NORTHERN PULP
NOVA SCOTIA CORPORATION

Updated Ambient Air Monitoring Plan

September 2019

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PREFACE

Northern Pulp Nova Scotia currently operates a Kraft pulp mill located at Abercrombie Point, Pictou County, Nova Scotia. The facility has been in operation since September 1967 and currently produces between 280,000 and 300,000 air dried metric tonnes (ADMT) of bleached Kraft pulp per year. Northern Pulp is planning to replace their current effluent treatment facility (ETF) with an activated sludge treatment (AST) system located within the site boundaries of the mill. Additionally Northern Pulp is planning to co-combust a mixture of hog fuel and biosludge obtained from the new AST system in the facility power boiler. The replacement ETF and co-combustion of biomass and bio-sludge in the power boiler are referred to in this monitoring plan as “The Project”.

Stantec Consulting Ltd. (Stantec) was retained by Northern Pulp conduct an air dispersion modelling study as part of the Environmental Assessment (EA). This air dispersion modelling study focused on criteria air Contaminants (CACs) regulated by the Government of Nova Scotia under Regulation 150/2017- Air Quality Regulations, as amended on October 12 2017 and those included in the Facility’s Industrial Approval (2011-076657-A01). The EA for the project was registered with Nova Scotia Environment (NSE) on February 9, 2019 and on March 29 2019, the Minster of Environment determined that the EA was insufficient to make a decision on the Project and that a Focus Report, pursuant to clause 13(1) c of the Environmental Regulations in accordance to Part IV of the Environmental Act, would be required. The “Terms of Reference for the Preparation of a Focus Report Regarding the Replacement Effluent Treatment Facility Project” (NSE 2019b) were issued on April 23, 2019 and included three conditions pertaining to air quality:

> 6.1 Provide a revised inventory of all potential air contaminants to be emitted from the proposed Project, including but not limited to, speciated volatile organic compounds, semi-volatile organic compounds, reduced Sulphur compounds, polyaromatic hydrocarbons and metals.

6.2 Update the air dispersion modelling for the pulp mill facility for all potential air contaminants of concern related to the Project.

6.3 Complete an updated ambient air monitoring plan for the Project site based on the air dispersion modelling results. This plan must include the potential air contaminants to be monitored and proposed air monitoring locations.

In response for the Terms of Reference for the Focus report, Stantec developed a revised inventory of potential air contaminants emitted from the project and ran an expanded air dispersion modelling study to satisfy Section 6.1 and 6.2 of the Terms of Reference. This Monitoring Plan will cover the terms of 6.3.

1.0 INTRODUCTION

1.1 Monitoring Objectives

The purposes of the ambient monitoring program will be to:

1. Update the ambient monitoring program in light of the proposed project);
2. Monitor ambient air quality in the region surrounding the Project to measure ground-level concentrations of select air contaminants associated with the Project;
3. Monitor concentration levels of the Project's related air contaminants at select locations that are representative of nearby residential areas;
4. Quantify ambient levels of select air contaminants in the area.

1.2 Current Ambient Air Monitoring Network

Section 9 of Northern Pulp's current Industrial Approval (2011-076657-A01) outlines the requirements that the company must adhere to with regards to ambient air monitoring:

a) The Approval Holder shall ensure that emissions from the facility do not contribute to an exceedance of the maximum permissible ground level concentrations specified in Schedule A of the Air Quality Regulations.

b) For the purpose of determining compliance with Schedule A of the Air Quality Regulations, the measurement of Total Reduced Sulphur (TRS) at the ambient monitoring stations shall be considered to be a measurement of hydrogen sulphide (H_2S).

c) The Approval Holder shall ensure that fine particulate matter ($PM_{2.5}$) emissions from the facility do not contribute to an exceedance of the ambient air quality standards for fine particulate matter indicated in Table 1:

Table 1: Ambient Air Quality Standards for Fine Particulate Matter ($PM_{2.5}$)

Pollutant	Averaging Time	Standards (µg/m^3)*		Metric
		2018	2020	
$PM_{2.5}$	24-hour (calendar day)	28.0	27.0	The 3-year average of the annual 98th percentile of the daily 24-hour average concentrations
$PM_{2.5}$	annual (calendar year)	10.0	8.8	The 3 year average of the annual average concentrations

*micrograms per cubic metre

d) The Approval Holder shall demonstrate compliance with Condition 9(c) by utilizing the data from the ambient monitor(s) identified in Condition 9(f) of this Approval, to complete calculations in accordance with procedures outlined in the "Guidance Document on Achievement Determination Canadian Ambient Air Quality Standards for Fine Particulate Matter and Ozone", dated 2012, prepared by Canadian Council of Ministers of the Environment (CCME), as amended from time to time.

e) The Approval Holder must be able to demonstrate compliance with condition 9(a), 9(b) and 9(c) through the development, implementation and maintenance of an ambient air monitoring and reporting program. The air monitoring and reporting program may include, but is not limited to:

(i) Ambient air monitoring;
(ii) Continuous Emissions Monitoring;
(iii) Source testing; and
(iv) Dispersion modelling.

