

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT

DECEMBER 2022

JANUARY 16, 2023





AMBIENT AIR QUALITY MONTHLY REPORT

DECEMBER 2022

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-05
DATE: JANUARY 16, 2023

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January 16, 2023

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

Attention: Nikolaos Veriotes P. Eng.

Dear Mr. Veriotes,

Subject: Ambient Air Quality Monthly Report – December 2022

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 December 2022.

Lagoon	Data Completeness (%)	1-Hour Average	24-hour Average
		Exceedances of AAAQO or AAAQG	Exceedances of AAAQO
TSP	99.9%	-	0
PM _{2.5}	99.7%	0	0
PM ₁₀	99.5%	-	-
NO	100%	-	-
NO ₂	100%	0	-
NO _x	100%	-	-
SO ₂	100%	0	0
Temperature	100%	-	-
Wind Speed / Direction	100%	-	-
Pressure	100%	-	-
Relative Humidity	100%	-	-
Precipitation	100%	-	-

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The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAQOs) or Guidelines (AAAQG) at the Windridge Station for December 2022.

Windridge	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of AAAQG	Exceedances of PM _{2.5} AAAQO	Exceedances of TSP AAAQO
TSP	100%	-	-	3
PM_{2.5}	100%	0	0	-
PM₁₀	100%	-	-	-

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 December 2022.

GRIMM Stations	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of PM _{2.5} Guidelines	Exceedances of PM _{2.5} Guidelines	Exceedances of TSP Guidelines
West	100%	0	0	0
Berm	100%	0	0	10
Entrance	73%	1	0	8

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



January 16, 2023

Dylan Weyell, B.A.
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Date

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



January 16, 2023

Tyler Abel, M.Sc.
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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 December 1, 2022 and December 31, 2022.

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

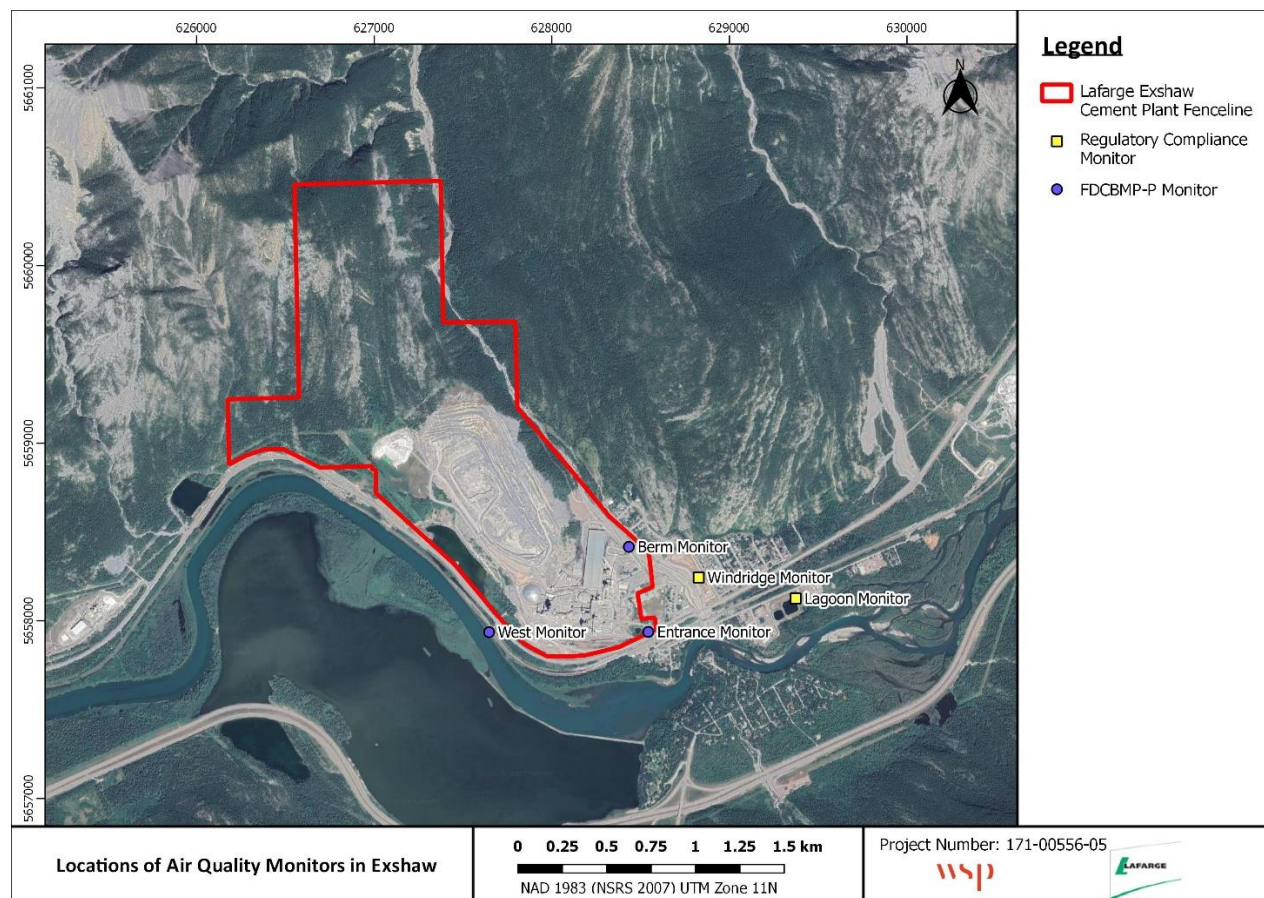


Figure 1-1 Locations of Air Quality Monitors in Exshaw

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 and is included in this report. The flood mitigation work has left an exposed creek bed area (see Figure below) that is a potential source of fugitive dust between Lafarge's eastern fenceline and the Windridge station.



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

2 DECEMBER 2022 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
NO ₂ (ppb)	100.0	45.0	0	28.1	-
SO ₂ (ppb)	100.0	9.0	0	2.6	0
PM _{2.5} (µg/m ³)	99.7	30.9	0 ¹	17.5	0
PM ₁₀ (µg/m ³)	99.5	188.3	-	49.6	-
TSP (µg/m ³)	99.9	294.2	-	90.2	0
Temperature (°C)	100.0	10.3	-	5.4	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	48.8/W	-	34.2/WSW	-
Precipitation (mm)	100.0	0.4 ²	-	1.2 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)

³ Monthly Total Accumulation of Precipitation (mm)

Data Quality Notes:

- There were zero days exceeding the 24-hour PM_{2.5} AAAQO.
- There were zero exceedances of the 1-hour PM_{2.5} AAAQG.
- There were zero days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Lagoon station the NO₂, SO₂, and meteorological analyzers recorded 100% uptime for the month of December.
- The TSP analyzer recorded 99.9% uptime for the month of December due to one hour of equipment malfunction occurring on December 10th at 2:00.
- The PM_{2.5} analyzer recorded 99.7% uptime for the month of December due to two hours of equipment malfunction occurring on December 5th at 2:00 & December 10th at 2:00.
- The PM₁₀ analyzer recorded 99.5% uptime for the month of December due to four hours of equipment malfunction occurring on December 6th at 14:00, December 14th at 14:00, December 19th at 16:00 & 24:00.

2.2 WINDRIDGE STATION

Table 2-2 Windridge station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQG	Maximum Concentration	Exceedances of AAAQO
PM _{2.5} (µg/m ³)	100.0	29.0	0*	13.8	0
PM ₁₀ (µg/m ³)	100.0	485.0	-	147.1	-
TSP (µg/m ³)	100.0	935.0	-	191.4	3

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

Data Quality Notes:

- There were zero days exceeding the 24-hour PM_{2.5} AAAQO.
- There were zero hours exceeding the 1-hour PM_{2.5} AAAQG.
- There were three days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

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

2.3 WEST GRIMM

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

Table 2-3 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	100.0	37.0	0*	19.9	0
PM ₁₀ (µg/m ³)	100.0	47.8	-	27.0	-
TSP (µg/m ³)	100.0	55.2	-	22.0	0

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

Data Quality Notes:

- There were zero exceedances of the 24-hour PM_{2.5} Guidelines.
- There were zero exceedances of the 1-hour PM_{2.5} Guidelines.
- There were zero exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The analyzer had 100% uptime for the month of December.

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	60.8	0*	18.3	0
PM ₁₀ (µg/m ³)	100.0	516.9	-	154.2	-
TSP (µg/m ³)	100.0	3593.6	-	712.3	10

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

Data Quality Notes:

- There were zero exceedances of the 24-hour PM_{2.5} Guidelines.
- There were zero exceedances of the 1-hour PM_{2.5} Guidelines.

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

Calibration/Maintenance Notes:

- The analyzer had 100% uptime for the month of December.

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.

Table 2-5 **Entrance 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)	73.0	87.5	1*	26.8	0
PM ₁₀ (µg/m ³)	73.0	468.8	-	118.3	-
TSP (µg/m ³)	73.0	3322.5	-	710.8	8

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

Data Quality Notes:

- There were zero exceedances of the 24-hour PM_{2.5} Guidelines.
- There was one exceedance of the 1-hour PM_{2.5} Guidelines.
- There were eight exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The analyzer had 73% uptime for the month of December due to 201 hours of power failure occurring from December 23rd at 16:00 to December 31st at 24:00.

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 (Figure 3-9) and tables and graphs illustrating the monitoring results for December 2022.

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 December 9 th . The monitor had 99.7% uptime for the month of December due to two hours of equipment malfunction occurring on December 5 th at 2:00 & December 10 th at 2:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on December 9 th . The monitor had 99.5% uptime for the month of December due to four hours of equipment malfunction occurring on December 6 th at 14:00, December 14 th at 14:00, December 19 th at 16:00 & 24:00.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on December 9 th . The monitor had 99.9% uptime for the month of December due to one hour of equipment malfunction occurring on December 10 th at 2:00.
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated on December 8 th . The monitor had 100% uptime for the month of December.
Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on December 8 th . The monitor had 100% uptime for the month of December.
Precipitation	MetOne 130 Rain/Snow Gauge	The monitor had 100% uptime for the month of December.

Wind Speed	MetOne Wind Sensor	The monitor had 100% uptime for the month of December.
Wind Direction		
Ambient Temperature	MetOne Ambient Temperature Sensor	The monitor had 100% uptime for the month of December.

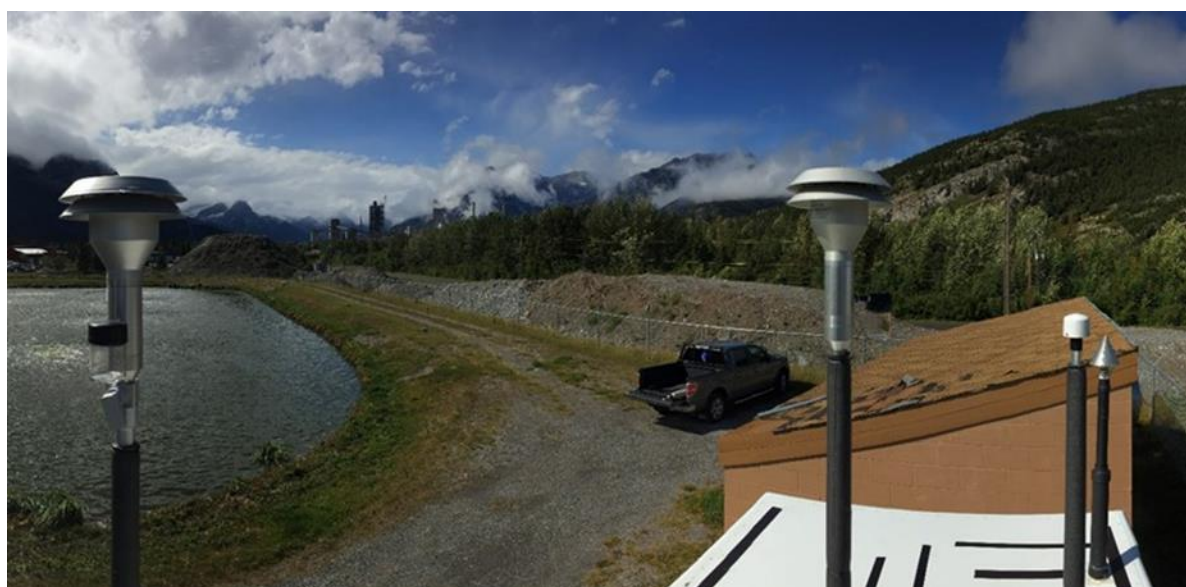


Figure 3-1 Inlets on the top of WSP's Lagoon monitor

3.2 MONITORING RESULTS AND TRENDS

Table 3-2 summarizes the hourly and daily concentrations recorded in December 2022. 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 December 2022 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 were zero days exceeding the 24-hour TSP (100 µg/m³) AAAQO. There were zero exceedances of the 24-hour PM_{2.5} (29 µg/m³) AAAQO. Further, there were zero exceedances of the 1-hour PM_{2.5} AAQ (80 µg/m³).

Historically in December, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances are zero.

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 December 2022 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/h r)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable	Day	
NO ₂ (ppb)	159	-	Lagoon	0	-	1.6	11.4	45.0	21	17	1.4	323.1	28.1	21	100.0
SO ₂ (ppb)	172	48	Lagoon	0	0	0.0	0.9	9.0	4	4	35.6	280.5	2.6	1	100.0
PM _{2.5} (µg/m ³)	80	29	Lagoon	0	0	0.0	5.3	30.9	10	1	5.6	126.6	17.5	12	99.7
PM ₁₀ (µg/m ³)	-	-	Lagoon	-	-	0.0	21.7	188.3	23	15	48.8	256.6	49.6	3	99.5
TSP (µg/m ³)	-	100	Lagoon	-	0	0.0	32.4	294.2	23	16	43.1	262.6	90.2	23	99.9
Temperature (°C)	-	-	Lagoon	-	-	-34.0	-10.6	10.3	26	14	23.0	269.5	5.4	26	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	1.3	17.4	48.8/W	23	15	48.8	256.6	34.2/WSW	3	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.0	0.4	26	16	9.7	233.9	1.2	-	100.0

¹ Maximum Daily Total Accumulation of Precipitation (mm)

² Monthly Total Accumulation of Precipitation (mm)

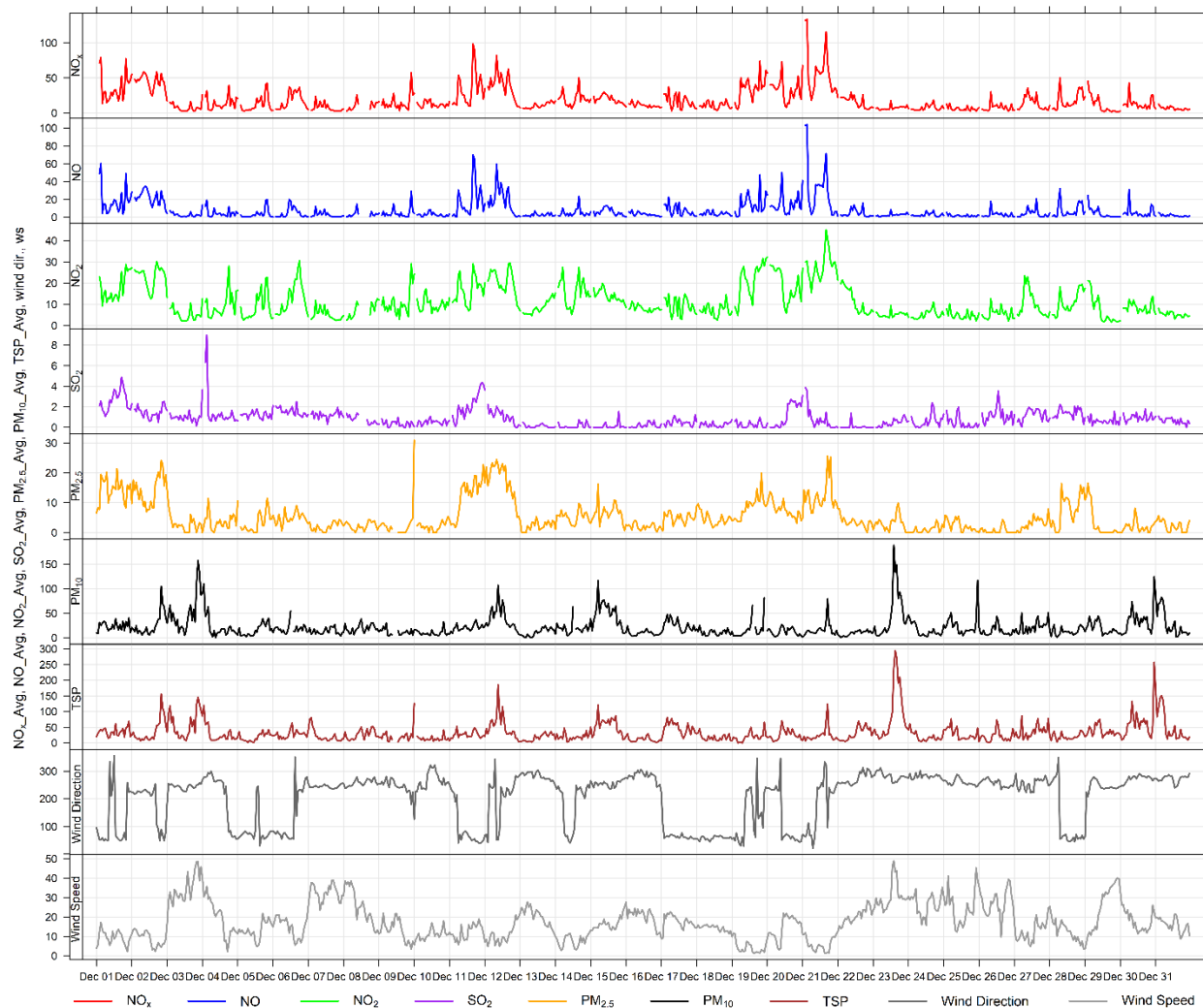


Figure 3-2 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

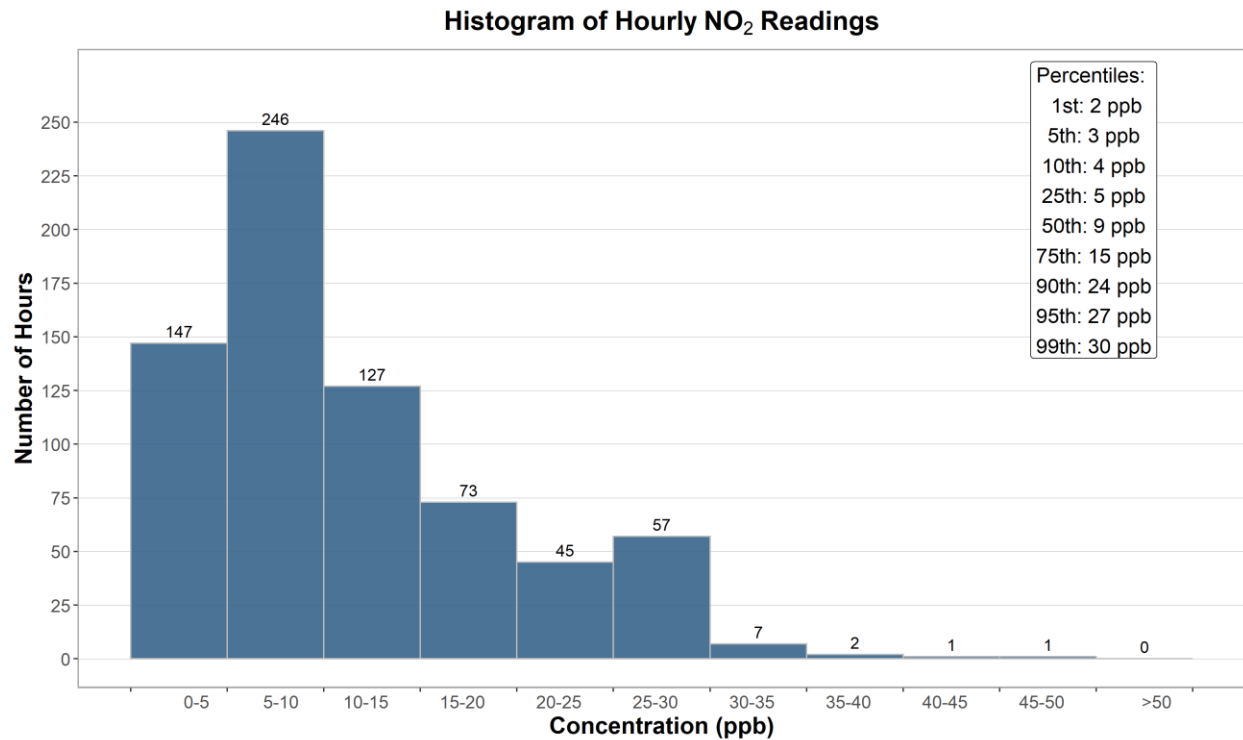


Figure 3-3 Histogram of hourly NO₂ concentrations at the Lagoon station

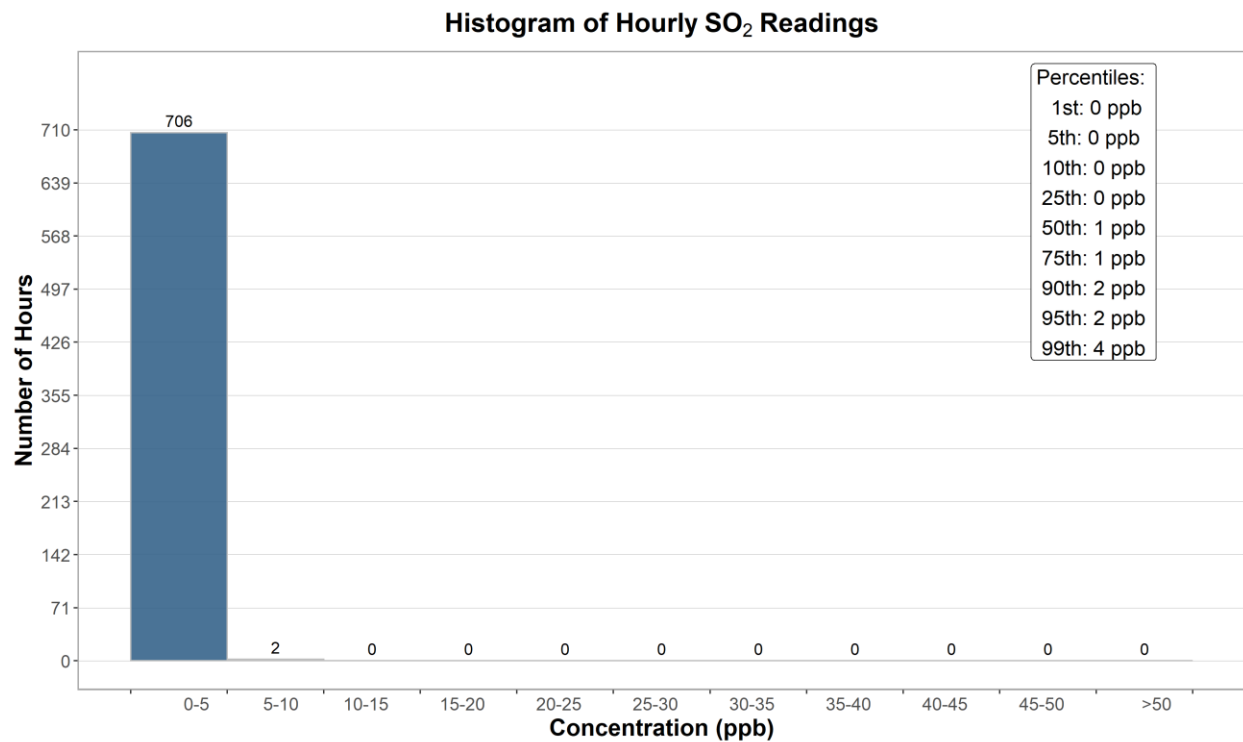


Figure 3-4 Histogram of hourly SO₂ concentrations at the Lagoon station

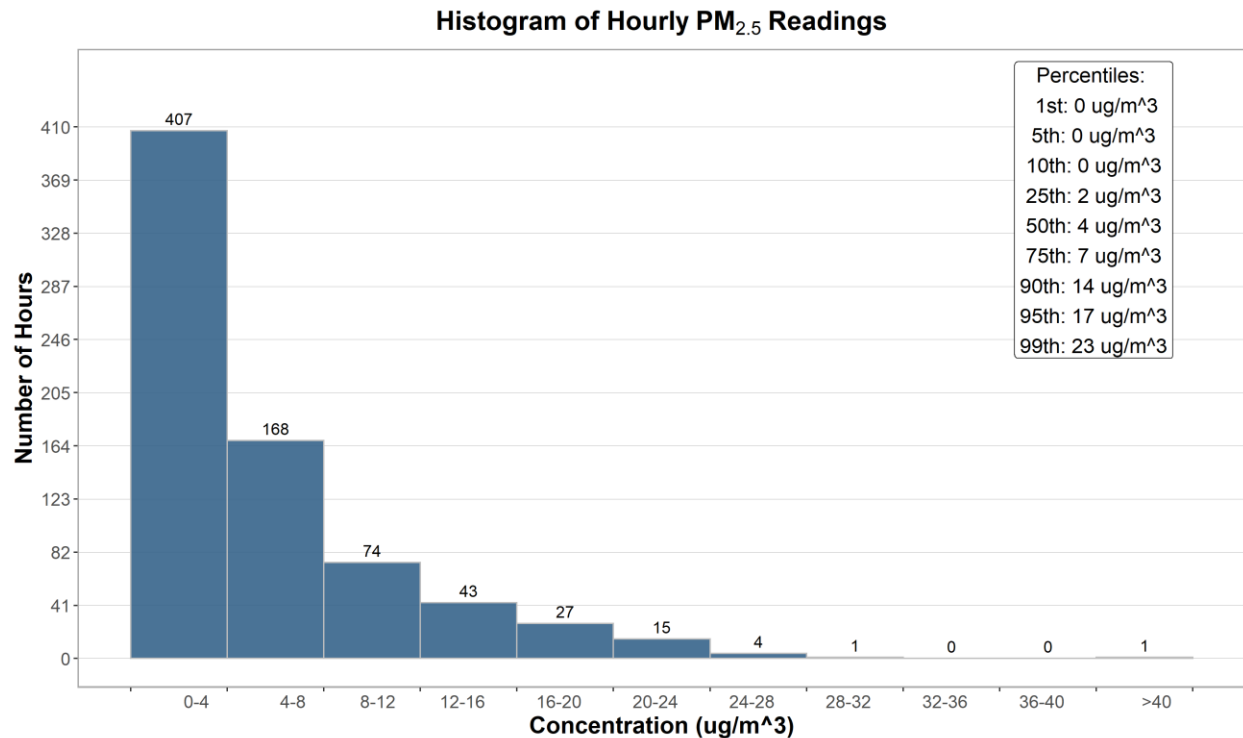


Figure 3-5 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

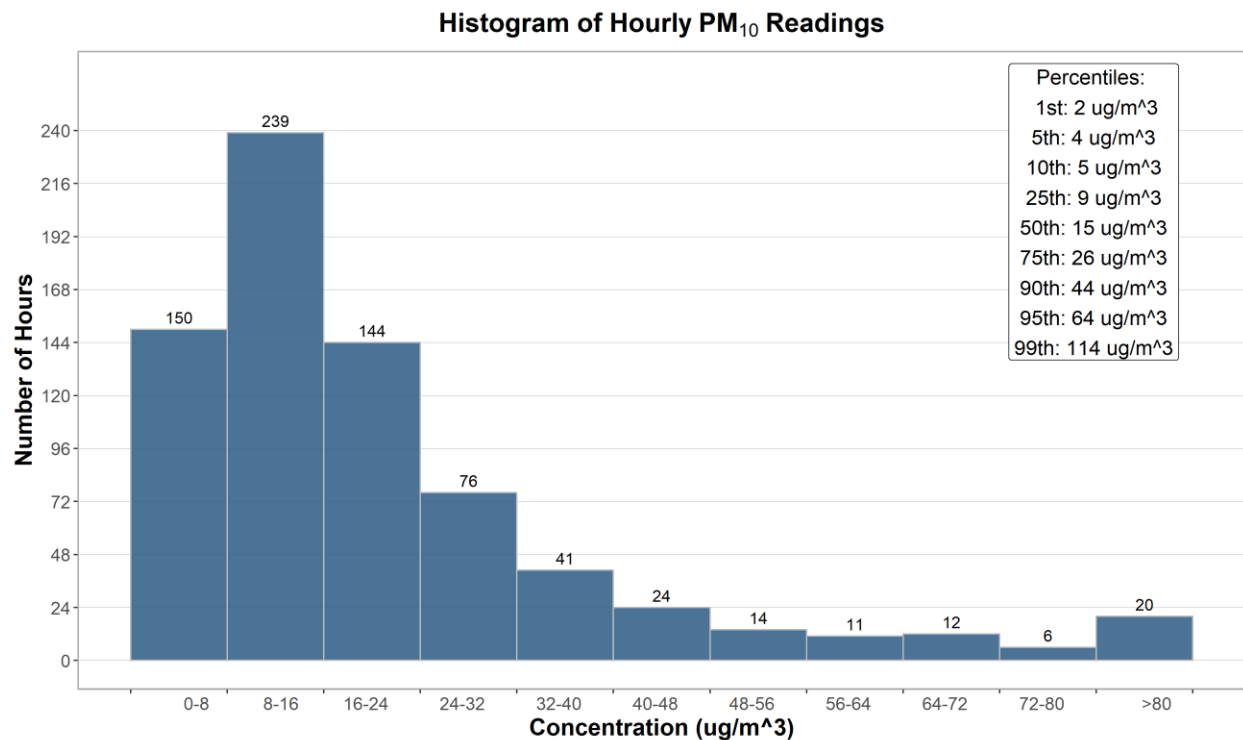


Figure 3-6 Histogram of hourly PM₁₀ concentrations at the Lagoon station

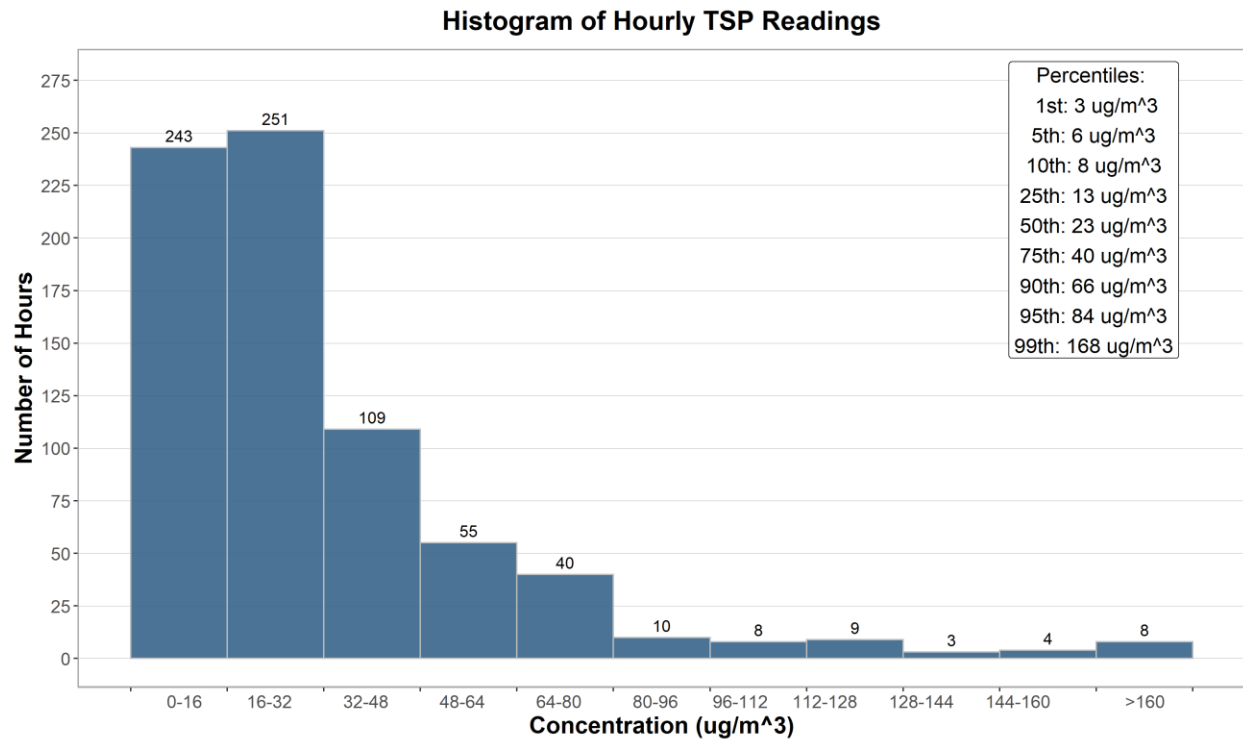


Figure 3-7 **Histogram of hourly TSP concentrations at the Lagoon station**

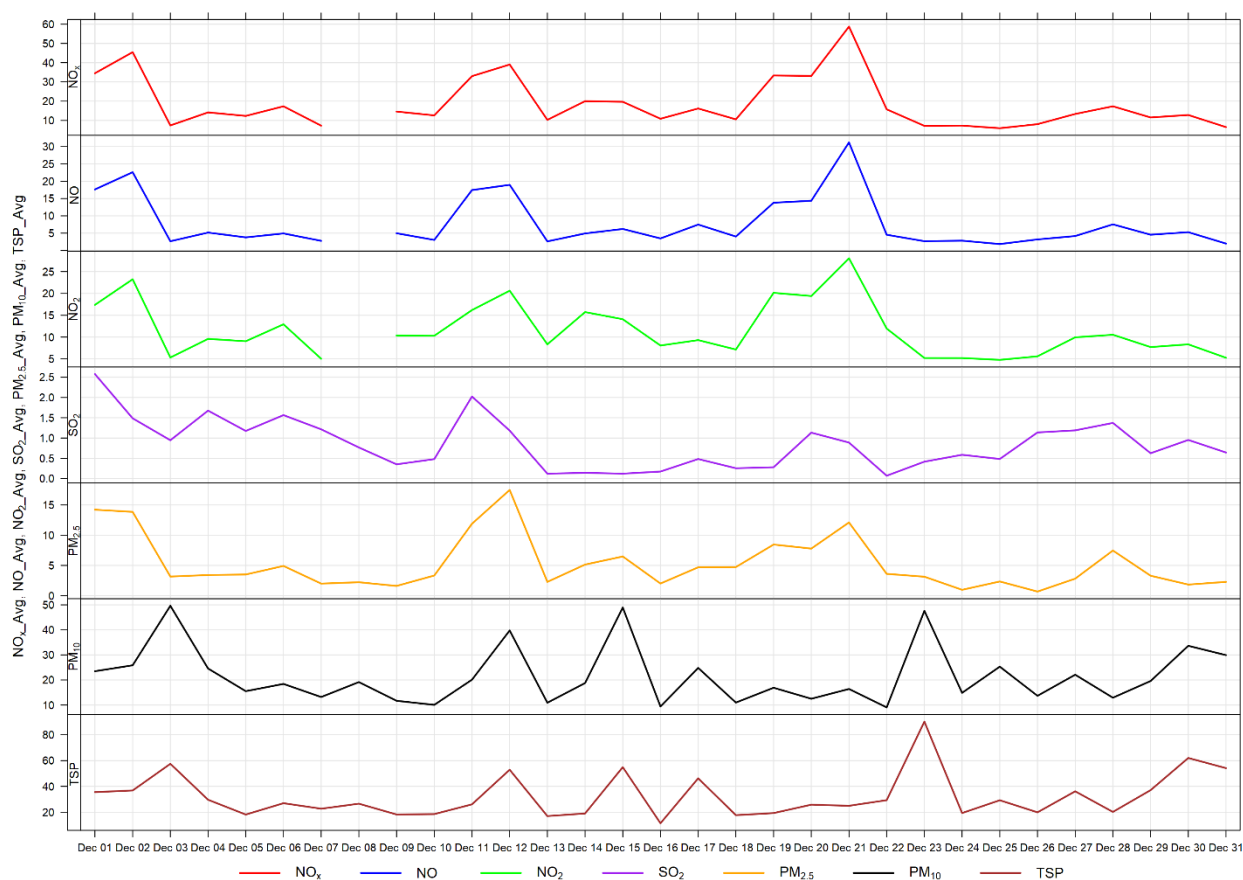


Figure 3-8 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

The following wind rose (Figure 3-9) shows the wind rose for the month of December. The wind roses shows that the winds predominately came from the west and west-southwest, with lighter winds prevailing from the east-northeast.

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. This diurnal pattern is not as prevalent this month. 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.

