Woodfibre LNG Air Quality Monitoring Station Report for April 2025

June 17, 2025

Prepared for:
Woodfibre LNG General Partner Inc.

Prepared by:
Stantec Consulting Ltd.

Project/File:
123222160

Stantec

Limitations and Sign-off

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Prepared by: Digitally signed by Dr. Kashif I. Choudhry, P.Eng. Date: 2025.06.18 11:21:55 -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: 2025.06.18 09:22:15 -07'00'

Signature

Dan Jarratt, EP, P.Eng. (AB, BC)
Senior Atmospheric Engineer

Printed Name

Approved by: Adriana MacLeod Digitally signed by Adriana MacLeod Date: 2025.06.18 10:30:00 -07'00'

Signature

Adriana MacLeod, B.Sc.

Printed Name

Executive Summary

This report provides a summary of the ambient air quality monitoring data for April 2025 that has been collected in fulfilment of the requirements established in the Floatel Air Quality Monitoring and Mitigation 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 April 2025, along with additional information on air quality exceedances and complaints received during this period. This report provides an overview of ambient air quality conditions and regulatory compliance actions taken during April 2025.

Table E.1 April 2025 Air Quality Monitoring Station Summary

Air Contaminant		Units	Monthly Average	Monthly Range (Min - Max)
$PM_{2.5}$ (24-hour average) [a]		µg/m³	6.8	3.5 - 13.5
PM_{10} (24-hour average)		µg/m³	24.5	8.4 - 115.2
TSP (24-hour average)		µg/m³	50.1	10.5 - 264.6
NO_2 (24-hour average)		ppb	8.5	4.9 - 16.4
NO_2 (1-hour average)		ppb	8.5	0.0 - 38.9
SO_2	Apr 1 – May 2, 2025	ppb	0.2	
VOC as Hexane			<0.7 [b]	
Number of Air Quality Exceedances Recorded			3	
Number of Complaints Received			None	

Notes:

[a] Monthly average concentration and range are based on valid measurements collected between April 1 and April 16 and then between April 22 and April 30, 2025.

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

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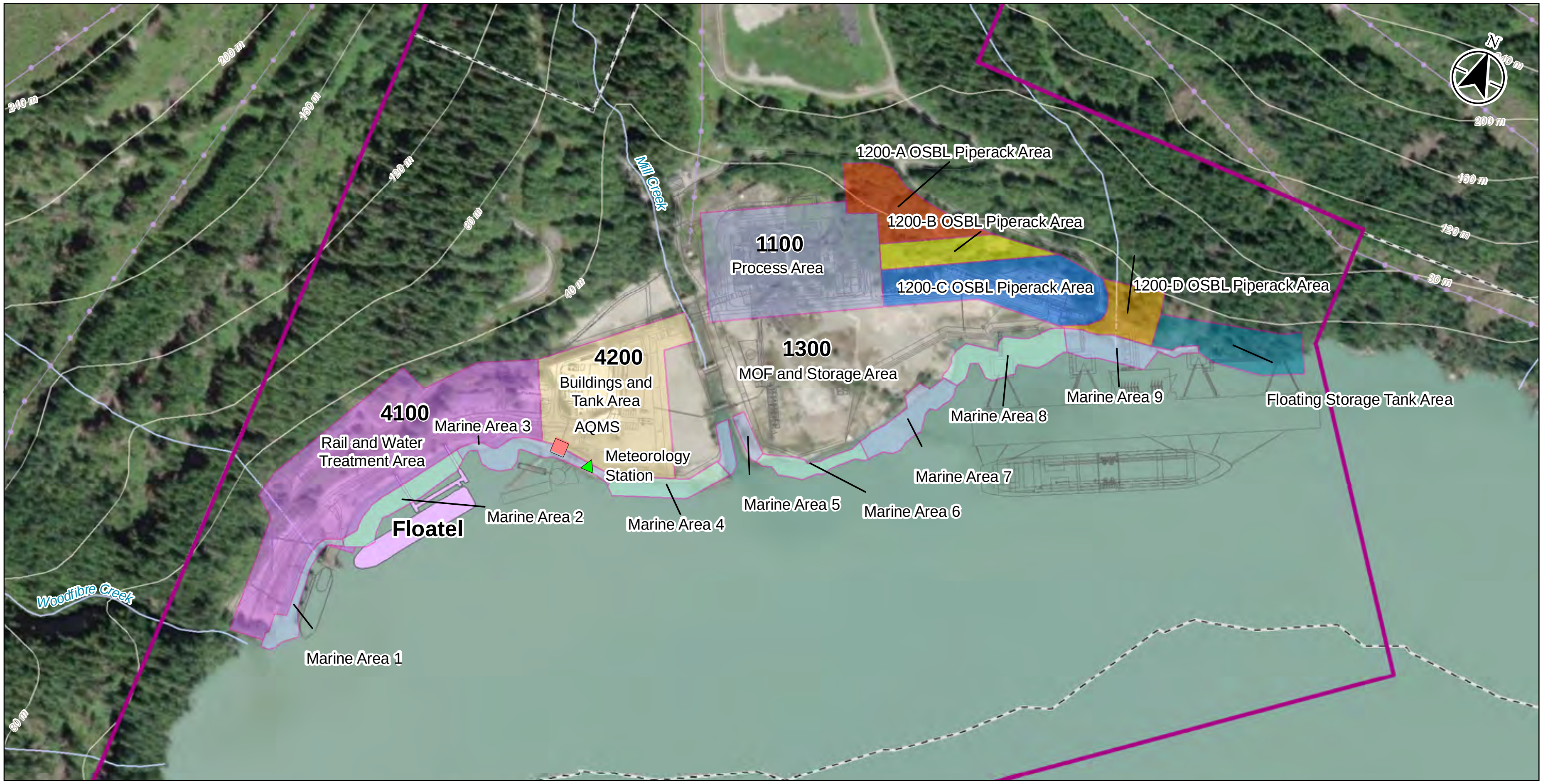
Acronyms / Abbreviations

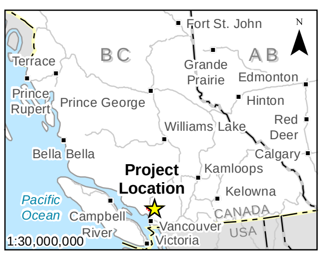
AGAT	AGAT Laboratories
AQMS	Air Quality Monitoring Station
AQO	British Columbia Air Quality Objective(s)
BC	British Columbia
BC ENV	British Columbia Ministry of Environment and Climate Change Strategy (2017–2024)
BC ENVP	British Columbia Ministry of Environment and Parks (2024–Present)
CAAQS	Canadian 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
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 April 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

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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 program. The meteorology variables measured at the station are listed in Table 2.1.

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
Relative Humidity	%
Barometric Pressure	hPa

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. The BAM $PM_{2.5}$ could not collect data from April 17 at 07:00 hours to April 21, 2025, at 10:00 hours due to a sampler filter tape error. 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: Figure A.1 to Figure A.10; Appendix B: Table B.1), and b) meteorology data acquired from the Woodfibre LNG meteorology station (Appendix A: Figure A.11 to Figure A.15; Appendix B: 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 April 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.

During April 2025, the hourly $PM_{2.5}$ concentrations ranged from 0[1] to 39 µg/m³ (based on sampling between April 1 and April 17, and then from April 21 to April 30), the hourly PM_{10} concentrations ranged from 2 to 347 µg/m³, the hourly TSP concentrations ranged from 5 to 893 µg/m³, and the hourly NO_2 concentrations ranged from 0[2] to 38.9 ppb. The hourly results for the NO_2 concentration monitoring during this period were less than the BCAQO threshold value of 60 ppb. 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).

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 April 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 $PM_{2.5}$ BAM sampler could not collect valid 24-hour average data from April 17 to April 21, 2025, due to a filter tape tension error. 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 April 2025, the 24-hour average $PM_{2.5}$ concentrations of ranged from 3.5 to 13.5 µg/m³ (based on valid data collected between April 1 and April 16, and then from April 22 to April 30; the data collected on April 17 and April 21 were excluded due to less than 75% data completeness), 24-hour average PM_{10} concentrations of ranged from 8.4 to 115.2 µg/m³, 24-hour average TSP concentrations ranged from 10.5 to 264.6 µg/m³, and 24-hour average NO_2 concentrations ranged from 4.9 to 16.4 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

[1] The BAM 1020 instrument recording the $PM_{2.5}$ concentrations may occasionally report slightly negative values when the are very low. 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.

monitoring stations, which is expected given the proximity of the AQMS site to active construction activities.

The available data for April 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 April 2025 is 8.5 ppb. The combined average from January to April 2025 is 8.0 ppb, less than the BCAQO and CAAQS annual threshold of 17 ppb and 12 ppb, respectively.

The April 2025 monthly average $PM_{2.5}$ concentration is 6.8 µg/m³. The combined average for January and April 2025 is 5.8 µg/m³ and is less than the BCAQO and CAAQS annual threshold values of 8.0 and 8.8 µg/m³, respectively. However, this four-month average does not represent a yearly valid average for comparison with these thresholds. Similarly, the April monthly average TSP concentration is 50.1 µg/m³. The combined average TSP concentration from January to April 2025 is 31.5 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 April 2025 is presented in Appendix A (Figure A.6 to Figure A.10) and Appendix B, Table B.1.

The measured concentrations for $PM_{2.5}$ were less than the BCAQO threshold values of 25 µg/m³, and no air quality exceedances were recorded. However, air quality exceedances for PM_{10} and TSP were recorded on April 15, April 16, and April 17, 2025. The measured 24-hour average concentrations recorded at the Woodfibre LNG AQMS were 66.0 µg/m³ (PM_{10}) and 168.9 µg/m³ (TSP) on April 15, 115.2 µg/m³ (PM_{10}) and 264.6 µg/m³ (TSP) on April 16, and 59.5 µg/m³ (PM_{10}) and 154.8 µg/m³ (TSP) on April 17. These values exceed the BCAQO threshold values of 50 µg/m³ for PM_{10} and 120 µg/m³ for TSP. It was concluded, based on air quality and meteorology data investigations, that PM_{10} and TSP exceedances were primarily attributable to construction project-related sources (see further details in the Air Quality Exceedance Reports, Appendix C). Additionally, PM_{10} concentrations were above the project-specific trigger level of 33.3 µg/m³ on April 14 (35.3 µg/m³) and April 18 (33.6 µg/m³). On these dates, the PM_{10} concentrations measured at the Langdale Elementary regional air quality station were substantially lower, with 11.2 µg/m³ on April 14 and 10.2 µg/m³ on April 18. The PM_{10} concentrations measured at the project site were more than three times higher than that of the regional ambient air quality monitoring station. This suggests that the elevated PM_{10} concentrations were due to emissions from the on-site construction activities, as documented in the weekly reports (Appendix D). In response to the elevated PM_{10} concentrations observed between April 14 and April 18, which included concentrations above the trigger level and the BCAQO threshold, the frequency of water truck dust suppression was increased during this period to minimize further dust generation during the dry weather conditions. Additionally, no complaints were received from the Floatel residents during April 2025 that required further investigation or mitigation actions. The weekly AQMS reports are presented in Appendix D.

4.2 Passive Monitoring of SO_2 and VOC

The passive sample media for SO_2 and total VOCs were swapped on May 2, 2025. This report includes the results for samples collected for the exposure period from April 1, 2025, to May 2, 2025.
The laboratory analysis report is presented in Appendix E.

The results for SO_2 and VOC samples show an ambient average concentration of 0.2 ppb and <0.7 ppb, respectively. The instrument-reported detection limits (RDL) are 0.2 ppb and 0.7 ppb, respectively. In comparison, the regional monitoring stations reported ambient SO_2 concentrations in April 2025, with Squamish Elementary recorded a lower concentration of 0.1 ppb and Langdale Elementary recorded a higher concentration of 1.4 ppb.

4.3 Meteorology

A summary of the meteorology conditions during April 2025 is presented in Appendix A, Figure A.11 to Figure A.15 and 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 April 16, 2025, at 10:00 (13.9 m/s), and the highest 24-hour average wind speed occurred on April 19 (3.4 m/s). Figure A.12 presents a wind rose illustrating wind direction and speed for April 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 April 2025.

The daily ambient temperature data is presented in Figure A.14. The maximum hourly air temperature of 20.4°C was recorded on April 25, 2025, at 11:00, while the minimum hourly temperature of 3.0°C occurred on April 13, 2025, at 05:00. The monthly average temperature for April 2025 was 10.0°C

The daily and total monthly rainfall data, presented in Figure A.15 and Table B.2, show that the highest single-day rainfall of 40.6 mm occurred on April 6, 2025. The total rainfall for April 2025 was 114.2 mm.

The daily average relative humidity values ranged from 51.5% to 99.9% in April 2025. The daily minimum, maximum, and average relative humidity values recorded at the Woodfibre LNG station are presented in Figure A.16 and Table B.2. The daily average barometric pressure values ranged from 1,008.1 hPa to 1,029.8 hPa in April 2025, with a monthly average of 1,019.8 hPa. The daily barometric pressure values are presented in Figure A.17 and Table B.2.

5 Summary of Ambient Air Quality Monitoring Results

The ambient air quality monitoring results for April 2025 indicate that the $PM_{2.5}$ concentrations remained less than the BC Air Quality Objective threshold values, with three exceedances recorded for TSP and PM_{10} on April 15, April 16 and April 17, 2025. These exceedances were primarily attributable to construction project-related sources (Air Quality Exceedance Reports; Appendix C). The hourly measured NO_2 concentrations were less than the BCAQO threshold. 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 April 2025.

