Woodfibre LNG Air Quality Monitoring Station Report for September 2025

November 7, 2025

Prepared for:
Woodfibre LNG General Partner Inc.

Prepared by:
Stantec Consulting Ltd.

Project/File:
123222160

Stantec

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Prepared by: Digitally signed by Dr. Kashif I. Choudhry, P.Eng. Date: 2025.11.07 16:07:17 -06'00'
Signature

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

Reviewed by: Digitally signed by Daniel Lloyd Jarratt - P.Eng. - EGBC Date: 2025.11.07 15:08:02 -08'00'
Signature

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

Approved by: Adriana MacLeod Digitally signed by Adriana MacLeod Date: 2025.11.07 15:24:02 -08'00'
Signature

Adriana MacLeod, B.Sc.
Project Manager
Printed Name

Executive Summary

This report provides a summary of the ambient air quality monitoring data for September 2025 that was 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 ES.1 below presents the monthly averages, ranges, and maximum values for key air contaminant concentrations measured during September 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 September 2025.

Table ES.1 September 2025 Air Quality Monitoring Station Summary

Air Contaminant		**Units**	**Monthly Average**	**Monthly Range (Min - Max)**
$PM_{2.5}$ (24-hour average)		µg/m³	21.2	6.0 - 179.2
PM_{10} (24-hour average)		µg/m³	32.4	12.1 - 194.8
TSP (24-hour average)		µg/m³	39.6	13.3 - 206.7
NO_2 (24-hour average)		ppb	10.4	4.0 - 19.9
NO_2 (1-hour average)		ppb	10.4	0.0 - 43.3
SO_2	Sep 3 – Oct 1, 2025	ppb	0.2	
VOC as Hexane			96.1	
Number of Day with Air Quality Exceedances Recorded			4	
Number of Complaints Received			None	

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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 (less than 100 microns (µm) in aerodynamic diameter)
US EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
Woodfibre LNG	Woodfibre LNG General Partner Inc.

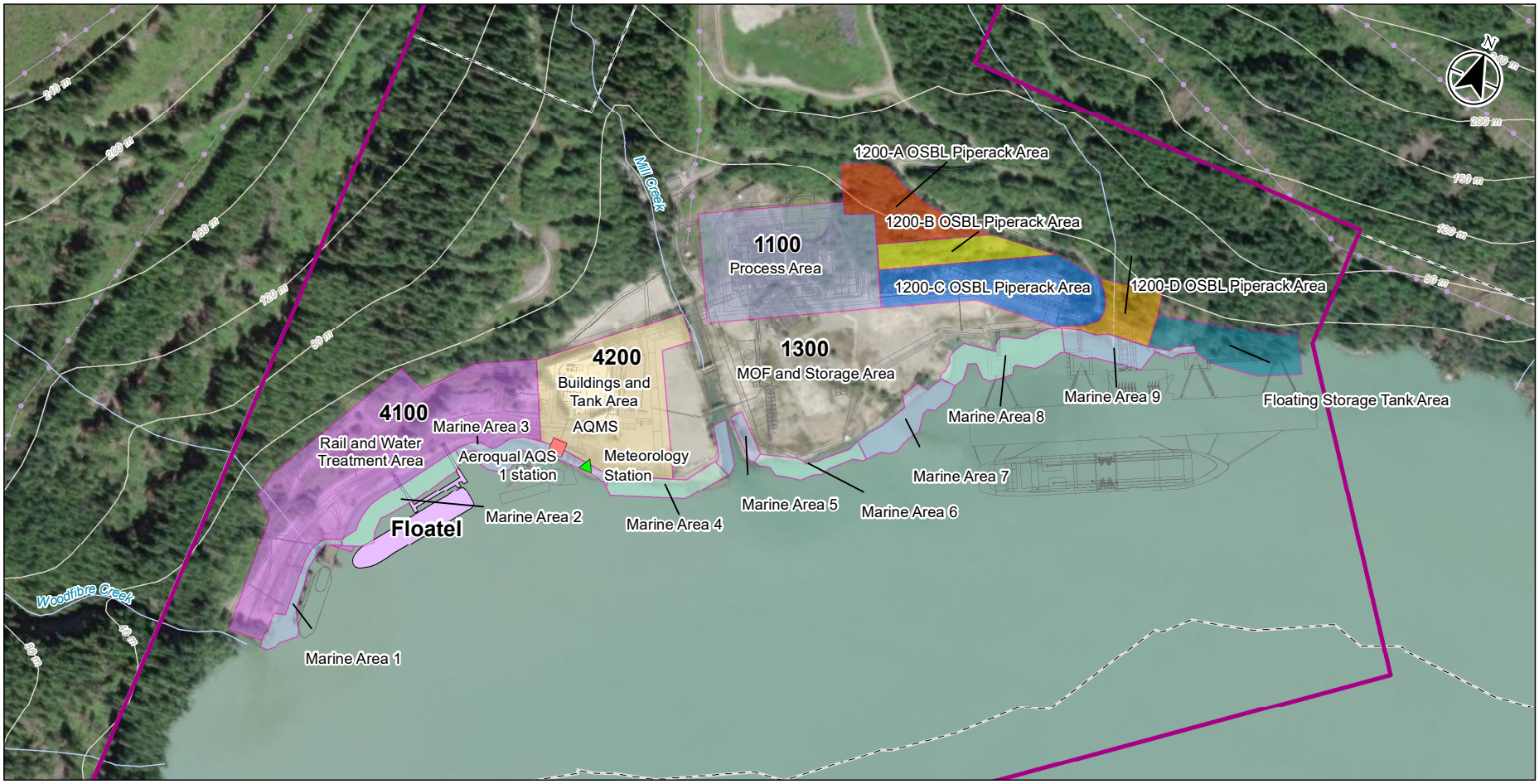
1 Introduction

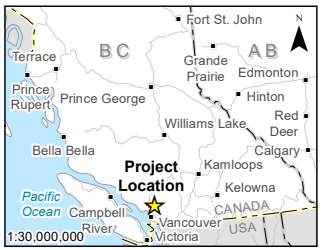
Woodfibre LNG General Partner Inc. (Woodfibre LNG) is developing the Woodfibre Liquefied Natural Gas Project (the Project) at the former Woodfibre Pulp Mill site, approximately seven kilometres southwest of Skwxwú7mesh (Squamish), British Columbia (BC). To support onsite ambient air quality monitoring, 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).

FAQMMP Rev 7 is currently in development through consultation with BC ENVP, BC MOH, BCER, EAO, VCH and designated Indigenous groups participating in the review process. The trigger levels for SO_2 and VOC from Rev 7 are applied in this monthly air quality report for comparison purposes.

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 September 2025 monthly air quality report provides data on air quality and meteorology conditions monitored at the Woodfibre LNG Project site close to Floatel #1. 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 including the protection of off-duty workers residing in Floatel #1.





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

MOF = Marine Offloading Facility
OSBL = Outside Battery Limits

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, relative humidity, barometric pressure, 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

- Fine particulate matter with aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$)
- Coarse particulate matter with aerodynamic diameter less than or equal to 10 microns (PM_{10})
- Total suspended particulate (TSP) with aerodynamic diameter less than or equal to 100 microns
- 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/m³ [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/m³ 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/m³ 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.

In addition to comparing measured concentrations against the applicable BCAQOs, project-specific trigger levels have been established to provide early warnings of potential air quality concerns. These trigger levels are set at two-thirds of the BCAQOs and are used to notify the project team when elevated concentrations are being recorded, prompting mitigation actions if needed. The project-specific trigger levels are:

- 16.7 µg/m³ for 24-hour average $PM_{2.5}$
- 33.3 µg/m³ for 24-hour average PM_{10}
- 80 µg/m³ for 24-hour average TSP
- 40 ppb for 1-hour average NO_2

The passive sampling of SO_2 and total VOCs allows for monthly and annual concentration values, rather than 1-hour and daily concentrations. There are no applicable monthly BCAQO for SO_2 and VOC but there is an annual BCAQO for SO_2 to compare the monitoring results to. The monthly trigger limit for the passive monitoring of SO_2 and VOC are:

- 5 ppb for monthly passive SO_2
- > 15 times of the previous monthly passive VOC

These SO_2 (5 ppb) and VOC (>15x previous month) values were introduced in draft Rev 7 of the FAQMMP as requested by the Squamish Nation. These trigger levels support proactive air quality management and are not regulatory limits.

3 Instrument Summary

The AQMS is currently being operated to measure the ambient concentrations of the air contaminants mentioned above. The instrumentation used to monitor ambient air quality at the AQMS is summarized in Table 3.1.

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 NO_x (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.17; 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 September 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 2025a) and Squamish Elementary (BC ENVP 2025b) 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. The 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 measures TSP and VOCs.

During September 2025, the hourly $PM_{2.5}$ concentrations ranged from 0[1] to 381 µg/m³, the hourly PM_{10} concentrations ranged from 6 to 408 µg/m³, the hourly TSP concentrations ranged from 6 to 409 µg/m³, and the hourly NO_2 concentrations ranged from 0[2] to 43.3 ppb. The hourly results for the NO_2 concentration monitoring during September were less than the BCAQO regulatory standard of 60 ppb. The hourly air quality objective regulatory standard 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 September 2025 is presented in Appendix B: Table B.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 24-hour regulatory standards for PM_{10} and TSP monitoring are 50 µg/m³ and 120 µg/m³, respectively. The 24-hour BCAQO regulatory standard 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).

[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 near the detection limit. 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.

During September 2025, the 24-hour average $PM_{2.5}$ concentrations ranged from 6.0 to 179.2 µg/m³, 24-hour average PM_{10} concentrations ranged from 12.1 to 194.8 µg/m³, 24-hour average TSP concentrations ranged from 13.3 to 206.7 µg/m³, and 24-hour average NO_2 concentrations ranged from 4.0 to 19.9 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.

The available data for September 2025 is insufficient to compare with the annual regulatory standards set for NO_2, $PM_{2.5}$, and TSP by BCAQO and CAAQS. The monthly average NO_2 concentration in September 2025 is 10.4 ppb. The combined average NO_2 concentration from January to September 2025 is 8.6 ppb, less than the BCAQO and CAAQS annual regulatory standards of 17 ppb and 12 ppb, respectively.

The September 2025 monthly average $PM_{2.5}$ concentration is 21.2 µg/m³. The combined average for January to September 2025 is 8.8 µg/m³ and is higher than the BCAQO and equal to CAAQS annual regulatory standards of 8.0 and 8.8 µg/m³, respectively. However, this nine-month average does not represent a yearly valid average for comparison with these regulatory standards. Wildfire smoke was transported to the site from September 2 to 6, 2025 (Figure A.6), including contributions from the Simms Creek wildfire (1,540 ha), the Bastion Peak wildfire (530 ha), the V31717 wildfire (64 ha) near Rutherford Creek, and the V31930 wildfire (2.6 ha) near Snowcap Lake (Government of British Columbia, 2025; FireSmoke Canada, 2025). When wildfire-influenced days are excluded, the September 2025 monthly average $PM_{2.5}$ concentration is 10.2 µg/m³, resulting in a nine-month average of 7.5 µg/m³, which is less than both the BCAQO and CAAQS annual regulatory standards. Similarly, the September monthly average TSP concentration is 39.6 µg/m³. The combined average TSP concentration from January to September 2025 is 31.4 µg/m³, less than the BCAQO annual regulatory standard of 60 µg/m³.

A summary of the 24-hour average $PM_{2.5}$, PM_{10}, TSP and NO_2 concentrations measured during September 2025 is presented in Appendix A (Figure A.6 to Figure A.10) and Appendix B, Table B.1. The calculated 24-hour average concentrations for $PM_{2.5}$ at the Woodfibre LNG AQMS were greater than the BCAQO threshold of 25 µg/m³ from September 2 to September 6, 2025. The measured 24-hour average PM_{10} concentrations were greater than the BCAQO threshold of 50 µg/m³ from September 3 to September 6, 2025. The measured 24-hour average TSP concentrations greater than the threshold of 120 µg/m³ were recorded on September 3, 2025. On September 2, 2025, the ambient 24-hour average PM_{10} concentration was greater than the project-specific trigger level of 33.3 µg/m³, with an actual value of 44.1 µg/m³. On September 4, 2025, the ambient 24-hour average TSP concentration was greater than the project-specific trigger level of 80.0 µg/m³, with an actual value of 89.2 µg/m³. These measured concentrations were above the project-specific trigger levels but did not exceed the applicable regulatory standards.

It was concluded, based on air quality and meteorology data investigations, that the elevated $PM_{2.5}$ concentrations and the exceedances of PM_{10} and TSP recorded at the Woodfibre LNG site between September 2 and 6, 2025, were primarily associated with wildfire smoke transported into the area (see further details in the Air Quality Exceedance Report, Appendix C).

In response to the elevated particulate matter concentrations observed between September 2 and September 6, which exceeded both project-specific trigger levels and BCAQO standards, the frequency of water truck dust suppression was increased. This reduced the fugitive dust generation during dry weather conditions and reduced the potential contributions from project-related sources related to construction activities.

In addition, a single measured NO_2 concentration above the project-specific trigger level of 40 ppb was recorded at the on-site AQMS on September 3, 2025, at 14:00 hours, with a value of 43.3 ppb. During the same hour, NO_2 concentrations measured at the Langdale Elementary and Squamish Elementary regional air quality stations were substantially lower, at 4.0 ppb and 9.7 ppb, respectively. Concentrations recorded at the onsite AQMS in the subsequent hours were much lower than the trigger level. As such, no further investigation or action was required. No complaints were received from the Floatel #1 residents during September 2025.

4.2 Passive Monitoring of SO_2 and VOC

The passive sample media for SO_2 and total VOCs were swapped on October 1, 2025. This report includes the results for samples collected for the exposure period from September 3, 2025, to October 1, 2025. The laboratory analysis report is presented in Appendix D.

The results for SO_2 and VOC samples show an ambient average SO_2 concentration of 0.2 ppb and an ambient average VOC concentration of 96.1 ppb. The instrument-reported detection limits (RDL) are 0.2 ppb and 0.7 ppb, respectively, for SO_2 and VOC. For comparison, the regional monitoring stations reported higher ambient SO_2 concentrations in September 2025, with Squamish Elementary recorded 1.3 ppb and Langdale Elementary recorded 1.0 ppb. The measured SO_2 concentration at the AQMS was 0.2 ppb, less than the levels recorded at Squamish Elementary and Langdale Elementary regional air quality stations. In July and August 2025, the recorded SO_2 concentrations were below the RDL of <0.2 ppb and 0.2 ppb respectively, while VOC concentrations in July and August 2025 were 3.3 ppb and 2.3 ppb, respectively.

The September VOC results included a primary and co-located duplicate passive sampler, which reported concentrations of 160 ppb and 32.2 ppb, resulting in a calculated monthly average of 96.1 ppb at the AQMS. These values show a notable difference between the two samples, despite being installed at the same location, and are considerably higher than historic results at the site. Onsite particulate matter monitoring instrumentation and regional PM data confirm elevated ambient particulate matter levels during the wildfire smoke event from September 2 to September 6, 2025, noted earlier in the report (see section 4.1 and Appendix C). Because wildfire emissions contain both particulate matter and volatile organic compounds, the elevated VOC concentration is likely associated with wildfire smoke effects at the site. The laboratory repeated the VOC analysis and confirmed consistent values, although the cause of the differences between the samplers remains unknown. Additional information about onsite work activities from Woodfibre LNG and further testing details from the laboratory have been requested to help verify the results. If the additional information supports the result as representative of site conditions, an updated interpretation and required mitigation recommendations will be included in a future report.

4.3 Meteorology

A summary of the meteorology conditions during September 2025 is presented in Appendix A, Figure A.11 to Figure A.17 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 September 30, 2025, at 17:00 (8.7 m/s), and the highest 24-hour average wind speed occurred on September 21, 2025 (2.2 m/s). Figure A.12 presents a wind rose illustrating wind direction and speed for September 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 September 2025.

The daily ambient temperature data is presented in Figure A.14. The maximum hourly air temperature of 25.1°C was recorded on September 16, 2025, at 12:00, while the minimum hourly temperature of 10.5°C occurred on September 25, 2025, at 05:00. The monthly average temperature for September 2025 was 16.6°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 41.6 mm occurred on September 29, 2025. The total rainfall for September 2025 was 152.8 mm.

The daily average relative humidity ranged from 76.0% to 97.9% in September 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 1,006.1 hPa to 1,021.4 hPa in September 2025, with a monthly average of 1,014.7 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 September 2025 indicate that elevated particulate matter concentrations remained less than the BC Air Quality Objective regulatory standards, with exceedances recorded for $PM_{2.5}$, PM_{10}, and TSP between September 2 and September 6, 2025. These exceedances were primarily associated with wildfire smoke transported into the area (Air Quality Exceedance Report, Appendix C). The hourly measured NO_2 concentrations were less than the BCAQO regulatory standard. The ambient monthly average SO_2 concentration remained consistent with previous months, while VOC concentration was elevated due to the early September wildfire smoke. The VOC results are still under investigation due to the discrepancy between the primary and duplicate sampler measurements, and interpretations may be updated in future reports as additional information becomes available.
The meteorology data, including wind speed, temperature, and rainfall, support accurate interpretation of the ambient air quality monitoring trends. No complaints from Floatel # 1 residents were received during September 2025.

