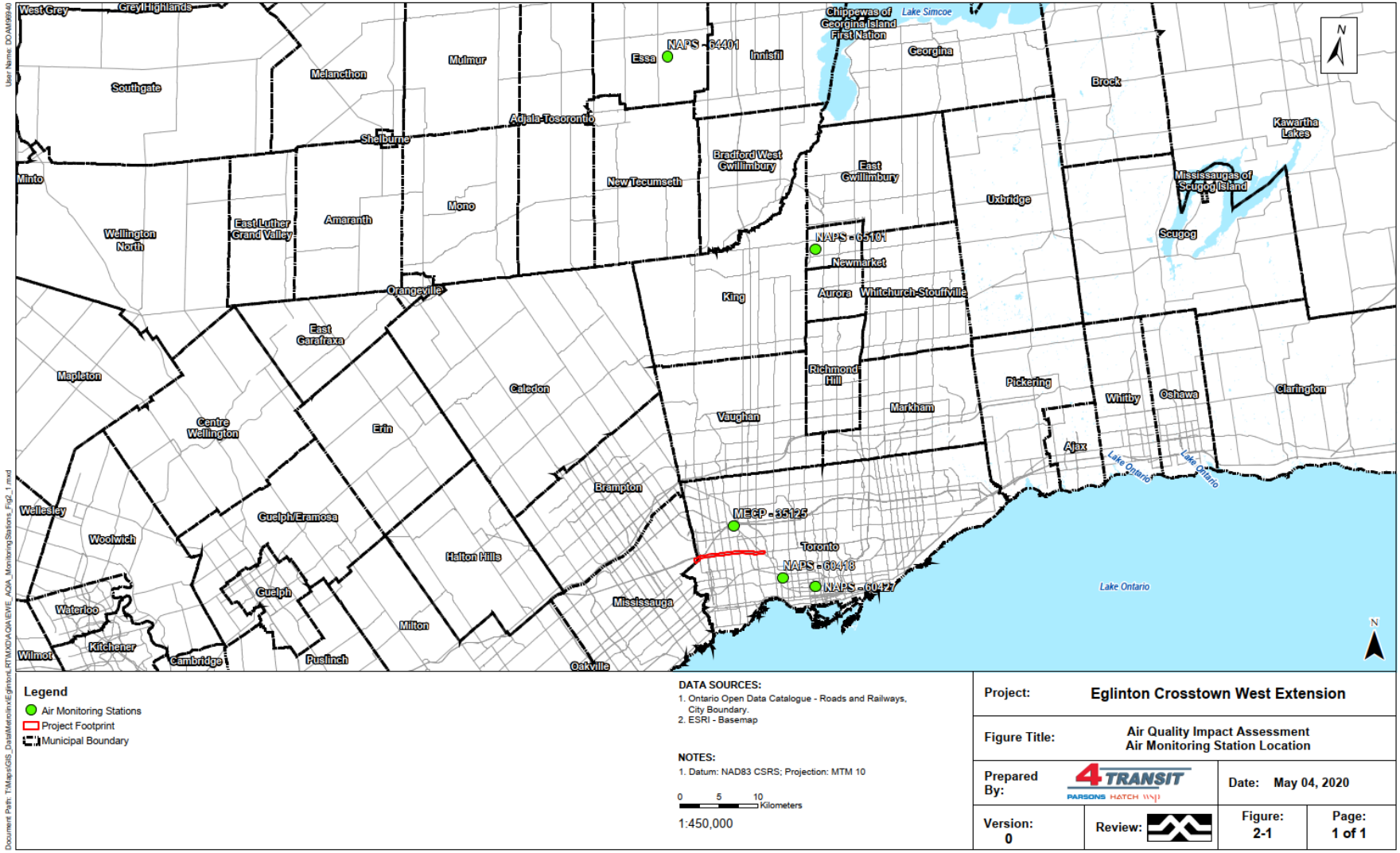

Figure 2-1: Location of Air Monitoring Stations

Table 2-4: Background Concentrations (µg/m³)

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value	% of Criterion
$PM_{2.5}$	24 hour	µg/m³	27.0	41.5	0.4	7.0	14.2	52%
$PM_{2.5}$	Annual	µg/m³	8.8	9.1	7.0	8.5	8.15	**93%**
NO_2	1 hour	µg/m³	400	170.3	0.0	28.3	62.0	15%
NO_2 (CAAQS 2025)	1 hour	µg/m³	83	170.3	0.0	28.3	62.0	75%
NO_2	24 hour	µg/m³	200	111.7	5.7	31.1	50.5	25%
NO_2	Annual	µg/m³	60	35.0	30.7	33.1	33.0	55%
NO_2 (CAAQS 2025)	Annual	µg/m³	23	35.0	30.7	33.1	33.0	**143%**
CO	1 hour	µg/m³	36200	2086	0	280	450	1%
CO	8 hour	µg/m³	15700	1541	37	288	436	3%
O_3	1 hour	µg/m³		177.8	0.0	44.1	84.0	
O_3	24 hour	µg/m³		131.5	1.3	45.0	71.0	
O_3	Annual	µg/m³		47.3	45.1	46.1	46.3	
Acrolein	1 hour	µg/m³	0.4	1.2	0.0	0.07	0.24	59%
Acrolein	24 hour	µg/m³	4.5					
Benzene	24 hour	µg/m³	2.3				0.65	28%
Benzene	Annual	µg/m³	0.45	1.19	0.10	0.41	0.44	**98%**
1,3 Butadiene	24 hour	µg/m³	10				0.05	0.5%
1,3 Butadiene	Annual	µg/m³	2	0.10	0.01	0.02	0.03	1.5%
Acetaldehyde	30 minutes	µg/m³	500	3.1	0.0	0.85	1.6	0.3%
Acetaldehyde	24 hour	µg/m³	500					
Formaldehyde	24 hour	µg/m³	65	8.2	0.14	2.2	4.2	6%
B(a)P	24 hour	µg/m³	0.00005				0.00012	**240%**
B(a)P	Annual	µg/m³	0.00001				0.000077	**770%**

Notes:

Ozone (O_3) concentrations were used to calculate the NO to NO_2 conversion using the Ozone Limiting Method (see Section 2.5).

'-' : Insufficient data to estimate these values.

2.5 Conversion of Nitrogen Oxides (NO_x) to Nitrogen Dioxide (NO_2)

The simplified version of the Ozone Limiting Method (OLM) was employed to verify if NO is being fully converted into NO_2, for reference purposes only. This method is one of the three approved methods by the Air Dispersion Modelling Guidelines of Ontario to evaluate NO to NO_2 conversion, which explains its utilization.

In fact, when nitrogen oxides (NO_x) are emitted in diesel exhaust, their initial composition is dominated by NO. Approximately 90% of the emissions of NO_x are in the form of NO. Once in the ambient air, NO is irreversibly oxidized by ground level O_3 to produce NO_2 as follows:

$$\mathbf{NO + O_3 \rightarrow NO_2 + O_2}$$

NO_2 is a COC with established air quality thresholds, so the concentration of NO_2 is important to quantify. For the purpose of this assessment, a simplified version of the OLM was used to estimate the maximum short-term NO_2 concentrations resulting from emissions of NO_x. The one hour and 24 hour NO_x concentrations predicted by AERMOD were compared to the average 90th percentile measured ambient O_3 concentration for years 2013 - 2017 from the Newmarket ambient air monitoring station.

The OLM method assumes that if the concentration of NO (90% of the modelled NO_x) is less than the available 90th percentile ambient O_3, then all of the NO is converted to NO_2 as follows:

$$\mathbf{If\ 0.9NO_x(ppm) < O_3(ppm), then\ NO_2(ppm) = NO_x(ppm)}$$

If the concentration of NO (90% of the modelled NOx) is greater than the available 90th percentile ambient O_3, then there is not enough O_3 to convert all the NO to NO_2, so the following relationship applies:

$$\mathbf{If\ 0.9NO_x(ppm) > O_3(ppm), then\ NO_2(ppm) = 0.1NO_x(ppm) + O_3(ppm)}$$

The conservative nature of this method assumes that the peak NO_x emissions from the dispersion modelling occur simultaneously with the 90th percentile peak of O_3, to maximize the amount of NO_2 that could be present. In this particular assignment, NO is fully converted into NO_2, which adds conservatism to the obtained results.

2.6 Credible Worst-Case Analysis

The COC concentrations from modelling the ECWE Stations new traffic patterns were summed with background concentrations. The results were then compared to the applicable air quality thresholds in order to evaluate the potential for adverse effects. This approach accounts for the cumulative effect of the Project's emissions in combination with background air contaminant levels.

It is noted that the Project's contribution and the background concentrations vary widely from day to day, depending on weather conditions and operational conditions. Thus, the credible worst-case analysis was undertaken for this assessment, as an appropriate analytical response to this issue. This analysis is based on the concept that a project is acceptable

under all conditions if it is acceptable under a credible worst-case condition (MTO, 2012). In the credible worst-case analysis, the maximum modelled 30 minutes, one hour, eight hour and 24 hour contributions from the Project, under maximum operating conditions and worst-case meteorological conditions, are assumed to coincide with peak ambient background concentrations.

For each COC, the 90th percentile concentration from the ambient background monitoring data was used to represent the peak background condition in this calculation. The sum of the maximum modelled Project contribution and the 90th percentile background concentration was compared to the applicable air quality threshold. If the credible worst-case analysis indicate that a significant number of sensitive receptors may be subject to air quality that does not meet the provincial/national ambient air quality criteria/standards (AAQS/CAAQS), then a more detailed analysis will be carried out for that specific community or receptor. Otherwise, no further local AQIA is needed (MTO, 2012).

2.7 Atmospheric Dispersion Modelling

Dispersion models use mathematical formulations to represent the atmospheric processes that transport and disperse air contaminants emitted by a source. This AQIA involved the AERMOD dispersion model. The AERMOD model is the US EPA's preferred steady-state dispersion model, designed to predict air contaminant concentrations at receptor locations within several kilometres of a source. It incorporates the turbulence structure associated with the atmosphere near the ground, and includes treatment of surface and elevated sources, as well as both simple and complex topography. It is noted that AERMOD has been adopted by the MECP as an approved dispersion model for regulatory purposes under O. Reg. 419/05.

The US EPA provides guidance to assess transportation sources within AERMOD, which has been adopted in this AQIA. All accepted dispersion modelling approaches for transportation emissions treat the emissions as steady-state within a given hour. Since the shortest averaging time of interest for pollutant concentration is 30 minutes, this assumption does not significantly compromise the results.

AERMOD uses the meteorological information (e.g., temperature, wind speed, relative humidity) and terrain data (e.g., surface roughness, albedo, and Bowen ratio) supplied by AERMET pre-processor in dispersion models to calculate the mixed layer height which was used in estimating the dispersion of emissions.

The MTO Guide prescribes a single worst-case set of meteorological conditions for use in a credible worst-case analysis (MTO, 2012). In the present study, a more refined approach was adopted, in which five years of hourly meteorological data were used in AERMOD. Predicted worst-case concentrations for 30 minutes, one hour, eight hour, 24 hour and annual averaging times were extracted from the results for the entire five-year period. Two meteorological datasets were needed to perform dispersion modelling analysis using the AERMOD model: upper air data (i.e., measurements recorded at various heights above the surface by weather balloons released twice per day); and surface data (i.e., hourly measurements recorded at surface-based weather stations located 10 m above the ground). Upper air data were obtained from the Buffalo International Airport Station (ID 14733) for the

years 2015 - 2019 inclusively, and surface data were obtained from the Lester B. Pearson International Airport (ID 61587) for the same five-year period in pre-processed datasets directly from the MECP. Buffalo is the upper air station designated for the City of Toronto, as upper air quality does not change significantly over a geographic area. Data from 2015 to 2019 are the most recent available from the Buffalo Station and were used for the purposes of this study. The MECP meteorological datasets were processed using the AERMET meteorological data processor for the urban surface category.

Terrain information for the area surrounding the Eglinton West corridor was obtained from the MECP Ontario Digital Elevation Model Data web site. The terrain data are based on the North American Datum 1983 (NAD83) horizontal reference datum (Tile 087). These data were run through the AERMAP terrain pre-processor to estimate base elevations for sources and receptors and to help the model account for changes in elevation of the surrounding terrain.

The AERMOD model is able to generate values for different averaging periods (hourly, daily and annual averages) over the five years of simulation. The hourly concentrations were estimated based on hourly emission rates expressed in grams per second (g/s) and hourly meteorological data. Figure 2-2 presents the wind rose resulting from the meteorological data pre-processing.

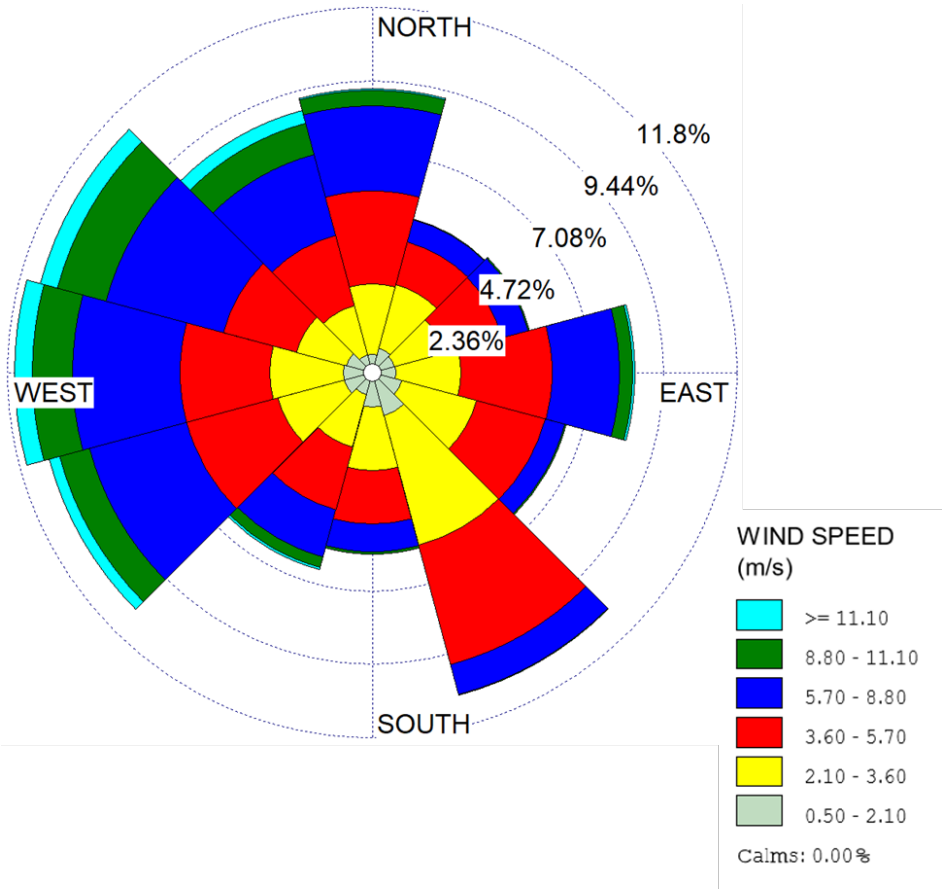

Figure 2-2: Wind Rose for Lester B. Pearson International Airport (2015-2019)

2.8 Modelling Scenarios

The modelling portion of the AQIA is developed based on the vehicles traffic pattern changes due to the crosstown extension of the Eglinton West corridor.

The following emission sources will be included in the dispersion model:

- Existing on-road vehicle emissions around the ECWE for the base case scenario (Current conditions (2019)); and
- Future on-road vehicle emissions around the ECWE after the completion of the "Project" (Future project case scenario (2031)).

The vehicles will be represented by line-volume source along the Project's most impacted road segments. The emission level for these two scenarios is based on the existing and projected number of vehicles assessed by the traffic team and average EFs for typical vehicles from US EPA MOVES software.

2.9 Receptors

As defined earlier in Section 1, this AQIA study area will be bounded by 1 km around the two most impacted intersections to account for the change in traffic patterns due to the Project. The sensitive receptors included in this assessment will be restricted to within 300 m of the road segments modelled. These limits were considered applicable, as predicted local air quality effects associated with roadways tend to drop off significantly at downwind distances greater than 300 m. For the purposes of this AQIA, a sensitive receptor is defined by the MTO (2012) as a residential dwelling, while critical receptors are defined as a:

- Childcare facility;
- Health care facility;
- Senior citizen's residence;
- Long-term care facility; and
- School.

Each sensitive and critical receptor location was selected to represent people who will experience the greatest effect after the implementation of the Project and to provide a global view of the contaminants' dispersion around the Project's location. As shown in Figure 2-3 and presented in Table 2-5, 16 critical and three sensitive receptors were identified. These are mostly located where people spend an extended period of time within the vicinity of the Project, such as residential dwellings, schools, health clinic and daycare center. The location at which a contaminant first contacts a sensitive receptor following emission is the Point of Impingement (POI).

Sensitive and critical receptors for the dispersion model were identified using aerial imagery from Google Earth's database.

Sensitive points of reception were considered as "flagpole" receptors at variable heights from the ground. For one storey buildings and green space (i.e., yards, patios, school yards, etc.) a

receptor was placed 1.5 m above the ground surface according to MXs Environmental Guide: Recommended Approach for Assessing and Mitigating Air Quality Impacts and Greenhouse Gas Emissions of Metrolinx Public Transit Projects (Metrolinx, 2015). For multi storey buildings, the 1.5 m flagpole receptor was utilized, as well as an additional reception point vertically every 3 m for each additional storey. Childcare facilities and schools do not have reduced receptor heights to represent children as the differences in air concentrations from AERMOD for heights of 0.5 m to 1.5 m are not significant, nor is there any guidance published by the MECP.

Table 2-5: Sensitive and Critical Receptors in ECWE Stations Study Area

Receptor ID	Address	Receptor Description	Height Above Ground (m)	Distance from Eglinton Avenue West (m)	Side of Track
Critical Receptor					
R1	15 Denfield Street, Etobicoke, ON M9R 3H2	School	1.5	275	North
R2	10 Denfield Street, Etobicoke, ON M9R 3H1	School	1.5	240	North
R3	59 Chemin Clement, Etobicoke, ON M9R 1Y5	School	1.5	330	North
R4	50 Winterton Drive, Etobicoke, ON M9B 3G7	School	1.5	140	South
R5	70 Princess Anne Crescent, Etobicoke, ON M9A 2P7	School	1.5	700	South
R6	1738 Islington Avenue, Etobicoke, ON M9A 3N2	School	1.5	150	South
R7	65 Hartsdale Drive, Toronto, ON M9R 2S8	School	1.5	505	North
R8	315 The Westway, Etobicoke, ON M9R 1H1	School	1.5	865	North
R9	111 Sun Row Drive, Etobicoke, ON M9P 3J3	School	1.5	580	North
R10	65 Tromley Drive, Etobicoke, ON M9B 5Y7	School	1.5	385	South
R11	130 Lloyd Manor Road, Etobicoke, ON	School	1.5	875	South

Receptor ID	Address	Receptor Description	Height Above Ground (m)	Distance from Eglinton Avenue West (m)	Side of Track
	M9B 5K1				
R12	204-201 Lloyd Manor Road, Toronto, ON M9B 6H6	Health Clinic	1.5	85	South
R13	250 Wincott Drive, Toronto, ON M9R 2R5	Health Clinic	1.5	115	North
R14	30 Earldown Drive, Etobicoke, ON M9R 2L3	Daycare center	1.5	290	North
R15	25 Poynter Drive, Etobicoke, ON M9R 1K8	Daycare center	1.5	1350	North
R16	4005 Eglinton Avenue West, Etobicoke, ON M9A 5H3	Retirement home	1.5	50	South
Sensitive Receptors					
R17	99 Dalegrove Crescent, Etobicoke, ON M9B 6B1	1-storey house	1.5	75	South
R18	181 Princess Anne Crescent, Etobicoke, ON M9A 2R8	2-storey house	1.5	25	South
R19	59 Hamptonbrook Drive, Etobicoke, ON M9P 1A2	1-storey house	1.5	50	North

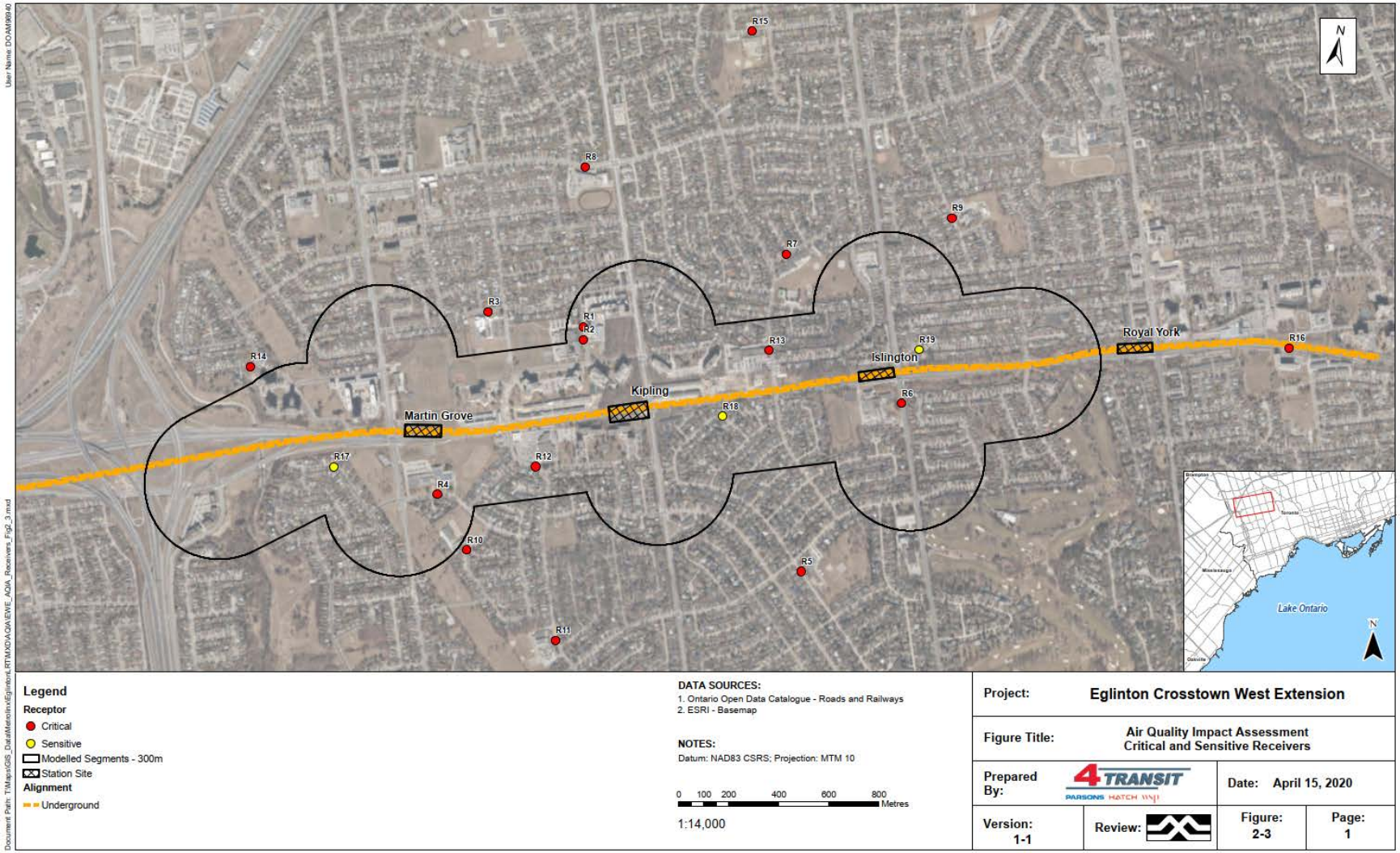

Figure 2-3: Location of Sensitive and Critical Receptors

2.10 Emission Sources

The following emission sources were included in the AQIA for this Project:

- Vehicles, buses and heavy-vehicles emissions on the roads affected by the ECWE (i.e., changes in traffic patterns/volumes due to the completion of the Project) for both scenarios modelled:
  - Existing Case scenario (2019): Existing traffic data; and
  - Future Case scenario (2031): Projected traffic data.

