Woodfibre LNG Air Quality Monitoring Station Report for February 2025

April 3, 2025

Prepared for:
Woodfibre LNG General Partner Inc.

Prepared by:
Stantec Consulting Ltd.

Project/File:
123222160

Stantec

Limitations and Sign-off

This document entitled Woodfibre LNG Air Quality Monitoring Station Report for February 2025 was prepared by Stantec Consulting Ltd. (“Stantec”) for the account of Woodfibre LNG General Partner Inc. (the “Client”) to support the Floatel Air Quality Monitoring and Mitigation Plan Rev. 6, July 5, 2024 for the Woodfibre LNG Project (the “Project”). In connection therewith, this document may be reviewed and used by the British Columbia Environmental Assessment Office (BC EAO) participating in the review process in the normal course of its duties. Except as set forth in the previous sentence, any reliance on this document by any other party or use of it for any other purpose is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The information and conclusions in the document are based on the conditions existing at the time the document was published and does not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by the Client or others, unless expressly stated otherwise in the document. Any use which another party makes of this document is the responsibility and risk of such party. Such party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other party as a result of decisions made or actions taken based on this document.

Prepared by: Digitally signed by Dr. Kashif I. Choudhry, P.Eng. Date: 2025.04.03 19:18:38 -06'00'
Signature

Dr. Kashif Choudhry, P.Eng. (BC, ON, and SK), Senior Atmospheric Engineer
Printed Name

Reviewed by: Digitally signed by Dan Jarratt Date: 2025.04.04 09:16:48 -07'00'
Signature

Dan Jarratt, EP, P.Eng. (AB, BC), Air Quality Technical Area Leader Canada
Printed Name

Approved by: Adriana MacLeod Digitally signed by Adriana MacLeod Date: 2025.04.04 09:22:26 -07'00'
Signature

Adriana MacLeod, B.Sc.
Printed Name

Executive Summary

This report provides a summary of the ambient air quality monitoring data for February 2025 that has been collected in fulfilment of the requirements established in the Floatel Air Quality Management and Monitoring Plan (Rev 6, July 5, 2024) (Woodfibre LNG 2024). Table E.1 below presents the monthly averages, ranges, and maximum values for key air contaminant concentrations measured during February 2025, along with additional information on any air quality exceedances and complaints received during this period. This report provides an overview of ambient air quality conditions and any regulatory compliance actions taken during February 2025.

Table E.1 February 2025 Air Quality Monitoring Station Summary

Air Contaminant		Units	Monthly Average	Monthly Range (Min - Max)
$PM_{2.5}$ (24-hour average)		µg/m³	5.7	3.0 - 9.5
PM_{10} (24-hour average)		µg/m³	16.2	8.5 - 53.0
TSP (24-hour average) [a]		µg/m³	26.2	15.1 - 48.5
NO_2 (24-hour average)		ppb	8.6	1.0 - 19.5
NO_2 (1-hour average)		ppb	8.5	0.0 - 37.5
SO_2	Feb 7, 2025 – Mar 3, 2025	ppb	<0.2 [b]	
VOC as Hexane			<0.7 [b]	
Number of Air Quality Exceedances Recorded			1	
Number of Complaints Received			None	

Notes:

[a] TSP monthly average concentration and range are based on valid measurements collected between February 1 and February 10, 2025.

[b] Concentrations below the Reported Detection Limit (RDL) are indicated with a '<' symbol.

Table of Contents

List of Tables

List of Figures

List of Appendices

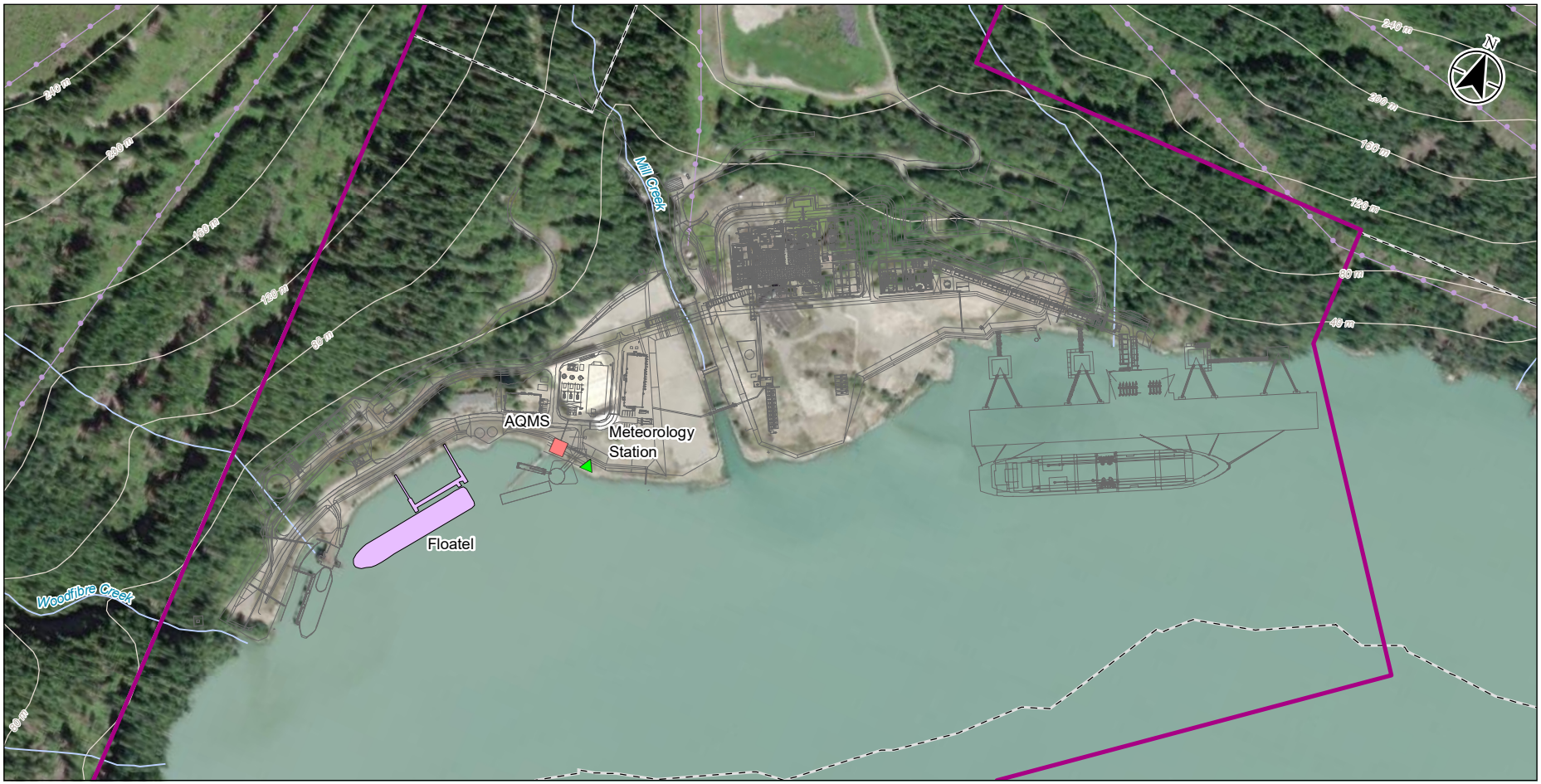
Acronyms / Abbreviations

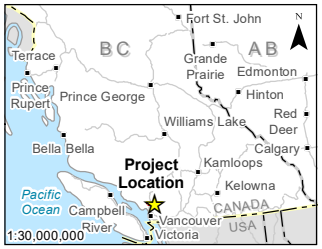
AGAT	AGAT Laboratories
AQMS	Air Quality Monitoring Station
AQO	British Columbia Air Quality Objective(s)
BC	British Columbia
BC ENV	British Columbia Ministry of Environment and Climate Change Strategy (2017–2024)
BC ENVP	British Columbia Ministry of Environment and Parks (2024–Present)
CAAQS	Canadian Ambient Air Quality Standard(s)
CCME	Canadian Council of Ministers of the Environment
EAO	British Columbia Environmental Assessment Office
Floatel	The marine-based work camp, associated facilities and mooring infrastructure dedicated to house approximately 650 Workers during the Construction and Operations of the Project
FAQMMP	Floatel Air Quality Monitoring and Mitigation Plan
FEM	Federal Equivalent Method
NO_2	Nitrogen Dioxide
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter (less than 2.5 microns (µm) in aerodynamic diameter)
PM_{10}	Particulate Matter (less than 10 microns (µm) in aerodynamic diameter)
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide
TSP	Total Suspended Particulate
UPS	Uninterruptable Power Supply
US EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
Woodfibre LNG	Woodfibre LNG General Partner Inc.

1 Introduction

Woodfibre LNG General Partner Inc. (Woodfibre LNG) is developing the Woodfibre Liquefied Natural Gas Project (the Project) at the former Woodfibre Pulp Mill site, approximately seven kilometres southwest of Skwxwú7mesh (Squamish), British Columbia (BC). To support onsite ambient air quality monitoring, Stantec Consulting Ltd. (“Stantec”) prepared the Floatel Air Quality Monitoring and Mitigation Plan (FAQMMP; Rev 6, July 5, 2024) on behalf of Woodfibre LNG (Woodfibre LNG 2024). The FAQMMP was developed to comply with Condition 30 of the Environmental Assessment Office (EAO) Amendment #3 (EAO 2023), which pertains specifically to Floatel air quality monitoring. The monitoring is intended to demonstrate compliance with ambient air quality standards and assists Woodfibre LNG in determining whether mitigation during the Project's construction phase is required. Further details regarding the purpose, duration, and compliance framework are available in the FAQMMP Rev 6 July 5, 2024 (Woodfibre LNG 2024). The air quality monitoring station (AQMS) continuously measures $PM_{2.5}$, PM_{10}, TSP, and NO_2 concentrations, along with passive sampling and analysis for SO_2 and VOCs. Data processing, quality assurance, and quality control (QA/QC) of the air quality monitoring equipment are performed, and the data presented in this monthly report is based on a Level 0 data validation as described by the British Columbia Field Sampling Manual – Part B (BC ENVP 2020, formerly British Columbia Ministry of Environment & Climate Change Strategy (BC ENV, 2017–2024); now Ministry of Environment & Parks (BC ENVP), 2024–present).

The location of the AQMS (UTM Easting 481,569 m and Northing 5,501,374 m, NAD83 datum, zone 10U) is adjacent to the existing meteorology station (UTM Easting 481,610 m and Northing 5,501,369 m, NAD83 datum, zone 10U) currently in operation at the Woodfibre LNG site as recommended in the FAQMMP. Figure 1.1 provides a map of the Woodfibre LNG site. This February 2025 monthly air quality report provides data on air quality and meteorology conditions monitored at the Woodfibre LNG Project site close to the Floatel. The monitoring and reporting support regulatory compliance. These monthly reports track ambient air quality trends, address potential issues, and help the Project meet project-specific and regulatory requirements.





Transmission Line
Topographic Contour
Watercourse
Municipal Boundary
Project Design Linework
Floatel
Certified Project Area
AQMS
Meteorology Station

0 50 100 150 200 250 m

1:7,500 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada
3. Orthoimagery: ESRI World Imagery

Stantec

Project Location:
Woodfibre, British Columbia

Project Number: 123222160
Prepared by JPOUCHER on 20250103
Requested by KCHUEN on 20250103
Checked by YMA on 20240828

Client/Project/Report

Woodfibre LNG

Figure No.
1.1

Title
Map of Woodfibre LNG Site

2 Key Components Assessed

Two key sets of measurements are reported: a) meteorology data, including ambient temperature, wind speed and direction, and total rainfall, and b) ambient concentrations of air contaminants measured at the AQMS.

2.1 Meteorology

Meteorology data supporting the Woodfibre LNG AQMS are acquired from the nearby Woodfibre LNG meteorology station. This meteorology data supports the long-term ambient air quality monitoring collected at the site. The meteorology variables measured at the station are listed in Table 2.1. While the table includes all measured parameters, this report explicitly presents data for wind, air temperature, and rainfall only, excluding pressure and relative humidity.

Table 2.1 Parameters Measured at the Woodfibre LNG Site Meteorology Station

Parameter	Units
Wind Speed	m/s
Wind Direction	Degrees
Air Temperature	°C
Rainfall	mm
Barometric Pressure	hPa
Relative Humidity	%

2.2 Air Contaminants of Interest

The air contaminants being measured are described below according to the type of monitoring.

2.2.1 Continuous Sampling

- Particulate matter with aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$)
- Particulate matter with aerodynamic diameter less than or equal to 10 microns (PM_{10})
- Total suspended particulate (TSP)
- Nitrogen dioxide (NO_2)

2.2.2 Passive Sampling

- Sulphur dioxide (SO_2)
- Volatile organic compounds (VOCs)

2.3 Air Quality Criteria

The air contaminants monitored at the AQMS, along with their corresponding Canadian Ambient Air Quality Standards (CAAQS) (CCME 2024) and British Columbia Air Quality Objectives (BCAQO) (BC ENVP 2021) regulatory criteria, are presented in Table 2.2 and Table 2.3, respectively.

Table 2.2 Summary of 2020 and 2025 Canadian Ambient Air Quality Standards for the Contaminants of Potential Concern

Substance	Averaging Period	Concentration [a]			
		($\mu g/m^3$) [b,c]		(ppbv) [d]	
		2020	2025	2020	2025
Nitrogen Dioxide (NO_2)	1-hour [e]	113	79	60	42
	Annual [f]	32	23	17.0	12.0
Sulphur Dioxide (SO_2)	1-hour [g]	183	170	70	65
	Annual [h]	13	10.4	5.0	4.0
Fine Particulate Matter ($PM_{2.5}$)	24-hour [i]	27	— [j]	—	—
	Annual [k]	8.8	— [j]	—	—

Notes:

[a] Canadian Ambient Air Quality Standards (CCME 2024) for 2020 and 2025.
[b] $\mu g/m^3$ is the mass of the substance in micrograms per cubic meter of air.
[c] Standard conditions of 25°C and 101.325 kPa are used to convert from $\mu g/m^3$ to ppbv.
[d] ppbv is the volume of the substance (parts) per billion volumes of air.
[e] The 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentration.
[f] The average over a single calendar year of all 1-hour average concentrations.
[g] The 3-year average of the annual 99th percentile of the daily maximum 1-hour average concentrations.
[h] The average over a single calendar year of all 1-hour average concentrations.
[i] The 3-year average of the annual 98th percentile of the daily 24-hour average concentrations.
[j] Currently under review by the CCME
[k] The 3-year average of the annual average of the daily 24-hour average concentrations.

Table 2.3 British Columbia Ambient Air Quality Objectives

Substance	Averaging Period	Air Quality Objective [a]	
		µg/m^3 [b,c]	ppbv [d]
Nitrogen Dioxide (NO_2)	1-hour [e]	113	60
	Annual [f]	32	17
Sulphur Dioxide (SO_2)	1-hour [g]	183	70
	Annual [h]	13	5
Fine Particulate Matter ($PM_{2.5}$)	24-hour [i]	25	—
	Annual [j]	8.0	—
Coarse Particulate Matter (PM_{10})	24-hour	50	—
Total Suspended Particulate (TSP)	24-hour	120	—
	Annual [k]	60	—

Notes:

[a] British Columbia Air Quality Objectives (BC ENVP 2021).
[b] µg/m^3 is the mass of the substance in micrograms per cubic meter of air.
[c] Standard conditions of 25°C and 101.325 kPa are used to convert from µg/m^3 to ppbv.
[d] ppbv is the volume of the substance (parts) per billion volumes of air.
[e] Achievement based on annual 98th percentile of daily 1-hour average maximum (D1HM), averaged over three consecutive years.
[f] Achievement based on annual average of 1-hour average concentrations over one year.
[g] Achievement based on annual 99th percentile of daily 1-hour average maximum (D1HM), averaged over three consecutive years.
[h] Achievement based on annual average of 1-hour concentrations over one year.
[i] Achievement based on annual 98th percentile of daily average, averaged over one year.
[j] Achievement based on annual average, averaged over one year.
[k] Based on geometric mean.

3 Instrument Summary

The AQMS is currently being operated to measure the ambient concentrations of the air contaminants mentioned above. A site visit took place between February 11 and 13, 2025. The following activities were undertaken during the site visit:

- Quarterly maintenance and calibration
- BAM TSP unit replacement, due to a malfunctioning display screen
- Uninterruptable power supply (UPS) installation to limit data loss due to power interruptions at the AQMS
- BAM $PM_{2.5}$ sampling time changed from 42 minutes to 50 minutes. As a result, the instrument has been operating as a non-designated method for $PM_{2.5}$ monitoring since February 11, 2025. The reason for this change is unknown.

Following the BAM TSP unit replacement, the AQMS initially occasionally recorded TSP concentrations that were lower than the $PM_{2.5}$ or PM_{10} values. As time progressed, it consistently recorded lower values. Because the TSP values are less than the PM_{10} and $PM_{2.5}$ values, the TSP data are invalid. TSP data collected after February 11, 2025, are excluded from this report. Although $PM_{2.5}$ data collected after February 11, 2025, were collected using a non-designated method, the BAM was operating without error. Therefore, the $PM_{2.5}$ data collected after February 11, 2025, are valid and are included in this report.

A site visit is planned for March 25 to March 28 to replace the malfunctioning TSP unit with the spare BAM TSP unit and to adjust the BAM $PM_{2.5}$ sampling time from 50 minutes to 42 minutes to meet the US EPA FEM requirements for $PM_{2.5}$ monitoring (BC ENVP 2020, US EPA 2024, and Met One Instruments 2024).

The passive sampling of SO_2 and VOCs uses AGAT's Passive Sampler system. The Woodfibre LNG personnel exchange the monthly samples and submit them to AGAT for laboratory analysis.

Table 3.1 Summary of Instrumentation used at the Woodfibre LNG Air Quality Monitoring Station

Parameter	Instrumentation
$PM_{2.5}$, PM_{10}, and TSP	Met One Instruments BAM 1020 Beta Attenuation Mass Monitors
NO_2	Thermo Fisher Scientific – Model 42i (NO-NO_2-NO_x) Analyzer
SO_2 and total VOCs	AGAT's Passive Sampler system

3.1 Continuous Monitoring of PM and NO_2

Particulate matter ($PM_{2.5}$, PM_{10}, and TSP) was continuously monitored following the Standard Operating Procedure for the Continuous Measurements of Ambient PM Using a Beta Attenuation Monitor (Reference No: SOP-05a). The NO_2 concentrations were continuously monitored following the Standard Operating Procedure for the Continuous Measurement of Ambient NOx (Reference No: SOP-03) in Part B1 of the British Columbia Field Sampling Manual (BC ENVP 2020).

3.2 Passive Monitoring of SO_2 and VOC

The SO_2 and VOC ambient concentrations were monitored following the Standard Operating Procedure for the Passive/Diffusive Method of Air Sample Collection (Reference No: SOP-07) in Part B1 of the British Columbia Field Sampling Manual (BC ENVP 2020).

4 Ambient Air Quality Monitoring Results

The measured data presented for passive and continuous monitoring includes a) ambient air quality data collected at the AQMS (Appendix A), and b) meteorology data acquired from the Woodfibre LNG meteorology station. The daily air quality and meteorology data are included in Appendix B, Table B.1 and Table B.2.

4.1 Continuous Monitoring of PM and NO_2

A summary of the hourly ambient air monitoring results for $PM_{2.5}$, PM_{10}, TSP, and NO_2 for February 2025 is presented in Appendix A, Figure A.1 to Figure A.5, along with the corresponding regulatory criteria and comparisons with Langdale Elementary (BC ENVP 2024a) and Squamish Elementary (BC ENVP 2024b) regional ambient air quality monitoring stations. Langdale Elementary and Squamish Elementary were selected as reference points due to their relative proximity to the Woodfibre LNG construction site and the availability of relevant ambient air quality data. BC ENVP air quality monitoring station at Langdale Elementary provides measurements for $PM_{2.5}$, PM_{10}, NO_2, and SO_2, while Squamish Elementary monitors $PM_{2.5}$, NO_2, and SO_2. There are no BC ENVP ambient air quality monitoring stations near the Woodfibre LNG project site that measure TSP and VOCs. The hourly air quality objective threshold for NO_2 is based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentration (CCME 2024; BC ENVP 2021).