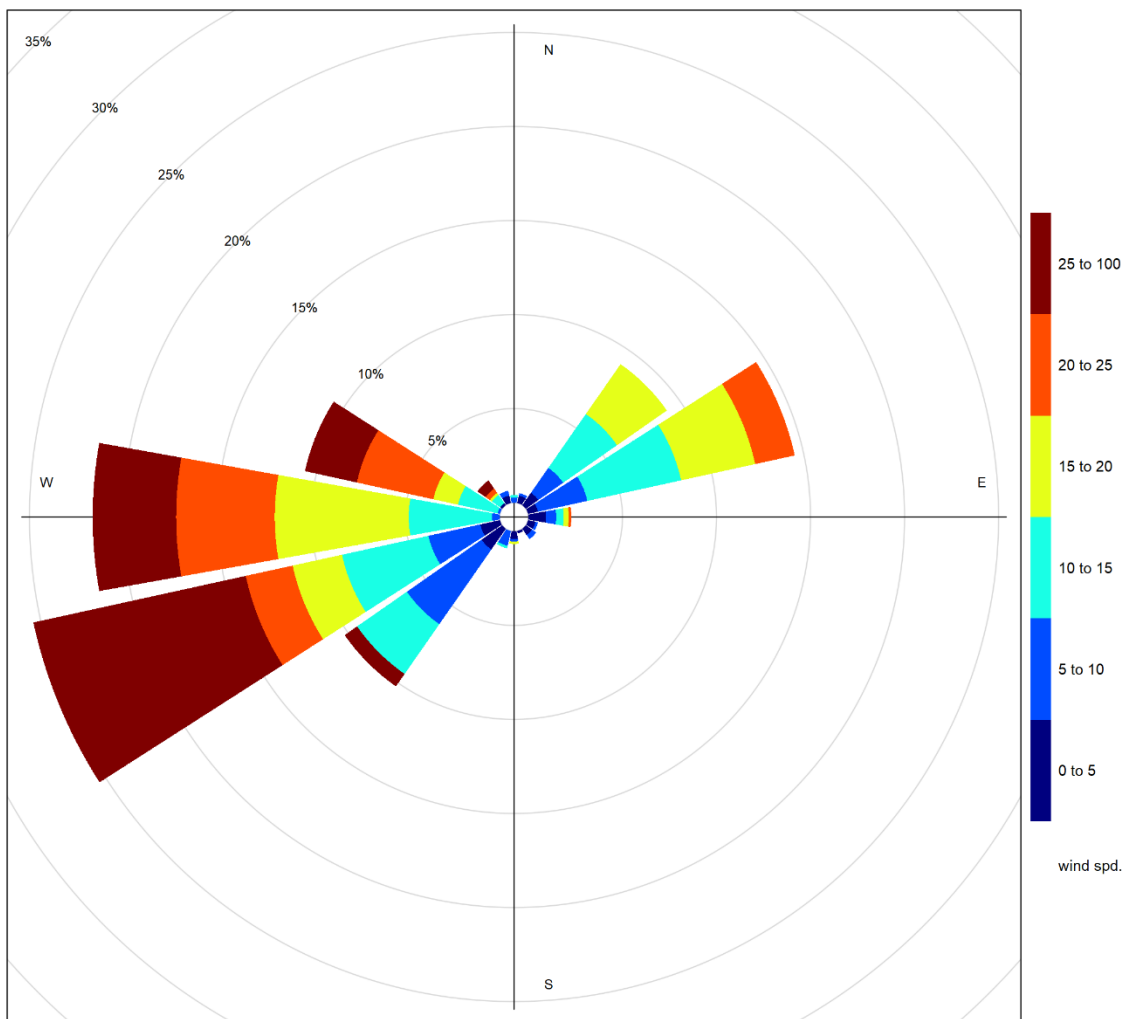


Figure 3-9 Wind rose for December 2022 at the Lagoon Station

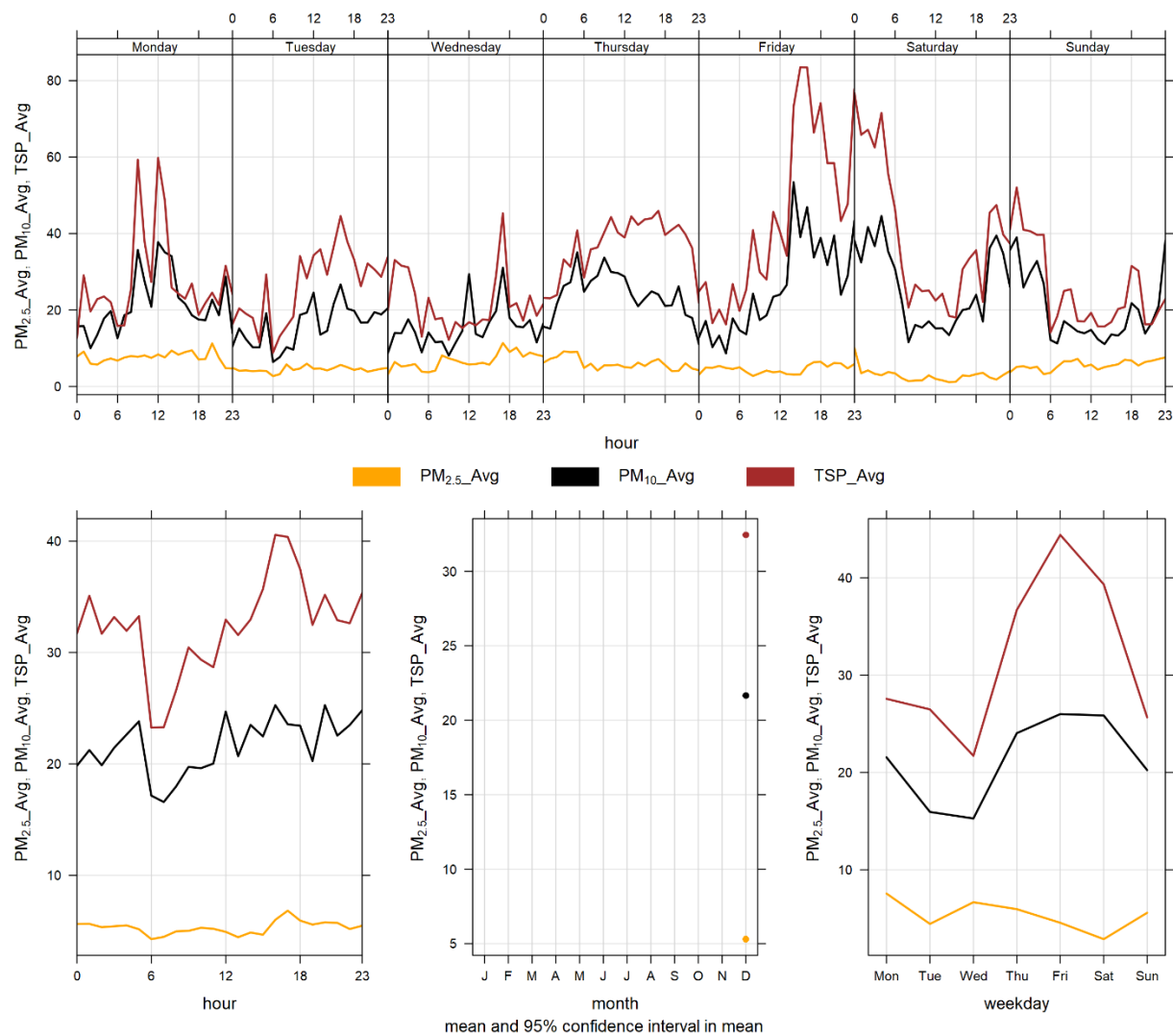


Figure 3-10 Lagoon monitor particulate matter time variation

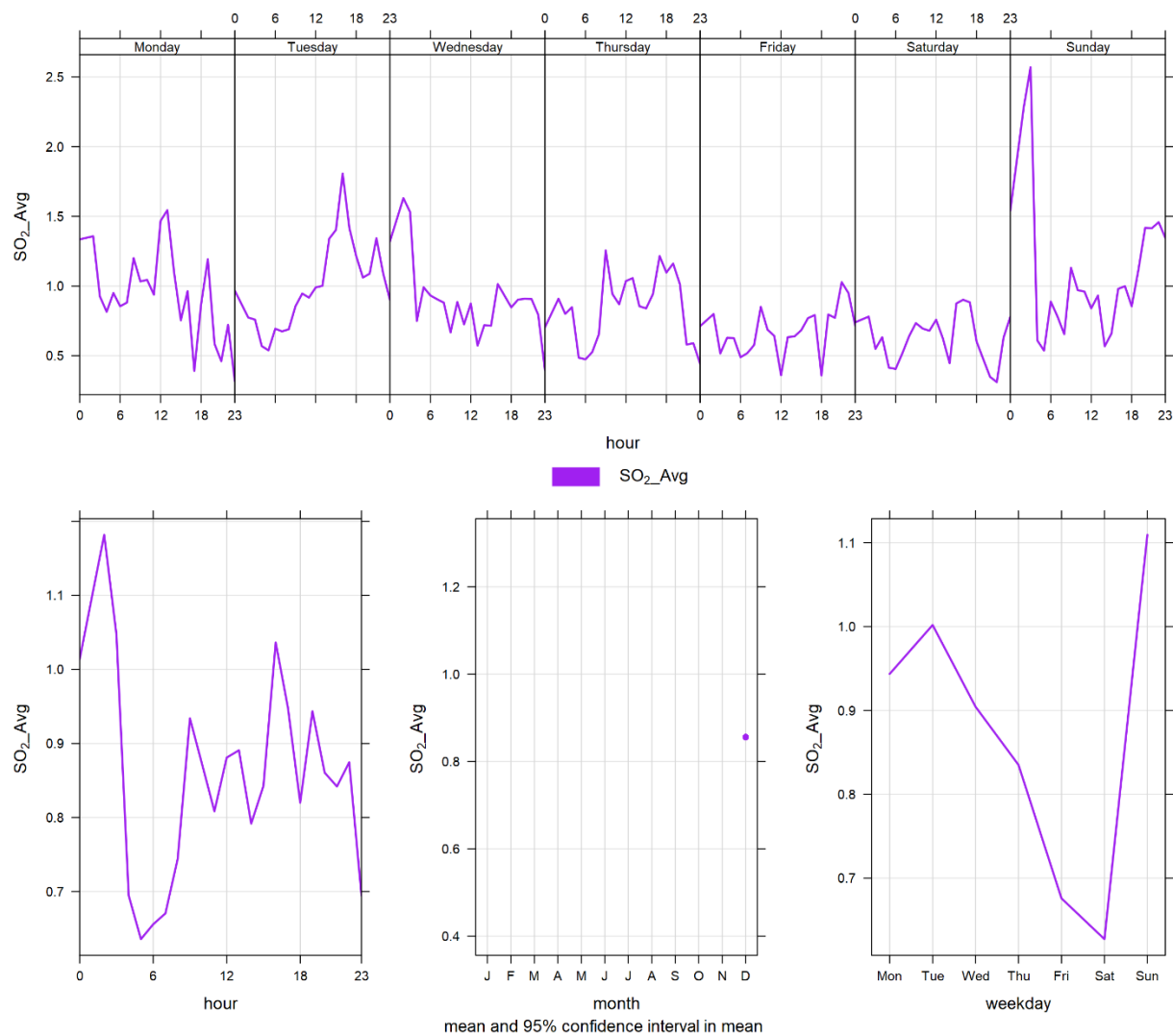


Figure 3-11 Lagoon monitor SO_2 time variation

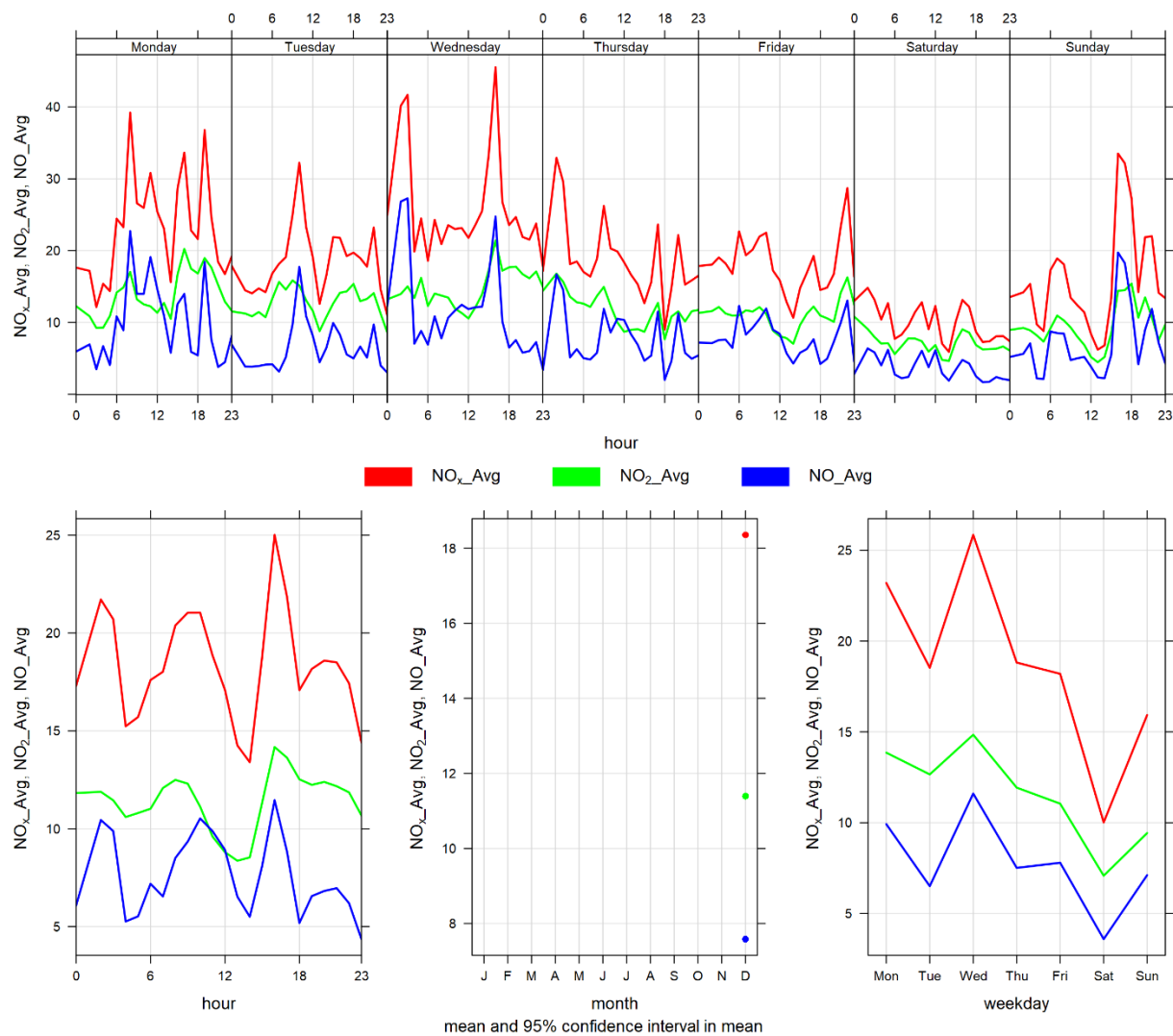


Figure 3-12 Lagoon monitor NO_x time variation

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 December 2022.

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 December 9 th . The monitor recorded 100% uptime during the month of December.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on December 9 th . The monitor recorded 100% uptime during the month of December.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on December 9 th . The monitor recorded 100% uptime during the month of December.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in December 2022, and Table 4-3 summarizes the recorded exceedances. Figure 4-1 illustrates the time series for hourly PM, Figure 4-2 to Figure 4-4 illustrates the histograms for hourly PM, Figure 4-5 illustrates the time series for daily PM, Figure 4-6 displays the wind rose for the 24-hour TSP, and Figure 4-7 illustrates the time series for hourly PM over different time periods.

There were zero exceedances of the 24-hour PM_{2.5} AAAQO, zero exceedances of the 1-hour PM_{2.5} AAQ, and 3 exceedances of the 24-hour TSP AAAQO.

Historically in December, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances is 9 and 0, respectively. The maximum number of 24-hour TSP AAAQO exceedances recorded in December was 16 days in 2018.

Due to flood mitigation construction at Exshaw creek 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 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 December 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 December 2022 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/m³)	80	29	Windridge	0	0	0.0	3.8	29.0	18	17	12.2	66.8	13.8	12	100.0
PM₁₀ (µg/m³)	-	-	Windridge	-	-	0.0	35.3	485.0	23	15	48.8	256.6	147.1	23	100.0
TSP (µg/m³)	-	100	Windridge	-	3	0.0	51.5	935.0	23	15	48.8	256.6	191.4	23	100.0

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						
2022-12-03	188.5	-	243.9	34.2	50.5	High wind event
2022-12-23	191.4	-	279.6	30.4	63.4	High wind event
2022-12-29	162.2	-	243.1	24.7	56.6	High wind event
Total # of Exceedances	3	0				
Maximum # of Exceedances (December)	16 (2018)	0 (2017, 2018, 2020, 2021)				
Average # of Exceedances (December)	9	0				
Minimum # of Exceedances (December)	6 (2020)	0 (2017, 2018, 2020, 2021)				

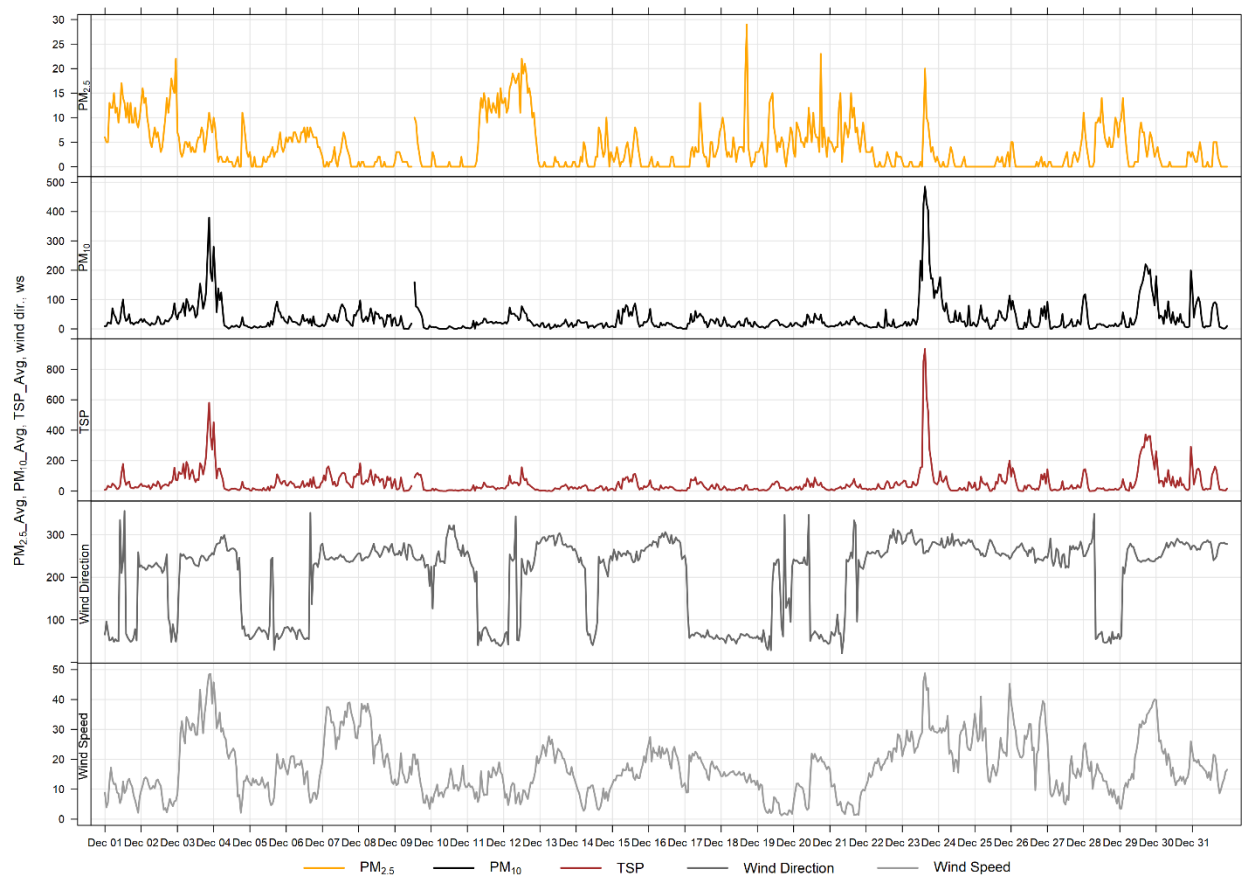


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

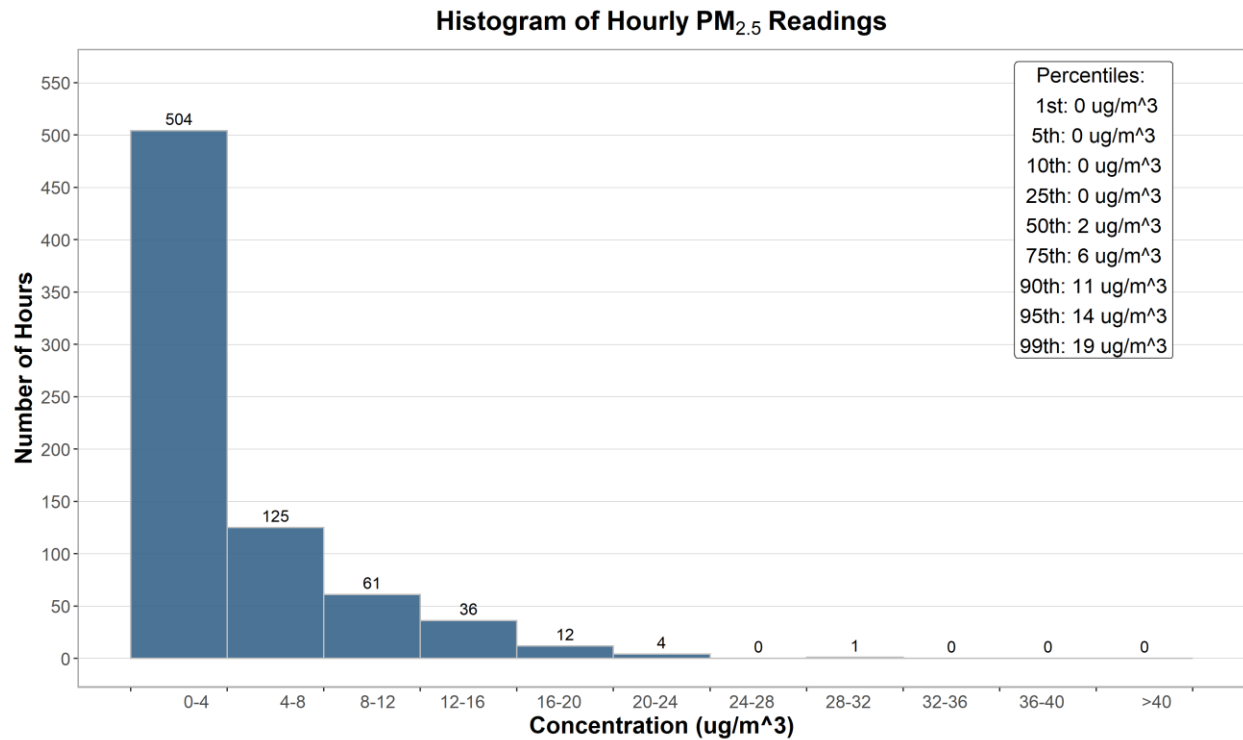


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

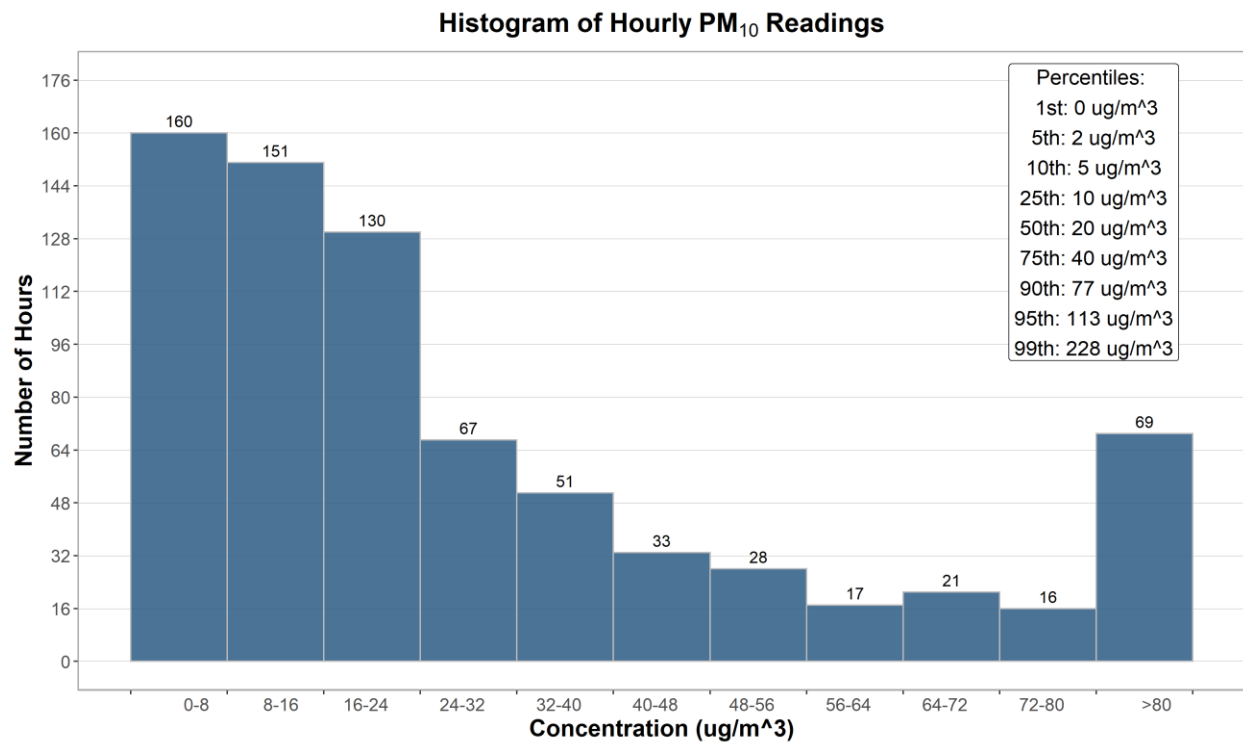


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

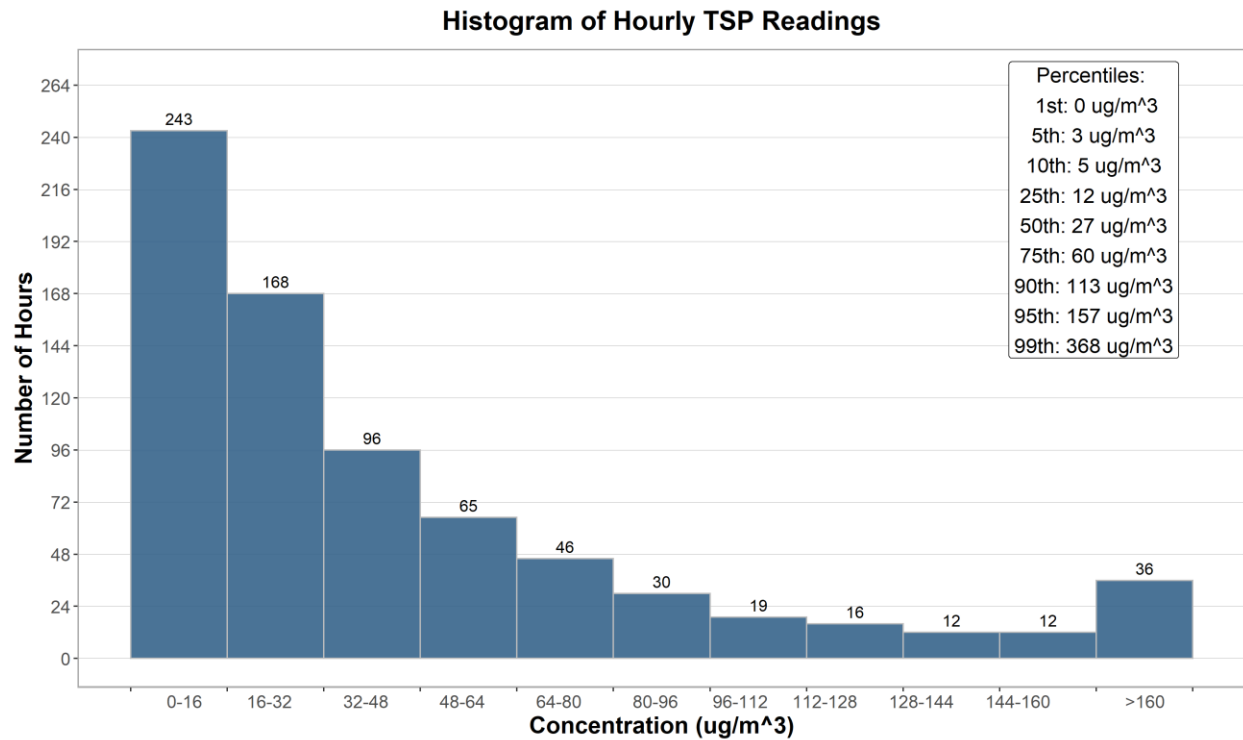


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

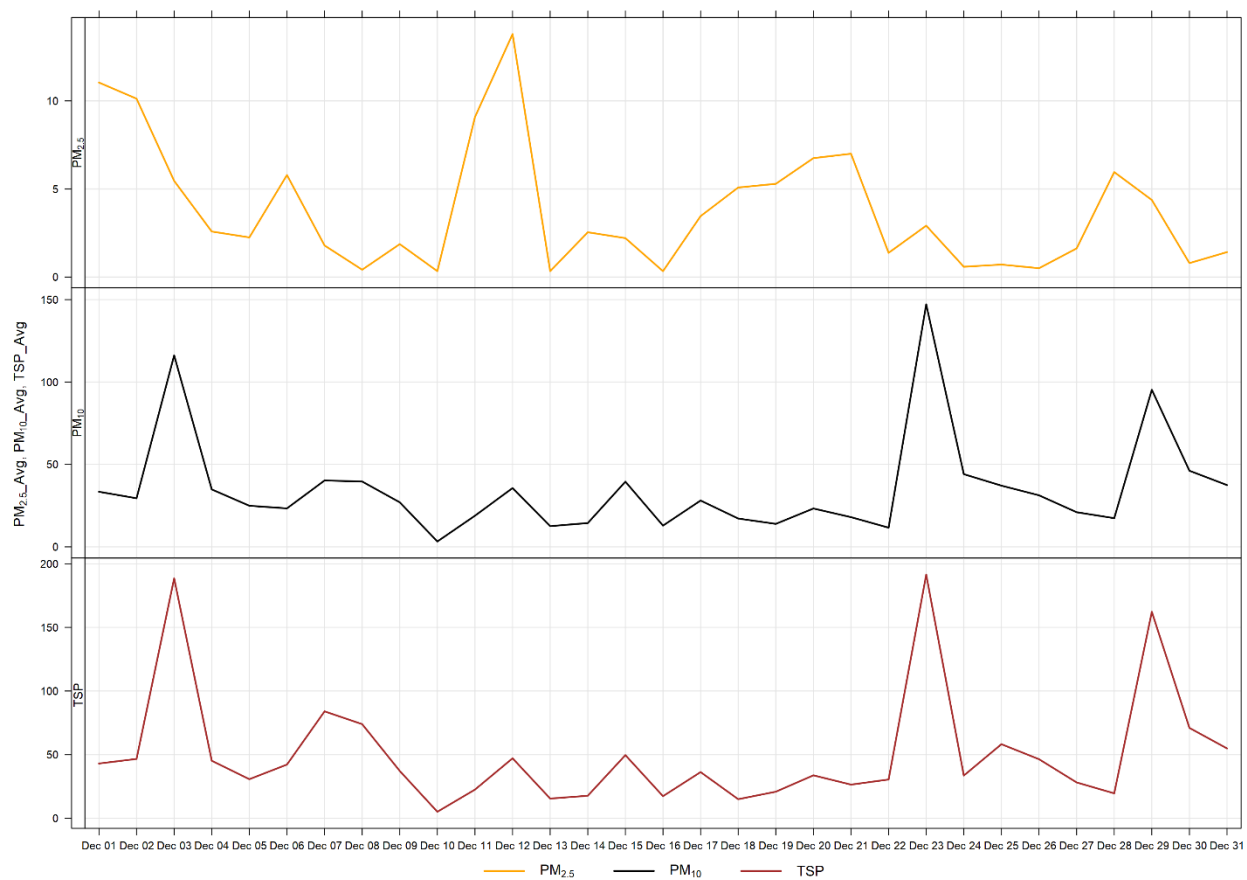


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 3 days of TSP exceedances. The wind roses shows that the winds predominantly came from the west direction.

Figure 4-7 illustrates the hourly PM concentrations recorded at the Windridge monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-7 is based on data collected during December 2022. Similar to the Lagoon station, typically PM concentrations shows a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other activities. This diurnal pattern is not as prevalent this month. The diurnal patterns also follow the diurnal pattern of higher wind speeds during the daytime hours.

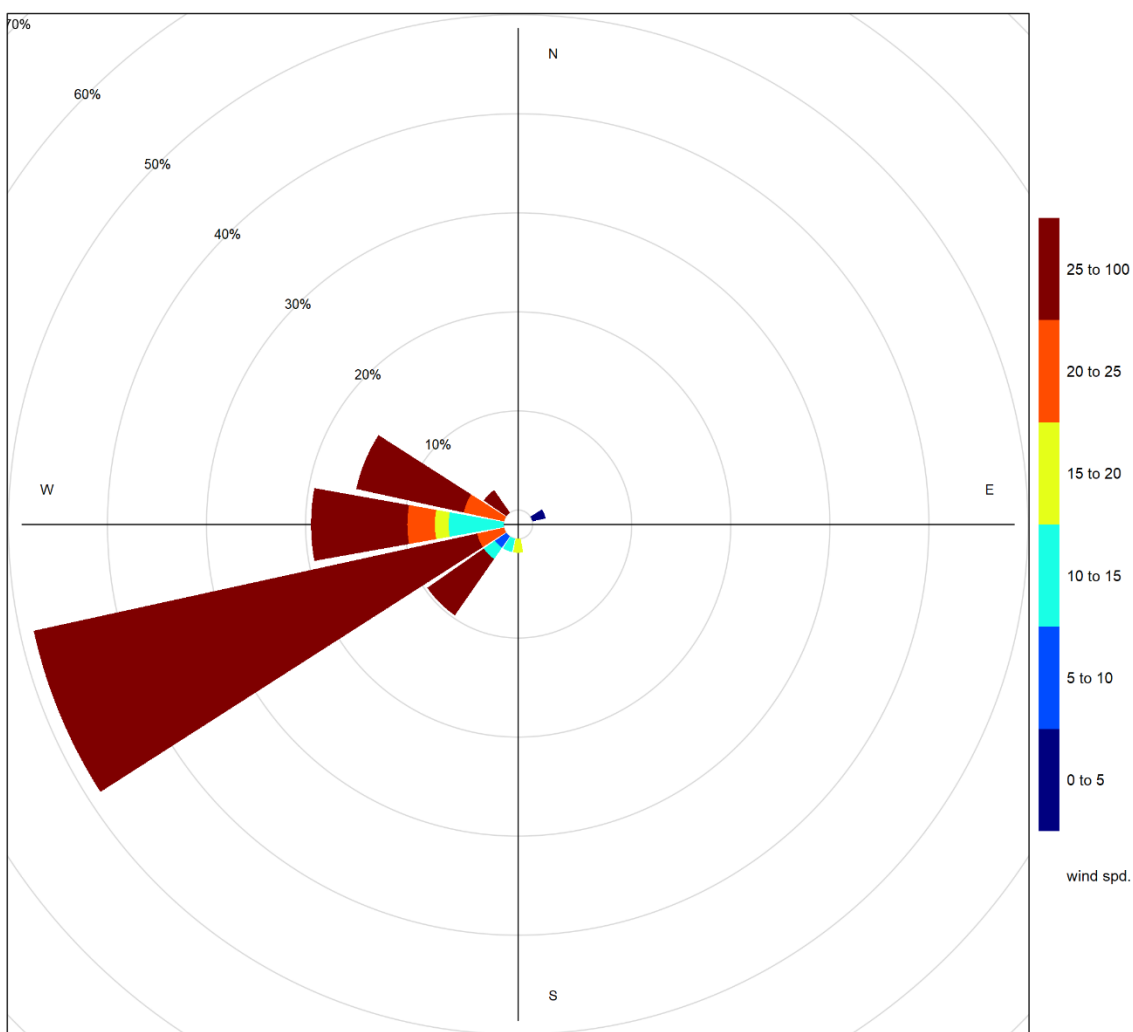


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

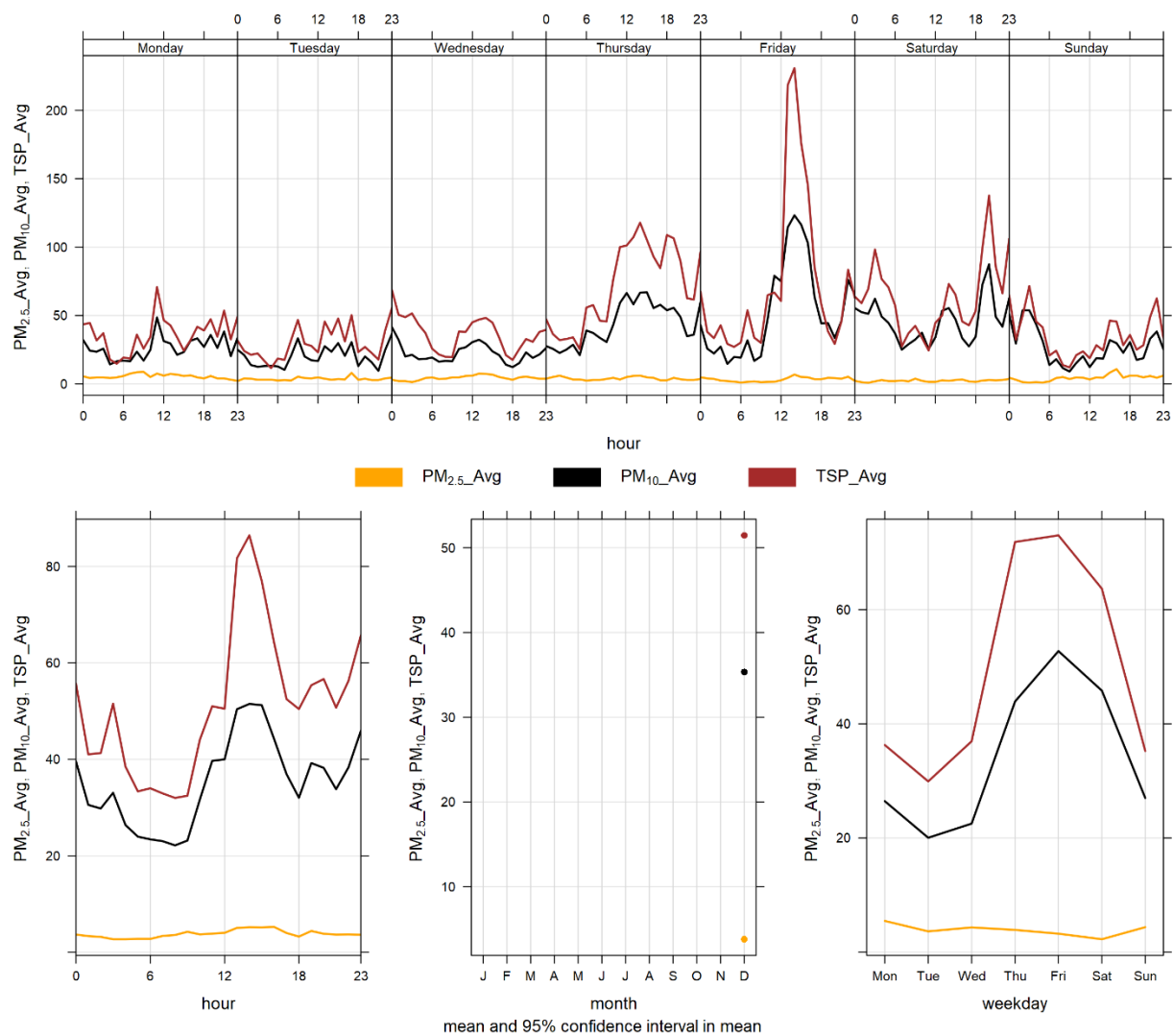


Figure 4-7 Windridge particulate matter time variation

5 WEST INDUSTRIAL GRIMM

5.1 OPERATIONAL SUMMARY

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

Table 5-1 Instrumentation List at the West monitoring location

Parameter Measured	Equipment Description	Notes
PM_{2.5}, PM₁₀, TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 100% uptime for the month of December.

5.2 MONITORING RESULTS AND TRENDS

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

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

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

Historically during the month of December, the West monitor records an average of one and zero exceedances of the 24-hour TSP and PM_{2.5} guidelines. The maximum number of 24-hour TSP AAAQO exceedances recorded in December was four days in 2012.

Table 5-2 Summary of December 2022 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} (µg/m ³)	80	29	West	0	0	0.1	5.6	37.0	19	9	2.1	28.6	19.9	12	100.0
PM₁₀ (µg/m ³)	-	-	West	-	-	0.2	7.4	47.8	19	9	2.1	28.6	27.0	12	100.0
TSP (µg/m ³)	-	100	West	-	0	0.1	6.8	55.2	19	9	2.1	28.6	22.0	12	100.0

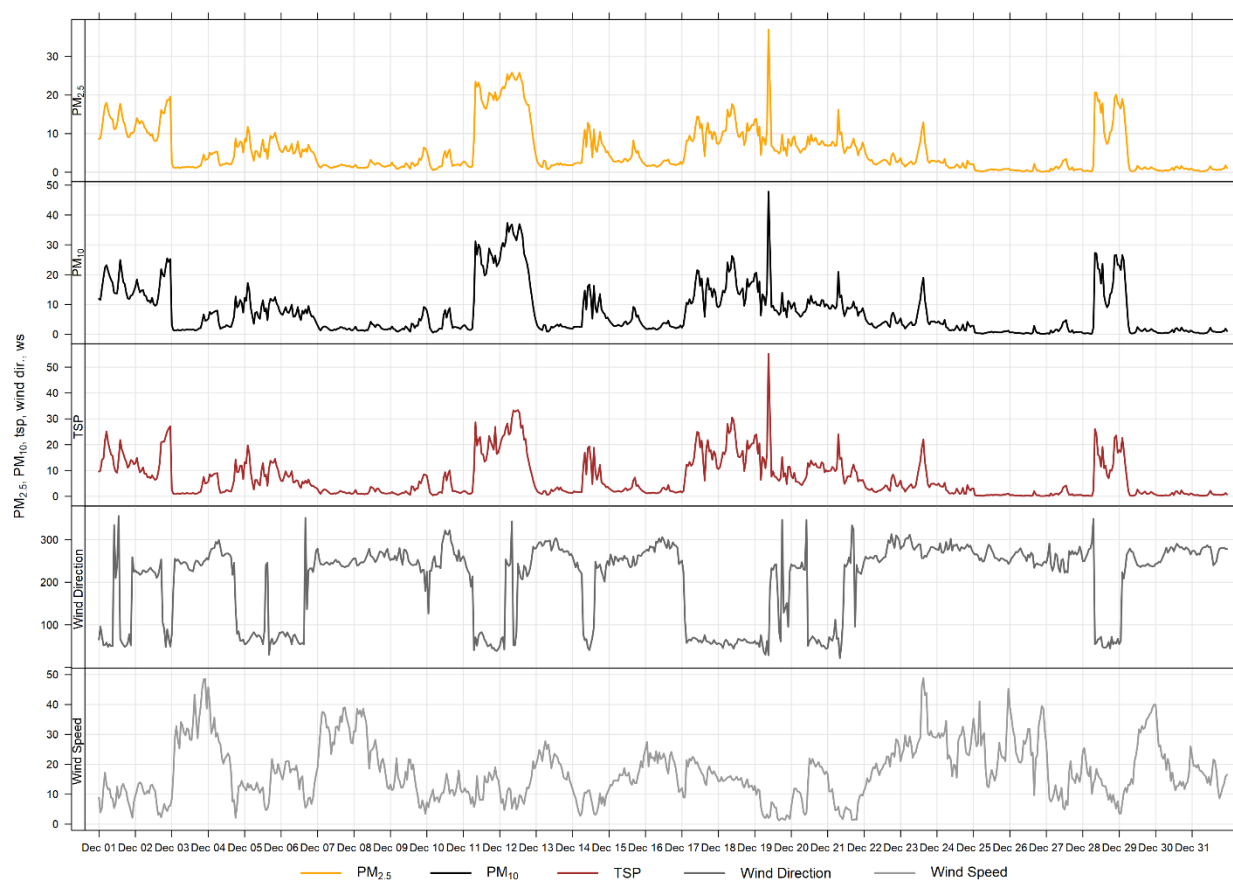


Figure 5-1 1-hour particulate matter concentrations at the West monitor

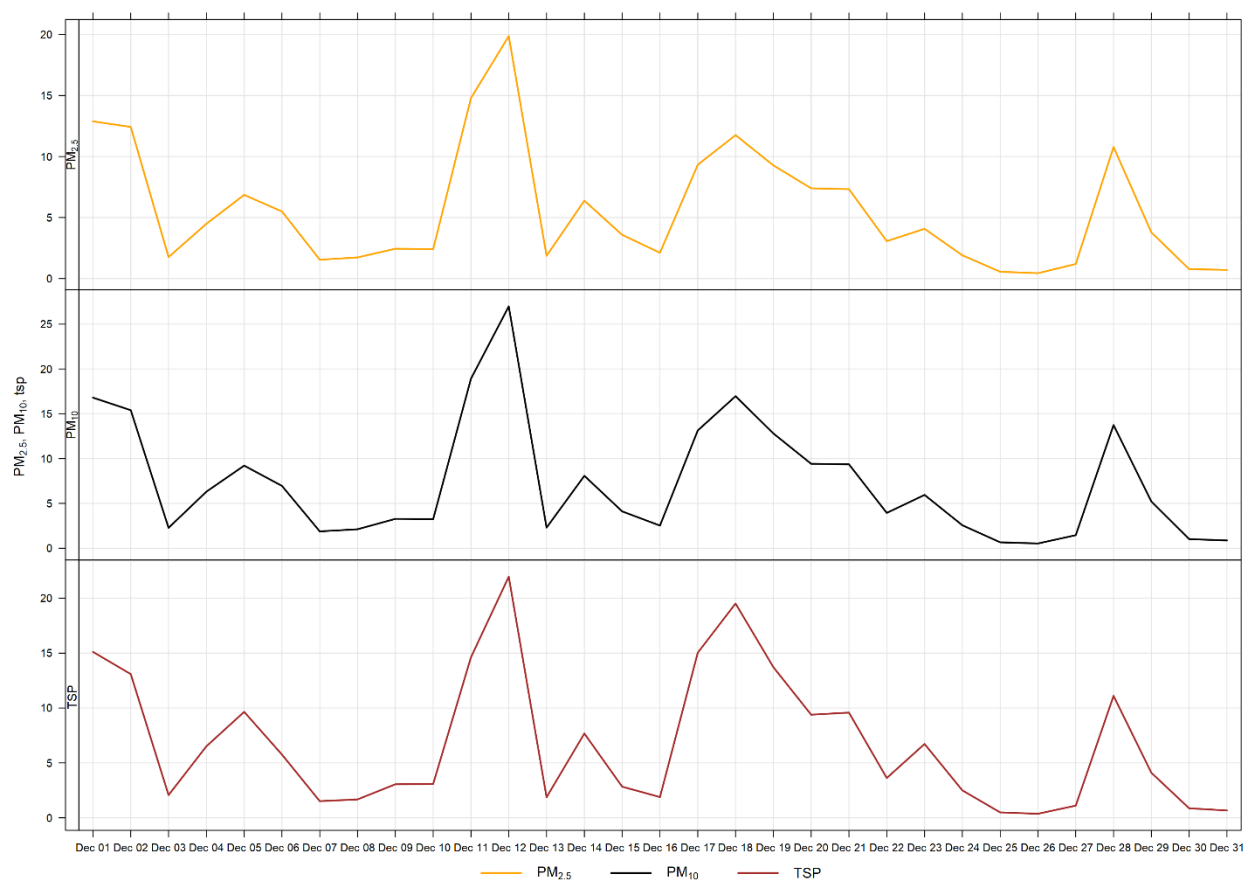


Figure 5-2 24-hour particulate matter concentrations at the West monitor

Figure 5-3 illustrates the hourly PM concentrations recorded at the West monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 5-3 is based on data collected during December 2022. 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 1, 2021, and will continue to be evaluated to better understand influences from background sources, Lafarge Exshaw, as well as highway and rail sources.

