REPORT

SITE C CLIMATE & AIR QUALITY MONITORING

FORT ST. JOHN, BC

2020 ANNUAL REPORT

RWDI #2002352

March 19, 2021

SUBMITTED TO

Molly Brewis, P.Chem., PMP
Senior Environmental Coordinator
Physical Environment
Site C Clean Energy Project
Molly.Brewis@bchydro.com

BC Hydro
333 Dunsmuir St, 6th floor
Vancouver, BC V6B 5R3

SUBMITTED BY

Laura Dailyde, P.Eng., PMP
Senior Project Manager / Associate
Laura.Dailyde@rwdi.com

David Chadder, Hon. B.Sc., QEP
Senior Technical Director
David.Chadder@rwdi.com

RWDI
Suite 280 – 1385 West 8th Avenue,
Vancouver, Canada, V6H 3V9
T: 604.730.5688
F: 519.823.1316

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

VERSION HISTORY

Index	Date	Pages	Authors
3	19-Mar-2021	All	David Chadder, Hon. B.Sc., QEP Laura Dailyde, P.Eng. Iain Hawthorne, Ph.D. Qamar Iqbal, M.Sc.

1 INTRODUCTION

BC Hydro's Site C Clean Energy Project (the Project) in British Columbia's Peace region will create a new 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.

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 created for the Project to minimize air emissions, monitor the ambient air quality and provide these readings to the BC Ministry of the Environment and Climate Change Strategy (BC MECCS) to notify sensitive populations if air quality thresholds are exceeded. As required by 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 2020, there were four ambient air quality and eight meteorological monitoring stations in operation by the Project. In September of 2020 an additional ambient air quality station was installed in the township of Hudson's Hope (Station 12), with monitoring starting on October 1st. Figure 1-1 provides an overview image of this new station. 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). Station 8 (Old Fort), Station 9 (85th Avenue) and Station 12 (Hudson's Hope) are used to inform BC MECCS air quality advisories.

Figure 1-1: Station 12 Hudson's Hope Overview

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 ninth year of observations and the fifth year of Project construction, coinciding with the 2020 calendar year. Seven previous annual monitoring reports describing the state of the climate and air quality for the years of observations, coinciding with the 2012 through 2019 calendar years have been released (RWDI AIR Inc. 2015a, 2015b, 2015c, 2016, 2017, 2018, 2019, 2020). 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. This current report allows for comparisons to the previous data collected by the network and to 30-year climate normals from the Environment and Climate Change Canada (ECCC) station at Fort St. John Airport (ECCC, 2016). Climate parameters such as temperature, precipitation, wind speed and direction, soil temperature and soil volumetric water content as well as 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.

1.1 Managing Air Quality

BC Hydro developed a Construction Environmental Management Plan (CEMP), (Rev. 7, BC Hydro 2020), which includes a component of an Air Quality Management Plan (Section 4.1) and a description of the Air Quality Monitoring Program (Appendix B) to avoid or minimize exceedances of the ambient air quality objectives (FDS, Section 12.1). The development of the CEMP satisfies Section 12.2 of the FDS. Section 4.1 of the CEMP details the management practices that will be implemented to minimize emissions criteria 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 are well underway involving elements of the majority of activities listed in Section 4.1 of the CEMP.

As of December 31, 2020 (cumulatively since the start of project construction), 1421 Environmental Protection Plans (EPPs) (including revisions) have been reviewed by BC Hydro, many of which include measures to minimize emissions as per Section 4.1 of the CEMP, where applicable. These measures include:

- Application of dust suppressant (water on non-paved roads and other select areas such as laydown areas;
- Application of other products, such as liquid calcium chloride, on roads for cold weather dust suppression;
- Dust suppression systems on drilling equipment; and
- Vehicle inspection and maintenance programs.

In the calendar year 2020, 357 EPPs (including revisions) were submitted to and reviewed by BC Hydro.

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. Of the 2,976 inspection results conducted by BC Hydro in 2020 against air quality commitments in contractor EPPs, 98.89% were demonstrated to be fully compliant, 0.27% were not compliant and 0.84% were partially compliant. For any instances of non-compliance, a Field Advice Memo is issued by BC Hydro to the contractor, if warranted.

BC Hydro has also developed a Smoke Management Plan (Rev. 2, BC Hydro 2018), 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.

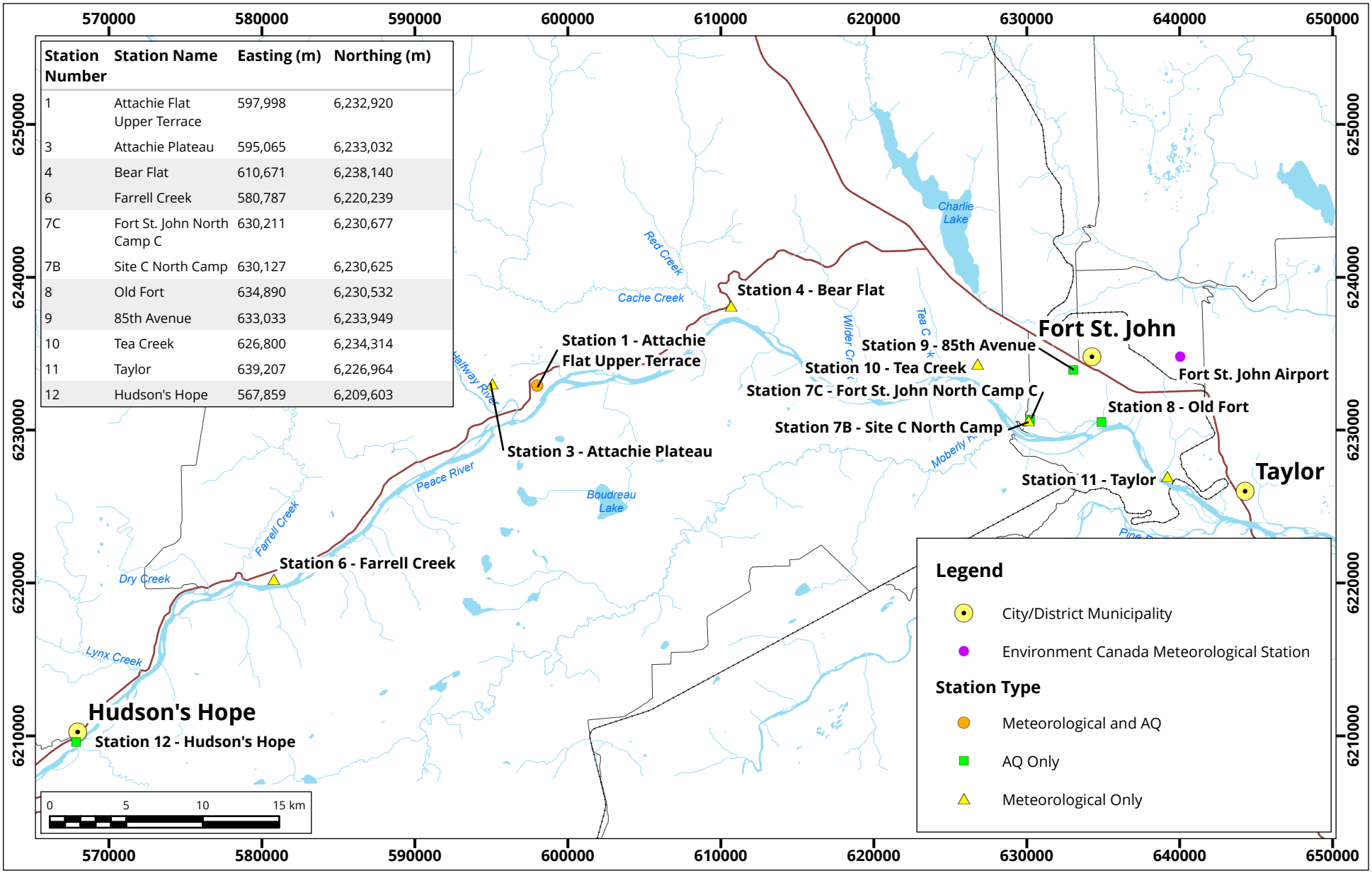
Open burning of piles of vegetation cleared in the footprint of the future Site C reservoir occurred in 2020. All ignition events were based on custom venting forecasts which were used to inform brush burning events. Further details are discussed in Section 4.1.

2 MONITORING NETWORK

Figure 2-1 shows the location of the network stations in relation to local communities and the Peace River. Table 2-1 and Table 2-2 show the coordinates and elevations for the locations and parameters measured at these stations, respectively.

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, -121.46W	645
Station 4 – Bear Flat	610669 E,6238135 N	56.27N, -121.21W	474
Station 6 – Farrell Creek	580779 E, 6220238 N	56.12N, -121.70W	471
Station 7B/C – Site C North Camp/Fort St. John North Camp C	630127 E, 6230625 N	56.20 N, -120.90W	581
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	567932 E, 6209604 N	56.03N, -121.91W	494
Fort St. John Airport (Environment and Climate Change Canada)	640053 E, 6234872 N	56.24N, -120.74W	695



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 2-2: 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 are performed on all Thermo gas analyzers and Sharp PM units. Gas instruments (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 (BC MECCS, 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:

- Stations with AC power (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 and Station 12 – Hudson's Hope) had download intervals of one hour; and
- Solar powered stations (Station 3 – Attachie Plateau, Station 6 – Farrell Creek, Station 7B – Site C North Camp, Station 10 – Tea Creek and Station 11 - Taylor) had their data collected only at specific times during daylight hours to preserve battery charge.

The first stage of quality assurance applied to the data involved the data logger by continually reading in and checking all instrumental diagnostics available from the air quality equipment for signs of an instrumental malfunction. Upon detection of a problem, the data logger can issue commands to the air quality instrument to rectify the problem and notify RWDI personnel of the problem so they can follow-up on it. The first level of QA was included in the data logger programs of Station 1 (Attachie Flat Upper Terrace), Station 7C (Fort St. John North Camp C), Station 8 (Old Fort), Station 9 (85th Avenue), and Station 12 (Hudson's Hope).

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 past 14 days to allow for a visual inspection so the operator can detect anomalous trends or data outliers. This frequency of QA was maintained to allow rapid detection and repair of any instrumental malfunctions.

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 BC MECCS were used to increase confidence in the validity of the data.

3 METEOROLOGY RESULTS

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, 1981 to 2010 (ECCC, 2016). 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 1981 to 2010. 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 over the month for all years. These numbers averaged over the 30 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. Station 3 (Attachie Plateau) data is not well represented due to missing data during April and May following a stubble burning event carried out by the landowner that damaged the equipment. The airport precipitation data is also not included due to insufficient and erroneous data through 2021 (G. Bramwell, pers. comm., Jan 25, 2021).

Table 3-1: Summary of measured climate parameters during 2020 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	2.3	31.1	-35.5	462	2.5
Station 3 – Attachie Plateau	-	28.8	-35.5	-	2.6
Station 4 – Bear Flat	2.4	29.9	-35.1	416	1.9
Station 6 – Farrell Creek	3.1	30.1	-35.0	509	1.6
Station 7B - Site C North Camp	3.0	30.7	-32.6	458	2.8
Station 9 – 85th Avenue	-	-	-	-	3.5
Station 10 – Tea Creek	2.2	28.2	-34.9	481	2.5
Station 11 – Taylor	2.4	31.4	-35.2	433	1.4
Station 12 – Hudson's Hope	-	-	-	-	-
Fort St. John Airport (ECCC)	1.9	29.0	-34.4	-	4.6
30-year climate normals (1981 – 2010)	2.3	30.2	-36.6	445	3.8
Max difference from normals	0.8	2	3.97	64	2.3

Note: — indicates insufficient or no data collected

3.1 Air Temperature and Relative Humidity

Figure 3-1 shows a time series plot of the mean daily temperature at all Site C network stations as well as the Fort St. John Airport for 2020. As was noted in the previous monitoring reports (RWDI AIR Inc. 2015a, 2015b, 2015c, 2016, 2017, 2018, 2019, 2020), much greater day to day variability was observed in the winter months (January to March, and November and December) than in the summer months (April to October). This was also observed in the 30-year averaged observations from Fort St. John Airport and was attributed to the passage of warm and cold weather fronts in the winter, bringing with them large swings in temperature. In the summer, the cold arctic air masses that dominate in winter are much farther north and there is less frontal activity in the region, resulting in less extreme temperature fluctuations.

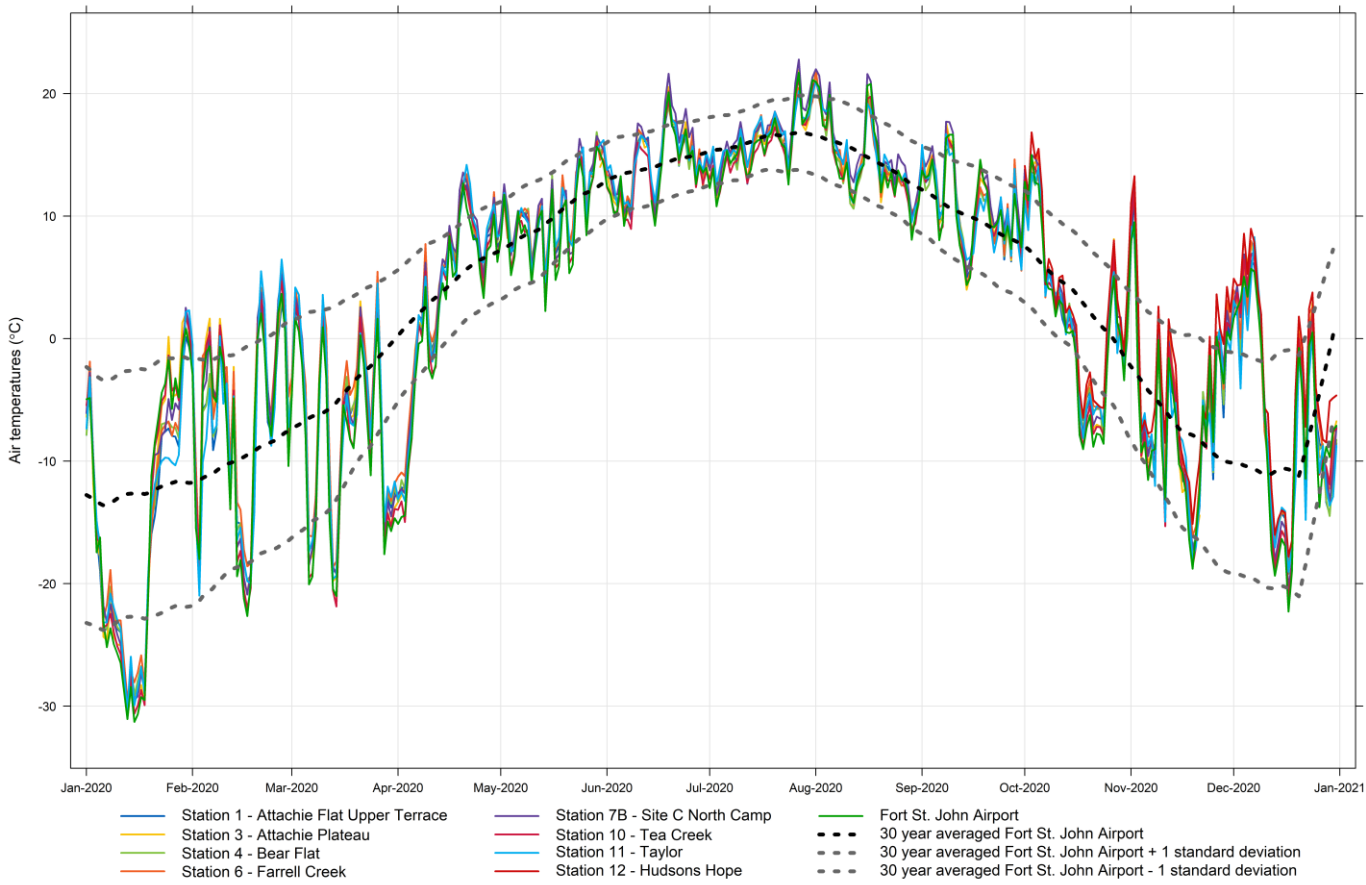


Figure 3-1: Daily average temperatures at all Site C network stations for the year 2020 and comparison with the mean ± 1 standard deviation of 30-year climate normal (based on 21-day centered rolling average) (in °C).

The inter-station variation was generally very small compared to the observed diurnal variations. The monthly average temperatures tabulated in Appendix B (Table B-1) show that all Site C network stations recorded warmer or the same temperatures than Fort St. John Airport from February through May and October through November. There were no months during which all Site C network stations recorded colder temperatures than the Fort St. John

Airport. Station 10 (Tea Creek) was cooler than Fort St. John Airport throughout the majority of the growing season (June through October). Temperatures recorded at Fort St. John Airport were below the climate normals during the majority of the growing season, excluding June and September when it was warmer.

When averaged over the entire year, the largest difference between any two stations was 1.1°C. For the months of available measurements (October through December 2020), it was noted that Station 12 (Hudson's Hope) was on average 2.21˚C warmer than the other stations with the difference increasing into winter months. Temperature differences of up to 1-2°C would be considered to be reasonable given that there is a maximum horizontal separation of 78 km between Fort St. John Airport and the most distant station in the network (Station 12 – Hudson's Hope) and a maximum change in station elevations of 284 m (from 411 m at Station 11 - Taylor to 695 m at Fort St. John Airport). This larger difference is likely due to a stronger influence of maritime climate patterns over winter and a more continental influence in summer at Hudson's Hope. Similar differences can be observed at Chetwynd which shares a more westerly position.

Annual average temperatures for 2020 at all Site C network stations were greater than those reported at Fort St. John Airport. The annual average temperature recorded at Fort St. John Airport was 0.4°C colder than the 30-year climate normal for that station. Notably in December, the airport was 4.8 °C warmer than the 30-year climate normal for that station.

Figure 3-2 shows a time-series of relative humidity (RH) recorded daily at 15:00 Mountain Standard Time (MST which equals Local Standard Time or LST) at each of the stations. This single hour of the day was used instead of a daily average due to the normally large fluctuation in RH that occurs over the course of a day and to allow comparisons with climate normals. Measurements of RH at Station 11 (Taylor) most frequently had the highest monthly averaged values over all of the stations (eight months). Station 6 (Farrell Creek) was the station at which the monthly average RH was most frequently the lowest (eight months).

When compared to Fort St. John Airport (Appendix B, Table B-2), the annual average RH at all Site C stations were lower, excluding Station 11 (Taylor), the furthest east, lowest elevation and closest to the Peace River climate station. Station 11 (Taylor) recorded consistently higher monthly RH from May onwards in 2020. Monthly average RH values over all of the stations were higher than observations from Fort St. John Airport in September. RH values recorded at Fort St. John Airport were higher than the climate normals for 50% of the year (January, March, May through July and November). Station 12 (Hudson's Hope) available monthly averages were increasingly lower into winter than all other stations compared to the airport, and most comparable to its nearest neighbour Station 6 (Farrell Creek).

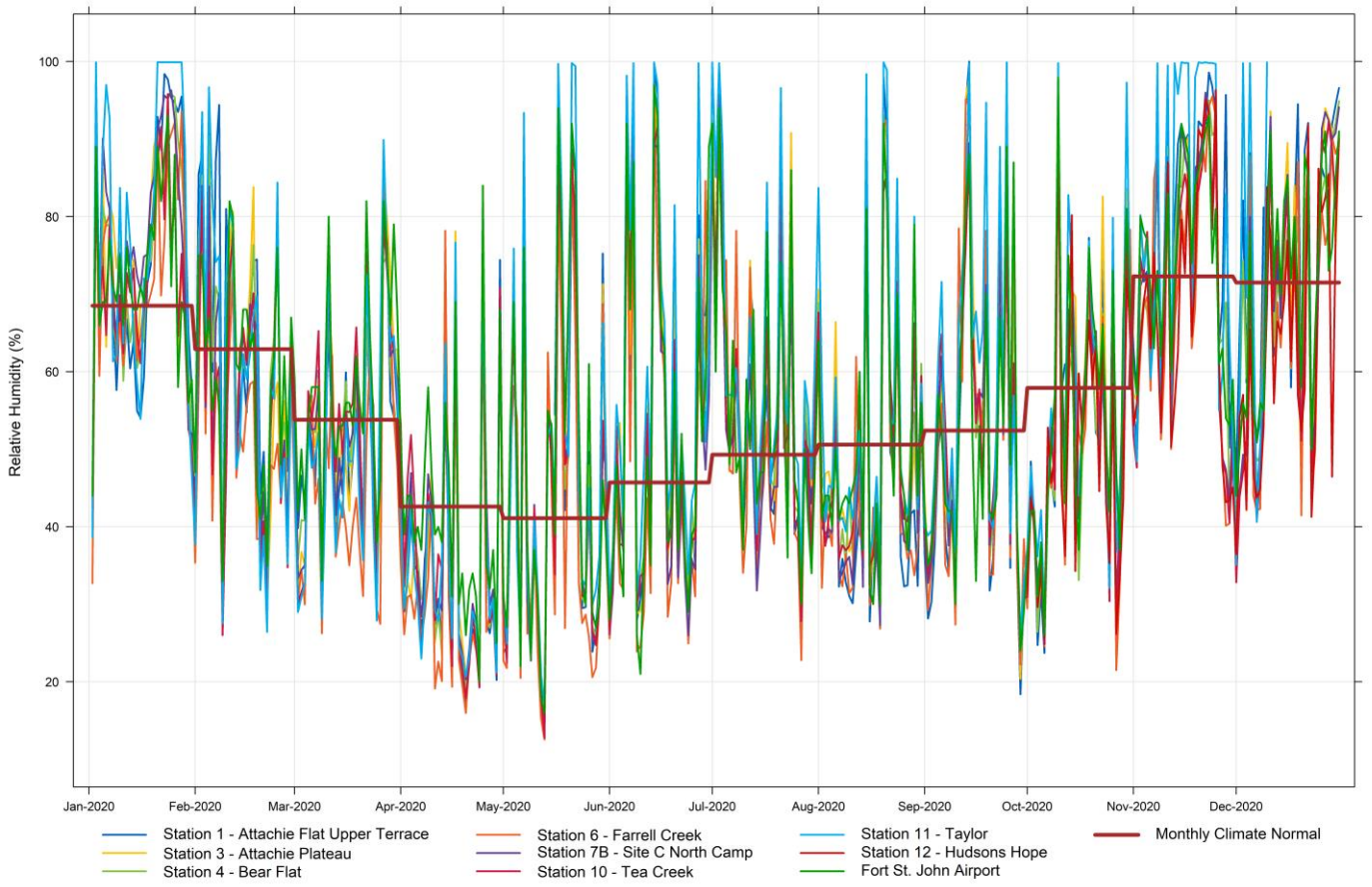


Figure 3-2: Relative humidity at all Site C network stations measured daily at 15:00 LST for the year 2020 (in percent). The monthly climate normal is shown in brown.

3.2 Wind Characteristics

Wind speed and wind direction were measured at all stations except Station 8 (Old Fort). Figure 3-3 shows wind roses for all stations with a complete year of records including Fort St. John Airport for 2020. Mean annual wind speed for 2020 ranged from 1.4 m/s (Station 11 – Taylor) to 3.5 m/s (Station 9 – 85th Avenue) at the Site C network stations. Fort St. John Airport recorded a mean annual wind speed of 4.6 m/s which was 13% greater than the 30-year climate normal of 3.8 m/s (Table 3-1).

While completing annual anemometer calibrations this year, a mis-wiring issue was discovered at Station 10 (Tea Creek) and Station 11 (Taylor). This resulted in wind direction measurements being reversed, for example, a recorded easterly wind was actually a westerly wind. Wind speed was unaffected. The wiring has been corrected and data adjusted to the proper alignment. No measured wind data were lost. Similarly, Station 4 (Bear Flat) required a minor adjustment for anemometer alignment to True North.

The differences between stations in wind speed and wind direction 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 location with a large fetch in all directions. There was a wide difference of the proportion of calms as well: ranging from 0.4 % to 27.7% of the 12-month period. Higher calm measurements were noted at lower elevation stations beside the Peace River in more enclosed areas of the valley.

Wind roses split by season from all stations with a complete year of data are included in Appendix C.

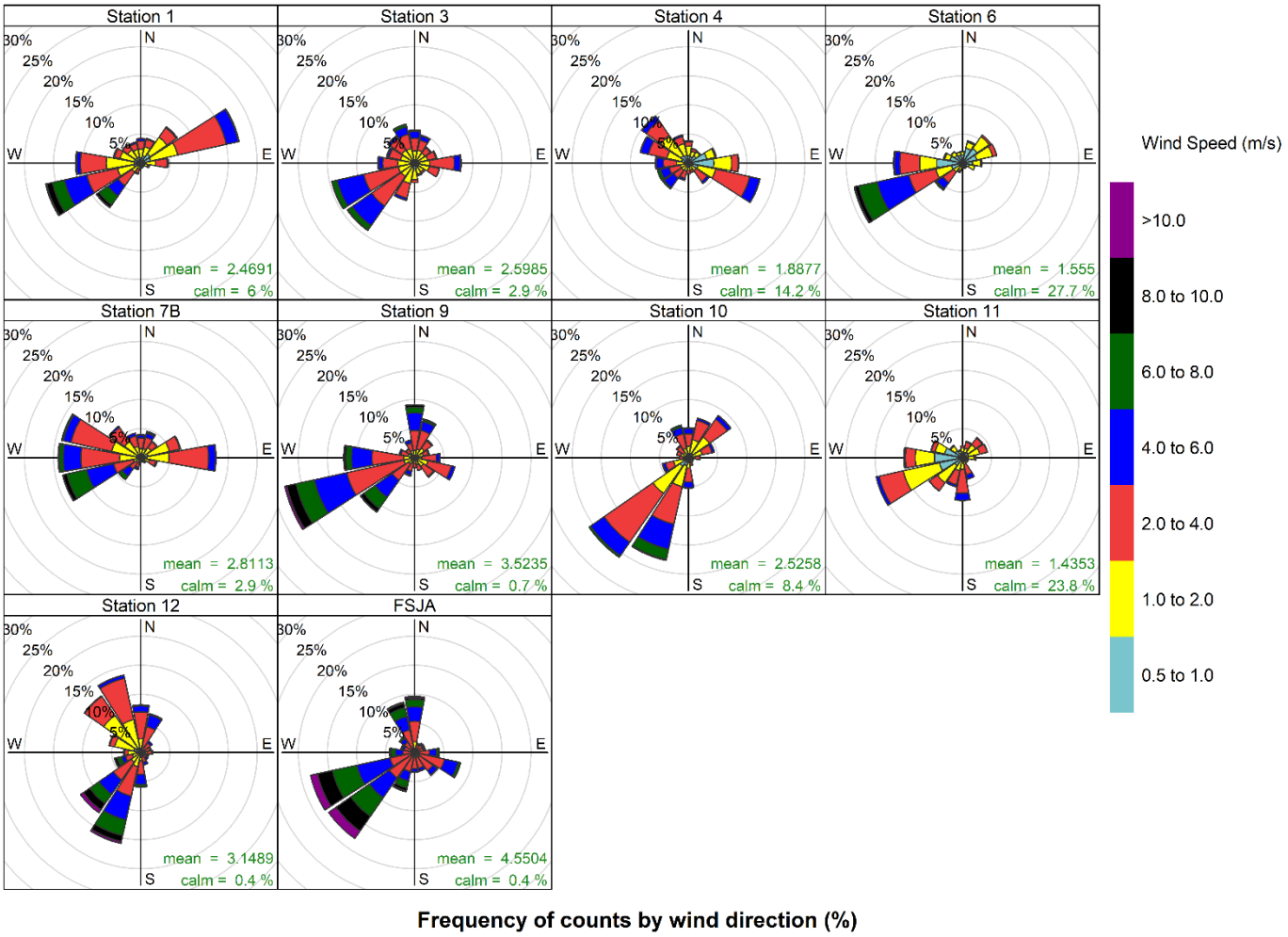


Figure 3-3: Wind roses for all Site C stations with 12-month records and Fort St John Airport for 2020.

3.3 Precipitation

Figure 3-4 shows the total monthly precipitation over the course of 2020 for each of the Site C network stations as well as for Fort St. John Airport. The gauge measures precipitation in water equivalent (i.e., any snow is melted first before the water level is measured). As a general rule of thumb, the equivalent amount of snow would be roughly 10 times as much than water. There is decreasing snow density as temperatures decrease. Values from this plot are also presented in Appendix B (Table B-3).

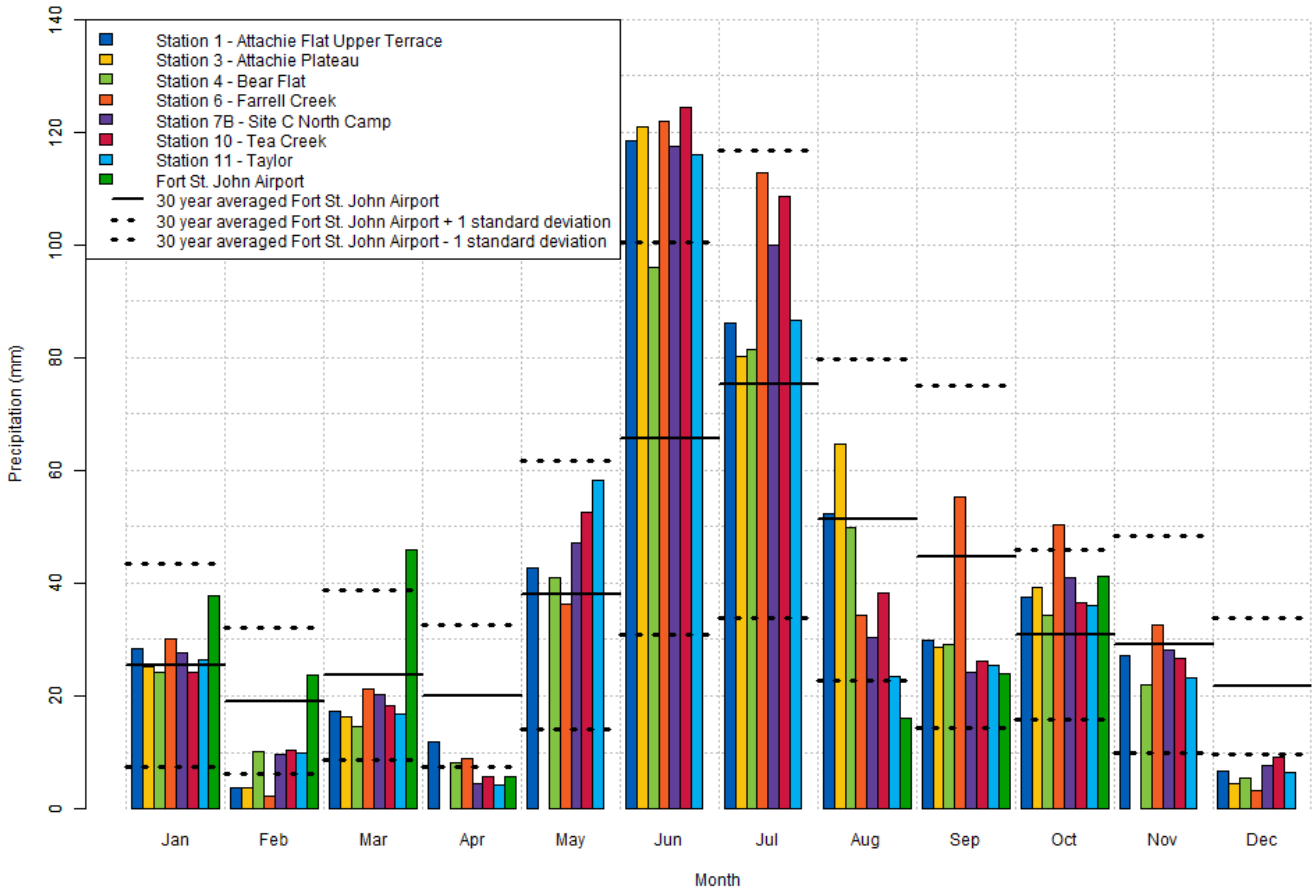


Figure 3-4: Monthly precipitation at all of the Site C network stations for 2020 and comparison with the mean ± 1 standard deviation of 30-year Fort St. John Airport climate normal.

Notes: Monthly precipitation totals have not been presented for Station 3 (Attachie Plateau) for April, May and November due to instrument damage. Additionally, monthly precipitation totals have not been presented for Fort St. John Airport for May, June, July, November and December due to instrument malfunctions.

The cumulative precipitation represented in the available data for the Fort St. John Airport for 2020 was <50% the average of the other available climate stations, and as a result, they are not comparable this year. The reduced capture for 2020 at the airport was a result of the May, June, July, November and December raw data records being incomplete. Environment Canada are working on installing an upgraded station for the future (G. Bramwell, pers.

comm., Jan 25, 2021). Monthly precipitation totals have not been presented for Station 3 (Attachie Plateau) in April and May, when fire damage occurred or for November when the data logger failed.

The winter months of January, February, and March recorded above average values at the airport. The uniform 1:10 conversion applied at the airport for snow water equivalent is likely not as accurate during snowfall events where temperatures are less than -5°C, as was experienced in FSJ during the aforementioned months. The winter into spring months (February – April) at BCH stations were dry in comparison to the 30-year averages at the airport. The June cumulative monthly amounts were well above the 30-year average at the airport. This was largely due to an extreme rain event on June 14th with Station 6 (Farrell Creek) exceeding the 100-year, Stations 1 (Attachie Flat Upper Terrace) and 3 (Attachie Plateau) exceeding the 50-year, and Station 10 (Tea Creek) exceeding the 10-year return period predicted for the airport. The June 14 event shows a strong gradient from east to west ranging from 35.1 mm at Station 11 (Taylor) to 69.8 mm at Station 6 (Farrell Creek). Unfortunately, FSJ airport data was not available for comparison. Similarly, the cumulative monthly amounts were above the 30-year average for the FSJ airport in July. This was largely due to a significant cumulative rain event spanning 1-4th of July. An average of 75 mm was measured at the stations, with the event turning from a 5-year to a 20-year event over the course of the 4 days.

At most BCH stations, the months of August and September were dry months below the 30-year average. The large difference in September at Station 6 (Farrell Creek) is largely due to one day of precipitation on the 13th, when that station measured 23 mm (>70%) more than its nearest neighbor Station 3 (Attachie Plateau), where the second largest amount was measured. In October, while all stations measured above average precipitation, Station 6 (Farrell Creek) again exceeded the 30-year average at the airport largely due to a daily catch exceeding its nearest Station 3 (Attachie Plateau) by 19.37 mm (>30%).

Annual cumulative precipitation recorded at Stations 1 (Attachie Flat Upper Terrace), 6 (Farrell Creek), 7B (Site C North Camp) and 10 (Tea Creek) were on average 33 mm greater than the 30-year climate normal (445 mm). Station 4 (Bear Flat) and Station 11 (Taylor) in easterly locations and with the lowest elevations, measured on average 20 mm below the 30-year climate normals.

3.4 Soil Temperature and Moisture

Figure 3-5 and Figure 3-6 provide the daily averaged soil temperature and soil moisture, respectively. Total daily precipitation recorded at Station 1 (Attachie Flat Upper Terrace) is included in Figure 3-6 to link increases in soil moisture to incoming precipitation and to identify increases that were related to other processes. Station 1 (Attachie Flat Upper Terrace) was selected due to its most complete dataset and its somewhat central location within the Site C monitoring network. Overall, there is very little difference among the soil temperature values between the stations, excluding the furthest west Station 6 (Farrell Creek), which during the spring and early summer was noticeably warmer. This was not observed in the air temperature data and was likely caused by differences in snow-melt timing, soil type, soil water content and land management. Over the course of the summer, the soil temperatures at Stations 1 (Attachie Flat Upper Terrace) and 7B (Site C North Camp) come closer to Station 6 (Farrell Creek), as soil moisture on average decreased.

The soil temperature at all stations was observed to exceed 0°C in April. Station 6 (Farrell Creek) thawed the earliest, on April 11th, 11 days later than in 2019, while Station 4 (Bear Flat) thawed the latest, on April 21st, also 11 days later than in 2019.