During February 2025, the hourly $PM_{2.5}$ concentrations ranged from 0[1] to 23 µg/m³, the hourly PM_{10} concentrations ranged from 3 to 235 µg/m³, the hourly TSP concentrations ranged from 8 to 236 µg/m³ (based on sampling between February 1 and February 11, before the TSP unit was replaced), and the hourly NO_2 concentrations ranged from 0[2] to 37.5 ppb. The hourly results for the NO_2 concentration monitoring during this period were less than the BCAQO threshold value of 60 ppb.

Similarly, a summary of the daily (24-hour average) ambient air quality monitoring results for $PM_{2.5}$, PM_{10}, TSP, and NO_2 for February 2025 is presented in Table E.1 and Figure A.6 to Figure A.10 (Appendix A), with corresponding regulatory criteria and comparisons with Langdale Elementary and Squamish Elementary regional air quality monitoring stations. The AQMS's gas analyzer units could not collect 24-hour average valid data on February 12, 2025, due to quarterly maintenance and calibration (Appendix C).

[1] The BAM 1020 instrument recording the $PM_{2.5}$ concentrations may occasionally report slightly negative values when the are very low (Met One Instruments 2024). Therefore, both the BCFSM (BC ENVP 2020) and the National Air Pollution Surveillance (NAPS, CCME 2019) program provide data validation criteria for $PM_{2.5}$ measurements: values between -3 and 0 µg/m³ are adjusted to 0, while values below -3 µg/m³ are flagged as invalid. This approach has been followed for $PM_{2.5}$ data validation program.

[2] The 42i NO-NO_2-NOx gas analyzer recording the NO_2 concentrations may occasionally report slightly negative values when the are very low. Both the BCFSM (BC ENVP 2020) and the National Air Pollution Surveillance (NAPS, CCME 2019) program provide data validation criteria for gas concentration measurements: values between -3 and 0 ppb are adjusted to 0, while values below -3 ppb are further investigated prior to setting to zero. This approach has been consistently applied in the data validation program.

The 24-hour regulatory standards for PM_{10} and TSP monitoring are 50 µg/m³ and 120 µg/m³, respectively. The 24-hour BCAQO threshold value for $PM_{2.5}$ is 25 µg/m³, based on the 3-year average of the annual 98th percentile of the daily 24-hour average concentrations (CCME 2024; BC ENVP 2021).

During February 2025, the 24-hour average $PM_{2.5}$ concentrations of ranged from 3.0 to 9.5 µg/m³, 24-hour average PM_{10} concentrations of ranged from 8.5 to 53.0 µg/m³, 24-hour average TSP concentrations ranged from 15.1 to 48.5 µg/m³ (based on valid data collected between February 1 and February 10, before the TSP unit was replaced on February 11; the data collected on February 11 was excluded due to less than 75% data completeness), and 24-hour average NO_2 concentrations of ranged from 1.0 to 19.5 ppb.

The 24-hour average $PM_{2.5}$, PM_{10} and NO_2 concentrations recorded at the Woodfibre LNG AQMS site were generally higher than those observed at the Langdale Elementary and Squamish Elementary regional air quality monitoring stations, which is expected given the proximity of the AQMS site to active construction activities. However, the measured NO_2 concentrations were similar or lower than those at the regional air quality monitoring stations between February 7 and February 11, 2025, indicating minimal impact from the site-specific emissions on the ambient NO_2 concentrations measured at the AQMS.

The available data for February 2025 is insufficient to compare with the annual thresholds set for NO_2, $PM_{2.5}$, and TSP by BCAQO and CAAQS. However, the monthly average NO_2 concentration in February 2025 is 8.6 ppb. The combined average for January and February 2025 is 7.7 ppb, less than the BCAQO and CAAQS annual threshold of 17 ppb and 12 ppb, respectively.

The February 2025 monthly average $PM_{2.5}$ concentration is 5.7 µg/m³. The combined average for January and February 2025 is 5.9 µg/m³ is less than the BCAQO and CAAQS annual threshold values of 8.0 and 8.8 µg/m³, respectively. However, this two-month average does not represent a yearly valid average for comparison with these thresholds due to the limited duration of monitoring data. Similarly, the February monthly average TSP concentration is 26.2 µg/m³ (based on valid data collected between February 1 and February 10, before the TSP unit was replaced). The combined average TSP concentration for January and February 2025 is 28.9 µg/m³, below the BCAQO annual threshold of 60 µg/m³.

A summary of the 24-hour average $PM_{2.5}$, PM_{10}, TSP and NO_2 concentrations measured during February 2025 is presented in Appendix B, Table B.1. The results for $PM_{2.5}$ and TSP were less than the BCAQO threshold values of 25 µg/m³ and 120 µg/m³, respectively, and no air quality exceedances were recorded for these contaminants. However, one air quality exceedance for PM_{10} was recorded on February 20, 2025, with a measured 24-hour average concentration of 53.0 µg/m³, which is greater than the BCAQO threshold value of 50 µg/m³ for PM_{10}. It was concluded, based on air quality and meteorology data investigations, that PM_{10} exceedance is primarily attributable to construction project-related sources (see further details in the Air Quality Exceedance Report, Appendix D). Additionally, no complaints were received from the Floatel residents during February 2025 that required further investigation or mitigation actions. The weekly AQMS reports are presented in Appendix E.

4.2 Passive Monitoring of SO_2 and VOC

The passive sample media for SO_2 and total VOCs were swapped on March 3, 2025. This report includes the results for samples collected for the exposure period from February 7, 2025, to March 3, 2025. The laboratory analysis reports are presented in Appendix F.

The results for SO_2 and VOC samples collected between February 7, 2025, and March 3, 2025, show an ambient average SO_2 concentration of <0.2 ppb and an ambient average VOC concentration of <0.7 ppb. The instrument-reported detection limits (RDL) are 0.2 ppb and 0.7 ppb, respectively. In comparison, the regional monitoring stations reported higher ambient SO_2 concentrations in February 2025, with Squamish Elementary recording 0.8 ppb and Langdale Elementary recording 0.7 ppb. The measured SO_2 concentration at the AQMS remained below 0.2 ppb, meaning it was lower than the levels recorded at Squamish Elementary and Langdale Elementary regional air quality stations.

4.3 Meteorology

A summary of the meteorology conditions during February 2025 is presented in Appendix B, Table B.2. Daily average and maximum wind speeds are shown in Figure A.11. The highest hourly average wind speed was recorded on February 23, 2025, at 19:00 (13.9 m/s), and the highest 24-hour average wind speed occurred on February 3 (3.5 m/s). Figure A.12 presents a wind rose illustrating wind direction and speed for February 2025 at the Woodfibre LNG meteorology station. The prevailing wind direction is from the northwest. Additionally, Figure A.13 includes four wind roses capturing specific time intervals: between 0:00 and 8:00 hours, 9:00 and 12:00 hours, 13:00 and 19:00 hours, and 20:00 and 00:00 hours throughout February 2025.

The daily ambient temperature data is presented in Figure A.14. The maximum hourly air temperature of 15.1°C was recorded on February 28, 2025, at 13:00 and 14:00, while the minimum hourly temperature of -7.5°C occurred on February 5, 2025, at 07:00. The monthly average temperature for February 2025 was 1.9°C

The daily and total monthly rainfall data, presented in Figure A.15 and Appendix B, Table B.2, show that the highest single-day rainfall of 53.2 mm occurred on February 22, 2025. The total rainfall for February 2025 was 218.6 mm.

5 Summary of Ambient Air Quality Monitoring Results

The ambient air quality monitoring results for February 2025 indicate that the $PM_{2.5}$, and TSP concentrations remained less than the BC Air Quality Objective threshold values, with one exceedance recorded for PM_{10} on February 20, 2025. This exceedance was primarily attributable to construction project-related sources (Air Quality Exceedance Report; Appendix D). The measured NO_2 concentrations were less than the regulatory limits. The meteorology data, including wind speed, temperature, and rainfall, support accurate interpretation of the ambient air quality monitoring trends. No complaints from the Floatel residents were received that required further investigation or a mitigation plan during February 2025.

6 References

BC ENVP. 2020. *The British Columbia Field Sampling Manual: Part B: Air and Air Emissions Testing.* Retrieved March 18, 2025, from Government of British Columbia: Ministry of Environment and Climate Change Strategy (BC ENV, 2017-2024); now Ministry of Environment & Parks (BC ENVP, 2024–present); Environmental Protection & Sustainability; Research, Monitoring and Reporting; Monitoring; B.C. Field Sampling Manual Web Site: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc_field_sampling_manual_part_b.pdf

BC ENVP. 2021. British Columbia Ambient Air Quality Objectives. Retrieved March 18, 2025, from Government of British Columbia; Environment and Climate Change Strategy (BC ENV, 2017-2024); now Ministry of Environment & Parks (BC ENVP, 2024–present); Environmental Protection and Sustainability; Air, Land, and Water; Air; Air Quality Management; Regulatory Framework, Objectives and Standards Web Page: https://www2.gov.bc.ca/gov/content/environment/air-land-water/air/air-quality-management/regulatory-framework/objectives-standards and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/air/reports-pub/prov_air_qual_objectives_fact_sheet.pdf

BC ENVP. 2024a. Langdale Elementary - British Columbia Ambient Air Data Archive Website. Retrieved March 18, 2025; https://envistaweb.env.gov.bc.ca/StationReportFast.aspx?ST_ID=86

BC ENVP. 2024b. Squamish Elementary - British Columbia Ambient Air Data Archive Website. Retrieved March 18, 2025; https://envistaweb.env.gov.bc.ca/StationReportFast.aspx?ST_ID=491

CCME. 2019. NAPS - Ambient Air monitoring and Quality Assurance and control Guidlines. National Air Pollution Surveillance Program (NAPS), Canadian Council of Ministers of the Environment (CCME); Retrieved March 18, 2025, https://ccme.ca/en/res/ambientairmonitoringandqa-qcguidelines_ensecure.pdf.

CCME. 2024. Canadian Ambient Air Quality Standards (CAAQS). Retrieved March 18, 2025, from Canadian Council of Ministers of the Environment (CCME); Canada's Air Web Site: https://ccme.ca/en/air-quality-report#slide-7

EAO. 2023. *Amendment #3 for the Woodfibre LNG Project (Project) Environmental Assessment Certificate #E15-02.* Victoria, British Columbia: British Columbia Environmental Assessment Office (EAO).

Met One Instruments. 2024. *BAM 1020 Operation Manual. Met One instruments, Inc. Grants Pass, Oregon, United States. https://metone.com/wp-content/uploads/2024/02/BAM-1020-9805-Manual-Rev-G-Reduced.pdf* .

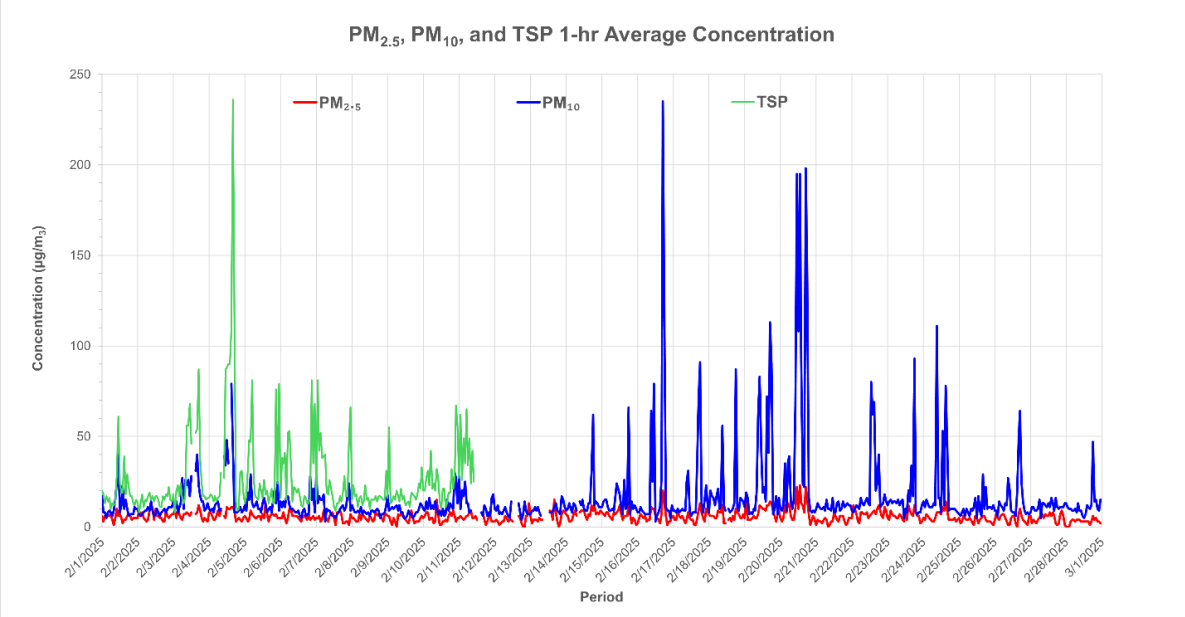
Woodfibre LNG. 2024. Floatel Air Quality Monitoring and Mitigation Plan Environmental Management Plan, Woodfibre LNG Project: Rev 6 (July 5, 2024). Vancouver, British Columbia: Woodfibre LNG General Partner Inc. (Woodfibre LNG).

US EPA. 2024. List of Designated Reference and Equivalent Methods, Issue date June 15, 2024. Retrieved March 26, 2025, https://www.epa.gov/system/files/documents/2024-12/amtic-list-december-2024_final.pdf.

Appendices

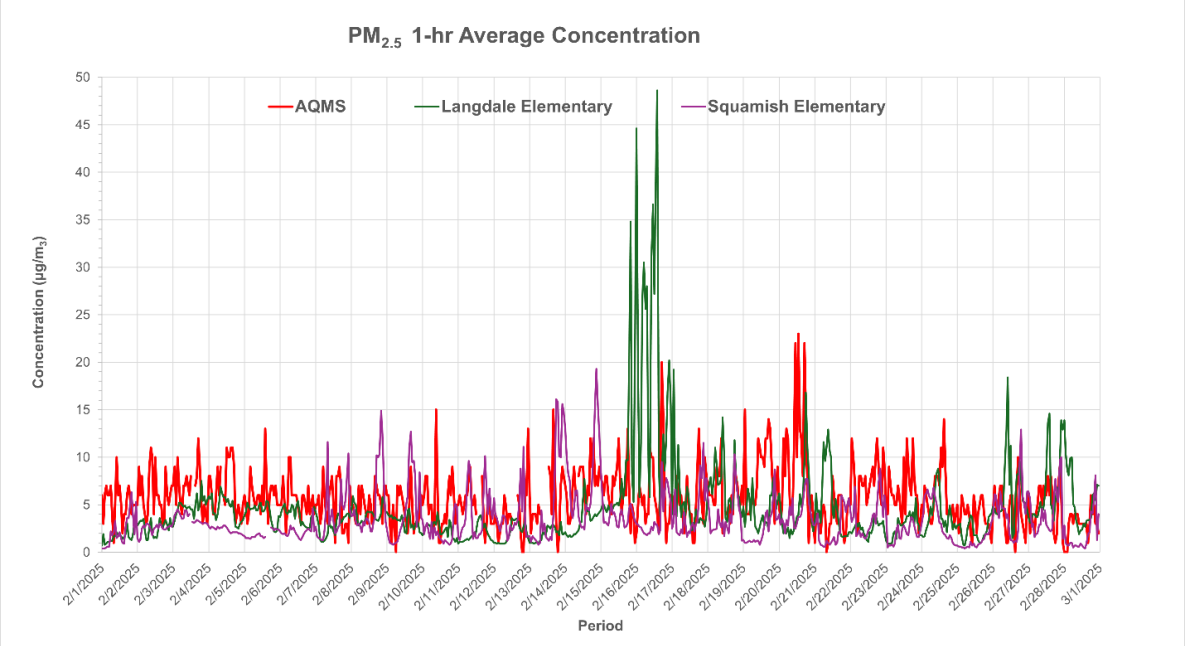
Appendix A Figures

Figure A.1 Hourly PM Concentrations Recorded at the AQMS during February 2025



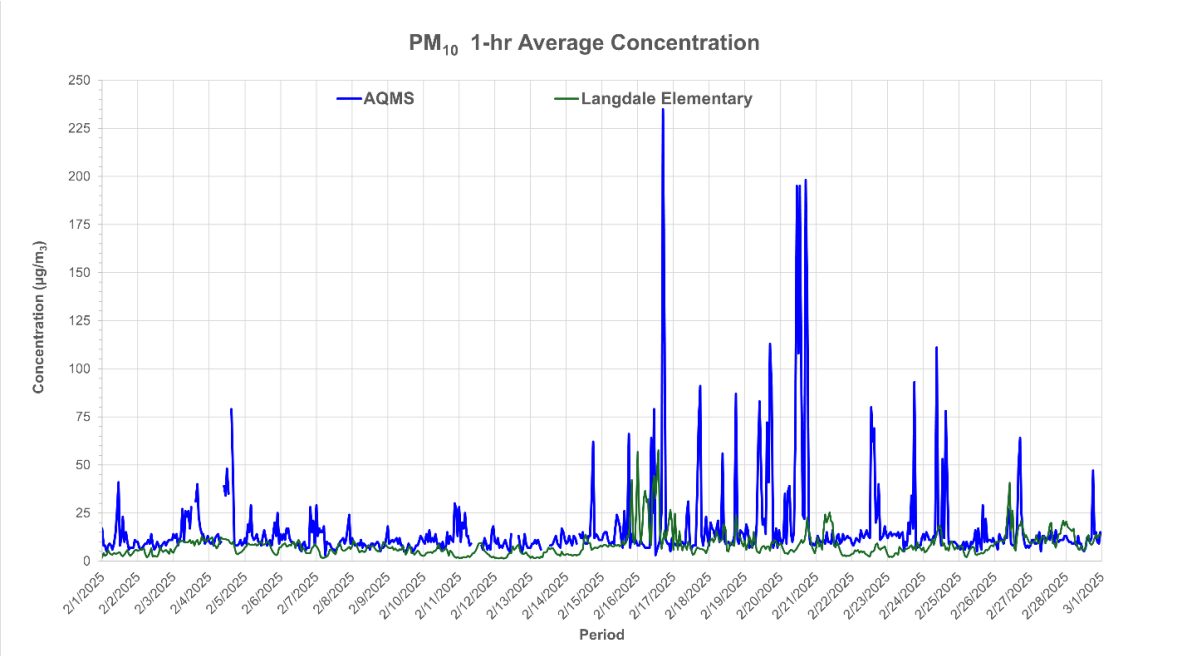
Note: Missing hourly data for $PM_{2.5}$ and PM_{10} due to the instrument's quarterly maintenance and calibration between February 11 and February 13, 2025. TSP data collected following TSP analyzer replacement on February 11, 2025 is invalid and is excluded from this report.

