REPORT

SITE C CLIMATE & AIR QUALITY MONITORING

FORT ST. JOHN, BC

2025 ANNUAL REPORT
RWDI #2301410/2602640
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SUBMITTED TO

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Index	Date	Pages	Authors
1	26-Mar-2026	All	Teri Adams Iain Hawthorne, Ph.D. David Chadder, QEP Laura Dailyde, P.Eng.

LIST OF ACRONYMS

AAQO	Ambient Air Quality Objective
ACMT	Active Compliance Management Tool
BC	British Columbia
CCME	Canadian Council of Ministers of the Environment
CEMP	Construction Environmental Management Plan
CO	Carbon Monoxide
EAC	Environmental Assessment Certificate
ECCC	Environment and Climate Change Canada
ENV	BC Ministry of the Environment and Climate Change Strategy
EPP	Environmental Protection Plan
FDS	Federal Decision Statement
MOU	Memorandum of Understanding
NO_2	Nitrogen Dioxide
PCIC	Pacific Climate Impacts Consortium
PCO	Pollution Control Objective
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter consisting of particles 2.5 µm in equivalent diameter or smaller
PM_{10}	Particulate Matter consisting of particles 10 µm in equivalent diameter or smaller
QA	Quality Assurance
QEP	Qualified Environmental Professional
SO_2	Sulphur Dioxide

1 INTRODUCTION

BC Hydro's Site C Clean Energy Project (the Project) in British Columbia's Peace region has completed the construction of the Site C hydroelectric dam and generating station on the Peace River in the vicinity of the City of Fort St. John. To characterize the microclimate and to provide a baseline against which to compare future changes brought on as a result of the Project, BC Hydro installed a network of climate and air quality monitoring stations in the Peace River Valley. This network has been active since 2011, through the preparation and submission of the Project's Environmental Impact Statement, and throughout Project construction to date, which began in mid-2015. We acknowledge this work is being conducted on the traditional territory of Treaty 8 First Nations of Dunne Zaa, Cree and Tse'khene cultural descent.

Approval of the Project in 2014 by the Joint Review Panel comprised of the Canadian Environmental Assessment Agency and the British Columbia Environmental Assessment Office was contingent upon BC Hydro satisfying a number of conditions (CEAA, 2014; EAO, 2014).

Condition 12 of the Federal Decision Statement (FDS) is concerned with the health of Indigenous peoples as it relates to air quality. This Condition mandates proper management, monitoring and reporting of air quality to minimize the potential effects on Indigenous health. Condition 12.6 of the FDS requires BC Hydro to "implement the [management] plan and provide to the Agency an analysis and summary of the implementation of the plan, as well as any amendments made to the plan in response to the results, on an annual basis during construction and the first year of operation."

Condition 57 of the provincial Environmental Assessment Certificate (EAC) dictates the management plans (Air Quality Management Plan, Smoke Management Plan) that were developed for the Project to minimize air emissions, monitor the ambient air quality and provide these readings to the BC Ministry of the Environment and Parks (ENV) to notify sensitive populations (in collaboration with Northern Health) if air quality conditions warrant. In addition, EAC Condition 31 requires that microclimate monitoring is also conducted to support an understanding of how the Project might affect agricultural activities. An example includes changes to ambient humidity levels that could affect crop drying as well as other climatic factors to estimate moisture deficits.

Throughout 2025, there were five ambient air quality and nine meteorological monitoring stations in operation in support of the Project. The air quality stations provided continuous ambient measurements that were used to monitor effects of the Project on Indigenous and public health, and to inform construction activities, while the meteorological stations provided continuous measurements for several meteorological parameters (discussed further in Section 2). Data from Station 8 (Old Fort), Station 9 (85th Avenue) and Station 12 (Hudson's Hope) were used to inform air quality advisories issued publicly by ENV.

A summary of the the applicable FDS Conditions and the provincial EAC Conditions and their status of the Project with respect to complying with the Air Quality Management Plan and Smoke Management Plan for the calendar year are presented in Appendix A. A summary of the meteorological data collected by the program is included herein but reporting to satisfy EAC Condition 31 will be done under separate cover.

This document serves to describe the state of the climate and air quality for the thirteenth year of observations and the ninth, and final, year of project construction, coinciding with the 2025 calendar year. Thirteen previous annual monitoring reports describing the state of the climate and air quality for the years of observations, coinciding with the 2012 through 2024 calendar years have been released (RWDI AIR Inc. 2015a, 2015b, 2015c, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025). The initial monitoring established baseline conditions that were in effect until the summer of 2015 when construction activities began. The network has remained in operation and has continued to collect valuable climate and air quality data in the Peace region. Air quality parameters such as concentrations of particulate matter (PM), specifically $PM_{2.5}$ and PM_{10}, nitrogen dioxide (NO_2), sulphur dioxide (SO_2) and carbon monoxide (CO) are presented in this report. Also included in this report is a review of the annual climate conditions, and roadway dust suppression activities. There were no brush burning activities in 2025.

1.1 Managing Air Quality

BC Hydro developed a Construction Environmental Management Plan (CEMP), (Rev. 12.2, BC Hydro 2026), which includes a component of an Air Quality Management Plan (Section 4.1) and a description of the Air Quality Monitoring Program (Appendix B, Rev 3, 2022) to avoid or minimize exceedances of the BC Ambient Air Quality Objectives (ENV, 2021) (FDS, Section 12.1). Section 4.1 of the CEMP details the management practices that will be implemented to minimize emissions of air contaminants. Contractors are required to produce site-specific Environmental Protection Plans (EPPs) that explain how the Contractor will meet the CEMP requirements. As of December 2020, construction activities, particularly the Main Civil Works, Generating Station and Spillways Civil Works, clearing for the future Site C reservoir, realignment of several segments of Highway 29, and construction of shoreline protection measures in Hudson's Hope were well underway involving elements of the majority of activities listed in Section 4.1 of the CEMP. The majority of the construction projects were completed on 28-Oct-2024 when the first generating unit came online.

BC Hydro conducts environmental audits during construction to verify implementation of EPPs, including implementation of appropriate mitigation measures in response to air quality alerts. BC Hydro implemented the Active Compliance Management Tool (ACMT) in 2017, which is a database to house environmental inspection data.

BC Hydro has also developed a Smoke Management Plan (Rev. 5, BC Hydro 2021), which is another component of the CEMP (Appendix A), and which satisfies Section 12.3.2 of the FDS conditions and Condition 57 of the provincial EAC.

As a fugitive dust suppression measure, BC Hydro applied calcium chloride in 2025. An example of the roads where calcium chloride was applied is provided in Appendix B.

2 MONITORING NETWORK

Condition 12.3.4 of the FDS approval of the Project requires BC Hydro to develop a plan that includes procedures to monitor air quality effects at locations used by Indigenous groups. To this end, BC Hydro developed an Air Quality Monitoring Program (BC Hydro, 2022). As part of the monitoring program, BC Hydro has installed and continuously operates a network of ambient air quality stations in areas that may be affected by Project construction activities.

BC Hydro currently operates five ambient air quality monitoring stations in the Peace River area. Three of these stations are located in the vicinity of the Project construction including:

- Station 1 – Attachie Flat Upper Terrace;
- Station 8 – Old Fort; and
- Station 12 – Hudson's Hope.

Two of these five stations are located directly within Project construction work areas including:

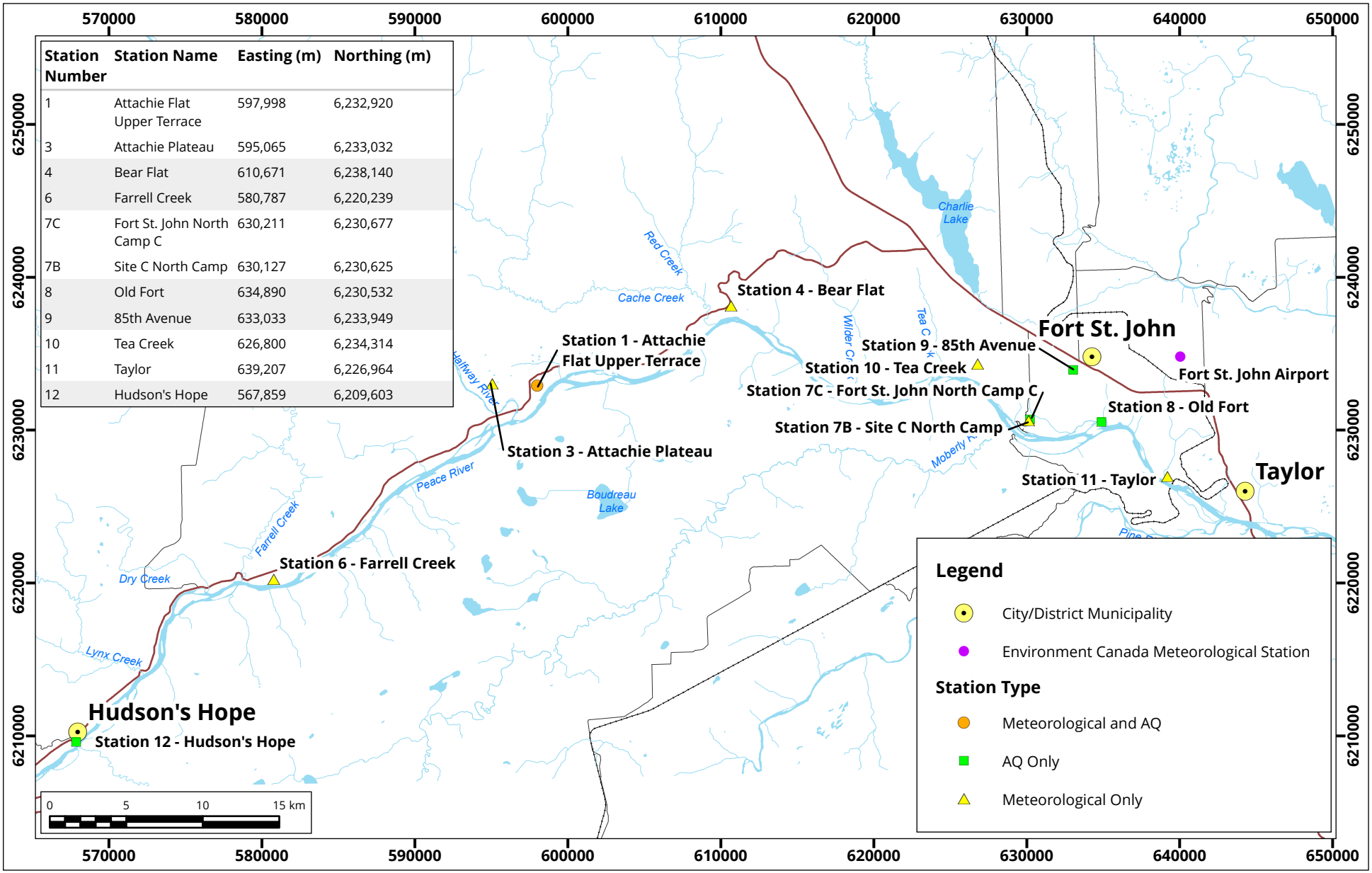
- Station 7C – Fort St. John North Camp C; and
- Station 9 – 85th Avenue.

Stations 1 (Attachie Flat Upper Terrace), 8 (Old Fort) and 7C (Fort St. John North Camp C) have continuous Thermo Scientific SHARP 5030 monitors, and Station 9 (85th Avenue) and 12 (Hudson's Hope) have Thermo Scientific SHARP 5030i monitors. These monitors measured particulate matter with diameters less than 10 µm (PM_{10}) and diameters less than 2.5 µm ($PM_{2.5}$). Station 7C (Fort St. John North Camp C) measures NO_X (using a Thermo Scientific 42i analyzer) and SO_2 (using a Thermo Scientific 43i analyzer). Station 12 (Hudson's Hope) measures NO_X (using a Thermo Scientific 42iQ analyzer) and SO_2 (using a Thermo Scientific 43iQ analyzer). Station 7C (Fort St. John North Camp C) additionally measures CO (using a Thermo Scientific 48i analyzer).