6 References

BC ENVP. 2020. *The British Columbia Field Sampling Manual: Part B: Air and Air Emissions Testing.* Retrieved September 19, 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

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Appendices

Appendix A Figures

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

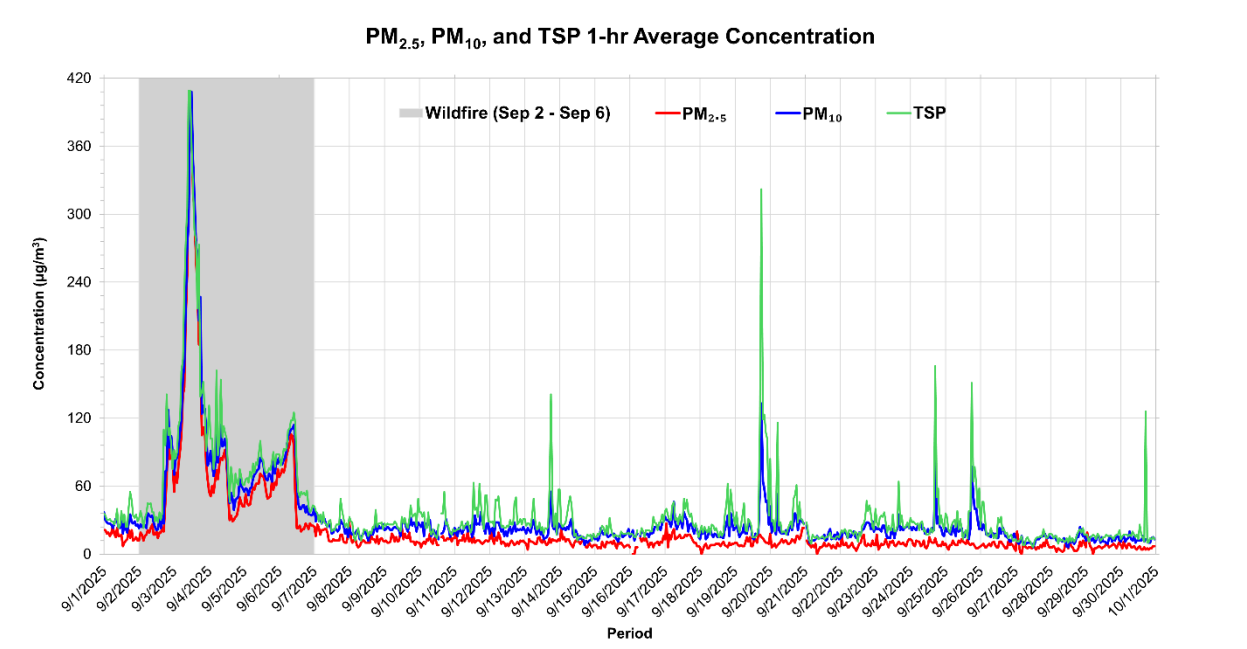


Figure A.2 Hourly $PM_{2.5}$ Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during September 2025

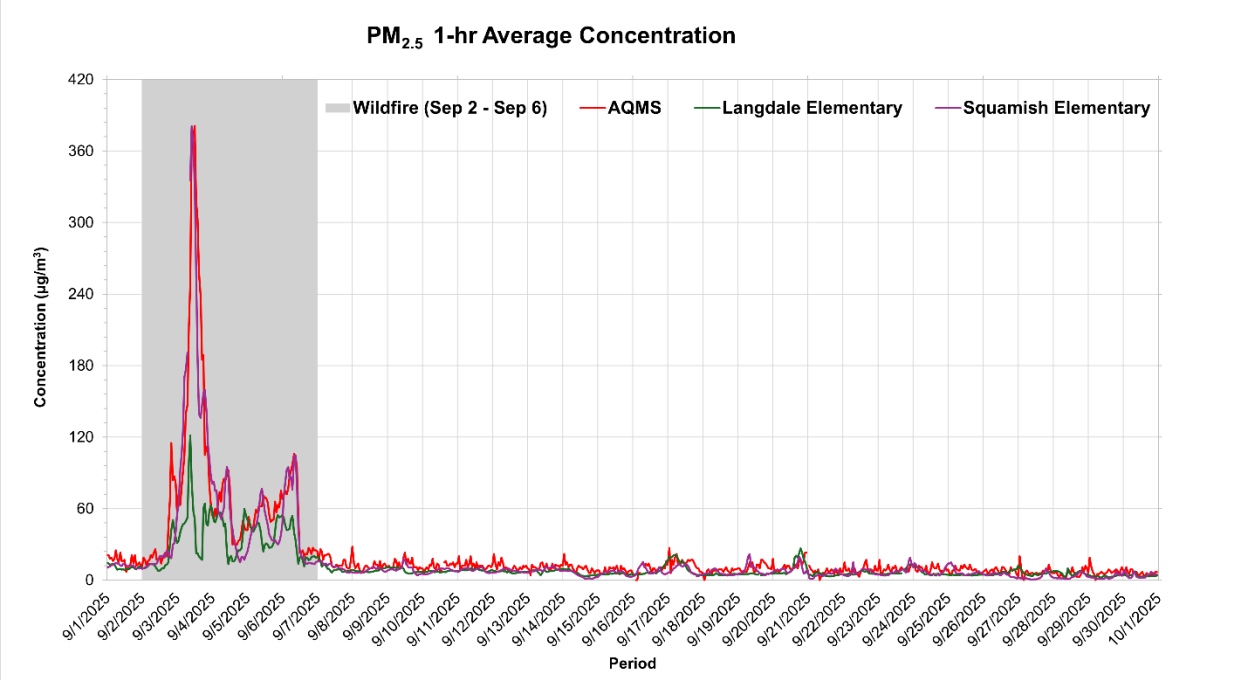


Figure A.3 Hourly PM_{10} Concentrations Recorded at the AQMS, and the Langdale Regional Air Quality Station during September 2025

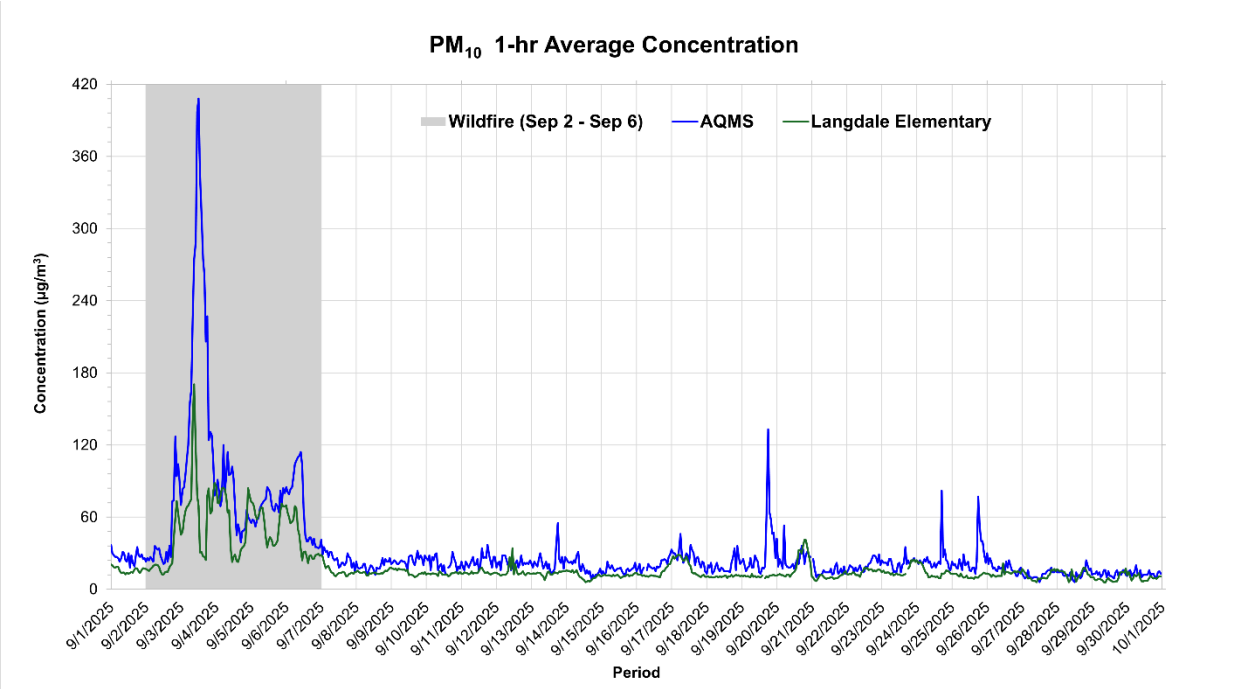


Figure A.4 Hourly TSP Concentrations Recorded at the AQMS during September 2025

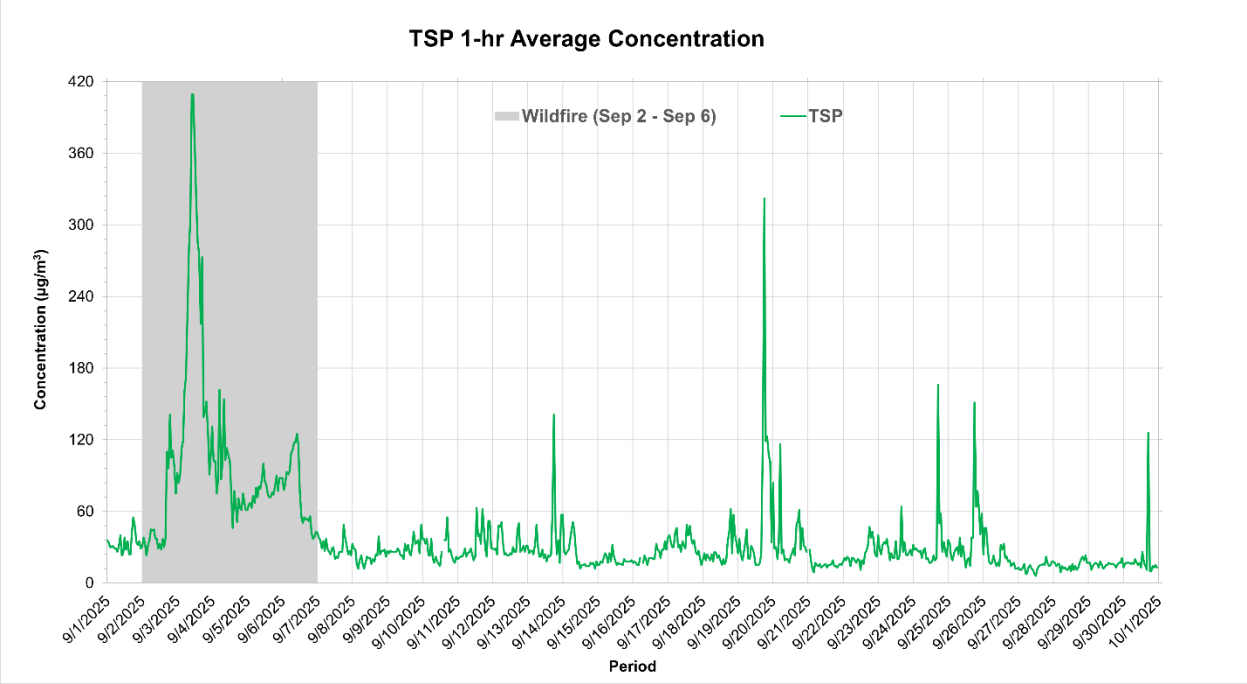


Figure A.5 Hourly NO_2 Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during September 2025

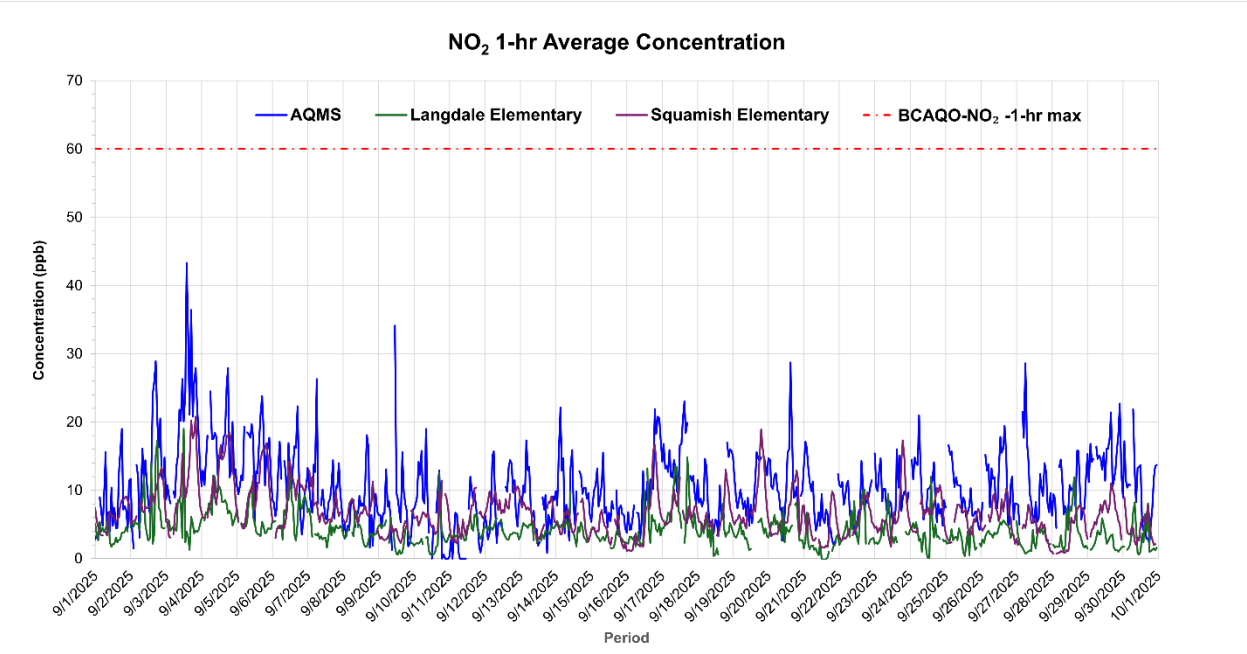


Figure A.6 24-Hour Average PM Concentrations Recorded at the AQMS during September 2025

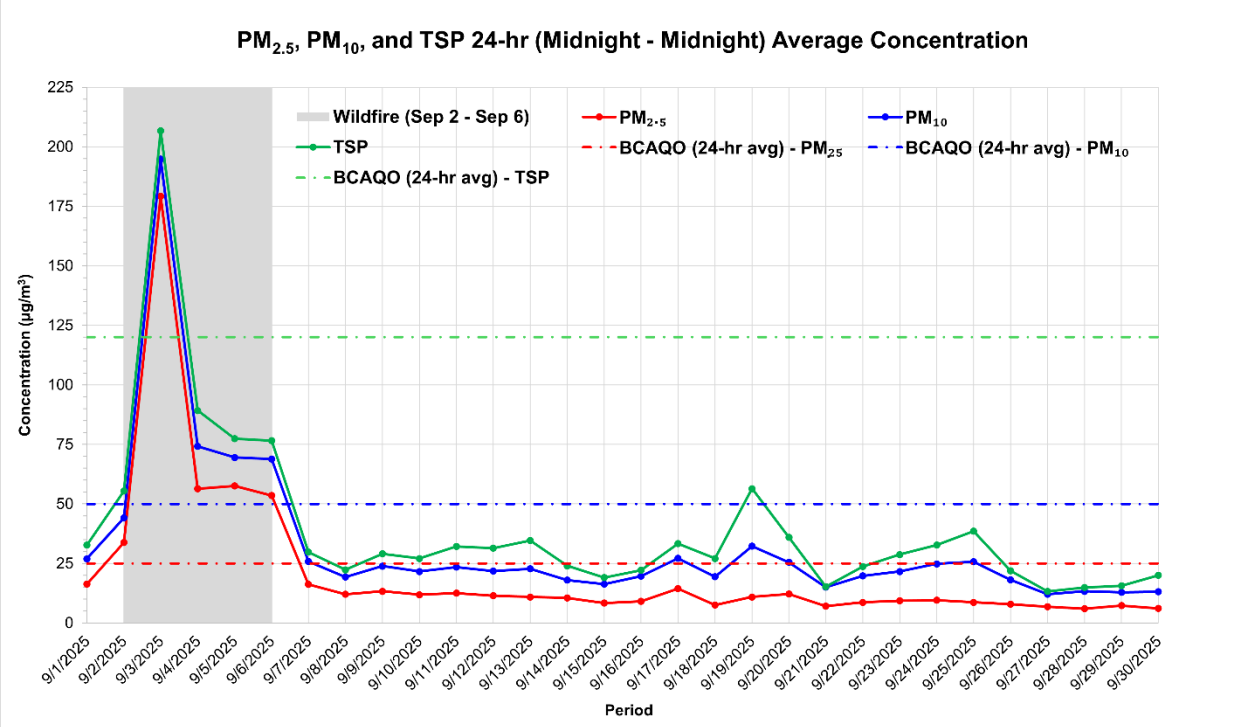


Figure A.7 *24-Hour Average $PM_{2.5}$ Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during September 2025*

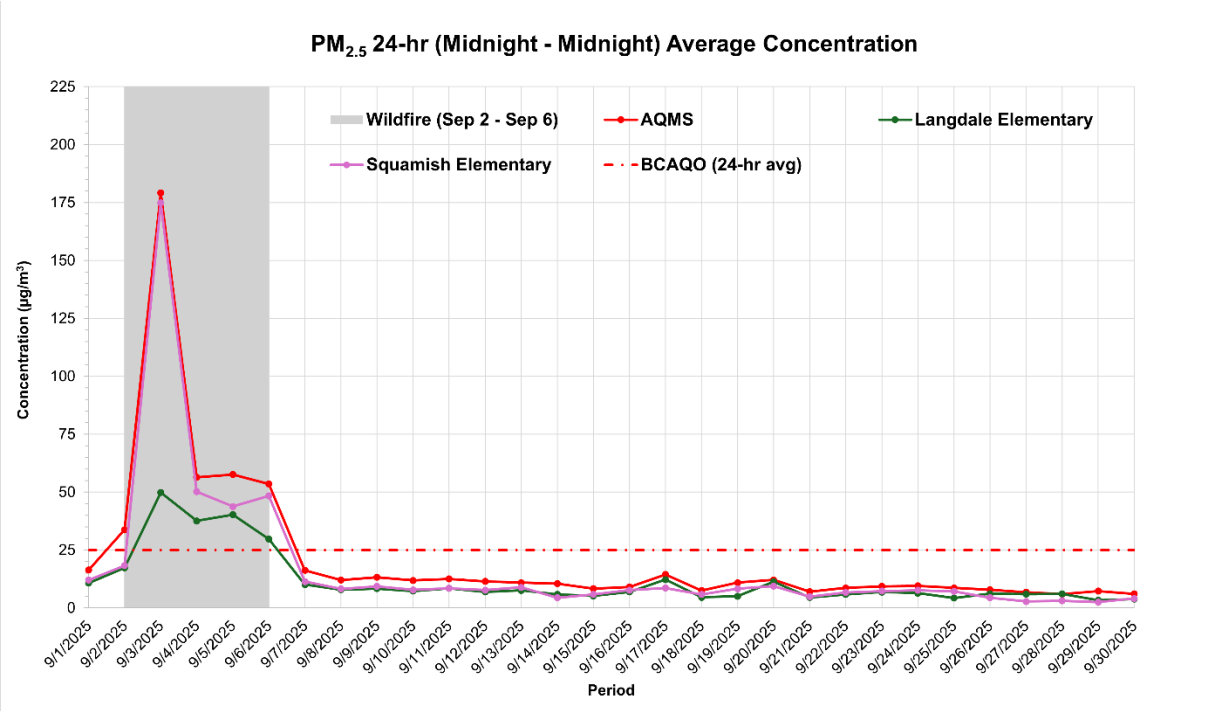


Figure A.8 *24-Hour Average PM_{10} Concentrations Recorded at the AQMS, and the Langdale Regional Air Quality Station during September 2025*

