

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT

NOVEMBER 2020

DECEMBER 15, 2020



WSP



**AMBIENT AIR
QUALITY MONTHLY
REPORT
NOVEMBER 2020
LAFARGE CANADA INC.**

PROJECT NO.: 171-00556-04
DATE: DECEMBER 15, 2020

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December 15, 2020

LAFARGE CANADA INC.
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Attention: Janet Brygger

Dear Ms. Brygger

Subject: Ambient Air Quality Monthly Report – November 2020

The operational uptime for the meteorological systems and all analyzers at the Lagoon station was 100% in November, except for NO₂ and SO₂ which recorded 99.7% uptime due to two hour of equipment malfunction on November 13th at 14:00 and 15:00. There was one exceedance of the 24-hour TSP Alberta Ambient Air Quality Objectives (AAAQOs), zero exceedances of the 24-hour PM_{2.5} AAAQOs, and zero exceedances of the 1-hour PM_{2.5} AAAQG in November at the Lagoon monitoring location.

At the Windridge Station, all analyzers had 100% uptime for the month of November. There were 14 exceedances of the 24-hour TSP AAAQO, zero exceedances of the 24-hour PM_{2.5} AAAQO, and zero exceedances of the 1-hour PM_{2.5} AAAQG. TSP exceedances primarily occurred on days with high westerly wind speeds.

Data collected at all of 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. The operational uptime at the 3 monitors was as follows: 100% at the West monitor; 100% at the Berm monitor; and 100% at the Entrance monitor.

The West GRIMM monitor recorded zero exceedances of the 24-hour TSP AAAQG and zero exceedances of the 24-hour PM_{2.5} AAAQG. The Berm GRIMM had 23 exceedances of the TSP AAAQG and 4 exceedances of the 24-hour PM_{2.5} AAAQG. The Entrance GRIMM monitor exceeded the 24-hour TSP AAAQG for 23 days and did not exceed the 24-hour PM_{2.5} AAAQG.

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

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December 15, 2020

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Date

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



December 15, 2020

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 November 1, 2020 and November 30, 2020.

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

2 NOVEMBER 2020 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)	99.7	20.9	0	11.4	-
SO ₂ (ppb)	99.7	11.1	0	3.5	0
PM _{2.5} (µg/m ³)	100.0	25.8	0*	11.5	0
PM ₁₀ (µg/m ³)	100.0	460.8	-	98.1	-
TSP (µg/m ³)	100.0	948.7	-	162.9	1
Temperature (°C)	100.0	17.2	-	12.9	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	56.7/W	-	48.0/WSW	-
Precipitation (mm)	100.0	2.5*	-	11*	-

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 no exceedances of the 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There was one day exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Lagoon station, all analyzer and meteorological sensors recorded 100% uptime during the month of November, except for NO₂ and SO₂ which recorded 99.7% uptime in November due to two hours of equipment malfunction on November 13th at 14:00 & 15:00.
-

2.2 WINDRIDGE STATION

Table 2-2 Windridge station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
PM _{2.5} (µg/m ³)	100.0	67.0	0*	15.6	0
PM ₁₀ (µg/m ³)	100.0	485.0	-	275.6	-
TSP (µg/m ³)	100.0	985.0	-	398.1	14

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

Data Quality Notes:

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

Calibration/Maintenance Notes:

- At the Windridge Station the analyzers had 100% uptime for the month of November.
-

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} ($\mu\text{g}/\text{m}^3$)	100.0	22.8	0*	15.9	0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	100.0	31.6	-	20.3	-
TSP ($\mu\text{g}/\text{m}^3$)	100.0	28.2	-	14.9	0

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 $\mu\text{g}/\text{m}^3$.

Data Quality Notes:

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

Calibration/Maintenance Notes:

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

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} ($\mu\text{g}/\text{m}^3$)	100.0	227.6	17*	79.8	4
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	100.0	1713.4	-	603.2	-
TSP ($\mu\text{g}/\text{m}^3$)	100.0	3810.6	-	1692.3	23

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 $\mu\text{g}/\text{m}^3$.

Data Quality Notes:

- There were 4 exceedances of the 24-hour PM_{2.5} AAAQG.
- There were 17 exceedances of the 1-hour PM_{2.5} AAAQG.

- There were 23 days exceeding the 24-hour TSP AAAQG.

Calibration/Maintenance Notes:

- The analyzer had 100% uptime during the month of November
-

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} ($\mu\text{g}/\text{m}^3$)	100.0	63.2	0*	20.4	0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	100.0	494.4	-	143.7	-
TSP ($\mu\text{g}/\text{m}^3$)	100.0	1925.7	-	514.1	23

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 $\mu\text{g}/\text{m}^3$.

Data Quality Notes:

- There were no exceedance of the 24-hour PM_{2.5} AAAQG.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were 23 days exceeding the 24-hour TSP AAAQG.

Calibration/Maintenance Notes:

- The analyzer had 100% uptime for the month of November

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 3-2) and tables and graphs illustrating the monitoring results for November 2020.

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

3.1 OPERATIONAL SUMMARY

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

Table 3-1 Instrumentation List at the Lagoon Station

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on November 12 th . The monitor had 100% uptime in November.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ was calibrated on November 12 th . The monitor had 100% uptime in November.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on November 12 th . The monitor had 100% uptime in November
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated on November 5 th . The monitor had 99.7% uptime for the month of November due to two hours of equipment malfunction occurring on November 13 th at 14:00 & 15:00.
Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on November 5 th . The monitor had 99.7% uptime for the month of November due to two hours of equipment malfunction occurring on November 13 th at 14:00 & 15:00.
Precipitation	MetOne 130 Rain/Snow Gauge	The monitor had 100% uptime for the month of November.
Wind Speed	MetOne Wind Sensor	The monitor had 100% uptime for the month of November.
Wind Direction		

Ambient Temperature	MetOne Ambient Temperature Sensor	The monitor had 100% uptime for the month of November.
----------------------------	-----------------------------------	--



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

3.2 MONITORING RESULTS AND TRENDS

The following wind rose (Figure 3-2) illustrates the frequency of wind speed by wind direction for the 24-hour TSP exceedance day. The wind rose indicates that the winds predominantly came from the west direction, which is typical for the airshed.

Table 3-2 summarizes the hourly and daily concentrations recorded in November 2020. Table 3-3 summarizes the recorded exceedances.

Figure 3-3 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-9 shows daily average concentrations recorded during November 2020 for the pollutants listed in Table 3-2. Additionally, Figure 3-4 to Figure 3-8 show the histograms of the hourly concentrations of NO₂, SO₂, PM_{2.5}, PM₁₀, and TSP measured at the Lagoon station.

There was one exceedance of the 24-hour TSP (100 µg/m³) AAAQO. However, there were no exceedances of the 24-hour PM_{2.5}(29 µg/m³) AAAQO. There was no exceedance of the 1-hour PM_{2.5} AAAQG (80 µg/m³).

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

Table 3-2 Summary of November 2020 data at Lagoon

Parameter	Guideline / Objectives		Station	Exceedances		Monthly		1-hour				24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration/Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/Meteorological Variable	Day	
NO ₂ (ppb)	159	-	Lagoon	0	-	0.6	6.5	20.9	27	23	22.4	281.1	11.4	19	99.7
SO ₂ (ppb)	172	48	Lagoon	0	0	0.0	0.8	11.1	30	6	41.4	289.4	3.5	22	99.7
PM _{2.5} (µg/m ³)	80	29	Lagoon	0	0	0.0	4.4	25.8	9	18	38.8	254.8	11.5	19	100.0
PM ₁₀ (µg/m ³)	-	-	Lagoon	-	-	0.0	29.8	460.8	19	13	11.4	69.5	98.1	26	100.0
TSP (µg/m ³)	-	100	Lagoon	-	1	0.2	44.6	948.7	19	13	11.4	69.5	162.9	26	100.0
Temperature (°C)	-	-	Lagoon	-	-	-11.0	0.8	17.2	2	15	45.1	250.3	12.9	3	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	2.3	24.6	56.7/W	29	10	56.7	258.8	48.0/WSW	27	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.0	2.5	12	13	43.5	260.0	11.0		100.0

Table 3-3 Days exceeding the TSP AAAQO at the Lagoon Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Lagoon						
2020-11-26	162.9	-	260.6	33.4	37.8	High wind event
Total # of Exceedances	1	0				
Maximum # of Exceedances (November)	2 (2010)	0 (2010 - 2019)				
Average # of Exceedances (November)	0	0				
Minimum # of Exceedances (November)	0 (2011, 2012, 2013, 2014, 2016, 2017, 2019)	0 (2010 - 2019)				

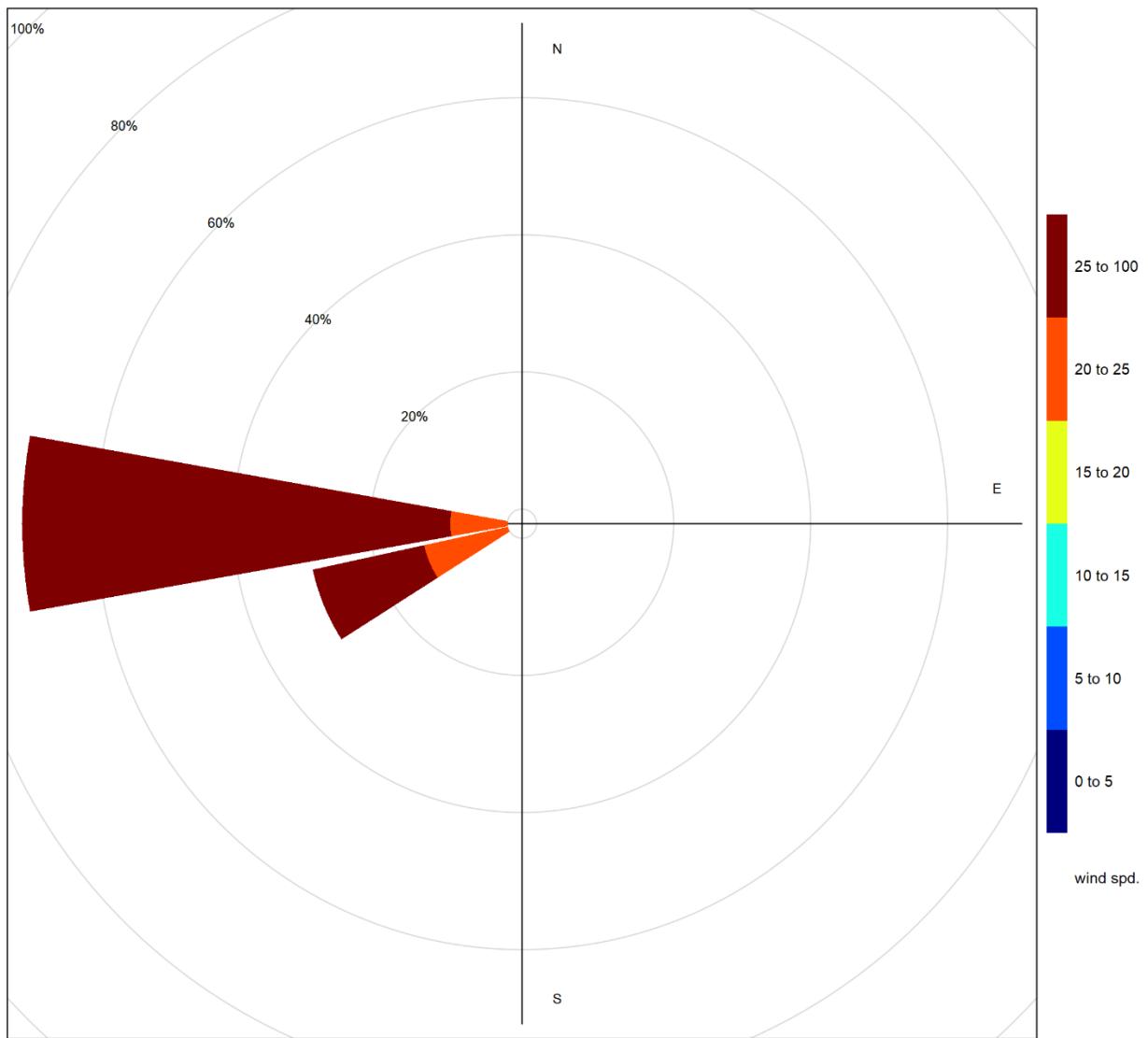


Figure 3-2 Wind rose for TSP exceedance day recorded at the Lagoon Station

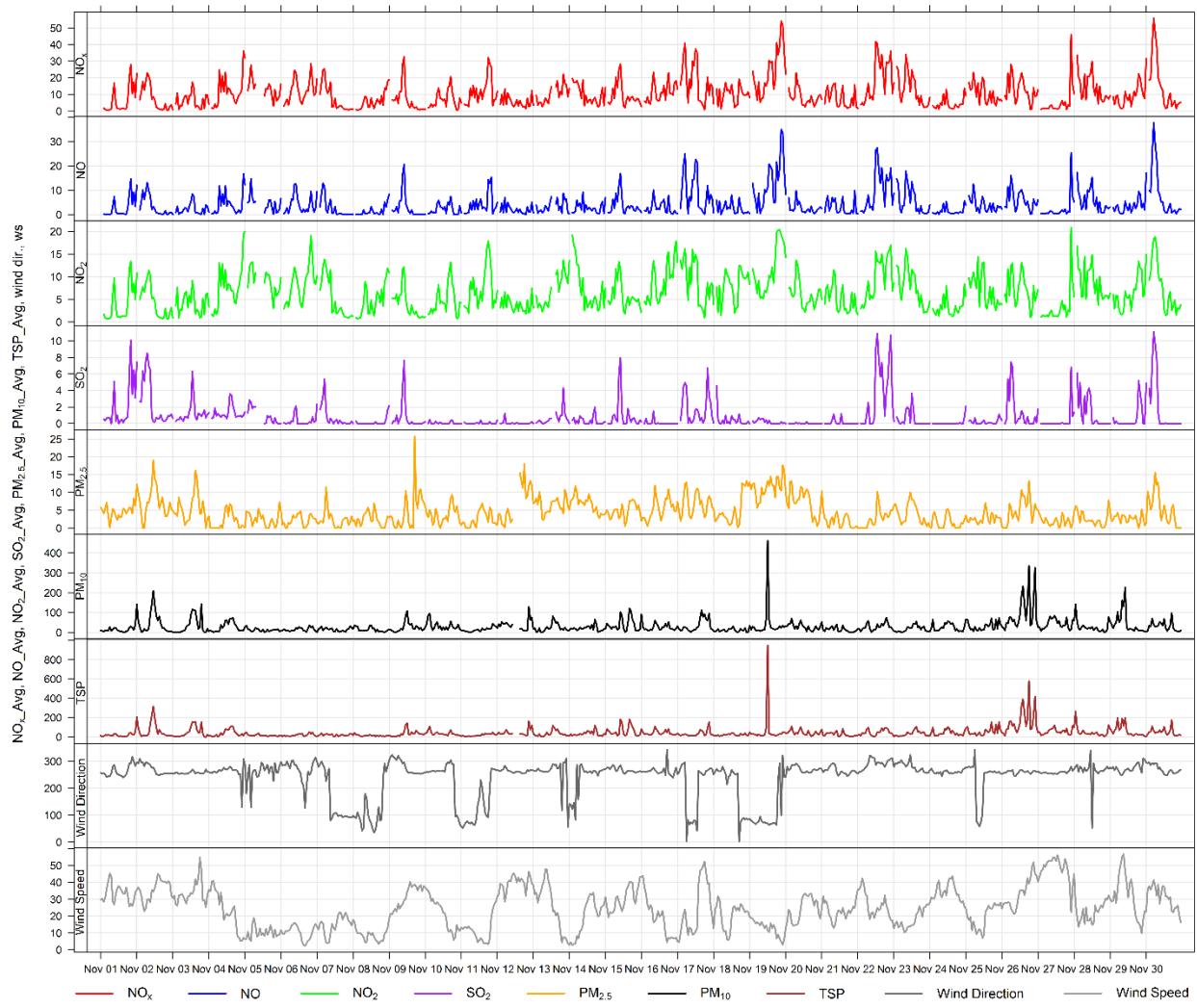


Figure 3-3 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

Histogram of Hourly NO₂ Readings

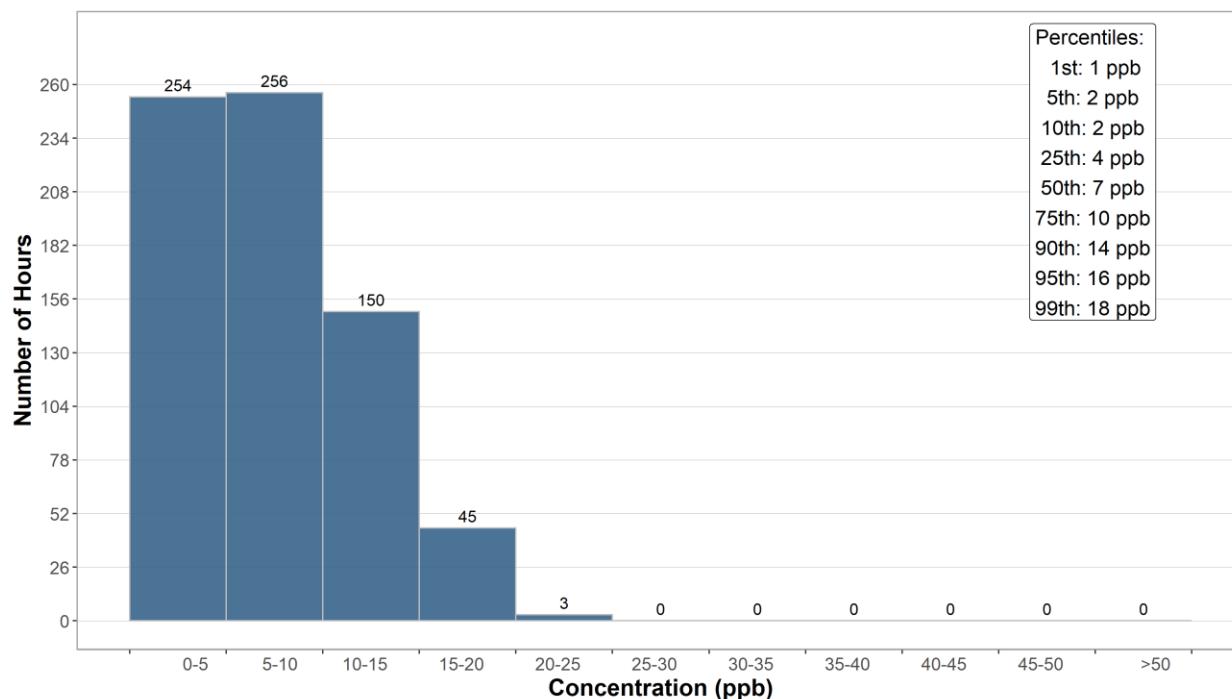


Figure 3-4 Histogram of hourly NO₂ concentrations at the Lagoon station

Histogram of Hourly SO₂ Readings

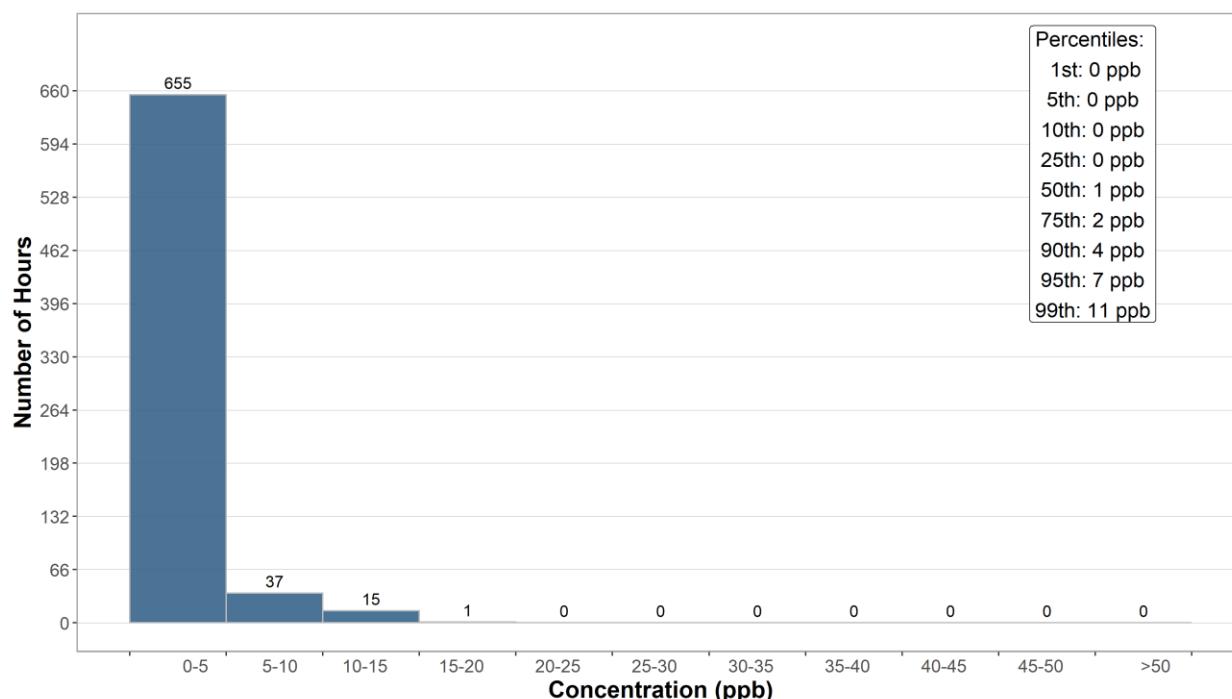


Figure 3-5 Histogram of hourly SO₂ concentrations at the Lagoon station

Histogram of Hourly PM_{2.5} Readings

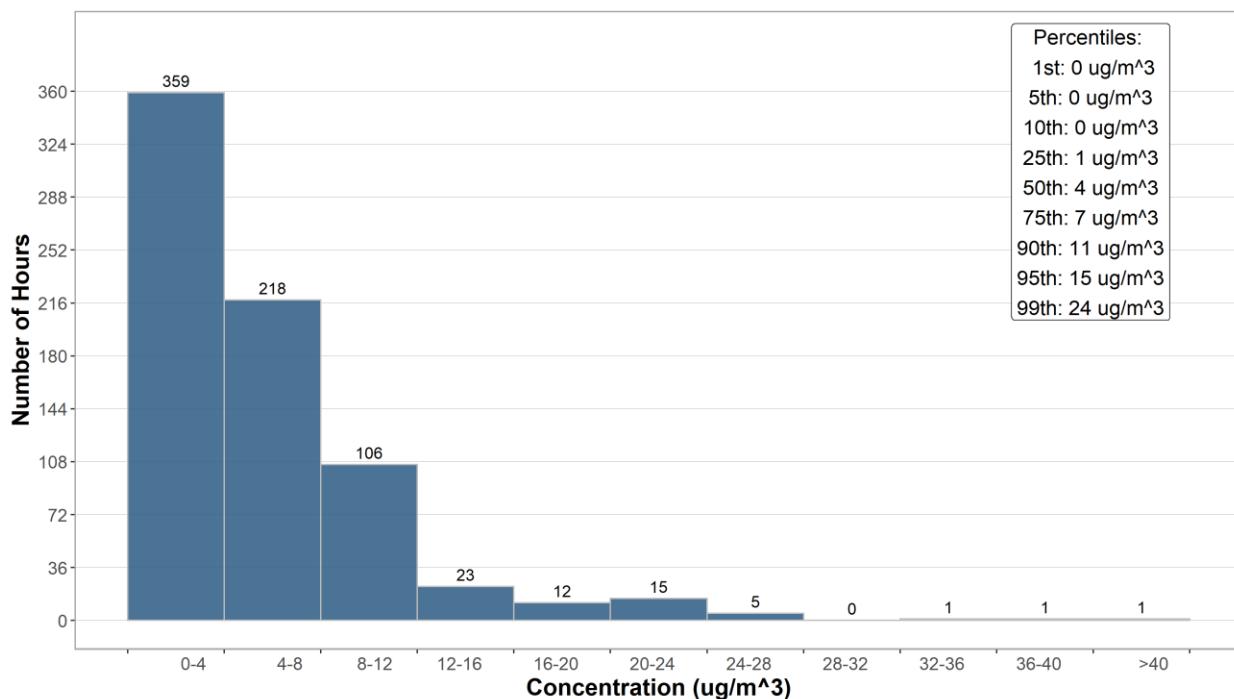


Figure 3-6 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

Histogram of Hourly PM₁₀ Readings

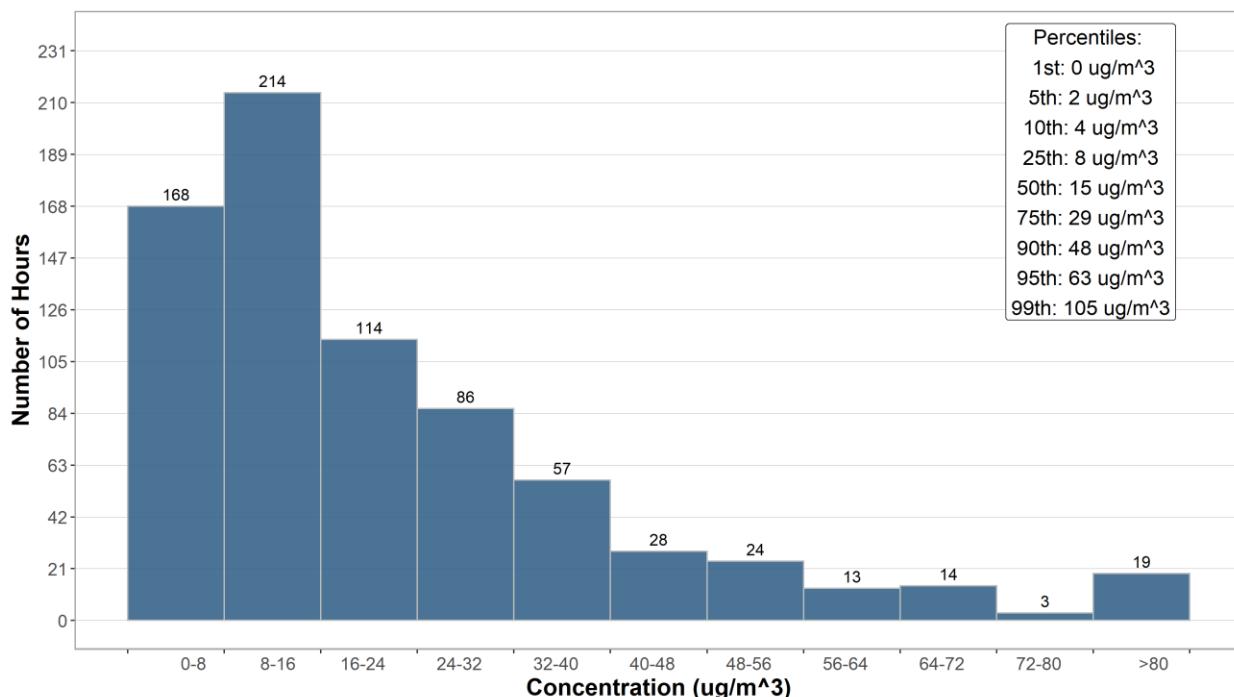


Figure 3-7 Histogram of hourly PM₁₀ concentrations at the Lagoon station

Histogram of Hourly TSP Readings

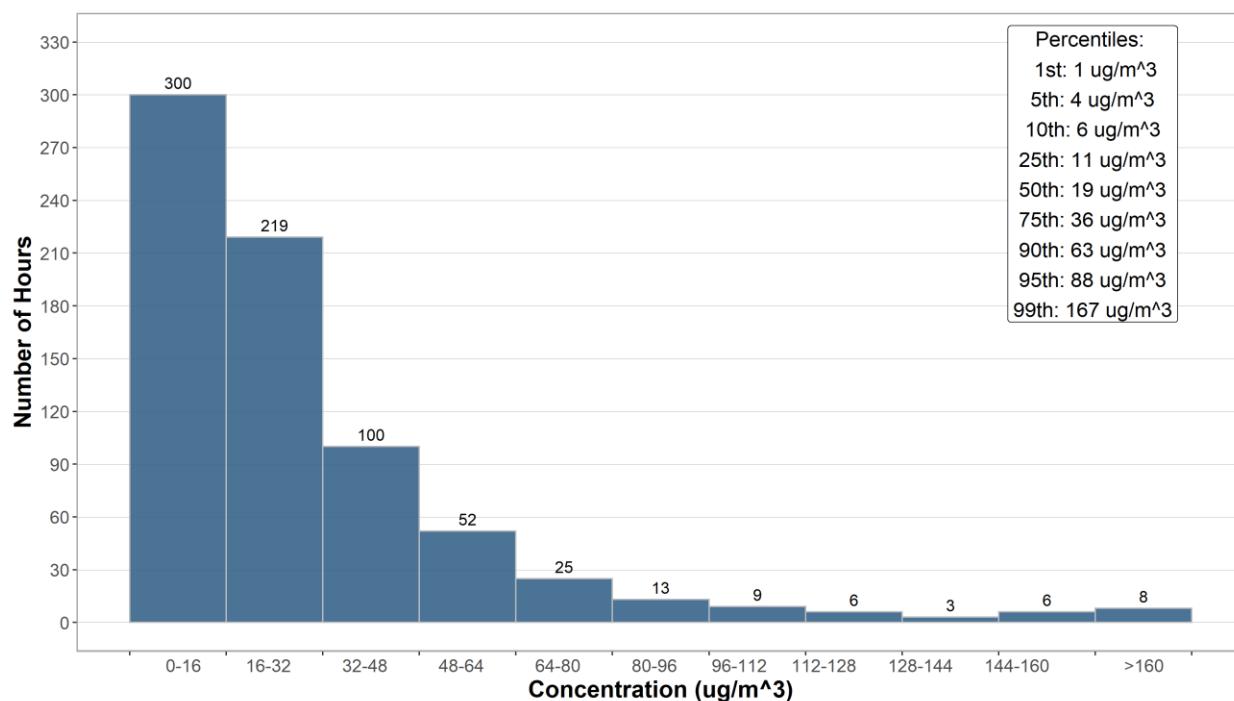


Figure 3-8 Histogram of hourly TSP concentrations at the Lagoon station

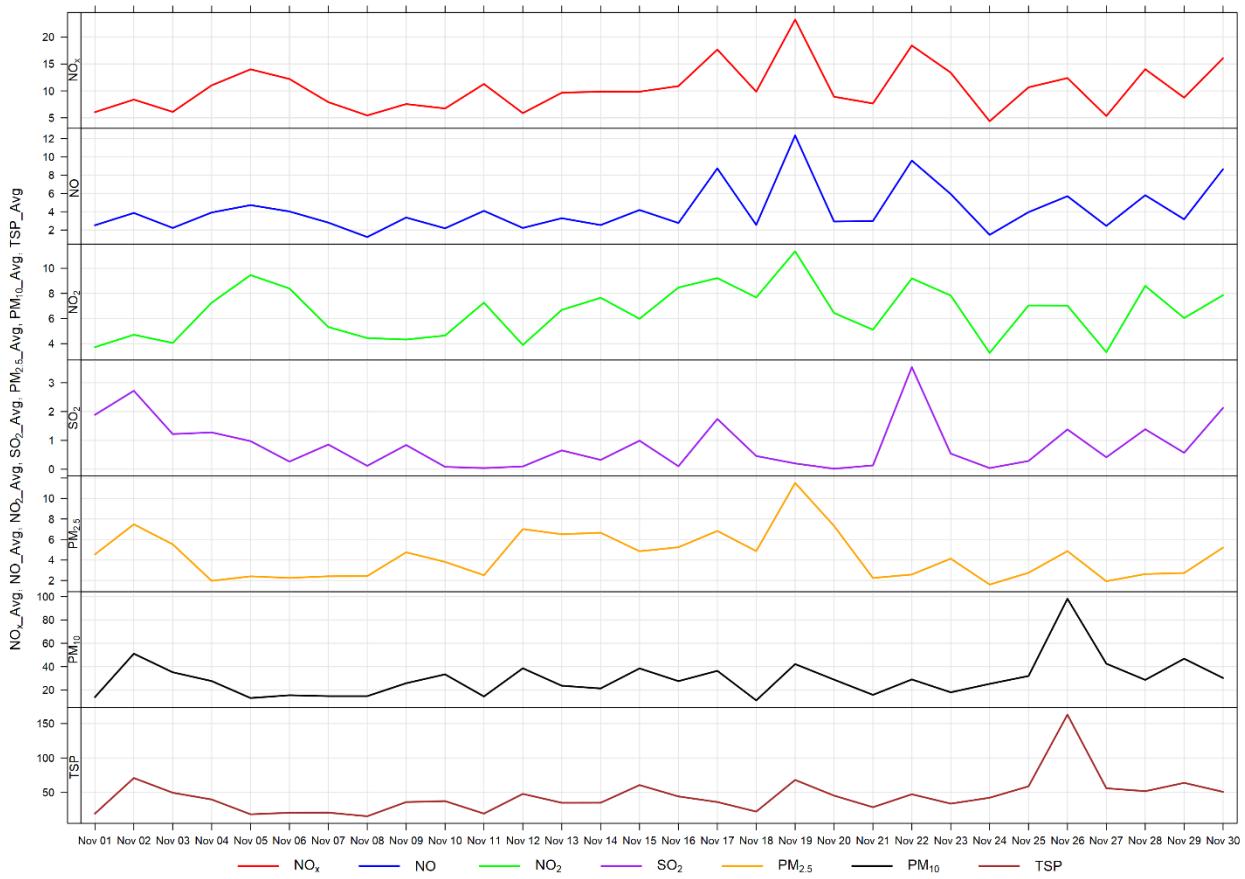


Figure 3-9 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

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 shows that PM₁₀ and TSP 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.

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.

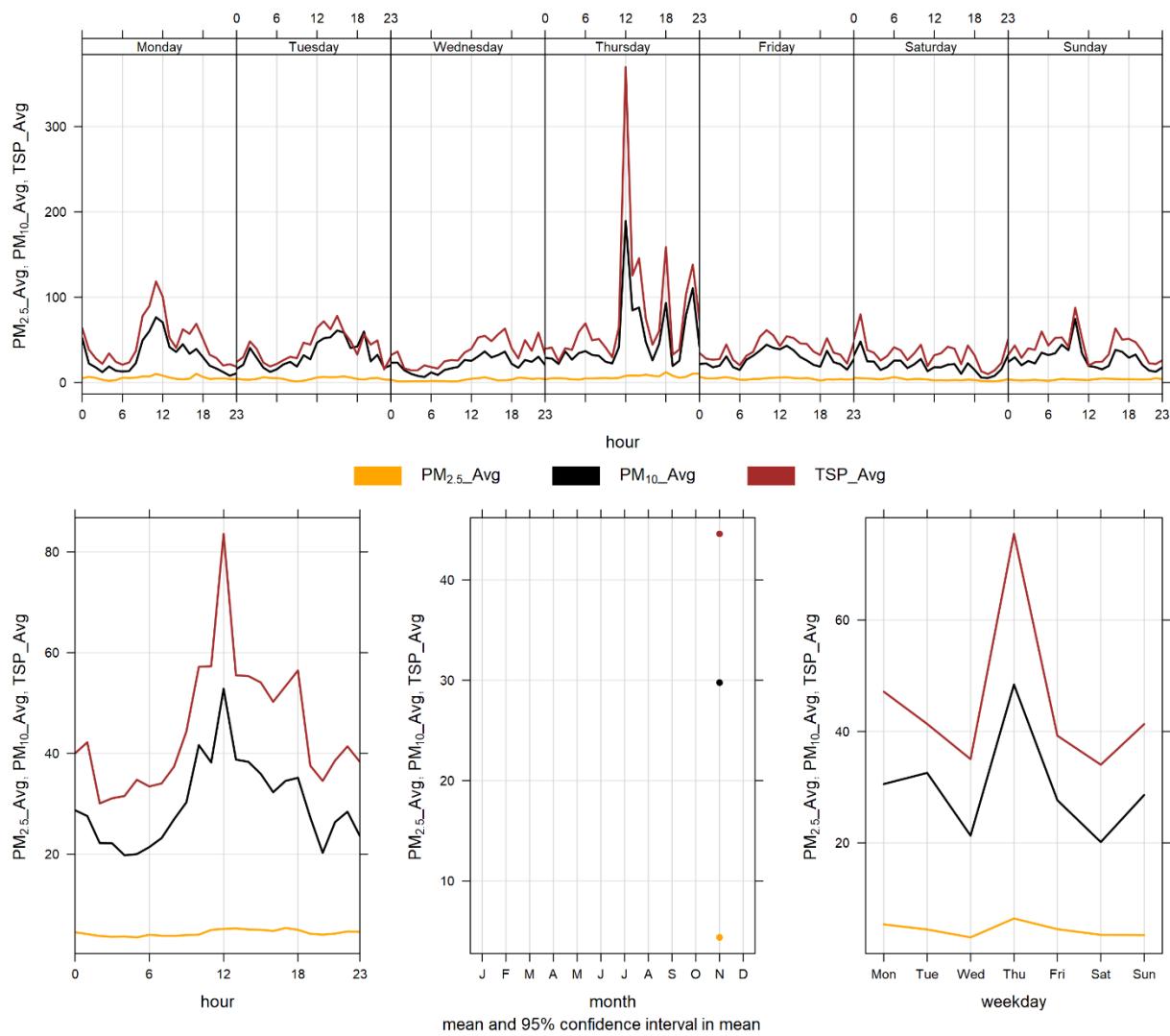


Figure 3-10 Lagoon monitor particulate matter time variation

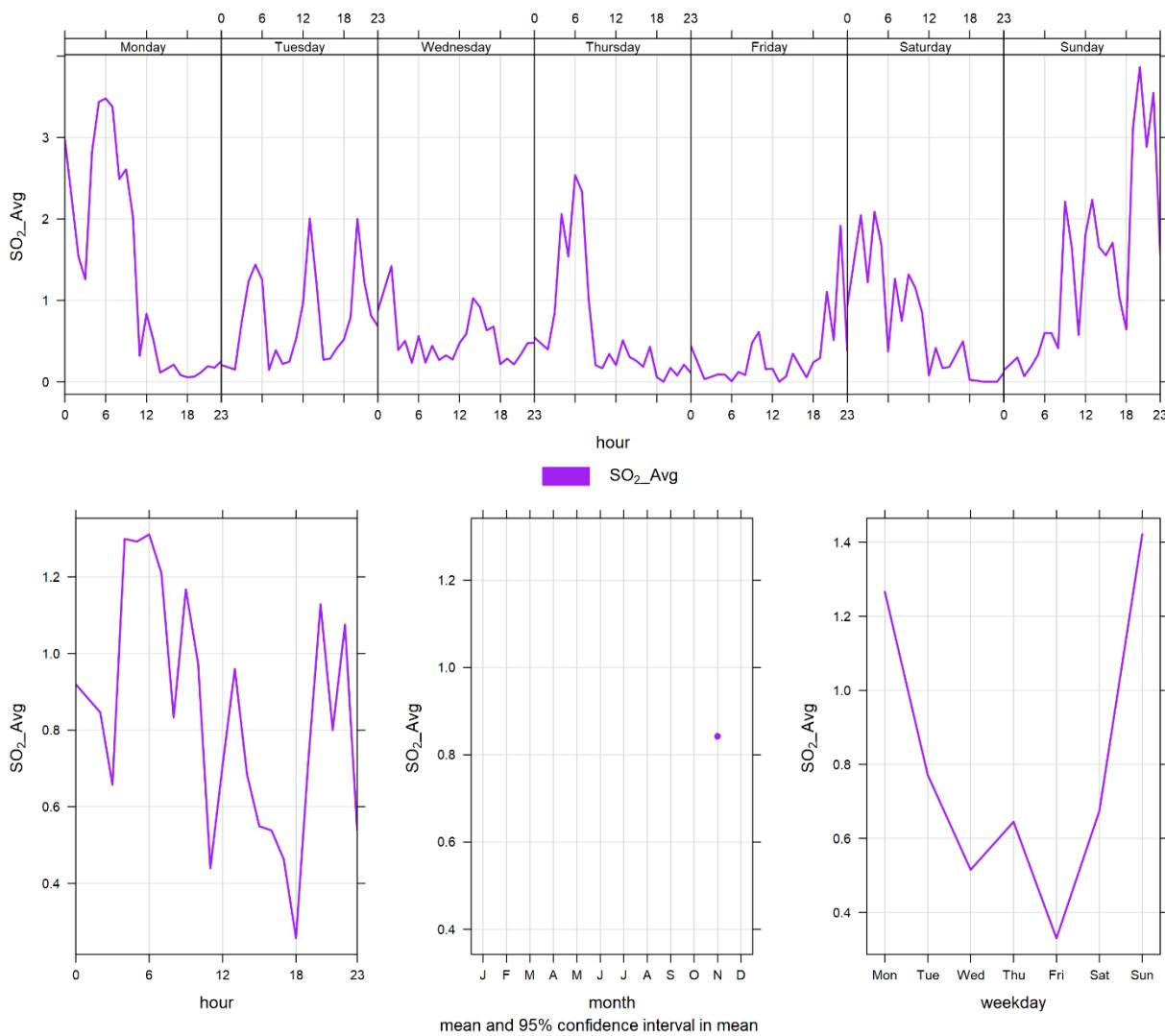


Figure 3-11 Lagoon monitor SO_2 time variation

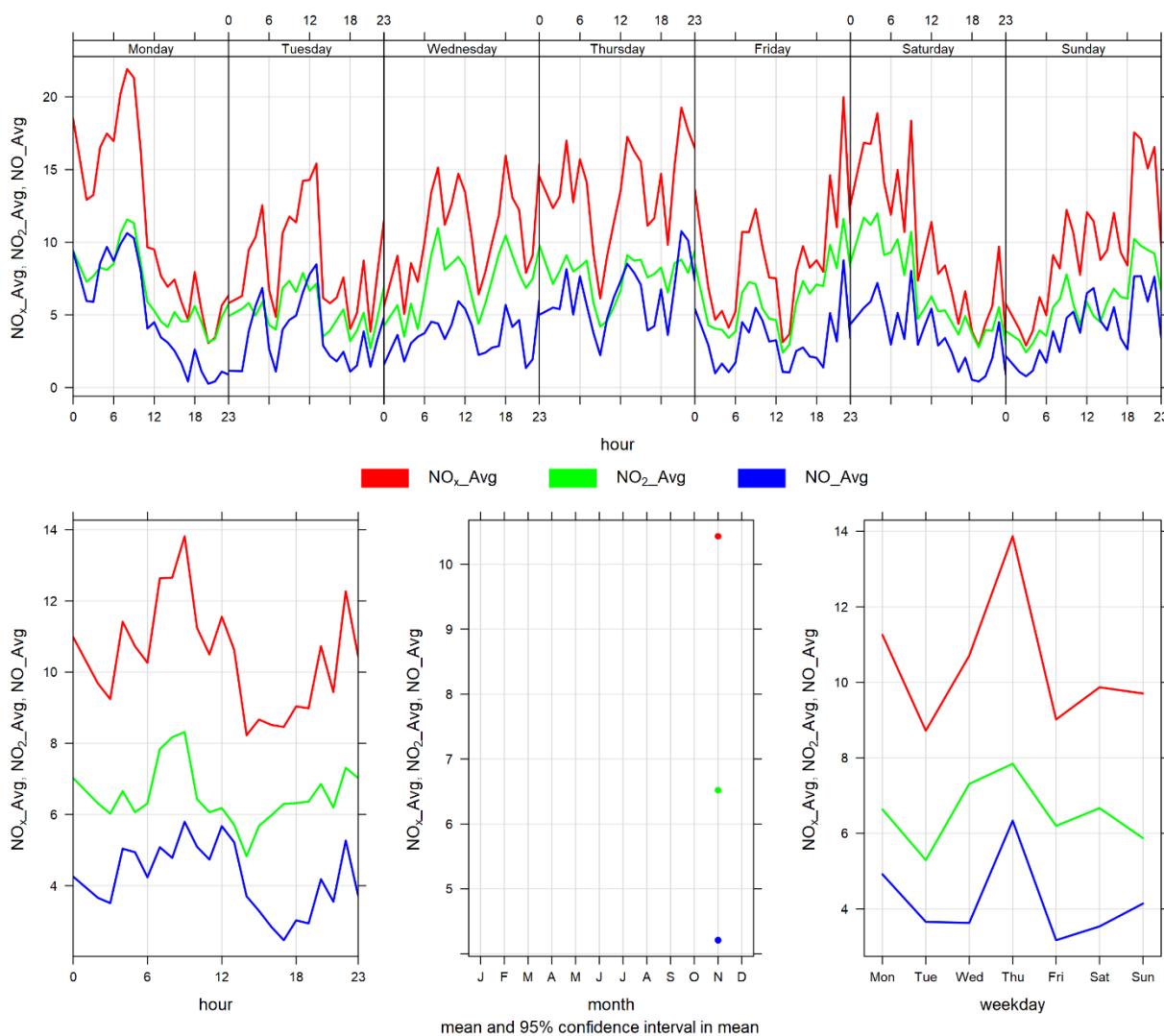


Figure 3-12 Lagoon monitor NO_x time variation

4 WINDRIDGE STATION

The Windridge station contains TSP, PM₁₀, and PM_{2.5} analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), a data summary table (Table 4-2), a table of recorded exceedances (Table 4-3), site visit notes, and graphs illustrating the monitoring results for November 2020.