6 References

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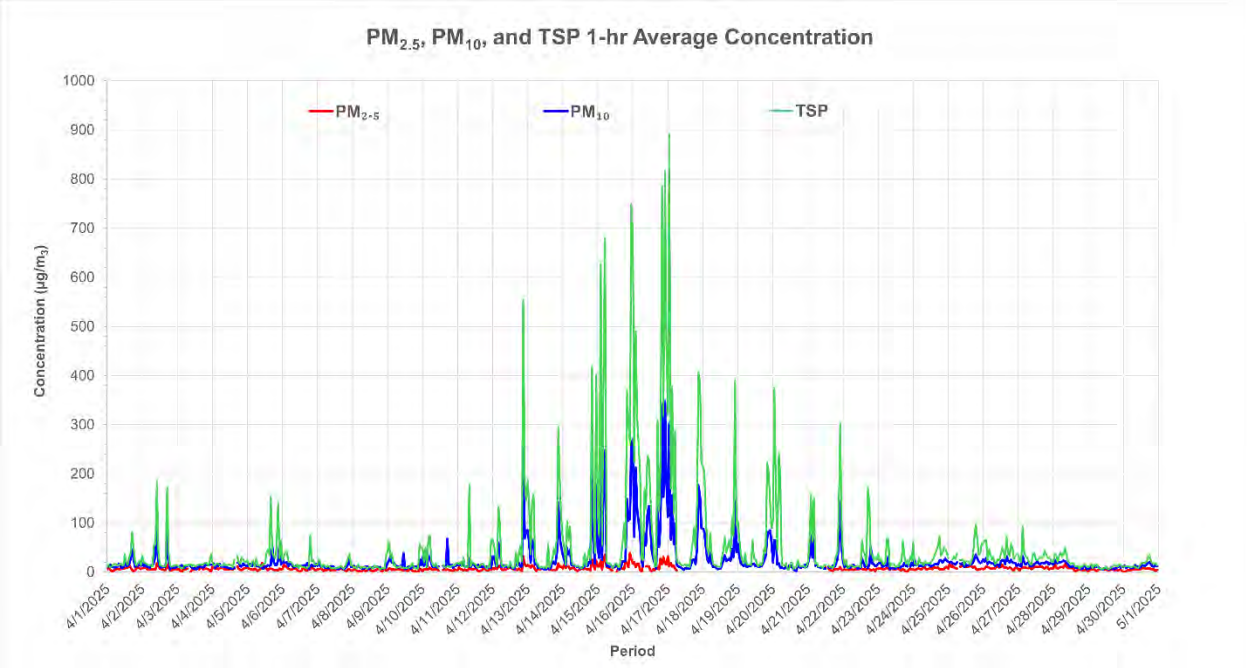
Appendices

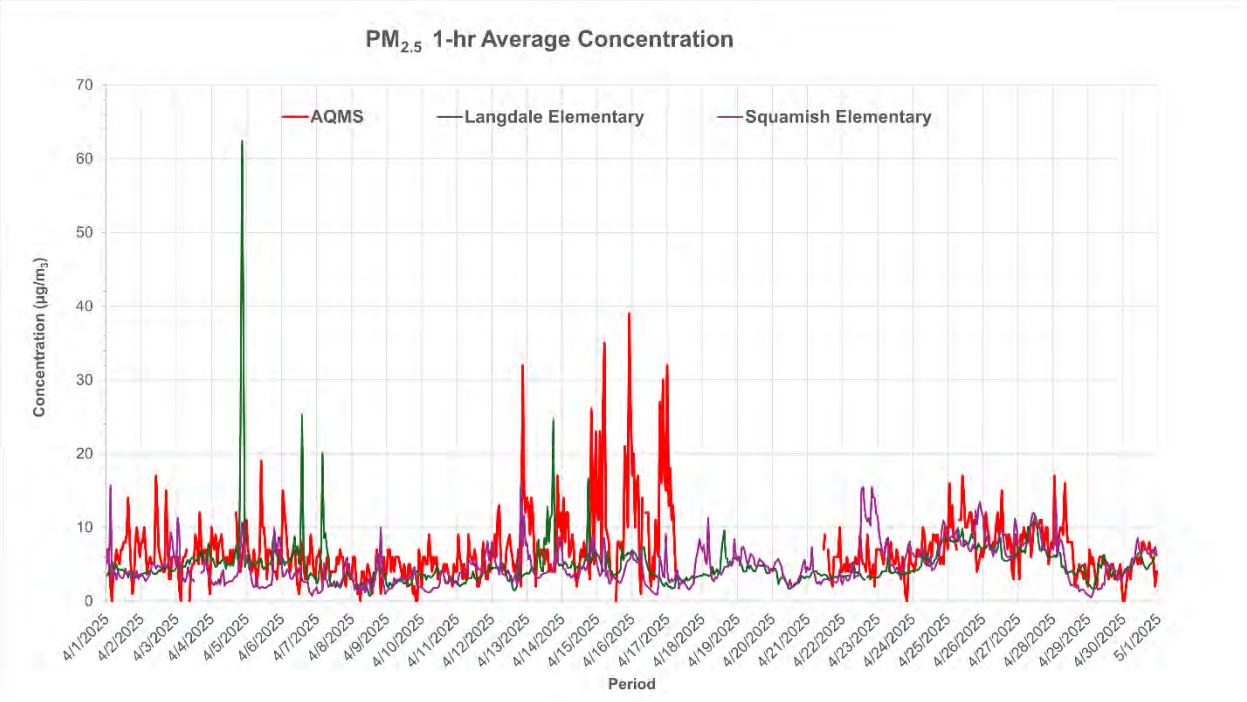
Appendix A Figures

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



Note: Missing hourly data for $PM_{2.5}$ between April 17 and April 21, 2025, is due to sampler filter tape error.

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



Note: Missing hourly data for $PM_{2.5}$ between April 17 and April 21, 2025, is due to sampler filter tape error.

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

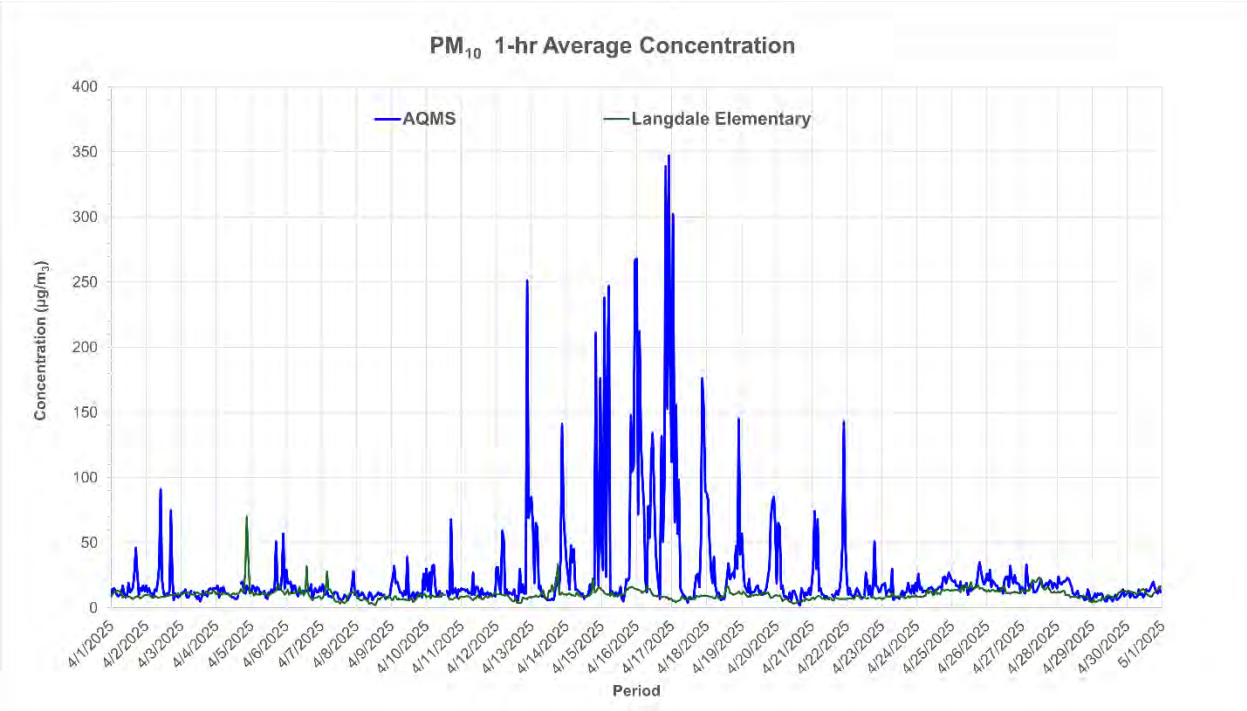


Figure A.4 Hourly TSP Concentrations Recorded at the AQMS during April 2025

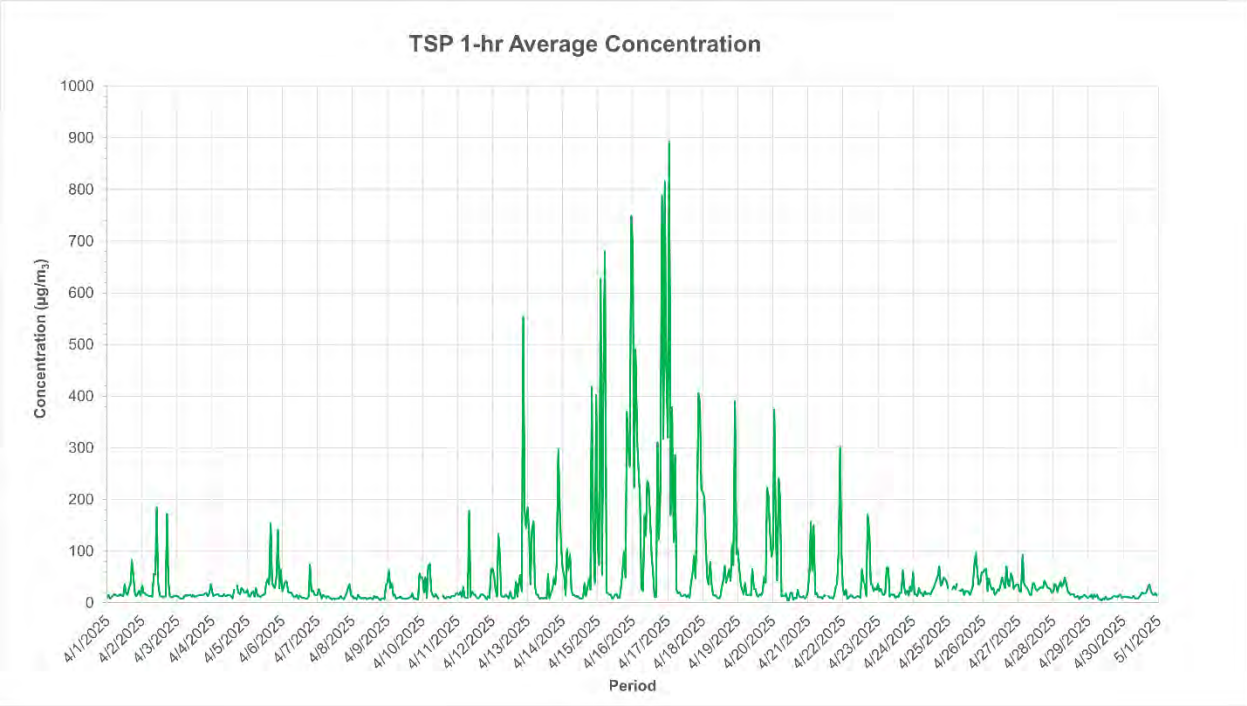


Figure A.5 Hourly NO_2 Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during April 2025

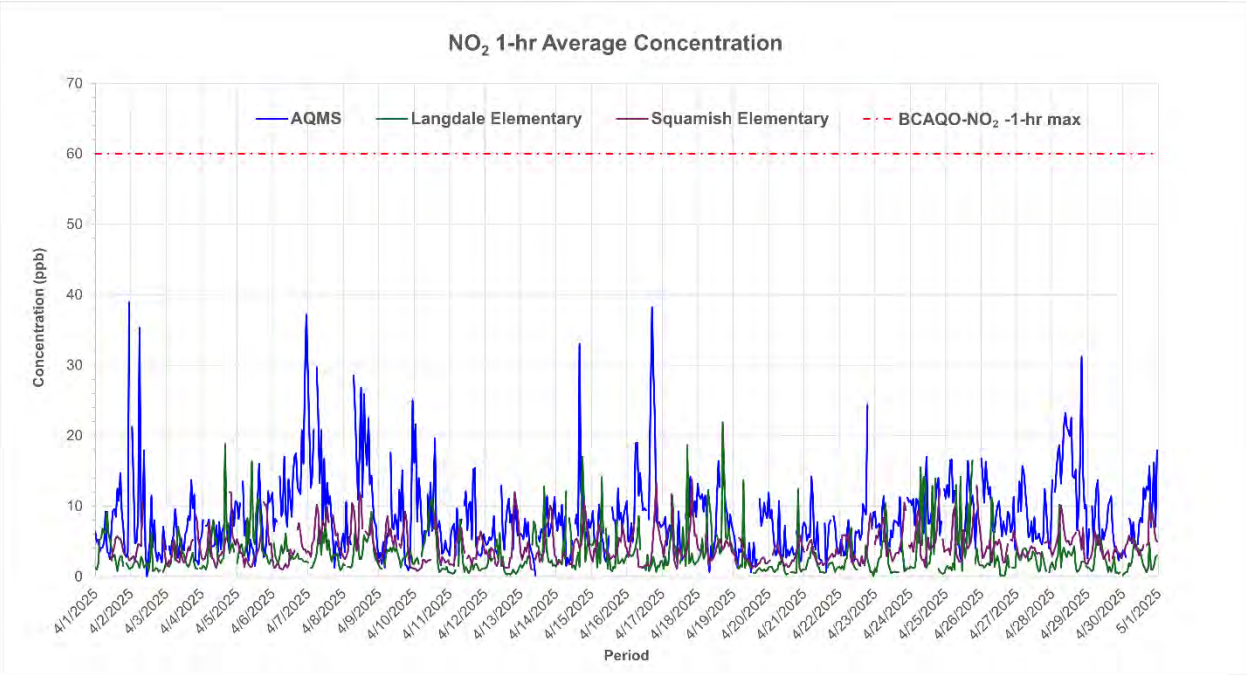
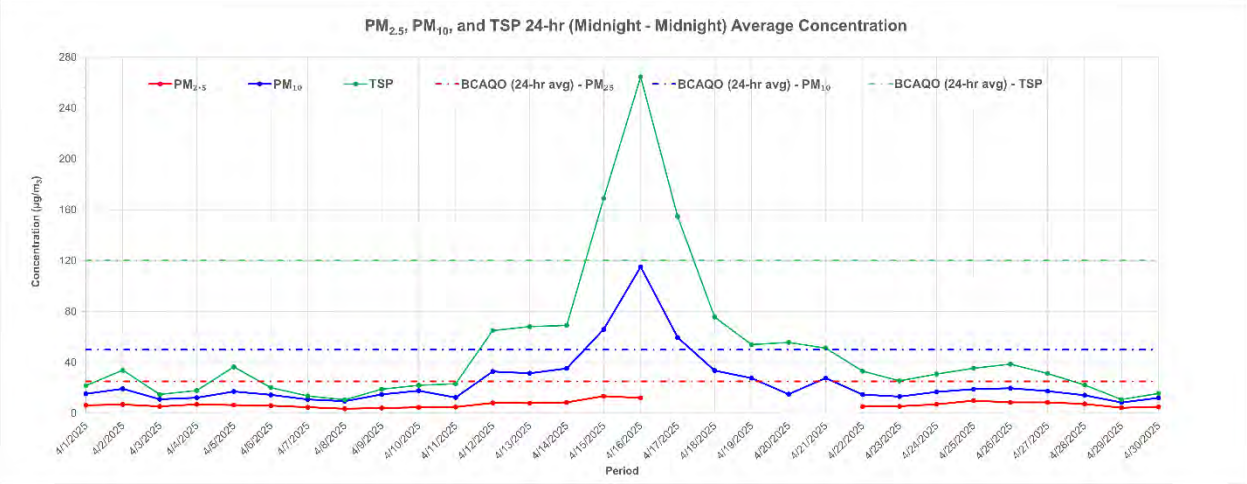
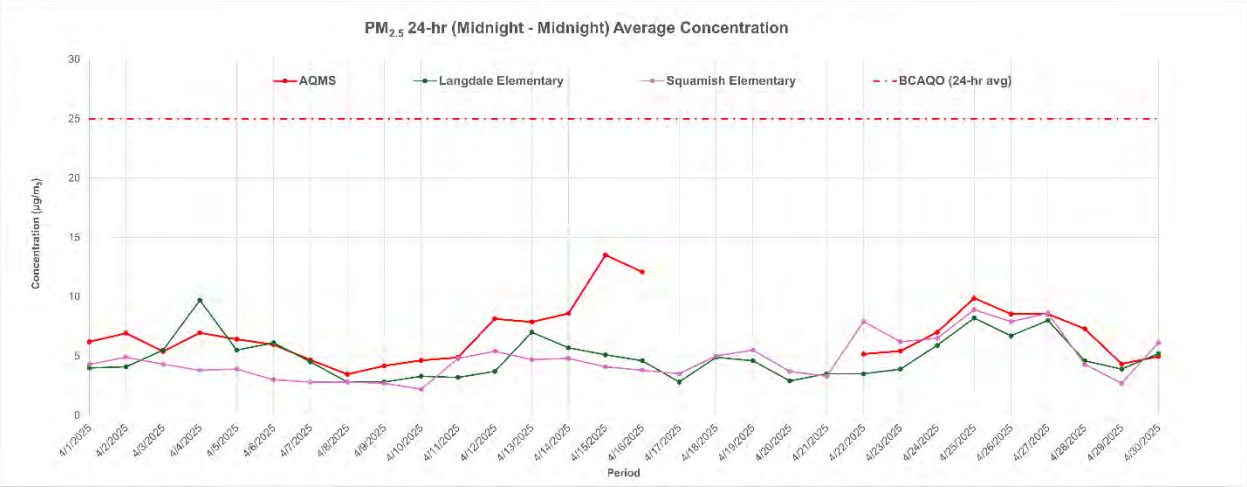


Figure A.6 24-Hour Average PM Concentrations Recorded at the AQMS during April 2025



Note: Missing hourly data for $PM_{2.5}$ between April 17 and April 21, 2025, is due to sampler filter tape error.