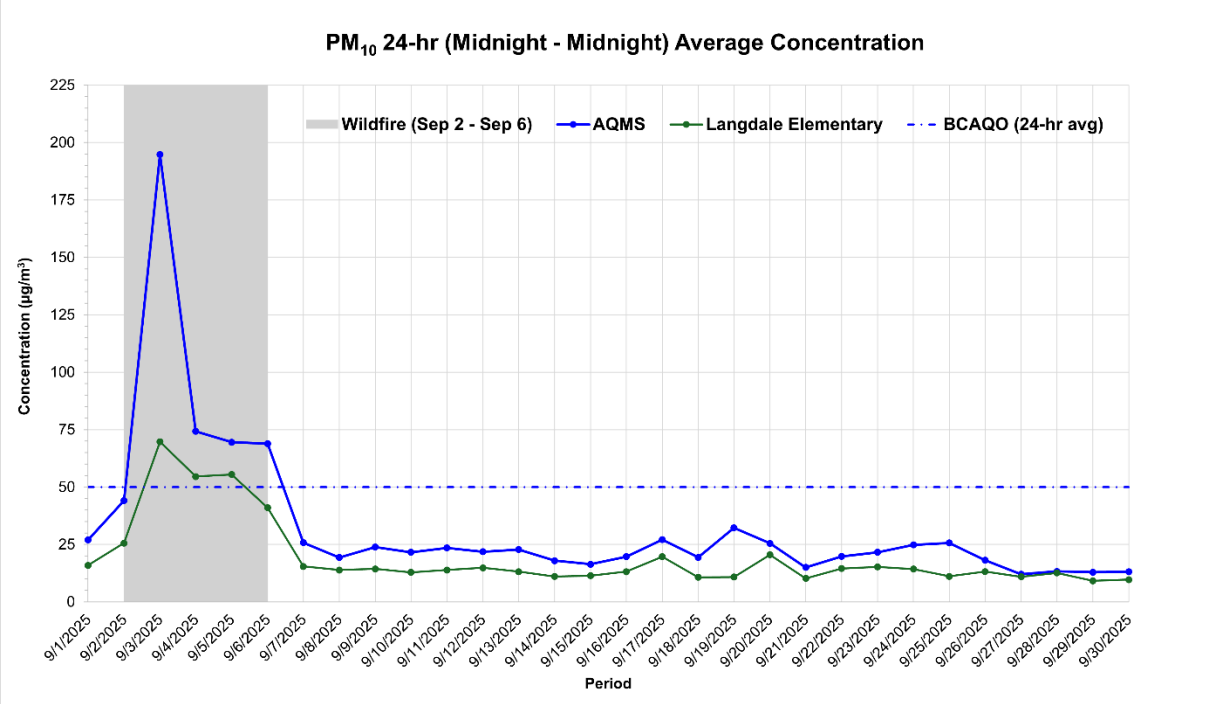


Figure A.9 24-Hour Average TSP Concentrations Recorded at the AQMS during September 2025

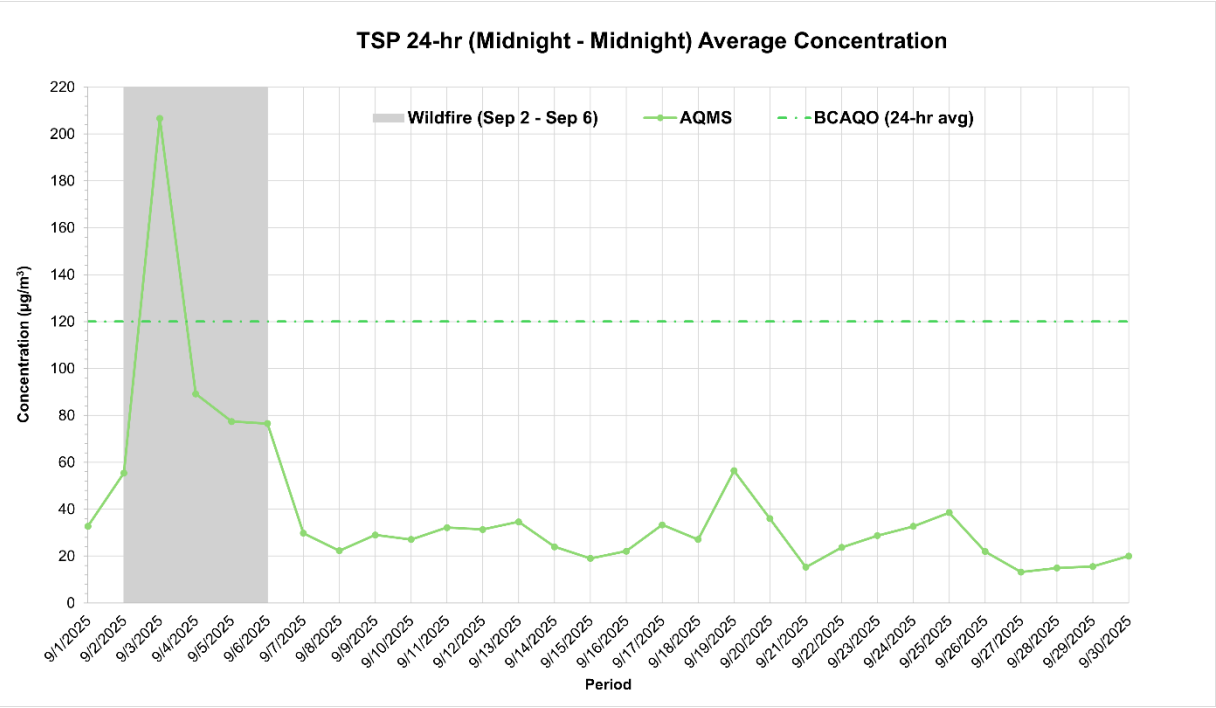


Figure A.10 24-Hour Average NO_2 Concentrations Recorded at the AQMS, and the Langdale and Squamish Regional Air Quality Stations during September 2025

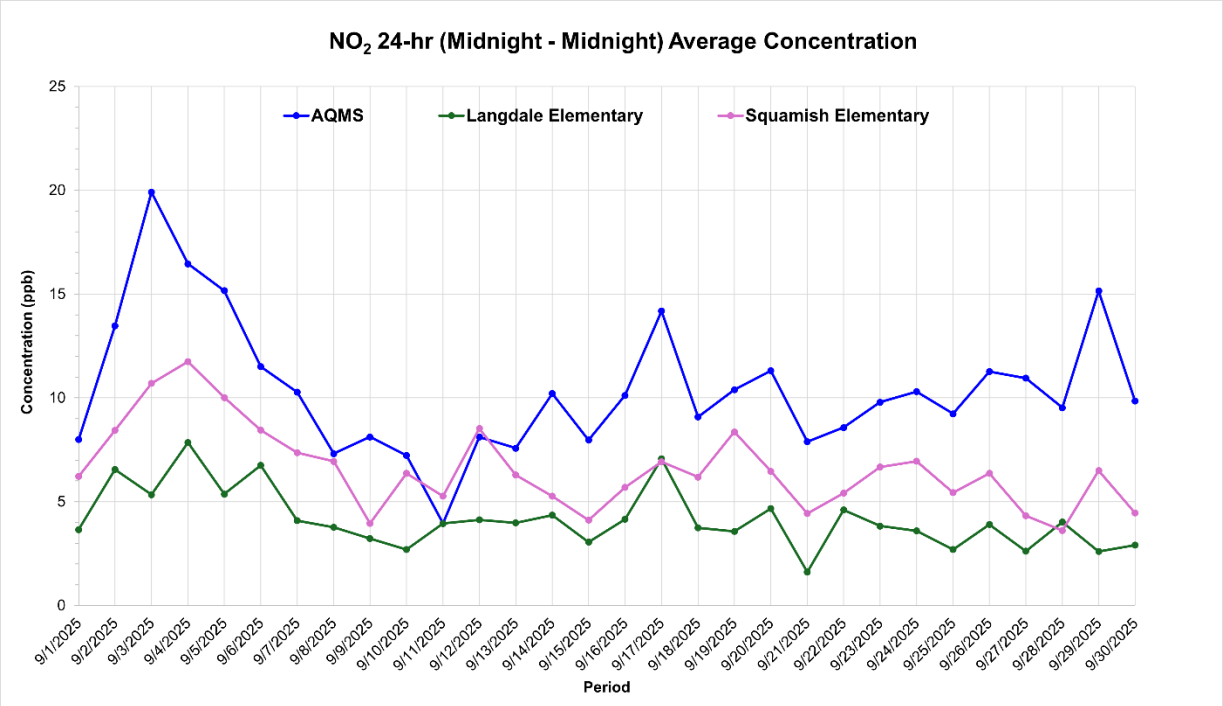


Figure A.11 Daily Average and Maximum Wind Speed Recorded at the Woodfibre LNG Meteorology Station during September 2025

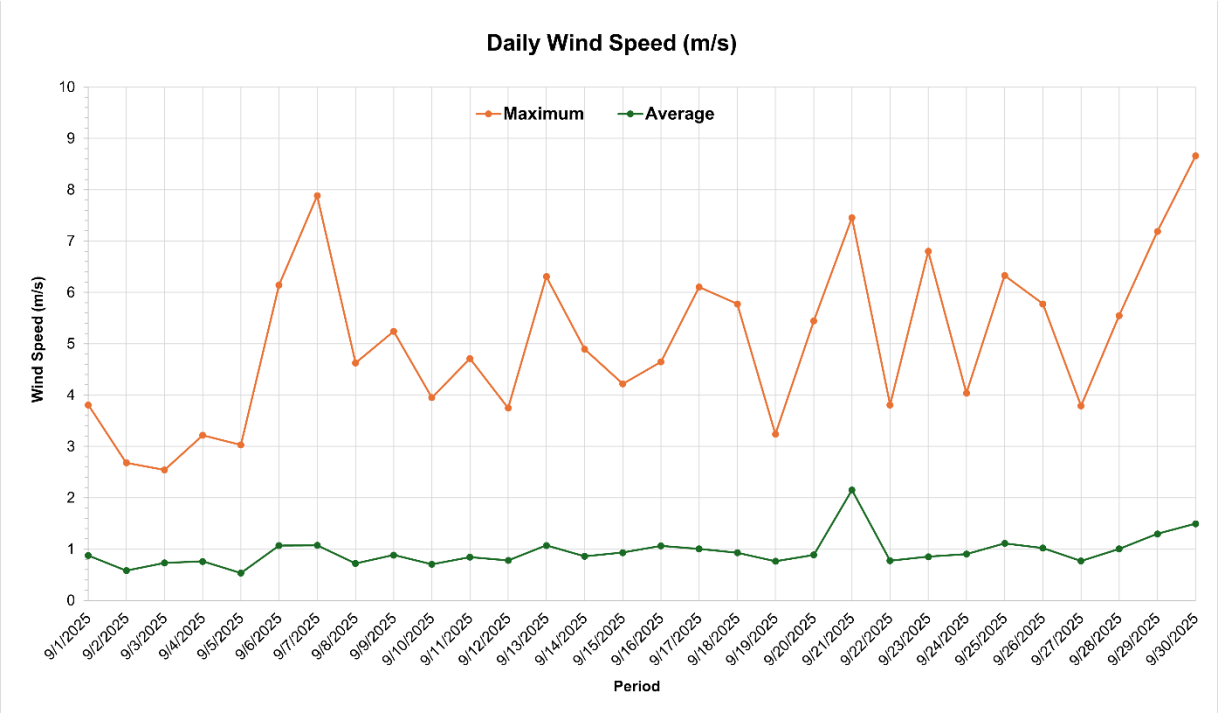


Figure A.12 Windrose for Woodfibre LNG Meteorology Station during September 2025

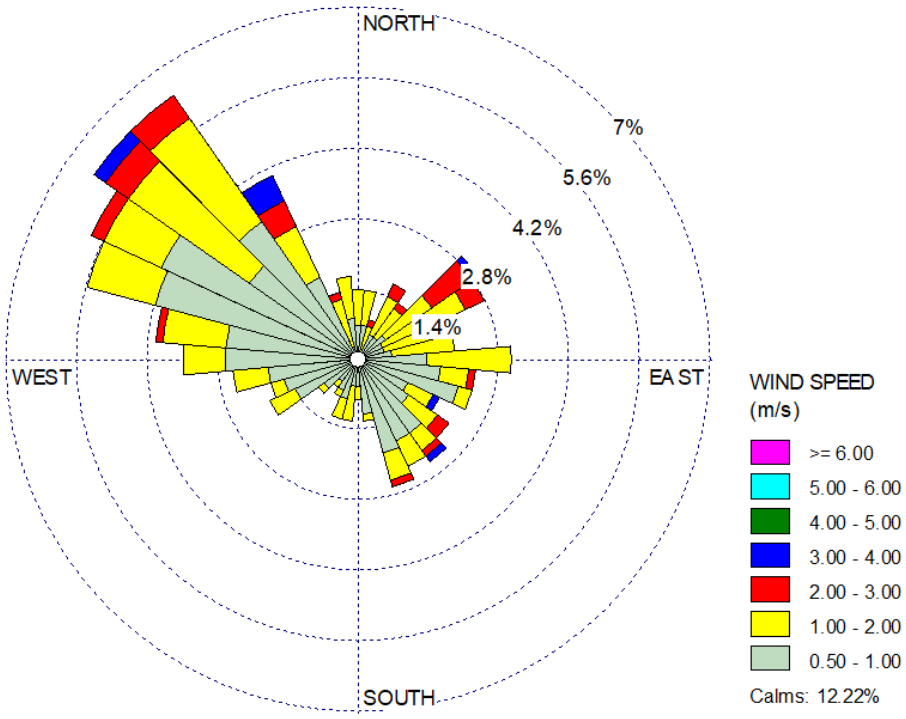


Figure A.13 Windrose for Woodfibre LNG Meteorology Station for the hours of 0000 - 0800, 0900 - 1200, 1300 - 1900, and 2000 - 2300 (September 2025)

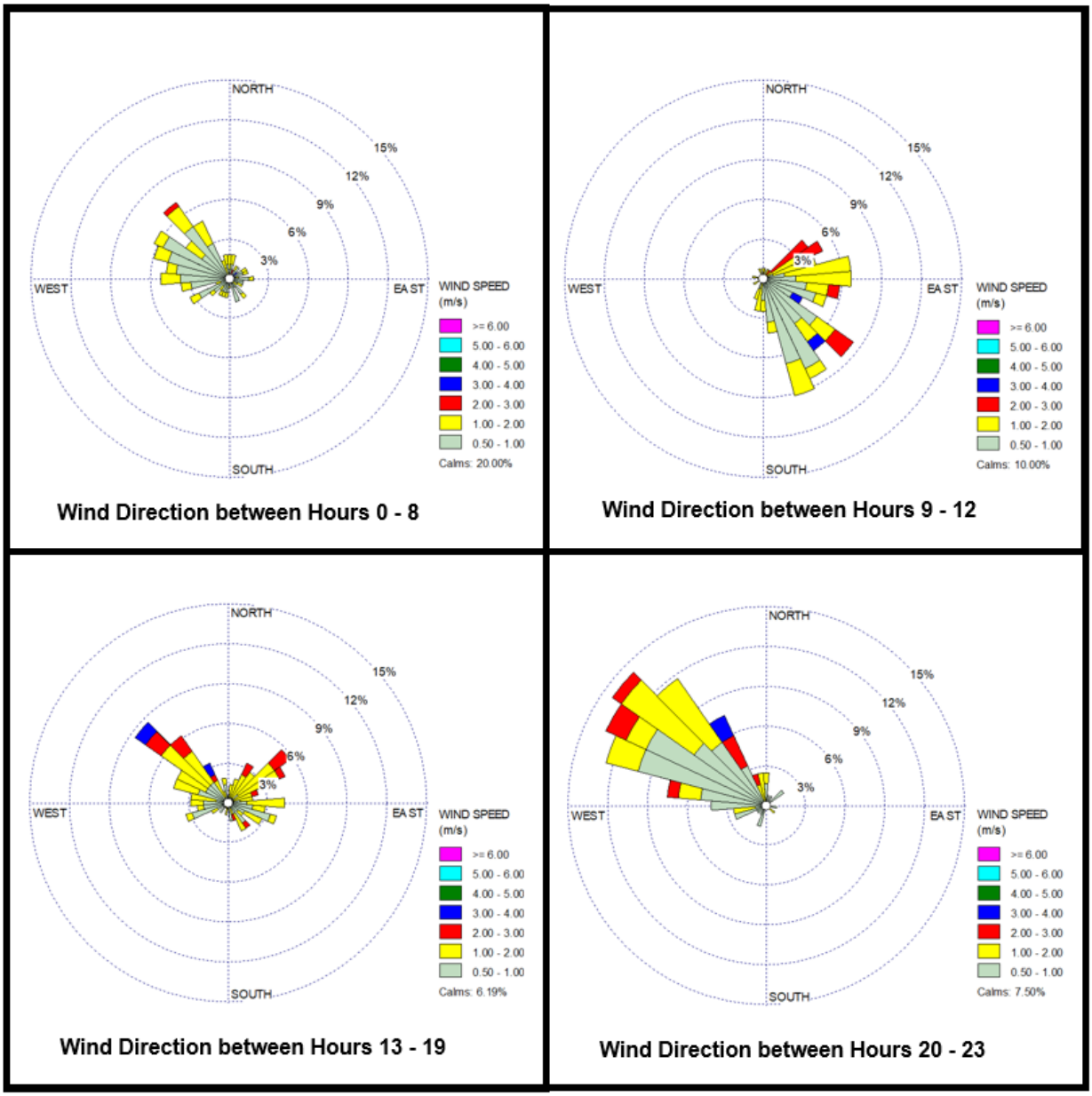


Figure A.14 Daily Average, Minimum, and Maximum Air Temperature Recorded at the Woodfibre LNG Meteorology Station during September 2025