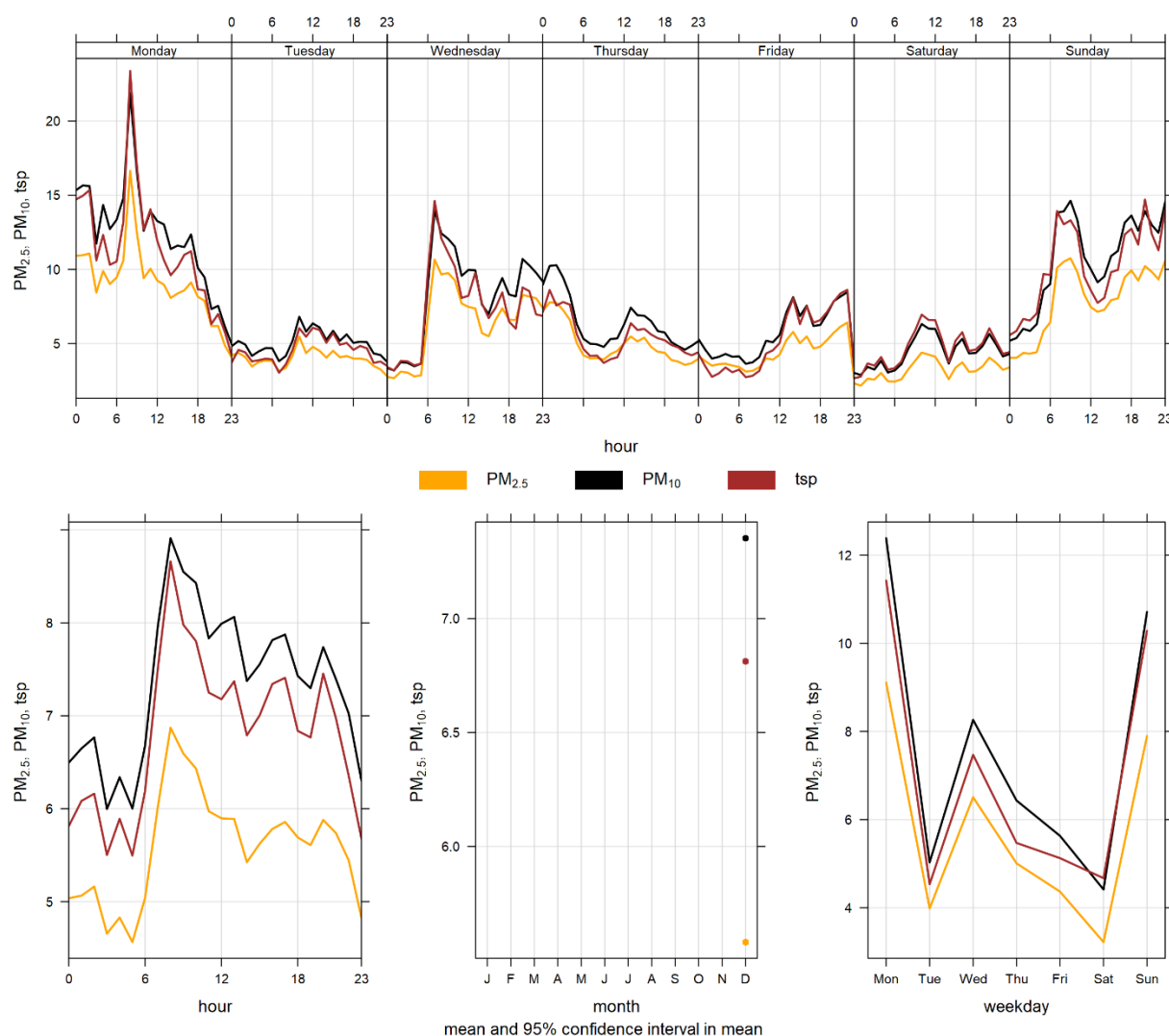


Figure 5-3 West monitor particulate matter time variation

6 BERM INDUSTRIAL GRIMM

6.1 OPERATIONAL SUMMARY

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

Table 6-1 Instrumentation List at the Berm monitoring location

Parameter Measured	Equipment Description	Notes
PM _{2.5} , PM ₁₀ , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 100% uptime for the month of December.

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

Historically during the month of December, the Berm monitor records an average of 16 and 2 exceedances of the 24-hour TSP and PM_{2.5} guidelines, respectively. The maximum number of TSP exceedances recorded during December occurred in 2011 where there were 24 days that exceeded the guideline. On the other hand, the maximum number of PM_{2.5} exceedances in December was 13 days in 2018.

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 December 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 December 2022 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	0	0	0.2	7.2	60.8	28	3	17.2	266.1	18.3	29	100.0
PM₁₀ (µg/m ³)	-	-	Berm	-	-	0.2	30.8	516.9	23	16	43.1	262.6	154.2	29	100.0
TSP (µg/m ³)	-	100	Berm	-	10	0.1	133.6	3593.6	23	16	43.1	262.6	712.3	3	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						
2022-12-03	712.3	-	243.9	34.2	50.5	High wind event
2022-12-04	145.5	-	279.9	20.5	67.8	High wind event
2022-12-07	655.1	-	244.2	32.2	54.3	High wind event
2022-12-08	250.8	-	255.5	25.7	55.7	High wind event
2022-12-22	139.5	-	275.7	20.0	61.4	High wind event
2022-12-23	557.7	-	279.6	30.4	63.4	High wind event
2022-12-25	141.9	-	256.7	24.6	53.1	High wind event
2022-12-29	522.0	-	243.1	24.7	56.6	High wind event
2022-12-30	189.9	-	269.1	18.4	59.2	Winds predominantly from the west
2022-12-31	153.1	-	271.2	15.9	60.0	Winds predominantly from the west
Total # of Exceedances	10	0				
Maximum # of Exceedances (December)	24 (2011)	13 (2018)				
Average # of Exceedances (December)	16	2				
Minimum # of Exceedances (December)	8 (2019)	0 (2012, 2013, 2015, 2016, 2017, 2019)				

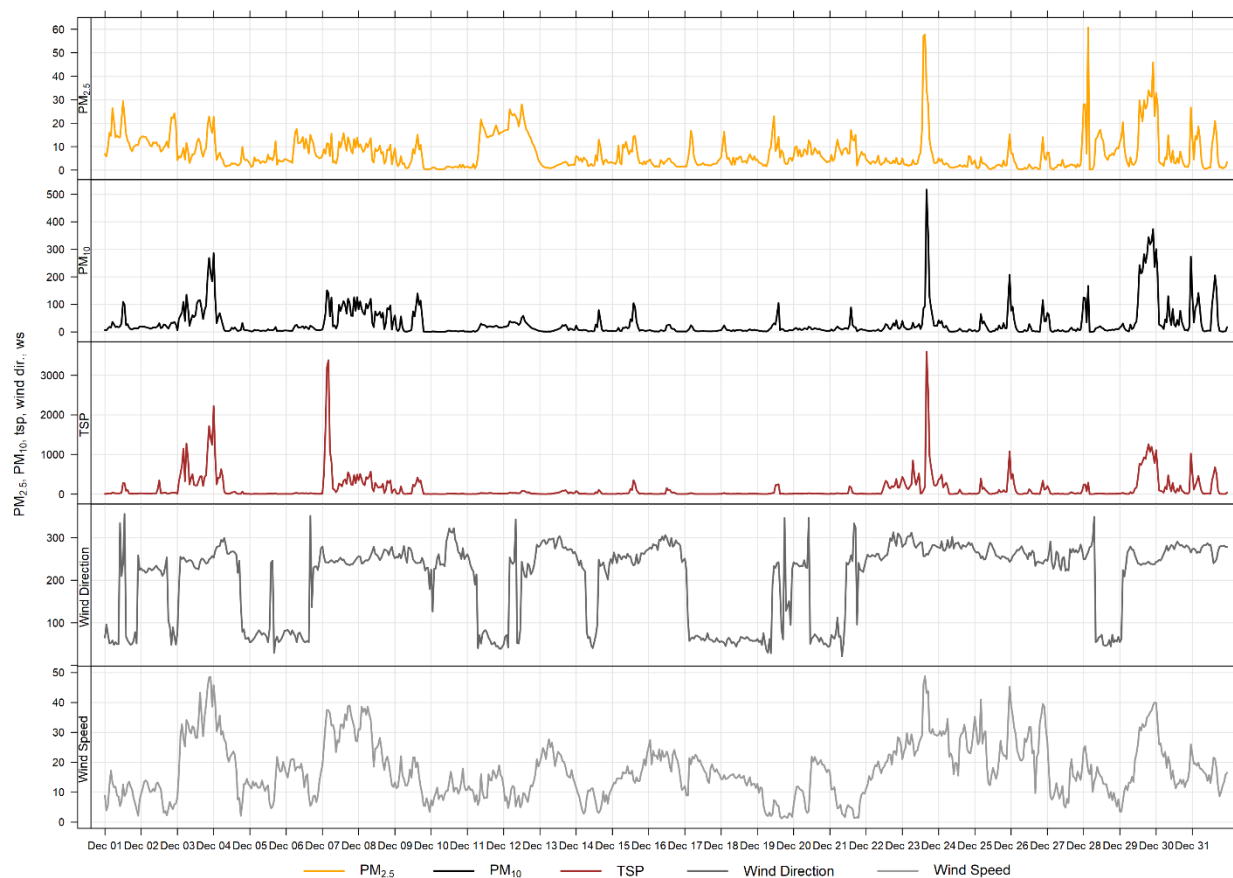


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

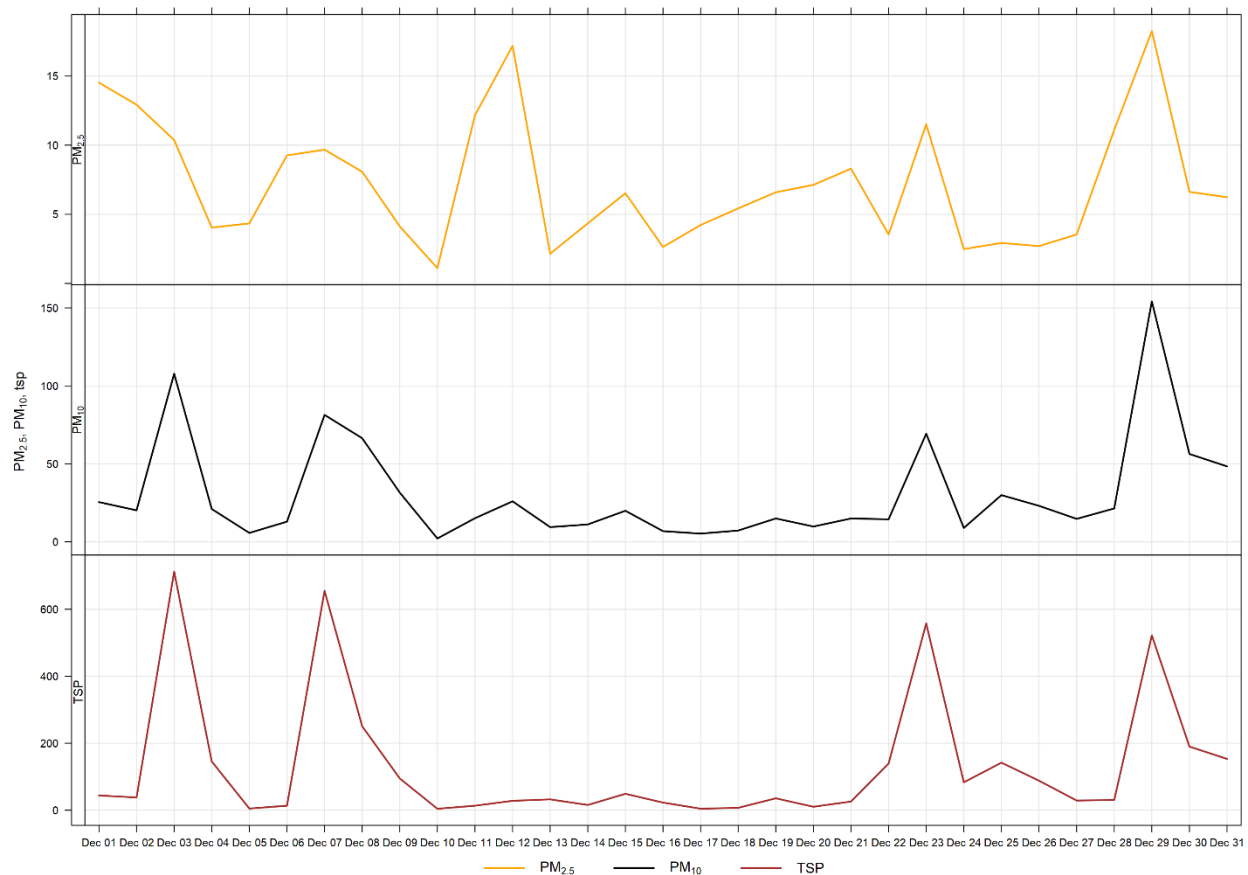


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 10 days of TSP exceedances. The wind roses show that the wind predominately came from the westerly direction. This month many of the TSP exceedances were driven by windblown fugitive dust, and winds from the west which suggest impacts from the Lafarge Facility.

Figure 6-4 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. During the month of December 2022 the diurnal pattern is skewed due to high particulate concentrations recorded overnight from strong westerly wind gusting.

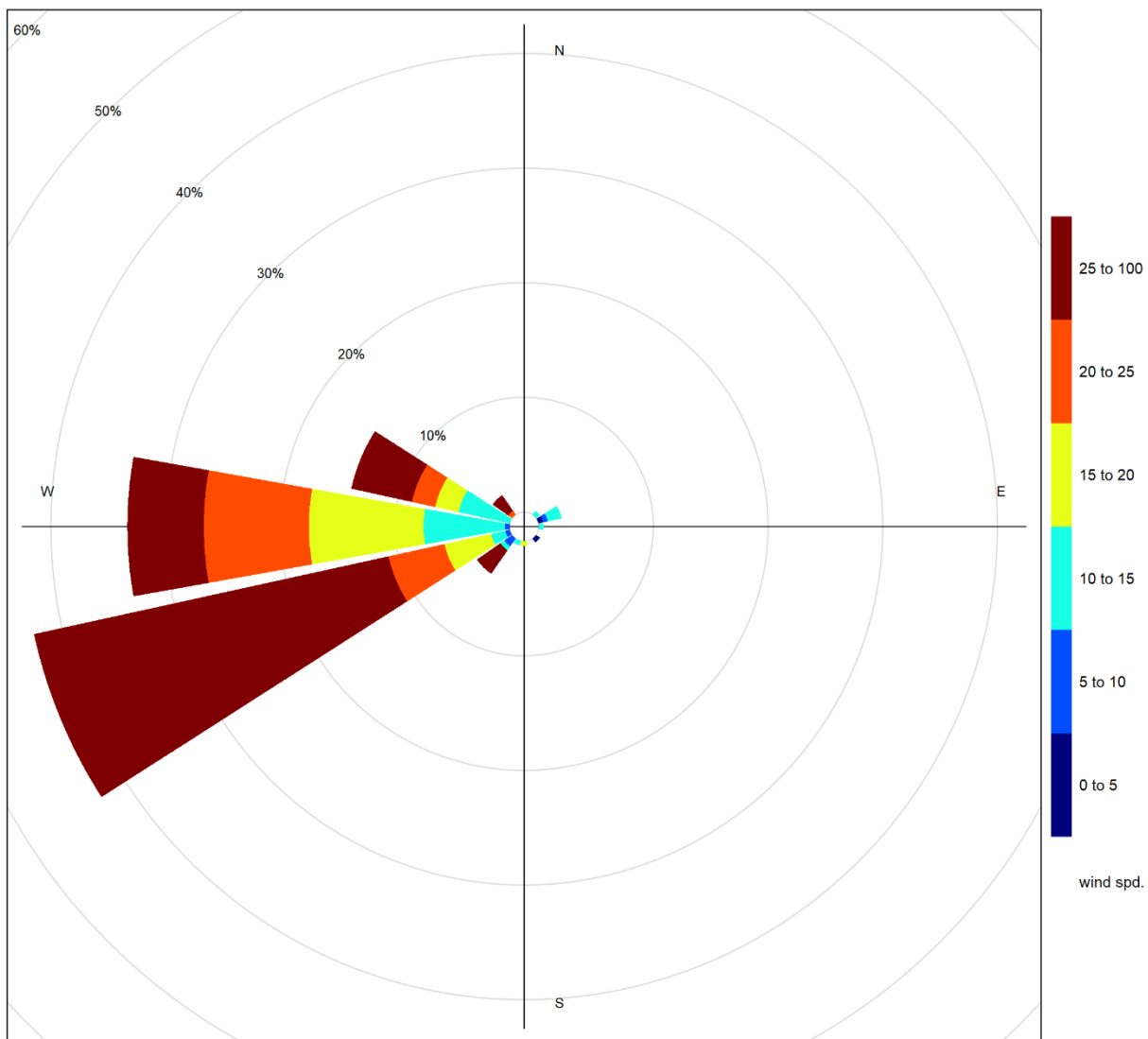


Figure 6-3 Windrose for TSP exceedance days recorded at the Berm GRIMM

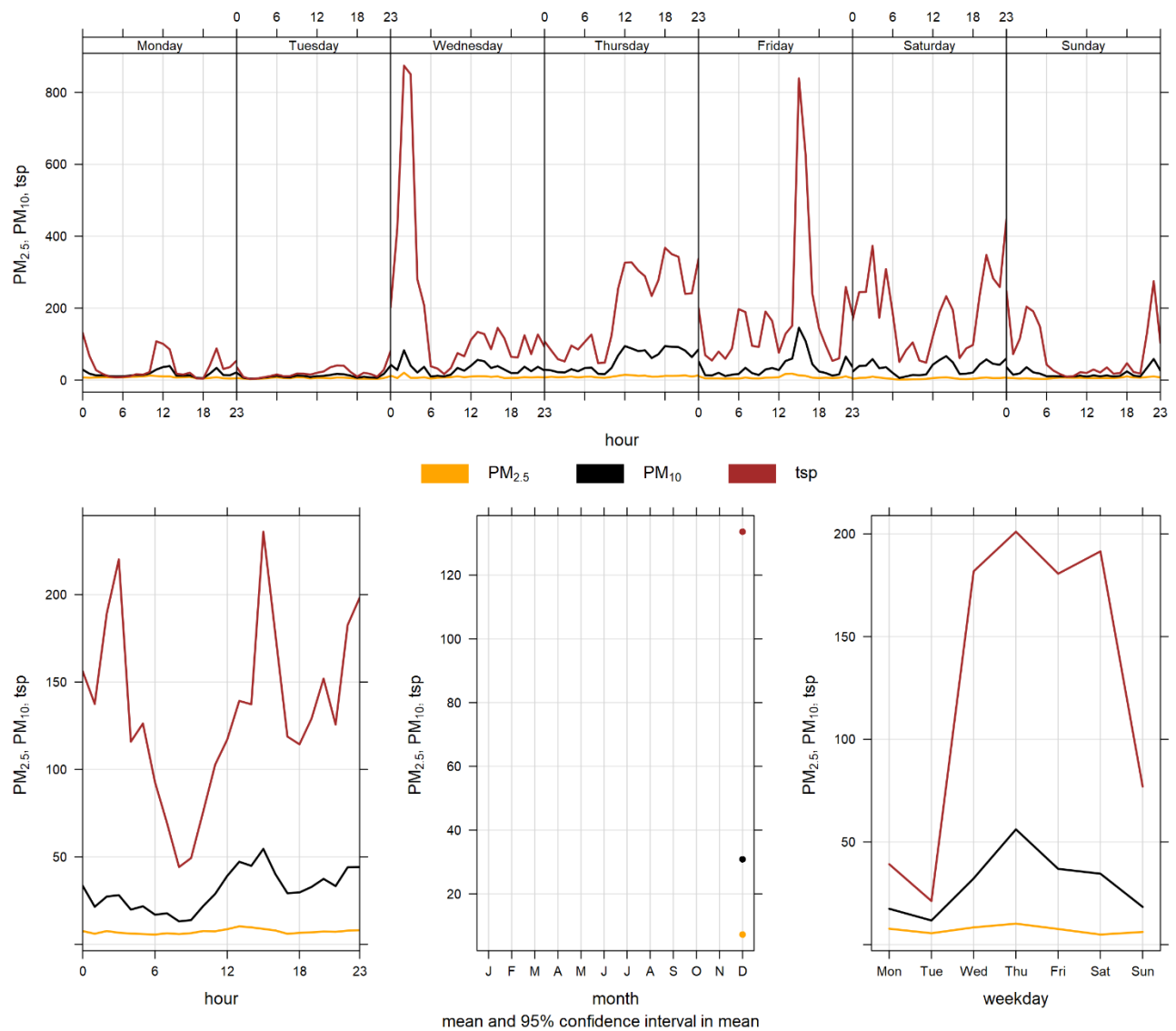


Figure 6-4 Berm particulate matter time variation

7 ENTRANCE INDUSTRIAL GRIMM

7.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 7-1.

Table 7-1 Instrumentation List at the Entrance monitoring location

Parameter Measured	Equipment Description	Notes
PM _{2.5} , PM ₁₀ , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 73% uptime for the month of December due to 201 hours of power failure occurring from December 23 rd at 16:00 to December 31 st at 24:00.

7.2 MONITORING RESULTS AND TRENDS

The Entrance monitor was placed at its current location as a result of the dispersion modelling conducted for the facility. Figure 7-1 and Figure 7-2 show the hourly and daily PM_{2.5}, PM₁₀, and TSP concentrations recorded over the month. Table 7-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month. Table 7-3 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.

During the month of December, there were 8 and 0 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (29 µg/m³) Guidelines, respectively. There was one hour exceeding the 1-hour PM_{2.5} Guideline.

Historically, the Entrance monitor records an average of 17 and 1 exceedances of the 24-hour TSP and PM_{2.5} guidelines respectively, during the month of December. The maximum number of TSP exceedances recorded during December occurred in 2013, which had 27 days that exceeded the guideline. The minimum number of TSP exceedances recorded during December occurred in 2019, which had eight days that exceeded the guideline. The maximum number of PM_{2.5} exceedances recorded during December is 5 days in 2014.

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 Entrance monitor is impacted by fugitive dust from plant activities, and high wind events. Trucks also pass near to the Entrance monitor as they enter and exit the Lafarge facility for loading and deliveries. Additionally, the monitor is closely located to Highway 1A. Traffic, particularly large trucks, can create dust while crossing over the railway tracks. This can all lead to the monitor recording high TSP concentrations, which are typically associated with fugitive dust sources.

Figure 7-3 shows the wind rose for the 8 days that exceeded the TSP Guideline. The wind roses show that the winds predominantly came from the westerly directions.

Table 7-2 Summary of December 2022 data at the Entrance 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	Entrance	1	0	0.7	11.3	87.5	3	18	35.2	244.4	26.8	15	73.0
PM₁₀ (µg/m ³)	-	-	Entrance	-	-	1.9	42.2	468.8	3	18	35.2	244.4	118.3	3	73.0
TSP (µg/m ³)	-	100	Entrance	-	8	1.3	183.6	3322.5	3	21	48.4	249.0	710.8	3	73.0

Table 7-3 Days exceeding the Guideline for TSP or PM_{2.5} at the Entrance 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)
Entrance						
2022-12-03	710.8	-	243.9	34.2	50.5	High wind event
2022-12-04	241.8	-	279.9	20.5	67.8	High wind event
2022-12-07	265.2	-	244.2	32.2	54.3	High wind event
2022-12-13	419.2	-	285.9	20.4	64.9	High wind event
2022-12-15	114.0	-	256.3	16.4	75.4	Winds predominately from the west
2022-12-16	218.6	-	285.0	20.3	70.2	High wind event
2022-12-20	285.5	-	57.8	14.5	67.7	Winds predominately from the northeast
2022-12-22	524.0	-	275.7	20.0	61.4	High wind event
Total # of Exceedances	8	0				
Maximum # of Exceedances (December)	27 (2013)	5 (2014)				
Average # of Exceedances (December)	17	1				
Minimum # of Exceedances (December)	8 (2019)	0 (2011, 2012, 2013, 2015, 2016, 2019, 2020, 2021)				

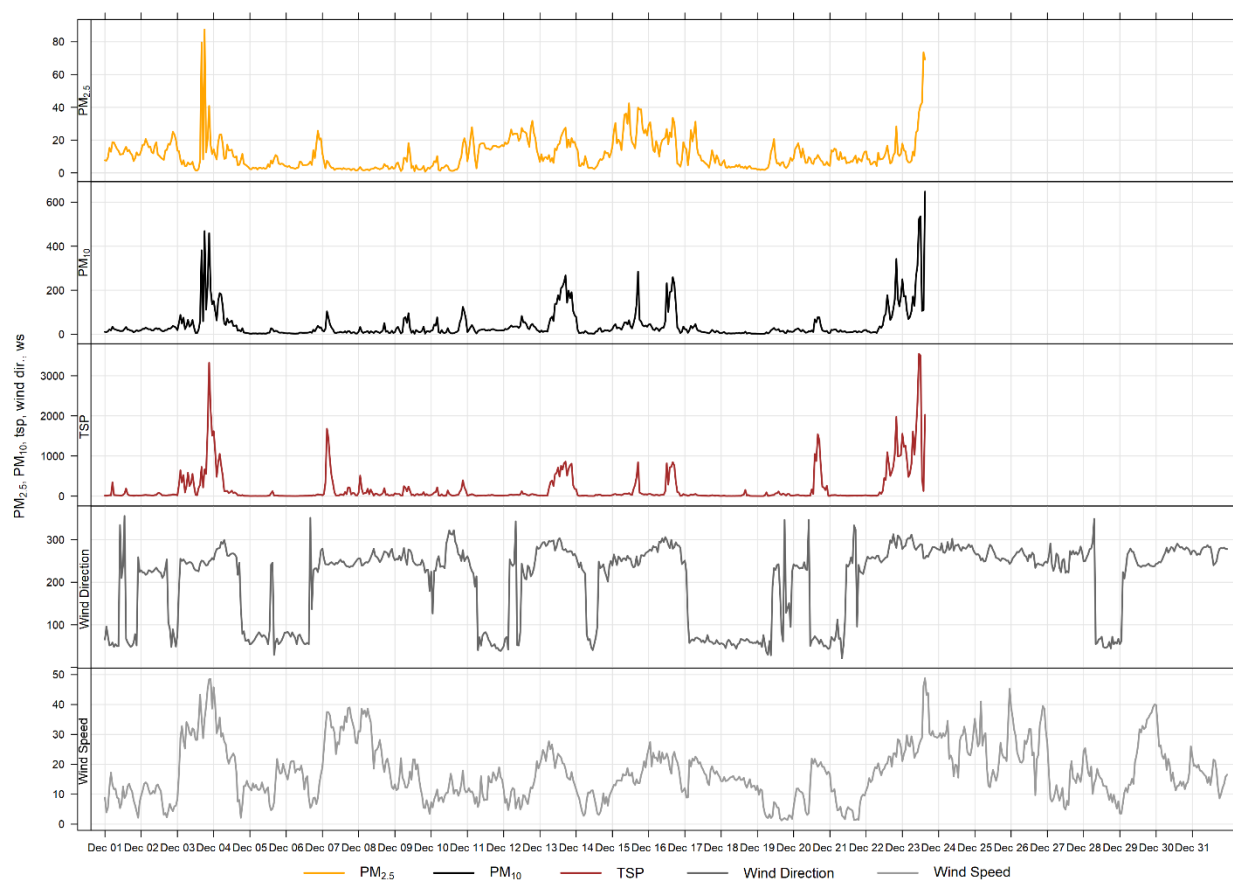


Figure 7-1 1-hour particulate matter concentrations recorded at the Entrance monitor

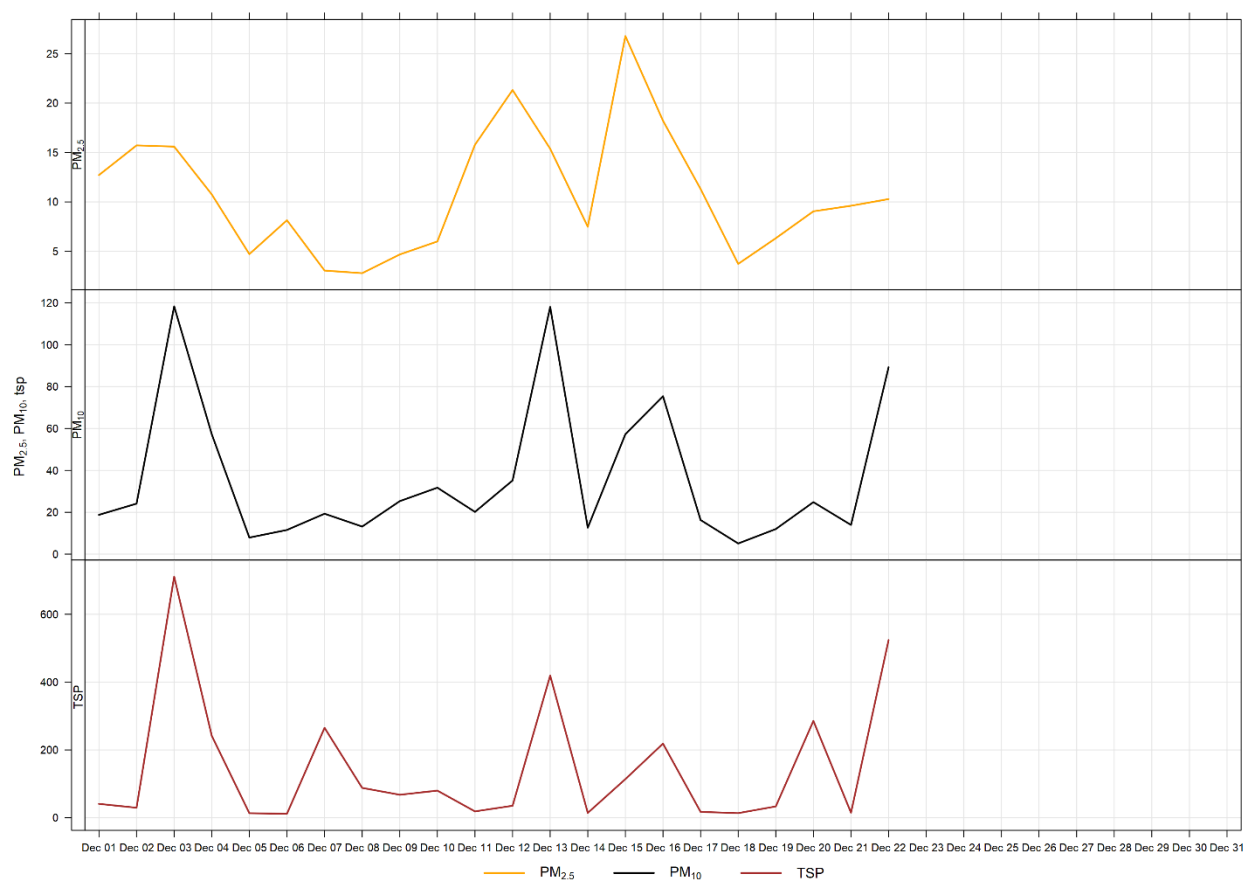


Figure 7-2 24-hour particulate matter concentrations recorded at the Entrance monitor

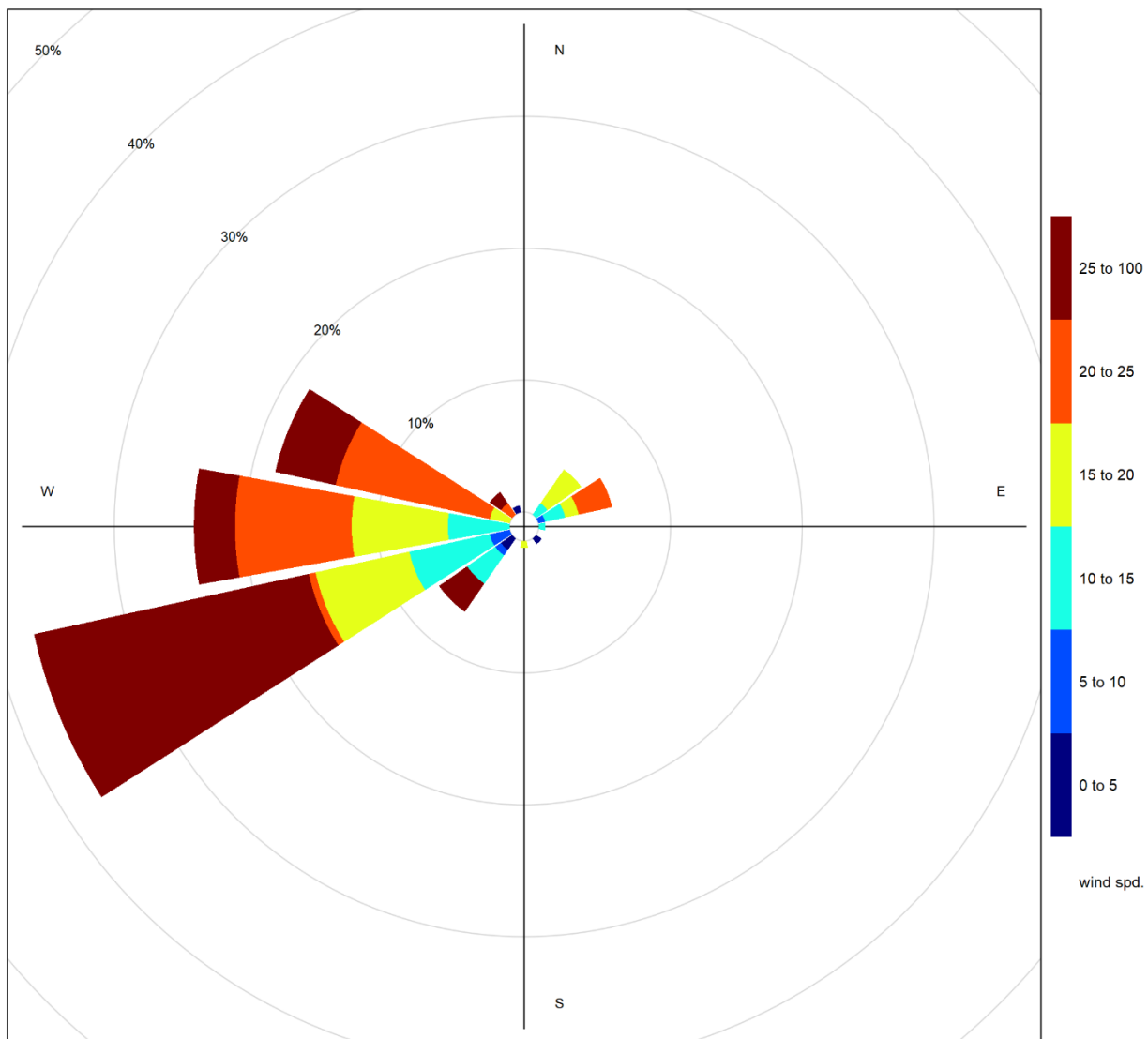


Figure 7-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

Figure 7-4 illustrates the hourly PM concentrations recorded at the Entrance 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 7-4 is based on data collected during December 2022. The diurnal pattern differs from the Windridge, Lagoon and Berm stations and are likely more influenced by daytime traffic emission (from vehicles serving Lafarge as well as regular highway traffic) given its location near the highway entrance to Lafarge.

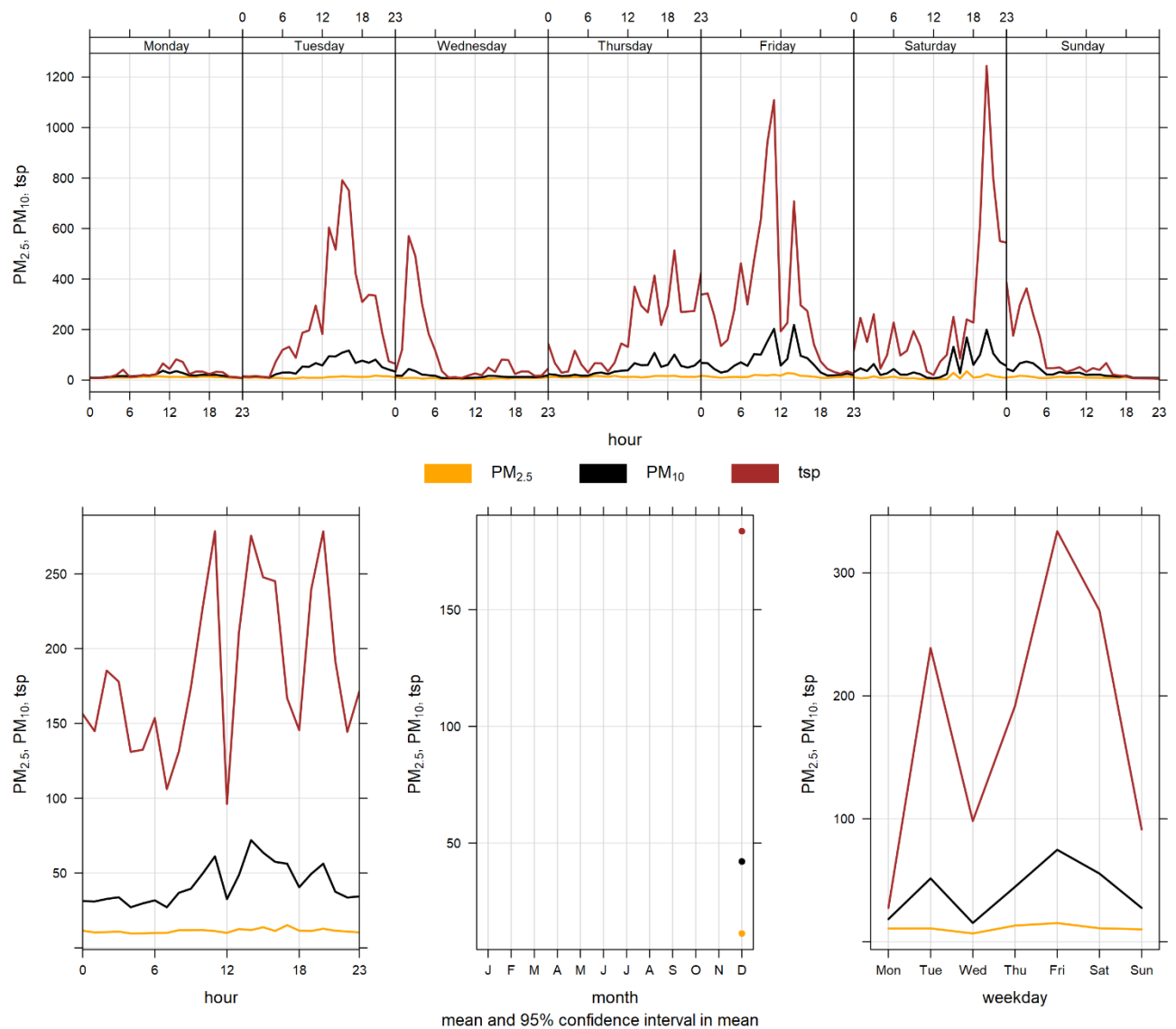


Figure 7-4 Entrance particle matter time variation

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APPENDIX

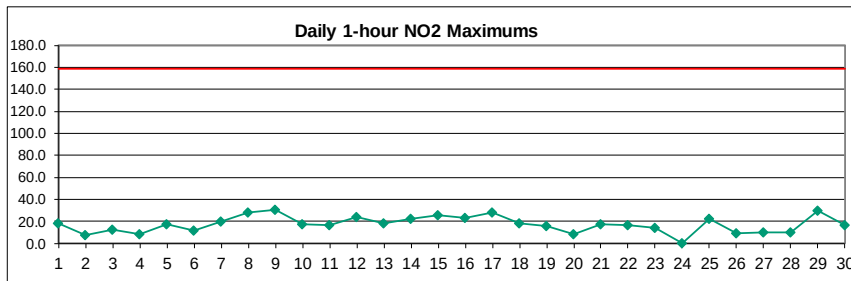
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – November 2022