Northern Pulp currently operates two ambient air quality stations in Pictou Land (PID 65006785) and Greenhill (PID 844233) to monitor ambient air quality. The stations measure 1-hour and 24-hour rolling average concentration of Total Reduced Sulphur (TRS) in parts per billion. 24 hour (calendar day) average concentration in micrograms per cubic metre (ug/m^3) of total suspended particulate matter (TSP). Meteorological data including wind speed, wind direction, ambient temperature, barometric pressure and humidity. The Pictou Landing Station is also equipped to monitor 1-hour and 24-hour (calendar day) continuous fine particulate matter ($PM_{2.5}$) in micrograms per cubic meter (ug/m^3).

Data collected is put through a quality control process and reported to NSE both in monthly and annual reports.

Figure 1: Map of Existing Air Modelling Network Station Locations

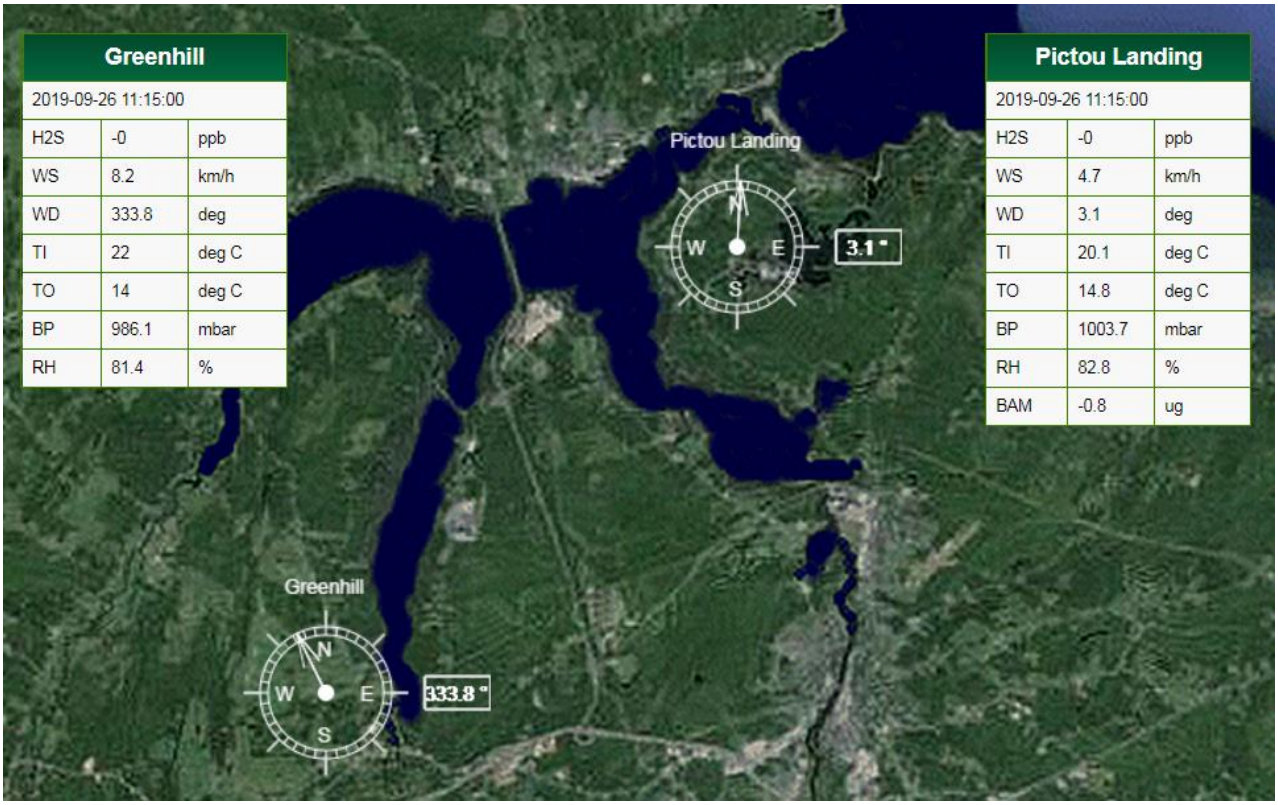
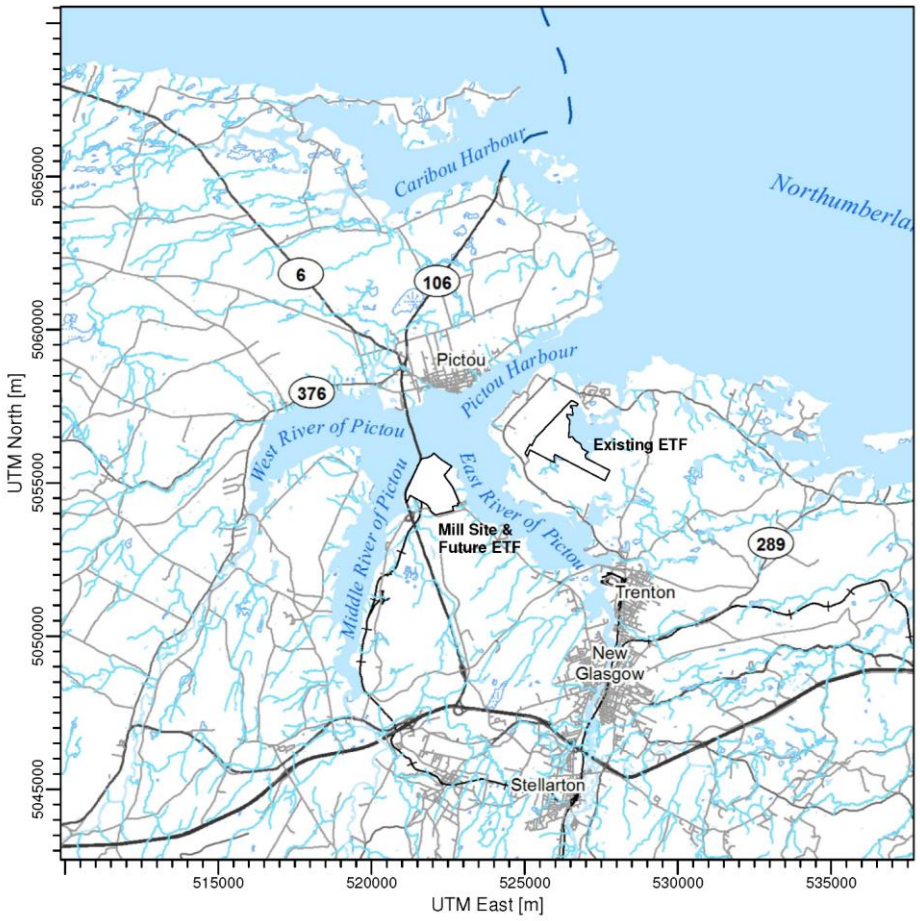