The change in traffic patterns associated with the Project's completion demonstrates an increase in traffic volume along the Eglinton West corridor, particularly between Martin Grove Road and Islington Avenue. The traffic volume models shows that for some of these intersections, a difference of 30% can be observed between the Existing and Future Case scenarios. Further details and descriptions of those traffic patterns changes, between the Existing and Future Case scenarios, are presented in the Traffic Impact Assessment study.

The roads will be represented by line-volume sources to represent emissions generated by the vehicles passing on these road segments. Details regarding the parameters used in the assessment for the above sources are provided in Section 2.12.

Furthermore, the future scenario assumed that the train engines will be fully electric. Therefore, US EPA emission standards do not apply since there are no direct emissions associated with the trains' electric engines. Trains' impact on local and regional air quality is thus considered negligible.

2.11 Emission Factors

2.11.1 Passenger Vehicles, Buses and Heavy-Vehicles

US EPA MOVES was used to determine the EFs for passenger vehicles travelling on roads modelled. The same procedure was used to calculate the EFs from buses and heavy-vehicles travelling on roads around the ECWE Stations. See EFs in Appendix B.

The MOVES model has been used in transportation projects in Ontario and it is the MECP recommended model for these assessments. MOVES is a state of the science emission modelling system that estimates emissions for mobile sources at the national, county, and project level for criteria pollutants and air toxics. MOVES provides estimates of existing and future emission rates from motor vehicles based on a variety of factors such as local meteorology and vehicle fleet composition. For this study, MOVES was used to estimate vehicle emissions based on vehicle type, model year, and vehicle speed. Table 2-6 specifies the major inputs into MOVES.

Table 2-6: MOVES Input Parameters

Parameter	Input
Scale and Geographical Bounds	Custom County Domain
Pollutants	$PM_{2.5}$, CO, NO_x, Acetaldehyde, Formaldehyde, 1,3-Butadiene, Benzene, Acrolein, and Benzo(a)pyrene
Year	2019, 2031
Meteorology	Temperature and Relative Humidity Values were obtained from the Lester B. Pearson International Airport Station (1981-2010).
Source Use Types and Fuel Combinations	Passenger Vehicles (Gasoline) Heavy vehicles (Diesel) Buses (Diesel)
Road Type	Urban Unrestricted Access
Vehicle Age Distribution	MOVES defaults based on years selected
Operation Mode of Distribution	Passenger Vehicles: Moderate Speed Coasting; VSP< 0; 25 mph<=Speed<50 mph Heavy vehicles: Cruise/Acceleration; 12<=VSP<18; 25 mph<=Speed<50 mph Buses: Cruise/Acceleration; 12<=VSP<18; 25 mph<=Speed<50 mph

All EFs were computed for two months: January and July. The highest value was retained and used in the air dispersion model. Associated hourly meteorological data (temperature and relative humidity) for those months were collected from the Lester B. Pearson International Airport Station from 1981 to 2010. January and July were used to consider two extremes as they resulted in high-end estimates of EFs for most contaminants due to reduced operating efficiency in cold/hot weather. For some contaminants, such as VOCs, the EFs are normally higher during warmer conditions due to a lower evaporative component at cold temperatures.

Emission sources included in this air quality assessment are essentially emissions from vehicles (passenger cars), buses and heavy vehicles on roads around the ECWE Stations.

The emission rates were calculated in custom county domain scale and EFs were generated for each vehicle type. The MOVES model has the capability to provide EFs for a specific speed range. The EFs used for all roads modelled were generated at a speed of 50 km/h. This is a conservative assumption, as not all vehicles travel with that speed at all time.

A summary of MOVES EFs for passenger vehicles, buses and heavy-vehicles used for both of the modelled scenarios are presented in Table 2-7 and Table 2-8.

Table 2-7: MOVES Output Emissions Factors for Existing Case Scenario (2019)

Contaminant	60 km/h (g/VKT)		
	Passenger Vehicle	Bus	Heavy-vehicle
$PM_{2.5}$[1]	5.35E-06	4.43E-04	4.29E-04
Nitrogen Oxides (NO_x)	4.90E-05	1.81E-02	1.29E-02
Carbon Monoxide (CO)	7.38E-04	4.59E-03	2.26E-03
Acrolein	8.73E-09	2.71E-06	2.93E-06
Benzene	4.30E-07	3.23E-06	3.49E-06
1,3-Butadiene	6.42E-08	1.13E-06	1.22E-06
Acetaldehyde	1.75E-07	1.49E-05	1.60E-05
Formaldehyde	1.87E-07	3.39E-05	3.66E-05
Benzo(a)pyrene	2.86E-09	3.55E-09	5.64E-09

Notes: [1]Includes breakwear and tirecar.

Table 2-8: MOVES Output Emissions Factors for Future Case Scenario (2031)

Contaminant	60 km/h (g/VKT)		
	Passenger Vehicle	Bus	Heavy vehicle
$PM_{2.5}$[1]	1.17E-06	8.33E-05	4.76E-05
Nitrogen Oxides (NO_x)	4.05E-06	4.23E-03	2.69E-03
Carbon Monoxide (CO)	2.87E-04	7.68E-04	4.50E-04
Acrolein	9.79E-10	6.39E-07	4.94E-07
Benzene	5.88E-08	7.86E-07	6.15E-07
1,3-Butadiene	0.00E+00	1.78E-07	1.14E-07
Acetaldehyde	9.10E-09	3.88E-06	3.10E-06
Formaldehyde	2.04E-08	1.04E-05	8.69E-06
Benzo(a)pyrene	6.25E-10	4.84E-10	4.53E-10

Notes: [1]Includes breakwear and tirecar.

2.12 Source Parameters for Dispersion Modelling

Dispersion models are used to predict how a contaminant concentration is diluted as it moves through the atmosphere. The concentration of a contaminant at a specific receptor is a function of a variety of parameters, including meteorological conditions in the vicinity of the source, contaminant emission rate(s), physical characteristics of the source and terrain in the vicinity of both the source and receptor. Atmospheric dispersion models use a combination of data inputs for these parameters in conjunction with mathematical algorithms that describe both the temporal and spatial variation of contaminants as they move away from the source (MECP, 2017). Some of these model inputs were discussed in Section 2.10. Selecting emission source parameters for the AERMOD model plays a very essential role in modelling. The dispersion modelling parameters for each of the emission sources used in this assessment are discussed in Table 2-9.

Table 2-9: Access Roads Source Parameters

Parameters	Unit	Value	Notes
Configuration	-	Adjacent	Adjacent Volume Sources
Plume Height	m	2.55	Vehicle Height x 1.7
Plume Width, one lane	m	7.8	Vehicle width + 6 m
Plume Width, two lanes	m	16	2 x (Vehicle width + 6 m)
Release Height	m	1.28	0.5 x Height of plume

2.13 Assumptions

A few assumptions were required to complete this AQIA. The approach employed to determine these assumptions were always leaning towards conservatism. Hence, the impacts of the ECWE on the air quality in the vicinity of the project are not underestimated. Here is a brief description of the assumptions made for the completion of this assessment.

Use of a 2% growth factor for the projection of Off-Peak traffic data:
Considering the traffic analysis only considered AM and PM peaks, there was no Off-Peak data projections made by the traffic team. However, the City of Toronto provided the existing traffic data for the Off-Peak hour periods, which is a required input to the air dispersion model. The projection of these existing numbers for the future case scenario (2031) were also required, but the applicable growth factor to do so were not determined (as the traffic assessment team is not required to do Off-Peak data projections). It was determined that the best practice, for coherence purposes, would be to use the same growth factor as the ones used in the noise and vibration study. The largest growth factor used in their assignment was 2%, which is the growth factor applied to the existing Off-Peak dataset.

Off-Peak traffic data used for the nighttime period:
As nighttime traffic data was not available, an assumption needed to be made to complete the variable emissions dataset in the air dispersion model. Consequently, the decision to use Off-Peak traffic data as the Nighttime traffic data was made. This is a conservative approach as there are more cars travelling through the streets of Toronto during the Off-Peak periods than during nighttime. As an example, the traffic volume is expected to be much more important during lunch hour than in the middle of the night. Therefore, this assumption ensures that the considered traffic volume at nighttime is greater than the actual traffic volume encountered in the study area.

Heavy-vehicles percentage increase (1%) during nighttime vs. Off-Peak:
Considering there wasn't any nighttime traffic data available, the percentage of heavy-vehicles for that specific period was also not available. Considering the previous assumption, it was possible to use the same percentage of heavy-vehicles as the one used for the Off-Peak hours period. However, this would not be a conservative approach as the proportion of on-road heavy-vehicles tend to increase during nighttime. Consequently, the percentage of heavy-vehicles for the Off-Peak hours was increased by 1% to account for that logic and generate the heavy-vehicle percentages for the nighttime period. This is a conservative approach as heavy-vehicles have larger EFs than light-duty vehicles.

No buses travelling on roads modelled during nighttime:
Buses travelling on roads modelled during Off-peak period were removed for the nighttime period since there are no buses travelling on roads at night.

No trains emission source considered:
As mentioned in Section 2.10, the future scenario assumed that the train engines will be fully electric. Consequently, there are no direct emissions associated with the trains' operation and, by the same token, the US EPA emission standards do not apply.

Cumulative contaminant concentration for Existing vs. Future case scenario:
The cumulative contaminant concentration was calculated by summing the 90th percentile background concentration and the modelled concentration at each sensitive and critical receptor. It is important to note that the future scenario year will use the known ambient background concentration data for the existing scenario (2019). Ambient data is unknown for the future scenario. Due to this unknown nature, future data will be assumed to be the same as current ambient trends.

3. Results

3.1 Air Dispersion Modelling Results

The following sections present the various tables summarizing the results for all pollutants modelled for both scenarios. The results were evaluated at all sensitive and critical receptors, as summarized in Appendix C of this report, but only the most affected receptor is presented for each contaminant in this Section. It is to be noted that, depending on the averaging period, the most affected sensitive and critical receptors may vary from one another. The receptor is the POI while the resulting impact is the Project's maximum contribution to pollutant concentration at the receptor.

The cumulative contaminant concentration was calculated by summing the 90th percentile background concentration and the modelled concentration at each sensitive and critical receptor.

All the dispersion models completed provided hourly results. Where the criterion was on an hourly basis, the maximum hourly result was reported. If the criterion was on a daily (24 hour) basis, the maximum 24 hour concentration result was reported. The annual results were the average of the hourly values for the year. The results were separated by contaminant and the following parameters are presented in the results tables:

- Receptor ID;
- Address (POI);
- Averaging Period;
- Scenario;

- The 90th percentile background value (from the MECP and NAPS air quality monitoring stations). This value is summed with the modelled concentration to result in the maximum cumulative predicted concentration;
- Criterion (applicable limit value);
- The maximum concentration predicted;
- The median concentration predicted;
- The 90th percentile concentration predicted;
- The maximum cumulative concentration predicted for the most impacted receptor;
- The median cumulative concentration predicted;
- The 90th percentile cumulative concentration predicted;
- The maximum cumulative percentage (%) of criterion; and
- The 90th percentile cumulative percentage (%) of criterion.

It is to be noted that emission rates for passenger vehicles, buses and heavy vehicles tend to decrease over time as new pollution control technologies are introduced in the transportation sector. As these types of vehicles are the only sources being modelled in this assessment and that the traffic growth between 2019 and 2031 is not very significant, the overall contaminant concentrations in the vicinity of Project decreased. Hence, the Project's impact on air quality is predicted to be negligible to slightly positive (decrease in ambient air pollutant concentrations).

Furthermore, it is important to consider that the model presents the results for the most impacted sectors of the ECWE project. Therefore, the modelled segments will experience the worst air quality impact due to the highest traffic growth between 2019 and 2031. This conclusion was reached because there is no bus stations and PPUDOs planned in the Project, it's an electrical system running underground and that the modelled segments will experience the worst air quality impact due to the worst combination of high traffic volumes, largest increase in traffic, and the proximity to residential areas or critical receptors between both modelling years (2019 and 2031). Nevertheless, the assumptions used to make this determination are presented in a more detailed fashion in Section 1.4. Consequently, it is assumed that the Project's impact for the following road segments will be less than the ones presented in this AQIA:

- Mount Dennis to west of Royal York; and
- West of Martin Grove (Renforth was not considered as it is not the most impacted sector in terms of traffic growth).

Additionally, if mitigation measures needed to be taken for these segments, the ones presented in Subsection 4.2.2 would be the best applicable options.

3.1.1 Carbon Monoxide

Values predicted for CO are shown in Table 3-1 for the hourly and eight hour averaging periods. The most impacted receptors, R18, is the same for both scenarios. The 90th percentile background concentrations at the MOECC station were 449.7 µg/m^3 for the hourly criterion and 436.2 µg/m^3 for the eight hour criterion. They respectively represent 1.2% and 2.8% of their applicable limit values.

The most impacted receptor for the Existing scenario is R18 with a maximum cumulative concentration of 931 µg/m^3 for the hourly averaging period and 642 µg/m^3 for the eight hour averaging period. They respectively represent 2.6% and 4.1% of their applicable limit values.

For the Future case scenario, the most impacted receptor, R18, is the same as the Existing scenario. The maximum cumulative concentration modelled is 633 µg/m^3 for the hourly averaging period and 516 µg/m^3 for the eight hour averaging period. They respectively represent 1.8% and 3.3% of their applicable limit values. Therefore, the Project's completion will not have any significant impact on air quality in the vicinity of the ECWE.

Table 3-1: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - Carbon Monoxide

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Existing	449.7	36200.0	931	469	516	2.57%	1.43%
		1-HR	Future	449.7	36200.0	633	457	476	1.75%	1.32%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	8-HR	Existing	436.2	15700.0	642	458	505	4.09%	3.22%
		8-HR	Future	436.2	15700.0	516	445	464	3.29%	2.95%

3.1.2 Nitrogen Dioxide

Values predicted for NO_2 are shown in Table 3-2 for the hourly, 24 hour (daily) and annual averaging periods. The most impacted receptors, R18, is the same for both scenarios. The 90th percentile background at the MOECC station was 62 µg/m^3 for the hourly averaging period, 50.5 µg/m^3 for the 24 hour averaging period and 33 µg/m^3 for the annual averaging period. They respectively represent 15.5%, 25.25% and 55% of their applicable limit values.

For the Existing scenario, the maximum modelled concentration results with background levels are 214 µg/m^3, 117 µg/m^3 and 61 µg/m^3 for the hourly, daily and annual averaging periods, respectively. The maximum projected results represent respectively 54%, 59% and 102% of the hourly, daily and annual applicable limit values for NO_2. The exceedance for the annual period can be explained by the important background concentration already present in the vicinity of the project.

For the Future case scenario, projected concentrations including background levels are 101 µg/m^3, 67 µg/m^3 and 40 µg/m^3, respectively, for the hourly, 24 hour and annual maximums, representing 25%, 34% and 67% of the applicable limit values. Consequently, the Project will not influence NO_2 concentration in the ambient air in the vicinity of the Project, as the concentrations should decrease over time and be much lower than their applicable limit values.

It is also important to consider that the background levels utilized include, and double count, some of the traffic modelled. The Existing case scenario (2019) models the current situation without any station or traffic pattern change from the ECWE project. The vehicles modelled for this scenario are thus already included in the background concentrations used since they currently contribute to ambient air pollutants concentrations.

Table 3-2: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - Nitrogen Dioxide

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Existing	62.0	400	214[a]	79	120	53.5%[a]	30.0%
		1-HR	Future	62.0	400	101[a]	66	77	25.3%[a]	19.2%
		1-HR (CAAQS 2025)	Future	62.0	83	101[a]	66	77	121.7%[a]	92.8%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	50.5	200	117[a]	76	98	58.6%[a]	48.8%
		24-HR	Future	50.5	200	68[a]	57	63	33.8%[a]	31.4%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Existing	33.0	60	61	N/A	N/A	101.5%	N/A
		Annual	Future	33.0	60	40	N/A	N/A	67.0%	N/A
		Annual	Future	33.0	23	40	N/A	N/A	183%	N/A

[a] Maximum cumulative concentration for 1-hr and 24-hr averaging periods for NO_x were taken as the 98th percentile of modelled concentrations.

3.1.3 Fine Particulate Matter ($PM_{2.5}$)

Values predicted for $PM_{2.5}$ are shown in Table 3-3 for the 24 hour (daily) and annual averaging periods. As noted in Table 3-3, the most impacted receptors, R18, is the same for both scenarios. The 90th percentile background levels at the MOECC station were 14.2 µg/m^3 for the 24 hour and 8.1 µg/m^3 for the annual averaging period. They respectively represent 52.6% and 92% of their criterions. Therefore, the background is almost already exceeding the criterion for $PM_{2.5}$ in the study area. Hence, exceedances for that specific averaging period were expected.

The maximum modelled concentrations including background levels for the Existing scenario are 17.5 µg/m^3 and 9.5 µg/m^3 for the daily and annual averaging periods, respectively. These values are slightly higher than the existing background levels and represent 70% and 115% of the daily and annual averaging periods, respectively.

For the Future case scenario, the 24 hour maximum of 16.8 µg/m^3 represents a small decrease when compared to the Existing scenario. The annual average concentration is estimated at 9.2 µg/m^3, which is slightly lower than the Existing scenario values. Although the annual concentrations were found to be slightly above the criterion, the Project's effect on air quality will still be negligible in the study area.

It is important to consider that the background levels utilized include, and double count, some of the traffic modelled. The Existing case scenario (2019) models the current situation without any station or traffic pattern change from the ECWE project. The vehicles modelled for this scenario are thus already included in the background concentrations used since they currently contribute to ambient air pollutants concentrations.

Table 3-3: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - $PM_{2.5}$

Receptor ID	Address	Averaging Period	Scenario	Background Concentration ($\mu g/m^3$)	Criterion ($\mu g/m^3$)	Maximum Cumulative Concentration ($\mu g/m^3$)	Median Cumulative Concentration ($\mu g/m^3$)	90th Percentile Cumulative Concentration ($\mu g/m^3$)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	14.2	27.0	17.5[a]	15.5	16.6	64.9%[a]	61.4%
		24-HR	Future	14.2	27.0	16.8[a]	15.2	16.0	62.3%[a]	59.4%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Existing	8.1	8.8	9.5	N/A	N/A	108.1%	N/A
		Annual	Future	8.1	8.8	9.2	N/A	N/A	104.5%	N/A

[a] Maximum cumulative concentration for 24-hr averaging period for $PM_{2.5}$ were taken as the 98th percentile of modelled concentrations.

3.1.4 Benzene

Values predicted by the model for benzene are shown in Table 3-4 for the 24 hour (daily) and annual averaging periods. The 90th percentile backgrounds at the MOECC station were 0.7 µg/m^3 for the 24 hour and 0.4 µg/m^3 for the annual averaging periods. They respectively represent 30% and 89% of their criterions. It is to be noted that the annual background is almost already exceeding the annual applicable limit value.

The maximum cumulative concentrations for the Existing case scenario is 0.77 µg/m^3 for the daily average period, which is slightly superior to the background (ambient) levels. For the annual average concentration, the Existing case scenario result is estimated to be 0.42 µg/m^3, including background levels. This result is slightly under benzene saturation with 93% of the applicable limit value for the annual averaging period. It is important to note that the annual background level already represents 89% of the applicable annual limit values. Therefore, the existing conditions considered in this assessment only have a small contribution to the existing benzene levels in the ambient air.

For the Future case scenario, the modelling results are predicting a minor air quality increase in the study area, specifically for the annual averaging period. In fact, the Future case scenario maximum cumulative annual average concentration result is estimated to be 0.40 µg/m^3, including background levels. This represents 89.8% of the applicable limit value for the annual averaging period, which is about than 4% less than the Existing case scenario. The daily predicted maximum concentration is 0.71 µg/m^3, which represents 31% of the applicable limit value for this specific averaging period. Therefore, for Benzene, the project completion will not have significant impact on air quality in the vicinity of the study area.

Table 3-4: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - Benzene

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	0.7	2.3	0.77	0.72	0.73	33.5%	31.9%
		24-HR	Future	0.7	2.3	0.71	0.70	0.71	31.0%	30.7%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Existing	0.4	0.45	0.42	N/A	N/A	93.4%	N/A
		Annual	Future	0.4	0.45	0.40	N/A	N/A	89.8%	N/A

3.1.5 1,3-Butadiene

Values predicted with the dispersion model for 1,3-Butadiene are shown in Table 3-5 for the 24 hour (daily) and annual averaging periods. The 90th percentile backgrounds at the MOECC station were 0.046 µg/m^3 for the 24 hour averaging period and 0.026 µg/m^3 for the annual averaging period. They respectively represent 0.5% and 1.5% of their criteria.

The maximum modelled concentrations for the Existing case scenario are 0.06 µg/m^3 and 0.030 µg/m^3 for the daily and annual averaging periods, respectively. They respectively represent 0.6% and 1.5% of their criteria.

For the Future case scenario, the modelling results are slightly lower than the results modelled for the Existing scenario. As shown in Table 3-5, the 24 hour maximum is decreasing for the Future case scenario with a predicted cumulative concentration of 0.05 µg/m^3, representing 0.5% of the criterion including the background level. The future annual average concentration result is expected to decrease by 0.004 µg/m^3 in comparison with the Existing scenario, which represents less than 1.3% of the criterion. Consequently, 1,3-Butadiene is only present in small concentrations in the atmosphere for both the Existing and Future scenarios and is therefore not considered significant.

