

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT

DECEMBER 2021

JANUARY 19, 2022





AMBIENT AIR QUALITY MONTHLY REPORT

DECEMBER 2021

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-05
DATE: JANUARY 19, 2022

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January 19, 2022

LAFARGE CANADA INC.
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Attention: Nikolaos Veriotes P. Eng.

Dear Mr. Veriotes,

Subject: Ambient Air Quality Monthly Report – December 2021

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 2021.

Lagoon	Data Completeness (%)	1-Hour Average	24-hour Average
		Exceedances of AAAQO or AAAQG	Exceedances of AAAQO
TSP	99.3%	-	0
PM _{2.5}	99.2%	0	0
PM ₁₀	99.1%	-	-
NO	100%	-	-
NO ₂	100%	0	-
NO _x	100%	-	-
SO ₂	100%	0	0
Met Parameters	100.0%	-	-

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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 2021.

Windridge	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of AAAQG	Exceedances of PM _{2.5} AAAQO	Exceedances of TSP AAAQO
TSP	98.8%	-	-	8
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 reported exceedances of the Guidelines at the GRIMM Monitors for December 2021.

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	98.5%	0	0	0
Berm	75.8%	12	2	9
Entrance	100%	0	0	16

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.
Team Leader, Environmental
Management, Vancouver Office

SIGNATURES

PREPARED BY



January 119, 2021

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Date

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



January 19, 2021

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. 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, 2021 and December 31, 2021.

This monthly report was prepared by Dylan Weyell, Junior Air Quality Specialist with WSP, on behalf of Lafarge and was reviewed by Tyler Abel, Team Leader of Environmental Management in the Vancouver Region at WSP.

1.1 EXSHAW CREEK FLOOD MITIGATION

Due to flood mitigation construction at Exshaw creek (Figure 1), 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.



Figure 1 Photo of Completed Flood Mitigation Work at Exshaw Creek

1.2 FUGITIVE DUST CONTRIBUTIONS FROM LAC DES ARCS

In the past, Lafarge environmental staff have noted the potential contributions of fugitive dust in the airshed from the exposed lake bed of Lac Des Arcs, immediately southwest of the Lafarge plant site. In some months of the year, low water levels have left more of the lake shore/bed exposed. During high wind events, the sediments from the exposed lake bed can be re-suspended, dispersed in air and become a significant source of fugitive dust impacting the community. This additional source of fugitive dust in the airshed would have an impact on ambient concentration of particulate matter at the monitor and exacerbate any dust originating from the plant site itself.

In December 2021, Lafarge environmental staff noted that water levels were low enough that the lake bed was exposed (Figure 2), therefore being a potential source of fugitive dust this month.



Figure 2 Photo of Lac Des Arcs (October 2021)

2 DECEMBER 2021 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 the stations 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	30.8	0	15.9	-
SO ₂ (ppb)	100.0	10.6	0	4.9	0
PM _{2.5} (µg/m ³)	99.2	27.7	0 ¹	17.0	0
PM ₁₀ (µg/m ³)	99.1	459.8	-	93.6	-
TSP (µg/m ³)	99.3	434.9	-	98.5	0
Temperature (°C)	100.0	8.7	-	2.8	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	55.9/W	-	39.4/WSW	-
Precipitation (mm)	100.0	1.3 ²	-	12.25 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 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 meteorological sensors, NO₂, and SO₂ analyzers recorded 100.0% uptime for the month of December.
- TSP recorded 99.3% uptime due to one hour of power failure that occurred on December 9th at 2:00, and further four hours of equipment change on December 14th at 11:00 & 12:00 and 15:00 & 16:00.
- PM_{2.5} recorded 99.2% uptime due to one hour of power failure that occurred on December 9th at 2:00, and further five hours of equipment malfunction on December 17th from 10:00 – 14:00.
- PM₁₀ recorded 99.1% uptime due to one hour of power failure that occurred on December 9th at 2:00, and further five hours of equipment change on December 14th at 11:00 & 12:00 and 15:00 & 16:00. Further, there was one hour of equipment malfunction on December 15th at 2:00.

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	59.0	0*	16.8	0
PM ₁₀ (µg/m ³)	100.0	485.0	-	286.1	-
TSP (µg/m ³)	98.8	985.0	-	453.8	8

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

Data Quality Notes:

- There was zero days exceeding the 24-hour PM_{2.5} AAAQO.
- There was zero hours exceeding the 1-hour PM_{2.5} AAAQG.
- There were 8 days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- The PM_{2.5} & PM₁₀ monitor recorded 100% uptime during the month of December.
- TSP recorded 98.8% uptime for the month of December due to nine hours of equipment malfunction on December 15th at 4:00 – 12:00.

2.3 WEST GRIMM

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

Table 2-3 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	98.5	29.5	0*	16.7	0
PM ₁₀ (µg/m ³)	98.5	36.7	-	21.5	-
TSP (µg/m ³)	98.5	98.8	-	18.6	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 exceedance of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The analyzer had 98.5% uptime for the month of December due the GRIMM monitor being removed for annual calibration and maintenance from December 1st at 1:00 - 11:00.

2.4 BERM GRIMM

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

Table 2-4 Berm station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	75.8	183.9	12*	79.6	2
PM ₁₀ (µg/m ³)	75.8	1526.4	-	635.8	-
TSP (µg/m ³)	75.8	3896.4	-	1727.1	9

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

Data Quality Notes:

- There were 2 exceedances of the 24-hour PM_{2.5} Guidelines.
- There were 12 exceedances of the 1-hour PM_{2.5} Guidelines.

- There were 9 exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The analyzer had 75.8% uptime during the month of December due to an equipment malfunction from December 1st at 1:00 to December 8th at 12:00.

2.5 ENTRANCE GRIMM

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

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)	100.0	47.0	0*	23.6	0
PM ₁₀ (µg/m ³)	100.0	513.3	-	143.7	-
TSP (µg/m ³)	100.0	3829.6	-	1067.7	16

* 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 16 exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

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

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 2021.

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 8 th . The monitor had 99.2% uptime due to one hour of power failure that occurred on December 9 th at 2:00, and further five hours of equipment malfunction on December 17 th from 10:00 – 14:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on December 8 th . The monitor had 99.1% uptime due to one hour of power failure that occurred on December 9 th at 2:00, and four hours of equipment change on December 14 th at 11:00 & 12:00 and 15:00 & 16:00. Further, there was one hour of equipment malfunction on December 15 th at 2:00.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on December 8 th . The monitor had 99.3% uptime due to one hour of power failure that occurred on December 9 th at 2:00, and further four hours of equipment change on December 14 th at 11:00 & 12:00 and 15:00 & 16:00.
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated on December 9 th . The monitor had 100% uptime for the month of December.

Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on December 9 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.

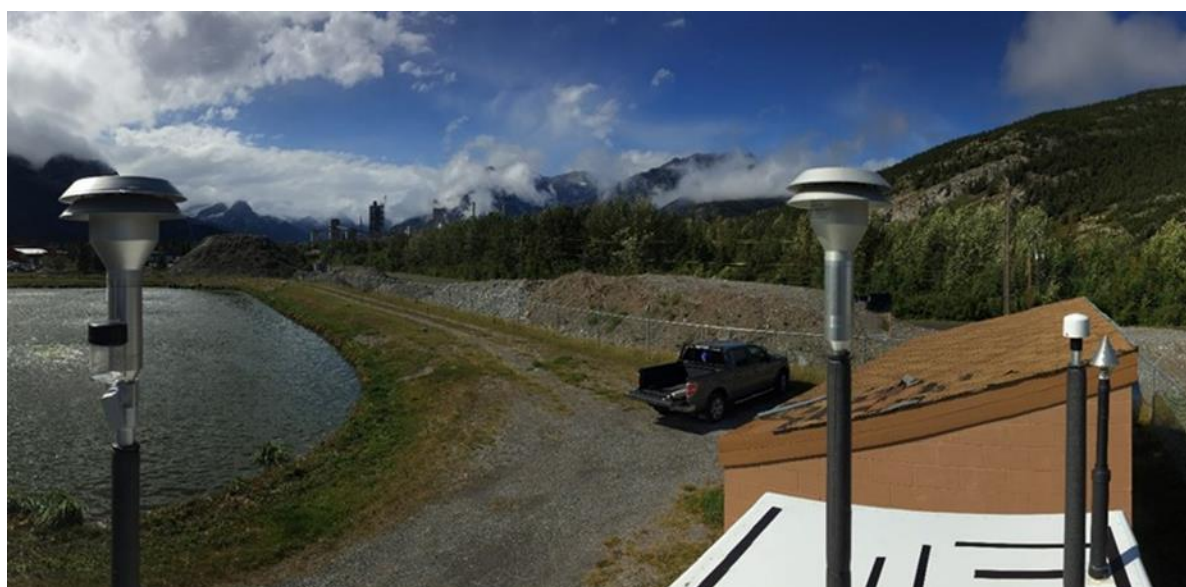


Figure 3-1 Inlets on the top of WSP's Lagoon monitor

3.2 MONITORING RESULTS AND TRENDS

Table 3-2 summarizes the hourly and daily concentrations recorded in December 2021. 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 2021 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 is zero and zero, respectively.

At the Lagoon station strong wind gusting that typically occurs in the area contributes to increased particulate levels that may have 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 2021 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	-	1.0	9.5	30.8	19	22	4.9	250.1	15.9	13	100.0
SO ₂ (ppb)	172	48	Lagoon	0	0	0.0	1.3	10.6	4	8	17.0	271.4	4.9	4	100.0
PM _{2.5} (µg/m ³)	80	29	Lagoon	0	0	0.0	5.2	27.7	13	15	6.7	216.3	17.0	14	99.2
PM ₁₀ (µg/m ³)	-	-	Lagoon	-	-	0.0	23.7	459.8	17	14	23.0	296.2	93.6	17	99.1
TSP (µg/m ³)	-	100	Lagoon	-	0	0.0	30.8	434.9	10	20	46.5	257.6	98.5	17	99.3
Temperature (°C)	-	-	Lagoon	-	-	-33.2	-11.1	8.7	1	1	35.5	273.2	2.8	1	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	1.6	19.0	55.9/W	10	23	55.9	257.0	39.4/WSW	21	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.0	1.3	1	7	19.2	270.3	12.3	-	100.0

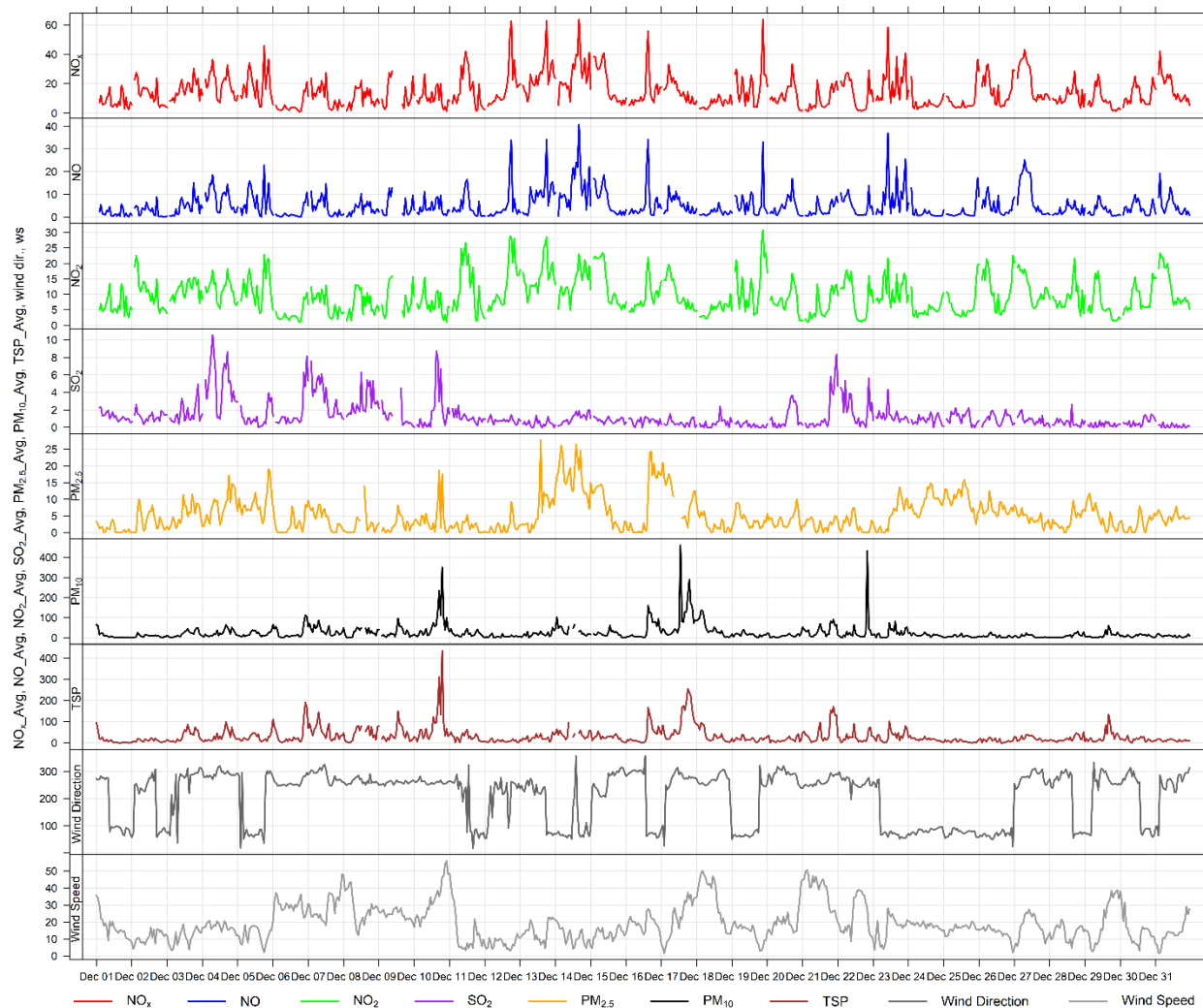


Figure 3-2 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

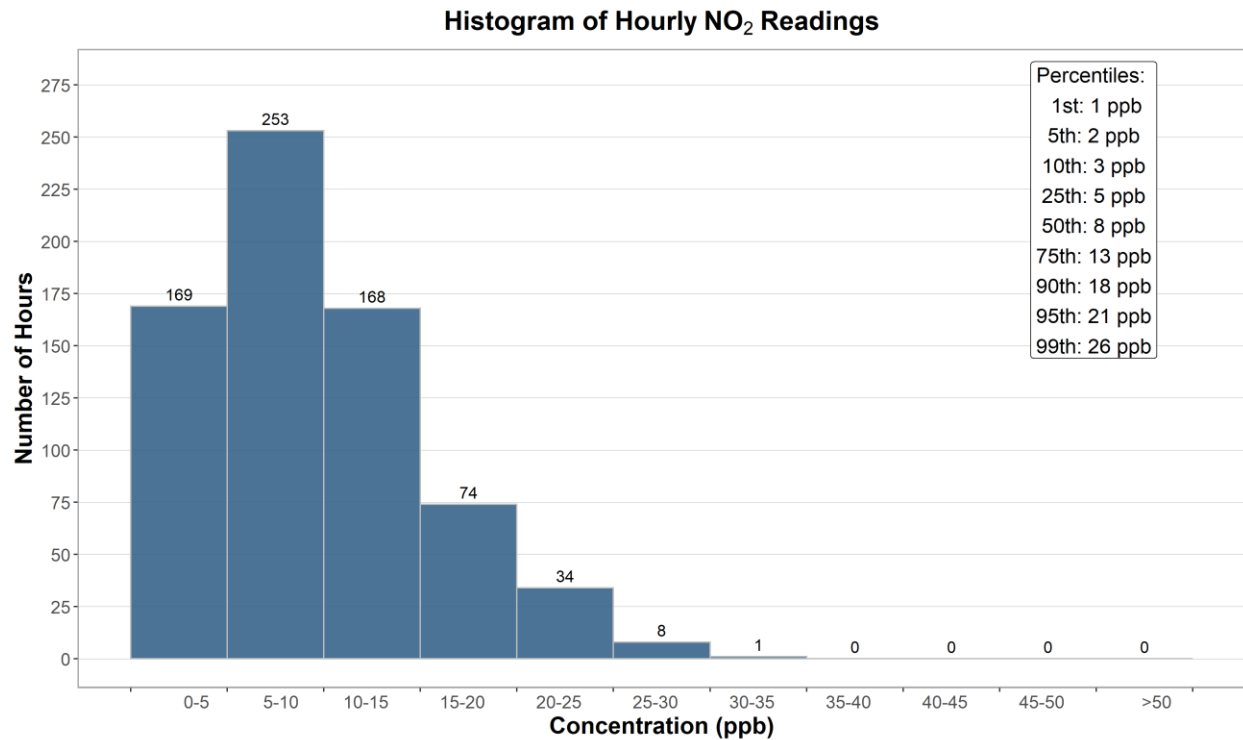


Figure 3-3 Histogram of hourly NO₂ concentrations at the Lagoon station

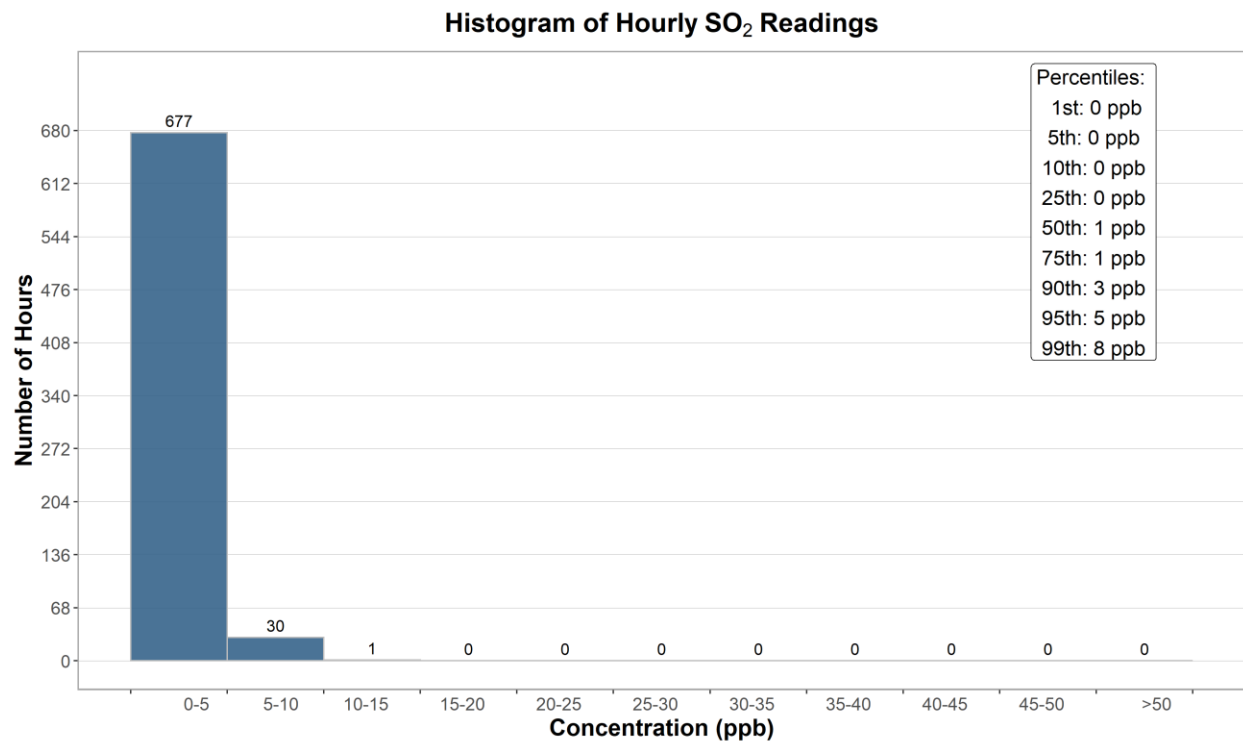


Figure 3-4 Histogram of hourly SO₂ concentrations at the Lagoon station

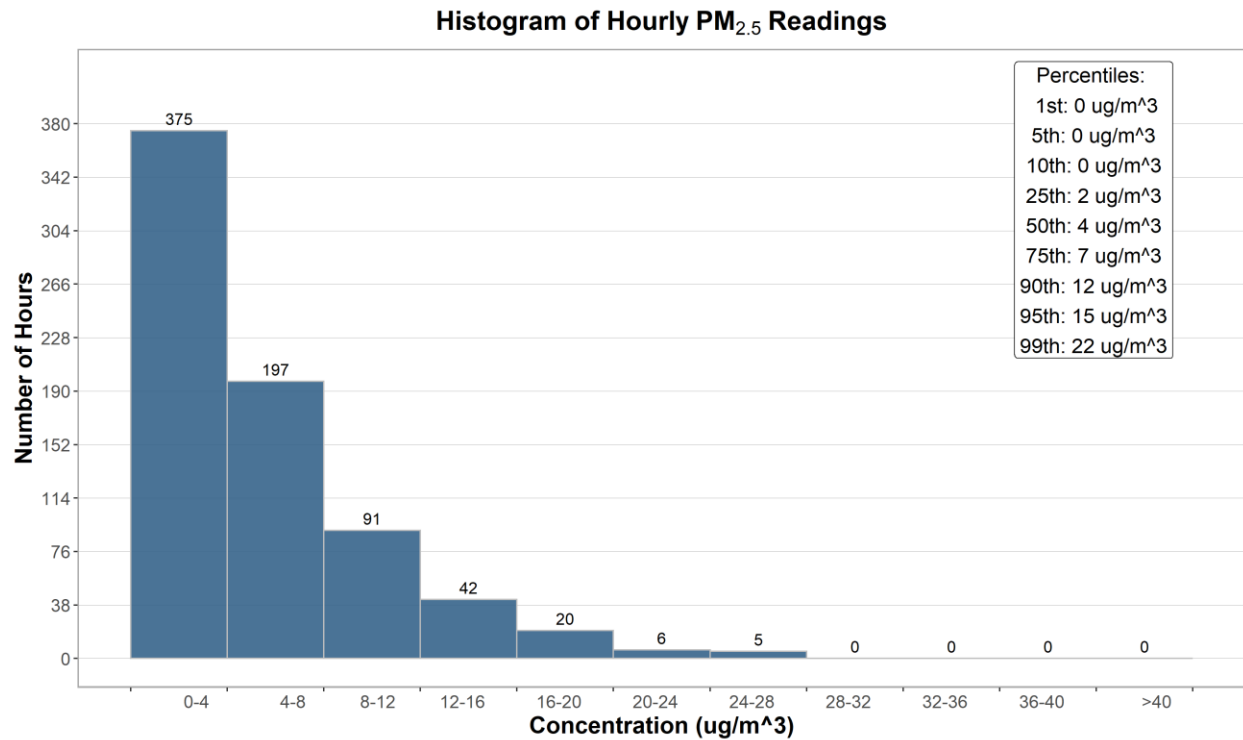


Figure 3-5 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

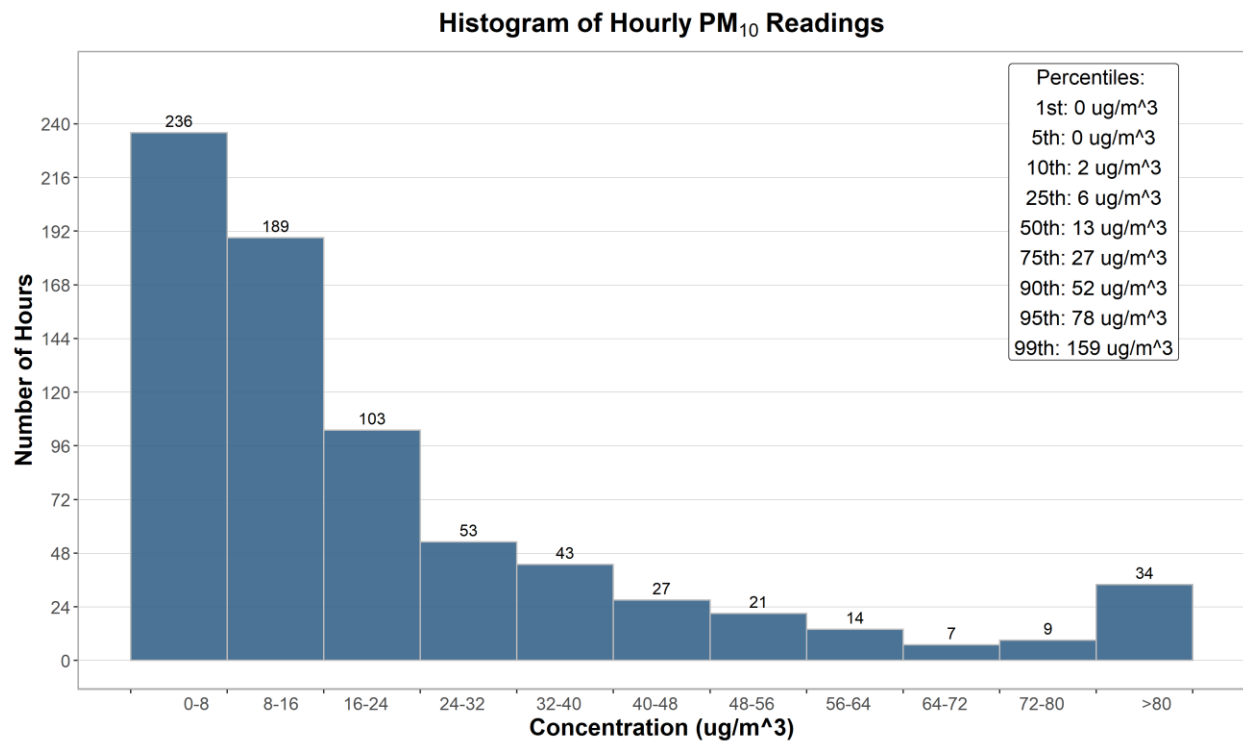


Figure 3-6 Histogram of hourly PM₁₀ concentrations at the Lagoon station

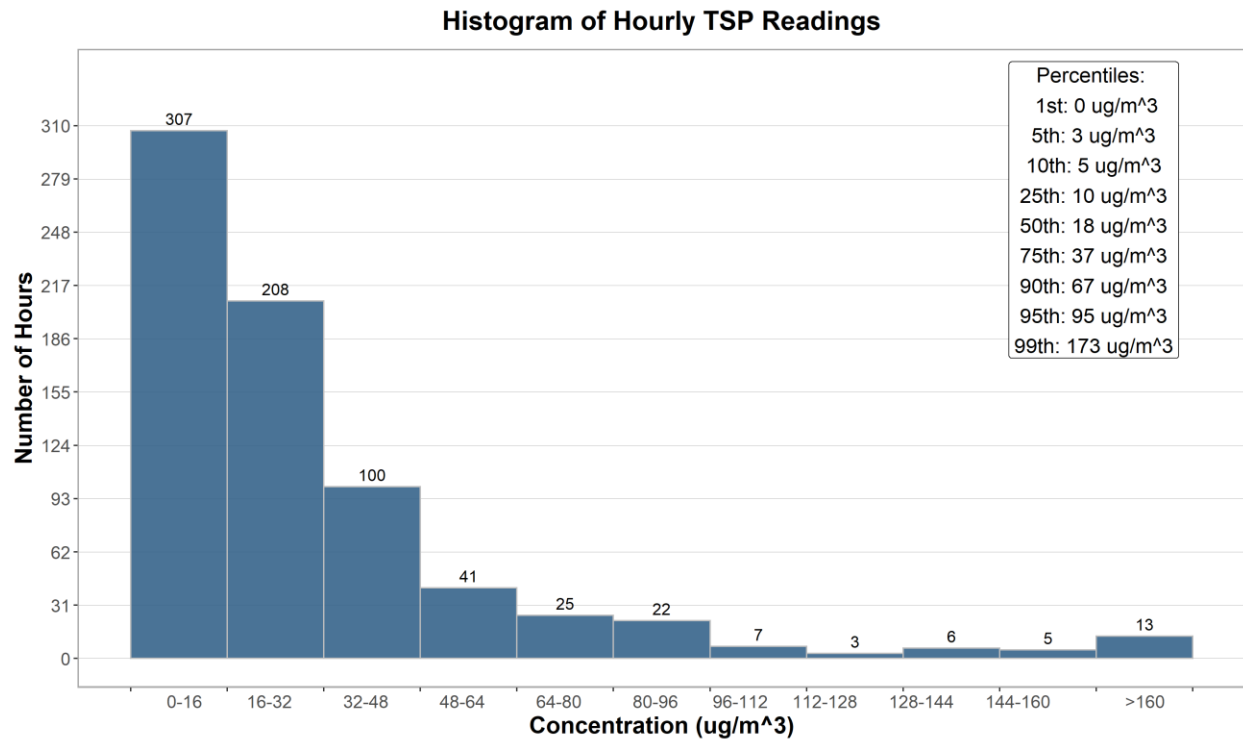


Figure 3-7 Histogram of hourly TSP concentrations at the Lagoon station

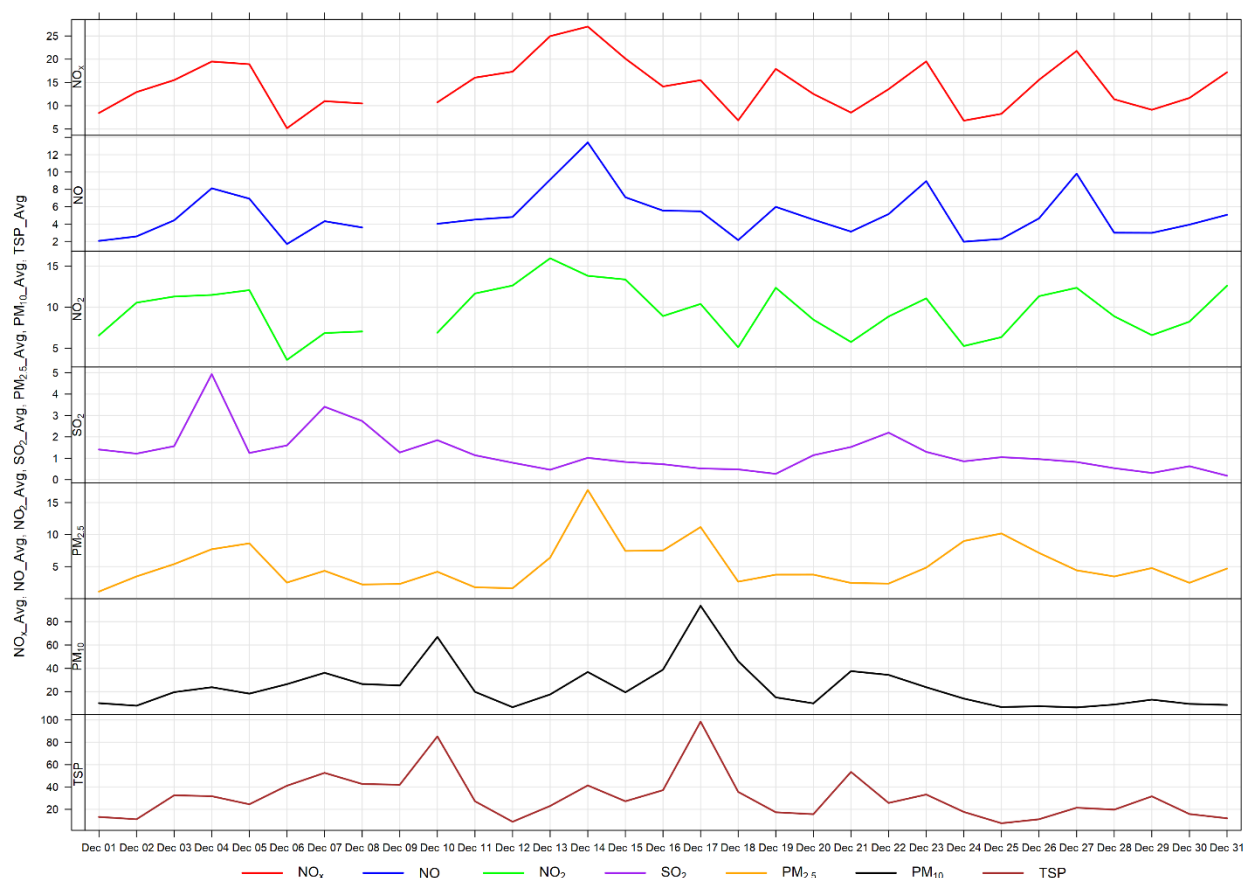


Figure 3-8 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

The following wind rose (Figure 3-9) shows the wind rose for the month of December. The wind rose shows that the winds predominately came from the west and east-northeast directions, and were predominately over 20 km/hr.

Figure 3-10 through Figure 3-12 show the variation in concentrations over various time averaging periods for PM, SO₂ and NO_x. The particulate matter plot in Figure 3-10 typically shows that PM₁₀ and TSP concentrations have a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other airshed activities. The diurnal patterns also typically follow the diurnal pattern of higher wind speeds during the daytime hours. This month, there were some very high winds into the evening and overnight hours, which skewed the typical diurnal pattern of PM concentrations.

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.

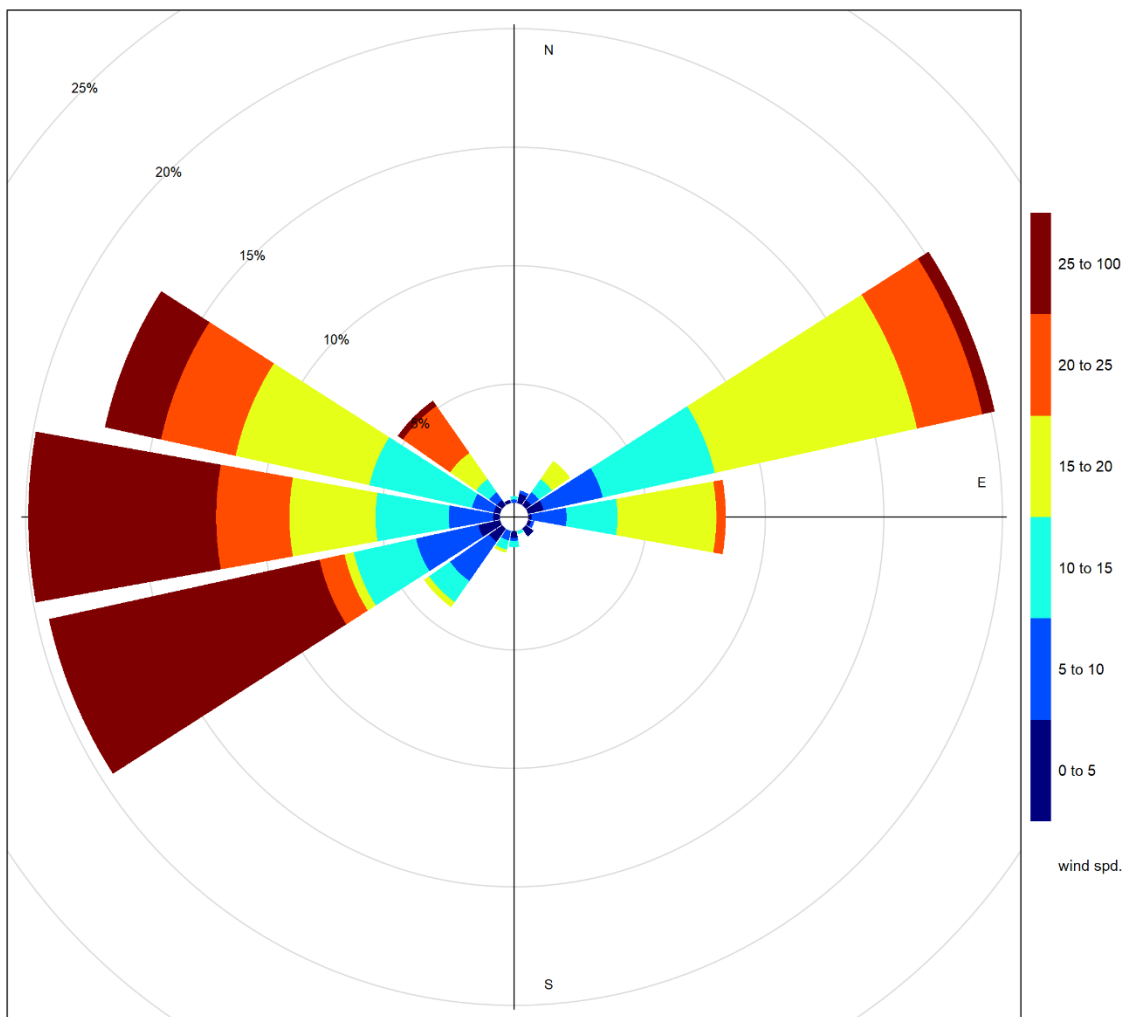


Figure 3-9 Wind rose for December recorded at the Lagoon Station

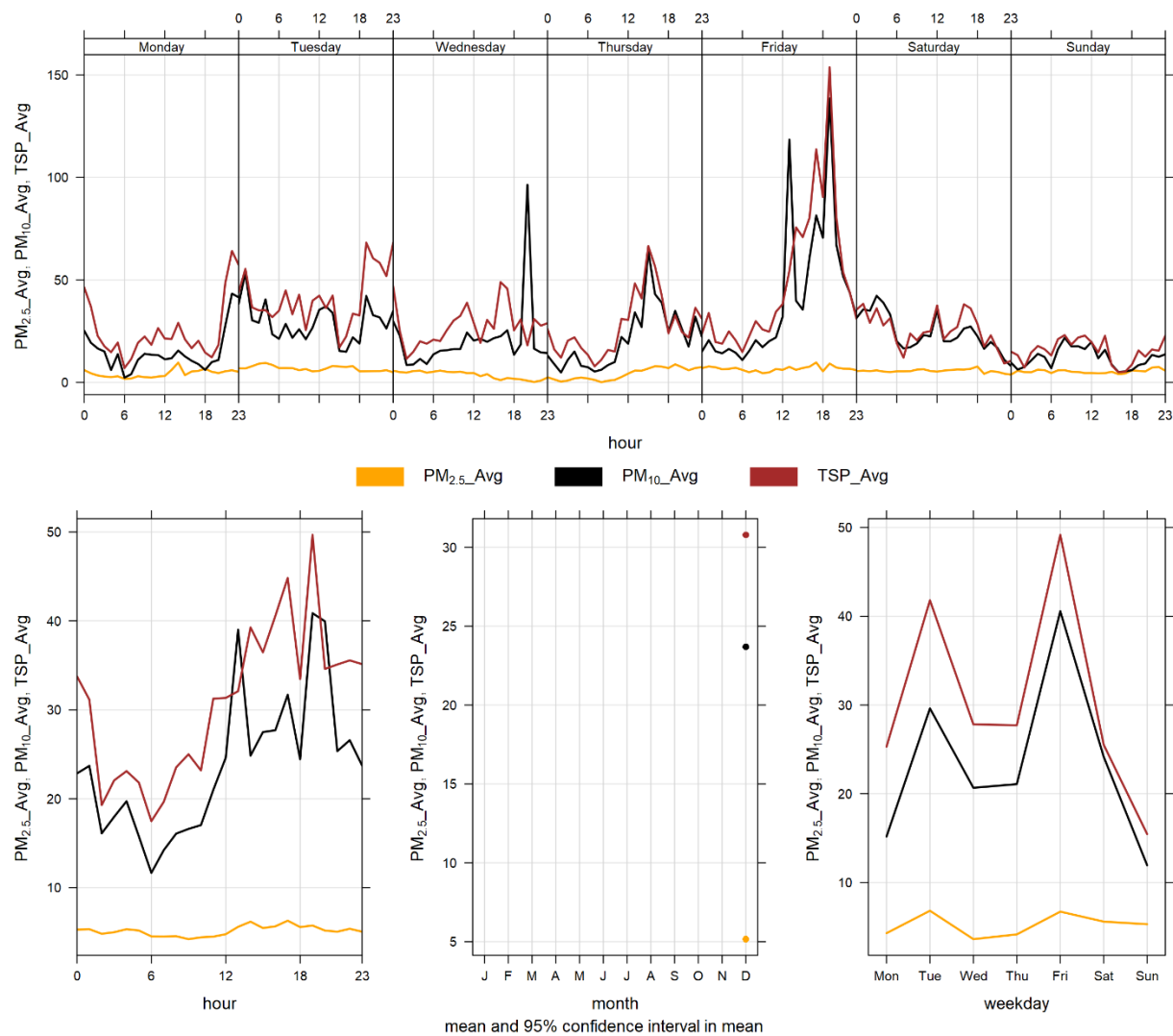


Figure 3-10 Lagoon monitor particulate matter time variation

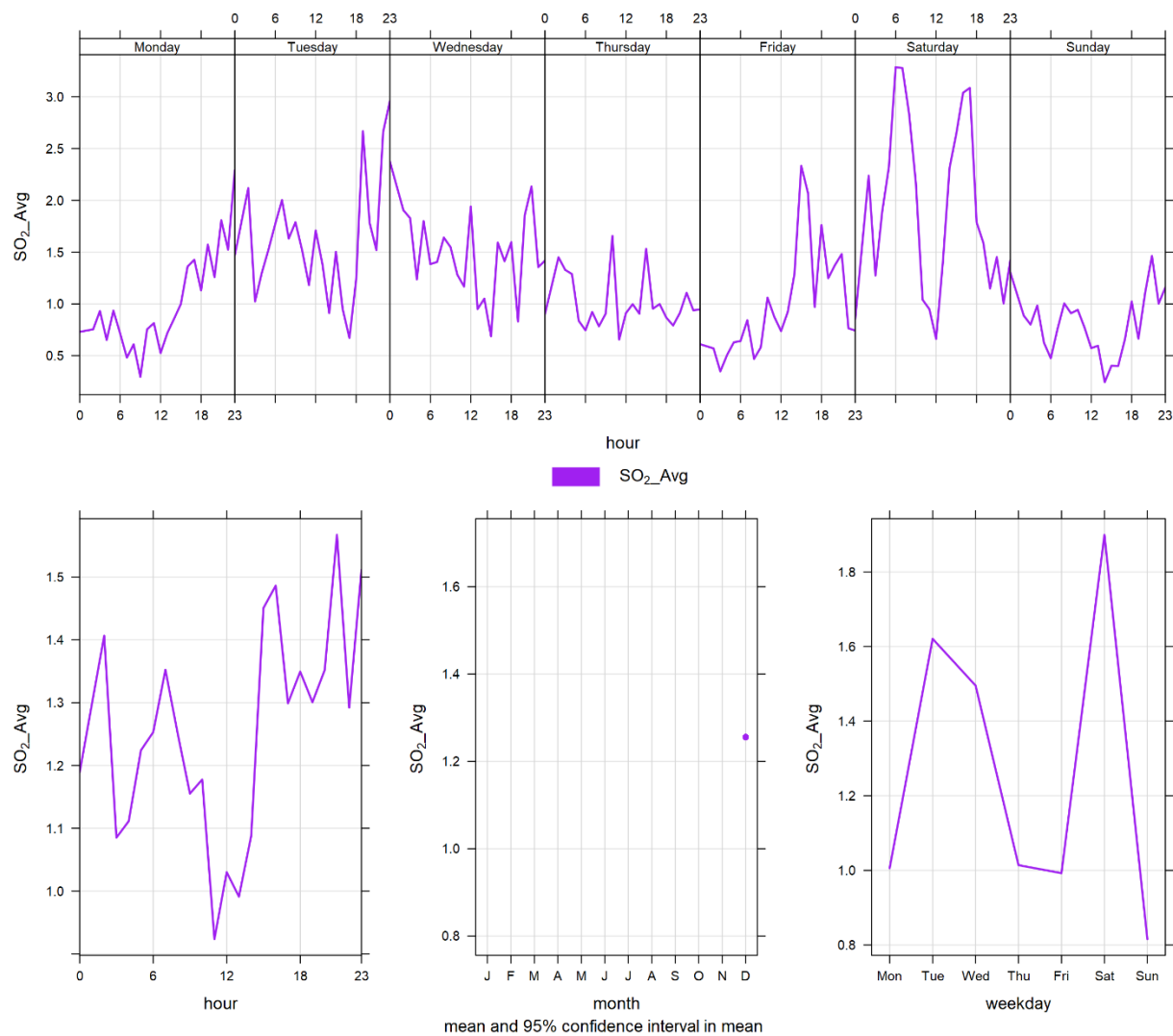


Figure 3-11 Lagoon monitor SO₂ time variation

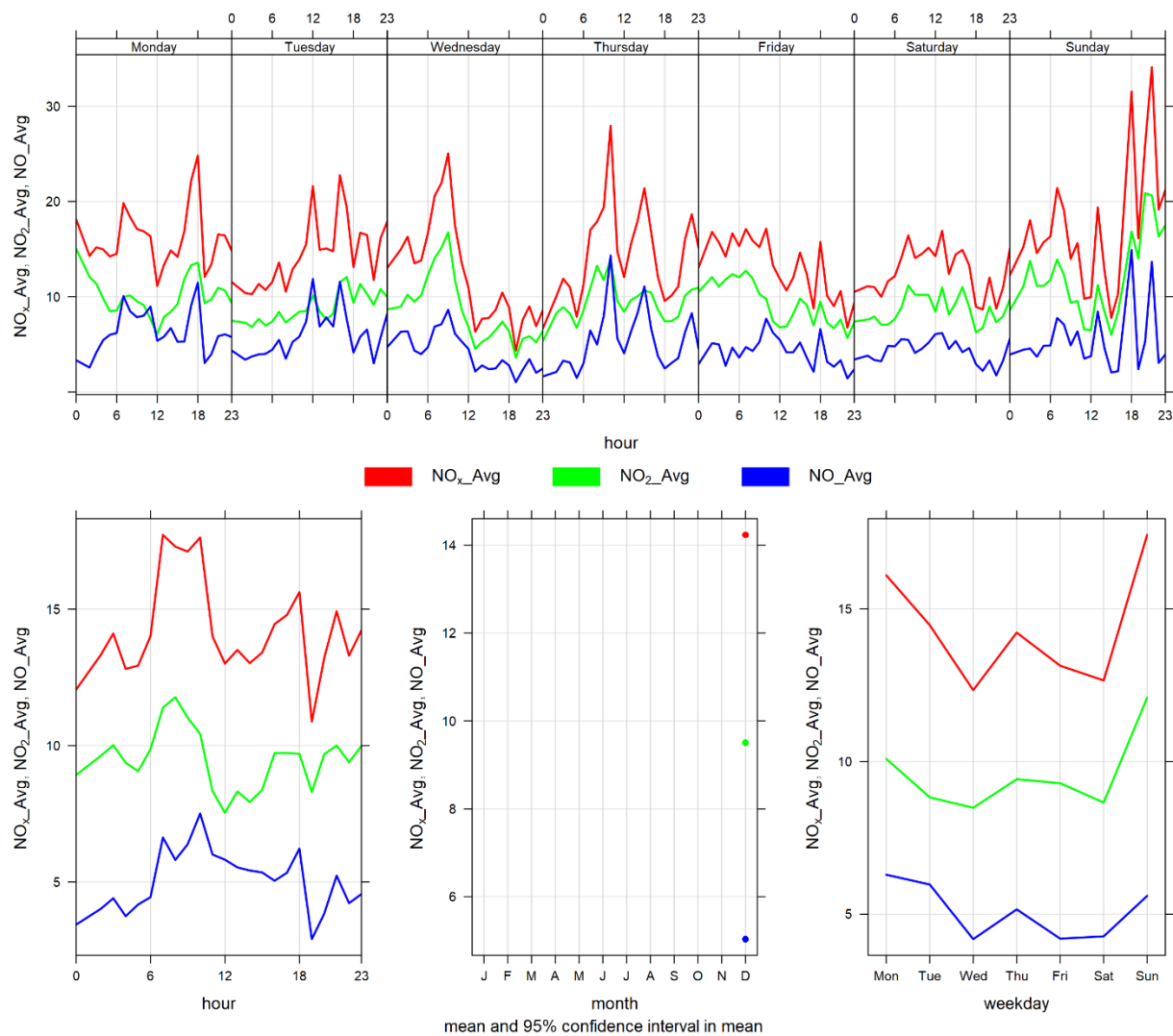


Figure 3-12 Lagoon monitor NO_x time variation

4 WINDRIDGE STATION

The Windridge station contains TSP, PM₁₀, and PM_{2.5} analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), a data summary table (Table 4-2), a table of recorded exceedances (Table 4-3), site visit notes, and graphs illustrating the monitoring results for December 2021.

