

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT

NOVEMBER 2023

DECEMBER 22, 2023



wsp



AMBIENT AIR QUALITY MONTHLY REPORT

NOVEMBER 2023

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-05
DATE: DECEMBER 22, 2023

WSP
SUITE 1000
840 HOWE STREET
VANCOUVER, BC, CANADA V6Z 2M1

T: +1 604 685-9381
F: +1 604 683-8655
WSP.COM



December 22, 2023

LAFARGE CANADA INC.
Highway 1A
Exshaw, AB T0L 2C0

Attention: Nikolaos Veriotes P. Eng.

Dear Mr. Veriotes,

Subject: Ambient Air Quality Monthly Report – November 2023

The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAQOs) or Guidelines (AAAQG) at the Lagoon Station for November 2023.

Lagoon	Data Completeness (%)	1-Hour Average	24-hour Average
		Exceedances of AAAQO or AAAQG	Exceedances of AAAQO
TSP	99.0%	-	6
PM _{2.5}	99.0%	0	0
PM ₁₀	99.0%	-	-
NO	99.0%	-	-
NO ₂	99.0%	0	-
NO _x	99.0%	-	-
SO ₂	99.0%	0	0
Temperature	98.6%	-	-
Wind Speed / Direction	98.6%	-	-
Pressure	98.6%	-	-
Relative Humidity	98.6%	-	-
Precipitation	99.0%	-	-

SUITE 1000
840 HOWE STREET
VANCOUVER, BC, CANADA V6Z 2M1

T: +1 604 685-9381
F: +1 604 683-8655
wsp.com

The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAOs) or Guidelines (AAAQG) at the Windridge Station for November 2023.

Windridge	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of AAAQG	Exceedances of PM _{2.5} AAAQO	Exceedances of TSP AAAQO
TSP	99.4%	-	-	14
PM _{2.5}	99.4%	0	0	-
PM ₁₀	99.4%	-	-	-

The GRIMM monitors are considered Industrial Ambient Monitors and are meant for assessing the performance of Lafarge Exshaw’s Fugitive Dust Control Best Management Practices – Program; the GRIMM monitors are not Air Monitoring Directive (AMD) compliant. This Program uses the AAAQOs as Guidelines. The following table summarizes the data completeness and exceedances of the Guidelines at the GRIMM Monitors for November 2023.

GRIMM Stations	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of PM _{2.5} Guidelines	Exceedances of PM _{2.5} Guidelines	Exceedances of TSP Guidelines
West	100.0%	0	0	0
Berm	100.0%	10	2	14
Entrance	0%	0	0	0

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization, and reporting requirements.

Sincerely,

Tyler Abel, M.Sc.
Senior Air Quality Specialist,
Vancouver Region

SIGNATURES

PREPARED BY



December 22, 2023

Tuonan Li, M.Sc.
Air Quality Specialist
Vancouver Region, Environment

Date

APPROVED¹ BY *(must be reviewed for technical accuracy prior to approval)*



December 22, 2023

Tyler Abel, M.Sc.
Senior Air Quality Specialist
Vancouver Region, Environment

Date

WSP Canada Inc. (WSP) prepared this report solely for the use of the intended recipient, LAFARGE CANADA INC., in accordance with the professional services agreement. The intended recipient is solely responsible for the disclosure of any information contained in this report. The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report. This limitations statement is considered an integral part of this report.

The original of this digital file will be conserved by WSP for a period of not less than 10 years. As the digital file transmitted to the intended recipient is no longer under the control of WSP, its integrity cannot be assured. As such, WSP does not guarantee any modifications made to this digital file subsequent to its transmission to the intended recipient.

¹ Approval of this document is an administrative function indicating readiness for release and does not impart legal liability on to the Approver for any technical content contained herein. Technical accuracy and fit-for-purpose of this content is obtained through the review process. The Approver shall ensure the applicable review process has occurred prior to signing the document.



TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Exshaw Creek Flood Mitigation	1
2	NOVEMBER 2023 REPORT SUMMARY	3
2.1	Lagoon Station	3
2.2	Windridge Station	4
2.3	West Grimm	4
2.4	Berm Grimm	5
2.5	Entrance Grimm	6
3	LAGOON STATION	7
3.1	Operational Summary	7
3.2	Monitoring Results and Trends	8
4	WINDRIDGE STATION	21
4.1	Operational Summary	21
4.2	Monitoring Results and Trends	21
5	WEST INDUSTRIAL GRIMM	32
5.1	Operational Summary	32
5.2	Monitoring Results and Trends	32
6	BERM INDUSTRIAL GRIMM	37
6.1	Operational Summary	37
6.2	Monitoring Results and Trends	37
	BIBLIOGRAPHY	46

TABLES

TABLE 2-1	LAGOON STATION DATA SUMMARY	3
TABLE 2-2	WINDRIDGE STATION DATA SUMMARY	4
TABLE 2-3	WEST STATION DATA SUMMARY	5
TABLE 2-4	BERM STATION DATA SUMMARY	5
TABLE 3-1	INSTRUMENTATION LIST AT THE LAGOON STATION	7
TABLE 3-2	SUMMARY OF NOVEMBER 2023 DATA AT LAGOON	10
TABLE 3-3	DAYS EXCEEDING THE TSP AAAQO OR PM _{2.5} AAAQO AT THE LAGOON STATION	11
TABLE 4-1	INSTRUMENTATION LIST AT THE WINDRIDGE MONITORING LOCATION	21
TABLE 4-2	SUMMARY OF NOVEMBER 2023 DATA AT THE WINDRIDGE STATION	23
TABLE 4-3	DAYS EXCEEDING THE TSP AAAQO OR PM _{2.5} AAAQO AT THE WINDRIDGE STATION	24
TABLE 5-1	INSTRUMENTATION LIST AT THE WEST MONITORING LOCATION	32
TABLE 5-2	SUMMARY OF NOVEMBER 2023 DATA AT THE WEST GRIMM	33
TABLE 6-1	INSTRUMENTATION LIST AT THE BERM MONITORING LOCATION	37
TABLE 6-2	SUMMARY OF NOVEMBER 2023 DATA AT THE BERM GRIMM	38
TABLE 6-3	DAYS EXCEEDING THE GUIDELINE FOR TSP OR PM _{2.5} AT THE BERM MONITOR	39

FIGURES

FIGURE 1-1	LOCATIONS OF AIR QUALITY MONITORS IN EXSHAW	1
FIGURE 1-2	PHOTO OF COMPLETED FLOOD MITIGATION WORK AT EXSHAW CREEK	2
FIGURE 3-1	INLETS ON THE TOP OF WSP'S LAGOON MONITOR	8

FIGURE 3-2	1-HOUR CONCENTRATIONS OF NO _x , SO ₂ , PARTICULATE MATTER, WIND DIRECTION AND WIND SPEED AT THE LAGOON STATION.....	12
FIGURE 3-3	HISTOGRAM OF HOURLY NO ₂ CONCENTRATIONS AT THE LAGOON STATION.....	13
FIGURE 3-4	HISTOGRAM OF HOURLY SO ₂ CONCENTRATIONS AT THE LAGOON STATION.....	13
FIGURE 3-5	HISTOGRAM OF HOURLY PM _{2.5} CONCENTRATIONS AT THE LAGOON STATION.....	14
FIGURE 3-6	HISTOGRAM OF HOURLY PM ₁₀ CONCENTRATIONS AT THE LAGOON STATION.....	14
FIGURE 3-7	HISTOGRAM OF HOURLY TSP CONCENTRATIONS AT THE LAGOON STATION.....	15
FIGURE 3-8	24-HOUR CONCENTRATIONS OF NO _x , SO ₂ , AND PARTICULATE MATTER AT THE LAGOON MONITOR	16
FIGURE 3-9	WIND ROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE LAGOON STATION.....	17
FIGURE 3-10	LAGOON MONITOR PARTICULATE MATTER TIME VARIATION	18
FIGURE 3-11	LAGOON MONITOR SO ₂ TIME VARIATION	19
FIGURE 3-12	LAGOON MONITOR NO _x TIME VARIATION	20
FIGURE 4-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE WINDRIDGE MONITOR	26
FIGURE 4-2	HISTOGRAM OF HOURLY PM _{2.5} CONCENTRATIONS AT THE WINDRIDGE STATION	27
FIGURE 4-3	HISTOGRAM OF HOURLY PM ₁₀ CONCENTRATIONS AT THE WINDRIDGE STATION	27
FIGURE 4-4	HISTOGRAM OF HOURLY TSP CONCENTRATIONS AT THE WINDRIDGE STATION	28
FIGURE 4-5	24-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE WINDRIDGE MONITOR.....	29

FIGURE 4-6	WIND ROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE WINDRIDGE STATION.....	30
FIGURE 4-7	WINDRIDGE PARTICULATE MATTER TIME VARIATION.....	31
FIGURE 5-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE WEST MONITOR.....	34
FIGURE 5-2	24-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE WEST MONITOR.....	35
FIGURE 5-3	WEST MONITOR PARTICULATE MATTER TIME VARIATION.....	36
FIGURE 6-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE BERM MONITOR.....	41
FIGURE 6-2	24-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE BERM MONITOR.....	42
FIGURE 6-3	WINDROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE BERM GRIMM.....	43
FIGURE 6-4	WINDROSE FOR PM _{2.5} EXCEEDANCE DAYS RECORDED AT THE BERM GRIMM.....	44
FIGURE 6-5	BERM PARTICULATE MATTER TIME VARIATION.....	45

APPENDICES

A DATA & CALIBRATION REPORTS

1 INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon, Windridge, and GRIMM monitors in Exshaw, AB (Figure 1-1). The stations are operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and are a requirement of Lafarge’s Approval 1702-02-04. This report contains data collected between November 1, 2023 and November 30, 2023.

This monthly report was prepared by Tuonan Li, Air Quality Specialist with WSP, on behalf of Lafarge and was reviewed by Tyler Abel, Senior Air Quality Specialist at WSP.

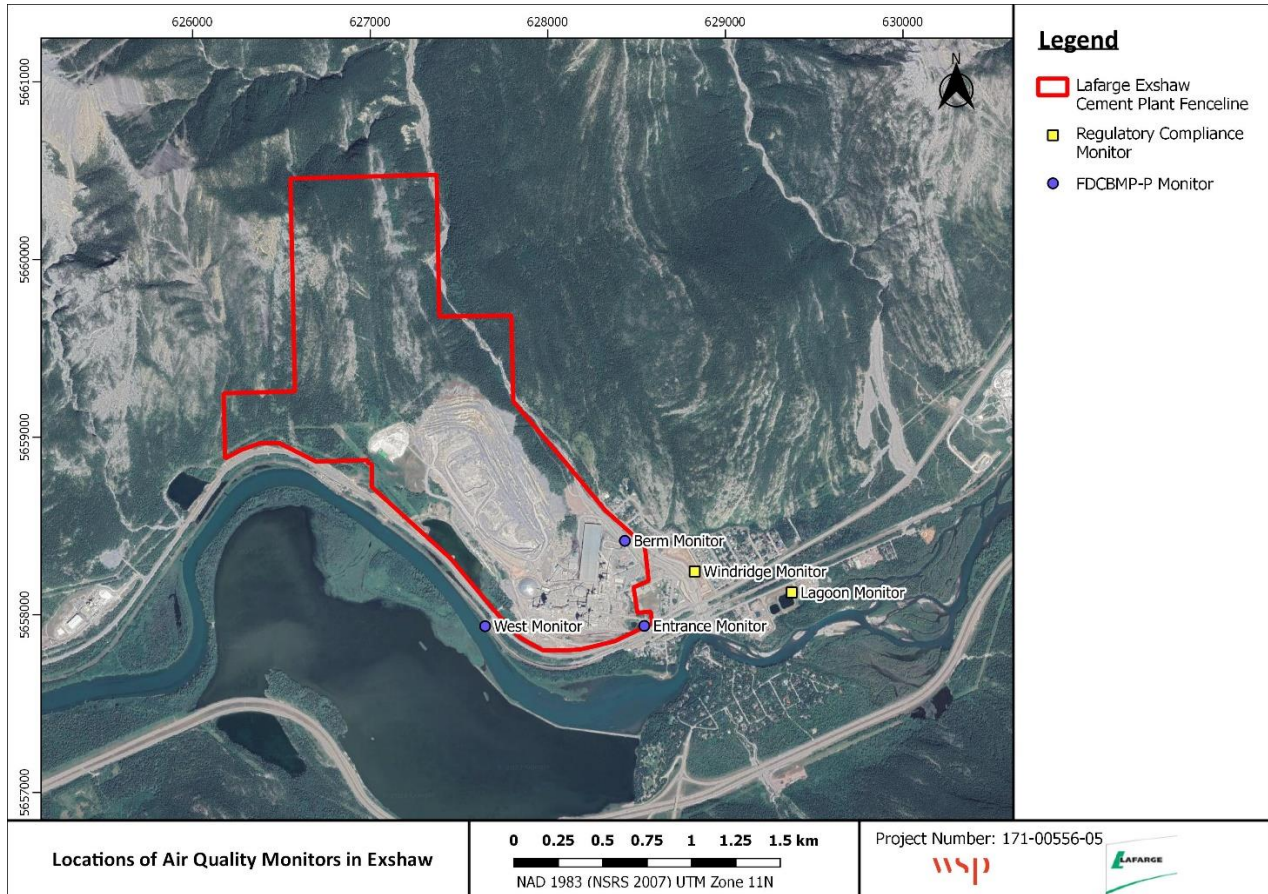


Figure 1-1 Locations of Air Quality Monitors in Exshaw

1.1 EXSHAW CREEK FLOOD MITIGATION

Due to flood mitigation construction at Exshaw creek (Figure 1-2), the Windridge monitoring station was taken out of operation and removed from the site on April 8, 2019. The flood mitigation work was completed in Summer 2020. The Windridge station was reinstalled on September 1, 2020. The flood mitigation work has left an exposed creek bed area (see Figure below) that is a potential source of fugitive dust between Lafarge’s eastern fenceline and the Windridge station.



Figure 1-2 Photo of Completed Flood Mitigation Work at Exshaw Creek

2 NOVEMBER 2023 REPORT SUMMARY

This summary section provides the pertinent details on data collected and maintenance/calibration activities at each of the monitoring locations. The monitoring results for each station are described in further detail in their corresponding sections. Maximum hourly concentrations are shown for all particulate matter size fractions, but there are no Alberta Ambient Air Quality Objectives (AAAQO) for 1-hour PM concentrations. The exceedances reported for 1-hour PM_{2.5} are those above the 1-hour PM_{2.5} Alberta Ambient Air Quality Guidelines (AAAQG).

2.1 LAGOON STATION

Table 2-1 Lagoon station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
NO₂ (ppb)	99.0	21.2	0	12.3	-
SO₂ (ppb)	99.0	7.2	0	2.3	0
PM_{2.5} (µg/m³)	99.0	16.3	0*	10.5	0
PM₁₀ (µg/m³)	99.0	321.1	-	77.5	-
TSP (µg/m³)	99.0	650.3	-	161.3	6
Temperature (°C)	98.6	14.0	-	7.7	-
Wind Speed (km/hr) /Direction (Degrees)	98.6	57.1/W	-	30.8/WSW	-
Precipitation (mm)	99.0	1.25 ²	-	6 ³	-

¹ Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

² Maximum Daily Total Accumulation of Precipitation (mm) – freezing temperatures can impact the precipitation totals in winter months

³ Monthly Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were six days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Lagoon station, the PM₁₀, PM_{2.5} and TSP analyzers recorded 99% uptime during the month of November due to 7 hours of power outage occurring on November 29th at 11:00 – 17:00.
- The SO₂ and NO₂ analyzers recorded 99% uptime during the month of November due to 7 hours of power outage occurring on November 29th at 11:00 – 17:00.
- The precipitation gauge recorded 99% uptime during the month of November due to 7 hours of power outage occurring on November 29th at 11:00 – 17:00.
- All meteorological analyzers except the precipitation gauge recorded 98.6% uptime during the month of November due to 3 hours non-routine maintenance occurring on November 1st at 1:00 – 3:00. Further, 7 hours of power outage occurred on November 29th at 11:00 – 17:00.

2.2 WINDRIDGE STATION

Table 2-2 Windridge station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQG	Maximum Concentration	Exceedances of AAAQO
PM _{2.5} (µg/m ³)	99.4	35.0	0*	13.4	0
PM ₁₀ (µg/m ³)	99.4	485.0	-	233.6	-
TSP (µg/m ³)	99.4	985.0	-	355.6	14

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

Data Quality Notes:

- There were no exceedances of 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were 14 days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Windridge station, the TSP, PM₁₀ and PM_{2.5} analyzers recorded 99.4% uptime for the month of November due to 4 hours of equipment malfunction occurring on November 27th at 20:00 – 22:00 and November 28th at 1:00.

2.3 WEST GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their Fugitive Dust Control Best Management Practices – Program (FDCBMP-P). The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Table 2-3 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	99.4	14.8	0*	11.9	0
PM ₁₀ (µg/m ³)	99.4	21.7	-	12.5	-
TSP (µg/m ³)	99.4	38.5	-	13.1	0

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} Guidelines.
- There were no exceedances of the 1-hour PM_{2.5} Guidelines.
- There were no exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The PM_{2.5}, PM₁₀, and TSP analyzers recorded 99.4% uptime during the month of November due to 4 hours of equipment malfunction occurring from November 7th at 23:00 to November 8th at 2:00.

2.4 BERM GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Table 2-4 Berm station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	99.4	112.6	10*	42.2	2
PM ₁₀ (µg/m ³)	99.4	1119.6	-	321.3	-
TSP (µg/m ³)	99.4	3048.8	-	974.5	14

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

Data Quality Notes:

- There were 2 days exceeding the 24-hour PM_{2.5} Guidelines.
- There were 10 exceedances of the 1-hour PM_{2.5} Guidelines.

- There were 14 exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The PM_{2.5}, PM₁₀, and TSP monitors recorded 99.4% uptime during the month of November due to 4 hours of equipment malfunction occurring from November 7th at 23:00 to November 8th at 2:00, and November 8th at 9:00.

2.5 ENTRANCE GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Calibration/Maintenance Notes:

- The analyzer had 0% uptime for the month of November due to collection error (i.e., communication error).

3 LAGOON STATION

The Lagoon trailer contains NO_x, SO₂, TSP, PM₁₀, and PM_{2.5} analyzers as well as meteorological sensors, and is shown in Figure 3-1. An ambient air quality station has been at this location since 2002, providing a long-term data record for air quality in the Exshaw area.

This section provides a summary of the monitoring activities for the Lagoon ambient air quality station, including: a table of instrumentation (Table 3-1), a data summary table (Table 3-2), site visit notes, and tables and graphs illustrating the monitoring results for November 2023.

All of the monitors comply with Alberta Environment and Parks Air Monitoring Directive (2016).

3.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 3-1.

Table 3-1 Instrumentation List at the Lagoon Station

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on November 27 th . The monitor had 99% uptime for the month of November due to 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on November 27 th . The monitor had 99% uptime for the month of November due to 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on November 27 th . The monitor had 99% uptime for the month of November due to 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated on November 16 th . The monitor had 99% uptime for the month of November due to 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.
Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on November 16 th . The monitor had 99% uptime for the month of November due to 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.
Precipitation	MetOne 130 Rain/Snow Gauge	The monitor had 99% uptime for the month of November due to 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.

Wind Speed	MetOne Wind Sensor	The monitor had 98.6% uptime for the month of November due to 3 hours non-routine maintenance occurring on November 1 st at 1:00 – 3:00. Further, 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.
Wind Direction		
Ambient Temperature	MetOne Ambient Temperature Sensor	The monitor had 98.6% uptime for the month of November due to 3 hours non-routine maintenance occurring on November 1 st at 1:00 – 3:00. Further, 7 hours of power outage occurring on November 29 th at 11:00 – 17:00.



Figure 3-1 Inlets on the top of WSP's Lagoon monitor

3.2 MONITORING RESULTS AND TRENDS

Table 3-2 summarizes the hourly and daily concentrations recorded in November 2023. Figure 3-2 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-8 shows daily average concentrations recorded during November 2023 for the pollutants listed in Table 3-2. Additionally, Figure 3-3 to Figure 3-7 show the histograms of the hourly concentrations of NO₂, SO₂, PM_{2.5}, PM₁₀, and TSP measured at the Lagoon station.

There was 6 days exceeding the 24-hour TSP (100 µg/m³) AAAQO. There were 0 exceedances of the 24-hour PM_{2.5} (29 µg/m³) AAAQO and the 1-hour PM_{2.5} AAAQG (80 µg/m³).

Historically in November, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances are both 0. The maximum number of 24-hour TSP AAAQO exceedances recorded in November were 2 days in 2010.

At the Lagoon station strong wind gusting that typically occurs in the area contributes to increased particulate levels that may arise from multiple sources including the Lafarge Plant, Exshaw Creek, dry sections of the Bow River, highway and rail traffic moving past the station and fugitive emissions from open areas.

Table 3-2 Summary of November 2023 data at Lagoon

Parameter	Guideline / Objectives		Station	Exceedances		Monthly		1-hour				24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration/ Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable		Day
NO₂ (ppb)	159	-	Lagoon	0	-	0.1	6.0	21.2	22	5	5.6	50.4	12.3	23	99.0
SO₂ (ppb)	172	48	Lagoon	0	0	0.0	0.4	7.2	8	15	29.0	254.6	2.3	8	99.0
PM_{2.5} (µg/m³)	80	29	Lagoon	0	0	0.0	3.6	16.3	2	15	7.0	238.2	10.5	2	99.0
PM₁₀ (µg/m³)	-	-	Lagoon	-	-	0.0	29.2	321.1	11	3	57.1	239.7	77.5	8	99.0
TSP (µg/m³)	-	100	Lagoon	-	6	0.0	58.3	650.3	11	3	57.1	239.7	161.3	8	99.0
Temperature (°C)	-	-	Lagoon	-	-	-26.7	0.8	14.0	21	15	38.8	239.7	7.7	4	98.6
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	0.7	19.3	57.1/W	11	3	57.1	239.7	30.8/WSW	14	98.6
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.1	1.3 ¹	13	18	18.8	253.4	6.0 ²		99.0

¹ Maximum Daily Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

² Monthly Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

Table 3-3 Days exceeding the TSP AAAQO or PM_{2.5} AAAQO at the Lagoon Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Lagoon						
2023-11-08	161.3	-	252.2	24.8	34.1	High wind event
2023-11-10	129.8	-	250.5	23.9	41.5	High wind event
2023-11-11	124.0	-	249.6	27.5	51.8	High wind event
2023-11-17	116.6	-	270.1	23.5	52.8	High wind event
2023-11-20	101.4	-	243.0	27.5	29.7	High wind event
2023-11-21	107.4	-	249.1	29.3	30.6	High wind event
Total # of Exceedances	6	0				
Maximum # of Exceedances (November)	2 (2010)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)				
Average # of Exceedances (November)	0	0				
Minimum # of Exceedances (November)	0 (2011, 2012, 2013, 2014, 2016, 2017, 2019, 2022)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)				

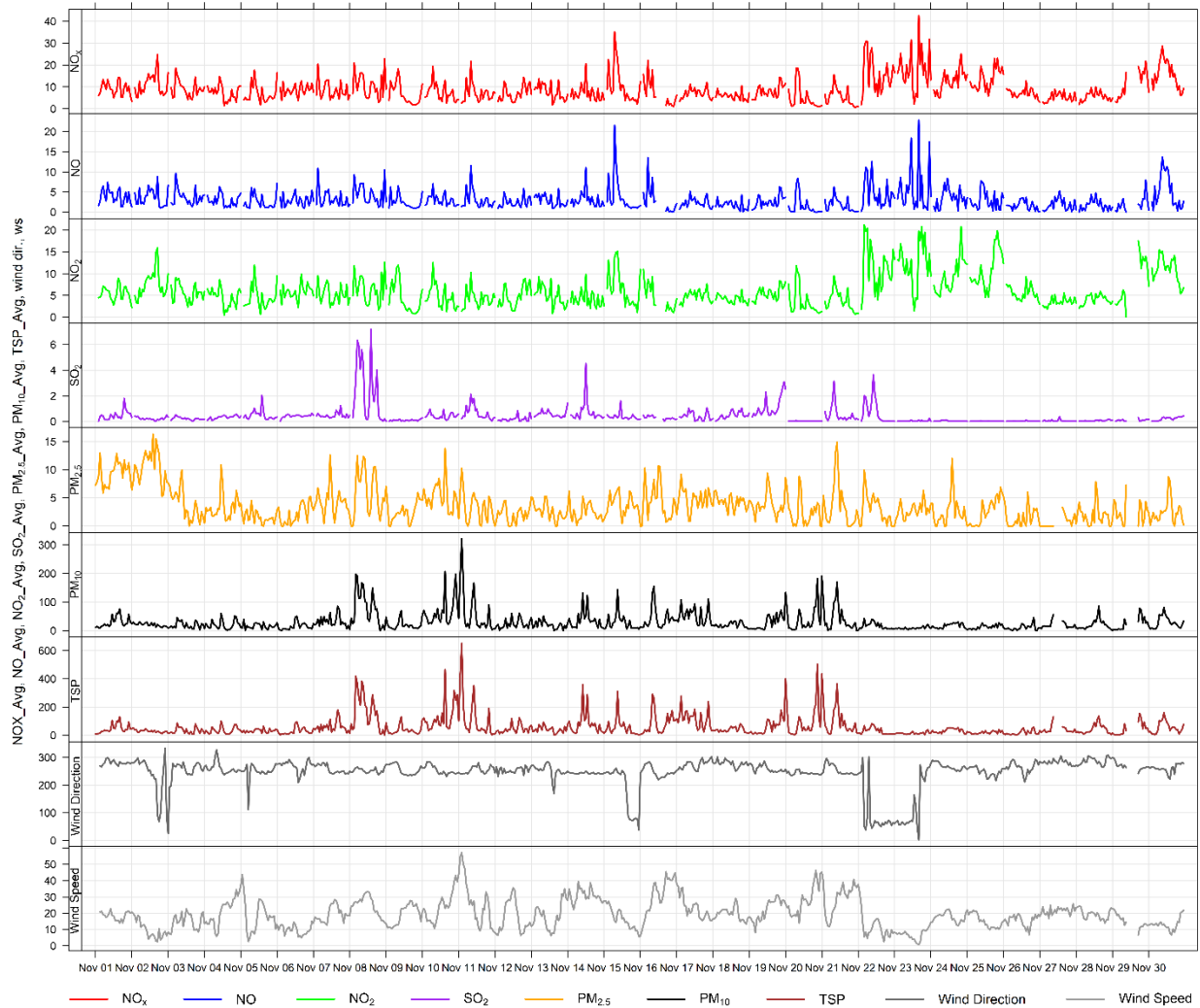


Figure 3-2 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

Histogram of Hourly NO₂ Readings

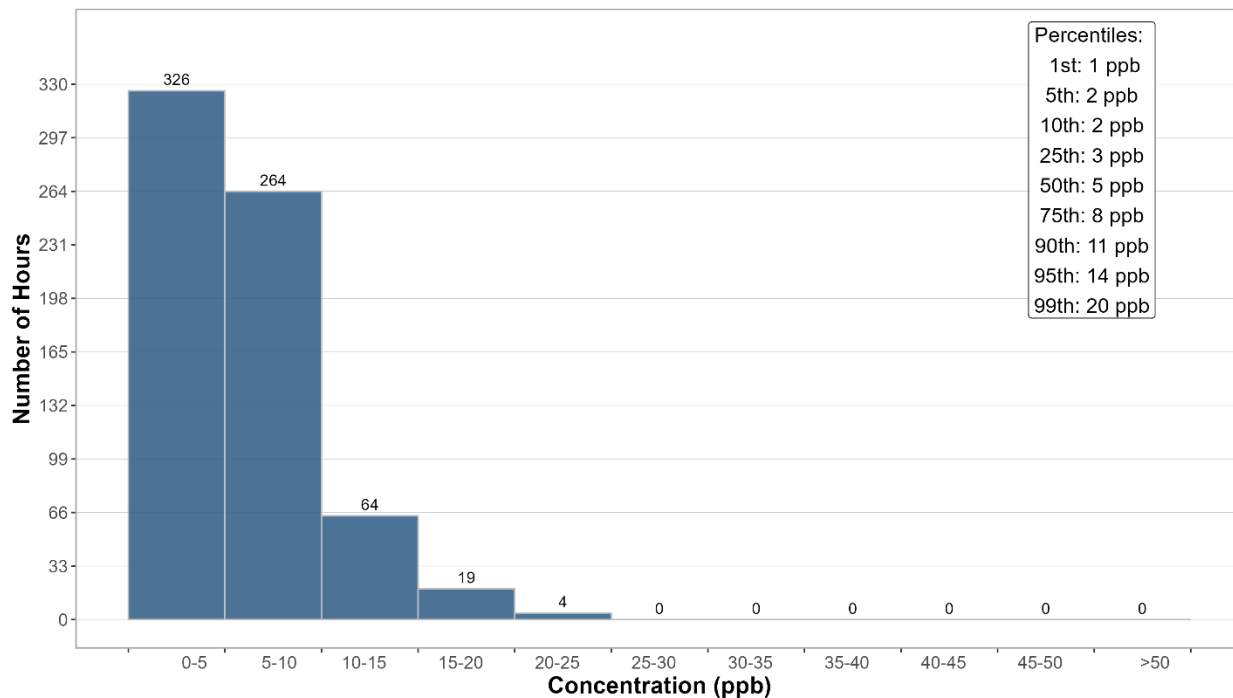


Figure 3-3 Histogram of hourly NO₂ concentrations at the Lagoon station

Histogram of Hourly SO₂ Readings

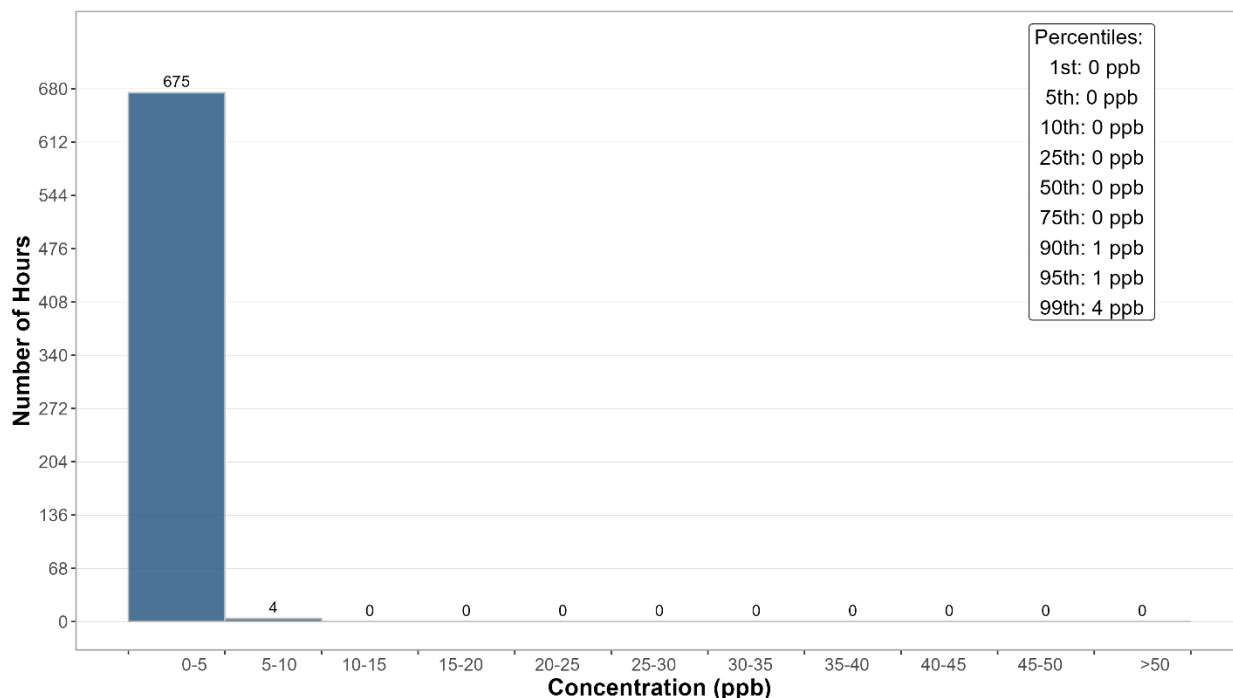


Figure 3-4 Histogram of hourly SO₂ concentrations at the Lagoon station

Histogram of Hourly PM_{2.5} Readings

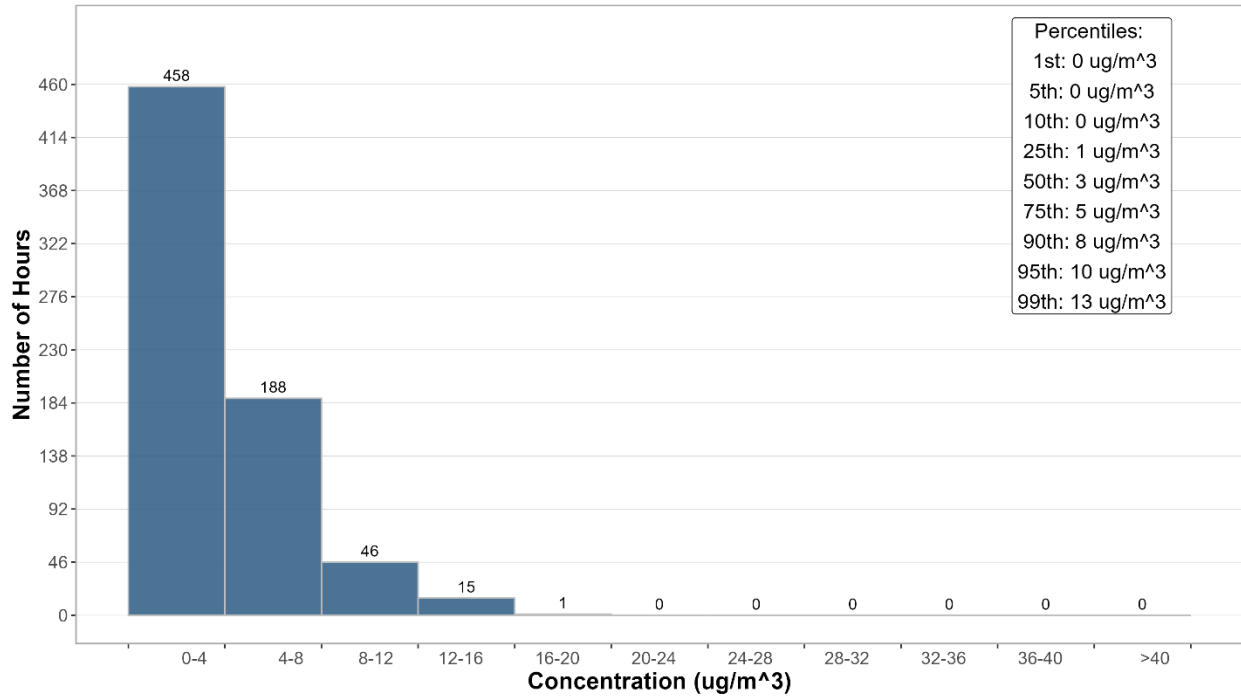


Figure 3-5 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

Histogram of Hourly PM₁₀ Readings

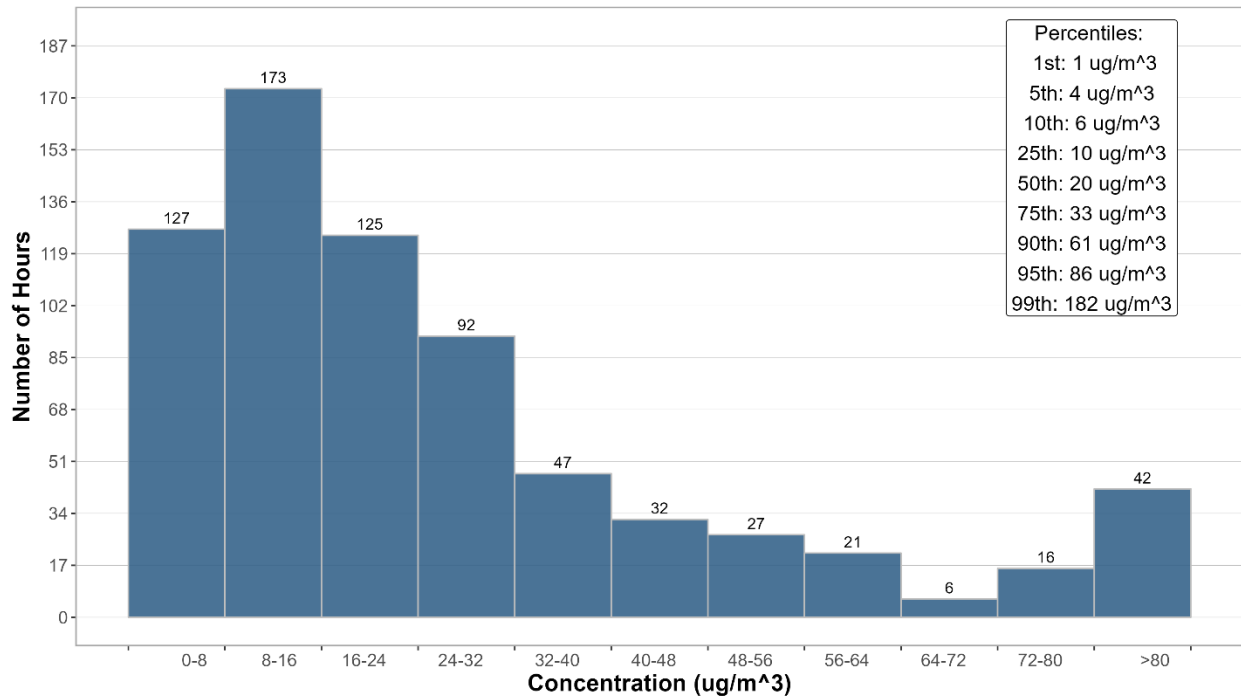


Figure 3-6 Histogram of hourly PM₁₀ concentrations at the Lagoon station

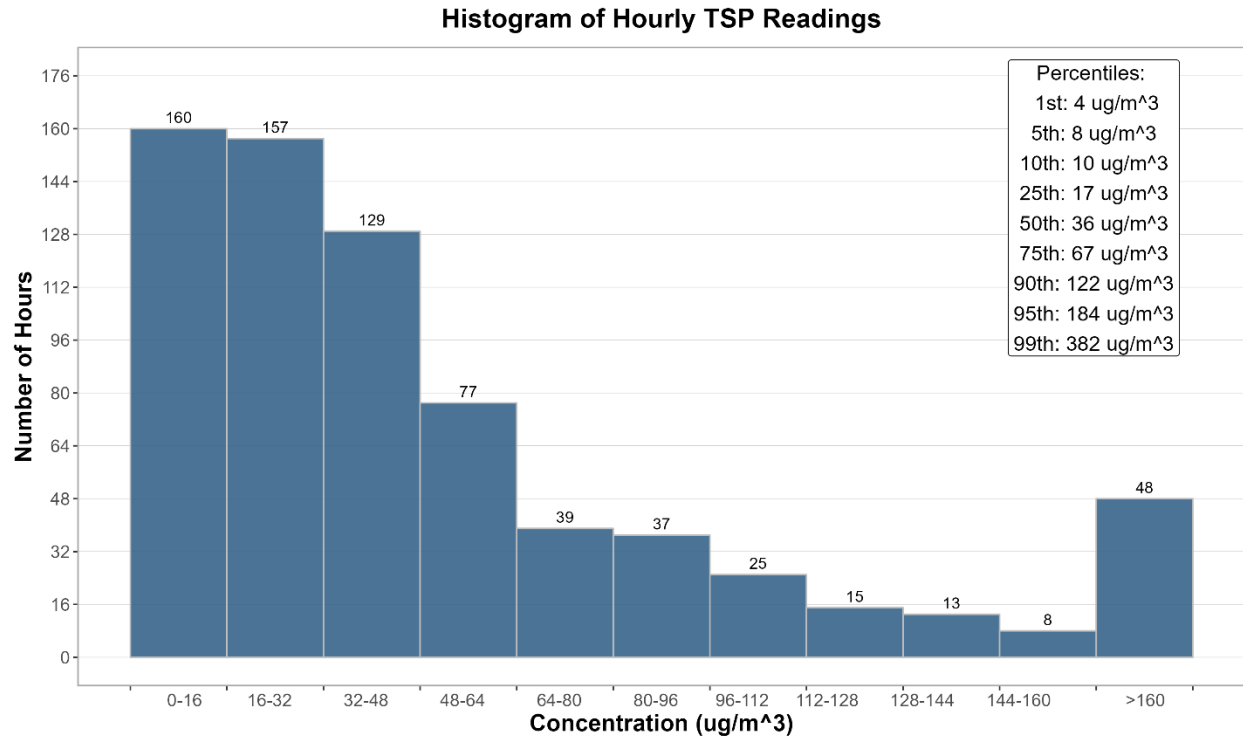


Figure 3-7 Histogram of hourly TSP concentrations at the Lagoon station

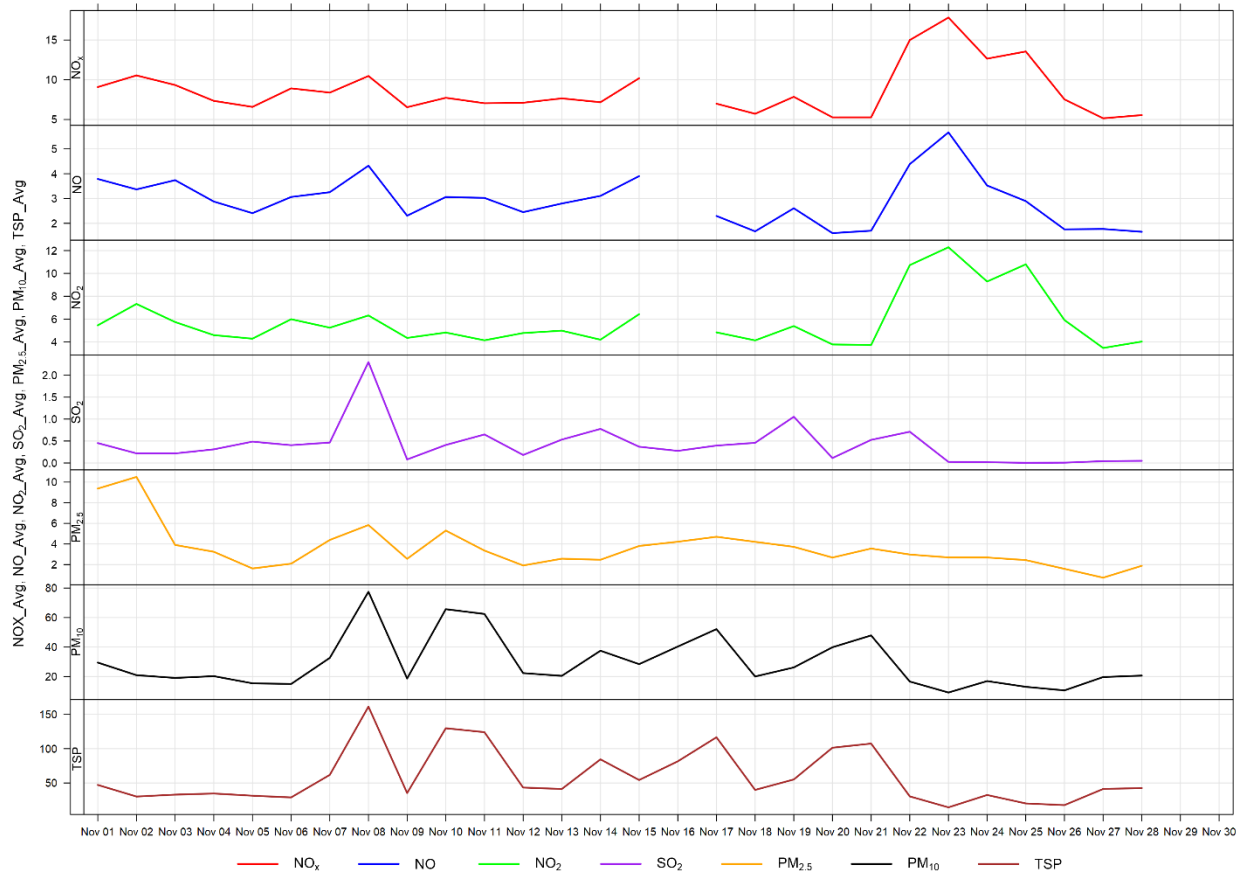


Figure 3-8 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

Figure 3-9 shows the wind rose for the six days of TSP exceedances. The wind rose shows that the winds predominately came from the west-southwest, in high speed (20 km/h), suggesting impacts of windblown dust from the direction of the Lafarge Facility