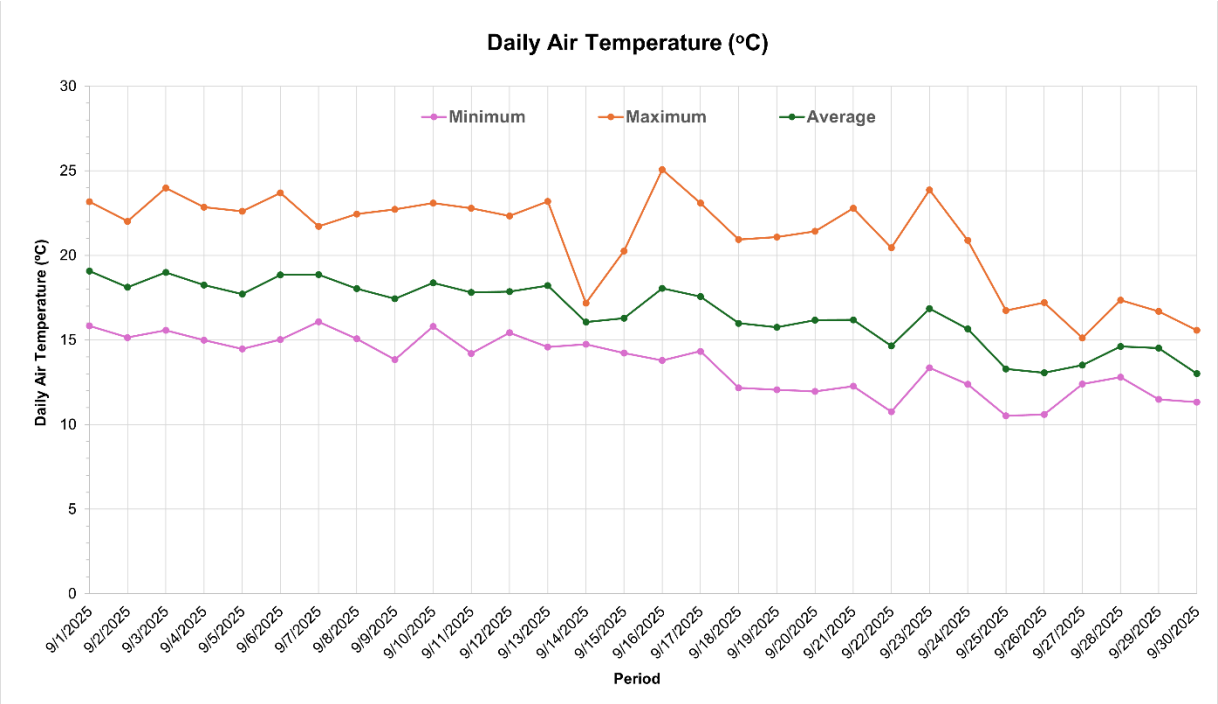


Figure A.15 Daily Rainfall Recorded at the Woodfibre LNG Meteorology Station during September 2025

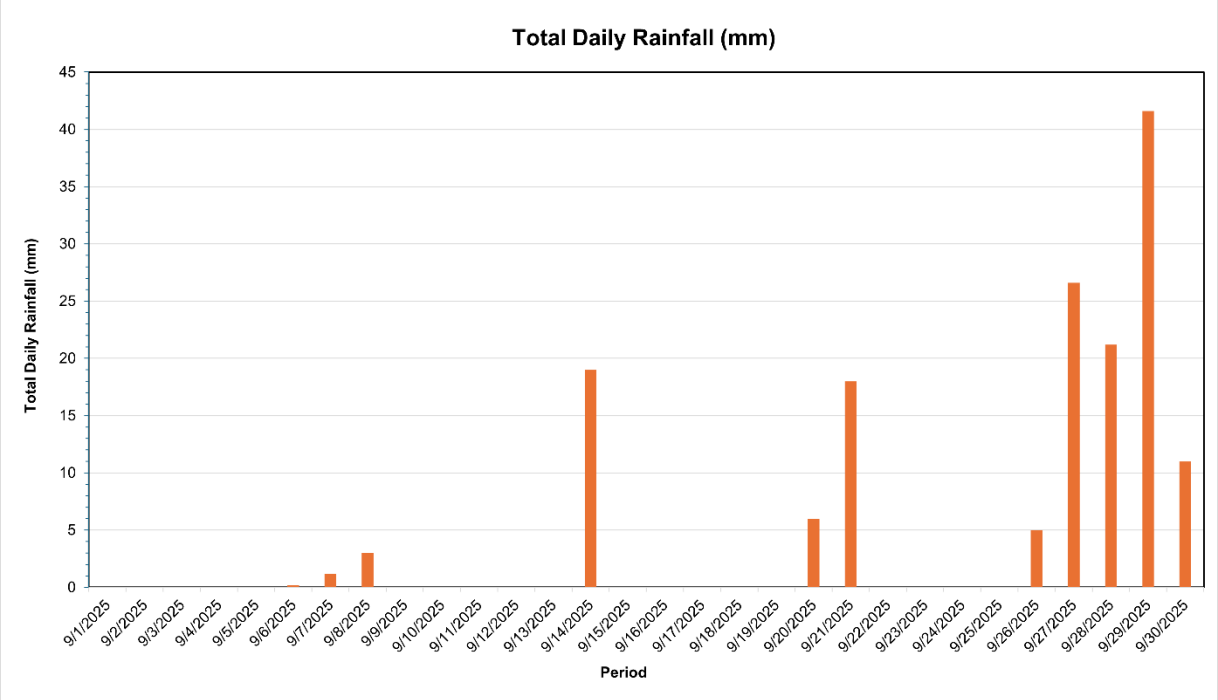


Figure A.16 Daily Average, Minimum, and Maximum Relative Humidity Recorded at the Woodfibre LNG Meteorology Station during September 2025

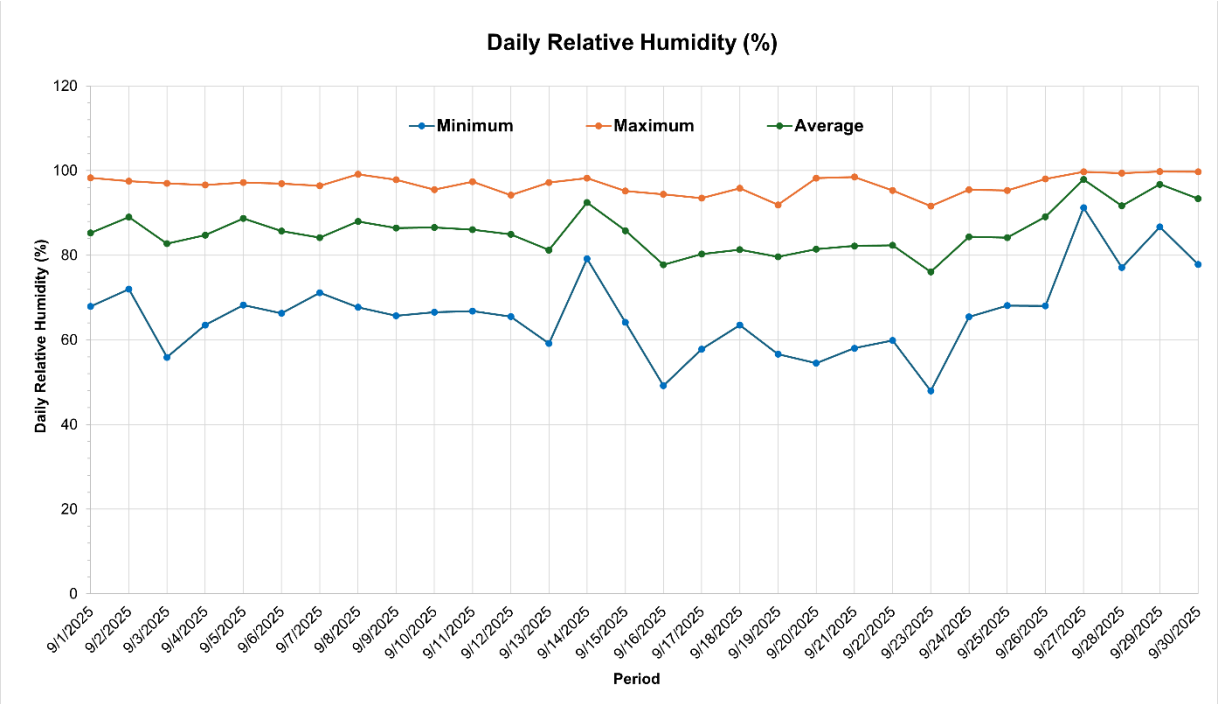
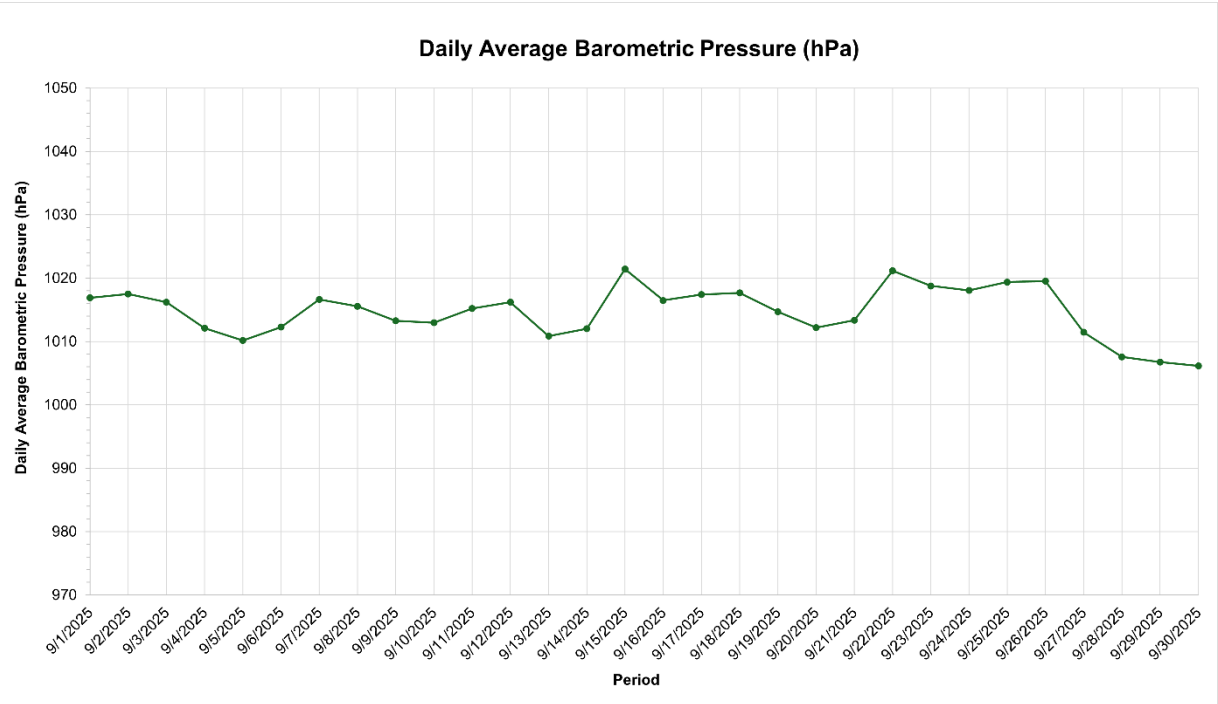


Figure A.17 Daily Average Barometric Pressure Recorded at the Woodfibre LNG Meteorology Station during September 2025



Appendix B Data Tables

Table B.1 Daily $PM_{2.5}$, PM_{10}, TSP, and NO_2 Concentrations Recorded at the AQMS for September 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
9/1/2025	16.4	27.0	32.8	8.0	19.0
9/2/2025	33.8	44.1	55.4	13.5	28.9
9/3/2025	179.2	194.8	206.7	19.9	43.3
9/4/2025	56.4	74.2	89.2	16.5	27.9
9/5/2025	57.6	69.5	77.4	15.2	23.8
9/6/2025	53.5	68.8	76.5	11.5	22.3
9/7/2025	16.2	25.8	29.8	10.3	26.3
9/8/2025	12.0	19.3	22.3	7.3	18.1
9/9/2025	13.3	23.9	29.0	8.1	34.1
9/10/2025	11.9	21.6	27.1	7.2	19.0
9/11/2025	12.5	23.5	32.2	4.0	12.0
9/12/2025	11.5	21.8	31.4	8.1	15.7
9/13/2025	10.9	22.8	34.6	7.6	17.3
9/14/2025	10.5	18.0	24.0	10.2	22.1
9/15/2025	8.3	16.4	19.0	8.0	15.5
9/16/2025	9.1	19.7	22.1	10.1	21.9
9/17/2025	14.5	27.1	33.3	14.2	23.0
9/18/2025	7.5	19.4	27.1	9.1	17.0
9/19/2025	10.9	32.2	56.4	10.4	15.6
9/20/2025	12.1	25.5	36.0	11.3	28.7
9/21/2025	7.0	15.0	15.3	7.9	17.1
9/22/2025	8.7	19.8	23.7	8.6	14.3
9/23/2025	9.3	21.6	28.8	9.8	16.0
9/24/2025	9.6	24.8	32.7	10.3	21.0
9/25/2025	8.7	25.7	38.5	9.2	16.6
9/26/2025	7.9	18.1	22.0	11.3	19.4
9/27/2025	6.8	12.1	13.3	10.9	28.6
9/28/2025	6.0	13.3	14.9	9.5	15.8
9/29/2025	7.3	12.9	15.6	15.1	22.7
9/30/2025	6.1	13.1	20.0	9.9	21.9

Table B.2 Daily Wind Speed, Air Temperature, Relative Humidity, Barometric Pressure, and Rainfall Recorded at the Woodfibre LNG Meteorology Station for September 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		
9/1/2025	3.8	0.9	15.8	23.2	19.1	67.9	98.3	85.3	1016.9	0.0
9/2/2025	2.7	0.6	15.1	22.0	18.1	72.0	97.5	89.0	1017.5	0.0
9/3/2025	2.5	0.7	15.6	24.0	19.0	55.9	97.0	82.7	1016.2	0.0
9/4/2025	3.2	0.8	15.0	22.9	18.2	63.5	96.6	84.7	1012.1	0.0
9/5/2025	3.0	0.5	14.5	22.6	17.7	68.2	97.2	88.7	1010.2	0.0
9/6/2025	6.1	1.1	15.0	23.7	18.8	66.3	96.9	85.7	1012.3	0.2
9/7/2025	7.9	1.1	16.1	21.7	18.9	71.2	96.4	84.2	1016.6	1.2
9/8/2025	4.6	0.7	15.1	22.4	18.0	67.7	99.1	88.0	1015.5	3.0
9/9/2025	5.2	0.9	13.8	22.7	17.4	65.7	97.8	86.4	1013.3	0.0
9/10/2025	4.0	0.7	15.8	23.1	18.4	66.5	95.5	86.6	1013.0	0.0
9/11/2025	4.7	0.8	14.2	22.8	17.8	66.8	97.4	86.0	1015.2	0.0
9/12/2025	3.7	0.8	15.4	22.3	17.9	65.5	94.2	84.9	1016.2	0.0
9/13/2025	6.3	1.1	14.6	23.2	18.2	59.1	97.2	81.2	1010.8	0.0
9/14/2025	4.9	0.9	14.8	17.2	16.1	79.2	98.2	92.4	1012.0	19.0
9/15/2025	4.2	0.9	14.2	20.3	16.3	64.1	95.2	85.8	1021.4	0.0
9/16/2025	4.6	1.1	13.8	25.1	18.0	49.2	94.4	77.7	1016.5	0.0
9/17/2025	6.1	1.0	14.3	23.1	17.6	57.8	93.5	80.3	1017.4	0.0
9/18/2025	5.8	0.9	12.2	20.9	16.0	63.5	95.8	81.3	1017.7	0.0
9/19/2025	3.2	0.8	12.1	21.1	15.8	56.6	91.9	79.6	1014.7	0.0
9/20/2025	5.4	0.9	12.0	21.4	16.2	54.5	98.2	81.4	1012.2	6.0
9/21/2025	7.5	2.2	12.3	22.8	16.2	58.0	98.5	82.2	1013.3	18.0
9/22/2025	3.8	0.8	10.8	20.4	14.6	59.9	95.3	82.3	1021.2	0.0
9/23/2025	6.8	0.9	13.4	23.9	16.9	48.0	91.6	76.0	1018.8	0.0
9/24/2025	4.0	0.9	12.4	20.9	15.6	65.5	95.5	84.4	1018.1	0.0
9/25/2025	6.3	1.1	10.5	16.7	13.3	68.1	95.3	84.2	1019.4	0.0
9/26/2025	5.8	1.0	10.6	17.2	13.1	68.1	98.0	89.1	1019.5	5.0
9/27/2025	3.8	0.8	12.4	15.1	13.5	91.2	99.7	97.9	1011.4	26.6
9/28/2025	5.6	1.0	12.8	17.4	14.6	77.1	99.4	91.7	1007.6	21.2
9/29/2025	7.2	1.3	11.5	16.7	14.5	86.7	99.8	96.8	1006.8	41.6
9/30/2025	8.7	1.5	11.3	15.6	13.0	77.8	99.7	93.4	1006.1	11.0

Appendix C 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 Michelle Bentzen Senior Associate, Environmental Planner Stantec Consulting Ltd.
Project/File:	123222160 12.2025.400	Date:	September 23, 2025

Reference: WLNG Air Quality Exceedance Report for $PM_{2.5}$, PM_{10} and TSP on September 2 to September 6, 2025

Executive Summary

This report investigates the elevated measured ambient concentrations of $PM_{2.5}$ and the measured exceedances for 24-hour average PM_{10} and TSP concentrations that were greater than the 24-hour British Columbia Ambient Air Quality Objectives (BCAQO) of 25 µg/m³, 50 µg/m³ and 120 µg/m³, respectively. The measured 24-hour average $PM_{2.5}$, PM_{10} and TSP concentrations, recorded at the Woodfibre LNG Air Quality Monitoring Station (AQMS) using Met One Instrument BAM 1020s are summarized in Table 1.

Table 1 24-Hour Average $PM_{2.5}$ PM_{10} and TSP Concentrations (September 2–6, 2025)

Air Contaminant	Units	Sep 2	Sep 3	Sep 4	Sep 5	Sep 6
$PM_{2.5}$ (24-hour average)	µg/m³	**33.8**	**174.7**	**56.4**	**57.6**	**42.3**
PM_{10} (24-hour average)	µg/m³	44.1	**194.8**	**74.2**	**69.5**	**68.8**
TSP (24-hour average)	µg/m³	55.4	**206.7**	89.2	77.4	76.5

Notes: **Bold** values exceed 24-hour BCAQO

Wind conditions, regional $PM_{2.5}$ and PM_{10} measurements, onsite construction activities, and firesmoke.ca forecasts were evaluated to determine the sources of elevated particulate concentrations observed between September 2 and 6, 2025. The measured $PM_{2.5}$ concentrations at the Woodfibre LNG AQMS were comparable to those measured at the Squamish Elementary station and substantially higher than those at Langdale, indicating a regional smoke influence. Forecast data confirmed the presence of wildfire smoke in the area during this period. Concurrently, construction activities such as rock crushing and material hauling were ongoing; however, no visible fugitive dust plumes were observed, and no correlation was found between the measured particulate matter concentrations and wind speed. Based on this assessment, the elevated $PM_{2.5}$ concentrations and the exceedances of the 24-hour average PM_{10} and TSP concentrations are attributed to a combination of transported wildfire smoke and localized fugitive dust emissions from the construction activities.

