

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT SEPTEMBER 2023

OCTOBER 31, 2023



wsp



AMBIENT AIR QUALITY MONTHLY REPORT

SEPTEMBER 2023

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-05
DATE: OCTOBER 31, 2023

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October 31, 2023

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

Attention: Nikolaos Veriotes P. Eng.

Dear Mr. Veriotes,

Subject: Ambient Air Quality Monthly Report – September 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 September 2023.

Lagoon	Data Completeness (%)	1-Hour Average	24-hour Average
		Exceedances of AAAQO or AAAQG	Exceedances of AAAQO
TSP	100.0%	-	0
PM _{2.5}	100.0%	17	2
PM ₁₀	100.0%	-	-
NO	100.0%	-	-
NO ₂	100.0%	0	-
NO _x	100.0%	-	-
SO ₂	100.0%	0	0
Temperature	100.0%	-	-
Wind Speed / Direction	100.0%	-	-
Pressure	100.0%	-	-
Relative Humidity	100.0%	-	-
Precipitation	100.0%	-	-

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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 September 2023.

Windridge	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of AAAQG	Exceedances of PM _{2.5} AAAQO	Exceedances of TSP AAAQO
TSP	99.9%	-	-	9
PM _{2.5}	99.7%	16	2	-
PM ₁₀	99.9%	-	-	-

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 September 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%	16	2	0
Berm	100.0%	1	1	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



October 31, 2023

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Date

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



October 31, 2023

Tyler Abel, M.Sc.
Senior Air Quality Specialist
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Date

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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 September 1, 2023 and September 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.

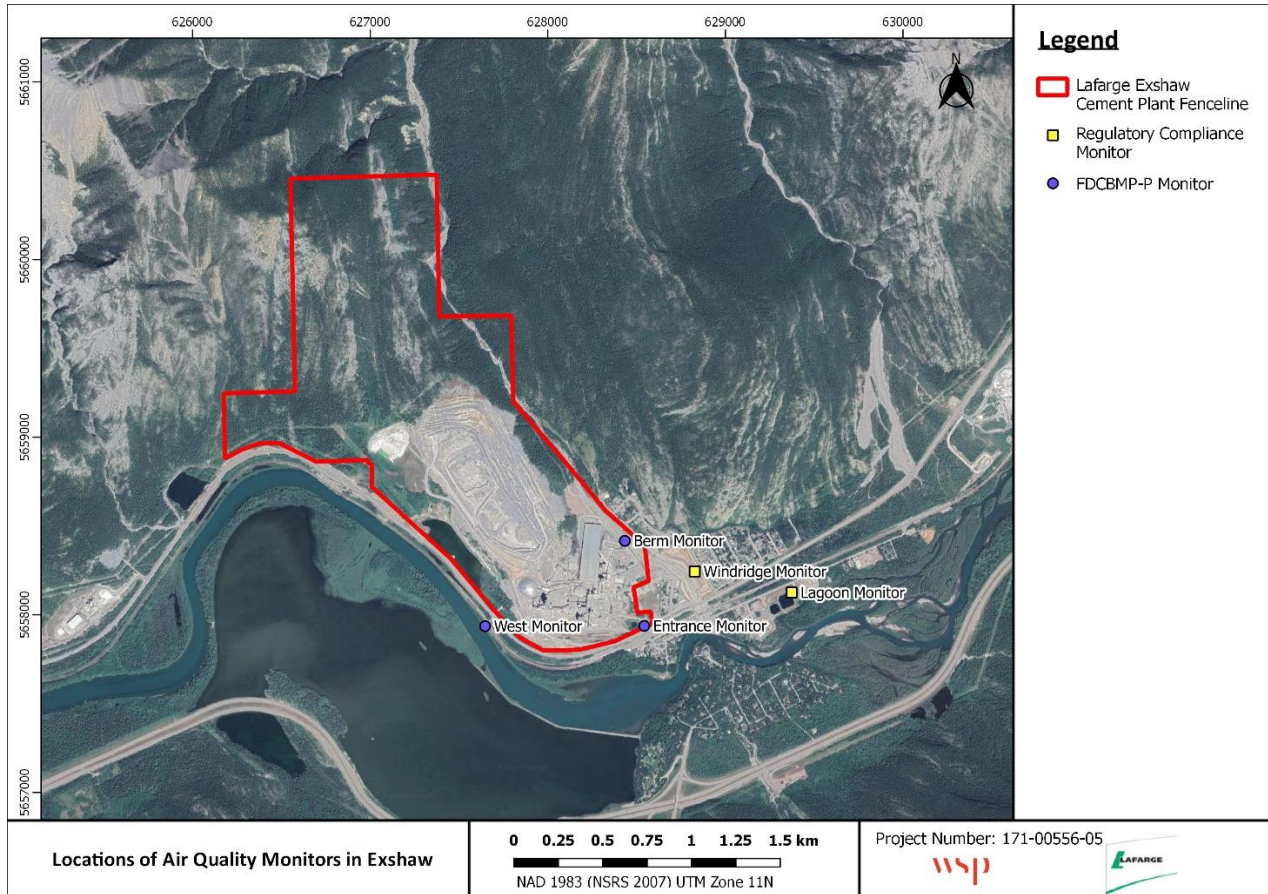


Figure 1-1 Locations of Air Quality Monitors in Exshaw

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

1.2 WILDFIRE IMPACT ON BOW VALLEY AIRSHED

During the month of September regional wildfire activity, including smoke impacts from BC and Alberta, had an impact on air quality in the Bow Valley airshed. Wildfires produce a large amount of suspended particulate matter which can affect air quality and result in AAAQO and AAAQG exceedances. The majority of TSP and PM_{2.5} exceedances during the month of September can be attributed to smoke from a regional wildfire, and not specific industrial operations from Lafarge Exshaw.

2 SEPTEMBER 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)	100.0	26.9	0	12.3	-
SO₂ (ppb)	100.0	16.2	0	4.0	0
PM_{2.5} (µg/m³)	100.0	111.2	17 ¹	79.3	2
PM₁₀ (µg/m³)	100.0	171.9	-	83.3	-
TSP (µg/m³)	100.0	978.5	-	94.9	0
Temperature (°C)	100.0	27.1	-	21.0	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	41.0/W	-	23.0/WSW	-
Precipitation (mm)	100.0	3.25 ²	-	42.75 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 two days exceeding the 24-hour PM_{2.5} AAAQO due to wildfire smoke in the airshed.
- There were 17 exceedances of the 1-hour PM_{2.5} AAAQG.
- There were zero day exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Lagoon station, all meteorological analyzers recorded 100% uptime during the month of September.
- The SO₂ and NO₂ analyzers recorded 100% uptime during the month of September.
- The PM₁₀, PM_{2.5} and TSP analyzers recorded 100% uptime for the month of September.

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)	99.7	121.0	16*	75.6	2
PM ₁₀ (µg/m ³)	99.9	485.0	-	123.7	-
TSP (µg/m ³)	99.9	725.0	-	189.9	9

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

Data Quality Notes:

- There were two days exceeding the 24-hour PM_{2.5} AAAQO due to wildfire smoke in the airshed.
- There were 16 hours exceeding the 1-hour PM_{2.5} AAAQG.
- There were nine days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Windridge station, the TSP and PM₁₀ analyzers recorded 99.9% uptime for the month of September due to one hour of equipment malfunction occurring on September 27th at 1:00.
- The PM_{2.5} analyzer recorded 99.7% uptime for the month of September due to two hours of equipment malfunction occurring on September 3rd at 18:00 and September 27th 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	1-Hour Average	24-hour Average
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	Data Completeness (%)	Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	100.0	101.6	16*	80.3	2
PM ₁₀ (µg/m ³)	100.0	116.9	-	83.4	-
TSP (µg/m ³)	100.0	134.3	-	85.0	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 two exceedances of the 24-hour PM_{2.5} Guidelines due to wildfire smoke in the airshed.
- There were 16 exceedances of the 1-hour PM_{2.5} Guidelines.
- There were zero exceedance of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The PM_{2.5}, PM₁₀, and TSP analyzers recorded 100% uptime during the month of September.

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)	100.0	91.5	1*	39.1	1
PM ₁₀ (µg/m ³)	100.0	665.6	-	168.6	-
TSP (µg/m ³)	100.0	1855.9	-	447.5	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 one exceedance of the 24-hour PM_{2.5} Guidelines due to wildfire smoke in the airshed.
- There was one exceedance 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 100% uptime during the month of September.

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 September 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, a wind rose (**Error! Reference source not found.**) and tables and graphs illustrating the monitoring results for September 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 September 26 th . The monitor had 100% uptime for the month of September.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on September 26 th . The monitor had 100% uptime for the month of September.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on September 26 th . The monitor had 100% uptime for the month of September.
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated for instrument removal and installation on September 6 th and 7 th respectively. The monitor had 100% uptime for the month of September.
Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on September 6 th . The monitor had 100% uptime for the month of September.
Precipitation	MetOne 130 Rain/Snow Gauge	The monitor had 100% uptime for the month of September.
Wind Speed	MetOne Wind Sensor	The monitor had 100% uptime for the month of September.
Wind Direction		

Ambient Temperature	MetOne Ambient Temperature Sensor	The monitor had 100% uptime for the month of September.
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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 September 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 September 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 0 day exceeding the 24-hour TSP (100 µg/m³) AAAQO. There were 2 exceedances of the 24-hour PM_{2.5} (29 µg/m³) AAAQO. Further, there were 17 exceedances of the 1-hour PM_{2.5} AAAQG (80 µg/m³). As discussed in Section 1.2, the Bow Valley airshed was impacted from regional wildfire activity in September. The PM_{2.5} exceedances were primarily attributable to wildfire activity and smoke in the airshed from fires in BC and Alberta.

Historically in September, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances are both 1. The maximum number of 24-hour TSP and PM_{2.5} AAAQO exceedances recorded in September were both 5 days in 2018.

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 September 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	-	0.6	7.7	26.9	14	22	1.8	141.9	12.3	16	100.0
SO₂ (ppb)	172	48	Lagoon	0	0	0.1	1.6	16.2	14	10	14.0	276.9	4.0	15	100.0
PM_{2.5} (µg/m³)	80	29	Lagoon	17	2	0.0	9.7	111.2	4	14	12.3	58.7	79.3	4	100.0
PM₁₀ (µg/m³)	-	-	Lagoon	-	-	0.0	29.2	171.9	17	16	23.8	261.0	83.3	4	100.0
TSP (µg/m³)	-	100	Lagoon	-	0	0.1	48.4	978.5	14	2	7.7	242.0	94.9	25	100.0
Temperature (°C)	-	-	Lagoon	-	-	0.8	12.4	27.1	16	17	17.0	252.7	21.0	2	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	1.0	13.7	41.0/W	18	4	41.0	243.7	23.0/WSW	2	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.1	3.3 ¹	1	3	6.6	54.7	42.8 ²		100.0

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						
2023-09-04	-	79.3	67.6	9.3	87.3	Regional wildfire activity
2023-09-05	-	40.8	245.3	9.9	79.7	Regional wildfire activity
Total # of Exceedances	0	2				
Maximum # of Exceedances (September)	5 (2017)	5 (2017)				
Average # of Exceedances (September)	1	1				
Minimum # of Exceedances (September)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2018, 2019, 2020)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2019, 2021)				

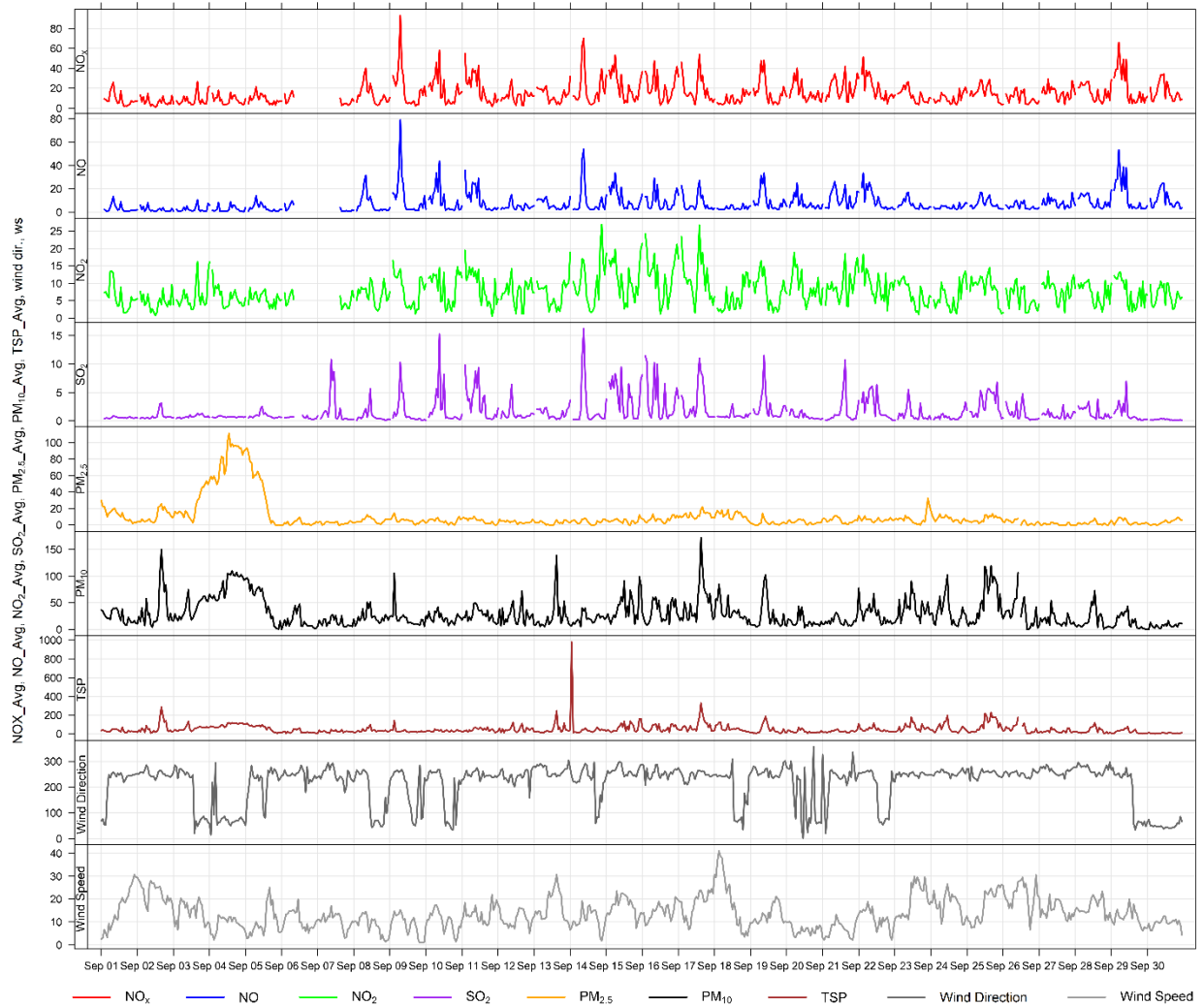


Figure 3-2 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

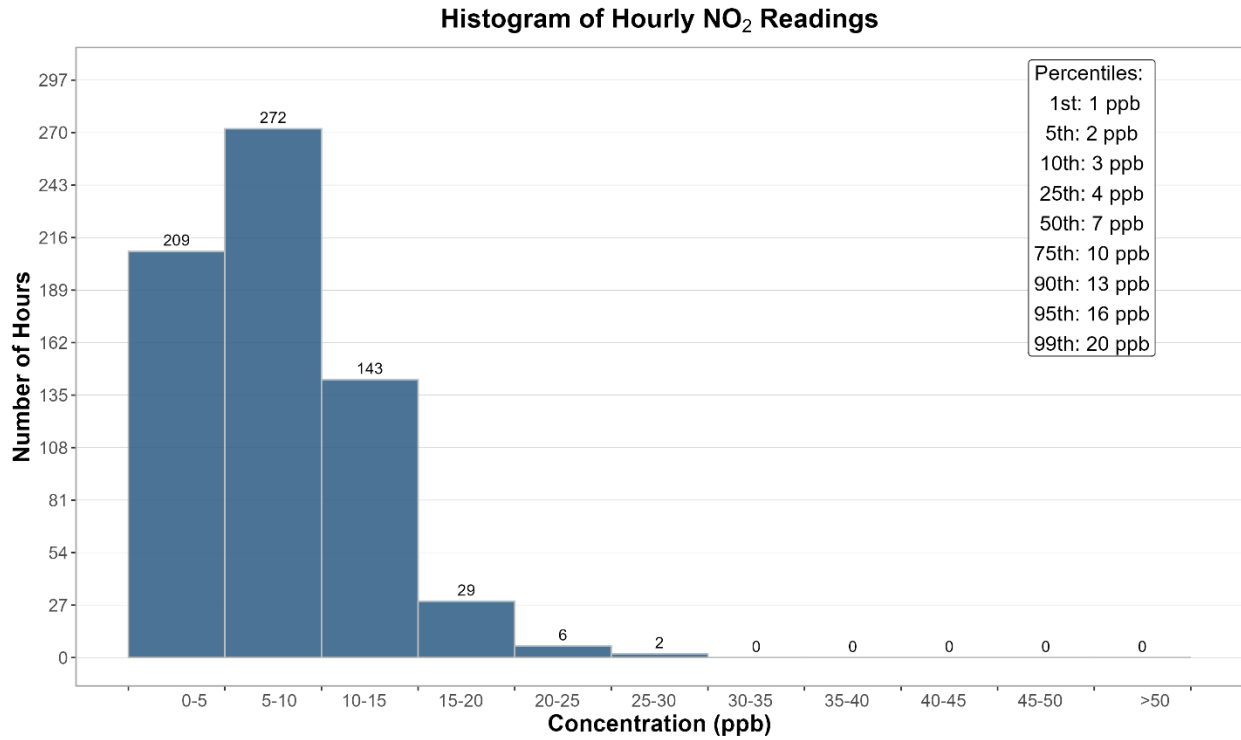


Figure 3-3 Histogram of hourly NO₂ concentrations at the Lagoon station

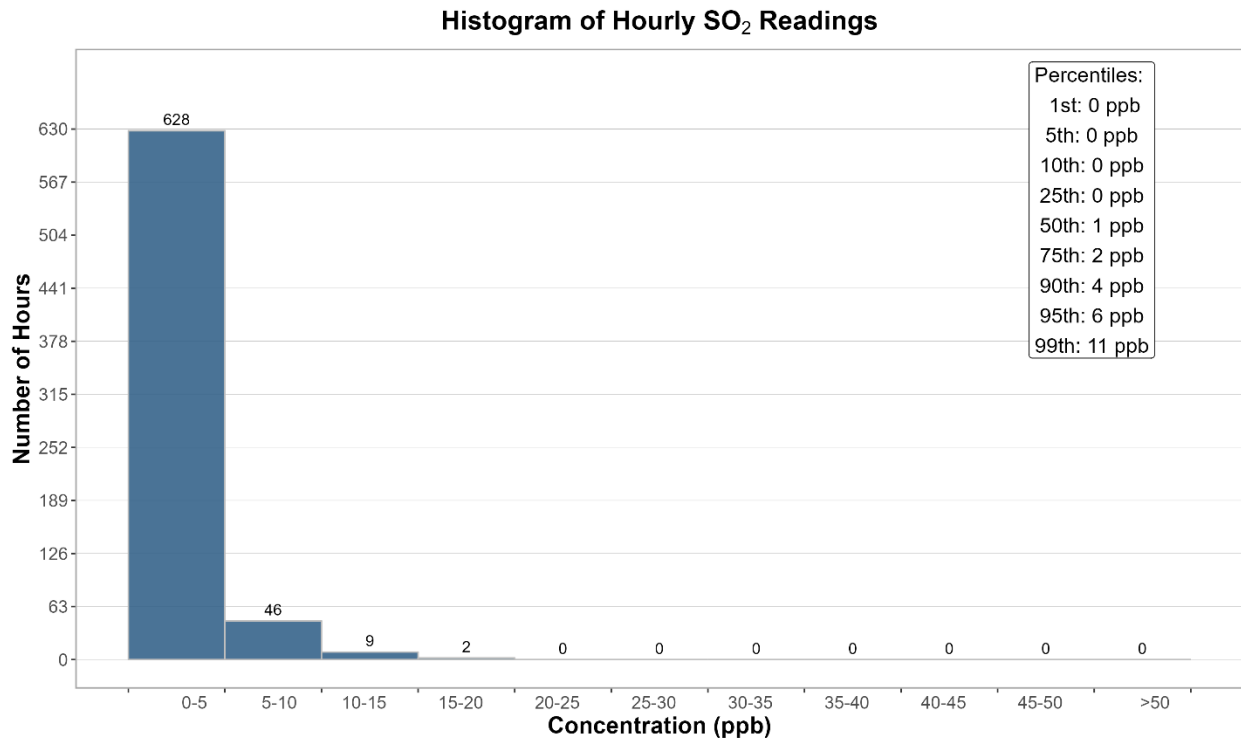


Figure 3-4 Histogram of hourly SO₂ concentrations at the Lagoon station

Histogram of Hourly PM_{2.5} Readings

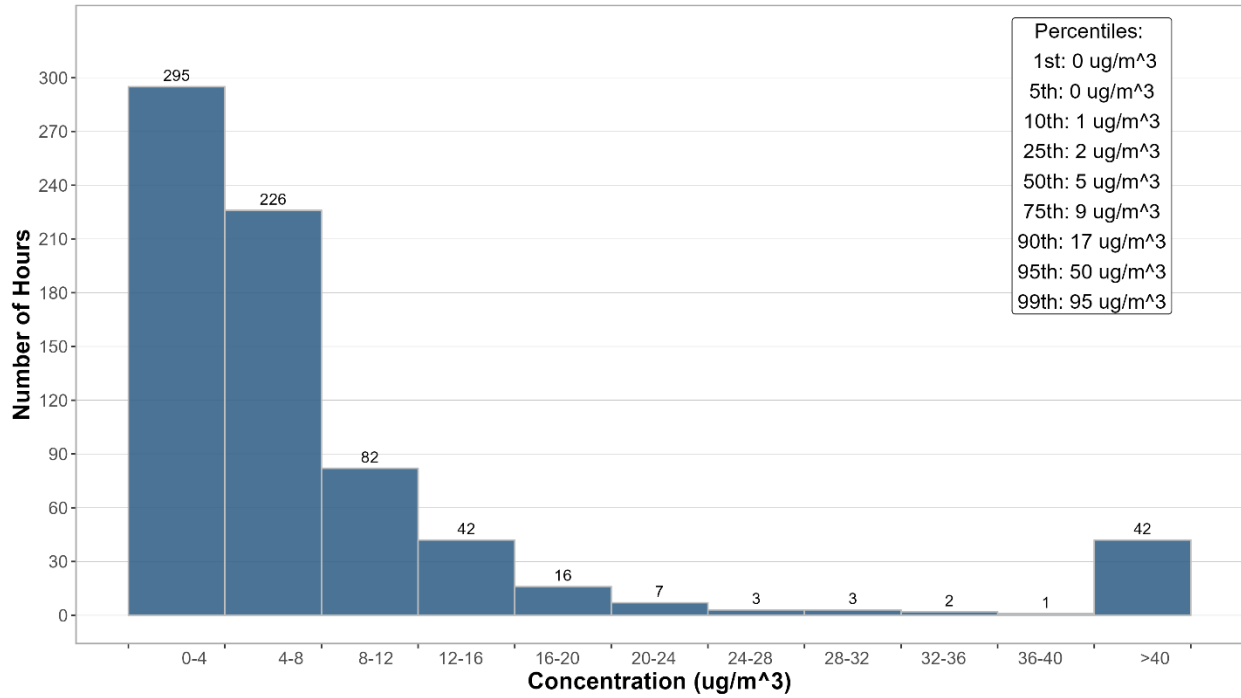


Figure 3-5 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

Histogram of Hourly PM₁₀ Readings

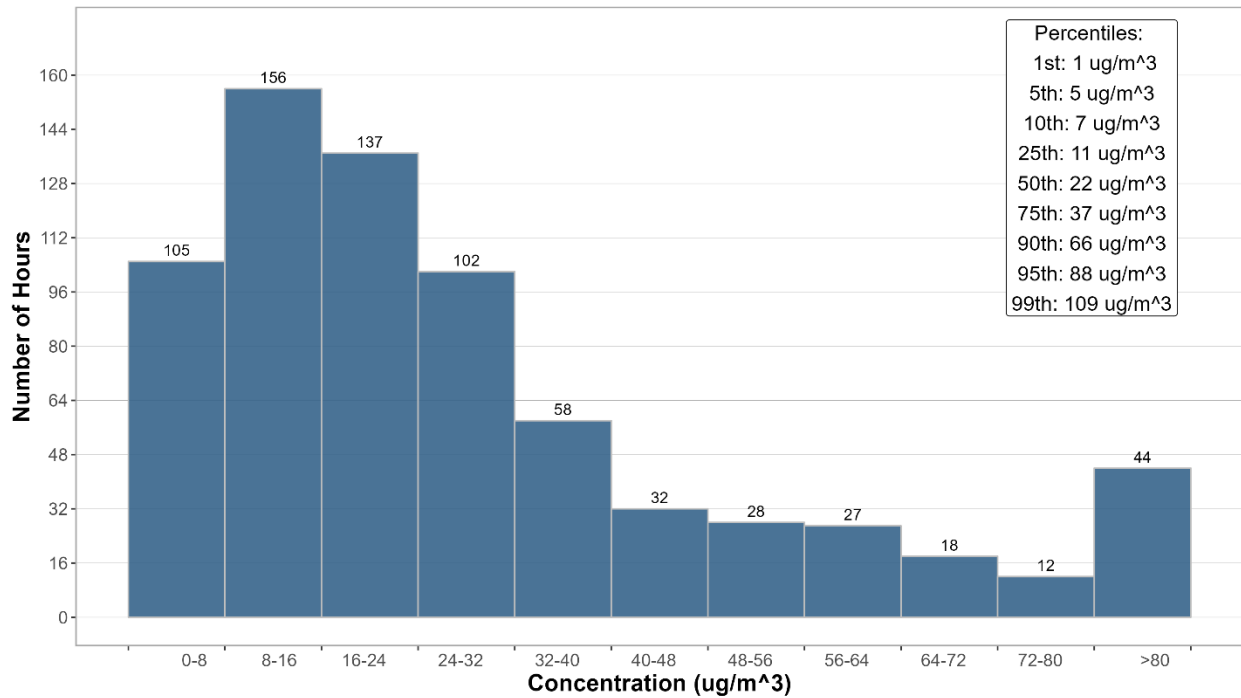


Figure 3-6 Histogram of hourly PM₁₀ concentrations at the Lagoon station

Histogram of Hourly TSP Readings

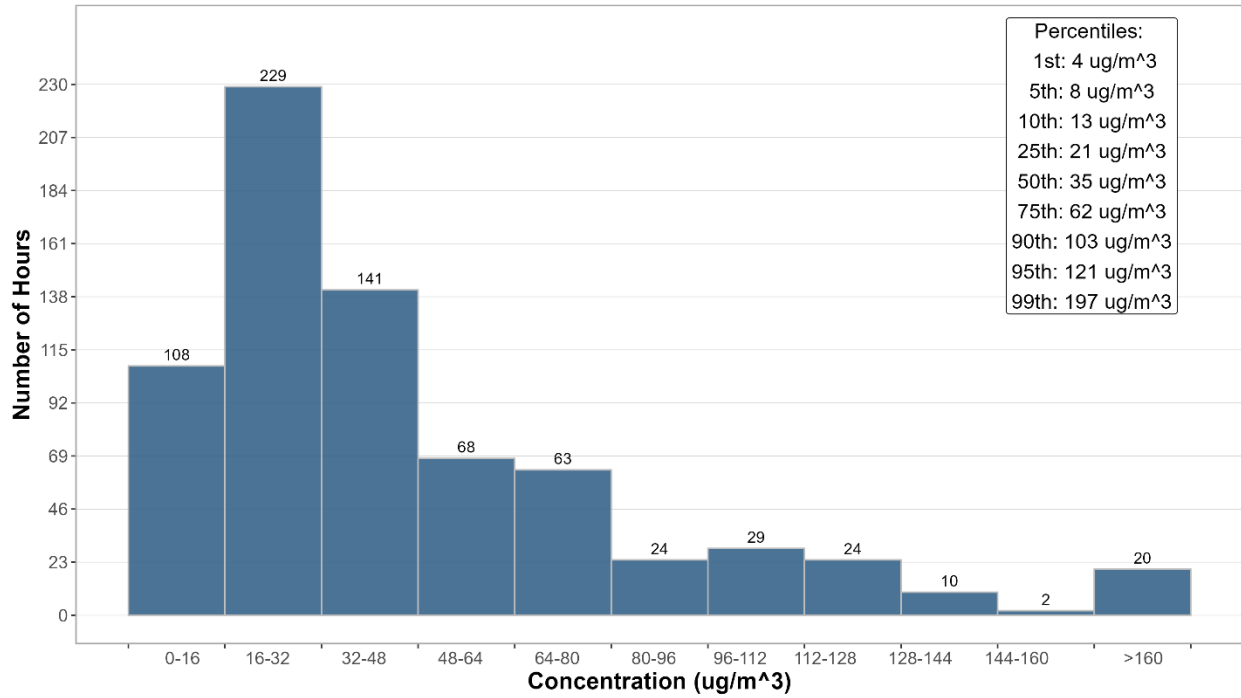


Figure 3-7 Histogram of hourly TSP concentrations at the Lagoon station

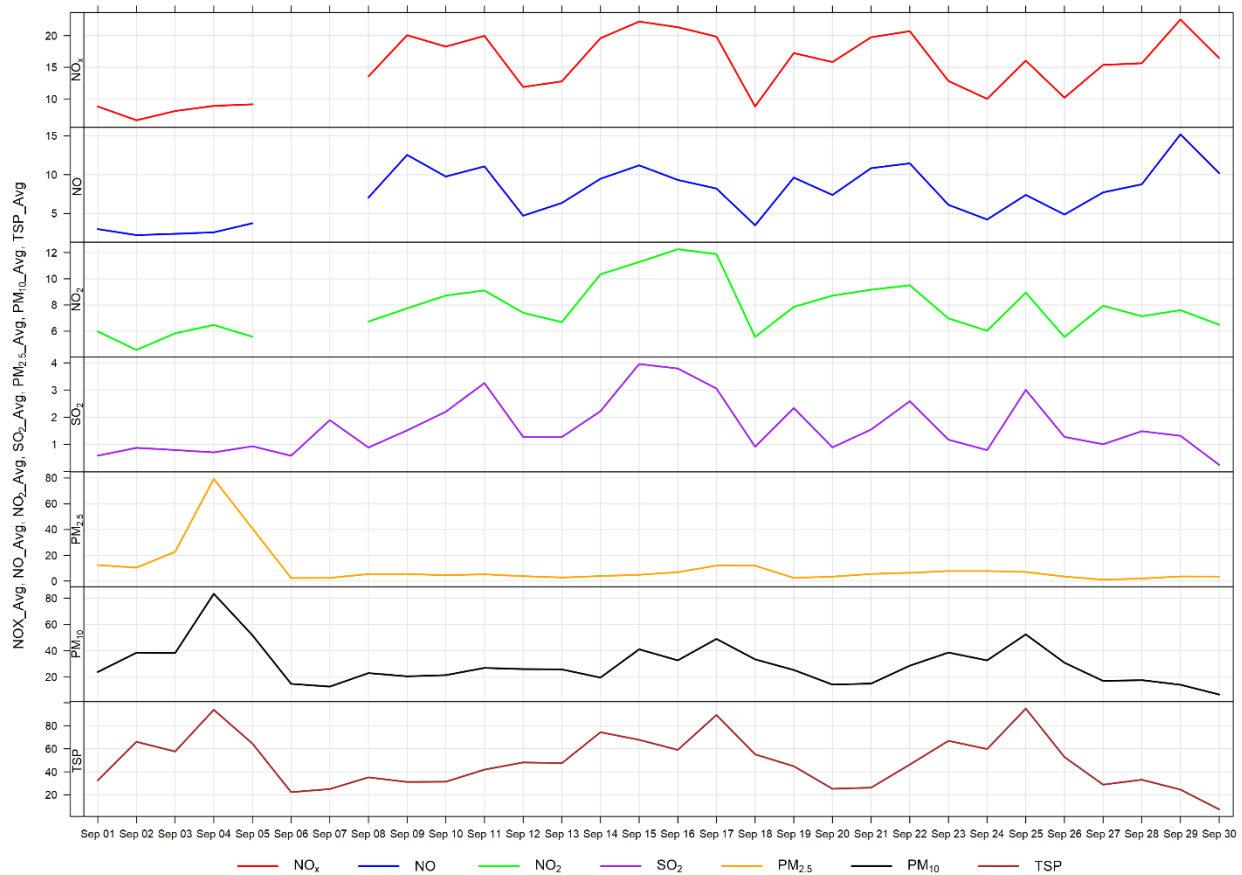


Figure 3-8 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

Figure 3-9 shows the wind rose for the 2 days of PM_{2.5} exceedances. The variation in wind conditions producing exceedances shows that, this month, the PM_{2.5} exceedances were influenced by wildfire smoke.

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.

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.