Figure 2: Ambient Air Testing Station at Pictou Landing

Figure 3 : Tisch Hi-Vol Total Particulate Sampler at Pictou Landing

*1.3 **Replacement Effluent Treatment Facility Site Characteristics***

The terrain surrounding the Facility to the south and south-east, is complex, meaning that the height of the surrounding terrain is higher than the release heights (stacks or vents) of the emission sources. Water (i.e. Pictou Harbour) surrounds the Facility to the west, north, and east. The Town of Pictou lies to the north of the plant directly across the Pictou Harbour, and Pictou Landing lies north-east of the plant on the north side of Pictou Harbour. See Figure 4 below.



.**Figure 4: Location of the Northern Pulp Kraft Mill, Existing and Future Effluent Treatment Facilities**

2 MONITOR SITING ASSESSMENT

The ambient monitoring program assessment will consider the results of the air dispersion modeling conducted for the Project in conjunction with the existing ambient monitoring network.

Ambient monitor siting considerations include:

1. Results from Dispersion Modelling Studies
2. Assessment of wind frequency distribution
3. Location of nearby sensitive receptors
4. Regulatory siting criteria
5. Practical and security considerations

2.1 Results from Dispersion Modelling Studies

Table Error! No text of specified style in document.**.1 Summary of Maximum Predicted GLCs from the Operation of the Project**

