

LAFARGE CANADA INC.

# AMBIENT AIR QUALITY MONTHLY REPORT

## JANUARY 2019

FEBRUARY 12, 2019





# AMBIENT AIR QUALITY MONTHLY REPORT

JANUARY 2019

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-00  
DATE: FEBRUARY 12, 2019

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February 12, 2019

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

**Attention: Janet Brygger**

Dear Ms. Brygger

**Subject: Ambient Air Quality Monthly Report - January 2019**

The operational uptime for the meteorological systems and all analyzers at the Lagoon station was 100% in January. There was one exceedance of the 24-hour TSP Alberta Ambient Air Quality Objectives (AAAOs), zero exceedances of the 24-hour PM<sub>2.5</sub> AAAOs, and zero exceedances of the 1-hour PM<sub>2.5</sub> AAAQG in January at the Lagoon monitoring location.

All analyzers at the Windridge station had 100% operational uptime in January. There were 10 exceedances of the 24-hour TSP AAAQO, zero exceedances of the 24-hour PM<sub>2.5</sub> AAAQO, and one exceedance of the 1-hour PM<sub>2.5</sub> AAAQG. TSP exceedances occurred on days with high wind speeds. Visible fugitive dust plume coming from the Lac des Arcs exposed lake bed, up-wind of the Lafarge plant site was observed in January. This additional source of fugitive dust in the airshed would have an impact on ambient concentration of particulate matter at the monitor and exacerbate any dust originating from the plant site itself.

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: 99.9% at the West monitor station due to 1 hour of instrument maintenance; 99.9% at the Berm monitor due to 1 hour of dryer pump failure; and 97.3% at the Entrance monitor due to 20 hours of machine malfunction. The Entrance GRIMM monitor exceeded the 24-hour TSP AAAQO for 18 days, with 2 exceedances of the 1-hour PM<sub>2.5</sub> AAAQG, while the Berm GRIMM had 20 exceedances of the TSP Objective and 3 exceedances of the PM<sub>2.5</sub> Objective. The West GRIMM monitor recorded zero exceedances of the 24-hour PM<sub>2.5</sub> Objective and the 24-hour TSP Objective.

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.  
Group Manager, Air Quality  
Environment

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# SIGNATURES

## PREPARED BY



February 12, 2019

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Junior Air Quality Specialist, Environment

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Date

## APPROVED<sup>1</sup> BY *(must be reviewed for technical accuracy prior to approval)*



February 12, 2019

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Tyler Abel, M.Sc.  
Team Leader, Environmental Management,  
Vancouver Region, Environment

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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 the GRIMM monitors in Exshaw, AB. The station is operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and is a requirement of Lafarge's Approval 1702-02-04. This report contains data collected between January 1, 2019 and January 31, 2019.

This monthly report was prepared by Rowena Seto, 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 FUGITIVE DUST CONTRIBUTIONS FROM LAC DES ARCS

In December 2018 and January 2019, Lafarge environmental staff noted the potential contributions of fugitive dust in the airshed from the exposed lake bed of Lac Des Arcs, immediately south and west of the Lafarge plant site. Low water levels have left more of the lake shore/bed exposed this winter (Figure 1-1). During high wind events, the sediments from the exposed lake bed can be re-suspended, dispersed in air and become a significant source of fugitive dust impacting the community. Figure 1-2 below shows the visible fugitive dust plume coming from the lake bed, up-wind of the Lafarge plant site. This additional source of fugitive dust in the airshed would have an impact on ambient concentration of particulate matter at the monitor and exacerbate any dust originating from the plant site itself. December 2018 saw the highest historical wind speeds recorded since WSP began monitoring in 2015. High wind speeds were also observed in January 2019. Given these high wind speeds and the observations from Lafarge environmental staff it is likely that fugitive dust from Lac Des Arcs was a contributor to ambient particulate matter concentrations and AAAQO exceedances in January 2019.



**Figure 1-1** Photo of Lac Des Arcs showing exposed lake shore/bed under low water levels (photo taken January 10, 2019)



**Figure 1-2** Photo showing fugitive dust plume from exposed lake shore/bed of Lac Des Arcs moving east towards the Lafarge plant and the Exshaw community (photo taken December 28, 2018)



## 2 JANUARY 2019 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<sub>2.5</sub> are those above the 1-hour PM<sub>2.5</sub> 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 <sub>2</sub> (ppb)	100.0	26.8	0*	19.6	-
SO <sub>2</sub> (ppb)	100.0	9.3	0	2.5	0
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	100.0	27.6	0	9.2	0
PM <sub>10</sub> (µg/m <sup>3</sup> )	100.0	485.2	-	112.3	-
TSP (µg/m <sup>3</sup> )	100.0	1003.9	-	176.9	1
Temperature (°C)	100.0	11.2	-	7.6	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	55.0/W	-	37.6/WSW	-
Precipitation (mm)	100.0	5.0*	-	5.75*	-

<sup>1</sup> Any exceedances reported for 1-hour PM<sub>2.5</sub> are over the guideline level (AAAQG) of 80 µg/m<sup>3</sup>.

<sup>2</sup> Maximum Daily Total Accumulation of Precipitation (mm)

<sup>3</sup> Monthly Total Accumulation of Precipitation (mm)

#### Data Quality Notes:

- There were no exceedances of the 24-hour PM<sub>2.5</sub> AAAQO.
- There were no exceedances of the 1-hour PM<sub>2.5</sub> AAAQG.
- There was 1 day exceeding the 24-hour TSP AAAQO.

**Calibration/Maintenance Notes:**

- All analyzers had 100% uptime for the month of January.

---

## 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 <sub>2.5</sub> (µg/m <sup>3</sup> )	100.0	89.1	1*	16.5	0
PM <sub>10</sub> (µg/m <sup>3</sup> )	100.0	984.8	-	236.0	-
TSP (µg/m <sup>3</sup> )	100.0	983.0	-	285.0	10

\* Any exceedances reported for 1-hour PM<sub>2.5</sub> are over the guideline level (AAAQG) of 80 µg/m<sup>3</sup>.

**Data Quality Notes:**

- There were no exceedances of the 24-hour PM<sub>2.5</sub> AAAQO.
- There was 1 hour exceeding the 1-hour PM<sub>2.5</sub> AAAQG.
- There were 10 days exceeding the 24-hour TSP AAAQO.

**Calibration/Maintenance Notes:**

- All analyzers had 100% uptime for the month of January.

---

## 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 <sub>2.5</sub> (µg/m <sup>3</sup> )	99.9	21.8	0*	12.1	0
PM <sub>10</sub> (µg/m <sup>3</sup> )	99.9	29.7	-	15.5	-
TSP (µg/m <sup>3</sup> )	99.9	30.0	-	14.7	0

\* Any exceedances reported for 1-hour PM<sub>2.5</sub> are over the guideline level (AAAQG) of 80 µg/m<sup>3</sup>.

### Data Quality Notes:

- There were no exceedances of the 24-hour PM<sub>2.5</sub> AAAQG.
- There were no exceedances of the 1-hour PM<sub>2.5</sub> AAAQG.
- There were no exceedances of the 24-hour TSP AAAQG.

### Calibration/Maintenance Notes:

- All analyzers had 99.9% uptime for the month of January due to 1 hour of instrument maintenance.

---

## 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 <sub>2.5</sub> (µg/m <sup>3</sup> )	99.9	300.2	13*	62.4	3
PM <sub>10</sub> (µg/m <sup>3</sup> )	99.9	2402.7	-	493.8	-
TSP (µg/m <sup>3</sup> )	99.9	3947.9	-	1231.7	20

\* Any exceedances reported for 1-hour PM<sub>2.5</sub> are over the guideline level (AAAQG) of 80 µg/m<sup>3</sup>.

**Data Quality Notes:**

- There were 3 days exceeding the 24-hour PM<sub>2.5</sub> AAAQG.
- There were 13 hours exceeding the 1-hour PM<sub>2.5</sub> AAAQG.
- There were 20 days exceeding the 24-hour TSP AAAQG.

**Calibration/Maintenance Notes:**

- All analyzers had 99.9% uptime for the month of January due to 1 hour of dryer pump repair.

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## 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 <sub>2.5</sub> (µg/m <sup>3</sup> )	97.3	185.3	2*	27.6	0
PM <sub>10</sub> (µg/m <sup>3</sup> )	97.3	1648.0	-	231.9	-
TSP (µg/m <sup>3</sup> )	97.3	3931.4	-	726.4	18

\* Any exceedances reported for 1-hour PM<sub>2.5</sub> are over the guideline level (AAAQG) of 80 µg/m<sup>3</sup>.

**Data Quality Notes:**

- There were no exceedances of the 24-hour PM<sub>2.5</sub> AAAQG.
- There were 2 hours exceeding the 1-hour PM<sub>2.5</sub> AAAQG.
- There were 18 days exceeding the 24-hour TSP AAAQG.

**Calibration/Maintenance Notes:**

- All analyzers had 97.3% uptime for the month of January due to 20 hours of machine malfunction.

## 3 LAGOON STATION

The Lagoon trailer contains NO<sub>x</sub>, SO<sub>2</sub>, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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 January 2019.

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
<b>PM<sub>2.5</sub> Concentrations</b>	MetOne BAM-1020 FRM Continuous Particulate Monitor	No operational issues observed. The PM <sub>2.5</sub> monitor was calibrated on January 9 <sup>th</sup> . The monitor had 100% uptime in January.
<b>PM<sub>10</sub> Concentrations</b>	MetOne BAM-1020 Continuous Particulate Monitor	No operational issues observed. The PM <sub>10</sub> monitor was calibrated on January 9 <sup>th</sup> . The monitor had 100% uptime in January.
<b>TSP Concentrations</b>	MetOne BAM-1020 Continuous Particulate Monitor	No operational issues observed. The TSP monitor was calibrated on January 9 <sup>th</sup> . The monitor had 100% uptime in January.
<b>Oxides of Nitrogen</b>	TEI 42C	No operational issues observed. The NO <sub>x</sub> monitor was calibrated on January 9 <sup>th</sup> . The monitor had 100% uptime in January.
<b>Sulphur Dioxide</b>	Teledyne API 102A	No operational issues observed. The SO <sub>2</sub> monitor was calibrated on January 9 <sup>th</sup> . The monitor had 100% uptime in January.
<b>Precipitation</b>	MetOne 130 Rain/Snow Gauge	No operational issues observed. The monitor had 100% uptime in January.
<b>Wind Speed</b>	MetOne Wind Sensor	No operational issues observed.

<b>Wind Direction</b>		The monitors had 100% uptime in January.
<b>Ambient Temperature</b>	MetOne Ambient Temperature Sensor	No operational issues observed. The monitor had 100% uptime in January.



**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 month of January 2019. Table 3-2 summarizes the hourly and daily concentrations recorded in January 2019.

Figure 3-3 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-4 shows daily average concentrations recorded during January 2019 for the pollutants listed in Table 3-2. Additionally, Figure 3-4 to Figure 3-8 show the histograms of the hourly concentrations of NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, and TSP measured at the Lagoon station.

There was 1 and zero exceedances of the 24-hour TSP (100 µg/m<sup>3</sup>) AAAQO and the 24-hour PM<sub>2.5</sub> (30 µg/m<sup>3</sup>) AAAQO, respectively. Historically in January, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM<sub>2.5</sub> AAAQO exceedances are both zero. The maximum number of 24-hour TSP exceedances was 1 day in 2015 and 2016. The station has not recorded an exceedance of the PM<sub>2.5</sub> AAAQO in January since monitoring began in 2010.

The wind rose (Figure 3-2) indicates that the winds predominantly came from the westerly directions. These directions follow the general orientation of the valley. The second wind rose (Figure 3-10) shows wind data from the single day (January 22, 2019) exceeding the 24-hour TSP objective. During this day, the winds were predominantly from the west-southwest directions and over 20 km/hr. Observations from Lafarge environmental staff suggest that

fugitive dust from Lac Des Arcs' exposed lake bed/shore was a potential contributor to AAAQO exceedances in January 2019 (see discussion in Section 1.1).

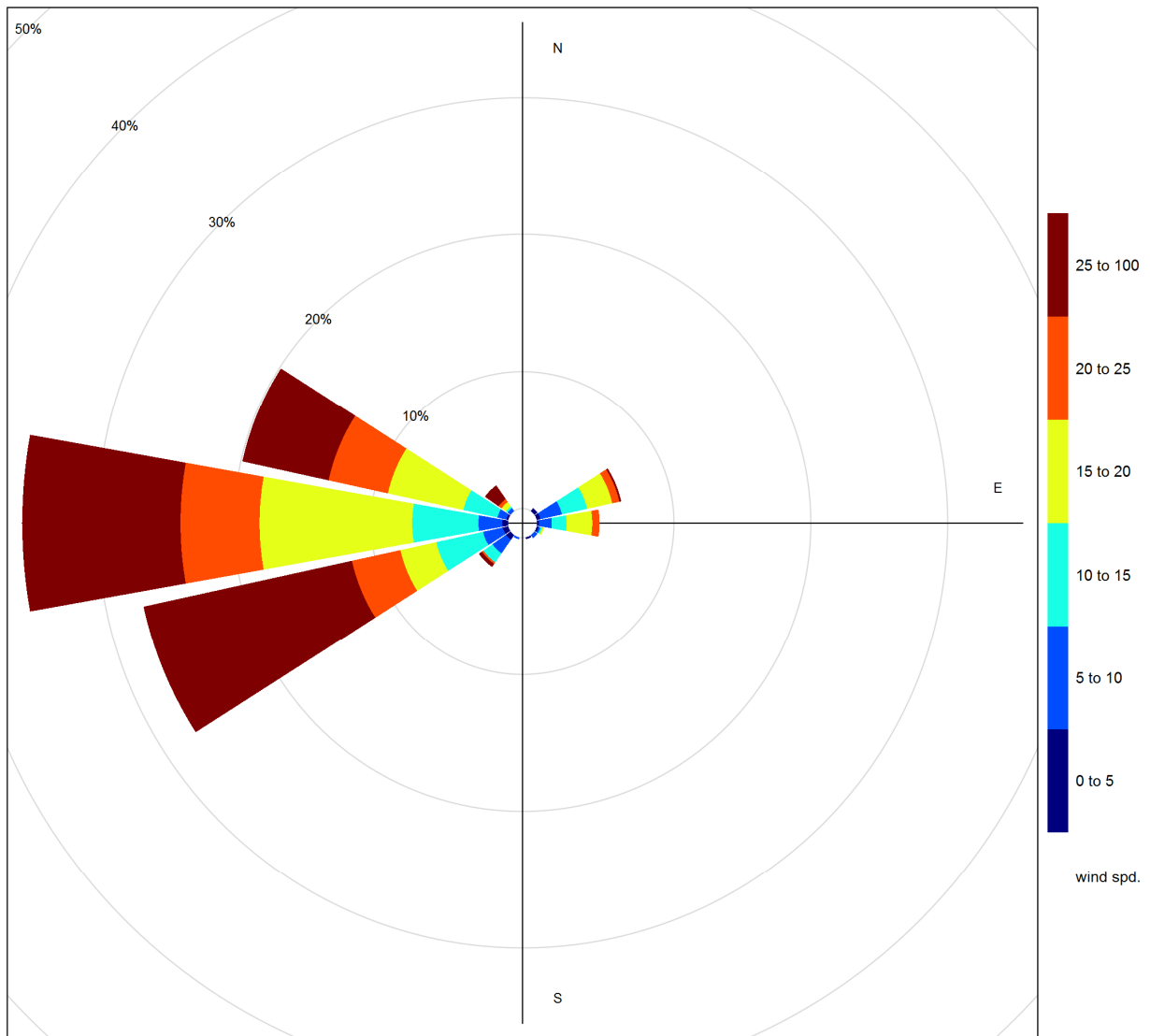


**Table 3-2 Summary of January 2019 data at Lagoon**

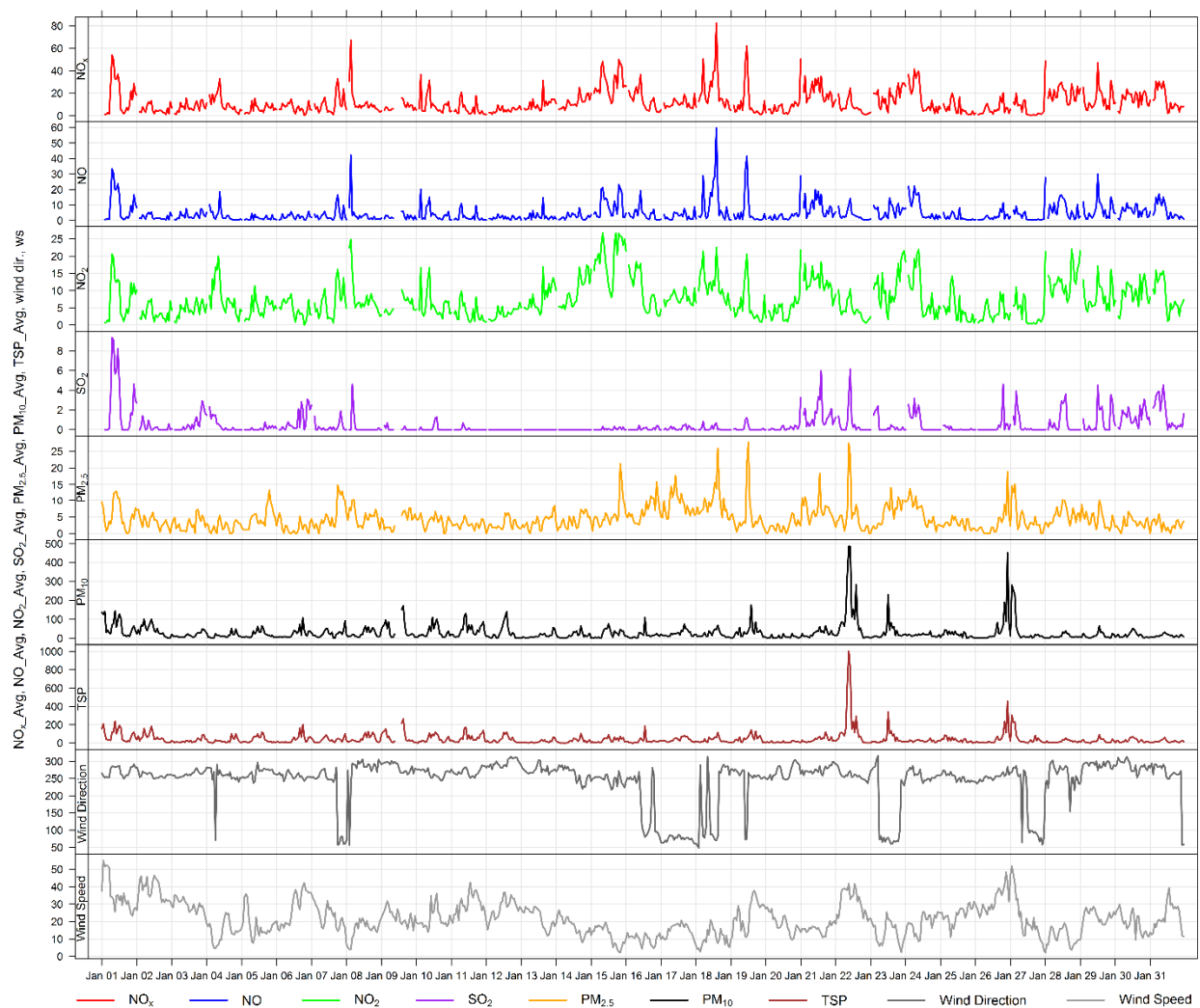
Parameter	Guideline / Objectives		Station	Exceedances		Monthly		1-hour					24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration/ Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable	Day	
NO <sub>2</sub> (ppb)	159	-	Lagoon	0	-	0.0	7.4	26.8	15	9	15.3	249.6	19.6	15	100.0
SO <sub>2</sub> (ppb)	172	48	Lagoon	0	0	0.0	0.5	9.3	1	8	34.1	285.4	2.5	1	100.0
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Lagoon	0	0	0.0	4.5	27.6	19	13	14.1	266.3	9.2	18	100.0
PM <sub>10</sub> (µg/m <sup>3</sup> )	-	-	Lagoon	-	-	0.0	28.8	485.2	22	10	41.8	268.4	112.3	22	100.0
TSP (µg/m <sup>3</sup> )	-	100	Lagoon	-	1	0.0	41.9	1003.9	22	10	41.8	268.4	176.9	22	100.0
Temperature (°C)	-	-	Lagoon	-	-	-15.9	-2.5	11.2	26	15	36.0	257.6	7.6	26	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	2.2	21.5	55.0/W	1	2	55.0	257.5	37.6/WSW	2	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.0	5.0	9	11	20.1	294.6	5.8	-	100.0

**Table 3-3 Days exceeding the TSP AAAQO or PM<sub>2.5</sub> AAAQO at the Lagoon Station**

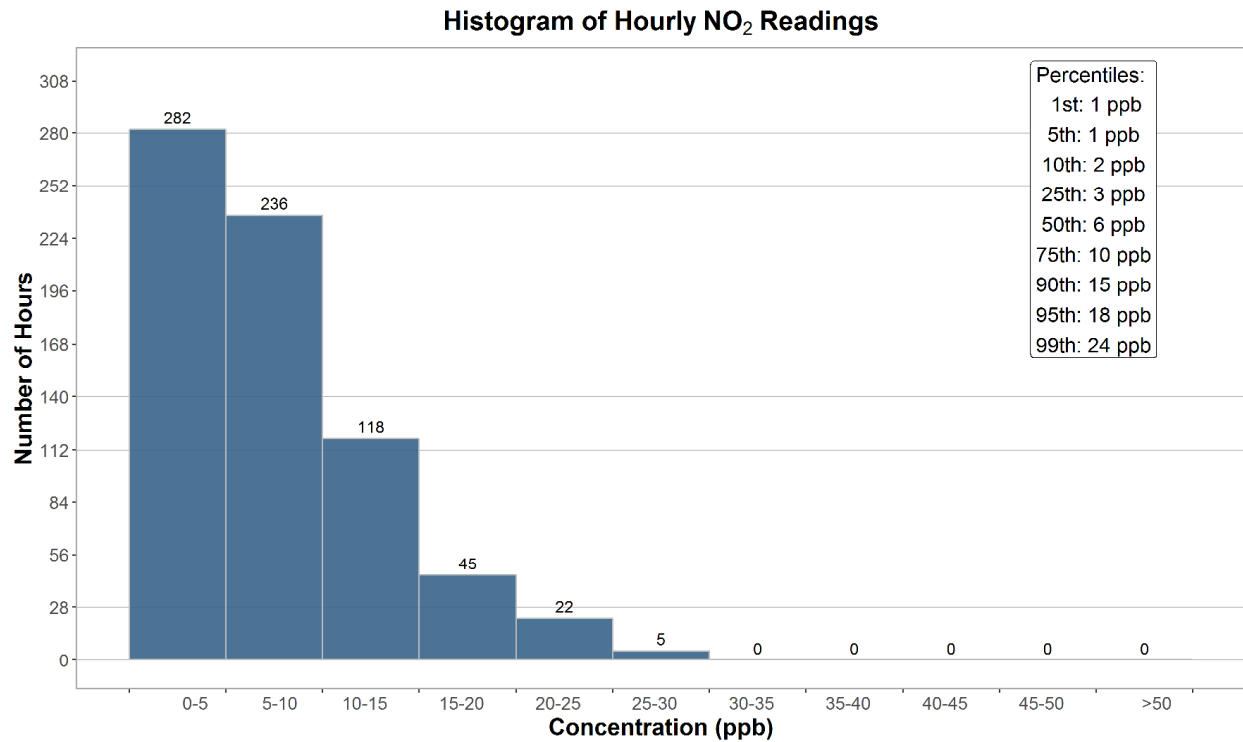
Date	TSP (ug/m <sup>3</sup> )	PM <sub>2.5</sub> (ug/m <sup>3</sup> )	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
<b>Lagoon</b>						
<b>1/22/2019</b>	176.9	-	259.3	31.2	42.5	high wind event
<b>Total # of Exceedances</b>	<b>1</b>	<b>0</b>				
<b>Maximum # of Exceedances (January)</b>	<b>1 (2015, 2016)</b>	<b>0 (2010 ~ 2018)</b>				
<b>Average # of Exceedances (January)</b>	<b>0</b>	<b>0</b>				
<b>Minimum # of Exceedances (January)</b>	<b>0 (2010 ~ 2014, 2017, 2018)</b>	<b>0 (2010 ~ 2018)</b>				