Table 3-5: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - 1,3-Butadiene

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	0.046	10	0.06	0.05	0.05	0.6%	0.5%
		24-HR	Future	0.046	10	0.05	0.05	0.05	0.5%	0.5%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Existing	0.026	2	0.030	N/A	N/A	1.5%	N/A
		Annual	Future	0.026	2	0.026	N/A	N/A	1.3%	N/A

3.1.6 Formaldehyde

Values predicted for formaldehyde are shown in Table 3-6 for the 24 hour (daily) averaging period. The 90th percentile background at the MOECC station was 4.2 µg/m^3 for the 24 hour averaging period, which represents 6.5% of the applicable limit value.

The maximum cumulative modelled concentration for the Existing case scenario is 4.5 µg/m^3 for the 24 hour (daily) averaging period. The daily concentration represents only 6.9% of the criterion, which is slightly higher than its corresponding background value.

For the Future case scenario, the modelling result is also similar to the background level. The 24 hour maximum cumulative concentration for the Future case scenario is 4.3 µg/m^3, representing 6.6% of the criterion. Consequently, in terms of formaldehyde concentrations, the project completion will not have a significant impact on the air quality in the vicinity of the project.

Table 3-6: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - Formaldehyde

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	4.2	65.0	4.5	4.3	4.3	6.9%	6.7%
		24-HR	Future	4.2	65.0	4.3	4.2	4.2	6.6%	6.5%

3.1.7 Acetaldehyde

Values predicted for acetaldehyde are shown in Table 3-7 for the 30 minute and 24 hour (daily) averaging periods. The 90th percentile background at the MOECC station was 1.55 µg/m^3 for the 24 hour averaging period and no background was calculated for the half-hour (30 minute) averaging period as data was only available on a daily basis. The 24 hour background represents 0.31% of the criterion.

The modelling results obtained for all scenarios demonstrate that acetaldehyde concentrations in the atmosphere are very low compared to the applicable limit values. The maximum cumulative concentration for the 30 minute averaging period of the Existing scenario is 0.64 µg/m^3, representing only 0.13% of the criterion. The 24 hour maximum cumulative concentration for the Existing scenario is 1.67 µg/m^3, which represents only 0.33% of the applicable criterion.

For the Future case scenario, the modelling results remain similar to the background levels and are contributing to less than 0.32% of the applicable limit values. Therefore, the Project is not expected to have significant impact on acetaldehyde concentrations in the ambient air of the study area.

Table 3-7: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - Acetaldehyde

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	30-MINS	Existing	0	500.0	0.64	0.03	0.09	0.13%	0.02%
		30-MINS	Future	0	500.0	0.16	0.01	0.02	0.03%	0.004%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	1.55	500.0	1.67	1.58	1.61	0.33%	0.32%
		24-HR	Future	1.55	500.0	1.58	1.56	1.56	0.32%	0.31%

3.1.8 Acrolein

Values predicted for acrolein are shown in Table 3-8 for the 1 hour (hourly) and 24 hour (daily) averaging periods. The 90th percentile background at the MOECC station was 0.2 µg/m^3 for the 24 hour averaging period and no background concentration was calculated for the hourly criterion because data were only available on a daily basis. The background represents 50% of the daily averaging period.

The maximum modelled concentrations, including the background levels, for the Existing case scenario is 0.22 µg/m^3 for the daily averaging periods. The cumulative daily result is contributing to 55% of the applicable limit value, which is slightly higher than the background value. For the hourly result, the maximum modelled concentration is 0.09 µg/m^3, which represents only 1.9% of the applicable limit value. The discrepancy in percentage between the hourly and daily averaging periods can be explained by the fact that no background concentrations were added to the hourly concentration due to lack of data.

As shown in Table 3-8, for the Future case scenario, the hourly maximum is decreasing with a predicted concentration of 0.02 µg/m^3, representing 0.5% of the applicable limit value including the background levels. The future maximum daily concentration result is estimated to be slightly greater than the background level with a concentration of 0.20 µg/m^3, which represents 51% of the applicable limit value. Therefore, the Project's impact to the ambient air quality is considered negligible.

Table 3-8: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - Acrolein

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Existing	0	4.5	0.09	0.004	0.01	1.9%	0.3%
		1-HR	Future	0	4.5	0.02	0.001	0.003	0.5%	0.1%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	0.2	0.4	0.22	0.21	0.21	55.0%	52.5%
		24-HR	Future	0.2	0.4	0.20	0.20	0.20	51.1%	50.5%

3.1.9 Benzo(a)pyrene (B(a)P)

Values predicted for B(a)P are shown in Table 3-9 for the 24 hour (daily) and annual averaging periods. The 90th percentile background at the MOECC station was 1.2E-04 µg/m^3 for the 24 hour averaging period and 7.7E-05 µg/m^3 for the annual averaging period. The background represents 240% of the daily applicable limit value and 770% of the annual applicable limit value. Therefore, the background concentrations already significantly exceed the criterion for B(a)P in the study area.

For the Existing case scenario, the daily maximum modelled concentration is 4.7E-04 µg/m^3. For the Future case scenario, the daily maximum modelled concentration is 2.1E-04 µg/m^3, representing 420% of the criterion and a significant decrease in comparison with the existing air quality conditions. There is a significant decrease in the emission rates from vehicles along the years due to new emission control technologies. Furthermore, the increase in traffic over the years is not significant compared to the decrease in B(a)P emission rates.

The existing case annual average concentration is estimated to be 1.8E-4 µg/m^3, representing 1770% of the criterion, including background levels. For the Future case scenario, the annual average cumulative concentration is predicted to be 1.1E-4 µg/m^3, which is equivalent to 1070% of the criterion.

Although the predicted concentration result contribution is high for both the Existing and Future case scenario, it is mainly due to the prevailing background levels in the Project area and the low criterion value. Comparing model results from the Existing case with the Future case, a significant decrease in ambient B(a)P concentration is observed. Once again, this observation is a consequence of lower vehicle emission rates over the years due to new emission control technologies. Therefore, implementation of the ECWE Project will not increase ambient B(a)P concentration levels in the vicinity of the Project. In fact, a few years after the Project's completion (2031), the daily and annual B(a)P concentrations should decrease.

Table 3-9: Summary of Model Predicted Results for the Most Impacted Sensitive Receptor - B(a)P

Receptor ID	Address	Averaging Period	Scenario	Background Concentration (µg/m^3)	Criterion (µg/m^3)	Maximum Cumulative Concentration (µg/m^3)	Median Cumulative Concentration (µg/m^3)	90th Percentile Cumulative Concentration (µg/m^3)	Maximum Cumulative % of Criterion (%)	90th Percentile Cumulative % of Criterion (%)
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Existing	1.2E-04	5.0E-05	4.7E-04	2.1E-04	2.9E-04	940%	581%
		24-HR	Future	1.2E-04	5.0E-05	2.1E-04	1.4E-04	1.6E-04	420%	327%
R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Existing	7.7E-05	1.0E-05	1.8E-04	N/A	N/A	1770%	N/A
		Annual	Future	7.7E-05	1.0E-05	1.1E-04	N/A	N/A	1070%	N/A

4. Effects Assessment Mitigation and Monitoring

The AQIA considered how the Project components could potentially affect air quality in the vicinity of the ECWE. It documents the potential effects that may occur due to the change in traffic pattern along the Eglinton West corridor. This section also documents the mitigation measures and monitoring activities (as applicable) identified to minimize the predicted effects on air quality.

4.1 Construction

4.1.1 Potential Effects

The construction activities associated with the Project consist of the construction of new underground tunnels, structures, platforms, walkways and landscaped areas. Therefore, air emissions associated with Project construction will typically include:

- Fugitive dust emissions (TSP, inhalable particulate matter (PM_{10}) and $PM_{2.5}$) resulting from:
  - Clearing and grubbing of the Project site;
  - Soil excavation and filling activities required to facilitate the site layout for the new stations;
  - Demolition of existing infrastructure necessary to accommodate the new station;
  - Cutting of existing pavement;
  - Stockpiling of soil and other friable construction materials;
  - Granular (i.e., aggregate) material loading and unloading activities;
  - Transport of soils and other friable construction materials to/from the Project site via dump trucks;
  - Movement of heavy and light vehicles on paved and unpaved roads; and
  - Tunnel Boring Machine (TBM) openings and soil tipping area.
- Emissions resulting from the use of combustion engines associated within mobile and stationary construction equipment and machinery on-site.

In addition to the above, construction activities will result in temporary traffic disruption and detours. This can lead to increased traffic congestion, thereby increasing motor vehicle exhaust emissions on nearby roadways, which could result in elevated localized pollutant levels (or concentrations). However, compared with emissions from other motor vehicle sources in the study area, emissions from construction equipment and machinery are temporary and generally insignificant with respect to compliance with Provincial and Federal ambient air quality standards.

4.1.2 Mitigation Measures

Best Management Practices (BMPs) will be implemented to mitigate potential air quality effects associated with the construction activities, which will be included in an Air Quality Management Plan (AQMP). Prior to commencement of construction, the Constructor will develop and submit a detailed Construction AQMP to the Contracting Authority. The AQMP will:

- Demonstrate compliance with the specific air quality criteria and limits in the Metrolinx Environmental Guide for Air Quality and Greenhouse Gas Emissions Assessment (2019);
- Define the Project's air quality impact zone and identify all sensitive receptors within this area;
- Assess the baseline air quality by continuous measurement of local ambient concentrations of $PM_{2.5}$ and PM_{10} over a minimum period of one week, where large local sources of pollution, such as highways, directly affect the Zone of Influence (ZOI) of the Project;
- Estimate and document the predictable worst-case air quality impacts of the Project on sensitive receptors within the air quality impact zone, develop appropriate mitigation measures, demonstrate their effectiveness, and commit to their timely implementation;
- Monitor continuously any contaminant, in addition to $PM_{2.5}$ and PM_{10}, which is predicted to exceed its relevant air quality exposure criterion during any phase of the Project and at any receptor; and
- Include explicit commitment to the implementation of all applicable best practices identified in Environment Canada's Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (2005).

This plan will be implemented for the duration of the construction phase, and will address the areas of vehicle and construction equipment exhaust, potential traffic disruption and congestion, fugitive dust, and odour. Potential mitigation measures for these areas are:

- Implementation of dust suppression measures (i.e., application of water wherever appropriate, or the use of approved non-chloride chemical dust suppressants, where the application of water is not suitable) as needed to control fugitive dust emissions in accordance with the (Cheminfo Services Inc., 2005) publication "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities";
- Stockpiling of soil and other friable materials in locations that are less exposed to wind (i.e., protected from the wind by suitable barriers or wind fences/screens) and far from sensitive receptors;
- Seeding, paving, covering, wetting, or otherwise treating disturbed soil surfaces as soon as reasonably possible after disturbance. Permanently stabilizing exposed soil areas with non-erodible material (i.e., stone or vegetation) as soon as reasonably possible after construction in the affected area is complete;

- Modifying work schedules when weather conditions could lead to adverse impacts (i.e., very dry soil and high winds);
- Removing all loose or unsecured debris or materials from empty trucks prior to leaving the Project site;
- Covering all truckloads of dust-producing material, including use of dump trucks with retractable covers for the transport of soils and other friable materials;
- Minimizing the number of loading and unloading of friable materials;
- Minimizing drop heights, using enclosed chutes, and covering debris bins used for deconstruction of affected structures;
- Reducing unnecessary traffic and implementation of speed limits on any unpaved surfaces;
- Vacuum sweeping or watering of all paved surfaces and roadways on which equipment and truck traffic enter and leave the construction areas;
- Washing of equipment and machinery, and use of wheel washes or mud mats where practical at construction site exits to limit the migration of soil and dust off-site;
- Ensuring that all construction vehicles, machinery, and equipment is equipped with current emission controls, which are in a state of good repair, that equipment is properly and regularly maintained, and compliant with applicable federal and provincial regulations for off-road diesel engines;
- Site supervisors during the construction phase should monitor the site for wind direction and weather conditions to ensure that high-impact activities be reduced when the wind is blowing consistently towards nearby sensitive receptors. The site supervisor should also monitor for visible fugitive dust and take action to determine the root-cause in order to counteract this. Specific details to this effect should be included in the construction site's Dust Management Plan (DMP);
- Use fuel with ultra-low sulphur content; and
- A Communications Protocol and a Complaints Protocol will be developed in accordance with the Future Project Agreement.

4.1.3 Monitoring Requirements

The Future Project Agreement shall include the development and implementation of Weekly Air Quality Monitoring Plans, submitted to the Contracting Authority that document how air quality monitoring has been conducted and compliance assessed to effectively prevent unacceptable rates of air emissions in accordance with the following guidelines:

- The construction related air contaminants of primary concern are in the form of particulate matter, with the principal construction related fractions of $PM_{2.5}$ and PM_{10} - particulate matter of less than 2.5 and 10 micron in diameter, respectively. Other contaminants of concern include crystalline silica and oxides of nitrogen. The list of

contaminants will be expanded with any and all air pollutants that may be produced as a result of the work;

- The criteria for $PM_{2.5}$, PM_{10} and crystalline silica are provided in Metrolinx's Environmental Guide for Air Quality and Greenhouse Gas Emissions Assessment (2019). The applicable criteria for all other air contaminants of concern are to be found in the various schedules of O. Reg. 419/05; and
- Siting of the monitors should generally follow the guidelines provided in the MECP Operations Manual for Air Quality Monitoring in Ontario (2018).

Construction activities will be monitored by a qualified Environmental Inspector who will frequently review the effectiveness of the mitigation measures and construction BMPs to confirm that they are functioning as intended. In the event that mitigation measures and/or construction BMPs are not functioning as intended (or are ineffective), revised mitigation measures/BMPs designed to improve their overall effectiveness will be implemented. Dust levels will be monitored to assess the effectiveness of dust suppression measures and will be adjusted if required. Monitoring will continue throughout the construction phase until activities are complete, all exposed soils have been stabilized, and all construction waste has been cleaned up. A complaint response protocol for nuisance effects, such as dust, will also be established.

4.2 Operations of Future Case Scenario

4.2.1 Potential Effects

Major sources of air emissions considered in this analysis are generated by:

- The combustion engines of passenger and heavy vehicles as well as buses travelling along the ECWE Stations on nearby paved surfaces, such as adjacent municipal roadways and on-site driveways. The only roads included in this analysis are the ones considered to be affected by the ECWE.

The potential effect on local air quality during the operations of the Future case scenario is predicted to be negligible for all the contaminants. All sensitive and critical receptors located along the ECWE most impacted sectors have predicted concentrations for the Future case scenario that are lower than the Existing Case scenario.

This can be explained by the fact that the traffic growth due to the Project's completion is not important enough to counteract the decreasing emission rates of the different vehicles being modelled.

It is noted that the background levels for B(a)P and $PM_{2.5}$ is already high in the study area and that the Future case scenario exceedances are not caused by the Project.

4.2.2 Mitigation Measures

4.2.2.1 Future Scenario

Operations of the stations along the ECWE will be carried out in accordance with applicable regulations and standards, including Ontario's AAQC (PIBS#6570e01) (MOE, 2012). To

improve general air quality around the Stations during the operations and maintenance phase, the following measures could be implemented:

- Implementing Multi-Use Path (MUP) connections to increase the number of passengers that are walking or cycling to access the Stations along the ECWE; and
- Cleaning roadways in order to minimize dust emissions coming from the roads.

Considering the air quality will not be diminished by the Project's completion, the measures to be taken are limited. However, if other structures, such as parking lots, PPUDO were to be constructed for any Stations considered in this AQIA, measures like erecting signs that encourage people to turn off their vehicles instead of idling for long periods of time or designating parking spots that are only available for carpoolers would be recommended. Furthermore, other measures can be applied during operation to reduce total air contaminant emissions (amount of pollutant emitted by the entire system over a year). These include:

- Minimizing unnecessary train/engine/propulsion system idling through technical and operational measures;
- Minimizing non-revenue equipment runs by better design and planning;
- Maximizing train passenger load factors by improved system design, planning, marketing and pricing;
- Optimizing the location and design of pedestrian and cycling accessible stations to limit motor vehicle trips to stations; and
- Promoting transit-supportive development.

4.2.3 Monitoring Requirements

MX maintains ongoing inspection schedules to monitor the effectiveness of its Transit operations. A complaints procedure is in place to address any concern raised by neighboring landowners, municipalities or the public. Furthermore, other monitoring measures should be taken during the operational phase of the project, such as:

- Annually test train propulsion and auxiliary power units, which produces exhaust emissions and ensure that they remain in compliance with applicable Canadian emission standards; and
- Develop an Air Sampling and Monitoring Plan in accordance with the Future Project Agreement and submit an annual report summarizing all sampling and monitoring results accumulated over the preceding year to the Contracting Authority.

4.3 Summary of Potential Effects, Mitigation Measures, and Monitoring Activities

The potential air quality effects associated with implementation of the ECWE are summarized in Table 4-1 for the operation phase of the Future case scenario. In addition, mitigation measures and prescribed monitoring measures are identified.

Table 4-1: Summary of Potential Effects, Mitigation Measures and Monitoring for Air Quality

Feature	Potential Effect	Mitigation Measures	Monitoring
Lands Adjacent to Station (construction)	• Fugitive dust emissions may be generated from construction activities.	BMPs will be implemented to mitigate potential air quality effects associated with the construction activities, which will be included in an AQMP. Prior to commencement of construction, the Constructor will develop and submit a detailed Construction AQMP to the Contracting Authority. The AQMP will: • Demonstrate compliance with the specific air quality criteria and limits in the Metrolinx Environmental Guide for Air Quality and Greenhouse Gas Emissions Assessment (2019); • Define the Project's air quality impact zone and identify all sensitive receptors within this area; • Assess the baseline air quality by continuous measurement of local ambient concentrations of $PM_{2.5}$ and PM_{10} over a minimum period of one week, where large local sources of pollution, such as highways, directly affect the ZOI of the Project; • Estimate and document the predictable worst-case air quality impacts of the Project on sensitive receptors within the air quality impact zone, develop appropriate mitigation measures, demonstrate their effectiveness, and commit to their timely implementation; • Monitor continuously any contaminant, in addition to $PM_{2.5}$ and PM_{10}, which is predicted to exceed its relevant air quality exposure criterion during any phase of the Project and at any receptor; and • Include explicit commitment to the implementation of all applicable	• The Future Project Agreement shall include the development and implementation of Weekly Air Quality Monitoring Plans, submitted to the Contracting Authority that document how air quality monitoring has been conducted and compliance assessed to effectively prevent unacceptable rates of air emissions in accordance with the following guidelines: • The construction related air contaminants of primary concern are in the form of particulate matter, with the principal construction related fractions of $PM_{2.5}$ and PM_{10} - particulate matter of less than 2.5 and 10 micron in diameter, respectively. Other contaminants of concern include crystalline silica and oxides of nitrogen. The list of contaminants will be expanded with any and all air pollutants that may be produced as a result of

Feature	Potential Effect	Mitigation Measures	Monitoring
		best practices identified in Environment Canada's Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (2005). This plan will be implemented for the duration of the construction phase. Potential mitigation measures for these areas are: • Implementation of dust suppression measures (i.e., application of water wherever appropriate, or the use of approved non-chloride chemical dust suppressants, where the application of water is not suitable) as needed to control fugitive dust emissions in accordance with the (Cheminfo Services Inc., 2005) publication "Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities"; • Stockpiling of soil and other friable materials in locations that are less exposed to wind (i.e., protected from the wind by suitable barriers or wind fences/screens) and far from sensitive receptors; • Seeding, paving, covering, wetting, or otherwise treating disturbed soil surfaces as soon as reasonably possible after disturbance. Permanently stabilizing exposed soil areas with non-erodible material (i.e., stone or vegetation) as soon as reasonably possible after construction in the affected area is complete; • Modifying work schedules when weather conditions could lead to adverse impacts (i.e., very dry soil and high winds); • Removing all loose or unsecured debris or materials from empty trucks prior to leaving the Project site;	the work; • The criteria for PM2.5, PM10 and crystalline silica are provided in Metrolinx's Environmental Guide for Air Quality and Greenhouse Gas Emissions Assessment (2019). The applicable criteria for all other air contaminants of concern are to be found in the various schedules of O. Reg. 419/05; • Siting of the monitors should generally follow the guidelines provided in the MECP Operations Manual for Air Quality Monitoring in Ontario (2018); • Construction activities will be monitored by a qualified Environmental Inspector who will frequently review the effectiveness of the mitigation measures and construction BMPs to confirm that they are functioning as intended; • In the event that mitigation

Feature	Potential Effect	Mitigation Measures	Monitoring
		• Covering all truckloads of dust-producing material, including use of dump trucks with retractable covers for the transport of soils and other friable materials; • Minimizing the number of loading and unloading of friable materials; • Minimizing drop heights, using enclosed chutes, and covering debris bins used for deconstruction of affected structures; • Reducing unnecessary traffic and implementation of speed limits on any unpaved surfaces; • Vacuum sweeping or watering of all paved surfaces and roadways on which equipment and truck traffic enter and leave the construction areas; • Washing of equipment and machinery, and use of wheel washes or mud mats where practical at construction site exits to limit the migration of soil and dust off-site; • Ensuring that all construction vehicles, machinery, and equipment is equipped with current emission controls, which are in a state of good repair, that equipment is properly and regularly maintained, and compliant with applicable federal and provincial regulations for off-road diesel engines; • Site supervisors during the construction phase should monitor the site for wind direction and weather conditions to ensure that high-impact activities be reduced when the wind is blowing consistently towards nearby sensitive receptors. The site supervisor should	measures and/or construction BMPs are not functioning as intended (or are ineffective), revised mitigation measures/BMPs designed to improve their overall effectiveness will be implemented; • Dust levels will be monitored to assess the effectiveness of dust suppression measures and will be adjusted, if necessary; and • A complaint response protocol for nuisance effects, such as dust, will be established.