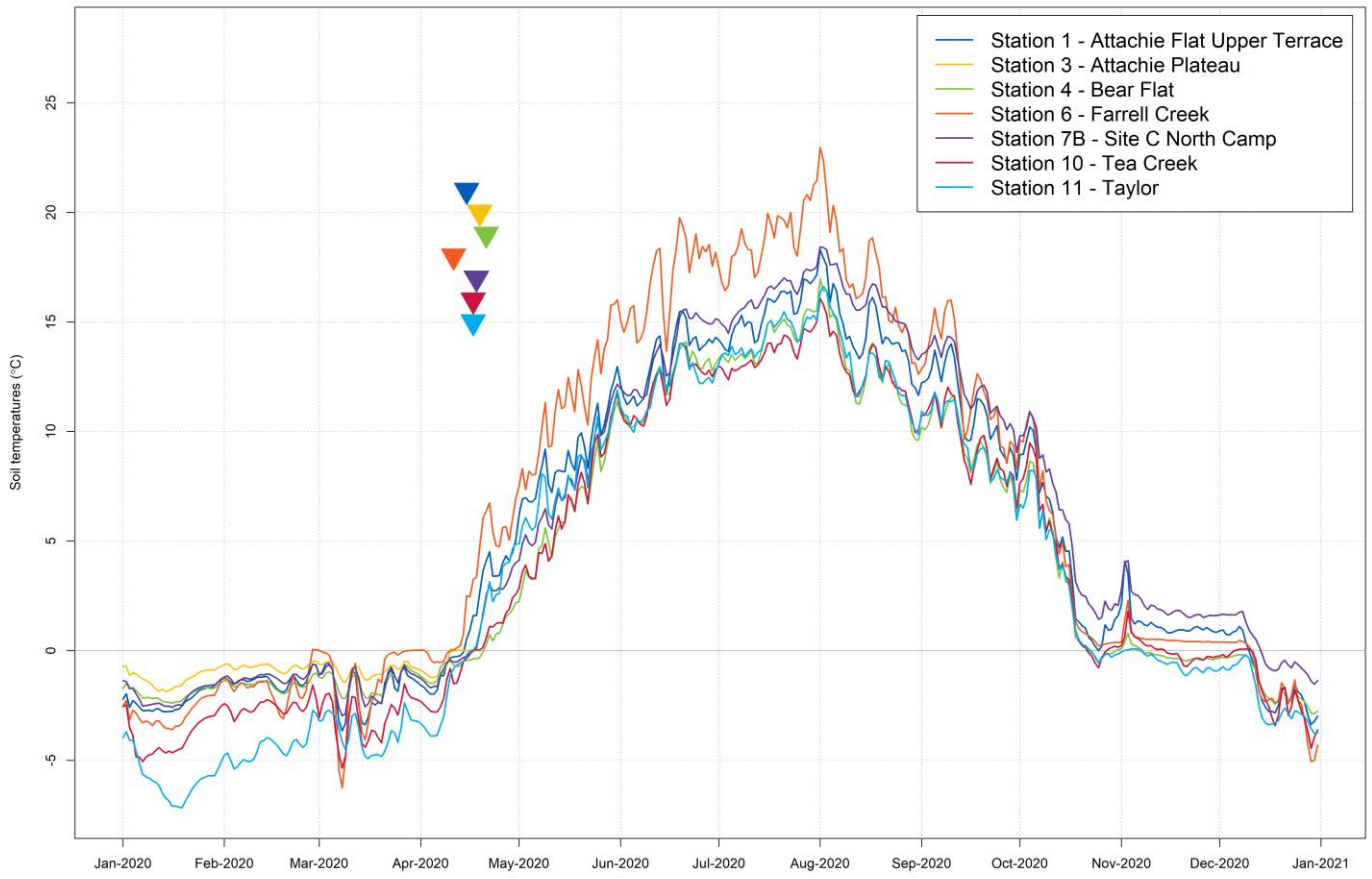


Figure 3-5: Average 24-hour soil temperatures (in ^{0}C) among the Site C network stations for 2020. The coloured triangles indicate the dates when daily averaged soil temperature exceeded 0°C at each one of the stations.

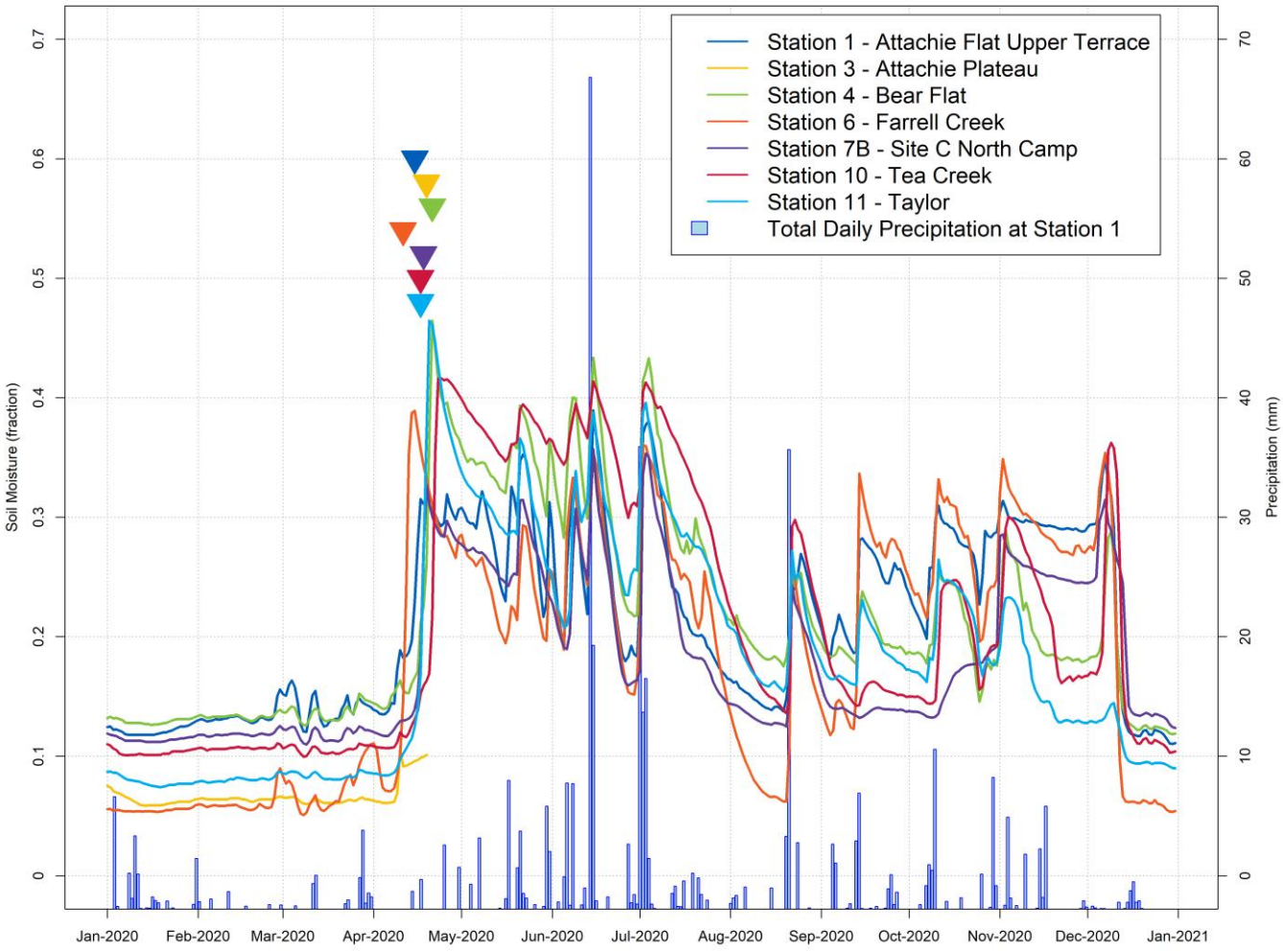


Figure 3-6: Average 24-hour soil moisture readings (expressed as a decimal fraction of 1) among the Site C network stations for 2020. The coloured triangles indicate the dates when daily averaged soil temperature exceeded 0°C at each one of the stations.

Soil moisture follows a similar response pattern between all stations wherein liquid precipitation (rain) events were clearly reflected as sudden increases in moisture followed by a gradual decline. An increase of soil moisture was also recorded when soil temperature increased beyond or very near to 0°C and the soil becomes permeable to surface water produced by the snowmelt. Differences between stations were attributable to different soil types and agricultural land management practices between stations. A wet spring and early summer resulted in soil moisture levels remaining high earlier in the growing season. After a large reduction in soil moisture through July into August, soil moisture was topped up with intermittent rain events through fall into winter.

4 AIR QUALITY RESULTS

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, 2016). As part of the monitoring program, BC Hydro installed and operated 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 and Station 9 (85th Avenue) and 12 (Hudson's Hope) have Thermo Scientific SHARP 5030i monitors. These monitors measure 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) and Station 12 (Hudson's Hope) both measure NO_X (using a Thermo Scientific 42i analyzer) and SO_2 (using a Thermo Scientific 43i analyzer). Station 7C (Fort St. John North Camp C) additionally measures CO (using a Thermo Scientific 48i analyzer).

Figure 2-1 and Table 2-1 provide the locations of all current air quality monitoring stations.

4.1 Particulate Matter

Table 4-1 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 annual AAQOs. The AAQO for $PM_{2.5}$ is based on the 98th percentile of daily $PM_{2.5}$ as defined by BC MECCS. An excursion is defined as when the 24-hour average of $PM_{2.5}$ is greater than the 24-hour AAQO without the 98th percentile of daily $PM_{2.5}$ exceeding the AAQO. An exceedance refers to PM_{10} values above the 24-hour AAQO. The lower percentage complete 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 data. 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. The 75% data completeness criteria established by the Government of Canada for fine particulate matter ($PM_{2.5}$) can be found at: http://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=En&n=BA9D8D27-1&offset=4&toc=hide&pedisable=true. Per the MOU with the BC MECCS, there is a data polling requirement of 90%. In other words, 90% of the time the Province will successfully

poll 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 2020, the 90% data polling criteria was met.

Most of the excursions and exceedances in 2020 were related to road dust at Station 7C (Fort St. John North Camp C). Others were the result of open burning of piles of brush cleared in the footprint of the future Site C reservoir and other burn events close to FSJ not related to Site C. Specific dates for these events in 2020 are provided later in this section.

Table 4-1: Summary of measured PM results for 2020 (in µg/m^3).

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(3) 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	96.9	96.9	99.0	98.8	98.1	97.9	99.1	97.4	99.3	99.3
Percentage data complete (24-hour averages)	97.8	97.8	99.5	99.2	98.6	98.4	99.5	97.5	98.9	98.9
24-hour AAQO	25	50	25	50	25	50	25	50	25	50
24-hour AAQO excursions / exceedances (1)	1	0	1	20	2	0	1	0	0	1
98th percentile of 24-hour daily averages	14.2	21.6	13.1	**73.3**	16.7	25.7	11.4	25.4	11.6	44.2
Annual AAQO	8	NA(2)	8	NA(2)	8	NA(2)	8	NA(2)	8	NA(2)
Annual average	4.1	7.8	4.3	17.6	3.8	8.8	4.0	8.7	4.4	9.1

Notes: **Bolded** PM values indicates measured concentrations that exceeded their respective AAQO
(1) Excursion is used here for $PM_{2.5}$ when the 24-hour average of $PM_{2.5}$ is greater than the 24-hour AAQO without the 98th percentile of daily $PM_{2.5}$ exceeding the AAQO. Exceedance is used here to refer to PM_{10} values above the 24-hour AAQO. The AAQO for $PM_{2.5}$ is based on the 98th percentile of daily $PM_{2.5}$ as defined by BC MECCS.
(2) NA is used where the quantity in question is not applicable to the measurement.
(3) Station 12 (Hudson's Hope) was commissioned on October 1st , 2020.

Table 4-2 provides percentile levels of note for PM concentrations at each of the air quality stations. Measured PM_{10} and $PM_{2.5}$ levels at Stations 1 (Attachie Flat Upper Terrace), 8 (Old Fort) and 9 (85th Ave) were all below the AAQO for 98% valid days or more in 2020. Measured $PM_{2.5}$ levels at Station 7B (Site C North Camp) was similarly below the AAQO for 98% valid days or more in 2020, while PM_{10} readings there were below the AAQO for 90% of the valid days or more in 2020.

All PM monitors had a data completeness of greater than 75% (typical of BC MECCS permit requirements).

Station 1 (Attachie Flat Upper Terrace) had 1 excursion for $PM_{2.5}$ above the 25 µg/m^3 AAQO for a 24-hour averaging period and no exceedances above the AAQO for $PM_{10,}$ in 2020. One excursion above the AAQO for $PM_{2.5}$ and 20 exceedances above the AAQO for PM_{10} over 24-hour averaging periods were observed at Station 7C (Fort St. John North Camp C). At Station 8 (Old Fort), two excursions above the 24-hour AAQO for $PM_{2.5}$ were observed. There were no exceedance's above the AAQO for PM_{10} observed at Station 8 (Old Fort). There was one excursion above

the 24-hour AAQO for $PM_{2.5}$ observed at Station 9 (85th Avenue) and no exceedances above the AAQO for PM_{10} were observed. Lastly, there was one exceedance above the 24-hour AAQO for PM_{10} observed at Station 12 (Hudson's Hope). The $PM_{2.5}$ excursions recorded at all stations were from the same smoke event on the 11th through 12th of December due to offsite burning not related to Site C construction activities. The additional $PM_{2.5}$ excursion at Station 8 (Old Fort) was recorded over 21-22nd November and was also not related to Site C construction activities. The PM_{10} exceedance measured at both Stations 7C (Fort St. John North Camp C) and 12 (Hudson's Hope) were due to local road dust conditions.

Table 4-2: Percentile values of 24-hour averaged PM concentrations for 2020 (in µg/m³).

Percentile	Station 1		Station 7B		Station 8		Station 9		Station12	
	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
0	0.01	0.6	0.4	1.2	0.07	0.6	0.3	0.4	0.5	0.5
0.1	0.8	2.7	1.2	3.8	0.7	3.0	1.2	3.0	1.6	2.5
0.25	2.1	4.4	2.0	6.8	1.3	4.8	1.9	4.8	2.7	4.0
0.5	3.5	6.6	3.2	12.1	2.6	7.3	3.5	7.2	3.8	5.6
0.75	5.0	10.2	5.8	22.4	4.5	10.7	5.3	10.5	5.3	9.3
0.9	7.4	13.6	8.1	38.9	7.5	16.2	7.2	16.9	7.4	20.6
0.95	9.2	17.6	10.2	52.2	10.3	20.3	8.9	21.4	9.6	25.2
0.975	13.6	20.7	13.0	64.3	14.1	25.6	10.6	23.9	11.1	42.4
0.98	14.2	21.6	13.1	73.3	16.7	25.7	11.4	25.4	11.6	44.2
0.99	20.4	25.0	19.9	81.1	22.6	30.5	15.2	30.1	13.7	52.8
0.999	30.5	33.2	31.0	143	32.6	43.2	26.2	39.7	18.6	80.2

Notes: Red cells denote values greater than the AAQO

Figure 4-1 through Figure 4-5 show the time series of the 24-hour average of both PM_{10} and $PM_{2.5}$ at each of the five stations, respectively. Table 4-3 lists the events that led to excursions or exceedances at the five monitoring stations and directs the reader to the appropriate section of Appendix D where a preliminary examination of each elevated PM event is presented. Note that some of these events persisted over more than one day. As discussed earlier and as expected, there are more events listed in Table 4-3 than counted as exceedances and excursions in Table 4-23. Not all events in Table 4-3 were exceedances or excursions above the 90% alert limit and alerts are triggered from a rolling daily average and are not the daily average for a given date. In this way BCH can respond to Alerts and mitigate the problem.

Due to the impact of smoke from the wildfires, Fort St. John was affected by a regional air quality advisory on 2020-09-19. Open burning restrictions were in place on 2020-03-26, 2020-04-14 and ended on 2020-06-15 to reduce potential negative air quality impacts during the COVID-19 pandemic. These advisories provide 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 from the Project, while one emission source like a wild fire could potentially be detected at many stations.

An email alerting system operated for the duration of 2020 to immediately notify BC Hydro staff and its contractors about any excursions of the AAQOs taking place so they could work to identify the source and mitigate its associated effects if it was found to be related to their operations. As of December 31, 2020, the distribution list for

the alerting system included 98 individuals representing 21 firms, including the Project's Independent Environmental Monitor (EDI Environmental Dynamics Inc.). A discussion for each alert received and the site contractor response to the alert can be found in Table D-1 of Appendix D.

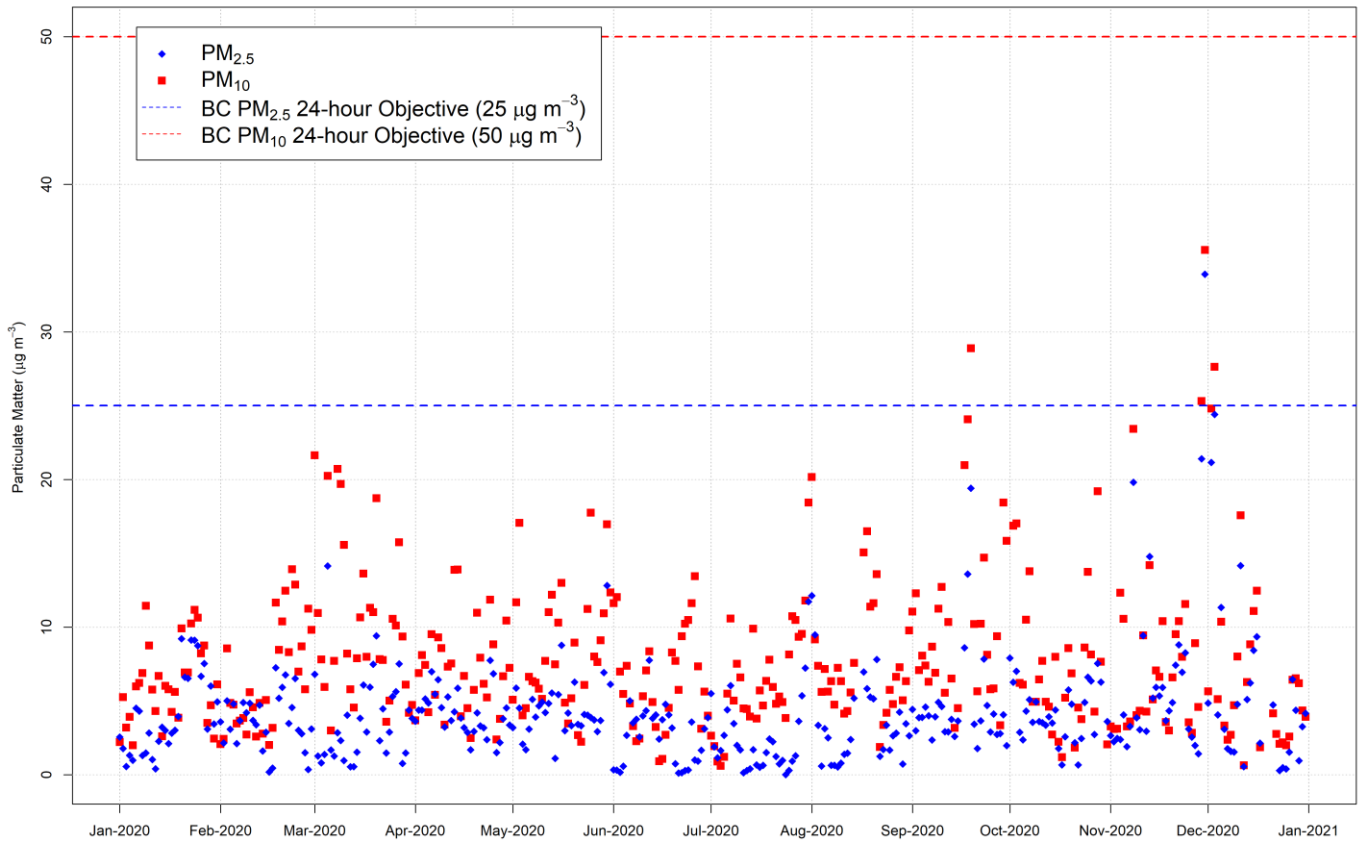


Figure 4-1: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 1 – Attachie Flat Upper Terrace for 2020 (in µg/m^3). The target AAQO's are plotted as broken lines.

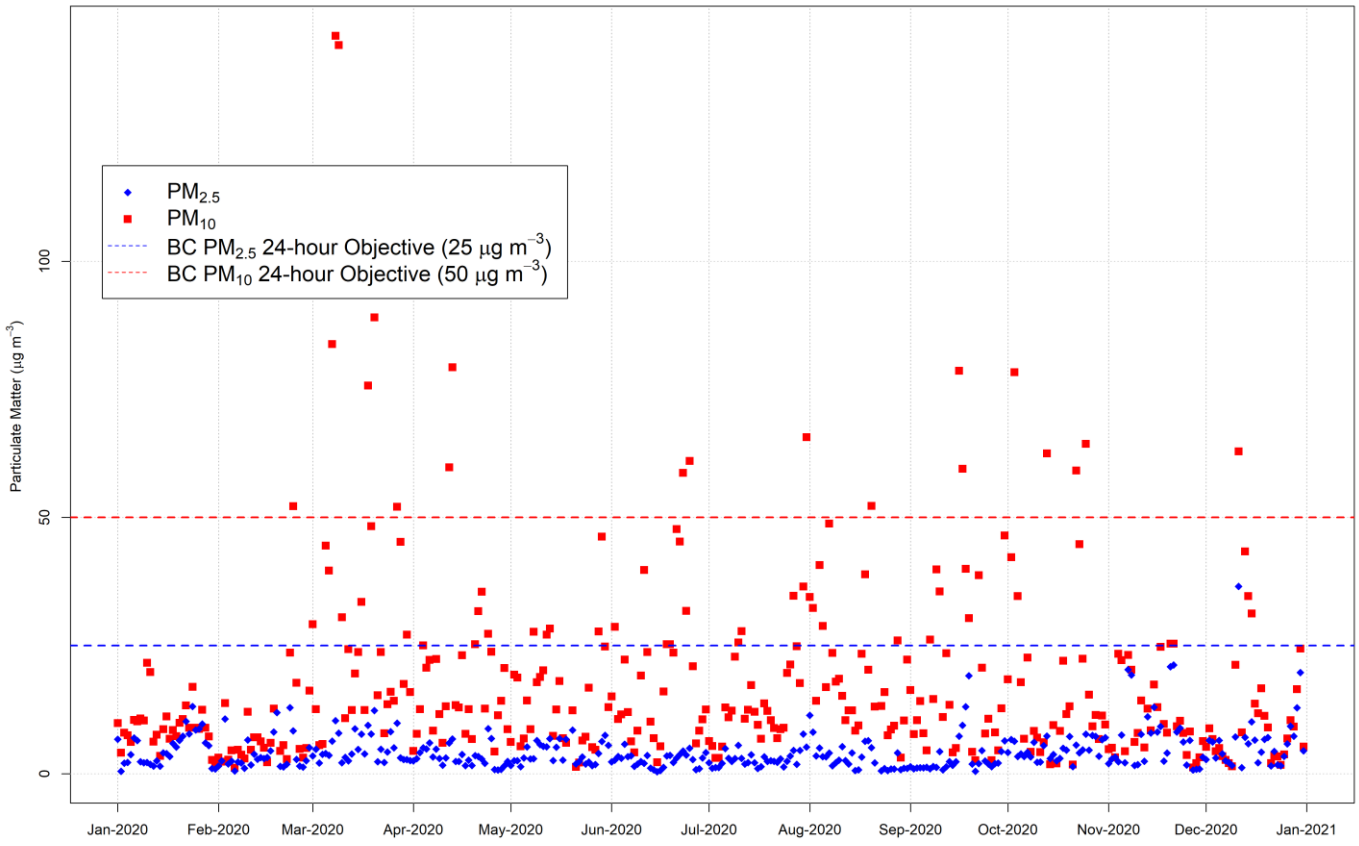


Figure 4-2: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 7C – Fort St. John North Camp C for 2020 (in µg/m^3). The target AAQO's are plotted as broken lines.

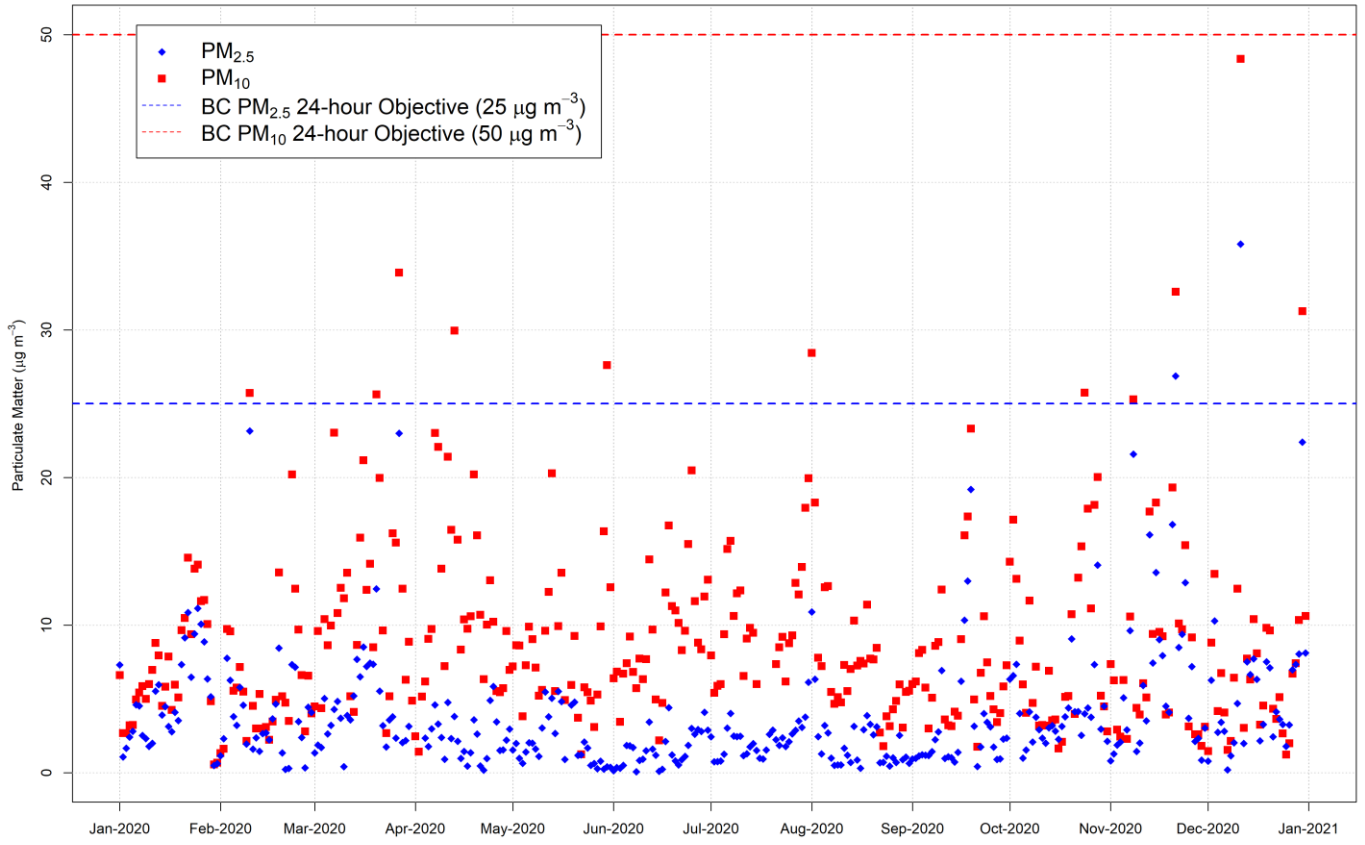


Figure 4-3: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 8 – Old Fort for 2020 (in µg/m³). The target AAQO's are plotted as broken lines.

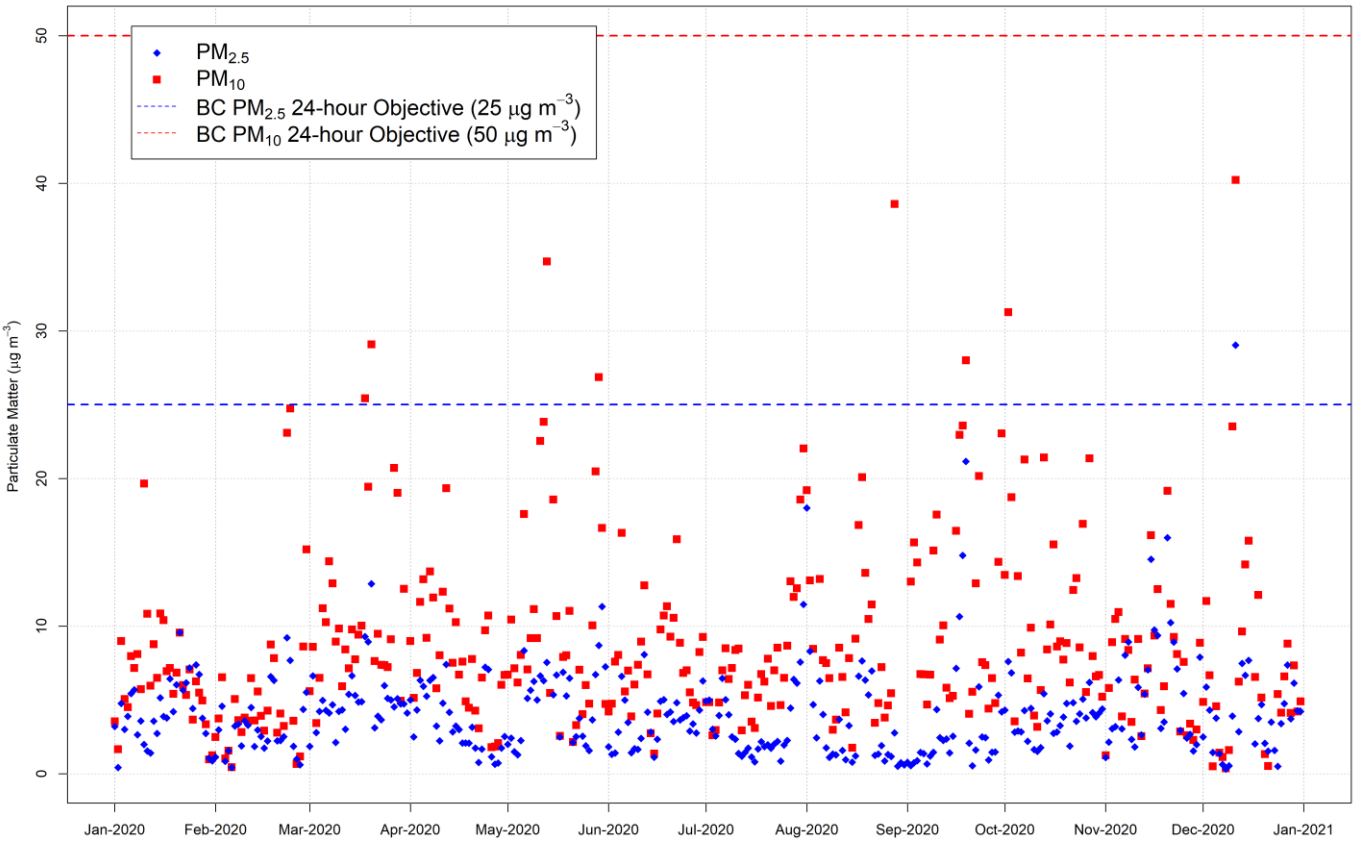


Figure 4-4: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 9 - 85th Avenue for 2020 (in µg/m^3). The target AAQO's are plotted as broken lines.

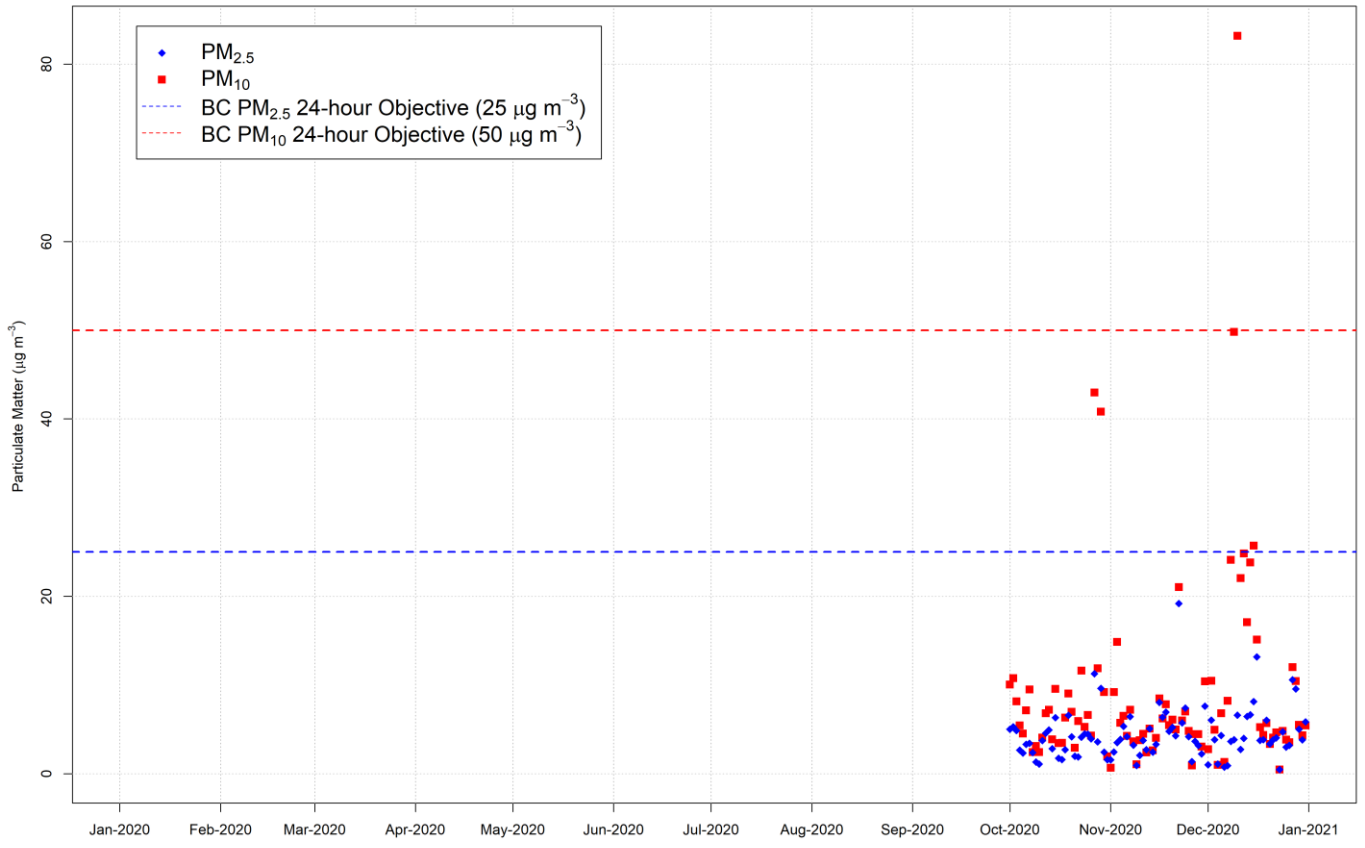


Figure 4-5: Daily average $PM_{2.5}$ and PM_{10} measurements from Station 12 – Hudson's Hope for 2020 (in µg/m^3). The target AAQO's are plotted as broken lines.

Table 4-3: Summary of Potential PM excursion or exceedance alert events recorded at Site C in 2020.