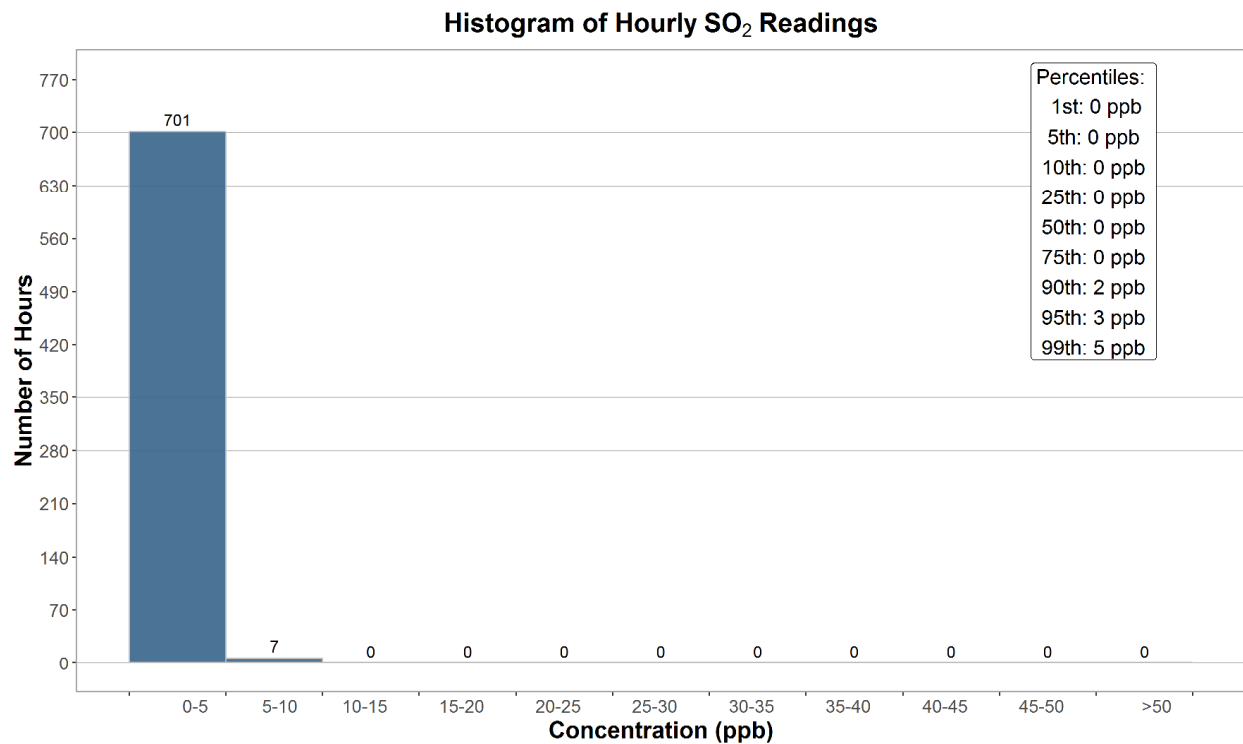
**Figure 3-2 January 2019 wind rose from the Lagoon Station**



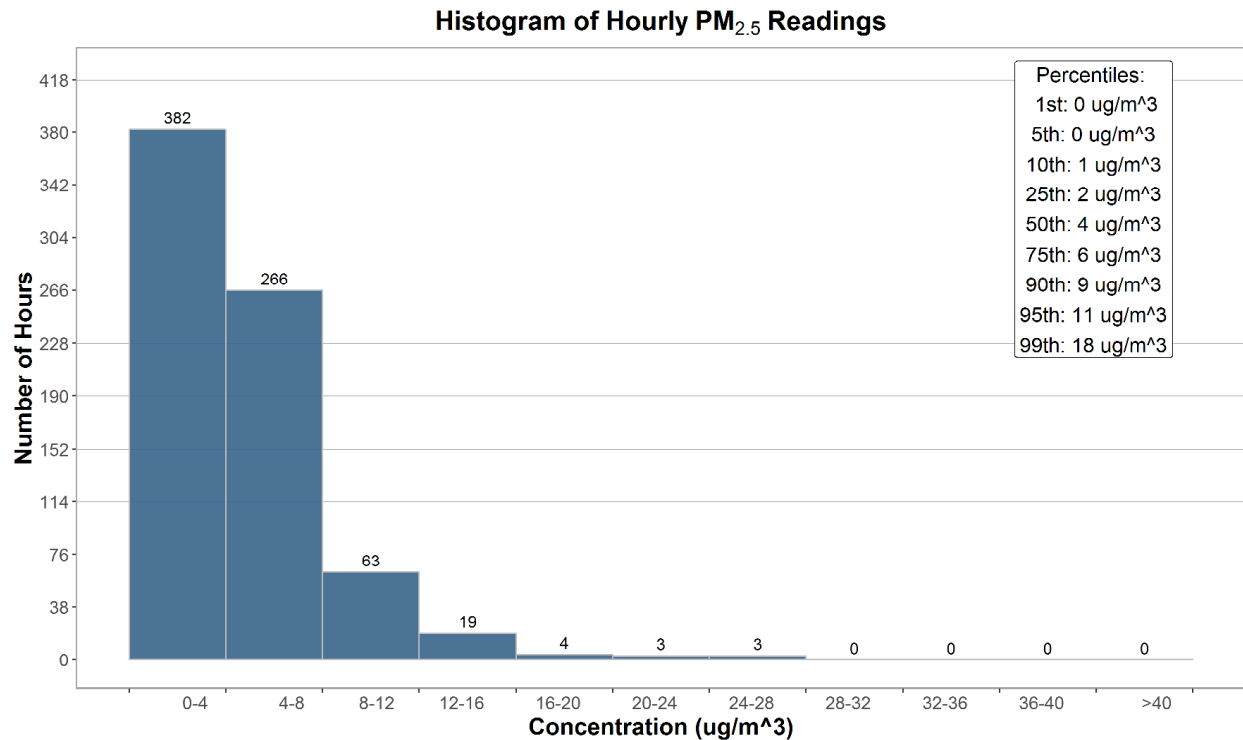
**Figure 3-3 1-hour concentrations of NO<sub>x</sub>, SO<sub>2</sub>, particulate matter, wind direction and wind speed at the Lagoon station**



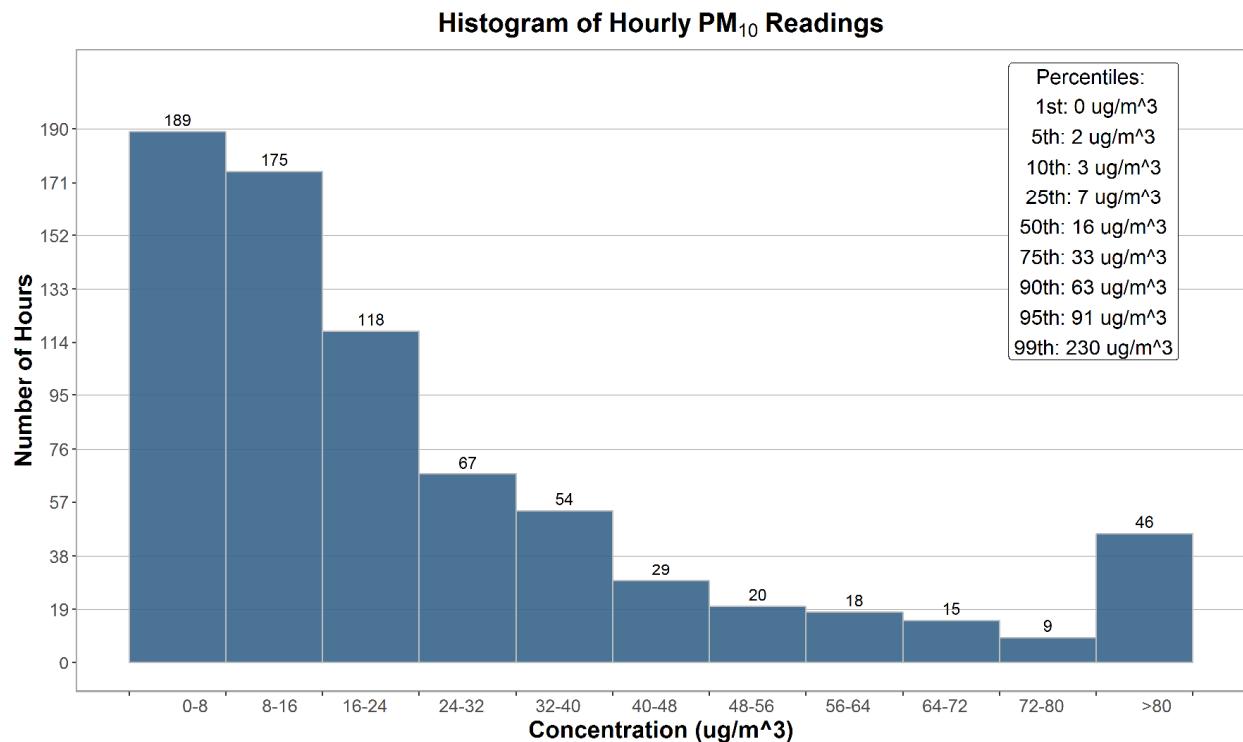
**Figure 3-4** Histogram of hourly NO<sub>2</sub> concentrations at the Lagoon station



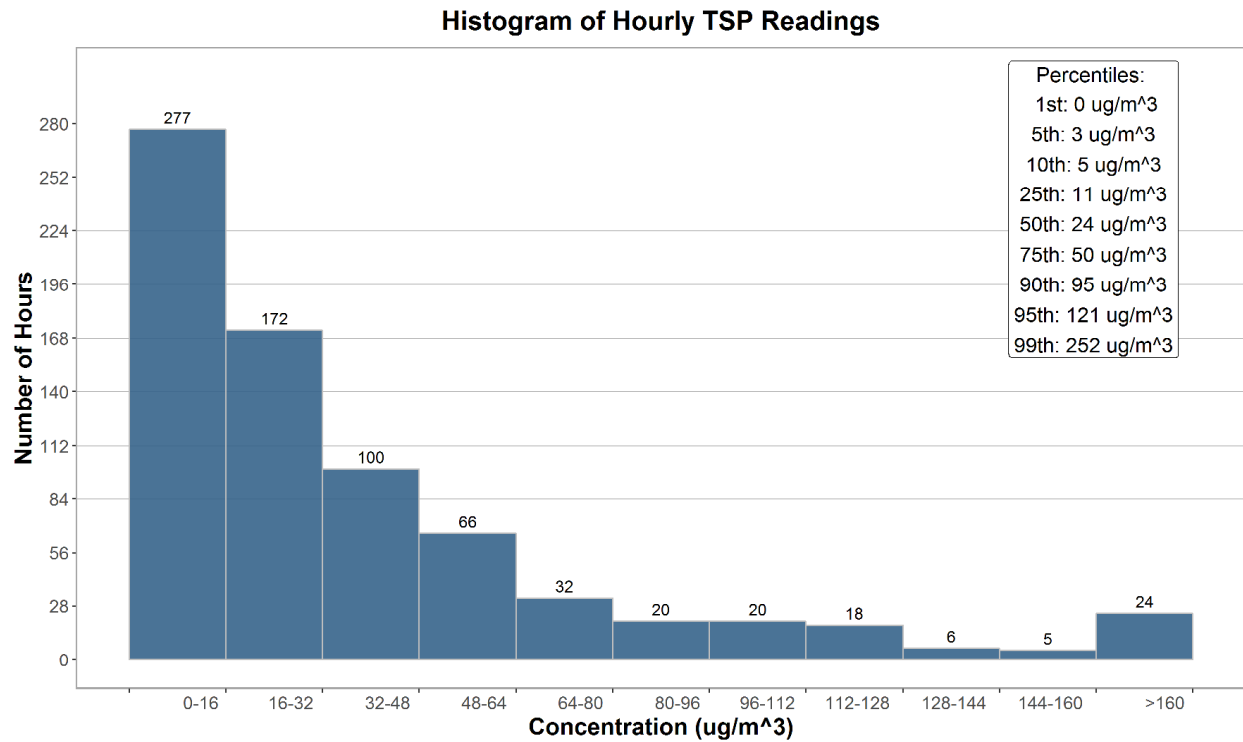
**Figure 3-5** Histogram of hourly SO<sub>2</sub> concentrations at the Lagoon station



**Figure 3-6** Histogram of hourly PM<sub>2.5</sub> concentrations at the Lagoon station

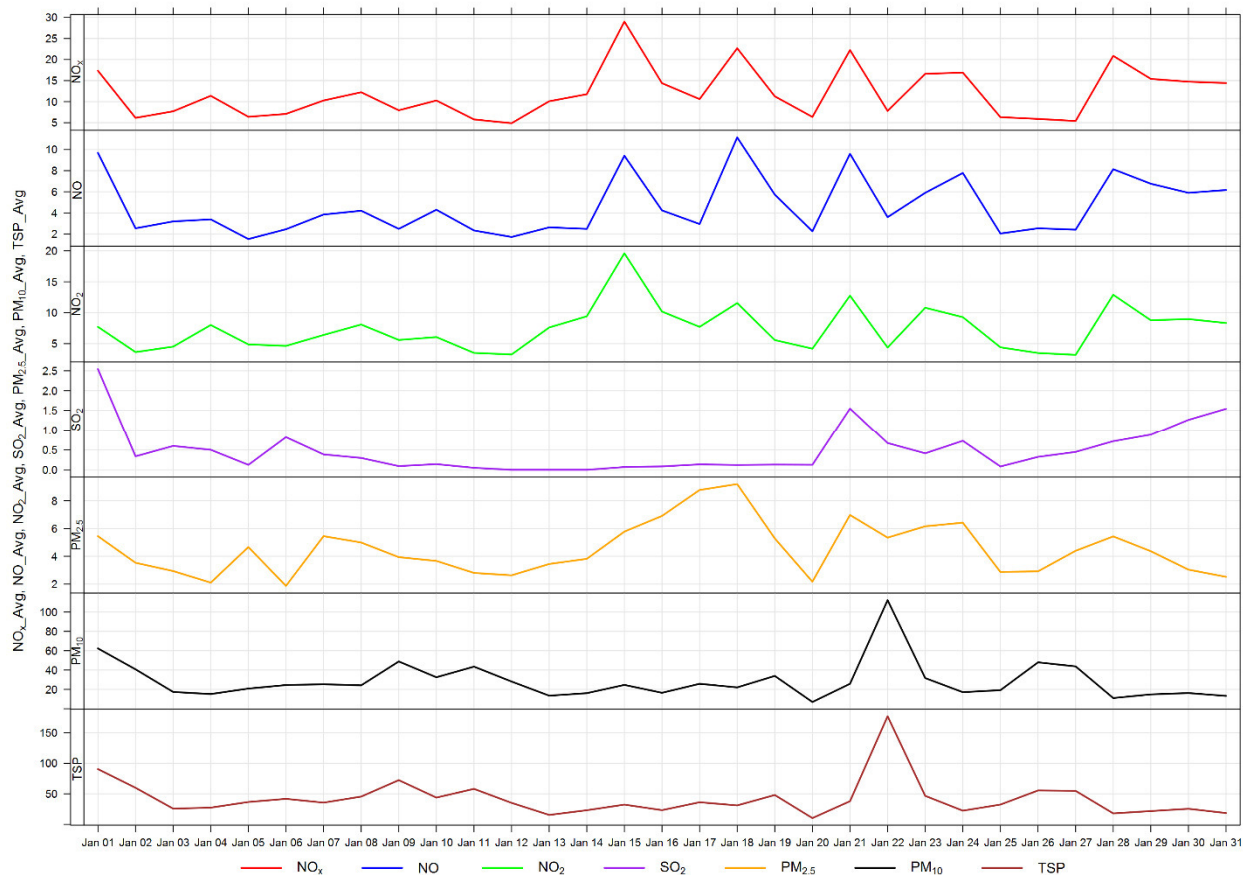


**Figure 3-7** Histogram of hourly PM<sub>10</sub> concentrations at the Lagoon station



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

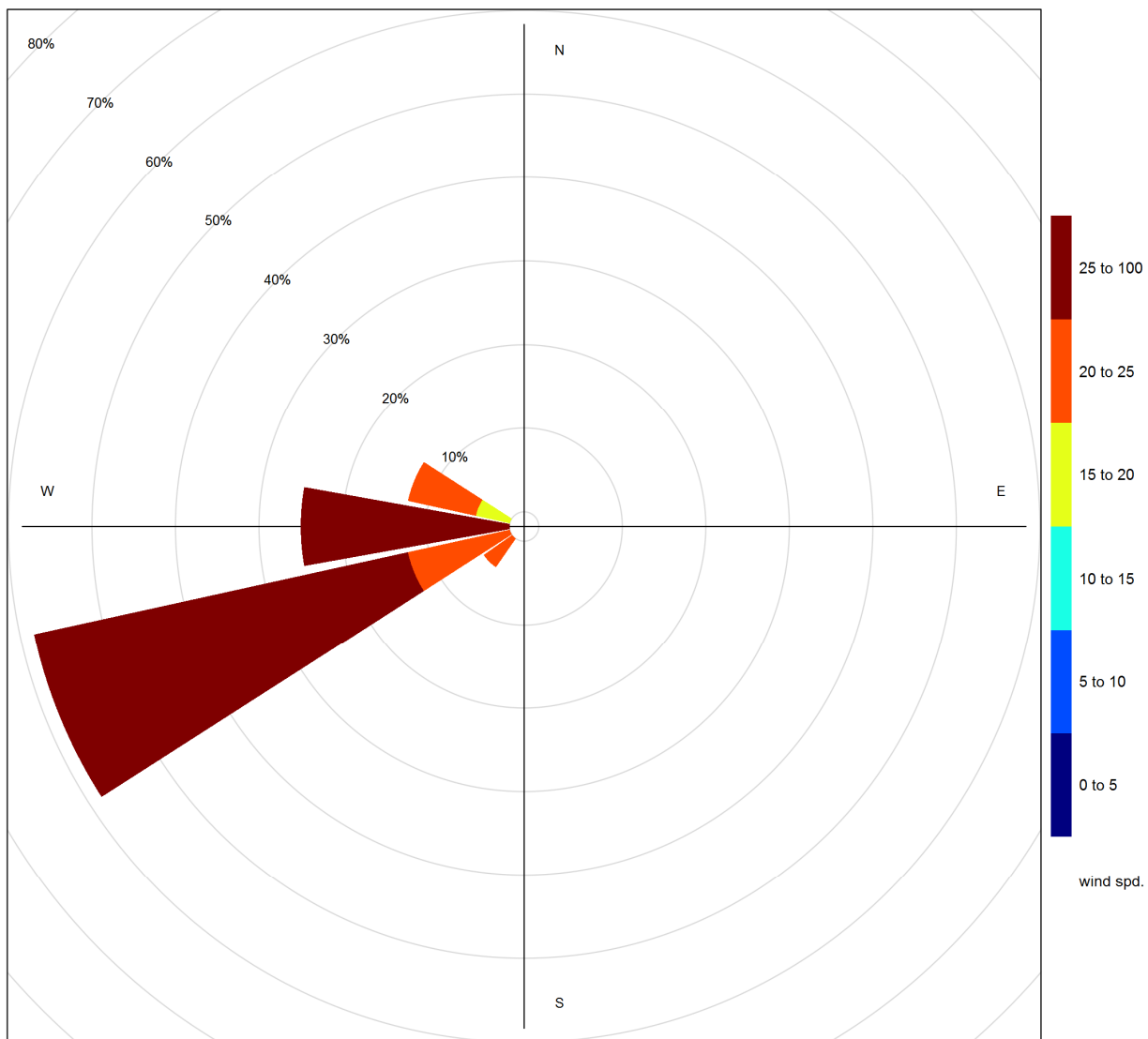




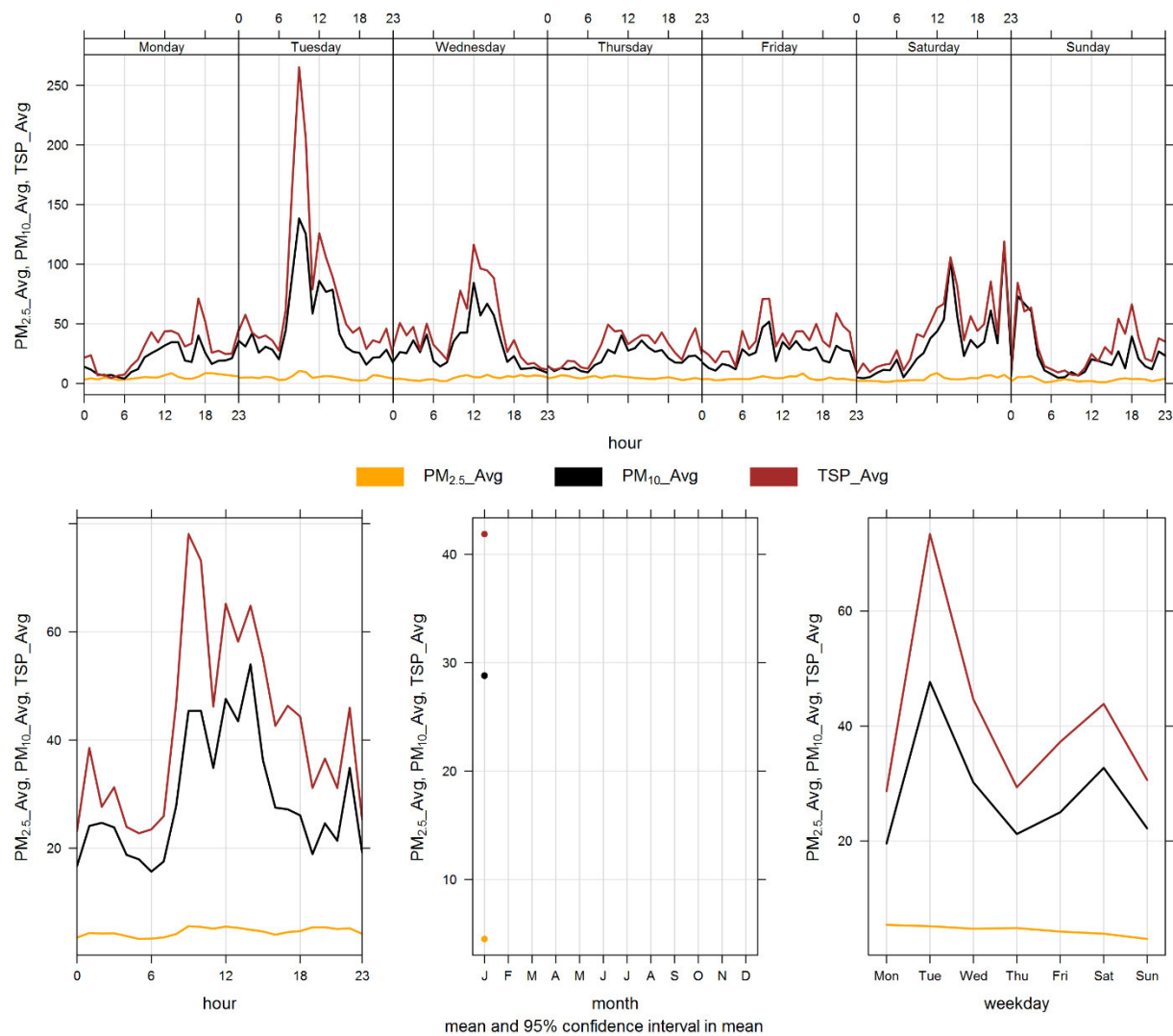
**Figure 3-9 24-hour concentrations of NO<sub>x</sub>, SO<sub>2</sub>, and particulate matter at the Lagoon monitor**

Figure 3- through Figure 3- show the variation in concentrations over various time averaging periods for PM, SO<sub>2</sub> and NO<sub>x</sub>. The particulate matter plot in Figure 3- shows that PM<sub>10</sub> 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.