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

4.1 OPERATIONAL SUMMARY

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

Table 4-1 Instrumentation List at the Windridge monitoring location

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on November 12 th . The monitor had 100% uptime for the month of November.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on November 12 th . The monitor had 100% uptime for the month of November
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on November 12 th . The monitor had 100% uptime for the month of November.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in November 2020, and Table 4-2 summarizes the recorded exceedances. Figure 4-1 illustrates the time series for hourly PM, Figure 4-2 to Figure 4-4 illustrate 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 exceedance days, 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 14 exceedances of the 24-hour TSP AAAQO. TSP exceedances occurred primarily on days with high westerly wind speeds.

Historically in November, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances is 1 and 0, respectively.

Due to flood mitigation construction at Exshaw creek the Windridge monitoring station was taken out of operation and removed from the site on April 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 contributed

to an increase in TSP levels. Further, the lack of precipitation and strong wind gusting (>85 km/h) that occurred in November may have also contributed to increased particulate levels that may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, Lac des Arcs lake, dry sections of the Bow River, roads (sanding from previous snowstorms) and open areas. Most of the TSP exceedances recorded were associated with high wind events in November.

Table 4-2 Summary of November 2020 data at the Windridge Station

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour				Maximum 24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM _{2.5} (µg/m ³)	80	29	Windridge	0	0	0.0	8.0	67.0	21	16	21.8	255.1	15.6	12	100.0
PM ₁₀ (µg/m ³)	-	-	Windridge	-	-	0.0	82.6	485.0	17	23	26.2	275.2	275.6	26	100.0
TSP (µg/m ³)	-	100	Windridge	-	14	0.0	107.1	985.0	26	19	39.4	258.4	398.1	26	100.0

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

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Windridge						
2020-11-02	101.1	-	270.5	35.6	34.7	High wind event
2020-11-03	140.9	-	257.7	33.8	27.4	High wind event
2020-11-04	106.6	-	265.2	23.7	55.2	High wind event
2020-11-09	106.8	-	275.6	31.0	54.7	High wind event
2020-11-12	221.0	-	263.8	39.4	49.4	High wind event
2020-11-14	115.1	-	261.9	18.7	51.2	Winds predominantly from the west
2020-11-15	140.8	-	267.3	30.3	42.8	High wind event
2020-11-17	109.3	-	270.5	24.1	66.5	High wind event
2020-11-20	121.7	-	267.8	23.9	54.3	High wind event
2020-11-24	244.3	-	260.2	34.2	48.8	High wind event
2020-11-25	180.3	-	268.6	19.4	52.4	Winds predominantly from the west
2020-11-26	398.1	-	260.7	33.5	37.9	High wind event
2020-11-27	221.3	-	258.7	48.0	33.9	High wind event

2020-11-29	119.3	-	270.0	32.3	37.4	High wind event
Total # of Exceedances	14	0				
Maximum # of Exceedances (November)	7 (2018)	0 (2010-2019)				
Average # of Exceedances (November)	1	0				
Minimum # of Exceedances (November)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2019)	0 (2010-2019)				

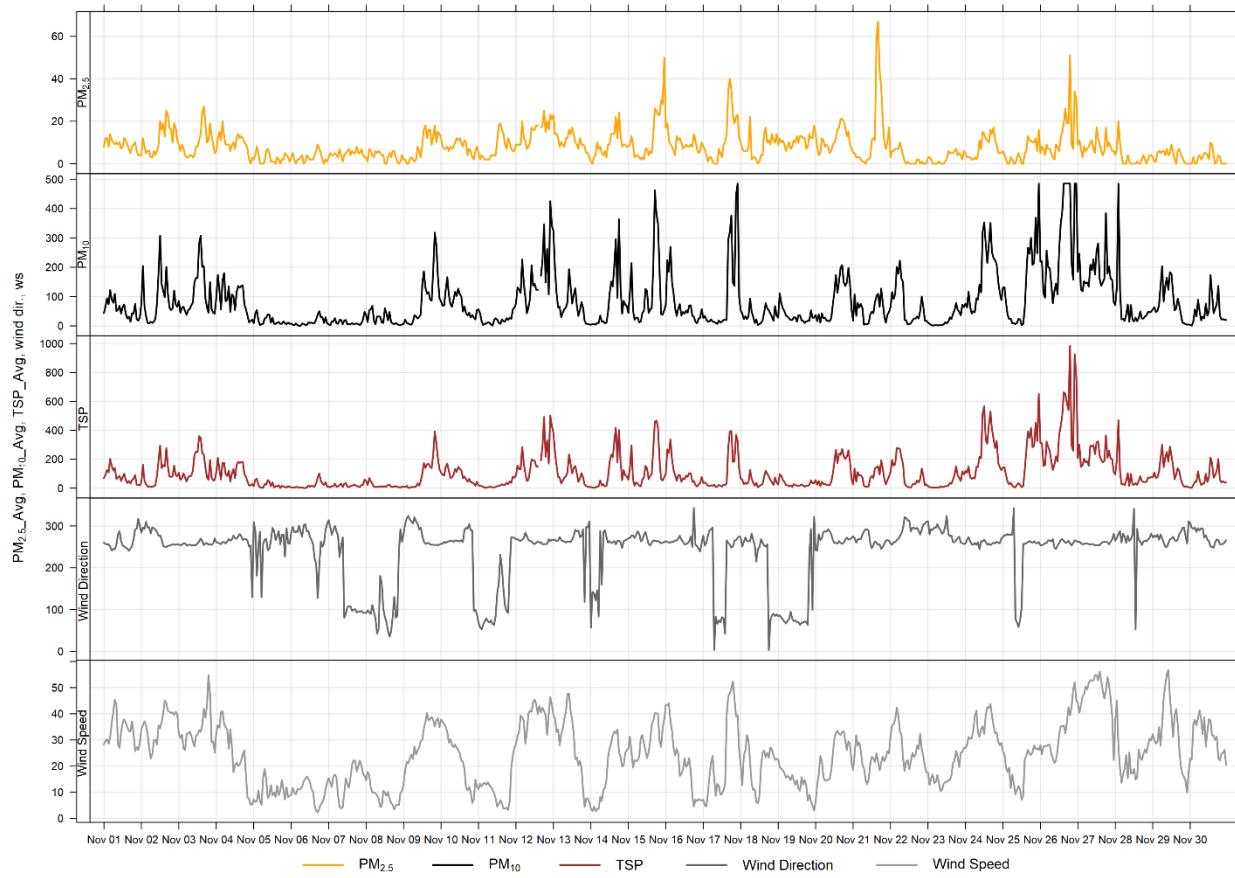


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

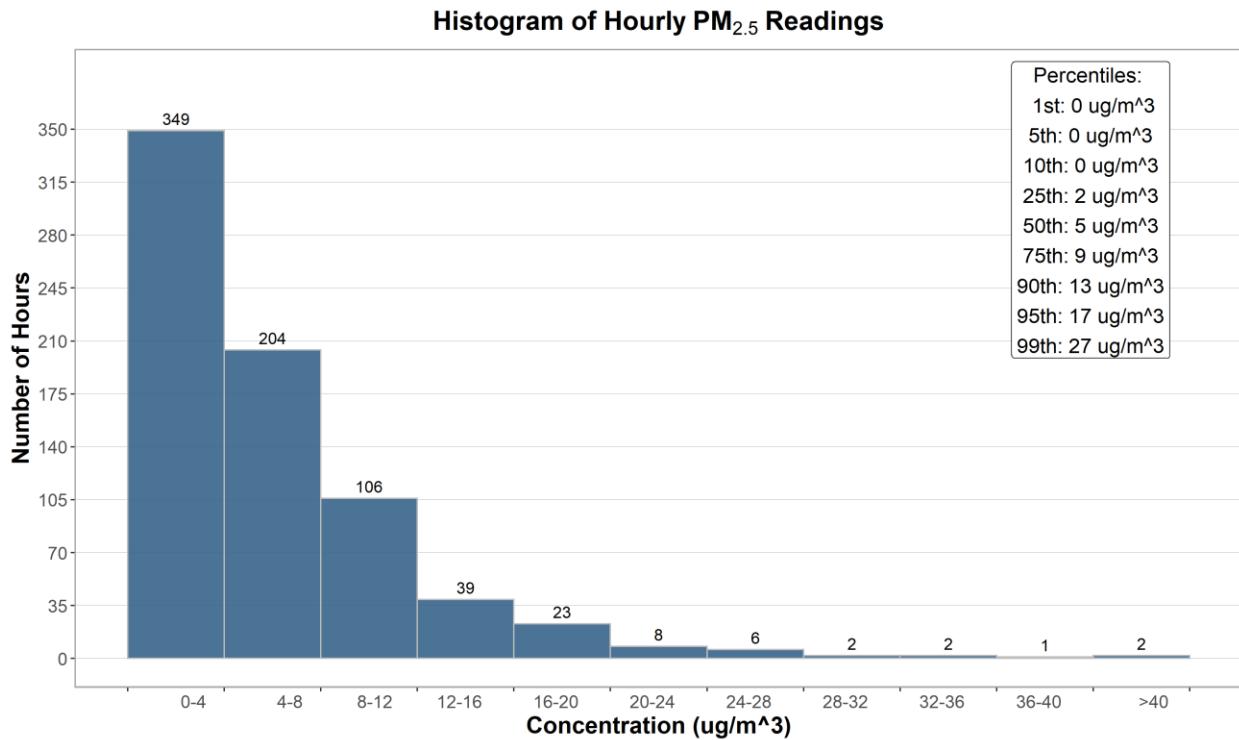


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

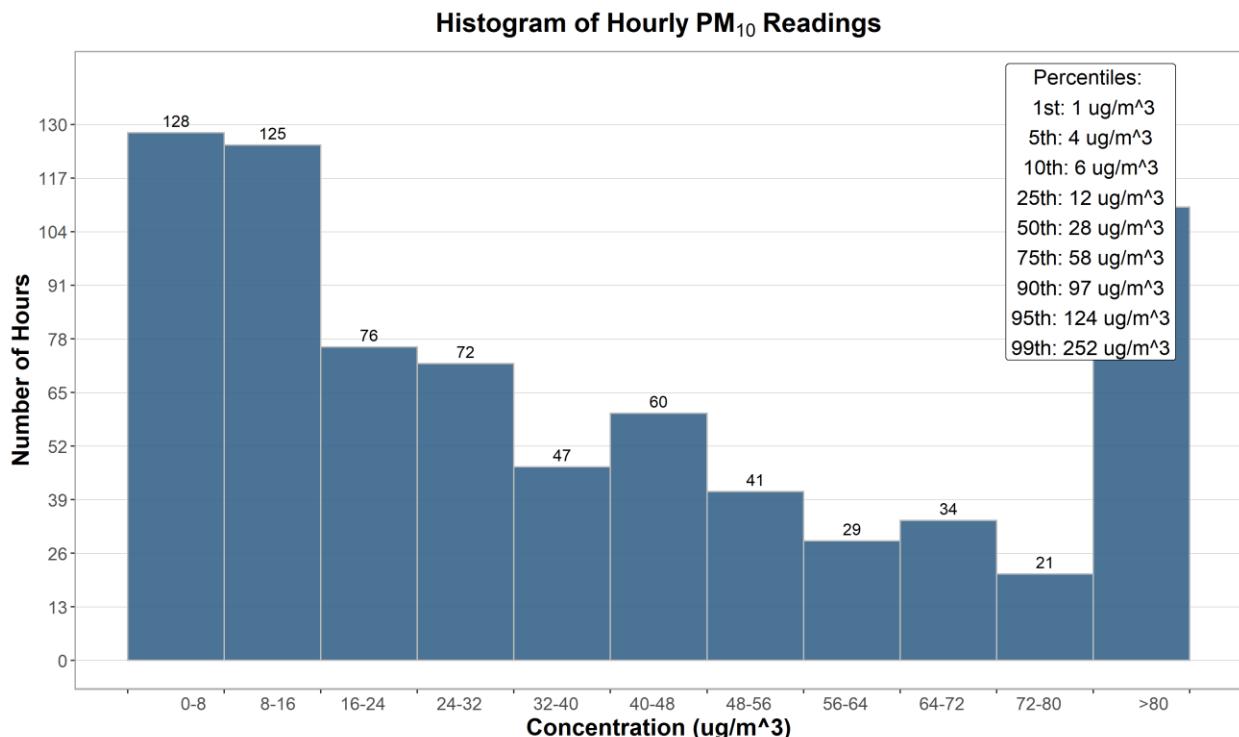


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

Histogram of Hourly TSP Readings

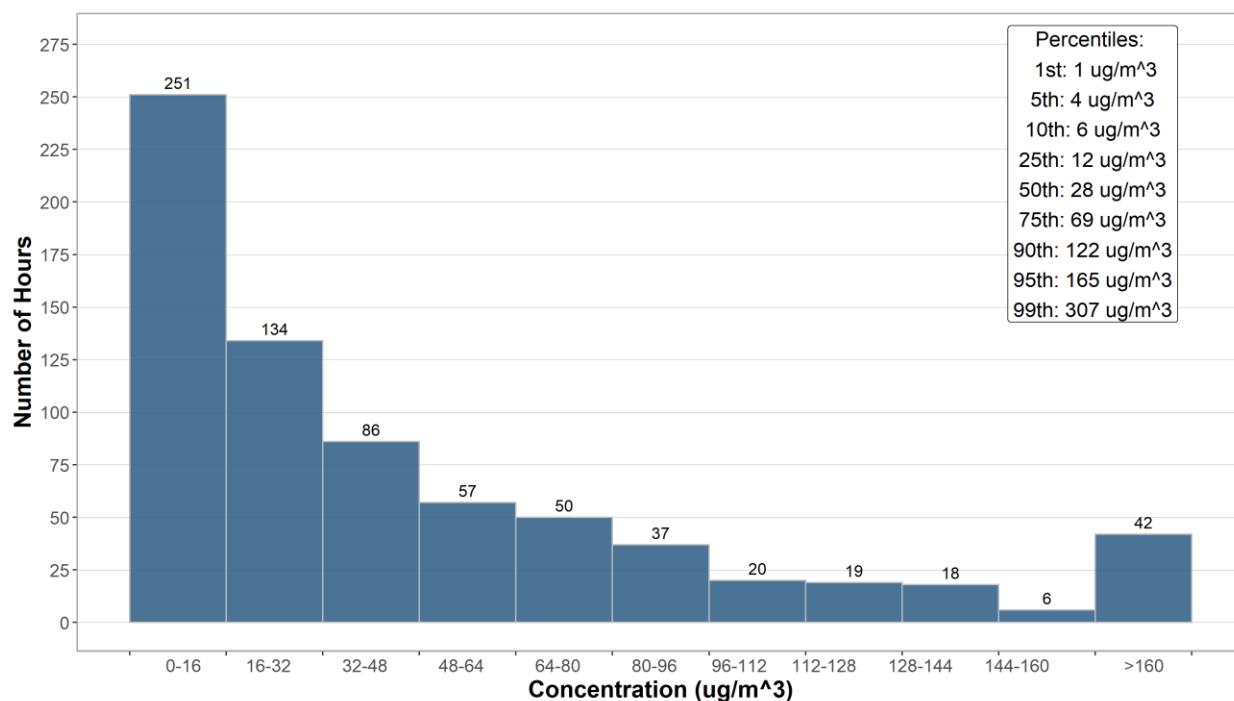


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

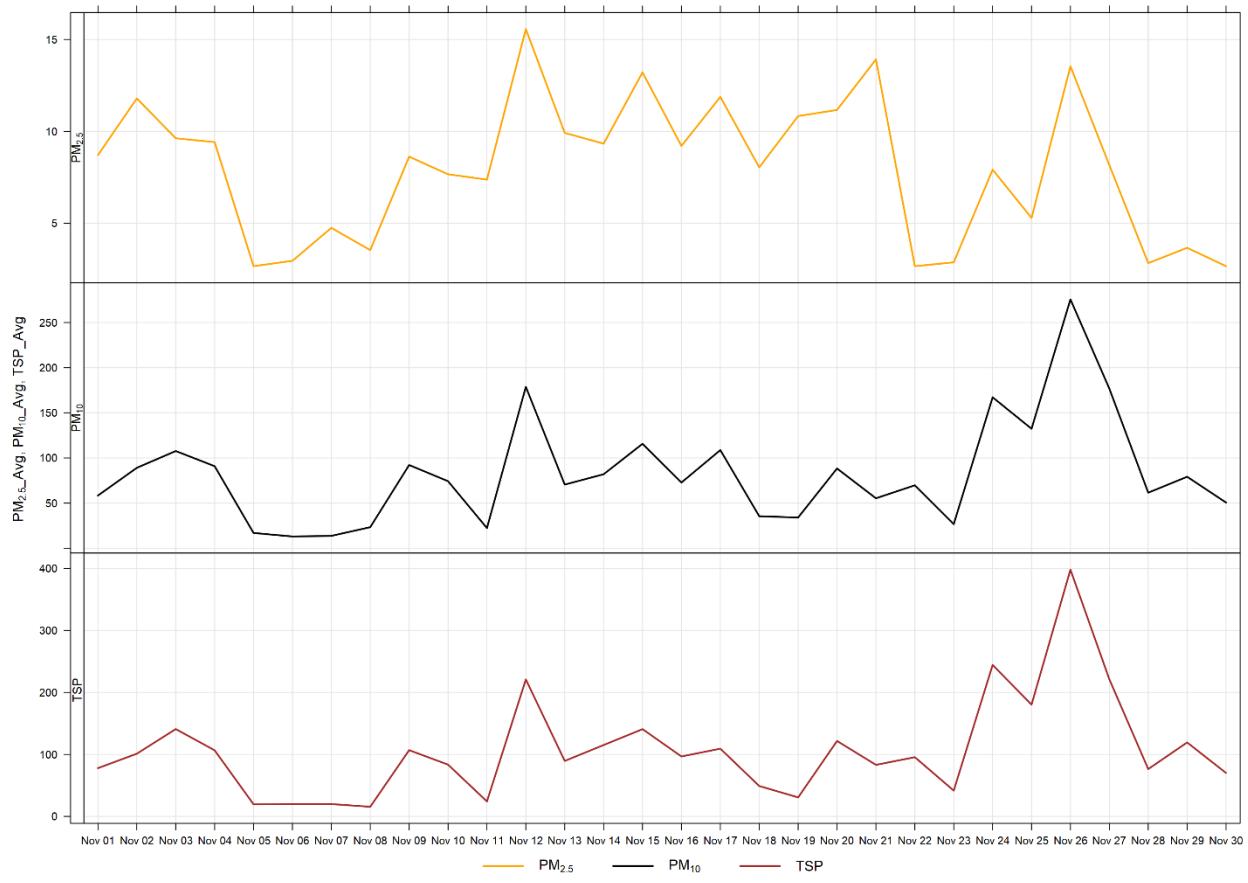


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 14 days of TSP exceedances. The wind rose shows that the winds predominantly came from the west direction, and were predominately over 25 km/hr.

Figure 4-7 illustrates the hourly PM concentrations recorded at the Windridge monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-7 is based on data collected during November 2020 and similar to the Lagoon station 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.

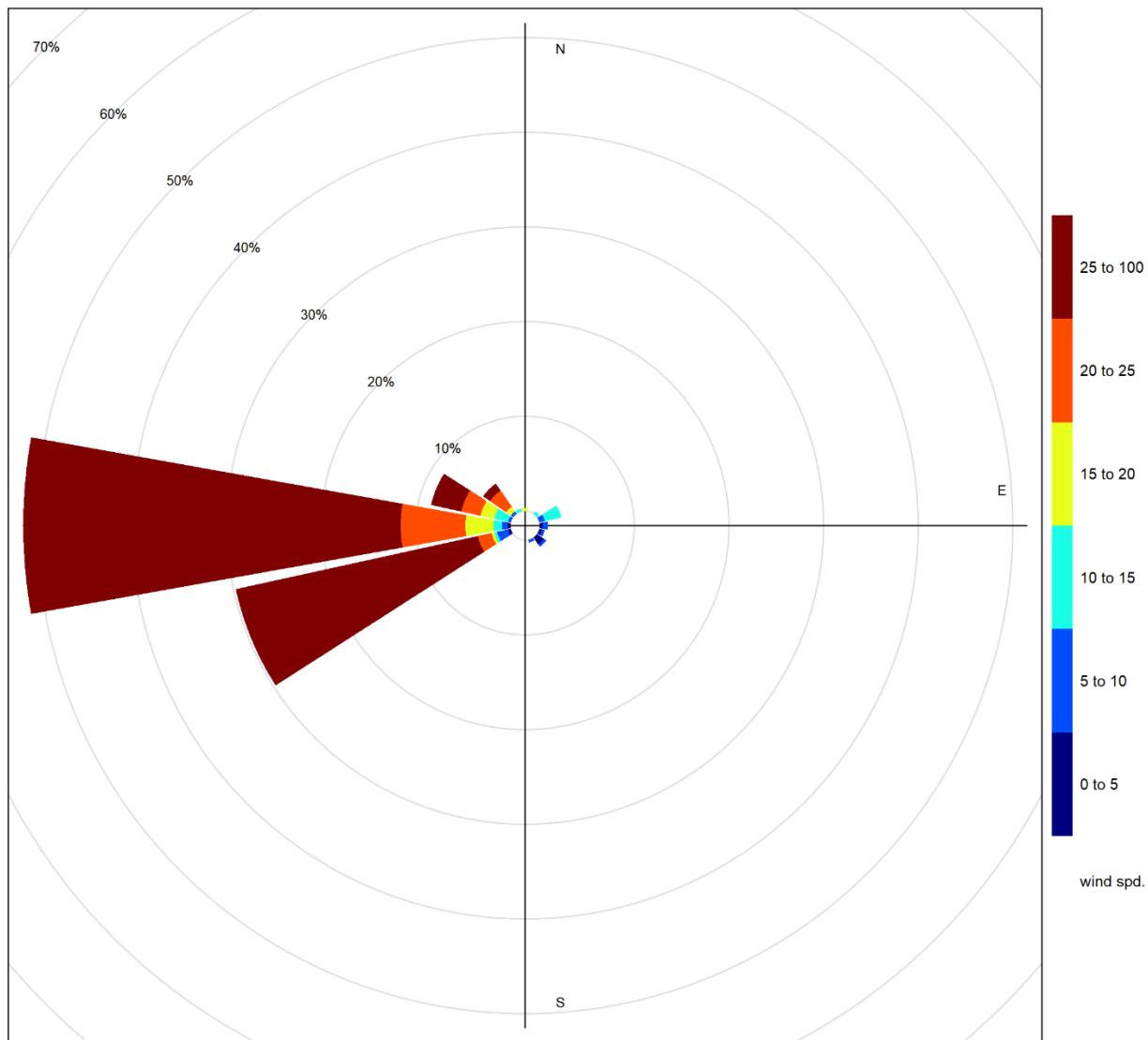


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

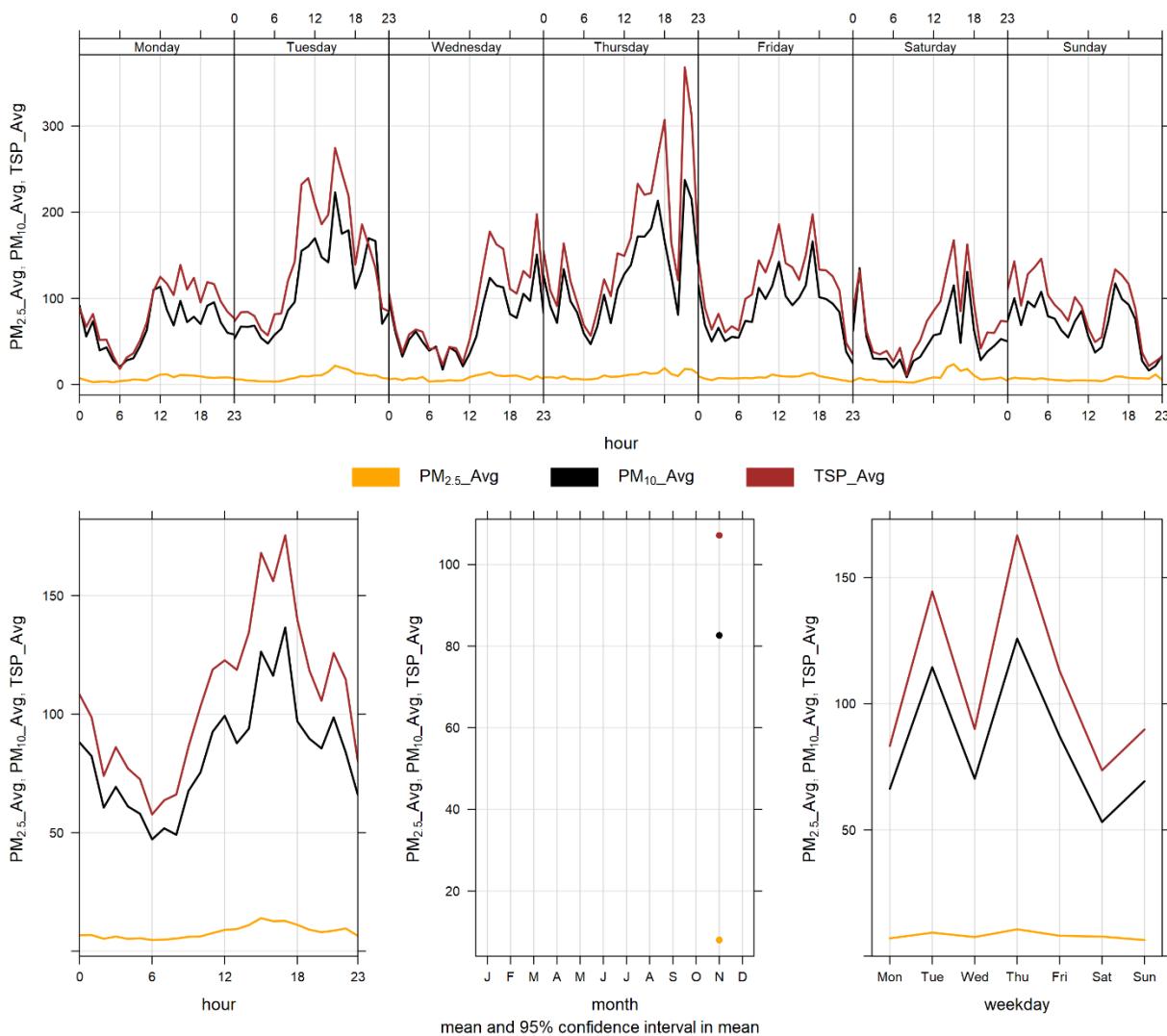


Figure 4-7 Windridge particulate matter time variation

5 WEST INDUSTRIAL GRIMM

5.1 OPERATIONAL SUMMARY

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

Table 5-1 Instrumentation List at the West monitoring location

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

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 exceedances of the 24-hour TSP guideline (100 µg/m³) and zero exceedances of the PM_{2.5} (29µg/m³) guideline.

Historically in November, the average number of 24-hour TSP guideline exceedances and 24-hour PM_{2.5} guideline exceedances are 1 and 0, respectfully. The maximum number of 24-hour TSP guidelines exceedances was 5 days in 2012 for TSP, and 1 day in 2012 for PM_{2.5}.

Table 5-2 Summary of November 2020 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/m³)	80	29	West	0	0	0.2	3.4	22.8	19	17	14.7	71.9	15.9	19	100.0
PM₁₀ (µg/m³)	-	-	West	-	-	0.2	4.4	31.6	19	17	14.7	71.9	20.3	19	100.0
TSP (µg/m³)	-	100	West	-	0	0.1	3.9	28.2	18	21	23.9	90.0	14.9	19	100.0

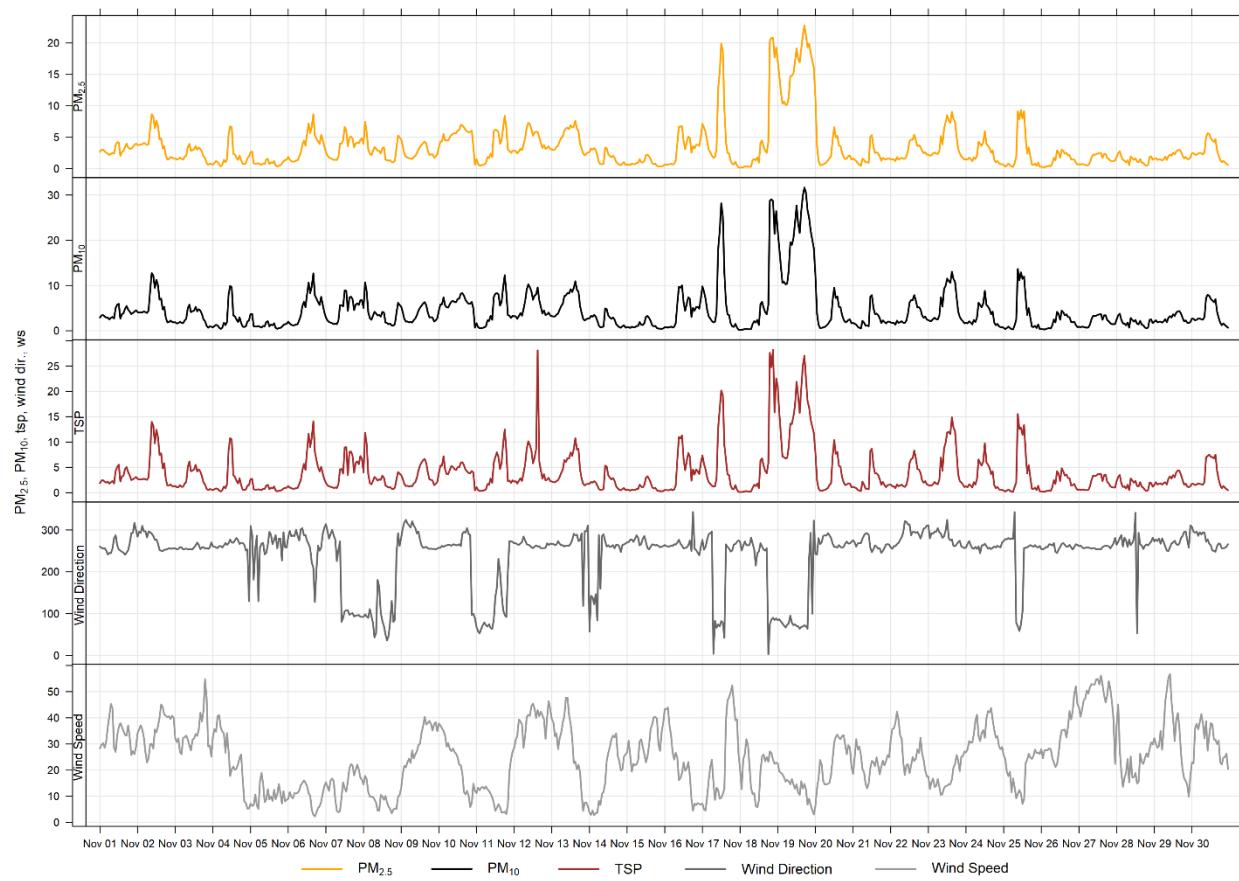


Figure 5-1 1-hour particulate matter concentrations at the West monitor

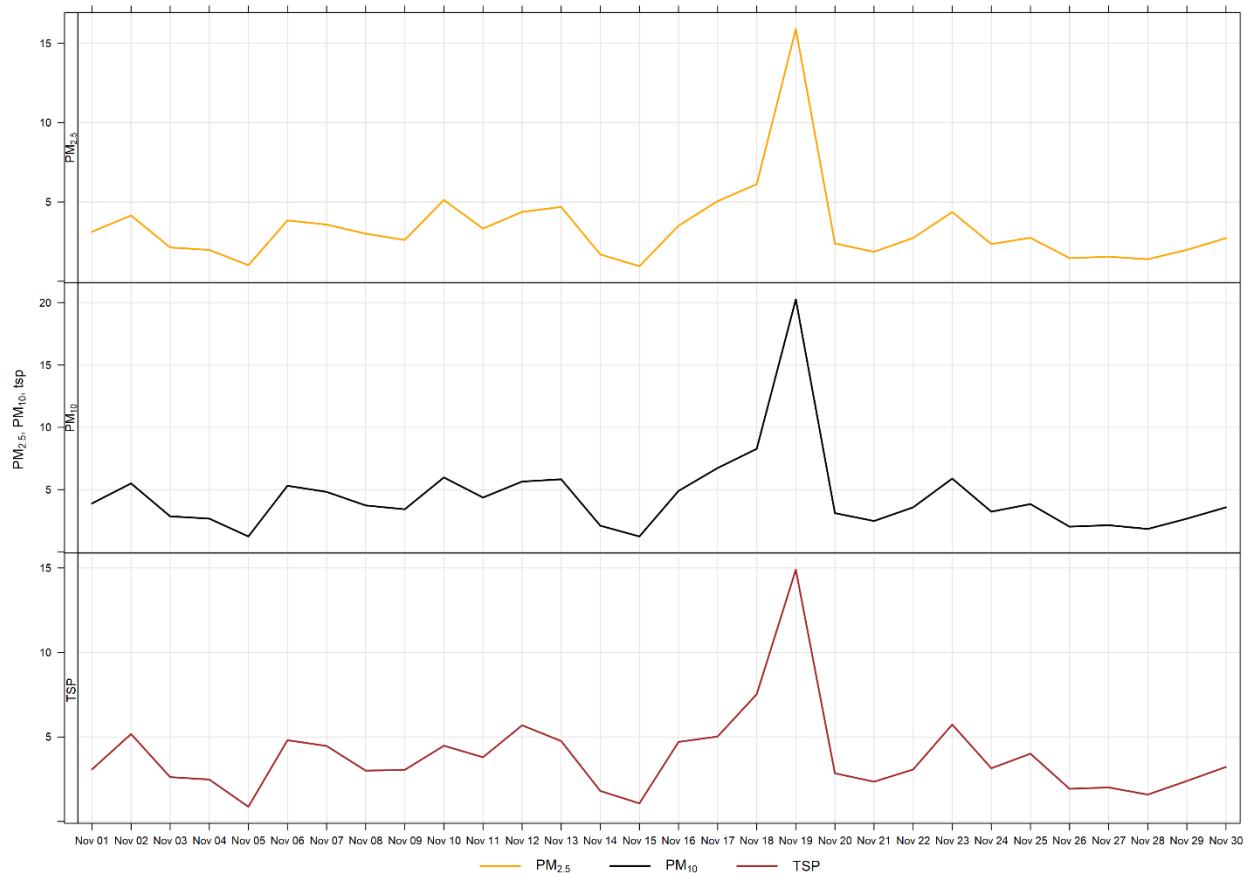


Figure 5-2 24-hour particulate matter concentrations at the West monitor

Figure 5- 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- is based on data collected during November 2020. 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.

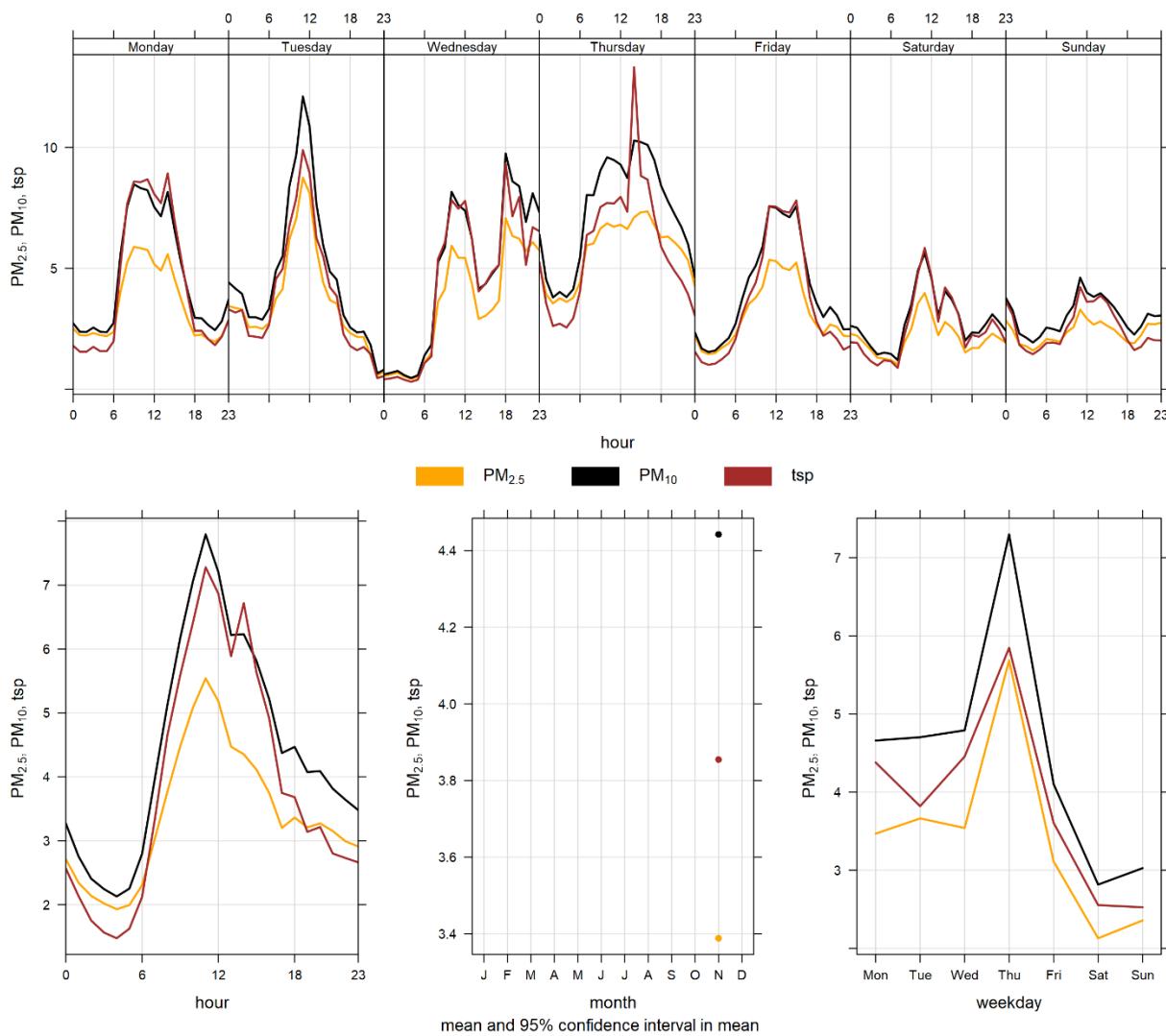


Figure 5-3 **West particulate matter time variation**

6 BERM INDUSTRIAL GRIMM

6.1 OPERATIONAL SUMMARY

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

Table 6-1 Instrumentation List at the Berm monitoring location

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

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 23 and 4 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (29 µg/m³) guidelines, respectively. There were 17 hours exceeding the 1-hour PM_{2.5} AAAQG.

Historically during the month of November, the Berm monitor records an average of 16 and 1 exceedances of the 24-hour TSP and PM_{2.5} guidelines, respectively. The maximum number of TSP exceedances recorded during November occurred in 2011 where there were 23 days that exceeded the guideline. On the other hand, the maximum number of PM_{2.5} exceedances in November was 3 days in 2017 & 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 lack of precipitation and strong wind gusting (>85 km/h) that occurred in November may have contributed to elevated TSP levels. The excess particulates may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, Lac des Arcs lake, dry sections of the Bow River, roads (sanding from previous snowstorms) and open areas.