In addition to air quality parameters, the Site C monitoring Network also measures a number of meteorological parameters.

Figure 2-1 shows the location of the network stations in relation to local communities and the Peace River, as well as the meteorological station run by Environment and Climate Change Canada (ECCC) located at Fort St. John Airport.

Table 2-1 and Table 2-2 show the coordinates and elevations for the station locations, and parameters measured at these stations, respectively.



Station Number	Station Name	Easting (m)	Northing (m)
1	Attachie Flat Upper Terrace	597,998	6,232,920
3	Attachie Plateau	595,065	6,233,032
4	Bear Flat	610,671	6,238,140
6	Farrell Creek	580,787	6,220,239
7C	Fort St. John North Camp C	630,211	6,230,677
7B	Site C North Camp	630,127	6,230,625
8	Old Fort	634,890	6,230,532
9	85th Avenue	633,033	6,233,949
10	Tea Creek	626,800	6,234,314
11	Taylor	639,207	6,226,964
12	Hudson's Hope	567,859	6,209,603

BC Hydro - Site C Meteorological and Air Quality Stations

True North

Drawn by: DJH | Figure: 2-1

Approx. Scale: 1:350,000

Date Revised: Dec 3, 2020

Project #: 2002352

Map Projection: NAD 1983 UTM Zone 10N

Map Document: C:\GIS Temp - Copy\1601625\Misc AQ Deliverables\1601625_BC_Hydro_Misc_AQ_Deliverables.aprx

Table 2-1: BC Hydro Site C network station locations and elevations.

Station Name	UTM NAD 83 (m)	Latitude, Longitude (decimal degrees)	Elevation (m)
Station 1 - Attachie Flat Upper Terrace	597999 E, 6232919 N	56.23N, -121.42W	479
Station 3 – Attachie Plateau	595065 E, 6233032 N	56.23N, -121.47W	645
Station 4 – Bear Flat	610671 E,6238140 N	56.28N, -121.21W	474
Station 6 – Farrell Creek	580787 E, 6220239 N	56.12N, -121.70W	471
Station 7B/C – Site C North Camp/Fort St. John North Camp C(1)	630206 E, 6230688 N	56.20 N, -120.90W	584
Station 8 – Old Fort	634890 E, 6230532 N	56.20N, -120.82W	423
Station 9 – 85th Avenue	633033 E, 6233949 N	56.23N, -120.85W	686
Station 10 – Tea Creek	626798 E, 6234314 N	56.24 N, -120.95W	653
Station 11 – Taylor	639206 E, 6226964 N	56.17N, -120.76W	411
Station 12 – Hudson's Hope	567859 E, 6209603 N	56.03N, -121.91W	494
Fort St. John Airport (ECCC)	640053 E, 6234872 N	56.24N, -120.74W	695

Note: (1) Meteorology parameters are measured at a tower that is located approximately 100 m to the southwest of the trailer where the air quality analyzers are located. The meteorology instrument tower is considered Station 7B, the air quality trailer is considered Station 7C. Coordinates provided are for the air quality analyzer location (7C).

Table 2-2: BC Hydro Site C network stations and the Fort St. John Airport ECCC station with parameters measured.

Station	Air Temperature and Relative Humidity	Wind Speed and Direction	Precipitation	Barometric Pressure	All Radiation Components	Solar Radiation	Net radiation	Turbulent Fluxes	Visibility	Soil Temperature	Soil Moisture	Soil heat Flux	PM_{10} and $PM_{2.5}$	SO_2, NO_2	CO
Station 1 – Attachie Flat Upper Terrace	X	X	X	X	X			X	X	X	X	X	X		
Station 3 – Attachie Plateau	X	X	X	X		X	X			X	X	X			
Station 4 – Bear Flat	X	X	X	X	X			X		X	X	X			
Station 6 – Farrell Creek	X	X	X	X		X	X			X	X	X			
Station 7B/C – Site C North Camp/Fort St. John North Camp C	X	X	X	X		X	X			X	X	X	X	X	X
Station 8 – Old Fort													X		
Station 9 – 85th Avenue		X											X		
Station 10 – Tea Creek	X	X	X	X	X		X			X	X	X			
Station 11 – Taylor	X	X	X	X		X	X			X	X	X			
Station 12 – Hudson's Hope	X	X											X	X	
Fort St. John Airport (ECCC)	X	X	X	X	X										

2.1 Equipment Maintenance

Scheduled monthly calibration and maintenance checks were performed on all Thermo Scientific gas analyzers and Sharp PM units. Gas instruments (Models 42i, 43i, 48i, 42iQ, 43iQ) run daily span and zero checks that are used to guide the need for unscheduled maintenance. This process exceeds the recommendations in the BC Field Sampling Manual (Government of BC, 2020).

2.2 Data Collection and Quality Assurance / Quality Control (QA/QC)

Measurements from the Site C network stations were remotely downloaded to RWDI servers using Campbell Scientific's LoggerNet software over cellular modem connections at the following intervals:

- The following stations with AC power had download intervals of one hour:
  - Station 1 (Attachie Flat Upper Terrace)
  - Station 4 (Bear Flat)
  - Station 7C (Fort St. John North Camp C)
  - Station 8 (Old Fort)
  - Station 9 (85thAvenue)
  - Station 12 (Hudson's Hope)

- The following solar powered stations had their data collected hourly when battery power was >12 V:
  - Station 3 (Attachie Plateau)
  - Station 6 (Farrell Creek)

- The following solar powered stations had their data collected only at specific times during daylight hours to preserve battery charge:
  - Station 7B (Site C North Camp)
  - Station 10 (Tea Creek)
  - Station 11 (Taylor)

The first stage of data quality assurance (QA) applied to the readings involved diagnostic monitoring in the data logger by continually reading in and checking all instrumental diagnostics available from the air quality equipment for signs of an instrumental malfunction. If a problem is detected, the data logger can issue commands to the air quality instrument to rectify the problem and notify RWDI personnel so the issue can be addressed. This first level of data QA was included in the data logger programs at Station 1 (Attachie Flat Upper Terrace), Station 7C (Fort St. John North Camp C, air quality), Station 8 (Old Fort), Station 9 (85th Avenue), and Station 12 (Hudson's Hope). In 2021 all climate stations were upgraded to include diagnostic monitoring as well.

Secondly, manually assisted and automated quality control was carried out on the raw data weekly. This involved plotting the readings over the past month and the previous 10 to 30 days to allow for a visual inspection of the time history so the operator can detect anomalous trends or data outliers. This frequency of QA was maintained to allow rapid detection and repair of any instrument malfunctions or drift.

As part of the RWDI data validation process, a third QA/QC operation was conducted monthly to invalidate any data from an instrument known to be malfunctioning based on the results of routine monthly visits for maintenance, calibrations and checks. Results from both checks performed by RWDI personnel as well as equipment performance audits performed by the ENV were used to increase confidence in the validity of the data.

3 METEOROLOGY AND AIR QUALITY RESULTS

An overview of results for meteorology and air quality parameters associated with the 2025 field monitoring are presented in the following subsections.

3.1 Meteorology

Table 3-1 provides a summary of some of the climate parameters discussed in this report as well as 30-year climate normals from Fort St. John Airport for the period, 1991 to 2020 (ECCC, 2023). Climate normals were calculated from 30-year records of meteorological observations of wind speed, temperature, precipitation and other related weather conditions at the location of interest. Climate normals are updated by ECCC on a 10-year basis and the most recent reporting period available is from 1991-2020. The 30-year climate normals for the maximum and minimum temperatures differ from what are reported in the published normals, because ECCC takes the daily maximum/daily minimum and averages that occur over the month for all years. These numbers are averaged over the 30-year annual maxima/minima in the period, so they are more extreme and more comparable to the maximum and minimum temperatures at any one site for this year.

The year 2025 was warmer and drier than normal throughout most of the year, despite record-breaking snowfall in December. Station 3, Station 4 and Station 10 recorded on average 94% more precipitation compared to the 30-year climate normal. Whereas, for Station 1, Station 6, Station 7B, Station 11 and the Fort St. John Airport on average the precipitation amounts were 83% compared to the 30-year climate normal. The Fort St. John Airport recorded the largest annual difference of 136.8 mm. As for the Site C network, Station 7B recorded the largest annual difference of 87.1 mm. Notably, the majority of precipitation in 2025 occurred in December at all stations, as the Peace region experienced greater than normal snowfall throughout the month. The British Columbia Snow Basin Index for the Peace Region was 142% above normal as of January 1, 2026 (BC Ministry of Water, Land and Resource Stewardship, 2026). In comparing the precipitation as snowfall from December 2024 with December 2025, there was, on average, a 145 % increase across the Site C network. The maximum mean temperature difference was 3.3°C warmer when compared to the 30-year normal.

Table 3-1: Summary of measured climate parameters during 2025 and comparison with climate normals.

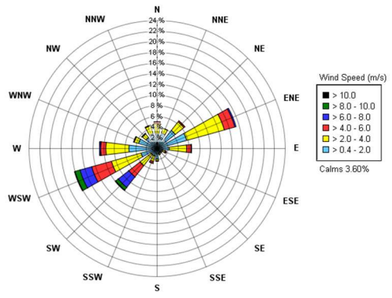
Data Record	Mean Temp (°C)	Max Temp (°C)	Min Temp (°C)	Total Precipitation (mm)	Mean Wind Speed (m/s)
Station 1 – Attachie Flat Upper Terrace	3.4	32.4	-36.2	410.7	2.7
Station 3 – Attachie Plateau	3.7	32.2	-36.6	521.2	2.6
Station 4 – Bear Flat	-	-	-	477.5	2.0
Station 6 – Farrell Creek	5.7	31.8	-37.1	378.3	1.8
Station 7B – Site C North Camp	4.4	33.5	-33.9	376.5	3.0
Station 9 – 85th Avenue	-	-	-	-	3.6
Station 10 – Tea Creek	3.4	31.6	-36.3	486.6	2.5
Station 11 – Taylor	4.1	34.3	-33.1	428.0	1.5
Station 12 – Hudson's Hope	4.5	31.6	-35.0	-	1.1
Fort St. John Airport	3.2	31.3	-35.3	326.8	3.9
30-year climate normals (1991 – 2020)	2.4	33.5	-44.6	463.6	3.9
Max difference from normals	+3.3	-2.2	+11.5	-136.8	-2.8

Note: - indicates insufficient or no data collected. Station 4 temperature and relative humidity readings were missing for an extended period of time due to the failure of the mechanical fan used to aspirate the sensors. This issue was resolved on June 4th which resulted in <75% temperature data available for Station 4 in 2025.

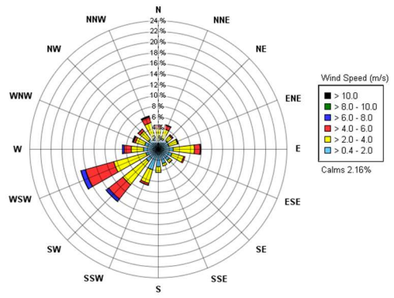
3.1.1 Wind Characteristics

Wind speed and wind direction were measured at all stations except Station 8 (Old Fort). Figure 3-1 shows wind roses for all stations with a complete year of records including Fort St. John Airport for 2025. Mean annual wind speed for 2025 ranged from 1.1 m/s (Station 12 – Hudson's Hope) to 3.6 m/s (Station 9 – 85th Avenue) at the Site C network stations. Fort St. John Airport recorded a mean annual wind speed of 3.9 m/s which was the same as the 30-year climate normal of 3.9 m/s (Table 3-1).