Feature	Potential Effect	Mitigation Measures	Monitoring
		also monitor for visible fugitive dust and take action to determine the root-cause in order to counteract this. Specific details to this effect should be included in the construction site's DMP; and • A Communications Protocol and a Complaints Protocol will be developed in accordance with the Future Project Agreement.	
Lands Adjacent to Station (operations)	• Fugitive dust emissions may be generated from vehicles travelling on the paved surfaces and adjacent driveways.	Operations of the Stations along the ECWE will be carried out in accordance with applicable regulations and standards, including Ontario's AAQC (PIBS#6570e01) (MECP, 2012). To improve general air quality around the Stations during the operations and maintenance phase, the following measures are recommended but not limited to: • The Constructor shall develop and submit a detailed Operations AQMP to the Contracting Authority to document the controls and methods that the Constructor will implement during project operations to limit the generation and dispersion of airborne particulate matter and air contaminants associated with the project operations; • Implement MUP connections to increase the number of passengers that are walking or cycling to access the new Stations; and • Dust emissions from the roads will be minimized by cleaning the roadways. Considering the air quality will not be diminished by the Project's completion, the measures to be taken are limited. However, if other structures, such as parking lots, PPUDO were to be constructed for	• MX has ongoing inspection schedules to monitor the effectiveness of its Transit operations; • A complaints procedure is in place to address any concern raised by neighboring land owners, municipalities or the public; • Annually test train propulsion and auxiliary power units, which produces exhaust emissions and ensure that they remain in compliance with applicable Canadian emission standards; and • Develop an Air Sampling and Monitoring Plan in accordance with the Future Project Agreement and submit an annual report summarizing all sampling and monitoring results accumulated

Feature	Potential Effect	Mitigation Measures	Monitoring
		any Stations considered in this AQIA, measures like erecting signs that encourage people to turn off their vehicles instead of idling for long periods of time or designating parking spots that are only available for carpoolers would be recommended. Furthermore, other measures can be applied during operation to reduce total air contaminant emissions (amount of pollutant emitted by the entire system over a year). These include: • Minimizing unnecessary train/engine/propulsion system idling through technical and operational measures; • Minimizing non-revenue equipment runs by better design and planning; • Maximizing train passenger load factors by improved system design, planning, marketing and pricing; • Optimizing the location and design of pedestrian and cycling accessible stations to limit motor vehicle trips to stations; and • Promoting transit-supportive development.	over the preceding year to the Contracting Authority.

5. Conclusions

In conclusion, the results of this AQIA show that the ECWE will not have a significant effect on local air quality.

Within the study area, the modelling results indicate that the Future case scenario modelled concentrations will be lower than the Existing case scenario. This is explained by the fact that the traffic growth due to the Project's completion is not important enough to counteract the decreasing emission rates of the different vehicles being modelled. These decreasing rates are expected as new pollution control technologies are constantly introduced in that sector.

Potential air quality effects associated with the ECWE are only caused by vehicles that will circulate in the study area, as documented in the Future case scenario. The effects on air quality are deemed insignificant based on the decrease in ambient concentrations for all of the contaminants of concerns.

6. References

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Appendix A

Ambient Air Quality Monitoring Data

Ambient Air Quality Data - $PM_{2.5}$

Source for Raw Data
Station: Toronto West
Address: 125 Resources Road
Latitude: 43.709444
Longitude: -79.5435
Elevation: 141 m
Air Intake Height: 8 m

Pollutant: Fine Particulate Matter (Fine Particulate Matter $PM_{2.5}$)
Method: SHARP 5030 operated 35% RH
Unit: micrograms per cubic metre ($\mu g/m^3$)
Years: 2013-2017
URL: http://airqualityontario.com/history/index.php

Table A-1: $PM_{2.5}$ Background Concentration Data ($\mu g/m^3$)

Year	Mean	Median 1-HR	Max 1-HR	Min 1-HR	Median 24-HR	Max 24 - HR	Min 24 - HR	90th 1-HR	90th 24-HR
2013	7.29	8.76	7.00	75.0	0	7.46	41.5	1	18.0
2014	7.30	9.06	7.00	65.0	0	7.75	37.9	2	17.0
2015	7.14	8.52	7.00	58.0	0	7.04	34.7	1	17.0
2016	6.03	6.99	6.00	43.0	0	6.000	28.4	1.00	13.0
2017	5.95	7.41	6.00	47	0	6.500	26.08	0.38	14.0

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
$PM_{2.5}$	24 hour	$\mu g/m^3$	27	38.1	0	5.80	13.2
$PM_{2.5}$	Annual	$\mu g/m^3$	8.8	7.30	6.03	7.22	6.94

Ambient Air Quality Data - NO_X

Source for Raw Data
Station: Toronto West
Address: 125 Resources Road
Latitude: 43.709444
Longitude: -79.5435
Elevation: 141 m
Air Intake Height: 8 m

Pollutant: Nitrogen dioxide (NO_2)
Method: SHARP 5030 operated 35% RH
Unit: micrograms per cubic metre ($\mu g/m^3$)
Years: 2013-2017
URL: http://airqualityontario.com/history/index.php

Table A-2: NO_2 Background Concentration Data (ppb)

Year	Mean	Median 1-HR	Max 1-HR	Min 1-HR	Median 24-HR	Max 24-HR	Min 24-HR	90th 1-HR	90th 24-HR
2013	16.13	14.00	76.00	1.00	15.35	48.00	3.96	30.00	24.3
2014	17.08	15.00	83.00	1.00	15.75	54.41	2.78	31.00	25.9
2015	16.56	14.00	63.00	2.00	15.58	47.78	3.04	31.00	25.7
2016	15.74	13.00	64.00	1.00	14.96	41.58	3.17	31.00	24.2
2017	14.96	13.00	55.00	0.00	14.04	41.00	3.09	28.00	23.0

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
NO_2	1 hour	ppb	-	83.00	0.00	13.8	30.2
NO_2	24 hour	ppb	-	54.41	2.78	15.14	24.6
NO_2	Annual	ppb	-	17.08	14.96	16.131	16.094

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
NO_2	1 hour	$\mu g/m^3$	400	170.3	0.0	28.3	62.0
NO_2 (CAAQS 2025)	1 hour	$\mu g/m^3$	83	170.3	0.0	28.3	62.0
NO_2	24 hour	$\mu g/m^3$	200	111.7	5.7	31.1	50.5
NO_2	Annual	$\mu g/m^3$	60	35.0	30.7	33.1	33.0
NO_2 (CAAQS 2025)	Annual	$\mu g/m^3$	23	35.0	30.7	33.1	33.0

*Temperature assumed for conversion is 0°C.

Ambient Air Quality Data - CO

Source for Raw Data
Station: Toronto West
Address: 125 Resources Road
Latitude: 43.709444
Longitude: -79.5435
Elevation: 141 m
Air Intake Height: 8 m

Pollutant: Carbon monoxide (CO)
Method: SHARP 5030 operated 35% RH
Unit: micrograms per cubic metre ($\mu g/m^3$)
Years: 2013-2017
URL: http://airqualityontario.com/history/index.php

Table A-3: CO Background Concentration Data (ppm)

Year	Mean	Median 1-HR	Max 1-HR	Min 1-HR	Median 8-HR	Max 8-HR	Min 8-HR	90th 1-HR	90th 8-HR
2013	0.25	0.23	1.41	0.11	0.24	1.21	0.13	0.36	0.35
2014	0.26	0.23	1.60	0.03	0.24	1.07	0.03	0.37	0.36
2015	0.25	0.22	1.30	0.10	0.23	0.82	0.11	0.36	0.35
2016	0.25	0.22	1.67	0.00	0.23	1.23	0.07	0.36	0.35
2017	0.25	0.22	1.23	0.09	0.225	0.861	0.115	0.35	0.35

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
CO	1-Hour	ppm	36200 ug/m^3	1.67	0.000	0.224	0.363
CO	8-Hour	ppm	15700 ug/m^3	1.23	0.0300	0.231	0.349

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
CO	1-Hour	µg/m^3	36200 ug/m^3	2086	0	280	450
CO	8-Hour	µg/m^3	15700 ug/m^3	1541	37	288	436

*Temperature assumed for conversion is 0°C.

Ambient Air Quality Data - O_3

Source for Raw Data
Station: Toronto West
Address: 125 Resources Road
Latitude: 43.709444
Longitude: -79.5435
Elevation: 141 m
Air Intake Height: 8 m

Pollutant: Ozone (O_3)
Method: SHARP 5030 operated 35% RH
Unit: micrograms per cubic metre (µg/m$_3$)
Years: 2013-2017
URL: http://airqualityontario.com/history/index.php

Table A-4: O_3 Background Concentration Data (ppb)

Year	Mean	Median 1-HR	Max 1HR	Min 1-HR	Median 24-HR	Max 24-HR	Min 24-HR	90th 1-hr	90th 24-hr
2013	21.5	20.0	83.0	0	20.5	53.7	0.63	39.0	33.8
2014	21.1	20.0	72.0	0	20.6	53.0	1.58	39.0	32.8
2015	21.3	20.0	82.0	0	20.8	51.0	2.29	39.0	33.0
2016	22.1	21.0	79.0	0	21.4	55.4	2.08	40.0	33.3
2017	22.1	22.0	82.0	0	21.6	61.4	2.42	39.0	32.8

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
O_3	1 hour	ppb	-	83	0	20.6	39.2
O_3	24 hour	ppb	-	61.4	0.63	21.0	33.1
O_3	Annual	ppb	-	22.1	21.1	21.5	21.6

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
O_3	1 hour	$\mu g/m^3$	-	178	0	44	84
O_3	24 hour	$\mu g/m^3$	-	131	1	45	71
O_3	Annual	$\mu g/m^3$	-	47	45	46	46

*Temperature assumed for conversion is 0°C.

Ambient Air Quality Data - Acrolein

Source for Raw Data
Station: NAPS No. 60418
Address: Perth Avenue/Ruskin Avenue
Latitude: 43.662933
Longitude: -79.451538
Elevation: 119 m

Pollutant: Acrolein
Unit: micrograms per cubic metre ($\mu g/m^3$)
Years: 2002-2006
URL: http://maps-cartes.ec.gc.ca/rnspa-naps/data.aspx?lang=en

Table A-5: Acrolein Background Concentration Data ($\mu g/m^3$)

Year	Annual Mean	Median 24-HR	Max 24-HR	Min 24-HR	90th 24-HR
2002	0.12	0.11	0.29	0.04	0.20
2003	0.13	0.12	0.26	0.06	0.22
2004	0.09	0.06	0.35	0.01	0.14
2005	0.19	0.05	1.17	0.03	0.57
2006	0.02	0.02	0.06	0	0.04

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
Acrolein	24 hour	$\mu g/m^3$	0,4	1.17	0	0.07	0.24
Acrolein	1 hour	$\mu g/m^3$	4.5	-	-	-	-

Ambient Air Quality Data - Benzene

Source for Raw Data
Station: NAPS No. 65101
Address: Eagle Street West/McCaffrey Road
Latitude: 44.04431
Longitude: -79.48325
Elevation: 273 m

Pollutant: Benzene
Unit: micrograms per cubic metre (µg/m^3)
Years: 2011-2015
URL: http://maps-cartes.ec.gc.ca/rnspa-naps/data.aspx?lang=en

Table A-6: Benzene Background Concentration Data (µg/m^3)

Year	Annual Mean	Median 24-HR	Max 24-HR	Min 24-HR	90th 24-HR
2011	0.57	0.57	1.13	0.27	0.66
2012	0.37	0.34	0.83	0.11	0.64
2013	0.41	0.36	1.15	0.12	0.59
2014	0.42	0.38	1.19	0.13	0.67
2015	0.43	0.41	1.00	0.10	0.70

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
Benzene	Annual	µg/m^3	0.45	1.19	0.10	0.41	0.44
Benzene	24 hour	µg/m^3	2.3	-	-	-	0.65

Ambient Air Quality Data - 1,3-Butadiene

Source for Raw Data
Station: NAPS No. 65101
Address: Eagle Street West/McCaffrey Road
Latitude: 44.04431
Longitude: -79.48325
Elevation: 273 m

Pollutant: 1,3 Butadiene
Unit: Micrograms per cubic metre (µg/m^3)
Years: 2011-2015
URL: http://maps-cartes.ec.gc.ca/rnspa-naps/data.aspx?lang=en

Table A-7: 1-3-Butadiene Background Concentration Data (µg/m^3)

Year	Annual Mean	Median 24-HR	Max 24-HR	Min 24-HR	90th 24-HR
2011	0.03	0.03	0.07	0.01	0.05
2012	0.02	0.02	0.09	0.01	0.04
2013	0.02	0.02	0.10	0.01	0.04
2014	0.02	0.02	0.07	0.01	0.03
2015	0.03	0.02	0.09	0.01	0.06

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
1,3-Butadiene	Annual	µg/m^3	2	0.10	0.01	0.02	0.03
1,3-Butadiene	24 hour	µg/m^3	10	-	-	-	0.05

Ambient Air Quality Data - Formaldehyde

Source for Raw Data
Station: NAPS No. 64401
Address: 8th Line/10th Side Road
Latitude: 44.231111
Longitude: -79.783056
Elevation: 253 m

Pollutant: Formaldehyde
Unit: Micrograms per cubic metre (µg/m^3)
Years: 2006-2010
URL: http://maps-cartes.ec.gc.ca/rnspa-naps/data.aspx?lang=en

Table A-8: Formaldehyde Background Concentration Data (µg/m^3)

Year	Annual Mean	Median 24-HR	Max 24-HR	Min 24-HR	90th 24-HR
2006	3.06	2.61	8.17	0.66	4.99
2007	2.08	1.74	4.64	0.73	3.48
2008	2.49	2.53	6.75	0.37	4.83
2009	1.12	0.92	2.99	0.22	2.53
2010	3.00	3.00	7.44	0.14	5.24

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
Formaldehyde	24 hour	µg/m^3	65	8.17	0.14	2.16	4.21

Ambient Air Quality Data - Acetaldehyde

Source for Raw Data
Station: NAPS No. 64401
Address: 8th Line/10th Side Road
Latitude: 44.231111
Longitude: -79.783056
Elevation: 253 m

Pollutant: Acetaldehyde
Unit: Micrograms per cubic metre (µg/m^3)
Years: 2006-2010
URL: http://maps-cartes.ec.gc.ca/rnspa-naps/data.aspx?lang=en

Table A-9: Acetaldehyde Background Concentration Data (µg/m³)

Year	Annual Mean	Median 24-HR	Max 24-HR	Min 24-HR	90th 24-HR
2006	1.28	1.23	3.09	0.26	2.06
2007	1.01	1.00	2.02	0.36	1.44
2008	1.09	0.91	2.97	0.25	1.96
2009	0.60	0.53	1.83	0	1.02
2010	0.68	0.58	2.53	0	1.27

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
Acetaldehyde	24 hour	µg/m³	500	3.09	0	0.85	1.55
Acetaldehyde	0.5-hour	µg/m³	500	-	-	-	-

Ambient Air Quality Data - B(a)P

Source for Raw Data
Station: NAPS No. 60427
Address: College Street/Ross Street
Latitude: 43.658222
Longitude: -79.397183
Elevation: 122 m

Pollutant: Benzo(a)pyrene (B(a)P)
Unit: Micrograms per cubic metre (µg/m³)
Years: 2009-2013
URL: http://maps-cartes.ec.gc.ca/rnspa-naps/data.aspx?lang=en

Table A-10: B(a)P Background Concentration Data (µg/m³)

Year	Mean	90th percentile
2009	0.06	0.11
2010	0.12	0.15
2011	0.09	0.15
2012	0.08	0.13
2013	0.06	0.10

Contaminant	Period	Unit	Criterion	Maximum	Minimum	Median	Background Value
B(a)P	Annual	µg/m³	0.00001	-	-	-	0.000082
B(a)P	24 hour	µg/m³	0.00005	-	-	-	0.000128

Appendix B

Emission Factors

Table B-1: Light Vehicles EFs (g/VmeterT) - EXISTING Scenario

Light Vehicles EFs (g/VmeterT)									
Speed Limit	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
60 km/hr	5.35E-06	4.90E-05	7.38E-04	4.30E-07	6.42E-08	1.87E-07	1.75E-07	8.73E-09	2.86E-09

Table B-2: Bus EFs (g/VmeterT) - EXISTING Scenario

Heavy Vehicles EFs (g/VmeterT)									
Speed Limit	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
60 km/hr	4.43E-04	1.81E-02	2.26E-03	3.23E-06	1.13E-06	3.39E-05	1.49E-05	2.71E-06	3.55E-09

Table B-3: Heavy Vehicles EFs (g/VmeterT) - EXISTING Scenario

Heavy Vehicles EFs (g/VmeterT)									
Speed Limit	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
60 km/hr	4.29E-04	1.29E-02	4.59E-03	3.49E-06	1.22E-06	3.66E-05	1.60E-05	2.93E-06	5.64E-09

Table B-4: Light Vehicles EFs (g/VmeterT) - FUTURE Scenario

Light vehicles EFs (g/VmeterT)									
Speed Limit	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
60 km/hr	1.17E-06	4.05E-06	2.87E-04	5.88E-08	0.00E+00	2.04E-08	9.10E-09	9.79E-10	6.25E-10

Table B-5: Bus EFs (g/VmeterT) - FUTURE Scenario

Heavy Vehicles EFs (g/VmeterT)									
Speed Limit	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
60 km/hr	8.33E-05	4.23E-03	7.68E-04	7.86E-07	1.78E-07	1.04E-05	3.88E-06	6.39E-07	4.84E-10

Table B-6: Heavy Vehicles EFs (g/VmeterT) - FUTURE Scenario

Heavy Vehicles EFs (g/VmeterT)									
Speed Limit	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
60 km/hr	4.76E-05	2.69E-03	4.50E-04	6.15E-07	1.14E-07	8.69E-06	3.10E-06	4.94E-07	4.53E-10

Table B-7: Emission Rates of Contaminants by Road Segment - EXISTING AM PEAK

Vehicles' Weighted Emission Rates AM PEAK (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	1.62E-02	3.04E-01	4.52E-01	2.84E-04	5.62E-05	8.15E-04	4.04E-04	6.21E-05	1.54E-06
Segment 2	1.09E-02	1.92E-01	3.45E-01	2.14E-04	4.02E-05	5.03E-04	2.58E-04	3.77E-05	1.22E-06
Segment 3	3.82E-03	4.62E-02	5.82E-02	3.77E-05	7.45E-06	1.08E-04	5.35E-05	8.22E-06	2.03E-07
Segment 4	2.31E-03	4.57E-02	6.41E-02	4.09E-05	8.00E-06	1.13E-04	5.64E-05	8.62E-06	2.22E-07
Segment 5	2.09E-03	2.15E-02	3.62E-02	2.28E-05	4.24E-06	5.16E-05	2.66E-05	3.86E-06	1.30E-07
Segment 6	2.82E-03	2.69E-02	5.01E-02	3.11E-05	5.75E-06	6.92E-05	3.58E-05	5.17E-06	1.78E-07
Segment 7	8.62E-03	1.65E-01	2.30E-01	1.45E-04	2.93E-05	4.42E-04	2.17E-04	3.38E-05	7.75E-07
Segment 8	5.19E-03	9.34E-02	1.57E-01	9.80E-05	1.87E-05	2.48E-04	1.25E-04	1.87E-05	5.47E-07
Segment 9	2.94E-04	1.53E-03	2.14E-03	1.37E-06	2.64E-07	3.55E-06	1.79E-06	2.68E-07	7.58E-09
Segment 10	3.81E-04	5.77E-04	3.90E-03	2.30E-06	3.56E-07	1.58E-06	1.18E-06	9.37E-08	1.50E-08
Segment 11	5.28E-04	1.53E-03	4.61E-03	2.76E-06	4.80E-07	4.59E-06	2.54E-06	3.32E-07	1.67E-08
Segment 12	3.82E-04	1.51E-03	3.03E-03	1.86E-06	3.43E-07	4.10E-06	2.13E-06	3.06E-07	1.07E-08
Segment 13	1.04E-02	2.16E-01	2.34E-01	1.51E-04	3.27E-05	5.75E-04	2.74E-04	4.46E-05	7.47E-07
Segment 14	7.01E-03	1.42E-01	1.84E-01	1.18E-04	2.37E-05	3.55E-04	1.74E-04	2.71E-05	6.30E-07
Segment 15	3.75E-03	5.43E-02	4.65E-02	3.18E-05	6.91E-06	1.23E-04	5.82E-05	9.50E-06	1.54E-07
Segment 16	2.58E-03	4.08E-02	2.76E-02	1.97E-05	4.59E-06	9.18E-05	4.27E-05	7.17E-06	8.69E-08
Segment 17	2.90E-03	4.46E-02	3.20E-02	2.25E-05	5.19E-06	1.02E-04	4.76E-05	7.98E-06	1.01E-07
Segment 18	3.18E-03	4.26E-02	4.30E-02	2.86E-05	6.00E-06	9.91E-05	4.77E-05	7.64E-06	1.45E-07
Segment 19	9.31E-03	1.97E-01	2.01E-01	1.31E-04	2.87E-05	5.20E-04	2.46E-04	4.04E-05	6.34E-07
Segment 20	7.72E-03	1.70E-01	1.80E-01	1.19E-04	2.48E-05	4.05E-04	1.96E-04	3.12E-05	6.06E-07
Segment 21	1.64E-04	4.46E-04	1.54E-03	9.33E-07	1.52E-07	1.03E-06	6.38E-07	6.96E-08	5.87E-09
Segment 22	2.13E-04	7.06E-04	1.85E-03	1.13E-06	1.94E-07	1.78E-06	9.96E-07	1.28E-07	6.83E-09
Segment 23	4.26E-04	3.05E-04	4.60E-03	2.68E-06	4.00E-07	1.17E-06	1.09E-06	5.44E-08	1.78E-08
Segment 24	4.51E-04	9.16E-04	4.46E-03	2.66E-06	4.20E-07	2.28E-06	1.55E-06	1.45E-07	1.71E-08
Segment 25	7.60E-03	1.51E-01	1.87E-01	1.19E-04	2.48E-05	4.05E-04	1.96E-04	3.12E-05	6.12E-07
Segment 26	5.18E-03	1.01E-01	1.39E-01	8.82E-05	1.76E-05	2.63E-04	1.29E-04	2.01E-05	4.72E-07
Segment 27	3.40E-03	4.02E-02	4.96E-02	3.19E-05	6.52E-06	1.02E-04	4.97E-05	7.83E-06	1.67E-07
Segment 28	1.47E-03	2.73E-02	5.00E-02	3.15E-05	5.66E-06	6.24E-05	3.30E-05	4.60E-06	1.83E-07
Segment 29	5.32E-03	1.10E-01	1.29E-01	8.31E-05	1.73E-05	2.81E-04	1.36E-04	2.16E-05	4.27E-07
Segment 30	3.87E-03	7.44E-02	1.21E-01	7.66E-05	1.43E-05	1.75E-04	9.03E-05	1.31E-05	4.34E-07
Segment 31	7.91E-03	1.58E-01	1.92E-01	1.23E-04	2.57E-05	4.24E-04	2.04E-04	3.27E-05	6.27E-07
Segment 32	5.89E-03	1.16E-01	1.57E-01	9.97E-05	2.00E-05	2.99E-04	1.47E-04	2.29E-05	5.32E-07