Table 6-2 Summary of November 2020 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	17	4	0.5	17.8	227.6	26	21	49.2	259.4	79.8	26	100.0
PM₁₀ (µg/m³)	-	-	Berm	-	-	0.6	127.6	1713.4	26	21	49.2	259.4	603.2	26	100.0
TSP (µg/m³)	-	100	Berm	-	23	0.4	408.6	3810.6	26	21	49.2	259.4	1692.3	26	100.0

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

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Berm						
2020-11-01	329.3	-	261.0	33.3	40.0	High wind event
2020-11-02	441.8	-	270.5	35.6	34.7	High wind event
2020-11-03	650.3	-	257.7	33.8	27.4	High wind event
2020-11-04	330.1	-	265.2	23.7	55.2	High wind event
2020-11-07	126.0	-	92.0	14.8	66.6	High wind event
2020-11-08	126.4	-	81.3	8.8	67.7	Winds predominately from the west
2020-11-09	605.9	-	275.6	31.0	54.7	High wind event
2020-11-12	1231.8	38.8	263.8	39.4	49.4	High wind event
2020-11-13	329.9	-	270.0	26.4	58.1	High wind event
2020-11-14	430.8	-	261.9	18.7	51.2	Winds predominately from the west
2020-11-15	471.3	-	267.3	30.3	42.8	High wind event
2020-11-16	248.1	-	262.8	19.7	43.5	Winds predominately from the west
2020-11-17	494.8	-	270.5	24.1	66.5	High wind event
2020-11-20	550.2	-	267.8	23.9	54.3	High wind event
2020-11-21	228.3	-	264.1	22.8	49.5	High wind event

2020-11-22	340.1	-	286.6	27.0	53.7	High wind event
2020-11-24	811.6	37.9	260.2	34.2	48.8	High wind event
2020-11-25	742.3	39.9	268.6	19.4	52.4	Winds predominately from the west
2020-11-26	1692.3	79.8	260.7	33.5	37.9	High wind event
2020-11-27	685.3	-	258.7	48.0	33.9	High wind event
2020-11-28	232.0	-	273.7	23.3	41.9	High wind event
2020-11-29	502.8	-	270.0	32.3	37.4	High wind event
2020-11-30	298.9	-	273.5	30.8	46.4	High wind event
Total # of Exceedances	23	4				
Maximum # of Exceedances (November)	23 (2011)	3 (2017, 2018)				
Average # of Exceedances (November)	16	1				
Minimum # of Exceedances (November)	12 (2015, 2019)	0 (2010, 2013, 2016, 2019)				

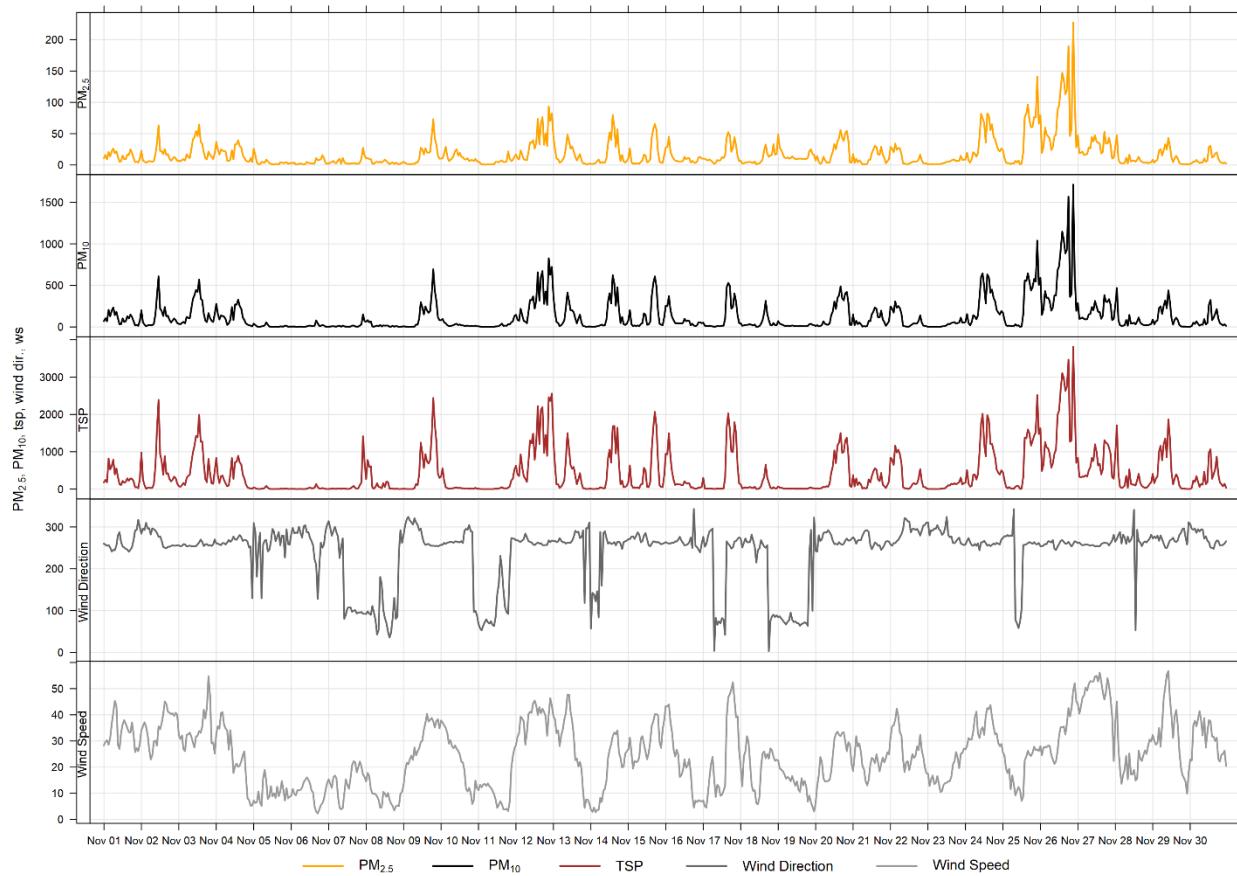


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

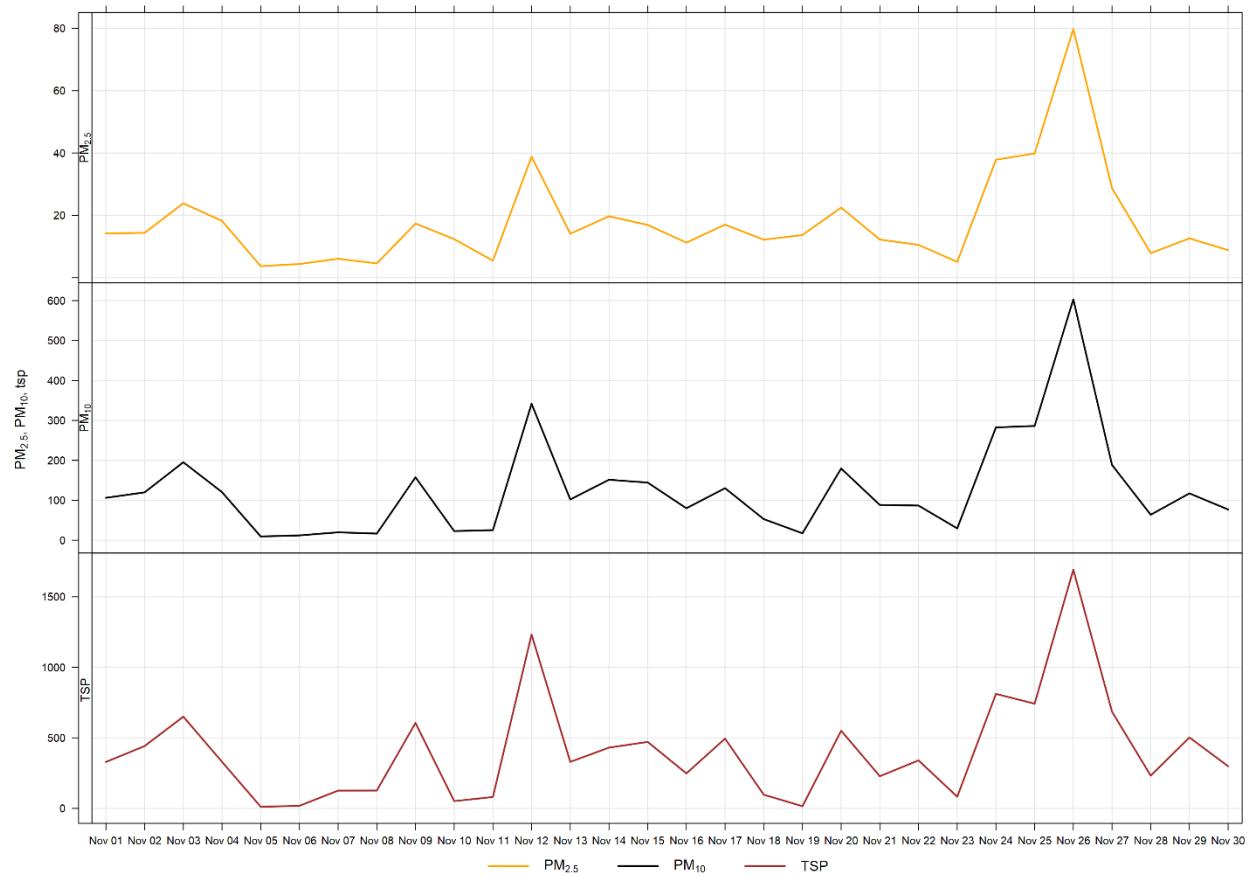


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 23 days of TSP exceedances. The wind rose shows that the winds predominantly came from the west direction, and were predominately over 20 km/hr.

Figure 6-4 shows the variation of PM recorded at the Berm monitor over various time averaging periods. The Berm monitor diurnal pattern, similar to the Windridge and Lagoon stations, is associated with Lafarge operations, but also daytime emissions from other activities and sources in Exshaw.

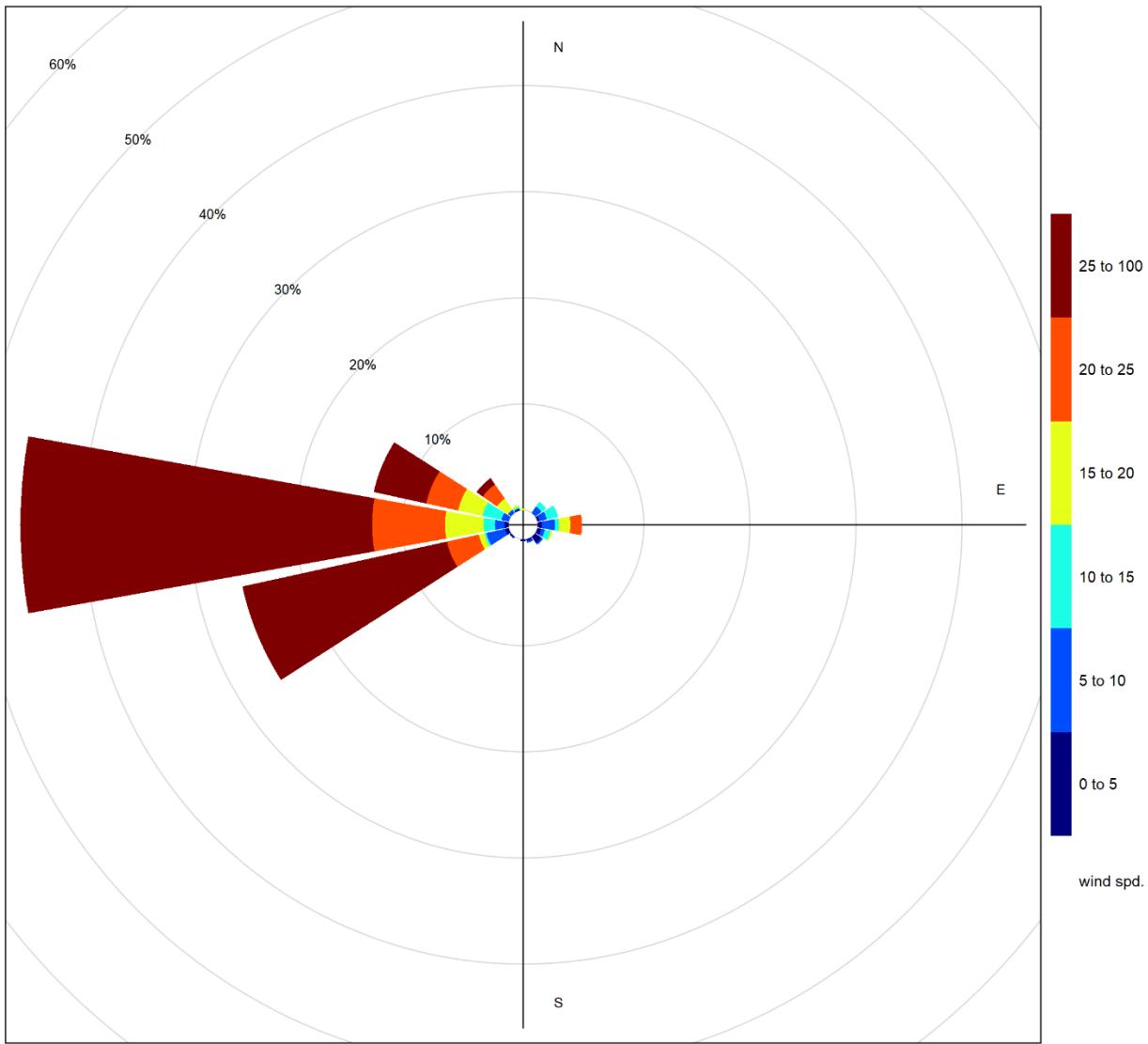


Figure 6-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM

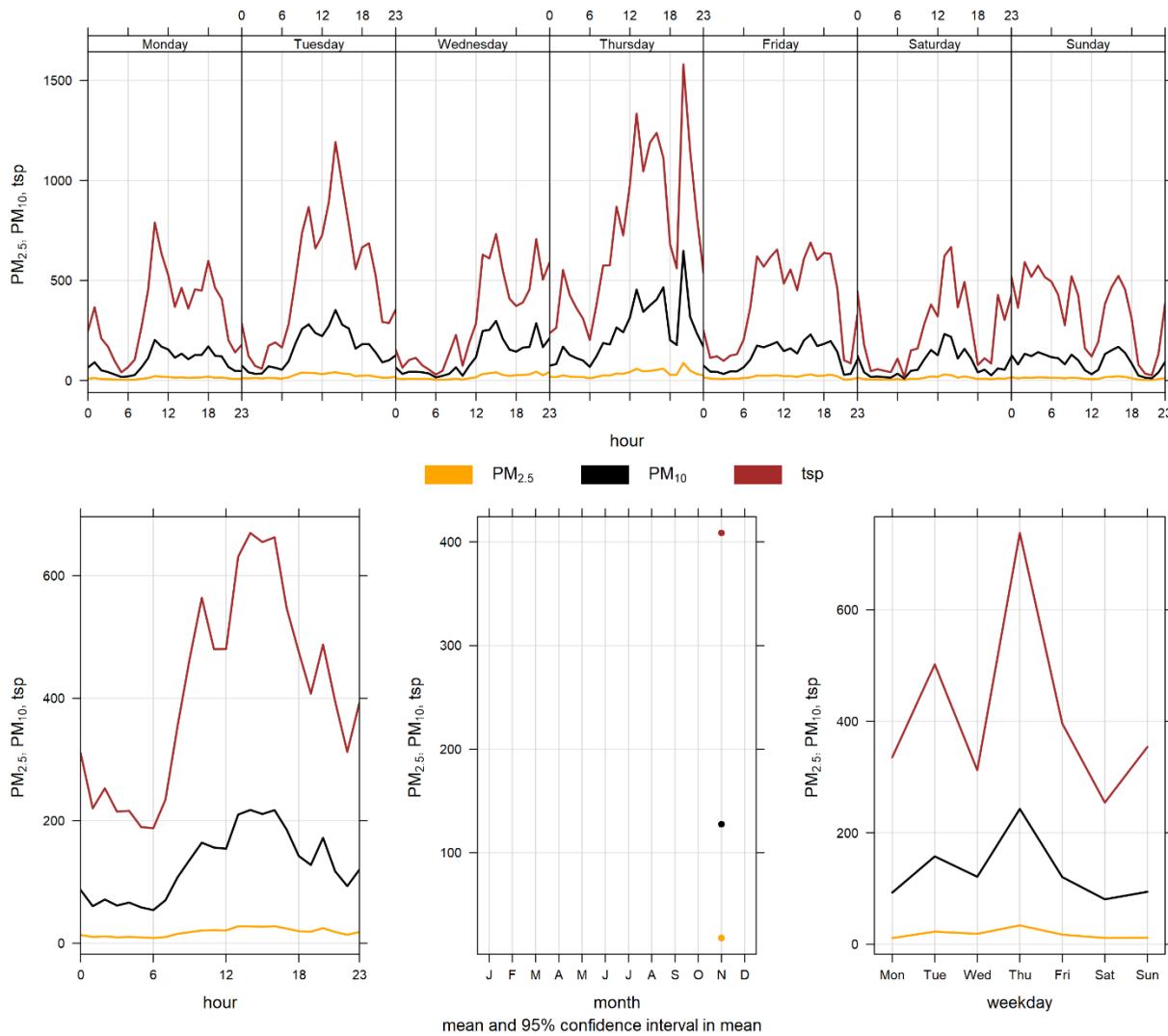


Figure 6-4 **Berm particulate matter time variation**

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}, PM₁₀, TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 100% uptime for the month of November.

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 November, there were 23 and zero exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5}(29 µg/m³) guidelines, respectively.

Historically, the Entrance monitor records an average of 15 and zero exceedances of the 24-hour TSP and PM_{2.5} guidelines respectively, during the month of November. The maximum number of TSP exceedances recorded during November occurred in 2014, which had 25 days that exceeded the guideline. The minimum number of TSP exceedances recorded during November occurred in 2012, which had one day that exceeded the guideline. On the other hand, the maximum number of PM_{2.5} exceedances recorded during the month of November was 2 days in 2013 & 2014.

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

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

The lack of precipitation and strong wind gusting (>85 km/h) that occurred in November may have contributed to elevated TSP levels. The excess particulates may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, Lac des Arcs lake, dry sections of the Bow River, roads (sanding from previous snowstorms) and open areas.

Figure 7-3 shows the wind rose for the 23 days that exceeded the TSP Guideline. The wind rose indicates that the winds predominantly came from the west direction, and were predominately over 20 km/hr.

Table 7-2 Summary of November 2020 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	0.5	9.4	63.2	2	4	32.4	296.5	20.4	2	100.0
PM ₁₀ (µg/m ³)	-	-	Entrance	-	-	0.6	49.9	494.4	26	18	42.6	264.5	143.7	26	100.0
TSP (µg/m ³)	-	100	Entrance	-	23	0.7	163.2	1925.7	26	18	42.6	264.5	514.1	26	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						
2020-11-01	131.7	-	261.0	33.3	40.0	High wind event
2020-11-02	368.5	-	270.5	35.6	34.7	High wind event
2020-11-03	154.6	-	257.7	33.8	27.4	High wind event
2020-11-06	105.8	-	283.9	10.3	76.1	Winds predominantly from the west
2020-11-07	169.2	-	92.0	14.8	66.6	Winds predominantly from the west
2020-11-08	158.3	-	81.3	8.8	67.7	Winds predominantly from the west
2020-11-09	330.3	-	275.6	31.0	54.7	High wind event
2020-11-12	511.7	-	263.8	39.4	49.4	High wind event
2020-11-13	127.4	-	270.0	26.4	58.1	High wind event
2020-11-14	104.7	-	261.9	18.7	51.2	Winds predominantly from the west
2020-11-15	125.7	-	267.3	30.3	42.8	High wind event
2020-11-16	107.0	-	262.8	19.7	43.5	Winds predominantly from the west
2020-11-17	127.0	-	270.5	24.1	66.5	High wind event
2020-11-20	109.8	-	267.8	23.9	54.3	High wind event

2020-11-22	206.3	-	286.6	27.0	53.7	High wind event
2020-11-23	133.3	-	276.6	17.8	57.3	Winds predominantly from the west
2020-11-24	231.7	-	260.2	34.2	48.8	High wind event
2020-11-25	164.0	-	268.6	19.4	52.4	Winds predominantly from the west
2020-11-26	514.1	-	260.7	33.5	37.9	High wind event
2020-11-27	231.5	-	258.7	48.0	33.9	High wind event
2020-11-28	118.3	-	273.7	23.3	41.9	High wind event
2020-11-29	194.5	-	270.0	32.3	37.4	High wind event
2020-11-30	205.4	-	273.5	30.8	46.4	High wind event
Total # of Exceedances	23	0				
Maximum # of Exceedances (November)	25 (2014)	2 (2013, 2014)				
Average # of Exceedances (November)	15	0				
Minimum # of Exceedances (November)	1 (2012)	0 (2010, 2011, 2015, 2016, 2017, 2018, 2019)				

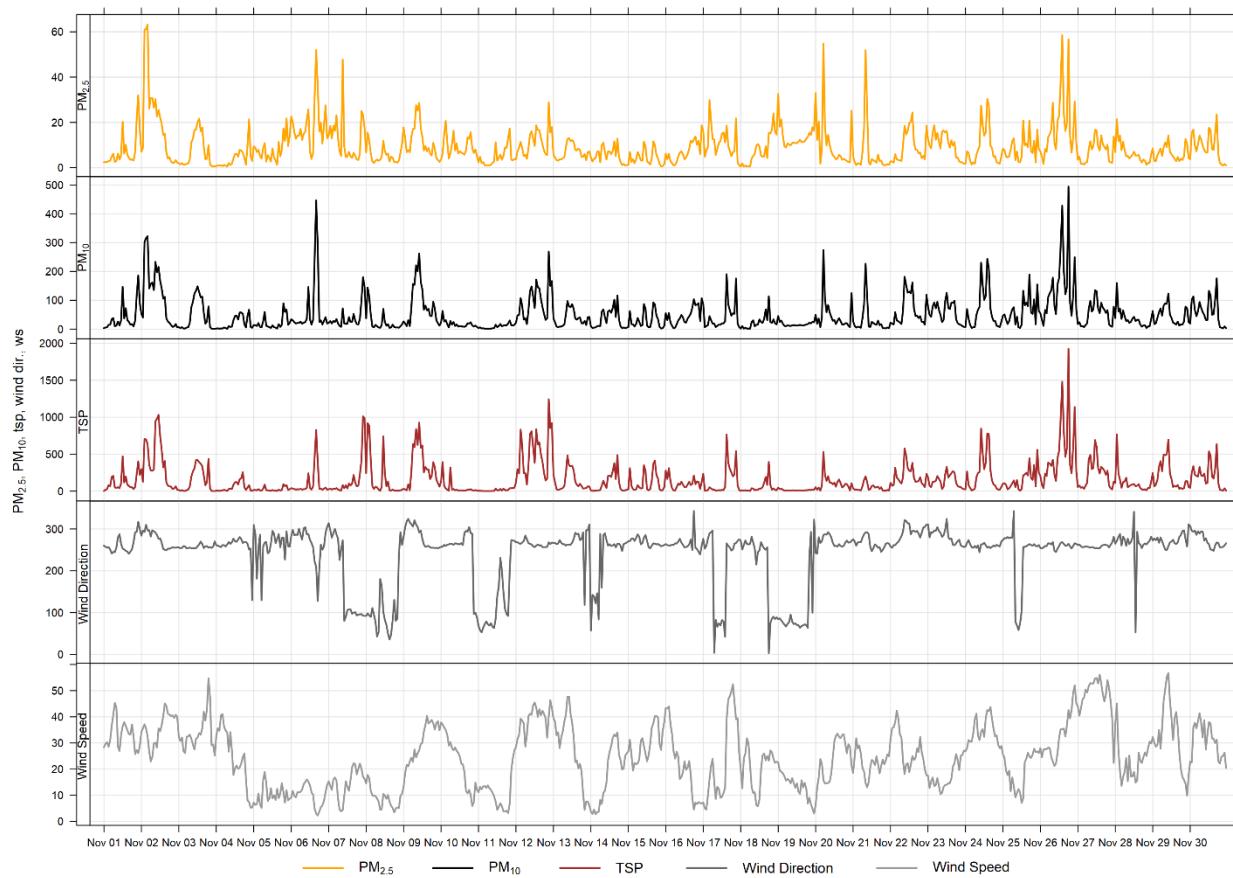


Figure 7-1 1-hour particulate matter concentrations recorded at the Entrance monitor

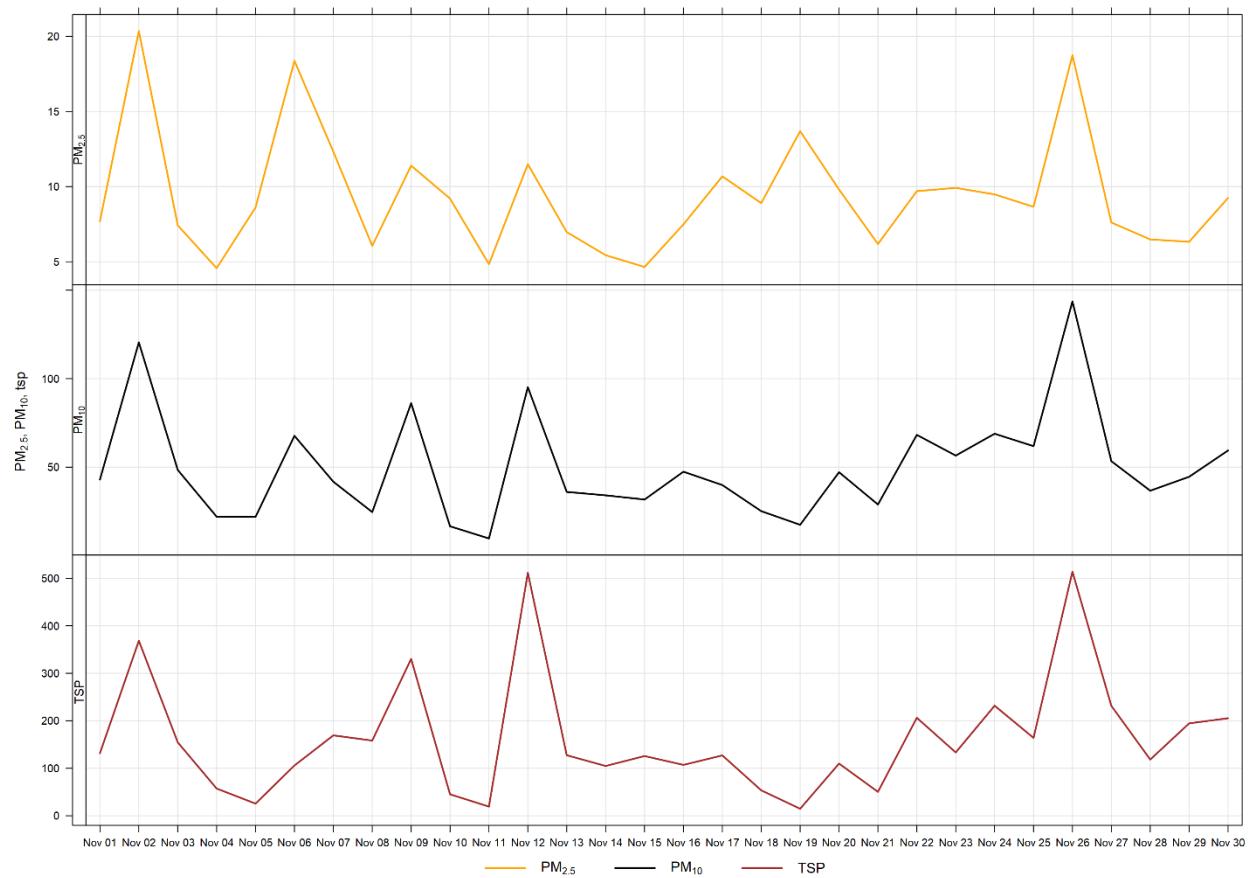


Figure 7-2 24-hour particulate matter concentrations at the Entrance monitor

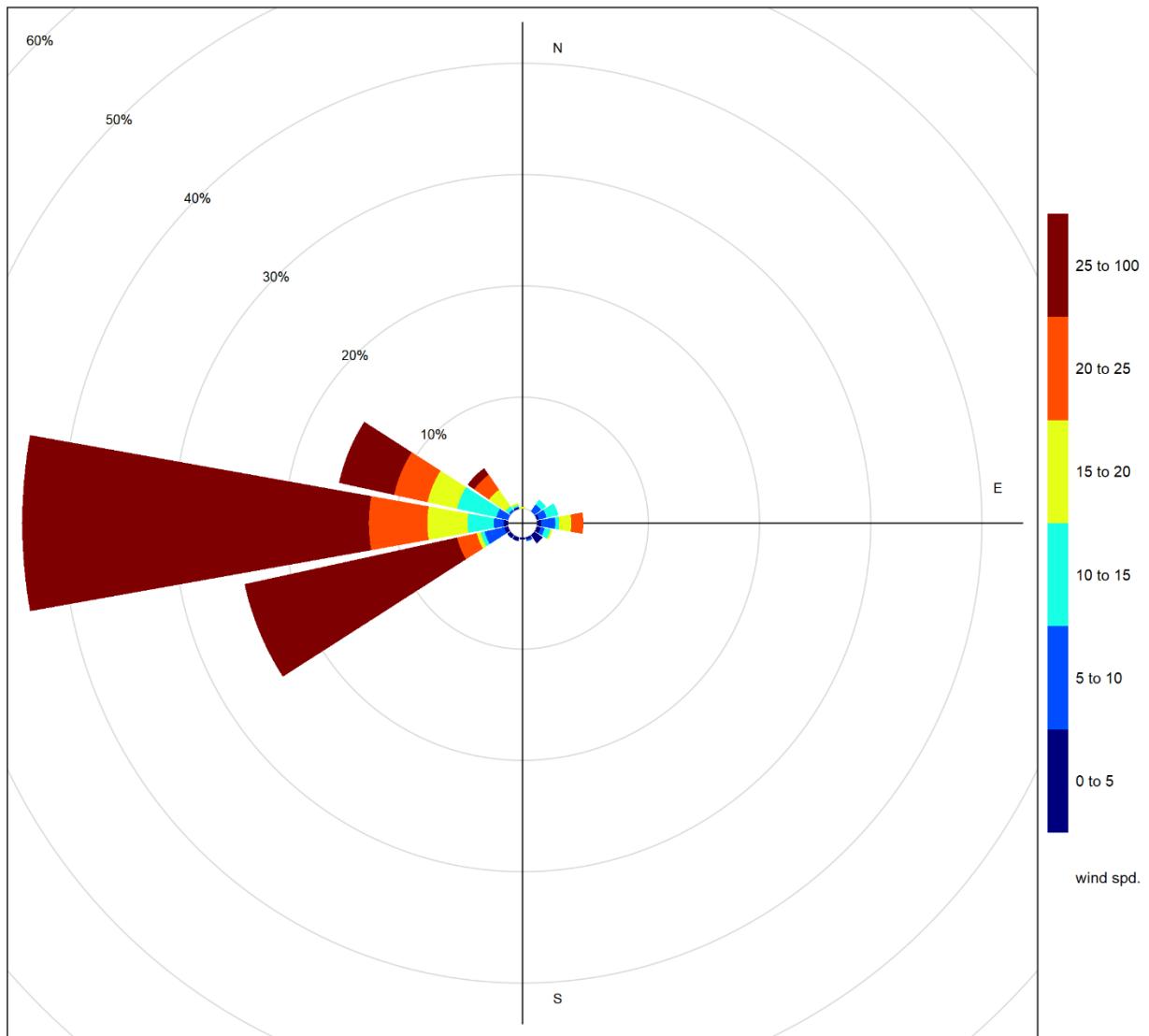


Figure 7-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

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 November 2020. 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.

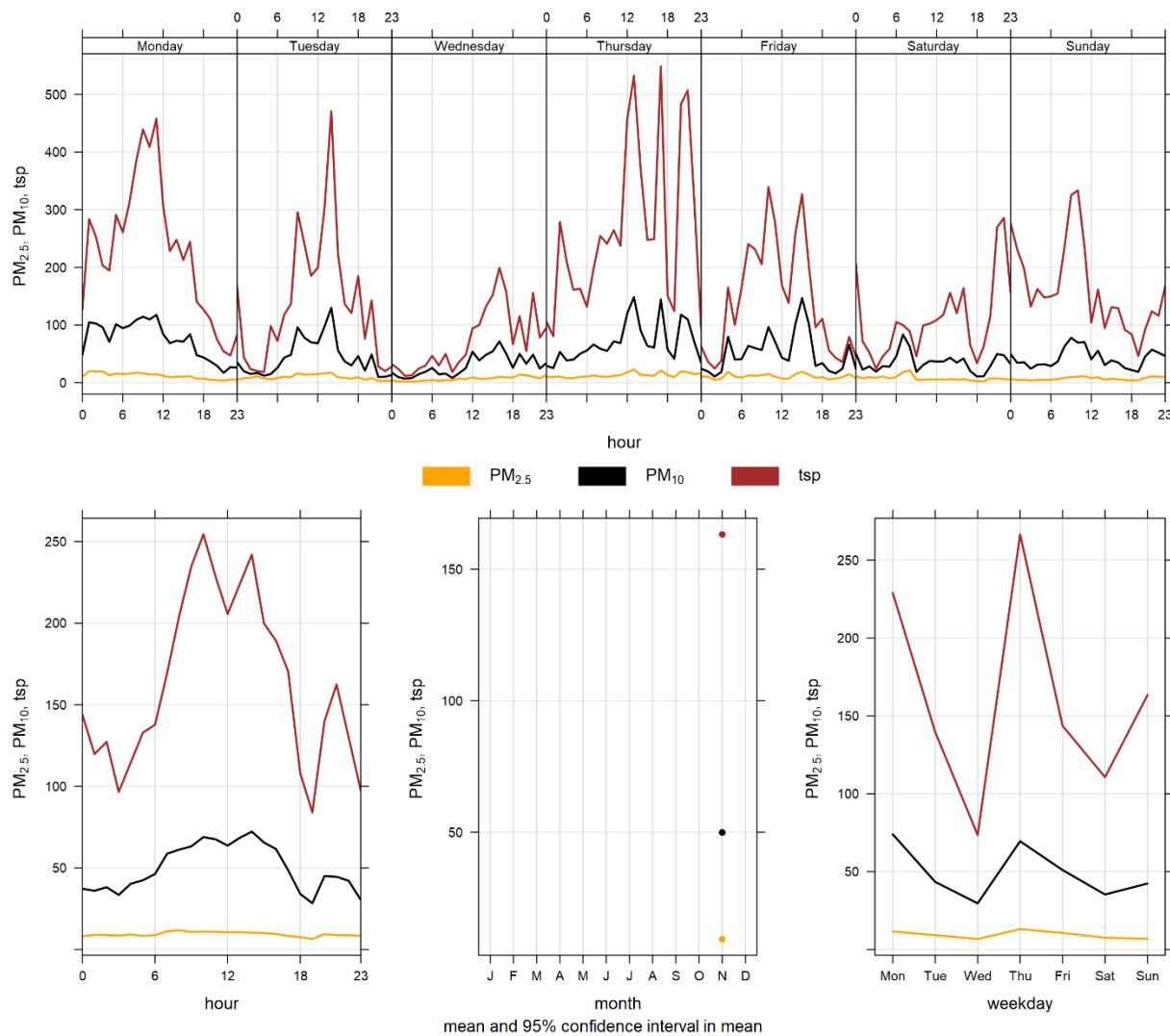


Figure 7-4 Entrance particulate matter time variation

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APPENDIX

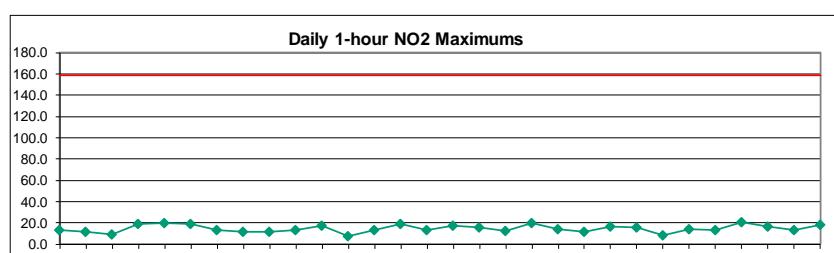
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – November 2020

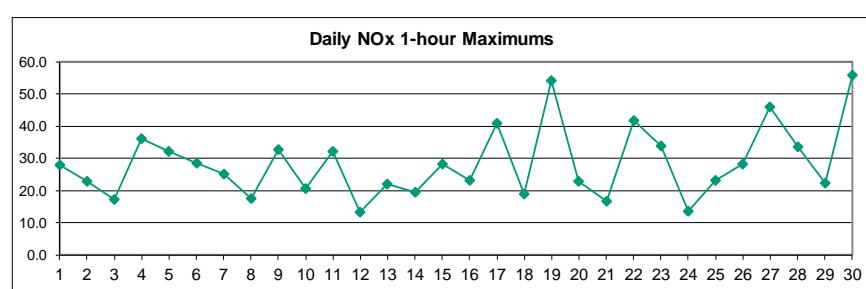
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	2.7	S	1.7	0.9	0.7	0.7	0.8	1.2	6.0	9.7	3.3	1.2	1.2	1.0	1.3	1.3	1.2	1.3	4.2	11.8	13.3	6.5	8.5	5.0	3.7	13.3
2	10.7	S	5.0	6.5	7.7	6.6	8.6	9.9	11.4	10.3	5.2	5.4	4.6	1.8	1.3	1.0	0.9	0.7	1.0	3.0	0.7	0.6	2.1	3.1	4.7	11.4
3	0.9	S	3.6	7.6	0.9	2.8	2.6	4.9	6.3	6.7	3.1	5.9	4.2	9.1	6.7	1.8	2.7	2.3	1.0	1.1	5.2	1.6	6.1	6.3	4.1	9.1
4	3.3	S	1.7	1.2	2.9	1.7	2.5	13.0	7.9	12.8	7.6	11.6	6.9	8.3	8.1	6.9	7.0	4.3	4.1	6.6	7.9	10.1	11.5	19.4	7.3	19.4
5	19.9	S	7.5	12.2	13.0	13.3	8.6	10.8	C	C	C	C	C	8.6	11.0	10.3	10.5	8.7	6.1	3.0	7.6	5.8	6.2	7.1	9.5	19.9
6	9.8	S	2.9	4.0	4.5	3.3	5.5	8.0	10.0	12.0	10.6	8.7	6.8	3.9	3.2	5.4	8.7	10.3	10.9	14.4	19.0	14.0	8.7	8.4	8.4	19.0
7	10.2	S	7.0	8.9	12.2	13.8	12.4	10.3	8.6	11.5	2.1	2.3	4.5	1.8	2.2	2.9	3.2	2.1	1.3	1.0	1.0	0.9	1.2	1.4	5.3	13.8
8	1.2	S	0.9	0.7	0.8	1.0	2.6	3.9	8.8	7.7	1.8	1.8	4.8	2.4	1.4	4.0	6.7	5.9	4.2	7.2	3.6	8.9	9.9	11.8	4.4	11.8
9	10.9	S	5.3	5.2	5.1	6.1	3.9	5.9	6.0	11.7	12.1	5.2	3.1	1.9	1.5	3.7	2.3	1.7	2.3	1.3	0.9	0.9	1.3	1.0	4.3	12.1
10	1.1	S	1.6	1.9	3.0	1.9	2.9	2.5	6.2	8.2	4.1	4.5	4.1	4.1	2.2	9.0	11.1	13.2	8.5	7.2	3.4	0.8	0.9	4.4	4.6	13.2
11	4.2	S	3.6	3.1	3.0	1.9	8.9	7.1	9.8	5.8	7.4	2.9	4.8	6.7	4.6	8.6	11.8	16.1	17.8	15.6	11.2	3.0	4.8	4.3	7.3	17.8
12	7.0	S	3.1	5.4	3.0	6.6	3.1	6.0	5.1	4.1	2.8	2.1	2.9	4.5	2.4	4.4	3.5	2.4	2.4	1.8	4.8	2.0	2.5	7.5	3.9	7.5
13	3.1	S	5.8	3.2	4.1	3.6	2.3	3.4	4.5	3.8	3.2	6.0	7.6	X	X	10.4	11.5	6.7	8.7	9.7	13.6	11.1	9.7	8.5	6.7	13.6
14	13.6	S	19.1	16.8	16.0	12.7	12.7	8.2	5.8	9.7	2.5	5.6	3.2	3.9	4.7	3.1	4.7	5.7	4.8	2.4	2.9	5.8	9.0	3.0	7.7	19.1
15	7.5	S	4.7	3.8	4.7	7.8	5.1	11.8	9.0	13.3	11.6	7.1	2.5	1.8	4.2	5.6	3.7	5.0	5.5	5.2	4.8	4.5	5.1	3.3	6.0	13.3
16	2.1	S	4.5	3.8	5.8	4.6	3.7	10.5	13.5	10.9	5.4	4.0	4.5	6.7	5.9	9.4	5.9	14.3	15.4	9.6	10.5	9.8	16.0	17.8	8.5	17.8
17	13.1	S	13.5	11.7	14.5	16.1	10.4	4.8	12.1	8.4	16.0	13.2	14.8	13.8	3.5	3.7	3.2	2.5	0.9	5.4	8.7	4.9	8.3	8.6	9.2	16.1
18	3.8	S	7.7	2.1	8.0	1.5	5.3	9.0	11.8	10.5	10.0	8.5	8.3	6.3	1.9	3.0	3.4	12.4	12.4	10.7	9.8	9.5	9.9	11.0	7.7	12.4
19	8.3	S	11.7	10.2	8.7	6.3	9.1	5.2	5.6	5.1	6.9	6.5	7.8	10.2	9.9	12.0	8.6	13.6	19.8	20.3	20.3	19.3	18.2	17.4	11.4	20.3
20	14.2	S	7.4	7.6	6.0	5.5	6.2	13.6	12.4	10.1	6.6	2.9	2.9	2.1	4.1	4.3	4.5	6.1	5.0	2.7	4.0	5.5	7.1	7.3	6.4	14.2
21	5.0	S	3.9	7.5	8.1	4.5	6.5	7.9	11.5	10.4	2.8	2.1	2.6	6.3	8.1	2.7	3.0	1.8	2.1	2.5	6.5	3.1	6.2	2.3	5.1	11.5
22	1.7	S	2.9	3.8	3.0	4.4	6.8	9.0	5.0	5.8	5.2	6.1	15.6	13.4	13.3	12.9	15.0	11.9	7.1	13.6	15.2	15.9	17.0	6.8	9.2	17.0
23	8.5	S	12.4	12.0	7.0	4.8	7.7	10.1	16.2	14.6	10.7	7.2	11.6	10.9	10.3	6.2	7.0	3.4	6.0	3.9	2.0	2.2	2.1	3.1	7.8	16.2
24	4.6	S	2.9	2.1	1.5	2.8	1.3	3.7	2.7	6.1	3.1	7.9	3.5	1.6	1.7	1.2	1.5	3.5	2.4	1.9	3.3	3.4	3.7	8.4	3.3	8.4
25	5.6	S	9.7	7.6	9.2	11.0	9.1	7.4	14.4	3.3	9.1	13.0	13.1	3.5	2.9	4.8	7.7	4.0	7.6	3.6	2.6	4.8	3.8	4.1	7.0	14.4
26	3.9	S	6.1	4.3	11.7	5.8	12.4	12.9	6.7	3.4	4.1	7.9	9.3	13.1	11.7	8.4	7.7	6.5	4.8	1.0	1.5	8.1	4.6	5.7	7.0	13.1
27	7.1	S	1.0	1.4	1.4	1.3	1.5	1.2	2.2	2.6	1.3	1.4	1.3	1.2	1.6	3.1	4.7	2.8	3.7	1.1	2.6	2.3	20.9	8.9	3.3	20.9
28	5.6	S	16.7	11.5	11.6	5.5	5.7	14.4	5.1	11.3	11.5	11.8	14.8	9.1	6.2	9.4	3.7	10.1	6.6	5.1	5.4	5.9	5.8	5.1	8.6	16.7
29	6.4	S	6.1	2.9	5.9	5.8	2.5	1.7	1.6	2.3	6.8	5.4	5.3	6.0	2.4	5.3	7.4	7.0	9.6	13.4	11.9	11.6	5.6	6.2	6.0	13.4
30	14.9	S	9.2	10.8	15.6	18.3	18.7	16.5	10.7	9.1	9.5	7.6	2.6	1.4	1.7	5.5	6.6	2.6	3.3	4.8	1.5	3.1	2.8	3.7	7.9	18.7
NO.	-	30	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	30	683	100%
MEAN	-	7.0	6.3	6.0	6.7	6.1	6.3	7.8	8.2	8.3	6.4	6.1	6.2	5.7	4.8	5.7	6.0	6.3	6.3	6.4	6.9	6.2	7.3	7.0		
MAX	-	19.9	19.1	16.8	16.0	18.3	18.7	16.5	16.2	14.6	16.0	13.2	15.6	13.8	13.3	12.9	15.0	16.1	19.8	20.3	20.3	19.3	20.9	19.4		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	683
Maximum 1-HR Average	20.9 PPB
Maximum 24-HR Average	11.4 PPB
Monthly Calibration Standard Deviation	4.3
Operational Time	718 HRS
Operational Uptime	99.7 %
Monthly Average	6.5 PPB