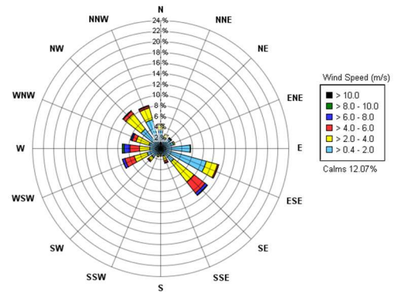
The differences in wind speed and wind direction between stations that are apparent in the wind roses are attributed to small scale surface features such as proximity of trees and local topography to the network stations and their location within the meandering Peace River Valley. The higher wind speed at Fort St. John Airport is likely due to this station being on the plateau above the Peace River Valley and its very open surroundings with a large fetch in all directions. There was a wide difference of the proportion of calms as well: ranging from 1.32% to 27.55% over the 12-month period. Higher calm measurements were noted at lower elevation stations beside the Peace River in more enclosed areas of the valley, with site values similar to previous years.



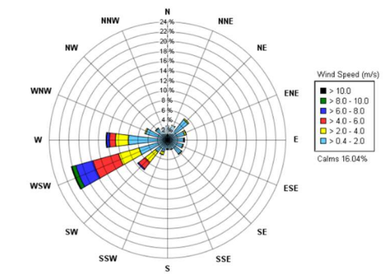
Station 1



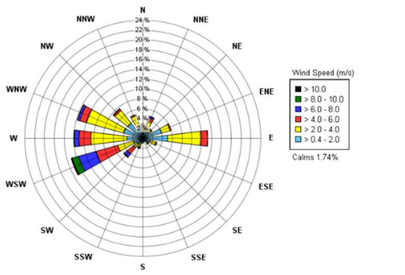
Station 3



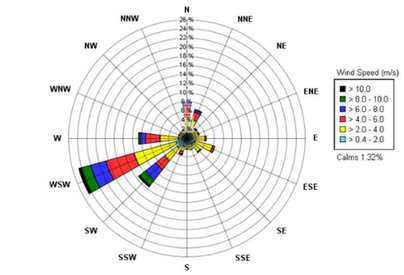
Station 4



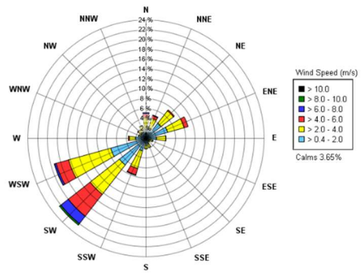
Station 6



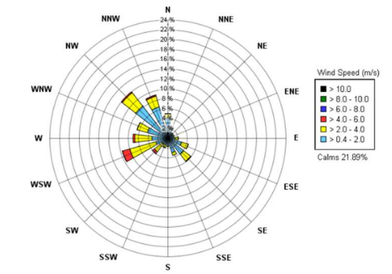
Station 7



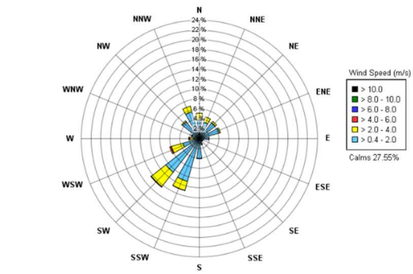
Station 9



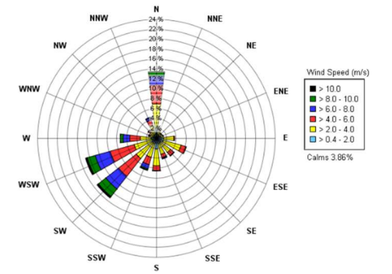
Station 10



Station 11



Station 12



Fort St. John Airport

Figure 3-1: Annual wind roses for Site C stations and Fort St. John Airport for 2025.

3.2 Particulate Matter

Table 3-2 gives an overview of the completeness of the datasets for PM_{10} and $PM_{2.5}$ at each station as well as the number of excursions and/or exceedances above the provincial 24-hour Ambient Air Quality Objectives (AAQOs) and a comparison of the annual averages with the provincial AAQOs. Excursions and exceedances are defined as follows:

> **Excursions** occur when the concentration for a contaminant at a certain averaging period exceeds the AAQO. Per ENV, a 24-hour average is averaged from midnight to midnight.
>
> **Exceedances** are defined by the AAQO and may require certain conditions to be met before an excursion is called an exceedance. For example, an exceedance for $PM_{2.5}$ requires that the annual 98th percentile of the 24-hour average > AAQO. PM_{10} has no such conditions (i.e., calculated annual percentiles) so any 24-hour excursions for PM_{10} are always exceedances.

The lower percentage data completeness for 24-hour averages than for hourly data stems from a requirement that, to consider a 24-hour average to be valid, it must contain at least 75% (18 hours) of valid hourly data (CCME 2019). This ensures that 24-hour averages are not biased toward one single time of the day. Unless specified otherwise, the 24-hour average refers to the daily block average from the 01:00 hour to the 00:00 hour-ending time stamp of the following day.

Per the Memorandum of Understanding (MOU) with ENV, there is a minimum data polling requirement of 90%. This means that 90% of the time the province should be able to successfully obtain data from BC Hydro's sites and display air quality readings on the Ministry's air quality public portal within an hour of when the observation is collected at the site. In 2025, the 90% data polling criteria was met.

All PM monitors had an hourly data completeness of greater than 75% (typical of ENV permit requirements). The majority of the excursions and exceedances in 2025 were related to smoke from forest fires or community specific events such as road dust. Under these conditions, ENV issued Smoky Skies Bulletins and Air Quality Advisories, respectively. Specific dates for these events in 2025 are provided later in this section.

The 98th percentile values for all stations $PM_{2.5}$ daily average measurements were greater than the BC AAQO of 25 µg/m^3, and so all excursions are classed as exceedances in 2025.

Table 3-2: Summary of measured PM results for 2025 (in µg/m³).

Parameter	Station 1 Attachie Flat Upper Terrace		Station 7C Fort St. John North Camp C		Station 8 Old Fort		Station 9 85th Avenue		Station 12 Hudson's Hope	
	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
Percentage data complete of hourly data	95.7	97.8	97.9	94.3	96.4	93.5	75.3	88.7	99.3	97.4
Percentage data complete (24-hour averages)	94.3	97.5	98.6	93.7	96.2	92.6	74.3	86.9	100	97.8
24-hour AAQO	25	50	25	50	25	50	25	50	25	50
24-hour AAQO excursions ($PM_{2.5}$) / exceedances (PM_{10})	11	8	12	9	11	7	15	3	11	6
98th percentile of 24-hour daily averages	**49.6**	55.2	**33.3**	52.6	**37.4**	44.4	**47.1**	38.1	**36.6**	43.3
Annual AAQO	8	NA	8	NA	8	NA	8	NA	8	NA
Annual average of hourly data	6.2	9.6	6.2	11.9	6.0	9.7	6.5	11.4	6.0	10.2

Notes: **Bolded** PM values indicate measured concentrations that exceeded their respective AAQO
NA is used where the quantity in question is not applicable to the measurement.

In 2025, Station 1 (Attachie Flat Upper Terrace) had 11 exceedances for $PM_{2.5}$ above the 25 µg/m³ AAQO for a 24-hour averaging period and 8 exceedances of the AAQO for PM_{10}. At Station 1 the annual average for $PM_{2.5}$ was 6.2 µg/m³. Twelve exceedances of the AAQO for $PM_{2.5}$ and 9 exceedances of the AAQO for PM_{10} over 24-hour averaging periods were observed at Station 7C (Fort St. John North Camp C). At Station 7C the annual average for $PM_{2.5}$ was also 6.2 µg/m³. At Station 8 (Old Fort), 11 exceedances of the 24-hour AAQO for $PM_{2.5}$ and 7 exceedances of the AAQO for PM_{10} were observed. The annual average $PM_{2.5}$ at Station 8 and Station 12 were the same (6.0 µg/m³). There were 11 exceedances above the 24-hour AAQO for $PM_{2.5}$ observed at Station 12 (Hudson's Hope) and 6 exceedances above the AAQO for PM_{10}. Lastly with an annual average for $PM_{2.5}$ of 6.5 µg/m³ there were 15 exceedances of the 24-hour AAQO for $PM_{2.5}$ observed at Station 9 (85th Avenue), and 3 exceedances above the AAQO for PM_{10}.

Station 1, Station 8 and Station 12 observed the same amount of $PM_{2.5}$ exceedances during 2025. Across the network, there was a similar number of occurrences of $PM_{2.5}$ and PM_{10} exceedances, with Station 9 standing out with the lowest amount of PM_{10} exceedances and the highest amount of $PM_{2.5}$ exceedances. Notably, the PM_{10} analyzer was out of service for periods of time due to multiple operational issues after August 2025, in which time 8 out of the 15 $PM_{2.5}$ exceedances occurred at Station 9. Effectively, the 3 PM_{10} exceedances at Station 9 reported in Table 3-2 can be compared with the amount of PM_{10} exceedances which occurred before August 2025. These were, 4 PM_{10} exceedances at Station 1, 3 PM_{10} exceedances at Station 12, 4 PM_{10} exceedances at Station 7C, and 2 PM_{10} exceedances at Station 8, between January 1 and August 1, 2025.

Table 3-3 provides percentile levels of note for PM concentrations at each of the air quality stations, indicating what percentage of daily average values were above the BC 24-hour AAQO. All stations PM were below the BC AAQO for 95% of the year excluding PM_{10} at Station 7C. Stations 1 and 12 are the furthest from Fort St. John and had the least number of exceedances.

Table 3-3: Percentile values of 24-hour average PM concentrations for 2025 (in µg/m³).

Percentile	Station 1 Attachie Flat Upper Terrace		Station 7C Fort St. John North Camp C		Station 8 Old Fort		Station 9 85th Avenue		Station 12 Hudson's Hope	
	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
0	0.0	0.2	0.0	0.0	0.1	0.3	0.3	0.2	0.5	0.5
0.1	1.0	2.2	0.7	2.3	0.6	1.6	0.8	2.4	1.2	2.9
0.25	2.1	3.5	1.5	3.7	1.1	3.3	1.6	4.6	1.9	4.6
0.5	3.4	5.8	3.3	7.0	3.0	6.6	3.2	7.7	3.5	6.8
0.75	5.6	10.6	6.1	12.7	6.0	10.3	6.2	15.1	5.6	11.0
0.9	9.8	16.4	10.5	21.9	10.4	17.8	10.7	21.6	9.0	16.2
0.95	15.2	23.8	19.3	39.4	18.2	25.1	20.7	28.2	12.9	25.7
0.975	30.7	41.3	28.5	49.5	36.4	44.2	30.3	36.1	26.8	38.6
0.98	49.6	55.2	33.3	52.6	37.4	44.4	47.1	38.1	36.6	43.3
0.99	69.4	77.9	46.1	72.7	55.2	82.1	58.9	42.1	42.4	52.8
0.999	147.7	163.9	148.9	174.3	150.0	156.0	155.4	151.9	127.9	140.6

Note: Red cells denote values greater than the AAQO

Figure 3-2 through Figure 3-5 show the time series of the 24-hour averages of both PM_{10} and $PM_{2.5}$ concentrations at each of the five stations, respectively.