Figure A.2 Hourly $PM_{2.5}$ Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during February 2025



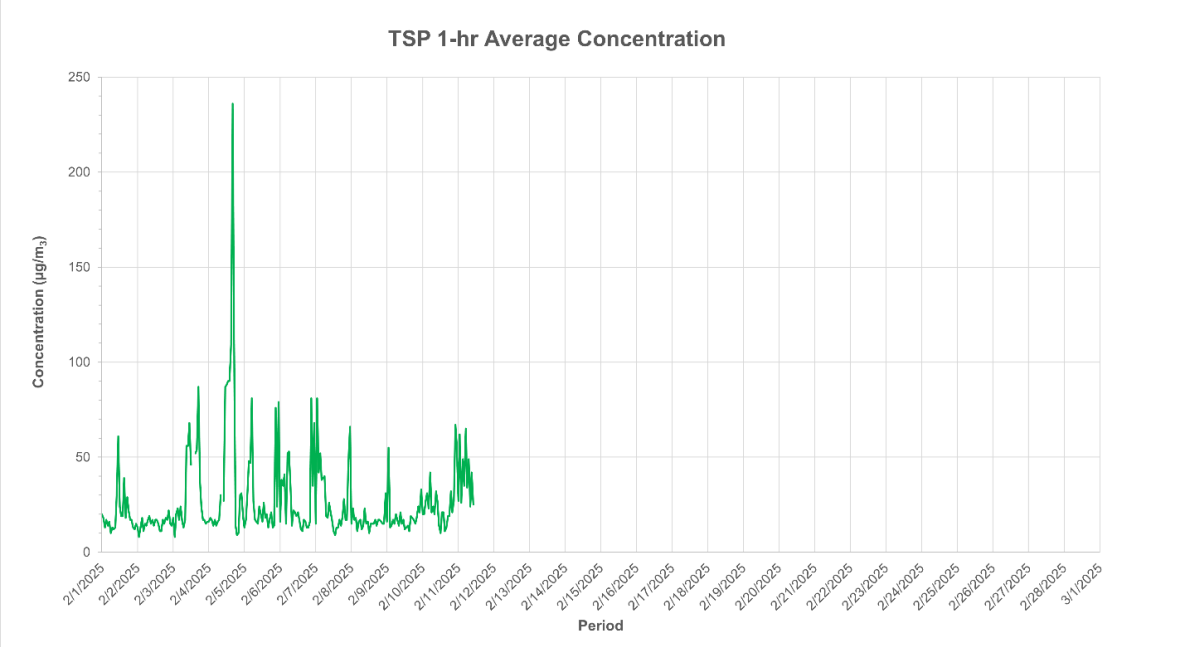
Note: Missing hourly data for $PM_{2.5}$ (AQMS) due to the instrument's quarterly maintenance and calibration between February 11 and February 13, 2025.

Figure A.3 Hourly PM_{10} Concentrations Recorded at the AQMS, and the Langdale Regional Air Quality Station during February 2025



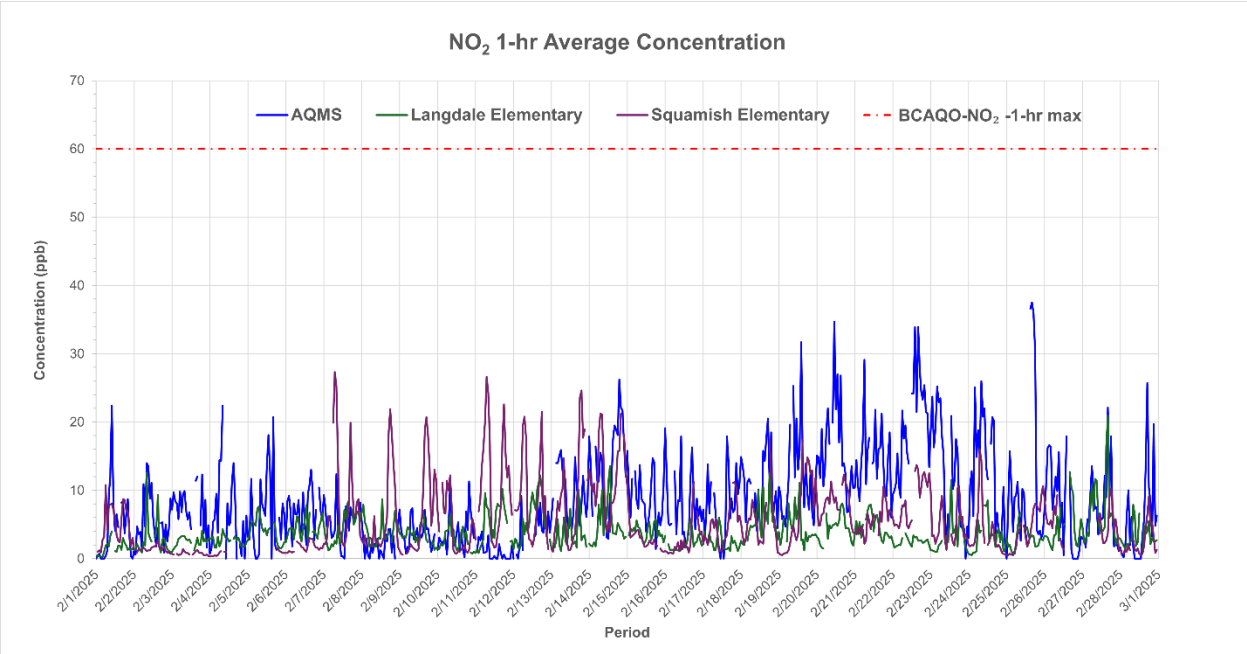
Note: Missing hourly data for PM_{10} (AQMS) due to the instrument's quarterly maintenance and calibration between February 11 and February 13, 2025.

Figure A.4 Hourly TSP Concentrations Recorded at the AQMS during February 2025



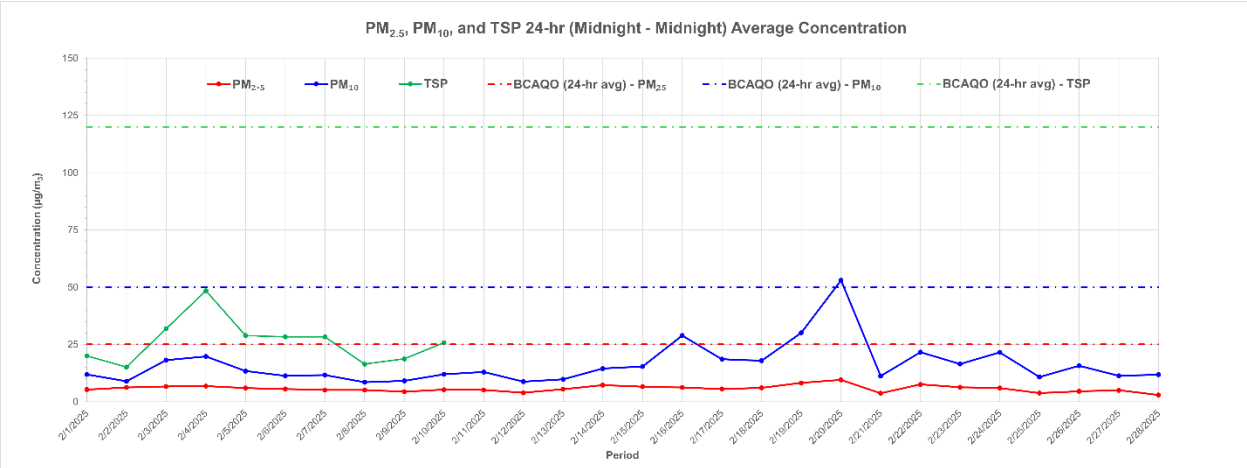
Note: TSP data collected following TSP analyzer replacement on February 11, 2025 is invalid and is excluded from this report.

Figure A.5 Hourly NO_2 Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during February 2025



Note: Missing hourly data for NO_2 (AQMS) due to the instrument's quarterly maintenance and calibration on February 12, 2025.

Figure A.6 24-Hour Average PM Concentrations Recorded at the AQMS during February 2025



Note: TSP data collected following TSP analyzer replacement on February 11, 2025 is invalid and is excluded from this report.

Figure A.7 24-Hour Average $PM_{2.5}$ Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during February 2025

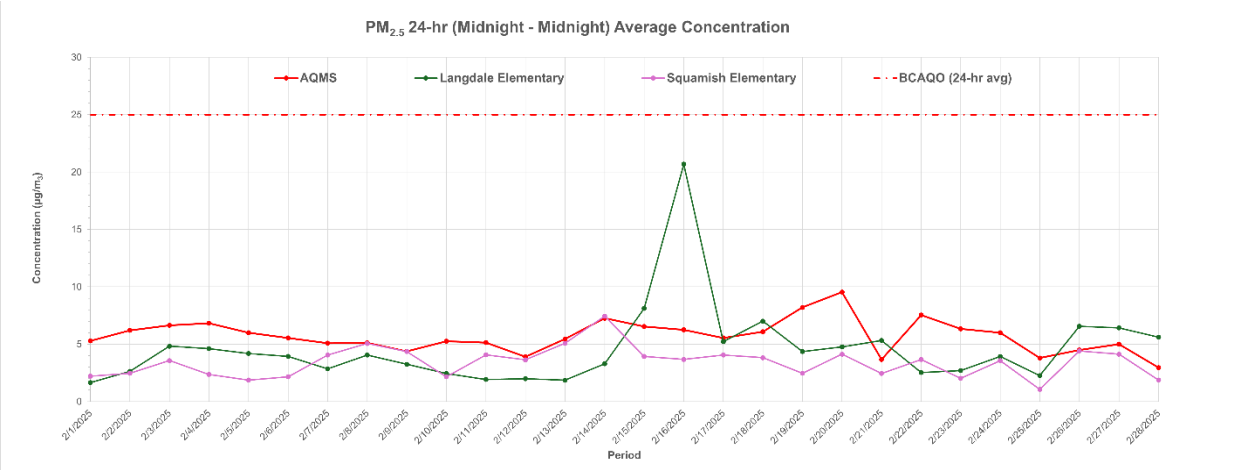


Figure A.8 24-Hour Average PM_{10} Concentrations Recorded at the AQMS, and the Langdale Regional Air Quality Station during February 2025

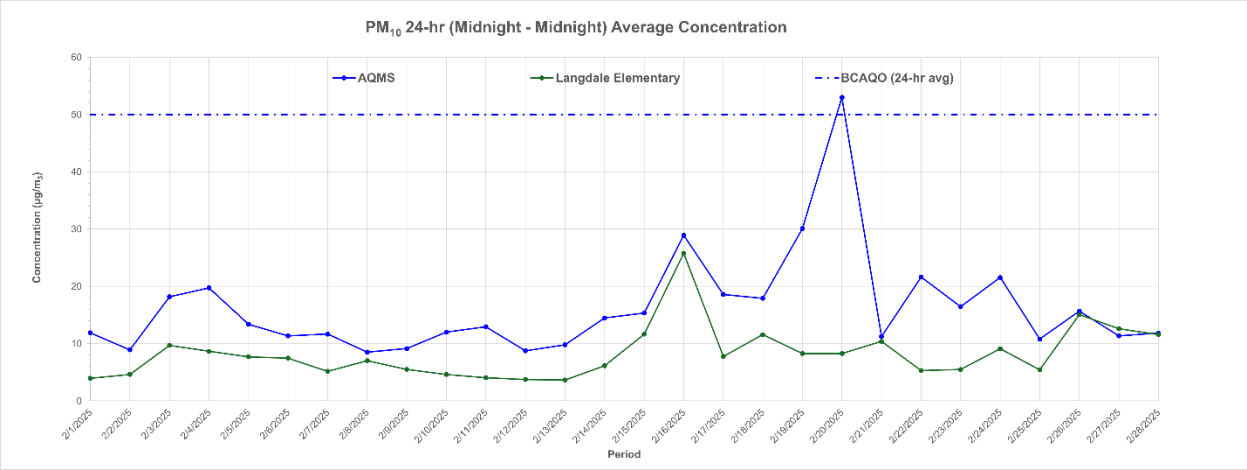
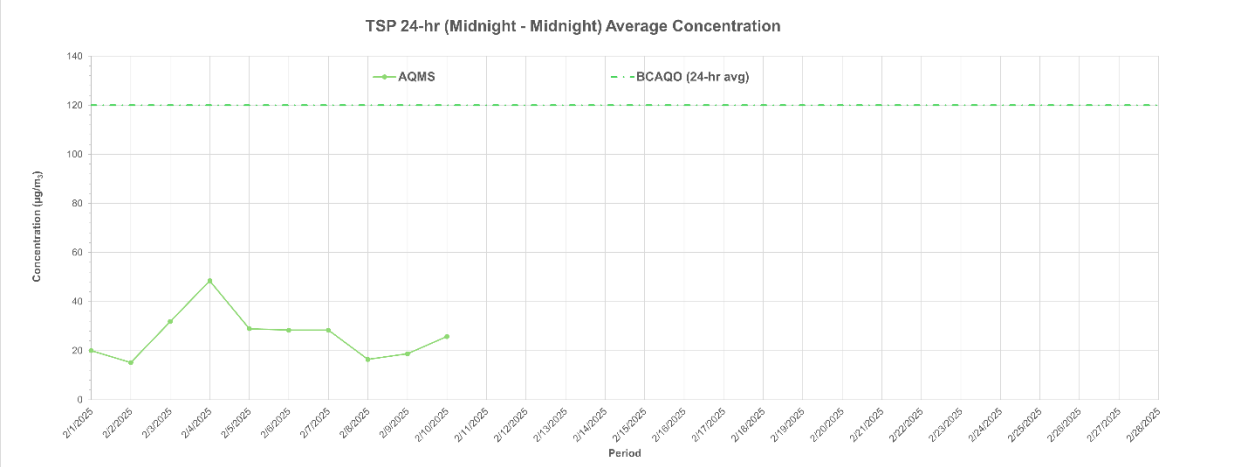
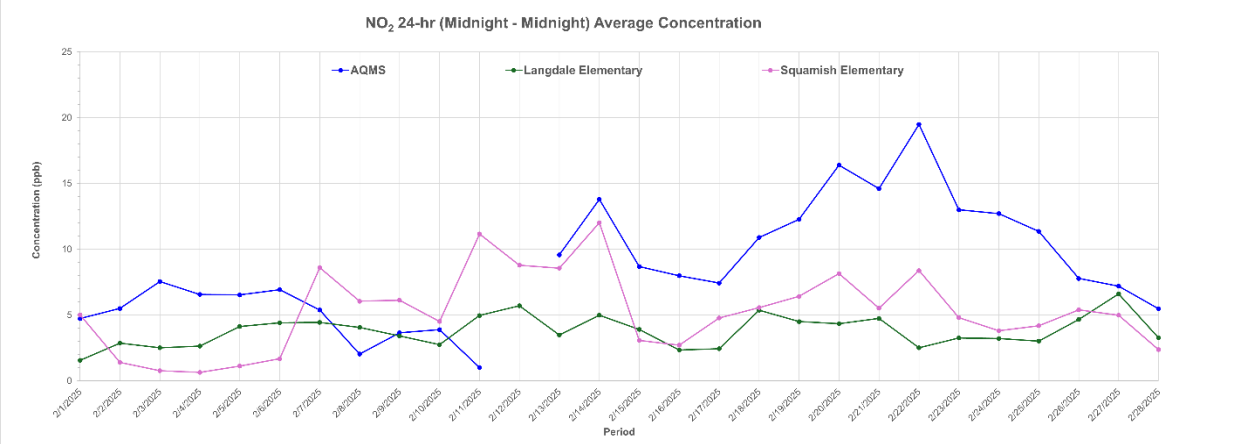


Figure A.9 24-Hour Average TSP Concentrations Recorded at the AQMS during February 2025



Note: TSP data collected following TSP analyzer replacement on February 11, 2025 is invalid and is excluded from this report.

Figure A.10 24-Hour Average NO_2 Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during February 2025



Note: Missing 24-hour average data for NO_2 (AQMS) due to the instrument's quarterly maintenance and calibration on February 12, 2025.

Figure A.11 Daily Average and Maximum Wind Speed Recorded at the Woodfibre LNG Meteorology Station during February 2025

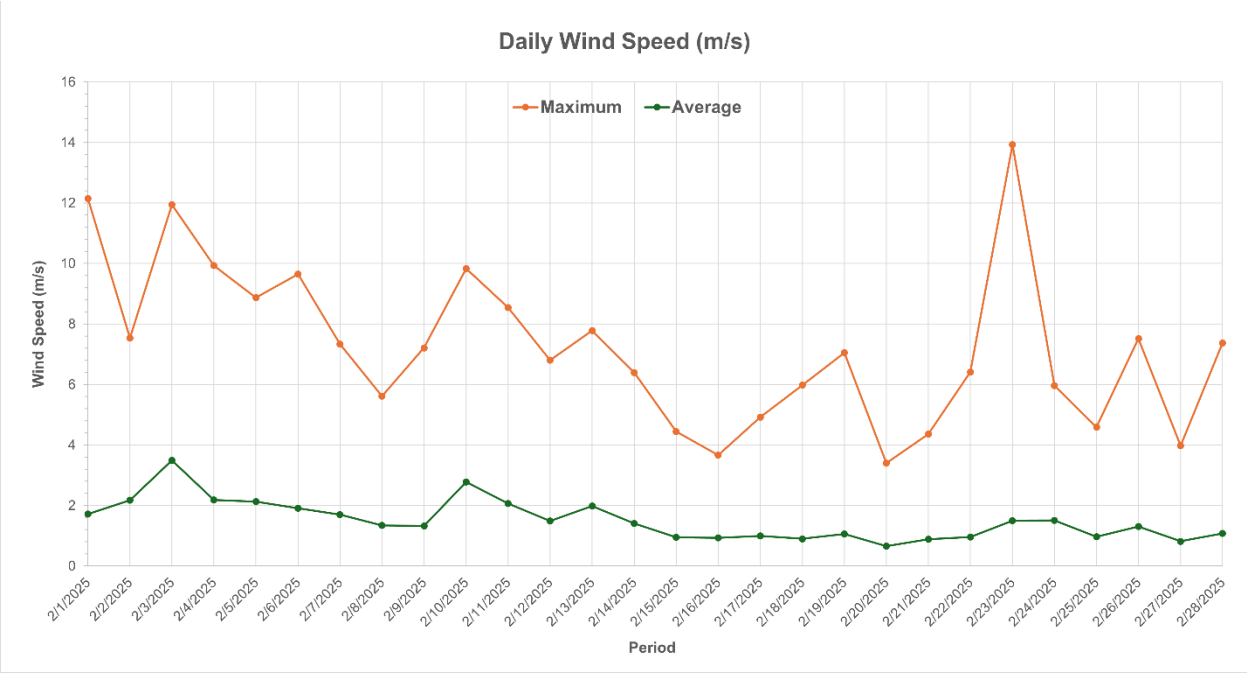


Figure A.12 Windrose for Woodfibre LNG Meteorology Station during February 2025

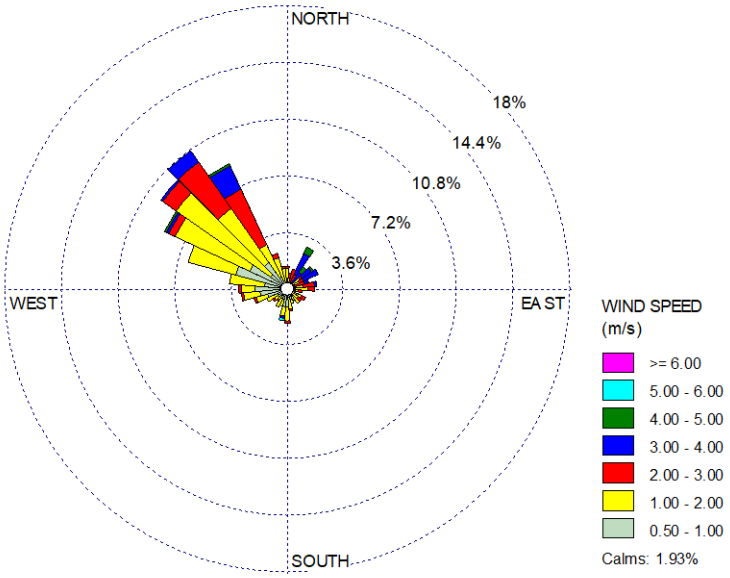


Figure A.13 Windrose for Woodfibre LNG Meteorology Station for the hours of 0000 - 0800, 0900 - 1200, 1300 - 1900, and 2000 - 2300 (February 2025)