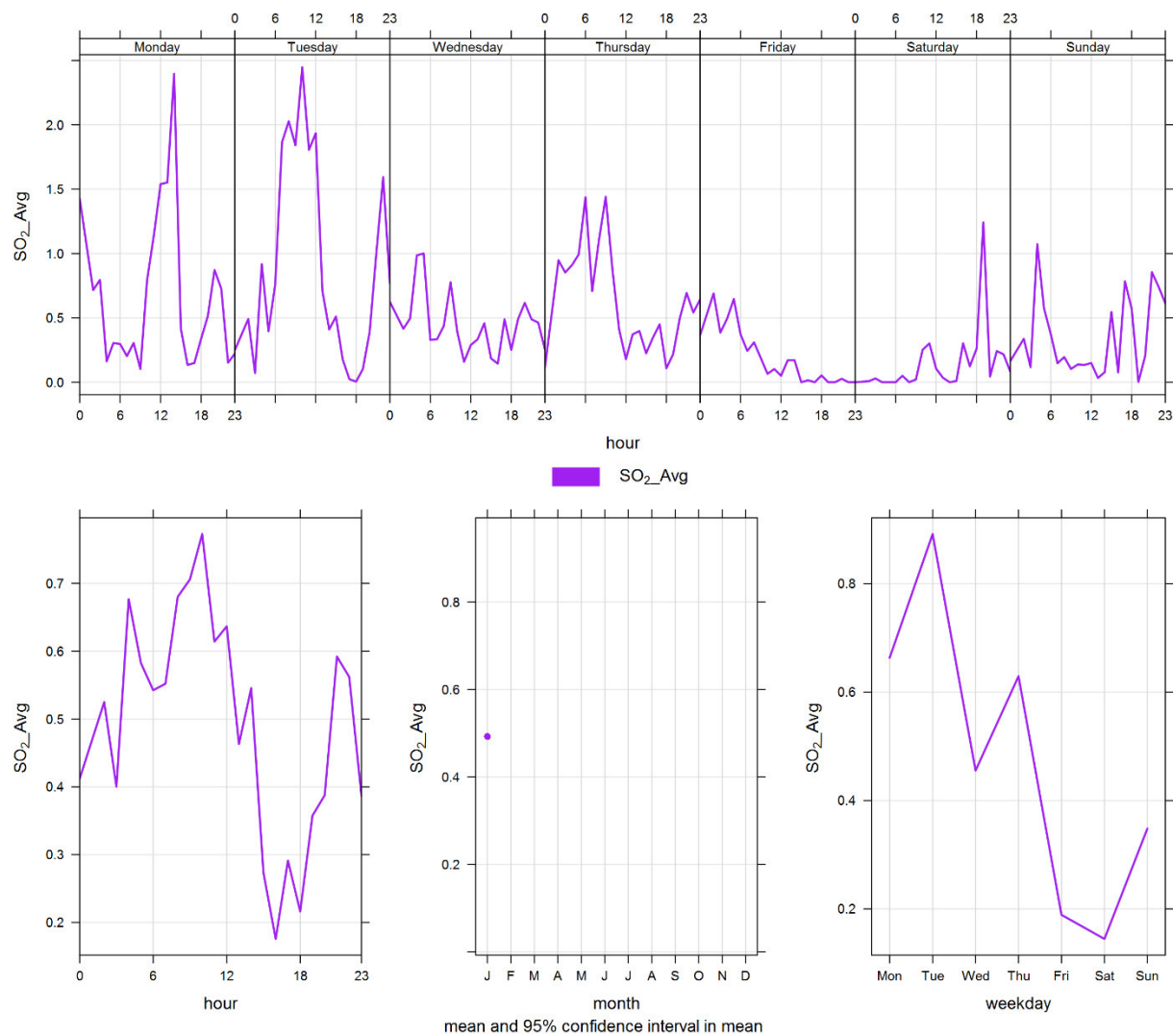
Figure 3- shows the variation of SO<sub>2</sub> over various time periods. SO<sub>2</sub> concentrations patterns are dependent on the timing of the highest SO<sub>2</sub> concentrations recorded in the month because in general SO<sub>2</sub> concentrations are very low. Figure 3- shows the variation of NO<sub>x</sub>, NO and NO<sub>2</sub>, with the peak of all three pollutants occurring in the early morning. This may be indicative of a peak in traffic.



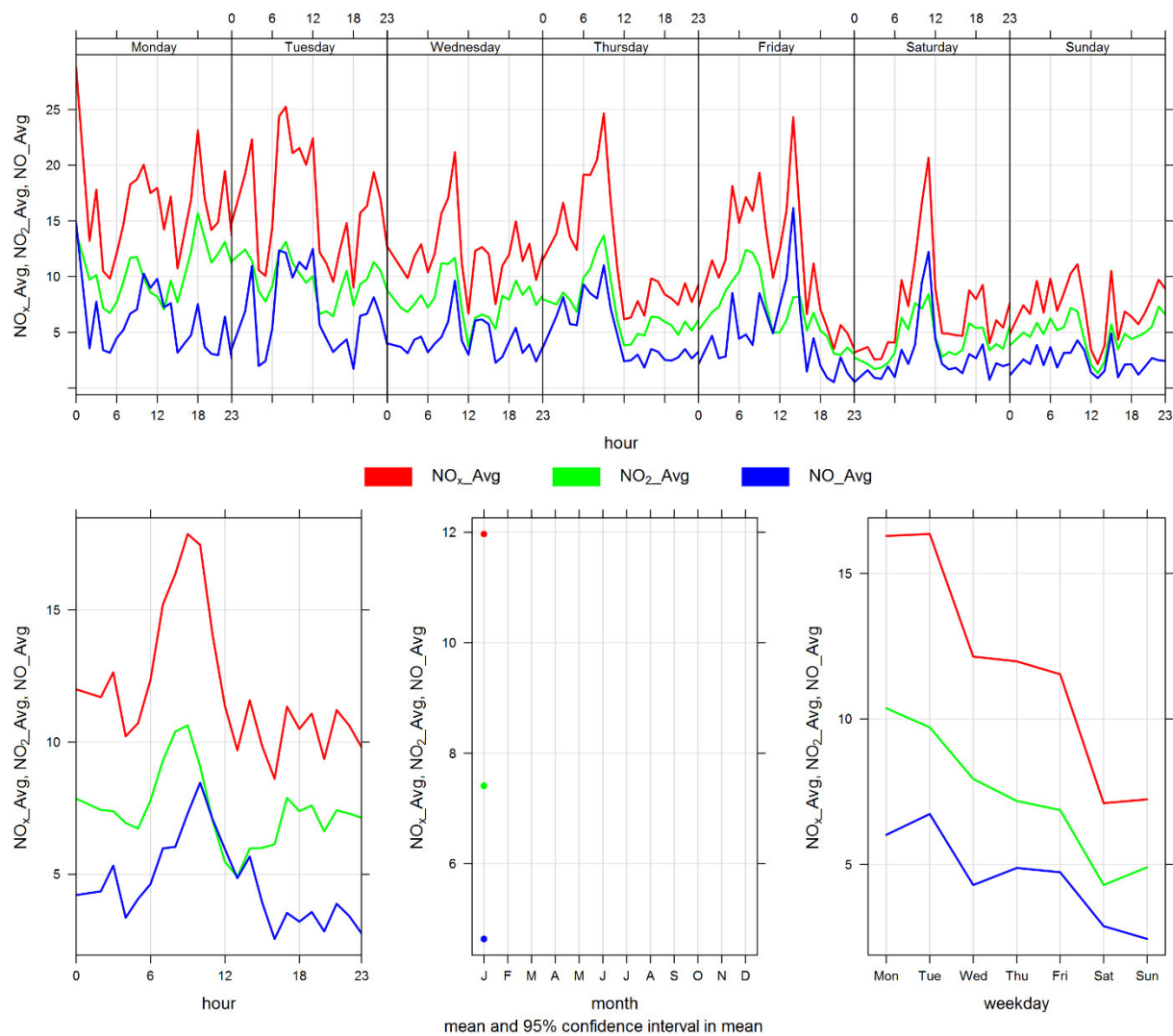
**Figure 3-10 Wind rose for TSP exceedance days recorded at the Lagoon station**



**Figure 3-11 Lagoon monitor particulate matter time variation**



**Figure 3-12 Lagoon monitor SO<sub>2</sub> time variation**



**Figure 3-13 Lagoon monitor NO<sub>x</sub> time variation**

## 4 WINDRIDGE STATION

The Windridge station contains TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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 January 2019.

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
<b>PM<sub>2.5</sub> Concentrations</b>	MetOne BAM-1020 FRM Continuous Particulate Monitor	No operational issues observed. The PM <sub>2.5</sub> monitor was calibrated on January 7 <sup>th</sup> . The monitor had 100% uptime in January.
<b>PM<sub>10</sub> Concentrations</b>	MetOne BAM-1020 Continuous Particulate Monitor	No operational issues observed. The PM <sub>10</sub> monitor was calibrated on January 7 <sup>th</sup> . The monitor had 100% uptime in January.
<b>TSP Concentrations</b>	MetOne BAM-1020 Continuous Particulate Monitor	No operational issues observed. The TSP monitor was calibrated on January 7 <sup>th</sup> . The monitor had 100% uptime in January.

### 4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in January 2019, and Table 4-2 summarizes the recorded exceedances. Figure 4-1 illustrates the time series for hourly PM, Figures 4-2 to 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<sub>2.5</sub> AAAQO, one exceedance of the 1-hour PM<sub>2.5</sub> AAAQG, and 10 exceedances of the 24-hour TSP AAAQO. TSP exceedances occurred on days with high wind speeds. As the Windridge monitor began reporting in November 2017, we can compare the exceedances in January 2019 with the exceedances in January 2018. In January 2018, there were zero exceedances of the 24-hour PM<sub>2.5</sub> AAAQO and 7 exceedances of the 24-hour TSP AAAQO. Observations from Lafarge environmental staff suggest that fugitive dust

from Lac Des Arcs' exposed lake bed/shore was a potential contributor to AAAQO exceedances in January 2019 (see discussion in Section 1.1). Fires from controlled pine beetle burns were also observed in January, which would contribute to higher levels of particulate, especially in the PM<sub>2.5</sub> size fraction.

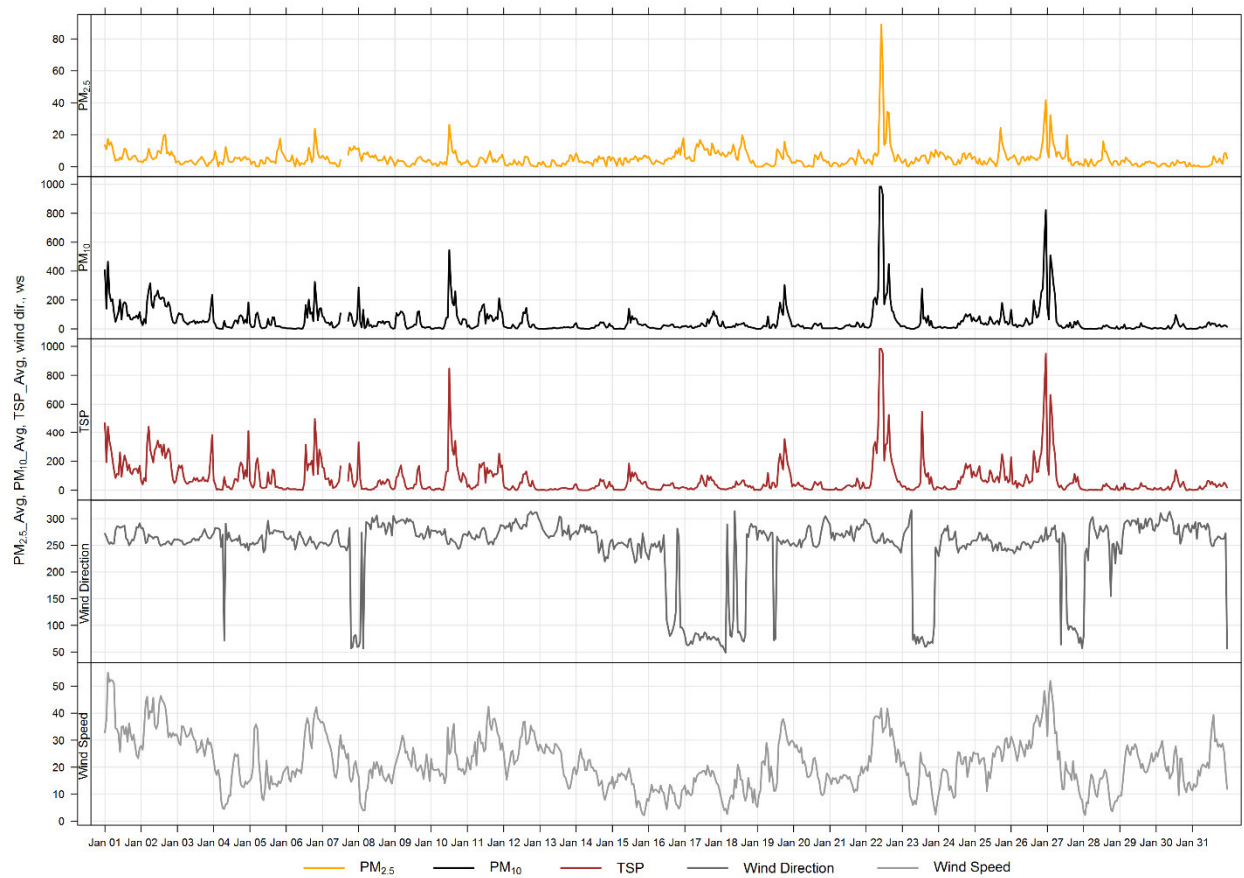


**Table 4-2      Summary of January 2019 data at the Windridge Station**

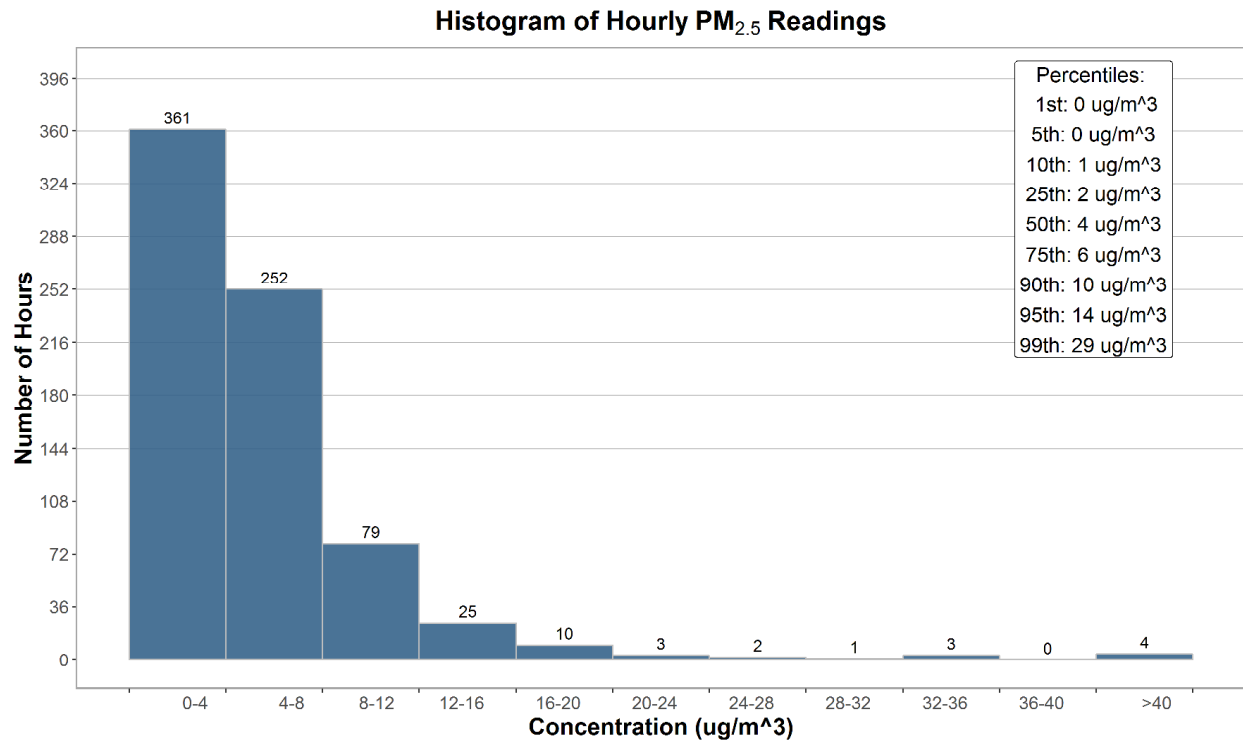
Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
<b>PM<sub>2.5</sub></b> (µg/m <sup>3</sup> )	80	30	Windridge	1	0	0.0	5.2	89.1	22	10	41.8	268.4	16.5	22	100.0
<b>PM<sub>10</sub></b> (µg/m <sup>3</sup> )	-	-	Windridge	-	-	0.0	54.5	984.8	22	9	38.0	257.8	236.0	22	100.0
<b>TSP</b> (µg/m <sup>3</sup> )	-	100	Windridge	-	10	0.0	76.4	983.0	22	10	41.8	268.4	285.0	22	100.0

**Table 4-3 Days exceeding the TSP AAAQO or PM<sub>2.5</sub> AAAQO at the Windridge Station**

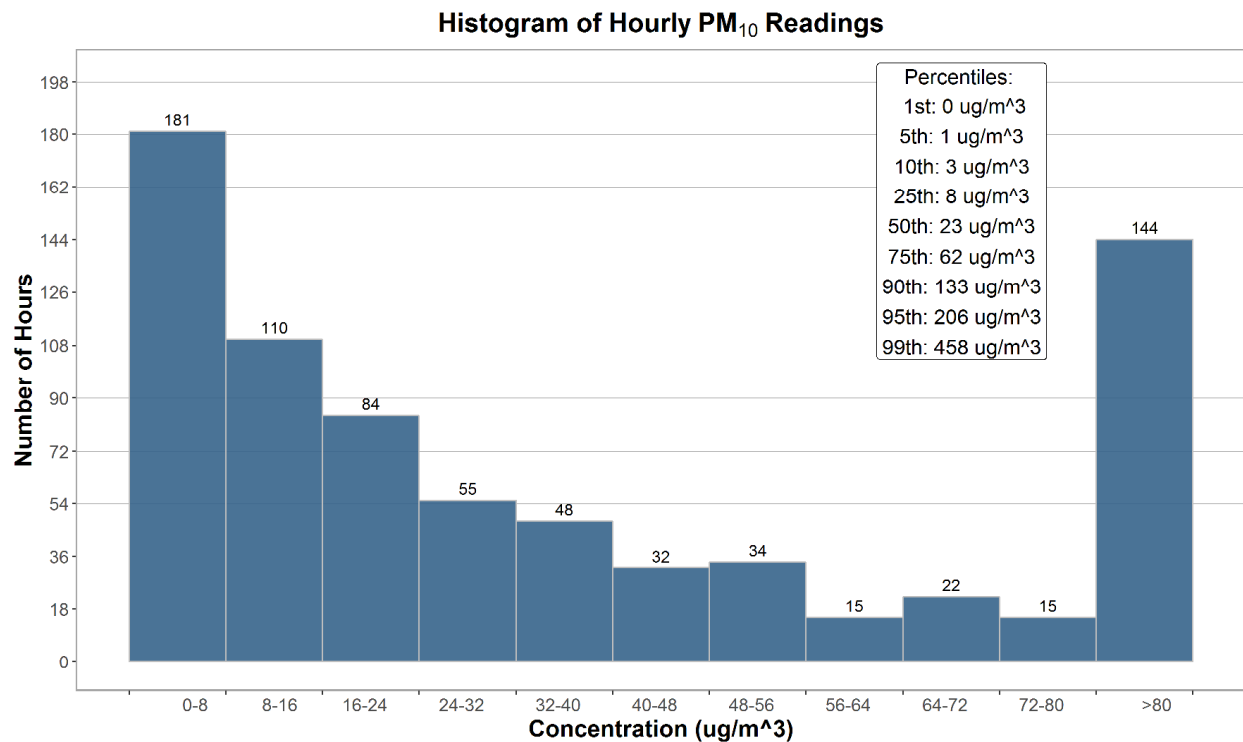
Date	TSP (ug/m <sup>3</sup> )	PM <sub>2.5</sub> (ug/m <sup>3</sup> )	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
<b>Windridge</b>						
1/1/2019	176.1	-	267.8	35.6	53.0	high wind event
1/2/2019	217.5	-	259.6	37.6	56.7	high wind event
1/3/2019	100.5	-	261.8	29.4	69.9	high wind event
1/6/2019	119.0	-	256.1	27.7	52.8	high wind event
1/10/2019	135.5	-	263.3	21.6	49.0	high wind event
1/11/2019	104.3	-	267.8	29.9	52.8	high wind event
1/22/2019	285.0	-	259.3	31.2	42.5	high wind event
1/25/2019	102.9	-	251.6	24.0	42.4	high wind event
1/26/2019	174.9	-	254.7	31.9	40.0	high wind event
1/27/2019	108.1	-	272.6	22.3	63.3	high wind event
<b>Total # of Exceedances</b>	<b>10</b>	<b>0</b>				
<b>Maximum # of Exceedances (January)</b>	<b>7 (2018)</b>	<b>0 (2018)</b>				
<b>Average # of Exceedances (January)</b>	<b>7 (2018)</b>	<b>0 (2018)</b>				
<b>Minimum # of Exceedances (January)</b>	<b>7 (2018)</b>	<b>0 (2018)</b>				



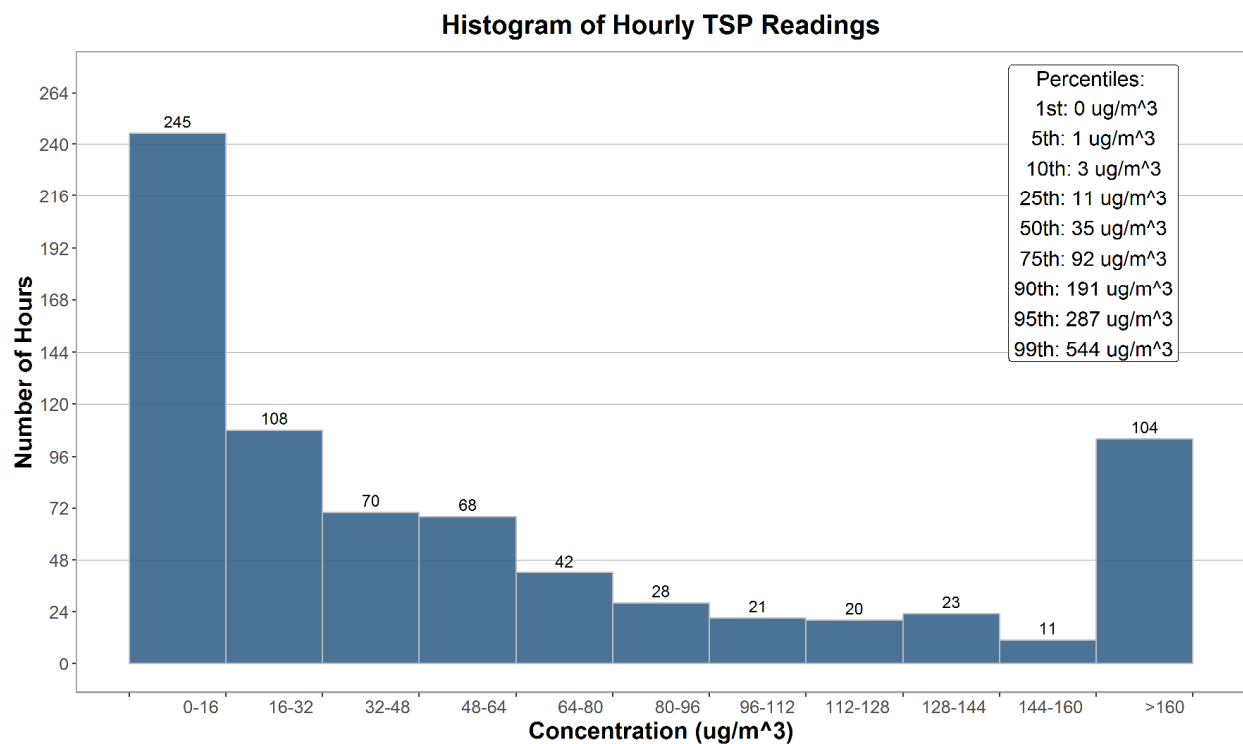
**Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor**



