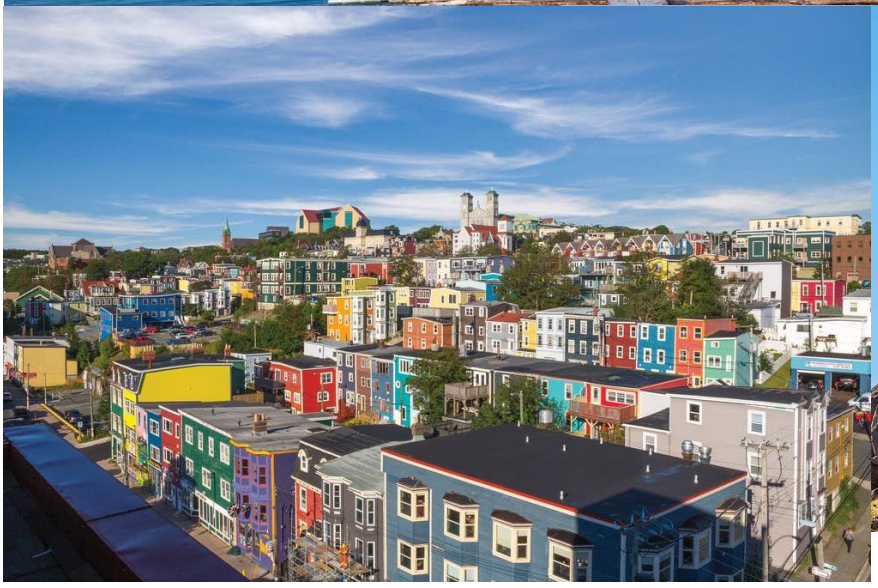
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

2015 AMBIENT AIR MONITORING REPORT

April 2016



Executive Summary

The air quality in communities across the province is generally considered to be good as the ambient air quality standards are rarely exceeded for the pollutants being measured. On occasion, communities in close proximity to an industrial operation may experience episodic decreases in the quality of the air; however, these episodes tend to be brief in nature and are rarely at levels that exceed the air quality standards. Elevated levels of air pollutants can also occur due to long-range transport from mainland Canada and the United States, but these events are episodic in nature and rarely produce levels that exceed the ambient air quality standards. On the local level, emissions from sources such as vehicular traffic, forest fires and woodstoves also impact the air quality in the province.

This 7th annual report presents all the monitoring results from both the federal / provincial operated National Air Pollution Surveillance (NAPS) network as well as the stations operated by industrial facilities in the province. Both datasets undergo a rigorous quality assurance procedure to ensure that the highest level of data confidence is achieved.

In 2015 there were no major long range transport events to adversely affect the air quality in the province. The air quality at most monitoring stations indicated no exceedances of the ambient air quality standards. There were however instances where the levels measured at a station operated by an industrial facility approached or exceeded the associated ambient standard.

The report does not provide commentary on the data contained herein except in situations where there has been a technological change in the data collection system (eg. $PM_{2.5}$ monitoring was switched from TEOM to BAM), or there has been a change in industrial operating conditions which would lead to a change in emissions (eg. a switch from heavy fuel oil combustion to distillate combustion).

Though an industrial facility may monitor the ambient air for specific pollutants, this report in no way implies or attributes those measurements to emissions from that facility.

The 2015 monitoring results are summarized below.

Sulphur Dioxide - 2015

Operator	Monitoring Location	Maximum 1-hour Concentration	Maximum 3-hour Concentration	Maximum 24-hour Concentration	Annual Concentration
Regulatory Limit (µg/m^3)		**900**	**600**	**300**	**60**
NAPS	St. John's	49.5	16.5	5.5	1.2
	Mt. Pearl	19.2	14.0	5.0	0.4
	Grand Falls-Windsor	17.0	7.1	2.8	1.1
	Corner Brook	14.2	8.9	1.8	0.6
	Burin	2.3	1.6	0.5	0.2
NALCOR	Butterpot Road	75.8	44.2	8.1	1.8
	Green Acres Road	192.8	124.7	36.5	4.2
	Indian Pond Drive	187.1	159.1	73.8	4.0
	Indian Pond Road	120.8	99.3	42.1	2.8
	Lawrence Pond Road	179.8	89.9	26.0	2.7
NARL	Arnold's Cove	75.0	56.3	19.5	2.2
	Come by Chance	109.3	64.1	26.8	3.2
	Sunnyside	136.5	79.3	27.4	3.5
	Property Boundary	1121.2	900.9	582.8	77.8
IOCC	Indian Point	178.6	127.9	41.9	1.9
	Tamarack Drive	213.0 *	169.2 *	80.6 *	2.0 *
	Smokey Mountain	51.3 *	29.1 *	5.2 *	0.8 *
Wabush Mines	Bond Street	54.5	39.1	12.0	3.9
CBPP	Main Street	60.2	50.6	11.1	1.6

Observations in µg/m^3
* based on limited data

$PM_{2.5}$ - 2015

Operator	Monitoring Location	Maximum 24-hour Concentration	Annual Concentration
Regulatory Limit (µg/m^3)		**25**	**8.8**
NAPS	St. John's	16.5	7.6
	Mt. Pearl	15.7	3.9
	Grand Falls-Windsor	18.5	4.7
	Corner Brook	14.1	5.5
	Burin	16.5	5.9
NALCOR	Butterpot Road	14.5	4.8
	Green Acres Road	15.6	5.3
	Indian Pond Drive	15.1	5.3
	Indian Pond Road	14.0	4.4
	Lawrence Pond Road	12.0	3.6
	Property Boundary	20.3	4.8
NARL	Arnold's Cove	22.7	6.2
	Come by Chance	15.8	5.4
	Sunnyside	102.0	9.4
	Property Boundary	131.6	25.3
IOCC	Indian Point	17.6	3.3
	Tamarack Drive	15.0 *	3.2 *
	Smokey Mountain	10.8 *	3.6 *
Wabush Mines	Bond Street	15.0	2.7
	Cabot Drive	31.8	3.7
CBPP	Main Street	34.1	6.3
VALE	Community Centre	25.0	3.8
	Main Road	11.9 *	4.4 *
	Access Road	13.9 *	7.2 *
	Accommodation Building	9.0	3.2

Observations in ug/m^3
* based on limited data

Nitrogen Dioxide - 2015

Operator	Monitoring Location	Maximum 1-hour Concentration	Maximum 24-hour Concentration	Annual Concentration
Regulatory Limit (µg/m^3)		**400**	**200**	**100**
NAPS	St. John's	112.8	40.3	9.0
	Mt. Pearl	57.4	14.9	2.9
	Grand Falls-Windsor	120.8	12.7	1.9
	Corner Brook	62.0	29.4	4.7
	Burin	73.2	12.4	1.3
NALCOR	Butterpot Road	33.0	4.5	1.2
	Green Acres Road	55.8	7.6	1.5
	Indian Pond Drive	41.4	12.2	1.4
	Indian Pond Road	31.2	9.0	1.5
	Lawrence Pond Road	42.7	11.0	1.8
IOCC	Indian Point	68.7	22.2	4.1
	Tamarack Drive	93.7 *	34.2 *	5.6 *
	Smokey Mountain	96.7 *	44.5 *	8.1 *
VALE	Community Centre	9.9	2.3	0.9
	Main Road	52.9	28.9	4.4
	Access Road	301.4	48.4	3.6
	Crusher Building	102.9	40.8	5.5
	Accommodation Building	129.8	61.6	19.4

Observations in ug/m^3
* based on limited data

Ozone - 2015

Operator	Monitoring Location	Maximum 1-hour Concentration	Maximum 8-hour Concentration
Regulatory Limit (µg/m^3)		**160**	**87**
NAPS	St. John's	128.1	107.7
	Mt. Pearl	124.8	97.2
	Grand Falls-Windsor	117.3	105.0
	Corner Brook	115.9	107.2
	Burin	111.0	102.6
	Port aux Choix	91.5 *	85.4 *
IOCC	Smokey Mountain	115.8	99.7

Observations in ug/m^3
* based on limited data

Carbon Monoxide - 2015

Operator	Monitoring Location	Maximum 1-hour Concentration	Maximum 8-hour Concentration
Regulatory Limit (mg/m^3)		**35**	**15**
NAPS	St. John's	2.3	1.1
	Mt. Pearl	1.1	0.5
	Grand Falls-Windsor	0.8	0.5
	Corner Brook	0.9	0.5
	Burin	3.6	1.0

Observations in mg/m^3

PM_{10} - 2015

Operator	Monitoring Location	Maximum 24-hour Concentration
Regulatory Limit (µg/m^3)		**50**
NAPS	Burin	64.8

Observations in ug/m^3
* based on limited data

Total Particulate Matter - 2015

Operator	Monitoring Location	Maximum 24-hour Concentration	Annual Concentration
Regulatory Limit (µg/m^3)		**120**	**60**
NALCOR	Green Acres Road	19.0	6.6
	Indian Pond Drive	42.3	6.6
	Indian Pond Road	23.7	9.1
	Lawrence Pond Road	35.9	9.4
	Property Boundary	143.0	33.6
IOCC	Indian Point	88.9	7.1
	Tamarack Drive	215.7 *	18.1 *
	Smokey Mountain	152.4 *	9.7 *
	Bartlett Drive	178.2 *	15.4 *
	Hudson Drive	159.7 *	19.4 *
Wabush Mines	Bond Street	51.8	6.2
	Cabot Drive	61.6	8.8
CBPP	Main Street	225.8	28.0
	West Street	106.8	22.7
VALE	Port Site	445.2	6.7

Observations in ug/m^3
* based on limited data

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Disclaimer

Though all data presented in this report has been subjected to quality assurance and quality control procedures, the Department of Environment and Conservation does not warrant any data contained herein or the use of this data for other purposes. The Department accepts no liability for inaccurate data, or any misrepresentation or misuse of the data contained in this report.

All data presented herein may be subject to future revision.

1.0 Introduction

The ambient air quality in Newfoundland and Labrador is monitored through a joint effort between the Department of Environment and Conservation and Environment Canada via the National Air Pollution Surveillance (NAPS) network. In 2015, the Department operated stations at six locations as part of the NAPS network. Additionally the major industrial operations in the province are required to monitor the air quality near their operations for select pollutants. The Department audits the operation of these industrial monitoring networks on a regular basis.

In general the air quality in the province is good as indicated by the levels recorded at the various monitors. Unlike the major forest fires in Labrador and northern Quebec in late June and early July 2013 which resulted in an extended period of poorer air quality in the province, in 2015 there were no major long range episodes to diminish the air quality. There were however, instances in 2015 where the levels measured at an industrial monitoring station approached or exceeded the associated ambient standard, and instances when elevated air pollutant levels, particularly ozone, were seen as a result of long range transport. Local emissions, such as those from vehicular traffic and woodstoves, also impact air quality on a routine basis.

This report provides 2-year tabular summary information and 5-year graphical trends for each air quality monitor in Newfoundland and Labrador which were either operated or audited by the Department in 2015. All monitoring stations, including those operated by industrial operations, are required to meet minimum standards set out in the *National Air Pollution Surveillance (NAPS) Program Quality Assurance/Quality Control (QA/QC) Guidelines*, and those defined in the *Departmental Guidelines for Ambient Air Monitoring* (http://www.env.gov.nl.ca/env/env_protection/science/gd_ppd_065.pdf). Additionally all data has gone through a data reduction and quality assurance process to account for any anomalous readings or system malfunctions.

In this report, Section 2 provides an overview of the monitoring network in the province, a description of the pollutants being measured and their associated standard. Section 3 provides results from the monitors in the NAPS network; while Section 4 provides results from the monitoring networks operated by industrial facilities.

1.1 Definitions

The following definitions are used throughout this report:

AQHI	Air Quality Health Index
CBPP	Corner Brook Pulp and Paper
CO	Carbon Monoxide
IOCC	Iron Ore Company of Canada
mg/m^3	Milligrams per cubic metre
NALCOR	NALCOR Energy
NARL	North Atlantic Refining Limited
NAPS	National Air Pollution Surveillance
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
O_3	Ozone
$PM_{2.5}$	Particulate Matter less than or equal to 2.5 microns
PM_{10}	Particulate Matter less than or equal to 10 microns
SO_2	Sulphur Dioxide
TPM	Total Particulate Matter
$\mu g/m^3$	Micrograms per cubic metre
VALE	VALE Newfoundland and Labrador

2.0 Monitoring Network

Five categories of pollutants are measured at the monitoring networks in the province, though not all networks monitor all pollutants. The monitored pollutants are sulphur dioxide (SO_2); oxides of nitrogen (NO_x) (which includes nitric oxide (NO) and nitrogen dioxide (NO_2)); carbon monoxide (CO); particulate matter (PM) (which includes particles less or equal to than 2.5 microns ($PM_{2.5}$), particles less than or equal to 10 microns (PM_{10}) and total particulate matter (TPM)); and ozone (O_3). Volatile organic compounds, (VOCs) are also measured on a one-in-six day cycle at the NAPS station in St. John's, but the data is not included in this report.

2.1 Pollutants

2.1.1 Oxides of Nitrogen (NO_x)

In a combustion process, NO_x is produced through 3 mechanisms, namely thermal NO_x, fuel NO_x and prompt NO_x. Thermal NO_x is the primary source of NO_x and is formed as a high temperature dissociation and subsequent reaction of nitrogen (N_2) and oxygen (O_2). It is produced in the hottest part of the flame and its formation increases exponentially with the flame temperature. The control of thermal NO_x is generally achieved through reducing the flame temperature, reducing the residence time, or by operating under fuel rich conditions. Fuel NO_x is formed by the reaction of nitrogen compounds chemically bound in liquid or solid fuels with oxygen in the combustion air. In the combustion of such fuels, fuel NO_x can account for up to 50% of the total NO_x emissions. Prompt NO_x is formed from the rapid reaction of atmospheric nitrogen with hydrocarbon radicals, and typically under partially fuel-rich conditions. It can be reduced through combustion staging or by operating under highly oxidizing combustion conditions.

NO_2 is the primary component of concern in NO_x emissions. Generally between 5% and 10% of the NO_x emitted from the combustion of fuel is emitted as NO_2. The remainder is emitted as NO, which is subsequently converted to NO_2 in reactions with various oxidants and oxygen as the plume is transported downwind from the source. The rate of NO_2 formation varies with time of day, season, temperature, wind speed, solar radiation and the availability of oxidants to help drive the chemical reactions.

NO_2 is a reddish brown gas with a pungent odour, which upon reaction with other atmospheric compounds, becomes a major contributor to smog, acid rain, inhalable particulates and reduced visibility. At significant levels and exposure, inhalation may result in irritation and burning to the skin and eyes, nose and throat. Prolonged exposure may result in permanent lung damage.

2.1.2 Particulate Matter (PM)

Particulate matter is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets, and can be large and dark enough to be seen with the naked eye or so small that they can only be detected with an electron microscope. Many manmade and natural sources emit particulate matter directly while others emit gaseous pollutants that react in the atmosphere to form particulate matter.

The size of the particulate has important health considerations. Particulate matter less than or equal to 10 microns in diameter (PM_{10}) poses a health concern because it can be inhaled into and accumulate in the respiratory system. Particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$) is believed to pose the greatest health risks as it can lodge deeply into the lungs; a $PM_{2.5}$ particle is approximately $1/30^{th}$ the average width of a human hair. Typically these smaller particles are suspended in the air for long periods of time. Total Particulate Matter (TPM) is the term applied to any particle suspended in the atmosphere, but depending on the monitoring method, is typically limited to particulate matter less than 44 microns. Particulate larger than 10 microns is typically associated with a nuisance issue rather than a health issue.

2.1.3 Carbon Monoxide (CO)

Carbon monoxide is a colourless and odourless gas which reduces the delivery of oxygen to the body's organs. For those with heart disease, exposure to low doses can result in chest pain. For healthier people, exposure to higher levels affects the central nervous system.

Incomplete oxidation of fuel results in the formation of CO. In simplified terms, the generic stoichiometric combustion equation for complete combustion is:

$$HC + O_2 \rightarrow CO_2 + H_2O$$

However if sufficient oxygen (O_2) is not present to complete the combustion of the hydrocarbon fuel (HC), then the oxidation to carbon dioxide (CO_2) and water (H_2O) is not completed and hence CO is emitted.

2.1.4 Sulphur Dioxide (SO_2)

Levels of sulphur dioxide (SO_2) in ambient air are directly related to the concentration of sulphur in fuel and the quantity of fuel being combusted. Upon combustion, approximately 98% of the sulphur in the fuel will oxidize to form SO_2, with the remaining 2% producing sulphur trioxide (SO_3). The emitted SO_2 can also further oxidize to SO_3 and react with water to produce acid rain in the form of sulphuric acid (H_2SO_4).

Short-term exposures to SO_2 have shown adverse respiratory effects including bronchoconstriction and increased asthma symptoms.

2.1.5 Ozone (O_3)

Ground-level ozone is not directly emitted into the air, but rather is formed by chemical reactions between NO_x and volatile organic compounds (VOCs) in the presence of ultraviolet (UV) radiation. Ozone is a primary component of smog.

Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can also worsen bronchitis, emphysema, and asthma as well as reduce lung function and inflame the linings of the lungs, permanently scarring lung tissue under repeated exposure.

2.2 Ambient Air Standards

The maximum concentrations of air pollutants considered to be protective of the environment are defined in the *Air Pollution Control Regulations, 2004*. For the pollutants discussed in the report, the ambient air standards are detailed in Table 2.2.1.

TABLE 2.2.1 - AMBIENT AIR STANDARDS IN NEWFOUNDLAND AND LABRADOR

Pollutant	Averaging Period	Concentration ($\mu g/m^3$)
Carbon Monoxide (CO)	1-hour	35000
	8-hour	15000
Nitrogen Dioxide (NO_2)	1-hour	400
	24-hour	200
	1-year	100
Ozone	1-hour	160
	8-hour	87
Particulate Matter < 2.5 microns ($PM_{2.5}$)	24-hour	25
	1-year	8.8 *
Particulate Matter < 10 microns (PM_{10})	24-hour	50
Particulate Matter Total (TPM)	24-hour	120
	1-year	60
Sulphur Dioxide (SO_2)	1-hour	900
	3-hour	600
	24-hour	300
	1-year	60

* The 3 year average of the annual average concentrations

2.3 Monitoring in Newfoundland and Labrador

Table 2.3.1 provides the listing of monitoring stations in the province that measured pollutants during 2015. Figure 2.0.1 provides a picture of a typical ambient air monitoring station.

TABLE 2.3.1 - POLLUTANT MONITORING IN NEWFOUNDLAND AND LABRADOR

		POLLUTANT						
OPERATOR	**STATION LOCATION**	**SO_2**	**NO_X / NO_2**	**O_3**	**TPM**	**PM_{10}**	**$PM_{2.5}$**	**CO**
ENVIRONMENT AND CONSERVATION + ENVIRONMENT CANADA (NAPS)	Water Street, St. John's	✓	✓	✓			✓	✓
	Old Placentia Road, Mount Pearl	✓	✓	✓			✓	✓
	Macpherson Avenue, Corner Brook	✓	✓	✓			✓	✓
	Scott Avenue, Grand Falls-Windsor	✓	✓	✓			✓	✓
	Port aux Choix			✓				
	Burin	✓	✓	✓		✓	✓	✓
NALCOR ENERGY	Butterpot Road	✓	✓				✓	
	Green Acres Road	✓	✓		✓		✓	
	Indian Pond Drive	✓	✓		✓		✓	
	Indian Pond Road	✓	✓		✓		✓	
	Lawrence Pond Road	✓	✓		✓		✓	
	Property Boundary				✓		✓	
NORTH ATLANTIC REFINING LIMITED	Come by Chance	✓					✓	
	First Street, Arnold's Cove	✓					✓	
	Sunnyside	✓					✓	
	Property Boundary	✓					✓	
CORNER BROOK PULP AND PAPER	Main Street	✓			✓		✓	
	West Street				✓			

OPERATOR	STATION LOCATION	POLLUTANT						
		SO_2	NO_X / NO_2	O_3	TPM	PM_{10}	$PM_{2.5}$	CO
IRON ORE COMPANY OF CANADA	Hudson Drive	✓	✓	✓	✓		✓	
	Bartlett Drive				✓			
	Indian Point	✓	✓		✓		✓	
	Smokey Mountain	✓	✓	✓	✓		✓	
	Smokey Mountain II	✓	✓		✓		✓	
	Tamarack Drive	✓	✓		✓		✓	
VALE NEWFOUNDLAND AND LABRADOR LIMITED	Voisey's Bay Camp		✓				✓	
	Voisey's Bay Process Area		✓					
	Voisey's Bay Port				✓			
	Long Harbour Community Centre		✓				✓	
	Long Harbour Main Road		✓				✓	
	Long Harbour Property Boundary		✓				✓	
WABUSH MINES	Bond Street	✓			✓		✓	
	Cabot Drive				✓		✓	

FIGURE 2.0.1 - TYPICAL AMBIENT AIR MONITORING STATION

NAPS monitoring station in Mt. Pearl

2.4 Air Quality Health Index (AQHI)

The Air Quality Health Index (AQHI) is a numerical scale designed to help an individual understand what the air quality means to your health. Ranging from 1 to 10+, the higher the number on the scale the greater the health risk associated with air quality. Specifically the AQHI health messages are defined in Table 2.4.1.

The AQHI is calculated on an hourly basis and considers the combined relative health risks of O_3, $PM_{2.5}$ and NO_2. Data for the calculation of AQHI is currently being collected at the NAPS stations and at the Smokey Mountain station operated by the Iron Ore Company of Canada. The hourly AQHI is published to the Environment Canada weather office website.
http://weather.gc.ca/airquality/pages/provincial_summary/nl_e.html

TABLE 2.4.1 - AQHI HEALTH MESSAGES

AQHI READING	HEALTH RISK LEVEL	HEALTH MESSAGES	
		GENERAL POPULATION	AT RISK POPULATION
1-3	LOW	Ideal air quality for outdoor activities.	Enjoy your usual outdoor activities.
4-6	MODERATE	No need to modify your usual outdoor activities unless you experience symptoms such as coughing and throat irritation.	Consider reducing or rescheduling strenuous activities outdoors if you are experiencing symptoms.
7-10	HIGH	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms such as coughing and throat irritation.	Reduce or reschedule strenuous activities outdoors. Children and the elderly should also take it easy.
10+	VERY HIGH	Reduce or reschedule strenuous activities outdoors, especially if you experience symptoms such as coughing and throat irritation.	Avoid strenuous activities outdoors. Children and the elderly should also avoid outdoor physical exertion.

2.5 Data Validity and Acceptability

All air monitoring data monitored in both the NAPS network and the industrial monitoring network undergoes a quality assurance and quality control procedure before being published. This procedure ensures that any anomalous readings or questionable data is not incorporated into the published dataset. Elements of this procedure account for:

- Routine calibration and auditing of the analyzers
- Zero correction of the baseline drift and noise
- Analyzer "Status Flag" activation
- Shelter temperature analysis
- Statistical rendering of outliers

Further details on the quality assurance and quality control procedures can be found in the Departmental *Guidelines for Ambient Air Monitoring (GD-PPD-065)* (http://www.env.gov.nl.ca/env/env_protection/science/gd_ppd_065.pdf) and in the *National Air Pollution Surveillance (NAPS) Program Quality Assurance/Quality Control (QA/QC) Guidelines*.

3.0 National Air Pollution Surveillance (NAPS) Network

The NAPS network in the province is primarily established to monitor the air quality in urbanized settings and in neighbourhoods away from the influences of industrial operations. In 2015 there were five sites operational with a complete suite monitoring (SO_2, $PM_{2.5}$ NO_x / NO_2, CO and O_3), and a sixth which monitored O_3 only. The five NAPS stations with a complete suite of monitoring provide the data necessary to calculate the AQHI.

The five sites with a complete suite monitoring were located in St. John's on Water Street, in Mt. Pearl on Old Placentia Road, in Grand Falls-Windsor on Scott Avenue, in Corner Brook on Macpherson Avenue and in Burin at the Highway Depot. The station which monitored O_3 only was located at the Town Depot in Port aux Choix.

The maps identifying the location of the NAPS stations in the St. John's and Mt. Pearl are presented in Figures 3.0.1 and 3.0.2, while the location of the Grand Falls Windsor station is presented in Figure 3.0.3. The location of the Corner Brook station is presented in Figure 3.0.4 while Figure 3.0.5 presents the location of the Port aux Choix Station. The location of the Burin station is presented in Figure 3.0.6.

FIGURE 3.0.1 - NAPS MONITORING STATION IN ST. JOHN'S

FIGURE 3.0.2 - NAPS MONITORING STATION IN MOUNT PEARL

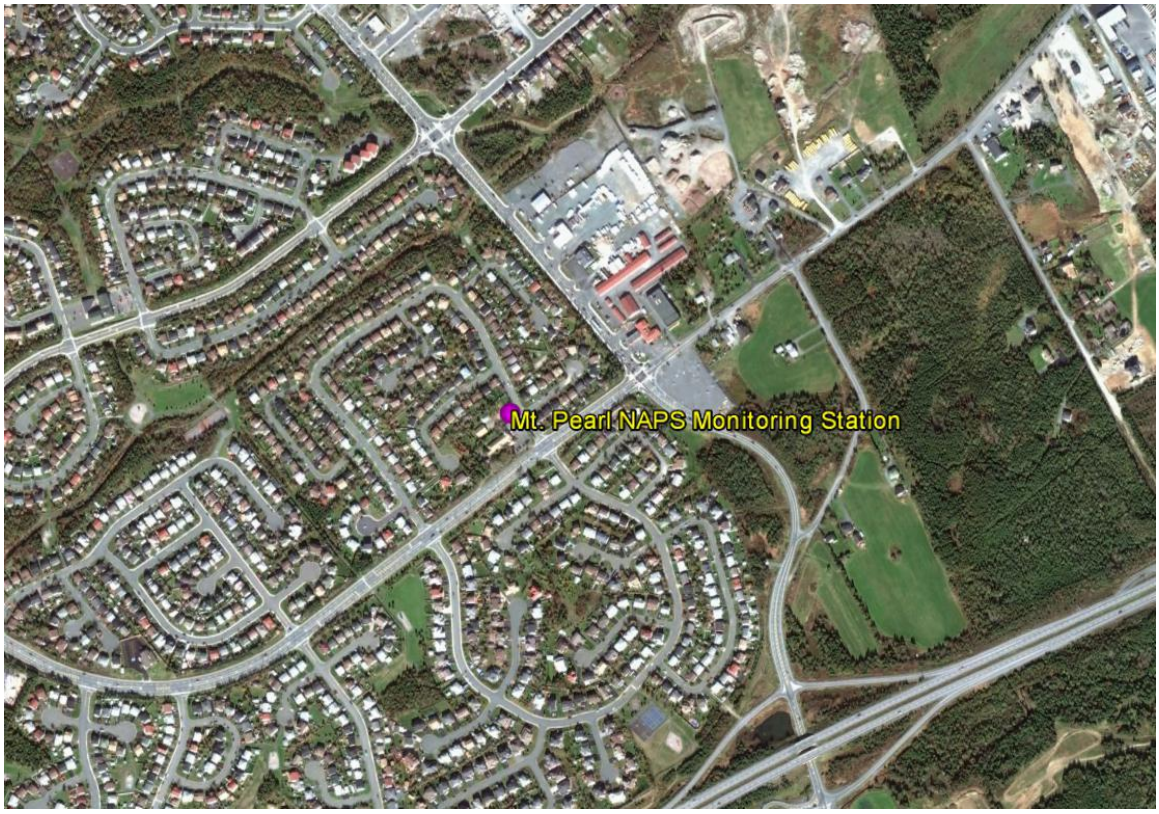


FIGURE 3.0.3 - NAPS MONITORING STATION IN GRAND FALLS-WINDSOR

FIGURE 3.0.4 - NAPS MONITORING STATION IN CORNER BROOK

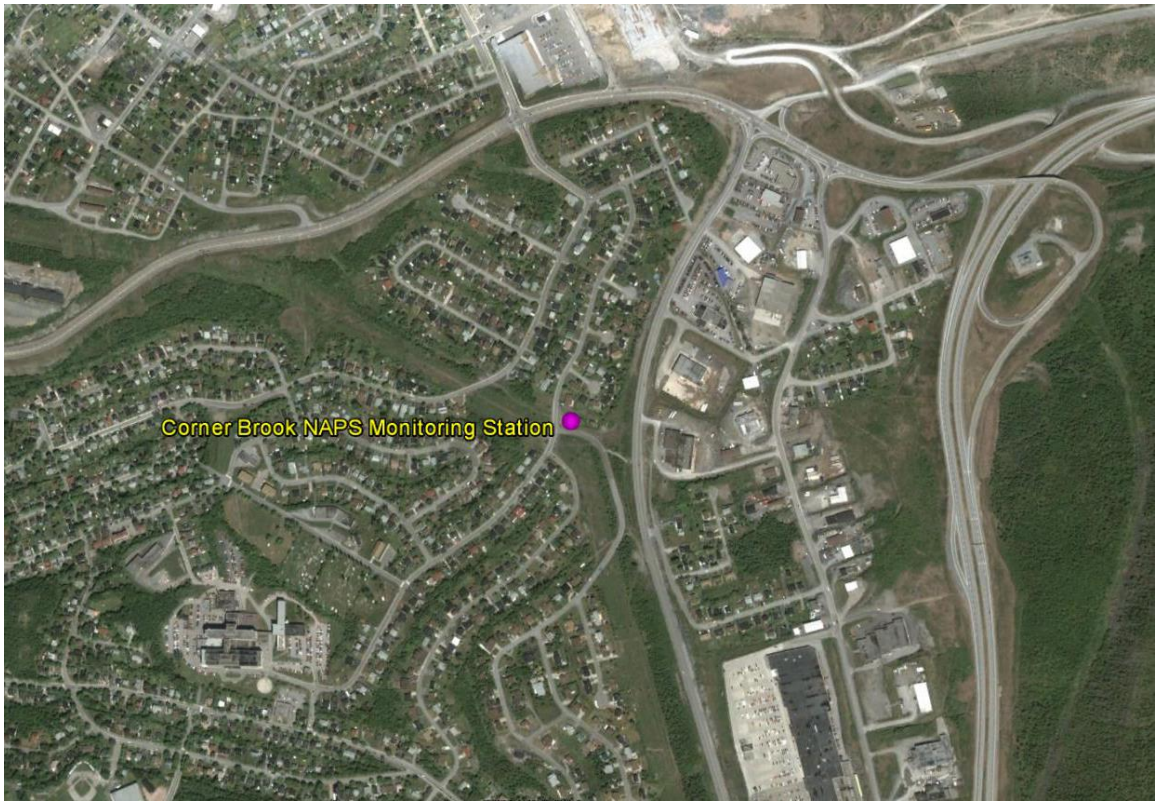


FIGURE 3.0.5 - NAPS MONITORING STATION IN PORT AUX CHOIX

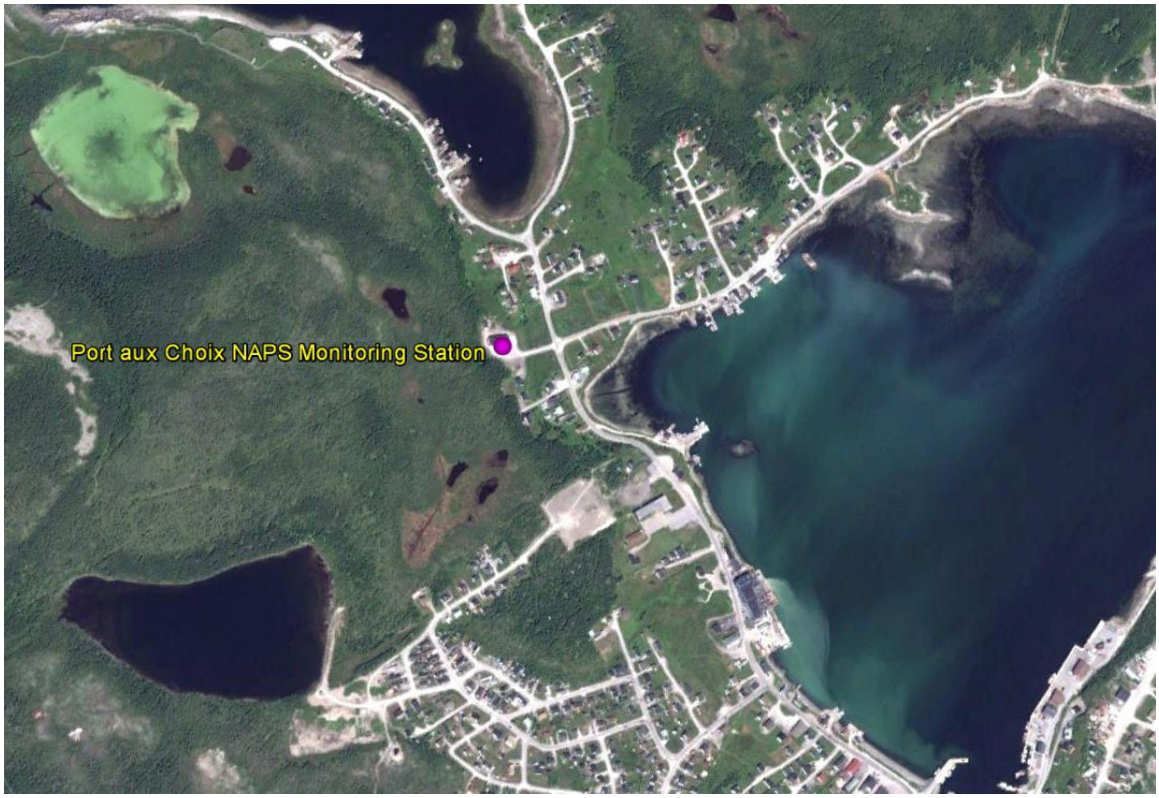
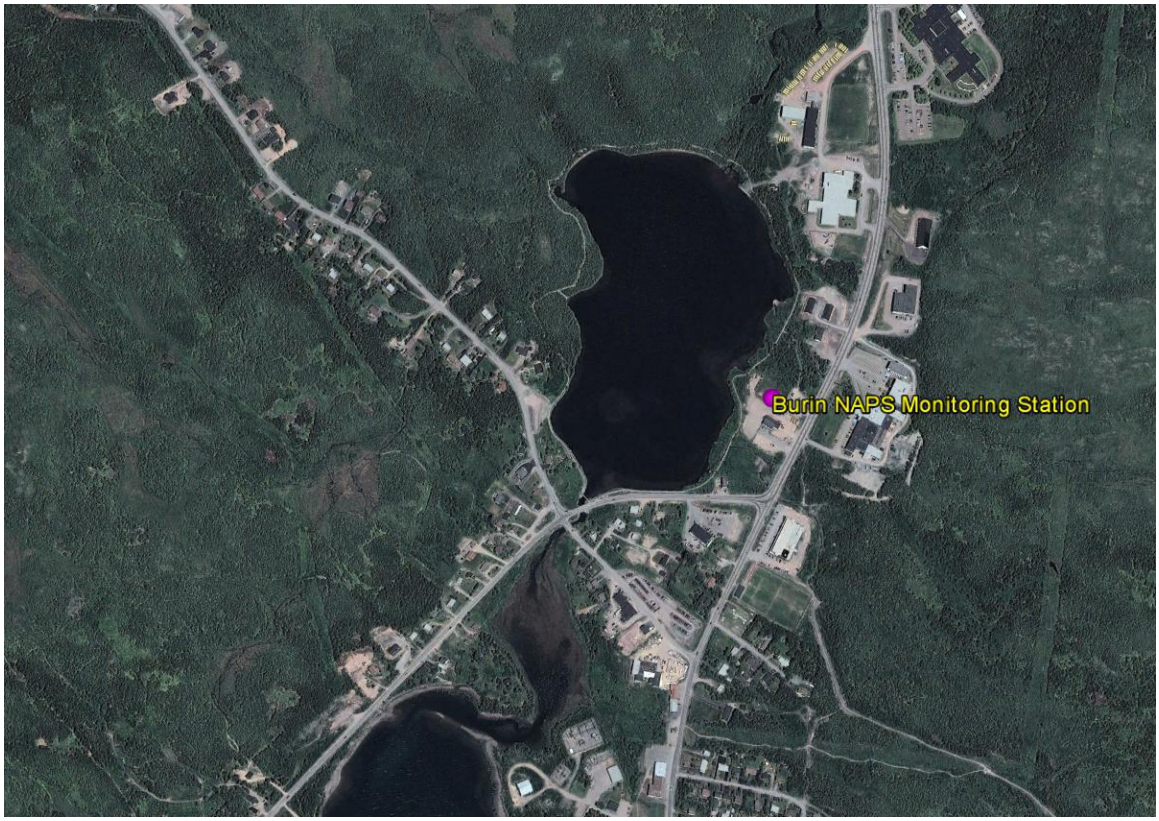


FIGURE 3.0.6 - NAPS MONITORING STATION IN BURIN



3.1 St. John's

The St. John's NAPS monitoring station is located on Water Street near the convention centre and monitors the ambient levels of SO_2, NO_x / NO_2, CO, O_3 and $PM_{2.5}$ on a continuous basis. For SO_2, NO_x / NO_2, $PM_{2.5}$ and CO, the ambient air criteria were not exceeded on any occasion in 2015. For O_3, the 8-hour standard was exceeded fifty-two times in 2015, thirty-two times in April, eighteen times in May and once in each of July and August. By the end of 2015, the annual average O_3 level recorded in St. John's was the highest on record for this station.

Tables 3.1.1 through 3.1.5 present the summary information on the level of air contaminants measured at the St. John's NAPS station, while Figures 3.1.1 through 3.1.5 provide a graphical representation of the annual trend of each pollutant. Table 3.1.6 provides a summary of the AQHI while Figure 3.1.6 provides a graphical representation of the percentage of time the AQHI values were below a given level in 2015.

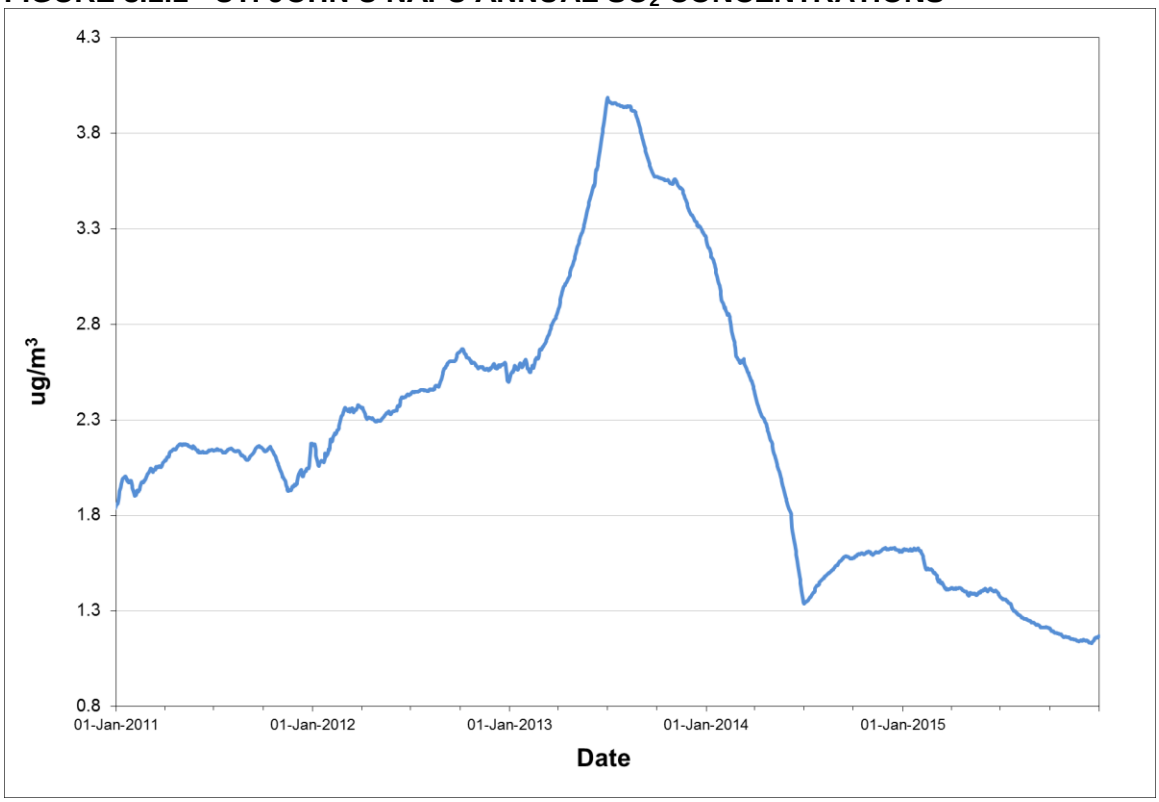
Volatile organic compounds, (VOCs) are also measured on a one-in-six day cycle at the monitoring station however the data is not included in this report.

TABLE 3.1.1 - ST. JOHN'S NAPS SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	669	89.9%	1.6	20.0	10.1	3.3	0	0	0
	February	672	100.0%	3.0	17.5	12.6	6.9	0	0	0
	March	738	99.2%	3.0	20.8	17.6	8.4	0	0	0
	April	713	99.0%	1.3	9.7	7.7	3.7	0	0	0
	May	742	99.7%	1.2	14.0	6.8	3.4	0	0	0
	June	717	99.6%	1.7	13.9	9.5	3.2	0	0	0
	July	717	96.4%	2.0	14.5	8.0	5.3	0	0	0
	August	741	99.6%	1.5	9.6	4.9	2.6	0	0	0
	September	628	87.2%	1.0	7.5	4.1	1.9	0	0	0
	October	679	91.3%	1.0	16.8	5.8	2.4	0	0	0
	November	618	85.8%	0.8	5.6	3.9	1.5	0	0	0
	December	739	99.3%	1.1	10.2	5.7	3.4	0	0	0
Annual		8373	95.6%	1.6	20.8	17.6	8.4	0	0	0
2015	January	671	90.2%	1.6	22.6	15.9	4.5	0	0	0
	February	537	79.9%	1.5	14.3	9.3	3.5	0	0	0
	March	658	88.4%	2.2	13.9	10.8	5.5	0	0	0
	April	718	99.7%	1.1	8.1	7.2	2.9	0	0	0
	May	727	97.7%	1.3	14.5	11.2	4.7	0	0	0
	June	718	99.7%	1.4	15.5	7.0	3.0	0	0	0
	July	742	99.7%	1.0	7.8	4.2	1.9	0	0	0
	August	743	99.9%	0.9	4.6	3.6	2.3	0	0	0
	September	581	80.7%	0.5	2.8	2.0	0.9	0	0	0
	October	743	99.9%	0.6	6.0	2.8	1.5	0	0	0
	November	714	99.2%	0.6	7.3	5.0	1.9	0	0	0
	December	744	100.0%	1.4	49.5	16.5	4.3	0	0	0
Annual		8296	94.7%	1.2	49.5	16.5	5.5	0	0	0

Observations in ug/m^3

FIGURE 3.1.1 - ST. JOHN'S NAPS ANNUAL SO_2 CONCENTRATIONS



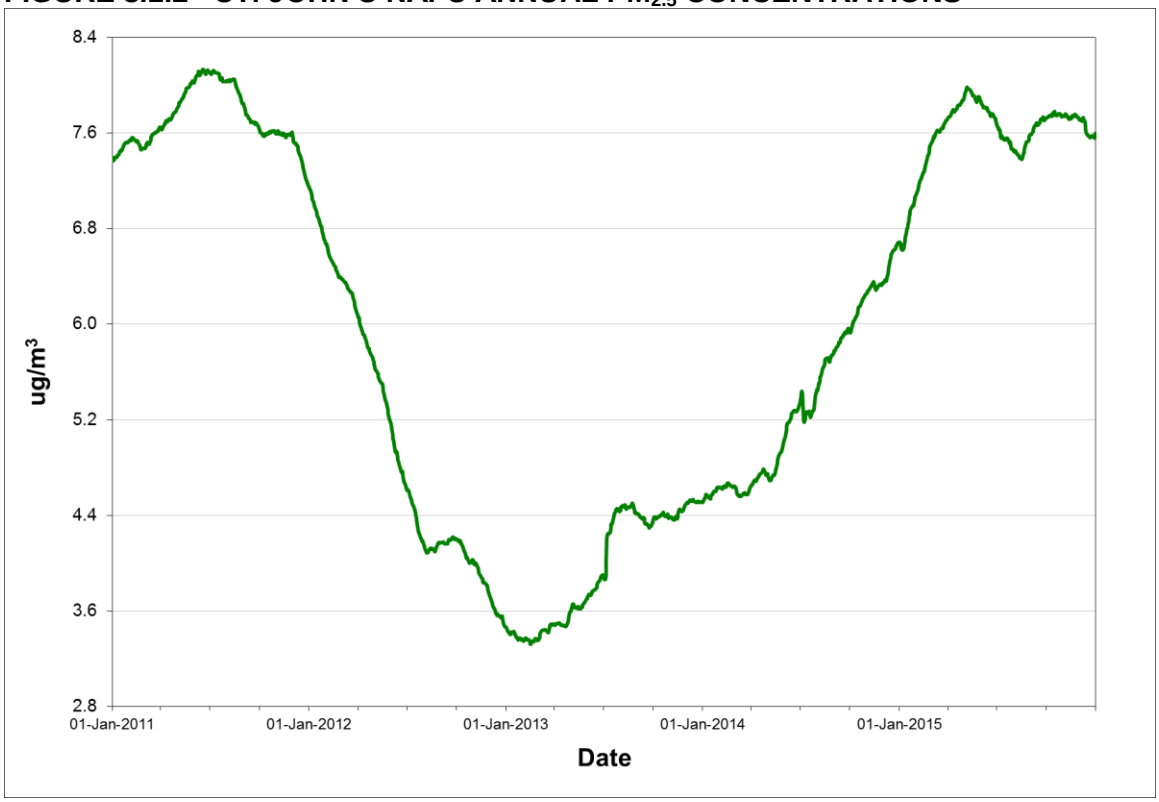
Rolling annual average of hourly concentrations

TABLE 3.1.2 - ST. JOHN'S NAPS $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	25	80.6%	3.5	10.3	0
	February	28	100.0%	3.1	8.0	0
	March	30	96.8%	4.3	8.4	0
	April	30	100.0%	6.6	11.1	0
	May	31	100.0%	8.4	13.4	0
	June	30	100.0%	9.3	13.6	0
	July	31	100.0%	11.1	21.5	0
	August	31	100.0%	9.3	17.8	0
	September	26	86.7%	6.1	14.0	0
	October	23	74.2%	7.2	16.9	0
	November	25	83.3%	4.2	7.3	0
	December	30	96.8%	5.7	20.3	0
Annual		340	93.2%	6.7	21.5	0
2015	January	27	87.1%	8.6	15.2	0
	February	21	75.0%	8.6	12.8	0
	March	23	74.2%	6.5	11.0	0
	April	30	100.0%	8.3	12.2	0
	May	30	96.8%	8.3	15.6	0
	June	30	100.0%	7.4	10.8	0
	July	31	100.0%	8.7	16.5	0
	August	31	100.0%	10.6	15.9	0
	September	30	100.0%	7.8	10.6	0
	October	31	100.0%	7.6	12.5	0
	November	28	93.3%	4.3	7.5	0
	December	31	100.0%	4.4	10.0	0
Annual		343	94.0%	7.6	16.5	0

Observations in ug/m^3

FIGURE 3.1.2 - ST. JOHN'S NAPS ANNUAL $PM_{2.5}$ CONCENTRATIONS



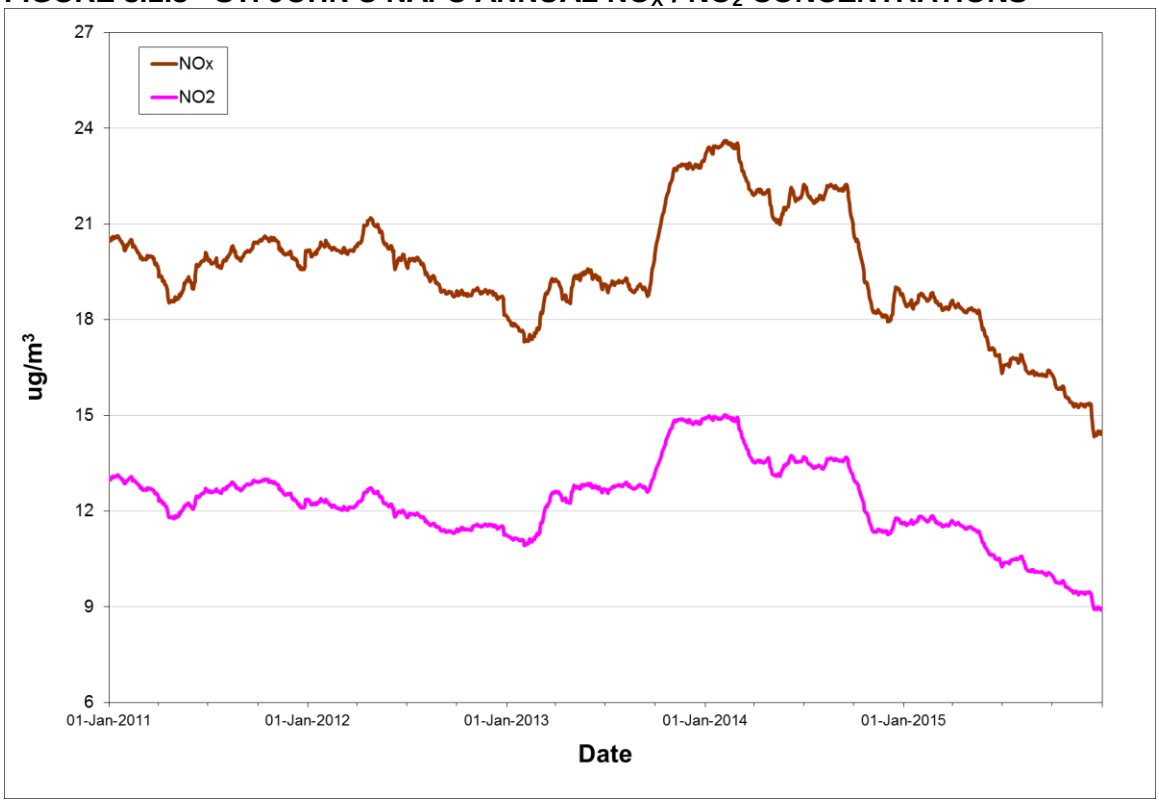
Rolling annual average of daily concentrations

TABLE 3.1.3 - ST. JOHN'S NAPS NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average		Maximums 1-Hour		Maximums 24-Hour		Exceedances 1-Hour	Exceedances 24-Hour
				NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	665	89.4%	20.2	11.5	308.0	86.2	105.1	49.1	0	0
	February	672	100.0%	20.6	14.5	188.7	82.7	56.2	36.9	0	0
	March	738	99.2%	16.6	11.5	165.7	72.4	48.2	30.8	0	0
	April	715	99.3%	16.5	11.7	250.1	98.0	37.1	23.4	0	0
	May	742	99.7%	20.9	14.0	270.0	74.4	55.7	28.7	0	0
	June	717	99.6%	28.3	14.5	233.0	69.4	67.8	31.4	0	0
	July	738	99.2%	12.1	6.1	282.6	56.7	58.0	17.9	0	0
	August	741	99.6%	16.3	10.6	115.4	66.3	52.7	30.6	0	0
	September	630	87.5%	11.6	7.4	116.7	56.9	30.9	17.1	0	0
	October	680	91.4%	20.0	11.3	215.2	62.6	80.9	34.8	0	0
	November	618	85.8%	15.3	11.0	121.9	69.7	36.3	27.1	0	0
	December	739	99.3%	24.6	14.8	353.7	137.6	139.3	53.1	0	0
Annual		8395	95.8%	18.7	11.6	353.7	137.6	139.3	53.1	0	0
2015	January	671	90.2%	21.7	14.4	501.9	112.8	86.6	37.9	0	0
	February	538	80.1%	17.1	12.3	140.6	71.7	61.2	40.3	0	0
	March	658	88.4%	17.1	12.0	181.2	79.7	45.2	28.0	0	0
	April	718	99.7%	13.3	9.5	138.1	61.0	34.3	21.7	0	0
	May	729	98.0%	11.5	6.8	254.0	80.9	52.5	29.1	0	0
	June	718	99.7%	15.1	7.7	210.0	46.4	40.7	20.2	0	0
	July	744	100.0%	15.8	8.9	197.2	53.0	48.6	23.3	0	0
	August	743	99.9%	12.6	6.2	179.0	64.0	55.5	24.3	0	0
	September	720	100.0%	11.8	6.2	149.1	49.5	35.4	14.6	0	0
	October	744	100.0%	11.4	6.9	106.6	40.1	25.3	13.8	0	0
	November	714	99.2%	12.2	8.5	77.3	38.6	37.9	27.3	0	0
	December	719	96.6%	15.9	9.9	198.5	89.6	59.8	37.8	0	0
Annual		8416	96.1%	14.5	9.0	501.9	112.8	86.6	40.3	0	0

Observations in ug/m^3

FIGURE 3.1.3 - ST. JOHN'S NAPS ANNUAL NO_X / NO_2 CONCENTRATIONS



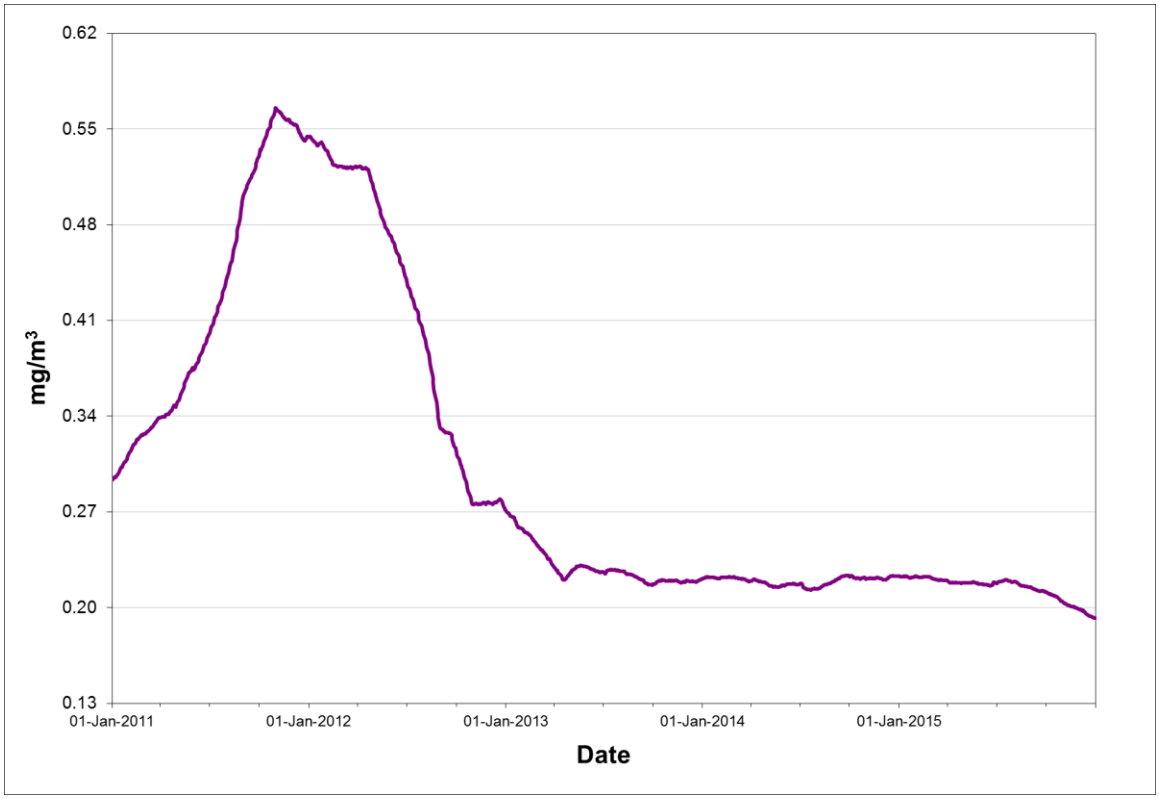
Rolling annual average of hourly concentrations

TABLE 3.1.4 - ST. JOHN'S NAPS CO SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>35)	Regulatory Exceedances 8-Hour (>15)
2014	January	670	90.1%	0.2	1.0	0.5	0	0
	February	672	100.0%	0.2	1.0	0.4	0	0
	March	738	99.2%	0.2	1.0	0.4	0	0
	April	715	99.3%	0.2	1.5	0.5	0	0
	May	742	99.7%	0.2	1.5	0.5	0	0
	June	717	99.6%	0.2	0.7	0.4	0	0
	July	739	99.3%	0.2	0.5	0.4	0	0
	August	741	99.6%	0.2	1.2	0.5	0	0
	September	630	87.5%	0.2	0.9	0.5	0	0
	October	668	89.8%	0.2	1.6	0.5	0	0
	November	618	85.8%	0.2	1.4	0.5	0	0
	December	739	99.3%	0.2	1.4	0.6	0	0
Annual		8389	95.8%	0.2	1.6	0.6	0	0
2015	January	672	90.3%	0.2	1.2	0.6	0	0
	February	537	79.9%	0.2	0.8	0.4	0	0
	March	658	88.4%	0.2	1.4	0.4	0	0
	April	717	99.6%	0.2	0.7	0.4	0	0
	May	726	97.6%	0.2	0.5	0.3	0	0
	June	718	99.7%	0.2	2.3	1.1	0	0
	July	744	100.0%	0.2	1.1	0.5	0	0
	August	744	100.0%	0.2	0.8	0.5	0	0
	September	720	100.0%	0.2	0.7	0.3	0	0
	October	744	100.0%	0.2	0.7	0.5	0	0
	November	714	99.2%	0.1	2.2	0.4	0	0
	December	744	100.0%	0.2	1.7	0.7	0	0
Annual		8438	96.3%	0.2	2.3	1.1	0	0

Observations in mg/m^3

FIGURE 3.1.4 - ST. JOHN'S NAPS ANNUAL CO CONCENTRATIONS



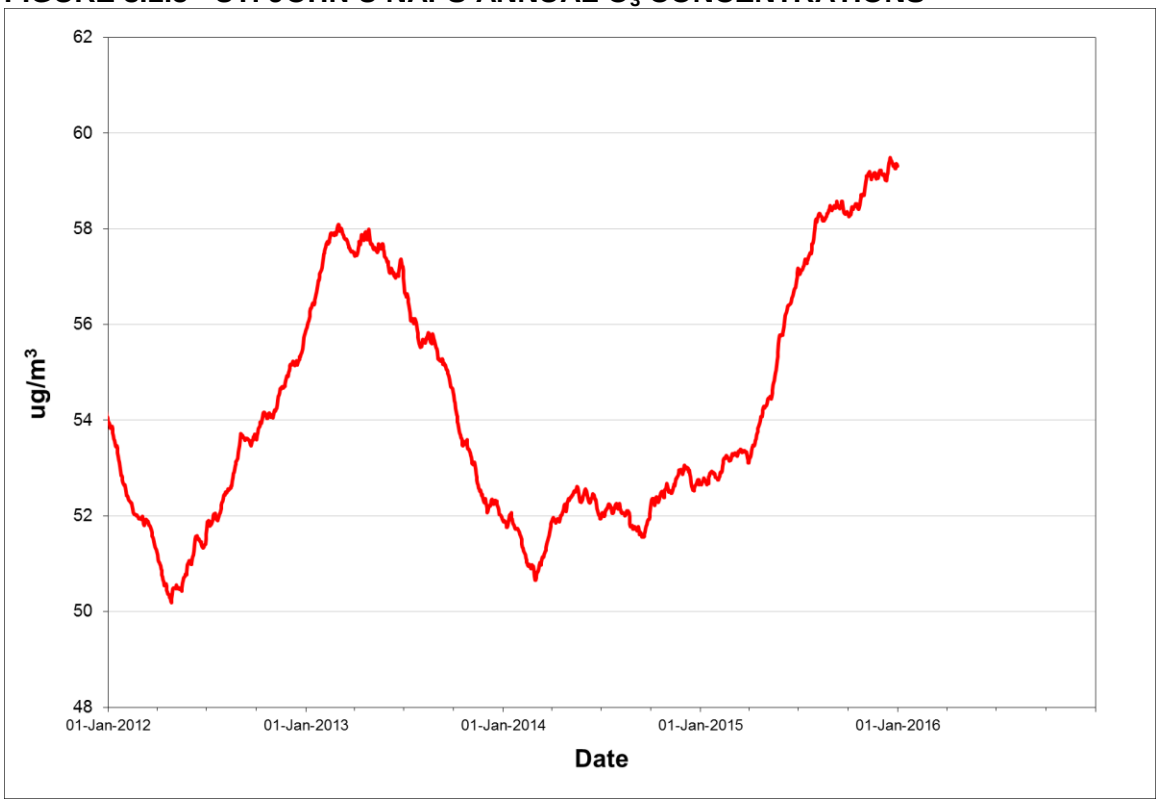
Rolling annual average of hourly concentrations

TABLE 3.1.5 - ST. JOHN'S NAPS O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	670	90.1%	59.4	84.8	80.4	0	0
	February	672	100.0%	58.5	85.3	79.9	0	0
	March	738	99.2%	65.2	91.6	87.9	0	1
	April	716	99.4%	67.6	95.6	87.7	0	2
	May	742	99.7%	58.0	99.5	80.0	0	0
	June	717	99.6%	38.4	75.4	71.0	0	0
	July	739	99.3%	45.1	96.3	76.7	0	0
	August	741	99.6%	43.9	104.3	92.9	0	1
	September	628	87.2%	44.0	122.2	84.0	0	0
	October	680	91.4%	42.6	82.0	78.3	0	0
	November	618	85.8%	53.1	83.5	71.6	0	0
	December	740	99.5%	55.5	86.7	85.9	0	0
Annual		8401	95.9%	52.7	122.2	92.9	0	4
2015	January	671	90.2%	60.8	89.8	83.0	0	0
	February	537	79.9%	67.7	89.0	86.8	0	0
	March	658	88.4%	64.4	92.6	84.7	0	0
	April	716	99.4%	81.1	119.3	107.7	0	32
	May	727	97.7%	74.9	128.1	107.0	0	18
	June	718	99.7%	54.3	104.3	80.7	0	0
	July	744	100.0%	54.4	99.1	92.0	0	1
	August	743	99.9%	48.0	120.1	92.1	0	1
	September	720	100.0%	45.1	82.2	70.1	0	0
	October	742	99.7%	49.4	80.3	73.6	0	0
	November	715	99.3%	58.7	80.8	78.9	0	0
	December	744	100.0%	56.6	79.4	76.5	0	0
Annual		8435	96.3%	59.3	128.1	107.7	0	52

Observations in ug/m^3

FIGURE 3.1.5 - ST. JOHN'S NAPS ANNUAL O_3 CONCENTRATIONS

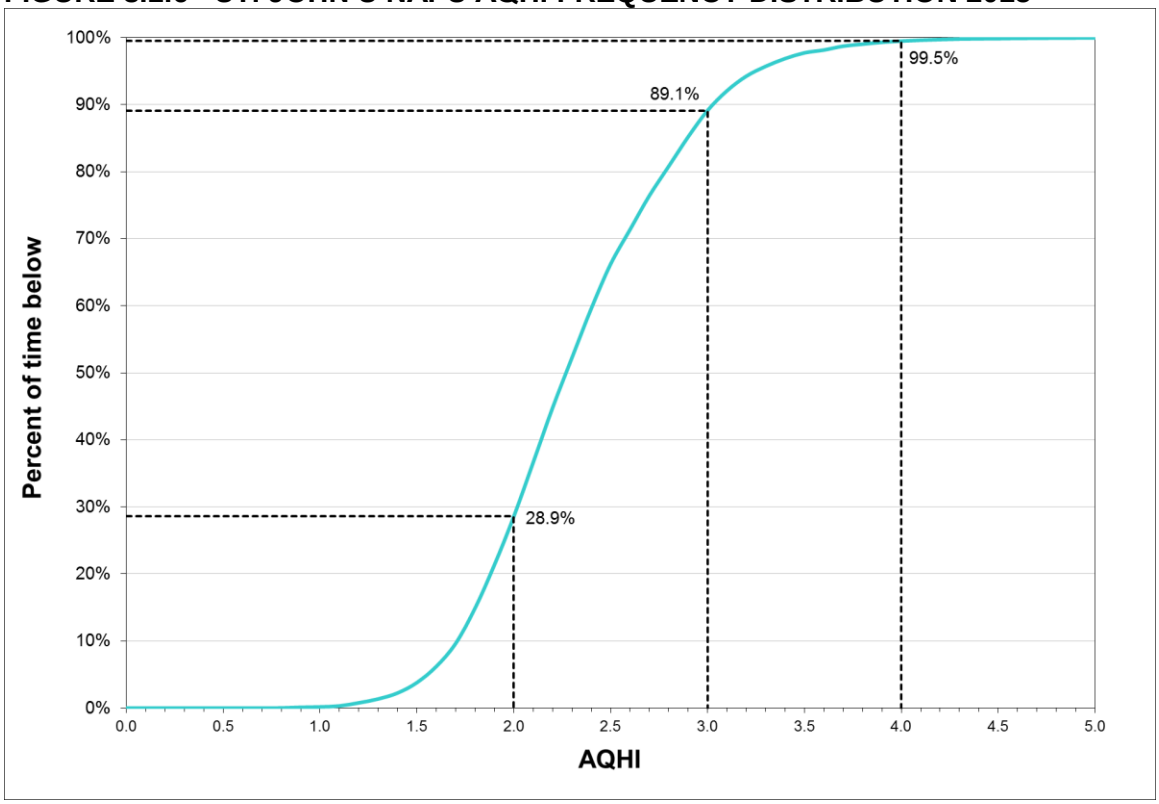


Rolling annual average of hourly concentrations

TABLE 3.1.6 - ST. JOHN'S NAPS AQHI SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 3-Hour
2014	January	626	84.1%	2.3	4.7
	February	651	96.9%	2.3	4.0
	March	724	97.3%	2.5	4.0
	April	720	100.0%	2.6	5.0
	May	744	100.0%	2.6	3.9
	June	718	99.7%	2.1	4.0
	July	739	99.3%	2.0	4.3
	August	742	99.7%	2.1	4.3
	September	628	87.2%	1.8	3.5
	October	562	75.5%	1.9	3.2
	November	614	85.3%	2.1	3.5
	December	726	97.6%	2.4	5.2
Annual		8194	93.5%	2.2	5.2
2015	January	668	89.8%	2.7	5.1
	February	536	79.8%	2.7	4.0
	March	587	78.9%	2.5	4.3
	April	717	99.6%	3.0	4.4
	May	728	97.8%	2.7	5.5
	June	718	99.7%	2.1	3.4
	July	744	100.0%	2.2	3.8
	August	744	100.0%	2.0	4.1
	September	720	100.0%	1.8	3.2
	October	740	99.5%	2.0	2.9
	November	683	94.9%	2.1	3.0
	December	717	96.4%	2.1	4.5
Annual		8302	94.8%	2.3	5.5

FIGURE 3.1.6 - ST. JOHN'S NAPS AQHI FREQUENCY DISTRIBUTION 2015



e.g. 89.1% of the time the AQHI recorded was below 3.0

3.2 Mt. Pearl

The Mt. Pearl NAPS monitoring station is located on Old Placentia Road near Admiralty House and monitors the ambient levels of SO_2, NO_x / NO_2, CO, O_3 and $PM_{2.5}$ on a continuous basis. For SO_2, $PM_{2.5}$, NO_x / NO_2, and CO, the ambient air criteria were not exceeded on any occasion in 2015. For O_3, the 8-hour ambient standard was exceeded on six occasions in 2015; three times is April, once in July and twice in September.