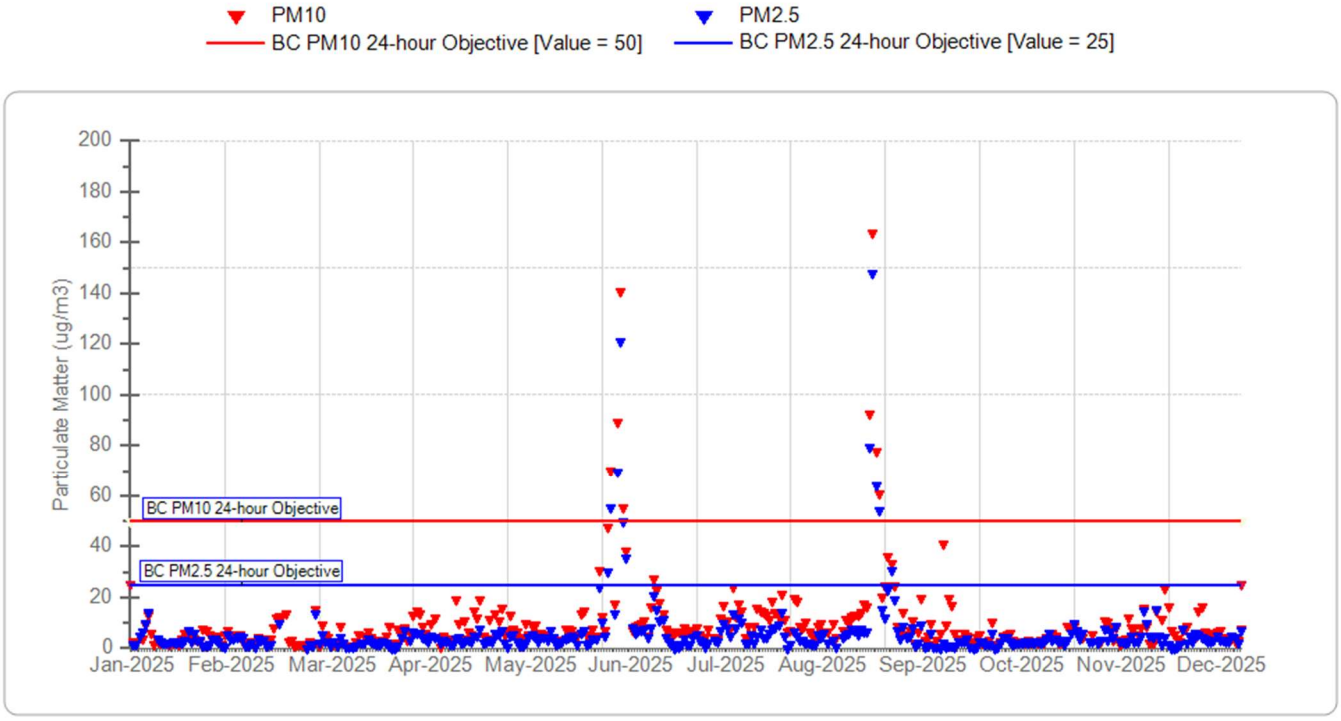


Figure 3-2: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 1 – Attachie Flat Upper Terrace for 2025 (in µg/m^3).

Note: The PM_{10} target AAQO plotted as a red line and the $PM_{2.5}$ target AAQO plotted as a blue line.

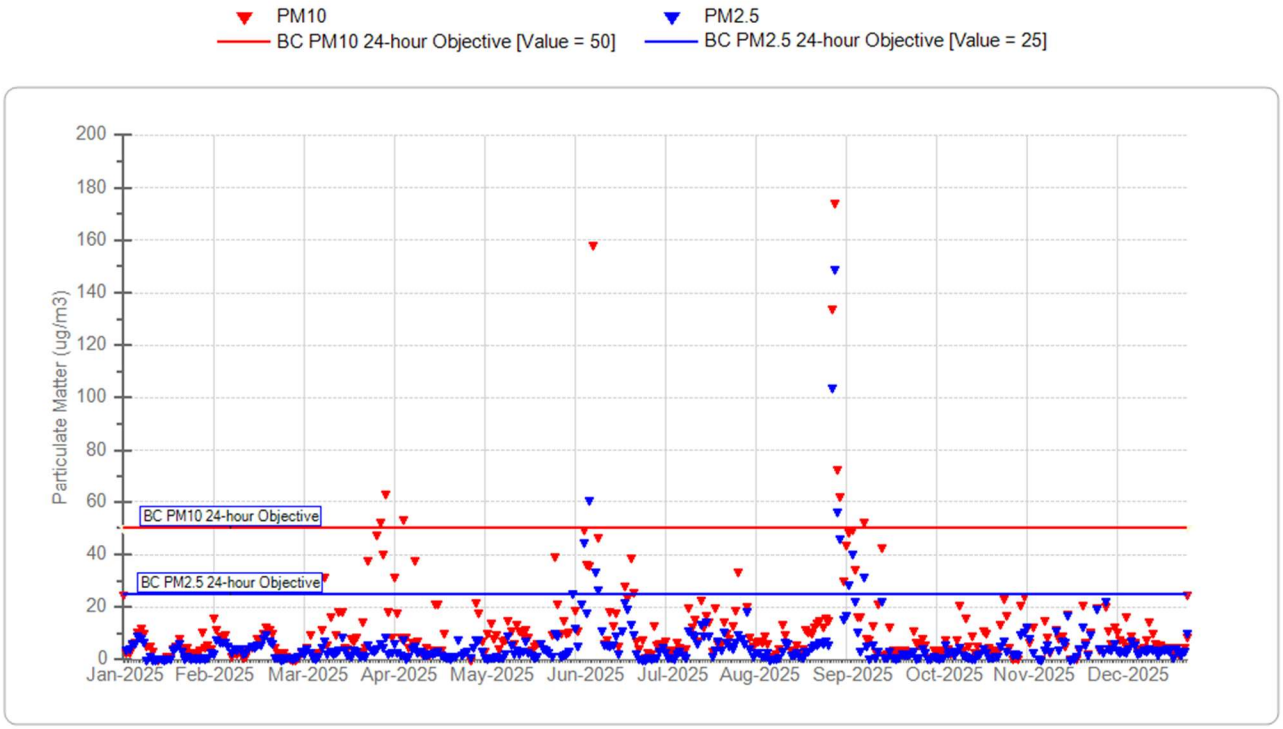


Figure 3-2: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 7C – Fort St. John North Camp C for 2025 (in µg/m^3).

Note: The PM_{10} target AAQO plotted as a red line and the $PM_{2.5}$ target AAQO plotted as a blue line.

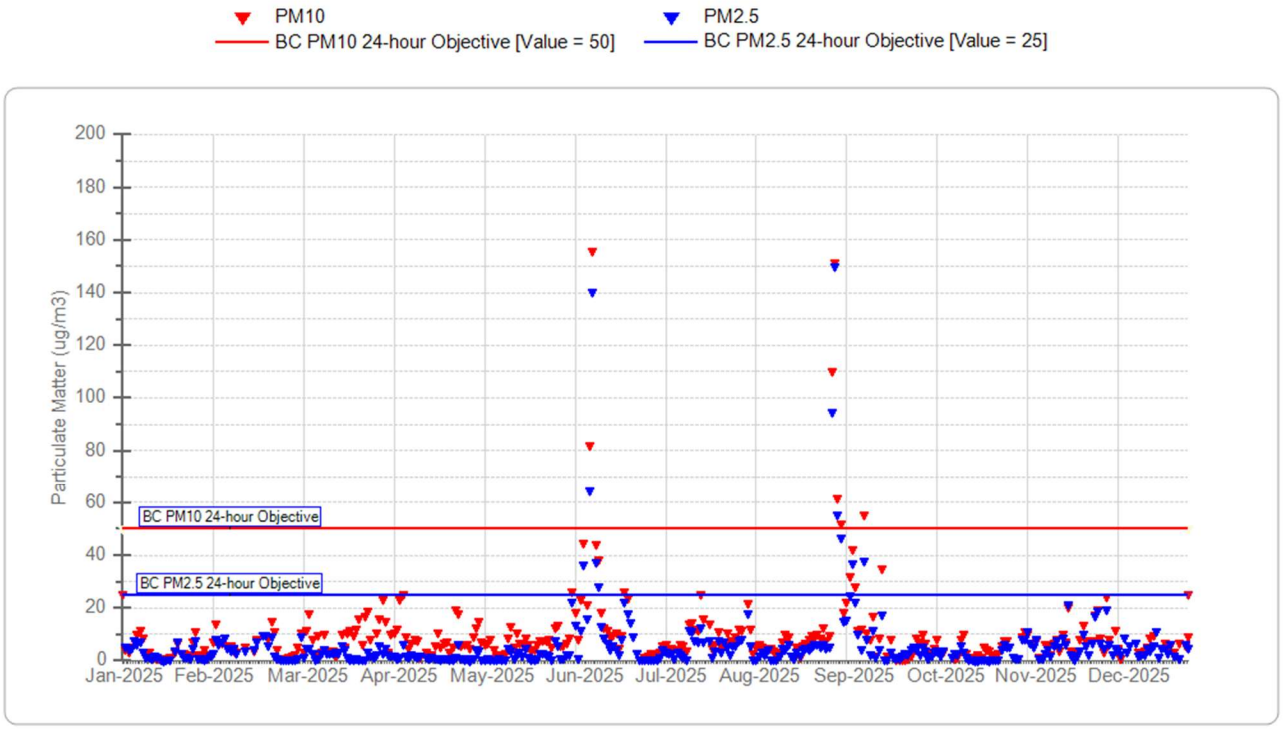


Figure 3-3: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 8 – Old Fort for 2025 (in µg/m³).

Note: The PM_{10} target AAQO plotted as a red line and the PM2.5 target AAQO plotted as a blue line.

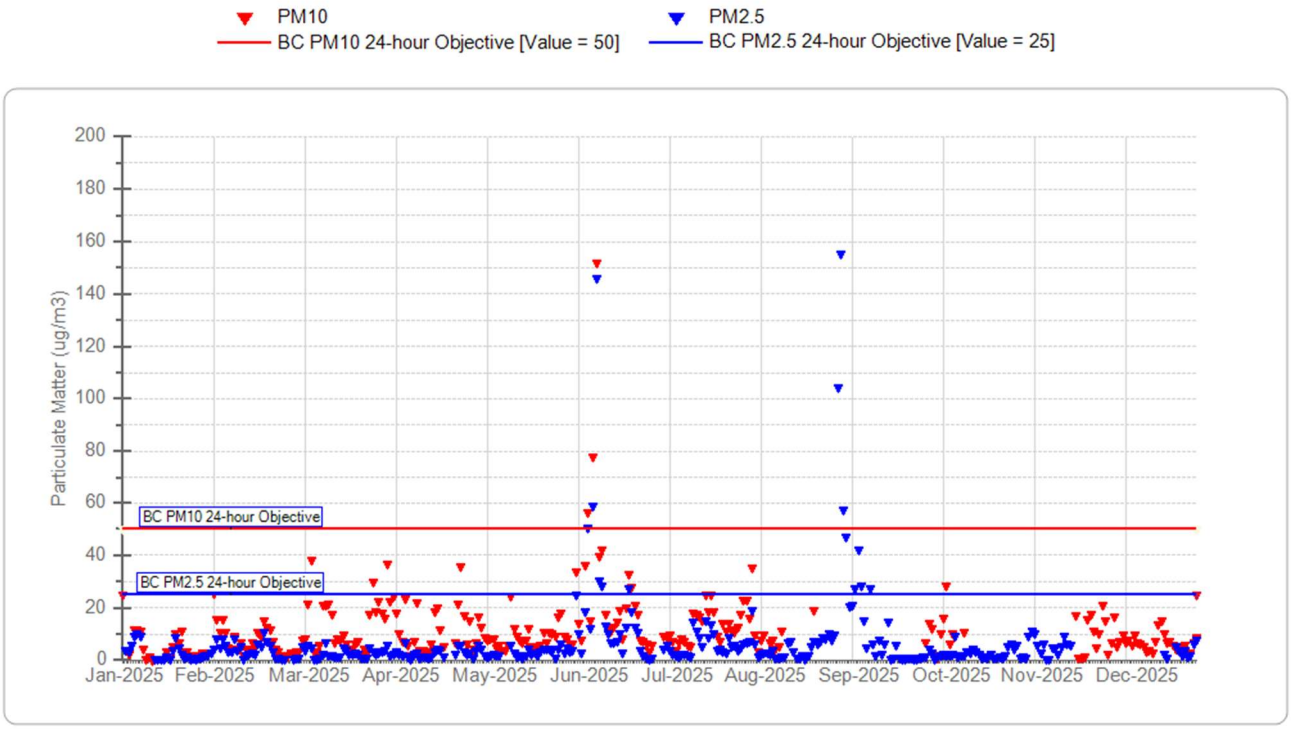


Figure 3-4: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 9 - 85th Avenue for 2025 (in µg/m^3).

Note: The PM_{10} target AAQO plotted as a red line and the PM2.5 target AAQO plotted as a blue line.