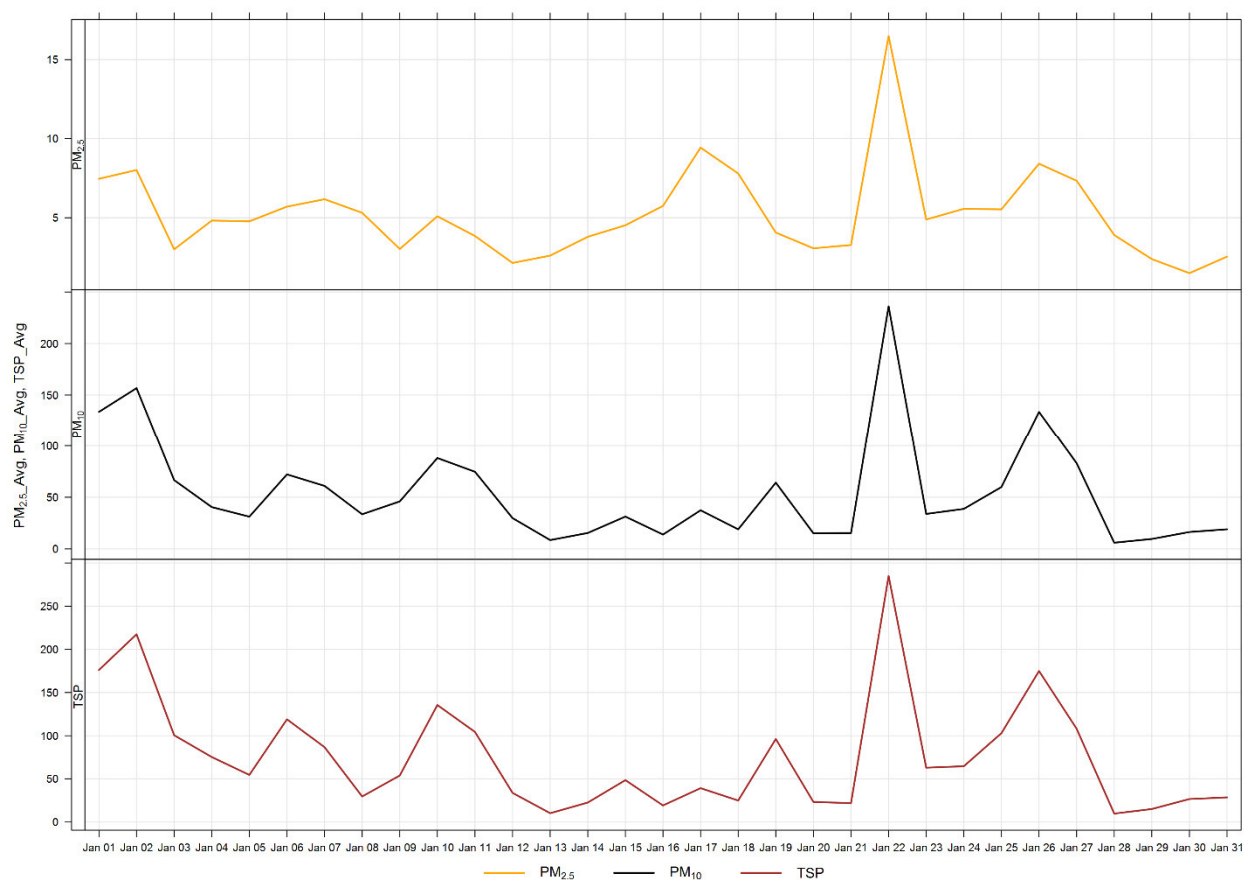
**Figure 4-2** Histogram of hourly PM<sub>2.5</sub> concentrations at the Windridge station



**Figure 4-3** Histogram of hourly PM<sub>10</sub> concentrations at the Windridge station



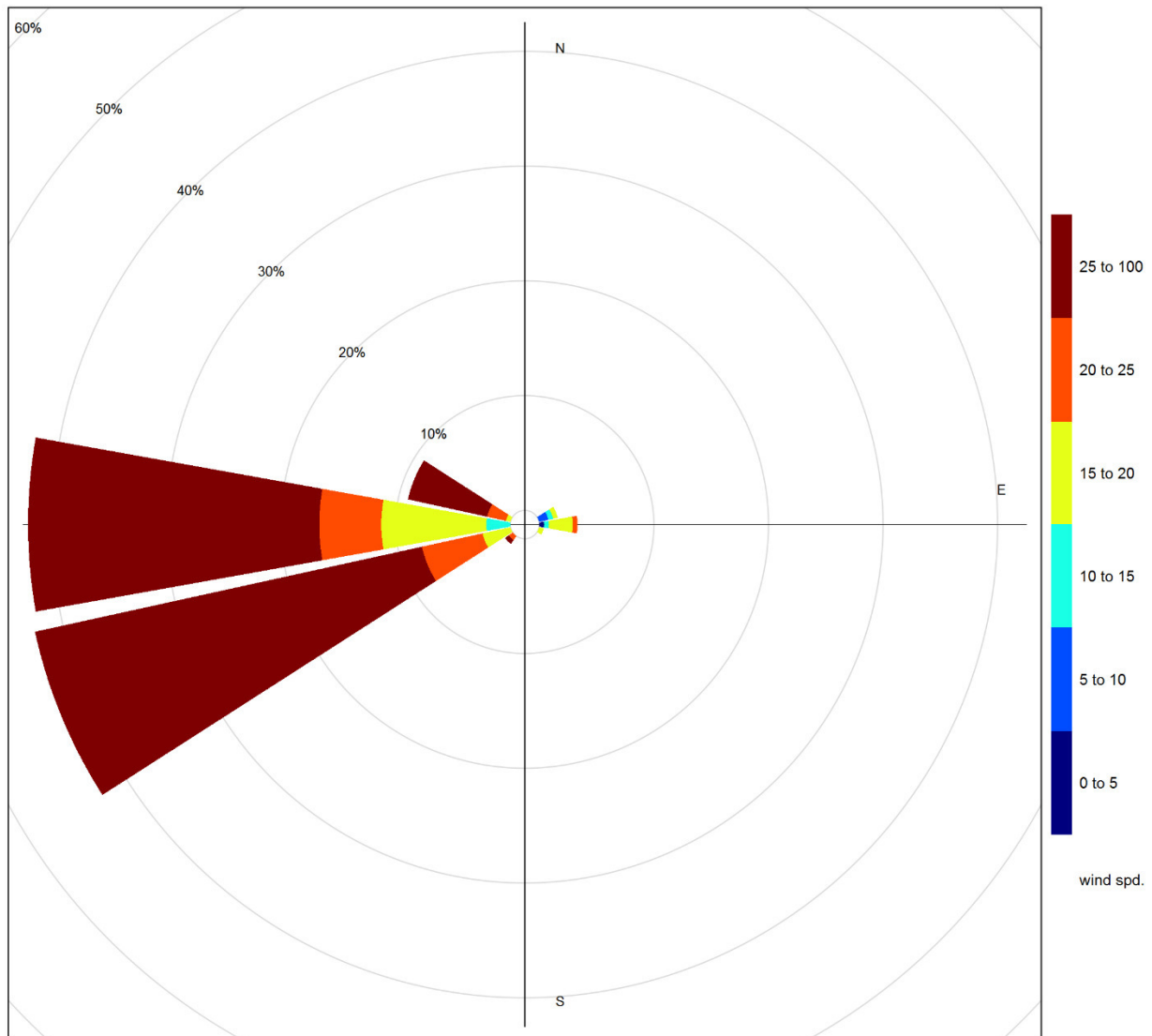
**Figure 4-4** Histogram of hourly TSP concentrations at the Windridge station



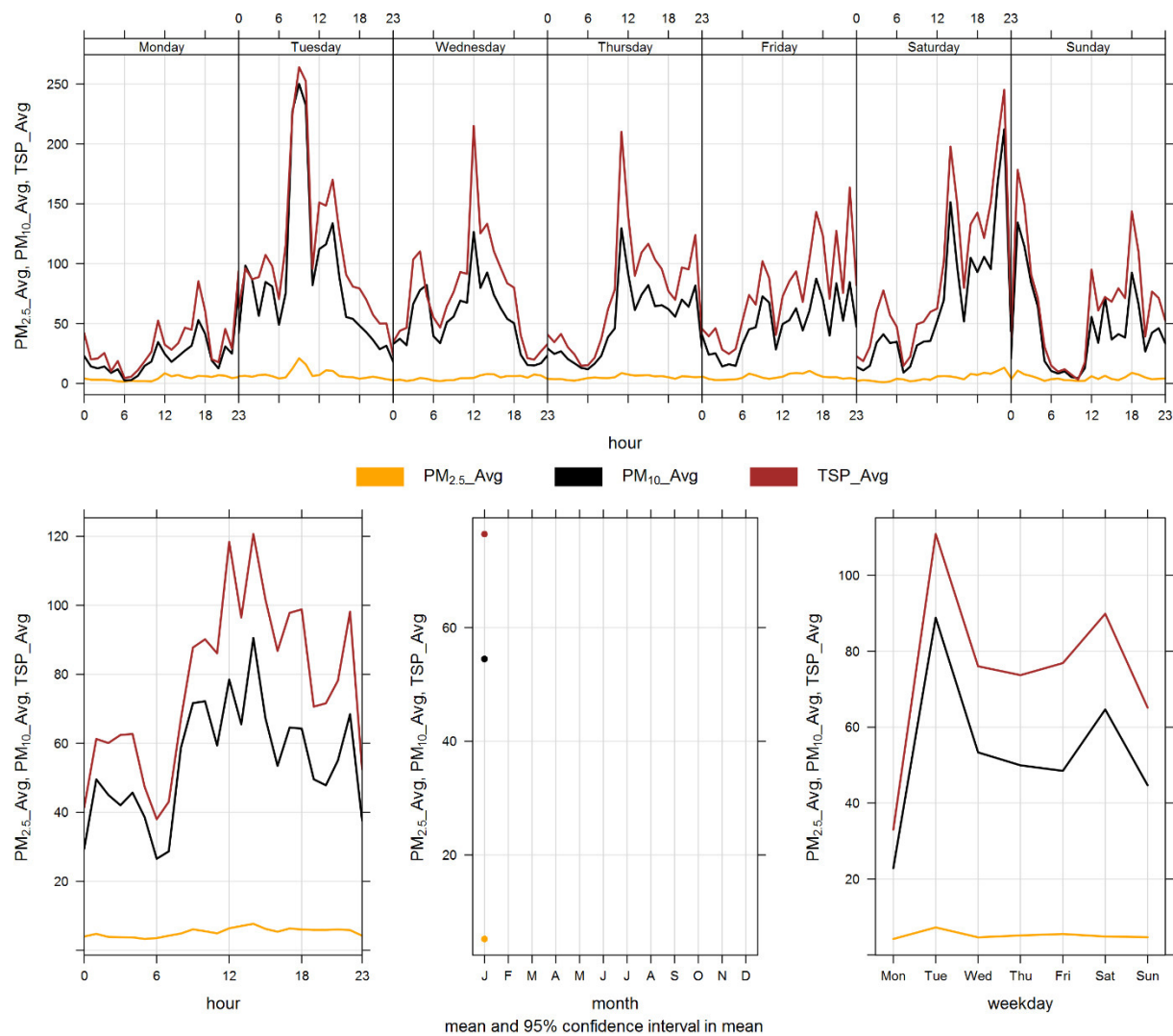
**Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor**

Figure 4- shows the wind rose for the 10 days of TSP exceedances. The wind rose shows that the winds predominantly came from the west and west-southwest directions, and were over 15 km/hr.

Figure 4- 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- is based on data collected during January 2019 and similar to the Lagoon station a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other activities in Exshaw.



**Figure 4-6 Wind rose for TSP exceedance day 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 <sub>2.5</sub> , PM <sub>10</sub> , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	Instrument maintenance led to 1 hour of lost operational time from January 7 <sup>th</sup> at 13:00 to January 7 <sup>th</sup> at 14:00. This hour was flagged as Y for “operational maintenance carried out on the instrument.” Operational time and valid data were well above 95% for the month of January, at 99.9%.

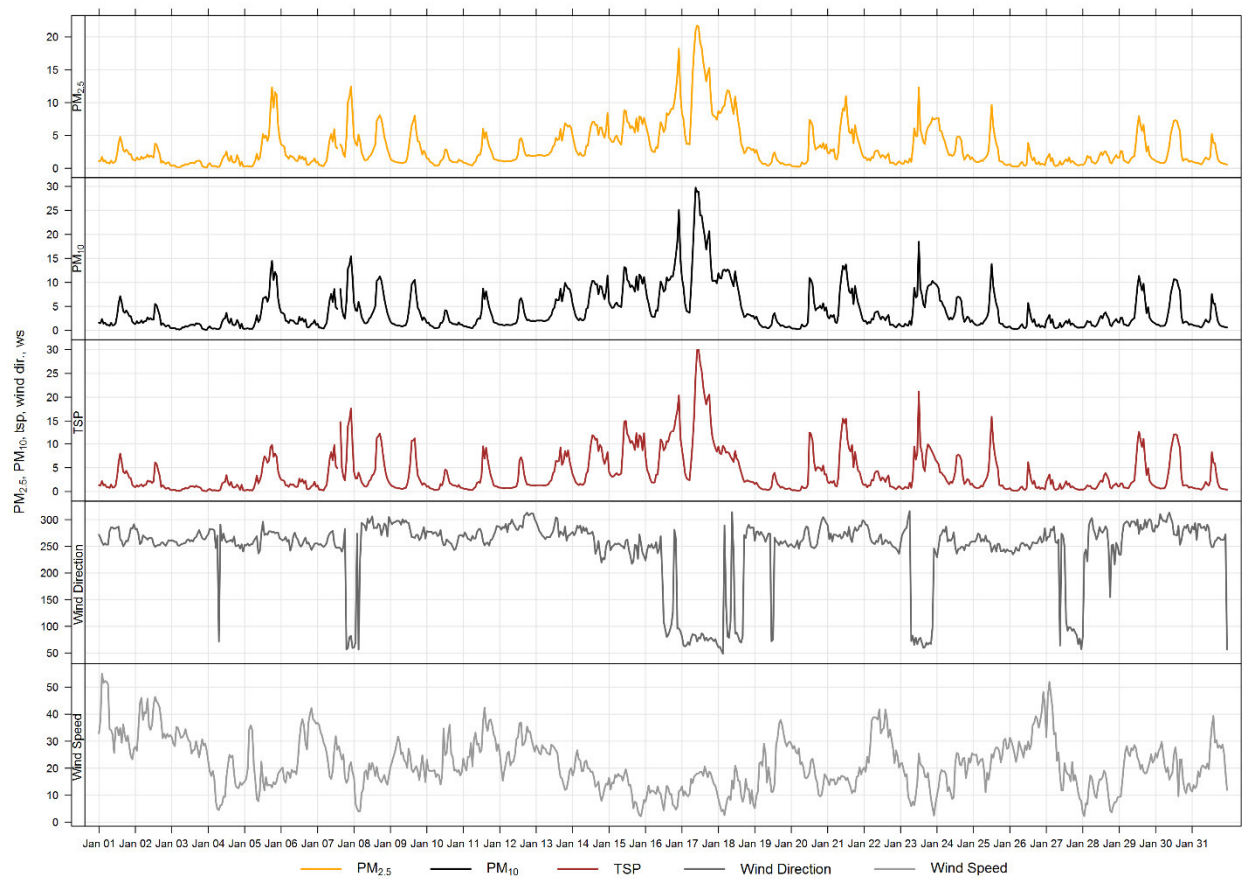
## 5.2 MONITORING RESULTS AND TRENDS

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.

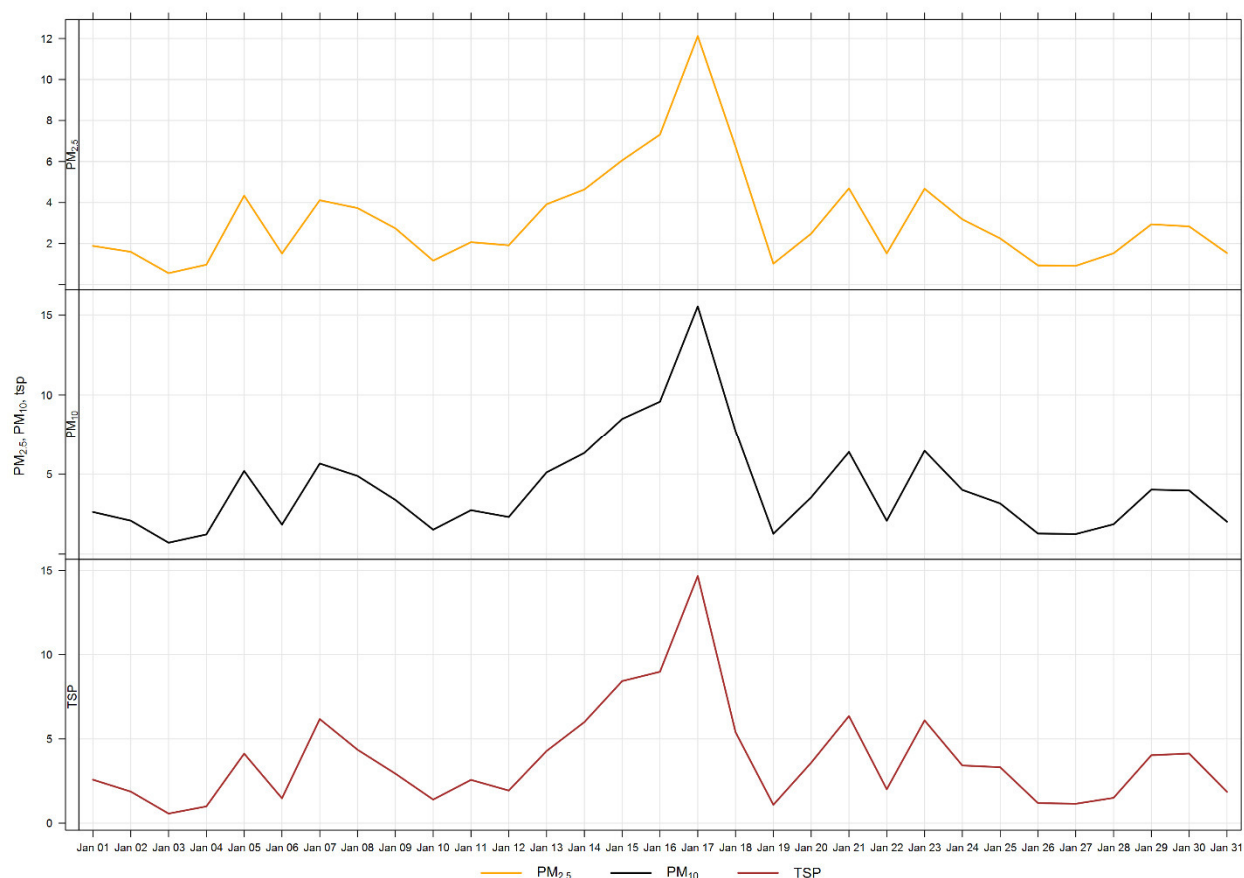
Figure 5-1 and Figure 5- show the hourly and daily PM<sub>2.5</sub>, PM<sub>10</sub> and TSP concentrations recorded over the month. There were no exceedances of the 24-hour TSP guideline (100 µg/m<sup>3</sup>) nor the PM<sub>2.5</sub> (30 µg/m<sup>3</sup>) guideline. Historically in January, the average number of 24-hour TSP AAQO exceedances and 24-hour PM<sub>2.5</sub> AAQO exceedances are two and zero, respectively. The maximum number of 24-hour TSP AAQO exceedances was 7 days in 2013, while the maximum number of 24-hour PM<sub>2.5</sub> AAQO exceedances was 2 days in 2010.

**Table 5-2      Summary of January 2019 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	
<b>PM<sub>2.5</sub></b> (µg/m <sup>3</sup> )	80	30	West	0	0	0.1	3.2	21.8	17	10	18.0	71.6	12.1	17	99.9
<b>PM<sub>10</sub></b> (µg/m <sup>3</sup> )	-	-	West	-	-	0.1	4.1	29.7	17	9	17.5	82.9	15.5	17	99.9
<b>TSP</b> (µg/m <sup>3</sup> )	-	100	West	-	0	0.1	3.8	30.0	17	11	18.1	79.1	14.7	17	99.9

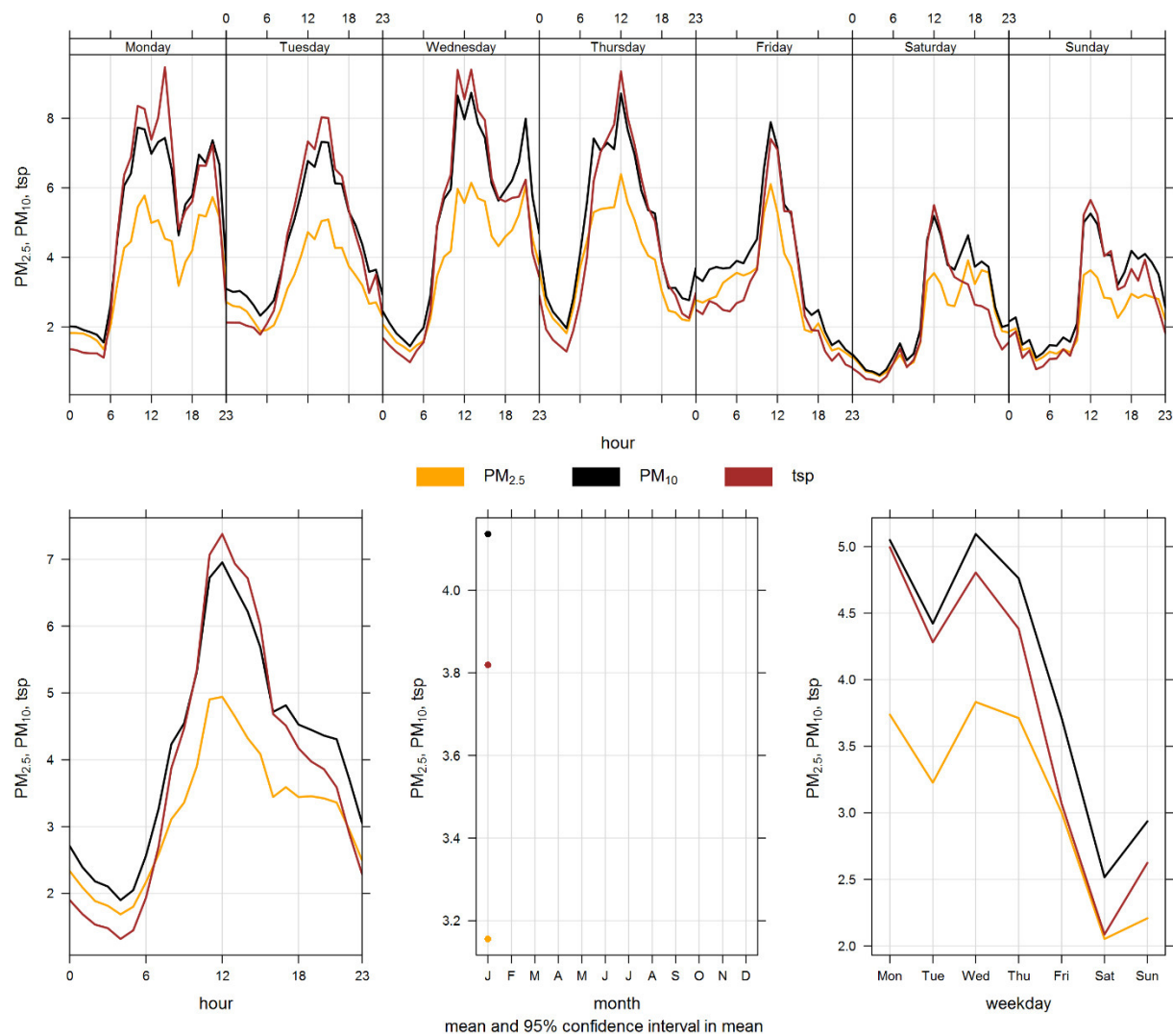


**Figure 5-1 1-hour particulate matter concentrations at the West monitor**



**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 January 2019 and indicates a strong relationship between TSP and hours which Lafarge is typically operational. Due to the proximity of the West monitor to the highway and generally ‘up-wind’ of the facility, the daily variations in PM are more likely a result of higher traffic volume during daylight hours.



**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 <sub>2.5</sub> , PM <sub>10</sub> , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	A dryer pump failure led to 1 hour of lost operational time from January 7 <sup>th</sup> at 14:00 to January 7 <sup>th</sup> at 15:00. This hour was flagged as X for “instrument malfunction.” Operational time and valid data were well above 95% for the month of January, at 99.9%.

## 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- show the hourly and daily PM<sub>2.5</sub>, PM<sub>10</sub> 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.

In January, there were 20 and 3 exceedances of the 24-hour TSP (100 µg/m<sup>3</sup>) and PM<sub>2.5</sub> (30 µg/m<sup>3</sup>) guidelines, respectively. There were 13 hours exceeding the 1-hour PM<sub>2.5</sub> guideline (80 µg/m<sup>3</sup>). Observations from Lafarge environmental staff suggest that fugitive dust from Lac Des Arcs’ exposed lake bed/shore was a potential contributor to AAAQO exceedances in January 2019 (see discussion in Section 1.1). Fires from controlled pine beetle burns were also observed in January, which would contribute to higher levels of particulate, especially in the PM<sub>2.5</sub> size fraction.

Historically during the month of January, the Berm monitor records an average of 18 and zero exceedances of the 24-hour TSP and PM<sub>2.5</sub> guidelines, respectively. The maximum number of TSP exceedances recorded during January occurred in 2013 where there were 26 days that exceeded the guideline. The minimum number of TSP exceedances was recorded during January 2016, which had 13 days that exceeded the guideline. With respect to PM<sub>2.5</sub>, January 2015 recorded the maximum number of exceedances (3 days) prior to this year.

It should also be noted that the GRIMM monitors become more conservative in the reported PM concentrations as the size fraction increases. The PM<sub>2.5</sub> size fraction has been shown to match other regulatory approved PM<sub>2.5</sub> 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.