Table B-8: Emission Rates of Contaminants by Road Segment - EXISTING PM PEAK

Vehicles' Weighted Emission Rates PM PEAK (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	1.33E-02	1.92E-01	5.22E-01	3.16E-04	5.50E-05	5.32E-04	2.93E-04	3.86E-05	1.90E-06
Segment 2	1.07E-02	1.97E-01	3.13E-01	1.96E-04	3.79E-05	5.22E-04	2.61E-04	3.95E-05	1.08E-06
Segment 3	2.92E-03	3.34E-02	4.70E-02	3.01E-05	5.80E-06	7.85E-05	3.95E-05	5.93E-06	1.66E-07
Segment 4	1.71E-03	2.90E-02	6.10E-02	3.77E-05	6.74E-06	7.20E-05	3.85E-05	5.29E-06	2.22E-07
Segment 5	2.54E-03	2.07E-02	5.02E-02	3.07E-05	5.39E-06	5.36E-05	2.93E-05	3.90E-06	1.83E-07
Segment 6	1.50E-03	1.31E-02	2.95E-02	1.82E-05	3.18E-06	3.12E-05	1.71E-05	2.26E-06	1.09E-07
Segment 7	6.21E-03	9.42E-02	2.33E-01	1.42E-04	2.50E-05	2.57E-04	1.39E-04	1.88E-05	8.43E-07
Segment 8	5.59E-03	1.01E-01	1.63E-01	1.02E-04	1.98E-05	2.75E-04	1.37E-04	2.08E-05	5.58E-07
Segment 9	3.61E-04	4.74E-04	3.69E-03	2.17E-06	3.36E-07	1.58E-06	1.15E-06	9.58E-08	1.41E-08
Segment 10	2.94E-04	9.26E-04	2.56E-03	1.55E-06	2.68E-07	2.47E-06	1.38E-06	1.78E-07	9.42E-09
Segment 11	4.99E-04	5.90E-04	5.17E-03	3.03E-06	4.66E-07	2.01E-06	1.52E-06	1.17E-07	1.98E-08
Segment 12	5.28E-04	6.10E-04	5.48E-03	3.21E-06	4.93E-07	2.08E-06	1.59E-06	1.21E-07	2.10E-08
Segment 13	6.91E-03	1.16E-01	2.31E-01	1.42E-04	2.62E-05	3.11E-04	1.62E-04	2.32E-05	8.19E-07
Segment 14	6.97E-03	1.21E-01	2.20E-01	1.36E-04	2.57E-05	3.27E-04	1.67E-04	2.46E-05	7.69E-07
Segment 15	2.88E-03	3.52E-02	4.35E-02	2.83E-05	5.61E-06	8.21E-05	4.06E-05	6.26E-06	1.51E-07
Segment 16	2.00E-03	2.69E-02	2.78E-02	1.86E-05	3.80E-06	5.98E-05	2.91E-05	4.58E-06	9.62E-08
Segment 17	2.15E-03	2.70E-02	3.17E-02	2.08E-05	4.15E-06	6.22E-05	3.06E-05	4.75E-06	1.10E-07
Segment 18	2.67E-03	3.10E-02	4.23E-02	2.73E-05	5.27E-06	7.22E-05	3.62E-05	5.47E-06	1.49E-07
Segment 19	5.95E-03	1.02E-01	1.94E-01	1.20E-04	2.23E-05	2.71E-04	1.40E-04	2.03E-05	6.88E-07
Segment 20	6.62E-03	1.17E-01	2.00E-01	1.24E-04	2.38E-05	3.20E-04	1.61E-04	2.42E-05	6.90E-07
Segment 21	1.79E-04	1.29E-04	1.94E-03	1.13E-06	1.69E-07	4.92E-07	4.58E-07	2.29E-08	7.51E-09
Segment 22	1.26E-04	9.02E-05	1.36E-03	7.92E-07	1.18E-07	3.45E-07	3.22E-07	1.61E-08	5.27E-09
Segment 23	5.42E-04	3.88E-04	5.85E-03	3.41E-06	5.09E-07	1.49E-06	1.39E-06	6.92E-08	2.27E-08
Segment 24	4.84E-04	3.47E-04	5.22E-03	3.04E-06	4.54E-07	1.33E-06	1.24E-06	6.18E-08	2.02E-08
Segment 25	4.81E-03	7.32E-02	1.77E-01	1.08E-04	1.92E-05	2.04E-04	1.09E-04	1.50E-05	6.37E-07
Segment 26	4.93E-03	8.53E-02	1.57E-01	9.70E-05	1.82E-05	2.30E-04	1.18E-04	1.72E-05	5.50E-07
Segment 27	2.12E-03	1.76E-02	4.29E-02	2.64E-05	4.54E-06	4.16E-05	2.33E-05	2.99E-06	1.59E-07
Segment 28	1.33E-03	1.93E-02	5.44E-02	3.31E-05	5.64E-06	4.95E-05	2.81E-05	3.53E-06	2.02E-07
Segment 29	2.76E-03	4.55E-02	1.04E-01	6.40E-05	1.12E-05	1.10E-04	6.04E-05	8.02E-06	3.82E-07
Segment 30	2.74E-03	3.67E-02	1.22E-01	7.38E-05	1.22E-05	9.34E-05	5.55E-05	6.49E-06	4.59E-07
Segment 31	4.78E-03	7.09E-02	1.82E-01	1.10E-04	1.94E-05	1.96E-04	1.07E-04	1.43E-05	6.59E-07
Segment 32	5.21E-03	9.06E-02	1.64E-01	1.02E-04	1.92E-05	2.44E-04	1.25E-04	1.83E-05	5.76E-07

Table B-9: Emission Rates of Contaminants by Road Segment - EXISTING OFF-PEAK

Vehicles' Weighted Emission Rates OFF-PEAK (g/s)									
Road Segments (60 km/hr)	**$PM_{2.5}$**	**NO_x**	**CO**	**Benzene**	**1,3-Butadiene**	**Formaldehyde**	**Acetaldehyde**	**Acrolein**	**Benzo(a)pyrene**
Segment 1	1.26E-02	2.61E-01	2.82E-01	1.82E-04	3.95E-05	6.96E-04	3.31E-04	5.40E-05	8.98E-07
Segment 2	1.09E-02	2.30E-01	2.28E-01	1.48E-04	3.31E-05	6.16E-04	2.90E-04	4.80E-05	7.07E-07
Segment 3	2.02E-03	2.82E-02	2.53E-02	1.71E-05	3.73E-06	6.65E-05	3.16E-05	5.16E-06	8.28E-08
Segment 4	1.58E-03	3.38E-02	3.56E-02	2.33E-05	4.97E-06	8.55E-05	4.09E-05	6.62E-06	1.16E-07
Segment 5	1.07E-03	1.25E-02	1.62E-02	1.04E-05	2.08E-06	3.07E-05	1.51E-05	2.34E-06	5.56E-08
Segment 6	8.87E-04	1.01E-02	1.38E-02	8.83E-06	1.74E-06	2.49E-05	1.24E-05	1.90E-06	4.78E-08
Segment 7	6.64E-03	1.36E-01	1.54E-01	9.88E-05	2.11E-05	3.62E-04	1.73E-04	2.80E-05	4.95E-07
Segment 8	6.23E-03	1.27E-01	1.38E-01	8.86E-05	1.94E-05	3.48E-04	1.65E-04	2.70E-05	4.33E-07
Segment 9	2.58E-04	9.14E-04	2.17E-03	1.32E-06	2.34E-07	2.41E-06	1.30E-06	1.76E-07	7.87E-09
Segment 10	4.47E-04	3.46E-03	2.45E-03	1.75E-06	3.92E-07	7.33E-06	3.45E-06	5.70E-07	8.12E-09
Segment 11	6.64E-04	2.52E-03	5.22E-03	3.18E-06	5.95E-07	7.41E-06	3.81E-06	5.56E-07	1.81E-08
Segment 12	8.45E-04	5.62E-03	5.02E-03	3.39E-06	7.40E-07	1.33E-05	6.29E-06	1.03E-06	1.64E-08
Segment 13	7.49E-03	1.52E-01	1.79E-01	1.15E-04	2.42E-05	4.01E-04	1.93E-04	3.10E-05	5.86E-07
Segment 14	7.17E-03	1.52E-01	1.55E-01	1.01E-04	2.22E-05	4.00E-04	1.90E-04	3.11E-05	4.89E-07
Segment 15	2.06E-03	3.03E-02	2.26E-02	1.56E-05	3.66E-06	7.40E-05	3.43E-05	5.79E-06	6.86E-08
Segment 16	1.74E-03	2.57E-02	1.94E-02	1.34E-05	3.11E-06	6.15E-05	2.87E-05	4.81E-06	6.00E-08
Segment 17	1.84E-03	2.61E-02	2.17E-02	1.47E-05	3.33E-06	6.36E-05	2.98E-05	4.96E-06	6.81E-08
Segment 18	2.15E-03	3.09E-02	2.45E-02	1.67E-05	3.86E-06	7.57E-05	3.53E-05	5.91E-06	7.58E-08
Segment 19	6.40E-03	1.35E-01	1.44E-01	9.36E-05	2.01E-05	3.50E-04	1.67E-04	2.71E-05	4.64E-07
Segment 20	6.31E-03	1.34E-01	1.35E-01	8.82E-05	1.94E-05	3.53E-04	1.67E-04	2.74E-05	4.26E-07
Segment 21	1.07E-04	7.66E-05	1.15E-03	6.72E-07	1.00E-07	2.93E-07	2.73E-07	1.36E-08	4.47E-09
Segment 22	1.06E-04	7.60E-05	1.14E-03	6.67E-07	9.96E-08	2.91E-07	2.71E-07	1.35E-08	4.44E-09
Segment 23	6.27E-04	1.66E-03	5.61E-03	3.35E-06	5.72E-07	5.05E-06	2.86E-06	3.61E-07	2.05E-08
Segment 24	6.13E-04	1.66E-03	5.46E-03	3.27E-06	5.59E-07	5.02E-06	2.83E-06	3.59E-07	1.99E-08
Segment 25	6.17E-03	1.24E-01	1.44E-01	9.23E-05	1.97E-05	3.37E-04	1.61E-04	2.60E-05	4.64E-07
Segment 26	5.82E-03	1.18E-01	1.32E-01	8.48E-05	1.83E-05	3.21E-04	1.53E-04	2.49E-05	4.20E-07
Segment 27	1.93E-03	2.23E-02	2.88E-02	1.84E-05	3.72E-06	5.69E-05	2.79E-05	4.36E-06	9.73E-08
Segment 28	1.20E-03	2.40E-02	3.13E-02	2.00E-05	4.04E-06	6.14E-05	3.01E-05	4.70E-06	1.06E-07
Segment 29	2.82E-03	5.63E-02	7.27E-02	4.64E-05	9.43E-06	1.46E-04	7.12E-05	1.12E-05	2.44E-07
Segment 30	3.13E-03	6.35E-02	7.82E-02	5.01E-05	1.03E-05	1.64E-04	7.97E-05	1.26E-05	2.61E-07
Segment 31	6.37E-03	1.30E-01	1.44E-01	9.29E-05	2.01E-05	3.51E-04	1.67E-04	2.72E-05	4.60E-07
Segment 32	5.44E-03	1.10E-01	1.28E-01	8.19E-05	1.74E-05	2.95E-04	1.42E-04	2.28E-05	4.13E-07

Table B-10: Emission Rates of Contaminants by Road Segment - EXISTING Nighttime

Vehicles' Weighted Emission Rates NIGHTTIME (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	1.24E-02	2.41E-01	2.88E-01	1.82E-04	3.95E-05	6.95E-04	3.31E-04	5.39E-05	9.04E-07
Segment 2	1.08E-02	2.14E-01	2.33E-01	1.48E-04	3.32E-05	6.16E-04	2.90E-04	4.80E-05	7.12E-07
Segment 3	1.77E-03	1.66E-02	2.51E-02	1.56E-05	3.16E-06	4.84E-05	2.37E-05	3.71E-06	8.30E-08
Segment 4	1.44E-03	2.64E-02	3.60E-02	2.25E-05	4.69E-06	7.64E-05	3.69E-05	5.89E-06	1.16E-07
Segment 5	1.01E-03	9.15E-03	1.64E-02	1.01E-05	1.95E-06	2.68E-05	1.34E-05	2.03E-06	5.59E-08
Segment 6	8.47E-04	7.67E-03	1.41E-02	8.63E-06	1.66E-06	2.25E-05	1.13E-05	1.70E-06	4.81E-08
Segment 7	6.60E-03	1.26E-01	1.58E-01	9.92E-05	2.12E-05	3.66E-04	1.75E-04	2.83E-05	4.99E-07
Segment 8	6.37E-03	1.26E-01	1.42E-01	9.00E-05	1.99E-05	3.64E-04	1.72E-04	2.83E-05	4.36E-07
Segment 9	2.62E-04	9.41E-04	2.24E-03	1.36E-06	2.47E-07	2.79E-06	1.47E-06	2.07E-07	7.93E-09
Segment 10	3.94E-04	1.13E-03	2.33E-03	1.42E-06	2.66E-07	3.32E-06	1.70E-06	2.49E-07	8.10E-09
Segment 11	6.90E-04	3.31E-03	5.46E-03	3.37E-06	6.66E-07	9.66E-06	4.79E-06	7.36E-07	1.83E-08
Segment 12	7.96E-04	3.34E-03	4.98E-03	3.09E-06	6.29E-07	9.70E-06	4.74E-06	7.44E-07	1.64E-08
Segment 13	7.34E-03	1.37E-01	1.83E-01	1.15E-04	2.41E-05	3.97E-04	1.91E-04	3.06E-05	5.90E-07
Segment 14	6.96E-03	1.35E-01	1.58E-01	1.00E-04	2.18E-05	3.90E-04	1.85E-04	3.03E-05	4.93E-07
Segment 15	1.83E-03	1.99E-02	2.23E-02	1.42E-05	3.13E-06	5.73E-05	2.71E-05	4.45E-06	6.87E-08
Segment 16	1.52E-03	1.57E-02	1.91E-02	1.20E-05	2.60E-06	4.53E-05	2.16E-05	3.51E-06	6.00E-08
Segment 17	1.65E-03	1.74E-02	2.16E-02	1.36E-05	2.91E-06	5.02E-05	2.40E-05	3.88E-06	6.83E-08
Segment 18	1.93E-03	2.08E-02	2.44E-02	1.54E-05	3.37E-06	6.01E-05	2.85E-05	4.66E-06	7.60E-08
Segment 19	6.08E-03	1.14E-01	1.47E-01	9.21E-05	1.95E-05	3.31E-04	1.59E-04	2.56E-05	4.67E-07
Segment 20	6.06E-03	1.17E-01	1.38E-01	8.71E-05	1.90E-05	3.38E-04	1.61E-04	2.63E-05	4.29E-07
Segment 21	1.13E-04	2.78E-04	1.21E-03	7.20E-07	1.18E-07	8.62E-07	5.21E-07	5.93E-08	4.52E-09
Segment 22	1.13E-04	2.76E-04	1.20E-03	7.14E-07	1.17E-07	8.55E-07	5.17E-07	5.88E-08	4.48E-09
Segment 23	6.56E-04	2.57E-03	5.88E-03	3.57E-06	6.53E-07	7.62E-06	3.98E-06	5.67E-07	2.07E-08
Segment 24	6.42E-04	2.54E-03	5.73E-03	3.48E-06	6.39E-07	7.51E-06	3.91E-06	5.60E-07	2.01E-08
Segment 25	6.31E-03	1.22E-01	1.49E-01	9.38E-05	2.02E-05	3.54E-04	1.69E-04	2.74E-05	4.67E-07
Segment 26	5.91E-03	1.16E-01	1.36E-01	8.59E-05	1.87E-05	3.33E-04	1.58E-04	2.59E-05	4.23E-07
Segment 27	1.88E-03	1.86E-02	2.94E-02	1.82E-05	3.64E-06	5.41E-05	2.66E-05	4.13E-06	9.79E-08
Segment 28	1.14E-03	2.00E-02	3.20E-02	1.98E-05	3.94E-06	5.84E-05	2.88E-05	4.46E-06	1.07E-07
Segment 29	2.73E-03	4.87E-02	7.44E-02	4.61E-05	9.31E-06	1.42E-04	6.95E-05	1.09E-05	2.46E-07
Segment 30	3.01E-03	5.44E-02	7.98E-02	4.97E-05	1.01E-05	1.58E-04	7.70E-05	1.21E-05	2.62E-07
Segment 31	6.43E-03	1.25E-01	1.48E-01	9.38E-05	2.04E-05	3.62E-04	1.72E-04	2.81E-05	4.64E-07
Segment 32	5.49E-03	1.06E-01	1.31E-01	8.28E-05	1.77E-05	3.05E-04	1.46E-04	2.36E-05	4.16E-07

Table B-11: Emission Rates of Contaminants by Road Segment - FUTURE AM PEAK

Vehicles' Weighted Emission Rates AM PEAK (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	1.24E-02	7.61E-02	1.61E-01	4.67E-05	3.13E-06	2.37E-04	8.62E-05	1.36E-05	3.35E-07
Segment 2	1.04E-02	5.49E-02	1.53E-01	4.09E-05	2.23E-06	1.70E-04	6.21E-05	9.73E-06	3.21E-07
Segment 3	2.99E-03	1.33E-02	2.07E-02	6.47E-06	5.50E-07	3.85E-05	1.41E-05	2.25E-06	4.18E-08
Segment 4	1.78E-03	1.22E-02	2.26E-02	6.73E-06	5.05E-07	3.64E-05	1.33E-05	2.11E-06	4.63E-08
Segment 5	1.67E-03	6.16E-03	1.32E-02	3.75E-06	2.53E-07	1.81E-05	6.65E-06	1.05E-06	2.74E-08
Segment 6	2.09E-03	6.46E-03	1.80E-02	4.78E-06	2.63E-07	1.95E-05	7.15E-06	1.12E-06	3.77E-08
Segment 7	6.50E-03	4.16E-02	8.23E-02	2.43E-05	1.71E-06	1.29E-04	4.70E-05	7.40E-06	1.70E-07
Segment 8	4.78E-03	2.59E-02	6.90E-02	1.87E-05	1.06E-06	8.07E-05	2.95E-05	4.62E-06	1.45E-07
Segment 9	3.32E-04	5.06E-04	8.41E-04	2.58E-07	2.09E-08	1.49E-06	5.43E-07	8.64E-08	1.71E-09
Segment 10	4.16E-04	1.46E-04	1.72E-03	3.73E-07	5.16E-09	4.58E-07	1.77E-07	2.58E-08	3.71E-09
Segment 11	4.68E-04	2.83E-04	1.67E-03	3.91E-07	1.10E-08	9.55E-07	3.51E-07	5.33E-08	3.57E-09
Segment 12	3.49E-04	3.50E-04	1.07E-03	2.81E-07	1.42E-08	1.09E-06	4.00E-07	6.24E-08	2.26E-09
Segment 13	8.13E-03	5.85E-02	9.04E-02	2.91E-05	2.43E-06	1.82E-04	6.60E-05	1.04E-05	1.84E-07
Segment 14	5.74E-03	3.91E-02	7.22E-02	2.16E-05	1.61E-06	1.17E-04	4.29E-05	6.79E-06	1.48E-07
Segment 15	3.08E-03	1.69E-02	1.64E-02	6.26E-06	7.06E-07	4.89E-05	1.79E-05	2.86E-06	3.18E-08
Segment 16	2.11E-03	1.27E-02	9.50E-03	4.13E-06	5.32E-07	3.67E-05	1.34E-05	2.15E-06	1.77E-08
Segment 17	2.32E-03	1.35E-02	1.11E-02	4.60E-06	5.66E-07	3.93E-05	1.43E-05	2.29E-06	2.10E-08
Segment 18	1.52E-03	1.30E-02	1.54E-02	5.40E-06	5.42E-07	3.80E-05	1.39E-05	2.22E-06	3.06E-08
Segment 19	7.15E-03	5.45E-02	7.45E-02	2.51E-05	2.27E-06	1.69E-04	6.12E-05	9.70E-06	1.50E-07
Segment 20	6.48E-03	5.15E-02	7.07E-02	2.34E-05	2.14E-06	1.52E-04	5.55E-05	8.84E-06	1.42E-07
Segment 21	2.23E-04	1.43E-04	8.44E-04	1.95E-07	5.57E-09	4.22E-07	1.59E-07	2.44E-08	1.80E-09
Segment 22	2.69E-04	1.96E-04	9.68E-04	2.30E-07	7.73E-09	5.96E-07	2.22E-07	3.42E-08	2.06E-09
Segment 23	8.22E-04	2.32E-04	3.37E-03	7.26E-07	7.83E-09	8.36E-07	3.20E-07	4.54E-08	7.30E-09
Segment 24	7.92E-04	2.84E-04	3.27E-03	7.09E-07	1.01E-08	8.87E-07	3.43E-07	5.01E-08	7.05E-09
Segment 25	5.55E-03	3.71E-02	6.71E-02	2.04E-05	1.53E-06	1.16E-04	4.20E-05	6.62E-06	1.38E-07
Segment 26	4.59E-03	2.85E-02	6.02E-02	1.74E-05	1.17E-06	8.80E-05	3.21E-05	5.05E-06	1.25E-07
Segment 27	2.58E-03	1.10E-02	1.71E-02	5.45E-06	4.56E-07	3.33E-05	1.21E-05	1.92E-06	3.49E-08
Segment 28	1.37E-03	8.93E-03	1.88E-02	5.33E-06	3.67E-07	2.60E-05	9.56E-06	1.52E-06	3.87E-08
Segment 29	3.88E-03	2.92E-02	4.30E-02	1.40E-05	1.21E-06	8.86E-05	3.22E-05	5.11E-06	8.71E-08
Segment 30	3.37E-03	2.28E-02	4.40E-02	1.29E-05	9.40E-07	6.69E-05	2.45E-05	3.89E-06	9.05E-08
Segment 31	5.70E-03	3.84E-02	6.82E-02	2.09E-05	1.59E-06	1.20E-04	4.34E-05	6.85E-06	1.40E-07
Segment 32	4.70E-03	3.08E-02	5.98E-02	1.77E-05	1.27E-06	9.40E-05	3.43E-05	5.41E-06	1.23E-07