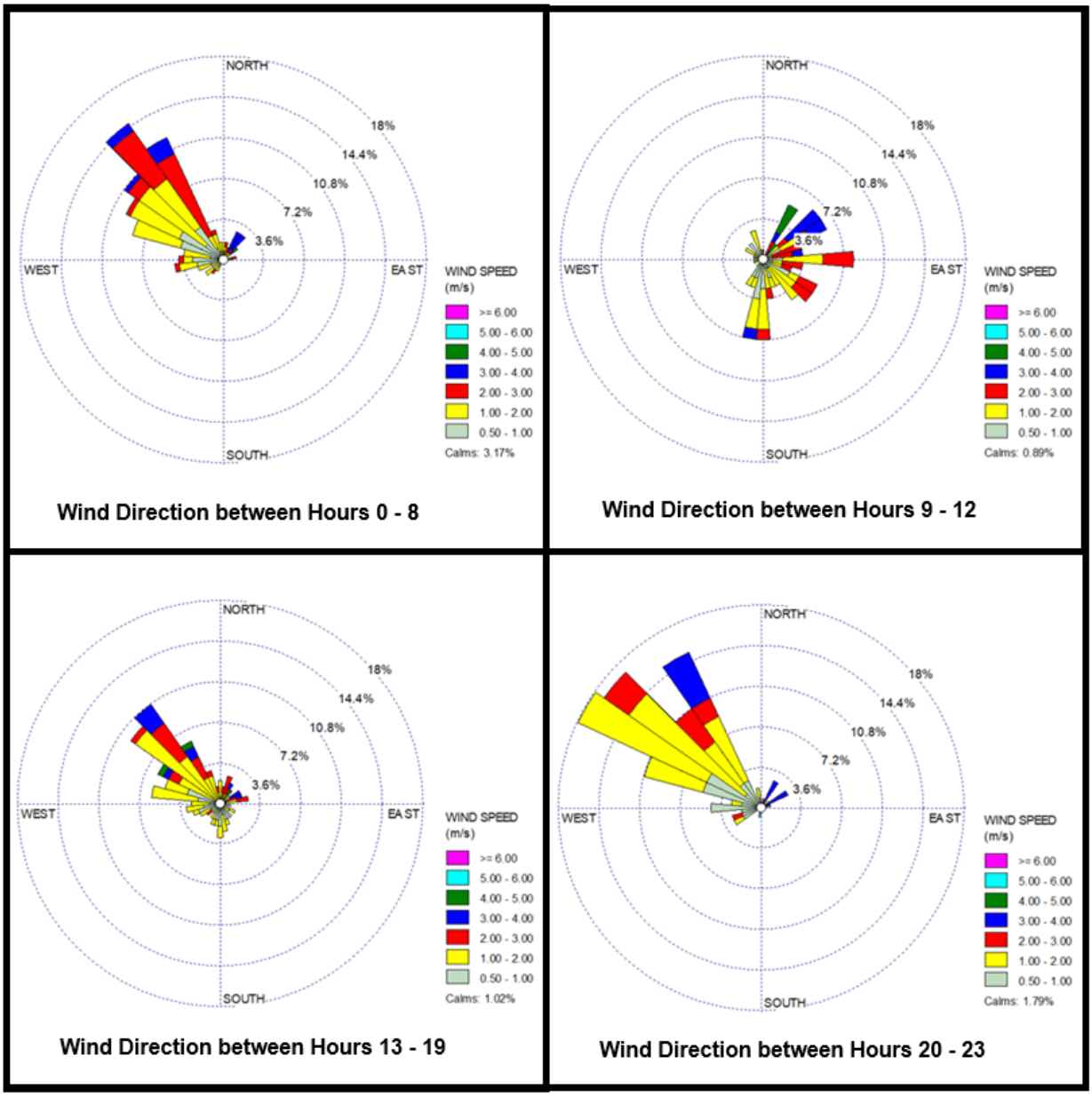


Figure A.14 Daily Average, Minimum, and Maximum Air Temperature Recorded at the Woodfibre LNG Meteorology Station during February 2025

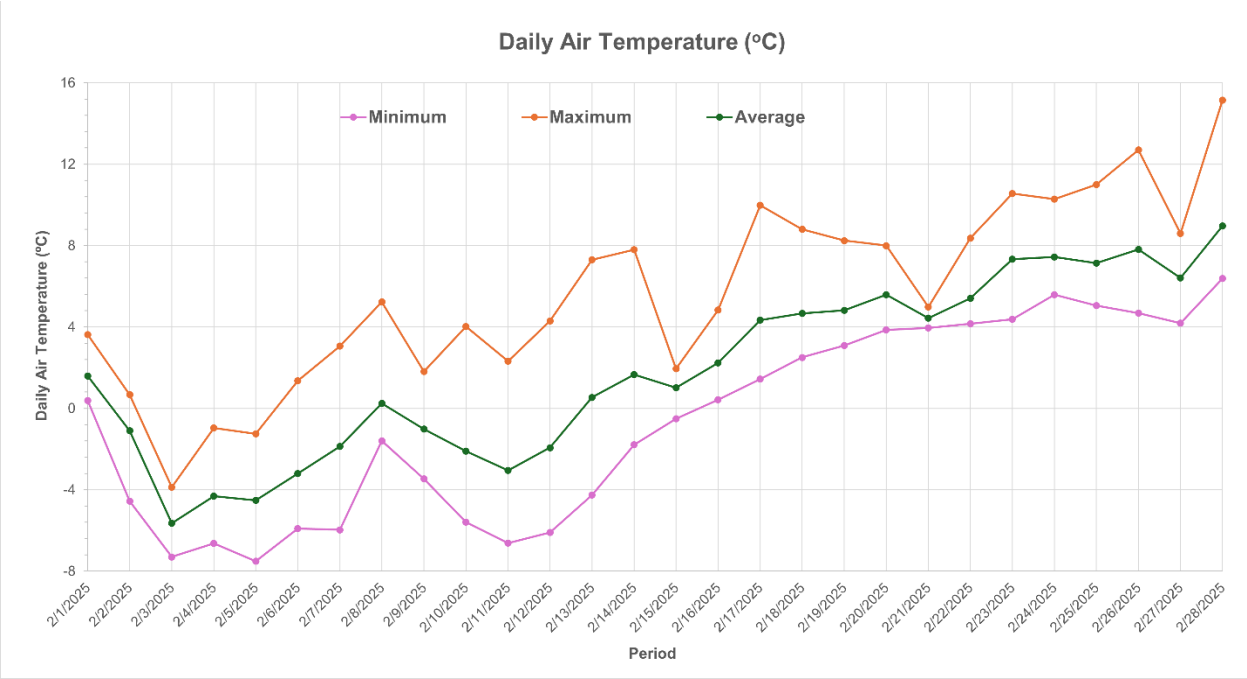
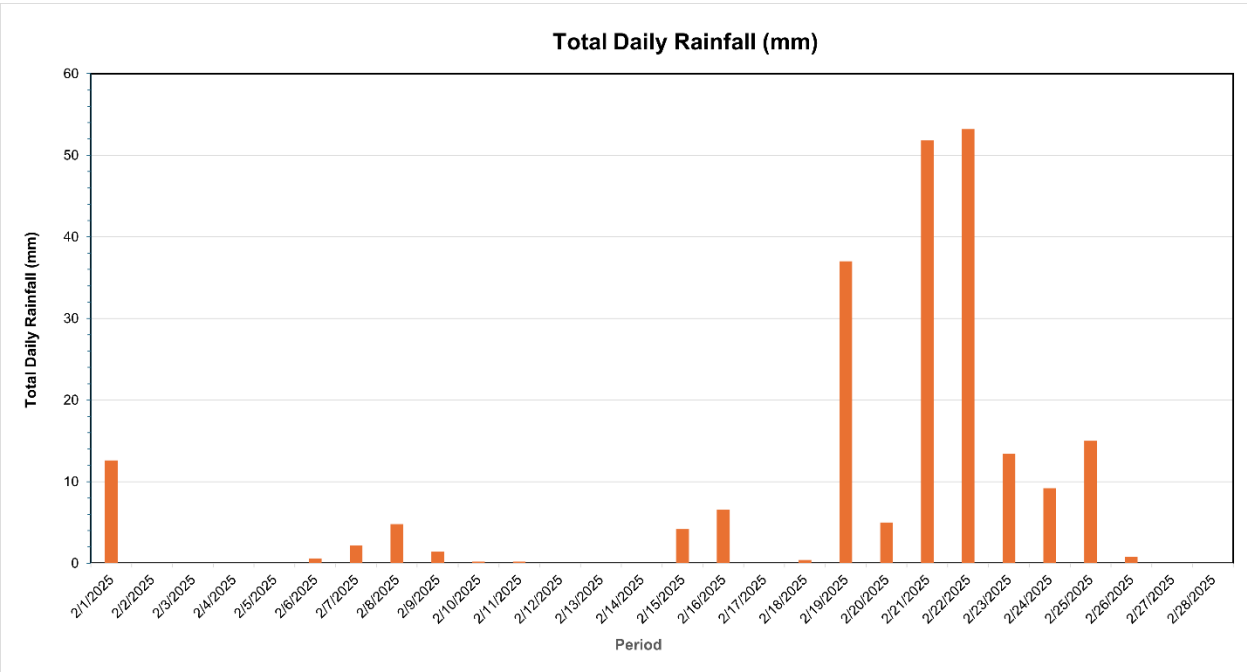


Figure A.15 Daily Rainfall Recorded at the Woodfibre LNG Meteorology Station during February 2025



Appendix B Data Tables

Table B.1 Daily $PM_{2.5}$, PM_{10}, TSP, and NO_2 Concentrations Recorded at the AQMS for February 2025

Date	AQMS (24-hr Average)				AQMS (1-hr Max)
	$PM_{2.5}$	PM_{10}	TSP	NO_2	NO_2
	µg/m³	µg/m³	µg/m³	ppb	ppb
2/1/2025	5.3	11.9	20.0	4.7	22.4
2/2/2025	6.2	8.9	15.1	5.5	14.0
2/3/2025	6.6	18.2	31.9	7.5	12.3
2/4/2025	6.8	19.7	48.5	6.6	22.4
2/5/2025	6.0	13.4	28.9	6.5	20.7
2/6/2025	5.5	11.3	28.3	6.9	13.0
2/7/2025	5.1	11.7	28.3	5.4	12.4
2/8/2025	5.1	8.5	16.4	2.0	5.5
2/9/2025	4.4	9.1	18.7	3.6	7.4
2/10/2025	5.3	12.0	25.8	3.9	11.3
2/11/2025	5.1	12.9	– [a]	1.0	4.0
2/12/2025	3.9	8.8	– [a]	– [b]	– [b]
2/13/2025	5.5	9.8	– [a]	9.6	15.9
2/14/2025	7.3	14.5	– [a]	13.8	26.2
2/15/2025	6.5	15.3	– [a]	8.7	15.8
2/16/2025	6.3	28.9	– [a]	8.0	19.1
2/17/2025	5.5	18.6	– [a]	7.4	17.9
2/18/2025	6.1	17.9	– [a]	10.9	20.5
2/19/2025	8.2	30.1	– [a]	12.3	31.7
2/20/2025	9.5	53.0	– [a]	16.4	34.7
2/21/2025	3.7	11.3	– [a]	14.6	29.1
2/22/2025	7.5	21.6	– [a]	19.5	33.9
2/23/2025	6.3	16.5	– [a]	13.0	25.2
2/24/2025	6.0	21.5	– [a]	12.7	26.0
2/25/2025	3.8	10.8	– [a]	11.3	37.5
2/26/2025	4.5	15.7	– [a]	7.8	17.9
2/27/2025	5.0	11.3	– [a]	7.2	22.1
2/28/2025	3.0	11.8	– [a]	5.5	25.7

Date	AQMS (24-hr Average)				AQMS (1-hr Max)
	$PM_{2.5}$	PM_{10}	TSP	NO_2	NO_2
	µg/m³	µg/m³	µg/m³	ppb	ppb

Note

[a] Data unavailable due to the TSP analyzer (BAM 1020) being unable to provide valid data during this period.

[b] Data unavailable due instrument quarterly maintenance and calibration.

Table B.2 Daily Wind Speed, Air Temperature, and Rainfall Recorded at the Woodfibre LNG Meteorology Station for February 2025

Date	Daily Wind Speed (m/s)		Daily Air Temperature (°C)			Daily Total Rainfall (mm)
	Max	Avg	Min	Max	Avg	
2/1/2025	12.1	1.7	0.4	3.6	1.6	12.6
2/2/2025	7.5	2.2	-4.6	0.7	-1.1	0.0
2/3/2025	11.9	3.5	-7.3	-3.9	-5.7	0.0
2/4/2025	9.9	2.2	-6.6	-1.0	-4.3	0.0
2/5/2025	8.9	2.1	-7.5	-1.3	-4.5	0.0
2/6/2025	9.7	1.9	-5.9	1.4	-3.2	0.6
2/7/2025	7.3	1.7	-6.0	3.1	-1.9	2.2
2/8/2025	5.6	1.3	-1.6	5.2	0.2	4.8
2/9/2025	7.2	1.3	-3.5	1.8	-1.0	1.4
2/10/2025	9.8	2.8	-5.6	4.0	-2.1	0.2
2/11/2025	8.5	2.1	-6.6	2.3	-3.1	0.2
2/12/2025	6.8	1.5	-6.1	4.3	-1.9	0.0
2/13/2025	7.8	2.0	-4.3	7.3	0.5	0.0
2/14/2025	6.4	1.4	-1.8	7.8	1.7	0.0
2/15/2025	4.4	0.9	-0.5	2.0	1.0	4.2
2/16/2025	3.7	0.9	0.4	4.8	2.2	6.6
2/17/2025	4.9	1.0	1.4	10.0	4.3	0.0
2/18/2025	6.0	0.9	2.5	8.8	4.7	0.4
2/19/2025	7.0	1.1	3.1	8.2	4.8	37.0
2/20/2025	3.4	0.7	3.8	8.0	5.6	5.0

Date	Daily Wind Speed (m/s)		Daily Air Temperature (°C)			Daily Total Rainfall (mm)
	Max	Avg	Min	Max	Avg	
2/21/2025	4.4	0.9	3.9	5.0	4.4	51.8
2/22/2025	6.4	1.0	4.2	8.4	5.4	53.2
2/23/2025	13.9	1.5	4.4	10.6	7.3	13.4
2/24/2025	6.0	1.5	5.6	10.3	7.4	9.2
2/25/2025	4.6	1.0	5.1	11.0	7.1	15.0
2/26/2025	7.5	1.3	4.7	12.7	7.8	0.8
2/27/2025	4.0	0.8	4.2	8.6	6.4	0.0
2/28/2025	7.4	1.1	6.4	15.1	9.0	0.0

Appendix C Station Calibration and Maintenance Record

AGAT Laboratories

$PM_{2.5}$ Audit

Date:	February 12, 2025
Client:	Woodfibre LNG
Location:	Woodfibre, BC
Technician:	Brad Moyles
Method:	Beta Attenuation Mass Monitor
Make:	Met One
Model:	BAM 1020
Serial number:	U11269
Parameter:	PM2.5
Operating Range:	1000 ug/m^3
Start Time:	13:50
Finish Time:	14:35

Audit Reference Instruments

Make/Model	Serial Number	Date Last Calibrated
TriCal Flow Device	188	2024-03-28
CNX +3000 Fluke	2445002	2024-03-21
RH/BP/Temp Sensor		Apr-24

Audit Criteria:

Leak Check (<1.5 L/min):	**0.70**	**PASS**
Sample Flow (±4% of 16.7 L/min):	**16.63**	**PASS**
Ambient Temperature (±2 ◦C):	**-1.00**	**PASS**
Ambient Pressure (±10 mmHg):	**0.00**	**PASS**
Ambient RH Error (±10%):	**-1.90%**	**PASS**

Audit Results: PASS

Instrument Verification

Sample Flow	Target (L/min)	Actual (Reference Standard)	Error (%)
Leak Check	**<1.5**	0.70	
Flow Check	**16.7**	16.63	0.4%

Ambient Temperature:	**°C**	**Ambient Pressure:**	**mmHg**
Ambient Temperature (Reference)	6.4	Ambient Pressure (Reference)	759
Ambient Temperature (Analyzer)	5.4	Ambient Pressure (Analyzer)	759

filter RH:	**%**
Ambient Humidity (Reference)	36.9
Ambient Humidity (Analyzer)	36.2

As-Left Diagnostics

Flow Rate:	16.63	L/min
Ambient Temperature:	6.4	°C
Barometric Pressure:	758.4	mmHg
Tape Pressure:	766	mmHg
Filter Relative Humidity:	36.9	%
Filter Temperature:	25.7	°C
Smart Inlet Heater Status:	ON	
Measurement Cycle Time:	50	mins
Background Zero:	0.0	%
Analyzer Time:	14:17	
PC Time:	14:17	
Analyzer Date:	12-Feb	
PC Date:	12-Feb	

AGAT Laboratories

$PM_{2.5}$ Maintenance Log

TO BE COMPLETED/UPDATED MONTHLY

Maintenance Item	Frequency Due	Completed (Y/N)	Date Last Completed	Next Service Date
Nozzle and vane cleaning	2 Months	Y	2025-02-12	2025-03-30
Leak check	2 Months	Y	2025-02-12	2025-03-30
Flow system check	2 Months	Y	2025-02-12	2025-03-30
Clean capstan shaft and pinch roller	2 Months	Y	2025-02-12	2025-03-30
Completely disassemble and clean inlet and cyclone	2 Months	Y	2025-02-12	2025-03-30
Download and save digital data and error log	2 Months	Y	2025-02-12	2025-03-30
Compare digital data to analog data	2 Months	Y	2025-02-12	2025-03-30
Check and set clock	2 Months	Y	2025-02-12	2025-03-30
Replace filter tape	2 Months	Y	WLNG Staff	2025-03-30
Run SELF TEST	2 Months	Y	2025-02-12	2025-03-30
Download and verify settings file	2 Months	Y	2025-02-12	2025-03-30
Flow system audit and calibration	2 Months	Y	2025-02-12	2025-03-30
Ambient pressure, temperature and RH audit and calibration	2 Months	Y	2025-02-12	2025-03-30
Replace or clean pump muffler	12 Months	N		
Test smart heater	24 Months	N		
Perform 72-hour BKGD test	12 Months	N		
Clean internal debris filter	12 Months	N		
Remove and check membrane span foil	12 Months	Y		
Beta detector count rate and dark count test	12 Months	N		
Clean vertical inlet tube	12 Months	N		
Test analog DAC output if necessary	12 Months	N		
Replace lithium battery if necessary	12 Months	N		
Rebuild vacuum pump	24 Months	N		
Replace nozzle o-ring	24 Months	N		
Replace pump tubing if necessary	24 Months	N		

AGAT Laboratories

PM10 Audit

Date:	February 13, 2025
Client:	Woodfibre LNG
Location:	Woodfibre, BC
Technician:	Brad Moyles
Method:	Beta Attenuation Mass Monitor
Make:	Met One
Model:	BAM 1020
Serial number:	W22222
Parameter:	PM10
Operating Range:	1000 ug/m^3
Start Time:	11:20
Finish Time:	12:10

Audit Reference Instruments

Make/Model	Serial Number	Date Last Calibrated
TriCal Flow Device	188	2024-03-28
CNX +3000 Fluke	2445002	2024-03-21
RH/BP/Temp Sensor	181250070	Apr-24

Audit Criteria:

Leak Check (<1.5 L/min):	**0.80**	**PASS**
Sample Flow (±4% of 16.7 L/min):	**16.85**	**PASS**
Ambient Temperature (±2 ◦C):	**0.10**	**PASS**
Ambient Pressure (±10 mmHg):	**0.00**	**PASS**
Ambient RH Error (±10%):	**-0.01**	**PASS**

Audit Results: PASS

Instrument Verification

Sample Flow	Target (L/min)	Actual (Reference Standard)	Error (%)
Leak Check	**<1.5**	0.80	
Flow Check	**16.7**	16.85	0.9%

Ambient Temperature:	**°C**	**Ambient Pressure:**	**mmHg**
Ambient Temperature (Reference)	4.6	Ambient Pressure (Reference)	748
Ambient Temperature (Analyzer)	4.7	Ambient Pressure (Analyzer)	748

filter RH:	**%**
Ambient Humidity (Reference)	38.5
Ambient Humidity (Analyzer)	38.1

As-Left Diagnostics

Flow Rate:	16.68	L/min
Ambient Temperature:	4.6	°C
Barometric Pressure:	748	mmHg
Tape Pressure:	27.1	mmHg
Filter Relative Humidity:	38	%
Filter Temperature:	27	°C
Smart Inlet Heater Status:	ON	
Measurement Cycle Time:	42	mins
Background Zero:	0.0	%
Analyzer Time:	11:49	
PC Time:	11:48	
Analyzer Date:	13-Feb	
PC Date:	13-Feb	

AGAT Laboratories

PM_{10} Maintenance Log

TO BE COMPLETED/UPDATED MONTHLY

Maintenance Item	Frequency Due	Completed (Y/N)	Date Last Completed	Next Service Date
Nozzle and vane cleaning	2 Months	Y	2025-02-13	2025-03-30
Leak check	2 Months	Y	2025-02-13	2025-03-30
Flow system check	2 Months	Y	2025-02-13	2025-03-30
Clean capstan shaft and pinch roller	2 Months	Y	2025-02-13	2025-03-30
Thoroughly clean inlet and particle trap	2 Months	Y	2025-02-13	2025-03-30
Download and save digital data and error log	2 Months	Y	2025-02-18	2025-03-30
Compare digital data to analog data	2 Months	Y	2025-02-18	2025-03-30
Check and set clock	2 Months	Y	2025-02-13	2025-03-30
Replace filter tape	2 Months	Y	WLNG Staff	2025-03-30
Run SELF TEST	2 Months	Y	2025-02-13	2025-03-30
Download and verify settings file	2 Months	Y	2025-02-13	2025-03-30
Flow system audit and calibration	2 Months	Y	2025-02-13	2025-03-30
Ambient pressure, temperature and RH audit and calibration	2 Months	Y	2025-02-13	2025-03-30
Replace or clean pump muffler	12 Months	N		
Test smart heater	24 Months	N		
Perform 72-hour BKGD test	12 Months	N		
Clean internal debris filter	12 Months	N		
Remove and check membrane span foil	12 Months	Y		
Beta detector count rate and dark count test	12 Months	N		
Clean vertical inlet tube	12 Months	N		
Test analog DAC output if necessary	12 Months	N		
Replace lithium battery if necessary	12 Months	N		
Rebuild vacuum pump	24 Months	N		
Replace nozzle o-ring	24 Months	N		
Preplace pump tubing if necessary	24 Months	N		

TSP Audit

Date:	February 11, 2025
Client:	Woodfibre LNG
Location:	Woodfibre, BC
Technician:	Brad Moyles
Method:	Beta Attenuation Mass Monitor
Make:	Met One
Model:	BAM 1020
Serial number:	A12386
Parameter:	TSP
Operating Range:	1000 ug/m^3
Start Time:	12:26
Finish Time:	13:09

Audit Reference Instruments

Make/Model	Serial Number	Date Last Calibrated
TriCal Flow Device	188	2024-03-28
CNX +3000 Fluke	2445002	2024-03-21
RH/BP/Temp Sensor	181250070	Apr-24

Audit Criteria:

Leak Check (<1.5 L/min):	**0.70**	**PASS**
Sample Flow (±4% of 16.7 L/min):	**16.64**	**PASS**
Ambient Temperature (±2 ◦C):	**0.10**	**PASS**
Ambient Pressure (±10 mmHg):	**0.00**	**PASS**
Ambient RH Error (±10%):	**4.49%**	**PASS**

Audit Results: PASS

Instrument Verification

Sample Flow	Target (L/min)	Actual (Reference Standard)	Error (%)
Leak Check	**<1.5**	0.70	
Flow Check	**16.7**	16.64	0.4%

Ambient Temperature:	**°C**	**Ambient Pressure:**	**mmHg**
Ambient Temperature (Reference)	3.4	Ambient Pressure (Reference)	770
Ambient Temperature (Analyzer)	3.5	Ambient Pressure (Analyzer)	770

filter RH:	**%**
Ambient Humidity (Reference)	31.2
Ambient Humidity (Analyzer)	32.6

As-Left Diagnostics

Flow Rate:	16.64	L/min
Ambient Temperature:	3.4	°C
Barometric Pressure:	770	mmHg
Tape Pressure:		mmHg
Filter Relative Humidity:	31.2	%
Filter Temperature:	22.1	°C
Smart Inlet Heater Status:	On	
Measurement Cycle Time:	42	mins
Background Zero:	0	%
Analyzer Time:	13:04	
PC Time:	13:04	
Analyzer Date:	11-Feb	
PC Date:	11-Feb	

AGAT Laboratories

TSP Maintenance Log

TO BE COMPLETED/UPDATED MONTHLY

Maintenance Item	Frequency Due	Completed (Y/N)	Date Last Completed	Next Service Date
Nozzle and vane cleaning	2 Months	Y	2025-02-11	2025-03-30
Leak check	2 Months	Y	2025-02-11	2025-03-30
Flow system check	2 Months	Y	2025-02-11	2025-03-30
Clean capstan shaft and pinch roller	2 Months	Y	2025-02-11	2025-03-30
Thoroughly clean inlet	2 Months	Y	2025-02-11	2025-03-30
Download and save digital data and error log	2 Months	Y	2025-02-18	2025-03-30
Compare digital data to analog data	2 Months	Y	2025-02-18	2025-03-30
Check and set clock	2 Months	Y	2025-02-11	2025-03-30
Replace filter tape	2 Months	N	WLNG Staff	2025-03-30
Run SELF TEST	2 Months	Y	2025-02-11	2025-03-30
Download and verify settings file	2 Months	Y	2025-02-11	2025-03-30
Flow system audit and calibration	2 Months	Y	2025-02-11	2025-03-30
Ambient pressure, temperature and RH audit and calibration	2 Months	Y	2025-02-11	2025-03-30
Replace or clean pump muffler	12 Months	N		
Test smart heater	24 Months	N		
Perform 72-hour BKGD test	12 Months	N		
Clean internal debris filter	12 Months	N		
Remove and check membrane span foil	12 Months	N		
Beta detector count rate and dark count test	12 Months	N		
Clean vertical inlet tube	12 Months	N		
Test analog DAC output if necessary	12 Months	N		
Replace lithium battery if necessary	12 Months	N		
Rebuild vacuum pump	24 Months	N		
Replace nozzle o-ring	24 Months	N		
Replace pump tubing if necessary	24 Months	N		

AGAT Laboratories			eLog Report		
Station	WLNG, Woodfibre, BC		Project #		
Date	February 11-13, 2025	Time In	\	Time Out	\
Weather Conditions			Technician	BM	

On site for AQM station quarterly calibration
Leak check, passed
Pressure check, passed
Flow calibration, passed for TSP, PM10 and PM2.5
Ambient temperature check, passed
Shelter temperature check, passed
RH check, passed
BP check, passed

Cleaned sample inlets for PM2.5, PM10, TSP

Replaced TSP sampler with spare unit (display was not working)
Attempted to replace PM10 unit since output not working to PC, however the spare was not operational
> another spare unit will be sent to site for replacement during next visit

Quality System Forms

AGAT Laboratories — $NO\text{-}NO_2\text{-}NO_X$ Routine

Revision: 3.0
2025-02-19
Jgallwey

AMBIENT AIR ANALYZER CALIBRATION FORM

Instructions - Use this form to record calibration data and calculations. Choose the type of calibration using the drop down menu at the top of the sheet. Complete the site information and include equipment type and serial number (S/N). Fill in all relevant boxes and the acceptance criteria will determine if the calibration hasd passed or failed. If the calibration has failed make necessary correction and/or calibrate the instrument until the calibration passes.

Site Information

Company	Woodfibre LNG	Plant	Woodfibre LNG	Job #		
Location	Woodfibre, BC			Date	February 12, 2025	
				Start Time	6:40	10:00
				Last Cal Date:	November 27, 2024	Next Due: May 12, 2025

Calibrator & Monitor Information

Calibrator Information		Analyzer Information	
Calibrator M/M	Sabio	Analyzer M/M	42i
Calibrator S/N	08500312R	Analyzer S/N	707120758
Zero Air S/N	Zero Air Cylinder	Detection Principle	Chemiluminescence
Verification Date	16-Apr-24		

Calibration Standard

Calibration Standard	Type	ID Number	Expiry Date	NOx Conc.	NO Conc.	ppm ± 2% @ 35ºC	Tank Pressure	
NO, NOx	Cylinder	CC522261	29-Nov-25	51.33	50.84		1200	PSI

Analyzer Settings	Before Calibration	After Calibration
Concentration Range ppb	0-500 ppb	0-500 ppb
Background ppb		7.9 / 7.8
Coefficient		0.993 / 0.983
Sample Flow cc/min		0.557
Span Value NOX / NO2		414 / 405

Calibrator Flow Measurement (sccm)

Calibration Point	Average Cal Gas Flow	Total Flow	Average Dilution Air Flow
Zero	0.0	5000.0	5000.0
High (100%)	49.1	5000.0	4950.9
Middle (60%)	29.5	5000.0	4970.5
Low (30%)	14.8	5000.0	4985.2

Current Shelter Temp 23 ºC
Current Barometric Pressure 770 mm/hg

Calibration Data - NO_X

	Stability Start	15- Minute	12- Minute	9- Minute	6- Minute	3- Minute	Average	Calculated Stability |x| ppb
As Found Zero	6:40	-0.5	-0.5	-0.4	-0.5	-0.6	-0.5	0.1
As Found Span	7:00	502.0	502.0	502.0	502.0	501.0	501.8	0.4
After Zero Adjust	7:15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
After Span Adjust - 1	9:05	504.0	504.0	504.0	504.0	504.0	504.0	0.0
After Span Adjust - 2	9:20	299.0	299.0	300.0	299.0	300.0	299.4	0.5
After Span Adjust - 3	9:35	149.0	149.2	149.2	148.6	148.7	148.9	0.2

Set point	Dilution Air Flow Rate @ STP (corrected)	Calibration Gas Flow @ STP (corrected)	Calculated Conc. (Cc)	Analyzer Response	Correction Factor (Cc/Ci)	Point Error %	Slope Error (%)	Converted Data Response
As Found Zero	1098	0.0	0.0	-0.5	N/A	NA		-0.5
As Found Span	1087	10.8	504.1	501.8	1.0045	-0.5%		501.8
After Zero Adjust	1098	0.0	0.0	0.0	N/A	NA		0.0
After Span Adjust - 1	1087	10.8	504.1	504.0	1.0001	0.0%	1.2%	504.0
After Span Adjust - 2	1092	6.5	302.8	299.4	1.0115	-1.2%	2.5%	299.4
After Span Adjust - 3	1095	3.3	151.9	148.9	1.0201	-2.0%	3.9%	148.9

Intercept	1.694020
Correlation Coefficient	0.999985
Slope	1.008798

Calibration Data - NO

	Stability Start	15- Minute	12- Minute	9- Minute	6- Minute	3- Minute	Average	Calculated Stability |x| ppb
As Found Zero	6:40	-0.7	-0.7	-0.7	-0.8	-0.7	-0.7	0.0
As Found Span	7:00	501.0	501.0	501.0	501.0	501.0	501.0	0.0
After Zero Adjust	7:15	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0
After Span Adjust - 1	9:05	501.0	501.0	501.0	501.0	501.0	501.0	0.0
After Span Adjust - 2	9:20	301.0	301.0	301.0	301.0	300.0	300.8	0.4
After Span Adjust - 3	9:35	150.0	150.0	149.4	149.4	149.5	149.7	0.3

Set point	Dilution Air Flow Rate @ STP (corrected)	Calibration Gas Flow @ STP (corrected)	Calculated Conc. (Cc)	Analyzer Response	Correction Factor (Cc/Ci)	Point Error %	Slope Error (%)	Converted Data Response
As Found Zero	1098	0.0	0.0	-0.7	N/A	NA		-0.7
As Found Span	1087	10.8	499.2	501.0	0.9965	0.3%		501.0
After Zero Adjust	1098	0.0	0.0	0.0	N/A	NA		0.0
After Span Adjust - 1	1087	10.8	499.2	501.0	0.9965	0.3%	0.5%	501.0
After Span Adjust - 2	1092	6.5	300.0	300.8	0.9972	0.3%	0.6%	300.8
After Span Adjust - 3	1095	3.3	150.5	149.7	1.0055	-0.6%	1.7%	149.7

Intercept	0.598793
Correlation Coefficient	0.999998
Slope	1.007237

Calibration Data - NO_2

	Stability Start	15- Minute	12- Minute	9- Minute	6- Minute	3- Minute	Average	Calculated Stability |x| ppb
15 min ref	9:55	0.0	0.0	0.0	-1.0	-1.0	-0.4	0.5
400	10:10	441.0	442.0	444.0	444.0	444.0	443.0	1.3
300	10:25	228.0	228.0	229.0	229.0	229.0	228.6	0.5
150	10:40	115.0	115.0	116.0	116.0	116.0	115.6	0.5

Set point	Nox Response	NO Response	NO2 Calculated Conc.	NO2 Analyzer Conc.	Correction Factor (Cc/Ci)	Slope Error (%)	Converted Data Response
15 Min Reference	525.0	525.0	0.0	0.0	N/A	NA	-0.4
Adjusted GPT 400 O3	510.0	66.0	444.0	444.0	1.0000	1.2%	443.0
GPT 2 (200 cc O3)	518.0	289.0	229.0	229.0	1.0000	1.6%	228.6
GPT 3 (150 cc O3)	521.0	406.0	115.0	115.0	1.0000	2.3%	115.6
Zero	0.4	0.0	0.4	0.3	N/A	NA	1.2

Intercept	0.000000
Correlation Coefficient	0.999999
Slope	0.995406

Converter efficiency	100%

Acceptance Criteria - From Part B1 Ambient Air Quality Monitoring BC Field Sampling Manual

1) Instrument is adjusted to give a correction factor (Ccalculated / Cindicated) as close to 1.0 as possible.

2) Each calibration point must be within ±10% of the expected criteria

3) As found calibration point must be within ±10% of the expected criteria

4) Analyzer must run within ±10% of the manufacturer's specifications

5) Slope must be ≥ 0.90 and ≤ 1.10

6) Intercept must be = 3% of full range of analyzer

7) Correlation coefficient must be = 0.9950

8) Converter efficiency 96-104%

	NOx	NO	NO_2
As Found Span vs. Expected	-0.5%	0.3%	1.2%
	PASS	PASS	PASS
After Span Adjust - 1	1.2%	0.5%	1.2%
	PASS	PASS	PASS
After Span Adjust - 2	2.5%	0.6%	1.6%
	PASS	PASS	PASS
After Span Adjust - 3	3.9%	1.7%	2.3%
	PASS	PASS	PASS
Slope	1.009	1.007	0.995
	PASS	PASS	PASS
Intercept	1.69	0.60	0.00
	PASS	PASS	PASS
Correlation	1.000	1.000	1.000
	PASS	PASS	PASS

NOx	**According to BC MOE Guidelines this calibration has PASSED**
NO	**According to BC MOE Guidelines this calibration has PASSED**
NO2	**According to BC MOE Guidelines this calibration has PASSED**

Calibration Performed by: Brad Moyles

Comments: Routine Calibration

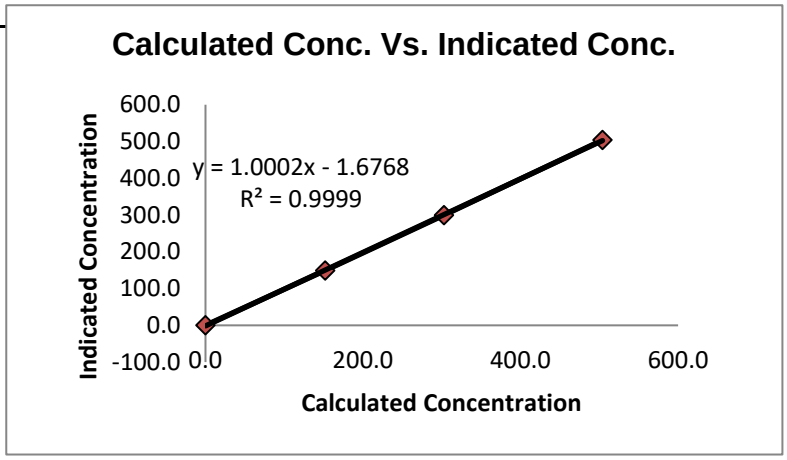
NOx - NO - NO2 Least Squares Calculations

Company: Woodfibre LNG
Date: 12-Feb-25
Analyzer: 42i
Units: ppb
Conc. Range: 0 - 500

Location: Woodfibre, BC
Job Number: 0.00E+00

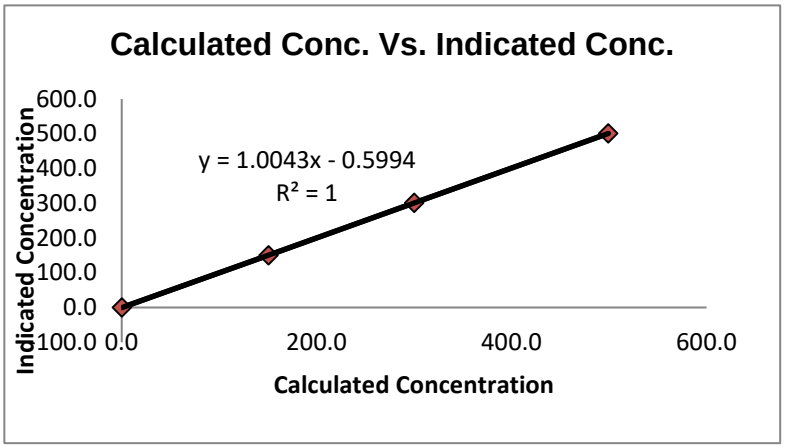
NOx	
Calculated Concentration	Converted Data Response
504.1	504.0
302.8	299.4
151.9	148.9
0.0	0.0

Slope	1.0088
Intercept	1.6940
Correlation	1.0000



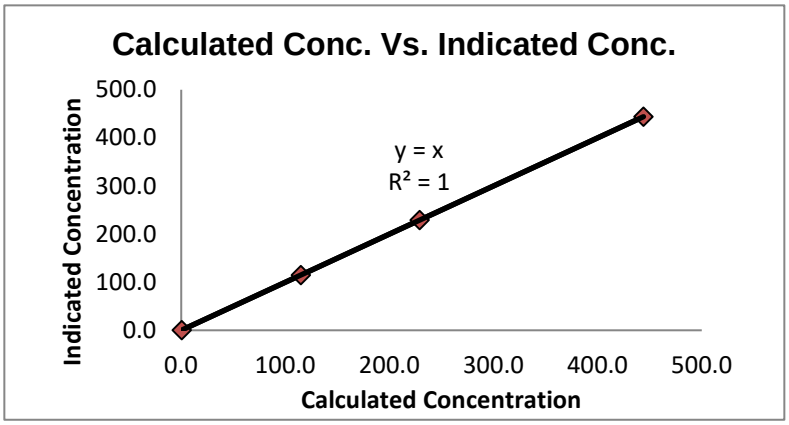
NO	
Calculated Concentration	Converted Data Response
499.2	501.0
300.0	300.8
150.5	149.7
0.0	0.0

Slope	1.0072
Intercept	0.5988
Correlation	1.0000



NO_2	
NO Decrease	NO_2 increase
444.0	444.0
229.0	229.0
115.0	115.0
0.4	0.4

Slope	0.9954
Intercept	0.0000
Correlation	1.0000



AGAT Laboratories — Analyzer Maintenance Log

Thermo Scientific 450i/43i/42i/45C/43C

Maintenance Item	Frequency Due	Completed (Y/N)	Date Last Completed	Date of Next Check/Service
In-line particulate filter changeout	Bi-Monthly	Y	2025-02-12	2025-04-30
Visual inspection and cleaning (loose connectors and fittings, cracked/clogged Teflon lines, excessive dirt and dust inside)	Bi-Monthly	Y	2025-02-12	2025-04-30
Leak test	Bi-Monthly	Y	2024-11-27	2025-04-30
Fan filter inspection and cleaning	Bi-Monthly	Y	2025-02-12	2025-04-30
Analyzer pump check (flow check) and replacement	Annually	N		2025-09-03
Perm tube check (stability) and replacement	Annually	Y	2024-09-03	
Zero charcoal replaced	Annually	Y	2024-09-03	
SO2 scrubber beads replaced - 450i/45C ONLY	Annually			2025-09-03
Inspect and replace spent absorbent material (Drierite, silica gel) - 42i ONLY	Annually			2025-09-03

AGAT Laboratories

eLog Report

Station	Woodfibre LNG	Project #	
Date	February 12, 2025	Time In	6:40
Time Out	10:00		
Weather Conditions		Technician On Site	BM

LOG DETAILS

Installed silica gel scrubber inside analyzer to help remove moisture in the air sample due to close proximity to the ocean

Replaced Zero Air Scrubber with a Canister that has half Charcoal and half Purifil.