Start Date	End Date	Station	Contaminant	Event Number
2020-02-10	2020-02-11	Station 8 - Old Fort	PM2.5	220
2020-02-24	2020-02-25	Station 7C - Fort St. John North Camp C	PM10	221
2020-03-07	2020-03-10	Station 7C - Fort St. John North Camp C	PM10	222
2020-03-18	2020-03-21	Station 7C - Fort St. John North Camp C	PM10	223
NA	NA	Station 8 - Old Fort	PM2.5	224
2020-03-27	2020-04-01	Station 7C - Fort St. John North Camp C	PM10	225
2020-04-12	2020-04-14	Station 7C - Fort St. John North Camp C	PM10	226
2020-05-29	2020-05-30	Station 7C - Fort St. John North Camp C	PM10	227
2020-06-21	2020-06-22	Station 7C - Fort St. John North Camp C	PM10	228
2020-06-22	2020-06-24	Station 7C - Fort St. John North Camp C	PM10	229
2020-06-25	2020-06-26	Station 7C - Fort St. John North Camp C	PM10	230
NA	NA	Station 7C - Fort St. John North Camp C	PM10	231
2020-07-31	2020-08-21	Station 7C - Fort St. John North Camp C	PM10	232
2020-08-05	2020-08-05	Station 7C - Fort St. John North Camp C	PM10	233
2020-08-07	2020-08-08	Station 7C - Fort St. John North Camp C	PM10	234
2020-08-20	2020-08-21	Station 7C - Fort St. John North Camp C	PM10	235
2020-09-10	2020-09-10	Station 7C - Fort St. John North Camp C	PM10	236
2020-09-16	2020-09-17	Station 7C - Fort St. John North Camp C	PM10	237
2020-09-17	2020-09-18	Station 7C - Fort St. John North Camp C	PM10	238
2020-09-19	2020-09-19	Station 7C - Fort St. John North Camp C	PM2.5	239
2020-09-19	2020-09-19	Station 9 - 85th Avenue	PM2.5	240
NA	NA	Station 7C - Fort St. John North Camp C	PM10	241
2020-10-03	2020-10-04	Station 7C - Fort St. John North Camp C	PM10	242
2020-10-13	2020-10-14	Station 7C - Fort St. John North Camp C	PM10	243
2020-10-22	2020-10-24	Station 7C - Fort St. John North Camp C	PM10	244
2020-10-25	2020-10-26	Station 7C - Fort St. John North Camp C	PM10	245
2020-10-28	2020-10-28	Station 12 - Hudson's Hope	PM10	246
NA	NA	Station 12 Hudson’s Hope	NO2	247
2020-11-08	2020-11-08	Station 7C - Fort St. John North Camp C	PM2.5	248
2020-11-21	2020-11-22	Station 8 - Old Fort	PM2.5	249
2020-11-30	2020-12-01	Station 1 - Attachie Flat Upper Terrace	PM2.5	250
2020-11-30	2020-11-30	Station 1 - Attachie Flat Upper Terrace	PM10	251
2020-12-03	2020-12-04	Station 1 - Attachie Flat Upper Terrace	PM2.5	252
2020-12-09	2020-12-11	Station 12 - Hudson's Hope	PM10	253
2020-12-11	2020-12-12	Station 7C - Fort St. John North Camp C	PM10	254
2020-12-11	2020-12-12	Station 7C - Fort St. John North Camp C	PM2.5	255

Start Date	End Date	Station	Contaminant	Event Number
2020-12-11	**2020-12-12**	Station 8 - Old Fort	PM2.5	256
2020-12-11	**2020-12-11**	Station 9 - 85th Avenue	PM10	257
2020-12-11	**2020-12-12**	Station 8 - Old Fort	PM10	258
2020-12-11	**2020-12-12**	Station 9 - 85th Avenue	PM2.5	259
2020-12-31	**2020-12-31**	Station 8 – Old Fort	PM2.5	260

Note: NA indicates a false alert (instrument error).

Appendix E includes three figures that present examples of active mitigation by the site contractor to suppress roadway dust and wind erosion emissions. A brine mixture of calcium chloride and water was applied by the Main Civil Works contractor, Peace River Hydro Partners (PRHP), on July 22, 2020 on several of the dam site construction roads as indicated on the figure. Water was also used routinely as a dust suppressant throughout the Project's active construction areas on several occasions in 2020. Spin broadcasting of seed was used in areas with no vegetation on the Left Bank, Right Bank and 85th Avenue to stabilize disturbed soil and prevent erosion and control fugitive dust emissions. Appendix E includes three figures of those areas that were spin broadcast by PRHP at the dam site and 85th Avenue industrial lands. Details of all completed mitigation measures, contractor inspection comments coupled with air quality alerts, and BC MOE-issued Smoky Skies Bulletins and Air Quality Advisories are all included in Table D-1.

Open burning of piles of vegetation cleared in the footprint of the future Site C reservoir occurred in 2020. A burn pile summary can be found in Table 4-4.

Table 4-4: Burn Pile summary

Location	2020 Burn Piles
Moberly River	62 + 129 incomplete (spring) 65 + 2 incomplete (fall)
Dam Site to Cache Creek	389 (fall) 305 + 2 incomplete (winter)
Cache Creek	19 (spring) 13 (fall)
Halfway River	174 (winter)
Dry Creek	13 (winter) 63 (winter)
Portage Mountain Quarry	8 (winter)
Transmission Line	3 piles on eastern end (winter) 27 piles on western end (winter)
TOTAL	**1274 burn piles TOTAL** 1141 COMPLETE 133 INCOMPLETE

Note: all piles fully burned unless noted as "incomplete" (i.e. material remaining to be disposed of)

All ignition events were based on custom venting forecasts which were used to inform brush burning events. These forecasts were provided by the Ministry of Forests, Lands and Natural Resource Operations. A Qualified Environmental Professional (QEP) sent out advance notification for every ignition event to the stakeholder list included as Appendix A in the Smoke Management Plan (Revision 2) (BC Hydro, 2016). Notices were also included in publications (e.g. notifications to First Nations, biweekly construction bulletins, etc.) distributed by the BC Hydro public relations team.

4.2 Gaseous Criteria Air Contaminants

Table 4-5 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 excursions and/or exceedances above the provincial AAQOs 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.

Table 4-5: Summary of gaseous criteria air contaminant results for 2020 at Station 7C (Fort St. John North Camp C) and Station 12 (Hudson's Hope) (in µg/m3).

	Station 7C Fort St. John North Camp C				Station 12 Hudson's Hope	
	NO_2	SO_2	CO	CO (8-hr Rolling Average)	NO_2	SO_2
Percentage data complete	91.0	98.9	95.1	93.5	24.7	16.4
1-hour AAQO	113	183	14,300	NA(1)	113	183
8-hour AAQO	NA(1)	NA(1)	NA(1)	5,500	NA(1)	NA(1)
AAQO Exceedances / Excursions(2)	0	0	0	0	0	0
Annual AAQO	60	13	NA(1)	NA(1)	60	13
Annual Average	6.6	0.8	144	144	NA(1)	NA(1)
97th percentile of Daily 1-Hour Maximum	NA(1)	10.2	NA(1)	NA(1)	NA(1)	NA(1)
98th percentile of Daily 1-Hour Maximum	52.8	NA(1)	NA(1)	NA(1)	NA(1)	NA(1)

Notes: (1): NA is used where the quantity in question is not applicable to the measurement.
(2): The term excursion is used here for NO_2 and SO_2 when the daily 1-hour maximum is greater than their respective AAQO but without satisfying the 98th or 97th percentile condition for achievement.
(3): Achievement based on annual average of 1-hour concentrations over one year, effective January 1, 2020. Used to inform new air management decisions beginning January 1, 2017 and all air management decisions beginning January 1, 2020.

No excursions of the 1-hour SO_2 and 1-hour NO_2 AAQOs were observed in 2020 at either Station 7C (Fort St. John North Camp C) or Station 12 (Hudson's Hope). There were also no observed exceedance of the 1-hour and 8-hour rolling average PCOs for CO in 2020 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 4-6 through Figure 4-8 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 4-9 through Figure 4-10 show the daily 1-hour maximum concentrations of NO_2 and SO_2, at Station 12 (Hudson's Hope), respectively.

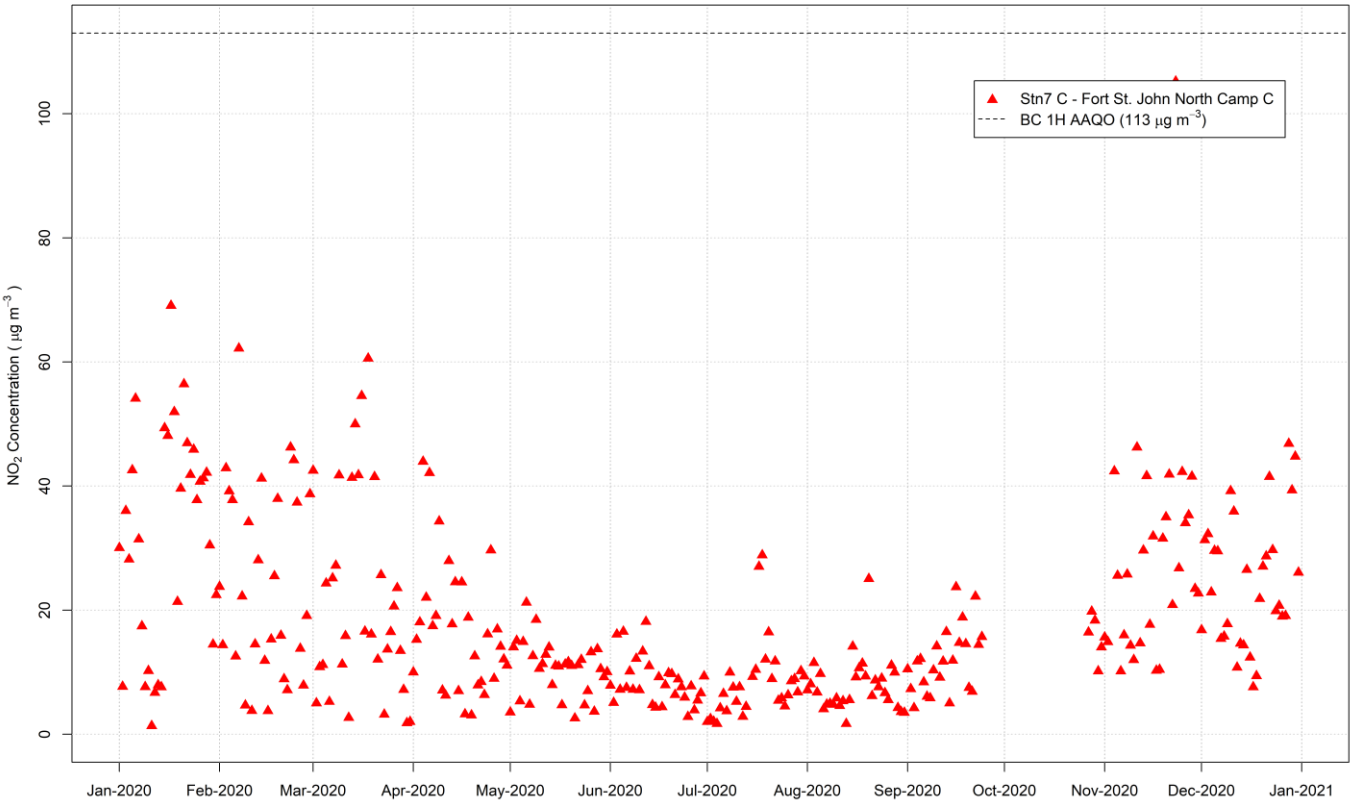


Figure 4-6: Daily 1-hour maximum NO_2 concentrations from Station 7C - Fort St. John North Camp C for 2020 (in µg/m^3).

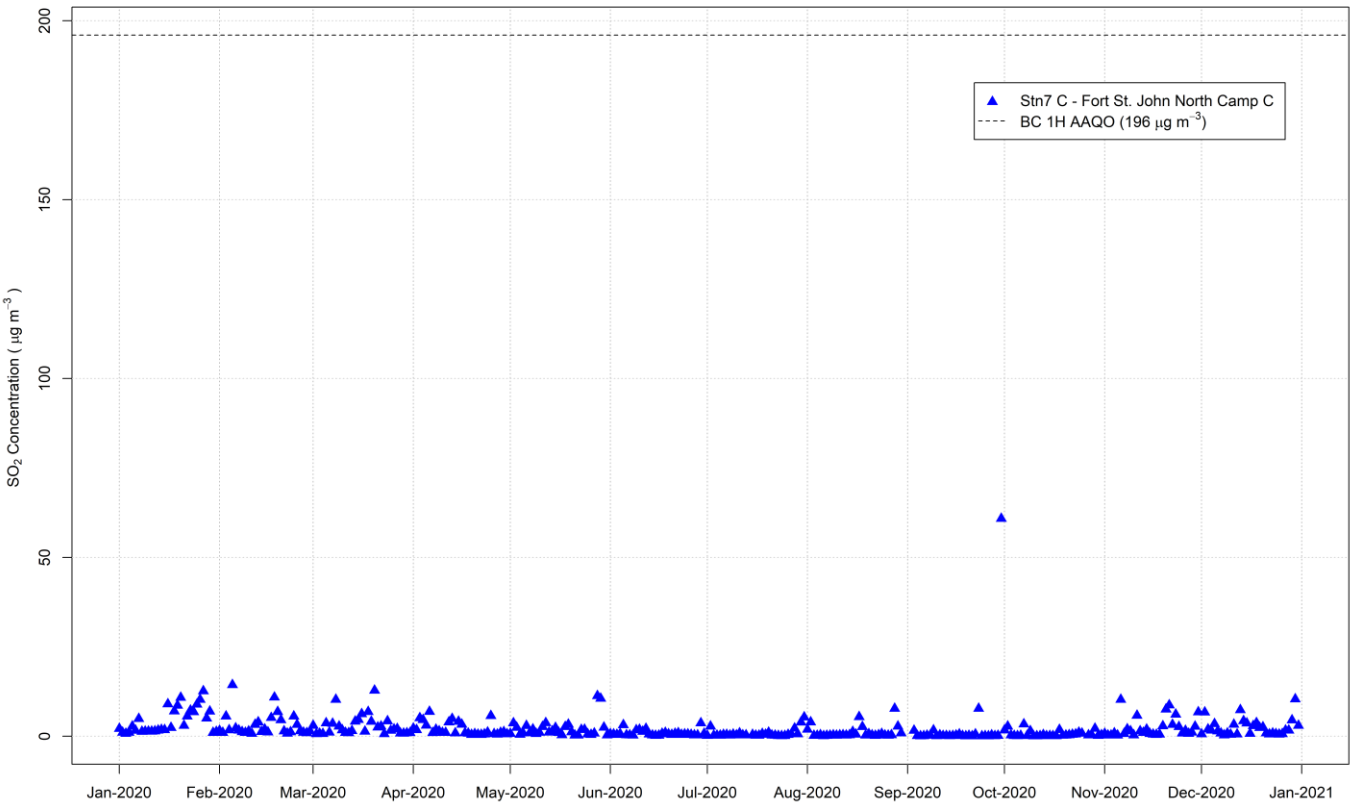


Figure 4-7: Daily 1-hour maximum SO_2 concentrations from Station 7C - Fort St. John North Camp C for 2020 (in µg/m^3).

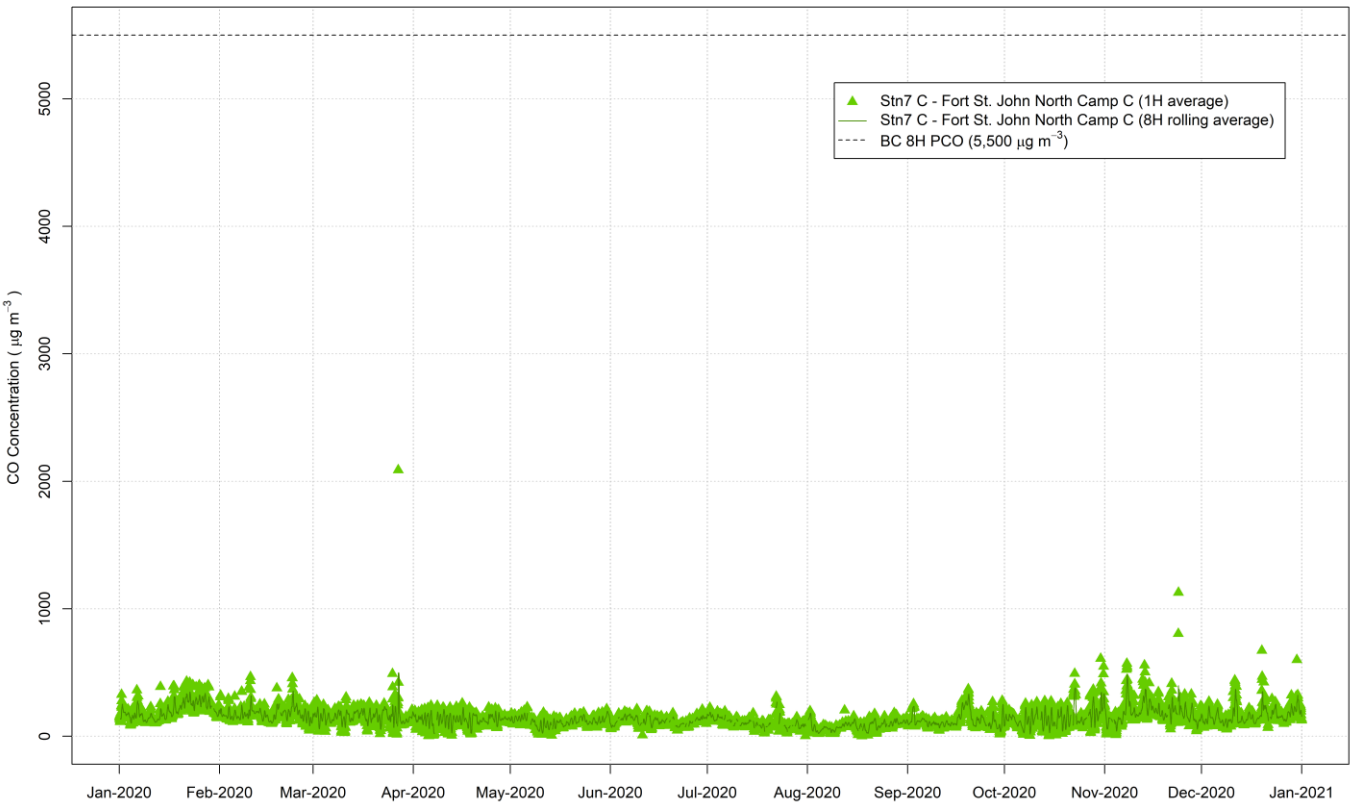


Figure 4-8: 1-hour (green) and 8-hour rolling average (black line) CO concentrations from Station 7C - Fort St. John North Camp C for 2020 (in µg/m^3).

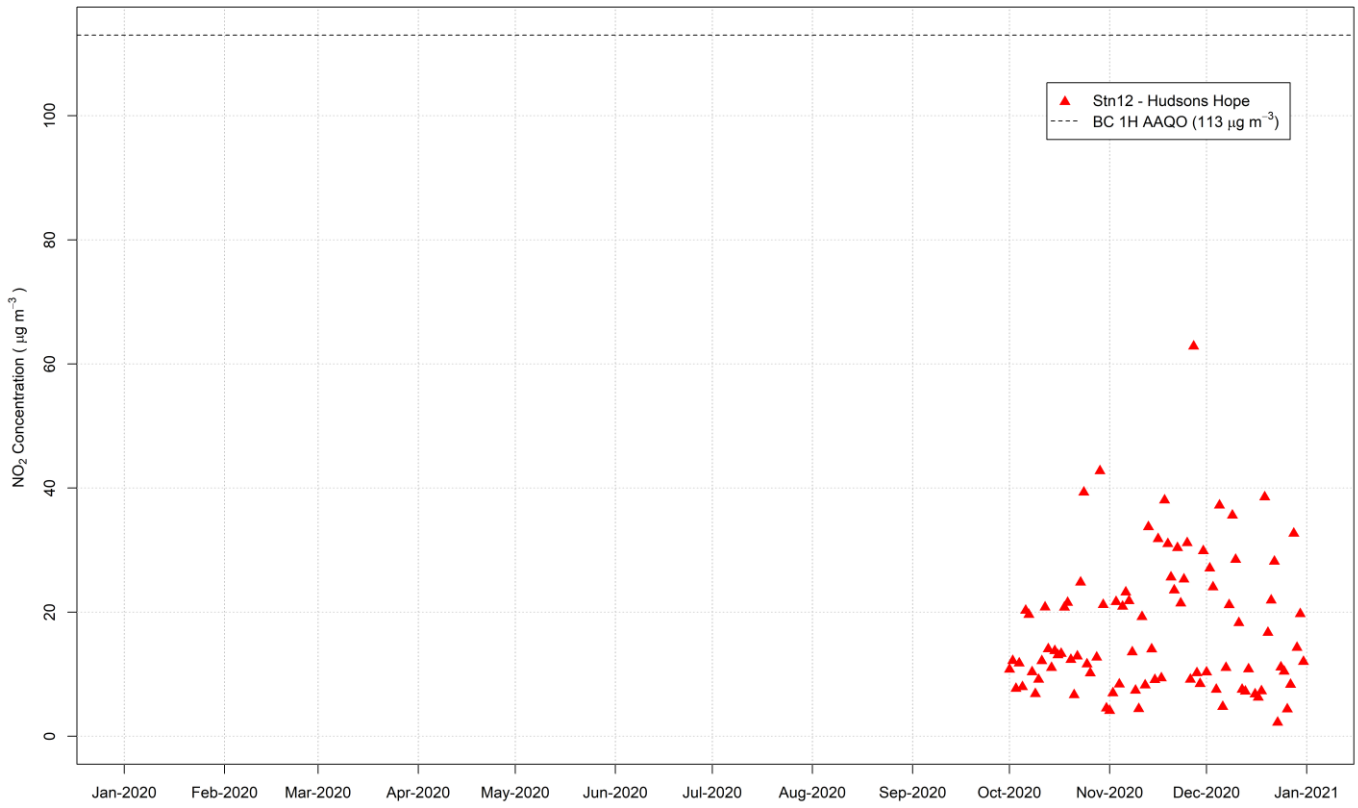


Figure 4-9: Daily 1-hour maximum NO_2 concentrations from Station 12 - Hudson's Hope for 2020 (in µg/m^3).

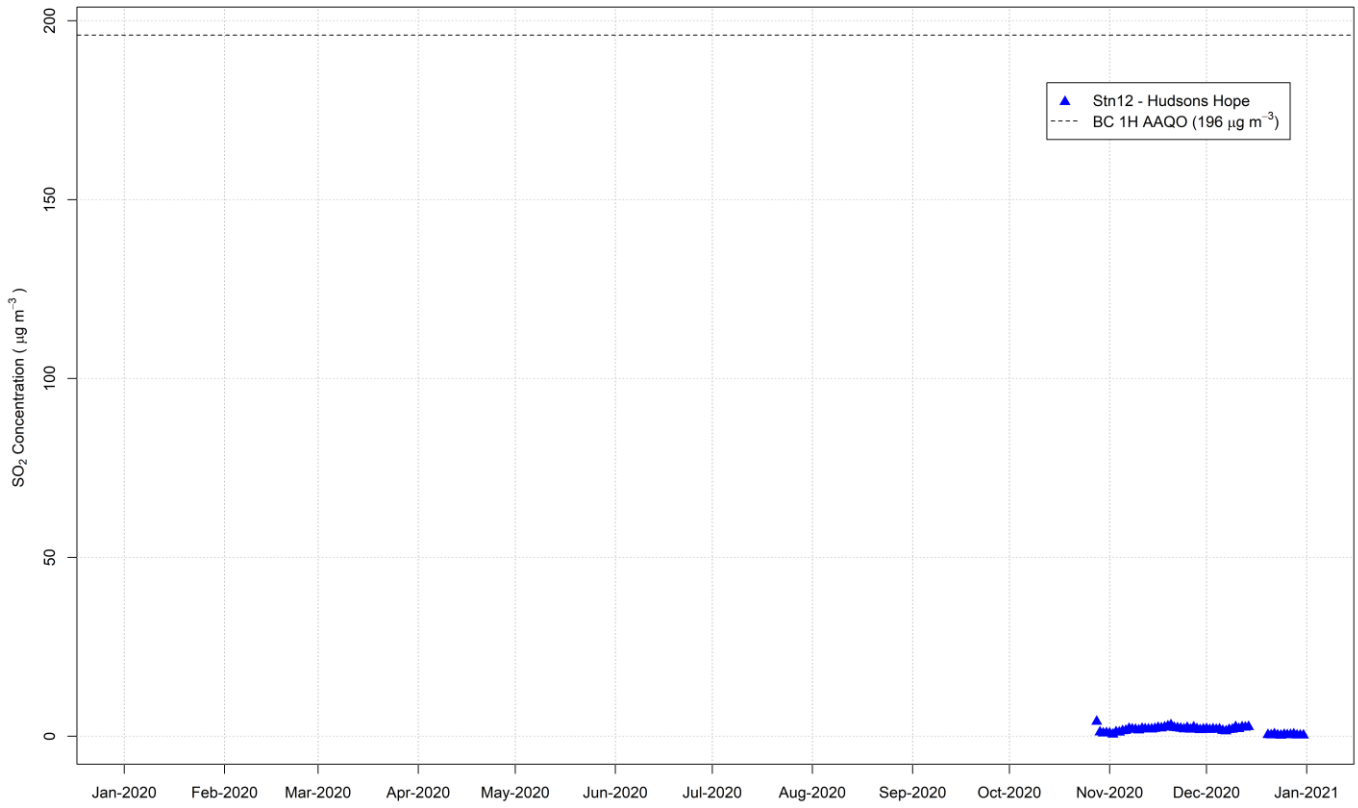


Figure 4-10: Daily 1-hour maximum SO_2 concentrations from Station 12 - Hudson's Hope for 2020 (in µg/m^3).

4.3 Air Quality Reporting

Section 12.3.3 of the FDS conditions 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, that forms part of the CEMP (BC Hydro 2016), BC Hydro has developed a Memorandum of Understanding (MOU) with the BC MECCS to allow access to all air quality readings monitored by BC Hydro. According to the MOU, the BC MECCS 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, the BC MECCS and Northern Health are able to issue air quality advisories. Quality assured data are provided annually to the BC MECCS. Final validated data must be delivered four to eight weeks prior to the subsequent Provincial Clean Air Day as indicated in the MOU. As of January 2018, as noted in the MOU, measurements from the Site C monitoring network are also being 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 BCH ambient network has been operated at a high standard that is consistent with provincial and national technical standards per guidance documents. 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 BCH 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. BCH 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.

4.3.1 Monitoring Station Audits

The BC MECCS conducted equipment performance audits on four of the five ambient air quality monitoring stations on October 1st, 2020, in accordance with the MOU. Station 7C (Fort Ct. John North Camp C) NOx analyzer was out for repair after the previous monthly calibration check determined that the gas phase titration system in the calibrator was close to failing.

The results of these audits are presented in Table 4-6. Station 1 (Attachie Flat Upper Terrace) SHARP PM_{10} failed due to contamination entering the beta chamber during the night before the station audit. The failed unit was sent for repair and replaced with a spare unit immediately after the audit. Station 8 (Old Fort) SHARP $PM_{2.5}$ failed the foil calibration audit. The root cause of this failure is uncertain. It is possible that the instrument was affected by rough handling during shipping while being returned from annual maintenance, or that accumulated dust in the enclosure's air conditioning unit got knocked into the foil chamber during the audit. Also, the instruments are housed on residential private property in a small enclosure, and are therefore more prone to detrimental temperature effects when instruments are being tested. The foil calibration test was repeated multiple times the

[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/

day after the audit, and an adjustment of 5% was accepted. The corrective action implemented was to complete a foil check after re-installation, and to service the air conditioning unit on the enclosure. Quarterly foil checks will continue as previously, since they have proven to be sufficient.

Table 4-6: Summary of BC MECCS audit results for 2020.

Station	Parameter	Audit date
		October 1st 2020
Station 1 Attachie Flat Upper Terrace	SHARP $PM_{2.5}$	Pass
	SHARP PM_{10}	Fail
Station 7C Fort St. John North Camp C	SHARP $PM_{2.5}$	Pass
	SHARP PM_{10}	Pass
	NOx	Out for repair – not audited
	SO_2	Pass
Station 8 Old Fort	SHARP $PM_{2.5}$	Fail
	SHARP PM_{10}	Pass
Station 9 85th Avenue	SHARP $PM_{2.5}$	Pass
	SHARP PM_{10}	Pass

5 CONCLUSIONS

5.1 Air Quality Management Plan Activities and Compliance Summary

In fulfillment of the conditions outlined by the Project's environmental assessment approvals, this document reports on the climate and air quality as observed by the Site C monitoring network and the Environment and Climate Change Canada weather station at Fort St. John Airport during the 2020 calendar year. Specifically, 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 [air quality management] plan [or AQMP] 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." In fulfillment of FDS Condition 12.3.4, the new Hudson's Hope ambient air quality monitoring station (Station 12) was installed in Hudson's Hope in October 2020. As well, FDS Conditions 12.6 and 12.7 were addressed through the issuance of this 6th annual report to CEAA, reservoir area indigenous groups and BC Metis Nation as part of the AQMP.

Condition 57 of the provincial Environmental Assessment Certificate (EAC) dictates that the management plans (e.g., AQMP, Smoke Management Plan) that were created for the Project to minimize air emissions, monitor the ambient air quality and provide these readings to the BC Ministry of the Environment and Climate Change Strategy (BC MECCS) to notify aboriginal groups, residents of the local towns and sensitive populations if air quality thresholds are exceeded. As required by EAC Condition 31, microclimate monitoring is also being conducted to support an understanding of how the Project might affect local agricultural activities. Notable activities in fulfillment of EAC Condition 57 during 2020 included an updated Construction Environmental Management Plan (Revision 7), ongoing indigenous consultation with respect to construction activities, and installation of the new Station 12 (Hudson's Hope).

5.2 Climate Monitoring Results

The Site C network stations recorded a warmer annual average temperature than the Fort St. John Airport, which recorded a cooler annual average, when compared to 30-year climate normals. Very small differences in ambient air temperature or in relative humidity were observed between the stations. This was attributed to the short distances and small elevation differences between stations; however, the newest station (Station 12 – Hudson's Hope) had notably warmer temperatures when comparing the available data record. On average, relative humidity was higher than normal for the during the growing season. Wind speeds and wind directions were found to vary between stations due to small-scale surface features and terrain elevations having a larger impact on the local air flow patterns. The Fort St. John Airport annual average wind speeds were greater than stations in the Site C network.

Rainfall measurements at the FSJ airport were incomplete for 2020. Compared to the 30-year climate normals only, two stations (Station 4 – Bear Flat and Station 11 - Taylor) measured lower values. Both of these stations are closest

to the river and at the lowest elevations. Overall, 2020 was a wet year with extreme rain events recorded in June and July.

There is very little difference in soil temperature between the stations, excluding at Station 6 (Farrell Creek), the furthest west station at the time, which was noticeably warmer in spring and early summer. This is thought to be related to snow-melt timing, soil type, soil water content and land management. The soil temperature at all stations was observed to exceed 0 °C in April. Station 6 (Farrell Creek) thawed the earliest, on April 11th, and Station 4 (Bear Flat) thawed the latest, on April 21st.

5.3 Ambient Air Quality Monitoring Results

Station 1 (Attachie Flat Upper Terrace) had 1 excursion for $PM_{2.5}$ above the 25 µg/m^3 AAQO for a 24-hour averaging period and no exceedances above the AAQO for $PM_{10,}$ in 2020. One excursion above the AAQO for $PM_{2.5}$ and 20 exceedances above the AAQO for PM_{10} over 24-hour averaging periods were observed at Station 7C (Fort St. John North Camp C). At Station 8 (Old Fort), two excursions above the 24-hour AAQO for $PM_{2.5}$ were observed. There were no exceedances above the AAQO for PM_{10} observed at Station 8 (Old Fort). There was one excursion above the 24-hour AAQO for $PM_{2.5}$ observed at Station 9 (85th Avenue) and no exceedances above the AAQO for PM_{10} were observed. Lastly, there was one exceedance above the 24-hour AAQO for PM_{10} observed at Station 12 (Hudson's Hope). The $PM_{2.5}$ excursions recorded at all stations were from the same smoke event on the 11th through 12th of December due to offsite brush burning, not related to Site C operations. The additional $PM_{2.5}$ excursion at Station 8 (Old Fort) was recorded 21-22nd November and was also not related to Site C operations. The PM_{10} exceedance measured at both Stations 7C (Fort St. John North Camp C) and 12 (Hudson's Hope) were due to local road dust conditions.

The year 2020 had an inactive wildfire season in the northern British Columbia with no wildfire events measured during the 2020 calendar year Many of the 24-hour PM_{10} exceedances were observed only at Station 7C (Fort St. John North Camp C) and not at any of the other BC Hydro stations, and have therefore, been attributed to dam construction activities. 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.

No exceedances of the 1-hour AAQO's for SO_2 and NO_2, or 8-hour PCO for CO were observed in 2020 at the two stations where these parameters are being measured including Station 7C (Fort St. John North Camp C) or Station 12 (Hudson's Hope).

6 REFERENCES

BC Hydro (2018). Smoke Management Plan (Rev. 2). 52 pp.

BC Hydro (2020). Construction Environmental Management Plan.

B.C. Ministry of Environment & Climate Change Strategy. 2018. British Columbia Ambient Air Quality Objectives. May 9, 2018.

B.C. Ministry of Environment & Climate Change Strategy. 2020. British Columbia Field Sampling Manual. Retrieved 2021-02-18, from: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/bc_field_sampling_manual_part_b.pdf

BC Ministry of Forests, Lands and Natural Resource Operations (2017), Wildfire Management Branch. Wildfire season summary. Retrieved 2017-02-08, from http://www2.gov.bc.ca/gov/content/safety/wildfire-status/wildfire-statistics/wildfire-season-summary

Canadian Environmental Assessment Agency (2014). Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2014.

Environmental Assessment Office (2014). Environmental Assessment Certificate # E14-02 Issued under the ENVIRONMENTAL ASSESSMENT ACT. S.B.C. 2002, c. 43.

Environment and Climate Change Canada. (2016). Canadian Climate Normals or Averages 1981-2010. Retrieved 02 2017, from: http://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?searchType=stnName&txtStationName=fort+st+john&searchMethod=contains&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongMin=0&txtCentralLongSec=0&stnID=1413&dispBack=1

RWDI Air Inc. (2012). Site C Clean Energy Project Volume 2 Appendix K Technical Data Report: Microclimate. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2015a). Site C Climate and Air Quality Monitoring Annual Report 2012. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2015b). Site C Climate and Air Quality Monitoring Annual Report 2013. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2015c). Site C Climate and Air Quality Monitoring Annual Report 2014. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2016). Site C Climate and Air Quality Monitoring Annual Report 2015. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2017). Site C Climate and Air Quality Monitoring Annual Report 2016. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2018). Site C Climate and Air Quality Monitoring Annual Report 2017. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2019). Site C Climate and Air Quality Monitoring Annual Report 2018. Prepared for BC Hydro Power and Authority. Vancouver, BC.

RWDI Air Inc. (2020). Site C Climate and Air Quality Monitoring Annual Report 2019. Prepared for BC Hydro Power and Authority. Vancouver, BC.

APPENDIX A

2020 COMPLIANCE SUMMARY

Table A- 1: Summary of AQMP Conditions and Year 2020 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. During this reporting period, ground truthing was undertaken by Blueberry	To date, ground truthing has identified areas of Indigenous use along the transmission line right-of-way, Cache Creek / Bear Flats, and Halfway River / Attachie Flats. Confidential ground truthing reports that summarize the ground truthing activities identify times when these areas may be used. Setback distances and ignition criteria described in the Smoke Management Plan (Sections 4.4 and 5.0, respectively) would apply in these areas. Indigenous groups 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). BC Hydro continues to consult with Indigenous groups regarding construction plans, and has sent invitation letters in April and September 2017; January, June, and August 2018; June and August 2019; and May 2020 highlighting areas where construction is planned in order that Indigenous groups could ground truth areas of traditional significance prior to construction.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
			River First Nations, Doig River First Nation, Halfway River First Nation, McLeod Lake Indian Band, and Saulteau First Nation.	
	• 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 will continue through 2022. An air quality monitoring station was installed in October 2020, monitoring will continue during construction and for the first 2 years of Site C 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 7, dated September 4, 2020, was accessible to regulators, government agencies, Indigenous Groups and the public via the Site C Clean Energy Project website at: https://www.sitecproject.com/document-library/environmental-management.
	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	2019 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.
EAC Condition 59	The EAC Holder must outline measures including relocation of affected home-owners, as deemed appropriate in consultation with affected home-	Construction Environmental Management Plan Section 4.11 (Noise and Vibration Management) and	Consultation with affected homeowners or Northern Health/BC Ministry of	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,

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
	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.	Appendix B (Air Quality Monitoring Plan)	Environment to occur if necessary	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
FDS Condition 12.3	The plan shall include:			

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
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.
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.