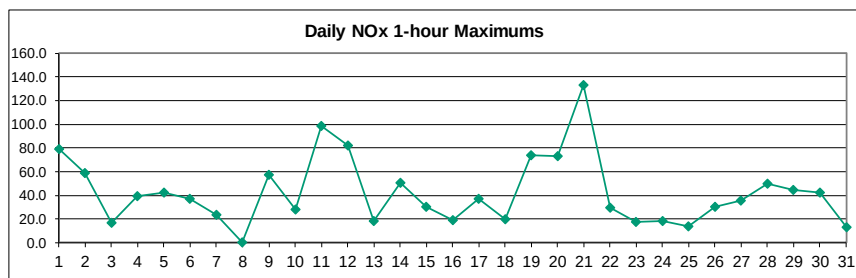
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	7.9	S	7.0	7.4	5.8	2.1	2.4	4.5	12.0	18.6	10.5	5.8	1.9	17.4	8.8	2.6	1.9	1.3	1.2	1.1	1.5	1.4	3.0	3.6	5.6	18.6
2	1.6	S	1.3	1.2	1.3	1.8	2.3	3.6	2.9	3.9	P	P	P	5.1	4.2	6.8	7.9	6.0	4.9	7.1	6.3	5.5	3.8	3.5	4.0	7.9
3	3.7	S	5.9	12.7	8.7	10.7	10.8	9.4	7.4	6.5	9.4	6.1	3.2	3.7	2.7	2.6	2.8	4.0	3.5	4.3	3.3	2.7	2.4	2.6	5.6	12.7
4	2.8	S	3.0	2.6	2.5	2.2	2.9	6.7	6.5	5.4	3.1	3.6	3.7	5.4	4.7	5.8	8.1	5.3	4.8	6.7	6.6	6.9	8.5	8.4	5.1	8.5
5	8.7	S	7.6	12.7	7.4	9.3	11.1	17.6	6.5	11.4	2.3	8.2	8.3	6.1	4.6	5.8	3.1	3.2	6.7	6.8	6.5	4.0	4.5	7.8	7.4	17.6
6	3.3	S	3.2	2.1	5.5	10.4	5.3	6.9	3.8	5.5	4.3	3.3	3.4	3.1	9.2	11.4	6.7	5.8	7.4	10.7	6.8	5.1	4.9	9.9	6.0	11.4
7	16.3	S	15.8	8.8	8.0	12.5	17.8	17.1	15.4	14.3	3.8	4.1	4.1	4.1	6.9	5.0	4.1	7.1	7.8	5.2	8.3	9.7	8.6	20.3	9.8	20.3
8	22.5	S	15.1	19.4	17.4	19.4	21.2	24.2	22.2	16.0	12.2	7.7	8.0	6.7	9.0	16.2	19.5	19.3	21.4	21.3	27.2	27.9	25.7	23.7	18.4	27.9
9	19.9	S	17.4	14.8	17.0	15.3	17.1	16.6	14.2	16.6	13.8	9.5	11.5	6.7	8.4	21.8	31.0	24.1	20.5	24.0	29.1	28.8	26.0	20.3	18.5	31.0
10	17.4	S	17.7	11.1	8.0	7.2	7.5	9.3	14.6	16.6	9.5	11.5	9.9	13.6	16.4	14.0	12.9	10.6	12.2	17.3	11.0	8.0	5.1	4.9	11.6	17.7
11	3.6	S	7.2	6.3	7.3	10.9	8.1	9.9	12.4	12.5	16.2	13.0	13.1	13.3	14.9	6.9	10.3	16.5	13.0	4.8	5.7	8.5	8.8	8.5	10.1	16.5
12	6.1	S	7.5	9.3	4.6	3.9	8.4	16.7	11.7	8.7	13.3	9.3	7.5	11.0	12.3	6.5	12.8	11.7	23.9	19.6	13.2	13.6	15.8	18.9	11.6	23.9
13	14.0	S	15.7	12.3	17.5	17.1	11.9	15.4	18.1	10.2	9.7	7.2	9.2	17.0	16.9	15.5	11.2	7.3	4.3	12.6	11.6	12.4	12.3	15.3	12.8	18.1
14	10.0	S	14.2	14.5	14.6	17.3	18.2	20.7	15.8	18.2	14.5	14.0	10.3	10.0	9.4	9.8	13.5	10.8	13.9	18.3	16.7	15.5	22.8	18.3	14.8	22.8
15	13.5	S	9.6	12.7	8.2	9.7	17.4	19.1	19.4	20.2	16.4	14.8	12.5	8.3	9.1	15.8	16.9	21.3	21.9	22.1	25.0	25.5	23.1	21.0	16.7	25.5
16	18.5	S	21.8	22.0	21.5	20.4	21.7	21.7	20.8	19.8	19.9	18.0	17.7	17.5	17.9	5.8	1.7	4.0	8.4	5.8	11.2	14.8	23.2	19.5	16.2	23.2
17	21.8	S	28.2	25.4	24.5	23.8	23.4	26.7	23.6	18.9	18.5	13.2	19.2	10.2	13.8	9.9	8.4	6.5	8.0	6.3	9.5	7.0	5.9	4.8	15.5	28.2
18	6.3	S	5.9	6.8	9.8	5.6	7.2	5.0	5.5	9.1	13.0	7.6	10.2	13.2	11.7	5.2	7.1	8.2	9.4	14.3	15.0	17.9	9.0	8.1	9.2	17.9
19	7.7	S	4.6	4.0	9.3	11.9	14.9	15.8	14.6	6.4	7.1	6.3	11.6	13.8	10.1	6.7	5.8	5.4	8.4	13.2	6.1	6.0	13.3	16.2	9.5	16.2
20	8.7	S	6.8	5.1	7.6	5.9	5.1	5.0	5.5	6.0	5.8	7.5	4.9	5.1	5.6	8.4	8.5	7.7	6.7	4.9	4.4	5.5	4.8	4.3	6.1	8.7
21	9.5	S	5.1	4.1	3.1	4.4	7.5	10.1	12.7	10.6	14.5	13.1	17.6	9.9	3.9	5.9	8.6	4.8	4.8	8.4	7.0	7.5	3.7	2.2	7.8	17.6
22	7.8	S	12.6	11.8	9.6	4.8	5.5	13.3	16.7	16.4	13.9	7.9	2.7	2.0	3.9	7.7	7.8	8.5	13.6	11.4	10.4	8.8	9.6	14.1	9.6	16.7
23	6.9	S	6.1	6.2	4.7	8.1	11.8	10.2	14.4	10.2	7.1	3.4	2.2	4.9	3.5	3.2	4.7	2.6	2.0	1.9	1.7	2.0	2.0	1.4	5.3	14.4
24	1.2	S	4.2	4.2	3.9	2.8	6.0	6.4	8.9	11.0	9.3	C	C	C	C	C	C	C	2.6	2.4	3.8	6.2	8.5	17.4	-	-
25	15.4	S	6.0	2.5	6.5	5.8	11.7	6.7	8.5	10.9	20.7	15.9	12.8	7.8	10.3	22.3	20.7	16.6	6.2	8.8	19.4	19.1	20.9	2.2	12.1	22.3
26	2.0	S	2.0	3.8	2.7	2.9	4.3	3.6	2.6	7.8	3.0	6.2	9.1	6.2	1.5	1.4	2.7	5.1	5.7	4.4	2.2	1.7	2.0	6.2	3.9	9.1
27	8.8	S	4.8	3.7	3.4	5.1	5.6	7.9	10.5	2.3	1.6	1.3	1.4	2.3	1.7	1.6	6.0	4.3	9.5	2.8	2.6	2.3	7.9	2.2	4.3	10.5
28	1.8	S	1.9	1.8	5.3	5.8	4.0	5.5	9.8	5.5	4.6	7.7	9.0	7.7	3.8	5.6	7.2	1.7	1.6	5.5	2.5	5.0	7.0	5.7	5.0	9.8
29	4.7	S	11.3	5.4	7.7	16.3	25.5	28.2	26.8	25.2	18.8	16.0	12.5	13.1	12.5	13.2	25.8	30.0	24.1	9.5	11.2	17.4	20.0	18.2	17.1	30.0
30	8.9	S	8.5	6.0	8.6	7.5	6.4	6.4	6.4	5.9	5.3	4.6	3.7	4.4	6.1	6.6	8.8	13.3	8.9	7.3	11.1	16.4	11.7	14.3	8.1	16.4
NO.	30	-	30	30	30	30	30	30	30	30	29	28	28	29	29	29	29	29	30	30	30	30	30	30	680	100%
MEAN	9.4	-	9.3	8.7	8.7	9.4	10.8	12.3	12.3	11.7	10.4	8.8	8.6	8.6	8.4	8.6	9.9	9.4	9.6	9.6	9.9	10.4	10.8	10.8		
MAX	22.5	-	28.2	25.4	24.5	23.8	25.5	28.2	26.8	25.2	20.7	18.0	19.2	17.5	17.9	22.3	31.0	30.0	24.1	24.0	29.1	28.8	26.0	23.7		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	680
Maximum 1-HR Average	31.0 PPB
Maximum 24-HR Average	18.5 PPB
Monthly Calibration	7
Standard Deviation	6.4
Operational Time	717 HRS
Operational Uptime	99.6 %
Monthly Average	9.9 PPB

Lagoon NOx (ppb) – December 2022

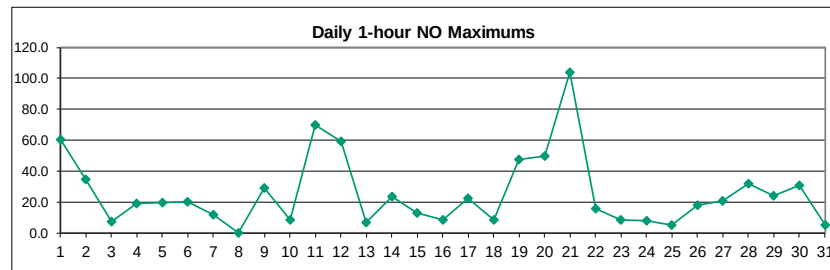
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	15.5	S	71.4	78.9	13.3	29.3	30.4	14.6	17.2	20.5	29.5	24.6	32.2	33.0	26.1	16.8	27.5	52.6	17.5	30.7	77.3	45.9	42.7	46.6	34.5	78.9
2	55.3	S	48.0	43.6	47.6	46.3	50.0	53.1	58.4	57.4	53.4	45.4	37.0	27.4	24.2	36.3	48.3	58.5	40.9	39.0	56.3	46.7	43.5	28.8	45.5	58.5
3	17.0	S	14.7	13.0	16.2	7.4	8.1	9.9	6.4	3.9	2.5	3.0	2.7	2.4	3.5	5.8	16.0	6.2	3.0	2.8	7.4	7.2	6.4	5.0	7.4	17.0
4	25.7	S	22.7	31.3	5.0	4.0	3.4	6.1	18.2	11.2	9.6	9.6	9.5	6.2	9.3	10.9	11.4	19.6	39.4	10.0	19.9	14.8	6.2	22.1	14.2	39.4
5	20.5	S	10.9	4.0	2.8	3.2	4.0	3.7	4.7	4.2	6.4	6.7	7.8	21.1	15.0	16.8	24.1	8.8	10.4	40.8	42.2	15.8	6.8	3.3	12.3	42.2
6	3.5	S	5.6	5.2	5.0	5.3	13.9	7.0	6.8	8.4	15.9	37.2	34.2	18.3	30.2	32.9	28.9	32.2	36.3	21.6	17.9	14.3	11.7	6.4	17.3	37.2
7	4.6	S	3.4	4.6	5.2	23.6	7.6	9.0	16.7	9.1	8.9	18.5	6.9	12.0	6.8	4.4	4.1	3.5	2.7	2.4	2.8	3.0	2.7	4.9	7.3	23.6
8	5.8	S	3.0	3.5	7.4	3.5	5.1	7.6	12.5	25.5	13.0	C	C	C	C	C	C	C	5.3	16.7	11.0	7.8	14.5	14.9	-	-
9	15.8	S	11.1	19.4	7.6	12.7	7.8	11.5	8.5	17.3	27.7	10.6	6.9	11.1	3.2	15.5	9.4	11.2	9.2	6.0	4.1	26.4	57.6	25.4	14.6	57.6
10	28.0	S	14.6	10.8	8.8	6.4	7.8	19.3	18.9	13.5	18.3	19.9	7.5	13.2	9.9	10.2	7.4	9.6	12.5	12.8	10.4	7.8	12.9	10.0	12.6	28.0
11	16.2	S	12.1	14.8	12.6	11.4	53.7	48.3	30.0	25.5	25.2	15.1	15.3	10.3	9.5	32.0	98.3	89.5	55.9	26.5	42.9	54.6	39.5	19.8	33.0	98.3
12	34.9	S	37.6	33.0	50.1	37.2	40.6	48.3	82.1	57.2	42.5	57.3	47.2	35.9	25.2	50.2	62.7	41.7	34.3	26.9	20.2	14.2	9.3	9.4	39.0	82.1
13	7.1	S	6.8	6.1	7.2	6.1	6.4	5.5	7.8	8.1	14.2	11.9	9.1	7.6	8.4	11.7	9.9	10.8	15.1	15.7	13.8	18.1	15.8	13.7	10.3	18.1
14	17.0	S	19.3	21.7	24.9	37.3	22.5	11.2	11.5	8.4	13.0	6.0	10.2	14.4	26.2	30.0	50.3	16.2	25.3	24.7	18.6	17.4	19.1	15.1	20.0	50.3
15	19.4	S	23.6	14.1	19.3	20.1	20.0	23.7	26.9	30.0	27.2	26.0	22.2	18.2	25.1	18.8	18.8	13.4	14.3	17.6	14.9	15.4	12.8	10.7	19.7	30.0
16	8.5	S	13.1	12.3	19.2	12.4	7.7	11.5	16.9	14.5	12.1	11.0	11.3	10.3	9.5	7.3	11.5	7.5	8.5	10.2	8.7	9.3	9.4	7.4	10.9	19.2
17	7.9	S	27.0	27.0	16.1	37.2	12.7	3.1	9.3	25.4	29.1	8.2	29.5	4.5	3.5	17.6	24.8	21.3	16.2	11.4	8.5	15.6	10.4	6.4	16.2	37.2
18	5.9	S	9.6	9.7	7.5	13.5	8.0	17.7	18.2	9.2	7.4	17.0	5.2	5.0	3.3	6.9	13.7	15.4	10.8	11.8	19.8	13.1	8.4	6.2	10.6	19.8
19	7.8	S	14.6	7.2	4.8	13.1	50.2	36.6	39.9	35.9	45.5	49.5	34.8	27.4	14.7	33.2	39.9	35.4	31.4	73.8	34.0	38.7	38.0	60.5	33.3	73.8
20	57.2	S	40.1	40.4	39.6	35.8	33.0	34.1	38.8	47.8	72.9	26.1	10.6	7.9	14.3	13.3	35.4	26.8	21.2	33.1	34.5	52.6	26.4	19.6	33.1	72.9
21	67.6	S	132.3	133.4	45.8	32.8	17.8	27.2	37.0	66.5	60.9	59.4	55.4	58.0	59.3	87.5	115.7	70.6	53.2	41.3	29.5	31.3	36.1	32.4	58.7	133.4
22	22.1	S	21.8	22.2	22.1	20.8	19.1	18.3	20.2	29.5	18.9	25.4	16.6	13.5	7.2	9.1	11.7	25.7	6.3	6.1	5.0	5.2	7.5	8.4	15.8	29.5
23	7.3	S	6.9	7.1	4.5	4.2	5.2	5.4	5.8	4.6	5.5	4.7	17.3	5.2	6.4	7.6	7.8	7.1	8.5	9.2	8.1	8.6	7.3	11.0	7.2	17.3
24	6.3	S	5.2	5.5	4.0	4.4	4.0	4.3	4.3	8.4	4.0	5.5	13.9	11.5	7.5	10.8	12.5	18.2	8.0	5.2	3.7	4.3	6.5	10.4	7.3	18.2
25	6.4	S	12.3	5.7	13.7	6.3	4.0	3.6	5.9	7.8	7.3	4.1	3.6	3.4	5.0	3.8	10.7	4.2	2.8	8.5	4.9	5.5	2.4	5.4	6.0	13.7
26	7.4	S	5.6	4.2	3.9	3.9	3.0	4.4	30.1	9.1	9.4	9.8	12.0	7.8	7.5	14.4	7.9	5.4	10.4	5.7	2.3	5.0	12.9	3.6	8.1	30.1
27	3.6	S	5.4	4.5	7.1	9.5	13.9	26.1	23.0	35.5	26.0	17.9	22.2	16.5	13.3	29.5	12.9	7.2	6.3	5.5	4.9	7.8	4.6	4.2	13.4	35.5
28	10.6	S	5.7	7.1	3.6	4.2	26.5	49.7	18.5	10.2	9.2	8.7	14.6	9.8	9.7	11.7	12.0	16.8	13.0	30.3	36.7	34.5	37.2	18.8	17.3	49.7
29	23.1	S	44.9	29.0	28.5	18.7	10.5	17.7	17.5	25.6	12.9	3.5	2.5	2.0	2.9	6.0	4.3	2.8	1.6	3.0	2.7	2.0	1.8	2.0	11.5	44.9
30	2.3	S	11.3	12.8	12.1	8.1	42.6	15.3	11.1	16.0	13.6	14.4	6.8	10.4	9.8	7.0	7.6	11.9	5.5	9.8	6.5	25.0	25.8	9.2	12.8	42.6
31	5.8	S	12.7	9.4	6.9	8.1	6.1	4.7	8.9	5.9	10.0	8.8	7.8	3.6	5.2	6.0	4.9	5.5	3.8	4.1	6.8	5.5	4.3	5.2	6.5	12.7
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	706	100.0%
MEAN	17.3	-	21.7	20.7	15.2	15.7	17.6	18.0	20.4	21.0	21.0	18.9	17.1	14.3	13.4	18.8	25.0	21.9	17.1	18.2	18.6	18.5	17.4	14.4		
MAX	67.6	-	132.3	133.4	50.1	46.3	53.7	53.1	82.1	66.5	72.9	59.4	55.4	58.0	59.3	87.5	115.7	89.5	55.9	73.8	77.3	54.6	57.6	60.5		



Number of Non-Zero Readings	706
Maximum 1-HR Average	133.4 PPB
Maximum 24-HR Average	58.7 PPB
Monthly Calibration	7
Standard Deviation	17.37
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	18.4 PPB

Lagoon NO (ppb) – December 2022

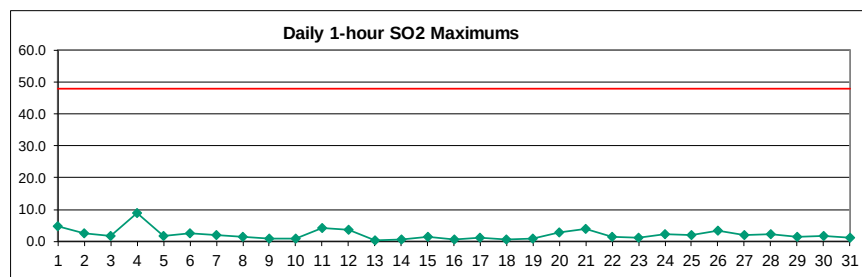
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	1.7	S	48.9	60.2	4.7	14.8	14.5	4.3	4.9	8.4	14.6	13.9	19.5	18.7	12.8	6.0	10.5	27.6	3.9	9.3	48.8	20.7	16.6	20.4	17.6	60.2
2	28.5	S	22.1	18.8	22.7	22.0	25.5	27.9	32.9	34.6	34.2	28.9	23.4	15.4	11.2	17.6	22.0	28.8	13.8	13.5	29.6	20.9	18.7	7.2	22.6	34.6
3	4.3	S	7.2	5.0	6.1	2.6	3.1	3.7	1.7	1.1	0.8	1.1	1.2	0.9	1.3	1.8	6.1	1.7	0.9	0.8	3.1	2.7	2.2	1.6	2.6	7.2
4	13.7	S	12.4	19.1	1.6	1.0	0.6	1.9	10.6	4.1	3.7	4.0	4.4	2.0	3.4	2.7	1.5	1.0	11.8	0.6	5.1	5.6	1.6	6.3	5.2	19.1
5	4.4	S	2.7	0.8	0.6	0.6	0.8	0.6	0.8	0.9	2.1	2.3	2.0	6.5	3.6	2.8	5.3	1.7	2.5	18.9	19.8	5.1	1.5	0.4	3.8	19.8
6	0.4	S	0.8	0.5	0.5	0.7	4.3	0.8	0.7	1.4	6.1	20.1	18.3	8.0	13.2	11.5	7.7	5.3	6.3	1.4	1.0	0.8	2.2	0.6	4.9	20.1
7	0.8	S	0.9	1.3	1.5	12.1	2.4	3.5	7.3	2.9	3.9	9.2	2.6	5.1	2.6	1.2	1.0	0.9	0.6	0.6	0.7	0.7	0.5	1.4	2.8	12.1
8	1.5	S	0.9	1.0	2.4	0.9	1.8	3.5	5.2	14.7	3.9	C	C	C	C	C	C	C	1.1	6.4	2.4	1.8	4.1	3.1	-	-
9	4.5	S	2.3	6.9	1.3	4.6	2.1	2.9	1.9	5.9	15.1	4.4	3.1	3.8	0.9	5.3	1.3	1.9	0.9	0.6	0.6	8.7	29.0	6.2	5.0	29.0
10	4.4	S	2.9	3.2	3.1	0.6	0.9	4.2	2.4	3.3	8.1	8.7	2.6	5.4	3.3	2.4	1.5	2.0	3.6	1.4	0.8	1.0	2.6	1.3	3.0	8.7
11	3.8	S	1.8	3.6	0.8	0.9	30.6	23.1	13.2	9.4	10.9	6.7	7.6	4.0	2.7	15.8	69.7	64.9	33.3	9.6	23.9	35.8	22.4	6.5	17.4	69.7
12	15.4	S	17.4	11.1	24.2	12.4	15.1	22.5	59.4	37.5	25.4	38.8	30.6	19.5	10.6	29.2	34.2	12.8	8.2	5.4	3.1	0.8	0.7	1.8	19.0	59.4
13	1.0	S	1.4	1.3	2.3	1.4	1.8	0.7	3.8	1.6	7.0	4.1	2.3	1.9	2.1	4.1	1.8	2.0	4.1	5.2	2.0	5.3	1.5	1.4	2.6	7.0
14	2.4	S	2.0	1.5	3.9	10.4	4.7	1.9	4.5	1.3	4.9	1.4	3.4	4.3	9.3	9.7	23.5	3.5	5.7	3.0	1.6	4.4	3.5	2.2	4.9	23.5
15	6.1	S	6.5	1.2	5.4	5.3	3.4	7.4	7.8	12.1	12.6	13.2	11.3	7.4	11.3	6.7	3.9	1.5	3.0	5.6	3.7	4.9	1.2	1.2	6.2	13.2
16	0.7	S	6.1	4.7	8.5	2.8	1.4	3.7	7.0	5.8	3.7	3.6	4.8	4.0	3.4	2.0	3.9	2.1	2.6	3.0	1.8	1.8	1.7	0.8	3.5	8.5
17	1.0	S	14.4	14.5	7.7	22.6	6.5	0.8	4.1	12.6	16.1	4.2	16.9	1.8	1.0	6.6	10.7	8.4	5.4	4.3	2.3	6.0	2.7	1.2	7.5	22.6
18	1.2	S	3.0	3.9	2.1	5.1	2.8	8.3	8.2	3.3	3.0	8.8	2.4	2.3	1.2	2.5	4.1	6.3	3.6	4.1	6.0	4.6	3.8	1.8	4.0	8.8
19	1.8	S	6.4	1.0	0.7	1.9	26.5	11.1	12.6	14.4	24.6	31.0	20.7	14.5	5.9	13.3	14.2	8.2	6.7	47.6	6.6	7.7	10.5	29.4	13.8	47.6
20	25.3	S	12.2	12.8	12.2	10.5	8.1	7.8	12.3	22.4	50.0	14.6	3.9	2.8	4.9	3.2	19.5	13.7	8.7	18.9	16.6	29.5	11.2	9.0	14.4	50.0
21	41.0	S	103.0	103.6	22.0	11.8	3.0	6.0	12.5	36.5	35.7	36.9	35.2	35.4	33.6	52.7	71.2	30.3	17.1	11.9	2.4	2.5	6.7	6.7	31.2	103.6
22	1.3	S	2.8	1.5	2.9	2.9	1.9	1.8	4.2	12.2	7.7	13.6	9.4	6.5	2.6	3.7	5.8	15.9	1.4	1.1	0.7	0.7	2.1	1.7	4.5	15.9
23	1.5	S	1.4	2.2	0.8	0.7	1.6	1.4	2.0	1.2	2.1	1.7	8.8	1.9	2.9	2.8	3.2	2.4	3.1	3.6	3.3	3.7	3.1	5.8	2.7	8.8
24	3.1	S	2.1	2.3	1.5	1.8	1.7	1.5	1.1	3.0	1.2	1.9	7.5	5.2	2.1	4.7	4.9	8.0	1.9	0.9	0.6	1.1	2.4	4.4	2.8	8.0
25	2.1	S	5.3	1.7	4.3	1.5	0.9	0.8	1.8	2.3	2.4	1.4	1.1	1.1	1.5	0.9	3.6	0.8	0.7	2.4	0.9	1.6	0.8	2.4	1.8	5.3
26	2.1	S	1.3	1.1	1.3	1.4	1.0	1.5	18.1	3.1	3.7	4.4	5.4	3.3	3.0	4.9	2.2	0.9	4.2	1.8	0.9	1.5	5.2	0.9	3.2	18.1
27	1.0	S	0.9	0.7	0.7	4.0	2.3	3.3	3.9	13.3	7.7	4.7	7.9	5.2	5.8	21.0	4.1	1.1	0.9	1.0	0.8	3.3	1.0	1.0	4.2	21.0
28	4.9	S	1.3	2.7	0.8	0.9	17.6	32.0	6.8	2.0	2.1	2.3	6.3	3.7	3.3	3.2	3.2	5.9	2.6	14.6	18.5	16.4	18.3	3.6	7.5	32.0
29	6.3	S	24.2	8.8	10.2	7.5	3.6	7.3	6.9	12.1	4.2	1.2	1.1	0.8	1.1	2.2	1.4	1.1	0.7	0.8	0.7	0.7	0.7	0.7	4.5	24.2
30	0.8	S	3.8	5.2	4.7	2.2	31.0	5.5	2.5	4.8	4.6	6.3	1.9	3.5	3.0	1.2	1.1	3.2	0.7	4.0	1.3	14.5	12.8	2.8	5.3	31.0
31	1.2	S	5.3	4.2	1.6	3.3	1.6	1.0	2.8	1.5	4.1	3.0	2.5	1.1	1.7	1.5	0.8	1.2	0.7	0.9	2.0	1.2	0.7	1.5	2.0	5.3
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	706	100.0%
MEAN	6.1	-	10.4	9.9	5.3	5.5	7.2	6.5	8.5	9.3	10.5	9.9	8.9	6.5	5.5	8.1	11.5	8.8	5.2	6.6	6.8	7.0	6.2	4.4		
MAX	41.0	-	103.0	103.6	24.2	22.6	31.0	32.0	59.4	37.5	50.0	38.8	35.2	35.4	33.6	52.7	71.2	64.9	33.3	47.6	48.8	35.8	29.0	29.4		



Number of Non-Zero Readings	706		
Maximum 1-HR Average	103.6 PPB		
Maximum 24-HR Average	31.2 PPB		
Monthly Calibration	7	Operational Time	744 HRS
Standard Deviation	11.16	Operational Uptime	100.0 %
		Monthly Average	7.6 PPB

Lagoon SO₂ (ppb) – December 2022

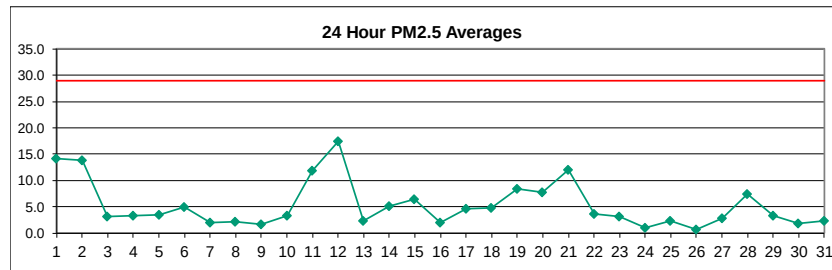
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	1.6	S	2.1	2.6	1.7	1.5	1.1	1.3	1.6	2.7	2.4	2.9	3.7	3.5	2.8	3.0	3.5	4.9	4.3	3.5	3.2	1.9	1.8	1.7	2.6	4.9
2	2.3	S	1.8	1.6	2.3	1.7	1.7	1.2	0.9	1.6	1.7	0.9	0.6	0.6	1.2	1.2	1.2	1.4	0.5	1.5	1.4	2.5	2.5	1.9	1.5	2.5
3	1.6	S	1.4	0.8	0.9	0.9	1.0	1.0	0.7	1.2	0.8	0.6	1.2	1.0	0.8	1.7	0.9	0.5	0.9	0.8	0.2	0.7	1.1	1.0	0.9	1.7
4	3.7	S	6.3	9.0	1.2	0.7	0.6	1.3	1.1	0.6	1.0	1.3	1.0	1.4	0.9	0.8	1.0	0.8	1.0	1.0	1.6	1.1	0.6	0.7	1.7	9.0
5	0.7	S	1.2	1.2	1.3	1.3	1.3	0.7	1.2	1.3	1.7	1.2	1.4	1.8	1.3	0.9	0.8	0.7	1.4	1.5	1.1	0.9	1.3	0.8	1.2	1.8
6	2.1	S	2.1	1.9	1.9	2.1	1.4	1.5	1.4	1.7	1.2	1.5	1.7	2.0	1.3	1.1	2.5	1.3	1.2	1.1	1.0	1.4	1.3	1.0	1.6	2.5
7	1.2	S	1.3	1.6	0.8	1.4	1.3	0.8	1.6	1.0	1.3	1.1	1.2	0.3	1.0	1.3	1.1	1.2	1.4	1.5	1.9	1.0	1.6	1.2	1.2	1.9
8	1.0	S	1.3	1.0	1.2	0.8	0.7	0.8	0.9	1.4	1.2	C	C	C	C	C	0.7	0.2	0.2	0.5	0.4	0.7	0.5	0.3	0.8	1.4
9	0.3	S	0.8	0.3	0.4	0.7	0.0	0.0	0.2	0.6	0.5	0.5	0.3	1.0	0.1	0.2	0.3	0.0	0.0	0.6	0.4	0.0	0.6	0.3	0.4	1.0
10	0.1	S	0.1	0.7	0.6	0.1	0.3	0.5	0.7	0.3	0.8	1.0	0.4	0.6	0.6	0.6	0.5	0.5	0.3	0.2	0.6	0.8	0.2	0.6	0.5	1.0
11	0.7	S	1.2	0.5	0.1	0.4	2.2	1.7	1.3	1.9	0.8	1.4	2.2	1.7	1.4	1.8	2.8	2.8	2.4	3.0	3.6	4.2	4.4	4.2	2.0	4.4
12	3.6	S	2.2	1.3	1.8	1.3	1.0	1.3	2.0	1.8	1.5	1.2	1.7	0.6	0.6	1.2	1.0	0.6	0.9	1.0	0.2	0.0	0.0	0.2	1.2	3.6
13	0.2	S	0.5	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.3	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5
14	0.0	S	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.5	0.0	0.0	0.7	0.3	0.0	0.1	0.7
15	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	1.5	0.0	0.0	0.1	0.0	0.1	1.5
16	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0	0.2	0.2	0.1	0.7	0.6	0.4	0.2	0.7	0.1	0.0	0.0	0.0	0.2	0.7
17	0.3	S	0.3	0.0	0.6	0.6	0.2	0.2	0.9	1.2	0.7	0.4	0.8	0.6	0.1	0.5	0.4	0.5	0.5	0.5	0.1	0.0	0.3	1.2	0.5	1.2
18	0.5	S	0.0	0.5	0.3	0.2	0.6	0.1	0.0	0.3	0.1	0.6	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.5	0.5	0.3	0.4	0.5	0.3	0.6
19	0.8	S	0.6	0.8	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.1	0.7	0.3	0.3	0.0	0.2	0.0	0.6	1.0	0.4	0.0	0.0	0.0	0.3	1.0
20	0.4	S	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.6	0.2	0.3	0.6	2.3	2.3	2.7	2.5	2.5	2.6	2.0	2.3	2.4	2.0	1.1	2.7
21	3.1	S	3.8	3.6	1.0	1.7	0.8	0.5	0.0	0.3	0.8	0.3	0.9	0.5	0.6	0.4	1.5	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.9	3.8
22	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.4
23	0.0	S	0.0	0.0	0.1	0.0	0.0	0.6	0.3	0.5	0.1	0.3	0.2	0.3	0.9	0.7	0.8	0.4	0.5	0.5	0.9	1.2	0.9	0.5	0.4	1.2
24	0.6	S	1.0	0.5	0.2	0.0	0.1	0.0	0.0	0.2	0.3	0.3	0.9	0.1	0.4	0.9	2.4	2.1	0.9	0.4	0.5	0.0	0.9	0.8	0.6	2.4
25	1.3	S	1.6	0.3	0.8	0.8	0.2	0.0	0.3	1.6	1.9	0.6	0.0	0.4	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.2	0.4	0.0	0.5	1.9
26	0.3	S	1.4	0.4	0.1	0.9	0.7	1.5	1.6	1.1	1.0	1.2	2.1	3.5	2.2	0.9	1.8	0.3	0.5	1.2	0.7	1.0	1.6	0.2	1.1	3.5
27	1.2	S	0.5	0.8	0.4	0.0	0.9	1.0	1.3	1.7	2.0	1.8	1.8	1.2	1.4	1.8	1.8	1.6	1.1	0.6	1.4	1.7	0.7	0.6	1.2	2.0
28	0.9	S	0.9	1.0	1.1	0.9	1.6	2.2	2.0	1.4	1.4	1.5	1.4	1.5	1.3	1.2	0.7	2.0	1.2	2.1	1.7	1.9	1.3	0.3	1.4	2.2
29	0.9	S	1.1	0.5	1.3	0.1	0.6	0.4	0.8	0.6	0.6	0.6	0.4	0.7	0.6	0.4	0.4	0.7	0.7	0.3	1.6	0.3	0.6	0.2	0.6	1.6
30	1.0	S	1.4	0.8	0.3	0.7	0.8	0.8	1.2	1.2	1.0	1.5	0.6	1.1	0.9	0.7	1.0	1.8	0.6	0.7	1.0	1.5	0.7	0.9	1.0	1.8
31	1.1	S	1.1	0.8	0.8	0.5	0.4	0.9	0.9	0.9	0.9	1.0	0.5	0.7	0.3	0.7	0.3	0.9	0.4	0.4	0.4	0.0	0.7	0.4	0.6	1.1
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	708	100.0%
MEAN	1.0	-	1.2	1.0	0.7	0.6	0.7	0.7	0.7	0.9	0.9	0.8	0.9	0.9	0.8	0.8	1.0	0.9	0.8	0.9	0.9	0.8	0.9	0.7		
MAX	3.7	-	6.3	9.0	2.3	2.1	2.2	2.2	2.0	2.7	2.4	2.9	3.7	3.5	2.8	3.0	3.5	4.9	4.3	3.5	3.6	4.2	4.4	4.2		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	590
Maximum 1-HR Average	9.0 PPB
Maximum 24-HR Average	2.6 PPB
Monthly Calibration	5
Standard Deviation	0.892
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	0.9 PPB

Lagoon PM_{2.5} (µg/m³) – December 2022

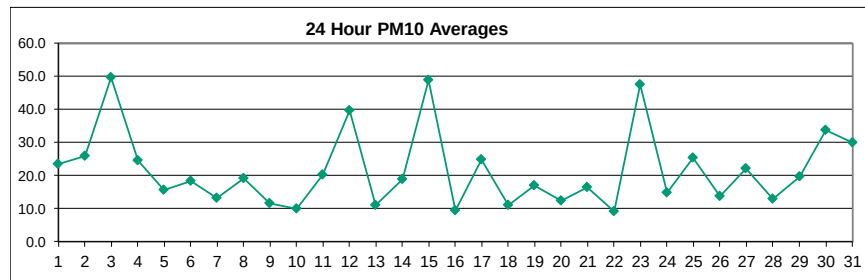
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	6.6	8.3	7.7	19.4	18.0	17.0	17.4	20.1	9.9	12.3	12.8	15.5	15.1	14.4	21.4	14.5	14.9	17.6	13.6	9.4	8.3	15.8	14.5	16.3	14.2	21.4
2	9.7	17.5	14.2	16.9	13.6	11.0	14.7	11.5	8.8	10.4	6.9	7.6	7.7	10.4	8.3	8.3	16.3	18.1	20.1	18.3	24.1	22.8	15.7	19.3	13.8	24.1
3	14.3	8.9	6.1	3.9	1.6	3.0	3.0	1.6	2.6	2.3	2.6	1.7	0.0	0.0	0.0	0.0	6.1	3.4	4.7	2.5	0.0	1.7	3.3	2.8	3.2	14.3
4	0.0	2.3	4.7	4.7	11.4	6.3	0.8	0.4	0.0	1.9	3.6	3.0	4.3	2.4	2.0	3.7	3.6	1.5	1.3	5.8	4.5	6.2	5.3	2.2	3.4	11.4
5	10.5	X	1.8	0.8	1.2	2.2	1.1	0.4	0.5	1.1	0.8	0.0	0.0	0.0	6.2	7.5	5.3	2.2	2.4	7.1	11.5	8.9	4.4	4.5	3.5	11.5
6	5.8	4.3	2.3	3.1	6.1	3.9	0.5	3.2	8.6	5.1	3.7	3.7	4.7	4.1	5.2	7.0	9.0	7.2	4.5	5.9	6.5	5.6	4.7	3.6	4.9	9.0
7	3.0	3.6	0.8	0.5	1.5	0.2	2.6	1.8	0.8	0.8	0.1	0.0	0.0	1.6	2.2	1.2	2.6	4.0	4.0	3.3	2.3	4.4	4.0	2.9	2.0	4.4
8	2.3	3.0	3.6	2.9	2.6	1.5	0.8	0.7	0.0	1.0	2.8	1.6	1.9	1.7	0.2	1.3	2.6	4.4	4.3	3.4	3.7	3.9	2.4	0.9	2.2	4.4
9	1.9	2.3	3.0	3.2	2.4	2.1	0.8	0.3	2.1	1.2	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.9	3.0	4.0	4.7	1.6	4.7
10	30.9	X	2.3	3.0	3.1	1.6	2.1	1.2	1.9	2.0	0.0	1.9	1.9	0.0	0.0	0.0	1.2	1.3	2.8	4.3	3.2	2.4	4.2	5.4	3.3	30.9
11	4.2	2.6	3.0	2.8	1.6	2.9	5.9	9.4	14.9	15.7	16.9	13.5	16.5	12.5	14.1	11.8	14.3	19.0	19.0	12.8	16.5	15.3	17.4	22.7	11.9	22.7
12	16.6	21.9	15.7	17.4	21.2	23.3	22.0	22.4	24.4	22.7	19.7	21.5	23.1	20.6	22.3	13.6	15.8	17.3	13.7	11.2	13.6	8.9	5.2	5.4	17.5	24.4
13	4.0	0.1	0.0	0.0	0.0	2.2	1.7	0.8	3.4	3.5	2.3	5.3	3.7	0.8	1.2	1.5	1.8	3.5	2.6	4.0	3.1	1.8	4.0	3.6	2.3	5.3
14	1.0	5.8	5.8	5.4	7.5	5.4	5.6	6.7	5.1	4.9	3.2	2.3	2.3	2.0	2.9	6.0	9.7	9.0	5.7	5.0	6.6	6.8	5.3	3.6	5.1	9.7
15	3.1	4.5	5.3	6.7	6.9	16.2	1.9	4.9	6.2	8.5	7.0	4.9	5.9	6.9	7.7	10.9	10.5	7.8	6.4	7.5	6.1	2.4	0.7	0.7	6.5	16.2
16	2.6	2.3	2.6	2.0	0.8	3.4	4.0	3.8	1.5	1.1	0.5	1.3	2.4	1.0	2.2	1.9	1.7	2.4	3.3	3.1	1.0	0.2	1.3	2.2	2.0	4.0
17	1.3	0.5	6.8	5.8	5.4	7.3	7.5	5.7	2.0	3.4	4.3	6.0	4.6	6.3	4.3	3.5	2.0	3.7	6.6	6.7	5.1	4.7	4.1	5.2	4.7	7.5
18	8.8	9.6	8.0	7.7	5.2	3.1	4.1	7.2	6.0	4.2	2.8	1.6	2.0	2.6	2.4	3.6	3.6	6.0	4.5	2.7	3.4	4.2	5.4	5.0	4.7	9.6
19	4.0	4.1	4.7	4.3	3.7	3.6	3.8	7.2	6.9	7.0	10.5	8.3	10.3	9.7	8.8	9.8	10.4	14.7	10.7	10.4	19.8	12.0	9.4	8.8	8.5	19.8
20	9.7	11.8	13.7	12.8	10.3	8.2	6.6	7.4	8.6	7.4	8.7	11.5	7.6	7.4	5.6	6.9	6.4	5.2	5.4	4.8	3.1	7.2	6.6	4.0	7.8	13.7
21	4.8	14.3	10.1	13.2	14.3	9.7	6.5	6.6	10.0	12.1	13.5	10.7	9.0	8.8	11.4	10.6	15.8	25.6	18.4	25.2	10.6	8.3	10.8	9.9	12.1	25.6
22	8.0	8.0	5.2	3.5	5.0	3.9	2.5	2.7	3.3	3.5	4.7	4.3	3.2	2.3	2.6	3.1	4.0	3.2	2.1	0.9	0.0	3.7	4.0	3.0	3.6	8.0
23	1.0	2.4	3.6	2.8	4.4	3.9	2.6	2.0	0.6	1.8	0.9	0.0	3.8	4.4	3.9	3.6	8.2	9.8	6.8	3.4	3.5	2.0	0.1	0.0	3.1	9.8
24	0.0	0.0	0.0	0.0	0.6	2.0	0.2	0.0	0.0	0.0	0.9	1.4	0.6	0.0	0.2	1.2	1.6	1.8	1.8	4.2	3.2	0.0	0.7	2.8	1.0	4.2
25	1.7	5.8	5.3	3.9	2.3	0.4	3.3	3.6	5.3	4.2	5.5	2.6	0.0	0.0	1.6	2.5	1.5	1.3	2.0	0.5	1.2	1.1	0.4	0.4	2.4	5.8
26	0.0	1.2	1.5	0.2	1.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	2.2	4.3	3.4	1.3	0.0	0.0	0.0	0.0	0.0	0.7	4.3
27	0.0	0.0	0.7	0.0	0.0	1.9	1.8	1.3	2.4	1.2	4.0	3.2	2.4	6.4	4.6	3.8	5.3	4.1	4.7	4.2	2.6	2.3	3.0	7.9	2.8	7.9
28	3.8	1.8	4.1	2.6	0.0	0.0	0.0	1.3	16.4	11.4	10.5	11.7	11.5	10.9	8.1	4.9	3.4	6.7	7.8	7.0	11.5	15.9	13.0	15.0	7.5	16.4
29	10.9	12.2	16.5	13.0	12.4	6.6	1.5	1.2	1.3	2.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.0	0.0	3.3	16.5
30	0.0	0.0	0.9	1.7	2.9	2.3	2.8	1.1	0.6	2.6	8.1	5.7	1.7	0.1	0.9	1.7	0.5	1.3	2.0	0.0	0.0	1.9	2.3	3.0	1.8	8.1
31	3.7	4.2	5.6	3.7	3.8	4.7	4.2	2.0	0.2	0.0	0.0	3.2	2.5	1.5	0.9	1.4	3.4	3.3	0.0	0.0	0.2	0.0	2.4	3.9	2.3	5.6
NO.	31	29	31	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	739	99.7%
MEAN	5.6	5.6	5.3	5.4	5.5	5.2	4.3	4.5	5.0	5.0	5.3	5.2	4.9	4.4	4.9	4.7	6.0	6.8	5.9	5.6	5.8	5.7	5.2	5.5		
MAX	30.9	21.9	16.5	19.4	21.2	23.3	22.0	22.4	24.4	22.7	19.7	21.5	23.1	20.6	22.3	14.5	16.3	25.6	20.1	25.2	24.1	22.8	17.4	22.7		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	658
Maximum 1-HR Average	30.9 UG/M3
Maximum 24-HR Average	17.5 UG/M3
Monthly Calibration	3
Standard Deviation	5.407
Operational Time	742 HRS
Operational Uptime	99.7 %
Monthly Average	5.3 UG/M3