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



Note: Missing data for $PM_{2.5}$ between April 17 and April 21, 2025, is due to sampler filter tape error.

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

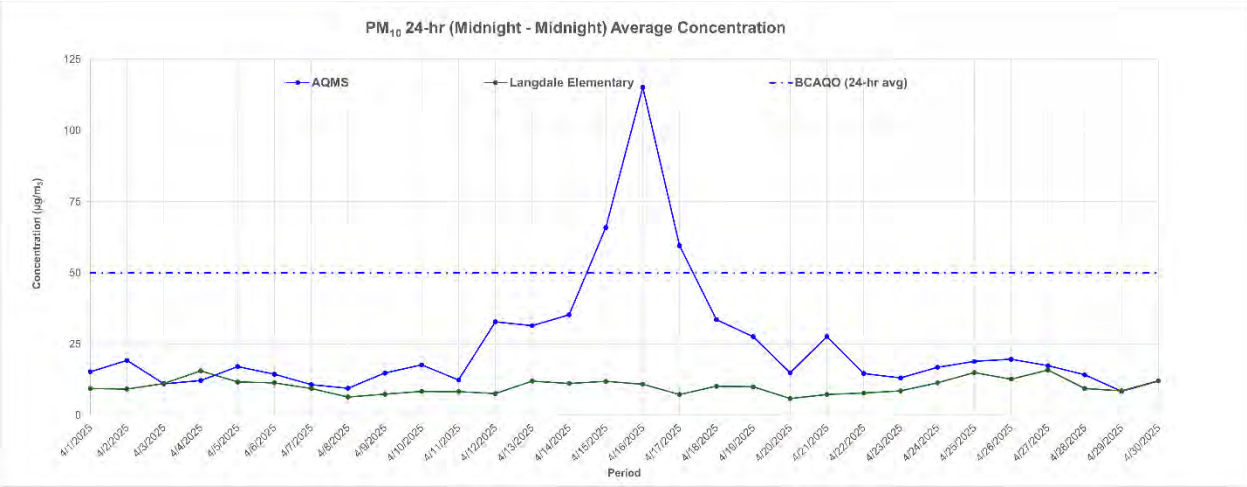


Figure A.9 24-Hour Average TSP Concentrations Recorded at the AQMS during April 2025

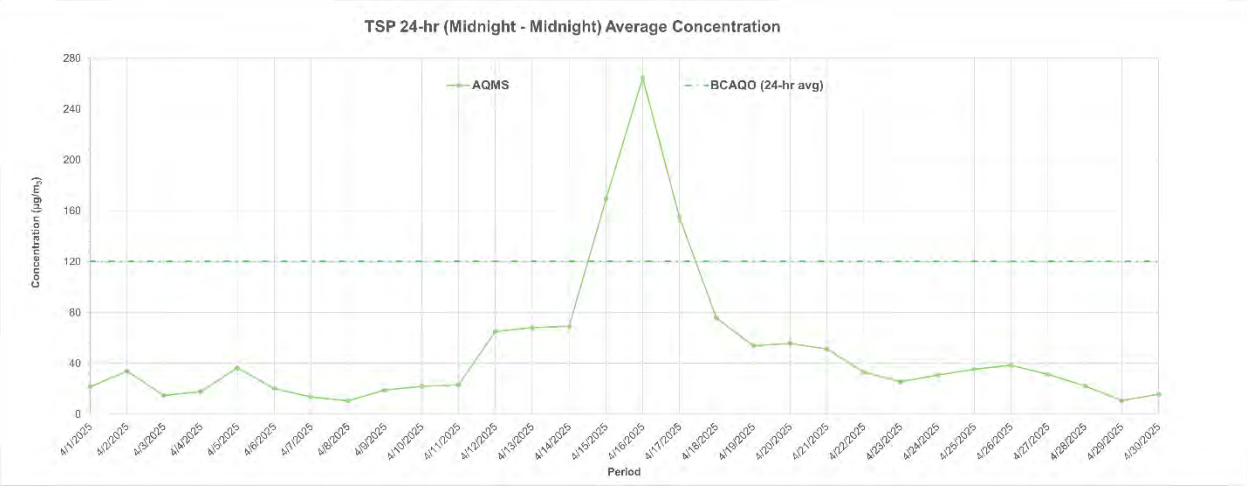


Figure A.10 24-Hour Average NO_2 Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during April 2025

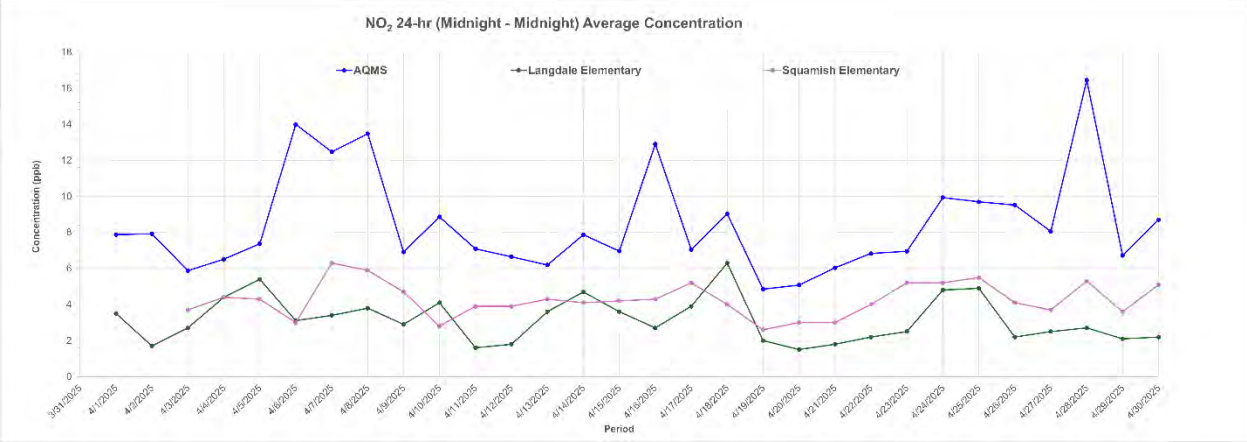


Figure A.11 Daily Average and Maximum Wind Speed Recorded at the Woodfibre LNG Meteorology Station during April 2025

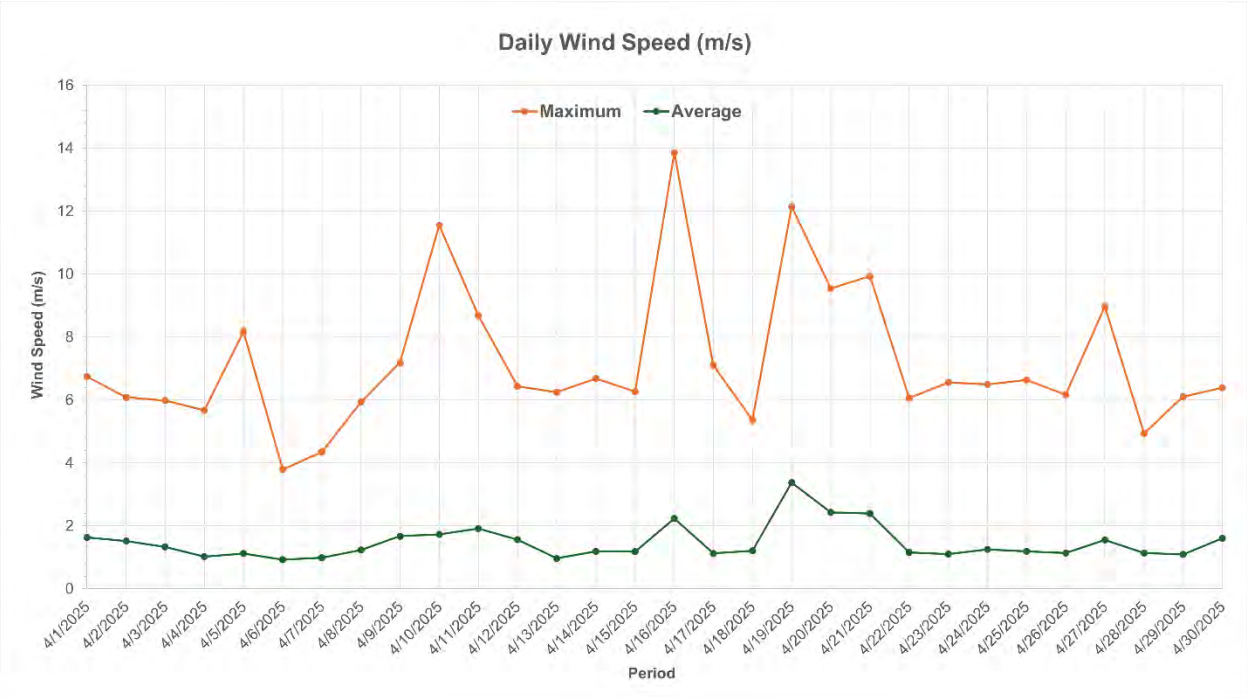


Figure A.12 Windrose for Woodfibre LNG Meteorology Station during April 2025

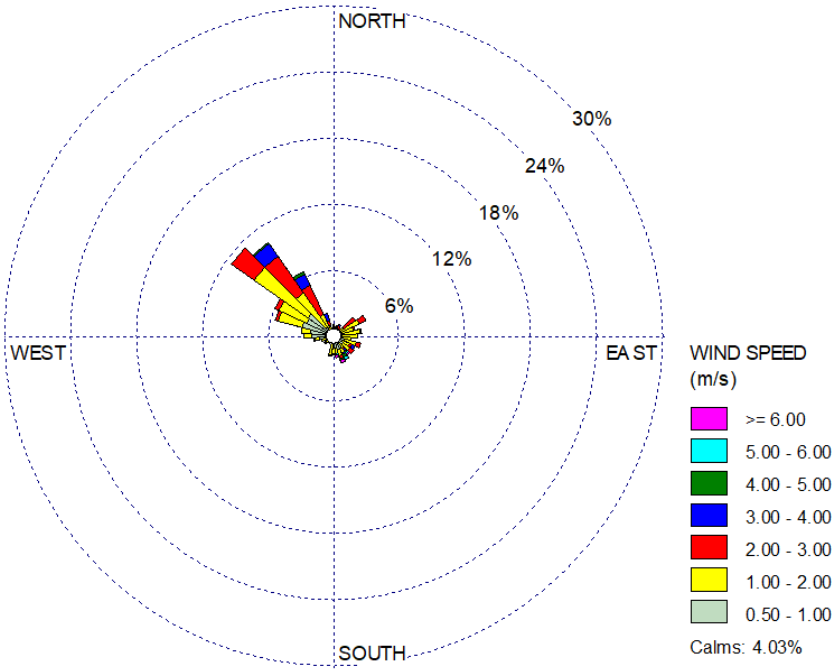


Figure A.13 Windrose for Woodfibre LNG Meteorology Station for the hours of 0000 - 0800, 0900 - 1200, 1300 - 1900, and 2000 - 2300 (April 2025)

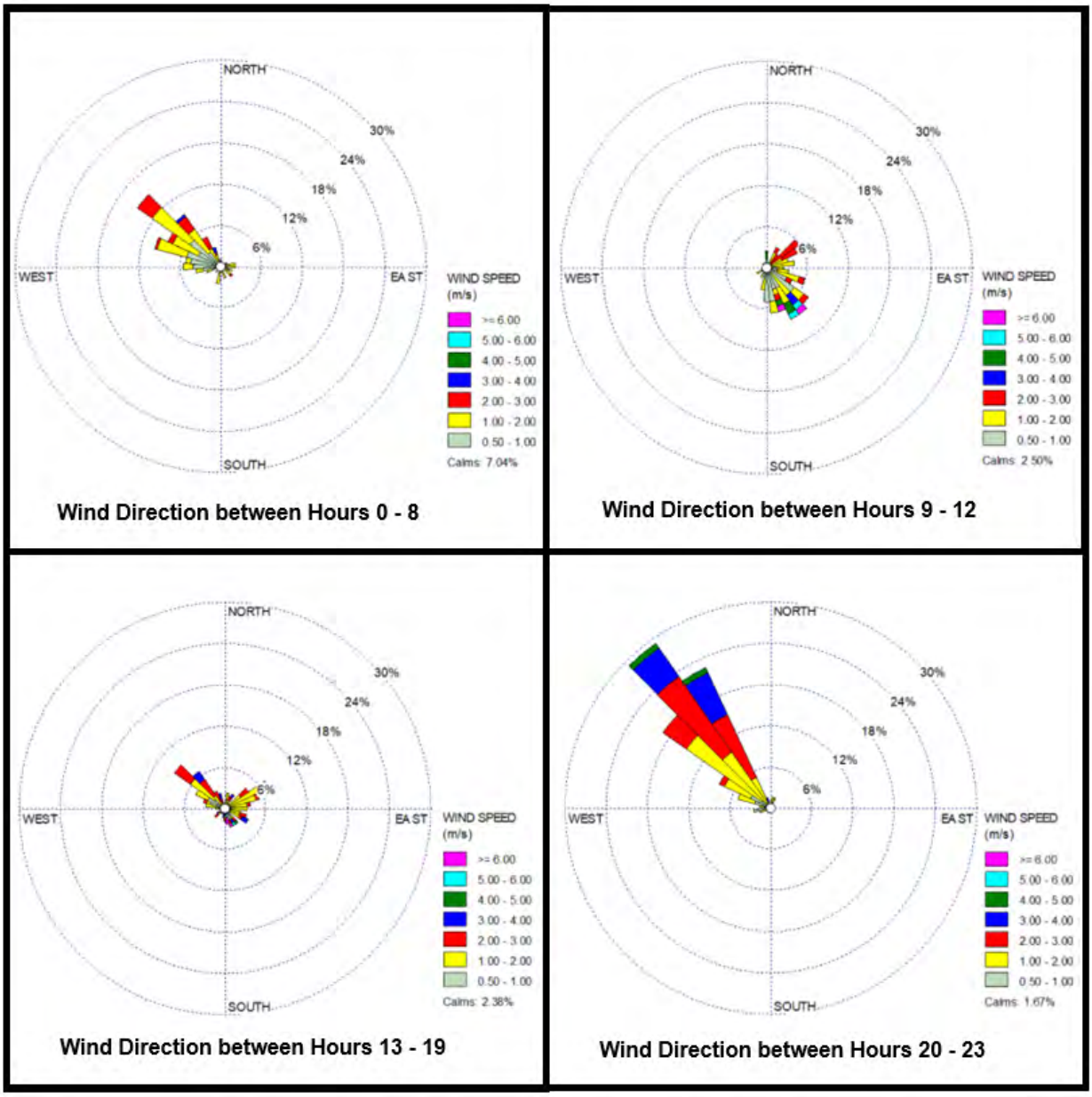


Figure A.14 Daily Average, Minimum, and Maximum Air Temperature Recorded at the Woodfibre LNG Meteorology Station during April 2025

