

Ambient Air Monitoring and Reporting Plan Summary – 2012

Below is a summary of the Air Quality Monitoring (AQM) program during the period of **January to December 2012**. It is important to have at least three years of data to make any firm conclusions, so these results should be treated as preliminary. The summary below presents the annual data from the three air quality monitoring stations as outlined in the Georgetown South Project Ambient Air Monitoring and Reporting Plan. These results have been audited and validated by the Ontario Ministry of the Environment (MOE).

Carbon Monoxide (CO)

		Monitoring Stations		
		STN 35020 Wallace	STN 35021 Weston	STN 35022 Strachan
Measured Annual Mean ($\mu\text{g}/\text{m}^3$)		181	217	229
Averaging time – 1 Hour				
Hours Above AAQC		0	0	0
Predicted Total Exceedances of AAQC*	1 Hour	0		

Regulatory Levels: CO 1 Hour AAQC – $36,200 \mu\text{g}/\text{m}^3$

* As per the 2009 Air Quality Assessment. Further analysis was not required.

Particulate Matter < 2.5 μm (PM_{2.5})

		Monitoring Stations		
		STN 35020 Wallace	STN 35021 Weston	STN 35022 Strachan
Measured Annual Mean ($\mu\text{g}/\text{m}^3$)		9	9	9
Averaging time – 24 Hour				
Days Above CWS		4*	5*	3*
Days Above WHO		9	8	9
Predicted Total Exceedances of CWS**	# days	15		

Regulatory Levels: PM_{2.5} 24 Hour CWS – $30 \mu\text{g}/\text{m}^3$
PM_{2.5} 24 Hour WHO – $25 \mu\text{g}/\text{m}^3$

* This does not mean an exceedence of the CWS as the CWS is based on the three-year average of the 98th percentile.

**As per the 2011 Enhanced Air Quality Assessment.

Nitrogen Dioxide (NO₂)

	Monitoring Stations		
	STN 35020 Wallace	STN 35021 Weston	STN 35022 Strachan
Measured Annual Mean (µg/m³)	32	34	34
Averaging time – 1 Hour			
Hours Above AAQC	0	0	0
Hours Above WHO	0	0	1
Averaging time – 24 Hour			
Hours Above AAQC	0	0	0
Predicted Total Exceedances of AAQC*	1 Hour	0	
	24 Hour	0	

Regulatory Levels: NO₂ 1 Hour AAQC – 400 µg/m³
 NO₂ 1 Hour WHO – 200 µg/m³
 NO₂ 24 Hour AAQC – 200 µg/m³
 NO₂ Annual WHO – 40 µg/m³

* As per the 2011 Enhanced Air Quality Assessment.

Sulphur Dioxide (SO₂)

	Monitoring Stations		
	STN 35020 Wallace	STN 35021 Weston	STN 35022 Strachan
Measured Annual Mean (µg/m³)	2.0	2.0	1.1
Averaging time – 1 Hour			
Hours Above AAQC	0	0	0
Averaging time – 24 Hour			
Days Above AAQC	0	0	0
Days Above WHO	0	0	0
Predicted Total Exceedances of AAQC*	1 Hour	0**	
	24 Hour	5	

Regulatory Levels: SO₂ 1 Hour AAQC – 690 µg/m³
 SO₂ 24 Hour AAQC – 275 µg/m³
 SO₂ 24 Hour WHO – 20 µg/m³

* As per the 2011 Enhanced Air Quality Assessment.

** 1 Hour SO₂ did not have predicted exceedances in original modelling for the 2009 Air Quality Assessment and further investigation was not necessary.

Glossary/Terms

AAQC – Ambient Air Quality Criteria are provincial emission guidelines set by the Ontario Ministry of the Environment.

CO – Carbon Monoxide is a colourless, odourless and tasteless but poisonous gas produced primarily by incomplete burning of fossil fuels.

CWS – The Canada Wide Standard is developed jointly by the Federal government and the Provinces – including Ontario – and is used as a guideline for particulate matter.

NO₂ – Nitrogen dioxide gases are oxides of nitrogen and are produced during high temperature combustion.

PM_{2.5} – Particulate matter describes a mixture of microscopic solid particles and liquid droplets suspended in air. PM_{2.5} refers to particulate matter less than 2.5 microns in size.

SO₂ – Sulphur dioxide is a colourless gas that smells like burnt matches; it can also be a precursor to sulphates which are a main component in particulate matter.

WHO – World Health Organization is the authority within the United Nations responsible for international public health (www.who.int/en/).

For more details on the data, please see the full report at gotransit.com/gts