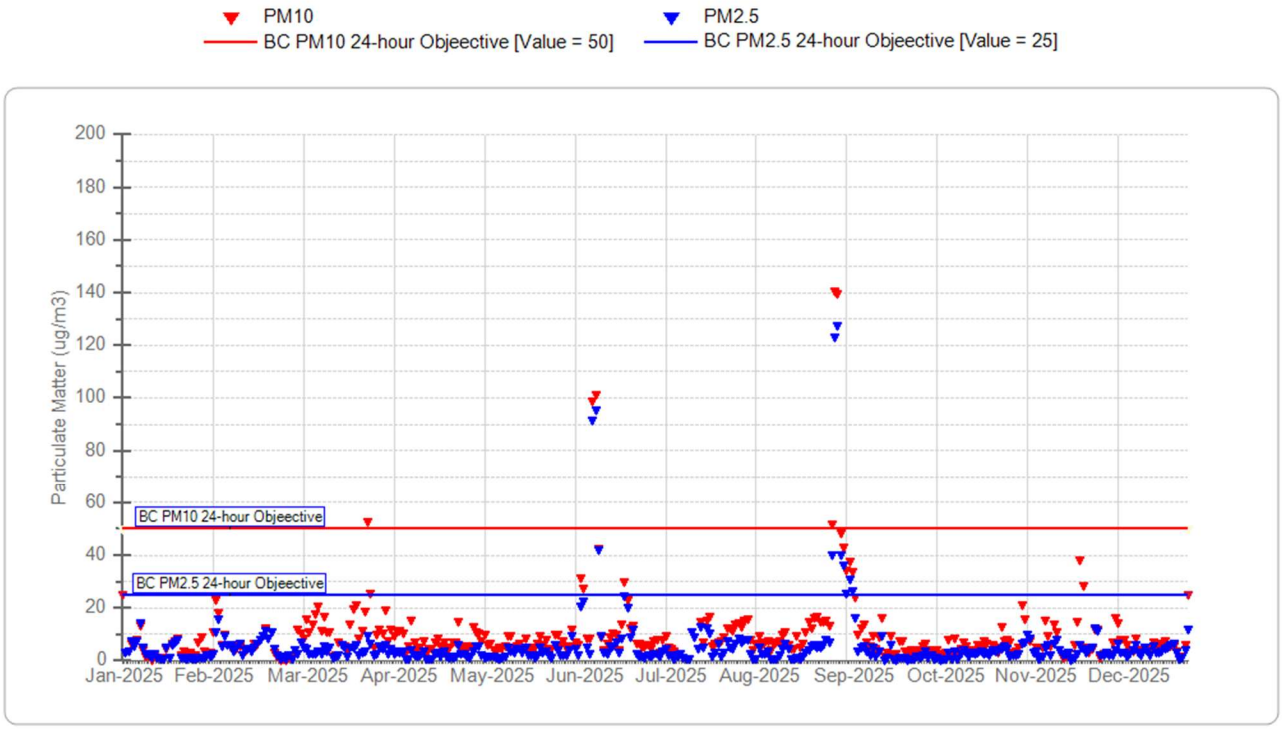


Figure 3-5: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 12 – Hudson's Hope for 2025 (in µg/m³).

Note: The PM_{10} target AAQO plotted as a red line and the PM2.5 target AAQO plotted as a blue line.

An email alerting system operated for the duration of 2025 to immediately notify BC Hydro staff and its contractors about any excursions of the AAQOs taking place so they could work to identify the emission source and mitigate its associated effects if it was found to be related to their operations. The distribution list for the alerting system includes BC Hydro and contractor environment, health and safety, and construction management personnel, and the Project's Independent Environmental Monitor (EDI Environmental Dynamics Inc.). The alerting system sends notifications of events when measured concentrations near or above AAQO's are being recorded by the analyzers.

Table 3-4 lists the alert events for 2025 at the five monitoring stations. Note that some of these events persisted over more than one day and had multiple daily exceedances within the time period (i.e., start and end dates). Throughout the month of June and from August 31 to early September, characterizing the PM_{10} and $PM_{2.5}$ exceedances as individual events was difficult due to the ongoing nature of the contribution from wildfire smoke across BC and the rest of Canada.

Table 3-4: Summary of PM alert events at Site C in 2025.

Start Date	End Date	Station	Contaminant	Excursion /Exceedance(1)	Total Excursions or Exceedances During Event
2025-03-05	2025-03-05	Stn 9: 85th Avenue	PM_{10}	No	0
2025-03-26	2025-03-26	Stn 12: Hudson's Hope	PM_{10}	Yes	1
2025-03-26	2025-04-01	Stn 7C: Fort St. John North Camp	PM_{10}	Yes	2
2025-04-06	2025-04-07	Stn 7C: Fort St. John North Camp	PM_{10}	Yes	1
2025-05-28	2025-05-29	Stn 7C: Fort St. John North Camp	PM_{10}	No	0
2025-06-03	2025-06-13	Stn 7C: Fort St. John North Camp	$PM_{2.5}$	Yes	5
2025-06-03	2025-06-04	Stn 9: 85th Avenue	$PM_{2.5}$	Yes	1
2025-06-03	2025-06-04	Stn 1: Attachie Flat Upper Terrace	$PM_{2.5}$	No	0
2025-06-03	2025-06-04	Stn 8: Old Fort	$PM_{2.5}$	No	0
2025-06-06	2025-06-13	Stn 1: Attachie Flat Upper Terrace	$PM_{2.5}$	Yes	6
2025-06-06	2025-06-13	Stn 12: Hudson's Hope	$PM_{2.5}$	Yes	3
2025-06-06	2025-06-13	Stn 8: Old Fort	$PM_{2.5}$	Yes	5
2025-06-06	2025-06-13	Stn 9: 85th Avenue	$PM_{2.5}$	Yes	5
2025-06-06	2025-06-12	Stn 1: Attachie Flat Upper Terrace	PM_{10}	Yes	4
2025-06-06	2025-06-12	Stn 12: Hudson's Hope	PM_{10}	Yes	2
2025-06-06	2025-06-12	Stn 7C: Fort St. John North Camp	PM_{10}	Yes	1
2025-06-06	2025-06-11	Stn 8: Old Fort	PM_{10}	Yes	2
2025-06-06	2025-06-12	Stn 9: 85th Avenue	PM_{10}	Yes	3
2025-06-21	2025-06-22	Stn 9: 85th Avenue	$PM_{2.5}$	Yes	1
2025-06-22	2025-06-22	Stn 12: Hudson's Hope	$PM_{2.5}$	No	0
2025-08-31	2025-09-09	Stn 9: 85th Avenue	$PM_{2.5}$	Yes	7
2025-08-31	2025-09-04	Stn 1: Attachie Flat Upper Terrace	PM_{10}	Yes	4
2025-08-31	2025-09-08	Stn 1: Attachie Flat Upper Terrace	$PM_{2.5}$	Yes	5
2025-08-31	2025-09-03	Stn 12: Hudson's Hope	PM_{10}	Yes	3
2025-08-31	2025-09-08	Stn 12: Hudson's Hope	$PM_{2.5}$	Yes	8
2025-08-31	2025-09-08	Stn 7C: Fort St. John North Camp	PM_{10}	Yes	4
2025-08-31	2025-09-08	Stn 7C: Fort St. John North Camp	$PM_{2.5}$	Yes	6
2025-08-31	2025-09-08	Stn 8: Old Fort	PM_{10}	Yes	4
2025-08-31	2025-09-08	Stn 8: Old Fort	$PM_{2.5}$	Yes	5
2025-09-11	2025-09-12	Stn 8: Old Fort	$PM_{2.5}$	Yes	1
2025-09-11	2025-09-12	Stn 7C: Fort St. John North Camp	$PM_{2.5}$	Yes	1
2025-09-11	2025-09-12	Stn 8: Old Fort	PM_{10}	Yes	1

Start Date	End Date	Station	Contaminant	Excursion /Exceedance(1)	Total Excursions or Exceedances During Event
2025-09-11	2025-09-12	Stn 9: 85th Avenue	$PM_{2.5}$	Yes	1
2025-09-11	2025-09-12	Stn 7C: Fort St. John North Camp	PM_{10}	Yes	1
2025-09-17	2025-09-18	Stn 7C: Fort St. John North Camp	PM_{10}	No	0
2025-09-17	2025-09-18	Stn 7C: Fort St. John North Camp	$PM_{2.5}$	No	0
2025-10-10	2025-10-10	Stn 9: 85th Avenue	PM_{10}	No	0

Notes:

Regional Air Quality Advisory in place

Smokey Skies Bulletin released by ENV

(1) 'No' indicates a measurement of 90% of the AAQO was recorded, but levels did not exceed the AAQO or data was later removed during intermediate QA/QC.

Table 3-4 indicates that during 2025 there was an impactful wildfire season in the Fort St. John, BC area, yet less intense than recent years past. The Site C network of Air Quality stations picked up smoke from wildfire activity primarily throughout the month of June and then again beginning on the last day of August into the first week of September. Throughout the summer into September, PM_{10} exceedances were likely in part the result of higher contributions of $PM_{2.5}$ from wildfires in addition to occasionally dry and dusty conditions within the city of Fort St. John.

Time periods when ENV issued Smokey Skies bulletins due to forest fires, coincided with periods of elevated $PM_{2.5}$ contributing >50% of the measured PM_{10} and resulted in PM_{10} exceedances. These advisories provided important regional context for the air quality exceedances recorded by stations in the Site C monitoring network. Events recorded at only one station such as at the main Project dam construction site, Station 7C (Fort St. John North Camp C) are more likely to originate from a local PM emission source(s) from the Project, while one regional emission source like a wildfire could potentially be detected at many stations at the same time. There were also Regional Air Quality Advisories issued by ENV for the period, September 2 to 4, 2025.

3.3 Gaseous Criteria Air Contaminants

Table 3-5 gives an overview of the completeness of the datasets for gaseous criteria air contaminants (CO, NO_2 and SO_2) measured at Station 7C (Fort St. John North Camp C) and Station 12 (Hudson's Hope), as well as the number of any excursions and/or exceedances above the provincial AAQOs (ENV 2025) and a comparison of the annual averages with the provincial AAQOs.

For CO, a value is an exceedance once it is greater than the provincial Pollution Control Objectives (PCOs); whereas, for NO_2 and SO_2, there is only an exceedance if the 98th and 97th percentile of daily 1-hour maxima in the year is greater than their AAQOs, respectively. If this condition has not been met, values above the respective AAQOs do not constitute exceedances and are classified only as excursions.

At Station 7C, the SO_2 and NO_2 and CO analyzers (43i, 42i and 48i) had a data completeness of greater than 90%. At Station 12 the SO_2 and NO_2 analyzers (43iQ and 42iQ) also had a data completeness of greater than 90%.

Table 3-5: Summary of gaseous criteria air contaminant results for 2025 at Station 7C (Fort St. John North Camp C) and Station 12 (Hudson's Hope) (in µg/m^3).

	Station 7C Fort St. John North Camp C				Station 12 Hudson's Hope	
	NO_2	SO_2	CO	CO (8-H Rolling average)	NO_2	SO_2
Percent data complete (in %)	98.2	92.3	90.3	90.2	90.1	99.3
1-hour AAQO or PCO	113(1)	170(2)	14,300	NA(3)	113(1)	170(2)
8-hour AAQO or PCO	NA(1)	NA(1)	NA(1)	5,500	NA(1)	NA(1)
AAQO Exceedances / Excursions(2)	0	0	0	0	0	0
Annual AAQO	32 (4)	10.5(4)	NA(3)	NA(3)	32(4)	10.5(4)
Annual Average	4.3	1.0	181.3	181.3	3.8	0.8
98th percentile of Daily 1-Hour Maximum	38.5	NA(3)	NA(3)	NA(3)	37.0	NA(3)
99th percentile of Daily 1-Hour Maximum	NA(3)	16.9	NA(3)	NA(3)	NA(3)	3.1

Notes:

(1) The term excursion is used here for NO_2 when the daily 1-hour maximum is greater than the respective AAQO but without being greater than the 98th percentile of those daily 1-hour maximum measurements.
(2) The term excursion is used here for SO_2 when the daily 1-hour maximum is greater than the respective AAQO but without being greater than the 99th percentile of those daily 1-hour maximum measurements.
(3) NA is used where the quantity in question is not applicable to the measurement.
(4) Achievement based on annual average of 1-hour concentrations over on year.