**Table 6-2 Summary of January 2019 data at the Berm GRIMM**

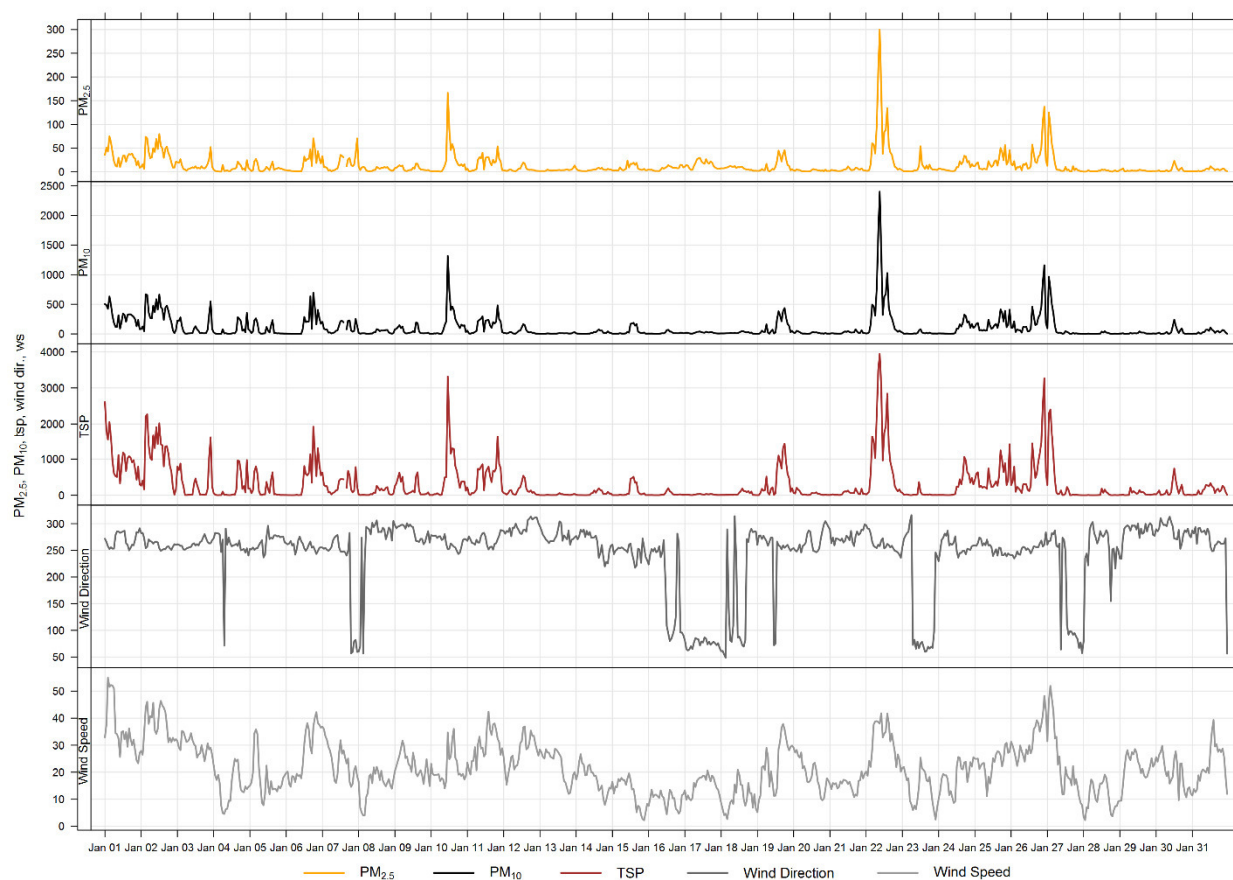
Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
<b>PM<sub>2.5</sub></b> (µg/m <sup>3</sup> )	80	30	Berm	13	3	0.3	13.7	300.2	22	9	38.0	257.8	62.4	22	99.9
<b>PM<sub>10</sub></b> (µg/m <sup>3</sup> )	-	-	Berm	-	-	0.4	99.9	2402.7	22	9	38.0	257.8	493.8	22	99.9
<b>TSP</b> (µg/m <sup>3</sup> )	-	100	Berm	-	20	0.3	294.8	3947.9	22	9	38.0	257.8	1231.7	22	99.9

**Table 6-3 Days exceeding the Guideline for TSP or PM<sub>2.5</sub> at the Berm Monitor**

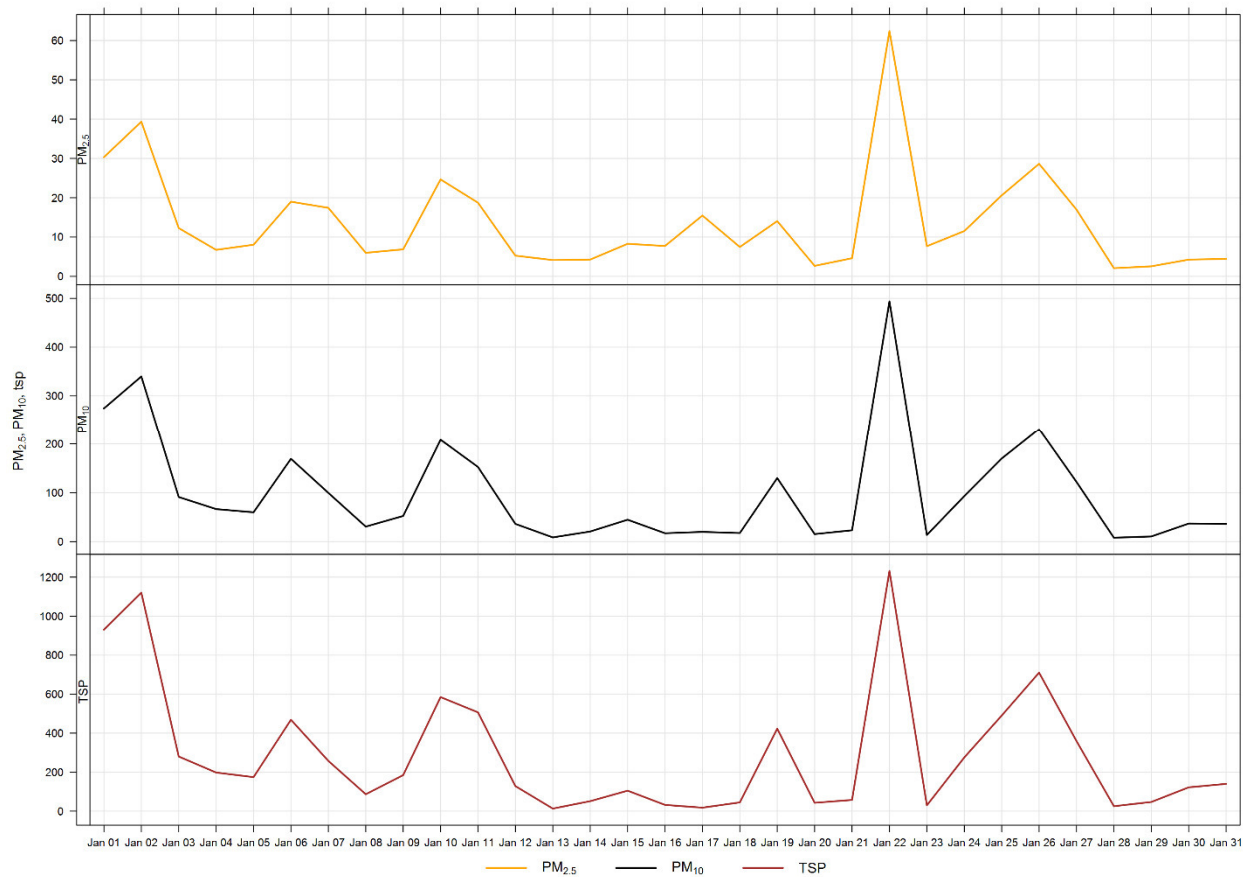
Date	TSP (ug/m <sup>3</sup> )	PM <sub>2.5</sub> (ug/m <sup>3</sup> )	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
<b>Berm</b>						
1/1/2019	930.6	30.3	267.8	35.6	53.0	high wind event
1/2/2019	1120.5	39.4	259.6	37.6	56.7	high wind event
1/3/2019	280.0	-	261.8	29.4	69.9	high wind event
1/4/2019	197.9	-	262.7	14.4	66.7	
1/5/2019	174.3	-	264.7	17.8	58.2	
1/6/2019	468.7	-	256.1	27.7	52.8	high wind event
1/7/2019	257.5	-	257.3	23.8	48.0	high wind event
1/9/2019	184.6	-	285.3	22.8	65.6	high wind event
1/10/2019	584.8	-	263.3	21.6	49.0	high wind event
1/11/2019	506.6	-	267.8	29.9	52.8	high wind event
1/12/2019	128.3	-	295.6	27.4	63.6	high wind event
1/15/2019	104.9	-	247.9	11.9	79.6	
1/19/2019	422.9	-	261.2	24.0	47.3	high wind event
1/22/2019	1231.7	62.4	259.3	31.2	42.5	high wind event
1/24/2019	275.2	-	256.9	18.9	54.7	
1/25/2019	490.0	-	251.6	24.0	42.4	high wind event



<b>1/26/2019</b>	710.3	-	254.7	31.9	40.0	high wind event
<b>1/27/2019</b>	359.4	-	272.6	22.3	63.3	high wind event
<b>1/30/2019</b>	122.0	-	287.3	19.4	53.5	
<b>1/31/2019</b>	139.8	-	270.7	22.6	59.5	high wind event
<b>Total # of Exceedances</b>	<b>20</b>	<b>3</b>				
<b>Maximum # of Exceedances (January)</b>	<b>26 (2013)</b>	<b>3 (2015)</b>				
<b>Average # of Exceedances (January)</b>	<b>18</b>	<b>0</b>				
<b>Minimum # of Exceedances (January)</b>	<b>13 (2016)</b>	<b>0 (2011, 2014, 2016 ~ 2018)</b>				



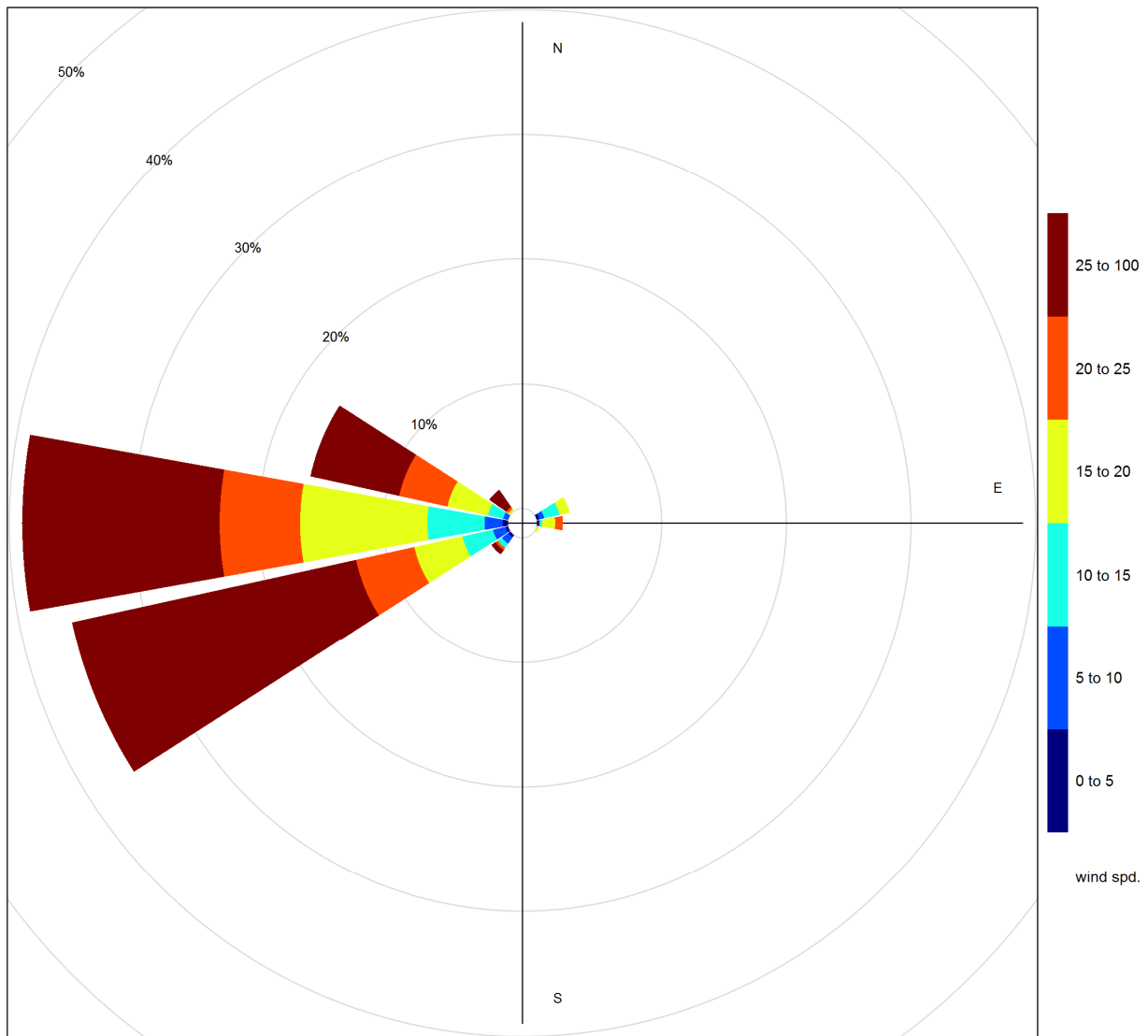
**Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor**



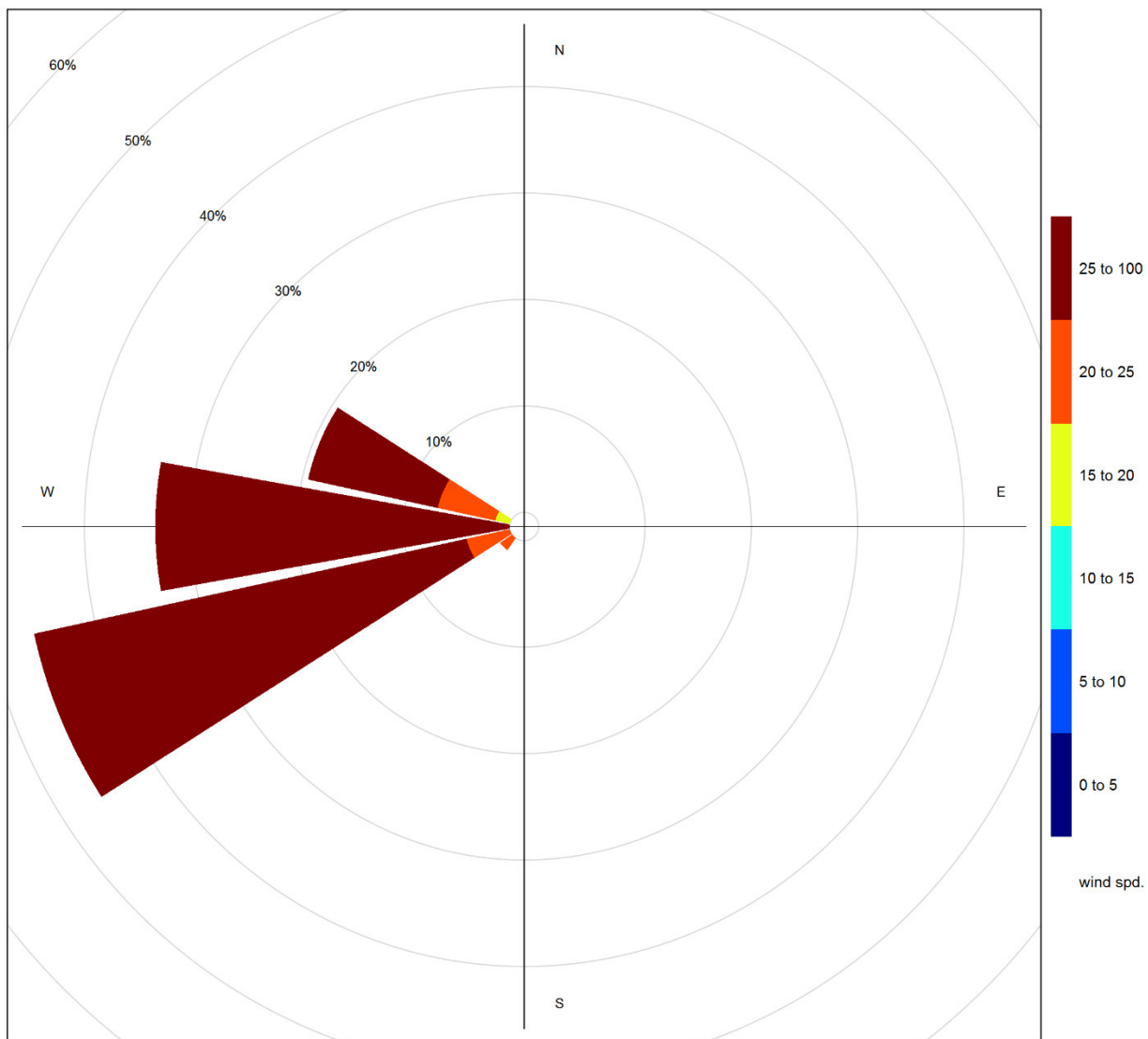
**Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor**

Figure 6- shows the wind rose for the 20 days of TSP exceedances, while Figure 6-4 shows the wind rose for the 3 days of PM<sub>2.5</sub> exceedances. Both wind roses show that the winds predominantly came from westerly directions. In particular, the PM<sub>2.5</sub> exceedances occurred during periods of high wind speeds, over 20 km/hr.

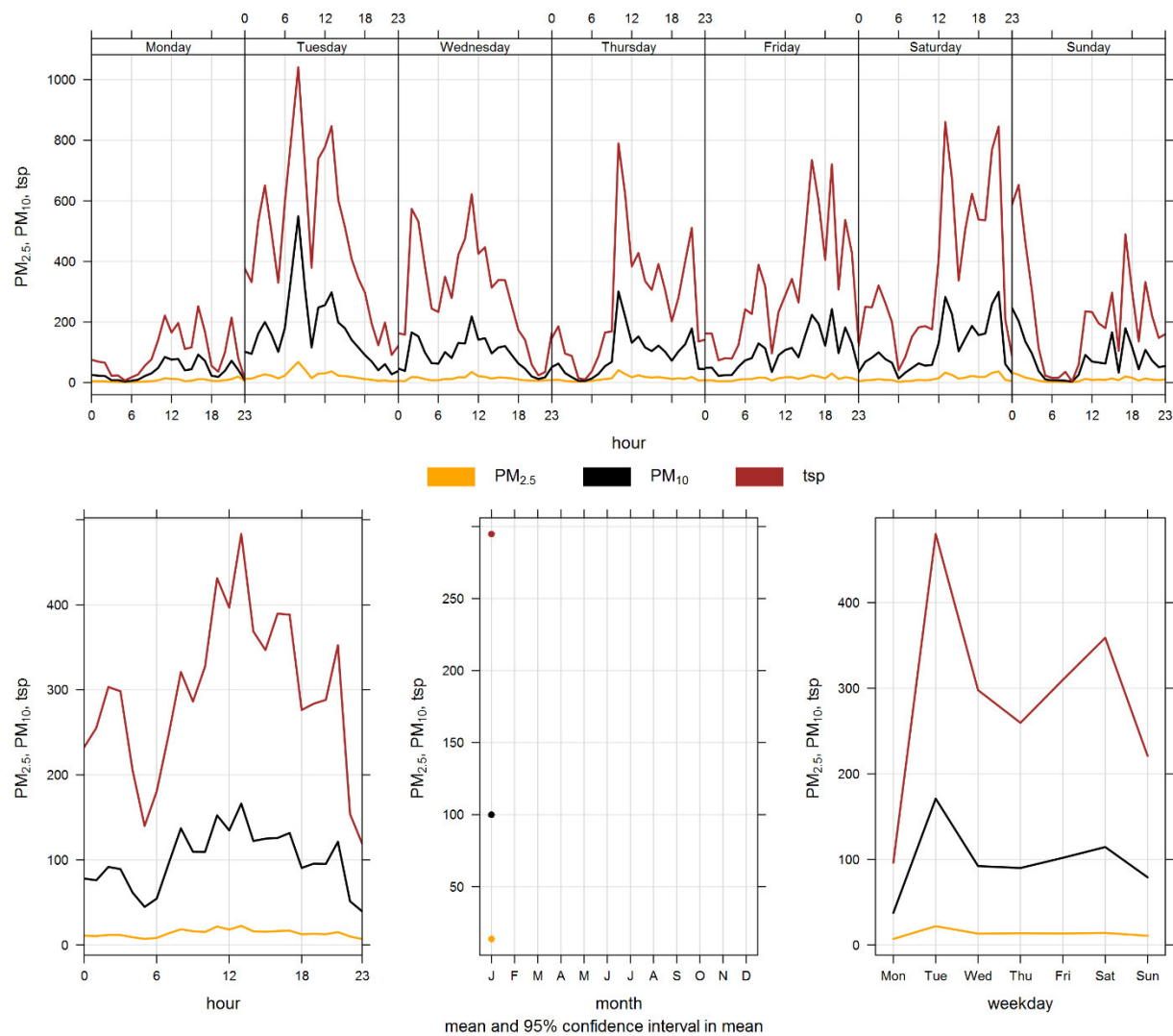
Figure 6- shows the variation of PM recorded at the Berm monitor over various time averaging periods. The Berm monitor diurnal pattern is similar to the Windridge and Lagoon stations, is associated with Lafarge operations, but also daytime emissions from traffic and other activities in Exshaw.



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



**Figure 6-4** Wind rose for PM<sub>2.5</sub> exceedance days recorded at the Berm GRIMM



**Figure 6-5** Berm particulate matter time variation

# 7 ENTRANCE INDUSTRIAL GRIMM

## 7.1 OPERATIONAL SUMMARY

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

**Table 7-1 Instrumentation List at the Entrance monitoring location**

Parameter Measured	Equipment Description	Notes
PM <sub>2.5</sub> , PM <sub>10</sub> , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	Machine malfunction led to 20 hours of lost operational time from January 3 <sup>rd</sup> at 17:00 to January 4 <sup>th</sup> at 12:00, and January 4 <sup>th</sup> at 14:00 to January 4 <sup>th</sup> at 15:00. These hours were flagged as X for “instrument malfunction.” Operational time and valid data were well above 95% for the month of January, at 97.3%.

## 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- show the hourly and daily PM<sub>2.5</sub>, PM<sub>10</sub> 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 January, there were 18 and zero exceedances of the 24-hour TSP (100 µg/m<sup>3</sup>) and PM<sub>2.5</sub> (30 µg/m<sup>3</sup>) guidelines, respectively. There were 2 hours exceeding the 1-hour PM<sub>2.5</sub> guideline (80 µg/m<sup>3</sup>). Observations from Lafarge environmental staff suggest that fugitive dust from Lac Des Arcs’ exposed lake bed/shore was a potential contributor to AAAQO exceedances in January 2019 (see discussion in Section 1.1). Fires from controlled pine beetle burns were also observed in January, which would contribute to higher levels of particulate, especially in the PM<sub>2.5</sub> size fraction.

Historically, the Entrance monitor records an average of 19 and zero exceedances of the 24-hour TSP and PM<sub>2.5</sub> guidelines respectively, during the month of January. The maximum number of TSP exceedances recorded during January occurred in 2014, which had 29 days that exceeded the guideline. The minimum number of TSP exceedances recorded during January occurred in 2011 and 2018, which had 11 days that exceeded the guideline. On the other hand, the maximum number of PM<sub>2.5</sub> exceedances recorded during the month of January was 5 days in 2013.

It should also be noted that the GRIMM monitors become more conservative in the reported PM concentrations as the size fraction increases. The PM<sub>2.5</sub> size fraction has been shown to match other regulatory approved PM<sub>2.5</sub>

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 CPR rail crossing is in disrepair and may be contributing to PM concentrations at the Entrance monitor. Lafarge has been informed the crossing is scheduled to be repaired in the spring of 2019.

Figure 7- shows the wind rose for the 18 days that exceeded the TSP Guideline. The wind rose indicates that the winds predominantly came from the westerly directions. High wind speeds were a primary factor in TSP exceedances in January at the Entrance station. On those days without high wind speeds other sources, such as industry, traffic and rail may have contributed to the exceedances.