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 6 th . The monitor recorded 100% uptime for the month of December.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on December 6 th . The monitor recorded 100% uptime for the month of December.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on December 6 th . The monitor recorded 98.8% uptime for the month of December due to nine hours of equipment malfunction on December 15 th at 4:00 – 12:00.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in December 2021, 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} AAAQG, and 8 exceedances of the 24-hour TSP AAAQO. The TSP exceedances occurred predominantly on days with high speed westerly winds.

Historically in December, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances is 10 and 0, respectively. Prior to this year, 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 2021 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	5.6	59.0	6	16	30.3	252.2	16.8	14	100.0
PM₁₀ (µg/m³)	-	-	Windridge	-	-	0.0	55.4	485.0	2	22	12.9	88.1	286.1	10	100.0
TSP (µg/m³)	-	100	Windridge	-	8	0.0	79.8	985.0	10	22	54.2	255.7	453.8	10	98.8

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						
2021-12-06	119.7	-	257.2	29.2	51.9	High wind event
2021-12-07	133.1	-	281.0	28.9	58.1	High wind event
2021-12-08	161.5	-	261.7	28.4	51.9	High wind event
2021-12-09	201.1	-	258.6	24.6	42.0	High wind event
2021-12-10	453.8	-	259.6	32.4	40.5	High wind event
2021-12-17	171.1	-	280.9	21.6	64.3	High wind event
2021-12-18	124.4	-	265.4	33.5	64.3	High wind event
2021-12-21	258.9	-	258.2	39.4	42.4	High wind event
Total # of Exceedances	8	0				
Maximum # of Exceedances (December)	16 (2018)	0 (2017, 2018, 2020)				
Average # of Exceedances (December)	10	0				
Minimum # of Exceedances (December)	6 (2020)	0 (2017, 2018, 2020)				

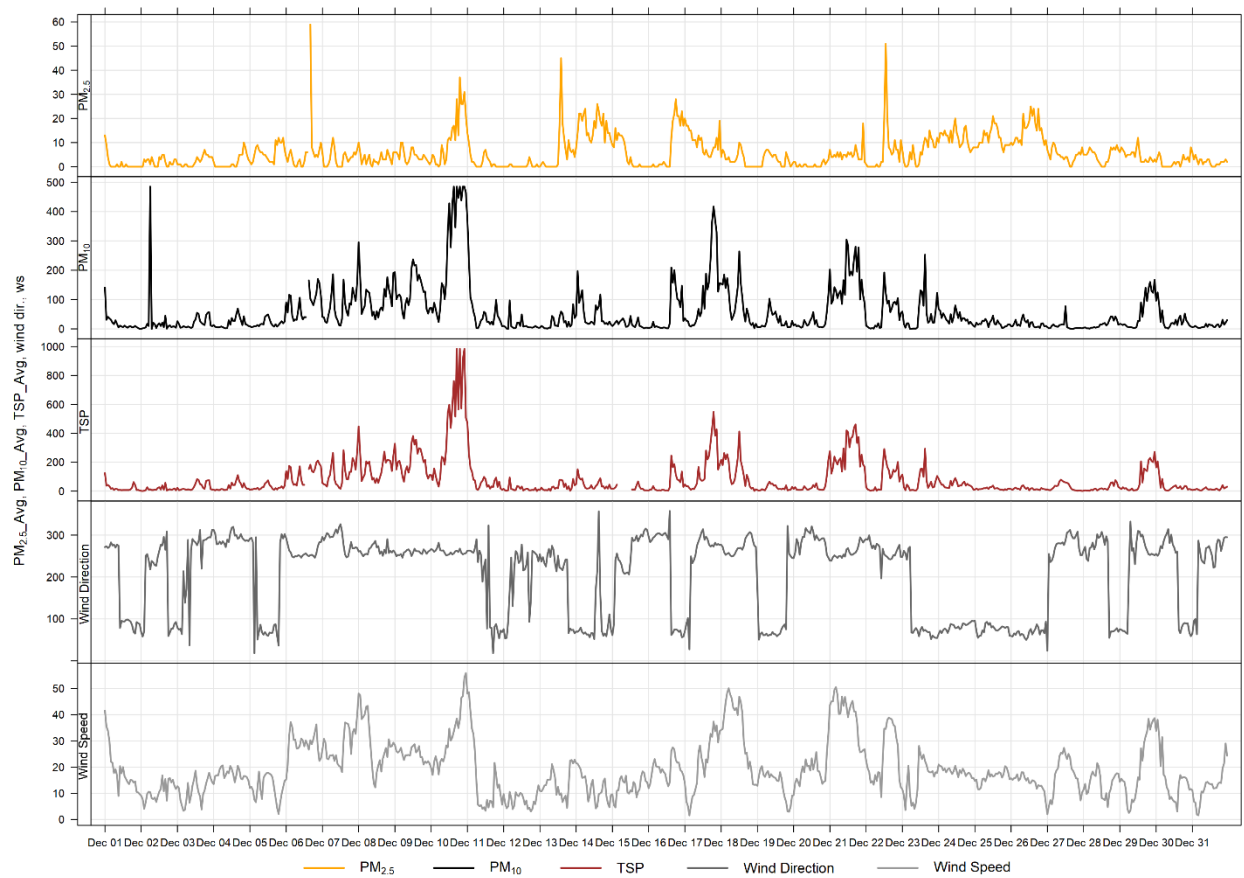


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

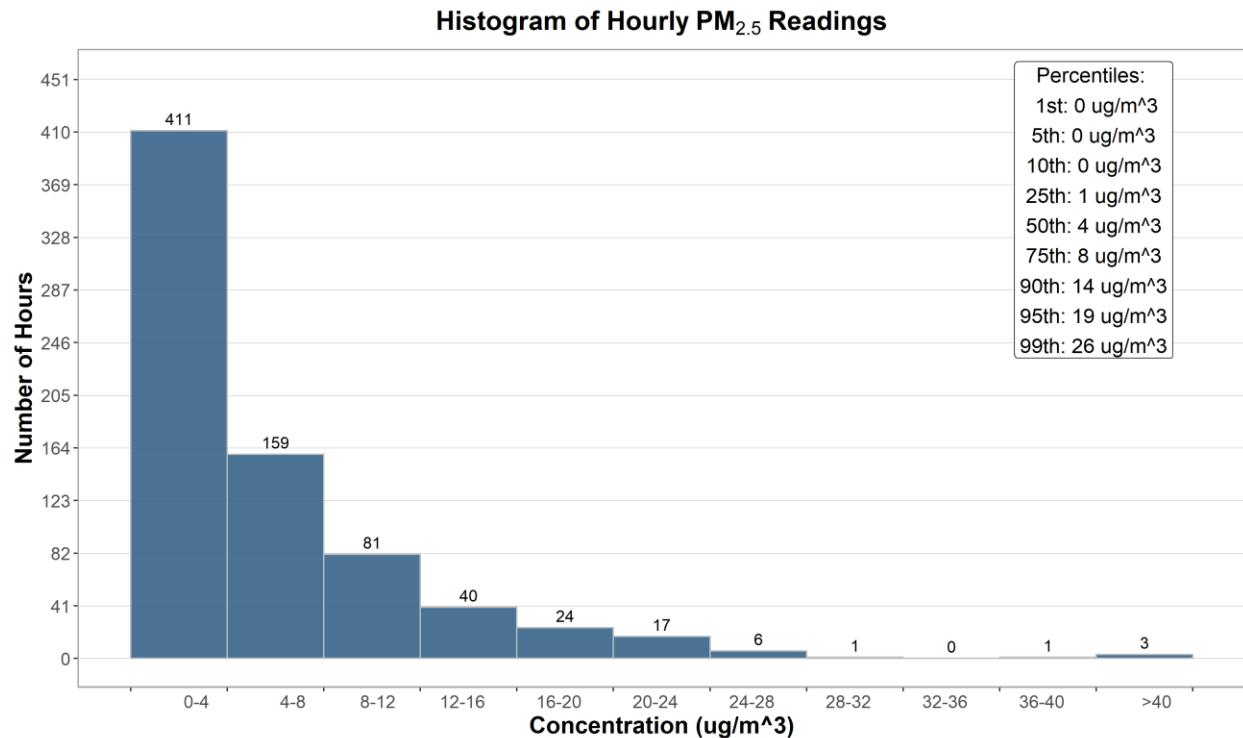


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

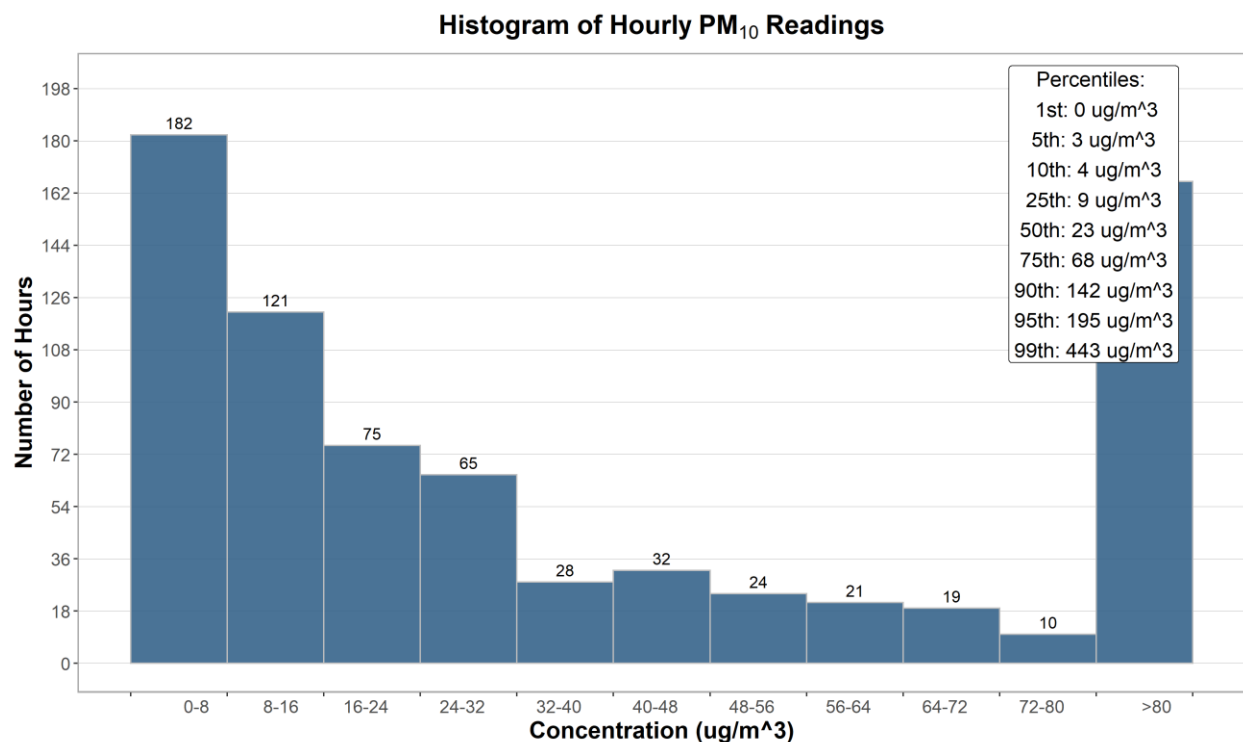


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

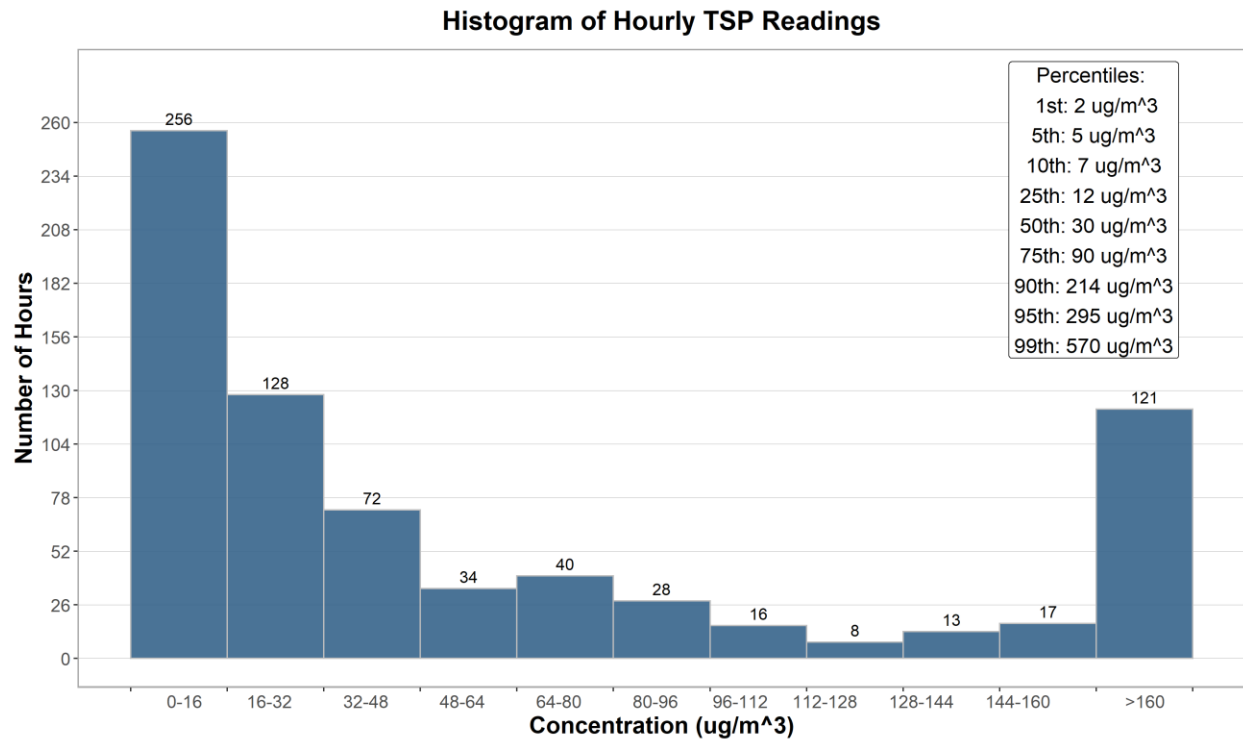


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

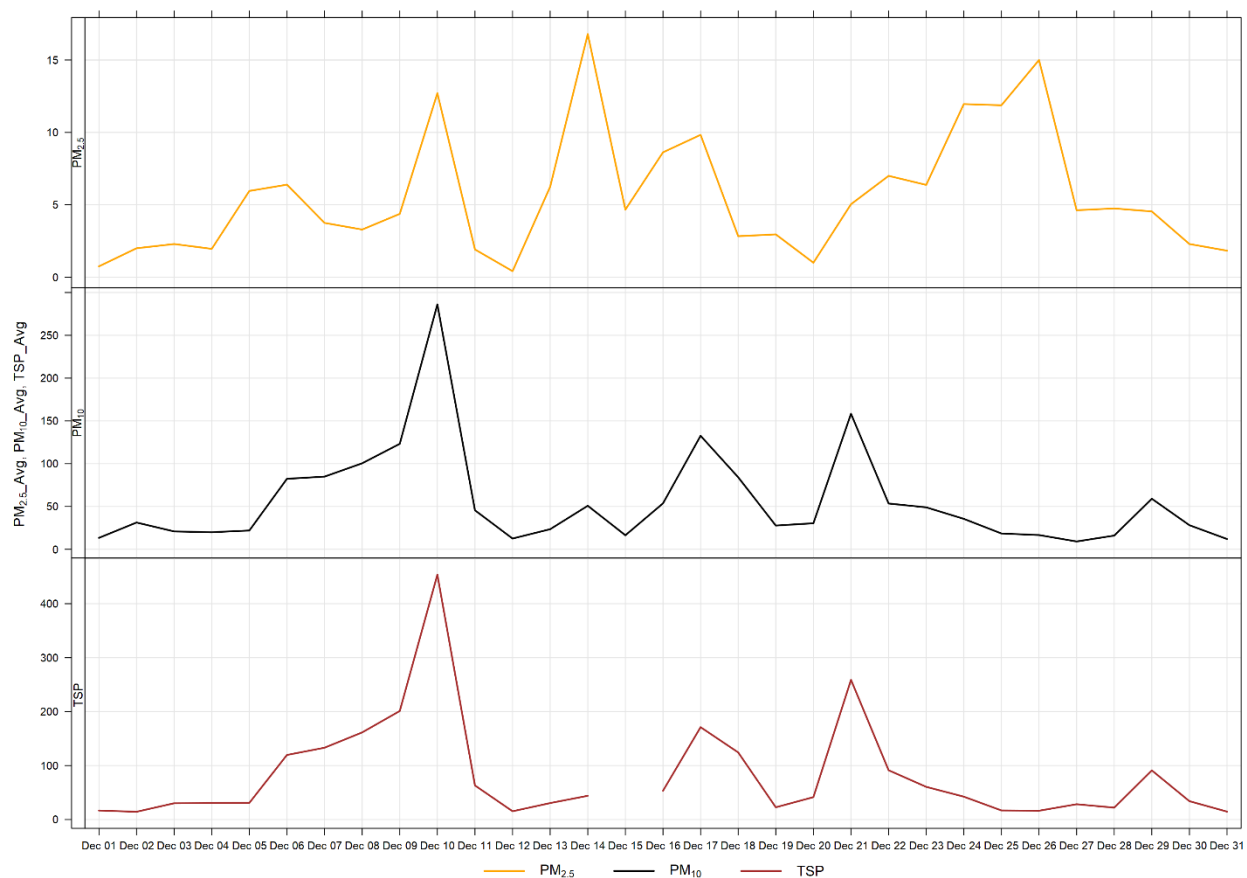


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 8 days of TSP exceedances. The wind rose shows that the winds predominantly came from the west-southwest and west directions, and were predominately over 25 km/hr. This month the TSP exceedances were largely driven by windblown fugitive dust.

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 2021. Similar to the Lagoon station, typically PM concentrations shows a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other activities. The diurnal patterns also follow the diurnal pattern of higher wind speeds during the daytime hours. However, this month, there were some very high winds into the evening and overnight hours, which skewed the typical diurnal pattern of PM concentrations.

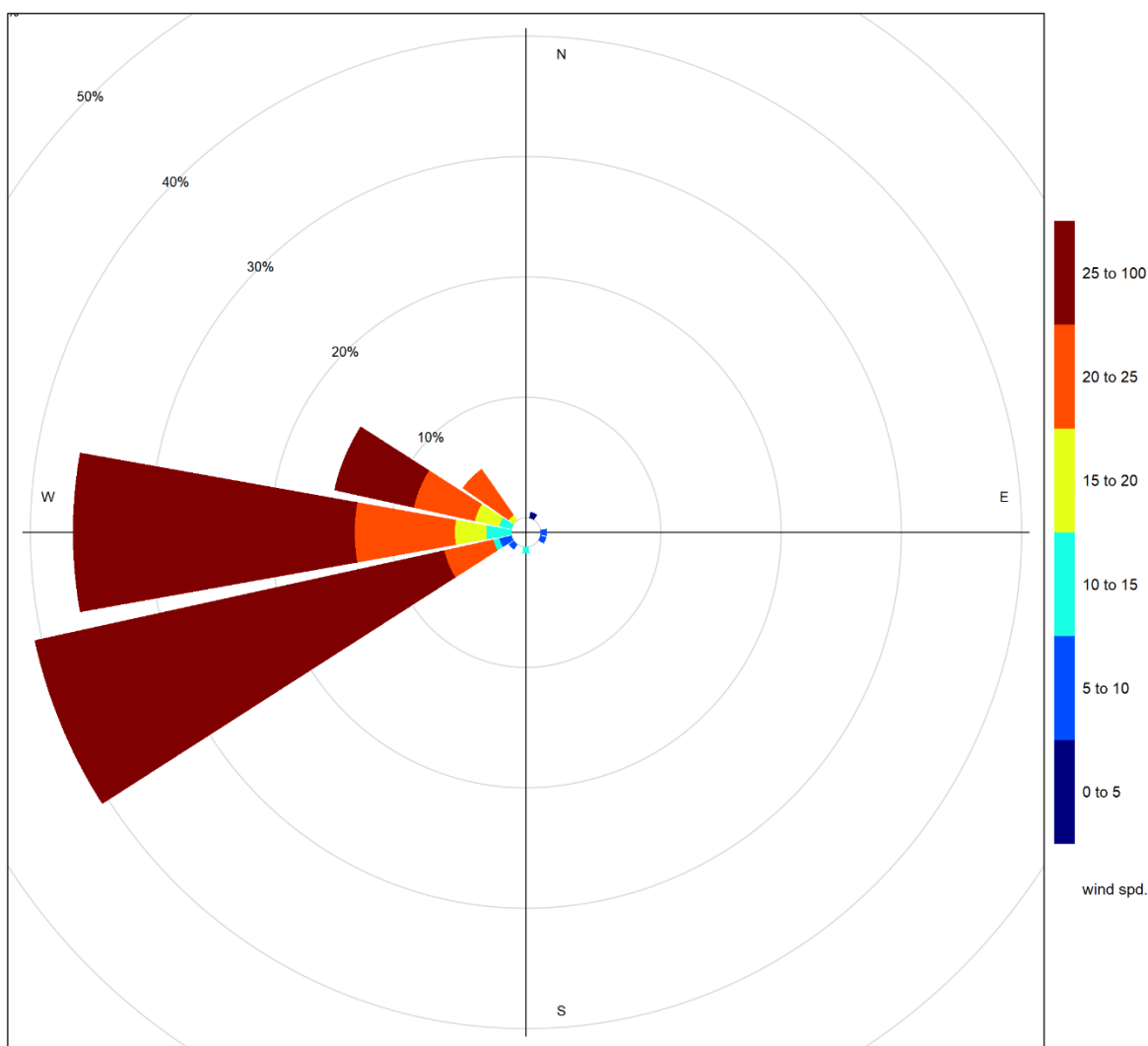


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

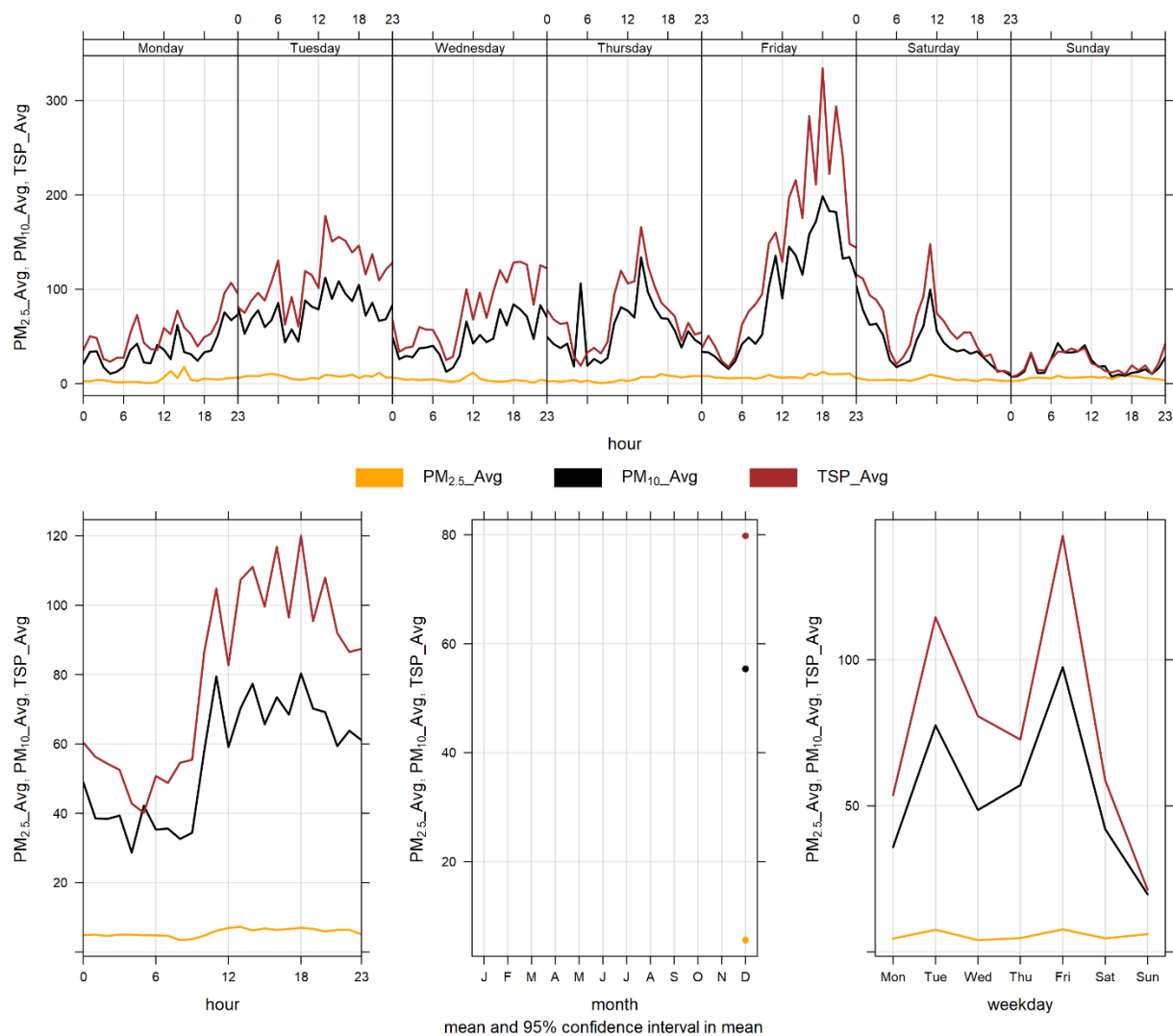


Figure 4-7 Windridge particulate matter time variation

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 98.5% uptime for the month of December due to the GRIMM monitor being removed for annual calibration and maintenance from December 1 st at 1:00 - 11:00.

5.2 MONITORING RESULTS AND TRENDS

The West GRIMM was installed in 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 exceedance 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 1 and zero exceedances of the 24-hour TSP and PM_{2.5} guidelines, respectively. The maximum number of TSP exceedances recorded during December occurred in 2012 where there were 4 days that exceeded the guideline

Table 5-2 Summary of December 2021 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	4.0	29.5	13	14	10.0	220.7	16.7	14	98.5
PM₁₀ (µg/m ³)	-	-	West	-	-	0.1	5.3	36.7	13	14	10.0	220.7	21.5	14	98.5
TSP (µg/m ³)	-	100	West	-	0	0.1	6.1	98.8	2	16	15.5	265.0	18.6	14	98.5

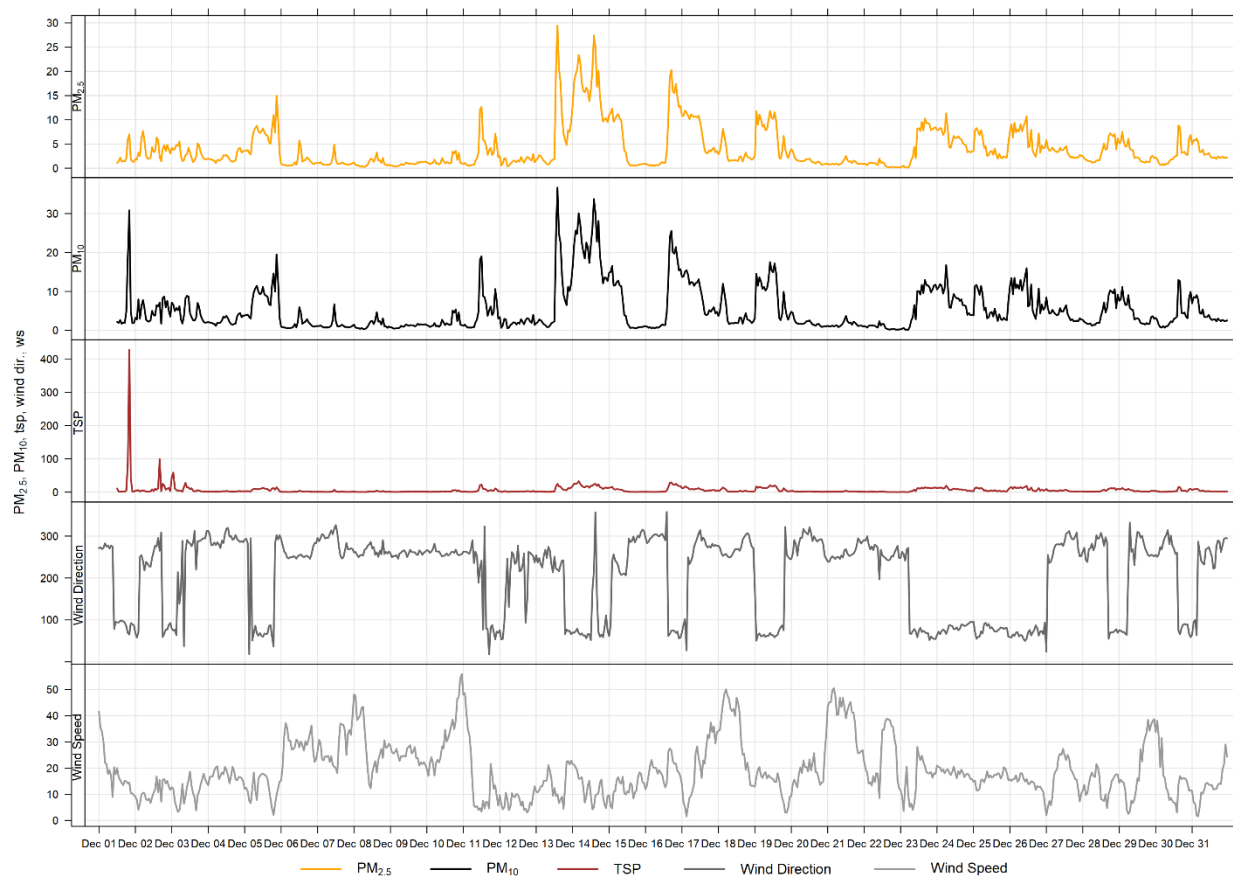


Figure 5-1 1-hour particulate matter concentrations at the West monitor

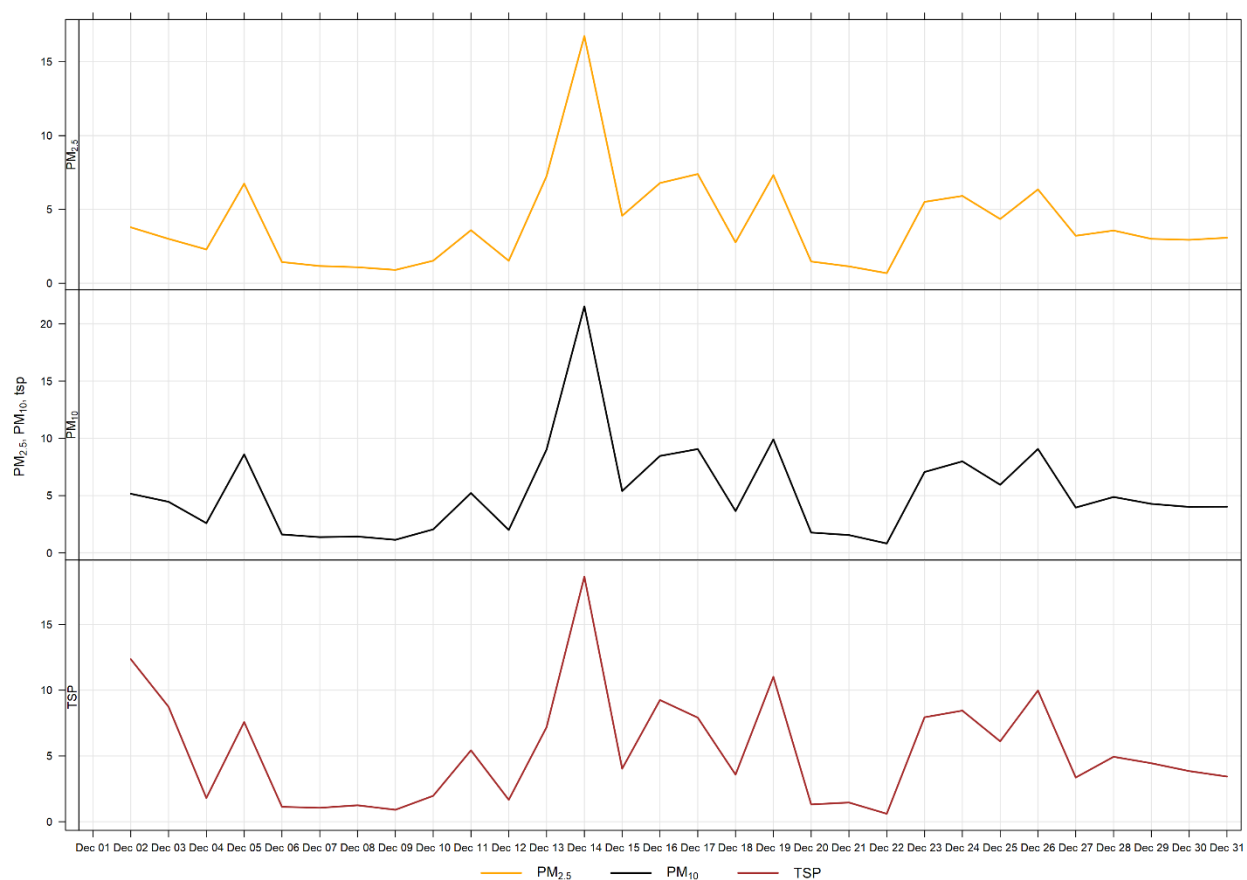


Figure 5-2 24-hour particulate matter concentrations at the West monitor

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 2021. As the monitor is generally 'up-wind' of the facility, the daily variations in PM are more likely a result of higher traffic volume during daylight hours than specific Lafarge operations. The TSP data is skewed to one particular reading on December 1st, when winds were from the east and there is the potential for impacts from Lafarge operations.

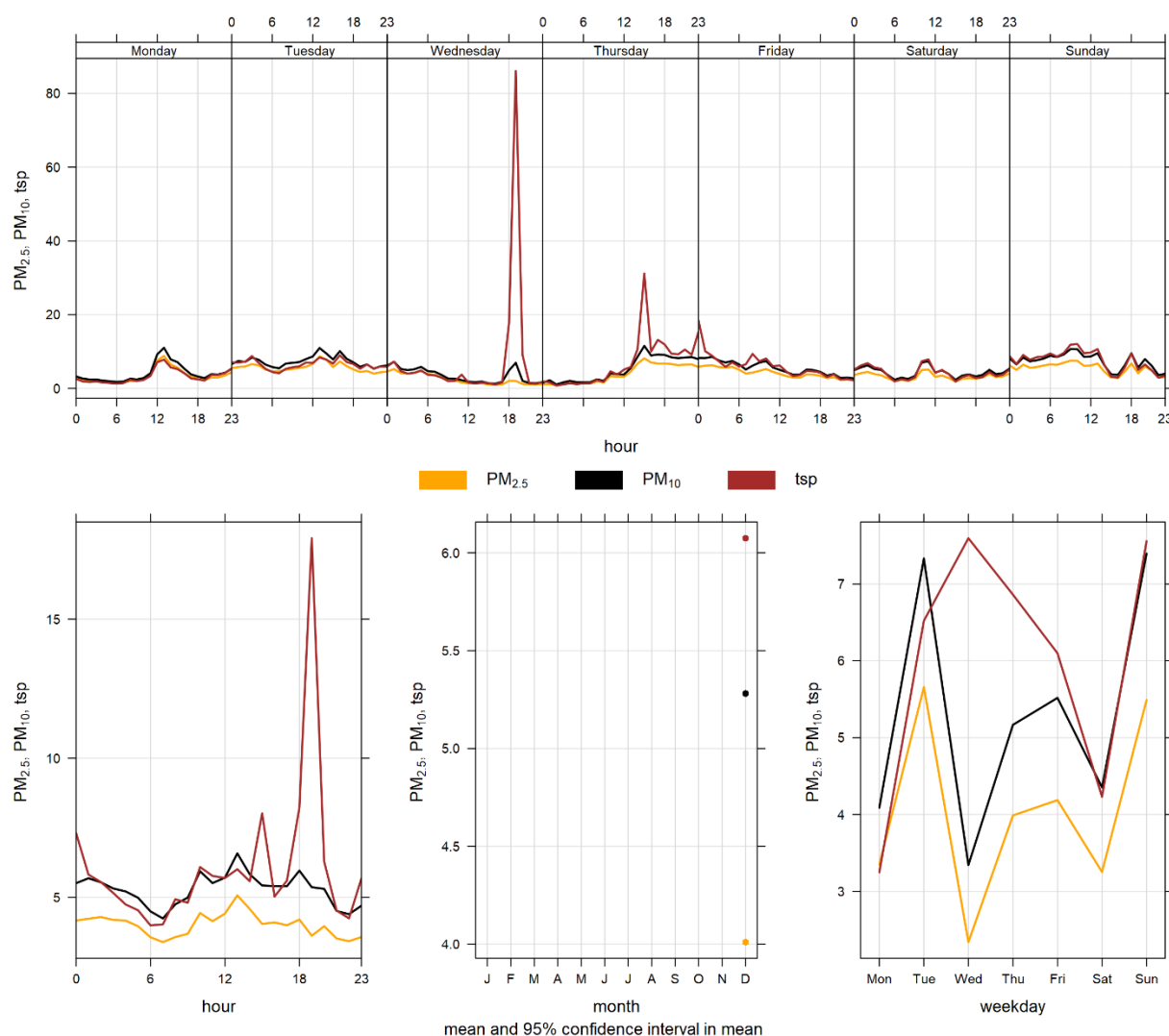


Figure 5-3 West monitor particulate matter time variation

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 75.8% uptime during the month of December due to the GRIMM monitor experiencing an equipment malfunction from December 1 st at 1:00 to December 8 th at 12:00.