Contaminant	Averaging Period	Ambient Air Quality Criteria	Limiting Effect	Predicted Concentration (µg/m^3)	Location of Max. Predicted GLC UTM Coordinates[1]	
					Easting (m)	Northing (m)
Aluminum	24-hour	12	Health	0.83	522540	5055120
Antimony	24-hour	25	Health	8.40E-04	522460	5055180
Arsenic	24-hour	0.3	Health	3.05E-03	522540	5055120
Barium	24-hour	10	Health	0.02	522580	5055300
Beryllium	24-hour	0.01	Health	3.00E-05	Multiple Locations	
Boron	24-hour	120	Particulate	5.60E-03	522540	5055120
Cadmium	24-hour	0.025	Health	2.22E-03	522580	5055080
	24-hour	0.25[1]	—	2.22E-03	522580	5055080
Chromium	24-hour	0.5	Health	6.75E-03	522600	5055060
	24-hour	5[1]	—	6.75E-03	522600	5055060
Hexavalent Chromium	Annual	0.00014	Health	2.20E-04	Multiple Locations	
	24-hour	0.07[1]	—	2.89E-03	522580	5055080
Cobalt	24-hour	0.1	Health	5.60E-04	522580	5055080
Copper	24-hour	50	Health	0.01	522580	5055080
Iron	24-hour	4	Health	0.84	522540	5055120

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Contaminant	Averaging Period	Ambient Air Quality Criteria	Limiting Effect	Predicted Concentration (µg/m^3)	Location of Max. Predicted GLC UTM Coordinates[1]	
					Easting (m)	Northing (m)
Ferric Oxide	24-hour	25	Soiling	1.12	522580	5055300
Lead	24-hour	0.5	Health	0.01	522580	5055080
	30-day	0.2	Health	1.93E-03	522240	5055800
	24-hour	2[1]	—	0.01	522580	5055080
Lithium	24-hour	20	Health	2.70E-04	Multiple Locations	
Magnesium	24-hour	72	Health	3.76	522580	5055300
Magnesium Oxide	24-hour	120	Particulate	6.23	522580	5055300
Manganese	24-hour	0.4	Health	0.22	522600	5055280
	24-hour	4[1]	—	0.22	522600	5055280
Mercury	24-hour	2	Health	4.70E-04	522580	5055300
Nickel	Annual	0.04	Health	4.40E-04	Multiple Locations	
	24-hour	2[1]	—	5.84E-03	522580	5055080
Phosphorus	24-hour	0.5	Health	0.02	522540	5055120
Selenium	24-hour	10	Health	5.90E-04	Multiple Locations	
Silver	24-hour	1	Health	4.42E-03	522580	5055300
Strontium	24-hour	120	Particulate	0.02	522540	5055120
Titanium	24-hour	120	Particulate	0.06	522580	5055300
Vanadium	24-hour	2	Health	3.45E-03	522580	5055300
Zinc	24-hour	120	Particulate	0.57	522540	5055120
Carbon Monoxide[2]	1-hour	34600	Health	665	513777	5040300
	8-hour	12700	Health	391	522460	5055160
TSP[2]	24-hour	120	Health	91.3	522540	5055320
	Annual	70	Health	7.77	522480	5055300
$PM_{2.5}$	24-hour	*27*	Health	19.5	522580	5055300
	Annual	8.8	Health	1.66	522480	5055280
PM_{10}[2]	24-hour	50	Health	47.1	522580	5055300
Nitrogen Dioxide[2]	Annual	100	Health	1.93	522350	5056000
	1-hour	400	Health	43.3	522440	5055180
Sulphur Dioxide[2]	24-hour	300	Health	22.9	522440	5055200
	1-hour	900	Health	87.4	522600	5055140
	Annual	60	Health	1.98	522380	5055780
Ammonia	24-hour	100	Health	**406**	522400	5055220
	24-hour	1000[1]	—	406	522400	5055220
Hydrochloric Acid	24-hour	20	Health	1.27	522650	5055200
	24-hour	200[1]	—	1.27	522650	5055200
Dioxins and Furans	24-hour	0.1 pg TEQ/m3	Health	0.013	522580	5055300
Acetaldehyde	24-hour	500	Health	10.7	522200	5055840
	1/2-hour	500	Health	106	522180	5055860
	24-hour	5000[1]	—	10.7	522200	5055840