Condition	Condition Description	Plan Reference	Status	Evidence/Deliverables
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	5th Annual Report to CEAA included in this document.	Air Quality Management Plan 2015. • 1st Annual Report to CEAA submitted July 2016. • Second Annual Report submitted March 21, 2017 and revised June 14, 2017. • Third Annual Report was submitted March 29, 2018 • 4th Annual Report submitted April 1, 2019. • 5th Annual Report submitted March 31, 2020. • 6th Annual Report included in this document.
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	5th Annual Report to CEAA included in this document.	Air Quality Management Plan 2015. • 1st Annual Report to CEAA submitted July 2016. • Second Annual Report submitted March 21, 2017 and revised June 14, 2017. • Third Annual Report submitted March 29, 2018 • 4th Annual Report submitted April 1, 2019. • 5th Annual Report submitted March 31, 2020. • 6th Annual Report included in this document.

APPENDIX B

DATA TABLES

Table B- 1: Monthly average temperatures at all Site C network stations and Fort St. John Airport for the year 2020 as well as the 30-year climate normals from 1981 to 2010 (in ^{0}C)

Month	Station 1 Attachie Flat Upper Terrace	Station 3 Attachie Plateau	Station 4 Bear Flat	Station 6 Farrell Creek	Station 7B Site C North Camp	Station 10 Tea Creek	Station 11 Taylor	Station 12 Hudson's Hope	FSJ Airport (ECCC)	Climate Normals
Jan	-16.4	-15.5	-15.9	-15.3	-15.4	-15.3	-16.1	-	-15.6	-12.8
Feb	-7.2	-5.7	-7.0	-5.2	-6.1	-6.5	-7.2	-	-7.2	-9.6
Mar	-7.0	-7.0	-6.9	-5.8	-7.0	-8.1	-7.0	-	-8.6	-4.6
Apr	3.3	-	3.6	3.9	3.8	2.6	3.4	-	1.9	3.9
May	10.4	-	10.7	10.6	10.7	9.7	10.5	-	9.5	9.8
Jun	14.3	14.1	14.2	14.6	14.9	13.6	14.6	-	14.3	14.1
Jul	16.0	15.8	15.9	16.2	16.8	15.5	16.4	-	15.8	16.2
Aug	14.6	14.6	14.3	14.6	15.7	14.3	14.8	-	14.4	14.9
Sep	10.5	10.8	10.5	10.8	11.5	10.5	10.6	-	10.7	10.1
Oct	1.7	1.9	2.0	2.4	2.4	1.6	1.8	3.3	1.2	3.6
Nov	-6.0	-	-5.6	-4.7	-5.5	-6.0	-6.0	-3.5	-6.4	-6.6
Dec	-6.6	-6.6	-6.5	-5.5	-6.0	-6.1	-6.7	-3.6	-6.6	-11.4
Annual Average	2.3	-	2.4	3.1	3.0	2.2	2.4	-	1.9	2.3

Notes: A "-" indicates a period for which the data was not sufficiently complete to calculate a valid monthly or annual average.

Table B- 2: Monthly average relative humidity measured at15:00 LST at all Site C network stations and Fort St. John Airport for the year 2020 as well as the 30-year climate normals from 1981 to 2010 (in %)

Month	Station 1 Attachie Flat Upper Terrace	Station 3 Attachie Plateau	Station 4 Bear Flat	Station 6 Farrell Creek	Station 7B Site C North Camp	Station 10 Tea Creek	Station 11 Taylor	Station 12 Hudson's Hope	FSJ Airport (ECCC)	Climate Normals
Jan	74.5	74.0	75.0	72.6	77.9	71.9	80.1	-	73.0	68.5
Feb	63.4	55.9	61.3	51.3	59.1	56.0	60.7	-	59.5	62.9
Mar	51.6	52.3	52.3	45.7	52.3	54.1	50.3	-	57.8	53.8
Apr	35.3	-	35.5	32.4	36.6	36.5	35.8	-	41.8	42.6
May	45.3	-	44.2	40.5	45.0	44.2	48.2	-	46.8	41.1
Jun	53.9	53.3	52.8	47.2	49.9	51.4	58.5	-	51.8	45.7
Jul	57.5	57.8	57.8	53.8	53.0	55.3	60.9	-	55.3	49.3
Aug	45.3	50.6	50.2	45.8	47.0	49.4	54.2	-	50.2	50.6
Sep	51.9	53.8	53.2	52.9	51.8	52.6	57.2	-	51.0	52.4
Oct	53.1	54.0	50.9	50.8	53.3	52.1	55.9	49.9	54.8	57.9
Nov	77.9	-	72.9	69.3	72.2	71.0	80.3	68.7	73.9	72.3
Dec	74.7	70.8	70.5	66.4	68.9	67.2	-	63.8	71.1	71.5
Annual Average	57.1	-	56.4	52.4	55.6	55.2	58.7	60.7	57.3	55.7

Notes: A "-" indicates a period for which the data was not sufficiently complete to calculate a valid monthly or annual average.

Table B- 3: Monthly precipitation totals at all Site C stations and Fort St. John Airport for the year 2020 as well as the 30-year climate normals from 1981 to 2010 (in mm)

Month	Station 1 Attachie Flat Upper Terrace	Station 3 Attachie Plateau	Station 4 Bear Flat	Station 6 Farrell Creek	Station 7B Site C North Camp	Station 10 Tea Creek	Station 11 Taylor	Station 12 Hudson's Hope	FSJ Airport (ECCC)
Jan	28.4	25.1	24.3	30.1	27.5	24.3	26.3	37.7	25.4
Feb	3.7	3.8	10.2	2.2	9.8	10.5	9.9	23.8	19.0
Mar	17.3	16.3	14.6	21.1	20.2	18.3	16.8	46.0	23.7
Apr	11.9	-	8.3	8.9	4.4	5.6	4.3	5.8	20.0
May	42.7	-	40.9	36.3	47.1	52.5	58.3	-	37.9
Jun	118	121	95.9	122	118	124	116	-	65.6
Jul	86.0	80.2	81.5	113	100	109	86.5	-	75.2
Aug	52.2	64.8	49.8	34.3	30.3	38.3	23.6	16.0	51.2
Sep	29.8	28.6	29.1	55.3	24.2	26.2	25.4	24.0	44.7
Oct	37.4	39.3	34.4	50.3	41.0	36.6	36.1	41.2	30.8
Nov	27.2	-	22.0	32.5	28.1	26.8	23.1	-	29.2
Dec	6.6	4.5	5.5	3.3	7.8	9.1	6.5	-	22.0
Total	462	383	416	509	458	481	433	194	445

Notes: A "-" indicates a period for which the data was not sufficiently complete to calculate a valid monthly or annual total.

APPENDIX C

SEASONAL WIND ROSES

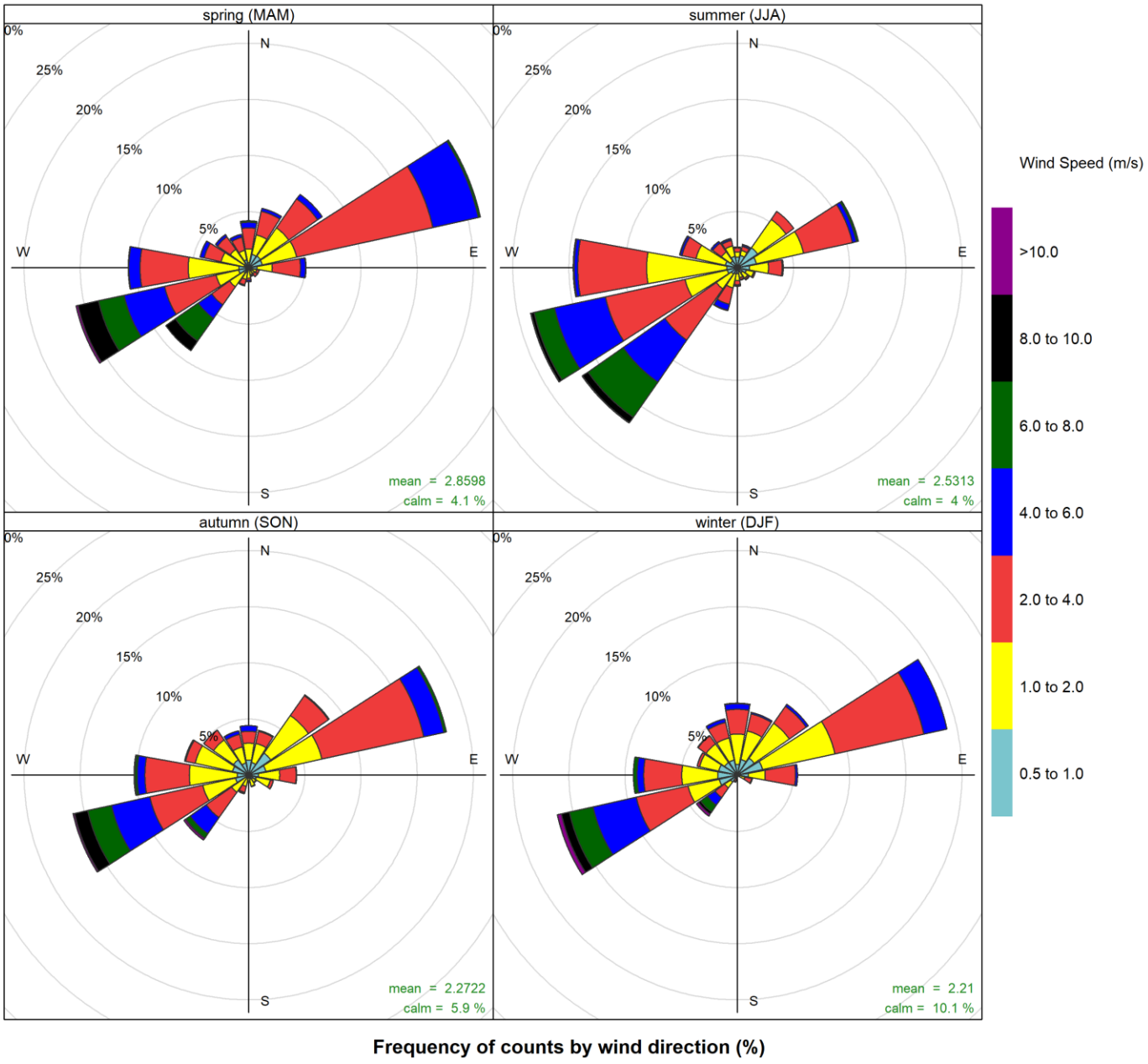


Figure C-1: Wind Roses by season for Station 1 (Attachie Flat Upper Terrace) for year 2020.

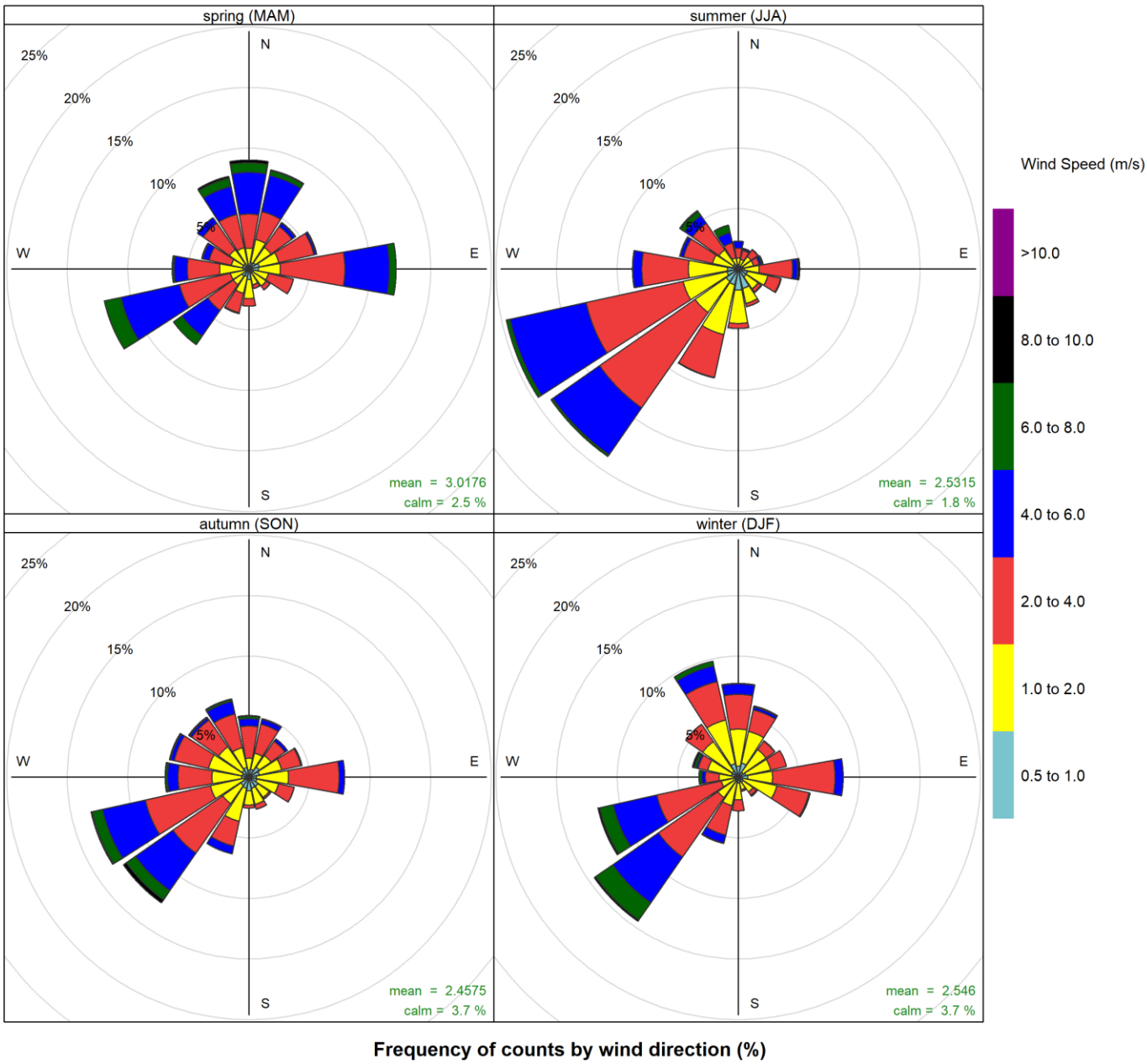


Figure C-2: Wind Roses by season for Station 3 (Attachie Plateau) for year 2020.

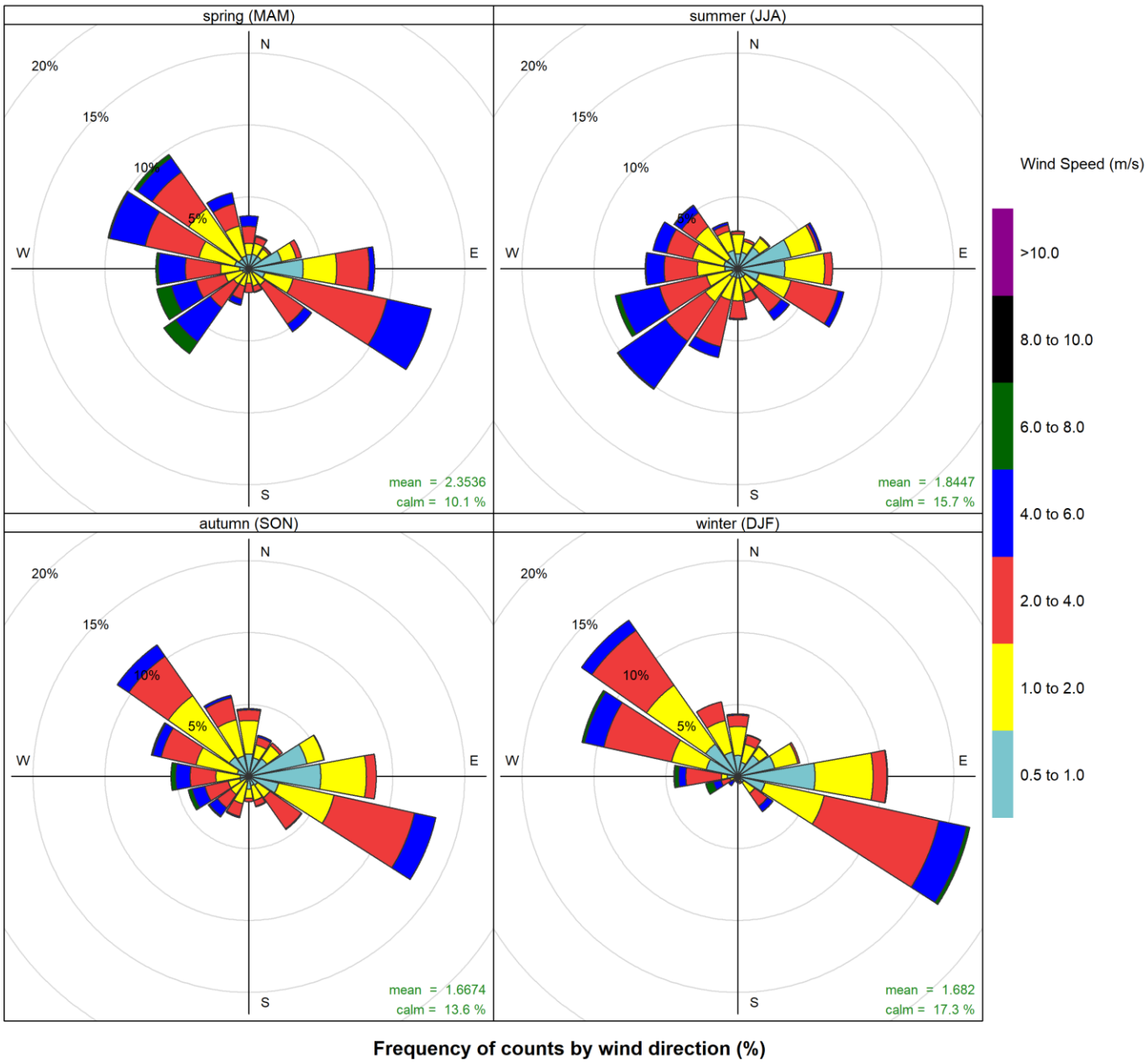


Figure C-3: Wind Roses by season for Station 4 (Bear Flat) for year 2020.

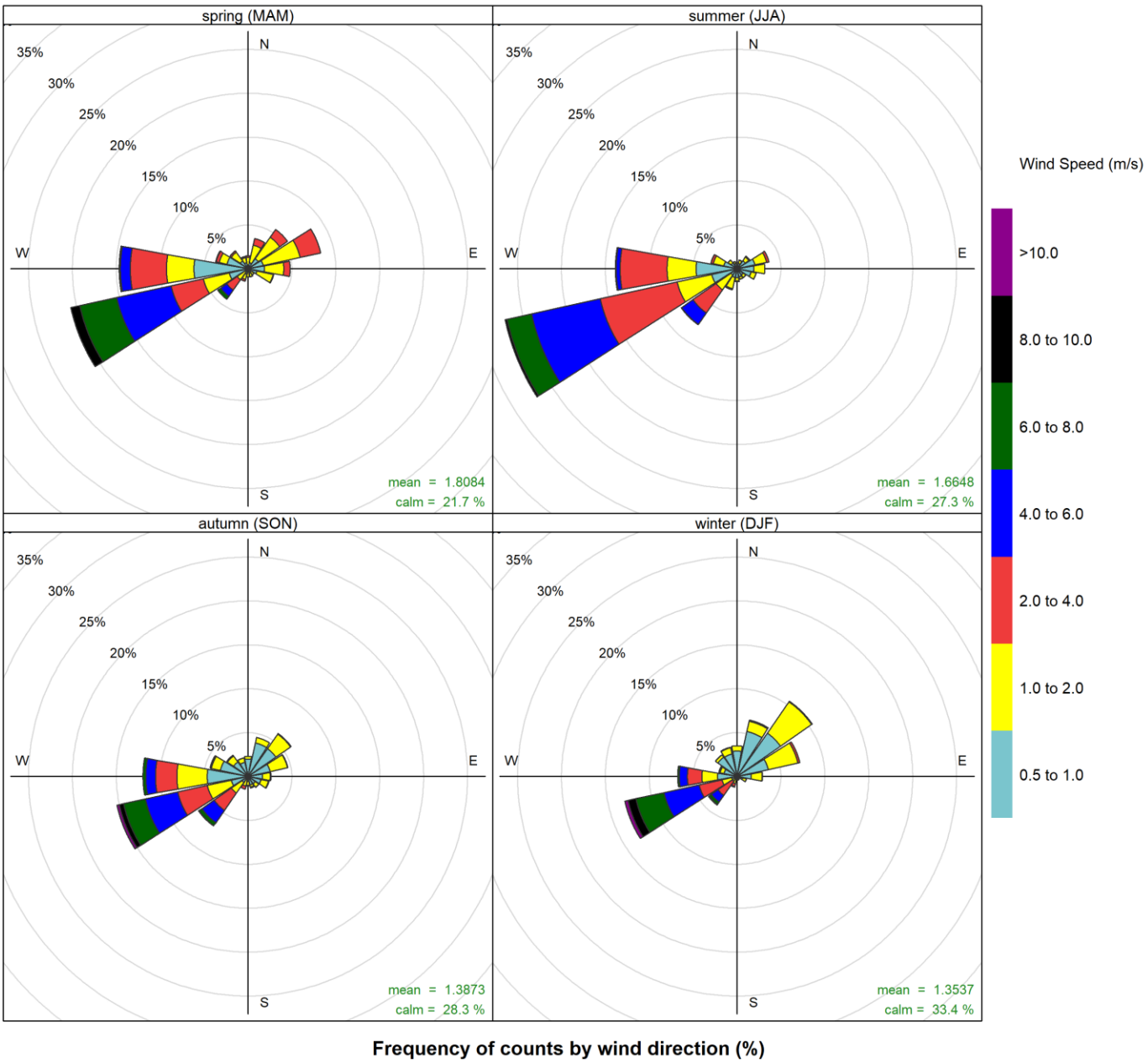


Figure C-4: Wind Roses by season for Station 6 (Farrell Creek) for year 2020.

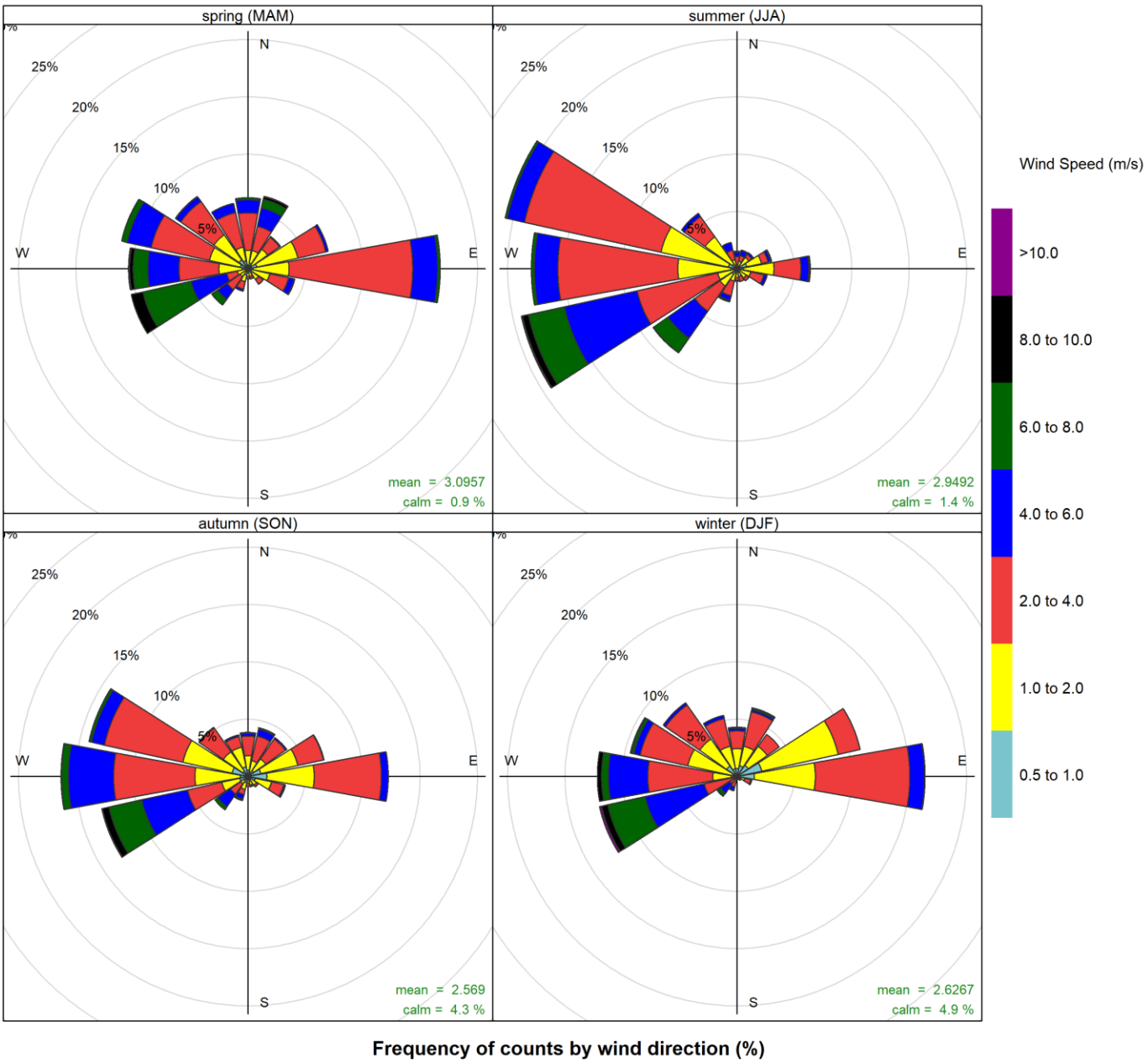


Figure C-5: Wind Roses by season for Station 7B (Site C North Camp) for year 2020.

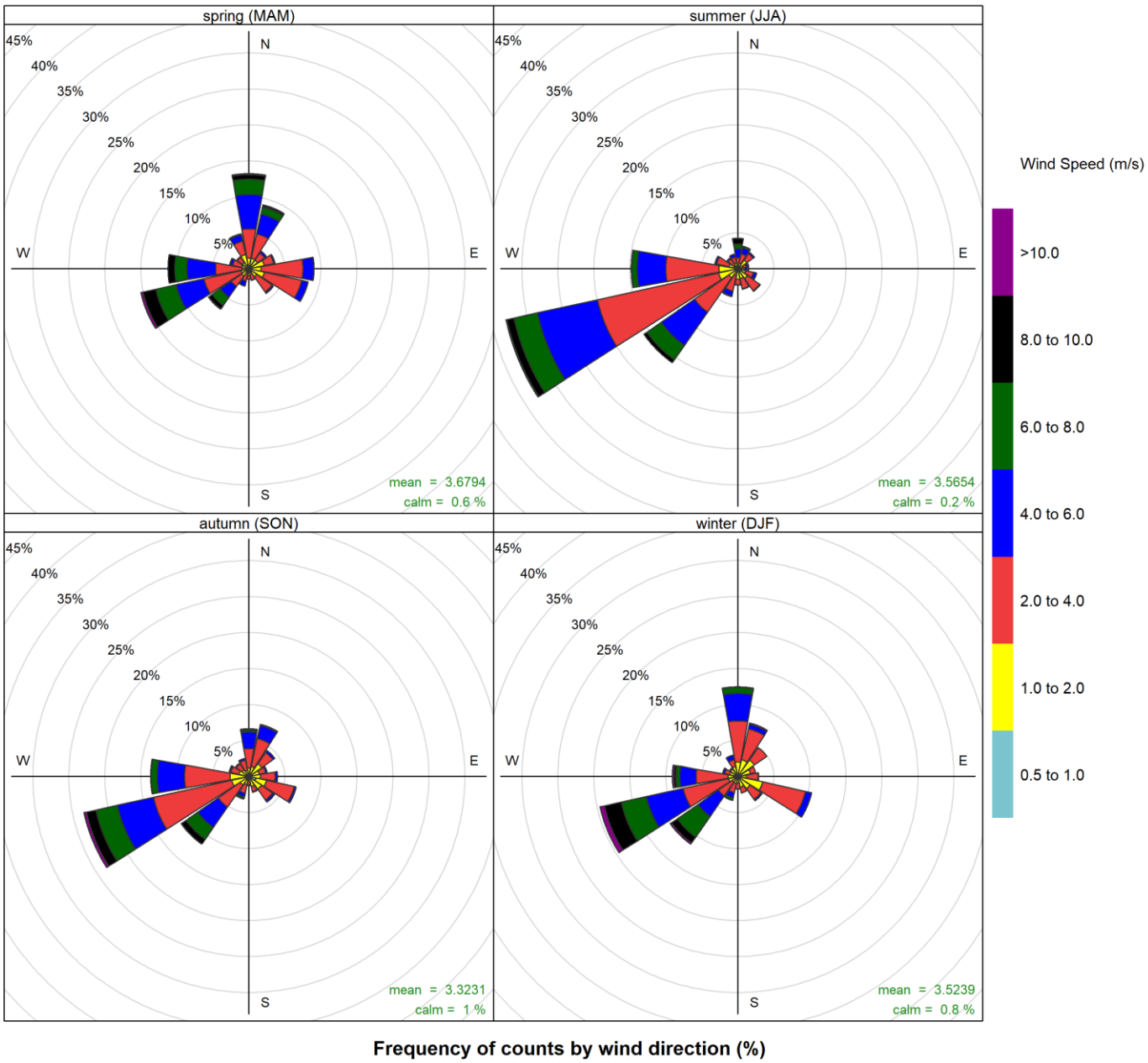


Figure C-6: Wind Roses by season for Station 9 (85th Avenue) for year 2020.

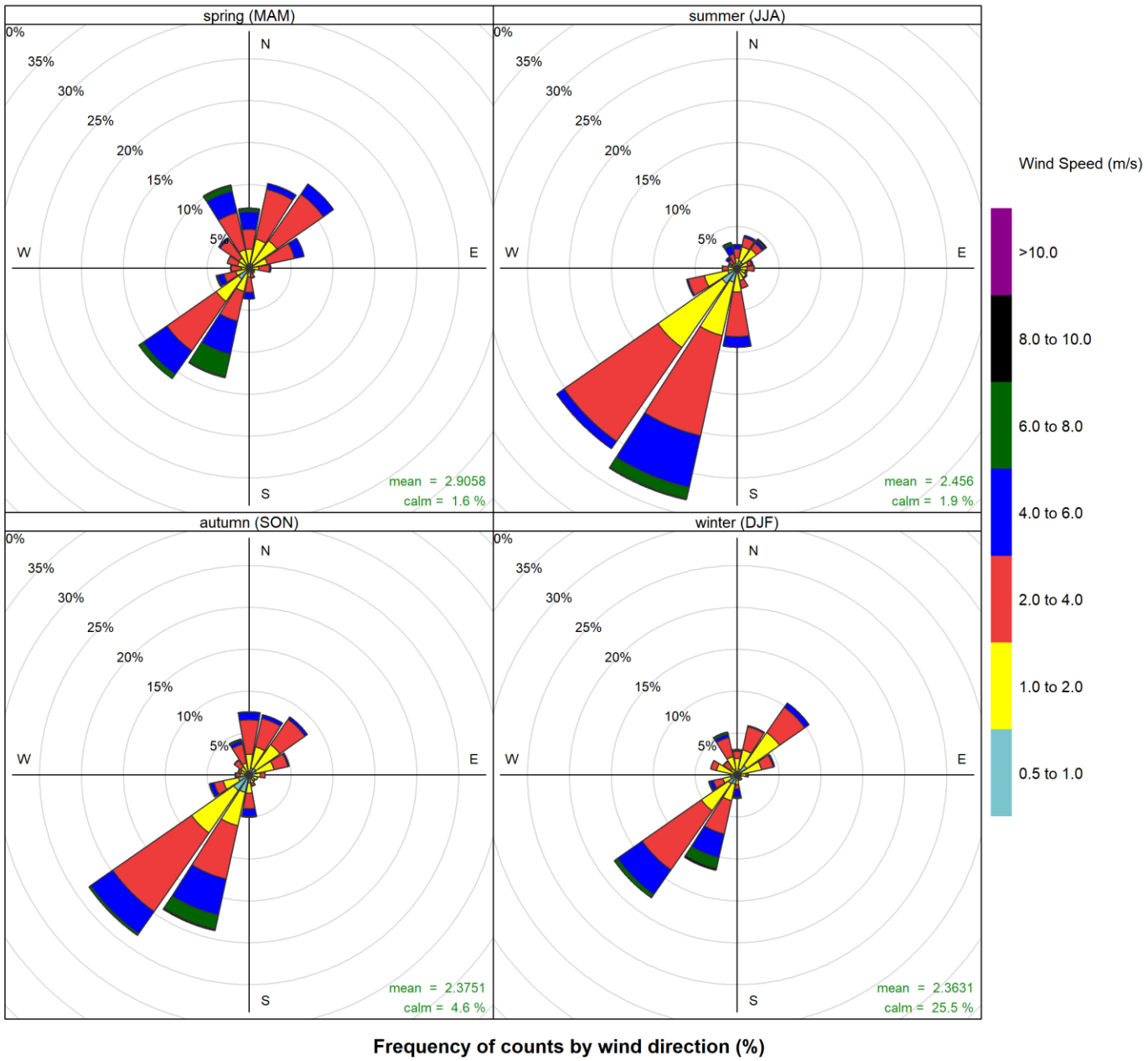


Figure C-7: Wind Roses by season for Station 10 (Tea Creek) for year 2020.

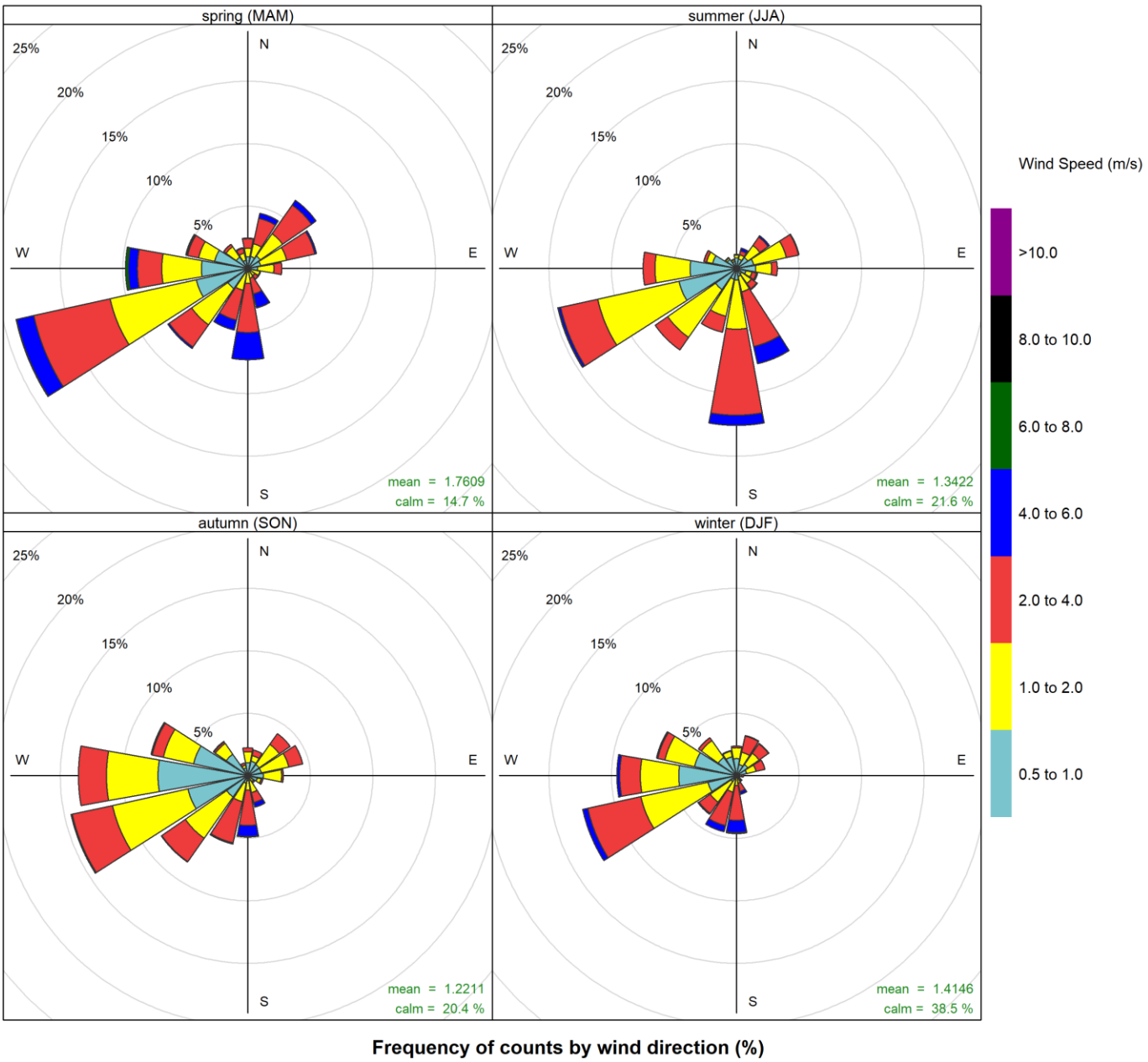


Figure C-8: Wind Roses by season for Station 11 (Taylor) for year 2020.