6.2 MONITORING RESULTS AND TRENDS

The Berm monitor was placed at its current location as a result of the dispersion modelling conducted for the facility in 2009. 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 9 and 2 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (29 µg/m³) Guidelines, respectively. There were 12 hours exceeding the 1-hour PM_{2.5} Guideline.

Historically during the month of December, the Berm monitor records an average of 17 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 2021 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/m³)	80	29	Berm	12	2	0.3	13.9	183.9	10	22	54.2	255.7	79.6	10	75.8
PM₁₀ (µg/m³)	-	-	Berm	-	-	0.3	83.5	1526.4	10	17	38.5	262.8	635.8	10	75.8
TSP (µg/m³)	-	100	Berm	-	9	0.2	290.7	3896.4	10	22	54.2	255.7	1727.1	10	75.8

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						
2021-12-09	800.2	35.6	258.6	24.6	42.0	High wind event
2021-12-10	1727.1	79.6	259.6	32.4	40.5	High wind event
2021-12-11	123.7	-	270.8	14.4	74.6	Wind predominantly from the west
2021-12-17	747.4	-	280.9	21.6	64.3	High wind event
2021-12-18	588.6	-	265.4	33.5	64.3	High wind event
2021-12-20	145.4	-	284.8	20.1	62.1	High wind event
2021-12-21	966.1	-	258.2	39.4	42.4	High wind event
2021-12-22	355.2	-	258.4	23.8	51.0	High wind event
2021-12-29	535.8	-	270.7	20.6	62.2	High wind event
Total # of Exceedances	9	2				
Maximum # of Exceedances (December)	24 (2011)	13 (2018)				
Average # of Exceedances (December)	17	2				
Minimum # of Exceedances (December)	8 (2019)	0 (2012, 2013, 2015, 2016, 2017, 2019)				

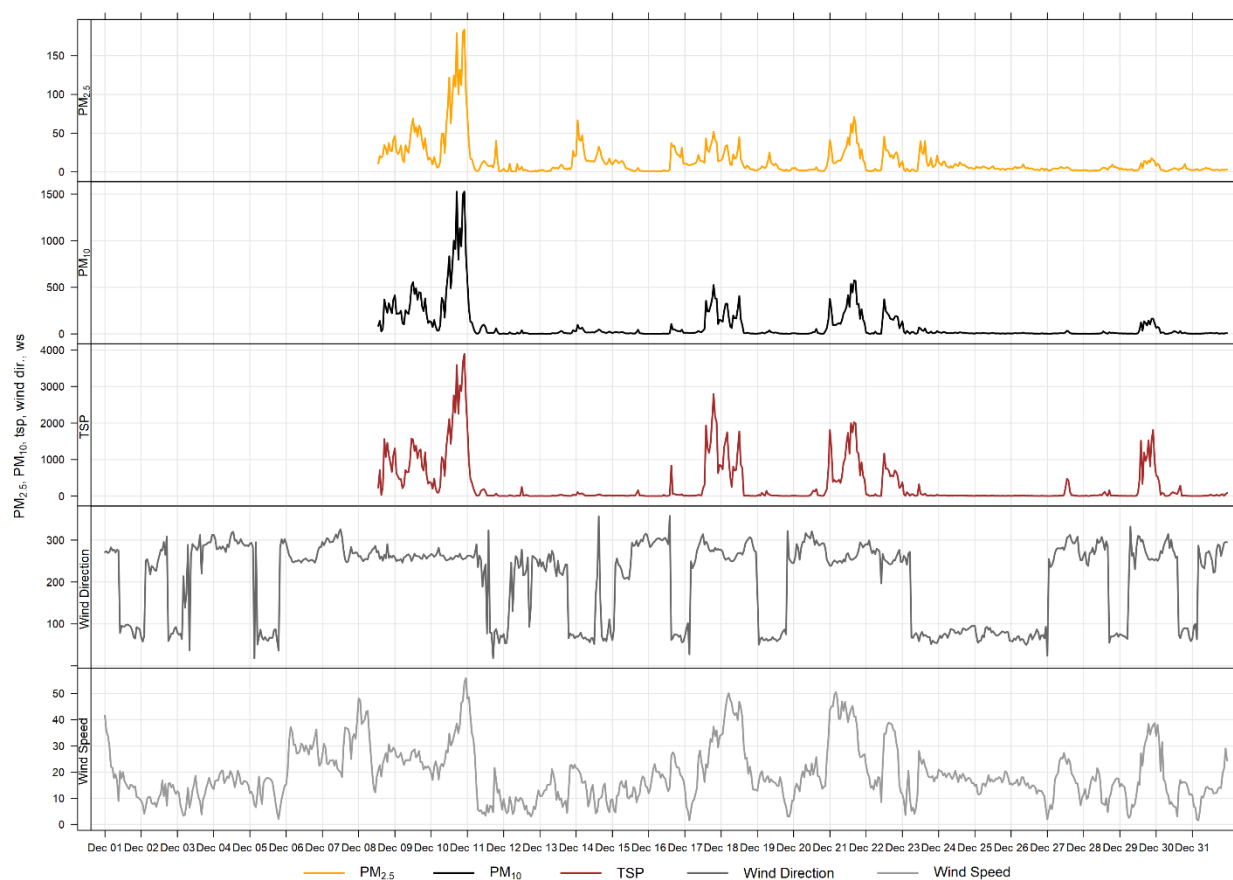


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

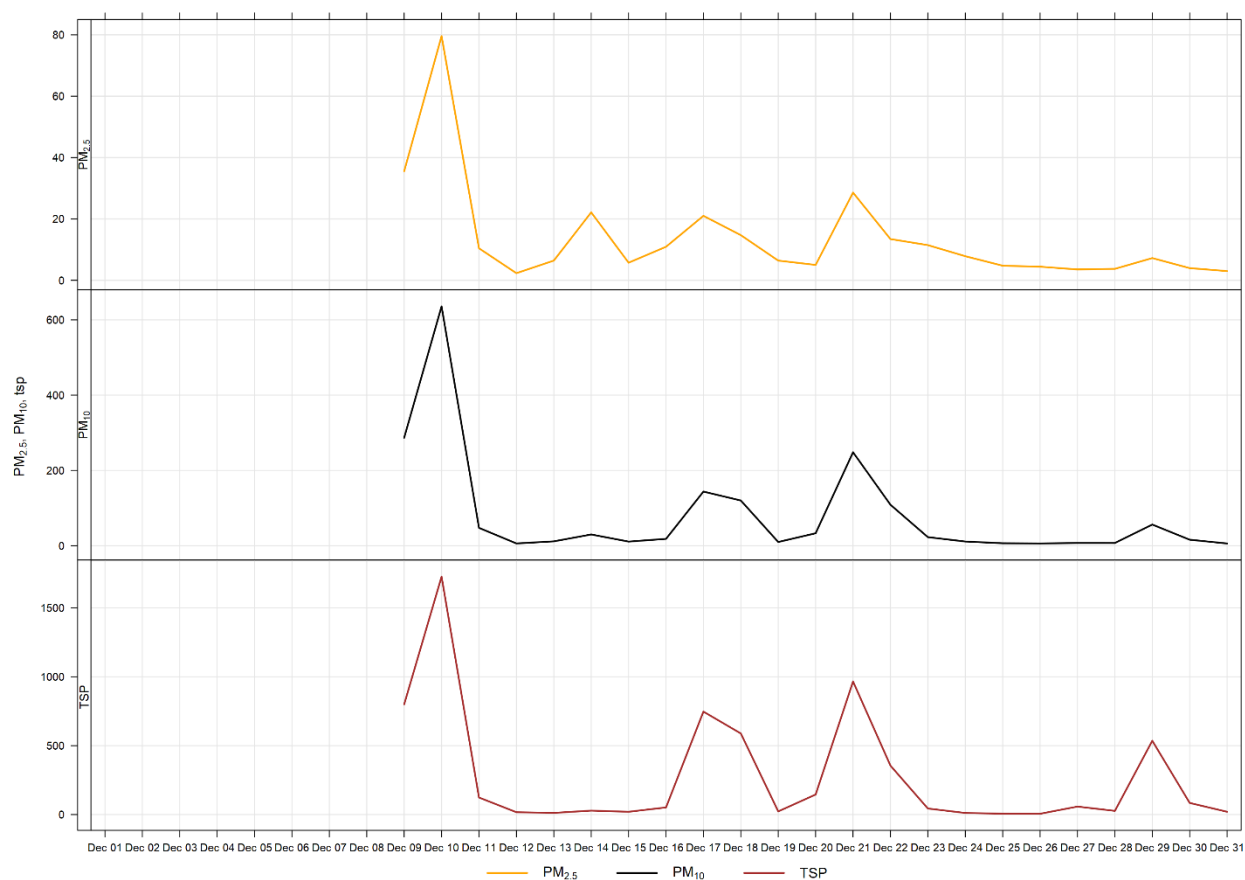


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 9 days of TSP exceedances. Figure 6-4 shows the wind rose for the 2 days of PM_{2.5} exceedances. The wind roses show that the winds predominantly came from the westerly directions, and were predominately over 20 km/hr. This month the TSP exceedances were largely driven by windblown fugitive dust.

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

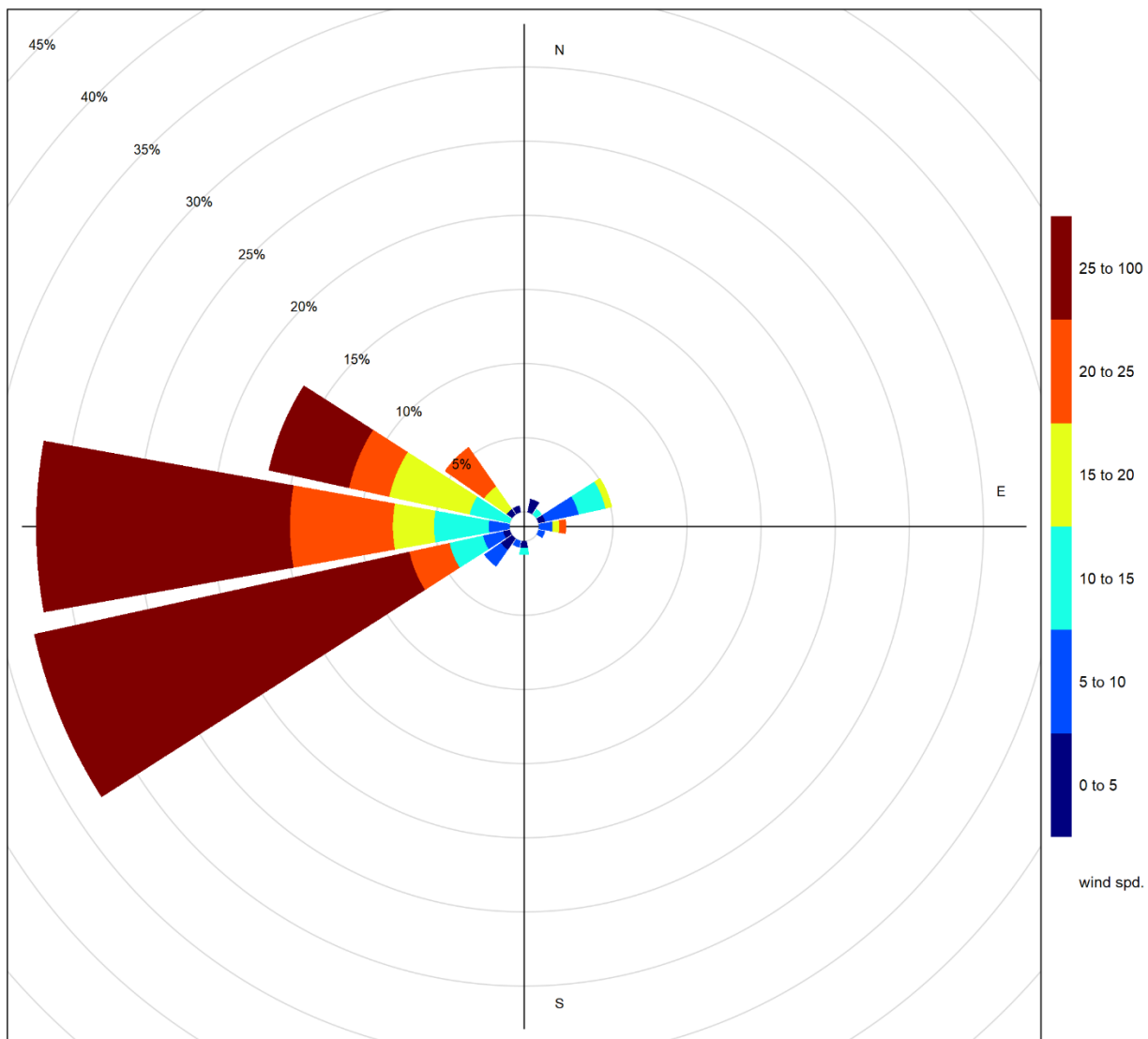


Figure 6-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM

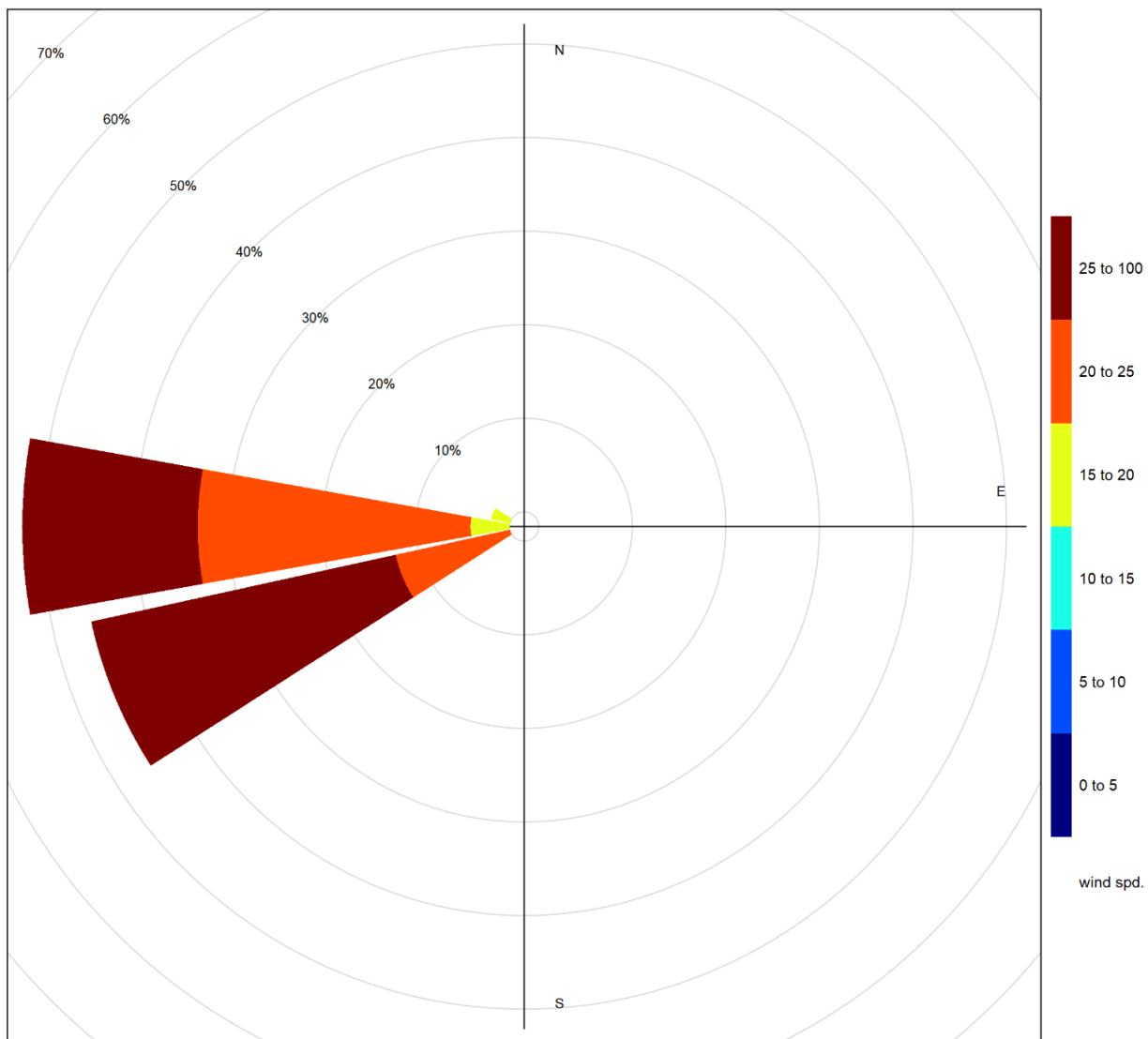


Figure 6-4 Wind rose for PM_{2.5} exceedance days recorded at the Berm GRIMM

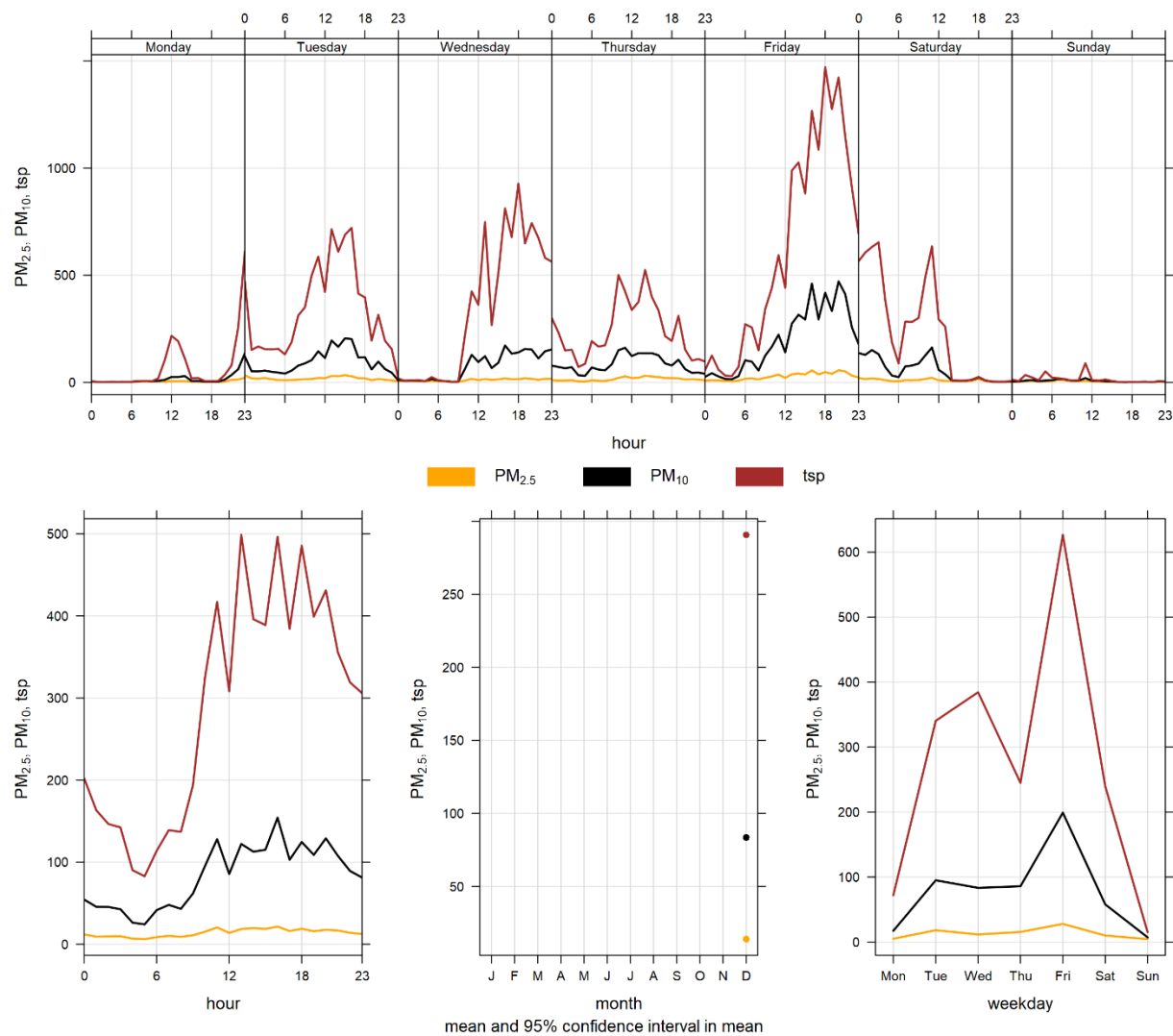


Figure 6-5 Berm particulate matter time variation

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 100% uptime for the month of December.

7.2 MONITORING RESULTS AND TRENDS

The Entrance monitor was placed at its current location as a result of dispersion modelling conducted in 2009. This area was indicated as being the area where the maximum PM concentrations were expected. 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 16 and zero 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, 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 occurred in 2014, which had 5 days that exceeded the guideline.

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 16 days that exceeded the TSP Guideline. The wind rose show that the winds predominantly came from the westerly directions, and were predominately over 20 km/hr.

Table 7-2 Summary of December 2021 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	0	0	0.4	9.7	47.0	17	9	25.7	284.9	23.6	17	100.0
PM₁₀ (µg/m ³)	-	-	Entrance	-	-	0.5	42.3	513.3	29	15	22.5	300.8	143.7	17	100.0
TSP (µg/m ³)	-	100	Entrance	-	16	0.3	193.3	3829.6	17	19	37.4	272.9	1067.7	17	100.0

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						
2021-12-03	101.7	-	293.2	11.0	69.9	Wind predominately from the west
2021-12-04	118.4	-	291.5	17.3	72.3	Wind predominately from the west
2021-12-06	250.4	-	257.2	29.2	51.9	High wind event
2021-12-07	388.5	-	281.0	28.9	58.1	High wind event
2021-12-08	138.6	-	261.7	28.4	51.9	High wind event
2021-12-10	378.6	-	259.6	32.4	40.5	High wind event
2021-12-16	189.0	-	357.4	19.3	71.8	Wind predominately from the west
2021-12-17	1067.7	-	280.9	21.6	64.3	High wind event
2021-12-18	621.0	-	265.4	33.5	64.3	High wind event
2021-12-20	193.0	-	284.8	20.1	62.1	High wind event
2021-12-21	671.7	-	258.2	39.4	42.4	High wind event
2021-12-22	276.7	-	258.4	23.8	51.0	High wind event
2021-12-28	146.0	-	310.7	13.8	70.1	Wind predominately from the west

2021-12-29	806.7	-	270.7	20.6	62.2	High wind event
2021-12-30	119.8	-	300.4	15.1	65.8	Wind predominately from the west
2021-12-31	102.7	-	274.1	13.5	68.2	Wind predominately from the west
Total # of Exceedances	16	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)				

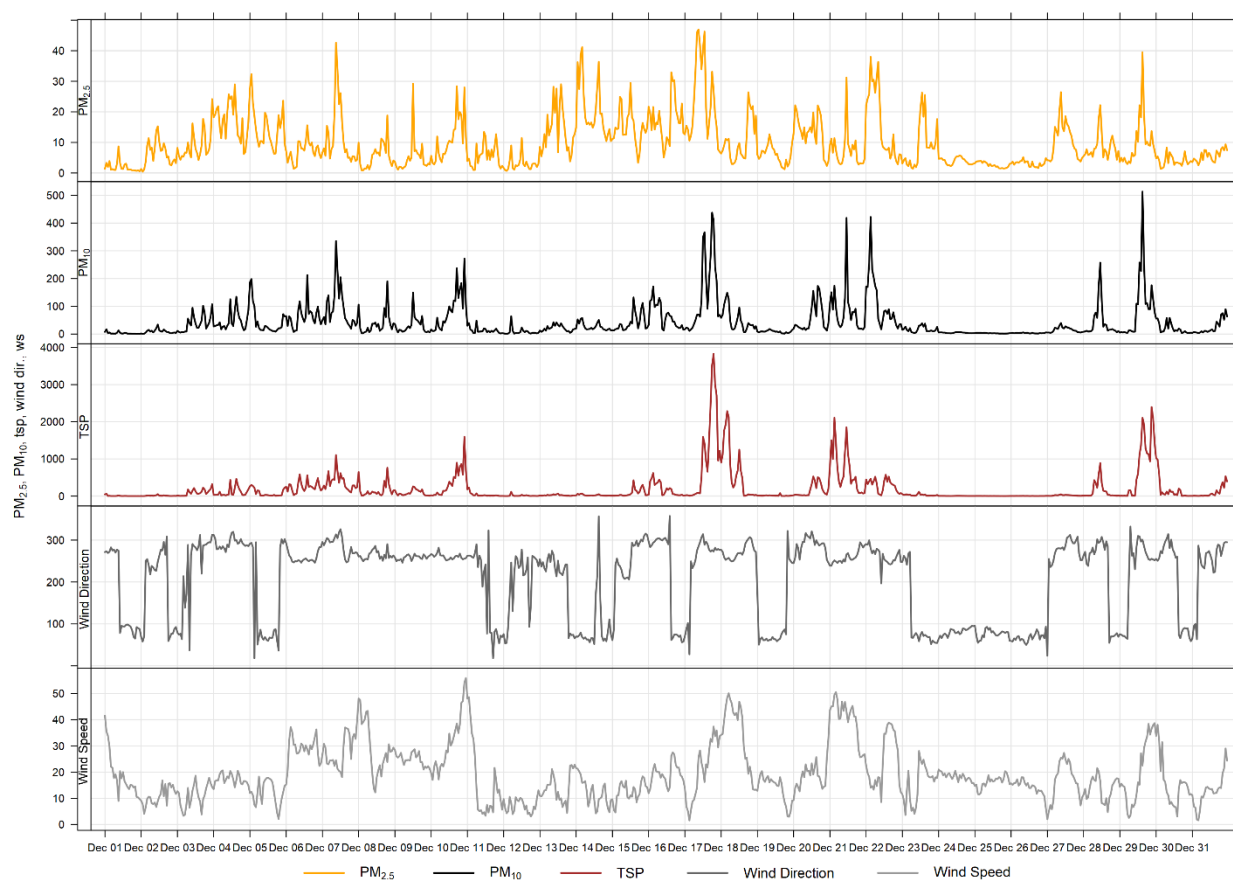


Figure 7-1 1-hour particulate matter concentrations recorded at the Entrance monitor

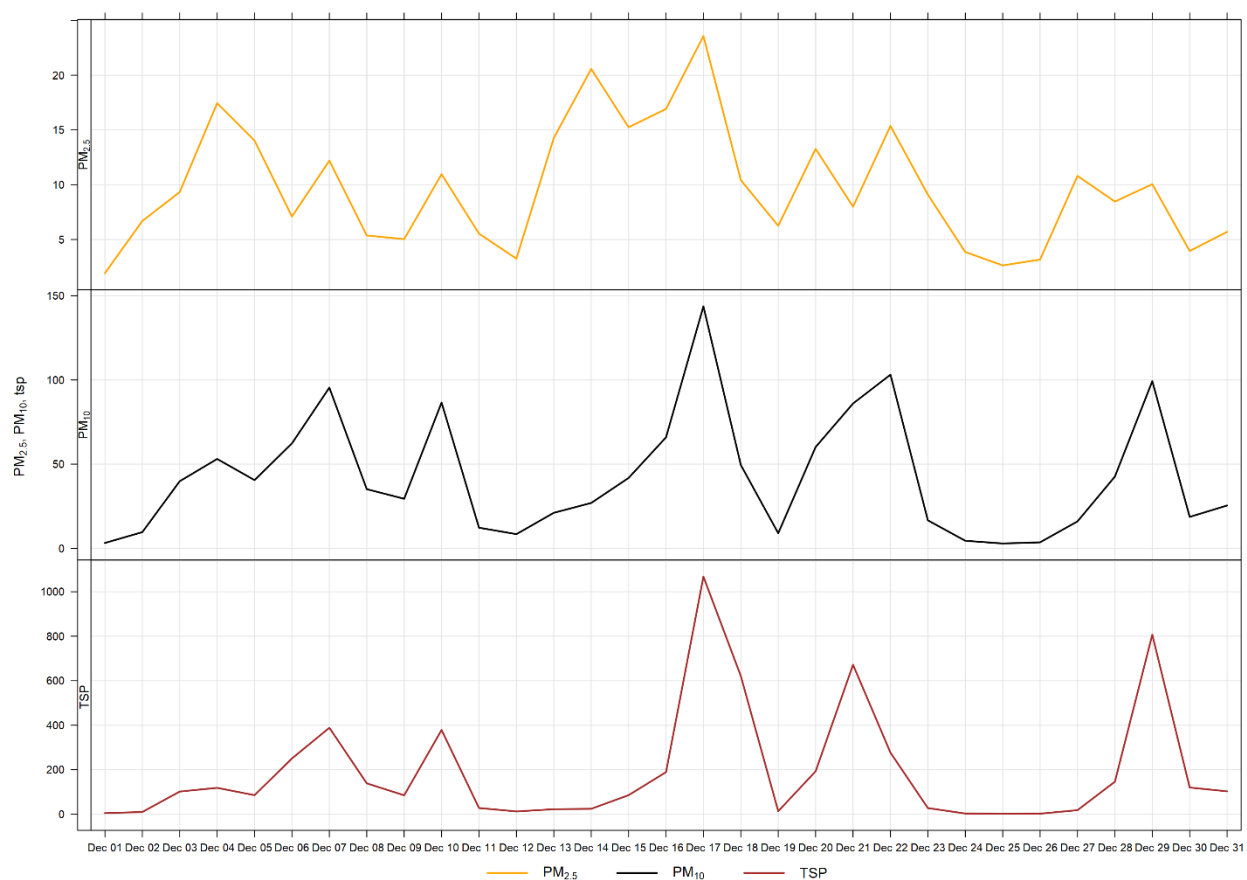


Figure 7-2 24-hour particulate matter concentrations at the Entrance monitor

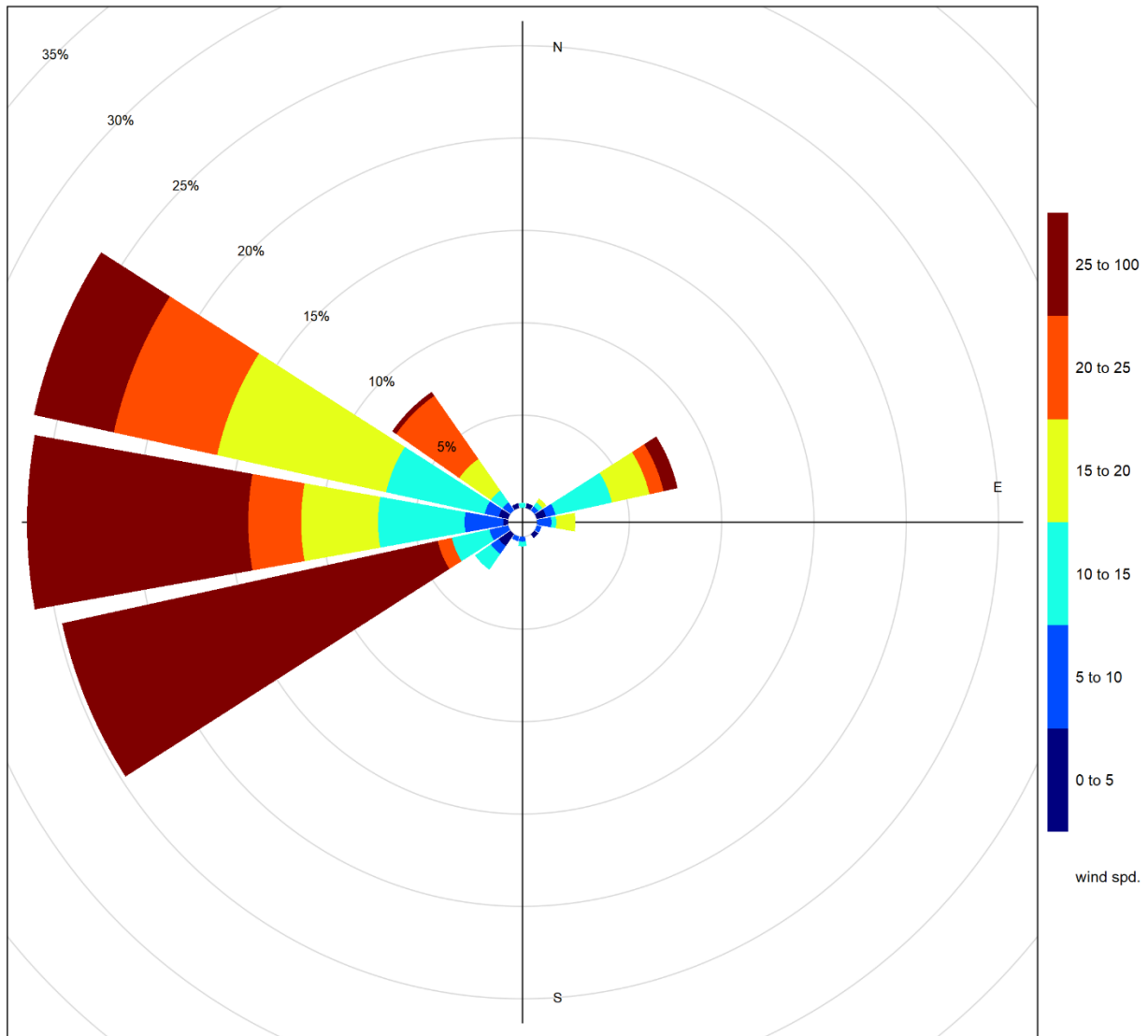


Figure 7-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

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 2021. 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.

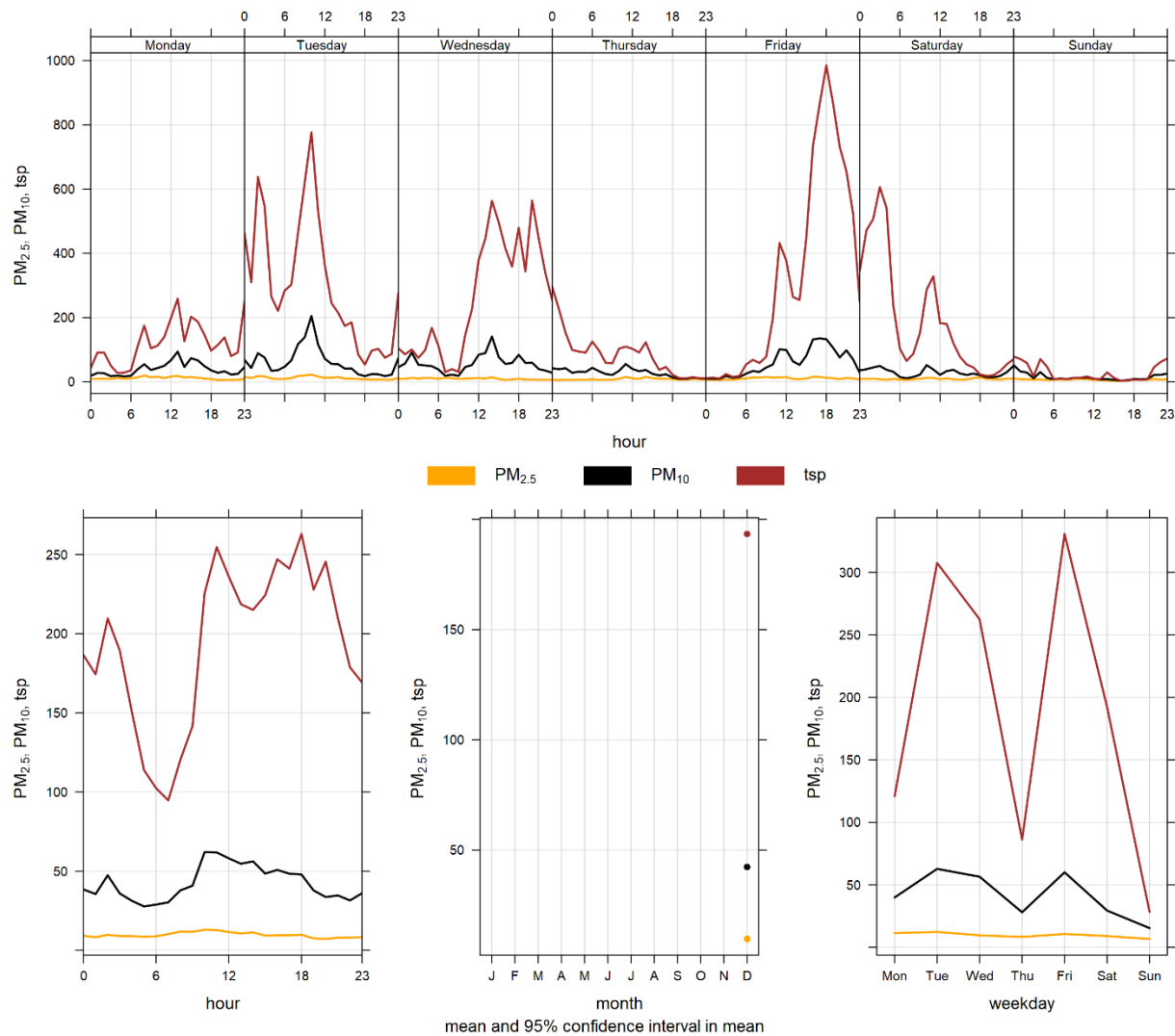


Figure 7-4 Entrance particulate matter time variation

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- Levelton Consultants Ltd. (2015, June 15). Comparison of GRIMM and E-BAM Data. Alberta, Can

APPENDIX

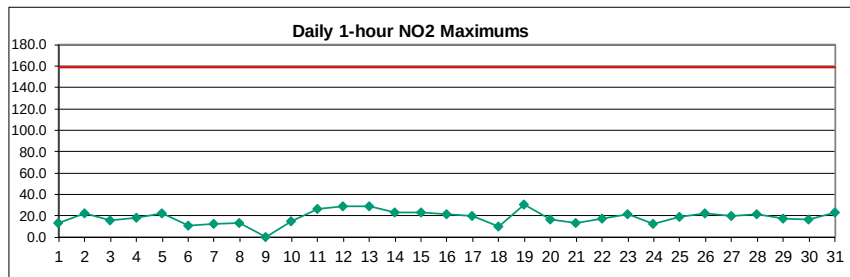
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – December 2021