1 Introduction

This report assesses the elevated $PM_{2.5}$ and the exceedances of PM_{10} and TSP observed between September 2 and 6, 2025, at Woodfibre LNG AQMS and examines the environmental and project-related factors contributing to the elevated concentrations. This analysis incorporates hourly $PM_{2.5}$, 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 air quality data from the British Columbia Ministry of Environment and Parks (BC ENVP). Regional comparison data included $PM_{2.5}$ and PM_{10} concentrations from Langdale Elementary (30 km southwest of the Woodfibre LNG AQMS) and $PM_{2.5}$ concentrations from Squamish Elementary (9 km northeast of the Woodfibre LNG AQMS), though neither station provided ambient TSP concentrations. A North American smoke forecast from firesmoke.ca was also reviewed to assess the potential impacts of wildfire smoke. Onsite activity logs were referenced to document dust-generating activities during the monitoring period.

To determine if there is an exceedance related to the measured 24-hour average PM concentrations at the Woodfibre LNG AQMS, they are compared to these BCAQOs:

- **$PM_{2.5}$ (24-hr average): 25 µg/m³**
- **PM_{10} (24-hr average): 50 µg/m³**
- **TSP (24-hr average): 120 µg/m ³**

2 Data Recorded at the Woodfibre LNG Site

The 24-hour average $PM_{2.5}$, PM_{10} and TSP concentrations measured at the Woodfibre LNG AQMS and the corresponding meteorology data are listed below. The summary figures are presented in Attachment A.

- **Measured PM concentrations at the Woodfibre LNG AQMS (bolded values are greater than the BCAQO):**
  - On September 2, 2025
    - $PM_{2.5}$ (24-hr average): **33.8** µg/m³
    - PM_{10} (24-hr average): 44.1 µg/m³
    - TSP (24-hr average): 55.4 µg/m³
  - On September 3, 2025
    - $PM_{2.5}$ (24-hr average): **174.7** µg/m³
    - PM_{10} (24-hr average): **194.8** µg/m³
    - TSP (24-hr average): **206.7** µg/m³

- On September 4, 2025
  - $PM_{2.5}$ (24-hr average): **56.4** µg/m³
  - PM_{10} (24-hr average): **74.2** µg/m³
  - TSP (24-hr average): 89.2 µg/m³
- On September 5, 2025
  - $PM_{2.5}$ (24-hr average): **57.6** µg/m³
  - PM_{10} (24-hr average): **69.5** µg/m³
  - TSP (24-hr average): 77.4 µg/m³
- On September 6, 2025
  - $PM_{2.5}$ (24-hr average): **42.3** µg/m³
  - PM_{10} (24-hr average): **68.8** µg/m³
  - TSP (24-hr average): 76.5 µg/m³

- **Meteorology:**
  - On September 2, 2025
    - Wind Speed: 24-hour average of 0.6 m/s; range of 0.2 – 1.0 m/s
    - Wind Direction: Predominantly from the east and east-southeast during the periods when elevated $PM_{2.5}$ concentrations were observed
    - Total Precipitation (24-hours): 0.0 mm
  - On September 3, 2025
    - Wind Speed: 24-hour average of 0.7 m/s; range of 0.4 – 1.2 m/s
    - Wind Direction: No predominant direction; winds were distributed approximately equally among the four quadrants during the periods when elevated $PM_{2.5}$, PM_{10} and TSP concentrations were observed
    - Total Precipitation (24-hours): 0.0 mm
  - On September 4, 2025
    - Wind Speed: 24-hour average of 0.8 m/s; range of 0.3 – 1.5 m/s
    - Wind Direction: Predominantly from the northeast during the periods when elevated $PM_{2.5}$ and PM_{10} concentrations were observed
    - Total Precipitation (24-hours): 0.0 mm
  - On September 5, 2025
    - Wind Speed: 24-hour average of 0.5 m/s; range of 0.2 – 0.9 m/s
    - Wind Direction Predominantly from the west-northwest during the periods when elevated $PM_{2.5}$ and PM_{10} concentrations were observed
    - Total Precipitation (24-hours): 0.0 mm

- On September 6, 2025
  - Wind Speed: 24-hour average of 1.1 m/s; range of 0.3 – 2.2 m/s
  - Wind Direction: Predominantly from the northeast and northwest quadrants during the periods when elevated $PM_{2.5}$ and PM_{10} concentrations were observed
  - Total Precipitation (24-hours): 0.2 mm

3 Air Quality Exceedance Investigation

The observed elevated $PM_{2.5}$ and the exceedances of PM_{10} and TSP were compared to regional air quality and local weather stations to determine the influence of Transboundary Flow and Exceptional Events (TF/EE). TF occurs when air pollutants travel from other geographic regions to BC and EE occurs when rare, natural, or human-induced events such as wildfire or volcanic eruptions impact air quality. The presence of air contaminants in ambient air due to TF/EE is unpredictable and not part of typical/controllable emissions (BC ENVP, 2025).

Figure A-1 shows that $PM_{2.5}$, PM_{10} and TSP concentrations at the Woodfibre LNG AQMS between September 2 and 6, 2025, did not align with wind speed patterns. The highest hourly average wind speeds recorded at the onsite meteorology station were 1.0 m/s on September 2, blowing from the east and east-southeast; 1.2 m/s on September 3, blowing from all directions equally; 1.5 m/s on September 4, blowing from the northeast; 0.9 m/s on September 5, blowing from the west-northwest; and 2.2 m/s on September 6, blowing from the northeast and northwest (Figure A-2).

$PM_{2.5}$ concentrations at the Woodfibre LNG site were consistently higher than those measured at the Langdale Elementary station, located 30 km southwest of the Woodfibre LNG AQMS. Levels were about twice as high on September 2 (33.8 vs. 17.3 µg/m³), three times higher on September 3 (174.7 vs. 49.8 µg/m³), and around 1.5 times higher from September 4 to 6. In contrast, concentrations at Woodfibre LNG more closely followed the trends observed at the Squamish Elementary station, located 9 km northeast of the Woodfibre LNG AQMS. On September 2, Woodfibre values were about double those at Squamish (33.8 vs. 18.3 µg/m³). However, from September 3 to 6, concentrations at the two sites were similar: nearly identical on September 3 (174.7 vs. 174.8 µg/m³), and closely matched on September 4 (56.4 vs. 50.2 µg/m³), September 5 (57.6 vs. 43.8 µg/m³), and September 6 (42.3 vs. 43.8 µg/m³). Figure A-3 compares the $PM_{2.5}$ concentrations recorded at the Woodfibre LNG AQMS to the regional Langdale Elementary and Squamish Elementary air quality stations operated by BC ENVP.

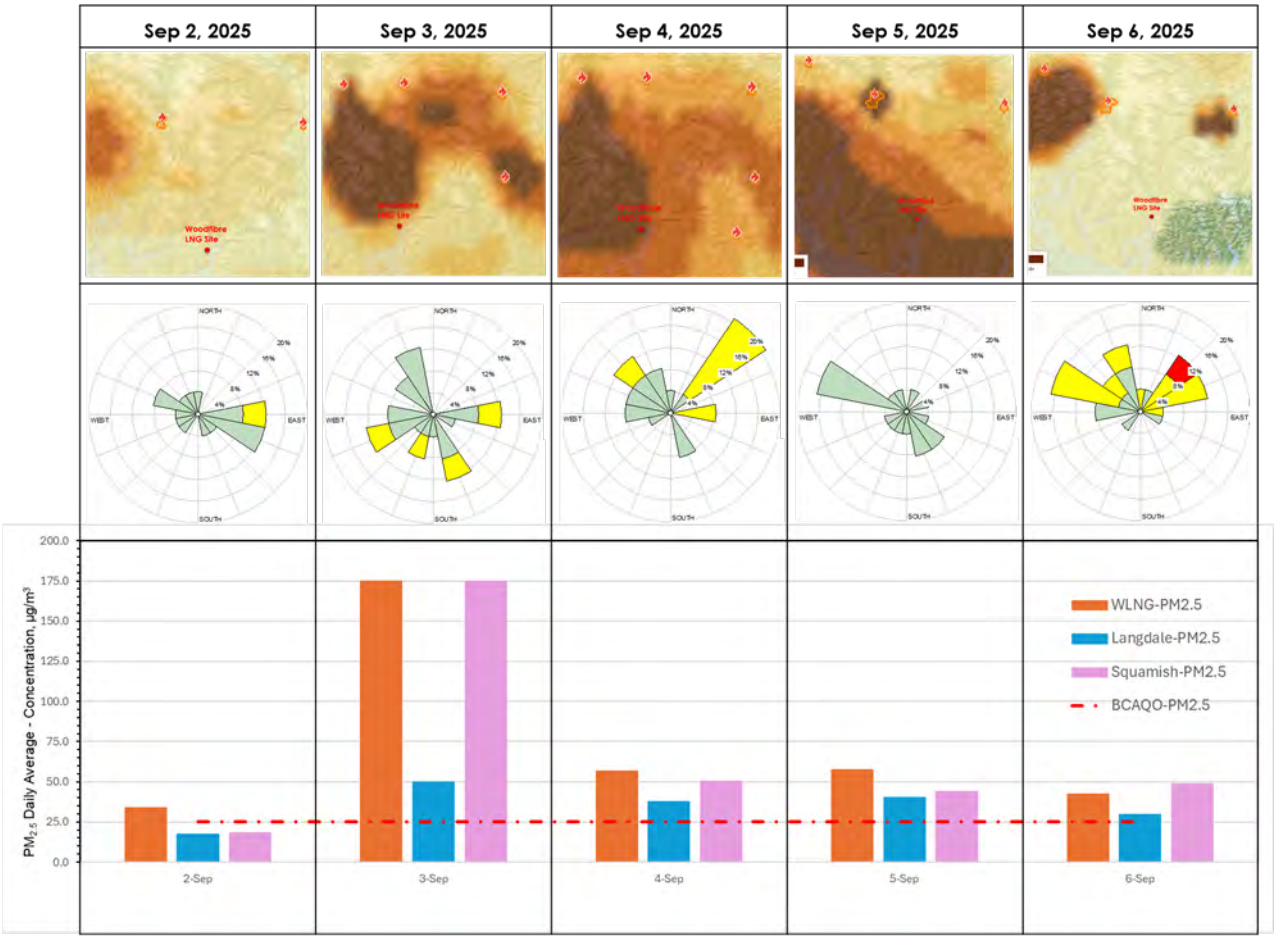
PM_{10} concentrations at the Woodfibre LNG site were consistently higher than those measured at the Langdale Elementary regional air quality station. On September 3, levels were nearly three times higher at Woodfibre (194.8 vs. 69.7 µg/m³), 1.5 times higher on September 4 (74.2 vs. 54.6 µg/m³), and remained elevated on September 5 (69.5 vs. 55.4 µg/m³) and September 6 (68.8 vs. 40.9 µg/m³). Although the Langdale data did not exactly match the Woodfibre results, they also showed 24-hour PM_{10} concentrations above the BC AQO of 50 µg/m³ from September 3 to 5. Figure A-4 compares the PM_{10} concentrations recorded at the Woodfibre LNG AQMS with those at the Langdale Elementary station operated by BC ENVP.

Woodfibre LNG informed Stantec of dust-generating activities around the Woodfibre LNG AQMS between September 2 and 6. Reported dust generating activities included vehicle transport across the site for material relocation, crew movement, and offloading; excavation for anchors and slope cutting in the 1200 and 1300 Areas (east of the Woodfibre LNG AQMS); rock breaking and hauling of Type-D and GB materials for sump walls and travel path ramps in the 1100 (northeast of the Woodfibre LNG AQMS) and 1300 Areas; drilling and blast rock hauling in the FST Area; and dredging and blast rock removal in the Marine Area. Haul roads are highlighted with a blue line in Figure A-5. Environmental Monitors (EMs) did not observe visible dust plumes originating from haul roads and the rock breaking and excavating 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.

The North American smoke forecast from *firesmoke.ca* indicates wildfire smoke transport to the site between September 2 and 6, 2025 (Figure A-6) , including contributions from the Simms Creek wildfire (1,540 ha), the Bastion Peak wildfire (530 ha), the V31717 wildfire (64 ha) near Rutherford Creek, and the V31930 wildfire (2.6 ha) near Snowcap Lake (Government of British Columbia, 2025). However, comparison with regional monitoring data shows that elevated concentrations were not solely due to wildfire smoke. Figure 1 and Figure 2 summarise the smoke modelling output, wind rose, and daily average $PM_{2.5}$ and PM_{10}. On September 2, winds were from the east and east-southeast while the wildfire was located to the north, and site concentrations were higher than regional stations, indicating contributions from site dust generating activities. On September 3, concentrations at the site were consistent with wildfire influence. On September 4, the dominant wind was from the northeast, aligned with the wildfire location, and elevated levels at both site and regional stations suggest wildfire influence. On September 5, dominant winds shifted to the west-northwest and the site showed higher concentrations than regional stations, indicating contributions from local dust emissions associated with site construction activities. On September 6, dominant winds were from the northeast and northwest quadrants, consistent with the wildfire source, and site concentrations aligned with regional monitoring, indicating wildfire as the primary contributor. No complaints were received from Floatel residents during this period. These findings demonstrate that the elevated particulate matter concentrations were the result of a combination of regional wildfire smoke transport and localized fugitive dust emissions from construction activities.

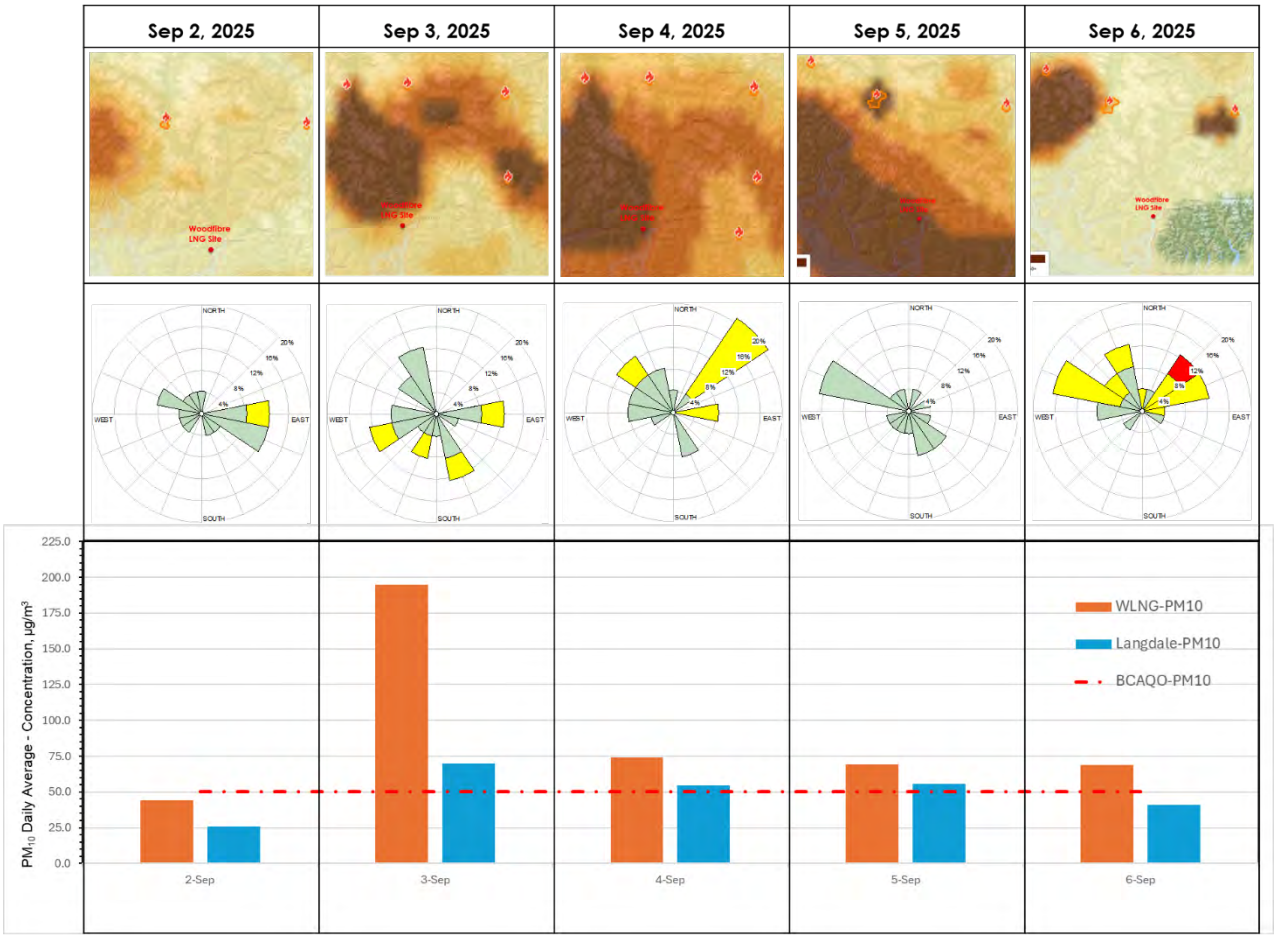
Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure 1 Summary of smoke modelling output, wind rose, and daily average $PM_{2.5}$ for September 2–6, 2025.



Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure 2 Summary of smoke modelling output, wind rose, and daily average PM_{10} for September 2–6, 2025.



4 Conclusion

In conclusion, the elevated $PM_{2.5}$ and the exceedances of PM_{10} and TSP recorded at the Woodfibre LNG site between September 2 and 6, 2025, were primarily associated with wildfire smoke transported into the area. This is supported by firesmoke.ca forecast data and comparisons with regional monitoring stations. However, there were instances in which the exceedances were likely caused by a combination of the wildfire smoke transported into the area and fugitive dust from the site construction activities. Although dust-generating activities such as rock breaking, excavation, loading, and hauling took place during this time, no fugitive dust plumes were observed, and measured concentrations did not correlate with wind speed or direction. The prevailing smoke transport conditions provide the most likely explanation for the elevated concentrations at the Woodfibre LNG AQMS.