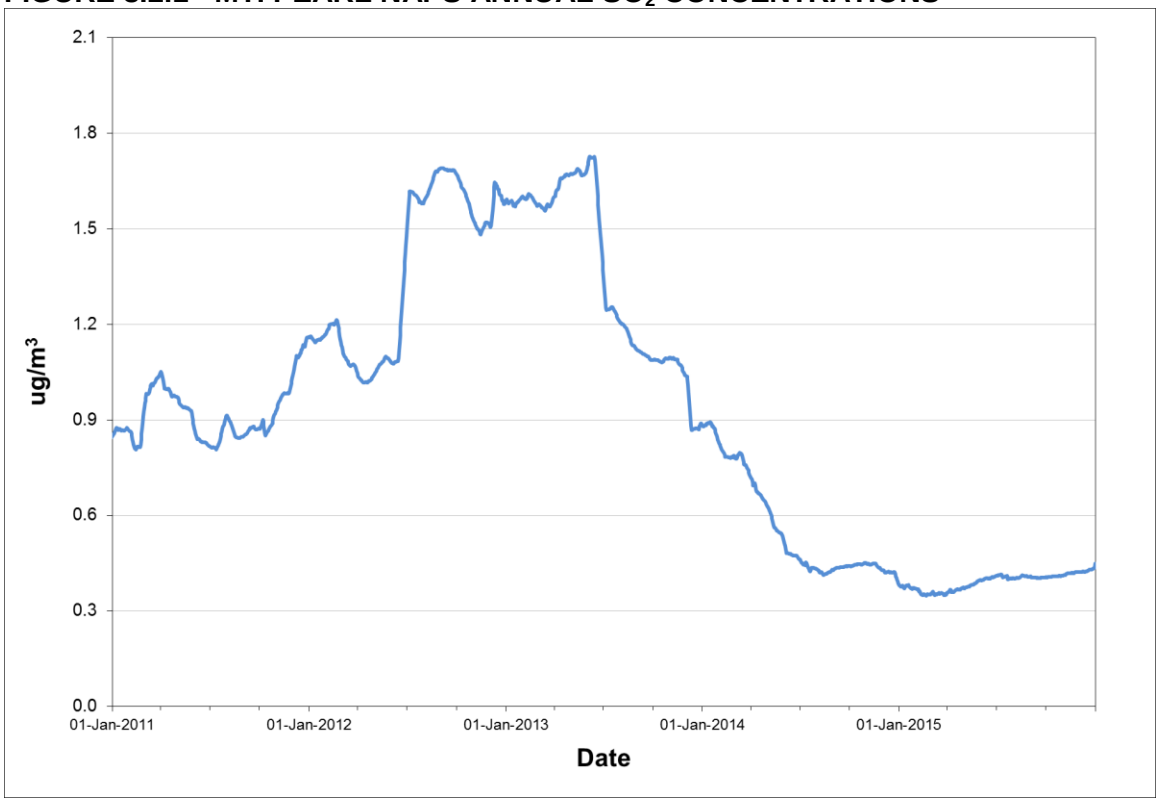
Tables 3.2.1 through 3.2.5 present the summary information on the level of air contaminants measured at the Mt. Pearl NAPS station, while Figures 3.2.1 through 3.2.5 provide a graphical representation of the annual trend of each pollutant. Table 3.2.6 provides a summary of the AQHI while Figure 3.2.6 provides a graphical representation of the percentage of time the AQHI values were below a given level in 2015.

TABLE 3.2.1 - MT. PEARL NAPS SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	721	96.9%	0.9	19.1	7.9	2.4	0	0	0
	February	668	99.4%	0.8	36.9	16.6	2.5	0	0	0
	March	739	99.3%	0.6	17.8	11.2	3.0	0	0	0
	April	712	98.9%	0.3	24.1	19.0	2.8	0	0	0
	May	741	99.6%	0.1	13.4	6.0	1.3	0	0	0
	June	716	99.4%	0.2	4.8	3.2	0.9	0	0	0
	July	738	99.2%	0.3	15.0	9.8	3.0	0	0	0
	August	741	99.6%	0.4	10.9	3.8	0.9	0	0	0
	September	717	99.6%	0.3	2.4	1.5	0.8	0	0	0
	October	733	98.5%	0.3	2.7	1.8	0.7	0	0	0
	November	682	94.7%	0.2	1.1	0.9	0.4	0	0	0
	December	493	66.3%	0.3	2.9	1.2	0.6	0	0	0
Annual		8401	95.9%	0.4	36.9	19.0	3.0	0	0	0
2015	January	743	99.9%	0.7	17.2	8.8	1.8	0	0	0
	February	672	100.0%	0.5	9.1	4.8	1.4	0	0	0
	March	737	99.1%	0.6	14.3	5.7	1.7	0	0	0
	April	716	99.4%	0.5	10.1	5.6	1.7	0	0	0
	May	741	99.6%	0.4	13.5	5.8	1.4	0	0	0
	June	720	100.0%	0.3	5.6	3.3	1.1	0	0	0
	July	744	100.0%	0.2	1.5	1.3	0.7	0	0	0
	August	744	100.0%	0.5	1.7	1.5	1.0	0	0	0
	September	720	100.0%	0.3	2.9	1.8	0.5	0	0	0
	October	744	100.0%	0.3	4.8	1.7	0.6	0	0	0
	November	720	100.0%	0.4	3.8	2.4	1.4	0	0	0
	December	744	100.0%	0.6	19.2	14.0	5.0	0	0	0
Annual		8745	99.8%	0.4	19.2	14.0	5.0	0	0	0

Observations in ug/m^3

FIGURE 3.2.1 - MT. PEARL NAPS ANNUAL SO_2 CONCENTRATIONS



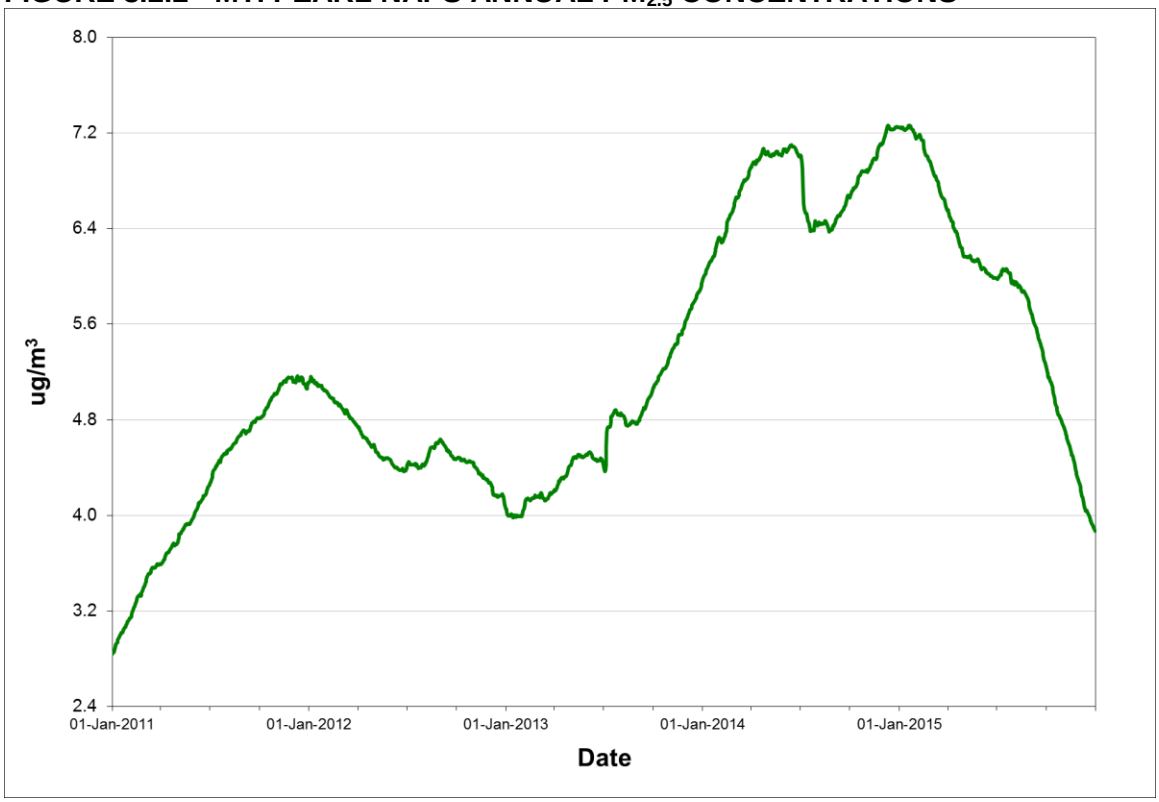
Rolling annual average of hourly concentrations

TABLE 3.2.2 - MT. PEARL NAPS $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	29	93.5%	8.4	12.9	0
	February	28	100.0%	9.2	30.2	1
	March	31	100.0%	8.3	11.8	0
	April	30	100.0%	8.0	13.8	0
	May	31	100.0%	5.1	9.4	0
	June	30	100.0%	3.2	6.8	0
	July	31	100.0%	3.7	18.9	0
	August	23	74.2%	4.9	9.1	0
	September	30	100.0%	8.3	13.0	0
	October	31	100.0%	9.3	19.3	0
	November	28	93.3%	9.5	13.7	0
	December	31	100.0%	8.9	14.2	0
Annual		353	96.7%	7.2	30.2	1
2015	January	31	100.0%	7.5	9.8	0
	February	28	100.0%	6.3	11.8	0
	March	31	100.0%	3.7	8.3	0
	April	30	100.0%	3.5	7.5	0
	May	26	83.9%	3.7	9.5	0
	June	30	100.0%	2.0	4.5	0
	July	24	77.4%	2.6	11.6	0
	August	27	87.1%	2.1	15.7	0
	September	30	100.0%	2.7	5.5	0
	October	31	100.0%	3.9	6.4	0
	November	30	100.0%	3.6	6.7	0
	December	31	100.0%	4.3	7.7	0
Annual		349	95.6%	3.9	15.7	0

Observations in ug/m^3

FIGURE 3.2.2 - MT. PEARL NAPS ANNUAL $PM_{2.5}$ CONCENTRATIONS



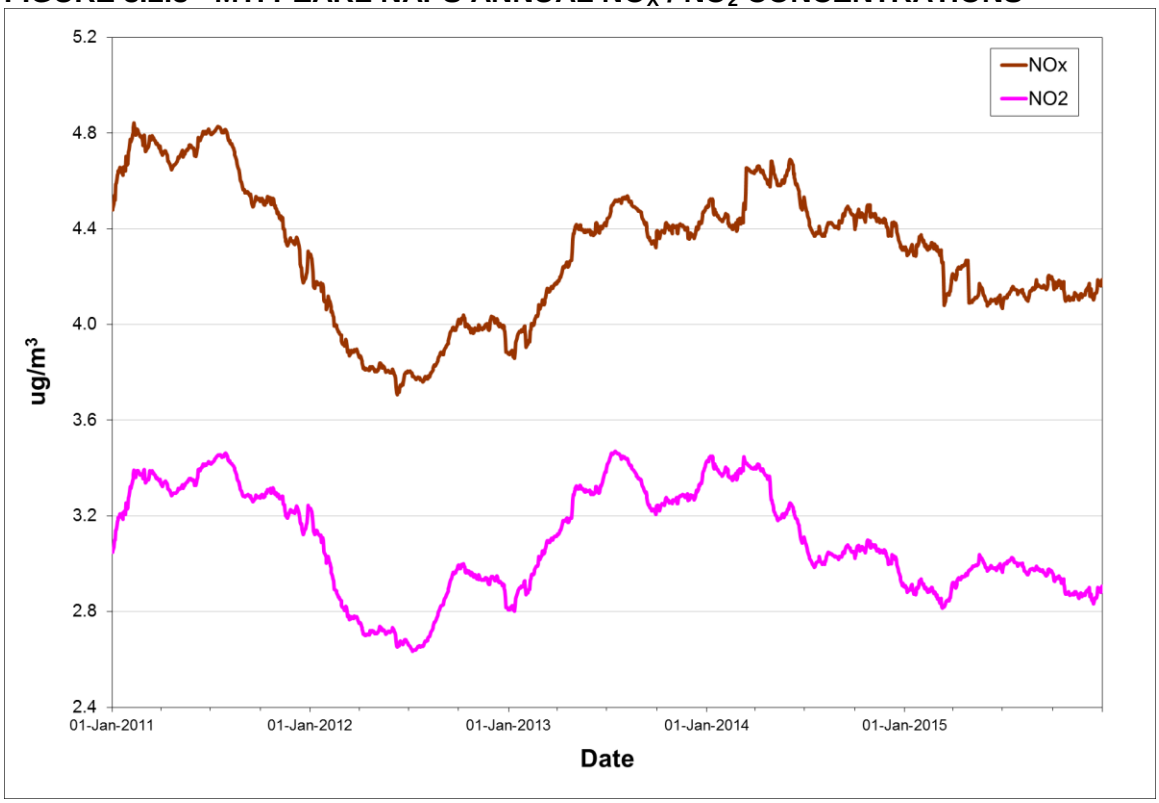
Rolling annual average of daily concentrations

TABLE 3.2.3 - MT. PEARL NAPS NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average		Maximums 1-Hour		Maximums 24-Hour		Exceedances 1-Hour	Exceedances 24-Hour
				NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	721	96.9%	5.0	4.1	70.3	68.5	15.1	12.5	0	0
	February	669	99.6%	5.5	4.5	68.5	66.1	10.4	8.6	0	0
	March	739	99.3%	6.8	3.6	112.3	64.4	42.8	14.8	0	0
	April	626	86.9%	5.5	2.2	82.2	33.4	40.4	8.1	0	0
	May	741	99.6%	3.3	2.3	70.4	19.8	9.4	5.5	0	0
	June	716	99.4%	3.9	2.4	58.2	33.8	16.6	9.1	0	0
	July	738	99.2%	2.0	1.3	52.7	22.8	7.4	5.7	0	0
	August	741	99.6%	2.7	1.8	28.7	21.3	8.3	6.0	0	0
	September	717	99.6%	3.8	2.6	78.7	24.8	13.0	6.0	0	0
	October	732	98.4%	5.2	3.8	97.9	37.2	16.4	11.4	0	0
	November	692	96.1%	3.9	3.0	77.6	55.5	9.3	7.2	0	0
	December	744	100.0%	4.3	3.2	111.9	55.0	23.6	16.6	0	0
Annual		8576	97.9%	4.3	2.9	112.3	68.5	42.8	16.6	0	0
2015	January	743	99.9%	5.7	4.5	87.5	48.3	14.1	11.1	0	0
	February	672	100.0%	4.7	3.6	115.9	34.3	11.0	8.8	0	0
	March	737	99.1%	5.6	4.3	106.6	57.4	13.4	11.1	0	0
	April	715	99.3%	3.9	2.9	35.7	29.6	10.2	8.9	0	0
	May	741	99.6%	3.4	2.4	63.1	38.1	18.0	13.5	0	0
	June	720	100.0%	3.5	2.2	61.4	27.1	7.3	4.9	0	0
	July	743	99.9%	2.8	1.8	32.7	26.9	7.1	5.8	0	0
	August	744	100.0%	3.1	1.6	69.8	31.9	7.4	4.1	0	0
	September	720	100.0%	4.0	2.4	116.1	25.4	12.1	5.6	0	0
	October	742	99.7%	4.3	2.8	67.0	25.6	12.2	8.9	0	0
	November	720	100.0%	4.1	2.9	50.7	23.6	8.3	6.4	0	0
	December	744	100.0%	5.0	3.6	217.6	46.7	17.9	14.9	0	0
Annual		8741	99.8%	4.2	2.9	217.6	57.4	18.0	14.9	0	0

Observations in ug/m^3

FIGURE 3.2.3 - MT. PEARL NAPS ANNUAL NO_X / NO_2 CONCENTRATIONS



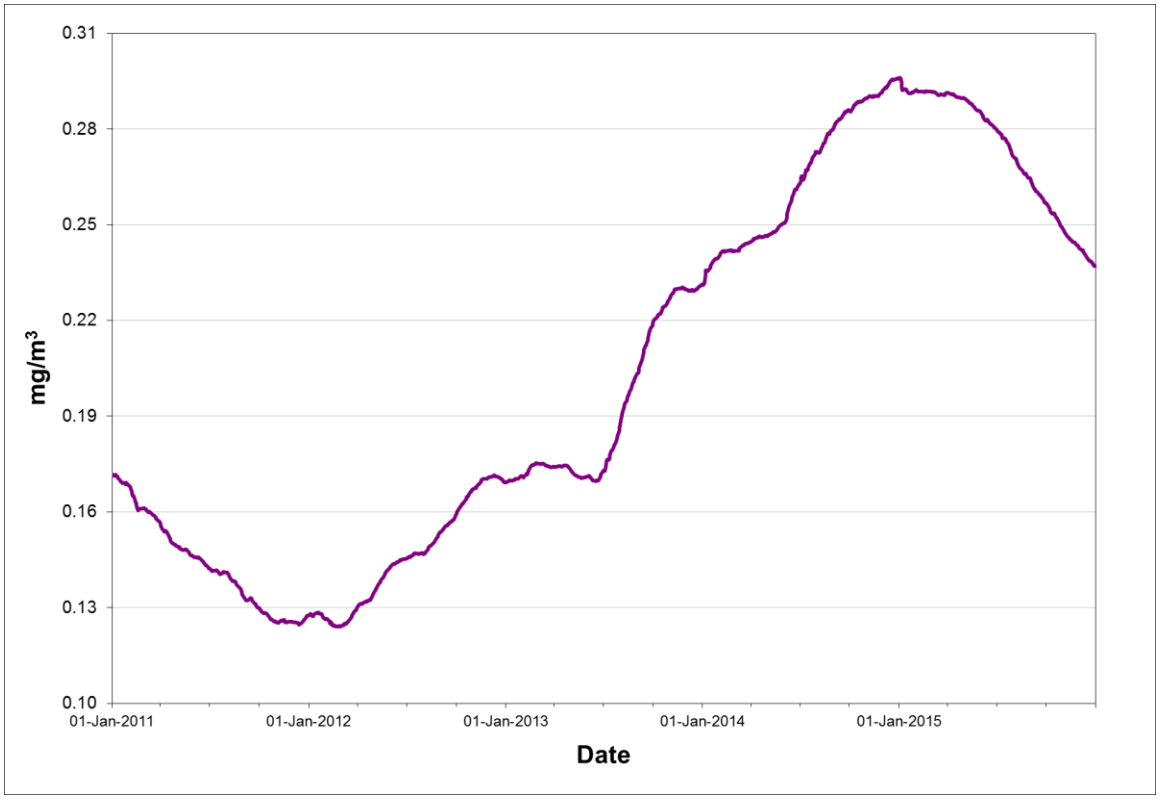
Rolling annual average of hourly concentrations

TABLE 3.2.4 - MT. PEARL NAPS CO SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>35)	Regulatory Exceedances 8-Hour (>15)
2014	January	720	96.8%	0.3	1.0	0.8	0	0
	February	668	99.4%	0.2	0.8	0.4	0	0
	March	739	99.3%	0.2	1.5	0.5	0	0
	April	713	99.0%	0.3	0.5	0.3	0	0
	May	741	99.6%	0.3	0.4	0.3	0	0
	June	716	99.4%	0.3	0.5	0.4	0	0
	July	738	99.2%	0.4	0.5	0.5	0	0
	August	741	99.6%	0.4	0.7	0.5	0	0
	September	717	99.6%	0.4	0.6	0.5	0	0
	October	733	98.5%	0.3	1.1	0.5	0	0
	November	692	96.1%	0.2	0.6	0.3	0	0
	December	744	100.0%	0.2	1.3	0.4	0	0
Annual		8662	98.9%	0.3	1.5	0.8	0	0
2015	January	743	99.9%	0.2	0.9	0.4	0	0
	February	672	100.0%	0.2	0.6	0.3	0	0
	March	737	99.1%	0.2	1.1	0.4	0	0
	April	715	99.3%	0.2	0.6	0.3	0	0
	May	741	99.6%	0.2	0.4	0.4	0	0
	June	720	100.0%	0.2	0.4	0.4	0	0
	July	744	100.0%	0.3	0.6	0.4	0	0
	August	744	100.0%	0.3	0.5	0.4	0	0
	September	720	100.0%	0.3	0.8	0.4	0	0
	October	744	100.0%	0.2	0.6	0.5	0	0
	November	720	100.0%	0.2	0.5	0.3	0	0
	December	744	100.0%	0.2	0.4	0.3	0	0
Annual		8744	99.8%	0.2	1.1	0.5	0	0

Observations in mg/m^3

FIGURE 3.2.4 - MT. PEARL NAPS ANNUAL CO CONCENTRATIONS



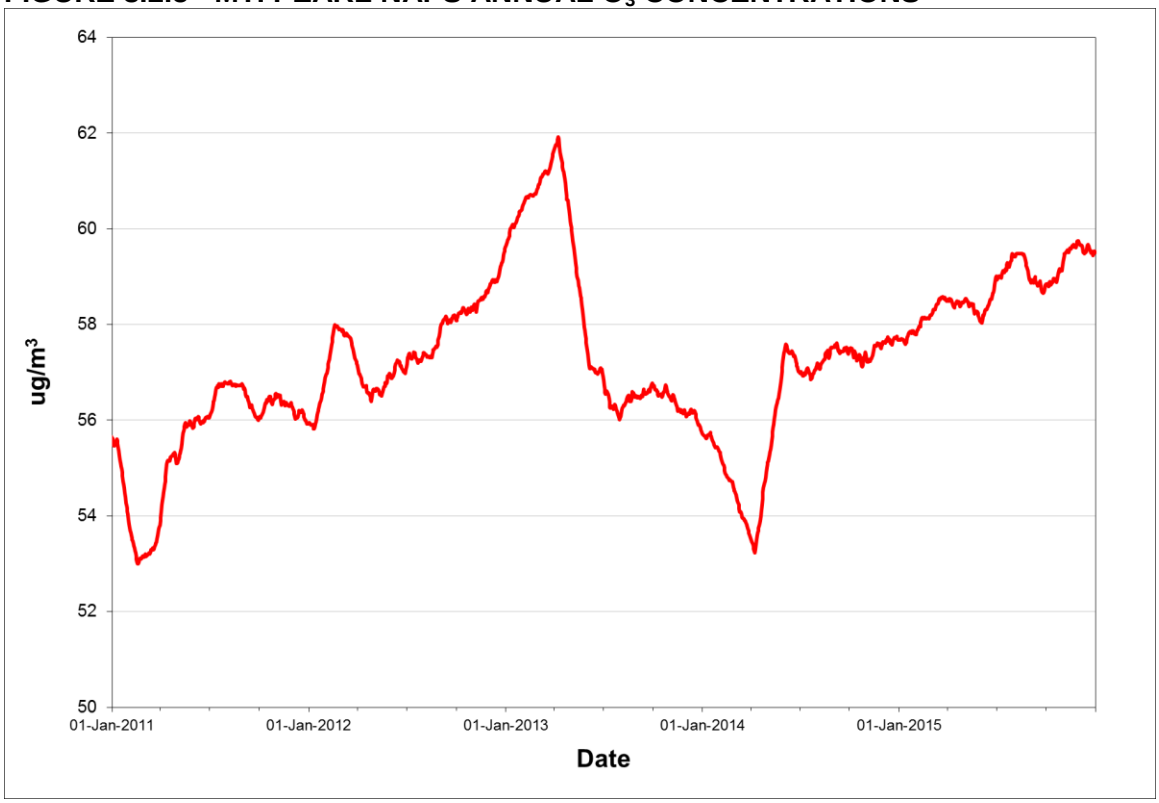
Rolling annual average of hourly concentrations

TABLE 3.2.5 - MT. PEARL NAPS O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	720	96.8%	62.5	82.6	79.2	0	0
	February	669	99.6%	65.0	84.6	80.0	0	0
	March	739	99.3%	68.9	88.0	85.8	0	0
	April	713	99.0%	73.2	95.4	88.5	0	2
	May	741	99.6%	64.3	92.8	84.2	0	0
	June	716	99.4%	44.3	79.3	68.9	0	0
	July	707	95.0%	44.9	90.9	76.1	0	0
	August	69	9.3%	58.6	93.9	76.7	0	0
	September	603	83.8%	44.6	111.2	79.3	0	0
	October	733	98.5%	45.8	80.6	77.7	0	0
	November	675	93.8%	56.0	82.8	74.2	0	0
	December	744	100.0%	62.6	89.6	80.5	0	0
Annual		7829	89.4%	57.7	111.2	88.5	0	2
2015	January	740	99.5%	63.6	88.0	79.6	0	0
	February	672	100.0%	69.5	87.5	84.1	0	0
	March	737	99.1%	72.2	90.5	84.7	0	0
	April	716	99.4%	73.1	99.9	95.1	0	3
	May	564	75.8%	60.6	117.8	86.8	0	0
	June	384	53.3%	50.3	110.3	71.4	0	0
	July	568	76.3%	47.2	114.2	91.9	0	1
	August	327	44.0%	46.8	122.5	68.7	0	0
	September	718	99.7%	46.0	124.8	97.2	0	2
	October	743	99.9%	50.0	79.1	71.7	0	0
	November	720	100.0%	61.7	76.9	74.2	0	0
	December	744	100.0%	60.1	76.5	74.9	0	0
Annual		7633	87.1%	59.5	124.8	97.2	0	6

Observations in ug/m^3

FIGURE 3.2.5 - MT. PEARL NAPS ANNUAL O_3 CONCENTRATIONS

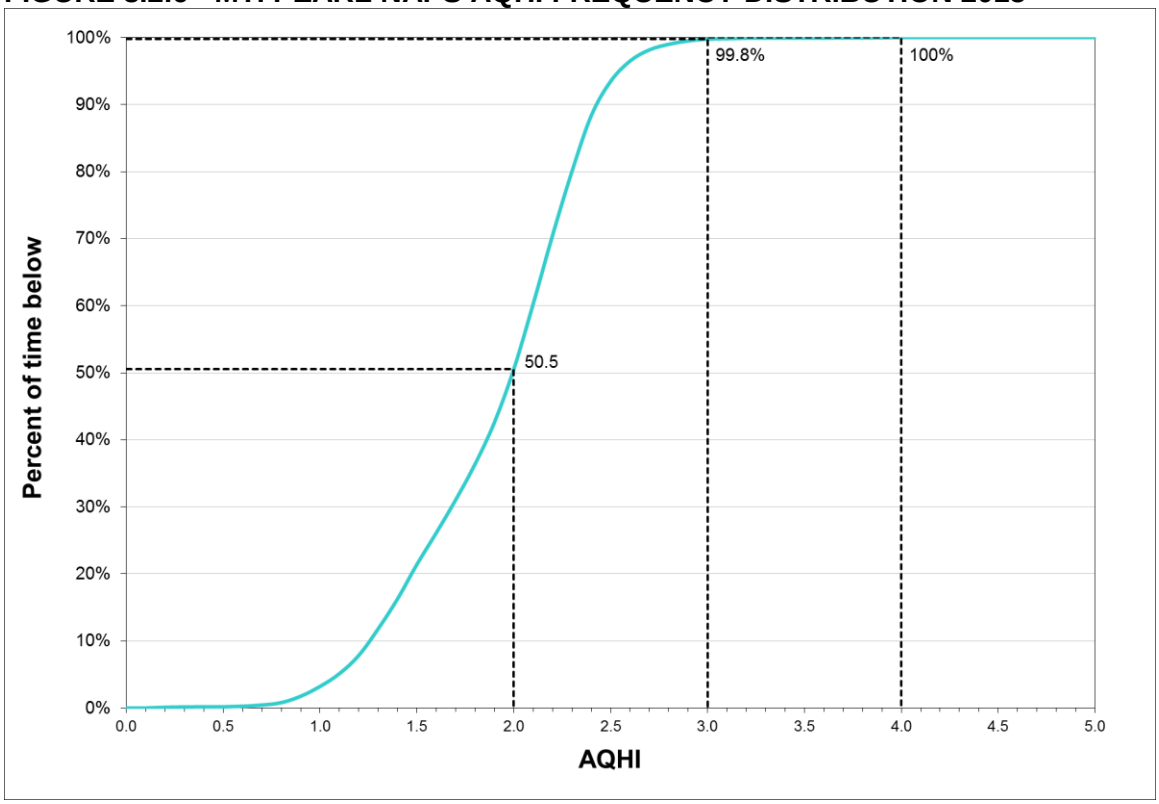


Rolling annual average of hourly concentrations

TABLE 3.2.6 - MT. PEARL NAPS AQHI SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 3-Hour
2014	January	719	96.6%	2.2	3.5
	February	669	99.6%	2.4	5.9
	March	744	100.0%	2.4	3.9
	April	632	87.8%	2.4	3.7
	May	744	100.0%	2.0	2.9
	June	720	100.0%	1.4	2.9
	July	711	95.6%	1.4	3.1
	August	51	6.9%	1.7	2.3
	September	612	85.0%	1.7	3.3
	October	737	99.1%	1.8	2.9
	November	676	93.9%	2.1	3.4
	December	744	100.0%	2.2	3.6
Annual		7759	88.6%	2.0	5.9
2015	January	740	99.5%	2.2	3.0
	February	668	99.4%	2.3	3.0
	March	731	98.3%	2.3	3.2
	April	713	99.0%	2.2	4.0
	May	486	65.3%	1.9	2.9
	June	379	52.6%	1.5	2.6
	July	507	68.1%	1.5	3.9
	August	308	41.4%	1.4	2.7
	September	716	99.4%	1.5	3.2
	October	738	99.2%	1.6	2.7
	November	720	100.0%	1.9	2.5
	December	744	100.0%	2.0	2.8
Annual		7450	85.0%	1.9	4.0

FIGURE 3.2.6 - MT. PEARL NAPS AQHI FREQUENCY DISTRIBUTION 2015



e.g. 99.8% of the time the AQHI recorded was below 3.0

3.3 Grand Falls-Windsor

The Grand Falls-Windsor NAPS monitoring station is located on Scott Avenue and monitors the ambient levels of SO_2, NO_x / NO_2, CO, O_3 and $PM_{2.5}$ on a continuous basis. For O_3, the 8-hour ambient standard was exceeded on thirty six occasions in 2015, specifically once in February, eight times in March, nineteen times in April, six times in May, and once in both June and July. For all other pollutants, the ambient air criteria were not exceeded on any occasion in 2015.

Of particular note, the $PM_{2.5}$ monitor experienced technical issues from late August to early November resulting in reduced data collection during this time.

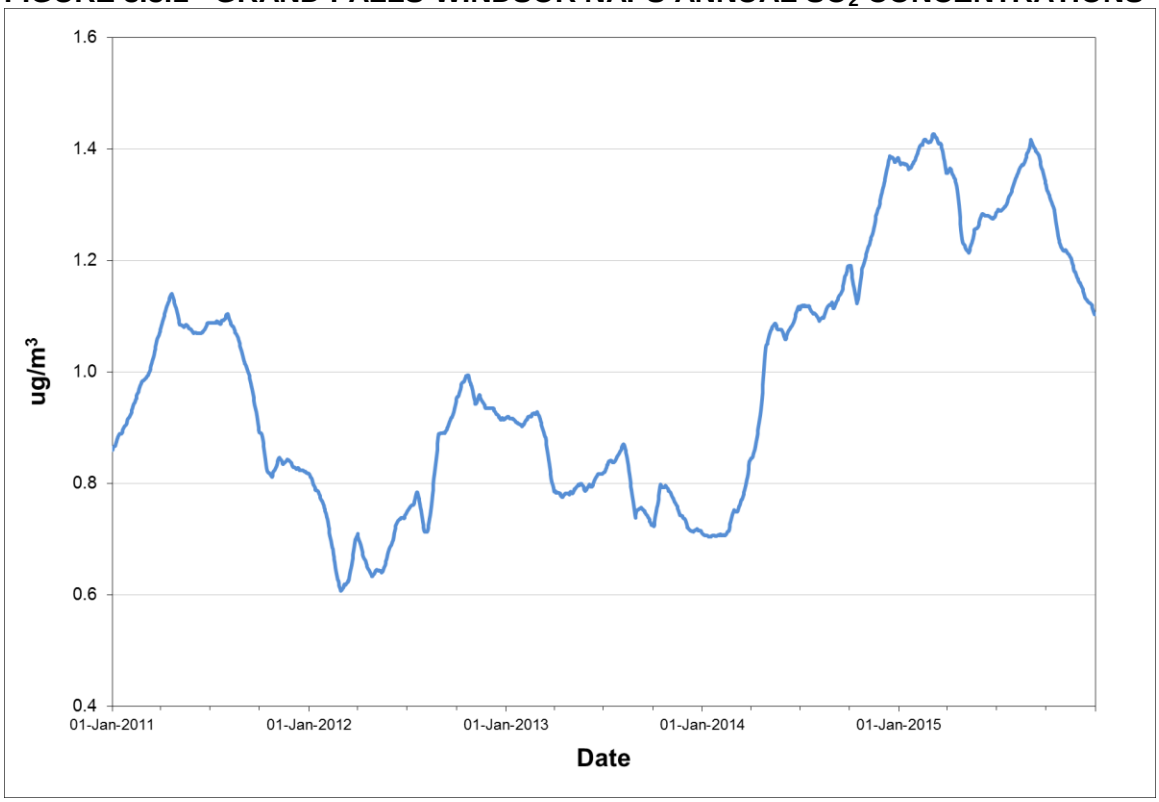
Tables 3.3.1 through 3.3.5 present the summary information on the level of air contaminants measured at the Grand Falls-Windsor NAPS station, while Figures 3.3.1 through 3.3.5 provides a graphical representation of the annual trend of each pollutant. Table 3.3.6 provides a summary of the AQHI while Figure 3.3.6 provides a graphical representation of the percentage of time the AQHI values were below a given level in 2015.

TABLE 3.3.1 - GRAND FALLS-WINDSOR NAPS SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	0	0.0%							
	February	242	36.0%	1.6	3.0	2.9	2.3	0	0	0
	March	660	88.7%	2.0	5.7	4.2	3.8	0	0	0
	April	703	97.6%	2.4	6.3	5.5	4.6	0	0	0
	May	721	96.9%	0.9	2.8	2.5	2.0	0	0	0
	June	720	100.0%	1.7	2.8	2.3	2.3	0	0	0
	July	744	100.0%	0.7	2.5	1.7	1.5	0	0	0
	August	738	99.2%	0.6	4.1	2.4	1.4	0	0	0
	September	711	98.8%	1.2	3.7	2.9	2.0	0	0	0
	October	505	67.9%	1.7	4.7	3.5	3.0	0	0	0
	November	628	87.2%	1.3	7.3	6.0	2.2	0	0	0
	December	743	99.9%	1.4	5.2	3.2	2.3	0	0	0
Annual		7115	81.2%	1.4	7.3	6.0	4.6	0	0	0
2015	January	728	97.8%	1.4	3.1	2.9	2.6	0	0	0
	February	662	98.5%	1.9	6.6	3.7	2.7	0	0	0
	March	732	98.4%	1.3	4.2	3.2	2.8	0	0	0
	April	653	90.7%	0.9	5.5	2.2	1.5	0	0	0
	May	719	96.6%	1.4	3.0	2.8	2.5	0	0	0
	June	718	99.7%	1.9	17.0	7.1	2.6	0	0	0
	July	744	100.0%	1.2	2.6	2.2	1.9	0	0	0
	August	456	61.3%	1.5	2.7	2.3	1.7	0	0	0
	September	714	99.2%	0.5	3.0	2.8	2.6	0	0	0
	October	738	99.2%	0.3	1.4	0.9	0.8	0	0	0
	November	619	86.0%	0.6	3.4	1.6	0.9	0	0	0
	December	743	99.9%	0.7	2.9	1.5	1.2	0	0	0
Annual		8226	93.9%	1.1	17.0	7.1	2.8	0	0	0

Observations in ug/m^3

FIGURE 3.3.1 - GRAND FALLS-WINDSOR NAPS ANNUAL SO_2 CONCENTRATIONS



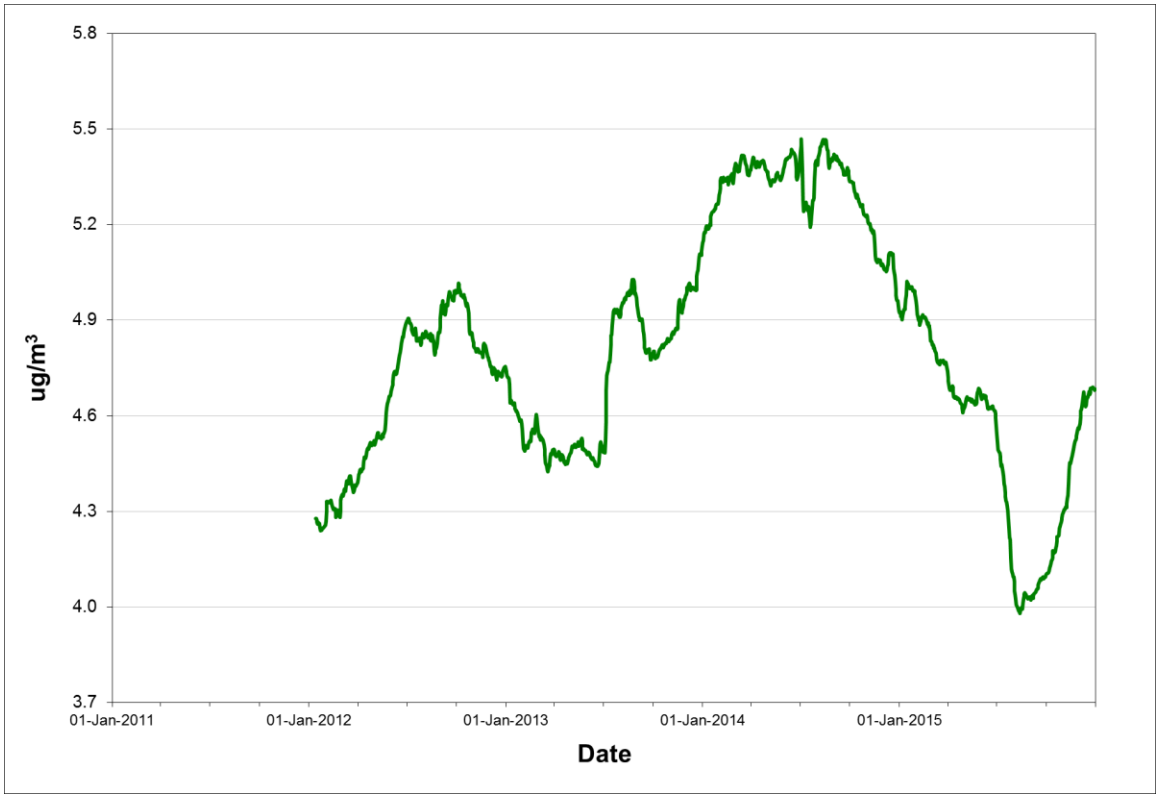
Rolling annual average of hourly concentrations

TABLE 3.3.2 - GRAND FALLS-WINDSOR NAPS $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	26	83.9%	5.3	13.5	0
	February	27	96.4%	6.1	13.4	0
	March	31	100.0%	4.7	9.2	0
	April	30	100.0%	4.9	9.8	0
	May	31	100.0%	4.6	8.4	0
	June	30	100.0%	4.5	11.2	0
	July	31	100.0%	8.8	24.3	0
	August	24	77.4%	5.1	13.5	0
	September	30	100.0%	3.2	7.2	0
	October	31	100.0%	3.2	7.6	0
	November	30	100.0%	4.2	7.1	0
	December	31	100.0%	4.6	14.0	0
Annual		352	96.4%	4.9	24.3	0
2015	January	31	100.0%	5.7	17.5	0
	February	28	100.0%	4.3	8.0	0
	March	31	100.0%	3.5	7.5	0
	April	30	100.0%	3.4	6.9	0
	May	31	100.0%	5.2	10.4	0
	June	30	100.0%	3.3	5.5	0
	July	31	100.0%	3.4	9.8	0
	August	28	90.3%	4.1	11.3	0
	September	0	0.0%			
	October	17	54.8%	6.1	10.6	0
	November	25	83.3%	7.6	18.5	0
	December	31	100.0%	5.9	10.7	0
Annual		313	85.8%	4.7	18.5	0

Observations in ug/m^3

FIGURE 3.3.2 - GRAND FALLS-WINDSOR NAPS ANNUAL $PM_{2.5}$ CONCENTRATIONS



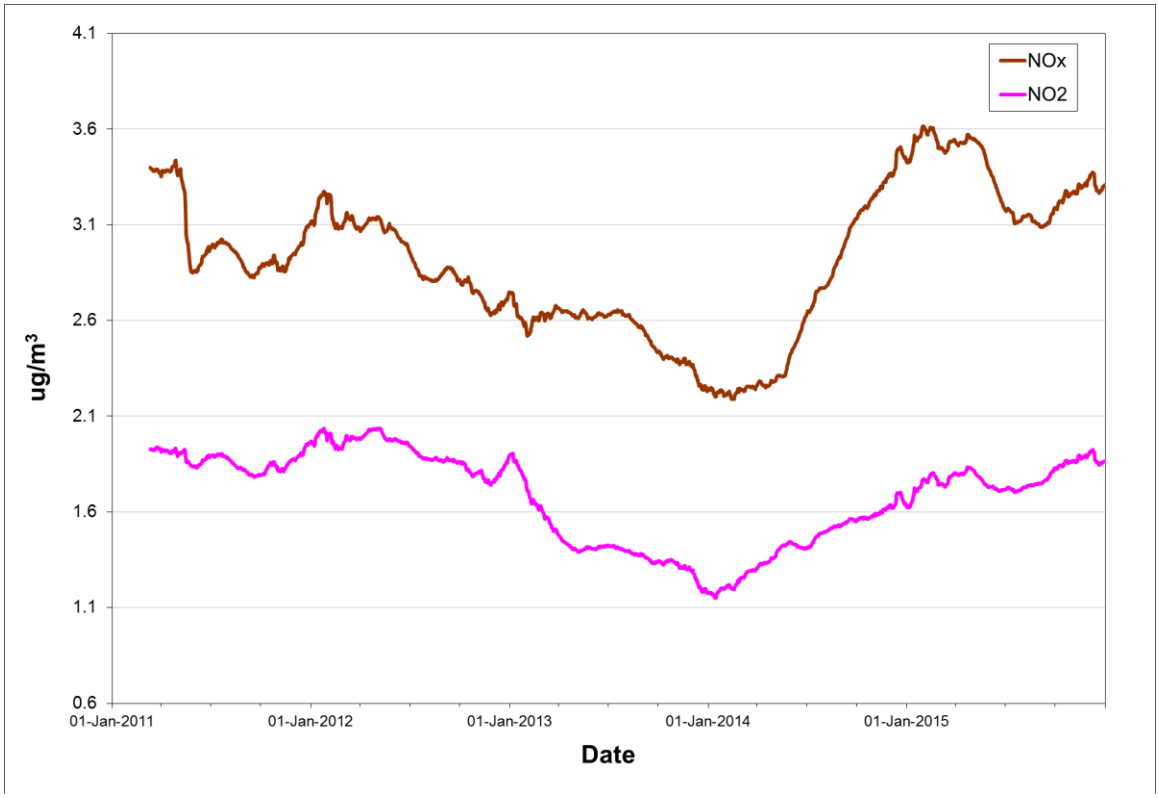
Rolling annual average of daily concentrations

TABLE 3.3.3 - GRAND FALLS-WINDSOR NAPS NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average		Maximums 1-Hour		Maximums 24-Hour		Exceedances 1-Hour	Exceedances 24-Hour
				NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	688	92.5%	2.4	1.5	42.9	24.7	9.8	6.6	0	0
	February	553	82.3%	5.0	2.4	40.7	24.6	9.6	6.8	0	0
	March	740	99.5%	3.2	1.5	40.9	18.0	6.0	4.0	0	0
	April	700	97.2%	2.5	1.2	71.8	36.4	5.1	2.5	0	0
	May	740	99.5%	3.9	2.1	54.1	25.1	8.2	3.8	0	0
	June	720	100.0%	4.8	1.1	29.4	12.5	6.7	2.4	0	0
	July	742	99.7%	3.2	1.5	68.0	13.5	12.8	4.1	0	0
	August	732	98.4%	3.0	1.2	31.2	10.9	6.9	2.4	0	0
	September	710	98.6%	3.1	1.1	26.3	14.1	6.2	2.5	0	0
	October	744	100.0%	3.3	1.7	101.1	40.2	7.4	4.2	0	0
	November	718	99.7%	3.4	2.0	34.7	20.5	10.2	7.2	0	0
	December	738	99.2%	3.8	2.2	145.2	50.3	17.2	10.6	0	0
Annual		8525	97.3%	3.4	1.6	145.2	50.3	17.2	10.6	0	0
2015	January	741	99.6%	4.6	3.2	54.3	29.4	17.2	12.7	0	0
	February	672	100.0%	3.3	1.9	87.3	31.6	8.8	5.2	0	0
	March	742	99.7%	3.6	2.2	90.8	35.5	7.5	5.1	0	0
	April	716	99.4%	2.7	1.6	219.5	120.8	12.2	7.1	0	0
	May	740	99.5%	2.0	1.0	55.8	18.3	5.4	2.2	0	0
	June	719	99.9%	2.2	0.9	30.6	15.4	3.5	2.2	0	0
	July	744	100.0%	2.6	1.6	20.0	9.4	4.2	2.4	0	0
	August	744	100.0%	2.7	1.6	63.8	20.0	5.2	2.4	0	0
	September	711	98.8%	4.1	2.0	33.2	21.3	10.6	4.8	0	0
	October	739	99.3%	4.2	2.1	40.4	19.2	9.4	4.6	0	0
	November	619	86.0%	4.4	2.5	119.1	69.3	13.3	7.5	0	0
	December	742	99.7%	3.4	1.8	112.0	57.0	7.4	3.9	0	0
Annual		8629	98.5%	3.3	1.9	219.5	120.8	17.2	12.7	0	0

Observations in ug/m^3

FIGURE 3.3.3 - GRAND FALLS-WINDSOR NAPS ANNUAL NO_X / NO_2 CONCENTRATIONS



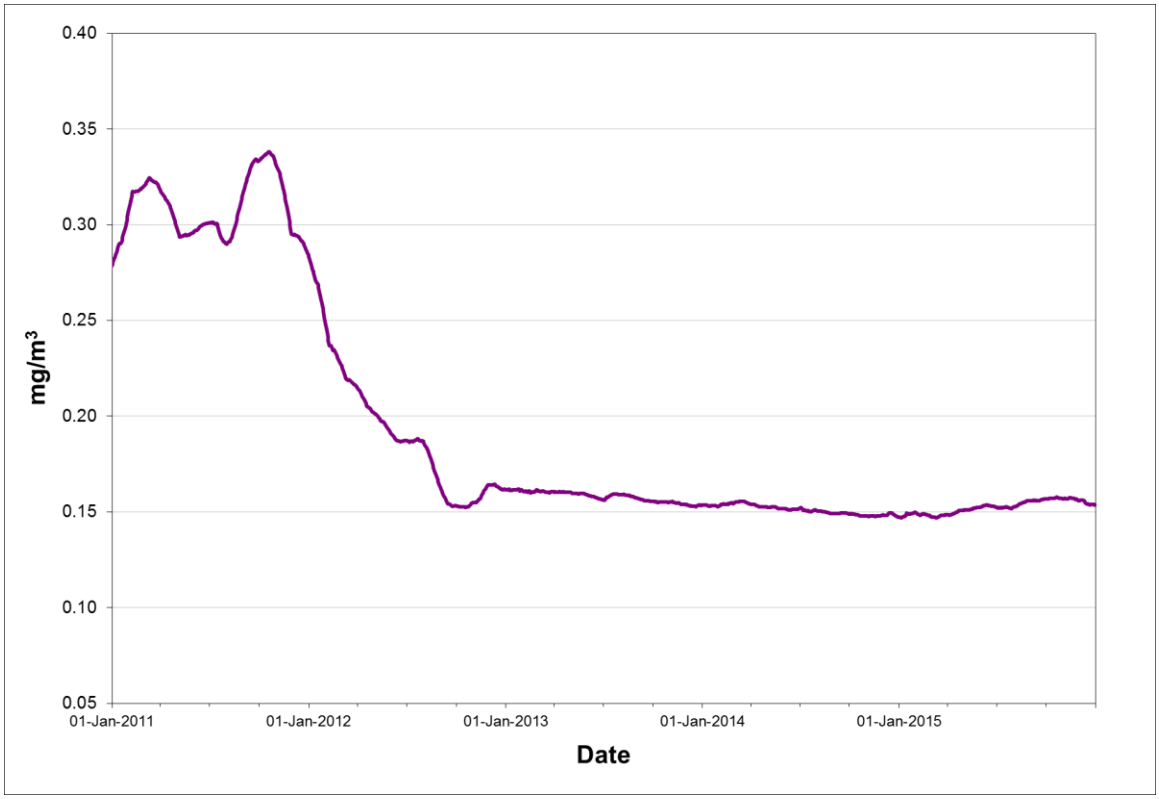
Rolling annual average of hourly concentrations

TABLE 3.3.4 - GRAND FALLS-WINDSOR NAPS CO SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>35)	Regulatory Exceedances 8-Hour (>15)
2014	January	742	99.7%	0.2	0.5	0.3	0	0
	February	638	94.9%	0.2	0.8	0.5	0	0
	March	743	99.9%	0.2	0.6	0.4	0	0
	April	717	99.6%	0.1	0.3	0.2	0	0
	May	743	99.9%	0.1	0.3	0.2	0	0
	June	650	90.3%	0.1	0.4	0.2	0	0
	July	703	94.5%	0.1	0.3	0.2	0	0
	August	740	99.5%	0.1	0.3	0.1	0	0
	September	718	99.7%	0.1	0.4	0.2	0	0
	October	744	100.0%	0.1	0.3	0.2	0	0
	November	720	100.0%	0.2	0.5	0.3	0	0
	December	744	100.0%	0.2	0.8	0.5	0	0
Annual		8602	98.2%	0.1	0.8	0.5	0	0
2015	January	742	99.7%	0.2	0.7	0.5	0	0
	February	672	100.0%	0.2	0.8	0.3	0	0
	March	743	99.9%	0.2	0.6	0.3	0	0
	April	718	99.7%	0.2	0.4	0.3	0	0
	May	744	100.0%	0.1	0.3	0.2	0	0
	June	720	100.0%	0.1	0.3	0.2	0	0
	July	684	91.9%	0.1	0.3	0.2	0	0
	August	422	56.7%	0.1	0.3	0.2	0	0
	September	715	99.3%	0.1	0.4	0.2	0	0
	October	738	99.2%	0.1	0.3	0.2	0	0
	November	620	86.1%	0.1	0.5	0.4	0	0
	December	744	100.0%	0.2	0.4	0.3	0	0
Annual		8262	94.3%	0.2	0.8	0.5	0	0

Observations in mg/m^3

FIGURE 3.3.4 - GRAND FALLS-WINDSOR NAPS ANNUAL CO CONCENTRATIONS



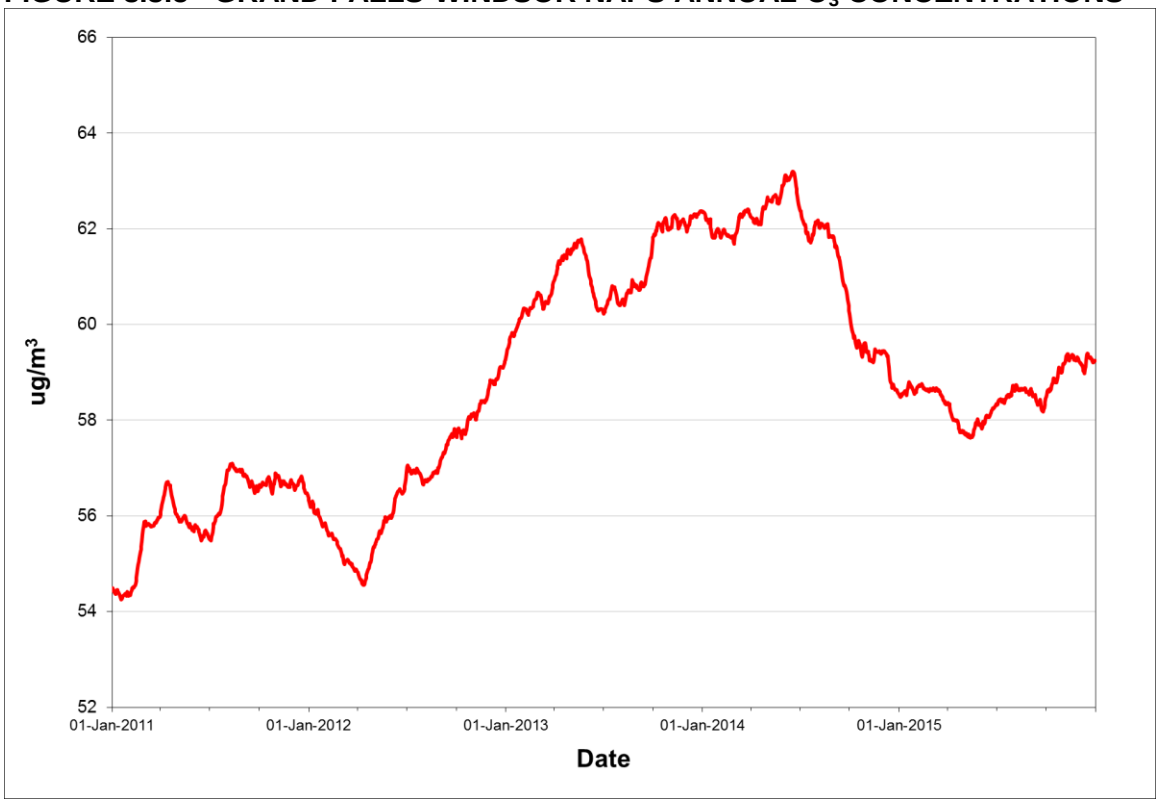
Rolling annual average of hourly concentrations

TABLE 3.3.5 - GRAND FALLS-WINDSOR NAPS O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	480	64.5%	67.7	88.5	86.5	0	0
	February	557	82.9%	74.3	94.0	88.4	0	4
	March	742	99.7%	80.7	101.3	93.9	0	20
	April	720	100.0%	84.3	105.4	102.6	0	31
	May	740	99.5%	66.6	103.9	97.1	0	5
	June	720	100.0%	46.2	88.4	78.6	0	0
	July	741	99.6%	48.6	103.5	87.0	0	1
	August	744	100.0%	45.3	94.0	75.4	0	0
	September	718	99.7%	41.1	99.0	79.7	0	0
	October	744	100.0%	41.0	81.7	77.2	0	0
	November	599	83.2%	54.9	80.1	78.3	0	0
	December	719	96.6%	58.3	83.9	78.6	0	0
Annual		8224	93.9%	58.5	105.4	102.6	0	61
2015	January	731	98.3%	65.0	87.7	82.8	0	0
	February	669	99.6%	72.6	92.8	88.3	0	1
	March	743	99.9%	77.1	99.4	94.1	0	8
	April	659	91.5%	79.3	111.0	102.9	0	19
	May	744	100.0%	68.1	117.3	105.0	0	6
	June	720	100.0%	51.2	101.9	89.9	0	1
	July	609	81.9%	51.8	96.9	89.1	0	1
	August	741	99.6%	43.2	88.8	78.7	0	0
	September	717	99.6%	40.1	99.4	80.9	0	0
	October	738	99.2%	48.2	84.3	72.5	0	0
	November	620	86.1%	57.3	77.3	75.1	0	0
	December	744	100.0%	57.9	75.6	74.7	0	0
Annual		8435	96.3%	59.2	117.3	105.0	0	36

Observations in ug/m^3

FIGURE 3.3.5 - GRAND FALLS-WINDSOR NAPS ANNUAL O_3 CONCENTRATIONS

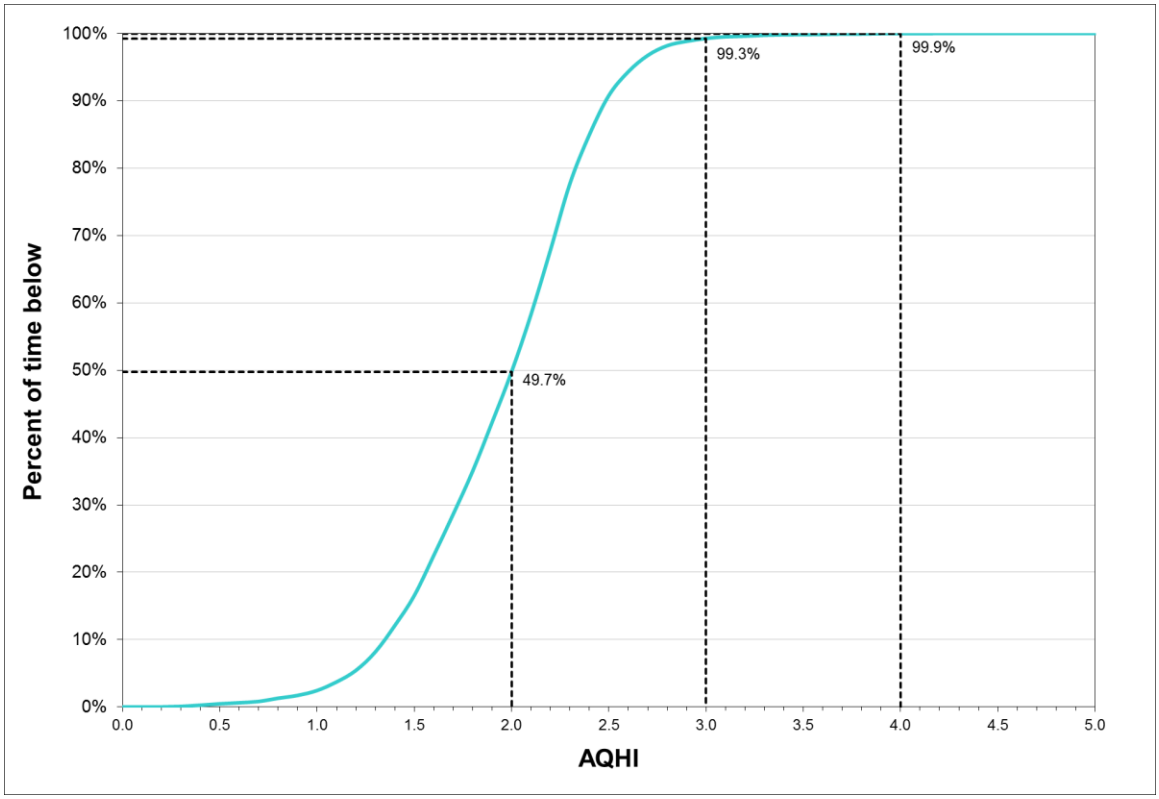


Rolling annual average of hourly concentrations

TABLE 3.3.6 - GRAND FALLS-WINDSOR NAPS AQHI SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 3-Hour
2014	January	475	63.8%	2.1	3.5
	February	549	81.7%	2.4	3.7
	March	738	99.2%	2.4	3.8
	April	698	96.9%	2.5	3.5
	May	737	99.1%	2.1	3.1
	June	716	99.4%	1.5	2.6
	July	737	99.1%	1.8	4.3
	August	585	78.6%	1.5	2.9
	September	699	97.1%	1.3	3.2
	October	731	98.3%	1.3	2.4
	November	594	82.5%	1.7	2.7
	December	707	95.0%	1.9	3.1
Annual		7966	90.9%	1.9	4.3
2015	January	732	98.4%	2.1	4.2
	February	661	98.4%	2.2	3.3
	March	737	99.1%	2.3	3.4
	April	649	90.1%	2.3	3.3
	May	744	100.0%	2.1	3.7
	June	711	98.8%	1.6	2.8
	July	599	80.5%	1.6	3.1
	August	643	86.4%	1.4	2.9
	September	0	0.0%		
	October	430	57.8%	1.8	2.5
	November	617	85.7%	2.0	3.3
	December	740	99.5%	1.9	2.9
Annual		7263	82.9%	2.0	4.2

FIGURE 3.3.6 - GRAND FALLS-WINDSOR NAPS AQHI FREQUENCY DISTRIBUTION 2015



e.g. 99.3% of the time the AQHI recorded was below 3.0

3.4 Corner Brook

The Corner Brook NAPS monitoring station is located on MacPherson Avenue near Confederation Drive and monitors the ambient levels of SO_2, NO_x / NO_2, CO, O_3 and $PM_{2.5}$ on a continuous basis. For SO_2, NO_x / NO_2, CO and $PM_{2.5}$, the ambient air criteria were not exceeded on any occasion in 2015. The 8-hour O_3 standard was exceeded on forty-one occasions in 2015 between March and September, specifically fourteen times in March, sixteen times in April, ten times in May and once in September.

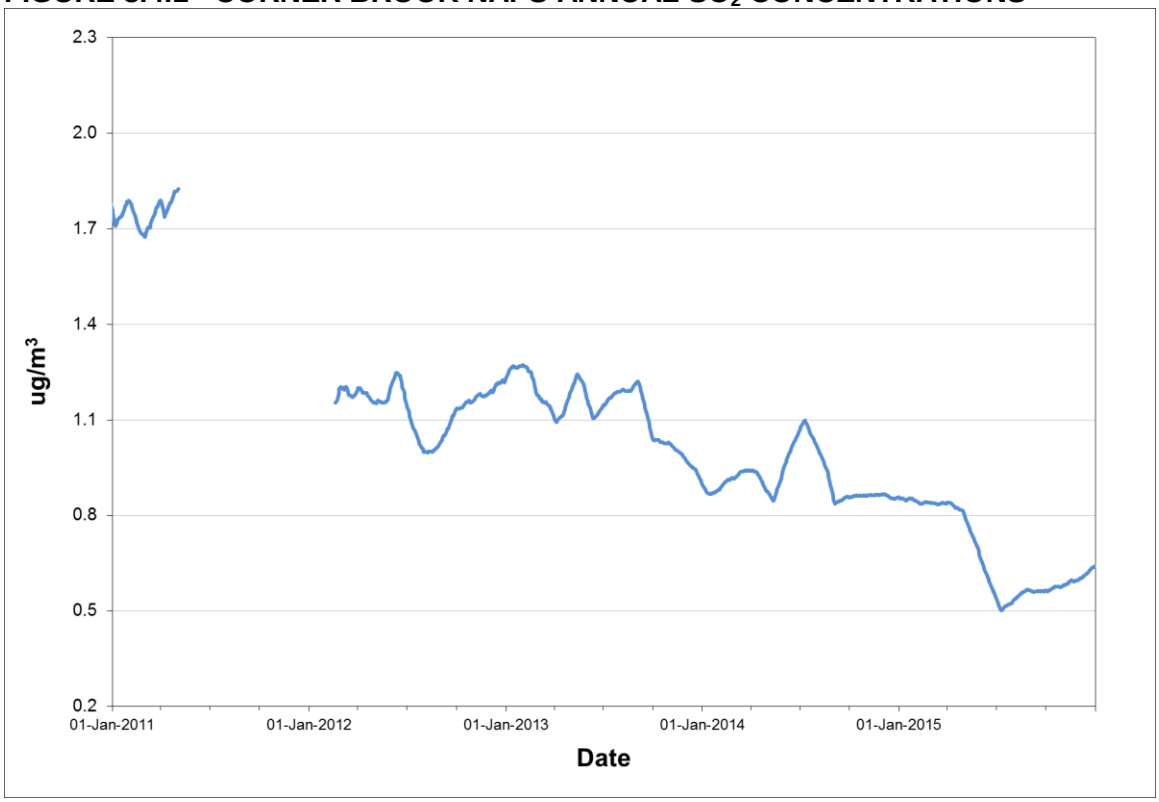
Tables 3.4.1 through 3.4.5 present the summary information on the level of air contaminants measured at the Corner Brook NAPS station, while Figures 3.4.1 through 3.4.5 provide a graphical representation of the annual trend of each pollutant. Table 3.4.6 provides a summary of the AQHI while Figure 3.4.6 provides a graphical representation of the percentage of time the AQHI values were below a given level in 2015.