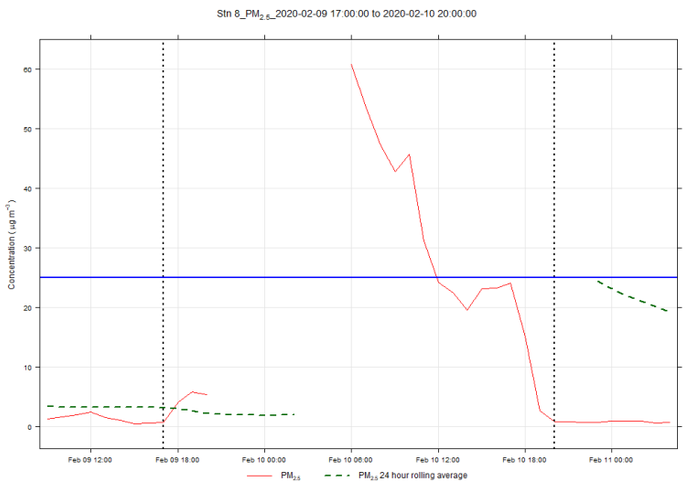
APPENDIX D

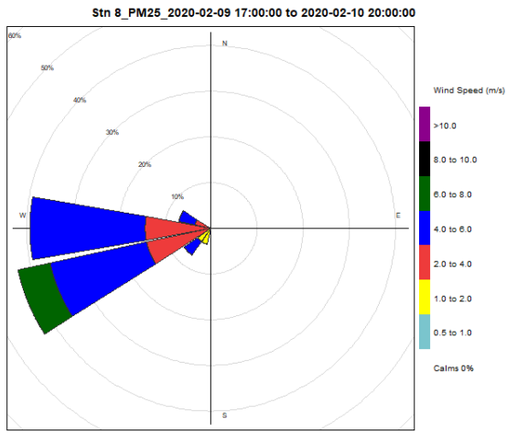
AIR QUALITY ALERT RESPONSE

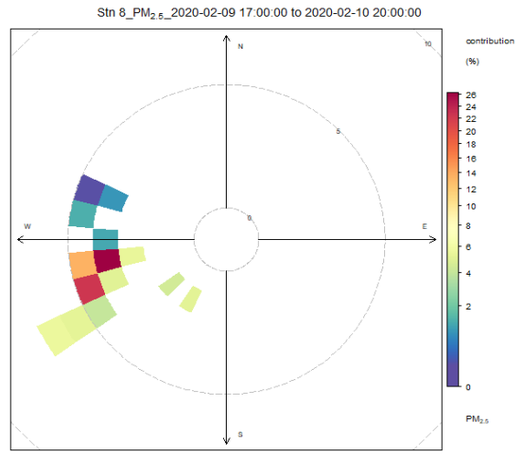
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
220	2/10/2020 4:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (22.7 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-02-10 04:00 MST.	IN	90%	PM 2.5	Station 8	N	NA	N	WSW-W	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 2 RWDI air quality notifications for the week of February 9 - 15, 2020. Stn 8: Fort St. John Old Fort: 'PM2.5 > 90% Alert' 2020-02-10 04:00 MST! IN Alert PM2.5 (22.7 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 8: Fort St. John Old Fort: 'PM2.5 Alert' 2020-02-10 05:00 MST! IN Alert PM2.5 (26.7 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	During the event, dominant wind direction that contributed were WSW with wind speeds up to 8 m/s.
As above	2/10/2020 5:00	IN Alert 'PM2.5 Alert': PM2.5 (26.7 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-02-10 05:00 MST.	IN	100%	As above	As above	As above	As above	As above	As above	As above	As above
As above	2/11/2020 4:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	100%	As above	As above	As above	As above	As above	As above	As above	As above
As above	2/11/2020 5:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	90%	As above	As above	As above	As above	As above	As above	As above	As above



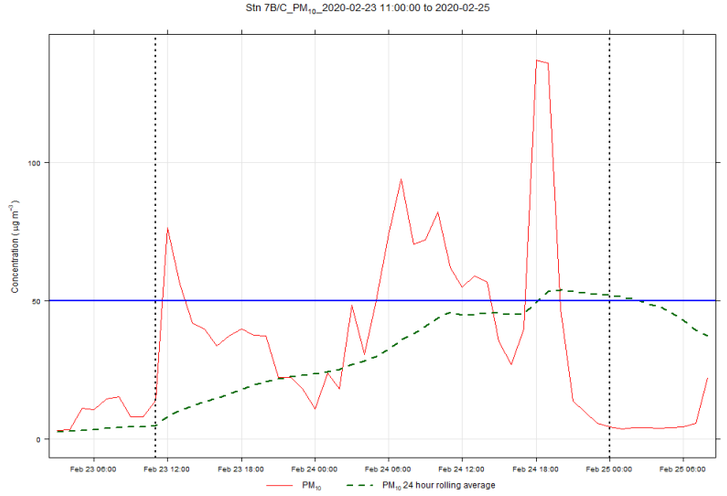


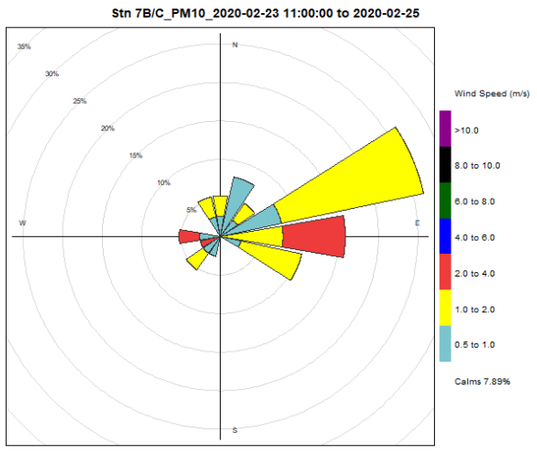


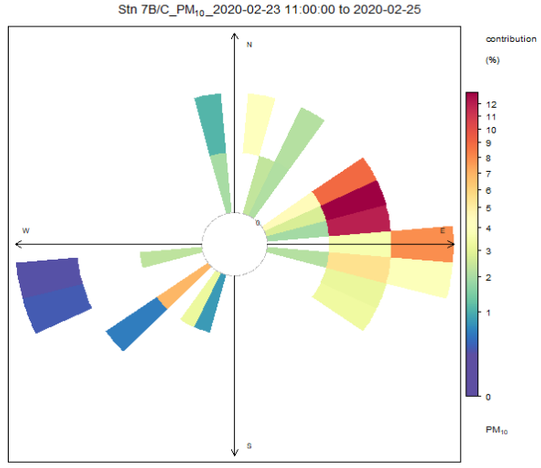
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
221	2/24/2020 11:00	IN Alert 'PM10 > 90% Alert': PM10 (45.9 µg/m3) at Stn 7B/C: North Camp for 2020-02-24 11:00 MST.	IN	90%	PM10	Station 7B/C	N	NA	Y	ENE-E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 3 RWDI air quality notifications for the week of February 23 - 29, 2020. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-02-24 11:00 MST! IN Alert PM10 (45.9 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-02-24 13:00 MST! IN Alert PM10 (45.1 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-02-24 19:00 MST! IN Alert PM10 (53.5 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	During the event, dominant wind direction that contributed were ENE with wind speeds up to 4 m/s.
As above	2/24/2020 12:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90%	As above	As above	As above	As above	As above	As above	As above	As above
As above	2/24/2020 13:00	IN Alert 'PM10 > 90% Alert': PM10 (45.1 µg/m3) at Stn 7B/C: North Camp for 2020-02-24 13:00 MST.	IN	90%	As above	As above	As above	As above	As above	As above	As above	As above
As above	2/24/2020 19:00	IN Alert 'PM10 Alert': PM10 (53.5 µg/m3) at Stn 7B/C: North Camp for 2020-02-24 19:00 MST.	IN	100%	As above	As above	As above	As above	As above	As above	As above	As above
As above	2/25/2020 3:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100%	As above	As above	As above	As above	As above	As above	As above	As above
As above	2/25/2020 6:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90%	As above	As above	As above	As above	As above	As above	As above	As above



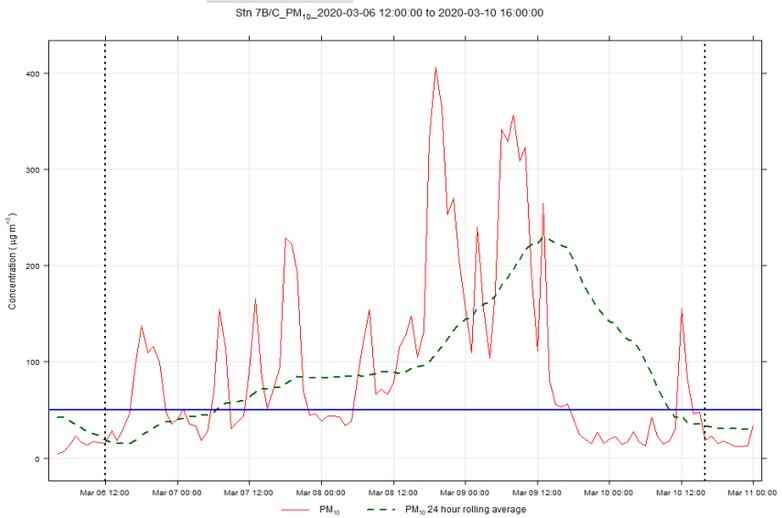


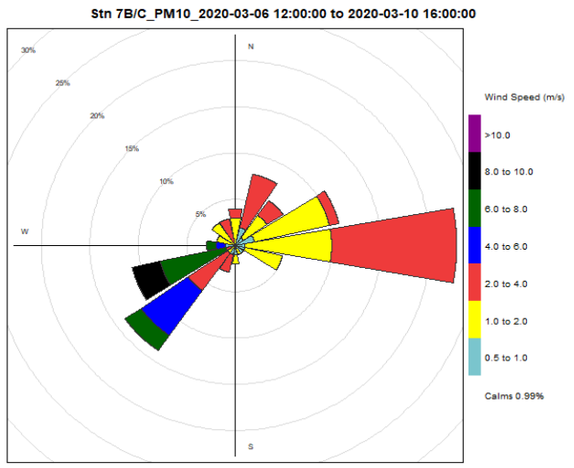


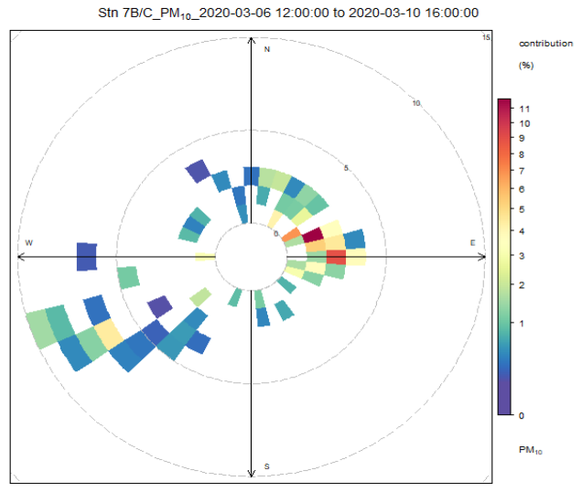
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
222	3/7/2020 5:00	IN Alert 'PM10 > 90% Alert': PM10 (45.3 µg/m3) at Stn 7B/C: North Camp for 2020-03-07 05:00 MST.	IN	90%	PM10	Station 7B/C	N	NA	Y	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 2 RWDI air quality notifications for the week of March 1 - 7, 2020: *Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-03-07 05:00 MST! IN Alert PM10 (45.3 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). *Stn 7B/C: North Camp: 'PM10 Alert' 2020-03-07 07:00 MST! IN Alert PM10 (53.1 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	During the event, wind direction that contributed were E-ENE with wind speeds up to 4 m/s.
As above	3/7/2020 7:00	IN Alert 'PM10 Alert': PM10 (53.1 µg/m3) at Stn 7B/C: North Camp for 2020-03-07 07:00 MST.	IN	100%	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/10/2020 10:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100%	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/10/2020 11:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90%	As above	As above	As above	As above	As above	As above	As above	As above



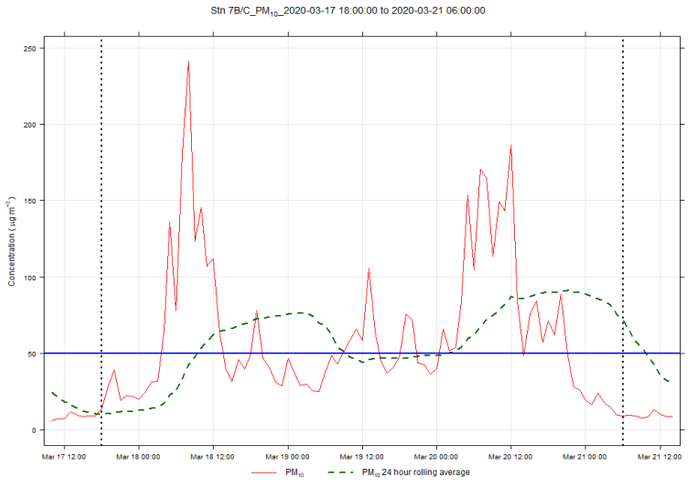


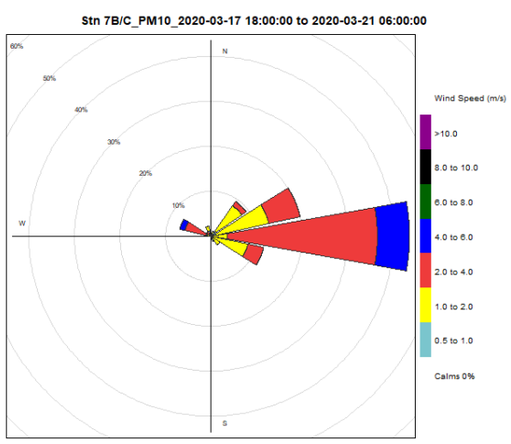


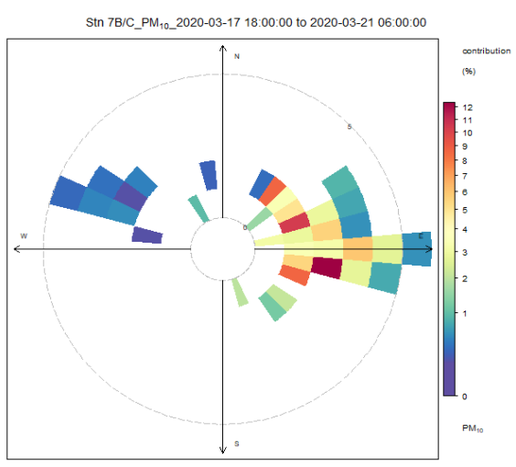
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
223	3/18/2020 9:00	IN Alert 'PM10 > 90% Alert': PM10 (47.6 µg/m3) at Stn 7B/C: North Camp for 2020-03-18 09:00 MST.	IN	90	PM10	Station 7B/C	N	N	Y	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether th be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 4 RWDI air quality notifications for the week of March 15 - 21, 2020. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-03-18 09:00 MST! IN Alert PM10 (47.6 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-03-18 10:00 MST! IN Alert PM10 (53.4 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 2 hour air quality objective of 50 ug/m3. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-03-19 13:00 MST! IN Alert PM10 (45.5 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-03-20 02:00 MST! IN Alert PM10 (50.4 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	During the event, wind direction that contributed were from E quadrant with wind speeds up to 6 m/s.
As above	3/18/2020 9:00	[illegible] (53.4 µg/m3) at Stn 7B/C: North Camp for 2020-03-18 10:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/19/2020 10:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/19/2020 12:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/19/2020 13:00	PM10 (45.5 µg/m3) at Stn 7B/C: North Camp for 2020-03-19 13:00 MST.	IN	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/20/2020 2:00	[illegible] (50.4 µg/m3) at Stn 7B/C: North Camp for 2020-03-20 02:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/21/2020 10:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/21/2020 11:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above







[1] Site Response provided by contractor, scope of contract as follows:

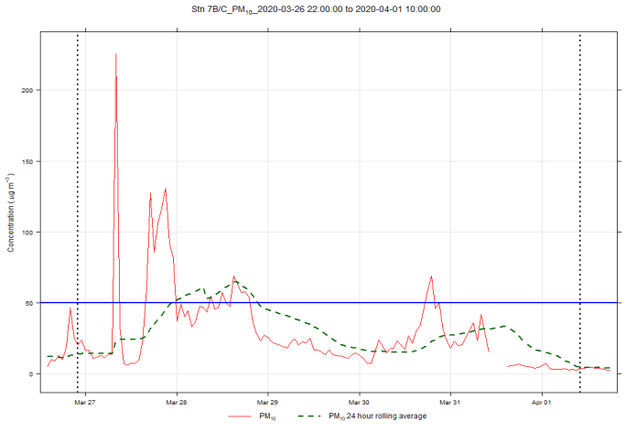
4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

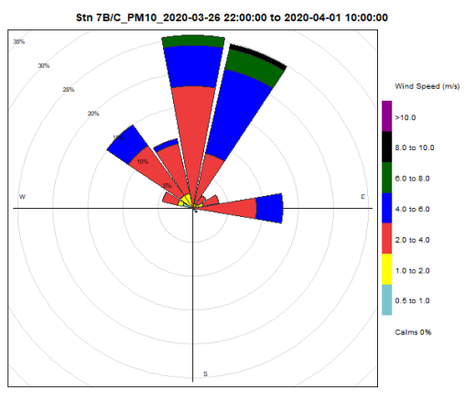
Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
224	3/27/2020 19:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (22.5 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-03-27 19:00 MST.	IN	90	PM2.5	Station 8	Y	Dirt introduced to bench when pump turned back on after monthly maintenance	NA		NA	NA
As Above	3/28/2020 6:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	As above	As above	As above	As above	As above	NA		As above	NA

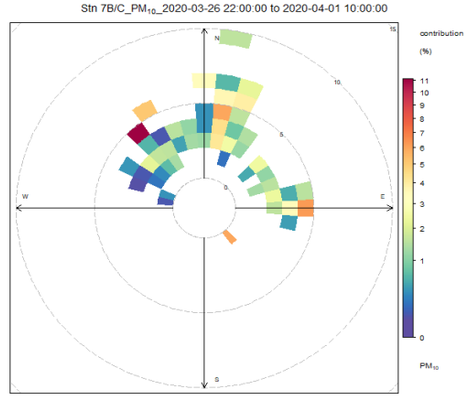
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
225	3/27/2020 21:00	IN Alert 'PM10 > 90% Alert': PM10 (45.8 µg/m3) at Stn 7B/C: North Camp for 2020-03-27 21:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	N-NNE	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 3 RWDI air quality notifications for the week of March 22 - 28, 2020. Stn 8: Fort St. John Old Fort: 'PM2.5 > 90% Alert' 2020-03-27 19:00 MST! IN Alert PM2.5 (22.5 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-03-27 21:00 MST! IN Alert PM10 (45.8 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-03-27 23:00 MST! IN Alert PM10 (51.3 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3. There were 2 RWDI air quality notifications for the week of March 29 - April 4, 2020. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-03-31 12:00 MST! IN Alert PM10 (53.2 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-03-31 12:00 MST! IN Alert PM10 (53.2 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	During the event, wind direction that contributed most to PM10 signal were NW through E with wind speeds up to 10 m/s.
As above	3/27/2020 23:00	IN Alert 'PM10 Alert': PM10 (51.3 µg/m3) at Stn 7B/C: North Camp for 2020-03-27 23:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/28/2020 22:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/29/2020 1:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/31/2020 12:00	IN Alert 'PM10 > 90% Alert': PM10 (53.2 µg/m3) at Stn 7B/C: North Camp for 2020-03-31 12:00 MST.	IN	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	3/31/2020 12:00	IN Alert 'PM10 Alert': PM10 (53.2 µg/m3) at Stn 7B/C: North Camp for 2020-03-31 12:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	4/1/2020 6:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	4/1/2020 10:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



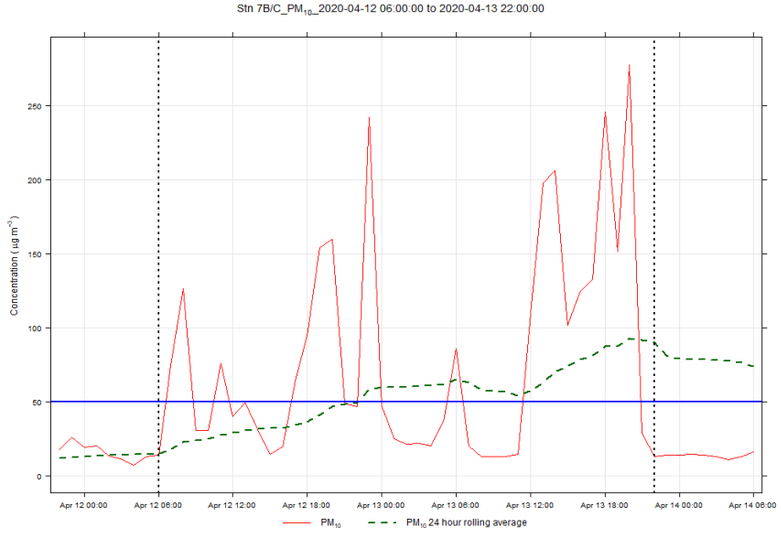


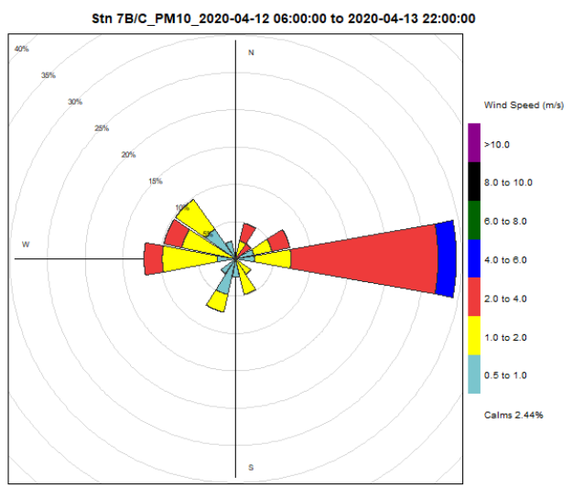


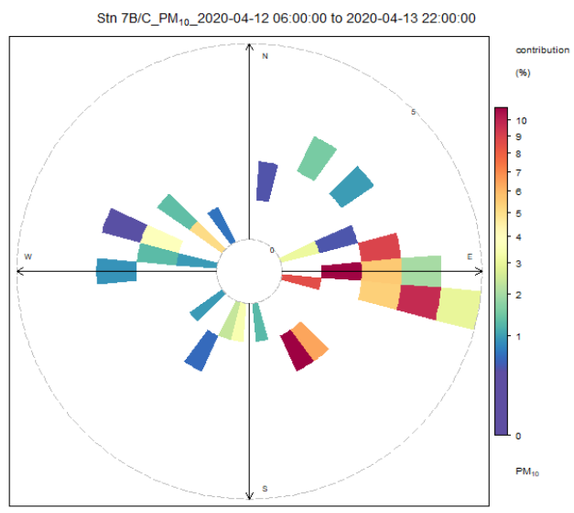
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
226	4/12/2020 20:00	IN Alert 'PM10 > 90% Alert': PM10 (47.1 µg/m3) at Stn 7B/C: North Camp for 2020-04-12 20:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 2 RWDI air quality notifications for the week of April 12-18, 2020. IN Alert 'PM10 > 90% Alert': PM10 (47.1 µg/m3) at Stn 7B/C: North Camp for 2020-04-12 20:00 MST. IN Alert 'PM10 Alert': PM10 (58.6 µg/m3) at Stn 7B/C: North Camp for 2020-04-12 23:00 MST. OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal. OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	During the event, dominant wind directions that contributed were ENE through SE with wind speeds up to 6 m/s.
As above	4/12/2020 23:00	IN Alert 'PM10 Alert': PM10 (58.6 µg/m3) at Stn 7B/C: North Camp for 2020-04-12 23:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	4/14/2020 16:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	4/14/2020 17:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above







[1] Site Response provided by contractor, scope of contract as follows

4Evergreen = reservoir clearing

Allteck: transmission line construction

AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works

PRHP = Peace River Hydro Partners: Main Civil Works

M & M = construction services for fish habitat mitigation

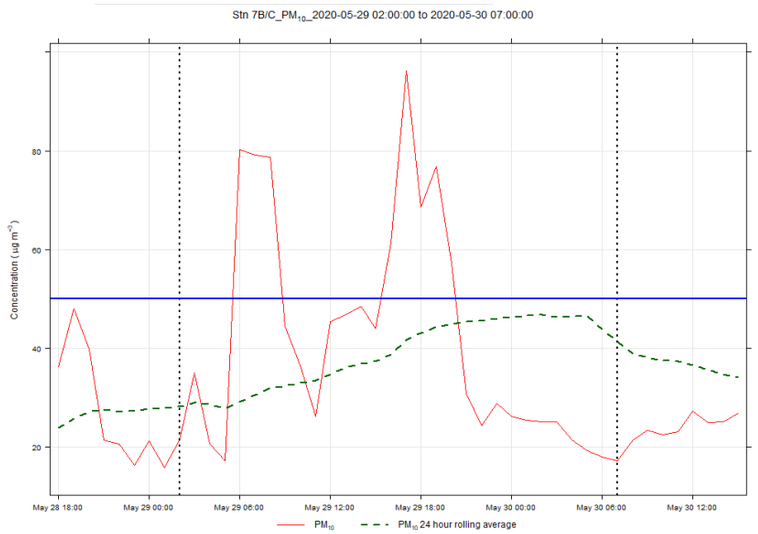
IDL = joint use warehouse construction

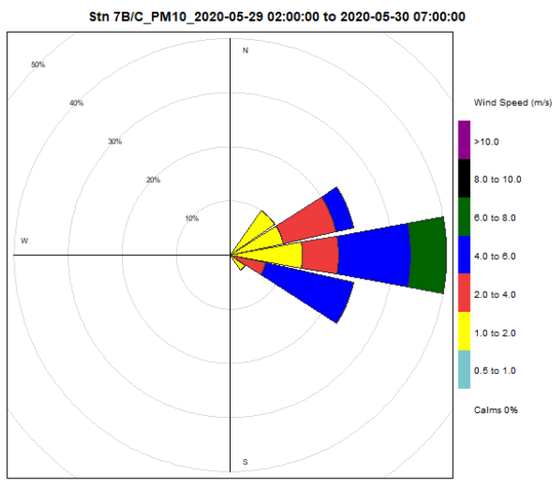
Duz Cho = building demolition services

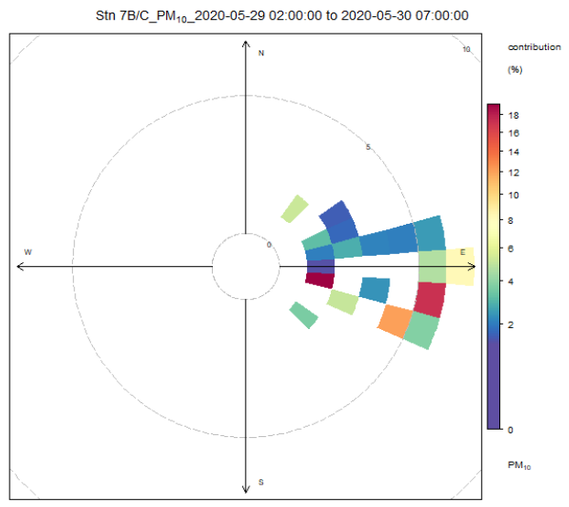
HRIDL LP = Halfway River general contractor

Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
227	5/29/2020 20:00	IN Alert 'PM10 > 90% Alert': PM10 (45 µg/m3) at Stn 7B/C: North Camp for 2020-05-29 20:00 MST.	IN	90	PM10	Station 7B/C	N	NA	N	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There was 1 RWDI air quality notifications for the week of March 24 - 30, 2020. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-05-29 20:00 MST! IN Alert PM10 (45 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3).	Dominant wind directions contributing to the event were from the E through ESE with speeds up to 8 m/s
As above	5/30/2020 6:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above





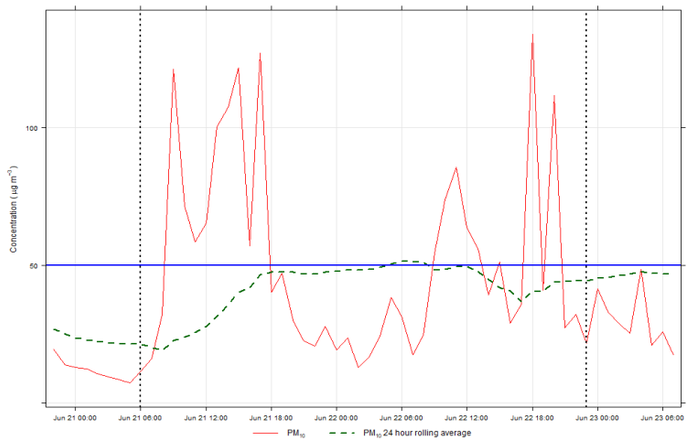


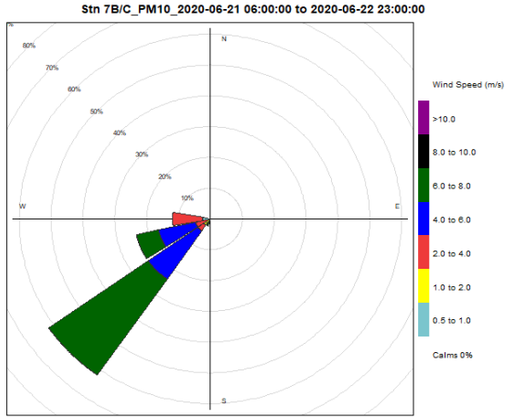
[1] Site Response provided by contractor, scope of contract as follows:

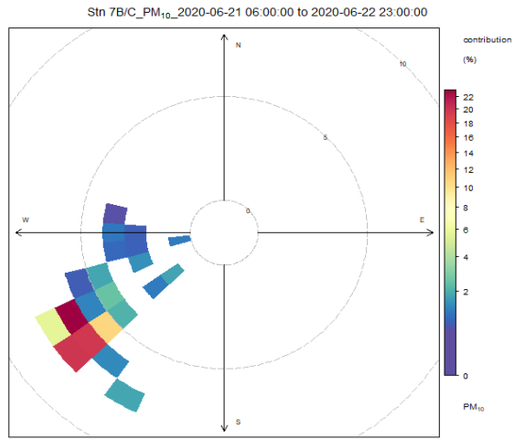
4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
228	2020-06-21 17:00	IN Alert 'PM10 > 90% Alert': PM10 (46.6 µg/m3) at Stn 7B/C: North Camp for 2020-06-21 17:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	SW	**PRHP:** For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-06-21 17:00 MST! IN Alert PM10 (46.6 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert'2020-06-22 05:00 MST! IN Alert PM10 (50.5 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction contributing to the event was from the SW with speeds up to 8 m/s
As above	6/22/2020 5:00	IN Alert 'PM10 Alert': PM10 (50.5 µg/m3) at Stn 7B/C: North Camp for 2020-06-22 05:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/22/2020 9:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/22/2020 14:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above

Stn 7B/C_PM_{10}_2020-06-21 06:00:00 to 2020-06-22 23:00:00



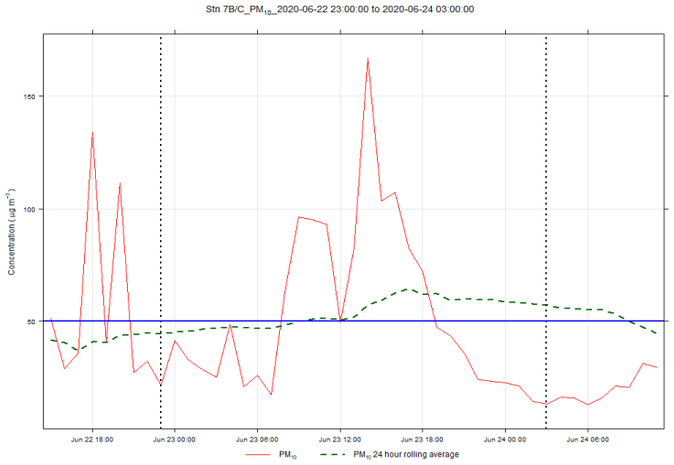


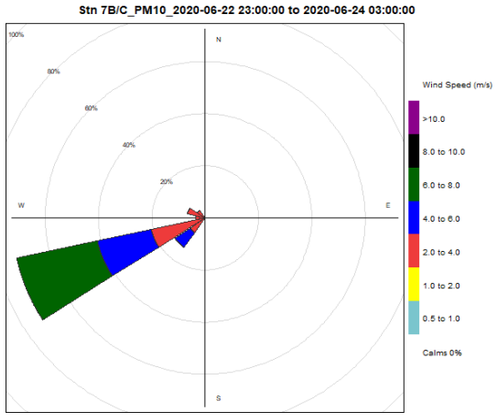


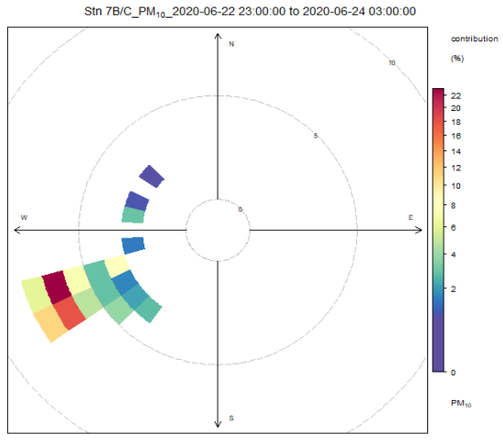
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
229	6/23/2020 0:00	IN Alert 'PM10 > 90% Alert': PM10 (45.3 µg/m3) at Stn 7B/C: North Camp for 2020-06-23 00:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	WSW	**PRHP:** For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-06-23 00:00 MST! IN Alert PM10 (45.3 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-06-23 09:00 MST! IN Alert PM10 (50.1 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction contributing to the event was generally from the WSW with speeds up to 8 m/s
As above	6/23/2020 9:00	IN Alert 'PM10 Alert': PM10 (50.1 µg/m3) at Stn 7B/C: North Camp for 2020-06-23 09:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/24/2020 10:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/24/2020 11:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