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

5 References

BC ENVP. (2025, July). *Environmental Reporting BC - Status of Fine Particulate Matter in B.C. (2020-2022).* Retrieved from https://www.env.gov.bc.ca/soe/indicators/air/fine-pm.html

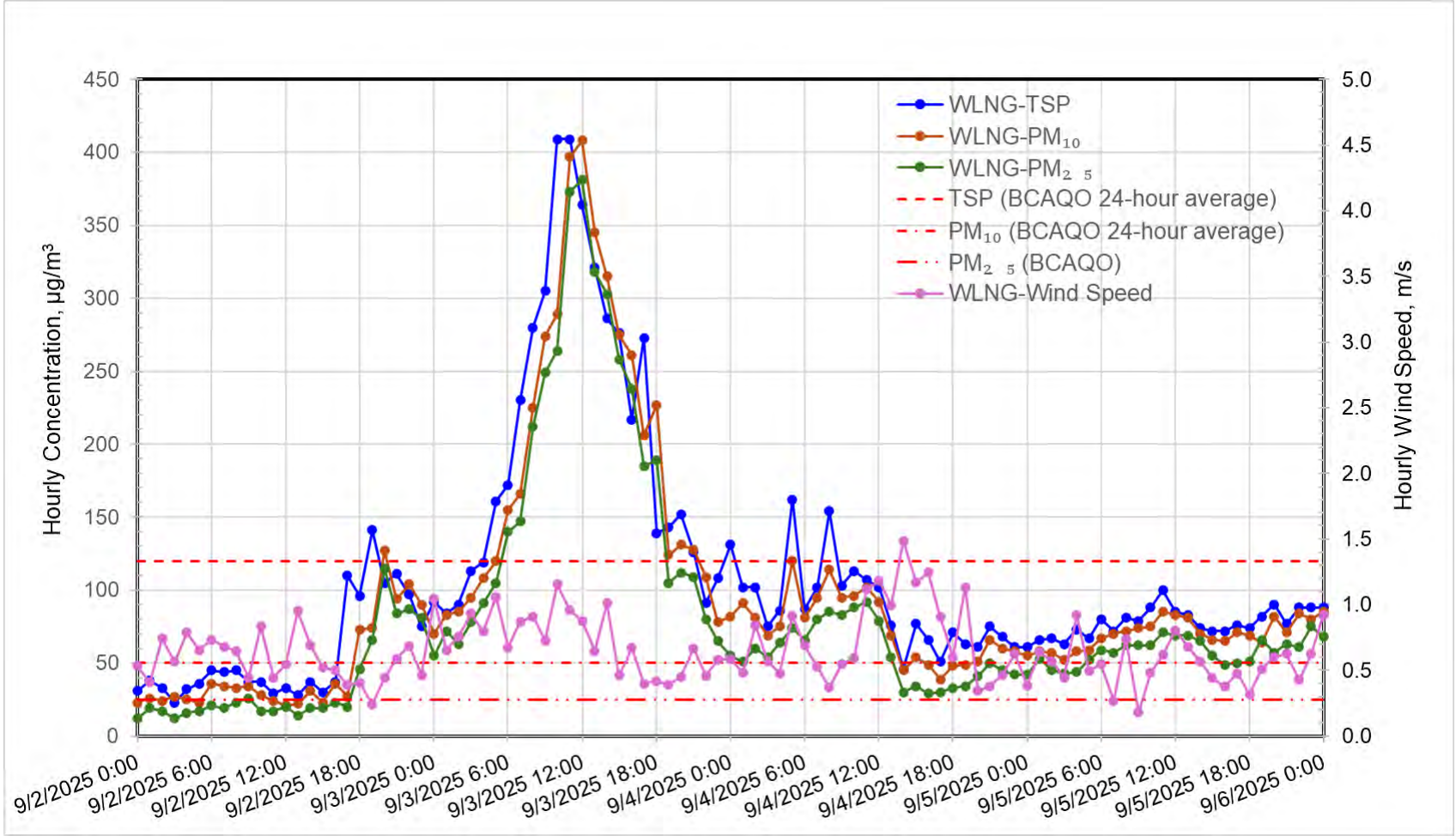
Government of British Columbia. (2025, Sep). *B.C. Wildfire Service.* Retrieved from https://wildfiresituation.nrs.gov.bc.ca/

Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Attachment A Figures

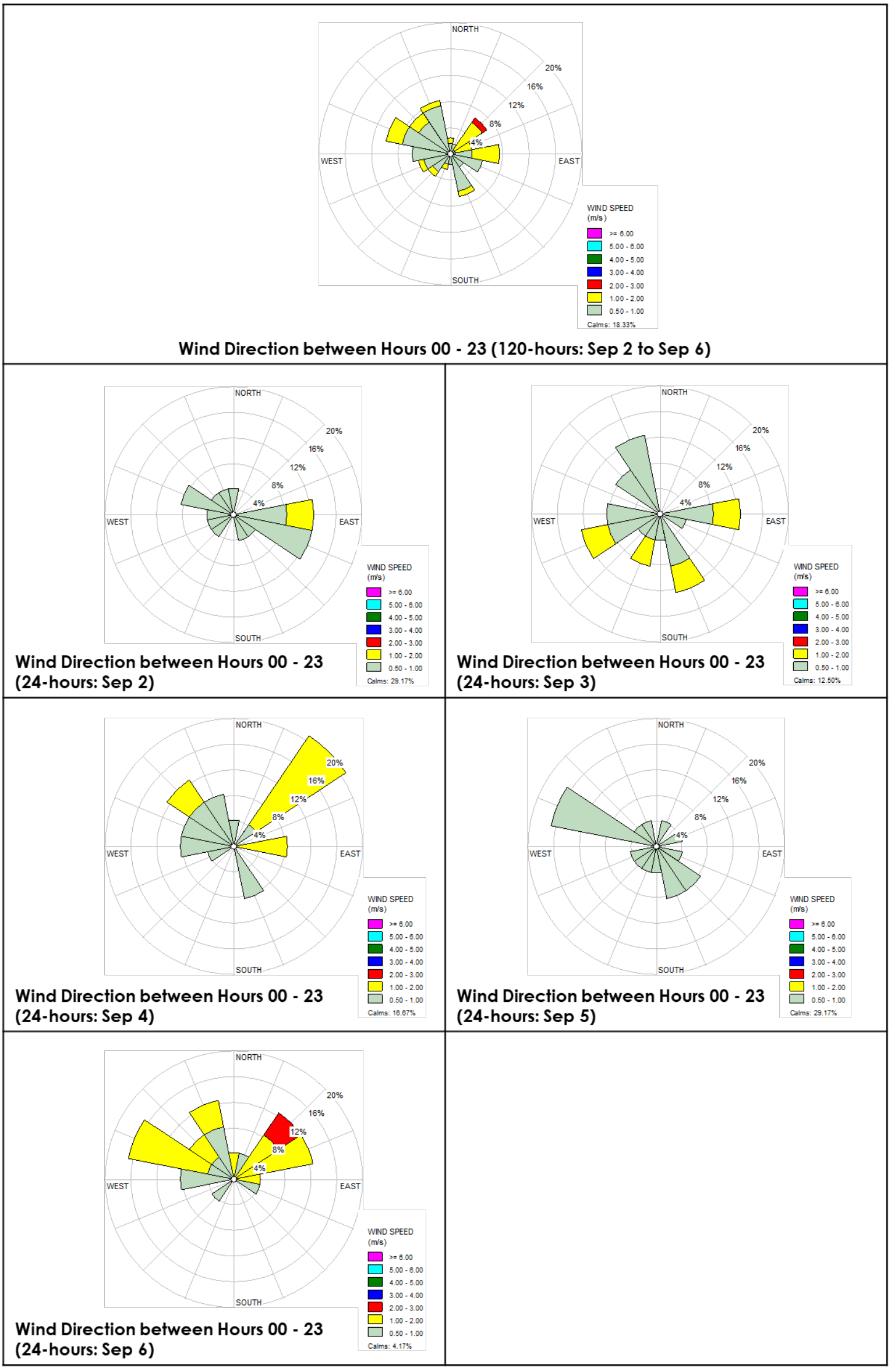
Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure A-1 $PM_{2.5}$, PM_{10} and TSP concentrations and wind speed at the Woodfibre LNG site between September 2 and 6, 2025



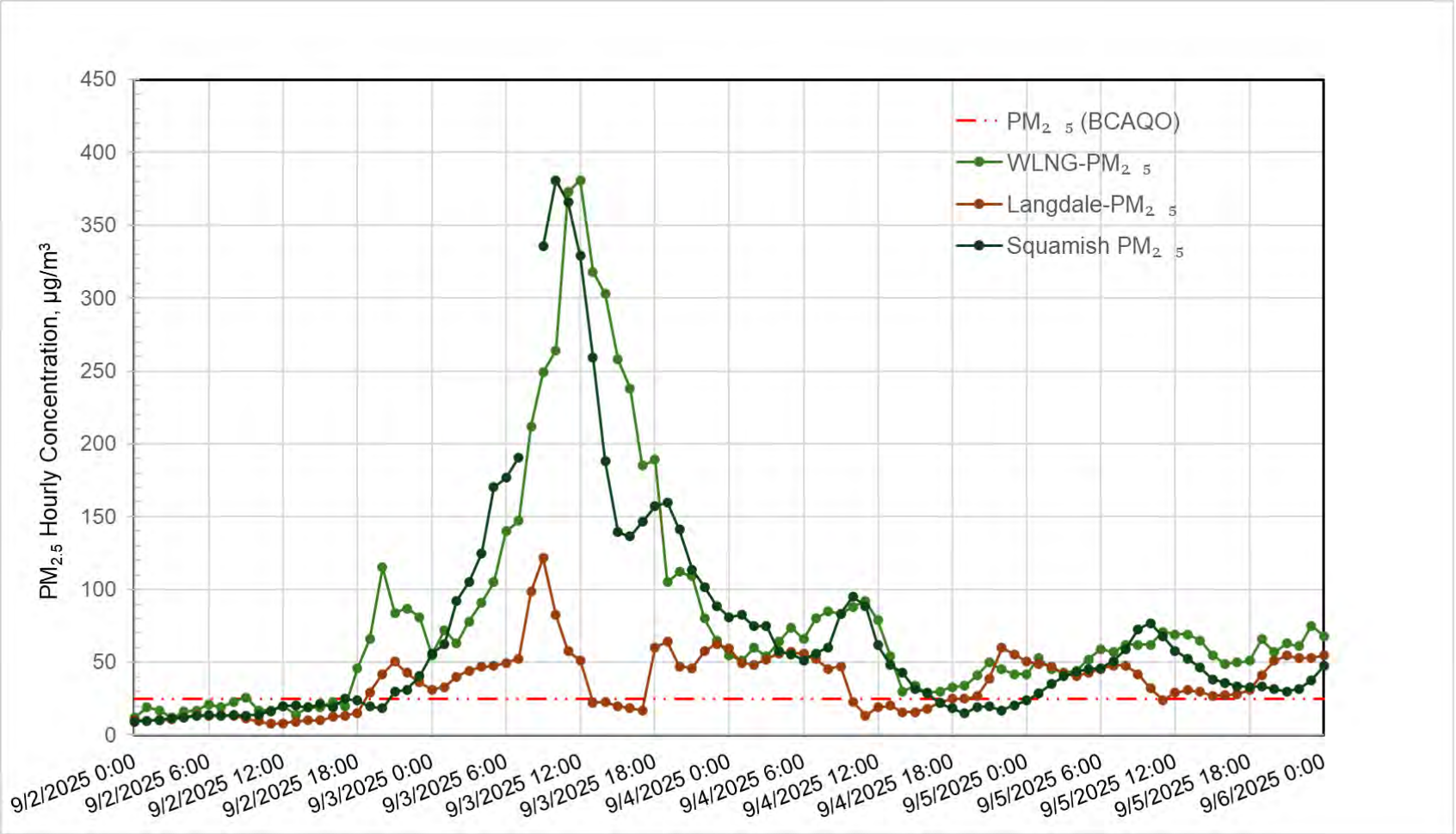
Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure A-2 Windrose for the Woodfibre LNG Meteorology Station, September 2 to 6, 2025.



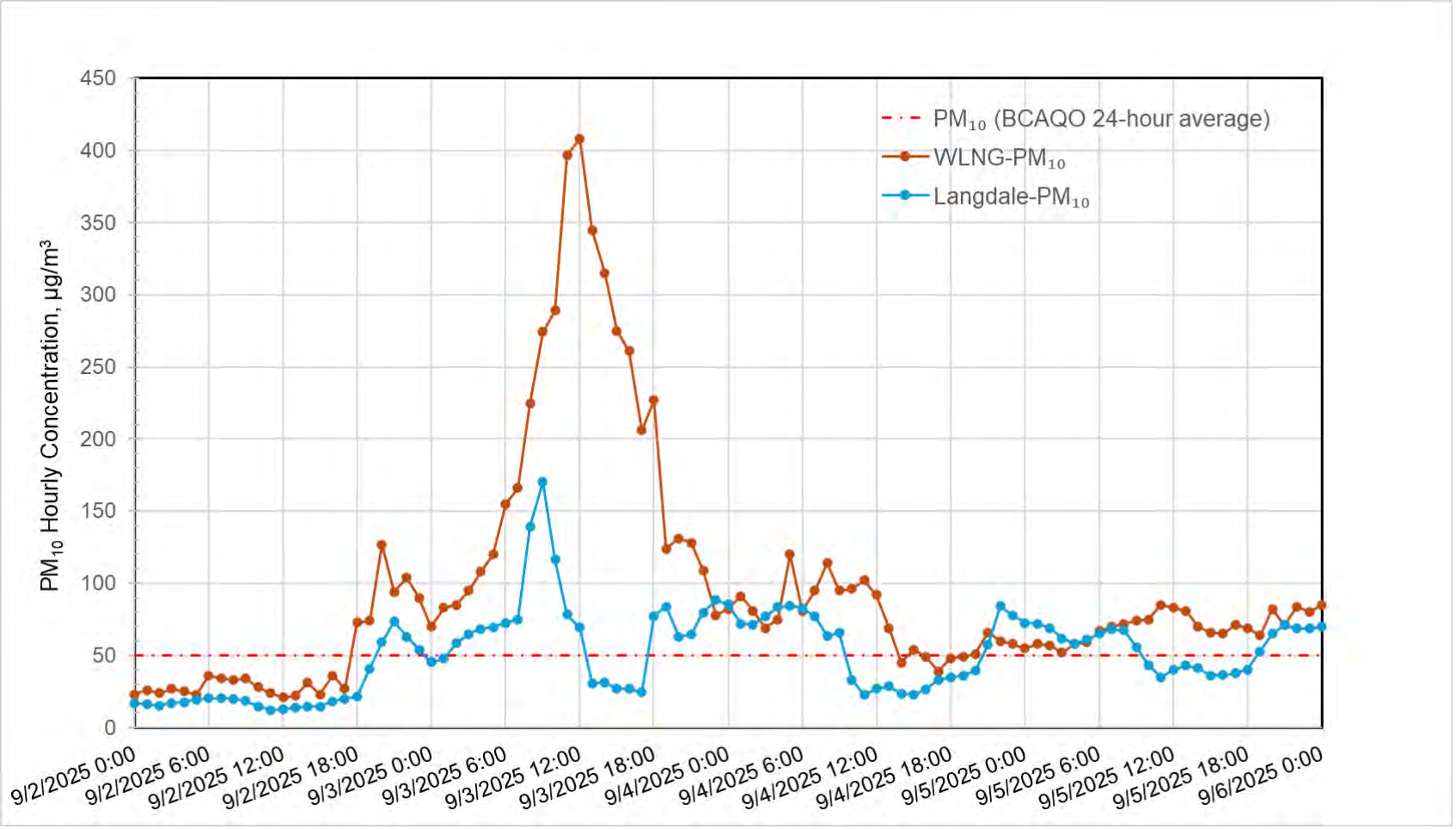
Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure A-3 $PM_{2.5}$ concentrations at the Woodfibre LNG site and the Langdale Elementary and Squamish Elementary Regional BC MOE Stations between September 2 and 6, 2025.



Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure A-4 PM_{10} concentrations at the Woodfibre LNG site and the Langdale Elementary Regional BC MOE Station between September 2 and 6, 2025.

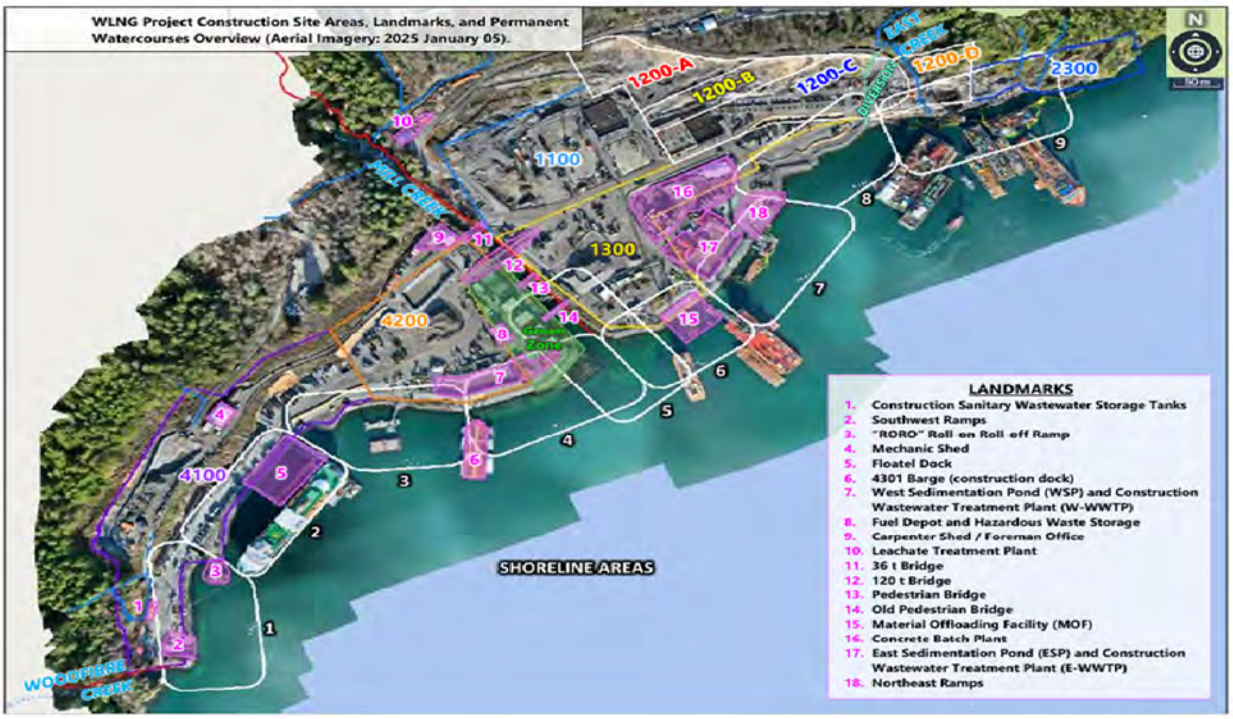


Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

Figure A-5 Details of the Woodfibre LNG Onsite Daily Work (Construction) Activities between September 2 and 6, 2025.