Table B-12: Emission Rates of Contaminants by Road Segment - FUTURE PM PEAK

Vehicles' Weighted Emission Rates PM PEAK (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	1.18E-02	4.72E-02	2.00E-01	4.90E-05	1.88E-06	1.50E-04	5.50E-05	8.49E-06	4.25E-07
Segment 2	9.06E-03	5.49E-02	1.21E-01	3.44E-05	2.25E-06	1.70E-04	6.20E-05	9.76E-06	2.51E-07
Segment 3	2.37E-03	1.00E-02	1.70E-02	5.17E-06	4.13E-07	2.92E-05	1.07E-05	1.70E-06	3.46E-08
Segment 4	1.52E-03	8.50E-03	2.24E-02	6.03E-06	3.46E-07	2.54E-05	9.34E-06	1.47E-06	4.69E-08
Segment 5	2.02E-03	5.50E-03	1.85E-02	4.71E-06	2.22E-07	1.67E-05	6.16E-06	9.62E-07	3.90E-08
Segment 6	1.29E-03	4.16E-03	1.11E-02	2.96E-06	1.70E-07	1.23E-05	4.52E-06	7.13E-07	2.31E-08
Segment 7	5.55E-03	2.40E-02	9.06E-02	2.27E-05	9.65E-07	7.55E-05	2.77E-05	4.30E-06	1.92E-07
Segment 8	4.74E-03	2.79E-02	6.35E-02	1.80E-05	1.14E-06	8.76E-05	3.18E-05	5.00E-06	1.32E-07
Segment 9	3.91E-04	1.19E-04	1.59E-03	3.44E-07	4.11E-09	4.26E-07	1.62E-07	2.32E-08	3.44E-09
Segment 10	3.13E-04	2.74E-04	1.03E-03	2.58E-07	1.10E-08	8.53E-07	3.14E-07	4.87E-08	2.18E-09
Segment 11	4.63E-04	8.06E-05	1.99E-03	4.17E-07	2.23E-09	3.11E-07	1.23E-07	1.64E-08	4.31E-09
Segment 12	5.08E-04	1.34E-04	2.10E-03	4.51E-07	4.43E-09	4.87E-07	1.87E-07	2.64E-08	4.56E-09
Segment 13	6.51E-03	3.46E-02	9.49E-02	2.55E-05	1.41E-06	1.08E-04	3.94E-05	6.17E-06	1.99E-07
Segment 14	5.84E-03	3.03E-02	8.61E-02	2.30E-05	1.23E-06	9.51E-05	3.47E-05	5.43E-06	1.81E-07
Segment 15	2.39E-03	1.08E-02	1.61E-02	5.13E-06	4.46E-07	3.15E-05	1.15E-05	1.83E-06	3.25E-08
Segment 16	1.73E-03	8.78E-03	1.04E-02	3.63E-06	3.66E-07	2.53E-05	9.26E-06	1.48E-06	2.07E-08
Segment 17	1.80E-03	8.36E-03	1.18E-02	3.84E-06	3.47E-07	2.43E-05	8.90E-06	1.42E-06	2.38E-08
Segment 18	1.30E-03	9.47E-03	1.61E-02	4.89E-06	3.91E-07	2.76E-05	1.01E-05	1.61E-06	3.28E-08
Segment 19	5.49E-03	2.98E-02	7.90E-02	2.15E-05	1.22E-06	9.30E-05	3.39E-05	5.31E-06	1.66E-07
Segment 20	5.43E-03	2.91E-02	7.81E-02	2.12E-05	1.18E-06	9.14E-05	3.33E-05	5.21E-06	1.64E-07
Segment 21	2.43E-04	1.53E-05	1.09E-03	2.22E-07	0.00E+00	7.71E-08	3.44E-08	3.70E-09	2.36E-09
Segment 22	2.05E-04	1.30E-05	9.19E-04	1.88E-07	0.00E+00	6.52E-08	2.91E-08	3.13E-09	2.00E-09
Segment 23	9.42E-04	5.95E-05	4.22E-03	8.63E-07	0.00E+00	2.99E-07	1.34E-07	1.44E-08	9.17E-09
Segment 24	9.66E-04	6.10E-05	4.33E-03	8.85E-07	0.00E+00	3.07E-07	1.37E-07	1.47E-08	9.41E-09
Segment 25	4.26E-03	1.69E-02	7.18E-02	1.76E-05	6.72E-07	5.37E-05	1.97E-05	3.05E-06	1.53E-07
Segment 26	4.96E-03	2.69E-02	7.07E-02	1.93E-05	1.10E-06	8.47E-05	3.09E-05	4.83E-06	1.48E-07
Segment 27	1.84E-03	5.37E-03	1.68E-02	4.32E-06	2.17E-07	1.58E-05	5.83E-06	9.15E-07	3.53E-08
Segment 28	1.19E-03	4.69E-03	2.09E-02	5.04E-06	1.86E-07	1.41E-05	5.23E-06	8.11E-07	4.44E-08
Segment 29	2.52E-03	1.33E-02	3.90E-02	1.02E-05	5.42E-07	3.94E-05	1.45E-05	2.29E-06	8.18E-08
Segment 30	2.53E-03	8.87E-03	4.67E-02	1.09E-05	3.47E-07	2.64E-05	9.88E-06	1.52E-06	9.95E-08
Segment 31	4.35E-03	1.68E-02	7.44E-02	1.81E-05	6.69E-07	5.34E-05	1.96E-05	3.03E-06	1.58E-07
Segment 32	4.87E-03	2.86E-02	6.55E-02	1.85E-05	1.17E-06	8.99E-05	3.27E-05	5.13E-06	1.36E-07

Table B-13: Emission Rates of Contaminants by Road Segment - FUTURE OFF-PEAK

Vehicles' Weighted Emission Rates OFF-PEAK (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	9.58E-03	6.54E-02	1.14E-01	3.50E-05	2.70E-06	2.03E-04	7.38E-05	1.16E-05	2.33E-07
Segment 2	8.05E-03	5.79E-02	8.91E-02	2.88E-05	2.40E-06	1.81E-04	6.54E-05	1.03E-05	1.82E-07
Segment 3	1.51E-03	6.73E-03	1.07E-02	3.32E-06	2.79E-07	1.92E-05	7.07E-06	1.13E-06	2.17E-08
Segment 4	1.20E-03	8.31E-03	1.48E-02	4.48E-06	3.43E-07	2.49E-05	9.10E-06	1.44E-06	3.04E-08
Segment 5	8.67E-04	3.01E-03	7.15E-03	1.97E-06	1.23E-07	8.85E-06	3.26E-06	5.15E-07	1.49E-08
Segment 6	7.35E-04	2.47E-03	6.13E-03	1.67E-06	1.01E-07	7.30E-06	2.68E-06	4.23E-07	1.28E-08
Segment 7	5.11E-03	3.37E-02	6.26E-02	1.89E-05	1.39E-06	1.05E-04	3.81E-05	6.01E-06	1.29E-07
Segment 8	4.71E-03	3.21E-02	5.44E-02	1.70E-05	1.33E-06	1.01E-04	3.67E-05	5.78E-06	1.12E-07
Segment 9	2.73E-04	1.86E-04	9.97E-04	2.34E-07	7.27E-09	5.66E-07	2.11E-07	3.24E-08	2.13E-09
Segment 10	4.14E-04	7.87E-04	1.08E-03	3.42E-07	3.26E-08	2.07E-06	7.70E-07	1.24E-07	2.15E-09
Segment 11	7.19E-04	5.97E-04	2.28E-03	5.77E-07	2.39E-08	1.99E-06	7.22E-07	1.11E-07	4.85E-09
Segment 12	8.29E-04	1.33E-03	2.12E-03	6.54E-07	5.49E-08	3.79E-06	1.39E-06	2.22E-07	4.29E-09
Segment 13	5.83E-03	3.75E-02	7.44E-02	2.19E-05	1.55E-06	1.16E-04	4.21E-05	6.64E-06	1.54E-07
Segment 14	5.35E-03	3.77E-02	6.19E-02	1.94E-05	1.56E-06	1.17E-04	4.23E-05	6.69E-06	1.27E-07
Segment 15	1.50E-03	7.52E-03	8.85E-03	3.11E-06	3.13E-07	2.21E-05	8.04E-06	1.28E-06	1.75E-08
Segment 16	1.27E-03	6.29E-03	7.77E-03	2.66E-06	2.62E-07	1.82E-05	6.66E-06	1.06E-06	1.54E-08
Segment 17	1.36E-03	6.32E-03	8.77E-03	2.88E-06	2.62E-07	1.85E-05	6.76E-06	1.08E-06	1.76E-08
Segment 18	9.24E-04	7.61E-03	9.75E-03	3.31E-06	3.16E-07	2.24E-05	8.17E-06	1.30E-06	1.95E-08
Segment 19	4.86E-03	3.34E-02	5.90E-02	1.80E-05	1.38E-06	1.02E-04	3.71E-05	5.87E-06	1.21E-07
Segment 20	4.70E-03	3.35E-02	5.40E-02	1.71E-05	1.39E-06	1.03E-04	3.75E-05	5.93E-06	1.10E-07
Segment 21	1.26E-04	7.98E-06	5.66E-04	1.16E-07	0.00E+00	4.01E-08	1.79E-08	1.93E-09	1.23E-09
Segment 22	1.26E-04	7.94E-06	5.63E-04	1.15E-07	0.00E+00	3.99E-08	1.78E-08	1.92E-09	1.22E-09
Segment 23	7.16E-04	4.02E-04	2.60E-03	6.03E-07	1.55E-08	1.37E-06	5.04E-07	7.60E-08	5.58E-09
Segment 24	6.99E-04	4.02E-04	2.52E-03	5.88E-07	1.55E-08	1.36E-06	5.02E-07	7.58E-08	5.42E-09
Segment 25	4.80E-03	3.11E-02	5.85E-02	1.76E-05	1.28E-06	9.82E-05	3.56E-05	5.60E-06	1.21E-07
Segment 26	4.45E-03	2.97E-02	5.29E-02	1.63E-05	1.23E-06	9.35E-05	3.39E-05	5.34E-06	1.09E-07
Segment 27	1.58E-03	5.57E-03	1.24E-02	3.51E-06	2.29E-07	1.69E-05	6.16E-06	9.72E-07	2.58E-08
Segment 28	9.69E-04	5.78E-03	1.35E-02	3.77E-06	2.37E-07	1.74E-05	6.38E-06	1.01E-06	2.82E-08
Segment 29	2.28E-03	1.38E-02	3.11E-02	8.79E-06	5.68E-07	4.22E-05	1.54E-05	2.43E-06	6.47E-08
Segment 30	2.48E-03	1.54E-02	3.32E-02	9.48E-06	6.32E-07	4.68E-05	1.71E-05	2.69E-06	6.88E-08
Segment 31	4.88E-03	3.27E-02	5.80E-02	1.78E-05	1.35E-06	1.03E-04	3.72E-05	5.87E-06	1.19E-07
Segment 32	4.20E-03	2.71E-02	5.22E-02	1.56E-05	1.12E-06	8.47E-05	3.07E-05	4.84E-06	1.08E-07

Table B-14: Emission Rates of Contaminants by Road Segment - FUTURE Nighttime

Vehicles' Weighted Emission Rates NIGHTTIME (g/s)									
Road Segments (60 km/hr)	$PM_{2.5}$	NO_x	CO	Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Benzo(a)pyrene
Segment 1	9.49E-03	6.18E-02	1.13E-01	3.48E-05	2.55E-06	2.02E-04	7.28E-05	1.14E-05	2.33E-07
Segment 2	7.98E-03	5.51E-02	8.84E-02	2.86E-05	2.28E-06	1.80E-04	6.48E-05	1.02E-05	1.82E-07
Segment 3	1.46E-03	4.11E-03	1.04E-02	2.90E-06	1.68E-07	1.35E-05	4.89E-06	7.63E-07	2.18E-08
Segment 4	1.16E-03	6.71E-03	1.46E-02	4.25E-06	2.76E-07	2.21E-05	7.95E-06	1.24E-06	3.04E-08
Segment 5	8.52E-04	2.30E-03	7.03E-03	1.87E-06	9.32E-08	7.60E-06	2.75E-06	4.28E-07	1.49E-08
Segment 6	7.24E-04	1.97E-03	6.05E-03	1.61E-06	7.99E-08	6.52E-06	2.36E-06	3.67E-07	1.28E-08
Segment 7	5.07E-03	3.22E-02	6.22E-02	1.88E-05	1.33E-06	1.06E-04	3.81E-05	5.97E-06	1.29E-07
Segment 8	4.71E-03	3.24E-02	5.42E-02	1.73E-05	1.34E-06	1.06E-04	3.82E-05	6.00E-06	1.12E-07
Segment 9	2.73E-04	2.02E-04	9.94E-04	2.40E-07	7.96E-09	6.77E-07	2.48E-07	3.79E-08	2.12E-09
Segment 10	4.03E-04	2.42E-04	1.01E-03	2.52E-07	9.68E-09	8.09E-07	2.95E-07	4.54E-08	2.16E-09
Segment 11	7.22E-04	8.07E-04	2.30E-03	6.21E-07	3.28E-08	2.66E-06	9.64E-07	1.50E-07	4.84E-09
Segment 12	8.18E-04	8.11E-04	2.05E-03	5.72E-07	3.32E-08	2.67E-06	9.65E-07	1.51E-07	4.30E-09
Segment 13	5.77E-03	3.47E-02	7.37E-02	2.16E-05	1.43E-06	1.14E-04	4.11E-05	6.43E-06	1.54E-07
Segment 14	5.28E-03	3.45E-02	6.13E-02	1.91E-05	1.43E-06	1.13E-04	4.07E-05	6.38E-06	1.27E-07
Segment 15	1.46E-03	5.14E-03	8.54E-03	2.73E-06	2.13E-07	1.68E-05	6.05E-06	9.51E-07	1.76E-08
Segment 16	1.22E-03	4.00E-03	7.47E-03	2.29E-06	1.65E-07	1.31E-05	4.72E-06	7.41E-07	1.55E-08
Segment 17	1.32E-03	4.36E-03	8.51E-03	2.57E-06	1.80E-07	1.43E-05	5.15E-06	8.07E-07	1.77E-08
Segment 18	8.79E-04	5.34E-03	9.45E-03	2.95E-06	2.21E-07	1.75E-05	6.29E-06	9.88E-07	1.95E-08
Segment 19	4.77E-03	2.92E-02	5.83E-02	1.75E-05	1.20E-06	9.57E-05	3.45E-05	5.41E-06	1.21E-07
Segment 20	4.62E-03	3.01E-02	5.34E-02	1.66E-05	1.24E-06	9.85E-05	3.55E-05	5.57E-06	1.10E-07
Segment 21	1.27E-04	6.08E-05	5.69E-04	1.27E-07	2.24E-09	2.11E-07	7.88E-08	1.16E-08	1.23E-09
Segment 22	1.27E-04	6.05E-05	5.66E-04	1.26E-07	2.23E-09	2.10E-07	7.84E-08	1.16E-08	1.22E-09
Segment 23	7.20E-04	6.43E-04	2.61E-03	6.53E-07	2.57E-08	2.14E-06	7.81E-07	1.20E-07	5.57E-09
Segment 24	7.03E-04	6.35E-04	2.54E-03	6.36E-07	2.54E-08	2.12E-06	7.71E-07	1.19E-07	5.40E-09
Segment 25	4.79E-03	3.15E-02	5.82E-02	1.79E-05	1.30E-06	1.03E-04	3.71E-05	5.82E-06	1.21E-07
Segment 26	4.44E-03	2.96E-02	5.27E-02	1.64E-05	1.22E-06	9.69E-05	3.49E-05	5.47E-06	1.09E-07
Segment 27	1.57E-03	4.83E-03	1.23E-02	3.42E-06	1.98E-07	1.59E-05	5.75E-06	8.97E-07	2.58E-08
Segment 28	9.50E-04	4.98E-03	1.34E-02	3.67E-06	2.03E-07	1.64E-05	5.94E-06	9.25E-07	2.81E-08
Segment 29	2.25E-03	1.24E-02	3.08E-02	8.64E-06	5.07E-07	4.08E-05	1.47E-05	2.30E-06	6.47E-08
Segment 30	2.44E-03	1.36E-02	3.28E-02	9.27E-06	5.56E-07	4.47E-05	1.61E-05	2.52E-06	6.88E-08
Segment 31	4.86E-03	3.23E-02	5.77E-02	1.79E-05	1.33E-06	1.06E-04	3.80E-05	5.97E-06	1.19E-07
Segment 32	4.18E-03	2.67E-02	5.19E-02	1.57E-05	1.10E-06	8.74E-05	3.15E-05	4.94E-06	1.08E-07

Appendix C

Individual Sensitive Receptor Results

PM25 - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
PM25	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	14.2	27.0	0.19	1.1	0.49	0.77
PM25	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	14.2	27.0	0.21	1.1	0.51	0.76
PM25	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	14.2	27.0	0.13	0.8	0.34	0.51
PM25	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	14.2	27.0	0.38	1.8	0.79	1.1
PM25	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	14.2	27.0	0.06	0.44	0.16	0.25
PM25	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	14.2	27.0	0.33	1.5	0.69	0.99
PM25	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	14.2	27.0	0.09	0.62	0.25	0.38
PM25	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	14.2	27.0	0.05	0.41	0.16	0.25
PM25	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	14.2	27.0	0.05	0.56	0.16	0.24
PM25	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	14.2	27.0	0.13	0.74	0.29	0.43
PM25	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	14.2	27.0	0.05	0.36	0.13	0.2
PM25	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	14.2	27.0	0.48	2.2	0.95	1.4
PM25	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	14.2	27.0	0.36	1.7	0.81	1.2
PM25	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	14.2	27.0	0.11	0.91	0.36	0.56
PM25	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	14.2	27.0	0.02	0.26	0.09	0.14
PM25	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	14.2	27.0	0.01	0.24	0.07	0.13
PM25	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	14.2	27.0	0.57	2.6	1.1	1.6
PM25	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	14.2	27.0	1.3	5	2.4	3.3
PM25	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	14.2	27.0	0.64	3	1.4	1.9
PM25	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	14.2	27.0	0.15	0.86	0.37	0.59
PM25	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	14.2	27.0	0.16	0.85	0.39	0.59
PM25	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	14.2	27.0	0.1	0.63	0.27	0.41
PM25	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	14.2	27.0	0.3	1.4	0.61	0.87
PM25	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	14.2	27.0	0.05	0.34	0.13	0.19
PM25	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	14.2	27.0	0.26	1.2	0.55	0.78
PM25	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	14.2	27.0	0.07	0.5	0.2	0.3
PM25	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	14.2	27.0	0.04	0.31	0.12	0.19
PM25	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	14.2	27.0	0.04	0.44	0.12	0.19
PM25	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	14.2	27.0	0.1	0.58	0.23	0.34
PM25	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	14.2	27.0	0.04	0.27	0.1	0.15
PM25	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	14.2	27.0	0.38	1.7	0.75	1.1
PM25	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	14.2	27.0	0.29	1.3	0.64	0.94
PM25	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	14.2	27.0	0.08	0.71	0.28	0.43
PM25	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	14.2	27.0	0.02	0.2	0.07	0.11
PM25	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	14.2	27.0	0.01	0.19	0.05	0.1
PM25	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	14.2	27.0	0.44	2	0.87	1.2
PM25	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	14.2	27.0	1	3.8	1.8	2.6
PM25	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	14.2	27.0	0.51	2.3	1.1	1.5

PM25 - Annual

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
PM25	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Current	µg/m³	8.1	8.8		0.24		
PM25	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Current	µg/m³	8.1	8.8		0.25		
PM25	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Current	µg/m³	8.1	8.8		0.16		
PM25	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Current	µg/m³	8.1	8.8		0.44		
PM25	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Current	µg/m³	8.1	8.8		0.08		
PM25	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Current	µg/m³	8.1	8.8		0.39		
PM25	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Current	µg/m³	8.1	8.8		0.11		
PM25	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Current	µg/m³	8.1	8.8		0.07		
PM25	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Current	µg/m³	8.1	8.8		0.07		
PM25	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Current	µg/m³	8.1	8.8		0.15		
PM25	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Current	µg/m³	8.1	8.8		0.06		
PM25	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Current	µg/m³	8.1	8.8		0.54		
PM25	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Current	µg/m³	8.1	8.8		0.42		
PM25	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Current	µg/m³	8.1	8.8		0.15		
PM25	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Current	µg/m³	8.1	8.8		0.04		
PM25	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Current	µg/m³	8.1	8.8		0.03		
PM25	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Current	µg/m³	8.1	8.8		0.65		
PM25	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Current	µg/m³	8.1	8.8		1.4		
PM25	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Current	µg/m³	8.1	8.8		0.73		
PM25	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Future	µg/m³	8.1	8.8		0.18		
PM25	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Future	µg/m³	8.1	8.8		0.19		
PM25	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Future	µg/m³	8.1	8.8		0.13		
PM25	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Future	µg/m³	8.1	8.8		0.34		
PM25	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Future	µg/m³	8.1	8.8		0.06		
PM25	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Future	µg/m³	8.1	8.8		0.3		
PM25	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Future	µg/m³	8.1	8.8		0.09		
PM25	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Future	µg/m³	8.1	8.8		0.05		
PM25	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Future	µg/m³	8.1	8.8		0.05		
PM25	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Future	µg/m³	8.1	8.8		0.12		
PM25	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Future	µg/m³	8.1	8.8		0.05		
PM25	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Future	µg/m³	8.1	8.8		0.43		
PM25	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Future	µg/m³	8.1	8.8		0.33		
PM25	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Future	µg/m³	8.1	8.8		0.12		
PM25	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Future	µg/m³	8.1	8.8		0.03		
PM25	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Future	µg/m³	8.1	8.8		0.02		
PM25	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Future	µg/m³	8.1	8.8		0.5		
PM25	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Future	µg/m³	8.1	8.8		1.1		
PM25	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Future	µg/m³	8.1	8.8		0.58		