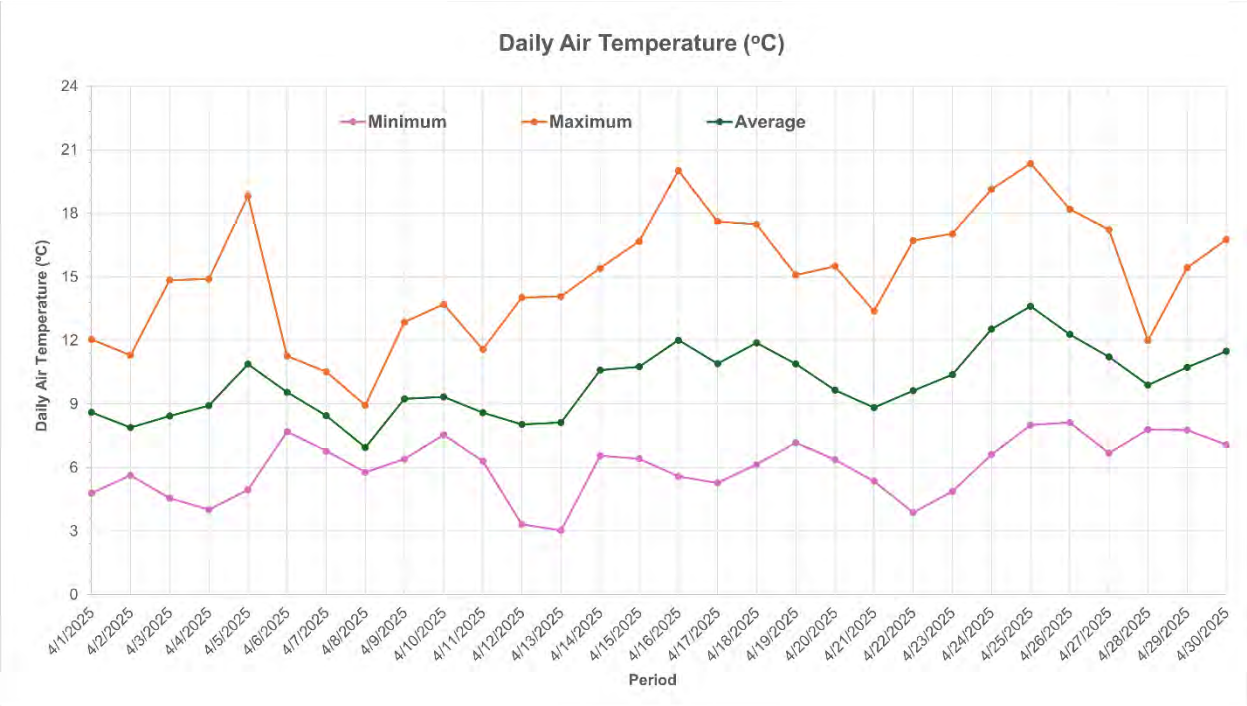


Figure A.15 Daily Rainfall Recorded at the Woodfibre LNG Meteorology Station during April 2025

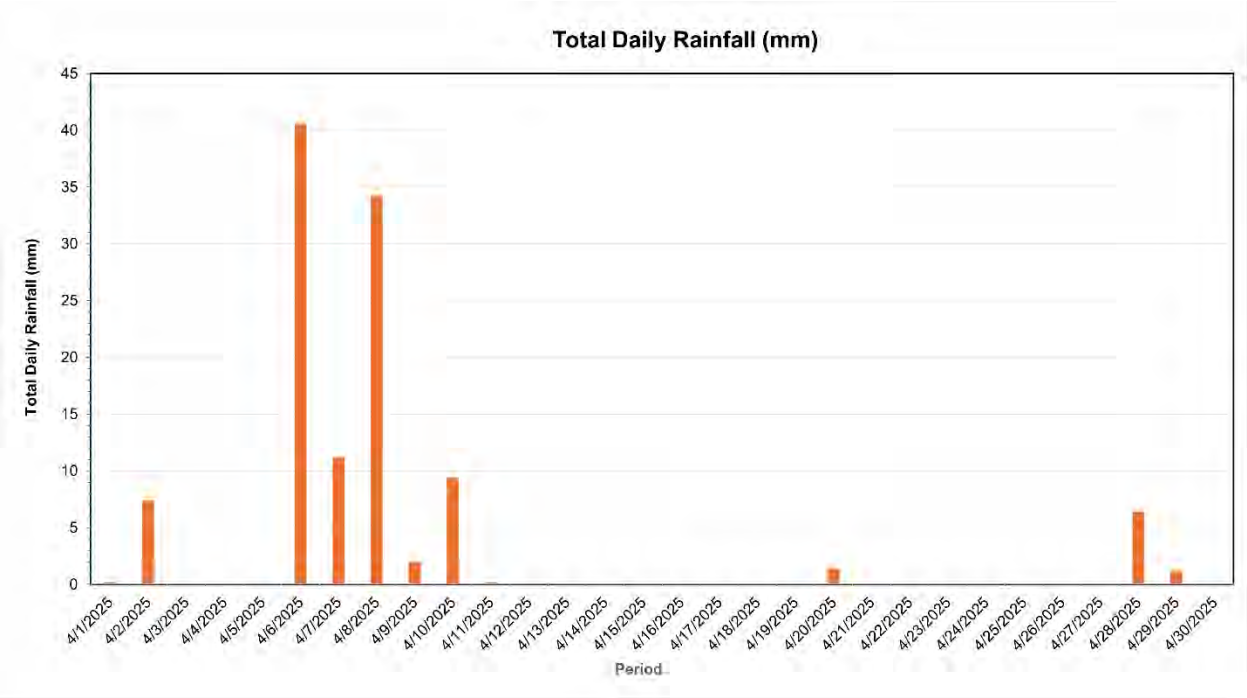


Figure A.16 Daily Average, Minimum, and Maximum Relative Humidity Recorded at the Woodfibre LNG Meteorology Station during April 2025

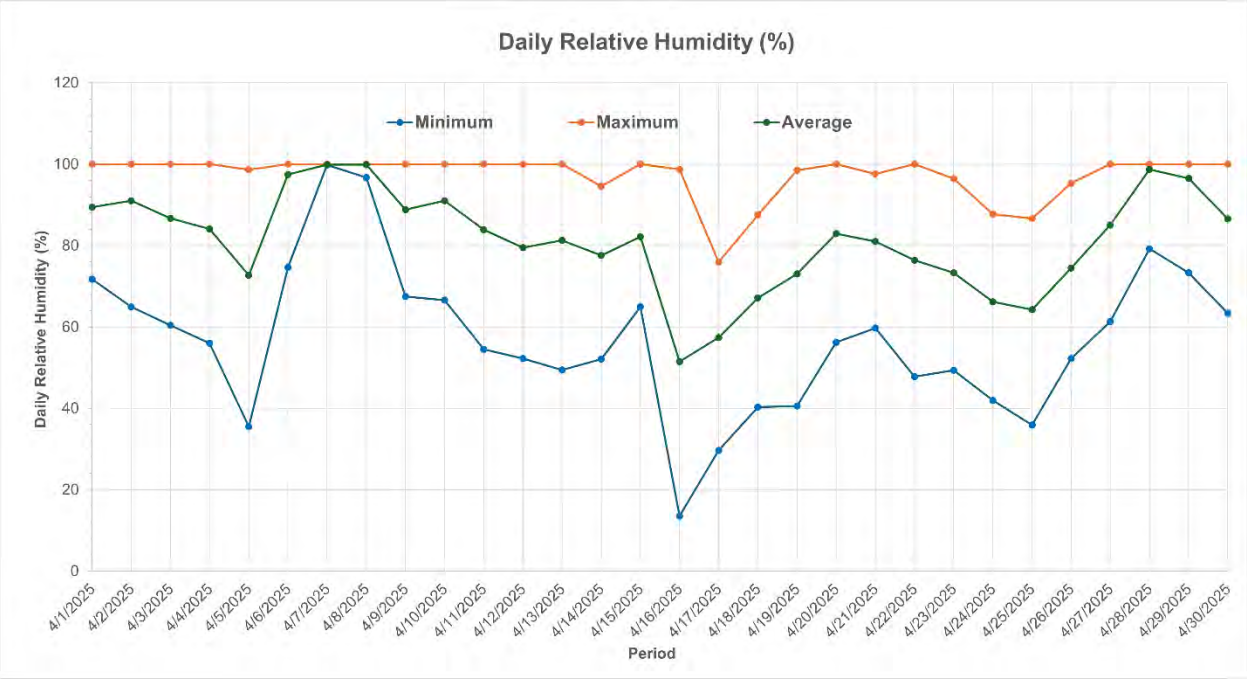
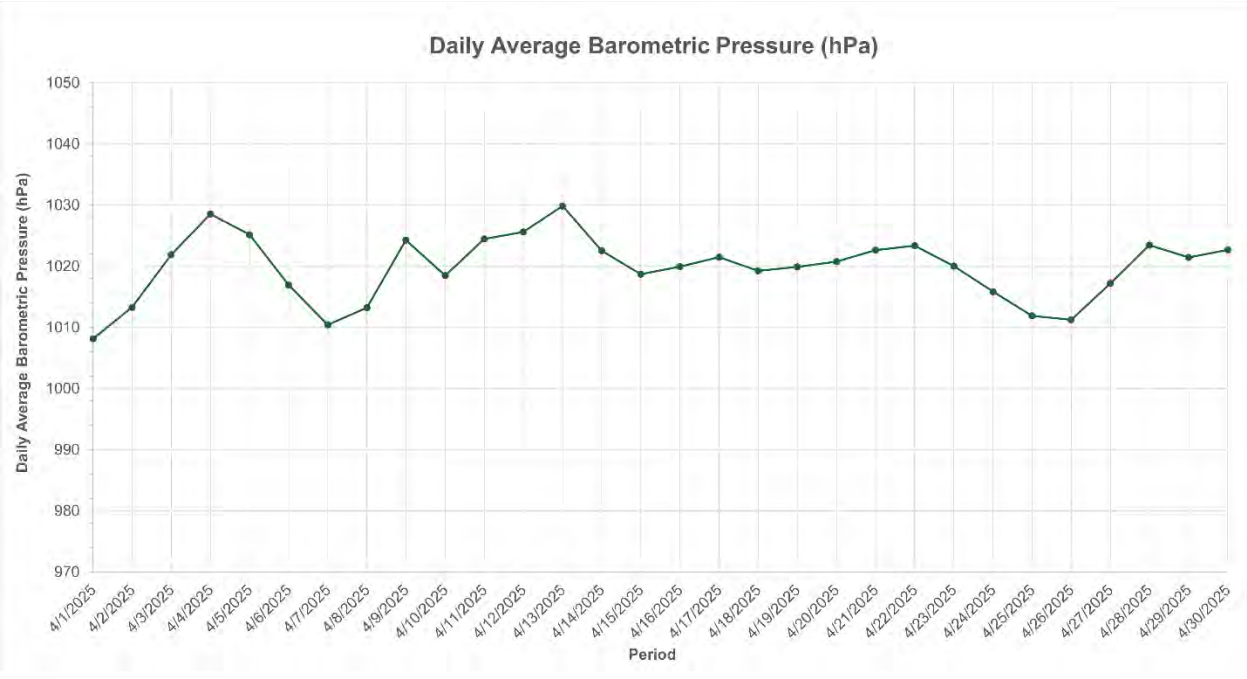


Figure A.17 Daily Average Barometric Pressure Recorded at the Woodfibre LNG Meteorology Station during April 2025



Appendix B Data Tables

Table B.1 Daily $PM_{2.5}$, PM_{10}, TSP, and NO_2 Concentrations Recorded at the AQMS for April 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
4/1/2025	6.2	15.3	21.6	7.9	38.9
4/2/2025	6.9	19.3	33.8	7.9	35.3
4/3/2025	5.4	11.0	14.7	5.9	13.7
4/4/2025	7.0	12.2	17.8	6.5	10.7
4/5/2025	6.4	17.1	36.5	7.4	16.0
4/6/2025	6.0	14.4	20.1	14.0	37.2
4/7/2025	4.7	10.8	13.5	12.5	29.7
4/8/2025	3.5	9.5	10.5	13.5	28.5
4/9/2025	4.2	14.8	19.0	6.9	25.0
4/10/2025	4.6	17.7	21.9	8.9	21.6
4/11/2025	4.9	12.4	23.1	7.1	15.4
4/12/2025	8.1	32.8	65.0	6.7	12.9
4/13/2025	7.9	31.5	68.1	6.2	11.4
4/14/2025	8.6	35.3	69.1	7.9	33.0
4/15/2025	13.5	66.0	168.9	7.0	12.5
4/16/2025	12.1	115.2	264.6	12.9	38.2
4/17/2025	– [a]	59.5	154.8	7.0	14.2
4/18/2025	– [a]	33.6	75.6	9.0	16.4
4/19/2025	– [a]	27.6	53.9	4.9	11.0
4/20/2025	– [a]	14.9	55.7	5.1	11.9
4/21/2025	– [a]	27.7	51.3	6.0	14.2
4/22/2025	5.2	14.7	33.1	6.8	24.4
4/23/2025	5.4	13.1	25.5	7.0	11.4
4/24/2025	7.0	16.8	30.8	9.9	17.0
4/25/2025	9.9	18.9	35.3	9.7	16.6
4/26/2025	8.5	19.7	38.6	9.5	16.8
4/27/2025	8.5	17.4	31.3	8.1	15.7
4/28/2025	7.3	14.2	22.3	16.4	31.2
4/29/2025	4.3	8.4	10.8	6.7	13.7
4/30/2025	5.0	12.1	15.6	8.7	17.9

Note

[a] Missing data for $PM_{2.5}$ between April 17 and April 21, 2025, is due to sampler filter tape error.

Table B.2 Daily Wind Speed, Air Temperature, Relative Humidity, Barometric Pressure, and Rainfall Recorded at the Woodfibre LNG Meteorology Station for April 2025

Date	Daily Wind Speed (m/s)		Daily Air Temperature (°C)			Daily Relative Humidity (%)			Daily Average Pressure (hPa)	Daily Total Rainfall (mm)
	Max	Avg	Min	Max	Avg	Min	Max	Avg		
4/1/2025	6.7	1.6	4.8	12.0	8.6	71.7	100.0	89.4	1008.1	0.2
4/2/2025	6.1	1.5	5.6	11.3	7.9	64.9	100.0	91.0	1013.3	7.4
4/3/2025	6.0	1.3	4.5	14.9	8.4	60.4	100.0	86.7	1021.9	0.0
4/4/2025	5.7	1.0	4.0	14.9	8.9	56.0	100.0	84.1	1028.5	0.0
4/5/2025	8.2	1.1	5.0	18.8	10.9	35.5	98.6	72.7	1025.2	0.0
4/6/2025	3.8	0.9	7.7	11.3	9.6	74.6	100.0	97.5	1016.9	40.6
4/7/2025	4.3	1.0	6.8	10.5	8.4	99.8	100.0	99.9	1010.4	11.2
4/8/2025	5.9	1.2	5.8	8.9	7.0	96.7	100.0	99.9	1013.2	34.2
4/9/2025	7.2	1.7	6.4	12.9	9.2	67.5	100.0	88.8	1024.3	2.0
4/10/2025	11.6	1.7	7.5	13.7	9.3	66.6	100.0	91.0	1018.5	9.4
4/11/2025	8.7	1.9	6.3	11.6	8.6	54.5	100.0	83.9	1024.5	0.2
4/12/2025	6.4	1.6	3.3	14.0	8.0	52.2	99.9	79.5	1025.6	0.0
4/13/2025	6.2	1.0	3.0	14.1	8.1	49.4	100.0	81.2	1029.8	0.0
4/14/2025	6.7	1.2	6.6	15.4	10.6	52.1	94.6	77.5	1022.5	0.0
4/15/2025	6.3	1.2	6.4	16.7	10.8	64.9	100.0	82.1	1018.7	0.0
4/16/2025	13.9	2.2	5.6	20.0	12.0	13.5	98.7	51.5	1019.9	0.0
4/17/2025	7.1	1.1	5.3	17.6	10.9	29.7	75.9	57.4	1021.5	0.0
4/18/2025	5.4	1.2	6.1	17.5	11.9	40.3	87.5	67.1	1019.3	0.0
4/19/2025	12.1	3.4	7.2	15.1	10.9	40.5	98.5	73.0	1019.9	0.0
4/20/2025	9.5	2.4	6.4	15.5	9.7	56.2	100.0	82.9	1020.8	1.4
4/21/2025	9.9	2.4	5.3	13.4	8.8	59.7	97.6	81.0	1022.6	0.0
4/22/2025	6.1	1.2	3.9	16.7	9.6	47.8	100.0	76.4	1023.4	0.0
4/23/2025	6.6	1.1	4.9	17.0	10.4	49.4	96.4	73.3	1020.0	0.0
4/24/2025	6.5	1.2	6.6	19.1	12.5	41.9	87.7	66.2	1015.9	0.0
4/25/2025	6.6	1.2	8.0	20.4	13.6	35.9	86.6	64.2	1011.9	0.0
4/26/2025	6.2	1.1	8.1	18.2	12.3	52.3	95.3	74.5	1011.2	0.0
4/27/2025	9.0	1.6	6.7	17.2	11.2	61.3	100.0	85.0	1017.2	0.0
4/28/2025	4.9	1.1	7.8	12.0	9.9	79.2	100.0	98.7	1023.4	6.4
4/29/2025	6.1	1.1	7.8	15.4	10.7	73.3	100.0	96.5	1021.5	1.2
4/30/2025	6.4	1.6	7.1	16.8	11.5	63.4	100.0	86.5	1022.7	0.0

Appendix C Air Quality Exceedance Reports

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 12.2025.400	Date:	April 29, 2025

Reference: WLNG Air Quality Exceedance Report for PM_{10} and TSP – April 15, 2025

Executive Summary

This report investigates the exceedance of the 24-hour British Columbia Ambient Air Quality Objectives (BCAQO) for PM_{10} and TSP, which have a threshold of 50 µg/m³ and 120 µg/m³, respectively. PM_{10} and TSP concentrations, recorded at the Woodfibre LNG Air Quality Monitoring Station (AQMS) using Met One Instrument BAM 1020s, recorded a 24-hour average of 66.0 µg/m³ and 168.9 µg/m³ respectively, with elevated hourly concentrations noted from 00:00 to 05:00, and then from 20:00 to 23:00 Pacific Standard Time (PST). 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 and hauling material work. Dust plumes were observed originating from the haul roads, and the wind was predominantly from the northwest during the elevated concentrations; the dust could likely have been transported toward the Floatel. The exceedances are primarily linked to Project-related activities.