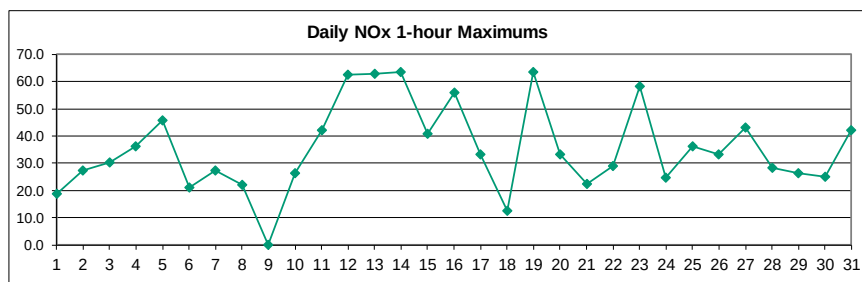
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	8.3	S	5.0	6.9	4.5	5.0	5.8	7.8	9.9	13.5	4.5	4.2	5.3	5.1	4.0	6.4	5.1	13.4	11.7	3.0	9.3	3.9	2.5	6.0	6.6	13.5
2	5.2	S	19.0	22.5	20.2	12.4	10.8	12.4	14.2	13.5	10.8	11.6	10.2	7.8	10.2	6.9	8.8	15.0	5.9	3.9	5.5	5.8	5.2	4.7	10.5	22.5
3	3.8	S	8.0	8.8	9.8	7.3	10.4	11.2	12.6	12.6	14.3	10.0	8.8	11.1	14.5	15.2	12.4	11.7	15.4	15.5	13.1	14.7	7.1	11.3	11.3	15.5
4	8.5	S	12.5	10.5	11.3	13.5	14.2	17.8	13.3	13.8	6.9	6.3	5.3	10.8	11.2	13.0	13.0	18.3	14.8	13.7	11.0	10.9	7.0	6.4	11.5	18.3
5	7.5	S	7.8	9.5	14.9	11.2	9.2	15.9	18.3	14.2	10.9	9.3	6.2	12.9	6.9	3.8	4.6	12.1	22.8	14.9	21.2	21.6	13.4	8.2	12.1	22.8
6	4.9	S	4.4	2.4	2.2	1.9	2.1	2.6	3.8	2.7	2.3	1.6	2.6	3.0	3.1	3.1	2.7	1.8	1.0	1.4	4.8	9.0	8.6	10.6	3.6	10.6
7	6.7	S	12.5	7.2	8.9	8.4	10.3	10.6	7.4	11.7	9.6	6.7	12.9	7.1	2.7	2.4	2.0	2.9	6.7	4.7	2.0	5.9	4.4	3.7	6.9	12.9
8	4.1	S	1.5	3.2	5.4	1.6	4.6	7.8	13.1	12.9	12.9	11.5	12.1	3.6	9.5	6.2	10.5	7.2	9.6	4.7	5.0	3.2	5.4	6.4	7.0	13.1
9	4.8	S	6.6	3.5	2.2	3.9	11.7	14.8	15.5	15.8	C	C	C	C	C	C	4.6	2.6	9.7	7.1	4.1	5.7	7.2	15.6	-	-
10	9.3	S	6.9	5.3	6.4	8.3	10.7	15.4	8.2	5.3	6.8	4.3	8.0	5.1	5.5	10.6	11.3	5.6	10.5	3.0	1.6	3.3	1.1	6.0	6.9	15.4
11	5.7	S	4.5	8.3	6.6	4.6	9.2	11.1	24.8	19.5	23.9	26.7	19.3	23.1	12.3	14.6	18.8	7.1	1.3	1.6	12.8	5.5	4.3	2.6	11.7	26.7
12	2.1	S	4.4	6.3	4.6	6.5	8.1	7.5	10.1	9.2	8.6	7.2	6.6	6.9	11.1	13.6	20.5	28.9	28.5	20.3	27.9	19.3	16.2	16.1	12.6	28.9
13	18.0	S	17.0	14.1	12.5	7.3	8.9	13.0	12.7	13.0	12.4	13.7	10.2	15.1	16.1	18.1	25.1	26.2	28.6	14.7	15.7	18.8	20.4	14.9	15.9	28.6
14	13.1	S	5.2	10.7	12.6	9.7	10.1	12.2	12.4	10.8	4.9	10.6	12.2	13.4	16.1	17.4	23.0	19.1	14.4	16.9	21.1	17.6	14.8	19.2	13.8	23.0
15	11.5	S	21.7	22.3	21.7	21.6	21.9	22.3	23.5	22.4	17.0	13.2	7.7	7.2	6.9	9.3	10.4	9.6	6.9	6.9	6.2	5.0	6.7	5.5	13.4	23.5
16	7.4	S	4.4	4.3	5.5	4.2	6.5	6.3	6.9	6.6	7.8	6.2	6.6	8.2	17.2	21.9	16.2	10.7	8.4	6.8	10.7	11.2	9.1	12.1	8.9	21.9
17	14.3	S	14.6	14.5	17.8	19.6	18.0	14.6	15.0	12.8	10.7	7.7	7.1	7.1	7.7	9.0	7.5	5.3	8.4	5.4	5.3	7.1	5.0	4.6	10.4	19.6
18	4.8	S	2.7	2.8	3.0	3.1	2.3	2.2	3.3	4.0	6.6	4.9	6.2	5.2	6.1	6.9	7.8	5.5	4.5	6.9	7.0	6.0	6.1	10.2	5.1	10.2
19	4.8	S	17.4	21.1	10.6	5.3	9.5	15.6	9.9	4.4	8.3	5.6	9.1	15.0	12.0	3.2	3.8	3.9	9.3	12.9	26.3	30.8	22.1	23.3	12.4	30.8
20	16.9	S	8.2	9.3	7.2	6.7	6.5	6.3	7.6	8.7	8.8	5.5	4.9	7.9	8.8	9.6	11.5	16.8	14.5	12.6	9.8	3.6	1.7	1.5	8.5	16.9
21	1.6	S	1.9	1.2	1.2	4.2	2.2	3.0	3.7	2.8	13.3	9.2	5.3	3.4	3.2	2.7	4.0	4.6	5.2	11.1	12.9	10.0	12.6	13.2	5.8	13.3
22	9.6	S	11.8	12.3	11.9	16.3	17.9	15.5	14.3	17.4	12.1	7.3	3.7	1.9	1.3	1.5	1.1	1.6	1.5	2.1	5.5	15.9	9.7	11.7	8.9	17.9
23	7.3	S	8.1	8.8	7.2	8.5	8.3	15.9	18.0	10.2	21.7	9.0	5.8	11.5	7.5	7.4	16.6	9.0	7.4	13.3	13.3	16.8	15.5	7.3	11.1	21.7
24	9.8	S	12.5	3.3	2.7	4.8	2.4	3.8	3.8	4.0	3.5	4.6	3.7	3.2	6.6	5.5	6.0	5.5	5.0	4.4	4.5	5.4	7.2	9.4	5.3	12.5
25	10.6	S	10.7	10.2	7.3	7.2	4.9	4.4	3.4	3.5	3.4	2.9	2.8	4.8	2.9	3.0	4.4	4.8	4.4	4.6	5.1	6.9	14.4	19.5	6.4	19.5
26	19.8	S	14.7	18.1	14.5	21.4	20.3	16.7	10.9	9.6	10.4	4.1	4.0	10.1	3.7	3.4	4.8	4.5	6.7	7.9	8.1	10.7	13.6	22.5	11.3	22.5
27	20.4	S	18.7	19.7	17.4	18.0	16.7	18.1	16.4	13.7	13.0	9.8	6.5	5.4	5.7	6.1	8.1	8.5	10.1	8.6	8.6	12.3	12.0	10.4	12.4	20.4
28	8.5	S	9.4	8.1	8.0	5.6	6.9	7.9	5.7	6.2	5.8	7.5	10.2	9.9	8.4	10.4	17.1	21.6	11.0	12.6	5.3	3.1	11.4	3.8	8.9	21.6
29	9.7	S	4.8	6.4	3.9	6.2	11.1	16.8	14.9	17.5	12.3	6.7	5.2	4.8	4.6	5.1	5.4	5.2	2.2	1.4	1.7	1.3	1.8	2.6	6.6	17.5
30	1.9	S	3.4	5.5	6.0	4.7	5.7	5.0	11.6	12.6	15.6	11.4	11.1	11.1	5.3	6.4	5.9	5.8	5.7	6.1	5.8	11.1	16.8	15.0	8.2	16.8
31	15.4	S	18.3	23.3	22.3	21.8	18.8	18.6	19.9	16.5	13.6	10.4	6.5	7.8	6.7	8.8	8.5	6.9	8.1	8.1	9.0	7.5	7.9	5.1	12.6	23.3
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	31	31	31	31	31	31	31	31	707	100.0%
MEAN	8.9	-	9.6	10.0	9.4	9.1	9.9	11.4	11.8	11.0	10.4	8.3	7.5	8.3	7.9	8.4	9.7	9.7	9.7	8.3	9.7	10.0	9.4	10.0		
MAX	20.4	-	21.7	23.3	22.3	21.8	21.9	22.3	24.8	22.4	23.9	26.7	19.3	23.1	17.2	21.9	25.1	28.9	28.6	20.3	27.9	30.8	22.1	23.3		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	707
Maximum 1-HR Average	30.8 PPB
Maximum 24-HR Average	15.9 PPB
Monthly Calibration	6
Standard Deviation	5.7
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	9.5 PPB

Lagoon NOx (ppb) – December 2021

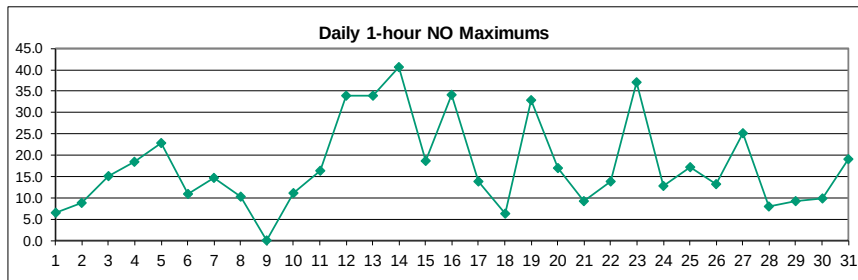
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	14.7	S	7.2	12.1	5.8	6.0	6.6	10.6	12.1	17.9	4.8	4.4	5.8	6.3	4.2	7.7	5.2	18.9	15.7	3.1	10.9	4.1	2.4	7.5	8.4	18.9
2	5.7	S	22.8	27.5	24.5	12.8	11.4	16.2	17.7	16.5	17.3	15.7	13.2	10.1	14.1	7.7	9.3	23.8	6.2	4.0	5.7	5.7	5.0	4.6	12.9	27.5
3	3.9	S	8.3	8.8	10.4	7.4	13.6	12.1	13.6	19.5	22.8	15.8	12.4	16.4	20.8	20.3	14.7	14.0	30.4	23.7	19.2	23.7	8.5	16.5	15.5	30.4
4	12.4	S	23.0	17.3	19.3	28.1	28.6	36.3	25.4	24.1	9.1	8.0	7.1	19.1	21.6	23.7	22.5	32.8	24.5	18.9	14.4	15.0	8.9	8.2	19.5	36.3
5	11.9	S	11.7	10.0	19.5	16.6	10.8	28.3	34.1	28.3	20.9	16.7	9.9	22.6	10.2	4.3	4.5	20.6	45.7	16.2	28.1	36.6	17.2	10.4	18.9	45.7
6	5.7	S	5.3	2.7	2.5	1.9	2.2	3.3	5.4	3.6	2.9	1.9	3.6	4.0	3.9	3.7	3.1	2.0	0.9	1.4	6.9	15.4	14.9	21.2	5.2	21.2
7	11.4	S	23.7	9.5	13.7	11.1	15.3	18.0	13.9	22.0	17.8	10.8	27.4	10.6	3.4	2.6	2.1	3.4	8.7	6.0	2.0	9.1	5.4	4.4	11.0	27.4
8	5.5	S	1.5	3.9	7.6	1.8	7.3	9.8	18.4	17.1	16.8	17.5	22.1	4.6	14.5	10.5	17.0	11.9	16.3	6.5	7.8	4.6	7.9	9.9	10.5	22.1
9	6.8	S	9.6	4.5	2.7	4.5	18.6	27.3	24.3	28.7	C	C	C	C	C	C	6.1	3.2	17.9	8.8	4.9	7.5	10.5	25.2	-	-
10	12.1	S	8.6	6.4	10.7	10.5	13.6	26.5	11.3	8.2	10.5	7.0	14.4	7.8	9.3	18.9	19.9	9.0	19.8	4.8	2.3	4.4	1.6	9.0	10.7	26.5
11	8.2	S	6.6	12.3	9.1	6.7	12.2	13.2	32.3	23.0	35.1	42.0	35.7	33.0	15.3	17.4	21.4	8.2	1.7	1.9	19.7	6.2	4.5	3.0	16.0	42.0
12	2.4	S	4.6	6.8	5.9	6.8	8.4	8.6	12.4	10.9	10.4	8.8	9.3	10.2	14.0	18.3	27.2	53.1	62.5	22.7	35.9	22.7	17.5	19.1	17.3	62.5
13	19.8	S	18.9	15.0	13.8	7.7	11.2	26.1	21.5	19.5	18.5	25.4	19.0	25.7	27.9	26.9	33.8	42.8	62.8	19.4	24.3	33.2	35.9	24.9	25.0	62.8
14	23.8	S	5.5	21.2	21.0	19.0	20.0	20.3	16.6	18.3	7.7	26.2	33.5	29.9	39.8	39.1	63.5	39.7	23.7	28.6	37.4	20.5	24.9	41.3	27.0	63.5
15	16.2	S	38.4	38.4	31.6	29.6	30.3	33.7	38.8	40.9	29.3	24.0	13.0	10.5	9.1	11.7	12.3	11.0	7.5	7.9	8.7	5.4	8.8	6.0	20.1	40.9
16	10.3	S	5.3	6.3	8.9	5.5	9.0	8.5	8.2	8.2	11.2	8.5	9.5	13.3	39.8	55.8	21.6	11.4	8.8	7.3	17.9	19.6	12.8	17.3	14.1	55.8
17	17.7	S	15.9	17.1	20.1	33.2	26.7	21.1	24.1	19.9	21.6	15.2	15.5	11.8	11.7	14.5	10.7	7.4	14.5	7.1	6.7	11.3	6.3	6.1	15.5	33.2
18	8.2	S	3.4	3.4	3.7	3.9	2.6	2.5	4.3	5.2	9.4	6.7	9.5	7.0	8.4	12.7	10.9	7.0	5.0	8.9	8.7	6.6	7.1	12.4	6.8	12.7
19	6.1	S	26.4	29.8	14.4	7.6	12.9	24.9	16.4	5.0	14.3	7.8	14.9	25.7	21.4	4.2	4.1	4.3	9.8	16.1	30.5	63.6	25.9	26.0	17.9	63.6
20	18.1	S	9.4	11.1	8.2	10.4	7.1	6.8	9.6	12.1	13.9	9.3	8.1	14.2	18.2	18.1	18.0	33.4	22.9	18.2	12.9	4.5	1.9	1.7	12.5	33.4
21	1.8	S	2.4	1.5	1.5	6.4	2.8	4.4	5.2	3.7	22.3	14.6	8.0	4.9	4.2	4.0	5.0	6.0	6.3	16.6	20.1	14.0	18.2	21.8	8.5	22.3
22	15.7	S	21.9	18.8	18.3	25.1	27.3	27.3	22.2	23.0	15.9	10.2	4.9	2.5	1.7	2.1	1.5	2.2	2.2	2.6	8.2	29.2	13.1	16.0	13.6	29.2
23	8.0	S	8.6	11.8	8.6	10.4	8.8	26.5	22.8	24.7	58.3	17.5	6.9	21.4	11.0	12.4	38.3	15.9	9.0	24.3	20.8	32.6	40.7	9.6	19.5	58.3
24	15.3	S	24.8	4.2	3.1	7.7	2.7	4.1	4.0	4.6	4.6	7.6	5.1	4.5	8.9	6.3	6.3	5.7	5.1	4.4	4.5	5.5	7.3	9.6	6.8	24.8
25	13.2	S	11.4	11.0	7.8	7.8	5.2	4.6	3.8	4.0	4.4	3.8	4.6	8.5	4.2	3.8	4.9	5.2	4.6	5.0	5.3	7.2	23.2	36.3	8.3	36.3
26	28.5	S	18.2	25.5	18.4	31.8	33.2	23.8	13.5	11.7	17.0	5.9	5.8	19.1	5.4	4.3	5.4	4.8	8.1	9.5	9.2	13.5	16.0	29.4	15.6	33.2
27	28.9	S	23.7	32.0	35.4	36.9	37.5	43.0	36.8	33.2	32.2	28.8	13.7	9.5	9.3	8.0	12.4	10.4	12.6	9.2	9.5	13.1	13.1	11.5	21.8	43.0
28	9.2	S	9.9	8.9	9.2	6.3	8.0	11.7	6.5	7.6	7.8	10.3	17.6	14.3	12.9	13.3	20.5	28.5	13.7	15.6	6.4	3.5	16.1	4.1	11.4	28.5
29	13.1	S	5.8	8.3	4.4	6.5	11.7	21.6	18.1	26.3	20.9	11.5	8.9	7.6	8.9	6.9	7.0	8.2	2.6	1.6	2.1	1.6	2.3	3.5	9.1	26.3
30	2.5	S	4.0	9.4	10.2	6.3	8.6	6.5	16.4	19.0	25.1	17.3	18.7	17.2	7.0	9.6	8.5	6.0	5.9	6.2	6.0	14.6	24.3	19.0	11.7	25.1
31	16.3	S	26.4	42.0	26.7	24.5	19.9	21.7	26.3	23.8	26.3	20.8	12.0	12.8	9.3	13.2	10.2	7.7	8.9	10.5	12.3	8.1	10.0	5.5	17.2	42.0
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	707	100.0%
MEAN	12.0	-	13.3	14.1	12.8	12.9	14.0	17.7	17.3	17.1	17.6	14.0	13.0	13.5	13.0	13.4	14.5	14.8	15.6	10.9	13.2	14.9	13.3	14.2		
MAX	28.9	-	38.4	42.0	35.4	36.9	37.5	43.0	38.8	40.9	58.3	42.0	35.7	33.0	39.8	55.8	63.5	53.1	62.8	28.6	37.4	63.6	40.7	41.3		



Number of Non-Zero Readings	707
Maximum 1-HR Average	63.6 PPB
Maximum 24-HR Average	27.0 PPB
Monthly Calibration	6
Standard Deviation	10.44
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	14.2 PPB

Lagoon NO (ppb) – December 2021

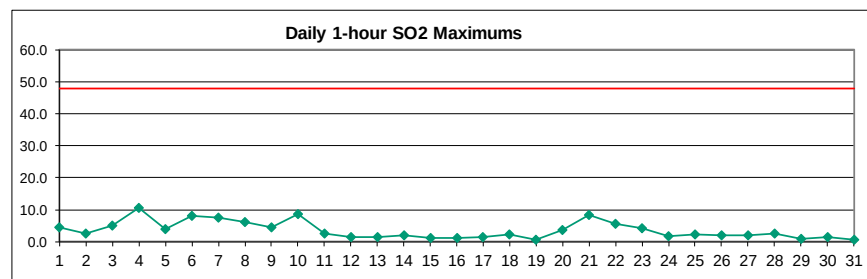
HOUR																										
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX
1	6.6	S	2.3	5.4	1.5	1.2	1.0	3.0	2.4	4.5	0.6	0.4	0.8	1.4	0.5	1.5	0.4	5.7	4.1	0.3	1.8	0.5	0.1	1.8	2.1	6.6
2	0.7	S	4.0	5.1	4.4	0.6	0.8	4.0	3.6	3.2	6.7	4.3	3.1	2.5	4.0	1.1	0.7	8.9	0.4	0.3	0.4	0.2	0.2	0.2	2.6	8.9
3	0.4	S	0.6	0.3	0.9	0.4	3.5	1.1	1.3	7.1	8.6	6.0	3.8	5.5	6.5	5.3	2.5	2.6	15.1	8.3	6.2	9.1	1.5	5.4	4.4	15.1
4	4.0	S	10.7	6.9	8.2	14.8	14.4	18.6	12.2	10.5	2.3	1.9	1.9	8.5	10.5	10.9	9.6	14.5	9.7	5.3	3.5	4.3	2.1	1.9	8.1	18.6
5	4.5	S	4.0	0.7	4.7	5.5	1.7	12.4	15.8	14.1	10.0	7.4	3.7	9.8	3.4	0.6	0.1	8.5	22.8	1.4	7.0	15.1	3.8	2.3	6.9	22.8
6	0.9	S	1.2	0.5	0.4	0.2	0.3	0.9	1.7	1.0	0.7	0.4	1.1	1.1	0.9	0.7	0.5	0.3	0.0	0.1	2.3	6.5	6.5	10.9	1.7	10.9
7	5.0	S	11.4	2.6	5.1	3.1	5.3	7.7	6.7	10.5	8.5	4.4	14.6	3.7	0.9	0.4	0.3	0.6	2.2	1.5	0.2	3.3	1.0	0.8	4.3	14.6
8	1.5	S	0.1	0.7	2.2	0.2	2.7	2.1	5.6	4.6	4.1	6.2	10.2	1.3	5.3	4.5	6.8	5.0	6.9	2.1	3.0	1.6	2.7	3.7	3.6	10.2
9	2.2	S	3.1	1.2	0.7	0.7	7.0	12.7	9.0	13.0	C	C	C	C	C	C	1.6	0.7	8.3	1.9	1.0	2.0	3.5	9.7	-	-
10	3.1	S	1.9	1.2	4.4	2.3	3.1	11.2	3.3	3.0	3.8	3.0	6.8	2.9	4.0	8.7	8.9	3.6	9.6	2.1	0.9	1.3	0.7	3.2	4.0	11.2
11	2.8	S	2.3	4.2	2.8	2.4	3.3	2.3	7.7	3.6	11.3	15.3	16.5	9.9	3.2	3.0	2.7	1.2	0.5	0.4	7.0	0.9	0.4	0.5	4.5	16.5
12	0.4	S	0.4	0.6	1.5	0.4	0.6	1.3	2.5	1.8	2.0	1.8	3.0	3.4	3.1	4.9	6.8	24.1	33.9	2.5	8.0	3.4	1.4	3.1	4.8	33.9
13	1.9	S	2.0	1.1	1.5	0.7	2.5	13.3	9.0	6.7	6.2	11.9	9.0	10.7	11.9	8.9	8.8	16.5	34.0	4.9	8.7	14.4	15.5	10.0	9.1	34.0
14	10.8	S	0.5	10.5	8.4	9.3	10.0	8.3	4.4	7.6	3.1	16.0	21.7	16.8	24.0	21.9	40.7	20.8	9.6	12.0	16.5	3.2	10.4	22.2	13.4	40.7
15	5.0	S	17.0	16.3	10.2	8.3	8.8	11.7	15.5	18.6	12.5	11.2	5.7	3.7	2.6	2.8	2.3	1.8	1.0	1.3	2.8	0.7	2.5	0.9	7.1	18.6
16	3.2	S	1.2	2.3	3.7	1.6	2.8	2.5	1.7	2.0	3.7	2.7	3.2	5.5	22.9	34.1	5.7	1.1	0.9	0.9	7.6	8.8	4.1	5.6	5.6	34.1
17	3.7	S	1.6	3.0	2.8	13.9	9.1	6.8	9.4	7.5	11.3	8.0	8.9	5.2	4.6	5.9	3.6	2.5	6.4	2.1	1.7	4.6	1.7	1.8	5.5	13.9
18	3.7	S	1.1	1.0	1.1	1.2	0.7	0.7	1.3	1.5	3.3	2.3	3.8	2.3	2.8	6.4	3.7	2.0	0.9	2.4	2.1	1.0	1.5	2.7	2.1	6.4
19	1.8	S	9.4	9.2	4.2	2.7	3.9	9.8	6.9	1.1	6.4	2.7	6.2	11.1	9.8	1.4	0.8	0.8	0.9	3.7	4.6	33.0	4.2	3.1	6.0	33.0
20	1.6	S	1.8	2.4	1.5	4.1	1.0	1.0	2.4	3.9	5.6	4.2	3.7	6.8	9.9	9.0	7.0	17.0	8.8	6.1	3.6	1.2	0.7	0.7	4.5	17.0
21	0.6	S	0.7	0.6	0.6	2.5	0.8	1.7	1.7	1.1	9.3	5.8	3.1	2.0	1.4	1.7	1.4	1.9	1.6	6.1	7.8	4.6	6.1	9.1	3.1	9.3
22	6.6	S	10.6	7.1	6.9	9.3	9.8	12.2	8.4	6.1	4.3	3.4	1.5	1.0	0.8	1.0	0.8	0.9	1.1	0.9	3.2	13.8	4.0	4.9	5.2	13.8
23	1.2	S	1.2	3.5	1.9	2.4	1.0	11.1	5.3	15.0	37.0	9.0	1.6	10.5	4.0	5.4	22.1	7.4	2.1	11.5	8.0	16.2	25.6	2.9	9.0	37.0
24	6.0	S	12.8	1.3	0.8	3.4	0.7	0.7	0.7	1.0	1.5	3.4	1.9	1.7	2.8	1.2	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.7	2.0	12.8
25	3.1	S	1.2	1.2	0.9	1.0	0.7	0.7	0.7	0.9	1.3	1.3	2.2	4.1	1.6	1.2	0.8	0.8	0.7	0.7	0.6	0.7	9.2	17.2	2.3	17.2
26	9.1	S	3.9	7.7	4.4	10.8	13.3	7.6	3.1	2.6	7.1	2.1	2.2	9.5	2.1	1.3	1.0	0.8	1.9	2.0	1.5	3.2	2.8	7.2	4.7	13.3
27	8.9	S	5.4	12.7	18.3	19.1	21.0	25.1	20.7	19.8	19.5	19.3	7.8	4.6	4.2	2.5	4.8	2.4	3.0	1.1	1.4	1.2	1.5	1.6	9.8	25.1
28	1.1	S	1.0	1.2	1.6	1.1	1.6	4.2	1.2	1.8	2.4	3.3	8.0	5.1	5.1	3.6	3.9	7.3	3.2	3.5	1.7	0.9	5.3	0.9	3.0	8.0
29	4.0	S	1.6	2.5	0.9	0.9	1.1	5.3	3.7	9.4	9.2	5.4	4.3	3.4	4.7	2.2	2.1	3.3	0.7	0.6	0.7	0.6	0.8	1.1	3.0	9.4
30	0.8	S	1.0	4.3	4.7	2.0	3.4	1.9	5.3	7.0	10.0	6.5	8.2	6.7	2.4	3.7	3.2	0.8	0.7	0.7	4.1	8.0	4.6	3.9	10.0	
31	1.4	S	8.6	19.2	4.9	3.3	1.7	3.7	6.8	7.8	13.1	10.8	6.0	5.6	3.1	4.9	2.2	1.2	1.2	2.8	3.8	1.1	2.6	0.8	5.1	19.2
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	31	31	31	31	31	31	31	31	707	100.0%
MEAN	3.4	-	4.0	4.4	3.7	4.2	4.4	6.6	5.8	6.4	7.5	6.0	5.8	5.5	5.4	5.3	5.0	5.3	6.2	2.9	3.8	5.2	4.2	4.6		
MAX	10.8	-	17.0	19.2	18.3	19.1	21.0	25.1	20.7	19.8	37.0	19.3	21.7	16.8	24.0	34.1	40.7	24.1	34.0	12.0	16.5	33.0	25.6	22.2		



Number of Non-Zero Readings	707		
Maximum 1-HR Average	40.7 PPB		
Maximum 24-HR Average	13.4 PPB		
Monthly Calibration	6	Operational Time	744 HRS
Standard Deviation	5.565	Operational Uptime	100.0 %
		Monthly Average	5.0 PPB

Lagoon SO₂ (ppb) – December 2021

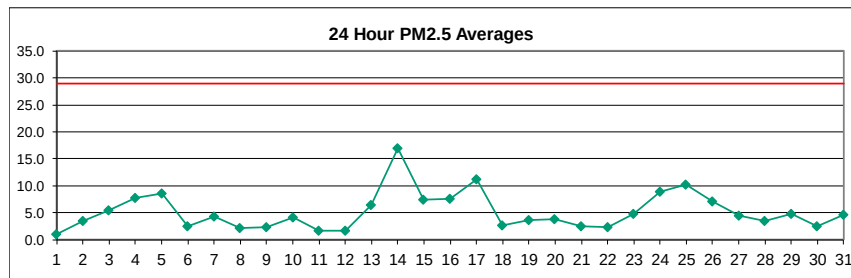
Day	HOURLY																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	4.4	S	2.3	2.3	1.3	1.4	1.5	1.8	1.9	1.0	1.3	1.7	1.1	1.3	0.9	0.7	0.8	1.0	1.2	1.1	0.8	1.0	0.9	0.5	1.4	4.4
2	0.7	S	1.4	2.6	1.5	1.5	1.2	0.9	0.3	0.6	1.0	0.8	1.4	1.3	1.7	0.6	0.9	1.1	1.1	0.7	1.9	1.8	1.4	1.4	1.2	2.6
3	1.5	S	1.1	0.8	0.7	0.6	1.3	1.5	0.4	1.5	3.3	2.6	0.7	1.1	2.3	0.9	0.8	1.4	0.9	2.3	3.4	4.9	0.7	1.2	1.6	4.9
4	1.5	S	5.4	3.2	4.7	6.4	8.4	10.6	8.2	6.2	1.1	1.1	1.0	3.1	6.4	7.3	6.7	8.6	5.1	5.3	3.0	4.1	3.1	2.9	4.9	10.6
5	2.9	S	2.5	1.3	1.1	0.4	0.3	1.1	1.0	0.4	0.7	0.9	0.7	1.2	0.0	0.1	0.2	0.2	0.6	0.4	2.4	3.9	3.0	3.4	1.2	3.9
6	1.3	S	0.6	0.6	0.5	0.8	1.2	1.2	1.2	0.4	1.1	0.6	0.5	0.6	1.0	1.0	1.1	0.8	0.6	0.8	1.8	6.3	4.7	8.1	1.6	8.1
7	5.3	S	7.6	3.6	4.4	4.1	5.5	5.9	4.9	6.1	4.8	2.8	4.5	2.7	1.2	1.1	1.2	1.2	2.5	3.2	1.5	1.5	1.6	1.1	3.4	7.6
8	1.0	S	1.2	1.5	1.6	1.5	2.8	1.8	1.7	2.6	2.2	1.8	6.3	2.0	1.9	1.8	5.4	4.7	5.3	2.2	5.3	2.8	2.7	3.0	2.7	6.3
9	2.1	S	3.1	1.5	1.7	1.0	0.8	1.6	1.7	1.3	C	C	C	C	C	4.5	0.2	0.4	0.6	0.7	0.5	0.5	0.4	0.2	1.3	4.5
10	0.0	S	0.3	0.0	1.0	0.4	0.0	0.6	0.2	0.1	0.4	0.0	1.9	1.9	2.5	8.7	8.0	3.0	6.7	2.2	1.0	0.2	1.1	2.3	1.8	8.7
11	1.5	S	2.1	1.1	2.1	1.1	2.5	1.0	0.9	1.2	1.5	1.3	0.9	0.8	1.0	1.0	1.2	0.7	0.4	0.2	1.1	1.0	0.6	1.0	1.1	2.5
12	0.9	S	0.6	1.0	1.5	0.8	0.3	0.9	0.7	0.7	0.7	0.8	0.7	0.9	0.7	0.8	0.6	0.9	1.4	0.9	0.6	0.3	0.3	1.0	0.8	1.5
13	0.8	S	0.4	0.6	0.3	0.4	0.8	0.2	0.0	0.0	0.5	1.4	0.5	0.8	0.2	0.0	0.3	0.1	0.6	1.2	0.6	0.4	0.4	0.0	0.5	1.4
14	0.3	S	0.2	0.2	0.3	0.6	0.7	0.7	0.9	0.4	0.6	0.9	1.3	1.4	1.8	1.3	1.9	1.1	1.1	1.5	1.3	0.9	1.9	2.0	1.0	2.0
15	1.0	S	1.2	1.1	1.0	0.7	0.9	0.7	0.7	0.3	0.7	1.0	1.3	0.9	0.7	0.5	0.5	0.6	0.9	0.8	0.9	1.2	1.0	0.3	0.8	1.3
16	0.6	S	1.0	1.1	0.8	0.2	0.0	0.4	0.8	0.7	1.2	0.0	0.6	1.2	1.1	1.1	0.5	0.9	0.9	0.9	0.6	0.8	0.2	0.9	0.7	1.2
17	0.3	S	0.4	0.3	0.4	1.0	1.5	0.6	0.6	0.3	0.4	0.4	0.3	0.6	0.5	0.3	0.0	0.5	0.5	0.1	0.8	1.1	1.1	0.0	0.5	1.5
18	0.2	S	0.4	0.0	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.7	0.7	2.4	0.8	0.8	0.8	0.2	0.7	0.0	1.1	0.5	2.4
19	0.6	S	0.4	0.4	0.7	0.4	0.0	0.3	0.5	0.6	0.8	0.1	0.4	0.0	0.2	0.4	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.8
20	0.4	S	0.9	1.1	0.0	0.5	0.0	0.0	0.4	0.0	0.3	0.4	0.1	0.9	1.9	2.3	3.5	3.7	2.9	3.0	2.5	0.3	0.5	0.5	1.1	3.7
21	0.2	S	0.4	0.0	0.0	0.4	0.3	0.4	0.0	0.2	0.4	0.3	0.2	0.7	0.6	1.0	0.5	0.1	1.0	5.8	4.1	3.7	6.3	8.4	1.5	8.4
22	4.7	S	4.5	4.1	1.7	5.3	1.7	2.2	3.9	3.8	1.5	1.2	0.5	0.5	1.1	0.1	0.6	0.6	0.3	0.0	1.7	5.6	1.9	2.8	2.2	5.6
23	0.8	S	1.2	1.0	1.9	1.2	1.0	1.7	0.9	1.2	4.3	1.5	1.4	1.0	0.8	1.2	1.9	1.2	0.6	1.0	0.9	1.0	1.3	1.1	1.3	4.3
24	0.5	S	0.9	0.4	0.5	0.6	0.4	1.5	0.8	1.0	1.2	0.8	0.5	1.0	0.9	1.8	1.3	0.0	0.7	1.3	1.7	1.1	0.7	0.1	0.9	1.8
25	0.1	S	0.9	0.7	0.5	1.8	1.5	1.5	2.2	1.3	1.5	0.9	0.4	1.5	1.3	1.6	1.9	2.2	0.9	0.0	0.3	0.0	0.3	0.7	1.0	2.2
26	0.7	S	0.0	0.5	0.7	0.9	1.3	0.8	1.8	1.9	1.6	1.3	0.5	0.2	0.1	0.3	0.8	1.3	2.1	1.4	1.4	1.3	0.7	0.3	1.0	2.1
27	0.5	S	1.2	1.4	1.8	2.0	0.8	0.5	0.8	0.8	1.1	1.0	1.0	0.5	0.3	0.6	0.5	1.0	0.4	1.3	0.2	0.2	0.5	0.5	0.8	2.0
28	0.0	S	0.3	0.3	0.5	1.0	0.5	1.0	0.7	0.5	0.2	0.7	0.8	0.6	0.0	2.6	0.2	0.3	0.3	0.2	0.1	0.0	0.9	0.4	0.5	2.6
29	0.7	S	0.2	0.1	0.5	0.1	0.0	0.6	0.0	0.1	0.8	0.1	0.5	0.1	0.7	0.5	0.6	0.2	0.2	0.1	0.5	0.1	0.2	0.4	0.3	0.8
30	0.3	S	0.5	0.4	0.5	0.3	0.7	0.1	0.2	0.7	0.1	0.4	0.2	0.5	0.0	0.3	1.2	1.4	1.1	0.7	0.7	1.5	1.4	1.2	0.6	1.5
31	0.7	S	0.3	0.3	0.0	0.6	0.0	0.0	0.3	0.0	0.0	0.5	0.2	0.0	0.3	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.2	0.1	0.2	0.7
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	31	31	708	100.0%
MEAN	1.2	-	1.4	1.1	1.1	1.2	1.3	1.4	1.3	1.2	1.2	0.9	1.0	1.0	1.1	1.5	1.5	1.3	1.3	1.3	1.4	1.6	1.3	1.5		
MAX	5.3	-	7.6	4.1	4.7	6.4	8.4	10.6	8.2	6.2	4.8	2.8	6.3	3.1	6.4	8.7	8.0	8.6	6.7	5.8	5.3	6.3	6.3	8.4		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	667
Maximum 1-HR Average	10.6 PPB
Maximum 24-HR Average	4.9 PPB
Monthly Calibration	5
Standard Deviation	1.504
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	1.3 PPB

Lagoon PM_{2.5} (µg/m³) – December 2021

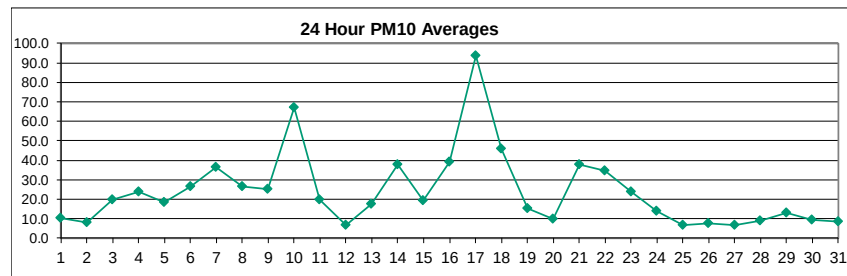
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	3.3	2.5	1.2	1.5	1.7	0.0	0.2	1.5	1.1	0.9	3.0	4.0	2.7	0.0	0.0	0.0	0.0	0.0	0.5	0.8	0.1	0.5	1.0	0.0	1.1	4.0
2	0.0	0.0	0.0	0.2	7.1	10.0	7.1	3.8	0.5	1.0	3.8	5.2	6.5	6.3	8.2	5.4	3.5	1.2	1.4	4.7	3.5	2.2	0.8	1.2	3.5	10.0
3	1.8	0.8	1.6	2.7	4.7	3.5	1.2	2.0	3.9	2.7	4.5	11.4	8.3	7.8	4.8	6.2	5.9	11.5	9.2	5.7	8.7	8.7	7.8	4.2	5.4	11.5
4	1.9	2.0	3.4	5.4	3.9	2.5	7.0	8.2	10.1	9.3	9.6	6.0	2.3	3.8	6.3	7.4	9.1	9.9	17.1	9.0	14.5	14.4	13.5	8.9	7.7	17.1
5	6.5	10.3	7.1	5.3	8.0	8.2	6.6	6.9	6.9	6.6	8.7	9.6	12.1	8.3	6.9	7.8	4.6	2.7	4.3	9.2	12.1	19.1	18.0	11.4	8.6	19.1
6	7.8	4.1	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.2	2.3	7.9	5.9	1.5	1.2	2.7	3.6	1.8	0.2	2.3	8.3	7.8	2.5	8.3
7	9.7	7.6	6.6	7.5	5.0	4.1	6.0	8.4	8.5	4.5	6.6	7.1	4.8	5.0	3.2	1.1	0.3	0.0	0.0	0.0	2.6	2.6	2.2	1.1	4.3	9.7
8	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.7	4.0	3.6	C	C	14.0	7.1	0.5	1.2	1.9	3.1	2.6	0.1	1.2	2.3	2.2	14.0
9	3.0	P	0.5	1.5	0.3	0.0	0.8	0.4	0.0	1.5	1.8	2.3	3.6	8.2	5.8	5.1	4.6	1.8	0.6	3.3	2.8	0.6	2.2	2.3	2.3	8.2
10	3.4	4.0	3.3	2.5	2.1	5.1	4.8	2.8	5.7	3.2	2.2	1.1	0.9	2.8	0.3	4.3	9.0	18.7	1.4	17.6	4.2	1.0	0.0	0.5	4.2	18.7
11	1.6	2.2	1.2	1.6	2.3	3.2	1.4	0.0	0.0	3.3	3.0	3.4	5.3	2.5	0.9	2.5	1.6	2.3	2.9	1.4	0.0	0.0	0.0	0.1	1.8	5.3
12	0.4	0.0	0.0	0.0	1.8	1.0	0.0	0.0	1.9	2.9	2.1	0.0	0.2	2.2	0.4	0.0	1.6	2.7	9.3	6.6	2.1	1.1	0.9	1.9	1.6	9.3
13	2.3	2.3	2.6	2.2	2.6	2.8	0.0	0.0	2.5	1.2	2.3	4.0	4.1	11.4	27.7	5.9	12.2	10.9	11.5	10.3	7.4	9.1	10.2	8.3	6.4	27.7
14	13.6	16.7	18.3	22.2	26.2	23.3	15.5	14.5	16.0	17.8	19.4	13.0	12.3	18.6	26.4	22.4	18.8	24.6	14.7	12.6	11.6	11.8	9.9	7.0	17.0	26.4
15	15.0	11.9	11.8	13.1	13.7	14.0	14.1	14.4	13.9	10.3	7.8	5.2	6.3	8.2	5.2	1.0	3.0	3.2	1.9	1.4	0.0	0.0	0.3	3.3	7.5	15.0
16	3.2	0.8	0.6	2.8	1.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	2.9	0.7	0.4	12.6	23.8	24.4	17.2	20.8	16.6	16.4	18.4	17.6	7.5	24.4
17	17.2	21.0	16.5	14.2	15.7	17.6	16.4	13.6	10.9	X	X	X	X	X	4.4	4.4	5.0	3.2	1.5	7.4	8.8	9.9	12.3	12.4	11.2	21.0
18	8.6	5.8	4.5	6.1	5.2	6.4	4.2	1.9	1.5	1.1	0.0	0.2	2.6	1.8	1.2	1.5	1.0	4.0	3.4	0.0	0.0	1.5	1.1	0.2	2.7	8.6
19	1.6	3.1	5.0	8.7	9.0	8.1	4.7	4.1	5.4	4.7	3.3	2.5	1.2	1.9	1.6	3.6	3.0	3.7	3.2	1.2	1.5	2.0	3.6	3.1	3.7	9.0
20	5.7	3.7	4.4	4.3	2.5	1.5	1.9	2.0	4.1	4.7	3.6	1.7	1.9	1.5	1.9	3.0	4.4	4.5	5.5	6.7	10.0	7.3	2.5	0.6	3.8	10.0
21	2.2	1.9	2.7	4.0	3.8	4.1	4.7	3.9	1.4	0.1	0.0	1.3	3.6	1.7	0.0	1.2	1.4	0.2	2.3	3.3	2.3	3.1	5.0	4.7	2.5	5.0
22	3.5	1.1	0.1	1.3	3.6	3.1	5.1	3.9	2.0	3.6	7.3	7.5	4.9	1.5	0.6	1.8	0.7	0.0	0.0	0.0	0.0	0.0	1.3	3.6	2.4	7.5
23	2.9	1.4	0.0	0.0	1.2	1.8	0.0	0.0	0.0	1.1	0.3	4.4	5.1	5.6	7.2	6.9	6.5	11.0	13.6	11.5	9.3	6.7	9.5	10.3	4.8	13.6
24	7.3	7.3	8.6	6.8	5.5	5.8	4.7	4.5	5.6	7.3	8.1	10.1	10.4	13.7	13.1	14.8	14.2	10.8	10.1	10.2	10.4	9.7	8.7	8.2	9.0	14.8
25	10.0	13.0	12.9	10.4	9.7	8.1	8.9	11.5	10.2	11.3	13.0	12.5	10.8	14.9	15.8	13.7	13.2	10.2	7.5	6.3	7.5	4.6	2.5	5.9	10.2	15.8
26	6.7	9.4	8.0	5.7	5.9	6.6	6.9	12.5	9.5	6.5	6.2	6.1	4.8	5.2	9.1	9.3	7.0	8.2	6.5	5.5	5.5	6.6	7.5	6.3	7.1	12.5
27	8.3	7.5	5.4	4.8	5.3	7.5	5.1	5.5	5.4	4.3	2.7	4.4	4.3	3.3	3.0	3.7	3.4	4.5	5.9	1.8	0.6	2.9	2.7	3.9	4.4	8.3
28	1.8	1.0	4.0	2.6	2.9	2.6	1.7	1.2	1.9	1.5	0.0	0.0	1.9	1.6	2.5	6.1	9.6	6.8	4.5	5.8	5.4	4.5	6.6	6.9	3.5	9.6
29	6.4	9.2	10.6	11.8	9.6	6.6	6.7	9.0	7.1	5.4	3.9	2.4	4.3	2.5	0.4	0.0	1.5	6.1	4.6	1.9	1.5	0.4	0.6	2.6	4.8	11.8
30	3.4	3.5	0.7	0.0	0.0	0.0	1.5	1.8	0.0	0.0	0.1	1.3	3.3	7.9	6.7	3.9	0.9	0.0	2.0	3.7	5.0	3.7	4.1	5.8	2.5	7.9
31	5.1	5.7	6.8	5.8	5.0	3.6	3.2	2.0	3.4	4.8	4.7	3.4	4.8	6.0	7.8	5.4	4.1	4.4	4.8	5.1	4.0	4.1	4.4	4.4	4.7	7.8
NO.	31	30	31	31	31	31	31	31	31	31	30	30	30	29	29	31	31	31	31	31	31	31	31	31	736	99.2%
MEAN	5.3	5.3	4.8	5.0	5.3	5.2	4.5	4.5	4.6	4.2	4.4	4.5	4.8	5.6	6.2	5.5	5.7	6.3	5.6	5.8	5.2	5.1	5.4	5.1		
MAX	17.2	21.0	18.3	22.2	26.2	23.3	16.4	14.5	16.0	17.8	19.4	13.0	12.3	18.6	27.7	22.4	23.8	24.6	17.2	20.8	16.6	19.1	18.4	17.6		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	665
Maximum 1-HR Average	27.7 UG/M3
Maximum 24-HR Average	17.0 UG/M3
Monthly Calibration	2
Standard Deviation	4.916
Operational Time	738 HRS
Operational Uptime	99.2 %
Monthly Average	5.2 UG/M3