Lagoon PM₁₀ (µg/m³) – December 2022

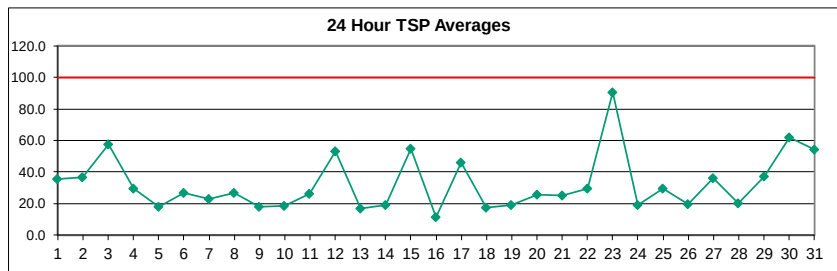
HOUR																										
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX
1	10.0	8.9	30.9	25.2	29.9	33.3	31.9	22.0	14.4	17.6	17.2	26.7	18.4	38.7	25.0	15.9	26.6	15.7	33.5	14.9	32.7	23.7	40.1	10.6	23.5	40.1
2	20.8	17.3	12.6	24.4	9.0	14.7	11.8	5.6	10.9	13.1	21.7	8.0	5.7	12.3	15.3	11.2	22.6	29.5	37.8	38.0	104.9	68.9	63.4	41.4	25.9	104.9
3	29.8	48.1	66.3	33.8	50.8	35.3	24.2	37.3	9.9	20.4	22.8	19.0	5.0	15.1	37.2	55.6	67.0	34.8	57.7	32.3	111.0	157.2	133.5	86.8	49.6	157.2
4	91.6	109.8	43.5	49.3	63.0	13.9	8.4	1.8	14.2	0.0	9.5	10.9	11.7	18.3	18.2	18.4	5.5	8.5	20.4	23.9	13.6	15.4	11.3	8.6	24.6	109.8
5	5.1	20.3	4.0	4.7	5.3	5.2	2.2	8.0	6.6	3.3	4.0	5.1	14.7	11.3	22.3	23.8	27.3	38.9	29.6	23.5	34.1	39.6	15.0	18.5	15.5	39.6
6	10.4	18.3	21.0	22.1	16.3	17.3	11.0	15.5	8.6	7.0	14.1	28.8	54.5	X	13.5	13.2	23.9	13.0	18.4	22.0	14.1	26.6	22.5	11.7	18.4	54.5
7	12.0	19.7	7.5	11.1	17.9	8.0	14.0	10.0	8.0	6.9	9.0	14.8	21.9	12.6	10.0	23.0	22.3	21.9	26.9	7.8	10.3	7.2	3.6	10.1	13.2	26.9
8	10.8	29.2	16.2	14.6	8.2	8.6	19.7	6.4	14.3	18.4	20.7	31.0	38.1	17.1	8.8	16.1	25.0	15.1	23.8	30.5	30.3	22.8	16.4	17.6	19.2	38.1
9	12.2	15.8	14.1	23.2	16.9	30.0	4.5	3.3	7.8	6.1	C	C	C	14.6	5.2	5.4	10.1	10.1	11.5	15.4	9.4	6.9	18.0	5.0	11.7	30.0
10	16.2	16.2	14.3	12.5	8.3	5.2	9.2	7.4	7.6	9.0	5.2	4.8	16.0	8.4	5.5	6.5	4.6	4.9	11.8	12.3	32.4	9.5	4.9	8.5	10.0	32.4
11	7.4	13.5	9.2	19.1	21.6	29.9	14.9	15.2	17.5	17.5	22.7	25.4	18.4	19.0	13.7	16.3	23.2	30.6	36.5	24.8	17.8	20.5	27.1	20.6	20.1	36.5
12	23.9	30.3	23.9	29.2	53.7	63.8	39.6	52.7	53.9	106.9	65.0	42.9	76.7	63.7	36.1	27.7	26.9	21.3	24.7	27.8	27.1	16.5	12.8	7.2	39.8	106.9
13	5.9	5.2	3.6	1.1	0.7	7.0	3.6	0.6	0.7	3.0	11.8	14.0	9.7	11.5	12.6	21.9	19.6	24.4	18.8	13.2	18.1	22.1	16.9	15.5	10.9	24.4
14	7.5	29.4	21.9	19.0	19.4	14.4	26.8	17.9	4.6	5.0	9.7	12.0	63.5	X	17.8	19.9	16.8	15.5	10.5	18.4	20.5	26.0	13.5	21.4	18.8	63.5
15	38.6	13.9	34.4	45.7	62.0	116.1	49.7	68.4	75.0	77.3	65.0	61.6	69.9	43.6	46.4	59.4	54.6	64.2	24.8	28.7	35.1	22.0	8.8	9.4	48.9	116.1
16	10.9	24.2	11.5	6.3	3.3	3.4	3.8	3.4	9.4	9.6	11.0	12.5	10.5	14.2	18.8	12.5	10.4	12.4	8.9	4.6	5.3	5.4	5.7	7.6	9.4	24.2
17	9.9	15.3	30.0	34.4	47.2	31.1	46.8	40.3	26.7	24.5	28.4	42.8	27.1	16.0	9.6	10.2	11.4	21.0	30.7	21.7	16.3	13.8	25.6	14.6	24.8	47.2
18	17.5	12.6	25.6	13.0	5.0	12.4	3.4	3.4	5.1	14.0	16.8	11.1	15.3	7.5	3.3	4.2	10.3	6.9	13.9	15.8	8.4	20.0	11.4	6.3	11.0	25.6
19	12.4	4.0	4.1	4.7	4.6	4.5	3.6	6.5	10.1	10.0	15.4	19.0	16.1	29.9	66.1	X	21.2	6.7	7.1	10.8	20.0	13.7	81.1	X	16.9	81.1
20	14.7	18.5	15.0	10.3	5.6	2.0	2.8	4.5	8.7	20.5	26.8	23.1	12.4	5.9	20.3	15.8	18.8	23.1	18.0	10.4	6.9	3.3	8.2	4.0	12.5	26.8
21	1.5	3.8	8.6	13.7	15.1	12.0	10.7	10.1	10.0	8.8	14.6	18.5	20.3	15.5	15.0	13.2	34.2	79.3	25.2	24.9	8.3	9.5	5.7	15.1	16.4	79.3
22	6.2	3.4	0.8	2.3	3.9	2.2	1.6	4.3	7.1	10.7	11.0	8.1	13.4	13.0	14.7	16.0	9.3	11.6	12.8	13.4	17.4	10.6	13.7	9.3	9.0	17.4
23	10.6	23.2	5.2	3.8	3.7	6.8	9.3	14.3	19.8	10.7	14.8	22.6	43.2	69.2	188.3	134.3	148.5	80.2	93.2	83.1	60.7	30.7	28.2	38.4	47.6	188.3
24	46.6	38.7	28.7	31.5	33.8	27.9	16.9	5.8	3.9	5.1	7.7	4.5	3.1	2.7	12.6	10.6	10.0	18.5	9.7	7.1	9.7	6.4	4.5	10.7	14.9	46.6
25	26.2	20.0	25.2	37.5	41.5	51.1	21.8	24.4	31.5	31.6	8.6	8.2	13.6	4.5	8.9	15.4	14.1	13.8	16.1	15.7	15.5	10.9	34.6	117.0	25.3	117.0
26	21.4	8.5	7.9	15.2	7.2	5.3	5.0	7.2	7.2	22.4	25.5	16.2	43.3	35.4	11.6	18.1	11.0	7.5	8.5	7.2	9.5	4.7	6.0	16.1	13.7	43.3
27	10.6	18.5	9.7	7.4	18.2	50.3	8.1	10.0	22.9	8.0	22.1	11.3	21.4	23.2	11.5	35.9	44.4	20.7	23.9	21.1	27.8	25.5	27.7	50.5	22.1	50.5
28	13.9	2.9	17.6	26.3	4.2	1.1	4.9	8.2	24.1	11.5	12.2	12.7	11.7	12.9	8.5	11.4	5.6	7.6	8.9	11.5	22.8	26.6	23.3	19.3	12.9	26.6
29	12.4	20.0	25.9	43.5	32.3	15.1	21.0	36.7	33.9	44.4	35.6	20.8	3.8	7.7	9.9	7.5	8.7	13.6	10.3	18.5	15.4	14.4	10.4	8.2	19.6	44.4
30	9.5	5.0	7.9	8.7	10.2	33.9	43.9	41.5	73.4	47.2	26.8	50.6	36.7	22.5	39.4	31.9	43.0	36.3	42.9	17.6	17.0	7.9	29.1	124.3	33.6	124.3
31	88.4	43.7	69.1	71.2	82.8	76.6	56.8	21.2	9.6	21.2	12.8	14.0	24.6	33.9	2.0	2.8	6.7	22.7	9.6	11.4	11.4	10.2	5.3	9.8	29.9	88.4
NO.	31	31	31	31	31	31	31	31	31	31	30	30	30	29	31	30	31	31	31	31	31	31	31	30	737	99.5%
MEAN	19.8	21.2	19.9	21.4	22.6	23.8	17.1	16.6	18.0	19.7	19.6	20.0	24.7	20.7	23.5	22.5	25.3	23.6	23.4	20.3	25.3	22.5	23.5	24.8		
MAX	91.6	109.8	69.1	71.2	82.8	116.1	56.8	68.4	75.0	106.9	65.0	61.6	76.7	69.2	188.3	134.3	148.5	80.2	93.2	83.1	111.0	157.2	133.5	124.3		



Number of Non-Zero Readings	736
Maximum 1-HR Average	188.3 UG/M3
Maximum 24-HR Average	49.6 UG/M3
Monthly Calibration	3
Standard Deviation	21.61
Operational Time	740 HRS
Operational Uptime	99.5 %
Monthly Average	21.7 UG/M3

Lagoon TSP (µg/m³) – December 2022

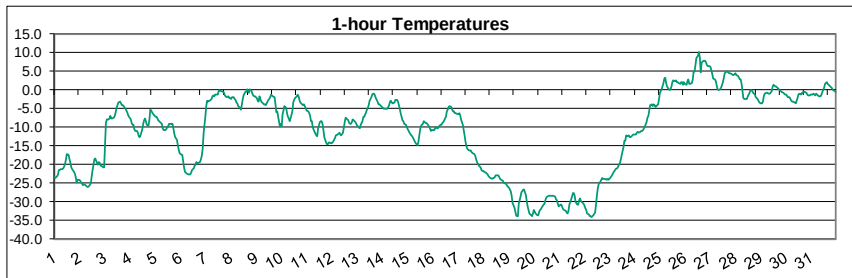
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	20.0	30.9	37.8	42.9	37.9	45.9	46.6	30.0	15.5	17.4	33.4	34.4	26.6	60.9	25.0	22.8	34.9	37.9	46.1	18.9	48.7	50.8	68.7	19.8	35.6	68.7
2	25.5	34.2	19.5	16.6	11.4	15.0	6.0	12.5	8.8	15.7	20.5	11.2	8.7	12.9	19.2	12.2	35.6	55.6	57.0	64.0	156.0	110.3	96.9	58.6	36.8	156.0
3	34.4	93.9	118.3	64.7	83.9	35.9	29.6	36.0	15.3	14.5	24.9	20.5	9.8	7.9	24.0	34.0	81.9	52.2	71.7	31.5	122.6	145.8	123.8	103.1	57.5	145.8
4	86.0	119.4	58.6	62.6	66.0	17.8	8.5	8.5	8.5	8.6	11.3	12.9	19.4	17.0	21.2	27.3	12.6	12.2	36.4	41.9	12.6	17.9	11.3	12.8	29.6	119.4
5	17.6	35.7	11.3	11.2	8.5	7.1	5.6	1.9	8.4	5.6	2.9	2.0	12.5	10.4	23.9	29.1	27.1	42.2	21.3	30.5	28.4	42.4	25.1	25.0	18.2	42.4
6	22.4	23.8	26.8	33.9	11.7	21.9	12.6	17.9	11.4	15.5	17.3	31.3	49.2	63.4	18.5	28.4	42.7	33.2	29.2	27.9	29.3	33.1	26.4	19.0	27.0	63.4
7	40.3	75.4	80.6	52.4	42.2	22.2	20.6	12.8	15.1	8.7	12.7	14.1	15.1	7.1	7.3	12.6	11.6	19.9	28.6	12.4	7.1	7.1	6.0	12.6	22.7	80.6
8	13.6	35.4	16.5	9.7	6.0	11.3	12.4	10.0	13.2	28.2	32.1	41.7	50.4	29.3	9.4	28.9	45.5	22.0	32.9	51.5	52.0	43.1	21.1	21.7	26.6	52.0
9	18.3	18.6	13.4	30.0	26.9	37.3	5.3	4.1	22.2	11.1	C	C	C	3.2	12.6	16.9	22.1	15.6	26.9	30.5	5.9	14.3	29.0	18.1	18.2	37.3
10	125.8	X	21.7	16.5	13.4	9.6	17.0	7.4	10.3	12.2	8.6	11.2	22.9	5.5	12.1	9.4	15.7	7.6	10.7	10.0	40.9	12.2	9.4	15.6	18.5	125.8
11	6.8	15.2	14.0	25.2	29.9	52.3	16.7	27.6	25.4	27.9	28.9	35.4	18.6	22.0	19.6	21.6	38.8	48.0	41.8	30.9	21.6	15.7	18.8	23.1	26.1	52.3
12	21.4	45.2	29.2	43.5	70.1	73.6	53.5	60.3	79.6	185.0	98.1	58.9	115.1	78.4	38.9	27.9	28.5	32.5	26.5	37.5	34.9	14.2	14.0	3.3	52.9	185.0
13	5.6	4.8	8.5	8.2	5.4	3.3	5.7	5.4	2.8	6.8	25.2	15.9	18.5	11.1	21.4	25.7	31.4	36.3	25.7	20.5	28.9	36.1	25.7	28.2	17.0	36.3
14	11.0	28.5	11.9	17.4	20.8	13.0	46.9	30.0	3.0	4.5	15.9	9.6	17.4	13.1	18.5	20.5	17.1	18.3	10.7	26.6	19.6	38.8	16.3	27.1	19.0	46.9
15	50.0	17.4	25.6	52.8	61.4	120.7	46.4	63.6	73.0	68.7	63.8	64.8	75.0	57.0	79.9	75.3	70.8	86.7	36.8	31.7	39.8	33.2	10.2	13.4	54.9	120.7
16	20.9	29.7	10.7	5.4	3.1	4.4	4.4	5.7	16.6	15.3	14.5	17.3	9.9	11.5	24.5	28.8	13.4	8.2	5.7	5.4	2.8	1.9	4.9	8.9	11.4	29.7
17	7.6	25.4	50.3	56.3	81.3	56.6	66.9	77.9	58.8	64.1	56.8	64.9	40.6	41.1	23.7	13.7	23.7	38.1	63.0	43.4	26.9	52.1	45.5	31.7	46.3	81.3
18	29.4	32.6	44.6	22.6	13.9	12.2	8.2	7.7	22.3	12.2	18.2	9.3	24.8	9.6	7.0	7.0	15.7	9.0	24.3	27.1	10.7	18.5	29.4	8.2	17.7	44.6
19	7.3	18.9	14.3	14.8	0.0	3.0	2.5	0.0	9.7	19.7	21.9	20.2	38.0	49.4	21.4	15.1	24.0	25.0	12.5	12.5	21.7	22.8	65.5	22.9	19.3	65.5
20	17.0	18.6	21.6	14.2	4.2	5.9	7.3	9.1	16.5	40.4	70.6	46.3	37.1	25.4	48.4	33.7	27.4	44.6	33.4	22.0	19.4	18.8	27.3	10.7	25.8	70.6
21	8.1	20.3	5.9	18.0	16.5	13.6	10.3	14.3	16.5	15.2	24.3	20.0	24.2	28.5	31.9	24.6	73.0	123.6	26.6	28.0	16.5	9.0	13.2	16.9	25.0	123.6
22	12.2	8.2	6.0	8.4	6.8	4.7	7.3	10.3	24.2	16.8	16.9	17.9	26.4	51.0	69.3	56.3	40.1	40.3	53.0	64.6	47.8	42.3	49.4	23.4	29.3	69.3
23	33.5	43.7	26.5	25.0	13.0	15.7	20.2	37.2	24.0	26.5	29.8	56.1	72.9	98.5	239.4	294.2	269.3	191.3	210.1	157.4	106.0	75.4	53.4	46.3	90.2	294.2
24	41.6	60.4	33.4	32.6	28.0	38.3	20.7	7.0	5.6	5.2	11.9	6.8	5.1	12.2	19.4	17.7	15.6	26.0	10.8	8.3	17.6	12.3	10.0	17.1	19.3	60.4
25	41.7	40.9	46.6	51.9	48.8	76.4	22.9	29.4	43.6	52.9	9.9	10.3	14.0	14.2	14.9	11.6	13.9	13.9	23.4	20.9	20.0	13.0	19.7	47.3	29.3	76.4
26	4.4	16.5	23.5	21.7	15.5	4.3	1.6	1.6	4.3	26.8	28.5	28.1	73.3	56.3	19.1	24.9	12.1	8.0	14.3	6.6	13.0	5.9	21.5	45.2	19.9	73.3
27	20.2	34.3	19.1	15.5	24.4	86.0	9.6	20.0	31.9	10.2	23.1	19.5	32.3	43.5	28.5	59.0	76.7	37.2	44.3	34.3	51.0	34.3	35.3	78.0	36.2	86.0
28	20.5	8.0	27.8	36.8	17.6	3.1	14.8	13.1	36.9	20.2	14.5	17.3	10.5	15.1	12.4	11.6	14.6	19.3	17.1	20.0	25.5	40.2	38.2	29.7	20.2	40.2
29	19.9	23.3	33.6	52.3	44.3	21.4	29.6	65.2	55.8	70.4	75.3	42.5	16.3	24.0	27.5	35.1	28.4	42.6	29.2	38.3	23.1	29.5	31.5	31.0	37.1	75.3
30	25.9	10.0	12.6	23.6	26.6	61.3	62.9	67.1	132.7	80.9	47.0	98.1	70.0	44.9	69.9	65.5	76.9	61.3	70.6	34.6	21.3	14.3	54.0	256.9	62.0	256.9
31	174.4	83.5	112.0	142.4	151.1	137.4	98.3	28.3	13.1	37.0	22.2	22.0	33.8	54.5	12.9	15.1	16.3	43.2	21.7	17.1	19.1	14.7	9.9	19.3	54.1	174.4
NO.	31	30	31	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	740	99.9%
MEAN	31.7	35.1	31.7	33.2	32.0	33.3	23.3	23.3	26.6	30.5	29.4	28.7	32.9	31.6	33.0	35.7	40.6	40.4	37.5	32.5	35.2	32.9	32.6	35.3		
MAX	174.4	119.4	118.3	142.4	151.1	137.4	98.3	77.9	132.7	185.0	98.1	98.1	115.1	98.5	239.4	294.2	269.3	191.3	210.1	157.4	156.0	145.8	123.8	256.9		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	738
Maximum 1-HR Average	294.2 UG/M3
Maximum 24-HR Average	90.2 UG/M3
Monthly Calibration	3
Standard Deviation	32.8
Operational time	743 HRS
Operational Uptime	99.9 %
Monthly Average	32.4 UG/M3

Lagoon Temperature (°C) – December 2022

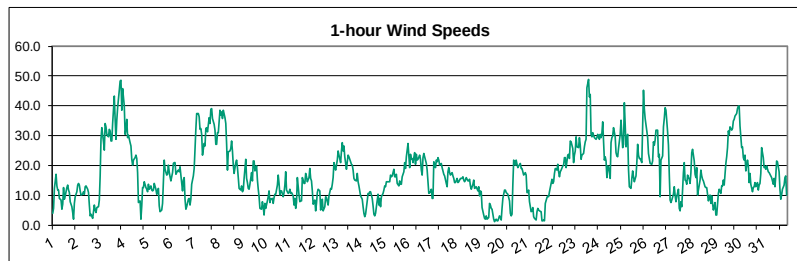
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	-23.3	-23.6	-23.1	-22.6	-21.5	-21.4	-21.3	-21.1	-21.1	-20.7	-19.9	-18.7	-17.2	-17.6	-18.6	-19.5	-20.8	-21.3	-21.9	-22.5	-23.5	-24.8	-24.2	-24.1	-21.4	-17.2
2	-24.3	-24.7	-25.1	-25.5	-25.3	-25.4	-25.8	-26.0	-26.1	-25.9	-25.0	-23.3	-21.4	-20.1	-18.7	-18.4	-19.5	-20.0	-19.3	-19.5	-20.2	-20.6	-20.8	-20.8	-22.6	-18.4
3	-14.9	-8.9	-7.8	-7.9	-7.6	-7.0	-7.6	-7.6	-7.5	-6.9	-6.0	-4.8	-4.0	-3.5	-3.2	-3.7	-4.2	-4.2	-4.3	-5.1	-5.6	-6.0	-6.7	-7.3	-6.3	-3.2
4	-8.0	-9.0	-9.3	-9.5	-10.5	-11.0	-11.1	-11.6	-12.5	-12.7	-12.1	-10.5	-9.1	-8.2	-7.7	-8.5	-9.4	-9.6	-8.0	-5.2	-5.6	-6.0	-6.8	-7.0	-9.1	-5.2
5	-7.1	-7.3	-7.6	-8.1	-8.6	-8.9	-9.2	-10.2	-10.7	-10.8	-10.7	-10.1	-9.8	-9.2	-9.0	-9.1	-9.2	-10.3	-11.8	-12.8	-13.4	-14.8	-16.1	-16.9	-10.5	-7.1
6	-17.2	-17.5	-19.0	-20.9	-21.9	-22.3	-22.5	-22.6	-22.7	-22.6	-22.3	-21.5	-21.1	-20.4	-20.0	-19.4	-19.7	-19.5	-19.2	-18.6	-17.7	-15.7	-11.7	-7.3	-19.3	-7.3
7	-4.3	-2.9	-3.1	-2.9	-2.8	-2.4	-1.9	-1.5	-1.8	-1.3	-1.3	-1.2	-0.4	-0.1	-0.3	-0.3	-0.5	-0.7	-1.4	-1.8	-1.9	-1.8	-2.1	-2.2	-1.7	-0.1
8	-2.4	-2.1	-2.0	-2.4	-2.8	-3.3	-3.7	-4.4	-4.9	-5.4	-4.2	-2.8	-1.4	-0.5	-0.6	0.2	-0.4	-0.9	0.1	-0.2	-1.0	-1.6	-1.9	-1.7	-2.1	0.2
9	-2.3	-3.0	-3.3	-1.7	-2.5	-3.1	-3.6	-3.9	-3.8	-4.2	-3.6	-2.7	-2.4	-1.9	-1.4	-1.5	-1.7	-2.1	-3.8	-6.0	-5.9	-7.1	-9.8	-9.0	-3.8	-1.4
10	-9.5	-6.6	-5.7	-4.4	-4.9	-6.3	-7.2	-7.8	-8.3	-6.8	-5.7	-3.4	-2.7	-2.2	-1.7	-1.3	-1.6	-2.8	-3.4	-3.7	-4.2	-3.8	-4.3	-4.8	-4.7	-1.3
11	-5.5	-5.9	-6.4	-7.0	-8.3	-8.4	-10.1	-11.2	-11.7	-12.2	-12.4	-10.4	-8.7	-8.4	-8.5	-9.1	-10.8	-12.8	-14.1	-14.5	-14.7	-14.1	-14.1	-14.3	-10.6	-5.5
12	-14.0	-13.9	-13.5	-12.8	-12.3	-12.0	-11.8	-11.6	-12.1	-12.2	-11.5	-10.0	-8.6	-7.5	-7.6	-8.2	-8.9	-9.2	-9.2	-8.7	-7.9	-8.4	-8.6	-9.0	-10.4	-7.5
13	-9.7	-9.9	-10.3	-9.5	-8.9	-8.4	-7.1	-7.2	-6.1	-5.4	-4.9	-4.1	-3.1	-2.1	-1.4	-1.0	-1.1	-1.6	-2.3	-3.1	-3.9	-4.0	-4.2	-4.4	-5.1	-1.0
14	-4.9	-5.1	-5.1	-5.1	-5.1	-5.0	-4.0	-3.1	-3.1	-3.5	-3.6	-3.3	-2.8	-2.6	-2.7	-3.3	-5.1	-6.4	-7.3	-8.2	-8.3	-9.2	-9.3	-10.1	-5.3	-2.6
15	-10.4	-11.0	-11.4	-12.2	-12.4	-13.0	-13.4	-14.0	-14.3	-14.7	-14.0	-12.3	-10.6	-9.6	-9.0	-8.5	-8.7	-8.9	-8.9	-9.2	-9.8	-10.2	-11.0	-10.9	-11.2	-8.5
16	-10.7	-10.9	-10.0	-10.1	-10.4	-10.4	-9.9	-9.5	-9.3	-8.9	-8.7	-8.1	-7.2	-5.8	-5.4	-4.6	-4.2	-4.6	-5.2	-5.8	-5.9	-6.3	-6.2	-6.5	-7.7	-4.2
17	-6.5	-6.4	-6.7	-7.9	-9.3	-10.7	-12.3	-13.9	-15.1	-15.7	-16.2	-16.4	-16.3	-16.7	-17.1	-17.2	-17.7	-18.7	-19.2	-19.8	-20.2	-20.8	-21.5	-21.7	-15.2	-6.4
18	-21.7	-21.9	-22.3	-22.5	-22.8	-23.1	-23.5	-23.6	-23.8	-23.7	-23.6	-23.4	-23.0	-22.9	-23.0	-23.4	-23.8	-24.1	-24.3	-24.8	-25.1	-25.2	-25.3	-25.7	-23.6	-21.7
19	-26.2	-26.6	-27.2	-28.4	-30.3	-31.6	-32.5	-33.6	-33.9	-33.8	-30.6	-28.7	-27.5	-27.2	-26.7	-26.7	-28.1	-29.8	-31.3	-32.2	-33.1	-33.5	-33.8	-33.1	-30.3	-26.2
20	-32.3	-32.6	-33.1	-33.6	-33.5	-32.8	-32.3	-31.8	-31.5	-30.7	-30.5	-29.6	-28.8	-28.7	-28.5	-28.3	-28.4	-28.3	-28.3	-28.7	-29.3	-29.7	-30.6	-30.6	-30.4	-28.3
21	-31.3	-30.8	-30.7	-31.4	-31.9	-32.1	-32.4	-33.0	-33.2	-32.5	-30.8	-30.0	-28.7	-27.7	-27.8	-28.4	-30.0	-30.9	-30.8	-29.6	-29.2	-29.7	-30.1	-30.4	-30.5	-27.7
22	-31.0	-31.7	-32.3	-33.1	-33.4	-33.7	-33.9	-34.0	-33.8	-33.6	-33.0	-30.7	-28.4	-26.6	-25.3	-24.6	-24.2	-23.7	-23.8	-23.8	-23.8	-24.1	-24.0	-24.2	-28.8	-23.7
23	-23.9	-23.5	-23.0	-22.3	-21.9	-21.6	-21.3	-21.0	-20.6	-20.1	-19.6	-18.6	-17.4	-15.3	-13.7	-13.6	-12.2	-12.4	-12.3	-12.7	-12.5	-12.3	-12.3	-12.0	-17.4	-12.0
24	-12.0	-11.9	-11.4	-11.3	-11.4	-11.3	-10.9	-11.0	-10.9	-10.4	-9.8	-8.7	-7.5	-6.9	-5.7	-4.2	-3.9	-4.4	-3.8	-4.1	-4.5	-4.4	-3.9	-2.5	-7.8	-2.5
25	-0.8	-0.4	0.1	1.8	3.0	3.2	1.9	0.8	0.1	-0.1	0.1	0.9	2.2	2.5	2.3	2.5	2.0	2.0	1.7	1.6	2.0	2.1	1.5	2.0	1.5	3.2
26	1.6	1.4	2.2	2.8	1.6	1.6	1.8	2.7	4.8	5.0	6.6	8.5	9.3	10.3	8.6	4.6	7.4	7.8	7.8	7.7	7.2	6.6	6.4	6.4	5.4	10.3
27	6.0	5.2	4.2	3.0	2.7	2.2	1.1	0.3	-0.2	0.1	0.7	1.4	2.1	3.2	4.5	5.0	4.9	4.8	4.4	4.5	4.3	3.9	3.9	4.2	3.2	6.0
28	4.4	4.1	3.6	3.3	2.9	2.9	1.5	-2.3	-2.4	-2.4	-2.4	-2.4	-1.8	-0.7	-0.2	0.0	-0.3	-0.7	-1.2	-1.9	-2.2	-2.4	-2.9	-3.4	-0.3	4.4
29	-3.6	-3.7	-3.2	-1.8	-0.9	-0.8	-0.7	-1.0	-1.1	-1.0	-0.3	0.9	1.4	1.1	1.0	0.8	0.3	0.2	-0.1	-0.4	-0.6	-0.8	-1.1	-1.3	-0.7	1.4
30	-1.3	-1.6	-1.9	-1.9	-2.4	-2.9	-3.2	-3.1	-3.4	-3.5	-3.0	-2.1	-1.3	-1.1	-1.2	-0.7	-0.7	-0.6	-0.6	-0.9	-1.3	-1.6	-1.6	-1.6	-1.8	-0.6
31	-1.4	-1.3	-1.0	-1.3	-1.5	-1.0	-1.5	-1.7	-1.6	-1.7	-1.2	-0.6	0.7	1.5	1.8	2.0	1.5	1.1	0.9	0.6	0.4	0.0	-0.4	-0.6	-0.3	2.0
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	-11.2	-11.1	-11.1	-11.2	-11.5	-11.6	-11.9	-12.2	-12.3	-12.2	-11.6	-10.5	-9.5	-8.9	-8.6	-8.7	-9.0	-9.4	-9.7	-10.0	-10.2	-10.5	-10.7	-10.7		
MAX	6.0	5.2	4.2	3.3	3.0	3.2	1.9	2.7	4.8	5.0	6.6	8.5	9.3	10.3	8.6	5.0	7.4	7.8	7.8	7.7	7.2	6.6	6.4	6.4		



Number of Non-Zero Readings	744
Maximum 1-HR Average	10.3 C
Maximum 24-HR Average	5.4 C
Monthly Calibration	0
Standard Deviation	10.76
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	-10.6 C

Lagoon Wind Speed (km/hr) – December 2022

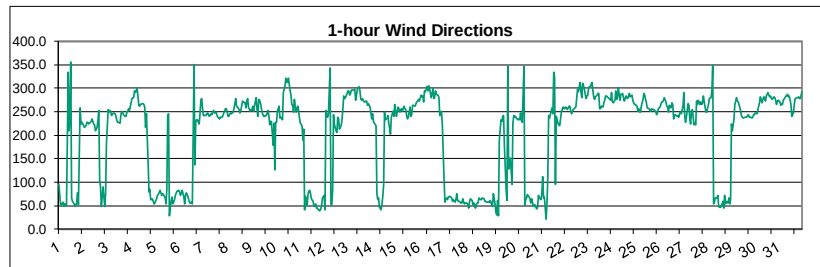
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	3.9	5.6	12.4	17.2	13.1	11.7	11.8	8.9	8.5	5.4	7.0	12.6	8.7	9.7	12.5	13.5	11.9	10.9	8.0	6.3	4.2	2.2	7.4	9.6	9.3	17.2
2	11.2	13.5	14.0	13.4	11.5	10.0	10.3	11.2	10.3	12.8	13.3	12.0	11.1	6.8	3.1	3.7	2.3	4.5	6.8	5.2	4.4	5.9	6.2	8.4	8.8	14.0
3	16.5	28.7	32.8	28.1	25.3	34.1	33.0	30.6	29.7	32.0	31.5	28.2	28.2	34.1	43.3	35.6	28.7	35.2	39.4	45.3	48.4	48.5	38.6	45.7	34.2	48.5
4	39.9	30.4	32.1	35.6	29.2	30.3	27.6	26.7	22.0	20.2	21.9	22.7	23.6	22.5	17.5	7.6	8.1	2.1	6.5	12.7	12.8	14.5	12.8	12.1	20.5	39.9
5	11.2	13.6	12.2	13.1	11.7	11.4	11.9	13.9	12.0	10.4	11.6	12.3	6.4	4.7	5.1	7.3	14.6	21.8	18.7	16.9	17.1	20.1	18.1	16.3	13.0	21.8
6	14.9	17.7	20.8	21.1	21.1	17.2	18.3	18.5	18.1	19.6	16.7	11.6	15.2	16.0	8.8	5.4	6.3	8.7	8.9	6.7	8.8	13.6	16.6	19.0	14.6	21.1
7	25.5	32.1	37.5	37.4	36.3	32.3	32.5	30.5	23.4	27.4	26.7	32.5	32.7	31.3	36.1	34.1	38.8	39.0	35.8	33.8	31.9	27.3	27.0	31.1	32.2	39.0
8	31.0	38.5	36.9	38.0	35.9	38.6	36.1	34.2	27.1	18.6	24.6	24.9	25.8	28.2	24.8	20.2	17.4	20.9	21.9	19.5	16.0	12.4	11.8	13.3	25.7	38.6
9	11.4	11.8	15.6	22.0	15.6	14.4	12.3	12.2	13.7	17.6	14.8	21.6	21.7	18.3	20.0	15.3	11.9	9.5	5.5	5.4	8.0	6.1	3.4	7.3	13.1	22.0
10	5.6	8.3	9.7	11.6	7.7	8.8	9.0	7.4	9.4	10.4	10.5	13.5	16.9	14.2	10.2	11.5	11.4	9.5	10.8	13.6	17.9	11.9	10.7	10.9	10.9	17.9
11	12.0	10.8	11.0	9.8	6.8	9.1	5.7	7.6	16.1	10.2	8.0	8.2	8.1	16.0	14.1	13.9	17.4	16.3	14.7	16.1	19.0	15.7	14.9	11.6	12.2	19.0
12	7.1	8.4	4.7	7.3	11.0	12.1	11.6	5.2	7.3	8.9	4.9	6.1	9.7	9.4	7.8	6.7	9.8	12.3	11.9	13.7	16.1	21.1	18.6	20.1	10.5	21.1
13	21.9	24.8	23.6	21.1	25.0	27.7	25.0	26.6	23.0	18.7	21.3	23.5	22.9	22.2	20.4	20.1	18.4	15.8	15.2	14.8	17.4	14.7	13.2	11.6	20.4	27.7
14	9.9	8.7	6.2	4.1	2.8	3.7	8.2	10.6	10.4	11.2	11.3	8.9	6.5	3.6	3.1	4.0	6.2	10.3	6.8	9.1	6.2	9.4	10.6	11.8	7.6	11.8
15	13.1	13.0	14.6	14.6	14.6	14.5	16.7	16.3	16.5	18.7	16.3	16.2	17.2	14.0	13.2	15.0	13.7	13.7	16.4	18.1	21.0	18.9	23.1	25.2	16.4	25.2
16	27.5	19.3	23.8	22.2	22.3	21.1	24.4	20.5	23.9	21.8	22.1	23.6	22.0	18.6	16.8	22.7	24.1	21.9	20.7	18.4	14.5	10.7	11.3	12.1	20.3	27.5
17	8.9	9.0	21.4	19.3	21.9	21.2	22.6	21.9	20.3	20.7	19.2	18.3	17.0	16.4	13.9	13.0	18.1	19.3	17.6	16.8	17.7	16.6	15.8	14.4	17.5	22.6
18	14.4	15.8	14.4	14.6	15.0	15.6	15.7	16.1	15.0	14.7	15.1	15.9	14.8	14.8	15.5	13.3	12.2	13.7	15.0	12.3	12.8	12.8	11.4	12.8	14.3	16.1
19	9.8	11.6	11.3	5.9	3.5	2.4	2.0	3.3	2.1	2.6	7.4	6.9	5.6	5.5	1.9	1.3	1.7	2.0	1.6	1.5	3.0	2.7	1.8	5.8	4.3	11.6
20	9.1	11.9	11.9	11.0	10.8	10.3	8.1	4.1	3.1	3.7	13.7	21.9	20.3	21.8	20.4	19.2	19.9	20.7	19.2	19.1	17.8	16.7	17.6	16.7	14.5	21.9
21	10.9	11.0	11.7	7.8	4.6	4.8	5.8	2.9	2.4	1.6	4.5	5.7	5.1	4.9	4.5	1.4	1.4	1.7	1.5	7.2	9.2	9.9	9.5	11.3	5.9	11.7
22	12.6	15.4	14.1	14.7	17.4	19.1	18.6	20.3	18.0	16.4	18.0	18.6	20.0	20.3	22.7	22.6	19.2	23.6	23.8	22.5	28.4	27.9	25.8	21.1	20.0	28.4
23	23.5	24.8	29.7	26.3	26.0	29.4	26.8	22.2	23.6	24.0	26.4	27.9	28.9	46.2	48.8	43.1	43.8	30.4	29.7	31.2	29.3	29.2	28.9	29.2	30.4	48.8
24	30.5	28.8	30.4	29.4	30.8	34.6	21.8	23.0	21.7	16.0	19.9	19.6	15.6	27.8	29.5	30.0	32.6	29.7	24.2	23.3	23.0	25.6	30.5	35.2	26.4	35.2
25	30.6	26.0	27.1	41.0	26.2	29.3	30.4	18.7	12.8	12.3	15.7	18.2	16.3	14.5	16.5	21.1	27.2	23.6	22.3	22.3	21.1	33.3	45.2	39.0	24.6	45.2
26	35.8	31.6	29.4	24.0	22.4	20.8	20.5	21.5	27.9	26.8	28.6	31.9	31.7	23.0	23.9	9.7	21.8	23.2	33.1	35.8	39.5	38.6	31.2	26.7	27.5	39.5
27	17.2	8.6	7.5	8.4	10.3	13.0	10.1	7.9	9.6	12.1	5.8	4.9	7.8	6.4	17.6	21.1	15.3	14.9	13.8	16.9	15.5	14.1	17.8	24.4	12.5	24.4
28	25.4	21.5	17.2	16.0	19.3	10.1	13.6	15.0	18.5	16.5	15.5	15.0	12.9	12.7	12.6	10.3	8.1	10.1	7.4	9.8	7.4	5.2	7.6	3.6	13.0	25.4
29	3.6	7.0	10.6	12.1	10.6	13.3	13.2	15.1	13.5	20.7	23.0	26.1	31.7	30.6	32.9	31.8	32.4	35.0	35.6	36.7	37.4	39.1	40.0	39.8	24.7	40.0
30	33.2	26.0	26.3	22.8	21.9	23.5	18.1	21.8	19.8	14.4	17.3	13.7	11.3	12.7	12.9	14.3	12.9	14.2	11.7	13.4	14.1	17.3	26.0	22.7	18.4	33.2
31	19.5	19.7	18.9	19.9	18.0	17.8	17.2	16.5	16.0	13.8	15.7	13.0	16.6	21.6	21.2	17.8	12.0	8.6	10.1	12.1	13.4	15.9	16.5	10.3	15.9	21.6
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	17.7	17.9	19.0	19.0	17.7	18.1	17.4	16.5	16.0	15.5	16.4	17.3	17.2	17.7	17.8	16.3	16.8	16.9	16.6	17.3	17.8	18.0	18.4	18.7		
MAX	39.9	38.5	37.5	41.0	36.3	38.6	36.1	34.2	29.7	32.0	31.5	32.5	32.7	46.2	48.8	43.1	43.8	39.0	39.4	45.3	48.4	48.5	45.2	45.7		



Number of Non-Zero Readings	744		
Maximum 1-HR Average	48.8 KM/HR		
Maximum 24-HR Average	34.2 KM/HR		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	9.491	Operational Uptime	100.0 %
		Monthly Average	17.4 KM/HR

Lagoon Wind Direction (°) – December 2022

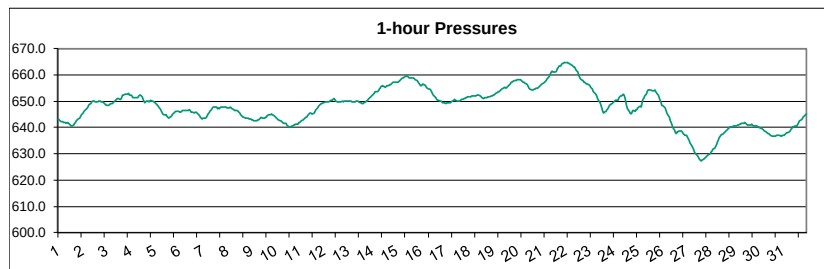
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	95.7	73.2	51.7	52.9	58.2	48.1	54.4	50.0	49.9	334.3	210.0	239.3	355.7	67.3	59.0	53.1	48.2	50.6	57.8	78.1	51.6	258.7	224.2	227.8	52.7	355.7
2	223.0	222.4	217.5	220.3	228.2	226.7	223.3	225.5	230.2	234.2	228.5	224.6	222.3	210.2	216.0	233.4	253.6	105.1	90.4	47.8	89.3	68.0	48.9	77.5	216.6	253.6
3	184.7	255.1	250.1	253.6	248.6	242.8	245.3	247.4	246.5	242.3	232.4	228.0	227.9	225.7	243.1	250.8	250.0	244.4	239.6	240.6	249.0	251.5	257.0	253.0	243.9	257.0
4	268.4	277.7	279.5	280.5	294.5	290.3	299.3	282.8	262.8	261.6	265.5	267.4	267.6	265.3	259.5	217.5	245.6	140.0	78.7	84.7	62.9	62.3	65.4	54.1	279.9	299.3
5	55.7	60.3	64.5	71.5	77.0	82.5	77.3	71.9	75.9	73.3	67.1	54.7	85.5	241.1	245.7	29.1	58.5	67.6	54.7	58.0	63.1	71.5	81.5	81.8	67.8	245.7
6	83.5	78.5	72.1	82.3	75.1	68.7	54.4	74.4	77.0	68.7	60.9	55.3	55.0	57.7	54.5	351.2	136.8	227.9	232.3	232.4	223.9	244.7	274.2	279.0	67.9	351.2
7	255.8	242.2	242.3	241.2	244.8	247.2	244.0	240.9	245.7	243.8	248.9	253.0	247.2	248.9	241.9	237.7	237.2	235.2	238.0	237.6	242.7	247.9	253.0	256.2	244.2	256.2
8	255.7	239.6	240.2	244.9	247.3	246.1	250.1	258.4	267.5	278.6	261.7	259.7	254.8	247.1	252.8	262.0	272.1	271.0	268.4	259.0	271.9	278.3	259.3	251.7	255.5	278.6
9	255.1	253.2	262.2	251.5	262.6	280.4	256.2	240.7	277.1	275.2	268.3	249.3	244.6	240.7	240.2	241.1	241.4	252.6	242.8	222.7	228.9	228.9	179.3	224.9	251.3	280.4
10	126.6	226.8	227.5	251.8	261.2	236.1	237.8	237.2	233.0	290.3	305.0	321.7	313.1	312.0	322.2	294.5	285.7	265.6	263.0	250.0	275.5	249.5	256.1	261.1	271.1	322.2
11	251.8	235.7	226.4	220.4	189.3	213.7	40.5	70.6	51.0	74.2	80.5	82.7	76.2	64.9	59.2	49.4	51.2	54.4	44.7	45.6	40.1	38.6	43.3	49.5	56.4	251.8
12	67.2	71.2	41.7	253.6	243.3	238.3	243.4	343.0	52.3	51.6	82.8	243.5	224.1	209.3	206.7	238.8	234.0	213.8	220.4	232.8	255.0	283.6	278.5	280.7	250.6	343.0
13	288.1	293.6	294.2	285.2	288.6	296.9	295.5	297.0	298.0	274.4	283.3	298.5	303.7	295.4	278.2	275.2	277.8	271.4	271.4	273.4	272.4	263.2	266.7	259.4	285.9	303.7
14	247.1	234.9	246.5	229.6	225.3	219.6	77.4	63.7	66.5	46.8	40.7	54.7	70.6	94.9	248.4	233.3	236.2	242.1	225.1	214.3	201.4	238.5	250.4	239.6	226.3	250.4
15	265.2	253.4	240.3	260.4	256.5	248.8	255.3	256.7	251.8	262.3	255.9	255.3	241.1	234.6	237.8	260.7	239.3	243.8	263.3	263.1	261.3	268.2	271.0	273.2	256.3	273.2
16	277.0	273.4	284.9	281.8	282.7	270.8	295.3	293.3	302.8	294.1	306.0	299.4	288.3	280.3	299.3	278.8	282.6	293.8	287.2	285.9	280.8	242.5	247.1	250.9	285.0	306.0
17	222.8	108.2	57.4	62.6	65.8	62.6	69.1	70.1	67.6	65.7	59.6	63.7	57.9	63.0	76.0	61.9	60.2	59.3	55.1	56.4	64.1	58.2	54.7	56.5	63.7	222.8
18	55.5	52.8	45.4	60.0	64.7	60.6	52.0	55.0	51.1	44.0	54.2	56.5	66.7	65.6	63.4	62.7	66.8	64.1	58.9	59.2	57.0	58.0	57.2	62.0	57.9	66.8
19	55.1	57.9	47.8	75.8	54.3	35.6	29.7	61.9	28.6	188.8	233.2	229.1	240.5	242.4	177.7	84.1	61.1	346.3	128.3	139.4	150.8	94.9	225.1	242.3	77.0	346.3
20	238.1	239.7	235.7	232.3	234.0	233.5	246.9	230.7	228.4	346.4	50.5	62.8	67.0	73.0	68.5	64.1	55.5	64.8	57.8	49.2	51.6	47.5	43.3	46.0	57.8	346.4
21	71.3	66.5	62.4	76.0	112.1	67.1	68.5	21.5	52.3	108.2	241.1	236.6	243.4	258.5	244.8	333.5	323.1	95.9	240.7	225.0	222.4	219.5	234.7	249.7	187.4	333.5
22	260.1	256.0	255.6	259.2	257.8	255.5	261.7	262.7	251.9	246.4	250.5	254.1	258.2	259.3	279.0	298.7	292.4	312.8	292.9	280.7	310.1	305.8	298.6	278.0	275.7	312.8
23	283.4	285.5	300.0	303.9	303.2	311.7	297.0	281.8	276.1	281.2	285.0	289.7	288.4	256.4	256.6	262.6	259.7	268.5	274.3	282.9	282.8	281.0	278.4	277.1	279.6	311.7
24	275.3	291.6	270.8	269.0	275.4	294.5	276.2	280.3	302.1	274.6	286.4	286.4	289.0	279.6	273.6	282.8	280.4	278.8	283.2	289.0	282.6	286.0	275.3	268.7	280.7	302.1
25	264.9	266.1	262.4	251.7	256.7	248.5	249.8	262.0	276.9	288.1	284.6	275.5	268.6	257.4	256.6	254.0	250.2	256.1	255.3	253.9	250.5	250.8	243.1	247.0	256.7	288.1
26	255.9	260.3	265.0	271.3	270.4	275.2	279.7	270.3	262.5	259.9	249.3	264.5	258.4	269.5	264.6	233.9	242.0	244.4	240.9	241.1	238.6	245.6	248.7	245.6	255.7	279.7
27	261.6	290.8	242.0	227.0	237.7	267.4	262.9	234.1	223.6	251.9	254.6	222.0	226.2	222.9	273.2	265.1	273.7	265.6	271.1	264.7	270.0	283.8	270.7	249.1	259.1	290.8
28	249.6	258.1	266.1	277.5	279.5	294.3	349.0	54.7	57.3	65.7	67.2	71.9	48.3	46.3	46.6	49.3	59.7	44.5	71.8	54.1	59.3	55.7	67.0	54.6	23.9	349.0
29	62.1	223.8	208.9	234.0	265.5	272.0	279.1	272.2	271.0	258.6	249.0	239.7	238.3	235.7	238.7	238.7	238.3	241.2	243.6	238.8	238.3	237.2	237.9	243.3	243.1	279.1
30	244.1	247.8	246.5	253.1	261.9	269.5	281.2	269.5	275.6	282.6	280.6	272.9	283.2	290.3	285.9	281.4	283.2	278.4	276.8	281.9	279.5	274.9	265.2	273.1	269.1	290.3
31	274.3	271.3	263.9	267.2	265.0	275.4	280.5	283.0	282.8	287.0	282.3	283.5	265.2	240.0	243.8	249.0	268.2	278.5	280.6	279.8	281.2	278.5	278.0	292.0	271.2	292.0
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	202.4	208.6	202.3	213.0	215.7	215.5	207.5	198.8	190.2	211.4	204.1	209.5	212.2	205.0	210.1	210.6	205.3	202.5	197.1	194.3	197.1	202.4	204.3	206.6		
MAX	288.1	293.6	300.0	303.9	303.2	311.7	349.0	343.0	302.8	346.4	306.0	321.7	355.7	312.0	322.2	351.2	323.1	346.3	292.9	289.0	310.1	305.8	298.6	292.0		