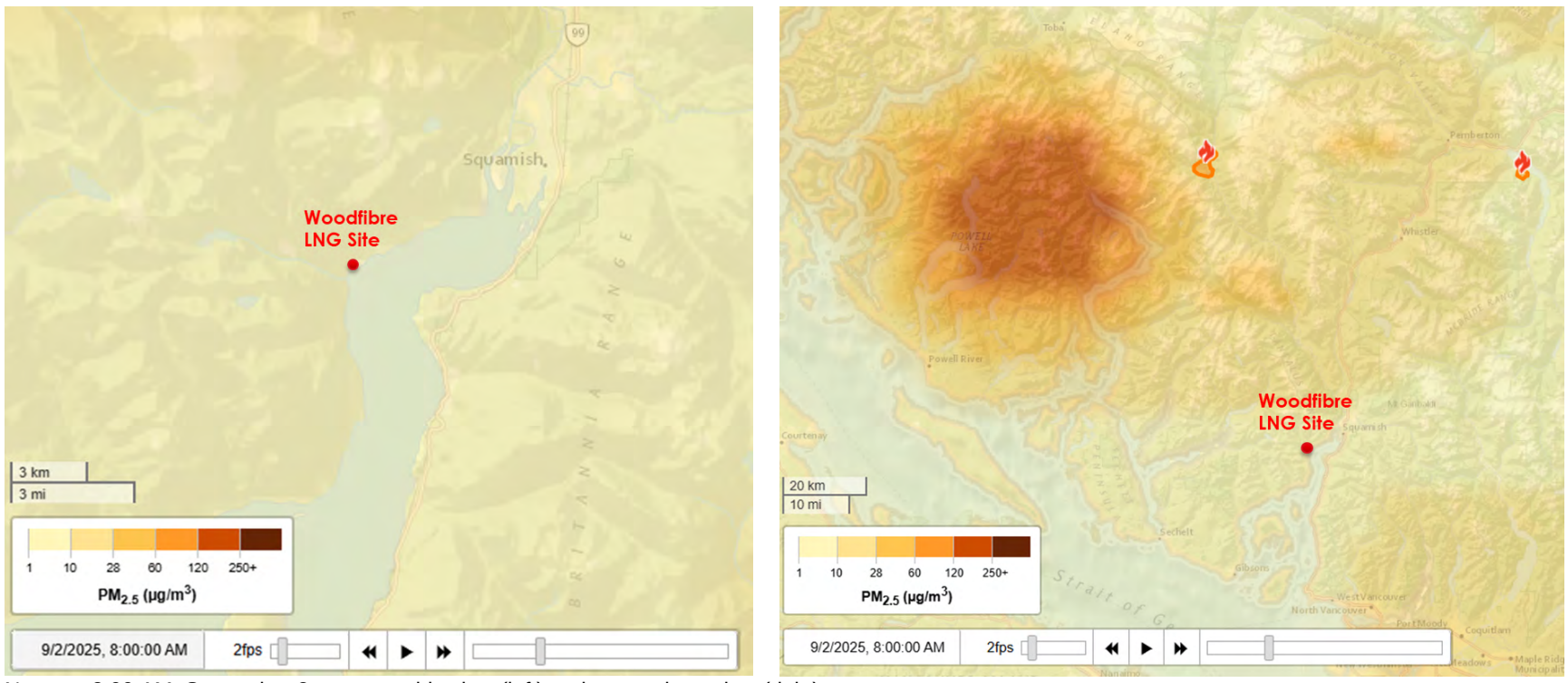
On-site Work Activities

Dust generating activities between Sep 2 and 6 included vehicle transport across the site for material relocation, crew movement, and offloading; excavation for anchors and slope cutting in the 1200 and 1300 Areas; rock breaking and hauling of Type-D and GB materials for sump walls and travel path ramps in the 1100 and 1300 Areas; drilling and blast rock hauling in the FST Area; and dredging and blast rock removal in the Marine Area. Haul roads are highlighted with a blue line. See the figure on the left for the September 2–6 work scope, and the figure below for the area breakdown.

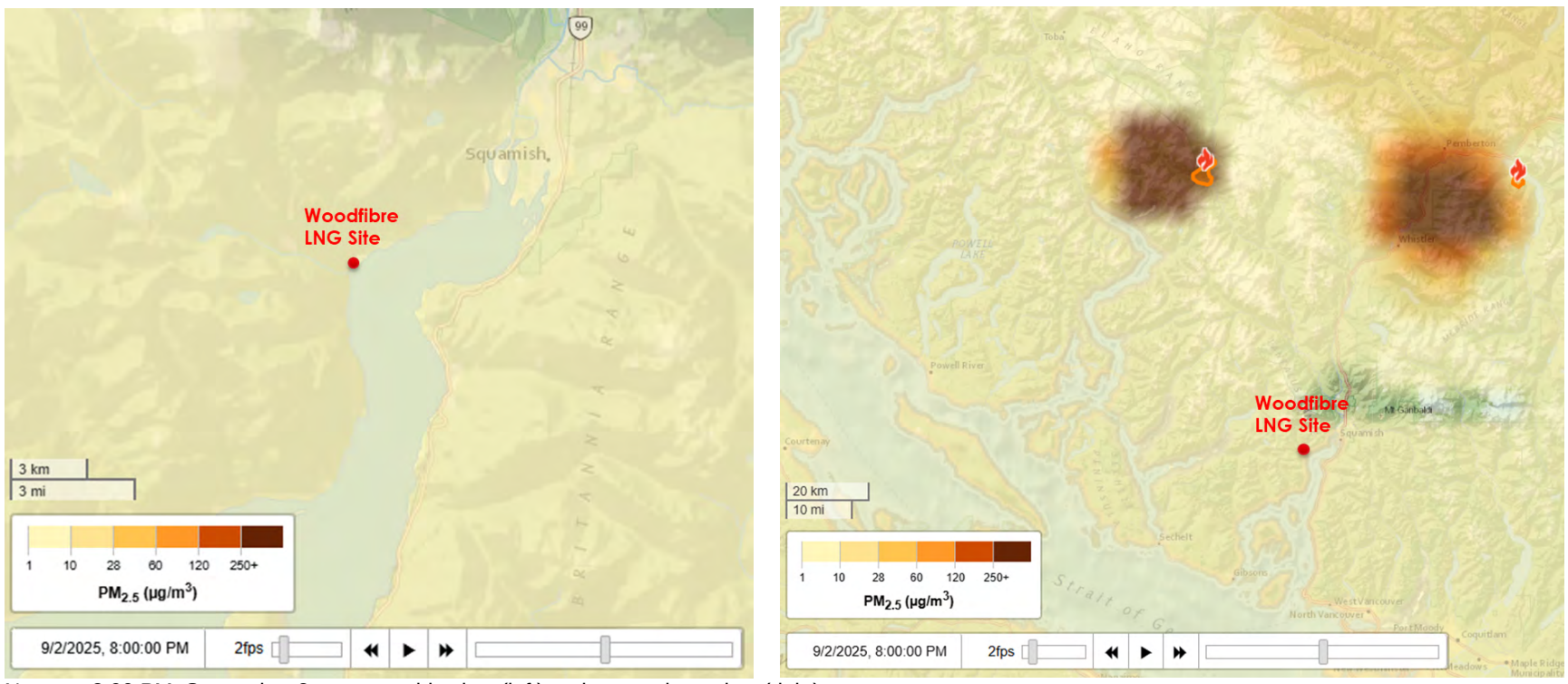


Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025

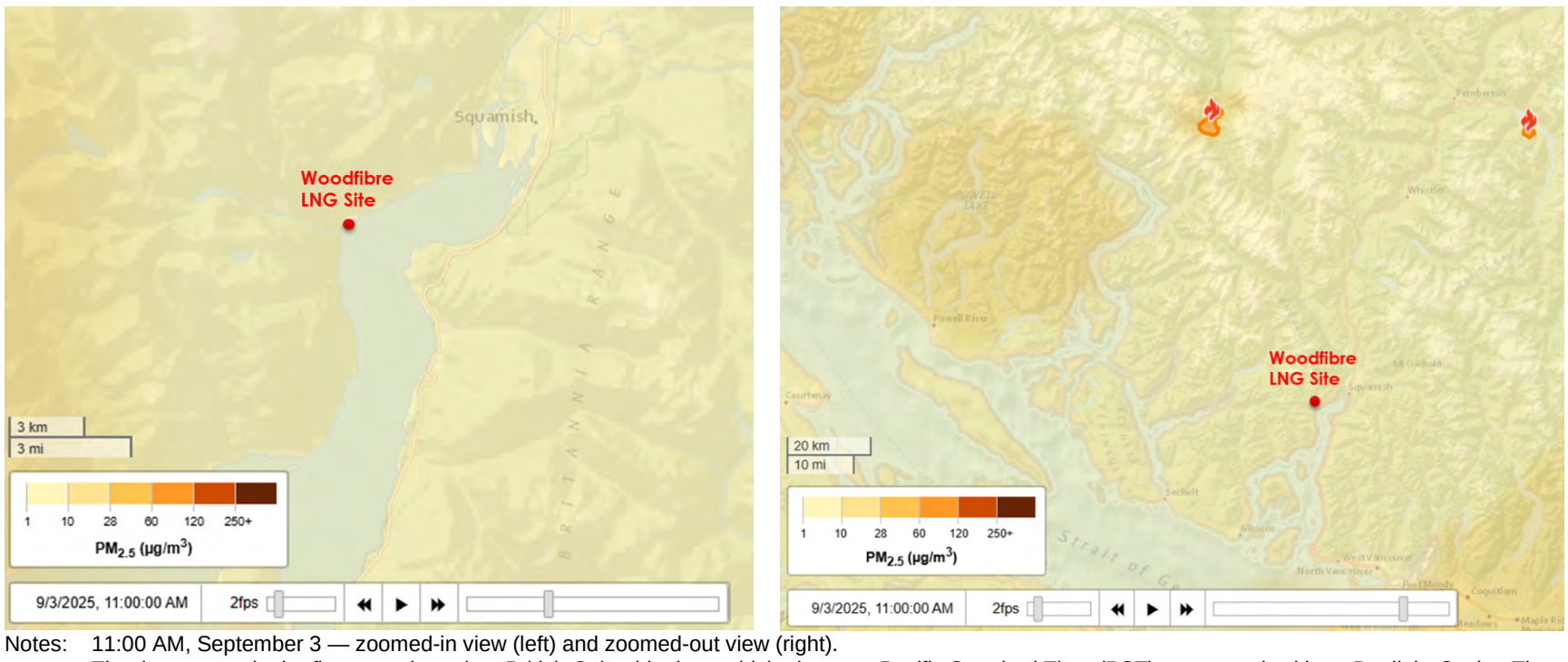
Figure A-6 Smoke modelling output (forecast from September 2 to September 6, 2025).



Notes: 8:00 AM, September 2 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

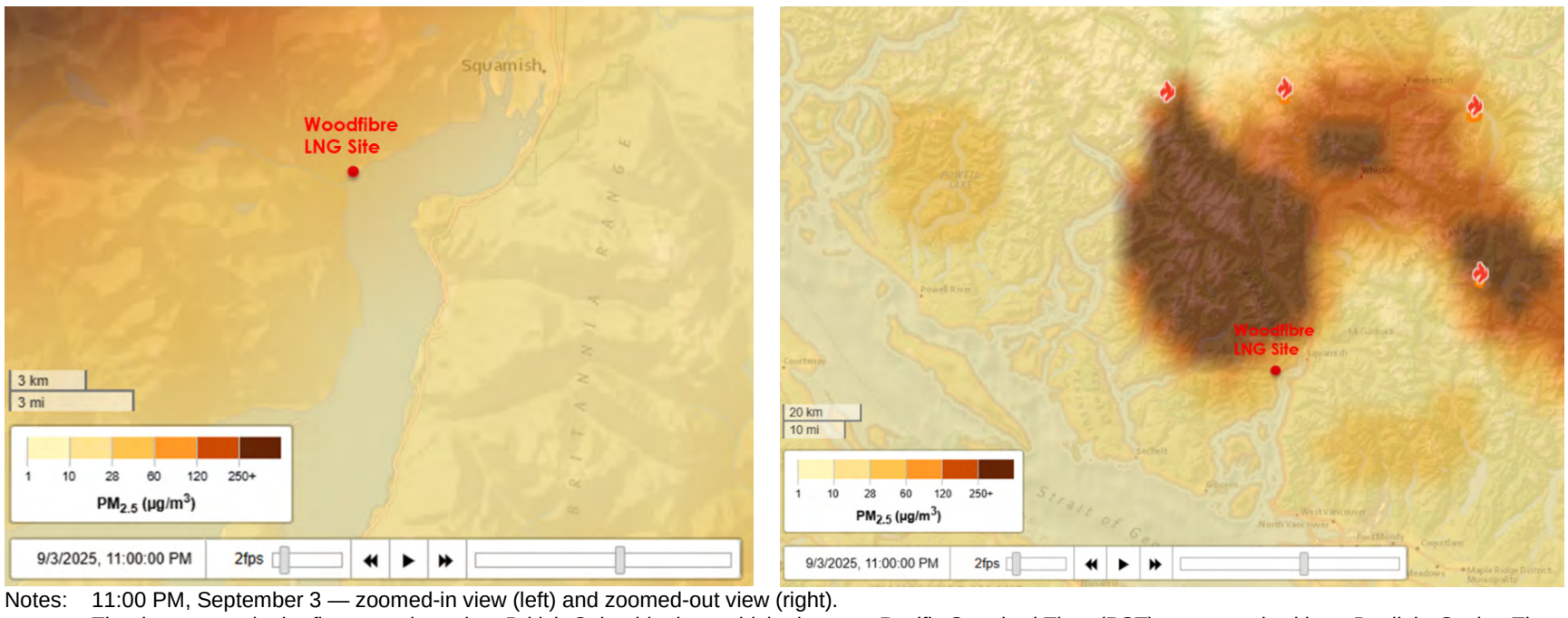


Notes: 8:00 PM, September 2 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

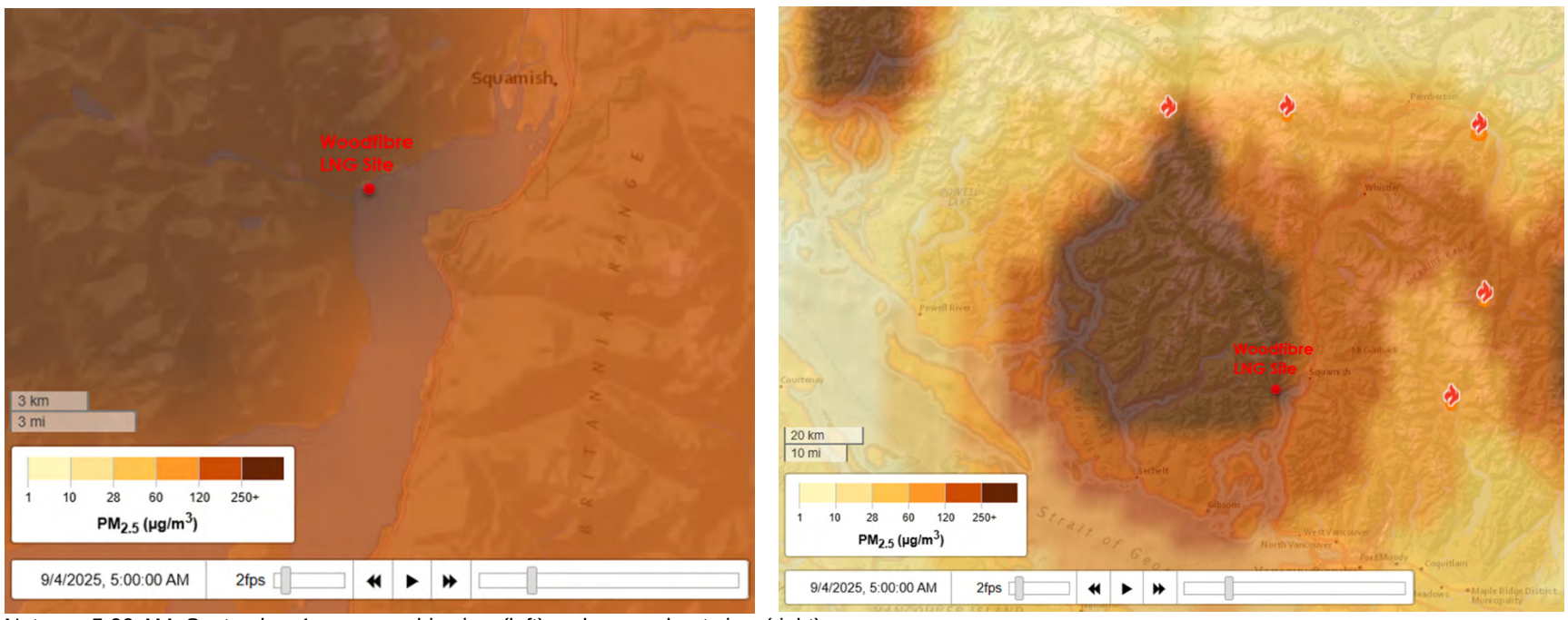


Notes: 11:00 AM, September 3 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