TABLE 3.4.1 - CORNER BROOK NAPS SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	234	31.5%	0.3	1.1	0.7	0.4	0	0	0
	February	437	65.0%	0.6	4.6	2.8	1.1	0	0	0
	March	730	98.1%	0.6	2.4	1.7	1.0	0	0	0
	April	702	97.5%	0.9	4.5	3.6	1.9	0	0	0
	May	732	98.4%	2.1	10.0	6.7	3.3	0	0	0
	June	709	98.5%	2.2	5.7	3.9	2.7	0	0	0
	July	733	98.5%	0.9	3.9	2.7	2.5	0	0	0
	August	732	98.4%	0.3	1.8	1.6	0.6	0	0	0
	September	666	92.5%	0.5	4.6	2.4	0.8	0	0	0
	October	743	99.9%	0.5	4.0	3.5	1.2	0	0	0
	November	715	99.3%	0.4	2.0	1.5	0.9	0	0	0
	December	733	98.5%	0.4	1.6	1.3	0.9	0	0	0
Annual		7866	89.8%	0.9	10.0	6.7	3.3	0	0	0
2015	January	734	98.7%	0.5	6.0	3.5	1.3	0	0	0
	February	666	99.1%	0.6	2.6	2.4	1.4	0	0	0
	March	742	99.7%	0.6	1.8	1.4	0.9	0	0	0
	April	717	99.6%	0.6	1.8	1.4	1.0	0	0	0
	May	744	100.0%	0.5	1.9	1.4	0.7	0	0	0
	June	719	99.9%	0.6	14.2	8.9	1.8	0	0	0
	July	600	80.6%	0.8	2.5	1.7	1.1	0	0	0
	August	721	96.9%	0.8	2.2	1.4	1.0	0	0	0
	September	692	96.1%	0.5	4.4	2.7	0.7	0	0	0
	October	738	99.2%	0.7	4.3	2.5	1.3	0	0	0
	November	713	99.0%	0.7	1.8	1.3	1.1	0	0	0
	December	742	99.7%	0.9	2.2	1.9	1.6	0	0	0
Annual		8528	97.4%	0.6	14.2	8.9	1.8	0	0	0

Observations in ug/m^3

FIGURE 3.4.1 - CORNER BROOK NAPS ANNUAL SO_2 CONCENTRATIONS



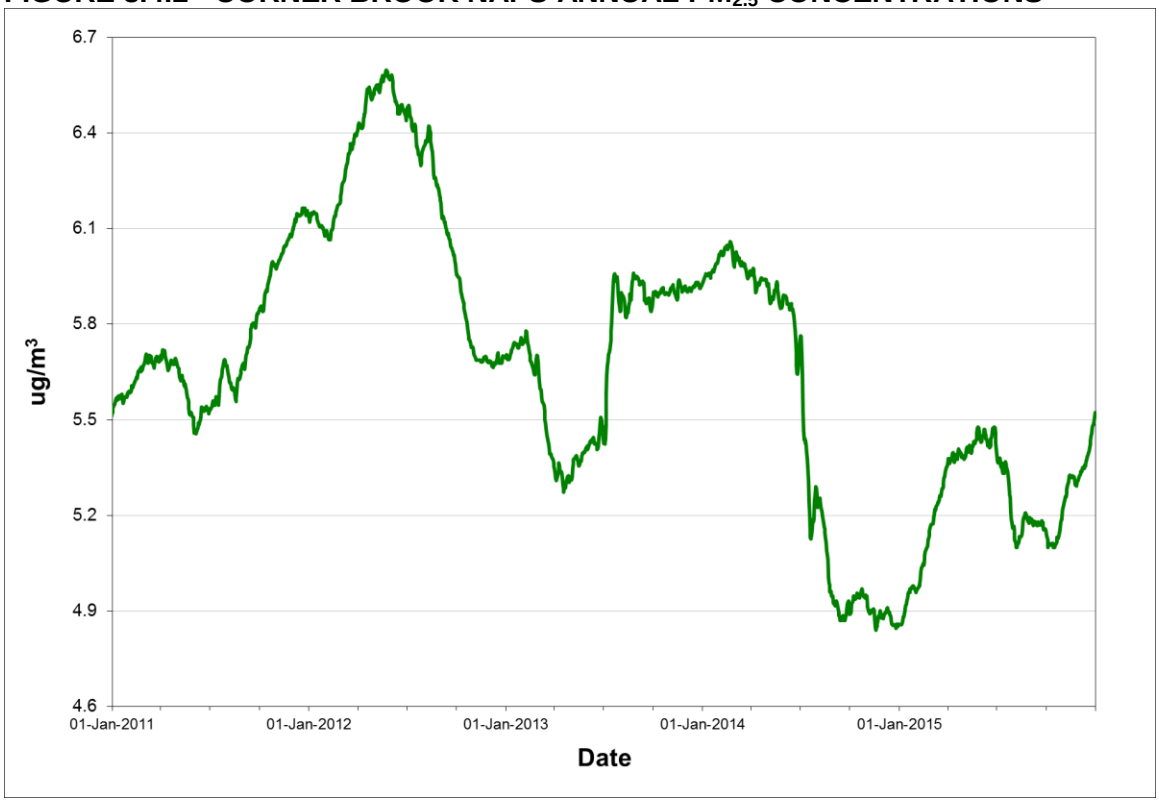
Rolling annual average of hourly concentrations

TABLE 3.4.2 - CORNER BROOK NAPS $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	6	19.4%	4.9	7.7	0
	February	18	64.3%	5.0	7.6	0
	March	31	100.0%	4.0	7.5	0
	April	30	100.0%	5.6	9.1	0
	May	31	100.0%	5.7	12.2	0
	June	30	100.0%	5.3	16.6	0
	July	31	100.0%	7.6	21.1	0
	August	31	100.0%	3.9	13.7	0
	September	27	90.0%	3.9	8.0	0
	October	30	96.8%	4.4	12.3	0
	November	25	83.3%	4.1	7.5	0
	December	31	100.0%	3.9	7.3	0
Annual		321	87.9%	4.9	21.1	0
2015	January	26	83.9%	6.3	9.9	0
	February	28	100.0%	7.5	14.1	0
	March	31	100.0%	6.2	9.4	0
	April	30	100.0%	5.9	11.7	0
	May	31	100.0%	6.3	10.8	0
	June	28	93.3%	4.9	9.1	0
	July	29	93.5%	4.7	12.8	0
	August	30	96.8%	4.2	12.6	0
	September	23	76.7%	3.0	7.9	0
	October	27	87.1%	5.2	10.5	0
	November	30	100.0%	5.4	9.5	0
	December	31	100.0%	6.1	9.2	0
Annual		344	94.2%	5.5	14.1	0

Observations in ug/m^3

FIGURE 3.4.2 - CORNER BROOK NAPS ANNUAL $PM_{2.5}$ CONCENTRATIONS



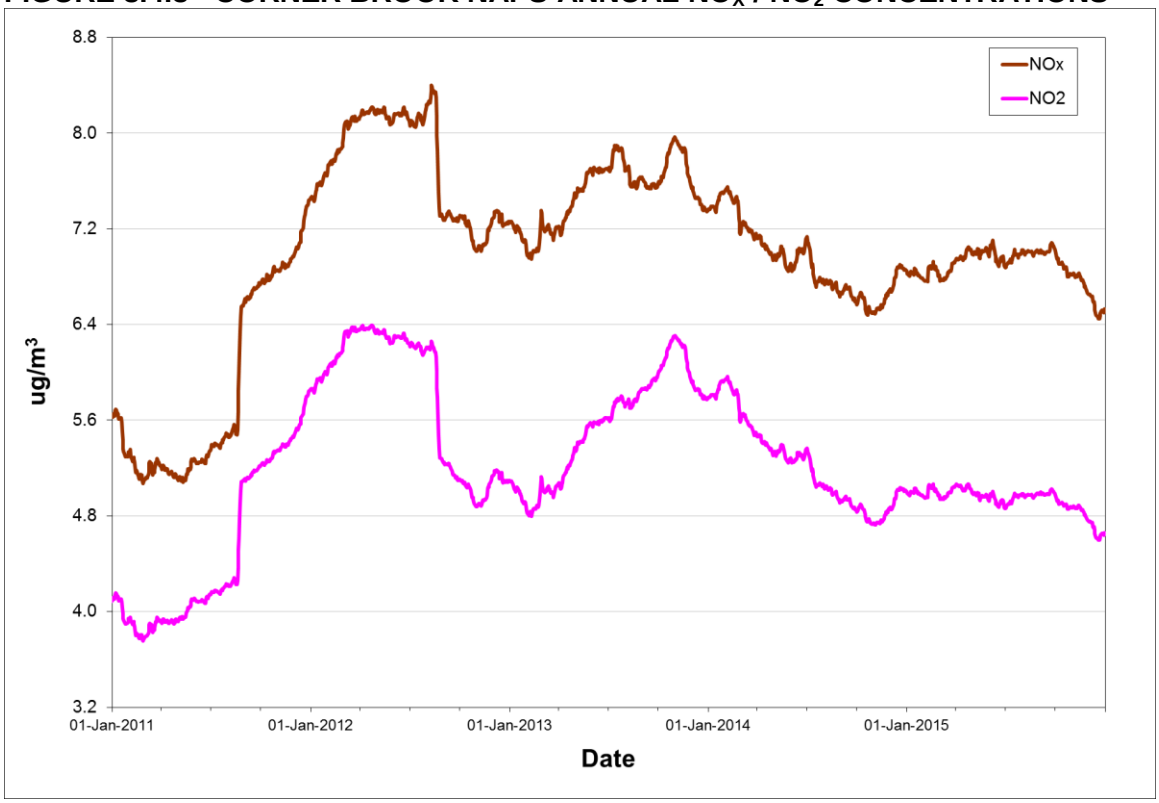
Rolling annual average of daily concentrations

TABLE 3.4.3 - CORNER BROOK NAPS NO_X / NO_2 SUMMARY 2014 & 2015

						Maximums				Exceedances	
		# Valid	% Valid	Average		1-Hour		24-Hour		1-Hour	24-Hour
Year	Month	Hours	Hours	NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	236	31.7%	9.2	7.2	65.6	41.6	23.2	16.7	0	0
	February	443	65.9%	9.9	7.8	113.7	58.8	24.6	16.3	0	0
	March	739	99.3%	6.3	4.6	95.7	52.3	21.7	15.4	0	0
	April	685	95.1%	5.7	5.0	48.2	35.1	11.4	9.6	0	0
	May	735	98.8%	7.0	5.9	90.9	50.1	28.9	21.6	0	0
	June	719	99.9%	9.3	5.9	66.4	38.8	20.2	14.3	0	0
	July	743	99.9%	4.8	2.8	84.6	54.8	17.0	12.4	0	0
	August	738	99.2%	5.3	3.3	56.4	36.5	13.6	8.7	0	0
	September	690	95.8%	4.8	3.3	47.9	29.3	13.1	8.3	0	0
	October	743	99.9%	7.6	5.1	74.8	42.9	21.5	12.9	0	0
	November	714	99.2%	7.4	5.7	67.9	45.8	16.6	12.7	0	0
	December	741	99.6%	7.6	6.0	74.8	51.0	23.4	19.1	0	0
Annual		7926	90.5%	6.8	5.0	113.7	58.8	28.9	21.6	0	0
2015	January	738	99.2%	6.8	5.3	73.5	54.3	22.6	16.9	0	0
	February	671	99.9%	9.1	6.8	113.9	60.7	37.2	29.4	0	0
	March	742	99.7%	7.8	5.5	57.2	33.6	20.5	14.0	0	0
	April	716	99.4%	6.7	4.5	52.3	43.1	16.6	11.6	0	0
	May	744	100.0%	6.7	5.0	84.9	62.0	13.5	10.0	0	0
	June	720	100.0%	8.1	5.1	85.8	43.5	23.8	15.2	0	0
	July	744	100.0%	6.1	4.0	84.6	36.8	22.2	11.1	0	0
	August	741	99.6%	5.5	3.5	50.9	35.3	19.6	13.2	0	0
	September	716	99.4%	5.1	3.3	51.2	28.1	19.2	10.2	0	0
	October	730	98.1%	5.1	3.7	39.2	24.2	10.2	6.8	0	0
	November	718	99.7%	5.5	4.4	36.9	25.3	14.1	11.5	0	0
	December	744	100.0%	6.0	4.7	77.5	45.2	15.8	12.1	0	0
Annual		8724	99.6%	6.5	4.7	113.9	62.0	37.2	29.4	0	0

Observations in ug/m^3

FIGURE 3.4.3 - CORNER BROOK NAPS ANNUAL NO_X / NO_2 CONCENTRATIONS



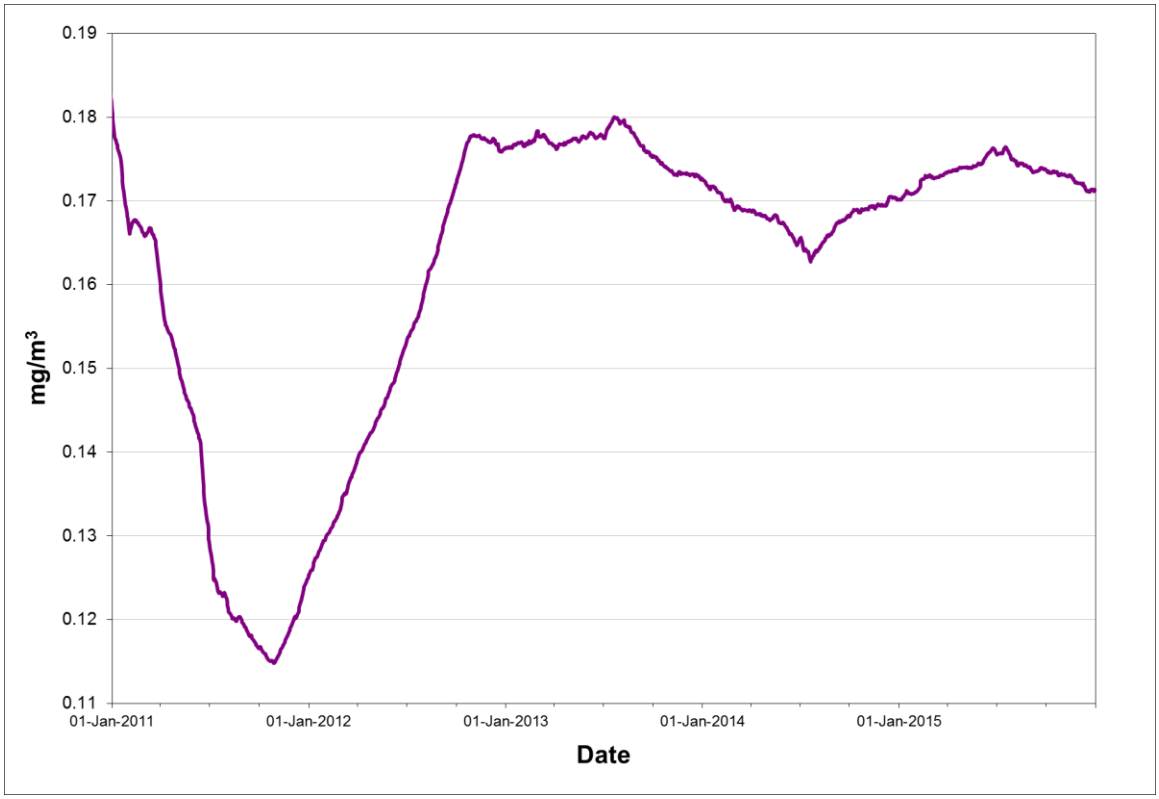
Rolling annual average of hourly concentrations

TABLE 3.4.4 - CORNER BROOK NAPS CO SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>35)	Regulatory Exceedances 8-Hour (>15)
2014	January	198	26.6%	0.2	0.7	0.4	0	0
	February	444	66.1%	0.2	0.9	0.4	0	0
	March	739	99.3%	0.2	0.6	0.3	0	0
	April	709	98.5%	0.2	0.3	0.2	0	0
	May	739	99.3%	0.2	0.3	0.2	0	0
	June	716	99.4%	0.1	0.3	0.2	0	0
	July	739	99.3%	0.2	0.3	0.3	0	0
	August	743	99.9%	0.2	0.3	0.2	0	0
	September	668	92.8%	0.2	0.3	0.2	0	0
	October	743	99.9%	0.2	0.5	0.3	0	0
	November	718	99.7%	0.2	0.6	0.3	0	0
	December	735	98.8%	0.2	0.7	0.5	0	0
Annual		7891	90.1%	0.2	0.9	0.5	0	0
2015	January	737	99.1%	0.2	0.9	0.4	0	0
	February	670	99.7%	0.2	0.9	0.5	0	0
	March	737	99.1%	0.2	0.6	0.3	0	0
	April	717	99.6%	0.2	0.6	0.3	0	0
	May	737	99.1%	0.2	0.3	0.2	0	0
	June	719	99.9%	0.1	0.4	0.2	0	0
	July	743	99.9%	0.2	0.5	0.3	0	0
	August	739	99.3%	0.2	0.8	0.3	0	0
	September	714	99.2%	0.2	0.4	0.2	0	0
	October	741	99.6%	0.1	0.5	0.2	0	0
	November	715	99.3%	0.2	0.4	0.3	0	0
	December	740	99.5%	0.2	0.5	0.3	0	0
Annual		8709	99.4%	0.2	0.9	0.5	0	0

Observations in mg/m^3

FIGURE 3.4.4 - CORNER BROOK NAPS ANNUAL CO CONCENTRATIONS



Rolling annual average of hourly concentrations

TABLE 3.4.5 - CORNER BROOK NAPS O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	235	31.6%	60.8	82.5	79.1	0	0
	February	443	65.9%	70.6	91.0	87.5	0	1
	March	739	99.3%	76.5	99.0	91.9	0	9
	April	713	99.0%	78.8	110.1	105.6	0	16
	May	742	99.7%	61.7	95.5	84.1	0	0
	June	719	99.9%	46.0	82.7	72.4	0	0
	July	743	99.9%	57.5	106.7	98.7	0	7
	August	742	99.7%	49.8	98.1	85.9	0	0
	September	666	92.5%	53.9	112.6	99.1	0	2
	October	743	99.9%	47.7	93.1	77.5	0	0
	November	711	98.8%	57.0	80.9	75.5	0	0
	December	737	99.1%	57.3	79.0	77.4	0	0
Annual		7933	90.6%	59.3	112.6	105.6	0	35
2015	January	717	96.4%	62.9	90.9	79.9	0	0
	February	584	86.9%	68.7	92.4	86.0	0	0
	March	742	99.7%	78.5	102.0	95.3	0	14
	April	717	99.6%	79.1	115.9	107.2	0	16
	May	744	100.0%	66.8	109.8	106.1	0	10
	June	715	99.3%	38.2	77.3	72.4	0	0
	July	744	100.0%	41.8	79.9	71.7	0	0
	August	737	99.1%	41.2	92.9	74.8	0	0
	September	714	99.2%	41.6	105.6	88.1	0	1
	October	742	99.7%	48.0	78.4	65.0	0	0
	November	719	99.9%	53.5	78.7	76.2	0	0
	December	744	100.0%	55.1	78.7	72.6	0	0
Annual		8619	98.4%	56.1	115.9	107.2	0	41

Observations in ug/m^3

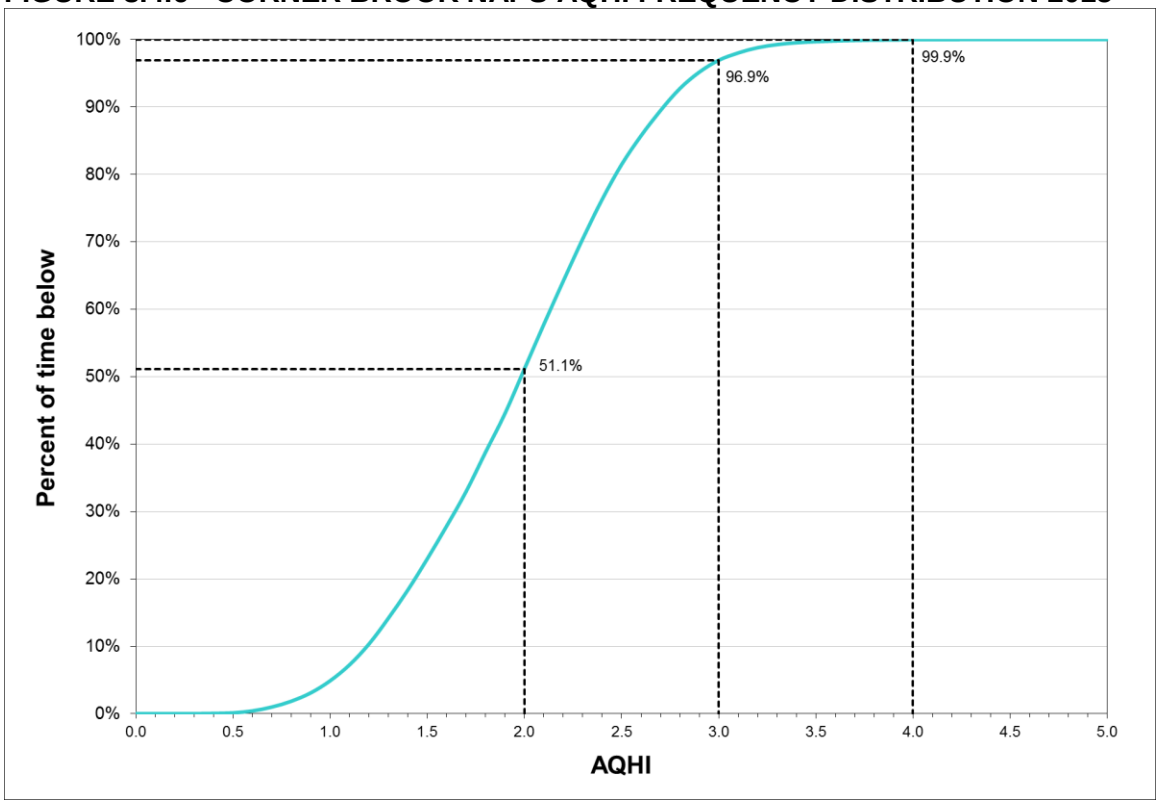
FIGURE 3.4.5 - CORNER BROOK NAPS ANNUAL O_3 CONCENTRATIONS

Rolling annual average of hourly concentrations

TABLE 3.4.6 - CORNER BROOK NAPS AQHI SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 3-Hour
2014	January	236	31.7%	2.2	3.3
	February	440	65.5%	2.5	4.2
	March	740	99.5%	2.4	3.9
	April	685	95.1%	2.6	3.8
	May	737	99.1%	2.2	4.2
	June	720	100.0%	1.7	3.9
	July	741	99.6%	2.0	3.7
	August	714	96.0%	1.6	3.5
	September	589	81.8%	1.8	3.7
	October	731	98.3%	1.7	4.0
	November	623	86.5%	1.9	3.3
	December	734	98.7%	2.0	3.5
Annual		7690	87.8%	2.0	4.2
2015	January	607	81.6%	2.2	3.1
	February	585	87.1%	2.5	3.9
	March	742	99.7%	2.6	3.5
	April	711	98.8%	2.6	4.2
	May	744	100.0%	2.3	4.2
	June	679	94.3%	1.5	3.3
	July	704	94.6%	1.5	3.2
	August	706	94.9%	1.4	3.3
	September	582	80.8%	1.4	2.5
	October	633	85.1%	1.7	2.7
	November	712	98.9%	1.9	2.5
	December	744	100.0%	2.0	3.2
Annual		8149	93.0%	2.0	4.2

FIGURE 3.4.6 - CORNER BROOK NAPS AQHI FREQUENCY DISTRIBUTION 2015



e.g. 96.9% of the time the AQHI recorded was below 3.0

3.5 Burin

The Burin station was commissioned in October 2011 and monitors the ambient levels of SO_2, $PM_{2.5}$ NO_x / NO_2, CO, O_3 and PM_{10} on a continuous basis. The ambient air criteria for SO_2, NO_x / NO_2, CO and $PM_{2.5}$ were not exceeded on any occasion in 2015. For 8-hour ozone, the ambient air criteria were exceeded on thirty-five occasions in 2015; twice in February, eight times in March, fourteen times in April, ten time in May and once in September. PM_{10} standard was also exceeded once in March. Tables 3.5.1 through 3.5.6 provide summary information on the level of each air contaminant measured at the Burin site while Figures 3.5.1 through 3.5.6 provide a graphical representation of the annual trend for each pollutant.

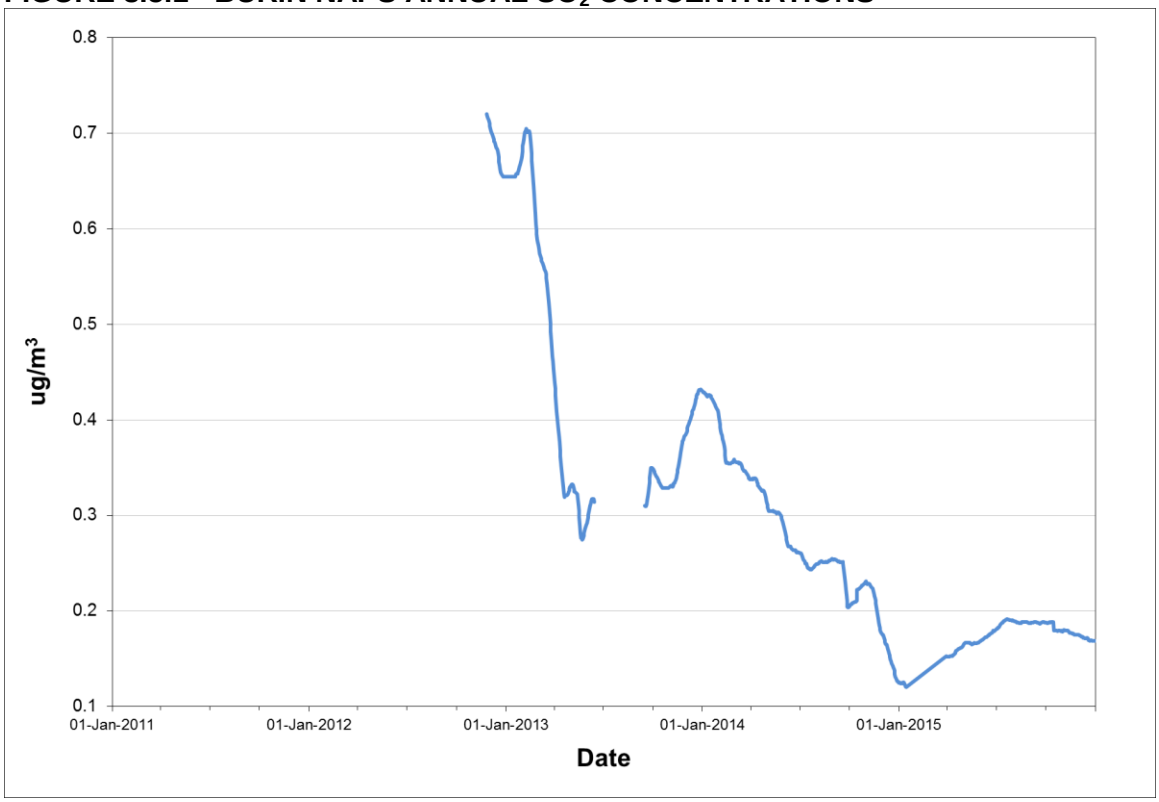
Table 3.5.7 provides a summary of the AQHI, while Figure 3.5.7 provides a graphical representation of the AQHI frequency based on all data collected in Burin in 2015.

TABLE 3.5.1 - BURIN NAPS SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	727	97.7%	0.2	1.8	0.9	0.7	0	0	0
	February	670	99.7%	0.1	2.6	1.8	0.5	0	0	0
	March	447	60.1%	0.0	1.4	1.0	0.3	0	0	0
	April	491	68.2%	0.0	1.7	1.0	0.2	0	0	0
	May	296	39.8%	0.1	0.8	0.7	0.3	0	0	0
	June	716	99.4%	0.0	1.0	0.5	0.2	0	0	0
	July	464	62.4%	0.0	0.0	0.0	0.0	0	0	0
	August	85	11.4%	0.2	3.0	1.1	0.2	0	0	0
	September	718	99.7%	0.1	0.9	0.6	0.3	0	0	0
	October	731	98.3%	0.3	40.9	14.9	3.2	0	0	0
	November	512	71.1%	0.2	1.6	0.8	0.4	0	0	0
	December	743	99.9%	0.2	1.6	1.3	0.6	0	0	0
Annual		6600	75.3%	0.1	40.9	14.9	3.2	0	0	0
2015	January	455	61.2%	0.2	1.5	0.8	0.5	0	0	0
	February	671	99.9%	0.2	1.8	1.0	0.5	0	0	0
	March	743	99.9%	0.2	1.2	1.0	0.5	0	0	0
	April	720	100.0%	0.2	1.3	1.0	0.4	0	0	0
	May	742	99.7%	0.2	1.1	0.6	0.3	0	0	0
	June	717	99.6%	0.1	2.3	0.9	0.3	0	0	0
	July	737	99.1%	0.2	1.0	0.7	0.4	0	0	0
	August	596	80.1%	0.2	2.1	1.6	0.4	0	0	0
	September	718	99.7%	0.2	1.7	0.7	0.3	0	0	0
	October	725	97.4%	0.1	1.2	0.8	0.4	0	0	0
	November	717	99.6%	0.2	0.9	0.7	0.5	0	0	0
	December	742	99.7%	0.1	0.8	0.5	0.2	0	0	0
Annual		8283	94.6%	0.2	2.3	1.6	0.5	0	0	0

Observations in ug/m^3

FIGURE 3.5.1 - BURIN NAPS ANNUAL SO_2 CONCENTRATIONS



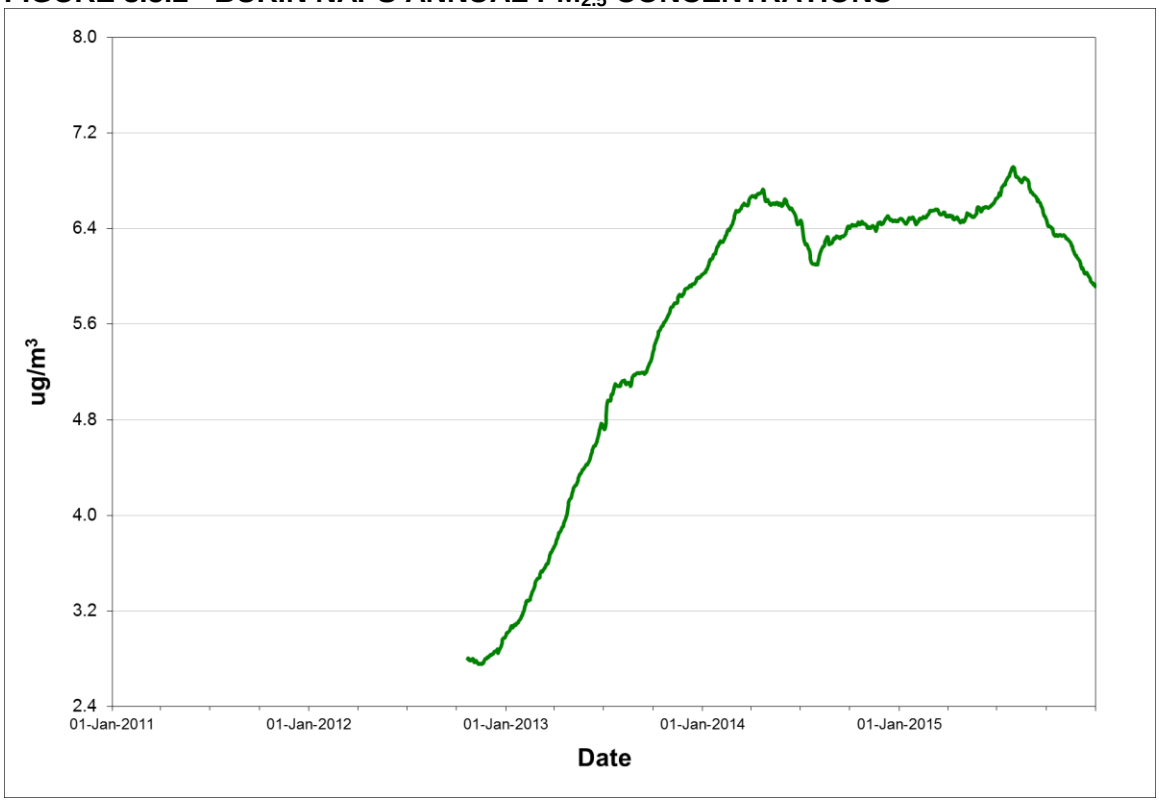
Rolling annual average of hourly concentrations

TABLE 3.5.2 - BURIN NAPS $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	30	96.8%	8.4	12.6	0
	February	28	100.0%	8.8	12.6	0
	March	31	100.0%	8.3	12.9	0
	April	30	100.0%	7.9	11.5	0
	May	31	100.0%	5.9	9.4	0
	June	30	100.0%	3.6	9.0	0
	July	31	100.0%	2.0	13.4	0
	August	30	96.8%	5.7	13.5	0
	September	30	100.0%	5.5	9.7	0
	October	31	100.0%	6.3	12.7	0
	November	30	100.0%	7.4	12.2	0
	December	31	100.0%	7.9	10.5	0
Annual		363	99.5%	6.5	13.5	0
2015	January	21	67.7%	8.8	12.9	0
	February	28	100.0%	10.1	14.5	0
	March	31	100.0%	7.8	12.0	0
	April	30	100.0%	7.3	12.0	0
	May	31	100.0%	7.1	13.7	0
	June	30	100.0%	4.8	6.6	0
	July	31	100.0%	5.0	16.5	0
	August	31	100.0%	3.6	9.0	0
	September	29	96.7%	2.4	5.7	0
	October	31	100.0%	4.7	7.7	0
	November	24	80.0%	4.7	7.7	0
	December	31	100.0%	5.4	10.6	0
Annual		348	95.3%	5.9	16.5	0

Observations in ug/m^3

FIGURE 3.5.2 - BURIN NAPS ANNUAL $PM_{2.5}$ CONCENTRATIONS



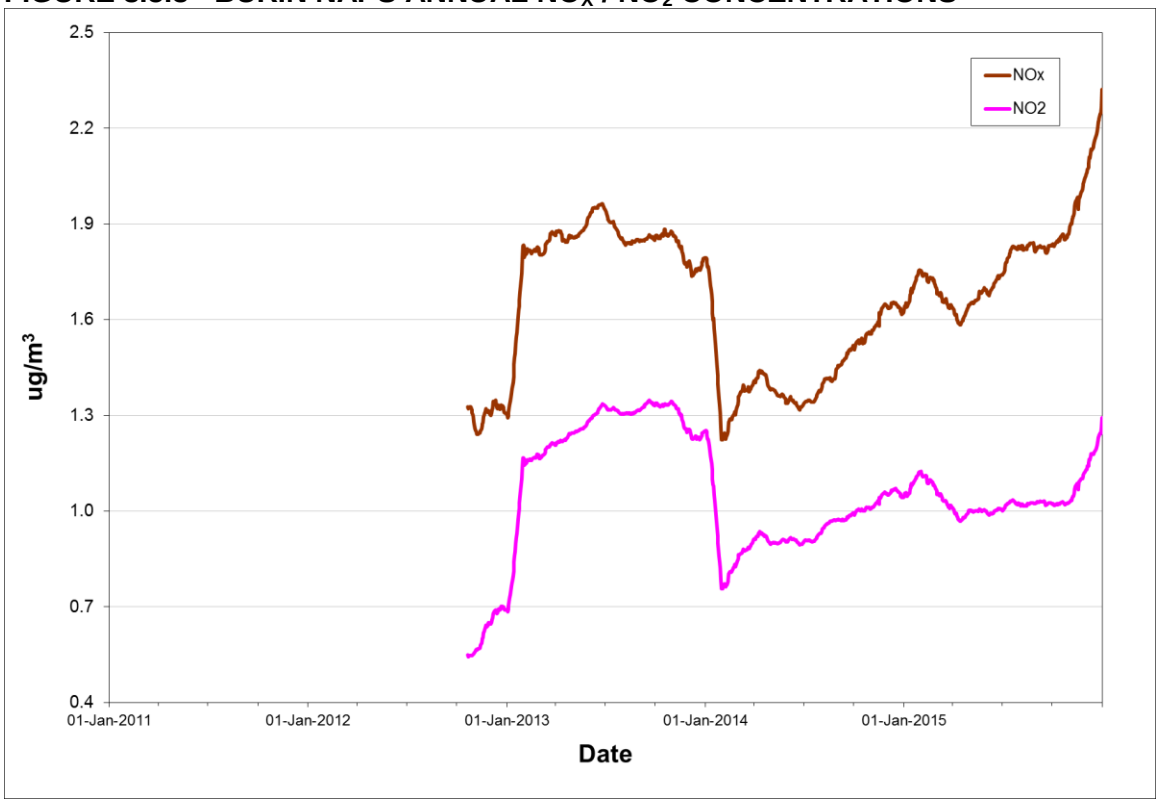
Rolling annual average of hourly concentrations

TABLE 3.5.3 - BURIN NAPS NO_X / NO_2 SUMMARY 2014 &2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	721	96.9%	0.9	0.6	42.7	21.6	9.1	4.7	0	0
	February	672	100.0%	2.5	1.9	68.6	35.2	9.7	7.5	0	0
	March	744	100.0%	2.2	1.6	43.2	26.8	5.7	4.0	0	0
	April	719	99.9%	1.3	1.0	76.0	39.0	7.2	3.9	0	0
	May	742	99.7%	1.2	0.9	27.0	11.0	3.9	2.0	0	0
	June	720	100.0%	1.2	0.8	32.3	14.2	4.8	2.3	0	0
	July	467	62.8%	0.7	0.5	11.2	5.4	1.7	1.4	0	0
	August	555	74.6%	2.0	0.9	27.4	12.2	7.1	2.5	0	0
	September	719	99.9%	1.5	0.8	41.2	25.9	5.6	3.4	0	0
	October	744	100.0%	1.8	1.0	44.3	11.0	6.2	2.8	0	0
	November	720	100.0%	2.2	1.2	87.5	37.2	16.2	8.1	0	0
	December	744	100.0%	1.7	1.2	23.3	13.5	5.7	3.8	0	0
Annual		8267	94.4%	1.6	1.0	87.5	39.0	16.2	8.1	0	0
2015	January	744	100.0%	2.4	1.5	88.5	73.2	6.9	5.0	0	0
	February	672	100.0%	1.9	1.3	22.6	14.9	3.8	3.3	0	0
	March	743	99.9%	1.5	0.9	30.2	19.3	4.7	4.0	0	0
	April	716	99.4%	1.4	0.9	31.7	24.5	2.9	1.9	0	0
	May	742	99.7%	1.7	0.9	47.5	14.6	6.6	2.3	0	0
	June	717	99.6%	1.8	0.8	79.4	44.2	4.6	2.7	0	0
	July	743	99.9%	2.1	0.9	48.0	28.5	5.7	3.0	0	0
	August	596	80.1%	1.8	0.9	30.9	12.2	4.8	2.6	0	0
	September	720	100.0%	1.7	0.8	51.9	9.1	5.4	1.5	0	0
	October	729	98.0%	2.2	1.1	103.4	42.3	7.5	3.2	0	0
	November	716	99.4%	4.3	2.4	69.0	46.7	10.8	8.2	0	0
	December	742	99.7%	4.9	3.1	105.6	50.7	21.2	12.4	0	0
Annual		8580	97.9%	2.3	1.3	105.6	73.2	21.2	12.4	0	0

Observations in ug/m^3

FIGURE 3.5.3 - BURIN NAPS ANNUAL NO_X / NO_2 CONCENTRATIONS



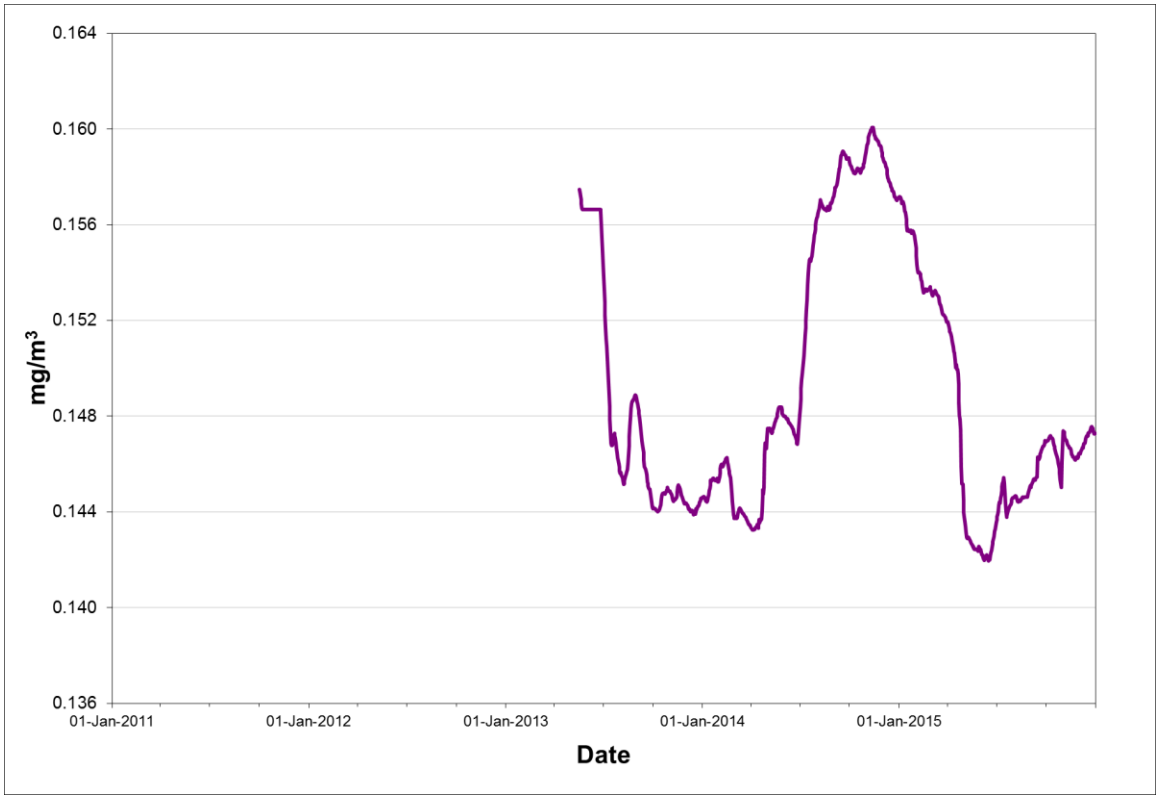
Rolling annual average of hourly concentrations

TABLE 3.5.4 - BURIN NAPS CO SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>35)	Regulatory Exceedances 8-Hour (>15)
2014	January	619	83.2%	0.2	0.3	0.3	0	0
	February	672	100.0%	0.2	0.6	0.3	0	0
	March	744	100.0%	0.2	0.3	0.3	0	0
	April	685	95.1%	0.2	0.8	0.7	0	0
	May	546	73.4%	0.2	0.5	0.4	0	0
	June	720	100.0%	0.1	0.4	0.2	0	0
	July	410	55.1%	0.2	0.5	0.5	0	0
	August	85	11.4%	0.1	0.2	0.2	0	0
	September	719	99.9%	0.1	0.2	0.2	0	0
	October	744	100.0%	0.1	0.4	0.2	0	0
	November	720	100.0%	0.1	0.2	0.2	0	0
	December	744	100.0%	0.1	0.2	0.2	0	0
Annual		7408	84.6%	0.2	0.8	0.7	0	0
2015	January	744	100.0%	0.2	0.3	0.2	0	0
	February	672	100.0%	0.2	0.3	0.2	0	0
	March	744	100.0%	0.2	0.3	0.2	0	0
	April	720	100.0%	0.1	0.2	0.2	0	0
	May	742	99.7%	0.1	0.2	0.2	0	0
	June	717	99.6%	0.1	0.2	0.2	0	0
	July	744	100.0%	0.2	0.3	0.3	0	0
	August	597	80.2%	0.1	0.2	0.2	0	0
	September	720	100.0%	0.1	3.6	1.0	0	0
	October	731	98.3%	0.1	0.9	0.8	0	0
	November	719	99.9%	0.1	0.7	0.4	0	0
	December	744	100.0%	0.1	0.2	0.2	0	0
Annual		8594	98.1%	0.1	3.6	1.0	0	0

Observations in ug/m^3

FIGURE 3.5.4 - BURIN NAPS ANNUAL CO CONCENTRATIONS



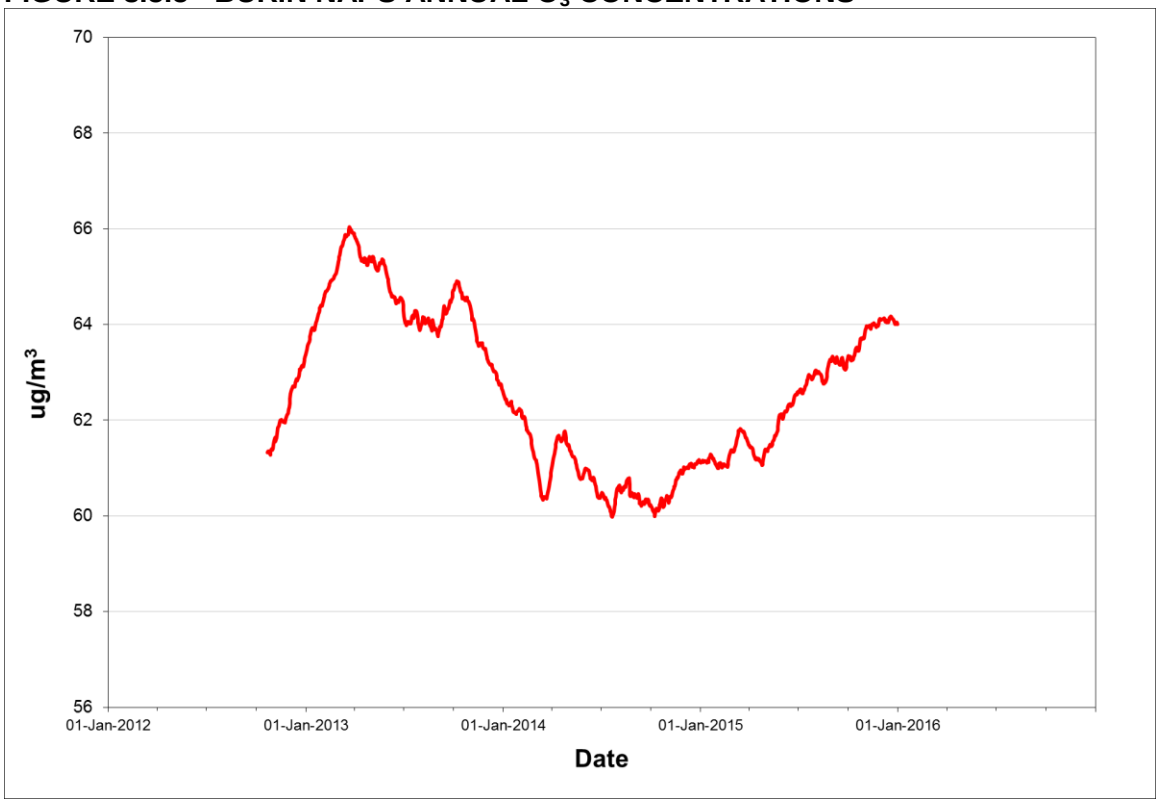
Rolling annual average of hourly concentrations

TABLE 3.5.5 - BURIN NAPS O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	691	92.9%	70.0	112.6	87.0	0	1
	February	511	76.0%	72.4	94.0	90.2	0	1
	March	535	71.9%	81.4	100.3	94.0	0	14
	April	670	93.1%	79.5	109.5	96.6	0	14
	May	733	98.5%	64.6	88.3	85.4	0	0
	June	719	99.9%	48.2	81.0	75.4	0	0
	July	471	63.3%	48.0	84.6	77.8	0	0
	August	629	84.5%	51.5	105.4	89.5	0	1
	September	718	99.7%	48.2	108.4	86.0	0	0
	October	744	100.0%	49.5	83.6	79.2	0	0
	November	720	100.0%	59.7	84.6	79.9	0	0
	December	744	100.0%	64.9	84.4	78.8	0	0
Annual		7885	90.0%	61.1	112.6	96.6	0	31
2015	January	744	100.0%	68.3	87.8	84.2	0	0
	February	672	100.0%	73.7	93.5	87.4	0	2
	March	744	100.0%	77.1	101.5	93.5	0	8
	April	719	99.9%	77.3	111.0	102.6	0	14
	May	742	99.7%	72.1	109.8	100.4	0	10
	June	717	99.6%	54.6	89.7	81.2	0	0
	July	744	100.0%	58.1	92.8	85.5	0	0
	August	597	80.2%	54.2	100.3	86.1	0	0
	September	720	100.0%	48.8	92.4	88.8	0	1
	October	693	93.1%	54.8	90.1	85.3	0	0
	November	681	94.6%	63.4	86.3	81.6	0	0
	December	743	99.9%	63.7	83.7	79.8	0	0
Annual		8516	97.2%	64.0	111.0	102.6	0	35

Observations in ug/m^3

FIGURE 3.5.5 - BURIN NAPS ANNUAL O_3 CONCENTRATIONS



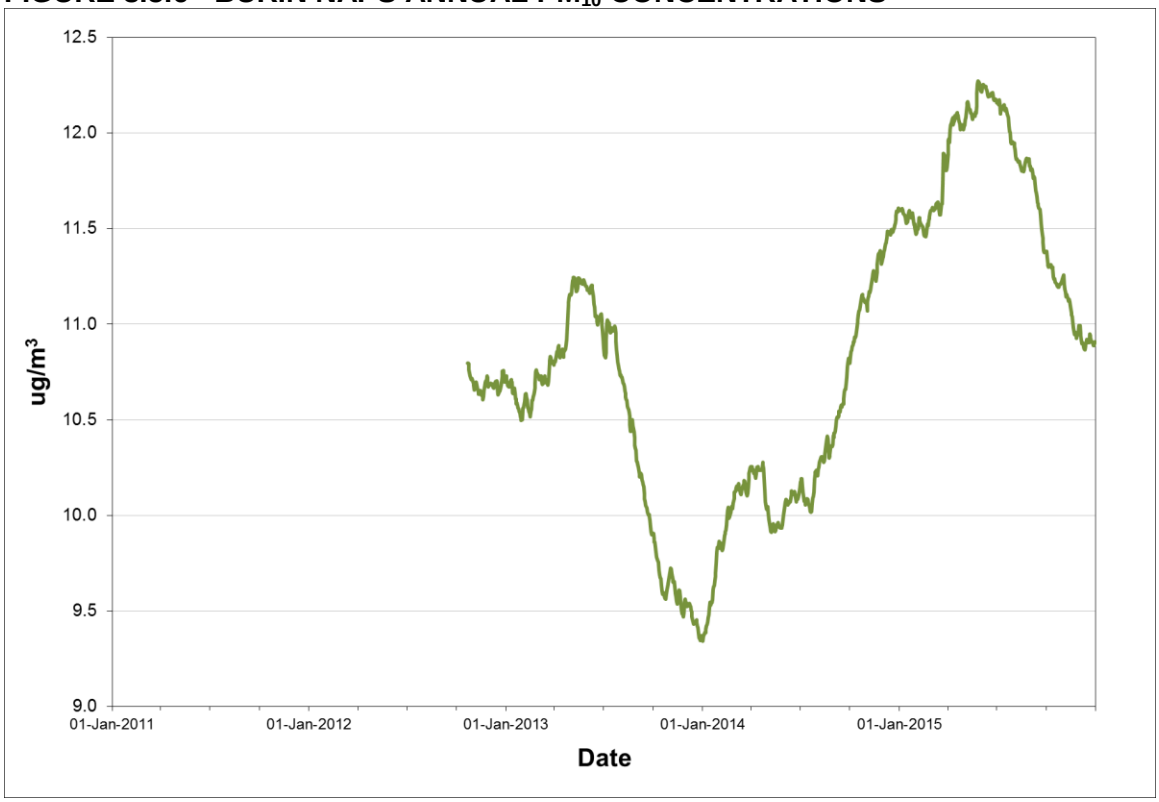
Rolling annual average of hourly concentrations

TABLE 3.5.6 - BURIN NAPS PM_{10} SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>50 µg/m^3)
2014	January	30	96.8%	13.0	22.6	0
	February	28	100.0%	12.4	22.4	0
	March	31	100.0%	13.0	25.6	0
	April	30	100.0%	12.5	22.9	0
	May	31	100.0%	9.9	16.0	0
	June	30	100.0%	8.7	15.7	0
	July	31	100.0%	10.8	27.8	0
	August	31	100.0%	10.2	20.7	0
	September	30	100.0%	12.8	20.7	0
	October	31	100.0%	11.4	20.0	0
	November	30	100.0%	12.6	22.2	0
	December	31	100.0%	12.0	19.0	0
Annual		364	99.7%	11.6	27.8	0
2015	January	22	71.0%	11.7	19.6	0
	February	28	100.0%	13.8	24.3	0
	March	31	100.0%	16.0	64.8	1
	April	30	100.0%	14.4	37.5	0
	May	31	100.0%	12.4	30.5	0
	June	30	100.0%	8.0	14.5	0
	July	29	93.5%	8.0	14.8	0
	August	31	100.0%	8.9	13.2	0
	September	30	100.0%	7.4	16.8	0
	October	30	96.8%	9.8	15.2	0
	November	30	100.0%	9.7	26.8	0
	December	31	100.0%	11.0	29.3	0
Annual		353	96.7%	10.9	64.8	1

Observations in ug/m^3

FIGURE 3.5.6 - BURIN NAPS ANNUAL PM_{10} CONCENTRATIONS

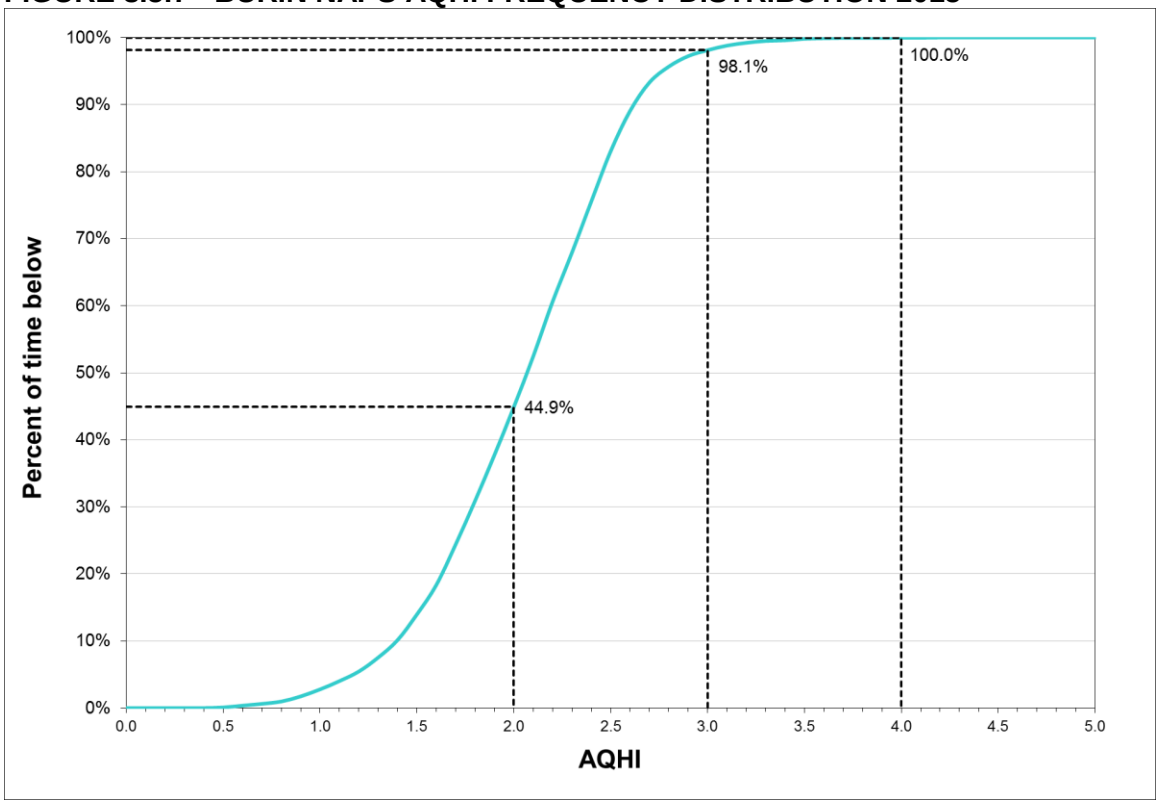


Rolling annual average of hourly concentrations

TABLE 3.5.7 - BURIN NAPS AQHI SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 3-Hour
2014	January	686	92.2%	2.3	3.1
	February	511	76.0%	2.4	3.3
	March	535	71.9%	2.6	3.4
	April	671	93.2%	2.5	3.4
	May	733	98.5%	2.0	2.9
	June	720	100.0%	1.5	2.6
	July	468	62.9%	1.4	3.1
	August	457	61.4%	1.8	3.3
	September	719	99.9%	1.6	3.3
	October	744	100.0%	1.7	3.7
	November	720	100.0%	2.0	3.3
	December	742	99.7%	2.1	3.2
Annual		7706	88.0%	2.0	3.7
2015	January	532	71.5%	2.3	3.4
	February	672	100.0%	2.5	3.3
	March	744	100.0%	2.5	3.4
	April	716	99.4%	2.4	3.5
	May	740	99.5%	2.3	3.6
	June	719	99.9%	1.7	2.8
	July	740	99.5%	1.8	4.1
	August	594	79.8%	1.7	2.9
	September	678	94.2%	1.4	2.7
	October	692	93.0%	1.7	2.7
	November	545	75.7%	2.0	2.7
	December	742	99.7%	2.1	4.0
Annual		8114	92.6%	2.0	4.1

FIGURE 3.5.7 - BURIN NAPS AQHI FREQUENCY DISTRIBUTION 2015



e.g. 98.1% of the time the AQHI recorded was below 3.0

3.6 Port aux Choix

The Port aux Choix NAPS monitoring station monitors the ambient levels of O_3 on a continuous basis.

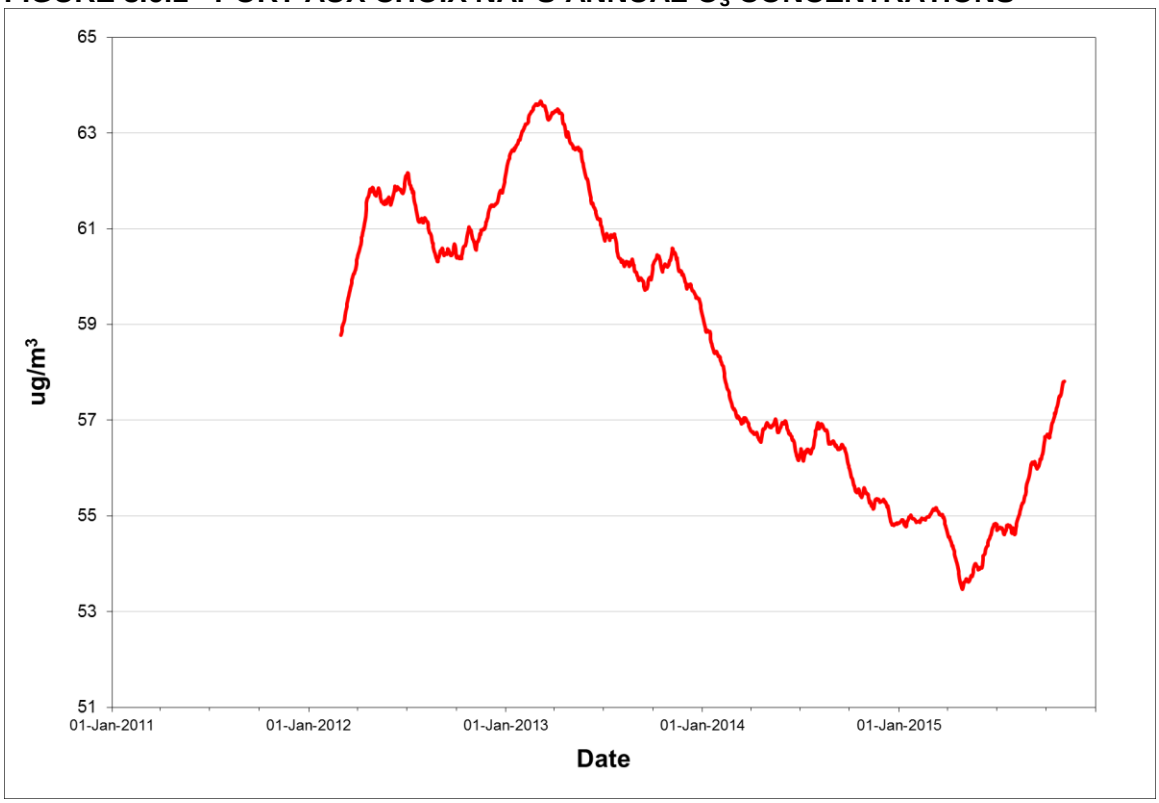
There were no recorded O_3 exceedances at this station in 2015, however due to ongoing technical issues, on average the unit was only operational for 67.5% of the year, with significant downtime occurring during the spring months when the O_3 levels tend to peak. Table 3.6.1 presents the summary information on the level of O_3 measured at the Port aux Choix NAPS station while Figure 3.6.1 presents a graphical representation of the annual trend of O_3.

TABLE 3.6.1 - PORT AUX CHOIX NAPS O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	742	99.7%	65.2	87.0	84.0	0	0
	February	669	99.6%	66.8	79.9	76.5	0	0
	March	744	100.0%	68.0	82.5	80.4	0	0
	April	719	99.9%	72.0	95.0	93.9	0	2
	May	739	99.3%	57.2	86.2	78.4	0	0
	June	718	99.7%	40.3	73.1	64.5	0	0
	July	743	99.9%	47.2	94.1	86.2	0	0
	August	739	99.3%	38.6	80.8	76.1	0	0
	September	703	97.6%	41.5	78.4	73.5	0	0
	October	744	100.0%	45.3	75.1	69.4	0	0
	November	718	99.7%	56.2	73.1	71.5	0	0
	December	662	89.0%	61.2	77.4	75.1	0	0
Annual		8640	98.6%	54.8	95.0	93.9	0	2
2015	January	744	100.0%	65.7	77.3	73.4	0	0
	February	670	99.7%	68.4	86.2	81.0	0	0
	March	411	55.2%	71.1	86.0	84.8	0	0
	April	278	38.6%	68.8	84.1	81.9	0	0
	May	356	47.8%	68.1	91.5	85.4	0	0
	June	662	91.9%	49.5	78.1	71.2	0	0
	July	655	88.0%	45.3	82.2	76.5	0	0
	August	415	55.8%	45.3	75.2	72.4	0	0
	September	322	44.7%	40.3	68.6	58.6	0	0
	October	744	100.0%	54.9	85.4	81.9	0	0
	November	175	24.3%	68.7	78.8	76.3	0	0
	December	485	65.2%	66.7	81.5	80.0	0	0
Annual		5917	67.5%	58.6	91.5	85.4	0	0

Observations in ug/m^3

FIGURE 3.6.1 - PORT AUX CHOIX NAPS ANNUAL O_3 CONCENTRATIONS



Rolling annual average of hourly concentrations

4.0 Industrial Monitoring Network

Industrial operations in the province are responsible for the monitoring of air quality near their facility. The Department audits the operation of the industrial monitoring stations on a regular basis to ensure that the monitors are functioning according to instrument specifications and to the standard operating procedures. If the audits indicate a monitor is not operating within the specifications, corrective actions are required by the industry and data may be invalidated.

On the island of Newfoundland, there were four monitoring networks operated by industry in 2015 and another three in Labrador. Figures 4.0.1 and 4.0.2 present the locations of these monitoring networks.

The subsequent sections of this report detail the summary statistics and the longer term trend of pollutants measured at each station within a given network.