**Table 7-2 Summary of January 2019 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	
<b>PM<sub>2.5</sub></b> (µg/m <sup>3</sup> )	80	30	Entrance	2	0	0.4	9.5	185.3	22	9	38.0	257.8	27.6	22	97.3
<b>PM<sub>10</sub></b> (µg/m <sup>3</sup> )	-	-	Entrance	-	-	0.6	57.2	1648.0	22	9	38.0	257.8	231.9	22	97.3
<b>TSP</b> (µg/m <sup>3</sup> )	-	100	Entrance	-	18	0.5	191.6	3931.4	22	9	38.0	257.8	726.4	22	97.3

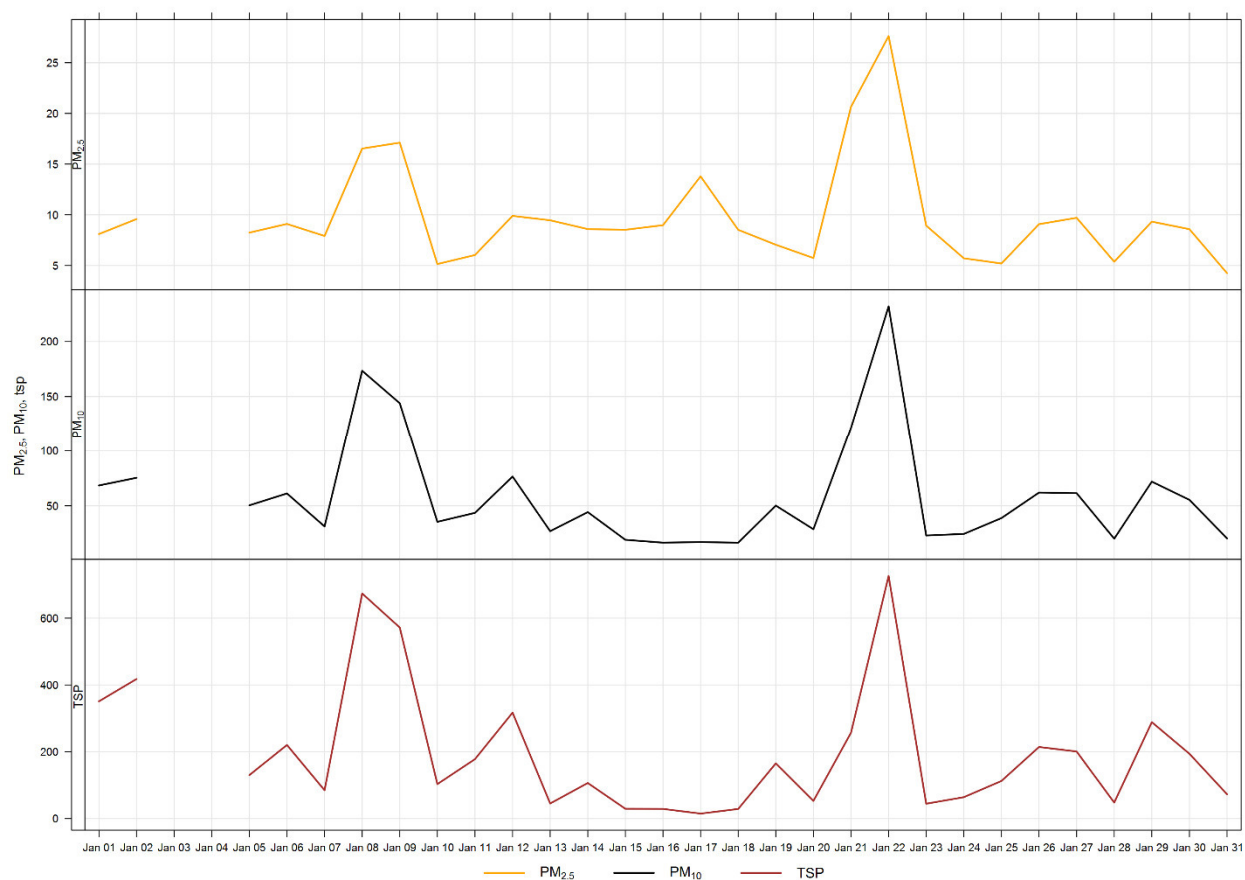
**Table 7-3 Days exceeding the Guideline for TSP or PM<sub>2.5</sub> at the Entrance Monitor**

Date	TSP (ug/m <sup>3</sup> )	PM <sub>2.5</sub> (ug/m <sup>3</sup> )	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
<b>Entrance</b>						
1/1/2019	351.0	-	267.8	35.6	53.0	high wind event
1/2/2019	417.8	-	259.6	37.6	56.7	high wind event
1/5/2019	130.1	-	264.7	17.8	58.2	
1/6/2019	220.3	-	256.1	27.7	52.8	high wind event
1/8/2019	673.9	-	290.5	15.2	54.5	
1/9/2019	572.0	-	285.3	22.8	65.6	high wind event
1/10/2019	103.1	-	263.3	21.6	49.0	high wind event
1/11/2019	177.8	-	267.8	29.9	52.8	high wind event
1/12/2019	317.1	-	295.6	27.4	63.6	high wind event
1/14/2019	106.4	-	269.0	17.5	66.6	
1/19/2019	165.2	-	261.2	24.0	47.3	high wind event
1/21/2019	257.0	-	276.1	15.7	57.2	
1/22/2019	726.4	-	259.3	31.2	42.5	high wind event
1/25/2019	112.5	-	251.6	24.0	42.4	high wind event
1/26/2019	214.3	-	254.7	31.9	40.0	high wind event

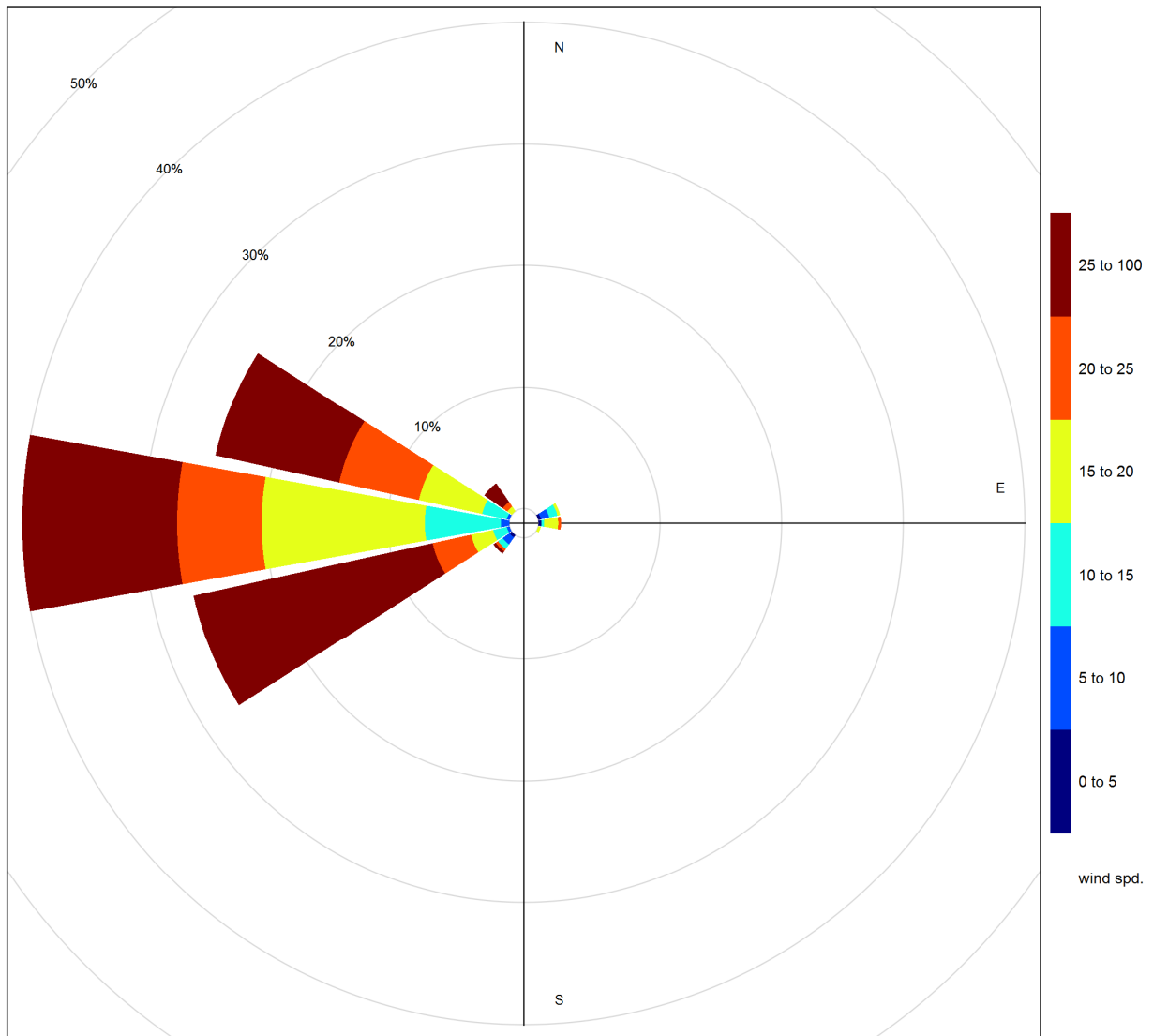
<b>1/27/2019</b>	200.7	-	272.6	22.3	63.3	high wind event
<b>1/29/2019</b>	288.6	-	289.6	22.5	60.8	high wind event
<b>1/30/2019</b>	193.9	-	287.3	19.4	53.5	
<b>Total # of Exceedances</b>	<b>18</b>	<b>0</b>				
<b>Maximum # of Exceedances (January)</b>	<b>29 (2014)</b>	<b>5 (2013)</b>				
<b>Average # of Exceedances (January)</b>	<b>19</b>	<b>0</b>				
<b>Minimum # of Exceedances (January)</b>	<b>11 (2011, 2018)</b>	<b>0 (2011, 2012, 2015 ~ 2018)</b>				



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

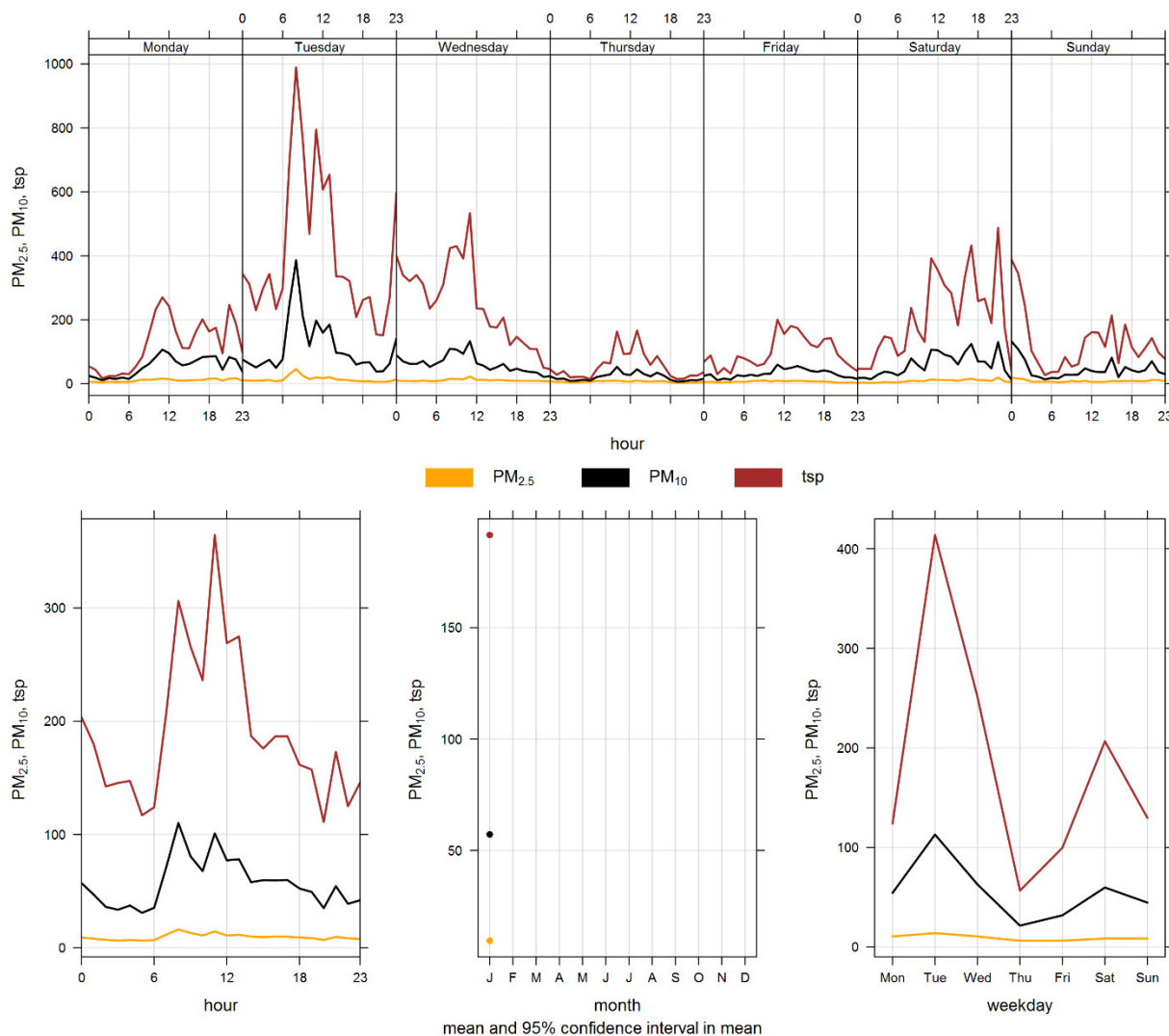


**Figure 7-2 24-hour particulate matter concentrations at the Entrance monitor**



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

Figure 7- 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- is based on data collected during January 2019 and shows a peak in the morning hours when traffic emissions likely influence the PM concentrations at the Entrance monitor which is located near Highway 1 and the entrance to Lafarge.



**Figure 7-4 Entrance particulate matter time variation**

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



# APPENDIX

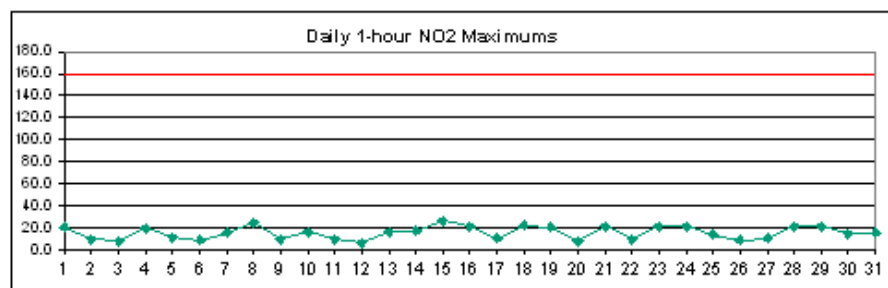
## A DATA & CALIBRATION REPORTS

# APPENDIX



# Lagoon NO<sub>2</sub> (ppb) – January 2019

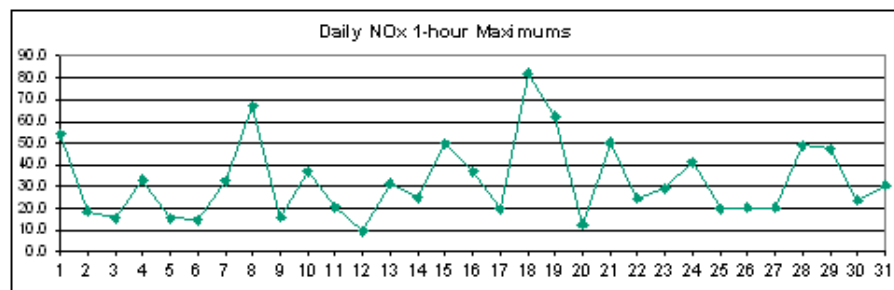
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.3	\$	0.7	0.8	1.4	1.0	12.1	20.6	19.4	13.0	12.4	13.3	12.4	3.1	2.4	1.0	2.4	4.7	3.3	5.7	12.3	9.0	12.0	9.0	7.7	20.6
2	10.1	\$	2.0	1.7	4.1	2.8	1.9	5.1	7.0	6.8	7.6	2.7	0.9	3.0	2.2	2.6	3.5	3.3	2.0	1.8	0.8	3.4	1.1	7.0	3.6	10.1
3	4.3	\$	1.1	0.7	2.8	1.8	5.9	4.8	4.9	3.8	7.9	5.4	3.6	4.3	3.8	3.1	5.9	8.0	5.9	3.0	6.3	7.6	5.4	3.6	4.5	8.0
4	6.0	\$	8.6	4.7	13.4	10.3	16.8	16.0	20.0	14.5	7.6	6.0	4.4	3.6	7.7	7.7	6.5	6.4	5.1	7.7	3.3	2.3	1.0	4.5	8.0	20.0
5	4.1	\$	1.2	1.9	1.7	1.5	2.9	8.5	3.9	11.4	7.0	5.5	3.3	2.7	3.6	2.2	5.4	8.4	7.9	5.9	6.1	7.1	4.2	5.6	4.9	11.4
6	4.8	\$	5.2	4.6	6.7	7.6	6.4	6.5	7.8	7.7	9.1	5.3	2.5	0.9	3.6	4.4	3.1	3.5	2.8	0.0	0.7	2.9	7.4	3.1	4.6	9.1
7	3.0	\$	6.4	3.9	4.5	1.9	3.2	7.2	8.2	10.6	6.3	1.8	2.1	1.9	1.7	0.7	5.4	14.0	16.1	12.2	6.9	7.9	13.7	7.4	6.4	16.1
8	4.9	\$	22.4	24.8	15.7	9.2	5.0	5.9	6.5	6.6	5.0	6.2	5.4	6.5	8.7	5.8	7.4	9.1	7.1	6.9	5.8	5.0	3.6	2.6	8.1	24.8
9	2.8	\$	3.6	4.5	3.9	3.0	3.2	4.0	4.6	C	C	C	C	C	10.2	9.0	7.2	7.1	8.0	6.7	6.2	7.7	4.6	4.3	5.6	10.2
10	4.5	\$	4.2	16.7	3.6	2.6	3.5	8.5	13.4	16.7	4.6	6.0	5.5	4.5	3.5	3.0	3.7	2.9	1.8	6.3	7.0	6.6	6.9	3.3	6.1	16.7
11	3.6	\$	3.2	4.1	1.7	1.6	8.3	9.9	5.6	6.4	4.0	2.8	1.2	0.8	1.5	4.6	1.1	8.1	3.7	1.7	1.5	2.9	1.2	1.0	3.5	9.9
12	0.9	\$	1.7	1.4	1.1	1.4	1.5	2.4	5.6	3.4	3.1	5.4	2.4	2.5	2.5	3.8	3.4	3.1	3.9	4.8	4.6	4.5	4.8	6.5	3.2	6.5
13	5.0	\$	5.1	4.8	4.5	4.9	7.5	5.1	8.9	6.0	5.0	5.1	4.3	2.9	3.9	16.9	7.5	10.1	8.1	11.9	9.4	12.2	13.8	12.0	7.6	16.9
14	10.0	\$	5.3	5.3	4.9	5.8	4.5	6.3	8.9	9.2	7.3	5.2	5.7	6.6	7.0	11.1	16.8	13.8	11.6	11.9	12.9	17.4	17.0	12.0	9.4	17.4
15	16.2	\$	15.8	19.0	18.9	20.7	17.8	23.4	26.8	22.8	18.0	15.2	11.4	9.5	8.0	10.4	23.7	26.7	20.4	26.6	25.8	25.7	23.2	24.9	19.6	26.8
16	21.5	\$	17.4	14.0	13.2	11.2	14.5	18.4	16.6	16.7	17.8	10.6	5.8	4.5	3.6	3.4	3.7	7.7	8.8	8.8	7.3	3.3	2.7	2.5	10.2	21.5
17	4.5	\$	7.4	5.4	7.0	7.2	7.5	8.6	8.9	10.3	8.9	7.5	6.6	6.4	7.6	7.9	11.1	10.7	7.0	8.2	6.4	5.9	5.6	10.8	7.7	11.1
18	6.5	\$	9.9	15.5	16.7	21.4	12.9	11.5	8.8	12.0	12.5	10.0	12.8	11.4	22.5	16.3	9.7	8.9	10.4	8.4	6.8	5.8	9.2	5.9	11.6	22.5
19	4.3	\$	5.0	2.4	3.1	5.1	4.8	8.0	4.0	11.0	16.1	20.6	11.8	3.4	4.1	2.9	1.9	2.3	3.0	2.0	1.0	0.8	2.2	8.7	5.6	20.6
20	2.0	\$	4.2	3.2	1.2	2.2	5.8	3.3	3.5	6.0	5.3	6.2	1.3	1.3	1.6	1.0	2.7	5.5	6.2	5.1	8.3	6.2	6.3	8.0	4.2	8.3
21	21.8	\$	12.9	17.9	10.2	11.2	11.2	12.9	17.1	13.2	13.3	13.8	14.9	10.7	18.3	12.5	10.0	11.3	13.0	10.7	12.3	10.9	5.6	7.4	12.8	21.8
22	8.9	\$	10.1	4.6	3.0	4.0	4.0	3.9	7.7	8.0	10.4	5.3	3.8	3.0	4.3	4.5	3.6	3.7	2.0	1.2	0.8	0.7	1.3	1.7	4.4	10.4
23	2.3	\$	10.5	12.1	11.9	14.5	6.7	4.9	15.2	9.2	10.1	3.6	1.5	10.0	6.4	8.3	6.8	8.7	13.5	17.8	12.7	19.2	20.8	21.5	10.8	21.5
24	18.4	\$	14.4	11.2	10.3	10.3	19.2	16.7	20.8	21.9	14.7	5.5	2.3	2.7	3.1	5.0	5.8	3.3	9.3	5.0	1.6	4.3	1.7	5.6	9.3	21.9
25	4.8	\$	5.6	4.9	3.1	5.3	3.8	12.2	14.1	10.6	5.8	1.3	1.5	8.5	0.8	4.2	3.4	3.6	1.4	0.8	0.9	0.9	3.2	0.6	4.4	14.1
26	1.7	\$	0.7	1.1	1.5	1.2	3.4	6.4	7.6	4.7	2.4	2.2	0.8	2.5	2.8	3.2	3.0	9.5	6.7	9.0	1.9	3.4	3.0	1.5	3.5	9.5
27	3.4	\$	5.5	5.7	11.1	4.6	5.2	5.8	1.7	9.0	8.1	0.8	0.4	0.3	0.3	0.5	0.6	0.4	0.5	1.6	1.5	0.9	1.8	3.3	3.2	11.1
28	21.3	\$	14.3	13.4	9.1	8.0	11.8	11.6	12.5	14.0	12.5	13.3	10.2	9.0	11.5	6.5	7.6	10.0	22.0	19.0	12.9	12.0	16.1	17.7	12.9	22.0
29	21.6	\$	13.1	7.8	4.6	3.8	6.8	6.7	5.4	5.7	5.7	7.3	17.2	11.2	11.1	10.4	6.3	8.4	4.2	6.2	4.1	16.1	12.5	5.6	8.8	21.6
30	7.0	\$	2.5	1.8	4.6	10.2	9.8	8.3	12.5	12.0	11.2	11.4	6.7	7.8	10.5	8.5	5.4	14.7	7.4	13.0	14.9	12.0	8.0	6.2	9.0	14.9
31	8.1	\$	10.4	9.0	15.9	12.3	13.4	15.0	14.6	15.7	12.6	5.9	1.1	1.6	6.3	4.6	5.4	6.9	5.8	5.6	2.6	5.5	6.2	7.3	8.3	15.9
NO.	31	-	31	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	708	100%
MEAN	7.9	-	7.4	7.4	6.9	6.7	7.8	9.3	10.4	10.6	9.1	7.0	5.5	4.9	6.0	6.0	6.1	7.9	7.4	7.6	6.6	7.4	7.3	7.1		
MAX	21.8	-	22.4	24.8	18.9	21.4	19.2	23.4	26.8	22.8	18.0	20.6	17.2	11.4	22.5	16.9	23.7	26.7	22.0	26.6	25.8	25.7	23.2	24.9		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	708
Maximum 1-HR Average	26.8 PPB
Maximum 24-HR Average	19.6 PPB
Monthly Calibration	5
Standard Deviation	5.4
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	7.4 PPB