1 Introduction

This report assesses the PM_{10}, and TSP exceedances observed on April 15, 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, but do not provide information on ambient TSP concentrations.

2 Data Collection and Methodology

- **Guideline Criteria Exceeded:**
  - 24-hour BC Air Quality Objective for PM_{10}: 50 µg/m³
  - 24-hour BC Air Quality Objective for TSP: 120 µg/m³

- **Actual reading recorded at Woodfibre LNG AQMS:**
  - PM_{10} (24-hr average): 66.0 µg/m³
  - TSP (24-hr average): 168.9 µg/m³

Elevated PM_{10} and TSP hourly concentrations were recorded from 0:00 to 5:00 hours and again between 20:00 and 23:00 hours

- **Climatic Conditions:**
  - Wind Speed: 24-hour average of 1.2 m/s; range of 0.5 – 2.2 m/s
  - Wind Direction: Predominantly from the northwest during the periods when elevated PM_{10} and TSP concentrations were observed
  - Total Precipitation (24-hours): 0.0 mm

Data collection included hourly PM_{10} and TSP readings from the Woodfibre LNG AQMS, hourly wind speed, wind direction, and rainfall measurements from Woodfibre LNG meteorology station, and regional PM_{10} data from the British Columbia Ministry of Environment and Parks (BC ENVP) 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} and TSP 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 April 15, 2025, did not correlate with wind speed. The maximum hourly average wind speed measured at the onsite meteorology station was 2.2 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 ENVP. The PM_{10} concentrations at the Woodfibre LNG site were higher than those recorded at the Langdale Elementary regional air quality station, particularly between 00:00 and 05:00 hours, and then again between 20:00 and 23:00 hours (Figure 3). The 24-hour average PM_{10} concentration recorded at AQMS (66.0 µg/m³) was approximately six times higher than at Langdale Elementary (11.9 µg/m³), further demonstrating the overall difference in air quality between the two locations.

Woodfibre LNG informed Stantec of dust-generating activities around the AQMS on April 15. During the night shift (6:00 p.m. to 6:00 a.m.), dust generating activities included rock crushing in the 4200 Area (north-northwest of the AQMS) and hauling material from the 4100 Area (northwest of the AQMS) to the site's east side for backfilling. Haul roads are highlighted with a blue line in Figure 4. Environmental Monitors (EMs) observed visible dust plumes originating from haul roads and the 4200 crushing area, particularly during dry and warm conditions. Site-wide dust suppression was in place, and water truck frequency was increased in response to the dry weather forecast. These operations contributed to the

observed PM_{10} and TSP exceedances 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 April 15, 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 April 15, 2025 (Figure 5).

For reference, the 4100 Area 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 April 15, 2025, the wind predominantly blew from the northwest quadrant toward the AQMS station, particularly during the period when elevated PM_{10} and TSP concentrations were recorded at the AQMS. Given this wind direction, and with dust plumes observed, it is likely that dust 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} and TSP air quality exceedance recorded at the Woodfibre LNG site on April 15, 2025, can be attributed to dust-generating project-related construction activities, such as rock crushing in the 4200 area, and hauling of material in from the 4100 Area to the east side of the construction site for backfilling. Predominant winds from the northwest quadrant likely contributed to the increased PM_{10} and TSP concentrations observed by the AQMS during this period. Therefore, the PM_{10} and TSP exceedances are 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@stantec.com

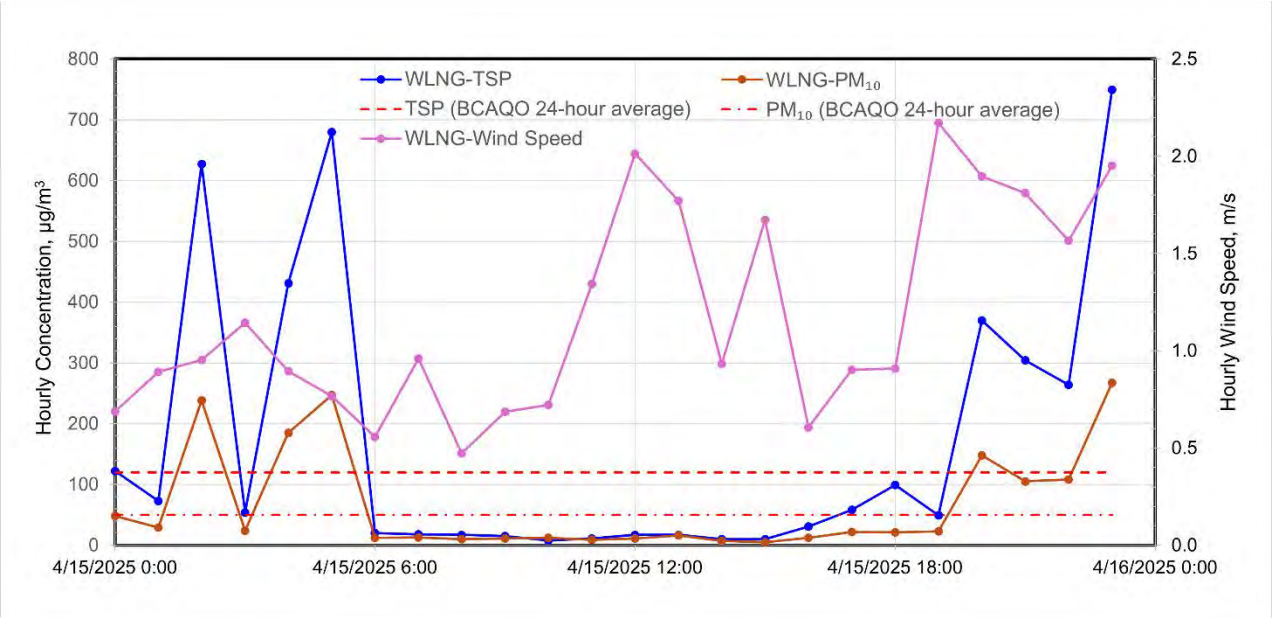
stantec.com

Attachments: A: Figures

Attachment A Figures

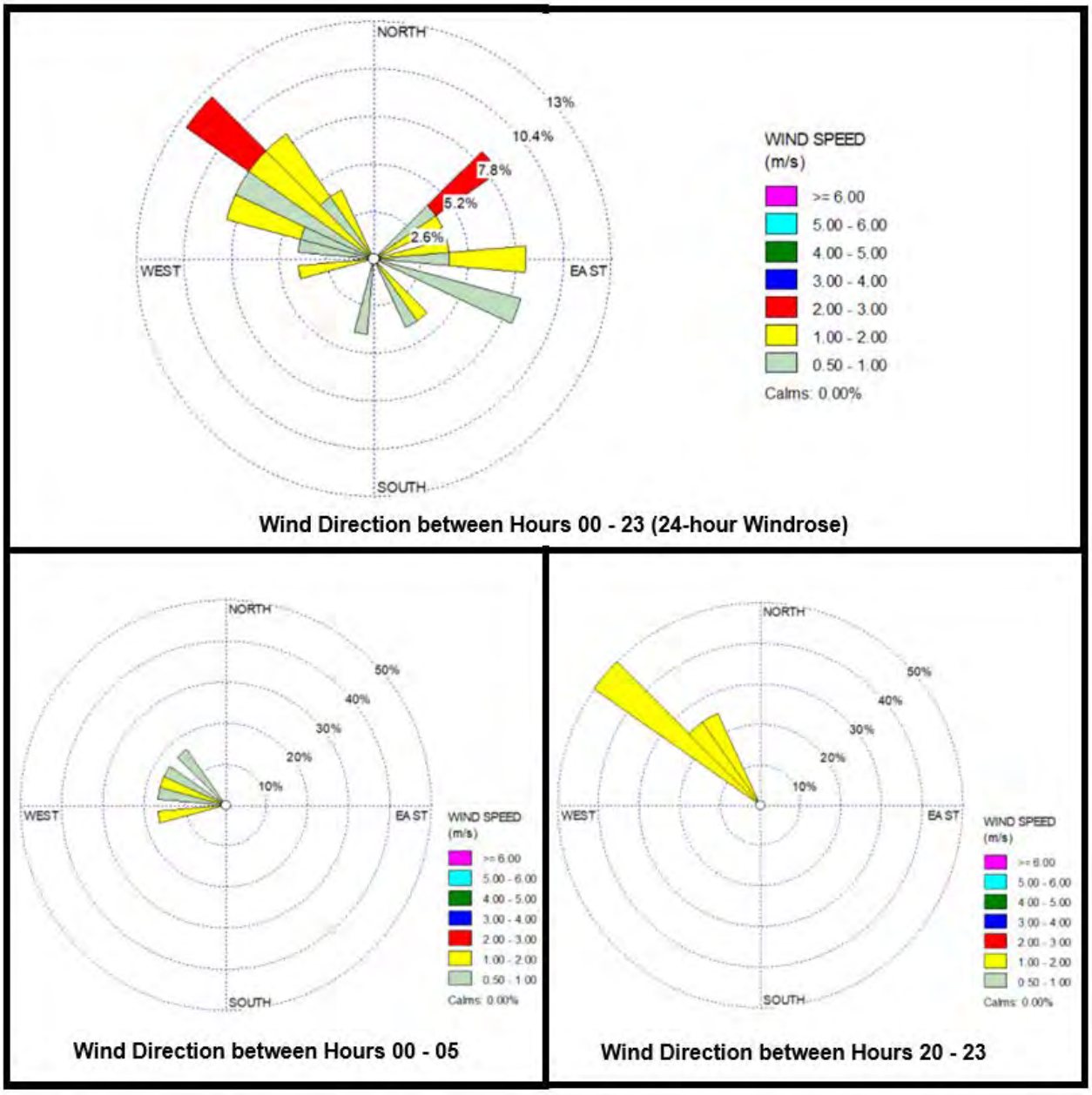
Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 15, 2025

Figure 1 PM_{10} and TSP concentrations and wind speed at the Woodfibre LNG site on April 15, 2025.



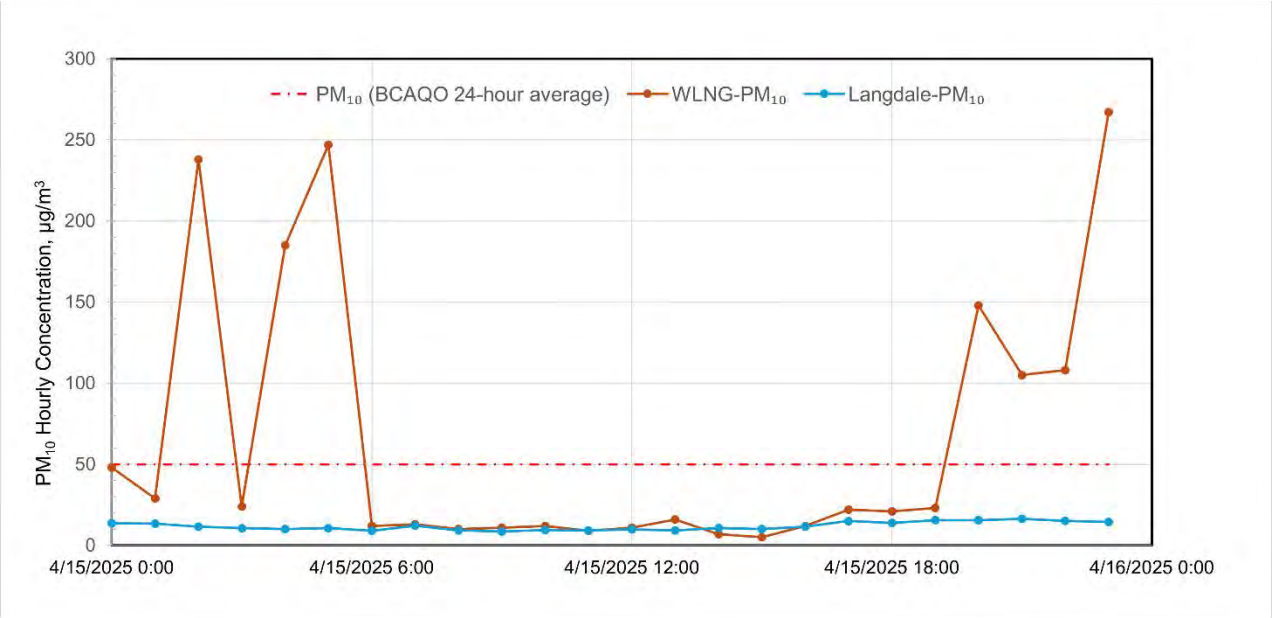
Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 15, 2025

Figure 2 Windrose for the Woodfibre LNG Meteorology Station, April 15, 2025.



Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 15, 2025

Figure 3 PM_{10} concentrations at the Woodfibre LNG site and the Langdale Elementary Regional BC MOE Station on April 15, 2025.