FIGURE 4.0.1 - INDUSTRIAL MONITORING NETWORK IN NEWFOUNDLAND

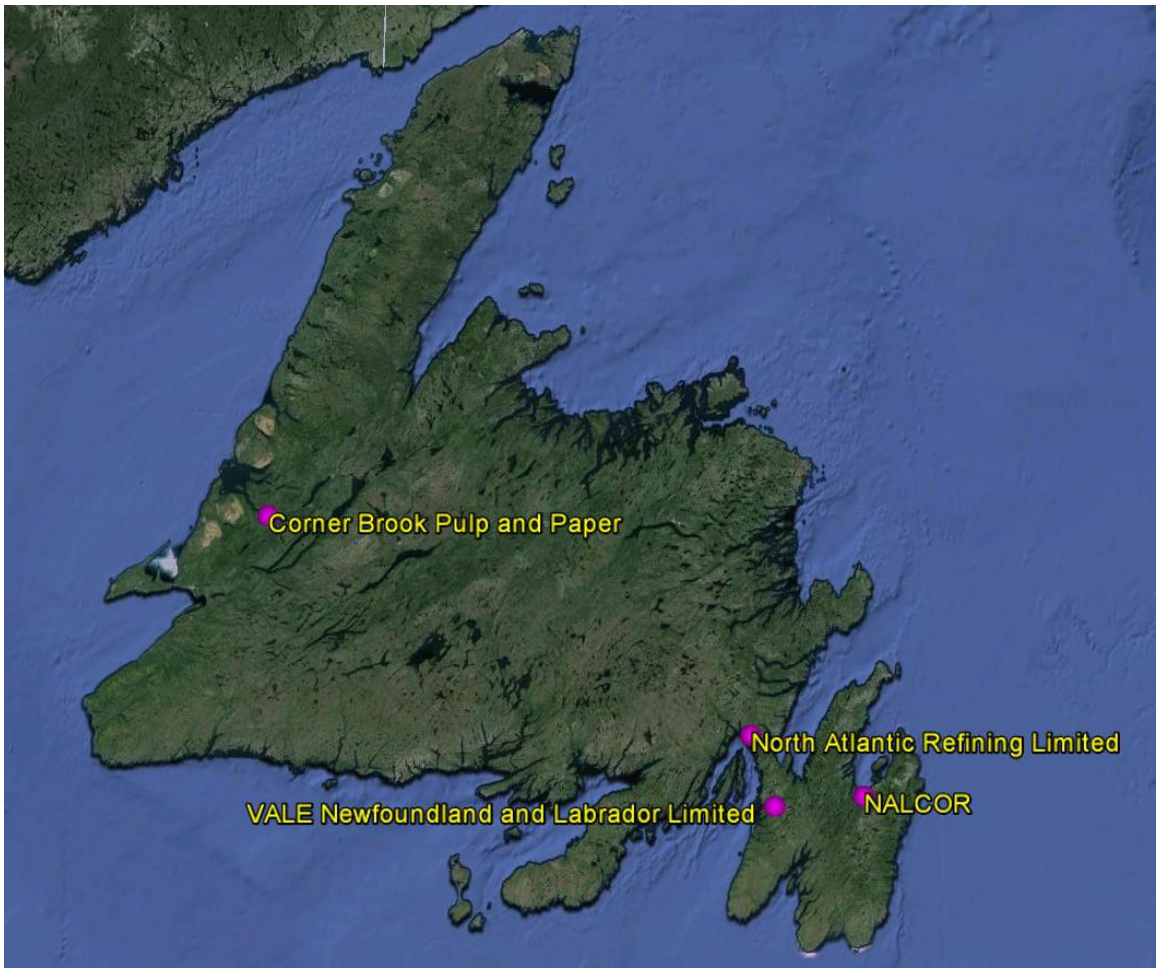
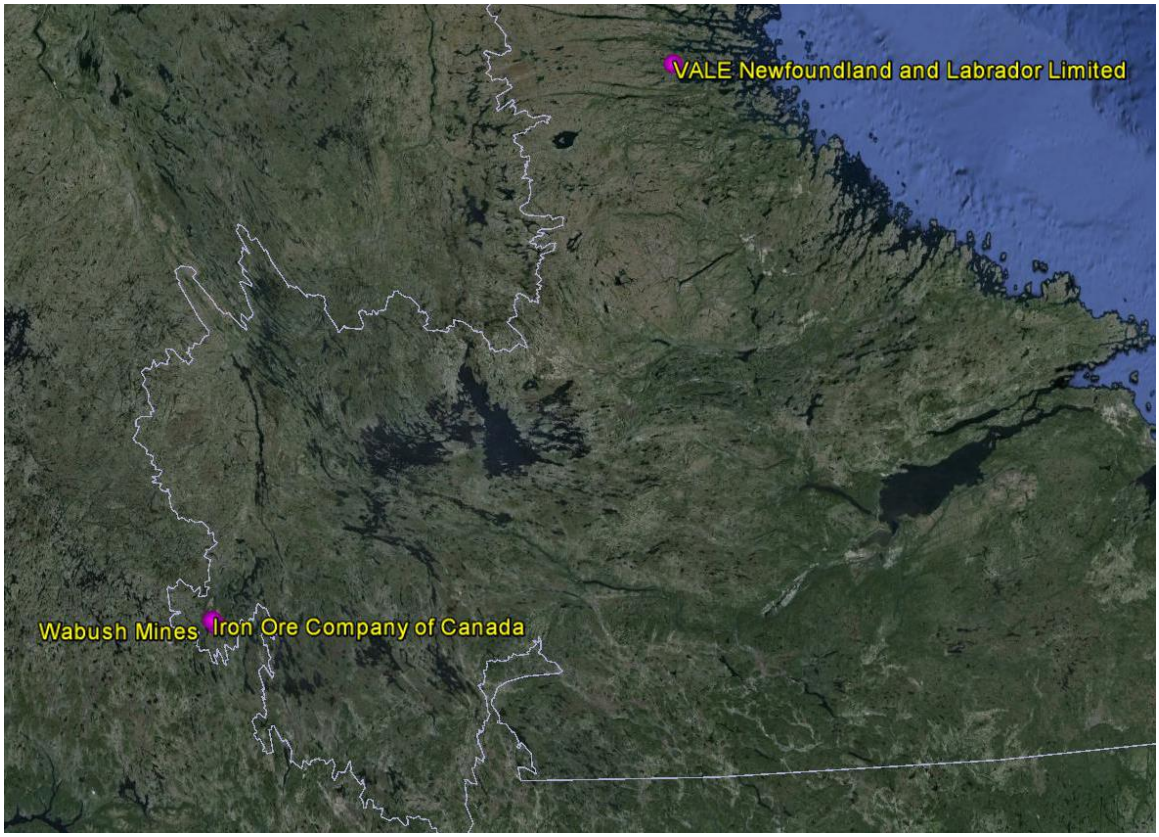


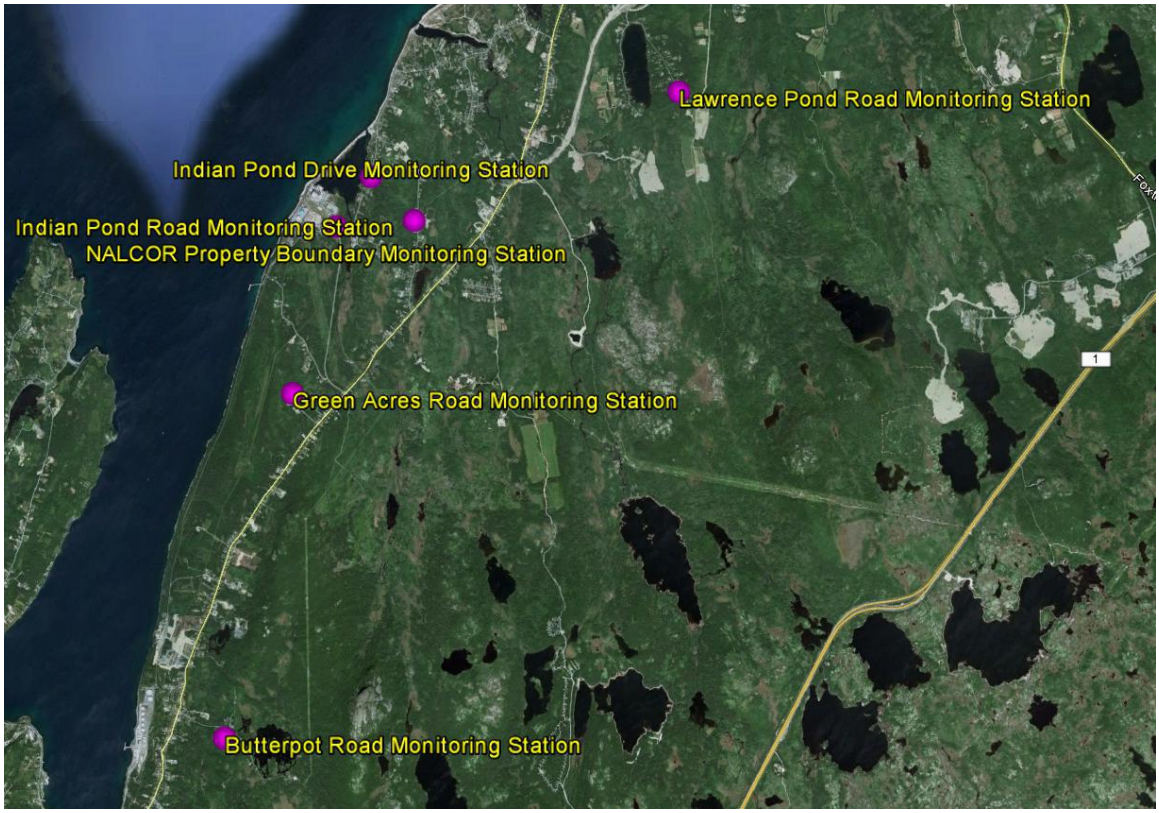
FIGURE 4.0.2 - INDUSTRIAL MONITORING NETWORK IN LABRADOR



4.1 NALCOR

In 2015, NALCOR operated monitoring stations at 6 locations in the Holyrood area. These stations are installed to monitor the air quality near the Holyrood Thermal Generating Station and are located at Butterpot Road, Green Acres Road, Indian Pond Drive, Indian Pond Road, Lawrence Pond, and the NALCOR property boundary. Figure 4.1.1 indicates the location of these stations.

FIGURE 4.1.1 - NALCOR AMBIENT MONITORING STATIONS



4.1.1 Butterpot Road

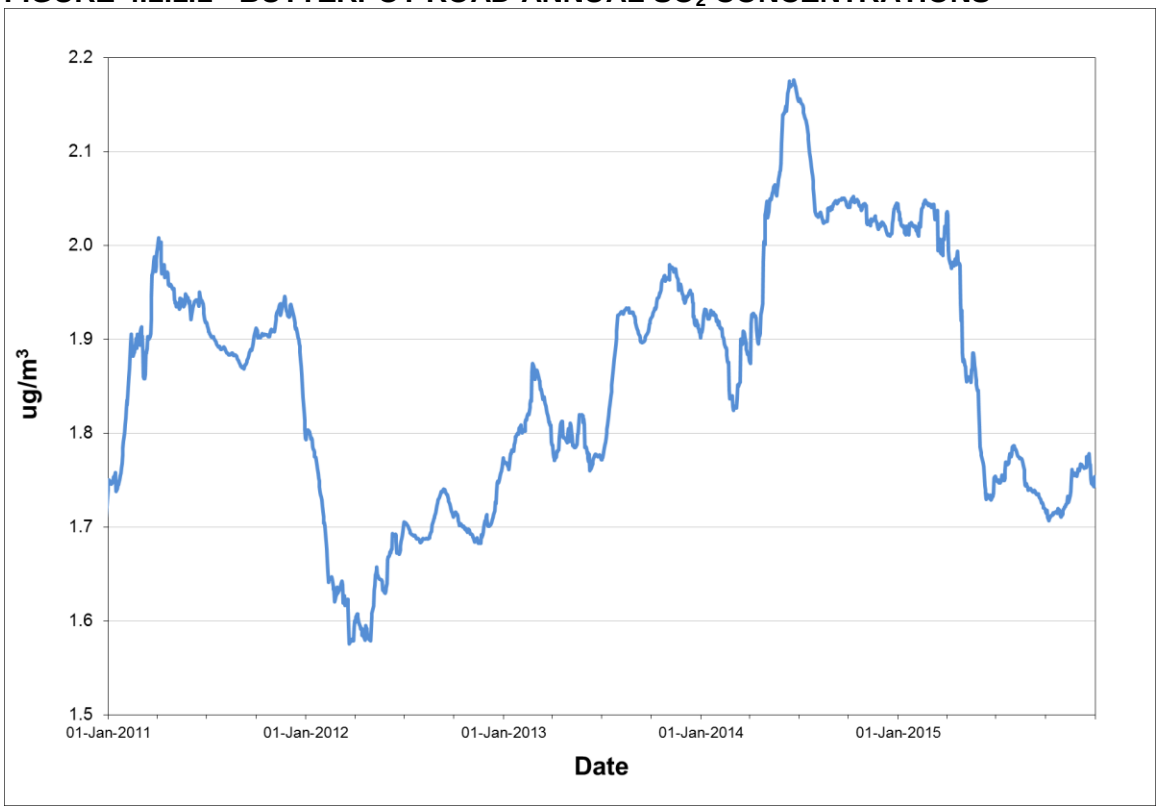
The Butterpot Road station monitors the ambient levels of SO_2, NO_x / NO_2 and $PM_{2.5}$ on a continuous basis. For all pollutants, the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.1.1.1 through 4.1.1.3 provide summary information on the level of air contaminants measured at Butterpot Road, while Figures 4.1.1.1 through 4.1.1.3 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.1.1.1 - BUTTERPOT ROAD SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	686	92.2%	2.1	25.0	17.0	4.3	0	0	0
	February	642	95.5%	1.5	13.9	9.3	2.7	0	0	0
	March	703	94.5%	2.4	67.3	58.4	18.4	0	0	0
	April	690	95.8%	4.1	77.9	43.8	18.3	0	0	0
	May	689	92.6%	3.2	61.4	32.1	8.8	0	0	0
	June	687	95.4%	2.2	33.5	22.5	8.3	0	0	0
	July	638	85.8%	1.2	7.1	3.7	1.8	0	0	0
	August	708	95.2%	1.4	20.5	15.0	4.1	0	0	0
	September	685	95.1%	1.3	8.3	5.0	1.9	0	0	0
	October	711	95.6%	1.6	34.4	21.6	4.4	0	0	0
	November	683	94.9%	1.4	29.3	19.0	4.0	0	0	0
	December	712	95.7%	2.0	25.8	18.1	7.0	0	0	0
Annual		8234	94.0%	2.0	77.9	58.4	18.4	0	0	0
2015	January	712	95.7%	1.8	71.4	25.3	6.1	0	0	0
	February	638	94.9%	1.8	60.2	24.6	6.1	0	0	0
	March	711	95.6%	2.3	75.8	44.2	8.1	0	0	0
	April	690	95.8%	2.3	42.1	26.8	7.3	0	0	0
	May	684	91.9%	2.2	63.9	39.8	7.8	0	0	0
	June	689	95.7%	1.5	42.2	21.4	6.8	0	0	0
	July	710	95.4%	1.6	29.5	17.4	4.2	0	0	0
	August	703	94.5%	0.9	15.4	10.5	2.0	0	0	0
	September	687	95.4%	1.1	4.3	2.7	1.6	0	0	0
	October	706	94.9%	1.6	10.7	9.1	2.8	0	0	0
	November	688	95.6%	2.0	29.1	19.0	5.5	0	0	0
	December	635	85.3%	1.9	21.3	19.1	5.6	0	0	0
Annual		8253	94.2%	1.8	75.8	44.2	8.1	0	0	0

Observations in ug/m^3

FIGURE 4.1.1.1 - BUTTERPOT ROAD ANNUAL SO_2 CONCENTRATIONS



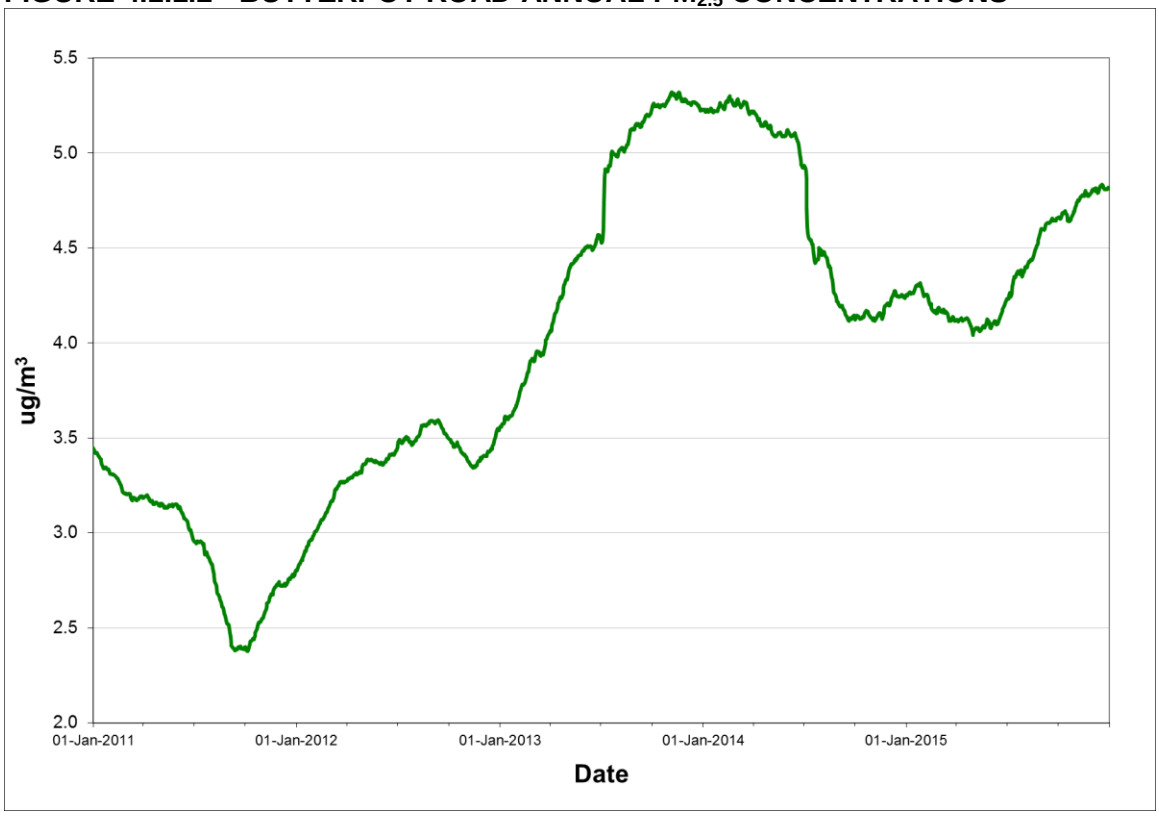
Rolling annual average of hourly concentrations

TABLE 4.1.1.2 - BUTTERPOT ROAD $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	27	87.1%	5.7	9.8	0
	February	27	96.4%	6.5	12.3	0
	March	31	100.0%	5.5	9.5	0
	April	30	100.0%	6.1	10.8	0
	May	31	100.0%	4.7	7.8	0
	June	30	100.0%	1.8	6.5	0
	July	27	87.1%	3.4	13.5	0
	August	31	100.0%	2.1	8.8	0
	September	26	86.7%	2.3	6.3	0
	October	31	100.0%	3.7	10.7	0
	November	30	100.0%	4.5	7.8	0
	December	31	100.0%	4.8	8.7	0
Annual		352	96.4%	4.3	13.5	0
2015	January	31	100.0%	5.5	8.8	0
	February	28	100.0%	5.5	11.5	0
	March	31	100.0%	4.7	9.7	0
	April	30	100.0%	5.1	8.5	0
	May	29	93.5%	5.3	9.3	0
	June	29	96.7%	3.6	5.4	0
	July	31	100.0%	5.2	14.5	0
	August	31	100.0%	4.7	9.1	0
	September	30	100.0%	3.3	8.0	0
	October	26	83.9%	4.1	7.9	0
	November	30	100.0%	5.6	12.3	0
	December	27	87.1%	5.0	10.3	0
Annual		353	96.7%	4.8	14.5	0

Observations in ug/m^3

FIGURE 4.1.1.2 - BUTTERPOT ROAD ANNUAL $PM_{2.5}$ CONCENTRATIONS



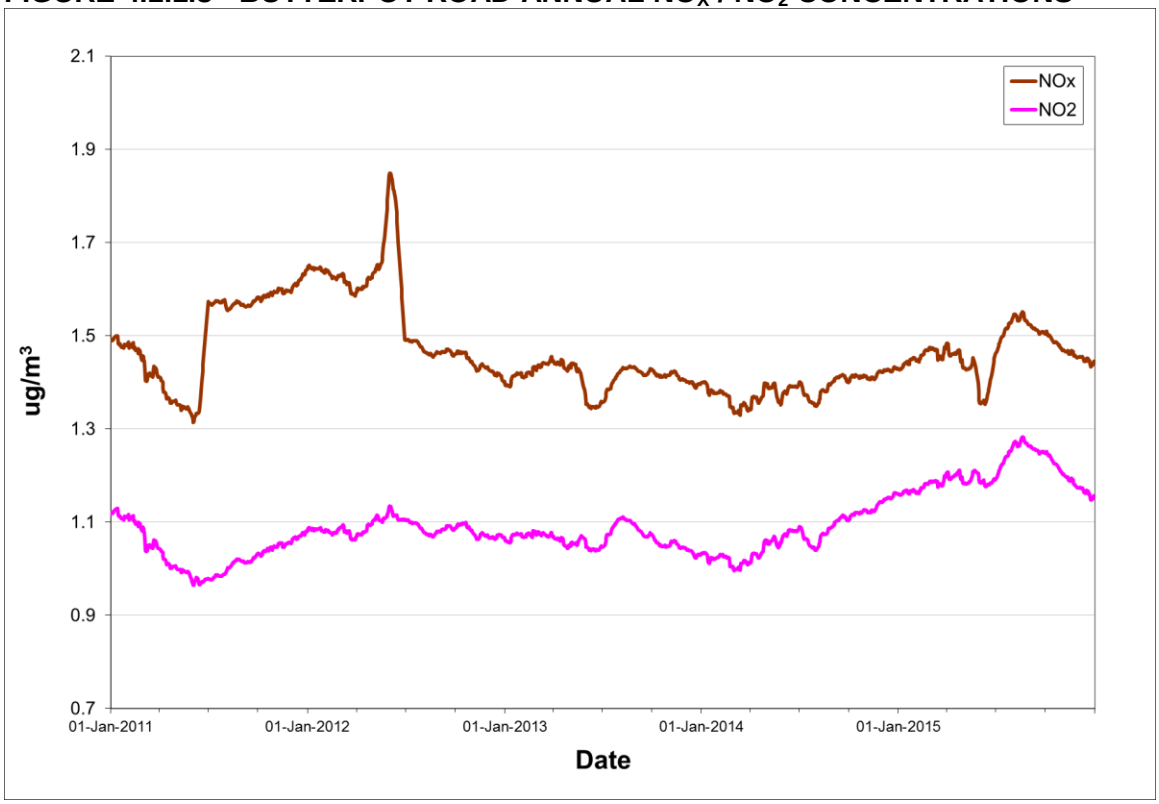
Rolling annual average of daily concentrations

TABLE 4.1.1.3 - BUTTERPOT ROAD NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	650	87.4%	1.2	1.1	11.7	10.4	3.5	3.4	0	0
	February	593	88.2%	1.0	0.9	6.7	6.4	2.0	1.8	0	0
	March	636	85.5%	1.3	1.1	35.3	22.8	9.0	5.9	0	0
	April	690	95.8%	1.9	1.5	31.1	19.3	7.3	5.7	0	0
	May	675	90.7%	2.6	1.4	20.0	13.5	7.8	3.4	0	0
	June	688	95.6%	1.6	1.3	14.4	13.2	3.4	2.8	0	0
	July	638	85.8%	0.9	0.8	6.1	4.4	1.6	1.3	0	0
	August	710	95.4%	1.6	1.3	42.3	26.0	4.2	3.5	0	0
	September	686	95.3%	1.0	0.9	13.2	12.8	1.9	1.7	0	0
	October	713	95.8%	1.3	1.2	19.8	13.7	3.3	2.5	0	0
	November	687	95.4%	1.3	1.2	13.5	10.3	3.3	2.8	0	0
	December	711	95.6%	1.3	1.2	15.0	13.9	4.2	4.0	0	0
Annual		8077	92.2%	1.4	1.2	42.3	26.0	9.0	5.9	0	0
2015	January	713	95.8%	1.5	1.2	34.6	29.8	4.0	3.3	0	0
	February	640	95.2%	1.3	1.2	39.5	33.0	3.6	3.0	0	0
	March	711	95.6%	1.5	1.3	29.1	20.8	4.7	4.2	0	0
	April	690	95.8%	1.3	1.3	15.6	11.2	3.6	3.0	0	0
	May	658	88.4%	1.7	1.5	35.9	21.0	6.2	4.5	0	0
	June	687	95.4%	2.8	1.3	16.1	8.6	5.4	2.7	0	0
	July	713	95.8%	1.9	1.6	10.9	8.6	2.9	2.5	0	0
	August	686	92.2%	1.4	1.3	14.1	10.1	3.5	3.0	0	0
	September	687	95.4%	0.8	0.7	5.5	4.3	1.3	1.1	0	0
	October	688	92.5%	0.9	0.6	11.4	10.2	2.1	1.7	0	0
	November	690	95.8%	1.1	0.9	15.0	13.4	2.5	2.2	0	0
	December	636	85.5%	1.2	1.0	10.9	10.1	3.2	2.8	0	0
Annual		8199	93.6%	1.4	1.2	39.5	33.0	6.2	4.5	0	0

Observations in ug/m^3

FIGURE 4.1.1.3 - BUTTERPOT ROAD ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

4.1.2 Green Acres Road

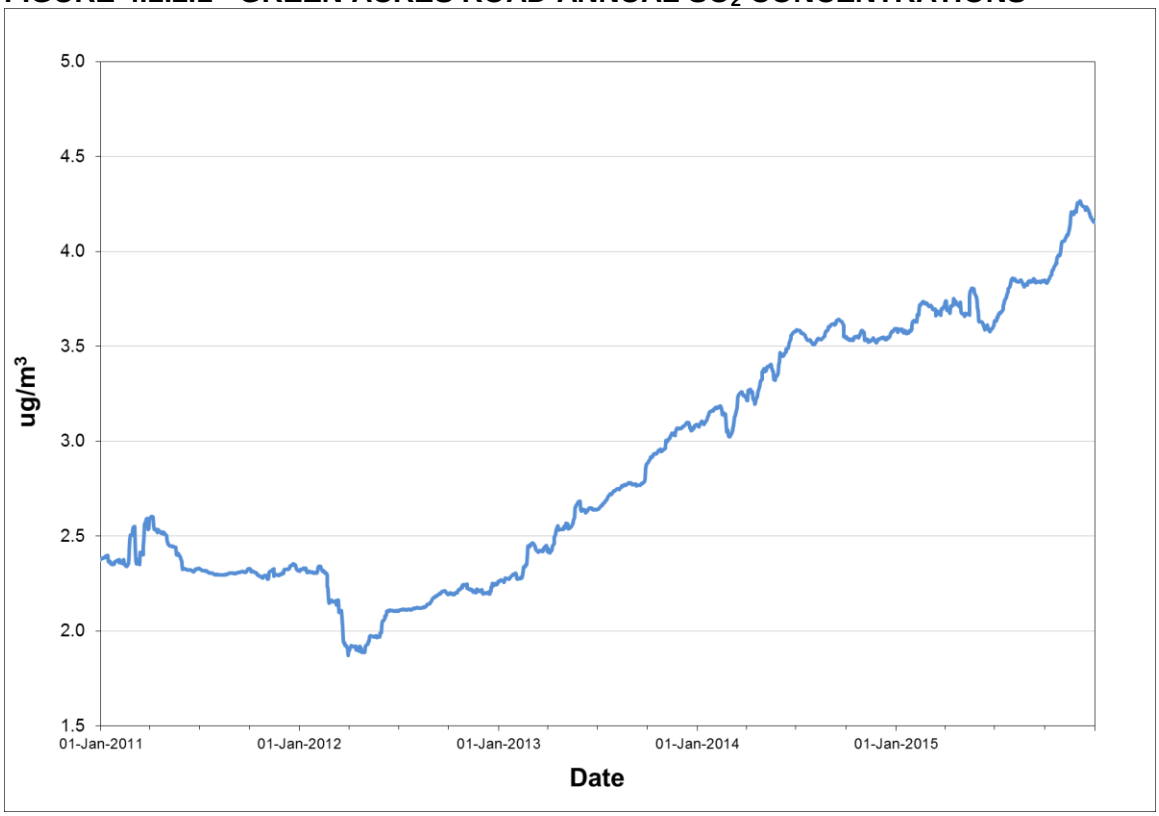
The Green Acres Road station monitors the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$ on a continuous basis and TPM on a 1 day in 6 day cycle consistent with the NAPS defined schedule. For all pollutants the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.1.2.1 through 4.1.2.4 provide summary information on the level of air contaminants measured at Green Acres Road, while Figures 4.1.2.1 through 4.1.2.4 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.1.2.1 - GREEN ACRES ROAD SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	695	93.4%	3.7	59.9	24.5	6.4	0	0	0
	February	643	95.7%	3.2	17.7	8.9	5.5	0	0	0
	March	653	87.8%	5.1	115.0	56.4	20.4	0	0	0
	April	689	95.7%	5.3	228.9	124.1	22.9	0	0	0
	May	703	94.5%	4.6	113.6	53.0	18.7	0	0	0
	June	681	94.6%	4.1	305.1	120.8	21.5	0	0	0
	July	712	95.7%	1.7	6.1	5.1	2.7	0	0	0
	August	712	95.7%	3.2	50.5	22.5	8.4	0	0	0
	September	665	92.4%	2.3	61.2	36.9	8.3	0	0	0
	October	707	95.0%	3.5	52.7	25.9	7.4	0	0	0
	November	683	94.9%	3.0	43.7	31.5	5.9	0	0	0
	December	705	94.8%	3.5	43.5	31.4	8.1	0	0	0
Annual		8248	94.2%	3.6	305.1	124.1	22.9	0	0	0
2015	January	678	91.1%	4.2	64.0	26.7	10.8	0	0	0
	February	639	95.1%	4.4	182.4	89.0	16.4	0	0	0
	March	702	94.4%	5.1	99.2	57.4	15.0	0	0	0
	April	690	95.8%	4.8	175.4	97.2	14.6	0	0	0
	May	713	95.8%	4.6	192.8	124.7	36.5	0	0	0
	June	648	90.0%	3.3	58.8	22.4	7.4	0	0	0
	July	705	94.8%	4.3	129.9	48.0	8.2	0	0	0
	August	712	95.7%	3.1	50.3	25.9	7.0	0	0	0
	September	618	85.8%	2.3	6.2	4.8	4.5	0	0	0
	October	711	95.6%	5.7	49.3	27.4	13.2	0	0	0
	November	690	95.8%	5.6	52.2	42.5	17.7	0	0	0
	December	689	92.6%	2.3	48.8	40.8	8.8	0	0	0
Annual		8195	93.6%	4.2	192.8	124.7	36.5	0	0	0

Observations in ug/m^3

FIGURE 4.1.2.1 - GREEN ACRES ROAD ANNUAL SO_2 CONCENTRATIONS



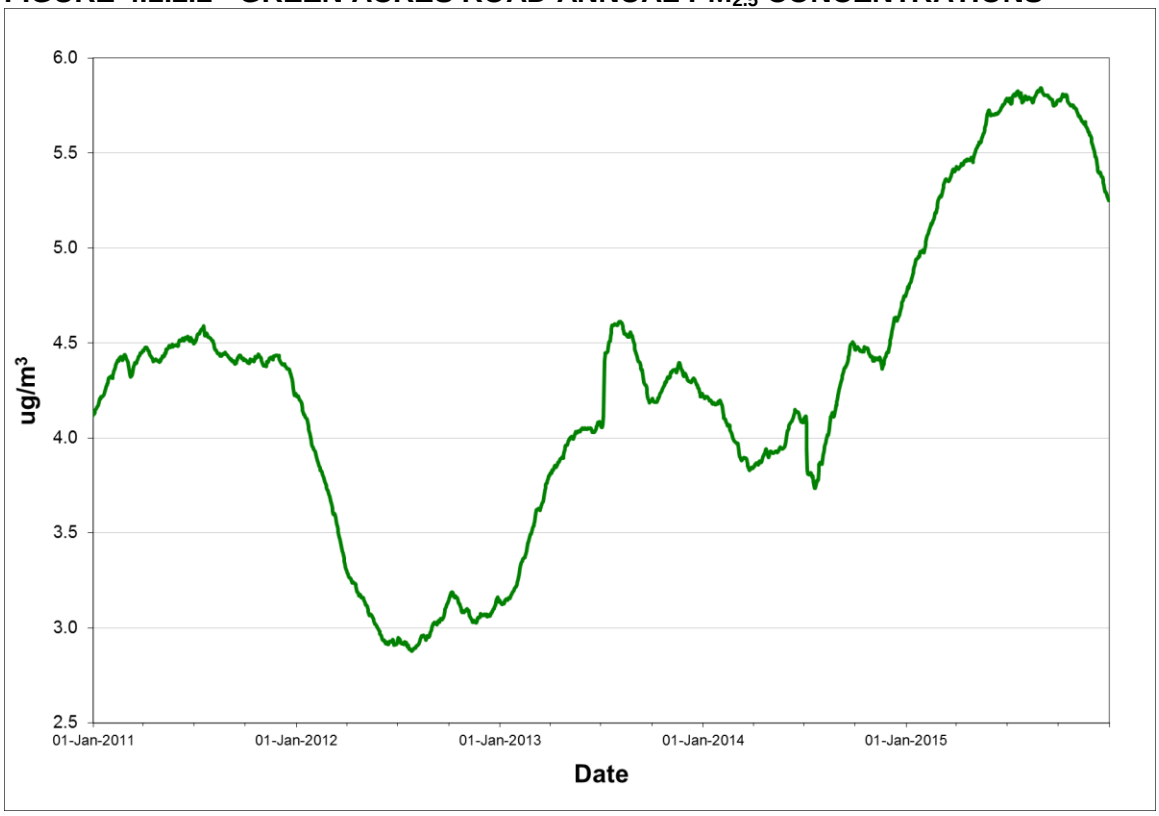
Rolling annual average of hourly concentrations

TABLE 4.1.2.2 - GREEN ACRES ROAD $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	29	93.5%	2.8	6.8	0
	February	28	100.0%	2.8	7.5	0
	March	28	90.3%	3.8	6.9	0
	April	30	100.0%	5.2	9.2	0
	May	30	96.8%	4.2	9.9	0
	June	30	100.0%	4.6	9.1	0
	July	31	100.0%	7.2	18.9	0
	August	31	100.0%	6.8	12.2	0
	September	19	63.3%	5.4	9.6	0
	October	31	100.0%	3.8	13.0	0
	November	30	100.0%	4.3	7.8	0
	December	31	100.0%	5.8	11.0	0
Annual		348	95.3%	4.8	18.9	0
2015	January	27	87.1%	5.6	7.8	0
	February	28	100.0%	6.2	10.8	0
	March	31	100.0%	5.8	10.2	0
	April	30	100.0%	5.6	8.3	0
	May	29	93.5%	7.2	13.9	0
	June	27	90.0%	5.6	8.4	0
	July	31	100.0%	7.1	15.6	0
	August	31	100.0%	7.5	11.5	0
	September	27	90.0%	4.6	9.4	0
	October	26	83.9%	2.9	7.0	0
	November	30	100.0%	2.2	6.6	0
	December	31	100.0%	2.4	6.4	0
Annual		348	95.3%	5.3	15.6	0

Observations in ug/m^3

FIGURE 4.1.2.2 - GREEN ACRES ROAD ANNUAL $PM_{2.5}$ CONCENTRATIONS



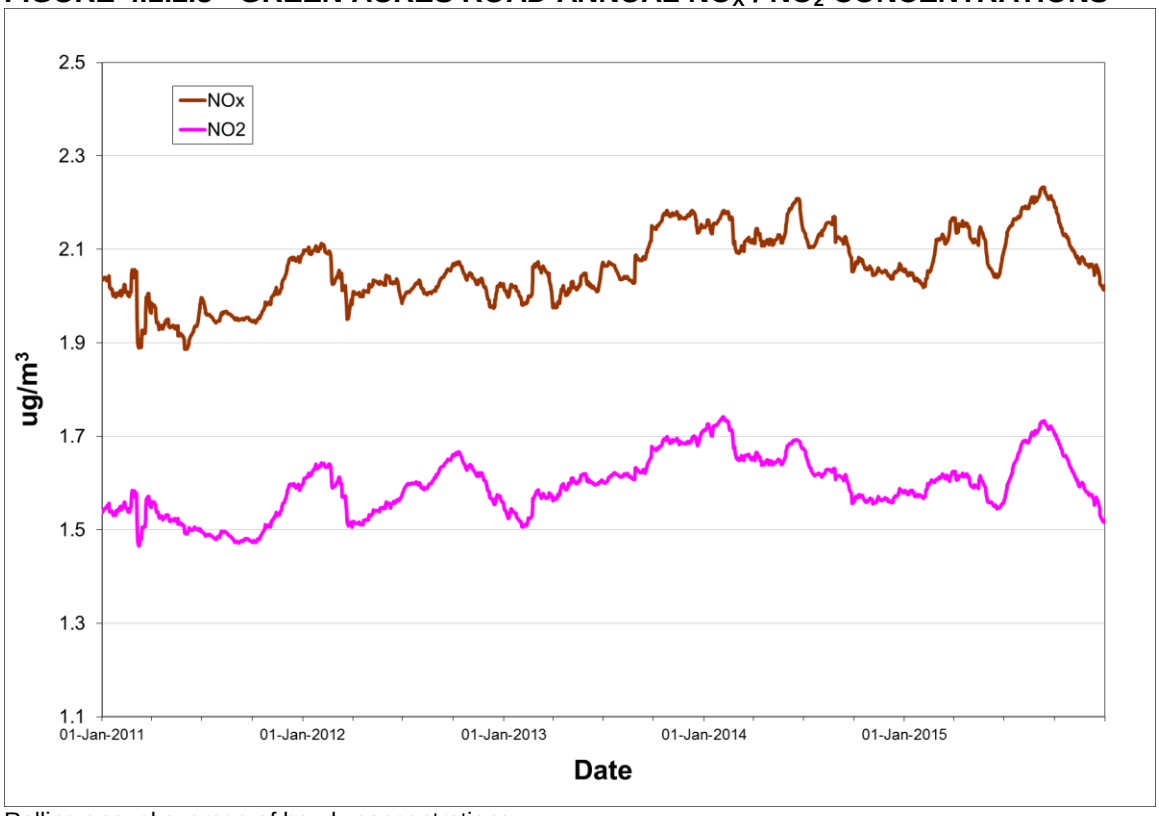
Rolling annual average of daily concentrations

TABLE 4.1.2.3 - GREEN ACRES ROAD NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average		Maximums 1-Hour		Maximums 24-Hour		Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
				NO_x	NO_2	NO_x	NO_2	NO_x	NO_2		
2014	January	645	86.7%	2.1	1.8	27.6	17.6	6.2	5.5	0	0
	February	644	95.8%	1.9	1.3	18.5	14.5	2.9	2.4	0	0
	March	655	88.0%	1.9	1.3	47.7	19.8	8.9	4.4	0	0
	April	689	95.7%	2.4	1.8	93.4	39.9	10.1	6.2	0	0
	May	703	94.5%	2.6	2.0	40.3	24.4	7.4	5.2	0	0
	June	681	94.6%	2.3	1.6	92.0	40.6	7.8	4.4	0	0
	July	713	95.8%	1.5	0.7	8.2	4.5	2.5	1.4	0	0
	August	713	95.8%	1.9	1.5	49.8	21.6	5.8	3.4	0	0
	September	666	92.5%	1.7	1.4	39.6	24.1	5.7	3.6	0	0
	October	692	93.0%	2.3	1.8	39.7	16.4	5.4	3.3	0	0
	November	644	89.4%	1.9	1.8	23.2	13.5	4.7	3.8	0	0
	December	706	94.9%	2.2	2.0	26.2	23.8	6.2	5.8	0	0
Annual		8151	93.0%	2.1	1.6	93.4	40.6	10.1	6.2	0	0
2015	January	676	90.9%	1.8	1.7	24.5	20.7	3.5	3.2	0	0
	February	610	90.8%	3.1	1.8	103.7	55.8	7.6	5.7	0	0
	March	697	93.7%	2.5	1.5	40.0	20.5	8.4	4.8	0	0
	April	690	95.8%	1.9	1.5	70.3	31.1	7.1	3.9	0	0
	May	713	95.8%	2.1	1.6	54.7	31.6	11.9	7.6	0	0
	June	647	89.9%	2.4	1.4	19.4	10.9	4.2	2.1	0	0
	July	705	94.8%	2.4	2.0	40.3	17.3	3.9	3.0	0	0
	August	713	95.8%	2.3	1.9	26.9	15.8	4.6	3.5	0	0
	September	636	88.3%	1.6	1.4	11.2	10.7	2.9	2.7	0	0
	October	709	95.3%	1.2	0.9	17.2	11.9	3.0	2.2	0	0
	November	690	95.8%	1.5	1.2	22.1	15.4	5.5	4.3	0	0
	December	708	95.2%	1.7	1.3	26.4	17.7	6.6	5.0	0	0
Annual		8194	93.5%	2.0	1.5	103.7	55.8	11.9	7.6	0	0

Observations in ug/m^3

FIGURE 4.1.2.3 - GREEN ACRES ROAD ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

TABLE 4.1.2.4 - GREEN ACRES ROAD TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	4	80.0%	7.3	13.2	0
	February	4	80.0%	4.5	7.4	0
	March	5	100.0%	6.2	13.5	0
	April	5	100.0%	12.2	19.9	0
	May	5	100.0%	4.8	6.9	0
	June	5	100.0%	7.1	10.0	0
	July	5	100.0%	8.3	19.0	0
	August	5	100.0%	13.8	23.4	0
	September	5	100.0%	7.1	12.8	0
	October	5	100.0%	7.6	11.5	0
	November	5	100.0%	7.2	16.8	0
	December	6	100.0%	5.7	9.3	0
Annual		59	96.7%	7.3	23.4	0
2015	January	3	60.0%	4.7	7.7	0
	February	1	25.0%	5.9	5.9	0
	March	4	66.7%	5.0	9.2	0
	April	5	100.0%	8.7	12.5	0
	May	5	100.0%	5.1	19.0	0
	June	5	100.0%	9.6	14.2	0
	July	5	100.0%	5.1	10.8	0
	August	5	100.0%	8.8	12.2	0
	September	5	100.0%	5.5	7.4	0
	October	5	100.0%	8.9	15.5	0
	November	5	100.0%	4.7	8.2	0
	December	5	100.0%	7.9	12.6	0
Annual		53	88.3%	6.6	19.0	0

Observations in ug/m^3

FIGURE 4.1.2.4 - GREEN ACRES ROAD ANNUAL TPM CONCENTRATIONS

Rolling annual average of daily concentrations

4.1.3 Indian Pond Drive

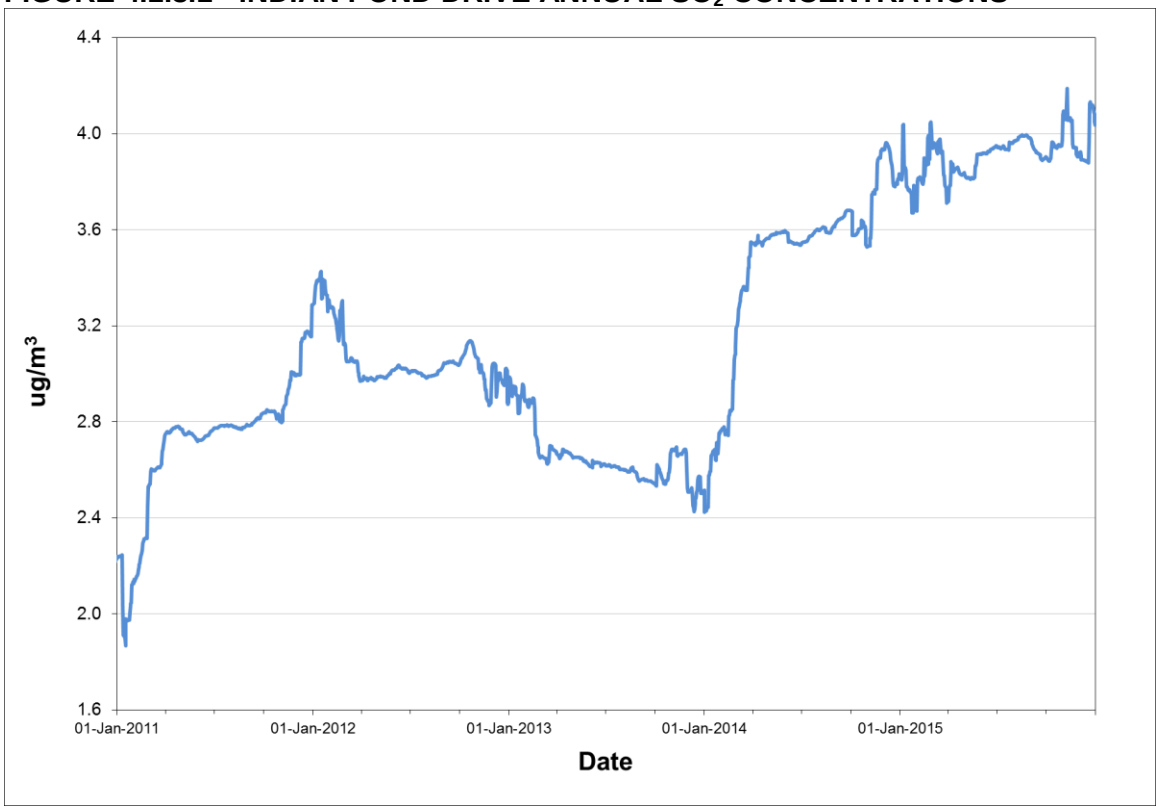
The Indian Pond Drive station monitors the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$ on a continuous basis and TPM on a 1 day in 6 day cycle consistent with the NAPS defined schedule. The ambient air criteria for any pollutant were not exceeded on any occasion in 2015. Tables 4.1.3.1 through 4.1.3.4 provide summary information on the level of air contaminants measured at Indian Pond Drive, while Figures 4.1.3.1 through 4.1.3.4 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.1.3.1 - INDIAN POND DRIVE SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	692	93.0%	8.2	142.9	117.1	59.5	0	0	0
	February	520	77.4%	7.6	194.1	146.9	43.8	0	0	0
	March	652	87.6%	7.8	120.9	65.6	27.0	0	0	0
	April	612	85.0%	2.1	85.1	43.6	13.3	0	0	0
	May	699	94.0%	1.5	34.6	12.8	3.4	0	0	0
	June	688	95.6%	1.5	11.2	6.6	2.8	0	0	0
	July	650	87.4%	1.7	9.7	6.8	3.3	0	0	0
	August	653	87.8%	1.7	5.8	4.8	3.0	0	0	0
	September	687	95.4%	2.3	26.2	14.3	4.9	0	0	0
	October	710	95.4%	2.7	56.8	42.6	17.9	0	0	0
	November	685	95.1%	6.5	153.1	133.2	49.6	0	0	0
	December	709	95.3%	2.9	49.9	41.0	11.9	0	0	0
Annual		7957	90.8%	3.8	194.1	146.9	59.5	0	0	0
2015	January	680	91.4%	6.7	187.1	126.5	73.8	0	0	0
	February	629	93.6%	11.2	169.8	149.1	61.1	0	0	0
	March	709	95.3%	4.1	81.2	62.0	21.2	0	0	0
	April	689	95.7%	3.7	105.5	83.9	20.9	0	0	0
	May	708	95.2%	2.4	111.7	68.2	18.7	0	0	0
	June	685	95.1%	2.0	24.0	12.6	4.2	0	0	0
	July	711	95.6%	2.0	48.2	30.3	13.2	0	0	0
	August	656	88.2%	1.9	6.5	4.2	2.6	0	0	0
	September	678	94.2%	1.4	22.7	11.0	3.2	0	0	0
	October	713	95.8%	4.7	108.5	79.3	39.9	0	0	0
	November	551	76.5%	4.6	114.6	90.9	40.8	0	0	0
	December	711	95.6%	4.4	180.8	159.1	59.4	0	0	0
Annual		8120	92.7%	4.0	187.1	159.1	73.8	0	0	0

Observations in ug/m^3

FIGURE 4.1.3.1 - INDIAN POND DRIVE ANNUAL SO_2 CONCENTRATIONS



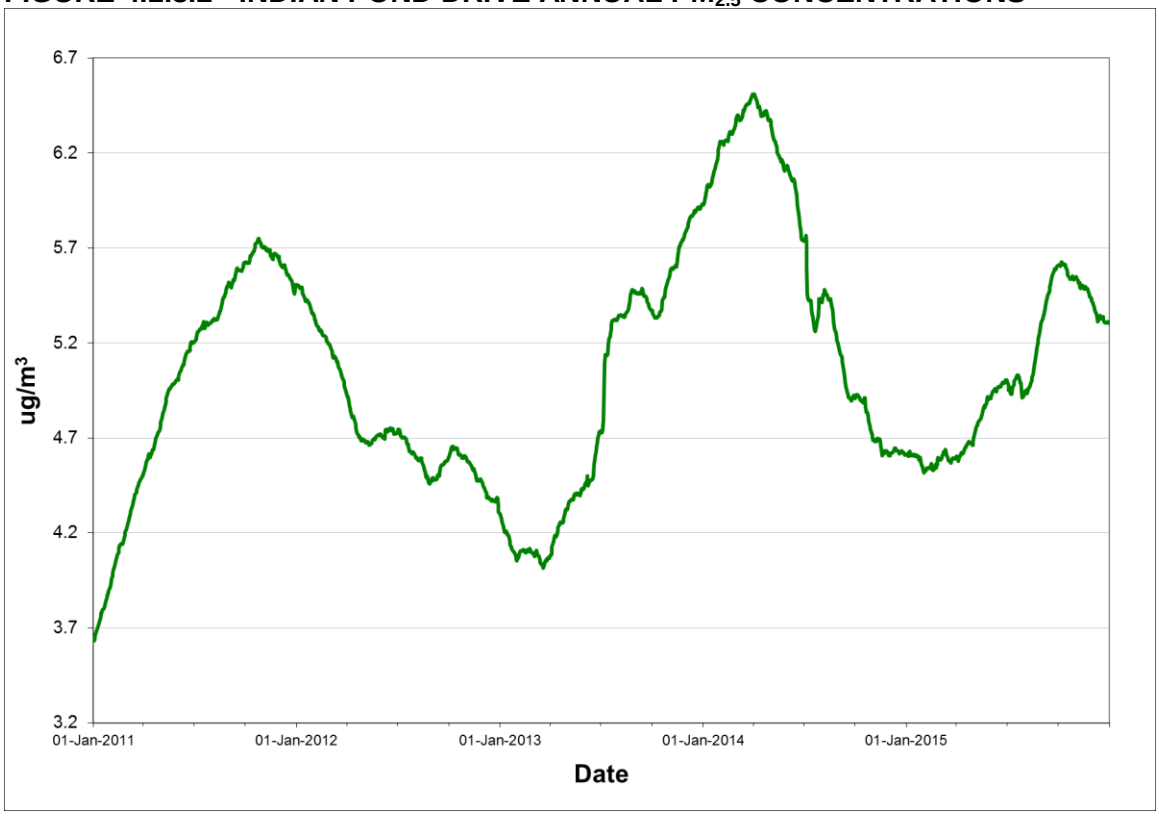
Rolling annual average of hourly concentrations

TABLE 4.1.3.2 - INDIAN POND DRIVE $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	28	90.3%	5.3	10.8	0
	February	21	75.0%	5.5	13.0	0
	March	26	83.9%	4.7	9.5	0
	April	26	86.7%	5.1	8.9	0
	May	31	100.0%	4.1	11.0	0
	June	30	100.0%	4.0	9.3	0
	July	27	87.1%	8.1	20.8	0
	August	31	100.0%	3.8	12.1	0
	September	26	86.7%	2.2	5.1	0
	October	31	100.0%	4.0	11.9	0
	November	30	100.0%	4.6	9.8	0
	December	31	100.0%	4.4	9.7	0
Annual		338	92.6%	4.6	20.8	0
2015	January	29	93.5%	4.3	10.1	0
	February	27	96.4%	6.0	15.1	0
	March	31	100.0%	4.8	9.5	0
	April	30	100.0%	5.8	9.4	0
	May	27	87.1%	7.2	12.5	0
	June	30	100.0%	5.2	8.7	0
	July	31	100.0%	6.8	14.2	0
	August	29	93.5%	8.4	12.6	0
	September	29	96.7%	6.2	10.0	0
	October	26	83.9%	2.8	5.2	0
	November	23	76.7%	2.5	6.3	0
	December	27	87.1%	2.8	8.7	0
Annual		339	92.9%	5.3	15.1	0

Observations in ug/m^3

FIGURE 4.1.3.2 - INDIAN POND DRIVE ANNUAL $PM_{2.5}$ CONCENTRATIONS



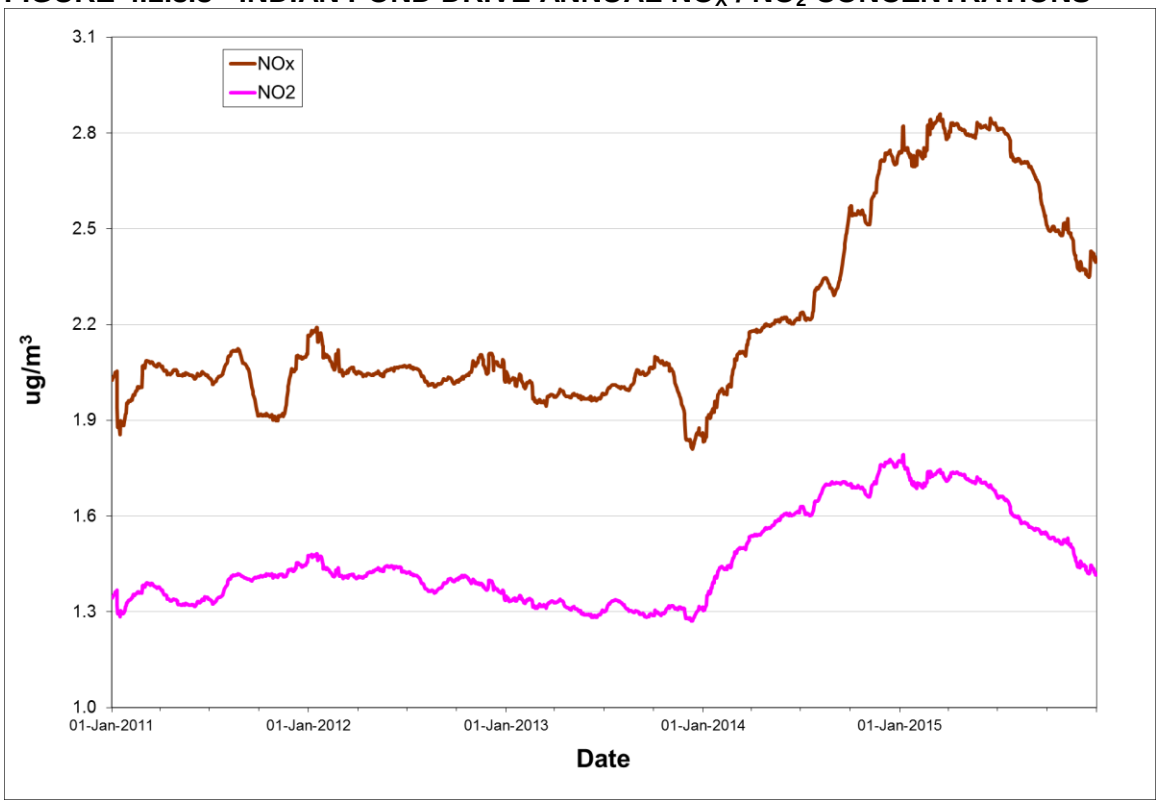
Rolling annual average of daily concentrations

TABLE 4.1.3.3 - INDIAN POND DRIVE NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	670	90.1%	4.1	3.2	52.6	27.8	26.4	14.1	0	0
	February	520	77.4%	3.0	1.9	64.5	23.5	12.2	6.2	0	0
	March	655	88.0%	3.0	2.0	37.9	19.4	8.0	4.8	0	0
	April	614	85.3%	1.6	1.2	22.1	12.8	4.3	2.6	0	0
	May	702	94.4%	1.7	1.6	13.9	10.3	3.0	2.8	0	0
	June	688	95.6%	1.9	1.6	37.2	18.3	4.2	2.8	0	0
	July	650	87.4%	2.6	1.7	61.0	21.6	12.0	5.2	0	0
	August	640	86.0%	1.8	1.5	14.7	9.9	3.7	3.0	0	0
	September	688	95.6%	5.0	1.2	23.5	9.2	7.4	1.9	0	0
	October	712	95.7%	1.9	1.4	16.9	10.0	5.6	2.8	0	0
	November	684	95.0%	3.8	2.3	51.3	17.5	16.4	7.1	0	0
	December	710	95.4%	2.4	1.8	63.4	29.7	8.1	4.6	0	0
Annual		7933	90.6%	2.7	1.8	64.5	29.7	26.4	14.1	0	0
2015	January	682	91.7%	3.7	2.2	66.3	32.2	28.5	10.9	0	0
	February	610	90.8%	4.6	2.4	132.6	41.4	27.8	12.2	0	0
	March	709	95.3%	2.4	1.7	42.4	27.9	8.7	5.2	0	0
	April	690	95.8%	2.0	1.5	30.0	14.6	6.8	3.7	0	0
	May	692	93.0%	1.8	1.3	52.8	27.4	10.9	5.5	0	0
	June	688	95.6%	1.9	1.1	89.4	33.0	10.4	3.5	0	0
	July	713	95.8%	1.5	0.9	95.2	28.3	6.0	2.4	0	0
	August	653	87.8%	1.6	1.1	21.5	10.0	5.0	3.1	0	0
	September	678	94.2%	2.8	0.9	35.4	17.9	7.5	2.9	0	0
	October	712	95.7%	2.0	1.2	37.5	16.5	11.8	5.3	0	0
	November	550	76.4%	1.9	1.2	40.1	19.5	13.3	6.1	0	0
	December	712	95.7%	2.7	1.6	54.2	23.8	18.1	6.6	0	0
Annual		8089	92.3%	2.4	1.4	132.6	41.4	28.5	12.2	0	0

Observations in ug/m^3

FIGURE 4.1.3.3 - INDIAN POND DRIVE ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

TABLE 4.1.3.4 - INDIAN POND DRIVE TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	4	80.0%	10.5	17.1	0
	February	5	100.0%	7.0	23.2	0
	March	5	100.0%	7.1	12.3	0
	April	5	100.0%	14.2	24.4	0
	May	5	100.0%	6.9	15.7	0
	June	5	100.0%	11.9	153.7	1
	July	5	100.0%	18.1	35.1	0
	August	5	100.0%	13.0	34.8	0
	September	5	100.0%	13.8	28.1	0
	October	5	100.0%	11.2	16.0	0
	November	5	100.0%	8.2	22.9	0
	December	6	100.0%	6.4	10.6	0
Annual		60	98.4%	10.0	153.7	1
2015	January	5	100.0%	10.2	17.6	0
	February	3	75.0%	13.3	21.9	0
	March	6	100.0%	9.3	11.4	0
	April	5	100.0%	10.9	13.6	0
	May	5	100.0%	16.5	23.3	0
	June	5	100.0%	19.0	42.3	0
	July	5	100.0%	8.2	11.9	0
	August	5	100.0%	10.5	16.3	0
	September	5	100.0%	7.2	9.3	0
	October	5	100.0%	12.9	25.6	0
	November	5	100.0%	7.9	20.3	0
	December	5	100.0%	11.2	17.4	0
Annual		59	98.3%	6.6	42.3	0

Observations in ug/m^3

FIGURE 4.1.3.4 - INDIAN POND DRIVE ANNUAL TPM CONCENTRATIONS

Rolling annual average of daily concentrations

4.1.4 Indian Pond Road

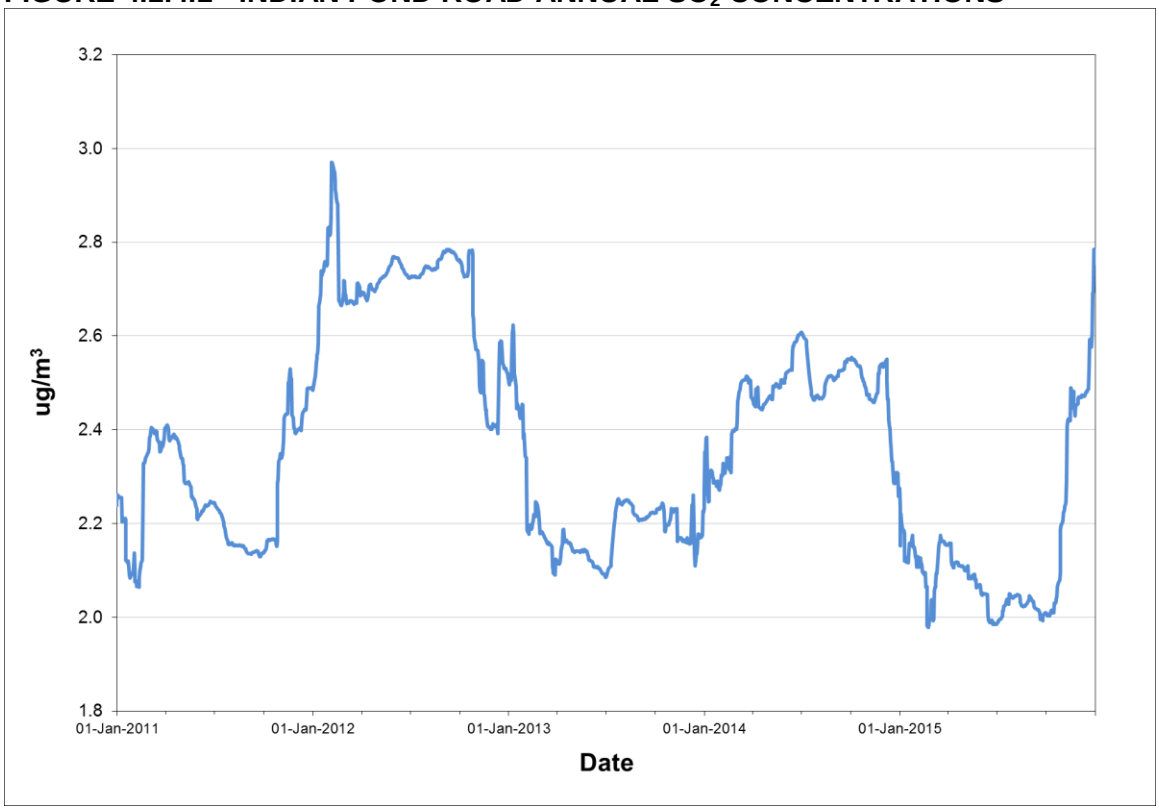
The Indian Pond Road station monitors the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$ on a continuous basis and TPM on a 1 day in 6 day cycle consistent with the NAPS defined schedule. For all pollutants, the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.1.4.1 through 4.1.4.4 provide summary information on the level of air contaminants measured at Indian Pond Road, while Figures 4.1.4.1 through 4.1.4.4 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.1.4.1 - INDIAN POND ROAD SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	690	92.7%	5.1	147.1	118.2	29.8	0	0	0
	February	640	95.2%	3.8	158.0	80.0	31.1	0	0	0
	March	711	95.6%	2.5	63.8	43.7	17.0	0	0	0
	April	683	94.9%	2.2	65.0	49.5	17.1	0	0	0
	May	711	95.6%	1.9	113.9	38.6	11.5	0	0	0
	June	684	95.0%	2.1	111.9	44.9	16.6	0	0	0
	July	712	95.7%	1.5	17.2	10.5	3.8	0	0	0
	August	674	90.6%	1.3	18.6	6.8	4.4	0	0	0
	September	688	95.6%	1.9	43.8	20.3	6.9	0	0	0
	October	710	95.4%	1.1	8.1	4.9	2.3	0	0	0
	November	576	80.0%	1.8	53.2	44.4	14.8	0	0	0
	December	703	94.5%	2.1	55.2	28.3	9.2	0	0	0
Annual		8182	93.4%	2.3	158.0	118.2	31.1	0	0	0
2015	January	649	87.2%	3.5	119.9	85.3	28.2	0	0	0
	February	644	95.8%	2.6	57.0	31.4	15.7	0	0	0
	March	709	95.3%	3.9	120.8	59.5	24.9	0	0	0
	April	689	95.7%	1.6	27.3	14.2	3.2	0	0	0
	May	705	94.8%	1.3	43.9	15.9	3.5	0	0	0
	June	684	95.0%	1.2	20.3	12.5	2.8	0	0	0
	July	686	92.2%	2.1	65.4	27.5	9.3	0	0	0
	August	713	95.8%	1.4	27.6	12.1	3.3	0	0	0
	September	683	94.9%	1.5	14.8	12.6	6.1	0	0	0
	October	703	94.5%	3.3	106.6	74.4	32.9	0	0	0
	November	688	95.6%	5.0	107.9	83.0	42.1	0	0	0
	December	709	95.3%	5.4	113.8	99.3	35.9	0	0	0
Annual		8262	94.3%	2.8	120.8	99.3	42.1	0	0	0