Routine Calibration

As Founds NO, Nox	NO2 GPT
	GPT As Found = PASS
	Converter Efficiency 100%
Calibration:	
Point 1, 2, 3 = PASS	
INTERNAL Z/S	INTERNAL Z/S

Meteorological checks (DRDAS vs Actual)

AT (Δ°C)	NA	ST (Δ°C)	NA	WS (Δkm/h)	1	WD	okay
Visual check	Y	Visual check	Y	Cups turning	Y	Vane free	Y
Calibrated	NA	Calibrated	NA	Calibrated	NA	Calibrated	NA

Station Checklist

Flagged in/out of Calibration Mode	Y	Sample Lines Reconnected	Y
Manifold Flow Check	Y	Manifold Clean	Y
Replaced Sample Filters	Y	PC Fan Running	Y
UPS Systems Functioning	Y	Station Housekeeping	Y
Data Backed Up and Polling Active	Y	Monitor Off	Y
Check DR DAS Date/Time	Y	HVAC Check	Y

Appendix D Air Quality Exceedance Report

Stantec

Memo

To:	Ross McCann (Regulatory Project Specialist), Ryan Schucroft (Environmental Site Lead), Jackie Boruch (Environmental Site Lead), Ian McAllister (Compliance Manager) Woodfibre LNG General Partner Inc.	From:	Dr. Kashif Choudhry, Senior Atmospheric Engineer Dan Jarratt Air Quality Technical Area Leader Canada Stantec Consulting Ltd.
Project/File:	123222160 12.2025.300	Date:	March 14, 2025

Reference: WLNG Air Quality Exceedance Report for PM_{10} – February 20, 2025

Executive Summary

This report investigates the exceedance of the 24-hour British Columbia Ambient Air Quality Objectives (BCAQO) for PM_{10}, which has a threshold of 50 µg/m³. PM_{10} concentrations, recorded at the Woodfibre LNG Air Quality Monitoring Station (AQMS) using Met One Instrument BAM 1020s, reached a 24-hour average of 53.0 µg/m³, with elevated hourly concentrations noted from 10:00 to 18:00 PDT. Wind conditions, regional PM_{10} data, and onsite work activities were analyzed to determine the likely sources of air quality exceedance, which were attributed to project-related activities. Based on the locations of the emission sources and the wind direction during the period of elevated concentrations, the exceedance of the 24-hour PM_{10} BCAQO was primarily attributed to emissions from construction activities, including rock crushing, hauling, and stockpiling work. Despite prevailing winds from the northwest, no dust plumes were observed or reported reaching the Floatel. The exceedance is primarily linked to project-related activities.

1 Introduction

This report assesses the PM_{10} exceedance observed on February 20, 2025, at the Woodfibre LNG AQMS and examines the environmental and project-related factors contributing to the elevated concentrations. This analysis considers local meteorology data, onsite activities, and regional air quality data comparisons to identify the potential sources of the elevated PM_{10} concentrations. The Langdale Elementary regional ambient air quality monitoring station provides off-site PM_{10} concentrations for comparison.

2 Data Collection and Methodology

- **Guideline Criteria Exceeded:**
  - 24-hour BC Air Quality Objective for PM_{10}: 50 µg/m³
- **Actual Reading recorded at Woodfibre LNG AQMS:**
  - PM_{10} (24-hr average): 53.0 µg/m³

Elevated PM10 hourly concentrations were recorded from 10:00 to 18:00 hours.

- **Climatic Conditions:**
  - Wind Speed: 24-hour average of 0.7 m/s; range of 0.4 – 1.0 m/s
  - Wind Direction: Predominantly from the northwest
  - Total Precipitation (24-hours): 5.0 mm

Data collection included hourly PM_{10} and TSP readings from the Woodfibre LNG AQMS, hourly wind speed and wind direction measurements from Woodfibre LNG meteorology station, and regional PM_{10} data from the British Columbia Ministry of Environment (BC MOE) Langdale Elementary air quality monitoring station. A North American smoke forecast from firesmoke.ca was also reviewed to assess the potential impacts of wildfire smoke. Onsite activity logs provided insight into the dust-generating activities that may have influenced the local ambient air quality.

3 Air Quality Exceedance Investigation

The observed PM_{10} air quality exceedances was compared to regional air quality and local weather stations.

Figure 1 shows that PM_{10} concentrations recorded at the Woodfibre LNG air quality station on February 20, 2025, did not correlate with wind speed. The maximum hourly average wind speed measured at the onsite Meteorology Station was 1.0 m/s, blowing predominantly from the northwest quadrant (Figure 2). Figure 3 compares the PM_{10} concentrations recorded at the Woodfibre LNG AQMS to the regional Langdale Elementary air quality station operated by BC MOE. The PM_{10} concentrations at the Woodfibre LNG site were higher than those recorded at the Langdale Elementary regional air quality station, particularly between 10:00 and 18:00 hours. Figure 3 also shows that the 24-hour average PM_{10} concentration recorded at AQMS (53 µg/m³) was approximately six times higher than at Langdale Elementary (8.3 µg/m³), further demonstrating the overall difference in air quality between the two locations.

Woodfibre LNG informed Stantec of various dust-generating activities around the AQMS in February 2025. During the day shift (07:00 to 17:00), activities included loading and hauling sifted rock material from the 1100 Area (northeast of AQMS) to the 4200 Area (north-northwest of AQMS) for crushing and processing, hammering oversized rock, and rock-breaking operations. In the 4100 Area (northwest of AQMS, highlighted with a red circle in Figure 4), Type D material was hauled to the firewater (FW) tank footprint to facilitate crushing operations, and a dozer managed and stacked the stockpile. During the night shift (19:00 to 05:00), crushing and rock-breaking continued in the 4200 Area (north-northwest of AQMS). Woodfibre LNG reported that no visible dust plumes were observed or reported on February 20, 2025. These operations contributed to the observed PM_{10} exceedance at the AQMS station (see Figure 4 for a summary of the onsite work activities across the construction site).

Figure 2 presents a wind rose showing the predominant wind direction during February 20, 2025, indicating wind patterns that likely dispersed particulates (fugitive dust) from the north-northwest. This aligns with dust-generating activities reported near the AQMS.

The North American smoke forecast at firesmoke.ca did not indicate that wildfire smoke affected air quality at the Woodfibre LNG Site on February 20, 2025 (Figure 5). For reference, the 4100 Area (highlighted with a red circle in Figure 4) is located northwest of the AQMS, with the Floatel positioned to the south-southeast of the 4100 Area and west-southwest of the AQMS station. On February 20, 2025, the wind predominantly blew from the northwest quadrant toward the AQMS station. Given this wind direction, blowing dust from the 4100 Area (highlighted with a red circle), it is likely that it could have been transported toward the Floatel. However, no complaints were received by Woodfibre LNG from the Floatel residents.

4 Conclusion

In conclusion, the PM_{10} air quality exceedance recorded at the Woodfibre LNG site on February 20, 2025, can be attributed to dust-generating project-related construction activities, such as rock crushing, mucking, excavation, and hauling of material in the 4100 Area. Predominant winds from the northwest quadrant likely contributed to the increased PM_{10} concentrations observed by the AQMS during this period. Therefore, the PM_{10} exceedance is primarily attributable to the construction project-related sources.

Regards,

Stantec Consulting Ltd.

Dr. Kashif Choudhry Ph.D., P.Eng.
Senior Atmospheric Engineer
Phone: (306) 667-2588
Mobile: (306) 717-2435
Kashif.Choudhry@stantec.com

Dan Jarratt EP, P.Eng. (AB, BC)
Air Quality Technical Area Leader Canada
Phone: (604) 235-1897
Mobile: (236) 818-4067
Dan.Jarratt@statnec.com

stantec.com

Attachments: A: Figures

Reference: WLNG Air Quality Exceedance Report for PM10 – February 20, 2025

Attachment A Figures

Reference: WLNG Air Quality Exceedance Report for PM10 – February 20, 2025

Figure 1 PM_{10} concentrations and wind speed at the Woodfibre LNG site on February 20, 2025

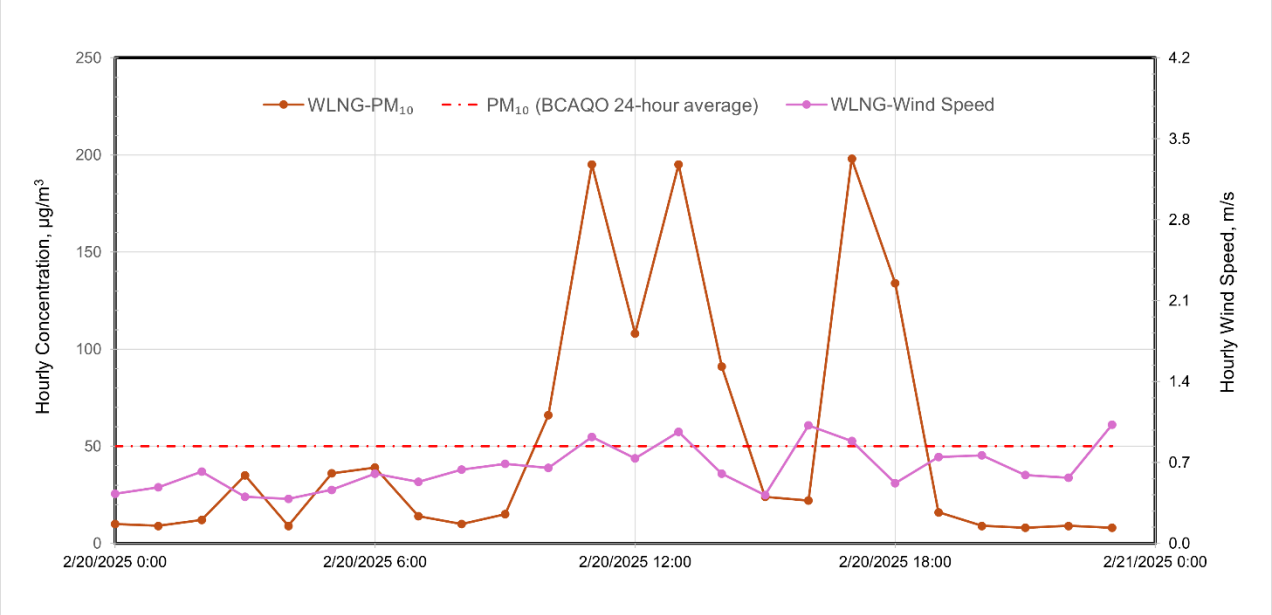
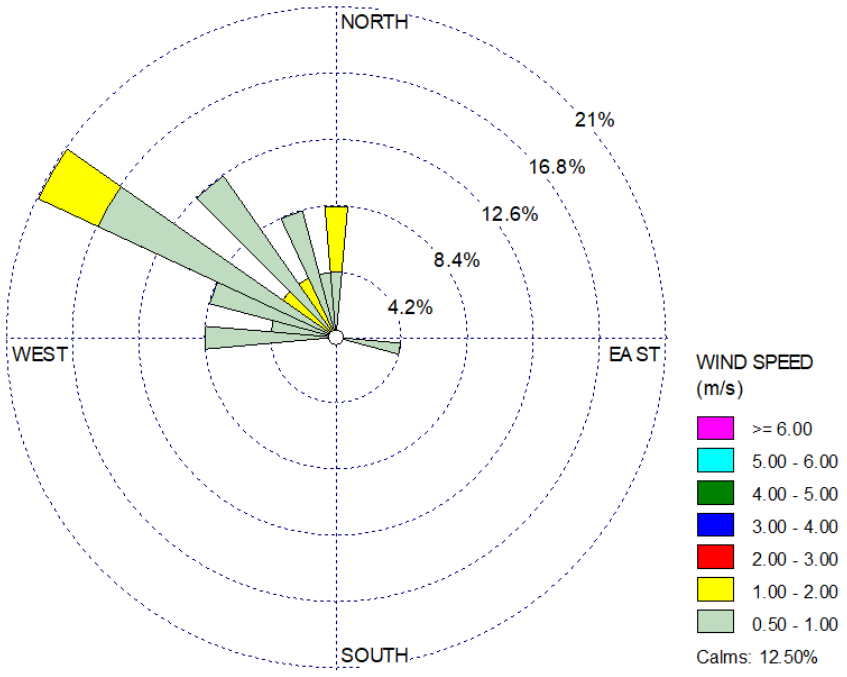
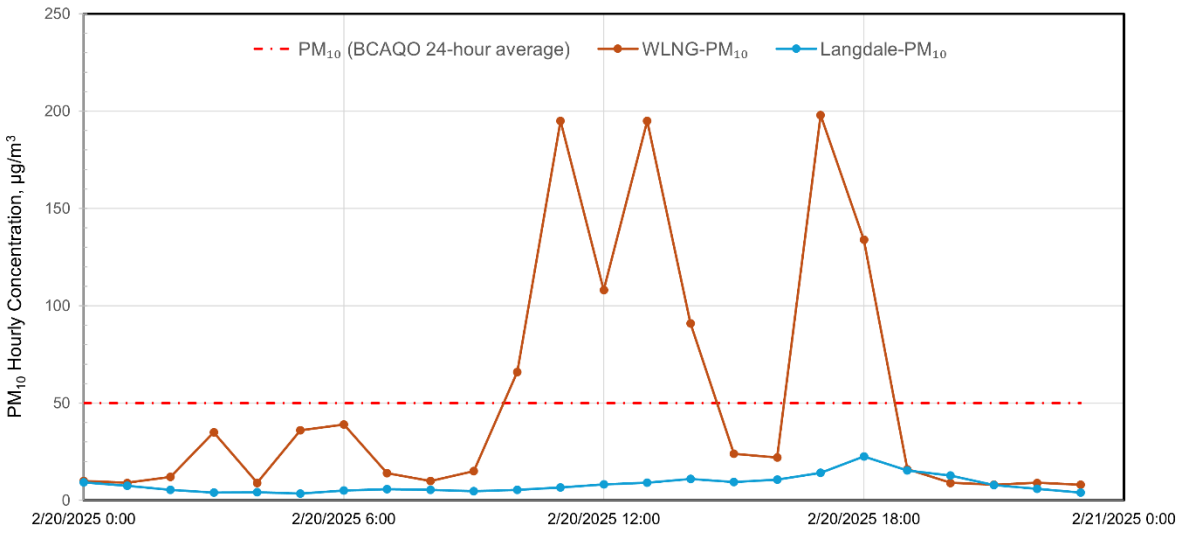


Figure 2 Windrose for the Woodfibre LNG Meteorology Station, February 20, 2025.



Reference: WLNG Air Quality Exceedance Report for PM10 – February 20, 2025

Figure 3 PM_{10} concentrations at the Woodfibre LNG site and the Langdale Elementary Regional BC MOE Station on February 20, 2025.



Reference: WLNG Air Quality Exceedance Report for PM10 – February 20, 2025

Figure 4 Details of the Woodfibre LNG Onsite Daily Work (Construction) Activities for February 20, 2025.

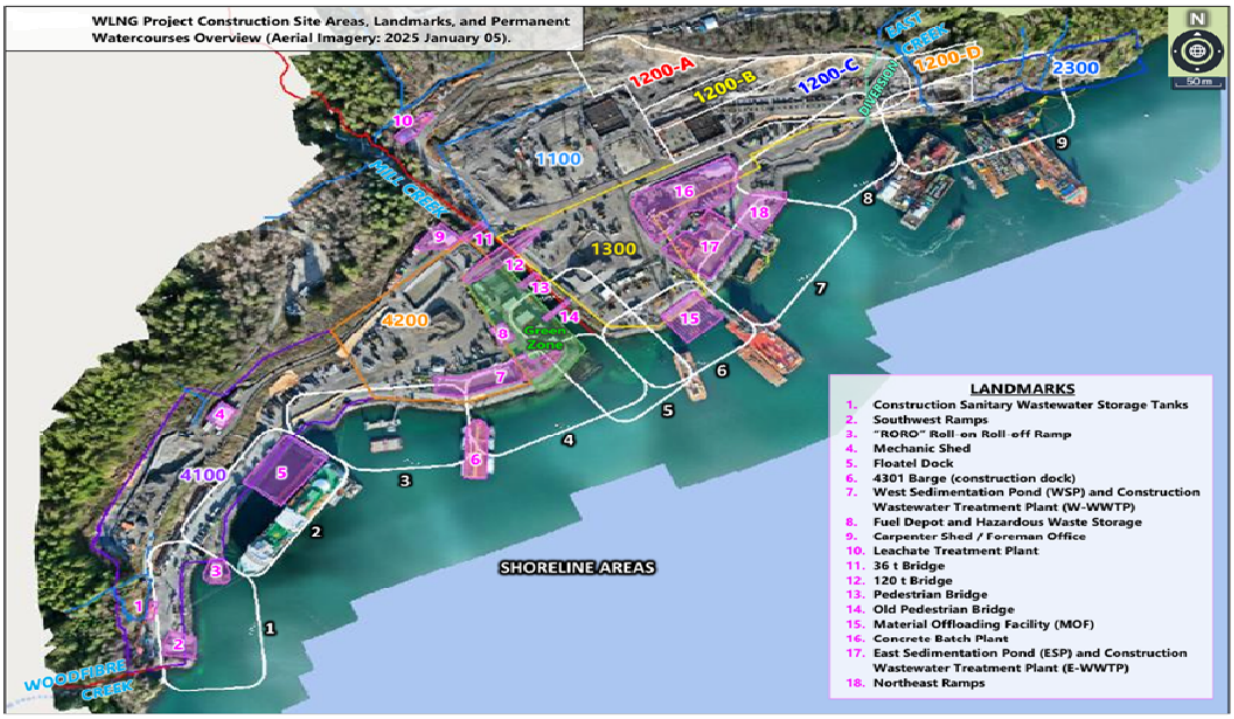
On-site Work Activities

Day Shift (7am-5pm)

- Continued loading rock trucks with sifted rock material in the 1100 Area, the material was hauled to the LT Subcontractor's (Kode) stockpile in the 4200 Area to be crushed and processed into Type D material.
- An excavator started mucking and licking bedrock with a tire in the 1100 Area, all oversized material was cast into stockpile to be hammered.
- An excavator continued to hammer oversized rock in the 1100 Aera.
- An excavator continued loading rock trucks with Type D material from the LT Subcontractor's (Kode) stockpile in the 4200 Area, the material was hauled to the FW tank footprint in the 4100 Area to help facilitate the crushing operations.
- The Dozer continued managing and stacking the stockpile in the 4100 Area.
- An excavator hammered the exposed foundation in the trench for OUT-10.