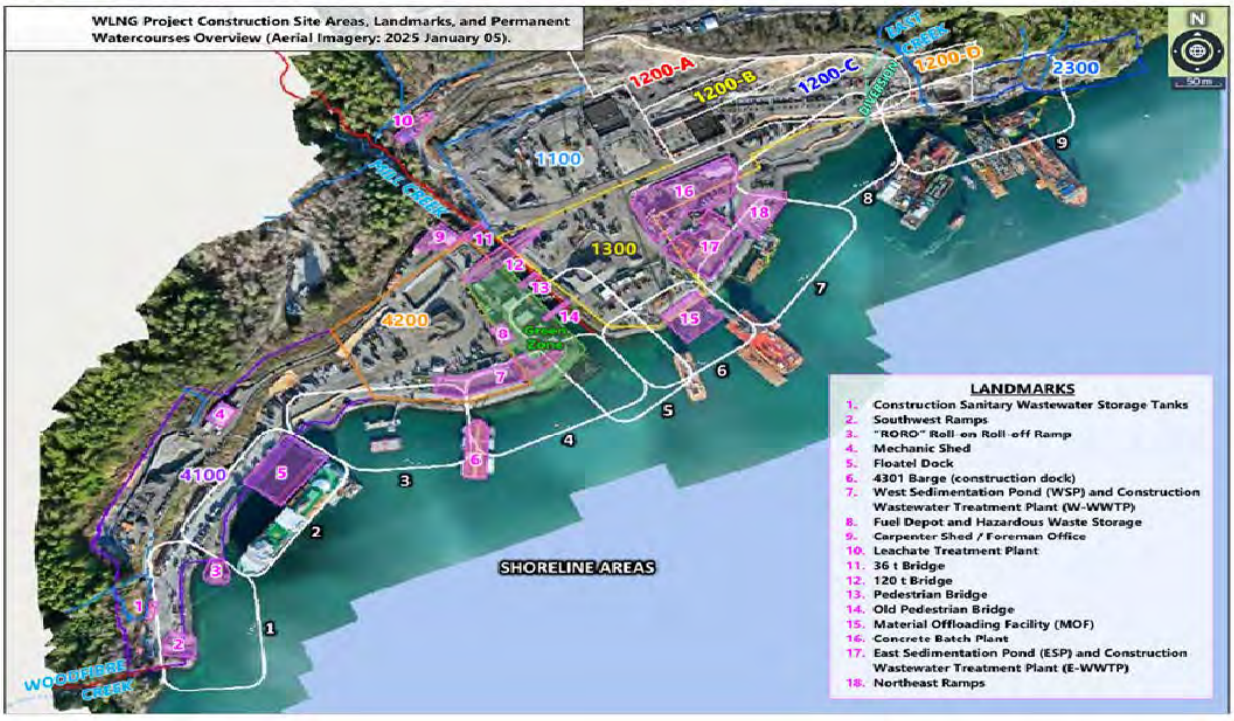


Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 15, 2025

Figure 4 Details of the Woodfibre LNG Onsite Daily Work (Construction) Activities for April 15, 2025.

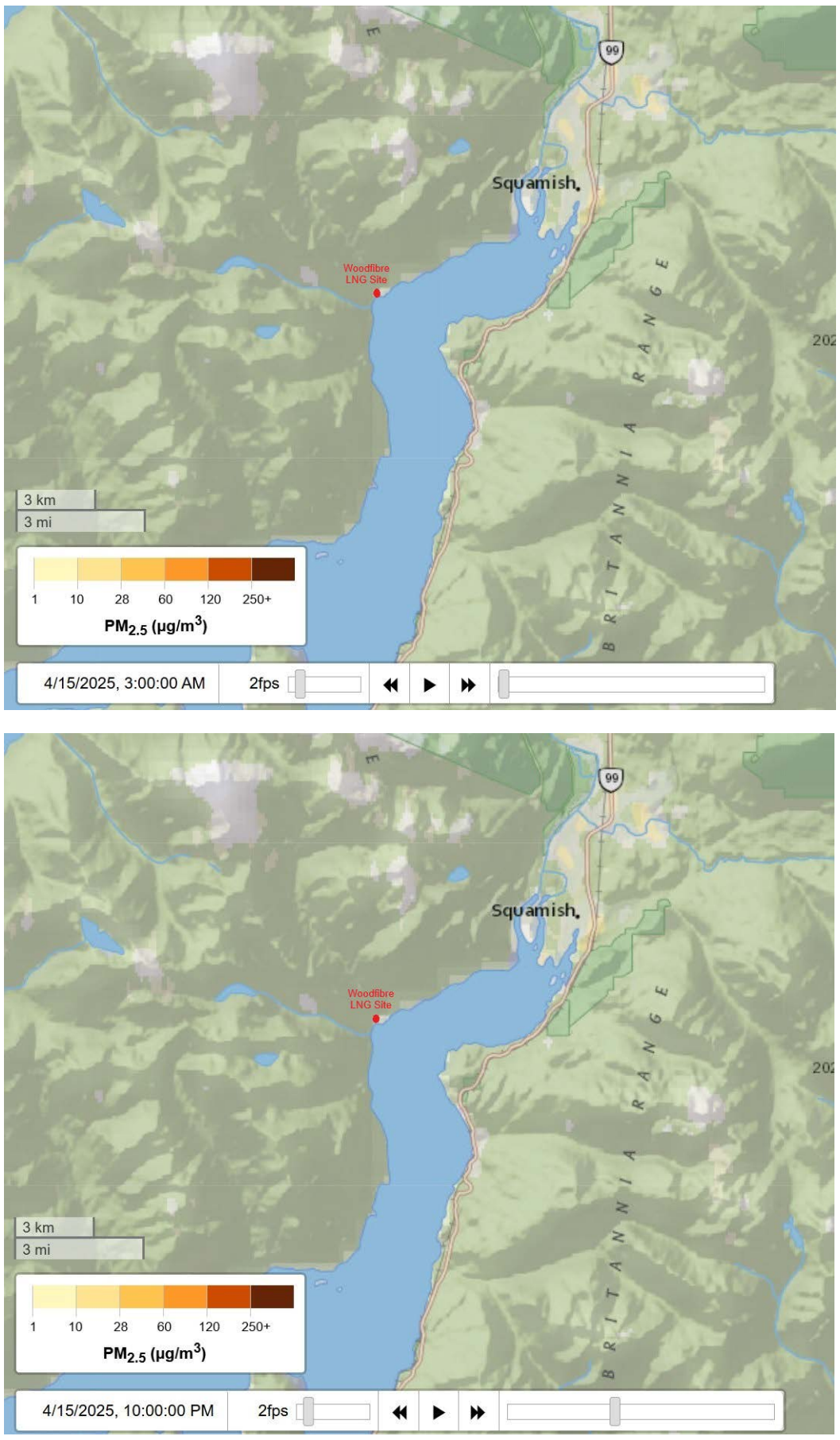
On-site Work Activities

The only dust-generating activities on April 15 were rock crushing in the 4200 Area and hauling material from the 4100 Area to the site's east side for backfilling. Haul routes are highlighted with blue lines. Please refer to the figure on the left for the April 15 work scope and the figure below for the area breakout.



Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 15, 2025

Figure 5 Smoke modelling output (forecast for 3:00 am and 10:00 pm) for April 15, 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.

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 Michelle Bentzen Senior Associate, Environmental Planner Stantec Consulting Ltd.
Project/File:	123222160 12.2025.400	Date:	May 7, 2025

Reference: WLNG Air Quality Exceedance Report for PM_{10} and TSP – April 16 and 17, 2025

Executive Summary

This report investigates the exceedance of the 24-hour British Columbia Ambient Air Quality Objectives (BCAQO) for PM_{10} and TSP, which have thresholds of 50 µg/m³ and 120 µg/m³, respectively. PM_{10} and TSP concentrations, recorded at the Woodfibre LNG Air Quality Monitoring Station (AQMS) using Met One Instrument BAM 1020s, recorded a 24-hour average of 115.2 µg/m³ and 59.5 µg/m³ for PM_{10} on April 16 and April 17, respectively. For TSP, the 24-hours averages were 264.6 µg/m³ on April 16 and 154.8 µg/m³ on April 17. Elevated hourly concentrations of PM_{10} and TSP were noted from 00:00 to 05:00, 08:00 to 12:00, and from 17:00 on April 16 to 05:00 on April 17, as well as from 20:00 to 23:00 on April 17, 2025, Pacific Standard Time (PST). Wind conditions, regional PM_{10} data, and onsite work activities were analyzed to determine the likely sources of air quality exceedance. Based on the locations of the emission sources and the wind direction during the period of elevated concentrations, these exceedances of the 24-hour PM_{10} and TSP BCAQO were primarily attributed to emissions from project construction activities, including rock crushing and hauling material work. While fugitive dust plumes were not observed originating from the rock crushing work, the wind was predominantly from the northwest during the elevated concentrations; the dust could likely have been transported toward the Floatel. These exceedances are primarily linked to Project-related activities.

1 Introduction

This report assesses the PM_{10}, and TSP exceedances observed on April 16 and 17, 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 but does not provide information on ambient TSP concentrations.

2 Data Collection and Methodology

- **Guideline Criteria Exceeded:**
  - 24-hour BC Air Quality Objective for PM_{10}: 50 µg/m³
  - 24-hour BC Air Quality Objective for TSP: 120 µg/m³
- **Actual reading recorded at Woodfibre LNG AQMS:**
  - On April 16, 2025
    - PM10 (24-hr average): 115.2 µg/m³
    - TSP (24-hr average): 264.6 µg/m³
  - On April 17, 2025
    - PM10 (24-hr average): 59.5 µg/m³
    - TSP (24-hr average): 154.8 µg/m³

Elevated PM_{10} and TSP hourly concentrations were recorded from 00:00 to 05:00, 08:00 to 12:00, and from 17:00 on April 16 to 05:00 on April 17, as well as from 20:00 to 23:00 on April 17, 2025.

- **Climatic Conditions:**
  - On April 16, 2025
    - Wind Speed: 24-hour average of 2.2 m/s; range of 0.6 – 4.3 m/s
    - Wind Direction: Predominantly from the northwest during the periods when elevated PM_{10} and TSP concentrations were observed
    - Total Precipitation (24-hours): 0.0 mm
  - On April 17, 2025
    - Wind Speed: 24-hour average of 1.1 m/s; range of 0.5 – 3.2 m/s
    - Wind Direction: Predominantly from the northwest during the periods when elevated PM_{10} and TSP concentrations were observed
    - Total Precipitation (24-hours): 0.0 mm

Data collection included hourly PM_{10} and TSP readings from the Woodfibre LNG AQMS, hourly wind speed, wind direction, and rainfall measurements from Woodfibre LNG meteorology station, and regional PM_{10} data from the British Columbia Ministry of Environment and Parks (BC ENVP) 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} and TSP air quality exceedances were 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 April 16 and 17, 2025, did not correlate with wind speed. The maximum hourly average wind speed measured at the onsite meteorology station was 4.3 m/s on April 16 and 3.2 m/s on April 17, both 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 ENVP. The PM_{10} concentrations at the Woodfibre LNG site were higher than those recorded at the Langdale Elementary regional air quality station, particularly between 00:00 and 05:00 hours, 08:00 and 12:00 hours, and then again between 17:00 and 23:00 hours on April 16, and Between 00:00 and 05:00 hours and between 20:00 and 23:00 hours on April 17 (Figure 3). The 24-hour average PM_{10} concentration recorded at AQMS were 115.2 µg/m³ on Apil 16 and 59.5 µg/m³ on April 17. These values were approximately eleven times and eight times higher, respectively than the concentrations recorded at the Langdale Elementary regional air quality station, which recorded 10.9 µg/m³ on April 16 and 7.3 µg/m³ on April 17. This further demonstrates the overall difference in air quality between the two locations.

Woodfibre LNG informed Stantec of dust-generating activities around the AQMS on April 16 and 17. During the night shift (6:00 p.m. to 6:00 a.m.) on both April 16 and 17, 2025, dust generating activities included rock crushing in the 4200 Area (north-northwest of the AQMS) and hauling material from the 4100 Area (northwest of the AQMS) to the site's east side for backfilling. Haul roads are highlighted with a blue line in Figure 4. Environmental Monitors (EMs) did not observe visible dust plumes originating from haul roads and the 4200 crushing area, particularly during dry and warm conditions. Site-wide dust suppression was in place, and water truck frequency was increased in response to the dry weather forecast. These dust-generating activities contributed to the observed PM_{10} and TSP exceedances 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 April 16 and 17, 2025, indicating wind patterns that likely dispersed particulates (fugitive dust) from the 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 April 16 and 17, 2025 (Figure 5).

For reference, the 4100 Area 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 (Figure 4). On April 16 and 17, 2025, the wind predominantly blew from the northwest quadrant toward the AQMS station, particularly during the period when elevated PM_{10} and TSP concentrations were recorded at the AQMS. Given this wind direction, it is likely that dust 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} and TSP air quality exceedance recorded at the Woodfibre LNG site on April 16 and 17, 2025, can be attributed to dust-generating project-related construction activities, such as rock crushing in the 4200 Area, and hauling of material from the 4100 Area to the east side of the construction site for backfilling. Predominant winds from the northwest quadrant likely contributed to the increased PM_{10} and TSP concentrations observed by the AQMS during this period. Therefore, the PM_{10} and TSP exceedances are 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

Michelle Bentzen M.E.Des., B.Sc.
Senior Associate, Environmental Planner
Phone: (403) 781-5487
Mobile: (403) 619-3464
Michelle.Bentzen@statnec.com