Observations in ug/m^3

FIGURE 4.1.4.1 - INDIAN POND ROAD ANNUAL SO_2 CONCENTRATIONS



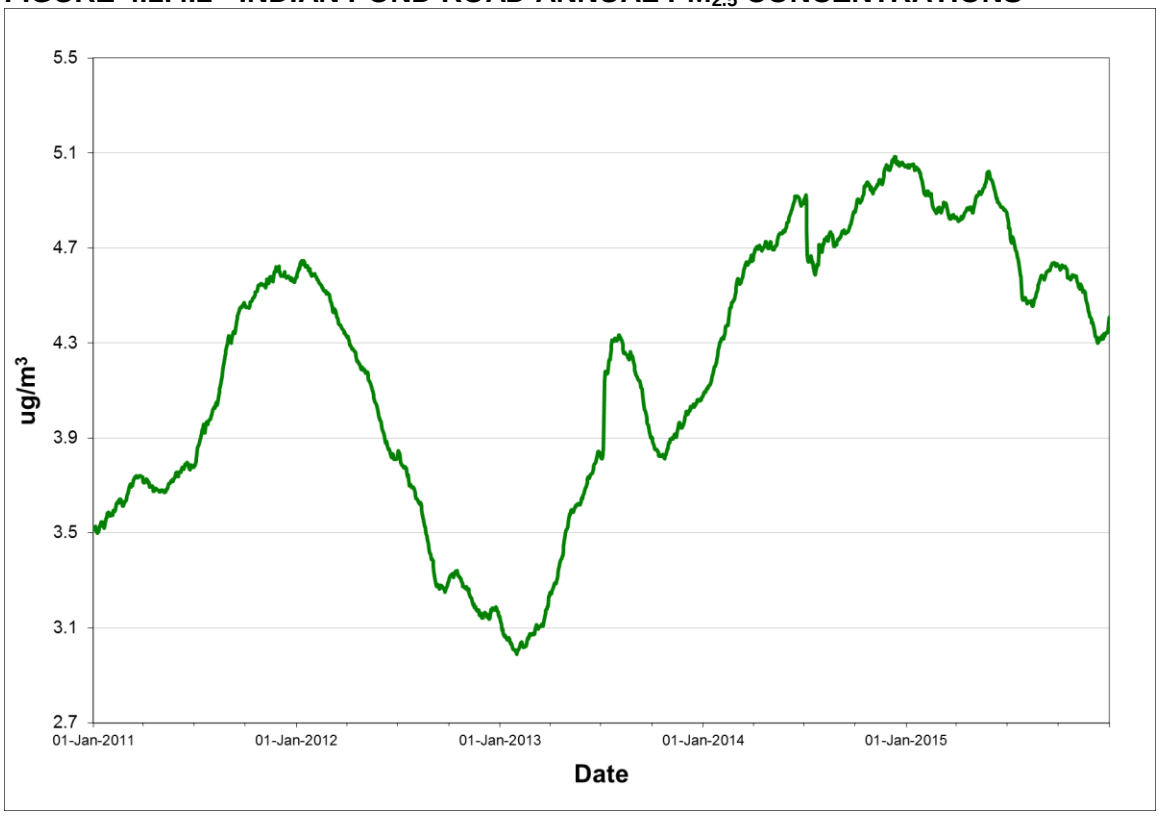
Rolling annual average of hourly concentrations

TABLE 4.1.4.2 - INDIAN POND ROAD $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	29	93.5%	5.3	9.9	0
	February	28	100.0%	6.2	13.6	0
	March	31	100.0%	5.5	8.7	0
	April	30	100.0%	5.7	9.4	0
	May	31	100.0%	4.4	9.6	0
	June	30	100.0%	5.2	9.0	0
	July	31	100.0%	8.0	19.8	0
	August	31	100.0%	3.5	9.8	0
	September	26	86.7%	3.0	6.2	0
	October	31	100.0%	4.1	14.6	0
	November	24	80.0%	5.1	8.7	0
	December	31	100.0%	4.3	10.0	0
Annual		353	96.7%	5.0	19.8	0
2015	January	28	90.3%	4.1	8.5	0
	February	28	100.0%	5.1	10.0	0
	March	31	100.0%	5.1	9.8	0
	April	30	100.0%	6.0	9.7	0
	May	31	100.0%	6.1	11.4	0
	June	30	100.0%	3.6	6.9	0
	July	31	100.0%	3.9	13.5	0
	August	31	100.0%	4.7	8.2	0
	September	30	100.0%	3.7	7.5	0
	October	25	80.6%	3.3	5.0	0
	November	30	100.0%	2.7	11.7	0
	December	27	87.1%	4.6	14.0	0
Annual		352	96.4%	4.4	14.0	0

Observations in ug/m^3

FIGURE 4.1.4.2 - INDIAN POND ROAD ANNUAL $PM_{2.5}$ CONCENTRATIONS



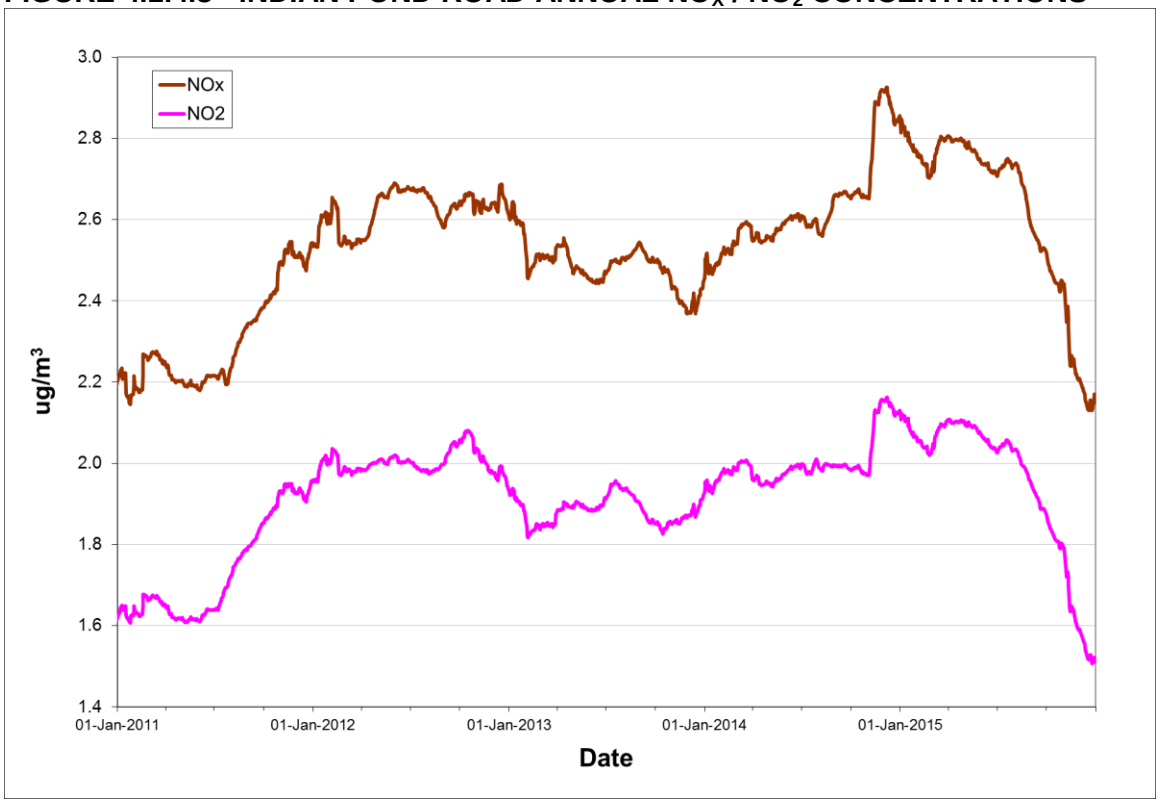
Rolling annual average of daily concentrations

TABLE 4.1.4.3 - INDIAN POND ROAD NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	691	92.9%	3.7	2.7	63.3	28.9	12.5	7.6	0	0
	February	644	95.8%	2.8	2.0	59.4	32.1	11.5	6.7	0	0
	March	711	95.6%	2.2	1.5	36.4	22.8	9.8	5.8	0	0
	April	673	93.5%	2.0	1.4	17.7	12.0	5.6	3.7	0	0
	May	713	95.8%	2.4	1.8	59.3	27.4	6.5	3.9	0	0
	June	688	95.6%	2.4	2.3	31.2	16.1	5.6	3.9	0	0
	July	693	93.1%	2.1	2.0	9.9	8.6	3.5	3.1	0	0
	August	664	89.2%	3.7	1.6	26.6	13.1	7.0	3.2	0	0
	September	658	91.4%	2.0	1.7	29.0	12.3	3.7	2.7	0	0
	October	682	91.7%	2.6	2.1	21.6	14.3	4.4	3.2	0	0
	November	555	77.1%	6.1	4.6	26.6	18.7	16.6	11.6	0	0
	December	711	95.6%	2.9	2.3	35.5	23.2	6.5	5.7	0	0
Annual		8083	92.3%	2.9	2.1	63.3	32.1	16.6	11.6	0	0
2015	January	651	87.5%	2.7	1.9	57.3	24.8	14.5	7.1	0	0
	February	644	95.8%	2.3	1.6	26.4	15.7	8.8	5.8	0	0
	March	711	95.6%	3.1	2.3	60.1	31.2	14.0	9.0	0	0
	April	690	95.8%	1.8	1.4	19.7	13.1	3.6	2.9	0	0
	May	684	91.9%	1.8	1.5	17.6	11.0	5.2	3.7	0	0
	June	656	91.1%	2.0	1.7	19.2	17.7	4.1	3.7	0	0
	July	661	88.8%	2.4	2.0	22.3	14.1	4.4	3.8	0	0
	August	713	95.8%	2.1	0.8	57.0	24.3	4.9	2.1	0	0
	September	684	95.0%	1.2	0.8	24.5	13.0	3.1	2.0	0	0
	October	708	95.2%	1.6	1.1	34.6	18.7	11.1	6.2	0	0
	November	687	95.4%	2.6	1.6	37.8	21.8	16.0	9.0	0	0
	December	711	95.6%	2.3	1.4	32.8	16.4	13.0	6.6	0	0
Annual		8200	93.6%	2.2	1.5	60.1	31.2	16.0	9.0	0	0

Observations in ug/m^3

FIGURE 4.1.4.3 - INDIAN POND ROAD ANNUAL NO_X / NO_2 CONCENTRATIONS



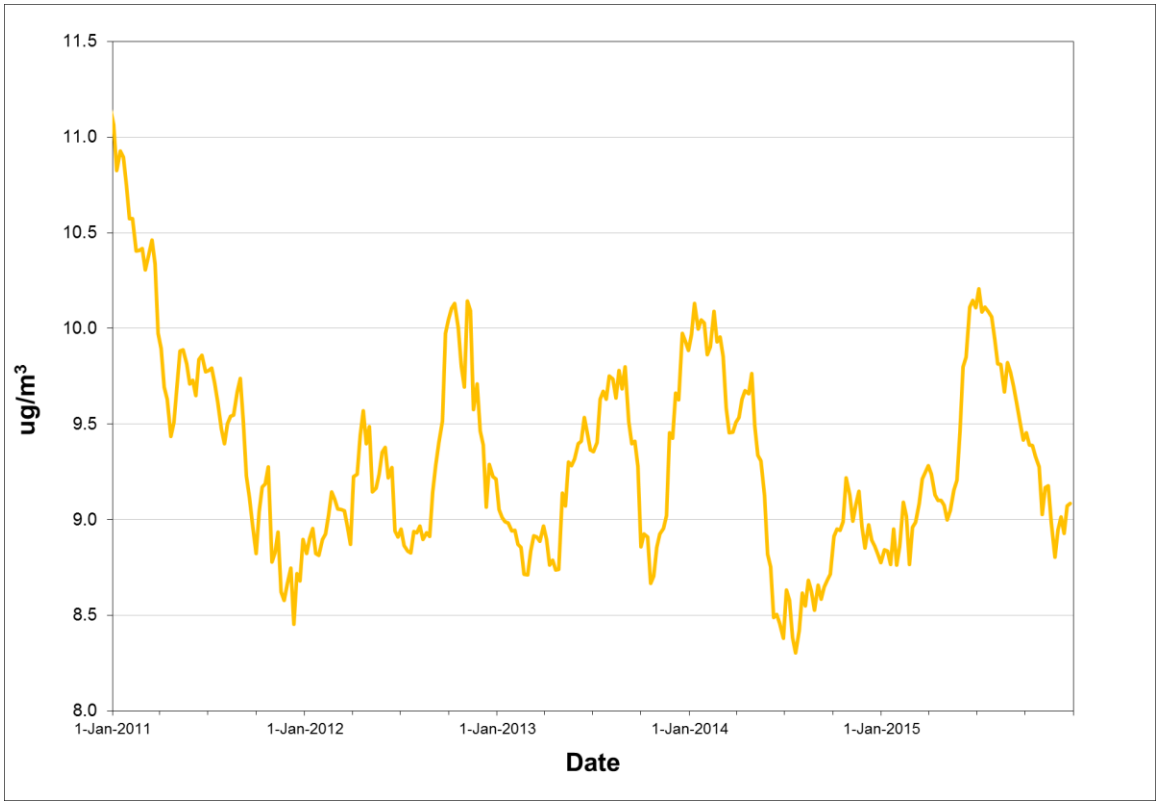
Rolling annual average of hourly concentrations

TABLE 4.1.4.4 - INDIAN POND ROAD TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	4	80.0%	8.5	14.9	0
	February	5	100.0%	8.0	29.3	0
	March	5	100.0%	7.4	15.4	0
	April	5	100.0%	16.2	22.4	0
	May	5	100.0%	5.0	17.0	0
	June	5	100.0%	6.9	11.2	0
	July	5	100.0%	10.9	25.6	0
	August	5	100.0%	9.9	19.3	0
	September	5	100.0%	11.1	15.0	0
	October	5	100.0%	12.7	18.8	0
	November	5	100.0%	7.2	16.6	0
	December	6	100.0%	7.0	10.6	0
Annual		60	98.4%	8.8	29.3	0
2015	January	5	100.0%	8.4	14.6	0
	February	3	75.0%	10.7	18.5	0
	March	3	50.0%	11.8	14.3	0
	April	5	100.0%	11.6	13.8	0
	May	5	100.0%	13.2	23.7	0
	June	5	100.0%	12.0	16.1	0
	July	5	100.0%	7.6	9.7	0
	August	5	100.0%	9.2	13.3	0
	September	5	100.0%	6.5	9.7	0
	October	5	100.0%	9.8	15.5	0
	November	5	100.0%	5.4	10.4	0
	December	5	100.0%	8.5	12.5	0
Annual		56	93.3%	9.1	23.7	0

Observations in ug/m^3

FIGURE 4.1.4.4 - INDIAN POND ROAD ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.1.5 Lawrence Pond Road

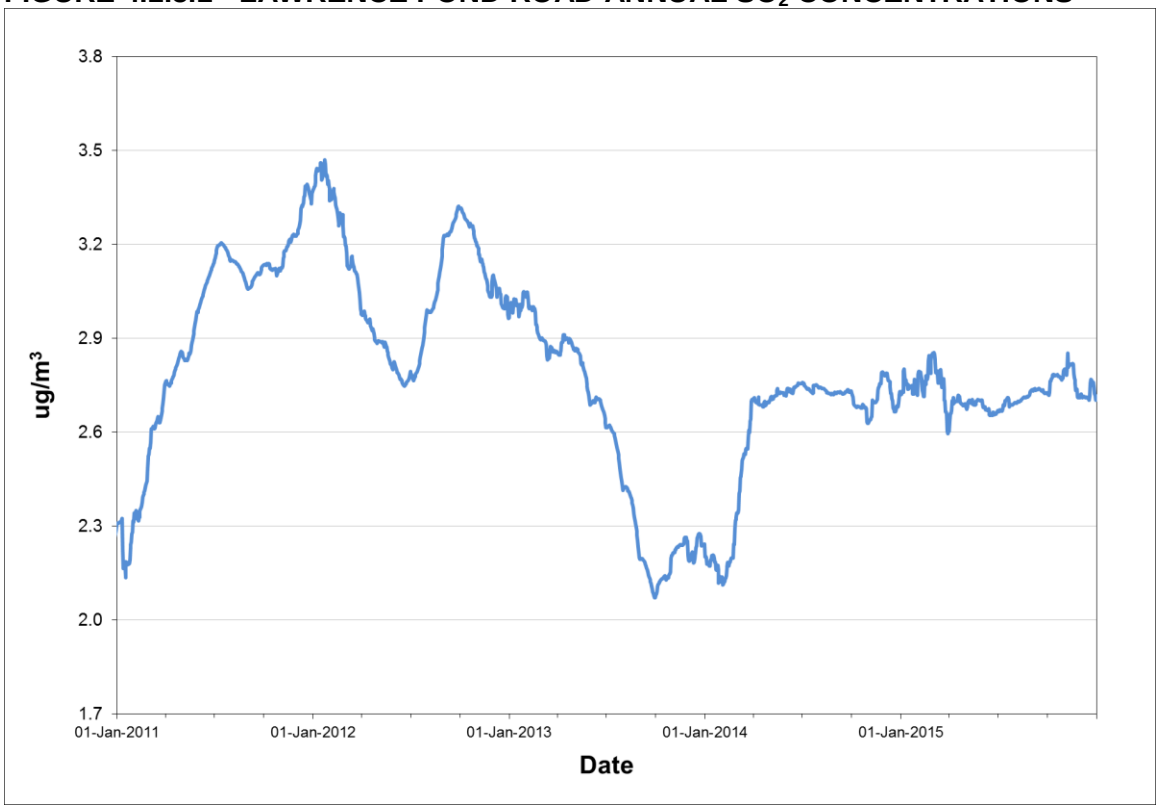
The Lawrence Pond Road station monitors the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$ on a continuous basis and TPM on a 1 day in 6 day cycle consistent with the NAPS defined schedule. For all pollutants, the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.1.5.1 through 4.1.5.4 provide summary information on the level of air contaminants measured at Lawrence Pond Road, while Figures 4.1.5.1 through 4.1.5.4 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.1.5.1 - LAWRENCE POND ROAD SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	663	89.1%	3.8	47.9	35.3	10.6	0	0	0
	February	643	95.7%	4.6	75.5	49.6	20.1	0	0	0
	March	706	94.9%	6.5	135.0	79.0	21.9	0	0	0
	April	689	95.7%	2.2	58.0	24.3	7.7	0	0	0
	May	713	95.8%	1.6	49.8	35.5	6.4	0	0	0
	June	630	87.5%	1.9	41.4	29.2	6.5	0	0	0
	July	710	95.4%	1.4	54.6	35.9	10.2	0	0	0
	August	690	92.7%	1.1	13.6	8.3	3.2	0	0	0
	September	688	95.6%	1.8	30.3	17.0	4.5	0	0	0
	October	713	95.8%	1.5	21.4	16.7	8.3	0	0	0
	November	663	92.1%	3.9	52.0	40.8	19.2	0	0	0
	December	707	95.0%	2.6	43.4	26.2	9.2	0	0	0
Annual		8215	93.8%	2.7	135.0	79.0	21.9	0	0	0
2015	January	713	95.8%	3.7	69.4	52.3	25.5	0	0	0
	February	644	95.8%	6.2	87.2	59.2	26.0	0	0	0
	March	706	94.9%	3.6	179.8	89.9	16.2	0	0	0
	April	690	95.8%	3.2	86.6	35.9	12.5	0	0	0
	May	711	95.6%	1.7	47.1	33.7	7.5	0	0	0
	June	683	94.9%	1.6	28.3	18.0	5.5	0	0	0
	July	712	95.7%	1.7	30.1	25.4	6.7	0	0	0
	August	713	95.8%	1.6	14.4	13.1	4.5	0	0	0
	September	657	91.3%	1.7	17.1	13.2	4.1	0	0	0
	October	711	95.6%	2.3	71.5	43.9	13.9	0	0	0
	November	690	95.8%	2.8	72.7	54.8	20.2	0	0	0
	December	700	94.1%	2.6	73.9	40.9	16.3	0	0	0
Annual		8330	95.1%	2.7	179.8	89.9	26.0	0	0	0

Observations in ug/m^3

FIGURE 4.1.5.1 - LAWRENCE POND ROAD ANNUAL SO_2 CONCENTRATIONS



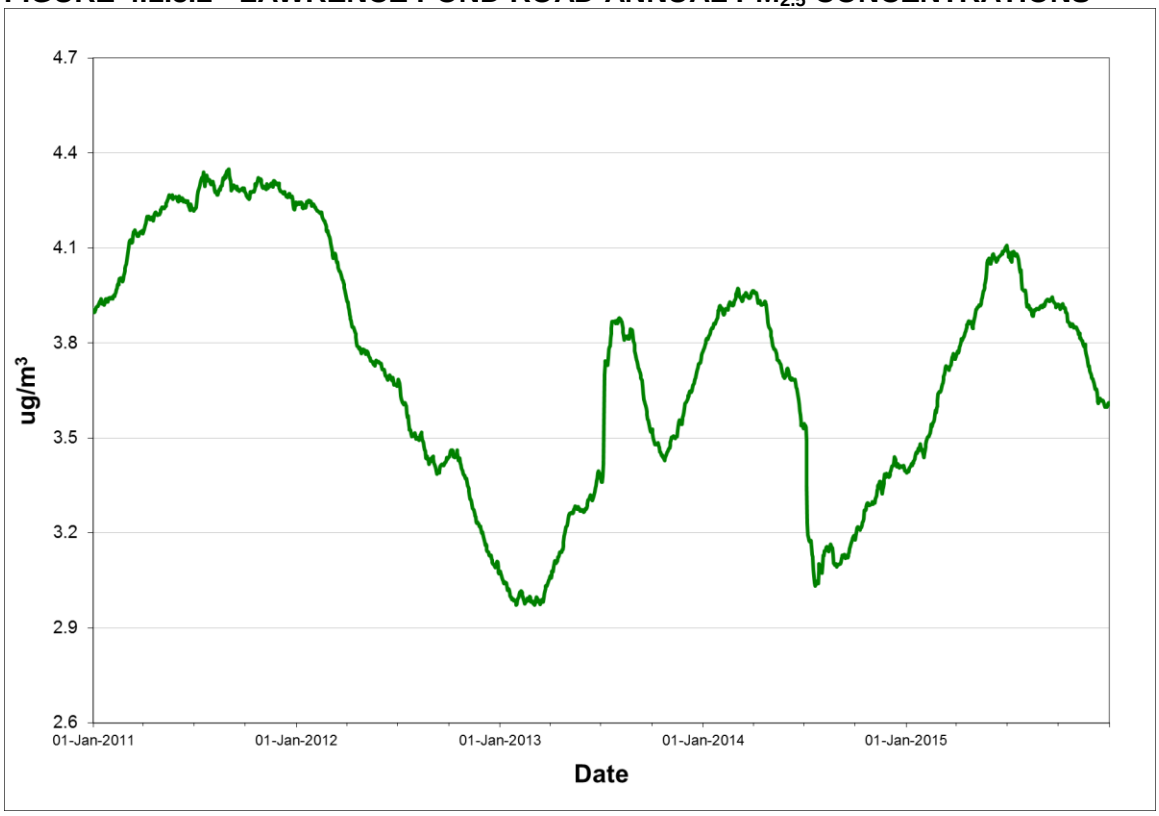
Rolling annual average of hourly concentrations

TABLE 4.1.5.2 - LAWRENCE POND ROAD $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	23	74.2%	3.9	7.5	0
	February	28	100.0%	3.2	7.9	0
	March	29	93.5%	3.6	7.0	0
	April	30	100.0%	3.3	5.7	0
	May	31	100.0%	2.3	7.0	0
	June	27	90.0%	2.1	4.8	0
	July	31	100.0%	4.6	15.8	0
	August	31	100.0%	3.3	13.8	0
	September	26	86.7%	2.5	5.0	0
	October	31	100.0%	3.5	11.2	0
	November	30	100.0%	4.2	7.9	0
	December	31	100.0%	4.0	8.3	0
Annual		348	95.3%	3.4	15.8	0
2015	January	31	100.0%	4.3	8.1	0
	February	28	100.0%	5.7	11.3	0
	March	31	100.0%	4.8	9.3	0
	April	30	100.0%	4.4	8.1	0
	May	31	100.0%	4.7	11.5	0
	June	30	100.0%	3.0	5.9	0
	July	31	100.0%	3.0	12.0	0
	August	31	100.0%	2.8	7.2	0
	September	30	100.0%	2.7	5.6	0
	October	26	83.9%	2.4	4.2	0
	November	30	100.0%	2.3	5.2	0
	December	31	100.0%	3.0	6.8	0
Annual		360	98.6%	3.6	12.0	0

Observations in ug/m^3

FIGURE 4.1.5.2 - LAWRENCE POND ROAD ANNUAL $PM_{2.5}$ CONCENTRATIONS



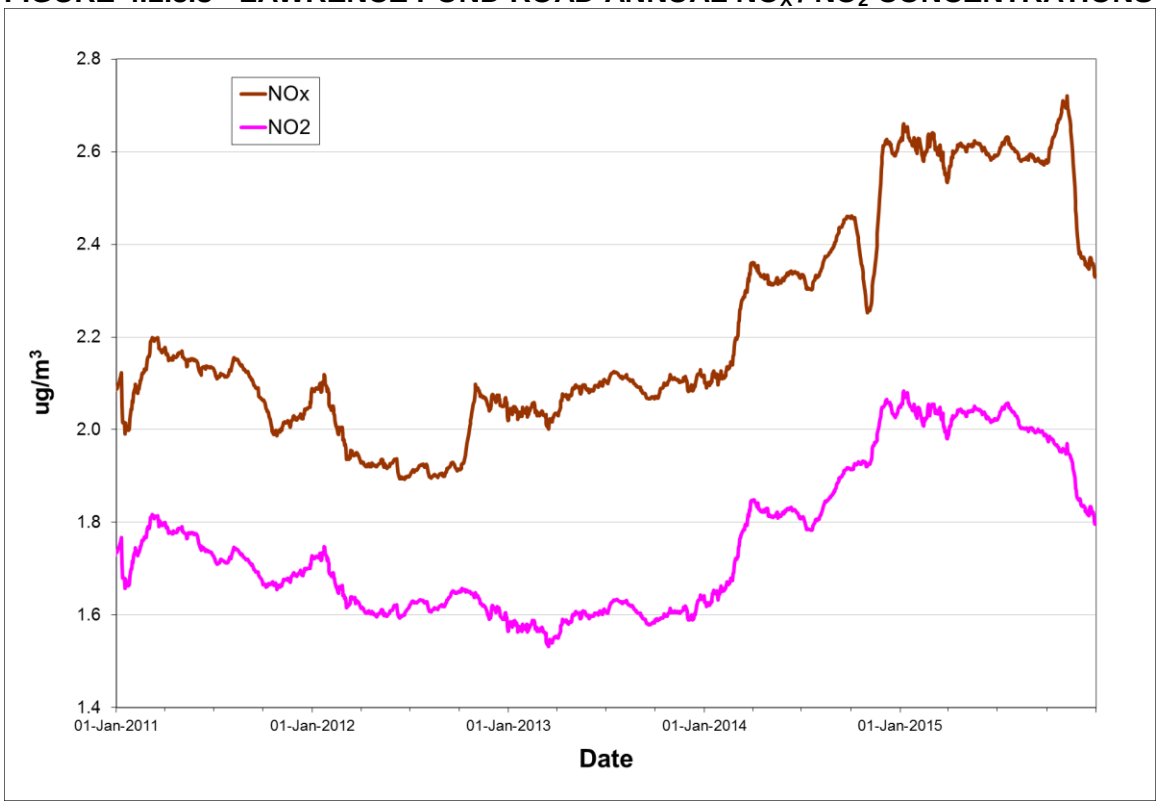
Rolling annual average of daily concentrations

TABLE 4.1.5.3 - LAWRENCE POND ROAD NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	670	90.1%	3.0	2.6	48.1	44.1	6.0	5.3	0	0
	February	643	95.7%	2.9	2.6	38.4	27.9	9.5	8.4	0	0
	March	708	95.2%	3.6	2.8	85.0	50.2	12.2	9.0	0	0
	April	690	95.8%	1.6	1.4	23.5	16.7	5.2	4.4	0	0
	May	713	95.8%	1.9	1.6	17.4	12.7	3.1	2.5	0	0
	June	631	87.6%	2.0	1.6	19.6	14.3	3.3	2.7	0	0
	July	713	95.8%	1.7	1.5	33.6	23.4	6.5	4.6	0	0
	August	690	92.7%	2.1	1.9	17.5	14.0	3.7	3.5	0	0
	September	688	95.6%	2.2	1.9	31.0	22.3	4.7	3.8	0	0
	October	713	95.8%	2.1	1.8	19.2	11.5	4.3	3.6	0	0
	November	648	90.0%	6.2	3.0	31.0	22.8	12.9	7.5	0	0
	December	682	91.7%	2.4	2.0	25.5	22.3	4.8	4.2	0	0
Annual		8189	93.5%	2.6	2.0	85.0	50.2	12.9	9.0	0	0
2015	January	713	95.8%	2.7	2.4	51.2	37.3	14.0	11.0	0	0
	February	644	95.8%	3.4	2.8	37.7	28.6	12.9	9.6	0	0
	March	706	94.9%	2.5	2.1	80.7	42.7	7.7	6.5	0	0
	April	690	95.8%	2.4	2.0	49.7	30.1	7.3	5.8	0	0
	May	713	95.8%	1.9	1.6	26.6	18.6	4.6	3.7	0	0
	June	684	95.0%	1.8	1.4	12.0	7.7	3.0	2.4	0	0
	July	713	95.8%	1.9	1.7	16.7	10.3	4.1	3.2	0	0
	August	713	95.8%	2.0	1.5	19.9	10.2	5.1	3.3	0	0
	September	660	91.7%	2.0	1.7	17.3	12.6	4.3	3.4	0	0
	October	713	95.8%	3.6	1.5	31.4	21.6	8.5	5.1	0	0
	November	679	94.3%	2.0	1.6	35.5	28.8	10.1	8.0	0	0
	December	705	94.8%	1.8	1.4	44.3	23.6	6.6	5.1	0	0
Annual		8333	95.1%	2.3	1.8	80.7	42.7	14.0	11.0	0	0

Observations in ug/m^3

FIGURE 4.1.5.3 - LAWRENCE POND ROAD ANNUAL NO_X / NO_2 CONCENTRATIONS



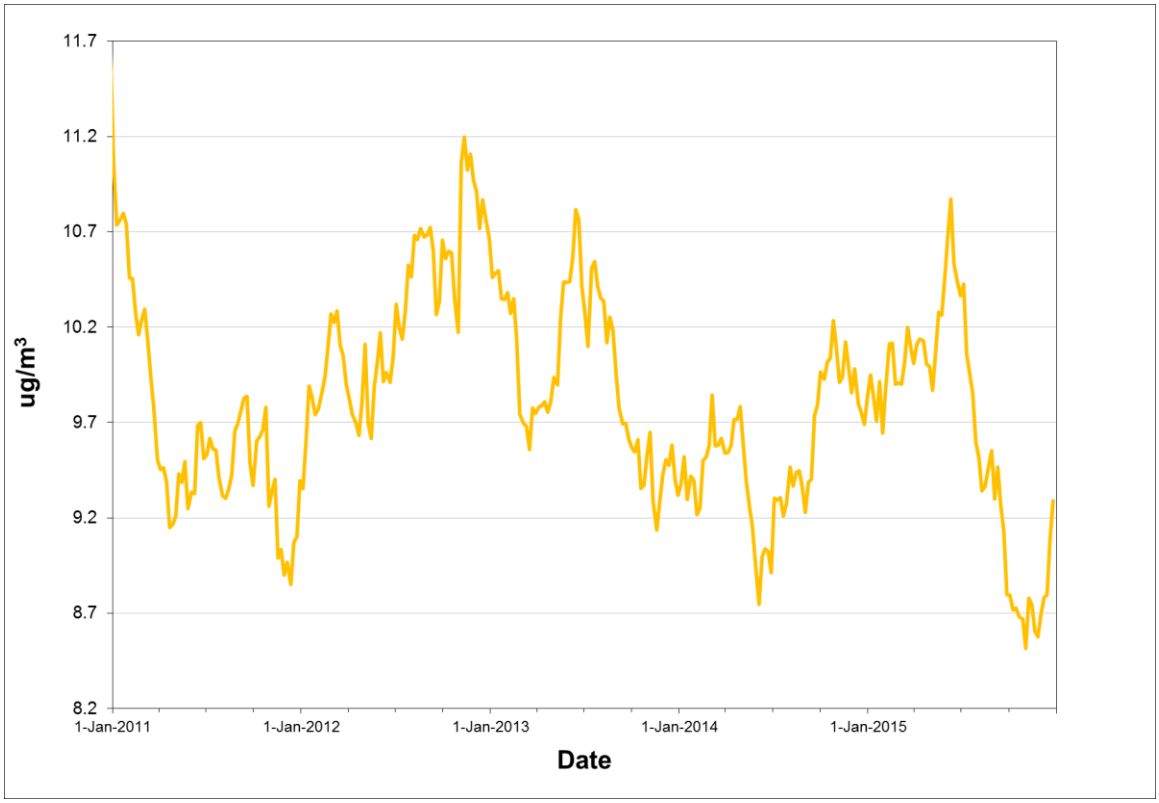
Rolling annual average of hourly concentrations

TABLE 4.1.5.4 - LAWRENCE POND ROAD TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	4	80.0%	8.8	20.1	0
	February	5	100.0%	10.4	28.3	0
	March	5	100.0%	7.0	13.8	0
	April	5	100.0%	10.7	15.8	0
	May	5	100.0%	6.1	19.0	0
	June	5	100.0%	17.4	152.7	1
	July	5	100.0%	24.9	44.1	0
	August	5	100.0%	12.3	30.8	0
	September	5	100.0%	12.3	67.0	0
	October	5	100.0%	10.9	13.9	0
	November	5	100.0%	6.1	17.3	0
	December	6	100.0%	5.2	9.5	0
Annual		60	98.4%	9.9	152.7	1
2015	January	5	100.0%	7.0	15.5	0
	February	4	100.0%	15.5	35.9	0
	March	6	100.0%	8.7	12.3	0
	April	5	100.0%	8.9	12.5	0
	May	5	100.0%	12.1	17.5	0
	June	5	100.0%	16.4	32.1	0
	July	5	100.0%	7.2	10.0	0
	August	5	100.0%	13.9	27.2	0
	September	5	100.0%	4.3	9.2	0
	October	5	100.0%	9.3	14.4	0
	November	5	100.0%	6.7	24.5	0
	December	5	100.0%	12.4	22.0	0
Annual		60	100.0%	9.4	35.9	0

Observations in ug/m^3

FIGURE 4.1.5.4 - LAWRENCE POND ROAD ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.1.6 NALCOR Property Boundary

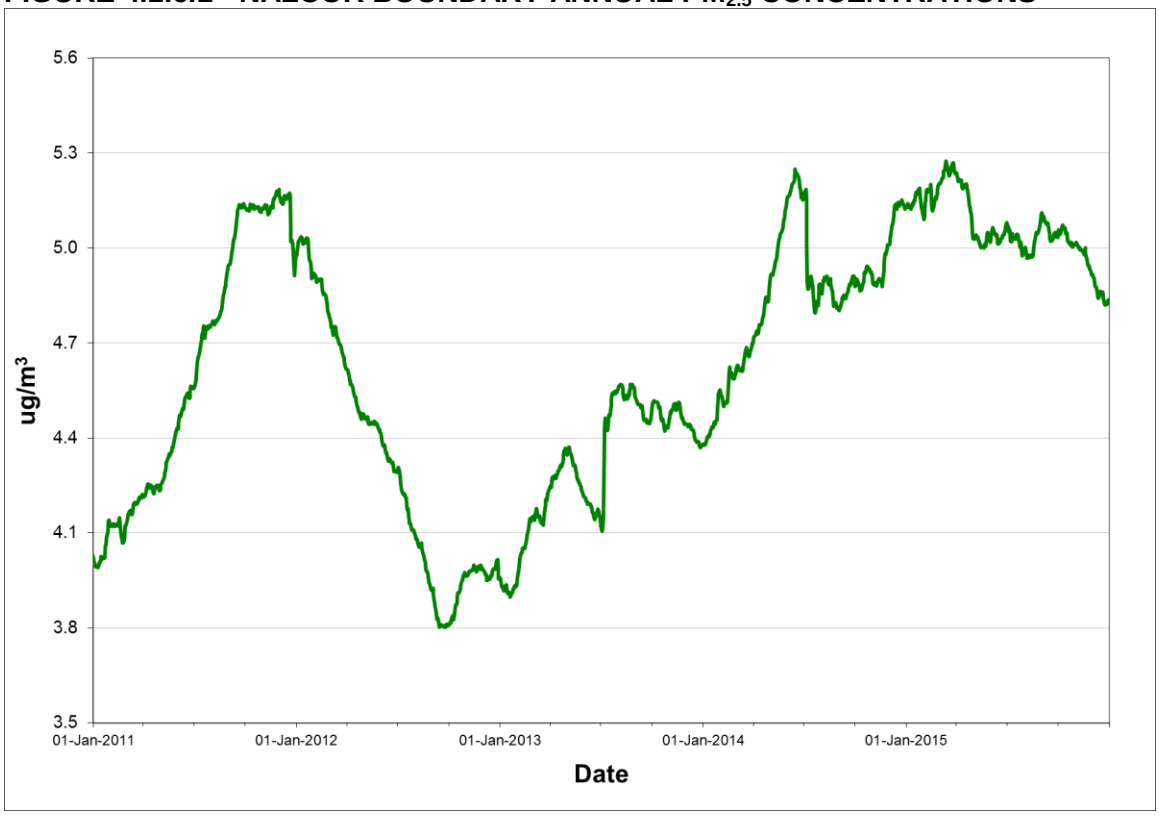
The NALCOR Property Boundary station monitors the ambient levels of $PM_{2.5}$ on a continuous basis and TPM on a 1 day in 6 day cycle consistent with the NAPS defined schedule. The 24-hour TPM ambient air quality standard was exceeded on one occasion in 2015 and the exceedance may have been attributable to the construction of the new combustion turbine in close proximity to the property boundary monitoring station. The 24-hour $PM_{2.5}$ standard was not exceeded at any time. Tables 4.1.6.1 through 4.1.6.2 provide summary information on the level of air contaminants measured at NALCOR Property Boundary, while Figures 4.1.6.1 through 4.1.6.2 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.1.6.1 - NALCOR BOUNDARY $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	28	90.3%	5.9	18.6	0
	February	28	100.0%	6.4	17.6	0
	March	31	100.0%	5.6	8.8	0
	April	30	100.0%	7.1	15.1	0
	May	26	83.9%	5.9	9.7	0
	June	25	83.3%	2.3	11.0	0
	July	31	100.0%	6.1	14.6	0
	August	28	90.3%	3.4	12.0	0
	September	19	63.3%	3.7	5.9	0
	October	29	93.5%	4.5	12.9	0
	November	30	100.0%	5.0	8.5	0
	December	31	100.0%	4.8	10.4	0
Annual		336	92.1%	5.1	18.6	0
2015	January	31	100.0%	5.6	9.0	0
	February	28	100.0%	7.5	20.3	0
	March	31	100.0%	6.0	11.8	0
	April	30	100.0%	4.8	8.8	0
	May	31	100.0%	5.6	12.1	0
	June	30	100.0%	3.5	7.5	0
	July	29	93.5%	5.2	13.6	0
	August	31	100.0%	4.8	10.0	0
	September	30	100.0%	3.3	6.5	0
	October	26	83.9%	4.1	11.0	0
	November	30	100.0%	3.8	8.6	0
	December	26	83.9%	3.7	5.8	0
Annual		353	96.7%	4.8	20.3	0

Observations in ug/m^3

FIGURE 4.1.6.1 - NALCOR BOUNDARY ANNUAL $PM_{2.5}$ CONCENTRATIONS



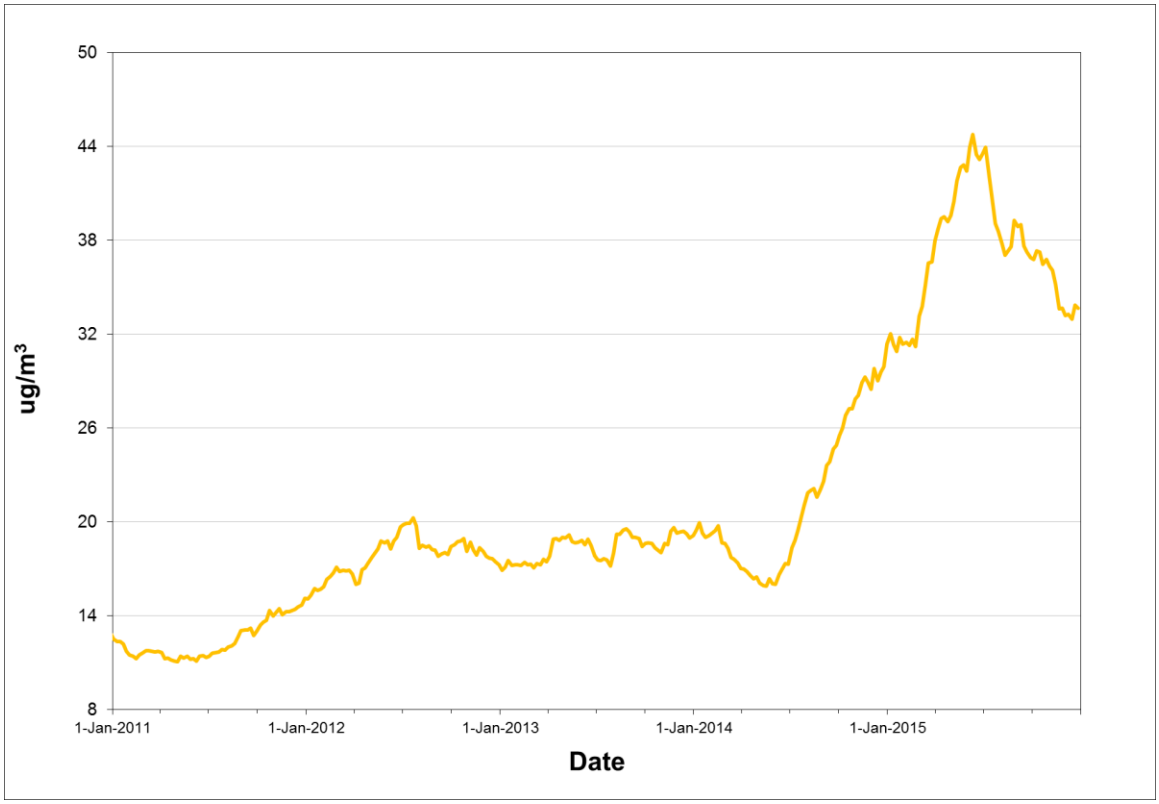
Rolling annual average of daily concentrations

TABLE 4.1.6.2 - NALCOR BOUNDARY TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	4	80.0%	16.9	27.9	0
	February	3	60.0%	10.7	24.4	0
	March	5	100.0%	10.0	16.1	0
	April	5	100.0%	19.3	29.9	0
	May	5	100.0%	18.7	55.9	0
	June	5	100.0%	38.8	166.9	1
	July	5	100.0%	183.6	242.2	5
	August	5	100.0%	33.3	118.4	0
	September	4	80.0%	73.5	93.7	0
	October	4	80.0%	55.6	121.2	1
	November	4	80.0%	63.4	126.7	1
	December	6	100.0%	24.4	104.1	0
Annual		55	90.2%	31.8	242.2	8
2015	January	5	100.0%	16.9	44.4	0
	February	3	75.0%	24.3	65.0	0
	March	5	83.3%	64.3	143.0	1
	April	5	100.0%	25.4	35.5	0
	May	5	100.0%	49.6	109.0	0
	June	5	100.0%	49.5	89.0	0
	July	5	100.0%	29.3	111.8	0
	August	5	100.0%	42.8	55.7	0
	September	5	100.0%	37.5	91.1	0
	October	5	100.0%	52.2	88.2	0
	November	5	100.0%	20.1	62.5	0
	December	5	100.0%	22.3	61.2	0
Annual		58	96.7%	33.6	143.0	1

Observations in ug/m^3

FIGURE 4.1.6.2 - NALCOR BOUNDARY ANNUAL TPM CONCENTRATIONS



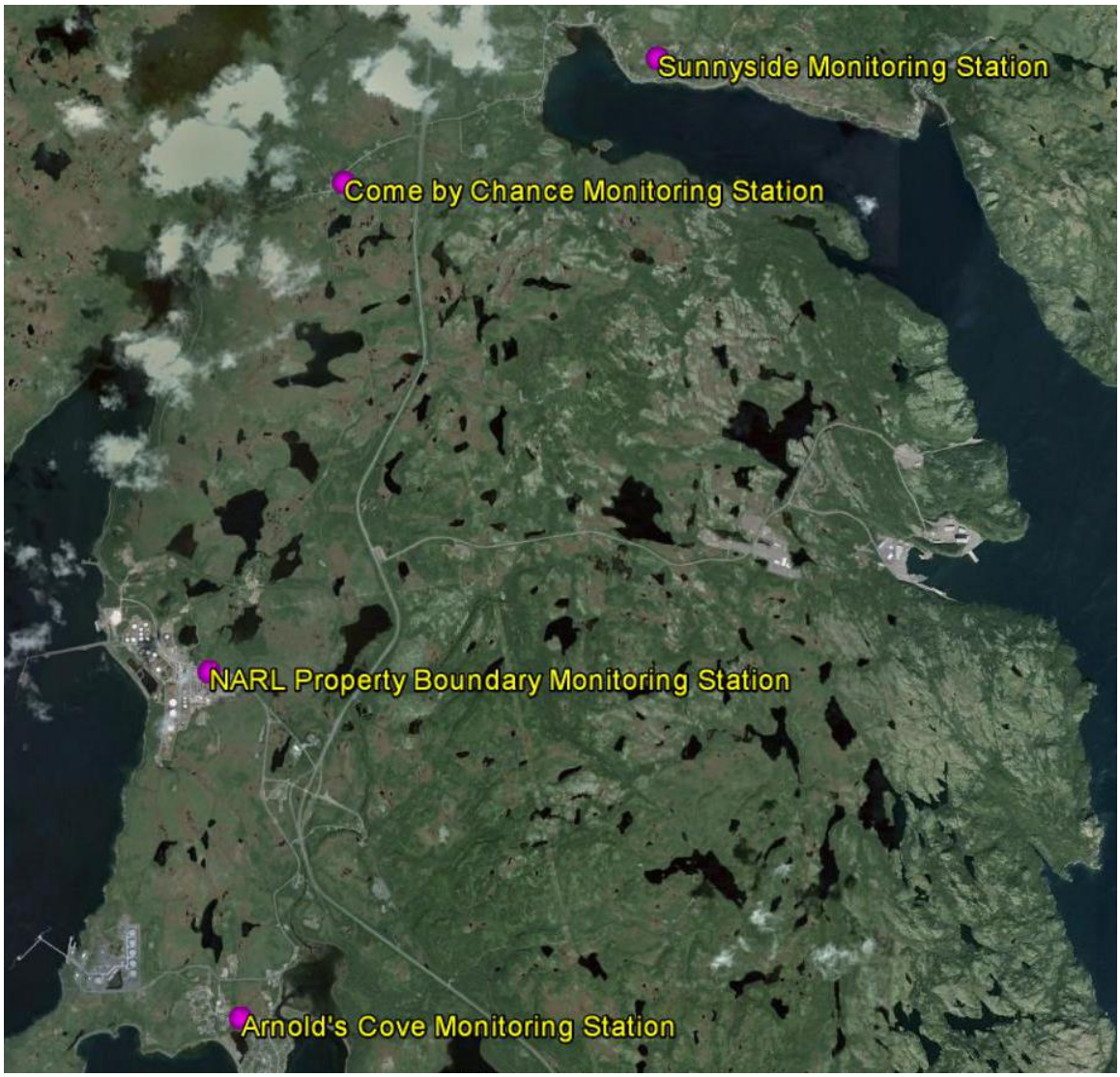
Rolling annual average of daily concentrations

4.2 North Atlantic Refining Limited

North Atlantic Refining Limited (NARL) operated monitoring stations at four locations in 2015. These stations are installed to monitor the air quality near North Atlantic's refinery in Come-by-Chance and are located at Arnold's Cove, Come-by-Chance, Sunnyside and the NARL property boundary. The locations of these monitoring stations are identified in Figure 4.2.1.

In January 2013, NARL replaced the $PM_{2.5}$ monitors at all monitoring stations, switching from TEOM technology to BAM technology. The new BAM units meet the current standards set out in the Departmental Ambient Air Monitoring Guidelines.

FIGURE 4.2.1 - NARL AMBIENT MONITORING STATIONS



4.2.1 Arnold's Cove

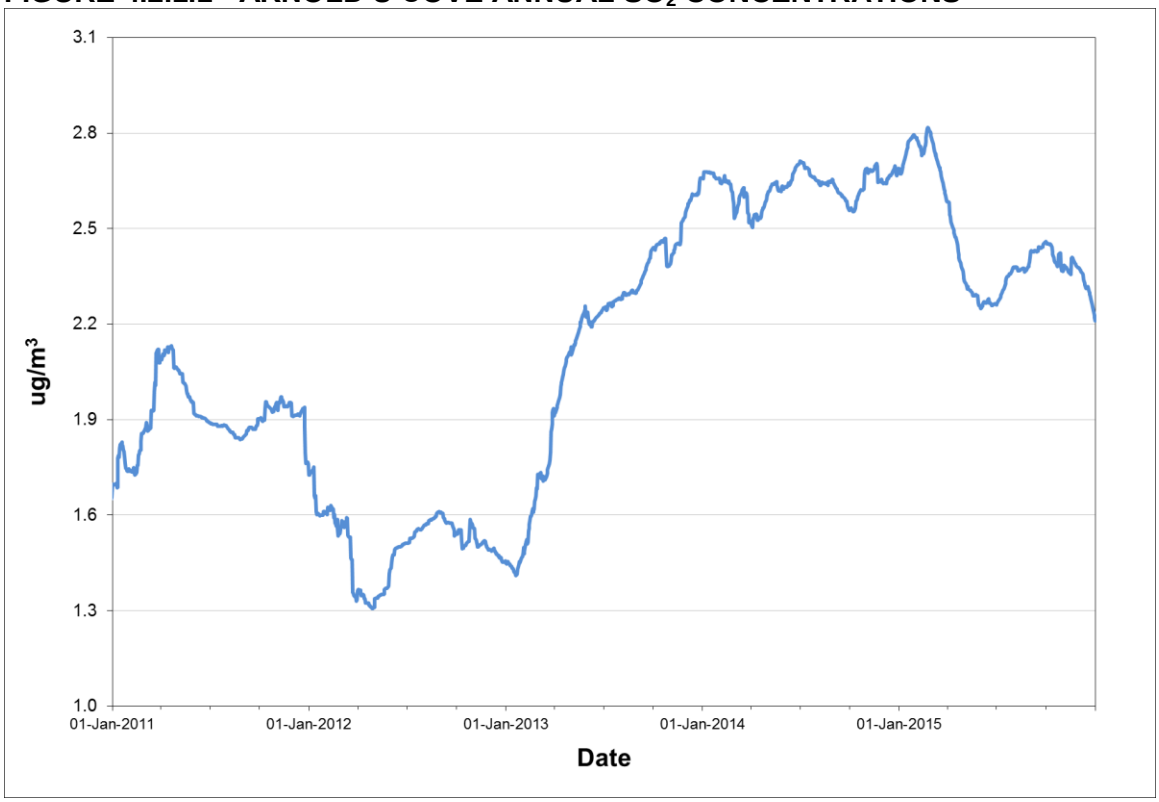
The Arnold's Cove station monitors the ambient levels of SO_2 and $PM_{2.5}$ on a continuous basis and is located near Tricentia Academy School. For both SO_2 and $PM_{2.5}$ the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.2.1.1 through 4.2.1.2 provide summary information on the level of air contaminants measured at Arnold's Cove, while Figures 4.2.1.1 through 4.2.1.2 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.2.1.1 - ARNOLD'S COVE SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	542	72.8%	2.8	135.9	59.5	10.1	0	0	0
	February	634	94.3%	3.6	36.9	19.2	6.4	0	0	0
	March	699	94.0%	4.1	37.2	17.7	6.7	0	0	0
	April	699	97.1%	4.0	43.4	30.7	13.2	0	0	0
	May	740	99.5%	3.2	40.6	30.0	8.9	0	0	0
	June	705	97.9%	2.5	44.7	22.6	8.0	0	0	0
	July	737	99.1%	0.8	8.5	4.5	1.7	0	0	0
	August	714	96.0%	1.2	20.1	14.5	4.9	0	0	0
	September	683	94.9%	1.2	6.2	4.3	1.9	0	0	0
	October	688	92.5%	3.0	87.0	62.2	18.1	0	0	0
	November	621	86.3%	2.3	12.3	6.8	3.7	0	0	0
	December	704	94.6%	3.6	20.4	12.2	6.8	0	0	0
Annual		8166	93.2%	2.7	135.9	62.2	18.1	0	0	0
2015	January	637	85.6%	4.1	17.9	10.1	6.2	0	0	0
	February	620	92.3%	3.8	25.1	18.4	8.4	0	0	0
	March	706	94.9%	1.6	56.6	16.2	7.3	0	0	0
	April	681	94.6%	1.2	22.6	13.1	4.2	0	0	0
	May	710	95.4%	2.2	22.8	16.5	5.6	0	0	0
	June	685	95.1%	2.6	11.5	7.4	4.0	0	0	0
	July	698	93.8%	2.1	13.9	8.9	4.0	0	0	0
	August	711	95.6%	1.4	22.6	7.8	3.7	0	0	0
	September	688	95.6%	2.0	42.1	31.2	8.5	0	0	0
	October	711	95.6%	1.9	38.7	31.4	13.8	0	0	0
	November	687	95.4%	2.4	75.0	56.3	19.5	0	0	0
	December	702	94.4%	1.6	24.4	14.6	4.2	0	0	0
Annual		8236	94.0%	2.2	75.0	56.3	19.5	0	0	0

Observations in ug/m^3

FIGURE 4.2.1.1 - ARNOLD'S COVE ANNUAL SO_2 CONCENTRATIONS



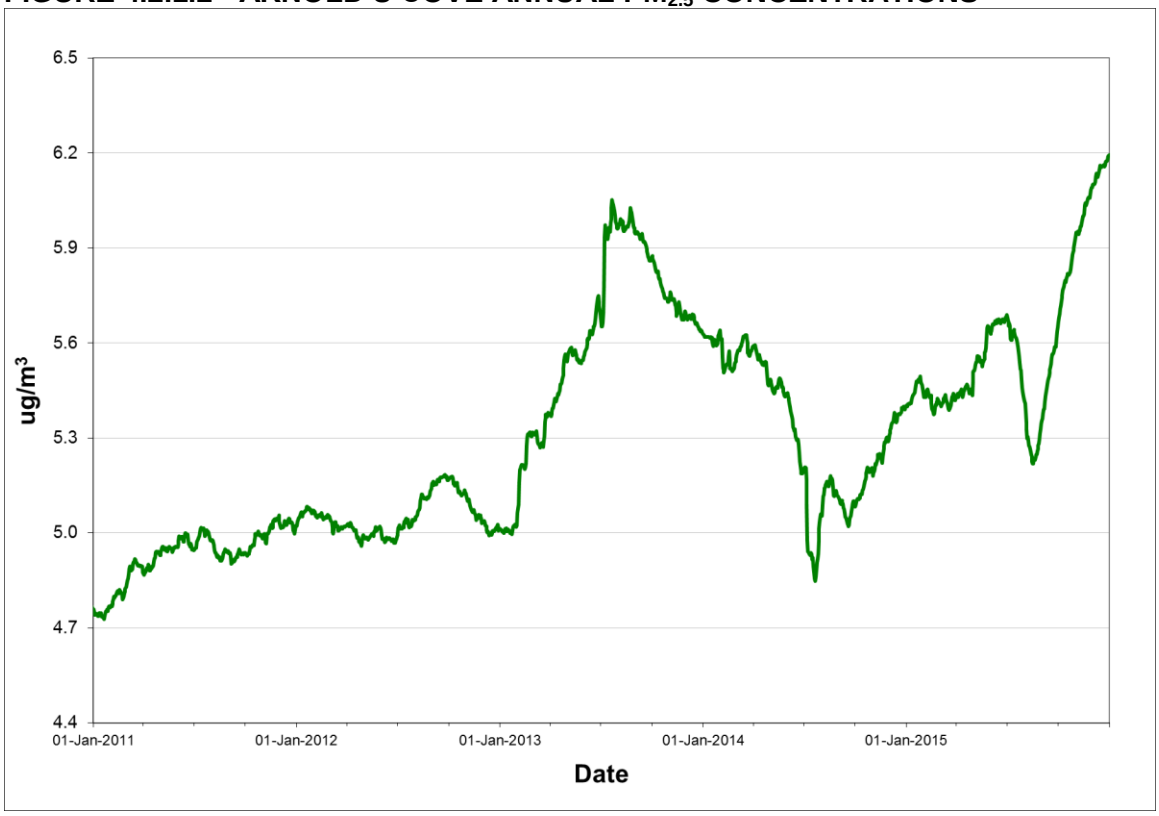
Rolling annual average of hourly concentrations

TABLE 4.2.1.2 - ARNOLD'S COVE $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	23	74.2%	5.7	10.4	0
	February	28	100.0%	6.8	14.0	0
	March	31	100.0%	6.3	9.8	0
	April	30	100.0%	5.8	9.4	0
	May	31	100.0%	4.4	8.0	0
	June	27	90.0%	2.6	6.2	0
	July	31	100.0%	7.4	16.4	0
	August	31	100.0%	6.6	16.1	0
	September	30	100.0%	4.1	8.4	0
	October	26	83.9%	4.2	7.2	0
	November	27	90.0%	5.0	9.5	0
	December	31	100.0%	5.5	9.3	0
Annual		346	94.8%	5.4	16.4	0
2015	January	28	90.3%	6.2	9.9	0
	February	23	82.1%	6.7	12.3	0
	March	29	93.5%	6.4	12.3	0
	April	30	100.0%	6.5	22.7	0
	May	31	100.0%	6.2	15.2	0
	June	30	100.0%	3.5	6.5	0
	July	26	83.9%	4.3	10.7	0
	August	31	100.0%	5.7	10.8	0
	September	30	100.0%	7.5	12.4	0
	October	31	100.0%	7.5	10.8	0
	November	30	100.0%	7.0	13.1	0
	December	31	100.0%	6.7	12.0	0
Annual		350	95.9%	6.2	22.7	0

Observations in ug/m^3

FIGURE 4.2.1.2 - ARNOLD'S COVE ANNUAL $PM_{2.5}$ CONCENTRATIONS



Rolling annual average of daily concentrations

4.2.2 Come by Chance

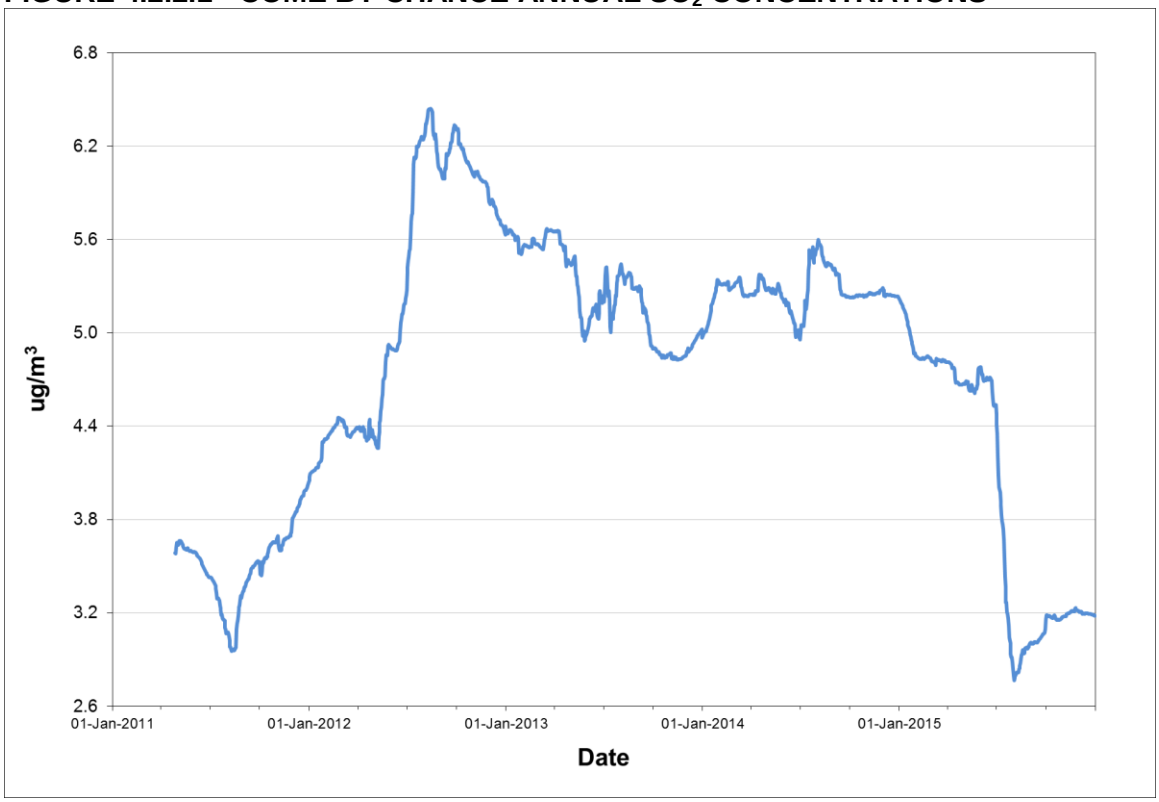
The Come by Chance station, located near the town office, monitors the ambient levels of SO_2 and $PM_{2.5}$ on a continuous basis. For both SO_2 and $PM_{2.5}$ the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.2.2.1 through 4.2.2.2 provide summary information on the level of air contaminants measured at Come by Chance, while Figures 4.2.2.1 through 4.2.2.2 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.2.2.1 - COME BY CHANCE SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	546	73.4%	7.6	120.5	72.2	16.6	0	0	0
	February	638	94.9%	3.2	54.7	22.5	7.7	0	0	0
	March	718	96.5%	3.6	38.3	21.5	6.5	0	0	0
	April	709	98.5%	4.4	64.4	53.0	25.3	0	0	0
	May	736	98.9%	4.0	45.7	26.6	13.0	0	0	0
	June	713	99.0%	6.2	113.7	87.2	30.2	0	0	0
	July	735	98.8%	21.3	173.7	153.0	58.8	0	0	0
	August	714	96.0%	2.9	128.3	91.2	21.1	0	0	0
	September	683	94.9%	1.7	37.2	13.3	4.7	0	0	0
	October	706	94.9%	1.9	33.3	20.4	6.4	0	0	0
	November	705	97.9%	2.7	20.0	11.1	5.3	0	0	0
	December	717	96.4%	3.1	28.0	20.0	6.7	0	0	0
Annual		8320	95.0%	5.2	173.7	153.0	58.8	0	0	0
2015	January	737	99.1%	2.6	9.7	5.7	4.0	0	0	0
	February	665	99.0%	3.0	10.0	6.7	5.0	0	0	0
	March	736	98.9%	3.4	90.9	57.1	18.3	0	0	0
	April	712	98.9%	2.7	14.2	7.7	5.3	0	0	0
	May	738	99.2%	5.2	77.5	56.5	26.8	0	0	0
	June	712	98.9%	2.5	38.1	28.7	9.6	0	0	0
	July	718	96.5%	2.3	50.0	31.9	9.6	0	0	0
	August	726	97.6%	4.8	84.9	37.3	18.4	0	0	0
	September	712	98.9%	3.7	109.3	64.1	24.3	0	0	0
	October	605	81.3%	1.8	28.0	19.3	10.4	0	0	0
	November	677	94.0%	3.1	33.0	19.0	8.2	0	0	0
	December	737	99.1%	2.7	6.7	4.6	3.8	0	0	0
Annual		8475	96.7%	3.2	109.3	64.1	26.8	0	0	0