Figure 3-10 through Figure 3-12 show the variation in concentrations over various time averaging periods for PM, SO₂ and NO_x. The particulate matter plot in Figure 3-10 typically shows that PM₁₀ and TSP concentrations have a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other airshed activities. The diurnal patterns also typically follow the diurnal pattern of higher wind speeds during the daytime hours. This month there were elevated levels of PM in the morning coinciding with the morning peak of NO_x concentrations which could be indicative of morning traffic and dust from winter road traction materials.

Figure 3-11 shows the variation of SO₂ over various time periods. SO₂ concentrations patterns are dependent on the timing of the highest SO₂ concentrations recorded in the month because in general SO₂ concentrations are very low. Figure 3-12 shows the variation of NO_x, NO and NO₂, with the peak of all three pollutants occurring in the early morning. This may be indicative of a peak in traffic.

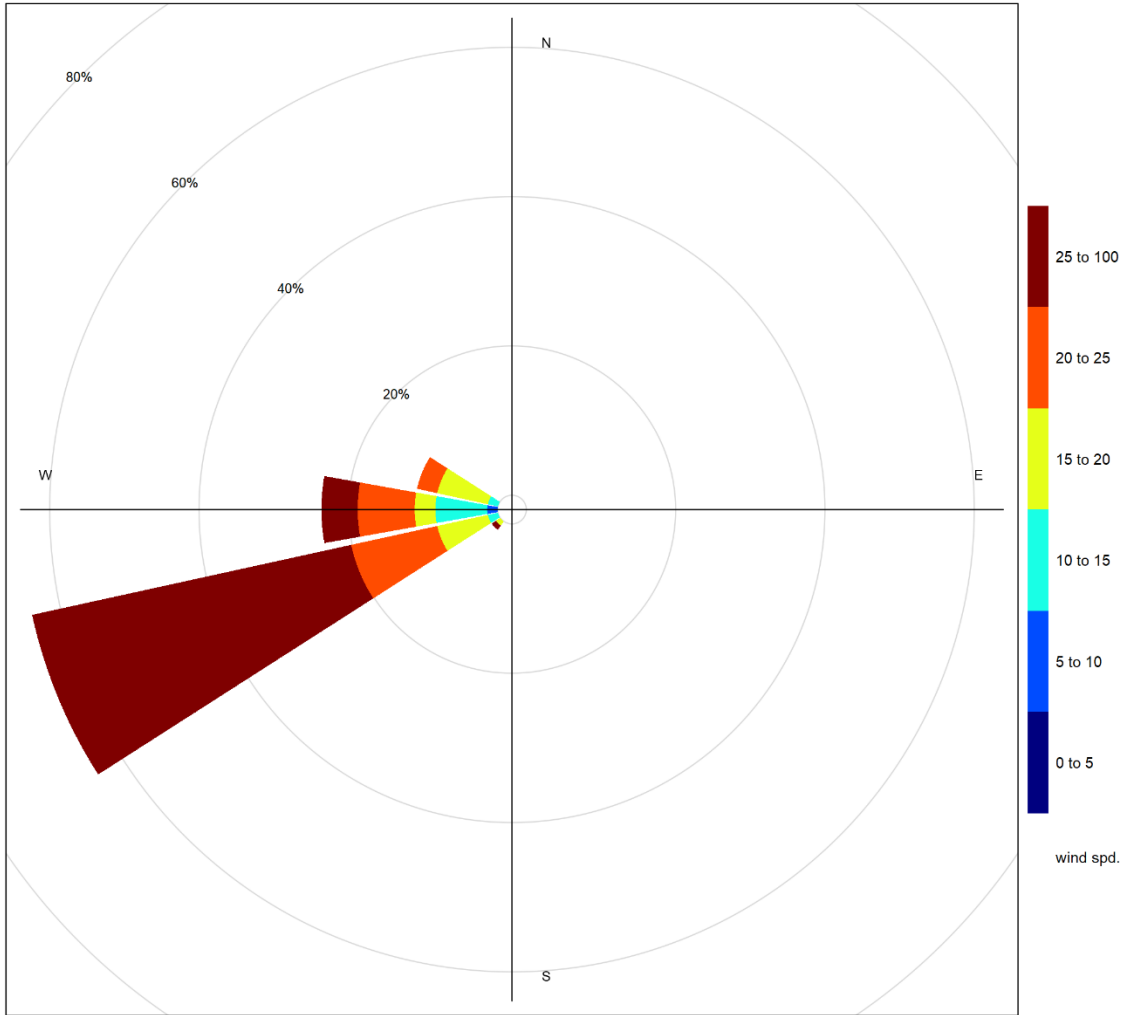


Figure 3-9 Wind rose for TSP exceedance days recorded at the Lagoon Station

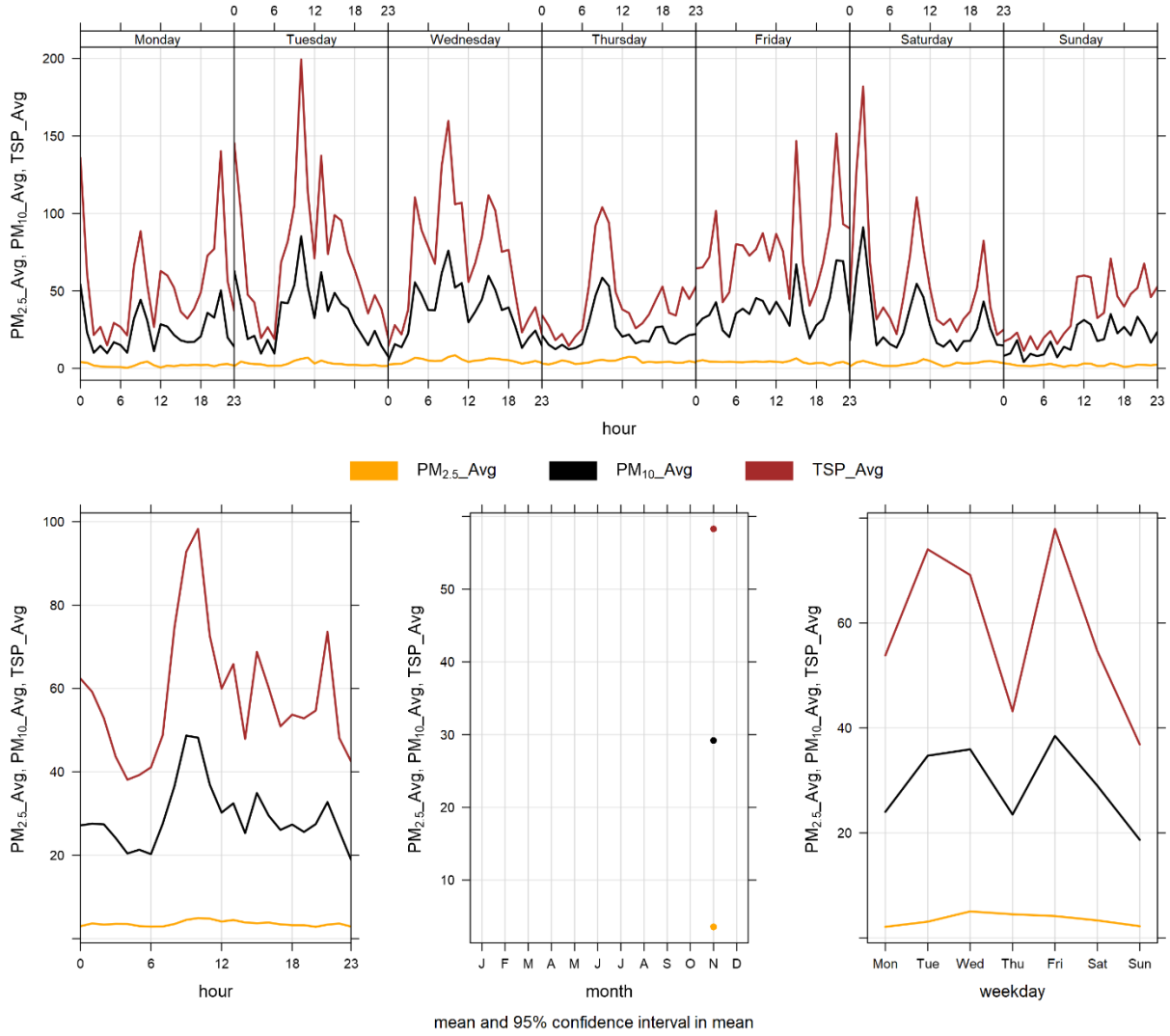


Figure 3-10 Lagoon monitor particulate matter time variation

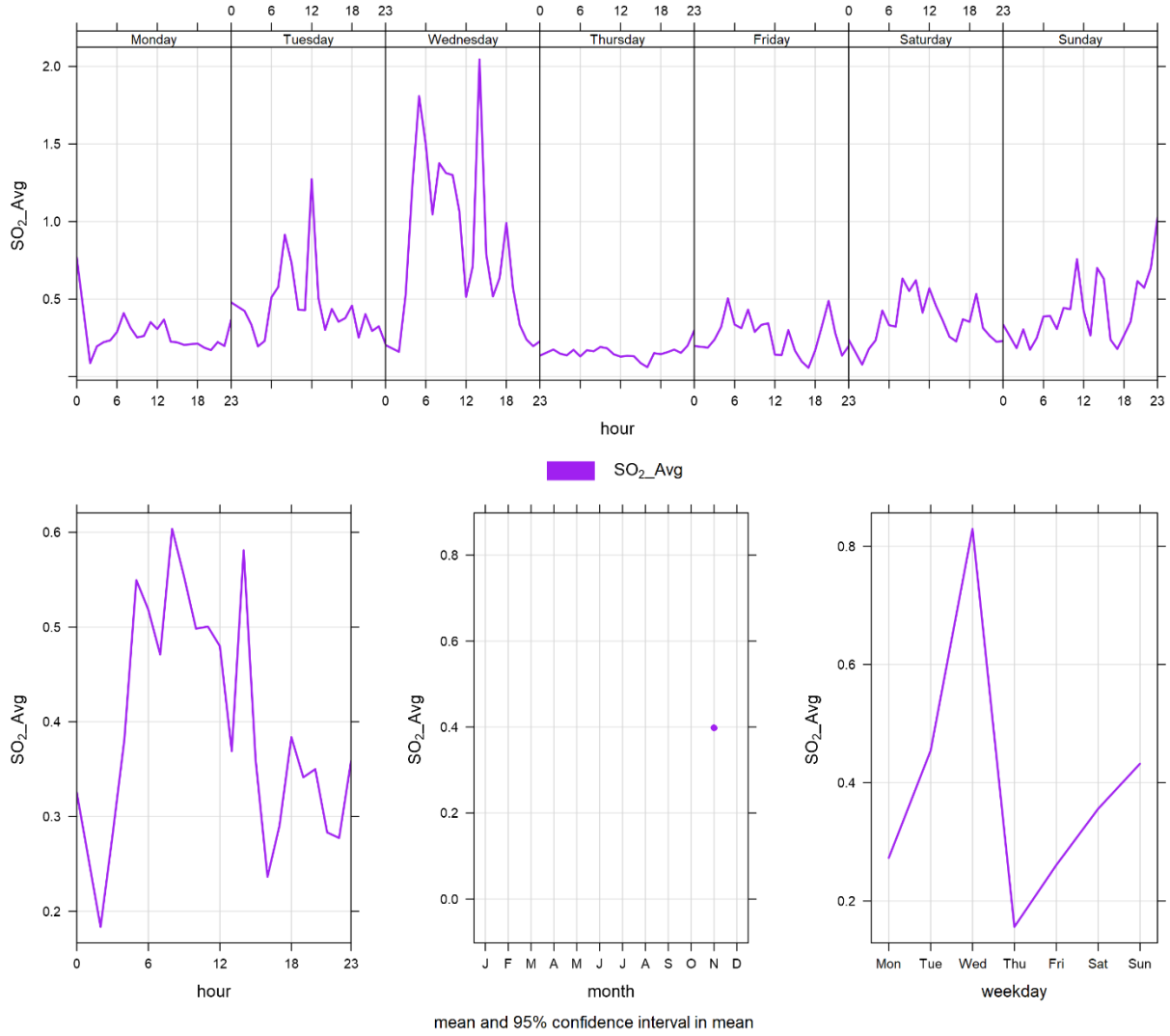


Figure 3-11 Lagoon monitor SO₂ time variation

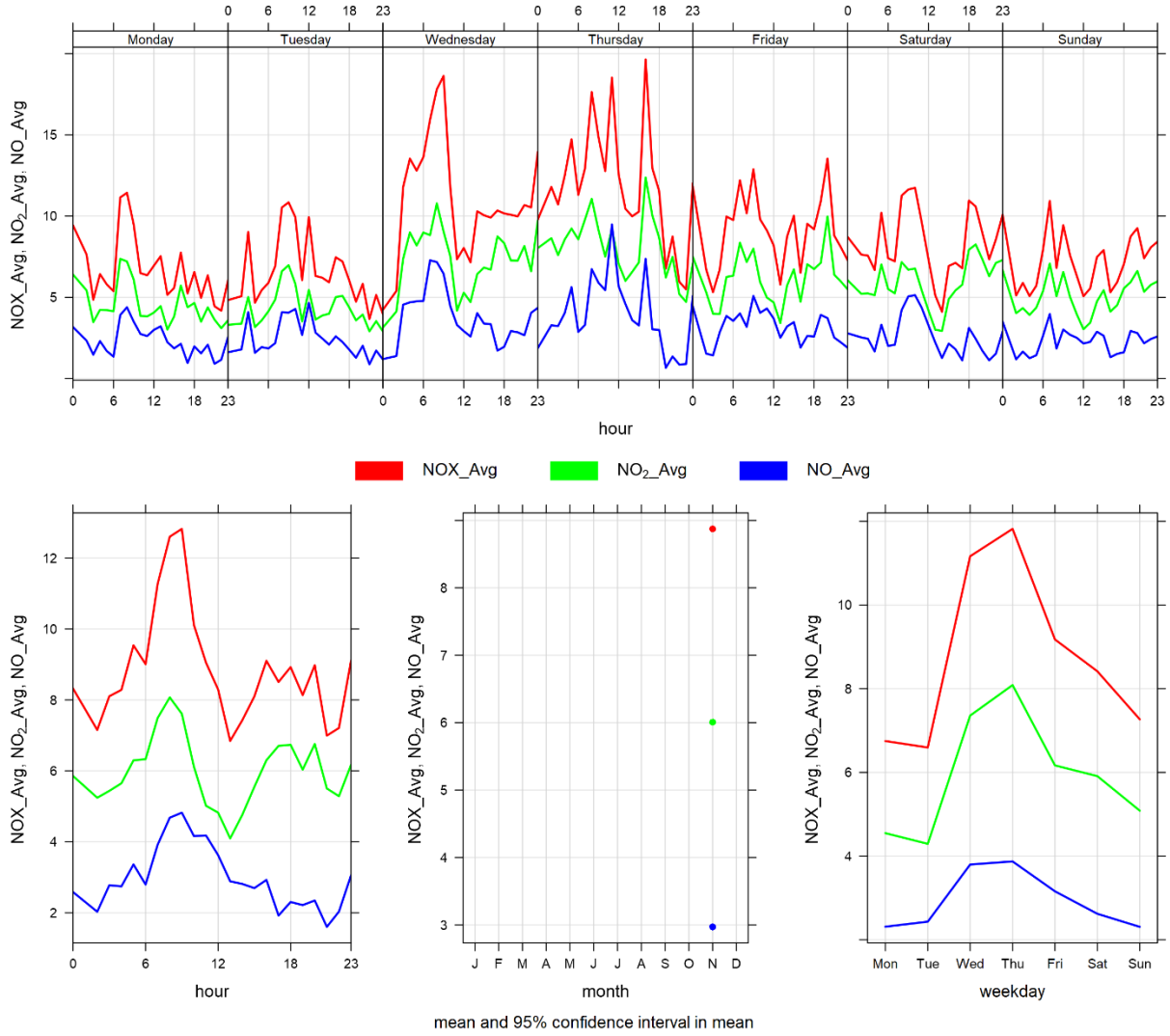


Figure 3-12 Lagoon monitor NO_x time variation

4 WINDRIDGE STATION

The Windridge station contains TSP, PM₁₀, and PM_{2.5} analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), a data summary table (Table 4-2), a table of recorded exceedances (Table 4-3), site visit notes, and graphs illustrating the monitoring results for November 2023.

All of the monitors comply with Alberta Environment and Parks Air Monitoring Directive (2016).

4.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 4-1.

Table 4-1 Instrumentation List at the Windridge monitoring location

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on November 27 th . The monitor recorded 99.4% uptime for the month of November due to 4 hours of equipment malfunction occurring on November 27 th at 20:00 – 22:00 and November 28 th at 1:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM _{2.5} monitor calibrated on November 27 th . The monitor recorded 99.4% uptime for the month of November due to 4 hours of equipment malfunction occurring on November 27 th at 20:00 – 22:00 and November 28 th at 1:00.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on November 27 th . The monitor recorded 99.4% uptime for the month of November due to 4 hours of equipment malfunction occurring on November 27 th at 20:00 – 22:00 and November 28 th at 1:00.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in November 2023, and Table 4-3 summarizes the recorded exceedances. Figure 4-1 illustrates the time series for hourly PM, Figure 4-2 to Figure 4-4 illustrates the histograms for hourly PM, Figure 4-5 illustrates the time series for daily PM, Figure 4-6 displays the wind rose for the 24-hour TSP, and Figure 4-7 illustrates the time series for hourly PM over different time periods.

There were 0 exceedances of the 24-hour PM_{2.5} AAAQO, 0 exceedances of the 1-hour PM_{2.5} AAAQG, and 14 exceedances of the 24-hour TSP AAAQO.

Historically in November, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances are 9 and 0, respectively. The maximum number of 24-hour TSP AAAQO exceedances recorded in November were 15 days in 2021.

Due to flood mitigation construction at Exshaw creek the Windridge monitoring station was taken out of operation and removed from the site on April 8th, 2019. The flood mitigation work was completed in August 2020. The Windridge station was reinstalled for September 1st, 2020. As per the photo presented in section 1.1 the flood mitigation work has left an exposed creek bed area immediately west of the Windridge monitor that may contribute to an increase in TSP levels. Further, the strong wind gusting that occurred in November would have contributed to increased particulate levels that may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, dry sections of the Bow River, and open areas.

Table 4-2 Summary of November 2023 data at the Windridge Station

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour				Maximum 24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration		Day
PM_{2.5} (µg/m ³)	80	29	Windridge	0	0	0.0	3.4	35.0	11	2	54.6	241.5	13.4	21	99.4
PM₁₀ (µg/m ³)	-	-	Windridge	-	-	0.0	75.7	485.0	10	23	43.1	240.8	233.6	21	99.4
TSP (µg/m ³)	-	100	Windridge	-	14	0.0	115.2	985.0	10	23	43.1	240.8	355.6	21	99.4

Table 4-3 Days exceeding the TSP AAAQO or PM_{2.5} AAAQO at the Windridge Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Windridge						
2023-11-07	131.8	-	254.9	19.2	50.6	
2023-11-08	272.3	-	252.2	24.8	34.1	High wind event
2023-11-09	129.3	-	250.4	18.9	47.8	
2023-11-10	346.4	-	250.5	23.9	41.5	High wind event
2023-11-11	249.3	-	249.6	27.5	51.8	High wind event
2023-11-12	113.1	-	251.5	17.1	50.1	
2023-11-14	187.8	-	243.5	30.8	31.9	High wind event
2023-11-15	129.0	-	238.3	17.2	53.0	
2023-11-16	227.4	-	244.4	30.2	53.3	High wind event
2023-11-17	184.9	-	270.1	23.5	52.8	High wind event
2023-11-19	115.5	-	257.8	22.0	48.5	High wind event
2023-11-20	211.4	-	243.0	27.5	29.7	High wind event
2023-11-21	355.6	-	249.1	29.3	30.6	High wind event
2023-11-30	103.2	-	263.2	13.1	71.0	
Total # of Exceedances	14	0				

Maximum # of Exceedances (November)	15 (2021)	0 (2017, 2018, 2020, 2021, 2022)				
Average # of Exceedances (November)	9	0				
Minimum # of Exceedances (November)	3 (2022)	0 (2017, 2018, 2020, 2021, 2022)				

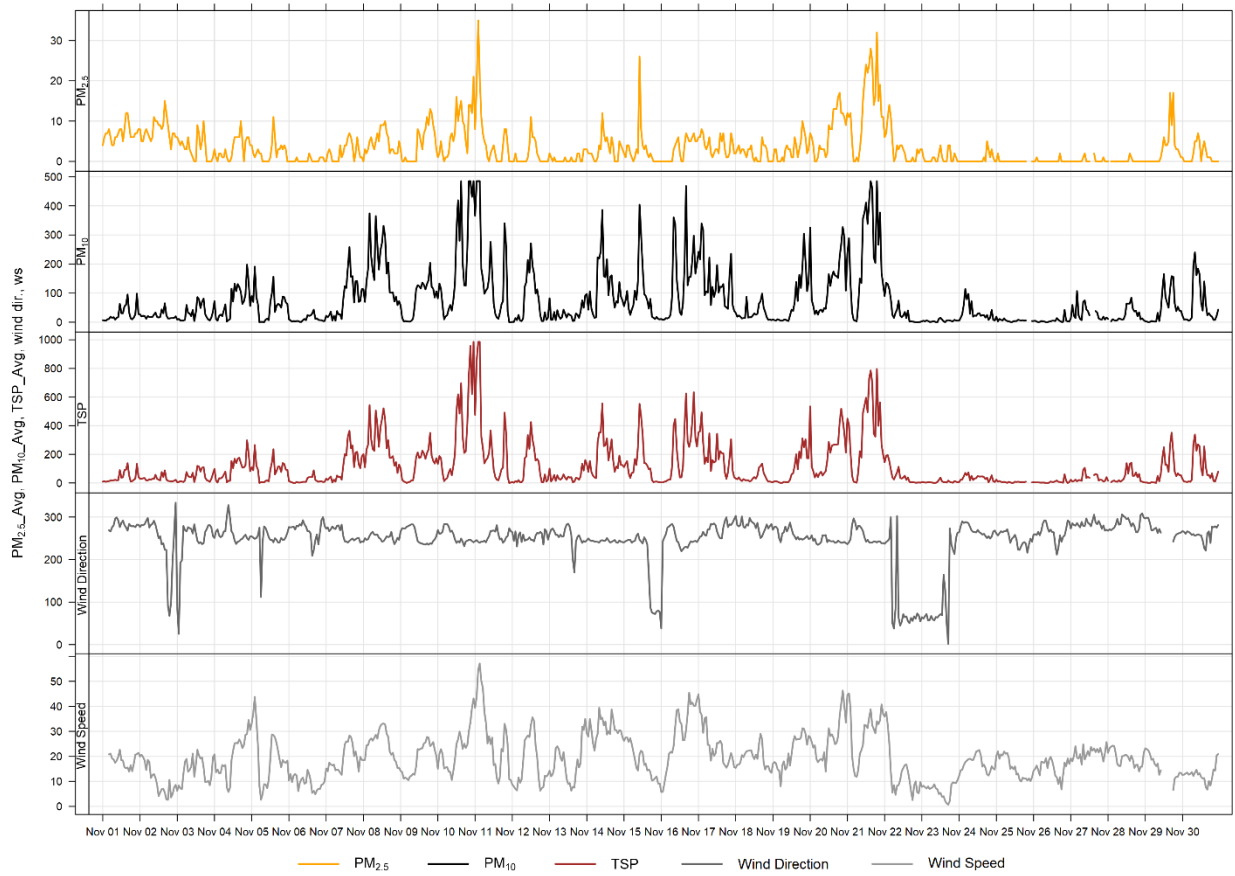


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

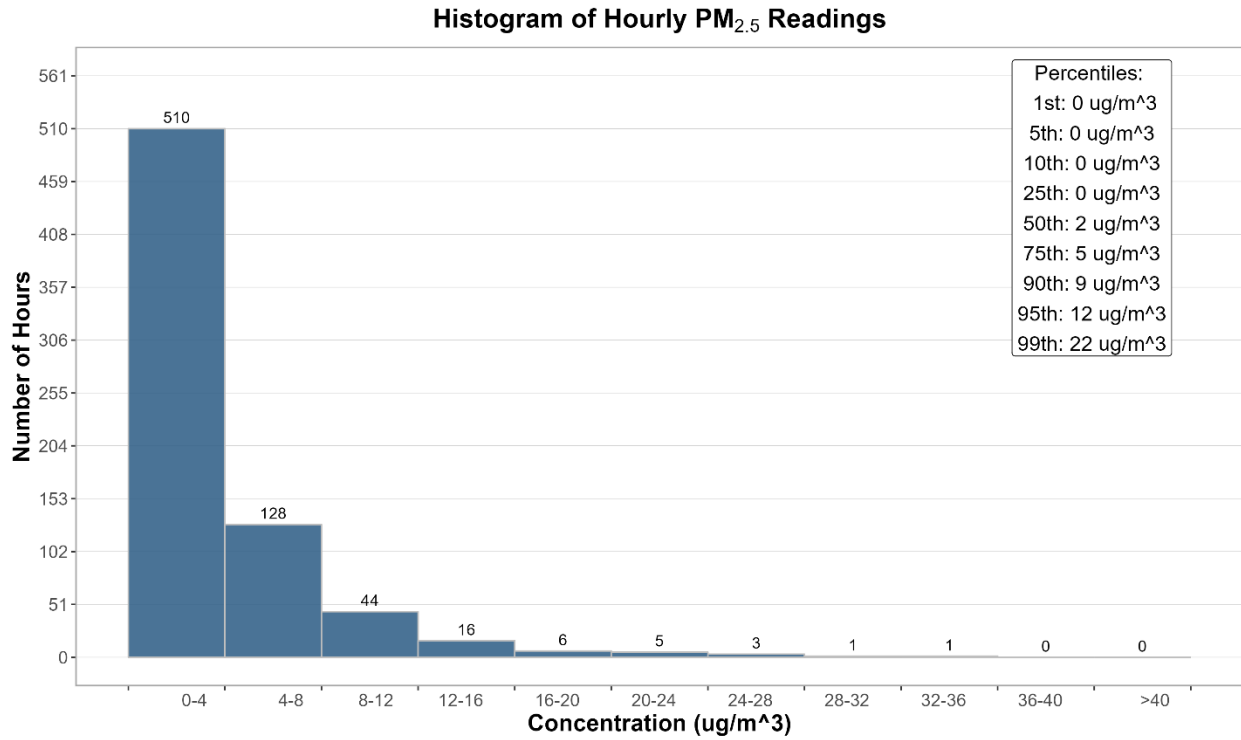


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

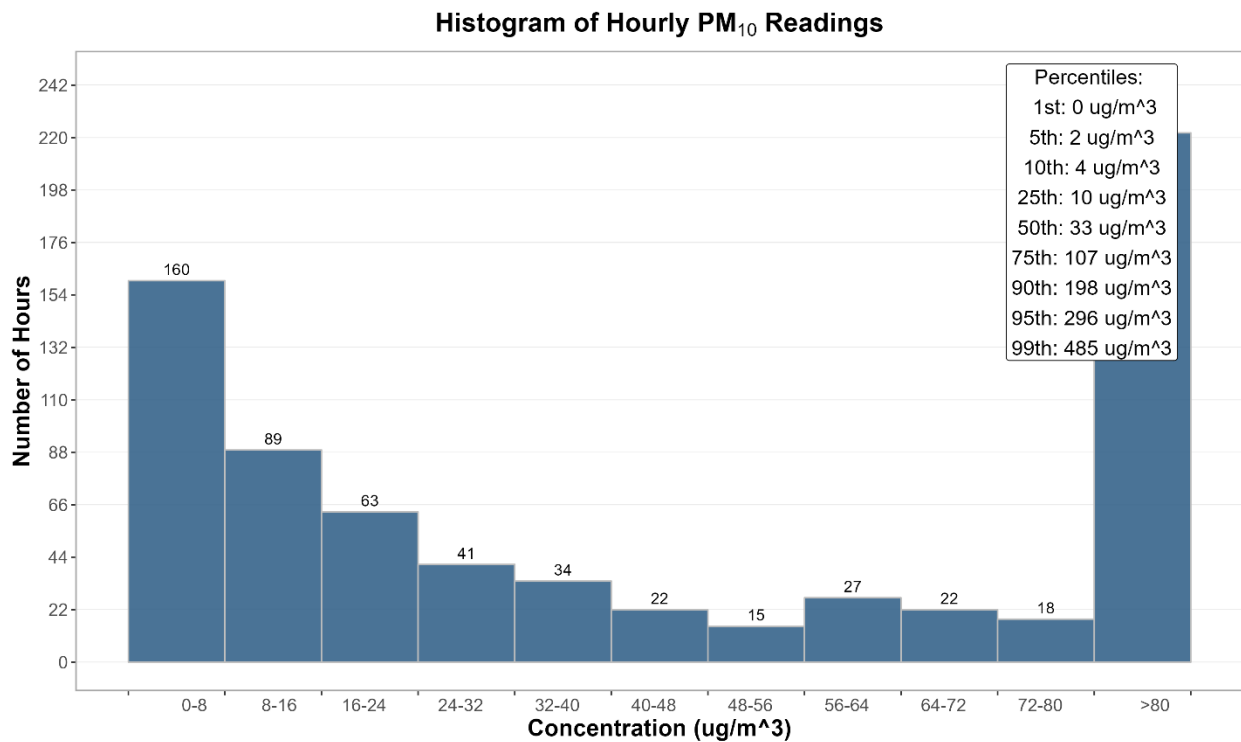


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

Histogram of Hourly TSP Readings

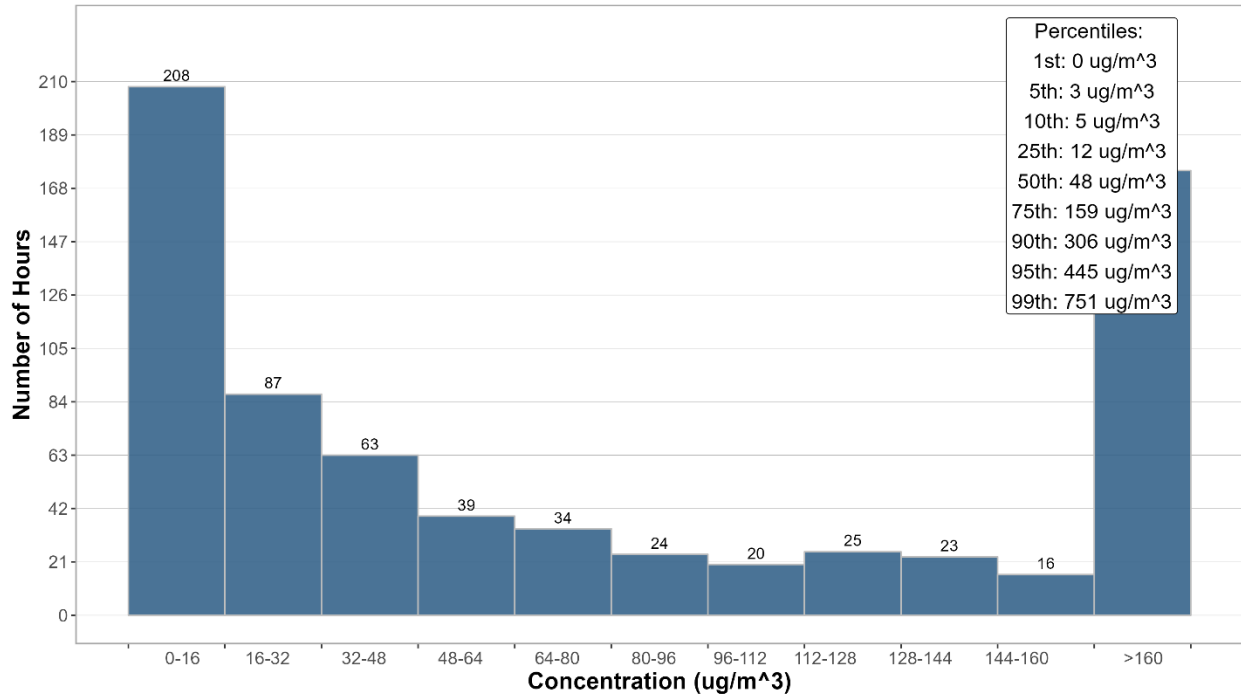


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

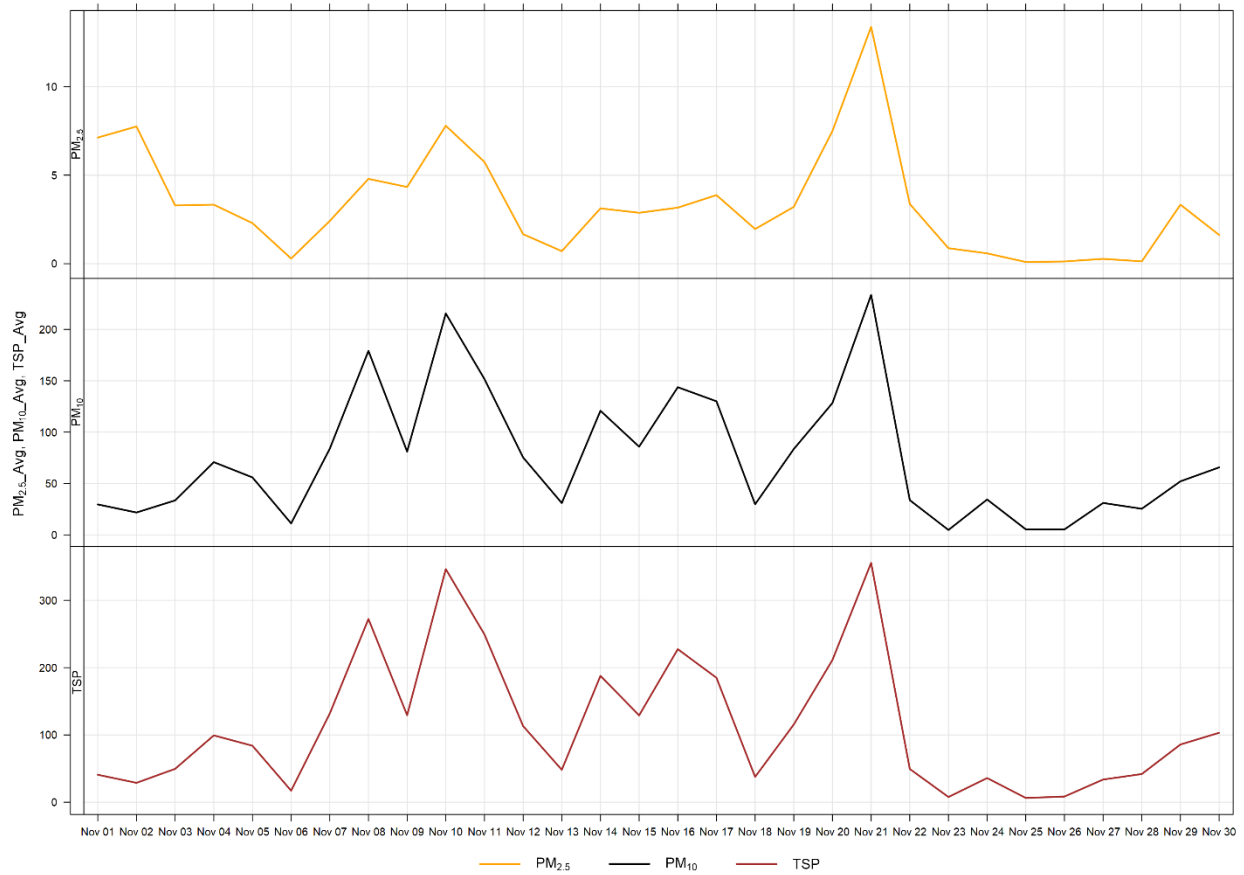


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 14 days of TSP exceedance in November. The wind rose shows that the winds predominately came from the west-southwest, in high speed (20 km/h), suggesting the impact of windblown dust from the direction of the Lafarge Facility.