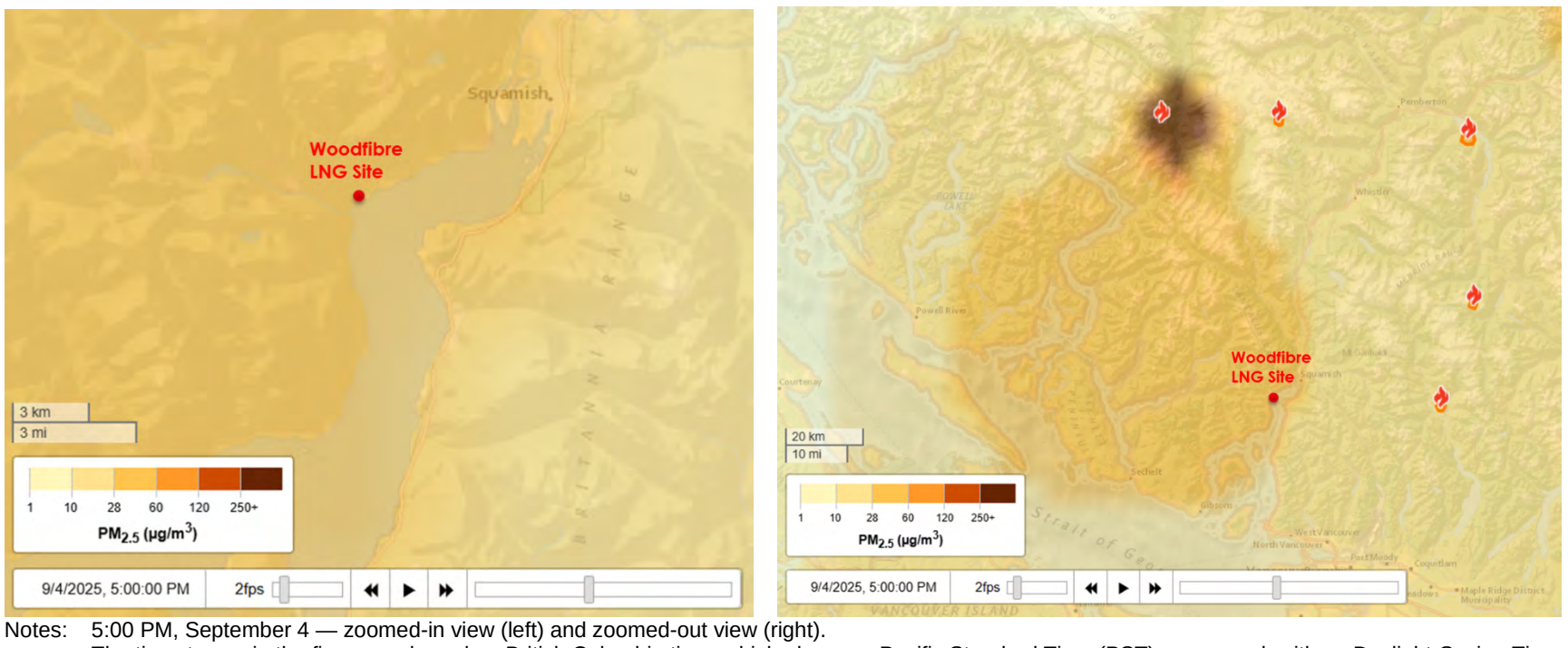
Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025



Notes: 11:00 PM, September 3 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

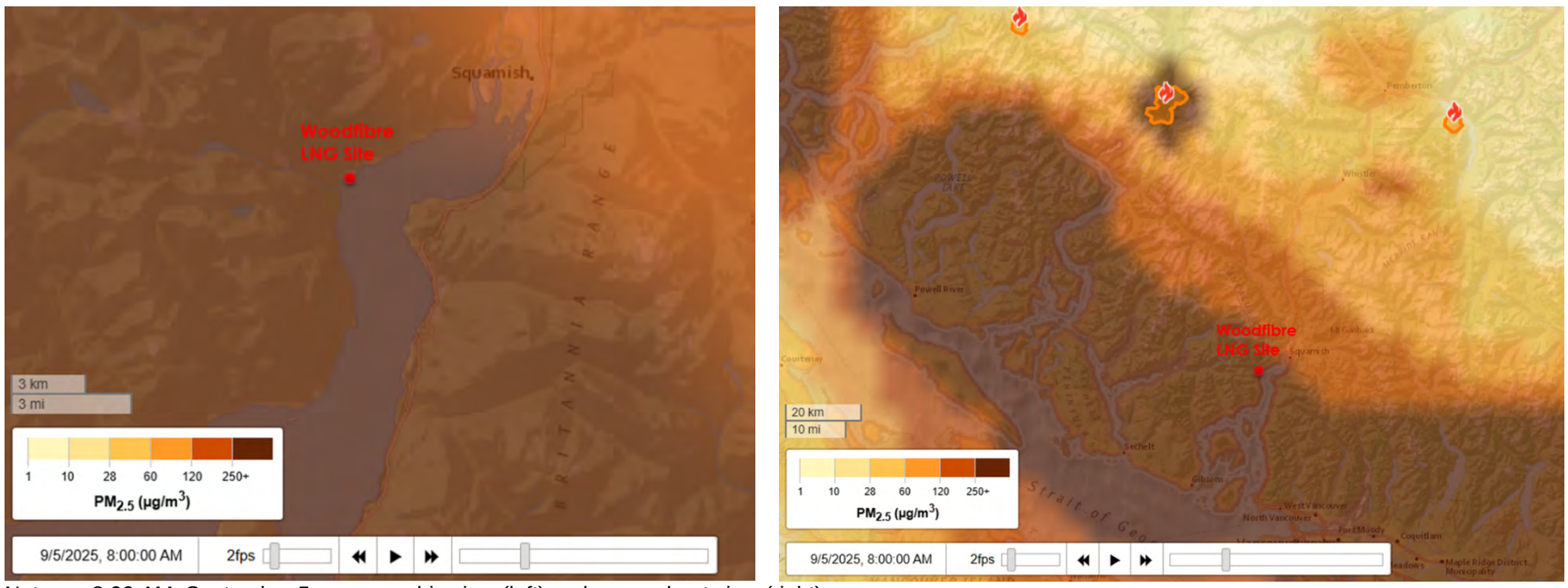


Notes: 5:00 AM, September 4 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

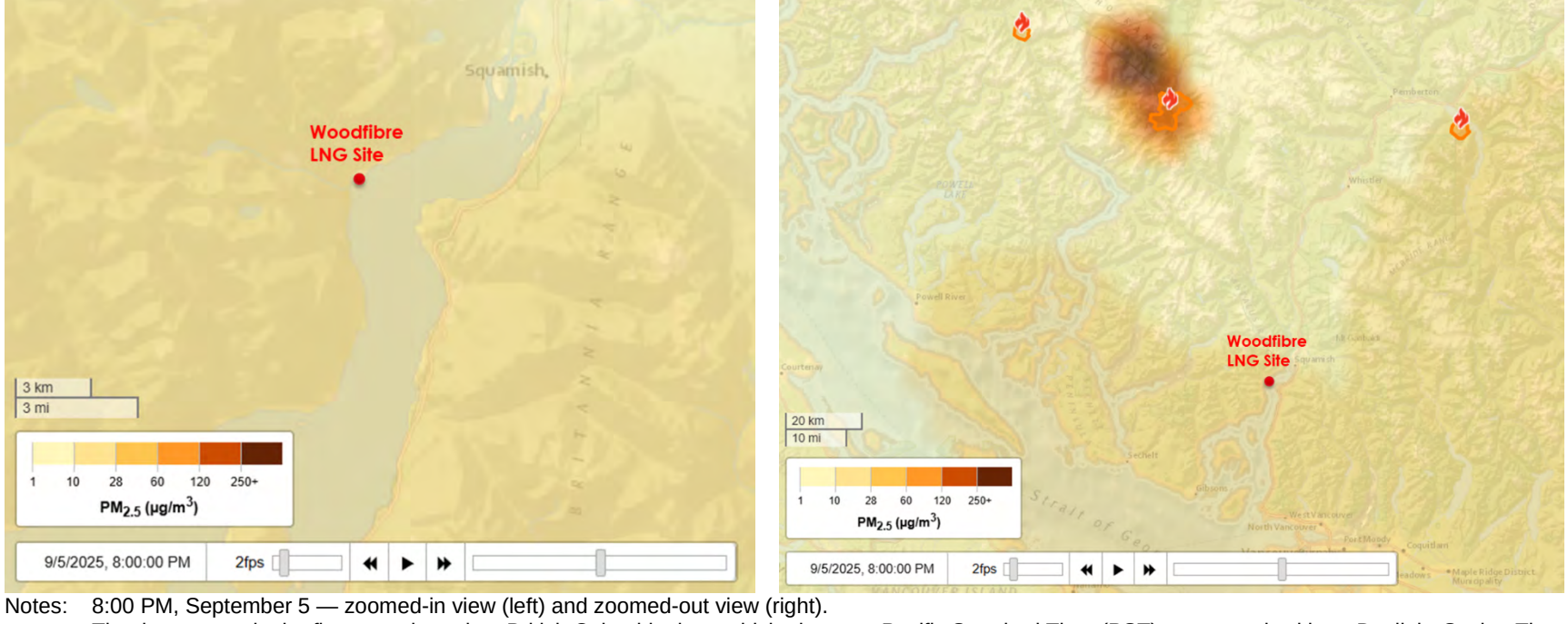


Notes: 5:00 PM, September 4 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

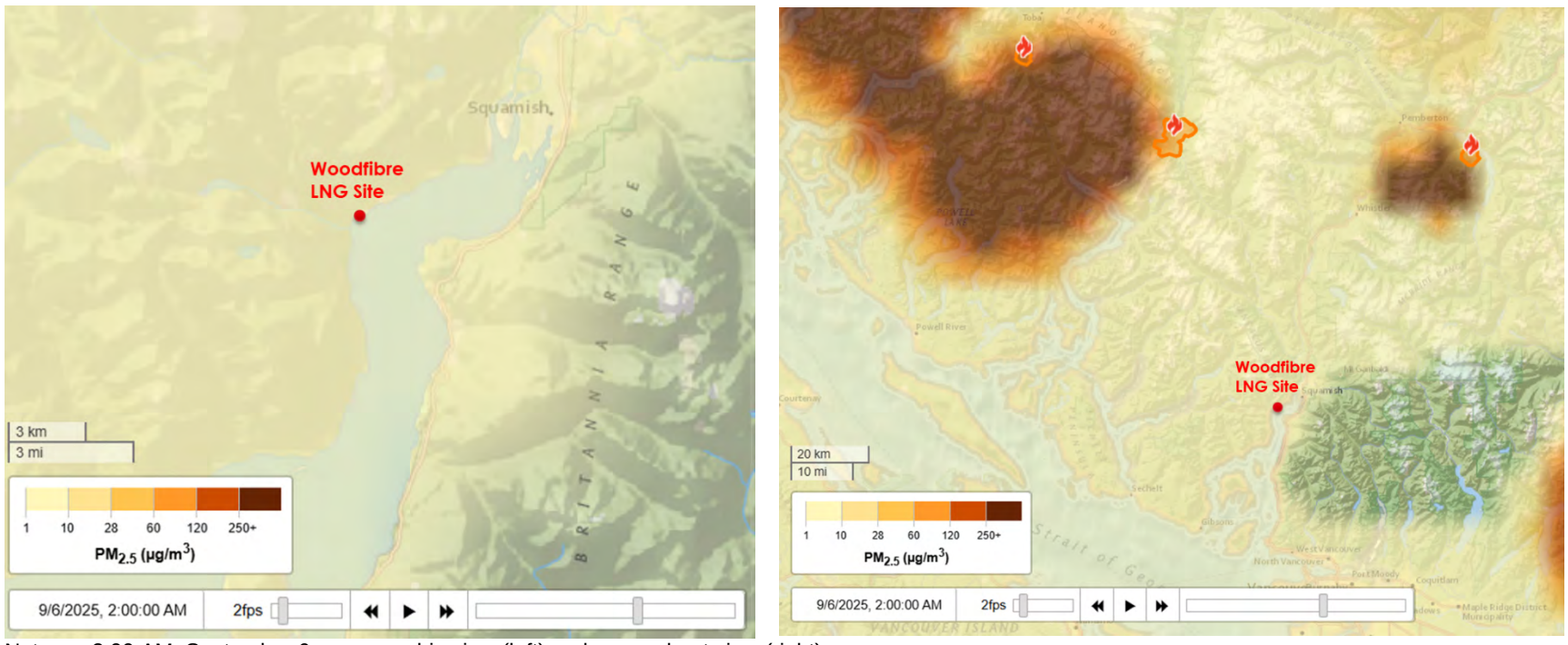
Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025



Notes: 8:00 AM, September 5 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

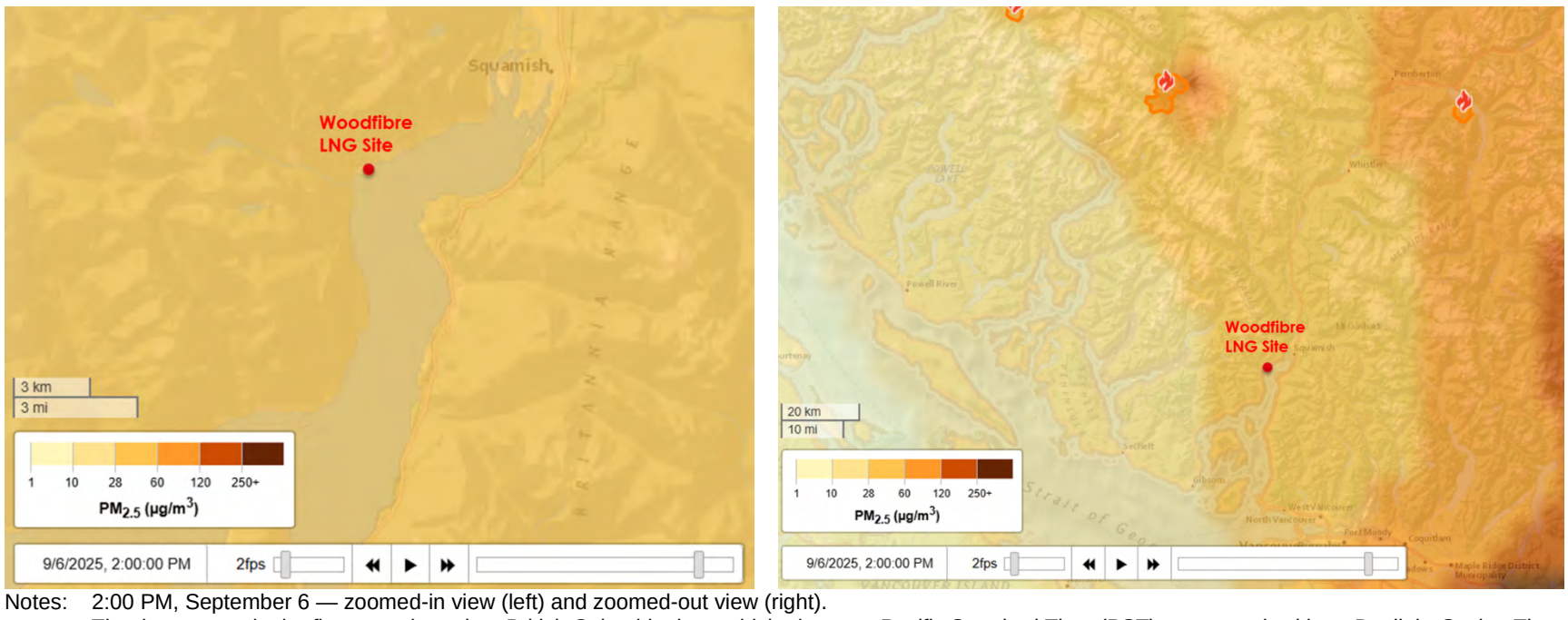


Notes: 8:00 PM, September 5 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.



Notes: 2:00 AM, September 6 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

Reference: WLNG Air Quality Exceedance Report for PM2.5, PM10 and TSP on September 2 to September 6, 2025



Notes: 2:00 PM, September 6 — zoomed-in view (left) and zoomed-out view (right).
The timestamps in the figure are based on British Columbia time, which observes Pacific Standard Time (PST) year-round, with no Daylight-Saving Time (DST) adjustment.

Appendix D 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: 25C354489
AIR QUALITY MONITORING REVIEWED BY: Carmen Andrei, AQM Lab Supervisor
DATE REPORTED: Oct 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

VERSION 1: VOC field duplicates not within acceptance limits. Analysis was repeated with similar results.

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: 25C354489

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	160.0	96.1

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: 25C354489

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Passive Air Quality Sampling

DATE RECEIVED: 2025-10-08

DATE REPORTED: 2025-10-20

Parameter	Unit	G / S	RDL	Site#01/ 03Sep/25,09:05 01Oct/25,10:25 /SO2 FILTER 7127596	Site#01/ 03Sep/25,09:05 01Oct/25,10:25 /TVOC FILTER 7127599
Ambient Sulfur Dioxide	ppbv		0.2	0.2	-
Ambient VOC as Hexane	ppbv		0.7	-	160

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

7127596-7127599 All samples are field blank subtracted.
VOC field duplicates not within acceptance limits. Analysis was repeated with similar results.

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: 25C354489

PROJECT: Woodfibre LNG

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Passive Quality Assurance

DATE RECEIVED: 2025-10-08

DATE REPORTED: 2025-10-20

SAMPLE DESCRIPTION:				Site#01/DUP 03Sep/25,09:05 01Oct/25,10:25 /SO2	BLANK/ 03Sep/25,09:05 01Oct/25,10:25 /SO2	Site#01/DUP 03Sep/25,09:05 01Oct/25,10:25 /TVOC	BLANK/ 03Sep/25,09:05 01Oct/25,10:25 /TVOC
SAMPLE TYPE:				FILTER	FILTER	FILTER	FILTER
DATE SAMPLED:							
Parameter	Unit	G / S	RDL	7127597	7127598	7127600	7127601
Ambient Sulfur Dioxide	ppbv		0.2	0.2	<0.2	-	-
Ambient VOC as Hexane	ppbv		0.7	-	-	32.2	<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: 25C354489

PROJECT: Woodfibre LNG

ATTENTION TO: Dan Jarratt/Kashif Choudhry

SAMPLING SITE:

SAMPLED BY:

Air Quality Monitoring

RPT Date: Oct 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	257	7127597	0.2	0.2	NA	< 0.2	102%	90%	110%	88%	80%	120%	99%	80%	120%
Ambient VOC as Hexane	190	7127600	160	32.2	133.0%	< 0.7	120%	60%	140%	107%	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: 25C354489

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: 25C354489

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	Sept 3, 2025 9:05 AM	Oct 1, 2025 10:25 AM			☑						☑				
	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	Pink Copy - Client	Page 1 of 1
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Yellow Copy - AGAT	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	White Copy- AGAT	No: 100825