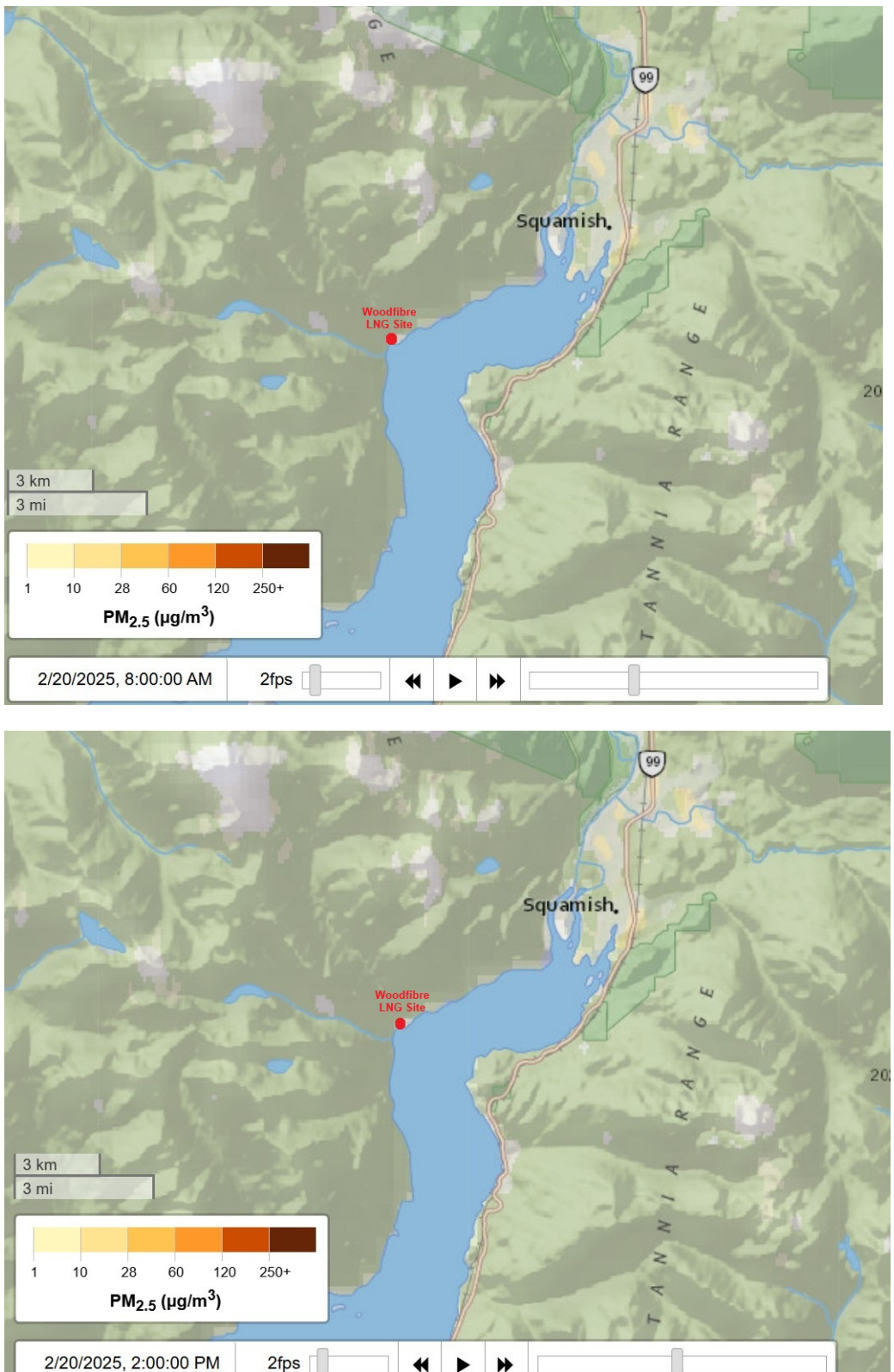
Night Shift (7pm-5am)

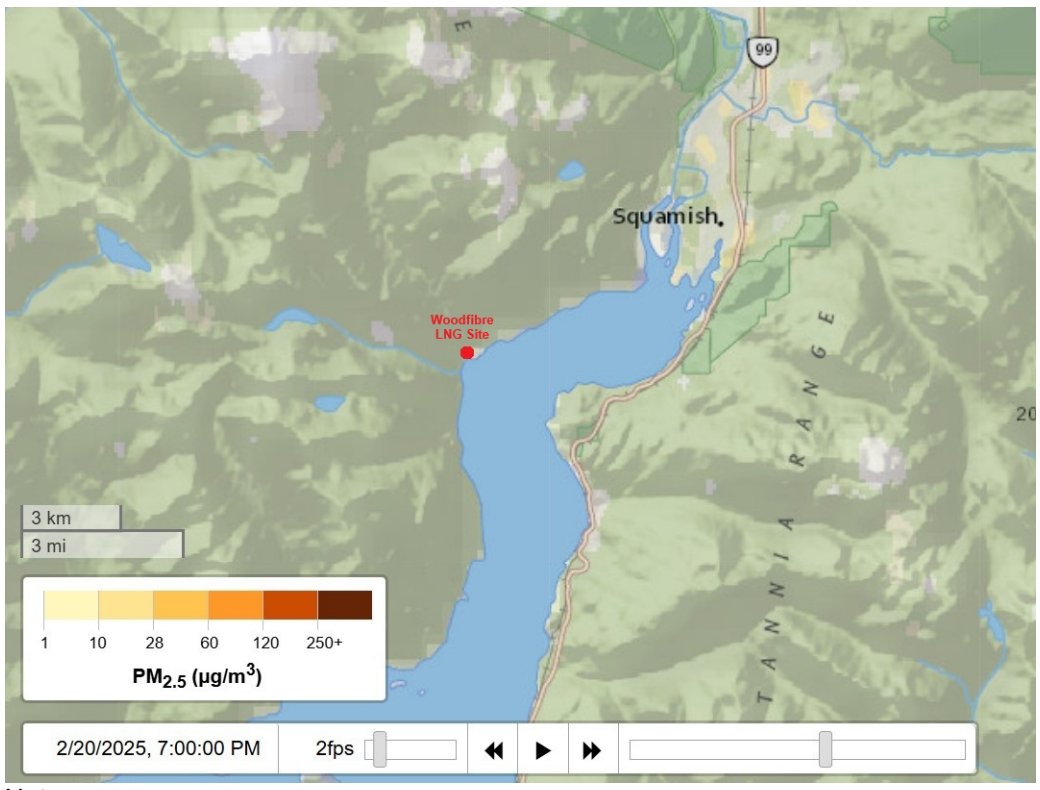
- Area 4200: Crushing ad rock breaking



Reference: WLNG Air Quality Exceedance Report for PM10 – February 20, 2025

Figure 5 Smoke modelling output (forecast for 8:00 am, 2:00 pm, and 7:00 pm) for February 20, 2025.





Note
The timestamps in the figure are based on Saskatchewan time, which observes Central Standard Time (CST) year-round, with no Daylight-Saving Time (DST) adjustment.

Appendix E Weekly AQMS Reports

WLNG AQMS - Weekly Reporting

Reporting Period

This AQMS Weekly report covers the period from February 3 to February 9, 2025.

Objective

This report summarizes the air quality monitoring data for the week of February 3 to February 9, 2025. This report includes an analysis of pollutants such as $PM_{2.5}$, PM_{10}, TSP, and NO_2, highlighting any significant dust events, alerts from the Air Quality Monitoring Station (AQMS), and changes to the monitoring network and mitigation measures. Additionally, the report documents the results of any investigations into alerts or equipment failures, detailing the actions taken or plans for resolution because these are reasonable efforts to maintain compliance with environmental standards and support the ongoing air quality management efforts.

Summary of Onsite Air Quality and Meteorological Data Collected

This section presents four summary tables for the air quality and meteorology data. The data is based on a Level 0 verification, indicating that it has undergone preliminary checks for completeness and accuracy.

Table 1: Summary of Daily Results for the Past 7 Days

Date	$PM_{2.5}$ (µg/m³)			PM_{10} (µg/m³)			TSP (µg/m³)			NO_2 (ppb)		
	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg
Feb 3	3	12	6.6	8	40	18.2	8	87	31.9	1.6	12.3	7.5
Feb 4	3	11	6.8	8	79	19.7	9	236	48.5	0.0	22.4	6.6
Feb 5	3	13	6.0	8	29	13.4	13	81	28.9	0.0	20.7	6.5
Feb 6	2	10	5.5	5	28	11.3	11	81	28.3	1.8	13.0	6.9
Feb 7	1	9	5.1	3	29	11.7	9	81	28.3	0.0	12.4	5.4
Feb 8	3	8	5.1	5	12	8.5	10	31	16.4	0.0	5.5	2.0
Feb 9	0	9	4.4	5	18	9.1	11	55	18.7	0.7	7.4	3.6

Note: The British Columbia Air Quality Objectives (AQO) are:

- $PM_{2.5}$: 25 µg/m³ - Achievement based on annual 98th percentile of daily average, averaged over one year.
- PM_{10}: 50 µg/m³ - Achievement based on the daily (24-hr) average.
- TSP: 120 µg/m³ - Achievement based on the daily (24-hr) average.
- NO_2: 60 ppb - Achievement based on annual 98th percentile of daily 1-hour average maximum (D1HM), averaged over three consecutive years.

Bold Italic numbers indicates that the 24-hour average for PM or one or more 1-hour maximum values for NO_2 exceed the respective threshold values.

Table 2: Weekly Averages Summary – $PM_{2.5}$, PM_{10}, TSP and NO_2

Pollutant	units	1-hr Min	1-hr Max	Weekly average	Trigger Limits (2/3 of the AQO)	Time Above Trigger Limit (Days)	Time Above AQO (Days)
$PM_{2.5}$	µg/m³	0	13	5.7	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	3	79	13.1	33.3 (24-hr avg)	0	0
TSP	µg/m³	8	236	28.7	80 (24-hr avg)	0	0
NO_2	ppb	0.0	22.4	5.5	40 (1-hr avg max)	0	0

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (ºC)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
Feb 3	11.9	3.5	-7.3	-3.9	-5.7	0.0
Feb 4	9.9	2.2	-6.6	-1.0	-4.3	0.0
Feb 5	8.9	2.1	-7.5	-1.3	-4.5	0.0
Feb 6	9.7	1.9	-5.9	1.4	-3.2	0.6
Feb 7	7.3	1.7	-6.0	3.1	-1.9	2.2
Feb 8	5.6	1.3	-1.6	5.2	0.2	4.8
Feb 9	7.2	1.3	-3.5	1.8	-1.0	1.4

Table 4: Passive SO_2 and VOC Sampling

Date	Sampled Swapped (Yes/No)	Chain of Custody (COC) Submitted (Yes/No)	Sample Submitted to AGAT Lab (Yes/No)	Lab Results Received (Yes/No)	Lab Results Summary or Comments
3-Feb to 9-Feb	No	No	No	No	No sample swap or lab analysis was performed during this period.

Note: This table mostly contains "No" entries because SO_2 and VOC passive samples are swapped on a monthly basis, and this reporting period may not coincide with the sampling schedule. Passive samples were swapped on January 7, 2025.

On-Site Dust Observation Report and Work Activities Details

Dust Observation Report Summary:

For this report: No dust observation report was received for this period.

Work Activities Details:

According to the Daily Construction Reports from Feb 3 to Feb 9, construction activities include, sifting, breaking and loading out rock from Area 1100, hauling to the Kode Crusher, breaking rock in Area 4200 and Kode Area.

Summary of Daily Reports and Action Taken

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	No AQ exceedances recorded for this period.	No Action required.	Not Applicable.
AQ Complaints	No AQ complaints received during this period.	No Action required.	Not Applicable.
Alerts from the AQMS	No alarms or instrument break-down was reported from AGAT during this period.	No Action required.	Not Applicable.
Changes to the Monitoring Network	No changes to the monitoring network during this period.	Not Applicable.	Not Applicable.
Changes to Mitigation Measures	No changes to mitigation measures during this period.	Not Applicable.	Not Applicable.

In summary, all instruments operated as intended, successfully collecting air quality data throughout the reporting period. No air quality exceedances of the British Columbia Air Quality Objectives were recorded, and no further investigation was required.

WLNG AQMS - Weekly Reporting

Reporting Period

This AQMS Weekly report covers the period from February 10 to February 16, 2025.

Objective

This report summarizes the air quality monitoring data for the week of February 10 to February 16, 2025. This report includes an analysis of pollutants such as $PM_{2.5}$, PM_{10}, TSP, and NO_2, highlighting any significant dust events, alerts from the Air Quality Monitoring Station (AQMS), and changes to the monitoring network and mitigation measures. Additionally, the report documents the results of any investigations into alerts or equipment failures, detailing the actions taken or plans for resolution because these are reasonable efforts to maintain compliance with environmental standards and support the ongoing air quality management efforts.

Summary of Onsite Air Quality and Meteorological Data Collected

This section presents four summary tables for the air quality and meteorology data. The data is based on a Level 0 verification, indicating that it has undergone preliminary checks for completeness and accuracy.

Table 1: Summary of Daily Results for the Past 7 Days

Date	$PM_{2.5}$ (µg/m³) [1]			PM_{10} (µg/m³)			TSP (µg/m³) [2]			NO_2 (ppb) [3]		
	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg
10 Feb	1	15	5.3	6	30	12.0	10	67	25.8	0.2	11.3	3.9
11 Feb	1	9	5.1	6	28	12.9	-	-	-	0.0	4.0	1.0
12 Feb	0	13	3.9	4	14	8.8	-	-	-	-	-	-
13 Feb	0	15	5.5	6	17	9.8	-	-	-	4.3	15.9	9.6
14 Feb	3	12	7.3	8	62	14.5	-	-	-	2.9	26.2	13.8
15 Feb	1	13	6.5	7	66	15.3	-	-	-	1.4	15.8	8.7
16 Feb	1	20	6.3	3	235	28.9	-	-	-	1.7	19.1	8.0

Note: The British Columbia Air Quality Objectives (AQO) are:

- $PM_{2.5}$: 25 µg/m³ - Achievement based on annual 98th percentile of daily average, averaged over one year.
- PM_{10}: 50 µg/m³ - Achievement based on the daily (24-hr) average.
- TSP: 120 µg/m³ - Achievement based on the daily (24-hr) average.
- NO_2: 60 ppb - Achievement based on annual 98th percentile of daily 1-hour average maximum (D1HM), averaged over three consecutive years.

Bold Italic numbers indicates that the 24-hour average for PM or one or more 1-hour maximum values for NO_2 exceed the respective threshold values.

[1] As of February 11, the BAM $PM_{2.5}$ instrument's sampling time was changed from 42 minutes to 50 minutes. Since then, it has been operating as a non-designated method for $PM_{2.5}$ monitoring.

[2] Data is unavailable due to the TSP BAM sampler being unable to collect valid data during this period.

[3] NO_2 valid data available on February 12 did not meet the 75% requirement due to quarterly maintenance and calibration.

Table 2: Weekly Averages Summary – $PM_{2.5}$, PM_{10}, TSP and NO_2

Pollutant	units	1-hr Min	1-hr Max	Weekly average	Trigger Limits (2/3 of the AQO)	Time Above Trigger Limit (Days)	Time Above AQO (Days)
$PM_{2.5}$	µg/m³	0	20	5.7	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	3	235	14.6	33.3 (24-hr avg)	0	0
TSP [1]	µg/m³	10	67	25.8	80 (24-hr avg)	0	0
NO_2	ppb	0.0	26.2	7.5	40 (1-hr avg max)	0	0

Note: [1] The TSP weekly average is based on data collected from a single day, February 10, 2025.

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (ºC)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
10 Feb	9.8	2.8	-5.6	4.0	-2.1	0.2
11 Feb	8.5	2.1	-6.6	2.3	-3.1	0.2
12 Feb	6.8	1.5	-6.1	4.3	-1.9	0.0
13 Feb	7.8	2.0	-4.3	7.3	0.5	0.0
14 Feb	6.4	1.4	-1.8	7.8	1.7	0.0
15 Feb	4.4	0.9	-0.5	2.0	1.0	4.2

16 Feb	3.7	0.9	0.4	4.8	2.2	6.6

Table 4: Passive SO_2 and VOC Sampling

Date	Sampled Swapped (Yes/No)	Chain of Custody (COC) Submitted (Yes/No)	Sample Submitted to AGAT Lab (Yes/No)	Lab Results Received (Yes/No)	Lab Results Summary or Comments
10-Feb to 16-Feb	No	No	No	No	No sample swap or lab analysis was performed during this period.

Note: This table mostly contains "No" entries because SO_2 and VOC passive samples are swapped on a monthly basis, and this reporting period may not coincide with the sampling schedule. Passive samples were swapped on February 7, 2025, and shipped to AGAT Labs.

On-Site Dust Observation Report and Work Activities Details

Dust Observation Report Summary:

For this report: No dust observation report was received for this period.

Work Activities Details:

According to the Daily Construction Reports from Feb 10 to Feb 16, construction activities include, breaking and sifting in the Area 1100, breaking rock in Area 4200, breaking and stacking material in the KODE area, backfilling in the MOF area and Area 4100 hole.

Summary of Daily Reports and Action Taken

AGAT Labs swapped and completed the quarterly calibration of the TSP BAM unit on February 11, 2025. However, the TSP BAM sampler has been unable to collect valid data since February 11, and AGAT is scheduling AQMS visit to resolve the issue with the TSP BAM air sampler. The $PM_{2.5}$ BAM and NO-NO_2-NO_x gas analyzer units were calibrated on February 12, 2025, and the PM_{10} BAM was calibrated on February 13, 2025. Currently, AGAT is unable to collect data remotely from the PM_{10} BAM due to a communication issue. WLNG field personnel will manually retrieve data from the PM_{10} BAM during weekly checks and send it to AGAT for review.

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	No AQ exceedances recorded for this period.	No Action required.	Not Applicable.
AQ Complaints	No AQ complaints received during this period.	No Action required.	Not Applicable.
Alerts from the AQMS	No alarms or instrument break-down was reported from AGAT during this period.	No Action required.	Not Applicable.
Changes to the Monitoring Network	No changes to the monitoring network during this period.	Not Applicable.	Not Applicable.
Changes to Mitigation Measures	No changes to mitigation measures during this period.	Not Applicable.	Not Applicable.

In summary, all instruments successfully collected air quality data throughout the reporting period, except for the TSP BAM sampler, which has not collected valid data since February 11, 2025. As of February 11, the BAM $PM_{2.5}$ instrument's sampling time was changed from 42 minutes to 50 minutes. Since then, it has been operating as a non-designated method for $PM_{2.5}$ monitoring. A site visit is planned for March 25 to March 28 to swap the malfunctioning TSP unit with the spare BAM TSP unit and adjust the BAM $PM_{2.5}$ sampling time from 50 minutes to 42 minutes to meet the United States Environmental Protection Agency (US EPA) Federal Equivalent Method (FEM) requirements for $PM_{2.5}$ monitoring. No air quality exceedances of the British Columbia Air Quality Objectives were recorded, and no further investigation was required.

WLNG AQMS - Weekly Reporting

Reporting Period

This AQMS Weekly report covers the period from February 17 to February 23, 2025.