Figure 4-7 illustrates the hourly PM concentrations recorded at the Windridge monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-7 is based on data collected during November 2023. The data shows a diurnal pattern potentially associated with Lafarge daytime operations, daytime emissions from traffic and other airshed activities. There is also a late evening increase to PM concentrations. The diurnal patterns also follow the diurnal pattern of higher wind speeds during the daytime hours.

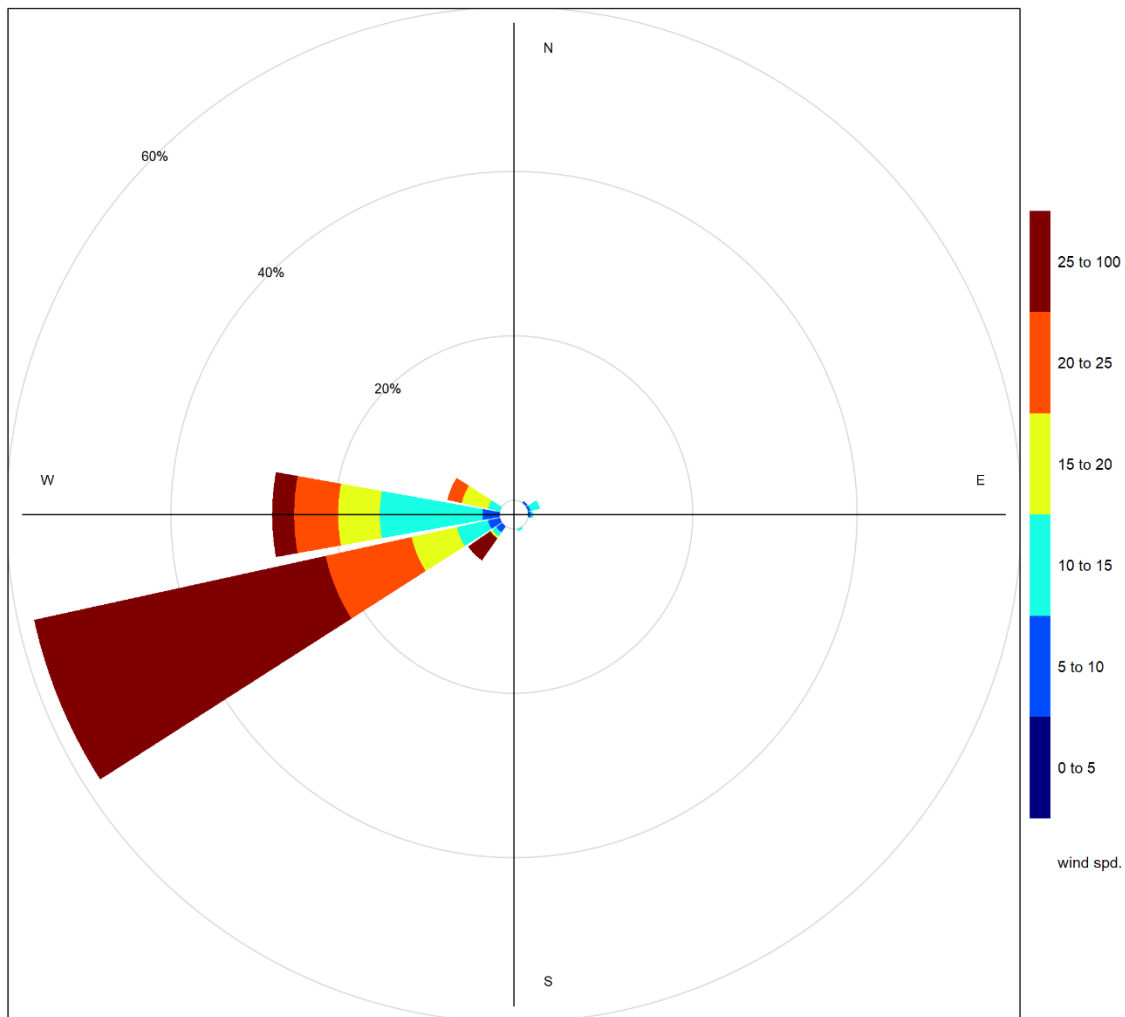


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

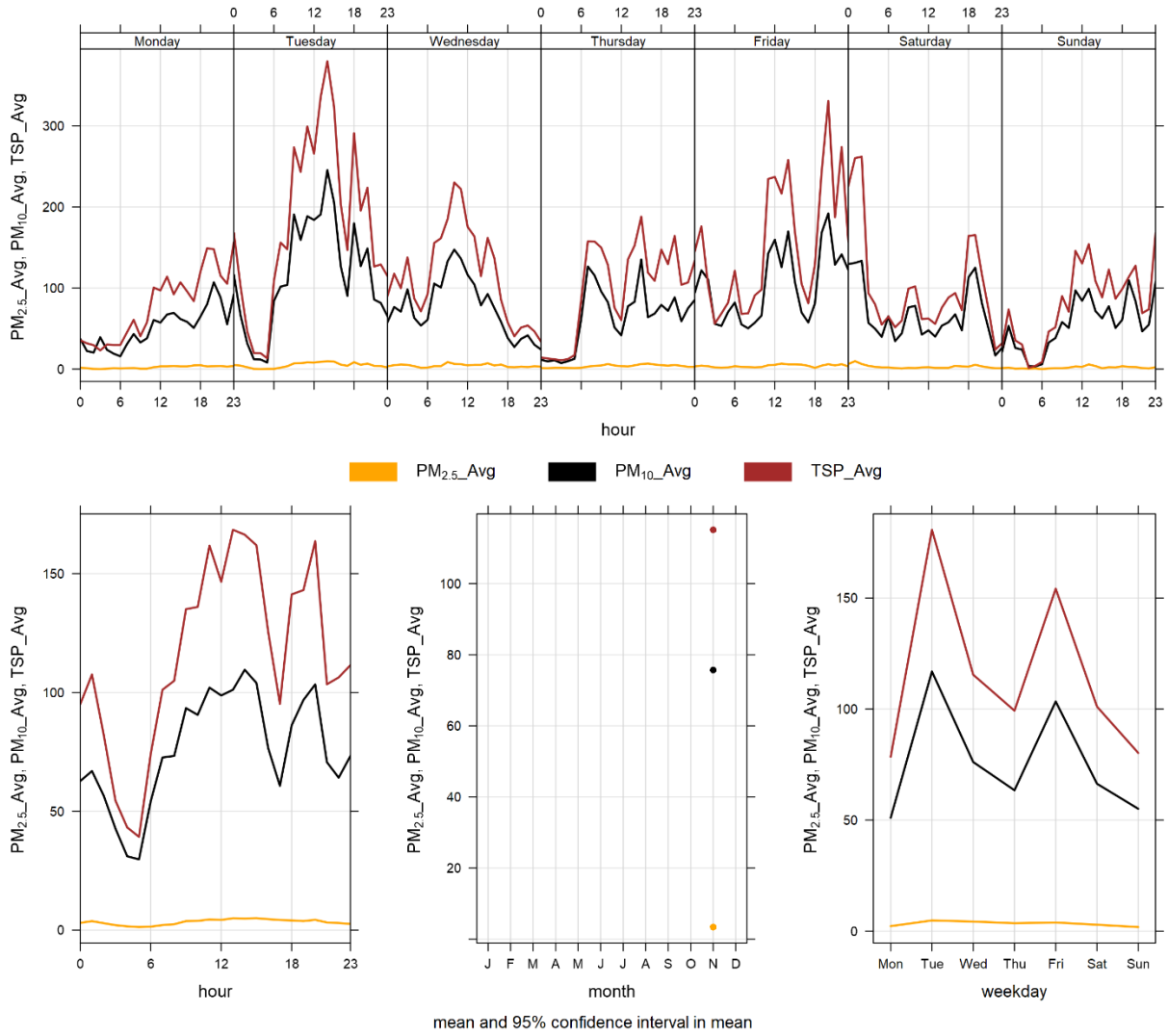


Figure 4-7 Windridge particulate matter time variation

5 WEST INDUSTRIAL GRIMM

5.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 5-1.

Table 5-1 Instrumentation List at the West monitoring location

Parameter Measured	Equipment Description	Notes
PM _{2.5} , PM ₁₀ , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 99.4% uptime during the month of November due to 4 hours of equipment malfunction occurring from November 7 th at 23:00 to November 8 th at 2:00.

5.2 MONITORING RESULTS AND TRENDS

The West GRIMM was moved to its current location in order to monitor “background” PM concentrations since the predominant wind pattern is from west to east in the valley. Table 5-2 summarizes the maximum 1-hour and 24-hour concentrations recorded over the course of the month. This is an industrial monitor that is not Alberta Air Monitoring Directive (AMD) compliant and is not required to show compliance with the AAAQO.

Figure 5-1 and Figure 5-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month.

There were 0 exceedance of the 24-hour TSP Guideline (100 µg/m³) and 0 exceedances of the 24-hour PM_{2.5} (29µg/m³) Guideline. Further, there were 0 hours exceeding the 1-hour PM_{2.5} Guideline.

Historically during the month of November, the West monitor records an average of 1 exceedance of the 24-hour TSP guidelines and no exceedances of the PM_{2.5} guidelines. The maximum number of 24-hour TSP and PM_{2.5} AAAQO exceedances recorded in November were 5 and 1 day in 2012 respectively.

Table 5-2 Summary of November 2023 data at the West GRIMM

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour				Maximum 24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration		Day
PM_{2.5} ($\mu\text{g}/\text{m}^3$)	80	29	West	0	0	0.2	3.1	14.8	22	15	14.0	55.1	11.9	2	99.4
PM₁₀ ($\mu\text{g}/\text{m}^3$)	-	-	West	-	-	0.3	3.7	21.7	22	15	14.0	55.1	12.5	2	99.4
TSP ($\mu\text{g}/\text{m}^3$)	-	100	West	-	0	0.3	4.7	38.5	22	15	14.0	55.1	13.1	2	99.4



Figure 5-1 1-hour particulate matter concentrations at the West monitor

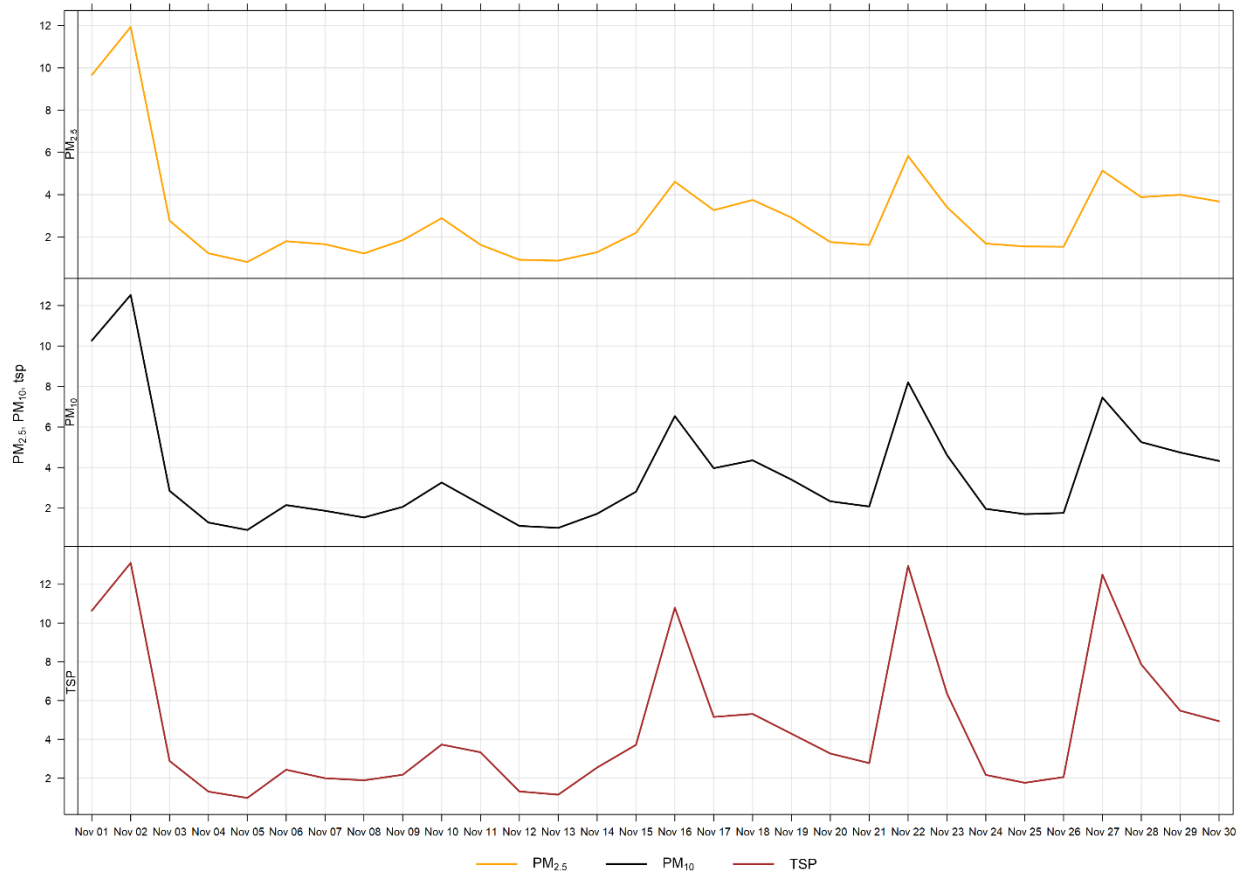


Figure 5-2 24-hour particulate matter concentrations at the West monitor

Figure 5-3 illustrates the hourly PM concentrations recorded at the West monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 5-3 is based on data collected during November 2023. Historically this monitor saw daily variations in PM that were more likely a result of higher traffic volume during daylight hours than specific Lafarge operations. The West monitor was moved to its current location (Figure 1-1) on December 1st, 2021, and will continue to be evaluated to better understand influences from background sources, Lafarge Exshaw, as well as highway and rail sources.

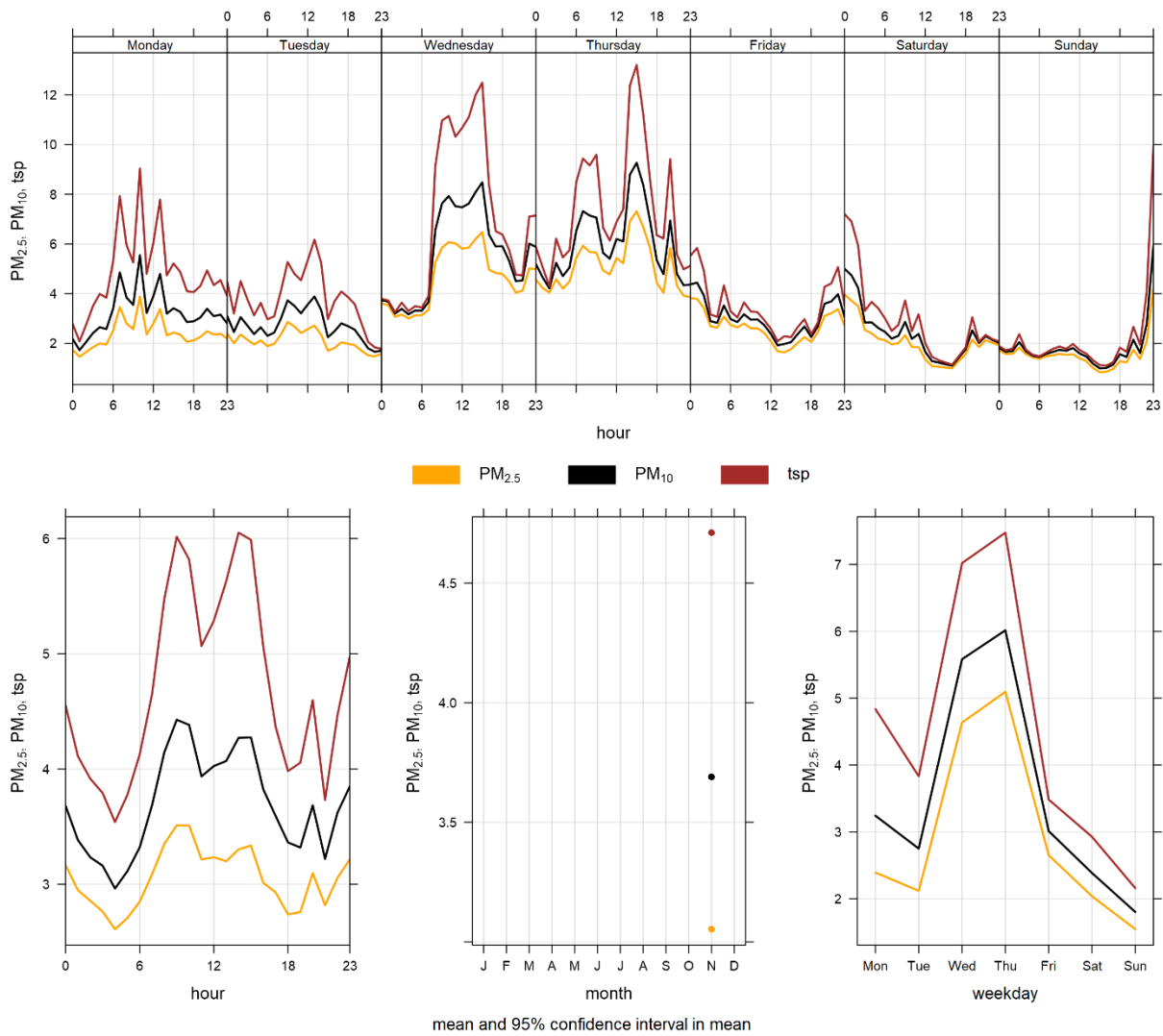


Figure 5-3 West monitor particulate matter time variation

6 BERM INDUSTRIAL GRIMM

6.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 6-1.

Table 6-1 Instrumentation List at the Berm monitoring location

Parameter Measured	Equipment Description	Notes
PM _{2.5} , PM ₁₀ , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 99.4% uptime during the month of November due to 4 hours of equipment malfunction occurring from November 7 th at 23:00 to November 8 th at 2:00, and November 8 th at 9:00.

6.2 MONITORING RESULTS AND TRENDS

The Berm monitor was placed at its current location as a result of the dispersion modelling conducted for the facility. Figure 6-1 and Figure 6-2 show the hourly and daily PM_{2.5}, PM₁₀, and TSP concentrations recorded over the month. Table 6-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month, and Table 6-3 summarizes the recorded exceedances. This is an industrial monitor that is not Alberta Air Monitoring Directive (AMD) compliant and is not required to show compliance with the AAAQO.

There were 14 and 2 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (29 µg/m³) Guidelines, respectively. There were 10 hours exceeding the 1-hour PM_{2.5} Guideline.

Historically during the month of November, the Berm monitor records an average of 16 and 1 exceedances of the 24-hour TSP and PM_{2.5} guidelines, respectively. The maximum number of TSP exceedances recorded during November occurred in 2011 and 2020 where there were 23 days that exceeded the guideline. On the other hand, the maximum number of PM_{2.5} exceedances in November was 4 days in 2020.

It should also be noted that the GRIMM monitors become more conservative in the reported PM concentrations as the size fraction increases. The PM_{2.5} size fraction has been shown to match other regulatory approved PM_{2.5} monitors, but the TSP concentrations recorded by the GRIMM tend to be higher than regulatory approved monitors (Levelton, 2015).

The Berm monitor is located along a ridge at the edge of the Lafarge property and is in an area where on-site trucks drive through site, which can create fugitive dust. Quarry blasting also has the potential to impact short term PM immediately following a blast. The strong wind gusting that occurred in November would have also contributed to increased particulate levels that may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, dry sections of the Bow River, and open areas.

Table 6-2 Summary of November 2023 data at the Berm GRIMM

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM_{2.5} (µg/m ³)	80	29	Berm	10	2	0.3	11.4	112.6	11	2	54.6	241.5	42.2	21	99.4
PM₁₀ (µg/m ³)	-	-	Berm	-	-	0.3	81.6	1119.6	11	2	54.6	241.5	321.3	21	99.4
TSP (µg/m ³)	-	100	Berm	-	14	0.3	249.8	3048.8	11	3	57.1	239.7	974.5	16	99.4

Table 6-3 Days exceeding the Guideline for TSP or PM_{2.5} at the Berm Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Berm						
2023-11-07	304.1	-	254.9	19.2	50.6	
2023-11-08	751.5	-	252.2	24.8	34.1	High wind event
2023-11-09	229.5	-	250.4	18.9	47.8	
2023-11-10	854.5	37.8	250.5	23.9	41.5	High wind event
2023-11-11	637.7	-	249.6	27.5	51.8	High wind event
2023-11-12	224.6	-	251.5	17.1	50.1	
2023-11-14	505.2	-	243.5	30.8	31.9	High wind event
2023-11-15	242.1	-	238.3	17.2	53.0	
2023-11-16	974.5	-	244.4	30.2	53.3	High wind event
2023-11-17	457.4	-	270.1	23.5	52.8	High wind event
2023-11-19	205.7	-	257.8	22.0	48.5	High wind event
2023-11-20	305.1	-	243.0	27.5	29.7	High wind event
2023-11-21	888.2	42.2	249.1	29.3	30.6	High wind event
2023-11-29	111.3	-	271.9	14.8	69.2	
Total # of Exceedances	14	2				

Date	TSP (ug/m³)	PM_{2.5} (ug/m³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Berm						
Maximum # of Exceedances (November)	23 (2011, 2020)	4 (2020)				
Average # of Exceedances (November)	16	1				
Minimum # of Exceedances (November)	8 (2021)	0 (2010, 2013, 2016, 2019)				

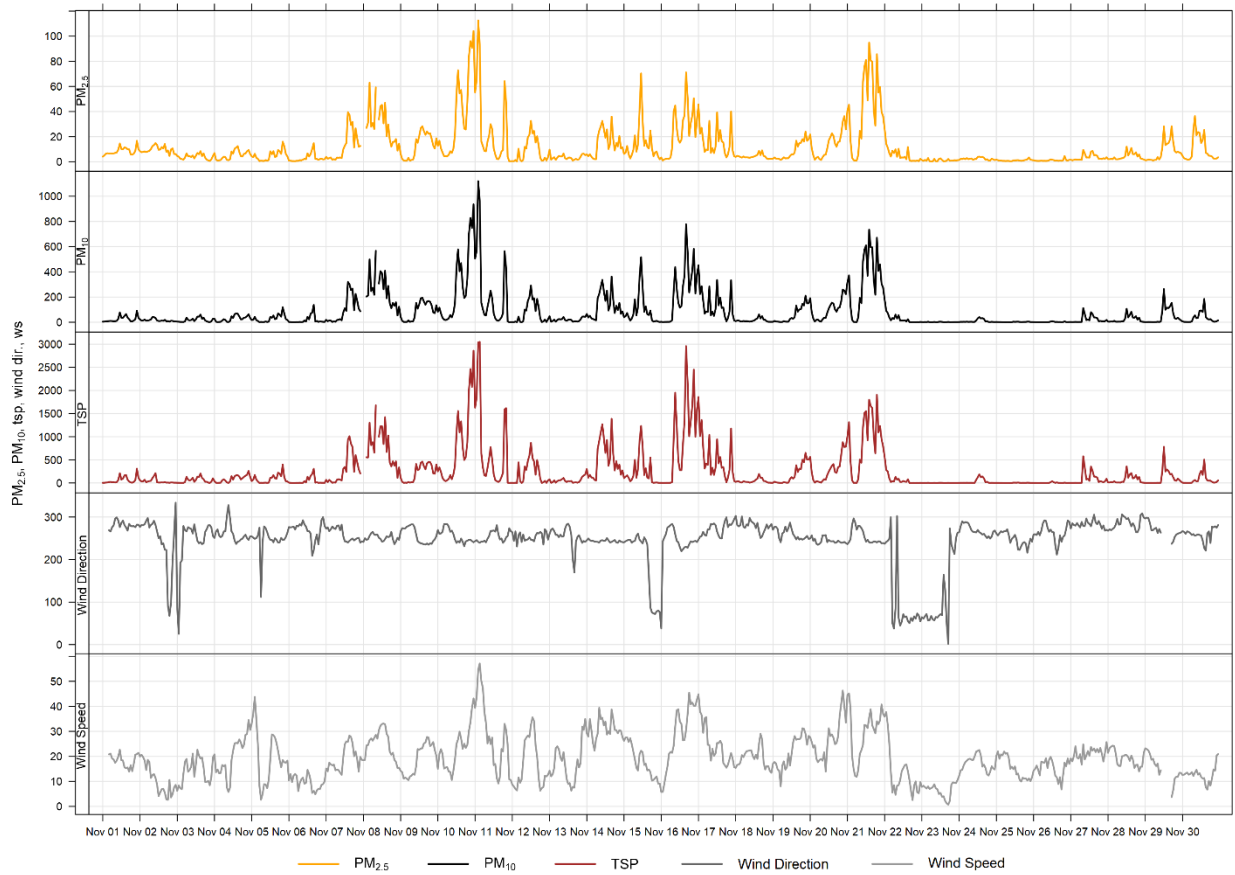


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

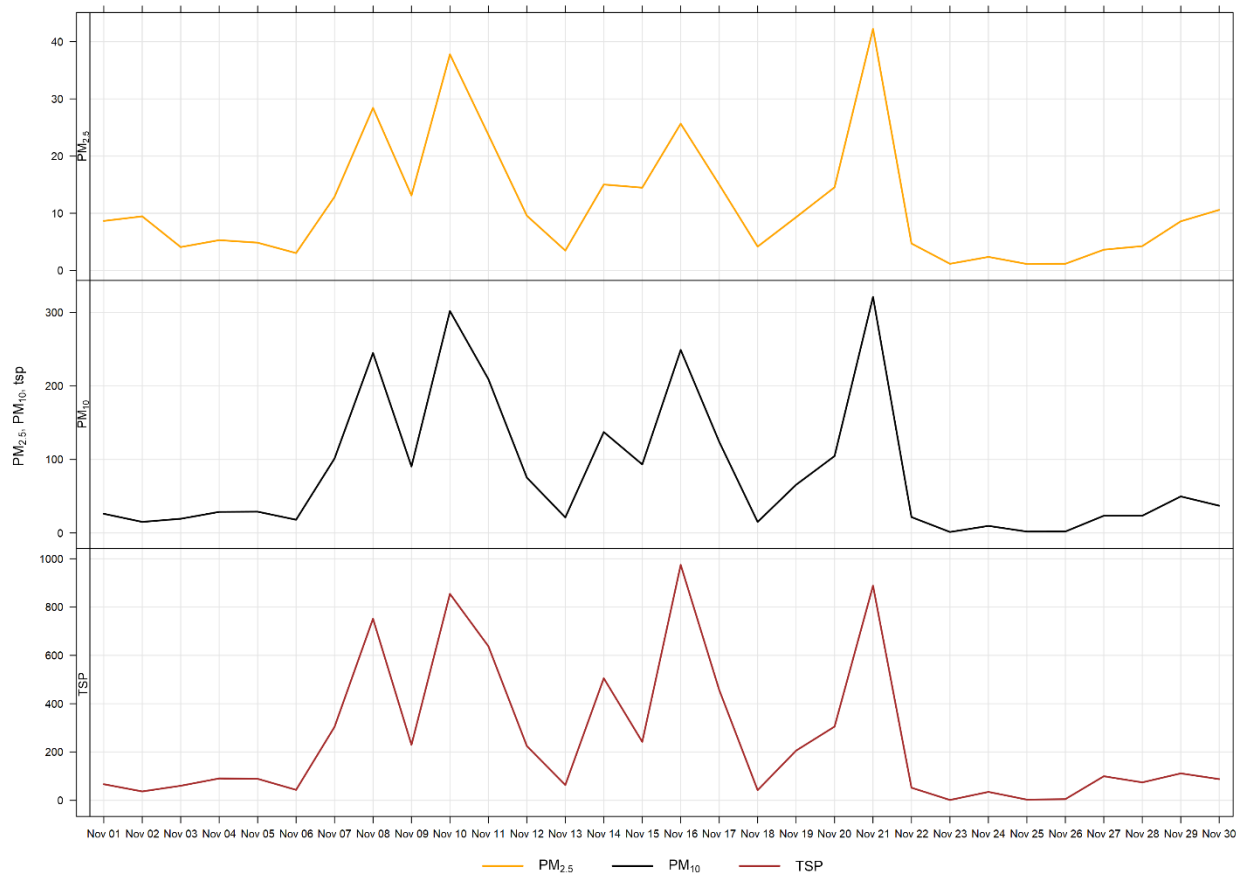


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 14 days of TSP exceedances. Figure 6-4 shows the wind rose for the 2 days of PM_{2.5} exceedances. Both wind roses show that the winds predominately came from the west-southwest, in high speed (20 km/h), suggesting the impact of windblown dust from the direction of the Lafarge Facility.

Figure 6-5 shows the variation of PM recorded at the Berm monitor over various time averaging periods. The Berm monitor diurnal pattern, similar to the Windridge station, and is associated with Lafarge operations, but also daytime emissions from other activities and sources in Exshaw.

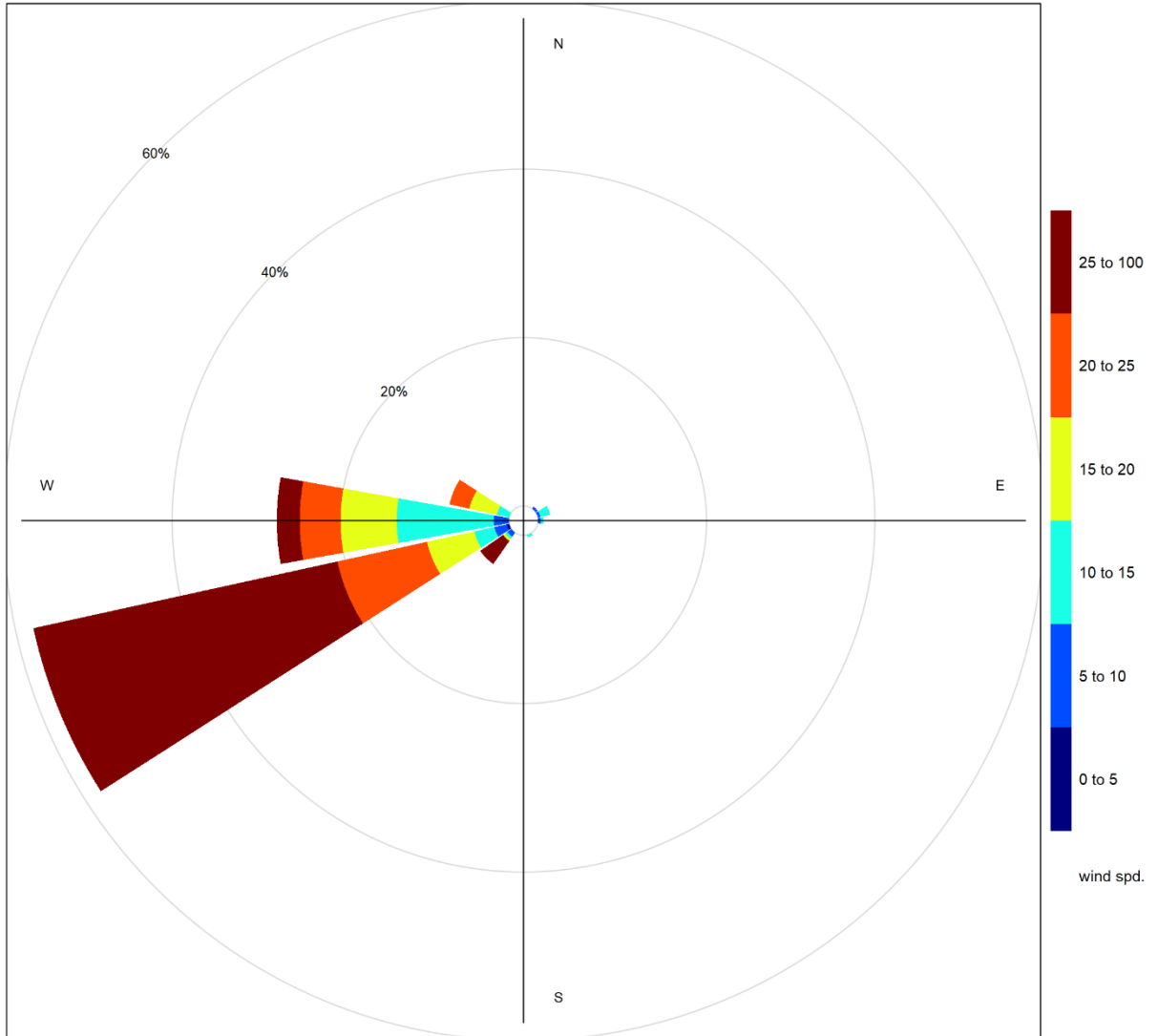


Figure 6-3 Windrose for TSP exceedance days recorded at the Berm GRIMM

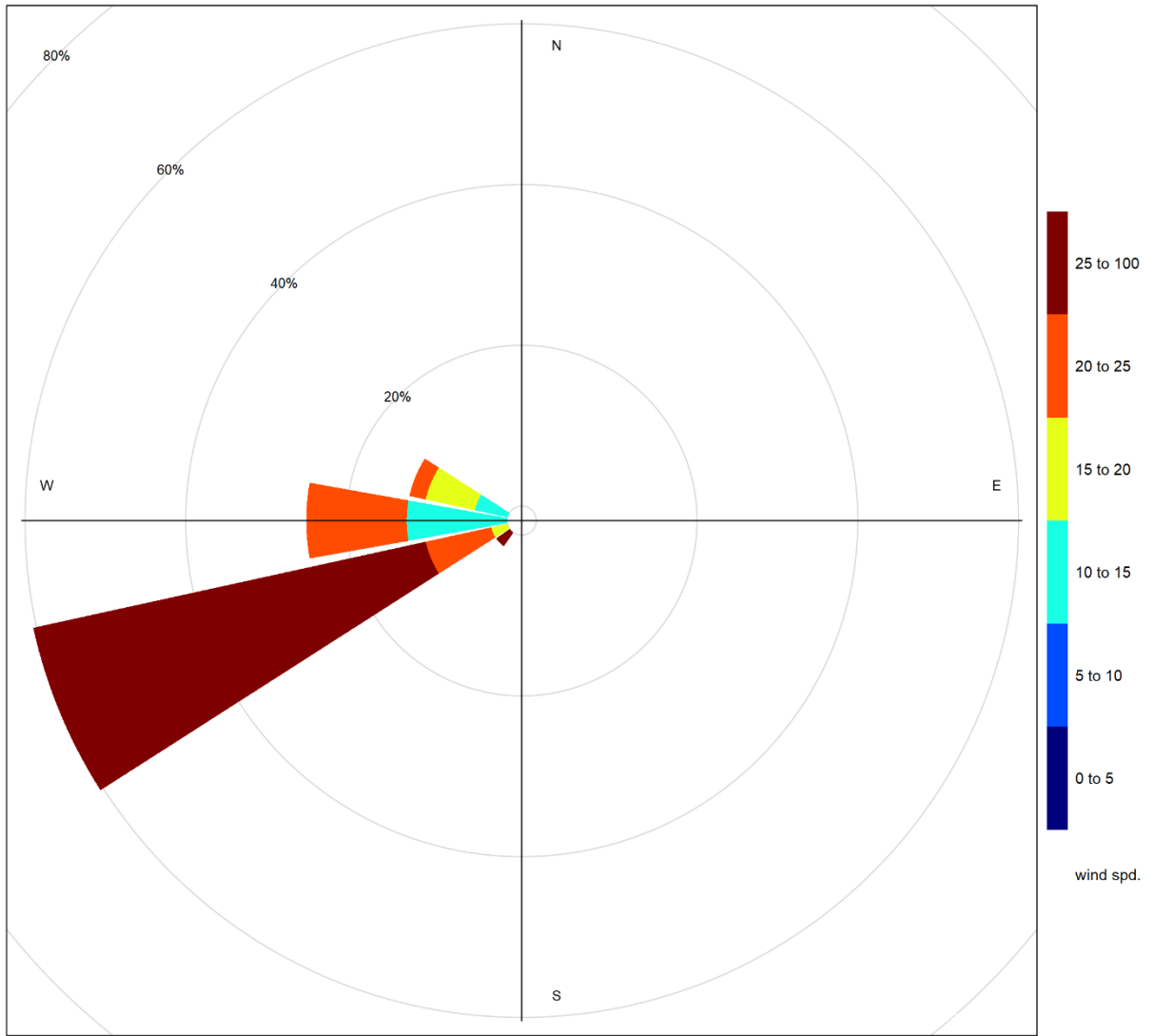


Figure 6-4 Windrose for PM_{2.5} exceedance days recorded at the Berm GRIMM

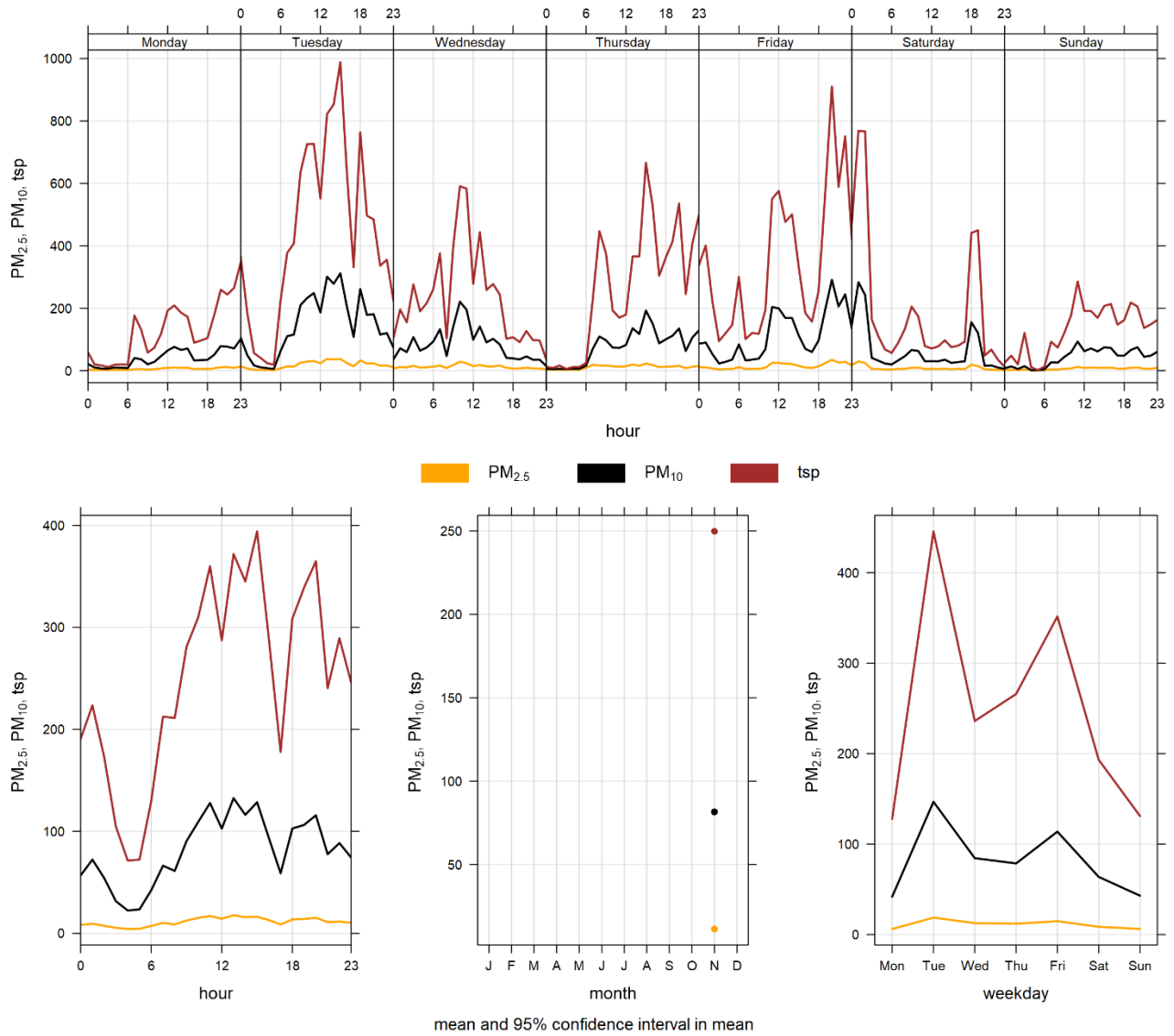


Figure 6-5 Berm particulate matter time variation

BIBLIOGRAPHY

- Alberta Environment and Parks. (2016, June). Alberta Ambient Air Quality Objectives and Guidelines Summary. Alberta, Canada.
- Alberta Environment and Parks. (2016, April). Air Monitoring Directive. Alberta, Canada.
- Carslaw, D.C. and K. Ropkins, (2012). Openair — an R package for air quality data analysis. Environmental Modelling & Software. Volume 27–28, 52–61.
- Levelton Consultants Ltd. (2015, June 15). Comparison of GRIMM and E-BAM Data. Alberta, Can