Observations in ug/m^3

FIGURE 4.2.2.1 - COME BY CHANCE ANNUAL SO_2 CONCENTRATIONS



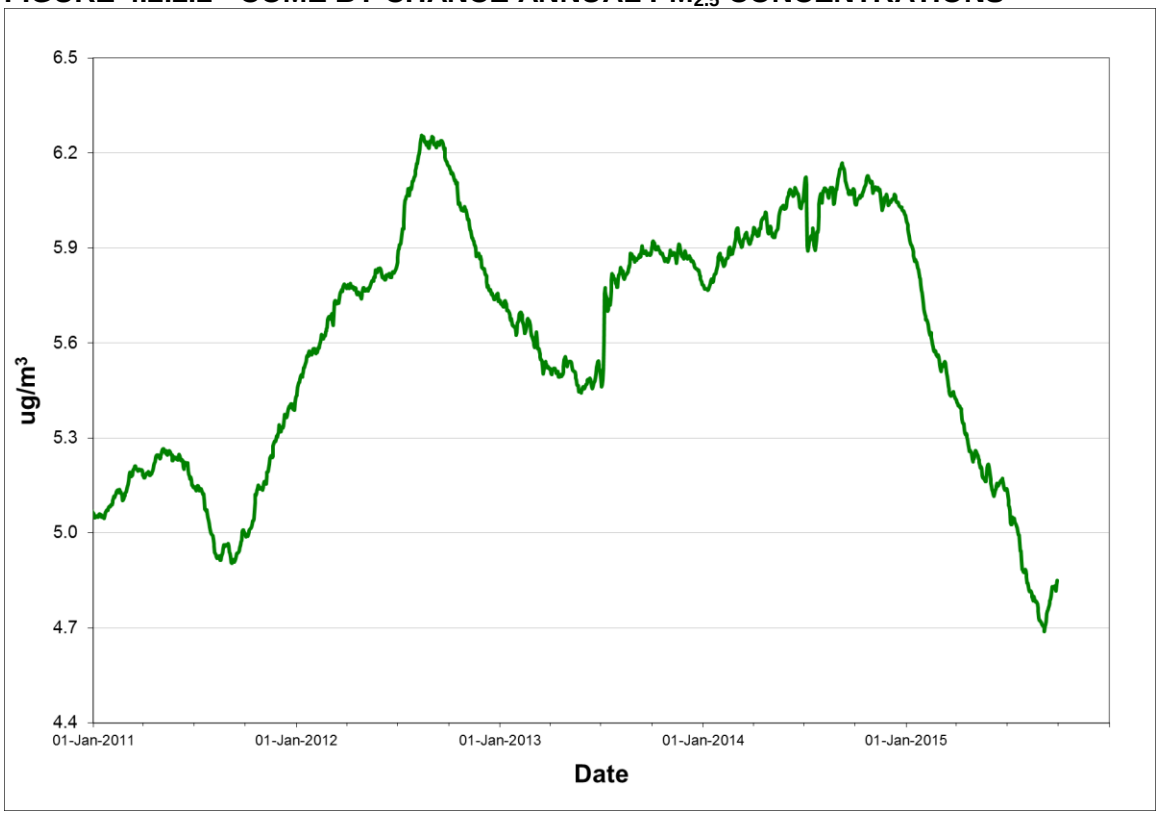
Rolling annual average of hourly concentrations

TABLE 4.2.2.2 - COME BY CHANCE $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	23	74.2%	6.2	9.9	0
	February	28	100.0%	6.3	11.5	0
	March	31	100.0%	5.6	8.5	0
	April	30	100.0%	6.1	11.3	0
	May	31	100.0%	5.5	11.2	0
	June	30	100.0%	5.4	9.6	0
	July	31	100.0%	11.4	20.5	0
	August	31	100.0%	8.0	15.0	0
	September	30	100.0%	5.3	9.6	0
	October	24	77.4%	4.4	7.6	0
	November	30	100.0%	4.1	7.5	0
	December	31	100.0%	3.2	6.4	0
Annual		350	95.9%	6.0	20.5	0
2015	January	31	100.0%	3.0	6.2	0
	February	24	85.7%	3.9	9.0	0
	March	31	100.0%	4.1	11.8	0
	April	30	100.0%	3.8	8.0	0
	May	31	100.0%	5.0	11.5	0
	June	26	86.7%	4.9	9.8	0
	July	31	100.0%	8.4	15.8	0
	August	31	100.0%	6.2	13.6	0
	September	30	100.0%	7.1	13.8	0
	October	31	100.0%	6.5	11.1	0
	November	30	100.0%	6.3	11.4	0
	December	31	100.0%	5.4	11.1	0
Annual		357	97.8%	5.4	15.8	0

Observations in ug/m^3

FIGURE 4.2.2.2 - COME BY CHANCE ANNUAL $PM_{2.5}$ CONCENTRATIONS



Rolling annual average of daily concentrations

4.2.3 Sunnyside

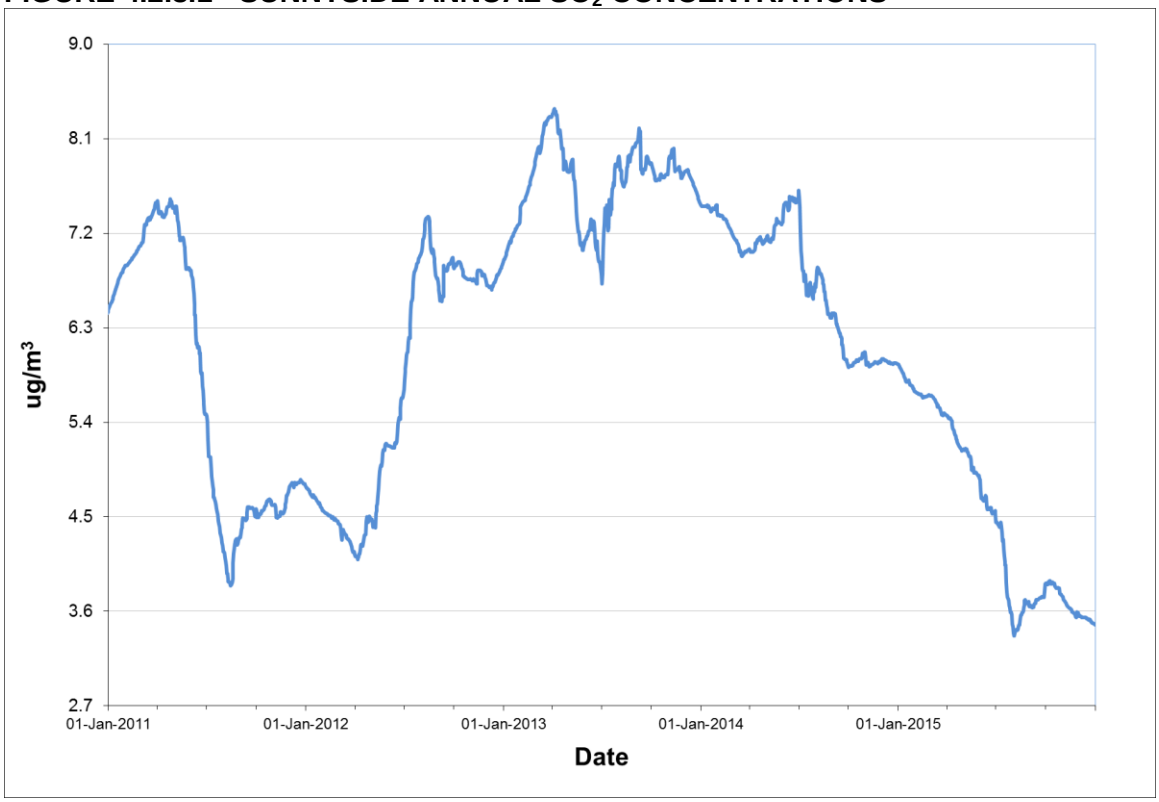
The Sunnyside station monitors the ambient levels of SO_2 and $PM_{2.5}$ on a continuous basis. For SO_2, the ambient air criteria were not exceeded on any occasion in 2015, however the 24-hour $PM_{2.5}$ standard was exceeded on thirteen occasions in 2015, specifically twice in January, eight times in February, twice in April and once in November. Given there was no corresponding increase in ambient SO_2 levels during the time of the $PM_{2.5}$ exceedances, and given the time of year of the exceedances, it is assumed that local influences were the primary contributor to the elevated $PM_{2.5}$ levels. Tables 4.2.3.1 through 4.2.3.3 provide summary information on the level of air contaminants measured at Sunnyside, while Figures 4.2.3.1 through 4.2.3.3 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.2.3.1 - SUNNYSIDE SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	453	60.9%	5.5	97.9	45.6	12.0	0	0	0
	February	616	91.7%	3.9	44.7	31.9	7.6	0	0	0
	March	678	91.1%	5.1	77.4	33.8	12.3	0	0	0
	April	684	95.0%	6.1	90.3	49.5	15.7	0	0	0
	May	719	96.6%	6.9	88.7	65.3	31.5	0	0	0
	June	683	94.9%	8.9	181.3	148.8	43.2	0	0	0
	July	708	95.2%	16.4	179.5	148.0	59.0	0	0	0
	August	708	95.2%	5.0	136.6	86.1	34.1	0	0	0
	September	677	94.0%	1.9	46.9	18.6	6.8	0	0	0
	October	701	94.2%	4.0	179.7	65.1	17.9	0	0	0
	November	707	98.2%	4.0	61.2	28.6	9.9	0	0	0
	December	706	94.9%	3.2	44.2	28.2	11.8	0	0	0
Annual		8040	91.8%	6.0	181.3	148.8	59.0	0	0	0
2015	January	707	95.0%	2.7	36.5	21.4	10.9	0	0	0
	February	626	93.2%	3.4	38.8	20.1	8.1	0	0	0
	March	677	91.0%	2.7	82.6	51.9	10.9	0	0	0
	April	658	91.4%	1.9	36.8	18.0	5.4	0	0	0
	May	626	84.1%	3.7	87.2	54.4	12.2	0	0	0
	June	511	71.0%	5.0	77.7	35.5	14.9	0	0	0
	July	537	72.2%	4.8	79.8	47.1	17.9	0	0	0
	August	711	95.6%	7.0	97.1	79.3	27.4	0	0	0
	September	644	89.4%	4.2	136.5	71.9	25.0	0	0	0
	October	710	95.4%	2.8	62.4	25.9	6.9	0	0	0
	November	668	92.8%	2.1	104.3	59.9	10.0	0	0	0
	December	679	91.3%	1.9	38.1	28.6	5.0	0	0	0
Annual		7754	88.5%	3.5	136.5	79.3	27.4	0	0	0

Observations in ug/m^3

FIGURE 4.2.3.1 - SUNNYSIDE ANNUAL SO_2 CONCENTRATIONS



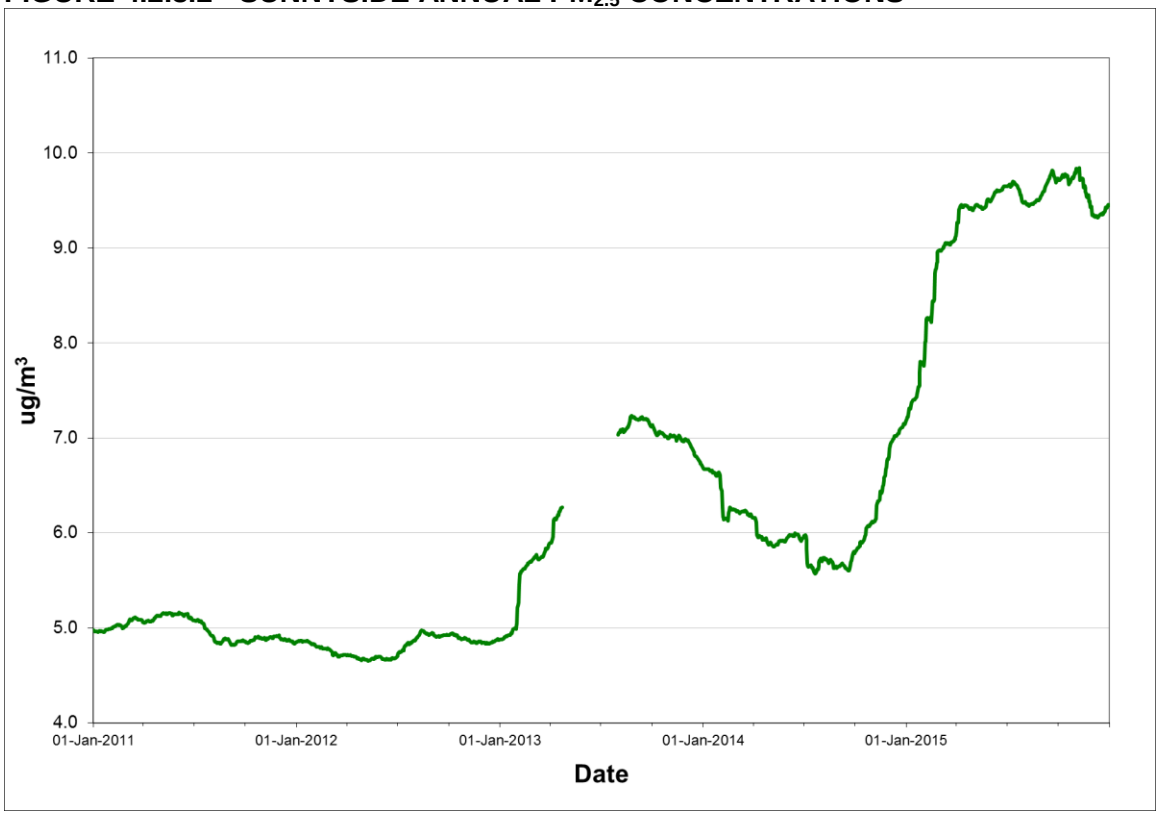
Rolling annual average of hourly concentrations

TABLE 4.2.3.2 - SUNNYSIDE $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	22	71.0%	5.5	10.5	0
	February	28	100.0%	7.0	33.2	1
	March	26	83.9%	5.1	8.5	0
	April	30	100.0%	6.2	13.0	0
	May	31	100.0%	5.3	10.8	0
	June	25	83.3%	5.4	8.6	0
	July	31	100.0%	9.8	18.5	0
	August	31	100.0%	6.9	14.6	0
	September	30	100.0%	6.7	18.6	0
	October	28	90.3%	7.4	25.8	1
	November	27	90.0%	12.6	54.0	4
	December	31	100.0%	7.7	33.7	1
Annual		340	93.2%	7.2	54.0	7
2015	January	31	100.0%	12.7	53.0	2
	February	28	100.0%	22.0	102.0	8
	March	29	93.5%	7.3	19.0	0
	April	30	100.0%	9.3	53.7	2
	May	31	100.0%	6.4	14.7	0
	June	14	46.7%	6.1	8.3	0
	July	23	74.2%	7.3	15.1	0
	August	31	100.0%	7.8	12.6	0
	September	27	90.0%	8.7	16.8	0
	October	29	93.5%	8.3	19.5	0
	November	28	93.3%	8.0	25.8	1
	December	25	80.6%	7.6	16.0	0
Annual		326	89.3%	9.4	102.0	13

Observations in ug/m^3

FIGURE 4.2.3.2 - SUNNYSIDE ANNUAL $PM_{2.5}$ CONCENTRATIONS



Rolling annual average of daily concentrations

4.2.4 NARL Property Boundary

The NARL Property Boundary station monitors the ambient levels of SO_2 and $PM_{2.5}$. Given its proximity to the process area of NARL, this station routinely records ambient levels of SO_2 and $PM_{2.5}$ in excess of the standards. In 2015, the 1-hour SO_2 standard was exceeded six times, the 3-hour standard exceeded thirty-four times and the 24-hour standard exceeded fifteen times.

The TEOM $PM_{2.5}$ monitor was replaced with a BAM $PM_{2.5}$ monitor in January 2013. The change-out resulted in more stable and reliable $PM_{2.5}$ measurements, however in 2015 operational issues in February, March and August limited the up-time of the monitor. In total there were one hundred and fourteen exceedances of the 24-hour ambient standard recorded. The annual $PM_{2.5}$ standard was also exceeded in 2015.

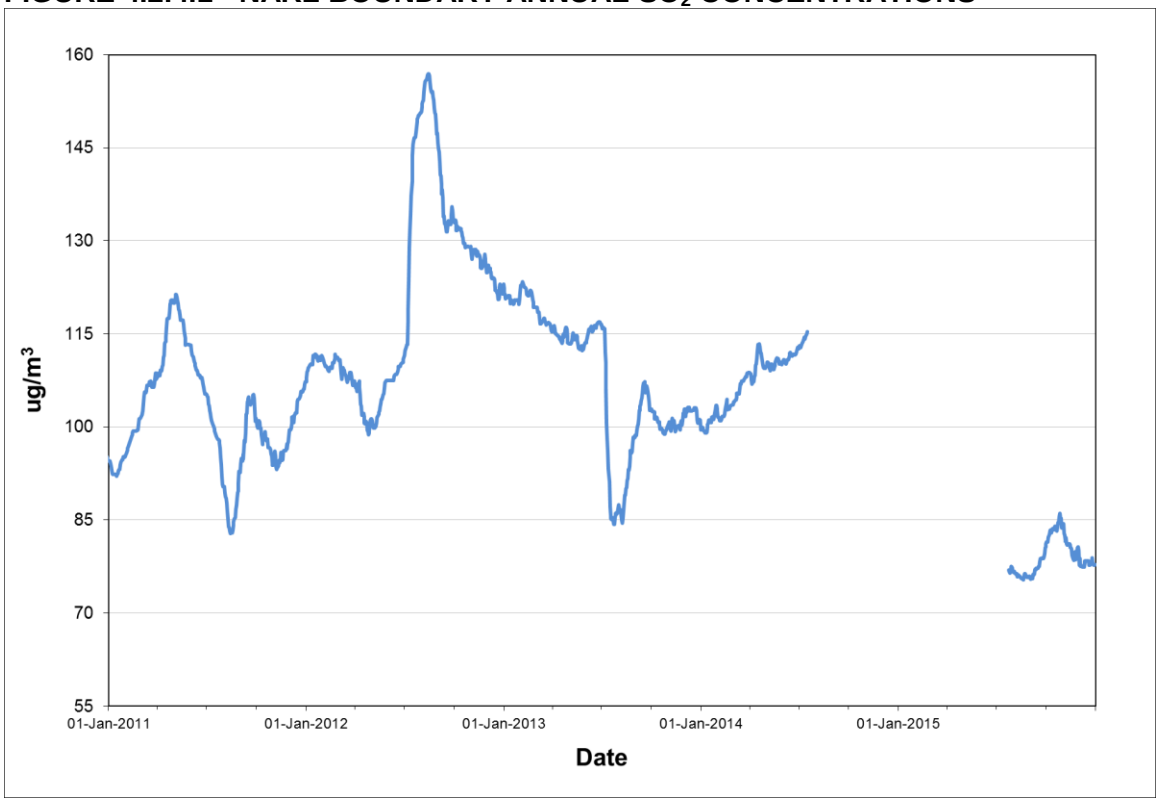
Tables 4.2.4.1 through 4.2.4.2 provide summary information on the level of air contaminants measured at NARL Property Boundary, while Figures 4.2.4.1 and 4.2.4.2 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.2.4.1 - NARL BOUNDARY SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	666	89.5%	109.4	881.7	720.2	407.3	0	2	3
	February	642	95.5%	62.0	723.7	608.0	284.8	0	2	0
	March	689	92.6%	85.2	999.7	861.0	370.9	2	3	1
	April	691	96.0%	115.3	881.3	756.0	608.2	0	13	5
	May	346	46.5%	92.4	731.7	627.3	324.1	0	2	1
	June	0	0.0%							
	July	0	0.0%							
	August	0	0.0%							
	September	608	84.4%	23.6	471.1	271.5	122.2	0	0	0
	October	704	94.6%	78.7	894.2	859.9	597.7	0	9	2
	November	693	96.3%	110.6	888.9	823.9	517.2	0	14	4
	December	714	96.0%	84.3	1091.0	872.8	796.3	7	14	5
Annual		5753	65.7%	85.1	1091.0	872.8	796.3	9	59	21
2015	January	666	89.5%	114.4	1121.2	900.9	474.4	3	16	3
	February	429	63.8%	77.9	972.8	740.5	359.1	1	2	3
	March	314	42.2%	67.0	874.2	776.3	358.4	0	2	1
	April	533	74.0%	63.3	588.0	449.3	293.2	0	0	0
	May	708	95.2%	77.9	576.1	494.0	202.5	0	0	0
	June	690	95.8%	84.3	672.7	543.2	386.3	0	0	1
	July	691	92.9%	50.7	686.4	480.7	361.5	0	0	2
	August	710	95.4%	66.3	725.3	438.7	270.5	0	0	0
	September	687	95.4%	81.7	851.0	695.2	330.3	0	1	1
	October	585	78.6%	120.2	1034.0	709.5	313.5	2	6	1
	November	651	90.4%	67.6	734.5	704.1	582.8	0	5	1
	December	706	94.9%	61.3	775.2	672.0	398.4	0	2	2
Annual		7370	84.1%	77.8	1121.2	900.9	582.8	6	34	15

Observations in ug/m^3

FIGURE 4.2.4.1 - NARL BOUNDARY ANNUAL SO_2 CONCENTRATIONS



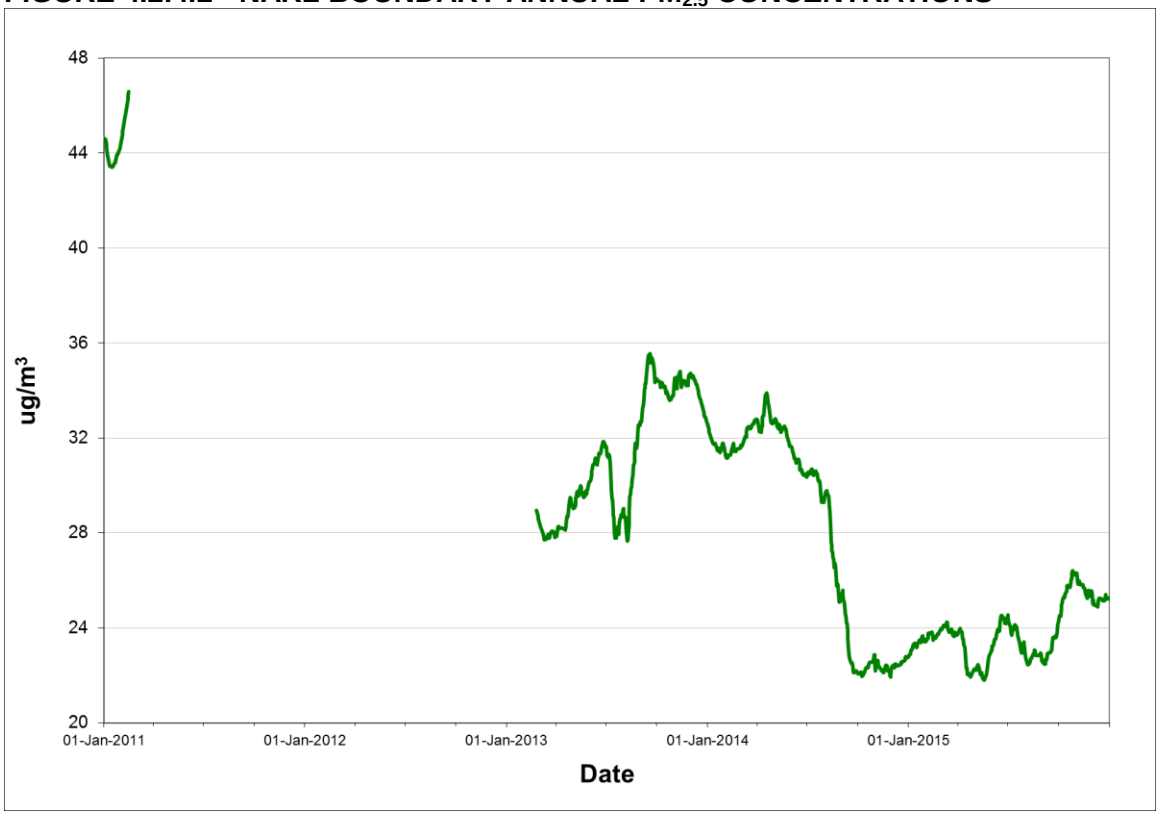
Rolling annual average of hourly concentrations

TABLE 4.2.4.2 - NARL BOUNDARY $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	31	100.0%	20.1	73.5	11
	February	28	100.0%	15.6	62.3	7
	March	26	83.9%	25.4	100.8	9
	April	30	100.0%	36.4	151.5	12
	May	30	96.8%	19.2	78.7	7
	June	28	93.3%	14.9	49.3	7
	July	26	83.9%	39.8	85.1	20
	August	24	77.4%	28.6	104.5	9
	September	28	93.3%	11.5	53.9	3
	October	31	100.0%	18.2	96.3	7
	November	30	100.0%	25.0	78.8	10
	December	31	100.0%	20.8	139.6	7
Annual		343	94.0%	22.8	151.5	109
2015	January	29	93.5%	27.3	82.5	13
	February	15	53.6%	20.5	93.9	3
	March	10	32.3%	21.7	70.6	2
	April	22	73.3%	20.8	75.4	7
	May	25	80.6%	28.3	70.6	13
	June	25	83.3%	31.2	115.1	13
	July	31	100.0%	23.6	131.6	9
	August	15	48.4%	21.4	48.2	7
	September	29	96.7%	28.5	110.0	12
	October	31	100.0%	37.3	97.2	20
	November	30	100.0%	16.9	80.0	8
	December	31	100.0%	19.3	78.5	7
Annual		293	80.3%	25.3	131.6	114

Observations in ug/m^3

FIGURE 4.2.4.2 - NARL BOUNDARY ANNUAL $PM_{2.5}$ CONCENTRATIONS



Rolling annual average of hourly concentrations

4.3 Iron Ore Company of Canada

The Iron Ore Company of Canada (IOCC) operated five monitoring stations in Labrador City in 2015, and they are located on Smokey Mountain Road, at the Town Depot / Tamarack Drive, Indian Point, Bartlett Drive, and Hudson Drive. The locations of these monitoring stations are identified in Figure 4.3.1.

In October 2015 IOCC undertook another minor revamp of their monitoring network. Frist, the Smokey Mountain Road station was moved closer to the ski resort and is designated as Smokey Mountain II. Second, the Town Depot / Tamarack Drive station was moved to the new Hudson Drive location. Finally the TPM monitors at both the Bartlett Drive and old Hudson Drive location were decommissioned.

The new configuration began recording data in late December 2015 and as such, the limited data for 2015 at the new sites will be reported in the 2016 annual report.

FIGURE 4.3.1 - IOCC AMBIENT MONITORING STATIONS

4.3.1 Indian Point

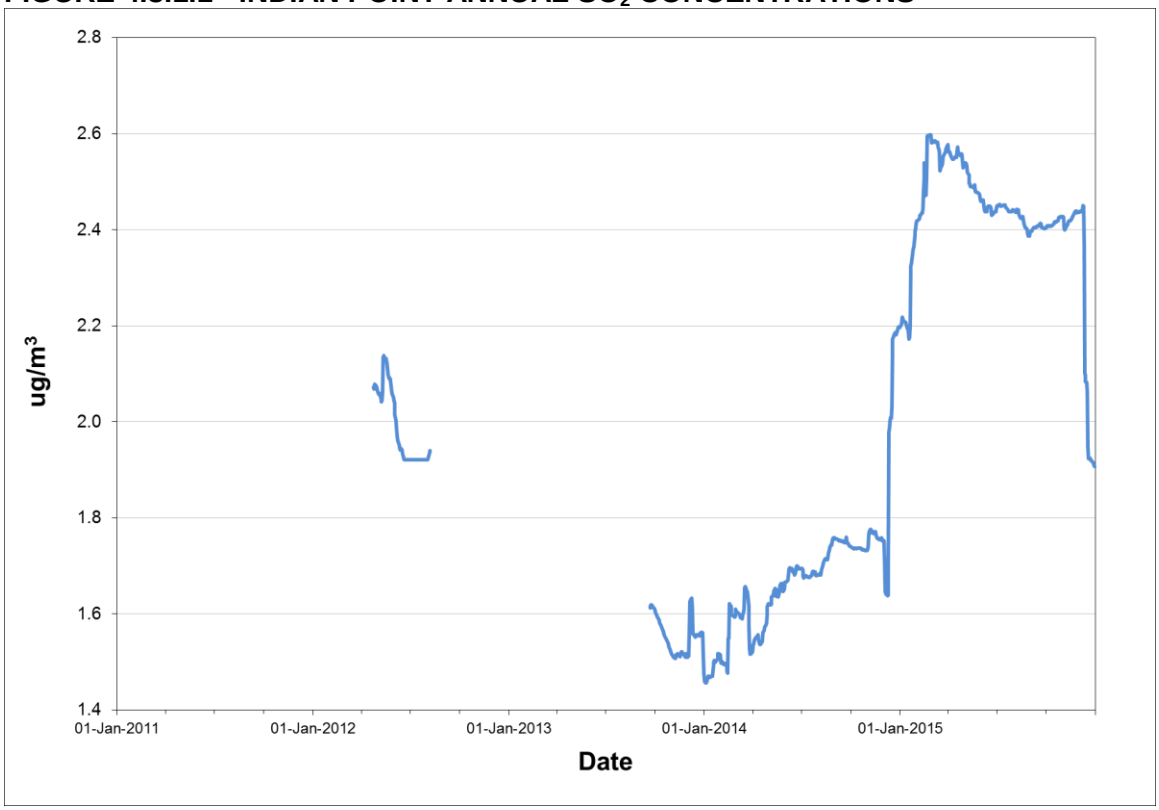
The Indian Point station monitors the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$ and TPM on a continuous basis. For all parameters the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.3.1.1 through 4.3.1.4 provide summary information on the level of air contaminants measured at Indian Point while Figures 4.3.1.1 through 4.3.1.4 present the graphical representation of the annual trends.

TABLE 4.3.1.1 - INDIAN POINT SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	709	95.3%	1.8	50.2	16.9	5.9	0	0	0
	February	641	95.4%	3.6	94.9	60.9	27.9	0	0	0
	March	703	94.5%	2.0	86.9	72.5	16.1	0	0	0
	April	711	98.8%	2.4	34.0	23.4	7.7	0	0	0
	May	740	99.5%	1.9	60.9	35.7	7.3	0	0	0
	June	692	96.1%	1.3	15.6	14.1	5.0	0	0	0
	July	730	98.1%	1.0	9.5	6.1	2.3	0	0	0
	August	723	97.2%	1.6	39.3	16.4	3.9	0	0	0
	September	713	99.0%	0.7	25.3	14.0	4.1	0	0	0
	October	735	98.8%	0.6	9.0	3.6	1.0	0	0	0
	November	718	99.7%	1.7	37.0	26.3	10.3	0	0	0
	December	647	87.0%	8.6	196.7	188.5	94.2	0	0	0
Annual		8462	96.6%	2.2	196.7	188.5	94.2	0	0	0
2015	January	733	98.5%	4.3	178.6	127.9	41.9	0	0	0
	February	660	98.2%	5.7	132.4	98.9	36.0	0	0	0
	March	741	99.6%	2.0	51.5	34.2	7.5	0	0	0
	April	575	79.9%	1.8	25.3	17.8	5.5	0	0	0
	May	742	99.7%	1.0	16.2	9.8	3.8	0	0	0
	June	683	94.9%	1.2	27.8	18.0	4.0	0	0	0
	July	744	100.0%	0.9	15.5	8.1	2.6	0	0	0
	August	744	100.0%	1.1	25.7	16.9	4.0	0	0	0
	September	720	100.0%	0.8	9.4	3.6	1.3	0	0	0
	October	740	99.5%	0.9	18.9	8.3	2.6	0	0	0
	November	506	70.3%	1.5	15.7	11.2	3.0	0	0	0
	December	742	99.7%	1.8	14.2	9.7	3.7	0	0	0
Annual		8330	95.1%	1.9	178.6	127.9	41.9	0	0	0

Observations in ug/m^3

FIGURE 4.3.1.1 - INDIAN POINT ANNUAL SO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

TABLE 4.3.1.2 - INDIAN POINT $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	31	100.0%	4.2	8.8	0
	February	28	100.0%	4.6	9.4	0
	March	31	100.0%	4.0	7.6	0
	April	30	100.0%	4.1	9.8	0
	May	31	100.0%	3.3	5.9	0
	June	29	96.7%	4.7	16.3	0
	July	31	100.0%	3.9	15.6	0
	August	30	96.8%	4.0	14.3	0
	September	30	100.0%	2.7	6.8	0
	October	30	96.8%	2.9	6.9	0
	November	30	100.0%	2.1	7.5	0
	December	26	83.9%	3.6	13.6	0
Annual		357	97.8%	3.7	16.3	0
2015	January	31	100.0%	2.8	4.3	0
	February	27	96.4%	2.6	4.1	0
	March	31	100.0%	2.4	3.8	0
	April	23	76.7%	4.1	7.5	0
	May	31	100.0%	3.7	8.1	0
	June	28	93.3%	3.3	9.4	0
	July	31	100.0%	5.4	17.6	0
	August	27	87.1%	4.7	10.1	0
	September	30	100.0%	3.5	7.4	0
	October	27	87.1%	2.2	7.0	0
	November	21	70.0%	2.1	4.6	0
	December	31	100.0%	2.5	5.1	0
Annual		338	92.6%	3.3	17.6	0

Observations in ug/m^3

FIGURE 4.3.1.2 - INDIAN POINT ANNUAL $PM_{2.5}$ CONCENTRATIONS

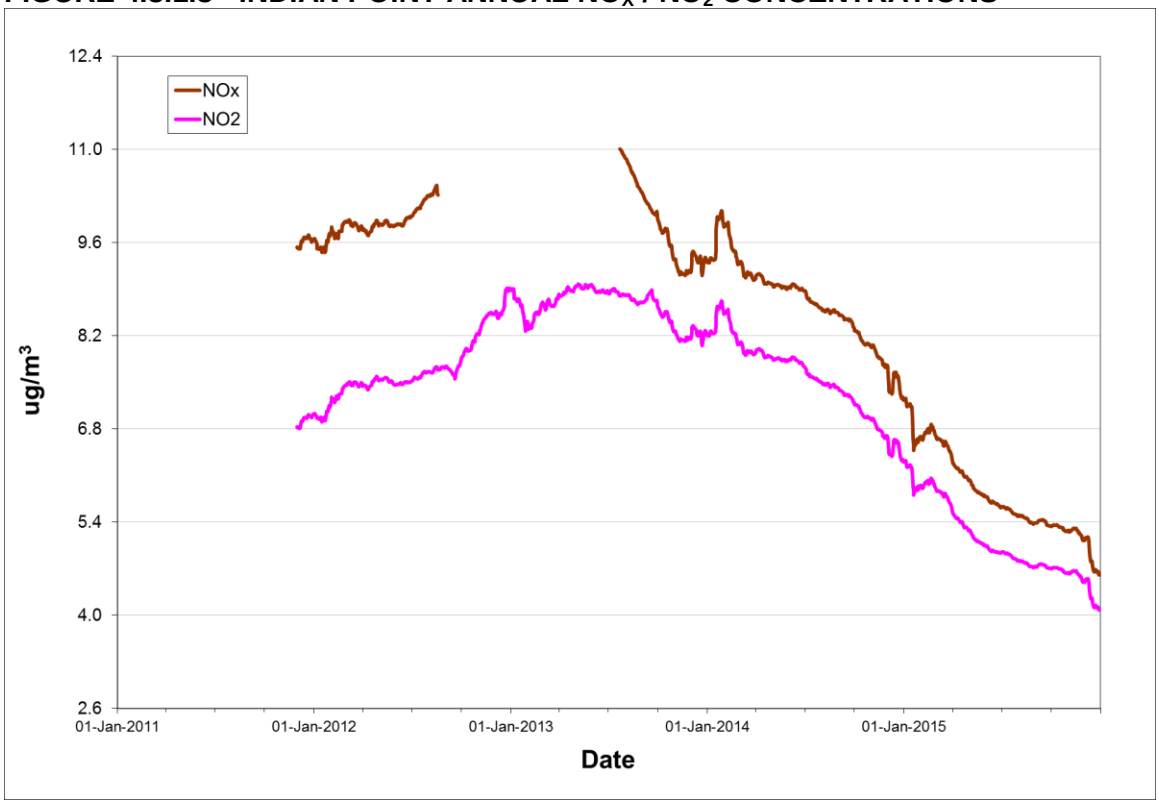
Rolling annual average of hourly concentrations

TABLE 4.3.1.3 - INDIAN POINT NO_X / NO_2 SUMMARY 2014 & 2015

						Maximums				Exceedances	
		# Valid	% Valid	Average		1-Hour		24-Hour		1-Hour	24-Hour
Year	Month	Hours	Hours	NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	739	99.3%	15.0	11.5	313.7	91.6	114.4	61.2	0	0
	February	656	97.6%	10.6	9.5	61.5	55.4	23.3	18.4	0	0
	March	732	98.4%	9.4	8.5	64.4	54.1	22.1	19.3	0	0
	April	718	99.7%	7.5	7.0	64.2	57.5	14.9	12.9	0	0
	May	739	99.3%	6.6	6.1	55.5	44.5	12.5	11.7	0	0
	June	693	96.3%	5.2	4.2	28.2	27.1	13.1	10.3	0	0
	July	734	98.7%	3.9	3.6	62.7	39.1	10.0	8.0	0	0
	August	724	97.3%	4.5	4.0	33.5	20.2	8.3	6.8	0	0
	September	713	99.0%	3.7	3.2	60.2	23.0	12.8	7.6	0	0
	October	735	98.8%	4.1	3.8	36.5	25.2	15.5	13.2	0	0
	November	718	99.7%	5.5	5.1	56.1	44.0	16.3	15.3	0	0
	December	647	87.0%	11.2	9.7	122.8	65.9	60.4	42.9	0	0
Annual		8548	97.6%	7.2	6.3	313.7	91.6	114.4	61.2	0	0
2015	January	734	98.7%	8.7	7.5	151.4	68.4	28.2	22.2	0	0
	February	659	98.1%	10.8	9.0	89.2	49.6	26.6	20.8	0	0
	March	739	99.3%	5.0	4.4	131.4	68.7	22.3	15.2	0	0
	April	575	79.9%	3.7	3.3	28.3	26.9	10.0	8.6	0	0
	May	742	99.7%	3.7	3.3	38.3	27.9	15.4	12.1	0	0
	June	684	95.0%	3.2	2.9	34.7	25.1	6.6	5.7	0	0
	July	744	100.0%	2.4	2.1	27.7	15.8	7.0	5.5	0	0
	August	743	99.9%	3.4	3.1	56.1	24.8	8.6	6.1	0	0
	September	720	100.0%	3.3	3.0	26.3	19.8	7.0	6.0	0	0
	October	740	99.5%	3.2	2.9	36.4	26.8	9.2	6.5	0	0
	November	510	70.8%	3.3	3.1	26.0	24.8	8.7	7.9	0	0
	December	744	100.0%	4.7	4.4	68.4	48.2	20.5	17.6	0	0
Annual		8334	95.1%	4.6	4.1	151.4	68.7	28.2	22.2	0	0

Observations in ug/m^3

FIGURE 4.3.1.3 - INDIAN POINT ANNUAL NO_X / NO_2 CONCENTRATIONS



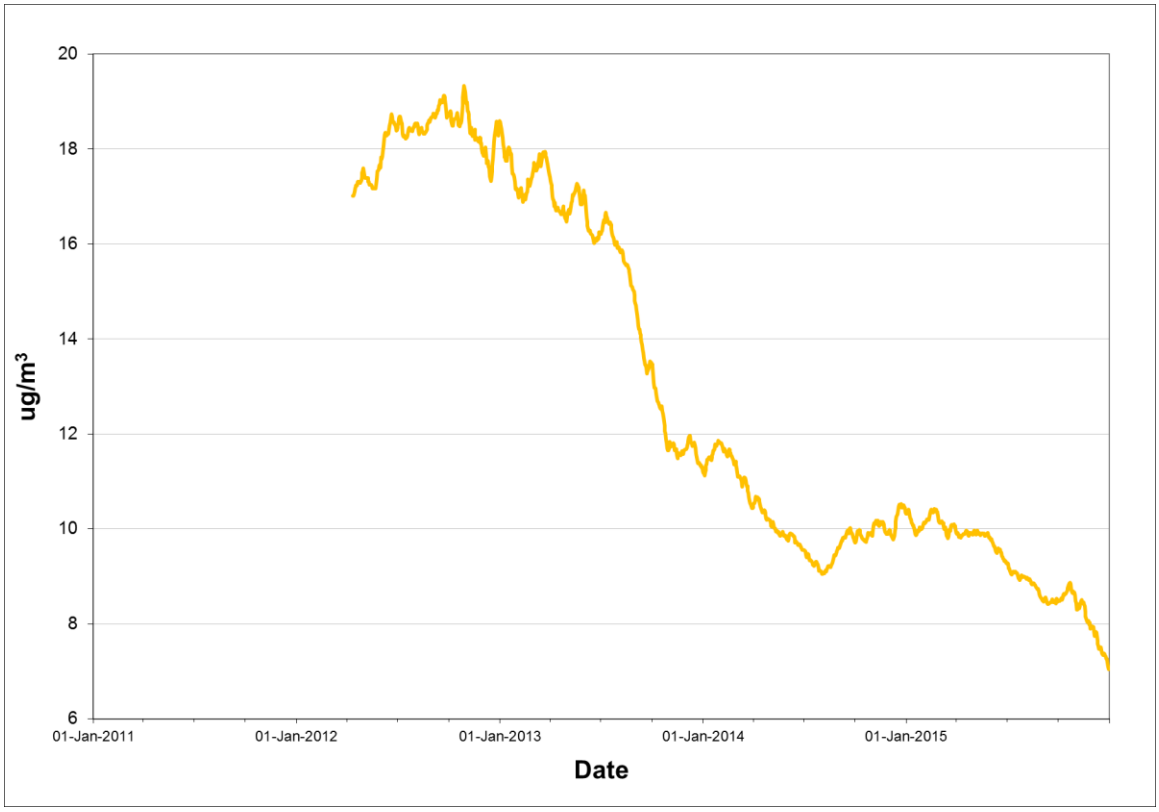
Rolling annual average of hourly concentrations

TABLE 4.3.1.4 - INDIAN POINT TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 µg/m^3)
2014	January	30	96.8%	8.7	61.5	0
	February	26	92.9%	9.9	135.0	1
	March	28	90.3%	7.2	49.1	0
	April	30	100.0%	11.5	86.0	0
	May	31	100.0%	16.2	43.9	0
	June	29	96.7%	22.4	62.3	0
	July	30	96.8%	16.8	94.7	0
	August	30	96.8%	18.2	52.6	0
	September	29	96.7%	6.7	41.8	0
	October	28	90.3%	3.8	42.1	0
	November	26	86.7%	5.5	177.3	2
	December	26	83.9%	11.1	130.8	1
Annual		343	94.0%	10.3	177.3	4
2015	January	30	96.8%	6.7	88.5	0
	February	26	92.9%	10.7	88.9	0
	March	30	96.8%	5.9	66.3	0
	April	21	70.0%	10.8	27.3	0
	May	31	100.0%	14.5	50.7	0
	June	27	90.0%	12.2	62.5	0
	July	28	90.3%	12.3	41.2	0
	August	25	80.6%	10.7	29.6	0
	September	29	96.7%	6.0	37.8	0
	October	26	83.9%	4.4	33.0	0
	November	14	46.7%	0.6	42.1	0
	December	21	67.7%	2.3	66.7	0
Annual		308	84.4%	7.1	88.9	0

Observations in ug/m^3

FIGURE 4.3.1.4 - INDIAN POINT ANNUAL TPM CONCENTRATIONS



Rolling annual average of hourly concentrations

4.3.2 Tamarack Drive / Town Depot

The Tamarack Drive / Town Depot station monitored the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$ and TPM on a continuous basis. For SO_2, NO_x / NO_2 and $PM_{2.5}$ the ambient air criteria were not exceeded on any occasion in 2015. The 24-hour TPM standard however was exceeded on eight occasions, specifically once in January, three times in February, twice in march, and once in both April and June. Tables 4.3.2.1 through 4.3.2.4 provide summary information on the level of air contaminants measured at Tamarack Drive / Town Depot. Figures 4.3.2.1 through 4.3.2.4 provide a graphic presentation of the annual trend for the various pollutants.

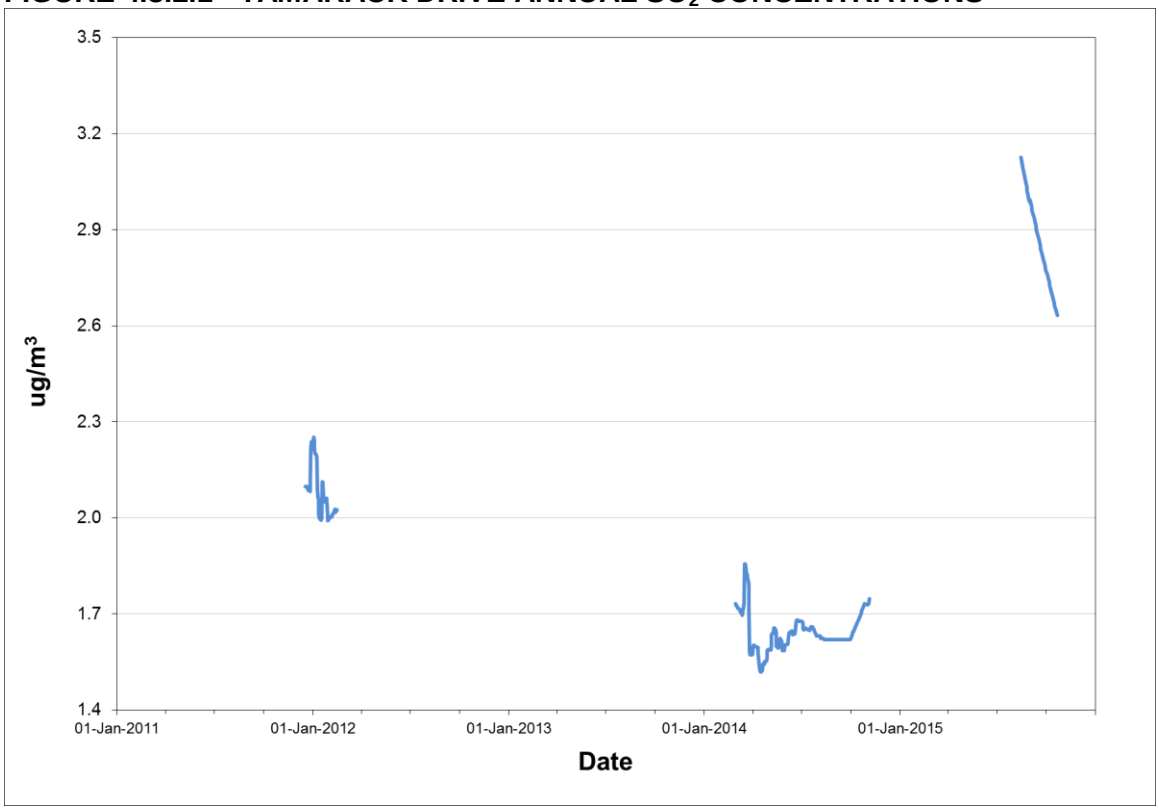
This station was moved in October 2015 to Hudson Drive and began collecting data in December. The ozone monitor at the old Smokey Mountain location was also moved to this new location. This new station now reports the AQHI for Labrador City.

TABLE 4.3.2.1 - TAMARACK DRIVE SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	741	99.6%	1.2	68.0	30.2	5.3	0	0	0
	February	672	100.0%	3.8	196.5	112.9	47.0	0	0	0
	March	732	98.4%	2.0	137.4	128.5	34.9	0	0	0
	April	715	99.3%	1.5	54.4	29.5	8.5	0	0	0
	May	739	99.3%	1.9	58.9	39.0	10.2	0	0	0
	June	694	96.4%	1.5	22.8	15.3	6.2	0	0	0
	July	676	90.9%	0.5	10.0	6.6	2.4	0	0	0
	August	152	20.4%	1.1	11.0	6.8	1.6	0	0	0
	September	0	0.0%							
	October	61	8.2%	0.3	4.7	1.7	0.2	0	0	0
	November	639	88.8%	0.8	14.4	10.1	2.6	0	0	0
	December	697	93.7%	11.0	315.1	277.3	135.8	0	0	0
Annual		6518	74.4%	2.7	315.1	277.3	135.8	0	0	0
2015	January	734	98.7%	5.0	193.4	169.2	80.6	0	0	0
	February	642	95.5%	8.4	213.0	167.2	62.0	0	0	0
	March	713	95.8%	1.3	58.6	45.7	7.5	0	0	0
	April	715	99.3%	1.0	32.4	25.6	5.0	0	0	0
	May	739	99.3%	0.8	42.4	20.5	4.2	0	0	0
	June	660	91.7%	0.7	49.6	26.6	4.4	0	0	0
	July	652	87.6%	0.5	14.1	7.0	1.8	0	0	0
	August	737	99.1%	0.9	46.4	20.9	4.5	0	0	0
	September	704	97.8%	0.6	7.0	3.9	1.3	0	0	0
	October	511	100.0%	0.5	10.5	6.7	1.6	0	0	0
	November									
	December									
Annual		6807	77.7%	2.0	213.0	169.2	80.6	0	0	0

Observations in ug/m^3

FIGURE 4.3.2.1 - TAMARACK DRIVE ANNUAL SO_2 CONCENTRATIONS



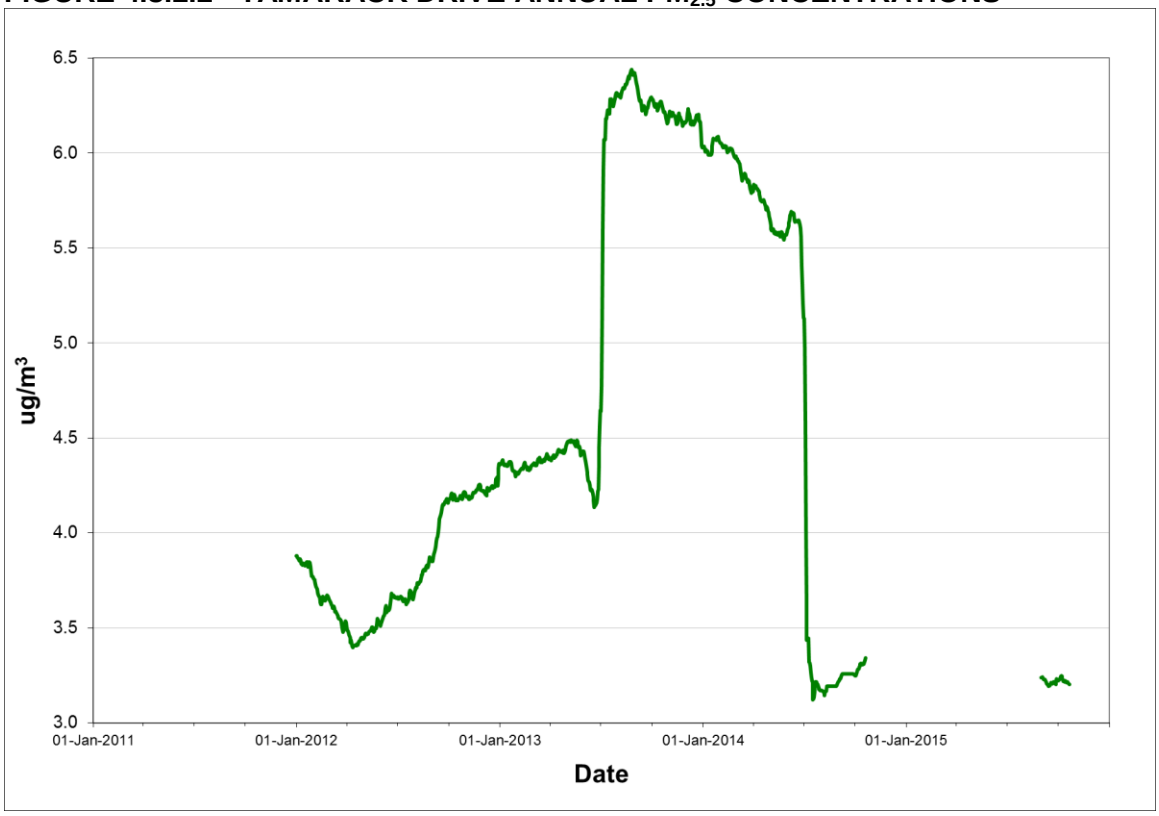
Rolling annual average of hourly concentrations

TABLE 4.3.2.2 - TAMARACK DRIVE $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	28	90.3%	3.8	15.1	0
	February	27	96.4%	3.8	9.0	0
	March	28	90.3%	2.8	7.3	0
	April	29	96.7%	3.3	11.3	0
	May	30	96.8%	3.3	6.8	0
	June	29	96.7%	4.2	11.4	0
	July	30	96.8%	3.1	15.4	0
	August	10	32.3%	3.9	10.8	0
	September	0	0.0%			
	October	2	6.5%	0.9	1.1	0
	November	25	83.3%	2.5	9.1	0
	December	31	100.0%	3.8	18.8	0
Annual		269	73.7%	3.4	18.8	0
2015	January	30	96.8%	2.8	15.0	0
	February	24	85.7%	3.2	8.5	0
	March	26	83.9%	3.0	6.5	0
	April	30	100.0%	3.2	9.0	0
	May	30	96.8%	2.7	8.3	0
	June	24	80.0%	2.3	8.4	0
	July	27	87.1%	3.6	12.5	0
	August	25	80.6%	5.5	12.3	0
	September	30	100.0%	3.1	8.1	0
	October	21	67.7%	2.9	6.1	0
	November					
	December					
Annual		267	73.2%	3.2	15.0	0

Observations in ug/m^3

FIGURE 4.3.2.2 - TAMARACK DRIVE ANNUAL $PM_{2.5}$ CONCENTRATIONS



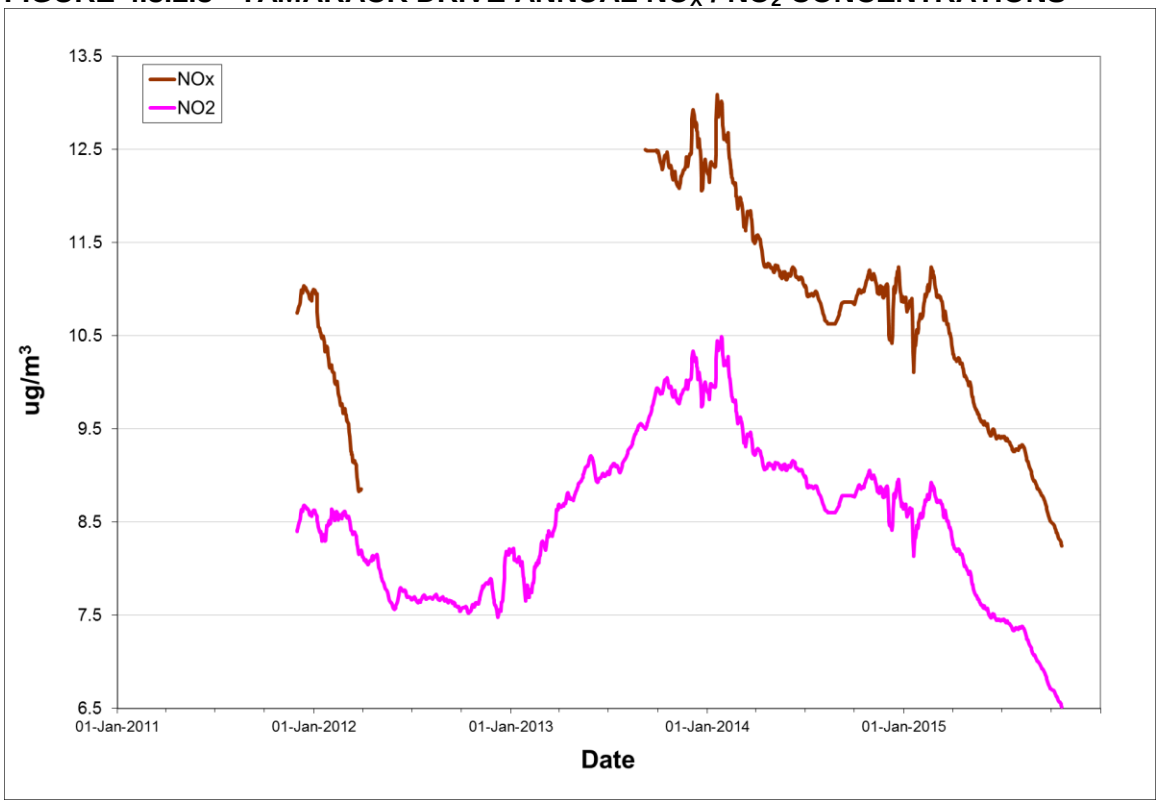
Rolling annual average of hourly concentrations

TABLE 4.3.2.3 - TAMARACK DRIVE NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	738	99.2%	16.1	12.0	194.7	86.9	109.6	60.7	0	0
	February	672	100.0%	15.6	12.4	126.6	87.9	49.2	33.0	0	0
	March	733	98.5%	13.0	10.0	142.1	74.3	35.2	25.2	0	0
	April	714	99.2%	7.9	7.0	61.5	53.5	14.5	13.1	0	0
	May	739	99.3%	8.8	7.4	66.1	47.6	20.6	18.0	0	0
	June	696	96.7%	5.9	4.8	57.5	33.4	17.6	11.9	0	0
	July	733	98.5%	5.3	4.1	61.3	44.3	11.7	9.5	0	0
	August	261	35.1%	5.1	4.2	27.5	22.7	8.6	7.2	0	0
	September	0	0.0%								
	October	61	8.2%	3.0	2.2	17.1	13.1	3.3	2.1	0	0
	November	663	92.1%	10.2	8.3	128.9	68.6	38.9	29.7	0	0
	December	700	94.1%	18.0	14.1	189.1	76.7	89.4	53.6	0	0
Annual		6710	76.6%	10.9	8.6	194.7	87.9	109.6	60.7	0	0
2015	January	732	98.4%	14.9	11.5	193.5	93.7	57.6	34.2	0	0
	February	642	95.5%	18.7	14.4	130.6	69.6	48.7	29.4	0	0
	March	723	97.2%	7.1	5.8	143.4	75.1	27.6	20.2	0	0
	April	715	99.3%	4.6	3.9	44.9	38.7	12.2	10.4	0	0
	May	736	98.9%	4.6	3.8	83.4	46.4	25.4	19.0	0	0
	June	659	91.5%	4.4	3.4	63.6	38.5	12.0	8.5	0	0
	July	680	91.4%	3.6	3.0	38.0	31.5	10.3	7.7	0	0
	August	741	99.6%	4.6	3.6	60.3	30.1	11.3	7.9	0	0
	September	703	97.6%	4.1	3.1	42.5	22.5	9.9	7.3	0	0
	October	512	100.0%	4.2	3.6	33.4	25.6	8.5	6.7	0	0
	November										
	December										
Annual		6843	78.1%	7.1	5.6	193.5	93.7	57.6	34.2	0	0

Observations in ug/m^3

FIGURE 4.3.2.3 - TAMARACK DRIVE ANNUAL NO_X / NO_2 CONCENTRATIONS



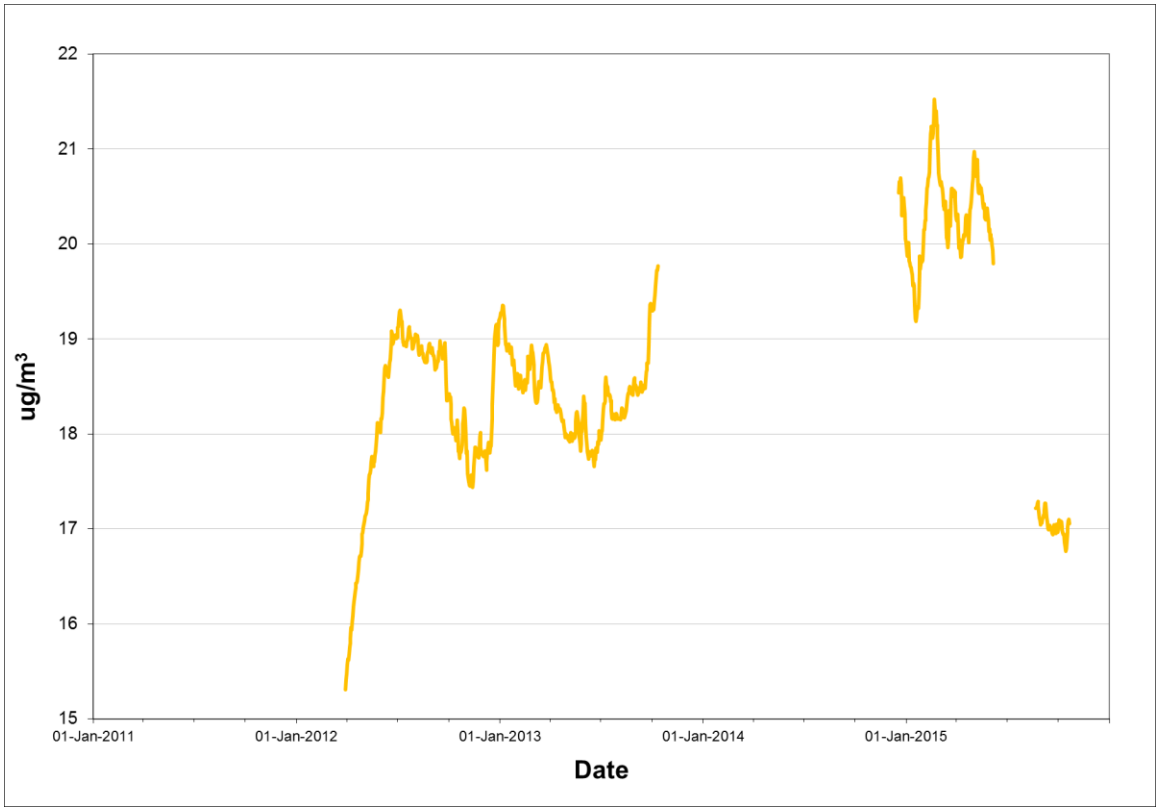
Rolling annual average of hourly concentrations

TABLE 4.3.2.4 - TAMARACK DRIVE TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 µg/m^3)
2014	January	31	100.0%	13.8	123.7	1
	February	28	100.0%	15.2	197.3	2
	March	31	100.0%	13.7	77.0	0
	April	30	100.0%	22.7	141.7	2
	May	31	100.0%	34.6	96.1	0
	June	29	96.7%	37.2	124.9	1
	July	30	96.8%	32.3	193.2	1
	August	10	32.3%	28.8	111.1	0
	September	0	0.0%			
	October	2	6.5%	3.1	8.0	0
	November	24	80.0%	10.4	66.6	0
	December	31	100.0%	16.3	178.9	4
Annual		277	75.9%	20.0	197.3	11
2015	January	29	93.5%	13.3	193.9	1
	February	27	96.4%	22.1	215.7	3
	March	31	100.0%	11.3	134.7	2
	April	30	100.0%	26.9	141.8	1
	May	31	100.0%	26.1	96.0	0
	June	26	86.7%	22.5	152.8	1
	July	28	90.3%	17.8	62.9	0
	August	25	80.6%	14.1	47.6	0
	September	30	100.0%	15.7	66.2	0
	October	21	95.5%	18.4	119.3	0
	November					
	December					
Annual		278	76.2%	18.1	215.7	8

Observations in ug/m^3

FIGURE 4.3.2.4 - TAMARACK DRIVE ANNUAL TPM CONCENTRATIONS



Rolling annual average of hourly concentrations

4.3.3 Smokey Mountain

The Smokey Mountain station monitors the ambient levels of SO_2, NO_x / NO_2, $PM_{2.5}$, TPM and O_3 on a continuous basis. For SO_2, NO_x / NO_2, and $PM_{2.5}$ the ambient air standards were not exceeded on any occasion in 2015. For TPM, the 24-hour ambient air standard was exceeded on one occasion while the 8-hour O_3 standard was exceeded on 8 occasions.

In late 2013, IOCC, in conjunction with Environment Canada and the Department of Environment and Conservation became the first industrial operation in the province to operate an ozone monitor. The ozone monitor at the Smokey Mountain station was installed for the purpose of generating the data required to calculate the hourly AQHI reading.

In October 2015, this station was moved closer to the ski resort and began recording data in December. The ozone monitor was moved to the new Hudson Drive monitoring station as part of this move.