No excursions of the 1-hour SO_2 and 1-hour NO_2 AAQOs were observed in 2025 at either Station 7C (Fort St. John North Camp C) or Station 12 (Hudson's Hope). There were also no observed exceedances of the 1-hour and 8-hour rolling average Pollution Control Objectives (PCO) for CO in 2025 at Station 7C (Fort St. John North Camp C). The annual average NO_2 and SO_2 concentrations were well below their respective annual AAQOs.

Figure 3-6 through Figure 3-8 show the daily 1-hour maximum concentrations of NO_2 and SO_2, as well as the 1-hour and 8-hour rolling average CO concentrations, respectively at Station 7C (Fort St. John North Camp C). Figure 3-9 and Figure 3-10 show the daily 1-hour maximum concentrations of NO_2 and SO_2, at Station 12 (Hudson's Hope), respectively. Large spikes in the CO data close to exceedance occur on dates with the highest $PM_{2.5}$ were recorded across the network and are indicative of poor air quality conditions resulting from wildfires in the summer and idling vehicles during the winter.

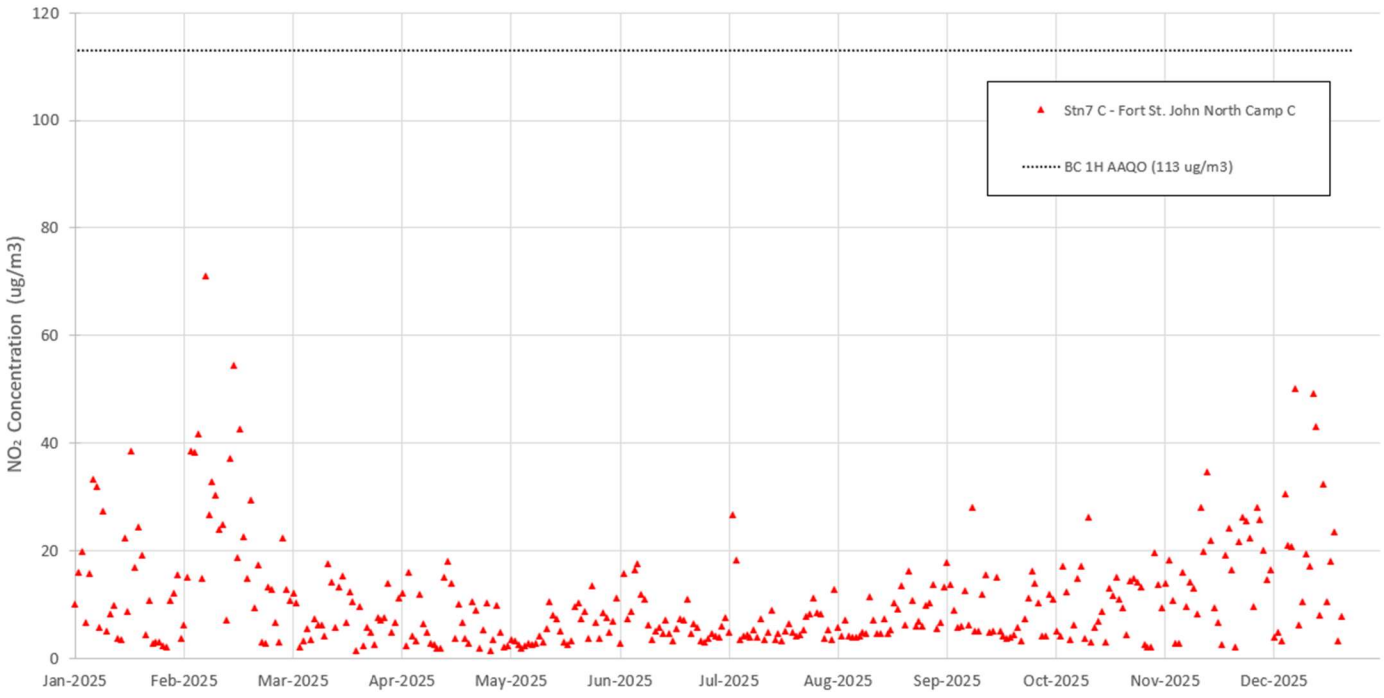


Figure 3-6: Daily 1-hour maximum NO_2 concentrations from Station 7C - Fort St. John North Camp for 2025 (in µg/m³).

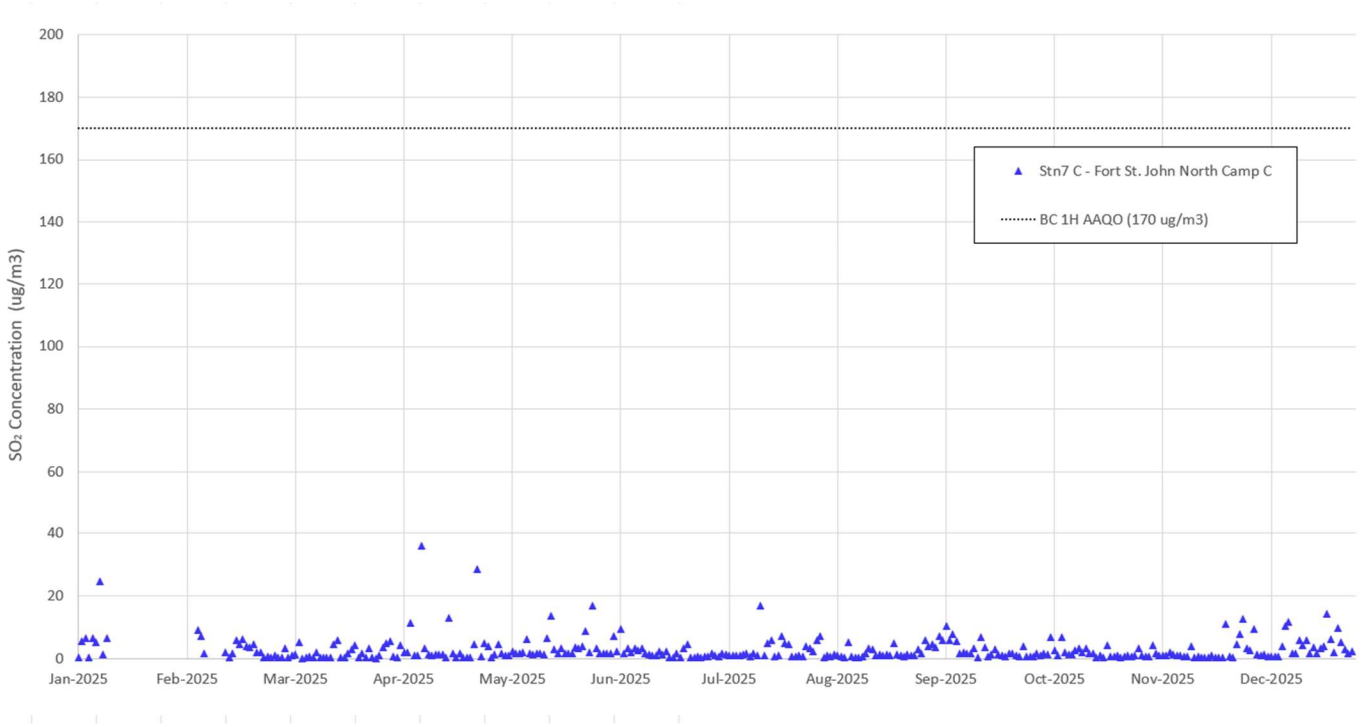


Figure 3-7: Daily 1-hour maximum SO_2 concentrations from Station 7C - Fort St. John North Camp C for 2025 (in µg/m³).

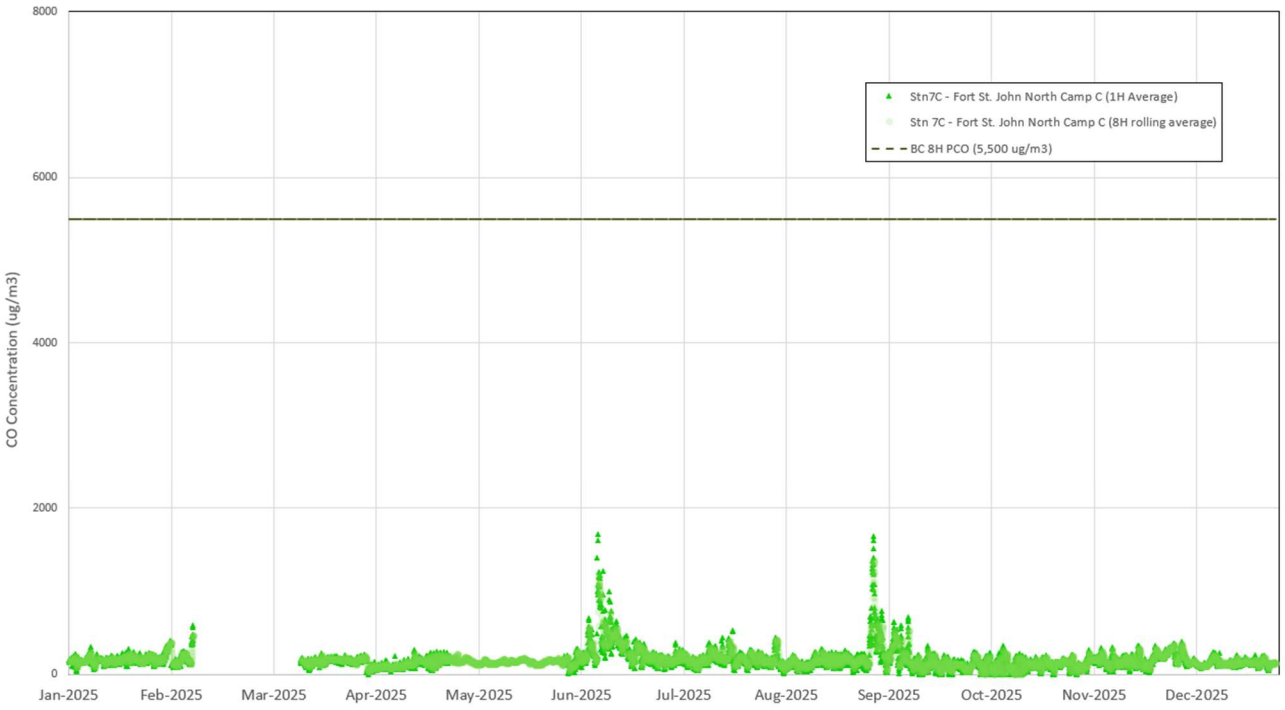


Figure 3-8: Measured 1-hour (green triangle) and 8-hour rolling average (light green dot) CO concentrations from Station 7C - Fort St. John North Camp C for 2025.