Number of Non-Zero Readings	744
Maximum 1-HR Average	356 degrees
Maximum 24-HR Average	286 degrees
Monthly Calibration	0
Standard Deviation	90.73
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	205.3 degrees

Lagoon Pressure (mmHg) – December 2022

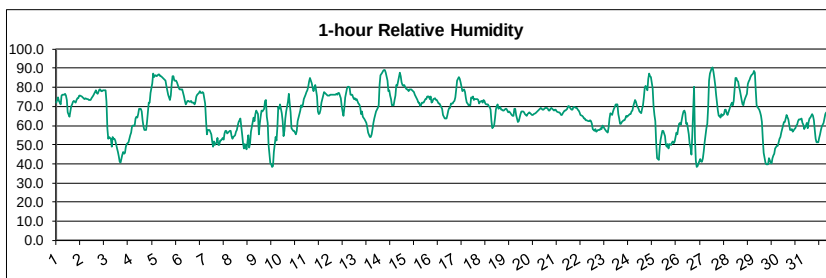
HOUR																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX	
1	643.3	643.0	642.5	642.4	642.3	642.0	641.9	641.9	641.7	641.7	641.6	641.1	641.0	640.7	640.5	641.0	641.5	642.0	642.5	642.8	643.2	643.6	644.1	644.8	642.2	644.8	
2	645.2	645.6	646.1	646.6	647.1	647.5	648.1	648.6	649.2	649.7	650.1	650.2	649.9	649.6	649.6	649.7	649.9	650.1	650.0	649.8	649.6	649.3	649.1	648.7	648.7	650.2	
3	648.5	648.5	648.6	648.8	648.9	649.0	649.1	649.9	650.2	650.2	650.7	650.9	651.2	650.8	650.8	651.4	652.2	652.4	652.6	652.6	652.6	652.6	652.8	652.4	650.7	652.8	
4	652.3	652.0	651.5	651.2	651.3	651.2	651.3	651.5	651.8	652.5	652.3	651.6	650.7	649.9	649.5	649.6	649.9	649.9	649.8	650.0	650.2	650.1	650.1	649.7	650.8	652.5	
5	649.5	649.1	648.8	648.4	647.6	647.1	646.3	645.8	645.2	644.9	644.8	644.7	644.3	643.7	643.7	643.7	644.1	644.7	645.2	645.5	645.8	646.0	646.0	646.1	645.9	649.5	
6	646.0	645.7	645.8	646.4	646.6	646.5	646.6	646.6	646.6	646.6	646.7	646.4	645.7	645.7	645.7	645.4	645.8	645.8	645.5	645.2	644.5	643.9	643.5	643.4	645.7	646.7	
7	643.5	643.6	643.6	644.0	644.4	645.0	645.5	646.0	646.8	647.3	647.8	647.9	647.7	647.7	647.3	647.3	647.3	647.3	647.7	647.6	647.6	647.8	647.9	647.7	646.5	647.9	
8	647.6	647.3	647.5	647.7	647.3	647.0	646.8	646.6	646.5	646.5	646.3	646.1	645.6	645.0	644.5	644.1	644.0	643.8	643.6	643.4	643.4	643.4	643.4	643.1	645.4	647.7	
9	643.0	642.8	642.6	642.5	642.6	642.7	642.8	643.0	643.1	643.6	643.9	643.6	643.5	643.5	643.8	644.0	644.5	644.9	645.0	645.0	645.0	644.9	644.6	644.2	643.7	645.0	
10	643.9	643.7	643.2	642.8	642.7	642.4	642.1	642.0	641.7	641.7	641.5	641.0	640.6	640.4	640.1	640.4	640.4	640.7	641.0	641.0	641.2	641.2	641.3	641.8	641.6	643.9	
11	642.0	642.1	642.6	642.9	643.1	643.5	643.8	644.0	644.7	645.3	645.6	645.6	645.3	645.2	645.6	646.2	646.6	647.1	647.6	648.1	648.6	649.0	649.2	649.5	645.6	649.5	
12	649.5	649.6	649.7	649.7	649.8	649.9	650.0	650.2	650.5	650.7	650.9	650.5	650.1	649.8	649.7	649.6	649.6	649.9	649.9	649.9	650.0	649.9	650.0	650.0	650.0	650.0	650.9
13	650.0	649.9	650.0	650.1	649.8	649.6	649.6	649.6	649.7	649.9	650.0	650.0	649.7	649.4	649.3	649.2	649.2	649.5	649.8	650.0	650.2	650.6	651.0	651.2	651.9	650.0	651.9
14	652.3	652.5	653.1	653.5	653.6	653.8	654.1	654.6	655.0	655.6	655.8	655.6	655.4	655.4	655.5	655.8	655.9	656.2	656.3	656.4	656.8	657.1	657.2	657.2	655.2	657.2	
15	657.2	657.2	657.3	657.8	658.2	658.5	658.7	658.9	659.0	659.4	659.8	659.5	659.1	658.8	658.9	658.8	658.9	658.8	658.4	658.2	657.8	657.5	656.9	656.4	658.3	659.8	
16	655.9	656.0	656.6	656.4	656.1	655.7	655.4	655.0	654.7	654.5	654.4	653.7	653.0	652.2	651.6	651.2	650.8	650.5	650.5	650.2	649.9	649.7	649.4	649.3	653.0	656.6	
17	649.2	649.2	649.3	649.4	649.4	649.5	649.5	649.9	650.1	650.3	650.6	650.4	650.1	650.0	649.9	650.0	650.4	650.7	650.8	651.0	651.2	651.3	651.4	651.6	650.2	651.6	
18	651.7	651.6	651.7	651.9	651.9	651.9	651.9	652.1	652.3	652.4	652.4	652.0	651.6	651.4	651.1	651.1	651.3	651.5	651.4	651.6	651.7	651.7	651.9	652.1	651.8	652.4	
19	652.2	652.2	652.5	653.0	653.2	653.5	653.7	653.8	654.2	654.6	654.9	655.2	655.2	655.0	655.3	655.8	656.2	656.7	657.1	657.2	657.5	657.7	657.7	658.0	655.1	658.0	
20	658.1	658.1	658.1	658.1	657.7	657.5	657.3	657.0	656.8	656.6	656.2	655.6	655.0	654.6	654.3	654.2	654.3	654.6	654.7	654.8	655.0	655.2	655.6	656.0	656.1	658.1	
21	656.3	656.4	657.0	657.3	657.6	658.0	658.6	659.2	659.8	660.6	661.2	661.4	661.2	661.2	661.2	661.5	662.3	662.9	663.3	663.5	664.0	664.3	664.4	664.6	660.7	664.6	
22	664.7	664.7	664.7	664.4	664.3	664.0	663.6	663.4	663.2	663.0	662.5	661.7	660.9	659.9	659.1	658.6	658.2	657.8	657.4	657.2	657.0	656.7	656.4	656.3	660.8	664.7	
23	655.9	655.3	655.0	654.5	653.7	653.1	652.5	651.9	650.9	650.3	649.5	648.5	647.5	646.0	645.5	645.8	646.3	646.8	647.0	647.7	648.3	648.8	649.0	649.5	650.0	655.9	
24	649.6	650.1	650.3	650.5	650.5	651.3	651.6	651.9	652.1	652.5	652.2	651.4	649.9	648.2	647.2	646.0	645.4	645.2	645.4	646.5	646.3	646.1	646.8	646.7	648.9	652.5	
25	647.4	647.9	648.2	647.9	649.5	650.6	651.0	652.0	652.7	653.6	654.3	654.2	654.1	654.1	654.0	653.9	654.0	654.2	653.6	652.8	652.2	651.2	650.3	649.7	651.8	654.3	
26	648.5	648.1	647.8	647.5	646.5	645.5	644.8	643.8	642.7	641.9	641.0	639.8	638.9	637.9	637.7	638.2	638.5	638.8	638.8	638.7	638.3	637.8	637.2	637.0	641.5	648.5	
27	637.0	636.5	635.6	635.1	634.2	633.3	632.5	631.8	630.8	630.3	629.7	629.4	628.5	627.9	627.5	627.4	627.7	628.0	628.4	628.6	628.9	629.1	629.5	629.9	630.7	637.0	
28	630.2	630.7	631.3	631.9	632.2	632.9	633.5	634.4	635.2	636.2	636.9	637.3	637.4	637.6	637.9	638.3	638.9	639.3	639.6	639.9	640.2	640.3	640.4	640.6	636.4	640.6	
29	640.7	640.8	640.8	641.0	641.1	641.2	641.3	641.4	641.7	641.7	641.9	641.6	641.2	641.0	641.1	641.0	641.1	641.1	641.0	640.7	640.7	640.6	640.5	640.4	641.1	641.9	
30	640.3	640.0	639.7	639.6	639.4	639.0	638.8	638.2	638.0	637.7	637.7	637.5	637.1	636.8	636.6	636.7	636.8	636.9	636.9	637.0	637.1	637.2	636.8	636.8	637.9	640.3	
31	637.1	637.1	637.3	637.7	637.9	638.0	638.4	638.8	639.2	639.6	640.2	640.4	640.5	640.4	640.7	641.2	641.9	642.4	643.0	643.3	643.7	644.2	644.6	645.2	640.5	645.2	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%	
MEAN	648.0	648.0	648.0	648.1	648.1	648.1	648.1	648.2	648.3	648.4	648.5	648.2	647.8	647.4	647.3	647.3	647.5	647.8	647.9	647.9	648.0	648.0	648.0	648.1	648.1	648.1	
MAX	664.7	664.7	664.7	664.4	664.3	664.0	663.6	663.4	663.2	663.0	662.5	661.7	661.2	661.2	661.2	661.5	662.3	662.9	663.3	663.5	664.0	664.3	664.4	664.6	664.6	664.6	



Number of Non-Zero Readings	744
Maximum 1-HR Average	665 MMHg
Maximum 24-HR Average	661 MMHg
Monthly Calibration	0
Standard Deviation	7.206
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	648.0 MMHg

Lagoon Relative Humidity (%) – December 2022

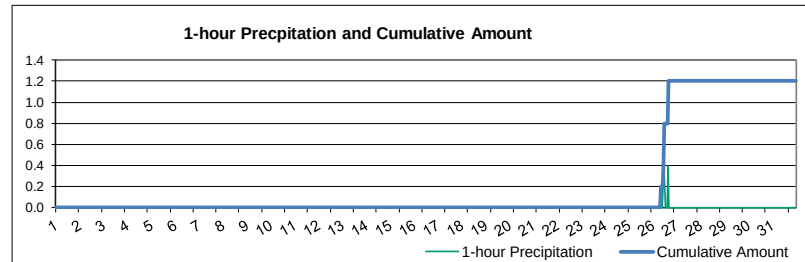
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	72.0	74.6	73.1	72.1	71.2	75.5	76.3	76.1	76.4	75.7	73.6	67.1	64.4	67.5	70.0	71.1	72.3	73.0	71.9	73.2	74.5	74.2	75.9	75.7	72.8	76.4
2	75.3	74.8	74.4	74.0	74.1	73.9	73.6	73.4	73.3	73.4	74.2	75.6	76.7	77.6	78.2	77.1	76.4	78.7	79.0	78.1	78.1	78.4	78.3	78.3	76.0	79.0
3	72.2	58.5	53.3	54.1	52.9	48.9	53.8	53.1	53.2	52.1	48.0	46.0	43.7	41.1	40.7	44.6	46.2	45.2	45.5	49.1	50.2	51.2	53.1	54.8	50.5	72.2
4	56.5	59.4	60.2	59.8	63.6	64.5	64.2	65.9	68.8	68.7	67.6	62.6	59.8	57.9	57.5	61.7	66.9	71.9	71.9	77.0	82.3	87.1	85.3	86.2	67.8	87.1
5	86.2	85.8	86.7	86.5	86.0	86.0	85.1	84.4	84.1	83.5	80.6	78.2	76.3	73.2	75.7	81.8	85.7	85.7	83.5	83.6	82.5	81.0	79.7	78.8	82.5	86.7
6	78.7	78.9	77.1	75.3	72.8	71.1	72.9	73.0	72.4	72.6	72.8	72.1	71.8	71.1	72.2	75.1	76.3	77.2	77.9	77.0	77.2	77.7	77.0	71.5	74.6	78.9
7	62.7	55.2	57.8	57.7	57.8	55.4	51.7	49.0	51.5	49.7	51.4	53.5	50.1	49.7	52.0	52.0	53.6	52.8	55.8	57.1	57.1	55.8	56.9	57.1	54.3	62.7
8	57.4	54.7	53.0	54.0	55.0	56.9	57.6	60.2	62.0	63.6	59.3	55.5	50.9	48.0	50.3	47.4	51.4	55.0	48.6	50.7	56.9	61.8	64.2	62.2	55.7	64.2
9	65.8	68.0	66.0	55.5	60.9	64.7	67.9	67.3	68.9	73.0	73.3	64.5	61.4	49.9	40.2	39.7	38.4	38.9	46.1	54.2	52.0	59.0	69.8	68.9	58.9	73.3
10	71.0	66.5	62.1	54.6	57.0	63.6	67.3	72.3	76.6	71.5	66.7	58.7	57.2	57.1	56.5	55.5	57.4	62.3	65.9	67.8	70.6	69.7	71.2	73.6	64.7	76.6
11	76.3	77.5	78.6	80.4	83.2	84.7	82.3	79.7	78.2	79.6	81.3	75.3	67.6	65.8	66.3	68.1	71.8	75.5	77.4	77.0	76.6	75.9	75.7	75.9	76.3	84.7
12	75.9	76.3	76.3	76.1	75.9	76.3	76.4	76.1	76.9	77.0	74.4	70.2	67.4	65.1	69.1	74.6	79.5	80.5	80.3	79.6	76.1	76.1	74.9	74.0	75.2	80.5
13	74.3	73.2	73.7	71.4	70.9	69.8	66.1	67.2	64.4	63.1	62.4	61.5	59.1	56.3	54.2	54.1	55.3	58.4	61.6	63.8	67.4	68.1	69.4	70.6	64.9	74.3
14	81.4	86.4	87.7	88.5	89.2	88.9	87.7	83.3	78.1	78.6	75.5	74.0	70.8	70.7	73.2	75.7	81.1	80.8	83.0	87.5	85.6	82.8	81.3	80.9	81.4	89.2
15	81.0	79.1	79.0	78.7	78.1	79.0	78.7	78.4	77.9	77.5	76.1	75.0	73.1	72.0	71.7	70.1	70.6	72.0	72.1	72.7	73.8	73.9	75.3	75.1	75.4	81.0
16	73.7	75.0	72.1	72.5	73.6	74.4	73.3	73.3	72.4	71.5	71.6	69.9	68.6	65.6	64.5	63.7	63.7	65.5	67.6	69.0	69.2	71.3	71.3	72.2	70.2	75.0
17	73.1	74.6	79.1	83.5	85.1	84.2	82.8	80.3	78.2	78.8	77.5	74.3	71.9	71.6	70.8	70.4	74.6	74.2	75.1	73.5	73.9	73.9	73.6	73.2	76.2	85.1
18	71.6	72.5	72.9	72.0	73.4	73.1	71.3	71.1	71.1	70.1	69.5	68.5	62.2	58.8	60.1	63.5	68.4	69.9	71.2	68.8	69.5	68.5	68.5	67.7	68.9	73.4
19	68.0	68.9	69.0	67.6	66.8	67.2	66.7	65.6	65.2	65.3	68.8	68.7	65.3	62.0	64.2	64.0	66.1	67.3	67.3	66.9	66.1	65.7	64.8	66.1	66.3	69.0
20	66.8	66.4	65.8	65.3	65.5	66.2	66.6	66.9	67.3	67.9	68.3	69.0	68.9	68.2	68.4	68.6	69.1	69.4	68.9	67.8	67.9	68.9	69.2	68.4	67.7	69.4
21	67.8	68.3	68.2	67.5	67.0	66.7	66.5	65.7	65.6	66.3	67.7	68.1	68.4	68.9	70.4	69.9	68.7	68.1	68.2	69.7	69.8	69.4	69.0	68.4	68.1	70.4
22	67.7	66.7	65.7	65.3	64.5	63.8	63.5	62.8	62.6	62.4	62.5	62.9	62.4	60.8	58.3	57.4	58.2	56.8	57.4	57.9	57.7	58.6	58.4	60.0	61.4	67.7
23	59.3	58.6	57.2	56.7	56.4	59.1	63.7	66.4	65.4	67.2	68.7	69.6	71.0	71.0	65.8	63.7	60.7	61.1	62.0	62.6	63.0	63.8	65.0	64.5	63.4	71.0
24	65.1	66.1	66.1	67.2	68.0	69.9	73.6	72.2	70.4	69.7	68.9	67.4	66.5	68.9	70.6	74.8	79.9	80.7	78.3	84.2	87.4	85.7	85.2	79.5	73.6	87.4
25	70.3	65.4	62.2	51.0	42.8	42.0	48.5	52.7	55.1	57.2	57.1	54.5	49.8	48.9	50.4	48.0	50.4	50.1	51.2	51.5	50.8	51.7	56.3	55.3	53.1	70.3
26	58.8	61.1	61.3	60.5	65.5	67.6	67.7	66.5	60.8	61.2	55.6	50.2	48.6	44.9	55.4	80.4	53.8	41.5	38.2	38.9	40.1	42.5	41.1	41.2	54.3	80.4
27	42.8	46.5	51.5	58.7	60.8	69.6	83.6	87.4	90.1	90.4	87.9	85.1	81.3	76.3	67.8	64.9	65.2	64.4	66.0	64.9	66.0	68.5	68.3	66.6	69.8	90.4
28	65.6	68.1	69.8	71.0	72.0	70.8	73.0	85.0	84.7	83.7	83.2	80.3	78.5	73.5	71.0	70.5	72.8	74.4	76.7	81.7	83.1	83.7	85.2	86.0	76.8	86.0
29	87.1	88.4	87.8	78.5	70.7	69.8	68.4	67.1	65.2	62.0	53.3	45.8	40.5	39.9	39.7	39.7	43.1	40.8	40.0	42.8	44.3	45.3	47.9	49.6	56.6	88.4
30	49.6	51.1	53.0	53.9	56.5	59.8	61.9	61.7	63.9	65.6	63.3	60.4	57.7	57.5	58.2	56.7	58.1	58.5	59.8	60.5	62.3	63.1	63.3	63.5	59.2	65.6
31	61.6	60.6	58.1	60.0	61.4	58.7	61.9	63.6	64.1	65.8	64.8	62.9	57.7	53.3	51.3	51.0	53.7	55.5	57.6	59.5	61.3	63.6	66.1	67.1	60.0	67.1
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	68.9	68.6	68.3	67.4	67.7	68.4	69.5	69.9	69.8	69.8	68.6	66.0	63.5	61.7	61.7	63.1	64.2	64.7	65.3	66.7	67.5	68.3	69.1	68.8		
MAX	87.1	88.4	87.8	88.5	89.2	88.9	87.7	87.4	90.1	90.4	87.9	85.1	81.3	77.6	78.2	81.8	85.7	85.7	83.5	87.5	87.4	87.1	85.3	86.2		



Number of Non-Zero Readings	744		
Maximum 1-HR Average	90.4 %		
Maximum 24-HR Average	82.5 %		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	10.86	Operational Uptime	100.0 %
		Monthly Average	67.0 %

Lagoon Precipitation (mm) – December 2022

Day	HOURL																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.2	0.0	0.2	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

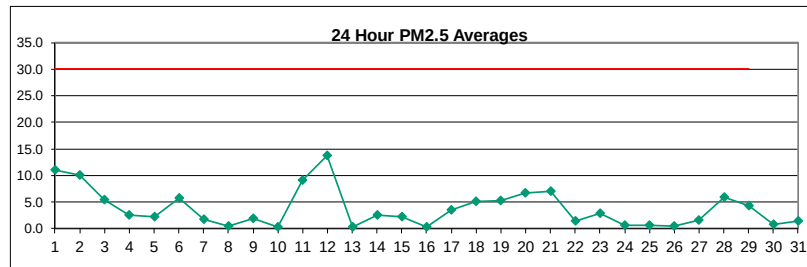


Number of Non-Zero Readings	4		
Maximum 1-HR Average	0.4 MM		
Maximum 24-HR Average	0.1 MM		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	0.023	Operational Uptime	100.0 %
		Monthly Average	0.00 MM

Windridge PM_{2.5} (µg/m³) – December 2022

Day	HOURLY																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.0	5.0	13.0	12.0	12.0	15.0	11.0	12.0	9.0	12.0	17.0	14.0	13.0	10.0	13.0	9.0	13.0	9.0	9.0	12.0	9.0	8.0	10.0	13.0	11.0	17.0
2	16.0	13.0	14.0	10.0	8.0	5.0	4.0	6.0	8.0	6.0	7.0	5.0	3.0	4.0	7.0	10.0	14.0	11.0	14.0	18.0	16.0	15.0	22.0	7.0	10.1	22.0
3	6.0	3.0	2.0	3.0	5.0	5.0	4.0	5.0	3.0	4.0	3.0	3.0	5.0	6.0	6.0	8.0	7.0	3.0	5.0	8.0	11.0	9.0	7.0	10.0	5.5	11.0
4	8.0	4.0	1.0	2.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	0.0	0.0	1.0	2.0	0.0	0.0	11.0	9.0	6.0	3.0	2.0	3.0	2.6	11.0
5	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	2.0	2.0	3.0	4.0	2.0	3.0	3.0	5.0	7.0	4.0	3.0	4.0	6.0	2.3	7.0
6	5.0	6.0	6.0	5.0	7.0	7.0	6.0	5.0	5.0	7.0	7.0	8.0	5.0	8.0	6.0	8.0	7.0	6.0	6.0	6.0	4.0	4.0	3.0	2.0	5.8	8.0
7	0.0	0.0	1.0	0.0	1.0	1.0	2.0	4.0	1.0	0.0	2.0	3.0	5.0	7.0	6.0	4.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	7.0
8	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	2.0
9	3.0	3.0	3.0	2.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	C	10.0	9.0	5.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	10.0
10	3.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.3	3.0
11	0.0	0.0	0.0	0.0	0.0	1.0	4.0	10.0	14.0	12.0	15.0	13.0	9.0	14.0	12.0	11.0	13.0	12.0	11.0	15.0	10.0	16.0	13.0	13.0	9.1	16.0
12	14.0	11.0	12.0	16.0	17.0	19.0	18.0	17.0	18.0	19.0	11.0	22.0	19.0	21.0	19.0	15.0	16.0	14.0	10.0	11.0	7.0	4.0	1.0	0.0	13.8	22.0
13	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.3	2.0
14	0.0	0.0	2.0	1.0	5.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	8.0	7.0	4.0	2.0	3.0	10.0	5.0	0.0	3.0	2.0	2.5	10.0
15	1.0	2.0	4.0	2.0	0.0	1.0	1.0	2.0	4.0	5.0	3.0	0.0	2.0	5.0	8.0	7.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	8.0
16	1.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0
17	0.0	0.0	0.0	3.0	4.0	2.0	4.0	3.0	3.0	13.0	8.0	3.0	2.0	2.0	0.0	0.0	5.0	5.0	2.0	2.0	3.0	4.0	7.0	8.0	3.5	13.0
18	10.0	8.0	4.0	2.0	3.0	2.0	2.0	6.0	4.0	1.0	3.0	4.0	4.0	4.0	3.0	19.0	29.0	4.0	2.0	0.0	1.0	1.0	3.0	3.0	5.1	29.0
19	3.0	4.0	5.0	3.0	0.0	0.0	5.0	13.0	14.0	15.0	8.0	6.0	3.0	5.0	4.0	6.0	5.0	2.0	0.0	3.0	5.0	8.0	7.0	3.0	5.3	15.0
20	2.0	9.0	8.0	7.0	5.0	5.0	4.0	6.0	5.0	12.0	8.0	5.0	11.0	7.0	6.0	6.0	3.0	23.0	4.0	8.0	5.0	2.0	6.0	5.0	6.8	23.0
21	5.0	4.0	3.0	4.0	4.0	12.0	15.0	1.0	5.0	9.0	8.0	6.0	8.0	15.0	10.0	12.0	7.0	8.0	5.0	3.0	6.0	9.0	6.0	3.0	7.0	15.0
22	3.0	3.0	3.0	4.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	3.0	2.0	1.0	0.0	0.0	0.0	3.0	2.0	2.0	2.0	1.0	1.4	4.0
23	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	9.0	20.0	10.0	9.0	6.0	3.0	4.0	2.0	1.0	2.0	1.0	2.9	20.0
24	0.0	0.0	1.0	0.0	0.0	0.0	2.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.0
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	1.0	2.0	1.0	1.0	2.0	0.0	0.0	2.0	3.0	0.0	5.0	0.7	5.0
26	5.0	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	1.0	0.0	1.0	2.0	0.0	1.0	0.0	0.0	0.5	5.0
27	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	0.0	0.0	0.0	2.0	3.0	2.0	1.0	2.0	4.0	6.0	11.0	1.6	11.0
28	7.0	4.0	2.0	0.0	0.0	0.0	1.0	9.0	9.0	10.0	9.0	14.0	9.0	6.0	5.0	4.0	6.0	4.0	4.0	6.0	10.0	9.0	6.0	9.0	6.0	14.0
29	10.0	14.0	9.0	5.0	2.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	7.0	9.0	7.0	7.0	4.0	2.0	4.0	7.0	6.0	4.0	2.0	3.0	4.4	14.0
30	4.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	2.0	3.0	0.8	4.0
31	2.0	1.0	1.0	3.0	5.0	3.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	5.0	5.0	5.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	5.0

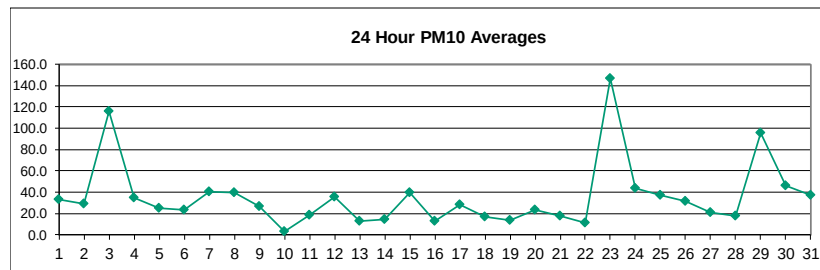
NO.	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	743	100.0%
MEAN	3.7	3.4	3.2	2.7	2.7	2.8	2.8	3.4	3.6	4.3	3.7	3.9	4.0	5.1	5.2	5.2	5.3	4.0	3.3	4.4	3.8	3.7	3.7	3.6	7.5	
MAX	16.0	14.0	14.0	16.0	17.0	19.0	18.0	17.0	18.0	19.0	17.0	22.0	19.0	21.0	20.0	19.0	29.0	23.0	14.0	18.0	16.0	16.0	22.0	13.0	17.4	70.0



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	494	
Maximum 1-HR Average	29.0 UG/M3	
Maximum 24-HR Average	13.8 UG/M3	
Monthly Calibration	1	Operational Time
Standard Deviation	4.7	Operational Uptime
		Monthly Average
		744 HRS
		100.0 %
		3.8 UG/M3

Windridge PM₁₀ (µg/m³) – December 2022

HOUR																										MEAN	MAX
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	10.0	22.0	20.0	18.0	70.0	49.0	40.0	22.0	17.0	29.0	70.0	100.0	45.0	27.0	32.0	50.0	19.0	21.0	15.0	20.0	23.0	20.0	29.0	34.0	33.4	100.0	
2	23.0	33.0	24.0	21.0	16.0	12.0	20.0	16.0	16.0	23.0	43.0	36.0	17.0	16.0	17.0	30.0	26.0	25.0	34.0	39.0	53.0	87.0	47.0	33.0	29.5	87.0	
3	55.0	56.0	68.0	88.0	44.0	102.0	89.0	61.0	68.0	79.0	69.0	39.0	48.0	97.0	154.0	113.0	69.0	88.0	126.0	260.0	379.0	193.0	163.0	280.0	116.2	379.0	
4	176.0	57.0	138.0	98.0	124.0	62.0	12.0	9.0	5.0	1.0	4.0	10.0	7.0	8.0	12.0	8.0	5.0	15.0	40.0	13.0	11.0	10.0	6.0	5.0	34.8	176.0	
5	2.0	5.0	9.0	6.0	4.0	5.0	9.0	6.0	7.0	7.0	9.0	21.0	8.0	27.0	14.0	44.0	76.0	93.0	61.0	56.0	38.0	40.0	28.0	23.0	24.9	93.0	
6	19.0	43.0	36.0	25.0	24.0	23.0	21.0	15.0	13.0	25.0	48.0	27.0	28.0	34.0	19.0	34.0	11.0	43.0	16.0	13.0	10.0	8.0	10.0	15.0	23.3	48.0	
7	9.0	15.0	30.0	51.0	40.0	32.0	28.0	47.0	26.0	24.0	48.0	72.0	84.0	75.0	66.0	30.0	27.0	21.0	13.0	10.0	48.0	45.0	60.0	65.0	40.3	84.0	
8	97.0	38.0	24.0	32.0	42.0	26.0	44.0	70.0	47.0	18.0	58.0	51.0	51.0	35.0	39.0	34.0	7.0	18.0	48.0	41.0	49.0	10.0	34.0	38.0	39.6	97.0	
9	12.0	11.0	17.0	44.0	18.0	0.0	1.0	0.0	0.0	10.0	18.0	C	159.0	76.0	73.0	63.0	54.0	40.0	5.0	2.0	0.0	1.0	11.0	6.0	27.0	159.0	
10	7.0	5.0	6.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	9.0	7.0	4.0	1.0	0.0	0.0	3.0	2.0	3.0	10.0	6.0	3.0	4.0	3.3	10.0	
11	2.0	2.0	6.0	28.0	1.0	23.0	13.0	16.0	20.0	21.0	35.0	34.0	21.0	22.0	23.0	25.0	19.0	20.0	24.0	20.0	21.0	21.0	17.0	19.0	18.9	35.0	
12	23.0	18.0	28.0	73.0	51.0	52.0	52.0	44.0	43.0	30.0	37.0	77.0	66.0	55.0	51.0	28.0	30.0	24.0	18.0	10.0	12.0	16.0	11.0	7.0	35.7	77.0	
13	19.0	20.0	5.0	5.0	12.0	17.0	0.0	4.0	6.0	15.0	6.0	12.0	8.0	11.0	17.0	19.0	32.0	19.0	7.0	14.0	21.0	6.0	14.0	12.0	12.5	32.0	
14	29.0	29.0	22.0	21.0	21.0	23.0	23.0	3.0	10.0	10.0	11.0	4.0	9.0	13.0	16.0	17.0	19.0	3.0	10.0	21.0	8.0	6.0	8.0	10.0	14.4	29.0	
15	6.0	6.0	33.0	63.0	20.0	17.0	69.0	58.0	81.0	75.0	43.0	58.0	45.0	74.0	86.0	56.0	22.0	7.0	12.0	11.0	24.0	22.0	25.0	36.0	39.5	86.0	
16	68.0	24.0	15.0	8.0	11.0	6.0	5.0	21.0	12.0	15.0	12.0	21.0	20.0	16.0	17.0	10.0	8.0	6.0	3.0	3.0	5.0	2.0	0.0	1.0	12.9	68.0	
17	0.0	18.0	18.0	51.0	23.0	27.0	61.0	38.0	43.0	52.0	44.0	40.0	21.0	24.0	5.0	16.0	32.0	31.0	26.0	18.0	35.0	31.0	11.0	9.0	28.1	61.0	
18	18.0	40.0	26.0	9.0	15.0	10.0	6.0	9.0	5.0	14.0	22.0	26.0	11.0	14.0	9.0	33.0	37.0	17.0	22.0	9.0	7.0	25.0	17.0	11.0	17.2	40.0	
19	7.0	5.0	8.0	6.0	2.0	8.0	7.0	16.0	22.0	26.0	28.0	31.0	30.0	23.0	12.0	16.0	13.0	9.0	6.0	7.0	11.0	20.0	9.0	12.0	13.9	31.0	
20	20.0	20.0	14.0	13.0	8.0	8.0	23.0	13.0	49.0	42.0	21.0	26.0	20.0	52.0	38.0	33.0	31.0	49.0	19.0	23.0	12.0	9.0	7.0	8.0	23.3	52.0	
21	10.0	9.0	8.0	13.0	11.0	17.0	23.0	11.0	15.0	16.0	26.0	18.0	15.0	31.0	29.0	42.0	26.0	22.0	14.0	21.0	18.0	15.0	9.0	13.0	18.0	42.0	
22	8.0	6.0	4.0	5.0	6.0	7.0	5.0	22.0	9.0	6.0	4.0	4.0	66.0	10.0	17.0	10.0	9.0	32.0	6.0	4.0	7.0	9.0	12.0	11.0	11.6	66.0	
23	18.0	25.0	10.0	23.0	11.0	17.0	33.0	28.0	14.0	32.0	106.0	232.0	165.0	426.0	485.0	428.0	405.0	223.0	171.0	172.0	105.0	131.0	123.0	148.0	147.1	485.0	
24	176.0	108.0	70.0	60.0	88.0	54.0	26.0	22.0	24.0	23.0	62.0	28.0	26.0	55.0	26.0	24.0	26.0	8.0	13.0	79.0	12.0	12.0	22.0	14.0	44.1	176.0	
25	8.0	19.0	45.0	80.0	35.0	30.0	24.0	38.0	16.0	0.0	0.0	11.0	10.0	31.0	30.0	62.0	58.0	39.0	36.0	28.0	36.0	76.0	113.0	66.0	37.1	113.0	
26	96.0	69.0	49.0	18.0	0.0	1.0	0.0	0.0	22.0	5.0	25.0	65.0	21.0	13.0	8.0	5.0	7.0	7.0	23.0	70.0	44.0	77.0	33.0	92.0	31.3	96.0	
27	42.0	1.0	0.0	7.0	8.0	5.0	7.0	9.0	15.0	51.0	5.0	4.0	11.0	13.0	20.0	33.0	8.0	11.0	10.0	30.0	20.0	15.0	68.0	111.0	21.0	111.0	
28	118.0	76.0	20.0	0.0	0.0	1.0	3.0	4.0	16.0	16.0	17.0	13.0	14.0	10.0	6.0	6.0	12.0	10.0	12.0	9.0	18.0	10.0	9.0	17.0	17.4	118.0	
29	17.0	56.0	32.0	7.0	5.0	6.0	37.0	14.0	14.0	25.0	41.0	83.0	125.0	145.0	159.0	185.0	220.0	211.0	188.0	202.0	142.0	113.0	80.0	180.0	95.3	220.0	
30	94.0	36.0	45.0	40.0	17.0	63.0	37.0	94.0	42.0	20.0	57.0	27.0	14.0	38.0	24.0	51.0	22.0	23.0	8.0	6.0	5.0	9.0	199.0	137.0	46.2	199.0	
31	39.0	75.0	94.0	108.0	90.0	40.0	8.0	4.0	10.0	8.0	9.0	11.0	68.0	87.0	91.0	83.0	40.0	7.0	5.0	2.0	1.0	3.0	10.0	6.0	37.5	108.0	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	743	100.0%	
MEAN	39.6	30.5	29.8	33.1	26.4	24.0	23.4	23.0	22.2	23.2	31.6	39.7	232.0	40.0	50.4	51.5	51.2	44.2	36.9	32.0	39.2	38.2	33.8	38.3	45.9	42.0	
MAX	176.0	108.0	138.0	108.0	124.0	102.0	89.0	94.0	81.0	79.0	106.0	232.0	165.0	426.0	485.0	428.0	405.0	223.0	188.0	260.0	379.0	193.0	199.0	280.0	91.1	433.3	



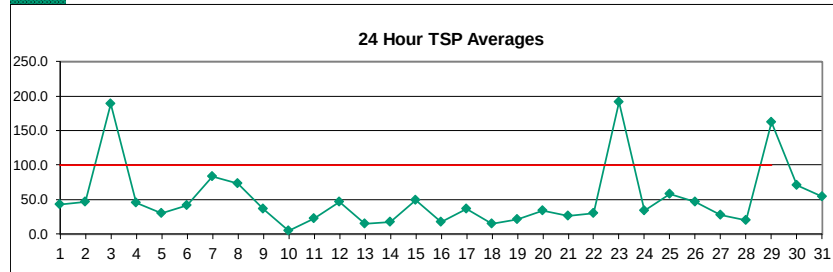
Number of Non-Zero Readings	721		
Maximum 1-HR Average	485.0 UG/M3		
Maximum 24-HR Average	147.1 UG/M3		
Monthly Calibration	1	Operational Time	744 HRS
Standard Deviation	50.31	Operational Uptime	100.0 %
		Monthly Average	35.3 UG/M3