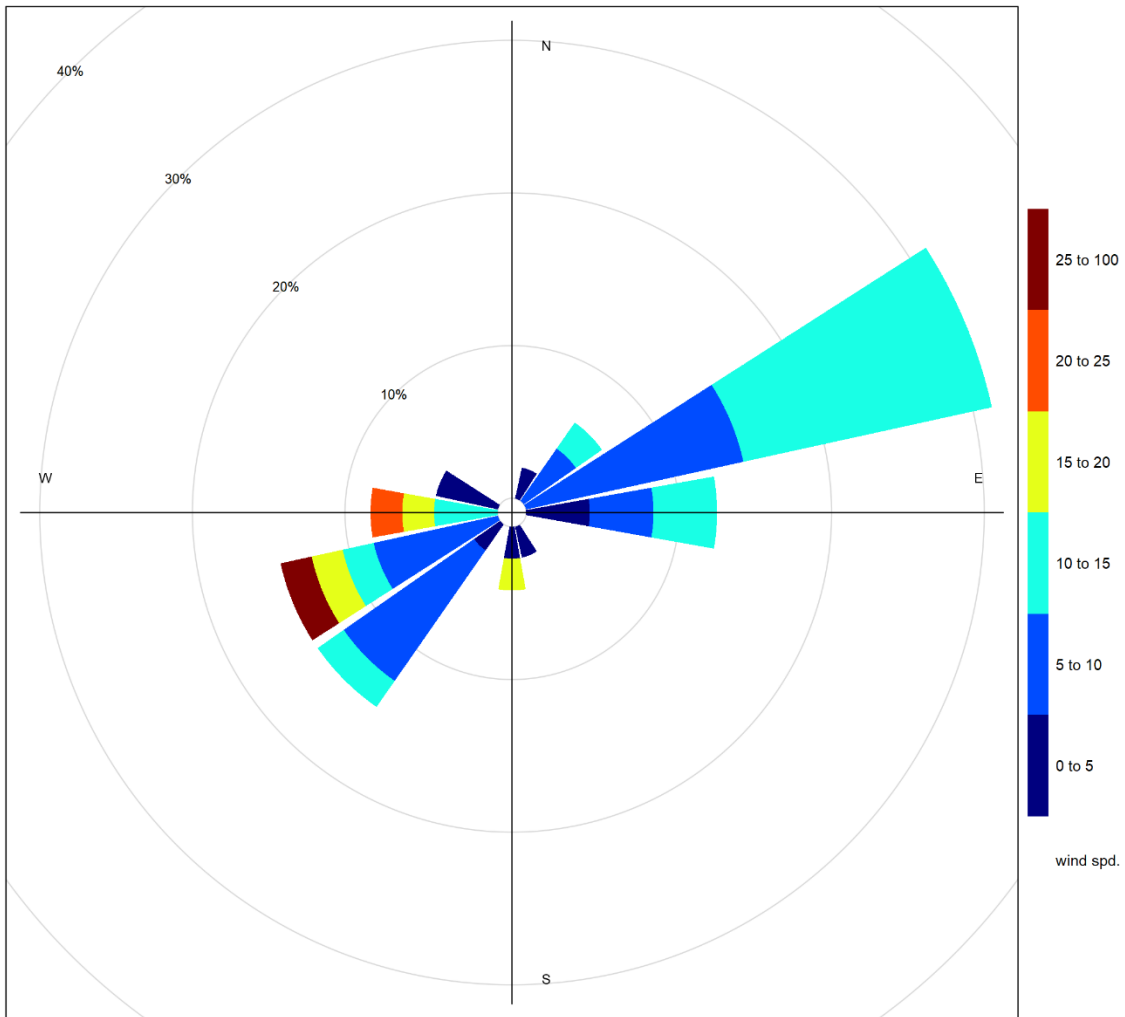


Figure 3-9 Wind rose for PM_{2.5} exceedance days recorded at the Lagoon Station

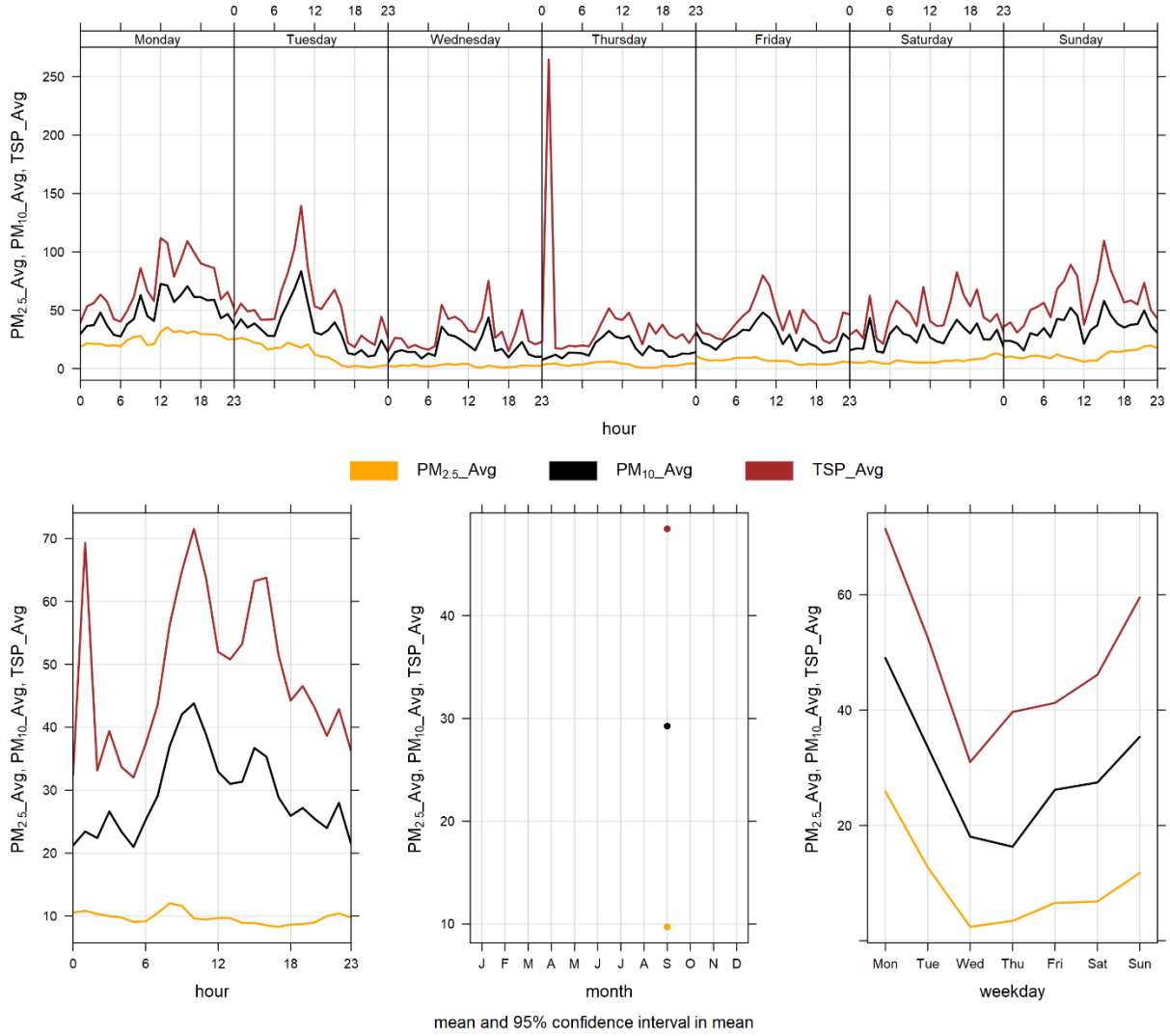


Figure 3-10 Lagoon monitor particulate matter time variation

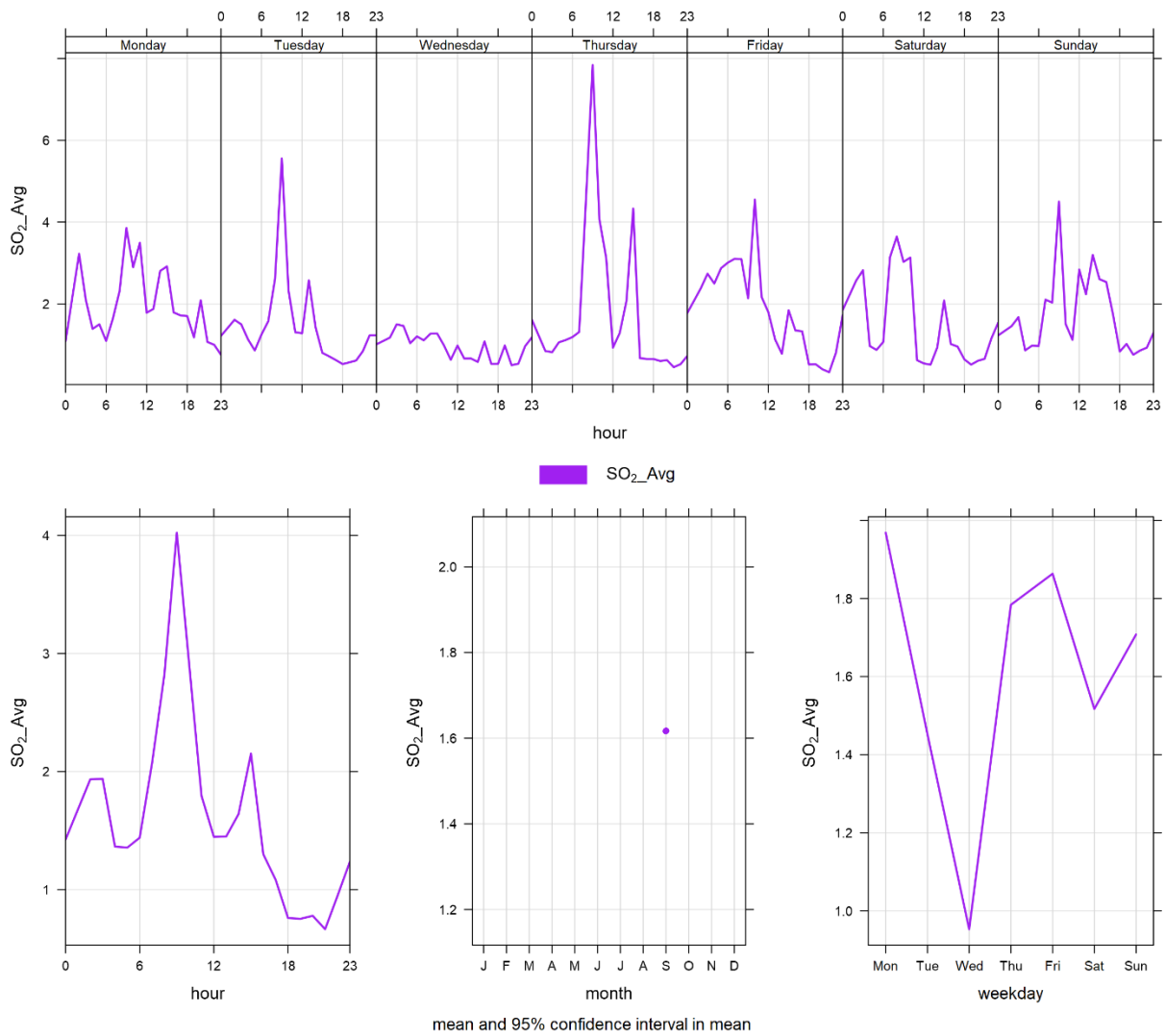


Figure 3-11 Lagoon monitor SO₂ time variation

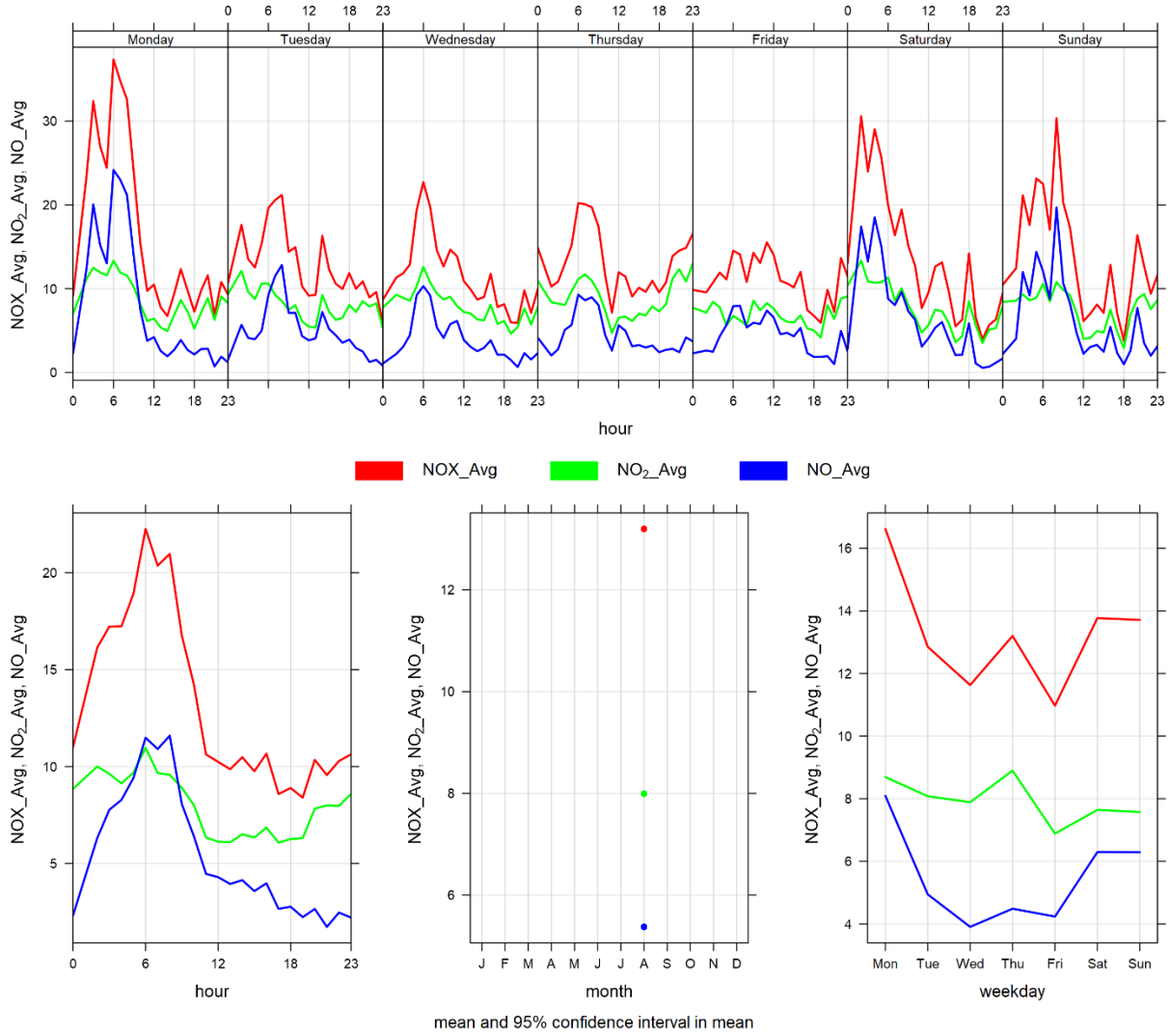


Figure 3-12 Lagoon monitor NO_x time variation

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 September 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 September 26 th . The monitor recorded 99.7% uptime for the month of September due to two hours of equipment malfunction occurring on September 3 rd at 18:00 and September 27 th at 1:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM _{2.5} monitor calibrated on September 26 th . The monitor recorded 99.9% uptime for the month of September due to one hour of equipment malfunction occurring on September 27 th at 1:00.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on September 26 th . The monitor recorded 99.9% uptime for the month of September due to one hour of equipment malfunction occurring on September 27 th at 1:00.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in September 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 while Figure 4-7 displays the wind rose for the 24-hour PM_{2.5} exceedance days, and Figure 4-8 illustrates the time series for hourly PM over different time periods.

There were 2 exceedances of the 24-hour PM_{2.5} AAAQO, 16 exceedances of the 1-hour PM_{2.5} AAAQG, and 9 exceedances of the 24-hour TSP AAAQO. As discussed in Section 1.2, the Bow Valley airshed was impacted from regional wildfire activity in September. The PM_{2.5} exceedances were primarily attributable to wildfire activity and smoke in the airshed from fires in BC and Alberta.

Historically in September, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances is 6 and 2, respectively. The maximum number of 24-hour TSP and PM_{2.5} AAAQO exceedances recorded in September were 12 days in 2021 and 3 days in 2022, respectively.

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 August 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 September 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	16	2	0.0	8.8	121.0	9	17	11.9	52.9	75.6	4	99.7
PM₁₀ (µg/m ³)	-	-	Windridge	-	-	0.0	48.4	485.0	25	16	23.6	256.1	123.7	2	99.9
TSP (µg/m ³)	-	100	Windridge	-	9	0.0	74.0	725.0	25	16	23.6	256.1	189.9	2	99.9

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						
2023-09-02	189.9	-	251.0	23.0	36.6	High wind event
2023-09-04	-	75.6	67.6	9.3	87.3	Regional wildfire activity
2023-09-05	-	33.9	245.3	9.9	79.7	Regional wildfire activity
2023-09-13	106.8	-	259.9	17.1	48.7	
2023-09-15	107.5	-	263.1	17.0	33.9	
2023-09-17	157.1	-	249.7	17.9	30.7	Regional wildfire activity
2023-09-18	143.9	-	242.4	19.9	43.6	Regional wildfire activity
2023-09-23	169.8	-	248.8	19.5	52.3	
2023-09-24	130.4	-	252.9	17.8	40.8	
2023-09-25	186.0	-	252.3	17.1	46.0	
2023-09-26	100.3	-	251.8	21.8	49.1	High wind event
Total # of Exceedances	9	2				
Maximum # of Exceedances (September)	12 (2021)	3 (2022)				
Average # of Exceedances (September)	6	2				
Minimum # of Exceedances (September)	1 (2018)	0 (2021)				

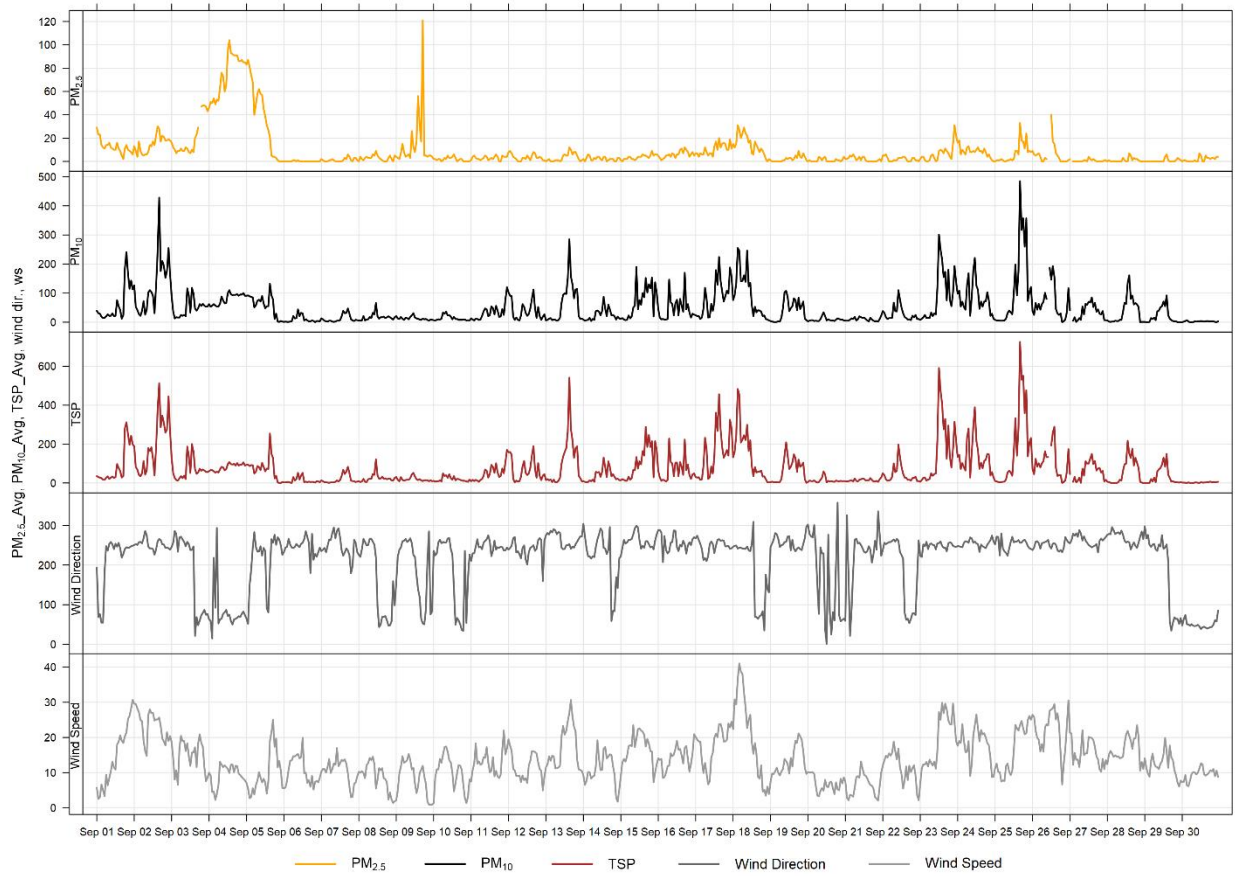


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

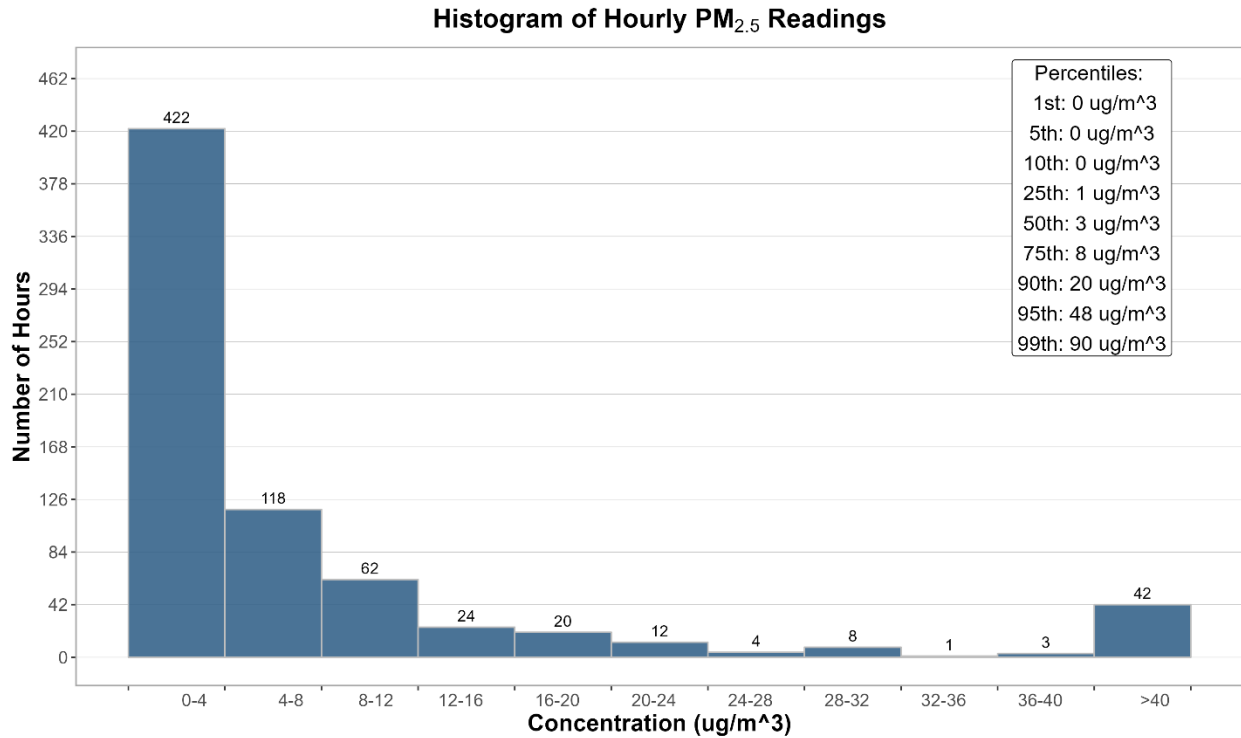


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

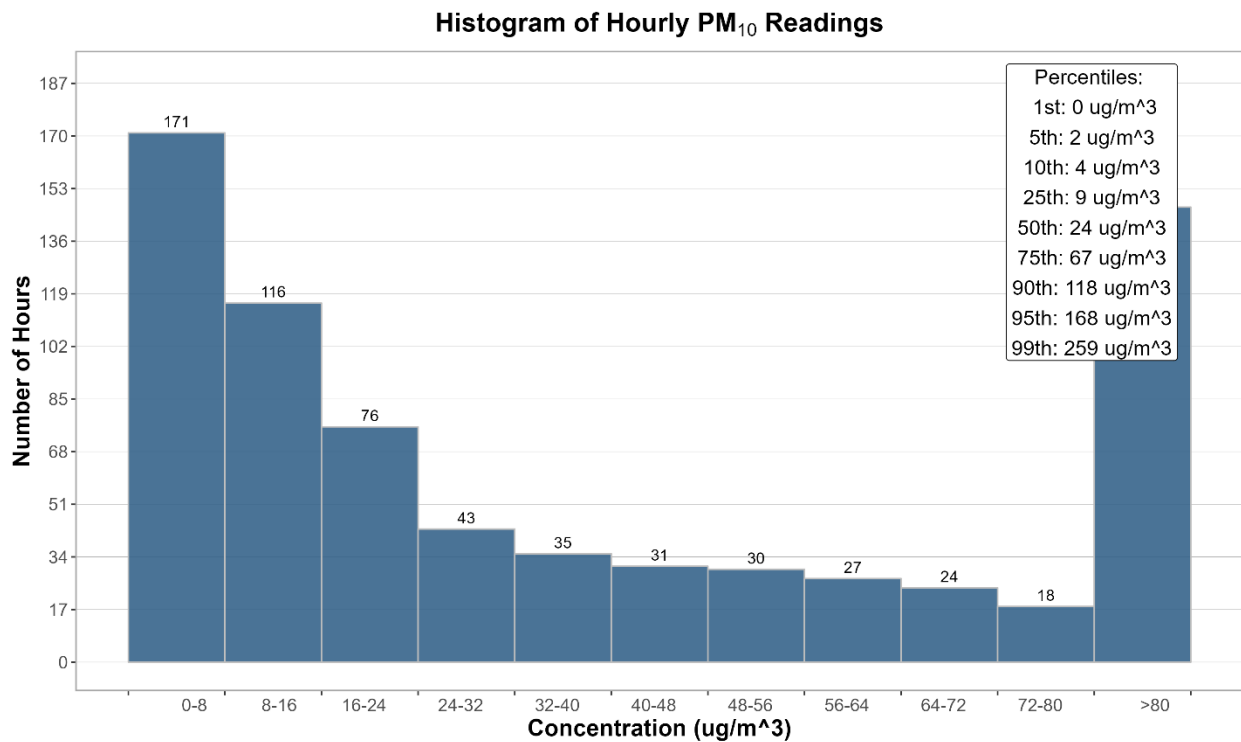


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

Histogram of Hourly TSP Readings

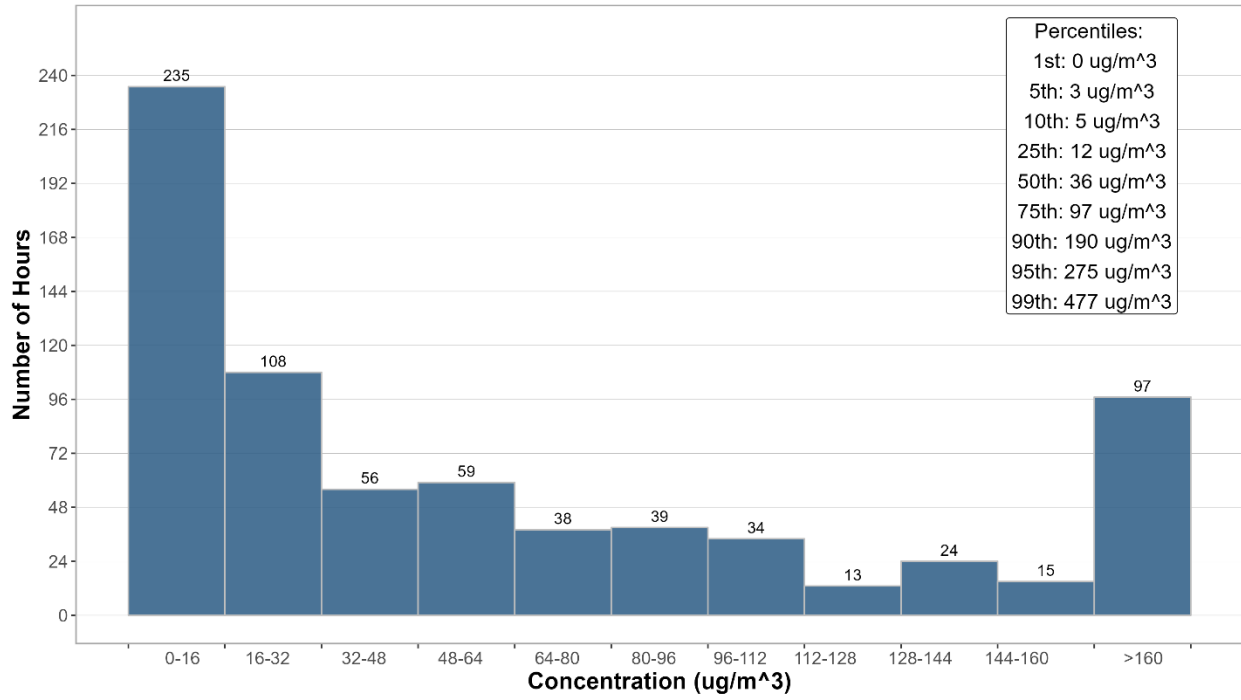


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

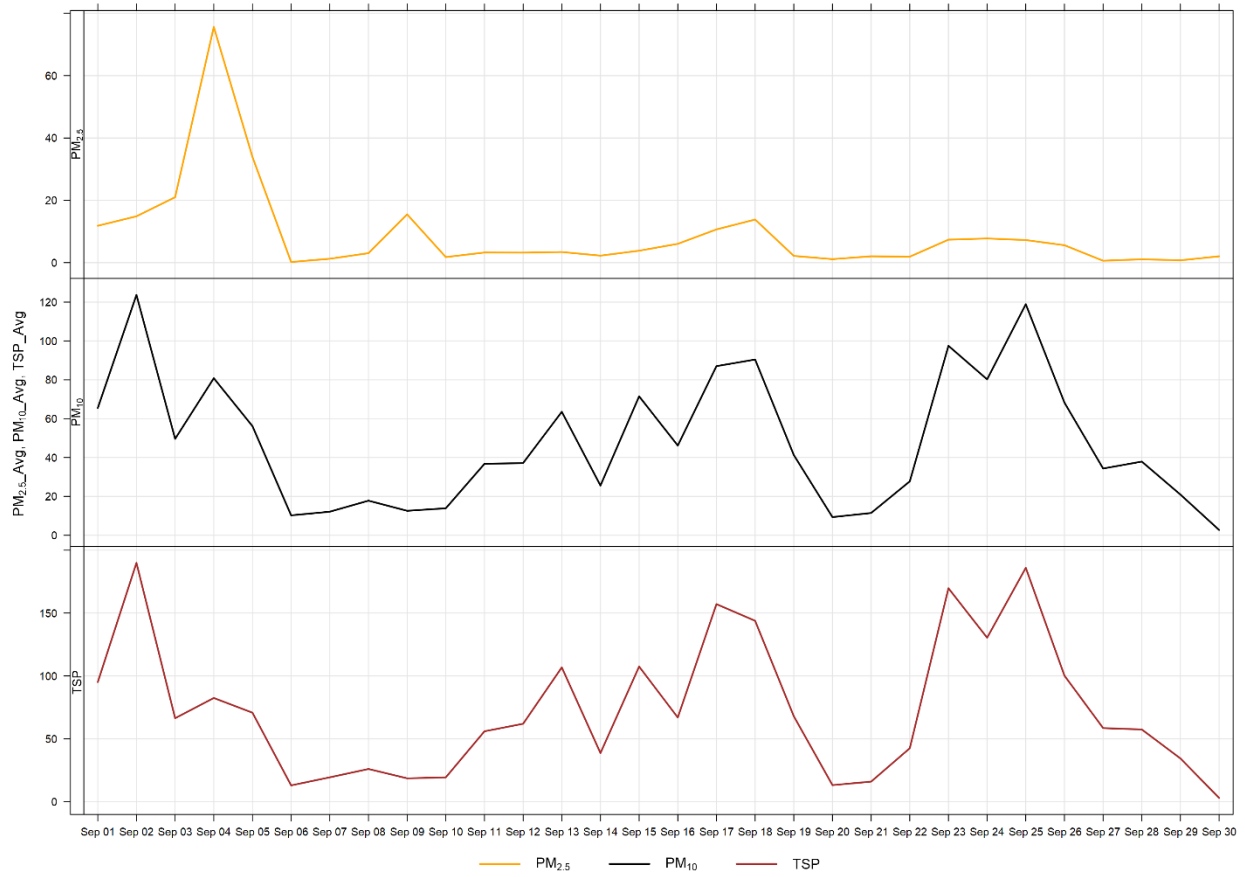


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 9 days of TSP exceedance in September. The wind rose shows that the winds predominately came from the west-southwest, suggesting impacts from the direction of the Lafarge Facility. Figure 4-7 shows the wind rose for the 2 days of PM_{2.5} exceedances. The variation in wind conditions producing exceedances shows that, this month, the PM_{2.5} exceedances were largely driven by wildfire activity rather than windblown fugitive dust.

Figure 4-8 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 4-8 is based on data collected during September 2023. Similar to the Lagoon station, and similar to the Lagoon station shows a more muted diurnal pattern associated with Lafarge operations, daytime emissions from traffic. The diurnal patterns also follow the diurnal pattern of higher wind speeds during the daytime hours.

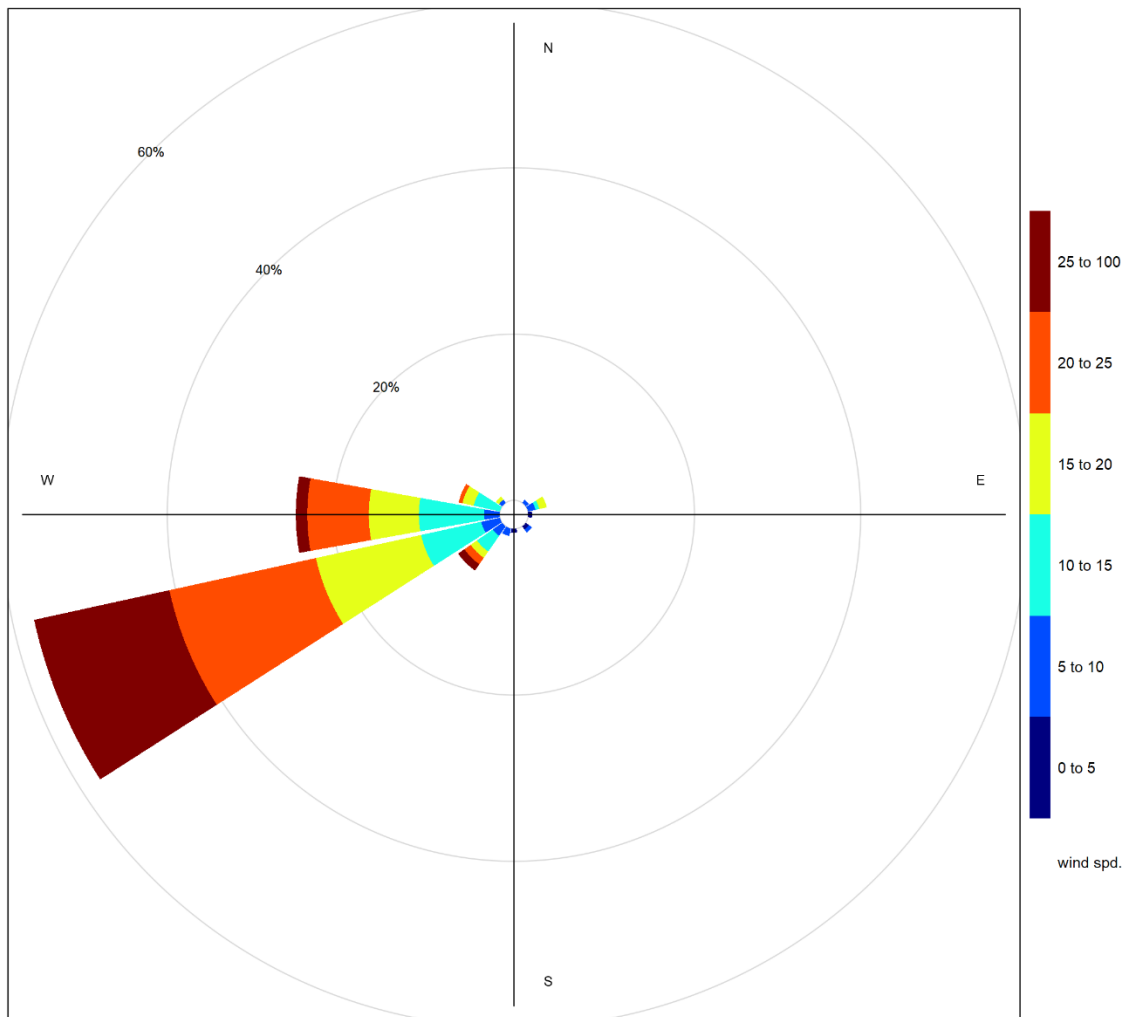


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

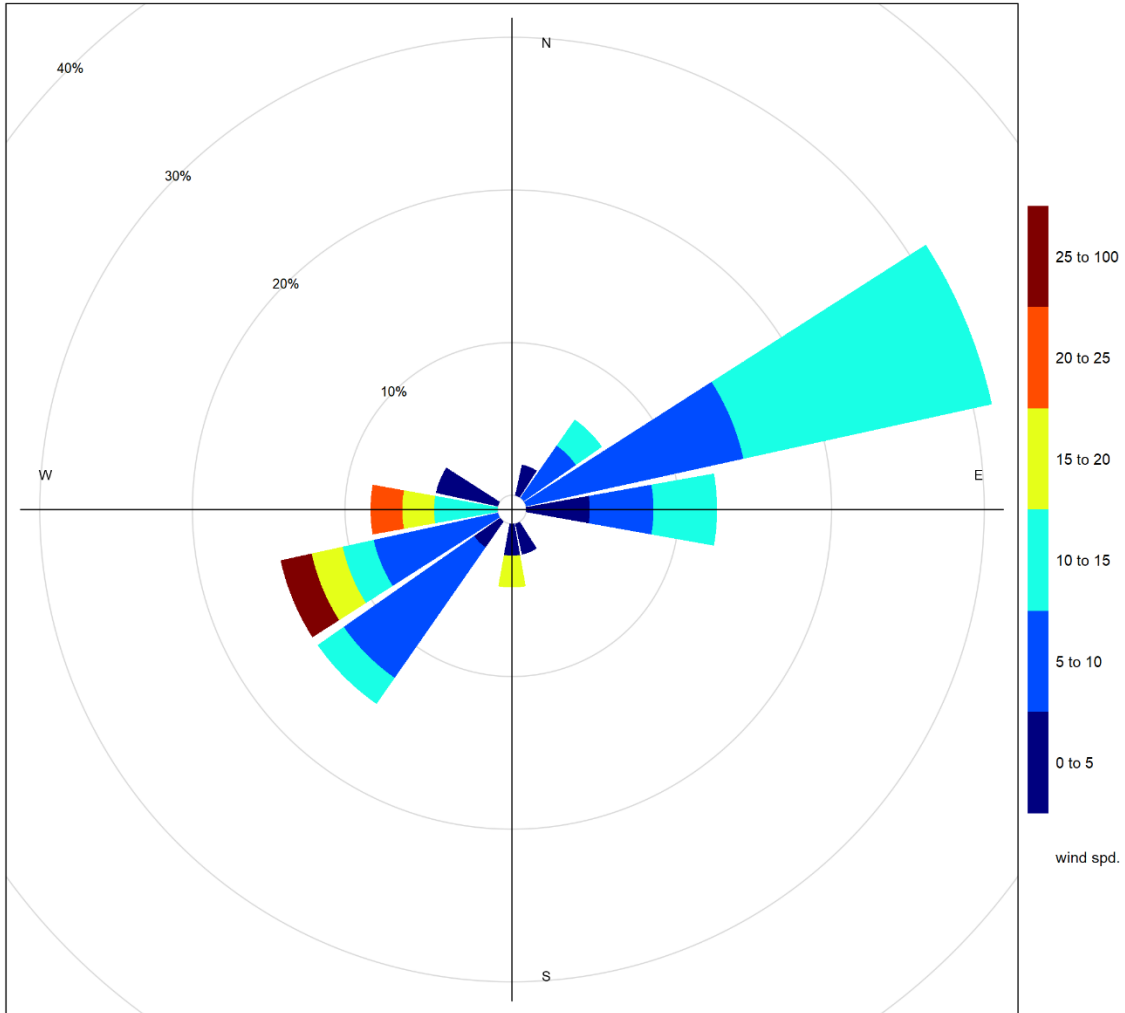


Figure 4-7 Wind rose for PM_{2.5} exceedance days recorded at the Windridge Station

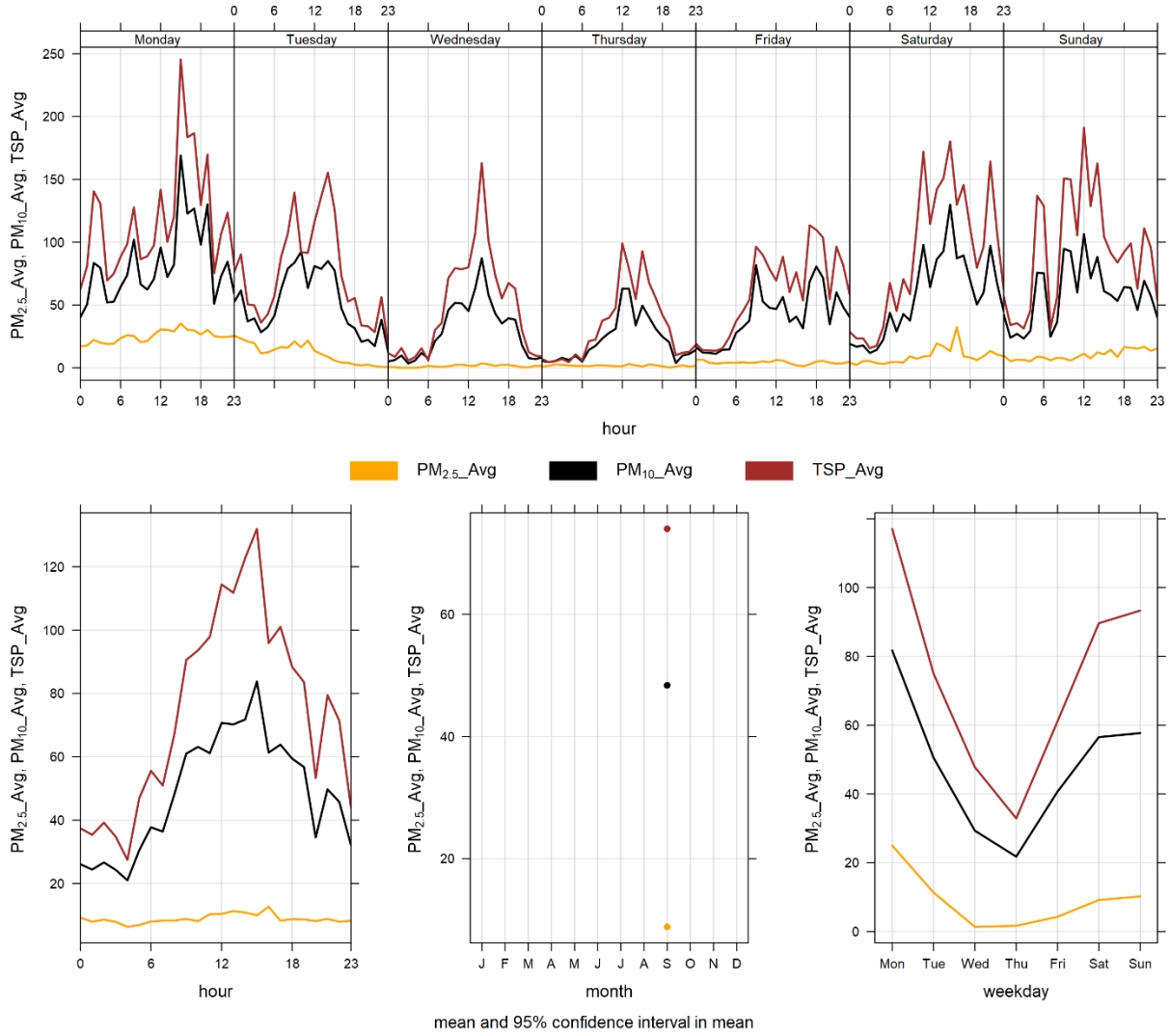


Figure 4-8 Windridge particulate matter time variation

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 100% uptime during the month of September.