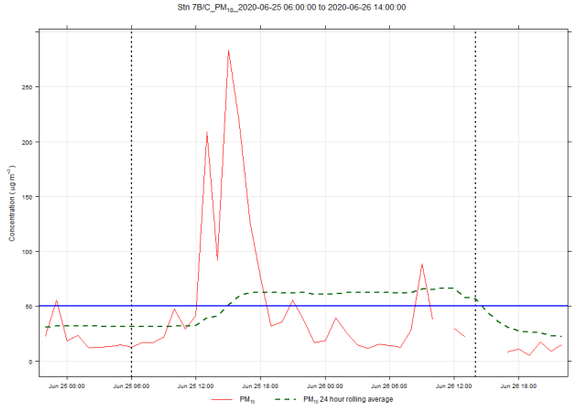


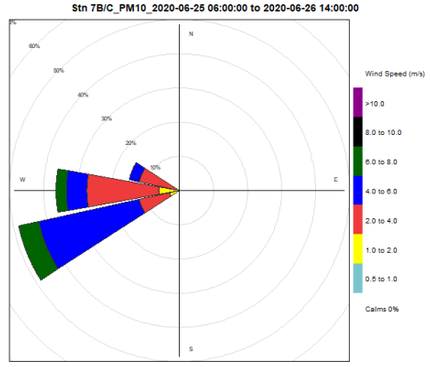


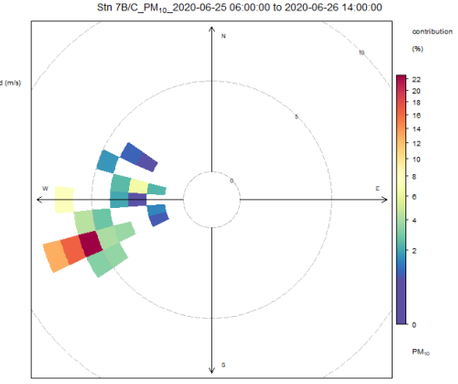
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
230	6/25/2020 15:00	IN Alert 'PM10 > 90% Alert': PM10 (51.5 µg/m3) at Stn 7B/C: North Camp for 2020-06-25 15:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	WSW	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-06-25 15:00 MST! IN Alert PM10 (51.5 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-06-25 15:00 MST! IN Alert PM10 (51.5 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3	Wind direction from the WSW through WNW with speeds up to 8 m/s
As above	6/25/2020 15:00	IN Alert 'PM10 Alert': PM10 (51.5 µg/m3) at Stn 7B/C: North Camp for 2020-06-25 15:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 11:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 11:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 12:00	IN Alert 'PM10 > 90% Alert': PM10 (65.3 µg/m3) at Stn 7B/C: North Camp for 2020-06-26 12:00 MST.	IN	90	PM10	Station 7B/C	As above	As above	As above	As above	As above	As above
As above	6/26/2020 12:00	IN Alert 'PM10 Alert': PM10 (65.3 µg/m3) at Stn 7B/C: North Camp for 2020-06-26 12:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 14:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 14:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above







[1] Site Response provided by contractor, scope of contract as follows:

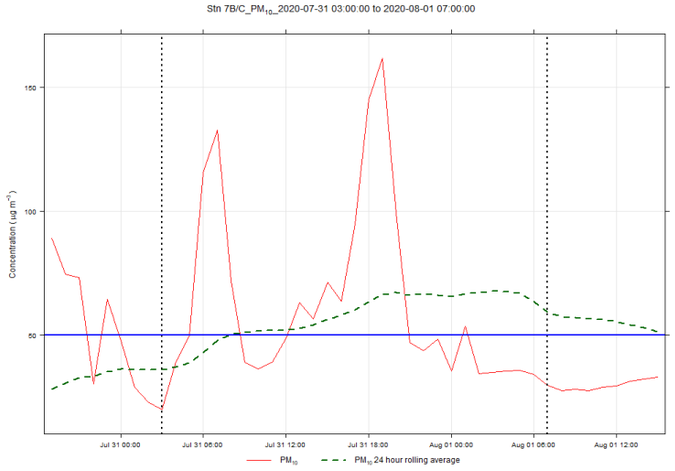
4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

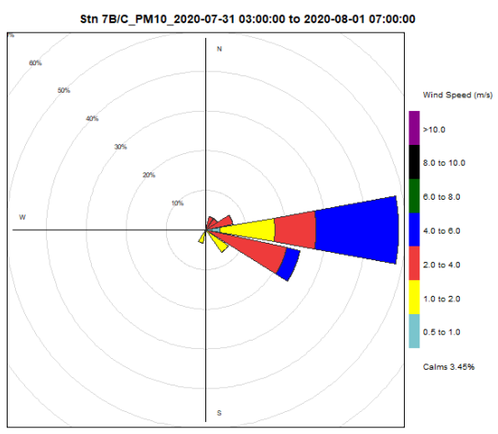
Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
231	6/26/2020 17:00	IN Alert 'PM10 > 90% Alert': PM10 (52.2 µg/m3) at Stn 7B/C: North Camp for 2020-06-26 17:00 MST.	IN	90	PM10	Station 7B/C	Y	Settling after calibration	N	NA	NA	NA
As above	6/26/2020 17:00	IN Alert 'PM10 Alert': PM10 (52.2 µg/m3) at Stn 7B/C: North Camp for 2020-06-26 17:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 18:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above
As above	6/26/2020 18:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above

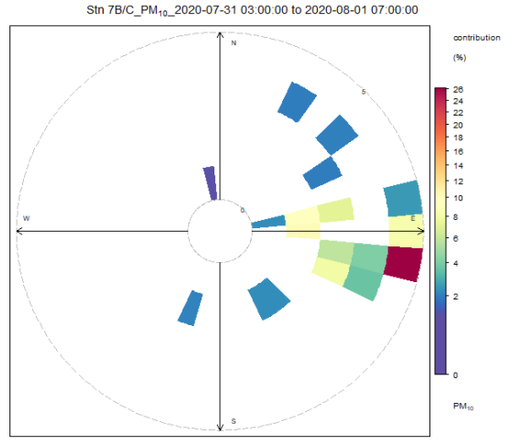
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
232	7/31/2020 7:00	IN Alert 'PM10 > 90% Alert': PM10 (47.9 µg/m3) at Stn 7B/C: North Camp for 2020-07-31 07:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-07-31 07:00 MST! IN Alert PM10 (47.9 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3 Stn 7B/C: North Camp: 'PM10 Alert'2020-07-31 08:00 MST! IN Alert PM10 (50.4 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	The dominant wind direction contributing to the PM10 event was from the ESE with speeds up to 6 m/s
As above	7/31/2020 8:00	IN Alert 'PM10 Alert': PM10 (50.4 µg/m3) at Stn 7B/C: North Camp for 2020-07-31 08:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	8/1/2020 17:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	8/1/2020 18:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



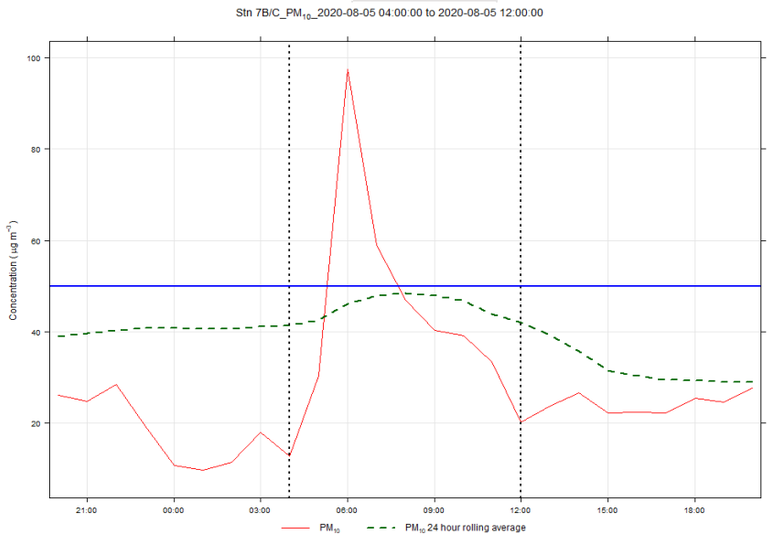


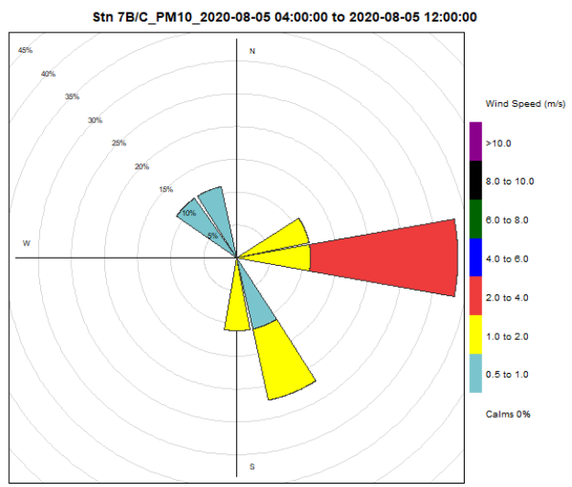


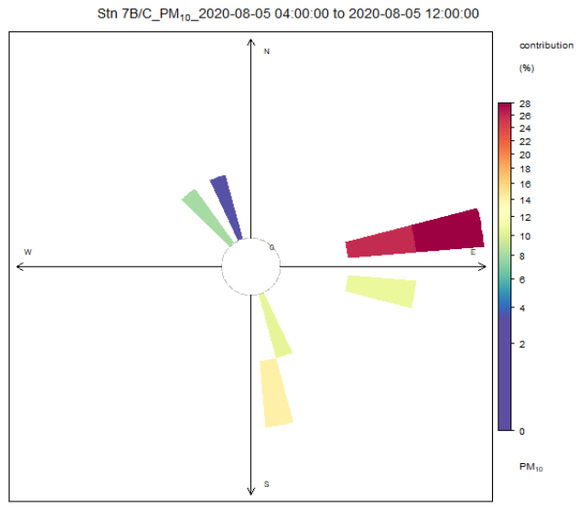
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
233	8/5/2020 6:00	IN Alert 'PM10 > 90% Alert': PM10 (46 µg/m3) at Stn 7B/C: North Camp for 2020-08-05 06:00 MST.	IN	90	PM10	Station7B/C	N	NA	N	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-08-05 06:00 MST! IN Alert PM10 (46 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3)	The dominant wind direction contributing to the event was from the ENE with speeds up to 4 m/s
As above	8/5/2020 11:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	As above	As above	As above	As above	As above	As above	As above	As above	As above



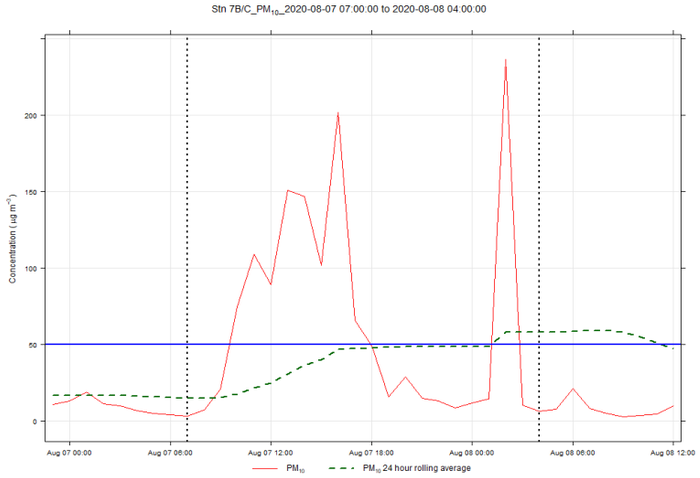


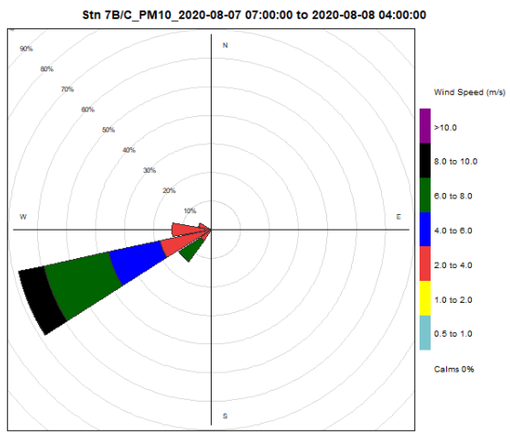


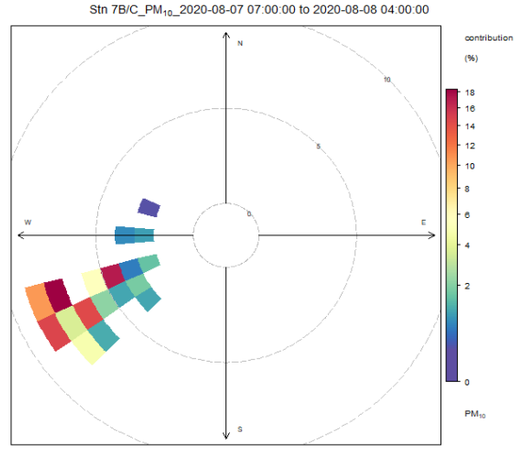
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
234	8/7/2020 16:00	IN Alert 'PM10 > 90% Alert': PM10 (47.1 µg/m3) at Stn 7B/C: North Camp for 2020-08-07 16:00 MST.	IN	90	PM10	Station 7B/C	N	N	Y	WSW	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards.Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-08-07 16:00 MST! IN Alert PM10 (47.1 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-08-08 02:00 MST! IN Alert PM10 (58 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3	Wind direction from the WSW with speeds up to 10 m/s
As above	8/8/2020 2:00	IN Alert 'PM10 Alert': PM10 (58 µg/m3) at Stn 7B/C: North Camp for 2020-08-08 02:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	8/8/2020 12:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	8/8/2020 13:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



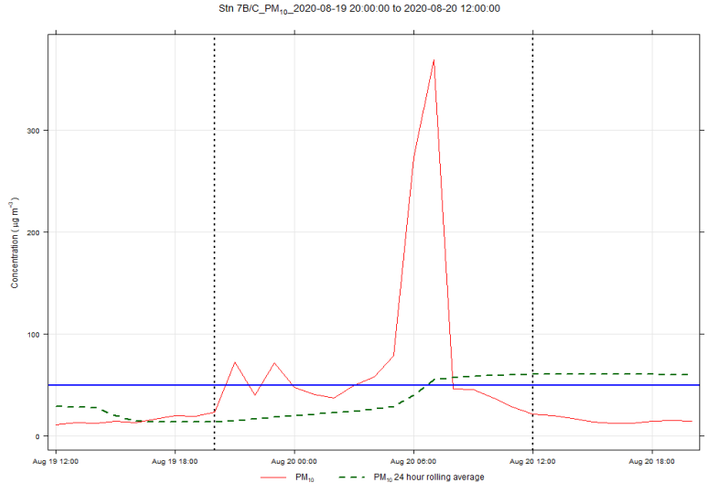


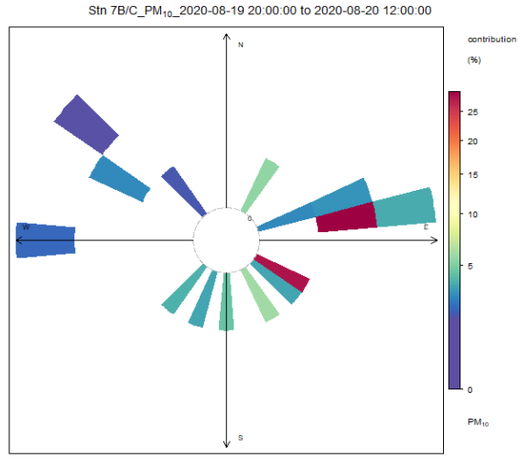


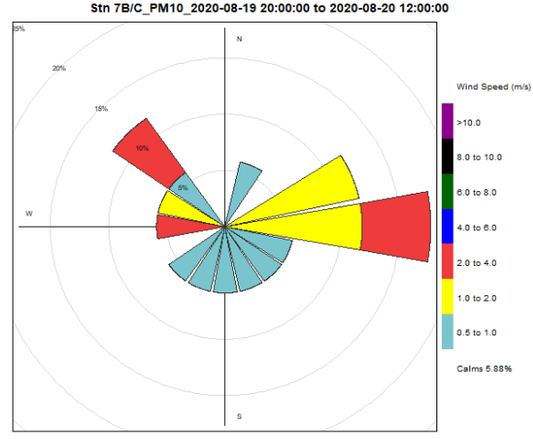
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
235	8/20/2020 7:00	IN Alert 'PM10 > 90% Alert': PM10 (55.3 µg/m3) at Stn 7B/C: North Camp for 2020-08-20 07:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	W	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert'2020-08-20 07:00 MST! IN Alert PM10 (55.3 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert'2020-08-20 07:00 MST! IN Alert PM10 (55.3 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3	Wind direction variable but generally from the E with speeds up to 4 m/s
As above	8/20/2020 7:00	IN Alert 'PM10 Alert': PM10 (55.3 µg/m3) at Stn 7B/C: North Camp for 2020-08-20 07:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	8/21/2020 2:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	8/21/2020 5:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



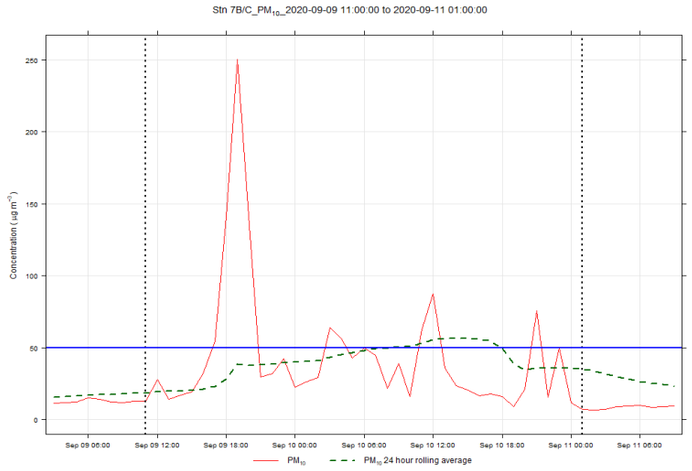


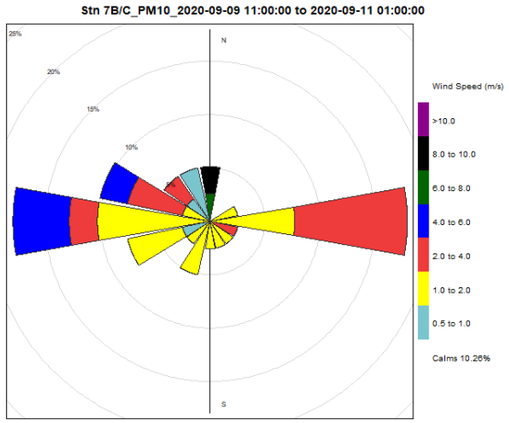


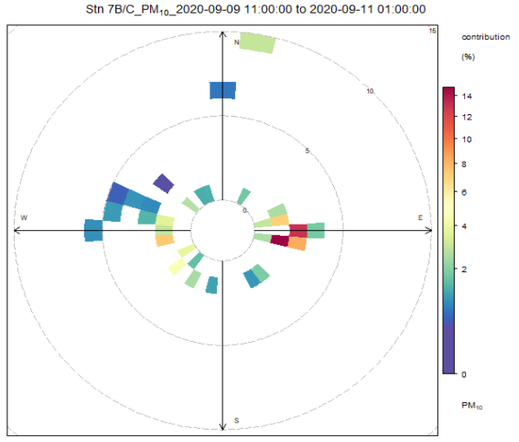
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
236	9/10/2020 4:00	IN Alert 'PM10 > 90% Alert': PM10 (45.2 µg/m3) at Stn 7B/C: North Camp for 2020-09-10 04:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	W	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were two RWDI air quality notifications for the week of September 6 – 12, 2020. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-09-10 04:00 MST! IN Alert PM10 (45.2 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-09-10 09:00 MST! IN Alert PM10 (50.7 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction from the W with speeds up to 6 m/s. The dominant wind direction carrying the high PM10 values was from the E up to 4 m/s.
As above	9/10/2020 9:00	IN Alert 'PM10 Alert': PM10 (50.7 µg/m3) at Stn 7B/C: North Camp for 2020-09-10 09:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/10/2020 18:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/10/2020 19:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



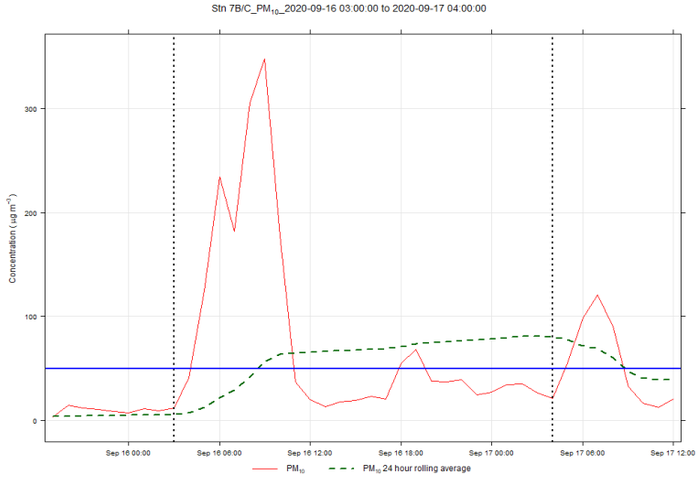


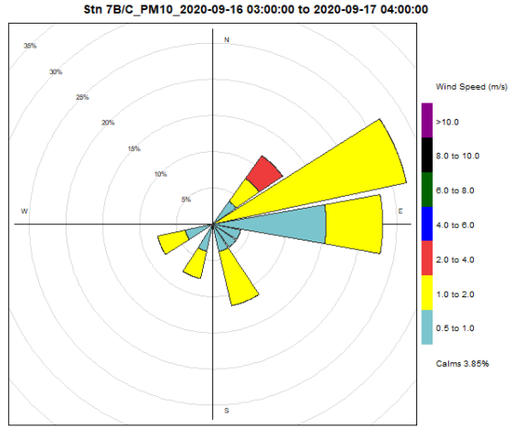


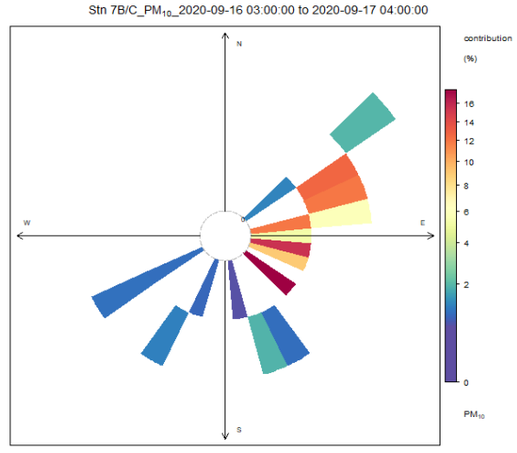
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
237	9/16/2020 9:00	IN Alert 'PM10 > 90% Alert': PM10 (56.4 µg/m3) at Stn 7B/C: North Camp for 2020-09-16 09:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	ENE	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-09-16 09:00 MST! IN Alert PM10 (56.4 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-09-16 09:00 MST! IN Alert PM10 (56.4 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction from the ENE with variable speeds up to 2 m/s. Domninant wind direction contributing to the event was from the ENE through ESE
As above	9/16/2020 9:00	IN Alert 'PM10 Alert': PM10 (56.4 µg/m3) at Stn 7B/C: North Camp for 2020-09-16 09:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/17/2020 9:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/17/2020 10:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



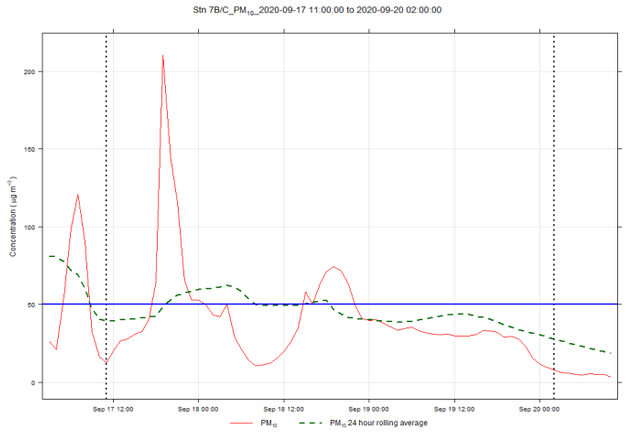


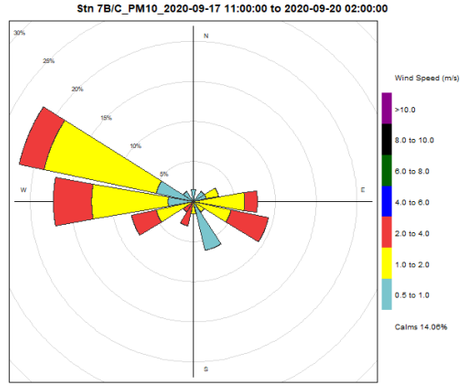


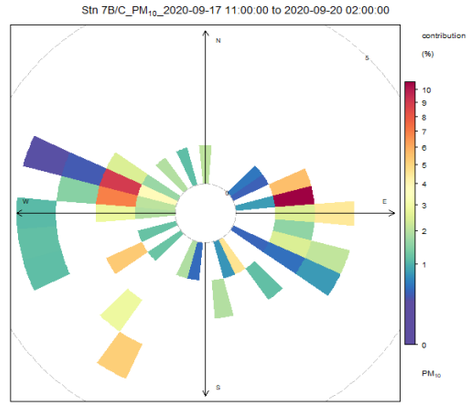
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
238	9/17/2020 19:00	IN Alert 'PM10 > 90% Alert': PM10 (48.5 µg/m3) at Stn 7B/C: North Camp for 2020-09-17 19:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	WNW	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-09-17 19:00 MST! IN Alert. PM10 (48.5 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-09-17 20:00 MST! IN Alert PM10 (52.9 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3. Stn 7B/C: North Camp: 'PM10 Alert' 2020-09-18 15:00 MST! IN Alert PM10 (50.6 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction from the WNW with speeds up to 4 m/s. Larger PM10 contributions were detected from ENE, SW and WNW
As above	9/17/2020 20:00	IN Alert 'PM10 Alert': PM10 (52.9 µg/m3) at Stn 7B/C: North Camp for 2020-09-17 20:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/18/2020 9:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/18/2020 15:00	IN Alert 'PM10 Alert': PM10 (50.6 µg/m3) at Stn 7B/C: North Camp for 2020-09-18 15:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/18/2020 19:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	990	As above	As above	As above	As above	As above	As above	As above	As above
As above	9/18/2020 20:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



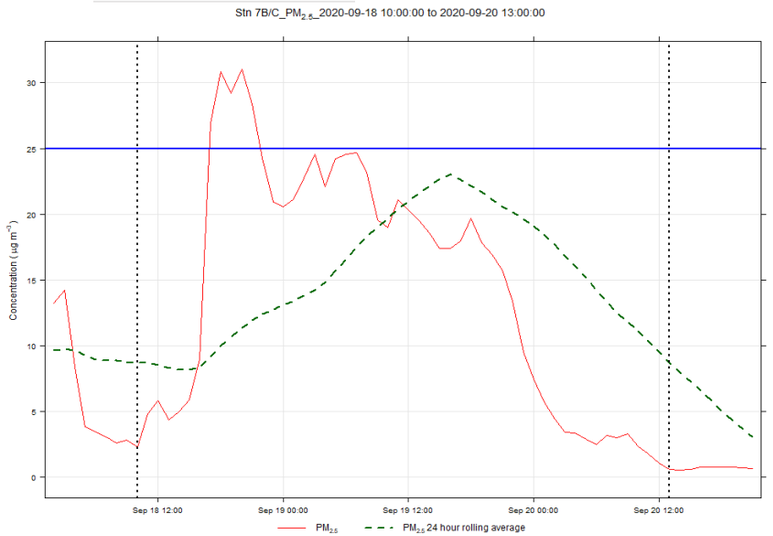


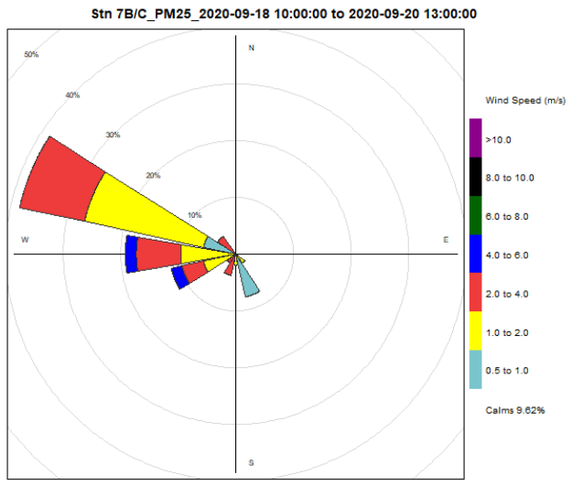


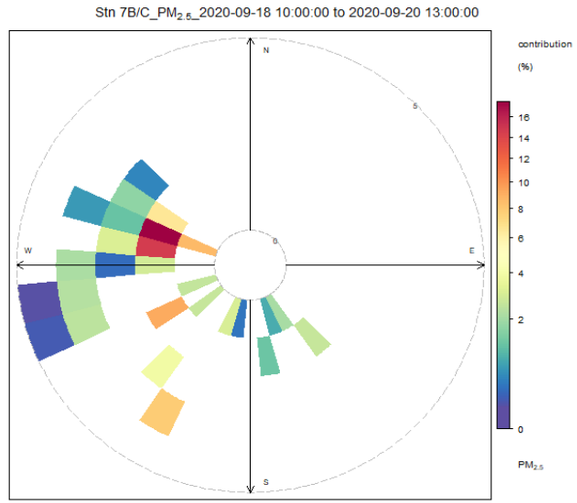
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
239	9/19/2020 15:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (22.7 µg/m3) at Stn 7B/C: North Camp for 2020-09-19 15:00 MST.	IN	90	PM2.5	Station 7B/C	N	NA	N	WNW	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM2.5 > 90% Alert' 2020-09-19 15:00 MST! IN Alert PM2.5 (22.7 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3).	Dominant wind direction from the WNW with speeds up to 4 m/s.
As above	9/19/2020 18:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



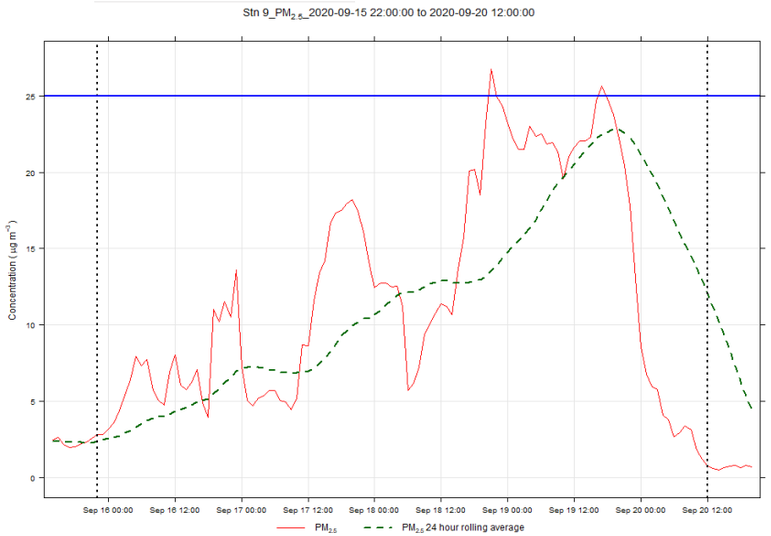


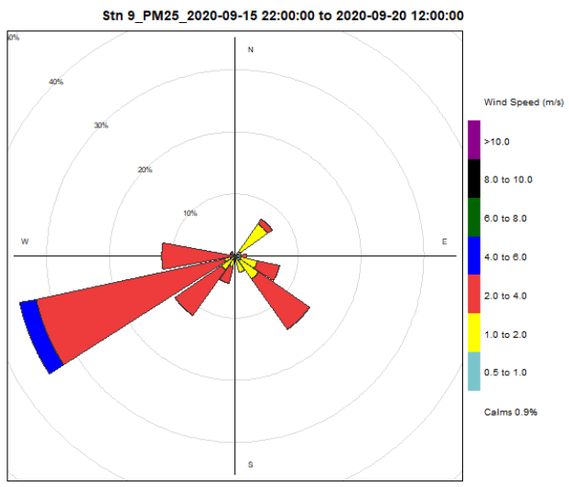


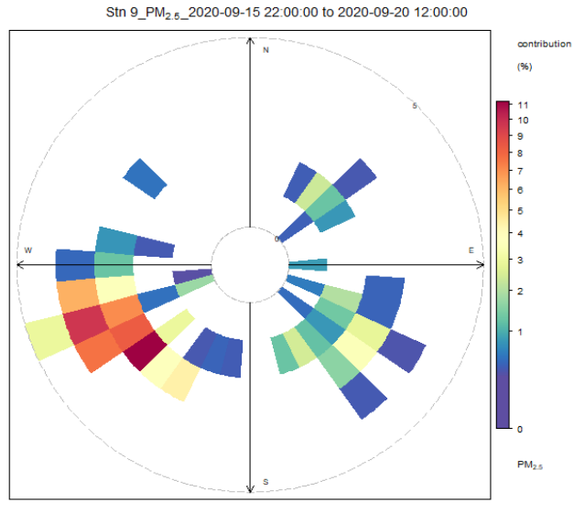
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
240	9/19/2020 18:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (22.6 µg/m3) at Stn 9: Fort St. John 85th Ave for 2020-09-19 18:00 MST.	IN	90	PM2.5	Station 9	N	NA	N	WSW	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 9: Fort St. John 85th Ave: 'PM2.5 > 90% Alert' 2020-09-19 18:00 MST! IN Alert PM2.5 (22.6 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3).	Dominant wind direction from the WSW with speeds up to 6 m/s.
As above	9/19/2020 22:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 9: Fort St. John 85th Ave are normal.	OUT	As above	As above	As above	As above	As above	As above	As above	As above	As above







[1] Site Response provided by contractor, scope of contract as follows:

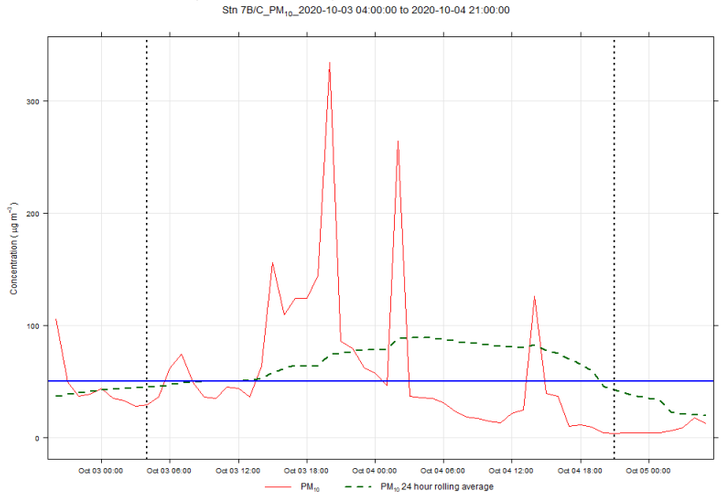
4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

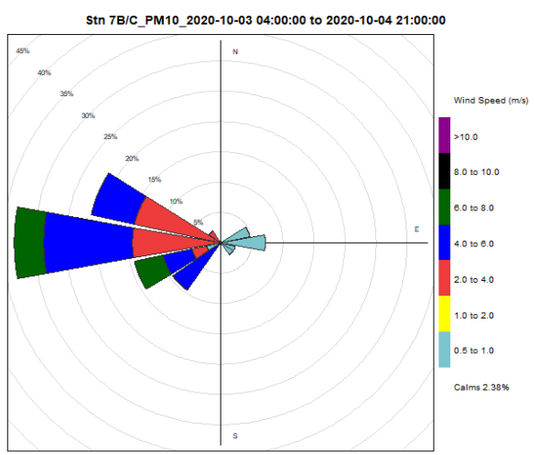
Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
241	30-09-20 20:00	IN Alert 'PM10 > 90% Alert': PM10 (47 µg/m3) at Stn 7B/C: North Camp for 2020-09-30 20:00 MST.	IN	90	PM10	Station 7B/C	Y	Neph zero off due to contamination in sample line	NA		NA	
As above	01-10-20 7:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	As above	As above	As above	As above	As above	As above		As above	

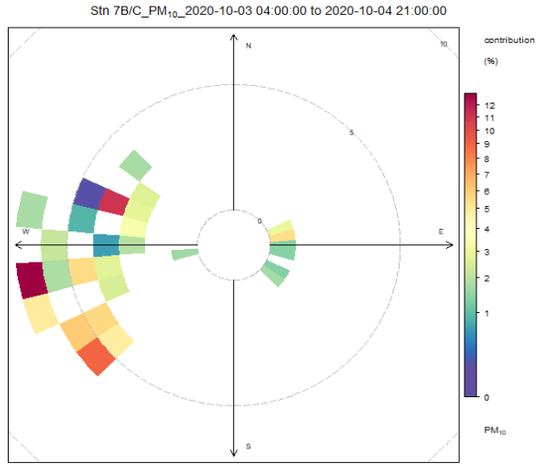
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
242	10/3/2020 5:00	IN Alert 'PM10 > 90% Alert': PM10 (45.6 µg/m3) at Stn 7B/C: North Camp for 2020-10-03 05:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	W	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 > 90% Alert'2020-10-03 05:00 MST! IN Alert PM10 (45.6 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3).	Dominant winds contributing to the event were from the WSW through SW up to 8 m/s.
As above	10/3/2020 11:00	IN Alert 'PM10 Alert': PM10 (50.1 µg/m3) at Stn 7B/C: North Camp for 2020-10-03 11:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/4/2020 20:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/4/2020 21:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