Windridge TSP (µg/m³) – December 2022

Day	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	12.0	35.0	27.0	25.0	49.0	41.0	29.0	12.0	16.0	35.0	119.0	178.0	78.0	40.0	55.0	62.0	23.0	20.0	18.0	27.0	23.0	24.0	37.0	48.0
2	32.0	35.0	31.0	26.0	38.0	12.0	25.0	47.0	38.0	33.0	64.0	48.0	14.0	32.0	38.0	44.0	40.0	34.0	59.0	55.0	78.0	153.0	73.0	70.0
3	125.0	113.0	114.0	179.0	85.0	191.0	168.0	79.0	118.0	139.0	88.0	59.0	78.0	72.0	183.0	164.0	109.0	157.0	230.0	408.0	580.0	361.0	272.0	452.0
4	233.0	84.0	148.0	149.0	111.0	78.0	17.0	12.0	8.0	4.0	10.0	16.0	14.0	17.0	13.0	8.0	6.0	18.0	61.0	23.0	20.0	13.0	17.0	5.0
5	2.0	19.0	14.0	9.0	9.0	6.0	9.0	4.0	21.0	6.0	6.0	28.0	3.0	34.0	22.0	22.0	48.0	110.0	90.0	59.0	46.0	64.0	67.0	39.0
6	35.0	53.0	63.0	50.0	47.0	23.0	26.0	30.0	21.0	40.0	66.0	27.0	35.0	53.0	30.0	78.0	27.0	92.0	39.0	20.0	24.0	23.0	51.0	60.0
7	103.0	69.0	149.0	162.0	124.0	87.0	42.0	61.0	33.0	38.0	86.0	101.0	117.0	120.0	114.0	60.0	53.0	42.0	26.0	23.0	96.0	92.0	113.0	105.0
8	183.0	50.0	45.0	55.0	72.0	60.0	94.0	139.0	75.0	39.0	110.0	90.0	92.0	59.0	77.0	80.0	18.0	38.0	95.0	71.0	88.0	18.0	48.0	79.0
9	12.0	11.0	19.0	89.0	38.0	0.0	1.0	2.0	4.0	15.0	34.0	C	90.0	109.0	119.0	104.0	108.0	70.0	9.0	7.0	2.0	3.0	5.0	4.0
10	17.0	4.0	14.0	8.0	3.0	1.0	1.0	0.0	0.0	0.0	5.0	6.0	6.0	6.0	4.0	6.0	4.0	1.0	5.0	6.0	9.0	5.0	5.0	7.0
11	5.0	4.0	14.0	39.0	2.0	29.0	20.0	23.0	16.0	27.0	57.0	40.0	28.0	29.0	26.0	29.0	30.0	20.0	10.0	20.0	16.0	19.0	21.0	17.0
12	17.0	34.0	38.0	102.0	55.0	48.0	59.0	53.0	56.0	37.0	52.0	156.0	90.0	70.0	81.0	44.0	41.0	31.0	24.0	16.0	7.0	11.0	7.0	2.0
13	3.0	4.0	4.0	1.0	0.0	2.0	0.0	0.0	8.0	19.0	16.0	16.0	12.0	27.0	32.0	34.0	43.0	32.0	10.0	24.0	28.0	16.0	24.0	17.0
14	15.0	27.0	18.0	30.0	32.0	40.0	31.0	3.0	7.0	5.0	5.0	2.0	17.0	20.0	23.0	34.0	30.0	5.0	12.0	27.0	2.0	9.0	14.0	17.0
15	6.0	5.0	40.0	62.0	27.0	14.0	82.0	73.0	90.0	93.0	59.0	76.0	62.0	109.0	113.0	79.0	30.0	10.0	20.0	12.0	34.0	25.0	30.0	40.0
16	71.0	26.0	20.0	9.0	15.0	11.0	6.0	37.0	19.0	16.0	25.0	25.0	18.0	29.0	27.0	23.0	12.0	6.0	4.0	3.0	1.0	6.0	4.0	4.0
17	3.0	21.0	20.0	77.0	70.0	70.0	90.0	46.0	47.0	59.0	58.0	41.0	26.0	19.0	7.0	11.0	29.0	41.0	19.0	14.0	47.0	38.0	11.0	7.0
18	15.0	31.0	20.0	4.0	13.0	9.0	6.0	9.0	5.0	17.0	16.0	22.0	21.0	6.0	9.0	38.0	38.0	11.0	8.0	9.0	10.0	15.0	12.0	16.0
19	4.0	5.0	6.0	8.0	5.0	4.0	9.0	17.0	32.0	48.0	42.0	59.0	64.0	54.0	18.0	24.0	21.0	17.0	4.0	5.0	10.0	24.0	9.0	12.0
20	24.0	28.0	15.0	30.0	9.0	15.0	43.0	31.0	82.0	63.0	27.0	52.0	26.0	88.0	58.0	39.0	39.0	55.0	27.0	24.0	14.0	9.0	6.0	6.0
21	13.0	7.0	5.0	14.0	17.0	21.0	29.0	15.0	20.0	18.0	44.0	35.0	27.0	42.0	51.0	80.0	40.0	28.0	22.0	44.0	17.0	13.0	17.0	16.0
22	8.0	14.0	10.0	13.0	16.0	11.0	18.0	47.0	25.0	15.0	14.0	15.0	47.0	65.0	54.0	19.0	22.0	23.0	51.0	60.0	41.0	38.0	50.0	55.0
23	69.0	66.0	30.0	24.0	26.0	25.0	61.0	45.0	36.0	50.0	107.0	154.0	158.0	853.0	935.0	622.0	528.0	270.0	199.0	118.0	59.0	50.0	44.0	65.0
24	130.0	71.0	59.0	79.0	98.0	46.0	18.0	5.0	3.0	3.0	3.0	3.0	7.0	22.0	10.0	10.0	23.0	4.0	3.0	59.0	47.0	20.0	26.0	57.0
25	6.0	10.0	17.0	94.0	57.0	49.0	40.0	53.0	26.0	0.0	1.0	17.0	12.0	61.0	50.0	110.0	108.0	64.0	64.0	48.0	67.0	148.0	200.0	95.0
26	151.0	120.0	69.0	29.0	2.0	1.0	0.0	0.0	35.0	12.0	37.0	40.0	29.0	13.0	15.0	7.0	18.0	9.0	38.0	109.0	75.0	115.0	47.0	143.0
27	65.0	11.0	3.0	8.0	11.0	6.0	5.0	9.0	18.0	65.0	8.0	16.0	19.0	14.0	24.0	40.0	15.0	22.0	17.0	40.0	24.0	23.0	75.0	138.0
28	144.0	99.0	23.0	0.0	0.0	1.0	1.0	7.0	19.0	17.0	18.0	14.0	19.0	6.0	5.0	5.0	12.0	9.0	10.0	8.0	16.0	9.0	8.0	20.0
29	27.0	78.0	38.0	9.0	6.0	1.0	56.0	17.0	25.0	46.0	80.0	141.0	227.0	263.0	290.0	287.0	372.0	332.0	360.0	362.0	264.0	208.0	143.0	261.0
30	153.0	52.0	67.0	66.0	29.0	87.0	58.0	138.0	72.0	36.0	94.0	40.0	23.0	69.0	35.0	88.0	38.0	45.0	20.0	9.0	6.0	16.0	291.0	172.0
31	44.0	86.0	140.0	148.0	127.0	45.0	10.0	7.0	17.0	11.0	14.0	13.0	106.0	131.0	161.0	135.0	63.0	11.0	9.0	6.0	5.0	4.0	17.0	7.0

MEAN	MAX
43.0	178.0
46.6	153.0
188.5	580.0
45.2	233.0
30.7	110.0
42.2	92.0
84.0	162.0
74.0	183.0
37.2	119.0
5.1	17.0
22.5	57.0
47.1	156.0
15.5	43.0
17.7	40.0
49.6	113.0
17.4	71.0
36.3	90.0
15.0	38.0
20.9	64.0
33.8	88.0
26.5	80.0
30.5	65.0
191.4	935.0
33.6	95.0
58.2	200.0
46.4	151.0
28.2	138.0
19.6	144.0
162.2	372.0
71.0	291.0
54.9	161.0

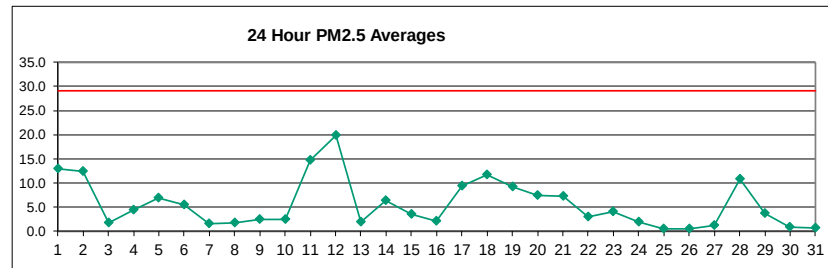
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31
MEAN	55.7	41.0	41.3	51.5	38.5	33.4	34.0	32.9	32.0	32.5	44.0	51.0	50.5	81.7	86.4	77.0	64.1	52.5	50.4	55.4	56.6	50.7	56.3	65.7
MAX	233.0	120.0	149.0	179.0	127.0	191.0	168.0	139.0	118.0	139.0	119.0	178.0	227.0	853.0	935.0	622.0	528.0	332.0	360.0	408.0	580.0	361.0	291.0	452.0



Number of 24HR Exceedences		3	Proposed Guideline
Number of Non-Zero Readings		731	
Maximum 1-HR Average		935.0 UG/M3	
Maximum 24-HR Average		191.4 UG/M3	
IZS Calibration Time			744 HRS
Down Time		0	Operational Uptime
Standard Deviation		80.0	Monthly Average
			100.0 %
			51.5 UG/M3

West PM_{2.5} (µg/m³) – December 2022

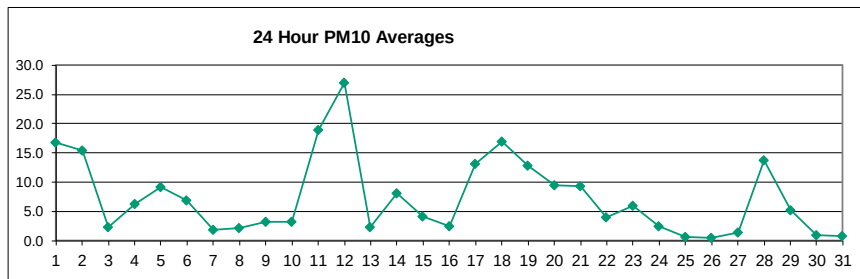
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	8.9	11.4	14.6	17.2	18.0	16.1	14.6	14.0	13.6	11.1	11.3	12.5	15.4	17.8	15.4	13.3	12.4	10.4	9.1	9.1	10.1	10.1	10.5	12.1	12.9	18.0
2	14.0	13.2	12.6	13.3	12.9	11.7	11.1	10.1	10.1	9.4	9.9	8.4	8.1	8.1	9.4	12.6	16.1	15.4	15.3	17.3	18.7	18.7	19.6	2.4	12.4	19.6
3	1.3	1.1	1.2	1.3	1.1	1.1	1.3	1.2	1.3	1.4	1.3	1.4	1.3	1.4	1.2	1.2	1.3	1.6	1.7	3.0	4.6	3.2	3.3	3.6	1.8	4.6
4	5.1	4.6	4.9	5.1	5.3	5.4	2.6	1.7	1.9	2.1	2.1	2.4	2.2	2.1	2.0	2.8	4.0	8.7	6.6	6.7	8.0	7.7	5.1	8.5	4.5	8.7
5	8.0	11.7	10.2	6.1	4.6	3.0	5.4	5.5	4.4	3.8	6.5	8.5	5.4	6.1	3.5	7.0	9.4	8.8	9.2	10.3	8.5	7.3	5.9	5.4	6.9	11.7
6	5.1	6.1	6.8	5.6	5.4	6.2	7.4	4.8	5.0	6.1	8.0	5.2	3.9	5.9	5.4	6.0	5.3	7.1	6.1	5.3	5.3	4.5	3.3	2.3	5.5	8.0
7	1.5	1.2	1.6	1.9	1.9	1.7	1.5	1.2	1.1	1.1	1.5	1.3	1.7	1.6	1.9	2.0	1.8	1.8	1.5	1.6	1.7	1.3	1.3	1.5	1.5	2.0
8	1.9	1.3	1.1	1.1	1.2	1.2	1.1	1.3	1.2	2.3	3.2	2.5	2.3	1.9	2.4	2.3	2.2	1.7	1.5	1.4	1.5	1.5	1.8	1.6	1.7	3.2
9	2.5	1.8	1.5	0.9	0.9	1.2	1.3	1.5	1.3	2.3	2.1	1.5	0.9	2.5	2.3	1.5	2.0	2.0	3.5	3.1	4.1	6.4	6.1	5.4	2.4	6.4
10	3.9	1.8	1.0	0.5	0.8	0.7	1.0	1.4	1.5	1.6	4.4	5.5	3.8	5.1	5.9	3.0	1.5	1.9	1.9	2.0	2.0	1.7	2.3	2.7	2.4	5.9
11	2.7	2.2	1.6	1.4	1.3	1.6	8.5	23.5	22.1	23.3	21.9	18.7	17.7	16.6	16.5	17.9	20.6	20.2	19.8	18.7	20.8	18.6	19.1	19.6	14.8	23.5
12	21.3	22.1	21.7	22.8	25.4	23.9	25.0	25.8	25.0	24.1	23.9	24.9	25.8	24.1	23.2	19.5	18.4	17.6	17.4	14.7	11.9	8.7	6.0	3.9	19.9	25.8
13	2.5	1.9	1.5	1.3	3.0	2.8	0.9	0.8	1.1	1.8	1.7	1.8	2.0	2.3	1.9	2.4	1.9	1.9	2.0	1.8	1.8	1.8	1.8	1.7	1.9	3.0
14	2.2	2.3	2.4	2.4	2.3	2.4	7.6	11.0	6.6	12.8	12.0	8.5	3.9	11.1	6.1	5.3	7.8	10.4	7.8	7.0	6.4	5.2	5.4	4.4	6.4	12.8
15	3.9	3.3	2.8	2.7	2.8	3.0	2.8	2.5	2.7	3.4	3.5	2.8	3.1	3.6	4.2	8.2	6.1	5.0	5.5	4.0	3.3	2.6	2.2	1.8	3.6	8.2
16	1.6	1.7	1.6	1.7	1.9	1.8	1.4	1.5	1.7	1.9	2.5	2.9	3.1	2.9	3.3	2.3	2.1	2.0	2.0	1.8	2.0	2.0	2.7	2.1	2.1	3.3
17	2.9	4.9	8.1	8.3	9.5	8.4	8.0	8.9	12.1	14.4	14.3	11.4	12.6	8.2	4.1	10.7	12.8	10.1	10.6	8.5	10.5	9.9	7.4	7.3	9.3	14.4
18	7.8	9.0	10.6	10.6	10.9	16.2	14.4	14.9	17.7	17.0	14.6	11.4	9.4	9.1	10.0	10.5	7.0	8.3	12.8	10.7	11.3	12.2	12.2	13.7	11.8	17.7
19	13.8	9.4	11.9	4.4	9.1	8.6	7.1	10.8	37.0	21.5	6.8	6.5	5.5	5.6	5.3	4.8	5.6	9.8	5.6	6.4	4.2	8.6	7.5	6.8	9.3	37.0
20	8.9	9.3	7.1	6.5	5.8	5.0	5.6	6.1	5.9	6.8	9.2	7.3	9.8	8.2	8.1	8.9	7.9	7.2	7.2	8.1	7.8	6.9	7.1	6.8	7.4	9.8
21	7.0	6.9	7.9	7.5	6.7	7.1	16.2	9.8	10.4	6.7	4.9	5.6	6.5	6.3	6.5	7.4	8.7	7.0	6.4	4.4	5.8	6.2	7.7	6.3	7.3	16.2
22	4.8	3.8	3.3	3.0	3.2	2.3	2.0	1.9	2.3	2.5	2.8	3.1	3.1	3.2	2.9	2.2	1.9	4.3	4.9	4.1	2.7	2.6	3.1	3.7	3.1	4.9
23	2.2	2.1	1.4	1.8	2.2	2.6	2.8	2.1	2.2	2.6	4.5	6.3	7.9	11.1	12.9	7.8	5.6	2.9	2.4	3.0	3.0	3.0	2.8	2.7	4.1	12.9
24	3.0	2.6	2.4	2.4	3.4	1.8	1.6	1.1	1.0	1.2	1.2	1.5	2.1	1.6	1.1	1.4	2.4	1.3	1.0	3.0	2.3	2.0	2.1	2.0	1.9	3.4
25	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.6	0.6	0.8	0.5	0.7	0.7	0.5	0.6	0.6	0.6	0.9	0.8	0.8	0.9	0.5	0.6	0.9
26	0.6	0.6	0.5	0.4	0.4	0.5	0.3	0.3	0.2	0.3	0.5	0.4	0.3	0.2	0.4	2.2	0.9	0.4	0.5	0.2	0.1	0.1	0.1	0.2	0.4	2.2
27	0.3	0.2	1.0	0.5	0.8	1.4	1.4	0.9	1.4	2.0	3.0	3.2	3.4	1.7	0.8	0.7	1.3	0.5	0.7	0.7	0.8	0.8	0.8	0.4	1.2	3.4
28	0.3	0.3	0.4	0.3	0.2	0.2	1.8	20.7	20.6	18.4	18.6	15.4	17.9	10.5	8.4	7.3	8.1	10.3	10.8	13.5	19.3	20.1	17.9	17.3	10.8	20.7
29	16.5	19.0	17.0	12.3	7.8	2.6	0.6	0.3	0.3	0.4	0.7	1.7	1.2	0.9	0.8	1.1	1.3	0.8	0.8	0.9	1.3	1.0	0.8	0.7	3.8	19.0
30	0.5	0.4	0.4	0.3	0.4	0.5	0.4	0.4	0.5	0.7	1.1	0.5	1.3	1.5	1.0	0.9	1.6	1.1	0.8	1.0	0.8	0.6	0.9	0.8	0.8	1.6
31	0.5	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.4	0.5	0.9	1.5	0.9	0.7	0.7	0.6	0.6	0.6	0.6	0.9	0.9	1.7	1.1	1.4	0.7	1.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	5.0	5.1	5.2	4.7	4.8	4.6	5.0	6.0	6.9	6.6	6.4	6.0	5.9	5.9	5.4	5.6	5.8	5.9	5.7	5.6	5.9	5.7	5.4	4.8		
MAX	21.3	22.1	21.7	22.8	25.4	23.9	25.0	25.8	37.0	24.1	23.9	24.9	25.8	24.1	23.2	19.5	20.6	20.2	19.8	18.7	20.8	20.1	19.6	19.6		



Number of 24HR Exceedences		0	Proposed Guideline
Number of Non-Zero Readings		744	
Maximum 1-HR Average		37.0 UG/M3	
Maximum 24-HR Average		19.9 UG/M3	
IZS Calibration Time			744 HRS
Down Time		0	Operational Uptime
Standard Deviation		5.858	Monthly Average
			100.0 %
			5.6 UG/M3

West PM₁₀ (µg/m³) – December 2022

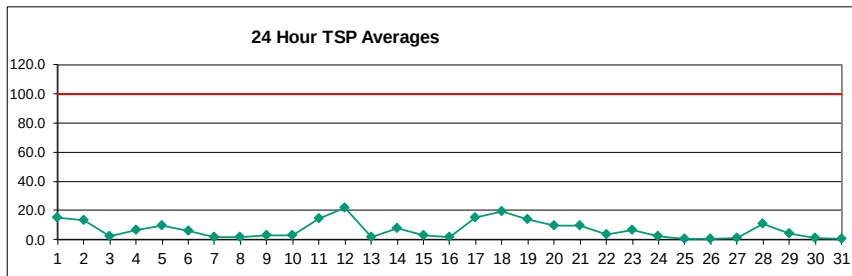
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	11.6	15.5	19.1	22.4	23.2	21.3	19.6	18.3	17.3	13.9	13.7	13.7	18.8	24.9	21.2	17.6	16.8	13.9	12.1	11.8	13.0	13.2	14.5	15.9	16.8	24.9
2	18.4	15.9	14.1	14.6	14.9	13.1	12.9	11.1	11.3	10.6	12.3	10.2	9.6	10.0	12.3	16.5	21.8	20.0	19.4	22.7	25.5	24.3	25.2	3.1	15.4	25.5
3	1.5	1.3	1.3	1.5	1.3	1.4	1.6	1.4	1.5	1.7	1.5	1.6	1.5	1.7	1.4	1.4	1.6	2.0	2.1	4.2	6.7	4.6	4.7	5.1	2.3	6.7
4	7.5	6.8	7.3	7.6	7.9	7.9	3.6	1.9	2.1	2.4	2.5	3.1	2.8	2.6	2.5	4.0	6.0	12.7	9.0	9.6	11.5	10.6	7.3	12.3	6.3	12.7
5	11.3	17.2	14.8	8.9	6.2	3.5	7.2	7.5	5.9	5.2	9.3	11.4	7.7	8.8	4.8	10.0	11.9	11.4	11.3	12.4	10.4	9.5	7.7	6.9	9.2	17.2
6	6.5	7.8	9.1	7.5	7.2	8.3	9.9	5.9	5.9	7.1	9.2	6.2	4.8	7.9	7.0	8.3	7.0	9.5	7.4	6.1	6.1	5.2	4.1	3.0	7.0	9.9
7	1.9	1.3	2.2	2.6	2.6	2.4	1.9	1.5	1.3	1.3	1.7	1.5	1.9	2.0	2.4	2.4	2.1	2.1	1.6	1.7	2.0	1.4	1.4	1.8	1.9	2.6
8	2.6	1.5	1.2	1.3	1.4	1.4	1.2	1.5	1.4	2.6	4.2	3.5	3.1	2.4	3.2	3.2	2.8	2.0	1.8	1.6	1.6	1.6	1.9	1.7	2.1	4.2
9	2.6	1.8	1.6	1.1	0.9	1.3	1.5	1.9	1.6	2.7	2.2	1.5	0.9	3.6	3.4	2.1	3.0	2.9	5.2	4.6	6.1	9.2	8.8	7.9	3.3	9.2
10	5.5	2.1	1.2	0.6	0.9	0.8	1.2	1.8	2.0	1.9	6.4	8.1	5.6	7.7	8.8	4.4	2.2	2.5	2.4	2.3	2.2	1.8	2.4	2.9	3.2	8.8
11	3.0	2.3	1.7	1.5	1.5	2.1	11.2	31.2	26.7	30.1	28.8	23.4	22.9	19.7	20.3	23.5	28.8	27.3	26.2	23.9	26.4	22.8	23.7	25.1	18.9	31.2
12	28.8	30.6	29.4	31.3	37.3	34.3	36.0	36.8	33.6	32.7	31.5	34.2	36.9	35.1	32.9	27.0	25.5	23.7	20.8	16.5	13.0	9.3	6.2	4.1	27.0	37.3
13	2.6	2.1	1.6	1.4	3.2	3.0	1.0	0.9	1.4	2.6	2.3	2.6	2.9	3.3	2.7	3.4	2.6	2.6	2.2	2.1	2.1	2.0	1.9	1.9	2.3	3.4
14	2.6	2.5	2.6	2.6	2.4	2.5	10.5	14.7	8.3	16.1	16.7	12.4	5.3	16.2	8.9	7.3	10.5	13.5	8.4	7.4	6.8	5.4	5.6	4.7	8.1	16.7
15	4.0	3.4	2.8	2.8	2.9	3.2	2.9	2.7	3.0	4.0	4.3	3.4	3.7	4.2	5.0	9.2	8.6	5.9	6.4	4.8	3.9	3.0	2.5	2.0	4.1	9.2
16	1.7	1.9	1.8	1.9	2.2	1.9	1.6	1.7	2.0	2.5	3.4	3.8	3.8	3.6	4.6	2.9	2.6	2.5	2.3	2.0	2.3	2.3	3.0	2.3	2.5	4.6
17	3.1	6.8	10.6	10.1	11.8	10.3	10.7	13.0	18.0	21.5	21.2	16.3	18.7	12.0	5.9	15.8	18.8	15.0	15.4	12.5	15.2	14.0	9.5	9.1	13.1	21.5
18	9.6	11.9	14.7	14.0	15.6	24.1	21.0	21.8	26.3	25.3	21.4	16.0	13.7	13.4	14.6	15.4	9.6	12.0	18.6	15.9	16.9	17.6	17.7	20.3	17.0	26.3
19	20.6	14.2	17.7	6.3	13.4	12.5	9.8	14.6	47.8	27.8	9.1	9.6	8.1	8.1	7.4	6.5	7.4	13.9	7.7	8.8	5.7	11.2	10.5	8.6	12.8	47.8
20	9.8	10.6	7.7	7.2	6.7	5.9	6.3	7.4	7.5	8.6	11.8	10.2	13.0	10.9	10.4	11.0	9.7	9.9	9.6	11.5	11.4	9.3	10.1	9.7	9.4	13.0
21	8.6	8.6	9.8	9.3	8.6	9.5	20.9	12.4	13.0	8.7	6.1	7.4	9.1	8.6	8.8	9.2	11.0	8.8	9.0	6.2	7.5	7.6	8.8	7.1	9.4	20.9
22	5.1	4.2	3.5	3.3	3.7	2.7	2.3	2.2	2.7	3.0	3.3	3.8	4.0	4.4	4.1	2.9	2.5	6.3	7.3	6.1	3.9	3.7	4.4	5.4	3.9	7.3
23	3.2	2.9	1.9	2.6	3.2	3.7	4.1	3.0	3.1	3.8	6.6	9.3	11.8	16.3	18.9	11.6	8.2	4.1	3.3	4.3	4.3	4.4	4.0	4.0	5.9	18.9
24	4.4	3.7	3.5	3.4	4.9	2.4	2.1	1.4	1.3	1.5	1.4	1.8	2.9	2.1	1.3	1.7	3.3	1.4	1.2	4.2	3.1	2.5	2.9	2.9	2.6	4.9
25	0.6	0.4	0.4	0.4	0.3	0.2	0.3	0.5	0.6	0.7	0.7	0.9	0.6	0.9	0.8	0.7	0.7	0.6	0.7	1.0	1.0	1.0	1.2	0.6	0.7	1.2
26	0.7	0.7	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.4	0.6	0.5	0.3	0.2	0.5	2.8	1.2	0.5	0.6	0.2	0.2	0.2	0.2	0.3	0.5	2.8
27	0.4	0.2	1.3	0.6	0.9	1.5	1.6	1.0	1.7	2.5	4.0	4.3	4.8	2.3	0.9	0.8	1.4	0.5	0.7	0.7	0.8	0.8	0.9	0.4	1.5	4.8
28	0.3	0.3	0.4	0.3	0.2	0.2	2.3	27.3	27.1	22.2	21.7	17.0	23.7	13.0	10.4	9.1	10.0	13.3	14.2	17.4	26.5	26.6	23.3	23.1	13.7	27.3
29	21.6	26.5	24.8	17.5	10.3	3.1	0.6	0.3	0.3	0.4	1.0	2.4	1.8	1.3	1.1	1.5	1.9	1.1	1.1	1.2	1.8	1.5	1.0	0.9	5.2	26.5
30	0.6	0.5	0.4	0.4	0.4	0.6	0.5	0.4	0.6	1.0	1.5	0.6	1.9	2.1	1.4	1.2	2.3	1.5	1.1	1.3	1.0	0.8	1.3	1.0	1.0	2.3
31	0.7	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.4	0.6	1.2	2.2	1.2	0.9	0.9	0.8	0.8	0.8	0.7	1.0	1.1	1.9	1.1	1.5	0.9	2.2
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	6.5	6.6	6.8	6.0	6.3	6.0	6.7	8.0	8.9	8.5	8.4	7.8	8.0	8.1	7.4	7.6	7.8	7.9	7.4	7.3	7.7	7.4	7.0	6.3		
MAX	28.8	30.6	29.4	31.3	37.3	34.3	36.0	36.8	47.8	32.7	31.5	34.2	36.9	35.1	32.9	27.0	28.8	27.3	26.2	23.9	26.5	26.6	25.2	25.1		



Number of Non-Zero Readings	744
Maximum 1-HR Average	47.8 UG/M3
Maximum 24-HR Average	27.0 UG/M3
IZS Calibration Time	
Down Time	0
Standard Deviation	7.9
OperatioEI Time	744 HRS
OperatioEI Uptime	100.0 %
Monthly Average	7.4 UG/M3

West TSP (µg/m³) – December 2022

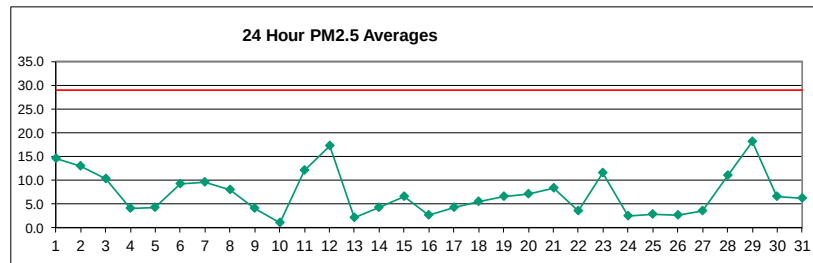
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	10.0	14.2	14.7	21.7	25.1	21.0	18.4	16.2	15.6	11.4	9.6	9.2	14.6	21.8	18.3	16.7	14.7	13.3	11.1	12.0	14.0	13.7	12.4	12.8	15.1	25.1
2	14.9	11.5	9.3	9.9	11.2	8.7	8.8	7.4	7.5	7.0	8.2	7.1	6.4	6.8	9.0	12.8	21.0	21.1	21.1	23.3	25.1	26.3	27.1	2.4	13.1	27.1
3	1.0	0.9	0.9	1.2	1.0	1.0	1.3	1.1	1.1	1.3	1.1	1.1	1.1	1.4	1.0	1.0	1.2	1.6	1.8	4.4	7.5	5.0	5.2	5.7	2.1	7.5
4	8.5	7.7	8.3	8.7	8.9	9.0	3.6	1.4	1.5	1.7	1.8	2.5	2.2	1.9	1.9	3.7	6.3	14.2	9.4	9.5	11.8	11.9	6.6	13.3	6.5	14.2
5	12.7	19.7	16.7	9.2	5.6	2.7	6.3	6.3	4.9	4.2	9.7	12.9	7.7	8.4	4.1	10.8	13.8	13.0	13.0	14.5	11.7	10.2	7.5	6.0	9.6	19.7
6	5.9	7.7	9.7	8.2	7.5	8.1	9.7	5.4	5.5	6.2	6.0	4.1	3.2	5.6	5.1	6.1	5.1	6.5	4.9	4.1	4.1	3.6	3.3	2.8	5.8	9.7
7	1.6	0.9	2.0	2.6	2.6	2.3	1.7	1.2	1.0	0.9	1.2	1.0	1.4	1.5	2.2	1.8	1.6	1.5	1.1	1.2	1.5	1.0	1.0	1.5	1.5	2.6
8	2.5	1.1	0.9	0.9	1.1	1.0	0.8	1.1	1.0	1.8	3.6	3.4	2.9	1.8	2.9	3.0	2.1	1.5	1.3	1.2	1.1	1.1	1.2	1.1	1.7	3.6
9	1.7	1.2	1.1	0.8	0.6	0.8	1.1	1.5	1.3	2.0	1.4	1.0	0.6	3.9	3.6	2.2	3.1	3.1	5.8	5.1	6.8	8.5	8.3	7.9	3.1	8.5
10	4.7	1.5	0.9	0.4	0.7	0.6	0.8	1.5	1.7	1.3	7.0	9.3	6.2	8.7	10.0	4.8	2.0	2.0	2.0	1.6	1.5	1.2	1.6	1.9	3.1	10.0
11	2.1	1.6	1.1	1.0	1.0	1.6	10.2	28.6	19.7	21.7	23.0	16.5	16.3	13.4	14.1	17.4	23.3	21.3	19.5	18.1	26.9	16.4	16.9	19.1	14.6	28.6
12	21.7	23.2	23.8	26.6	28.2	23.8	24.7	30.0	33.3	32.8	33.1	33.4	32.2	26.5	27.4	21.8	22.2	16.4	13.6	10.8	8.7	6.1	4.0	2.7	22.0	33.4
13	1.7	1.4	1.1	1.0	2.1	2.1	0.7	0.6	1.2	2.6	2.0	2.4	3.0	3.5	2.5	3.5	2.4	2.1	2.0	1.7	1.5	1.4	1.3	1.3	1.9	3.5
14	2.0	1.7	1.7	1.7	1.6	1.6	11.5	16.9	8.5	18.7	19.3	14.0	4.8	18.8	9.3	6.4	8.7	12.2	5.5	4.8	4.5	3.5	3.7	3.1	7.7	19.3
15	2.6	2.2	1.8	1.8	1.9	2.1	1.9	1.8	2.0	2.7	3.2	2.3	2.6	2.9	3.4	6.2	7.3	4.0	4.4	3.3	2.7	2.0	1.7	1.3	2.8	7.3
16	1.2	1.3	1.3	1.2	1.5	1.3	1.2	1.2	1.5	1.9	3.0	3.5	2.7	2.6	4.4	2.2	1.9	1.9	1.6	1.4	1.6	1.7	2.0	1.5	1.9	4.4
17	2.1	7.0	12.3	11.8	13.3	11.9	12.5	15.0	20.8	24.9	24.6	18.9	21.6	13.6	6.1	18.2	21.8	17.3	17.8	14.1	17.4	16.2	11.1	10.5	15.0	24.9
18	11.2	13.9	17.0	16.3	18.0	28.0	24.4	25.3	30.5	29.4	24.8	18.6	15.4	15.1	15.9	17.6	9.8	13.4	21.5	18.3	19.4	20.4	20.5	23.5	19.5	30.5
19	23.9	16.4	20.5	6.3	15.2	14.4	10.9	16.4	55.2	30.6	7.6	9.7	7.6	7.5	6.6	6.0	7.2	15.2	7.5	9.0	4.8	11.5	11.4	8.0	13.7	55.2
20	7.0	9.1	5.7	5.6	5.4	4.7	4.3	5.5	6.4	7.7	12.9	11.5	13.9	12.6	12.0	12.8	11.3	11.2	11.0	13.2	12.7	9.3	10.1	9.6	9.4	13.9
21	9.9	9.9	11.4	10.8	9.8	10.6	24.0	14.4	14.9	8.7	4.9	5.9	7.7	7.8	7.5	10.5	12.3	10.0	9.4	5.8	6.4	6.1	6.3	5.1	9.6	24.0
22	3.4	2.9	2.5	2.4	3.0	2.1	1.7	1.6	2.1	2.2	2.4	2.9	3.3	4.3	4.0	2.6	2.1	7.0	8.5	6.9	4.2	3.8	4.8	6.1	3.6	8.5
23	3.4	3.1	1.8	2.7	3.4	4.1	4.7	3.3	3.4	4.2	7.6	10.8	13.7	18.9	22.0	13.5	9.3	4.5	3.5	4.7	4.9	4.9	4.5	4.4	6.7	22.0
24	4.9	4.0	3.8	3.7	5.3	2.5	2.0	1.1	1.1	1.3	1.0	1.4	3.0	1.8	0.9	1.4	3.3	1.0	0.9	4.4	3.0	2.2	3.0	3.0	2.5	5.3
25	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.4	0.6	0.6	0.5	0.5	0.5	0.5	0.8	0.7	0.9	1.1	0.4	0.5	1.1
26	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.4	0.3	0.2	0.1	0.4	2.0	0.8	0.3	0.4	0.1	0.1	0.1	0.1	0.3	0.4	2.0
27	0.3	0.1	1.2	0.4	0.6	1.0	1.0	0.7	1.3	1.7	3.4	3.8	4.2	1.9	0.6	0.5	0.9	0.3	0.5	0.5	0.5	0.5	0.6	0.2	1.1	4.2
28	0.2	0.2	0.3	0.2	0.2	0.1	2.2	26.0	23.9	16.2	15.4	11.4	19.1	10.9	11.9	8.1	7.0	10.1	9.9	12.3	22.7	23.6	16.9	17.8	11.1	26.0
29	17.1	22.6	17.9	12.1	7.0	2.1	0.4	0.2	0.2	0.3	0.8	2.6	1.7	1.2	1.0	1.4	1.9	1.0	1.0	1.2	1.8	1.3	0.9	0.7	4.1	22.6
30	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.3	0.4	0.7	1.4	0.5	1.8	2.0	1.2	1.0	2.3	1.4	0.9	1.1	0.8	0.6	1.2	0.9	0.9	2.3
31	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.3	0.4	1.0	2.2	1.1	0.7	0.7	0.6	0.6	0.6	0.5	0.7	0.7	1.3	0.7	1.0	0.7	2.2
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	5.8	6.1	6.2	5.5	5.9	5.5	6.2	7.5	8.7	8.0	7.8	7.2	7.2	7.4	6.8	7.0	7.3	7.4	6.8	6.8	7.5	7.0	6.4	5.7		
MAX	23.9	23.2	23.8	26.6	28.2	28.0	24.7	30.0	55.2	32.8	33.1	33.4	32.2	26.5	27.4	21.8	23.3	21.3	21.5	23.3	26.9	26.3	27.1	23.5		



Number of 24HR Exceedences	0	Proposed Guideline	
Number of Non-Zero Readings	744		
Maximum 1-HR Average	55.2 UG/M3		
Maximum 24-HR Average	22.0 UG/M3		
IZS Calibration Time		Operational Time	744 HRS
Down Time	0	Operational Uptime	100.0 %
Standard Deviation	7.583	Monthly Average	6.8 UG/M3

Berm PM_{2.5} (µg/m³) – December 2022

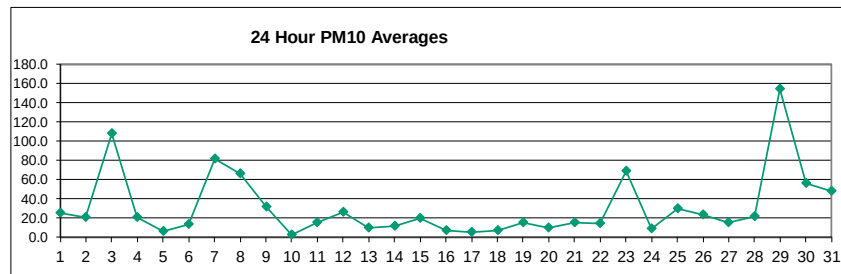
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.8	9.9	15.9	14.6	26.4	20.7	13.9	14.7	14.0	13.9	21.4	29.4	22.7	15.4	12.5	11.5	9.0	8.0	9.9	10.4	10.8	10.6	13.3	13.9	14.5	29.4
2	14.4	14.2	14.1	13.0	11.9	10.4	10.1	11.9	11.4	12.0	10.4	10.5	7.9	8.4	9.7	10.5	12.1	9.6	15.8	22.5	22.1	24.1	18.8	4.2	12.9	24.1
3	5.9	5.3	6.9	9.3	4.5	11.6	8.4	3.0	4.8	6.8	6.7	8.5	12.0	13.4	11.9	7.9	5.7	8.2	9.3	19.2	22.8	18.5	15.8	22.6	10.4	22.8
4	11.7	4.3	5.9	7.4	5.3	4.5	2.2	1.5	1.8	2.0	2.1	3.0	2.6	2.9	2.4	2.0	2.4	3.3	9.9	4.9	4.2	4.4	3.7	2.7	4.0	11.7
5	1.3	1.9	5.4	3.8	4.4	4.1	2.9	3.6	3.8	3.1	3.6	6.6	4.5	5.2	4.1	6.3	12.3	2.3	4.3	3.8	3.7	3.7	4.7	4.5	4.3	12.3
6	4.2	3.8	3.7	3.0	9.8	16.1	17.5	11.4	11.6	12.2	14.1	9.1	13.3	10.5	7.0	15.0	13.1	11.3	7.7	5.9	5.7	5.0	5.2	6.2	9.3	17.5
7	8.9	6.9	11.4	11.2	6.0	15.5	3.3	3.9	2.8	5.1	12.1	9.7	12.5	15.7	11.5	8.2	14.0	11.7	8.3	7.1	13.3	9.6	13.9	9.8	9.7	15.7
8	11.0	9.4	7.7	8.7	11.4	9.7	11.7	13.6	4.1	3.3	9.2	8.0	8.6	10.5	7.0	7.7	2.7	4.0	8.8	8.5	10.8	2.4	6.1	9.2	8.1	13.6
9	3.7	1.6	2.6	5.9	2.6	3.0	1.0	0.8	1.1	2.7	4.0	9.0	7.0	10.8	15.1	8.8	10.7	5.7	0.8	0.4	0.4	0.4	0.5	0.5	4.1	15.1
10	1.1	1.1	0.7	0.4	0.4	0.3	0.3	0.4	0.5	1.3	1.6	1.4	1.3	1.0	1.2	1.4	1.4	1.0	2.3	1.1	2.3	1.1	1.4	1.5	1.1	2.3
11	1.2	1.0	1.0	2.7	0.7	1.9	5.7	13.9	21.6	19.0	17.8	15.8	13.9	14.1	14.6	14.6	15.1	17.3	19.1	17.1	15.2	16.0	16.2	16.7	12.2	21.6
12	17.0	17.2	17.2	25.9	24.1	23.2	24.0	23.0	21.5	18.6	22.4	28.1	23.7	20.0	17.2	16.3	14.6	13.6	11.4	10.5	8.7	6.8	4.3	3.2	17.2	28.1
13	2.4	1.6	1.3	1.1	0.9	1.0	0.8	1.0	1.1	1.5	2.0	2.2	2.5	2.5	3.1	3.3	3.6	3.0	1.8	2.2	2.3	2.4	2.2	5.9	2.2	5.9
14	5.6	4.1	5.0	3.5	5.4	4.6	4.0	1.6	2.0	2.7	1.9	2.0	6.3	3.9	13.0	10.2	4.9	2.3	4.1	4.4	3.2	3.1	3.5	3.1	4.3	13.0
15	3.1	2.5	4.0	10.4	3.2	2.4	10.9	9.6	12.1	9.2	6.8	8.5	7.8	14.4	14.5	9.6	5.2	3.0	3.1	2.4	3.7	2.5	3.8	3.9	6.5	14.5
16	4.6	3.0	2.2	1.4	1.8	1.3	1.5	4.3	3.5	2.5	3.6	4.0	4.9	4.9	3.4	3.1	2.6	1.7	1.4	1.4	1.5	1.6	1.6	1.6	2.6	4.9
17	1.5	4.5	8.7	16.8	13.1	5.6	3.7	2.4	2.1	2.4	2.4	3.1	2.3	2.3	2.0	2.1	1.9	2.3	2.6	2.7	2.7	4.0	4.6	5.5	4.2	16.8
18	10.6	16.4	8.9	4.8	5.2	3.7	2.2	5.4	2.3	5.1	4.5	5.6	5.8	3.4	3.6	3.9	3.0	5.2	6.7	5.2	4.3	5.9	4.2	4.4	5.4	16.4
19	3.3	2.9	2.7	1.8	2.2	1.6	3.5	8.5	9.8	17.4	22.9	8.1	9.7	14.2	5.3	8.4	7.2	3.4	2.5	2.7	4.9	5.3	3.9	5.9	6.6	22.9
20	9.8	10.1	6.0	8.7	5.7	6.1	8.8	8.2	6.6	12.7	11.5	6.5	7.1	9.4	8.3	7.0	8.0	6.0	5.3	4.6	4.0	3.3	3.7	3.5	7.1	12.7
21	6.5	3.9	4.7	9.5	12.9	9.9	8.2	6.4	8.6	9.2	9.2	7.0	7.2	17.1	13.2	12.5	15.0	1.9	4.4	6.2	7.8	6.5	6.8	4.6	8.3	17.1
22	3.9	3.2	2.6	3.6	3.8	3.0	3.7	6.2	2.8	2.2	3.1	3.2	5.1	3.8	3.7	2.9	2.9	4.2	3.0	5.3	2.7	2.5	2.8	5.0	3.5	6.2
23	2.7	2.2	2.4	1.7	2.2	2.1	4.3	2.6	2.5	2.8	5.9	7.4	16.9	57.2	57.7	34.6	28.4	12.9	8.7	6.3	3.1	3.0	3.2	5.0	11.5	57.7
24	3.8	4.7	2.7	2.3	2.9	2.6	1.4	1.1	1.0	1.2	1.2	1.6	1.5	2.2	1.8	1.4	2.1	1.4	1.3	6.0	5.7	2.4	3.1	4.3	2.5	6.0
25	1.1	0.8	1.2	5.5	2.8	2.8	2.4	1.7	0.8	0.4	0.5	1.0	0.9	1.8	2.2	2.4	2.0	1.5	4.1	1.9	2.0	8.0	15.2	7.2	2.9	15.2
26	7.1	3.8	2.8	0.8	0.5	0.3	0.4	0.4	1.0	0.5	1.0	2.5	1.5	0.6	0.7	1.2	0.9	0.5	0.4	6.7	14.0	5.3	4.3	7.6	2.7	14.0
27	7.4	0.8	0.7	0.2	1.0	1.2	2.3	2.3	1.8	4.4	1.9	1.0	1.8	1.6	2.2	2.5	2.0	2.1	1.1	2.5	1.5	2.4	12.3	28.0	3.5	28.0
28	28.1	7.0	60.8	0.2	0.2	0.4	2.2	13.4	14.0	15.9	17.2	13.6	12.4	6.6	5.2	4.3	6.3	6.3	7.1	6.3	8.3	9.5	9.2	11.9	11.1	60.8
29	14.0	20.4	9.5	5.2	3.0	1.5	5.4	2.6	2.2	2.9	4.3	10.3	29.7	24.3	20.7	29.8	26.1	27.6	34.0	31.7	31.1	45.9	23.0	32.9	18.3	45.9
30	27.6	3.7	2.7	2.7	1.7	5.4	4.6	14.8	6.4	3.4	8.3	3.1	2.8	5.1	3.0	7.9	4.9	2.8	1.5	1.6	1.2	3.0	26.7	13.9	6.6	27.6
31	4.5	14.5	13.1	18.6	13.4	4.3	1.3	0.6	0.6	0.8	1.1	1.1	10.7	14.9	20.9	15.2	4.0	1.2	1.4	0.7	1.1	1.5	3.4	0.8	6.2	20.9
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	7.5	6.0	7.6	6.6	6.1	5.8	5.6	6.3	5.8	6.4	7.6	7.4	8.6	10.3	9.6	8.8	7.9	6.0	6.5	6.8	7.3	7.1	7.8	8.1		
MAX	28.1	20.4	60.8	25.9	26.4	23.2	24.0	23.0	21.6	19.0	22.9	29.4	29.7	57.2	57.7	34.6	28.4	27.6	34.0	31.7	31.1	45.9	26.7	32.9		