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. Table 5-3 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.

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 2 exceedances of the 24-hour PM_{2.5} (29µg/m³) Guideline. Further, there were 16 hours exceeding the 1-hour PM_{2.5} Guideline.

Historically during the month of September, the West monitor records an average of 0 exceedance of the 24-hour TSP and PM_{2.5} guidelines. The maximum number of 24-hour TSP and PM_{2.5} AAAQO exceedances recorded in September were 1 and 2 days in 2017 respectively.

Table 5-2 Summary of September 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	16	2	0.2	9.6	101.6	4	13	9.9	74.9	80.3	4	100.0
PM₁₀ ($\mu\text{g}/\text{m}^3$)	-	-	West	-	-	0.2	10.9	116.9	4	15	12.3	50.1	83.4	4	100.0
TSP ($\mu\text{g}/\text{m}^3$)	-	100	West	-	0	0.2	12.0	134.3	4	15	12.3	50.1	85.0	4	100.0

Table 5-3 Days exceeding the Guideline for TSP or PM_{2.5} at the West 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						
2023-09-04	-	80.3	67.6	9.3	87.3	Regional wildfire activity
2023-09-05	-	37.0	245.3	9.9	79.7	Regional wildfire activity
Total # of Exceedances	0	2				
Maximum # of Exceedances (September)	1 (2017)	2 (2017)				
Average # of Exceedances (September)	0	0				
Minimum # of Exceedances (September)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2018, 2019, 2020, 2021, 2022)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2019, 2020, 2021, 2022)				

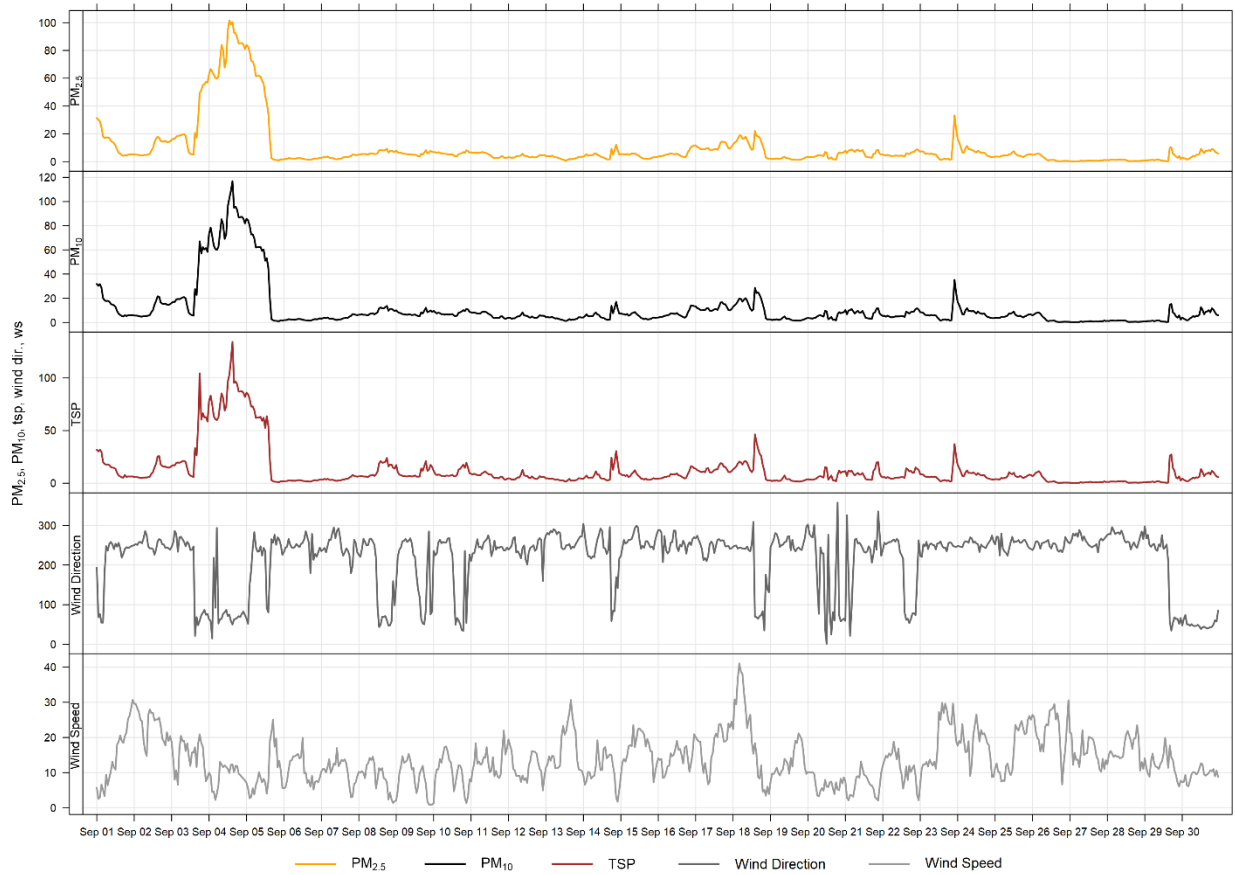


Figure 5-1 1-hour particulate matter concentrations at the West monitor

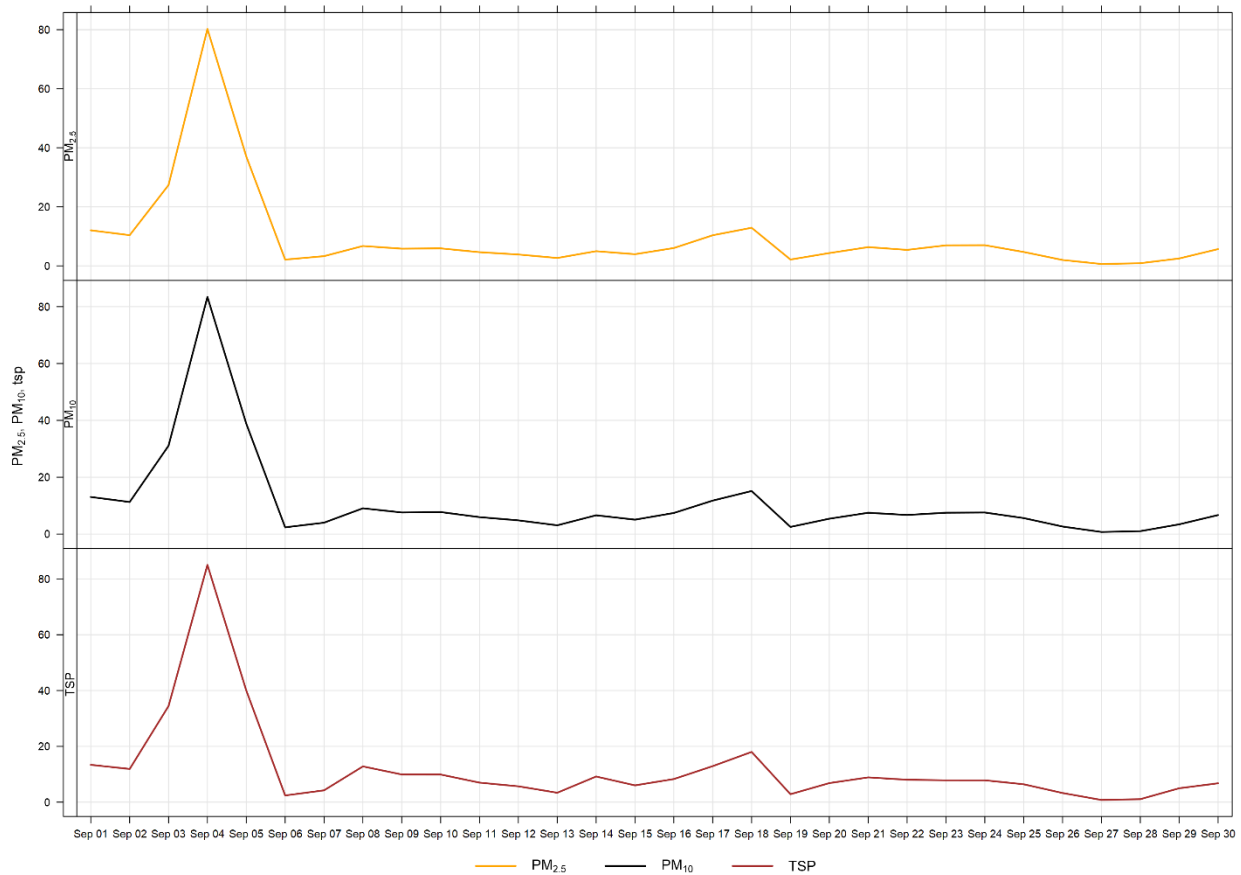


Figure 5-2 24-hour particulate matter concentrations at the West monitor

Figure 5-3 shows the wind rose for the 2 days of PM_{2.5} exceedances. The variation in wind conditions producing exceedances shows that, this month, the PM_{2.5} exceedances were largely driven by wildfire activity rather than windblown fugitive dust.

Figure 5-4 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 September 2023. The diurnal pattern is not significant due to the wildfire smoke event recorded in early September. 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.

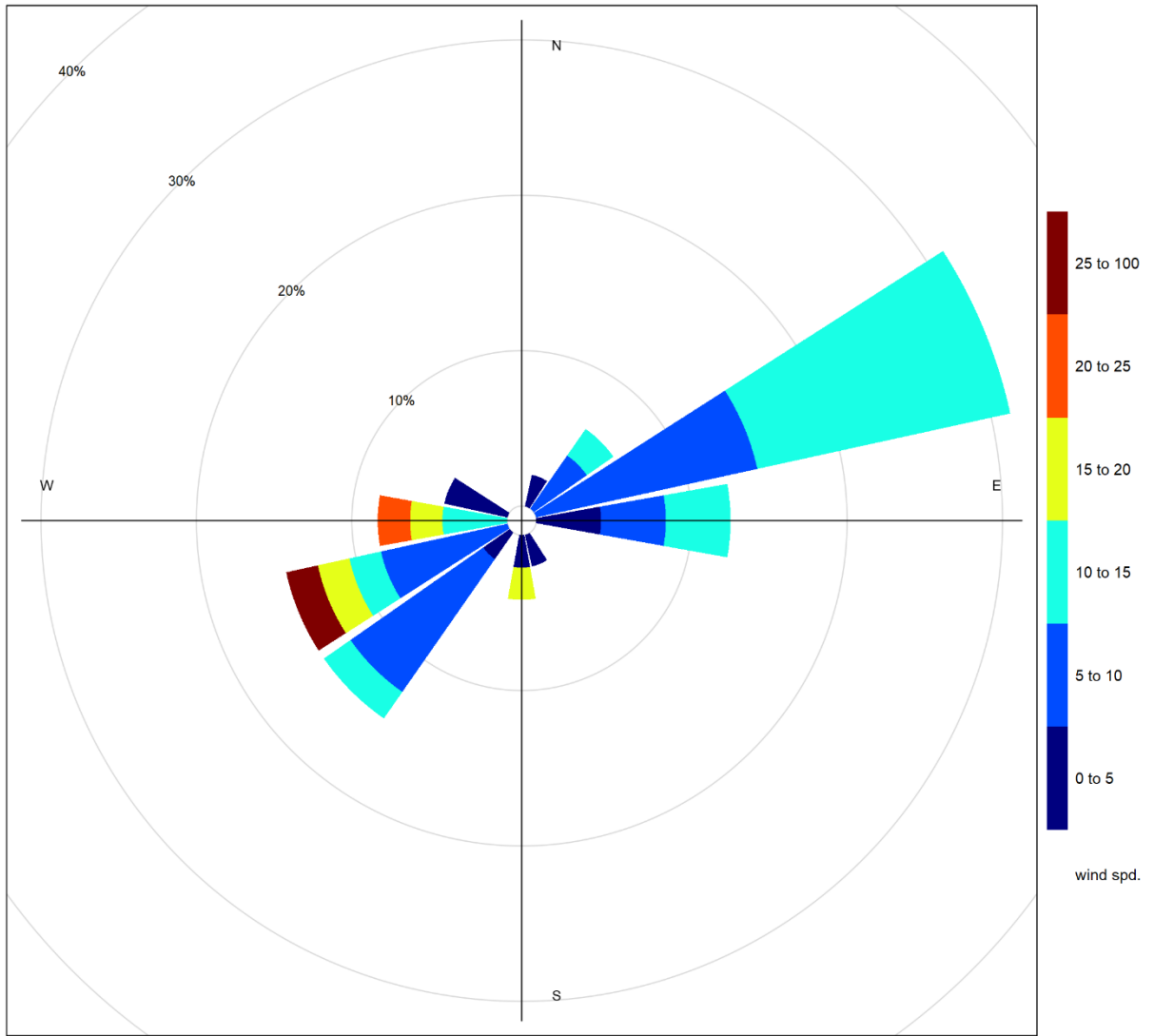


Figure 5-3 Windrose for PM_{2.5} exceedance days recorded at the West GRIMM

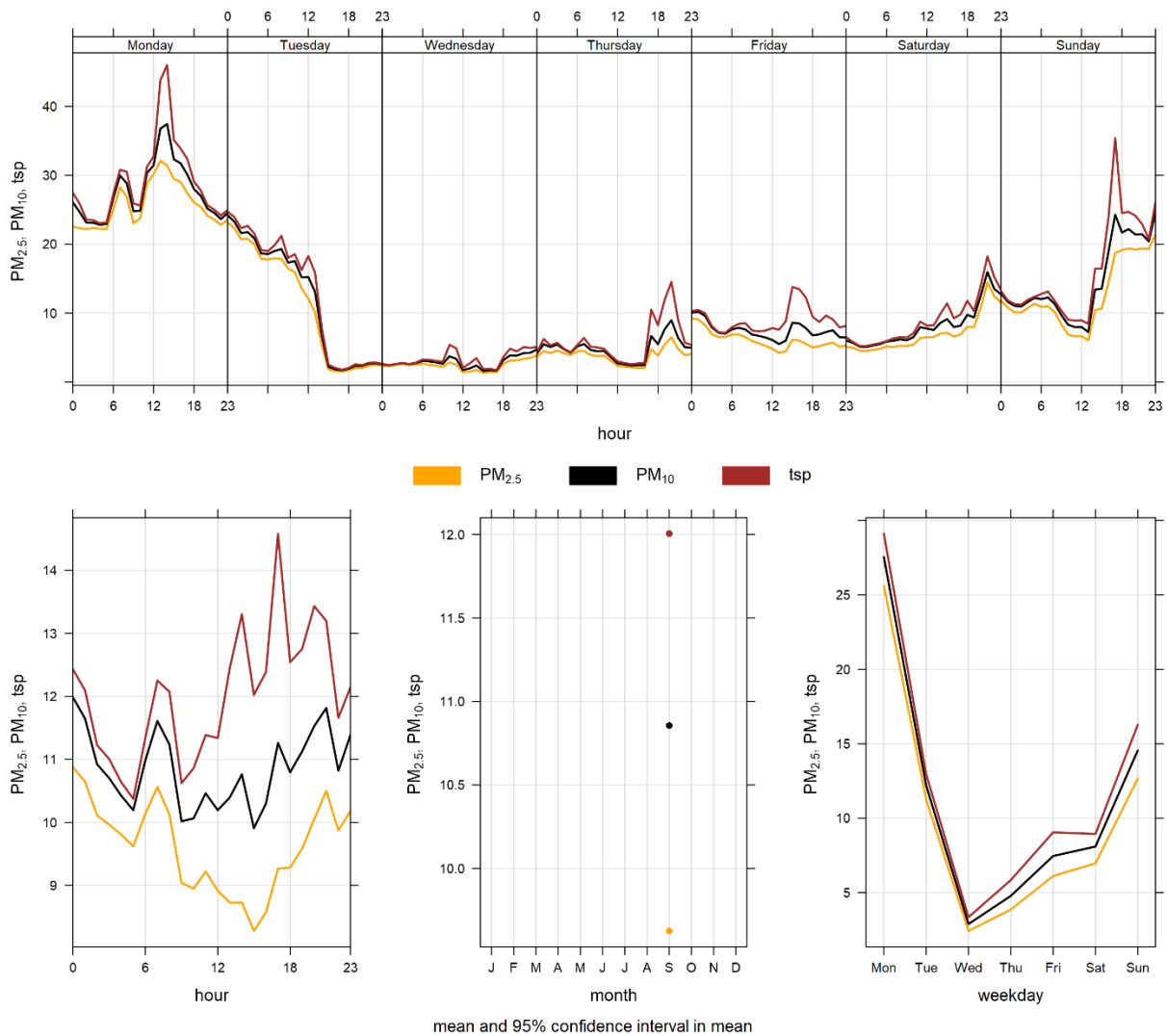


Figure 5-4 West monitor particulate matter time variation

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 100% uptime during the month of September.

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 1 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (29 µg/m³) Guidelines, respectively. There were 1 hour exceeding the 1-hour PM_{2.5} Guideline. As discussed in Section 1.2, the Bow Valley airshed was impacted from regional wildfire activity in September. The PM_{2.5} exceedances were primarily attributable to wildfire activity and smoke in the airshed from fires in BC and Alberta.

Historically during the month of September, the Berm monitor records an average of 12 and 1 exceedances of the 24-hour TSP and PM_{2.5} guidelines, respectively. The maximum number of TSP exceedances recorded during September occurred in 2011 and 2021 where there were 19 days that exceeded the guideline. On the other hand, the maximum number of PM_{2.5} exceedances in September was 7 days in 2017.

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 September 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 September 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	1	1	0.2	13.1	91.5	25	16	23.6	256.1	39.1	4	100.0
PM₁₀ (µg/m ³)	-	-	Berm	-	-	0.2	59.8	665.6	25	16	23.6	256.1	168.6	2	100.0
TSP (µg/m ³)	-	100	Berm	-	14	0.2	139.4	1855.9	13	15	27.0	253.1	447.5	2	100.0

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						
2023-09-01	184.4	-	244.3	15.3	61.8	
2023-09-02	447.5	-	251.0	23.0	36.6	High wind event
2023-09-04	-	39.1	67.6	9.3	87.3	Regional wildfire activity
2023-09-12	123.4	-	245.0	11.3	43.6	
2023-09-13	313.9	-	259.9	17.1	48.7	
2023-09-15	231.4	-	263.1	17.0	33.9	
2023-09-17	276.8	-	249.7	17.9	30.7	Regional wildfire activity
2023-09-18	198.7	-	242.4	19.9	43.6	Regional wildfire activity
2023-09-19	125.1	-	255.1	13.3	54.9	
2023-09-23	422.6	-	248.8	19.5	52.3	
2023-09-24	286.6	-	252.9	17.8	40.8	
2023-09-25	361.0	-	252.3	17.1	46.0	
2023-09-26	225.4	-	251.8	21.8	49.1	High wind event
2023-09-27	123.0	-	261.6	15.4	58.2	
2023-09-28	149.5	-	267.2	16.6	64.1	
Total # of Exceedances	14	1				

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 (September)	19 (2011, 2021)	7 (2017)				
Average # of Exceedances (September)	12	1				
Minimum # of Exceedances (September)	7 (2013)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2019)				

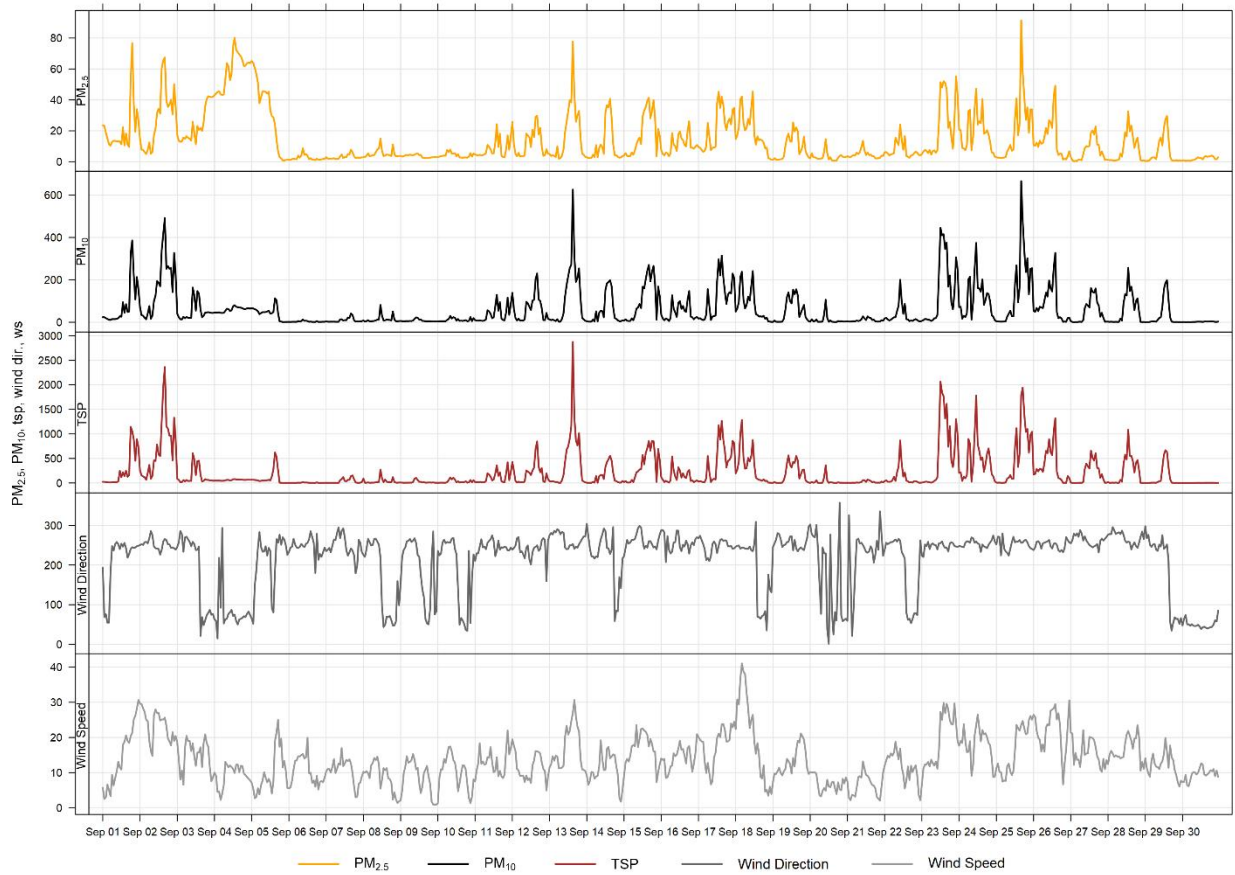


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

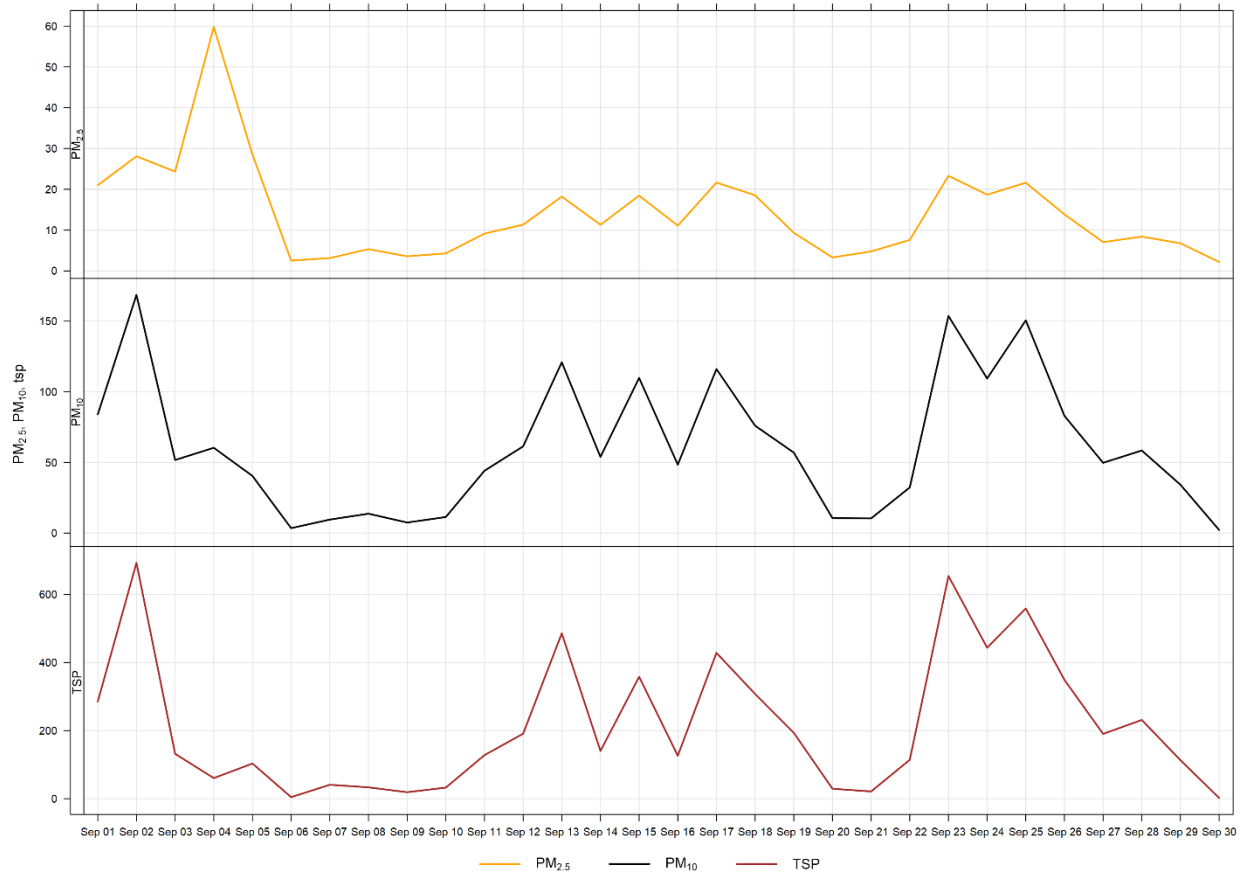


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 14 days of TSP exceedances. The wind rose shows that the winds predominately came from the west-southwest, suggesting impacts from the direction of the Lafarge Facility. Figure 6-4 shows the wind rose for the 1 day of PM_{2.5} exceedances. The variation in wind conditions producing exceedances shows that, this month, the PM_{2.5} exceedances were largely driven by wildfire activity rather than windblown fugitive dust.

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 Lagoon station, and is associated with Lafarge operations, but also daytime emissions from other activities and sources in Exshaw.

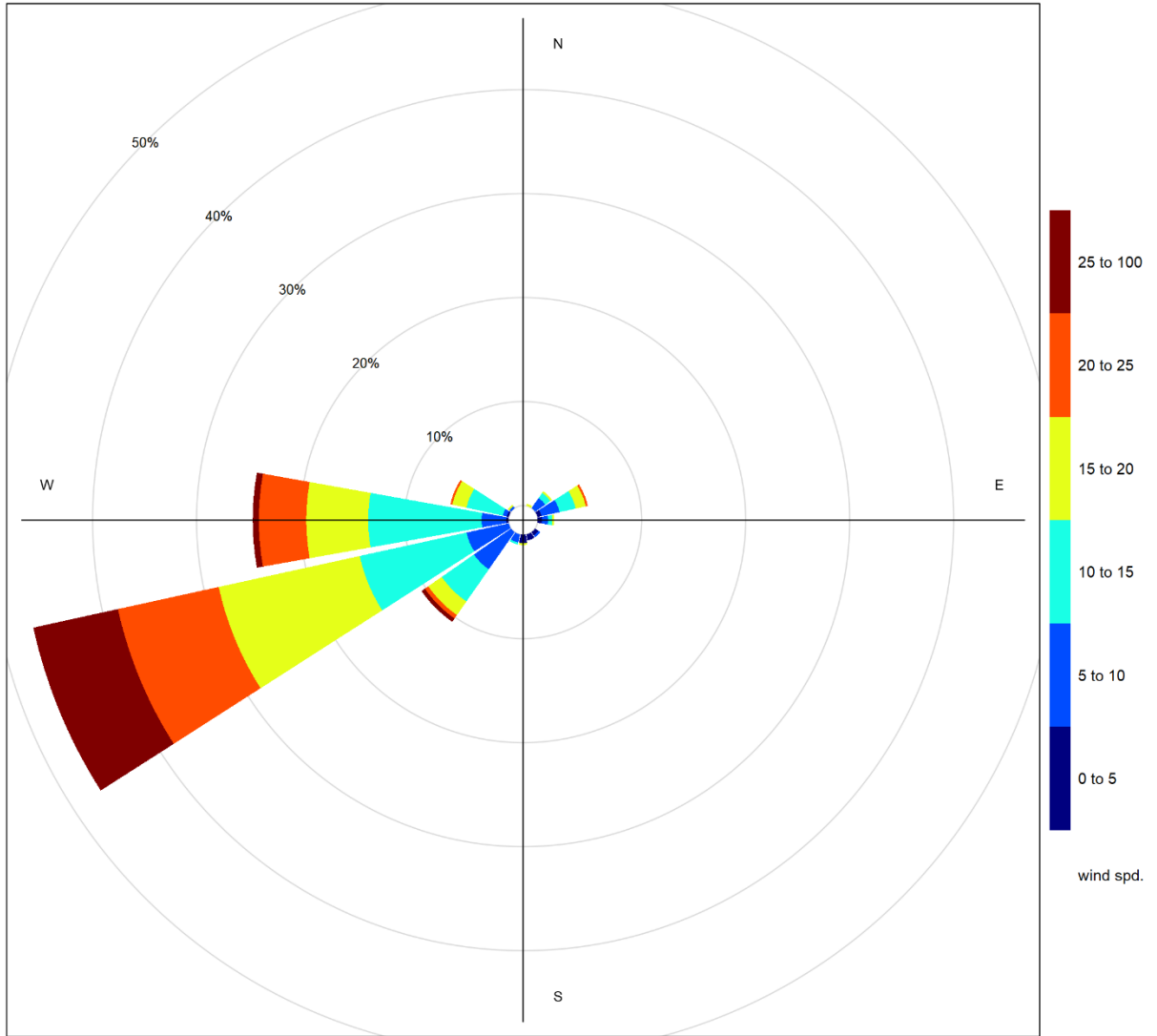


Figure 6-3 Windrose for TSP exceedance days recorded at the Berm GRIMM

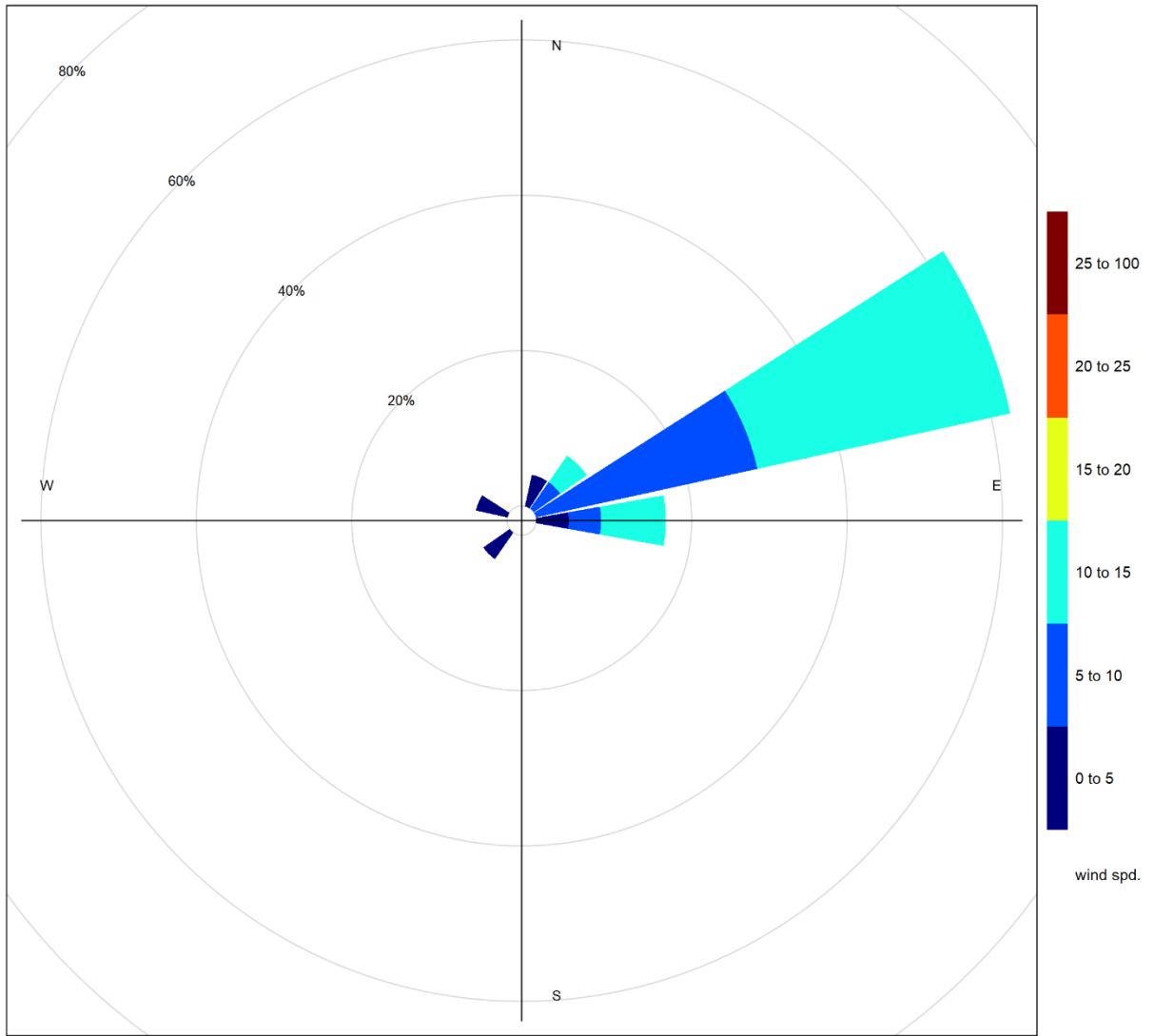


Figure 6-4 Windrose for PM_{2.5} exceedance days recorded at the Berm GRIMM

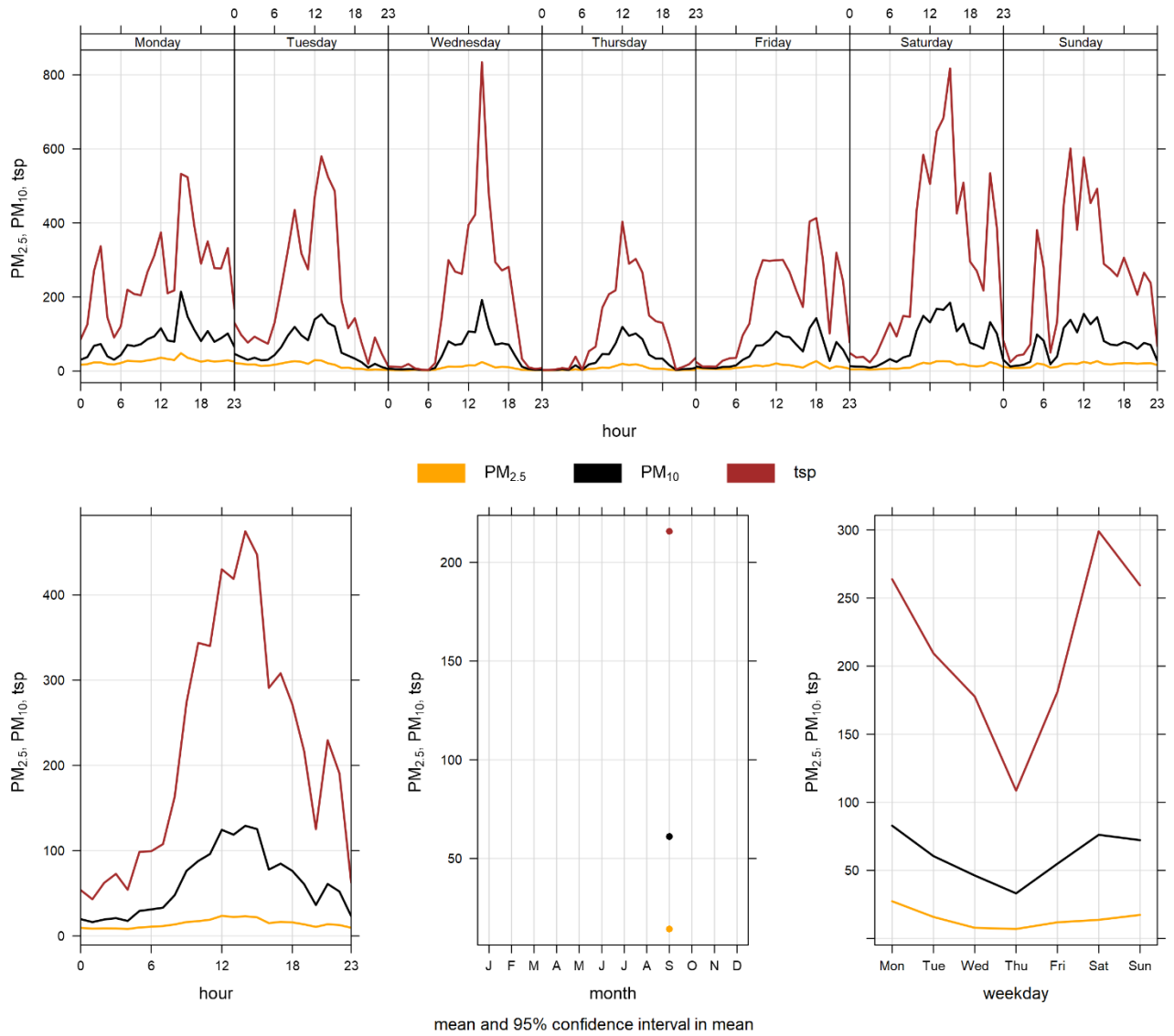


Figure 6-5 Berm particulate matter time variation

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APPENDIX

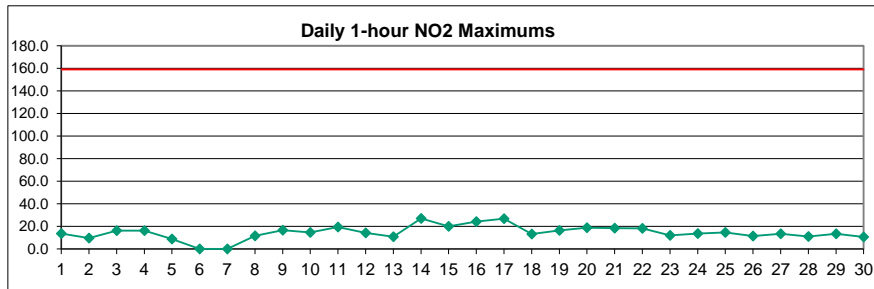
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – September 2023