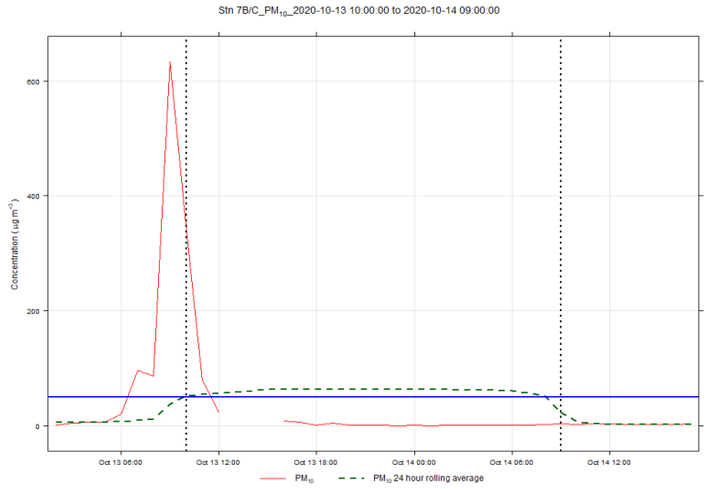


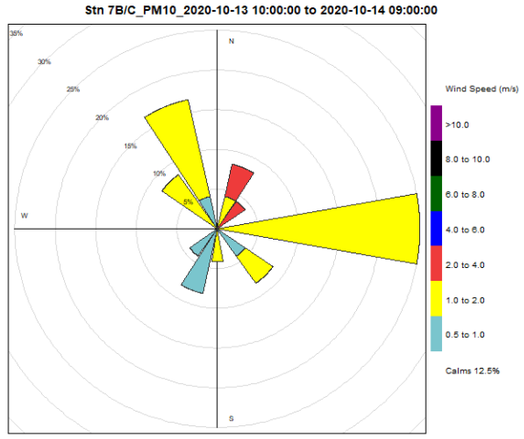


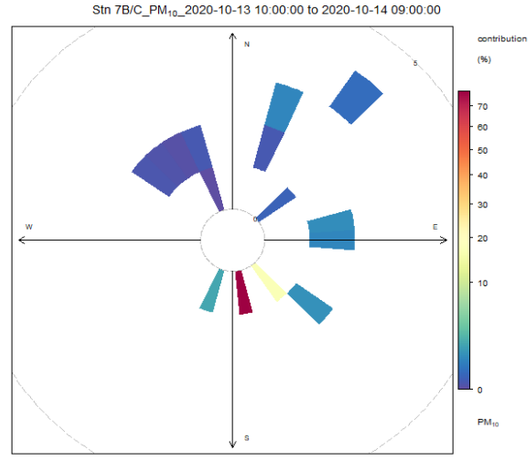
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
243	10/13/2020 10:00	IN Alert 'PM10 > 90% Alert': PM10 (51.4 µg/m3) at Stn 7B/C: North Camp for 2020-10-13 10:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	E	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 7B/C: North Camp: 'PM10 Alert'2020-10-03 11:00 MST! IN Alert PM10 (50.1 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3. Calcium was applied for dust control on October 6th	Dominant wind direction from the E up to 2 m/s. The dominant wind direction contributing to the event was from the SSW.
As above	10/13/2020 10:00	IN Alert 'PM10 Alert': PM10 (51.4 µg/m3) at Stn 7B/C: North Camp for 2020-10-13 10:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/14/2020 8:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/14/2020 9:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



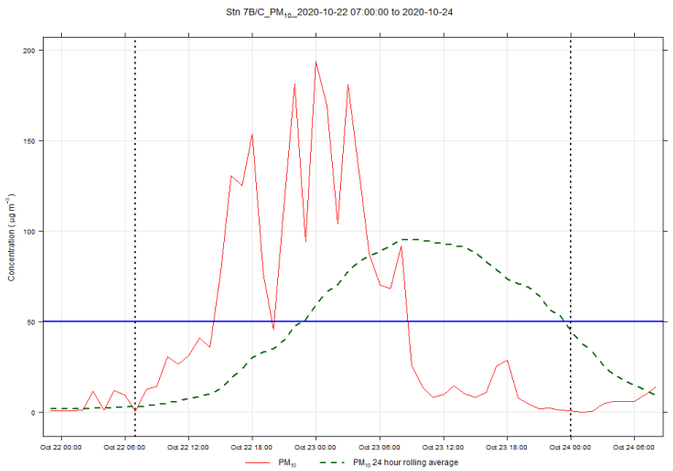


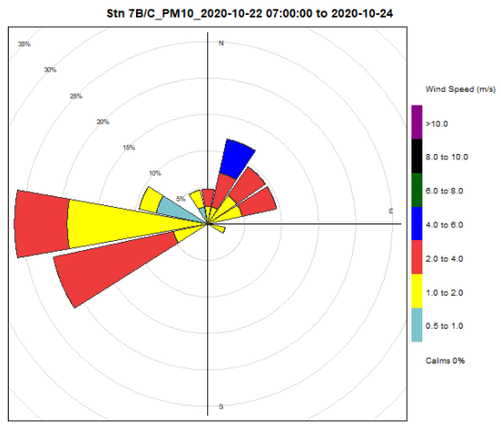


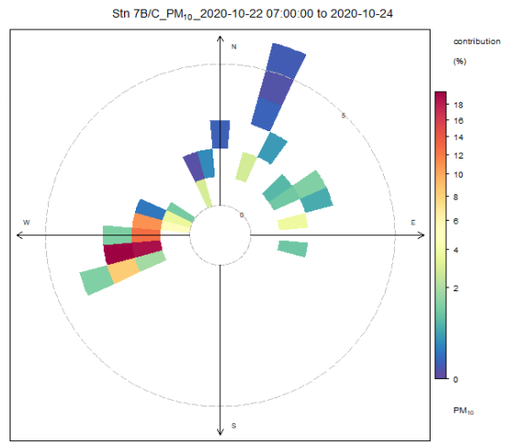
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
244	10/22/2020 22:00	IN Alert 'PM10 > 90% Alert': PM10 (47.2 µg/m3) at Stn 7B/C: North Camp for 2020-10-22 22:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	W	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were 2 RWDI air quality notifications for the week of October 18 - 24, 2020. Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-10-22 22:00 MST! IN Alert PM10 (47.2 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM10 Alert' 2020-10-22 23:00 MST! IN Alert PM10 (51.1 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction from the W through WSW up to 4 m/s.
As above	10/22/2020 23:00	IN Alert 'PM10 Alert': PM10 (51.1 µg/m3) at Stn 7B/C: North Camp for 2020-10-22 23:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/24/2020 0:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/24/2020 0:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



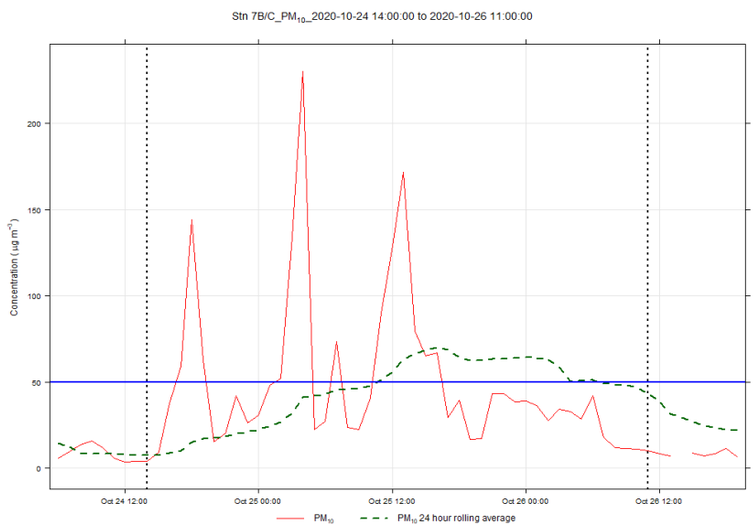


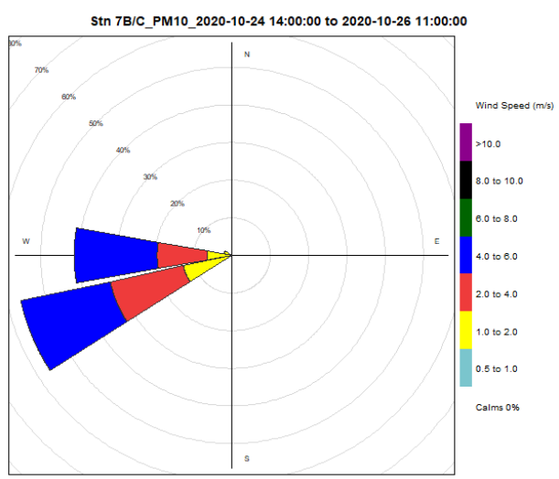


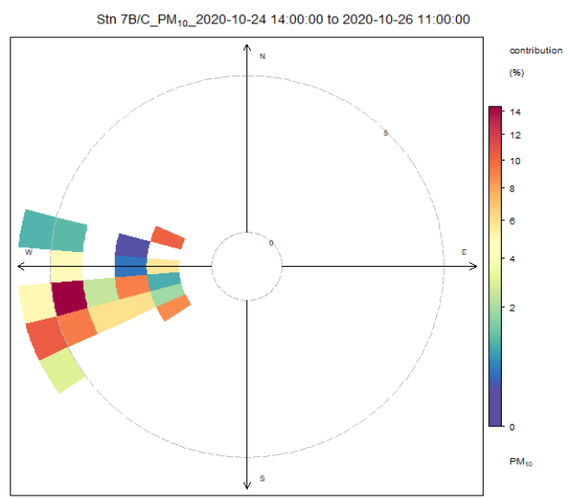
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
245	10/25/2020 7:00	IN Alert 'PM10 > 90% Alert': PM10 (45.7 µg/m3) at Stn 7B/C: North Camp for 2020-10-25 07:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	WSW	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There was one RWDI air quality notifications for the week of October 25 – 31, 2020. Stn 12: Hudson's Hope: 'PM10 > 90% Alert' 2020-10-28 02:00 MST! IN Alert PM10 (46 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3).	The dominant wind direction was WSW up to 6 m/s.
As above	10/25/2020 11:00	IN Alert 'PM10 Alert': PM10 (51 µg/m3) at Stn 7B/C: North Camp for 2020-10-25 11:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/26/2020 6:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	10/26/2020 11:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



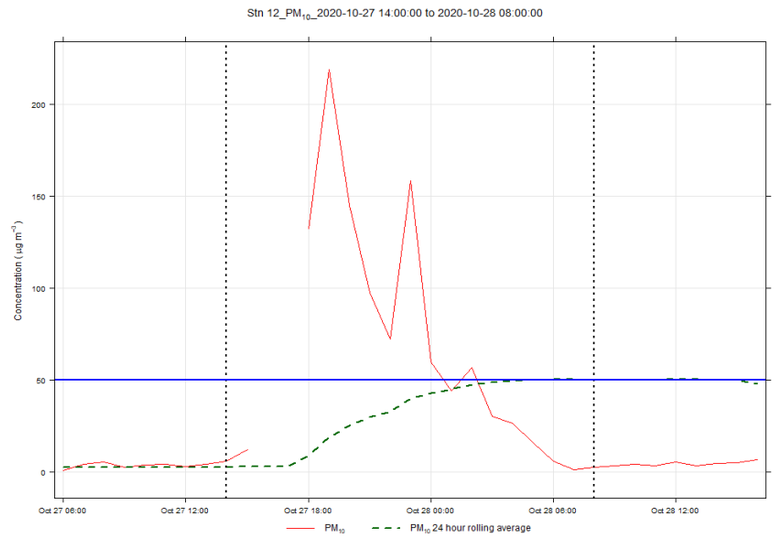


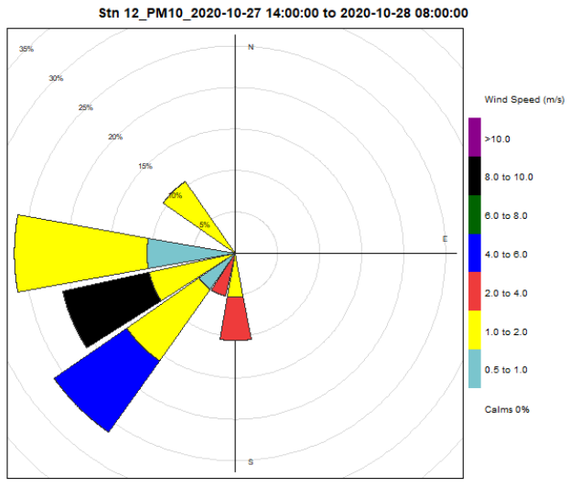


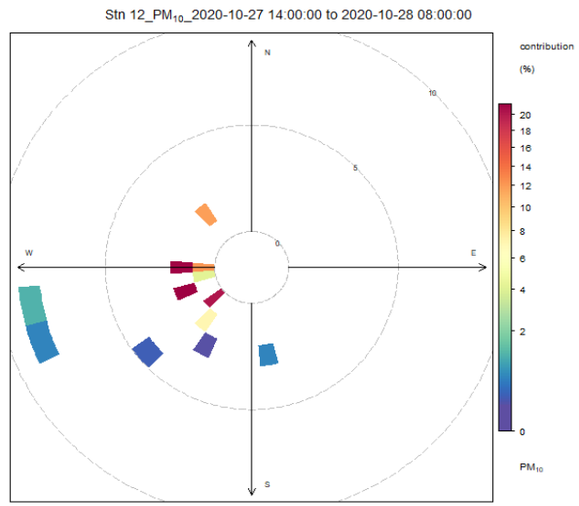
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
246	10/28/2020 2:00	IN Alert 'PM10 > 90% Alert': PM10 (46 µg/m3) at Stn 12: Hudson's Hope for 2020-10-28 02:00 MST.	IN	90	PM10	Station 12	N	NA	Y	W-SW	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There was one RWDI air quality notifications for the week of October 25 – 31, 2020. Stn 12: Hudson's Hope: 'PM10 > 90% Alert' 2020-10-28 02:00 MST! IN Alert PM10 (46 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3).	Dominant wind directions was from W through SW up to 10 m/s. The dominant wind direction contributing to the event included NW through SW.
As above	10/28/2020 18:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 12: Hudson's Hope are normal.	OUT	90	as above	as above	as above	as above	as above	as above	as above	as above







[1] Site Response provided by contractor, scope of contract as follows:

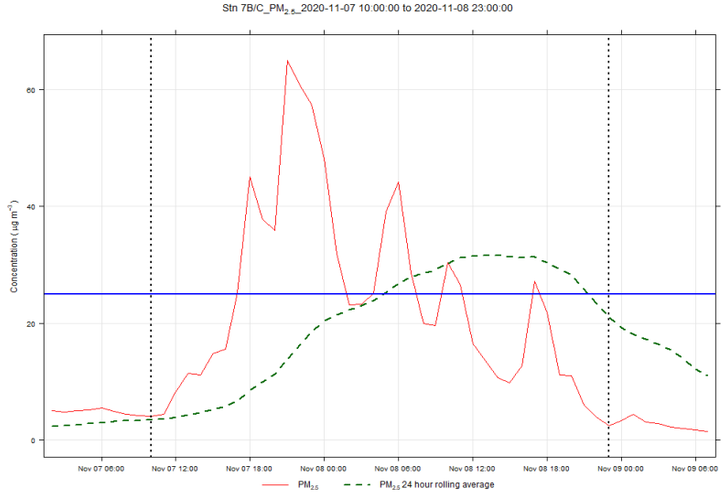
4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

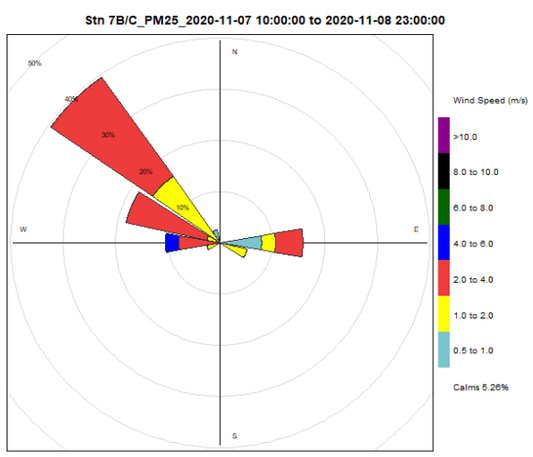
Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
247	11/2/2020 3:00	IN Alert 'NO2 Alert': NO2 (301 µg/m3) at Stn 12: Hudson's Hope for 2020-11-02 03:00 MST.	IN	100	PM10	Station 12	Y	Internal span time off due to seasonal time change	NA	NA	NA	
As above	11/2/2020 3:00	IN Alert 'NO2 > 90% Alert': NO2 (301 µg/m3) at Stn 12: Hudson's Hope for 2020-11-02 03:00 MST.	IN	90	As above	As above	As above	As above	As above	As above	As above	
As above	11/2/2020 4:00	OUT Alert 'NO2 Alert': NO2 conditions at Stn 12: Hudson's Hope are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	
As above	11/2/2020 4:00	OUT Alert 'NO2 > 90% Alert': NO2 conditions at Stn 12: Hudson's Hope are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	

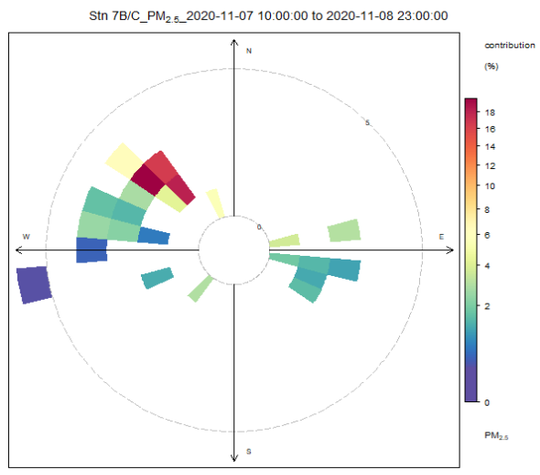
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
248	11/8/2020 3:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (23 µg/m3) at Stn 7B/C: North Camp for 2020-11-08 03:00 MST.	IN	90	PM2.5	Station 7B/C	N	NA	Y	NW	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were two RWDI air quality notifications for the week of November 08 - 14, 2020. Stn 7B/C: North Camp: 'PM2.5 > 90% Alert' 2020-11-08 03:00 MST ! IN Alert PM2.5 (23 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 7B/C: North Camp: 'PM2.5 Alert' 2020-11-08 05:00 MST ! IN Alert PM2.5 (25.2 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	The dominant wind direction was NW up to 4 m/s
As above	11/8/2020 5:00	IN Alert 'PM2.5 Alert': PM2.5 (25.2 µg/m3) at Stn 7B/C: North Camp for 2020-11-08 05:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	11/8/2020 22:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	11/8/2020 23:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



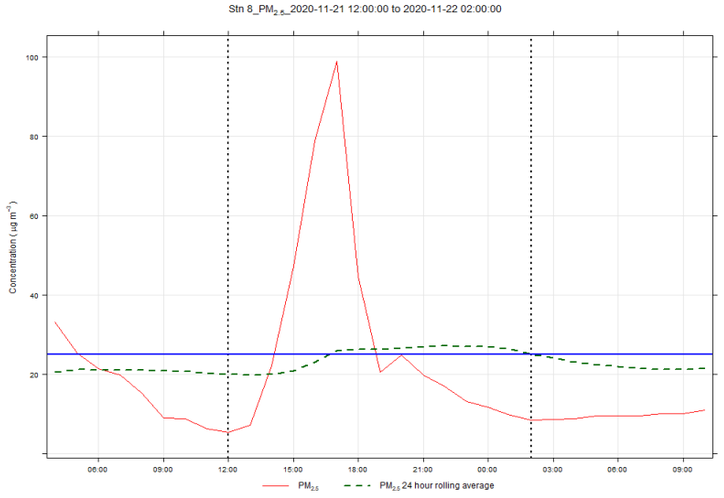


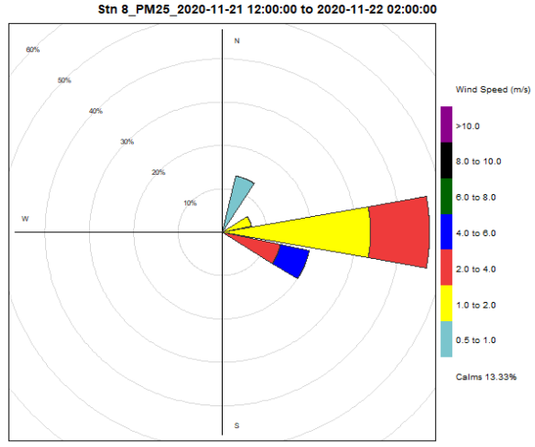


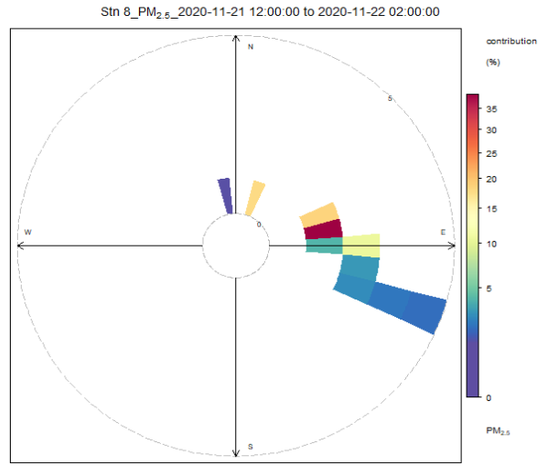
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
249	11/21/2020 16:11	IN Alert 'PM2.5 > 90% Alert': PM2.5 (23 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-11-21 16:00 MST.	IN	90	PM2.5	Station 8	N	NA	Y	E	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. There were two RWDI air quality notifications for the week of November 15 - 21, 2020. Stn 8: Fort St. John Old Fort : 'PM2.5 > 90% Alert' 2020-11-21 16:00 MST ! IN Alert PM2.5 (23 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 8: Fort St. John Old Fort : 'PM2.5 Alert' 2020-11-21 17:00 MST ! IN Alert PM2.5 (25.8 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	Dominant wind direction from the E up to 4 m/s. Major contributing PM 2.5 wind directions were from ENE through NNE.
As above	11/21/2020 17:00	IN Alert 'PM2.5 Alert': PM2.5 (25.8 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-11-21 17:00 MST.	As above	As above	As above	As above	As above	As above	As above	As above	As above	As above
As above	11/22/2020 2:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	As above	As above	As above	As above	As above	As above	As above	As above	As above	As above
As above	11/22/2020 5:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	As above	As above	As above	As above	As above	As above	As above	As above	As above	As above



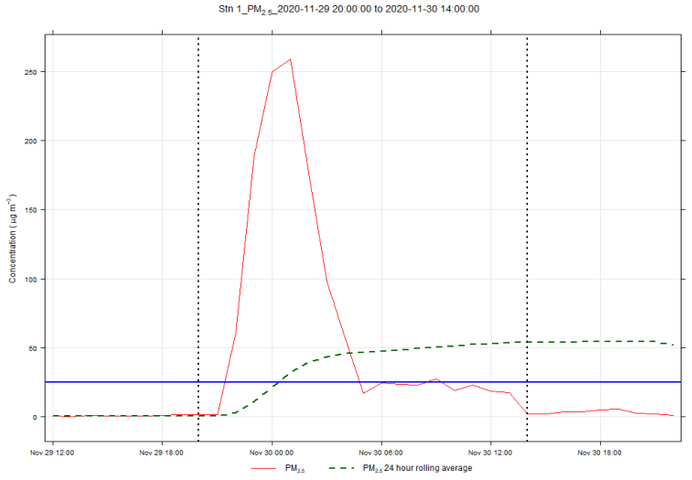


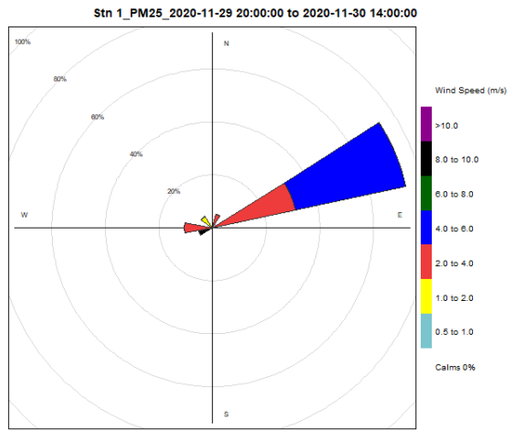


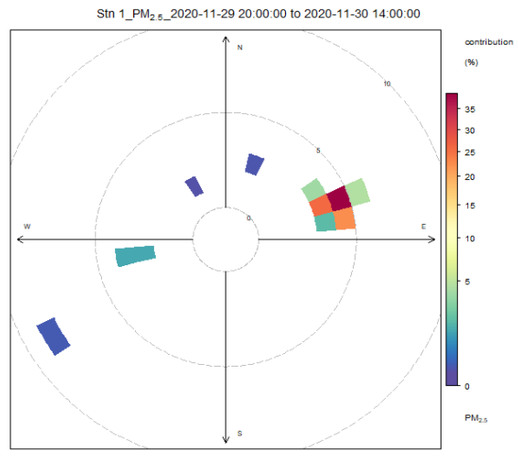
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
250	11/30/2020 1:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (32.2 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-11-30 01:00 MST.	IN	90	PM2.5	Station 1	N	NA	Y	ENE	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 1: Peace Valley Attachie Flat Upper Terrace : 'PM2.5 > 90% Alert' 2020-11-30 01:00 MST ! IN Alert PM2.5 (32.2 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 1: Peace Valley Attachie Flat Upper Terrace : 'PM2.5 Alert' 2020-11-30 01:00 MST ! IN Alert PM2.5 (32.2 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	Dominant wind was ENE up to 6 m/s.
As above	2020-11-30: 01:00	IN Alert 'PM2.5 Alert': PM2.5 (32.2 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-11-30 01:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/1/2020 1:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/1/2020 2:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



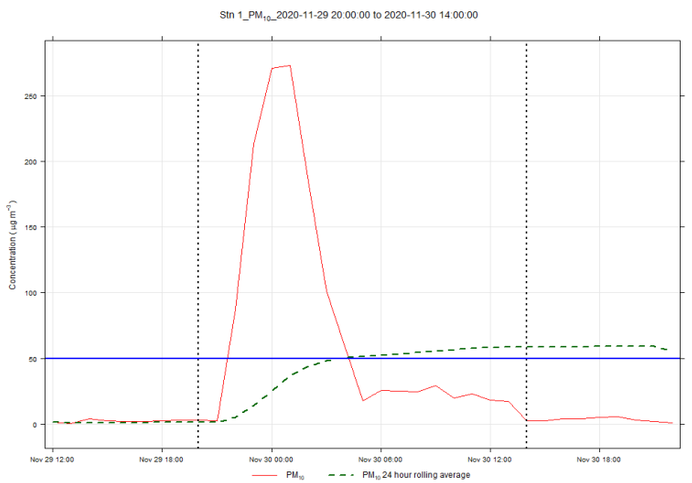


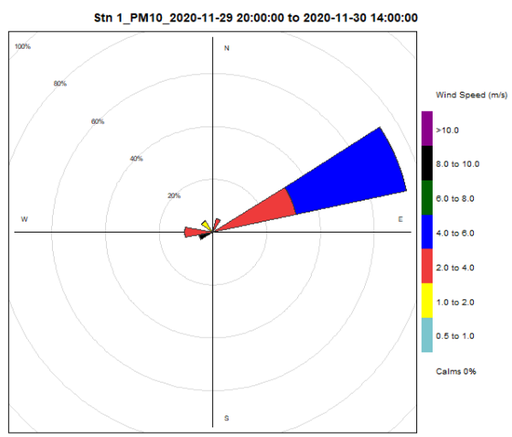


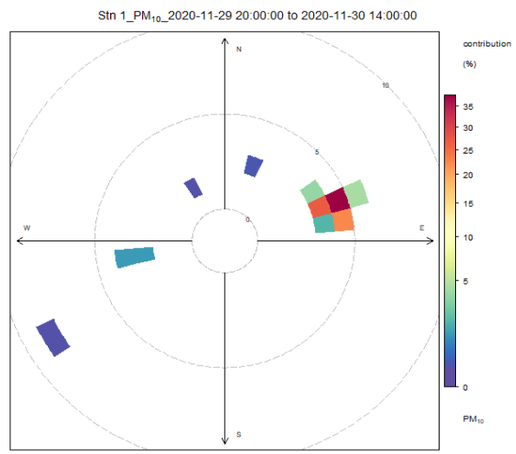
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
251	11/30/2020 3:00	IN Alert 'PM10 > 90% Alert': PM10 (48.5 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-11-30 03:00 MST.	IN	90	PM10	Station 1	N	N	Y	ENE	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 1: Peace Valley Attachie Flat Upper Terrace : 'PM10 > 90% Alert' 2020-11-30 03:00 MST ! IN Alert PM10 (48.5 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 1: Peace Valley Attachie Flat Upper Terrace : 'PM10 Alert' 2020-11-30 04:00 MST ! IN Alert PM10 (50.9 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Dominant wind direction was ENE up to 6 m/s.
As above	11/30/2020 4:00	IN Alert 'PM10 Alert': PM10 (50.9 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-11-30 04:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	11/30/2020 23:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/1/2020 0:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



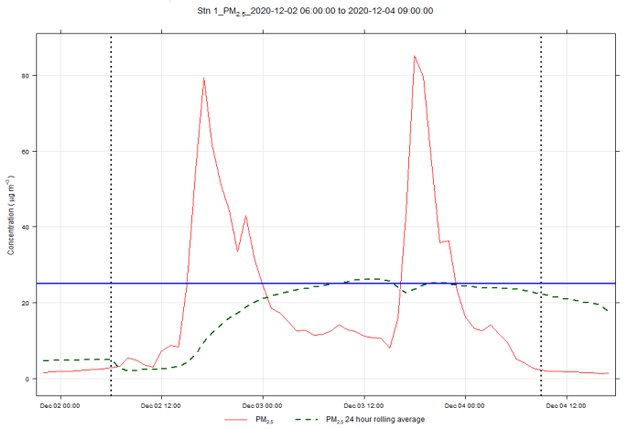


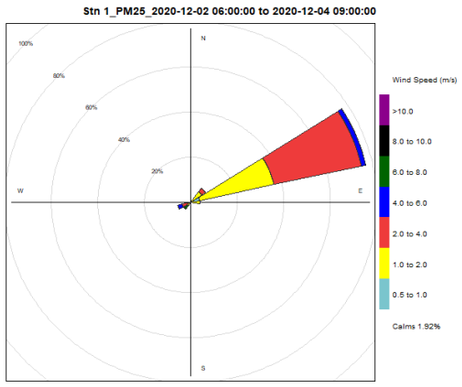


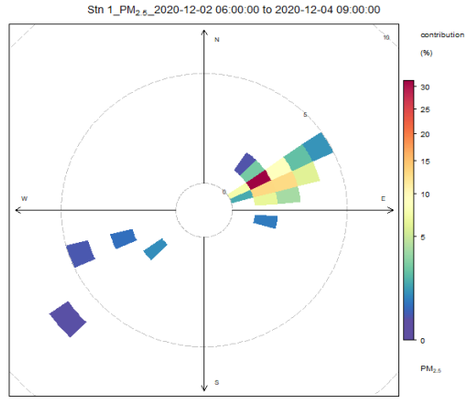
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
252	12/3/2020 3:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (23 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-12-03 03:00 MST.	IN	90	PM2.5	Station 1	N	NA	Y	ENE	**PRHP**: For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazardsStn 1: Peace Valley Attachie Flat Upper Terrace : 'PM2.5 > 90% Alert' 2020-12-03 03:00 MST ! IN Alert PM2.5 (23 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 1: Peace Valley Attachie Flat Upper Terrace : 'PM2.5 Alert' 2020-12-03 09:00 MST ! IN Alert PM2.5 (25.2 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3. Stn 1: Peace Valley Attachie Flat Upper Terrace : 'PM2.5 Alert 2020-12-03 20:00 MST ! IN Alert PM2.5 (25.3 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	Dominant wind direction from the ENE up to 6 m/s.
As above	12/3/2020 9:00	IN Alert 'PM2.5 Alert': PM2.5 (25.2 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-12-03 09:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/3/2020 16:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/3/2020 20:00	IN Alert 'PM2.5 Alert': PM2.5 (25.3 µg/m3) at Stn 1: Peace Valley Attachie Flat Upper Terrace for 2020-12-03 20:00 MST	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/3/2020 23:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/4/2020 9:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 1: Peace Valley Attachie Flat Upper Terrace are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



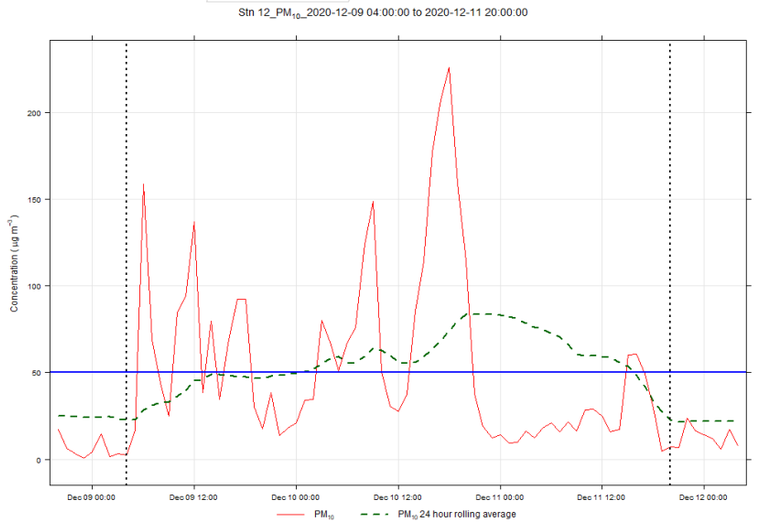


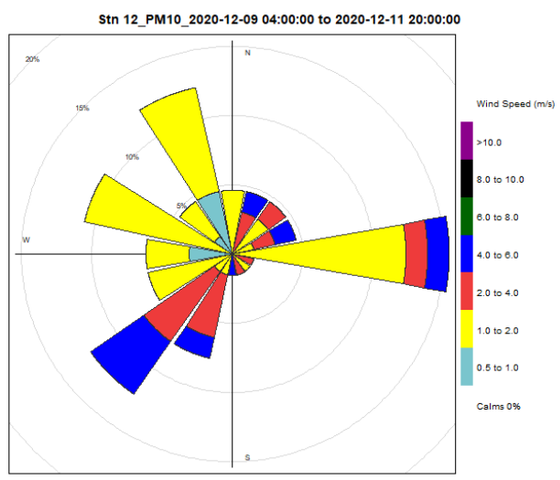


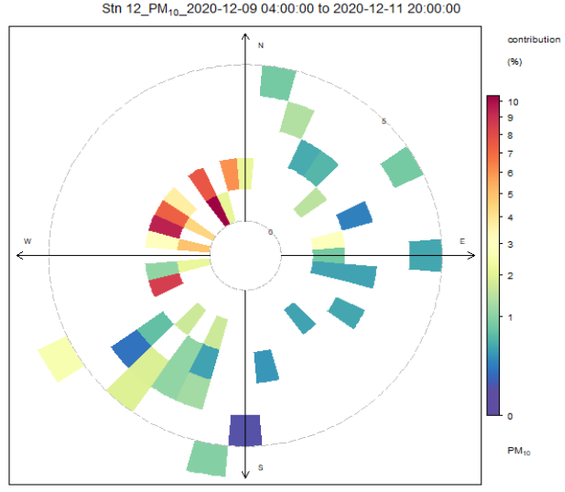
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
253	12/9/2020 13:00	IN Alert 'PM10 > 90% Alert': PM10 (45.4 µg/m3) at Stn 12: Hudson's Hope for 2020-12-09 13:00 MST.	IN	90	PM10	Station 12	N	NA	y	SSW-NNW	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazardsStn 12: Hudson's Hope: 'PM10 > 90% Alert 2020-12-09 13:00 MST ! IN Alert PM10 (45.4 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 12: Hudson's Hope: 'PM10 Alert' 2020-12-10 02:00 MST ! IN Alert PM10 (50.6 µg/m3) conditions have triggered the 'PM10 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 50 ug/m3.	Variable wind direction was from the E, WSW through NNW up to 6 m/s. Largest contrution to PM10 was from the WSW and NW quadrant
As above	12/10/2020 2:00	IN Alert 'PM10 Alert': PM10 (50.6 µg/m3) at Stn 12: Hudson's Hope for 2020-12-10 02:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/11/2020 17:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 12: Hudson's Hope are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/11/2020 18:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 12: Hudson's Hope are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