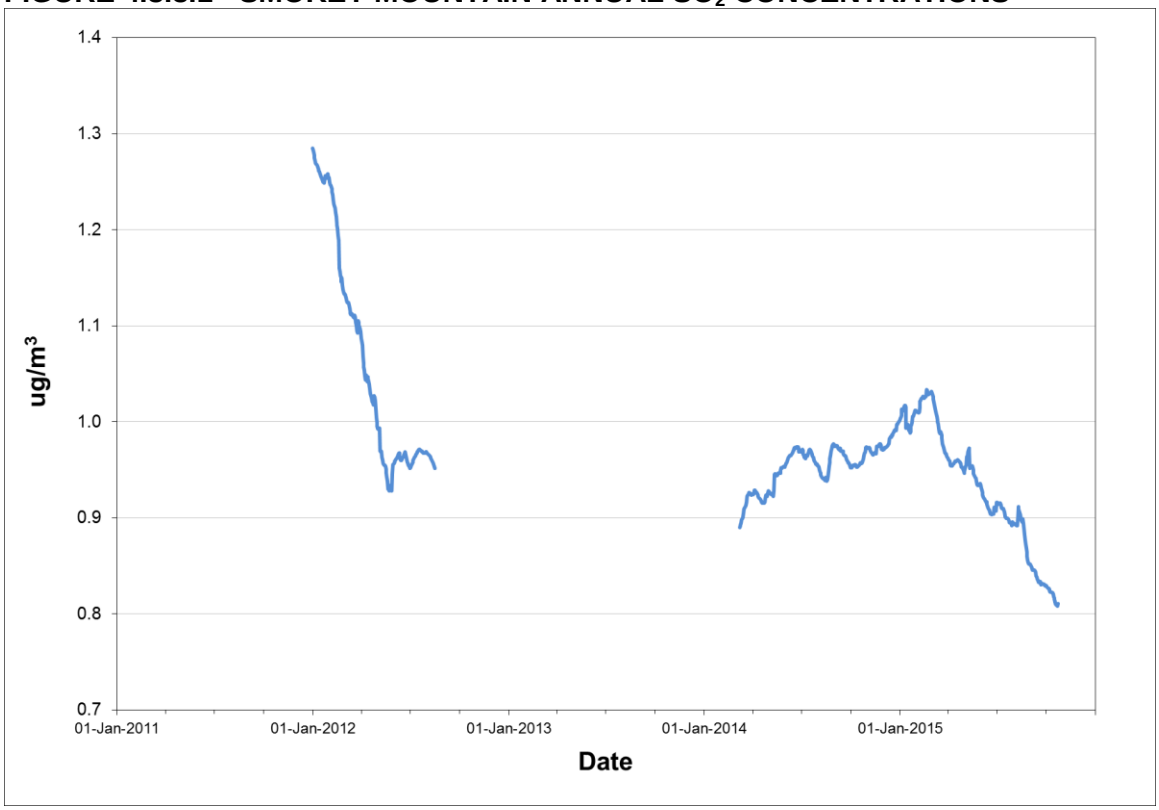
Tables 4.3.3.1 through 4.3.3.5 provide summary information on the level of air contaminants measured at Smokey Mountain while Figures 4.3.3.1 through 4.3.3.5 provide a graphical representation of the annual trend for each pollutant while Table 4.3.3.6 provides the AQHI levels for 2015 and Figure 4.3.3.6 provides the AQHI frequency distribution for 2015.

TABLE 4.3.3.1 - SMOKEY MOUNTAIN SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	710	95.4%	1.2	60.7	30.9	9.0	0	0	0
	February	645	96.0%	0.7	13.8	6.8	2.3	0	0	0
	March	701	94.2%	1.3	13.4	9.2	2.9	0	0	0
	April	675	93.8%	1.0	24.1	10.7	2.2	0	0	0
	May	741	99.6%	1.2	36.5	22.1	6.7	0	0	0
	June	685	95.1%	1.0	4.3	2.3	1.8	0	0	0
	July	726	97.6%	0.9	5.1	3.0	2.0	0	0	0
	August	682	91.7%	1.3	10.3	5.7	2.8	0	0	0
	September	715	99.3%	0.9	5.9	4.1	2.0	0	0	0
	October	738	99.2%	0.9	12.0	7.4	1.8	0	0	0
	November	687	95.4%	0.8	20.4	13.0	3.8	0	0	0
	December	726	97.6%	0.9	16.5	9.2	2.9	0	0	0
Annual		8431	96.2%	1.0	60.7	30.9	9.0	0	0	0
2015	January	733	98.5%	1.3	15.5	8.2	3.0	0	0	0
	February	639	95.1%	1.0	44.0	16.9	3.4	0	0	0
	March	742	99.7%	0.5	8.1	5.7	1.6	0	0	0
	April	710	98.6%	0.8	11.4	7.7	1.7	0	0	0
	May	709	95.3%	1.1	38.9	23.1	3.8	0	0	0
	June	605	84.0%	0.8	30.5	23.0	4.9	0	0	0
	July	740	99.5%	0.6	10.1	5.9	2.3	0	0	0
	August	738	99.2%	0.7	51.3	29.1	5.2	0	0	0
	September	694	96.4%	0.6	17.4	6.1	1.0	0	0	0
	October	535	100.0%	0.5	14.2	9.2	1.7	0	0	0
	November									
	December									
Annual		6845	78.1%	0.8	51.3	29.1	5.2	0	0	0

Observations in ug/m^3

FIGURE 4.3.3.1 - SMOKEY MOUNTAIN ANNUAL SO_2 CONCENTRATIONS



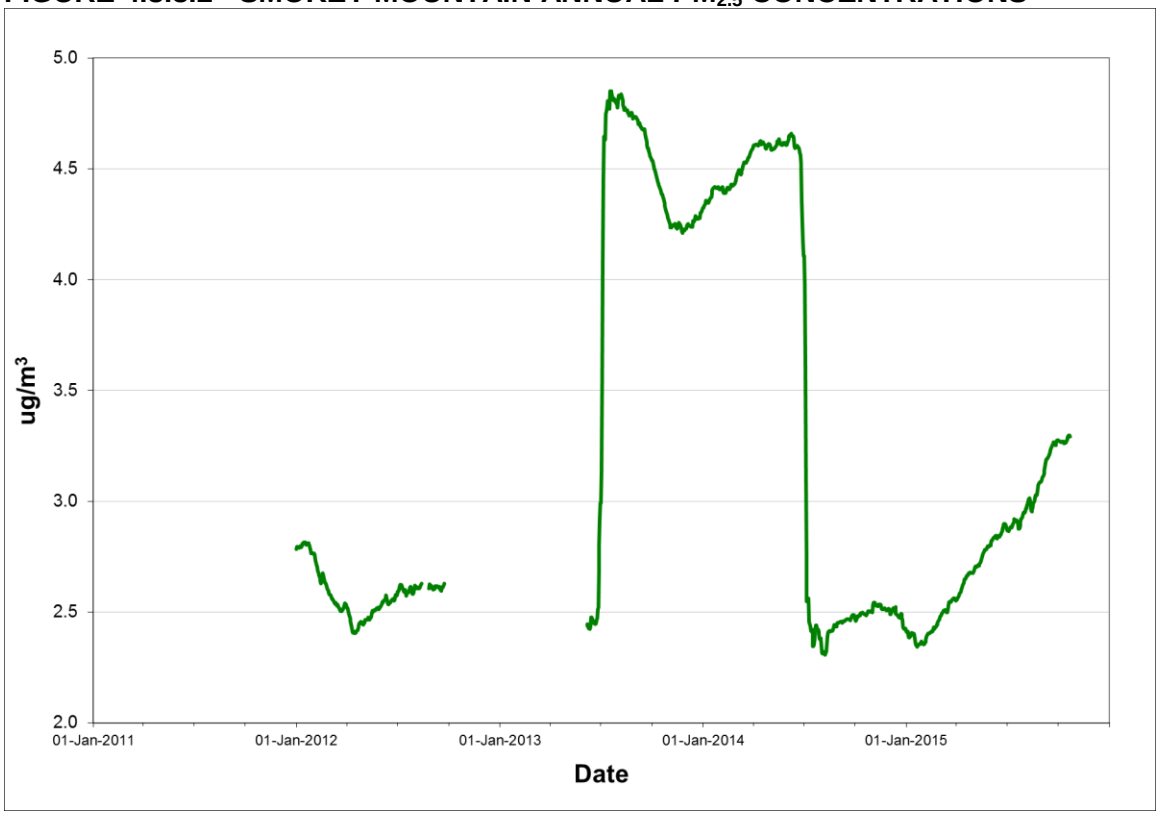
Rolling annual average of hourly concentrations

TABLE 4.3.3.2 - SMOKEY MOUNTAIN $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	29	93.5%	3.7	10.5	0
	February	11	39.3%	2.4	4.8	0
	March	21	67.7%	3.2	4.8	0
	April	24	80.0%	2.5	3.6	0
	May	31	100.0%	1.8	3.8	0
	June	29	96.7%	2.6	8.1	0
	July	30	96.8%	2.6	14.0	0
	August	30	96.8%	2.9	12.0	0
	September	30	100.0%	1.3	3.4	0
	October	31	100.0%	1.6	4.7	0
	November	29	96.7%	2.1	12.5	0
	December	31	100.0%	2.5	6.1	0
Annual		326	89.3%	2.4	14.0	0
2015	January	31	100.0%	3.0	5.4	0
	February	26	92.9%	3.8	6.0	0
	March	31	100.0%	4.0	10.1	0
	April	30	100.0%	4.0	6.0	0
	May	31	100.0%	3.2	6.8	0
	June	24	80.0%	3.6	8.0	0
	July	27	87.1%	3.6	7.8	0
	August	29	93.5%	4.6	10.8	0
	September	30	100.0%	3.4	7.0	0
	October	18	78.3%	1.8	6.5	0
	November					
	December					
Annual		277	75.9%	3.6	10.8	0

Observations in ug/m^3

FIGURE 4.3.3.2 - SMOKEY MOUNTAIN ANNUAL $PM_{2.5}$ CONCENTRATIONS



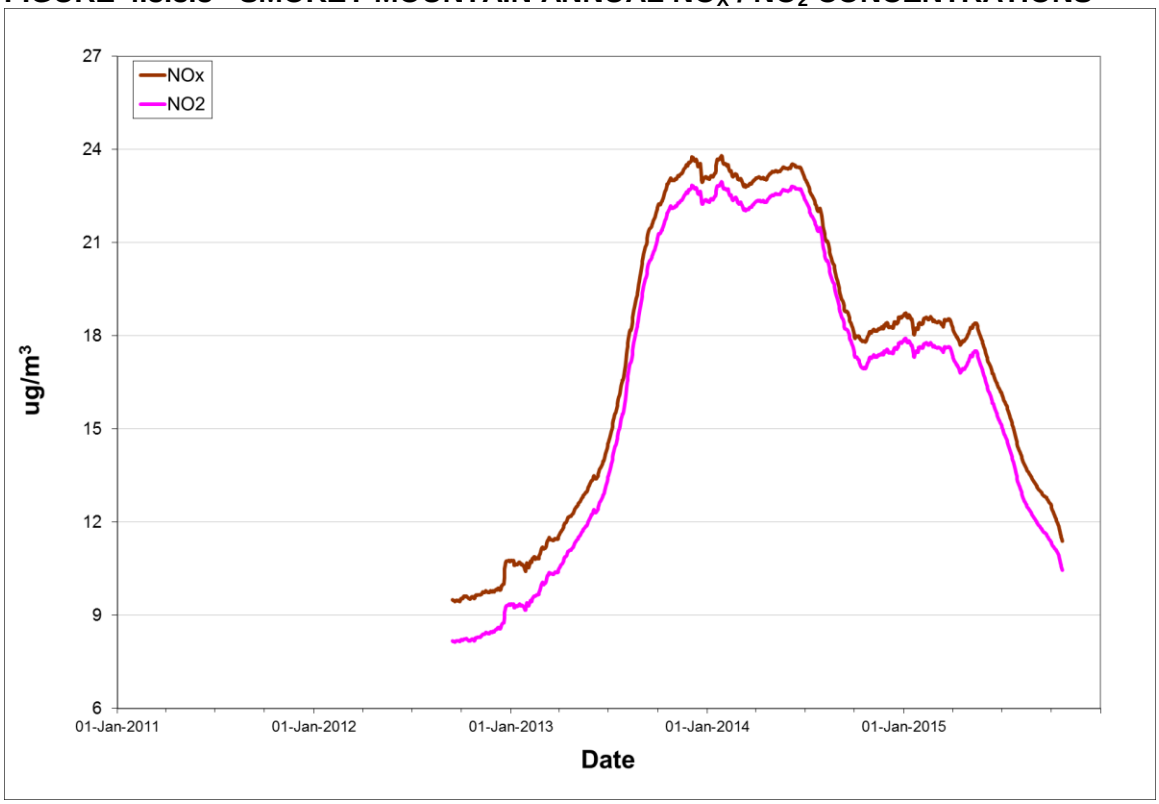
Rolling annual average of hourly concentrations

TABLE 4.3.3.3 - SMOKEY MOUNTAIN NO_X / NO_2 SUMMARY 2014 & 2015

						Maximums				Exceedances	
		# Valid	% Valid	Average		1-Hour		24-Hour		1-Hour	24-Hour
Year	Month	Hours	Hours	NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	741	99.6%	18.7	17.2	152.9	71.0	66.6	44.1	0	0
	February	672	100.0%	15.0	14.2	110.1	73.1	30.8	28.4	0	0
	March	726	97.6%	14.8	14.7	99.5	73.6	32.7	31.8	0	0
	April	689	95.7%	18.4	18.0	54.7	52.1	32.3	31.6	0	0
	May	740	99.5%	18.0	17.8	62.9	60.2	27.3	26.7	0	0
	June	692	96.1%	20.7	20.6	52.4	52.1	30.8	30.6	0	0
	July	728	97.8%	21.6	21.3	70.4	67.2	30.8	30.0	0	0
	August	261	35.1%	20.4	20.3	57.9	56.3	28.4	28.0	0	0
	September	365	50.7%	10.4	10.2	41.8	27.7	16.5	16.4	0	0
	October	738	99.2%	22.5	19.2	89.0	80.5	39.7	37.8	0	0
	November	716	99.4%	21.3	20.4	89.1	62.2	34.8	31.6	0	0
	December	723	97.2%	19.0	17.9	96.4	66.4	46.6	37.3	0	0
Annual		7791	88.9%	18.7	17.8	152.9	80.5	66.6	44.1	0	0
2015	January	727	97.7%	16.1	14.9	142.2	78.4	49.9	44.5	0	0
	February	638	94.9%	15.3	13.9	132.1	69.8	35.1	30.8	0	0
	March	640	86.0%	12.5	11.5	200.4	96.7	50.8	36.6	0	0
	April	704	97.8%	15.6	15.3	60.5	58.9	35.1	34.6	0	0
	May	742	99.7%	12.8	12.4	54.6	54.2	43.3	42.9	0	0
	June	612	85.0%	4.2	2.7	32.5	18.7	8.9	6.2	0	0
	July	733	98.5%	3.4	2.2	35.8	17.5	9.4	5.7	0	0
	August	735	98.8%	3.8	2.7	71.8	30.0	9.5	6.4	0	0
	September	694	96.4%	3.4	2.2	26.6	14.7	7.1	4.3	0	0
	October	535	100.0%	2.8	2.1	29.6	20.8	7.3	4.1	0	0
	November										
	December										
Annual		6760	77.2%	9.1	8.1	200.4	96.7	50.8	44.5	0	0

Observations in ug/m^3

FIGURE 4.3.3.3 - SMOKEY MOUNTAIN ANNUAL NO_X / NO_2 CONCENTRATIONS



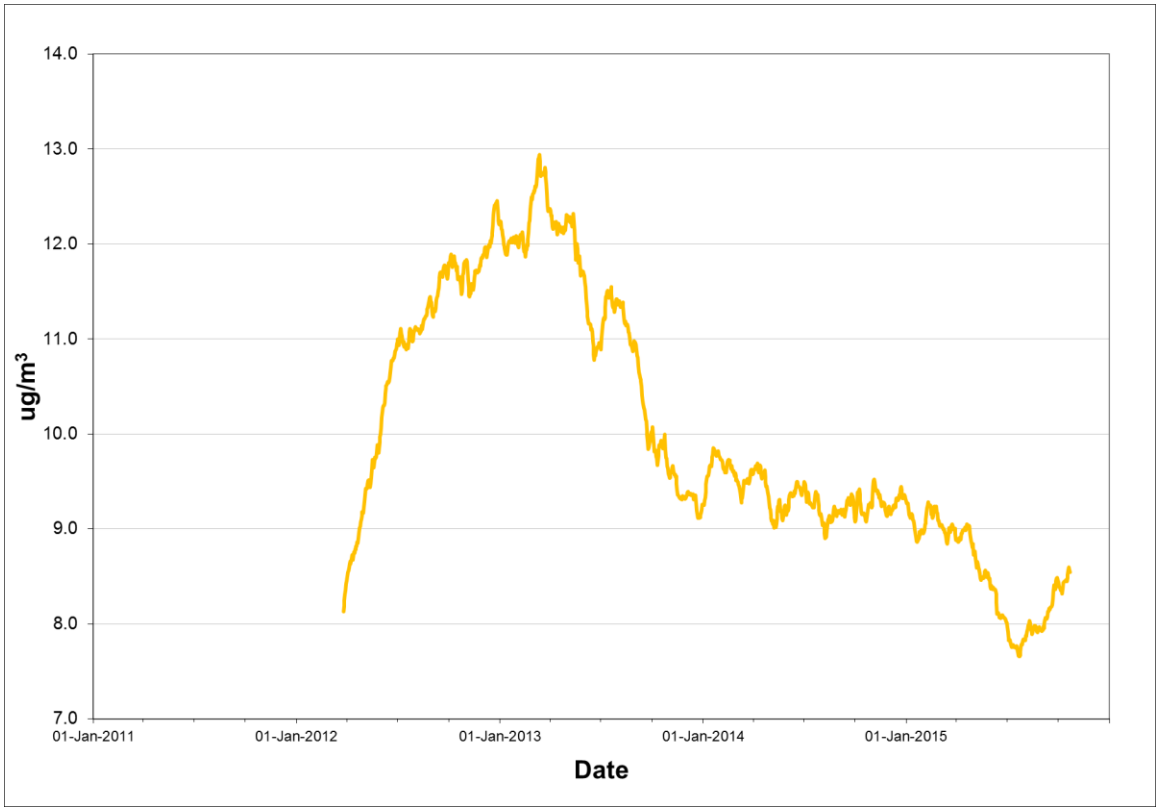
Rolling annual average of hourly concentrations

TABLE 4.3.3.4 - SMOKEY MOUNTAIN TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 µg/m^3)
2014	January	29	93.5%	9.1	86.0	0
	February	28	100.0%	7.1	59.0	0
	March	29	93.5%	12.9	76.8	0
	April	24	80.0%	12.0	36.8	0
	May	30	96.8%	12.6	55.1	0
	June	29	96.7%	21.9	123.4	1
	July	29	93.5%	15.3	80.1	0
	August	30	96.8%	11.3	62.5	0
	September	29	96.7%	5.5	20.1	0
	October	28	90.3%	6.5	50.8	0
	November	29	96.7%	4.5	203.6	1
	December	28	90.3%	5.4	34.5	0
Annual		342	93.7%	9.3	203.6	2
2015	January	29	93.5%	5.8	28.4	0
	February	26	92.9%	8.5	33.8	0
	March	30	96.8%	9.8	152.4	1
	April	29	96.7%	10.7	70.9	0
	May	31	100.0%	7.0	62.6	0
	June	23	76.7%	14.2	53.5	0
	July	27	87.1%	11.9	35.3	0
	August	30	96.8%	13.1	39.4	0
	September	30	100.0%	11.6	75.9	0
	October	18	78.3%	8.0	21.0	0
	November					
	December					
Annual		273	74.8%	9.7	152.4	1

Observations in ug/m^3

FIGURE 4.3.3.4 - SMOKEY MOUNTAIN ANNUAL TPM CONCENTRATIONS



Rolling annual average of hourly concentrations

TABLE 4.3.3.5 - SMOKEY MOUNTAIN O_3 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 8-Hour	Regulatory Exceedances 1-Hour (>160)	Regulatory Exceedances 8-Hour (>87)
2014	January	741	99.6%	45.5	69.0	67.7	0	0
	February	672	100.0%	50.4	70.8	67.0	0	0
	March	708	95.2%	50.2	85.0	77.6	0	0
	April	597	82.9%	54.1	77.2	71.7	0	0
	May	743	99.9%	43.9	80.8	73.4	0	0
	June	697	96.8%	47.2	181.5	158.0	5	10
	July	538	72.3%	50.4	120.1	87.5	0	1
	August	724	97.3%	23.9	52.9	47.4	0	0
	September	716	99.4%	25.4	58.4	42.8	0	0
	October	741	99.6%	37.6	138.2	118.6	0	2
	November	717	99.6%	36.2	53.5	52.8	0	0
	December	731	98.3%	35.7	49.3	47.2	0	0
Annual		8325	95.0%	41.3	181.5	158.0	5	13
2015	January	737	99.1%	39.3	71.6	69.1	0	0
	February	639	95.1%	48.7	69.8	68.1	0	0
	March	742	99.7%	59.2	84.0	82.0	0	0
	April	710	98.6%	60.8	85.0	82.9	0	0
	May	743	99.9%	60.5	95.3	90.7	0	1
	June	630	87.5%	57.3	115.8	99.7	0	2
	July	743	99.9%	52.2	106.7	94.1	0	2
	August	738	99.2%	51.3	108.9	84.8	0	0
	September	719	99.9%	50.8	114.2	95.4	0	3
	October	535	100.0%	61.4	93.6	85.3	0	0
	November							
	December							
Annual		6936	79.2%	53.9	115.8	99.7	0	8

Observations in ug/m^3

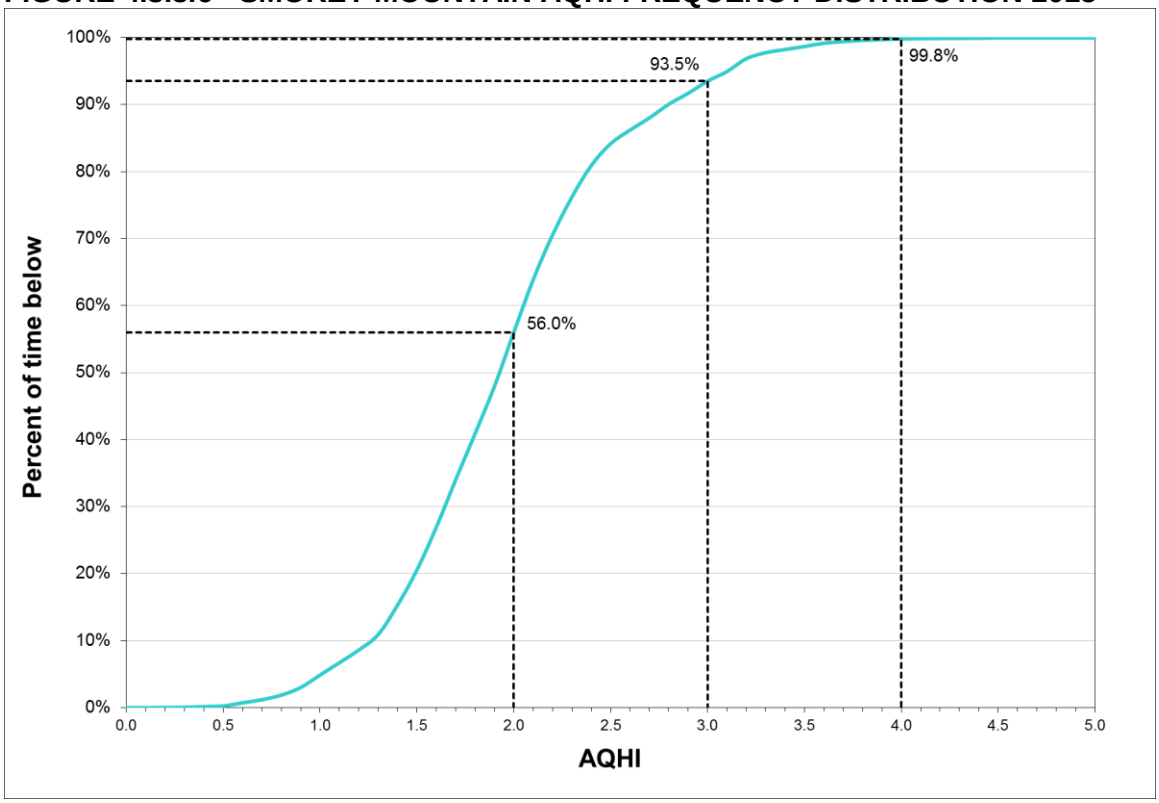
FIGURE 4.3.3.5 - SMOKEY MOUNTAIN ANNUAL O_3 CONCENTRATIONS

Rolling annual average of hourly concentrations

TABLE 4.3.3.6 - SMOKEY MOUNTAIN AQHI SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 3-Hour
2014	January	686	92.2%	2.2	4.0
	February	408	60.7%	2.2	3.7
	March	552	74.2%	2.2	4.0
	April	594	82.5%	2.3	3.2
	May	744	100.0%	2.0	3.1
	June	681	94.6%	2.3	6.0
	July	523	70.3%	2.5	3.7
	August	257	34.5%	2.0	3.0
	September	367	51.0%	1.2	2.1
	October	741	99.6%	1.9	4.6
	November	697	96.8%	2.0	3.8
	December	731	98.3%	1.9	3.8
Annual		6981	79.7%	2.1	6.0
2015	January	729	98.0%	1.8	4.4
	February	637	94.8%	2.1	3.9
	March	642	86.3%	2.3	5.8
	April	709	98.5%	2.5	4.1
	May	744	100.0%	2.3	4.0
	June	577	80.1%	1.8	3.3
	July	659	88.6%	1.6	3.5
	August	719	96.6%	1.7	3.8
	September	695	96.5%	1.6	3.2
	October	460	61.8%	1.7	2.5
	November				
	December				
Annual		6571	75.0%	2.0	5.8

FIGURE 4.3.3.6 - SMOKEY MOUNTAIN AQHI FREQUENCY DISTRIBUTION 2015



e.g. 93.5% of the time the AQHI recorded was below 3.0

4.3.4 Bartlett Drive

The Bartlett Drive monitoring station was located at A. P. Low School and measured TPM on a one day in six day cycle in 2015. The station had an equipment upgrade in 2011, resulting in a period of monitoring downtime. There were two exceedances of the 24-hour ambient air standard in 2015. In November 2015, this station was decommissioned as part of the network upgrade.

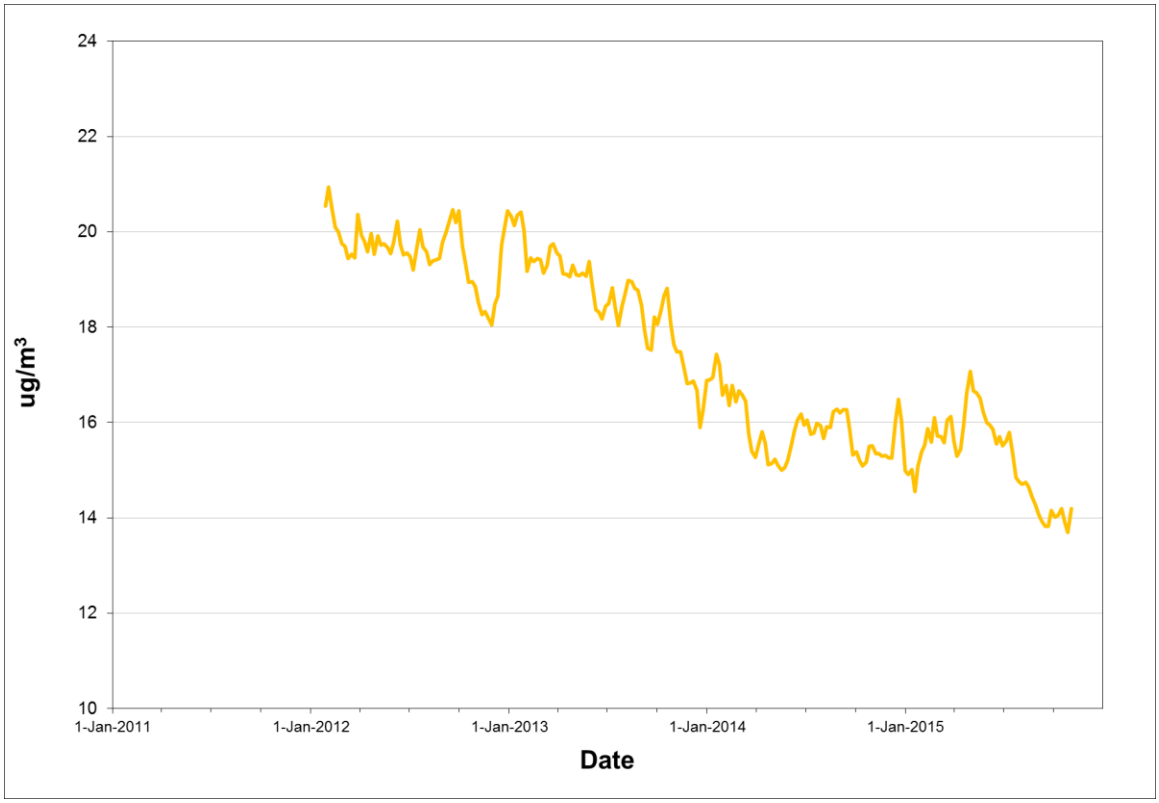
Table 4.3.4.1 provides summary information of air contaminants measured at Bartlett Drive, while Figure 4.3.4.1 provides a graphical representation of the annual trend of the measured pollutant.

TABLE 4.3.4.1 - BARTLETT DRIVE TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	5	100.0%	7.6	21.5	0
	February	5	100.0%	9.8	27.6	0
	March	5	100.0%	8.0	38.1	0
	April	4	80.0%	19.7	39.3	0
	May	5	100.0%	50.6	67.6	0
	June	5	100.0%	38.0	54.1	0
	July	5	100.0%	22.9	39.3	0
	August	5	100.0%	26.8	53.4	0
	September	5	100.0%	10.8	14.7	0
	October	4	80.0%	10.7	19.7	0
	November	5	100.0%	5.7	8.6	0
	December	6	100.0%	14.2	110.6	0
Annual		59	96.7%	15.5	110.6	0
2015	January	5	100.0%	10.4	73.7	0
	February	3	75.0%	15.6	33.2	0
	March	6	100.0%	7.0	19.7	0
	April	5	100.0%	54.2	178.2	2
	May	5	100.0%	23.4	29.5	0
	June	5	100.0%	26.3	41.2	0
	July	5	100.0%	12.7	33.8	0
	August	4	80.0%	19.2	59.6	0
	September	5	100.0%	9.9	46.1	0
	October	5	100.0%	7.6	17.2	0
	November	1	100.0%	73.7	73.7	0
	December					
Annual		49	96.1%	15.4	178.2	2

Observations in ug/m^3

FIGURE 4.3.4.1 - BARTLETT DRIVE ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.3.5 Hudson Drive

The Hudson Drive monitoring station was located at the fire hall and measured TPM on a one day in six day cycle in 2015. The station was newly installed in 2011, but in November 2015 the station was decommissioned to make way for the installation of the new continuous monitoring station.

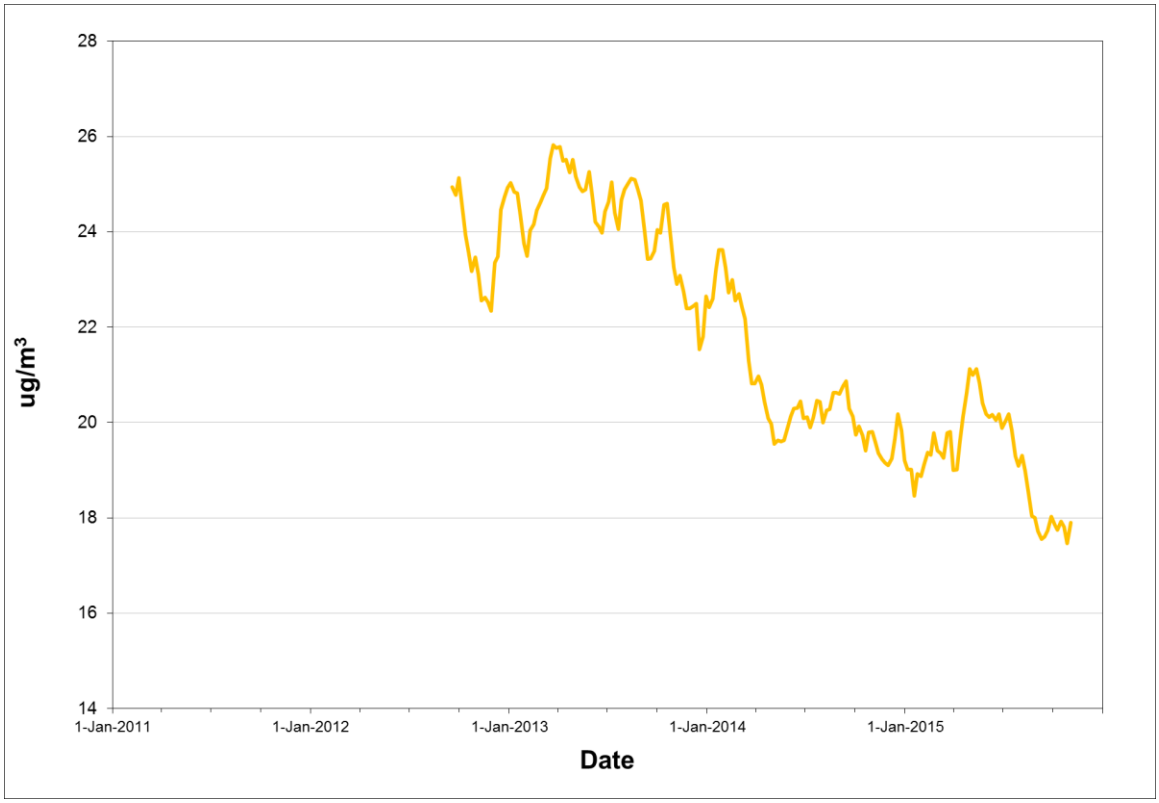
Table 4.3.5.1 provides summary information of air contaminants measured at Hudson Drive while Figure 4.3.5.1 provides a graphical representation of the annual trend. In 2015, the 24-hour ambient air criterion was exceeded on two occasions.

TABLE 4.3.5.1 - HUDSON DRIVE TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	5	100.0%	14.6	30.1	0
	February	5	100.0%	11.8	19.7	0
	March	5	100.0%	10.8	86.0	0
	April	5	100.0%	23.8	38.1	0
	May	5	100.0%	57.5	86.0	0
	June	5	100.0%	36.7	61.4	0
	July	5	100.0%	30.3	67.6	0
	August	5	100.0%	32.0	67.6	0
	September	5	100.0%	13.3	17.8	0
	October	5	100.0%	16.1	28.3	0
	November	5	100.0%	6.3	9.8	0
	December	6	100.0%	20.4	79.9	0
Annual		61	100.0%	19.2	86.0	0
2015	January	5	100.0%	11.9	73.7	0
	February	4	100.0%	21.3	45.5	0
	March	6	100.0%	7.9	20.9	0
	April	5	100.0%	87.0	159.7	2
	May	5	100.0%	32.9	79.9	0
	June	4	80.0%	34.2	49.8	0
	July	5	100.0%	18.6	35.6	0
	August	5	100.0%	15.9	22.7	0
	September	4	80.0%	12.6	41.2	0
	October	5	100.0%	11.1	32.6	0
	November	1	100.0%	41.8	41.8	0
	December					
Annual		49	96.1%	19.4	159.7	2

Observations in ug/m^3

FIGURE 4.3.5.1 - HUDSON DRIVE ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.4 Wabush Mines

In 2013, Wabush Mines initiated a minor revamp of their monitoring network, updating equipment and relocating instruments. Work on this upgrade was completed in early 2014. As a consequence Wabush Mines closed the Shea Street station and the station near the NALCOR substation. By the end of 2015 there were two monitoring stations in operation in Wabush, namely on Bond Street near the Provincial Building and a new station on Cabot Drive near the J. R. Smallwood school. These stations are installed to monitor the air quality near Wabush Mines' iron ore mine, concentrator / processing facility and the tailings. The locations of these monitoring stations are identified in Figure 4.4.1.

In February 2014, Wabush Mines indefinitely idled the processing facility, and it remained idled at year end. Though not processing, Wabush Mines are committed to their environmental responsibilities and will continue to operate the ambient air monitoring network until further notice.

FIGURE 4.4.1 - WABUSH MINES AMBIENT MONITORING STATIONS

4.4.1 Bond Street

The Bond Street monitoring station is located near the Provincial Building and measures SO_2, $PM_{2.5}$ and TPM on a continuous basis. Each monitor did not record exceedances of the associated ambient air criteria on any occasion in 2015. The TPM monitor was newly installed in September 2013.

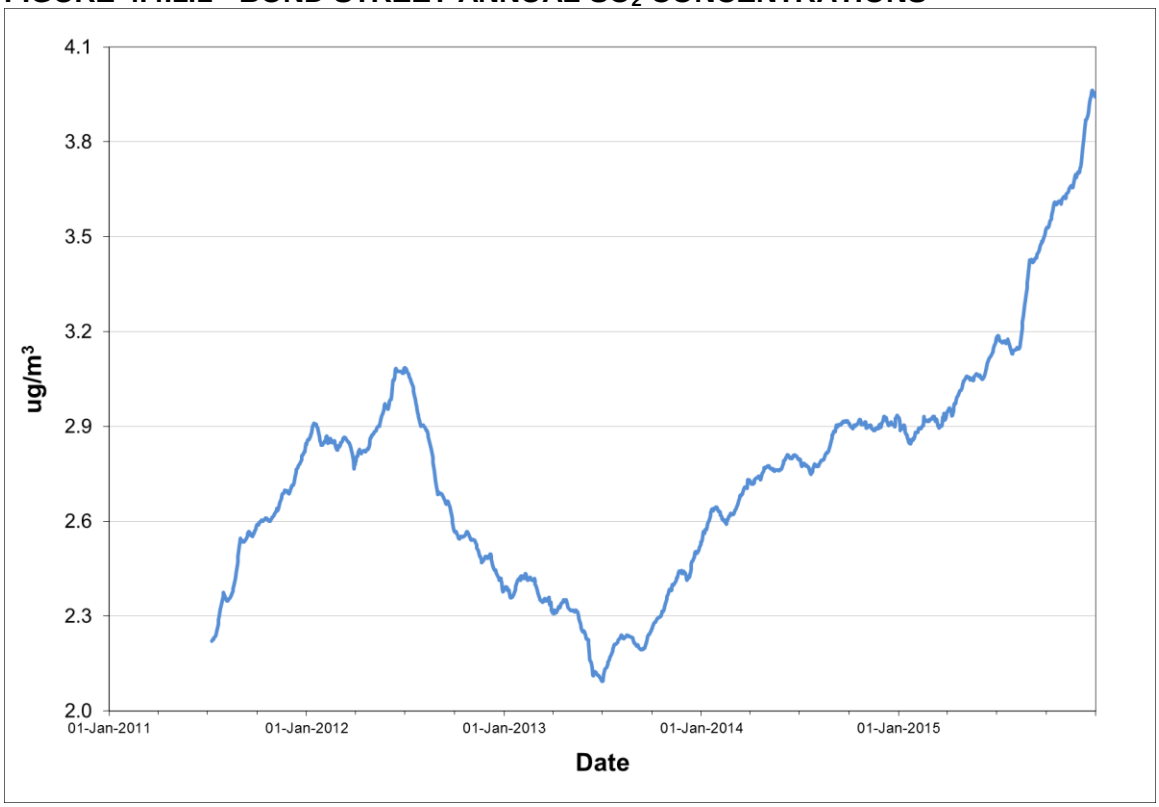
Tables 4.4.1.1 to 4.4.1.3 provide summary information of air contaminants measured at Bond Street, while Figures 4.4.1.1 to 4.4.1.3 provide a graphical representation of the annual trend of SO_2, $PM_{2.5}$ and TPM respectively.

TABLE 4.4.1.1 - BOND STREET SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	742	99.7%	4.0	27.7	19.5	7.3	0	0	0
	February	660	98.2%	2.2	32.9	21.7	7.9	0	0	0
	March	725	97.4%	3.0	53.4	46.0	11.4	0	0	0
	April	678	94.2%	3.1	16.6	11.2	4.7	0	0	0
	May	717	96.4%	2.6	23.7	16.0	5.3	0	0	0
	June	673	93.5%	2.3	21.4	11.0	4.1	0	0	0
	July	705	94.8%	2.9	14.6	7.0	5.3	0	0	0
	August	693	93.1%	2.9	16.7	10.9	5.1	0	0	0
	September	597	82.9%	2.9	17.0	7.6	4.6	0	0	0
	October	710	95.4%	2.8	6.1	5.3	4.7	0	0	0
	November	685	95.1%	3.1	10.9	7.6	6.5	0	0	0
	December	712	95.7%	3.3	9.2	9.1	7.5	0	0	0
Annual		8297	94.7%	2.9	53.4	46.0	11.4	0	0	0
2015	January	710	95.4%	3.4	35.0	16.8	7.8	0	0	0
	February	640	95.2%	2.9	54.5	39.1	11.1	0	0	0
	March	713	95.8%	3.2	42.8	23.3	10.9	0	0	0
	April	691	96.0%	4.2	15.0	12.3	7.5	0	0	0
	May	713	95.8%	2.9	13.2	10.9	5.5	0	0	0
	June	663	92.1%	3.7	36.8	29.7	7.6	0	0	0
	July	712	95.7%	2.4	47.3	16.3	4.0	0	0	0
	August	714	96.0%	6.3	28.5	21.2	12.0	0	0	0
	September	690	95.8%	4.1	14.7	12.2	6.6	0	0	0
	October	710	95.4%	3.9	19.0	9.6	8.0	0	0	0
	November	686	95.3%	4.0	9.0	8.6	7.3	0	0	0
	December	712	95.7%	6.1	11.1	10.8	10.0	0	0	0
Annual		8354	95.4%	3.9	54.5	39.1	12.0	0	0	0

Observations in ug/m^3

FIGURE 4.4.1.1 - BOND STREET ANNUAL SO_2 CONCENTRATIONS



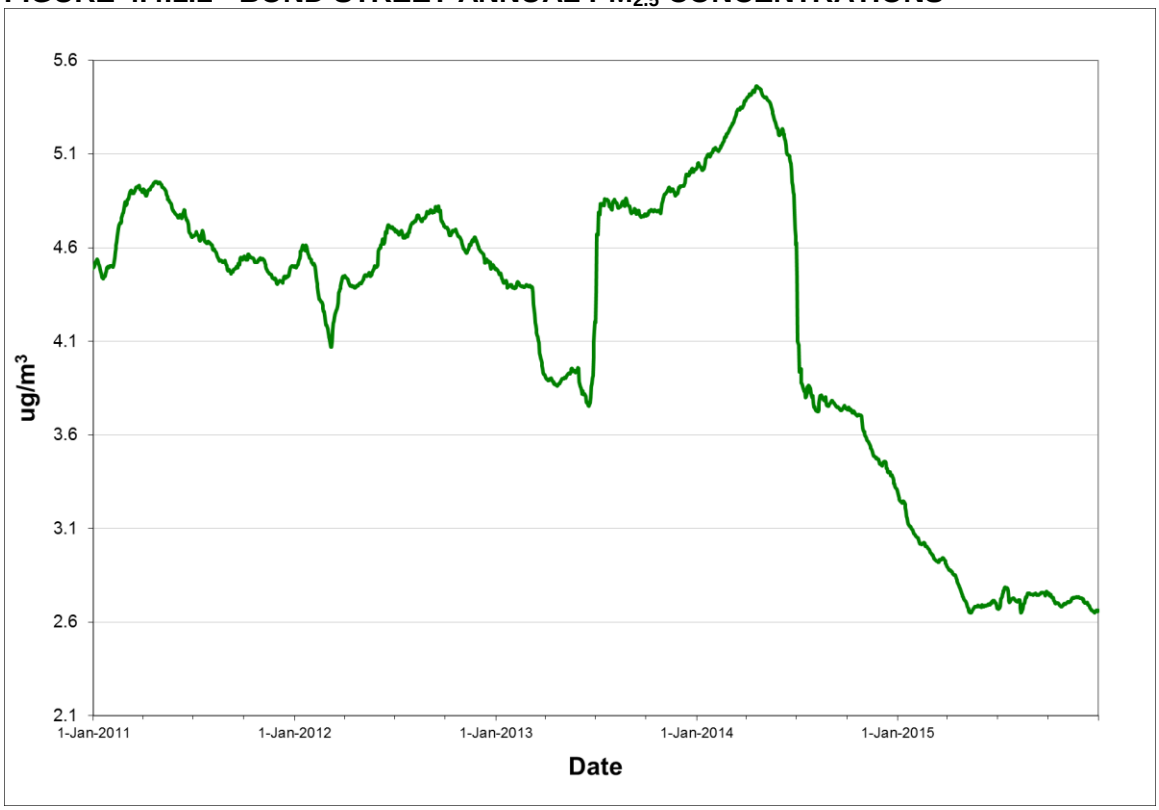
Rolling annual average of daily concentrations

TABLE 4.4.1.2 - BOND STREET $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	31	100.0%	5.3	14.3	0
	February	23	82.1%	4.8	7.6	0
	March	17	54.8%	4.1	5.7	0
	April	27	90.0%	4.2	6.1	0
	May	31	100.0%	2.2	4.7	0
	June	26	86.7%	2.2	10.3	0
	July	30	96.8%	3.6	16.0	0
	August	30	96.8%	4.3	13.8	0
	September	26	86.7%	2.6	4.3	0
	October	31	100.0%	2.3	5.9	0
	November	30	100.0%	1.7	4.4	0
	December	31	100.0%	2.8	6.0	0
Annual		333	91.2%	3.3	16.0	0
2015	January	31	100.0%	2.8	5.8	0
	February	28	100.0%	3.4	4.6	0
	March	31	100.0%	2.7	6.0	0
	April	30	100.0%	2.1	4.1	0
	May	31	100.0%	1.6	4.3	0
	June	28	93.3%	2.2	6.6	0
	July	31	100.0%	4.2	15.0	0
	August	28	90.3%	4.7	10.5	0
	September	7	23.3%	2.6	5.5	0
	October	30	96.8%	1.7	4.6	0
	November	30	100.0%	2.1	4.2	0
	December	31	100.0%	2.1	3.7	0
Annual		336	92.1%	2.7	15.0	0

Observations in ug/m^3

FIGURE 4.4.1.2 - BOND STREET ANNUAL $PM_{2.5}$ CONCENTRATIONS



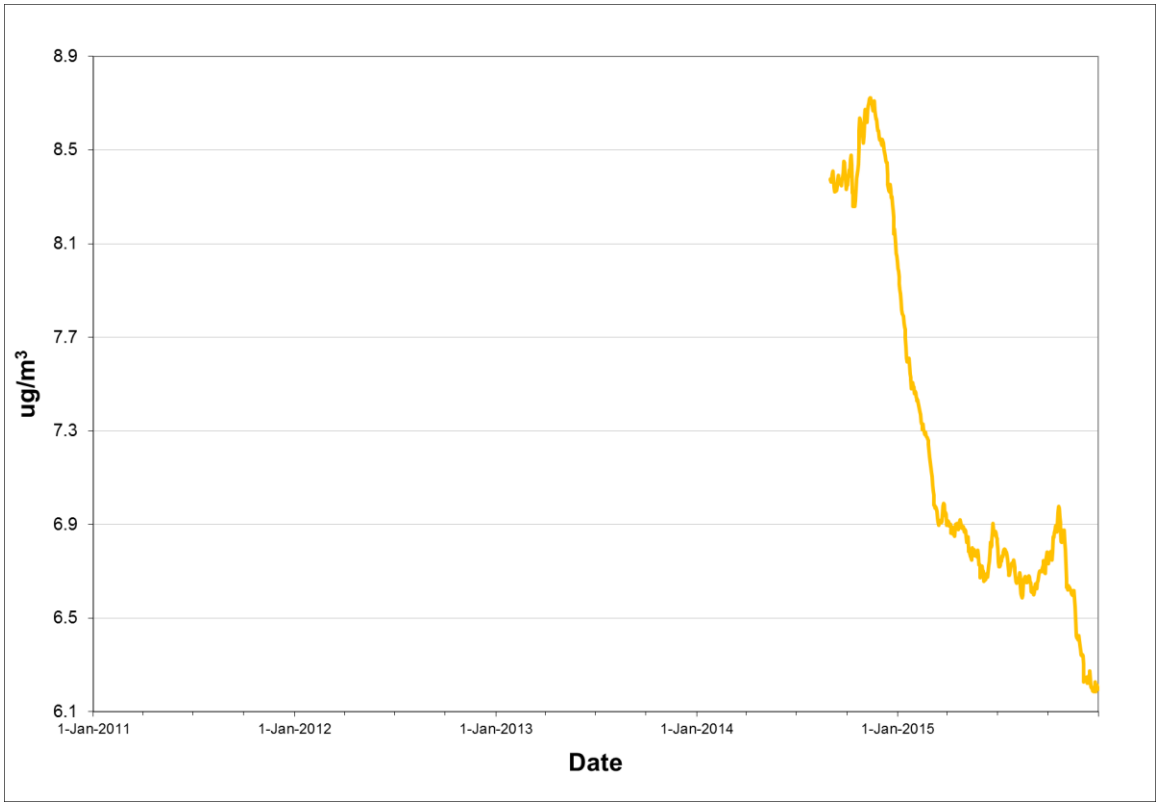
Rolling annual average of daily concentrations

TABLE 4.4.1.3 - BOND STREET TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	28	90.3%	9.5	26.6	0
	February	12	42.9%	9.5	12.0	0
	March	22	71.0%	9.0	39.8	0
	April	28	93.3%	7.4	27.8	0
	May	28	90.3%	14.3	52.6	0
	June	24	80.0%	8.8	61.9	0
	July	28	90.3%	11.0	63.2	0
	August	30	96.8%	10.3	21.0	0
	September	23	76.7%	6.6	27.5	0
	October	28	90.3%	5.4	25.0	0
	November	28	93.3%	6.8	45.9	0
	December	31	100.0%	4.0	13.5	0
Annual		310	84.9%	8.0	63.2	0
2015	January	30	96.8%	4.4	14.9	0
	February	25	89.3%	5.2	20.7	0
	March	31	100.0%	5.4	33.0	0
	April	28	93.3%	7.4	22.4	0
	May	30	96.8%	9.5	31.4	0
	June	28	93.3%	11.4	51.8	0
	July	25	80.6%	9.4	28.8	0
	August	24	77.4%	8.9	37.3	0
	September	20	66.7%	9.3	39.9	0
	October	27	87.1%	6.1	42.1	0
	November	26	86.7%	2.7	35.1	0
	December	24	77.4%	2.6	7.9	0
Annual		318	87.1%	6.2	51.8	0

Observations in ug/m^3

FIGURE 4.4.1.3 - BOND STREET ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.4.2 Cabot Drive

The Cabot Drive monitoring station was installed in early 2014 and is located near the J.R. Smallwood School. The station measures $PM_{2.5}$ and TPM on a continuous basis. The $PM_{2.5}$ monitor recorded two exceedances in 2015, both in January whereas the TPM monitor did not record exceedance for the entire year.

Tables 4.4.2.1 and 4.4.2.2 provide summary information of air contaminants measured at Cabot Drive while figures 4.4.2.1 and 4.4.2.2 present the annual trend of $PM_{2.5}$ and TPM respectively.

TABLE 4.4.2.1 - CABOT DRIVE $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January					
	February	26	92.9%	5.9	22.5	0
	March	30	96.8%	4.7	16.2	0
	April	25	83.3%	3.5	6.5	0
	May	27	87.1%	3.4	6.7	0
	June	26	86.7%	5.5	9.9	0
	July	29	93.5%	3.3	15.4	0
	August	30	96.8%	2.7	10.6	0
	September	27	90.0%	1.5	3.4	0
	October	31	100.0%	2.3	7.8	0
	November	30	100.0%	2.0	3.6	0
	December	29	93.5%	3.4	7.1	0
Annual		310	84.9%	3.4	22.5	0
2015	January	31	100.0%	5.0	31.8	2
	February	28	100.0%	3.7	5.6	0
	March	30	96.8%	3.1	6.8	0
	April	30	100.0%	2.8	4.7	0
	May	31	100.0%	3.1	6.7	0
	June	28	93.3%	3.5	7.3	0
	July	31	100.0%	5.6	16.1	0
	August	31	100.0%	4.1	9.9	0
	September	26	86.7%	3.2	7.0	0
	October	30	96.8%	3.6	7.8	0
	November	30	100.0%	3.5	6.0	0
	December	31	100.0%	2.5	6.0	0
Annual		357	97.8%	3.7	31.8	2

Observations in ug/m^3

FIGURE 4.4.2.1 – CABOT DRIVE ANNUAL $PM_{2.5}$ CONCENTRATIONS

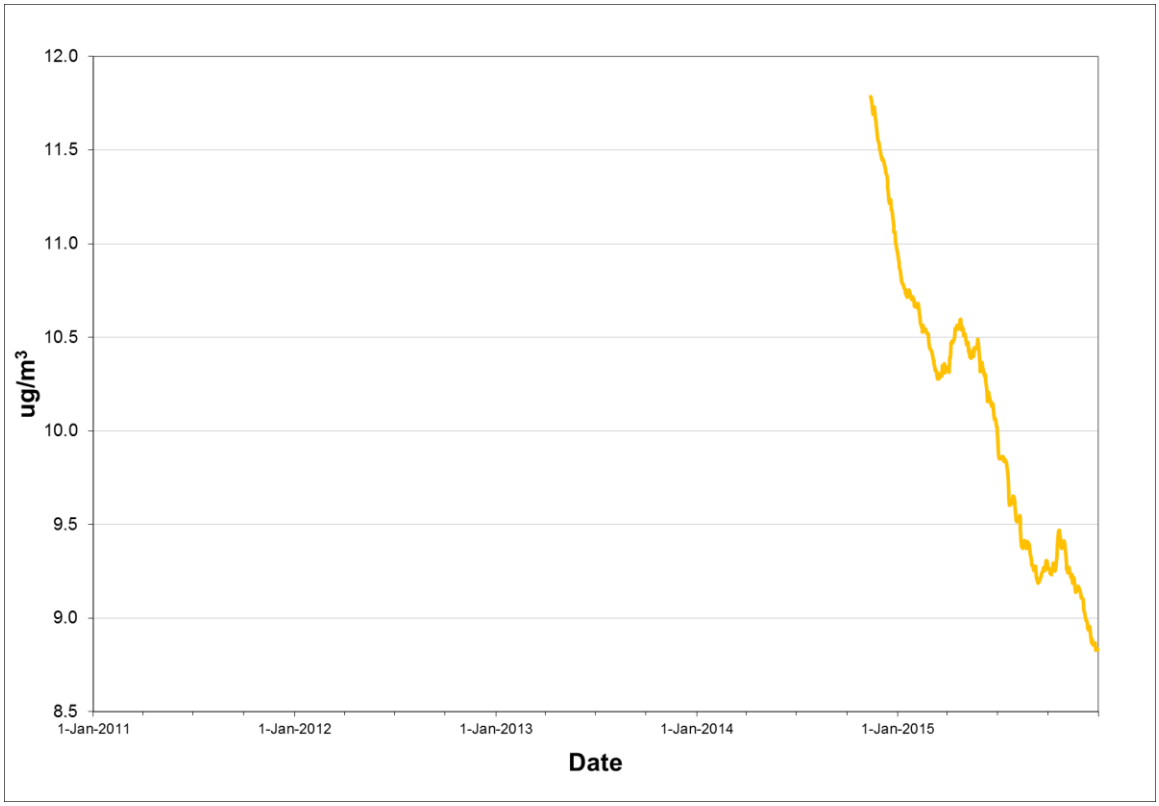
Rolling annual average of daily concentrations

TABLE 4.4.2.2 - CABOT DRIVE TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 µg/m^3)
2014	January					
	February	28	100.0%	10.7	18.9	0
	March	30	96.8%	9.9	35.3	0
	April	29	96.7%	7.9	25.1	0
	May	31	100.0%	17.7	57.8	0
	June	27	90.0%	22.4	56.9	0
	July	31	100.0%	14.2	52.3	0
	August	26	83.9%	13.9	32.0	0
	September	28	93.3%	9.1	25.2	0
	October	31	100.0%	8.1	44.7	0
	November	30	100.0%	8.7	25.7	0
	December	31	100.0%	7.0	19.0	0
Annual		322	88.2%	11.0	57.8	0
2015	January	31	100.0%	8.1	19.2	0
	February	28	100.0%	8.2	20.9	0
	March	31	100.0%	8.7	24.6	0
	April	30	100.0%	10.2	19.6	0
	May	31	100.0%	13.8	61.6	0
	June	27	90.0%	15.3	43.3	0
	July	30	96.8%	9.1	38.1	0
	August	31	100.0%	8.9	33.0	0
	September	26	86.7%	8.6	41.2	0
	October	31	100.0%	9.4	44.4	0
	November	27	90.0%	5.7	29.9	0
	December	31	100.0%	4.9	8.5	0
Annual		354	97.0%	8.8	61.6	0

Observations in ug/m^3

FIGURE 4.4.2.2 – CABOT DRIVE ANNUAL TPM CONCENTRATIONS

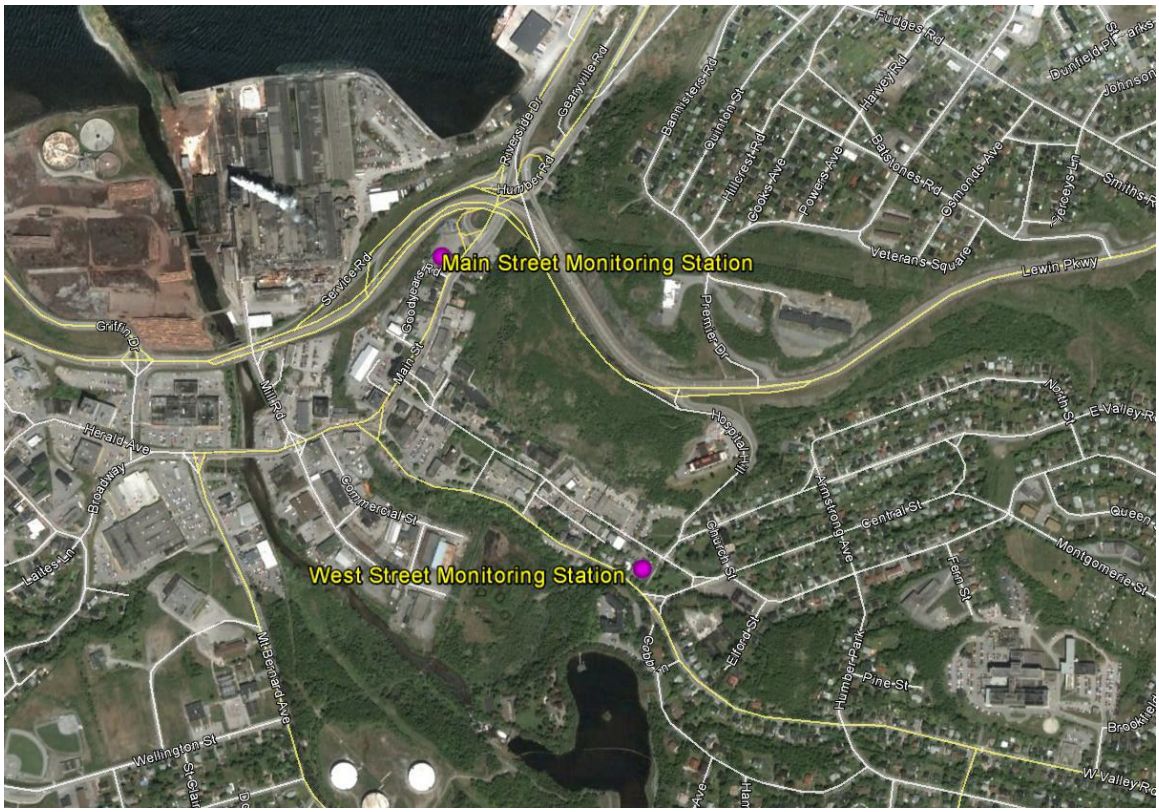


Rolling annual average of daily concentrations

4.5 Corner Brook Pulp and Paper

In 2015, Corner Brook Pulp and Paper (CBPP) operated monitoring stations at two locations in Corner Brook. These stations are installed to monitor the air quality near CBPP's paper mill operation and are located on Main Street and West Street. The locations of these monitoring stations are identified in Figure 4.5.1.

FIGURE 4.5.1 - CBPP AMBIENT MONITORING STATIONS



4.5.1 Main Street

The Main Street monitoring station is located at Hotel Corner Brook. The station monitors ambient levels of SO_2 and $PM_{2.5}$ on a continuous basis and TPM on a 1 day in 6 day cycle. For both $PM_{2.5}$ and TPM, the 24-hour ambient air criteria were exceeded on one occasion in 2015; the SO_2 criteria were not exceeded during the year. The TPM exceedance may have been related to roof repair work that was ongoing in the vicinity of the monitor.