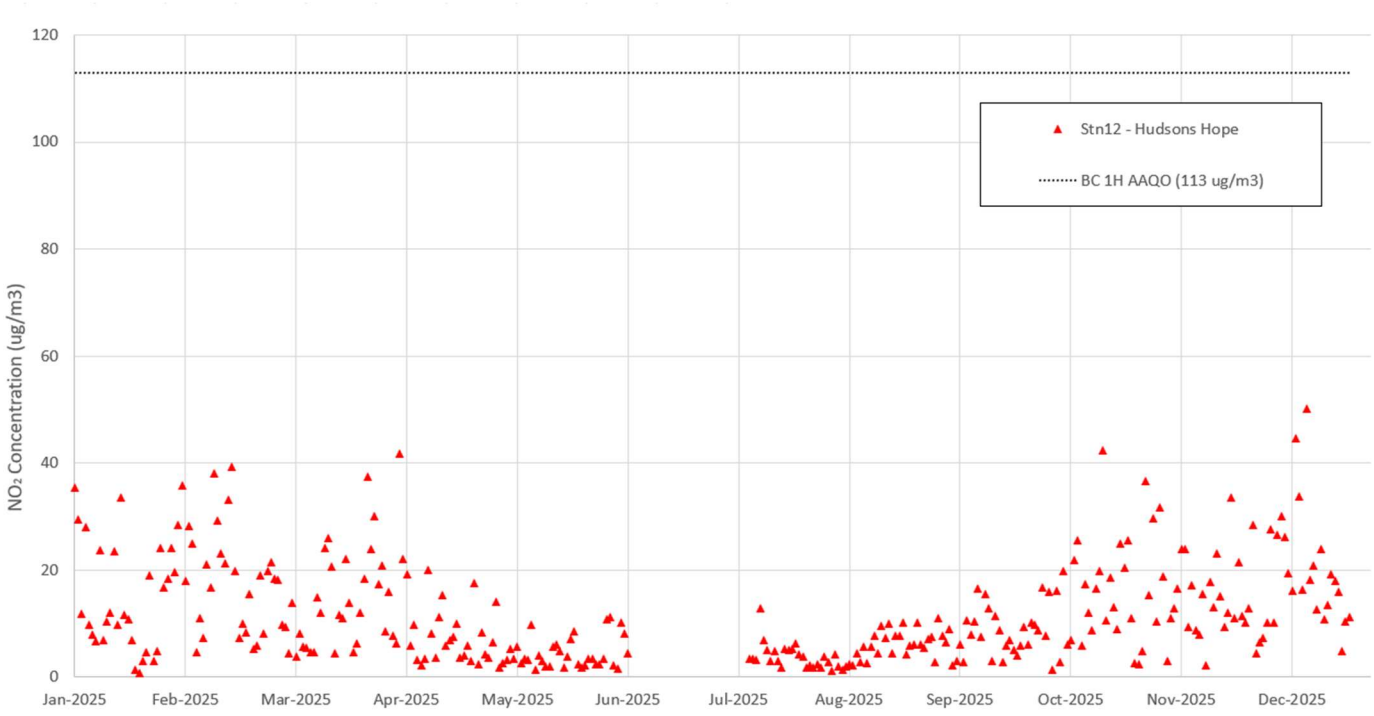


Figure 3-9: Daily 1-hour maximum NO_2 concentrations from Station 12 - Hudson's Hope for 2025.

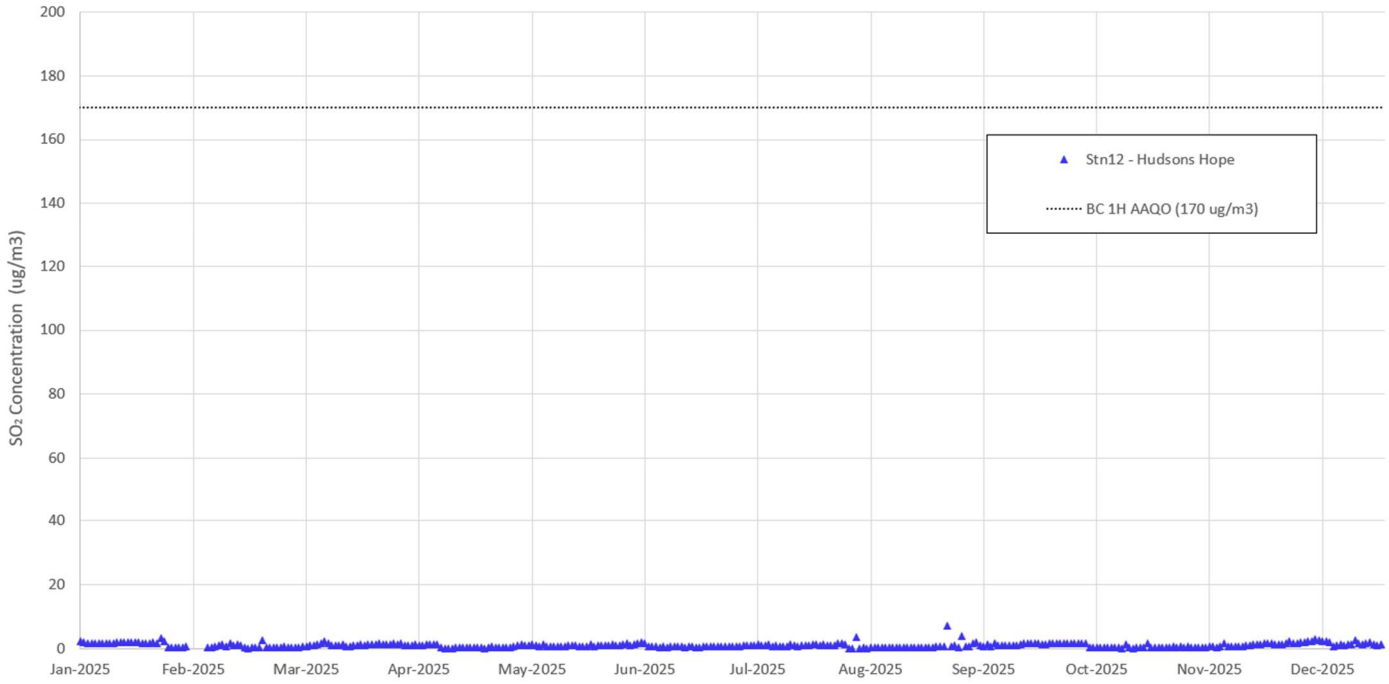


Figure 3-10: Daily 1-hour maximum SO_2 concentrations from Station 12 - Hudson's Hope for 2025 (in µg/m^3).

3.4 Air Quality Reporting

Condition 12.3.3 of the FDS requires that BC Hydro produce a plan that includes procedures to enable the appropriate authorities to alert sensitive receptor groups and Reservoir Area Indigenous Groups in case of any measured exceedances of the AAQO's and to address those exceedances. Following Section 5.0 of BC Hydro's Air Quality Monitoring Program (included as Appendix A of the CEMP; BC Hydro 2022), BC Hydro has developed a MOU with ENV to allow access to all air quality readings monitored by BC Hydro. The MOU includes an agreement for BC Hydro to share collected data, with the understanding that ENV will regularly audit the monitoring stations (see Section 3.4.1).

According to the MOU, ENV will be responsible for reporting the information publicly on the Ministry's near real-time air quality data portal[1]. This data portal is currently active and available to all interested parties to view current and historical air quality data from BC Hydro's air quality monitoring stations. Based on these measurements and other monitoring in the region, ENV and Northern Health are able to issue air quality advisories as they deem appropriate. In addition, quality assured data are provided annually to ENV prior to the subsequent Provincial Clean Air Day, in accordance with the MOU. Throughout 2025, also in accordance with the MOU, measurements from the Site C monitoring network were shared regularly (monthly) with the Pacific Climate Impacts Consortium (PCIC).[2] PCIC is a regional climate service centre at the University of Victoria that provides practical information on the physical impacts of climate variability and change in the Pacific and Yukon Region of Canada.

The BC Hydro ambient network has been operated at a high standard that is consistent with provincial and national technical standards per guidance documents (CCME 2019; Province of BC 2020). The real-time readings are being shared with external users to inform decision-making for health alerts and climate issues and with internal Project contractors, and BC Hydro managers and decision makers to minimise emissions and comply with the AAQO's. External audits are discussed in the following section and have indicated that the data quality is high and meets expectations. BC Hydro concludes that the ambient monitoring program is a success and is very useful to all parties seeking reliable, timely and accessible information that has been verified to the highest applicable technical standards.

3.4.1 Monitoring Station Audits

During 2025 ENV conducted one equipment performance audit on the five ambient air quality monitoring stations on May 8th and 9th and in accordance with the MOU. The result of this audit is presented in Table 3-6. RWDI's audit pass rate for 2025 was 100%.

[1] https://envistaweb.env.gov.bc.ca/ Data is available by searching in the reporting tool under purpose = BC HYDRO

[2] https://www.pacificclimate.org/

Table 3-6: Summary of ENV equipment performance audit results for 2025.

Station	Parameter	Audit Date
		May 8 & 9, 2025
Station 1 (Attachie Flat Upper Terrace)	$PM_{2.5}$	PASS
	PM_{10}	PASS
Station 7C (Fort St. John North Camp C)	$PM_{2.5}$	PASS
	PM_{10}	PASS
	NOx	PASS
	SO_2	PASS
Station 8 (Old Fort)	$PM_{2.5}$	PASS
	PM_{10}	PASS
Station 9 (85th Avenue)	$PM_{2.5}$	PASS
	PM_{10}	PASS
Station 12 (Hudson's Hope)	$PM_{2.5}$	PASS
	PM_{10}	PASS
	NO_X	PASS
	SO_2	PASS

4 CONCLUSIONS

Data quality was high in 2025 and for PM measurements, the complete amount of valid data exceeded 86% for the 1-hour readings as well as for the 24-hour averages, except for Station 9 where hourly data completeness for PM_{10} surpassed 75%. The complete amount of valid data exceeded 90% for the 1-hour readings for all gases.

All of the measured ambient concentrations for gases in 2025 were below their respective AAQO. The majority of measured ambient concentrations for PM in 2025 were below their respective AAQO. Year 2025 included a warm and relatively dry summer, which featured some wildfires of note, that can be related to the elevated PM readings as discussed in detail below. No exceedances of the 1-hour or annual AAQO's for sulphur dioxide (SO_2) and nitrogen dioxide (NO_2), or 1-hour and 8-hour Pollution Control Objectives (PCO's) 's for carbon monoxide (CO) were observed in 2025 at the two stations where these parameters are being measured, specifically, Station 7C (Fort St. John North Camp C) and Station 12 (Hudson's Hope).

Elevated levels of $PM_{2.5}$ and PM_{10} were not uncommon with more alerts for particulate matter. The fire season began in early June and persisted throughout the month. Before the end of summer in late August into September there was a second distinct period of smoky skies in the region. During these time periods, elevated $PM_{2.5}$ concentrations contributed significantly to the PM_{10} signal. Relative to the BC AAQO, there were 33 exceedances of the 24-hour average PM_{10} target of 50 µg/m^3. The 24-hour PM_{10} exceedances outside of the fire season were observed at Station 7C (Fort St. John North Camp C) on March 29th and on April 6th, and Station 12 (Hudson's Hope) on March 25th. To note, Station 9 (85th Avenue) likely would have measured more PM_{10} exceedances had the analyzer been in service for longer periods of time in the latter half of the year. After careful consideration of weather conditions, the PM_{10} exceedances can likely be attributed to fugitive dust mobilized by vehicles and strong winds. An alerting system is in place to immediately notify BC Hydro and its contractors about excursions of the AAQOs taking place so they can work to identify the activities onsite that may be responsible for the emissions and implement mitigation measures or change activities to reduce those emissions.

For $PM_{2.5}$ measurements, there were 60 exceedances recorded in 2025 where elevated levels occurred, and alerts were issued. All $PM_{2.5}$ exceedances were measured within the wildfire season.

During 2025 the BC ENV conducted one equipment performance audit. During the audit in May, all instruments were audited and each of them passed. An eight-week B.C. public service worker labour dispute was a factor which prevented a second Site C network instrument audit in 2025.

5 STATEMENT OF LIMITATIONS

This report entitled “Site C Climate &
Air Quality Monitoring 2025 Annual Report”, dated March 26, 2026, was prepared by RWDI AIR Inc. (“RWDI”) for BC Hydro (“Client”). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein (“Project”). This report was prepared using scientific principles, published methodologies and professional judgment in assessing available information and data. The findings presented within this document are based on available data within the limits of the existing information, budgeted scope of work, and schedule. The conclusions contained in this report are based on the information available to RWDI when this report was prepared; subsequent changes made by the Client after the date of this report have not been reflected in the conclusions.

This report was prepared for the exclusive use of BC Hydro. Any use which a third party makes of this report, or any reliance on, or decisions made based on it, are the responsibility of such third parties. RWDI accepts no responsibility for damages, if any, suffered by any third party as result of decisions made or actions based on this report.