# Lagoon NOx (ppb) – January 2019

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	10.5	\$	1.1	1.5	2.6	1.7	26.8	54.1	49.7	32.7	32.7	36.9	29.1	5.4	3.7	1.6	3.5	7.1	4.7	9.2	21.9	14.3	28.6	19.6	17.3	54.1
2	18.4	\$	3.4	2.9	7.8	5.2	3.0	9.0	12.1	11.0	13.0	4.1	1.9	4.7	3.9	4.3	4.9	4.1	2.9	2.8	1.3	6.4	1.7	12.2	6.1	18.4
3	7.2	\$	1.9	1.1	4.5	3.1	11.8	7.9	8.4	5.6	15.6	8.3	5.4	6.6	5.6	4.7	9.6	13.1	9.1	4.4	13.9	14.4	8.9	6.3	7.7	15.6
4	11.3	\$	18.7	10.1	19.2	12.0	17.7	19.6	24.9	33.0	12.9	7.6	6.2	5.3	10.9	10.8	7.7	7.3	5.6	8.3	3.7	2.6	1.3	5.5	11.4	33.0
5	4.7	\$	1.7	2.8	2.5	1.9	3.5	13.1	4.3	15.4	9.0	7.9	4.7	4.1	4.9	2.9	7.2	11.7	8.7	7.1	6.7	10.9	5.0	6.4	6.4	15.4
6	5.4	\$	5.7	5.5	11.0	9.3	8.1	8.6	11.7	11.1	14.8	8.9	4.0	1.5	6.8	8.5	4.5	6.2	5.3	0.4	1.2	5.4	13.4	5.6	7.1	14.8
7	5.1	\$	10.6	5.9	7.7	2.6	4.8	10.8	12.3	16.4	9.3	3.2	4.0	3.7	2.6	1.0	8.4	26.3	32.7	18.6	8.4	8.3	23.6	9.9	10.3	32.7
8	5.4	\$	30.7	67.1	18.9	14.5	7.8	8.3	7.4	9.7	6.7	9.0	8.8	10.9	12.6	6.9	8.4	10.7	7.8	9.4	6.4	5.9	4.8	3.2	12.2	67.1
9	4.3	\$	4.8	7.7	7.3	4.8	4.6	6.0	6.1	C	C	C	C	C	15.8	14.5	9.1	7.5	11.5	7.7	9.5	9.5	4.9	7.1	7.9	15.8
10	5.1	\$	6.1	36.7	4.3	4.2	4.3	18.3	23.3	31.6	7.3	10.9	9.3	8.1	5.5	4.2	5.2	3.6	2.4	9.5	10.6	9.4	12.6	3.6	10.3	36.7
11	3.9	\$	3.8	5.4	2.4	2.1	16.6	20.8	7.8	9.3	5.5	4.2	2.1	1.5	2.6	7.4	1.6	17.9	6.0	2.3	2.0	4.4	1.5	1.5	5.8	20.8
12	1.2	\$	2.9	2.7	1.5	3.3	2.6	3.7	9.6	5.2	4.8	8.8	3.4	5.2	3.6	5.7	3.9	3.5	7.2	7.0	5.2	5.4	6.7	8.9	4.9	9.6
13	5.3	\$	6.5	5.2	5.7	6.2	12.3	5.5	15.1	7.8	6.7	9.8	6.9	4.4	5.2	31.4	8.6	12.8	9.2	12.4	11.4	14.9	14.5	14.4	10.1	31.4
14	10.8	\$	5.7	6.2	6.6	8.0	4.9	8.1	14.2	12.1	9.4	9.8	9.7	10.0	8.7	13.4	25.0	16.8	12.3	12.3	13.4	19.0	20.2	14.0	11.8	25.0
15	19.8	\$	20.1	24.6	21.6	22.9	19.9	43.6	48.2	36.5	32.5	28.6	19.7	15.4	10.8	13.6	36.2	35.5	24.4	49.8	46.8	44.5	25.4	27.0	29.0	49.8
16	26.2	\$	22.2	16.7	15.5	12.7	21.1	25.7	19.6	26.1	36.8	15.8	10.2	8.1	5.3	4.6	4.4	12.4	13.3	16.0	8.2	3.7	3.1	3.1	14.4	36.8
17	5.3	\$	11.3	6.5	9.0	8.2	7.9	9.0	9.5	15.6	13.7	12.5	9.9	9.6	11.7	10.4	18.9	15.7	7.5	11.0	7.2	6.8	6.6	19.7	10.6	19.7
18	7.6	\$	12.7	17.5	20.8	50.5	20.3	12.9	11.1	19.6	30.4	25.6	38.9	40.3	82.3	37.1	12.9	15.2	15.0	10.1	7.2	14.5	12.9	6.3	22.7	82.3
19	4.7	\$	9.1	3.3	4.3	9.7	5.6	13.2	4.6	18.6	49.1	62.2	26.3	5.5	6.8	4.8	2.6	3.0	4.1	2.7	1.4	1.2	3.1	13.0	11.3	62.2
20	2.9	\$	5.6	6.1	1.6	2.7	9.8	4.0	4.2	8.7	9.2	10.3	2.1	2.0	2.7	1.5	3.5	7.7	10.3	7.9	12.4	10.9	8.7	11.6	6.4	12.4
21	50.5	\$	20.9	35.4	11.5	15.8	15.5	23.3	30.4	20.4	33.1	27.2	33.6	20.6	35.2	18.1	12.5	13.7	19.3	14.7	21.6	18.9	7.7	11.6	22.2	50.5
22	14.3	\$	19.1	7.1	4.4	6.6	6.1	6.4	14.0	18.1	24.6	9.6	7.4	6.3	7.0	6.9	5.2	5.7	2.7	1.6	1.2	0.9	1.7	2.2	7.8	24.6
23	3.1	\$	20.0	19.8	19.3	22.9	7.5	5.4	16.8	11.3	15.4	6.0	2.8	24.5	17.1	17.9	12.0	10.2	22.3	28.9	16.1	25.0	29.0	28.8	16.6	29.0
24	26.3	\$	36.4	24.4	19.3	23.4	41.4	33.5	37.1	39.7	23.3	9.4	4.1	4.6	4.7	7.0	8.3	4.5	13.6	6.9	2.1	8.1	2.3	8.5	16.9	41.4
25	6.4	\$	10.6	6.6	3.7	7.9	4.6	15.3	19.9	15.4	7.6	2.2	2.5	16.6	1.4	5.6	4.2	4.4	1.8	1.0	1.3	1.2	4.1	0.9	6.3	19.9
26	2.2	\$	1.0	1.6	2.1	1.6	4.6	8.7	10.8	6.7	3.3	3.7	1.5	4.9	4.2	5.6	5.0	16.8	11.9	20.3	2.9	6.9	6.9	2.2	5.9	20.3
27	5.8	\$	11.9	9.8	20.1	9.0	9.2	9.6	3.0	13.5	13.8	1.5	0.8	0.7	0.6	0.7	0.8	0.7	0.8	2.2	2.1	1.2	2.3	4.0	5.4	20.1
28	48.8	\$	15.6	23.7	16.1	12.9	23.1	16.5	16.2	26.0	28.4	29.7	24.6	22.6	22.1	10.4	9.4	10.9	28.1	22.6	13.4	13.4	26.3	19.3	20.9	48.8
29	24.1	\$	25.1	11.2	5.5	4.6	11.5	9.5	7.0	8.4	11.1	16.1	47.1	22.8	21.9	18.8	8.9	15.1	5.5	8.7	5.4	31.3	24.0	10.7	15.4	47.1
30	11.4	\$	3.7	2.2	9.3	18.7	15.8	14.2	23.7	19.8	19.4	19.3	11.8	11.9	21.1	18.9	7.2	20.7	9.7	19.4	21.9	20.0	9.8	8.6	14.7	23.7
31	13.8	\$	13.7	14.4	30.7	23.1	30.4	27.0	24.0	30.7	24.1	12.7	2.2	2.8	11.6	6.3	7.2	10.8	9.5	8.4	3.5	8.3	8.1	8.3	14.4	30.7
NO.	31	-	31	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	708	100%
MEAN	12.0	-	11.7	12.6	10.2	10.7	12.4	15.2	16.4	17.9	17.5	14.1	11.4	9.7	11.6	9.8	8.6	11.3	10.5	11.1	9.4	11.2	10.6	9.8		
MAX	50.5	-	36.4	67.1	30.7	50.5	41.4	54.1	49.7	39.7	49.1	62.2	47.1	40.3	82.3	37.1	36.2	35.5	32.7	49.8	46.8	44.5	29.0	28.8		



Number of Non-Zero Readings 708

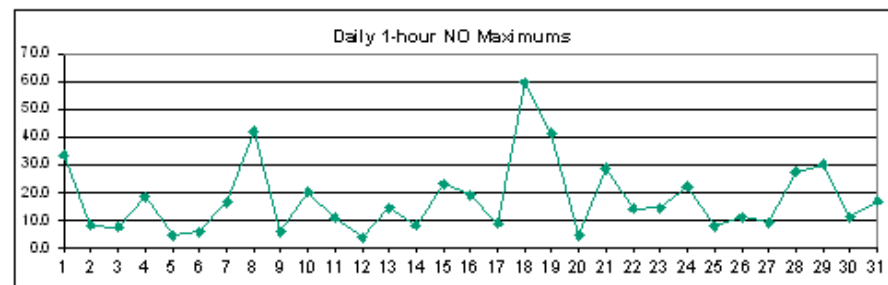
Maximum 1-HR Average 82.3 PPB

Maximum 24-HR Average 29.0 PPB

Monthly Calibration	5	Operational Time	744 HRS
Standard Deviation	10.46	Operational Uptime	100.0 %
		Monthly Average	12.0 PPB

# Lagoon NO (ppb) – January 2019

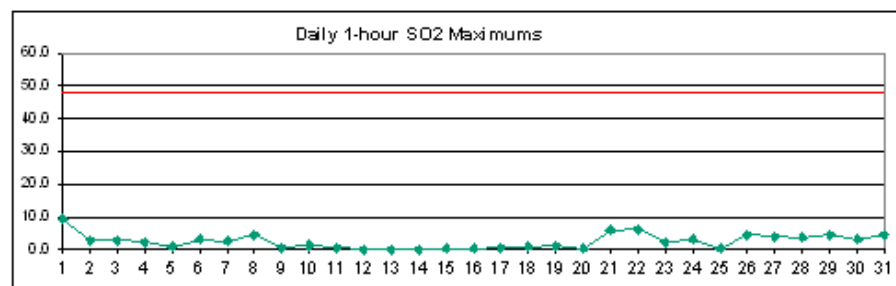
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.2	\$	0.7	0.8	1.3	0.8	14.7	33.4	30.3	19.8	20.3	23.7	16.7	2.3	1.4	0.7	1.1	2.4	1.4	3.5	9.7	5.4	16.6	10.6	9.7	33.4
2	8.3	\$	1.5	1.3	3.7	2.5	1.0	3.9	5.2	4.3	5.5	1.4	1.0	1.8	1.6	1.7	1.5	0.8	1.0	0.9	0.6	3.1	0.6	5.3	2.5	8.3
3	2.9	\$	0.7	0.6	1.8	1.3	5.8	3.1	3.5	1.8	7.7	2.9	1.7	2.3	1.7	1.5	3.6	5.2	3.2	1.3	7.6	6.7	3.6	2.6	3.2	7.7
4	5.3	\$	10.1	5.4	5.8	1.7	0.9	3.6	4.8	18.4	5.2	1.7	1.7	1.6	3.2	3.1	1.2	0.9	0.5	0.6	0.4	0.4	0.4	0.9	3.4	18.4
5	0.6	\$	0.5	0.9	0.8	0.4	0.6	4.6	0.5	4.0	2.1	2.4	1.3	1.3	1.3	0.7	1.7	3.4	0.9	1.1	0.6	3.7	0.8	0.8	1.5	4.6
6	0.6	\$	0.5	1.0	4.3	1.7	1.7	2.1	3.9	3.3	5.7	3.6	1.5	0.7	3.1	3.9	1.3	2.7	2.5	0.4	0.6	2.6	6.0	2.5	2.5	6.0
7	2.1	\$	4.1	2.0	3.1	0.7	1.5	3.5	4.1	5.9	2.9	1.3	1.8	1.6	0.8	0.3	3.0	12.2	16.6	6.4	1.5	0.5	9.9	2.6	3.8	16.6
8	0.6	\$	8.3	42.2	3.3	5.3	2.9	2.5	1.0	3.1	1.8	2.8	3.5	4.5	4.0	1.2	1.1	1.6	0.8	2.6	0.8	1.0	1.2	0.7	4.2	42.2
9	1.5	\$	1.2	3.2	3.5	1.9	1.4	2.0	1.6	C	C	C	C	C	5.9	5.8	2.0	0.6	3.8	1.2	3.5	2.0	0.6	3.0	2.5	5.9
10	0.7	\$	2.1	20.1	0.9	1.8	0.9	10.0	10.0	15.0	2.8	4.9	3.9	3.6	2.0	1.1	1.6	0.7	0.7	3.2	3.6	2.9	5.8	0.5	4.3	20.1
11	0.5	\$	0.7	1.4	0.7	0.7	8.4	11.0	2.2	3.0	1.6	1.5	0.9	0.8	1.0	2.9	0.6	9.7	2.4	0.7	0.6	1.6	0.4	0.5	2.3	11.0
12	0.4	\$	1.3	1.3	0.5	2.1	1.2	1.5	4.2	1.9	1.8	3.4	1.0	2.7	1.1	2.0	0.6	0.6	3.4	2.4	0.8	1.0	2.0	2.5	1.7	4.2
13	0.5	\$	1.7	0.6	1.4	1.4	4.9	0.6	6.3	2.0	1.7	4.9	2.7	1.5	1.3	14.6	1.3	2.9	1.3	0.7	2.2	2.8	0.8	2.5	2.6	14.6
14	1.0	\$	0.6	1.0	1.9	2.3	0.5	1.9	5.4	3.0	2.3	4.7	4.1	3.6	1.8	2.5	8.3	3.2	0.8	0.5	0.6	1.6	3.2	2.1	2.5	8.3
15	3.6	\$	4.3	5.6	2.8	2.3	2.1	20.2	21.2	13.6	14.5	13.4	8.4	6.2	3.0	3.3	12.4	8.8	4.1	23.1	20.8	18.6	2.2	2.1	9.4	23.1
16	4.7	\$	4.8	2.7	2.3	1.5	6.5	7.2	3.1	9.3	19.3	5.2	4.5	3.6	1.7	1.1	0.7	4.8	4.6	7.3	1.0	0.5	0.4	0.6	4.2	19.3
17	0.8	\$	4.0	1.2	2.0	1.2	0.6	0.5	0.7	5.4	4.9	5.1	3.3	3.2	4.2	2.6	7.8	5.0	0.6	2.8	0.8	0.9	1.0	8.9	2.9	8.9
18	1.1	\$	2.8	2.0	4.1	28.9	7.4	1.3	2.4	7.7	17.9	15.6	26.0	28.9	59.6	20.8	3.3	6.4	4.7	1.9	0.5	8.8	3.7	0.5	11.1	59.6
19	0.5	\$	4.1	1.0	1.4	4.7	0.9	5.3	0.7	7.7	33.1	41.5	14.4	2.1	2.7	2.0	0.8	0.7	1.2	0.7	0.5	0.5	1.0	4.3	5.7	41.5
20	0.9	\$	1.5	2.9	0.6	0.7	4.0	0.7	0.8	2.7	3.9	4.2	0.8	0.8	1.1	0.6	0.8	2.3	4.2	2.9	4.3	4.8	2.5	3.8	2.3	4.8
21	28.7	\$	8.1	17.5	1.4	4.7	4.5	10.5	13.3	7.3	19.9	13.5	18.8	10.0	17.0	5.7	2.6	2.6	6.5	4.2	9.4	8.1	2.2	4.3	9.6	28.7
22	5.5	\$	9.1	2.6	1.5	2.8	2.2	2.7	6.5	10.2	14.4	4.5	3.8	3.4	2.8	2.6	1.8	2.2	1.0	0.6	0.6	0.6	0.6	0.7	3.6	14.4
23	0.9	\$	9.7	7.9	7.4	8.5	0.9	0.7	1.6	2.2	5.4	2.4	1.3	14.6	10.8	9.6	5.2	1.7	8.8	11.1	3.6	5.9	8.3	7.4	5.9	14.6
24	7.9	\$	22.0	13.3	9.1	13.1	22.1	16.8	16.5	17.9	8.9	4.1	1.9	2.1	1.7	2.2	2.6	1.4	4.5	2.0	0.7	4.0	0.8	3.2	7.8	22.1
25	1.7	\$	5.2	1.9	0.8	2.8	1.0	3.3	6.0	4.9	2.0	0.9	1.0	8.1	0.8	1.5	0.9	0.9	0.5	0.4	0.6	0.3	0.9	0.5	2.0	8.1
26	0.6	\$	0.5	0.6	0.8	0.6	1.2	2.4	3.3	2.0	0.9	1.6	0.8	2.5	1.6	2.7	2.2	7.5	5.3	11.4	1.1	3.7	4.1	0.9	2.5	11.4
27	2.6	\$	6.6	4.2	9.2	4.5	4.2	3.9	1.6	4.7	5.8	0.9	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.8	0.7	0.6	0.7	1.0	2.4	9.2
28	27.6	\$	1.4	10.4	7.2	5.0	11.4	5.0	3.9	12.1	16.0	16.5	14.5	13.8	10.8	4.1	2.0	1.0	6.3	3.7	0.7	1.6	10.3	1.6	8.1	27.6
29	2.7	\$	12.1	3.6	1.1	0.9	4.8	3.0	1.7	2.9	5.6	8.9	30.0	11.8	11.0	8.5	2.8	6.8	1.4	2.6	1.4	15.2	11.6	5.2	6.8	30.0
30	4.6	\$	1.3	0.6	4.8	8.6	6.2	6.1	11.4	8.0	8.4	8.0	5.3	4.4	10.8	10.5	1.9	6.1	2.5	6.5	7.2	8.1	2.0	2.5	5.9	11.4
31	5.8	\$	3.5	5.6	14.9	10.9	17.1	12.0	9.6	15.0	11.6	7.0	1.1	1.3	5.3	1.7	1.8	4.0	3.7	2.9	1.0	2.9	2.1	1.1	6.2	17.1
NO.	31	-	31	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	708	100%
MEAN	4.2	-	4.4	5.3	3.4	4.1	4.6	6.0	6.0	7.3	8.5	7.1	6.0	4.9	5.7	3.9	2.6	3.5	3.2	3.6	2.8	3.9	3.4	2.8		
MAX	28.7	-	22.0	42.2	14.9	28.9	22.1	33.4	30.3	19.8	33.1	41.5	30.0	28.9	59.6	20.8	12.4	12.2	16.6	23.1	20.8	18.6	16.6	10.6		



Number of Non-Zero Readings	708
Maximum 1-HR Average	59.6 PPB
Maximum 24-HR Average	11.1 PPB
Monthly Calibration	5
Standard Deviation	6.012
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	4.6 PPB

# Lagoon SO<sub>2</sub> (ppb) – January 2019

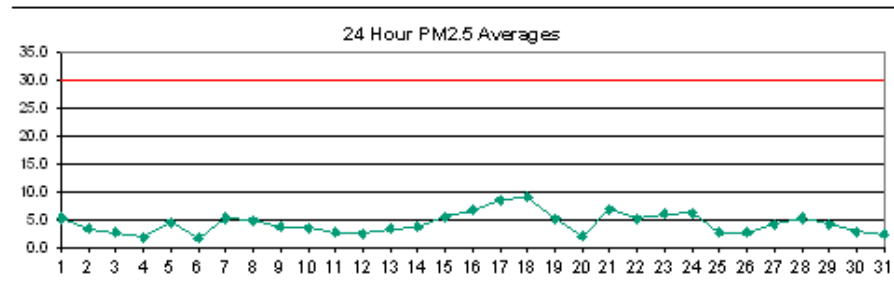
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.0	\$	0.0	0.0	0.0	0.1	3.3	9.3	9.1	5.7	5.9	8.2	4.8	1.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7	1.5	4.6	2.9	2.5	9.3
2	2.7	\$	0.0	0.4	1.4	0.6	0.0	0.1	1.0	0.4	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	2.7
3	0.1	\$	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.5	0.4	0.0	0.5	0.1	0.9	1.3	0.5	0.3	1.9	2.9	2.3	1.6	0.6	2.9
4	1.5	\$	2.3	1.1	1.5	1.4	1.5	0.6	0.6	0.4	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.5	2.3
5	0.0	\$	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.8	0.2	0.1	0.4	0.2	0.4	0.2	0.3	0.1	0.8
6	0.1	\$	0.0	0.0	0.3	0.1	0.0	0.4	0.8	0.4	0.4	0.3	0.1	0.1	0.2	2.1	0.2	2.8	2.1	0.0	0.4	3.1	2.9	2.0	0.8	3.1
7	2.5	\$	1.4	0.0	0.0	0.3	0.1	0.0	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.3	0.0	0.0	0.2	0.7	1.9	0.8	0.1	0.0	0.4	2.5
8	0.0	\$	0.0	0.0	4.6	1.9	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	0.2	0.0	0.3	4.6
9	0.0	\$	0.4	0.2	0.7	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
10	0.0	\$	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3
11	0.0	\$	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
12	0.0	\$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
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
15	0.0	\$	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.0	0.2	0.0	0.1	0.3
16	0.0	\$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.4	0.0	0.1	0.4
17	0.0	\$	0.0	0.1	0.0	0.0	0.2	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.0	0.4	0.3	0.0	0.1	0.0	0.1	0.5
18	0.0	\$	0.0	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.5	0.7	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
19	0.0	\$	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.0	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	1.2
20	0.0	\$	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.1	0.1	0.3	0.2	0.0	0.4	0.3	0.1	0.4	0.1	0.4
21	3.2	\$	1.5	2.2	0.3	0.7	0.3	0.6	1.0	0.4	1.8	1.7	3.4	3.0	6.0	0.8	0.5	0.6	1.1	1.3	1.6	2.1	0.5	0.9	1.6	6.0
22	1.2	\$	1.4	0.4	0.0	0.0	0.0	0.0	0.8	3.6	6.1	0.8	0.2	0.5	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	6.1
23	0.0	\$	1.5	1.9	2.0	2.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5	0.3	0.2	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.4	2.4
24	0.0	\$	2.5	1.4	1.2	1.2	3.2	1.3	2.0	2.5	1.3	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	0.7	3.2
25	0.0	\$	0.4	0.4	0.2	0.3	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	0.1	0.0	0.0	0.1	0.4
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	0.5	0.3	1.0	4.6	0.0	0.6	0.6	0.0	0.3	4.6
27	0.5	\$	1.3	0.5	3.9	2.1	1.5	0.2	0.0	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.9
28	0.0	\$	0.0	1.0	0.3	0.2	0.7	0.2	0.0	0.0	1.3	2.9	2.6	2.9	3.6	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.6
29	0.0	\$	1.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	4.5	2.0	2.0	2.4	0.4	0.0	0.0	0.0	0.0	3.5	2.9	0.9	0.9	4.5
30	0.4	\$	0.2	0.1	0.8	2.0	1.6	1.6	1.2	2.3	1.5	0.6	0.7	0.9	1.3	0.5	0.1	2.4	1.0	2.3	3.1	2.1	1.1	1.3	1.3	3.1
31	0.5	\$	2.2	2.4	3.4	3.8	3.9	1.9	3.2	4.5	2.9	1.4	0.0	0.6	0.2	0.7	0.4	0.4	0.1	0.4	0.3	0.5	0.3	1.6	1.5	4.5
NO.	31	-	31	31	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	708	100%
MEAN	0.4	-	0.5	0.4	0.7	0.6	0.5	0.6	0.7	0.7	0.8	0.6	0.6	0.5	0.5	0.3	0.2	0.3	0.2	0.4	0.4	0.6	0.6	0.4		
MAX	3.2	-	2.5	2.4	4.6	3.8	3.9	9.3	9.1	5.7	6.1	8.2	4.8	3.0	6.0	2.4	0.9	2.8	2.1	4.6	3.1	3.5	4.6	2.9		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	320
Maximum 1-HR Average	9.3 PPB
Maximum 24-HR Average	2.5 PPB
Monthly Calibration	5
Standard Deviation	1.092
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	0.5 PPB