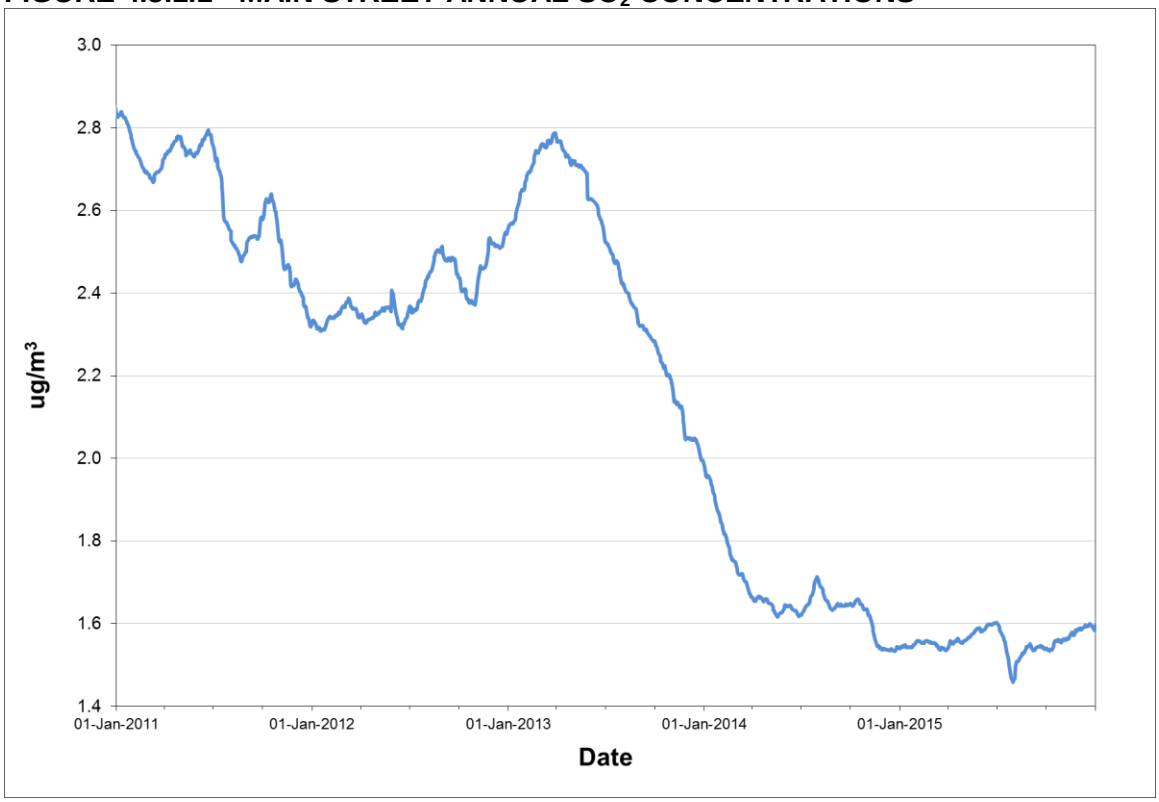
Tables 4.5.1.1 through 4.5.1.3 provide summary information on the level of air contaminants measured at the Main Street Station, while Figures 4.5.1.1 through 4.5.1.3 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.5.1.1 - MAIN STREET SO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average	Maximum 1-Hour	Maximum 3-Hour	Maximum 24-Hour	Regulatory Exceedances 1-Hour (>900)	Regulatory Exceedances 3-Hour (>600)	Regulatory Exceedances 24-Hour (>300)
2014	January	736	98.9%	1.8	5.9	3.5	3.0	0	0	0
	February	663	98.7%	1.6	3.6	3.3	2.4	0	0	0
	March	736	98.9%	1.6	4.5	3.9	2.9	0	0	0
	April	720	100.0%	1.5	14.1	6.9	2.4	0	0	0
	May	741	99.6%	1.3	19.0	16.9	4.3	0	0	0
	June	709	98.5%	1.1	2.3	2.0	1.5	0	0	0
	July	710	95.4%	2.6	4.7	4.6	4.1	0	0	0
	August	742	99.7%	0.9	2.8	2.1	1.8	0	0	0
	September	720	100.0%	1.6	5.1	4.1	2.4	0	0	0
	October	736	98.9%	1.4	12.7	4.8	2.3	0	0	0
	November	719	99.9%	1.3	4.9	3.2	2.7	0	0	0
	December	744	100.0%	1.7	3.6	3.5	2.8	0	0	0
Annual		8676	99.0%	1.5	19.0	16.9	4.3	0	0	0
2015	January	740	99.5%	2.0	5.5	4.5	3.0	0	0	0
	February	644	95.8%	1.6	4.6	4.3	3.9	0	0	0
	March	742	99.7%	1.5	4.6	3.3	2.4	0	0	0
	April	719	99.9%	1.7	4.3	4.0	2.9	0	0	0
	May	743	99.9%	1.6	4.4	3.8	3.0	0	0	0
	June	716	99.4%	1.3	4.3	3.2	1.9	0	0	0
	July	743	99.9%	0.9	6.3	2.8	1.4	0	0	0
	August	744	100.0%	2.0	60.2	50.6	11.1	0	0	0
	September	715	99.3%	1.5	5.2	5.2	3.4	0	0	0
	October	744	100.0%	1.7	4.6	3.9	3.2	0	0	0
	November	720	100.0%	1.6	4.7	3.8	3.0	0	0	0
	December	736	98.9%	1.8	4.7	4.6	4.2	0	0	0
Annual		8706	99.4%	1.6	60.2	50.6	11.1	0	0	0

Observations in ug/m^3

FIGURE 4.5.1.1 - MAIN STREET ANNUAL SO_2 CONCENTRATIONS



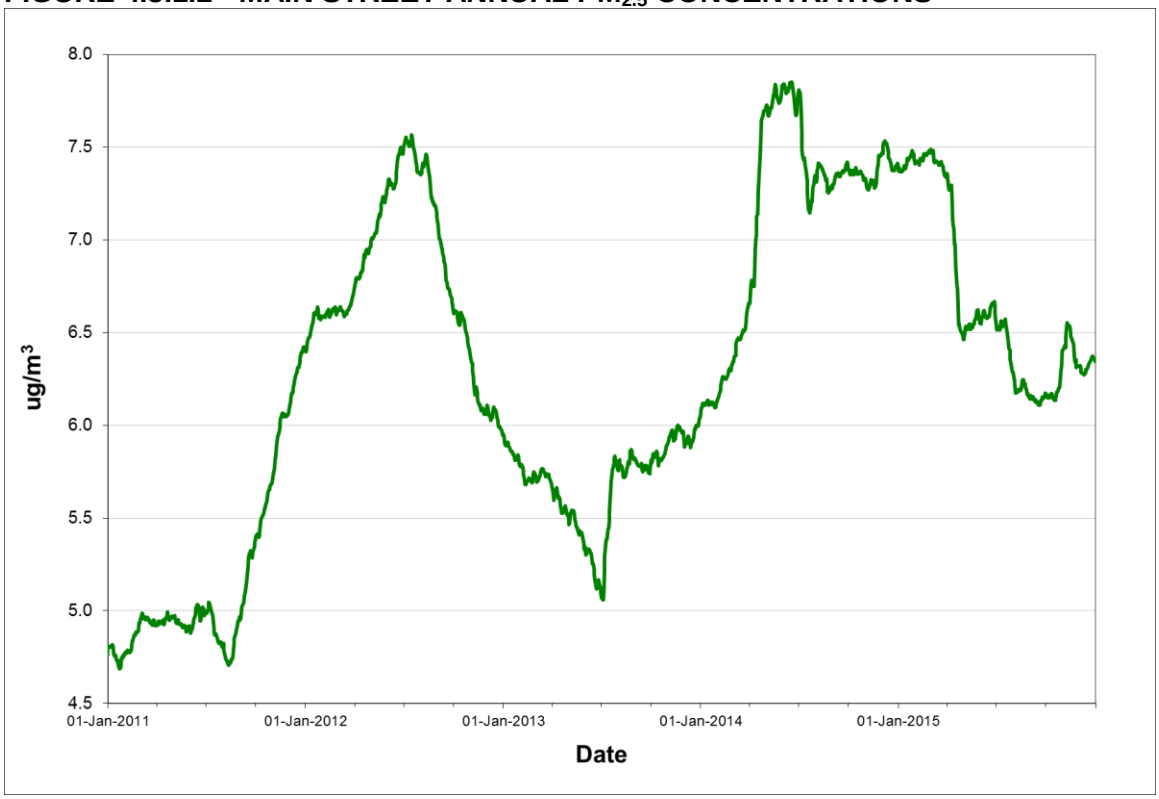
Rolling annual average of hourly concentrations

TABLE 4.5.1.2 - MAIN STREET $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	31	100.0%	5.5	10.4	0
	February	23	82.1%	7.6	16.1	0
	March	18	58.1%	9.7	25.7	1
	April	21	70.0%	21.5	48.4	8
	May	31	100.0%	7.0	15.0	0
	June	30	100.0%	6.0	16.8	0
	July	29	93.5%	8.6	21.1	0
	August	31	100.0%	6.1	18.6	0
	September	30	100.0%	5.2	12.9	0
	October	31	100.0%	4.9	10.2	0
	November	30	100.0%	6.4	21.3	0
	December	31	100.0%	5.7	15.8	0
Annual		336	92.1%	7.4	48.4	9
2015	January	26	83.9%	5.6	12.8	0
	February	28	100.0%	8.2	16.2	0
	March	31	100.0%	7.3	11.3	0
	April	30	100.0%	6.9	14.7	0
	May	31	100.0%	8.0	15.1	0
	June	30	100.0%	6.1	13.1	0
	July	31	100.0%	5.1	19.1	0
	August	31	100.0%	4.6	16.0	0
	September	30	100.0%	5.4	11.2	0
	October	31	100.0%	7.6	34.1	1
	November	30	100.0%	5.4	24.4	0
	December	13	41.9%	5.5	12.7	0
Annual		342	93.7%	6.3	34.1	1

Observations in ug/m^3

FIGURE 4.5.1.2 - MAIN STREET ANNUAL $PM_{2.5}$ CONCENTRATIONS



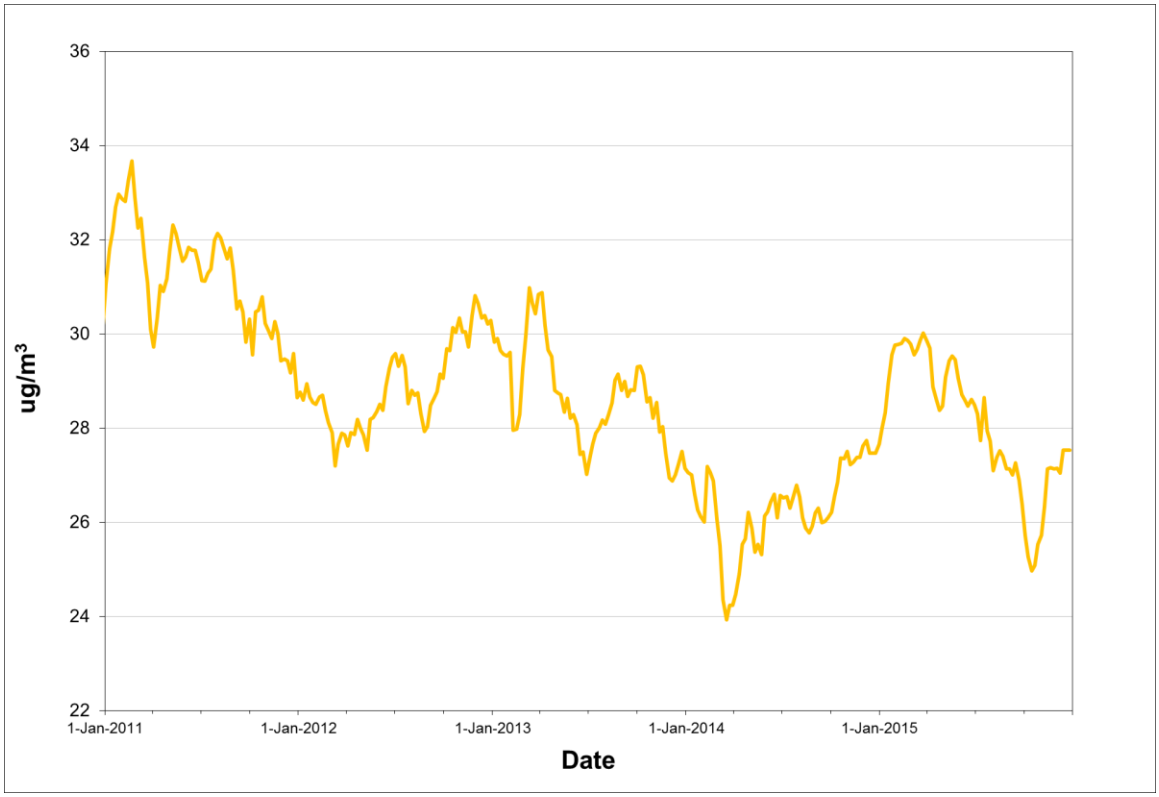
Rolling annual average of daily concentrations

TABLE 4.5.1.3 - MAIN STREET TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	5	100.0%	10.4	15.1	0
	February	5	100.0%	14.7	19.7	0
	March	5	100.0%	20.7	47.4	0
	April	5	100.0%	94.8	147.9	1
	May	5	100.0%	38.3	97.7	0
	June	5	100.0%	39.3	56.5	0
	July	5	100.0%	45.0	54.3	0
	August	5	100.0%	27.6	45.9	0
	September	5	100.0%	27.1	38.7	0
	October	5	100.0%	37.5	66.7	0
	November	5	100.0%	19.9	49.4	0
	December	4	66.7%	15.7	23.5	0
Annual		59	96.7%	27.7	147.9	1
2015	January	2	40.0%	18.7	23.8	0
	February	4	100.0%	14.4	22.9	0
	March	6	100.0%	20.5	63.2	0
	April	5	100.0%	55.7	86.9	0
	May	5	100.0%	48.1	94.4	0
	June	4	80.0%	32.3	39.5	0
	July	5	100.0%	33.4	225.8	1
	August	4	80.0%	20.7	32.7	0
	September	5	100.0%	20.0	26.9	0
	October	5	100.0%	26.3	43.8	0
	November	5	100.0%	38.2	61.6	0
	December	3	60.0%	23.3	29.4	0
Annual		53	88.3%	28.0	225.8	1

Observations in ug/m^3

FIGURE 4.5.1.3 - MAIN STREET ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.5.2 West Street

The West Street monitoring station is located at the Western Star building. The station monitors ambient levels TPM on a 1 day in 6 day cycle. The ambient air criterion was not exceeded in 2015.

Tables 4.5.2.1 provides summary information on the level of air contaminants measured at the West Street Station, while Figure 4.5.2.1 provides a graphical representation of the annual trend.

TABLE 4.5.2.1 - WEST STREET TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120 ug/m^3)
2014	January	5	100.0%	7.8	11.7	0
	February	5	100.0%	10.0	14.1	0
	March	4	80.0%	13.7	21.5	0
	April	5	100.0%	100.6	248.3	2
	May	3	60.0%	32.8	52.7	0
	June	5	100.0%	32.1	63.3	0
	July	5	100.0%	29.0	37.4	0
	August	5	100.0%	20.0	29.6	0
	September	4	80.0%	17.0	24.8	0
	October	5	100.0%	23.1	30.5	0
	November	5	100.0%	16.2	25.5	0
	December	4	66.7%	14.1	16.2	0
Annual		55	90.2%	20.6	248.3	2
2015	January	5	100.0%	11.7	16.8	0
	February	4	100.0%	12.6	17.6	0
	March	6	100.0%	12.3	24.7	0
	April	5	100.0%	55.3	89.6	0
	May	5	100.0%	47.8	106.8	0
	June	4	80.0%	19.7	28.8	0
	July	5	100.0%	23.0	47.4	0
	August	4	80.0%	21.9	33.3	0
	September	5	100.0%	24.8	39.3	0
	October	5	100.0%	20.5	26.2	0
	November	5	100.0%	32.6	77.8	0
	December	3	60.0%	23.9	43.1	0
Annual		56	93.3%	22.7	106.8	0

Observations in ug/m^3

FIGURE 4.5.2.1 - WEST STREET ANNUAL TPM CONCENTRATIONS

Rolling annual average of daily concentrations

4.6 VALE Newfoundland and Labrador Limited - Voisey's Bay

In 2015, VALE Newfoundland and Labrador Limited (VALE) operated monitoring stations at three locations at its Voisey's Bay mine site. These stations are installed to monitor the air quality near VALE's mining / processing operation and port activities, and are located at the Accommodation Unit, the Crusher and the Port Site near the concentrate storage facility. The locations of these monitoring stations are identified in Figure 4.6.1.

FIGURE 4.6.1 - VALE / VOISEY'S BAY AMBIENT MONITORING STATIONS

4.6.1 Accommodation Unit

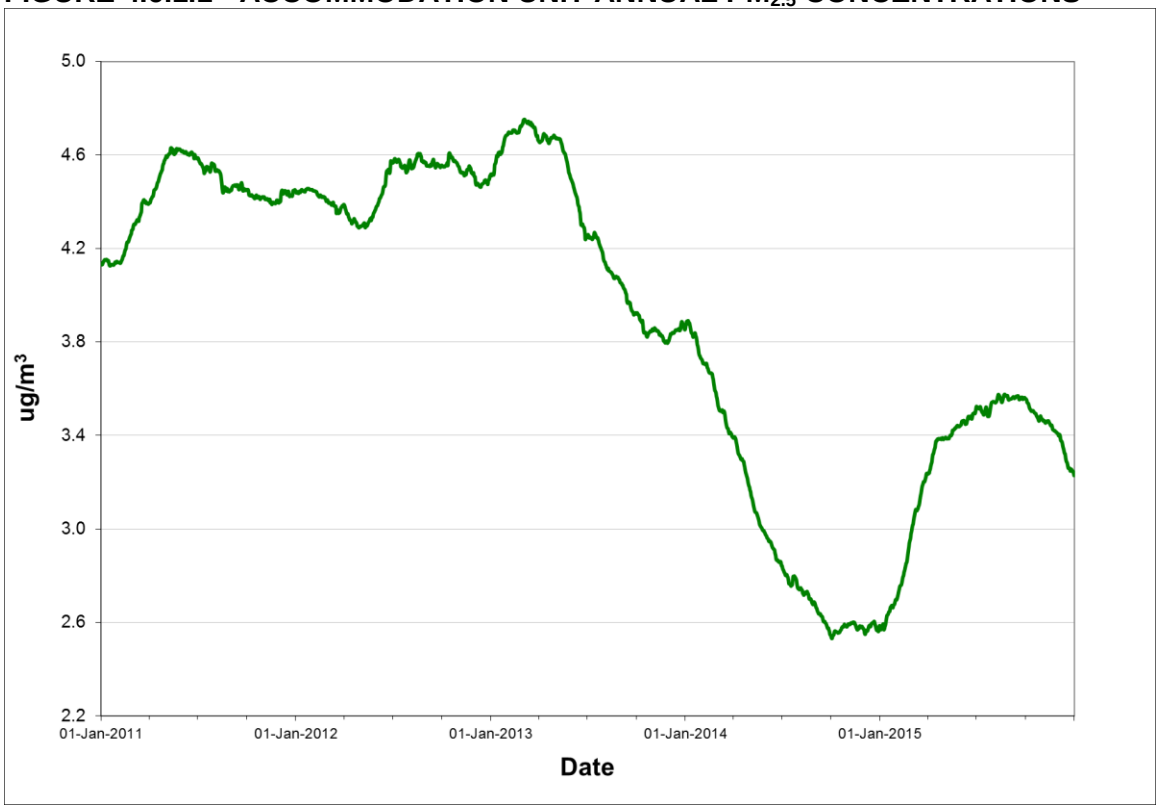
The Accommodation Unit station monitors the ambient levels of $PM_{2.5}$ and NO_x / NO_2 on a continuous basis. For all pollutants, the ambient air criteria were not exceeded on any occasion in 2015. Tables 4.6.1.1 through 4.6.1.2 provide summary information on the level of air contaminants measured at the Accommodation Unit, while Figures 4.6.1.1 through 4.6.1.2 provide a graphical representation of the annual trend of each pollutant.

TABLE 4.6.1.1 - ACCOMMODATION UNIT $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 ug/m^3)
2014	January	31	100.0%	4.9	15.1	0
	February	24	85.7%	3.1	5.1	0
	March	31	100.0%	2.7	6.3	0
	April	29	96.7%	2.3	4.3	0
	May	31	100.0%	0.8	3.2	0
	June	25	83.3%	0.8	4.3	0
	July	20	64.5%	1.5	8.1	0
	August	31	100.0%	1.9	5.9	0
	September	26	86.7%	0.8	3.0	0
	October	27	87.1%	3.0	5.0	0
	November	26	86.7%	3.2	5.2	0
	December	31	100.0%	5.3	7.8	0
Annual		332	91.0%	2.6	15.1	0
2015	January	31	100.0%	6.1	9.0	0
	February	28	100.0%	6.4	8.8	0
	March	31	100.0%	5.5	8.8	0
	April	30	100.0%	4.0	7.6	0
	May	31	100.0%	1.5	5.4	0
	June	27	90.0%	2.0	5.3	0
	July	27	87.1%	2.4	6.5	0
	August	26	83.9%	1.7	5.0	0
	September	30	100.0%	1.3	2.8	0
	October	28	90.3%	1.9	7.3	0
	November	30	100.0%	2.5	4.5	0
	December	31	100.0%	3.3	5.8	0
Annual		350	95.9%	3.2	9.0	0

Observations in ug/m^3

FIGURE 4.6.1.1 - ACCOMMODATION UNIT ANNUAL $PM_{2.5}$ CONCENTRATIONS



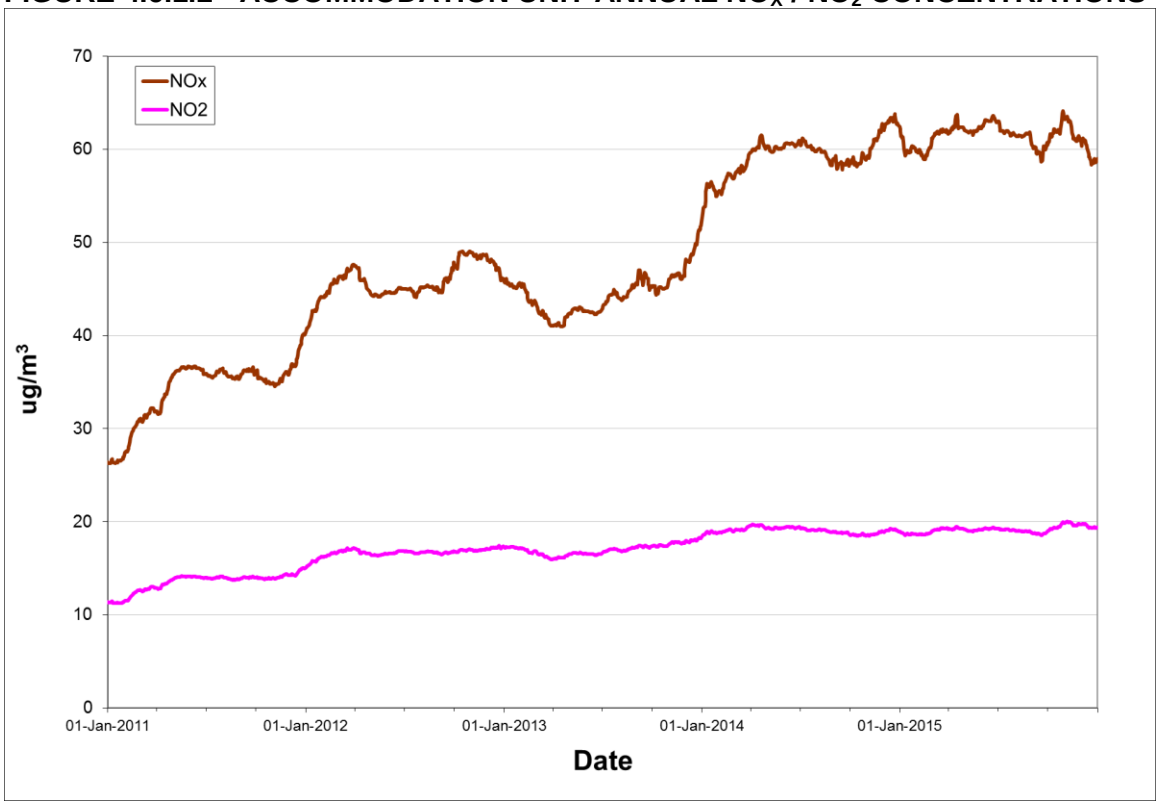
Rolling annual average of daily concentrations

TABLE 4.6.1.2 - ACCOMMODATION UNIT NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	720	96.8%	113.4	34.4	840.4	108.5	425.1	65.4	0	0
	February	666	99.1%	85.6	28.1	524.5	91.8	218.9	43.3	0	0
	March	744	100.0%	68.0	21.8	634.5	76.3	187.7	32.3	0	0
	April	714	99.2%	50.0	15.5	792.5	75.5	283.4	35.4	0	0
	May	726	97.6%	25.4	11.8	380.3	85.1	145.1	39.3	0	0
	June	685	95.1%	24.2	9.6	333.8	50.2	81.2	24.1	0	0
	July	718	96.5%	30.2	8.0	440.6	48.2	203.5	25.1	0	0
	August	741	99.6%	28.6	10.4	568.8	104.7	239.3	33.3	0	0
	September	697	96.8%	65.5	14.0	730.3	73.2	280.5	35.1	0	0
	October	712	95.7%	53.8	14.7	545.0	84.0	243.1	43.5	0	0
	November	694	96.4%	93.2	26.3	875.3	106.5	280.9	46.2	0	0
	December	744	100.0%	111.4	32.4	886.4	113.6	225.6	51.6	0	0
Annual		8561	97.7%	62.4	18.9	886.4	113.6	425.1	65.4	0	0
2015	January	735	98.8%	81.8	31.0	472.7	107.0	166.0	44.9	0	0
	February	671	99.9%	100.1	31.8	728.9	109.9	232.8	44.0	0	0
	March	738	99.2%	76.3	24.8	546.1	118.4	162.3	46.4	0	0
	April	706	98.1%	54.6	15.2	801.1	129.8	320.2	61.6	0	0
	May	728	97.8%	27.5	11.1	457.5	83.8	109.4	36.6	0	0
	June	698	96.9%	34.3	11.7	484.6	73.3	166.6	38.9	0	0
	July	699	94.0%	11.9	5.5	351.1	54.6	71.3	17.9	0	0
	August	699	94.0%	15.5	6.8	321.8	61.1	58.4	22.7	0	0
	September	692	96.1%	62.6	15.4	793.8	75.8	305.0	40.3	0	0
	October	736	98.9%	87.4	24.8	686.3	98.9	296.2	56.2	0	0
	November	719	99.9%	66.2	25.1	891.5	96.7	171.3	49.9	0	0
	December	739	99.3%	86.8	28.6	1014.3	99.0	339.7	60.5	0	0
Annual		8560	97.7%	59.0	19.4	1014.3	129.8	339.7	61.6	0	0

Observations in ug/m^3

FIGURE 4.6.1.2 - ACCOMMODATION UNIT ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

4.6.2 Crusher Site

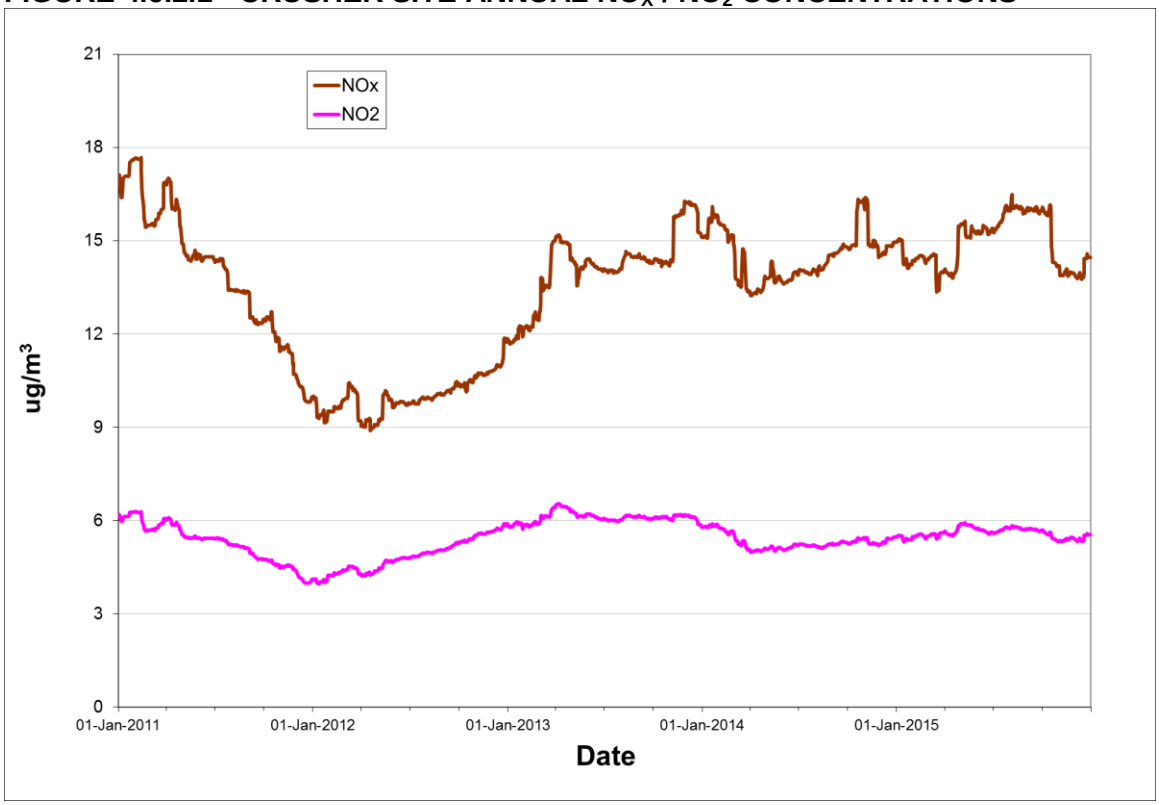
The Crusher Site station monitors the ambient levels of NO_x / NO_2 on a continuous basis. The ambient air criteria were not exceeded on any occasion in 2015. Table 4.6.2.1 provides summary information on the level of air contaminants measured at the Crusher Site, while Figure 4.6.2.1 provides a graphical representation of the annual trend.

TABLE 4.6.2.1 - CRUSHER SITE NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	714	96.0%	20.6	6.2	512.9	74.2	187.0	33.4	0	0
	February	640	95.2%	6.5	3.6	183.6	54.0	41.0	20.5	0	0
	March	713	95.8%	18.1	4.3	700.6	69.0	248.0	37.9	0	0
	April	691	96.0%	14.4	6.1	284.2	72.3	90.8	22.3	0	0
	May	716	96.2%	15.9	6.5	456.5	49.9	169.5	21.5	0	0
	June	668	92.8%	10.4	5.9	249.0	43.4	39.3	12.3	0	0
	July	710	95.4%	11.2	4.7	297.5	38.4	64.0	15.0	0	0
	August	713	95.8%	19.3	6.5	590.7	37.6	104.6	13.8	0	0
	September	675	93.8%	11.0	4.8	391.7	55.6	52.1	13.4	0	0
	October	706	94.9%	29.4	7.5	677.2	73.1	421.9	46.2	0	0
	November	687	95.4%	12.1	4.4	789.0	72.6	153.1	25.4	0	0
	December	686	92.2%	8.8	4.8	363.1	75.1	57.7	19.9	0	0
Annual		8319	95.0%	14.9	5.5	789.0	75.1	421.9	46.2	0	0
2015	January	709	95.3%	13.7	6.2	561.4	78.8	131.8	33.4	0	0
	February	645	96.0%	7.1	3.8	195.5	58.5	38.7	19.6	0	0
	March	702	94.4%	14.3	6.1	673.0	102.9	183.8	40.6	0	0
	April	672	93.3%	32.1	9.0	689.2	69.4	365.7	40.8	0	0
	May	714	96.0%	13.6	5.0	793.2	67.6	103.2	12.9	0	0
	June	520	72.2%	10.5	4.1	236.8	42.2	59.3	12.8	0	0
	July	384	51.6%	20.1	6.9	355.2	43.6	71.2	16.6	0	0
	August	684	91.9%	18.7	6.1	319.7	50.8	135.4	24.8	0	0
	September	662	91.9%	11.4	4.5	233.6	35.8	42.5	14.7	0	0
	October	680	91.4%	9.4	3.6	607.8	44.8	58.9	14.6	0	0
	November	657	91.3%	8.8	5.1	215.3	62.0	40.0	24.4	0	0
	December	666	89.5%	15.2	6.3	706.2	83.1	154.5	33.6	0	0
Annual		7695	87.8%	14.5	5.5	793.2	102.9	365.7	40.8	0	0

Observations in ug/m^3

FIGURE 4.6.2.1 - CRUSHER SITE ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

4.6.3 Port Site

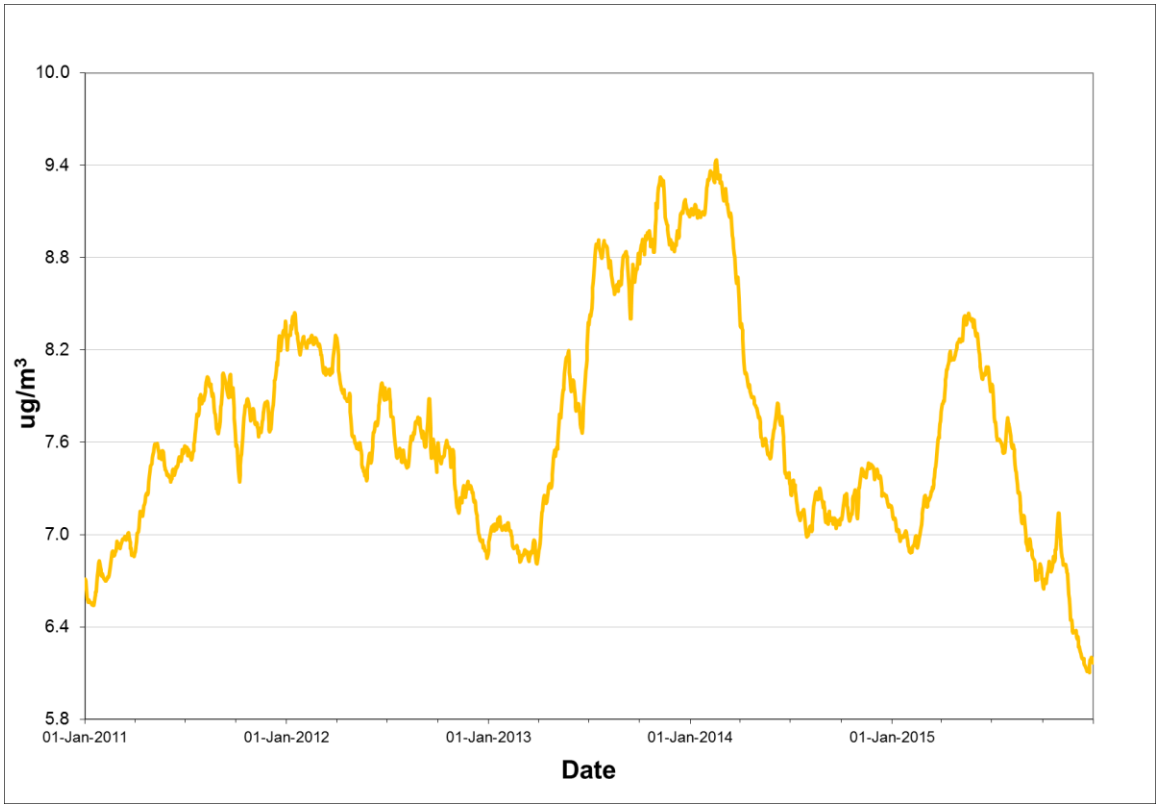
The Port Site station monitors the ambient levels of TPM on a continuous basis. The 24-hour ambient air criterion was exceeded on three occasions in October 2015 likely owing to dry conditions and high winds. Table 4.6.3.1 provides summary information on the level of air contaminants measured at the Port Site, while Figure 4.6.3.1 provides a graphical representation of the annual trend.

TABLE 4.6.3.1 - PORT SITE TPM SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>120ug/m^3)
2014	January	31	100.0%	8.0	42.5	0
	February	26	92.9%	3.7	281.0	1
	March	29	93.5%	3.4	49.2	0
	April	24	80.0%	4.2	38.0	0
	May	31	100.0%	5.8	53.9	0
	June	30	100.0%	10.4	104.6	0
	July	31	100.0%	6.9	52.6	0
	August	31	100.0%	14.2	61.0	0
	September	30	100.0%	11.1	206.4	2
	October	26	83.9%	8.9	132.0	1
	November	30	100.0%	10.3	174.9	1
	December	31	100.0%	6.0	98.3	0
Annual		350	95.9%	7.2	281.0	5
2015	January	25	80.6%	5.0	11.2	0
	February	28	100.0%	6.6	13.2	0
	March	28	90.3%	8.5	46.0	0
	April	18	60.0%	9.8	30.7	0
	May	30	96.8%	6.5	105.5	0
	June	29	96.7%	6.0	25.5	0
	July	30	96.8%	4.9	67.5	0
	August	30	96.8%	4.7	21.1	0
	September	30	100.0%	7.0	73.0	0
	October	31	100.0%	15.3	445.2	3
	November	30	100.0%	3.2	11.3	0
	December	31	100.0%	4.2	28.8	0
Annual		340	93.2%	6.7	445.2	3

Observations in ug/m^3

FIGURE 4.6.3.1 - PORT SITE ANNUAL TPM CONCENTRATIONS



Rolling annual average of daily concentrations

4.7 VALE Newfoundland and Labrador - Long Harbour

VALE operates a monitoring network in the Long Harbour / Mt. Arlington Heights area to monitor the air quality near the Hydromet Nickel Processing facility. The network monitors levels of NO_x / NO_2 as well as $PM_{2.5}$. In 2015, VALE operated three stations; near the Community Centre in Long Harbour, along the Main Road in Long harbour, and near the Access Road to the Hydromet facility. The location of the stations is shown in Figure 4.7.1.

FIGURE 4.7.1 - VALE / LONG HARBOUR AMBIENT MONITORING STATIONS

4.7.1 Community Centre (AM1)

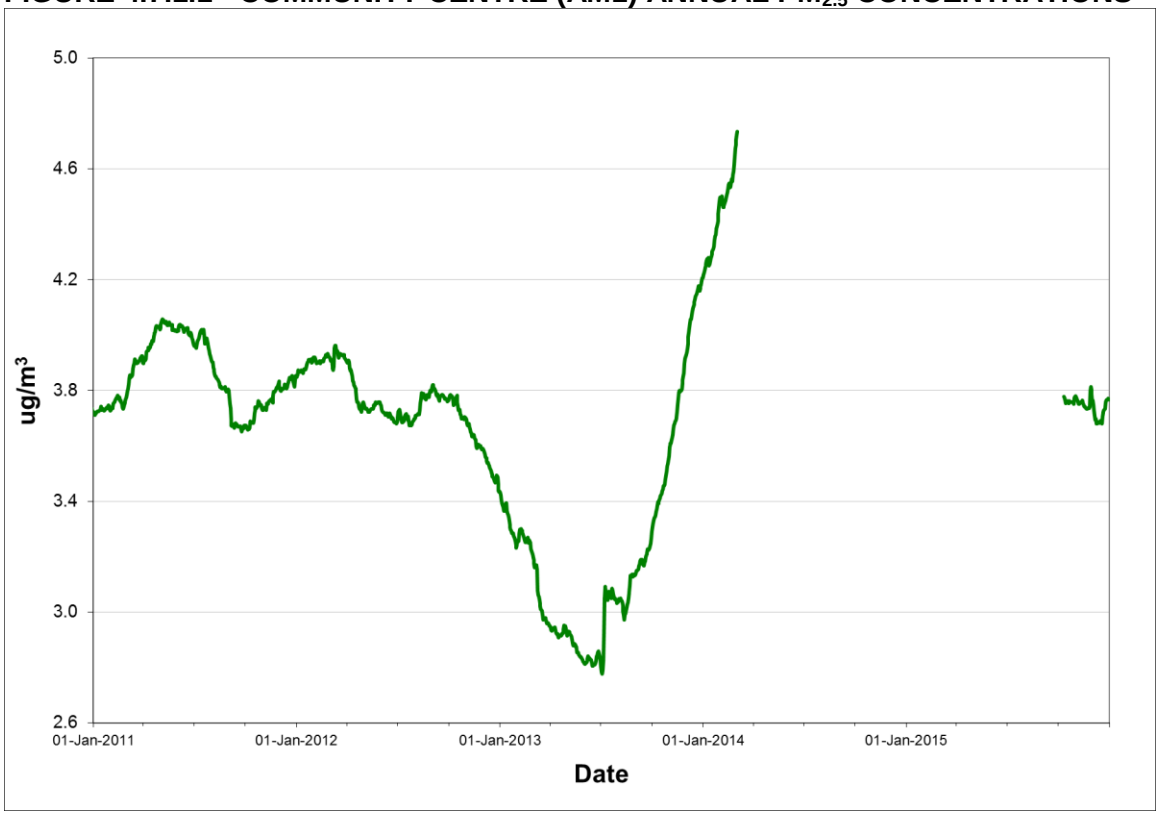
The Community Centre (AM1) station was the first station installed in the area by VALE and monitors the ambient levels of $PM_{2.5}$ and NO_x / NO_2 on a continuous basis. Neither the 24-hour ambient air criterion for $PM_{2.5}$ nor the ambient air criteria for NO_x / NO_2 was exceeded in 2015. Tables 4.7.1.1 and 4.7.1.2 provide summary information on the level of air contaminants measured at the Community Centre (AM1) site, while Figures 4.7.1.1 and 4.7.1.2 provide a graphical representation of the annual trend of $PM_{2.5}$ and NO_x / NO_2.

TABLE 4.7.1.1 - COMMUNITY CENTRE (AM1) $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	9	29.0%	8.1	11.7	0
	February	6	21.4%	8.6	9.6	0
	March	7	22.6%	8.1	10.1	0
	April	6	20.0%	10.1	15.1	0
	May	4	12.9%	4.9	7.5	0
	June	0	0.0%			
	July	0	0.0%			
	August	0	0.0%			
	September	0	0.0%			
	October	0	0.0%			
	November	3	10.0%	6.0	7.2	0
	December	17	54.8%	6.1	10.9	0
Annual		52	14.2%	7.4	15.1	0
2015	January	23	74.2%	6.6	25.0	0
	February	28	100.0%	4.8	11.0	0
	March	14	45.2%	3.2	5.5	0
	April	29	96.7%	5.0	19.7	0
	May	30	96.8%	4.9	13.9	0
	June	30	100.0%	1.9	4.2	0
	July	31	100.0%	2.6	9.3	0
	August	29	93.5%	2.3	6.3	0
	September	29	96.7%	2.3	8.8	0
	October	27	87.1%	3.1	9.6	0
	November	28	93.3%	4.1	22.3	0
	December	31	100.0%	4.8	13.3	0
Annual		329	90.1%	3.8	25.0	0

Observations in ug/m^3

FIGURE 4.7.1.1 - COMMUNITY CENTRE (AM1) ANNUAL $PM_{2.5}$ CONCENTRATIONS



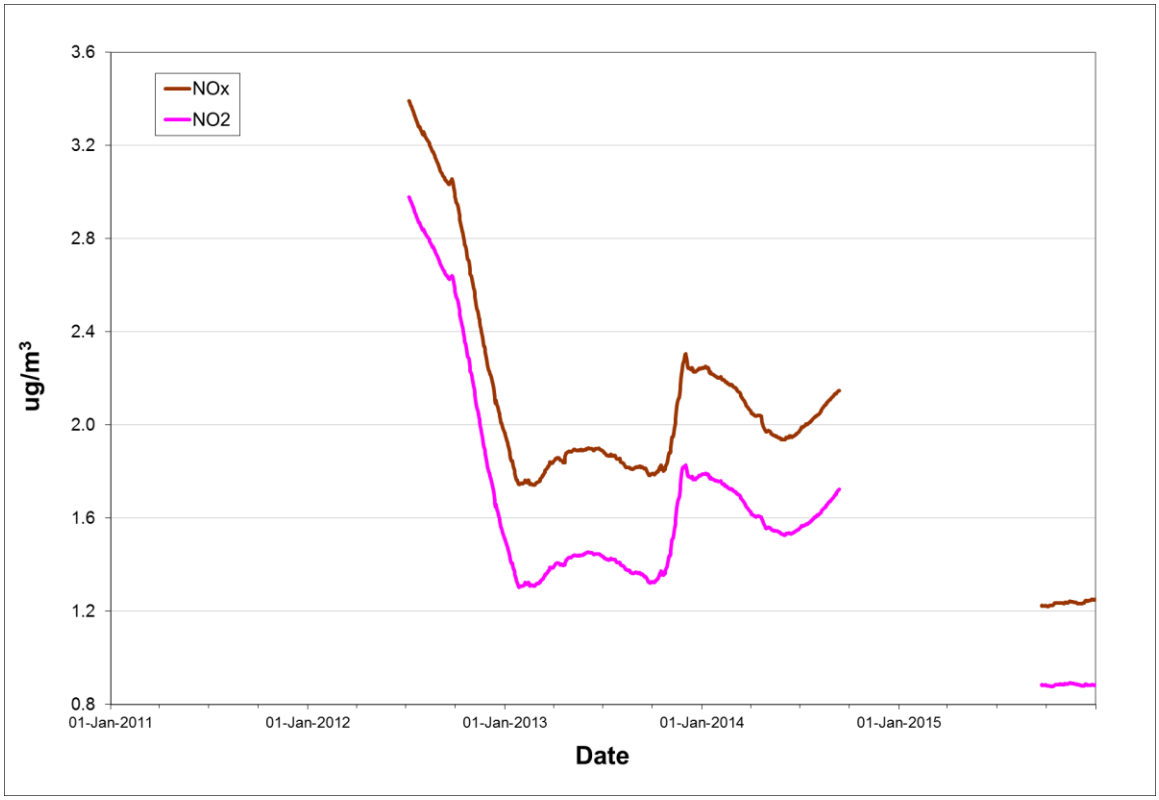
Rolling annual average of daily concentrations

TABLE 4.7.1.2 - COMMUNITY CENTRE (AM1) NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average		Maximums 1-Hour		Maximums 24-Hour		Exceedances 1-Hour	Exceedances 24-Hour
				NO_x	NO_2	NO_x	NO_2	NO_x	NO_2	(>400)	(>200)
2014	January	708	95.2%	1.3	1.0	11.8	10.4	2.8	2.3	0	0
	February	672	100.0%	1.2	0.9	22.9	9.6	2.6	1.6	0	0
	March	738	99.2%	1.3	0.9	8.0	7.1	2.3	1.8	0	0
	April	720	100.0%	1.2	0.9	5.6	4.1	2.2	1.7	0	0
	May	744	100.0%	1.1	0.8	14.0	6.4	2.0	1.4	0	0
	June	368	51.1%	1.5	1.0	24.9	13.8	3.7	2.2	0	0
	July	0	0.0%								
	August	0	0.0%								
	September	0	0.0%								
	October	0	0.0%								
	November	0	0.0%								
	December	340	45.7%	1.1	0.7	8.2	6.2	1.9	1.4	0	0
Annual		4290	49.0%	1.2	0.9	24.9	13.8	3.7	2.3	0	0
2015	January	702	94.4%	1.3	1.0	11.5	9.9	2.5	2.0	0	0
	February	670	99.7%	1.4	1.0	8.6	7.2	2.6	2.2	0	0
	March	712	95.7%	1.2	0.9	10.0	7.1	2.5	2.2	0	0
	April	718	99.7%	1.0	0.8	9.8	7.3	1.5	1.2	0	0
	May	743	99.9%	1.1	0.7	13.8	9.2	2.4	1.9	0	0
	June	712	98.9%	1.2	0.9	9.7	7.0	2.2	1.8	0	0
	July	742	99.7%	1.1	0.7	8.9	5.1	1.7	1.2	0	0
	August	744	100.0%	1.4	1.1	11.5	9.3	2.9	2.3	0	0
	September	699	97.1%	1.4	0.9	7.0	5.5	1.9	1.4	0	0
	October	736	98.9%	1.3	0.9	11.2	9.4	2.5	1.8	0	0
	November	716	99.4%	1.2	0.9	11.9	7.0	2.7	2.3	0	0
	December	741	99.6%	1.4	0.8	8.5	6.7	3.0	2.2	0	0
Annual		8635	98.6%	1.3	0.9	13.8	9.9	3.0	2.3	0	0

Observations in ug/m^3

FIGURE 4.7.1.2 - COMMUNITY CENTRE (AM1) ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

4.7.2 Main Road (AM2)

The Main Road (AM2) station monitors the ambient levels of $PM_{2.5}$ and NO_x / NO_2 on a continuous basis. Neither the $PM_{2.5}$ nor the NO_x / NO_2 ambient air criteria were exceeded in 2015. Tables 4.7.2.1 and 4.7.2.2 provide summary information on the level of air contaminants measured at the Main Road (AM2) site, while Figures 4.7.2.1 and 4.7.2.2 provide a graphical representation of the annual trend for pollutants.

Owing to prolonged maintenance related issues, as in 2014, significant volumes of $PM_{2.5}$ data collected at the station was again invalidated in 2015. In late December, the maintenance issues were resolved and valid data was again being recorded.

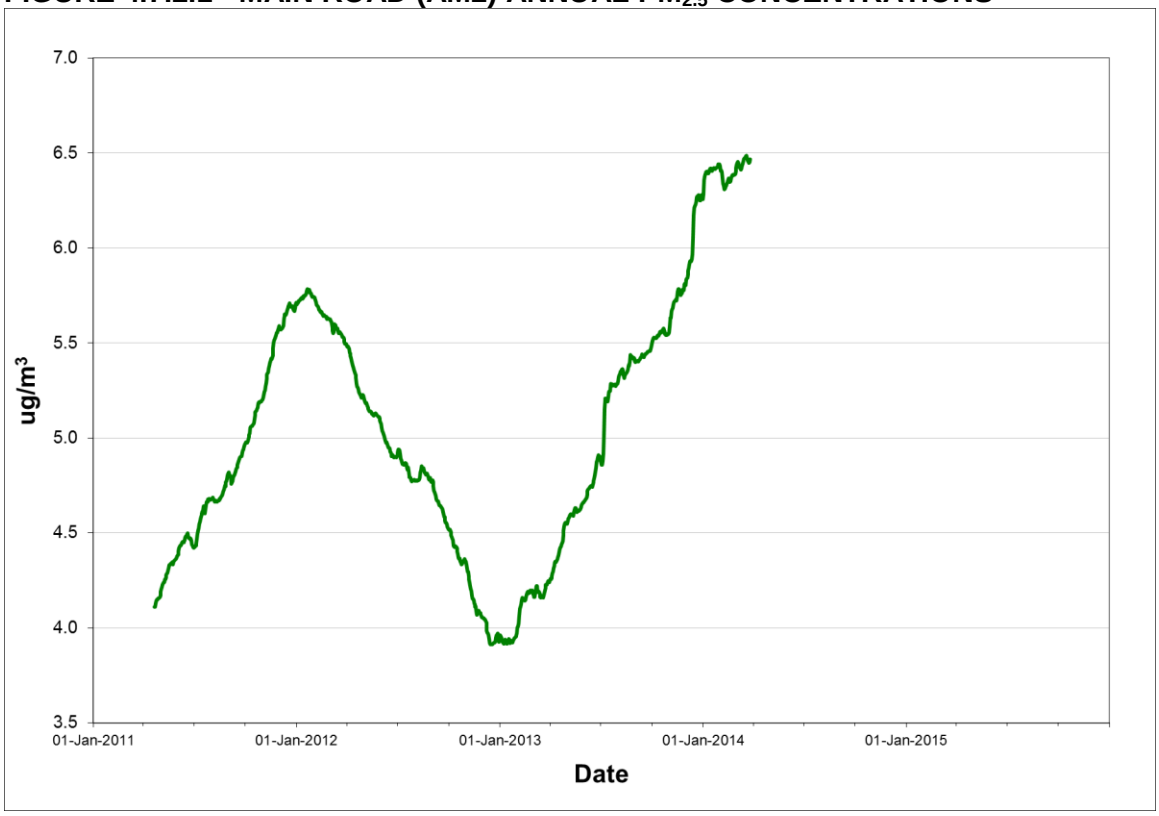
Though presented for illustrative purposes, the averaging contained within Table 4.7.2.1 does not meet established criteria.

TABLE 4.7.2.1 - MAIN ROAD (AM2) $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	3	9.7%	18.1	30.5	1
	February	0	0.0%			
	March	0	0.0%			
	April	0	0.0%			
	May	0	0.0%			
	June	0	0.0%			
	July	12	38.7%	7.0	16.4	0
	August	31	100.0%	6.4	16.5	0
	September	18	60.0%	8.1	23.8	0
	October	0	0.0%			
	November	0	0.0%			
	December	15	48.4%	3.4	5.6	0
Annual		79	21.6%	6.7	30.5	1
2015	January	31	100.0%	3.9	7.5	0
	February	26	92.9%	4.8	10.9	0
	March	29	93.5%	3.4	8.2	0
	April	6	20.0%	5.5	9.8	0
	May	3	9.7%	7.8	11.9	0
	June	4	13.3%	3.5	3.9	0
	July	4	12.9%	3.9	4.9	0
	August	13	41.9%	6.6	9.1	0
	September	0	0.0%			
	October	1	3.2%	2.3	2.3	0
	November	11	36.7%	3.8	5.3	0
	December	20	64.5%	4.3	5.9	0
Annual		148	40.5%	4.4	11.9	0

Observations in ug/m^3

FIGURE 4.7.2.1 - MAIN ROAD (AM2) ANNUAL $PM_{2.5}$ CONCENTRATIONS



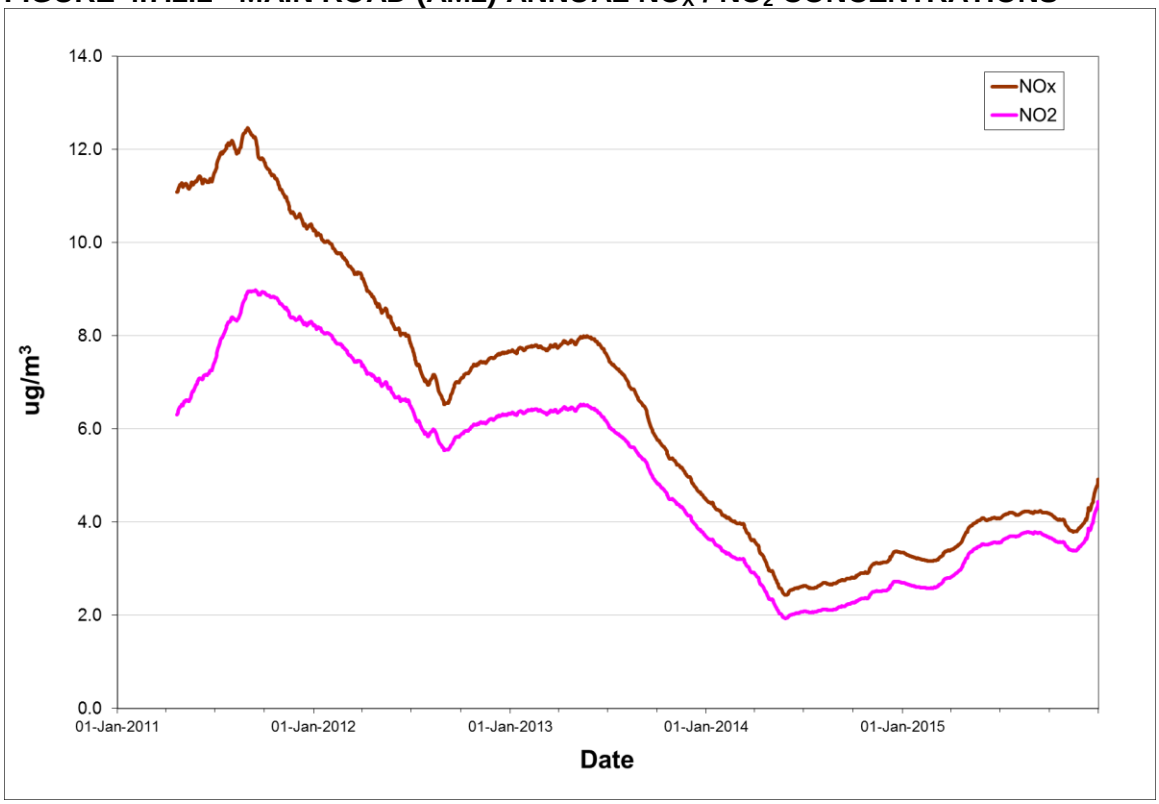
Rolling annual average of daily concentrations

TABLE 4.7.2.2 - MAIN ROAD (AM2) NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	90	12.1%	2.1	1.7	11.7	7.7	2.5	2.0	0	0
	February	253	37.6%	2.0	1.5	8.0	7.4	3.1	2.6	0	0
	March	603	81.0%	2.0	2.0	12.7	10.2	3.9	3.6	0	0
	April	565	78.5%	2.2	2.0	9.6	8.0	3.8	3.3	0	0
	May	743	99.9%	2.7	2.4	16.7	10.2	4.9	4.0	0	0
	June	718	99.7%	3.8	3.0	58.3	22.0	10.8	7.0	0	0
	July	744	100.0%	3.6	2.6	13.5	8.1	6.3	3.9	0	0
	August	740	99.5%	2.8	2.0	11.4	6.9	5.7	4.3	0	0
	September	719	99.9%	3.8	3.3	18.8	9.9	7.1	5.5	0	0
	October	744	100.0%	4.6	3.6	35.8	21.6	19.5	12.3	0	0
	November	711	98.8%	4.0	3.1	30.9	19.3	13.3	8.4	0	0
	December	698	93.8%	4.1	3.3	27.9	23.3	17.1	14.4	0	0
Annual		7328	83.7%	3.3	2.7	58.3	23.3	19.5	14.4	0	0
2015	January	744	100.0%	1.8	1.6	10.4	9.7	4.8	4.1	0	0
	February	670	99.7%	2.2	2.1	14.4	12.2	5.9	5.4	0	0
	March	736	98.9%	4.9	4.7	15.6	11.7	8.8	8.5	0	0
	April	715	99.3%	7.2	7.2	24.0	23.5	13.0	12.7	0	0
	May	737	99.1%	6.1	5.9	27.0	26.6	20.2	19.8	0	0
	June	714	99.2%	3.8	3.4	17.7	13.0	6.2	5.8	0	0
	July	744	100.0%	4.5	4.1	14.7	10.9	8.3	7.1	0	0
	August	737	99.1%	3.3	2.9	16.9	14.5	8.1	6.8	0	0
	September	679	94.3%	3.7	2.2	18.1	16.8	9.9	8.8	0	0
	October	608	81.7%	1.5	1.3	11.1	10.1	2.7	2.3	0	0
	November	658	91.4%	3.5	3.1	31.6	27.3	13.2	11.7	0	0
	December	741	99.6%	15.5	13.9	60.1	52.9	32.5	28.9	0	0
Annual		8483	96.8%	4.9	4.4	60.1	52.9	32.5	28.9	0	0

Observations in ug/m^3

FIGURE 4.7.2.2 - MAIN ROAD (AM2) ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations

4.7.3 Access Road (AM3)

The Access Road (AM3) station was installed in June 2011 near the VALE Inco security gate and monitors the ambient levels of $PM_{2.5}$ and NO_x / NO_2 on a continuous basis. The $PM_{2.5}$ ambient air standards were not exceeded in 2015 nor were the NO_x / NO_2 standards. Tables 4.7.3.1 and 4.7.3.2 provide summary information on the level of air contaminants measured at the Access Road (AM3) site while Figures 4.7.3.1 and 4.7.3.2 provide a graphical representation of the annual trend in the data.

Owing to prolonged maintenance related issues, significant volumes of $PM_{2.5}$ data collected at the station was again invalidated as it was in 2014. In late December, the maintenance issues were resolved and valid data was again being recorded. In the case of NO_x / NO_2 the monitor, it was removed from service in 2014 but replaced in January 2015.

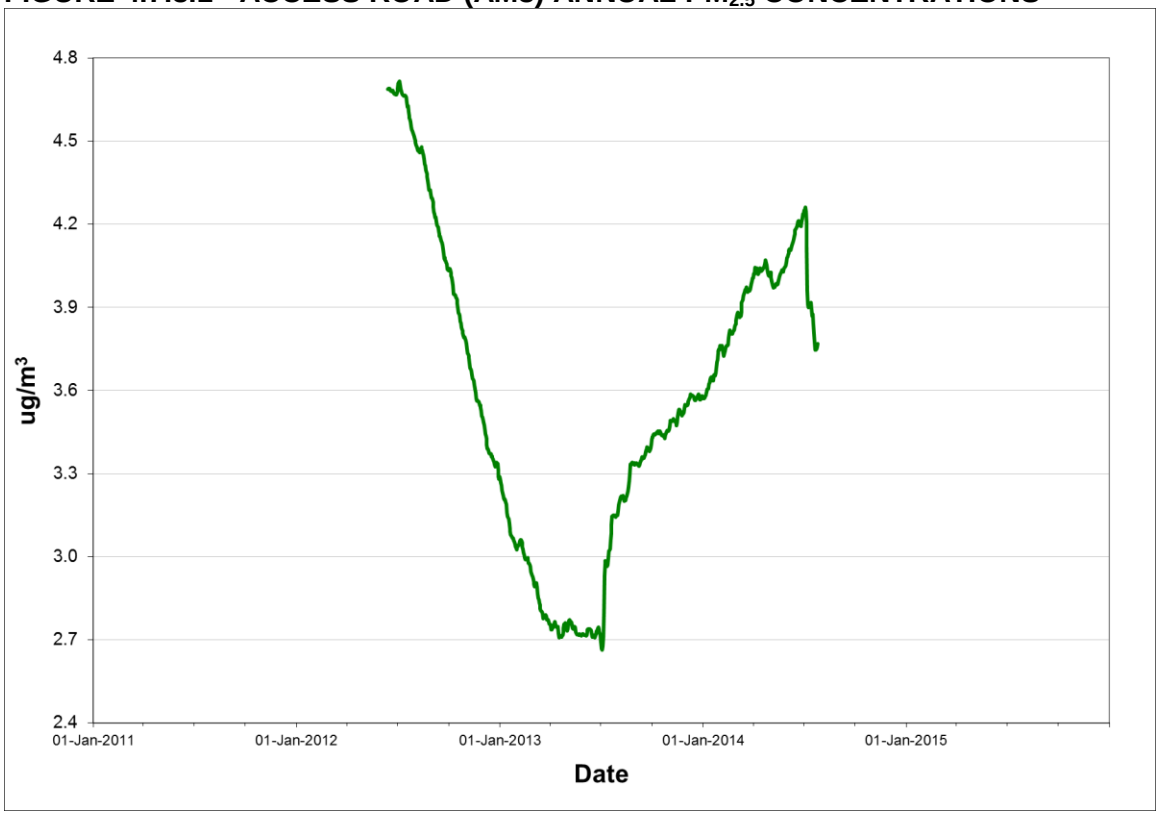
Though presented for illustrative purposes, the averaging contained within Tables 4.7.3.1 for 2015 does not meet established criteria.

TABLE 4.7.3.1 - ACCESS ROAD (AM3) $PM_{2.5}$ SUMMARY 2014 & 2015

Year	Month	# Valid Days	% Valid Days	Average	Maximum 24-Hour	Regulatory Exceedances (>25 µg/m^3)
2014	January	28	90.3%	5.1	10.0	0
	February	28	100.0%	4.5	10.7	0
	March	30	96.8%	5.1	14.9	0
	April	21	70.0%	5.1	12.4	0
	May	17	54.8%	3.8	6.8	0
	June	0	0.0%			
	July	1	3.2%	1.7	1.7	0
	August	9	29.0%	3.6	5.7	0
	September	17	56.7%	3.5	7.6	0
	October	13	41.9%	2.6	4.4	0
	November	24	80.0%	3.7	8.5	0
	December	22	71.0%	6.0	23.4	0
Annual		210	57.5%	4.5	23.4	0
2015	January	28	90.3%	6.4	9.7	0
	February	28	100.0%	7.3	13.9	0
	March	31	100.0%	7.4	12.3	0
	April	15	50.0%	7.4	11.1	0
	May	5	16.1%	7.4	11.0	0
	June	3	10.0%	4.8	6.8	0
	July	7	22.6%	5.5	9.8	0
	August	18	58.1%	9.1	12.0	0
	September	3	10.0%	9.8	11.4	0
	October	0	0.0%	0.0	0.0	0
	November	1	3.3%	4.6	4.6	0
	December	17	54.8%	6.2	8.4	0
Annual		156	42.7%	7.2	13.9	0

Observations in ug/m^3

FIGURE 4.7.3.1 - ACCESS ROAD (AM3) ANNUAL $PM_{2.5}$ CONCENTRATIONS



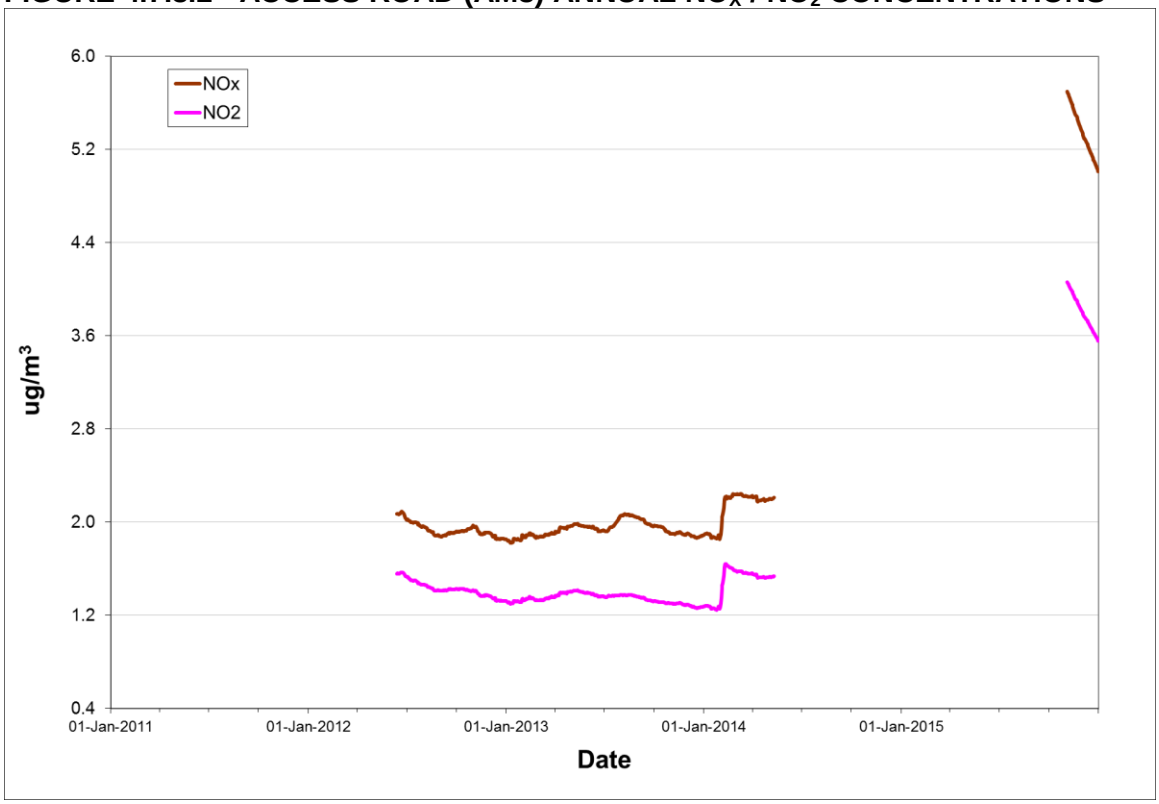
Rolling annual average of daily concentrations

TABLE 4.7.3.2 - ACCESS ROAD (AM3) NO_X / NO_2 SUMMARY 2014 & 2015

Year	Month	# Valid Hours	% Valid Hours	Average NO_x	Average NO_2	Maximums 1-Hour NO_x	Maximums 1-Hour NO_2	Maximums 24-Hour NO_x	Maximums 24-Hour NO_2	Exceedances 1-Hour (>400)	Exceedances 24-Hour (>200)
2014	January	582	78.2%	2.4	1.9	24.0	22.5	9.6	8.9	0	0
	February	529	78.7%	8.0	6.7	42.7	41.8	34.6	34.0	0	0
	March	47	6.3%	2.5	0.3	4.3	0.5	1.6	0.2	0	0
	April	0	0.0%								
	May	0	0.0%								
	June	0	0.0%								
	July	0	0.0%								
	August	0	0.0%								
	September	0	0.0%								
	October	0	0.0%								
	November	0	0.0%								
	December	0	0.0%								
Annual		1158	13.2%	5.0	4.0	42.7	41.8	34.6	34.0	0	0
2015	January	253	34.0%	10.2	4.6	42.9	26.0	17.8	10.4	0	0
	February	635	94.5%	7.4	6.0	75.1	33.1	18.2	15.2	0	0
	March	710	95.4%	8.7	7.5	90.0	56.3	19.1	16.9	0	0
	April	681	94.6%	6.2	5.5	61.1	44.8	15.7	13.5	0	0
	May	716	96.2%	3.0	2.4	30.9	22.7	6.2	5.0	0	0
	June	671	93.2%	3.4	2.3	49.2	34.2	9.9	7.6	0	0
	July	710	95.4%	6.8	5.3	346.4	301.4	56.4	48.4	0	0
	August	715	96.1%	4.2	2.8	65.2	37.7	14.0	11.5	0	0
	September	681	94.6%	2.6	1.5	272.0	101.5	22.7	10.5	0	0
	October	713	95.8%	7.8	3.4	242.0	89.3	45.0	16.9	0	0
	November	687	95.4%	1.5	1.0	27.2	19.4	4.8	3.2	0	0
	December	710	95.4%	1.5	1.0	48.8	17.5	4.3	2.3	0	0
Annual		7882	90.0%	5.0	3.6	346.4	301.4	56.4	48.4	0	0

Observations in ug/m^3

FIGURE 4.7.3.2 - ACCESS ROAD (AM3) ANNUAL NO_X / NO_2 CONCENTRATIONS



Rolling annual average of hourly concentrations