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	744	
Maximum 1-HR Average	60.8 UG/M3	
Maximum 24-HR Average	18.3 UG/M3	
Monthly Calibration	0	Operational Time
Standard Deviation	7.3	Operational Uptime
		Monthly Average
		744 HRS
		100.0 %
		7.2 UG/M3

Berm PM₁₀ (µg/m³) – December 2022

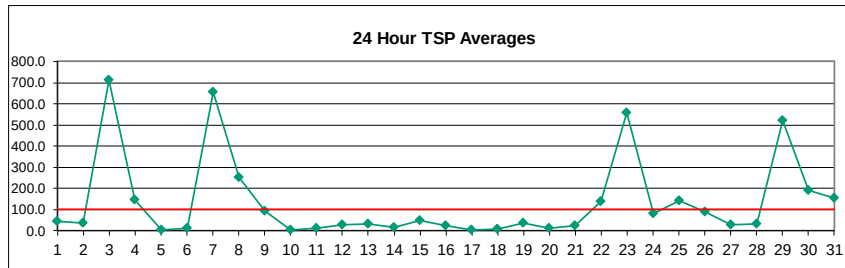
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	6.3	13.0	18.3	15.7	36.5	27.6	17.7	19.3	16.9	20.0	32.1	109.5	98.7	24.4	28.2	15.7	10.2	9.3	12.5	13.4	13.5	13.2	19.6	19.8	25.5	109.5
2	18.9	18.8	17.5	15.1	14.9	11.6	13.1	16.8	15.8	17.0	21.4	31.9	13.9	16.3	27.2	25.3	18.1	12.1	23.3	33.2	32.7	36.2	27.4	6.3	20.2	36.2
3	47.4	59.4	70.2	109.6	39.8	134.8	89.0	22.9	43.1	60.7	53.6	62.1	104.8	114.6	115.2	84.6	46.8	79.0	95.1	202.4	268.4	213.7	184.3	286.1	107.8	286.1
4	126.4	32.3	53.2	68.3	47.8	26.4	7.0	2.7	3.1	3.2	5.7	15.3	11.0	16.0	9.5	3.2	4.9	7.6	32.2	8.7	5.7	6.0	5.0	3.6	21.0	126.4
5	1.6	2.5	7.8	5.4	6.0	5.5	3.4	4.4	5.1	4.1	4.8	9.4	6.5	7.6	5.9	9.1	17.8	2.5	4.5	4.0	3.9	4.1	5.5	5.2	5.7	17.8
6	4.9	4.3	4.3	3.3	13.8	23.4	25.5	16.0	16.3	17.5	20.5	13.0	19.3	15.1	9.9	22.4	19.5	15.6	10.0	6.9	6.8	6.2	7.2	9.0	12.9	25.5
7	30.7	66.0	151.1	141.2	56.6	125.0	20.2	24.0	12.8	25.5	98.2	76.5	93.9	111.9	98.4	66.6	120.6	105.6	59.4	58.0	125.9	77.2	126.1	82.3	81.4	151.1
8	110.9	83.7	69.1	62.9	101.9	86.1	100.9	120.2	33.5	17.4	74.6	59.8	63.1	72.9	52.2	69.6	10.7	31.8	86.5	81.7	96.0	8.9	40.6	59.5	66.4	120.2
9	11.3	3.2	11.0	56.2	16.5	3.4	1.3	1.3	2.5	4.3	7.6	74.2	56.2	93.4	139.5	97.7	113.7	59.3	1.7	0.9	0.6	1.0	0.6	0.7	31.6	139.5
10	2.0	1.5	1.0	0.7	0.5	0.4	0.3	0.8	0.7	1.8	4.4	4.6	3.9	2.6	2.8	3.5	2.9	1.7	3.4	2.4	5.0	1.7	1.7	1.5	2.2	5.0
11	1.3	1.0	1.3	3.8	0.9	2.7	7.4	17.8	30.4	25.8	25.3	22.7	16.5	20.1	20.6	19.2	17.7	20.0	22.9	19.9	15.4	16.2	16.5	18.1	15.1	30.4
12	18.3	20.1	22.6	38.8	35.8	33.6	35.4	33.4	31.0	25.1	32.2	51.9	58.8	40.0	32.9	26.9	21.6	16.7	12.7	11.3	9.1	7.0	4.4	3.4	26.0	58.8
13	2.5	1.7	1.3	1.2	1.0	1.8	1.1	3.1	3.2	7.0	7.5	10.2	12.1	15.9	24.7	22.1	26.2	17.3	5.3	12.4	10.6	7.6	7.4	23.0	9.4	26.2
14	10.2	6.0	7.3	5.0	8.0	6.8	5.7	1.9	2.5	3.4	2.2	2.6	27.1	17.1	79.0	45.9	10.2	2.5	4.9	5.7	3.3	3.3	3.8	3.4	11.2	79.0
15	3.3	2.7	5.2	15.0	4.2	2.9	15.2	14.3	18.0	13.7	14.9	46.4	39.1	104.6	89.4	36.5	17.0	4.2	6.8	6.1	5.1	3.0	5.0	5.4	19.9	104.6
16	6.5	4.1	2.9	1.6	2.2	1.5	1.7	6.2	5.0	3.5	5.7	23.7	25.0	26.5	13.5	11.0	10.4	2.9	1.7	1.9	1.7	1.7	1.8	1.7	6.9	26.5
17	1.6	6.2	12.0	24.0	18.1	6.4	4.0	2.6	2.3	2.7	2.7	3.7	2.8	2.7	2.3	2.5	2.2	2.5	2.8	2.9	3.1	4.9	5.3	6.3	5.3	24.0
18	14.2	23.6	12.5	6.1	6.9	4.6	2.5	7.5	2.7	7.0	6.0	7.6	7.5	4.1	4.5	4.9	3.3	6.8	9.3	6.5	5.7	8.2	5.8	5.9	7.2	23.6
19	4.3	3.6	3.1	1.8	2.6	1.7	4.0	9.5	13.9	24.7	31.0	26.9	62.8	105.3	6.8	11.0	9.9	4.0	2.9	3.2	6.5	6.3	5.3	8.4	15.0	105.3
20	13.6	14.0	7.9	12.1	7.3	8.1	12.8	12.0	9.6	18.8	16.4	9.2	10.4	13.7	11.8	9.7	11.3	8.2	7.0	5.8	4.6	3.6	3.9	3.7	9.8	18.8
21	9.0	4.5	5.6	13.6	19.4	14.3	11.3	8.7	10.9	13.7	13.7	10.7	25.6	89.4	25.9	17.7	17.4	2.2	6.1	9.0	9.7	7.6	7.9	5.3	15.0	89.4
22	4.3	3.9	3.1	4.8	5.4	4.2	5.5	9.2	4.0	2.9	8.4	15.4	28.4	25.2	14.1	9.8	17.6	31.2	22.2	42.6	15.1	11.3	18.6	40.0	14.5	42.6
23	18.1	14.5	9.2	9.2	11.1	12.8	33.6	15.9	17.6	21.3	28.6	10.9	25.3	85.8	94.6	516.9	361.6	126.4	87.0	54.5	22.4	21.9	22.3	42.3	69.3	516.9
24	31.5	39.8	18.3	16.0	22.4	11.6	1.9	1.4	1.1	1.4	1.9	3.0	6.3	11.7	6.6	1.8	2.9	1.9	1.7	8.7	8.3	3.3	4.4	6.2	8.9	39.8
25	1.6	2.5	7.3	65.0	30.5	38.1	25.5	16.4	5.1	0.6	0.5	4.1	2.8	11.3	7.8	23.6	13.3	12.6	31.9	14.1	13.6	105.8	207.4	77.2	29.9	207.4
26	91.3	45.2	18.3	6.1	0.7	0.3	0.4	1.3	7.6	2.5	5.8	28.5	16.4	3.0	3.4	1.7	2.4	1.4	1.0	54.0	115.6	39.2	38.8	68.9	23.1	115.6
27	61.5	6.1	1.3	0.2	5.4	3.5	8.0	3.3	2.6	6.6	2.5	1.1	2.0	2.2	10.5	15.6	7.2	8.2	2.8	12.1	6.6	7.8	51.0	125.1	14.7	125.1
28	122.3	35.1	167.1	0.2	0.3	0.6	2.5	13.5	14.8	17.6	20.9	14.7	12.9	6.6	5.4	4.4	7.2	6.5	8.7	6.8	9.3	10.9	9.7	15.7	21.4	167.1
29	20.5	30.5	13.8	6.8	3.7	1.8	27.2	10.7	14.8	29.7	38.5	112.0	242.9	212.4	218.7	282.2	250.7	281.9	344.6	318.1	328.7	373.6	236.1	300.9	154.2	373.6
30	206.4	26.6	23.4	19.7	10.7	45.5	35.4	129.8	56.1	24.4	83.6	26.9	19.4	43.6	24.1	76.8	37.3	20.4	6.3	8.0	4.3	18.2	273.6	131.4	56.3	273.6
31	34.3	88.1	99.1	141.6	83.9	26.4	5.6	1.7	2.8	4.8	5.0	4.2	96.2	147.2	205.3	153.2	31.0	3.7	2.2	1.1	2.1	2.6	17.7	1.0	48.4	205.3
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	33.5	21.4	27.3	28.1	19.8	21.7	16.9	17.7	13.1	13.8	21.8	28.8	39.1	47.2	44.9	54.5	40.1	29.2	29.7	32.8	37.4	33.3	44.0	44.1		
MAX	206.4	88.1	167.1	141.6	101.9	134.8	100.9	129.8	56.1	60.7	98.2	112.0	242.9	212.4	218.7	516.9	361.6	281.9	344.6	318.1	328.7	373.6	273.6	300.9		



Number of Non-Zero Readings	744
Maximum 1-HR Average	516.9 UG/M3
Maximum 24-HR Average	154.2 UG/M3
Monthly Calibration	0
Standard Deviation	54.81
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	30.8 UG/M3

Berm TSP ($\mu\text{g}/\text{m}^3$) – December 2022

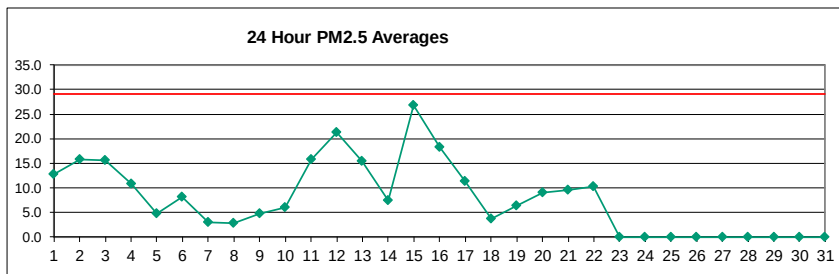
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	4.3	11.2	13.6	10.5	38.4	28.8	17.0	19.5	14.9	21.6	36.3	277.3	271.7	79.2	103.7	16.3	7.4	7.3	9.1	10.3	10.0	9.7	19.0	19.3	44.0	277.3
2	15.7	14.0	12.8	11.3	13.3	8.1	12.2	17.6	16.5	18.3	128.6	344.6	23.2	23.5	31.4	37.8	16.3	9.0	21.3	29.8	30.3	39.7	27.9	6.8	37.9	344.6
3	318.7	507.3	715.4	1148.4	325.4	1273.6	919.9	244.3	400.2	500.7	233.3	217.4	220.2	331.9	442.2	448.6	205.3	427.2	475.0	1160.0	1715.8	1401.2	1242.5	2221.4	712.3	2221.4
4	972.3	245.2	408.6	416.4	628.8	430.5	61.5	16.4	11.5	6.7	14.9	41.6	47.4	60.4	25.4	3.7	3.6	6.2	63.8	9.5	4.8	5.1	4.6	2.9	145.5	972.3
5	1.1	2.0	6.8	4.7	4.7	4.1	2.6	3.3	4.3	3.5	4.0	9.6	6.6	7.7	5.9	8.8	19.6	1.6	3.0	2.6	2.5	2.8	3.6	3.4	5.0	19.6
6	3.2	2.8	2.8	2.2	15.0	26.3	29.5	18.0	18.5	20.0	23.5	14.5	22.1	17.0	10.0	24.1	19.5	12.9	7.5	4.9	5.2	5.0	7.5	10.0	13.4	29.5
7	504.9	1612.2	3194.4	3380.4	1087.9	810.5	134.1	109.0	45.5	102.6	265.1	235.5	195.6	338.4	367.1	258.8	549.1	456.2	243.2	232.7	481.2	274.2	492.1	351.3	655.1	3380.4
8	509.2	364.2	257.5	223.2	428.1	388.3	441.1	568.3	154.9	65.6	286.4	219.4	160.9	179.1	168.8	261.4	24.2	110.4	332.6	281.2	343.4	26.5	104.3	120.1	250.8	568.3
9	15.9	3.8	27.8	191.4	51.7	3.5	1.4	5.0	10.9	8.3	11.7	232.7	195.1	278.4	419.1	303.7	341.1	163.5	2.2	3.2	0.7	3.0	0.4	0.4	94.8	419.1
10	2.8	1.6	2.9	2.1	0.4	0.2	0.7	0.4	1.3	12.4	10.0	12.5	5.8	7.9	7.4	5.3	1.7	6.0	6.0	9.4	3.5	1.2	1.0		4.3	12.5
11	0.8	0.7	1.0	4.1	0.7	2.7	5.5	13.8	29.3	21.0	22.5	21.2	17.2	23.8	27.8	24.5	16.5	14.8	15.9	13.7	9.9	10.5	10.7	12.1	13.4	29.3
12	12.1	14.0	17.5	39.0	30.1	26.2	28.7	26.3	23.9	19.1	29.9	76.6	82.7	72.5	47.4	41.2	41.8	12.4	8.6	7.7	6.0	4.6	2.9	2.2	28.1	82.7
13	1.7	1.1	0.8	0.8	0.7	6.2	1.9	9.3	13.8	23.8	27.5	35.2	45.5	61.0	88.7	79.8	100.2	56.5	15.7	45.0	38.0	19.3	27.6	75.4	32.3	100.2
14	49.5	6.0	7.6	5.0	8.2	6.8	5.3	1.3	1.8	2.9	1.5	2.5	47.6	24.9	105.8	65.2	11.6	1.7	3.5	5.1	2.2	2.2	2.6	2.3	15.5	105.8
15	2.2	1.8	4.9	16.3	4.0	2.2	15.3	15.8	20.5	15.4	29.7	134.1	101.4	351.0	260.9	98.4	45.6	5.5	14.6	17.9	5.0	2.4	4.0	5.4	48.9	351.0
16	7.0	4.0	2.7	1.2	1.7	1.1	1.3	6.8	5.1	3.3	7.9	152.3	98.7	105.3	44.7	40.4	39.2	13.2	1.6	1.9	1.1	1.1	1.4	2.3	22.7	152.3
17	1.0	5.5	11.8	25.4	18.3	4.9	2.6	1.7	1.5	1.8	1.8	2.6	2.0	1.9	1.6	1.9	1.5	1.7	1.8	1.9	2.1	4.0	4.0	4.4	4.5	25.4
18	14.2	27.0	13.1	5.2	6.6	4.1	1.8	7.7	1.9	7.1	5.8	8.0	5.8	3.2	3.6	4.3	2.4	6.3	9.8	5.9	5.4	8.8	6.1	6.0	7.1	27.0
19	3.9	2.7	2.4	1.2	1.7	1.1	3.2	7.8	15.1	25.9	29.3	222.6	233.1	246.1	5.4	9.2	8.2	2.9	2.1	2.5	6.1	5.3	5.1	8.6	35.5	246.1
20	13.8	13.6	7.0	13.1	6.7	7.8	14.0	13.1	10.2	21.5	18.1	10.2	11.9	15.8	13.6	10.6	12.5	8.7	7.1	5.3	3.4	2.4	2.6	2.5	10.2	21.5
21	9.7	3.8	4.6	15.0	22.5	16.4	12.2	9.0	10.6	15.9	15.5	16.7	195.4	168.1	35.1	16.7	12.4	1.6	5.9	9.9	8.5	5.5	5.7	4.0	25.9	195.4
22	3.1	3.4	2.8	4.9	6.0	4.7	6.3	10.5	4.4	2.9	103.5	226.5	335.1	291.6	171.9	138.6	202.0	175.3	223.7	379.3	164.6	162.7	293.6	431.8	139.5	431.8
23	354.6	233.4	146.6	126.0	191.2	246.6	847.5	443.9	235.3	362.1	520.5	12.7	29.4	99.7	190.6	3593.6	2646.0	957.5	676.5	423.0	229.2	208.8	243.8	367.0	557.7	3593.6
24	396.4	490.2	170.4	232.0	286.8	182.1	1.8	1.1	0.8	1.7	7.3	5.6	30.1	113.0	37.0	2.9	2.9	1.5	1.5	9.9	9.2	3.3	4.8	7.0	83.3	490.2
25	1.9	16.4	38.1	390.4	128.1	158.6	102.3	68.7	23.9	1.4	0.3	16.0	9.3	30.2	27.6	108.1	48.0	51.6	98.3	60.0	53.2	503.3	1078.6	392.0	141.9	1078.6
26	507.5	250.8	83.5	23.4	0.8	0.2	0.3	4.0	21.3	11.4	26.3	122.3	81.1	15.3	12.9	1.3	12.5	2.4	1.6	152.4	337.3	110.6	132.6	202.3	88.1	507.5
27	127.3	17.2	1.3	0.2	8.1	3.5	16.9	3.0	2.5	7.0	2.3	0.7	1.4	2.0	30.3	48.1	27.3	13.5	8.4	26.4	21.1	11.3	77.7	234.5	28.8	234.5
28	245.5	67.0	290.0	0.1	0.2	0.5	1.7	8.8	9.9	12.4	17.4	10.1	8.6	4.3	4.0	2.8	6.9	4.2	6.5	4.5	6.2	7.4	6.3	11.2	30.7	290.0
29	18.3	30.6	11.2	4.9	2.5	1.4	50.2	18.9	40.4	137.3	164.1	420.6	763.7	735.3	817.7	928.7	889.9	1088.4	1258.5	1062.2	1190.9	999.1	785.8	1108.4	522.0	1258.5
30	610.1	90.5	82.3	65.6	38.3	181.2	124.0	472.4	208.3	68.4	283.8	79.4	34.6	136.9	70.9	218.8	88.4	58.9	16.9	23.6	5.3	49.0	1021.3	529.6	189.9	1021.3
31	112.5	217.9	324.4	459.5	235.5	81.8	14.2	4.5	11.3	17.8	16.6	6.7	339.8	491.9	676.5	509.9	91.0	8.3	3.5	2.5	2.6	3.5	40.5	1.7	153.1	676.5
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	156.2	137.5	189.2	220.1	115.9	126.3	92.8	69.4	44.2	49.3	75.7	102.7	117.1	139.2	137.3	236.0	177.4	118.8	114.4	129.1	151.9	125.7	182.6	198.3		
MAX	972.3	1612.2	3194.4	3380.4	1087.9	1273.6	919.9	568.3	400.2	500.7	520.5	420.6	763.7	735.3	817.7	3593.6	2646.0	1088.4	1258.5	1160.0	1715.8	1401.2	1242.5	2221.4		



Number of 24HR Exceedences	10	Proposed Guideline
Number of Non-Zero Readings	744	
Maximum 1-HR Average	3593.6 UG/M3	
Maximum 24-HR Average	712.3 UG/M3	
IZS Calibration Time		Operational Time
Monthly Calibration	0	Operational Uptime
Standard Deviation	333.5	Monthly Average
		744 HRS
		100.0 %
		133.6 UG/M3

Entrance PM_{2.5} (µg/m³) – December 2022

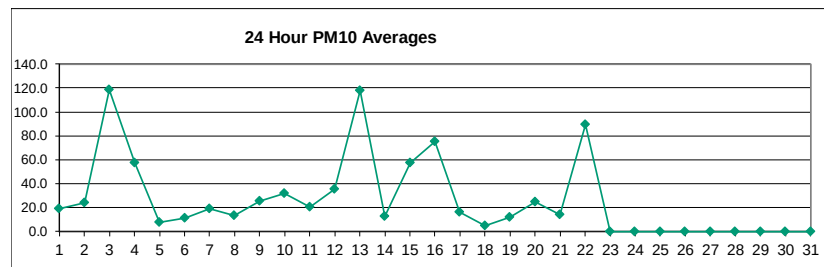
Day	Hour																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	7.5	9.4	15.2	12.9	18.8	18.5	16.5	14.6	13.5	11.2	11.4	11.5	14.1	15.9	13.1	14.0	12.0	10.9	7.2	9.0	12.5	10.8	11.0	13.6	12.7	18.8
2	17.1	17.1	20.7	18.2	15.7	16.0	12.6	12.0	16.6	18.7	11.2	10.5	9.3	8.6	8.0	13.6	14.0	17.7	17.1	19.9	25.1	23.4	20.3	13.6	15.7	25.1
3	13.3	8.0	5.2	7.7	4.1	4.3	6.4	5.2	5.3	6.7	3.1	1.6	1.4	2.5	7.4	79.6	8.3	87.5	12.5	20.3	40.8	17.1	11.5	14.4	15.6	87.5
4	10.6	8.2	18.8	23.3	23.5	17.6	8.6	8.9	17.2	13.7	13.8	14.1	10.1	9.4	10.2	4.7	5.0	8.0	11.6	5.6	5.0	4.3	3.5	2.4	10.8	23.5
5	2.2	3.3	2.8	3.1	2.1	3.1	3.1	2.7	3.1	2.5	2.9	5.2	3.6	7.5	5.7	8.7	10.9	10.2	5.8	5.3	5.7	5.4	4.4	4.0	4.7	10.9
6	3.8	4.3	3.3	3.1	2.9	2.5	3.0	3.2	6.8	6.6	4.8	4.8	4.8	4.9	5.6	6.9	4.9	13.8	9.1	17.5	25.7	20.3	21.1	12.0	8.1	25.7
7	7.1	2.8	7.4	6.5	4.3	3.1	3.2	1.8	2.5	2.6	2.8	2.7	2.2	2.9	2.4	2.3	2.5	2.4	1.7	2.3	2.4	1.5	1.5	2.4	3.1	7.4
8	3.6	2.2	1.6	1.7	2.0	2.1	1.5	2.4	2.4	2.7	3.4	2.9	2.6	2.2	2.7	3.0	5.4	4.2	4.3	2.3	2.6	3.8	2.6	2.9	2.8	5.4
9	5.7	6.3	3.4	1.2	2.4	9.2	9.0	6.9	18.2	12.0	2.9	4.1	1.0	4.6	2.5	2.0	2.1	2.6	4.2	0.7	1.9	3.2	2.6	3.7	4.7	18.2
10	4.4	7.1	6.5	10.2	1.8	1.4	3.1	3.0	3.9	4.7	4.1	2.0	1.3	1.2	1.4	2.0	2.0	3.3	7.4	9.9	17.9	21.1	17.3	7.1	6.0	21.1
11	13.1	20.9	27.8	19.8	9.0	2.8	10.5	17.1	17.9	18.0	18.0	15.2	14.7	14.8	14.1	14.8	16.5	16.5	16.4	15.8	15.7	16.3	17.0	16.2	15.8	27.8
12	18.6	17.6	18.3	21.9	26.4	23.2	23.9	23.8	23.8	19.6	21.3	27.4	25.4	25.0	24.2	19.4	16.0	27.5	31.8	24.4	21.1	13.7	10.4	6.8	21.3	31.8
13	11.4	7.2	9.2	9.7	8.4	10.9	6.9	9.0	6.1	14.9	13.9	17.2	17.8	22.1	24.3	26.3	27.6	15.5	20.3	15.9	21.2	18.5	18.9	15.6	15.4	27.6
14	13.8	4.3	4.3	6.1	4.8	10.3	6.7	3.1	3.0	3.3	2.8	2.3	3.4	4.4	6.9	8.4	7.9	9.0	13.2	12.0	12.2	9.5	11.9	16.1	7.5	16.1
15	25.9	30.4	18.1	20.3	18.7	13.9	24.2	35.5	36.2	30.0	42.4	24.1	18.7	17.3	15.0	24.7	39.8	38.7	38.8	27.3	24.2	26.5	22.9	29.1	26.8	42.4
16	30.9	23.0	14.0	12.8	19.4	16.2	10.0	17.0	20.0	20.7	21.6	26.8	17.5	24.6	21.8	33.6	30.5	19.8	5.7	5.1	3.9	7.9	18.7	15.6	18.2	33.6
17	14.5	4.7	12.9	26.1	19.3	24.2	31.2	15.5	11.0	10.7	7.6	7.4	6.4	5.6	4.8	3.2	7.6	13.8	10.1	6.0	10.7	8.7	5.1	4.5	11.3	31.2
18	6.4	7.8	3.5	3.0	4.1	3.3	3.6	3.6	3.6	4.8	3.8	5.0	3.3	3.8	2.9	3.9	2.5	3.8	4.2	2.7	2.7	2.6	2.6	2.1	3.7	7.8
19	2.3	1.8	2.2	1.9	1.9	2.6	3.2	6.3	12.8	15.7	20.6	9.4	5.7	6.1	4.4	6.3	6.6	3.8	2.9	4.0	6.0	9.2	7.5	8.9	6.3	20.6
20	14.5	16.1	18.1	14.1	9.4	14.8	10.3	6.0	6.2	9.7	8.8	6.1	5.5	8.6	8.8	10.9	9.3	7.6	6.9	4.8	5.0	6.7	4.9	4.3	9.0	18.1
21	13.7	13.0	14.8	14.3	8.7	7.9	12.7	8.5	8.9	9.7	5.9	6.3	6.3	7.2	6.9	8.9	10.5	6.0	8.9	7.9	7.0	10.6	12.9	13.1	9.6	14.8
22	8.2	8.3	5.1	5.5	6.7	6.7	4.2	12.3	8.2	8.4	8.6	10.0	12.4	16.7	10.5	5.8	6.6	10.7	12.2	28.4	11.7	10.3	11.7	17.9	10.3	28.4
23	13.9	13.2	8.0	6.5	6.4	7.4	13.0	10.6	24.7	25.8	37.2	41.1	42.9	73.5	69.2	P	P	P	P	P	P	P	P	P	-	-
24	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
25	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
26	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
27	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
28	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
29	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
30	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
NO.	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	543	73%
MEAN	11.4	10.3	10.5	10.9	9.6	9.7	9.9	10.0	11.8	11.9	11.9	11.2	10.0	12.6	11.9	13.8	11.3	15.2	11.5	11.2	12.8	11.4	10.9	10.3		
MAX	30.9	30.4	27.8	26.1	26.4	24.2	31.2	35.5	36.2	30.0	42.4	41.1	42.9	73.5	69.2	79.6	39.8	87.5	38.8	28.4	40.8	26.5	22.9	29.1		



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	543	
Maximum 1-HR Average	87.5 UG/M3	
Maximum 24-HR Average	26.8 UG/M3	
Monthly Calibration	0	Operational Time
Standard Deviation	10.01	Operational Uptime
		Monthly Average
		543 HRS
		73.0 %
		11.3 UG/M3

Entrance PM₁₀ (µg/m³) – December 2022

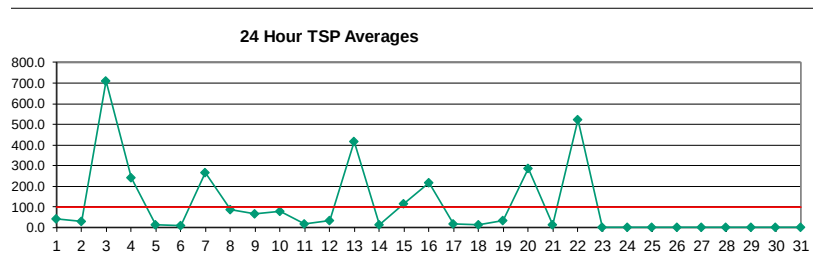
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	10.1	13.7	22.1	18.3	34.0	24.4	21.6	19.0	17.8	14.9	15.0	15.9	25.0	33.0	21.7	20.6	17.0	15.8	9.1	13.0	18.2	15.0	16.1	19.1	18.8	34.0
2	24.5	24.6	30.3	26.2	22.9	23.7	17.3	17.0	24.7	27.8	23.3	26.5	19.2	14.4	14.1	19.3	19.6	26.1	25.7	29.6	37.7	35.1	30.2	19.1	24.1	37.7
3	51.5	87.8	49.0	75.6	23.4	37.4	65.3	35.0	42.1	64.8	31.2	6.6	5.3	20.8	58.3	381.6	59.5	468.8	111.9	216.9	459.0	200.1	137.1	151.3	118.3	468.8
4	107.5	63.3	152.9	186.9	180.9	127.5	49.0	42.4	71.9	53.3	56.5	62.3	38.1	37.9	40.2	16.2	19.1	13.3	27.4	7.9	6.9	5.9	4.9	3.1	57.3	186.9
5	2.9	4.1	3.8	4.2	2.7	4.0	3.8	3.2	4.0	3.2	3.6	7.4	7.4	27.2	23.9	12.7	15.7	14.8	8.4	7.2	8.0	7.2	5.5	4.9	7.9	27.2
6	4.4	5.2	4.1	3.7	3.4	2.8	3.5	3.6	7.5	7.6	6.4	6.8	7.0	7.1	8.1	10.2	7.0	20.6	13.4	26.2	38.6	30.4	31.6	17.9	11.5	38.6
7	13.0	24.8	103.8	75.8	45.9	30.6	22.0	7.4	5.8	8.2	8.2	11.7	8.1	8.2	13.2	7.0	14.7	13.4	4.6	8.2	9.1	3.7	3.8	12.3	19.3	103.8
8	33.1	13.3	6.2	9.5	11.6	14.2	5.2	13.5	10.3	6.1	13.5	12.9	9.1	6.2	11.1	17.1	51.0	11.7	15.1	6.3	6.9	16.0	5.8	10.3	13.2	51.0
9	27.4	33.6	17.6	4.0	10.1	73.5	77.3	52.1	95.6	28.5	7.1	15.9	2.6	19.2	14.5	9.4	10.7	16.5	34.6	2.9	13.2	13.9	10.7	16.4	25.3	95.6
10	19.4	43.8	39.6	76.5	9.3	6.4	19.2	7.6	5.6	9.9	27.7	10.9	5.1	4.3	5.1	8.3	11.1	17.5	53.9	73.8	124.3	102.1	70.0	10.4	31.7	124.3
11	19.7	31.3	41.8	29.6	13.4	4.0	13.9	19.0	20.3	22.4	23.5	17.9	17.6	19.8	18.2	22.1	24.0	20.4	18.7	16.8	17.1	17.4	18.1	17.2	20.2	41.8
12	24.4	22.5	25.1	32.2	39.6	34.2	35.5	35.5	35.7	28.7	37.9	82.9	54.9	55.4	46.7	28.4	23.2	40.8	47.2	36.6	31.6	19.9	15.5	9.9	35.2	82.9
13	17.0	10.7	13.8	14.5	12.6	45.4	71.5	79.7	60.3	138.2	138.1	176.7	156.0	208.7	218.0	237.2	267.3	143.8	198.1	164.4	190.9	106.6	86.6	78.0	118.1	267.3
14	20.6	5.8	5.9	8.6	6.6	15.1	9.8	3.9	3.8	4.0	3.2	3.0	12.3	13.5	26.2	28.0	11.5	12.8	18.5	16.7	18.0	14.0	17.4	24.1	12.6	28.0
15	38.8	45.6	27.1	30.4	28.0	20.9	36.3	53.2	54.3	45.0	63.7	36.1	27.2	49.8	79.0	135.8	284.3	66.4	58.2	41.0	36.3	39.7	34.4	43.7	57.3	284.3
16	46.4	34.5	21.0	19.1	29.1	24.3	14.9	25.5	30.0	31.1	58.3	231.7	101.6	190.8	195.6	259.3	229.5	138.0	30.9	22.2	5.6	11.7	35.1	23.5	75.4	259.3
17	21.6	6.8	18.7	38.4	27.6	35.4	46.3	22.8	15.9	15.5	10.8	10.5	9.2	8.0	6.8	4.4	10.9	20.1	14.4	8.2	15.5	12.3	6.1	4.8	16.3	46.3
18	7.6	10.4	4.3	3.3	4.9	3.9	3.8	4.5	4.0	5.7	4.8	6.5	4.2	6.9	5.5	11.9	3.4	5.8	5.6	3.3	3.2	3.2	3.1	2.5	5.1	11.9
19	2.7	1.9	2.3	2.0	3.3	9.1	4.3	8.2	18.2	22.9	28.6	20.1	19.7	23.8	12.5	14.4	15.5	7.5	4.8	17.6	11.7	12.5	10.9	12.9	12.0	28.6
20	20.7	23.5	27.0	19.7	13.0	20.1	13.4	7.4	8.5	13.9	12.4	17.5	10.7	67.8	54.9	78.4	76.3	39.3	18.2	14.7	12.6	15.5	5.9	4.7	24.8	78.4
21	20.4	19.4	22.0	21.4	12.9	11.3	18.6	11.9	11.9	13.8	8.1	8.6	8.8	10.4	10.1	13.2	14.7	8.3	12.8	11.6	9.9	15.7	19.2	19.7	13.9	22.0
22	12.1	12.4	7.3	8.1	10.0	10.0	6.2	21.5	36.1	29.3	41.4	81.4	93.3	177.9	123.6	65.2	78.6	115.1	159.7	342.3	162.9	127.2	171.7	249.9	89.3	342.3
23	172.6	173.7	105.9	69.4	78.8	104.6	171.4	129.8	262.0	313.7	523.8	536.0	106.7	110.3	648.2	P	P	P	P	P	P	P	P	P	-	-
24	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
25	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
26	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
27	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
28	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
29	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
30	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
NO.	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	543	73%
MEAN	31.2	31.0	32.7	33.8	27.1	29.7	31.7	27.1	36.8	39.5	49.9	61.1	32.6	48.8	72.0	63.7	57.5	56.2	40.5	49.4	56.2	37.5	33.6	34.3	-	-
MAX	172.6	173.7	152.9	186.9	180.9	127.5	171.4	129.8	262.0	313.7	523.8	536.0	156.0	208.7	648.2	381.6	284.3	468.8	198.1	342.3	459.0	200.1	171.7	249.9	-	-



Number of Non-Zero Readings	543
Maximum 1-HR Average	468.8 UG/M3
Maximum 24-HR Average	118.3 UG/M3
Monthly Calibration	0
Standard Deviation	71.57
Operational Time	543 HRS
Operational Uptime	73.0 %
Monthly Average	42.2 UG/M3

Entrance TSP (µg/m³) – December 2022

Day	HOURLY																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.2	14.0	22.4	17.1	341.6	26.3	22.7	19.3	18.5	14.1	11.9	29.6	63.4	190.1	47.3	21.6	15.8	15.7	6.8	12.7	19.4	12.0	14.9	16.5	41.0	341.6
2	20.8	24.6	29.9	23.3	22.5	20.7	14.4	14.1	25.6	29.0	71.4	79.0	51.6	17.4	22.0	17.0	16.4	23.5	24.9	28.8	42.1	39.9	33.8	18.5	29.6	79.0
3	277.4	642.0	337.1	523.3	91.8	244.5	584.0	255.7	324.5	552.5	254.9	36.1	22.0	197.4	280.1	727.1	215.8	665.4	557.1	1670.1	3322.5	2152.6	1508.2	1618.2	710.8	3322.5
4	1126.9	480.4	841.5	1052.7	761.4	508.0	127.3	125.4	131.1	76.0	98.5	135.7	76.5	91.5	65.7	17.4	24.4	11.5	26.1	6.5	5.9	5.1	4.5	2.5	241.8	1126.9
5	2.3	3.2	3.3	3.5	2.1	3.2	3.1	2.4	3.5	2.5	2.9	7.4	12.0	72.2	122.2	13.6	17.9	15.9	6.4	5.1	5.8	5.0	3.8	3.3	13.4	122.2
6	3.0	3.5	2.8	2.5	2.3	1.9	2.4	2.4	5.0	5.1	5.0	6.3	6.9	6.6	8.1	10.4	6.6	22.7	13.4	30.2	44.4	34.7	36.5	20.7	11.8	44.4
7	47.4	333.1	1679.5	1439.7	886.2	520.8	317.3	89.9	15.3	17.2	15.9	44.1	38.8	24.8	100.2	46.1	217.7	216.5	42.5	73.8	72.8	20.7	16.1	88.1	265.2	1679.5
8	509.7	189.3	57.9	74.5	80.8	182.5	46.4	161.4	87.3	12.1	61.4	58.6	30.4	21.0	40.7	71.0	197.1	29.9	49.3	15.1	21.5	28.4	17.6	70.1	88.1	509.7
9	49.4	50.7	51.3	15.6	15.2	246.5	203.8	119.1	235.9	133.5	23.6	39.0	8.7	42.1	52.4	25.7	42.3	40.5	96.4	16.4	49.4	22.1	20.5	27.8	67.8	246.5
10	49.4	89.4	96.2	217.9	15.3	10.7	46.0	10.4	5.7	13.0	139.5	54.5	29.1	11.1	12.9	19.9	27.4	31.5	109.9	170.9	392.2	220.5	137.1	11.3	80.1	392.2
11	22.4	36.2	48.4	34.2	15.3	3.9	11.1	12.9	14.6	16.5	18.8	12.6	18.6	24.1	18.6	30.6	25.8	14.7	12.8	11.1	12.0	11.8	11.9	11.4	18.8	48.4
12	18.6	16.7	19.7	31.3	38.0	27.5	30.0	32.2	37.1	27.0	40.3	121.7	49.9	58.1	42.4	22.2	18.8	42.3	50.9	40.7	35.3	21.6	17.6	10.8	35.4	121.7
13	19.5	12.2	15.8	16.4	14.6	197.7	344.0	387.6	252.8	541.9	572.6	709.0	487.9	754.5	664.4	819.8	857.7	511.3	682.6	766.0	807.1	274.5	181.1	169.1	419.2	857.7
14	22.6	5.1	5.3	8.9	6.4	16.4	9.7	3.2	2.8	3.1	2.2	3.1	31.5	22.5	36.5	35.2	11.2	11.2	15.8	16.6	18.8	12.7	17.5	27.1	14.4	36.5
15	45.0	52.8	30.9	35.1	32.1	23.9	42.0	61.9	63.1	52.2	74.0	41.9	29.6	175.2	278.1	475.6	841.6	86.5	67.6	47.6	42.2	46.1	40.0	50.8	114.0	841.6
16	53.9	39.9	24.4	22.0	33.8	28.0	17.2	29.6	34.8	36.0	122.7	816.7	287.3	716.9	729.5	845.9	761.8	358.8	101.1	88.7	6.0	13.0	51.2	27.2	218.6	845.9
17	24.8	7.0	18.1	40.3	28.4	39.0	53.6	26.0	18.0	16.3	11.3	10.7	9.4	8.3	5.7	4.1	11.3	22.9	15.8	7.9	17.5	13.1	5.0	3.3	17.4	53.6
18	6.2	10.3	3.4	2.3	3.6	3.0	2.5	3.7	2.8	4.5	4.1	5.9	3.5	25.5	36.0	153.4	14.3	26.3	5.1	2.9	2.2	2.4	2.3	1.8	13.7	153.4
19	1.9	1.3	1.5	1.3	20.6	91.8	4.1	7.5	19.9	25.5	27.9	68.3	69.6	115.9	49.7	34.4	65.1	40.8	13.8	52.2	52.8	12.5	11.5	13.9	33.5	115.9
20	22.3	25.9	29.3	18.8	12.1	20.3	11.1	5.5	7.8	14.4	11.9	168.6	52.4	1050.7	875.8	1542.3	1386.6	734.0	231.1	216.6	150.7	255.6	5.3	3.5	285.5	1542.3
21	23.7	22.5	25.6	24.9	14.9	12.7	21.4	12.8	12.6	13.7	6.9	7.2	7.8	10.4	10.4	14.0	14.5	8.6	13.5	12.3	9.9	15.8	20.1	21.3	14.9	25.6
22	12.3	13.0	6.8	8.4	10.5	11.3	6.7	23.5	94.9	57.4	128.0	449.2	401.3	1092.8	811.6	502.9	601.4	739.7	1058.8	1976.7	994.2	998.8	1020.3	1554.9	524.0	1976.7
23	1227.5	1257.4	911.6	479.3	563.6	805.0	1611.3	1034.9	1606.1	2338.0	3547.9	3499.9	424.7	128.2	2026.5	P	P	P	P	P	P	P	P	P	-	-
24	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
25	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
26	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
27	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
28	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
29	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
30	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-
NO.	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	543	73%
MEAN	156.3	144.8	185.3	178.0	131.0	132.4	153.6	106.1	131.3	174.0	228.4	278.5	96.2	211.2	275.5	247.7	245.1	166.8	145.5	239.5	278.4	191.8	144.4	171.5		
MAX	1227.5	1257.4	1679.5	1439.7	886.2	805.0	1611.3	1034.9	1606.1	2338.0	3547.9	3499.9	487.9	1092.8	2026.5	1542.3	1386.6	739.7	1058.8	1976.7	3322.5	2152.6	1508.2	1618.2		



Number of 24HR Exceedences	8	Proposed Guideline	
Number of Non-Zero Readings	543		
Maximum 1-HR Average	3322.5 UG/M3		
Maximum 24-HR Average	710.8 UG/M3		
		Operational Time	543 HRS
Monthly Calibration	0	Operational Uptime	73.0 %
Standard Deviation	424.6	Monthly Average	183.6 UG/M3