Lagoon PM₁₀ (µg/m³) – December 2021

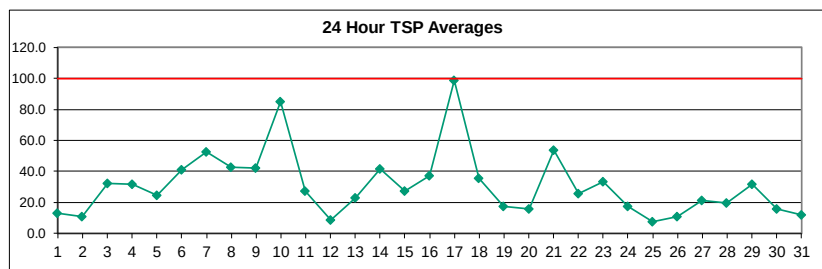
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	64.2	59.4	15.2	21.8	24.1	10.4	9.4	9.8	5.2	2.9	7.9	5.7	1.1	0.0	0.1	2.6	2.5	0.6	1.2	0.0	0.0	0.5	0.0	0.0	10.2	64.2
2	0.0	0.0	1.5	6.0	25.7	15.1	8.6	5.8	3.5	14.7	13.4	11.9	8.8	10.6	8.8	9.6	12.5	8.2	9.3	6.4	1.2	0.2	5.2	4.4	8.0	25.7
3	11.1	6.4	1.2	0.7	2.2	6.0	5.7	11.2	7.9	6.7	17.2	22.8	30.5	33.8	43.1	30.0	24.3	23.2	18.1	38.5	48.2	48.9	19.8	13.1	19.6	48.9
4	7.8	5.4	17.1	9.9	7.4	7.6	11.3	9.5	20.6	16.3	36.9	11.4	21.9	16.6	24.7	42.0	63.7	53.3	38.5	18.9	50.8	39.8	26.8	14.0	23.8	63.7
5	12.0	10.5	6.7	7.2	15.0	7.0	11.5	12.2	13.8	29.6	38.3	34.0	36.8	21.4	27.6	15.5	5.7	12.0	10.4	11.6	14.2	25.7	26.7	34.5	18.3	38.3
6	65.0	44.7	55.1	38.4	4.6	3.7	0.0	0.0	5.1	11.9	8.5	4.9	8.1	9.6	12.1	11.5	12.4	16.1	4.1	6.6	20.2	74.8	112.0	105.7	26.5	112.0
7	55.2	68.6	39.7	27.8	66.3	46.4	54.4	86.5	55.9	30.4	31.4	25.0	15.8	33.6	59.1	13.2	8.9	12.1	14.7	33.5	28.9	15.6	18.1	27.7	36.2	86.5
8	47.8	17.1	0.0	0.0	0.0	1.9	3.7	30.6	32.9	50.6	48.6	37.2	49.6	C	C	47.1	20.1	48.9	21.8	33.6	20.9	21.4	10.6	39.9	26.6	50.6
9	40.6	P	10.3	13.8	7.6	2.1	14.2	11.5	22.6	17.6	17.0	6.2	34.5	96.4	58.1	56.9	45.8	21.9	16.8	37.8	25.6	3.7	9.2	12.3	25.3	96.4
10	16.5	10.5	6.4	14.0	33.8	32.5	13.3	23.2	45.4	11.6	14.2	27.8	52.2	74.7	57.0	62.8	131.1	234.4	112.3	350.3	96.9	38.6	100.3	46.5	66.9	350.3
11	30.0	43.9	21.4	17.6	8.5	15.8	9.8	5.4	6.9	20.5	14.6	33.9	44.2	16.6	22.7	7.8	10.6	14.4	30.5	41.5	24.7	19.2	12.3	4.4	19.9	44.2
12	0.8	4.5	2.1	5.3	15.3	21.6	0.0	1.4	4.4	5.3	3.8	2.5	20.6	4.6	4.1	5.5	7.2	5.8	13.1	7.8	5.0	9.3	7.2	4.1	6.7	21.6
13	5.8	3.0	8.8	20.1	8.9	30.4	0.0	7.0	12.9	24.7	20.5	24.2	13.2	19.8	32.9	18.1	16.5	10.8	13.1	27.7	6.9	12.0	50.5	36.0	17.7	50.5
14	43.2	102.1	47.9	56.3	57.0	38.3	23.5	20.4	15.4	54.9	EC	EC	47.1	64.3	EC	EC	31.2	36.2	19.8	21.7	13.4	9.7	16.9	X	37.9	102.1
15	16.2	X	20.5	13.6	16.1	26.2	24.0	19.8	12.1	12.6	10.1	10.4	27.3	60.4	30.8	35.2	25.9	30.0	24.3	14.3	16.0	1.8	0.0	0.0	19.5	60.4
16	2.2	6.1	6.2	10.3	13.8	8.5	5.2	5.9	3.8	5.3	4.3	3.9	2.0	3.7	18.5	160.3	125.2	122.4	77.3	79.3	79.6	56.7	93.3	39.7	38.9	160.3
17	23.7	44.3	36.8	20.6	15.3	15.5	16.6	23.3	29.9	42.6	40.9	24.3	51.0	459.8	80.9	78.4	129.5	126.7	207.6	290.4	171.2	156.6	73.9	86.6	93.6	459.8
18	85.7	90.4	97.9	136.2	134.1	103.3	53.2	36.6	26.2	33.8	33.1	32.5	53.5	41.7	25.9	27.9	20.8	34.1	16.1	3.9	3.4	4.5	2.3	8.9	46.1	136.2
19	17.7	4.1	16.5	21.0	20.1	13.7	8.7	30.5	40.8	21.9	16.1	13.7	20.6	15.7	19.3	13.8	6.7	2.4	0.2	13.7	6.3	11.0	14.1	14.0	15.1	40.8
20	21.9	20.5	0.0	1.0	7.2	3.8	0.6	0.7	3.3	4.3	9.5	11.3	9.6	11.6	14.6	21.1	13.2	8.7	6.6	5.1	13.3	19.9	10.1	22.3	10.0	22.3
21	52.9	42.7	32.5	32.2	38.1	9.2	5.9	4.7	14.3	16.2	26.7	46.3	69.9	40.5	28.5	30.3	6.7	16.8	19.5	81.3	73.6	90.2	59.5	64.6	37.6	90.2
22	13.9	8.4	3.1	0.1	12.5	6.3	30.1	14.8	25.0	14.3	10.2	63.7	22.4	13.9	9.9	7.2	4.7	4.7	5.0	27.1	432.3	46.2	35.8	13.6	34.4	432.3
23	15.7	17.0	0.0	19.2	21.5	0.0	0.0	0.0	0.0	0.0	5.7	73.6	39.0	43.0	31.7	80.7	19.4	25.4	12.3	34.3	13.1	20.1	49.0	51.5	23.8	80.7
24	20.7	25.4	10.8	21.6	21.2	13.2	8.8	9.5	10.8	12.4	16.9	26.7	20.4	11.8	16.0	3.0	8.0	17.4	14.8	13.5	12.6	10.0	7.9	5.1	14.1	26.7
25	2.0	2.7	3.4	5.2	5.4	6.0	5.9	14.9	14.9	5.5	7.6	12.1	21.3	5.4	6.9	9.5	10.0	7.2	5.1	1.1	0.0	3.7	2.7	4.6	6.8	21.3
26	8.0	5.9	4.7	9.2	5.3	7.4	7.5	20.8	28.1	13.4	12.4	14.8	0.9	5.3	12.6	0.0	0.6	1.1	0.0	0.6	11.3	7.7	1.9	2.3	7.6	28.1
27	8.2	9.1	2.3	0.8	3.5	17.1	8.6	8.3	22.6	14.9	15.3	12.9	14.4	5.8	2.6	0.0	0.0	0.0	0.5	0.1	3.3	3.8	0.8	2.0	6.5	22.6
28	1.9	0.1	1.2	0.0	0.6	0.0	1.2	2.6	1.4	2.2	5.0	8.8	8.8	9.8	14.1	2.6	12.8	22.8	21.6	32.1	15.4	11.3	10.7	28.4	9.0	32.1
29	7.3	5.9	3.6	7.9	4.4	0.0	1.1	2.1	3.2	0.8	4.7	4.5	1.8	10.6	38.4	15.7	59.2	43.0	15.1	17.3	12.7	12.3	26.5	18.2	13.2	59.2
30	7.0	12.4	6.1	5.5	6.6	14.5	9.0	3.1	0.8	4.6	9.3	15.1	9.9	17.0	17.9	13.4	12.4	16.3	8.1	16.5	11.2	6.5	3.3	2.7	9.6	17.9
31	3.5	16.5	20.6	14.0	9.2	5.1	10.2	8.9	9.0	12.7	11.3	8.0	5.9	12.2	2.0	3.2	11.2	5.6	0.0	0.0	6.5	4.8	17.1	10.0	8.6	20.6
NO.	31	29	31	31	31	31	31	31	31	31	30	30	31	30	29	30	31	31	31	31	31	31	31	30	735	99.1%
MEAN	22.9	23.7	16.1	18.0	19.7	15.8	11.7	14.2	16.1	16.6	17.0	21.0	24.6	39.0	24.8	27.5	27.7	31.7	24.4	40.9	40.0	25.4	26.6	23.9		
MAX	85.7	102.1	97.9	136.2	134.1	103.3	54.4	86.5	55.9	54.9	48.6	73.6	69.9	459.8	80.9	160.3	131.1	234.4	207.6	350.3	432.3	156.6	112.0	105.7		



Number of Non-Zero Readings	702
Maximum 1-HR Average	459.8 UG/M3
Maximum 24-HR Average	93.6 UG/M3
Monthly Calibration	2
Standard Deviation	37.98
Operational Time	737 HRS
Operational Uptime	99.1 %
Monthly Average	23.7 UG/M3

Lagoon TSP (µg/m³) – December 2021

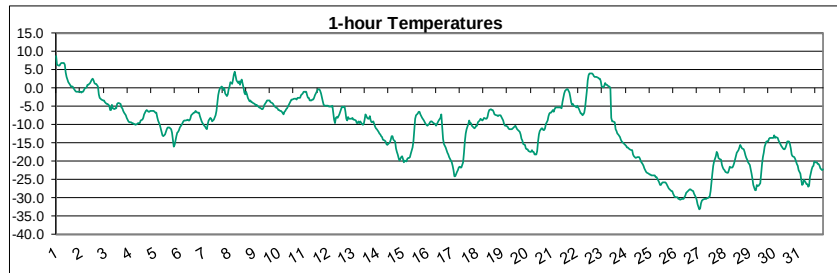
Day	HOURLY																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	96.1	59.3	19.6	20.0	25.5	11.1	8.9	16.2	7.3	10.1	13.4	4.3	3.1	4.3	2.8	0.2	0.2	0.5	4.3	3.0	2.9	1.3	0.0	1.3	13.1	96.1
2	1.9	7.1	6.9	4.4	20.8	19.1	12.4	8.0	5.2	17.9	13.9	10.9	11.9	22.2	20.3	10.6	21.8	13.3	11.0	5.6	3.1	4.4	5.8	7.6	11.1	22.2
3	15.1	9.8	8.1	6.0	9.6	4.3	4.2	18.0	11.2	10.2	17.2	45.5	61.7	52.2	86.0	63.8	41.7	41.3	38.5	74.1	62.3	58.8	23.4	17.7	32.5	86.0
4	10.3	6.2	13.8	10.1	13.9	12.6	11.3	12.5	30.9	16.0	45.4	17.7	31.1	18.0	37.4	59.4	99.5	73.6	51.8	26.8	73.1	44.8	27.1	18.2	31.7	99.5
5	18.3	20.4	11.1	9.3	22.2	20.7	16.6	14.6	24.6	38.0	45.1	47.1	44.8	30.1	41.2	12.3	7.2	8.8	14.3	17.6	8.5	30.5	30.5	53.8	24.5	53.8
6	111.4	76.6	59.4	32.0	10.9	5.6	3.1	4.6	8.6	18.8	7.8	17.9	12.8	9.6	26.1	19.5	18.6	24.1	8.3	6.6	25.6	123.8	189.8	165.4	41.1	189.8
7	69.4	89.7	59.4	35.1	61.7	73.2	93.6	144.6	88.0	54.9	45.2	35.2	22.1	64.4	91.0	17.7	10.5	19.2	16.0	45.8	42.8	17.2	33.3	33.1	52.6	144.6
8	47.5	9.6	5.6	2.8	0.5	5.9	10.4	40.9	51.6	77.9	80.3	58.3	79.2	C	C	54.5	69.6	80.7	34.4	75.1	26.7	37.0	14.1	76.1	42.7	80.7
9	79.7	P	19.0	31.3	18.7	6.9	24.3	14.4	41.3	34.3	26.0	20.4	61.4	150.0	92.4	85.3	73.9	36.6	24.2	53.1	35.7	7.4	11.6	17.6	42.0	150.0
10	29.0	23.9	6.9	27.3	61.5	61.2	20.2	32.9	66.8	27.2	17.2	36.7	50.5	121.6	95.4	95.6	170.3	309.8	133.7	434.9	93.0	34.2	65.7	31.0	85.3	434.9
11	38.4	50.3	33.2	28.2	1.9	27.4	18.4	1.9	29.1	47.6	33.2	52.2	62.6	23.0	32.4	16.6	22.5	26.2	42.5	32.1	11.1	8.3	5.9	8.3	27.2	62.6
12	4.4	5.6	3.1	6.2	18.4	21.3	4.3	3.5	11.4	13.9	11.0	7.5	13.6	7.0	4.4	4.6	8.4	7.3	10.4	17.6	8.8	13.4	3.0	3.6	8.9	21.3
13	13.8	10.6	22.0	16.9	19.2	32.9	6.0	10.6	21.3	26.1	22.1	43.3	25.3	29.0	44.2	18.1	16.9	18.4	20.1	27.7	4.8	13.7	50.6	39.2	23.0	50.6
14	44.5	64.8	38.9	58.8	45.2	34.6	30.7	15.7	24.4	95.9	EC	EC	28.7	41.7	EC	EC	46.7	59.5	34.6	31.3	20.1	27.7	27.0	57.0	41.4	95.9
15	56.7	11.8	21.5	30.6	32.1	54.6	38.9	17.7	30.6	23.5	21.4	29.2	29.3	30.8	32.7	23.0	35.3	42.6	33.9	18.4	21.5	8.3	5.6	2.8	27.2	56.7
16	1.3	15.0	10.4	17.9	13.8	10.0	12.5	9.7	6.9	5.6	2.8	0.3	1.8	6.3	24.5	167.0	136.8	109.5	65.4	53.8	48.0	41.3	77.5	53.1	37.1	167.0
17	40.4	83.6	45.7	20.7	16.8	17.2	24.8	41.5	38.2	63.2	52.2	43.1	44.4	71.1	165.4	174.5	154.7	191.0	255.0	238.6	221.6	155.2	112.4	92.6	98.5	255.0
18	89.7	81.9	63.1	95.2	88.6	84.3	35.1	18.0	15.1	11.4	12.6	13.1	41.4	36.6	22.5	25.1	26.2	41.7	19.1	10.9	5.8	6.9	3.1	6.7	35.6	95.2
19	21.3	6.1	13.4	24.7	18.1	16.6	14.3	40.0	33.4	11.6	16.6	14.1	15.4	16.0	24.6	16.1	4.3	3.1	6.6	19.8	23.1	13.1	21.0	22.8	17.3	40.0
20	31.0	34.0	0.9	11.2	9.6	5.5	2.1	9.8	8.3	6.0	10.0	11.3	11.7	18.5	24.2	31.1	16.8	16.6	13.5	7.3	32.8	42.2	6.1	14.8	15.6	42.2
21	48.9	53.2	38.8	35.8	28.6	16.0	3.2	7.0	8.5	8.9	18.3	66.0	96.6	24.1	9.5	24.4	14.3	18.7	34.4	152.9	141.9	171.8	130.6	130.6	53.5	171.8
22	27.8	25.4	3.1	5.2	17.9	14.5	41.7	20.1	29.1	26.5	26.6	90.1	24.8	20.0	4.8	10.9	5.8	7.4	11.0	7.8	21.1	68.4	73.7	33.3	25.7	90.1
23	31.4	21.4	8.7	36.3	37.3	12.2	8.2	2.9	1.7	3.5	18.1	101.3	58.7	42.7	37.3	45.6	21.4	47.8	11.3	33.0	22.4	47.9	79.7	66.7	33.2	101.3
24	25.7	35.3	21.0	22.5	24.4	14.1	15.2	11.8	19.2	14.3	18.9	30.0	19.3	15.9	23.2	15.6	18.2	18.1	16.6	12.5	10.0	11.0	7.0	4.2	17.7	35.3
25	3.7	14.8	6.1	11.0	6.7	0.9	11.5	15.8	20.1	7.0	6.4	16.7	14.9	6.8	7.1	7.0	4.3	2.9	1.3	0.0	1.8	4.1	0.7	8.9	7.5	20.1
26	15.8	21.0	1.3	17.9	12.2	6.4	17.4	26.3	22.9	10.1	14.6	22.6	4.4	5.4	20.7	0.0	0.0	1.7	3.2	7.3	9.7	7.1	7.3	11.0	11.1	26.3
27	29.2	26.7	8.6	10.4	19.2	33.7	16.9	20.7	38.9	38.6	33.4	33.6	35.7	27.5	21.7	15.3	14.5	22.0	16.2	7.3	10.1	13.8	9.9	10.1	21.4	38.9
28	12.7	13.8	9.2	10.9	5.6	3.5	12.2	12.2	12.1	11.4	13.0	18.4	21.8	14.8	26.7	9.0	17.9	36.7	45.7	42.8	37.6	16.6	16.4	51.3	19.7	51.3
29	6.6	18.9	7.6	16.0	24.1	8.3	4.4	5.9	8.7	12.6	20.5	12.4	9.1	22.1	81.7	42.0	133.7	97.7	43.6	49.3	18.1	39.3	45.0	31.0	31.6	133.7
30	15.7	20.6	15.2	11.7	19.3	35.9	9.6	4.0	0.0	17.9	14.5	22.1	18.3	20.3	30.5	24.1	29.1	4.5	7.8	17.9	13.7	8.4	7.3	9.8	15.8	35.9
31	9.0	16.8	16.9	17.9	12.2	6.0	9.7	7.5	14.0	14.3	18.1	16.7	15.2	11.1	8.3	5.1	16.3	8.5	8.5	8.9	15.1	10.0	11.2	9.6	12.0	18.1
NO.	31	30	31	31	31	31	31	31	31	31	31	30	30	31	30	29	30	31	31	31	31	31	31	31	737	99.3%
MEAN	33.8	31.1	19.3	22.1	23.1	21.8	17.5	19.7	23.5	25.0	23.2	31.3	31.3	32.1	39.3	36.5	40.6	44.8	33.5	49.7	34.6	35.1	35.6	35.1		
MAX	111.4	89.7	63.1	95.2	88.6	84.3	93.6	144.6	88.0	95.9	80.3	101.3	96.6	150.0	165.4	174.5	170.3	309.8	255.0	434.9	221.6	171.8	189.8	165.4		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	732
Maximum 1-HR Average	434.9 UG/M3
Maximum 24-HR Average	98.5 UG/M3
Monthly Calibration	2
Standard Deviation	38.0
Operational Time	739 HRS
Operational Uptime	99.3 %
Monthly Average	30.8 UG/M3

Lagoon Temperature (°C) – December 2021

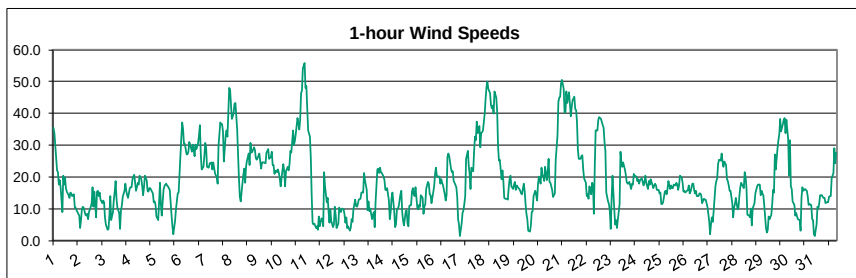
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	8.7	6.5	6.0	6.2	6.5	6.7	6.8	6.7	6.4	4.2	3.0	2.4	1.5	0.8	0.5	0.4	0.3	-0.1	-0.8	-1.1	-1.0	-0.9	-1.0	-1.1	2.8	8.7
2	-1.2	-1.1	-1.0	-0.5	-0.1	0.0	0.9	0.9	1.0	1.3	2.3	2.5	2.1	1.4	1.2	1.1	0.4	-1.7	-2.8	-3.0	-3.2	-3.4	-3.5	-3.8	-0.4	2.5
3	-4.2	-4.3	-4.3	-4.9	-6.0	-6.0	-4.6	-5.5	-5.9	-5.6	-5.6	-4.4	-4.1	-4.1	-4.4	-5.3	-5.6	-6.2	-6.7	-7.5	-8.3	-8.6	-9.1	-9.3	-5.8	-4.1
4	-9.3	-9.5	-9.6	-9.8	-9.9	-10.1	-9.8	-9.7	-9.6	-9.5	-9.0	-8.6	-8.1	-7.3	-6.7	-6.3	-6.0	-6.4	-6.5	-6.3	-6.2	-6.3	-6.2	-6.4	-8.0	-6.0
5	-6.7	-6.8	-8.0	-9.0	-10.0	-11.1	-12.0	-12.9	-13.1	-12.7	-12.0	-11.2	-10.7	-10.8	-10.9	-11.2	-12.1	-14.2	-15.9	-15.5	-13.3	-12.3	-12.0	-11.4	-11.5	-6.7
6	-10.8	-10.0	-9.6	-9.2	-8.9	-8.8	-8.8	-8.6	-8.8	-8.9	-8.4	-7.5	-7.0	-6.8	-6.6	-6.4	-6.6	-6.7	-6.8	-7.6	-8.3	-9.2	-9.7	-10.3	-8.3	-6.4
7	-10.6	-11.1	-11.4	-9.8	-8.9	-8.3	-8.4	-9.2	-9.0	-8.7	-7.5	-6.3	-4.1	-2.1	-0.7	-0.1	0.3	0.1	-0.6	-0.1	-1.4	-2.2	-1.7	-0.2	-5.1	0.3
8	0.3	1.6	1.0	2.3	3.8	4.4	3.3	1.9	1.3	1.7	1.0	1.8	2.2	0.2	-1.2	-1.8	-1.1	-1.6	-2.7	-3.6	-3.4	-3.9	-4.0	-4.1	0.0	4.4
9	-4.4	-4.8	-4.6	-4.7	-5.0	-5.2	-5.5	-5.7	-5.8	-5.4	-4.5	-3.8	-3.3	-3.4	-3.5	-3.5	-4.0	-4.2	-4.4	-4.8	-5.0	-5.2	-5.5	-6.0	-4.7	-3.3
10	-6.1	-6.3	-6.4	-6.6	-7.1	-6.5	-6.3	-5.8	-5.4	-4.6	-4.2	-3.6	-3.2	-3.1	-3.0	-2.9	-2.9	-3.1	-2.8	-2.8	-2.7	-2.0	-1.7	-1.5	-4.2	-1.5
11	-1.1	-1.1	-1.1	-1.9	-2.7	-2.8	-3.3	-3.4	-3.3	-3.2	-2.6	-2.1	-1.0	-0.5	-0.4	-0.3	-0.8	-1.6	-3.7	-4.7	-4.9	-4.9	-4.9	-4.9	-2.6	-0.3
12	-5.1	-5.0	-5.0	-5.0	-4.7	-8.6	-9.5	-8.1	-7.9	-8.1	-7.3	-6.5	-5.7	-5.1	-5.2	-5.0	-6.5	-8.4	-8.8	-7.9	-8.4	-8.4	-8.3	-8.1	-6.9	-4.7
13	-8.7	-8.7	-8.9	-9.6	-9.7	-9.1	-9.7	-9.2	-9.9	-10.0	-9.8	-8.6	-7.2	-8.1	-8.5	-8.4	-7.8	-8.8	-9.3	-9.1	-9.9	-10.5	-11.0	-11.4	-9.2	-7.2
14	-12.0	-12.4	-12.7	-13.1	-13.5	-14.1	-14.4	-14.7	-15.3	-15.4	-15.4	-14.9	-14.2	-13.1	-13.2	-14.1	-14.6	-16.4	-17.5	-18.2	-19.0	-19.8	-18.8	-18.5	-15.2	-12.0
15	-19.3	-20.4	-19.8	-20.0	-19.5	-19.2	-19.1	-18.8	-18.0	-16.3	-14.6	-11.5	-8.3	-7.5	-7.0	-6.5	-6.6	-7.3	-7.7	-8.2	-8.8	-9.4	-9.9	-10.2	-13.1	-6.5
16	-10.2	-9.7	-9.3	-9.1	-9.1	-9.4	-9.7	-9.9	-10.3	-9.8	-9.3	-8.9	-8.1	-7.3	-10.6	-13.9	-15.3	-16.3	-16.9	-17.6	-18.2	-18.8	-19.3	-20.2	-12.4	-7.3
17	-21.2	-22.4	-24.0	-24.2	-22.9	-22.4	-21.8	-21.5	-21.6	-21.8	-20.4	-17.8	-14.6	-12.5	-11.3	-9.8	-8.9	-9.6	-9.6	-10.2	-10.6	-11.0	-10.7	-10.4	-16.3	-8.9
18	-10.3	-9.2	-8.9	-8.5	-8.6	-8.9	-8.6	-8.2	-8.4	-8.4	-7.9	-6.8	-6.1	-5.8	-5.9	-6.1	-6.5	-7.3	-7.5	-7.4	-7.6	-7.6	-7.5	-7.4	-7.7	-5.8
19	-8.3	-9.0	-9.8	-10.3	-10.3	-10.5	-11.0	-11.3	-11.4	-11.4	-11.3	-10.9	-10.5	-10.4	-10.7	-11.3	-11.6	-12.0	-12.8	-13.8	-14.3	-15.2	-15.5	-16.5	-11.7	-8.3
20	-16.8	-16.7	-17.1	-17.4	-17.5	-17.1	-17.5	-17.5	-18.1	-18.1	-17.2	-14.7	-12.7	-11.7	-11.0	-10.9	-11.5	-11.6	-10.9	-9.8	-9.0	-7.8	-7.1	-6.6	-13.6	-6.6
21	-6.6	-6.0	-6.6	-5.9	-5.4	-5.2	-5.3	-5.4	-5.3	-5.4	-5.5	-4.0	-1.6	-0.7	-0.5	-0.4	-0.4	-1.2	-2.5	-4.0	-4.6	-4.4	-4.9	-5.2	-4.0	-0.4
22	-5.3	-4.8	-5.3	-5.9	-7.0	-7.0	-7.6	-7.3	-6.8	-5.3	-0.8	2.0	3.5	3.9	4.0	4.1	3.7	3.3	3.1	2.9	3.0	2.7	2.5	2.6	-0.9	4.1
23	1.9	0.3	0.1	0.7	1.4	0.8	0.9	0.4	0.4	0.1	-8.2	-9.2	-9.0	-9.4	-11.1	-11.6	-12.3	-12.6	-13.4	-14.1	-14.6	-14.9	-15.1	-15.3	-6.8	1.9
24	-15.9	-16.3	-16.3	-16.4	-16.7	-16.9	-17.1	-18.1	-18.6	-18.8	-19.0	-18.8	-18.8	-18.8	-19.3	-20.2	-20.8	-21.4	-22.0	-22.5	-22.9	-23.1	-23.4	-23.7	-19.4	-15.9
25	-23.7	-23.9	-23.9	-23.8	-23.9	-24.2	-24.3	-24.8	-25.9	-26.5	-26.5	-26.1	-25.8	-25.8	-26.0	-26.4	-26.9	-27.5	-27.8	-28.1	-28.3	-28.9	-29.4	-29.7	-26.0	-23.7
26	-29.7	-29.8	-29.9	-30.3	-30.3	-30.5	-30.2	-30.3	-30.2	-29.8	-29.3	-28.7	-28.1	-27.8	-27.8	-27.7	-27.9	-28.2	-28.9	-29.4	-29.8	-30.5	-31.6	-33.2	-29.6	-27.7
27	-33.0	-31.4	-30.8	-30.4	-30.2	-30.2	-30.2	-30.1	-30.0	-29.5	-28.0	-25.8	-23.4	-21.3	-20.0	-18.6	-17.5	-18.0	-19.1	-19.4	-19.5	-21.1	-21.7	-22.2	-25.1	-17.5
28	-22.4	-22.9	-23.2	-23.1	-22.5	-21.4	-21.8	-21.7	-21.0	-20.6	-19.6	-18.7	-17.8	-16.9	-16.1	-15.5	-16.1	-16.6	-16.7	-17.5	-18.5	-19.1	-19.7	-20.3	-19.6	-15.5
29	-21.0	-22.2	-23.4	-24.7	-26.6	-28.0	-27.9	-26.5	-26.6	-26.7	-26.0	-23.5	-20.7	-18.8	-17.6	-16.0	-14.5	-14.5	-14.6	-13.8	-13.7	-13.7	-13.5	-13.5	-20.3	-13.5
30	-13.0	-13.6	-13.3	-13.6	-14.4	-14.8	-15.4	-15.9	-16.4	-16.7	-16.7	-16.2	-15.6	-14.7	-14.6	-15.3	-16.6	-18.1	-18.7	-19.0	-19.4	-20.0	-20.8	-21.3	-16.4	-13.0
31	-22.5	-23.5	-25.1	-26.5	-26.4	-25.0	-25.8	-26.1	-26.3	-26.8	-26.6	-24.3	-22.1	-21.5	-21.2	-20.1	-20.3	-20.4	-20.7	-20.9	-21.3	-21.9	-22.4	-22.2	-23.3	-20.1
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	-11.2	-11.4	-11.7	-11.8	-11.8	-11.9	-12.1	-12.1	-12.3	-12.2	-11.8	-10.8	-9.8	-9.3	-9.3	-9.3	-9.6	-10.3	-10.8	-11.1	-11.4	-11.7	-11.8	-12.0		
MAX	8.7	6.5	6.0	6.2	6.5	6.7	6.8	6.7	6.4	4.2	3.0	2.5	3.5	3.9	4.0	4.1	3.7	3.3	3.1	2.9	3.0	2.7	2.5	2.6		



Number of Non-Zero Readings	744
Maximum 1-HR Average	8.7 C
Maximum 24-HR Average	2.8 C
Monthly Calibration	0
Standard Deviation	8.828
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	-11.1 C

Lagoon Wind Speed (km/hr) – December 2021

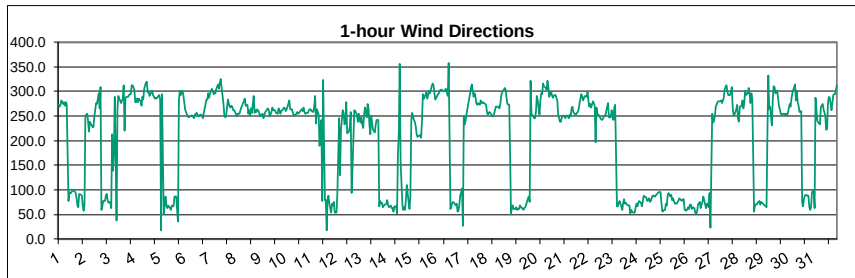
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	35.5	33.9	29.9	22.1	21.6	17.7	19.2	16.9	9.0	20.4	17.6	20.0	16.5	15.5	14.3	13.5	15.2	15.0	14.1	14.5	10.5	10.3	9.7	9.1	17.6	35.5
2	7.8	4.1	6.5	9.8	10.6	10.4	8.1	7.8	8.4	6.7	8.9	10.7	11.7	16.8	10.8	15.5	7.2	15.5	15.8	14.2	15.1	12.9	11.7	12.7	10.8	16.8
3	12.0	7.4	5.2	3.3	3.8	7.8	14.0	6.4	9.1	13.0	15.3	18.7	13.2	10.4	8.8	3.8	9.6	11.1	13.8	15.7	17.8	15.8	14.3	13.5	11.0	18.7
4	16.6	16.9	16.9	19.2	20.3	20.7	15.8	17.0	18.4	17.7	20.4	19.3	17.2	14.2	16.9	20.5	19.0	15.7	15.4	16.6	16.6	16.1	14.9	12.0	17.3	20.7
5	12.4	11.2	7.5	6.6	12.0	18.3	11.5	7.8	15.9	17.0	17.7	17.9	17.5	17.1	16.0	12.2	8.3	4.5	2.1	6.2	9.7	12.3	14.8	15.3	12.2	18.3
6	20.7	32.1	37.2	35.3	30.5	30.6	27.1	27.2	28.1	30.9	30.2	27.9	30.2	28.7	26.7	30.3	28.8	30.7	33.4	36.3	27.1	22.4	23.3	26.5	29.2	37.2
7	30.8	29.3	23.3	23.0	24.5	24.4	24.7	22.4	24.5	21.3	20.5	20.1	18.1	29.9	37.0	36.7	36.5	34.4	25.0	33.1	34.6	32.7	39.9	48.1	28.9	48.1
8	47.5	38.3	39.1	40.1	43.1	43.4	34.8	27.2	19.6	13.8	12.3	18.1	20.6	22.7	18.3	23.2	25.2	27.3	23.9	30.6	27.8	28.0	29.3	28.5	28.4	47.5
9	26.0	25.6	26.1	27.4	24.8	22.7	24.5	24.6	24.7	24.4	27.6	28.1	28.7	25.6	26.3	28.0	23.8	23.8	21.0	22.1	21.6	22.3	21.3	19.6	24.6	28.7
10	17.0	22.1	24.1	21.7	17.2	22.0	23.1	22.2	24.1	28.3	27.6	34.7	30.1	31.3	33.6	36.1	38.5	34.9	38.1	46.5	47.1	54.2	55.9	48.0	32.4	55.9
11	48.7	41.3	34.7	32.6	25.9	14.1	5.7	5.1	5.5	4.1	4.7	3.3	7.5	4.6	7.1	6.9	4.6	21.6	17.2	12.1	13.3	9.3	5.7	9.7	14.4	48.7
12	6.2	4.3	5.0	10.6	8.2	4.0	5.3	10.4	9.3	8.9	10.2	9.8	8.2	5.7	7.2	4.0	4.5	3.1	4.0	6.8	5.9	9.9	13.0	11.0	7.3	13.0
13	10.7	11.6	13.0	13.1	15.2	15.2	15.3	21.1	19.0	16.1	9.5	12.4	9.4	10.0	6.7	8.1	9.1	4.4	12.4	22.5	22.7	21.4	22.8	21.6	14.3	22.8
14	21.3	20.3	19.1	15.9	16.0	16.6	12.7	6.8	9.0	13.4	15.1	9.4	4.3	5.0	9.7	10.0	10.6	14.6	15.6	9.1	6.2	4.7	9.4	9.6	11.9	21.3
15	5.5	4.6	11.0	11.2	15.5	16.6	14.6	14.1	16.7	10.4	9.9	11.1	10.6	14.3	13.5	8.5	10.7	11.5	16.3	18.4	17.8	14.7	14.3	11.9	12.7	18.4
16	13.6	17.2	21.1	23.1	20.3	20.0	20.0	17.9	19.2	18.2	17.4	14.5	12.7	14.2	26.3	27.5	26.7	22.7	21.7	18.9	18.3	16.8	13.8		19.3	27.5
17	6.9	5.1	1.6	5.5	8.8	9.4	11.6	14.0	25.7	28.3	23.6	21.0	16.2	23.0	21.8	27.9	32.7	31.6	37.4	33.7	35.9	29.5	33.7	34.2	21.6	37.4
18	34.6	39.8	44.8	48.4	50.1	47.8	46.3	42.7	41.8	42.6	39.9	46.9	44.9	40.8	29.8	25.1	25.5	19.3	22.1	18.9	13.5	13.2	13.3	12.9	33.5	50.1
19	16.6	19.4	20.4	17.2	16.3	17.7	18.5	16.1	17.3	16.6	16.1	15.8	14.8	14.7	18.1	15.6	11.5	8.6	6.8	3.1	3.0	4.9	9.1	9.3	13.6	20.4
20	13.9	15.6	14.2	12.6	17.7	20.3	18.1	23.0	20.4	20.5	18.7	23.3	19.1	21.9	25.7	18.6	18.3	16.1	13.6	14.4	14.7	25.5	32.9	43.6	20.1	43.6
21	45.1	45.1	49.5	50.5	47.7	40.3	40.5	46.9	43.4	46.8	43.1	39.1	42.0	44.0	45.3	41.3	41.2	37.1	28.5	25.7	25.8	26.5	26.8	22.4	39.4	50.5
22	19.6	18.2	14.0	14.7	13.3	17.0	14.7	18.1	17.8	8.6	23.1	34.7	34.6	38.0	38.9	38.6	38.3	36.2	35.6	31.1	28.2	15.1	12.3	11.5	23.8	38.9
23	9.2	3.6	13.2	20.5	9.8	5.2	6.4	4.1	6.4	11.5	28.1	24.9	23.1	24.7	22.3	20.8	18.5	18.0	18.0	18.5	16.4	18.0	17.8	21.0	15.8	28.1
24	20.4	20.2	18.8	19.5	18.0	19.1	19.6	18.4	17.4	18.6	20.5	18.3	16.2	18.8	17.6	19.4	18.4	16.6	17.5	17.9	17.3	15.9	15.9	14.8	18.1	20.5
25	15.3	11.6	11.5	12.1	15.5	15.7	14.6	16.3	18.8	16.4	17.3	16.4	16.7	17.6	17.3	18.1	17.7	16.0	17.3	20.3	19.9	18.1	15.4	15.7	16.3	20.3
26	15.1	15.8	15.9	17.3	14.9	15.5	18.1	18.0	15.9	14.9	15.8	13.9	13.9	15.0	14.8	14.2	11.8	13.1	12.8	12.9	11.8	10.8	6.2	2.0	13.8	18.1
27	5.1	7.4	5.8	9.2	17.2	18.7	19.5	24.2	25.5	25.1	27.3	24.9	23.1	25.0	23.7	19.4	18.6	17.3	15.7	15.6	11.7	7.3	10.3	11.5	17.1	27.3
28	13.6	9.7	10.4	14.0	16.8	18.3	17.0	16.6	21.5	20.2	16.6	8.1	7.9	7.4	10.0	4.7	10.1	11.7	15.0	15.9	17.1	17.7	17.5	14.4	13.8	21.5
29	15.6	14.7	14.4	11.3	4.1	2.5	3.4	7.6	6.7	8.0	11.4	16.1	15.2	27.2	22.5	29.2	31.7	33.5	38.4	34.3	36.6	38.0	38.7	33.8	20.6	38.7
30	38.1	32.0	20.4	31.5	17.1	16.3	12.4	11.2	7.8	8.6	7.5	6.8	6.6	3.0	13.6	16.9	15.8	16.2	16.1	15.7	14.1	11.3	11.6	11.2	15.1	38.1
31	6.9	6.4	1.9	1.6	5.2	10.7	10.3	11.8	14.2	14.4	13.7	13.5	13.6	11.9	12.0	12.1	13.6	14.1	13.9	19.5	21.4	29.0	24.4	27.6	13.5	29.0
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	19.6	18.9	18.6	19.4	18.8	18.7	17.7	17.5	18.1	18.2	19.0	19.3	18.2	19.3	19.8	19.6	19.4	19.2	19.3	20.1	19.4	18.9	19.4	19.3		
MAX	48.7	45.1	49.5	50.5	50.1	47.8	46.3	46.9	43.4	46.8	43.1	46.9	44.9	44.0	45.3	41.3	41.2	37.1	38.4	46.5	47.1	54.2	55.9	48.1		



Number of Non-Zero Readings	744
Maximum 1-HR Average	55.9 KM/HR
Maximum 24-HR Average	39.4 KM/HR
Monthly Calibration	0
Standard Deviation	10.41
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	19.0 KM/HR