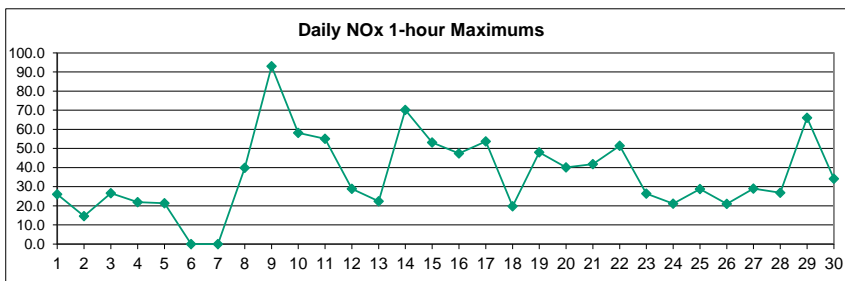
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	6.9	S	7.3	7.5	6.5	5.9	13.4	13.5	12.8	7.1	4.6	3.4	3.6	8.9	4.1	1.5	1.6	1.6	2.5	3.1	6.1	5.1	5.1	5.3	6.0	13.5	
2	5.6	S	7.7	4.6	6.8	3.7	4.2	6.9	4.1	1.5	2.6	1.6	0.7	1.6	4.5	5.7	3.8	8.6	5.0	4.1	3.3	5.0	3.8	9.6	4.6	9.6	
3	3.8	S	5.2	4.6	3.3	4.5	5.7	8.2	5.6	6.9	3.8	4.2	2.5	2.4	3.7	10.3	16.2	6.4	3.8	7.1	4.8	3.7	4.2	13.2	5.8	16.2	
4	16.1	S	13.8	6.3	9.2	8.5	9.7	6.7	7.7	3.0	2.7	3.2	3.3	3.8	7.5	5.5	7.0	8.1	6.1	5.1	4.2	4.6	3.4	3.6	6.5	16.1	
5	5.8	S	3.8	8.8	5.4	5.4	7.1	7.6	5.4	4.6	6.7	7.1	7.8	8.4	4.8	4.8	2.6	3.9	2.8	5.4	2.6	6.9	5.8	5.0	5.6	8.8	
6	5.3	S	7.2	3.5	4.0	5.8	7.3	8.2	5.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	-	-	
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	6.3	2.5	3.2	4.2	3.8	2.8	2.8	5.1	7.9	-	-
8	6.0	S	5.0	8.3	7.0	8.9	8.3	8.3	8.6	6.0	5.3	11.5	10.6	7.4	3.3	2.5	2.0	2.8	5.7	7.2	11.4	8.5	4.9	5.5	6.7	11.5	
9	7.5	S	16.5	12.4	11.6	11.6	13.1	14.1	9.6	8.8	4.3	3.1	2.8	3.6	2.6	3.9	4.8	1.2	2.4	2.5	11.7	11.9	9.8	8.2	7.7	16.5	
10	9.8	S	11.5	12.1	10.3	12.7	12.2	12.4	7.8	14.5	4.7	5.0	13.1	1.8	2.3	5.5	3.2	1.9	4.8	3.2	11.4	14.7	12.4	13.2	8.7	14.7	
11	11.6	S	19.5	10.8	12.0	14.7	12.4	14.4	11.9	13.4	10.3	14.0	5.8	3.6	11.5	7.1	6.4	3.4	4.7	3.8	0.6	2.3	11.3	4.0	9.1	19.5	
12	5.5	S	5.3	7.1	7.1	7.8	10.0	6.7	10.6	14.1	6.1	3.2	1.3	7.6	9.3	8.7	1.2	1.2	10.7	10.1	8.2	9.5	11.6	7.4	7.4	14.1	
13	7.3	S	10.6	8.4	8.4	8.6	8.4	8.8	9.3	4.9	1.8	4.0	4.0	5.6	4.2	1.8	3.3	1.9	3.6	9.5	10.8	8.9	9.7	10.0	6.7	10.8	
14	18.8	S	10.5	9.2	7.1	6.5	8.0	11.4	17.0	16.6	12.4	5.5	4.2	2.0	1.6	2.0	3.0	8.2	12.2	5.3	20.8	26.9	15.9	12.5	10.3	26.9	
15	18.6	S	16.7	14.9	17.2	15.9	19.7	12.7	10.4	5.8	12.8	8.6	2.6	4.2	3.1	14.4	10.3	9.9	6.9	4.4	9.1	6.7	14.5	20.0	11.3	20.0	
16	21.4	S	24.2	19.9	12.4	12.0	13.8	14.4	18.6	8.5	15.3	6.8	1.2	2.8	4.4	12.6	9.1	2.5	5.8	8.2	13.5	14.9	18.4	21.2	12.3	24.2	
17	17.0	S	23.4	16.6	11.7	11.6	9.8	11.0	11.0	8.7	5.5	1.4	7.1	16.5	26.7	15.5	18.9	13.2	7.8	14.4	9.9	5.4	6.3	3.7	11.9	26.7	
18	6.1	S	2.7	1.9	2.6	1.6	2.1	2.8	9.0	3.2	2.2	6.1	7.5	2.5	2.5	5.8	5.7	2.7	4.2	12.5	9.1	13.2	13.0	8.9	5.6	13.2	
19	10.8	S	10.3	7.1	10.5	10.6	14.2	16.5	12.0	14.8	10.6	5.8	2.2	5.1	4.0	1.5	3.1	2.9	1.8	2.7	7.4	8.2	10.9	7.9	7.9	16.5	
20	7.1	S	6.6	9.6	13.2	18.8	14.6	15.4	8.1	10.3	14.0	5.8	5.5	2.4	4.4	6.0	8.6	6.3	8.7	6.1	8.6	11.7	4.9	3.8	8.7	18.8	
21	8.7	S	3.7	9.9	8.3	8.3	10.4	7.9	8.5	8.9	6.0	3.9	5.9	8.2	13.6	18.5	3.5	3.3	12.8	10.2	7.2	10.4	15.4	17.3	9.2	18.5	
22	13.1	S	13.3	18.3	9.3	14.2	13.6	11.4	9.8	6.8	6.9	4.2	7.6	12.9	10.0	5.3	6.7	4.8	12.9	2.1	7.2	9.9	10.2	8.1	9.5	18.3	
23	10.9	S	10.7	9.4	10.8	11.5	12.1	9.9	9.5	9.8	7.6	4.8	6.2	4.5	1.7	2.0	1.1	9.1	7.8	4.6	3.4	3.6	3.0	6.4	7.0	12.1	
24	6.0	S	5.3	2.8	4.2	5.3	4.4	10.2	8.1	8.2	6.0	3.6	3.6	1.5	1.7	5.9	2.4	1.3	4.4	11.7	5.5	10.7	12.5	13.5	6.0	13.5	
25	8.3	S	7.7	12.0	9.2	10.1	10.2	9.5	10.4	11.9	11.8	9.9	6.5	11.2	13.0	14.5	9.2	8.1	9.3	8.5	7.8	2.7	2.4	1.3	8.9	14.5	
26	1.5	S	8.5	5.8	2.7	8.6	8.3	7.0	10.6	11.4	6.0	2.5	9.0	8.4	9.2	1.5	1.6	1.6	3.8	4.6	5.1	5.0	2.9	2.1	5.6	11.4	
27	4.0	S	9.8	10.2	8.5	9.0	13.5	8.5	9.7	10.0	9.4	7.7	3.3	3.1	5.5	8.4	7.3	1.5	7.7	10.2	5.6	6.3	11.0	12.4	7.9	13.5	
28	8.5	S	9.8	8.5	10.0	8.6	10.0	10.2	10.6	11.0	8.0	7.4	4.3	2.7	3.1	7.5	4.8	3.9	1.7	3.7	10.8	5.7	9.3	4.0	7.1	11.0	
29	10.0	S	12.1	11.4	11.3	12.8	13.3	10.8	10.9	8.2	11.0	3.4	1.9	7.7	1.7	4.1	2.2	3.1	6.4	8.7	3.4	10.6	2.9	6.9	7.6	13.3	
30	6.7	S	9.6	3.7	3.1	3.7	5.3	8.5	8.6	10.6	8.8	9.8	3.7	10.0	9.9	6.7	5.2	2.5	2.8	4.8	7.7	6.5	5.5	5.9	6.5	10.6	
NO.	29	-	29	29	29	29	29	29	29	28	28	28	28	28	28	29	29	29	29	29	29	29	29	29	29	661	100%
MEAN	9.3	-	10.3	9.2	8.4	9.2	10.2	10.1	9.7	8.9	7.4	5.6	4.9	5.7	6.2	6.7	5.4	4.5	6.0	6.5	7.6	8.4	8.5	8.6			
MAX	21.4	-	24.2	19.9	17.2	18.8	19.7	16.5	18.6	16.6	15.3	14.0	13.1	16.5	26.7	18.5	18.9	13.2	12.9	14.4	20.8	26.9	18.4	21.2			



Number of 1HR Exceedences	0
Number of Non-Zero Readings	661
Maximum 1-HR Average	26.9 PPB
Maximum 24-HR Average	12.3 PPB
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Calibration	30
Standard Deviation	4.4
Monthly Average	7.7 PPB

Lagoon NOx (ppb) – September 2023

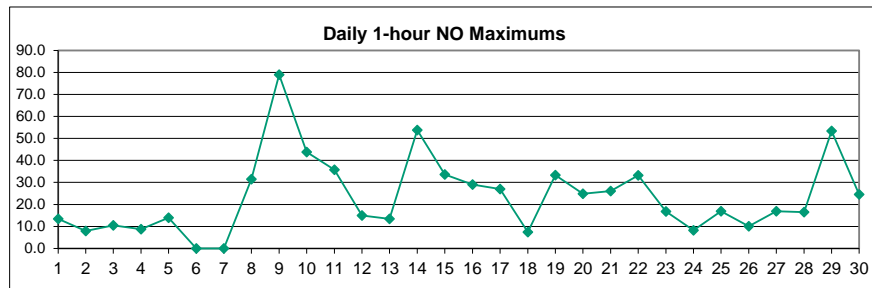
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	7.6	S	9.4	8.5	6.9	7.1	17.4	21.7	26.0	13.0	8.4	4.9	5.7	17.4	6.8	2.2	2.4	2.3	3.1	4.0	7.5	6.5	6.7	7.0	8.8	26.0
2	7.3	S	13.4	6.5	11.5	4.2	6.8	14.6	6.0	2.3	3.9	2.4	1.0	2.4	6.6	8.6	5.2	12.2	6.3	4.6	3.8	5.8	4.3	12.7	6.6	14.6
3	4.6	S	7.5	5.3	3.7	5.1	7.0	12.1	7.1	11.7	5.7	5.8	3.4	3.4	5.1	15.4	26.6	8.2	4.5	8.7	5.5	4.4	4.6	20.4	8.1	26.6
4	21.9	S	15.1	7.1	10.3	10.6	17.9	7.4	8.6	3.6	3.4	4.0	4.1	5.6	16.0	9.2	12.8	13.1	8.5	7.4	5.1	5.5	3.7	3.9	8.9	21.9
5	9.5	S	4.7	12.2	7.9	9.5	14.0	21.3	12.0	8.5	15.0	14.0	11.5	13.1	6.6	6.9	3.6	4.9	3.4	7.4	3.1	7.7	6.5	7.1	9.1	21.3
6	7.3	S	14.3	4.6	5.8	9.9	14.3	17.7	11.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	-	-
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	10.1	3.0	3.6	4.8	4.9	3.2	3.3	5.6	9.6	-	-
8	7.2	S	5.9	13.4	11.9	19.7	23.6	34.7	39.9	17.0	15.1	24.8	18.6	11.2	4.9	3.5	3.1	3.7	7.9	8.5	13.5	10.6	6.2	6.6	13.6	39.9
9	10.8	S	32.7	27.5	22.4	28.3	50.1	93.0	40.6	32.1	9.8	5.1	4.9	5.8	4.5	5.8	7.4	2.3	3.6	3.7	17.7	18.9	12.8	22.1	20.1	93.0
10	12.1	S	21.9	25.5	17.1	28.2	30.7	45.9	24.9	58.2	10.1	11.1	28.4	3.2	4.4	8.5	5.2	4.3	6.5	4.6	15.9	24.6	14.0	15.0	18.3	58.2
11	16.7	S	55.0	25.5	23.9	31.2	21.0	39.6	35.8	37.7	22.2	42.7	10.8	7.4	21.4	14.2	8.7	5.1	7.6	5.5	1.9	4.7	14.7	5.8	20.0	55.0
12	8.7	S	7.4	10.6	9.8	11.2	13.6	9.8	21.4	28.9	10.5	5.5	3.0	13.5	14.2	13.7	2.9	2.7	17.8	16.3	12.2	12.1	15.4	11.9	11.9	28.9
13	12.5	S	20.7	19.5	19.3	19.3	16.5	20.0	22.4	12.7	4.4	8.4	8.5	11.0	8.1	4.0	6.2	3.7	5.7	13.1	18.3	11.1	14.1	14.4	12.8	22.4
14	32.0	S	12.5	11.7	8.9	8.3	11.2	26.7	62.8	70.2	30.1	11.3	7.9	4.3	3.8	4.2	5.4	12.6	16.0	7.1	29.3	39.6	20.1	14.7	19.6	70.2
15	33.2	S	38.1	29.8	42.5	36.3	53.2	30.6	22.7	11.3	33.8	15.9	5.2	7.7	5.8	23.4	17.1	16.7	9.3	6.5	12.0	8.5	21.1	30.5	22.2	53.2
16	36.6	S	37.1	33.1	15.8	14.9	16.9	24.9	47.5	17.2	38.7	12.8	3.1	5.5	8.0	23.1	17.4	4.8	8.1	10.5	18.9	20.6	33.9	41.6	21.3	47.5
17	31.5	S	46.1	33.2	15.7	13.5	11.9	13.7	16.0	13.4	10.0	3.4	11.9	35.9	53.7	27.2	33.1	19.9	10.6	20.1	12.4	7.9	9.6	5.8	19.8	53.7
18	9.1	S	5.5	4.0	4.8	3.7	4.1	5.3	13.8	6.0	4.8	12.1	13.3	4.8	4.5	8.8	8.2	4.7	7.0	19.7	11.9	17.9	15.2	13.3	8.8	19.7
19	16.0	S	19.7	12.5	17.1	16.3	28.2	47.5	36.2	48.0	26.3	10.7	4.8	15.5	8.1	3.9	6.6	5.7	3.8	4.9	14.4	12.6	21.6	15.8	17.2	48.0
20	11.7	S	10.3	18.0	21.0	35.2	27.2	40.1	13.5	17.3	29.3	10.1	12.1	5.8	8.2	11.3	16.3	10.6	13.5	8.5	12.7	17.5	7.6	6.2	15.8	40.1
21	15.2	S	7.1	13.4	11.2	22.2	28.0	28.9	34.4	28.8	15.3	9.4	13.1	17.6	28.7	41.8	6.6	6.0	26.6	14.8	10.1	16.9	23.3	34.9	19.8	41.8
22	30.0	S	34.3	51.4	17.6	37.9	32.4	36.7	31.4	22.3	19.3	9.3	14.5	25.8	17.6	9.2	10.2	7.7	17.3	4.3	10.0	12.8	14.0	10.4	20.7	51.4
23	13.1	S	14.5	15.3	16.1	18.7	23.2	18.5	25.4	26.3	15.3	10.0	13.1	8.5	4.2	5.0	3.3	16.2	12.7	7.1	5.8	6.3	5.3	10.8	12.8	26.3
24	9.9	S	9.2	5.2	6.8	8.1	6.7	15.5	13.1	13.1	11.2	6.8	7.4	4.0	4.3	12.0	5.1	3.5	6.8	19.8	8.0	14.5	17.9	21.1	10.0	21.1
25	15.7	S	12.6	17.5	11.8	13.7	15.7	16.4	21.0	28.6	27.9	17.0	12.0	21.0	24.9	28.8	16.2	13.0	14.4	13.0	13.9	5.6	5.0	3.7	16.0	28.8
26	3.9	S	14.3	10.2	5.5	13.4	12.2	11.3	19.6	21.0	11.6	5.1	17.8	15.6	19.0	4.2	4.1	4.0	6.1	8.1	9.8	7.6	5.3	4.5	10.2	21.0
27	7.4	S	15.8	21.5	14.3	15.0	29.0	15.4	21.7	18.8	19.9	17.8	7.2	6.1	11.7	15.2	16.4	3.8	12.2	15.9	8.8	10.4	27.7	21.5	15.4	29.0
28	14.0	S	20.9	21.0	25.9	23.3	23.1	24.9	26.9	26.8	15.4	14.5	8.3	6.2	7.7	18.8	8.8	7.1	4.1	7.5	19.4	10.2	17.0	8.0	15.6	26.9
29	28.7	S	30.5	38.9	39.2	66.0	44.7	28.7	49.1	27.4	48.9	10.9	5.3	14.2	4.5	8.4	5.2	6.1	10.1	16.6	6.0	13.7	5.4	9.9	22.5	66.0
30	11.8	S	20.8	7.2	6.6	11.9	13.5	21.8	27.3	33.3	33.1	34.1	9.6	27.0	22.1	13.1	12.2	6.8	7.1	12.1	16.1	13.8	8.1	9.1	16.5	34.1
NO.	29	-	29	29	29	29	29	29	28	28	28	28	28	28	29	29	29	29	29	29	29	29	29	29	661	100%
MEAN	15.4	-	19.2	17.6	14.9	18.7	21.2	25.7	25.5	23.4	17.8	12.1	9.5	11.4	12.0	12.4	9.6	7.4	9.2	9.8	11.3	12.1	12.6	13.7		
MAX	36.6	-	55.0	51.4	42.5	66.0	53.2	93.0	62.8	70.2	48.9	42.7	28.4	35.9	53.7	41.8	33.1	19.9	26.6	20.1	29.3	39.6	33.9	41.6		



Number of Non-Zero Readings	661
Maximum 1-HR Average	93.0 PPB
Maximum 24-HR Average	22.5 PPB
Operational Time	720 HRS
Monthly Calibration	30
Operational Uptime	100.0 %
Standard Deviation	11.4
Monthly Average	14.9 PPB

Lagoon NO (ppb) – September 2023

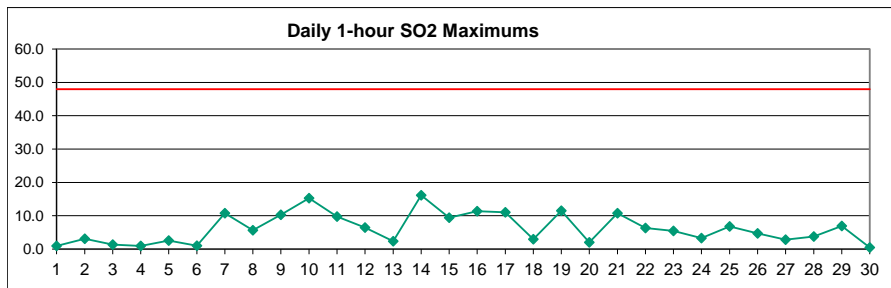
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.9	S	2.3	1.2	0.5	1.4	4.2	8.4	13.5	6.1	3.9	1.7	2.2	8.7	2.8	0.8	1.0	0.7	0.7	1.0	1.6	1.5	1.8	1.8	3.0	13.5
2	1.9	S	5.9	2.0	4.8	0.7	2.8	7.9	2.1	0.9	1.4	0.9	0.4	0.9	2.3	3.1	1.6	3.8	1.4	0.6	0.6	0.9	0.7	3.2	2.2	7.9
3	0.9	S	2.4	0.8	0.5	0.7	1.5	4.1	1.7	5.0	2.0	1.7	1.1	1.0	1.5	5.3	10.5	1.9	0.8	1.8	0.8	0.9	0.5	7.3	2.4	10.5
4	6.0	S	1.5	1.0	1.2	2.3	8.3	0.8	1.1	0.7	0.8	0.9	1.0	1.9	8.7	3.8	6.0	5.3	2.6	2.5	1.0	1.1	0.4	0.4	2.6	8.7
5	3.8	S	0.9	3.7	2.7	4.3	7.1	14.0	6.8	4.1	8.6	7.1	4.0	5.0	1.9	2.2	1.1	1.1	0.8	2.2	0.6	0.9	0.8	2.2	3.7	14.0
6	2.2	S	7.3	1.2	1.9	4.3	7.3	9.7	6.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	-	-
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	-	-
8	1.4	S	1.1	5.4	5.1	11.1	15.6	26.6	31.5	11.3	10.1	13.5	8.3	4.2	1.7	1.2	1.2	1.1	2.4	1.6	2.4	2.4	1.5	1.3	7.0	31.5
9	3.5	S	16.4	15.3	11.0	16.9	37.2	79.0	31.2	23.4	5.7	2.3	2.2	2.4	2.1	2.1	2.8	1.3	1.3	1.3	6.2	7.3	3.3	14.1	12.5	79.0
10	2.5	S	10.7	13.7	7.1	15.7	18.7	33.6	17.2	43.8	5.7	6.2	15.4	1.6	2.3	3.3	2.2	2.5	1.9	1.6	4.7	10.1	1.9	2.0	9.8	43.8
11	5.3	S	35.7	14.9	12.0	16.7	8.9	25.4	24.2	24.5	12.2	28.9	5.3	4.0	10.0	7.4	2.6	1.9	3.1	1.9	1.5	2.5	3.6	2.0	11.1	35.7
12	3.4	S	2.3	3.8	2.9	3.6	3.8	3.4	11.1	15.0	4.7	2.5	1.9	6.2	5.2	5.4	1.9	1.7	7.4	6.4	4.3	2.8	4.1	4.7	4.7	15.0
13	5.5	S	10.4	11.3	11.2	11.0	8.4	11.5	13.4	8.0	2.9	4.6	4.8	5.7	4.1	2.4	3.1	2.0	2.3	3.8	7.7	2.6	4.7	4.7	6.3	13.4
14	13.4	S	2.3	2.8	2.0	2.0	3.5	15.5	45.9	53.8	17.9	6.1	3.9	2.5	2.4	2.4	2.5	4.6	4.0	2.0	8.6	12.8	4.4	2.4	9.5	53.8
15	14.8	S	21.6	15.1	25.5	20.5	33.6	18.2	12.6	5.9	21.3	7.6	2.9	3.7	2.9	9.3	7.1	7.0	2.6	2.4	3.2	2.1	6.8	10.7	11.2	33.6
16	15.3	S	13.2	13.4	3.7	3.1	3.4	10.7	29.0	9.0	23.7	6.2	2.2	2.9	3.8	10.7	8.5	2.5	2.5	2.5	5.7	6.0	15.8	20.6	9.3	29.0
17	14.7	S	22.8	16.9	4.3	2.2	2.3	2.9	5.2	5.0	4.7	2.1	5.0	19.5	27.0	12.0	14.4	6.9	3.2	6.0	2.8	2.8	3.6	2.3	8.2	27.0
18	3.3	S	3.0	2.3	2.4	2.3	2.2	2.7	5.1	3.0	2.8	6.3	6.0	2.6	2.2	3.2	2.8	2.2	3.0	7.4	3.0	5.0	2.4	4.7	3.5	7.4
19	5.5	S	9.7	5.6	7.0	6.1	14.2	31.1	24.4	33.3	15.9	5.2	2.9	10.6	4.4	2.7	3.8	3.0	2.2	2.4	7.2	4.7	11.0	8.2	9.6	33.3
20	4.9	S	4.0	8.7	8.1	16.6	12.9	24.8	5.7	7.4	15.6	4.6	6.9	3.6	4.1	5.6	8.0	4.5	5.0	2.6	4.5	6.1	2.9	2.6	7.4	24.8
21	6.7	S	3.6	3.8	3.2	14.3	17.9	21.2	26.0	20.0	9.6	5.8	7.5	9.7	15.4	23.4	3.3	2.9	14.0	4.9	3.2	6.8	8.1	17.8	10.8	26.0
22	17.1	S	21.2	33.2	8.6	23.9	19.0	25.5	21.8	15.7	12.7	5.3	7.2	13.2	7.9	4.2	3.7	3.1	4.6	2.4	3.1	3.2	4.1	2.6	11.5	33.2
23	2.5	S	4.1	6.2	5.6	7.5	11.4	8.9	16.2	16.8	8.0	5.5	7.2	4.2	2.7	3.2	2.4	7.3	5.1	2.7	2.7	3.0	2.5	4.6	6.1	16.8
24	4.1	S	4.1	2.6	2.9	3.1	2.5	5.6	5.3	5.2	5.5	3.5	4.0	2.8	2.8	6.3	3.0	2.4	2.7	8.3	2.8	4.1	5.7	7.9	4.2	8.3
25	7.6	S	5.2	5.8	2.8	3.9	5.7	7.3	10.9	16.9	16.4	7.4	5.7	10.1	12.1	14.6	7.3	5.2	5.4	4.8	6.3	3.1	2.8	2.6	7.4	16.9
26	2.6	S	6.0	4.7	3.0	5.0	4.2	4.6	9.2	9.9	5.8	2.8	9.1	7.5	10.0	2.9	2.7	2.6	2.5	3.7	4.9	2.8	2.7	2.6	4.9	10.0
27	3.6	S	6.3	11.5	6.1	6.2	15.8	7.2	12.4	9.2	10.8	10.3	4.1	3.3	6.5	7.2	9.4	2.5	4.8	6.0	3.4	4.3	16.9	9.4	7.7	16.9
28	5.8	S	11.4	12.8	16.2	15.0	13.4	14.9	16.5	16.0	7.7	7.4	4.3	3.7	4.8	11.5	4.2	3.5	2.6	4.0	8.8	4.8	8.0	4.2	8.8	16.5
29	19.0	S	18.6	27.7	28.1	53.4	31.6	18.1	38.4	19.4	38.1	7.7	3.6	6.9	3.1	4.7	3.3	3.3	4.0	8.1	2.8	3.4	2.7	3.3	15.2	53.4
30	5.4	S	11.5	3.7	3.7	8.4	8.5	13.6	19.0	23.0	24.5	24.6	6.2	17.2	12.5	6.7	7.2	4.5	4.5	7.6	8.7	7.5	2.8	3.5	10.2	24.6
NO.	29	-	29	29	29	29	29	29	29	28	28	28	28	28	29	29	29	29	29	29	29	29	29	29	661	100%
MEAN	6.3	-	9.2	8.7	6.7	9.7	11.2	15.8	16.0	14.7	10.7	6.7	4.8	5.9	6.0	5.9	4.4	3.2	3.4	3.6	3.9	4.0	4.4	5.4		
MAX	19.0	-	35.7	33.2	28.1	53.4	37.2	79.0	45.9	53.8	38.1	28.9	15.4	19.5	27.0	23.4	14.4	7.3	14.0	8.3	8.8	12.8	16.9	20.6		



Number of Non-Zero Readings	661		
Maximum 1-HR Average	79.0 PPB		
Maximum 24-HR Average	15.2 PPB		
Monthly Calibration	30	Operational Time	720 HRS
Standard Deviation	8.13	Operational Uptime	100.0 %
		Monthly Average	7.4 PPB

Lagoon SO₂ (ppb) – September 2023

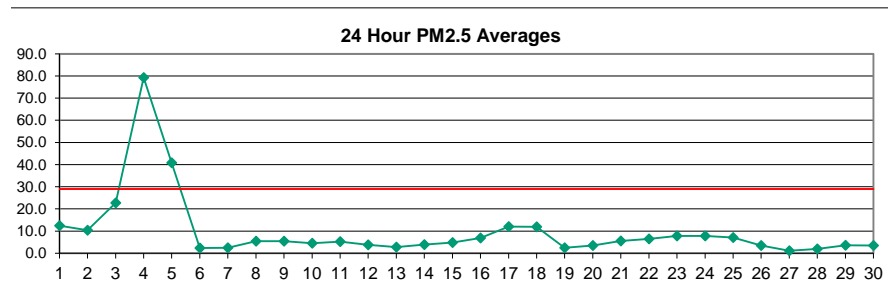
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.5	S	0.4	0.5	0.5	0.5	0.5	0.6	0.9	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.5	0.5	0.6	0.6	0.9	0.9	
2	0.5	S	0.5	0.6	0.5	0.5	0.5	0.6	0.4	0.5	0.8	0.5	0.6	0.7	1.7	3.0	3.1	0.8	0.7	0.6	0.7	0.8	0.7	0.6	0.9	3.1	
3	0.6	S	0.5	0.6	0.7	0.4	0.5	0.6	0.7	0.8	0.6	1.1	0.7	0.8	0.8	1.0	1.3	1.1	1.1	1.3	1.0	0.7	0.7	0.8	0.8	1.3	
4	0.6	S	0.7	0.6	0.6	0.7	0.9	1.0	0.9	0.8	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.7	1.0	
5	0.8	S	0.5	0.8	0.7	0.6	0.8	1.0	1.0	0.9	2.1	2.6	1.2	1.4	1.1	0.8	0.8	0.8	0.6	0.5	0.5	0.6	0.7	0.7	0.9	2.6	
6	0.6	S	0.6	0.6	0.6	0.6	0.7	0.7	0.7	C	C	C	C	C	1.0	0.6	0.5	1.0	0.4	0.5	0.3	0.3	0.4	0.4	0.6	1.0	
7	0.9	S	0.4	0.8	1.4	1.8	1.5	0.7	3.0	10.8	7.1	8.6	0.6	0.3	0.8	2.2	0.4	0.2	0.5	0.5	0.3	0.2	0.2	0.2	1.9	10.8	
8	0.3	S	0.1	0.6	0.6	0.4	0.7	1.6	2.1	0.6	2.0	5.6	1.0	0.9	0.6	0.5	0.4	0.5	0.4	0.3	0.3	0.1	0.2	0.3	0.9	5.6	
9	0.3	S	0.5	1.6	0.9	1.4	3.6	10.3	5.0	5.0	1.2	0.6	0.7	0.4	0.4	0.4	0.3	0.2	0.4	0.4	0.1	0.1	0.2	0.2	1.5	10.3	
10	0.1	S	0.6	1.5	1.2	2.1	2.4	5.6	4.1	15.3	1.9	2.1	8.2	0.5	0.7	0.5	0.5	0.4	0.4	0.7	0.6	0.5	0.3	0.3	2.2	15.3	
11	1.1	S	9.8	5.4	3.6	3.8	1.5	4.3	5.5	8.7	5.8	9.3	1.6	1.4	4.0	4.5	0.5	0.5	0.5	0.4	0.3	0.4	1.2	0.7	3.3	9.8	
12	2.2	S	0.5	1.7	1.2	0.7	0.5	0.8	2.9	6.4	1.4	0.8	0.5	1.0	0.8	1.0	0.6	0.5	0.6	0.8	0.9	0.8	1.3	1.3	1.3	6.4	
13	1.2	S	2.1	2.0	2.1	1.5	1.3	2.2	2.4	1.4	0.4	0.7	0.8	0.8	0.5	0.3	0.5	0.3	0.7	1.8	0.7	1.0	2.1	2.3	1.3	2.4	
14	3.6	S	0.2	0.2	0.2	0.2	0.3	1.8	11.4	16.2	7.1	2.0	0.5	0.2	0.3	0.6	0.8	1.1	1.1	1.3	0.7	0.5	0.4	0.4	2.2	16.2	
15	3.8	S	6.8	5.6	7.8	5.8	8.3	6.8	3.5	1.6	9.4	2.9	0.5	0.5	0.8	6.5	4.1	4.2	0.4	0.4	0.5	0.4	2.9	7.4	4.0	9.4	
16	8.1	S	11.4	10.4	2.4	1.0	0.5	3.1	10.2	3.8	10.0	0.7	0.3	0.4	1.7	6.5	1.0	0.4	1.1	1.0	1.1	1.8	4.4	5.8	3.8	11.4	
17	3.9	S	4.5	3.9	1.1	0.6	0.7	1.0	2.0	1.4	2.6	0.7	1.8	7.5	11.0	8.5	8.0	5.2	1.6	1.4	0.8	0.7	0.8	0.7	3.1	11.0	
18	0.7	S	0.8	0.8	0.7	0.7	0.7	0.6	0.8	0.7	0.6	1.8	3.0	0.7	0.7	0.9	0.9	0.9	0.7	0.6	0.5	1.2	0.7	1.2	0.9	3.0	
19	1.4	S	2.1	1.3	1.2	1.1	2.0	3.8	5.5	11.5	5.4	1.4	0.8	3.2	1.3	0.8	0.9	0.8	0.8	0.7	0.8	1.7	2.6	2.7	2.3	11.5	
20	1.8	S	1.0	2.0	2.0	0.9	0.7	0.8	0.6	1.6	1.9	0.6	1.3	0.8	0.7	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.3	0.9	2.0	2.0	
21	0.4	S	0.2	0.2	0.3	0.4	0.6	0.6	1.1	1.0	1.0	1.0	1.9	4.0	6.8	10.7	1.0	0.7	0.6	0.3	0.2	0.4	0.4	1.8	1.5	10.7	
22	3.6	S	3.3	5.1	1.4	4.1	3.1	5.5	5.9	6.1	3.6	0.8	6.3	3.2	1.4	1.0	1.0	1.0	1.0	0.8	0.6	0.5	0.2	0.1	2.6	6.3	
23	0.1	S	0.3	1.3	0.9	1.3	0.5	1.4	2.4	5.5	3.4	0.8	0.8	0.3	0.5	0.3	0.3	3.1	1.0	0.4	0.5	0.4	0.3	0.9	1.2	5.5	
24	0.3	S	0.2	0.7	0.6	0.8	0.3	1.1	1.3	0.6	0.9	0.5	0.7	0.2	0.3	0.5	0.3	0.3	0.2	0.7	0.6	1.6	1.9	3.3	0.8	3.3	
25	1.9	S	1.7	1.6	0.7	0.8	1.3	0.6	2.0	5.3	4.5	2.2	1.9	4.7	5.7	5.6	5.0	4.9	5.0	3.1	6.8	1.9	1.5	0.4	3.0	6.8	
26	0.5	S	3.4	2.2	1.4	1.0	1.6	0.7	1.1	3.4	0.4	0.5	2.5	4.7	2.5	0.6	0.6	0.4	0.2	0.3	0.2	0.3	0.3	0.3	1.3	4.7	
27	0.4	S	1.1	1.4	1.1	1.2	2.1	0.7	1.5	0.8	0.6	0.6	0.8	0.4	0.4	1.1	2.8	0.3	0.7	1.3	0.6	0.5	1.1	1.6	1.0	2.8	
28	1.5	S	2.6	2.1	2.3	2.1	2.3	2.2	2.7	3.4	1.1	0.8	0.7	0.6	0.3	3.8	0.5	0.7	0.4	0.4	1.3	0.7	1.1	0.5	1.5	3.8	
29	0.7	S	1.3	1.9	2.1	3.6	2.5	0.9	3.0	1.6	6.9	0.9	0.6	0.4	0.6	0.7	0.7	0.5	0.2	0.4	0.1	0.2	0.3	0.3	1.3	6.9	
30	0.3	S	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.4
NO.	30	-	30	30	30	30	30	30	30	29	29	29	29	29	30	30	30	30	30	30	30	30	30	30	685	100%	
MEAN	1.4	-	1.9	1.9	1.4	1.4	1.4	2.1	2.8	4.0	2.9	1.8	1.4	1.5	1.6	2.2	1.3	1.1	0.8	0.8	0.8	0.7	0.9	1.2			
MAX	8.1	-	11.4	10.4	7.8	5.8	8.3	10.3	11.4	16.2	10.0	9.3	8.2	7.5	11.0	10.7	8.0	5.2	5.0	3.1	6.8	1.9	4.4	7.4			



Number of 1HR Exceedences	0
Number of Non-Zero Readings	685
Maximum 1-HR Average	16.2 PPB
Maximum 24-HR Average	4.0 PPB
Monthly Calibration	5
Standard Deviation	2.17
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	1.6 PPB