6 REFERENCES

BC Hydro (2022). Air Quality Monitoring Program (Rev. 3). 9 pp. Included as Appendix B of CEMP as noted below.

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APPENDIX A

2025 COMPLIANCE SUMMARY

Table A- 1: Summary of AQMP Conditions and Year 2025 Compliance Summary

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
EAC Condition 57	The EAC Holder must develop an Air Quality Management Plan and Smoke Management Plan	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendices A (Smoke Management Plan and B (Air Quality Monitoring Plan)	Completed February 4, 2016	Construction Environmental Monitoring Plan
	The Air Quality Management Plan and Smoke Management Plan must include at least the following to describe how the EAC Holder:			
	• Identify places of high use by Indigenous Groups for traditional purposes and develop mitigation measures if adverse effects are predicted at those locations.	Ground truthing activities are conducted per the Aboriginal Plant Use Mitigation Plan, Cultural Resources Mitigation Plan, and Heritage Resources Management Plan.	• BC Hydro has initiated ground truthing programs with the purpose of engaging with Indigenous land users, including registered trapline holders, to verify and accurately locate Indigenous land use information, and to identify concerns related to specific features, or sites that may be affected by the Project. BC Hydro has provided funding to Indigenous groups for ground truthing through Consultation and Capacity Funding Agreements.	Indigenous Nations have generally reported through traditional use studies, ground-truthing reports and other communications, that certain places/landscapes continue to be highly valued for cultural purposes, including several of the stream confluences on the north shore of the Peace River including but not limited to Cache Creek / Bear Flats, and Halfway River / Attachie Flats, and other areas. Additionally, Indigenous Nations have reported areas of importance along the transmission line right of way. Setback distances and ignition criteria described in the Smoke Management Plan (Sections 4.4 and 5.0, respectively) would apply in these areas. Indigenous Nations will be notified of planned debris burning through the activities and tools described in section 5.0 of the Aboriginal Group Communications Plan (Appendix D of the CEMP). The Project continues to consult with individual Indigenous Nations regarding construction plans and offers opportunities for site visits where ground truthing has not already occurred.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
	• Measures to manage emissions and dust from all Project activities.	Construction Environmental Management Plan Section 4.1	Completed February 4, 2016, and ongoing	Section 4.1 provides mitigation measures to be completed to manage emissions and dust.
	• Measures to manage Project effects on air quality associated with concrete production at concrete batch plants.	Construction Environmental Management Plan Section 4.1	Completed February 4, 2016, and ongoing	Section 4.1 provides mitigation measures to be taken to manage air quality effects associated with concrete batch plant operations
	• Control Project-related smoke by following the most current BC Ministry of Environment Open Burning Smoke Control Regulation.	Construction Environmental Management Plan Appendix A	Ongoing	Section 4.1 and Appendix A of the CEMP refer to the requirement to control Project-related smoke in accordance with the BC Ministry of Environment and Climate Change's Open Burning Smoke Control Regulation. BC Hydro audits compliance with this requirement by reviewing contractor EPPs and conducting environmental audits during construction to verify implementation of EPPs.
	• Measures to retain vegetative barriers, or install temporary barriers, where practical.	Construction Environmental Management Plan Section 4.1	Ongoing	Section 4.1 identifies this commitment.
	• Procedures to provide MOE with data collected during monitoring so that they can notify sensitive populations if air quality thresholds are exceeded.	Construction Environmental Management Plan Appendix B Section 5.0	Ongoing	BC Hydro has entered into an agreement with the BC Ministry of Environment and Climate Change (ENV) to make all air quality measurements available in near real-time. All operational air quality stations are accessed hourly by the BC ENV.
	The EAC Holder must monitor air quality associated with shoreline protection works at Hudson's Hope during the construction period and for the first two years of operations.	Construction Environmental Management Plan Appendix B Section 4.0	Ongoing	Shoreline protection works at Hudson's Hope began in 2020 and were completed in November 2022. An air quality monitoring station was installed in October 2020, monitoring will continue during construction and for the first 2 years of operations.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
	The EAC Holder must provide these draft Air Quality Management Plan and Smoke Management Plan to MOE, City of Fort St. John, District of Hudson's Hope, Peace River Regional District, District of Taylor, District of Hudson's Hope, District of Chetwynd and Indigenous Groups for review a minimum of 90 days prior to the commencement of construction activities.	Draft Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendix A (Smoke Management Plan) and Appendix B (Air Quality Monitoring Program)	Completed	The draft CEMP was submitted for review and comment on October 17, 2014.
	The EAC Holder must file the final Air Quality Management Plan and Smoke Management Plan with EAO, MOE, City of Fort St. John, District of Hudson's Hope, Peace River Regional District, District of Taylor, District of Chetwynd and Indigenous Groups a minimum of 30 days prior to the commencement of construction activities.	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendix A (Smoke Management Plan) and Appendix B (Air Quality Monitoring Program)	Completed	The final (Revision 1) of the CEMP was provided to regulatory agencies, governments and Indigenous Groups on June 5, 2015. The CEMP continues to be updated as required, with the most recent version, Revision 12.2, dated January 29, 2026, was accessible to regulators, government agencies, Indigenous Groups and the public via the Site C Clean Energy Project website at: CEMP-REV12.2-final-20260129-with-appencides.pdf
	The EAC Holder must develop, implement and adhere to the final Air Quality Management Plan and Smoke Management Plan, and any amendments, to the satisfaction of EAO.	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendices A (Smoke Management Plan and B (Air Quality Monitoring Plan)	Ongoing	2022 Air Quality Management Plan Annual Report BC Hydro audits contractor compliance with implementation of relevant requirements of the Air Quality Management Plan through: • reviewing Environmental Protection Plans (EPPs) submitted by the contractors and, • conducting environmental audits during construction to verify that requirements of the Plan are being considered and implemented as required BC Hydro will continue to issue Field Advice Memos to its contractors to address any issues of non-compliance.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
EAC Condition 59	The EAC Holder must outline measures including relocation of affected home-owners, as deemed appropriate in consultation with affected home-owners, to address serious levels of noise or changes in air quality during construction of the Project. The measures would be included in the appropriate plans.	Construction Environmental Management Plan Section 4.11 (Noise and Vibration Management) and Appendix B (Air Quality Monitoring Plan)	Consultation with affected homeowners or Northern Health/BC Ministry of Environment to occur if necessary	A noise and air quality complaint response process has been developed and is being implemented. Key steps in the process include proactive noise mitigation, complaint response, monitoring/notification as required, and additional mitigation if warranted.
FDS Condition 12.1	The Proponent shall ensure that Designated Project construction is undertaken in a manner that protects the health of Indigenous peoples, by ensuring that exceedances of federal and provincial ambient air quality objectives are avoided or minimized and by managing the potential effects of smoke and dustfall.		Ongoing	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendices A (Smoke Management Plan and B (Air Quality Monitoring Plan) BC Hydro audits contractor compliance with implementation of relevant requirements of the Air Quality Management Plan through: • reviewing Environmental Protection Plans (EPPs) submitted by the contractors and, • conducting environmental audits during construction to verify that requirements of the Plan are being considered and implemented as required BC Hydro will continue to issue Field Advice Memos to its contractors to address any issues of non-compliance.
FDS Condition 12.2	The Proponent shall develop, in consultation with Reservoir Area Indigenous groups, an air quality management plan to ensure exceedances of those ambient air quality objectives due to Designated Project construction are avoided or minimized at human receptor sites located outside the Project Activity Zone.	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendices A (Smoke Management Plan and B (Air Quality Monitoring Plan)	Completed February 4, 2016	Construction Environmental Management Plan

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
FDS Condition 12.3	The plan shall include:			
FDS Condition 12.3.1	• measures to avoid or minimize exceedances of federal and provincial ambient air quality objectives for Total Suspended Particulates (TSP), Particulate Matter ($PM_{2.5}$, PM_{10}), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2) and Sulphur Dioxide (SO_2);	Construction Environmental Management Plan Section 4.1	Completed February 4, 2016	Construction Environmental Management Plan
FDS Condition 12.3.2	• measures to minimize or manage the potential effects of smoke and dustfall;	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendices A (Smoke Management Plan)	Completed February 4, 2016	Construction Environmental Management Plan
FDS Condition 12.3.3	• procedures to enable the appropriate authorities to alert sensitive receptor groups and Reservoir Area Indigenous groups in cases of exceedance of air quality standards and to address those exceedances; and	Construction Environmental Management Plan Appendix B Section 5.0	Ongoing	BC Hydro has entered into an agreement with the BC ENV to make all air quality data available in near real-time. All operational air quality stations are accessed hourly by the BC ENV.
FDS Condition 12.3.4	• procedures to monitor air quality effects at locations used by Indigenous groups and to develop mitigation measures if adverse effects are predicted at those locations.	Construction Environmental Management Plan Appendix B	Completed July 8, 2016	Air quality monitors measuring PM_{10} and $PM_{2.5}$ were installed at three locations before construction began. A fourth station at the construction site measuring PM_{10}, $PM_{2.5}$, SO_2, NO_x and CO was installed July 7, 2016, and a fifth station at Hudson's Hope measuring PM_{10}, $PM_{2.5}$, SO_2, and NO_x was installed as of October 1, 2020.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
FDS Condition 12.4	The Proponent shall submit to the Agency and Reservoir Area Indigenous groups a draft copy of the plan for review 90 days prior to initiating construction.	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendix A (Smoke Management Plan)	Completed	The draft CEMP was submitted for review and comment on October 17, 2014.
FDS Condition 12.5	The Proponent shall submit to the Agency the final plan a minimum of 30 days prior to initiating construction. When submitting the final plan, the Proponent shall provide to the Agency an analysis that demonstrates how it has appropriately considered the input, views or information received from Reservoir Area Indigenous groups.	Construction Environmental Management Plan Section 4.1 (Air Quality Management Plan) and Appendices A (Smoke Management Plan)	Completed	The final Construction Environmental Management Plan, along with the Consideration Tracking Table was submitted on June 5, 2015.
FDS Condition 12.6	The Proponent shall implement the plan and provide to the Agency an analysis and summary of the implementation of the plan, as well as any amendments made to the plan in response to the results, on an annual basis during construction and the first year of operation.	Air Quality Management Plan 2015	8th Annual Report to CEAA included in this document.	Air Quality Management Plan 2015. • 1st Annual Report to CEAA submitted July 2016. • 2nd Annual Report submitted March 21, 2017 and revised June 14, 2017. • 3rd Annual Report was submitted March 29, 2018 • 4th Annual Report submitted April 1, 2019. • 5th Annual Report submitted March 31, 2020. • 6th Annual Report submitted March 31, 2021. • 7th Annual Report submitted March 31, 2022. • 8th Annual Report submitted March 31, 2023. • 9th Annual Report submitted March 31, 2024. • 10th Annual Report submitted March 31, 2025. • 11th Annual Report included in this document.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
FDS Condition 12.7	The Proponent shall provide a copy of the same version of its annual reporting on ambient air quality as provided to the Agency and in the same timeframe to Reservoir Area Indigenous groups and the Métis Nation British Columbia.	Air Quality Management Plan 2015	8th Annual Report to CEAA included in this document.	Air Quality Management Plan 2015. • 1st Annual Report to CEAA submitted July 2016. • 2nd Annual Report submitted March 21, 2017 and revised June 14, 2017. • 3rd Annual Report submitted March 29, 2018 • 4th Annual Report submitted April 1, 2019. • 5th Annual Report submitted March 31, 2020. • 6th Annual Report submitted March 31, 2021. • 7th Annual Report submitted March 31, 2022. • 8th Annual Report submitted March 31, 2023. • 9th Annual Report submitted March 31, 2024. • 10th Annual Report submitted March 31, 2025. • 11th Annual Report included in this document.

APPENDIX B

EXAMPLES OF DUST SUPPRESSION WITH CALCIUM CHLORIDE ROADWAY APPLICATION

Figure B-1: Calcium Road Application

As provided by BC Hydro in memo dated 13-July-2025