Lagoon NOx (ppb) – November 2020

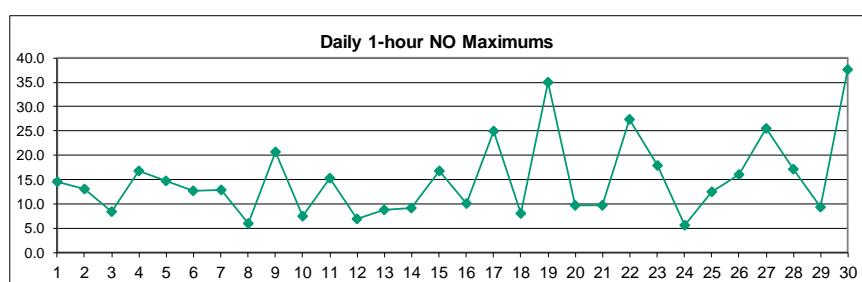
Day	Hour																									Mean	Max
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	2.9	S	1.8	0.8	0.6	0.7	0.7	1.3	9.3	17.0	4.3	1.3	1.4	1.0	1.6	1.4	1.3	1.3	6.5	20.2	27.8	10.5	17.4	8.2	6.1	27.8	
2	22.6	S	6.7	11.5	17.6	12.6	18.0	22.9	20.9	17.9	7.1	8.6	6.6	2.3	1.7	1.1	1.0	0.6	1.1	4.4	0.6	0.5	2.9	3.7	8.4	22.9	
3	0.8	S	4.3	10.8	0.8	3.4	3.1	6.7	8.9	9.2	4.2	9.2	9.4	17.3	13.8	2.2	3.3	2.7	1.0	1.1	7.5	1.5	9.9	9.5	6.1	17.3	
4	4.1	S	1.9	1.4	4.1	2.1	3.3	24.7	11.3	21.1	11.6	23.2	10.3	13.7	13.0	10.4	9.9	6.0	4.4	7.4	9.6	10.6	13.5	36.2	11.0	36.2	
5	32.1	S	12.3	17.6	27.6	19.9	13.3	16.0	C	C	C	C	9.1	13.5	13.0	16.2	14.6	8.6	3.0	12.8	6.2	7.1	9.1	14.0	32.1		
6	16.2	S	3.0	5.1	7.0	3.6	8.3	14.0	15.8	24.5	23.0	14.8	10.4	5.7	4.1	7.4	9.5	12.1	11.9	18.5	28.5	17.4	9.3	10.7	12.2	28.5	
7	19.4	S	9.9	17.5	24.8	25.3	14.1	10.7	12.4	17.4	2.4	2.7	7.5	1.7	2.2	3.0	3.3	1.9	1.1	0.9	0.9	0.7	0.9	1.3	7.9	25.3	
8	1.0	S	0.8	0.6	0.8	1.0	2.4	5.7	8.8	7.8	2.3	2.3	7.9	3.9	1.5	4.4	7.1	5.8	4.2	9.2	3.3	13.8	12.7	17.7	5.4	17.7	
9	18.9	S	6.8	6.3	6.6	9.2	4.5	11.6	11.6	28.2	32.7	9.7	6.0	3.1	2.0	5.5	2.4	1.7	2.4	1.0	0.8	0.8	1.1	0.8	7.6	32.7	
10	1.1	S	1.9	2.3	4.3	2.5	3.8	3.2	10.8	13.9	7.4	7.4	6.1	7.2	2.6	13.8	15.0	20.6	11.5	7.1	3.2	0.6	0.8	7.8	6.7	20.6	
11	4.8	S	4.0	3.5	3.5	2.7	13.7	8.9	15.4	7.9	13.6	4.9	9.3	13.0	7.0	11.5	14.2	17.5	32.2	28.5	26.4	3.2	6.8	6.9	11.3	32.2	
12	11.9	S	4.0	9.9	3.7	13.3	3.9	10.7	8.3	6.4	3.8	2.6	4.0	6.7	3.0	6.3	4.1	2.5	2.4	1.5	7.6	2.7	3.2	12.3	5.9	13.3	
13	3.5	S	9.4	3.4	5.1	5.1	2.7	4.5	7.9	6.0	4.5	10.4	14.6	X	X	14.5	18.2	8.3	11.8	9.9	22.1	16.9	15.6	8.7	9.7	22.1	
14	13.5	S	19.6	17.1	17.1	18.3	15.7	12.6	7.4	18.6	3.1	9.2	4.9	6.5	6.9	4.3	6.9	8.0	5.3	2.5	3.0	9.4	14.0	3.2	9.9	19.6	
15	14.2	S	5.1	4.2	6.0	13.7	7.4	20.2	13.9	25.2	28.2	13.9	2.9	1.9	6.6	8.7	6.0	8.2	8.6	6.6	5.9	7.5	7.1	4.8	9.9	28.2	
16	2.6	S	5.9	4.9	8.4	4.8	4.2	14.1	23.2	15.4	7.2	6.1	6.3	11.1	10.7	15.3	6.6	14.7	23.0	10.6	10.3	9.5	17.2	18.2	10.9	23.2	
17	13.1	S	15.8	22.6	34.8	40.8	18.9	4.8	19.2	13.6	30.1	27.4	37.3	35.3	6.5	6.0	5.0	3.1	0.8	10.3	20.3	9.3	16.2	15.1	17.7	40.8	
18	4.3	S	13.3	2.7	13.1	1.2	6.6	11.8	17.0	12.3	12.6	10.6	15.9	9.6	2.1	3.2	3.9	19.1	15.3	11.3	9.7	9.7	9.8	11.4	9.9	19.1	
19	8.1	S	24.0	18.2	13.9	6.7	17.5	5.2	7.6	7.9	16.8	15.2	18.1	30.3	29.1	29.7	13.1	18.0	41.0	33.9	39.0	54.0	51.7	35.3	23.2	54.0	
20	22.1	S	14.0	8.7	7.5	6.5	8.2	23.0	15.9	15.1	9.9	3.6	3.7	2.5	5.3	6.2	5.1	9.1	5.8	2.6	4.4	6.9	9.1	9.9	8.9	23.0	
21	6.9	S	4.3	12.2	15.5	5.6	9.2	14.4	16.3	16.6	3.4	2.5	3.4	9.4	15.2	3.0	3.1	1.6	2.0	2.5	7.9	3.1	15.6	2.4	7.7	16.6	
22	1.6	S	3.8	5.0	3.4	6.3	11.1	16.6	7.5	8.7	6.7	13.3	41.8	40.4	31.5	25.4	33.9	22.3	10.0	29.6	28.7	29.7	35.9	10.4	18.4	41.8	
23	16.8	S	26.7	24.2	9.3	5.1	10.9	13.4	33.9	28.3	20.7	11.5	24.7	20.4	18.3	7.2	9.0	3.5	9.1	4.4	2.2	2.3	2.3	3.7	13.4	33.9	
24	8.2	S	3.3	2.2	1.4	3.5	1.1	4.8	3.6	10.4	3.8	13.0	4.4	1.8	1.8	1.2	1.5	3.9	2.9	2.0	4.0	3.9	4.2	13.6	4.4	13.6	
25	9.1	S	17.1	12.7	13.5	23.1	16.4	8.3	16.8	3.6	12.6	20.1	18.3	4.8	3.6	6.8	11.9	4.8	12.0	5.0	3.2	8.1	6.3	7.1	10.7	23.1	
26	5.9	S	9.1	6.8	22.7	11.1	28.1	24.5	11.9	4.2	6.4	16.2	18.4	22.9	19.5	13.1	11.1	11.6	6.9	0.8	1.6	14.0	8.8	9.1	12.4	28.1	
27	12.7	S	1.1	1.5	1.4	1.3	1.7	1.3	3.2	3.5	1.4	1.4	1.4	1.2	1.7	3.9	6.2	3.5	5.5	0.9	3.5	3.0	46.0	15.7	5.3	46.0	
28	10.3	S	33.6	20.3	18.1	7.2	8.6	22.2	6.7	20.9	20.5	22.9	29.8	13.7	9.3	16.1	4.3	14.9	7.1	5.5	5.9	9.2	8.2	7.3	14.0	33.6	
29	9.1	S	8.6	3.9	8.7	9.5	3.2	1.7	1.4	2.5	11.8	7.9	6.4	10.0	2.7	7.3	11.9	9.0	12.7	22.3	19.7	13.9	9.6	7.6	8.7	22.3	
30	31.6	S	18.5	19.4	40.8	55.7	47.2	39.0	19.9	16.8	14.1	12.4	3.9	1.6	2.0	7.9	10.6	2.8	4.2	6.0	1.3	4.0	4.7	5.3	16.1	55.7	
NO.	30	-	30	30	30	30	30	30	29	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	683	100%	
MEAN	11.0	-	9.7	9.2	11.4	10.7	10.3	12.6	12.7	13.8	11.2	10.5	11.6	10.6	8.2	8.7	8.5	8.5	9.0	9.0	10.7	9.4	12.3	10.4			
MAX	32.1	-	33.6	24.2	40.8	55.7	47.2	39.0	33.9	28.3	32.7	27.4	41.8	40.4	31.5	29.7	33.9	22.3	41.0	33.9	39.0	54.0	51.7	36.2			



Number of Non-Zero Readings	683
Maximum 1-HR Average	55.7 PPB
Maximum 24-HR Average	23.2 PPB
Monthly Calibration Standard Deviation	5.9.019
Operational Time	718 HRS
Operational Uptime	99.7 %
Monthly Average	10.4 PPB

Lagoon NO (ppb) – November 2020

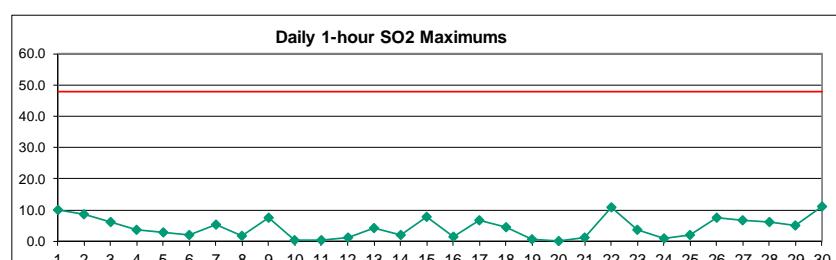
Day	Hour																									Mean	Max
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1		0.4	S	0.3	0.2	0.1	0.1	0.1	3.5	7.4	1.2	0.3	0.3	0.3	0.5	0.3	0.2	0.2	2.6	8.6	14.6	4.1	9.1	3.3	2.5	14.6	
2		12.1	S	1.9	5.3	10.0	6.2	9.5	13.1	9.7	7.8	2.1	3.3	2.2	0.7	0.6	0.3	0.3	0.1	0.3	1.6	0.1	0.1	0.9	0.8	3.9	13.1
3		0.1	S	0.9	3.4	0.2	0.7	0.7	1.9	2.7	2.6	1.2	3.5	5.2	8.4	7.3	0.6	0.8	0.6	0.2	0.2	2.5	0.1	4.0	3.4	2.2	8.4
4		1.0	S	0.4	0.3	1.4	0.5	0.9	11.8	3.6	8.4	4.2	11.8	3.5	5.5	5.1	3.7	3.1	1.8	0.5	1.0	1.9	0.7	2.2	16.8	3.9	16.8
5		12.2	S	4.9	5.6	14.7	6.7	4.9	5.4	C	C	C	C	C	0.7	2.8	2.9	6.0	6.0	2.7	0.2	5.4	0.7	1.1	2.2	4.7	14.7
6		6.6	S	0.3	1.2	2.7	0.4	3.0	6.3	6.1	12.6	12.6	6.4	4.0	1.9	1.0	2.2	1.0	2.1	1.3	4.3	9.6	3.5	0.9	2.6	4.0	12.6
7		9.5	S	3.2	8.8	12.8	11.6	2.0	0.8	4.0	6.2	0.6	0.6	3.2	0.1	0.2	0.4	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	2.8	12.8
8		0.0	S	0.1	0.2	0.1	0.2	0.1	1.9	0.3	0.4	0.7	0.7	3.3	1.7	0.4	0.6	0.7	0.1	0.2	2.2	0.0	5.2	3.1	6.1	1.2	6.1
9		8.3	S	1.8	1.2	1.7	3.2	0.8	5.7	5.8	16.6	20.7	4.7	2.9	1.3	0.5	1.9	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.4	20.7
10		0.1	S	0.3	0.5	1.4	0.6	1.0	0.7	4.6	5.8	3.3	2.1	3.2	0.5	5.0	4.0	7.5	3.2	0.1	0.0	0.0	0.0	0.0	0.0	2.2	7.5
11		0.7	S	0.5	0.5	0.6	0.9	4.8	1.9	5.6	2.1	6.3	2.0	4.6	6.4	2.4	3.0	2.5	1.5	14.3	12.9	15.3	0.3	2.1	2.7	4.1	15.3
12		5.0	S	1.0	4.7	0.8	6.9	0.9	4.9	3.4	2.4	1.3	0.8	1.4	2.5	0.9	2.2	0.9	0.4	0.3	0.1	3.2	1.1	1.1	5.1	2.2	6.9
13		0.7	S	3.9	0.6	1.3	1.9	0.7	1.3	3.7	2.6	1.5	4.7	7.3	X	X	4.4	7.0	1.9	3.4	0.6	8.8	6.1	6.2	0.6	3.3	8.8
14		0.4	S	0.8	0.6	1.4	5.9	3.4	4.7	1.9	9.2	0.9	4.0	2.0	2.9	2.5	1.5	2.5	2.7	0.8	0.4	0.4	3.8	5.3	0.5	2.5	9.2
15		7.0	S	0.8	0.7	1.6	6.2	2.6	8.7	5.3	12.2	16.9	7.1	0.7	0.4	2.7	3.5	2.6	3.5	3.4	1.7	1.5	3.3	2.3	1.8	4.2	16.9
16		0.8	S	1.7	1.3	3.0	0.6	0.9	4.0	10.0	4.8	2.1	2.4	2.2	4.8	5.1	6.2	1.1	0.7	7.9	1.4	0.4	0.2	1.7	0.7	2.8	10.0
17		0.4	S	2.6	11.2	20.6	24.9	8.9	0.4	7.4	5.6	14.3	14.5	22.6	21.7	3.2	2.6	2.1	0.9	0.2	5.3	11.9	4.7	8.2	6.8	8.7	24.9
18		0.8	S	5.9	0.9	5.5	0.1	1.7	3.1	5.6	2.2	3.0	2.5	8.0	3.6	0.5	0.6	0.8	6.9	3.2	1.0	0.4	0.8	0.6	1.2	2.6	8.0
19		0.5	S	12.8	8.5	5.6	0.8	8.8	0.4	2.3	3.2	10.3	9.2	11.1	20.7	19.7	18.2	5.0	5.0	21.6	14.1	19.1	35.0	33.7	18.3	12.3	35.0
20		8.4	S	7.0	1.7	2.0	1.5	2.5	9.8	4.0	5.5	3.7	1.0	1.2	0.8	1.7	2.3	1.0	3.4	1.3	0.4	0.9	1.9	2.4	3.1	2.9	9.8
21		2.4	S	0.8	5.2	7.7	1.6	3.1	7.0	5.3	6.7	0.9	0.8	1.2	3.6	7.5	0.7	0.5	0.3	0.4	0.4	1.8	0.5	9.8	0.5	3.0	9.8
22		0.4	S	1.3	1.6	0.8	2.3	4.8	8.0	2.8	3.3	1.8	7.6	26.5	27.3	18.6	12.8	19.2	10.7	3.3	16.3	13.9	14.1	19.2	4.0	9.6	27.3
23		8.7	S	14.6	12.5	2.6	0.7	3.6	3.7	17.9	14.0	10.3	4.7	13.5	9.9	8.4	1.3	2.4	0.5	3.5	0.9	0.6	0.4	0.5	1.0	5.9	17.9
24		4.0	S	0.7	0.4	0.3	1.1	0.1	1.4	1.2	4.5	1.1	5.4	1.2	0.7	0.5	0.5	0.4	0.8	0.8	0.5	1.1	0.9	0.9	5.6	1.5	5.6
25		3.8	S	7.7	5.5	4.7	12.5	7.6	1.3	2.8	0.6	3.8	7.4	5.6	1.5	1.0	2.3	4.5	1.1	4.7	1.7	0.9	3.6	2.9	3.3	4.0	12.5
26		2.3	S	3.3	2.8	11.4	5.6	16.0	11.9	5.5	1.1	2.6	8.6	9.5	10.2	8.2	5.1	3.8	5.5	2.5	0.2	0.5	6.3	4.5	3.7	5.7	16.0
27		6.0	S	0.5	0.5	0.5	0.5	0.6	0.5	1.4	1.3	0.6	0.5	0.5	0.5	0.5	1.2	1.9	1.2	2.3	0.3	1.3	1.1	25.4	7.3	2.5	25.4
28		5.2	S	17.2	9.1	6.8	2.2	3.3	8.1	2.1	10.0	9.4	11.6	15.3	5.0	3.4	7.1	0.9	5.2	0.8	0.8	0.9	3.7	2.8	2.5	5.8	17.2
29		3.1	S	2.9	1.3	3.2	4.1	1.0	0.4	0.3	0.7	5.5	3.1	1.7	4.5	0.8	2.5	4.9	2.5	3.7	9.4	8.4	2.8	4.5	1.9	3.2	9.4
30		17.0	S	9.8	9.1	25.5	37.7	28.8	22.8	9.7	8.1	5.1	5.2	1.7	0.7	0.8	2.9	4.4	0.7	1.3	1.7	0.3	1.4	2.3	2.1	8.7	37.7
NO.	30	-	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	30	683	100%	
MEAN	4.3	-	3.7	3.5	5.0	4.9	4.2	5.1	4.8	5.8	5.1	4.7	5.7	5.2	3.7	3.3	2.8	2.5	3.0	2.9	4.2	3.6	5.3	3.7			
MAX	17.0	-	17.2	12.5	25.5	37.7	28.8	22.8	17.9	16.6	20.7	14.5	26.5	27.3	19.7	18.2	19.2	10.7	21.6	16.3	19.1	35.0	33.7	18.3			



Number of Non-Zero Readings	672
Maximum 1-HR Average	37.7 PPB
Maximum 24-HR Average	12.3 PPB
Monthly Calibration Standard Deviation	5.278
Operational Time	718 HRS
Operational Uptime	99.7 %
Monthly Average	4.2 PPB

Lagoon SO₂ (ppb) – November 2020

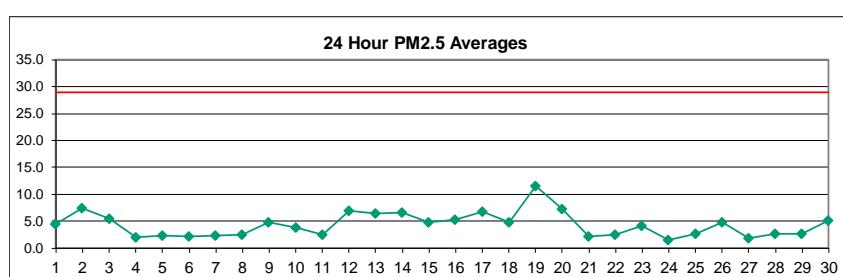
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.5	S	0.5	0.3	0.7	0.7	0.7	0.0	1.8	5.1	0.3	1.0	0.0	0.3	0.5	0.1	0.5	0.6	0.8	5.9	10.1	3.5	6.5	3.1	1.9	10.1	
2	7.4	S	2.7	2.6	6.4	5.1	7.6	8.5	7.0	6.5	0.8	0.2	0.2	0.7	0.6	0.6	1.1	0.4	0.3	0.3	0.6	1.0	0.9	1.1	2.7	8.5	
3	0.6	S	0.3	0.5	0.5	0.8	0.5	0.3	0.8	0.8	0.7	1.5	2.1	6.3	3.5	0.7	0.4	1.2	1.1	0.9	1.2	1.6	0.7	1.1	1.2	6.3	
4	1.3	S	0.6	0.7	1.9	0.9	1.2	0.9	0.8	1.0	1.0	0.9	0.6	1.4	3.6	3.5	2.2	1.5	0.7	0.9	0.9	1.0	0.8	1.0	1.3	3.6	
5	1.4	S	1.3	2.8	2.6	1.8	2.0	2.0	C	C	C	C	0.0	0.0	0.9	0.7	0.9	0.2	0.0	0.0	0.7	0.1	0.0	0.0	1.0	2.8	
6	0.0	S	0.1	0.0	0.0	0.1	0.0	0.3	0.2	1.6	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.8	0.2	0.3	2.1	
7	2.3	S	1.7	2.3	3.4	5.4	1.5	0.3	0.0	0.6	0.3	0.0	0.3	0.5	0.0	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.9	5.4	
8	0.0	S	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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.6	
9	2.1	S	0.0	0.3	0.3	1.0	0.0	0.5	1.0	4.6	7.6	1.3	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	7.6	
10	0.2	S	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
11	0.0	S	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	
12	0.4	S	0.0	0.0	0.1	1.2	0.0	0.0	0.0	0.0	0.1	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	0.1	1.2	
13	0.0	S	0.1	0.2	0.4	0.2	0.0	0.0	0.1	0.2	0.3	0.6	0.6	X	X	1.4	0.7	0.2	1.0	1.0	4.3	1.3	0.6	0.4	0.7	4.3	
14	0.0	S	0.4	0.7	0.0	0.3	0.0	0.9	0.7	0.6	0.0	0.0	0.0	0.4	0.0	1.2	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0	
15	0.2	S	0.0	0.0	0.0	0.9	1.1	0.5	0.2	6.0	8.0	1.3	0.0	0.0	0.0	1.8	0.7	0.2	0.6	0.7	0.2	0.0	0.0	0.0	1.0	8.0	
16	0.2	S	0.0	0.6	0.0	0.0	0.0	0.0	1.5	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	0.1	1.5	
17	0.0	S	0.3	2.0	4.5	4.9	4.5	0.0	0.7	0.1	0.2	0.6	1.8	1.7	1.3	0.4	0.7	0.1	0.5	2.3	6.7	3.3	2.5	0.9	1.7	6.7	
18	0.1	S	4.6	0.4	0.0	0.0	0.4	0.0	1.0	0.0	0.2	0.0	0.9	0.5	0.5	0.1	0.3	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.5	4.6	
19	0.0	S	0.3	0.1	0.2	0.4	0.7	0.5	0.6	0.6	0.2	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.7	
20	0.0	S	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
21	0.0	S	0.0	0.0	0.0	0.0	0.0	0.5	1.1	0.3	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	
22	0.0	S	0.0	0.0	0.0	0.0	1.3	2.5	0.0	0.0	0.5	9.0	10.9	7.8	5.7	7.4	4.3	0.9	3.9	5.4	8.5	10.7	2.7	3.5	10.9		
23	0.3	S	0.8	0.3	0.0	0.0	0.2	0.0	1.7	2.0	1.8	0.1	3.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.6	
24	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.8	
25	2.1	S	0.3	0.4	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.4	1.1	0.7	0.3	2.1		
26	0.4	S	0.0	0.5	5.4	2.7	7.4	6.9	2.5	0.0	0.3	0.6	0.6	1.5	1.2	0.1	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.1	1.4	7.4	
27	1.8	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.8	
28	1.4	S	6.1	1.9	4.9	1.0	0.0	3.3	1.1	3.8	4.3	3.4	0.0	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	6.1	
29	0.0	S	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.2	3.6	2.3	0.0	0.0	0.6	5.2	
30	4.9	S	4.3	2.4	7.5	11.1	9.6	7.9	1.3	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	2.1	11.1	
NO	-	30	-	30	30	30	30	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	683	100%	
MEAN	-	0.9	-	0.8	0.7	1.3	1.3	1.3	1.2	0.8	1.2	1.0	0.4	0.7	1.0	0.7	0.5	0.5	0.5	0.3	0.7	1.1	0.5	0.5	0.5	0.8	
MAX	-	7.4	-	6.1	2.8	7.5	11.1	9.6	8.5	7.0	6.5	8.0	3.4	9.0	10.9	7.8	5.7	7.4	4.3	1.1	5.9	10.1	8.5	10.7	3.1		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	377
Maximum 1-HR Average	11.1 PPB
Maximum 24-HR Average	3.5 PPB
Monthly Calibration Standard Deviation	5 1.778
Operational Time	718 HRS
Operational Uptime	99.7 %
Monthly Average	0.8 PPB

Lagoon PM_{2.5} ($\mu\text{g}/\text{m}^3$) – November 2020

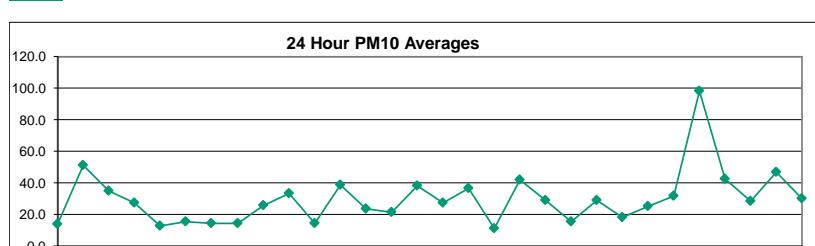
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	5.8	5.1	4.1	5.5	7.2	3.3	0.1	3.0	5.4	4.7	3.3	2.3	3.7	3.0	3.3	5.5	5.1	4.0	4.8	5.8	5.5	4.1	8.3	6.3	4.5	8.3	
2	12.3	9.8	7.6	4.0	0.0	0.0	4.8	7.3	7.1	9.1	12.0	19.0	13.7	13.0	9.0	5.5	6.9	8.7	6.1	3.3	3.3	4.4	7.2	5.5	7.5	19.0	
3	4.7	4.1	4.0	3.4	8.7	6.5	5.5	3.6	0.8	1.5	2.2	2.3	5.1	8.3	9.1	16.2	14.0	9.4	4.0	4.1	7.6	4.7	0.0	2.6	5.5	5.5	16.2
4	3.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.0	2.6	5.8	6.5	3.4	6.8	6.2	3.7	1.9	2.9	2.2	0.0	0.0	0.8	0.4	2.0	6.8	
5	0.1	4.7	4.4	4.4	2.9	0.5	1.9	3.0	1.6	5.5	4.0	2.6	3.6	1.5	0.0	0.0	0.0	1.9	2.6	1.5	0.1	0.5	3.4	7.2	2.4	7.2	
6	4.7	0.9	1.5	0.1	0.1	1.5	1.2	1.9	3.7	3.0	3.0	4.0	4.1	4.7	2.3	0.0	0.0	0.4	1.2	3.7	4.0	3.0	2.6	2.6	2.3	4.7	
7	1.5	1.2	1.9	1.9	1.5	4.1	11.5	6.5	2.6	4.0	3.3	1.1	0.0	0.0	0.4	0.1	0.0	2.2	2.6	3.0	2.9	0.8	1.6	3.3	2.4	11.5	
8	1.9	2.2	0.5	2.6	2.3	0.4	1.2	3.7	4.0	4.7	5.8	4.0	1.9	1.9	6.9	4.7	2.2	1.9	0.8	0.0	0.0	1.5	3.3	2.4	6.9		
9	3.0	3.3	2.9	0.8	0.0	0.0	2.2	0.8	0.0	1.2	4.1	10.5	7.6	1.5	0.0	0.8	0.0	25.8	7.6	5.5	10.5	10.8	8.0	7.3	4.8	25.8	
10	6.2	4.0	3.0	5.1	4.0	0.8	1.6	5.5	4.0	1.1	0.0	1.2	2.6	2.6	3.3	1.9	5.5	8.4	9.4	5.5	4.4	6.2	4.0	1.5	3.8	9.4	
11	0.8	1.6	1.5	0.1	0.0	0.0	0.1	1.9	2.2	0.8	0.1	4.0	5.1	5.8	6.9	5.1	4.4	3.3	1.6	5.8	5.1	1.5	1.5	1.2	2.5	6.9	
12	0.8	4.0	3.7	1.2	0.8	0.1	4.0	5.5	3.7	1.5	2.4	C	C	C	C	15.5	13.4	11.3	18.0	8.3	9.1	11.9	13.4	11.9	7.0	18.0	
13	6.9	7.3	8.3	6.5	10.1	7.6	2.4	2.2	4.4	4.4	4.7	4.4	7.3	7.6	7.6	7.7	8.5	6.8	5.5	5.6	4.0	10.7	9.4	6.1	6.5	10.7	
14	5.1	7.7	8.1	9.0	11.8	10.1	6.6	7.9	7.3	7.2	6.4	7.9	7.5	9.6	7.9	7.0	4.4	4.9	5.9	3.5	2.7	4.1	3.7	3.7	6.7	11.8	
15	4.1	5.0	4.2	2.3	2.7	4.1	5.1	5.1	5.2	2.6	3.3	6.7	4.7	0.5	1.8	4.7	7.6	7.7	8.0	7.9	6.9	5.2	6.4	4.5	4.9	8.0	
16	2.0	3.0	2.9	1.7	0.6	2.0	3.4	4.2	6.2	11.9	8.5	6.7	4.2	2.0	3.5	5.7	8.3	8.1	10.9	8.1	5.9	6.7	4.7	4.7	5.2	11.9	
17	7.4	4.8	2.0	3.4	8.4	12.4	12.9	7.5	3.2	2.7	3.9	6.6	10.2	11.2	10.4	6.7	7.7	5.2	3.0	3.7	7.8	9.0	8.1	5.8	6.8	12.9	
18	5.5	1.9	2.3	3.1	4.1	3.7	4.3	3.3	2.9	2.5	1.1	0.8	1.3	3.3	6.0	3.7	0.1	0.8	4.8	12.6	12.2	11.8	13.2	11.7	4.9	13.2	
19	12.8	10.9	12.4	12.6	9.7	5.6	6.9	7.0	11.4	9.4	9.6	11.4	13.2	11.9	14.5	12.0	11.9	8.6	14.4	14.5	11.1	10.5	17.6	16.3	11.5	17.6	
20	9.8	6.7	5.5	13.1	13.2	7.9	6.9	7.0	8.0	8.0	11.6	11.3	8.5	9.9	10.8	10.3	8.4	4.8	1.7	3.3	2.4	0.5	1.5	5.0	7.3	13.2	
21	10.4	5.2	2.6	2.4	0.3	0.0	2.3	3.1	1.0	3.5	4.7	2.7	0.0	0.0	1.0	3.1	4.0	3.9	2.8	0.3	0.0	0.2	0.6	2.2	10.4		
22	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.6	2.6	2.4	0.9	0.8	2.0	10.3	7.7	4.3	2.9	2.1	4.0	3.9	3.0	3.5	5.1	4.9	2.6	10.3	
23	6.3	6.8	5.4	4.0	2.4	0.9	1.5	1.8	2.0	6.7	7.9	10.0	8.0	7.9	6.8	5.7	4.1	2.8	1.1	1.0	2.8	1.4	0.5	1.4	4.1	10.0	
24	0.3	0.0	3.4	4.6	3.2	1.3	0.0	0.0	0.1	0.0	2.0	5.1	5.4	4.2	1.7	0.5	1.3	0.0	0.0	0.2	0.0	1.5	1.3	2.4	1.6	5.4	
25	3.5	1.8	1.6	2.9	2.3	2.3	2.9	1.8	0.9	1.6	2.2	1.4	4.3	7.0	4.5	2.1	1.1	4.4	3.8	1.4	3.6	3.0	3.0	2.7	2.8	7.0	
26	0.4	0.0	0.1	0.0	1.4	6.8	5.9	2.7	3.8	4.7	3.2	2.0	6.6	10.7	9.1	9.1	5.9	6.9	13.2	7.4	1.4	3.6	6.8	5.4	4.9	13.2	
27	5.0	3.9	2.9	1.8	1.3	2.9	2.1	1.1	0.5	1.1	0.9	2.0	2.9	1.7	0.0	0.5	4.3	3.4	0.5	1.7	2.9	1.7	0.0	1.2	1.9	5.0	
28	4.6	6.2	5.6	3.4	1.5	4.8	4.5	2.2	1.9	1.9	2.2	1.9	2.2	1.4	0.5	1.6	2.2	2.1	0.4	0.1	0.2	1.0	3.1	7.7	2.6	7.7	
29	4.8	1.9	2.3	3.3	3.4	4.3	2.9	1.3	3.7	3.6	3.2	1.5	1.7	3.6	2.9	2.6	2.7	3.5	1.7	0.0	1.6	5.2	3.1	0.8	2.7	5.2	
30	1.4	10.3	8.1	5.2	6.2	10.7	15.5	12.1	12.8	6.5	2.0	3.9	6.4	4.5	1.6	1.2	2.2	5.6	6.6	2.5	0.0	0.0	0.0	0.0	5.2	15.5	
NO.	30	30	30	30	30	30	30	30	30	30	29	29	29	29	29	30	30	30	30	30	30	30	30	30	716	100%	
MEAN	4.5	4.1	3.8	3.6	3.7	3.5	4.0	3.8	3.8	3.9	4.0	5.0	5.2	5.3	5.1	5.0	4.8	5.3	5.0	4.2	4.0	4.2	4.7	4.6			
MAX	12.8	10.9	12.4	13.1	13.2	12.4	15.5	12.1	12.8	11.9	12.0	19.0	13.7	13.0	14.5	16.2	14.0	25.8	18.0	14.5	12.2	11.9	17.6	16.3			



Number of 24HR Exceedences	0
Number of Non-Zero Readings	660
Maximum 1-HR Average	25.8 UG/M3
Maximum 24-HR Average	11.5 UG/M3
Monthly Calibration Standard Deviation	4 3.694
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	4.4 UG/M3

Lagoon PM₁₀ ($\mu\text{g}/\text{m}^3$) – November 2020

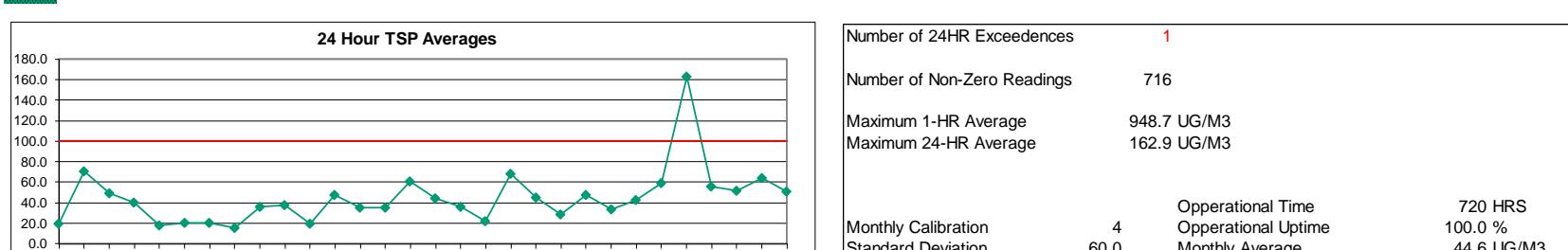
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.3	8.1	6.1	10.0	11.4	10.1	27.2	8.0	16.6	24.1	23.0	12.4	8.2	6.7	6.0	0.7	0.6	7.2	8.0	25.1	30.2	23.8	12.4	39.0	13.9	39.0
2	141.7	56.8	27.2	3.3	3.9	17.8	9.7	9.4	19.2	93.8	142.1	209.3	137.7	82.1	61.4	80.6	43.1	22.8	24.2	13.1	8.2	6.7	6.0	6.0	51.1	209.3
3	1.4	0.0	0.0	0.0	1.2	1.9	5.9	8.6	11.3	29.2	36.3	40.4	89.2	115.7	113.1	109.7	61.7	18.1	26.0	143.3	10.2	2.1	0.6	18.3	35.2	143.3
4	7.0	9.3	6.8	2.1	4.6	7.3	4.1	5.9	38.2	23.4	32.1	60.7	60.1	41.2	70.8	69.1	74.9	45.5	35.4	22.6	9.1	10.7	12.1	10.8	27.7	74.9
5	28.5	34.3	16.1	16.1	7.6	6.0	9.3	23.9	18.4	17.5	7.0	4.7	14.5	2.4	4.6	15.2	6.3	8.6	12.0	12.8	12.8	12.8	16.8	7.0	13.1	34.3
6	8.0	10.0	16.7	10.9	11.4	8.1	6.1	9.3	10.7	10.1	23.2	19.0	28.7	21.8	22.2	9.1	8.1	2.8	20.4	36.7	24.7	32.3	15.4	6.9	15.5	36.7
7	2.1	17.7	22.2	30.1	10.0	18.6	25.4	18.4	14.9	19.7	20.9	3.8	5.3	18.5	5.7	3.4	5.9	9.9	6.1	3.4	15.8	18.1	32.6	25.2	14.7	32.6
8	17.1	35.2	32.5	30.5	8.7	9.4	8.1	8.7	10.7	10.8	12.6	33.8	36.4	20.3	20.9	3.2	16.4	3.7	5.9	6.7	3.4	1.3	5.9	11.9	14.7	36.4
9	14.7	13.5	8.9	3.5	2.0	3.3	7.2	10.0	19.9	12.3	41.0	84.6	108.3	44.6	40.0	43.2	19.0	16.9	33.3	27.9	15.9	24.2	10.5	14.7	25.8	108.3
10	26.0	43.4	86.7	95.2	32.3	11.3	22.9	42.7	52.8	20.6	33.3	12.1	25.9	14.2	27.3	13.9	27.9	55.9	33.2	22.6	19.6	24.1	40.7	16.9	33.4	95.2
11	11.5	10.1	8.8	5.4	4.0	3.2	2.0	2.6	6.6	11.9	12.1	16.0	7.6	7.4	21.2	13.1	13.4	22.0	19.0	18.2	20.8	44.3	36.1	29.9	14.5	44.3
12	22.5	42.0	30.1	54.2	43.0	43.3	49.8	40.9	32.7	27.2	40.1	C	C	C	18.9	20.2	11.5	8.7	8.1	10.3	128.8	64.4	75.3	38.6	128.8	
13	17.5	21.5	2.6	3.9	21.7	0.0	1.9	5.2	17.1	28.7	18.5	20.2	29.1	81.0	65.7	47.1	53.8	36.5	15.1	19.7	12.2	25.1	15.1	8.8	23.7	81.0
14	10.7	20.7	17.2	22.7	18.4	11.4	12.9	25.3	19.5	18.6	24.9	24.7	31.2	32.9	19.5	38.8	12.7	65.0	42.2	2.7	4.9	8.7	9.8	16.9	21.3	65.0
15	19.2	45.4	36.1	29.6	16.9	28.9	27.3	30.7	13.5	19.0	102.1	85.7	23.0	2.7	7.0	49.8	121.8	107.7	64.1	48.4	10.6	8.1	9.5	16.3	38.5	121.8
16	91.4	26.3	15.6	17.2	11.1	8.5	16.5	11.8	30.2	60.0	45.3	32.6	14.1	14.3	28.0	27.4	44.2	28.7	53.5	20.8	18.7	15.9	11.2	19.0	27.6	91.4
17	31.6	17.1	10.7	11.1	27.6	26.7	22.4	12.4	6.4	2.3	9.0	13.5	14.5	25.1	29.5	72.8	111.0	78.7	91.9	66.5	61.2	95.5	20.6	15.7	36.4	111.0
18	7.3	6.7	8.0	17.4	4.2	8.9	11.7	14.9	4.8	7.3	17.4	16.4	20.3	31.4	14.3	5.7	0.8	5.5	19.1	11.3	10.9	22.1	0.0	0.0	11.1	31.4
19	33.9	14.4	29.6	25.5	10.7	11.5	11.9	7.5	9.0	13.5	14.1	69.6	460.8	64.0	26.7	20.7	16.7	15.6	17.0	21.0	33.2	23.7	34.7	27.4	42.2	460.8
20	33.0	31.9	44.5	43.6	69.8	37.3	18.5	32.7	17.0	41.8	60.9	38.6	28.2	23.3	5.1	32.7	13.7	6.5	3.3	15.9	32.9	18.0	14.9	29.3	28.9	69.8
21	53.0	11.7	6.4	23.3	17.4	15.5	27.3	31.2	11.7	27.9	39.7	4.2	7.3	7.8	36.8	19.1	11.5	9.7	3.0	0.0	0.0	0.9	5.5	9.3	15.8	53.0
22	18.2	18.0	4.7	17.3	24.2	23.8	47.5	58.6	19.8	2.9	7.9	16.1	15.8	42.3	26.4	28.1	44.5	35.3	50.6	74.5	50.6	26.4	26.5	17.0	29.0	74.5
23	7.9	5.5	2.2	5.7	5.7	0.7	2.2	6.2	9.8	26.9	25.4	21.0	24.2	44.4	42.1	55.0	25.4	30.7	14.8	25.4	30.5	9.9	7.1	3.9	18.0	55.0
24	4.2	22.3	64.2	9.3	8.1	9.4	10.7	21.2	26.0	22.6	48.9	42.8	57.2	52.1	42.3	47.3	33.5	8.6	17.5	6.8	8.0	7.8	5.3	29.9	64.2	
25	66.4	66.4	34.0	15.7	18.1	6.1	29.3	11.9	9.0	23.8	10.9	12.6	13.2	41.8	39.3	29.5	39.4	71.6	14.1	16.6	64.7	19.5	72.5	41.3	32.0	72.5
26	30.6	21.5	11.1	49.7	45.8	76.5	75.9	56.7	64.8	39.0	28.2	50.3	92.8	187.3	232.2	135.4	60.6	146.0	334.8	35.4	45.6	151.7	325.3	57.1	98.1	334.8
27	27.7	25.8	7.5	20.2	19.3	26.6	32.6	59.5	80.5	68.7	74.4	84.5	69.6	46.2	58.5	30.8	27.6	36.9	35.1	76.2	25.4	10.2	14.5	63.1	42.6	84.5
28	60.1	141.7	53.6	21.8	13.0	27.5	36.6	27.3	21.4	18.7	24.7	20.1	28.0	12.0	21.2	25.4	10.4	5.4	7.9	16.5	0.1	3.6	13.3	77.1	28.7	141.7
29	56.0	40.7	21.3	39.0	50.0	102.4	50.6	64.8	161.1	132.5	226.8	24.0	13.1	18.1	16.8	15.0	7.8	25.8	16.4	8.7	8.9	10.6	8.5	4.6	46.8	226.8
30	3.5	9.0	34.8	30.9	71.2	38.6	29.1	29.9	34.4	54.4	46.5	34.6	67.7	22.5	7.3	17.9	36.4	97.1	22.3	11.4	8.5	4.7	4.9	9.7	30.3	97.1
NO.	30	30	30	30	30	30	30	30	30	30	30	29	29	29	29	30	30	30	30	30	30	30	30	30	716	100%
MEAN	28.7	27.6	22.2	22.2	19.8	20.0	21.4	23.2	26.9	30.3	41.6	38.2	52.8	38.8	38.3	35.9	32.3	34.5	35.2	27.3	20.3	26.4	28.4	23.6		
MAX	141.7	141.7	86.7	95.2	71.2	102.4	75.9	64.8	161.1	132.5	226.8	209.3	460.8	187.3	232.2	135.4	121.8	146.0	334.8	143.3	64.7	151.7	325.3	77.1		