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

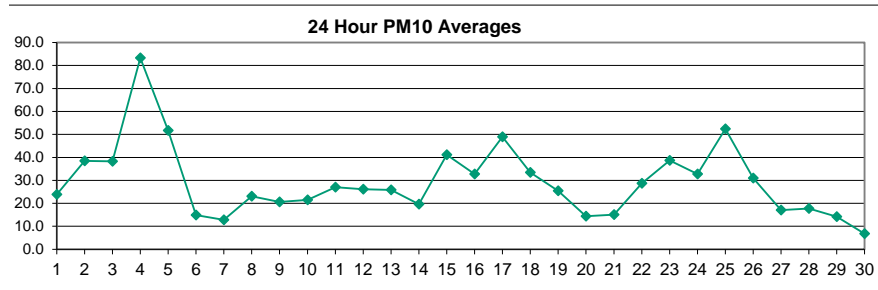
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	29.5	22.5	22.4	16.6	9.8	14.3	15.2	17.3	19.6	20.0	15.8	13.4	11.6	9.6	14.8	9.2	6.4	6.2	4.9	6.7	4.3	1.5	3.4	2.8	12.4	29.5
2	4.1	4.4	3.4	6.9	4.9	4.0	4.8	5.6	7.3	4.4	3.3	2.9	4.6	9.8	21.5	22.8	25.4	18.0	22.1	18.6	14.9	15.1	11.9	9.3	10.4	25.4
3	9.4	16.5	14.4	14.5	16.6	14.9	13.1	9.2	16.8	15.3	10.7	7.9	5.6	2.6	9.6	24.3	29.9	31.9	39.5	45.5	45.9	49.4	53.1	49.4	22.7	53.1
4	53.4	58.8	55.6	59.1	54.8	49.3	54.1	72.5	83.2	81.9	61.6	67.5	101.0	111.2	95.1	98.5	95.4	96.8	95.7	95.9	93.3	93.4	85.1	89.7	79.3	111.2
5	91.3	93.6	87.4	77.1	75.6	56.8	60.2	60.7	65.0	61.1	55.0	54.5	44.5	35.8	26.9	15.7	8.2	2.2	5.1	2.4	0.0	0.0	0.1	0.0	40.8	93.6
6	0.0	0.0	2.4	2.0	4.3	0.2	0.0	0.8	3.3	4.9	5.1	7.5	9.4	4.2	0.3	2.0	0.8	0.6	1.4	0.0	0.0	1.3	1.6	4.1	2.3	9.4
7	2.8	3.6	3.6	0.0	0.7	3.0	4.0	3.9	2.7	3.1	2.9	2.3	3.7	3.9	0.0	0.0	1.3	0.8	1.5	1.6	1.6	4.3	4.6	3.1	2.5	4.6
8	2.3	3.2	3.5	4.1	3.7	3.6	7.5	6.9	9.1	12.5	9.5	10.3	7.5	7.4	5.4	2.6	1.7	1.4	0.9	3.0	4.1	6.7	6.8	7.0	5.4	12.5
9	6.8	7.2	11.5	14.6	7.8	3.5	3.6	5.8	6.9	7.2	5.5	6.5	6.2	5.1	4.8	4.6	1.3	0.0	2.1	1.2	3.5	4.5	6.0	4.4	5.4	14.6
10	2.3	3.5	6.3	6.7	6.9	6.3	4.7	8.1	8.7	4.8	4.2	4.4	2.5	4.9	2.1	0.0	2.2	3.1	0.9	0.0	2.9	7.1	10.2	6.6	4.6	10.2
11	7.6	9.5	7.8	8.2	5.3	8.4	7.4	7.7	10.4	8.1	5.8	5.9	5.2	6.7	5.6	2.7	1.5	2.2	1.7	1.9	4.3	1.6	0.0	0.1	5.2	10.4
12	2.2	7.0	4.7	5.3	5.1	3.5	5.6	4.4	3.1	4.3	4.2	5.5	3.3	0.7	2.8	3.3	2.1	2.1	2.3	3.0	3.0	2.9	4.0	6.7	3.8	7.0
13	4.9	2.5	2.7	2.7	4.8	4.4	2.8	2.0	0.0	0.6	0.0	0.0	0.0	0.0	3.4	6.3	3.1	2.0	2.9	1.6	5.8	6.0	4.8	3.1	2.8	6.3
14	3.0	4.9	5.4	5.9	3.6	1.8	1.9	3.4	7.2	7.3	8.3	5.9	3.3	1.1	0.0	0.0	0.0	0.4	4.7	3.8	2.8	4.1	7.0	6.9	3.9	8.3
15	5.5	5.2	3.7	4.4	4.9	5.8	6.9	7.6	6.0	4.4	3.5	2.0	7.3	6.8	4.0	0.1	0.0	5.0	4.9	1.7	2.6	4.1	12.1	8.5	4.9	12.1
16	7.3	6.4	3.5	2.9	5.3	6.3	7.8	13.0	8.1	4.4	7.5	7.4	7.1	4.6	2.4	1.5	3.8	7.9	5.3	8.0	12.4	12.5	8.5	11.5	6.9	13.0
17	9.1	10.8	9.2	10.2	12.8	14.1	9.3	8.9	15.1	11.0	8.7	7.3	7.8	11.3	10.5	19.1	21.8	15.2	14.4	15.0	14.5	13.9	8.6	9.0	12.0	21.8
18	8.4	13.8	17.4	14.6	13.4	17.9	9.6	12.5	12.6	18.7	8.1	6.7	7.0	11.8	16.0	16.8	14.3	15.6	12.3	9.0	10.1	9.7	6.2	4.2	11.9	18.7
19	2.2	1.6	0.7	0.0	0.0	0.0	1.6	2.5	13.9	8.4	4.4	2.6	1.1	1.1	3.2	3.7	1.3	1.1	0.5	0.0	1.2	2.5	3.4	2.1	2.5	13.9
20	1.8	4.5	6.1	3.2	2.8	2.9	3.9	5.6	7.1	7.3	5.9	6.5	4.4	0.9	0.0	2.1	3.1	0.7	0.6	1.8	2.4	3.2	2.7	3.0	3.4	7.3
21	7.3	8.0	6.5	3.7	4.8	6.9	5.6	8.6	11.4	11.3	9.5	9.0	5.7	2.1	1.4	2.6	1.1	0.8	3.1	2.4	3.7	5.2	6.2	5.2	5.5	11.4
22	11.1	7.8	5.0	7.5	10.8	6.4	7.3	6.9	6.6	3.8	2.8	4.6	5.7	8.8	6.0	4.4	4.0	5.6	6.6	5.6	6.4	8.8	6.5	5.3	6.4	11.1
23	7.2	7.6	6.3	7.9	8.0	7.0	4.9	11.6	8.2	9.5	7.1	5.8	3.0	2.2	1.8	0.6	1.4	0.0	3.6	5.5	3.7	17.4	32.3	23.9	7.8	32.3
24	17.0	11.2	7.3	4.2	6.9	9.2	13.2	8.9	8.8	9.2	12.3	10.3	7.7	9.3	6.1	3.7	6.0	6.3	5.7	2.6	1.9	5.4	7.9	5.1	7.8	17.0
25	5.4	4.5	3.9	3.1	4.3	4.5	4.5	4.7	1.7	3.2	4.8	4.0	12.2	12.1	8.2	10.9	10.2	13.6	8.9	11.1	8.9	8.6	8.8	7.5	7.1	13.6
26	3.9	3.0	6.5	6.4	4.9	4.7	2.5	4.1	7.3	6.4	7.9	C	0.0	3.9	6.0	4.0	0.0	0.0	0.9	1.7	0.2	0.0	2.3	3.8	3.5	7.9
27	2.9	0.0	0.0	1.7	2.0	0.3	0.8	0.7	3.2	3.2	1.6	2.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.7	0.0	0.1	0.0	1.1	3.2
28	0.0	0.0	2.3	2.2	1.1	1.3	2.6	2.1	1.1	1.3	3.4	4.3	4.7	8.0	4.9	0.4	0.9	0.7	0.0	1.4	1.5	0.0	0.0	2.8	2.0	8.0
29	5.5	2.9	0.0	3.4	5.9	9.3	9.1	7.7	5.3	8.5	6.2	2.8	0.9	0.0	1.2	2.2	3.2	2.6	0.5	0.8	1.4	1.9	2.0	2.7	3.6	9.3
30	2.1	0.6	0.0	0.0	1.0	1.0	0.0	0.0	1.1	2.2	3.2	3.7	5.9	4.5	2.6	2.8	4.9	5.2	6.0	7.1	9.0	8.7	6.2	5.9	3.5	9.0
NO.	30	30	30	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	719	100%
MEAN	10.5	10.8	10.3	10.0	9.8	9.1	9.2	10.5	12.0	11.6	9.6	9.4	9.7	9.7	8.9	8.9	8.5	8.3	8.6	8.7	9.0	10.0	10.4	9.8		
MAX	91.3	93.6	87.4	77.1	75.6	56.8	60.2	72.5	83.2	81.9	61.6	67.5	101.0	111.2	95.1	98.5	95.4	96.8	95.7	95.9	93.3	93.4	85.1	89.7		



Number of 24HR Exceedences	2
Number of Non-Zero Readings	667
Maximum 1-HR Average	111.2 UG/M3
Maximum 24-HR Average	79.3 UG/M3
Monthly Calibration	1
Standard Deviation	17.1
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	9.7 UG/M3

Lagoon PM₁₀ (µg/m³) – September 2023

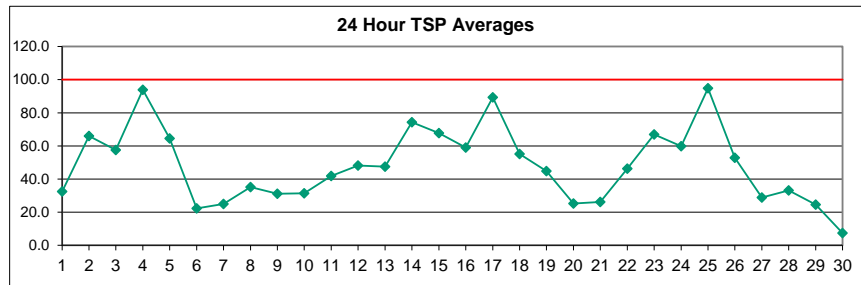
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	36.2	34.3	28.1	23.6	20.9	20.9	18.5	35.9	39.4	38.9	40.3	36.3	24.8	16.6	37.9	12.3	8.3	8.2	22.3	17.2	12.6	12.4	16.2	11.2	23.9	40.3
2	10.5	23.8	14.9	40.5	21.2	7.3	57.8	26.7	29.8	8.6	4.1	15.3	14.5	16.7	30.7	104.1	149.6	105.0	70.4	83.5	25.7	16.6	29.7	17.5	38.5	149.6
3	15.6	28.9	21.1	16.5	24.4	18.3	24.6	29.4	37.6	56.9	74.3	29.3	18.0	21.3	29.1	35.5	44.6	52.2	54.2	56.6	61.8	61.7	53.6	52.9	38.3	74.3
4	66.0	60.7	58.1	63.4	55.5	53.7	55.8	70.7	72.7	91.2	58.3	69.9	104.5	103.8	102.5	109.7	101.8	100.5	106.6	99.5	99.2	102.8	98.8	92.6	83.3	109.7
5	94.4	96.5	92.2	72.1	84.9	66.9	63.5	73.6	77.2	79.8	71.1	76.5	58.5	52.0	30.8	43.6	35.8	20.1	24.7	6.5	3.3	1.2	0.8	15.8	51.7	96.5
6	0.0	8.4	17.5	6.7	20.4	6.1	12.6	17.5	33.9	44.3	29.2	41.3	47.4	6.6	5.7	14.6	10.7	6.9	6.7	6.7	7.0	3.6	1.7	2.3	14.9	47.4
7	5.6	16.9	11.7	7.1	19.3	19.8	5.8	13.2	11.5	26.1	27.5	17.6	26.3	10.5	7.9	11.6	25.3	5.8	5.3	4.7	7.8	7.2	7.2	5.3	12.8	27.5
8	19.1	6.4	11.9	23.4	16.2	22.1	38.4	17.4	20.9	50.7	39.4	51.3	21.7	24.3	24.9	17.7	16.3	11.4	13.4	21.8	16.2	27.5	23.8	17.4	23.1	51.3
9	24.6	24.9	24.2	105.2	28.3	16.3	15.6	22.0	23.2	26.8	22.5	22.6	12.0	12.4	12.5	11.0	9.9	10.4	10.3	9.2	8.0	18.5	18.0	5.6	20.6	105.2
10	25.2	20.0	33.3	20.9	16.4	13.5	34.3	31.9	42.2	21.8	30.0	19.5	14.2	21.4	20.4	7.1	11.8	16.3	12.5	8.5	19.6	29.2	24.0	22.2	21.5	42.2
11	17.6	22.5	22.2	34.6	15.3	23.4	17.4	26.5	48.7	48.9	45.6	35.9	35.2	36.1	26.5	29.1	24.2	35.9	16.3	21.2	27.9	13.8	13.0	9.6	27.0	48.9
12	11.7	37.5	6.9	39.7	9.3	19.0	13.8	25.7	28.4	44.4	53.6	23.0	10.4	9.5	22.5	44.0	71.7	12.2	7.0	36.5	26.2	19.4	25.2	28.7	26.1	71.7
13	8.1	8.0	13.4	14.6	5.6	9.2	8.5	5.4	12.6	24.6	9.3	13.4	18.6	36.3	87.5	138.7	25.8	41.3	11.3	18.5	52.9	24.6	22.5	10.4	25.9	138.7
14	7.3	7.0	13.0	9.9	14.7	18.6	15.8	5.3	40.0	35.1	39.5	18.6	20.8	19.3	17.7	12.0	13.3	19.2	27.5	28.4	21.4	24.3	23.5	19.1	19.6	40.0
15	21.7	29.1	18.8	10.2	20.0	26.6	22.1	32.5	46.4	46.9	61.3	52.3	90.7	23.0	43.9	24.7	73.3	61.1	44.0	9.8	26.8	18.9	98.4	83.8	41.1	98.4
16	31.1	19.8	11.2	7.7	10.1	16.1	29.5	60.0	55.3	60.6	38.1	54.0	28.8	14.4	19.1	16.6	18.6	46.3	9.3	50.4	58.8	41.8	56.8	30.7	32.7	60.6
17	24.6	16.6	21.8	16.5	51.0	39.2	18.0	18.0	48.1	25.1	24.8	30.2	13.7	61.0	90.5	171.9	118.0	78.4	68.7	66.2	49.7	66.9	38.0	18.5	49.0	171.9
18	22.7	57.0	54.7	84.1	62.3	28.8	24.8	24.0	29.0	64.2	22.7	23.1	32.1	35.8	31.9	29.6	37.3	22.0	23.0	19.9	24.6	21.8	8.9	19.0	33.5	84.1
19	8.8	8.8	7.6	7.9	4.5	6.1	8.5	30.0	61.3	91.3	102.4	70.1	31.6	10.4	17.0	37.3	10.2	20.7	13.9	8.9	5.7	9.2	29.4	8.3	25.4	102.4
20	6.4	19.5	17.9	15.8	9.3	8.0	8.6	12.8	43.7	16.9	42.2	27.3	3.3	8.9	6.3	14.9	12.1	6.4	13.8	9.4	9.8	10.0	6.0	14.8	14.3	43.7
21	9.8	10.1	14.8	11.0	16.4	9.9	20.7	13.9	26.8	31.7	27.9	20.2	11.0	9.4	7.4	18.1	13.0	7.0	7.7	6.1	10.4	16.7	14.7	27.4	15.1	31.7
22	77.3	37.6	34.6	15.6	29.5	37.8	35.4	48.0	32.2	35.8	66.6	34.7	25.4	36.4	20.0	8.5	10.3	23.1	11.4	17.2	13.1	15.5	10.2	12.0	28.7	77.3
23	12.3	17.9	22.1	56.1	11.4	26.4	38.1	68.2	39.1	43.2	37.4	90.2	68.3	67.1	29.4	23.8	26.2	10.9	53.4	41.9	28.4	37.0	51.6	27.0	38.6	90.2
24	29.9	29.7	10.6	8.3	29.8	42.6	61.8	28.4	42.5	62.4	79.5	102.5	39.5	28.2	8.7	17.7	8.9	6.7	5.5	19.1	21.3	41.4	31.0	28.7	32.7	102.5
25	12.5	6.3	13.9	10.0	14.2	9.8	12.2	30.9	20.0	47.4	53.9	34.5	118.2	109.2	67.4	83.1	119.3	87.7	98.9	93.2	84.4	33.9	66.3	31.1	52.4	119.3
26	20.0	26.6	33.9	35.3	36.0	20.9	25.5	47.6	57.5	57.9	106.2	C	24.1	44.9	61.1	33.5	0.0	0.0	2.5	11.7	6.2	15.7	42.0	2.6	30.9	106.2
27	6.5	20.6	14.6	19.5	21.9	11.6	22.6	7.9	53.8	30.3	29.9	14.9	10.5	10.8	9.5	6.9	12.0	12.6	6.6	30.4	21.9	10.5	10.5	13.9	17.1	53.8
28	7.2	5.0	8.1	7.1	4.7	6.0	10.1	12.0	11.1	14.3	34.5	52.4	45.5	72.6	36.2	3.9	25.7	29.6	20.9	0.7	3.2	3.7	5.9	4.7	17.7	72.6
29	3.8	2.4	5.9	8.0	25.3	21.6	27.6	32.5	24.9	33.6	32.7	43.3	8.3	4.5	18.6	12.2	20.1	2.9	2.2	1.9	4.6	2.2	1.2	0.3	14.2	43.3
30	0.0	0.0	13.0	7.1	3.7	2.5	8.8	4.9	1.9	1.5	8.8	6.8	10.1	6.2	16.7	7.5	5.2	4.7	7.3	9.2	4.6	11.2	10.9	10.6	6.8	16.7
NO.	30	30	30	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	719	100%
MEAN	21.2	23.4	22.4	26.6	23.4	21.0	25.2	29.1	37.0	42.0	43.8	38.9	32.9	31.0	31.3	36.7	35.3	28.9	25.9	27.2	25.4	24.0	28.0	21.5		
MAX	94.4	96.5	92.2	105.2	84.9	66.9	63.5	73.6	77.2	91.3	106.2	102.5	118.2	109.2	102.5	171.9	149.6	105.0	106.6	99.5	99.2	102.8	98.8	92.6		



Number of Non-Zero Readings	714
Maximum 1-HR Average	171.9 UG/M3
Maximum 24-HR Average	83.3 UG/M3
Monthly Calibration	1
Standard Deviation	25.7
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	29.2 UG/M3

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

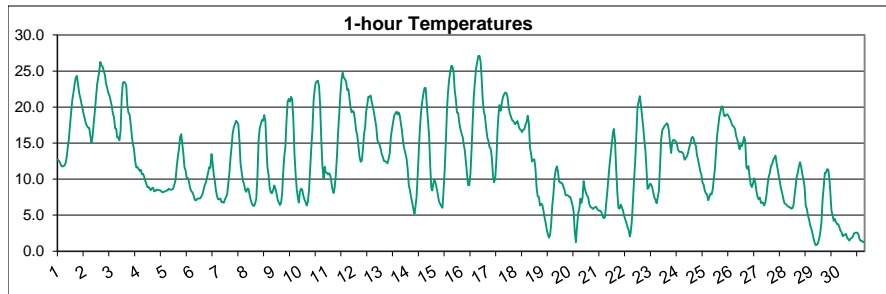
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	35.1	42.5	33.6	28.0	22.9	22.3	25.1	47.3	48.3	47.6	49.6	43.6	30.1	23.0	69.8	25.4	11.0	13.0	36.9	24.5	28.1	26.3	24.6	21.6	32.5	69.8
2	17.5	37.9	19.4	61.7	46.5	16.2	87.3	49.8	54.6	8.8	15.6	34.0	17.7	24.2	51.6	177.0	283.8	197.1	124.7	138.4	36.0	26.0	38.7	21.2	66.1	283.8
3	27.4	45.7	34.3	28.1	43.9	42.5	42.5	44.7	66.4	92.6	133.9	46.4	26.2	36.8	55.0	60.8	65.1	73.4	75.5	68.6	69.0	65.2	74.4	64.6	57.6	133.9
4	71.0	81.4	78.8	72.6	64.4	65.7	71.3	76.7	95.0	91.7	68.9	78.5	112.2	118.5	106.4	117.7	111.0	113.2	114.4	104.3	112.4	111.5	113.8	100.6	93.8	118.5
5	103.9	110.6	98.5	82.7	91.6	78.1	75.2	84.9	86.3	90.7	76.4	98.0	79.0	73.6	43.9	67.4	67.4	40.7	29.0	16.1	18.0	5.5	14.3	16.9	64.5	110.6
6	12.4	20.2	25.7	4.4	25.0	10.1	9.2	20.6	51.6	51.8	43.7	52.4	63.0	15.4	12.3	16.5	12.4	19.7	16.2	12.4	10.3	13.4	10.6	7.1	22.4	63.0
7	6.0	37.3	21.5	22.3	30.1	27.2	14.8	16.4	7.4	46.3	31.9	28.7	40.5	20.8	23.2	22.2	45.9	15.4	21.7	28.1	26.8	24.3	18.4	23.2	25.0	46.3
8	15.8	11.6	25.4	34.4	20.0	21.0	54.7	34.1	31.6	67.6	62.0	99.8	30.1	39.7	38.3	22.3	30.9	32.2	29.9	29.8	27.5	38.9	26.2	20.6	35.2	99.8
9	33.3	44.2	37.0	140.6	33.4	19.9	24.5	26.2	27.7	33.7	43.0	24.3	19.0	17.5	23.1	20.2	25.1	25.6	17.4	20.3	22.4	30.0	18.9	21.1	31.2	140.6
10	26.7	30.3	30.7	27.3	20.2	19.9	50.4	37.6	39.5	32.0	44.9	22.9	22.1	34.1	39.9	26.5	23.6	38.6	23.2	22.8	35.1	45.1	29.0	31.7	31.4	50.4
11	19.5	25.4	32.6	38.2	18.6	39.6	27.5	39.0	62.1	69.3	56.4	51.2	67.2	60.5	40.0	56.6	42.0	72.5	28.9	38.9	51.1	34.9	14.1	19.8	41.9	72.5
12	30.2	59.1	14.4	53.2	13.1	43.6	35.2	42.1	46.5	82.4	120.7	35.0	18.0	18.4	39.4	78.9	109.5	24.7	17.7	66.6	54.2	36.8	54.3	61.4	48.1	120.7
13	21.0	21.4	26.8	25.8	14.4	17.6	9.5	20.5	28.3	31.3	23.0	25.1	26.4	71.5	138.6	245.3	46.8	67.2	19.1	32.9	114.0	44.8	39.0	28.8	47.5	245.3
14	45.3	978.5	15.1	19.3	17.9	14.3	15.6	20.7	45.5	45.0	60.7	45.4	30.3	28.9	23.7	17.8	29.3	47.1	68.1	50.4	36.2	49.2	36.9	42.8	74.3	978.5
15	28.0	42.0	33.3	17.4	20.7	36.0	34.4	33.3	71.4	83.7	115.2	72.1	132.0	27.4	80.8	43.2	136.4	110.6	91.3	27.7	24.4	43.4	160.2	161.2	67.8	161.2
16	67.8	47.0	27.9	29.9	21.0	32.5	53.2	99.4	97.0	106.8	43.5	103.3	35.6	18.6	39.8	33.0	42.0	68.2	16.9	100.8	103.1	78.7	96.6	54.6	59.0	106.8
17	46.8	37.6	40.6	73.7	83.6	68.2	23.1	48.5	84.7	46.5	44.5	51.7	30.9	114.3	182.3	327.0	222.4	150.0	119.1	113.5	69.2	103.2	33.2	29.7	89.3	327.0
18	37.2	92.9	99.0	120.1	123.1	46.8	39.4	35.5	48.6	106.4	43.5	45.9	50.9	55.4	51.0	58.9	57.4	39.1	40.8	30.5	35.2	25.0	21.2	19.5	55.1	123.1
19	12.5	17.1	8.2	9.5	5.5	15.5	16.8	52.1	105.4	141.2	184.1	126.4	63.5	28.4	40.9	73.1	30.0	21.3	24.5	9.4	6.0	16.9	52.4	16.0	44.9	184.1
20	14.8	37.2	36.1	21.4	21.2	12.9	14.3	20.0	67.0	41.5	59.4	50.6	21.7	20.4	6.9	23.4	14.7	12.7	14.4	12.0	17.5	18.0	16.7	30.7	25.2	67.0
21	18.3	18.1	19.5	12.7	22.1	18.2	35.0	27.4	39.9	44.8	48.2	25.7	18.6	23.7	25.9	28.3	15.1	10.1	16.4	31.6	33.5	23.5	28.0	45.2	26.2	48.2
22	108.7	52.9	47.3	30.1	28.1	47.9	43.1	68.4	59.1	60.9	117.0	62.7	38.9	61.0	36.3	27.8	27.2	42.4	26.0	31.9	25.1	23.9	23.4	20.7	46.3	117.0
23	19.1	24.2	37.5	75.2	21.6	37.5	56.7	110.8	77.8	82.0	67.0	177.9	122.7	117.4	59.4	39.8	51.0	20.2	105.2	72.1	49.3	60.9	71.6	48.1	66.9	177.9
24	42.8	44.8	18.3	16.9	53.5	80.8	109.5	45.2	83.4	128.7	132.6	196.4	70.6	41.6	23.6	24.0	27.3	20.7	8.7	28.8	46.4	80.6	63.9	45.4	59.8	196.4
25	29.8	13.9	14.2	22.5	23.3	17.6	22.7	46.5	40.0	77.2	98.0	56.2	217.1	195.4	117.7	138.9	226.6	173.1	176.4	178.3	145.9	65.6	113.7	66.0	94.9	226.6
26	33.3	36.3	74.7	55.4	57.4	31.1	41.9	84.8	89.3	96.7	176.8	C	C	83.6	113.6	50.7	4.9	1.5	2.0	21.3	16.9	21.6	56.7	11.4	52.8	176.8
27	12.1	26.3	14.6	19.7	20.3	30.0	31.8	16.1	71.7	44.9	51.6	34.6	19.3	17.5	15.3	15.4	31.6	27.2	9.8	63.0	59.1	18.3	17.0	25.8	28.9	71.7
28	22.3	25.6	13.7	13.6	8.3	16.3	14.2	11.4	20.8	25.8	65.7	72.7	77.1	118.3	66.7	14.9	65.2	46.7	44.4	6.3	7.3	20.9	3.9	12.8	33.1	118.3
29	7.9	4.3	8.0	20.8	32.0	31.1	35.9	41.7	38.0	58.3	55.3	77.3	18.2	12.6	21.5	32.6	46.8	14.6	5.8	7.6	3.7	0.9	6.3	8.1	24.5	77.3
30	7.1	12.3	7.4	4.3	7.0	0.1	4.1	4.5	6.2	6.4	12.8	10.1	8.6	4.9	11.2	11.4	10.1	5.4	2.6	7.5	8.8	5.5	8.5	10.7	7.4	12.8
NO.	30	30	30	30	30	30	30	30	30	30	30	29	29	30	30	30	30	30	30	30	30	30	30	30	718	100%
MEAN	32.5	69.3	33.1	39.4	33.7	32.0	37.3	43.5	56.4	64.8	71.5	63.8	52.0	50.8	53.3	63.2	63.8	51.5	44.2	46.5	43.1	38.6	42.9	36.2		
MAX	108.7	978.5	99.0	140.6	123.1	80.8	109.5	110.8	105.4	141.2	184.1	196.4	217.1	195.4	182.3	327.0	283.8	197.1	176.4	178.3	145.9	111.5	160.2	161.2		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	718
Maximum 1-HR Average	978.5 UG/M3
Maximum 24-HR Average	94.9 UG/M3
Operational Time	720 HRS
Monthly Calibration	2
Operational Uptime	100.0 %
Standard Deviation	53.4
Monthly Average	48.4 UG/M3

Lagoon Temperature (°C) – September 2023

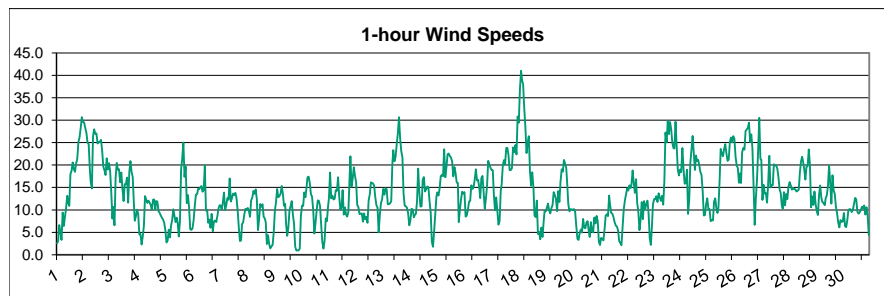
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	12.7	12.5	12.3	11.9	11.7	11.8	11.9	12.3	13.1	14.5	15.7	17.6	19.4	21.1	22.1	23.2	24.1	24.3	23.1	21.9	21.3	20.5	19.8	19.1	17.4	24.3
2	18.5	17.7	17.4	17.2	17.1	16.0	15.0	16.0	17.9	19.4	21.3	23.2	24.1	25.2	26.3	25.8	25.6	25.0	24.5	23.3	22.6	22.0	21.6	20.9	21.0	26.3
3	20.2	19.1	18.6	17.0	17.0	15.8	15.8	15.4	16.7	21.3	23.3	23.5	23.4	23.0	20.1	19.2	18.9	17.5	15.9	14.9	14.2	12.6	11.6	11.7	17.8	23.5
4	11.4	11.1	11.3	10.7	10.7	10.3	9.7	9.3	8.9	8.9	8.7	8.5	8.7	8.8	8.3	8.4	8.6	8.5	8.5	8.5	8.4	8.2	8.2	8.3	9.2	11.4
5	8.3	8.4	8.4	8.7	8.6	8.5	8.5	8.7	9.3	9.9	11.7	13.1	14.2	15.8	16.2	14.7	13.6	11.6	11.2	10.1	10.2	9.6	8.7	8.3	10.7	16.2
6	8.2	7.8	7.2	7.0	7.3	7.3	7.3	7.3	7.6	7.9	8.5	9.2	9.5	10.1	10.9	11.7	11.6	13.5	12.2	10.6	9.7	8.5	7.7	7.2	9.0	13.5
7	7.2	7.3	6.8	6.8	6.7	7.2	7.5	8.0	9.4	11.0	13.1	14.7	16.3	17.2	17.6	18.1	17.9	17.6	15.3	12.1	10.9	9.8	9.4	8.5	11.5	18.1
8	8.2	8.7	8.6	7.9	7.1	6.7	6.3	6.3	6.6	7.3	10.3	15.3	17.0	17.6	18.2	18.1	18.9	18.0	15.1	11.6	10.6	8.8	8.1	8.0	11.2	18.9
9	8.5	9.1	8.7	8.1	7.1	6.7	6.4	6.7	8.1	10.8	13.1	14.5	18.1	20.8	21.1	20.7	21.4	21.1	18.2	13.5	10.7	8.6	7.4	6.8	12.3	21.4
10	8.2	8.7	8.5	7.7	7.2	6.8	6.3	6.9	8.5	11.4	14.4	16.9	20.8	22.5	23.3	23.6	23.7	22.9	20.2	15.4	11.8	10.1	11.7	10.9	13.7	23.7
11	10.8	10.7	10.8	10.5	9.4	8.6	8.1	8.9	10.6	13.3	16.6	19.1	21.8	23.8	24.7	24.1	23.9	23.5	22.4	22.5	21.5	20.1	19.3	19.5	16.8	24.7
12	19.3	18.3	16.8	16.1	14.7	13.1	12.4	12.5	14.1	16.3	17.2	19.3	20.3	21.4	21.3	21.6	20.7	20.0	19.2	18.2	17.2	15.4	15.0	14.7	17.3	21.6
13	14.1	13.5	13.0	12.5	12.5	12.4	12.2	12.8	13.6	15.9	16.9	17.9	18.8	19.1	19.3	18.9	19.3	18.8	17.7	16.7	15.1	14.2	13.6	12.9	15.5	19.3
14	11.4	9.1	8.5	7.5	6.7	5.8	5.2	6.1	7.5	10.5	13.9	17.2	19.3	20.8	21.8	22.7	22.6	20.4	18.2	16.1	11.9	8.8	8.4	9.4	12.9	22.7
15	9.9	9.4	8.6	7.8	6.9	6.6	6.2	6.0	8.5	11.4	15.4	19.6	21.9	23.7	24.9	25.7	25.7	24.8	22.3	21.0	19.2	19.2	17.8	16.9	15.8	25.7
16	16.3	15.8	14.7	14.1	12.4	10.7	9.2	9.2	10.7	14.1	18.0	21.6	23.6	25.4	26.3	27.1	27.1	26.2	24.2	21.1	19.4	18.7	17.2	15.8	18.3	27.1
17	15.3	14.4	14.3	13.0	10.6	9.6	10.1	12.5	16.6	18.8	20.3	19.5	20.5	21.4	21.8	22.0	22.0	21.5	20.0	19.2	18.7	18.2	18.1	17.8	17.3	22.0
18	17.6	17.8	18.1	17.4	16.9	16.8	16.5	16.8	16.9	17.5	17.9	18.8	17.8	14.3	13.7	12.5	12.7	12.7	11.5	8.8	7.6	7.5	6.3	6.6	14.2	18.8
19	6.5	5.7	4.7	3.9	3.0	2.4	1.9	2.2	3.7	6.3	7.9	10.1	11.3	11.8	11.0	9.7	9.5	9.5	9.3	8.9	8.5	7.8	7.8	7.7	7.1	11.8
20	7.6	7.5	7.0	6.4	5.5	2.7	1.3	3.5	5.2	5.9	7.3	6.7	7.4	9.7	8.7	8.1	7.7	7.5	6.5	6.1	6.1	5.9	6.0	6.1	6.3	9.7
21	6.1	5.9	5.7	5.6	5.6	5.3	4.8	4.6	4.8	6.5	8.2	10.1	12.0	13.4	14.9	16.5	17.0	15.3	11.4	8.3	6.0	5.9	6.5	6.1	8.6	17.0
22	5.7	5.0	4.4	4.0	3.3	2.9	2.1	2.6	4.2	7.0	10.0	12.6	16.2	20.0	20.8	21.5	20.3	18.8	17.2	15.4	13.8	11.1	8.7	8.8	10.7	21.5
23	9.3	9.3	8.9	8.2	7.5	7.1	6.6	7.5	8.4	11.7	15.5	16.8	17.0	17.3	17.5	17.8	17.6	16.7	15.0	13.6	15.2	15.5	15.4	15.3	12.9	17.8
24	14.9	14.1	13.8	13.8	13.8	13.7	13.4	12.7	12.9	13.1	13.6	14.3	14.8	15.6	15.9	15.6	14.9	14.6	13.4	12.8	11.9	11.1	10.6	9.5	13.5	15.9
25	9.2	8.4	8.0	7.8	7.1	7.5	8.0	7.9	8.6	9.9	11.3	13.7	16.0	17.3	18.7	19.4	20.1	20.0	18.9	18.7	19.0	19.0	18.8	18.5	13.8	20.1
26	18.2	17.7	17.4	17.3	16.9	16.0	15.5	14.8	14.1	14.7	14.6	15.1	15.9	15.2	11.6	11.4	11.8	10.3	9.2	8.9	9.4	10.1	9.6	8.3	13.5	18.2
27	7.5	7.2	7.4	6.7	6.8	6.7	6.3	6.8	7.7	9.2	10.3	10.9	11.8	12.0	12.7	12.9	13.3	12.2	11.3	10.3	9.6	8.7	8.1	7.4	9.3	13.3
28	6.7	6.6	6.4	6.2	6.1	6.1	5.9	6.0	6.4	7.7	9.1	10.3	10.9	11.8	12.3	11.7	10.7	10.0	8.9	6.4	5.9	4.9	4.4	3.5	7.7	12.3
29	3.1	2.4	1.8	1.2	0.8	0.9	1.1	1.7	2.6	4.0	7.1	8.9	10.9	10.9	11.4	11.3	10.1	8.3	5.7	5.0	4.2	4.5	4.0	3.7	5.2	11.4
30	3.7	3.3	2.8	2.6	2.1	2.3	2.3	2.4	1.9	1.7	1.5	1.8	1.8	2.0	2.5	2.5	2.6	2.6	2.3	1.7	1.4	1.4	1.3	1.2	2.2	3.7
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	10.8	10.4	10.0	9.5	9.0	8.5	8.1	8.5	9.5	11.3	13.1	14.7	16.0	17.0	17.2	17.2	17.1	16.5	15.0	13.4	12.4	11.6	11.0	10.6		
MAX	20.2	19.1	18.6	17.4	17.1	16.8	16.5	16.8	17.9	21.3	23.3	23.5	24.1	25.4	26.3	27.1	27.1	26.2	24.5	23.3	22.6	22.0	21.6	20.9		



Number of Non-Zero Readings	720	Operational Time	720 HRS
Maximum 1-HR Average	27.1 C	Operational Uptime	100.0 %
Maximum 24-HR Average	21.0 C	Monthly Average	12.4 C
Monthly Calibration	0		
Standard Deviation	5.98		

Lagoon Wind Speed (km/hr) – September 2023

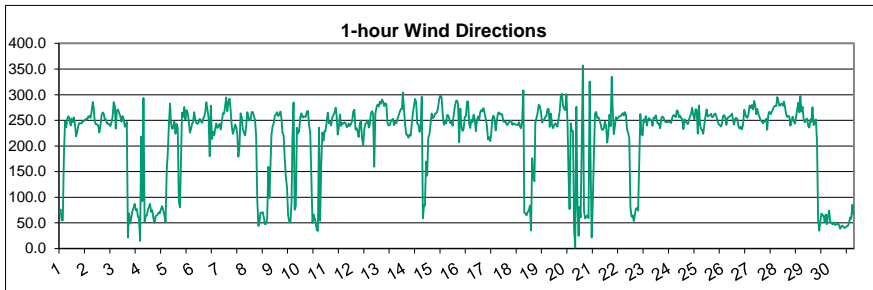
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	2.5	3.1	6.6	5.1	3.3	9.4	6.4	8.5	10.4	13.1	11.5	10.9	18.0	18.8	20.6	19.0	18.5	20.4	21.4	25.2	26.2	28.3	30.7	29.6	15.3	30.7
2	29.5	28.3	27.2	25.0	24.6	19.1	16.1	14.8	26.4	28.0	26.9	27.0	24.8	25.1	25.6	23.3	19.7	18.8	17.8	21.5	19.0	20.4	18.7	23.0	29.5	
3	13.9	8.0	10.7	6.6	17.1	20.5	19.0	19.1	16.2	18.3	14.7	11.9	15.7	15.7	17.2	11.6	18.4	20.9	18.4	17.4	11.5	7.6	8.6	10.0	14.5	20.9
4	9.2	4.5	4.6	2.3	4.1	6.5	13.1	12.3	11.6	12.1	11.6	11.1	9.9	12.3	12.3	10.2	12.0	11.9	9.7	9.3	8.8	8.3	7.8	7.1	9.3	13.1
5	5.5	2.8	3.2	5.6	3.9	6.5	7.8	10.1	8.6	7.3	8.3	7.2	4.1	7.5	19.0	21.5	25.0	17.4	19.7	11.5	13.3	10.6	5.7	5.6	9.9	25.0
6	5.8	7.7	10.9	13.4	13.5	14.7	14.6	15.0	15.3	14.1	14.4	19.9	9.9	10.0	7.1	7.8	6.0	9.1	5.2	7.4	7.6	7.3	8.6	10.3	10.7	19.9
7	11.0	11.0	10.1	11.7	13.9	9.9	11.0	12.6	12.3	17.0	11.9	12.6	13.6	13.3	13.8	12.6	9.8	6.0	3.0	3.2	6.8	7.2	9.0	10.3	10.6	17.0
8	10.0	10.4	9.9	8.5	12.1	12.7	14.2	13.6	14.5	12.4	5.5	8.0	11.3	10.7	11.3	8.4	8.2	7.3	2.4	4.4	2.4	1.4	1.9	2.2	8.5	14.5
9	4.9	9.8	11.7	14.7	12.8	13.1	13.6	15.3	13.7	10.9	11.4	7.0	4.2	6.0	9.9	10.9	11.9	8.9	6.9	1.8	1.0	1.0	1.0	1.4	8.5	15.3
10	8.6	11.0	10.9	13.9	12.8	15.1	17.3	17.4	16.0	13.6	12.9	10.0	4.7	7.0	9.9	12.1	12.0	10.9	6.6	2.8	1.4	3.2	8.1	7.5	10.2	17.4
11	10.7	12.6	18.4	12.6	13.2	12.3	12.5	14.4	14.3	17.2	12.9	10.1	10.5	14.4	9.0	10.5	9.0	8.5	9.5	16.5	22.0	15.2	16.9	19.5	13.4	22.0
12	17.7	16.2	11.1	10.7	9.1	9.1	9.2	7.4	9.2	7.9	8.5	7.1	12.1	13.4	16.1	16.0	15.9	15.4	12.9	11.1	10.5	5.0	8.9	11.5	11.3	17.7
13	12.4	14.6	13.4	14.8	14.6	11.3	11.3	11.5	12.0	20.3	23.3	20.8	21.8	24.6	27.0	30.6	26.0	23.1	21.7	13.7	11.0	10.8	10.5	9.3	17.1	30.6
14	6.5	7.7	10.2	10.1	8.3	8.9	9.1	11.8	19.2	14.0	10.7	10.8	16.8	17.3	14.1	14.6	15.2	15.0	11.8	9.4	2.9	1.8	5.1	9.0	10.9	19.2
15	12.9	13.9	13.2	14.7	17.5	17.8	17.5	23.5	17.3	19.6	22.4	22.6	22.0	21.7	20.8	17.5	19.6	18.2	16.1	16.0	7.3	10.1	12.4	14.1	17.0	23.5
16	13.6	13.9	8.5	8.7	10.0	11.8	12.0	15.5	14.7	15.1	16.8	19.0	16.5	16.7	14.9	12.6	17.0	17.6	13.9	10.3	12.5	15.5	20.9	20.2	14.5	20.9
17	19.4	18.9	18.8	13.2	9.9	12.8	9.8	6.7	7.5	14.3	15.7	19.9	21.1	20.1	23.8	23.8	22.2	18.9	18.9	19.3	23.9	22.9	24.5	22.4	17.9	24.5
18	30.8	29.4	36.8	41.0	38.7	38.1	32.7	28.4	22.7	25.0	26.4	18.7	15.4	18.4	15.2	8.8	8.4	12.1	4.6	5.1	3.5	6.0	4.0	7.4	19.9	41.0
19	9.7	9.7	10.4	11.4	9.9	9.2	10.4	11.0	13.9	13.3	12.5	9.7	14.2	11.8	16.3	19.0	18.5	21.1	20.3	19.4	16.1	11.4	9.7	10.2	13.3	21.1
20	10.1	10.0	10.2	9.6	6.4	3.6	3.3	4.8	5.6	4.9	8.0	6.1	5.9	7.3	7.5	5.6	4.0	7.3	5.3	5.0	8.3	7.0	8.6	7.5	6.7	10.2
21	2.9	2.2	3.7	3.6	3.2	5.8	8.8	9.0	8.6	13.2	11.2	9.4	9.2	8.4	7.3	6.5	6.3	5.5	3.1	2.6	2.1	6.1	10.1	12.0	6.7	13.2
22	13.5	14.8	14.3	15.5	14.8	15.7	18.8	16.0	13.8	16.8	11.5	9.6	5.5	7.8	11.8	7.9	12.0	10.2	11.3	12.1	9.2	3.7	2.2	6.8	11.5	18.8
23	11.3	12.4	12.4	13.0	11.8	13.7	12.8	12.0	13.1	11.2	16.3	27.2	25.0	29.8	26.9	29.6	28.0	24.9	23.8	23.7	29.6	24.2	18.9	17.7	19.5	29.8
24	19.0	18.5	23.8	19.1	15.9	15.9	18.9	9.1	12.2	20.5	23.5	26.5	22.7	18.9	22.1	20.9	21.2	20.0	18.4	17.8	14.2	8.8	8.9	11.3	17.8	26.5
25	12.6	10.2	10.2	7.5	7.8	7.7	11.8	12.6	10.4	9.3	10.5	16.3	23.6	22.6	22.0	23.6	24.7	22.6	20.9	21.2	25.0	26.1	25.1	26.4	17.1	26.4
26	25.8	21.9	19.9	19.3	16.0	18.1	16.0	22.9	23.8	23.4	27.6	27.9	28.3	29.5	25.1	26.9	23.7	15.4	6.7	12.5	16.7	23.2	30.5	21.4	21.8	30.5
27	21.1	12.2	15.6	13.7	13.7	11.6	15.8	22.1	15.0	15.5	15.5	20.1	20.0	19.9	19.3	17.3	14.6	13.8	10.9	10.3	13.9	11.0	13.5	12.4	15.4	22.1
28	15.2	16.2	15.5	14.5	14.9	14.6	14.6	14.1	14.3	14.5	18.3	20.8	21.9	20.5	19.1	16.8	19.7	19.8	23.5	20.1	10.6	13.0	11.1	14.1	16.6	23.5
29	11.3	9.7	8.9	13.4	15.4	12.7	11.7	11.6	11.0	12.6	13.2	15.3	19.9	16.0	11.4	17.7	14.4	13.6	10.7	9.3	7.2	6.1	7.8	7.3	12.0	19.9
30	7.4	9.3	6.4	6.2	7.8	9.7	10.2	10.1	9.5	10.0	11.2	12.7	12.4	9.6	9.2	9.5	9.9	10.7	10.4	11.0	9.0	10.6	8.8	4.4	9.4	12.7
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	12.8	12.4	12.9	12.6	12.6	12.9	13.3	13.8	13.8	14.8	14.8	15.2	15.4	15.8	16.2	15.9	15.8	14.9	12.9	12.2	11.9	11.1	12.0	12.2		
MAX	30.8	29.4	36.8	41.0	38.7	38.1	32.7	28.4	26.4	28.0	27.6	27.9	28.3	29.8	27.0	30.6	28.0	24.9	23.8	25.2	29.6	28.3	30.7	29.6		