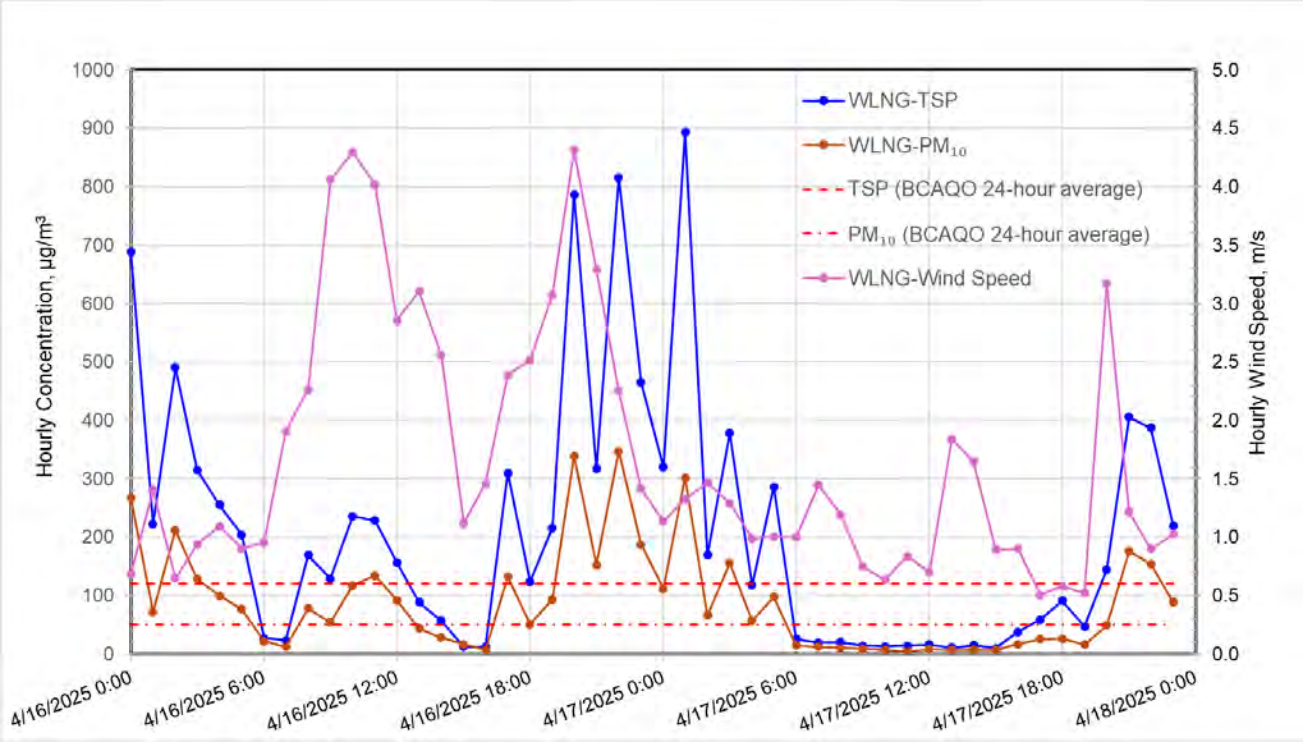
stantec.com

Attachments: A: Figures

Attachment A Figures

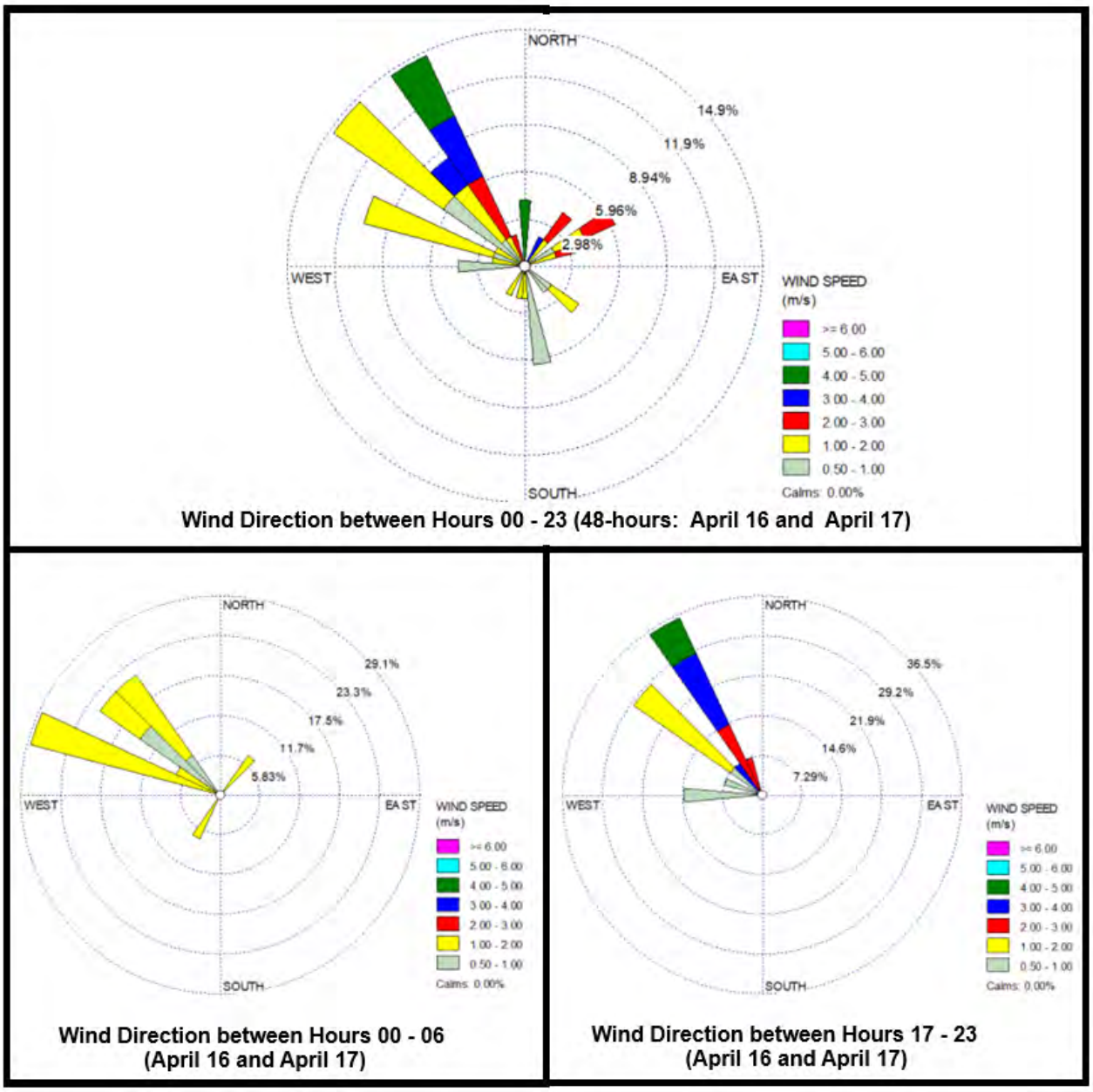
Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 16 and 17, 2025

Figure 1 PM_{10} and TSP concentrations and wind speed at the Woodfibre LNG site on April 16 and 17, 2025



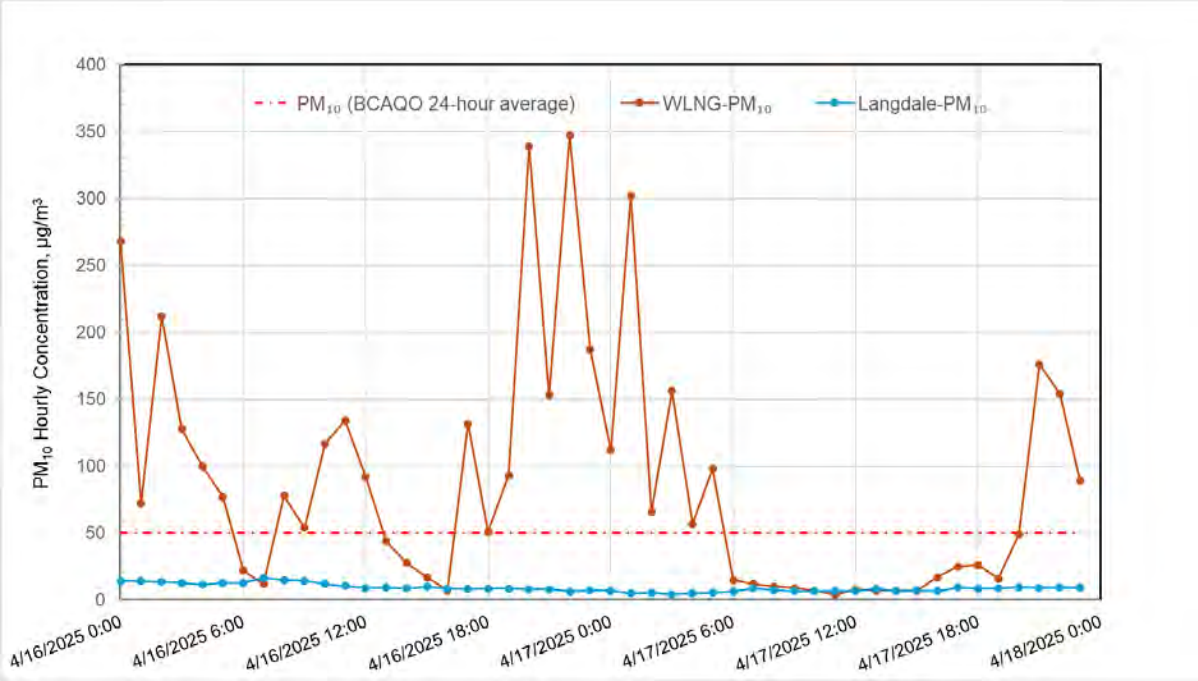
Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 16 and 17, 2025

Figure 2 Windrose for the Woodfibre LNG Meteorology Station, April 15 and 17, 2025.



Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 16 and 17, 2025

Figure 3 PM_{10} concentrations at the Woodfibre LNG site and the Langdale Elementary Regional BC MOE Station on April 16 and 17, 2025.

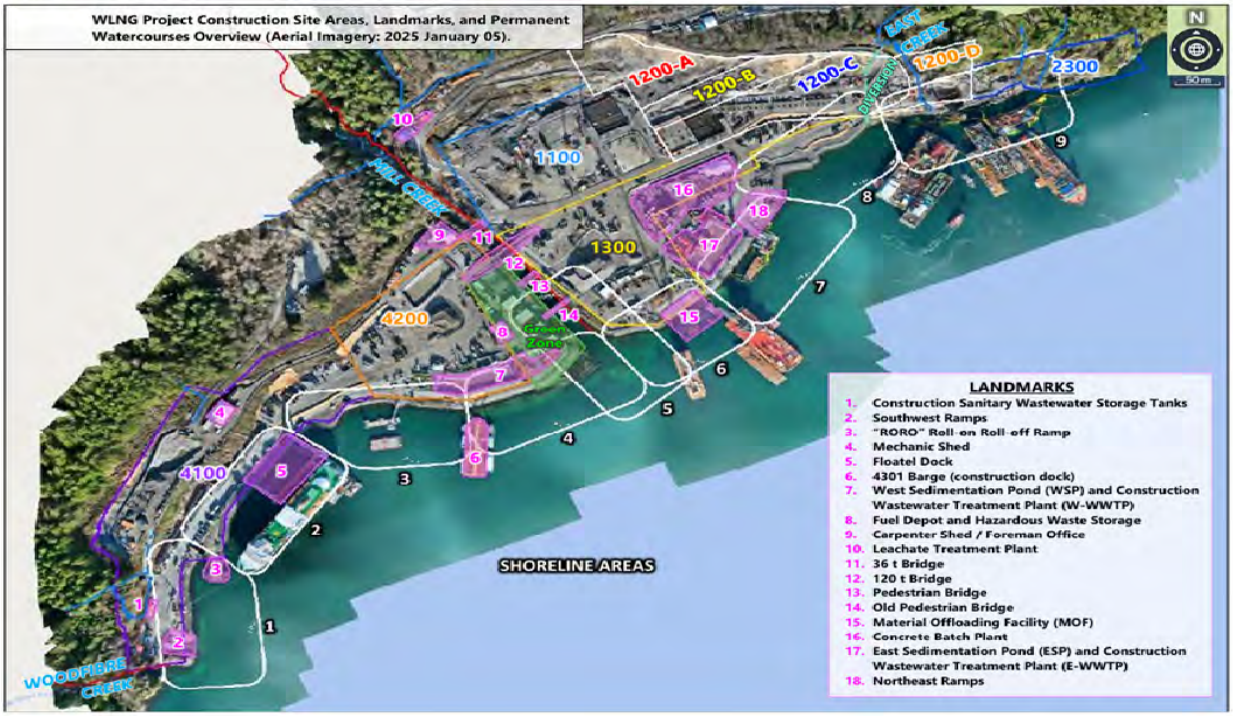


Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 16 and 17, 2025

Figure 4 Details of the Woodfibre LNG Onsite Daily Work (Construction) Activities for April 16 and 17, 2025.

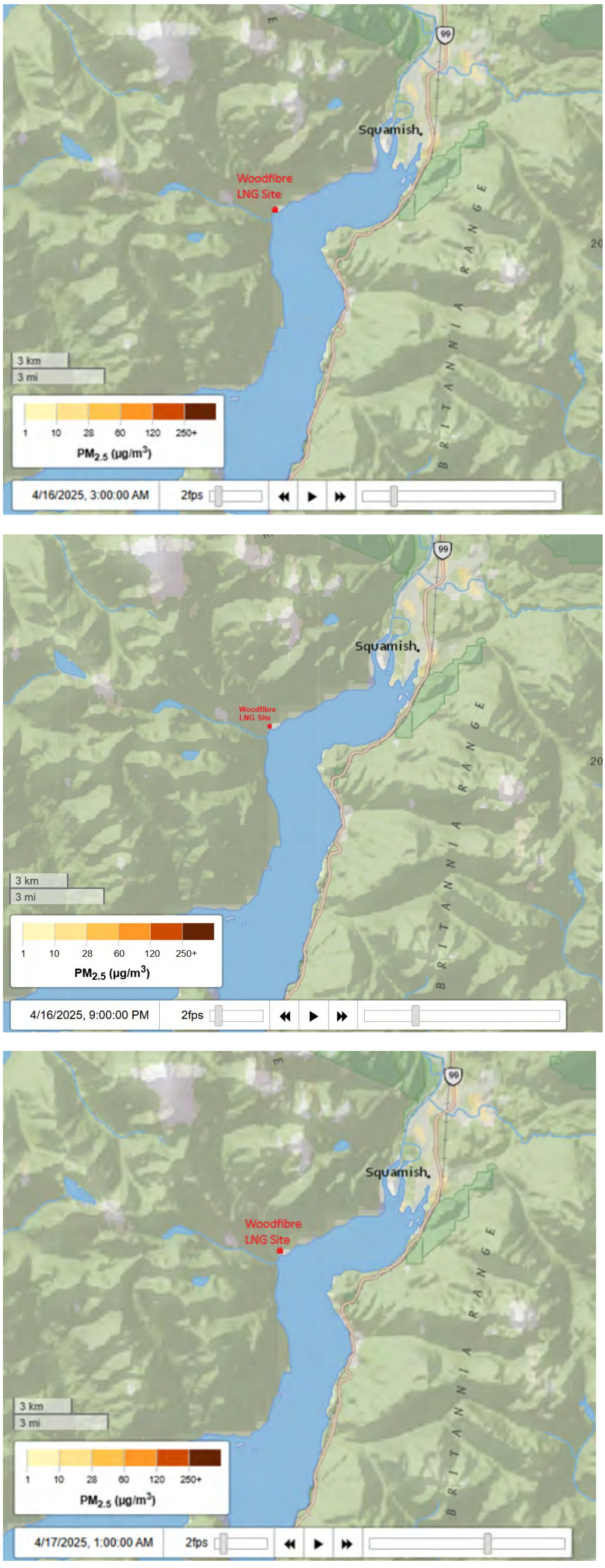
On-site Work Activities

The only dust-generating activities on April 16 and 17 were rock crushing in the 4200 Area and hauling material from the 4100 Area to the east side of the site for backfilling. Haul routes are highlighted with blue lines. Please refer to the figure on the left for the April 16 and 17 work scope, and the figure below for the area breakout.

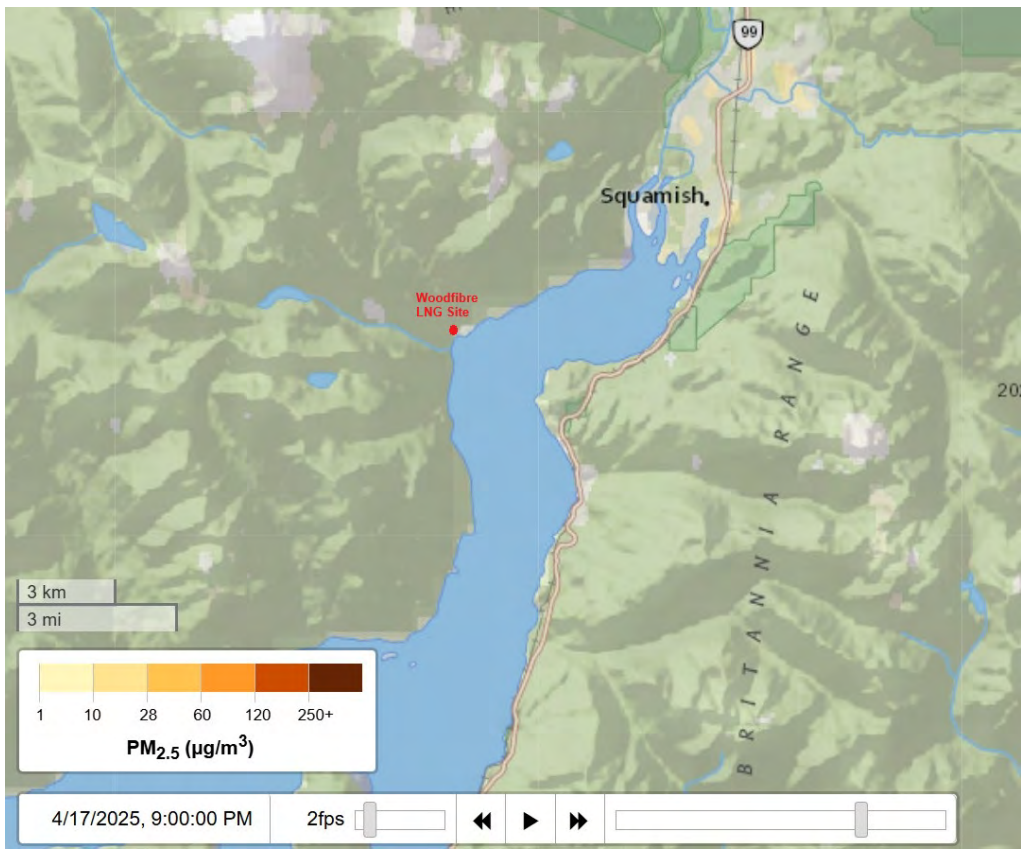


Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 16 and 17, 2025

Figure 5 Smoke modelling output (forecast for 3:00 am and 9:00 pm on April 16, 2025, and 01:00 am and 9:00 pm on April 17, 2025).