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Contaminant	Averaging Period	Ambient Air Quality Criteria	Limiting Effect	Predicted Concentration (µg/m^3)	Location of Max. Predicted GLC UTM Coordinates[1]	
					Easting (m)	Northing (m)
Acetone	24-hour	11880	Health	919	522400	5055220
	24-hour	118800[1]	—	919	522400	5055220
Acrolein	24-hour	0.4	Health	0.11	522200	5055840
	1-hour	4.5	Odour	0.78	522240	5055820
	24-hour	4[1]	—	0.11	522400	5055220
Benzene	Annual	0.45	Health	0.01	522200	5055840
	24-hour	100[1]	—	0.14	522200	5055840
1,3-Butadiene	Annual	2	Health	0.04	522379	5055250
	24-hour	300[1]	—	0.19	522400	5055220
Butanol, n	10-minute	2100	Health	1413	522420	5055200
Chloroform	24-hour	1	Health	**2.55**	522400	5055220
	24-hour	100[1]	—	2.55	522400	5055220
Chloromethane	24-hour	320	Odour	0.04	522700	5055250
	24-hour	3200[1]	—	0.04	522700	5055250
Cyclohexane	24-hour	6100	Health	32.2	522400	5055220
	24-hour	61,000[1]	—	32.2	522400	5055220
Dichloromethane	24-hour	220	Health	0.80	522480	5055280
	24-hour	22000[1]	—	0.80	522480	5055280
Ethyl Benzene	10-minute	1900	Health	2.84E-03	522650	5055100
Ethylene Dichloride (1,2-Dichloroethane)	24-hour	2	Health	0.02	522400	5055220
	24-hour	200[1]	—	0.02	522400	5055220
Formaldehyde	24-hour	65	Health	0.50	522700	5055250
Hexane, n	24-hour	7500	Odour	919	522400	5055220
	24-hour	25,000[1]	—	919	522400	5055220
Methanol[1]	24-hour	4000	Health	38.0	522540	5055020
Methyl Ethyl Ketone	24-hour	1000	Odour	1.16	522400	5055220
	24-hour	10,000	—	1.16	522400	5055220
Methyl Isobutyl Ketone	24-hour	1200	Health	0.43	522400	5055220
Phenol	24-hour	30	Health	10.0	522200	5055840
	24-hour	300[1]	—	10.0	522200	5055840
Propionaldehyde	10-minute	10	Odour	5.27	522240	5055820
a-pinene	24-hour	1350	Odour	965	522400	5055220
b-pinene	24-hour	1350	Health	244	522400	5055220
Toluene	24-hour	2000	Health	0.14	522600	5055280
Xylenes	10-minute	3000	Health	1.02	522650	5055200
	24-hour	730	Health	0.14	522600	5055280
Hexachlorobenzene	24-hour	0.011	Health	1.20E-06	522450	5055120
Naphthalene	24-hour	22.5	Health	0.88	522400	5055220
	10-minute	50	Health	8.43	522420	5055200

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Contaminant	Averaging Period	Ambient Air Quality Criteria	Limiting Effect	Predicted Concentration (µg/m^3)	Location of Max. Predicted GLC UTM Coordinates[1]	
					Easting (m)	Northing (m)
Quinoline	24-hour	0.005	Odour	6.00E-05	522580	5055060
Benzo(a)pyrene[3]	Annual	0.00001	Health	7.82E-06	522320	5055740
	24-hour	0.005[1]	—	0.07	522600	5055080

Table Error! No text of specified style in document..**1 Summary of Maximum Predicted GLCs from the Operation of the Project**

Contaminant	Averaging Period	Ambient Air Quality Criteria	Limiting Effect	Predicted Concentration (µg/m^3)	Location of Max. Predicted GLC UTM Coordinates[1]	
					Easting (m)	Northing (m)
Total Reduced Sulphur[4]	24-hour	14	Health	**64.5**	522439	5055151
	10-minutes	13	Odour	**528**	522474	5055103
	24-hour	70[1]	—	**64.5**	522433	5055159
Hydrogen Sulphide[2]	24-hour	8	Health	3.85	522626	5055535
	1-hour	42	Health	17.4	522420	5055200

Bold indicates exceedance of ambient air quality criteria.
1 – Upper Risk Threshold
2 – Nova Scotia provincial limits without defined limiting effects - assumed standards were based on health effects.
3 – Project PAHs surrogated by B[a]P include: Acenaphthene, Acenaphthylene, Benz(a)anthracene, Benzo(a)phenanthrene (Chrysene), Benzo(b)fluoranthene, Benzo(b,j) fluoranthene, Benzo(e)pyrene, Benzo(g,h,i)perylene, Benzo(j)fluoranthene, Benzo(k)fluoranthene, Dibenz(a,j)acridine, Indeno(1,2,3-c,d)pyrene, Phenanthrene, Fluorene, Perylene, Pyrene, and Fluoranthene.
4 – Total Reduced Sulphur is a combination of hydrogen sulphide, dimethyl disulphide, dimethyl sulphide, methyl mercaptan, and carbon disulphide

2.2 Wind Frequency Assessment

The wind frequency distribution for a 5 year period was obtained for the dispersion air modelling report from Lakes Environmental corresponding to the location of the Facility (Lakes Environmental Software 2018) is presented in Figure 2.1. Directions where wind blows more frequently are a factor in the consideration of where to site A joint wind direction and speed frequency diagram, or “wind rose”, of these data is presented in Figure 3 for wind direction; the convention used is “wind blowing from”.