APPENDIX

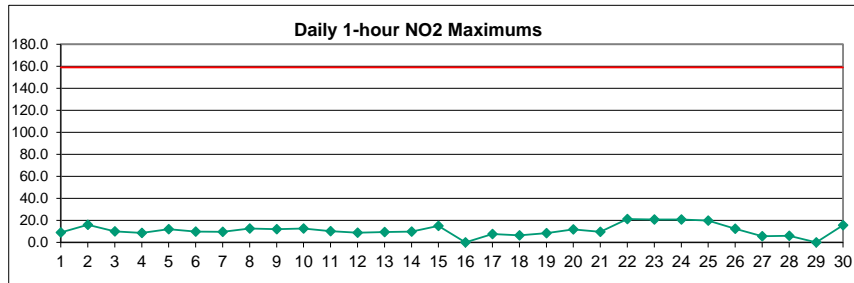
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – November 2023

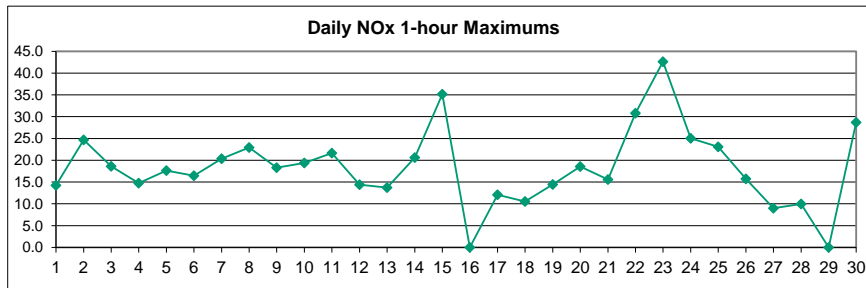
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	4.2	S	4.5	4.6	5.1	7.1	6.9	6.3	6.1	6.0	4.3	3.7	2.8	4.2	5.2	9.0	8.1	4.1	4.1	7.0	7.0	5.8	5.4	3.7	5.4	9.0
2	2.2	S	4.9	3.3	3.2	6.7	4.7	6.3	5.9	8.2	8.9	9.5	8.8	8.9	10.2	9.2	14.9	16.0	7.4	5.7	7.0	4.7	5.3	6.5	7.3	16.0
3	9.9	S	7.4	3.2	3.5	9.1	8.5	8.9	7.1	6.8	5.4	5.1	3.9	2.3	4.5	2.7	2.9	7.0	8.0	4.4	5.8	5.7	5.7	4.0	5.7	9.9
4	5.9	S	6.5	5.4	5.1	6.8	5.1	5.6	4.8	4.9	8.6	7.0	4.8	0.5	1.7	1.2	2.6	2.4	5.4	3.8	3.3	1.7	5.7	6.5	4.6	8.6
5	5.6	S	2.6	2.8	2.9	3.0	3.1	8.2	5.7	11.9	7.3	5.5	2.8	0.6	5.6	2.8	1.8	2.3	3.5	4.2	4.1	3.5	3.7	4.6	4.3	11.9
6	9.5	S	6.2	2.8	7.6	4.5	5.8	6.4	6.0	4.6	4.7	5.3	6.1	4.0	2.2	6.5	9.9	6.8	5.6	5.2	8.2	6.9	6.5	6.4	6.0	9.9
7	4.9	S	4.5	9.5	5.1	3.1	4.6	6.2	7.5	8.5	7.5	2.2	3.3	2.8	4.2	5.8	4.8	3.0	7.9	5.5	4.7	4.6	7.6	2.8	5.2	9.5
8	4.4	S	4.9	11.8	7.5	4.9	7.4	9.5	9.4	8.7	4.1	2.8	2.5	3.1	6.7	7.5	7.7	5.2	6.1	1.7	2.4	10.3	4.0	12.6	6.3	12.6
9	6.5	S	2.9	6.6	8.6	5.8	7.9	11.4	11.9	9.9	3.3	3.3	2.8	1.9	1.4	2.1	1.7	1.0	0.8	0.8	1.0	1.4	2.0	4.9	4.3	11.9
10	6.4	S	3.7	3.7	4.6	6.3	6.7	12.5	7.5	8.4	6.3	2.4	2.6	1.6	5.5	7.7	1.3	4.0	4.1	4.0	5.7	2.0	1.4	2.5	4.8	12.5
11	2.5	S	1.4	1.9	1.9	7.6	4.8	3.6	10.2	5.7	5.4	3.8	3.5	1.7	2.6	5.8	3.0	5.0	5.0	4.9	2.7	3.0	3.6	5.4	4.1	10.2
12	4.5	S	2.3	4.1	2.4	2.8	7.6	7.8	4.3	3.5	3.5	1.7	1.4	1.5	2.8	4.5	5.4	4.0	6.7	8.7	8.8	5.2	7.5	8.6	4.8	8.8
13	5.0	S	5.2	5.6	5.7	9.3	5.5	8.2	7.4	6.9	3.7	4.0	5.0	8.9	0.9	2.2	4.8	4.7	7.4	3.5	3.2	3.4	1.7	2.2	5.0	9.3
14	3.8	S	3.4	6.0	3.0	4.7	3.6	2.8	4.5	6.9	4.3	3.5	9.8	2.7	4.3	2.0	6.0	5.5	2.7	1.9	5.2	2.4	2.4	4.9	4.2	9.8
15	2.6	S	6.6	13.1	7.6	5.4	6.0	13.8	14.9	15.1	9.4	5.5	7.8	7.6	2.3	5.0	4.0	2.8	3.1	3.7	2.7	3.0	1.1	4.8	6.4	15.1
16	10.9	S	11.0	6.9	4.4	8.7	7.6	5.9	9.3	2.9	2.7	C	C	C	C	C	C	1.4	3.4	1.7	2.2	1.4	1.1	2.6	-	-
17	4.2	S	2.8	3.4	2.5	4.6	5.5	4.4	5.4	6.3	5.3	5.1	6.1	4.0	6.0	6.6	4.9	3.8	5.6	5.7	7.6	4.6	3.7	3.1	4.8	7.6
18	3.7	S	4.0	5.6	5.1	4.9	4.3	4.3	4.9	4.2	3.5	3.2	3.8	3.1	2.9	5.0	4.8	4.6	3.5	6.4	3.4	3.8	3.3	2.7	4.1	6.4
19	4.2	S	3.6	3.5	3.0	5.0	5.9	6.8	5.2	6.9	5.0	4.9	4.3	6.4	6.2	5.1	4.1	5.8	3.7	4.0	8.4	8.2	6.5	7.1	5.4	8.4
20	8.1	S	7.6	3.3	1.2	1.2	2.2	11.8	10.4	9.7	1.9	2.9	2.0	1.9	5.3	3.6	2.7	2.0	2.2	1.7	1.6	1.2	0.9	1.1	3.8	11.8
21	1.3	S	3.6	1.9	2.2	3.8	5.0	5.4	9.5	7.6	6.0	4.8	5.6	3.7	2.5	3.3	3.4	6.8	2.5	2.0	1.9	1.0	0.7	0.9	3.7	9.5
22	0.9	S	1.8	4.5	21.2	19.7	20.5	8.3	17.9	15.4	12.5	4.7	8.0	4.0	11.5	5.8	7.0	14.1	12.9	12.8	10.3	8.8	8.5	15.6	10.7	21.2
23	13.4	S	13.1	12.9	16.8	14.8	11.3	9.9	13.4	9.6	10.1	13.3	4.8	1.5	4.4	4.1	19.8	17.5	20.8	14.5	19.5	13.1	9.4	14.6	12.3	20.8
24	9.5	S	7.3	5.7	5.4	5.0	4.6	7.6	8.8	10.6	6.7	7.4	6.2	5.8	6.9	9.9	9.8	13.3	9.3	14.4	20.8	13.3	13.1	12.3	9.3	20.8
25	12.2	S	9.1	8.1	8.4	8.8	7.9	7.5	8.8	12.0	9.6	7.7	4.6	6.7	4.6	7.6	11.3	11.1	17.8	17.9	19.9	16.6	15.9	14.6	10.8	19.9
26	12.3	S	7.5	7.0	7.4	6.6	5.0	5.5	5.0	3.9	4.3	3.8	3.6	5.3	4.3	9.3	5.2	6.0	8.3	6.8	5.2	4.5	5.3	3.6	5.9	12.3
27	2.9	S	2.7	2.2	2.4	1.9	3.1	3.0	5.0	3.2	5.1	3.1	3.2	3.1	3.7	2.9	5.5	4.1	3.4	3.6	4.5	3.0	3.3	4.6	3.5	5.5
28	3.3	S	2.1	2.7	2.4	2.7	3.4	5.0	4.9	5.0	5.5	3.6	3.0	5.4	4.5	4.8	5.9	5.2	4.4	4.9	4.0	3.6	3.5	3.0	4.0	5.9
29	3.6	S	3.0	2.8	3.5	3.9	4.1	6.2	5.6	0.1	P	P	P	P	P	P	P	17.5	15.5	11.2	13.9	12.9	14.0	11.9	-	-
30	7.2	S	11.3	8.3	9.7	10.2	11.3	15.5	14.8	15.1	12.4	10.7	11.8	11.7	10.3	13.3	13.1	14.2	11.0	8.4	7.8	5.4	5.8	6.8	10.7	15.5
NO.	30	-	30	30	30	30	30	30	30	29	28	28	28	28	28	28	28	30	30	30	30	30	30	30	677	99%
MEAN	5.9	-	5.2	5.4	5.6	6.3	6.3	7.5	8.1	7.6	6.1	5.0	4.8	4.1	4.8	5.5	6.3	6.7	6.7	6.0	6.8	5.5	5.3	6.2		
MAX	13.4	-	13.1	13.1	21.2	19.7	20.5	15.5	17.9	15.4	12.5	13.3	11.8	11.7	11.5	13.3	19.8	17.5	20.8	17.9	20.8	16.6	15.9	15.6		



Number of 1HR Exceedences	0		
Number of Non-Zero Readings	677		
Maximum 1-HR Average	21.2 PPB		
Maximum 24-HR Average	12.3 PPB		
Monthly Calibration	6	Operational Time	713 HRS
Standard Deviation	3.8	Operational Uptime	99.0 %
		Monthly Average	6.0 PPB

Lagoon NOx (ppb) – November 2023

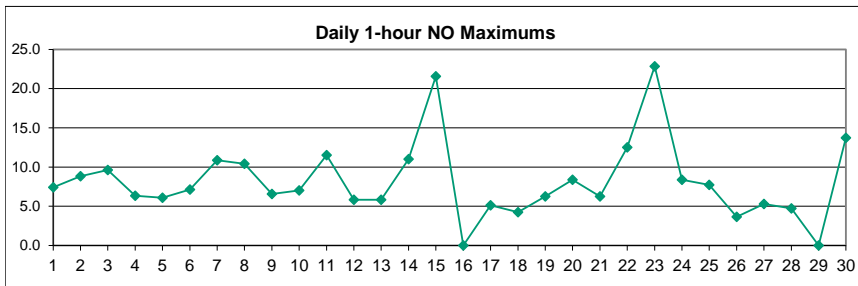
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX	
1	5.3	S	6.0	7.1	10.3	13.3	11.0	8.9	13.4	10.8	8.8	8.6	5.0	7.2	8.0	14.2	14.1	5.3	5.3	10.2	11.8	8.0	10.3	6.0	9.1	14.2	
2	3.4	S	9.6	5.2	5.1	12.5	6.7	8.6	7.7	12.1	12.8	16.0	13.6	14.5	15.4	12.2	18.4	24.7	8.7	6.6	8.0	6.0	6.9	7.9	10.5	24.7	
3	16.5	S	9.6	5.0	5.3	18.6	15.4	13.7	10.9	10.3	10.0	8.6	6.8	4.2	7.2	4.4	4.2	9.3	14.5	6.2	8.3	9.6	8.2	8.1	9.3	18.6	
4	10.0	S	10.4	7.7	7.5	9.3	6.8	9.5	6.7	8.2	14.7	12.1	9.2	1.4	3.2	2.3	4.1	3.5	8.8	5.4	5.3	2.9	9.4	10.4	7.3	14.7	
5	10.2	S	4.0	5.1	4.1	4.1	4.1	14.2	9.5	17.6	11.0	8.1	4.8	1.8	9.8	4.5	2.9	3.4	4.5	5.7	5.5	4.6	4.9	7.2	6.6	17.6	
6	16.4	S	9.8	3.8	12.5	5.5	7.3	9.2	8.2	6.6	7.8	9.3	11.6	6.4	3.8	10.1	12.7	7.9	6.5	9.0	11.8	8.4	8.9	11.7	8.9	16.4	
7	7.5	S	6.3	20.3	9.4	4.3	6.1	8.8	12.5	13.2	13.0	3.9	6.0	4.9	7.4	9.5	7.0	4.4	13.1	7.0	6.4	6.3	11.2	4.2	8.4	20.3	
8	6.2	S	7.0	20.9	13.0	8.2	12.4	16.4	16.4	15.5	6.6	5.0	4.7	5.5	12.4	12.4	11.2	7.6	9.3	2.9	3.8	15.5	5.2	22.9	10.5	22.9	
9	9.0	S	3.8	12.7	10.3	8.6	9.9	14.2	18.3	14.2	5.6	5.8	5.0	3.5	2.9	3.5	3.0	2.1	1.7	1.9	2.5	3.2	7.2	7.2	6.5	18.3	
10	11.3	S	5.3	5.7	8.4	10.0	10.4	19.4	9.2	12.3	9.6	4.3	4.9	3.2	9.6	12.9	2.6	6.1	6.0	7.3	8.8	3.5	2.8	4.2	7.7	19.4	
11	4.2	S	2.7	3.4	3.4	14.2	8.0	5.6	21.6	12.0	10.2	6.2	5.7	2.9	3.7	8.9	4.4	7.1	8.4	8.2	4.0	4.7	4.8	7.8	7.0	21.6	
12	7.1	S	3.3	5.8	3.6	3.9	12.5	11.3	6.2	5.7	6.7	3.2	2.8	2.9	4.7	7.6	7.0	5.0	9.3	14.4	10.6	6.3	11.0	12.4	7.1	14.4	
13	6.6	S	8.8	9.9	9.2	13.7	7.3	12.4	11.1	11.7	6.8	6.0	7.0	13.1	1.8	3.2	6.1	6.5	13.2	4.6	5.2	5.2	3.0	3.8	7.7	13.7	
14	6.6	S	5.5	9.1	4.3	7.7	5.8	4.8	7.3	11.9	8.4	7.1	20.6	5.4	8.0	3.8	9.7	7.7	3.9	3.2	9.3	3.6	3.7	7.4	7.2	20.6	
15	4.0	S	8.9	22.5	10.6	7.0	8.2	35.2	27.2	22.5	13.9	8.3	10.9	10.4	3.7	7.0	5.4	3.9	4.0	4.9	3.8	4.0	2.1	6.0	10.2	35.2	
16	12.4	S	15.7	8.7	5.8	22.1	12.4	9.5	17.7	5.2	5.3	C	C	C	C	C	C	1.6	4.6	1.6	2.4	1.4	1.1	3.7	-	-	
17	6.2	S	3.4	4.8	4.5	6.1	8.3	5.5	7.4	11.3	8.0	8.0	9.6	5.8	8.5	8.4	6.5	5.6	6.7	9.2	12.1	6.4	4.6	3.7	7.0	12.1	
18	5.1	S	5.3	9.3	6.3	6.7	5.4	5.9	7.2	6.8	5.2	5.8	6.6	4.4	3.7	7.6	6.1	5.4	3.6	10.5	3.5	4.5	3.8	2.9	5.7	10.5	
19	7.2	S	4.1	4.1	4.0	7.1	10.0	10.8	5.9	9.4	6.6	7.1	5.8	9.0	9.0	6.8	5.4	9.3	4.9	5.6	14.4	14.0	9.7	10.4	7.9	14.4	
20	11.6	S	9.0	3.4	1.2	1.3	2.3	18.5	18.6	15.8	2.5	4.4	2.6	2.6	8.2	4.7	3.2	2.2	2.8	1.7	1.5	1.1	0.9	1.2	5.3	18.6	
21	1.4	S	6.5	2.3	2.3	6.1	8.0	6.9	15.6	11.4	8.7	7.3	7.9	5.0	2.9	4.3	4.1	10.5	2.8	2.2	2.3	1.1	0.6	0.9	5.3	15.6	
22	0.9	S	1.9	5.6	28.3	30.8	30.8	9.8	25.5	27.8	17.9	7.5	11.5	5.6	17.2	6.6	8.9	15.6	15.2	20.8	13.5	9.9	13.4	19.9	15.0	30.8	
23	16.6	S	16.3	18.5	25.4	18.5	12.8	11.7	20.1	14.2	17.1	31.5	8.8	2.2	7.0	5.2	42.6	20.2	29.8	15.3	20.9	13.9	9.8	31.9	17.8	42.6	
24	13.2	S	8.5	5.7	8.6	5.2	4.9	10.2	13.2	17.7	11.7	15.5	11.5	9.9	9.6	14.4	12.8	17.2	9.5	21.0	25.0	15.7	16.8	13.1	12.7	25.0	
25	15.6	S	12.2	9.8	9.5	10.6	9.4	7.9	9.5	19.5	16.8	14.4	7.7	11.7	5.8	9.0	13.9	11.2	23.0	18.2	23.1	17.2	16.3	19.2	13.6	23.1	
26	15.7	S	9.1	8.5	8.7	7.8	5.1	7.5	5.7	5.1	6.1	7.0	6.9	8.5	6.4	12.7	5.9	6.1	9.5	9.3	6.5	4.7	6.7	3.7	7.5	15.7	
27	3.0	S	3.1	2.3	2.8	2.7	4.5	4.5	7.8	3.9	8.9	5.7	6.6	8.1	6.8	4.4	9.0	4.3	3.8	4.6	6.9	3.2	3.9	7.6	5.2	9.0	
28	3.7	S	2.0	4.4	2.7	3.6	3.6	7.1	6.8	6.9	9.6	5.9	5.3	10.0	6.5	6.1	9.1	6.2	4.4	6.4	5.3	3.7	5.0	3.3	5.6	10.0	
29	4.8	S	3.2	2.8	5.5	4.7	5.8	9.4	6.5	16.5	P	P	P	P	P	P	P	P	19.3	17.0	11.7	17.0	15.9	21.8	14.9	-	-
30	7.5	S	13.7	8.5	16.0	11.9	14.7	20.7	24.4	28.7	23.1	20.8	22.8	21.6	14.7	20.2	14.6	16.1	12.9	8.6	10.5	6.0	6.6	9.3	15.4	28.7	
NO.	30	-	30	30	30	30	30	30	30	30	29	28	28	28	28	28	28	30	30	30	30	30	30	30	677	99%	
MEAN	8.3	-	7.2	8.1	8.3	9.5	9.0	11.3	12.6	12.8	10.1	9.0	8.3	6.8	7.4	8.1	9.1	8.5	8.9	8.1	9.0	7.0	7.2	9.1			
MAX	16.6	-	16.3	22.5	28.3	30.8	30.8	35.2	27.2	28.7	23.1	31.5	22.8	21.6	17.2	20.2	42.6	24.7	29.8	21.0	25.0	17.2	21.8	31.9			



Number of Non-Zero Readings	677		
Maximum 1-HR Average	42.6 PPB		
Maximum 24-HR Average	17.8 PPB		
Monthly Calibration	6	Operational Time	713 HRS
Standard Deviation	5.75	Operational Uptime	99.0 %
		Monthly Average	8.9 PPB

Lagoon NO (ppb) – November 2023

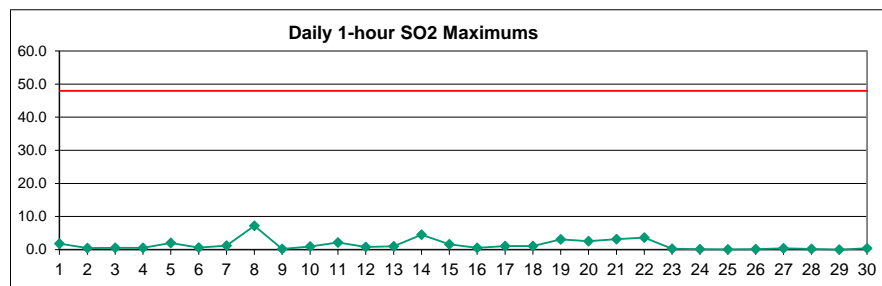
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	1.2	S	1.6	2.6	5.3	6.4	4.2	2.8	7.4	5.0	4.7	5.0	2.4	3.2	2.9	5.5	6.2	1.3	1.3	3.4	4.9	2.4	5.0	2.4	3.8	7.4
2	1.3	S	4.8	1.9	1.9	6.0	2.1	2.5	1.9	4.0	4.1	6.7	5.0	5.8	5.5	3.2	3.6	8.8	1.4	1.0	1.1	1.4	1.7	1.6	3.4	8.8
3	6.7	S	2.3	1.9	1.9	9.6	7.0	5.0	3.9	3.7	4.7	3.7	3.1	2.0	2.9	1.8	1.4	2.4	6.7	1.9	2.6	4.0	2.7	4.2	3.7	9.6
4	4.2	S	4.1	2.4	2.5	2.6	1.8	4.0	2.1	3.4	6.3	5.3	4.5	1.0	1.6	1.2	1.5	1.2	3.5	1.7	2.1	1.3	3.8	4.1	2.9	6.3
5	4.7	S	1.5	2.4	1.2	1.1	1.0	6.1	3.8	5.8	3.8	2.7	2.1	1.2	4.4	1.8	1.2	1.1	1.1	1.6	1.5	1.2	1.3	2.7	2.4	6.1
6	7.1	S	3.7	1.0	5.1	1.1	1.7	3.0	2.4	2.1	3.2	4.2	5.7	2.5	1.6	3.7	2.9	1.3	1.0	3.9	3.8	1.6	2.5	5.4	3.1	7.1
7	2.7	S	1.9	10.9	4.4	1.3	1.6	2.7	5.2	4.9	5.6	1.9	2.8	2.3	3.3	3.9	2.4	1.5	5.3	1.6	1.9	1.8	3.8	1.4	3.3	10.9
8	1.9	S	2.2	9.3	5.7	3.6	5.2	7.1	7.2	7.1	2.8	2.4	2.3	2.5	5.9	5.1	3.8	2.6	3.3	1.2	1.5	5.3	1.2	10.4	4.3	10.4
9	2.5	S	1.0	6.2	1.8	2.9	2.2	3.0	6.6	4.5	2.3	2.6	2.3	1.7	1.6	1.5	1.3	1.1	1.0	1.0	1.0	1.2	1.3	2.5	2.3	6.6
10	5.1	S	1.7	2.1	3.9	3.9	3.8	7.0	1.9	4.1	3.5	2.1	2.5	1.8	4.3	5.4	1.4	2.2	2.1	3.4	3.3	1.5	1.5	1.8	3.1	7.0
11	1.8	S	1.4	1.6	1.5	6.8	3.3	2.1	11.5	6.4	5.0	2.6	2.4	1.3	1.2	3.2	1.5	2.2	3.5	3.4	1.3	1.8	1.2	2.4	3.0	11.5
12	2.7	S	1.0	1.8	1.2	1.2	5.0	3.6	1.9	2.3	3.3	1.7	1.5	1.6	2.0	3.3	1.8	1.1	2.7	5.8	2.0	1.3	3.6	4.0	2.5	5.8
13	1.8	S	3.7	4.4	3.6	4.6	2.0	4.3	3.9	4.9	3.2	2.1	2.1	4.3	1.0	1.0	1.5	1.9	5.8	1.2	2.1	1.9	1.4	1.6	2.8	5.8
14	3.0	S	2.2	3.3	1.4	3.1	2.3	2.1	2.9	5.2	4.3	3.7	11.0	2.8	3.8	1.9	3.8	2.4	1.3	1.4	4.3	1.4	1.4	2.6	3.1	11.0
15	1.5	S	2.5	9.6	3.1	1.8	2.3	21.6	12.5	7.7	4.8	2.9	3.3	3.0	1.5	2.1	1.5	1.2	1.0	1.3	1.2	1.1	1.0	1.3	3.9	21.6
16	1.6	S	4.9	2.0	1.4	13.5	5.0	3.8	8.6	2.4	2.7	C	C	C	C	C	C	0.2	1.3	0.0	0.3	0.0	0.1	1.2	-	-
17	2.1	S	0.7	1.5	2.2	1.7	3.0	1.2	2.3	5.1	2.9	3.1	3.7	1.9	2.8	2.0	1.8	1.8	1.3	3.7	4.6	2.0	1.0	0.7	2.3	5.1
18	1.5	S	1.3	3.8	1.3	1.8	1.2	1.8	2.4	2.6	1.8	2.6	2.9	1.4	0.9	2.7	1.4	0.8	0.2	4.2	0.1	0.8	0.6	0.3	1.7	4.2
19	3.1	S	0.5	0.7	1.1	2.1	4.3	4.0	0.9	2.7	1.7	2.4	1.6	2.8	2.9	1.8	1.5	3.6	1.4	1.7	6.2	6.0	3.3	3.5	2.6	6.2
20	3.6	S	1.5	0.3	0.1	0.1	0.2	6.8	8.4	6.2	0.7	1.6	0.7	0.7	3.0	1.1	0.6	0.3	0.7	0.0	0.0	0.0	0.1	0.1	1.6	8.4
21	0.2	S	3.1	0.4	0.2	2.4	3.1	1.7	6.2	4.1	2.9	2.7	2.5	1.5	0.6	1.1	0.9	3.9	0.4	0.4	0.5	0.2	0.1	0.2	1.7	6.2
22	0.2	S	0.2	1.1	7.2	11.2	10.4	1.6	7.7	12.5	5.6	2.9	3.7	1.7	5.9	0.9	2.0	1.6	2.4	8.1	3.3	1.3	5.0	4.5	4.4	12.5
23	3.4	S	3.2	5.7	8.6	3.8	1.7	1.9	6.8	4.8	7.2	18.4	4.1	0.7	2.7	1.2	22.8	2.9	9.1	0.9	1.5	1.0	0.5	17.4	5.7	22.8
24	3.9	S	1.4	0.2	3.3	0.3	0.4	2.8	4.6	7.4	5.2	8.4	5.5	4.3	2.9	4.7	3.1	4.1	0.4	6.7	4.4	2.6	3.8	0.9	3.5	8.4
25	3.6	S	3.3	1.9	1.3	2.0	1.7	0.5	0.9	7.7	7.4	6.9	3.2	5.2	1.3	1.6	2.8	0.3	5.3	0.4	3.3	0.6	0.5	4.7	2.9	7.7
26	3.6	S	1.7	1.7	1.5	1.3	0.2	2.1	0.8	1.3	1.9	3.3	3.4	3.5	2.2	3.7	0.7	0.2	1.3	2.6	1.4	0.2	1.5	0.2	1.8	3.7
27	0.2	S	0.4	0.2	0.4	0.9	1.5	1.6	2.9	0.8	3.8	2.6	3.5	5.3	3.3	1.6	3.6	0.3	0.5	1.1	2.5	0.2	0.7	3.1	1.8	5.3
28	0.6	S	0.0	1.8	0.3	1.0	0.4	2.2	2.0	2.1	4.3	2.5	2.4	4.7	2.2	1.5	3.3	1.2	0.1	1.7	1.4	0.1	1.6	0.4	1.7	4.7
29	1.3	S	0.3	0.1	2.1	0.9	1.8	3.3	1.0	0.0	P	P	P	P	P	P	P	2.0	1.7	0.7	3.3	3.2	8.0	3.1	-	-
30	0.5	S	2.5	0.4	6.5	1.9	3.5	5.4	9.8	13.7	10.9	10.3	11.3	10.1	4.7	7.1	1.7	2.1	2.2	0.3	2.9	0.7	0.9	2.7	4.9	13.7
NO.	30	-	30	30	30	30	30	30	30	30	29	28	28	28	28	28	28	30	30	30	30	30	30	30	677	99%
MEAN	2.6	-	2.0	2.8	2.7	3.4	2.8	3.9	4.7	4.8	4.2	4.2	3.6	2.9	2.8	2.7	2.9	1.9	2.3	2.2	2.3	1.6	2.0	3.1		
MAX	7.1	-	4.9	10.9	8.6	13.5	10.4	21.6	12.5	13.7	10.9	18.4	11.3	10.1	5.9	7.1	22.8	8.8	9.1	8.1	6.2	6.0	8.0	17.4		



Number of Non-Zero Readings	674		
Maximum 1-HR Average	22.8 PPB		
Maximum 24-HR Average	5.7 PPB		
Monthly Calibration	6	Operational Time	713 HRS
Standard Deviation	2.63	Operational Uptime	99.0 %
		Monthly Average	3.0 PPB

Lagoon SO₂ (ppb) – November 2023

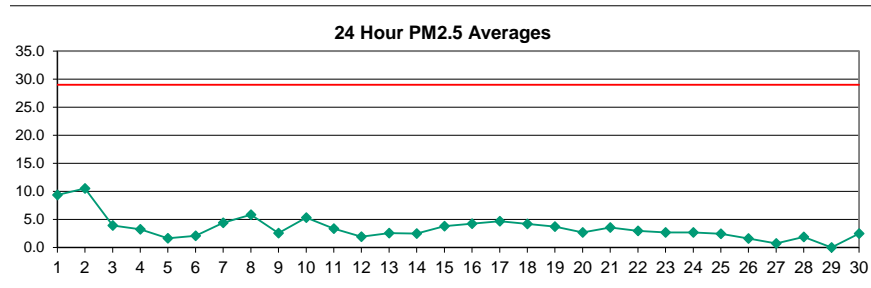
Day	HOURLY																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.0	S	0.0	0.4	0.5	0.4	0.1	0.1	0.1	0.1	0.5	0.4	0.2	0.7	0.5	0.3	0.3	0.2	0.7	1.8	1.0	0.7	0.6	0.6	0.5	1.8	
2	0.3	S	0.4	0.4	0.4	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.3	0.5	0.2	0.5	
3	0.3	S	0.1	0.2	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.5	
4	0.2	S	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.3	0.6
5	0.4	S	0.3	0.5	0.2	0.2	0.3	0.6	0.7	1.0	0.6	0.6	0.6	0.4	2.0	0.8	0.2	0.1	0.1	0.3	0.3	0.2	0.2	0.3	0.5	2.0	
6	0.3	S	0.0	0.2	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.6	0.4	0.6	
7	0.5	S	0.4	0.6	0.4	0.4	0.4	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.9	0.7	0.5	1.2	0.3	0.4	0.3	0.6	0.3	0.5	1.2	
8	0.5	S	0.3	1.5	3.3	6.3	5.9	4.1	5.6	4.4	0.6	0.2	0.2	1.6	7.2	2.4	1.5	2.4	4.0	0.5	0.2	0.1	0.0	0.2	2.3	7.2	
9	0.0	S	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.2	
10	0.3	S	0.3	0.4	0.6	1.0	0.5	0.5	0.3	0.2	0.2	0.2	0.4	0.3	0.9	0.2	0.1	0.2	0.4	0.7	0.7	0.3	0.3	0.5	0.4	1.0	
11	0.6	S	0.2	0.4	0.4	1.2	0.7	0.9	2.1	1.4	1.8	0.8	1.0	0.4	0.4	0.4	0.3	0.3	0.3	0.7	0.3	0.1	0.0	0.3	0.6	2.1	
12	0.3	S	0.1	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.1	0.2	0.2	0.3	0.8	0.0	0.0	0.2	0.1	0.4	0.0	0.0	0.7	0.2	0.8	
13	0.2	S	0.3	0.4	0.5	0.6	0.6	1.0	0.6	0.7	0.6	1.0	0.7	0.6	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.4	0.3	0.8	0.5	1.0	
14	1.4	S	0.5	0.4	0.3	0.2	0.6	0.4	0.2	1.1	0.9	1.3	4.5	1.3	0.6	0.5	0.5	0.8	0.2	0.4	0.5	0.5	0.4	0.2	0.8	4.5	
15	0.3	S	0.5	0.4	0.3	0.3	0.3	0.5	0.4	0.3	0.5	1.6	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.5	0.4	0.3	0.2	0.2	0.4	1.6	
16	0.2	S	0.5	0.3	0.3	0.5	0.4	0.4	0.5	0.3	0.3	C	C	C	C	0.2	0.0	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.3	0.5	
17	0.2	S	0.3	0.3	0.4	0.6	0.5	0.4	1.0	0.6	0.8	0.8	0.0	0.1	0.1	0.4	0.3	0.0	0.0	0.4	1.1	0.7	0.1	0.1	0.4	1.1	
18	0.2	S	0.0	0.1	0.2	0.4	0.5	0.2	0.2	0.4	0.3	0.5	0.9	1.0	0.6	0.4	0.4	0.8	0.7	1.0	0.5	0.4	0.4	0.4	0.5	1.0	
19	0.7	S	0.4	0.6	0.5	0.6	1.1	0.7	0.5	0.7	0.9	2.3	0.9	0.5	0.5	0.8	0.7	0.6	0.7	1.0	1.8	2.1	2.6	3.1	1.1	3.1	
20	2.5	S	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	
21	0.0	S	0.8	0.2	0.1	0.3	1.0	1.6	3.1	1.3	0.5	0.2	0.3	0.3	0.2	0.3	0.1	0.2	0.3	0.2	0.6	0.3	0.2	0.2	0.5	3.1	
22	0.2	S	0.0	0.4	2.0	1.9	1.1	0.4	0.8	1.7	3.6	2.1	1.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.6	
23	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2	
24	0.0	S	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
25	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
26	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
27	0.0	S	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
28	0.0	S	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.2	
29	0.1	S	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	P	P	P	P	P	P	P	0.3	0.0	0.0	0.1	0.1	0.1	0.2	-	-	
30	0.2	S	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.4	
NO.	30	-	30	30	30	30	30	30	30	30	29	28	28	28	28	29	29	30	30	30	30	30	30	30	679	99%	
MEAN	0.3	-	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.6	0.4	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	
MAX	2.5	-	0.8	1.5	3.3	6.3	5.9	4.1	5.6	4.4	3.6	2.3	4.5	1.6	7.2	2.4	1.5	2.4	4.0	1.8	1.8	2.1	2.6	3.1	3.1	3.1	



Number of 1HR Exceedences	0
Number of Non-Zero Readings	536
Maximum 1-HR Average	7.2 PPB
Maximum 24-HR Average	2.3 PPB
Operational Time	713 HRS
Operational Uptime	99.0 %
Monthly Calibration	4
Standard Deviation	0.71
Monthly Average	0.4 PPB