Number of Non-Zero Readings	708
Maximum 1-HR Average	460.8 $\mu\text{g}/\text{m}^3$
Maximum 24-HR Average	98.1 $\mu\text{g}/\text{m}^3$
Monthly Calibration Standard Deviation	37.35
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	29.8 $\mu\text{g}/\text{m}^3$

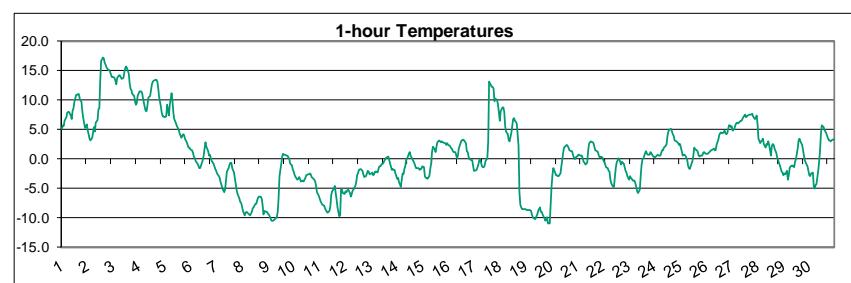
Lagoon TSP ($\mu\text{g}/\text{m}^3$) – November 2020

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	13.9	3.3	8.3	20.6	18.3	20.9	18.3	14.1	11.3	35.4	33.5	16.0	7.4	11.1	7.2	8.5	5.8	7.8	11.2	40.8	45.7	28.4	21.1	53.1	19.2	53.1
2	205.6	93.6	38.9	8.0	12.5	19.3	12.8	15.3	31.5	137.9	224.3	315.4	194.7	98.4	28.5	74.7	49.3	31.1	33.3	20.0	15.5	12.7	18.0	10.8	70.9	315.4
3	11.3	5.9	4.4	9.7	7.2	8.5	12.5	11.3	26.0	34.5	52.2	54.0	108.0	153.6	154.7	157.6	76.0	44.0	45.7	154.4	33.1	1.7	0.2	23.0	49.6	157.6
4	10.3	12.9	7.3	5.8	9.8	24.8	2.3	15.0	43.6	20.3	41.0	81.9	79.1	70.9	98.8	111.8	110.8	57.1	45.4	25.7	13.0	19.3	31.6	15.9	39.8	111.8
5	39.5	48.3	21.8	16.9	12.8	12.6	11.3	20.6	27.7	39.5	16.1	15.4	13.0	12.7	15.8	8.1	9.8	16.6	16.8	11.4	16.6	10.5	7.2	17.8	18.3	48.3
6	15.9	6.1	19.1	8.8	11.2	9.9	8.5	11.2	11.3	13.9	22.1	22.3	35.7	30.8	36.0	9.3	9.8	16.6	32.9	52.1	32.6	46.7	20.4	10.2	20.6	52.1
7	8.5	12.5	26.0	38.5	13.4	24.7	29.7	29.3	21.2	26.3	29.1	7.8	7.5	27.3	7.7	11.1	20.6	25.0	14.4	11.3	18.0	18.2	35.6	33.5	20.7	38.5
8	17.3	44.9	25.7	22.6	18.3	8.8	8.5	10.1	12.6	15.3	12.7	23.4	17.0	15.5	16.7	7.4	16.5	7.4	17.8	8.8	11.2	5.9	11.1	15.3	15.4	44.9
9	18.1	8.8	8.5	5.8	5.0	7.1	16.5	7.4	32.6	20.0	55.3	129.3	142.3	27.3	26.4	49.2	35.2	36.1	67.0	51.8	29.9	30.6	27.9	26.5	36.0	142.3
10	35.8	42.8	75.2	109.8	47.8	24.4	25.0	42.5	51.1	33.9	33.4	30.7	29.3	20.8	22.3	14.3	46.2	72.0	31.9	32.0	24.0	18.4	20.9	14.2	37.4	109.8
11	8.7	13.9	7.3	3.1	7.0	11.1	7.2	9.8	10.2	9.9	12.5	15.7	15.4	16.7	30.2	22.6	37.1	30.8	29.3	31.9	30.7	49.4	28.5	23.8	19.3	49.4
12	27.7	49.3	31.2	36.0	33.5	49.5	75.5	46.8	28.4	30.5	36.0	C	C	C	33.4	33.3	29.2	25.0	15.4	17.9	164.0	76.6	118.5	47.9	164.0	
13	36.1	18.7	12.8	8.6	29.9	8.3	7.1	5.8	20.5	47.7	27.1	19.8	42.3	116.8	95.9	67.7	81.3	51.4	30.8	32.6	20.1	28.4	15.3	13.8	35.0	116.8
14	11.1	29.6	14.6	23.5	19.5	18.3	21.7	33.0	26.5	27.8	49.1	36.5	63.8	59.5	36.1	61.3	26.0	118.4	80.4	13.9	11.7	17.5	8.6	32.8	35.0	118.4
15	26.1	82.1	64.2	47.4	28.3	36.1	37.0	49.1	12.9	26.6	183.8	150.9	36.1	13.0	21.0	74.8	184.3	140.4	103.5	71.8	21.6	10.2	11.7	23.2	60.7	184.3
16	81.1	46.7	26.9	34.6	31.3	20.9	21.3	29.0	52.2	109.0	79.0	55.4	30.3	25.8	37.8	45.1	76.9	45.5	82.1	29.8	30.1	22.2	19.9	27.1	44.2	109.0
17	36.8	24.4	14.4	21.2	25.4	29.1	25.8	15.2	11.3	12.7	14.3	17.9	13.5	28.2	35.7	73.3	70.0	55.8	15.7	24.9	94.1	152.8	27.8	25.9	36.1	152.8
18	16.5	11.3	11.9	21.4	7.6	15.5	17.4	27.4	19.8	24.2	31.6	26.1	42.5	43.3	24.4	12.6	12.5	12.7	35.3	21.0	23.3	39.1	19.2	16.0	22.2	43.3
19	47.4	28.1	32.0	27.7	24.6	16.2	27.2	16.6	12.8	15.8	20.9	93.8	948.7	35.8	30.0	19.7	21.9	15.4	15.9	24.2	31.4	28.6	50.1	50.7	68.1	948.7
20	40.0	36.0	57.4	69.2	108.6	48.5	25.0	45.0	34.0	68.9	103.9	57.6	29.9	22.9	24.9	65.1	30.6	7.6	16.4	33.5	57.0	35.4	25.0	46.7	45.4	108.6
21	79.1	12.9	12.8	37.8	41.4	38.0	45.8	44.5	23.7	47.1	64.3	5.9	8.9	19.6	85.3	35.0	16.7	15.1	9.6	5.6	3.3	7.5	13.9	11.7	28.6	85.3
22	18.8	24.3	13.1	42.7	35.5	37.5	83.0	98.7	36.4	17.6	8.4	7.2	11.1	52.3	44.9	55.1	92.4	64.3	95.5	93.8	84.8	44.4	43.7	30.2	47.3	98.7
23	6.3	15.4	14.9	6.1	11.2	10.0	11.6	17.0	21.4	50.6	38.4	30.4	29.6	65.2	88.6	106.1	53.0	55.4	36.7	46.3	52.1	18.0	15.1	10.3	33.7	106.1
24	11.8	45.9	98.9	16.6	12.7	13.3	23.6	35.9	31.9	32.6	86.5	75.1	105.5	84.3	36.7	66.7	44.4	22.0	37.5	14.7	26.4	24.2	12.4	56.3	42.3	105.5
25	92.6	106.7	39.5	26.9	33.1	28.7	45.2	13.3	25.4	50.8	18.2	16.8	20.4	79.6	65.4	46.6	65.3	151.8	51.3	34.1	131.2	40.6	154.5	74.4	58.8	154.5
26	44.1	37.2	14.0	80.2	82.3	158.3	163.0	113.7	135.1	78.3	45.4	86.2	147.8	328.1	390.9	238.4	111.9	179.5	576.9	79.2	88.4	210.3	418.2	103.2	162.9	576.9
27	46.2	50.7	17.2	23.2	28.4	40.2	40.3	63.3	77.9	83.6	92.1	121.1	62.8	46.2	52.0	41.3	59.0	69.3	48.5	89.2	30.0	19.7	27.7	114.9	56.0	121.1
28	101.9	264.1	98.9	39.6	28.6	43.3	67.9	43.8	33.5	34.8	34.2	26.4	47.6	30.5	38.3	51.0	22.2	14.6	23.6	21.4	6.1	13.5	33.5	123.7	51.8	264.1
29	84.6	61.9	32.6	66.3	91.3	195.7	70.0	88.4	191.4	113.7	199.4	62.0	27.9	28.1	31.2	18.1	17.7	31.8	27.5	20.9	21.1	23.6	20.2	8.3	63.9	199.4
30	6.9	28.0	52.6	54.5	110.4	63.8	42.1	48.4	47.4	72.1	50.4	61.2	105.8	45.7	21.7	36.4	70.7	175.7	36.2	14.1	15.4	16.0	26.0	18.1	50.8	175.7
NO.	30	30	30	30	30	30	30	30	30	30	29	29	29	29	30	30	30	30	30	30	30	30	30	30	716	100%
MEAN	40.0	42.2	30.1	31.1	31.6	34.8	33.4	34.0	37.4	44.4	57.2	57.3	83.6	55.5	55.4	54.1	50.2	53.3	56.5	37.6	34.5	38.6	41.4	38.3		
MAX	205.6	264.1	98.9	109.8	110.4	195.7	163.0	113.7	191.4	137.9	224.3	315.4	948.7	328.1	390.9	238.4	184.3	179.5	576.9	154.4	131.2	210.3	418.2	123.7		



Lagoon Temperature (°C) – November 2020

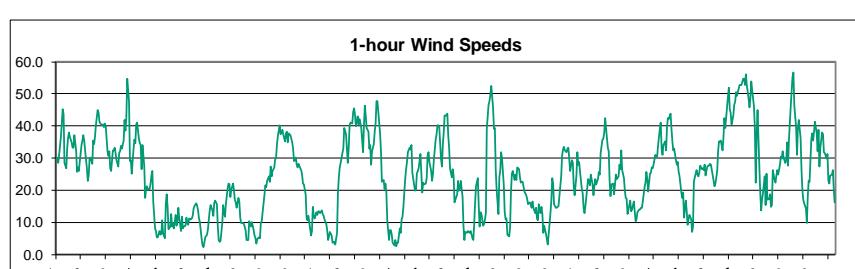
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.1	5.8	5.6	6.4	7.1	7.8	8.1	7.9	7.4	6.7	8.2	8.6	9.6	10.8	10.8	11.1	11.0	10.2	9.6	7.9	6.9	6.0	5.2	5.8	7.9	11.1
2	4.8	4.1	3.4	3.1	3.7	4.5	5.4	4.7	6.2	6.6	8.5	8.6	13.3	16.7	17.2	17.1	16.4	16.0	15.6	15.1	15.0	14.8	14.3	13.8	10.4	17.2
3	13.8	13.8	13.2	12.6	13.8	14.1	14.2	13.9	13.6	13.8	14.7	15.5	15.8	15.4	14.5	12.8	12.0	11.6	11.0	10.7	9.8	9.3	9.5	10.7	12.9	15.8
4	11.4	11.4	11.5	11.2	10.3	8.7	8.2	8.1	9.2	10.3	10.7	11.8	12.7	13.1	13.3	13.4	13.5	13.2	12.0	10.6	8.9	7.9	7.2	7.2	10.7	13.5
5	7.1	7.2	9.3	8.2	7.3	9.2	11.2	9.8	7.8	6.7	6.0	5.6	5.2	5.0	4.3	3.6	4.0	4.2	4.1	3.4	2.9	2.4	1.9	1.9	5.8	11.2
6	1.6	1.4	1.0	0.4	0.2	-0.3	-0.8	-1.1	-1.5	-1.6	-1.1	-0.2	0.6	1.7	2.8	2.1	1.4	0.6	0.7	0.1	-0.3	-0.9	-1.3	-1.6	0.2	2.8
7	-2.1	-2.4	-3.0	-3.2	-4.0	-4.4	-5.0	-5.6	-5.2	-3.7	-2.2	-1.5	-1.0	-0.6	-0.7	-1.6	-2.3	-3.3	-4.3	-5.4	-6.0	-6.6	-7.4	-7.4	-3.7	-0.6
8	-8.0	-8.9	-9.5	-9.2	-9.0	-9.1	-9.3	-9.6	-9.2	-8.9	-8.3	-8.3	-7.6	-7.6	-7.0	-6.5	-6.4	-6.5	-6.6	-7.7	-9.5	-8.9	-8.9	-9.0	-8.3	-6.4
9	-9.2	-9.4	-9.7	-10.6	-10.4	-10.5	-10.3	-10.1	-9.8	-9.0	-6.6	-2.9	-0.8	0.4	0.9	0.8	0.8	0.6	0.5	0.3	0.0	-0.8	-1.1	-1.9	-4.5	0.9
10	-2.2	-2.8	-3.1	-3.5	-3.3	-3.0	-3.3	-3.8	-3.6	-3.9	-3.5	-3.2	-2.8	-2.7	-2.6	-2.4	-2.6	-3.0	-3.4	-3.6	-3.8	-4.6	-5.6	-6.3	-3.4	-2.2
11	-6.8	-7.1	-7.4	-7.7	-7.9	-8.4	-8.6	-8.9	-9.1	-8.9	-8.1	-6.0	-5.6	-5.1	-4.5	-5.7	-6.9	-8.2	-9.8	-9.6	-5.2	-5.2	-5.8	-5.9	-7.2	-4.5
12	-5.5	-5.6	-5.4	-5.2	-5.8	-6.5	-6.0	-5.3	-5.2	-4.6	-3.9	-2.8	-2.5	-1.9	-1.7	-1.8	-2.1	-2.6	-3.0	-2.9	-2.5	-2.1	-2.1	-2.6	-3.7	-1.7
13	-2.5	-2.3	-2.7	-2.7	-2.2	-2.2	-2.3	-1.7	-1.2	-1.2	-0.7	-0.7	-0.6	-0.2	0.3	0.2	0.5	-0.2	-0.8	-1.9	-1.7	-1.8	-1.9	-2.5	-1.4	0.5
14	-3.3	-3.2	-4.0	-4.3	-4.7	-2.4	-2.7	-1.6	-1.2	-0.2	0.4	0.9	1.1	0.6	0.2	-0.4	-0.7	-1.0	-1.5	-1.5	-1.6	-1.8	-1.7	-1.7	-1.5	1.1
15	-1.3	-1.4	-2.8	-3.3	-3.2	-3.4	-2.9	-1.7	-0.7	1.2	2.1	1.6	1.1	2.1	2.8	3.1	2.9	2.9	3.1	2.8	2.6	2.7	2.4	2.7	0.6	3.1
16	2.4	2.2	1.9	1.8	1.4	1.1	1.2	0.8	0.1	0.6	1.8	2.7	3.1	3.2	3.2	3.1	2.7	1.3	1.1	0.4	0.0	-0.2	-0.2	-1.1	1.4	3.2
17	-2.0	-2.1	-1.9	-1.4	-0.9	-0.2	-0.1	-1.3	-1.5	-1.4	-1.0	-0.4	0.1	3.0	13.1	12.9	12.3	12.2	11.9	9.8	10.2	9.9	9.1	7.8	4.1	13.1
18	6.5	8.2	8.8	8.7	8.0	5.6	4.7	4.1	3.1	2.9	3.7	4.5	6.7	6.9	6.5	6.3	6.0	2.2	-5.7	-7.8	-8.2	-8.5	-8.6	-8.5	2.3	8.8
19	-8.6	-8.6	-8.7	-8.6	-8.7	-8.8	-9.4	-9.9	-10.2	-10.1	-9.8	-9.4	-8.8	-8.2	-8.9	-9.0	-9.4	-10.1	-10.6	-10.3	-9.8	-11.0	-10.9	-7.8	-9.4	-7.8
20	-4.8	-2.8	-1.5	-2.2	-2.8	-2.7	-2.9	-3.0	-2.4	-1.3	-0.2	1.1	2.0	2.2	2.3	2.2	2.0	1.5	1.4	1.3	0.8	0.3	-0.1	0.5	-0.4	2.3
21	0.5	0.7	0.6	0.5	0.1	-0.5	-0.6	-0.9	-0.6	1.4	2.5	2.8	2.9	2.9	2.6	2.0	1.5	1.3	1.1	0.5	0.3	0.5	0.3	1.0	2.9	
22	-0.1	-0.5	-0.9	-1.4	-1.5	-2.0	-2.1	-3.5	-4.1	-4.7	-4.7	-3.1	-1.6	-0.7	0.1	0.0	-0.6	-0.9	-0.5	-0.8	-1.4	-2.0	-2.3	-3.0	-1.8	0.1
23	-3.5	-3.0	-3.2	-3.4	-3.6	-3.7	-4.1	-4.8	-5.5	-5.9	-5.1	-2.7	-0.9	0.0	0.2	1.0	1.4	0.8	0.7	0.7	1.2	0.9	0.6	0.4	-1.7	1.4
24	0.3	0.4	0.6	0.7	0.6	0.5	1.0	1.4	1.5	2.0	2.3	2.6	3.9	4.7	5.0	5.1	4.7	4.1	3.9	3.1	3.0	2.9	2.7	2.4	2.5	5.1
25	2.6	1.4	0.6	0.7	0.7	0.6	-0.1	-1.2	-1.5	-1.6	-1.3	-0.4	0.5	1.9	1.7	1.4	1.1	0.5	0.4	0.6	0.6	1.0	1.1	0.9	0.5	2.6
26	0.9	0.8	1.0	1.1	1.3	1.4	1.6	1.8	1.4	1.5	2.3	3.4	4.0	4.3	4.4	4.4	4.5	4.8	4.4	4.2	4.4	4.6	5.6	5.3	3.1	5.8
27	5.5	4.8	5.1	5.7	6.0	6.2	6.1	6.3	6.4	6.5	6.8	7.1	7.5	7.1	7.2	7.3	7.5	7.5	7.6	7.6	7.2	6.8	6.9	7.4	6.7	7.6
28	5.8	3.5	2.7	3.0	3.2	3.5	2.6	1.9	2.5	2.4	3.0	2.3	0.6	2.2	2.5	2.4	1.8	1.1	0.3	-0.2	-0.6	-1.1	-2.1	-2.4	1.7	5.8
29	-2.8	-2.4	-2.6	-2.1	-3.6	-2.8	-1.6	-1.3	-1.1	-1.3	-1.3	-0.5	-0.1	1.7	3.2	3.4	2.9	2.3	1.5	0.5	-0.1	-0.7	-1.3	-2.0	-0.5	3.4
30	-2.8	-2.9	-2.5	-2.3	-4.5	-5.0	-4.4	-4.3	-2.0	-0.5	1.4	4.2	5.8	5.4	4.9	4.7	4.3	3.9	3.1	3.2	2.9	3.2	3.3	3.3	0.9	5.8
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	0.1	0.0	-0.1	-0.2	-0.4	-0.4	-0.6	-0.6	-0.3	0.5	1.4	2.1	2.8	3.3	3.1	2.8	2.2	1.6	1.1	0.9	0.6	0.3	0.2			
MAX	13.8	13.8	13.2	12.6	13.8	14.1	14.2	13.9	13.6	13.8	14.7	15.5	15.8	16.7	17.2	17.1	16.4	16.0	15.6	15.1	15.0	14.8	14.3	13.8		



Number of Non-Zero Readings	720
Maximum 1-HR Average	17.2 C
Maximum 24-HR Average	12.9 C
Monthly Calibration Standard Deviation	5.89
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	0.8 C

Lagoon Wind Speed (km/hr) – November 2020

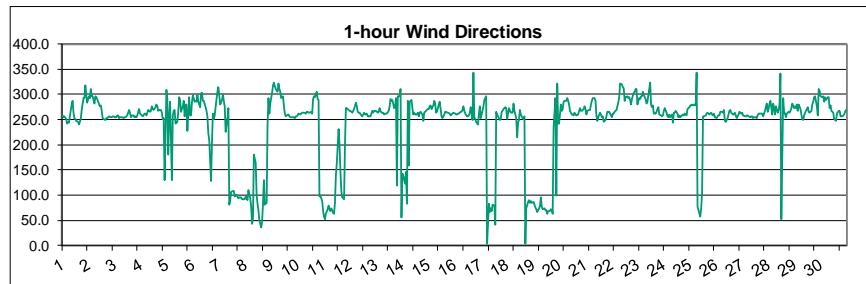
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	29.7	30.3	28.6	31.0	36.6	40.8	45.3	43.5	28.5	27.0	33.1	36.4	37.9	36.5	34.9	33.4	33.2	37.0	32.4	25.7	27.3	26.1	28.9	34.1	33.3	45.3	
2	35.6	37.1	35.5	32.4	26.9	23.0	24.6	29.9	30.1	28.2	35.5	34.5	36.7	40.2	45.1	44.1	41.2	40.8	40.3	40.6	39.6	40.8	40.0	32.1	35.6	45.1	
3	30.7	32.1	26.9	26.1	32.4	32.5	33.2	31.6	29.5	27.5	31.6	32.1	33.8	33.1	35.5	42.0	38.6	42.8	54.7	47.5	29.1	29.4	25.2	32.7	33.8	54.7	
4	35.7	34.7	40.6	41.0	36.2	34.7	34.0	26.7	34.1	27.3	17.8	20.3	21.4	20.1	20.6	22.2	24.6	26.0	16.5	8.1	7.4	5.3	5.3	7.2	23.7	41.0	
5	6.3	6.6	10.7	6.5	5.2	15.7	18.9	14.8	7.8	8.8	12.7	8.9	10.0	8.2	12.5	8.9	10.7	14.7	11.3	7.2	11.9	8.0	8.7	9.0	10.2	18.9	
6	11.7	9.8	9.2	11.2	11.1	11.4	12.2	14.3	15.1	16.1	15.2	13.9	11.1	10.2	4.9	2.9	2.3	3.8	5.5	6.1	7.9	11.1	13.9	15.3	10.3	16.1	
7	13.7	12.1	16.0	16.8	15.7	8.7	4.5	3.9	4.3	9.8	15.3	13.1	11.7	15.7	20.7	22.2	21.8	18.0	20.1	22.1	20.2	17.1	16.3	14.5	14.8	22.2	
8	17.8	16.5	11.6	9.9	9.8	9.7	8.8	7.5	4.5	4.6	10.5	9.9	8.7	10.1	7.5	6.0	5.1	3.5	4.9	5.4	5.1	9.8	10.5	13.2	8.8	17.8	
9	18.5	21.6	21.1	23.0	24.4	22.8	27.5	24.5	26.0	27.2	29.5	30.1	34.3	36.9	40.4	37.4	38.0	38.8	37.5	35.1	37.6	38.3	34.9	37.8	31.0	40.4	
10	37.1	36.0	35.0	33.1	29.0	30.3	28.0	27.2	28.3	27.0	26.2	24.8	22.1	21.8	18.8	11.6	10.7	12.0	10.1	5.9	7.4	14.8	12.1	11.2	21.7	37.1	
11	13.2	12.3	13.3	13.6	12.8	13.8	12.7	12.0	11.0	9.6	7.5	4.4	5.6	7.0	5.8	3.8	3.8	4.1	3.2	6.8	19.5	24.1	27.1	28.4	11.5	28.4	
12	31.5	33.1	39.3	38.6	37.4	28.6	33.1	40.2	41.2	40.8	44.4	45.4	43.5	40.0	42.9	40.6	42.3	41.1	39.4	32.0	40.1	46.4	43.4	39.5	39.4	46.4	
13	38.2	33.0	34.0	28.0	32.1	34.4	38.2	40.8	47.7	47.7	41.1	37.6	32.3	22.7	23.2	20.3	22.0	19.2	10.8	4.4	7.6	7.6	6.2	3.8	26.4	47.7	
14	2.9	4.5	2.7	3.6	3.7	8.2	6.7	10.9	11.7	14.9	23.5	26.6	28.8	31.9	33.2	32.6	34.0	25.6	23.5	19.9	20.3	25.1	26.0	26.8	18.7	34.0	
15	31.2	25.4	19.4	22.4	21.9	22.2	23.8	30.9	31.8	28.8	25.9	23.0	25.3	29.6	35.8	37.5	40.2	40.3	39.8	29.7	27.4	34.5	38.0	43.4	30.3	43.4	
16	43.3	43.9	37.1	33.4	26.8	24.0	26.6	24.7	16.2	17.0	18.8	23.0	19.7	20.6	23.1	17.9	8.9	4.5	7.2	6.7	7.4	7.0	6.9	7.2	19.7	43.9	
17	5.0	4.6	9.9	16.1	21.3	23.9	15.4	8.6	13.2	12.5	9.1	9.5	10.9	12.9	39.2	46.7	47.8	49.8	52.4	45.8	39.1	39.4	26.2	20.0	24.1	52.4	
18	12.7	24.1	26.0	31.8	29.8	21.5	13.1	10.9	11.2	6.3	5.8	8.5	19.7	25.2	25.9	23.4	25.0	23.2	27.1	26.5	23.9	22.4	22.8	22.6	20.4	31.8	
19	19.5	19.0	18.4	17.3	15.6	16.3	15.7	14.6	16.6	14.6	12.9	14.6	11.4	10.6	15.7	13.0	14.7	12.5	6.8	9.0	6.6	4.8	3.0	6.2	12.9	19.5	
20	13.0	16.8	23.8	22.1	15.8	14.5	14.6	14.7	15.2	18.3	24.3	30.7	32.8	33.5	32.3	31.8	33.0	33.4	29.7	26.1	29.5	28.6	21.4	18.5	23.9	33.5	
21	24.6	31.8	27.9	28.9	25.9	20.4	19.2	14.7	13.0	15.0	20.8	23.5	23.1	21.5	24.9	21.8	18.4	21.2	23.6	21.8	23.4	25.7	24.9	31.6	22.8	31.8	
22	35.7	36.0	38.0	42.4	39.3	33.3	32.0	23.0	18.1	21.8	22.2	18.8	21.8	25.0	23.5	24.3	27.9	26.6	32.4	26.4	23.9	19.9	17.6	17.5	27.0	42.4	
23	12.8	15.4	16.8	13.5	14.0	16.6	13.6	10.4	10.9	13.2	13.9	14.0	14.6	14.7	16.4	21.1	22.3	25.8	23.6	19.6	25.1	25.4	27.1	26.8	17.8	27.1	
24	28.0	31.1	30.5	30.6	33.7	39.0	41.2	32.9	31.1	34.2	35.3	32.4	39.6	42.6	42.1	43.7	39.2	35.3	32.5	32.9	29.2	28.0	28.8	25.7	34.2	43.7	
25	24.3	19.4	17.7	19.4	11.6	16.8	13.4	9.2	10.9	12.4	11.0	7.1	8.9	22.7	24.0	26.2	24.8	24.3	25.5	27.8	26.5	26.8	26.2	28.0	19.4	28.0	
26	24.5	27.5	27.7	27.6	28.2	28.1	24.6	22.9	21.2	22.2	26.2	32.1	35.2	35.5	32.5	36.6	42.6	39.4	42.6	49.2	52.0	45.2	44.0	33.5	52.0		
27	40.4	43.2	46.6	47.4	50.4	49.3	51.8	52.9	52.8	52.7	54.7	54.9	52.8	56.1	52.7	48.6	48.6	45.9	48.6	54.0	51.0	46.1	39.4	22.4	37.4	48.0	56.1
28	45.1	27.4	19.2	13.6	17.0	19.0	24.2	15.3	25.2	17.2	17.3	18.9	14.9	15.5	26.3	23.1	22.4	24.5	26.4	25.0	28.1	30.5	29.8	32.3	23.3	45.1	
29	30.1	28.6	29.2	34.9	27.8	35.8	46.2	50.7	55.3	56.7	46.3	39.6	31.1	39.3	41.8	36.2	26.5	20.1	17.0	15.9	14.3	9.8	17.8	22.9	32.3	56.7	
30	22.6	36.0	37.7	35.6	38.4	41.4	37.7	32.1	38.7	27.5	33.3	38.0	37.5	31.8	31.6	30.0	31.2	23.1	22.1	24.7	25.0	26.2	20.4	16.4	30.8	41.4	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	24.5	25.0	25.0	25.1	24.4	24.5	24.7	23.2	23.4	22.9	24.1	24.2	24.6	25.7	27.9	26.9	26.5	26.1	25.7	23.3	23.5	24.1	22.6	23.5			
MAX	45.1	43.9	46.6	47.4	50.4	49.3	51.8	52.9	55.3	56.7	54.7	54.9	52.8	56.1	52.7	48.6	47.8	49.8	54.7	51.0	49.2	52.0	45.2	44.0			



Number of Non-Zero Readings	720
Maximum 1-HR Average	56.7 KM/HR
Maximum 24-HR Average	48.0 KM/HR
Monthly Calibration Standard Deviation	12.34
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	24.6 KM/HR

Lagoon Wind Direction (°) – November 2020

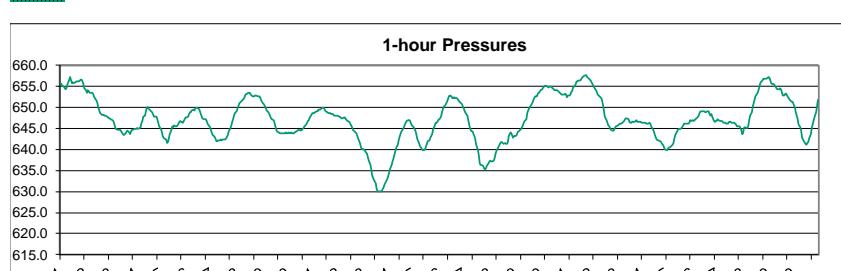
Hour		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	Max				
Day		257.4	255.2	256.6	250.9	241.5	245.1	244.5	255.8	280.1	287.4	264.0	253.2	250.9	247.9	245.8	240.6	245.8	251.8	268.3	292.0	293.2	317.3	299.4	283.9	261.0	317.3				
1		257.4	255.2	256.6	250.9	241.5	245.1	244.5	255.8	280.1	287.4	264.0	253.2	250.9	247.9	245.8	240.6	245.8	251.8	268.3	292.0	293.2	317.3	299.4	283.9	261.0	317.3				
2		296.0	292.9	309.8	296.5	296.9	282.0	296.7	294.7	291.2	285.6	276.6	277.5	267.4	252.4	250.3	249.2	252.7	252.8	254.4	256.3	255.1	255.2	256.1	255.9	270.5	309.8				
3		253.9	254.8	258.9	258.3	253.5	254.3	255.4	254.1	253.6	254.2	254.0	258.5	263.0	269.9	264.1	254.4	258.3	259.0	255.3	256.8	254.7	257.9	270.1	261.0	257.7	270.1				
4		260.3	258.0	256.7	261.5	261.3	258.1	263.1	268.8	264.6	268.2	277.0	270.3	269.4	275.0	280.7	275.6	266.5	269.3	268.9	264.5	250.9	253.3	129.7	309.6	265.2	309.6				
5		288.7	181.2	254.5	286.2	129.7	257.7	267.4	269.1	241.7	245.4	265.0	295.2	288.6	266.0	276.0	287.6	256.3	278.9	279.2	226.9	294.4	259.0	257.9	282.8	267.1	295.2	267.1			
6		297.6	285.0	286.7	285.7	300.6	285.7	274.6	301.4	304.3	287.5	287.9	274.1	266.5	256.1	222.2	209.6	127.9	205.2	262.4	250.5	258.3	290.4	305.1	313.9	283.9	313.9	92.0	300.2		
7		298.0	279.5	289.8	300.2	287.0	276.5	225.7	252.5	272.8	80.2	90.0	105.8	107.8	107.7	97.3	99.6	100.8	93.1	95.1	95.6	96.4	92.3	92.1	91.8	81.3	292.2	81.3	292.2		
8		98.1	93.0	89.8	110.8	94.6	77.9	42.9	53.1	180.3	163.4	101.7	82.3	70.2	49.9	35.5	47.2	82.3	130.2	80.2	85.4	240.3	292.2	262.0	281.4	266.9	324.1	275.6	324.1		
9		304.1	318.1	324.1	315.6	311.1	305.9	320.8	310.8	304.7	291.9	296.4	276.6	262.7	257.3	258.7	259.4	256.1	254.8	255.2	254.4	255.1	253.5	255.7	257.3	266.9	304.6	54.9	273.4		
10		257.4	261.9	259.5	262.3	263.3	264.2	264.1	262.2	265.5	265.2	263.5	263.5	266.1	261.4	290.9	295.4	293.4	306.4	290.1	288.5	96.5	99.7	88.8	68.1	266.9	304.6	270.0	310.6		
11		57.6	52.8	63.5	72.3	78.8	72.0	69.0	74.4	65.6	63.1	185.3	139.1	162.7	230.9	200.3	147.8	108.3	96.3	91.8	200.6	273.4	272.4	271.6	268.2	263.8	266.3	263.8	263.8	263.8	
12		268.2	265.5	264.5	267.6	271.1	284.2	275.5	266.2	264.3	263.0	258.2	256.8	260.0	263.0	260.5	261.1	256.5	256.6	256.7	257.2	268.0	264.0	267.5	266.5	263.8	284.2	270.0	310.6		
13		266.6	263.7	265.3	273.3	267.2	263.5	263.4	260.4	262.7	262.6	262.2	267.3	276.0	290.8	287.0	288.7	273.5	275.5	291.8	118.4	297.0	297.0	310.6	56.6	261.9	289.6	266.9	304.6		
14		142.2	139.0	122.5	146.2	83.5	288.0	159.3	284.9	289.6	273.1	260.4	263.4	259.2	260.5	263.6	256.2	264.3	264.9	260.1	247.1	263.8	265.6	267.6	270.5	267.3	287.1	270.5	273.4		
15		271.1	276.6	277.5	271.6	278.7	287.1	281.5	263.3	266.3	279.3	285.5	271.1	256.6	253.6	259.9	265.5	264.9	264.9	263.1	264.0	261.7	258.7	259.9	261.5	263.8	262.8	343.1	270.5	343.1	
16		261.3	260.7	260.6	262.4	261.9	265.6	265.3	270.0	276.4	267.4	262.1	256.0	257.0	258.5	263.3	274.6	249.7	343.1	255.1	251.9	245.3	239.4	259.9	276.4	266.5	266.5	266.5	266.5		
17		252.9	259.7	276.6	289.6	292.4	296.0	3.6	82.5	65.9	73.9	69.2	81.8	78.6	42.0	265.5	259.5	255.6	248.4	251.0	264.9	266.5	271.4	275.2	272.2	270.5	296.0	270.5	296.0	270.5	296.0
18		250.9	261.6	272.6	264.0	263.1	264.3	281.7	267.3	253.5	214.9	244.5	248.6	268.4	260.3	253.2	250.6	256.3	2.7	74.7	85.7	90.0	84.7	88.4	84.1	264.5	281.7	74.2	322.4		
19		86.2	81.2	76.2	71.3	66.6	73.0	76.9	95.0	78.0	72.4	73.8	70.4	69.5	63.7	68.1	69.1	71.9	69.7	63.6	234.3	293.0	99.6	322.4	242.5	267.8	292.3	264.1	292.2		
20		241.3	280.3	266.5	270.6	285.6	287.3	286.5	292.3	287.4	280.3	267.0	259.2	259.6	258.0	263.6	259.5	257.7	259.6	267.4	272.1	267.4	267.7	271.5	275.5	270.0	311.1	286.6	321.1		
21		270.5	259.9	267.8	269.1	268.5	279.2	287.1	291.9	292.2	287.9	257.5	246.7	254.1	263.2	260.1	255.1	256.1	245.2	250.1	256.7	264.9	266.3	264.9	258.1	264.1	292.2	266.5	311.1		
22		255.0	261.5	261.2	266.1	269.2	276.0	282.8	294.0	321.1	319.2	313.5	313.1	287.5	295.1	295.5	293.1	295.3	288.8	279.6	291.1	303.3	305.0	310.5	311.1	286.6	321.1	270.5	321.1		
23		279.9	292.3	291.2	296.1	295.8	304.4	294.9	290.8	281.2	285.1	298.4	324.1	280.3	275.4	277.3	261.8	261.2	265.5	271.2	274.2	260.6	258.5	256.8	257.9	270.0	276.6	324.1	270.0	324.1	
24		266.9	273.4	263.5	265.4	265.0	259.3	254.9	260.7	244.4	263.1	263.4	267.0	261.3	255.4	257.4	254.4	257.2	260.3	258.4	262.0	259.8	258.4	270.1	273.7	260.2	273.7	273.7	273.7		
25		278.0	277.8	280.7	278.0	279.8	278.5	342.8	77.9	69.3	58.2	73.9	104.5	256.9	257.2	258.6	261.4	263.7	261.9	259.7	263.6	259.2	261.5	254.4	268.6	342.8	266.5	342.8	266.5	342.8	
26		253.5	255.9	259.1	265.8	265.3	263.1	268.6	247.8	244.9	253.0	259.3	266.7	268.7	264.4	260.0	260.5	264.5	258.4	253.3	259.4	265.8	264.4	261.3	260.7	268.7	260.7	268.7	260.7	268.7	
27		263.0	258.6	256.3	257.0	258.4	257.8	256.8	255.5	256.7	256.5	253.2	254.8	253.8	253.5	259.1	261.1	262.3	261.6	261.1	256.0	261.8	267.9	281.1	264.8	258.7	281.1	264.8	258.7	281.1	
28		271.5	281.1	287.9	260.5	281.6	275.1	259.4	276.7	263.9	268.9	279.4	341.0	52.7	293.1	266.2	262.6	254.4	262.4	265.3	263.0	267.6	272.3	281.4	272.6	273.7	341.0	273.7	341.0	273.7	341.0
29		277.1	273.4	279.3	267.1	279.7	270.8	260.2	250.6	249.4	258.8	267.7	270.2	274.2	266.1	264.0	267.7	280.7	285.5	295.0	296.6	275.5	257.9	311.1	307.1	270.0	311.1	270.0	311.1		
30		295.6	293.7	296.1	286.1	294.5	289.4	294.2	293.6	272.1	277.7	267.4	263.5	251.1	249.8	247.9	261.0	267.8	266.4	256.2	256.5	257.1	260.4	265.8	269.1	273.5	296.1	273.5	296.1		
No.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
Mean	247.4	244.9	249.2	250.4	244.6	254.8	240.5	241.3	242.2	233.3	232.4	237.2	230.0	236.7	241.9	239.6	235.3	234.7	234.7	237.9	249.6	245.5	252.7	247.1	270.5	309.8	257.7	270.1	257.7	270.1	
Max	304.1	318.1	324.1	315.6	311.1	305.9	342.8	310.8	321.1	319.2	313.5	341.0	288.6	295.1	295.5	295.4	295.3	343.1	295.0	296.6	303.3	317.3	322.4	313.9	273.5	313.9	273.5	313.9	273.5	313.9	



Number of Non-Zero Readings	720
Maximum 1-HR Average	343 degrees
Maximum 24-HR Average	287 degrees
Monthly Calibration	0
Standard Deviation	68.42
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	241.8 degrees