Lagoon Wind Direction (°) – December 2021

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	273.2	269.2	272.0	282.6	275.3	277.3	270.3	277.3	274.6	78.2	95.2	94.1	93.9	97.7	98.6	96.5	93.5	85.0	69.0	65.1	92.4	89.9	87.4	68.7	17.4	282.6
2	57.8	70.6	250.5	254.5	240.3	218.3	238.3	234.6	228.2	227.1	248.2	262.7	276.8	275.4	295.6	265.0	308.4	59.0	67.3	76.6	76.9	88.1	92.6	79.2	265.4	308.4
3	74.4	76.5	63.6	213.9	138.5	171.9	288.6	37.3	264.3	290.7	285.5	282.6	275.8	284.9	312.0	219.9	287.1	288.3	289.6	292.9	295.0	294.6	312.6	312.4	293.2	312.6
4	303.7	278.3	278.8	284.5	278.8	284.9	280.3	271.4	289.1	283.5	305.3	317.5	319.7	298.8	300.2	291.2	294.0	302.5	293.3	289.1	286.2	287.8	285.6	291.4	291.5	319.7
5	293.4	283.1	18.2	294.8	50.8	69.2	86.1	67.9	62.3	68.5	62.3	59.3	67.5	66.6	67.0	85.7	87.3	59.9	36.4	282.4	302.1	292.1	302.1	292.7	40.7	302.1
6	278.0	263.3	258.8	248.7	246.8	249.7	249.0	251.9	250.6	246.3	252.0	254.2	256.3	252.3	249.6	252.2	252.9	250.5	246.0	256.3	273.9	283.0	283.0	295.5	257.2	295.5
7	287.8	295.6	304.9	302.1	294.5	295.9	296.2	304.8	313.5	304.5	318.5	326.0	307.6	276.4	253.6	246.8	249.1	264.8	283.4	268.4	268.1	271.1	269.2	261.0	281.0	326.0
8	262.1	255.4	249.5	254.1	255.3	253.9	267.7	270.1	276.7	280.1	286.1	270.7	273.6	255.2	261.0	250.6	265.1	256.6	290.4	257.3	262.2	258.5	263.3	258.6	261.7	290.4
9	249.6	252.7	252.1	254.8	246.2	258.6	260.4	264.4	265.9	261.4	250.1	257.8	267.5	261.7	261.6	261.3	256.8	254.8	265.8	261.9	255.3	260.3	263.0	266.7	258.6	267.5
10	264.9	260.1	263.2	269.8	281.8	263.9	263.1	263.5	257.2	251.5	252.8	254.1	258.7	254.0	256.1	261.5	262.8	259.6	267.7	257.6	254.3	255.7	257.0	262.7	259.6	281.8
11	263.2	262.9	259.8	257.8	269.1	290.1	235.6	262.9	252.7	188.9	225.4	241.6	76.9	322.9	79.5	78.4	18.1	81.3	87.9	71.9	53.8	72.0	68.8	75.7	270.8	322.9
12	53.4	54.8	94.3	169.1	246.2	130.5	219.4	261.7	256.2	233.7	238.5	277.5	215.7	217.8	228.8	258.6	93.0	143.3	262.3	260.0	256.3	252.0	237.5	254.2	236.7	277.5
13	236.9	247.3	232.5	225.3	253.6	267.1	247.7	274.5	264.8	232.8	213.5	251.0	222.2	220.7	216.3	230.4	241.8	241.6	66.2	76.9	73.2	74.0	65.5	69.8	233.9	274.5
14	69.3	72.6	79.1	68.4	64.7	67.8	62.8	63.0	56.3	66.1	65.9	51.8	170.6	215.7	356.5	157.3	71.0	59.6	65.1	58.7	81.0	110.7	75.0	61.2	69.4	356.5
15	86.5	240.6	256.1	241.6	237.8	229.2	213.0	207.3	209.4	210.9	206.3	238.5	293.7	286.1	288.2	298.9	285.3	293.1	301.1	296.8	310.1	315.4	312.0	296.4	266.4	315.4
16	283.3	287.0	293.9	296.5	301.6	303.8	304.3	301.4	299.2	303.2	305.3	298.3	290.0	357.6	61.7	66.3	74.4	75.1	73.5	69.2	72.4	56.1	57.7	70.8	357.4	357.6
17	88.2	102.0	27.4	249.3	233.4	240.4	252.0	274.9	284.9	294.7	306.8	314.0	288.7	296.2	290.5	277.2	272.7	276.1	272.9	281.7	276.3	278.7	276.4	277.0	280.9	314.0
18	272.1	258.8	252.9	255.6	257.5	252.1	249.0	250.0	254.4	262.2	268.5	268.8	269.7	265.2	273.8	291.3	298.1	303.0	307.0	303.7	287.1	274.4	271.9	175.7	265.4	307.0
19	50.5	64.1	67.7	61.0	61.3	64.7	59.6	61.9	61.9	68.9	63.8	63.2	58.7	62.3	64.7	76.0	82.4	86.7	75.1	321.8	255.4	250.1	245.5	245.1	64.0	321.8
20	257.9	290.7	281.3	253.3	281.9	295.6	295.3	316.9	310.6	307.3	304.1	320.9	307.9	288.3	299.4	292.4	287.0	290.0	292.4	281.0	252.8	246.1	239.1		284.8	320.9
21	238.8	247.3	251.6	248.8	245.5	250.2	250.6	245.5	253.6	248.7	265.8	268.8	258.2	253.1	253.2	256.2	258.2	264.1	275.8	294.7	289.0	282.2	287.7	290.7	258.2	294.7
22	288.8	299.3	279.7	268.5	275.1	266.8	279.3	276.9	271.5	196.8	267.2	254.0	250.6	247.8	243.3	242.1	243.8	251.9	251.3	260.3	269.0	276.6	247.6	248.3	258.4	299.3
23	262.3	256.7	241.3	267.9	271.9	67.4	66.7	73.3	78.1	72.1	58.7	74.2	80.8	71.3	73.8	71.0	68.1	69.0	52.0	60.1	56.5	54.7	54.4	64.1	63.2	271.9
24	71.9	65.9	73.5	77.0	74.3	66.6	75.9	88.1	86.3	85.5	78.0	78.4	82.0	75.5	78.2	88.8	88.4	85.6	86.2	89.3	92.0	95.1	94.7	95.4	81.7	95.4
25	71.5	54.9	59.5	60.1	72.5	67.8	90.0	92.9	86.0	90.3	79.6	82.4	77.5	72.4	71.8	75.0	77.9	82.0	81.3	78.3	80.8	80.3	59.5	59.2	76.0	92.9
26	58.3	65.4	61.9	69.3	71.0	60.6	64.1	62.5	54.4	50.0	55.7	70.2	75.9	63.0	69.7	76.0	86.9	80.1	62.7	72.7	72.8	65.6	93.4	24.0	66.5	93.4
27	255.0	235.8	239.5	250.5	269.2	278.2	280.6	280.4	279.9	282.6	276.2	287.1	305.6	308.2	312.1	299.4	292.6	292.5	299.7	308.1	267.6	251.8	252.4	263.9	284.5	312.1
28	271.9	243.2	238.4	268.9	270.9	282.1	266.0	275.5	301.9	293.4	296.6	307.5	294.5	276.8	297.1	284.6	54.9	69.7	69.9	70.6	73.8	77.8	69.4	75.6	310.7	307.5
29	74.1	71.3	71.1	67.0	64.5	216.3	332.3	262.8	268.9	230.7	283.4	309.9	308.6	296.5	300.8	285.6	271.5	262.9	254.3	252.6	255.4	253.9	251.7	255.2	270.7	332.3
30	250.7	256.5	273.7	268.5	285.2	296.3	303.3	314.3	280.9	300.9	277.6	270.2	257.8	260.2	74.3	65.8	80.3	88.3	90.2	88.9	88.9	67.2	58.8	64.8	300.4	314.3
31	95.0	99.9	63.5	286.7	262.8	240.9	235.5	232.3	269.0	270.2	273.8	263.6	251.0	222.4	224.3	276.3	289.3	287.1	261.9	277.7	293.2	295.3	294.8	313.0	274.1	313.0
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	191.8	196.2	190.7	221.6	215.4	212.2	222.0	216.8	224.6	212.3	218.3	224.9	220.5	225.9	210.1	202.5	190.1	185.9	183.8	199.8	198.5	197.3	194.7	190.6		
MAX	303.7	299.3	304.9	302.1	301.6	303.8	332.3	316.9	313.5	307.3	318.5	326.0	319.7	357.6		299.4	308.4	303.0	307.0	321.8	310.1	315.4	312.6	313.0		



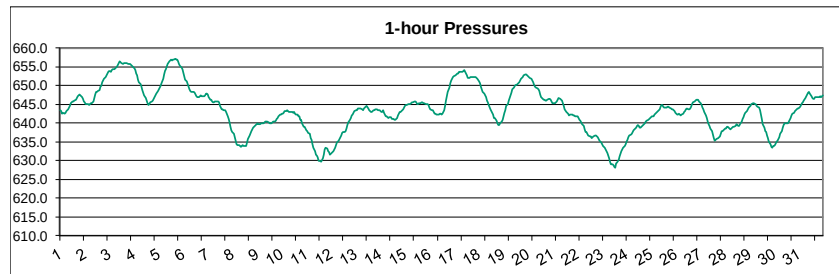
Number of Non-Zero Readings 744

Maximum 1-HR Average 358 degrees
Maximum 24-HR Average 357 degrees

Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	94.58	Operational Uptime	100.0 %
		Monthly Average	206.1 degrees

Lagoon Pressure (mmHg) – December 2021

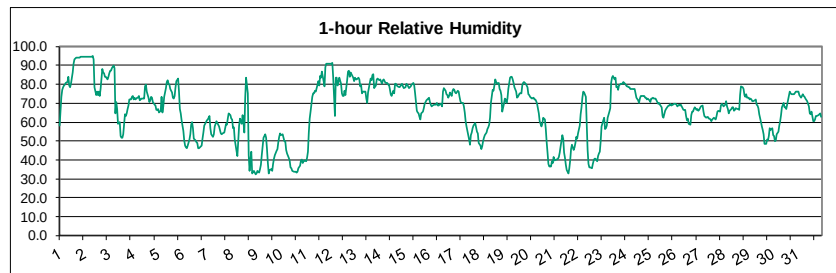
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	643.4	643.2	642.5	642.7	642.4	642.8	643.2	643.4	643.6	644.5	645.2	645.5	645.6	645.8	645.9	646.1	646.6	647.0	647.5	647.5	647.5	646.9	646.4	645.8	645.0	647.5
2	645.4	645.1	645.1	645.0	644.8	645.0	645.3	645.3	645.6	646.6	647.6	648.2	648.4	648.6	648.9	649.6	650.0	650.8	651.2	651.9	652.3	652.7	653.2	653.7	648.3	653.7
3	653.9	653.8	654.1	654.3	654.2	654.4	654.7	655.1	655.5	656.0	656.4	656.2	656.0	655.8	655.9	656.0	656.0	656.0	655.8	655.6	655.7	655.5	655.2	655.1	655.3	656.4
4	654.6	654.0	653.3	652.6	651.6	650.9	650.4	649.6	648.9	648.1	647.4	646.7	645.9	645.3	644.8	645.0	645.5	645.7	646.0	646.3	646.9	647.4	647.9	648.4	648.5	654.6
5	649.0	649.3	649.9	650.5	651.7	653.0	653.9	654.4	655.1	655.8	656.3	656.7	656.8	656.7	656.9	656.8	657.1	657.0	656.9	656.4	655.8	655.2	654.8	654.4	657.1	657.1
6	653.5	652.5	651.6	651.0	650.3	649.6	649.1	648.5	648.4	648.3	648.3	648.1	647.5	647.2	646.9	646.9	647.2	647.4	647.2	647.2	647.1	647.4	647.8	647.8	648.6	653.5
7	647.5	646.9	646.2	646.2	645.7	645.6	645.5	645.7	645.7	645.7	645.7	645.5	644.6	643.7	643.6	643.4	643.4	643.5	642.9	641.9	641.0	640.3	639.1	638.0	644.0	647.5
8	637.5	637.1	636.2	635.2	634.3	634.1	634.2	633.9	633.7	633.8	634.1	633.9	633.9	634.0	634.8	635.6	636.1	636.7	637.8	638.2	638.7	638.9	639.1	639.6	635.9	639.6
9	639.9	639.8	639.7	639.7	639.9	640.0	640.0	640.1	640.3	640.4	640.3	640.2	640.0	639.9	640.0	640.2	640.4	640.5	640.7	641.1	641.4	641.8	642.1	642.3	640.5	642.3
10	642.5	642.5	642.8	643.1	643.2	643.3	643.2	643.0	643.0	642.9	643.0	642.7	642.9	642.5	642.2	642.2	641.9	641.9	641.0	640.8	640.0	639.1	639.0	638.6	642.0	643.3
11	638.2	637.8	637.5	637.1	636.1	635.5	634.3	633.4	632.5	631.6	631.4	630.8	630.0	629.7	630.1	630.6	631.5	633.0	633.4	633.1	632.6	632.2	631.6	631.6	633.1	638.2
12	631.9	632.2	632.5	632.9	633.5	634.2	634.9	635.3	635.7	636.2	636.7	637.5	637.6	637.5	637.9	638.6	639.4	640.3	640.9	641.4	641.9	642.2	642.6	643.1	637.4	643.1
13	643.3	643.5	643.9	644.0	643.9	643.9	643.7	643.5	644.0	644.2	644.4	644.5	644.0	643.4	643.2	643.0	643.0	643.3	643.3	643.7	643.7	643.7	643.5	643.4	643.7	644.5
14	643.1	643.0	643.0	643.4	642.7	641.8	641.7	641.6	641.3	641.6	641.5	641.2	641.0	641.1	640.9	640.8	641.4	642.0	642.4	643.0	643.0	643.1	643.6	644.1	642.2	644.1
15	644.5	644.7	644.7	644.9	645.0	645.1	645.4	645.6	645.5	645.7	645.8	645.6	645.1	645.1	645.2	645.3	645.5	645.5	645.3	645.3	645.1	645.1	645.1	644.8	645.2	645.8
16	644.2	643.7	643.5	643.4	642.9	642.5	642.4	642.3	642.2	642.4	642.4	642.4	642.4	642.5	643.4	644.7	645.9	647.1	648.3	649.4	650.6	651.2	651.8	652.2	645.2	652.2
17	652.5	652.7	652.9	653.2	653.3	653.6	653.6	653.6	653.6	653.9	654.1	653.6	652.7	652.0	651.9	652.1	652.2	652.3	652.3	652.2	652.3	652.3	652.0	651.7	652.8	654.1
18	651.2	650.6	649.8	649.0	648.3	647.9	647.3	646.9	646.1	645.4	644.8	643.7	643.1	642.8	642.2	641.3	641.2	640.7	639.9	639.5	639.5	639.9	640.3	640.9	644.3	651.2
19	641.8	642.7	643.5	644.6	645.1	645.9	646.7	647.3	648.0	648.9	649.5	649.9	650.1	650.2	650.4	650.8	651.3	651.8	652.0	652.3	652.7	652.8	653.0	652.8	648.9	653.0
20	652.5	652.2	651.9	651.9	651.4	650.8	650.1	649.6	649.4	649.3	649.0	648.5	647.5	646.9	646.4	646.2	646.1	646.0	646.1	646.2	646.5	646.5	646.2	645.7	648.5	652.5
21	645.3	645.2	645.2	645.6	645.8	646.3	646.6	646.4	646.2	645.9	645.3	644.6	643.6	643.0	642.6	642.4	642.1	642.2	642.2	642.4	642.0	641.9	641.9	641.8	644.0	646.6
22	641.8	641.4	640.9	640.7	640.3	639.7	639.1	638.2	637.6	637.6	637.1	636.6	636.4	636.4	636.1	636.2	636.5	636.7	636.6	636.3	635.8	635.2	634.8	634.8	637.7	641.8
23	634.3	633.9	633.6	633.5	633.0	632.1	631.3	630.6	629.7	629.1	629.1	628.8	628.2	628.0	629.2	629.4	630.2	631.2	631.9	632.4	633.0	633.4	633.9	634.5	631.4	634.5
24	635.1	635.5	636.1	636.7	636.9	637.3	637.5	638.0	638.3	638.8	639.3	639.4	639.2	638.9	638.8	639.1	639.5	639.8	640.0	640.3	640.6	640.9	641.2	641.4	638.7	641.4
25	641.6	641.7	641.8	642.1	642.4	642.6	642.9	643.3	643.7	644.3	644.8	644.7	644.4	644.2	644.1	644.2	644.4	644.4	644.2	643.9	643.7	643.6	643.4	643.1	643.5	644.8
26	642.7	642.3	642.3	642.5	642.3	642.1	642.2	642.5	642.9	643.2	643.6	643.8	643.6	643.7	644.0	644.4	645.0	645.5	645.7	645.9	646.2	646.3	646.2	645.8	643.9	646.3
27	645.3	644.7	644.2	643.6	642.8	641.9	641.3	640.3	639.7	639.3	638.6	637.9	636.9	635.9	635.4	635.5	635.7	636.0	636.3	636.6	637.1	637.7	637.9	638.3	639.1	645.3
28	638.5	638.6	639.0	639.0	638.6	638.4	638.6	638.7	639.0	639.1	639.3	639.8	639.4	639.3	639.2	639.7	640.4	641.1	641.7	642.3	642.8	643.2	643.7	644.1	640.1	644.1
29	644.5	644.7	645.1	645.3	645.3	645.1	645.0	644.6	644.4	644.2	643.3	642.3	641.0	639.8	638.8	637.8	637.5	636.7	635.9	635.1	634.4	633.6	633.5	633.9	640.5	645.3
30	633.9	634.2	635.1	635.3	635.7	636.3	637.1	637.9	638.7	639.5	639.9	639.9	639.9	639.9	640.3	640.9	641.4	641.9	642.4	642.7	643.1	643.5	643.7	643.9	639.5	643.9
31	643.9	644.4	644.9	645.4	645.6	646.0	646.6	647.1	647.6	648.1	648.4	647.8	647.2	646.8	646.5	646.5	646.9	647.0	646.8	646.9	647.0	647.1	647.0	647.4	646.6	648.4
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	643.8	643.7	643.6	643.7	643.5	643.5	643.5	643.4	643.4	643.6	643.6	643.5	643.1	642.8	642.8	642.9	643.2	643.5	643.7	643.8	643.9	643.9	644.0	644.0		
MAX	654.6	654.0	654.1	654.3	654.2	654.4	654.7	655.1	655.5	656.0	656.4	656.7	656.8	656.7	656.9	656.8	657.1	657.0	656.9	656.4	655.8	655.5	655.2	655.1		



Number of Non-Zero Readings	744
Maximum 1-HR Average	657 MMHg
Maximum 24-HR Average	655 MMHg
Monthly Calibration	0
Standard Deviation	6.066
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	643.5 MMHg

Lagoon Relative Humidity (%) – December 2021

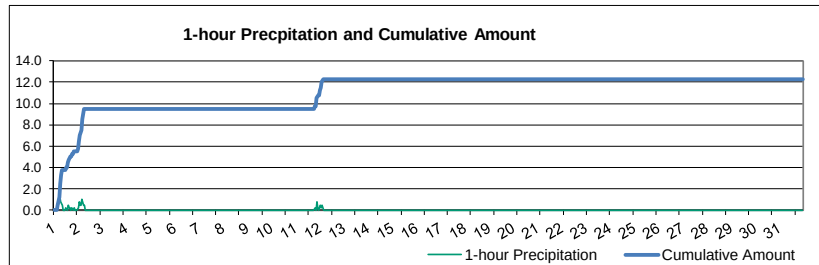
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	58.1	73.4	76.9	78.3	79.3	79.7	80.8	81.4	83.8	79.3	78.6	80.3	86.1	90.8	92.9	93.8	93.9	94.0	94.3	94.3	94.3	94.4	94.4	94.5	85.3	94.5
2	94.5	94.4	94.4	94.6	94.6	94.6	94.5	94.7	94.8	93.1	78.3	74.4	76.0	74.3	75.9	74.0	77.5	88.0	86.4	85.6	83.7	84.1	82.7	83.9	86.2	94.8
3	85.9	87.0	87.3	88.6	90.1	88.4	64.5	70.7	66.7	59.0	60.0	52.6	51.6	51.8	53.5	64.0	63.4	64.8	66.9	69.0	71.8	72.0	73.5	73.7	69.9	90.1
4	72.1	73.1	72.0	72.7	72.8	73.9	71.5	71.8	72.4	72.7	72.4	78.7	79.9	76.1	72.7	70.4	71.6	73.3	72.9	70.4	69.3	68.7	66.4	66.4	72.3	79.9
5	66.9	65.2	65.8	73.2	64.9	68.2	73.5	78.1	81.2	82.1	80.2	79.9	77.4	75.5	73.0	72.3	73.7	78.5	81.6	83.1	76.3	67.1	64.7	60.8	73.5	83.1
6	55.5	50.3	47.5	46.9	46.3	47.4	50.8	53.7	58.6	60.2	56.7	51.2	50.4	49.3	49.1	46.0	46.4	47.0	47.4	51.3	54.6	58.4	59.3	61.1	51.9	61.1
7	61.2	62.5	63.2	56.8	53.7	52.1	53.6	57.8	58.9	60.6	58.8	57.7	55.9	54.2	53.5	54.1	54.3	56.6	59.0	58.4	62.0	64.4	63.8	61.8	58.1	64.4
8	61.4	56.6	57.2	50.9	44.7	42.1	49.9	58.0	61.6	59.2	63.6	59.9	54.5	73.0	83.3	75.4	42.4	34.3	40.2	44.2	33.0	34.4	33.2	32.3	51.9	83.3
9	32.8	34.1	33.2	34.9	37.4	42.5	47.2	51.6	53.6	51.5	45.8	38.4	32.9	34.5	35.2	34.3	37.9	40.7	42.3	44.8	45.9	49.3	52.2	54.0	42.0	54.0
10	52.9	53.6	51.6	49.7	49.7	45.2	43.6	41.2	40.0	36.1	35.5	34.4	33.9	33.6	33.6	33.4	33.6	35.6	36.9	39.6	40.3	38.6	39.2	39.8	40.5	53.6
11	39.4	40.9	44.1	54.3	61.8	65.7	73.1	75.1	75.2	76.7	76.2	79.8	81.8	79.1	84.5	83.6	86.5	81.7	79.0	89.1	90.7	91.0	90.7	90.7	74.6	91.0
12	90.7	91.1	91.2	83.7	63.0	83.4	83.7	79.5	81.3	83.6	80.3	75.0	74.0	73.7	76.5	74.3	82.0	86.7	87.3	83.9	86.2	84.3	83.7	81.5	81.7	91.2
13	83.7	82.5	82.7	83.7	82.7	79.1	79.8	75.1	76.0	76.0	76.1	72.4	70.0	75.7	80.8	83.0	82.2	84.9	85.5	78.1	79.4	82.4	83.0	82.6	79.9	85.5
14	82.1	82.5	80.0	82.2	82.7	81.7	80.8	80.6	80.0	79.6	77.5	74.8	74.0	76.4	75.4	80.5	80.4	79.2	78.8	78.4	79.0	80.0	80.1	78.7	79.4	82.7
15	77.8	78.6	80.2	79.7	78.9	78.2	78.8	79.6	80.4	80.7	79.3	75.0	66.1	65.0	64.4	62.7	61.5	64.6	65.7	67.4	69.6	70.5	71.7	72.2	72.9	80.7
16	72.7	70.6	69.0	68.5	68.8	69.1	69.2	69.1	70.3	69.0	68.7	69.7	69.3	68.1	76.1	78.2	76.6	74.8	74.2	73.0	73.7	75.6	73.7	76.4	71.8	78.2
17	77.3	76.8	75.7	75.3	76.5	76.0	73.2	70.9	70.3	70.0	68.3	65.2	60.6	57.7	55.4	50.7	48.2	53.0	54.3	57.0	58.3	59.3	57.2	55.1	64.3	77.3
18	54.1	49.1	47.5	45.7	46.9	49.8	51.8	53.0	54.5	56.5	57.5	58.8	62.1	70.2	76.8	76.7	79.3	82.6	81.4	80.1	80.6	77.7	76.7	74.2	64.3	82.6
19	65.8	69.6	72.4	72.0	70.0	72.4	77.5	83.4	84.1	83.7	82.7	80.8	78.4	76.2	72.7	73.4	74.1	75.1	75.4	79.2	80.6	81.3	80.6	80.4	76.8	84.1
20	78.6	74.8	74.1	73.5	73.0	72.5	73.0	72.0	72.0	70.8	69.7	64.5	60.5	59.1	57.9	59.1	62.1	61.6	56.2	49.6	44.0	38.0	36.3	36.7	62.1	78.6
21	39.2	38.2	41.4	39.9	40.0	40.2	40.8	41.8	43.7	47.1	53.2	51.4	43.9	40.9	37.7	34.7	32.7	35.6	39.6	45.6	48.2	45.4	46.7	48.9	42.4	53.2
22	52.0	51.0	54.2	58.3	64.0	67.7	73.1	76.0	75.9	73.4	58.5	45.4	38.0	36.2	35.9	35.8	37.9	39.9	40.7	40.5	39.1	41.9	43.7	44.5	51.0	76.0
23	49.7	57.6	61.0	62.3	56.3	57.0	58.4	62.4	65.6	67.3	80.6	83.6	84.4	82.7	83.4	78.3	78.8	76.9	79.1	80.3	80.4	80.4	81.2	80.8	72.0	84.4
24	80.1	78.9	79.0	78.3	78.2	77.5	77.4	77.4	77.5	77.4	75.4	72.7	71.7	70.3	72.3	73.7	73.7	73.7	73.6	73.0	72.9	71.8	72.4	71.6	75.0	80.1
25	70.4	72.3	72.6	73.0	72.3	72.5	71.4	70.8	69.6	70.3	69.3	67.7	63.1	62.4	64.1	65.8	67.1	68.4	68.7	68.6	69.6	68.7	69.1	69.6	69.1	73.0
26	69.8	69.8	69.3	68.4	69.2	69.0	69.3	68.2	67.2	66.5	66.3	63.1	60.9	61.7	59.0	58.5	63.6	65.6	65.6	66.9	67.7	66.7	66.8	65.9	66.0	69.8
27	66.2	67.2	68.5	68.5	65.4	63.4	62.7	62.1	62.6	61.7	61.9	61.5	60.7	61.2	62.5	62.0	61.6	63.2	65.5	66.0	65.4	68.6	69.7	69.4	64.5	69.7
28	68.5	69.2	71.1	68.4	66.9	64.6	65.8	67.0	67.9	67.6	65.8	66.6	67.5	66.9	67.1	66.5	74.4	79.0	78.3	77.6	74.2	73.3	74.7	73.1	70.1	79.0
29	73.0	71.8	72.4	72.0	71.2	70.9	71.3	71.8	69.4	68.8	67.3	64.0	60.0	57.9	55.9	53.7	48.5	48.7	50.9	50.2	52.8	56.9	56.1	57.0	62.2	73.0
30	53.2	52.6	50.0	50.5	53.5	54.8	58.0	60.3	63.5	67.8	70.3	68.1	68.0	66.7	69.1	71.6	75.9	75.2	74.7	74.8	74.7	74.5	76.3	76.2	65.8	76.3
31	76.2	76.0	74.2	72.9	73.9	74.8	74.0	73.5	72.5	71.2	69.8	68.5	64.6	64.3	65.7	60.5	60.6	61.4	63.2	63.2	63.7	64.2	64.4	62.8	68.2	76.2
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	66.5	66.8	67.1	67.0	66.1	66.9	67.5	68.7	69.4	69.0	67.9	65.7	63.8	64.1	65.0	64.5	64.6	66.0	66.6	67.2	67.2	67.2	67.2	67.0		
MAX	94.5	94.4	94.4	94.6	94.6	94.6	94.5	94.7	94.8	93.1	82.7	83.6	86.1	90.8	92.9	93.8	93.9	94.0	94.3	94.3	94.3	94.4	94.4	94.5		



Number of Non-Zero Readings	744		
Maximum 1-HR Average	94.8 %		
Maximum 24-HR Average	86.2 %		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	14.46	Operational Uptime	100.0 %
		Monthly Average	66.6 %

Lagoon Precipitation (mm) – December 2021

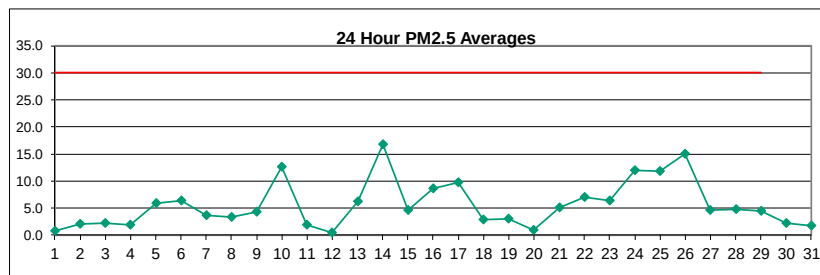
Day	HOURLY																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.0	0.0	0.0	0.0	0.5	0.8	1.3	0.8	0.5	0.0	0.0	0.0	0.3	0.0	0.5	0.3	0.3	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.2	1.3
2	0.3	0.8	0.5	0.5	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
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	0.3	0.0	0.8	0.3	0.0	0.1	0.8
12	0.5	0.3	0.5	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	0.1	0.5
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	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
MAX	0.5	0.8	0.5	0.5	1.0	0.8	1.3	0.8	0.5	0.0	0.0	0.0	0.3	0.0	0.5	0.3	0.3	0.0	0.3	0.3	0.3	0.8	0.3	0.0	0.0	0.0



Number of Non-Zero Readings	25		
Maximum 1-HR Average	1.3 MM		
Maximum 24-HR Average	0.2 MM		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	0.1	Operational Uptime	100.0 %
		Monthly Average	0.02 MM

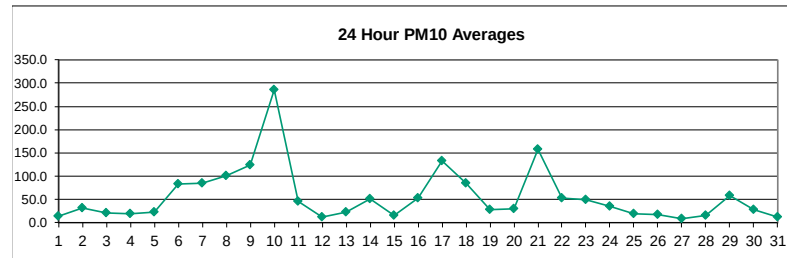
Windridge PM_{2.5} (µg/m³) – December 2021

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.0	4.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.0	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	0.8	9.0
2	0.0	3.0	2.0	3.0	3.0	1.0	4.0	2.0	0.0	0.0	0.0	4.0	3.0	5.0	5.0	2.0	0.0	0.0	2.0	1.0	1.0	3.0	3.0	1.0	2.0	5.0
3	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	2.0	4.0	3.0	2.0	3.0	5.0	7.0	5.0	5.0	4.0	4.0	4.0	2.0	2.3	7.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	2.0	5.0	5.0	5.0	10.0	8.0	5.0	3.0	2.0	2.0	10.0
5	1.0	2.0	5.0	8.0	9.0	7.0	6.0	6.0	5.0	5.0	4.0	3.0	2.0	2.0	2.0	1.0	11.0	9.0	12.0	10.0	10.0	12.0	7.0	4.0	6.0	12.0
6	2.0	5.0	7.0	4.0	1.0	0.0	0.0	2.0	3.0	0.0	0.0	2.0	6.0	6.0	59.0	59.0	8.0	6.0	4.0	5.0	4.0	7.0	10.0	6.0	6.4	59.0
7	0.0	0.0	0.0	1.0	3.0	8.0	12.0	8.0	2.0	0.0	0.0	0.0	0.0	5.0	6.0	4.0	2.0	3.0	4.0	4.0	6.0	5.0	7.0	10.0	3.8	12.0
8	6.0	1.0	3.0	5.0	1.0	3.0	5.0	1.0	0.0	3.0	2.0	2.0	1.0	3.0	6.0	3.0	3.0	3.0	7.0	5.0	3.0	1.0	6.0	6.0	3.3	7.0
9	6.0	5.0	3.0	10.0	10.0	6.0	2.0	1.0	2.0	4.0	8.0	5.0	5.0	4.0	3.0	3.0	3.0	3.0	5.0	4.0	3.0	2.0	1.0	2.0	4.4	10.0
10	5.0	4.0	1.0	1.0	0.0	1.0	9.0	6.0	1.0	3.0	11.0	12.0	11.0	16.0	17.0	11.0	28.0	13.0	37.0	26.0	26.0	31.0	21.0	14.0	12.7	37.0
11	10.0	5.0	2.0	2.0	1.0	0.0	0.0	0.0	0.0	2.0	6.0	7.0	4.0	3.0	2.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	10.0
12	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.0	2.0	0.0	0.0	1.0	0.0	0.0	0.4	4.0
13	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	17.0	45.0	18.0	12.0	7.0	3.0	11.0	7.0	6.0	7.0	4.0	6.3	45.0
14	14.0	22.0	22.0	19.0	22.0	24.0	13.0	14.0	11.0	10.0	13.0	19.0	16.0	26.0	23.0	19.0	17.0	22.0	10.0	19.0	14.0	14.0	11.0	9.0	16.8	26.0
15	8.0	16.0	11.0	14.0	13.0	13.0	12.0	10.0	6.0	2.0	1.0	4.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	16.0
16	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0	12.0	19.0	22.0	28.0	21.0	21.0	17.0	23.0	17.0	8.6	28.0
17	17.0	17.0	15.0	15.0	11.0	11.0	11.0	8.0	13.0	11.0	12.0	6.0	5.0	7.0	5.0	4.0	4.0	6.0	8.0	8.0	12.0	7.0	19.0	4.0	9.8	19.0
18	7.0	6.0	3.0	3.0	4.0	2.0	2.0	2.0	2.0	3.0	5.0	10.0	9.0	6.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	10.0
19	0.0	0.0	0.0	4.0	6.0	7.0	7.0	6.0	5.0	4.0	5.0	5.0	3.0	2.0	2.0	0.0	0.0	0.0	6.0	4.0	2.0	0.0	1.0	2.0	3.0	7.0
20	2.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	1.0	2.0	3.0	1.0	7.0
21	4.0	4.0	5.0	4.0	6.0	4.0	6.0	3.0	5.0	5.0	4.0	6.0	5.0	6.0	4.0	5.0	9.0	6.0	3.0	3.0	3.0	18.0	2.0	1.0	5.0	18.0
22	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.0	2.0	20.0	51.0	21.0	8.0	7.0	5.0	6.0	11.0	7.0	7.0	2.0	11.0	7.0	7.0	51.0
23	2.0	0.0	0.0	1.0	6.0	3.0	9.0	4.0	0.0	0.0	1.0	6.0	5.0	9.0	12.0	11.0	8.0	15.0	12.0	11.0	8.0	8.0	12.0	10.0	6.4	15.0
24	14.0	14.0	13.0	15.0	13.0	13.0	10.0	15.0	10.0	16.0	20.0	14.0	12.0	8.0	9.0	10.0	16.0	17.0	11.0	8.0	6.0	7.0	8.0	8.0	12.0	20.0
25	8.0	8.0	10.0	10.0	10.0	15.0	13.0	14.0	10.0	14.0	16.0	21.0	18.0	18.0	16.0	12.0	12.0	8.0	6.0	9.0	9.0	9.0	9.0	10.0	11.9	21.0
26	9.0	10.0	12.0	12.0	10.0	11.0	9.0	22.0	16.0	16.0	17.0	19.0	25.0	21.0	24.0	18.0	15.0	24.0	15.0	16.0	12.0	9.0	11.0	7.0	15.0	25.0
27	5.0	3.0	8.0	10.0	9.0	6.0	5.0	5.0	4.0	4.0	3.0	4.0	4.0	2.0	0.0	0.0	2.0	3.0	5.0	5.0	6.0	5.0	8.0	5.0	4.6	10.0
28	5.0	5.0	6.0	8.0	7.0	6.0	6.0	5.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0	2.0	2.0	4.0	8.0	7.0	8.0	7.0	7.0	6.0	4.8	9.0
29	8.0	7.0	6.0	4.0	5.0	5.0	5.0	6.0	6.0	4.0	8.0	12.0	6.0	2.0	2.0	2.0	3.0	2.0	2.0	4.0	3.0	2.0	3.0	2.0	4.5	12.0
30	4.0	6.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	2.0	2.0	0.0	2.0	5.0	3.0	3.0	4.0	2.0	8.0	6.0	2.3	8.0
31	3.0	5.0	3.0	1.0	3.0	3.0	1.0	2.0	2.0	3.0	3.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.0	2.0	3.0	2.0	0.0	1.8	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	4.9	5.0	4.6	5.0	5.0	4.8	4.8	4.7	3.5	3.7	4.7	6.2	6.9	7.3	6.2	6.8	6.4	6.7	7.0	6.7	5.9	6.4	6.4	5.1	7.5	
MAX	17.0	22.0	22.0	19.0	22.0	24.0	13.0	22.0	16.0	16.0	20.0	21.0	51.0	45.0	24.0	59.0	28.0	28.0	37.0	26.0	26.0	31.0	21.0	20.0	17.4	70.0



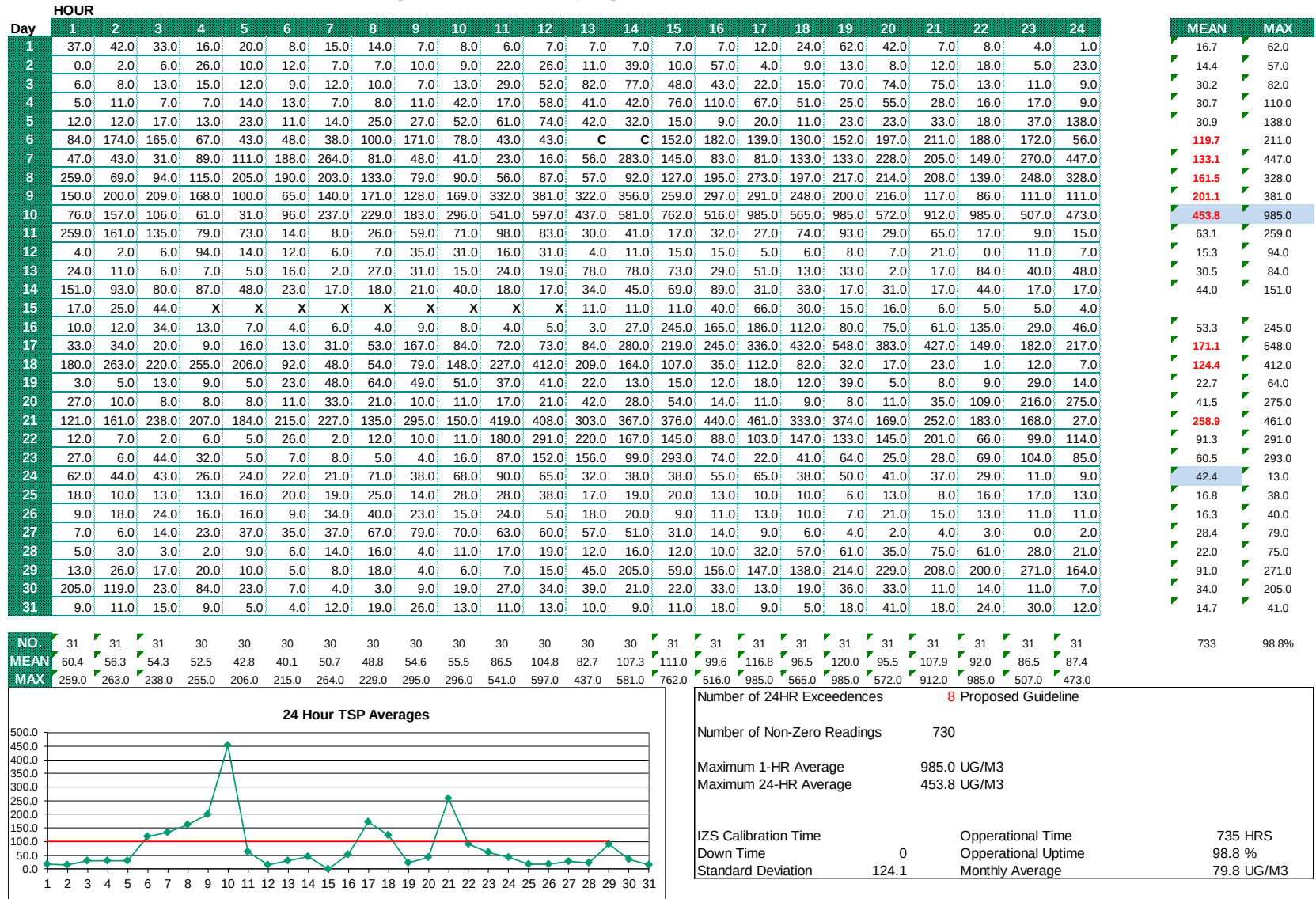
Windridge PM₁₀ (µg/m³) – December 2021

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	31.0	41.0	36.0	31.0	21.0	16.0	29.0	17.0	5.0	11.0	8.0	6.0	11.0	7.0	4.0	8.0	9.0	5.0	6.0	10.0	6.0	3.0	0.0	0.0
2	2.0	3.0	5.0	17.0	10.0	485.0	0.0	21.0	16.0	3.0	14.0	19.0	10.0	21.0	6.0	45.0	1.0	9.0	12.0	6.0	8.0	8.0	4.0	26.0
3	17.0	4.0	5.0	9.0	7.0	5.0	8.0	6.0	3.0	6.0	25.0	32.0	55.0	51.0	26.0	20.0	16.0	13.0	47.0	55.0	57.0	12.0	9.0	13.0
4	7.0	6.0	5.0	6.0	8.0	6.0	3.0	2.0	3.0	29.0	14.0	37.0	27.0	27.0	50.0	69.0	46.0	29.0	13.0	43.0	16.0	14.0	10.0	9.0
5	6.0	7.0	9.0	9.0	13.0	9.0	16.0	17.0	15.0	41.0	46.0	49.0	34.0	19.0	12.0	8.0	16.0	8.0	13.0	20.0	26.0	19.0	25.0	90.0
6	56.0	116.0	113.0	45.0	27.0	32.0	31.0	65.0	106.0	48.0	32.0	40.0	40.0	C	165.0	103.0	92.0	81.0	101.0	121.0	170.0	156.0	114.0	41.0
7	39.0	23.0	21.0	47.0	70.0	121.0	186.0	69.0	40.0	30.0	13.0	11.0	35.0	168.0	87.0	59.0	45.0	87.0	82.0	140.0	118.0	95.0	157.0	295.0
8	177.0	51.0	66.0	78.0	134.0	128.0	123.0	88.0	45.0	58.0	32.0	60.0	39.0	65.0	73.0	63.0	136.0	110.0	176.0	136.0	113.0	77.0	191.0	193.0
9	101.0	113.0	117.0	107.0	54.0	35.0	85.0	105.0	81.0	104.0	207.0	237.0	216.0	218.0	165.0	184.0	168.0	147.0	126.0	127.0	67.0	52.0	70.0	72.0
10	55.0	89.0	68.0	43.0	23.0	72.0	156.0	145.0	101.0	162.0	334.0	428.0	278.0	423.0	485.0	346.0	485.0	447.0	485.0	438.0	485.0	485.0	464.0	370.0
11	236.0	107.0	88.0	59.0	40.0	3.0	2.0	13.0	29.0	34.0	58.0	53.0	23.0	25.0	16.0	24.0	14.0	46.0	99.0	45.0	36.0	24.0	9.0	10.0
12	7.0	1.0	0.0	97.0	9.0	5.0	2.0	3.0	21.0	21.0	10.0	49.0	8.0	9.0	10.0	6.0	5.0	5.0	4.0	6.0	10.0	6.0	4.0	4.0
13	10.0	7.0	2.0	2.0	1.0	4.0	4.0	44.0	38.0	11.0	11.0	9.0	41.0	59.0	52.0	22.0	27.0	7.0	24.0	8.0	14.0	84.0	37.0	46.0
14	197.0	89.0	109.0	132.0	61.0	23.0	20.0	17.0	18.0	25.0	21.0	15.0	80.0	66.0	77.0	117.0	26.0	26.0	17.0	20.0	15.0	25.0	15.0	10.0
15	15.0	22.0	28.0	16.0	25.0	30.0	36.0	26.0	7.0	8.0	14.0	44.0	14.0	9.0	6.0	19.0	39.0	10.0	8.0	5.0	2.0	4.0	4.0	3.0
16	4.0	6.0	24.0	6.0	9.0	7.0	5.0	3.0	3.0	5.0	4.0	2.0	2.0	19.0	209.0	157.0	200.0	140.0	102.0	97.0	74.0	147.0	27.0	36.0
17	28.0	26.0	11.0	8.0	13.0	12.0	21.0	37.0	68.0	43.0	57.0	147.0	69.0	188.0	135.0	161.0	238.0	365.0	417.0	373.0	329.0	127.0	156.0	154.0
18	151.0	185.0	139.0	173.0	129.0	65.0	31.0	43.0	59.0	99.0	142.0	264.0	156.0	108.0	54.0	25.0	69.0	49.0	21.0	13.0	20.0	2.0	17.0	6.0
19	6.0	6.0	11.0	9.0	8.0	22.0	54.0	103.0	68.0	48.0	51.0	59.0	36.0	21.0	44.0	11.0	12.0	13.0	26.0	6.0	6.0	7.0	27.0	12.0
20	16.0	9.0	11.0	8.0	4.0	7.0	30.0	20.0	11.0	15.0	29.0	38.0	57.0	16.0	30.0	9.0	6.0	7.0	5.0	8.0	17.0	59.0	116.0	202.0
21	86.0	97.0	142.0	131.0	105.0	121.0	130.0	85.0	166.0	116.0	304.0	285.0	182.0	195.0	183.0	241.0	280.0	195.0	277.0	100.0	168.0	114.0	87.0	11.0
22	7.0	3.0	1.0	3.0	1.0	11.0	7.0	19.0	3.0	5.0	88.0	192.0	122.0	87.0	96.0	57.0	70.0	89.0	92.0	83.0	105.0	30.0	54.0	59.0
23	17.0	4.0	19.0	19.0	0.0	0.0	1.0	1.0	1.0	5.0	75.0	131.0	127.0	79.0	253.0	54.0	21.0	26.0	51.0	22.0	21.0	59.0	123.0	68.0
24	62.0	37.0	53.0	44.0	32.0	26.0	18.0	50.0	22.0	42.0	80.0	58.0	37.0	57.0	27.0	37.0	36.0	28.0	32.0	17.0	24.0	17.0	11.0	7.0
25	21.0	14.0	17.0	16.0	28.0	26.0	34.0	25.0	6.0	23.0	30.0	45.0	17.0	15.0	29.0	19.0	15.0	3.0	4.0	8.0	9.0	15.0	16.0	9.0
26	9.0	18.0	31.0	11.0	15.0	10.0	34.0	49.0	28.0	22.0	30.0	6.0	22.0	23.0	8.0	5.0	6.0	8.0	3.0	18.0	19.0	9.0	10.0	6.0
27	2.0	3.0	11.0	15.0	10.0	8.0	7.0	13.0	14.0	16.0	14.0	77.0	6.0	3.0	1.0	0.0	0.0	2.0	3.0	3.0	3.0	3.0	2.0	4.0
28	5.0	2.0	2.0	1.0	4.0	4.0	6.0	4.0	6.0	7.0	15.0	15.0	18.0	20.0	12.0	17.0	30.0	42.0	42.0	28.0	42.0	32.0	14.0	17.0
29	16.0	13.0	16.0	12.0	7.0	6.0	6.0	5.0	3.0	3.0	6.0	27.0	27.0	90.0	41.0	92.0	140.0	95.0	138.0	160.0	129.0	123.0	167.0	96.0
30	124.0	83.0	24.0	63.0	18.0	4.0	4.0	1.0	8.0	19.0	20.0	16.0	31.0	13.0	36.0	45.0	14.0	25.0	52.0	29.0	21.0	12.0	8.0	6.0
31	7.0	10.0	6.0	3.0	3.0	5.0	6.0	7.0	17.0	7.0	16.0	13.0	13.0	7.0	6.0	13.0	16.0	6.0	12.0	31.0	14.0	21.0	30.0	19.0
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31
MEAN	48.9	38.5	38.4	39.4	28.7	42.2	35.3	35.6	32.6	34.4	58.1	79.5	59.1	70.3	77.4	65.7	73.5	68.5	80.3	70.2	69.2	59.4	63.8	61.1
MAX	236.0	185.0	142.0	173.0	134.0	485.0	186.0	145.0	166.0	162.0	334.0	428.0	278.0	423.0	485.0	346.0	485.0	447.0	485.0	438.0	485.0	485.0	464.0	370.0