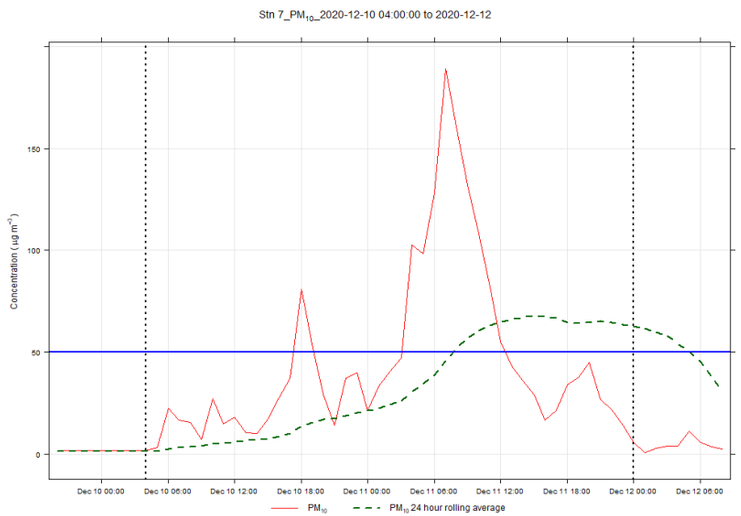


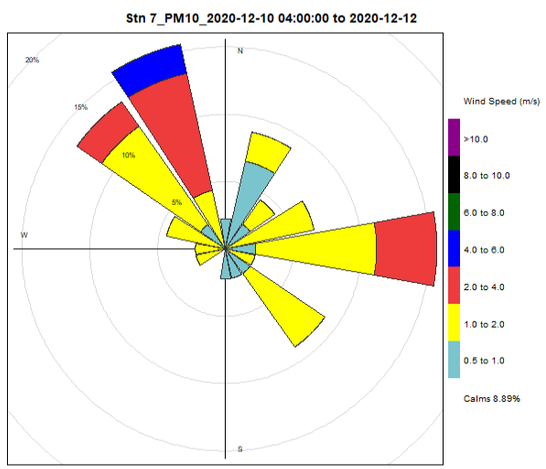


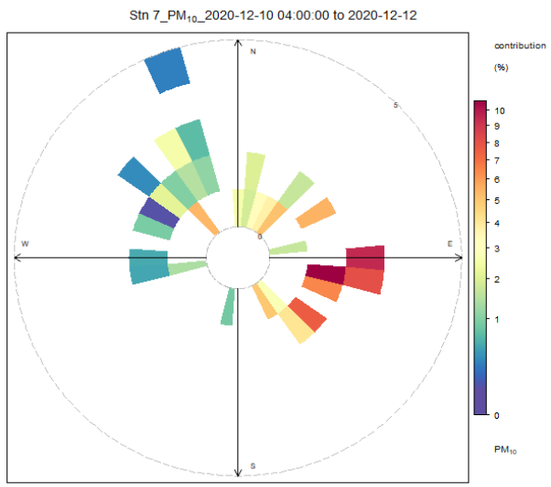
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
254	12/11/2020 7:00	IN Alert 'PM10 > 90% Alert': PM10 (45.9 µg/m3) at Stn 7B/C: North Camp for 2020-12-11 07:00 MST.	IN	90	PM10	Station 7B/C	N	NA	Y	NNW-E	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards.Stn 7B/C: North Camp: 'PM10 > 90% Alert' 2020-12-11 07:00 MST ! IN Alert PM10 (45.9 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 7B/C: North Camp: 'PM2.5 > 90% Alert 2020-12-11 08:00 MST ! IN Alert PM2.5 (24.9 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3).	Wind directions were from the NW quadrant and E up to 6 m/s. The dominant wind direction contributing to the PM10 was from the E through ESE
As above	12/11/2020 8:00	IN Alert 'PM10 Alert': PM10 (51.9 µg/m3) at Stn 7B/C: North Camp for 2020-12-11 08:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 6:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 7:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



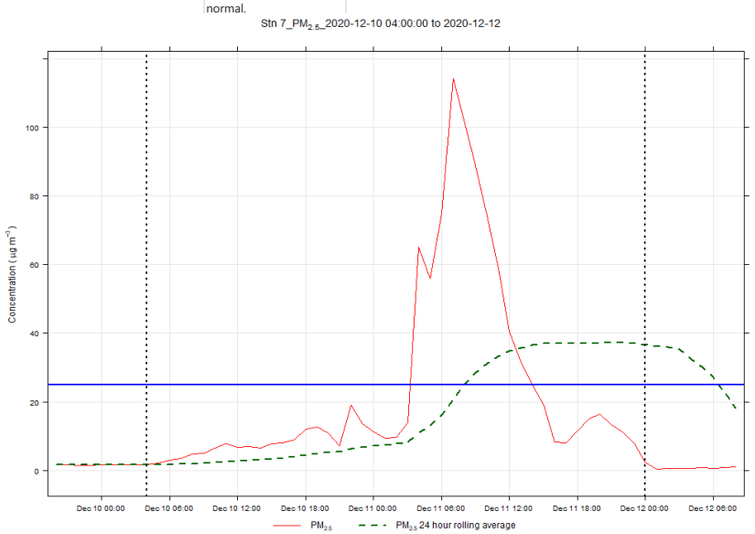


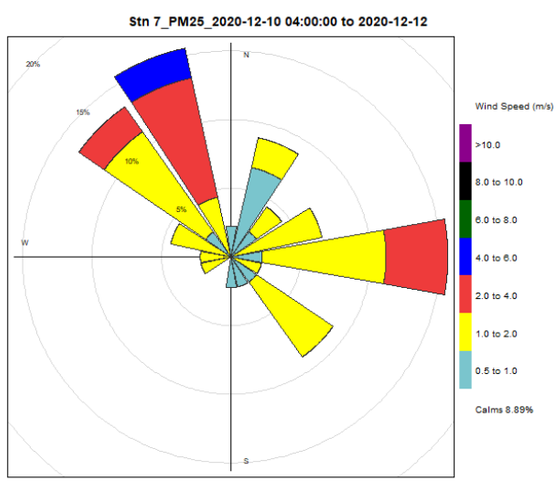


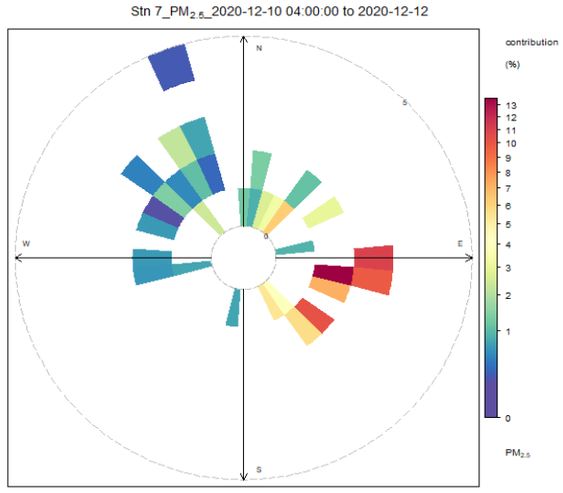
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
255	12/11/2020 8:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (24.9 µg/m3) at Stn 7B/C: North Camp for 2020-12-11 08:00 MST.	IN	90	PM2.5	Station 7B/C	N	NA	Y	E	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards: PM2.5 (28.4 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3. Stn 8: Fort St. John Old Fort : 'PM2.5 > 90% Alert' 2020-12-11 09:00 MST ! IN Alert PM2.5 (24 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3).	Wind directions were from the NW through NNW and E up to 6 m/s. The dominant wind direction contributing to the PM10 was from the E through SE.
As above	12/11/2020 9:00	IN Alert 'PM2.5 Alert': PM2.5 (28.4 µg/m3) at Stn 7B/C: North Camp for 2020-12-11 09:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 7:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 7B/C: North Camp are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 7:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 7B/C: North Camp are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



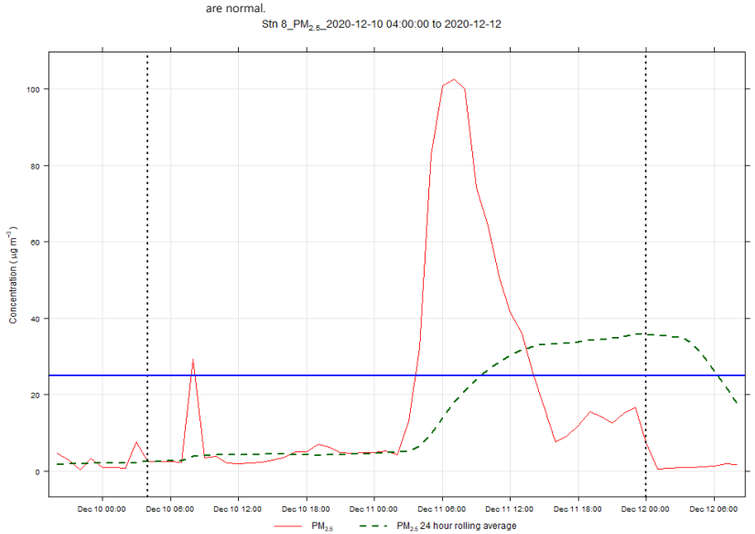


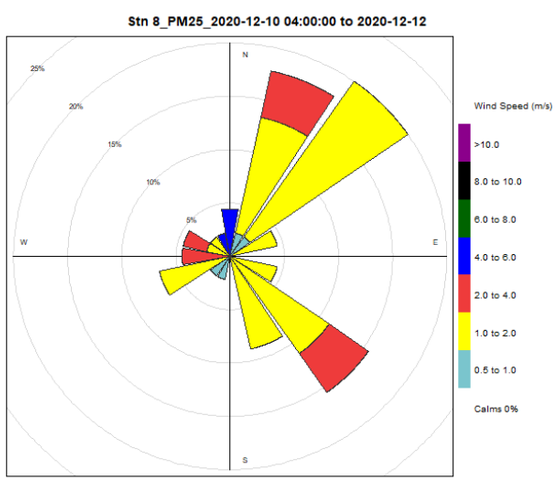


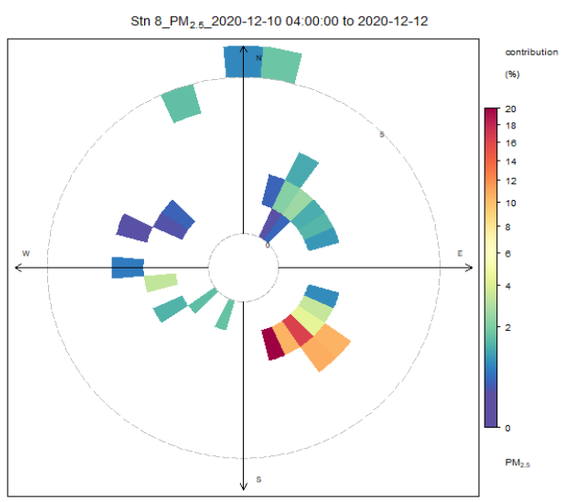
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
256	12/11/2020 9:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (24 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-12-11 09:00 MST.	IN	90	PM2.5	Station 8	N	NA	Y	SE	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazardsStn 9: Fort St. John 85th Ave : 'PM10 > 90% Alert' 2020-12-11 09:00 MST ! IN Alert PM10 (47.4 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 8: Fort St. John Old Fort : 'PM2.5 Alert' 2020-12-11 10:00 MST ! IN Alert PM2.5 (26.5 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	Wind directions were from the NNE and SE up to 4 m/s. The SE quadrant contributed most to the PM2.5 signal.
As above	12/11/2020 10:00	IN Alert 'PM2.5 Alert': PM2.5 (26.5 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-12-11 10:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 7:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 7:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



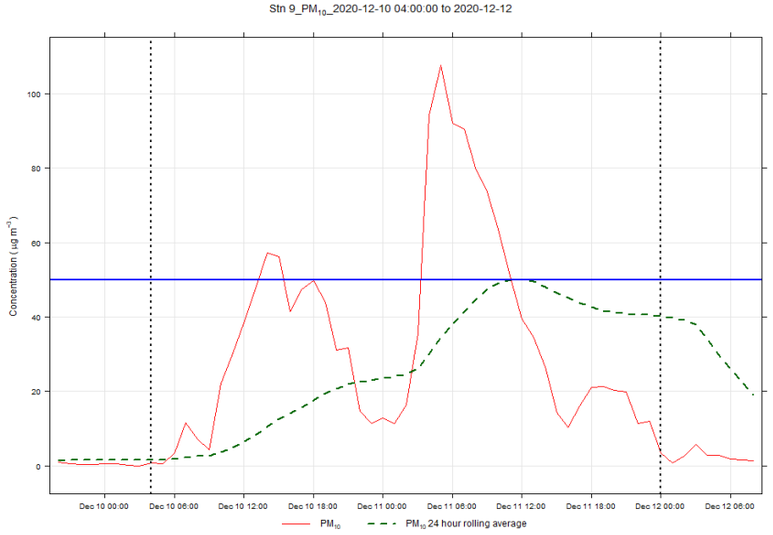


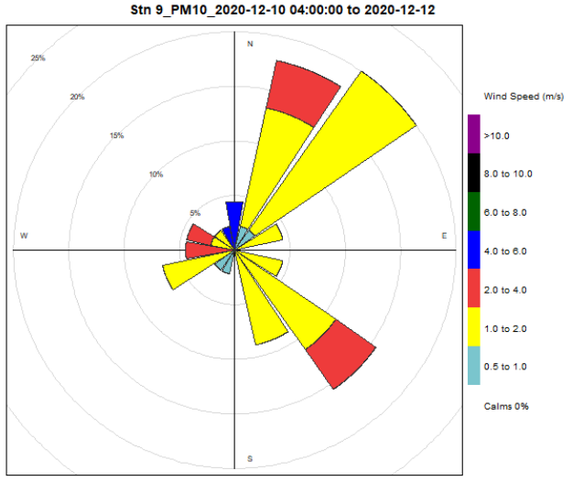


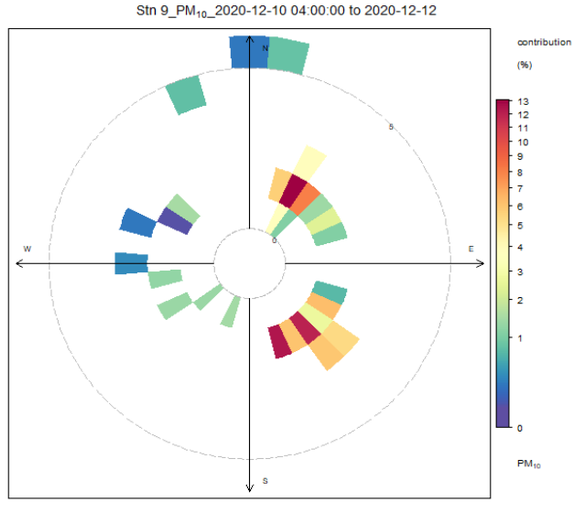
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
257	12/11/2020 9:00	IN Alert 'PM10 > 90% Alert': PM10 (47.4 µg/m3) at Stn 9: Fort St. John 85th Ave for 2020-12-11 09:00 MST.	IN	90	PM10	Station 9	N	NA	N	NNE-SE	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards.Stn 9: Fort St. John 85th Ave : 'PM10 > 90% Alert' 2020-12-11 09:00 MST ! IN Alert PM10 (47.4 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3).	Dominant wind direction contributing to the PM10 signal was from both the NE and SE quadrants with wind speed up to 4 m/s.
As above	12/11/2020 17:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 9: Fort St. John 85th Ave are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



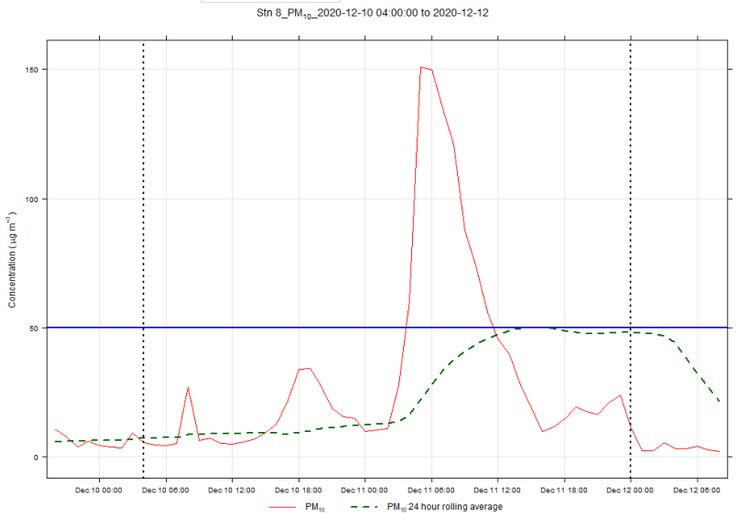


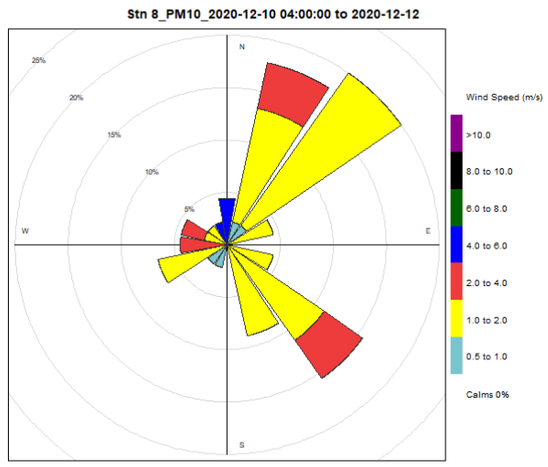


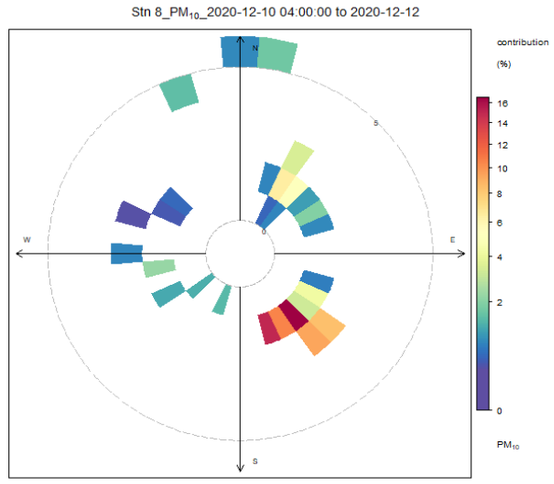
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
258	12/11/2020 11:00	IN Alert 'PM10 > 90% Alert': PM10 (45.8 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-12-11 11:00 MST.	IN	90	PM10	Station 8	N	NA	N	NE-SE	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazardsStn 8: Fort St. John Old Fort : 'PM10 > 90% Alert 2020-12-11 11:00 MST ! IN Alert PM10 (45.8 µg/m3) conditions have triggered the 'PM10 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM10 concentrations has exceeded and remains greater than 45 ug/m3 (90% of the BC 24-hour air quality objective of 50 ug/m3). Stn 9: Fort St. John 85th Ave : 'PM2.5 > 90% Alert' 2020-12-11 11:00 MST ! IN Alert PM2.5 (23 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal.	Wind direction was from both the NE and SE quadrants with wind speed up to 4 m/s. The dominant wind direction contributing to the PM10 signal was from the SE quadrant
As above	12/11/2020 15:00	IN Alert 'PM10 Alert': PM10 (50.2 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-12-11 15:00 MST.	IN	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/11/2020 17:00	OUT Alert 'PM10 Alert': PM10 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 4:00	OUT Alert 'PM10 > 90% Alert': PM10 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



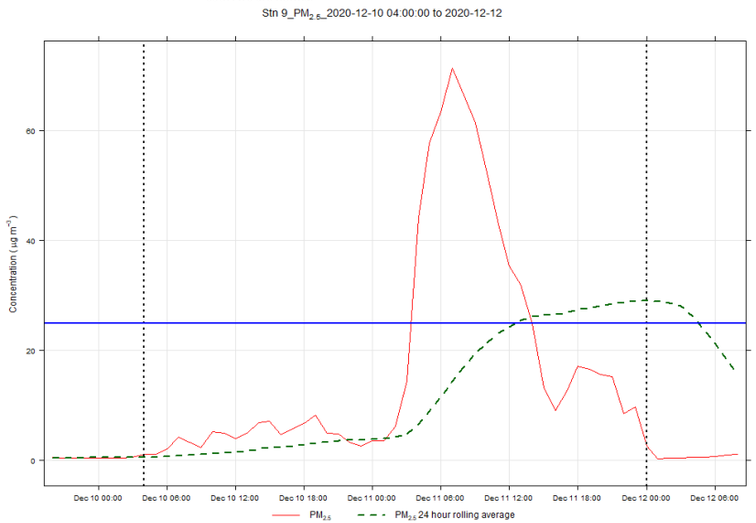


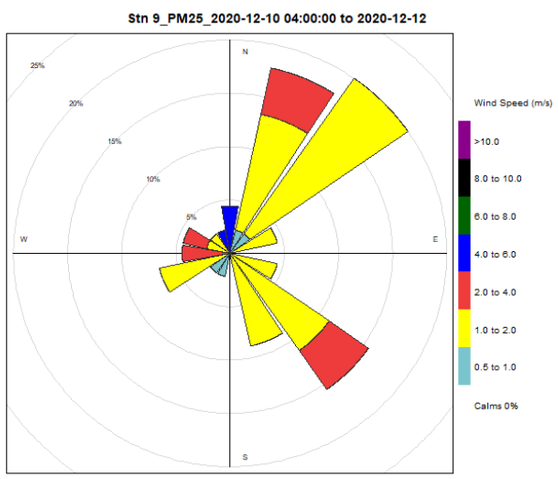


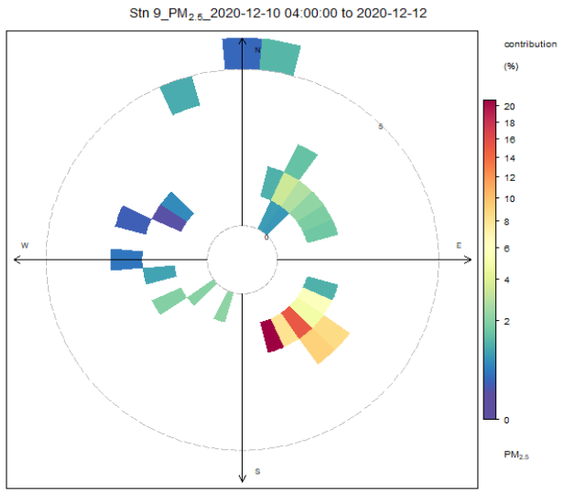
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
259	2020-12-11:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (23 µg/m3) at Stn 9: Fort St. John 85th Ave for 2020-12-11 11:00 MST.	IN	90	PM2.5	Station 9	N	NA	Y	SE	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazards. Stn 9: Fort St. John 85th Ave : 'PM2.5 > 90% Alert' 2020-12-11 11:00 MST ! IN Alert PM2.5 (23 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3). Stn 9: Fort St. John 85th Ave : 'PM2.5 Alert' 2020-12-11 13:00 MST! IN Alert PM2.5 (25.4 µg/m3) conditions have triggered the 'PM2.5 Alert' alert. An OUT alert will be sent when conditions return to normal.The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than the BC 24-hour air quality objective of 25 ug/m3.	Variable wind direction was from both the NNE and SE with wind speed up to 4 m/s. The dominant wind direction contributing to the PM2.5 signal was from the SE quadrant
As above	12/11/2020 13:00	IN Alert 'PM2.5 Alert': PM2.5 (25.4 µg/m3) at Stn 9: Fort St. John 85th Ave for 2020-12-11 13:00 MST.	IN	10	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 5:00	OUT Alert 'PM2.5 Alert': PM2.5 conditions at Stn 9: Fort St. John 85th Ave are normal.	OUT	100	As above	As above	As above	As above	As above	As above	As above	As above
As above	12/12/2020 6:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 9: Fort St. John 85th Ave are normal	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above



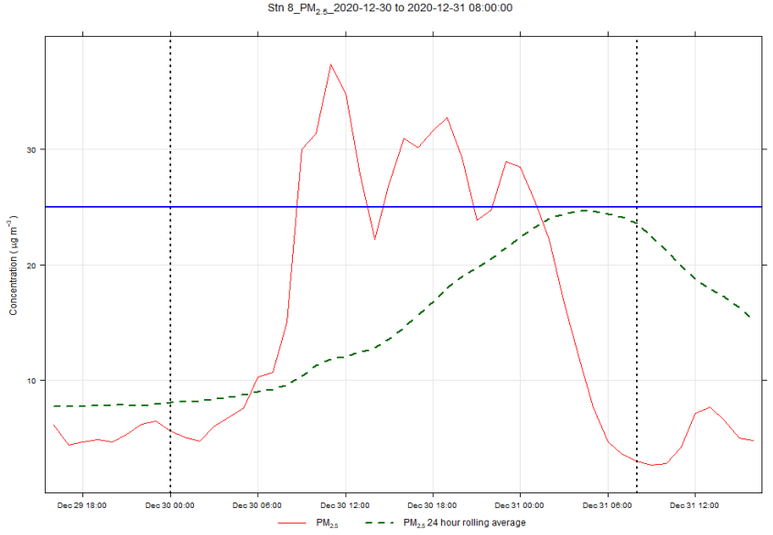


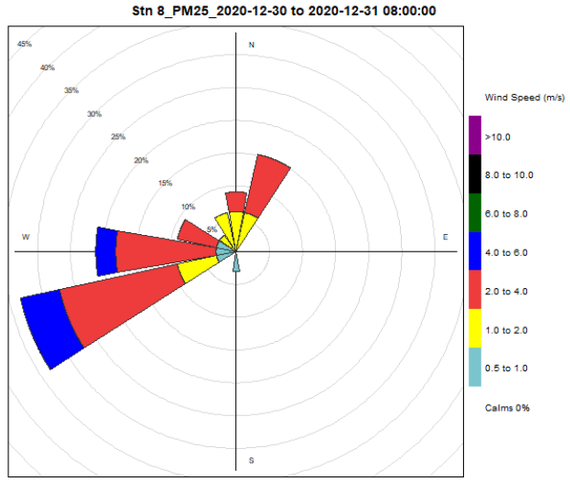


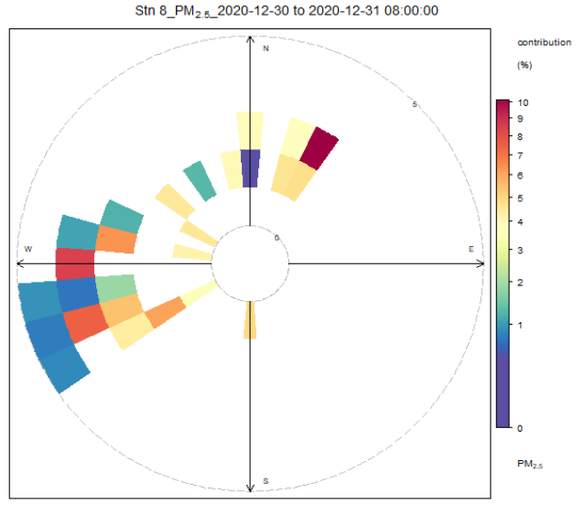
[1] Site Response provided by contractor, scope of contract as follows:

4Evergreen = reservoir clearing
Allteck: transmission line construction
AFDE = Aecon, Flatiron, Dragados, and EBC: Generating Station and Spillways Civil Works
PRHP = Peace River Hydro Partners: Main Civil Works
M & M = construction services for fish habitat mitigation
IDL = joint use warehouse construction
Duz Cho = building demolition services
HRIDL LP = Halfway River general contractor
Pathfinder = Pathfinder Endeavours Ltd

Event number (serial)	Date / Time Alert issued	Alert text	IN / OUT	90% / 100%	Contaminant	Station Name	Instrumental Error (Y/N)	Reason for Instrumental Error	Did a measured Exceedance / excursion occur?	Dominant wind direction during event	BC Hydro (BCH) or Contractor Response	Comment regarding current conditions / observations
260	12/31/2020 1:00	IN Alert 'PM2.5 > 90% Alert': PM2.5 (23.3 µg/m3) at Stn 8: Fort St. John Old Fort for 2020-12-31 01:00 MST.	IN	90	PM2.5	Station 8	N	NA	N	WSW	**PRHP**:For the purposes of fugitive dust emissions from construction and production activities, the business unit performing those activities will self-manage and is ultimately responsible for controlling and protecting workers from those associated hazards, whether that be the installation of sprinkler systems or calling upon water truck support. The PRHP QHSE Department will continue to support each business unit in their efforts to mitigate dust hazardsStn 8: Fort St. John Old Fort : 'PM2.5 > 90% Alert' 2020-12-31 01:00 MST ! IN Alert PM2.5 (23.3 µg/m3) conditions have triggered the 'PM2.5 > 90% Alert' alert. An OUT alert will be sent when conditions return to normal. The 24-hour rolling average of PM2.5 concentrations has exceeded and remains greater than 22.5 ug/m3 (90% of the BC 24-hour air quality objective of 25 ug/m3).	Dominant wind directions contributing to the PM2.5 signal came from the WSW and NNE with wind speeds up to 6 m/s.
As above	12/31/2020 9:00	OUT Alert 'PM2.5 > 90% Alert': PM2.5 conditions at Stn 8: Fort St. John Old Fort are normal.	OUT	90	As above	As above	As above	As above	As above	As above	As above	As above







APPENDIX E

EXAMPLES OF DUST SUPPRESSION WITH CALCIUM CHLORIDE ROADWAY APPLICATION, HYDRO-SEEDING AND SPIN BROADCAST

627600 628200 628800 629400 630000 630600 631200 631800 632400 633000 633600 634200 634800

6231000 6230300 6229600 6228900 6228200 6227500 6226800 6226100 6225400

RSEM R5a
RSEM L5
RSEM 11
Gully Road
RSEM L3
Moberly Bridge
Left Bank Excavation
Left Bank Road
RSEM R5b
RSEM L6
River Road
Peace River
Memorial Bridge
Approach Channel
GSS Laydown
SBIAR
Right Bank Road

Site C Clean Energy Project

Dust Management
Calcium Chloride Application Areas
(July 22, 2020)

Legend

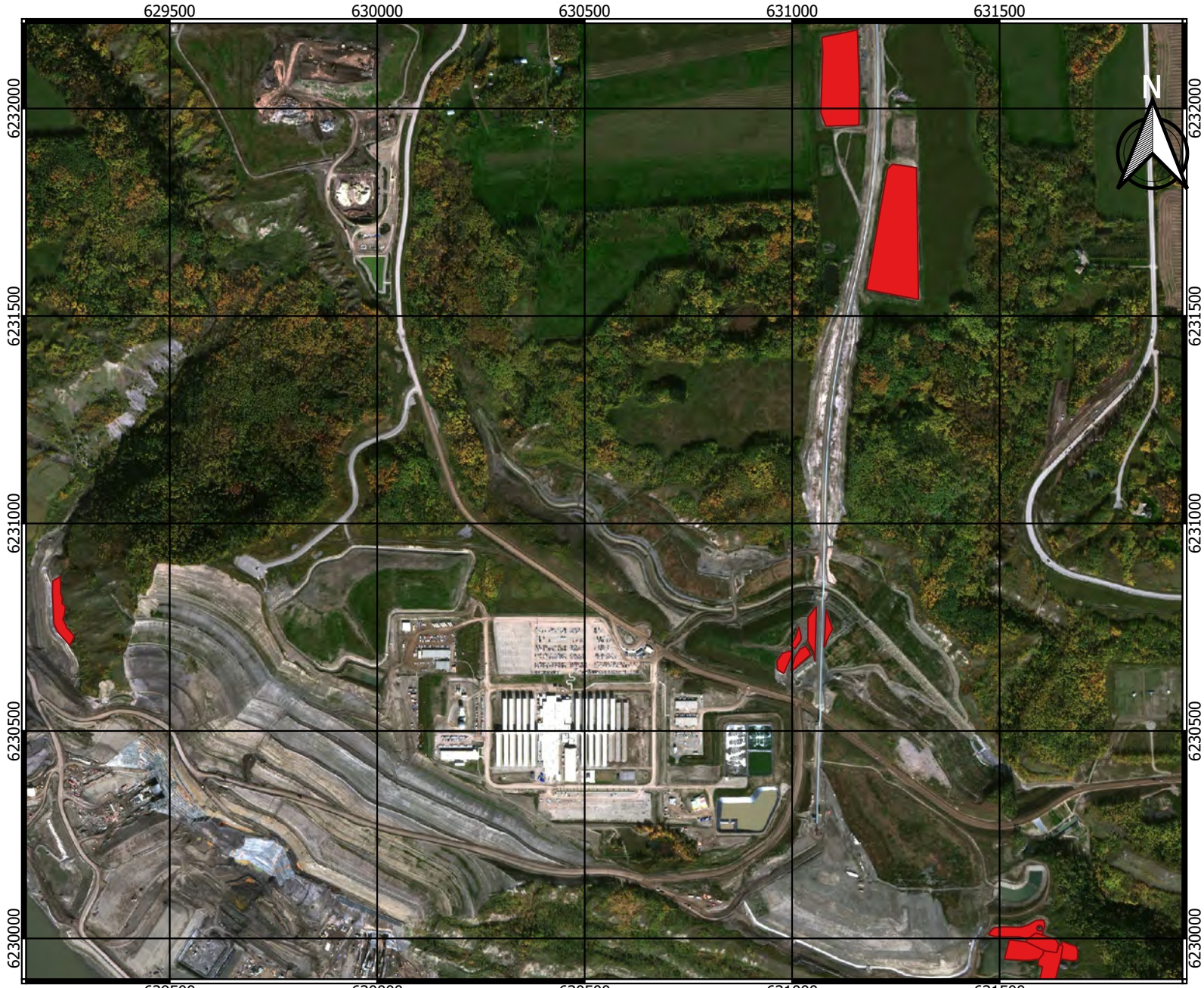
- Main Road
- Bridge
- Calcium Chloride Applicaton Areas
- Other Contractors Areas
- All Sites

Data Source: Photosat Image: October 14, 2020

Figure 1

PEACE RIVER HYDRO PARTNERS

Created By:	PRHP Environmental Dept.	Rev:
Datum:	NAD 83 Zone 10N	0
Date:	February 20, 2021	



Site C Clean Energy Project

Seeded Area Locations - Left Bank
(2020)

Legend

Spin Broadcast Area

Data Source: Photosat Image 2019-09-18

Figure 6-2

PEACE RIVER HYDRO PARTNERS

Created By: PRHP Environment Dept.
Datum: NAD 83 Zone 10
Date: December 8, 2020

Rev: 0

Site C Clean Energy Project

Seeded Area Locations - Right Bank
(2020)

Legend

Spin Broadcast Area

Data Source: Photosat Image 2019-09-18

Figure 6-3

PEACE RIVER HYDRO PARTNERS

Created By: PRHP Environment Dept. Datum: NAD 83 Zone 10 Date: December 8, 2020	Rev: 0

0 500 1000 1500 m

Site C Clean Energy Project

Seeded Area Locations - 85th Avenue
(2020)

Legend

Spin Broadcast Area

Data Source: Photosat Image 2019-09-18

Figure 6-4

PEACE RIVER HYDRO PARTNERS

Created By: PRHP Environment Dept.
Datum: NAD 83 Zone 10
Date: December 8, 2020

Rev: 0