Lagoon PM_{2.5} (µg/m³) – November 2023

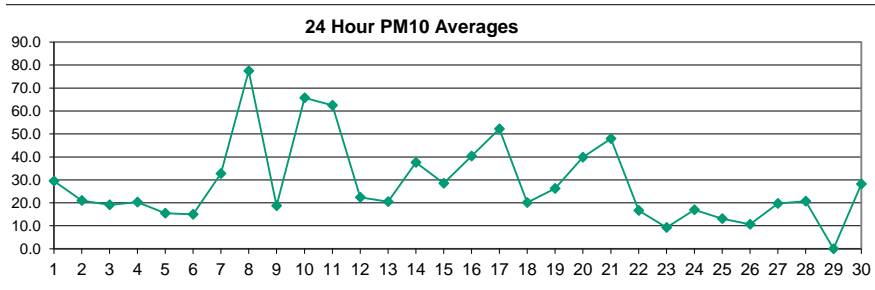
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	7.2	7.8	8.8	13.0	8.6	5.9	7.3	6.8	6.8	6.5	9.6	9.7	9.8	11.0	12.9	11.0	11.3	10.9	8.5	11.7	9.9	10.1	11.2	8.5	9.4	13.0
2	6.4	7.9	10.9	10.3	9.1	7.4	9.0	10.9	12.1	13.3	12.4	11.7	13.2	11.5	16.3	10.1	15.5	14.0	12.8	8.8	5.3	5.6	9.8	7.8	10.5	16.3
3	7.6	7.1	5.4	4.8	5.2	6.0	5.6	4.4	7.9	9.9	6.0	1.3	2.8	2.5	0.0	1.0	0.5	2.2	4.5	3.4	1.3	0.2	2.5	1.6	3.9	9.9
4	0.5	3.2	2.7	2.8	3.3	1.8	1.7	2.1	2.1	3.1	2.9	10.9	7.8	3.0	0.9	1.0	1.7	1.1	3.8	4.2	2.3	6.3	4.9	3.5	3.2	10.9
5	4.0	1.9	0.4	2.4	3.0	1.0	1.2	4.5	2.5	0.5	2.8	2.6	1.3	1.6	0.1	0.0	1.1	1.1	1.0	1.3	1.4	1.5	0.3	1.5	1.6	4.5
6	2.9	3.4	1.0	0.0	0.0	0.8	0.3	0.2	2.8	0.0	0.5	0.9	1.1	2.5	0.9	3.5	4.4	4.6	3.9	2.4	0.5	5.0	5.2	3.5	2.1	5.2
7	2.8	3.7	4.5	6.7	4.9	3.8	3.1	0.4	3.3	5.8	4.7	12.6	7.8	2.6	0.5	2.8	4.8	6.2	4.5	4.2	4.6	4.9	3.2	3.0	4.4	12.6
8	1.8	0.0	0.0	1.5	7.8	12.5	7.9	7.8	10.0	12.3	11.9	7.4	2.4	1.8	3.3	8.4	10.5	10.5	6.6	2.6	0.9	2.7	5.0	4.4	5.8	12.5
9	7.0	3.8	0.0	0.0	1.1	1.5	1.7	2.2	2.4	2.2	2.7	3.7	1.8	2.9	2.9	0.0	0.0	1.0	1.9	3.2	4.1	5.9	4.8	4.7	2.6	7.0
10	4.6	6.5	5.0	3.5	5.0	4.3	3.0	5.8	6.8	7.5	7.2	8.5	5.6	3.6	4.3	13.7	7.8	2.1	2.0	2.5	1.9	6.1	5.6	4.1	5.3	13.7
11	1.3	6.2	10.3	7.3	3.6	0.6	0.0	0.7	3.0	5.3	5.9	4.7	4.5	3.3	0.2	0.0	3.8	4.6	1.4	0.6	5.2	4.6	2.7	0.9	3.4	10.3
12	0.0	1.0	2.7	2.0	2.2	3.2	4.4	4.5	1.4	0.0	0.0	0.1	2.3	0.8	0.0	2.4	2.9	3.3	2.1	0.9	2.7	1.3	2.2	3.4	1.9	4.5
13	5.1	4.9	3.4	2.7	2.9	3.1	2.9	1.6	2.8	5.3	5.2	3.0	0.9	2.1	3.4	1.5	0.0	0.0	2.0	2.7	1.7	1.3	1.4	1.8	2.6	5.3
14	3.0	6.2	1.8	0.8	2.9	1.9	0.1	1.0	1.3	1.3	5.3	3.9	1.9	3.8	4.2	4.5	3.1	2.4	2.4	1.5	1.2	1.7	2.0	0.8	2.5	6.2
15	1.1	1.9	2.4	4.2	6.3	3.7	4.2	5.2	5.9	6.5	7.0	2.6	0.4	2.7	1.8	3.8	3.1	6.2	5.8	3.8	3.1	3.5	3.8	2.5	3.8	7.0
16	0.0	0.0	4.3	10.3	5.9	1.0	4.1	4.2	6.0	8.2	4.8	5.0	10.6	10.5	6.2	2.3	2.7	0.7	0.9	1.4	1.1	1.9	4.9	4.2	4.2	10.6
17	2.0	4.0	6.1	9.2	6.3	6.0	6.6	3.8	0.8	0.9	3.5	5.8	5.2	5.2	3.2	4.3	6.2	3.2	4.3	6.4	3.3	6.8	5.5	3.9	4.7	9.2
18	3.5	6.2	6.3	5.0	3.8	4.5	4.6	3.8	4.8	3.2	1.9	5.4	5.8	3.7	1.9	3.5	5.2	3.5	5.1	4.4	5.0	4.0	2.6	3.2	4.2	6.3
19	4.5	4.3	3.7	2.6	0.7	3.7	4.2	2.7	3.4	3.5	3.1	4.8	9.4	7.8	5.8	4.1	3.0	2.2	0.7	2.5	2.6	3.7	2.5	3.8	3.7	9.4
20	8.6	6.6	3.2	2.6	1.4	0.0	0.4	0.0	1.2	8.8	7.7	2.4	0.0	1.0	0.0	0.5	1.3	3.1	1.9	3.4	2.4	4.1	3.7	0.0	2.7	8.8
21	0.0	5.4	3.1	1.2	0.7	0.6	2.1	4.7	7.3	13.1	14.8	8.7	2.6	6.3	4.4	3.4	2.7	0.0	0.0	0.0	0.2	0.5	0.9	2.8	3.6	14.8
22	1.7	0.0	0.0	3.3	9.9	7.6	4.8	4.1	2.5	4.8	5.8	4.2	4.3	5.0	3.6	2.9	0.8	1.5	1.4	0.0	1.7	1.7	0.0	0.0	3.0	9.9
23	0.0	1.3	1.9	3.3	4.8	2.7	0.9	0.8	2.4	1.8	2.1	2.6	3.7	4.0	2.6	1.8	2.8	4.1	2.5	6.3	4.6	2.0	3.1	2.4	2.7	6.3
24	4.0	4.0	1.3	0.0	0.0	1.2	1.2	2.0	1.8	0.0	0.0	3.0	3.7	4.4	12.0	7.2	1.4	4.4	3.3	2.0	1.6	1.3	3.4	1.3	2.7	12.0
25	0.0	0.1	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.7	4.6	3.2	1.5	2.2	2.4	3.8	4.6	3.9	3.0	5.4	5.7	4.1	6.8	5.9	2.4	6.8
26	5.2	4.0	1.0	0.0	0.0	0.0	0.0	0.3	0.9	0.4	2.2	0.0	0.0	2.4	0.5	0.0	6.0	3.2	0.3	1.3	3.1	2.8	3.1	1.5	1.6	6.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	3.3	2.6	1.7	0.9	1.0	1.0	0.0	1.2	2.2	0.7	3.3
28	0.3	2.5	4.2	2.5	2.5	0.9	2.1	1.2	0.0	0.0	0.1	2.9	0.6	7.9	5.9	1.2	1.0	0.5	2.3	2.5	2.0	2.1	0.0	0.0	1.9	7.9
29	1.1	4.7	4.1	1.3	1.7	2.3	1.4	0.0	0.0	7.3	P	P	P	P	P	P	P	0.0	4.6	3.9	0.0	1.2	4.3	2.9	-	-
30	2.3	0.1	1.3	2.4	1.3	1.7	0.9	1.0	2.7	2.3	2.6	2.7	3.3	8.7	7.9	4.6	0.6	0.0	2.3	2.1	3.6	3.3	1.2	0.2	2.5	8.7
NO.	30	30	30	30	30	30	30	30	30	30	28	28	28	28	28	29	29	30	30	30	30	30	30	30	708	99%
MEAN	3.0	3.6	3.3	3.5	3.5	3.0	2.9	2.9	3.5	4.5	4.9	4.8	4.1	4.5	3.9	3.7	3.8	3.4	3.2	3.2	2.8	3.3	3.6	2.9		
MAX	8.6	7.9	10.9	13.0	9.9	12.5	9.0	10.9	12.1	13.3	14.8	12.6	13.2	11.5	16.3	13.7	15.5	14.0	12.8	11.7	9.9	10.1	11.2	8.5		



Number of 24HR Exceedences	0		
Number of Non-Zero Readings	636		
Maximum 1-HR Average	16.3 UG/M3		
Maximum 24-HR Average	10.5 UG/M3		
Monthly Calibration	5	Operational Time	713 HRS
Standard Deviation	3.07	Operational Uptime	99.0 %
		Monthly Average	3.6 UG/M3

Lagoon PM₁₀ (µg/m³) – November 2023

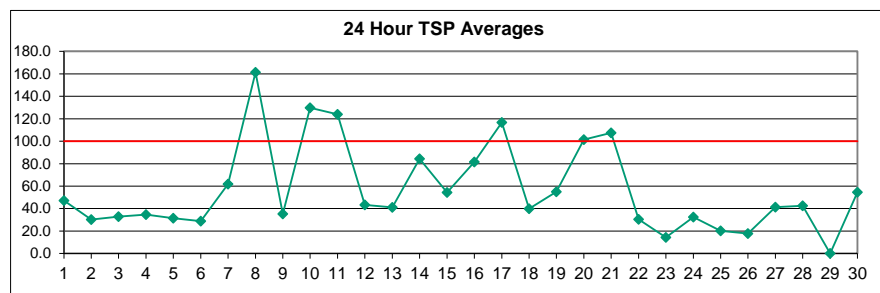
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	10.9	14.6	10.4	8.4	16.0	16.9	22.8	17.9	22.0	14.2	21.4	57.5	31.3	34.0	61.1	60.3	75.9	40.2	21.4	16.5	22.9	25.3	57.2	29.0	29.5	75.9
2	24.4	29.6	23.5	20.6	21.6	31.1	24.5	19.9	22.5	28.2	29.0	17.5	19.1	27.7	17.8	26.0	12.2	21.1	17.1	12.3	10.6	16.7	16.6	14.0	21.0	31.1
3	9.0	11.4	16.6	10.3	14.5	9.7	45.7	34.8	33.3	37.5	17.7	9.5	26.7	13.4	8.6	14.6	6.4	5.1	36.9	30.9	17.5	3.0	23.4	22.2	19.1	45.7
4	7.6	24.9	15.1	10.3	9.7	39.4	24.3	19.4	14.4	6.2	10.4	59.9	39.0	11.2	5.0	1.3	4.5	4.5	11.3	21.4	50.8	48.2	25.7	23.0	20.3	59.9
5	11.0	9.9	38.6	1.3	17.1	11.4	10.8	9.0	6.6	25.1	26.5	25.3	24.6	18.1	3.6	30.1	13.6	5.9	3.3	20.4	16.4	10.8	12.8	18.5	15.4	38.6
6	27.8	6.5	2.3	0.0	7.3	7.5	4.7	5.0	2.3	15.1	10.3	8.3	47.0	50.0	28.2	9.0	19.3	24.9	26.1	22.4	12.2	8.3	9.4	6.6	15.0	50.0
7	24.5	19.7	24.2	39.9	15.9	48.5	20.1	49.1	30.8	39.1	24.3	63.1	18.2	20.9	19.5	41.7	85.4	74.9	21.5	30.9	22.6	25.6	6.7	17.4	32.7	85.4
8	4.2	43.4	24.7	29.9	197.7	190.5	113.4	114.1	167.5	161.2	102.0	98.4	40.6	32.7	72.5	148.9	104.6	73.2	76.4	32.2	0.0	7.9	20.2	2.7	77.5	197.7
9	46.8	22.0	11.3	10.4	7.5	4.9	4.2	14.6	21.0	52.8	69.9	14.9	14.8	20.9	19.8	11.5	19.5	17.7	8.6	9.9	8.2	7.8	12.9	17.7	18.7	69.9
10	54.9	70.4	54.5	45.5	24.1	27.3	25.0	36.2	60.6	45.8	77.1	39.9	29.9	71.0	61.7	206.6	31.4	22.2	28.3	53.4	79.5	138.6	197.9	94.5	65.7	206.6
11	43.2	195.5	321.1	175.4	30.6	13.8	25.0	9.9	51.7	117.7	166.4	79.8	20.3	16.4	10.4	25.9	20.9	26.2	9.6	21.3	90.2	17.5	3.4	6.3	62.4	321.1
12	5.8	15.5	21.2	1.3	10.3	10.0	16.8	43.6	9.2	25.0	13.9	60.7	23.1	16.1	10.4	28.5	61.3	47.6	27.7	10.9	16.3	22.3	7.5	32.4	22.4	61.3
13	45.7	8.6	15.0	33.2	11.8	43.2	36.4	15.9	51.3	31.8	26.2	14.7	19.8	19.6	21.9	0.0	4.7	4.7	14.9	26.0	21.8	0.0	17.2	8.0	20.5	51.3
14	27.1	42.2	23.4	10.6	12.0	11.9	9.7	59.2	25.4	51.7	132.4	41.4	50.9	123.3	42.4	30.1	33.4	32.7	42.7	25.3	9.6	39.8	14.0	9.9	37.5	132.4
15	7.3	7.6	22.8	57.0	14.9	10.3	27.9	29.4	52.8	143.4	48.2	36.0	32.2	50.9	33.0	5.7	15.8	35.7	9.6	9.3	8.4	9.2	10.7	4.7	28.5	143.4
16	13.7	10.9	11.1	29.9	20.7	14.8	25.1	46.7	132.5	154.2	77.8	36.8	12.8	11.5	8.8	20.6	21.7	55.5	75.5	27.9	42.0	47.5	36.5	34.5	40.4	154.2
17	37.3	31.1	54.6	107.1	51.0	38.3	61.5	75.4	40.4	74.7	63.3	68.7	93.8	36.6	17.4	19.3	82.4	22.7	16.4	30.8	57.5	110.2	43.9	17.9	52.2	110.2
18	18.9	16.3	21.6	14.6	11.5	22.2	10.2	12.2	17.9	16.0	15.3	28.0	32.7	23.8	32.6	32.6	9.7	20.3	37.6	35.5	21.7	11.0	12.9	7.2	20.1	37.6
19	5.7	7.7	6.9	5.5	4.9	8.1	8.9	8.7	6.8	5.0	2.5	19.5	54.1	56.8	41.6	11.5	50.1	23.2	63.9	29.1	54.6	72.1	46.6	35.5	26.2	72.1
20	133.3	70.8	8.2	8.5	4.6	2.9	4.1	5.1	33.3	74.4	56.2	10.4	18.8	11.4	14.7	29.8	12.6	14.6	33.2	81.7	84.5	182.5	41.6	20.1	39.9	182.5
21	191.2	99.6	19.0	25.7	1.2	5.3	4.5	49.1	99.4	109.0	169.3	81.2	24.6	74.5	37.0	37.7	16.2	19.8	17.9	11.8	8.0	19.6	28.0	0.0	47.9	191.2
22	1.4	8.3	7.6	14.7	43.2	15.9	19.2	21.6	24.0	39.6	37.2	28.3	15.1	28.6	10.8	24.1	7.0	7.7	10.8	6.8	7.7	7.1	7.9	5.1	16.7	43.2
23	7.3	7.9	7.3	9.6	5.7	7.7	4.9	11.8	6.3	4.0	7.8	6.4	9.9	7.6	6.7	9.6	7.8	9.1	10.9	17.0	7.2	15.4	22.3	11.5	9.2	22.3
24	7.9	16.2	12.1	8.1	8.8	6.0	9.9	7.8	6.2	23.5	16.2	22.1	21.7	23.2	22.6	20.0	25.1	27.3	29.8	11.8	26.4	26.9	12.0	7.9	17.0	29.8
25	3.0	5.9	6.5	3.6	7.8	5.1	3.5	12.5	6.8	16.7	26.5	16.4	19.5	14.3	8.3	12.7	9.6	19.3	12.7	24.5	10.0	27.0	19.1	22.8	13.1	27.0
26	10.1	5.8	6.2	8.5	5.6	2.4	0.0	8.0	6.2	0.8	5.3	7.4	23.3	22.6	15.2	5.4	15.1	14.1	12.4	25.1	46.1	1.6	0.0	8.7	10.7	46.1
27	10.2	7.3	15.1	16.7	15.7	14.2	15.2	14.9	40.8	56.1	C	C	C	C	C	33.8	31.3	24.3	8.8	13.5	12.7	10.8	11.8	21.2	19.7	56.1
28	9.0	7.2	9.3	8.0	9.3	8.0	4.6	13.6	12.7	16.5	15.1	24.7	36.4	29.5	48.8	85.6	32.1	27.1	33.4	20.1	19.9	12.0	9.4	3.9	20.7	85.6
29	1.0	4.5	3.1	3.1	5.6	4.4	5.0	4.8	40.5	21.5	P	P	P	P	P	P	P	31.6	78.6	71.6	27.2	48.8	26.3	31.4	-	-
30	14.5	6.2	9.1	5.9	6.1	7.7	19.8	56.2	53.1	53.7	81.3	56.7	46.1	41.8	27.8	21.5	25.8	29.0	23.6	17.4	11.2	8.5	19.5	33.2	28.2	81.3
NO.	30	30	30	30	30	30	30	30	30	30	28	28	28	28	28	29	29	30	30	30	30	30	30	30	708	99%
MEAN	27.2	27.6	27.4	24.1	20.4	21.3	20.3	27.6	36.6	48.7	48.2	36.9	30.2	32.4	25.3	34.9	29.5	26.1	27.4	25.6	27.5	32.7	25.8	18.9		
MAX	191.2	195.5	321.1	175.4	197.7	190.5	113.4	114.1	167.5	161.2	169.3	98.4	93.8	123.3	72.5	206.6	104.6	74.9	78.6	81.7	90.2	182.5	197.9	94.5		



Number of Non-Zero Readings	702		
Maximum 1-HR Average	321.1 UG/M3		
Maximum 24-HR Average	77.5 UG/M3		
Monthly Calibration	5	Operational Time	713 HRS
Standard Deviation	33.6	Operational Uptime	99.0 %
		Monthly Average	29.2 UG/M3

Lagoon TSP ($\mu\text{g}/\text{m}^3$) – November 2023

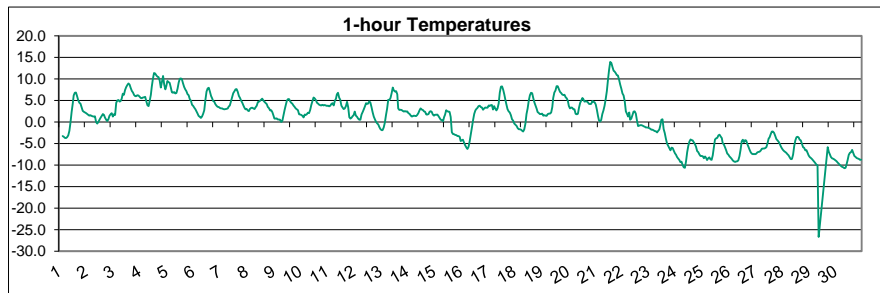
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	10.4	11.4	11.9	14.1	26.9	29.2	36.6	32.3	31.7	28.2	38.2	104.1	50.5	47.4	98.1	94.6	130.9	57.4	31.0	26.4	42.2	38.2	94.1	45.0	47.1	130.9
2	46.6	51.9	39.0	38.3	19.4	24.1	35.7	34.7	31.8	46.9	38.4	26.3	24.8	33.8	23.6	34.8	19.7	29.5	23.5	16.5	11.8	21.3	25.4	26.9	30.2	51.9
3	13.3	16.1	23.5	13.9	14.7	29.9	85.5	54.8	58.8	54.8	36.9	14.1	43.9	17.9	8.7	26.8	7.5	10.2	80.1	56.0	33.9	12.4	44.3	32.2	32.9	85.5
4	12.2	33.0	21.1	9.9	13.4	59.0	46.0	30.9	20.4	12.7	31.6	101.7	64.8	22.7	9.6	7.6	6.6	14.6	23.3	48.7	77.5	77.7	44.7	40.1	34.6	101.7
5	32.1	19.2	33.7	16.5	33.3	19.2	28.1	28.0	18.3	34.7	46.0	45.7	42.5	39.9	13.4	63.1	30.1	14.9	13.7	48.7	28.1	30.2	31.4	42.7	31.4	63.1
6	39.7	16.6	2.4	9.9	8.2	12.7	11.4	9.2	10.0	20.4	19.0	13.8	88.8	95.9	62.5	20.0	36.5	52.9	58.3	31.0	26.7	16.0	14.7	17.4	28.9	95.9
7	48.7	40.6	51.0	64.3	22.9	76.2	32.1	68.6	54.6	74.9	40.3	113.9	23.0	44.6	35.1	97.3	179.7	144.4	53.7	63.8	55.9	47.1	16.9	33.2	61.8	179.7
8	15.1	79.7	41.3	51.7	417.8	366.9	269.4	213.3	383.5	344.0	215.1	197.6	74.7	83.2	171.7	285.9	216.0	140.8	171.9	74.9	7.5	10.6	39.2	0.0	161.3	417.8
9	86.7	37.2	12.3	14.6	7.6	15.0	19.5	21.9	34.8	92.4	130.0	36.6	31.7	41.5	43.0	23.0	30.7	40.9	29.2	19.4	14.3	8.0	16.9	39.3	35.3	130.0
10	113.5	121.0	93.4	94.3	33.8	44.2	42.8	81.4	113.9	92.8	138.2	75.5	66.2	157.2	82.6	465.4	62.7	47.7	48.5	118.8	167.9	318.3	248.1	287.2	129.8	465.4
11	102.4	425.2	650.3	219.8	82.2	47.0	47.1	20.6	109.5	237.9	351.8	147.0	47.6	33.4	30.6	49.4	37.5	37.2	14.8	60.2	190.3	20.3	4.1	10.7	124.0	650.3
12	10.7	27.6	34.7	10.6	24.0	15.1	28.6	45.0	26.8	41.0	38.4	119.8	45.3	34.2	14.0	53.8	123.6	100.6	54.3	20.6	47.5	46.1	16.3	60.5	43.3	123.6
13	70.4	25.2	31.2	44.6	21.9	74.3	62.9	36.0	92.1	70.6	37.2	32.9	43.1	47.9	57.6	4.5	4.6	15.7	30.0	46.1	32.5	15.8	61.2	29.9	41.2	92.1
14	78.6	97.9	51.1	32.1	21.1	13.0	18.6	94.6	65.6	115.9	359.4	104.6	117.6	288.4	80.7	59.4	85.9	67.3	84.9	42.7	14.6	76.2	32.9	22.9	84.4	359.4
15	15.8	26.8	48.1	97.2	35.9	13.7	40.0	44.4	100.8	311.7	94.4	65.8	65.4	92.4	49.9	13.6	52.0	74.4	13.2	12.9	13.2	9.6	6.9	4.5	54.3	311.7
16	5.3	10.2	14.7	38.1	25.2	38.1	25.6	97.3	289.7	262.7	133.1	49.1	16.3	20.4	15.4	25.5	56.0	80.0	155.3	85.0	131.2	174.4	102.3	106.1	81.5	289.7
17	115.1	89.8	149.6	277.1	104.0	110.3	168.8	170.8	84.5	137.1	137.3	135.2	183.8	74.7	34.8	45.8	160.5	61.6	23.5	73.4	119.5	237.9	68.7	35.0	116.6	277.1
18	35.7	31.6	37.8	38.6	22.6	39.1	25.6	29.0	35.9	24.0	30.5	48.9	61.9	52.4	56.6	61.4	24.8	42.5	80.8	70.2	51.7	20.2	18.0	16.8	39.8	80.8
19	16.4	25.0	11.7	11.3	19.6	10.7	13.2	17.0	14.4	9.7	16.4	50.2	114.5	108.7	74.5	23.8	97.9	52.6	78.8	72.1	75.0	178.7	129.5	100.0	55.1	178.7
20	399.9	183.2	23.5	12.9	9.4	6.4	4.8	12.3	72.8	131.6	105.1	33.7	56.9	36.0	36.3	61.9	31.6	34.2	82.6	186.3	222.2	504.4	126.8	59.0	101.4	504.4
21	434.3	239.4	70.8	50.4	16.7	8.5	11.5	87.4	183.8	207.1	365.9	177.3	52.7	154.9	68.0	103.0	44.1	30.4	46.2	42.6	24.9	52.2	87.6	18.2	107.4	434.3
22	12.9	15.9	7.2	25.1	67.2	31.7	37.1	37.7	55.8	81.2	76.3	60.0	32.9	48.4	18.4	53.0	9.2	7.9	11.6	7.1	7.0	9.7	9.4	7.0	30.4	81.2
23	9.9	12.7	14.7	12.9	15.5	15.9	10.9	7.0	6.2	9.2	8.7	16.7	27.3	8.0	13.4	11.2	8.9	14.1	15.2	19.5	4.0	31.8	38.0	13.5	14.4	38.0
24	16.2	34.0	20.9	21.2	18.4	12.5	23.5	10.4	34.0	23.6	36.6	52.7	53.5	53.3	48.9	44.0	42.6	54.7	23.9	44.4	37.4	11.4	6.9	32.4	54.7	18.4
25	25.1	22.1	18.6	8.7	8.5	12.4	11.6	8.3	15.7	16.9	27.9	13.9	31.4	17.5	15.6	9.5	25.6	33.4	28.3	27.9	10.1	41.0	19.6	32.8	20.1	41.0
26	10.3	5.5	12.6	7.4	6.1	4.3	9.6	6.9	4.0	4.5	8.6	21.1	37.6	52.9	28.3	3.3	31.8	18.2	13.0	50.8	57.2	15.6	6.9	8.1	17.7	57.2
27	33.6	20.5	29.4	39.8	20.3	24.2	28.1	27.9	89.0	131.7	C	C	C	C	C	60.3	56.2	51.3	25.6	27.9	27.0	24.6	23.3	42.5	41.2	131.7
28	20.3	25.0	17.5	23.6	17.7	8.9	14.0	23.4	23.9	23.9	31.7	57.4	90.6	60.8	111.6	136.0	72.0	58.9	69.7	52.7	46.5	13.5	15.9	5.3	42.5	136.0
29	17.1	5.9	1.2	2.2	4.0	4.3	8.9	10.0	80.9	33.3	P	P	P	P	P	P	95.6	155.1	120.0	46.6	92.5	47.8	53.5	-	-	-
30	23.5	25.5	10.8	7.6	5.3	10.4	35.0	103.9	98.7	108.9	159.2	117.7	90.3	75.1	34.3	51.4	59.1	56.0	40.8	39.0	9.5	26.0	41.5	78.3	54.5	159.2
NO.	30	30	30	30	30	30	30	30	30	30	28	28	28	28	28	29	29	30	30	30	30	30	30	30	708	99%
MEAN	62.4	59.2	52.9	43.6	38.1	39.2	41.1	48.8	74.7	92.8	98.3	72.6	60.0	65.8	47.9	68.8	60.2	50.9	53.7	52.8	54.7	73.6	48.1	42.5		
MAX	434.3	425.2	650.3	277.1	417.8	366.9	269.4	213.3	383.5	344.0	365.9	197.6	183.8	288.4	171.7	465.4	216.0	144.4	171.9	186.3	222.2	504.4	248.1	287.2		



Number of 24HR Exceedences	6
Number of Non-Zero Readings	707
Maximum 1-HR Average	650.3 UG/M3
Maximum 24-HR Average	161.3 UG/M3
Operational Time	713 HRS
Operational Uptime	99.0 %
Monthly Calibration	5
Standard Deviation	72.2
Monthly Average	58.3 UG/M3

Lagoon Temperature (°C) – November 2023

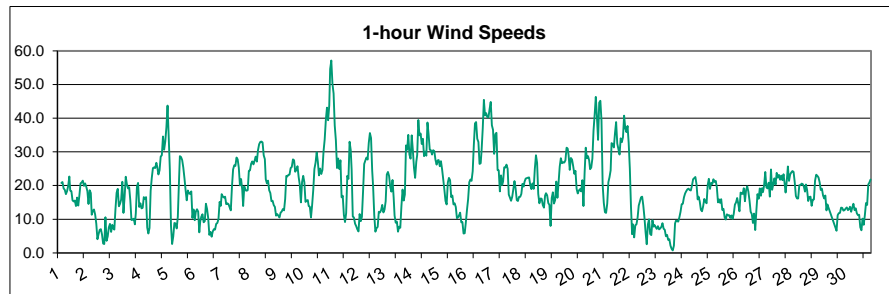
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	NRM	NRM	NRM	-3.3	-3.4	-3.7	-3.8	-3.5	-3.1	-2.0	0.0	2.4	4.3	6.2	6.8	6.9	6.0	5.1	4.5	4.3	3.4	2.6	2.4	2.2	1.6	6.9
2	2.1	1.9	1.6	1.5	1.6	1.4	1.3	1.3	1.3	0.0	-0.4	0.0	0.5	1.0	1.4	1.8	1.6	1.1	0.6	0.2	0.6	1.4	1.8	2.0	1.2	2.1
3	1.3	1.8	1.6	4.5	5.0	5.1	4.7	4.8	5.4	6.6	6.3	7.4	8.1	8.6	9.0	8.7	7.9	7.2	6.8	6.3	6.0	6.0	6.2	6.2	5.9	9.0
4	5.9	5.6	5.5	5.7	5.7	5.8	4.8	3.9	3.7	5.0	6.3	8.2	10.0	11.4	11.3	10.9	10.5	10.4	9.6	8.0	9.3	10.7	8.7	7.6	7.7	11.4
5	8.3	9.5	9.3	9.1	8.1	6.9	6.8	6.9	6.6	6.7	7.7	9.1	10.1	10.1	10.0	9.0	8.2	7.6	7.1	6.5	6.2	5.3	4.9	4.0	7.7	10.1
6	3.7	3.3	2.9	2.4	2.0	1.4	1.2	1.0	1.3	1.9	2.7	5.1	7.0	7.8	8.0	7.1	6.0	5.5	4.9	4.7	4.2	3.8	3.5	3.5	4.0	8.0
7	3.3	3.2	3.2	3.0	3.0	3.0	3.1	3.1	3.6	3.9	4.8	5.7	6.7	7.1	7.6	7.6	7.0	6.0	5.6	5.0	4.5	3.9	3.4	2.9	4.6	7.6
8	3.1	2.7	2.5	3.0	3.2	3.3	3.1	3.0	3.4	3.8	4.7	4.7	4.9	5.2	5.4	5.0	4.7	4.4	4.2	3.5	3.2	2.7	2.7	2.3	3.7	5.4
9	1.5	0.8	0.8	0.8	0.6	0.6	0.5	0.0	0.2	1.5	2.8	3.9	4.9	5.3	5.3	4.9	4.5	4.3	3.8	3.5	3.2	3.0	2.8	1.8	2.6	5.3
10	1.7	1.7	1.4	1.1	1.7	1.7	1.8	2.2	2.1	2.8	4.0	4.9	5.7	5.5	5.1	4.5	4.3	4.0	3.9	3.9	4.0	3.9	3.9	3.9	3.3	5.7
11	3.8	3.8	3.7	3.8	4.2	4.4	3.9	4.9	5.4	6.4	6.8	5.7	5.2	3.8	3.4	3.0	3.1	3.7	4.7	3.4	1.1	0.8	1.0	1.3	3.8	6.8
12	1.6	2.4	1.5	1.2	0.8	0.5	0.6	1.7	2.3	3.0	3.6	4.4	4.2	4.3	4.8	4.5	3.5	2.3	1.3	0.6	0.0	-0.3	-0.6	-1.2	2.0	4.8
13	-1.7	-1.9	-1.9	-1.3	-0.2	1.6	3.1	5.2	5.1	5.6	6.7	8.0	7.3	7.1	7.2	6.4	3.2	2.8	2.8	2.6	2.4	2.5	2.4	2.4	3.2	8.0
14	2.5	2.1	1.9	1.5	1.3	1.4	1.5	1.4	1.4	1.7	2.0	2.7	3.2	2.9	2.8	2.5	2.4	1.7	1.7	1.8	2.3	2.5	2.4	1.7	2.1	3.2
15	1.5	1.7	1.7	1.7	1.4	1.0	0.5	0.4	0.2	1.2	1.7	2.7	2.5	2.4	2.4	1.2	-2.4	-2.8	-2.9	-3.0	-3.1	-3.2	-3.3	-3.5	0.0	2.7
16	-4.4	-4.3	-4.1	-4.8	-5.4	-5.9	-6.3	-5.7	-4.4	-2.8	-1.2	0.5	1.9	2.7	3.0	3.3	3.7	3.8	3.5	3.4	2.9	3.2	3.4	3.3	-0.5	3.8
17	3.3	3.8	3.7	3.9	3.9	2.9	3.7	3.1	2.7	3.2	4.3	6.9	8.2	8.3	7.5	6.4	5.1	4.1	3.0	2.5	2.2	1.6	0.6	0.3	4.0	8.3
18	-0.4	-0.6	-0.9	-1.4	-1.7	-1.7	-1.8	-2.0	-2.2	-1.7	-0.4	1.8	3.1	4.9	6.2	6.8	6.7	5.5	4.5	3.8	3.0	2.3	2.1	1.8	1.6	6.8
19	1.9	1.9	1.5	1.6	1.5	1.4	1.9	2.0	1.9	2.2	3.5	5.6	6.8	7.3	8.3	8.3	7.6	7.0	6.7	6.4	6.3	6.3	5.7	5.5	4.5	8.3
20	4.9	3.7	3.2	3.4	3.3	3.0	2.9	1.9	1.8	1.9	3.3	4.4	5.0	5.6	5.3	4.8	4.8	4.8	4.6	4.2	4.1	4.2	4.9	4.7	3.9	5.6
21	4.6	4.0	2.9	1.4	0.4	0.1	0.5	1.8	2.7	3.8	5.4	7.2	9.8	12.2	14.0	13.7	12.7	11.9	11.8	11.4	10.9	10.8	9.9	8.7	7.2	14.0
22	7.7	6.6	6.2	4.8	2.5	1.9	1.3	2.2	0.5	0.8	1.6	2.4	2.5	2.0	0.4	-0.9	-0.8	-0.7	-0.7	-0.8	-1.0	-1.1	-1.3	-1.3	1.4	7.7
23	-1.3	-1.4	-1.6	-1.8	-1.8	-2.0	-2.1	-2.2	-2.4	-2.0	-1.7	-0.6	0.5	0.6	-1.6	-2.6	-3.9	-5.0	-5.5	-6.0	-6.6	-5.9	-6.1	-6.7	-2.9	0.6
24	-7.3	-7.6	-8.1	-8.5	-8.8	-9.3	-9.2	-10.0	-10.6	-10.7	-9.1	-7.0	-5.5	-4.5	-4.1	-4.2	-4.2	-4.7	-5.1	-5.8	-6.8	-7.0	-7.5	-7.9	-7.2	-4.1
25	-7.9	-7.9	-8.4	-8.0	-8.4	-8.8	-8.4	-8.2	-8.7	-8.8	-7.7	-5.9	-4.0	-3.8	-3.7	-3.1	-2.9	-3.4	-3.7	-4.9	-5.2	-5.9	-6.5	-7.3	-6.3	-2.9
26	-7.6	-8.0	-8.3	-8.6	-9.0	-9.1	-9.3	-9.2	-9.1	-8.9	-7.9	-6.4	-4.5	-4.1	-4.7	-4.2	-4.3	-5.2	-5.8	-6.5	-7.0	-7.4	-7.5	-7.4	-7.1	-4.1
27	-7.5	-7.4	-7.1	-7.0	-6.9	-6.6	-6.2	-6.1	-6.2	-6.1	-5.8	-5.0	-3.8	-3.6	-2.8	-2.2	-2.2	-2.5	-3.2	-4.0	-4.2	-4.6	-5.1	-5.7	-5.1	-2.2
28	-6.2	-6.5	-6.8	-7.0	-7.2	-7.5	-7.7	-8.2	-8.6	-8.6	-7.6	-5.6	-4.3	-3.5	-3.4	-3.6	-4.1	-4.3	-5.0	-5.9	-6.0	-6.6	-6.5	-7.1	-6.2	-3.4
29	-7.8	-8.2	-8.4	-8.6	-9.0	-9.3	-9.5	-9.9	-10.1	-26.7	P	P	P	P	P	P	P	-5.9	-7.0	-7.6	-8.1	-8.4	-8.5	-8.7	-	-
30	-8.9	-9.1	-9.4	-9.7	-10.0	-10.2	-10.4	-10.6	-10.7	-10.7	-9.9	-8.9	-7.6	-7.1	-7.0	-6.5	-7.2	-7.9	-8.1	-8.4	-8.5	-8.6	-8.8	-8.8	-8.9	-6.5
NO.	29	29	29	30	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	710	99%
MEAN	0.1	-0.1	-0.3	-0.5	-0.7	-0.9	-0.9	-0.8	-0.8	-0.9	0.9	2.2	3.2	3.6	3.7	3.4	2.8	2.0	1.6	1.1	0.8	0.6	0.4	0.0		
MAX	8.3	9.5	9.3	9.1	8.1	6.9	6.8	6.9	6.6	6.7	7.7	9.1	10.1	12.2	14.0	13.7	12.7	11.9	11.8	11.4	10.9	10.8	9.9	8.7		



Number of Non-Zero Readings	710
Maximum 1-HR Average	14.0 C
Maximum 24-HR Average	7.7 C
Monthly Calibration	0
Standard Deviation	5.4
Operational Time	710 HRS
Operational Uptime	98.6 %
Monthly Average	0.8 C