Objective

This report summarizes the air quality monitoring data for the week of February 17 to February 23, 2025. This report includes an analysis of pollutants such as $PM_{2.5}$, PM_{10}, TSP, and NO_2, highlighting any significant dust events, alerts from the Air Quality Monitoring Station (AQMS), and changes to the monitoring network and mitigation measures. Additionally, the report documents the results of any investigations into alerts or equipment failures, detailing the actions taken or plans for resolution because these are reasonable efforts to maintain compliance with environmental standards and support the ongoing air quality management efforts.

Summary of Onsite Air Quality and Meteorological Data Collected

This section presents four summary tables for the air quality and meteorology data. The data is based on a Level 0 verification, indicating that it has undergone preliminary checks for completeness and accuracy.

Table 1: Summary of Daily Results for the Past 7 Days

Date	$PM_{2.5}$ (µg/m³) [1]			PM_{10} (µg/m³)			TSP (µg/m³) [2]			NO_2 (ppb)		
	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg
17 Feb	1	13	5.5	6	91	18.6	-	-	-	0.0	17.9	7.4
18 Feb	2	12	6.1	8	87	17.9	-	-	-	3.5	20.5	10.9
19 Feb	3	15	8.2	7	113	30.1	-	-	-	4.7	31.7	12.3
20 Feb	1	23	9.5	8	198	***53.0***	-	-	-	6.8	34.7	16.4
21 Feb	0	8	3.7	8	16	11.3	-	-	-	6.0	29.1	14.6
22 Feb	2	12	7.5	8	80	21.6	-	-	-	8.9	33.9	19.5
23 Feb	2	12	6.3	5	93	16.5	-	-	-	0.0	25.2	13.0

Note: The British Columbia Air Quality Objectives (AQO) are:

- $PM_{2.5}$: 25 µg/m³ - Achievement based on annual 98th percentile of daily average, averaged over one year.
- PM_{10}: 50 µg/m³ - Achievement based on the daily (24-hr) average.
- TSP: 120 µg/m³ - Achievement based on the daily (24-hr) average.
- NO_2: 60 ppb - Achievement based on annual 98th percentile of daily 1-hour average maximum (D1HM), averaged over three consecutive years.

Bold Italic numbers indicates that the 24-hour average for PM or one or more 1-hour maximum values for NO_2 exceed the respective threshold values.

[1] As of February 11, the BAM PM2.5 instrument's sampling time was changed from 42 minutes to 50 minutes. Since then, it has been operating as a non-designated method for PM2.5 monitoring.

[2] Data is unavailable due to the TSP BAM sampler being unable to collect valid data during this period.

Table 2: Weekly Averages Summary – $PM_{2.5}$, PM_{10}, TSP and NO_2

Pollutant	units	1-hr Min	1-hr Max	Weekly average	Trigger Limits (2/3 of the AQO)	Time Above Trigger Limit (Days)	Time Above AQO (Days)
$PM_{2.5}$	µg/m³	0	23	6.7	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	5	198	24.1	33.3 (24-hr avg)	1	1
TSP [1]	µg/m³	-	-	-	80 (24-hr avg)	-	-
NO_2	ppb	0.0	34.7	13.4	40 (1-hr avg max)	0	0

Note: [1] Data is unavailable due to the TSP BAM sampler being unable to collect valid data during this period.

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (ºC)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
17 Feb	4.9	1.0	1.4	10.0	4.3	0.0
18 Feb	6.0	0.9	2.5	8.8	4.7	0.4
19 Feb	7.0	1.1	3.1	8.2	4.8	37.0
20 Feb	3.4	0.7	3.8	8.0	5.6	5.0
21 Feb	4.4	0.9	3.9	5.0	4.4	51.8
22 Feb	6.4	1.0	4.2	8.4	5.4	53.2

23 Feb	13.9	1.5	4.4	10.6	7.3	13.4

Table 4: Passive SO_2 and VOC Sampling

Date	Sampled Swapped (Yes/No)	Chain of Custody (COC) Submitted (Yes/No)	Sample Submitted to AGAT Lab (Yes/No)	Lab Results Received (Yes/No)	Lab Results Summary or Comments
17-Feb to 23-Feb	No	No	No	No	No sample swap or lab analysis was performed during this period.

Note: This table mostly contains "No" entries because SO_2 and VOC passive samples are swapped on a monthly basis, and this reporting period may not coincide with the sampling schedule. Passive samples were swapped on February 7, 2025, and shipped to AGAT Labs.

On-Site Dust Observation Report and Work Activities Details

Dust Observation Report Summary:

For this report: No dust observation report was received for this period.

Work Activities Details:

According to the Daily Construction Reports from Feb 17 to Feb 23, construction activities include, breaking rock in Area 1100 and Kode area, hauling and sorting rock from the Area 1100 to Area 4200, offloading the Type D from the barge to Area 4100, backfilling in MOF and Area 4100, piping excavation for FIWP-002, NCS water management at the east and west ponds, wash car top ups, site clean-up and fueling ongoing.

Summary of Daily Reports and Action Taken

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	An air quality exceedance was recorded on February 20, 2025, with a PM_{10} value of 53.0 µg/m³, which was greater than the BCAQO.	AQ exceedance report was prepared.	Completed on March 17, 2025.
AQ Complaints	No AQ complaints received during this period.	No Action required.	Not Applicable.
Alerts from the AQMS	No alarms or instrument break-down was reported from AGAT during this period.	No Action required.	Not Applicable.
Changes to the Monitoring Network	No changes to the monitoring network during this period.	Not Applicable.	Not Applicable.
Changes to Mitigation Measures	No changes to mitigation measures during this period.	Not Applicable.	Not Applicable.

In summary, all instruments successfully collected air quality data throughout the reporting period, except for the TSP BAM sampler, which has not collected valid data since February 11, 2025. As of February 11, the BAM $PM_{2.5}$ instrument's sampling time was changed from 42 minutes to 50 minutes. Since then, it has been operating as a non-designated method for $PM_{2.5}$ monitoring. A site visit is planned for March 25 to March 28 to swap the malfunctioning TSP unit with the spare BAM TSP unit and adjust the BAM $PM_{2.5}$ sampling time from 50 minutes to 42 minutes to meet the United States Environmental Protection Agency (US EPA) Federal Equivalent Method (FEM) requirements for $PM_{2.5}$ monitoring. No air quality exceedances of the British Columbia Air Quality Objectives were recorded, and no further investigation was required. Data could not be collected remotely from the PM_{10} BAM due to a communication issue; therefore, it was collected manually using a USB. Stantec received the PM_{10} data from AGAT on March 5, 2025. An air quality exceedance of the British Columbia Air Quality Objectives was recorded for PM_{10} on February 20, 2025, and therefore, an air quality exceedance report was prepared.

WLNG AQMS - Weekly Reporting

Reporting Period

This AQMS Weekly report covers the period from February 24 to March 02, 2025.

Objective

This report summarizes the air quality monitoring data for the week of February 24 to March 02, 2025. This report includes an analysis of pollutants such as $PM_{2.5}$, PM_{10}, TSP, and NO_2, highlighting any significant dust events, alerts from the Air Quality Monitoring Station (AQMS), and changes to the monitoring network and mitigation measures. Additionally, the report documents the results of any investigations into alerts or equipment failures, detailing the actions taken or plans for resolution because these are reasonable efforts to maintain compliance with environmental standards and support the ongoing air quality management efforts.

Summary of Onsite Air Quality and Meteorological Data Collected

This section presents four summary tables for the air quality and meteorology data. The data is based on a Level 0 verification, indicating that it has undergone preliminary checks for completeness and accuracy.

Table 1: Summary of Daily Results for the Past 7 Days

Date	$PM_{2.5}$ (µg/m³) [1]			PM_{10} (µg/m³)			TSP (µg/m³) [2]			NO_2 (ppb)		
	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg	1-hr Min	1-hr Max	24-hr Avg
24 Feb	3	14	6.0	8	111	21.5	-	-	-	1.9	26.0	12.7
25 Feb	1	6	3.8	5	29	10.8	-	-	-	0.0	37.5	11.3
26 Feb	0	10	4.5	6	64	15.7	-	-	-	0.0	17.9	7.8
27 Feb	1	9	5.0	5	16	11.3	-	-	-	1.1	22.1	7.2
28 Feb	0	6	3.0	5	47	11.8	-	-	-	0.0	25.7	5.5
01 Mar	0	10	4.6	5	38	13.1	-	-	-	0.0	21.5	7.8
02 Mar	2	12	6.6	9	32	15.1	-	-	-	0.0	14.6	4.5

Note: The British Columbia Air Quality Objectives (AQO) are:

- $PM_{2.5}$: 25 µg/m³ - Achievement based on annual 98th percentile of daily average, averaged over one year.
- PM_{10}: 50 µg/m³ - Achievement based on the daily (24-hr) average.
- TSP: 120 µg/m³ - Achievement based on the daily (24-hr) average.
- NO_2: 60 ppb - Achievement based on annual 98th percentile of daily 1-hour average maximum (D1HM), averaged over three consecutive years.

Bold Italic numbers indicates that the 24-hour average for PM or one or more 1-hour maximum values for NO_2 exceed the respective threshold values.

[1] As of February 11, the BAM $PM_{2.5}$ instrument's sampling time was changed from 42 minutes to 50 minutes. Since then, it has been operating as a non-designated method for $PM_{2.5}$ monitoring.

[2] Data unavailable due to the TSP BAM sampler being unable to collect valid data during this period.

Table 2: Weekly Averages Summary – $PM_{2.5}$, PM_{10}, TSP and NO_2

Pollutant	units	1-hr Min	1-hr Max	Weekly average	Trigger Limits (2/3 of the AQO)	Time Above Trigger Limit (Days)	Time Above AQO (Days)
$PM_{2.5}$	µg/m³	0	14	4.8	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	5	111	14.2	33.3 (24-hr avg)	0	0
TSP [1]	µg/m³	-	-	-	80 (24-hr avg)	-	-
NO_2	ppb	0.0	37.5	8.1	40 (1-hr avg max)	0	0

Note: [1] Data is unavailable due to the TSP BAM sampler being unable to collect valid data during this period.

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (ºC)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
24 Feb	6.0	1.5	5.6	10.3	7.4	9.2
25 Feb	4.6	1.0	5.1	11.0	7.1	15.0
26 Feb	7.5	1.3	4.7	12.7	7.8	0.8
27 Feb	4.0	0.8	4.2	8.6	6.4	0.0
28 Feb	7.4	1.1	6.4	15.1	9.0	0.0
01 Mar	4.8	0.8	4.3	14.6	7.8	0.0

02 Mar	4.8	0.8	4.7	11.6	7.2	0.0

Table 4: Passive SO_2 and VOC Sampling

Date	Sampled Swapped (Yes/No)	Chain of Custody (COC) Submitted (Yes/No)	Sample Submitted to AGAT Lab (Yes/No)	Lab Results Received (Yes/No)	Lab Results Summary or Comments
24-Feb to 02-Mar	No	No	No	No	No sample swap or lab analysis was performed during this period.

Note: This table mostly contains "No" entries because SO_2 and VOC passive samples are swapped on a monthly basis, and this reporting period may not coincide with the sampling schedule. Passive samples were swapped on February 7, 2025, and shipped to AGAT Labs.

On-Site Dust Observation Report and Work Activities Details

Dust Observation Report Summary:

For this report: No dust observation report was received for this period.

Work Activities Details:

According to the Daily Construction Reports from Feb 24 to Mar 02, construction activities include, breaking rock in the 1100 sump, placing Type D in Area 1300, M02 foundation and east pond, loading out sifted blast rock from the Area 1100 and hauling to the Kode crusher, Kode stockpile management, offloading of the Type D from barge and haul to Area 4100, stockpiling at the batch plant, piping excavation for FIWP-002, excavation at the east pond and M01 foundation, placing and grading bedding sand in the utility trench in the 1200C area, washing car tops, site cleanup and fueling ongoing.

Summary of Daily Reports and Action Taken

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	No AQ exceedances recorded for this period.	No Action required.	Not Applicable.
AQ Complaints	No AQ complaints received during this period.	No Action required.	Not Applicable.
Alerts from the AQMS	No alarms or instrument break-down was reported from AGAT during this period.	No Action required.	Not Applicable.
Changes to the Monitoring Network	No changes to the monitoring network during this period.	Not Applicable.	Not Applicable.
Changes to Mitigation Measures	No changes to mitigation measures during this period.	Not Applicable.	Not Applicable.

In summary, all instruments successfully collected air quality data throughout the reporting period, except for the TSP BAM sampler, which has not collected valid data since February 11, 2025. As of February 11, the BAM $PM_{2.5}$ instrument's sampling time was changed from 42 minutes to 50 minutes. Since then, it has been operating as a non-designated method for $PM_{2.5}$ monitoring. A site visit is planned for March 25 to March 28 to swap the malfunctioning TSP unit with the spare BAM TSP unit and adjust the BAM $PM_{2.5}$ sampling time from 50 minutes to 42 minutes to meet the United States Environmental Protection Agency (US EPA) Federal Equivalent Method (FEM) requirements for $PM_{2.5}$ monitoring. No air quality exceedances of the British Columbia Air Quality Objectives were recorded, and no further investigation was required.

Appendix F Passive SO2 and VOC Samples – Lab Analysis Report

AGAT Laboratories

3650 – 21 Street NE
CALGARY, ALBERTA
CANADA T2E 6V6
TEL (403)299-2000

http://www.agatlabs.com

CLIENT NAME: STANTEC CONSULTING LTD
100-75 24TH STREET
EAST SASKATOON, SK S7K 0K3

ATTENTION TO: Dan Jarratt/Kashif Choudhry

PROJECT: Woodfibre LNG

AGAT WORK ORDER: 25C258608

AIR QUALITY MONITORING REVIEWED BY: Carmen Andrei, AQM Lab Supervisor

DATE REPORTED: Mar 20, 2025

PAGES (INCLUDING COVER): 6

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 299-2000

*Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

AGAT Laboratories
3650 – 21 Street NE
CALGARY, ALBERTA
CANADA T2E 6V6
TEL (403)299-2000

http://www.agatlabs.com

Air Quality Summary

AGAT WORK ORDER: 25C258608

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Parameter	Unit	Number of Samples	Peak Reading	Network Average
Ambient Sulfur Dioxide	ppbv	2	0.2	<0.2
Ambient VOC as Hexane	ppbv	2	<0.7	<0.7

AGAT Laboratories

3650 – 21 Street NE
CALGARY, ALBERTA
CANADA T2E 6V6
TEL (403)299-2000

http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 25C258608

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Passive Air Quality Sampling

DATE RECEIVED: 2025-03-10

DATE REPORTED: 2025-03-20

				Site#01/ 07Feb/25,13:20 03Mar/25,13:10
SAMPLE DESCRIPTION:				/SO2,TVOC
SAMPLE TYPE:				FILTER
DATE SAMPLED:				
Parameter	Unit	G / S	RDL	6584482
Ambient Sulfur Dioxide	ppbv		0.2	0.2
Ambient VOC as Hexane	ppbv		0.7	<0.7

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6584482 All samples are field blank subtracted.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:

AGAT Laboratories

3650 – 21 Street NE
CALGARY, ALBERTA
CANADA T2E 6V6
TEL (403)299-2000

http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 25C258608

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Passive Quality Assurance

DATE RECEIVED: 2025-03-10

DATE REPORTED: 2025-03-20

Parameter	Unit	G / S	RDL	Site#01/DUP 07Feb/25,13:20 03Mar/25,13:10 /SO2,TVOC FILTER 6584483	BLANK/ 07Feb/25,13:20 03Mar/25,13:10 /SO2,TVOC FILTER 6584484
Ambient Sulfur Dioxide	ppbv		0.2	<0.2	<0.2
Ambient VOC as Hexane	ppbv		0.7	<0.7	<0.7

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:

AGAT Laboratories

3650 – 21 Street NE
CALGARY, ALBERTA
CANADA T2E 6V6
TEL (403)299-2000

http://www.agatlabs.com

Quality Assurance

CLIENT NAME: STANTEC CONSULTING LTD

AGAT WORK ORDER: 25C258608

PROJECT: Woodfibre LNG

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Air Quality Monitoring

RPT Date: Mar 20, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Passive Air Quality Sampling															
Ambient Sulfur Dioxide	250	6584483	0.2	<0.2	NA	< 0.2	101%	90%	110%	109%	80%	120%	102%	80%	120%
Ambient VOC as Hexane	183	6584483	<0.7	<0.7	NA	< 0.7	100%	60%	140%	103%	60%	140%			

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
Sample spikes and duplicates are not from the same sample.

Certified By:

AGAT Laboratories

3650 – 21 Street NE
CALGARY, ALBERTA
CANADA T2E 6V6
TEL (403)299-2000

http://www.agatlabs.com

Method Summary

CLIENT NAME: STANTEC CONSULTING LTD

AGAT WORK ORDER: 25C258608

PROJECT: Woodfibre LNG

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Air Quality Monitoring			
Ambient Sulfur Dioxide	AQM-43-16007	Inhouse Method	ION CHROMATOGRAPH
Ambient VOC as Hexane	IHF-60-25003	Modified NIOSH-1500,1501,1003	GC/MS

AGAT Laboratories

Have feedback? Scan here for a quick survey!

3650, 21 Street NE
Calgary, AB
T2E 6V6
P: 403.299.2000
webalr.agatlabs.com

Laboratory Use Only

AGAT Job Number: 25C258608

Notes:

Chain of Custody Record

Report Information

Company: Stantec
Contact: Kashif Choudhry
Address: 100-75 24th Street East
Saskatoon, SK, S7K 0K3
Phone: 474-774-0927 Fax:
LSD:
Client Project #: 123222160-12-2024.300

Invoice To Same Yes ☐ / No ☐

Company: Stantec
Contact: accounts.payable.invoices@stantec.com and
Address: 100-75 24th Street East
Saskatoon, SK, S7K 0K3
Phone: 474-774-0927 Fax:
PO/AFE#: 123222160-12-2024.300

Turnaround Time Required (TAT)

Regular TAT ☑ 5 to 7 working days

Rush TAT ☐ Less than 24 hours ☐ 24 to 48 hours ☐ 48 to 72 hours

Date Required:

UPON FILLING OUT THIS SECTION, THE CLIENT ACCEPTS THAT SURCHARGES WILL BE ATTACHED TO THIS ANALYSIS. IF NOT COMPLETED, REGULAR TAT WILL BE DEFAULT.

LABORATORY USE (LAB ID #)	SITE NAME/SAMPLE DESCRIPTION	DATE/TIME INSTALLED	DATE/TIME EXTRACTED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	H2S Passive	SO2 Passive	NO2 Passive	O3 Passive	PM2.5	PM10	TSP	Duplicate - SO2 Passive	Blank - SO2 Passive	VOC Passive	Duplicate - VOC Passive	Blank - VOC Passive
	Please Email reports to:															
	kashif.choudhry@stantec.com															
	daniel.casanova@stantec.com															
	katie.chuen@stantec.com															
	dan.jarratt@stantec.com															
	WLNG-SO2-AQMS	Feb 7, 2025 13:20	March 3, 2025 13:10			☑						☑				
	WLNG-SO2-DUPLICATE												☑			
	WLNG-SO2-BLANK													☑		
	WLNG-VOC-AQMS														☑	
	WLNG-VOC-DUPLICATE															☑
	WLNG-VOC-Blank															

Samples Relinquished By (Print Name and Sign)	Date/Time	Samples Received By (Print Name and Sign)	Date/Time
		Chan Jin	Mar 10, 25
Samples Relinquished By (Print Name and Sign)	Date/Time	Samples Received By (Print Name and Sign)	Date/Time
Samples Relinquished By (Print Name and Sign)	Date/Time	Samples Received By (Print Name and Sign)	Date/Time

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1

No: 03/025