Lagoon Pressure (mmHg) – November 2020

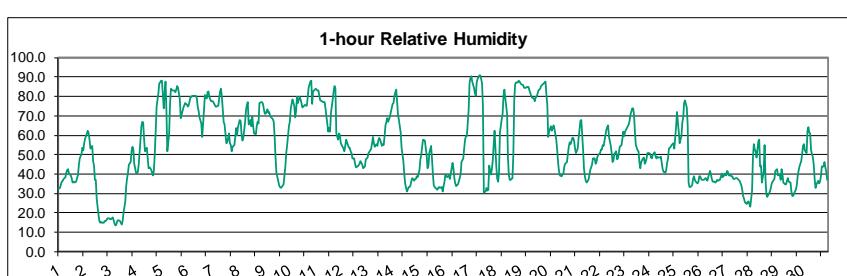
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	655.7	655.6	655.0	654.8	654.4	654.4	654.8	655.4	656.7	657.2	656.5	655.8	655.9	655.8	655.9	656.1	656.1	656.2	656.5	656.5	656.2	655.5	654.4	655.7	657.2	
2	654.1	653.5	654.1	653.9	653.4	653.4	653.4	653.3	652.5	652.2	651.5	650.9	649.9	649.3	648.7	648.2	648.2	648.0	647.9	647.8	647.5	647.4	647.3	650.6	654.1	
3	647.1	646.9	646.7	646.1	645.3	644.8	644.6	644.6	644.6	644.6	644.3	643.6	643.4	643.6	643.8	644.4	644.4	644.1	643.5	644.2	644.7	644.8	644.9	644.7	647.1	
4	644.9	645.0	644.8	645.1	645.4	646.4	646.8	647.8	648.0	649.0	649.8	650.0	649.8	649.3	649.1	648.9	648.5	647.9	647.9	647.8	647.2	646.4	645.5	644.8	647.3	650.0
5	644.2	643.2	642.8	642.6	642.4	641.5	641.7	642.6	643.6	644.7	645.4	645.4	645.7	645.6	645.5	645.8	646.1	646.5	646.6	646.6	646.4	646.7	647.2	647.5	644.8	647.5
6	647.5	647.9	648.5	648.9	648.9	649.4	649.5	649.4	649.7	649.9	650.0	649.7	649.2	648.5	647.9	647.4	647.2	647.1	647.2	646.7	646.2	645.6	645.2	644.5	648.0	650.0
7	643.9	643.4	643.0	642.5	642.0	642.0	642.2	642.3	642.3	642.2	642.3	642.4	642.4	642.5	642.5	642.9	643.4	644.3	645.1	645.7	646.6	647.3	648.1	648.6	649.1	644.0
8	649.8	650.4	650.9	651.1	651.5	651.7	652.0	652.5	653.0	653.3	653.5	653.4	653.4	653.0	652.6	652.6	652.7	652.9	652.9	652.6	652.6	652.5	652.2	651.5	652.3	653.5
9	651.0	650.7	650.3	649.9	649.2	648.8	648.4	647.9	647.4	647.1	646.9	646.3	645.4	644.7	644.3	644.1	643.9	643.8	643.9	643.8	643.7	643.8	644.0	643.9	644.4	651.0
10	643.9	644.0	643.9	644.0	643.8	643.8	643.9	644.2	644.3	644.4	644.6	644.6	644.5	644.7	644.8	645.1	645.5	646.0	646.4	646.7	647.0	647.6	648.2	648.5	645.2	648.5
11	648.6	648.6	648.9	649.0	649.1	649.4	649.4	649.6	649.8	649.9	649.8	649.4	649.1	648.8	648.6	648.6	648.5	648.4	648.2	648.1	647.9	648.1	648.0	648.8	649.9	644.0
12	647.9	647.9	647.5	647.5	647.5	647.7	647.5	647.2	647.0	646.7	646.5	646.2	645.7	645.2	644.6	644.1	644.0	643.8	643.2	642.5	641.4	640.7	640.0	640.0	645.1	647.9
13	640.1	639.7	639.3	639.0	638.2	637.3	636.3	635.1	633.7	633.1	632.6	631.8	630.6	630.0	629.9	630.1	630.0	630.6	631.0	631.8	632.5	632.9	633.6	633.7	640.1	640.1
14	634.4	635.2	636.3	637.1	637.8	638.6	639.4	640.3	641.1	642.1	642.9	643.5	644.2	644.8	645.4	645.9	646.4	646.8	647.0	647.1	646.7	646.1	645.6	645.3	642.5	647.1
15	644.9	644.4	643.7	642.6	641.6	640.9	640.6	640.2	639.8	639.9	640.2	640.7	641.3	641.9	642.1	642.7	643.1	643.6	644.6	645.8	646.3	646.4	646.5	646.9	642.9	646.9
16	647.3	647.8	648.7	649.6	650.1	650.6	650.9	651.3	652.0	652.6	652.7	652.7	652.2	652.1	652.3	652.3	652.2	652.0	651.5	651.3	651.1	650.7	650.2	649.8	651.0	652.7
17	649.1	648.6	647.9	647.0	646.0	645.0	644.4	644.3	643.7	643.2	642.4	641.2	639.9	638.5	636.7	636.4	636.3	636.1	635.5	635.3	635.5	636.1	636.7	637.1	641.0	649.1
18	637.3	637.2	637.1	637.4	638.0	639.0	639.6	640.0	640.8	641.2	641.7	641.8	641.6	641.4	641.5	641.4	641.3	641.8	643.3	644.0	643.8	643.1	642.8	643.1	640.8	644.0
19	643.2	643.4	644.0	644.2	644.4	644.9	645.3	645.7	646.3	646.8	647.1	648.7	649.3	649.6	650.1	650.7	651.2	652.7	653.2	653.5	653.7	653.7	648.5	653.7	654.2	655.2
20	654.0	654.3	654.6	654.9	655.2	655.5	655.0	654.8	654.8	654.9	654.5	654.2	654.0	654.1	654.1	654.0	653.7	653.5	653.2	653.0	653.0	653.2	653.2	654.2	655.2	655.5
21	653.0	652.4	652.7	652.8	653.0	653.6	653.9	654.7	655.2	655.6	656.1	656.2	656.3	656.4	656.6	657.0	657.2	657.4	657.6	657.6	657.2	656.9	656.7	656.4	649.7	656.0
22	656.0	655.5	655.1	654.7	654.1	653.6	652.9	652.8	652.5	652.2	651.5	650.6	649.2	647.8	647.0	646.3	645.8	645.5	645.0	644.8	644.5	644.8	645.2	646.5	647.4	646.5
23	645.5	645.7	645.9	646.1	646.1	646.1	646.5	646.8	647.2	647.4	647.1	646.5	646.3	646.4	646.4	646.5	646.5	646.5	646.7	646.9	646.6	646.6	646.5	646.5	646.5	647.4
24	646.4	646.4	646.4	646.4	646.0	646.0	646.1	646.4	646.0	645.3	645.1	644.6	643.4	642.8	642.3	642.2	642.0	641.8	641.3	641.1	640.6	640.1	639.8	643.8	646.4	
25	639.8	640.2	640.4	640.4	640.9	641.0	641.6	642.6	643.4	644.2	644.6	644.9	644.9	645.3	645.7	646.1	646.1	646.1	646.1	646.0	646.4	646.8	644.0	646.9	646.0	
26	647.0	646.8	647.0	647.2	647.5	647.8	648.3	648.8	649.1	649.1	649.1	649.2	648.9	648.8	648.6	648.9	649.1	648.5	648.1	648.4	647.7	646.6	646.7	646.8	648.0	649.2
27	647.1	647.0	646.9	646.8	646.6	646.5	646.4	646.3	646.1	646.2	646.5	646.5	646.4	646.4	646.4	646.3	646.3	646.0	645.5	645.6	645.5	644.7	643.7	646.1	647.1	
28	643.8	645.1	645.3	645.1	645.2	645.8	647.0	648.0	648.9	650.1	651.0	651.8	652.6	653.1	653.6	654.5	655.3	655.9	656.4	656.7	656.7	656.8	657.0	651.4	657.0	
29	657.2	656.9	656.4	655.7	655.5	655.4	655.1	654.9	654.5	654.3	654.5	654.5	653.6	652.8	652.7	653.1	653.3	652.9	652.3	651.9	651.5	651.4	654.0	657.2	651.7	
30	651.0	649.9	648.7	648.1	647.1	645.9	645.2	644.4	642.8	642.5	641.8	641.3	641.2	641.5	641.7	642.6	643.6	645.9	646.7	647.6	648.8	650.3	651.7	645.6	651.7	



Number of Non-Zero Readings	720
Maximum 1-HR Average	658 MMHg
Maximum 24-HR Average	656 MMHg
Monthly Calibration Standard Deviation	5.344
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	647.1 MMHg

Lagoon Relative Humidity (%) – November 2020

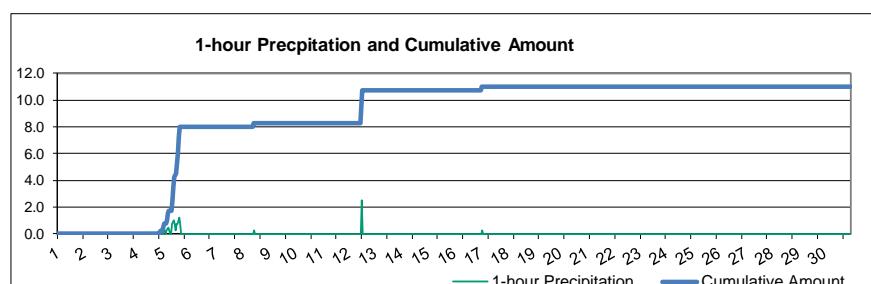
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	32.3	32.8	34.8	35.9	36.5	37.5	38.5	40.4	41.8	42.4	40.2	39.4	37.8	35.6	36.0	35.5	36.0	38.0	39.5	44.5	47.8	50.5	53.5	52.4	40.0	53.5	
2	56.0	58.3	60.9	62.5	60.7	57.7	52.9	54.5	46.9	44.3	36.9	37.2	27.2	19.2	15.9	15.1	15.4	14.9	14.9	15.7	15.7	16.3	17.2	17.4	34.7	62.5	
3	16.9	16.9	17.3	17.9	14.5	13.7	14.1	15.8	16.4	16.0	14.8	14.1	15.6	20.1	25.8	33.8	38.0	40.5	44.9	46.3	51.5	54.2	52.4	45.4	27.4	54.2	
4	40.7	40.3	41.2	45.0	51.4	64.7	67.0	66.3	58.3	51.7	53.4	48.6	43.2	43.6	43.1	42.1	39.3	42.2	50.9	62.4	74.7	81.6	86.7	87.3	55.2	87.3	
5	88.3	88.0	73.7	81.5	87.5	72.5	51.7	60.5	75.9	84.0	83.4	82.9	83.1	82.2	83.7	85.5	84.5	78.2	68.7	70.6	72.6	74.2	76.8	76.3	77.8	88.3	
6	75.7	74.7	75.5	80.0	79.8	80.1	80.4	80.3	80.1	78.7	74.7	72.3	69.2	65.9	59.1	66.1	72.7	80.6	78.7	81.9	82.7	80.0	78.5	77.4	76.1	82.7	
7	77.6	76.5	75.5	74.6	74.7	75.3	78.9	82.5	84.0	79.8	67.0	65.4	60.7	55.8	56.2	60.7	55.9	55.0	51.6	54.2	54.8	59.2	63.5	59.8	66.6	84.0	
8	64.1	67.6	67.4	60.6	57.3	58.8	66.7	72.9	75.7	77.0	65.4	67.7	64.5	69.6	64.7	60.8	60.4	64.8	67.1	66.1	76.7	76.9	77.0	75.9	67.7	77.0	
9	73.5	71.2	70.8	73.5	71.7	71.9	69.6	69.0	68.2	66.8	59.6	48.9	40.6	36.4	34.0	33.5	32.6	33.4	34.8	39.4	44.1	50.7	55.0	64.7	54.7	73.5	
10	66.7	73.3	76.0	78.6	75.1	69.0	72.6	79.7	76.4	79.8	78.5	76.8	74.4	74.6	75.6	75.3	75.4	79.4	84.4	87.6	87.9	76.1	82.4	83.1	77.4	87.9	
11	84.1	83.6	83.2	83.2	80.5	77.8	77.6	77.3	77.1	77.0	73.4	65.6	61.9	63.8	61.9	71.6	78.2	82.6	85.5	83.9	61.0	57.7	60.7	59.8	73.7	85.5	
12	55.7	55.1	53.3	51.8	54.5	57.9	56.4	53.3	53.7	51.9	50.8	48.1	47.8	45.3	43.7	43.9	44.1	45.3	46.8	45.9	44.9	43.1	44.0	47.7	49.4	57.9	
13	47.9	48.4	50.9	52.2	53.2	55.7	59.2	55.6	53.8	55.2	54.4	57.0	58.7	57.5	54.6	55.6	54.9	59.6	65.0	68.8	67.1	68.2	69.7	71.9	58.1	71.9	
14	76.3	76.6	80.3	82.1	83.7	70.5	67.9	64.7	61.3	53.4	46.5	40.1	35.3	32.9	31.0	33.3	33.2	34.4	36.5	37.7	36.7	37.3	37.6	38.6	51.2	83.7	
15	38.4	42.0	47.4	50.1	54.2	57.6	57.4	53.7	50.1	43.1	43.7	50.7	54.3	48.1	40.0	34.2	33.3	32.6	32.0	32.9	33.1	32.8	33.5	31.1	42.8	57.6	
16	33.9	36.2	39.6	38.2	38.8	39.2	37.4	40.2	45.6	42.8	38.0	35.2	33.9	34.6	36.2	37.8	39.7	46.3	48.2	53.2	57.5	59.6	59.7	73.0	43.5	73.0	
17	86.8	89.5	90.6	87.5	84.5	81.6	80.2	87.0	89.0	90.7	90.9	89.1	86.8	74.8	30.6	31.1	32.9	31.5	32.1	44.1	40.0	42.5	46.9	55.1	66.5	90.9	
18	62.4	43.3	37.6	36.1	41.1	61.5	68.2	71.0	80.1	83.7	78.8	71.2	48.1	39.3	36.9	37.0	37.7	49.8	78.0	86.4	87.1	87.1	88.3	87.7	62.4	88.3	
19	86.8	86.2	85.7	84.5	84.5	84.2	84.8	85.0	83.2	81.8	80.4	79.5	78.7	77.5	79.7	79.7	80.0	81.1	82.9	84.1	85.2	85.6	86.0	86.7	87.6	83.4	87.6
20	80.9	75.6	59.0	62.0	64.4	62.2	63.5	65.1	63.1	57.5	52.6	46.3	41.6	39.3	38.7	39.9	40.4	44.0	45.3	46.2	50.4	56.1	55.5	54.3	80.9		
21	58.8	58.6	56.7	53.3	50.8	52.9	58.5	62.7	67.5	68.0	52.4	43.1	38.8	36.7	35.7	36.9	39.1	42.3	43.6	44.8	48.1	45.5	46.4	49.5	68.0		
22	48.9	49.8	51.0	52.8	52.6	54.7	54.3	59.8	62.7	64.1	65.0	59.3	54.3	50.7	46.3	47.2	50.1	51.6	47.7	48.1	50.9	53.9	55.1	58.3	53.7	65.0	
23	61.7	59.5	61.7	63.7	64.7	65.4	67.4	70.8	73.6	74.0	70.6	61.2	54.9	51.9	46.2	42.8	46.4	47.8	48.3	45.4	46.1	48.2	50.8	57.3	74.0		
24	50.9	50.4	48.4	48.0	49.8	51.2	49.3	48.0	48.8	48.4	48.4	49.2	45.9	42.4	41.0	40.5	42.1	45.7	48.2	53.2	54.2	55.0	55.6	55.7	48.8	55.7	
25	53.2	64.2	71.9	66.9	61.7	56.0	59.4	66.5	69.0	76.6	77.9	74.2	64.9	35.8	33.1	33.2	34.1	37.6	38.9	37.0	36.3	35.2	35.9	38.6	52.4	77.9	
26	38.8	37.5	36.9	37.1	37.5	37.7	37.4	36.7	40.1	41.7	39.7	37.4	36.1	35.9	35.7	36.1	36.8	36.5	37.1	38.2	40.4	38.8	40.4	37.9	41.7		
27	39.3	41.6	41.2	39.5	39.3	38.8	38.9	37.6	38.0	38.1	37.5	36.8	36.6	34.1	31.7	28.8	27.4	25.6	24.7	25.5	26.1	24.6	23.0	33.9	41.6		
28	31.6	48.8	55.3	52.6	51.9	48.4	56.8	57.7	44.1	44.4	35.8	41.3	55.0	37.7	29.4	28.5	30.1	31.1	33.0	35.0	36.1	37.5	41.8	42.2	41.9	57.7	
29	42.5	39.2	39.6	36.9	42.4	39.8	35.4	34.5	34.6	36.6	38.0	36.2	35.7	31.1	28.6	28.6	30.1	31.8	34.4	38.8	41.6	43.8	46.7	50.2	37.4	50.2	
30	54.7	55.3	52.4	50.8	62.1	64.1	61.2	60.9	52.4	48.6	44.6	37.4	32.9	34.6	36.5	35.2	36.1	38.6	43.7	43.7	46.2	43.5	41.3	36.9	46.4	64.1	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	57.5	58.0	57.9	58.0	58.7	58.6	58.8	60.3	60.4	59.9	56.5	53.8	50.6	47.0	44.0	44.6	45.2	47.5	49.6	52.2	53.2	53.9	55.3	56.3			
MAX	88.3	89.5	90.6	87.5	87.5	84.2	84.8	87.0	89.0	90.7	90.9	89.1	86.8	82.2	83.7	85.5	84.5	82.9	85.5	87.6	87.9	87.1	88.3	87.7			



Number of Non-Zero Readings	720
Maximum 1-HR Average	90.9 %
Maximum 24-HR Average	83.4 %
Monthly Calibration Standard Deviation	18.34
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	54.1 %

Lagoon Precipitation (mm) – November 2020

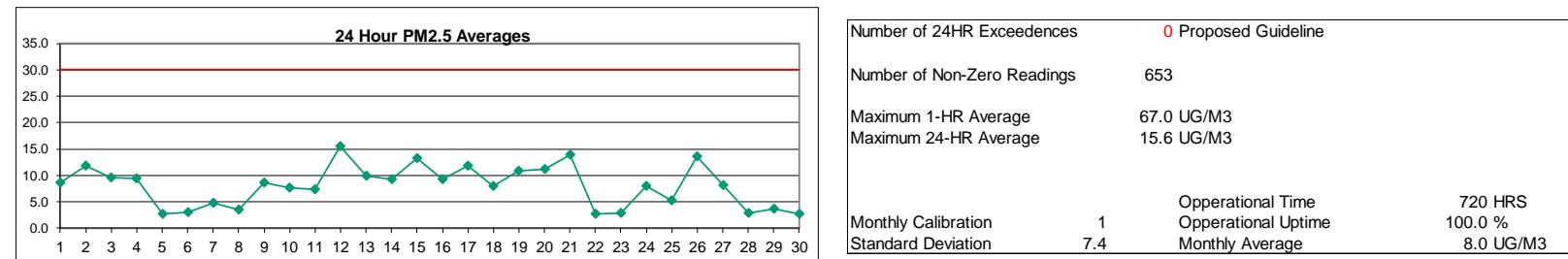
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.3	0.3	0.0	0.3	0.5	0.3	0.0	0.0	0.8	1.0	0.8	0.3	0.8	0.8	1.3	0.8	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	0.3	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	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	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	
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	0.3	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	
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	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	
MAX	0.3	0.3	0.0	0.3	0.5	0.3	0.0	0.0	0.8	1.0	0.8	0.3	2.5	0.8	1.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



Number of Non-Zero Readings	17
Maximum 1-HR Average	2.5 MM
Maximum 24-HR Average	0.3 MM
Monthly Calibration Standard Deviation	0.13
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	0.02 MM

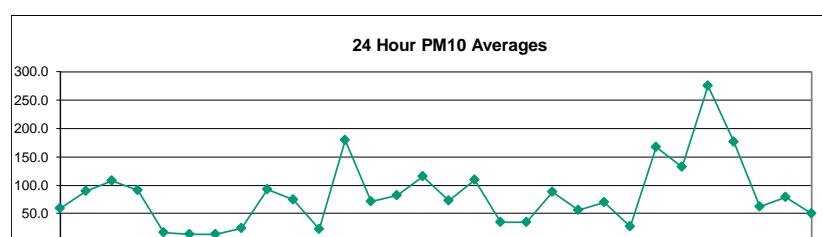
Windridge PM_{2.5} ($\mu\text{g}/\text{m}^3$) – November 2020

Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	12.0	12.0	8.0	14.0	11.0	10.0	9.0	10.0	9.0	10.0	7.0	8.0	12.0	11.0	9.0	7.0	5.0	8.0	9.0	10.0	6.0	4.0	4.0	4.0	8.7	14.0	
2	12.0	8.0	5.0	6.0	6.0	3.0	3.0	6.0	4.0	6.0	9.0	20.0	16.0	19.0	13.0	25.0	23.0	17.0	16.0	10.0	19.0	17.0	11.0	9.0	11.8	25.0	
3	6.0	9.0	7.0	4.0	3.0	3.0	4.0	4.0	3.0	4.0	8.0	8.0	11.0	14.0	24.0	27.0	19.0	10.0	11.0	19.0	13.0	9.0	5.0	6.0	9.6	27.0	
4	12.0	15.0	11.0	20.0	13.0	9.0	9.0	9.0	6.0	9.0	10.0	7.0	12.0	14.0	12.0	13.0	12.0	10.0	9.0	7.0	2.0	0.0	3.0	2.0	9.4	20.0	
5	4.0	8.0	5.0	0.0	0.0	0.0	1.0	6.0	7.0	5.0	1.0	1.0	1.0	0.0	3.0	2.0	0.0	2.0	2.0	5.0	4.0	3.0	1.0	3.0	2.7	8.0	
6	5.0	2.0	0.0	2.0	2.0	3.0	4.0	0.0	1.0	4.0	3.0	2.0	2.0	2.0	4.0	6.0	9.0	7.0	5.0	2.0	0.0	2.0	1.0	3.0	3.0	9.0	
7	5.0	4.0	4.0	5.0	4.0	3.0	7.0	4.0	1.0	4.0	5.0	6.0	7.0	4.0	6.0	5.0	5.0	5.0	8.0	5.0	5.0	7.0	4.0	3.0	3.0	4.8	8.0
8	1.0	7.0	6.0	4.0	3.0	6.0	5.0	6.0	5.0	4.0	4.0	0.0	0.0	3.0	5.0	3.0	6.0	6.0	3.0	1.0	0.0	1.0	4.0	2.0	2.0	3.5	7.0
9	2.0	0.0	0.0	2.0	3.0	2.0	1.0	2.0	8.0	6.0	3.0	9.0	16.0	18.0	12.0	16.0	16.0	9.0	13.0	18.0	10.0	15.0	14.0	12.0	8.6	18.0	
10	8.0	7.0	7.0	8.0	6.0	8.0	7.0	8.0	10.0	12.0	11.0	12.0	10.0	8.0	11.0	10.0	4.0	7.0	6.0	3.0	2.0	6.0	8.0	5.0	7.7	12.0	
11	2.0	4.0	3.0	2.0	2.0	2.0	2.0	4.0	4.0	4.0	4.0	11.0	18.0	19.0	16.0	14.0	9.0	7.0	12.0	10.0	7.0	6.0	6.0	9.0	7.4	19.0	
12	9.0	9.0	9.0	20.0	12.0	11.0	7.0	8.0	10.0	17.0	16.0	16.0	18.0	C	17.0	18.0	25.0	15.0	20.0	16.0	23.0	21.0	23.0	15.6	25.0		
13	14.0	14.0	12.0	8.0	10.0	9.0	8.0	12.0	12.0	16.0	14.0	17.0	14.0	10.0	9.0	7.0	12.0	9.0	9.0	8.0	5.0	5.0	3.0	1.0	9.9	17.0	
14	0.0	3.0	4.0	10.0	7.0	8.0	5.0	4.0	6.0	3.0	9.0	9.0	14.0	14.0	14.0	22.0	12.0	24.0	14.0	8.0	9.0	9.0	8.0	8.0	9.3	24.0	
15	9.0	13.0	9.0	3.0	4.0	4.0	3.0	2.0	3.0	2.0	7.0	7.0	4.0	6.0	5.0	14.0	26.0	25.0	23.0	23.0	30.0	28.0	50.0	17.0	13.2	50.0	
16	19.0	11.0	9.0	8.0	6.0	4.0	13.0	11.0	12.0	10.0	7.0	8.0	9.0	8.0	8.0	9.0	8.0	14.0	11.0	7.0	5.0	6.0	10.0	8.0	9.2	19.0	
17	7.0	4.0	1.0	3.0	3.0	1.0	0.0	0.0	0.0	7.0	5.0	3.0	9.0	10.0	14.0	34.0	40.0	35.0	23.0	19.0	22.0	23.0	12.0	10.0	11.9	40.0	
18	7.0	6.0	6.0	6.0	8.0	22.0	2.0	3.0	3.0	2.0	0.0	1.0	4.0	4.0	14.0	17.0	10.0	11.0	9.0	14.0	11.0	10.0	14.0	9.0	8.0	22.0	
19	12.0	10.0	11.0	9.0	6.0	8.0	10.0	7.0	8.0	11.0	10.0	13.0	10.0	13.0	13.0	12.0	12.0	7.0	8.0	14.0	12.0	12.0	18.0	14.0	10.8	18.0	
20	8.0	4.0	5.0	12.0	11.0	8.0	9.0	8.0	5.0	6.0	9.0	10.0	12.0	16.0	17.0	21.0	21.0	20.0	17.0	13.0	15.0	9.0	7.0	5.0	11.2	21.0	
21	5.0	3.0	3.0	3.0	2.0	1.0	1.0	0.0	2.0	2.0	3.0	11.0	12.0	11.0	60.0	67.0	44.0	36.0	21.0	10.0	7.0	10.0	17.0	3.0	13.9	67.0	
22	6.0	6.0	7.0	7.0	7.0	10.0	7.0	4.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	1.0	0.0	0.0	0.0	3.0	2.7	10.0	
23	3.0	2.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	2.0	6.0	5.0	5.0	5.0	6.0	7.0	4.0	5.0	4.0	2.0	6.0	5.0	2.9	7.0	
24	3.0	3.0	2.0	2.0	3.0	2.0	4.0	11.0	7.0	15.0	14.0	12.0	11.0	10.0	16.0	14.0	17.0	11.0	9.0	5.0	5.0	5.0	6.0	7.9	17.0		
25	4.0	2.0	0.0	0.0	3.0	2.0	0.0	0.0	3.0	5.0	3.0	0.0	0.0	5.0	6.0	13.0	11.0	11.0	10.0	10.0	12.0	6.0	16.0	5.3	16.0		
26	8.0	7.0	4.0	9.0	7.0	7.0	5.0	3.0	2.0	9.0	8.0	6.0	12.0	15.0	19.0	26.0	19.0	19.0	51.0	9.0	7.0	34.0	30.0	9.0	13.5	51.0	
27	11.0	7.0	3.0	8.0	6.0	7.0	8.0	10.0	11.0	7.0	5.0	17.0	12.0	9.0	6.0	4.0	6.0	17.0	8.0	10.0	8.0	6.0	4.0	8.2	17.0		
28	7.0	20.0	10.0	4.0	0.0	0.0	0.0	4.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	2.0	4.0	2.0	0.0	2.0	4.0	4.0	3.0	2.8	20.0	
29	1.0	1.0	5.0	6.0	5.0	6.0	6.0	4.0	7.0	4.0	5.0	9.0	6.0	2.0	0.0	6.0	7.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	3.7	9.0	
30	0.0	3.0	0.0	0.0	0.0	3.0	4.0	2.0	3.0	5.0	5.0	4.0	2.0	10.0	9.0	4.0	0.0	1.0	4.0	3.0	0.0	0.0	0.0	2.0	2.7	10.0	



Windridge PM₁₀ ($\mu\text{g}/\text{m}^3$) – November 2020

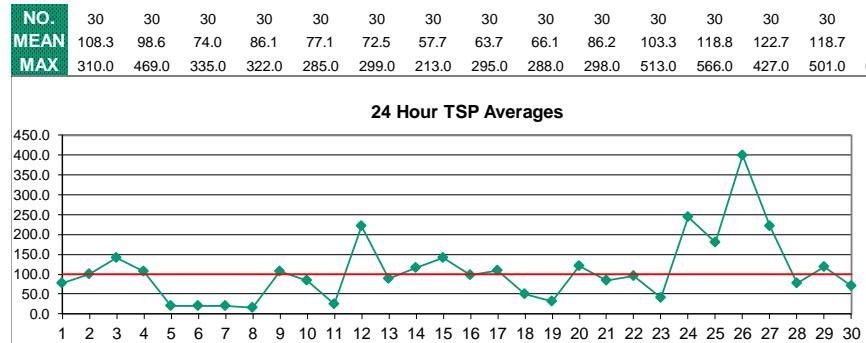
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	66.0	94.0	74.0	122.0	90.0	79.0	109.0	50.0	55.0	68.0	42.0	64.0	73.0	41.0	25.0	31.0	14.0	43.0	41.0	75.0	23.0	18.0	28.0	76.0	58.4	122.0	
2	204.0	66.0	33.0	10.0	9.0	14.0	10.0	14.0	25.0	77.0	181.0	307.0	142.0	119.0	98.0	201.0	109.0	62.0	54.0	60.0	120.0	73.0	65.0	85.0	89.1	307.0	
3	45.0	62.0	65.0	50.0	38.0	54.0	58.0	70.0	80.0	149.0	163.0	164.0	281.0	307.0	201.0	204.0	95.0	64.0	45.0	149.0	57.0	45.0	42.0	96.0	107.7	307.0	
4	174.0	122.0	56.0	155.0	180.0	84.0	88.0	134.0	48.0	107.0	101.0	54.0	115.0	136.0	130.0	136.0	138.0	72.0	57.0	35.0	12.0	17.0	21.0	9.0	16.9	54.0	
5	42.0	54.0	18.0	2.0	6.0	7.0	25.0	28.0	39.0	38.0	11.0	28.0	7.0	7.0	11.0	13.0	7.0	7.0	15.0	9.0	6.0	11.0	7.0	8.0	13.0	50.0	
6	4.0	2.0	8.0	3.0	0.0	0.0	8.0	7.0	3.0	3.0	12.0	10.0	11.0	9.0	10.0	22.0	39.0	50.0	29.0	30.0	10.0	29.0	9.0	5.0	13.7	48.0	
7	2.0	15.0	15.0	26.0	9.0	7.0	20.0	20.0	6.0	18.0	20.0	5.0	6.0	6.0	9.0	6.0	7.0	8.0	6.0	3.0	9.0	22.0	48.0	36.0	23.3	68.0	
8	13.0	53.0	57.0	68.0	17.0	6.0	32.0	32.0	31.0	12.0	10.0	60.0	43.0	19.0	47.0	13.0	8.0	6.0	10.0	6.0	3.0	2.0	5.0	7.0	9.0	196.0	363.0
9	21.0	10.0	8.0	5.0	4.0	14.0	37.0	32.0	25.0	30.0	40.0	141.0	186.0	130.0	110.0	115.0	90.0	86.0	193.0	318.0	274.0	166.0	94.0	83.0	92.2	318.0	
10	69.0	70.0	123.0	166.0	106.0	75.0	65.0	89.0	116.0	102.0	127.0	109.0	100.0	49.0	66.0	43.0	36.0	45.0	29.0	37.0	28.0	22.0	54.0	56.0	74.3	166.0	
11	43.0	16.0	3.0	7.0	8.0	12.0	11.0	5.0	1.0	20.0	26.0	21.0	11.0	7.0	22.0	16.0	15.0	26.0	20.0	28.0	24.0	56.0	62.0	76.0	22.3	76.0	
12	131.0	123.0	112.0	226.0	146.0	98.0	43.0	62.0	92.0	206.0	137.0	143.0	123.0	123.0	C	171.0	223.0	346.0	148.0	262.0	107.0	425.0	341.0	324.0	178.8	425.0	
13	196.0	112.0	63.0	65.0	30.0	45.0	57.0	63.0	81.0	193.0	138.0	76.0	105.0	128.0	69.0	34.0	54.0	81.0	62.0	17.0	7.0	7.0	5.0	4.0	70.5	196.0	
14	6.0	6.0	4.0	10.0	10.0	35.0	14.0	16.0	9.0	11.0	47.0	110.0	151.0	134.0	205.0	296.0	96.0	363.0	134.0	41.0	85.0	73.0	67.0	44.0	82.0	363.0	
15	113.0	214.0	53.0	21.0	28.0	28.0	12.0	15.0	44.0	51.0	126.0	119.0	44.0	55.0	61.0	208.0	462.0	381.0	350.0	188.0	40.0	39.0	53.0	71.0	115.7	462.0	
16	224.0	185.0	269.0	148.0	110.0	59.0	34.0	60.0	74.0	35.0	47.0	42.0	52.0	45.0	69.0	70.0	34.0	31.0	14.0	9.0	24.0	28.0	57.0	27.0	72.8	269.0	
17	34.0	21.0	14.0	15.0	22.0	15.0	13.0	10.0	7.0	18.0	11.0	15.0	20.0	20.0	21.0	294.0	319.0	376.0	148.0	136.0	444.0	485.0	98.0	53.0	108.7	485.0	
18	42.0	23.0	33.0	23.0	33.0	93.0	49.0	31.0	10.0	22.0	3.0	6.0	10.0	18.0	45.0	77.0	60.0	53.0	42.0	31.0	17.0	67.0	35.0	28.0	35.5	93.0	
19	111.0	77.0	60.0	50.0	35.0	32.0	26.0	20.0	20.0	29.0	29.0	14.0	36.0	36.0	19.0	17.0	10.0	15.0	17.0	18.0	53.0	28.0	37.0	34.0	111.0		
20	16.0	39.0	11.0	43.0	26.0	28.0	18.0	17.0	16.0	26.0	72.0	115.0	173.0	113.0	152.0	199.0	207.0	149.0	136.0	148.0	197.0	144.0	57.0	18.0	88.3	207.0	
21	107.0	34.0	78.0	63.0	75.0	60.0	4.0	7.0	5.0	9.0	39.0	48.0	43.0	80.0	102.0	109.0	65.0	127.0	80.0	33.0	11.0	38.0	47.0	64.0	55.3	127.0	
22	115.0	92.0	109.0	201.0	178.0	222.0	160.0	150.0	20.0	19.0	5.0	6.0	9.0	18.0	25.0	25.0	32.0	25.0	51.0	100.0	65.0	18.0	17.0	11.0	69.7	222.0	
23	7.0	3.0	1.0	2.0	3.0	2.0	2.0	3.0	2.0	5.0	12.0	9.0	14.0	29.0	23.0	41.0	54.0	78.0	55.0	48.0	36.0	72.0	64.0	76.0	26.7	78.0	
24	63.0	116.0	65.0	42.0	50.0	46.0	94.0	90.0	141.0	114.0	319.0	353.0	278.0	215.0	279.0	351.0	250.0	231.0	224.0	209.0	150.0	114.0	88.0	130.0	167.2	353.0	
25	132.0	78.0	38.0	23.0	25.0	9.0	9.0	6.0	10.0	24.0	22.0	3.0	7.0	61.0	174.0	266.0	246.0	300.0	208.0	215.0	368.0	248.0	485.0	132.3	485.0		
26	220.0	110.0	96.0	257.0	200.0	197.0	142.0	77.0	119.0	144.0	108.0	257.0	346.0	389.0	485.0	485.0	485.0	485.0	485.0	215.0	158.0	485.0	485.0	275.6	485.0		
27	246.0	124.0	118.0	152.0	145.0	148.0	134.0	208.0	190.0	227.0	175.0	256.0	281.0	160.0	137.0	148.0	161.0	384.0	178.0	202.0	161.0	156.0	81.0	71.0	176.8	384.0	
28	132.0	485.0	126.0	22.0	24.0	17.0	39.0	73.0	14.0	71.0	22.0	15.0	28.0	16.0	27.0	49.0	25.0	25.0	32.0	36.0	48.0	46.0	49.0	56.0	61.5	485.0	
29	63.0	47.0	51.0	70.0	136.0	203.0	83.0	135.0	164.0	123.0	183.0	177.0	111.0	53.0	59.0	93.0	70.0	41.0	11.0	9.0	6.0	4.0	5.0	3.0	79.2	203.0	
30	1.0	15.0	56.0	33.0	89.0	50.0	19.0	31.0	26.0	76.0	35.0	50.0	173.0	109.0	43.0	58.0	75.0	136.0	35.0	22.0	23.0	21.0	20.0	19.0	50.6	173.0	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	719	100%	
MEAN	88.1	82.3	60.6	69.3	61.1	58.0	47.2	51.8	49.1	67.6	75.4	92.6	99.3	87.7	93.9	126.4	116.2	136.5	97.0	89.6	85.5	98.6	83.9	65.9	42.0	433.3	
MAX	246.0	485.0	269.0	257.0	200.0	222.0	160.0	208.0	190.0	227.0	319.0	353.0	346.0	389.0	485.0	485.0	485.0	485.0	485.0	318.0	444.0	485.0	485.0	324.0	91.1	433.3	



Number of Non-Zero Readings	717
Maximum 1-HR Average	485.0 $\mu\text{g}/\text{m}^3$
Maximum 24-HR Average	275.6 $\mu\text{g}/\text{m}^3$
Monthly Calibration Standard Deviation	94.4
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	82.6 $\mu\text{g}/\text{m}^3$

Windridge TSP ($\mu\text{g}/\text{m}^3$) – November 2020

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	92.0	125.0	109.0	202.0	153.0	122.0	138.0	63.0	74.0	85.0	49.0	75.0	99.0	56.0	35.0	49.0	31.0	56.0	64.0	89.0	23.0	22.0	18.0	39.0
2	161.0	51.0	26.0	11.0	10.0	11.0	9.0	13.0	21.0	87.0	190.0	293.0	138.0	159.0	150.0	277.0	148.0	81.0	77.0	82.0	155.0	90.0	82.0	105.0
3	57.0	69.0	101.0	72.0	45.0	76.0	83.0	85.0	121.0	229.0	253.0	248.0	359.0	347.0	242.0	231.0	146.0	75.0	57.0	193.0	72.0	53.0	56.0	111.0
4	209.0	126.0	59.0	175.0	174.0	97.0	83.0	119.0	46.0	100.0	133.0	68.0	158.0	182.0	174.0	179.0	181.0	95.0	77.0	46.0	18.0	18.0	28.0	13.0
5	58.0	64.0	21.0	5.0	2.0	2.0	27.0	24.0	55.0	44.0	13.0	39.0	5.0	13.0	12.0	19.0	0.0	15.0	11.0	7.0	4.0	12.0	10.0	5.0
6	4.0	4.0	7.0	7.0	4.0	4.0	4.0	0.0	0.0	4.0	18.0	9.0	16.0	12.0	11.0	34.0	75.0	101.0	48.0	31.0	21.0	41.0	11.0	10.0
7	6.0	13.0	13.0	31.0	9.0	12.0	22.0	31.0	7.0	29.0	34.0	9.0	7.0	13.0	17.0	21.0	20.0	14.0	11.0	7.0	20.0	23.0	59.0	48.0
8	21.0	69.0	47.0	30.0	8.0	8.0	7.0	11.0	9.0	12.0	10.0	12.0	11.0	21.0	21.0	8.0	8.0	11.0	13.0	8.0	6.0	3.0	10.0	8.0
9	8.0	15.0	2.0	1.0	7.0	8.0	6.0	12.0	32.0	17.0	48.0	101.0	173.0	140.0	164.0	168.0	148.0	138.0	234.0	392.0	309.0	204.0	130.0	107.0
10	92.0	87.0	147.0	169.0	119.0	70.0	74.0	91.0	133.0	112.0	147.0	133.0	124.0	68.0	80.0	62.0	44.0	64.0	41.0	38.0	31.0	16.0	43.0	19.0
11	15.0	14.0	8.0	2.0	3.0	6.0	8.0	8.0	4.0	5.0	7.0	14.0	13.0	19.0	26.0	21.0	21.0	37.0	28.0	45.0	36.0	79.0	72.0	87.0
12	156.0	132.0	129.0	285.0	173.0	101.0	49.0	58.0	120.0	197.0	191.0	189.0	150.0	150.0	C	191.0	291.0	492.0	218.0	330.0	169.0	501.0	428.0	382.0
13	249.0	156.0	77.0	74.0	32.0	51.0	72.0	80.0	111.0	232.0	169.0	102.0	140.0	153.0	101.0	43.0	67.0	103.0	74.0	24.0	15.0	8.0	8.0	6.0
14	4.0	3.0	4.0	9.0	13.0	53.0	17.0	26.0	12.0	14.0	75.0	179.0	231.0	212.0	322.0	417.0	178.0	401.0	187.0	54.0	124.0	90.0	80.0	58.0
15	136.0	295.0	59.0	17.0	38.0	31.0	16.0	12.0	59.0	75.0	153.0	136.0	61.0	86.0	96.0	280.0	459.0	467.0	417.0	197.0	61.0	53.0	75.0	99.0
16	268.0	243.0	335.0	197.0	124.0	88.0	50.0	90.0	89.0	44.0	67.0	61.0	86.0	78.0	103.0	102.0	43.0	49.0	21.0	11.0	24.0	35.0	77.0	35.0
17	38.0	30.0	15.0	13.0	19.0	16.0	23.0	7.0	11.0	22.0	16.0	11.0	24.0	21.0	32.0	276.0	390.0	395.0	181.0	186.0	369.0	328.0	132.0	67.0
18	57.0	27.0	38.0	29.0	41.0	125.0	66.0	37.0	17.0	36.0	6.0	14.0	21.0	28.0	78.0	119.0	100.0	82.0	56.0	40.0	22.0	73.0	39.0	24.0
19	95.0	86.0	54.0	43.0	20.0	19.0	12.0	18.0	7.0	28.0	22.0	14.0	15.0	18.0	24.0	18.0	10.0	17.0	15.0	23.0	53.0	34.0	34.0	55.0
20	23.0	49.0	13.0	44.0	27.0	29.0	21.0	22.0	19.0	42.0	98.0	179.0	265.0	173.0	238.0	230.0	271.0	222.0	202.0	217.0	260.0	187.0	63.0	26.0
21	135.0	44.0	110.0	86.0	89.0	71.0	15.0	10.0	10.0	12.0	69.0	84.0	70.0	138.0	144.0	150.0	94.0	192.0	136.0	63.0	26.0	56.0	78.0	113.0
22	195.0	155.0	167.0	276.0	276.0	270.0	213.0	167.0	32.0	15.0	8.0	5.0	4.0	22.0	30.0	29.0	52.0	39.0	62.0	135.0	83.0	19.0	25.0	13.0
23	6.0	5.0	3.0	5.0	3.0	4.0	3.0	11.0	7.0	8.0	13.0	13.0	17.0	36.0	30.0	57.0	92.0	150.0	88.0	70.0	48.0	115.0	95.0	119.0
24	105.0	149.0	74.0	64.0	72.0	66.0	146.0	147.0	217.0	207.0	513.0	566.0	333.0	308.0	435.0	529.0	404.0	342.0	277.0	326.0	174.0	144.0	124.0	142.0
25	144.0	88.0	43.0	26.0	37.0	17.0	7.0	5.0	24.0	33.0	22.0	6.0	15.0	127.0	263.0	391.0	348.0	416.0	283.0	291.0	451.0	326.0	652.0	313.0
26	310.0	154.0	160.0	322.0	285.0	258.0	187.0	126.0	162.0	219.0	184.0	367.0	427.0	501.0	663.0	653.0	588.0	540.0	985.0	296.0	258.0	926.0	777.0	207.0
27	300.0	146.0	158.0	203.0	179.0	186.0	154.0	295.0	288.0	298.0	235.0	317.0	323.0	225.0	194.0	178.0	188.0	364.0	209.0	258.0	206.0	200.0	111.0	95.0
28	195.0	469.0	121.0	25.0	29.0	20.0	53.0	103.0	14.0	98.0	27.0	22.0	34.0	22.0	50.0	82.0	48.0	43.0	41.0	43.0	72.0	70.0	78.0	73.0
29	108.0	70.0	76.0	115.0	205.0	299.0	144.0	209.0	250.0	182.0	287.0	225.0	152.0	61.0	93.0	138.0	118.0	61.0	27.0	11.0	12.0	10.0	6.0	4.0
30	2.0	21.0	43.0	44.0	116.0	55.0	22.0	30.0	32.0	99.0	42.0	73.0	211.0	172.0	72.0	90.0	120.0	201.0	56.0	39.0	47.0	38.0	38.0	18.0