Number of Non-Zero Readings	720	Operational Time	720 HRS
Maximum 1-HR Average	41.0 KM/HR	Operational Uptime	100.0 %
Maximum 24-HR Average	23.0 KM/HR	Monthly Average	13.7 KM/HR
Monthly Calibration	0		
Standard Deviation	6.66		

Lagoon Wind Direction (°) – September 2023

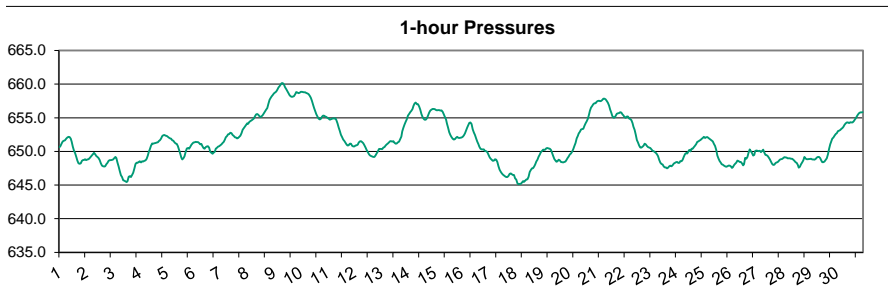
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	68.6	76.1	54.7	54.8	182.9	247.6	236.3	253.0	258.1	252.3	240.1	253.7	246.4	255.8	242.2	218.7	227.7	240.5	244.7	243.9	244.3	247.5	248.6	250.4	244.3	258.1
2	252.6	250.8	257.5	258.4	254.7	267.4	285.7	275.3	246.6	242.2	241.9	240.4	226.2	238.6	259.5	265.6	263.0	252.2	251.8	243.2	244.2	242.2	238.7	245.5	251.0	285.7
3	256.9	285.7	277.8	233.6	269.4	271.3	264.7	258.2	247.4	258.5	252.7	237.8	238.3	246.8	21.2	68.6	48.5	60.3	73.3	79.5	87.0	74.7	76.5	63.1	282.1	285.7
4	59.3	15.0	218.3	92.5	293.5	52.6	63.2	64.7	77.1	80.6	87.0	71.6	74.9	58.7	50.1	62.7	64.4	67.0	70.8	69.1	77.2	82.5	73.7	64.6	67.6	293.5
5	52.0	149.0	187.7	243.3	282.8	245.8	233.8	234.4	247.2	223.9	243.1	235.2	90.8	80.6	184.1	265.2	256.5	276.2	251.2	269.7	264.2	249.7	225.7	232.9	245.3	282.8
6	243.8	246.1	266.0	251.4	244.3	242.9	245.9	253.3	248.3	245.0	253.6	256.0	265.3	285.1	270.7	255.9	180.0	278.7	213.3	227.7	220.9	232.2	243.8	235.2	248.8	285.1
7	238.4	242.9	232.2	248.6	264.3	263.1	280.3	294.6	267.8	285.8	292.5	269.9	237.5	223.6	232.0	241.7	236.4	224.8	179.2	197.7	263.5	256.1	232.4	225.8	252.3	294.6
8	220.6	240.2	266.0	258.1	249.4	250.6	266.0	266.2	258.9	251.2	218.3	95.6	43.8	49.2	69.4	69.3	71.4	61.0	47.5	47.8	57.9	159.4	98.6	154.2	261.6	266.2
9	221.4	238.3	244.4	259.7	261.3	265.7	258.2	261.2	267.4	255.1	225.2	220.8	174.8	138.7	119.4	63.9	52.9	50.6	87.3	211.8	284.6	75.6	83.0	235.6	245.0	284.6
10	224.5	229.1	256.9	263.7	255.1	258.0	256.9	256.7	266.6	268.3	240.3	226.9	140.2	49.7	66.5	60.5	51.0	36.5	34.0	235.5	54.0	165.4	226.4	210.2	255.0	268.3
11	229.4	229.6	246.7	265.0	244.5	246.7	239.9	255.9	260.8	264.8	274.7	260.3	222.4	236.0	261.6	238.8	244.7	243.5	246.2	244.9	236.8	237.1	243.8	238.8	246.2	274.7
12	242.9	248.6	267.4	270.6	231.8	234.7	227.3	217.2	243.5	249.2	214.2	201.5	232.5	243.5	245.8	249.6	235.8	240.7	262.7	267.9	263.0	159.4	262.0	275.2	245.0	275.2
13	280.8	277.1	286.1	282.3	290.6	287.1	277.6	283.3	281.5	243.8	239.9	240.6	249.7	249.6	253.1	240.9	246.4	243.8	252.4	258.9	265.9	272.1	271.7	304.0	259.9	304.0
14	272.8	242.0	222.3	222.0	216.1	222.1	220.1	245.7	264.8	276.9	292.0	286.2	243.4	241.6	227.7	237.8	295.8	59.0	84.6	83.7	169.6	141.9	216.7	222.1	245.3	295.8
15	242.9	263.2	254.2	256.7	263.3	263.5	265.8	277.5	292.8	298.7	294.5	261.9	241.2	248.4	243.9	260.1	260.2	252.8	244.4	246.9	239.5	261.6	276.9	288.0	263.1	298.7
16	288.3	282.0	207.4	273.0	237.9	229.1	234.0	256.6	257.8	287.1	286.4	244.8	235.1	251.0	246.7	261.1	252.7	228.9	249.5	257.3	250.3	265.3	269.8	267.3	256.2	288.3
17	273.8	263.1	253.2	239.9	212.4	217.5	209.7	222.6	252.7	259.2	252.8	230.3	248.6	263.5	265.3	261.0	262.4	261.6	247.2	247.1	248.3	241.0	242.2	246.1	249.7	273.8
18	248.4	249.1	241.4	243.7	243.8	241.6	241.1	240.7	246.7	237.5	234.8	253.3	308.8	69.7	68.7	64.5	71.0	73.8	83.7	35.2	175.9	139.1	131.3	245.3	242.4	308.8
19	254.3	263.9	280.5	277.8	265.4	245.5	249.9	251.6	257.7	258.3	271.7	272.6	237.3	263.4	241.4	234.6	241.1	244.3	240.2	237.7	253.3	267.8	296.7	302.1	255.1	302.1
20	278.1	272.5	269.8	300.9	241.7	151.8	76.9	244.4	229.5	229.3	37.8	1.5	276.4	83.7	24.7	81.2	60.4	204.6	357.1	73.0	58.4	61.6	64.6	59.4	352.4	357.1
21	325.8	172.3	21.4	90.7	184.9	263.3	266.5	254.4	256.1	250.4	242.5	233.1	231.1	234.6	247.2	238.9	206.2	226.4	260.9	238.4	335.2	277.3	223.3	238.2	243.7	335.2
22	256.0	252.7	255.2	257.9	257.9	261.1	264.2	259.2	265.9	261.2	232.9	225.1	216.2	80.5	61.9	64.5	53.4	64.1	77.7	78.6	73.7	164.8	262.2	223.5	255.3	265.9
23	220.5	251.9	247.5	258.5	240.1	251.7	254.3	250.9	249.9	239.4	255.1	255.0	259.5	248.6	243.3	243.9	234.5	254.4	257.4	255.3	248.2	246.6	245.9	247.8	248.8	259.5
24	247.2	246.0	244.8	256.1	260.1	259.3	256.1	269.4	267.4	256.2	259.2	254.5	252.6	233.0	251.7	247.3	245.0	242.6	251.2	256.9	262.7	274.3	259.2	252.1	252.9	274.3
25	271.4	270.8	224.2	279.3	241.4	234.4	230.7	223.8	241.1	257.8	271.1	257.4	259.1	259.5	262.8	256.1	256.6	262.0	263.4	257.1	247.6	242.3	240.5	237.8	252.3	279.3
26	244.2	258.6	260.2	254.9	241.3	255.0	256.2	258.0	259.7	263.3	247.2	241.7	253.7	255.0	250.9	237.3	233.7	237.8	232.2	242.7	270.5	262.8	257.1	254.8	251.8	270.5
27	262.3	278.9	273.9	279.8	271.2	288.0	279.5	261.7	272.2	262.0	256.1	250.4	247.7	244.5	247.1	249.0	252.9	231.7	261.1	266.7	261.8	266.1	271.0	276.5	261.6	288.0
28	278.2	277.8	295.5	287.7	278.2	280.8	282.5	278.0	286.7	276.2	261.4	256.7	259.0	257.3	239.4	249.6	257.0	248.1	243.3	256.2	271.6	284.3	265.6	297.7	267.2	297.7
29	267.3	275.9	250.8	245.9	251.6	253.3	238.9	235.8	251.7	246.8	275.5	240.9	244.5	251.8	209.4	56.7	34.7	54.2	68.2	64.1	64.1	51.7	66.3	47.6	261.6	275.9
30	64.1	73.8	50.7	50.4	46.9	50.8	47.0	46.0	46.8	49.1	45.3	38.4	43.1	44.4	42.2	39.8	41.3	43.5	44.0	49.9	60.7	57.8	85.2	66.4	50.1	85.2
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	229.6	230.8	230.5	235.2	242.6	236.7	233.6	241.7	245.7	244.3	234.7	220.5	216.7	196.2	188.3	186.2	181.3	182.2	189.4	191.5	201.8	198.7	206.6	216.9	248.8	259.5
MAX	325.8	285.7	295.5	300.9	293.5	288.0	285.7	294.6	292.8	298.7	294.5	286.2	308.8	285.1	270.7	265.6	295.8	278.7	357.1	269.7	335.2	284.3	296.7	304.0	352.4	357.1



Number of Non-Zero Readings	720
Maximum 1-HR Average	357 degrees
Maximum 24-HR Average	352 degrees
Monthly Calibration	0
Standard Deviation	76
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	215.9 degrees

Lagoon Pressure (mmHg) – September 2023

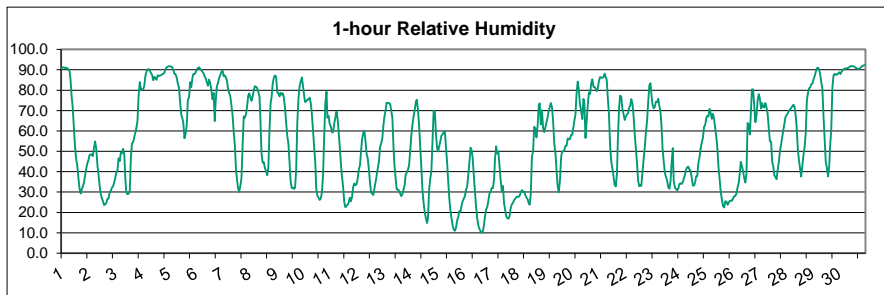
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	650.6	650.8	651.2	651.5	651.6	651.7	651.9	652.1	652.2	652.1	651.9	651.4	650.7	650.1	649.8	649.2	648.6	648.2	648.2	648.2	648.6	648.7	648.7	648.8	650.3	652.2
2	648.7	648.8	648.8	649.0	649.2	649.4	649.6	649.8	649.6	649.3	649.2	649.0	648.7	648.2	647.9	647.8	647.7	647.8	648.1	648.3	648.6	648.7	648.7	648.7	648.7	649.8
3	648.8	649.0	649.2	649.0	648.3	647.8	647.1	646.4	646.2	645.7	645.6	645.5	645.4	645.6	646.2	646.3	646.2	646.5	646.8	647.4	648.1	648.3	648.3	648.4	647.2	649.2
4	648.5	648.4	648.6	648.5	648.6	648.7	648.9	649.4	649.9	650.4	650.8	651.2	651.2	651.2	651.3	651.3	651.4	651.5	651.6	651.9	652.3	652.4	652.5	652.3	650.5	652.5
5	652.3	652.2	652.0	651.9	651.9	651.7	651.6	651.4	651.2	651.1	650.8	650.2	649.7	649.1	648.8	649.0	649.3	649.9	650.4	650.5	650.4	650.7	651.0	651.2	650.8	652.3
6	651.3	651.4	651.4	651.4	651.4	651.2	651.0	651.1	650.7	650.5	650.4	650.6	650.7	650.8	650.5	649.9	649.8	649.6	649.8	650.0	650.4	650.6	650.7	650.8	650.7	651.4
7	650.9	651.1	651.3	651.4	651.8	652.1	652.3	652.5	652.6	652.8	652.7	652.4	652.3	652.1	652.1	651.9	652.0	652.2	652.3	652.7	653.2	653.5	653.7	653.9	652.3	653.9
8	654.2	654.1	654.4	654.5	654.6	654.8	654.9	655.2	655.5	655.6	655.4	655.3	655.1	655.2	655.4	655.7	655.9	656.2	656.5	657.1	657.7	657.9	658.2	658.4	655.7	658.4
9	658.6	658.8	658.9	659.2	659.5	659.7	659.9	660.1	660.1	660.0	659.5	659.3	659.0	658.6	658.4	658.2	658.1	658.1	658.2	658.5	658.8	658.8	658.8	658.6	659.0	660.1
10	658.9	658.8	658.8	658.8	658.8	658.7	658.6	658.5	658.3	658.0	657.5	656.9	656.5	656.0	655.5	655.2	654.9	654.8	654.9	655.1	655.3	655.3	655.2	655.1	656.9	658.9
11	655.0	654.9	654.7	654.8	654.9	654.9	654.9	654.9	654.7	654.2	653.6	653.1	652.5	652.1	651.8	651.5	651.3	651.0	650.9	650.9	651.1	651.2	650.8	650.7	652.9	655.0
12	650.7	650.9	650.9	651.0	651.3	651.5	651.5	651.4	651.2	650.9	650.6	650.2	649.9	649.6	649.4	649.3	649.2	649.2	649.2	649.2	649.4	649.7	650.0	650.4	650.3	651.5
13	650.4	650.3	650.6	650.7	650.9	651.1	651.2	651.3	651.5	651.5	651.5	651.5	651.3	651.2	651.2	651.4	651.4	651.8	652.2	653.0	653.5	654.0	654.4	654.8	651.8	654.8
14	655.3	655.6	655.8	656.0	656.3	656.8	657.1	657.3	657.0	657.0	656.7	656.2	655.6	655.1	654.9	654.7	654.7	654.9	655.3	655.8	656.1	656.2	656.3	656.3	656.0	657.3
15	656.3	656.2	656.1	656.1	656.1	656.1	656.1	655.9	655.5	655.1	654.8	654.1	653.5	652.9	652.4	652.1	651.9	651.8	651.8	652.0	652.2	652.1	652.0	652.0	654.0	656.3
16	652.1	652.2	652.4	652.7	653.1	653.6	653.9	654.3	654.3	654.1	653.3	652.8	652.4	651.9	651.4	651.1	650.7	650.4	650.3	650.3	650.3	650.1	650.0	649.9	652.0	654.3
17	649.5	649.2	648.9	648.8	648.6	648.7	648.9	648.8	648.4	647.8	647.3	647.0	646.8	646.6	646.4	646.3	646.2	646.2	646.4	646.7	646.7	646.6	646.5	646.5	647.5	649.5
18	646.0	645.8	645.3	645.1	645.2	645.2	645.4	645.6	645.5	645.6	645.8	645.9	646.2	646.9	647.2	647.5	647.5	647.8	648.1	648.5	648.8	649.2	649.5	649.9	646.8	649.9
19	650.1	650.3	650.2	650.3	650.5	650.5	650.5	650.4	650.2	649.8	649.3	648.9	648.7	648.5	648.6	648.8	648.7	648.4	648.4	648.4	648.4	648.5	648.8	649.0	649.3	650.5
20	649.2	649.6	649.7	649.9	650.3	650.8	651.3	651.9	652.3	652.7	652.9	653.3	653.3	653.4	653.8	654.2	654.5	654.9	655.5	656.0	656.5	656.8	657.0	657.2	653.2	657.2
21	657.2	657.4	657.5	657.5	657.5	657.5	657.6	657.8	657.8	657.7	657.5	657.2	656.8	656.2	655.7	655.3	655.0	655.0	655.3	655.6	655.7	655.7	655.8	655.8	656.6	657.8
22	655.5	655.4	655.1	655.0	655.2	655.2	654.9	654.8	654.7	654.2	653.7	653.2	652.5	651.7	651.3	650.9	650.6	650.6	650.7	650.9	651.2	651.1	650.8	650.6	652.9	655.5
23	650.6	650.5	650.3	650.1	650.0	649.9	649.8	649.6	649.3	648.7	648.3	648.1	647.7	647.6	647.6	647.5	647.6	647.8	647.9	647.8	647.9	648.2	648.2	648.3	648.7	650.6
24	648.4	648.4	648.3	648.3	648.6	648.5	648.8	649.2	649.6	649.8	649.7	650.0	650.3	650.0	650.4	650.4	650.6	650.8	651.1	651.4	651.5	651.6	651.7	651.9	650.0	651.9
25	652.0	652.2	652.0	652.1	652.1	652.0	651.9	651.8	651.6	651.5	651.1	650.8	650.2	649.4	648.9	648.6	648.3	648.1	648.0	647.9	647.8	647.7	647.8	647.9	650.1	652.2
26	647.9	647.8	647.6	647.6	648.0	648.2	648.3	648.7	648.6	648.4	648.4	648.2	647.9	648.1	649.0	648.9	649.2	649.8	650.3	650.0	649.8	649.4	649.5	650.1	648.7	650.3
27	650.1	650.1	650.0	650.1	649.9	650.1	650.3	649.8	649.5	649.5	649.4	649.1	648.9	648.5	648.2	648.0	648.0	648.3	648.4	648.4	648.6	648.8	648.9	648.9	649.1	650.3
28	649.0	649.1	649.1	649.1	649.0	649.0	648.9	648.9	648.9	648.8	648.6	648.4	648.3	648.0	647.6	647.7	648.1	648.4	648.7	649.2	649.0	648.9	648.8	648.9	648.7	649.2
29	648.9	648.9	648.8	648.8	648.8	648.9	649.1	649.2	649.2	649.0	648.7	648.4	648.4	648.5	648.7	649.0	649.6	650.4	651.1	651.5	651.9	652.1	652.3	652.6	649.7	652.6
30	652.7	653.0	653.1	653.2	653.4	653.5	653.7	654.0	654.2	654.3	654.3	654.2	654.3	654.3	654.3	654.5	654.7	654.9	655.2	655.5	655.7	655.8	655.8	655.8	654.3	655.8
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	651.7	651.7	651.7	651.8	651.8	651.9	652.0	652.1	652.0	651.9	651.6	651.4	651.2	650.9	650.8	650.7	650.7	650.8	651.0	651.3	651.5	651.6	651.7	651.8		
MAX	658.9	658.8	658.9	659.2	659.5	659.7	659.9	660.1	660.1	660.0	659.5	659.3	659.0	658.6	658.4	658.2	658.1	658.1	658.2	658.5	658.8	658.8	658.6	658.7		



Number of Non-Zero Readings	720
Maximum 1-HR Average	660 MMHg
Maximum 24-HR Average	659 MMHg
Operational Time	720 HRS
Monthly Calibration	0
Operational Uptime	100.0 %
Standard Deviation	3.32
Monthly Average	651.5 MMHg

Lagoon Relative Humidity (%) – September 2023

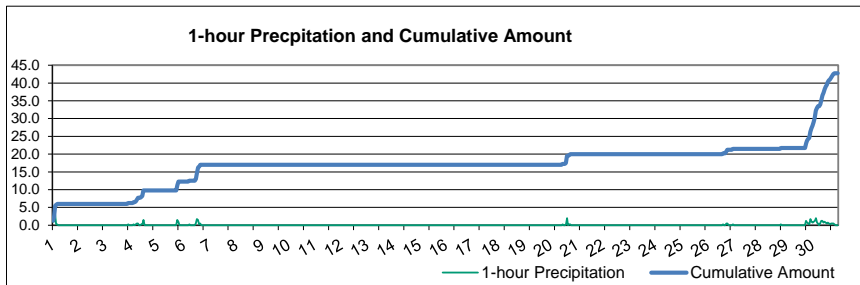
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	90.7	91.1	91.3	90.9	91.1	90.7	90.3	89.3	85.7	77.1	71.5	61.6	52.3	46.2	43.0	36.8	31.5	29.3	31.2	32.7	34.5	38.0	41.4	44.1	61.8	91.3
2	45.8	48.2	48.4	48.4	47.6	51.5	54.8	51.6	43.6	38.7	33.0	29.1	26.9	25.5	23.6	23.9	24.6	26.5	26.8	29.8	30.7	32.2	32.8	34.9	36.6	54.8
3	36.7	39.5	40.6	46.5	45.2	49.3	49.0	51.3	48.5	35.9	29.8	28.9	29.2	30.1	46.9	54.0	54.5	57.0	59.5	62.0	64.9	77.4	84.0	80.1	50.0	84.0
4	80.3	80.4	82.3	87.3	89.2	90.0	90.4	89.7	88.4	87.6	84.9	86.5	85.8	85.2	87.4	86.9	87.1	87.4	87.8	88.0	88.6	90.4	91.2	91.6	87.3	91.6
5	91.8	91.7	91.6	91.3	89.9	88.0	87.8	86.2	83.3	81.1	74.0	68.1	66.7	63.9	56.4	58.5	62.8	75.4	76.3	84.0	81.6	86.1	87.9	88.0	79.7	91.8
6	88.7	90.2	90.8	91.3	90.5	89.7	89.0	88.2	86.9	85.8	84.0	82.2	85.2	83.4	80.1	75.6	78.6	64.8	74.5	81.7	83.5	85.8	87.4	88.9	84.5	91.3
7	89.6	86.9	87.3	86.2	84.7	80.8	78.7	77.1	72.7	67.7	59.6	53.2	41.1	35.5	31.9	30.0	32.9	36.8	52.7	67.2	66.5	68.3	72.4	77.4	64.1	89.6
8	78.5	76.6	74.8	76.8	79.9	82.0	81.7	81.0	79.2	77.1	66.6	49.0	44.4	44.7	41.8	40.3	38.2	42.1	60.6	73.7	76.5	83.1	86.2	87.2	67.6	87.2
9	86.6	79.0	78.5	76.9	78.7	77.8	78.5	76.4	71.4	64.0	57.5	53.7	44.6	34.8	31.9	32.2	31.5	32.2	40.7	64.3	75.8	81.8	84.3	86.3	63.3	86.6
10	82.1	77.3	74.2	74.6	75.4	75.5	76.4	73.8	68.0	60.2	51.9	44.2	31.8	28.2	27.2	26.1	26.8	29.9	38.6	57.9	73.7	79.3	66.5	67.5	57.8	82.1
11	63.4	62.2	59.3	59.4	63.7	66.6	69.5	65.8	60.0	52.6	44.2	37.7	32.3	25.0	22.5	23.4	23.7	25.2	27.3	25.5	27.6	32.6	34.2	33.5	43.2	69.5
12	33.9	36.8	41.3	43.3	49.4	55.8	58.9	60.1	55.2	48.6	46.5	41.0	34.4	29.6	29.5	28.5	31.6	34.7	38.1	41.8	45.0	52.2	53.9	56.4	43.6	60.1
13	62.1	66.9	70.0	73.8	73.7	73.7	73.3	70.0	66.5	51.7	43.5	36.9	31.4	31.2	30.8	29.3	28.1	28.9	31.2	33.5	38.3	39.5	40.9	43.0	48.7	73.8
14	49.9	57.7	63.0	67.2	70.4	74.3	75.3	70.7	62.9	52.6	42.0	30.8	24.5	20.1	17.2	14.8	16.8	30.7	36.5	40.2	55.1	69.8	69.9	58.9	48.8	75.3
15	51.7	49.9	52.3	54.8	57.6	58.3	59.4	60.0	52.0	44.5	35.1	26.6	21.7	17.4	13.8	11.6	11.0	12.4	16.0	17.8	20.7	20.4	23.1	25.4	33.9	60.0
16	26.8	27.9	31.2	32.7	38.6	44.9	51.8	50.4	46.8	38.6	30.6	22.9	17.1	13.6	11.9	10.8	9.9	10.7	13.2	17.9	21.5	22.5	25.8	29.2	27.0	51.8
17	30.1	32.0	32.0	36.5	46.0	52.5	48.9	49.9	42.7	35.8	30.5	33.0	24.4	21.1	18.2	17.2	16.9	18.2	22.2	24.0	24.8	26.0	26.8	27.5	30.7	52.5
18	27.8	27.6	28.2	29.8	30.9	30.3	30.2	28.6	27.3	26.5	24.9	23.8	28.8	47.6	49.8	62.0	61.2	56.9	62.5	72.5	73.6	63.2	70.2	61.4	43.6	73.6
19	59.5	61.7	64.3	66.9	70.1	71.9	73.7	71.6	64.8	54.0	49.3	40.8	32.7	29.9	35.7	46.8	49.9	49.9	50.5	52.7	52.7	56.3	55.8	56.0	54.9	73.7
20	58.1	58.0	61.1	64.9	68.1	78.6	84.3	79.6	72.9	69.9	65.8	75.7	73.7	56.5	64.5	72.9	78.9	78.1	83.3	85.3	81.7	81.5	81.0	79.5	73.1	85.3
21	80.8	84.5	86.5	86.2	86.1	86.4	88.2	86.4	85.2	76.0	68.1	52.6	45.0	41.4	37.7	33.4	32.8	39.4	55.6	70.8	77.4	76.7	70.7	68.3	67.3	88.2
22	65.3	67.1	68.2	68.8	71.3	72.3	75.6	73.4	67.3	58.4	51.1	44.2	35.4	32.8	33.3	33.0	39.8	46.2	52.1	59.1	64.9	74.0	82.3	83.4	59.1	83.4
23	78.0	73.1	71.1	71.9	74.4	74.1	75.9	72.3	69.5	61.3	51.2	45.2	39.6	37.5	35.6	32.6	31.6	35.2	44.7	51.5	35.4	32.3	31.5	30.8	52.3	78.0
24	31.7	33.9	34.3	34.0	34.9	36.8	38.3	41.1	42.2	42.5	41.0	40.6	37.0	33.1	34.8	37.7	37.8	44.0	47.1	51.2	54.2	56.6	62.0	40.8	62.0	
25	62.9	66.4	67.4	67.1	70.8	68.8	66.0	68.4	65.9	61.4	56.8	50.8	42.7	36.7	30.2	26.5	23.2	22.4	25.4	25.4	23.8	24.7	25.5	25.8	46.0	70.8
26	25.6	26.7	27.9	28.1	29.3	32.2	34.4	39.4	44.8	42.9	40.2	36.9	34.6	38.8	64.0	63.2	58.4	70.7	80.4	80.4	72.6	64.3	67.7	74.9	49.1	80.4
27	78.1	75.9	71.0	73.7	71.9	71.5	73.7	71.5	68.4	61.3	55.0	54.6	44.8	42.4	38.2	37.4	36.3	40.8	44.8	50.1	53.3	57.1	60.6	63.9	58.2	78.1
28	66.7	67.8	68.6	69.8	70.6	71.2	72.1	72.9	71.9	67.5	62.4	51.8	45.9	41.8	37.6	42.7	48.1	52.0	58.7	75.0	78.1	80.8	81.3	82.8	64.1	82.8
29	83.2	85.4	86.8	88.9	90.8	91.0	90.3	88.0	84.1	80.7	67.1	56.0	44.6	41.8	37.7	42.7	52.5	60.8	81.4	87.3	88.1	87.6	87.6	88.1	74.7	91.0
30	88.8	87.9	88.8	89.7	90.3	90.6	90.7	90.7	91.0	91.3	91.9	91.7	91.8	91.8	91.4	91.0	90.7	90.3	90.5	91.0	91.7	91.9	92.2	92.4	90.8	92.4
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	63.2	63.7	64.4	65.9	67.7	69.2	70.2	69.2	65.6	59.8	53.7	48.3	43.0	40.3	40.1	40.6	41.6	44.1	50.2	56.3	58.5	61.0	62.4	63.0		
MAX	91.8	91.7	91.6	91.3	91.1	91.0	90.7	90.7	91.0	91.3	91.9	91.7	91.8	91.8	91.4	91.0	90.7	90.3	90.5	91.0	91.7	91.9	92.2	92.4		



Number of Non-Zero Readings	720		
Maximum 1-HR Average	92.4 %		
Maximum 24-HR Average	90.8 %		
Operational Time	720 HRS		
Monthly Calibration	0	Operational Uptime	100.0 %
Standard Deviation	22.5	Monthly Average	56.8 %

Lagoon Precipitation (mm) – September 2023

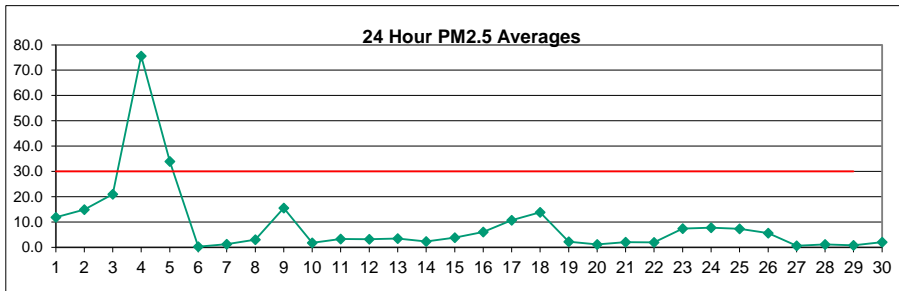
Day	HOUR																								24-HOUR TOTAL	DAILY MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	1.3	1.0	3.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	3.3	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	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	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	
4	0.0	0.0	0.3	0.0	0.3	0.5	0.5	0.0	0.0	0.3	0.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	1.5	
5	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	1.5	1.0	0.0	0.0	0.0	0.0	2.5	1.5	
6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.5	1.8	1.5	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	1.8	
7	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	2.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	3.0	2.0	
21	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	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	0.3	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.3	0.0	1.5	0.5	
27	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28	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	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.3	
29	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	1.3	0.8	0.5	0.3	1.8	1.0	5.5	1.8	
30	0.8	1.0	1.3	2.0	0.8	0.5	0.0	0.5	1.3	1.3	0.8	1.0	0.8	0.5	0.8	0.5	0.3	0.5	0.5	0.5	0.3	0.0	0.0	0.0	15.5	2.0	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	
MAX	1.3	1.0	3.3	2.0	0.8	0.5	0.5	0.5	1.3	1.3	0.8	1.5	1.8	1.5	0.8	2.0	0.3	0.5	1.5	1.0	0.5	0.3	1.8	1.0	0.0	0.0	



Number of Non-Zero Readings	57	Operational Time	720 HRS
Maximum 1-HR Total	15.5 MM	Operational Uptime	100.0 %
Maximum 24-HR Total	3.3 MM	Monthly Average	0.06 MM
Monthly Calibration	0		
Standard Deviation	0.26		

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

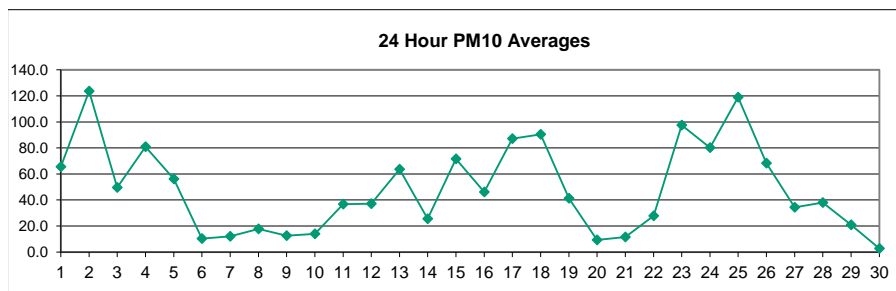
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	23.0	23.0	14.0	12.0	11.0	14.0	14.0	16.0	12.0	11.0	10.0	10.0	16.0	11.0	9.0	5.0	2.0	11.0	14.0	10.0	9.0	8.0	6.0	13.0	11.8	23.0
2	9.0	4.0	17.0	9.0	6.0	5.0	6.0	6.0	8.0	14.0	13.0	17.0	14.0	22.0	30.0	28.0	17.0	22.0	21.0	18.0	18.0	19.0	18.0	16.0	14.9	30.0
3	12.0	10.0	7.0	9.0	9.0	11.0	9.0	9.0	12.0	11.0	8.0	7.0	10.0	8.0	20.0	23.0	29.0	X	47.0	48.0	48.0	47.0	43.0	46.0	21.0	48.0
4	51.0	50.0	54.0	49.0	53.0	52.0	63.0	76.0	73.0	60.0	65.0	95.0	104.0	93.0	92.0	91.0	91.0	91.0	86.0	86.0	87.0	85.0	85.0	83.0	75.6	104.0
5	87.0	81.0	74.0	68.0	40.0	49.0	58.0	62.0	58.0	57.0	45.0	39.0	31.0	27.0	21.0	5.0	4.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	33.9	87.0
6	0.0	0.0	0.0	0.0	0.0	1.0	1.0	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	2.0	0.2	2.0
7	1.0	0.0	0.0	0.0	1.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	2.0	6.0	4.0	1.0	0.0	3.0	3.0	1.0	0.0	1.3	6.0
8	4.0	2.0	1.0	3.0	4.0	3.0	3.0	3.0	6.0	5.0	9.0	5.0	3.0	2.0	1.0	0.0	0.0	0.0	3.0	5.0	2.0	0.0	5.0	4.0	3.0	9.0
9	3.0	2.0	7.0	15.0	8.0	4.0	5.0	6.0	3.0	26.0	12.0	8.0	17.0	56.0	32.0	17.0	121.0	5.0	5.0	4.0	5.0	5.0	4.0	2.0	15.5	121.0
10	2.0	1.0	2.0	2.0	0.0	1.0	3.0	2.0	5.0	3.0	3.0	4.0	6.0	3.0	0.0	1.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	6.0
11	4.0	5.0	3.0	2.0	2.0	1.0	2.0	3.0	5.0	4.0	1.0	2.0	3.0	2.0	4.0	6.0	4.0	0.0	0.0	5.0	4.0	4.0	4.0	8.0	3.3	8.0
12	9.0	7.0	4.0	3.0	2.0	0.0	0.0	3.0	3.0	2.0	5.0	3.0	1.0	5.0	8.0	7.0	3.0	3.0	4.0	3.0	1.0	1.0	0.0	0.0	3.2	9.0
13	1.0	2.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0	5.0	6.0	5.0	5.0	12.0	10.0	6.0	8.0	8.0	5.0	2.0	0.0	1.0	2.0	3.4	12.0
14	0.0	3.0	6.0	5.0	1.0	1.0	3.0	2.0	4.0	4.0	2.0	1.0	4.0	4.0	0.0	1.0	2.0	2.0	2.0	0.0	0.0	3.0	3.0	1.0	2.3	6.0
15	0.0	2.0	2.0	2.0	4.0	4.0	2.0	2.0	1.0	2.0	4.0	4.0	4.0	6.0	5.0	5.0	4.0	3.0	5.0	9.0	5.0	6.0	6.0	5.0	3.8	9.0
16	3.0	1.0	2.0	3.0	5.0	5.0	6.0	4.0	7.0	6.0	3.0	6.0	6.0	10.0	11.0	7.0	12.0	10.0	8.0	4.0	6.0	8.0	5.0	7.0	6.0	12.0
17	7.0	4.0	7.0	6.0	6.0	12.0	8.0	5.0	7.0	7.0	4.0	13.0	17.0	10.0	20.0	12.0	15.0	16.0	15.0	10.0	10.0	19.0	11.0	15.0	10.7	20.0
18	12.0	15.0	31.0	27.0	20.0	24.0	29.0	24.0	22.0	16.0	18.0	7.0	6.0	17.0	14.0	11.0	8.0	11.0	9.0	6.0	2.0	0.0	2.0	1.0	13.8	31.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	3.0	2.0	3.0	3.0	1.0	2.0	5.0	3.0	9.0	4.0	3.0	7.0	4.0	1.0	0.0	2.2	9.0
20	1.0	0.0	0.0	0.0	0.0	0.0	4.0	3.0	1.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	0.0	1.0	4.0	2.0	1.1	4.0
21	2.0	3.0	5.0	4.0	6.0	4.0	1.0	2.0	4.0	1.0	4.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	5.0	2.0	6.0
22	5.0	6.0	3.0	0.0	0.0	0.0	1.0	1.0	1.0	3.0	3.0	4.0	4.0	2.0	0.0	0.0	0.0	3.0	3.0	3.0	1.0	1.0	0.0	2.0	1.9	6.0
23	4.0	4.0	1.0	0.0	0.0	1.0	5.0	6.0	3.0	0.0	1.0	9.0	10.0	9.0	7.0	11.0	9.0	7.0	4.0	2.0	15.0	31.0	22.0	16.0	7.4	31.0
24	18.0	6.0	10.0	8.0	6.0	12.0	13.0	8.0	8.0	9.0	8.0	10.0	12.0	9.0	9.0	7.0	11.0	8.0	4.0	6.0	3.0	1.0	0.0	0.0	7.8	18.0
25	1.0	1.0	1.0	2.0	1.0	0.0	0.0	1.0	1.0	2.0	1.0	2.0	9.0	9.0	6.0	33.0	18.0	17.0	11.0	24.0	8.0	9.0	8.0	9.0	7.3	33.0
26	6.0	5.0	6.0	7.0	4.0	0.0	0.0	3.0	2.0	C	C	40.0	17.0	15.0	7.0	5.0	3.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	5.6	40.0
27	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	4.0	2.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.6	4.0
28	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	0.0	7.0	5.0	1.0	3.0	2.0	2.0	1.0	0.0	0.0	0.0	0.0	1.1	7.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	6.0	1.0	0.0	0.0	0.0	0.0	1.0	3.0	2.0	1.0	0.0	0.8	6.0
30	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	7.0	5.0	0.0	0.0	5.0	3.0	3.0	2.0	3.0	3.0	2.0	4.0	4.0	5.0	2.0	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	716	99.7%
MEAN	9.2	7.9	8.6	7.9	6.3	6.9	8.0	8.3	8.3	8.8	8.1	10.3	10.4	11.3	10.8	9.9	12.7	8.2	8.7	8.6	8.1	8.8	7.9	8.2	7.5	
MAX	87.0	81.0	74.0	68.0	53.0	52.0	63.0	76.0	73.0	60.0	65.0	95.0	104.0	93.0	92.0	91.0	121.0	91.0	86.0	86.0	87.0	85.0	85.0	83.0	17.4	70.0