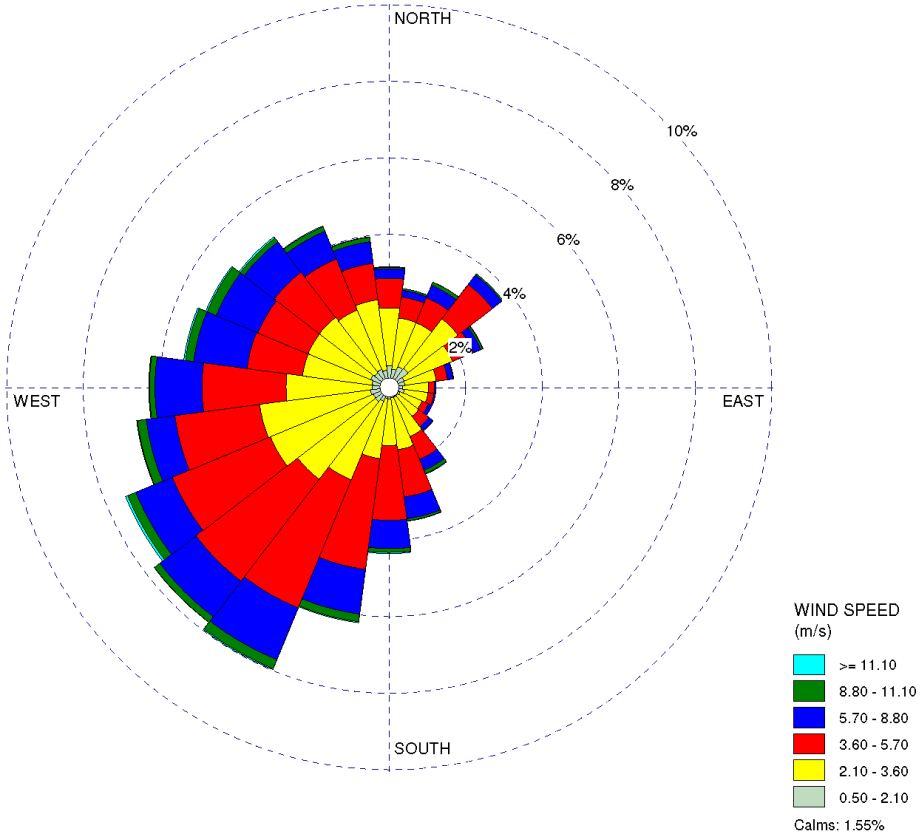


Figure 6: Annual Windrose (2013-2017)

2.3 Practical and Security Considerations

The final locations of stations will be constrained to sites with adequate security, vehicle access, set-back from roadways, and access to power. The sites will be developed and maintained in order to prevent unauthorized access and vandalism.