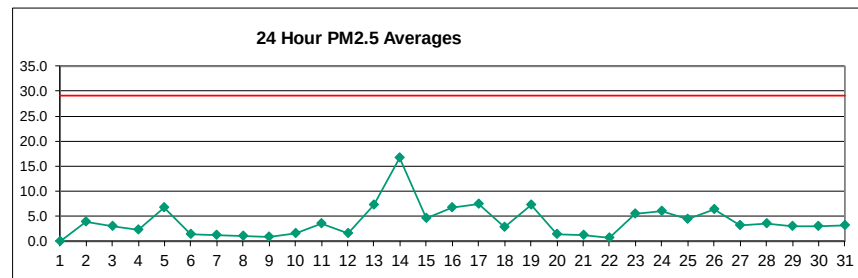
Number of Non-Zero Readings	735
Maximum 1-HR Average	485.0 UG/M3
Maximum 24-HR Average	286.1 UG/M3
Monthly Calibration	1
Standard Deviation	80.81
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	55.4 UG/M3

Windridge TSP (µg/m³) – December 2021



West PM_{2.5} (µg/m³) – December 2021

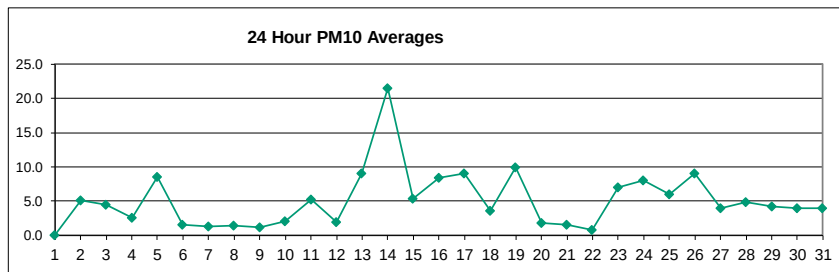
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	G	G	G	G	G	G	G	G	G	G	G	1.1	1.4	2.2	1.4	1.5	1.4	2.1	5.9	7.0	1.9	1.4	1.3	1.9	-	-
2	1.8	3.2	2.5	6.1	7.7	5.6	2.7	2.0	2.0	2.1	4.4	3.3	3.6	6.3	5.8	2.3	1.4	4.0	4.7	3.5	4.8	3.9	3.1	4.2	3.8	7.7
3	3.7	4.1	4.8	4.6	5.5	2.5	1.5	1.7	2.7	2.9	4.2	3.3	2.2	1.2	1.7	2.3	5.1	4.7	3.3	2.5	2.0	1.8	1.9	2.0	3.0	5.5
4	1.8	1.9	1.6	1.6	1.1	1.7	1.7	1.7	2.0	2.7	2.6	2.7	2.4	1.8	1.5	1.3	1.5	1.6	3.3	4.1	4.2	3.2	3.6	3.6	2.3	4.2
5	3.6	3.8	3.2	2.8	6.2	7.7	8.3	8.8	7.6	7.3	7.6	8.2	7.4	6.9	6.7	5.4	5.0	8.2	11.0	7.4	14.9	10.3	2.9	0.9	6.8	14.9
6	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.8	1.2	0.7	1.9	5.7	4.3	1.4	1.6	1.7	2.2	1.9	1.6	1.2	0.9	0.9	1.1	1.1	1.4	5.7
7	1.1	1.2	0.9	0.7	0.7	0.7	0.7	0.8	1.0	2.2	4.9	1.8	0.9	1.0	0.9	1.2	1.1	0.8	0.8	0.7	0.8	0.9	1.0	1.2	1.2	4.9
8	0.7	0.6	0.6	0.4	0.5	0.3	0.3	0.5	0.7	1.4	2.0	1.9	1.3	2.0	3.2	1.6	1.6	1.1	2.1	0.8	0.8	0.5	0.7	0.6	1.1	3.2
9	0.6	0.4	0.4	0.4	0.5	0.5	0.9	0.7	0.7	1.2	1.1	0.9	1.0	1.0	0.9	0.8	0.9	1.3	1.1	1.3	1.3	1.3	1.4	1.2	0.9	1.4
10	1.1	0.8	1.0	1.1	1.8	1.0	1.0	0.8	1.0	2.1	1.5	1.0	1.3	1.1	1.0	1.1	3.4	3.1	3.6	1.7	3.2	1.1	1.0	0.9	1.5	3.6
11	1.0	0.8	0.6	0.6	0.6	0.7	0.7	1.5	2.0	3.3	12.2	12.7	5.9	5.7	4.6	2.8	3.7	4.2	2.7	3.2	7.1	5.1	2.2	2.5	3.6	12.7
12	0.6	1.0	2.1	1.9	0.4	0.5	1.0	1.2	1.6	1.5	1.2	1.6	1.4	2.3	1.6	1.2	1.8	2.3	2.2	1.8	1.6	2.9	1.2	1.7	1.5	2.9
13	2.1	2.7	2.5	2.0	1.5	1.3	0.8	0.8	1.1	1.6	1.8	1.9	20.0	29.5	20.5	17.7	10.8	7.1	5.8	4.8	7.9	7.5	9.5	13.1	7.3	29.5
14	17.9	19.4	20.4	23.4	21.9	17.7	16.0	15.7	16.6	15.9	13.9	16.3	20.3	27.4	25.1	16.8	20.2	14.7	11.8	9.6	10.1	10.3	9.5	10.9	16.7	27.4
15	11.4	12.3	9.6	10.1	10.8	11.2	10.3	9.9	6.9	3.6	3.3	1.5	1.0	0.5	0.6	0.6	0.5	0.5	0.7	0.8	0.8	0.8	0.9	1.0	4.6	12.3
16	0.8	0.6	0.7	0.5	0.7	0.5	0.7	0.6	0.7	1.0	1.3	1.1	1.1	3.3	10.4	18.9	20.3	15.9	15.5	17.4	14.6	12.7	12.8	10.8	6.8	20.3
17	10.8	11.9	11.5	10.9	10.2	11.1	10.8	10.6	10.7	10.5	10.8	9.5	7.8	5.5	3.7	3.1	3.1	3.7	3.5	3.9	4.2	3.3	3.5	2.9	7.4	11.9
18	3.6	5.6	8.1	6.5	4.7	2.0	1.5	1.6	1.6	1.6	1.7	1.6	1.5	2.4	2.3	1.4	2.4	3.2	2.4	2.2	2.1	1.7	2.0	2.6	2.8	8.1
19	11.8	9.0	11.1	10.2	8.7	9.0	7.9	8.0	10.0	11.8	10.4	10.2	11.5	9.8	6.1	2.3	1.9	3.5	6.7	4.0	2.7	2.1	3.3	3.9	7.3	11.8
20	3.5	2.4	1.8	1.6	1.5	1.5	1.4	1.5	1.6	1.9	1.9	2.0	1.6	1.2	1.2	1.0	1.3	1.4	1.0	0.8	0.8	0.8	0.9	0.9	1.5	3.5
21	0.8	0.8	0.9	0.8	0.9	1.0	0.7	0.8	1.0	1.4	1.8	2.5	1.7	1.3	1.4	1.0	1.5	1.4	1.1	0.9	0.9	1.0	0.9	0.9	1.1	2.5
22	0.8	0.6	1.0	1.2	1.1	1.1	1.1	0.8	0.7	2.0	1.1	1.2	1.1	0.5	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.7	2.0
23	0.3	0.5	0.2	0.2	0.1	0.6	1.7	2.3	4.4	2.1	8.1	8.2	7.7	9.6	7.8	10.2	9.3	9.3	9.1	7.9	8.0	8.4	8.4	7.8	5.5	10.2
24	7.9	8.3	8.1	6.9	7.4	11.3	8.2	4.3	4.2	5.4	6.7	6.2	6.3	6.6	6.1	6.0	5.1	5.0	4.7	3.3	3.5	3.3	3.4	3.6	5.9	11.3
25	7.9	8.3	7.6	6.9	7.9	6.5	4.2	4.5	2.6	2.7	3.4	3.5	2.8	4.0	2.9	1.9	3.0	2.2	2.1	2.5	2.2	2.2	5.2	7.6	4.4	8.3
26	9.1	6.4	9.4	7.5	7.9	7.6	9.1	7.6	8.8	9.5	10.7	4.3	4.6	7.9	3.6	2.9	2.4	4.1	7.2	3.2	4.7	4.1	4.3	5.8	6.4	10.7
27	4.2	3.6	3.7	4.3	3.8	3.5	3.3	3.4	4.2	3.7	3.7	4.2	4.6	3.2	2.7	2.2	2.4	2.1	2.2	2.2	2.2	2.7	2.6	2.5	3.2	4.6
28	2.0	1.8	1.6	1.5	1.5	1.1	1.3	1.3	1.5	1.6	1.6	2.9	3.8	5.1	3.8	4.0	6.5	7.2	6.9	6.6	7.1	3.9	6.1	5.2	3.6	7.2
29	5.4	7.5	5.5	4.5	4.5	6.1	4.0	3.8	3.7	2.1	2.3	2.2	2.1	1.5	1.3	1.3	1.2	1.4	1.3	1.3	2.4	2.5	2.1	2.2	3.0	7.5
30	1.9	1.1	0.7	0.6	0.9	0.6	0.9	0.9	1.4	1.8	1.8	2.2	2.4	2.6	8.8	8.5	3.2	3.3	3.4	2.9	2.7	6.1	6.9	4.9	2.9	8.8
31	5.8	5.7	6.1	5.4	3.4	3.3	3.9	2.8	2.8	2.9	3.2	2.4	2.1	2.2	2.2	1.9	2.4	2.2	2.1	2.4	2.2	2.1	2.2	2.2	3.1	6.1
NO.	30	30	30	30	30	30	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	733	99%
MEAN	4.2	4.2	4.3	4.2	4.2	4.0	3.6	3.4	3.6	3.7	4.4	4.1	4.4	5.1	4.6	4.0	4.1	4.0	4.2	3.6	4.0	3.5	3.4	3.6		
MAX	17.9	19.4	20.4	23.4	21.9	17.7	16.0	15.7	16.6	15.9	13.9	16.3	20.3	29.5	25.1	18.9	20.3	15.9	15.5	17.4	14.9	12.7	12.8	13.1		



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	733	
Maximum 1-HR Average	29.5 UG/M3	
Maximum 24-HR Average	16.7 UG/M3	
IZS Calibration Time		Operational Time
Down Time	0	Operational Uptime
Standard Deviation	4.284	Monthly Average
		733 HRS
		98.5 %
		4.0 UG/M3

West PM₁₀ (µg/m³) – December 2021

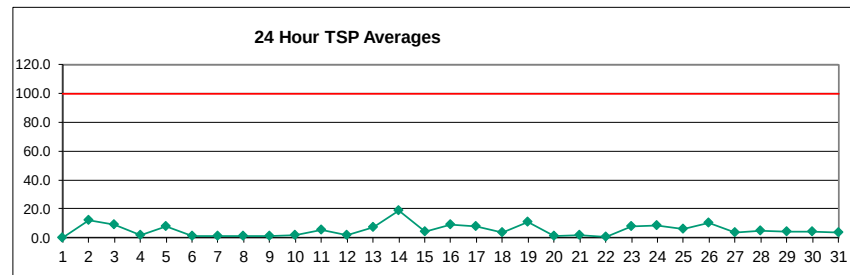
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	G	G	G	G	G	G	G	G	G	G	G	2.2	1.9	2.7	1.7	2.0	1.9	4.8	18.5	30.8	4.8	1.9	1.8	3.2	-	-
2	2.8	7.9	3.0	6.3	7.8	5.7	2.8	2.3	2.3	2.6	5.0	3.9	3.8	6.5	6.2	7.1	1.7	8.3	8.6	5.9	7.6	5.1	3.5	7.1	5.2	8.6
3	6.6	5.0	5.8	5.2	6.2	2.8	1.8	3.8	8.2	8.9	8.7	4.4	3.4	2.6	2.5	3.3	7.0	6.0	3.8	2.9	2.2	2.0	2.0	2.1	4.5	8.9
4	2.0	2.0	1.8	1.7	1.1	1.9	1.9	2.0	2.6	3.5	3.3	3.7	3.1	2.1	1.6	1.5	1.6	1.8	3.6	4.3	4.4	3.4	3.8	3.8	2.6	4.4
5	4.0	4.0	3.4	3.1	7.6	9.8	10.8	11.5	9.9	9.3	9.6	11.1	9.2	8.9	8.7	6.8	6.5	11.6	14.6	10.0	19.5	12.5	3.2	1.0	8.6	19.5
6	0.8	0.7	0.7	0.6	0.6	0.6	0.7	0.9	1.6	0.8	2.1	5.9	4.5	1.7	2.0	2.2	2.9	2.1	1.7	1.3	1.0	1.0	1.1	1.1	1.6	5.9
7	1.1	1.2	1.0	0.7	0.7	0.7	0.8	0.9	1.2	2.6	6.7	2.4	1.1	1.1	1.1	1.4	1.2	0.9	0.9	0.8	0.8	0.9	1.2	1.5	1.4	6.7
8	0.7	0.6	0.6	0.4	0.6	0.3	0.3	0.5	1.0	1.7	2.4	2.4	1.6	2.7	4.7	2.3	2.4	1.5	3.1	1.1	1.1	0.7	1.0	0.8	1.4	4.7
9	0.7	0.5	0.5	0.5	0.6	0.7	1.2	0.9	1.0	1.4	1.4	1.2	1.4	1.3	1.3	1.1	1.2	1.7	1.4	1.6	1.5	1.5	1.6	1.3	1.1	1.7
10	1.2	0.9	1.1	1.2	1.8	1.1	1.2	0.9	1.4	2.7	2.0	1.4	1.8	1.6	1.4	1.5	5.1	4.6	5.4	2.4	4.6	1.5	1.3	1.2	2.1	5.4
11	1.4	1.0	0.7	0.7	0.7	0.8	0.8	2.0	2.8	4.8	18.2	19.0	8.8	8.5	6.9	3.7	5.1	6.1	3.9	4.6	10.6	7.6	3.0	3.4	5.2	19.0
12	0.7	1.3	2.9	2.8	0.5	0.7	1.3	1.7	2.1	2.0	1.5	2.0	1.8	2.9	2.2	1.6	2.6	3.1	3.0	2.3	1.9	4.0	1.4	1.8	2.0	4.0
13	2.1	2.8	2.6	2.1	1.6	1.3	0.9	0.8	1.2	1.8	2.0	2.4	24.0	36.7	24.7	22.5	14.1	9.1	7.7	6.5	11.2	10.1	12.0	16.4	9.0	36.7
14	22.1	25.6	24.8	30.1	27.4	22.6	20.2	18.5	22.5	21.4	17.3	22.0	26.1	33.7	30.1	22.8	28.1	19.1	15.8	12.1	13.6	13.5	12.7	14.8	21.5	33.7
15	15.0	16.5	11.5	11.6	12.4	12.8	11.5	11.4	7.9	3.9	3.7	1.8	1.2	0.6	0.7	0.7	0.6	0.5	0.8	0.8	0.9	0.9	1.0	1.1	5.4	16.5
16	1.0	0.7	0.8	0.5	0.7	0.5	0.7	0.7	0.8	1.2	1.5	1.3	1.4	4.6	12.8	23.9	25.5	20.1	19.7	21.4	18.2	15.4	15.7	13.8	8.5	25.5
17	13.8	15.1	15.4	14.3	11.8	12.4	12.3	11.4	12.1	12.3	13.1	11.0	9.1	6.9	4.2	3.9	4.1	5.2	4.8	5.4	5.9	4.4	4.8	3.7	9.1	15.4
18	4.9	8.2	12.0	9.6	6.8	2.5	1.6	1.8	1.9	1.8	2.0	1.9	1.8	3.3	3.2	1.7	3.2	4.4	2.9	2.6	2.4	1.8	2.3	3.1	3.7	12.0
19	14.5	11.5	13.6	12.6	10.7	11.1	10.2	10.8	12.9	17.5	15.5	14.9	17.2	14.7	9.0	3.2	2.6	4.3	9.9	5.9	3.7	2.7	4.0	4.8	9.9	17.5
20	4.4	2.8	2.0	1.8	1.7	1.7	1.6	1.7	1.9	2.3	2.3	2.6	2.1	1.5	1.4	1.2	1.6	1.7	1.2	0.9	0.9	1.0	1.1	1.2	1.8	4.4
21	1.0	1.0	1.2	1.0	1.2	1.3	0.8	1.0	1.4	1.8	2.6	3.7	2.4	1.9	2.0	1.5	2.2	2.0	1.6	1.1	1.2	1.2	1.1	1.1	1.6	3.7
22	1.0	0.7	1.1	1.3	1.3	1.2	1.2	0.9	0.7	2.3	1.3	1.7	1.6	0.6	0.4	0.3	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.8	2.3
23	0.4	0.6	0.2	0.2	0.1	0.9	2.5	3.3	6.5	2.8	10.1	10.0	9.2	11.7	9.6	12.9	11.7	11.6	11.1	9.8	10.5	11.5	11.7	10.5	7.1	12.9
24	11.0	11.9	11.5	9.5	10.8	16.7	12.0	6.0	5.8	7.5	9.3	8.6	8.2	8.3	7.6	7.9	6.5	6.5	6.2	4.0	4.4	3.9	3.9	3.9	8.0	16.7
25	11.4	11.7	10.6	9.1	11.4	9.2	5.2	5.8	3.1	3.3	4.5	4.7	3.6	5.5	3.9	2.4	4.1	2.9	2.7	3.3	2.8	2.6	7.6	11.3	5.9	11.7
26	13.4	9.3	13.5	10.8	11.7	10.7	13.0	10.2	11.8	13.9	16.0	6.1	6.5	11.8	5.0	3.9	2.9	6.0	10.7	4.4	6.6	5.3	5.8	8.4	9.1	16.0
27	5.7	4.3	4.4	5.3	4.6	4.2	3.9	4.1	5.7	4.8	4.8	5.7	6.4	4.2	3.3	2.6	2.9	2.3	2.4	2.5	2.4	3.1	2.8	2.7	4.0	6.4
28	2.2	1.9	1.7	1.6	1.8	1.2	1.4	1.4	1.9	1.9	1.9	3.8	5.1	7.2	4.6	5.8	9.0	10.3	10.0	9.5	10.6	5.7	9.1	7.6	4.9	10.6
29	7.9	11.1	8.0	6.6	6.5	9.0	5.7	5.4	5.2	2.8	3.0	3.1	2.9	2.0	1.8	1.7	1.5	1.9	1.6	1.7	3.4	3.6	3.0	3.2	4.3	11.1
30	2.7	1.4	0.8	0.7	1.1	0.7	1.1	1.1	1.8	2.3	2.1	2.9	3.1	3.5	12.9	12.6	4.5	4.4	4.6	3.5	3.1	8.4	9.9	6.9	4.0	12.9
31	8.6	8.3	9.0	7.8	4.5	4.3	5.4	3.4	3.4	3.5	4.0	3.1	2.7	2.8	2.9	2.3	3.0	2.6	2.4	2.7	2.4	2.4	2.6	2.7	4.0	9.0
NO.	30	30	30	30	30	30	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	733	99%
MEAN	5.5	5.7	5.5	5.3	5.2	5.0	4.5	4.2	4.7	5.0	5.9	5.5	5.7	6.6	5.8	5.4	5.4	5.4	6.0	5.4	5.3	4.5	4.4	4.7		
MAX	22.1	25.6	24.8	30.1	27.4	22.6	20.2	18.5	22.5	21.4	18.2	22.0	26.1	36.7	30.1	23.9	28.1	20.1	19.7	30.8	19.5	15.4	15.7	16.4		



Number of Non-Zero Readings	733		
Maximum 1-HR Average	36.7 UG/M3		
Maximum 24-HR Average	21.5 UG/M3		
IZS Calibration Time		OperatioEI Time	733 HRS
Down Time	0	OperatioEI Uptime	98.5 %
Standard Deviation	5.7	Monthly Average	5.3 UG/M3

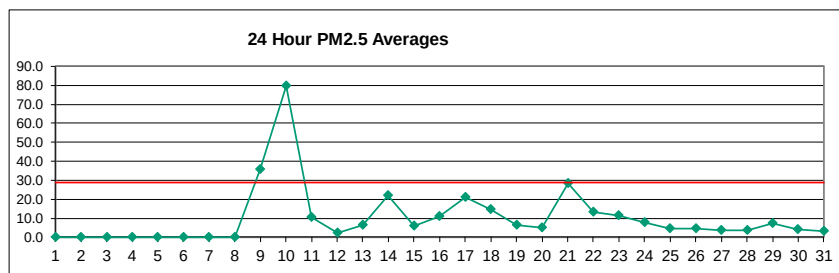
West TSP (µg/m³) – December 2021

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	G	G	G	G	G	G	G	G	G	G	G	10.8	1.4	1.9	1.2	2.4	1.3	4.3	82.8	427.2	39.9	1.3	1.3	4.2	-	-
2	5.1	5.6	2.1	4.0	5.0	3.7	1.8	1.8	1.5	2.0	8.1	2.9	10.3	6.5	11.5	98.8	2.8	24.7	19.9	7.2	10.2	12.4	3.0	45.6	12.4	98.8
3	58.5	11.3	5.6	4.8	4.5	3.7	1.4	15.2	27.6	13.9	13.8	8.6	11.2	3.9	2.3	3.0	5.8	4.5	2.6	2.0	1.4	1.3	1.3	1.4	8.7	58.5
4	1.4	1.3	1.2	1.1	0.8	1.3	1.2	1.4	1.9	2.7	2.3	3.2	2.5	1.6	1.1	1.0	1.1	1.1	2.3	2.8	2.9	2.2	2.5	2.5	1.8	3.2
5	2.6	2.7	2.3	2.0	7.8	9.1	9.9	8.9	8.4	9.8	10.6	12.8	10.6	10.0	8.8	5.1	4.6	10.5	12.2	7.4	14.3	8.9	2.2	0.6	7.6	14.3
6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.6	1.3	0.5	1.5	3.9	3.0	1.4	1.5	1.8	2.4	1.5	1.1	0.8	0.7	0.6	0.7	0.7	1.1	3.9
7	0.7	0.8	0.6	0.5	0.5	0.5	0.5	0.6	0.9	1.9	6.8	2.1	0.8	0.8	0.8	1.1	0.8	0.6	0.6	0.5	0.5	0.6	0.8	1.2	1.1	6.8
8	0.5	0.4	0.4	0.2	0.5	0.2	0.2	0.4	0.8	1.3	1.8	1.9	1.2	2.4	4.4	2.2	2.3	1.5	3.3	1.0	0.9	0.5	1.0	0.7	1.3	4.4
9	0.6	0.3	0.4	0.4	0.4	0.5	0.9	0.7	0.8	1.1	1.0	1.0	1.3	1.2	1.2	0.9	1.1	1.5	1.1	1.2	1.1	1.0	1.1	0.9	0.9	1.5
10	0.8	0.6	0.7	0.8	1.2	0.7	0.8	0.7	1.1	2.3	1.9	1.2	1.8	1.5	1.3	1.5	5.6	5.2	6.1	2.5	5.1	1.5	1.3	1.1	2.0	6.1
11	1.4	0.8	0.6	0.5	0.4	0.6	0.6	1.6	2.7	5.2	21.0	22.1	9.7	9.5	7.5	3.0	4.1	6.3	4.2	4.4	10.9	7.8	2.7	2.7	5.4	22.1
12	0.5	1.0	2.7	2.7	0.4	0.6	1.2	1.4	1.6	1.6	1.1	1.5	1.4	2.3	1.9	1.4	2.5	2.6	2.5	1.7	1.4	3.7	1.0	1.2	1.7	3.7
13	1.4	1.8	1.7	1.3	1.0	0.9	0.6	0.5	0.8	1.2	1.4	1.8	16.7	24.6	17.4	16.3	10.5	6.6	6.2	5.4	11.7	11.0	13.2	18.2	7.2	24.6
14	25.2	25.2	26.1	32.6	24.8	18.7	15.7	14.0	17.8	18.1	13.1	18.7	19.2	23.5	24.7	18.7	23.0	15.1	12.9	9.3	12.2	13.8	11.9	13.0	18.6	32.6
15	13.9	15.6	8.9	7.8	8.7	8.4	7.6	7.5	5.3	2.6	2.7	1.4	0.9	0.4	0.5	0.5	0.4	0.3	0.5	0.5	0.6	0.6	0.6	0.7	4.0	15.6
16	0.7	0.5	0.6	0.3	0.5	0.4	0.5	0.4	0.6	0.8	1.1	1.0	1.1	4.9	14.9	27.3	29.0	22.7	21.5	24.8	20.6	17.9	18.3	11.7	9.3	29.0
17	11.9	16.8	15.0	12.7	8.1	8.5	9.0	7.8	9.6	10.2	11.6	8.8	7.6	6.4	3.3	3.5	3.9	5.5	5.0	5.7	6.5	4.3	4.9	3.5	7.9	16.8
18	5.2	9.2	13.8	10.9	7.6	2.3	1.1	1.4	1.4	1.3	1.6	1.5	1.4	3.4	3.3	1.4	3.0	4.3	2.3	2.2	1.8	1.2	1.7	2.7	3.6	13.8
19	16.8	12.9	15.8	14.3	12.3	12.8	11.8	12.4	15.0	20.3	17.9	17.2	19.9	16.9	9.8	2.8	2.4	3.4	11.3	6.5	3.4	2.1	2.8	3.3	11.0	20.3
20	3.4	2.0	1.3	1.2	1.1	1.1	1.2	1.2	1.4	1.8	1.8	2.1	1.8	1.1	1.0	0.9	1.2	1.2	0.8	0.6	0.7	0.8	0.8	1.0	1.3	3.4
21	0.9	0.8	1.1	0.9	1.0	1.3	0.7	0.9	1.2	1.6	2.7	4.1	2.5	1.9	2.0	1.4	2.3	2.0	1.5	0.9	0.9	1.0	0.8	0.8	1.5	4.1
22	0.7	0.5	0.8	0.9	0.9	0.8	0.8	0.6	0.5	1.6	0.9	1.5	1.5	0.5	0.3	0.2	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.6	1.6
23	0.3	0.5	0.2	0.1	0.1	0.8	2.8	3.2	7.3	3.1	11.4	11.3	10.4	13.4	11.1	14.1	13.0	13.0	12.6	11.1	12.1	13.2	13.4	12.1	7.9	14.1
24	12.6	13.4	13.1	10.5	11.8	19.1	13.6	6.6	6.0	8.0	10.5	9.2	8.5	9.0	7.5	8.3	6.2	6.2	6.2	3.3	4.2	3.1	3.1	2.6	8.4	19.1
25	12.3	13.5	11.9	10.2	12.5	9.7	4.6	5.6	2.7	3.0	4.5	4.7	3.2	5.6	3.6	2.0	4.1	2.6	2.4	3.0	2.2	2.0	8.1	12.6	6.1	13.5
26	15.1	9.9	15.6	12.1	13.3	12.1	15.0	11.8	13.4	15.8	18.5	6.5	7.1	13.5	5.2	3.4	2.4	6.1	12.0	4.3	6.8	4.8	5.6	8.9	10.0	18.5
27	5.1	3.2	3.4	4.6	3.8	3.4	3.0	3.5	5.8	4.5	4.5	5.8	6.9	4.1	2.9	1.9	2.3	1.6	1.6	1.6	1.5	2.2	1.8	1.8	3.4	6.9
28	1.4	1.3	1.1	1.1	1.4	0.8	1.0	0.9	1.4	1.4	1.4	3.3	5.1	7.5	3.6	5.8	9.9	11.0	11.4	10.7	12.2	6.2	10.3	8.3	4.9	12.2
29	8.8	12.4	8.7	7.0	6.8	10.1	6.2	5.7	5.2	2.4	2.7	3.1	2.9	1.7	1.5	1.5	1.3	1.7	1.5	1.5	3.6	4.0	3.2	3.3	4.4	12.4
30	2.8	1.3	0.6	0.5	0.9	0.5	0.8	0.9	1.5	1.8	1.5	2.6	2.6	3.0	14.6	14.5	4.3	4.0	4.6	2.8	2.3	8.2	9.8	6.1	3.9	14.6
31	8.5	8.4	10.0	8.0	3.6	3.1	4.9	2.5	2.4	2.5	2.8	2.2	2.0	2.1	2.3	1.7	2.3	1.8	1.6	1.9	1.7	1.7	2.0	2.3	3.4	10.0
NO.	30	30	30	30	30	30	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	733	99%
MEAN	7.3	5.8	5.5	5.2	4.7	4.5	4.0	4.0	4.9	4.8	6.1	5.8	5.7	6.0	5.6	8.0	5.0	5.6	8.2	17.9	6.3	4.5	4.2	5.7		
MAX	58.5	25.2	26.1	32.6	24.8	19.1	15.7	15.2	27.6	20.3	21.0	22.1	19.9	24.6	24.7	98.8	29.0	24.7	82.8	427.2	39.9	17.9	18.3	45.6		



Berm PM_{2.5} (µg/m³) – December 2021

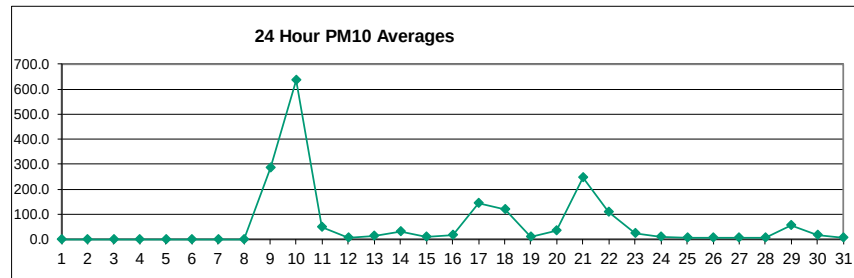
HOUR																											
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX	
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
8	X	X	X	X	X	X	X	X	X	X	X	X	10.7	20.7	18.3	21.2	34.6	29.9	22.7	37.3	27.3	26.8	41.8	46.5	-	-	
9	26.8	22.9	26.5	34.2	16.0	12.5	34.4	28.4	24.9	40.9	58.1	68.8	51.6	57.9	45.5	60.0	55.2	40.3	29.6	43.4	26.0	15.7	18.5	15.3	35.6	68.8	
10	9.7	19.4	11.4	5.5	6.3	13.4	49.0	49.3	24.4	59.4	83.5	121.7	62.7	95.2	124.7	110.3	179.1	100.0	131.9	112.0	180.3	183.9	104.8	72.2	79.6	183.9	
11	36.9	16.9	16.1	9.3	3.0	1.3	1.2	3.5	8.9	12.2	14.1	12.1	9.4	7.5	7.8	8.2	5.6	14.1	40.2	14.1	0.9	1.0	2.0	4.1	10.4	40.2	
12	1.8	0.4	1.4	10.6	1.0	0.6	0.4	0.4	10.3	2.7	3.8	6.6	1.8	2.8	2.2	1.6	0.5	0.3	0.7	0.7	1.7	0.3	1.9	1.5	2.3	10.6	
13	2.4	2.5	1.3	1.1	0.6	1.6	1.1	4.6	5.8	4.4	5.6	4.1	6.6	9.3	8.1	4.0	4.4	3.1	4.9	3.4	6.5	27.2	20.4	21.4	6.4	27.2	
14	66.5	42.0	40.3	47.2	29.7	17.2	13.9	14.9	13.6	14.0	13.7	13.1	18.1	23.3	32.5	27.7	17.7	14.9	11.0	9.5	11.9	17.3	11.6	9.6	22.1	66.5	
15	12.8	15.4	14.4	11.3	12.5	14.0	13.2	8.9	4.6	4.8	3.3	2.6	1.6	1.4	1.1	2.5	5.1	1.6	1.3	1.4	0.8	0.9	1.2	1.0	5.7	15.4	
16	1.0	1.1	1.3	0.8	0.6	0.8	0.7	0.7	1.3	2.0	1.5	1.2	1.2	3.1	37.2	32.6	34.0	26.2	22.4	21.9	18.3	31.2	11.3	10.1	10.9	37.2	
17	10.6	9.2	8.7	9.1	9.8	10.4	11.0	14.3	21.9	15.0	13.7	13.8	11.6	43.2	28.2	25.9	33.6	39.8	51.8	41.1	38.4	13.8	14.7	15.0	21.0	51.8	
18	17.7	25.6	33.4	34.5	21.4	9.6	8.9	22.7	17.1	18.3	27.8	44.7	16.6	11.7	6.9	4.5	8.2	6.8	4.1	3.1	3.6	2.0	2.1	2.0	14.7	44.7	
19	3.7	4.2	7.1	6.4	4.7	7.4	13.8	25.1	12.4	10.2	8.5	10.7	8.4	4.5	3.3	3.1	1.7	1.4	3.1	1.5	1.5	2.3	4.9	4.5	6.4	25.1	
20	5.4	2.9	2.5	2.1	1.8	1.6	1.9	1.7	1.9	2.7	2.8	2.6	3.4	3.1	6.0	2.2	1.6	1.3	1.2	1.3	3.5	7.5	18.5	40.9	5.0	40.9	
21	30.1	11.9	10.9	12.2	13.9	15.0	14.6	18.1	24.3	28.7	32.5	44.2	34.8	62.0	50.6	71.0	61.9	36.8	36.6	17.1	29.5	15.7	11.6	2.1	28.6	71.0	
22	1.7	0.9	0.8	1.5	1.3	4.1	1.8	2.3	1.5	2.9	20.6	45.5	28.2	28.1	25.2	19.2	21.6	17.3	22.5	25.4	20.5	6.0	10.1	13.7	13.4	45.5	
23	3.3	1.2	4.3	2.2	0.4	2.8	3.3	1.5	0.8	1.9	20.8	39.6	25.5	22.9	39.9	14.0	7.6	9.7	18.1	5.9	7.2	9.2	21.1	12.4	11.5	39.9	
24	10.6	8.2	13.0	13.5	7.8	6.6	5.0	7.7	5.3	7.5	10.5	8.7	7.5	12.5	10.4	8.7	9.4	7.0	6.4	4.5	5.2	5.0	3.9	3.7	7.9	13.5	
25	6.9	5.1	6.1	4.7	6.8	7.1	5.6	5.3	3.6	4.5	6.3	7.5	4.3	3.9	4.5	3.8	2.7	4.0	3.7	2.4	3.7	4.5	3.9	3.7	4.8	7.5	
26	3.6	5.5	6.6	4.4	6.0	5.1	6.4	9.7	6.1	4.4	5.3	4.0	4.8	4.3	2.9	2.6	2.9	2.5	2.1	4.2	4.1	1.9	4.1	2.9	4.4	9.7	
27	1.5	1.8	3.2	4.5	4.7	4.0	4.1	5.1	6.5	5.1	4.7	4.9	6.1	5.5	3.6	2.4	2.1	2.5	2.2	2.3	1.8	2.1	1.9	2.4	3.5	6.5	
28	2.3	2.0	1.5	1.4	1.6	1.4	1.5	1.8	1.9	1.9	2.5	4.4	5.6	5.3	4.3	2.7	5.9	6.6	9.5	6.1	6.8	5.3	5.0	3.0	3.7	9.5	
29	4.8	2.8	3.5	3.4	2.2	2.9	2.7	3.6	1.8	1.6	2.0	2.2	4.7	11.4	4.7	13.8	13.8	10.5	14.6	12.5	17.6	15.4	13.8	7.7	7.3	17.6	
30	10.6	8.9	2.6	2.5	2.2	0.9	0.8	1.5	2.5	2.8	3.7	5.0	4.1	3.6	2.4	4.4	4.3	6.2	10.1	4.5	3.7	3.3	2.4	2.3	4.0	10.6	
31	2.5	2.5	3.8	2.2	2.2	2.5	3.8	3.8	5.5	4.1	4.7	3.3	2.6	2.3	2.5	3.1	2.6	2.1	2.5	2.8	2.3	3.1	3.0	2.1	3.0	5.5	
NO.	23	23	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	564	76%	
MEAN	11.9	9.3	9.6	9.8	6.8	6.2	8.6	10.2	9.0	10.9	15.2	20.5	13.8	18.6	19.7	18.7	21.5	16.0	18.9	15.8	17.6	16.7	13.9	12.5			
MAX	66.5	42.0	40.3	47.2	29.7	17.2	49.0	49.3	24.9	59.4	83.5	121.7	62.7	95.2	124.7	110.3	179.1	100.0	131.9	112.0	180.3	183.9	104.8	72.2			



Number of 24HR Exceedences	2	Proposed Guideline	
Number of Non-Zero Readings	564		
Maximum 1-HR Average	183.9 UG/M3		
Maximum 24-HR Average	79.6 UG/M3		
		Operational Time	564 HRS
Monthly Calibration	0	Operational Uptime	75.8 %
Standard Deviation	22.0	Monthly Average	13.9 UG/M3