Number of 24HR Exceedences	14	Proposed Guideline
Number of Non-Zero Readings	716	
Maximum 1-HR Average	985.0	UG/M3
Maximum 24-HR Average	398.1	UG/M3
Izs Calibration Time		
Down Time	0	
Standard Deviation	125.5	
Operational Time		
Operational Uptime		
Monthly Average		
		720 HRS
		100.0 %
		107.1 UG/M3

719 100%

398.1 985.0

221.3 364.0

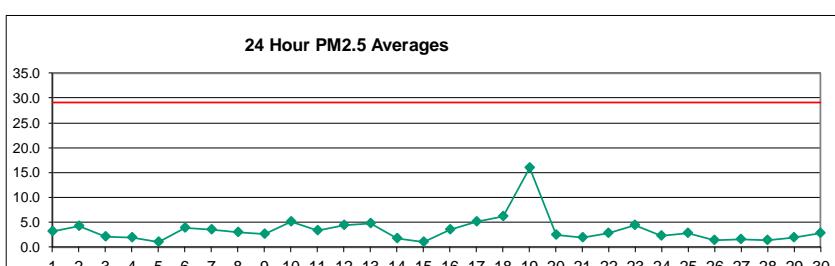
76.3 469.0

119.3 299.0

70.0 211.0

West PM_{2.5} ($\mu\text{g}/\text{m}^3$) – November 2020

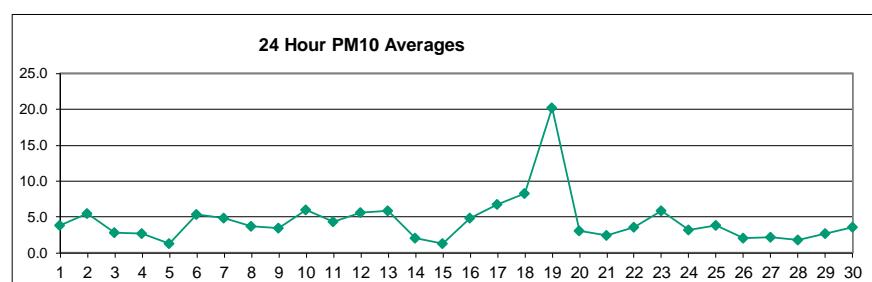
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	3.0	3.0	2.8	2.6	2.4	2.2	2.3	2.5	2.4	3.7	4.2	4.2	2.0	2.6	2.8	3.4	4.0	3.4	3.2	3.2	3.5	3.8	4.0	3.8	3.1	4.2	
2	3.8	3.8	3.9	4.1	4.0	3.8	3.9	6.4	8.7	8.3	6.4	7.6	6.8	4.7	4.8	3.2	3.5	2.0	1.5	1.5	1.9	1.7	1.7	1.6	4.1	8.7	
3	1.5	1.5	1.7	1.6	1.4	1.9	2.1	3.5	3.9	2.8	3.0	3.1	3.6	3.0	3.4	3.1	2.7	2.0	1.7	0.9	0.6	0.8	0.8	0.6	2.1	3.9	
4	0.9	1.2	1.1	0.6	0.4	0.6	1.4	1.0	1.5	5.5	6.7	6.6	2.4	2.3	1.8	1.4	2.1	1.3	0.8	0.7	0.8	1.7	1.9	2.6	2.0	6.7	
5	2.7	0.9	0.8	0.8	0.9	0.7	0.6	0.8	0.8	1.5	1.5	0.8	1.0	0.9	1.2	0.5	0.4	0.5	0.5	0.8	1.2	1.4	1.4	1.9	1.0	2.7	
6	1.5	1.2	1.1	1.1	1.3	1.3	1.9	2.5	3.8	4.5	3.7	5.5	7.2	5.7	6.7	8.6	5.3	4.8	4.3	3.9	5.4	4.6	3.6	2.7	3.8	8.6	
7	2.1	1.8	1.7	1.5	1.4	1.4	1.4	1.9	4.0	4.0	4.5	6.6	6.0	3.6	5.0	5.1	4.8	3.4	4.0	4.2	4.1	4.6	4.8	4.0	3.6	6.6	
8	7.4	5.8	3.1	2.4	2.1	2.8	3.5	3.2	2.8	2.8	2.4	3.3	3.4	1.4	1.4	1.3	1.3	1.0	1.0	1.3	3.3	5.3	4.9	4.7	3.0	7.4	
9	3.6	2.4	1.8	1.8	1.7	1.7	1.6	1.8	2.0	2.5	3.1	3.5	3.8	4.1	4.3	4.0	2.8	2.2	2.3	2.3	1.8	2.0	2.3	3.3	2.6	4.3	
10	4.3	4.4	5.5	4.5	4.5	4.5	5.0	5.4	5.5	5.7	5.6	6.1	6.2	7.0	6.9	6.6	6.2	5.9	5.8	5.9	6.0	3.5	0.6	1.5	5.1	7.0	
11	0.7	0.5	0.5	0.6	0.7	0.9	1.8	1.7	2.4	1.8	5.9	6.2	6.1	5.8	4.0	4.5	6.6	8.4	6.5	3.0	2.8	2.5	2.8	2.9	3.3	3.3	8.4
12	2.8	2.4	2.7	3.2	3.0	3.8	4.9	6.5	7.3	7.1	6.3	5.3	5.7	5.9	5.8	5.0	4.1	3.3	3.8	3.1	3.3	3.5	3.2	3.0	4.4	7.3	
13	3.0	3.1	3.5	3.7	4.4	4.9	5.1	6.1	6.4	6.5	6.3	6.9	6.5	6.7	7.6	6.4	6.0	4.0	3.2	2.4	2.1	2.4	2.6	2.7	4.7	7.6	
14	3.2	3.0	3.3	3.0	2.1	1.1	0.7	0.7	0.8	3.4	3.2	2.3	2.0	1.8	2.1	1.7	1.1	0.8	0.6	0.6	0.8	1.0	0.6	0.7	1.7	3.4	
15	0.6	0.6	0.8	0.7	0.7	0.9	0.9	1.5	1.0	1.0	1.2	2.1	2.2	2.0	1.5	0.9	0.7	0.8	0.4	0.4	0.4	0.5	0.7	1.0	1.0	2.2	
16	0.7	0.6	0.7	0.8	0.7	0.8	1.3	4.1	6.7	6.7	6.8	4.3	3.1	4.2	5.1	4.9	2.5	3.6	3.2	3.8	3.8	3.6	5.1	7.1	3.5	7.1	
17	6.5	5.8	4.4	3.0	2.6	2.1	1.7	1.9	3.2	12.6	15.4	19.9	18.7	9.6	4.1	2.5	2.4	1.2	0.8	0.7	1.1	0.6	0.2	0.2	5.1	19.9	
18	0.2	0.2	0.3	0.3	0.3	0.3	1.4	1.5	1.3	1.8	1.0	4.1	4.5	3.5	3.5	2.9	2.5	4.3	20.4	20.8	20.8	17.7	19.3	17.2	6.1	20.8	
19	14.8	12.2	10.3	10.7	10.2	10.2	11.3	14.7	14.8	15.1	17.0	19.1	17.4	16.9	19.0	21.2	22.8	21.2	19.3	19.9	18.4	17.3	16.0	11.4	15.9	22.8	
20	3.8	1.3	0.6	0.6	0.7	0.8	1.0	1.3	1.7	2.0	4.7	6.6	5.0	5.2	3.7	3.6	2.5	1.9	1.5	1.6	2.0	2.1	1.4	1.6	2.4	6.6	
21	1.4	1.2	0.9	0.6	0.5	1.6	1.4	1.0	1.0	5.1	5.3	3.4	2.5	2.6	2.4	2.0	1.3	1.7	1.5	1.5	1.6	1.6	1.5	1.9	1.9	5.3	
22	1.5	1.5	1.2	1.8	1.5	1.6	1.7	1.6	1.6	2.0	2.9	4.4	4.6	4.6	5.4	4.5	3.6	3.7	3.4	2.8	2.5	2.6	2.3	2.2	2.7	5.4	
23	2.1	2.1	2.4	2.6	2.4	2.4	2.8	5.2	3.9	6.4	7.4	8.5	7.6	7.3	9.0	7.9	7.5	5.1	3.1	2.5	1.9	1.8	1.4	1.5	4.4	9.0	
24	1.4	1.8	1.5	1.2	1.8	1.5	2.2	4.3	3.9	3.6	4.2	6.0	3.9	3.7	3.3	2.6	2.9	1.4	1.0	1.2	0.9	0.7	0.7	0.6	2.3	6.0	
25	0.3	0.5	0.8	0.6	0.3	0.3	0.9	1.9	9.1	7.9	9.3	8.0	9.1	5.0	2.4	3.4	2.0	0.7	0.6	0.8	0.5	1.0	0.3	0.3	2.7	9.3	
26	0.3	0.2	0.3	0.4	0.5	0.4	0.9	1.7	1.3	2.9	2.6	1.7	3.0	2.8	2.4	2.5	2.1	2.1	1.5	1.4	1.4	1.0	0.7	0.7	1.5	3.0	
27	0.6	0.7	0.7	0.6	0.5	0.6	1.0	1.8	2.2	2.2	2.3	2.4	2.5	2.5	1.7	2.3	2.3	1.7	1.5	1.3	1.2	1.2	1.3	1.9	1.6	2.5	
28	2.5	2.8	1.9	1.4	1.3	1.0	1.3	0.6	1.9	1.7	1.4	1.7	1.1	1.0	1.5	1.0	0.9	0.6	0.5	0.6	1.8	2.0	1.4	1.6	1.4	2.8	
29	1.7	1.4	1.5	1.4	1.3	1.5	1.9	1.4	2.0	2.2	2.1	2.5	2.3	2.7	2.9	3.0	2.7	2.1	1.7	1.8	1.5	1.5	1.8	2.4	2.0	3.0	
30	2.4	2.2	2.2	2.4	2.5	2.5	2.3	2.6	5.0	5.6	5.5	4.8	4.6	4.3	4.7	2.9	2.1	1.4	1.0	1.2	1.0	0.8	0.6	0.6	2.7	5.6	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	2.7	2.3	2.1	2.0	1.9	2.0	2.3	3.0	3.8	4.5	5.1	5.5	5.2	4.5	4.4	4.1	3.7	3.2	3.4	3.2	3.3	3.2	3.0	2.9			
MAX	14.8	12.2	10.3	10.7	10.2	10.2	11.3	14.7	14.8	15.1	17.0	19.9	18.7	16.9	19.0	21.2	22.8	21.2	20.4	20.8	20.8	17.7	19.3	17.2			



Number of 24HR Exceedences		0 Proposed Guideline
Number of Non-Zero Readings		720
Maximum 1-HR Average		22.8 UG/M3
Maximum 24-HR Average		15.9 UG/M3
IZS Calibration Time		
Down Time		0
Standard Deviation		3.592
Operational Time		
Operational Uptime		
Monthly Average		720 HRS 100.0 % 3.4 UG/M3

West PM₁₀ ($\mu\text{g}/\text{m}^3$) – November 2020

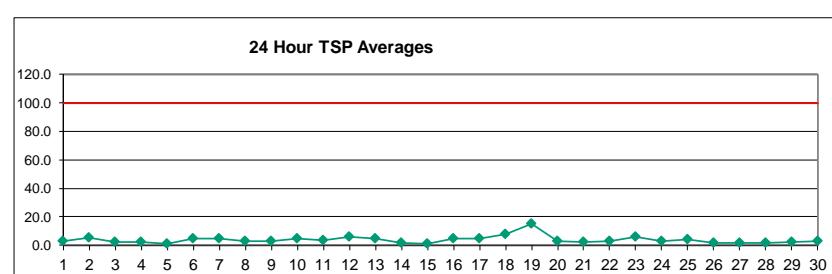
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	3.4	3.5	3.2	2.9	2.9	2.5	2.8	3.1	2.7	5.0	5.8	5.9	2.7	3.6	3.9	4.9	5.5	4.6	4.2	3.7	3.9	4.2	4.5	4.1	3.9	5.9	
2	4.0	4.1	4.1	4.3	4.1	3.9	4.5	8.9	12.7	12.2	9.5	11.3	10.0	6.9	7.1	4.7	5.3	2.8	1.8	1.9	2.2	1.9	1.9	1.9	5.5	12.7	
3	1.6	1.7	2.0	1.7	1.7	2.3	2.6	5.0	5.7	4.1	4.3	4.4	5.3	4.3	4.7	4.4	3.7	2.5	2.1	1.1	0.7	1.0	0.9	0.8	2.9	5.7	
4	1.0	1.3	1.1	0.7	0.4	0.7	1.7	1.2	2.0	8.1	9.9	9.6	3.4	3.2	2.5	1.9	3.0	1.7	0.9	0.8	1.0	2.0	2.3	3.7	2.7	9.9	
5	3.7	1.0	0.9	0.9	1.0	0.9	0.7	1.1	1.0	1.9	2.1	1.0	1.3	1.2	1.6	0.6	0.4	0.6	0.6	0.9	1.3	1.4	1.5	2.0	1.2	3.7	
6	1.6	1.3	1.2	1.2	1.4	1.4	2.3	3.3	5.4	6.4	5.2	8.0	10.6	8.3	9.8	12.7	7.8	7.1	6.3	5.7	7.5	5.7	4.1	2.9	5.3	12.7	
7	2.3	1.9	1.8	1.6	1.5	1.6	1.5	2.2	5.7	5.6	5.4	8.9	8.8	4.4	7.3	7.5	7.0	4.6	5.8	6.0	5.7	6.7	6.8	5.0	4.8	8.9	
8	10.7	8.7	4.1	2.8	2.4	3.3	4.2	3.8	3.4	3.5	3.1	4.2	4.0	1.8	1.7	1.5	1.6	1.1	1.1	1.5	3.9	6.2	5.7	5.3	3.7	10.7	
9	4.1	2.6	2.0	2.0	1.9	1.9	1.8	2.4	2.7	3.4	4.4	5.1	5.6	6.0	6.3	5.6	4.0	3.0	3.0	2.9	2.0	2.3	2.8	4.4	3.4	6.3	
10	5.8	5.9	7.4	5.6	5.2	5.1	5.9	6.4	6.6	6.3	7.0	7.1	8.2	8.3	7.8	6.8	6.3	5.9	6.0	6.3	4.9	0.7	1.7	6.0	8.3	8.3	
11	0.8	0.5	0.6	0.6	0.8	0.9	2.3	2.2	3.3	2.4	7.4	8.2	8.3	8.0	5.5	6.4	9.6	12.3	8.5	3.4	3.3	2.8	3.3	3.2	4.4	12.3	12.3
12	3.2	2.6	3.2	3.9	3.3	4.8	6.6	9.1	10.3	9.6	8.7	6.8	7.7	8.1	9.6	6.8	5.3	3.8	4.5	3.5	3.6	4.0	3.4	3.2	5.7	10.3	
13	3.1	3.2	3.6	3.8	4.7	5.5	6.0	7.7	7.8	8.3	8.2	9.2	8.6	9.5	10.9	9.0	8.7	5.5	3.9	2.6	2.3	2.6	2.7	2.7	5.8	10.9	
14	3.3	3.1	3.5	3.1	2.2	1.1	0.8	0.8	1.0	4.9	4.8	3.4	2.9	2.6	2.9	2.5	1.5	1.1	0.8	0.7	1.0	1.2	0.7	0.8	2.1	4.9	
15	0.8	0.6	0.9	0.8	0.8	1.0	1.1	1.9	1.3	1.3	1.7	3.1	3.3	2.8	2.1	1.2	1.0	1.1	0.6	0.5	0.5	0.4	0.5	0.8	1.2	3.3	
16	0.8	0.7	0.8	0.9	0.7	0.9	1.7	6.0	9.7	9.5	10.0	6.3	4.4	4.9	7.4	7.0	3.0	5.0	4.5	5.2	5.3	4.9	7.2	9.8	4.9	10.0	
17	8.7	7.1	4.6	3.2	2.7	2.2	1.9	2.0	4.0	17.9	22.0	28.2	25.3	12.8	6.0	3.6	3.4	1.6	1.0	0.9	1.5	0.7	0.2	0.2	6.7	28.2	
18	0.2	0.3	0.4	0.4	0.4	0.3	0.4	1.5	2.1	1.8	2.4	1.3	5.9	6.4	5.1	4.1	3.7	5.7	28.8	29.0	28.6	21.4	26.5	22.0	8.3	29.0	
19	18.3	14.2	10.6	10.8	10.3	10.4	13.3	19.5	19.0	20.4	23.8	27.6	23.6	21.6	26.5	29.9	31.6	30.5	26.6	24.9	22.0	20.1	18.2	12.4	20.3	31.6	
20	3.9	1.3	0.6	0.6	0.7	0.8	1.1	1.5	2.0	2.5	6.8	9.5	7.2	7.6	5.3	5.2	3.5	2.5	1.9	2.0	2.4	2.5	1.6	1.7	3.1	9.5	
21	1.6	1.3	0.9	0.7	0.5	2.2	1.8	1.1	1.1	1.0	7.5	7.9	5.0	3.7	3.8	3.5	2.8	1.7	2.3	1.9	1.6	2.0	2.0	1.8	2.5	7.9	
22	1.7	1.7	1.4	2.2	1.7	1.9	2.1	1.8	1.7	2.3	3.8	6.2	6.8	6.8	7.9	6.7	5.2	5.2	4.7	3.4	2.9	3.1	2.5	2.3	3.6	7.9	
23	2.2	2.2	2.6	2.9	2.6	2.5	3.3	7.4	5.3	9.2	10.0	11.5	11.0	10.6	13.0	11.5	10.8	7.4	4.3	3.1	2.5	2.1	1.6	1.8	5.9	13.0	
24	1.6	2.1	1.8	1.4	2.4	1.9	3.0	6.2	5.7	5.2	6.1	8.8	5.7	5.3	4.8	3.6	4.2	1.8	1.2	1.5	1.0	0.8	0.8	0.6	3.2	8.8	
25	0.4	0.6	0.9	0.6	0.3	0.3	1.2	2.5	13.6	11.2	12.9	11.5	12.0	7.3	3.5	5.0	2.9	0.9	0.8	1.1	0.6	1.4	0.4	0.4	3.8	13.6	
26	0.4	0.3	0.4	0.5	0.6	0.5	1.2	2.5	1.9	4.2	3.7	2.4	4.4	4.1	3.4	3.6	3.0	3.0	1.9	1.9	2.0	1.3	0.8	0.9	2.0	4.4	
27	0.8	0.9	0.8	0.7	0.7	0.7	1.4	2.6	3.3	3.2	3.3	3.5	3.6	3.7	2.4	3.4	3.4	2.4	2.1	1.7	1.5	1.4	1.5	2.5	2.1	3.7	
28	3.4	3.8	2.4	1.6	1.6	1.2	1.8	0.7	2.8	2.4	2.0	2.4	1.5	1.4	2.2	1.4	1.2	0.7	0.5	0.7	2.4	2.5	1.7	2.0	1.8	3.8	
29	2.3	1.9	2.0	2.0	1.8	2.1	2.6	1.9	2.8	3.2	2.9	3.6	3.2	4.0	4.3	4.4	3.8	2.9	2.1	2.3	1.8	1.7	1.9	2.7	2.7	4.4	
30	2.6	2.3	2.4	2.7	2.7	2.6	2.4	3.1	7.2	8.0	7.7	7.0	6.7	6.3	7.0	4.2	2.9	1.8	1.2	1.6	1.3	1.0	0.7	0.7	3.6	8.0	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	3.3	2.8	2.4	2.2	2.1	2.3	2.8	4.0	5.1	6.2	7.1	7.8	7.2	6.2	6.2	5.8	5.2	4.4	4.5	4.1	4.1	3.8	3.6	3.5			
MAX	18.3	14.2	10.6	10.8	10.3	10.4	13.3	19.5	19.0	20.4	23.8	28.2	25.3	21.6	26.5	29.9	31.6	30.5	28.8	29.0	28.6	21.4	26.5	22.0			



Number of Non-Zero Readings	720
Maximum 1-HR Average	31.6 UG/M3
Maximum 24-HR Average	20.3 UG/M3
IHZ Calibration Time	
Down Time	0
OpperatioEI Time	
Standard Deviation	4.9
OpperatioEI Uptime	
Monthly Average	4.4 UG/M3
	720 HRS
	100.0 %

West TSP ($\mu\text{g}/\text{m}^3$) – November 2020

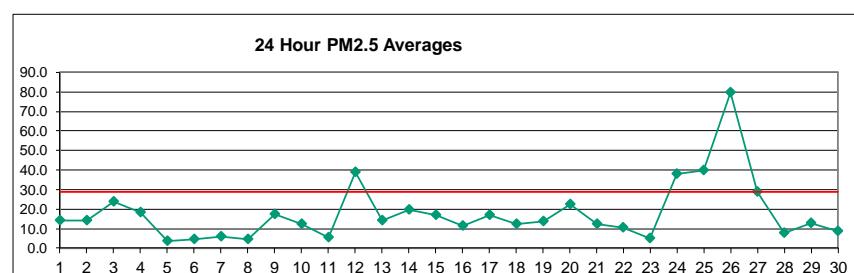
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.4	2.4	2.2	2.0	2.2	1.8	2.1	2.3	1.8	4.3	5.1	5.5	2.2	3.2	3.4	4.7	5.1	4.1	3.4	2.5	2.6	2.9	3.1	2.7	3.1	5.5	
2	2.6	2.6	2.6	2.8	2.7	2.6	3.1	7.9	14.0	13.3	9.8	12.4	11.0	7.5	7.8	4.8	5.8	2.7	1.4	1.5	1.6	1.3	1.2	1.3	5.2	14.0	
3	1.1	1.1	1.5	1.2	1.2	1.8	2.2	5.1	6.2	4.2	4.4	4.6	5.5	4.2	4.6	4.1	3.2	2.0	1.6	0.8	0.5	0.7	0.6	0.5	2.6	6.2	
4	0.7	0.8	0.8	0.5	0.3	0.5	1.2	0.9	1.7	8.4	10.8	10.5	3.5	3.1	2.4	1.8	2.8	1.5	0.6	0.6	0.7	1.4	1.5	2.7	2.5	10.8	
5	2.7	0.7	0.6	0.6	0.7	0.6	0.5	0.8	0.8	1.4	1.5	0.7	1.0	0.9	1.2	0.4	0.3	0.4	0.4	0.6	0.8	0.9	1.0	1.3	0.9	2.7	
6	1.0	0.9	0.8	0.8	0.9	1.0	1.7	2.5	4.4	5.7	4.5	4.8	8.3	11.6	9.0	10.8	14.1	8.1	6.4	5.0	4.2	5.1	3.8	2.7	1.9	4.8	14.1
7	1.5	1.3	1.2	1.1	1.0	1.0	0.9	1.7	4.6	4.7	3.8	8.9	9.0	3.5	8.0	8.1	7.3	4.0	5.9	6.2	5.6	7.2	6.7	4.0	4.5	9.0	
8	11.9	9.7	3.7	1.9	1.7	2.3	3.1	2.8	2.4	2.6	2.5	3.4	3.0	1.4	1.2	1.0	1.1	0.8	0.7	1.0	2.6	4.1	3.7	3.5	3.0	11.9	
9	2.7	1.7	1.3	1.4	1.2	1.4	1.3	1.8	2.1	3.0	4.4	5.4	6.0	6.5	6.7	5.8	3.9	2.6	2.6	2.4	1.5	1.8	2.1	3.9	3.1	6.7	
10	5.3	5.3	7.2	4.5	3.7	3.7	4.5	5.3	5.1	4.7	4.5	5.0	5.0	5.9	6.0	5.4	4.5	4.2	3.9	3.9	4.3	4.0	0.5	1.1	4.5	7.2	
11	0.5	0.4	0.4	0.4	0.5	0.6	1.7	1.6	2.8	1.9	5.9	7.0	8.0	7.0	4.7	5.9	9.7	12.5	8.4	2.2	2.4	1.9	2.4	2.2	3.8	12.5	
12	2.3	1.8	2.4	2.8	2.3	3.9	5.6	8.6	10.1	9.4	8.3	5.8	6.9	8.6	28.1	6.2	4.5	2.8	3.6	2.4	2.6	2.9	2.3	2.2	5.7	28.1	
13	2.1	2.1	2.3	2.5	3.1	3.9	4.6	6.4	6.1	6.8	6.8	7.9	7.3	8.6	10.8	8.5	8.7	4.6	2.8	1.7	1.5	1.7	1.7	1.8	4.8	10.8	
14	2.1	2.0	2.3	2.0	1.4	0.7	0.5	0.6	0.8	5.3	5.1	3.4	3.0	2.6	2.9	2.3	1.3	0.9	0.6	0.5	0.7	0.9	0.5	0.6	1.8	5.3	
15	0.6	0.4	0.6	0.5	0.5	0.7	0.7	1.6	1.2	1.1	1.6	3.0	3.2	2.7	2.0	1.1	0.9	1.0	0.5	0.4	0.3	0.3	0.4	0.6	1.1	3.2	
16	0.5	0.5	0.5	0.7	0.5	0.7	1.5	6.5	11.0	10.7	11.3	6.6	4.4	6.2	7.8	7.1	2.4	4.6	3.6	4.6	4.2	3.7	5.9	7.4	4.7	11.3	
17	5.7	4.6	3.0	2.1	1.7	1.4	1.2	1.3	2.8	12.7	16.5	20.2	19.2	9.4	6.4	3.6	3.4	1.4	0.8	0.7	1.5	0.6	0.2	0.1	5.0	20.2	
18	0.1	0.2	0.3	0.3	0.3	0.2	0.3	1.0	1.5	1.3	1.8	0.9	6.4	6.8	5.3	4.3	3.8	5.8	27.6	24.8	28.2	15.9	22.6	21.0	7.5	28.2	
19	15.7	11.5	7.2	7.0	6.8	6.9	9.0	13.6	13.6	15.1	17.2	21.9	19.2	15.7	20.6	25.1	27.0	22.5	18.1	16.8	14.4	13.0	11.8	8.0	14.9	27.0	
20	2.5	0.9	0.4	0.4	0.5	0.5	0.7	1.0	1.5	1.9	7.2	10.4	7.7	8.1	5.3	5.1	3.1	2.0	1.5	1.6	1.9	1.8	1.1	1.2	2.8	10.4	
21	1.0	0.9	0.6	0.4	0.3	2.2	1.6	0.8	0.8	0.7	8.2	8.7	5.3	3.8	3.8	3.5	2.7	1.6	2.1	1.5	1.1	1.5	1.6	1.6	2.4	8.7	
22	1.3	1.2	0.9	1.6	1.3	1.4	1.6	1.3	1.1	1.6	2.9	5.8	6.6	6.8	8.3	6.9	4.7	4.6	3.9	3.5	2.0	2.3	1.7	1.5	3.1	8.3	
23	1.4	1.4	1.7	2.1	1.8	1.7	2.5	6.9	4.3	8.7	9.9	11.9	12.0	11.6	14.9	12.9	12.2	7.8	3.6	2.3	2.0	1.6	1.1	1.2	5.7	14.9	
24	1.1	1.7	1.4	1.0	2.1	1.6	2.8	6.6	5.8	5.4	6.2	9.8	6.0	5.5	4.9	3.7	4.2	1.5	0.9	1.1	0.7	0.5	0.6	0.4	3.1	9.8	
25	0.3	0.4	0.6	0.4	0.2	0.2	1.2	2.0	15.5	12.6	12.8	11.4	13.4	8.0	3.8	5.4	3.0	0.8	0.7	1.0	0.5	1.4	0.3	0.3	4.0	15.5	
26	0.2	0.2	0.3	0.4	0.5	0.4	1.1	2.5	1.7	4.2	3.8	2.3	4.8	4.2	3.4	3.6	2.9	2.9	1.4	1.5	1.7	1.0	0.6	0.7	1.9	4.8	
27	0.6	0.6	0.6	0.5	0.5	0.6	1.3	2.5	3.4	3.3	3.4	3.7	3.6	3.7	2.3	3.5	3.6	2.1	1.8	1.3	1.1	1.0	1.0	2.3	2.0	3.7	
28	3.1	3.5	1.8	1.1	1.2	0.9	1.6	0.5	2.8	2.4	2.0	2.3	1.3	1.3	2.1	1.2	1.0	0.5	0.4	0.5	2.0	1.9	1.2	1.5	1.6	3.5	
29	2.1	1.6	1.8	1.9	1.6	1.9	2.1	1.6	2.8	3.2	2.8	3.5	3.0	4.0	4.4	4.3	3.5	2.5	1.6	1.8	1.2	1.1	1.3	1.8	2.4	4.4	
30	1.7	1.5	1.6	1.9	1.7	1.7	1.6	2.1	7.0	7.3	7.5	7.1	7.0	6.8	7.5	4.3	2.7	1.5	0.9	1.3	1.0	0.7	0.5	0.5	3.2	7.5	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	2.6	2.1	1.8	1.6	1.5	1.6	2.1	3.3	4.7	5.6	6.4	7.3	6.9	5.9	6.7	5.6	4.9	3.7	3.7	3.1	3.2	2.8	2.7	2.7	2.4	3.5	
MAX	15.7	11.5	7.2	7.0	6.8	6.9	9.0	13.6	15.5	15.1	17.2	21.9	19.2	15.7	28.1	25.1	27.0	22.5	27.6	24.8	28.2	15.9	22.6	21.0	3.2	7.5	



Number of 24HR Exceedences		0 Proposed Guideline
Number of Non-Zero Readings		720
Maximum 1-HR Average		28.2 UG/M3
Maximum 24-HR Average		14.9 UG/M3
IZS Calibration Time		
Down Time		0
Standard Deviation		4.333
Operational Time		
Operational Uptime		
Monthly Average		3.9 UG/M3
720 HRS		
100.0 %		

Berm PM_{2.5} ($\mu\text{g}/\text{m}^3$) – November 2020

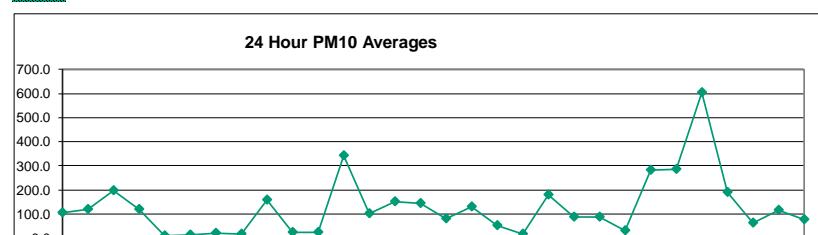
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	16.0	9.1	20.7	13.9	22.1	26.2	18.7	21.9	12.8	5.1	6.1	15.1	9.4	9.5	16.7	16.1	25.0	19.1	11.3	4.5	5.1	4.1	10.0	23.0	14.2	26.2
2	7.0	5.6	3.7	4.9	6.3	6.0	5.2	6.5	17.0	35.6	63.2	22.6	22.1	17.4	25.2	16.2	17.3	10.2	6.9	9.7	12.8	10.6	6.6	7.3	14.4	63.2
3	5.7	8.0	9.5	7.1	17.0	13.3	10.8	24.8	40.7	44.4	54.0	46.2	64.7	37.1	33.8	19.8	10.8	9.0	21.4	16.1	13.2	9.6	18.8	36.8	23.9	64.7
4	25.1	16.6	24.8	22.8	22.4	21.2	6.9	6.5	8.6	23.7	9.2	32.7	33.3	39.3	30.3	28.0	15.5	11.4	7.0	5.8	5.0	10.8	4.8	26.0	18.2	39.3
5	15.9	3.9	1.3	1.3	4.9	4.4	3.5	8.7	6.1	3.4	1.8	1.1	1.1	1.7	1.8	0.7	4.5	3.8	3.0	3.7	4.4	2.0	2.4	3.6	3.7	15.9
6	2.8	3.9	0.8	1.3	1.8	2.4	1.6	1.2	4.8	3.4	3.1	2.4	2.2	2.8	11.0	7.6	8.1	9.1	15.8	10.6	3.1	2.1	2.1	2.1	4.4	15.8
7	3.8	4.8	6.5	3.5	3.2	7.5	10.0	2.1	11.2	5.2	2.6	2.3	2.0	2.2	2.8	3.1	2.6	2.0	2.1	3.7	10.5	27.3	14.7	10.5	6.1	27.3
8	11.3	9.3	9.4	2.3	1.8	4.4	5.3	3.8	5.4	3.7	6.1	8.5	6.4	3.9	1.4	3.1	4.1	1.8	3.7	2.5	0.9	2.4	3.3	5.2	4.6	11.3
9	3.5	1.9	1.5	1.4	1.4	2.1	1.6	4.4	4.2	9.7	27.4	25.2	16.9	26.5	20.3	19.5	21.1	45.5	73.1	42.4	32.7	14.8	10.1	10.2	17.4	73.1
10	10.8	18.1	28.8	14.6	6.4	8.1	10.6	14.5	22.2	24.9	15.1	19.3	13.3	12.3	9.2	8.8	10.7	6.4	7.6	7.8	6.6	9.9	5.8	5.6	12.4	28.8
11	3.5	0.7	1.3	0.5	0.7	1.4	0.8	0.7	1.5	1.3	5.0	5.0	4.4	6.2	7.4	4.8	4.7	5.7	21.6	10.2	6.3	8.0	13.3	16.7	5.5	21.6
12	10.8	9.0	23.3	16.1	8.9	8.6	7.6	20.7	35.9	35.5	39.6	26.1	35.6	73.5	32.8	66.6	76.4	32.3	50.4	30.5	93.5	70.5	82.4	45.8	38.8	93.5
13	25.8	10.2	9.4	3.8	5.2	8.6	13.2	28.2	48.5	38.3	26.3	29.6	21.8	13.2	7.3	12.7	17.3	7.4	2.9	2.5	1.3	1.4	2.3	1.7	14.1	48.5
14	1.8	2.0	3.1	6.1	8.7	3.4	4.8	3.5	4.0	11.3	34.3	52.0	40.0	79.9	61.0	28.8	56.7	22.2	6.3	15.9	5.8	4.1	6.1	11.0	19.7	79.9
15	26.5	4.6	1.9	2.6	2.1	2.8	1.9	5.0	7.1	16.6	15.1	4.4	5.7	8.9	43.8	57.7	65.3	56.5	21.5	5.3	3.7	3.4	15.7	28.2	16.9	65.3
16	28.6	45.1	20.9	14.4	10.0	7.1	6.7	5.6	5.9	5.8	6.4	13.1	9.4	10.7	10.9	4.3	6.6	4.1	3.4	5.5	12.3	12.9	10.3	10.1	11.3	45.1
17	10.1	8.2	7.3	9.0	7.1	4.5	2.1	3.5	7.8	7.0	7.6	12.4	11.2	15.7	43.9	52.3	47.3	21.1	27.6	44.4	31.5	14.1	6.2	6.7	17.0	52.3
18	2.7	2.8	3.8	4.2	4.8	4.8	4.3	3.3	5.6	1.3	2.1	2.7	5.1	8.9	23.4	32.7	18.5	13.1	15.8	16.2	33.4	16.6	17.9	48.8	12.2	48.8
19	27.4	24.1	17.3	11.7	11.1	12.1	10.2	11.1	13.8	11.2	9.6	9.8	10.0	10.3	9.9	10.0	9.4	9.8	11.4	22.5	25.0	17.5	16.2	7.2	13.7	27.4
20	14.1	5.1	2.1	4.0	13.2	7.8	3.9	3.9	4.1	14.1	21.2	33.4	25.2	37.7	43.1	55.8	43.3	38.5	51.0	54.4	38.4	4.5	3.9	17.4	22.5	55.8
21	3.4	10.1	4.5	7.5	4.8	1.2	1.7	1.1	2.0	7.9	8.7	19.0	24.9	30.4	28.5	16.9	29.3	16.5	12.0	2.9	6.1	9.4	28.8	12.2	30.4	
22	25.3	20.5	34.2	24.3	27.4	26.5	17.0	2.8	2.1	1.8	1.4	2.1	3.7	5.0	5.5	5.3	6.0	8.8	16.6	7.5	2.9	2.8	2.3	1.4	10.5	34.2
23	1.6	1.4	1.6	1.6	1.5	1.7	1.6	1.6	2.3	3.0	3.6	4.9	5.6	5.6	7.3	8.5	8.6	6.1	6.6	6.7	14.8	8.1	8.8	8.7	5.1	14.8
24	19.6	7.1	3.9	9.8	20.3	18.2	13.3	18.8	43.7	81.7	74.8	67.2	35.6	82.3	78.4	55.8	64.9	45.2	40.7	32.2	24.0	21.7	26.4	23.3	37.9	82.3
25	10.9	3.9	3.1	2.8	1.7	3.0	2.3	6.5	4.3	7.0	0.8	2.7	20.0	76.7	82.2	96.5	71.7	60.2	61.2	76.6	76.1	140.8	66.2	79.4	39.9	140.8
26	19.4	29.1	59.8	48.4	45.8	41.4	23.9	29.2	45.9	48.2	88.3	95.1	121.5	147.1	136.5	113.1	119.7	189.5	46.4	58.2	227.6	104.7	28.1	47.2	28.7	53.2
27	18.7	19.7	21.3	16.1	16.8	17.8	27.8	26.6	44.5	37.7	47.2	37.5	35.8	34.1	18.4	20.9	53.2	34.7	34.3	43.7	31.4	10.2	11.9	29.2	7.9	47.3
28	47.3	8.8	3.7	2.9	2.7	3.3	11.6	2.7	16.4	5.7	7.1	6.9	5.3	8.2	13.0	7.2	5.1	3.9	3.5	4.2	3.1	3.7	4.6	8.5	7.9	47.3
29	3.8	6.9	8.1	22.8	25.1	15.2	23.5	33.0	24.5	43.1	29.9	12.4	4.5	10.7	14.6	10.7	3.8	1.7	1.5	1.4	1.4	1.1	1.3	1.8	12.6	43.1
30	2.7	5.5	4.8	7.9	5.0	3.3	4.1	3.9	10.5	5.1	6.8	28.9	30.6	12.0	13.5	18.2	20.2	10.6	5.3	3.7	2.9	3.7	2.6	0.8	8.9	30.6
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	13.5	10.2	11.4	9.7	10.3	9.6	8.5	10.2	15.3	18.1	20.8	21.4	20.9	27.6	27.5	26.8	27.8	23.9	19.6	18.9	24.7	18.4	13.8	18.4		
MAX	47.3	45.1	59.8	48.4	45.8	41.4	27.8	33.0	48.5	81.7	88.3	95.1	121.5	147.1	136.5	113.1	119.7	189.5	73.1	76.6	227.6	140.8	82.4	79.4		



Number of 24HR Exceedances	4	Proposed Guideline
Number of Non-Zero Readings	720	
Maximum 1-HR Average	227.6 UG/M3	
Maximum 24-HR Average	79.8 UG/M3	
Monthly Calibration Standard Deviation	23.2	Operational Time Operational Uptime
		720 HRS 100.0 %
		Monthly Average 17.8 UG/M3