Reference: WLNG Air Quality Exceedance Report for PM10 and TSP – April 16 and 17, 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 D Weekly AQMS Reports

WLNG AQMS - Weekly Reporting

Reporting Period
This AQMS Weekly report covers the period from March 31 to April 06, 2025.

Objective
This report summarizes the air quality monitoring data for the week of March 31 to April 06, 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
31 Mar	0	16	6.9	5	82	16.3	6	183	27.8	1.7	25.4	11.2
01 Apr	0	14	6.2	8	46	15.3	9	82	21.6	2.5	38.9	7.9
02 Apr	3	17	6.9	6	91	19.3	11	185	33.8	0.0	35.3	7.9
03 Apr	0	12	5.4	5	15	11.0	8	36	14.7	1.7	13.7	5.9
04 Apr	4	12	7.0	7	20	12.2	9	34	17.8	3.4	10.7	6.5
05 Apr	2	19	6.4	7	57	17.1	11	154	36.5	1.5	16.0	7.4
06 Apr	1	15	6.0	6	29	14.4	8	74	20.1	6.4	37.2	14.0

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.

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	19	6.4	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	5	91	15.1	33.3 (24-hr avg)	0	0
TSP	µg/m³	6	185	24.6	80 (24-hr avg)	0	0
NO_2	ppb	0.0	38.9	8.7	40 (1-hr avg max)	0	0

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (°C)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
31 Mar	6.1	1.5	6.9	12.4	8.9	6.6
01 Apr	6.7	1.6	4.8	12.0	8.6	0.2
02 Apr	6.1	1.5	5.6	11.3	7.9	7.4
03 Apr	6.0	1.3	4.5	14.9	8.4	0.0
04 Apr	5.7	1.0	4.0	14.9	8.9	0.0
05 Apr	8.2	1.1	5.0	18.8	10.9	0.0
06 Apr	3.8	0.9	7.7	11.3	9.6	40.6

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
31-Mar to 06-Apr	Yes	Yes	Yes	No	NA

Note: SO_2 and VOC passive samples are swapped on a monthly basis. Passive samples were swapped on April 1, 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 March 31 to April 06, construction activities include, breaking oversized rock and excavating a utility trench in Area 1100, excavating a test pit in Area 1200D, sifting and hauling rock to Surge Road, hauling rock to the crusher from Areas 1100 and 1200, backfilling in Areas 1100 and 1200, stockpiling Type D material, performing grade work at the North Sump, conducting backfill and grade work at the Admin Building, removing blast rock from Area 1200, and placing Type A and Type D material in Area 1100.

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 April 07 to April 13, 2025.

Objective
This report summarizes the air quality monitoring data for the week of April 07 to April 13, 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
07 Apr	2	7	4.7	6	28	10.8	7	36	13.5	1.3	29.7	12.5
08 Apr	0	7	3.5	6	13	9.5	5	35	10.5	3.5	28.5	13.5
09 Apr	0	7	4.2	6	39	14.8	7	62	19.0	0.9	25.0	6.9
10 Apr	2	9	4.6	8	68	17.7	8	75	21.9	3.2	21.6	8.9
11 Apr	2	9	4.9	8	27	12.4	6	178	23.1	2.9	15.4	7.1
12 Apr	2	32	8.1	6	251	32.8	8	554	65.0	3.0	12.9	6.7
13 Apr	2	17	7.9	6	141	31.5	8	296	68.1	0.2	11.4	6.2

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	32	5.4	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	6	251	18.5	33.3 (24-hr avg)	0	0
TSP	µg/m³	5	554	31.6	80 (24-hr avg)	0	0
NO_2	ppb	0.2	29.7	8.8	40 (1-hr avg max)	0	0

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (°C)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
07 Apr	4.3	1.0	6.8	10.5	8.4	11.2
08 Apr	5.9	1.2	5.8	8.9	7.0	34.2
09 Apr	7.2	1.7	6.4	12.9	9.2	2.0
10 Apr	11.6	1.7	7.5	13.7	9.3	9.4
11 Apr	8.7	1.9	6.3	11.6	8.6	0.2
12 Apr	6.4	1.6	3.3	14.0	8.0	0.0
13 Apr	6.2	1.0	3.0	14.1	8.1	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
07-Apr to 13-Apr	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 April 1, 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 April 7 to April 13, construction activities included breaking a utility trench in Area 1100, breaking oversize material north of M10 and in the Kode area, breaking rock for the 1200D Flare Stack anchor, loading out oversize material from 1200A, and crushing material at Kode to produce Type D.

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 April 14 to April 20, 2025.

Objective

This report summarizes the air quality monitoring data for the week of April 14 to April 20, 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)			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
14 Apr	2	26	8.6	7	211	35.3	8	418	69.1	1.5	33.0	7.9
15 Apr	0	39	13.5	5	267	***66.0***	8	749	***168.9***	2.1	12.5	7.0
16 Apr	1	30	12.1	7	347	***115.2***	12	816	***264.6***	4.9	38.2	12.9
17 Apr	–	–	–	4	302	***59.5***	10	893	***154.8***	2.3	14.2	7.0
18 Apr	–	–	–	6	145	33.6	9	390	75.6	0.7	16.4	9.0
19 Apr	–	–	–	10	85	27.6	12	223	53.9	0.6	11.0	4.9
20 Apr	–	–	–	2	65	14.9	5	374	55.7	2.1	11.9	5.1

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] Data is unavailable from April 17 to April 20 due to the $PM_{2.5}$ BAM sampler's Tape tension malfunction.

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	39	11.4	16.7 (24-hr avg)	0	0
PM_{10} [1]	µg/m³	2	347	50.3	33.3 (24-hr avg)	5	3
TSP [2]	µg/m³	5	893	120.4	80 (24-hr avg)	3	3
NO_2	ppb	0.6	38.2	7.7	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	
14 Apr	6.7	1.2	6.6	15.4	10.6	0.0
15 Apr	6.3	1.2	6.4	16.7	10.8	0.0
16 Apr	13.9	2.2	5.6	20.0	12.0	0.0
17 Apr	7.1	1.1	5.3	17.6	10.9	0.0
18 Apr	5.4	1.2	6.1	17.5	11.9	0.0
19 Apr	12.1	3.4	7.2	15.1	10.9	0.0
20 Apr	9.5	2.4	6.4	15.5	9.7	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
14-Apr to 20-Apr	No	No	No	Yes	**Exposure Period (March):** SO_2=<0.2 ppb & VOC= <0.7 ppb

Note: SO_2 and VOC passive samples are swapped on a monthly basis. Passive samples were swapped on April 1, 2025, and shipped to AGAT Labs. The laboratory analysis report for the exposure periods of March 3 – April 1 (VOC) and, March 7 to April 1 (SO_2) was received on April 16, 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 April 14 to April 20, construction activities included excavating and breaking rock for the sump on the east side of M13, breaking oversize material at 1100 and 1200, breaking rock at the flare stack anchor B, crushing material at the Kode stockpile to produce Type D, and loading and hauling material from Area 1100 and 4100.

Summary of Daily Reports and Action Taken

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	Air quality exceedances were recorded on April 15, 16, and 17, 2025. • April 15: PM_{10} = 66.0 µg/m³; TSP = 168.9 µg/m³ • April 16: PM_{10} = 115.2 µg/m³; TSP = 264.6 µg/m³ • April 17: PM_{10} = 59.5 µg/m³; TSP = 154.8 µg/m³	Investigation and data QA/QC have been completed.	The air quality exceedance reports are under preparation.
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. Air quality exceedances of the British Columbia Air Quality Objectives were recorded for PM_{10} and TSP on April 15, 16, and 17, 2025. As a result, air quality exceedance reports are currently being prepared.

WLNG AQMS - Weekly Reporting

Reporting Period

This AQMS Weekly report covers the period from April 21 to April 27, 2025.

Objective

This report summarizes the air quality monitoring data for the week of April 21 to April 27, 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
21 Apr	– [1]	– [1]	– [1]	7	143	27.7	8	303	51.3	0.7	14.2	6.0
22 Apr	2	9	5.2	7	51	14.7	8	171	33.1	2.2	24.4	6.8
23 Apr	0	8	5.4	6	30	13.1	10	68	25.5	1.1	11.4	7.0
24 Apr	4	10	7.0	11	27	16.8	13	71	30.8	5.9	17.0	9.9
25 Apr	4	17	9.9	10	35	18.9	15	97	35.3	2.5	16.6	9.7
26 Apr	3	15	8.5	11	32	19.7	16	71	38.6	3.8	16.8	9.5
27 Apr	3	11	8.5	11	33	17.4	15	93	31.3	4.0	15.7	8.1

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] Data is unavailable due to the $PM_{2.5}$ BAM sampler's Tape tension malfunction.

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	17	7.4	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	6	143	18.3	33.3 (24-hr avg)	0	0
TSP	µg/m³	8	303	35.1	80 (24-hr avg)	0	0
NO_2	ppb	0.7	24.4	8.1	40 (1-hr avg max)	0	0

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (°C)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
21 Apr	9.9	2.4	5.3	13.4	8.8	0.0
22 Apr	6.1	1.2	3.9	16.7	9.6	0.0
23 Apr	6.6	1.1	4.9	17.0	10.4	0.0
24 Apr	6.5	1.2	6.6	19.1	12.5	0.0
25 Apr	6.6	1.2	8.0	20.4	13.6	0.0
26 Apr	6.2	1.1	8.1	18.2	12.3	0.0
27 Apr	9.0	1.6	6.7	17.2	11.2	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
21-Apr to 27-Apr	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 April 1, 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 April 21 to April 27, construction activities included rock anchor installation in areas M01 and P10, backfilling in the P02 area and Area 4200, breaking and clearing at the flare stack, oversize rock breaking in Area 1100, material sorting and stockpiling at the batch plant, and grading and road topping in Area 4200.

Summary of Daily Reports and Action Taken

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	No AQ exceedance was recorded during this period.	No Action required.	Not Applicable.
AQ Complaints	No AQ complaint was 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 April 28 to May 4, 2025.

Objective
This report summarizes the air quality monitoring data for the week of April 28 to May 4, 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
28 Apr	2	17	7.3	6	24	14.2	7	49	22.3	6.6	31.2	16.4
29 Apr	2	7	4.3	5	14	8.4	5	16	10.8	2.3	13.7	6.7
30 Apr	0	8	5.0	8	20	12.1	8	35	15.6	2.8	17.9	8.7
1 May	1	14	6.8	6	20	12.8	10	43	21.3	3.6	33.4	11.8
2 May	4	16	7.9	11	49	18.8	12	88	30.1	3.6	22.4	10.8
3 May	0	11	5.0	6	16	9.7	6	20	12.3	0.0	31.4	8.7
4 May	0	10	4.4	4	11	8.3	5	22	11.6	1.0	21.0	7.7

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	17	5.8	16.7 (24-hr avg)	0	0
PM_{10}	µg/m³	4	49	12.0	33.3 (24-hr avg)	0	0
TSP	µg/m³	5	88	17.7	80 (24-hr avg)	0	0
NO_2	ppb	0.0	33.4	10.1	40 (1-hr avg max)	0	0

Table 3: Summary of Meteorological Station Results

Date	Wind Speed (m/s)		Ambient Temperature (°C)			Total Precipitation (mm)
	Max	24-hr Avg	Min	Max	24-hr Avg	
28 Apr	4.9	1.1	7.8	12.0	9.9	6.4
29 Apr	6.1	1.1	7.8	15.4	10.7	1.2
30 Apr	6.4	1.6	7.1	16.8	11.5	0.0
1 May	8.1	1.2	7.1	18.8	12.9	0.0
2 May	10.6	1.8	8.9	22.4	14.5	3.0
3 May	12.6	3.6	6.7	15.0	11.1	6.6
4 May	6.7	1.5	4.5	17.0	10.2	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
28-Apr to 4-May	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 April 1, 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 April 28 to May 4, construction activities included rock breaking in Areas 1100, 1200C, and 4100; excavation at the flare stack and 1100 Sump; and backfilling at CB5, P01–P02, and 1200D. Grading and granular placement were also conducted at the Flex Unit pad and 1300 roadway. Dust suppression measures, including dewatering and road watering, were ongoing.

Summary of Daily Reports and Action Taken

Category	Details	Action Taken	Resolution Status / Anticipated Completion Date
AQ Exceedances Report	No AQ exceedance was recorded during this Period.	No Action required.	Not Applicable.
AQ Complaints	No AQ complaint was 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.

Appendix E Passive SO_2 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: 25C289887

AIR QUALITY MONITORING REVIEWED BY: Bithi Nahar, Lab Technician

DATE REPORTED: May 23, 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: 25C289887

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: 25C289887

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Passive Air Quality Sampling

DATE RECEIVED: 2025-05-09

DATE REPORTED: 2025-05-23

Parameter	Unit	G / S	RDL	Site#01/ 01Apr/25,09:00 02May/25,13:45 /SO2 FILTER 6728448	Site#01/ 01Apr/25,09:00 02May/25,13:45 /TVOC FILTER 6728451
SAMPLE DESCRIPTION:					
SAMPLE TYPE:					
DATE SAMPLED:					
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

6728448-6728451 All samples are field blank subtracted.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By: S. Nahar.

AGAT Laboratories

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CALGARY, ALBERTA
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Certificate of Analysis

AGAT WORK ORDER: 25C289887

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Passive Quality Assurance

DATE RECEIVED: 2025-05-09

DATE REPORTED: 2025-05-23

				Site#01/DUP	BLANK/	Site#01/DUP	BLANK/
				01Apr/25,09:00	01Apr/25,09:00	01Apr/25,09:00	01Apr/25,09:00
				02May/25,13:45	02May/25,13:45	02May/25,13:45	02May/25,13:45
		SAMPLE DESCRIPTION:		/SO2	/SO2	/TVOC	/TVOC
		SAMPLE TYPE:		FILTER	FILTER	FILTER	FILTER
		DATE SAMPLED:					
Parameter	Unit	G / S	RDL	6728449	6728450	6728452	6728453
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: S. Nahar.

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: 25C289887

PROJECT: Woodfibre LNG

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Air Quality Monitoring

RPT Date: May 23, 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	252	6728449	0.2	0.2	NA	<0.2	103%	90%	110%	104%	80%	120%	103%	80%	120%
Ambient VOC as Hexane	185	6728452	<0.7	<0.7	NA	< 0.7	83%	60%	140%	110%	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: S. Nahar.

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: 25C289887

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!

3700, 21st Street NE
Calgary, AB
T2E 6V6
P: 403.299.2158
webair.agatlabs.com

Laboratory Use Only

AGAT Job Number: 25-289887

Notes:

Chain of Custody Record

Report Information

Company: Stantec
Contact: Kashif Choudhry
Address: 255 – 2nd Avenue North
Saskatoon, Saskatchewan, S7K 3P2
Phone: 306-717-2435 Fax:
LSD:
Client Project #: 123222160-12-2025.200

Invoice To Same Yes ☐ / No ☐

Company: Stantec
Contact: accounts.payable.invoices@stantec.com
Address: 255 – 2nd Avenue North
Saskatoon, Saskatchewan, S7K 3P2
Phone: 306-717-2435 Fax:
PO/AFE#: 123222160-12-2025.200

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	Bank - SO2 passive	VOC Passive	Duplicate - VOC Passive	Blank - VOC Passive
	Please Email reports to:															
	kashif.choudhry@stantec.com															
	dan.jarratt@stantec.com															
	katie.chuen@stantec.com															
	WLNG-SO2-AQMS	APR 1, 2025 9:00AM	MAY 2, 2025 13:45PM			☑										
	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 Yan	May 9, 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

N°: 050925