Number of 24HR Exceedences	2	Proposed Guideline	
Number of Non-Zero Readings	551		
Maximum 1-HR Average	121.0 UG/M3		
Maximum 24-HR Average	75.6 UG/M3		
Monthly Calibration	2	Operational Time	718 HRS
Standard Deviation	17.0	Operational Uptime	99.7 %
		Monthly Average	8.8 UG/M3

Windridge PM₁₀ (µg/m³) – September 2023

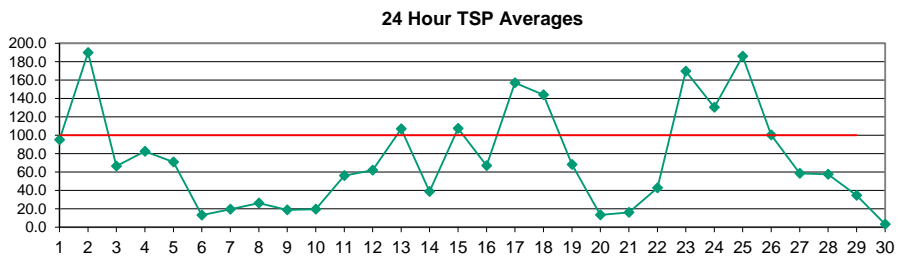
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	31.0	29.0	19.0	14.0	15.0	20.0	27.0	22.0	22.0	30.0	21.0	22.0	76.0	55.0	42.0	12.0	24.0	185.0	241.0	168.0	115.0	143.0	113.0	126.0	65.5	241.0
2	53.0	42.0	28.0	22.0	39.0	72.0	26.0	42.0	102.0	110.0	104.0	91.0	31.0	122.0	240.0	428.0	176.0	210.0	194.0	153.0	176.0	255.0	164.0	89.0	123.7	428.0
3	36.0	13.0	17.0	16.0	16.0	25.0	22.0	25.0	21.0	116.0	92.0	33.0	118.0	99.0	47.0	40.0	48.0	62.0	56.0	63.0	57.0	53.0	54.0	62.0	49.6	118.0
4	53.0	57.0	62.0	57.0	54.0	54.0	63.0	88.0	75.0	65.0	66.0	100.0	110.0	96.0	93.0	94.0	94.0	96.0	91.0	95.0	95.0	100.0	91.0	91.0	80.8	110.0
5	92.0	89.0	87.0	85.0	51.0	58.0	74.0	77.0	71.0	90.0	64.0	48.0	55.0	55.0	132.0	92.0	78.0	11.0	29.0	2.0	1.0	4.0	2.0	1.0	56.2	132.0
6	2.0	1.0	1.0	2.0	3.0	21.0	13.0	14.0	44.0	21.0	32.0	30.0	6.0	10.0	6.0	3.0	3.0	6.0	4.0	0.0	4.0	4.0	3.0	13.0	10.3	44.0
7	10.0	5.0	3.0	2.0	5.0	5.0	2.0	1.0	2.0	5.0	5.0	7.0	20.0	39.0	31.0	32.0	47.0	29.0	10.0	6.0	4.0	8.0	7.0	6.0	12.1	47.0
8	5.0	6.0	21.0	6.0	9.0	10.0	18.0	14.0	32.0	27.0	66.0	20.0	12.0	17.0	17.0	19.0	14.0	17.0	20.0	17.0	13.0	9.0	17.0	21.0	17.8	66.0
9	13.0	11.0	18.0	12.0	8.0	15.0	14.0	10.0	18.0	24.0	31.0	16.0	13.0	12.0	9.0	8.0	12.0	10.0	11.0	8.0	5.0	9.0	8.0	7.0	12.6	31.0
10	6.0	8.0	10.0	9.0	12.0	33.0	29.0	36.0	23.0	24.0	19.0	10.0	18.0	11.0	11.0	8.0	8.0	8.0	9.0	9.0	6.0	7.0	6.0	13.0	13.9	36.0
11	9.0	6.0	12.0	11.0	8.0	9.0	21.0	37.0	47.0	44.0	21.0	24.0	54.0	48.0	27.0	56.0	40.0	18.0	20.0	45.0	25.0	77.0	120.0	103.0	36.8	120.0
12	91.0	90.0	18.0	8.0	16.0	8.0	6.0	23.0	62.0	53.0	32.0	22.0	28.0	48.0	81.0	112.0	46.0	15.0	52.0	21.0	8.0	19.0	27.0	6.0	37.2	112.0
13	8.0	12.0	14.0	7.0	9.0	8.0	5.0	7.0	15.0	66.0	94.0	99.0	97.0	150.0	285.0	157.0	130.0	82.0	112.0	115.0	21.0	11.0	12.0	9.0	63.5	285.0
14	5.0	7.0	8.0	15.0	4.0	11.0	8.0	38.0	40.0	36.0	24.0	38.0	87.0	46.0	21.0	60.0	44.0	24.0	25.0	20.0	9.0	19.0	13.0	12.0	25.6	87.0
15	14.0	9.0	7.0	8.0	23.0	13.0	20.0	50.0	57.0	190.0	44.0	76.0	60.0	100.0	86.0	152.0	102.0	130.0	117.0	153.0	20.0	137.0	102.0	46.0	71.5	190.0
16	15.0	10.0	11.0	9.0	9.0	11.0	146.0	69.0	62.0	24.0	65.0	77.0	23.0	80.0	57.0	36.0	170.0	44.0	62.0	33.0	16.0	29.0	26.0	24.0	46.2	170.0
17	21.0	21.0	11.0	16.0	47.0	118.0	82.0	16.0	17.0	63.0	39.0	71.0	179.0	129.0	224.0	142.0	105.0	71.0	89.0	108.0	99.0	188.0	157.0	76.0	87.0	224.0
18	93.0	133.0	255.0	245.0	141.0	142.0	161.0	139.0	246.0	123.0	135.0	59.0	21.0	53.0	34.0	41.0	40.0	36.0	21.0	23.0	11.0	9.0	6.0	4.0	90.5	255.0
19	2.0	1.0	0.0	1.0	3.0	2.0	16.0	49.0	103.0	108.0	87.0	38.0	48.0	55.0	82.0	76.0	41.0	84.0	45.0	57.0	71.0	12.0	7.0	3.0	41.3	108.0
20	5.0	7.0	7.0	4.0	5.0	4.0	4.0	10.0	22.0	34.0	21.0	6.0	10.0	7.0	6.0	6.0	4.0	9.0	13.0	11.0	9.0	9.0	6.0	5.0	9.3	34.0
21	5.0	5.0	9.0	13.0	11.0	18.0	6.0	10.0	20.0	17.0	15.0	16.0	11.0	6.0	3.0	15.0	9.0	5.0	3.0	4.0	2.0	11.0	23.0	38.0	11.5	38.0
22	32.0	17.0	11.0	14.0	14.0	15.0	67.0	38.0	37.0	110.0	78.0	50.0	31.0	18.0	14.0	9.0	10.0	7.0	22.0	17.0	25.0	11.0	11.0	8.0	27.8	110.0
23	12.0	17.0	25.0	14.0	15.0	14.0	33.0	21.0	30.0	27.0	119.0	301.0	251.0	216.0	155.0	173.0	75.0	180.0	77.0	55.0	102.0	193.0	137.0	98.0	97.5	301.0
24	108.0	54.0	70.0	52.0	43.0	127.0	168.0	22.0	85.0	176.0	221.0	126.0	111.0	46.0	71.0	54.0	71.0	72.0	103.0	75.0	22.0	29.0	12.0	8.0	80.3	221.0
25	6.0	6.0	5.0	5.0	5.0	6.0	12.0	31.0	40.0	34.0	27.0	100.0	198.0	92.0	175.0	485.0	317.0	357.0	260.0	357.0	73.0	104.0	121.0	38.0	118.9	485.0
26	25.0	66.0	43.0	63.0	43.0	62.0	70.0	101.0	80.0	C	187.0	146.0	193.0	157.0	45.0	30.0	25.0	30.0	0.0	3.0	9.0	34.0	117.0	41.0	68.3	193.0
27	X	5.0	17.0	1.0	6.0	14.0	8.0	54.0	27.0	63.0	60.0	70.0	68.0	85.0	52.0	66.0	36.0	44.0	29.0	27.0	38.0	7.0	7.0	6.0	34.3	85.0
28	2.0	1.0	2.0	2.0	5.0	4.0	4.0	8.0	8.0	35.0	67.0	63.0	134.0	161.0	80.0	91.0	61.0	66.0	61.0	52.0	0.0	1.0	1.0	1.0	37.9	161.0
29	0.0	0.0	1.0	14.0	11.0	15.0	7.0	37.0	40.0	51.0	55.0	71.0	55.0	92.0	24.0	12.0	7.0	4.0	3.0	3.0	0.0	0.0	0.0	0.0	20.9	92.0
30	2.0	4.0	7.0	2.0	0.0	0.0	0.0	3.0	2.0	3.0	3.0	4.0	3.0	2.0	3.0	4.0	3.0	3.0	3.0	3.0	1.0	0.0	3.0	7.0	2.7	7.0
NO.	29	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	718	99.9%
MEAN	26.1	24.4	26.6	24.3	21.0	30.5	37.7	36.4	48.3	61.0	63.1	61.1	70.7	70.2	71.8	83.8	61.3	63.8	59.4	56.8	34.6	49.7	45.8	32.1	42.0	
MAX	108.0	133.0	255.0	245.0	141.0	142.0	168.0	139.0	246.0	190.0	221.0	301.0	251.0	216.0	285.0	485.0	317.0	357.0	260.0	357.0	176.0	255.0	164.0	126.0	91.1	433.3



Number of Non-Zero Readings	704		
Maximum 1-HR Average	485.0 UG/M3		
Maximum 24-HR Average	123.7 UG/M3		
Monthly Calibration	1	Operational Time	719 HRS
Standard Deviation	59.85	Operational Uptime	99.9 %
		Monthly Average	48.4 UG/M3

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

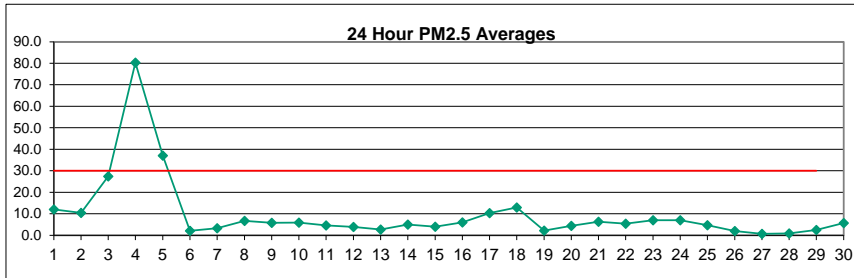
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	31.0	27.0	25.0	17.0	16.0	27.0	34.0	21.0	27.0	33.0	26.0	30.0	97.0	78.0	61.0	28.0	35.0	281.0	312.0	251.0	196.0	243.0	199.0	188.0	95.1	312.0
2	82.0	69.0	42.0	34.0	50.0	112.0	43.0	63.0	179.0	164.0	183.0	127.0	39.0	177.0	371.0	513.0	287.0	346.0	309.0	259.0	275.0	445.0	262.0	127.0	189.9	513.0
3	49.0	26.0	15.0	12.0	24.0	35.0	25.0	38.0	20.0	187.0	137.0	51.0	200.0	161.0	70.0	47.0	54.0	73.0	63.0	69.0	64.0	57.0	56.0	61.0	66.4	200.0
4	66.0	66.0	60.0	53.0	58.0	54.0	70.0	83.0	80.0	65.0	71.0	97.0	107.0	97.0	95.0	98.0	90.0	102.0	90.0	94.0	95.0	106.0	90.0	93.0	82.5	107.0
5	94.0	87.0	92.0	91.0	49.0	57.0	87.0	81.0	66.0	103.0	82.0	60.0	74.0	72.0	254.0	150.0	128.0	24.0	37.0	3.0	0.0	0.0	5.0	3.0	70.8	254.0
6	3.0	5.0	5.0	2.0	0.0	30.0	13.0	20.0	52.0	18.0	38.0	52.0	4.0	7.0	4.0	7.0	5.0	6.0	5.0	2.0	9.0	8.0	4.0	13.0	13.0	52.0
7	9.0	4.0	4.0	2.0	1.0	3.0	3.0	3.0	6.0	13.0	8.0	15.0	36.0	68.0	46.0	59.0	83.0	51.0	12.0	10.0	9.0	5.0	7.0	9.0	19.4	83.0
8	5.0	8.0	21.0	6.0	5.0	19.0	22.0	21.0	46.0	42.0	122.0	39.0	22.0	23.0	32.0	22.0	24.0	19.0	22.0	23.0	13.0	12.0	26.0	31.0	26.0	122.0
9	16.0	9.0	30.0	16.0	12.0	15.0	17.0	16.0	25.0	44.0	52.0	33.0	19.0	15.0	20.0	13.0	10.0	14.0	14.0	14.0	9.0	14.0	9.0	11.0	18.6	52.0
10	7.0	9.0	9.0	13.0	8.0	49.0	36.0	39.0	27.0	45.0	25.0	17.0	35.0	14.0	21.0	20.0	16.0	13.0	11.0	11.0	8.0	6.0	17.0	9.0	19.4	49.0
11	16.0	10.0	16.0	12.0	6.0	16.0	20.0	36.0	69.0	63.0	28.0	46.0	93.0	82.0	52.0	101.0	54.0	31.0	36.0	74.0	50.0	105.0	170.0	158.0	56.0	170.0
12	159.0	146.0	22.0	3.0	12.0	7.0	9.0	32.0	86.0	113.0	52.0	41.0	49.0	79.0	142.0	189.0	69.0	27.0	102.0	36.0	15.0	38.0	45.0	15.0	62.0	189.0
13	20.0	14.0	18.0	5.0	17.0	3.0	4.0	11.0	26.0	98.0	135.0	159.0	179.0	262.0	541.0	278.0	220.0	129.0	178.0	188.0	37.0	25.0	9.0	8.0	106.8	541.0
14	6.0	4.0	5.0	13.0	9.0	17.0	6.0	57.0	54.0	56.0	32.0	56.0	130.0	81.0	30.0	111.0	82.0	34.0	45.0	31.0	19.0	22.0	15.0	14.0	38.7	130.0
15	20.0	16.0	11.0	12.0	32.0	17.0	25.0	67.0	65.0	133.0	74.0	111.0	96.0	164.0	141.0	288.0	185.0	246.0	185.0	214.0	29.0	215.0	171.0	63.0	107.5	288.0
16	28.0	11.0	17.0	13.0	8.0	15.0	228.0	108.0	100.0	35.0	104.0	105.0	35.0	107.0	84.0	42.0	223.0	66.0	94.0	40.0	21.0	44.0	49.0	30.0	67.0	228.0
17	28.0	29.0	16.0	19.0	87.0	232.0	174.0	21.0	29.0	84.0	49.0	137.0	361.0	267.0	456.0	275.0	183.0	130.0	146.0	169.0	141.0	325.0	281.0	132.0	157.1	456.0
18	160.0	243.0	483.0	452.0	208.0	223.0	245.0	221.0	299.0	164.0	219.0	88.0	35.0	82.0	54.0	58.0	59.0	63.0	33.0	34.0	19.0	4.0	3.0	4.0	143.9	483.0
19	7.0	4.0	4.0	4.0	3.0	5.0	21.0	77.0	142.0	209.0	142.0	72.0	83.0	105.0	147.0	127.0	57.0	120.0	83.0	91.0	104.0	19.0	1.0	5.0	68.0	209.0
20	12.0	10.0	9.0	13.0	6.0	2.0	5.0	16.0	27.0	59.0	44.0	3.0	11.0	8.0	10.0	7.0	6.0	12.0	10.0	8.0	11.0	9.0	10.0	9.0	13.2	59.0
21	8.0	9.0	12.0	13.0	8.0	23.0	11.0	8.0	17.0	19.0	23.0	21.0	13.0	14.0	14.0	25.0	16.0	8.0	7.0	11.0	6.0	19.0	29.0	50.0	16.0	50.0
22	40.0	19.0	12.0	13.0	17.0	32.0	100.0	56.0	63.0	197.0	133.0	83.0	48.0	28.0	26.0	16.0	17.0	12.0	25.0	26.0	32.0	10.0	10.0	6.0	42.5	197.0
23	15.0	27.0	28.0	12.0	18.0	20.0	50.0	37.0	46.0	49.0	220.0	591.0	477.0	409.0	276.0	329.0	124.0	295.0	134.0	80.0	174.0	314.0	215.0	134.0	169.8	591.0
24	144.0	72.0	102.0	81.0	64.0	232.0	280.0	28.0	151.0	287.0	389.0	217.0	169.0	73.0	104.0	76.0	113.0	119.0	149.0	147.0	39.0	56.0	28.0	10.0	130.4	72.0
25	8.0	5.0	3.0	5.0	6.0	7.0	18.0	54.0	63.0	54.0	37.0	159.0	332.0	140.0	281.0	725.0	531.0	551.0	359.0	477.0	137.0	209.0	231.0	72.0	186.0	725.0
26	45.0	124.0	84.0	101.0	80.0	101.0	112.0	163.0	133.0	133.0	C	193.0	259.0	289.0	78.0	36.0	40.0	40.0	0.0	5.0	13.0	57.0	174.0	46.0	100.3	289.0
27	X	6.0	31.0	3.0	11.0	27.0	1.0	73.0	38.0	111.0	100.0	100.0	126.0	149.0	97.0	113.0	64.0	74.0	77.0	54.0	62.0	8.0	16.0	6.0	58.6	149.0
28	5.0	1.0	0.0	0.0	0.0	0.0	4.0	17.0	13.0	62.0	96.0	99.0	217.0	152.0	129.0	176.0	90.0	129.0	104.0	77.0	6.0	2.0	0.0	0.0	57.5	217.0
29	0.0	0.0	0.0	20.0	8.0	27.0	4.0	59.0	70.0	77.0	94.0	130.0	84.0	149.0	42.0	26.0	7.0	9.0	5.0	4.0	3.0	2.0	4.0	2.0	34.4	149.0
30	2.0	1.0	0.0	3.0	0.0	0.0	0.0	2.0	3.0	1.0	0.0	4.0	2.0	2.0	3.0	4.0	5.0	7.0	4.0	5.0	4.0	5.0	6.0	9.0	3.0	9.0
NO.	29	30	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	718	99.9%
MEAN	37.4	35.4	39.2	34.8	27.4	46.9	55.6	50.9	67.4	90.6	93.6	97.9	114.4	111.8	122.7	132.0	95.9	101.0	88.4	83.6	53.3	79.5	71.4	43.9		
MAX	160.0	243.0	483.0	452.0	208.0	232.0	280.0	221.0	299.0	287.0	389.0	591.0	477.0	409.0	541.0	725.0	531.0	551.0	359.0	477.0	275.0	445.0	281.0	188.0		



Number of 24HR Exceedences	9	Proposed Guideline
Number of Non-Zero Readings	700	
Maximum 1-HR Average	725.0 UG/M3	
Maximum 24-HR Average	189.9 UG/M3	
IZS Calibration Time		Operational Time 719 HRS
Down Time	0	Operational Uptime 99.9 %
Standard Deviation	96.7	Monthly Average 74.0 UG/M3

West PM_{2.5} (µg/m³) – September 2023

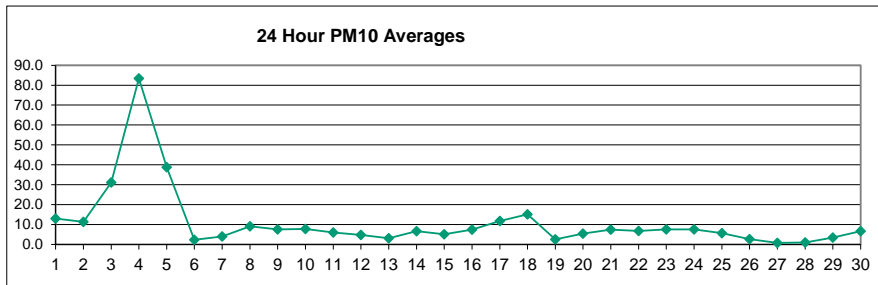
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	30.1	29.0	24.8	18.0	17.1	17.3	17.5	16.9	15.0	14.2	13.2	11.5	8.6	6.5	5.7	4.7	4.2	4.5	4.4	5.0	5.2	5.3	5.3	5.1	12.0	30.1
2	5.1	5.0	4.7	4.5	4.4	4.7	4.8	4.9	5.2	5.7	7.9	9.7	14.0	16.6	17.9	17.2	14.8	14.4	14.4	15.0	14.1	14.1	14.6	15.7	10.4	17.9
3	16.5	16.5	18.0	18.6	18.6	19.1	19.5	19.7	18.4	11.8	6.7	5.6	5.2	5.0	20.7	17.3	31.1	49.3	51.4	55.1	55.7	57.3	56.9	63.1	27.4	63.1
4	66.6	64.8	62.7	60.2	59.7	61.5	72.5	83.9	80.2	67.7	72.6	94.2	101.6	98.7	100.4	92.8	92.4	89.2	85.0	85.2	85.4	84.1	81.0	83.9	80.3	101.6
5	82.8	79.2	72.4	72.0	68.8	61.5	61.6	61.8	61.0	58.1	56.1	47.2	42.2	34.6	15.8	2.6	1.7	1.3	1.1	1.0	1.0	1.7	1.5	1.8	37.0	82.8
6	1.8	1.9	2.5	2.4	2.2	2.2	2.1	2.3	2.6	2.5	2.4	2.0	1.8	1.6	1.6	1.3	1.3	1.7	2.0	2.3	2.2	2.4	2.8	2.8	2.1	2.8
7	3.1	3.4	3.0	3.7	2.9	2.6	2.6	2.3	1.8	1.6	1.9	2.1	2.4	3.0	3.3	3.3	3.2	3.7	4.1	5.1	5.0	4.8	4.7	5.1	3.3	5.1
8	5.1	5.6	5.4	5.5	5.3	5.2	5.8	6.0	5.8	5.4	5.6	6.0	8.0	8.5	8.0	8.1	8.4	9.3	6.6	7.7	7.9	7.3	7.1	7.8	6.7	9.3
9	6.6	6.5	6.5	5.8	5.7	5.5	5.4	5.3	5.2	4.9	5.0	5.0	4.6	4.0	3.8	5.6	5.1	6.6	8.2	6.0	6.5	7.7	7.0	6.8	5.8	8.2
10	6.8	6.4	6.7	6.5	5.8	6.1	5.6	5.6	5.3	5.2	5.4	5.3	4.3	3.8	4.0	5.4	5.6	6.1	6.8	6.4	8.2	7.5	6.5	6.7	5.9	8.2
11	6.3	6.5	6.3	6.2	6.3	6.5	6.9	6.6	6.4	6.0	5.4	4.8	4.0	2.9	2.6	2.7	2.7	2.7	3.7	3.9	3.0	2.6	2.8	3.2	4.6	6.9
12	3.1	2.7	2.9	3.0	3.8	4.1	4.1	4.6	5.6	4.3	4.1	3.9	3.3	3.0	3.6	3.1	3.1	3.3	3.9	4.8	4.6	4.6	4.7	3.9	3.8	5.6
13	4.0	3.8	4.0	4.3	3.6	3.2	3.1	2.7	2.2	1.7	1.4	1.0	0.9	1.3	1.9	1.7	2.0	2.1	2.4	2.7	3.5	3.5	3.4	3.6	2.7	4.3
14	4.3	5.3	4.3	4.4	4.8	4.7	5.7	5.9	4.9	4.6	3.6	3.2	2.8	2.3	1.7	1.6	1.8	9.2	5.2	8.1	12.1	8.2	5.1	5.4	5.0	12.1
15	5.5	5.4	5.2	5.6	4.9	5.2	5.8	5.7	6.0	5.1	4.5	3.9	2.9	2.4	2.0	2.3	1.9	2.0	2.3	2.8	3.2	3.1	3.3	3.6	3.9	6.0
16	3.9	4.0	4.3	4.7	4.9	5.2	5.5	5.9	5.7	5.5	5.3	5.8	5.1	4.4	3.9	3.4	3.0	4.1	6.8	8.5	10.5	11.1	11.7	11.7	6.0	11.7
17	10.5	10.0	9.2	8.9	9.0	9.0	9.5	9.8	8.5	8.5	8.5	9.0	9.1	8.5	10.6	13.9	14.4	14.0	14.1	12.0	9.6	9.3	10.6	12.4	10.4	14.4
18	13.7	14.4	16.4	18.8	18.8	16.5	16.6	18.0	15.7	13.0	10.3	8.5	9.5	22.0	18.5	18.1	17.4	14.5	11.5	8.0	3.0	2.2	2.2	2.2	12.9	22.0
19	1.8	2.0	2.0	2.3	2.0	2.0	2.4	3.1	3.4	2.5	2.4	2.2	1.7	1.4	1.4	1.3	1.3	1.3	1.4	1.8	2.1	2.7	3.3	3.5	2.1	3.5
20	3.4	3.3	3.2	3.5	3.8	4.4	4.7	4.6	4.3	4.0	7.0	6.3	2.1	2.3	3.0	1.6	1.8	1.4	5.3	6.6	6.1	6.3	6.8	7.9	4.3	7.9
21	6.2	8.0	8.2	8.7	8.0	7.1	8.2	8.6	7.5	7.7	8.3	6.0	3.7	3.3	3.2	3.0	2.8	5.6	5.7	8.2	8.3	5.6	5.2	5.0	6.3	8.7
22	4.8	4.4	4.9	4.5	4.1	4.0	4.1	4.3	4.2	4.1	4.2	4.3	4.1	3.6	6.1	5.7	5.4	6.5	6.9	7.1	8.3	8.8	8.1	7.2	5.4	8.8
23	7.5	7.2	5.9	5.6	5.7	5.4	5.9	5.4	5.3	5.1	3.5	2.2	1.2	1.6	1.9	2.0	1.7	2.0	1.4	1.7	15.6	33.2	23.3	16.4	7.0	33.2
24	13.8	10.4	6.7	6.4	9.6	11.3	9.1	8.9	8.5	8.0	7.1	6.6	7.9	6.9	6.4	6.2	6.5	5.5	4.2	4.0	3.4	3.4	3.4	3.7	7.0	13.8
25	3.6	3.6	3.5	4.2	4.3	4.3	4.5	4.5	5.2	5.4	6.7	7.5	5.7	4.7	4.2	4.2	3.7	3.3	4.0	4.6	5.1	5.4	5.2	4.9	4.7	7.5
26	5.0	5.4	5.7	5.7	5.1	3.9	3.1	2.4	1.4	0.9	1.2	1.2	1.2	0.6	0.4	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.5	0.3	2.0	5.7
27	0.2	0.2	0.2	0.2	0.2	0.3	0.7	0.4	0.5	0.6	0.6	0.7	0.8	0.7	0.6	0.6	0.7	0.6	0.8	1.0	0.8	1.3	1.0	1.2	0.6	1.3
28	1.0	1.4	1.3	1.3	1.2	1.3	1.4	1.3	1.5	1.2	1.4	1.0	0.6	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.6	0.7	0.7	0.9	1.5
29	0.9	1.0	1.1	1.2	1.3	1.0	1.2	1.5	1.4	1.0	0.6	0.6	0.5	0.3	0.4	10.0	10.2	5.5	4.9	3.6	2.8	4.1	1.9	2.9	2.5	10.2
30	2.4	2.2	1.5	2.0	2.6	3.3	4.2	3.9	4.8	5.0	5.5	9.2	7.6	6.1	7.7	7.7	8.3	7.7	9.2	8.7	7.2	6.3	5.9	7.1	5.7	9.2
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	720	100.0%
MEAN	10.9	10.6	10.1	10.0	9.8	9.6	10.1	10.6	10.1	9.0	8.9	9.2	8.9	8.7	8.7	8.3	8.6	9.3	9.3	9.6	10.1	10.5	9.9	10.2	7.5	7.5
MAX	82.8	79.2	72.4	72.0	68.8	61.5	72.5	83.9	80.2	67.7	72.6	94.2	101.6	98.7	100.4	92.8	92.4	89.2	85.0	85.2	85.4	84.1	81.0	83.9	17.4	70.0



Number of 24HR Exceedences	2	Proposed Guideline
Number of Non-Zero Readings	720	
Maximum 1-HR Average	101.6 UG/M3	
Maximum 24-HR Average	80.3 UG/M3	
Monthly Calibration	0	Operational Time
Standard Deviation	16.9	Operational Uptime
		Monthly Average
		720 HRS
		100.0 %
		9.6 UG/M3

West PM₁₀ (µg/m³) – September 2023

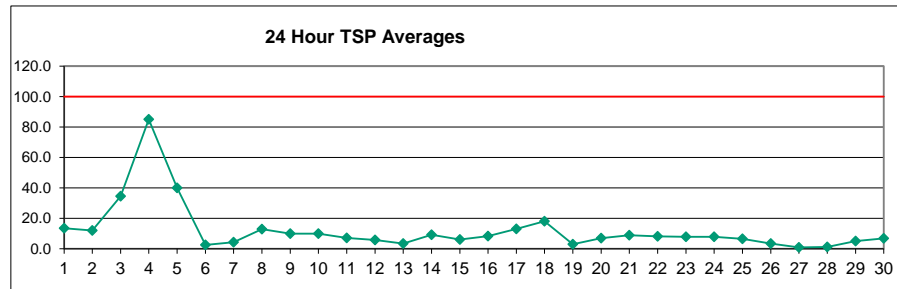
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	30.3	31.7	28.7	20.1	18.3	17.7	17.9	17.3	15.4	14.6	14.3	12.9	9.5	7.2	6.2	5.3	4.9	6.0	5.3	5.9	6.0	6.0	6.0	5.7	13.0	31.7
2	5.7	5.6	5.2	4.9	4.8	5.2	5.3	5.4	5.6	6.1	8.5	10.2	14.6	17.8	21.5	21.2	16.5	15.5	15.2	15.5	14.7	14.6	15.1	16.1	11.3	21.5
3	17.0	17.0	19.0	19.4	19.3	19.8	20.7	20.9	19.8	13.3	8.0	6.7	6.0	5.6	27.6	22.7	43.0	67.1	57.0	62.2	60.4	61.5	58.4	73.5	31.1	73.5
4	78.4	71.5	63.7	60.7	60.0	62.5	74.2	85.3	81.0	69.1	72.9	95.9	102.8	108.7	116.9	94.9	95.7	93.1	86.9	87.2	87.3	85.9	82.0	85.7	83.4	116.9
5	84.4	80.1	72.8	72.8	69.5	62.0	62.2	62.4	62.4	59.2	60.2	51.0	53.0	45.0	19.8	2.8	1.8	1.4	1.3	1.1	1.1	1.9	1.6	1.9	38.8	84.4
6	2.0	2.1	2.7	2.6	2.3	2.4	2.2	2.5	2.8	2.8	2.7	2.2	2.0	1.8	1.7	1.5	1.5	1.9	2.4	2.8	2.5	2.9	3.4	3.2	2.4	3.4
7	3.4	4.0	3.5	4.1	3.2	3.0	3.2	2.8	2.2	2.0	2.4	2.5	2.8	3.4	3.6	3.9	3.8	4.8	5.4	6.9	6.7	6.3	6.0	6.4	4.0	6.9
8	6.4	6.7	6.3	6.4	6.1	6.0	7.0	7.3	7.6	6.7	7.5	8.4	11.6	12.4	11.7	11.7	12.5	13.7	9.7	11.2	11.3	10.3	9.5	10.0	9.1	13.7
9	8.6	7.9	7.6	6.9	6.7	6.5	6.3	6.7	6.6	6.1	6.3	6.5	5.8	5.3	5.2	8.3	7.4	9.7	12.1	8.4	9.1	9.9	8.8	9.5	7.6	12.1
10	8.4	7.5	8.1	7.7	6.8	6.9	6.4	6.8	6.5	6.5	6.7	6.9	5.7	5.2	5.7	8.0	8.4	9.1	10.2	9.4	11.2	10.7	8.7	8.4	7.7	11.2
11	7.9	8.2	7.8	7.3	7.3	7.4	8.6	8.7	8.9	8.3	7.3	6.6	5.7	4.1	3.5	3.8	3.6	3.6	5.0	5.0	3.6	3.0	3.5	4.0	6.0	8.9
12	3.8	3.1	3.4	3.4	4.4	5.0	5.0	6.4	8.3	5.8	5.6	5.4	4.4	4.0	4.9	4.1	3.8	3.7	4.5	5.9	5.6	5.5	5.4	4.3	4.8	8.3
13	4.5	4.1	4.2	4.5	3.8	3.3	3.4	3.1	2.6	2.2	2.0	1.3	1.2	1.8	2.8	2.0	2.3	2.3	2.7	3.1	4.3	4.3	4.0	4.1	3.1	4.5
14	5.3	6.7	5.1	5.0	5.3	5.2	7.1	8.2	6.6	6.2	4.4	3.9	3.6	3.0	2.2	2.2	2.4	13.7	7.6	11.9	17.0	11.4	7.3	7.3	6.6	17.0
15	7.0	6.8	6.3	7.0	5.6	6.2	7.6	8.0	8.6	7.1	6.0	5.1	3.7	3.2	2.7	3.2	2.5	2.6	2.9	3.5	4.1	3.8	4.0	4.1	5.1	8.6
16	4.4	4.5	4.8	5.4	5.6	6.0	6.3	7.5	7.4	7.2	7.1	7.7	6.5	5.9	5.2	4.4	3.9	4.9	8.2	10.6	14.1	13.8	13.5	13.3	7.4	14.1
17	11.8	11.4	10.4	10.1	10.4	10.2	11.7	11.8	9.8	9.5	10.0	10.9	11.1	10.4	13.1	16.5	16.6	15.1	15.0	12.8	10.3	10.0	11.1	12.9	11.8	16.6
18	14.1	15.3	17.4	19.7	19.4	17.2	18.8	20.1	18.0	14.6	11.4	9.7	10.9	28.6	24.3	25.0	22.8	19.6	15.2	10.4	3.4	2.5	2.6	2.5	15.1	28.6
19	1.9	2.3	2.2	2.6	2.1	2.2	2.8	4.1	4.9	3.3	3.1	3.0	2.2	1.8	1.8	1.5	1.5	1.4	1.5	1.9	2.2	2.8	3.4	3.7	2.5	4.9
20	3.5	3.4	3.3	3.7	4.0	5.0	5.7	5.9	5.4	4.8	9.6	9.1	2.7	3.4	4.5	2.2	2.3	1.7	6.6	8.5	7.7	8.1	8.5	10.3	5.4	10.3
21	6.8	9.8	10.2	11.1	9.2	7.4	8.7	9.6	8.0	8.2	9.4	6.7	3.9	3.5	3.3	3.2	3.1	7.7	8.4	11.5	11.6	7.4	6.1	5.4	7.5	11.6
22	5.5	4.8	5.6	5.0	4.3	4.3	4.4	5.0	4.9	4.9	5.1	5.3	5.2	4.5	8.8	8.2	7.3	8.6	8.8	9.1	11.1	11.6	10.6	8.4	6.7	11.6
23	8.4	7.9	6.4	6.1	6.1	5.6	6.2	5.8	5.9	5.8	4.2	2.7	1.5	2.0	2.3	2.6	2.0	2.4	1.6	1.8	16.6	35.2	24.4	16.9	7.5	35.2
24	14.2	10.8	6.8	6.6	10.0	11.8	9.5	9.5	9.2	9.5	8.4	7.4	9.1	7.8	7.3	7.0	7.5	5.8	4.6	4.3	3.7	3.6	3.5	3.8	7.6	14.2
25	3.8	3.7	3.6	4.7	4.6	4.7	5.0	5.7	7.5	7.2	7.9	9.0	6.3	5.6	5.1	5.6	4.8	4.1	4.9	5.5	6.2	6.8	6.5	5.9	5.6	9.0
26	6.6	7.6	8.0	8.2	7.4	5.4	4.2	3.1	1.6	1.1	1.3	1.3	1.4	1.5	0.8	0.4	0.3	0.3	0.4	0.5	0.6	0.5	0.4	2.6	2.6	8.2
27	0.3	0.2	0.2	0.3	0.3	0.3	0.9	0.5	0.6	0.7	0.7	0.8	1.1	0.9	0.7	0.7	0.8	0.7	0.9	1.1	0.9	1.6	1.1	1.3	0.7	1.6
28	1.1	1.6	1.5	1.5	1.3	1.5	1.7	1.5	1.8	1.4	1.8	1.3	0.6	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.6	0.8	0.7	1.0	1.8
29	1.0	1.1	1.2	1.2	1.5	1.0	1.3	1.8	1.7	1.1	0.7	0.7	0.6	0.3	0.5	14.6	15.2	8.2	7.2	4.9	4.0	5.8	2.4	4.1	3.4	15.2
30	3.0	2.5	1.7	2.2	3.3	4.1	5.2	4.5	5.5	5.2	6.5	12.6	10.4	6.8	8.7	9.1	10.1	8.4	11.6	10.5	8.3	6.4	5.9	7.8	6.7	12.6
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	12.0	11.6	10.9	10.7	10.4	10.2	11.0	11.6	11.2	10.0	10.1	10.5	10.2	10.4	10.8	9.9	10.3	11.3	10.8	11.1	11.5	11.8	10.8	11.4		
MAX	84.4	80.1	72.8	72.8	69.5	62.5	74.2	85.3	81.0	69.1	72.9	95.9	102.8	108.7	116.9	94.9	95.7	93.1	86.9	87.2	87.3	85.9	82.0	85.7		