Lagoon Wind Speed (km/hr) – November 2023

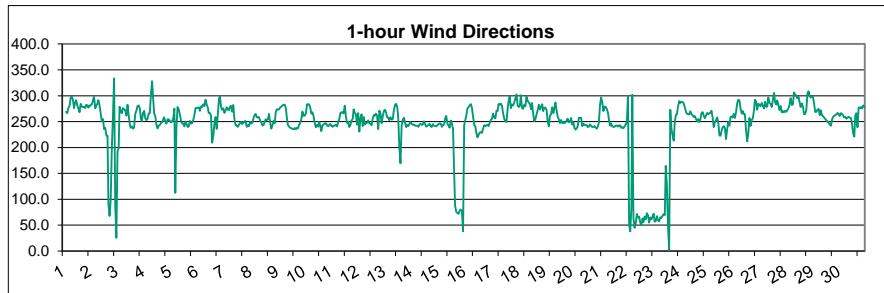
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	NRM	NRM	NRM	20.8	21.1	19.2	18.7	17.5	18.3	19.9	22.7	18.5	18.3	15.6	15.3	15.6	13.9	16.4	14.1	17.0	20.6	20.9	21.4	19.9	18.4	22.7
2	20.6	19.7	18.3	14.5	18.6	17.8	11.4	12.5	12.9	11.4	8.7	4.1	5.5	6.9	7.0	5.5	2.8	2.6	10.6	3.6	4.9	7.6	8.6	6.2	10.1	20.6
3	8.3	7.2	6.9	13.1	17.9	19.0	13.9	14.6	15.9	21.1	11.9	16.6	22.6	20.3	19.2	19.5	15.6	9.8	9.9	10.2	8.5	11.7	19.6	20.8	14.8	22.6
4	13.6	14.8	13.2	13.4	16.5	16.0	16.5	7.6	5.8	7.4	18.5	22.3	25.2	25.4	25.2	26.8	25.5	23.3	24.5	28.6	29.0	34.5	30.6	33.1	20.7	34.5
5	37.3	43.8	34.7	24.8	8.2	2.6	4.9	8.9	8.7	7.3	10.7	19.1	28.7	28.5	27.6	25.3	22.2	18.7	15.6	18.5	17.6	17.5	18.3	10.4	19.2	43.8
6	12.9	9.7	12.3	13.0	12.3	6.1	9.3	10.8	11.5	9.1	9.4	14.6	13.0	10.3	5.4	6.2	4.8	6.4	7.1	6.9	8.6	8.9	10.0	15.1	9.7	15.1
7	14.0	17.5	16.8	16.5	16.7	14.4	14.7	14.5	13.5	12.6	19.6	24.8	26.0	25.8	28.3	27.8	25.2	20.0	21.9	18.8	13.9	19.8	18.6	18.5	19.2	28.3
8	18.6	24.4	24.5	26.5	27.1	26.3	27.4	28.6	27.1	30.5	32.3	32.9	33.1	32.8	29.0	27.8	21.8	20.7	21.5	18.6	17.8	15.4	15.5	14.2	24.8	33.1
9	13.6	11.1	11.5	11.1	10.5	11.9	12.3	13.0	12.7	16.0	22.9	22.7	23.1	23.2	25.2	25.5	27.7	27.5	24.1	24.7	25.7	22.5	20.3	15.0	18.9	27.7
10	21.0	22.9	21.0	15.1	15.5	15.7	14.0	13.7	10.5	14.2	18.7	24.9	26.8	29.9	27.1	23.0	25.0	23.4	24.6	30.1	33.7	39.4	43.1	39.4	23.9	43.1
11	43.8	54.6	57.1	50.2	47.4	37.8	33.4	25.2	28.1	24.9	27.5	16.5	16.9	11.3	9.2	11.8	22.9	22.0	33.0	30.6	24.7	10.8	10.5	8.7	27.5	57.1
12	7.9	7.0	6.4	11.5	9.4	10.8	18.3	26.4	27.5	28.3	27.7	32.7	35.6	34.1	24.5	19.8	11.3	6.3	7.3	7.7	12.2	12.0	12.7	14.3	17.1	35.6
13	12.0	12.8	15.4	23.3	24.0	22.8	19.6	18.2	21.7	16.4	11.1	8.9	9.3	6.3	7.8	7.5	13.9	18.8	15.6	17.3	31.9	30.6	35.0	29.2	17.9	35.0
14	28.0	34.9	30.5	25.2	22.3	27.0	29.0	39.4	34.9	35.4	32.3	33.9	28.7	30.1	28.9	38.7	35.2	30.6	30.5	29.2	30.5	30.2	27.7	26.2	30.8	39.4
15	27.5	27.6	25.8	27.3	24.9	21.9	18.8	15.4	14.4	20.9	22.3	21.6	16.5	17.1	14.4	14.8	13.7	10.3	10.6	11.3	11.9	9.1	9.2	5.8	17.2	27.6
16	5.8	9.1	12.8	16.0	21.0	21.8	21.4	24.2	32.0	38.4	38.8	33.9	32.9	26.4	26.6	30.5	37.0	45.5	40.8	41.5	40.2	40.2	42.7	44.8	30.2	45.5
17	37.9	36.6	29.4	35.2	35.7	24.6	24.5	18.3	23.0	20.2	21.2	25.4	25.3	26.2	25.0	17.3	16.5	15.5	16.6	18.9	21.3	19.1	15.7	15.4	23.5	37.9
18	16.6	16.6	17.5	20.5	19.7	21.1	22.1	22.2	22.4	22.4	20.1	18.9	20.6	19.0	24.9	29.0	26.8	17.5	14.8	16.1	16.1	14.2	13.4	17.1	19.6	29.0
19	17.7	17.1	14.8	14.2	8.0	16.3	18.0	14.7	15.7	21.2	16.4	20.8	25.6	28.1	26.7	26.9	26.8	27.5	31.2	31.0	29.0	24.6	28.2	27.7	22.0	31.2
20	25.8	23.5	24.4	19.0	17.6	18.5	19.0	18.3	21.6	13.9	23.8	31.2	28.1	28.7	27.4	24.9	25.3	28.0	36.3	41.0	46.3	40.3	33.5	44.6	27.5	46.3
21	45.2	39.2	20.3	14.9	12.1	11.9	14.6	21.0	22.5	24.5	32.6	32.3	31.3	35.5	38.8	32.4	30.9	29.2	34.0	32.9	34.4	40.7	37.0	35.8	29.3	45.2
22	37.7	32.6	25.1	13.8	5.6	8.5	4.6	8.2	8.5	10.4	14.1	15.3	16.5	16.7	14.0	10.5	6.1	2.5	8.4	10.0	5.7	5.3	9.7	7.8	12.4	37.7
23	8.3	7.7	7.2	7.9	7.0	7.3	7.7	8.8	7.2	6.8	4.9	5.4	3.9	4.0	2.2	1.2	0.7	2.2	8.7	9.6	9.5	9.3	10.6	12.2	6.7	12.2
24	14.4	14.6	16.5	17.7	18.3	18.9	19.1	18.7	18.5	20.0	21.9	22.2	22.5	20.4	15.9	16.7	15.3	12.8	12.3	13.8	16.0	15.2	14.8	20.2	17.4	22.5
25	22.0	19.0	20.8	20.4	21.9	21.1	21.4	19.5	15.0	15.9	14.9	16.0	12.8	13.1	10.6	9.9	11.5	11.1	11.2	10.4	11.2	10.1	11.6	14.3	15.2	22.0
26	15.0	16.3	14.5	12.4	17.9	17.6	17.5	19.2	15.3	18.6	19.8	18.2	15.5	12.2	11.6	8.9	11.7	6.8	12.6	17.5	16.1	19.1	17.0	19.2	15.4	19.8
27	18.0	20.1	24.0	19.5	19.1	20.9	16.7	24.8	18.7	20.3	22.1	20.3	23.8	22.3	23.1	21.7	23.0	21.6	23.4	21.1	17.9	21.3	25.7	21.4	21.3	25.7
28	23.3	23.9	24.3	24.1	21.0	16.9	16.2	16.2	20.1	20.1	20.6	20.5	19.7	18.2	20.3	18.8	15.4	16.6	16.7	14.0	15.8	15.9	21.4	23.2	19.3	24.3
29	22.9	22.4	21.0	18.7	19.1	17.1	16.1	17.1	12.6	14.4	P	P	P	P	P	P	P	6.6	11.2	11.8	11.9	13.4	13.4	12.5	-	-
30	12.7	13.2	13.5	12.7	13.0	13.7	12.2	13.5	14.6	12.7	13.2	11.8	11.2	11.3	7.6	6.7	10.2	8.3	11.2	14.8	14.3	20.3	20.9	21.8	13.1	21.8
NO.	29	29	29	30	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	710	99%
MEAN	20.8	21.4	20.0	19.1	18.3	17.5	17.1	17.7	17.7	18.5	20.0	20.9	21.4	20.7	19.6	19.0	18.6	16.9	18.7	19.3	19.9	20.0	20.6	20.5		
MAX	45.2	54.6	57.1	50.2	47.4	37.8	33.4	39.4	34.9	38.4	38.8	33.9	35.6	35.5	38.8	38.7	37.0	45.5	40.8	41.5	46.3	40.7	43.1	44.8		



Number of Non-Zero Readings	710
Maximum 1-HR Average	57.1 KM/HR
Maximum 24-HR Average	30.8 KM/HR
Monthly Calibration	0
Standard Deviation	9.11
Operational Time	710 HRS
Operational Uptime	98.6 %
Monthly Average	19.3 KM/HR

Lagoon Wind Direction (°) – November 2023

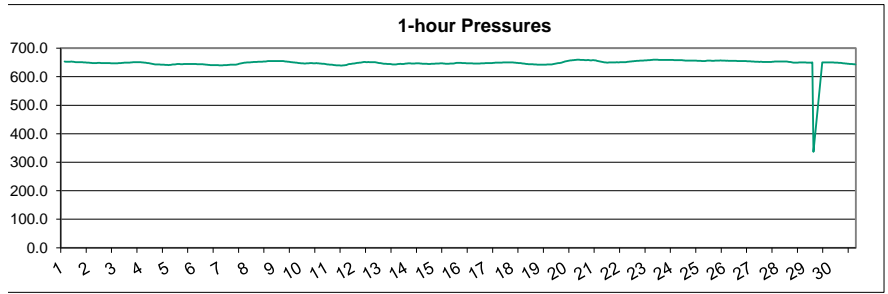
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	NRM	NRM	NRM	269.0	266.2	275.8	280.4	296.3	299.1	291.8	276.2	286.3	291.6	281.1	275.5	268.1	284.2	279.0	278.3	278.7	276.1	282.1	281.8	276.8	280.5	299.1
2	281.4	280.7	283.3	291.1	297.9	275.5	281.3	283.9	291.2	281.4	266.3	250.5	254.7	235.5	238.2	223.0	222.5	91.3	67.7	98.6	197.8	262.0	333.7	88.0	279.1	333.7
3	25.3	192.8	197.9	278.8	269.3	266.3	276.2	273.7	272.1	261.3	282.8	262.8	244.1	238.3	240.9	236.3	238.5	265.2	271.3	280.5	281.1	275.5	255.4	250.9	258.9	282.8
4	266.2	270.9	256.6	252.7	255.3	266.0	266.5	302.8	328.0	298.5	266.4	260.4	244.4	236.7	242.2	243.3	247.4	249.0	254.5	258.4	250.4	246.2	254.6	254.5	254.9	328.0
5	251.5	248.8	250.6	256.7	274.9	112.1	240.0	278.0	273.7	264.2	252.6	246.4	246.5	240.7	250.1	246.4	240.1	240.4	251.2	246.2	246.9	253.1	262.9	276.5	250.8	278.0
6	275.8	276.3	277.6	270.7	279.7	278.1	283.4	280.1	292.5	282.8	277.5	266.9	266.8	261.0	209.1	222.3	245.6	258.7	235.9	264.3	293.0	300.0	278.9	272.8	272.2	300.0
7	275.7	266.7	271.2	277.9	273.5	271.9	279.5	280.2	269.1	282.0	255.5	242.9	242.6	240.0	244.0	247.3	249.5	245.1	247.9	250.2	251.3	239.8	243.0	241.4	254.9	282.0
8	250.1	246.4	247.9	255.9	262.0	265.2	258.8	257.9	258.8	251.2	248.6	242.4	243.3	248.3	254.6	253.0	254.1	265.1	247.9	236.4	242.5	251.3	246.3	266.2	252.2	266.2
9	273.8	273.3	273.4	277.4	278.9	281.1	282.8	282.7	275.8	259.3	243.3	240.2	238.1	237.4	235.7	235.3	237.7	235.0	238.1	236.9	243.8	247.5	254.8	269.6	250.4	282.8
10	260.9	261.6	265.3	283.3	283.6	283.7	277.6	265.4	268.0	260.2	247.4	239.2	243.4	240.2	249.5	241.7	231.4	242.8	244.3	246.4	246.8	243.4	240.8	243.3	250.5	283.7
11	245.6	241.5	239.7	242.2	242.0	244.4	240.7	248.8	255.2	267.2	267.6	268.4	265.8	280.8	259.5	247.3	249.6	239.5	243.7	252.2	255.4	273.7	266.9	264.3	249.6	280.8
12	244.0	266.1	230.8	257.4	264.0	241.3	258.9	244.5	246.3	247.6	252.3	246.6	246.0	242.9	256.3	262.7	261.5	265.3	261.5	235.3	271.3	266.0	247.0	260.1	251.5	271.3
13	270.3	272.9	267.0	258.2	258.0	252.8	253.9	254.7	272.8	282.2	284.4	277.1	258.1	200.1	169.5	242.1	253.4	257.3	248.3	239.3	243.6	241.6	245.4	252.8	284.4	252.8
14	249.6	245.6	243.7	244.1	242.3	241.9	241.5	239.9	244.8	245.5	244.0	244.5	250.5	245.1	240.3	241.5	243.8	245.8	240.6	239.5	245.0	242.0	241.1	240.6	243.5	250.5
15	243.1	245.0	246.6	246.2	239.7	242.8	243.9	255.7	261.0	246.7	242.4	238.1	252.1	246.2	235.4	164.0	87.3	75.5	73.5	71.8	77.9	80.2	76.9	38.1	238.3	261.0
16	243.1	251.9	260.0	275.5	277.6	281.2	283.9	276.7	259.2	244.0	240.7	229.0	219.5	224.1	228.9	229.9	227.8	236.0	242.9	241.1	242.9	243.9	241.2	246.9	244.4	283.9
17	253.7	255.4	265.3	257.8	256.2	271.1	270.7	283.9	282.4	284.8	280.9	265.7	255.8	249.8	249.6	275.5	290.8	299.3	276.1	282.9	281.4	286.7	299.3	302.6	270.1	302.6
18	280.9	278.1	281.2	301.3	276.9	274.5	282.6	280.0	297.9	289.9	287.1	284.0	274.0	286.3	266.1	250.7	254.7	263.8	272.1	282.6	273.2	278.6	283.6	270.1	277.2	301.3
19	276.9	276.8	272.3	249.9	240.8	261.3	264.4	277.7	266.1	274.6	286.8	272.3	259.7	254.4	247.4	253.2	247.1	249.4	246.9	248.7	251.7	255.6	248.6	249.5	257.8	286.8
20	256.9	244.1	249.1	237.2	234.8	236.9	240.7	257.3	257.0	257.6	241.0	246.1	243.2	243.0	243.4	239.4	240.3	244.6	241.6	239.6	239.8	241.4	238.7	236.3	243.0	257.6
21	241.0	247.9	281.7	296.8	287.2	270.2	279.0	278.8	274.3	267.1	252.4	242.3	246.6	240.7	239.7	240.1	242.5	242.4	240.3	243.1	242.5	238.3	238.9	237.1	249.1	296.8
22	241.4	244.1	248.8	299.8	50.4	37.8	84.5	302.2	63.2	44.8	53.7	71.5	64.4	66.3	55.1	50.4	62.6	55.8	66.4	61.1	73.1	68.9	54.7	64.6	40.1	302.2
23	61.0	66.9	71.9	56.5	57.7	67.3	59.3	57.1	64.9	63.7	68.0	71.4	69.3	164.6	128.0	48.6	2.0	273.1	235.7	223.5	213.2	250.8	263.4	264.1	70.7	273.1
24	278.5	289.8	286.2	288.0	287.7	285.3	277.2	268.6	265.1	264.7	263.8	269.8	264.4	262.2	258.9	260.4	255.5	250.6	254.8	249.3	254.0	265.7	268.3	261.4	268.3	289.8
25	256.8	261.8	266.6	264.2	266.5	266.7	271.2	258.2	239.4	248.9	252.6	258.0	247.6	223.2	222.7	231.5	238.6	241.0	237.6	216.2	235.3	249.2	242.1	259.1	251.8	271.2
26	259.6	257.8	265.0	257.1	267.9	285.2	292.2	290.9	275.0	265.4	270.3	264.6	264.1	233.6	211.6	227.9	256.9	241.6	253.1	256.7	272.1	292.1	288.9	273.0	267.0	292.2
27	285.0	281.4	279.9	286.0	280.1	275.7	288.5	279.1	278.8	296.7	286.7	283.8	278.3	291.8	305.4	287.0	283.1	290.8	282.8	272.4	280.1	268.1	270.1	267.8	282.4	305.4
28	271.3	269.0	272.4	274.9	282.5	295.5	282.1	283.0	306.2	302.1	299.7	295.1	297.4	288.2	278.2	285.4	278.7	264.7	264.4	272.8	304.8	308.6	298.9	296.6	286.2	308.6
29	298.6	297.4	285.7	268.7	269.1	272.8	274.6	262.2	271.9	263.3	P	P	P	P	P	P	P	242.2	253.4	258.8	261.0	262.3	263.7	266.8	-	-
30	265.2	260.8	266.2	265.2	262.0	257.9	259.9	255.9	257.6	259.3	257.7	256.9	245.0	227.0	221.0	261.6	266.1	239.1	277.4	275.9	278.2	275.1	281.3	278.6	263.2	281.3
NO.	29	29	29	30	30	30	30	30	30	30	29	29	29	29	29	29	29	29	30	30	30	30	30	30	710	99%
MEAN	247.7	254.2	255.3	261.4	252.8	247.9	256.0	265.2	258.3	254.6	249.9	245.9	242.6	240.9	234.0	229.1	230.4	236.2	235.3	235.6	244.1	249.7	250.1	242.1		
MAX	298.6	297.4	286.2	301.3	297.9	295.5	292.2	302.8	328.0	302.1	299.7	295.1	297.4	291.8	305.4	287.0	290.8	299.3	282.8	282.9	304.8	308.6	333.7	302.6		



Number of Non-Zero Readings	710
Maximum 1-HR Average	334 degrees
Maximum 24-HR Average	286 degrees
Operational Time	710 HRS
Monthly Calibration	0
Operational Uptime	98.6 %
Standard Deviation	53.3
Monthly Average	246.7 degrees

Lagoon Pressure (mmHg) – November 2023

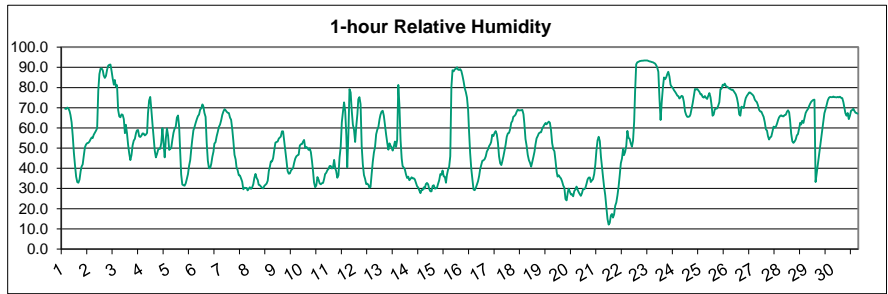
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	NRM	NRM	NRM	653.1	653.0	652.9	652.9	652.6	653.0	653.1	652.7	652.3	651.9	651.3	651.3	651.1	651.0	650.8	650.8	650.9	650.5	650.2	650.1	649.7	651.7	653.1
2	649.3	649.1	648.7	648.5	648.0	647.8	647.8	648.0	648.2	648.5	648.5	648.6	648.1	647.7	647.5	647.5	647.8	647.7	647.9	648.0	647.6	647.3	647.2	647.3	648.0	649.3
3	647.1	647.1	647.3	647.4	647.6	647.7	648.1	648.4	648.8	649.1	649.7	649.7	649.6	649.6	649.6	649.9	650.5	650.8	651.0	650.9	651.0	651.4	651.2	651.0	649.3	651.4
4	650.7	650.3	650.0	649.4	649.1	648.9	648.1	647.5	647.1	646.2	645.3	644.5	643.9	643.4	643.1	643.0	643.1	642.9	642.7	642.2	642.0	642.0	641.9	641.7	645.4	650.7
5	641.6	641.1	641.2	641.8	642.4	642.8	643.1	643.3	643.9	644.3	644.4	644.3	644.0	644.1	644.3	644.5	644.6	644.5	644.6	644.7	644.6	644.7	644.7	644.7	643.7	644.7
6	644.5	644.4	644.3	644.2	644.0	644.0	643.7	643.5	643.6	643.3	643.1	642.5	642.0	641.5	641.2	641.0	640.9	640.8	640.9	640.7	640.6	640.5	640.4	640.2	642.3	644.5
7	640.2	640.1	640.3	640.4	640.6	640.9	641.1	641.4	641.9	642.0	642.0	641.9	642.1	642.2	642.5	642.9	644.2	645.1	645.9	646.9	648.0	648.6	649.2	649.7	643.3	649.7
8	650.2	650.2	650.2	650.5	650.7	651.2	651.6	651.5	651.9	652.2	652.3	652.6	652.5	652.5	652.9	653.1	653.4	653.7	654.2	654.7	655.1	655.2	655.2	655.1	652.6	655.2
9	655.0	655.0	655.2	655.3	655.2	655.0	654.8	654.8	654.8	654.7	654.1	653.7	653.1	652.7	652.3	651.7	651.2	650.8	650.6	650.3	649.8	649.4	648.9	648.2	652.8	655.3
10	647.8	647.4	647.1	646.7	646.4	646.4	646.7	646.9	647.3	647.6	647.8	647.7	647.5	647.3	647.3	647.5	647.4	647.1	646.6	645.9	645.6	645.1	645.1	644.9	646.8	647.8
11	644.0	643.1	642.9	642.4	642.2	642.3	641.7	640.9	640.5	640.0	639.7	639.6	639.6	639.5	639.5	639.6	640.0	640.4	640.4	642.4	643.9	644.7	645.1	645.5	641.7	645.5
12	646.1	646.6	647.0	647.6	648.3	648.8	649.2	649.7	650.4	651.1	651.5	651.5	651.3	651.4	651.5	651.2	651.3	651.3	650.9	650.8	650.6	650.2	649.5	648.7	649.9	651.5
13	648.1	647.5	646.7	646.1	645.9	645.6	645.1	645.0	645.0	644.7	644.5	644.1	643.4	643.2	643.0	643.0	643.6	644.4	644.6	645.2	644.7	645.0	645.0	645.6	645.0	648.1
14	646.4	646.7	647.2	647.2	646.7	646.4	646.4	645.9	646.1	646.8	647.2	647.2	647.0	646.3	645.9	645.3	645.4	645.4	645.4	645.2	644.9	645.0	645.1	645.3	646.1	647.2
15	645.5	645.6	645.8	645.9	646.2	646.5	646.6	646.8	646.9	646.7	646.4	646.0	645.7	645.4	645.2	645.5	646.1	646.2	646.3	646.5	647.1	647.8	648.3	648.6	646.4	648.6
16	648.6	648.5	648.3	648.2	648.1	647.9	647.7	647.4	647.1	646.9	647.0	646.8	646.6	646.3	646.1	645.9	646.1	646.5	646.5	646.5	646.7	647.1	647.2	647.4	647.2	648.6
17	647.6	647.7	647.7	647.7	647.8	647.9	648.0	648.4	648.6	649.1	649.5	649.6	649.4	649.3	649.4	649.8	650.2	650.3	650.4	650.5	650.5	650.6	650.5	650.4	649.2	650.6
18	650.4	650.1	649.6	649.2	648.7	648.3	648.1	647.8	647.6	647.2	646.6	646.1	645.6	645.0	644.3	643.9	643.7	643.8	643.8	643.6	643.3	643.0	642.8	642.7	646.0	650.4
19	642.5	642.3	642.3	642.4	642.5	642.2	642.2	642.6	642.9	643.0	643.3	643.3	643.2	643.6	644.4	645.4	646.1	647.0	647.8	648.1	648.7	649.7	650.8	652.0	644.9	652.0
20	653.2	654.2	654.9	655.9	656.4	657.0	657.4	657.8	658.4	659.0	659.3	659.4	659.7	659.5	659.3	658.9	658.8	658.6	658.4	658.2	658.3	658.6	658.2	657.6	657.8	659.7
21	657.5	657.9	658.0	657.7	657.1	656.1	655.2	654.0	653.3	652.7	652.1	651.3	650.5	649.9	649.5	649.6	649.9	650.1	650.1	650.4	650.5	650.3	650.4	650.6	652.7	658.0
22	650.5	650.4	650.7	651.3	651.3	651.3	651.3	651.3	651.9	652.3	652.7	653.2	653.4	653.9	654.4	654.7	655.2	655.5	655.7	655.9	656.3	656.3	656.5	656.9	653.5	656.9
23	657.1	657.3	657.7	657.9	658.2	658.5	658.8	659.1	659.3	659.6	659.8	659.6	659.6	659.3	659.3	659.0	659.1	659.1	659.1	659.1	659.2	659.3	659.3	659.2	658.9	659.8
24	658.9	658.7	658.7	658.5	658.3	658.2	658.3	658.1	658.2	658.1	658.0	657.6	657.2	656.8	656.6	656.5	656.3	656.4	656.6	656.7	656.8	656.7	656.6	656.6	657.5	658.9
25	656.2	655.9	655.6	655.4	655.3	655.2	655.2	655.2	655.9	656.5	656.7	656.7	656.4	656.1	656.0	656.1	656.4	656.5	656.8	656.9	656.9	657.0	656.7	656.6	656.2	657.0
26	656.7	656.4	656.1	656.3	656.0	655.8	655.6	655.4	655.8	655.7	655.7	655.5	655.1	655.0	654.8	654.7	654.9	655.1	655.2	655.1	654.8	654.6	654.3	654.1	655.4	656.7
27	653.9	653.6	653.4	653.2	653.0	652.7	652.7	652.5	652.2	652.7	652.8	652.1	651.9	651.9	651.5	651.5	651.5	651.7	652.0	652.2	652.5	652.8	653.1	653.4	652.5	653.9
28	653.5	653.5	653.5	653.6	653.7	653.5	653.5	653.5	653.4	653.3	652.8	652.1	651.4	650.7	650.1	649.8	649.7	649.8	649.7	649.6	650.0	649.9	649.9	650.0	651.7	653.7
29	650.1	650.1	650.0	649.8	649.6	649.7	649.7	649.8	650.0	336.3	P	P	P	P	P	P	P	P	650.3	650.5	650.5	650.6	650.5	650.6	-	-
30	650.4	650.3	650.2	650.1	649.8	649.6	649.4	649.2	649.0	648.8	648.7	648.1	647.4	646.9	646.4	646.1	645.8	645.4	644.9	644.6	644.4	643.9	643.6	643.2	647.3	650.4
NO.	29	29	29	30	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	710	99%
MEAN	649.8	649.7	649.7	649.8	649.7	649.7	649.7	649.6	649.8	639.4	649.8	649.6	649.3	649.1	648.9	648.9	649.1	649.3	649.3	649.4	649.5	649.6	649.6	649.6	649.8	659.8
MAX	658.9	658.7	658.7	658.5	658.3	658.5	658.8	659.1	659.3	659.6	659.8	659.8	659.7	659.5	659.3	659.0	659.0	659.1	659.1	659.1	659.2	659.3	659.3	659.2	659.2	659.8



Number of Non-Zero Readings	710
Maximum 1-HR Average	660 MMHg
Maximum 24-HR Average	659 MMHg
Monthly Calibration	0
Standard Deviation	12.8
Operational Time	710 HRS
Operational Uptime	98.6 %
Monthly Average	649.1 MMHg

Lagoon Relative Humidity (%) – November 2023

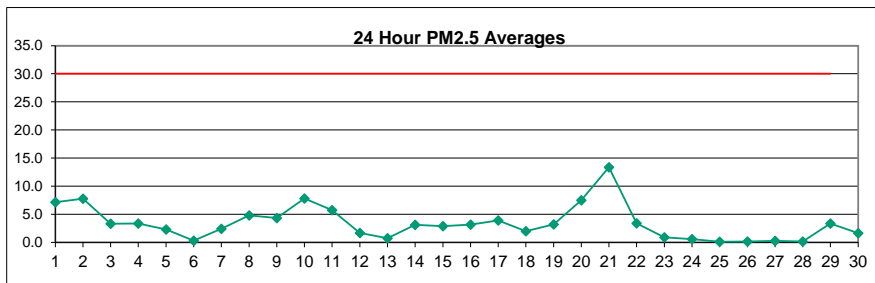
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	NRM	NRM	NRM	69.5	69.4	70.0	69.6	68.3	66.4	62.8	56.0	47.7	41.4	35.9	33.2	32.9	34.4	38.6	40.8	42.0	46.3	50.5	51.8	52.5	51.4	70.0	
2	52.6	53.3	54.4	55.3	55.0	56.6	57.6	58.7	59.9	78.4	86.7	89.3	89.5	88.5	86.0	84.8	85.8	88.8	90.8	91.3	91.4	88.1	84.3	81.5	75.4	91.4	
3	83.8	80.5	81.1	68.9	65.7	65.2	66.8	66.5	64.3	57.4	61.6	57.5	51.7	47.3	44.1	46.5	51.4	53.7	54.7	57.4	58.7	59.0	55.8	55.5	60.6	83.8	
4	56.1	57.3	57.2	56.3	56.7	57.5	67.2	73.6	75.4	69.0	61.9	55.4	48.8	45.4	47.1	49.2	49.8	49.6	52.7	59.9	52.4	45.4	54.7	59.8	56.6	75.4	
5	56.1	49.1	49.6	50.1	54.2	57.7	59.6	60.7	65.1	66.2	60.6	47.0	36.9	32.0	31.7	31.4	32.5	34.8	37.2	41.3	44.1	50.1	54.2	58.8	48.4	66.2	
6	60.4	62.4	64.2	65.8	66.7	69.0	69.8	71.6	70.7	67.4	65.5	52.5	43.8	40.1	40.0	42.2	45.7	48.3	52.3	52.9	55.8	58.1	60.6	61.7	57.8	71.6	
7	63.8	66.5	68.1	69.3	68.9	68.1	67.5	67.4	65.2	64.0	59.4	53.5	46.6	44.4	40.5	39.0	36.5	36.4	34.9	33.4	29.5	30.4	30.3	30.2	50.6	69.3	
8	29.0	29.8	30.6	29.9	30.6	32.0	35.4	37.3	35.2	34.2	31.9	31.6	31.0	30.4	30.0	31.2	31.9	32.4	33.9	38.8	40.4	43.4	43.3	45.1	34.1	45.1	
9	49.0	52.7	53.0	53.3	54.8	55.3	55.8	58.3	58.3	53.4	48.7	43.8	38.7	37.4	37.5	38.9	39.5	40.0	42.7	44.9	45.9	46.4	46.8	51.2	47.8	58.3	
10	51.9	52.0	53.1	54.1	50.1	50.5	50.1	49.1	49.9	48.0	43.5	38.1	32.9	30.6	31.5	35.7	34.4	32.5	32.1	32.6	32.7	34.9	37.2	37.8	41.5	54.1	
11	39.0	39.7	41.1	41.2	39.9	40.4	44.1	39.9	38.7	35.3	36.5	45.5	50.6	62.8	68.0	72.7	68.2	56.2	40.4	56.6	79.1	77.5	68.5	61.6	51.8	79.1	
12	59.1	53.0	60.8	67.0	74.2	75.3	71.8	50.9	41.9	36.6	34.7	32.2	32.4	31.8	30.3	30.8	37.1	43.1	47.8	50.5	56.9	59.1	60.6	64.4	50.1	75.3	
13	66.5	68.0	68.5	66.0	61.5	56.7	52.7	49.2	52.4	51.2	50.5	48.8	50.6	53.2	50.6	54.0	81.3	71.0	54.1	44.9	41.1	40.3	39.4	37.0	54.6	81.3	
14	35.2	35.9	34.1	34.7	35.5	35.0	35.1	34.6	32.9	31.2	30.5	29.0	27.7	29.2	29.3	30.6	30.0	32.2	32.8	32.0	29.7	28.5	28.6	31.3	31.9	35.9	
15	31.6	30.0	30.0	30.3	32.3	34.1	37.1	36.8	38.9	36.0	35.8	32.8	36.6	39.3	40.7	45.9	80.3	88.6	88.0	89.1	89.3	90.0	88.9	88.7	53.0	90.0	
16	89.2	88.3	85.9	83.0	79.7	77.7	75.0	68.9	58.7	47.5	39.9	34.6	29.5	29.2	30.3	31.9	33.6	36.3	39.4	41.6	43.7	44.0	44.5	45.9	53.3	89.2	
17	48.3	49.3	51.0	51.9	53.0	56.6	56.0	57.5	58.4	56.9	52.7	45.9	42.5	41.6	43.3	45.7	48.7	51.7	55.6	57.3	57.5	59.3	62.6	63.5	52.8	63.5	
18	65.4	65.9	66.6	68.1	69.0	68.7	68.7	68.7	69.0	66.9	62.1	54.6	51.1	46.7	44.1	42.7	40.8	43.2	45.6	48.3	51.7	54.9	55.9	57.3	57.3	69.0	
19	57.7	57.8	59.7	60.7	61.6	62.5	61.7	62.4	63.1	62.6	58.8	52.5	49.5	48.5	43.6	38.2	35.9	36.5	35.7	35.0	33.5	31.5	30.4	24.8	48.5	63.1	
20	24.2	27.9	29.9	28.5	27.0	27.2	26.2	28.8	29.5	31.0	29.3	28.0	27.3	26.4	27.7	29.8	29.6	30.3	32.3	34.6	35.4	35.4	33.1	34.0	29.7	35.4	
21	34.7	37.1	41.8	48.9	53.8	55.6	53.5	45.6	41.3	35.8	30.8	26.7	20.6	14.9	12.2	13.0	16.7	17.4	15.5	17.1	21.4	23.1	26.5	30.8	30.6	55.6	
22	36.4	42.5	44.8	49.7	46.6	48.2	51.1	58.5	55.0	54.6	52.3	50.7	53.8	63.1	77.7	91.5	92.5	92.8	93.0	93.2	93.3	93.3	93.4	93.4	67.6	93.4	
23	93.4	93.4	93.2	93.0	92.9	92.7	92.5	92.2	91.9	91.0	89.9	87.8	74.6	63.9	72.7	79.7	85.0	84.2	85.1	86.8	87.8	85.5	81.4	80.4	86.3	93.4	
24	79.8	78.8	78.0	77.1	76.0	75.7	74.6	75.2	76.0	75.6	72.8	68.3	66.5	65.4	65.5	65.7	66.6	69.4	72.2	75.7	79.3	79.0	79.2	78.6	78.3	79.8	
25	77.9	76.6	76.7	75.4	75.1	75.8	75.0	74.4	76.0	77.2	75.1	70.9	66.1	66.7	69.3	69.5	69.7	70.9	72.7	79.3	79.5	81.5	81.1	82.0	74.8	82.0	
26	80.7	80.4	80.0	79.5	79.3	78.8	79.0	78.1	77.5	76.6	74.7	71.9	66.7	66.0	70.5	70.2	69.8	73.0	74.8	76.0	76.7	77.6	77.5	76.9	75.5	80.7	
27	76.5	75.7	74.0	73.3	72.8	71.2	69.0	68.2	68.0	66.7	65.5	62.9	59.3	58.7	56.1	54.3	55.3	55.8	58.1	60.6	60.1	60.6	62.0	63.9	64.5	76.5	
28	65.2	65.9	66.3	65.8	65.7	66.3	66.5	68.0	68.8	67.7	63.9	57.2	53.4	52.5	53.3	54.3	56.3	57.0	59.7	62.5	61.7	63.6	62.4	64.9	62.0	68.8	
29	67.4	68.5	69.3	70.7	72.0	73.0	73.5	73.9	74.0	33.2	P	P	P	P	P	P	P	P	67.3	69.2	71.5	73.6	74.9	75.4	75.3	-	-
30	75.2	75.6	75.3	75.3	75.2	75.3	75.1	75.4	74.9	74.8	72.8	69.7	67.3	66.0	67.4	64.4	66.0	68.6	68.9	69.5	68.5	67.5	67.4	67.0	71.0	75.6	
NO.	29	29	29	30	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	710	99%	
MEAN	58.8	59.1	60.0	60.4	60.5	61.0	61.3	60.6	59.9	57.0	55.3	51.3	47.8	46.8	47.4	48.9	51.9	53.3	53.8	55.9	57.2	57.8	57.9	58.5			
MAX	93.4	93.4	93.2	93.0	92.9	92.7	92.5	92.2	91.9	91.0	89.9	89.3	89.5	88.5	86.0	91.5	92.5	92.8	93.0	93.2	93.3	93.3	93.4	93.4			



Number of Non-Zero Readings	710		
Maximum 1-HR Average	93.4 %		
Maximum 24-HR Average	86.3 %		
Monthly Calibration	0	Operational Time	710 HRS
Standard Deviation	18.3	Operational Uptime	98.6 %
		Monthly Average	56.0 %