Berm PM₁₀ (µg/m³) – December 2021

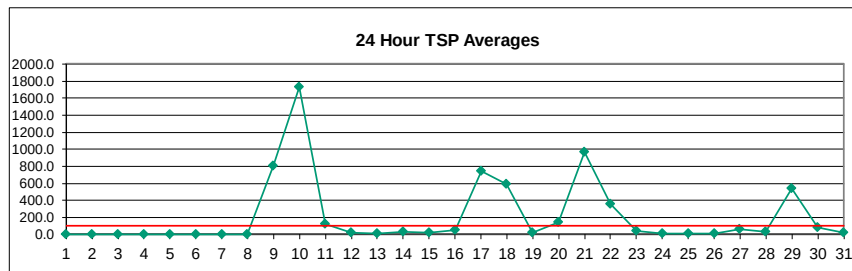
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
8	X	X	X	X	X	X	X	X	X	X	X	X	85.2	139.7	27.4	50.9	368.5	288.2	226.0	328.9	268.0	221.2	370.0	412.8	-	-
9	214.1	219.8	220.3	248.2	115.8	101.7	253.7	229.1	214.7	315.5	511.1	555.1	428.0	490.3	367.6	447.4	441.2	294.1	245.4	380.2	207.4	117.2	137.3	127.6	286.8	555.1
10	73.7	148.3	79.6	35.2	35.0	92.9	386.9	350.3	174.9	461.4	623.3	832.6	490.1	719.2	1000.1	910.4	1526.4	795.4	1133.6	940.3	1496.2	1526.3	864.3	561.7	635.8	1526.4
11	271.0	130.6	121.6	65.0	21.2	4.7	3.7	19.0	65.7	91.5	98.8	72.1	14.1	11.3	11.6	12.3	8.3	21.1	60.1	21.0	1.2	1.4	2.8	4.9	47.3	271.0
12	2.2	0.5	2.0	17.6	5.5	2.4	0.8	0.6	15.4	4.0	7.5	39.3	5.9	12.4	8.1	6.6	0.8	0.3	1.0	1.0	2.4	0.4	2.8	1.9	5.9	39.3
13	3.4	2.9	1.5	1.3	0.7	2.2	1.5	6.8	8.5	5.5	7.5	10.7	20.7	31.4	24.7	8.3	12.4	5.6	6.9	4.0	8.9	40.0	28.7	29.7	11.4	40.0
14	97.7	59.5	56.8	67.3	39.8	19.3	14.0	16.4	14.6	16.5	17.1	14.4	25.4	32.6	46.8	39.5	22.9	20.1	13.3	11.6	15.6	25.4	16.2	10.8	29.7	97.7
15	15.6	18.3	20.5	14.1	15.4	18.6	17.9	11.4	5.2	6.0	4.9	9.1	5.6	4.6	4.1	19.1	44.7	8.3	5.4	4.4	1.8	1.2	1.4	1.3	10.8	44.7
16	1.3	1.5	1.9	1.0	0.7	1.0	1.0	0.9	1.7	4.1	2.6	2.9	2.6	8.1	106.5	47.7	50.1	38.1	31.8	30.8	25.6	45.2	13.4	11.7	18.0	106.5
17	13.5	10.0	8.8	9.7	11.2	11.5	13.4	20.0	31.9	21.5	19.2	34.1	52.9	354.5	242.0	239.9	299.8	369.0	524.5	380.8	377.8	106.0	151.8	144.0	143.6	524.5
18	130.6	248.3	323.6	324.6	184.9	82.1	62.9	197.8	166.2	165.8	270.0	406.2	157.9	95.9	10.2	6.6	12.1	10.0	5.5	4.2	4.8	2.4	2.6	2.7	119.9	406.2
19	5.7	5.6	14.8	9.2	5.4	17.6	21.0	37.0	18.0	14.8	12.2	15.6	12.0	6.3	4.5	4.4	2.3	1.9	4.5	1.8	1.6	3.2	7.2	6.2	9.7	37.0
20	7.6	3.6	3.1	2.5	2.0	1.8	2.4	2.1	2.4	3.5	6.6	9.7	22.2	20.0	53.2	9.2	5.9	2.9	2.0	4.3	29.9	62.4	155.2	375.7	32.9	375.7
21	261.8	93.9	95.8	96.9	106.5	116.0	106.8	146.1	217.2	246.9	289.0	413.9	289.7	538.5	444.2	574.0	566.7	318.2	323.9	162.1	265.4	154.8	113.6	13.1	248.1	574.0
22	11.4	2.2	1.8	8.2	2.7	24.8	5.5	3.3	2.0	3.5	182.8	370.7	246.7	221.5	202.8	163.1	158.4	149.9	184.2	191.4	179.6	60.9	95.7	135.9	108.7	370.7
23	24.4	4.1	32.4	18.5	1.8	18.9	23.5	7.1	2.5	8.9	67.9	58.9	37.5	33.0	59.2	19.4	9.1	13.2	24.9	6.5	9.5	12.9	31.0	18.0	22.6	67.9
24	15.2	11.5	18.8	19.7	11.1	9.3	6.9	11.1	7.5	10.8	15.2	12.2	10.1	17.5	14.6	12.1	13.1	9.6	8.7	5.7	6.8	6.6	4.7	4.1	11.0	19.7
25	9.6	6.6	8.1	6.0	9.1	9.6	7.5	7.1	4.6	6.2	8.9	10.6	5.7	5.1	6.2	5.1	3.4	5.9	5.1	3.2	5.1	6.1	5.1	4.7	6.4	10.6
26	4.5	7.6	9.3	5.7	8.2	6.7	8.7	13.8	8.4	5.8	7.4	5.1	6.7	5.9	3.8	3.3	3.7	2.9	2.4	5.8	5.7	2.0	4.4	2.9	5.9	13.8
27	1.6	1.9	3.7	5.5	6.2	5.3	5.4	7.1	9.3	7.1	7.4	17.0	33.6	25.4	10.2	4.1	3.6	3.5	2.7	2.5	2.0	2.2	2.1	2.7	7.2	33.6
28	2.5	2.2	1.7	1.5	2.7	2.5	2.8	2.8	3.8	3.6	5.4	7.3	26.9	15.9	6.7	3.3	17.6	9.5	14.0	8.9	10.0	7.8	7.1	3.9	7.1	26.9
29	6.8	3.8	4.9	4.8	2.6	3.9	3.7	4.8	2.2	1.9	3.5	7.0	42.9	123.3	34.1	134.8	117.1	90.7	143.9	100.9	163.1	164.6	114.3	65.1	56.0	164.6
30	74.3	63.2	10.2	16.1	13.7	1.6	1.0	2.7	7.3	9.9	19.2	29.3	23.9	14.0	11.2	30.7	6.2	8.7	14.7	6.1	4.7	4.2	2.8	2.6	15.8	74.3
31	2.7	2.8	4.0	2.3	2.8	3.1	5.3	5.4	8.1	5.8	8.3	11.5	8.1	6.7	6.1	12.1	5.5	3.2	5.2	5.8	3.3	8.3	7.8	5.2	5.8	12.1
NO.	23	23	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	564	76%
MEAN	54.4	45.6	45.4	42.6	26.3	24.2	41.6	47.9	43.1	61.8	95.5	128.1	85.6	122.2	112.8	115.2	154.2	102.9	124.6	108.8	129.0	107.6	89.3	81.2		
MAX	271.0	248.3	323.6	324.6	184.9	116.0	386.9	350.3	217.2	461.4	623.3	832.6	490.1	719.2	1000.1	910.4	1526.4	795.4	1133.6	940.3	1496.2	1526.3	864.3	561.7		



Number of Non-Zero Readings	564
Maximum 1-HR Average	1526.4 UG/M3
Maximum 24-HR Average	635.8 UG/M3
Monthly Calibration	0
Standard Deviation	185.1
Operational Time	564 HRS
Operational Uptime	75.8 %
Monthly Average	83.5 UG/M3

Berm TSP (µg/m³) – December 2021

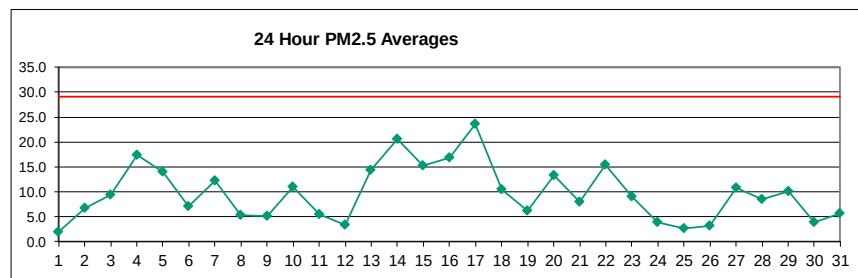
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
8	X	X	X	X	X	X	X	X	X	X	X	X	229.8	707.8	29.2	239.0	1561.1	1071.6	1458.8	1116.7	912.0	662.8	1125.0	1307.0	-	-
9	621.9	541.0	457.4	464.0	213.2	296.4	714.8	650.1	659.5	957.6	1573.5	1542.5	1232.7	1379.0	1033.9	1240.9	1274.6	799.4	696.6	1197.4	572.4	340.7	387.5	358.1	800.2	1573.5
10	201.6	478.9	209.0	97.1	97.0	269.3	1063.7	989.6	547.9	1328.5	1713.3	2108.5	1430.8	1991.8	2758.5	2287.1	3588.9	2252.7	3033.5	2873.9	3648.0	3896.4	2697.8	1886.3	1727.1	3896.4
11	954.2	468.7	364.7	207.6	101.2	17.2	8.6	34.6	146.2	174.0	190.8	121.4	15.2	12.3	10.6	12.5	8.3	23.2	67.1	22.7	1.1	1.3	2.3	3.5	123.7	954.2
12	1.7	0.4	1.7	26.1	12.4	2.2	1.2	0.5	17.7	4.4	10.1	246.5	12.8	12.1	33.7	12.6	0.7	0.2	1.0	0.9	2.6	0.3	3.1	1.7	16.9	246.5
13	3.2	2.1	1.2	1.0	0.5	1.9	1.4	6.7	8.7	4.5	7.3	18.1	29.0	32.8	28.4	10.6	15.6	4.7	6.5	2.9	7.6	41.2	26.2	29.5	12.1	41.2
14	111.1	62.1	61.9	75.8	39.8	14.1	9.1	11.8	9.9	12.3	13.7	9.8	23.3	29.0	46.4	40.2	17.6	17.9	10.9	9.1	12.0	22.9	13.3	7.5	28.4	111.1
15	10.7	12.4	17.9	10.7	11.7	16.2	17.5	10.2	3.8	5.1	5.0	22.5	19.9	15.7	13.1	73.2	158.3	16.1	22.5	11.7	5.6	0.9	1.1	1.0	20.1	158.3
16	1.0	1.1	1.6	0.9	0.5	0.8	2.8	0.7	1.5	31.7	2.9	3.1	2.5	32.4	832.5	55.2	57.8	41.9	35.6	33.4	27.3	51.1	11.4	8.5	51.6	832.5
17	10.8	7.2	5.7	6.6	7.9	8.1	10.4	18.6	35.2	22.2	18.8	207.4	306.3	1930.9	1321.4	1187.1	1448.5	2072.0	2799.6	2171.6	2026.1	630.7	850.7	832.9	747.4	2799.6
18	731.7	1342.5	1522.3	1747.0	1037.6	536.3	248.9	807.6	695.3	722.3	1268.6	1771.6	863.0	762.2	11.4	7.0	13.3	10.6	4.9	3.5	4.6	1.7	2.1	10.8	588.6	1771.6
19	33.6	10.8	91.7	38.6	9.3	145.0	57.4	41.8	19.1	15.0	12.8	17.1	12.4	6.0	4.1	4.2	2.0	1.5	4.7	1.3	1.2	3.3	7.3	5.6	22.8	145.0
20	8.0	3.1	2.7	1.9	1.5	1.3	1.9	1.6	2.0	2.9	20.6	70.6	149.4	125.2	191.8	25.3	19.4	5.4	2.5	13.1	99.3	196.9	738.6	1804.5	145.4	1804.5
21	1292.5	388.2	439.4	389.1	406.0	445.1	358.5	535.4	911.0	1016.7	1444.1	1730.8	1165.2	1997.6	1745.6	2019.2	1987.6	1215.0	1162.5	566.7	922.3	552.3	447.3	49.3	966.1	2019.2
22	37.8	4.6	3.1	16.3	3.2	53.5	8.8	3.2	1.8	2.8	652.2	1167.6	744.9	751.9	695.8	538.9	563.3	537.3	701.3	651.6	525.6	219.8	259.4	381.0	355.2	1167.6
23	50.1	6.2	105.9	61.9	5.8	47.9	51.3	10.3	3.3	21.9	320.7	66.8	42.6	37.5	68.7	19.3	7.5	12.9	25.9	4.5	9.1	13.9	35.3	20.5	43.8	320.7
24	17.2	12.4	20.4	22.4	12.3	9.3	6.8	12.0	7.9	11.9	17.0	13.0	10.1	18.8	15.3	12.8	14.1	10.0	9.1	5.1	6.7	6.4	3.5	2.9	11.6	22.4
25	10.5	6.0	7.8	5.3	9.4	9.8	7.4	6.7	4.3	6.2	9.6	11.3	5.4	4.9	6.2	4.7	2.8	6.3	5.1	2.8	5.2	6.2	4.9	4.2	6.4	11.3
26	3.8	8.2	10.1	5.6	8.7	6.4	9.2	15.5	8.9	5.2	7.9	4.2	7.0	6.1	3.4	2.7	3.3	2.1	1.7	5.9	6.0	1.4	3.0	1.9	5.8	15.5
27	1.1	1.3	2.9	4.9	6.0	4.9	5.1	7.5	10.0	7.4	28.7	227.2	473.2	418.1	113.9	21.1	26.4	9.1	8.6	4.9	1.3	1.7	5.3	1.8	58.0	473.2
28	7.1	5.8	1.6	1.1	17.9	10.8	25.4	15.9	16.9	21.5	36.3	19.5	76.2	116.6	36.8	5.4	157.6	9.8	15.9	9.9	11.2	8.6	7.2	3.2	26.6	157.6
29	6.7	3.4	5.2	5.0	1.8	3.8	3.3	4.6	1.7	1.4	10.7	83.6	453.3	1517.5	331.2	1192.8	962.9	1086.9	1525.4	812.6	1530.0	1812.2	938.0	563.8	535.8	1812.2
30	528.6	385.4	32.7	83.5	68.5	3.0	1.2	6.5	28.2	73.5	107.0	84.7	73.3	52.4	163.1	282.7	6.5	8.5	15.6	6.0	4.0	3.7	1.9	1.8	84.3	528.6
31	1.7	2.0	2.6	1.6	2.3	2.2	5.6	5.4	8.6	5.4	13.4	43.3	19.6	10.8	9.2	38.1	15.0	8.1	38.7	50.3	7.0	54.0	84.6	52.9	20.1	84.6
NO.	23	23	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	564	76%
MEAN	202.0	163.2	146.5	142.3	90.2	82.9	113.9	139.0	136.9	193.7	325.4	417.0	308.2	498.7	396.0	388.9	496.4	384.3	485.6	399.1	431.2	355.4	319.0	305.8		
MAX	1292.5	1342.5	1522.3	1747.0	1037.6	536.3	1063.7	989.6	911.0	1328.5	1713.3	2108.5	1430.8	1997.6	2758.5	2287.1	3588.9	2252.7	3033.5	2873.9	3648.0	3896.4	2697.8	1886.3		



Number of 24HR Exceedences	9	Proposed Guideline
Number of Non-Zero Readings	564	
Maximum 1-HR Average	3896.4 UG/M3	
Maximum 24-HR Average	1727.1 UG/M3	
IZS Calibration Time		Operational Time
Monthly Calibration	0	Operational Uptime
Standard Deviation	592.8	Monthly Average
		564 HRS
		75.8 %
		290.7 UG/M3

Entrance PM_{2.5} (µg/m³) – November 2021

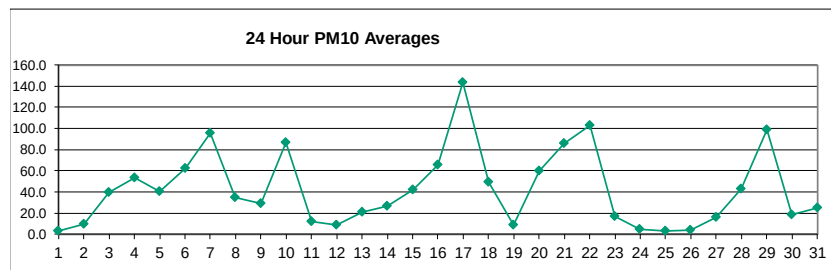
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	3.3	2.0	3.9	1.1	1.3	1.0	1.0	3.0	8.7	3.2	1.4	1.3	2.7	3.1	1.2	1.1	1.1	0.9	0.9	0.8	0.7	0.9	0.6	1.3	1.9	8.7
2	0.4	1.1	3.7	9.0	11.4	7.6	8.2	3.9	8.2	13.9	15.3	10.1	7.2	7.5	9.7	8.2	5.0	5.4	2.8	2.5	3.8	4.4	3.2	8.2	6.7	15.3
3	5.6	4.3	5.6	5.3	6.7	6.6	10.0	6.6	5.1	16.2	11.7	7.9	6.5	4.2	6.1	8.9	17.7	15.1	6.0	6.5	7.8	11.2	24.2	18.2	9.3	24.2
4	19.1	21.0	21.9	15.3	11.3	17.4	19.2	11.2	19.7	25.7	24.2	25.1	19.1	29.0	19.2	12.3	11.5	9.6	17.9	6.2	6.9	11.5	16.8	27.6	17.4	29.0
5	32.3	22.9	18.6	14.2	10.9	8.6	10.4	10.4	9.7	19.7	18.5	14.9	11.5	10.1	8.1	6.3	6.4	12.1	18.9	14.7	17.3	23.6	9.6	7.1	14.0	32.3
6	3.3	5.2	6.9	3.8	1.4	1.6	2.1	10.4	10.3	8.0	7.9	7.3	10.3	15.6	10.0	9.0	9.9	6.6	5.5	8.3	9.0	6.2	4.9	6.7	7.1	15.6
7	8.1	5.6	15.4	13.3	4.7	7.8	8.8	19.6	42.6	33.8	22.5	26.1	17.0	10.2	6.7	7.8	4.9	5.1	3.7	5.5	5.5	3.9	4.4	9.9	12.2	42.6
8	2.9	0.9	0.9	1.5	1.4	2.6	1.2	2.6	6.0	6.3	7.8	6.4	6.7	5.6	11.2	10.6	9.6	6.5	18.8	5.7	3.6	2.3	4.1	3.6	5.4	18.8
9	2.0	1.1	2.0	2.0	1.4	1.9	2.2	4.1	5.5	4.0	5.1	29.2	7.1	7.5	6.3	6.0	4.8	9.6	2.9	2.6	2.3	3.0	2.8	5.6	5.0	29.2
10	3.2	2.8	3.9	11.9	6.4	4.5	3.5	6.3	6.1	7.4	9.5	10.5	10.2	10.0	14.1	14.4	28.4	17.6	19.9	19.0	9.7	28.0	11.9	3.9	11.0	28.4
11	4.7	2.3	2.1	1.0	1.0	9.6	3.2	5.6	6.1	6.5	13.4	12.0	4.3	7.4	4.3	7.6	5.2	8.6	12.7	7.3	2.5	1.5	2.3	1.7	5.5	13.4
12	0.9	0.7	1.3	4.1	9.0	1.6	1.1	2.5	2.3	2.6	4.4	11.4	3.0	2.2	3.7	2.4	1.3	1.3	2.9	3.1	3.0	1.9	2.9	8.5	3.3	11.4
13	5.5	7.9	12.7	8.4	19.1	12.2	14.1	16.1	28.2	19.7	27.6	6.8	21.3	29.0	21.4	16.5	11.4	7.3	8.4	3.8	5.8	11.6	12.7	14.9	14.3	29.0
14	36.3	27.5	38.8	41.2	25.7	18.2	15.9	16.5	15.8	16.5	14.8	16.1	20.8	28.4	36.3	19.4	19.5	14.8	12.5	10.4	12.6	14.4	10.4	11.1	20.6	41.2
15	11.4	14.9	14.3	14.6	24.9	24.1	12.4	12.5	12.5	18.3	19.4	29.4	18.1	17.1	11.4	7.8	3.4	6.1	12.8	16.4	14.5	13.1	14.7	21.7	15.2	29.4
16	19.4	14.0	21.6	14.2	16.5	16.0	20.3	15.3	11.0	5.1	7.6	11.7	10.8	8.8	32.9	30.0	30.4	20.7	18.7	16.3	16.3	22.7	13.1	12.6	16.9	32.9
17	15.5	14.2	10.6	12.1	15.4	23.7	33.2	46.0	47.0	41.7	33.9	40.6	46.3	21.4	11.2	16.1	21.4	33.1	27.1	19.2	15.2	7.7	7.0	6.3	23.6	47.0
18	7.3	9.0	11.2	10.7	11.2	5.0	3.0	2.9	3.4	4.7	8.4	9.8	6.4	5.6	4.8	4.7	13.0	26.4	22.4	20.9	21.9	12.8	18.7	6.0	10.4	26.4
19	4.6	5.3	7.3	7.1	6.4	7.9	9.4	12.7	10.3	8.2	7.7	5.9	6.3	4.5	3.7	1.9	1.6	1.2	4.4	2.1	3.1	5.5	9.9	13.0	6.3	13.0
20	22.1	20.6	17.3	14.8	13.4	11.1	14.9	9.7	13.2	13.7	15.0	13.2	19.8	12.2	9.5	22.1	20.8	18.9	13.3	4.3	3.5	2.3	3.8	9.0	13.3	22.1
21	11.2	6.6	11.4	7.5	4.8	3.3	2.8	3.1	5.4	10.9	31.3	9.6	7.9	5.6	9.2	7.7	10.6	3.8	2.8	3.2	3.1	3.1	4.7	22.2	8.0	31.3
22	24.3	25.8	38.0	30.0	30.5	26.2	31.5	36.3	23.9	11.4	8.6	8.0	7.6	7.6	8.2	4.7	6.2	12.7	5.7	3.8	2.9	6.1	6.0	3.1	15.4	38.0
23	4.2	4.8	2.8	2.2	4.1	1.7	1.4	2.7	1.9	3.2	14.9	21.2	26.3	18.4	25.5	8.4	8.3	8.2	10.0	8.0	7.9	9.9	17.6	4.7	9.1	26.3
24	4.7	4.8	4.2	4.3	3.1	2.5	2.6	2.2	2.6	3.7	4.9	5.4	5.4	5.7	5.5	4.7	4.5	3.8	3.4	2.8	2.8	2.8	3.0	3.2	3.9	5.7
25	3.7	3.8	3.9	4.0	3.3	3.9	3.6	3.2	2.2	2.9	2.3	2.4	2.6	2.0	2.2	1.6	1.5	1.6	1.5	1.5	1.7	2.0	3.0	3.1	2.6	4.0
26	3.7	2.7	3.4	3.6	3.3	3.9	4.0	5.2	3.4	3.8	3.8	2.0	2.0	3.7	2.2	1.9	1.9	1.6	3.3	2.2	2.6	3.1	4.9	4.1	3.2	5.2
27	4.1	3.8	4.3	7.6	15.1	13.8	12.2	20.4	26.4	14.9	13.7	18.5	16.0	15.3	13.4	12.0	9.2	8.0	7.6	4.6	4.2	3.7	5.0	5.5	10.8	26.4
28	6.1	7.7	5.9	6.1	6.8	5.3	7.9	8.1	9.5	17.8	22.2	13.3	5.1	7.8	6.9	4.3	7.1	10.6	12.2	9.7	7.9	4.3	7.2	3.6	8.5	22.2
29	5.0	3.8	5.0	3.5	2.9	3.8	3.2	6.6	5.5	5.9	13.8	10.2	22.2	18.2	39.5	19.2	9.4	10.2	9.1	8.9	13.7	9.5	7.3	4.8	10.0	39.5
30	5.4	4.1	1.4	1.5	1.9	4.1	8.3	3.2	6.8	5.9	5.0	2.7	3.5	3.4	3.2	3.1	2.3	4.0	7.1	4.2	2.8	3.5	3.9	3.6	4.0	8.3
31	4.7	4.3	3.7	2.5	3.8	6.7	4.2	7.5	7.4	5.2	6.6	5.7	4.2	3.6	3.4	7.3	6.5	5.3	7.8	8.4	7.4	9.4	7.5	3.8	5.7	9.4
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	9.2	8.2	9.8	9.0	9.0	8.5	8.9	10.2	11.8	11.6	13.0	12.7	11.6	10.7	11.3	9.3	9.5	9.6	9.8	7.5	7.2	7.9	8.0	8.3		
MAX	36.3	27.5	38.8	41.2	30.5	26.2	33.2	46.0	47.0	41.7	33.9	40.6	46.3	29.0	39.5	30.0	30.4	33.1	27.1	20.9	21.9	28.0	24.2	27.6		



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	744	
Maximum 1-HR Average	47.0 UG/M3	
Maximum 24-HR Average	23.6 UG/M3	
Monthly Calibration	0	
Standard Deviation	8.243	
Operational Time	744 HRS	
Operational Uptime	100.0 %	
Monthly Average	9.7 UG/M3	

Entrance PM₁₀ (µg/m³) – December 2021

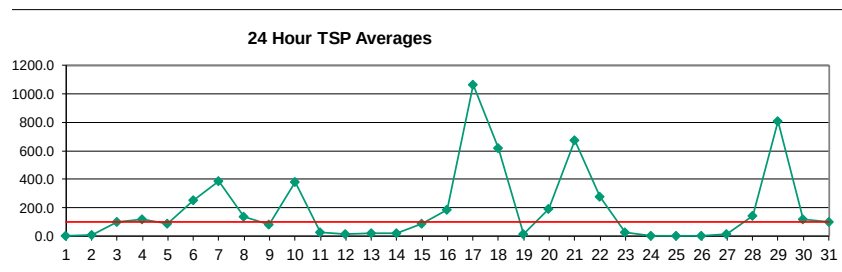
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	17.1	2.7	5.7	1.5	1.8	1.4	1.3	4.4	13.0	4.6	1.8	1.7	3.8	3.9	1.3	1.3	1.2	1.0	1.0	1.0	0.8	1.0	0.7	1.8	3.2	17.1
2	0.5	1.3	5.1	11.5	15.0	8.9	11.8	5.7	12.2	20.8	34.0	13.1	9.4	8.7	16.3	11.1	7.4	7.2	3.3	2.8	4.4	5.5	3.6	11.3	9.6	34.0
3	7.5	5.0	7.2	6.6	8.7	9.1	55.7	39.4	30.8	94.5	60.5	37.7	22.0	22.7	34.4	48.0	101.6	78.8	19.6	29.1	40.6	62.4	107.2	27.3	39.8	107.2
4	28.7	31.5	32.8	41.9	17.0	26.2	28.8	16.8	29.5	38.5	125.5	37.6	28.6	85.4	134.2	82.9	57.3	48.8	26.7	13.6	18.0	50.5	86.7	186.1	53.1	186.1
5	198.1	118.4	100.0	26.2	45.3	22.2	14.5	14.5	13.6	29.2	27.3	21.8	16.4	13.9	10.8	10.5	8.5	14.6	20.7	20.9	24.6	71.5	63.9	64.6	40.5	198.1
6	29.0	63.6	56.4	24.9	7.5	11.6	13.5	86.2	117.6	75.8	57.5	43.2	62.4	212.5	72.2	82.0	76.3	49.5	38.4	76.0	98.9	56.1	34.8	49.7	62.3	212.5
7	60.9	35.0	118.7	139.0	42.9	76.0	81.2	140.2	335.1	228.9	127.7	204.5	140.3	97.2	57.1	48.0	36.2	29.1	19.1	50.5	46.5	29.9	40.3	105.8	95.4	335.1
8	20.5	2.6	2.8	6.9	8.7	22.4	6.9	12.5	37.1	36.6	41.1	26.2	36.8	11.4	16.7	21.9	93.6	61.0	190.0	61.8	33.7	17.0	37.9	36.5	35.1	190.0
9	17.6	5.6	15.4	13.9	8.3	9.6	13.7	21.8	27.9	21.3	33.7	149.8	61.7	52.5	49.1	41.1	34.0	65.0	17.0	8.4	6.6	9.4	6.0	16.3	29.4	149.8
10	10.6	11.3	14.9	58.8	26.0	17.1	13.2	46.0	40.3	53.5	73.5	99.6	84.5	78.0	121.0	118.4	237.2	129.6	160.6	183.5	91.7	272.3	106.3	29.9	86.6	272.3
11	39.6	15.4	13.5	3.2	3.7	48.2	8.1	8.4	9.1	9.7	20.1	18.0	6.4	11.0	6.3	11.4	7.7	12.8	19.0	10.9	3.6	2.1	3.2	2.3	12.2	48.2
12	1.2	0.9	1.8	6.0	63.7	11.4	1.5	3.7	3.2	3.7	6.4	23.2	11.1	6.8	11.2	9.3	2.9	1.8	4.2	4.4	4.1	2.4	4.0	12.5	8.4	63.7
13	7.8	11.3	19.0	12.1	28.3	18.4	21.2	24.2	42.3	29.5	41.4	32.7	27.3	38.5	28.3	21.0	14.9	9.5	11.1	4.4	7.7	16.8	18.3	20.0	21.1	42.3
14	52.5	37.9	54.4	58.1	32.7	20.5	16.8	17.6	18.3	22.2	17.3	20.9	27.7	40.7	50.5	26.5	24.4	17.4	15.3	12.5	16.6	19.2	12.9	13.5	26.9	58.1
15	12.8	17.4	18.8	20.2	36.3	33.8	14.1	14.5	17.1	27.1	29.1	44.2	38.1	131.8	84.7	57.2	20.4	41.6	89.1	111.9	68.6	19.6	22.1	32.5	41.8	131.8
16	119.8	123.9	171.5	97.0	105.0	104.6	130.4	115.0	17.9	12.4	52.5	73.0	77.2	65.8	63.3	44.7	44.3	29.5	25.6	21.5	22.2	31.9	15.4	17.2	65.9	171.5
17	23.0	20.8	11.4	16.3	22.1	35.3	49.7	69.0	70.5	62.6	119.8	348.6	366.8	201.5	90.9	189.7	278.1	437.4	410.2	241.7	192.6	63.6	68.8	58.2	143.7	437.4
18	69.7	106.6	128.5	148.7	126.8	47.5	18.6	15.9	20.1	37.8	60.4	95.4	48.9	35.3	7.1	7.0	19.4	39.6	33.6	31.3	32.8	19.1	28.1	8.9	49.5	148.7
19	5.9	8.7	9.1	8.5	8.5	11.2	13.3	18.2	14.8	11.6	10.9	8.0	8.9	6.0	9.2	2.5	2.1	1.6	6.4	3.0	4.4	8.0	14.7	19.4	9.0	19.4
20	33.2	30.8	25.9	22.3	20.2	16.7	22.4	14.5	19.8	20.6	52.6	96.4	155.4	102.1	64.2	173.3	162.7	125.2	82.9	25.4	19.1	12.2	38.3	107.9	60.2	173.3
21	150.5	88.1	174.1	96.3	52.6	32.3	24.4	32.3	58.7	129.6	418.3	115.2	93.1	50.1	79.3	77.9	90.7	31.3	19.1	18.8	18.8	16.7	25.1	170.6	86.0	418.3
22	169.3	256.8	422.0	232.2	204.4	173.0	157.7	54.5	35.8	17.0	49.6	82.7	84.7	73.3	89.0	53.3	55.7	78.2	50.9	30.4	20.0	34.1	35.6	14.8	103.1	422.0
23	18.2	26.3	14.4	10.1	21.1	6.8	4.9	4.0	5.1	14.8	30.1	31.0	38.6	26.6	37.4	10.7	10.4	10.4	12.8	10.3	10.0	14.1	25.5	5.5	16.6	38.6
24	5.7	5.8	5.0	5.1	3.5	2.9	3.0	2.5	2.9	4.3	6.1	7.0	6.7	6.8	6.2	5.2	5.1	4.2	3.7	3.0	3.0	2.9	3.1	3.3	4.5	7.0
25	4.2	4.1	4.1	4.2	3.4	4.1	3.9	3.5	2.3	3.5	2.6	2.7	3.0	2.3	2.5	1.7	1.6	1.7	1.5	1.6	1.7	2.0	3.1	3.3	2.9	4.2
26	3.9	2.9	3.8	3.9	3.6	4.1	4.3	5.8	3.6	4.0	4.3	2.2	2.2	4.3	2.6	2.0	2.0	1.7	3.5	2.7	3.1	3.3	5.7	5.2	3.5	5.8
27	5.4	4.4	5.5	11.0	22.6	20.6	18.2	30.5	39.6	22.3	20.4	27.8	24.0	22.9	20.0	18.0	13.8	11.9	11.3	6.6	6.1	5.2	7.2	8.1	16.0	39.6
28	9.1	11.6	8.8	9.2	10.2	16.3	65.9	77.2	58.2	174.1	257.1	122.1	26.5	35.3	32.4	12.1	15.1	15.5	18.0	14.3	11.7	6.2	10.6	4.9	42.6	257.1
29	7.1	5.4	7.1	5.0	3.9	13.4	13.0	9.5	7.9	8.7	109.5	106.5	257.6	227.2	513.3	252.5	108.2	111.3	89.5	89.5	175.5	126.4	79.2	55.6	99.3	513.3
30	55.9	39.1	5.6	8.5	9.3	23.1	57.9	19.6	58.3	38.2	20.5	9.7	14.0	11.3	19.2	16.6	3.1	5.5	10.2	5.6	3.4	4.2	4.6	4.3	18.7	58.3
31	6.8	6.0	5.0	3.1	5.2	9.8	5.5	11.1	11.0	7.6	9.7	13.6	16.5	9.6	11.2	44.2	38.0	26.8	69.8	74.8	51.5	89.3	63.2	21.0	25.4	89.3
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	38.5	35.5	47.4	35.9	31.2	27.7	28.9	30.3	37.9	40.8	62.0	61.8	58.1	54.7	56.2	48.5	50.8	48.4	47.9	37.8	33.6	34.7	31.5	36.1		
MAX	198.1	256.8	422.0	232.2	204.4	173.0	157.7	140.2	335.1	228.9	418.3	348.6	366.8	227.2	513.3	252.5	278.1	437.4	410.2	241.7	192.6	272.3	107.2	186.1		



Number of Non-Zero Readings	744
Maximum 1-HR Average	513.3 UG/M3
Maximum 24-HR Average	143.7 UG/M3
Monthly Calibration	0
Standard Deviation	61.78
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	42.3 UG/M3

Entrance TSP ($\mu\text{g}/\text{m}^3$) – December 2021

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	61.0	2.4	5.8	1.3	1.6	1.3	1.1	4.3	14.4	4.5	1.6	1.5	3.0	3.0	0.9	0.9	0.8	0.7	0.7	0.8	0.5	0.7	0.5	1.5	4.8	61.0
2	0.3	0.9	4.5	11.7	15.6	6.5	12.1	5.3	13.2	23.4	50.8	11.2	7.4	6.1	20.7	9.6	7.5	5.5	2.3	1.9	3.0	4.4	2.4	10.4	9.9	50.8
3	6.3	3.6	5.2	4.6	6.4	8.6	178.2	106.4	60.6	148.7	215.7	127.0	66.0	63.8	77.0	115.6	225.3	182.7	54.1	95.2	151.2	189.2	317.8	31.6	101.7	317.8
4	33.2	36.5	38.0	114.7	19.2	30.0	33.2	18.9	34.2	44.6	435.5	43.7	32.8	218.5	463.2	289.6	184.1	118.2	30.3	25.7	40.6	110.3	183.1	263.4	118.4	463.2
5	298.8	270.9	223.2	50.5	149.6	143.7	14.1	12.3	12.4	31.3	29.7	23.7	16.3	13.3	12.8	31.4	7.2	11.3	13.9	17.4	20.0	169.7	225.0	250.8	85.4	298.8
6	120.9	314.0	308.2	151.5	26.8	51.3	70.9	359.5	581.8	333.9	200.7	137.2	218.1	558.4	246.3	269.5	245.8	211.2	181.4	344.0	482.5	256.5	148.3	191.4	250.4	581.8
7	282.1	189.1	372.2	669.5	270.7	415.5	452.6	437.9	1102.5	675.2	356.8	617.0	466.5	482.4	257.7	204.6	173.6	124.4	97.8	284.5	288.9	212.3	243.6	645.9	388.5	1102.5
8	124.7	12.1	11.8	42.7	58.3	129.3	48.7	64.8	119.0	97.0	97.0	56.2	110.8	44.4	18.2	55.4	406.5	233.0	761.1	324.3	157.1	47.4	148.4	159.4	138.6	761.1
9	69.4	15.9	65.5	54.7	25.5	26.3	42.9	54.2	77.7	62.8	125.8	258.9	242.9	180.9	166.0	134.3	116.6	180.0	57.8	19.9	15.7	14.0	8.2	21.4	84.9	258.9
10	14.5	30.8	30.6	94.7	44.0	32.5	28.6	142.6	138.1	156.9	253.0	384.8	330.9	272.5	514.5	483.6	897.0	550.4	784.8	861.7	578.9	1598.1	682.4	180.7	378.6	1598.1
11	229.1	78.2	59.2	20.0	19.3	72.3	10.3	9.5	10.2	11.1	23.3	20.6	7.0	12.6	6.6	12.0	7.7	13.9	20.3	11.8	3.6	2.0	2.9	1.9	27.7	229.1
12	1.0	0.7	1.7	6.3	113.0	20.8	1.6	3.7	2.9	3.5	6.7	33.9	12.8	12.9	24.3	14.1	4.0	1.9	4.1	4.2	3.6	1.8	3.5	13.7	12.4	113.0
13	7.9	11.9	21.5	12.6	32.2	21.2	24.6	28.0	49.1	34.1	47.9	63.7	22.9	27.7	23.0	15.0	11.7	7.5	9.1	3.0	6.3	17.3	17.9	18.1	22.3	63.7
14	60.2	40.4	61.7	66.3	32.6	16.4	11.6	12.0	13.2	18.6	12.8	16.3	22.1	34.9	49.0	21.5	16.8	11.8	10.5	8.7	11.8	13.3	8.9	9.1	24.2	66.3
15	8.5	11.4	13.1	15.0	30.5	28.3	9.4	9.7	13.7	25.0	31.2	50.2	89.9	424.0	169.8	140.4	68.8	112.2	233.2	304.6	178.0	22.4	25.6	37.7	85.5	424.0
16	401.0	481.9	619.0	298.9	339.2	366.2	441.4	372.4	23.0	33.1	109.7	208.8	168.8	214.8	185.0	51.5	51.1	32.7	27.5	21.8	23.2	35.9	13.1	16.0	189.0	619.0
17	24.9	21.6	7.9	14.2	20.4	38.6	56.8	80.3	81.9	72.6	502.9	1593.8	1418.9	947.8	657.0	1483.6	2458.8	3526.2	3829.6	3010.0	2703.2	957.1	1219.0	898.2	1067.7	3829.6
18	1118.7	1771.4	1926.5	2286.7	2125.4	851.3	363.4	229.3	302.8	552.3	688.9	1247.3	689.5	487.7	7.8	7.5	22.4	46.0	38.8	35.7	37.7	21.4	32.0	13.0	621.0	2286.7
19	12.3	10.6	7.0	9.6	17.7	21.1	14.1	20.8	16.5	12.4	11.6	7.8	9.0	5.8	78.3	2.1	1.9	1.3	6.9	3.0	4.2	8.7	15.6	22.0	13.4	78.3
20	38.4	35.8	30.1	25.8	23.3	19.2	25.8	16.6	22.9	23.7	179.0	326.8	525.9	422.4	212.6	507.2	476.6	354.3	185.0	106.1	57.8	41.9	193.6	781.8	193.0	781.8
21	1499.9	997.9	2108.7	1440.0	746.1	389.0	244.2	410.5	522.6	1193.8	1850.9	1132.2	820.9	331.2	431.8	438.4	518.6	187.0	86.0	79.0	96.9	68.1	82.4	444.6	671.7	2108.7
22	320.8	396.8	464.6	309.2	399.5	520.9	346.6	63.4	41.6	19.4	152.9	420.1	573.9	385.5	521.8	367.0	323.3	299.2	275.8	156.2	92.3	59.0	79.7	51.2	276.7	573.9
23	30.0	42.4	45.2	31.8	40.0	12.6	12.5	7.6	12.9	55.8	114.4	35.8	44.2	29.7	42.3	8.1	7.8	8.7	11.9	8.3	9.5	15.9	28.9	3.6	27.5	114.4
24	3.8	3.9	3.3	3.3	2.3	2.0	2.0	1.7	1.9	2.8	4.1	4.9	4.7	4.7	4.2	3.4	3.4	2.7	2.5	1.9	2.0	1.9	2.0	2.1	3.0	4.9
25	2.9	2.7	2.7	2.7	2.2	2.7	2.6	2.3	1.5	2.3	1.8	1.9	2.1	1.6	1.8	1.1	1.1	1.2	1.0	1.0	1.1	1.3	2.0	2.1	1.9	2.9
26	2.6	1.9	2.6	2.7	2.5	2.8	2.9	4.1	2.4	2.7	3.0	1.5	1.5	3.1	1.9	1.3	1.3	1.1	2.3	2.1	2.3	2.2	4.2	4.0	2.5	4.2
27	4.2	3.0	4.4	11.8	26.2	23.9	21.0	35.3	46.1	25.8	23.6	32.3	27.7	26.5	23.1	20.4	15.7	13.8	12.8	6.8	6.3	5.1	7.4	8.8	18.0	46.1
28	10.2	13.2	9.7	10.2	11.6	62.5	428.0	350.9	222.4	592.3	887.2	354.7	143.7	132.1	121.6	31.0	31.8	16.4	20.4	15.9	13.5	6.7	12.0	4.9	146.0	887.2
29	7.4	5.4	7.7	5.2	3.8	160.2	149.8	10.2	8.5	9.7	446.8	599.7	1118.8	1369.8	2106.7	1920.7	1277.9	1149.5	1126.3	932.7	2394.4	2094.1	1432.3	1023.3	806.7	2394.4
30	979.8	592.5	32.0	99.5	51.2	43.2	118.0	49.3	169.5	113.8	116.2	33.4	51.4	24.9	201.5	159.8	2.8	5.3	11.3	5.7	2.8	3.3	3.7	3.3	119.8	979.8
31	7.0	5.7	4.5	2.5	4.6	9.2	4.5	11.5	10.8	7.2	10.0	50.3	68.2	33.9	20.8	151.8	91.7	64.7	254.8	370.2	223.0	530.7	395.4	131.2	102.7	530.7
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	186.5	174.4	209.6	189.4	150.4	113.8	102.4	94.7	120.3	141.6	225.5	254.7	236.1	218.6	215.1	224.3	247.1	241.1	263.0	227.9	245.5	210.1	178.8	169.3		
MAX	1499.9	1771.4	2108.7	2286.7	2125.4	851.3	452.6	437.9	1102.5	1193.8	1850.9	1593.8	1418.9	1369.8	2106.7	1920.7	2458.8	3526.2	3829.6	3010.0	2703.2	2094.1	1432.3	1023.3		



Number of 24HR Exceedences	16	Proposed Guideline
Number of Non-Zero Readings	744	
Maximum 1-HR Average	3829.6	UG/M3
Maximum 24-HR Average	1067.7	UG/M3
Monthly Calibration	0	
Standard Deviation	420.5	
Operational Time	744	HRS
Operational Uptime	100.0	%
Monthly Average	193.3	UG/M3