NOX - 1-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
NOX	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Current	µg/m³	62.0	400.0	1.6	103	10	32.4
NOX	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Current	µg/m³	62.0	400.0	2	108	11	35.1
NOX	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Current	µg/m³	62.0	400.0	1.1	81.4	6.8	24.9
NOX	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Current	µg/m³	62.0	400.0	4.2	133	17.9	48.5
NOX	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Current	µg/m³	62.0	400.0	0.57	44.1	3.5	10.7
NOX	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Current	µg/m³	62.0	400.0	3.7	124	16.6	43.6
NOX	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Current	µg/m³	62.0	400.0	0.68	48.2	5.2	18.5
NOX	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Current	µg/m³	62.0	400.0	0.29	40.7	3	12.5
NOX	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Current	µg/m³	62.0	400.0	0.29	41.6	3.2	10.8
NOX	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Current	µg/m³	62.0	400.0	1.2	61.6	6.5	19.5
NOX	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Current	µg/m³	62.0	400.0	0.43	29.3	3	8.4
NOX	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Current	µg/m³	62.0	400.0	5.3	189	22.1	62.3
NOX	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Current	µg/m³	62.0	400.0	3.7	148	17.7	53.6
NOX	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Current	µg/m³	62.0	400.0	0.68	76.3	6.7	26.2
NOX	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Current	µg/m³	62.0	400.0	0.13	21.8	1.7	6.8
NOX	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Current	µg/m³	62.0	400.0	0.07	65.9	1	3.7
NOX	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Current	µg/m³	62.0	400.0	6.9	200	28.1	76.8
NOX	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Current	µg/m³	62.0	400.0	17.2	435	57.9	152
NOX	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Current	µg/m³	62.0	400.0	7.2	236	30.7	86.1
NOX	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Future	µg/m³	62.0	400.0	0.41	30.6	2.5	8.1
NOX	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Future	µg/m³	62.0	400.0	0.5	31.4	2.8	8.9
NOX	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Future	µg/m³	62.0	400.0	0.28	20.4	1.7	6.3
NOX	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Future	µg/m³	62.0	400.0	1.1	34.8	4.5	12.3
NOX	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Future	µg/m³	62.0	400.0	0.15	11.8	0.89	2.8
NOX	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Future	µg/m³	62.0	400.0	0.94	34.7	4.2	11.1
NOX	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Future	µg/m³	62.0	400.0	0.18	13.9	1.3	4.7
NOX	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Future	µg/m³	62.0	400.0	0.07	12.1	0.76	3.1
NOX	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Future	µg/m³	62.0	400.0	0.07	11.5	0.82	2.8
NOX	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Future	µg/m³	62.0	400.0	0.3	16.4	1.6	4.9
NOX	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Future	µg/m³	62.0	400.0	0.11	8.5	0.77	2.2
NOX	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Future	µg/m³	62.0	400.0	1.3	49.9	5.5	15.7
NOX	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Future	µg/m³	62.0	400.0	0.95	40.9	4.5	13.8
NOX	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Future	µg/m³	62.0	400.0	0.17	21.2	1.7	6.7
NOX	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Future	µg/m³	62.0	400.0	0.03	6	0.43	1.7
NOX	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Future	µg/m³	62.0	400.0	0.02	17.8	0.26	0.95
NOX	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Future	µg/m³	62.0	400.0	1.8	49.8	7.1	19.7
NOX	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Future	µg/m³	62.0	400.0	4.3	123	14.9	39.2
NOX	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Future	µg/m³	62.0	400.0	1.8	65.1	7.7	21.6

NOX - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
NOX	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	50.5	200.0	3.4	19.2	8.6	13.3
NOX	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	50.5	200.0	3.9	19.6	9.3	14.1
NOX	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	50.5	200.0	2.4	14.5	6.2	9.2
NOX	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	50.5	200.0	6.9	29.9	14	20.1
NOX	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	50.5	200.0	1.2	8.3	2.9	4.5
NOX	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	50.5	200.0	6.2	27.9	13.1	18.8
NOX	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	50.5	200.0	1.7	11.3	4.5	6.9
NOX	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	50.5	200.0	0.92	7.4	2.9	4.5
NOX	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	50.5	200.0	0.88	10.4	2.9	4.5
NOX	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	50.5	200.0	2.3	13	5.2	7.7
NOX	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	50.5	200.0	0.9	6.5	2.2	3.5
NOX	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	50.5	200.0	8.7	37.5	17.1	25.2
NOX	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	50.5	200.0	6.6	31.2	14.9	21.6
NOX	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	50.5	200.0	2.1	17.3	7	10.8
NOX	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	50.5	200.0	0.45	4.6	1.7	2.6
NOX	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	50.5	200.0	0.25	4.5	1.2	2.5
NOX	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	50.5	200.0	11.1	49.9	21.8	31.4
NOX	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	50.5	200.0	25.7	96.6	47.2	66.6
NOX	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	50.5	200.0	11.8	56.1	25.8	35.9
NOX	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	50.5	200.0	0.86	4.9	2.2	3.4
NOX	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	50.5	200.0	0.98	5	2.4	3.5
NOX	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	50.5	200.0	0.61	3.7	1.6	2.4
NOX	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	50.5	200.0	1.8	7.6	3.6	5.1
NOX	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	50.5	200.0	0.3	2.1	0.75	1.1
NOX	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	50.5	200.0	1.6	7.1	3.3	4.8
NOX	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	50.5	200.0	0.43	2.9	1.1	1.7
NOX	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	50.5	200.0	0.23	1.9	0.75	1.2
NOX	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	50.5	200.0	0.22	2.7	0.73	1.2
NOX	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	50.5	200.0	0.57	3.3	1.3	2
NOX	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	50.5	200.0	0.23	1.7	0.58	0.9
NOX	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	50.5	200.0	2.2	9.5	4.3	6.4
NOX	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	50.5	200.0	1.7	8	3.8	5.6
NOX	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	50.5	200.0	0.53	4.6	1.8	2.8
NOX	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	50.5	200.0	0.11	1.2	0.42	0.68
NOX	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	50.5	200.0	0.06	1.2	0.3	0.63
NOX	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	50.5	200.0	2.8	12.7	5.6	8
NOX	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	50.5	200.0	6.6	25	12.2	17.1
NOX	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	50.5	200.0	3	14.2	6.5	9.1

NOX - Annual

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
NOX	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Current	µg/m³	33.0	60.0		4.2		
NOX	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Current	µg/m³	33.0	60.0		4.6		
NOX	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Current	µg/m³	33.0	60.0		2.9		
NOX	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Current	µg/m³	33.0	60.0		7.8		
NOX	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Current	µg/m³	33.0	60.0		1.5		
NOX	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Current	µg/m³	33.0	60.0		7.2		
NOX	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Current	µg/m³	33.0	60.0		2.1		
NOX	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Current	µg/m³	33.0	60.0		1.3		
NOX	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Current	µg/m³	33.0	60.0		1.3		
NOX	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Current	µg/m³	33.0	60.0		2.7		
NOX	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Current	µg/m³	33.0	60.0		1.1		
NOX	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Current	µg/m³	33.0	60.0		9.8		
NOX	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Current	µg/m³	33.0	60.0		7.6		
NOX	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Current	µg/m³	33.0	60.0		3		
NOX	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Current	µg/m³	33.0	60.0		0.68		
NOX	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Current	µg/m³	33.0	60.0		0.48		
NOX	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Current	µg/m³	33.0	60.0		12.6		
NOX	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Current	µg/m³	33.0	60.0		27.9		
NOX	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Current	µg/m³	33.0	60.0		13.5		
NOX	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Future	µg/m³	33.0	60.0		1.1		
NOX	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Future	µg/m³	33.0	60.0		1.2		
NOX	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Future	µg/m³	33.0	60.0		0.74		
NOX	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Future	µg/m³	33.0	60.0		2		
NOX	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Future	µg/m³	33.0	60.0		0.37		
NOX	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Future	µg/m³	33.0	60.0		1.8		
NOX	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Future	µg/m³	33.0	60.0		0.53		
NOX	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Future	µg/m³	33.0	60.0		0.32		
NOX	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Future	µg/m³	33.0	60.0		0.32		
NOX	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Future	µg/m³	33.0	60.0		0.68		
NOX	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Future	µg/m³	33.0	60.0		0.28		
NOX	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Future	µg/m³	33.0	60.0		2.5		
NOX	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Future	µg/m³	33.0	60.0		1.9		
NOX	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Future	µg/m³	33.0	60.0		0.76		
NOX	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Future	µg/m³	33.0	60.0		0.17		
NOX	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Future	µg/m³	33.0	60.0		0.12		
NOX	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Future	µg/m³	33.0	60.0		3.2		
NOX	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Future	µg/m³	33.0	60.0		7.2		
NOX	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Future	µg/m³	33.0	60.0		3.4		

CO - 1-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
CO	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Current	µg/m³	449.7	36200.0	1.9	131	11.5	
CO	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Current	µg/m³	449.7	36200.0	2.3	153	12.7	
CO	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Current	µg/m³	449.7	36200.0	1.3	115	8.1	
CO	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Current	µg/m³	449.7	36200.0	5.2	212	21	
CO	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Current	µg/m³	449.7	36200.0	0.69	58.5	4.2	
CO	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Current	µg/m³	449.7	36200.0	4.8	160	20.5	
CO	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Current	µg/m³	449.7	36200.0	0.82	62.6	6.2	
CO	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Current	µg/m³	449.7	36200.0	0.33	60.5	3.5	
CO	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Current	µg/m³	449.7	36200.0	0.35	55.3	3.9	
CO	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Current	µg/m³	449.7	36200.0	1.4	101	7.6	
CO	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Current	µg/m³	449.7	36200.0	0.49	44.1	3.6	
CO	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Current	µg/m³	449.7	36200.0	6.4	285	25.2	
CO	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Current	µg/m³	449.7	36200.0	4.4	184	21.1	
CO	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Current	µg/m³	449.7	36200.0	0.77	101	8.1	
CO	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Current	µg/m³	449.7	36200.0	0.16	29	2.1	
CO	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Current	µg/m³	449.7	36200.0	0.09	83.3	1.3	
CO	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Current	µg/m³	449.7	36200.0	8.3	266	31.6	
CO	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Current	µg/m³	449.7	36200.0	19.4	481	66.7	
CO	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Current	µg/m³	449.7	36200.0	9.3	302	37.2	
CO	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Future	µg/m³	449.7	36200.0	0.76	51	4.6	
CO	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Future	µg/m³	449.7	36200.0	0.92	59.4	5.1	
CO	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Future	µg/m³	449.7	36200.0	0.52	44.3	3.2	
CO	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Future	µg/m³	449.7	36200.0	2.1	81.5	8.3	
CO	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Future	µg/m³	449.7	36200.0	0.28	22.7	1.7	
CO	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Future	µg/m³	449.7	36200.0	1.9	58	8.1	
CO	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Future	µg/m³	449.7	36200.0	0.33	24.5	2.5	
CO	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Future	µg/m³	449.7	36200.0	0.13	23.3	1.4	
CO	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Future	µg/m³	449.7	36200.0	0.14	20	1.6	
CO	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Future	µg/m³	449.7	36200.0	0.56	38.4	3	
CO	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Future	µg/m³	449.7	36200.0	0.2	16.9	1.5	
CO	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Future	µg/m³	449.7	36200.0	2.6	111	10.1	
CO	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Future	µg/m³	449.7	36200.0	1.8	70.9	8.4	
CO	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Future	µg/m³	449.7	36200.0	0.31	39.3	3.2	
CO	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Future	µg/m³	449.7	36200.0	0.06	10.7	0.83	
CO	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Future	µg/m³	449.7	36200.0	0.03	31.5	0.51	
CO	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Future	µg/m³	449.7	36200.0	3.3	102	12.4	
CO	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Future	µg/m³	449.7	36200.0	7.7	184	26.4	
CO	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Future	µg/m³	449.7	36200.0	3.8	115	15	

CO - 8-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
CO	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	8-HR	Current	µg/m³	436.2	15700.0	2.4	42.4	12.6	
CO	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	8-HR	Current	µg/m³	436.2	15700.0	2.8	50.3	13.9	
CO	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	8-HR	Current	µg/m³	436.2	15700.0	1.6	35.1	9.4	
CO	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	8-HR	Current	µg/m³	436.2	15700.0	6.1	85.9	22.1	
CO	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	8-HR	Current	µg/m³	436.2	15700.0	0.87	20.3	4.5	
CO	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	8-HR	Current	µg/m³	436.2	15700.0	5.7	65.2	21.5	
CO	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	8-HR	Current	µg/m³	436.2	15700.0	1.1	25.4	7.1	
CO	R8	315 The Westway, Etobicoke, ON, M9R 1H1	8-HR	Current	µg/m³	436.2	15700.0	0.54	15.8	4.5	
CO	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	8-HR	Current	µg/m³	436.2	15700.0	0.57	21.6	4.3	
CO	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	8-HR	Current	µg/m³	436.2	15700.0	1.8	39.8	8	
CO	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	8-HR	Current	µg/m³	436.2	15700.0	0.66	17.2	3.4	
CO	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	8-HR	Current	µg/m³	436.2	15700.0	7.5	95.4	27.3	
CO	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	8-HR	Current	µg/m³	436.2	15700.0	5.1	76.1	22.3	
CO	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	8-HR	Current	µg/m³	436.2	15700.0	1.4	45.6	10.2	
CO	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	8-HR	Current	µg/m³	436.2	15700.0	0.26	12.6	2.5	
CO	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	8-HR	Current	µg/m³	436.2	15700.0	0.17	14.6	1.4	
CO	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	8-HR	Current	µg/m³	436.2	15700.0	9.6	107	34.3	
CO	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	8-HR	Current	µg/m³	436.2	15700.0	22.2	206	69.1	
CO	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	8-HR	Current	µg/m³	436.2	15700.0	10.5	119	40.2	
CO	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	8-HR	Future	µg/m³	436.2	15700.0	0.98	16.5	5	
CO	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	8-HR	Future	µg/m³	436.2	15700.0	1.1	19.4	5.6	
CO	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	8-HR	Future	µg/m³	436.2	15700.0	0.66	13.6	3.8	
CO	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	8-HR	Future	µg/m³	436.2	15700.0	2.4	33.4	8.7	
CO	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	8-HR	Future	µg/m³	436.2	15700.0	0.35	7.8	1.8	
CO	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	8-HR	Future	µg/m³	436.2	15700.0	2.3	25.2	8.6	
CO	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	8-HR	Future	µg/m³	436.2	15700.0	0.45	10.1	2.9	
CO	R8	315 The Westway, Etobicoke, ON, M9R 1H1	8-HR	Future	µg/m³	436.2	15700.0	0.22	6.2	1.8	
CO	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	8-HR	Future	µg/m³	436.2	15700.0	0.23	8.4	1.7	
CO	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	8-HR	Future	µg/m³	436.2	15700.0	0.73	15.5	3.2	
CO	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	8-HR	Future	µg/m³	436.2	15700.0	0.27	6.7	1.3	
CO	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	8-HR	Future	µg/m³	436.2	15700.0	3	37.3	10.9	
CO	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	8-HR	Future	µg/m³	436.2	15700.0	2.1	29.9	8.9	
CO	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	8-HR	Future	µg/m³	436.2	15700.0	0.54	17.5	4	
CO	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	8-HR	Future	µg/m³	436.2	15700.0	0.1	5.2	0.99	
CO	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	8-HR	Future	µg/m³	436.2	15700.0	0.07	5.7	0.55	
CO	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	8-HR	Future	µg/m³	436.2	15700.0	3.8	41.7	13.5	
CO	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	8-HR	Future	µg/m³	436.2	15700.0	8.9	80	27.4	
CO	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	8-HR	Future	µg/m³	436.2	15700.0	4.3	47.3	16	

Acrolein - 1-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Acrolein	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Current	µg/m³	0	4.5	0.0003	0.02	0.002	
Acrolein	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Current	µg/m³	0	4.5	0.0004	0.02	0.002	
Acrolein	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Current	µg/m³	0	4.5	0.0002	0.02	0.001	
Acrolein	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Current	µg/m³	0	4.5	0.0009	0.03	0.004	
Acrolein	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Current	µg/m³	0	4.5	0.0001	0.009	0.0007	
Acrolein	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Current	µg/m³	0	4.5	0.0008	0.02	0.004	
Acrolein	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Current	µg/m³	0	4.5	0.0001	0.009	0.001	
Acrolein	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Current	µg/m³	0	4.5	0.00006	0.008	0.0006	
Acrolein	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Current	µg/m³	0	4.5	0.00006	0.008	0.0007	
Acrolein	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Current	µg/m³	0	4.5	0.0003	0.01	0.001	
Acrolein	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Current	µg/m³	0	4.5	0.00009	0.006	0.0007	
Acrolein	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Current	µg/m³	0	4.5	0.001	0.04	0.005	
Acrolein	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Current	µg/m³	0	4.5	0.0008	0.03	0.004	
Acrolein	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Current	µg/m³	0	4.5	0.0001	0.01	0.001	
Acrolein	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Current	µg/m³	0	4.5	0.00003	0.004	0.0004	
Acrolein	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Current	µg/m³	0	4.5	0.00001	0.01	0.0002	
Acrolein	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Current	µg/m³	0	4.5	0.001	0.04	0.006	
Acrolein	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Current	µg/m³	0	4.5	0.004	0.09	0.01	
Acrolein	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Current	µg/m³	0	4.5	0.001	0.05	0.007	
Acrolein	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Future	µg/m³	0	4.5	0.00007	0.005	0.0005	
Acrolein	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Future	µg/m³	0	4.5	0.00009	0.005	0.0005	
Acrolein	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Future	µg/m³	0	4.5	0.00005	0.004	0.0003	
Acrolein	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Future	µg/m³	0	4.5	0.0002	0.006	0.0008	
Acrolein	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Future	µg/m³	0	4.5	0.00003	0.002	0.0002	
Acrolein	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Future	µg/m³	0	4.5	0.0002	0.006	0.0008	
Acrolein	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Future	µg/m³	0	4.5	0.00003	0.002	0.0002	
Acrolein	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Future	µg/m³	0	4.5	0.00001	0.002	0.0001	
Acrolein	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Future	µg/m³	0	4.5	0.00001	0.002	0.0002	
Acrolein	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Future	µg/m³	0	4.5	0.00005	0.003	0.0003	
Acrolein	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Future	µg/m³	0	4.5	0.00002	0.001	0.0001	
Acrolein	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Future	µg/m³	0	4.5	0.0002	0.009	0.001	
Acrolein	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Future	µg/m³	0	4.5	0.0002	0.007	0.0008	
Acrolein	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Future	µg/m³	0	4.5	0.00003	0.004	0.0003	
Acrolein	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Future	µg/m³	0	4.5	0.000006	0.001	0.00008	
Acrolein	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Future	µg/m³	0	4.5	0.000003	0.003	0.00005	
Acrolein	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Future	µg/m³	0	4.5	0.0003	0.009	0.001	
Acrolein	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Future	µg/m³	0	4.5	0.0008	0.02	0.003	
Acrolein	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Future	µg/m³	0	4.5	0.0003	0.01	0.001	

Acrolein - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Acrolein	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	0.2	0.4	0.0007	0.004	0.002	
Acrolein	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	0.2	0.4	0.0008	0.004	0.002	
Acrolein	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	0.2	0.4	0.0005	0.003	0.001	
Acrolein	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	0.2	0.4	0.001	0.006	0.003	
Acrolein	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	0.2	0.4	0.0002	0.002	0.0006	
Acrolein	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	0.2	0.4	0.001	0.006	0.003	
Acrolein	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	0.2	0.4	0.0003	0.002	0.0009	
Acrolein	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	0.2	0.4	0.0002	0.002	0.0006	
Acrolein	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	0.2	0.4	0.0002	0.002	0.0006	
Acrolein	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	0.2	0.4	0.0005	0.003	0.001	
Acrolein	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	0.2	0.4	0.0002	0.001	0.0005	
Acrolein	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	0.2	0.4	0.002	0.008	0.004	
Acrolein	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	0.2	0.4	0.001	0.007	0.003	
Acrolein	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	0.2	0.4	0.0004	0.004	0.001	
Acrolein	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	0.2	0.4	0.00009	0.001	0.0003	
Acrolein	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	0.2	0.4	0.00005	0.0009	0.0003	
Acrolein	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	0.2	0.4	0.002	0.01	0.005	
Acrolein	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	0.2	0.4	0.005	0.02	0.01	
Acrolein	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	0.2	0.4	0.002	0.01	0.005	
Acrolein	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	0.2	0.4	0.0002	0.0009	0.0004	
Acrolein	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	0.2	0.4	0.0002	0.0009	0.0004	
Acrolein	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	0.2	0.4	0.0001	0.0007	0.0003	
Acrolein	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	0.2	0.4	0.0003	0.001	0.0006	
Acrolein	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	0.2	0.4	0.00005	0.0004	0.0001	
Acrolein	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	0.2	0.4	0.0003	0.001	0.0006	
Acrolein	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	0.2	0.4	0.00008	0.0005	0.0002	
Acrolein	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	0.2	0.4	0.00004	0.0003	0.0001	
Acrolein	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	0.2	0.4	0.00004	0.0005	0.0001	
Acrolein	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	0.2	0.4	0.0001	0.0006	0.0002	
Acrolein	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	0.2	0.4	0.00004	0.0003	0.0001	
Acrolein	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	0.2	0.4	0.0004	0.002	0.0008	
Acrolein	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	0.2	0.4	0.0003	0.001	0.0007	
Acrolein	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	0.2	0.4	0.0001	0.0008	0.0003	
Acrolein	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	0.2	0.4	0.00002	0.0002	0.00008	
Acrolein	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	0.2	0.4	0.00001	0.0002	0.00006	
Acrolein	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	0.2	0.4	0.0005	0.002	0.001	
Acrolein	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	0.2	0.4	0.001	0.004	0.002	
Acrolein	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	0.2	0.4	0.0005	0.003	0.001	

Benzene - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Benzene	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	0.7	2.3	0.003	0.01	0.006	
Benzene	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	0.7	2.3	0.003	0.01	0.007	
Benzene	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	0.7	2.3	0.002	0.01	0.005	
Benzene	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	0.7	2.3	0.005	0.02	0.01	
Benzene	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	0.7	2.3	0.0009	0.006	0.002	
Benzene	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	0.7	2.3	0.005	0.02	0.01	
Benzene	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	0.7	2.3	0.001	0.009	0.003	
Benzene	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	0.7	2.3	0.0007	0.005	0.002	
Benzene	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	0.7	2.3	0.0007	0.008	0.002	
Benzene	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	0.7	2.3	0.002	0.01	0.004	
Benzene	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	0.7	2.3	0.0007	0.005	0.002	
Benzene	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	0.7	2.3	0.007	0.03	0.01	
Benzene	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	0.7	2.3	0.005	0.02	0.01	
Benzene	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	0.7	2.3	0.002	0.01	0.005	
Benzene	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	0.7	2.3	0.0003	0.004	0.001	
Benzene	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	0.7	2.3	0.0002	0.004	0.0009	
Benzene	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	0.7	2.3	0.008	0.04	0.02	
Benzene	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	0.7	2.3	0.02	0.07	0.03	
Benzene	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	0.7	2.3	0.009	0.05	0.02	
Benzene	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	0.7	2.3	0.0005	0.003	0.001	
Benzene	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	0.7	2.3	0.0005	0.003	0.001	
Benzene	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	0.7	2.3	0.0003	0.002	0.0009	
Benzene	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	0.7	2.3	0.001	0.004	0.002	
Benzene	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	0.7	2.3	0.0002	0.001	0.0004	
Benzene	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	0.7	2.3	0.0009	0.004	0.002	
Benzene	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	0.7	2.3	0.0002	0.002	0.0007	
Benzene	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	0.7	2.3	0.0001	0.001	0.0004	
Benzene	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	0.7	2.3	0.0001	0.002	0.0004	
Benzene	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	0.7	2.3	0.0003	0.002	0.0008	
Benzene	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	0.7	2.3	0.0001	0.0009	0.0003	
Benzene	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	0.7	2.3	0.001	0.005	0.002	
Benzene	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	0.7	2.3	0.0009	0.004	0.002	
Benzene	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	0.7	2.3	0.0003	0.002	0.001	
Benzene	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	0.7	2.3	0.00006	0.0007	0.0002	
Benzene	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	0.7	2.3	0.00004	0.0007	0.0002	
Benzene	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	0.7	2.3	0.002	0.007	0.003	
Benzene	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	0.7	2.3	0.004	0.01	0.007	
Benzene	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	0.7	2.3	0.002	0.008	0.004	