3 GENERAL SITE CONSIDERATIONS

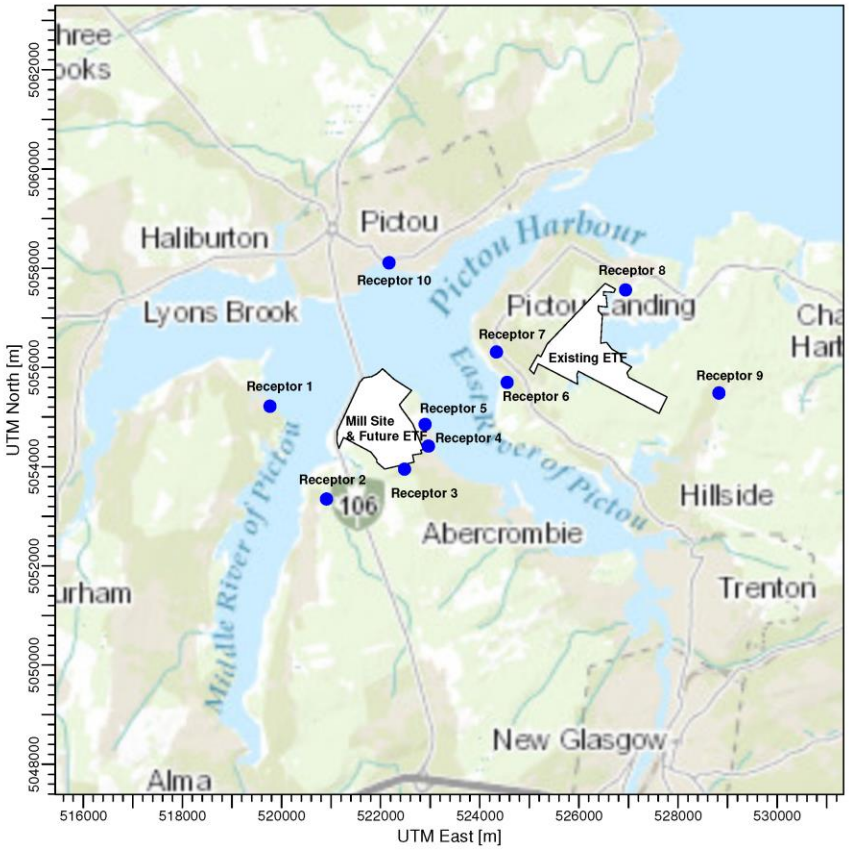
3.1 Siting Considerations

Northern Pulp proposes to perform ambient air monitoring at a few key locations that would be proposed as potential monitoring stations or temporary supplemental sites should the existing monitor locations not be representative for those additional parameters. These sites will be selected in consideration of the model results, particularly the ten discrete receptors locations used in the Expanded Air Dispersion Modelling Study for Replacement Effluent Treatment Facility prepared by Stantec Consulting Ltd (2019b). The results from all of the receptors will be used to help identify potential monitoring stations or portable testing sites the testing will be performed in order to quantify the ambient concentrations of select air contaminants that were suggested to have a higher probability of being elevated based on the air dispersion model predictions.

Table 3: Discrete Receptors used in Dispersion Modelling

Receptor ID	UTM Coordinates		Description
	Easting (m)	Northing (m)	
1	519768	5055219	Residence
2	520907	5053346	Residence
3	522480	5053951	Residence
4	522963	5054415	Residence
5	522899	5054854	Residence
6	524552	5055699	Residence
7	524337	5056312	Residence
8	526942	5057565	Residence
9	528826	5055486	Residence
10	522169	5058110	Residence

Using North American Datum (NAD_83 UTM zone 20)



Using North American Datum (NAD_83 UTM zone 20)

Figure 7: Map Showing Discrete Receptors

3.2 Location of Nearby Sensitive Receptors

The American Environmental Protection Agency defines Sensitive Receptors as areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. Table 3 below provides a list of sensitive receptors located in the air dispersion modelling domain area.

Table 4: Sensitive Receptors

Receptor	Category	Location
Sutherland Harris Memorial	Hospital	222 Haliburton Road Pictou
Aberdeen Hospital	Hospital	835 East River Road, New Glasgow
Shiretown Nursing Home	Convalescent	280 Haliburton Rd, Pictou, NS
Maritime Oddfellows	Convalescent	143 Norway Point Rd, Pictou,
Highcrest Place	Convalescent	222 Provost St, New Glasgow,
Glen Haven Manor	Convalescent	739 E River Rd, New Glasgow
Valley View Villa	Convalescent	6125 Stellarton Trafalgar Rd, Stellarton
Ivey's Terrace	Convalescent	11 Centennial Dr, Trenton
McCulloch Education Center	School	350 Wellington St, Pictou
Pictou Academy	School	200 Louise Street Pictou
Pictou Landing School	School	6533 Pictou Landing Road, Pictou Landing
West Pictou Consolidated	School	1999 NS-376, NS, Lyons Brook
Northumberland Regional	School	104 Alma Road, Alma,
AG Baillie Memorial	School	477 Victoria Ave Extension, New Glasgow
New Glasgow Academy	School	93 Albert Street, New Glasgow
G.R Saunders Elementary	School	71 Bridge Avenue, Stellarton
North Nova Education	School	343 Park Street ,New Glasgow
Dr. W.A Macleod	School	6193 Stellarton Trafalgar Road, Riverton
Thorburn Consolidated	School	13 New Row, Thorburn
Walter Duggan Consolidated	School	2370 Spring Garden Road, Westville
F.H Macdonald Elementary	School	123 School Road, Sutherlands River
East Pictou Middle	School	163 School Road, Sutherlands River
Scotsburn Elementary	School	4100 Scotsburn Road, Scotsburn
Trenton Middle	School	37 Dickie Street, Trenton
Starting Blocks	Daycare	24 Ross Street, Pictou
Spring Garden Child Care	Daycare	2380 Spring Garden Road, Westville
Jens Lil Kid Place	Daycare	176 Foord Street, Stellarton
Hands on Leaning Center	Daycare	1875 North Main Street, Westville
Microtots Preschool	Daycare	539 Martin Avenue, New Glasgow
House of Children	Daycare	824 Granton Abercrombie Road, Abercrombie
Miss Doreen's Preschool	Daycare	17 Duke Street, New Glasgow
Family Home Childcare	Daycare	71 Acadia Avenue , Stellarton
Playtime at Dodie's	Daycare	10492 Sherbrooke Road, New Glasgow
Thorburn Childcare	Daycare	72 New Row, Thorburn
NSCC Pictou Campus	Daycare	39 Acadia Avenue, Stellarton
YMCA of Pictou County	Daycare	22756 Westville Road, New Glasgow