Windridge PM_{2.5} (µg/m³) – November 2023

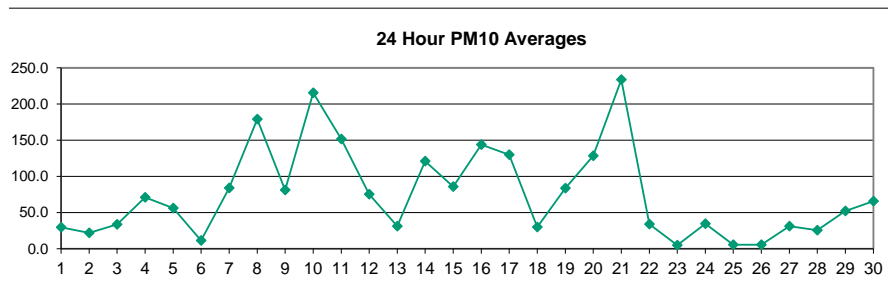
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	6.0	7.0	7.0	8.0	6.0	4.0	4.0	6.0	6.0	7.0	8.0	8.0	5.0	8.0	12.0	12.0	9.0	6.0	6.0	6.0	7.0	7.0	8.0	8.0	7.1	12.0
2	5.0	5.0	7.0	8.0	7.0	6.0	5.0	6.0	11.0	10.0	10.0	9.0	9.0	8.0	9.0	15.0	12.0	9.0	6.0	3.0	7.0	7.0	6.0	6.0	7.8	15.0
3	5.0	4.0	5.0	4.0	3.0	3.0	6.0	3.0	2.0	1.0	0.0	0.0	9.0	7.0	3.0	5.0	10.0	5.0	0.0	0.0	0.0	0.0	1.0	3.0	3.3	10.0
4	1.0	0.0	2.0	2.0	1.0	1.0	3.0	1.0	0.0	0.0	1.0	4.0	6.0	6.0	6.0	10.0	5.0	0.0	5.0	6.0	6.0	4.0	4.0	4.0	3.3	10.0
5	2.0	1.0	2.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	1.0	4.0	11.0	6.0	1.0	3.0	3.0	4.0	3.0	4.0	3.0	0.0	0.0	2.3	11.0
6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.3	2.0
7	2.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	1.0	2.0	4.0	4.0	6.0	7.0	6.0	4.0	0.0	2.0	6.0	3.0	1.0	1.0	0.0	2.4	7.0
8	3.0	2.0	3.0	5.0	6.0	4.0	3.0	5.0	7.0	5.0	9.0	9.0	10.0	7.0	6.0	2.0	3.0	3.0	2.0	2.0	2.0	5.0	3.0	3.0	4.8	10.0
9	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	7.0	5.0	3.0	7.0	8.0	11.0	9.0	13.0	12.0	9.0	7.0	3.0	1.0	4.3	13.0
10	2.0	5.0	2.0	0.0	1.0	1.0	2.0	6.0	7.0	5.0	7.0	16.0	10.0	13.0	15.0	10.0	9.0	5.0	2.0	14.0	14.0	12.0	21.0	8.0	7.8	21.0
11	19.0	35.0	21.0	11.0	7.0	5.0	4.0	1.0	0.0	2.0	3.0	4.0	2.0	0.0	0.0	0.0	4.0	8.0	8.0	4.0	0.0	0.0	0.0	0.0	5.8	35.0
12	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.0	11.0	6.0	6.0	5.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.7	11.0
13	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	3.0	3.0	3.0	0.7	3.0
14	2.0	2.0	2.0	1.0	0.0	0.0	1.0	4.0	3.0	12.0	7.0	5.0	6.0	4.0	2.0	6.0	4.0	0.0	0.0	0.0	5.0	4.0	3.0	2.0	3.1	12.0
15	1.0	4.0	4.0	2.0	1.0	0.0	1.0	3.0	2.0	26.0	8.0	4.0	3.0	4.0	2.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	26.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	4.0	5.0	6.0	2.0	0.0	0.0	4.0	7.0	6.0	5.0	5.0	6.0	7.0	5.0	5.0	6.0	3.2	7.0
17	6.0	8.0	7.0	4.0	3.0	4.0	6.0	2.0	1.0	2.0	3.0	3.0	2.0	7.0	5.0	7.0	3.0	1.0	1.0	2.0	7.0	5.0	2.0	2.0	3.9	8.0
18	3.0	4.0	2.0	3.0	3.0	2.0	1.0	3.0	3.0	4.0	1.0	0.0	1.0	0.0	0.0	0.0	6.0	4.0	4.0	3.0	0.0	0.0	0.0	0.0	2.0	6.0
19	3.0	3.0	0.0	0.0	0.0	1.0	0.0	3.0	4.0	3.0	3.0	1.0	1.0	6.0	4.0	1.0	3.0	5.0	10.0	8.0	6.0	2.0	3.0	7.0	3.2	10.0
20	6.0	4.0	0.0	0.0	1.0	4.0	3.0	3.0	3.0	1.0	2.0	9.0	8.0	8.0	13.0	13.0	13.0	16.0	17.0	12.0	12.0	11.0	9.0	12.0	7.5	17.0
21	11.0	12.0	5.0	0.0	0.0	1.0	0.0	3.0	7.0	15.0	20.0	24.0	22.0	24.0	28.0	25.0	14.0	16.0	32.0	15.0	19.0	11.0	11.0	6.0	13.4	32.0
22	7.0	11.0	14.0	11.0	5.0	0.0	1.0	4.0	3.0	4.0	4.0	3.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0	3.0	2.0	3.0	3.0	3.0	3.4	14.0
23	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	2.0	4.0	1.0	0.0	0.0	0.0	4.0	4.0	0.0	0.0	2.0	1.0	0.0	0.0	0.9	4.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	5.0	3.0	1.0	3.0	1.0	0.0	0.0	0.6	5.0
25	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X	X	X	0.0	0.0	0.1	2.0
26	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0	0.0	C	C	2.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.3	2.0
28	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	6.0	4.0	4.0	5.0	17.0	9.0	17.0	4.0	3.0	3.0	2.0	1.0	1.0	3.3	17.0
30	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.0	5.0	7.0	5.0	0.0	3.0	5.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.6	7.0
NO.	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	714	99.4%
MEAN	3.0	3.8	2.9	2.1	1.6	1.3	1.4	2.1	2.5	3.8	3.9	4.5	4.3	5.0	4.9	5.0	4.6	4.2	4.1	3.8	4.3	3.2	3.0	2.6	7.5	
MAX	19.0	35.0	21.0	11.0	7.0	6.0	6.0	6.0	11.0	26.0	20.0	24.0	22.0	24.0	28.0	25.0	14.0	17.0	32.0	15.0	19.0	12.0	21.0	12.0	17.4	70.0



Number of 24HR Exceedences	0	Proposed Guideline	
Number of Non-Zero Readings	446		
Maximum 1-HR Average	35.0 UG/M3		
Maximum 24-HR Average	13.4 UG/M3		
Monthly Calibration	2	Operational Time	716 HRS
Standard Deviation	4.7	Operational Uptime	99.4 %
		Monthly Average	3.4 UG/M3

Windridge PM₁₀ (µg/m³) – November 2023

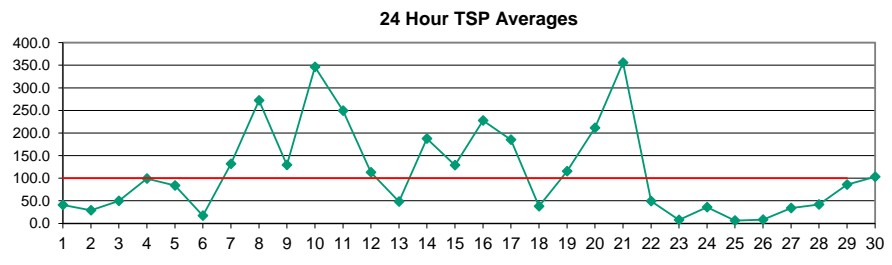
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	6.0	5.0	10.0	11.0	19.0	15.0	17.0	9.0	15.0	18.0	63.0	31.0	31.0	55.0	60.0	95.0	33.0	13.0	10.0	16.0	27.0	98.0	28.0	27.0	29.7	98.0
2	20.0	22.0	21.0	12.0	21.0	18.0	18.0	18.0	26.0	33.0	18.0	16.0	18.0	44.0	31.0	65.0	24.0	13.0	13.0	14.0	14.0	15.0	20.0	9.0	21.8	65.0
3	11.0	6.0	5.0	6.0	8.0	59.0	32.0	30.0	21.0	42.0	4.0	33.0	86.0	79.0	49.0	70.0	81.0	28.0	17.0	9.0	6.0	16.0	36.0	72.0	33.6	86.0
4	11.0	5.0	22.0	26.0	21.0	40.0	61.0	2.0	7.0	11.0	115.0	71.0	132.0	107.0	131.0	121.0	104.0	63.0	72.0	95.0	198.0	139.0	56.0	90.0	70.8	198.0
5	70.0	191.0	87.0	62.0	0.0	1.0	1.0	0.0	9.0	12.0	7.0	69.0	99.0	156.0	35.0	56.0	63.0	60.0	50.0	88.0	86.0	68.0	63.0	10.0	56.0	191.0
6	6.0	2.0	4.0	3.0	4.0	4.0	1.0	1.0	7.0	11.0	7.0	24.0	22.0	23.0	30.0	43.0	12.0	13.0	8.0	7.0	7.0	4.0	4.0	22.0	11.2	43.0
7	17.0	24.0	36.0	6.0	22.0	5.0	38.0	27.0	27.0	11.0	78.0	124.0	118.0	189.0	258.0	156.0	158.0	68.0	141.0	141.0	70.0	73.0	114.0	113.0	83.9	258.0
8	70.0	140.0	182.0	374.0	226.0	178.0	145.0	365.0	267.0	181.0	247.0	273.0	331.0	295.0	168.0	205.0	102.0	101.0	102.0	71.0	88.0	59.0	72.0	57.0	179.1	374.0
9	15.0	3.0	4.0	3.0	2.0	2.0	5.0	12.0	53.0	114.0	127.0	124.0	116.0	136.0	128.0	113.0	131.0	145.0	204.0	122.0	115.0	85.0	106.0	82.0	81.1	204.0
10	133.0	115.0	60.0	10.0	20.0	24.0	45.0	59.0	40.0	77.0	131.0	312.0	419.0	280.0	485.0	205.0	127.0	126.0	253.0	485.0	485.0	431.0	485.0	366.0	215.5	485.0
11	485.0	485.0	485.0	183.0	151.0	98.0	109.0	117.0	151.0	276.0	171.0	65.0	29.0	16.0	12.0	32.0	61.0	73.0	340.0	263.0	38.0	0.0	0.0	1.0	151.7	485.0
12	1.0	14.0	7.0	25.0	5.0	4.0	13.0	122.0	138.0	214.0	170.0	271.0	194.0	167.0	99.0	113.0	80.0	24.0	4.0	4.0	34.0	8.0	16.0	82.0	75.4	271.0
13	8.0	9.0	35.0	7.0	41.0	21.0	12.0	17.0	43.0	30.0	16.0	29.0	25.0	22.0	4.0	5.0	30.0	25.0	15.0	36.0	75.0	50.0	92.0	97.0	31.0	97.0
14	43.0	106.0	46.0	27.0	15.0	17.0	223.0	219.0	244.0	386.0	158.0	155.0	216.0	93.0	155.0	161.0	91.0	50.0	72.0	67.0	138.0	88.0	75.0	55.0	120.8	386.0
15	75.0	107.0	47.0	25.0	43.0	58.0	108.0	77.0	143.0	404.0	301.0	189.0	97.0	90.0	75.0	47.0	80.0	19.0	15.0	11.0	18.0	11.0	10.0	11.0	85.9	404.0
16	8.0	9.0	14.0	13.0	16.0	26.0	89.0	360.0	337.0	147.0	91.0	34.0	25.0	64.0	192.0	468.0	127.0	155.0	156.0	212.0	297.0	167.0	201.0	242.0	143.8	468.0
17	216.0	339.0	317.0	93.0	106.0	102.0	222.0	59.0	121.0	87.0	107.0	196.0	102.0	122.0	121.0	131.0	55.0	51.0	46.0	162.0	235.0	60.0	39.0	32.0	130.0	339.0
18	19.0	23.0	19.0	13.0	14.0	14.0	87.0	16.0	17.0	17.0	23.0	30.0	26.0	29.0	64.0	72.0	98.0	50.0	35.0	17.0	8.0	9.0	7.0	9.0	29.8	98.0
19	7.0	6.0	10.0	8.0	5.0	5.0	8.0	9.0	6.0	4.0	23.0	43.0	39.0	69.0	138.0	73.0	163.0	118.0	188.0	304.0	210.0	107.0	138.0	325.0	83.6	325.0
20	76.0	56.0	28.0	40.0	26.0	40.0	43.0	35.0	48.0	46.0	91.0	165.0	125.0	157.0	174.0	161.0	158.0	152.0	226.0	268.0	327.0	291.0	109.0	239.0	128.4	327.0
21	289.0	132.0	35.0	8.0	5.0	3.0	62.0	150.0	135.0	356.0	377.0	411.0	338.0	417.0	485.0	460.0	222.0	204.0	485.0	266.0	377.0	169.0	130.0	90.0	233.6	485.0
22	135.0	131.0	114.0	78.0	25.0	15.0	32.0	44.0	74.0	23.0	17.0	23.0	35.0	14.0	40.0	2.0	3.0	2.0	1.0	0.0	0.0	0.0	1.0	3.0	33.8	135.0
23	5.0	3.0	6.0	4.0	1.0	1.0	3.0	3.0	0.0	0.0	12.0	15.0	9.0	3.0	0.0	6.0	7.0	6.0	4.0	3.0	8.0	6.0	5.0	5.0	4.8	15.0
24	15.0	27.0	60.0	114.0	79.0	97.0	29.0	72.0	19.0	23.0	22.0	29.0	31.0	22.0	24.0	24.0	16.0	25.0	8.0	16.0	42.0	8.0	6.0	19.0	34.5	114.0
25	3.0	11.0	8.0	6.0	13.0	7.0	4.0	3.0	1.0	0.0	3.0	4.0	4.0	8.0	7.0	6.0	7.0	5.0	6.0	X	X	X	4.0	4.0	5.4	13.0
26	5.0	2.0	0.0	1.0	4.0	3.0	2.0	0.0	0.0	2.0	3.0	5.0	5.0	4.0	14.0	8.0	4.0	1.0	1.0	42.0	5.0	3.0	2.0	13.0	5.4	42.0
27	59.0	22.0	14.0	107.0	24.0	11.0	7.0	70.0	75.0	44.0	38.0	24.0	C	C	C	38.0	33.0	13.0	10.0	9.0	19.0	9.0	16.0	11.0	31.1	107.0
28	X	3.0	10.0	7.0	5.0	7.0	13.0	11.0	9.0	10.0	24.0	64.0	64.0	64.0	84.0	46.0	37.0	39.0	21.0	34.0	10.0	13.0	7.0	3.0	25.4	84.0
29	2.0	0.0	1.0	4.0	3.0	2.0	2.0	32.0	4.0	39.0	109.0	165.0	87.0	68.0	50.0	114.0	158.0	156.0	64.0	38.0	53.0	40.0	39.0	22.0	52.2	165.0
30	9.0	10.0	9.0	5.0	8.0	16.0	193.0	240.0	162.0	184.0	164.0	67.0	40.0	140.0	64.0	24.0	31.0	23.0	19.0	8.0	8.0	22.0	43.0	88.0	65.7	240.0
NO.	29	30	30	30	30	30	30	30	30	30	30	30	30	29	29	29	30	30	30	30	29	29	30	30	713	99.4%
MEAN	62.7	66.9	56.5	42.7	31.1	29.8	54.1	72.6	73.3	93.4	90.6	102.0	98.7	101.1	109.6	104.0	76.5	60.7	86.2	96.8	103.4	70.7	64.1	73.3	42.0	
MAX	485.0	485.0	485.0	374.0	226.0	178.0	223.0	365.0	337.0	404.0	377.0	411.0	419.0	417.0	485.0	468.0	222.0	204.0	485.0	485.0	485.0	431.0	485.0	366.0	91.1	433.3



Number of Non-Zero Readings	698		
Maximum 1-HR Average	485.0 UG/M3		
Maximum 24-HR Average	233.6 UG/M3		
Monthly Calibration	3	Operational Time	716 HRS
Standard Deviation	98.57	Operational Uptime	99.4 %
		Monthly Average	75.7 UG/M3

Windridge TSP ($\mu\text{g}/\text{m}^3$) – November 2023

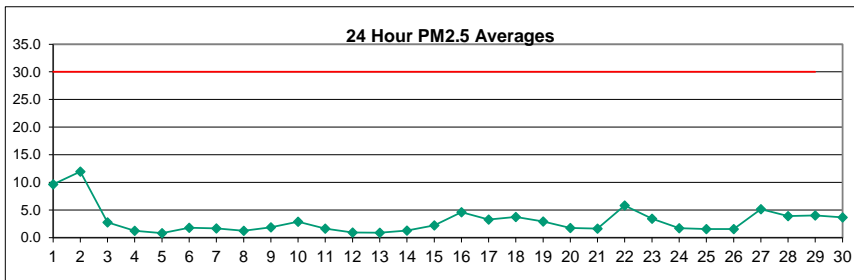
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	12.0	8.0	11.0	13.0	17.0	17.0	19.0	22.0	19.0	20.0	90.0	37.0	40.0	90.0	93.0	138.0	52.0	10.0	13.0	22.0	31.0	133.0	43.0	29.0	40.8	138.0
2	29.0	33.0	34.0	18.0	18.0	26.0	23.0	29.0	28.0	57.0	29.0	23.0	18.0	76.0	43.0	88.0	24.0	15.0	13.0	11.0	11.0	16.0	22.0	6.0	28.8	88.0
3	7.0	13.0	10.0	7.0	17.0	76.0	48.0	42.0	40.0	71.0	7.0	49.0	119.0	114.0	80.0	106.0	111.0	38.0	20.0	15.0	8.0	29.0	64.0	98.0	49.5	119.0
4	17.0	3.0	33.0	32.0	39.0	57.0	79.0	5.0	15.0	15.0	153.0	104.0	169.0	139.0	169.0	176.0	139.0	107.0	109.0	123.0	298.0	209.0	82.0	110.0	99.3	298.0
5	89.0	265.0	121.0	94.0	0.0	6.0	5.0	5.0	15.0	17.0	12.0	91.0	143.0	235.0	60.0	82.0	114.0	113.0	77.0	139.0	132.0	93.0	92.0	13.0	83.9	265.0
6	8.0	4.0	0.0	0.0	7.0	3.0	3.0	4.0	8.0	8.0	8.0	35.0	41.0	41.0	42.0	88.0	22.0	14.0	8.0	11.0	11.0	7.0	8.0	30.0	17.1	88.0
7	21.0	34.0	45.0	3.0	23.0	9.0	52.0	41.0	44.0	23.0	120.0	201.0	192.0	325.0	364.0	243.0	261.0	111.0	213.0	217.0	130.0	104.0	186.0	201.0	131.8	364.0
8	110.0	233.0	267.0	543.0	306.0	238.0	225.0	506.0	407.0	253.0	390.0	446.0	521.0	444.0	243.0	298.0	175.0	176.0	187.0	121.0	146.0	70.0	128.0	102.0	272.3	543.0
9	22.0	11.0	6.0	0.0	6.0	8.0	18.0	18.0	85.0	180.0	213.0	175.0	180.0	225.0	206.0	169.0	209.0	235.0	350.0	191.0	154.0	136.0	173.0	133.0	129.3	350.0
10	188.0	173.0	74.0	13.0	26.0	34.0	72.0	97.0	54.0	119.0	200.0	498.0	619.0	485.0	697.0	324.0	210.0	221.0	417.0	755.0	957.0	620.0	985.0	476.0	346.4	985.0
11	851.0	985.0	985.0	323.0	246.0	137.0	160.0	174.0	209.0	366.0	223.0	93.0	42.0	23.0	19.0	52.0	95.0	108.0	491.0	349.0	43.0	0.0	3.0	7.0	249.3	985.0
12	2.0	13.0	7.0	20.0	4.0	6.0	20.0	173.0	185.0	334.0	239.0	425.0	303.0	248.0	157.0	168.0	150.0	57.0	5.0	6.0	59.0	10.0	24.0	100.0	113.1	425.0
13	11.0	27.0	56.0	15.0	53.0	30.0	23.0	33.0	60.0	37.0	24.0	44.0	38.0	40.0	6.0	9.0	35.0	33.0	23.0	46.0	134.0	87.0	160.0	131.0	48.1	160.0
14	78.0	153.0	76.0	51.0	39.0	34.0	285.0	352.0	353.0	555.0	258.0	263.0	311.0	158.0	229.0	304.0	159.0	78.0	115.0	103.0	191.0	126.0	125.0	111.0	187.8	555.0
15	134.0	153.0	68.0	35.0	70.0	73.0	167.0	127.0	256.0	552.0	466.0	340.0	140.0	137.0	121.0	96.0	101.0	20.0	6.0	9.0	10.0	7.0	5.0	4.0	129.0	552.0
16	4.0	9.0	11.0	19.0	24.0	26.0	116.0	403.0	447.0	235.0	123.0	39.0	40.0	114.0	393.0	625.0	290.0	252.0	303.0	429.0	633.0	315.0	255.0	353.0	227.4	633.0
17	361.0	493.0	283.0	134.0	177.0	145.0	346.0	83.0	160.0	143.0	151.0	343.0	165.0	222.0	209.0	207.0	73.0	29.0	75.0	175.0	305.0	88.0	40.0	31.0	184.9	493.0
18	26.0	39.0	22.0	14.0	27.0	20.0	19.0	19.0	11.0	16.0	31.0	41.0	31.0	52.0	108.0	119.0	135.0	70.0	48.0	24.0	9.0	10.0	7.0	5.0	37.6	135.0
19	13.0	12.0	9.0	4.0	0.0	1.0	8.0	7.0	6.0	7.0	22.0	60.0	68.0	121.0	200.0	96.0	220.0	173.0	311.0	250.0	304.0	173.0	534.0	534.0	115.5	534.0
20	113.0	82.0	39.0	66.0	41.0	66.0	78.0	52.0	69.0	82.0	156.0	287.0	212.0	261.0	266.0	269.0	268.0	271.0	426.0	518.0	436.0	353.0	213.0	449.0	211.4	518.0
21	405.0	215.0	51.0	9.0	6.0	2.0	79.0	222.0	177.0	490.0	541.0	595.0	494.0	728.0	785.0	700.0	344.0	324.0	796.0	399.0	562.0	267.0	200.0	144.0	355.6	796.0
22	191.0	194.0	153.0	93.0	39.0	25.0	49.0	74.0	113.0	36.0	31.0	38.0	51.0	21.0	38.0	8.0	5.0	6.0	4.0	2.0	2.0	4.0	2.0	6.0	49.4	194.0
23	6.0	3.0	3.0	6.0	5.0	4.0	2.0	0.0	1.0	7.0	22.0	37.0	11.0	6.0	6.0	3.0	16.0	8.0	4.0	2.0	13.0	9.0	5.0	6.0	7.7	37.0
24	23.0	25.0	46.0	70.0	54.0	73.0	19.0	50.0	21.0	31.0	34.0	48.0	45.0	45.0	46.0	41.0	27.0	37.0	5.0	26.0	53.0	12.0	7.0	23.0	35.9	5.0
25	9.0	14.0	8.0	6.0	8.0	5.0	1.0	8.0	4.0	0.0	1.0	9.0	7.0	9.0	7.0	6.0	6.0	6.0	9.0	X	X	X	4.0	5.0	6.3	14.0
26	4.0	4.0	4.0	3.0	2.0	3.0	2.0	0.0	0.0	2.0	10.0	7.0	7.0	12.0	17.0	8.0	7.0	4.0	2.0	60.0	15.0	0.0	6.0	23.0	8.4	60.0
27	10.0	14.0	23.0	11.0	20.0	20.0	15.0	92.0	106.0	35.0	43.0	36.0	C	C	55.0	62.0	58.0	17.0	23.0	21.0	10.0	14.0	40.0	16.0	33.7	106.0
28	X	6.0	14.0	16.0	10.0	8.0	19.0	9.0	17.0	26.0	54.0	138.0	66.0	132.0	141.0	49.0	51.0	74.0	40.0	63.0	12.0	9.0	5.0	3.0	41.8	141.0
29	3.0	0.0	0.0	5.0	4.0	3.0	1.0	49.0	12.0	64.0	174.0	249.0	125.0	127.0	78.0	269.0	351.0	215.0	78.0	48.0	67.0	55.0	54.0	27.0	85.8	351.0
30	10.0	9.0	6.0	11.0	8.0	22.0	268.0	338.0	226.0	270.0	255.0	103.0	53.0	255.0	114.0	55.0	56.0	34.0	67.0	14.0	10.0	44.0	79.0	169.0	103.2	338.0
NO.	29	30	30	30	30	30	30	30	30	30	30	30	29	29	30	30	30	30	30	29	29	29	30	30	714	99.4%
MEAN	95.1	107.6	82.2	54.5	43.2	39.2	74.0	101.1	104.9	135.0	136.0	161.8	146.6	168.4	166.4	161.9	125.5	95.2	141.3	143.1	163.7	103.4	106.3	111.5		
MAX	851.0	985.0	985.0	543.0	306.0	238.0	346.0	506.0	447.0	555.0	541.0	595.0	619.0	728.0	785.0	700.0	351.0	324.0	796.0	755.0	957.0	620.0	985.0	534.0		



Number of 24HR Exceedences	14	Proposed Guideline
Number of Non-Zero Readings	701	
Maximum 1-HR Average	985.0 UG/M3	
Maximum 24-HR Average	355.6 UG/M3	
IZS Calibration Time		Operational Time 716 HRS
Down Time	0	Operational Uptime 99.4 %
Standard Deviation	157.4	Monthly Average 115.2 UG/M3

West PM_{2.5} (µg/m³) – November 2023

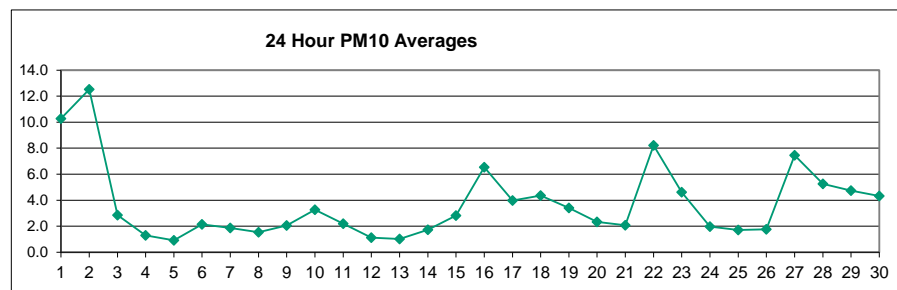
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.6	9.5	9.3	9.2	9.1	9.3	9.6	9.8	10.1	10.8	10.9	10.7	10.3	9.8	9.3	8.5	8.5	8.6	8.4	8.8	9.7	10.5	10.7	10.6	9.7	10.9
2	10.4	10.5	10.7	11.2	11.5	12.0	12.6	13.5	14.1	14.5	14.1	13.4	13.0	12.9	13.4	13.5	14.4	10.6	6.7	11.1	11.0	9.6	8.4	11.9	14.5	
3	6.4	5.7	4.9	4.2	3.9	3.9	3.7	3.8	3.0	2.5	2.9	3.3	2.5	1.8	1.1	1.2	1.5	1.2	1.1	1.3	1.6	1.6	1.5	1.7	2.8	6.4
4	1.6	1.7	1.7	1.8	1.7	1.7	1.8	2.0	1.7	1.5	1.4	1.2	0.6	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1.2	1.4	1.2	1.2	1.2	2.0
5	1.1	1.1	1.1	1.0	0.8	0.7	0.8	0.8	0.7	0.9	0.6	0.6	0.5	0.6	0.8	0.9	0.7	0.7	0.8	0.9	0.8	0.7	0.9	0.9	0.8	1.1
6	1.4	1.8	1.5	1.0	1.1	1.1	1.4	1.4	1.6	1.7	2.0	1.5	1.4	1.4	1.5	1.6	2.3	2.8	2.6	2.3	2.6	2.6	2.2	2.1	1.8	2.8
7	2.2	2.1	2.0	1.9	1.8	1.6	1.6	1.6	1.7	1.8	2.0	1.9	1.6	1.6	1.6	1.0	1.3	1.4	1.3	1.4	1.5	1.5	X	X	1.7	2.2
8	X	X	1.3	1.9	1.3	1.6	1.0	1.0	1.3	1.5	1.1	0.8	0.8	1.2	1.9	1.9	1.2	1.0	1.1	1.1	1.0	1.0	1.0	0.8	1.2	1.9
9	1.0	1.0	1.0	0.9	0.9	0.9	1.0	1.3	1.4	1.6	1.7	1.9	2.1	2.1	2.1	2.3	2.8	2.3	2.4	2.5	2.6	2.7	2.8	3.2	1.8	3.2
10	3.4	3.4	3.7	3.6	3.6	3.8	4.0	3.7	3.9	3.8	3.3	2.3	1.7	1.0	1.5	1.6	1.3	1.5	1.7	2.4	3.2	3.9	4.6	2.4	2.9	4.6
11	7.6	6.6	6.5	2.4	1.5	1.1	1.0	0.7	0.8	2.2	0.8	0.4	0.3	0.2	0.3	0.6	0.3	0.5	0.5	2.4	0.5	0.6	0.4	0.8	1.6	7.6
12	0.6	0.4	0.4	1.7	0.9	0.4	0.5	0.6	0.7	0.7	0.6	0.9	0.6	0.5	0.5	0.5	0.8	0.7	1.9	1.6	2.3	1.7	1.3	1.4	0.9	2.3
13	1.2	0.8	1.0	0.9	0.9	1.0	1.0	1.1	1.2	1.4	1.0	0.7	1.0	0.9	1.2	0.8	0.8	0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.9	1.4
14	0.9	0.7	0.3	0.5	0.5	0.6	0.8	1.5	2.2	3.9	2.9	1.5	2.6	1.8	1.3	1.0	0.7	0.9	0.9	0.8	0.9	1.1	1.1	1.3	1.3	3.9
15	1.2	1.1	1.2	1.2	1.2	1.3	1.4	1.6	1.8	2.3	2.4	1.5	2.0	1.9	1.6	5.5	5.1	2.6	2.2	3.0	2.3	1.3	1.1	5.8	2.2	5.8
16	2.8	2.7	3.8	2.6	2.9	2.7	3.2	5.5	4.6	2.6	2.0	1.5	1.6	4.2	13.0	14.3	8.1	4.9	3.5	5.7	10.0	2.7	2.9	2.9	4.6	14.3
17	4.4	5.1	4.0	2.1	2.2	3.7	2.5	2.2	3.1	2.7	2.7	2.3	2.2	2.3	2.5	2.5	3.3	3.1	3.3	3.8	4.5	4.6	4.6	4.6	3.3	5.1
18	5.0	5.2	4.6	4.9	5.5	5.2	4.8	4.5	4.9	4.7	4.2	4.7	3.5	2.9	2.6	2.3	2.1	2.1	2.4	2.5	2.5	3.0	3.0	3.1	3.7	5.5
19	3.3	3.3	3.4	3.3	3.2	3.3	3.2	3.4	3.5	3.5	3.6	3.7	3.4	2.9	1.7	0.9	0.7	0.8	1.0	0.9	2.2	1.6	2.6	10.6	2.9	10.6
20	1.9	0.8	0.9	0.9	0.9	1.0	1.2	1.4	2.2	2.0	2.0	1.6	1.5	1.9	1.9	1.6	1.5	2.1	2.7	2.5	2.7	3.2	2.8	1.8	3.2	
21	2.9	1.5	1.4	1.5	1.5	1.7	1.8	1.9	1.9	2.5	2.6	3.0	2.3	2.2	1.8	1.2	0.8	0.8	1.4	1.1	0.9	0.7	0.7	0.9	1.6	3.0
22	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.8	10.0	10.9	11.5	11.1	11.8	11.8	14.8	10.5	5.7	2.3	4.9	5.6	2.9	3.9	8.7	4.2	5.8	14.8
23	5.4	3.8	1.6	5.4	2.9	3.9	7.6	6.3	5.1	5.4	3.2	3.7	3.3	2.0	2.4	3.0	3.3	1.9	1.7	2.1	2.5	2.0	1.6	1.8	3.4	7.6
24	1.1	0.9	1.0	0.9	0.8	0.8	0.7	0.9	1.2	1.4	1.5	1.7	2.0	1.6	1.4	1.7	2.0	3.1	2.2	2.4	3.1	2.8	2.8	2.2	1.7	3.1
25	1.7	1.4	1.2	1.0	0.9	0.8	0.8	0.7	0.7	0.9	1.0	1.1	1.0	1.0	0.9	0.8	1.1	2.0	2.6	2.8	3.2	3.5	3.4	2.6	1.5	3.5
26	1.9	1.6	1.4	1.3	1.3	1.3	1.1	1.2	1.1	1.2	1.3	1.0	1.1	1.1	1.1	1.1	1.3	1.6	1.5	1.6	1.7	1.5	3.6	4.1	1.5	4.1
27	2.4	2.4	3.2	4.6	5.1	4.7	6.6	10.0	6.9	5.0	10.5	5.2	7.1	9.8	4.7	5.4	4.8	3.5	3.3	3.5	4.3	3.4	3.6	3.1	5.1	10.5
28	3.6	3.7	5.7	4.8	4.1	4.6	3.3	3.0	3.6	3.2	3.3	3.3	3.8	5.3	4.8	3.7	4.4	5.1	4.3	4.4	3.5	2.8	2.6	2.6	3.9	5.7
29	2.6	2.6	2.5	2.4	2.4	2.4	2.5	2.7	3.1	3.7	4.5	6.0	4.2	4.6	3.5	6.0	4.3	9.7	7.3	3.9	4.2	3.9	3.5	3.4	4.0	9.7
30	3.2	3.2	3.1	2.9	2.8	2.9	2.8	3.0	3.3	4.1	3.6	3.4	7.2	5.0	3.7	3.7	5.7	5.7	4.0	3.2	3.0	3.1	2.7	3.0	3.7	7.2
NO.	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	716	99.4%
MEAN	3.2	2.9	2.9	2.8	2.6	2.7	2.8	3.1	3.4	3.5	3.5	3.2	3.2	3.2	3.3	3.3	3.0	2.9	2.7	2.8	3.1	2.8	3.1	3.2	7.5	
MAX	10.4	10.5	10.7	11.2	11.5	12.0	12.6	13.5	14.1	14.5	14.1	13.4	13.0	12.9	14.8	14.3	13.5	14.4	10.6	8.8	11.1	11.0	10.7	10.6	17.4	70.0



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	716	
Maximum 1-HR Average	14.8 UG/M3	
Maximum 24-HR Average	11.9 UG/M3	
Monthly Calibration	0	Operational Time
Standard Deviation	2.9	Operational Uptime
		Monthly Average
		716 HRS
		99.4 %
		3.1 UG/M3

West PM₁₀ (µg/m³) – November 2023

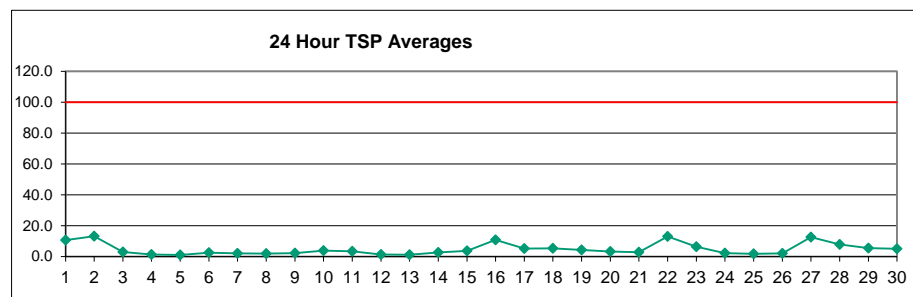
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.8	9.8	9.5	9.4	9.4	9.6	9.9	10.4	11.2	13.2	12.9	12.0	11.2	10.3	9.7	9.0	8.9	9.4	9.2	9.1	10.0	10.8	10.9	10.8	10.3	13.2
2	10.6	10.6	10.9	11.4	11.6	12.2	12.9	14.8	16.6	16.7	14.9	13.7	13.1	13.1	14.4	13.9	13.8	14.6	12.4	7.0	11.3	11.4	10.0	8.9	12.5	16.7
3	6.5	5.8	5.0	4.3	3.9	4.0	3.8	3.8	3.1	2.5	3.1	3.6	2.6	1.9	1.3	1.4	1.6	1.3	1.2	1.4	1.6	1.6	1.6	1.7	2.9	6.5
4	1.6	1.7	1.7	1.9	1.8	1.7	1.8	2.1	1.7	1.6	1.5	1.5	0.6	0.3	0.5	0.4	0.6	0.7	0.8	1.0	1.3	1.5	1.3	1.3	1.3	2.1
5	1.1	1.2	1.2	1.1	0.9	0.9	0.9	0.9	0.8	1.1	0.7	0.8	0.6	0.7	1.0	1.1	0.8	0.9	0.9	1.0	0.9	0.8	0.9	1.0	0.9	1.2
6	1.6	1.9	1.6	1.1	1.2	1.2	1.5	1.6	1.9	2.1	2.6	1.7	1.6	1.6	1.9	2.0	3.1	4.0	3.5	2.9	3.3	3.1	2.4	2.2	2.2	4.0
7	2.3	2.2	2.1	1.9	1.8	1.6	1.7	1.7	1.8	2.0	2.1	2.2	1.9	2.0	2.1	1.3	1.7	1.7	1.6	1.7	1.9	1.9	X	X	1.9	2.3
8	X	X	1.5	2.6	1.7	2.1	1.2	1.2	1.7	2.0	1.4	0.9	0.9	1.6	2.6	2.7	1.6	1.2	1.3	1.2	1.2	1.1	1.1	0.9	1.5	2.7
9	1.1	1.1	1.1	1.0	1.0	0.9	1.1	1.5	1.5	1.8	2.0	2.3	2.6	2.5	2.5	2.7	3.5	2.6	2.5	2.7	2.7	2.8	2.9	3.2	2.1	3.5
10	3.4	3.5	3.7	3.7	3.7	4.0	4.2	3.9	4.2	4.2	3.6	2.6	2.0	1.1	1.9	1.9	1.4	1.8	1.9	2.7	4.2	5.1	6.3	3.1	3.3	6.3
11	11.0	9.5	8.9	2.9	1.7	1.2	1.1	0.8	0.9	3.2	1.2	0.6	0.4	0.3	0.4	0.7	0.3	0.6	0.6	3.5	0.7	0.7	0.5	0.9	2.2	11.0
12	0.7	0.4	0.5	2.4	1.2	0.5	0.5	0.7	1.0	0.9	0.8	1.2	0.7	0.5	0.5	0.5	1.0	0.8	2.5	2.0	2.8	1.8	1.4	1.5	1.1	2.8
13	1.3	0.9	1.1	1.0	1.1	1.1	1.1	1.3	1.4	1.8	1.1	0.8	1.2	1.0	1.7	1.0	0.9	0.6	0.6	0.5	0.7	0.7	0.6	1.0	1.0	1.8
14	1.2	0.9	0.4	0.6	0.6	0.7	1.1	2.1	3.2	5.7	4.2	2.1	3.8	2.6	1.8	1.3	0.9	1.2	1.1	0.9	1.1	1.2	1.2	1.4	1.7	5.7
15	1.3	1.2	1.3	1.3	1.3	1.3	1.5	1.7	2.2	3.1	3.2	1.9	2.6	2.4	1.9	7.7	7.5	3.4	2.8	3.8	2.9	1.5	1.4	8.5	2.8	8.5
16	3.3	3.0	4.0	3.1	4.0	3.7	4.5	8.0	6.7	3.5	2.6	1.9	2.1	6.2	19.4	21.1	12.0	7.2	5.2	8.5	14.9	3.9	4.1	4.2	6.5	21.1
17	6.4	7.5	5.8	2.6	2.8	5.1	3.2	2.6	4.0	3.3	3.4	2.6	2.5	2.7	2.9	2.8	3.9	3.5	3.5	4.0	5.2	5.1	5.0	5.1	4.0	7.5
18	5.5	6.3	5.0	5.5	7.0	6.7	6.0	5.1	5.8	5.6	4.9	6.3	4.3	3.3	2.9	2.5	2.2	2.1	2.5	2.6	2.7	3.2	3.2	3.2	4.4	7.0
19	3.4	3.5	3.7	3.4	3.3	3.4	3.3	3.6	3.7	3.6	3.9	4.2	3.8	3.3	1.9	1.0	0.8	1.0	1.2	1.2	3.1	2.2	3.8	15.5	3.4	15.5
20	2.6	0.9	1.0	1.0	0.9	1.0	1.1	1.5	1.8	3.1	2.8	2.7	2.0	1.9	2.6	2.7	2.0	1.9	2.8	3.9	3.4	3.9	4.6	4.0	2.3	4.6
21	4.1	1.9	1.6	1.6	1.5	1.8	2.1	2.3	2.4	3.4	3.6	4.2	3.2	3.1	2.5	1.6	1.0	1.0	2.0	1.4	1.1	0.8	0.8	1.0	2.1	4.2
22	1.0	1.1	1.0	1.1	1.0	1.1	1.2	2.2	14.0	15.0	17.0	16.3	17.4	17.5	21.7	14.8	8.3	3.0	6.9	8.0	3.8	5.0	13.0	5.6	8.2	21.7
23	7.7	5.3	2.0	7.9	4.0	5.5	11.3	9.1	7.3	7.9	4.3	5.2	4.7	2.7	3.3	4.2	4.4	2.3	1.9	2.1	2.5	2.0	1.6	1.8	4.6	11.3
24	1.2	1.0	1.2	1.0	1.0	1.0	0.8	1.1	1.4	1.8	1.8	2.1	2.4	2.0	1.8	2.2	2.6	4.1	2.5	2.6	3.4	3.0	3.1	2.3	2.0	4.1
25	1.8	1.4	1.3	1.0	1.0	0.9	0.9	0.8	0.8	1.0	1.1	1.2	1.2	1.2	1.1	1.0	1.2	2.3	3.0	3.0	3.4	3.9	3.5	2.7	1.7	3.9
26	2.0	1.6	1.5	1.4	1.3	1.3	1.1	1.2	1.2	1.3	1.4	1.1	1.2	1.3	1.3	1.3	1.4	1.9	1.6	1.6	1.8	1.6	5.1	5.8	1.8	5.8
27	3.2	3.3	4.6	6.6	7.4	7.0	9.9	15.0	10.3	7.3	15.7	7.6	10.7	14.6	6.6	8.0	7.1	4.9	4.7	4.9	6.2	4.7	4.9	4.1	7.5	15.7
28	4.8	4.8	8.2	6.7	5.5	6.5	4.3	3.6	4.6	3.9	4.2	4.2	5.4	7.8	6.9	4.7	6.4	7.4	6.1	6.2	4.7	3.3	3.0	2.8	5.3	8.2
29	2.8	2.7	2.6	2.5	2.5	2.5	2.7	2.8	3.7	4.8	5.1	6.5	5.3	6.3	4.5	8.3	5.7	12.6	9.4	4.4	4.7	4.2	3.7	3.6	4.7	12.6
30	3.3	3.3	3.2	2.9	2.9	3.0	2.8	3.2	3.7	5.4	4.4	3.9	8.5	6.1	4.4	4.4	8.1	7.9	4.7	3.7	3.4	3.9	3.1	3.7	4.3	8.5
NO.	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29	716	99%
MEAN	3.7	3.4	3.2	3.2	3.0	3.1	3.3	3.7	4.1	4.4	4.4	3.9	4.0	4.1	4.3	4.3	3.8	3.6	3.4	3.3	3.7	3.2	3.6	3.8		
MAX	11.0	10.6	10.9	11.4	11.6	12.2	12.9	15.0	16.6	16.7	17.0	16.3	17.4	17.5	21.7	21.1	13.8	14.6	12.4	9.1	14.9	11.4	13.0	15.5		