Number of Non-Zero Readings	720		
Maximum 1-HR Average	116.9 UG/M3		
Maximum 24-HR Average	83.4 UG/M3		
IZS Calibration Time	OperatioEI Time	720 HRS	
Down Time	0	OperatioEI Uptime	100.0 %
Standard Deviation	17.6	Monthly Average	10.9 UG/M3

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

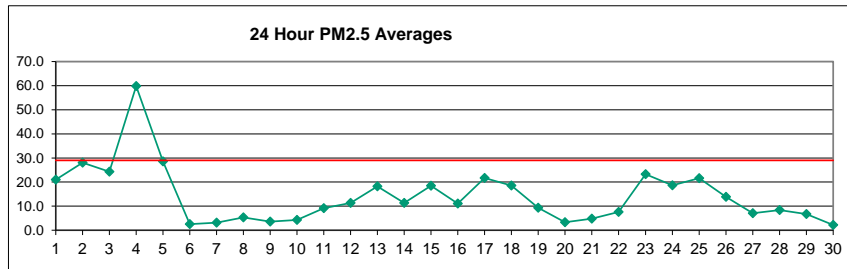
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	30.3	31.8	29.8	20.1	18.3	17.7	17.9	17.3	15.4	14.7	14.6	13.6	9.8	7.4	6.4	5.6	5.3	7.8	6.0	6.4	6.4	6.4	6.4	5.9	13.4	31.8
2	5.9	5.8	5.3	5.0	4.9	5.3	5.4	5.5	5.7	6.2	8.9	10.5	14.9	18.5	25.4	25.8	17.8	16.3	15.7	15.7	15.0	14.7	15.2	16.2	11.9	25.8
3	17.2	17.0	19.4	19.6	19.5	20.0	21.1	21.2	20.1	14.1	8.7	7.2	6.5	5.9	33.4	26.5	55.2	104.4	60.4	66.4	62.7	62.7	58.7	78.5	34.4	104.4
4	83.2	74.9	63.7	60.9	60.1	62.5	74.2	85.4	81.0	69.1	72.9	96.3	103.1	117.0	134.3	95.4	96.7	93.9	87.0	87.2	87.4	86.1	82.0	86.0	85.0	134.3
5	84.4	80.2	72.8	72.9	69.5	62.1	62.4	62.5	63.1	59.4	62.2	52.6	63.7	54.8	22.2	2.8	1.9	1.4	1.3	1.2	1.1	1.9	1.6	1.9	40.0	84.4
6	2.0	2.1	2.7	2.6	2.3	2.4	2.2	2.5	2.9	2.9	2.7	2.2	2.0	1.8	1.8	1.6	1.5	2.0	2.6	2.9	2.6	2.9	3.5	3.3	2.4	3.5
7	3.4	4.1	3.5	4.2	3.3	3.1	3.3	2.9	2.3	2.2	2.6	2.7	3.0	3.6	3.7	4.2	4.2	5.4	6.2	7.8	6.9	6.5	6.2	6.5	4.2	7.8
8	6.6	6.7	6.3	6.4	6.2	6.0	7.1	7.5	8.0	6.9	8.4	11.0	18.6	21.0	19.5	19.6	20.4	23.9	16.0	17.7	17.6	14.7	13.9	17.3	12.8	23.9
9	10.4	8.2	7.7	6.9	6.7	6.6	6.3	7.0	6.8	6.3	6.8	7.4	6.3	6.3	6.3	13.9	11.8	16.3	21.0	11.7	13.0	17.4	15.4	11.8	9.9	21.0
10	8.8	7.7	8.2	7.9	6.9	7.0	6.5	7.2	7.2	7.0	7.3	7.9	6.5	6.5	8.0	12.9	13.7	15.6	17.5	14.7	19.4	14.8	9.5	8.9	9.9	19.4
11	8.4	9.0	8.4	7.6	7.6	7.6	9.4	10.1	11.2	10.0	8.7	8.2	8.2	5.8	4.8	5.3	4.8	4.8	6.2	6.0	4.0	3.2	4.1	4.7	7.0	11.2
12	4.5	3.3	3.7	3.5	4.5	5.6	5.5	8.3	12.7	7.5	6.9	7.1	5.2	4.7	6.5	5.1	4.3	3.9	4.8	6.7	5.9	6.0	5.8	4.5	5.7	12.7
13	4.7	4.2	4.3	4.5	3.9	3.3	3.5	3.3	2.8	2.7	2.7	1.7	1.6	2.8	4.1	2.3	2.7	2.3	2.8	3.3	4.7	4.6	4.2	4.2	3.4	4.7
14	5.6	7.3	5.3	5.2	5.4	5.3	7.7	11.3	8.1	8.2	4.8	4.4	4.5	3.6	2.8	2.9	3.3	24.2	12.8	19.9	30.6	19.7	9.3	8.7	9.2	30.6
15	7.7	7.8	6.8	7.7	5.8	6.7	8.8	10.3	12.3	9.4	7.4	6.2	4.3	4.1	3.5	4.5	3.2	3.2	3.3	3.9	4.8	4.2	4.3	4.4	6.0	12.3
16	4.6	4.6	5.0	6.0	5.9	6.5	6.4	8.8	8.4	8.5	8.7	9.2	7.4	7.2	6.3	5.3	4.4	5.3	8.9	11.7	16.2	15.6	14.3	13.8	8.3	16.2
17	12.3	11.9	10.8	10.6	11.1	10.4	13.8	14.3	10.4	10.1	11.0	12.6	13.1	13.2	16.7	19.0	18.7	15.7	15.5	13.2	10.6	10.5	11.4	13.2	12.9	19.0
18	14.3	15.9	18.5	20.6	19.8	17.7	20.3	21.2	19.4	15.6	12.2	10.5	12.9	46.3	39.0	32.9	28.1	25.8	17.5	11.9	3.7	2.7	2.8	2.5	18.0	46.3
19	2.0	2.5	2.3	2.8	2.1	2.2	3.0	5.2	7.3	4.0	3.8	4.0	2.7	2.1	2.1	1.7	1.7	1.5	1.5	2.0	2.2	2.8	3.4	3.8	2.9	7.3
20	3.5	3.4	3.3	3.7	4.0	5.3	6.4	6.7	6.0	5.4	15.4	14.7	3.3	5.2	7.3	2.9	2.6	1.8	8.1	12.1	9.6	10.9	11.0	11.4	6.8	15.4
21	6.9	12.0	11.0	11.9	9.4	7.4	8.7	9.8	8.1	8.3	9.7	6.8	3.9	3.6	3.3	3.2	3.1	11.7	13.5	19.6	20.0	9.2	6.4	5.5	8.9	20.0
22	5.9	4.9	5.8	5.2	4.4	4.3	4.5	5.2	5.2	5.4	5.5	5.9	5.8	5.0	14.1	13.1	11.3	11.7	9.9	10.1	14.9	13.7	12.6	8.6	8.0	14.9
23	8.5	8.0	6.4	6.1	6.2	5.7	6.3	5.9	6.1	6.0	4.6	3.2	1.7	2.3	2.8	3.0	2.1	2.7	1.7	1.9	17.4	37.1	25.6	17.4	7.9	37.1
24	14.5	10.9	6.9	6.8	10.2	12.1	9.7	9.8	9.4	10.3	9.2	7.9	9.7	8.2	7.6	7.3	7.8	5.9	4.7	4.4	3.8	3.7	3.5	3.9	7.8	14.5
25	3.8	3.7	3.6	4.9	4.6	4.9	5.3	6.6	10.5	9.0	8.7	9.9	6.8	6.1	5.9	7.0	6.0	4.9	5.7	6.3	7.4	8.1	7.8	6.6	6.4	10.5
26	7.9	9.8	10.5	11.4	9.9	6.7	5.1	3.5	1.7	1.2	1.4	1.4	1.5	1.8	0.9	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.4	0.4	3.3	11.4
27	0.3	0.2	0.2	0.3	0.3	0.4	1.0	0.5	0.6	0.8	0.8	0.9	1.4	1.0	0.7	0.8	0.9	0.7	1.0	1.1	0.9	1.8	1.2	1.3	0.8	1.8
28	1.1	1.6	1.5	1.6	1.4	1.5	1.8	1.6	2.0	1.5	2.1	1.4	0.6	0.4	0.5	0.5	0.6	0.6	0.5	0.4	0.6	0.6	0.8	0.7	1.1	2.1
29	1.0	1.2	1.2	1.2	1.6	1.0	1.3	1.9	1.8	1.2	0.7	0.7	0.6	0.3	0.6	26.1	27.2	14.6	12.0	5.4	4.6	6.5	2.6	4.6	5.0	27.2
30	3.2	2.5	1.7	2.2	3.5	4.2	5.3	4.6	5.6	5.2	6.6	13.5	10.7	6.8	8.7	9.1	10.2	8.4	11.7	10.5	8.3	6.4	5.9	7.8	6.8	13.5
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	12.4	12.1	11.2	11.0	10.6	10.4	11.3	12.3	12.1	10.6	10.9	11.4	11.3	12.4	13.3	12.0	12.4	14.6	12.5	12.8	13.4	13.2	11.7	12.1		
MAX	84.4	80.2	72.8	72.9	69.5	62.5	74.2	85.4	81.0	69.1	72.9	96.3	103.1	117.0	134.3	95.4	96.7	104.4	87.0	87.2	87.4	86.1	82.0	86.0		



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	720	
Maximum 1-HR Average	134.3 UG/M3	
Maximum 24-HR Average	85.0 UG/M3	
IZS Calibration Time		Operational Time 720 HRS
Down Time	0	Operational Uptime 100.0 %
Standard Deviation	18.44	Monthly Average 12.0 UG/M3

Berm PM_{2.5} (µg/m³) – September 2023

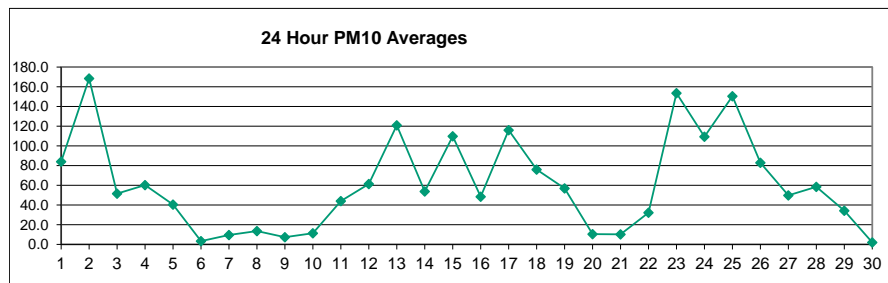
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	23.2	18.8	15.1	11.3	10.4	12.8	13.6	13.4	13.3	13.0	13.2	11.2	22.2	10.6	18.2	11.0	9.6	53.9	76.8	37.4	19.4	34.0	26.5	14.8	21.0	76.8
2	7.8	7.6	6.2	5.0	7.8	12.5	5.1	6.3	17.4	21.3	31.7	34.4	31.2	60.6	65.6	67.4	39.7	35.5	36.9	40.1	30.6	50.1	35.7	17.5	28.1	67.4
3	13.5	12.9	13.1	15.6	14.9	16.5	15.5	14.9	13.6	25.9	18.5	11.3	23.1	20.6	21.8	19.9	25.3	35.9	40.5	42.3	42.0	41.7	42.0	43.0	24.3	43.0
4	44.2	45.0	45.6	43.5	43.2	43.5	53.1	63.8	61.7	52.8	56.3	74.8	80.1	72.4	70.9	69.3	68.2	65.7	61.8	62.2	63.7	64.2	63.7	65.2	59.8	80.1
5	63.9	60.5	56.8	51.2	37.9	41.5	45.7	45.6	45.1	44.1	45.2	33.2	29.5	28.7	24.1	14.4	6.6	3.0	2.2	0.9	0.8	1.2	1.1	1.4	28.5	63.9
6	1.1	1.7	1.8	1.7	1.7	4.0	2.7	4.1	8.7	4.5	4.9	3.8	1.6	2.3	1.3	1.3	1.0	1.9	1.2	1.4	1.6	1.8	1.7	3.0	2.5	8.7
7	2.0	2.0	2.0	2.1	2.2	1.7	1.8	1.9	3.4	4.7	2.4	3.0	2.9	5.1	4.8	7.8	6.1	3.5	2.3	2.7	2.6	2.6	2.8	3.0	3.1	7.8
8	3.0	3.9	5.4	3.5	3.9	4.1	4.4	6.1	8.0	8.6	14.9	7.0	3.7	4.1	4.7	4.4	4.1	3.7	11.2	4.8	3.5	3.5	3.7	3.8	5.3	14.9
9	3.3	3.6	4.1	4.4	4.2	4.6	4.3	4.2	4.5	5.1	5.2	4.3	4.4	2.7	2.5	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.0	2.9	3.6	5.2
10	3.3	3.5	3.8	3.9	3.9	7.6	6.3	7.8	5.1	5.3	5.6	3.5	4.9	2.8	2.8	2.6	2.7	2.8	2.6	3.3	5.6	3.3	5.3	4.7	4.3	7.8
11	4.3	4.2	4.5	4.1	4.2	4.8	5.6	10.8	9.7	8.0	5.4	5.4	12.1	24.3	9.6	18.2	3.8	3.0	3.0	7.8	17.0	7.8	16.2	25.8	9.1	25.8
12	11.6	5.1	3.6	5.7	3.3	3.7	3.5	4.3	18.2	17.0	15.8	9.5	20.7	15.8	29.0	29.7	17.7	21.8	9.8	3.8	4.2	8.1	5.1	5.0	11.3	29.7
13	3.7	4.2	3.8	3.1	10.0	2.0	2.4	3.9	8.0	19.1	25.9	32.5	39.9	38.3	77.7	43.4	25.9	29.9	32.8	14.9	5.2	4.4	3.2	2.9	18.2	77.7
14	2.4	2.4	2.5	4.5	3.0	10.8	2.9	8.9	11.0	9.4	5.0	31.8	36.6	35.2	40.7	28.4	11.3	4.2	4.2	3.1	2.7	2.8	3.6	4.0	11.3	40.7
15	5.5	3.7	3.5	3.6	6.0	4.5	7.2	11.2	14.0	15.6	11.5	29.2	33.1	35.4	39.3	41.4	28.1	32.7	39.9	28.5	3.5	21.2	16.9	7.5	18.4	41.4
16	4.9	4.2	5.9	5.4	3.5	5.5	18.6	11.0	10.1	7.0	17.6	19.6	15.1	13.9	10.8	10.0	20.2	26.2	9.2	9.1	8.4	9.7	10.8	9.6	11.1	26.2
17	9.0	7.7	6.4	7.0	9.9	25.1	16.4	7.5	9.0	9.1	9.6	37.9	45.3	34.8	42.0	36.7	24.8	20.5	26.0	27.8	24.1	33.7	34.9	14.6	21.7	45.3
18	17.2	22.3	40.4	42.2	25.1	20.3	21.7	27.7	24.1	34.6	45.5	17.3	11.1	16.4	13.9	14.3	13.8	12.2	8.7	9.1	2.5	1.8	1.3	1.2	18.5	45.5
19	2.3	1.4	1.3	1.4	1.6	1.8	3.3	10.1	15.5	18.2	13.3	13.0	25.4	19.6	22.1	19.7	4.9	6.9	9.6	16.3	6.9	4.5	2.8	2.2	9.3	25.4
20	5.5	2.9	2.9	2.4	1.9	2.0	2.3	6.5	14.6	5.5	1.5	2.9	0.9	0.6	0.7	0.8	2.6	3.8	4.3	3.2	2.8	3.1	3.6	3.3	3.3	14.6
21	3.0	2.9	3.8	4.2	4.0	5.9	4.9	6.1	9.5	13.5	7.3	4.3	5.9	4.4	4.5	3.7	3.5	2.2	2.1	2.3	2.6	3.9	3.7	6.1	4.8	13.5
22	6.2	5.3	4.1	4.7	5.1	5.5	15.5	12.8	10.8	24.1	14.4	7.7	16.7	3.7	3.2	2.5	4.0	4.4	5.5	6.5	5.9	4.4	4.1	4.9	7.6	24.1
23	6.6	7.7	6.9	5.7	7.5	4.6	6.9	7.4	5.8	7.4	25.5	51.4	48.0	52.1	51.0	46.8	21.8	25.8	15.9	8.4	26.5	55.3	43.5	20.7	23.3	55.3
24	20.4	8.9	8.6	7.5	10.5	32.7	33.6	7.3	16.1	34.5	47.2	24.0	26.2	24.9	40.5	18.2	18.7	20.4	17.6	12.7	6.1	5.7	3.3	2.9	18.7	47.2
25	2.7	2.6	2.5	2.6	2.7	3.0	6.7	8.5	10.8	7.1	7.8	28.3	40.9	17.1	24.6	91.5	57.8	42.1	27.1	35.1	18.7	33.8	33.9	10.8	21.6	91.5
26	10.3	12.4	9.5	13.6	11.7	12.0	16.0	21.9	17.9	26.9	25.3	21.8	42.8	49.1	7.9	4.4	5.2	5.2	1.3	2.1	1.5	3.6	6.8	3.0	13.8	49.1
27	1.0	0.2	0.6	0.4	1.4	1.3	1.0	4.9	8.8	10.1	9.7	10.2	18.8	20.2	17.5	22.9	11.1	10.9	4.0	6.6	4.0	1.1	1.3	1.2	7.1	22.9
28	1.0	1.1	0.9	0.8	0.9	1.1	1.3	5.2	3.2	10.5	19.1	16.5	32.7	19.7	23.3	16.3	8.9	13.1	15.5	7.5	1.0	0.7	0.9	0.4	8.4	32.7
29	0.5	0.6	1.1	2.6	2.8	2.8	1.7	7.2	13.6	15.6	10.6	21.9	27.4	29.6	15.2	3.3	1.0	0.7	0.6	1.0	0.6	0.9	0.5	0.7	6.8	29.6
30	0.9	0.5	0.7	0.7	0.5	1.0	1.1	1.4	2.2	2.8	2.5	2.4	1.5	3.1	3.6	3.2	3.4	3.8	3.9	3.3	1.6	1.6	2.9	3.7	2.2	3.9
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	9.5	8.7	8.9	8.8	8.2	10.0	10.8	11.6	13.5	16.3	17.4	19.1	23.5	22.3	23.1	21.8	15.1	16.6	16.0	13.6	10.6	13.8	12.8	9.7		
MAX	63.9	60.5	56.8	51.2	43.2	43.5	53.1	63.8	61.7	52.8	56.3	74.8	80.1	72.4	77.7	91.5	68.2	65.7	76.8	62.2	63.7	64.2	63.7	65.2		



Number of 24HR Exceedences	1	Proposed Guideline
Number of Non-Zero Readings	720	
Maximum 1-HR Average	91.5 UG/M3	
Maximum 24-HR Average	59.8 UG/M3	
Monthly Calibration	0	Operational Time
Standard Deviation	16.2	Operational Uptime
		Monthly Average
		720 HRS
		100.0 %
		14.2 UG/M3

Berm PM₁₀ (µg/m³) – September 2023

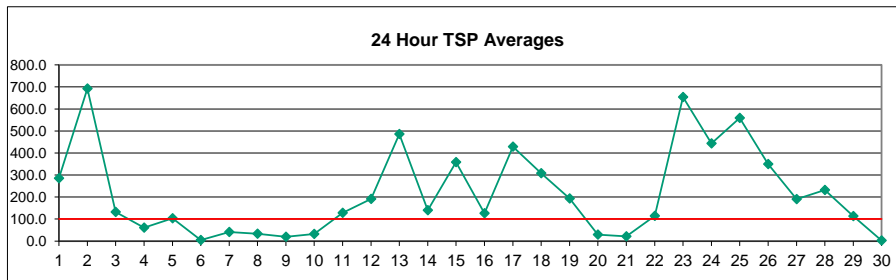
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	23.8	19.3	15.5	11.6	10.7	14.8	14.8	14.8	16.1	19.3	28.4	26.3	94.4	44.6	85.1	48.5	50.4	327.6	385.7	219.8	107.7	213.0	153.7	70.5	84.0	385.7
2	33.3	30.7	20.9	14.2	41.3	76.4	16.8	31.1	100.2	124.9	193.9	186.4	169.7	340.0	417.0	491.4	252.1	264.8	252.1	256.0	142.0	326.7	223.6	40.7	168.6	491.4
3	23.5	14.5	13.5	25.5	18.7	25.6	20.8	21.0	19.6	163.6	126.7	54.6	146.8	135.3	59.6	23.7	30.6	45.1	46.4	47.6	45.8	44.0	43.8	45.4	51.7	163.6
4	46.2	45.9	47.1	43.9	43.7	44.2	53.4	64.0	61.8	52.9	56.5	75.0	80.4	72.8	71.1	69.7	68.6	66.3	62.3	62.7	65.1	65.7	64.4	65.6	60.4	80.4
5	64.8	61.7	58.2	52.0	38.1	43.2	47.8	47.3	48.1	50.4	54.6	40.6	42.5	48.1	112.7	104.3	42.3	4.2	3.0	1.1	0.9	1.5	1.4	1.8	40.4	112.7
6	1.2	2.0	2.0	1.8	1.9	5.6	3.6	5.7	13.1	6.4	7.2	5.5	2.0	3.1	1.5	1.6	1.2	5.5	1.5	1.6	1.8	2.2	2.1	4.0	3.5	13.1
7	2.4	2.3	2.4	2.4	2.7	2.0	2.1	2.1	13.6	13.8	8.3	10.3	9.4	22.5	20.0	41.5	34.5	9.1	3.3	3.8	3.3	4.4	5.2	8.1	9.6	41.5
8	3.6	5.3	9.9	4.2	4.9	5.5	6.2	8.9	11.9	12.8	81.4	30.8	8.0	9.3	12.2	11.2	10.7	8.4	51.0	11.7	5.1	4.6	5.7	6.2	13.7	81.4
9	5.2	4.5	5.0	5.6	5.2	6.2	5.8	7.9	15.8	23.0	21.0	12.1	13.5	6.1	6.2	4.4	4.8	4.4	4.6	3.8	3.7	3.8	3.7	3.5	7.5	23.0
10	4.4	4.8	4.8	4.8	4.8	11.0	15.2	30.0	17.8	23.7	21.3	7.3	15.2	6.3	7.2	6.0	8.1	10.1	4.7	6.4	24.2	5.2	19.3	9.9	11.3	30.0
11	7.9	7.0	8.0	7.0	6.2	8.5	13.3	56.5	51.2	39.3	18.5	23.7	75.3	129.5	54.5	94.9	17.3	10.3	9.1	46.2	115.8	34.7	85.3	138.9	44.1	138.9
12	64.1	20.4	8.3	16.9	7.2	9.3	7.0	14.4	96.5	89.2	73.0	58.2	102.3	106.1	203.7	230.2	107.5	100.1	65.3	10.1	9.7	43.9	16.9	13.1	61.4	230.2
13	9.8	12.1	9.3	5.6	14.1	2.2	2.9	15.7	42.0	122.9	175.8	216.8	255.5	271.4	625.5	310.3	190.7	208.7	253.9	110.3	20.4	13.5	6.8	5.0	120.9	625.5
14	2.9	2.7	2.9	12.2	4.2	51.4	4.2	44.8	54.3	52.2	23.3	152.5	183.7	189.8	198.0	170.3	72.4	20.3	15.7	8.8	5.3	4.7	9.6	7.7	53.9	198.0
15	13.6	6.9	5.9	5.9	17.9	9.5	29.9	63.9	70.0	86.2	66.8	167.7	159.5	202.9	242.5	270.2	192.6	237.2	265.7	181.8	11.9	168.3	123.6	35.5	109.8	270.2
16	17.5	9.5	17.6	13.8	5.5	19.6	127.2	63.6	46.0	24.8	91.3	99.4	63.2	76.8	54.0	48.9	108.9	147.1	26.7	23.3	14.1	21.4	24.7	17.6	48.4	147.1
17	18.8	13.4	10.1	13.1	36.1	156.1	77.4	10.6	26.3	29.6	31.4	194.7	297.0	220.6	314.0	212.2	143.2	86.5	129.6	141.9	136.2	229.5	208.4	50.2	116.1	314.0
18	64.5	94.9	214.1	238.0	106.0	65.3	80.0	121.0	102.0	169.2	241.3	97.3	37.9	34.4	27.3	27.7	25.9	30.0	16.3	21.5	3.6	2.9	1.5	1.6	76.0	241.3
19	7.9	2.3	1.8	1.9	2.0	2.8	16.1	58.3	118.3	140.9	99.3	88.7	153.5	132.2	155.4	127.3	24.4	43.6	63.9	81.6	24.6	12.9	5.0	2.6	57.0	155.4
20	13.8	4.9	5.7	12.4	2.0	2.1	2.1	3.0	37.1	106.1	19.6	2.2	8.5	2.5	1.5	1.0	1.3	5.8	4.3	4.7	3.7	3.1	3.4	4.0	10.6	106.1
21	3.2	3.0	4.3	4.7	4.3	7.9	5.5	7.5	13.2	27.6	18.0	10.3	27.5	21.9	20.1	10.3	11.8	4.1	3.0	3.1	3.2	9.9	6.9	18.2	10.4	27.6
22	20.3	13.5	8.3	11.7	17.9	23.3	23.6	52.9	78.5	200.2	99.9	39.9	86.9	14.6	12.9	5.4	8.0	5.9	11.4	14.7	10.3	5.2	4.5	6.4	32.4	200.2
23	10.0	15.5	14.5	11.5	10.8	6.0	9.9	18.5	19.2	34.7	233.8	445.2	409.9	415.1	345.7	375.3	168.3	220.6	93.2	60.9	139.9	306.6	251.1	71.5	153.7	445.2
24	73.0	17.4	29.9	24.8	41.5	202.4	214.3	12.2	92.9	250.1	373.8	161.7	159.1	143.8	201.4	82.3	104.0	137.4	132.8	97.4	33.8	25.8	9.9	4.6	109.4	373.8
25	3.6	3.1	2.7	2.9	3.5	4.5	26.4	40.8	54.2	28.6	28.5	178.2	268.1	94.0	164.6	665.6	475.3	338.5	236.8	302.1	131.7	251.7	254.9	53.6	150.6	665.6
26	49.1	67.4	52.4	73.2	69.9	66.5	102.8	139.6	121.2	196.8	159.4	145.3	259.1	327.0	47.3	18.8	23.8	18.2	2.0	3.0	2.1	19.6	21.4	4.7	82.9	327.0
27	1.3	0.3	0.8	0.5	2.0	2.5	1.4	9.9	66.6	85.9	78.7	69.9	161.6	143.4	139.2	159.1	92.5	79.1	26.4	44.3	20.7	2.2	2.8	2.8	49.7	161.6
28	1.7	2.5	1.7	1.2	2.1	1.3	1.7	17.4	7.7	90.0	131.9	125.9	256.6	147.4	167.7	122.2	57.6	100.4	112.4	49.5	1.3	0.9	1.2	0.4	58.4	256.6
29	0.5	0.7	1.6	3.8	4.1	4.0	2.4	10.7	20.4	23.4	72.4	156.2	185.3	198.6	105.0	23.2	3.0	1.3	0.8	1.2	0.7	1.0	0.6	0.8	34.2	198.6
30	0.9	0.5	0.7	0.7	0.5	1.0	1.1	1.5	2.2	2.9	2.5	2.4	1.5	3.1	3.6	3.2	3.4	3.8	3.9	3.3	1.6	1.6	2.9	3.7	2.2	3.9
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	19.8	16.3	19.3	20.9	17.7	29.4	31.2	33.2	47.9	76.4	87.9	96.2	124.5	118.8	129.2	125.4	77.8	84.8	76.3	60.8	36.3	61.0	52.1	23.3		
MAX	73.0	94.9	214.1	238.0	106.0	202.4	214.3	139.6	121.2	250.1	373.8	445.2	409.9	415.1	625.5	665.6	475.3	338.5	385.7	302.1	142.0	326.7	254.9	138.9		



Number of Non-Zero Readings	720	Operational Time	720 HRS
Maximum 1-HR Average	665.6 UG/M3	Operational Uptime	100.0 %
Maximum 24-HR Average	168.6 UG/M3	Monthly Average	61.1 UG/M3
Monthly Calibration	0		
Standard Deviation	88.96		

Berm TSP ($\mu\text{g}/\text{m}^3$) – September 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	23.9	19.4	15.5	11.6	10.7	14.9	14.8	15.0	17.1	33.3	248.1	118.8	218.9	140.6	248.7	126.6	163.7	1144.8	1055.1	886.7	453.2	892.5	726.3	253.5	285.6	1144.8
2	156.0	133.2	115.1	65.2	205.9	367.6	88.0	146.2	459.6	449.4	785.1	578.2	549.1	1256.3	1958.1	2362.2	1154.8	1105.5	965.3	965.2	460.9	1329.8	887.0	87.0	692.9	2362.2
3	63.2	19.0	15.4	59.2	32.3	60.7	39.2	42.9	42.7	606.5	479.3	159.5	445.8	453.1	170.6	31.0	44.3	78.4	62.7	63.7	51.5	53.9	44.8	46.4	131.9	606.5
4	47.1	46.3	47.9	43.9	43.7	44.3	53.5	64.1	61.8	52.9	56.5	75.1	80.4	72.9	71.2	69.7	68.6	66.4	62.3	62.7	65.3	65.9	64.7	65.7	60.5	80.4
5	65.0	61.9	58.2	52.0	38.1	44.6	48.7	48.6	50.1	56.7	64.2	52.7	133.4	279.4	621.3	533.3	255.9	5.9	4.2	1.2	1.0	1.6	1.4	1.9	103.4	621.3
6	1.2	2.1	2.0	1.8	2.0	6.7	4.2	7.4	19.1	8.6	10.1	7.8	2.1	3.5	1.6	1.7	1.3	12.4	1.6	1.6	1.9	2.2	2.1	4.6	4.6	19.1
7	2.4	2.3	2.4	2.5	2.9	2.1	2.1	2.2	56.3	81.6	119.7	41.9	34.3	63.8	63.4	142.7	153.1	73.9	10.8	4.5	3.4	5.8	18.6	89.4	40.9	153.1
8	4.7	5.3	12.4	4.3	5.7	7.0	8.4	12.7	19.4	20.8	272.9	95.0	16.9	70.9	25.3	18.5	19.6	12.9	119.0	19.3	7.4	4.9	9.9	8.6	33.4	272.9
9	7.6	4.9	5.4	5.9	5.5	7.5	6.7	18.8	88.3	103.9	60.3	22.7	25.1	10.0	17.0	6.2	7.8	10.2	10.3	7.3	12.2	5.8	4.5	4.2	19.1	103.9
10	4.9	7.0	5.5	5.0	5.2	17.5	60.8	112.1	75.1	106.9	71.0	13.2	34.2	10.0	16.6	15.2	19.7	33.3	7.0	14.4	60.1	14.0	57.0	17.7	32.6	112.1
11	19.4	15.0	21.5	20.9	12.8	16.7	38.1	198.1	171.2	129.3	52.6	70.9	190.9	358.7	145.1	219.5	36.9	19.2	18.5	193.1	421.4	57.9	217.5	427.1	128.0	427.1
12	252.2	43.2	9.8	27.4	9.7	17.3	10.2	33.9	256.8	230.5	210.5	161.8	254.2	312.5	696.6	847.5	330.3	219.4	300.3	28.1	21.0	195.2	79.4	37.7	191.1	847.5
13	28.9	38.0	26.5	19.4	22.9	2.3	3.3	52.7	165.4	432.5	678.0	743.4	899.8	1161.3	2873.8	1332.3	866.9	763.9	1013.0	439.1	52.9	30.1	12.0	5.7	486.0	2873.8
14	3.2	2.7	3.8	21.4	7.0	141.8	5.5	138.1	164.2	161.9	79.2	326.6	425.7	483.7	555.1	458.4	205.9	49.7	38.7	18.7	8.1	7.6	42.3	18.0	140.3	555.1
15	39.7	9.9	8.5	11.3	61.1	17.6	110.5	217.0	236.1	274.3	279.6	568.0	378.8	609.0	709.1	853.8	658.0	851.7	852.2	552.5	21.4	693.7	471.8	114.3	358.3	853.8
16	66.6	19.5	43.8	25.9	7.1	54.3	540.3	256.2	132.5	61.2	318.6	256.4	110.8	198.5	121.1	103.2	224.0	265.2	42.0	51.5	15.8	37.7	51.3	27.9	126.3	540.3
17	37.6	27.3	16.2	20.1	97.3	548.0	222.7	19.7	66.1	84.5	72.2	569.3	1176.0	881.1	1264.0	881.8	658.0	317.7	451.7	471.7	533.2	859.3	813.8	196.4	428.6	1264.0
18	270.4	432.7	1008.6	1281.2	517.2	292.0	301.1	508.8	440.6	547.7	876.6	373.7	109.3	81.9	65.1	58.8	44.9	73.7	38.1	44.7	7.0	6.1	3.0	1.7	307.7	1281.2
19	19.9	3.2	2.1	2.0	2.5	7.3	57.1	167.8	395.0	561.9	371.6	316.4	429.0	410.0	548.8	460.1	90.0	176.8	264.0	274.1	53.8	24.6	8.5	2.8	193.7	561.9
20	18.4	5.6	12.1	54.0	2.0	2.1	2.1	6.0	117.4	361.6	47.5	2.4	16.6	10.2	4.6	1.2	1.4	14.0	4.7	4.9	4.0	3.2	3.5	4.1	29.3	361.6
21	3.2	3.0	4.5	4.9	4.4	10.2	5.9	8.9	18.4	57.4	55.9	21.7	70.3	56.8	41.5	16.1	26.0	7.6	5.3	7.5	4.9	28.4	11.8	37.5	21.3	70.3
22	54.7	25.4	24.0	26.7	55.7	125.4	41.6	219.6	332.3	865.6	391.8	130.5	213.4	50.1	33.5	10.5	15.8	8.1	38.5	37.2	24.7	5.8	5.2	8.5	114.3	865.6
23	13.0	24.8	27.5	19.4	13.8	7.3	14.8	43.9	62.2	114.5	997.0	2062.3	1840.6	1765.7	1315.4	1612.5	739.7	1158.6	455.6	323.9	596.8	1297.1	992.3	204.9	654.3	2062.3
24	216.6	42.9	128.8	96.0	154.2	897.1	795.2	24.7	345.4	1001.2	1781.6	783.6	652.4	470.6	518.8	229.4	377.2	595.3	703.2	480.0	177.8	135.8	36.0	7.7	443.8	1781.6
25	5.2	7.9	3.0	2.9	5.4	8.9	90.9	108.2	159.0	88.7	85.2	724.9	1116.4	327.2	590.1	1783.0	1943.5	1406.1	1040.8	1100.3	617.7	979.2	1043.8	176.3	558.9	1943.5
26	183.8	283.2	237.1	290.2	281.4	225.8	406.6	654.1	607.2	892.2	625.7	567.4	1063.2	1318.3	229.2	102.2	89.4	61.4	2.6	4.0	2.6	140.9	102.2	7.2	349.1	1318.3
27	1.6	0.3	1.1	0.7	2.8	4.8	2.1	19.1	283.0	395.0	338.5	295.9	660.0	515.4	456.7	606.1	306.9	296.7	106.1	177.8	72.6	3.7	6.3	18.1	190.5	660.0
28	3.0	4.7	7.1	3.3	10.1	1.6	2.3	64.8	24.5	382.9	575.7	482.8	1083.7	554.2	551.7	447.9	214.5	407.8	465.5	261.6	1.7	1.1	1.6	0.5	231.4	1083.7
29	0.6	0.7	2.3	5.7	6.1	6.3	3.5	18.5	36.0	41.4	304.5	575.1	667.7	631.8	320.2	79.5	7.9	2.1	1.1	1.2	0.7	1.0	0.6	0.8	113.1	667.7
30	0.9	0.5	0.7	0.7	0.5	1.0	1.1	1.5	2.2	2.9	2.5	2.4	1.5	3.1	3.6	3.2	3.4	3.8	3.9	3.3	1.6	1.6	2.9	3.7	2.2	3.9
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	53.8	43.1	62.3	72.9	54.2	98.7	99.4	107.7	163.5	273.6	343.7	340.0	430.0	418.7	474.6	447.1	291.0	308.1	271.5	216.7	125.2	229.6	190.7	62.7		
MAX	270.4	432.7	1008.6	1281.2	517.2	897.1	795.2	654.1	607.2	1001.2	1781.6	2062.3	1840.6	1765.7	2873.8	2362.2	1943.5	1406.1	1055.1	1100.3	617.7	1329.8	1043.8	427.1		



Number of 24HR Exceedences	21	Proposed Guideline
Number of Non-Zero Readings	720	
Maximum 1-HR Average	2873.8 UG/M3	
Maximum 24-HR Average	692.9 UG/M3	
IZS Calibration Time		Operational Time 720 HRS
Monthly Calibration	0	Operational Uptime 100.0 %
Standard Deviation	362.3	Monthly Average 215.8 UG/M3