Berm PM₁₀ ($\mu\text{g}/\text{m}^3$) – November 2020

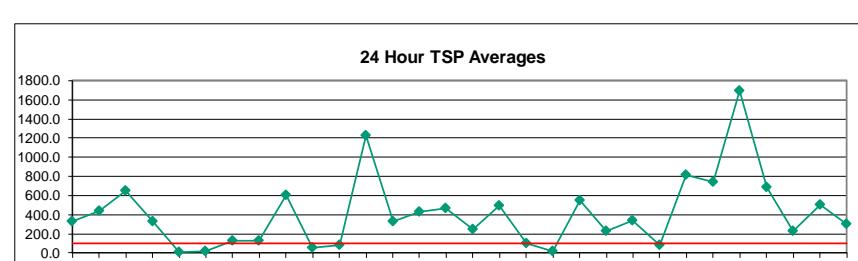
DAY	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	103.1	68.4	204.9	127.9	194.8	234.3	142.7	181.4	102.1	32.0	34.9	101.9	60.5	69.0	128.2	102.6	149.0	118.6	69.4	17.5	23.1	13.3	70.5	198.9	106.2	234.3	
2	54.2	28.7	8.5	17.1	25.6	19.6	20.3	38.6	152.0	377.2	608.4	220.0	192.2	132.4	239.0	128.2	133.8	84.4	53.8	77.3	101.4	81.1	45.8	37.6	119.9	608.4	
3	32.5	48.7	60.5	44.9	121.7	109.4	103.5	217.9	335.0	381.3	444.0	423.1	568.7	341.1	320.4	159.1	76.0	58.6	165.6	107.5	73.0	59.4	158.8	277.1	195.3	568.7	
4	157.5	89.4	137.6	131.9	123.5	92.8	24.4	42.9	85.8	238.7	83.3	269.7	267.9	327.2	251.7	218.9	113.9	82.3	40.9	28.8	19.9	16.0	7.0	38.9	120.5	327.2	
5	23.9	5.9	2.6	1.7	7.3	10.6	18.2	54.1	28.3	5.1	2.5	1.6	1.5	2.4	2.6	1.0	6.7	5.6	4.5	15.4	13.5	3.0	3.1	4.8	9.4	54.1	
6	3.9	5.6	0.8	1.6	2.4	3.3	1.9	1.4	2.1	7.1	13.7	16.5	10.7	9.5	14.9	77.8	42.1	12.9	13.5	23.7	15.8	4.1	2.5	2.6	12.1	77.8	
7	5.3	6.8	9.6	4.9	4.6	11.1	14.8	2.7	15.7	7.9	3.0	3.3	2.8	4.3	15.0	17.2	6.7	3.4	4.6	15.4	32.8	149.8	70.1	62.4	19.8	149.8	
8	81.3	56.6	65.6	5.9	2.6	9.9	16.5	8.0	23.2	5.8	18.4	15.2	16.9	15.9	2.6	3.9	13.7	3.1	10.9	6.6	1.0	2.8	4.2	7.3	16.6	81.3	
9	4.7	2.3	1.8	1.6	1.8	2.8	3.7	27.8	27.9	99.9	299.3	236.2	151.1	245.3	198.1	170.5	190.9	394.5	694.2	438.1	311.6	116.5	80.9	80.5	157.6	694.2	
10	95.0	55.1	43.1	21.8	9.3	11.8	15.7	21.6	33.2	37.3	22.6	29.0	19.8	18.3	13.6	13.1	16.0	9.3	11.0	11.3	9.0	15.3	8.5	8.1	22.9	95.0	
11	4.4	0.9	1.7	0.6	0.8	1.7	0.9	0.8	2.0	1.7	6.5	7.0	10.3	23.5	39.0	12.5	16.4	14.0	32.4	31.2	54.8	68.0	131.3	145.4	25.3	145.4	
12	86.5	74.2	218.5	142.4	72.6	64.2	44.9	180.1	323.6	322.3	366.5	219.5	322.4	657.0	314.7	603.6	672.2	278.6	426.6	265.1	826.6	627.6	721.4	370.8	341.7	826.6	
13	174.2	60.1	48.0	9.0	21.6	44.1	81.1	231.8	414.1	311.7	199.9	200.9	176.5	103.1	43.7	98.4	147.8	51.4	10.6	8.0	1.6	3.4	5.2	3.4	102.1	414.1	
14	2.2	2.2	3.8	8.5	12.8	19.3	28.0	15.7	21.3	92.2	306.4	405.2	282.5	623.8	526.5	255.3	476.7	211.8	47.1	120.8	33.3	23.9	38.2	78.1	151.5	623.8	
15	202.4	33.7	9.3	17.8	11.2	18.4	9.2	35.1	45.5	163.4	146.3	26.2	30.0	62.8	373.4	527.7	607.9	487.4	196.4	39.5	26.9	21.6	117.8	254.8	144.4	607.9	
16	249.6	370.2	204.3	120.6	80.8	46.3	46.0	41.8	44.2	40.9	48.7	97.5	69.3	75.7	72.6	20.5	38.6	16.7	9.5	19.0	56.7	55.4	45.6	51.5	80.1	370.2	
17	15.2	12.1	10.2	13.2	10.3	6.5	2.7	5.0	11.2	9.7	9.2	15.6	14.5	96.9	476.1	529.7	496.6	218.2	240.7	402.1	304.5	137.2	46.2	43.9	130.3	529.7	
18	14.1	18.2	23.5	24.7	28.4	31.1	25.3	18.0	28.7	1.9	3.1	10.1	37.1	80.7	167.0	314.0	157.7	82.1	24.6	18.4	47.4	20.8	21.8	69.5	52.8	314.0	
19	38.5	33.1	22.9	14.0	13.3	14.9	11.5	12.7	17.4	13.4	10.3	10.6	11.6	10.6	10.6	10.6	9.7	10.3	13.4	32.8	37.5	24.4	23.8	9.8	17.4	38.5	
20	20.9	7.5	10.3	23.2	67.5	37.8	28.5	26.1	42.5	141.9	186.8	304.4	216.1	349.3	380.9	487.4	346.4	319.5	405.4	420.7	287.5	24.4	25.1	150.0	179.6	487.4	
21	22.6	74.2	34.3	53.1	33.0	4.7	10.1	5.5	11.8	71.4	69.4	151.1	185.7	234.7	215.8	114.5	114.6	196.4	90.9	57.8	14.2	38.8	68.9	245.5	88.3	245.5	
22	218.0	173.6	306.7	231.2	251.5	225.3	157.9	13.9	8.4	5.0	2.0	5.6	19.0	34.0	43.6	38.9	43.5	72.8	139.9	54.1	15.8	13.3	7.8	1.9	86.8	306.7	
23	2.4	1.5	2.2	2.2	1.7	2.0	2.1	2.0	7.0	9.2	11.1	21.6	36.8	34.4	47.9	52.2	58.7	39.9	47.3	52.5	111.9	51.7	52.3	59.3	29.6	111.9	
24	154.4	46.5	18.5	58.5	140.7	125.3	93.2	138.3	355.8	601.6	644.5	481.5	283.4	631.0	597.6	412.3	448.9	350.4	308.5	205.3	173.2	150.3	190.3	171.8	282.6	644.5	
25	84.6	22.0	10.6	16.5	9.4	11.6	9.1	31.0	15.3	19.0	1.4	6.7	151.0	559.7	553.4	644.9	545.7	438.9	477.6	577.1	546.9	1039.1	505.9	590.6	286.2	1039.1	
26	145.1	215.5	431.1	350.7	352.7	308.1	196.7	235.2	377.8	378.5	680.3	732.2	923.6	1146.8	1044.4	886.4	930.9	1568.2	361.8	396.8	1713.4	619.5	194.5	285.6	603.2	1713.4	
27	97.1	103.8	112.8	95.7	90.1	95.6	151.1	156.7	238.2	202.0	312.1	246.7	183.5	179.3	98.8	134.5	382.9	303.7	301.2	333.9	267.2	81.1	97.8	259.0	188.5	382.9	
28	469.4	81.2	20.9	12.7	14.6	21.2	83.0	14.8	144.0	40.6	42.4	49.9	31.7	66.3	113.3	50.7	33.9	24.3	18.9	21.5	21.8	28.1	37.2	89.1	63.8	469.4	
29	33.2	66.5	79.5	225.3	246.9	157.1	254.4	318.8	224.7	438.8	302.2	107.4	29.0	84.1	113.3	82.6	26.8	7.0	4.4	4.4	3.6	3.6	1.9	1.7	2.9	117.3	438.8
30	11.4	50.5	36.5	67.4	38.5	15.8	28.3	26.2	93.3	30.0	46.0	269.4	324.6	80.7	111.4	159.0	214.3	101.0	46.1	32.3	17.8	31.6	13.2	3.0	77.0	324.6	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%	
MEAN	86.9	60.5	71.4	61.6	66.4	58.5	54.2	70.2	107.7	136.2	164.2	156.2	154.3	210.0	217.6	210.9	217.3	185.5	142.4	127.8	172.1	117.4	93.2	120.1			
MAX	469.4	370.2	431.1	350.7	352.7	308.1	254.4	318.8	414.1	601.6	680.3	732.2	923.6	1146.8	1044.4	886.4	930.9	1568.2	694.2	577.1	1713.4	1039.1	721.4	590.6			



Number of Non-Zero Readings		720
Maximum 1-HR Average		1713.4 UG/M3
Maximum 24-HR Average		603.2 UG/M3
Operational Time		720 HRS
Monthly Calibration Standard Deviation		190.8
Operational Uptime		100.0 %
Monthly Average		127.6 UG/M3

Berm TSP ($\mu\text{g}/\text{m}^3$) – November 2020

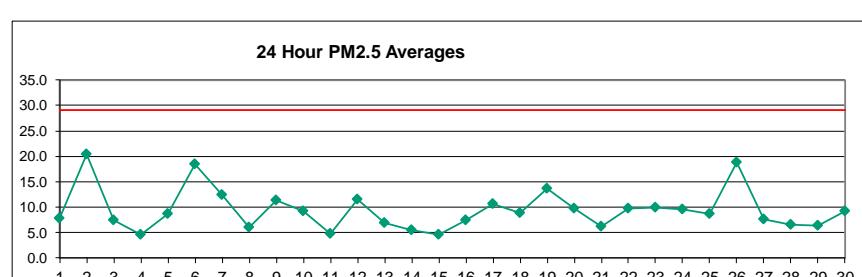
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	244.1	182.7	815.7	527.3	611.9	784.1	394.1	552.3	315.4	130.9	111.6	217.7	172.0	192.4	286.9	225.6	283.6	273.9	209.8	48.5	54.0	22.3	269.9	977.5	329.3	977.5
2	260.6	104.2	10.6	31.0	37.8	29.1	32.1	134.0	618.1	1601.5	2388.3	940.4	746.5	385.0	878.5	406.0	424.1	271.5	207.9	252.9	331.3	289.4	144.4	77.1	441.8	2388.3
3	62.0	105.4	164.5	108.8	293.5	354.7	381.2	698.9	977.2	1150.3	1421.0	1385.8	1990.1	1266.6	1269.9	683.5	265.1	184.9	808.6	415.8	155.5	139.8	490.6	834.1	650.3	1990.1
4	358.3	160.0	340.9	362.1	238.2	147.2	73.4	101.6	396.7	831.9	275.1	716.2	732.8	889.3	715.6	658.5	382.6	282.0	120.4	47.3	24.6	18.0	6.7	43.8	330.1	889.3
5	26.6	5.9	1.9	1.6	7.7	12.1	31.3	81.8	40.2	5.4	2.4	1.4	2.5	2.6	0.9	7.4	6.1	4.8	11.8	11.4	2.7	2.8	4.7	11.6	81.8	
6	4.0	5.8	0.5	1.3	2.3	3.3	1.6	1.0	1.7	7.7	25.3	41.4	19.4	22.8	35.6	134.2	50.5	14.9	15.0	26.7	17.4	3.3	1.8	2.2	18.3	134.2
7	5.4	7.2	10.8	5.0	4.6	12.5	16.5	2.4	16.2	11.3	6.1	3.1	2.6	16.4	54.3	81.8	31.4	11.2	24.8	106.9	180.8	1414.1	730.9	268.2	126.0	1414.1
8	777.8	595.0	608.8	37.7	11.0	56.2	154.6	58.3	51.3	19.9	157.2	56.9	196.9	188.7	12.4	10.9	10.7	2.4	8.4	5.7	0.7	2.1	3.7	7.2	126.4	777.8
9	4.5	1.9	1.3	1.2	1.4	2.7	25.9	139.1	108.5	397.3	1243.5	972.7	564.0	933.2	743.7	684.0	779.9	1433.8	2440.1	1737.0	1280.3	408.0	300.7	335.8	605.9	2440.1
10	550.5	226.1	50.0	25.3	9.9	12.8	17.7	24.7	38.4	43.3	26.2	33.4	22.7	21.0	15.0	14.6	18.4	9.5	11.7	12.2	8.6	33.8	7.3	7.4	51.7	550.5
11	3.7	0.6	1.2	0.4	0.5	1.2	0.7	0.6	1.7	1.3	13.9	8.0	15.7	30.8	48.9	22.1	21.8	17.1	37.1	68.4	227.5	275.6	517.6	620.1	80.7	620.1
12	390.5	349.9	927.4	583.5	344.0	279.3	192.9	729.5	1296.5	1227.9	1483.1	784.9	1256.6	2221.3	1200.7	2120.5	2193.9	973.7	1444.8	889.8	2458.1	2359.3	2555.9	1298.5	1231.8	2555.9
13	639.7	122.8	127.5	30.2	66.2	135.1	235.4	815.2	1497.8	1076.2	640.0	545.6	592.3	349.6	130.3	264.0	426.4	163.0	22.4	20.9	1.2	2.9	7.0	7.0	329.9	1497.8
14	1.6	1.6	3.2	8.2	13.7	46.8	34.5	20.0	26.0	229.8	825.6	1051.7	708.7	1681.4	1689.9	955.1	1641.7	666.8	128.5	222.7	49.6	54.4	89.2	188.7	430.8	1689.9
15	631.8	111.8	37.9	45.9	35.0	44.2	22.4	120.8	137.2	568.8	500.2	61.4	49.7	184.1	1057.6	1656.7	2066.5	1685.0	769.0	102.1	56.0	49.9	369.4	948.2	471.3	2066.5
16	933.9	1493.7	846.1	464.9	244.6	109.9	134.8	126.4	124.3	111.1	108.3	208.9	160.5	148.5	157.9	45.0	49.6	19.5	7.7	13.4	43.5	42.3	55.6	303.5	248.1	1493.7
17	15.8	12.7	10.3	13.4	10.8	6.9	2.7	5.0	10.8	8.4	6.7	11.7	13.4	299.2	1636.3	2025.7	1612.8	1003.8	994.6	1791.6	1498.5	606.5	150.3	126.3	494.8	2025.7
18	16.3	36.0	43.2	36.6	42.8	55.4	33.9	30.9	60.6	1.9	3.2	18.8	72.6	215.6	318.0	652.4	306.0	172.1	40.5	13.8	50.2	17.5	17.2	70.1	96.9	652.4
19	41.2	35.7	21.5	11.0	11.1	13.1	8.6	9.1	14.1	10.4	7.0	7.3	7.2	8.2	7.5	7.1	6.3	6.8	9.8	35.0	42.3	20.8	23.3	9.2	15.6	42.3
20	21.6	8.1	19.6	30.5	60.4	49.8	76.5	62.2	149.2	438.6	605.2	1033.9	694.9	1168.0	1247.5	1500.3	972.5	991.6	1301.8	1371.7	887.1	84.1	55.1	375.6	550.2	2015.5
21	71.3	283.9	109.0	180.6	125.8	14.8	32.2	17.7	34.1	256.8	178.9	345.4	473.0	553.9	517.2	257.8	213.8	431.7	120.0	76.3	30.6	106.3	207.6	840.8	228.3	840.8
22	786.7	648.8	1161.0	980.8	1054.9	928.8	690.0	59.5	22.4	20.8	3.1	10.9	52.7	125.1	161.4	129.1	153.2	286.8	535.0	218.9	54.3	54.2	21.5	2.4	340.1	1161.0
23	2.4	1.0	1.9	2.1	1.1	1.3	1.5	4.0	14.2	17.7	23.4	62.7	99.1	96.7	144.1	125.4	158.5	124.2	156.7	183.7	308.3	124.2	162.6	168.4	82.7	308.3
24	506.8	145.0	65.0	86.2	380.5	386.1	256.7	397.4	974.4	1749.1	2015.5	1210.5	878.9	1977.6	1847.9	1211.0	1211.2	1030.5	847.7	523.9	437.1	389.8	499.8	450.3	811.6	2015.5
25	236.3	59.4	23.6	52.3	17.1	10.7	9.1	60.6	85.3	74.8	2.8	15.6	318.9	1379.4	1359.0	1594.9	1490.6	1164.5	1291.2	1429.3	1519.5	2516.0	1476.1	1627.3	742.3	2516.0
26	485.4	662.3	1258.2	1114.6	1087.0	929.9	576.4	688.7	948.1	1061.0	1983.1	2108.2	2653.2	3106.0	2970.0	2630.5	2745.0	3466.3	1268.2	1307.7	3810.6	2216.2	702.9	835.7	1692.3	3810.6
27	328.0	314.8	336.0	330.0	367.7	336.3	502.7	586.0	832.8	753.7	1198.6	996.2	631.2	678.6	392.4	532.8	1309.2	1240.8	1211.4	1116.0	932.5	314.0	278.2	931.7	685.3	1309.2
28	1707.4	419.2	63.6	31.1	49.3	91.2	352.4	33.9	524.9	141.0	120.2	117.7	96.5	235.9	406.8	166.1	84.1	53.5	35.8	37.7	76.1	136.4	181.6	405.3	232.0	1707.4
29	160.4	278.1	336.6	997.5	1156.3	772.0	1208.5	1353.1	851.7	1865.0	1356.6	458.9	127.4	276.1	393.1	313.4	99.7	27.6	10.9	13.0	4.0	2.8	2.0	2.7	502.8	1865.0
30	35.5	228.1	190.6	344.8	198.1	59.7	136.4	118.3	466.7	132.5	183.8	980.4	1063.4	277.2	391.6	536.8	865.0	396.1	177.9	129.2	73.6	141.9	37.7	8.4	298.9	1063.4



Number of 24HR Exceedences	23	Proposed Guideline
Number of Non-Zero Readings	720	
Maximum 1-HR Average	3810.6 UG/M3	
Maximum 24-HR Average	1692.3 UG/M3	
Izs Calibration Time		
Monthly Calibration	0	Operational Time
Standard Deviation	585.5	Operational Uptime
		720 HRS
		100.0 %
		408.6 UG/M3

Entrance PM_{2.5} ($\mu\text{g}/\text{m}^3$) – November 2020

Day	HOUR																								MEAN	MAX			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1	2.5	2.5	3.0	3.1	4.9	6.2	2.6	3.1	6.2	3.6	5.5	20.3	6.2	10.1	5.8	4.4	3.5	3.6	3.2	7.0	21.7	32.0	16.6	7.1	7.7	32.0			
2	8.8	61.0	61.2	63.2	26.1	30.8	30.9	26.5	30.3	22.7	25.6	22.2	19.4	14.4	14.9	6.8	4.1	4.7	2.8	2.1	2.3	3.4	2.2	2.0	20.4	63.2			
3	1.5	2.1	1.4	1.5	1.7	1.9	3.6	11.1	12.8	16.6	16.9	20.1	21.7	16.2	17.7	9.3	3.8	4.0	9.9	1.6	0.7	0.6	0.6	0.7	7.4	21.7			
4	1.1	1.0	1.0	0.8	1.2	1.0	0.5	2.1	1.2	1.9	4.1	6.0	6.2	4.9	7.9	7.6	6.7	4.4	1.4	9.8	21.4	5.1	3.0	9.5	4.6	21.4			
5	8.9	6.9	7.9	5.2	4.1	8.6	10.9	2.7	5.6	4.4	2.7	8.5	4.4	3.3	1.3	11.4	5.1	7.8	17.3	11.8	21.8	9.6	14.0	22.6	8.6	22.6			
6	20.2	15.7	12.8	14.2	14.2	17.1	12.3	15.0	15.9	21.4	25.8	7.2	3.9	6.6	31.1	51.9	35.5	16.0	19.8	10.7	18.8	27.5	13.0	14.2	18.4	51.9			
7	18.4	13.0	18.5	16.3	23.2	12.9	7.3	5.2	47.8	9.3	4.7	5.0	7.0	5.0	4.3	6.6	5.3	3.6	3.5	6.1	25.1	23.3	17.6	6.8	12.3	47.8			
8	15.6	11.9	6.1	2.9	2.1	3.1	3.6	3.1	4.8	11.9	7.3	5.7	6.3	2.8	4.8	4.4	2.5	2.6	2.2	3.1	6.7	10.5	17.8	6.1	17.8	11.4	28.6		
9	13.1	6.9	7.8	6.8	13.8	17.1	17.3	27.6	25.2	28.6	17.5	13.7	7.7	9.5	7.3	8.7	6.2	5.4	11.0	8.4	4.2	3.4	2.6	3.6	9.2	20.7			
10	6.3	14.6	20.7	11.1	4.1	6.5	10.3	16.3	7.7	10.7	6.3	7.3	6.7	6.3	5.8	7.7	13.4	12.7	15.7	8.6	6.6	8.1	5.1	2.4	4.8	17.3			
11	4.8	2.0	2.5	1.1	1.0	1.1	1.0	1.4	2.1	2.9	11.2	3.1	4.4	5.8	3.6	5.3	8.9	8.8	13.2	17.3	3.6	3.3	3.8	3.7	11.5	28.9			
12	7.3	8.9	11.4	8.7	5.2	5.7	4.0	8.6	14.7	16.1	12.9	9.6	18.7	16.7	16.6	13.3	10.2	7.5	6.1	5.6	28.9	15.7	17.9	5.6	7.0	13.1	10.7	29.9	
13	4.5	3.3	3.1	3.7	3.7	4.2	4.7	9.2	12.7	13.1	11.8	12.2	11.4	7.8	7.7	8.4	7.9	4.8	4.9	6.1	3.4	6.8	7.2	4.6	5.4	12.9	4.6	11.7	
14	2.8	3.9	4.2	7.1	7.2	2.4	10.1	11.0	6.9	3.7	7.1	7.1	6.0	7.5	11.6	5.1	12.9	4.9	2.5	1.2	1.7	1.0	1.2	1.4	7.5	18.7	10.7	32.5	
15	7.0	2.6	3.8	2.0	3.8	6.9	5.4	3.3	3.1	11.5	9.4	2.8	2.2	1.5	4.0	11.7	10.0	5.6	4.2	1.8	0.6	0.7	1.6	6.2	9.8	54.8	13.7	32.9	
16	3.8	6.2	2.9	2.0	1.0	1.2	2.6	5.1	6.7	7.2	5.9	3.8	4.5	6.0	8.3	12.0	11.2	12.6	13.8	10.2	11.9	6.0	18.7	16.2	6.2	51.9	29.9		
17	4.8	7.5	9.1	29.9	20.6	12.7	12.5	5.7	8.2	10.9	11.8	15.1	15.5	11.2	18.6	9.7	7.5	5.1	6.9	7.3	21.8	2.3	1.2	0.5	9.7	24.4	8.9	32.5	
18	1.9	0.5	1.0	0.5	0.6	0.5	4.1	5.2	6.1	9.8	10.5	9.4	5.5	4.9	5.1	9.4	4.3	15.4	15.1	16.8	24.0	15.9	14.6	32.5	9.9	18.7	9.5	30.3	
19	18.1	21.3	14.2	9.5	8.9	10.8	10.3	9.9	9.9	10.9	11.1	10.9	10.9	11.5	12.4	11.3	11.5	11.7	12.8	13.6	15.5	14.5	17.9	16.3	2.5	5.7	54.8		
20	12.3	20.5	1.8	7.9	54.8	18.0	9.9	14.5	10.0	7.3	5.5	4.9	3.8	4.2	5.7	5.1	3.5	3.9	3.5	3.0	2.6	2.4	25.1	5.3	9.8	6.2	51.9		
21	2.5	1.2	2.0	1.8	1.4	7.0	16.8	51.9	26.0	2.6	1.4	3.8	3.3	2.9	2.3	5.8	3.0	3.2	1.5	1.1	1.2	1.6	1.4	2.8	9.7	24.4	8.7	20.8	
22	2.8	2.3	6.0	3.7	3.5	3.2	3.0	10.0	18.5	14.7	16.2	19.7	20.2	24.4	11.2	8.0	7.9	6.4	6.7	4.2	5.2	3.7	18.6	12.6	9.9	18.7	10.7	58.6	
23	9.9	8.6	15.5	18.7	12.4	15.3	11.6	8.5	15.9	16.5	15.6	16.3	11.2	8.9	12.1	9.8	11.3	4.4	4.5	2.9	2.4	2.3	1.8	1.7	1.7	13.7	32.9	6.5	21.4
24	7.2	6.6	3.0	1.5	2.4	1.7	5.8	7.7	9.5	27.4	19.1	14.2	15.6	30.3	27.5	9.8	8.6	4.8	5.1	2.5	2.1	1.8	5.2	8.4	9.5	9.5	30.3		
25	7.7	5.0	4.6	5.1	8.1	11.7	13.0	3.4	7.2	2.6	2.4	4.9	20.8	9.9	10.7	9.1	20.8	7.3	6.5	12.0	2.4	16.8	8.3	7.2	8.7	18.7	58.6		
26	4.9	1.7	8.3	7.0	13.5	14.7	16.9	28.7	11.0	8.1	20.7	23.0	37.9	58.6	24.3	16.3	19.7	56.7	14.1	6.7	13.5	29.2	10.9	3.5	10.7	29.9	7.6	16.8	
27	4.8	1.8	1.8	1.4	2.2	2.6	8.2	11.7	8.1	9.5	16.8	16.3	9.4	7.6	14.2	10.4	9.2	8.1	10.2	2.8	2.4	2.1	13.8	6.9	100.0 %	9.4 UG/M3			
28	21.4	11.8	14.2	7.8	11.5	7.7	5.0	5.2	4.2	4.9	5.7	7.1	5.4	5.4	5.7	3.4	2.3	3.6	3.1	1.3	2.1	5.9	8.6	6.5	720 HRS	100.0 %	9.4 UG/M3		
29	3.0	3.0	5.5	7.0	8.5	5.3	8.9	11.2	9.2	14.2	7.0	6.0	4.9	4.0	2.9	4.7	2.9	4.0	3.4	4.9	12.7	10.6	4.2	3.8	6.3	14.2			
30	15.5	16.8	9.8	7.3	10.5	14.2	12.5	9.8	7.8	6.7	6.7	17.7	16.6	8.1	8.0	15.3	23.5	5.8	2.1	1.5	1.0	1.6	1.1	1.9	9.2	23.5	100.0 %	9.4 UG/M3	
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%			
MEAN	8.1	9.0	8.8	8.6	9.2	8.4	8.8	11.2	11.8	10.8	11.0	10.8	10.6	10.7	10.3	10.1	9.5	8.4	7.6	6.4	9.4	8.8	8.4						
MAX	21.4	61.0	61.2	63.2	54.8	30.8	30.9	51.9	47.8	28.6	25.8	23.0	37.9	58.6	31.1	51.9	35.5	56.7	19.8	17.3	28.9	32.0	25.1	32.9					

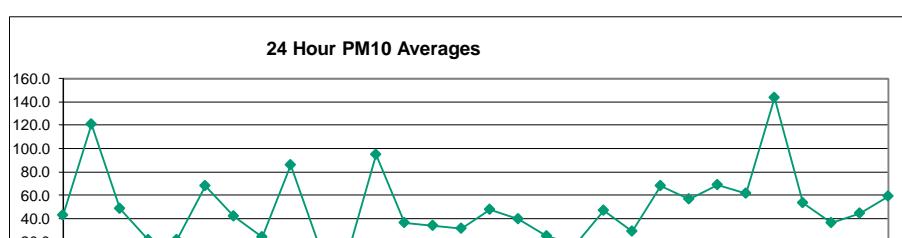


Number of 24HR Exceedences 0 Proposed Guideline

Number of Non-Zero Readings	720
Maximum 1-HR Average	63.2 UG/M3
Maximum 24-HR Average	20.4 UG/M3
Monthly Calibration Standard Deviation	8.615
Operational Time	0
Operational Uptime	100.0 %
Monthly Average	9.4 UG/M3

Entrance PM₁₀ ($\mu\text{g}/\text{m}^3$) – November 2020

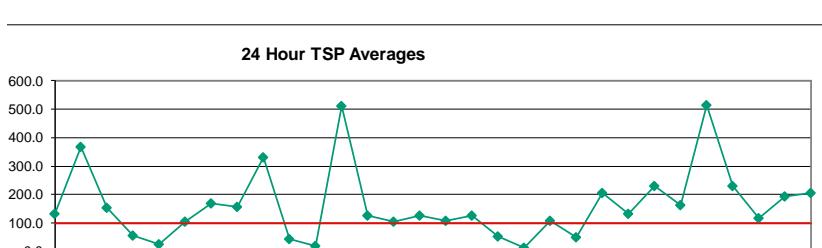
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.2	6.2	14.6	14.8	34.0	38.3	9.9	11.9	26.0	12.7	30.5	146.2	37.1	72.3	31.0	24.9	15.1	17.5	9.2	29.3	116.5	186.0	89.3	52.8	43.0	186.0
2	40.3	302.2	315.8	321.9	141.1	156.4	161.4	135.3	233.2	197.1	215.6	168.0	141.5	105.5	111.6	36.9	26.3	21.4	14.1	7.5	9.1	17.4	5.7	6.4	120.5	321.9
3	3.3	6.4	1.9	2.0	5.1	6.2	20.9	75.3	94.4	123.0	133.0	148.2	128.9	110.5	112.3	56.0	18.9	25.9	78.3	6.6	1.1	0.9	0.9	1.6	48.4	148.2
4	2.5	1.4	2.0	2.1	5.4	3.8	0.6	10.5	7.2	8.4	30.9	45.2	46.6	32.9	57.3	57.3	53.0	16.7	5.4	45.5	67.2	7.5	4.3	14.2	22.0	67.2
5	13.3	10.7	20.7	7.7	6.1	26.3	59.2	11.3	8.8	6.5	3.9	12.7	6.5	4.8	1.8	17.0	7.5	14.6	89.1	59.9	67.4	14.4	20.9	34.0	21.9	89.1
6	30.3	23.5	19.2	21.3	21.3	25.7	18.4	22.5	23.8	35.5	145.8	33.6	15.7	31.4	244.2	446.5	285.6	24.0	29.8	16.0	28.2	41.2	19.5	21.4	67.7	446.5
7	27.6	19.5	27.7	24.5	34.8	19.4	10.9	7.7	71.5	19.5	17.9	18.6	41.4	24.0	24.7	52.6	29.5	17.3	16.1	34.5	98.6	180.0	146.2	37.4	41.7	180.0
8	144.3	111.3	49.4	8.6	6.0	14.6	9.6	5.4	4.5	13.9	69.7	24.5	11.7	17.0	4.2	5.6	15.2	7.0	5.2	5.6	4.6	10.0	15.8	26.7	24.6	144.3
9	19.6	10.3	30.7	10.2	76.6	156.6	153.5	221.0	200.4	262.0	164.2	137.3	67.0	81.3	65.0	69.9	45.3	44.8	94.6	71.6	30.5	20.3	11.9	22.5	86.1	262.0
10	62.7	26.2	30.9	16.5	5.6	27.6	15.5	24.2	11.1	15.7	8.7	10.4	9.2	8.5	7.7	10.5	20.0	19.0	23.4	12.4	9.0	12.0	7.5	3.3	16.6	62.7
11	5.8	2.3	2.8	1.4	1.1	1.3	1.1	1.6	2.5	3.4	15.0	6.5	10.6	17.7	9.6	12.2	13.2	13.1	19.2	29.7	13.6	12.5	14.5	21.8	9.7	29.7
12	47.4	49.3	107.7	80.6	32.9	37.0	17.3	64.3	132.4	147.6	113.9	72.6	171.6	144.7	141.1	104.3	76.0	52.3	31.9	37.1	268.9	150.0	166.4	36.9	95.2	268.9
13	24.0	8.7	6.6	8.4	8.5	11.5	15.6	51.2	97.0	78.5	76.0	86.4	69.6	36.3	32.6	37.8	40.4	20.3	19.7	28.1	13.9	40.9	42.0	9.5	36.0	97.0
14	3.7	4.9	5.6	10.0	10.9	10.4	60.3	68.3	41.0	20.5	61.4	65.1	56.5	73.1	101.5	41.5	115.9	33.4	9.6	3.4	5.2	3.7	4.8	6.8	34.1	115.9
15	62.6	17.2	15.9	9.0	17.8	38.4	25.3	10.8	13.5	86.9	70.6	11.8	6.0	6.9	30.4	92.3	85.7	46.5	34.3	7.7	2.0	3.0	11.1	55.0	31.7	92.3
16	31.4	55.3	22.2	11.3	2.8	4.9	16.8	30.0	37.3	48.9	40.1	23.8	22.7	36.5	44.2	53.8	74.6	103.3	82.8	84.8	90.0	27.4	106.7	86.2	47.4	106.7
17	6.5	10.4	13.4	44.8	30.9	19.0	18.4	7.0	11.1	15.0	15.1	19.8	19.6	27.2	190.3	85.6	65.8	46.3	54.4	53.1	175.4	19.2	6.8	1.7	39.9	190.3
18	10.0	1.6	4.9	1.6	1.6	1.3	24.6	30.2	9.5	14.7	15.7	33.5	24.4	21.3	34.8	67.8	31.0	114.0	24.8	21.0	33.5	19.7	16.2	45.2	25.1	114.0
19	24.6	29.3	18.5	11.0	10.0	12.9	11.5	10.8	12.7	13.6	12.8	11.8	12.9	14.7	12.3	12.4	13.8	15.8	17.5	21.8	19.6	25.1	23.3	49.1	17.4	49.1
20	18.4	36.3	6.6	37.5	274.2	103.2	58.5	83.3	57.9	42.8	28.8	31.3	17.2	28.2	37.8	27.3	15.5	15.6	20.1	20.1	12.0	6.6	124.5	27.2	47.1	274.2
21	11.3	5.0	8.3	6.6	4.4	37.1	83.7	226.5	116.6	8.9	7.1	24.6	21.0	16.8	14.7	29.2	13.6	17.1	4.0	2.6	2.8	5.3	3.7	22.3	28.9	226.5
22	18.4	16.0	58.3	29.8	27.1	22.2	17.4	65.2	181.5	152.3	126.5	129.8	124.4	161.4	71.2	44.9	46.1	38.2	44.8	25.2	24.9	15.1	118.8	77.7	68.2	181.5
23	49.6	42.8	78.5	92.0	72.1	94.7	66.3	48.9	23.9	32.0	96.9	125.8	73.3	69.5	91.1	91.0	97.6	34.0	20.6	16.6	14.3	10.6	7.4	7.2	56.5	125.8
24	69.2	36.3	14.0	3.8	6.3	7.0	48.4	66.8	76.7	230.3	155.4	101.4	114.9	243.6	209.2	71.0	42.5	28.3	28.2	11.6	9.1	7.0	25.2	46.5	68.9	243.6
25	50.7	32.4	17.3	27.5	50.5	68.7	75.6	15.9	43.1	5.9	4.0	15.5	132.8	82.3	91.5	79.5	189.0	57.6	52.6	103.0	16.5	154.6	62.8	54.7	61.8	189.0
26	31.5	11.2	66.4	54.6	110.8	124.3	134.8	178.3	81.0	51.8	155.2	177.3	289.3	428.3	205.1	120.6	146.0	494.4	91.2	46.3	115.7	249.1	67.4	17.4	143.7	494.4
27	23.6	9.7	10.0	6.7	14.1	20.5	70.7	97.9	60.9	69.2	135.1	130.9	70.7	55.4	91.2	74.4	67.3	56.2	65.9	16.2	10.7	8.0	77.6	38.1	53.4	135.1
28	159.7	60.6	70.9	35.2	64.5	44.2	27.2	31.3	21.4	25.3	36.2	42.3	27.8	32.3	32.1	15.3	8.5	12.3	13.2	3.9	8.9	9.5	35.3	62.5	36.7	159.7
29	17.1	20.2	38.9	58.4	71.3	46.6	81.9	89.0	87.4	123.0	49.8	39.0	22.7	19.3	15.8	25.9	12.2	16.1	15.6	25.6	77.8	72.0	24.3	19.2	44.5	123.0
30	102.5	112.9	65.8	44.5	62.2	93.8	74.0	58.9	48.8	31.9	31.6	132.7	116.9	49.8	51.5	103.6	175.7	34.7	6.5	4.6	2.4	8.9	3.3	8.0	59.4	175.7
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	37.2	36.0	38.2	33.5	40.3	42.5	46.3	58.7	61.2	63.2	68.9	67.6	63.7	68.4	72.3	65.6	61.6	48.6	34.1	28.4	45.0	44.6	42.1	30.4		
MAX	159.7	302.2	315.8	321.9	274.2	156.6	161.4	226.5	233.2	262.0	215.6	177.3	289.3	428.3	244.2	446.5	285.6	494.4	94.6	103.0	268.9	249.1	166.4	86.2		



Number of Non-Zero Readings	720
Maximum 1-HR Average	494.4 UG/M3
Maximum 24-HR Average	143.7 UG/M3
Monthly Calibration Standard Deviation	60.09
Operational Time	720 HRS
Operational Uptime	100.0 %
Monthly Average	49.9 UG/M3

Entrance TSP ($\mu\text{g}/\text{m}^3$) – November 2020

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	18.2	27.1	81.6	66.3	192.3	205.3	48.7	43.8	51.9	40.3	104.9	470.6	116.6	199.1	86.5	70.5	51.9	52.6	26.6	55.9	229.7	402.4	219.3	297.7	131.7	470.6
2	126.7	703.5	699.6	633.6	358.2	279.4	276.6	289.3	946.0	979.8	1032.1	751.8	562.9	321.1	406.9	116.2	74.4	64.3	59.9	27.2	36.9	64.8	18.7	14.9	368.5	1032.1
3	3.8	13.6	2.3	1.4	12.2	20.9	61.0	195.1	265.6	307.3	419.2	419.2	390.4	371.1	337.7	209.9	80.1	119.2	436.6	35.1	1.9	1.2	0.7	4.3	154.6	436.6
4	5.4	1.3	7.7	8.4	18.5	9.5	2.2	28.7	34.4	27.9	86.5	119.5	122.0	90.3	161.3	172.7	255.1	50.6	15.6	48.4	80.9	7.8	3.7	15.8	57.3	255.1
5	14.7	11.9	25.8	8.5	6.3	31.1	86.9	15.0	10.1	6.2	4.0	14.2	7.0	5.2	1.6	19.3	8.3	14.9	93.5	65.8	81.4	16.5	24.3	39.4	25.5	93.5
6	35.1	27.2	22.2	24.4	24.3	29.5	21.0	26.0	27.4	43.7	240.3	44.4	21.3	63.0	464.2	827.5	391.8	27.8	34.4	18.2	32.4	47.7	21.7	24.5	105.8	827.5
7	31.8	22.2	31.9	28.3	40.3	21.9	12.1	8.5	81.7	39.6	78.1	35.5	102.1	76.2	99.8	218.1	115.4	65.1	74.7	226.2	409.1	1010.8	987.8	244.0	169.2	1010.8
8	919.2	882.1	413.0	67.1	27.8	59.7	49.6	22.0	3.7	58.9	739.3	236.9	66.0	129.6	12.3	6.5	21.7	7.8	5.8	5.8	4.9	10.8	18.2	31.0	158.3	919.2
9	22.7	11.7	91.4	11.6	268.4	636.5	595.1	839.7	624.9	926.4	587.3	616.5	251.8	325.3	293.3	291.3	162.8	203.5	392.0	324.1	155.9	106.1	60.9	128.4	330.3	926.4
10	392.1	69.4	35.9	19.1	5.4	319.3	20.8	27.9	12.1	17.9	8.5	10.8	9.4	8.7	7.2	9.3	19.8	20.7	25.3	12.2	7.5	13.8	6.8	2.9	45.1	392.1
11	4.5	1.6	1.9	1.0	0.8	0.9	0.8	1.1	1.9	2.5	33.2	12.5	9.9	29.4	7.9	32.8	12.6	12.4	14.7	38.5	38.9	39.9	45.5	116.2	19.2	116.2
12	296.8	239.4	832.5	616.4	244.4	240.4	89.5	343.7	772.7	808.9	597.3	380.7	836.3	632.9	655.5	497.6	396.1	242.2	142.9	170.8	1242.8	854.3	922.1	225.7	511.7	1242.8
13	122.6	25.5	16.4	23.0	31.6	41.2	68.1	244.0	482.9	349.9	334.0	343.8	280.7	126.4	85.6	66.0	98.1	70.6	34.6	37.5	40.2	64.2	61.3	9.6	127.4	482.9
14	3.2	3.9	4.6	9.1	10.6	15.4	76.1	139.4	82.9	42.5	204.6	208.7	190.9	272.4	376.9	162.7	487.3	122.4	29.4	9.4	6.5	11.5	17.8	25.4	104.7	487.3
15	310.7	71.4	25.6	16.8	24.5	80.0	50.1	35.5	38.9	350.4	271.1	24.9	11.7	26.7	133.8	369.2	411.0	217.5	168.2	25.4	8.7	13.5	53.4	277.7	125.7	411.0
16	165.7	310.6	130.7	39.0	8.6	8.2	55.0	101.5	85.3	127.8	87.0	55.3	53.8	87.9	125.7	82.3	99.4	209.4	94.6	130.2	123.1	27.9	124.0	236.0	107.0	310.6
17	5.1	8.5	13.7	52.0	35.7	21.8	20.4	5.3	9.7	12.3	11.3	15.2	14.4	54.2	766.8	386.7	301.9	252.8	200.4	225.2	538.9	77.5	15.8	3.4	127.0	766.8
18	11.4	5.5	12.2	4.2	8.2	1.6	38.7	34.4	13.4	16.8	18.1	35.5	33.5	53.3	111.9	190.6	84.0	394.2	84.5	19.0	36.8	16.0	12.2	47.4	53.5	394.2
19	26.0	32.0	17.8	8.2	7.3	10.6	8.5	7.9	10.2	10.8	9.3	8.0	9.1	10.7	8.6	8.3	10.0	12.1	12.5	18.6	14.7	19.7	18.7	52.4	14.7	52.4
20	19.9	47.5	7.2	72.6	529.6	214.7	138.2	201.7	117.7	112.9	93.5	113.1	59.9	125.7	157.2	107.4	49.8	64.5	97.9	94.5	61.0	8.1	106.2	34.7	109.8	529.6
21	21.9	21.8	18.3	14.7	9.8	65.2	151.3	199.0	124.1	18.1	26.6	70.2	75.9	48.5	52.3	59.0	28.7	52.1	7.6	3.9	5.4	15.0	7.3	111.1	50.3	199.0
22	72.0	82.4	315.7	180.6	161.4	124.2	103.5	186.5	576.6	479.8	314.8	274.1	269.5	382.0	181.0	125.1	130.5	136.1	188.9	105.1	85.1	54.7	232.2	187.7	206.3	576.6
23	72.1	54.5	124.9	128.4	139.1	203.3	165.2	130.7	27.5	59.1	226.6	328.7	184.8	212.0	243.5	269.7	249.7	113.1	69.2	57.4	54.8	34.5	26.4	23.7	133.3	328.7
24	265.4	83.2	41.2	8.6	19.0	29.9	186.6	243.8	258.1	845.2	524.2	296.1	383.7	778.7	770.5	285.3	143.6	90.2	77.7	32.9	21.7	18.8	56.6	100.1	231.7	845.2
25	106.5	85.5	23.9	39.1	70.2	105.4	144.3	55.0	149.3	26.2	5.2	25.9	211.2	226.6	246.9	211.9	444.3	176.4	152.0	355.0	62.6	558.3	251.1	203.1	164.0	558.3
26	84.8	39.3	238.1	204.9	385.8	370.0	341.1	424.9	224.9	138.1	446.6	546.3	975.7	1480.3	813.2	464.4	581.5	1925.7	354.7	241.7	595.0	1138.0	267.3	55.4	514.1	1925.7
27	74.7	45.6	52.8	31.6	74.7	114.2	433.1	489.9	297.4	315.0	690.5	603.3	312.6	238.8	327.3	306.9	276.2	221.5	275.8	72.8	38.1	23.3	127.9	111.8	231.5	690.5
28	768.9	238.5	154.4	45.1	122.1	131.1	181.1	52.3	68.4	82.9	87.6	95.5	65.7	73.4	94.1	41.4	23.5	20.6	24.2	11.7	42.9	40.6	129.1	244.9	118.3	768.9
29	62.6	89.3	152.7	328.7	405.3	269.2	495.9	485.5	497.2	696.5	237.8	165.3	56.0	70.5	60.3	82.8	30.7	29.7	38.7	132.4	137.2	56.6	44.8	194.5	696.5	
30	248.9	336.8	221.4	204.4	198.3	327.0	211.9	203.5	237.6	102.0	111.1	536.8	482.1	195.2	169.3	304.7	635.3	110.1	18.3	13.6	5.4	37.5	5.9	12.0	205.4	635.3
NO.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	720	100%
MEAN	143.8	119.8	127.2	96.6	114.7	132.9	137.8	169.4	204.5	234.9	254.4	228.6	205.6	223.8	242.0	199.9	189.2	170.4	108.1	84.0	139.8	162.4	130.0	97.5		
MAX	919.2	882.1	832.5	633.6	529.6	636.5	595.1	839.7	946.0	979.8	1032.1	751.8	975.7	1480.3	813.2	827.5	635.3	1925.7	436.6	355.0	1242.8	1138.0	987.8	297.7		



Number of 24HR Exceedences

23 Proposed Guideline

Number of Non-Zero Readings	720
Maximum 1-HR Average	1925.7 UG/M3
Maximum 24-HR Average	514.1 UG/M3
Monthly Calibration Standard Deviation	224.2
Operational Time	0
Operational Uptime	100.0 %
Monthly Average	163.2 UG/M3