Number of Non-Zero Readings	716		
Maximum 1-HR Average	21.7 UG/M3		
Maximum 24-HR Average	12.5 UG/M3		
IZS Calibration Time		OperatioEI Time	716 HRS
Down Time	0	OperatioEI Uptime	99.4 %
Standard Deviation	3.6	Monthly Average	3.7 UG/M3

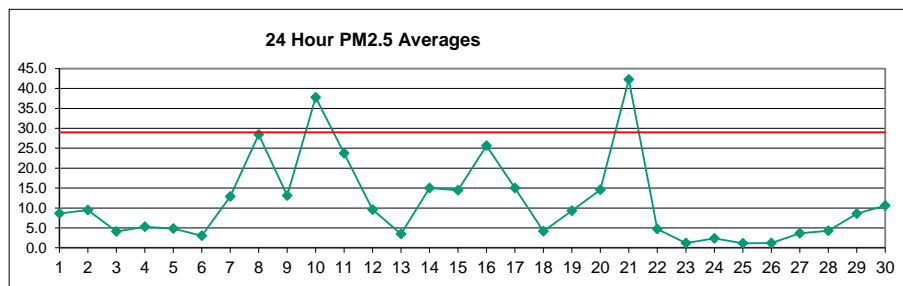
West TSP ($\mu\text{g}/\text{m}^3$) – November 2023

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.9	9.8	9.6	9.5	9.5	9.7	10.2	10.9	12.0	15.4	14.5	12.9	11.7	10.5	9.9	9.1	9.0	9.7	9.4	9.2	10.1	10.9	10.9	10.9	10.6	15.4
2	10.7	10.6	10.9	11.5	11.7	12.2	13.0	15.4	19.5	22.1	16.9	14.6	13.1	13.1	14.5	14.0	13.9	14.6	12.7	7.0	11.3	11.6	10.2	9.2	13.1	22.1
3	6.5	5.9	5.0	4.3	3.9	4.0	3.8	3.8	3.1	2.5	3.2	3.7	2.7	2.1	1.3	1.4	1.7	1.3	1.2	1.4	1.6	1.6	1.6	1.7	2.9	6.5
4	1.6	1.7	1.7	1.9	1.8	1.7	1.8	2.1	1.8	1.6	1.5	1.5	0.7	0.3	0.5	0.4	0.7	0.8	0.8	1.0	1.3	1.5	1.3	1.3	1.3	2.1
5	1.1	1.2	1.2	1.1	0.9	0.9	0.9	0.9	0.9	1.1	0.8	0.8	0.6	0.7	1.2	1.5	0.9	0.9	1.0	1.1	0.9	0.9	1.0	1.0	1.0	1.5
6	1.6	1.9	1.6	1.1	1.2	1.2	1.5	1.7	2.0	2.3	3.0	1.8	1.7	1.7	2.2	2.3	4.2	5.7	4.5	3.3	3.7	3.4	2.5	2.2	2.4	5.7
7	2.3	2.2	2.1	1.9	1.8	1.6	1.7	1.7	1.8	2.0	2.2	2.4	2.1	2.3	2.9	1.6	1.9	1.9	1.7	1.8	2.1	2.0	X	X	2.0	2.9
8	X	X	1.6	3.7	2.2	2.8	1.5	1.4	2.2	2.8	1.6	1.0	1.0	2.2	3.6	3.8	2.0	1.3	1.3	1.2	1.2	1.1	0.9	1.9	3.8	
9	1.1	1.1	1.1	1.0	1.0	0.9	1.2	1.5	1.6	1.9	2.1	2.6	2.9	2.7	2.7	2.9	4.1	2.7	2.6	2.7	2.7	2.9	2.9	3.3	2.2	4.1
10	3.4	3.5	3.7	3.7	3.7	4.1	4.2	3.9	4.3	4.3	3.7	2.8	2.2	1.1	2.4	2.1	1.4	2.0	2.1	3.1	5.9	7.6	10.0	4.1	3.7	10.0
11	18.9	16.2	15.2	3.7	1.9	1.3	1.2	0.8	1.1	5.2	1.6	0.7	0.5	0.4	0.4	0.8	0.3	0.6	0.8	5.5	0.8	0.7	0.5	1.0	3.3	18.9
12	0.8	0.4	0.5	3.6	1.5	0.5	0.5	0.8	1.3	1.2	0.9	1.4	0.9	0.6	0.5	0.5	1.1	0.9	3.1	2.3	3.1	1.9	1.4	1.6	1.3	3.6
13	1.4	0.9	1.1	1.0	1.1	1.2	1.2	1.4	1.5	2.0	1.2	1.0	1.4	1.2	2.5	1.3	1.0	0.7	0.6	0.5	0.8	0.8	0.7	1.3	1.1	2.5
14	1.8	1.3	0.4	0.7	0.7	0.7	1.4	3.2	5.4	9.8	7.2	3.4	6.4	4.3	2.8	1.8	1.1	1.3	1.3	1.0	1.2	1.2	1.3	1.4	2.5	9.8
15	1.3	1.2	1.4	1.3	1.3	1.3	1.5	1.8	2.4	4.0	4.2	2.2	3.1	2.9	2.1	12.8	12.5	4.0	3.3	4.4	3.7	1.7	1.5	13.3	3.7	13.3
16	3.5	3.1	4.0	3.9	6.0	5.3	7.0	13.7	10.9	5.1	3.5	2.4	2.7	10.4	34.9	38.0	21.3	12.7	9.1	15.0	26.7	6.5	6.7	6.7	10.8	38.0
17	11.0	12.9	9.7	3.6	3.6	8.1	4.3	3.2	5.6	4.2	4.0	2.8	2.8	2.9	3.4	2.9	4.3	3.7	3.6	4.3	6.1	5.5	5.6	5.8	5.2	12.9
18	6.4	8.2	5.6	6.6	10.0	9.8	8.0	6.3	7.4	7.1	5.7	9.2	5.5	3.8	3.1	2.6	2.3	2.2	2.6	2.6	2.7	3.3	3.3	3.3	5.3	10.0
19	3.6	3.7	4.0	3.4	3.3	3.5	3.3	3.6	3.7	3.7	4.0	4.5	4.1	3.6	2.2	1.1	1.0	1.2	1.6	1.6	4.8	3.4	6.3	27.9	4.3	27.9
20	3.9	0.9	1.0	1.0	1.0	1.0	1.1	1.7	2.1	4.5	4.0	3.4	2.5	2.4	3.6	3.6	2.5	2.4	4.2	6.2	5.2	6.3	7.6	6.5	3.3	7.6
21	6.6	2.3	1.8	1.7	1.5	1.9	2.6	2.9	2.9	4.3	4.8	6.6	4.6	4.9	4.0	2.2	1.2	1.1	2.8	2.0	1.3	1.0	0.8	1.0	2.8	6.6
22	1.1	1.1	1.1	1.1	1.0	1.2	1.3	2.5	24.9	26.9	29.9	28.8	31.1	31.0	38.5	23.6	10.9	3.2	7.9	9.3	4.0	5.4	18.2	7.0	13.0	38.5
23	10.7	7.2	2.2	11.8	5.6	7.3	18.5	13.4	9.9	12.1	5.9	7.0	6.3	3.9	4.8	6.2	5.7	2.5	1.9	2.1	2.5	2.0	1.6	1.8	6.4	18.5
24	1.2	1.0	1.3	1.1	1.1	1.2	0.9	1.3	1.5	2.1	2.0	2.5	2.7	2.3	2.1	2.6	3.2	4.9	2.6	2.6	3.4	3.0	3.1	2.3	2.2	4.9
25	1.8	1.5	1.3	1.0	1.0	0.9	1.0	0.8	0.8	1.1	1.2	1.2	1.4	1.4	1.3	1.1	1.3	2.4	3.2	3.1	3.5	4.0	3.6	2.8	1.8	4.0
26	2.0	1.6	1.5	1.4	1.3	1.3	1.1	1.2	1.2	1.4	1.4	1.1	1.3	1.5	1.4	1.4	1.5	2.0	1.6	1.7	1.8	1.6	7.7	9.3	2.1	9.3
27	4.2	4.6	7.3	10.9	12.7	12.0	17.3	27.0	18.2	12.3	28.0	13.0	18.6	25.8	10.7	13.7	11.9	7.6	7.0	7.2	10.1	6.9	7.4	5.6	12.5	28.0
28	7.3	7.1	13.8	10.8	8.5	10.3	6.2	4.5	6.3	4.9	5.1	5.8	8.2	13.3	11.3	6.4	10.6	12.1	9.7	9.5	6.7	4.1	3.4	2.9	7.9	13.8
29	2.9	2.7	2.6	2.6	2.5	2.5	2.8	2.9	4.2	5.8	5.5	6.7	6.5	9.0	5.8	13.2	7.5	14.5	10.1	4.7	4.8	4.4	3.8	3.6	5.5	14.5
30	3.3	3.3	3.2	2.9	3.1	3.0	2.8	3.2	3.9	6.8	4.9	4.1	9.4	6.9	4.9	4.9	10.9	10.3	5.5	4.3	3.8	4.9	3.5	4.6	4.9	10.9
NO.	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29	716	99%
MEAN	4.6	4.1	3.9	3.8	3.5	3.8	4.1	4.6	5.5	6.0	5.8	5.1	5.3	5.6	6.1	6.0	5.1	4.4	4.0	4.1	4.6	3.7	4.5	5.0		
MAX	18.9	16.2	15.2	11.8	12.7	12.2	18.5	27.0	24.9	26.9	29.9	28.8	31.1	31.0	38.5	38.0	21.3	14.6	12.7	15.0	26.7	11.6	18.2	27.9		



Berm PM_{2.5} (µg/m³) – November 2023

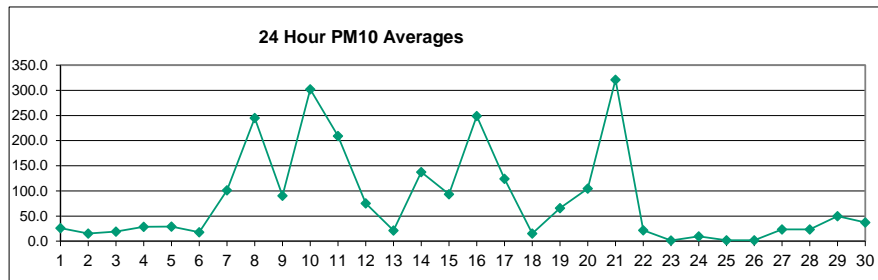
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.1	6.4	6.8	6.6	6.7	6.6	6.7	7.1	7.4	9.7	14.5	10.2	9.9	11.3	11.1	10.0	9.9	5.9	5.7	6.5	8.7	16.7	9.9	8.4	8.7	16.7
2	7.6	7.9	8.2	7.8	8.2	8.7	10.0	12.4	13.3	14.9	13.4	9.5	9.8	11.7	10.5	14.1	7.9	9.0	4.6	9.8	10.6	6.2	6.2	4.6	9.5	14.9
3	4.0	2.4	2.1	1.7	3.3	6.7	4.4	4.4	3.8	5.0	2.7	4.8	7.0	6.0	8.5	4.5	6.6	3.2	1.7	1.1	0.7	2.0	4.6	6.9	4.1	8.5
4	1.7	1.0	1.2	1.4	2.9	4.1	3.7	1.5	1.2	1.9	8.1	6.5	10.4	11.3	12.5	7.8	4.5	4.2	6.3	6.6	8.4	9.3	6.2	4.3	5.3	12.5
5	3.6	6.4	3.2	2.4	0.6	0.9	0.7	0.6	1.3	0.8	1.5	8.3	6.0	8.4	3.8	4.3	9.3	8.2	6.2	16.0	12.4	6.3	4.3	0.9	4.9	16.0
6	0.8	0.6	0.5	0.5	0.8	0.7	1.3	1.2	1.6	2.3	2.0	6.7	4.2	6.2	10.2	14.8	2.4	2.3	1.4	2.2	2.5	1.9	2.0	3.9	3.0	14.8
7	2.5	2.9	3.4	1.5	2.1	1.6	3.3	3.1	3.5	3.0	9.8	12.7	14.9	39.5	37.5	29.3	31.6	11.4	26.6	18.7	11.9	12.6	X	X	12.9	39.5
8	X	26.9	31.1	63.0	27.9	30.9	26.1	59.2	X	33.7	44.3	45.3	30.6	47.1	20.4	29.6	17.8	12.1	15.8	15.9	18.1	8.9	14.4	6.3	28.4	63.0
9	2.3	1.0	0.8	0.8	3.1	0.8	1.4	1.6	5.7	18.1	15.1	20.7	26.8	28.2	24.4	21.5	24.1	22.3	22.7	18.4	13.0	10.6	18.7	12.6	13.1	28.2
10	16.7	10.6	7.4	4.5	4.5	4.4	5.5	8.4	7.1	10.4	21.1	53.2	72.9	54.5	57.2	39.1	26.4	25.7	47.5	83.7	96.1	90.7	104.1	55.2	37.8	104.1
11	65.7	112.6	93.0	16.2	12.6	8.7	8.3	16.1	20.7	29.9	26.0	10.7	5.8	2.3	2.0	4.2	8.1	9.4	64.2	47.5	4.0	0.4	0.5	0.5	23.7	112.6
12	0.5	1.4	0.3	10.3	1.5	0.4	1.4	11.9	10.5	19.5	21.5	32.5	22.7	24.5	15.3	20.3	12.6	3.2	0.8	1.1	3.2	1.1	3.6	9.6	9.6	32.5
13	1.7	2.8	3.6	1.5	3.3	4.7	4.2	4.2	6.6	2.9	2.1	3.2	3.4	2.9	1.0	1.7	2.3	1.6	2.0	4.1	6.3	6.4	5.3	5.9	3.5	6.6
14	4.5	6.0	4.0	2.6	2.1	2.0	19.4	24.8	28.2	32.5	26.1	19.1	25.7	10.2	14.0	36.0	18.4	9.0	14.9	12.3	20.6	10.7	11.5	6.2	15.0	36.0
15	7.3	12.6	5.9	2.6	5.3	9.4	20.9	8.1	13.8	41.0	70.4	32.6	12.8	17.1	11.9	10.5	24.9	10.8	4.4	7.3	8.2	4.1	2.0	3.4	14.5	70.4
16	1.1	1.9	2.3	2.5	2.3	3.4	10.8	40.1	44.8	26.7	17.6	15.2	17.6	33.2	36.8	71.2	51.0	20.6	30.7	36.7	50.5	19.6	33.5	45.7	25.7	71.2
17	22.4	27.1	17.1	7.9	9.7	9.3	32.6	7.1	10.9	7.0	12.0	39.3	16.3	25.2	16.3	15.3	6.8	3.4	5.8	11.9	40.0	9.1	4.4	3.9	15.0	40.0
18	4.7	4.4	3.8	3.4	4.2	3.5	3.6	3.4	3.2	3.6	3.8	4.3	4.8	5.6	8.6	5.3	9.1	4.7	4.2	2.6	2.2	2.4	2.3	2.4	4.2	9.1
19	3.4	2.5	2.5	2.3	1.4	2.3	3.5	2.7	2.8	2.9	4.7	5.9	5.8	7.3	16.7	12.1	14.8	15.1	18.1	16.1	24.0	16.7	18.0	21.7	9.3	24.0
20	10.7	5.2	1.6	3.2	3.9	2.1	1.4	3.6	5.4	5.7	10.7	17.0	19.7	22.6	20.7	14.4	12.0	15.8	16.2	22.2	31.9	36.3	25.8	40.9	14.5	40.9
21	45.4	16.9	3.2	1.3	1.0	1.1	5.6	24.6	18.4	63.4	76.1	81.0	48.8	94.9	80.7	79.7	40.2	28.8	85.7	55.2	59.6	39.7	36.2	26.2	42.2	94.9
22	14.3	11.2	6.9	4.1	8.8	6.9	9.9	4.0	10.3	3.0	3.5	3.3	3.9	2.0	11.7	1.3	0.6	0.7	0.7	0.6	1.0	0.5	2.3	1.3	4.7	14.3
23	0.7	1.5	0.8	2.9	0.5	0.3	0.4	2.3	0.4	0.4	2.3	2.7	1.4	0.4	0.5	0.8	2.2	0.8	0.9	0.9	1.3	1.1	1.3	1.4	1.2	2.9
24	2.3	2.1	2.7	2.1	2.9	2.0	2.5	2.6	1.5	2.2	2.2	3.8	4.1	3.6	3.9	3.3	1.6	2.0	1.0	1.1	2.5	1.9	1.3	1.7	2.4	4.1
25	1.3	1.0	1.0	0.7	0.7	0.6	0.7	0.7	0.4	0.5	1.1	1.1	1.2	1.3	0.9	0.8	0.9	1.3	1.5	1.9	3.4	1.6	1.4	1.2	1.1	3.4
26	0.9	0.7	0.6	0.7	0.9	0.7	0.7	0.7	0.8	1.2	1.9	1.6	1.3	0.9	1.0	0.7	0.9	0.8	1.1	4.5	1.3	1.0	1.5	1.6	1.2	4.5
27	1.2	1.5	1.9	1.6	1.6	1.8	1.4	9.5	6.6	3.4	3.5	3.3	8.1	8.6	5.2	5.4	4.7	2.3	2.5	2.2	2.8	2.4	3.6	2.1	3.6	9.5
28	2.1	2.3	2.1	3.5	2.0	2.0	2.1	2.6	2.8	3.2	4.4	12.0	5.1	7.3	11.0	6.1	6.1	7.5	4.2	5.8	2.6	2.2	1.9	1.2	4.3	12.0
29	1.3	1.7	1.6	1.5	1.1	1.4	1.5	3.7	1.9	3.9	11.3	28.2	13.2	14.3	14.9	17.8	28.2	15.7	8.5	7.4	8.0	7.3	6.9	4.7	8.6	28.2
30	2.8	2.3	1.8	1.6	2.3	4.3	25.0	36.4	21.2	23.7	23.0	14.9	17.2	25.4	7.2	6.5	4.9	4.7	4.2	2.6	2.5	2.6	3.5	13.6	10.6	36.4
NO.	29	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29	716	99%
MEAN	8.2	9.5	7.4	5.4	4.3	4.4	7.3	10.3	8.8	12.5	15.2	17.0	14.4	17.8	15.9	16.3	13.0	8.8	13.7	14.1	15.3	11.1	11.6	10.3		
MAX	65.7	112.6	93.0	63.0	27.9	30.9	32.6	59.2	44.8	63.4	76.1	81.0	72.9	94.9	80.7	79.7	51.0	28.8	85.7	83.7	96.1	90.7	104.1	55.2		



Number of 24HR Exceedences	2	Proposed Guideline
Number of Non-Zero Readings	716	
Maximum 1-HR Average	112.6 UG/M3	
Maximum 24-HR Average	42.2 UG/M3	
Monthly Calibration	0	Operational Time
Standard Deviation	16.1	Operational Uptime
		Monthly Average
		716 HRS
		99.4 %
		11.4 UG/M3

Berm PM₁₀ (µg/m³) – November 2023

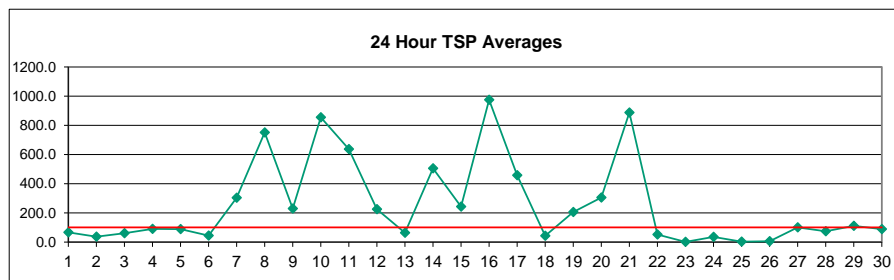
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.1	6.9	8.1	9.4	10.5	9.5	8.0	8.6	10.6	27.8	77.6	35.7	35.6	50.0	64.7	37.0	23.6	7.9	6.7	13.6	23.9	91.4	34.3	21.5	26.2	91.4
2	13.1	14.6	20.9	11.6	13.5	16.7	21.7	40.1	40.9	33.3	13.9	9.5	9.8	12.8	10.8	18.7	7.9	9.0	4.6	11.6	10.6	6.2	6.2	4.6	15.1	40.9
3	4.0	2.4	2.1	1.7	7.0	36.5	18.5	15.1	17.8	27.9	9.0	22.6	44.4	44.1	60.3	27.0	36.3	13.8	7.6	2.6	0.7	7.6	27.5	27.5	19.3	60.3
4	4.1	1.1	2.1	3.3	13.6	23.9	18.0	3.2	1.2	8.2	46.8	33.6	63.9	69.6	66.9	46.2	23.0	24.2	36.1	37.9	47.9	62.9	34.3	17.2	28.7	69.6
5	19.4	42.7	16.3	9.8	0.6	2.4	1.1	1.8	5.6	2.0	4.7	41.5	35.3	53.5	24.4	29.2	69.5	60.0	44.4	119.0	68.6	24.9	17.3	2.1	29.0	119.0
6	1.3	0.6	0.5	0.5	1.2	0.8	2.2	1.2	2.4	13.4	5.5	42.9	22.8	67.9	76.6	137.5	6.3	10.8	2.7	6.3	4.6	3.2	2.5	18.9	18.0	137.5
7	8.2	13.7	12.5	2.5	6.7	3.8	17.4	19.1	25.0	15.4	76.8	109.9	90.6	320.2	302.5	254.5	266.6	94.7	224.3	171.6	107.8	87.1	X	X	101.4	320.2
8	X	203.9	212.0	498.2	246.9	273.1	217.8	566.8	X	306.9	405.1	388.4	261.8	409.1	189.9	288.3	149.7	111.3	152.6	131.0	157.8	53.5	123.1	42.9	245.0	566.8
9	11.0	2.4	2.2	2.3	14.2	3.2	6.1	6.5	37.6	153.4	107.9	142.2	190.1	193.9	163.9	139.1	164.4	168.3	162.0	133.4	78.4	72.1	134.6	83.2	90.5	193.9
10	115.3	69.6	35.3	20.2	17.1	21.2	30.4	57.6	38.5	73.6	147.4	427.6	578.6	404.8	468.9	283.9	192.3	209.9	344.8	697.0	827.7	748.4	935.4	504.1	302.1	935.4
11	568.1	1119.6	959.3	154.5	103.7	59.0	53.1	122.1	180.3	250.1	191.1	70.0	30.4	15.1	10.7	21.5	38.4	72.4	563.8	433.2	6.0	0.4	1.3	1.3	209.4	1119.6
12	0.9	5.2	0.6	44.4	3.2	0.4	6.4	100.2	92.5	169.1	199.8	290.7	180.6	190.2	88.9	185.1	119.0	30.5	1.7	5.7	20.3	2.2	23.6	47.4	75.4	290.7
13	4.1	9.8	20.2	4.7	17.5	25.0	22.6	24.8	41.7	17.4	10.8	19.3	21.0	18.0	3.9	6.9	7.3	4.9	9.2	22.5	44.2	45.0	42.1	65.6	21.2	65.6
14	37.4	50.9	30.7	26.2	19.7	15.1	190.6	225.0	279.3	336.2	247.7	169.3	249.9	93.0	135.1	361.7	182.8	73.0	130.6	96.7	153.9	66.9	85.8	39.5	137.4	361.7
15	48.2	72.9	38.6	13.6	28.8	61.8	181.0	55.0	120.4	355.0	516.0	276.7	82.9	125.4	63.8	57.1	92.5	15.8	4.7	7.7	11.4	4.8	2.0	3.4	93.3	516.0
16	1.1	2.1	2.3	2.7	2.7	4.9	16.2	246.6	437.5	264.3	154.0	115.8	128.3	287.4	371.2	777.1	560.5	236.8	321.6	409.3	581.4	227.4	375.3	452.2	249.1	777.1
17	224.0	286.2	173.5	67.8	85.2	82.2	284.1	55.2	83.1	50.6	104.5	335.0	134.4	195.1	113.2	116.5	45.3	7.6	32.7	85.2	332.8	64.7	13.8	8.6	124.2	335.0
18	13.1	12.9	7.0	5.6	10.1	7.9	8.5	6.9	4.6	6.9	10.2	14.6	24.1	31.4	61.5	30.2	47.7	20.1	18.7	7.4	3.3	3.1	2.9	3.2	15.1	61.5
19	10.6	5.4	4.9	3.1	1.4	2.3	8.3	4.8	3.9	4.5	26.0	33.5	27.9	39.8	130.8	83.8	101.3	102.6	145.4	133.5	210.4	149.8	150.6	190.9	65.6	210.4
20	78.7	28.8	5.3	18.9	19.8	9.1	4.8	23.5	36.7	34.4	74.9	109.3	134.7	155.4	147.8	101.0	83.6	113.2	117.4	166.5	259.0	250.5	223.0	316.2	104.7	316.2
21	371.7	127.1	19.0	3.0	1.3	1.3	39.2	193.4	151.0	481.0	577.3	609.3	368.5	734.3	594.2	594.8	330.2	218.3	670.4	408.6	458.0	305.4	273.8	180.2	321.3	734.3
22	91.3	73.2	37.9	15.2	33.3	26.2	60.3	29.9	55.8	12.8	13.5	13.1	16.3	6.8	23.7	1.3	0.6	0.7	0.7	0.6	1.0	0.5	2.3	1.3	21.6	91.3
23	0.7	1.7	0.8	4.0	0.5	0.3	0.4	2.3	0.4	0.4	3.3	4.0	2.6	0.4	0.5	0.8	2.4	0.8	0.9	0.9	1.3	1.1	1.3	1.4	1.4	4.0
24	3.1	2.7	3.4	2.8	4.3	2.5	3.3	3.6	2.0	2.9	14.2	30.4	40.7	30.4	32.7	26.2	6.2	8.7	1.9	1.2	3.4	1.9	1.3	2.0	9.7	40.7
25	1.4	1.2	1.1	0.7	0.7	0.6	0.7	0.7	0.4	0.5	4.1	2.8	3.7	4.3	2.3	1.3	1.7	2.3	2.3	4.5	4.5	1.6	1.4	1.2	1.9	4.5
26	0.9	0.7	0.6	0.7	0.9	0.7	0.7	0.7	0.8	1.2	5.4	7.4	5.5	1.8	2.5	1.2	1.7	0.8	1.2	6.7	1.3	1.0	1.5	1.9	2.0	7.4
27	1.2	1.8	2.6	1.8	1.8	2.0	2.8	112.1	65.8	16.7	21.8	15.2	79.7	64.3	37.7	37.8	33.0	7.6	10.4	8.2	7.7	8.2	18.2	4.8	23.5	112.1
28	4.2	5.8	4.9	11.4	4.0	4.0	4.3	4.3	7.4	8.5	28.8	106.7	38.2	57.5	82.1	37.1	36.1	47.3	20.9	36.5	6.0	3.8	2.4	1.2	23.5	106.7
29	1.3	1.7	1.6	1.5	1.1	1.4	1.5	3.7	1.9	5.4	92.0	263.1	99.2	115.1	112.2	127.3	153.9	70.7	31.1	27.5	35.4	24.5	14.5	6.0	49.7	263.1
30	2.8	2.3	1.8	1.6	2.3	5.8	37.5	54.6	31.8	35.5	90.6	93.2	81.4	184.8	41.5	26.9	22.1	24.2	13.2	4.6	4.0	7.8	15.2	105.4	37.1	184.8
NO.	29	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29		716	99%
MEAN	56.8	72.3	54.3	31.5	22.5	23.5	42.2	66.3	61.3	90.5	109.4	127.8	102.8	132.5	116.2	128.6	93.5	58.9	102.8	106.4	115.8	77.6	88.5	74.3		
MAX	568.1	1119.6	959.3	498.2	246.9	273.1	284.1	566.8	437.5	481.0	577.3	609.3	578.6	734.3	594.2	777.1	560.5	236.8	670.4	697.0	827.7	748.4	935.4	504.1		



Number of Non-Zero Readings	716
Maximum 1-HR Average	1119.6 UG/M3
Maximum 24-HR Average	321.3 UG/M3
Operational Time	716 HRS
Operational Uptime	99.4 %
Monthly Calibration	0
Standard Deviation	143.3
Monthly Average	81.6 UG/M3

Berm TSP ($\mu\text{g}/\text{m}^3$) – November 2023

DAY	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	5.1	9.2	11.3	20.2	24.8	16.2	17.0	11.0	19.4	64.4	212.9	74.1	94.6	163.1	172.7	71.6	32.0	11.8	6.7	23.7	61.7	308.6	113.5	56.1	66.7	308.6	
2	33.1	35.0	69.5	16.6	31.1	41.6	46.5	104.4	152.4	212.8	13.9	9.5	9.8	12.8	10.8	18.7	7.9	9.0	4.6	11.6	10.6	6.2	6.2	4.6	36.6	212.8	
3	4.0	2.4	2.1	1.7	21.0	133.3	71.0	54.8	70.4	110.5	24.9	63.7	136.0	127.2	204.1	108.7	79.2	25.4	26.9	7.9	0.7	29.2	101.7	38.3	60.2	204.1	
4	5.2	1.3	4.2	6.2	58.4	79.5	52.7	12.4	1.2	31.1	147.1	74.1	145.5	166.4	169.0	138.8	77.5	102.0	131.9	156.6	176.8	260.6	132.9	41.0	90.5	260.6	
5	70.2	173.3	71.8	32.1	0.6	4.3	1.8	5.4	7.0	2.0	7.5	111.5	114.7	169.2	101.5	93.7	222.5	201.7	143.1	400.4	123.6	38.1	32.9	7.5	89.0	400.4	
6	2.5	0.6	0.5	0.5	1.9	1.7	4.3	1.2	3.1	41.0	10.7	133.4	66.0	157.1	194.1	305.6	7.4	16.7	2.7	6.5	4.6	4.1	2.5	67.9	43.2	305.6	
7	18.7	66.3	35.9	5.0	12.0	9.1	71.8	82.4	73.3	55.0	304.4	347.8	241.1	934.6	1010.4	847.9	774.5	242.4	600.9	453.1	295.2	207.8	X	X	304.1	1010.4	
8	X	555.8	552.4	1301.0	817.5	881.1	657.0	1678.5	X	1000.9	1225.4	1227.3	842.5	1423.8	670.0	1025.8	441.0	359.6	467.1	377.3	466.7	111.3	336.2	114.2	751.5	1678.5	
9	26.1	3.3	7.5	3.3	21.0	7.8	16.4	17.9	94.5	410.2	278.5	295.5	434.5	463.0	363.0	296.2	423.2	455.1	451.6	382.9	208.6	198.4	399.1	251.4	229.5	463.0	
10	335.3	238.1	107.3	62.9	39.8	58.6	86.3	170.0	81.7	184.3	361.6	1071.6	1557.0	1094.9	1331.0	778.0	496.8	560.6	875.9	1991.6	2462.6	2077.0	2858.4	1627.0	854.5	2858.4	
11	1847.0	3036.2	3048.8	638.1	341.6	164.8	151.5	324.3	528.5	775.4	513.6	193.5	61.1	39.4	21.9	48.6	127.7	223.3	1589.0	1617.2	6.2	0.4	2.8	2.8	637.7	3048.8	
12	0.9	5.2	0.6	445.8	41.6	0.4	31.3	353.0	283.9	474.2	594.2	866.5	539.9	464.8	180.3	495.5	322.7	89.6	2.1	14.7	46.3	3.6	56.1	77.7	224.6	866.5	
13	4.1	15.2	57.0	7.3	40.5	57.2	60.5	82.2	108.5	43.8	21.5	42.7	38.3	44.2	4.9	11.2	14.9	6.5	20.1	63.5	133.4	160.4	183.8	300.6	63.4	300.6	
14	114.9	175.8	118.5	115.7	67.6	53.3	734.8	912.0	1092.1	1269.7	976.0	650.3	927.4	370.4	522.8	1387.2	638.3	270.7	468.7	306.4	396.8	179.1	271.8	105.1	505.2	1387.2	
15	134.6	164.8	111.9	37.0	72.2	150.7	498.8	113.6	302.8	900.7	1231.5	787.5	171.5	317.8	116.3	99.2	549.9	15.8	4.7	7.7	11.4	4.8	2.0	3.4	242.1	1231.5	
16	1.1	2.1	2.3	2.7	2.7	4.9	18.3	953.2	1951.1	1211.4	478.8	276.9	275.3	848.7	1343.0	2958.5	2170.9	1008.9	1330.8	1662.1	2449.3	998.4	1577.0	1858.8	974.5	2958.5	
17	1013.4	1360.5	782.9	312.4	415.3	393.3	1040.3	177.2	329.7	175.9	327.7	943.7	424.7	560.1	326.9	345.7	144.6	16.1	115.3	282.4	1175.7	247.1	42.8	23.1	457.4	1360.5	
18	36.3	35.0	12.6	10.6	38.2	26.9	23.4	22.6	7.5	14.6	27.4	41.2	72.7	94.8	193.7	112.5	112.4	44.4	41.9	19.6	6.4	6.8	3.4	4.5	42.1	193.7	
19	29.0	13.6	7.7	4.6	1.4	2.3	17.9	11.0	5.1	8.2	87.4	125.5	95.4	128.3	382.2	237.8	307.6	297.8	502.1	450.3	651.6	504.2	503.3	563.3	205.7	651.6	
20	228.9	61.5	8.1	37.9	31.2	20.1	7.9	47.4	83.3	69.0	171.8	247.4	311.3	372.4	406.9	237.5	219.8	343.5	356.4	612.0	881.6	777.5	785.3	1004.3	305.1	1004.3	
21	1313.9	471.2	57.1	4.1	4.5	2.9	82.7	506.0	439.0	1197.3	1512.6	1551.8	922.5	1799.1	1666.0	1619.0	989.7	642.6	1905.8	1095.7	1230.6	949.7	789.6	564.1	888.2	1905.8	
22	283.5	247.7	98.1	21.8	35.5	33.4	133.0	73.3	89.5	23.4	23.5	44.0	30.1	23.9	78.7	1.3	0.6	0.7	0.7	0.6	1.0	0.5	2.3	1.3	52.0	283.5	
23	0.7	1.7	0.8	4.0	0.5	0.3	0.4	2.3	0.4	0.4	3.5	4.1	3.2	0.4	0.5	0.8	2.4	0.8	0.9	0.9	1.3	1.1	1.3	1.4	1.4	4.1	4.1
24	3.1	2.7	3.4	2.8	4.5	2.5	3.3	3.6	2.0	2.9	67.1	123.7	185.3	124.7	141.5	102.2	17.8	27.1	5.3	1.2	3.4	1.9	1.3	2.0	34.8	185.3	
25	1.4	1.2	1.1	0.7	0.7	0.6	0.7	0.7	0.4	0.5	7.3	6.9	5.5	9.9	4.5	1.4	3.2	2.6	2.3	6.2	4.5	1.6	1.4	1.2	2.8	9.9	9.9
26	0.9	0.7	0.6	0.7	0.9	0.7	0.7	0.7	0.8	1.2	18.4	38.1	16.2	3.5	12.9	2.5	1.7	0.8	1.2	7.3	1.3	1.0	1.5	1.9	4.8	38.1	38.1
27	1.2	1.8	2.6	1.8	1.8	2.0	4.7	576.6	333.7	77.8	90.0	46.9	354.7	262.6	138.4	136.4	116.0	19.8	38.5	28.5	17.0	34.4	90.3	11.6	99.5	576.6	
28	11.4	20.4	14.8	38.0	11.6	10.2	10.7	8.6	27.0	22.1	110.8	356.9	115.2	183.7	214.2	99.0	111.7	170.1	79.5	131.1	16.4	8.9	5.8	1.2	74.1	356.9	
29	1.3	1.7	1.6	1.5	1.1	1.4	1.5	3.7	1.9	5.4	261.2	782.5	250.0	291.0	256.0	189.6	198.1	123.4	56.2	49.1	93.8	64.1	29.9	6.0	111.3	782.5	
30	2.8	2.3	1.8	1.6	2.3	5.8	43.0	63.2	36.4	40.4	189.4	262.7	176.2	505.3	112.5	55.3	48.8	48.6	26.1	8.3	8.7	23.0	55.3	385.7	87.7	505.3	
NO.	29	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	29	29		716	99%	
MEAN	190.7	223.6	173.2	104.6	71.5	72.2	129.7	212.4	211.3	280.9	310.0	360.0	287.3	371.9	345.0	394.2	288.7	177.9	308.6	339.2	364.9	240.3	289.3	245.8			
MAX	1847.0	3036.2	3048.8	1301.0	817.5	881.1	1040.3	1678.5	1951.1	1269.7	1512.6	1551.8	1557.0	1799.1	1666.0	2958.5	2170.9	1008.9	1905.8	1991.6	2462.6	2077.0	2858.4	1858.8			



Number of 24HR Exceedences	14	Proposed Guideline	
Number of Non-Zero Readings	716		
Maximum 1-HR Average	3048.8 UG/M3		
Maximum 24-HR Average	974.5 UG/M3		
IZS Calibration Time		Operational Time	716 HRS
Monthly Calibration	0	Operational Uptime	99.4 %
Standard Deviation	451.0	Monthly Average	249.8 UG/M3