Benzene - Annual

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Benzene	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Current	µg/m³	0.4	0.5		0.003		
Benzene	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Current	µg/m³	0.4	0.5		0.003		
Benzene	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Current	µg/m³	0.4	0.5		0.002		
Benzene	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Current	µg/m³	0.4	0.5		0.006		
Benzene	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Current	µg/m³	0.4	0.5		0.001		
Benzene	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Current	µg/m³	0.4	0.5		0.006		
Benzene	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Current	µg/m³	0.4	0.5		0.002		
Benzene	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Current	µg/m³	0.4	0.5		0.0009		
Benzene	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Current	µg/m³	0.4	0.5		0.001		
Benzene	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Current	µg/m³	0.4	0.5		0.002		
Benzene	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Current	µg/m³	0.4	0.5		0.0008		
Benzene	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Current	µg/m³	0.4	0.5		0.007		
Benzene	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Current	µg/m³	0.4	0.5		0.006		
Benzene	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Current	µg/m³	0.4	0.5		0.002		
Benzene	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Current	µg/m³	0.4	0.5		0.0005		
Benzene	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Current	µg/m³	0.4	0.5		0.0004		
Benzene	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Current	µg/m³	0.4	0.5		0.009		
Benzene	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Current	µg/m³	0.4	0.45		0.02		
Benzene	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Current	µg/m³	0.4	0.45		0.01		
Benzene	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Future	µg/m³	0.4	0.45		0.0006		
Benzene	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Future	µg/m³	0.4	0.45		0.0006		
Benzene	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Future	µg/m³	0.4	0.45		0.0004		
Benzene	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Future	µg/m³	0.4	0.45		0.001		
Benzene	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Future	µg/m³	0.4	0.45		0.0002		
Benzene	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Future	µg/m³	0.4	0.45		0.001		
Benzene	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Future	µg/m³	0.4	0.45		0.0003		
Benzene	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Future	µg/m³	0.4	0.45		0.0002		
Benzene	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Future	µg/m³	0.4	0.45		0.0002		
Benzene	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Future	µg/m³	0.4	0.45		0.0004		
Benzene	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Future	µg/m³	0.4	0.45		0.0002		
Benzene	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Future	µg/m³	0.4	0.45		0.001		
Benzene	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Future	µg/m³	0.4	0.45		0.001		
Benzene	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Future	µg/m³	0.4	0.45		0.0004		
Benzene	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Future	µg/m³	0.4	0.45		0.0001		
Benzene	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Future	µg/m³	0.4	0.45		0.00007		
Benzene	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Future	µg/m³	0.4	0.45		0.002		
Benzene	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Future	µg/m³	0.4	0.45		0.004		
Benzene	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Future	µg/m³	0.4	0.5		0.002		

1,3Buta - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
1,3Buta	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	0.0	2.3	0.0005	0.003	0.001	
1,3Buta	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	0.0	2.3	0.0006	0.003	0.001	
1,3Buta	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	0.0	2.3	0.0004	0.002	0.001	
1,3Buta	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	0.0	2.3	0.001	0.005	0.002	
1,3Buta	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	0.0	2.3	0.0002	0.001	0.0005	
1,3Buta	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	0.0	2.3	0.001	0.005	0.002	
1,3Buta	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	0.0	2.3	0.0003	0.002	0.0007	
1,3Buta	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	0.0	2.3	0.0001	0.001	0.0005	
1,3Buta	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	0.0	2.3	0.0001	0.002	0.0005	
1,3Buta	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	0.0	2.3	0.0004	0.002	0.0009	
1,3Buta	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	0.0	2.3	0.0001	0.001	0.0004	
1,3Buta	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	0.0	2.3	0.001	0.006	0.003	
1,3Buta	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	0.0	2.3	0.001	0.005	0.002	
1,3Buta	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	0.0	2.3	0.0003	0.003	0.001	
1,3Buta	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	0.0	2.3	0.00007	0.0007	0.0003	
1,3Buta	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	0.0	2.3	0.00004	0.0007	0.0002	
1,3Buta	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	0.0	2.3	0.002	0.008	0.004	
1,3Buta	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	0.046	2.3	0.004	0.01	0.007	
1,3Buta	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	0.046	2.3	0.002	0.009	0.004	
1,3Buta	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	0.046	2.3	0.00004	0.0002	0.00009	
1,3Buta	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	0.046	2.3	0.00004	0.0002	0.0001	
1,3Buta	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	0.046	2.3	0.00003	0.0002	0.00006	
1,3Buta	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	0.046	2.3	0.00007	0.0003	0.0001	
1,3Buta	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	0.046	2.3	0.00001	0.00009	0.00003	
1,3Buta	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	0.046	2.3	0.00007	0.0003	0.0001	
1,3Buta	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	0.046	2.3	0.00002	0.0001	0.00005	
1,3Buta	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	0.046	2.3	0.00001	0.00008	0.00003	
1,3Buta	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	0.046	2.3	0.000009	0.0001	0.00003	
1,3Buta	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	0.046	2.3	0.00002	0.0001	0.00005	
1,3Buta	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	0.046	2.3	0.000009	0.00007	0.00002	
1,3Buta	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	0.046	2.3	0.00009	0.0004	0.0002	
1,3Buta	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	0.046	2.3	0.00007	0.0003	0.0002	
1,3Buta	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	0.046	2.3	0.00002	0.0002	0.00007	
1,3Buta	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	0.046	2.3	0.000005	0.00005	0.00002	
1,3Buta	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	0.046	2.3	0.000003	0.00005	0.00001	
1,3Buta	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	0.046	2.3	0.0001	0.0005	0.0002	
1,3Buta	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	0.046	2.3	0.0003	0.001	0.0005	
1,3Buta	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	0.0	2.3	0.0001	0.0006	0.0003	

1,3Buta - Annual

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
1,3Buta	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Current	µg/m³	0.0	0.5		0.0007		
1,3Buta	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Current	µg/m³	0.0	0.5		0.0007		
1,3Buta	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Current	µg/m³	0.0	0.5		0.0005		
1,3Buta	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Current	µg/m³	0.0	0.5		0.001		
1,3Buta	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Current	µg/m³	0.0	0.5		0.0002		
1,3Buta	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Current	µg/m³	0.0	0.5		0.001		
1,3Buta	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Current	µg/m³	0.0	0.5		0.0003		
1,3Buta	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Current	µg/m³	0.0	0.5		0.0002		
1,3Buta	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Current	µg/m³	0.0	0.5		0.0002		
1,3Buta	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Current	µg/m³	0.0	0.5		0.0004		
1,3Buta	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Current	µg/m³	0.0	0.5		0.0002		
1,3Buta	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Current	µg/m³	0.0	0.5		0.002		
1,3Buta	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Current	µg/m³	0.0	0.5		0.001		
1,3Buta	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Current	µg/m³	0.0	0.5		0.0005		
1,3Buta	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Current	µg/m³	0.0	0.5		0.0001		
1,3Buta	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Current	µg/m³	0.0	0.5		0.00008		
1,3Buta	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Current	µg/m³	0.0	0.5		0.002		
1,3Buta	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Current	µg/m³	0.026	0.5		0.004		
1,3Buta	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Current	µg/m³	0.026	0.5		0.002		
1,3Buta	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Future	µg/m³	0.026	0.5		0.00004		
1,3Buta	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Future	µg/m³	0.026	0.5		0.00005		
1,3Buta	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Future	µg/m³	0.026	0.5		0.00003		
1,3Buta	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Future	µg/m³	0.026	0.5		0.00008		
1,3Buta	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Future	µg/m³	0.026	0.5		0.00002		
1,3Buta	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Future	µg/m³	0.026	0.5		0.00008		
1,3Buta	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Future	µg/m³	0.026	0.5		0.00002		
1,3Buta	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Future	µg/m³	0.026	0.5		0.00001		
1,3Buta	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Future	µg/m³	0.026	0.5		0.00001		
1,3Buta	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Future	µg/m³	0.026	0.5		0.00003		
1,3Buta	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Future	µg/m³	0.026	0.5		0.00001		
1,3Buta	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Future	µg/m³	0.026	0.5		0.0001		
1,3Buta	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Future	µg/m³	0.026	0.5		0.00008		
1,3Buta	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Future	µg/m³	0.026	0.5		0.00003		
1,3Buta	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Future	µg/m³	0.026	0.5		0.00001		
1,3Buta	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Future	µg/m³	0.026	0.5		0.00001		
1,3Buta	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Future	µg/m³	0.026	0.5		0.0001		
1,3Buta	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Future	µg/m³	0.026	0.5		0.0003		
1,3Buta	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Future	µg/m³	0.0	0.5		0.0001		

Acetal - 1-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Acetal	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Current	µg/m³	0	500.0	0.003	0.14	0.02	
Acetal	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Current	µg/m³	0	500.0	0.003	0.16	0.02	
Acetal	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Current	µg/m³	0	500.0	0.002	0.13	0.01	
Acetal	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Current	µg/m³	0	500.0	0.006	0.21	0.03	
Acetal	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Current	µg/m³	0	500.0	0.0009	0.07	0.005	
Acetal	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Current	µg/m³	0	500.0	0.006	0.18	0.03	
Acetal	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Current	µg/m³	0	500.0	0.001	0.07	0.008	
Acetal	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Current	µg/m³	0	500.0	0.0004	0.06	0.005	
Acetal	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Current	µg/m³	0	500.0	0.0004	0.06	0.005	
Acetal	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Current	µg/m³	0	500.0	0.002	0.1	0.01	
Acetal	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Current	µg/m³	0	500.0	0.0006	0.04	0.005	
Acetal	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Current	µg/m³	0	500.0	0.008	0.29	0.03	
Acetal	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Current	µg/m³	0	500.0	0.006	0.22	0.03	
Acetal	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Current	µg/m³	0	500.0	0.001	0.11	0.01	
Acetal	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Current	µg/m³	0	500.0	0.0002	0.03	0.003	
Acetal	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Current	µg/m³	0	500.0	0.0001	0.1	0.002	
Acetal	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Current	µg/m³	0	500.0	0.01	0.31	0.04	
Acetal	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Current	µg/m³	0	500.0	0.03	0.63	0.09	
Acetal	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Current	µg/m³	0	500.0	0.01	0.35	0.05	
Acetal	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	1-HR	Future	µg/m³	0	500.0	0.0006	0.04	0.003	
Acetal	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	1-HR	Future	µg/m³	0	500.0	0.0007	0.04	0.004	
Acetal	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	1-HR	Future	µg/m³	0	500.0	0.0004	0.03	0.002	
Acetal	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	1-HR	Future	µg/m³	0	500.0	0.001	0.05	0.006	
Acetal	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	1-HR	Future	µg/m³	0	500.0	0.0002	0.02	0.001	
Acetal	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	1-HR	Future	µg/m³	0	500.0	0.001	0.05	0.006	
Acetal	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	1-HR	Future	µg/m³	0	500.0	0.0002	0.02	0.002	
Acetal	R8	315 The Westway, Etobicoke, ON, M9R 1H1	1-HR	Future	µg/m³	0	500.0	0.0001	0.02	0.001	
Acetal	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	1-HR	Future	µg/m³	0	500.0	0.0001	0.01	0.001	
Acetal	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	1-HR	Future	µg/m³	0	500.0	0.0004	0.02	0.002	
Acetal	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	1-HR	Future	µg/m³	0	500.0	0.0001	0.01	0.001	
Acetal	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	1-HR	Future	µg/m³	0	500.0	0.002	0.07	0.007	
Acetal	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	1-HR	Future	µg/m³	0	500.0	0.001	0.05	0.006	
Acetal	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	1-HR	Future	µg/m³	0	500.0	0.0002	0.03	0.002	
Acetal	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	1-HR	Future	µg/m³	0	500.0	0.00005	0.008	0.0006	
Acetal	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	1-HR	Future	µg/m³	0	500.0	0.00002	0.02	0.0003	
Acetal	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	1-HR	Future	µg/m³	0	500.0	0.002	0.07	0.01	
Acetal	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	1-HR	Future	µg/m³	0	500.0	0.006	0.16	0.02	
Acetal	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	1-HR	Future	µg/m³	0	500.0	0.002	0.09	0.01	

Acetal - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Acetal	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	1.6	500.0	0.004	0.02	0.01	
Acetal	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	1.6	500.0	0.005	0.03	0.01	
Acetal	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	1.6	500.0	0.003	0.02	0.008	
Acetal	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	1.6	500.0	0.009	0.04	0.02	
Acetal	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	1.6	500.0	0.002	0.01	0.004	
Acetal	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	1.6	500.0	0.008	0.04	0.02	
Acetal	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	1.6	500.0	0.002	0.01	0.006	
Acetal	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	1.6	500.0	0.001	0.009	0.004	
Acetal	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	1.6	500.0	0.001	0.01	0.004	
Acetal	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	1.6	500.0	0.003	0.02	0.007	
Acetal	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	1.6	500.0	0.001	0.008	0.003	
Acetal	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	1.6	500.0	0.01	0.05	0.02	
Acetal	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	1.6	500.0	0.009	0.04	0.02	
Acetal	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	1.6	500.0	0.003	0.02	0.009	
Acetal	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	1.6	500.0	0.0006	0.006	0.002	
Acetal	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	1.6	500.0	0.0003	0.006	0.002	
Acetal	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	1.6	500.0	0.01	0.07	0.03	
Acetal	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	1.6	500.0	0.03	0.12	0.06	
Acetal	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	1.6	500.0	0.02	0.07	0.03	
Acetal	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	1.6	500.0	0.001	0.005	0.003	
Acetal	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	1.6	500.0	0.001	0.006	0.003	
Acetal	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	1.6	500.0	0.0007	0.004	0.002	
Acetal	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	1.6	500.0	0.002	0.009	0.004	
Acetal	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	1.6	500.0	0.0003	0.002	0.0009	
Acetal	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	1.6	500.0	0.002	0.008	0.004	
Acetal	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	1.6	500.0	0.0005	0.003	0.001	
Acetal	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	1.6	500.0	0.0003	0.002	0.0009	
Acetal	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	1.6	500.0	0.0003	0.003	0.0008	
Acetal	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	1.6	500.0	0.0007	0.004	0.002	
Acetal	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	1.6	500.0	0.0003	0.002	0.0007	
Acetal	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	1.6	500.0	0.003	0.01	0.005	
Acetal	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	1.6	500.0	0.002	0.009	0.004	
Acetal	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	1.6	500.0	0.0006	0.005	0.002	
Acetal	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	1.6	500.0	0.0001	0.001	0.0005	
Acetal	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	1.6	500.0	0.00007	0.001	0.0004	
Acetal	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	1.6	500.0	0.003	0.01	0.006	
Acetal	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	1.6	500.0	0.007	0.03	0.01	
Acetal	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	1.6	500.0	0.003	0.02	0.007	

Formal - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
Formal	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	4.2	65.0	0.009	0.05	0.02	
Formal	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	4.2	65.0	0.01	0.05	0.03	
Formal	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	4.2	65.0	0.006	0.04	0.02	
Formal	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	4.2	65.0	0.02	0.08	0.04	
Formal	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	4.2	65.0	0.003	0.02	0.008	
Formal	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	4.2	65.0	0.02	0.08	0.04	
Formal	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	4.2	65.0	0.005	0.03	0.01	
Formal	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	4.2	65.0	0.002	0.02	0.008	
Formal	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	4.2	65.0	0.002	0.03	0.008	
Formal	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	4.2	65.0	0.006	0.03	0.01	
Formal	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	4.2	65.0	0.002	0.02	0.006	
Formal	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	4.2	65.0	0.02	0.1	0.05	
Formal	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	4.2	65.0	0.02	0.08	0.04	
Formal	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	4.2	65.0	0.006	0.05	0.02	
Formal	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	4.2	65.0	0.001	0.01	0.005	
Formal	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	4.2	65.0	0.0007	0.01	0.003	
Formal	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	4.2	65.0	0.03	0.14	0.06	
Formal	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	4.2	65.0	0.07	0.26	0.13	
Formal	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	4.2	65.0	0.03	0.15	0.07	
Formal	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	4.2	65.0	0.003	0.01	0.007	
Formal	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	4.2	65.0	0.003	0.02	0.007	
Formal	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	4.2	65.0	0.002	0.01	0.005	
Formal	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	4.2	65.0	0.006	0.02	0.01	
Formal	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	4.2	65.0	0.0009	0.007	0.002	
Formal	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	4.2	65.0	0.005	0.02	0.01	
Formal	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	4.2	65.0	0.001	0.009	0.004	
Formal	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	4.2	65.0	0.0007	0.006	0.002	
Formal	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	4.2	65.0	0.0007	0.008	0.002	
Formal	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	4.2	65.0	0.002	0.01	0.004	
Formal	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	4.2	65.0	0.0007	0.005	0.002	
Formal	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	4.2	65.0	0.007	0.03	0.01	
Formal	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	4.2	65.0	0.005	0.03	0.01	
Formal	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	4.2	65.0	0.002	0.01	0.006	
Formal	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	4.2	65.0	0.0004	0.004	0.001	
Formal	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	4.2	65.0	0.0002	0.004	0.001	
Formal	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	4.2	65.0	0.009	0.04	0.02	
Formal	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	4.2	65.0	0.02	0.08	0.04	
Formal	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	4.2	65.0	0.009	0.05	0.02	

BaP - 24-HR

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
BaP	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00001	0.00007	0.00003	
BaP	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00001	0.00007	0.00003	
BaP	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000009	0.00006	0.00002	
BaP	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00003	0.0001	0.00006	
BaP	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000004	0.00003	0.00001	
BaP	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00003	0.0001	0.00005	
BaP	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000006	0.00004	0.00002	
BaP	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000003	0.00003	0.00001	
BaP	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000003	0.00004	0.00001	
BaP	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000009	0.00005	0.00002	
BaP	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000003	0.00002	0.000009	
BaP	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00003	0.0002	0.00007	
BaP	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00003	0.0001	0.00006	
BaP	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000008	0.00007	0.00003	
BaP	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000002	0.00002	0.000006	
BaP	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.000001	0.00002	0.000005	
BaP	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00004	0.0002	0.00008	
BaP	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00009	0.0004	0.0002	
BaP	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Current	µg/m³	1.2E-04	5.0E-05	0.00005	0.0002	0.0001	
BaP	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000003	0.00002	0.000008	
BaP	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000004	0.00002	0.000009	
BaP	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000002	0.00002	0.000006	
BaP	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000007	0.00003	0.00001	
BaP	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000001	0.00001	0.000003	
BaP	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000007	0.00003	0.00001	
BaP	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000002	0.00001	0.000005	
BaP	R8	315 The Westway, Etobicoke, ON, M9R 1H1	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.0000009	0.00001	0.000003	
BaP	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.0000009	0.00001	0.000003	
BaP	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000002	0.00001	0.000005	
BaP	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.0000009	0.00001	0.000002	
BaP	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000009	0.00004	0.00002	
BaP	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000006	0.00003	0.00001	
BaP	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.000002	0.00002	0.000007	
BaP	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.0000004	0	0.000002	
BaP	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.0000002	0	0.000001	
BaP	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.00001	0.00005	0.00002	
BaP	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.00002	0.00009	0.00004	
BaP	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	24-HR	Future	µg/m³	1.2E-04	5.0E-05	0.00001	0.00006	0.00003	

BaP - Annual

Contaminant	Receptor ID	Receptor Address	Averaging Period	Scenario	Units	Background Value 90th Percentile (µg/m³)	Criterion (µg/m³)	Model Mediane (µg/m³)	Model Maximum (µg/m³)	Model 90th Percentile (µg/m³)	Model 98th Percentile (µg/m³)
BaP	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00002		
BaP	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00002		
BaP	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00003		
BaP	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00003		
BaP	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Current	µg/m³	7.7E-05	1.0E-05		0		
BaP	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Current	µg/m³	7.7E-05	1.0E-05		0		
BaP	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Current	µg/m³	7.7E-05	1.0E-05		0		
BaP	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00004		
BaP	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00003		
BaP	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Current	µg/m³	7.7E-05	1.0E-05		0		
BaP	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Current	µg/m³	7.7E-05	1.0E-05		0		
BaP	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00005		
BaP	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.0001		
BaP	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Current	µg/m³	7.7E-05	1.0E-05		0.00006		
BaP	R1	15 Denfield St, Etobicoke, ON, M9R 3H2	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R2	10 Denfield St, Etobicoke, ON, M9R 3H1	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R3	59, chemin Clement Etobicoke, ON, M9R 1Y5	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R4	50 Winterton Dr, Etobicoke, ON, M9B 3G7	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R5	70 Princess Anne Cres, Etobicoke, ON, M9A 2P7	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R6	1738 Islington Ave, Etobicoke, ON, M9A 3N2	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R7	65 Hartsdale Dr, Toronto, ON, M9R 2S8	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R8	315 The Westway, Etobicoke, ON, M9R 1H1	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R9	111 Sun Row Dr, Etobicoke, ON, M9P 3J3	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R10	65 Tromley Dr, Etobicoke, ON, M9B 5Y7	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R11	130 Lloyd Manor Rd, Etobicoke, ON, M9B 5K1	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R12	204-201 Lloyd Manor Rd, Toronto, ON, M9B 6H6	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R13	250 Wincott Drive, Toronto, ON, M9R 2R5	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R14	30 Earldown Drive, Etobicoke, ON, M9R 2L3	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R15	25 Poynter Dr, Etobicoke, ON, M9R 1K8	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R16	4005 Eglinton Ave W, Etobicoke, ON, M9A 5H3	Annual	Future	µg/m³	7.7E-05	1.0E-05		0		
BaP	R17	99 Dalegrove Crescent, Etobicoke, ON, M9B 6B1	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00001		
BaP	R18	181 Princess Anne Crescent, Etobicoke, ON, M9A 2R8	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00003		
BaP	R19	59 Hamptonbrook Dr, Etobicoke, ON, M9P 1A2	Annual	Future	µg/m³	7.7E-05	1.0E-05		0.00001		