4 CONTAMINANTS FOR MONITORING

4.1 Contaminants Identified for Consideration for Monitoring

Based on the Expanded Air Dispersion Modelling Study predictions the following contaminants were chosen to be possibly included in the proposed monitoring program due to the compounds either being present in Northern Pulp's biomass boiler stack testing, present in sludge analyzed from similar Kraft pulp mill's with AST treatment or released from AST facilities as presented in NCASI 2007. Further details can be found in the Expanded Air Dispersion Modelling Study that determined the air contaminants of interest. Table 5 outlines the parameters of interest based on model exceedances. Further details on the parameters will be developed in consultation with NSE.

Table 5: Contaminant Exceedances Identified from Expanded Air Dispersion Model

Parameters to Investigate	Justification for Selection
Metals in total suspended particulate (TSP)	Detection of Hexavalent Chromium in the model from the Power Boiler
Select Polycyclic Aromatic Hydrocarbons (PAHs)	Potential emissions from the new ETF
Total Reduced Sulphur Compounds (TRS)	Potential emissions from the new ETF
Ammonia	Potential emissions from the new ETF
Select Volatile Organic Compounds	Potential emissions from the new ETF

4.2 Monitoring Period

The monitoring program will commence one (1) year prior to Replacement ETF commissioning (dates to be determined) to monitor baseline air quality in the absence of emissions for the replacement ETF. During commissioning only continuous monitoring

parameters will be collected. When replacement ETF is fully operation all Contaminants will be collected again. The length of the monitoring program and sampling duration of individual Contaminants will be determined in consultation with the Nova Scotia Department of the Environment (NSE).

5 *INSTRUMENTATION AND DATA ACQUISITION*

The measurement program at the monitoring site will include continuous and non-continuous monitors to sample air contaminant concentrations. Monitoring for respirable particulate matter ($PM_{2.5}$), Sulphur dioxide (SO_2) and Total Reduced Sulphur (TRS) will be conducted on a continuous basis over the duration of the ambient air monitoring program at pre-existing ambient air monitoring stations. Monitoring for metals in total suspended particulates (TSP), polycyclic aromatic hydrocarbons (PAHs), Volatile Organic Compounds (VOCs) and Ammonia will be conducted at the downwind monitoring station with non-continuous monitors at selected locations at frequencies to be determined in consultation with NSE

6 LABORATORY ANALYTICAL REQUIREMENTS

All samples will be obtained and analyzed following US EPA or equivalent methods at a CALA approved Laboratory.

7 QUALITY ASSURANCE PROCEDURES

7.1 Operator Requirements

The proposed monitoring program will be operated by Northern Pulp aided by a licensed and accredited third party consultant hired by the company. Training of Northern Pulp staff and Standard Operating Procedures of new air testing equipment will be developed by the company with aide from hired consultant. Northern Pulp and the consultant will

work with NSE to develop a quality plan for operating and maintaining the monitoring program for the Project.

7.2 Instrument Calibration

Samplers will be bench-tested and calibrated prior to their installation in the field. If required, the samplers will be re-calibrated once installed before their first use. On-going calibration of the samplers will follow the recommended calibration schedule that will be developed in the quality plan.

7.3 Sample Collection and Transportation

Samples will be properly handled to ensure that there is no contamination. For filters this entails the use of surgical gloves and tweezers to avoid contamination. All samples will be carefully removed from the monitoring device by a trained operator, and placed in sealed, non-reactive containers. All samples will be placed in protective cases for protection from breakage, contamination or loss during transportation.

7.4 Data Review and Validation

Data collected from the continuous monitors will be screened for any suspicious data including outliers, instrumentation drift and missing data following protocols that will be determined for the programs quality manual after consultation with NSE.
A final data screening of all measurement data will be performed at the end of the monitoring program to examine overall trends and to identify and correct any suspect data.

8 Reporting Requirements

Both monthly and annual reports will be generated that include results of the ambient monitoring program. The reports will follow a standardized format to be agreed upon by Northern Pulp and NSE and will include statistical information required by NSE and a summary of any exceedances from the Project.

9 Closure

The ambient monitoring program has be prepared to meet section 6.3 of the Terms of Reference for the Preparation of a Focus Report Regarding the Replacement Effluent Treatment Facility Project" (NSE 2019b). Complete an updated ambient air monitoring plan for the Project site based on the air dispersion modelling results. This plan must include the potential air contaminants to be monitored and proposed air monitoring locations."