# Lagoon PM<sub>2.5</sub> (µg/m<sup>3</sup>) – January 2019

HOUR																										
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX
1	9.4	7.6	3.3	0.8	1.5	3.7	2.8	4.8	12.3	12.7	13.0	10.9	10.8	6.5	3.0	3.3	1.2	0.1	0.1	0.8	4.4	5.8	4.4	7.6	5.4	13.0
2	6.9	7.3	5.1	3.3	1.9	5.5	4.4	2.2	1.9	4.4	5.1	6.3	4.1	4.1	3.7	1.9	0.5	2.3	2.6	3.3	4.0	2.6	1.5	0.1	3.5	7.3
3	2.6	4.0	4.7	1.5	1.9	2.8	0.8	0.8	0.8	0.8	0.5	3.0	4.4	3.0	1.9	2.6	0.1	6.9	7.3	4.7	3.7	5.5	4.4	1.9	2.9	7.3
4	3.0	2.6	0.4	0.0	1.2	2.3	0.7	0.1	4.0	5.5	3.0	1.2	1.5	3.3	3.0	1.5	0.0	0.0	0.5	3.3	4.0	3.7	3.0	3.0	2.1	5.5
5	1.9	1.2	1.2	1.2	1.2	1.2	4.0	5.1	5.5	5.8	5.8	3.3	3.0	4.0	3.0	3.5	2.3	8.0	9.8	13.4	9.4	8.0	5.8	4.7	4.7	13.4
6	2.3	4.4	6.2	4.4	1.2	0.1	2.3	2.3	0.8	0.1	0.0	0.4	0.8	0.0	0.1	1.2	5.1	3.0	1.2	2.6	2.6	0.7	0.0	3.3	1.9	6.2
7	4.4	2.6	1.4	3.0	1.9	0.0	2.6	4.0	3.0	4.1	5.8	5.1	3.7	2.2	4.8	2.2	1.9	4.8	14.8	13.0	11.9	13.0	10.8	9.8	5.5	14.8
8	5.8	4.0	7.6	6.9	10.1	10.5	6.5	3.7	1.9	2.2	2.2	1.5	3.3	6.2	4.4	4.0	5.8	5.1	5.5	5.1	7.3	5.8	3.0	1.2	5.0	10.5
9	4.8	4.0	1.2	1.9	1.9	1.9	1.9	0.4	0.4	2.2	C	C	C	C	5.5	6.6	6.9	5.5	4.1	7.6	7.6	4.0	4.6	5.8	3.9	7.6
10	4.4	4.0	4.8	6.2	4.0	1.9	0.5	1.5	3.3	4.0	4.8	4.7	3.7	6.5	5.1	3.3	4.1	5.5	3.3	0.0	0.0	3.3	5.1	4.0	3.7	6.5
11	3.3	2.3	2.6	2.6	2.9	1.9	1.2	3.0	3.3	5.4	4.7	3.0	2.2	2.6	3.0	1.9	0.8	3.0	2.9	1.5	2.6	4.4	4.0	2.2	2.8	5.4
12	0.0	1.2	2.6	2.8	1.9	1.9	1.9	1.5	2.2	1.9	1.5	1.2	2.3	6.2	5.5	6.2	5.4	2.3	1.2	4.0	4.0	2.2	1.9	1.5	2.6	6.2
13	1.5	2.6	1.9	2.6	3.3	0.8	0.0	1.9	3.7	3.0	3.0	5.1	3.7	0.8	0.8	3.7	4.4	5.1	4.8	4.4	5.1	4.8	7.6	8.3	3.4	8.3
14	3.0	0.8	1.9	1.9	3.5	4.4	2.2	1.5	1.2	5.1	4.0	2.3	5.1	3.5	1.5	1.9	4.1	7.3	6.7	5.8	7.3	6.9	4.8	5.1	3.8	7.3
15	3.3	0.8	4.4	5.1	4.7	3.0	1.9	2.3	4.0	4.1	6.2	5.5	4.0	2.6	4.7	4.8	5.8	5.5	3.7	5.6	21.2	16.6	10.5	8.7	5.8	21.2
16	5.5	4.8	6.2	5.1	5.8	4.0	3.0	3.0	3.0	2.6	4.8	7.3	5.1	5.9	9.8	7.3	8.4	11.6	10.9	10.8	7.0	15.9	11.2	7.3	6.9	15.9
17	5.1	4.7	9.8	6.7	4.4	4.4	10.5	14.4	11.2	13.0	17.7	11.9	10.5	9.1	12.3	9.8	8.7	5.8	8.3	6.9	5.3	6.9	7.6	5.5	8.8	17.7
18	5.8	8.0	5.8	6.4	6.9	7.3	10.8	9.0	6.4	9.4	8.0	9.4	12.0	15.5	13.8	25.9	13.7	8.4	4.8	10.8	6.9	7.3	4.4	4.0	9.2	25.9
19	5.4	5.8	4.0	2.2	0.5	1.9	3.3	2.2	3.0	3.7	3.1	21.3	27.6	9.0	5.8	1.9	2.2	3.7	2.9	4.0	5.5	4.0	2.3	1.5	5.3	27.6
20	0.4	0.0	0.9	2.2	2.2	2.2	1.2	0.8	3.0	2.6	0.4	0.5	2.2	1.5	0.0	0.8	2.6	4.0	6.2	5.8	3.3	2.3	4.0	3.0	2.2	6.2
21	2.3	10.9	8.4	11.2	9.0	4.7	2.6	4.4	6.2	6.9	5.1	5.5	8.7	18.3	7.3	5.5	5.8	8.3	8.0	8.0	6.4	5.8	4.7	3.3	7.0	18.3
22	1.9	3.7	4.0	5.5	5.5	3.3	0.8	2.6	7.0	27.4	23.3	4.4	6.2	5.8	8.7	6.9	3.0	1.5	0.8	0.7	0.8	2.2	2.2	0.0	5.3	27.4
23	0.1	1.5	2.2	1.5	1.5	3.0	3.0	2.6	3.0	6.9	8.7	9.4	8.0	6.9	14.1	8.0	4.4	7.6	7.3	11.2	9.8	6.9	10.3	10.1	6.2	14.1
24	9.5	9.8	10.9	13.8	11.7	8.0	8.7	11.6	7.3	8.0	8.0	8.3	6.5	4.0	2.2	1.9	4.0	3.3	3.3	5.1	2.6	0.5	2.6	2.6	6.4	13.8
25	2.2	2.2	1.9	3.0	3.3	3.3	2.3	2.6	5.5	4.0	5.1	3.7	2.6	2.2	3.7	4.4	1.9	0.8	4.4	4.4	1.5	0.8	1.5	1.5	2.9	5.5
26	1.2	0.8	1.2	1.9	1.9	0.8	0.0	0.0	0.0	0.0	0.0	0.1	1.9	1.9	0.4	0.4	1.9	4.7	4.7	3.3	4.4	8.7	5.5	18.9	2.9	18.9
27	2.3	14.4	12.7	15.1	8.0	1.2	2.2	5.5	6.8	5.5	3.0	1.9	1.2	2.6	3.3	3.0	2.6	5.1	2.6	2.6	2.6	0.0	0.0	1.5	4.4	15.1
28	3.3	3.0	1.9	3.3	3.0	3.3	5.5	5.8	8.0	5.5	5.1	7.3	10.3	10.1	8.7	6.5	4.0	2.2	4.8	7.6	5.8	3.3	5.8	6.2	5.4	10.3
29	3.7	8.7	5.8	4.4	6.5	4.7	2.6	3.0	5.8	6.2	3.3	1.2	3.3	10.1	8.3	5.8	4.0	1.5	1.9	1.9	0.8	1.9	5.5	3.7	4.4	10.1
30	1.9	2.2	1.5	0.8	0.0	1.9	5.1	2.2	2.2	6.5	5.8	5.1	4.0	3.7	3.7	2.2	2.6	3.7	3.0	2.2	1.5	4.0	4.8	2.2	3.0	6.5
31	0.1	3.3	4.0	4.4	2.6	3.7	5.8	3.3	0.4	3.3	1.9	0.8	1.9	0.8	0.1	1.9	2.2	1.5	3.7	4.0	2.6	1.5	3.0	3.6	2.5	5.8
NO.	31	31	31	31	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31	31	740	100%
MEAN	3.5	4.3	4.2	4.2	3.7	3.2	3.3	3.5	4.1	5.6	5.4	5.1	5.5	5.3	4.9	4.6	4.0	4.5	4.7	5.4	5.4	5.0	5.2	4.1		
MAX	9.5	14.4	12.7	15.1	11.7	10.5	10.8	14.4	12.3	27.4	23.3	21.3	27.6	18.3	14.1	25.9	13.7	11.6	14.8	13.4	21.2	16.6	18.9	10.1		

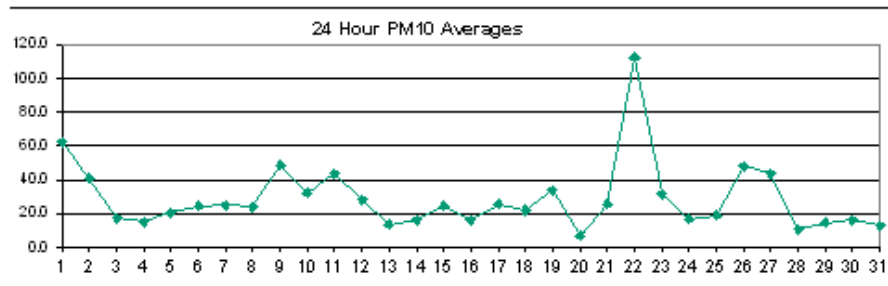


Number of 24HR Exceedences	0
Number of Non-Zero Readings	719
Maximum 1-HR Average	27.6 UG/M3
Maximum 24-HR Average	9.2 UG/M3
Monthly Calibration	4
Standard Deviation	3.701
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	4.5 UG/M3



# Lagoon PM<sub>10</sub> (µg/m<sup>3</sup>) – January 2019

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	137.4	126.1	141.6	30.5	41.9	29.7	23.9	71.1	78.2	143.8	58.1	98.4	127.9	105.9	28.2	14.8	16.1	9.4	16.8	8.8	30.5	53.5	63.5	40.5	62.4	143.8
2	22.4	44.5	21.1	68.3	63.8	100.7	58.1	40.0	59.6	78.6	99.4	72.9	39.9	31.2	50.6	27.7	24.3	24.7	26.9	10.1	7.4	2.2	0.6	2.7	40.7	100.7
3	20.9	10.7	8.7	9.4	9.4	5.3	4.7	4.7	4.7	6.7	17.6	22.2	14.1	14.1	7.4	6.7	9.5	23.7	29.7	27.7	28.7	48.7	45.3	36.5	17.4	48.7
4	26.9	6.0	5.3	1.9	0.0	2.7	22.9	14.8	15.5	12.1	9.4	8.7	11.4	7.4	4.7	15.5	16.3	50.6	20.0	19.7	48.6	24.3	10.7	9.4	15.2	50.6
5	7.4	4.7	6.7	8.9	7.4	4.0	4.0	8.8	38.5	23.0	32.5	62.2	33.9	31.2	65.6	48.6	22.5	20.9	15.6	15.5	10.3	15.5	6.7	6.7	20.9	65.6
6	6.7	7.4	8.0	8.0	7.4	8.0	8.7	6.0	4.7	6.0	9.4	23.0	40.6	37.1	25.7	35.9	72.3	16.4	107.5	43.0	18.2	12.2	38.5	37.2	24.5	107.5
7	29.0	15.5	16.2	10.7	5.3	4.0	8.7	14.8	24.3	39.9	50.7	49.3	22.9	20.9	31.0	0.6	0.0	20.9	24.3	32.4	31.1	20.3	42.0	91.9	25.3	91.9
8	17.5	8.0	9.4	11.4	19.6	19.5	10.1	8.7	5.3	6.7	19.6	18.9	46.7	64.9	33.2	59.5	30.4	38.6	54.8	46.6	24.3	9.4	8.0	9.5	24.2	64.9
9	47.4	62.9	73.1	95.4	51.5	85.2	16.2	4.7	4.7	21.6	C	C	C	C	152.6	169.8	72.0	23.5	14.8	16.2	18.3	23.6	18.1	6.0	48.9	169.8
10	5.3	5.4	17.5	13.5	20.9	14.0	10.2	10.3	32.7	62.7	37.8	109.9	49.4	78.7	100.6	70.7	23.6	20.8	6.0	5.9	8.2	26.4	37.0	13.5	32.5	109.9
11	18.9	19.5	8.7	7.4	8.7	8.2	26.5	46.6	46.6	118.6	130.6	30.1	70.9	46.9	69.4	27.6	18.9	21.1	43.2	34.0	61.6	70.5	86.2	24.6	43.5	130.6
12	8.7	10.2	6.6	1.3	2.7	18.9	16.7	0.0	0.7	20.4	36.0	59.1	90.9	114.7	139.5	55.2	20.2	14.9	29.0	22.1	1.9	1.9	1.9	1.3	28.1	139.5
13	0.6	5.3	4.6	1.3	3.3	3.3	4.7	7.3	5.3	6.7	8.9	8.0	8.8	23.6	20.9	17.6	25.6	11.4	10.2	8.1	16.8	15.8	56.8	49.2	13.5	56.8
14	19.5	6.1	4.0	1.9	1.9	0.0	0.0	2.0	5.4	14.8	10.3	15.6	34.4	30.5	37.3	15.5	18.5	64.7	31.6	8.1	15.4	8.1	15.6	25.5	16.1	64.7
15	1.9	0.0	2.6	4.6	2.0	5.3	1.3	1.4	29.2	46.7	52.1	51.6	75.7	47.2	20.2	6.1	39.1	27.0	26.3	15.0	45.9	38.5	39.1	12.8	24.6	75.7
16	12.1	8.7	3.9	0.0	0.0	5.9	6.7	1.3	2.1	29.0	28.3	22.9	15.3	109.9	14.2	14.1	13.4	8.1	15.5	14.8	18.2	24.3	15.6	11.5	16.5	109.9
17	21.6	14.1	12.9	13.5	12.8	8.7	9.5	25.0	20.9	23.6	23.6	26.3	28.3	17.3	41.2	37.4	75.0	50.7	48.0	34.5	33.0	12.8	10.1	18.2	25.8	75.0
18	20.9	8.7	11.4	12.1	9.4	17.6	29.0	11.4	8.9	38.5	30.3	14.3	36.6	48.0	46.1	68.2	41.8	22.9	14.1	15.5	8.0	6.0	5.3	4.6	22.1	68.2
19	2.2	0.6	6.2	23.7	34.4	19.0	56.6	8.7	9.5	33.1	24.3	22.4	40.0	58.0	174.8	39.8	23.9	84.4	32.4	32.9	42.5	29.0	7.4	8.7	33.9	174.8
20	4.6	0.0	0.6	3.4	20.0	0.0	2.2	2.6	4.0	14.8	0.0	2.0	23.6	8.7	7.4	5.3	4.6	3.4	24.3	12.1	10.7	6.7	3.3	3.3	7.0	24.3
21	6.1	23.6	9.4	11.4	11.4	6.7	3.3	16.2	12.2	28.4	31.8	37.9	37.3	60.8	32.5	37.8	29.2	65.6	40.5	18.9	22.3	39.8	19.6	16.8	25.8	65.6
22	14.1	15.5	31.2	67.1	84.7	83.2	63.1	138.8	342.6	485.2	484.1	111.8	152.8	100.7	281.2	96.0	42.6	53.4	23.6	1.1	4.0	6.7	6.7	4.0	112.3	485.2
23	2.6	4.7	8.0	11.4	11.4	6.7	4.0	6.0	15.5	31.7	15.5	38.3	229.9	42.7	82.5	54.1	61.5	14.2	39.8	16.2	15.5	12.1	15.5	20.9	31.7	229.9
24	21.6	14.2	20.9	17.5	11.4	12.8	13.5	20.1	14.8	22.3	16.9	18.9	26.3	20.2	18.2	20.2	20.9	36.5	8.7	11.4	9.4	7.4	9.4	17.5	17.1	36.5
25	4.0	17.5	17.6	44.0	42.2	18.9	36.5	21.6	33.1	18.9	37.2	21.6	20.2	12.8	22.2	3.3	34.5	26.3	0.0	1.3	8.0	11.4	6.0	1.9	19.2	44.0
26	1.9	1.9	1.9	1.3	1.3	2.6	2.6	3.3	1.9	6.7	9.4	8.0	10.1	10.1	35.2	82.5	25.7	25.7	43.3	68.5	189.6	88.4	450.4	78.5	48.0	450.4
27	12.3	280.4	254.0	230.2	62.9	32.4	16.2	3.3	6.7	10.7	8.0	6.1	8.0	6.0	14.8	2.6	5.3	19.6	15.6	19.6	11.7	12.8	8.7	3.3	43.8	280.4
28	1.3	1.3	1.3	2.6	10.1	10.8	4.0	5.3	6.1	4.7	8.7	10.8	32.8	26.3	37.9	23.0	24.3	9.4	7.4	6.1	7.4	8.7	7.4	8.0	11.1	37.9
29	8.0	5.3	25.7	15.5	6.0	4.0	2.6	2.6	4.7	9.4	12.8	12.8	27.0	65.2	30.4	32.4	24.3	4.7	6.7	7.4	3.3	1.9	24.3	19.6	14.9	65.2
30	7.4	10.7	20.9	5.3	4.7	6.7	10.1	19.6	6.0	14.8	27.0	36.5	52.1	44.6	34.5	19.6	11.4	20.0	17.5	4.0	3.3	4.7	5.3	3.3	16.3	52.1
31	4.7	7.4	4.7	5.3	12.8	10.8	8.8	16.8	16.2	26.3	31.1	24.3	19.6	17.5	12.8	16.2	4.0	8.8	13.5	8.0	7.4	18.9	14.8	8.0	13.3	31.1
NO.	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	31	31	740	100%
MEAN	16.6	24.1	24.7	23.8	18.7	17.9	15.6	17.5	27.8	45.4	45.4	34.8	47.6	43.4	54.0	36.3	27.5	27.2	26.1	18.9	24.6	21.4	34.8	19.2		
MAX	137.4	280.4	254.0	230.2	84.7	100.7	63.1	138.8	342.6	485.2	484.1	111.8	229.9	114.7	281.2	169.8	75.0	84.4	107.5	68.5	189.6	88.4	450.4	91.9		

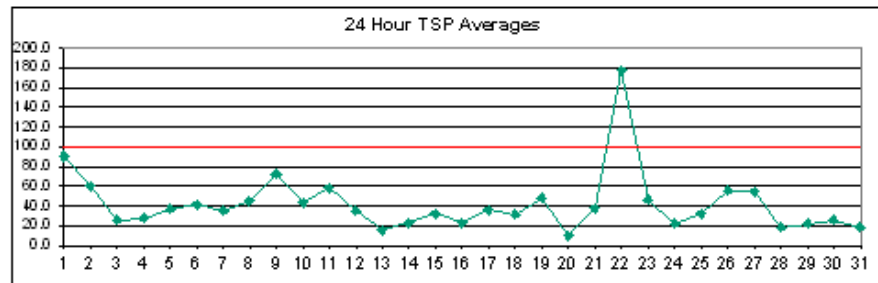


Number of Non-Zero Readings	728
Maximum 1-HR Average	485.2 UG/M3
Maximum 24-HR Average	112.3 UG/M3
Monthly Calibration	4
Standard Deviation	45.31
Operational Time	74+HRS
Operational Uptime	100.0%
Monthly Average	28.4 UG/M3



# Lagoon TSP ( $\mu\text{g}/\text{m}^3$ ) – January 2019

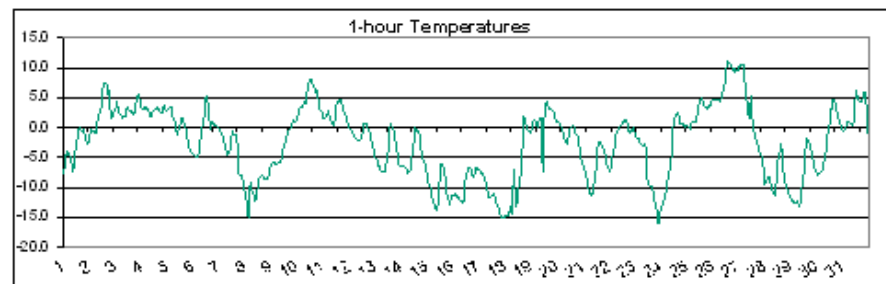
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	156.8	206.8	106.2	40.3	36.1	32.0	28.6	120.5	120.0	236.9	101.4	144.4	192.2	168.0	40.2	22.3	20.9	11.4	23.7	17.2	62.7	104.0	120.0	58.1	90.4	236.9
2	37.8	75.8	25.3	51.5	65.9	158.7	95.4	63.8	69.8	125.0	180.8	119.9	38.9	41.8	62.3	41.7	40.4	50.8	47.0	18.1	8.5	5.7	5.0	7.2	59.9	180.8
3	25.0	15.3	3.0	12.8	9.9	9.8	4.4	14.1	19.5	7.2	25.1	25.0	12.8	27.7	4.5	18.1	10.5	32.2	52.6	40.2	25.6	84.6	93.8	44.9	25.8	93.8
4	38.7	11.2	7.1	2.9	0.0	8.7	32.0	22.3	25.1	27.8	16.8	16.8	18.2	7.1	5.8	22.2	9.1	102.2	51.3	43.5	102.2	55.3	23.7	8.5	27.4	102.2
5	3.1	16.8	16.8	11.3	8.5	5.8	15.5	25.3	62.5	73.4	66.7	96.8	59.1	61.4	117.6	103.4	33.3	27.8	16.8	16.8	15.9	5.1	12.6	7.1	36.6	117.6
6	11.3	14.0	5.8	9.8	11.2	4.4	12.6	5.8	7.8	9.9	8.7	37.6	64.0	32.1	44.6	63.0	161.1	64.7	202.6	70.4	12.7	19.8	63.8	66.5	41.8	202.6
7	49.9	31.9	7.1	7.1	5.7	3.0	14.1	32.2	47.3	68.1	87.2	63.9	30.6	23.8	34.6	12.6	7.3	36.2	48.6	45.8	33.3	11.5	53.5	99.3	35.6	99.3
8	26.4	10.2	16.8	22.4	36.1	27.9	23.7	15.7	16.8	11.5	45.8	32.3	82.0	113.3	58.6	122.9	59.7	77.8	116.2	95.3	41.5	14.0	8.5	16.1	45.5	122.9
9	93.0	120.6	131.6	153.2	63.8	71.9	37.4	14.0	4.4	19.6	C	C	C	C	216.2	261.5	104.6	30.5	22.4	33.3	22.4	29.1	13.9	4.3	72.4	261.5
10	2.9	0.0	15.4	14.2	27.9	25.0	9.9	15.8	54.6	110.3	55.8	94.1	80.7	117.1	103.7	78.6	31.7	35.9	8.5	5.9	19.8	47.4	70.3	26.5	43.8	117.1
11	29.2	26.4	12.6	9.9	11.3	8.8	40.4	54.0	44.1	162.1	170.6	43.4	85.5	42.0	77.2	32.0	34.6	32.4	61.0	51.7	97.1	104.2	138.8	25.1	58.1	170.6
12	12.9	25.0	8.5	5.8	10.5	30.6	27.7	8.5	4.5	23.8	39.0	51.4	113.5	97.2	118.8	77.3	41.6	35.0	60.7	25.0	14.0	5.7	4.3	3.0	35.2	118.8
13	3.0	5.7	4.3	3.0	2.9	0.3	7.1	11.2	5.0	0.0	4.4	7.2	11.3	21.1	37.1	19.7	33.2	14.0	14.0	5.9	20.9	18.5	63.8	58.0	15.5	63.8
14	22.2	11.2	4.3	0.2	1.6	0.7	0.2	1.6	1.7	19.6	22.3	18.5	48.6	47.2	40.1	19.7	36.7	103.5	57.9	15.5	24.9	5.8	16.9	34.5	23.1	103.5
15	4.4	12.5	5.7	7.1	7.2	12.6	5.7	5.9	30.8	54.1	55.4	47.5	88.4	44.2	12.7	17.1	63.6	34.9	53.9	25.4	70.5	43.2	58.0	15.4	32.4	88.4
16	18.2	18.1	4.4	7.1	0.0	0.0	8.5	3.0	1.8	30.8	52.6	33.3	20.8	185.6	16.8	18.2	15.6	9.9	14.1	25.0	19.6	18.2	14.1	23.7	23.3	185.6
17	23.7	22.3	25.1	23.6	11.3	9.9	15.5	22.3	25.2	45.9	52.7	51.2	34.7	24.0	69.3	68.0	81.7	66.6	71.9	43.0	40.1	16.8	15.4	8.6	36.2	81.7
18	19.5	12.7	11.2	8.5	15.4	14.2	42.9	14.0	8.9	62.3	45.8	37.6	44.6	63.8	60.0	113.9	60.8	19.6	19.6	19.6	19.5	12.6	9.7	8.5	31.0	113.9
19	7.1	9.9	10.0	34.8	38.8	24.0	64.8	9.9	10.1	52.7	40.4	48.7	72.2	101.4	142.2	71.9	36.7	129.5	47.3	63.8	78.8	42.8	4.4	11.2	48.1	142.2
20	7.2	12.6	4.4	10.0	23.6	1.6	1.6	3.1	14.0	7.1	4.4	4.5	23.6	4.4	5.7	5.7	3.0	5.1	22.3	25.0	18.2	16.8	14.0	9.9	10.3	25.0
21	8.6	30.5	12.7	15.4	5.0	15.4	11.3	16.8	23.7	30.7	49.9	39.5	58.3	70.5	39.0	54.1	53.1	120.3	78.7	29.2	29.4	66.3	23.7	27.8	37.9	120.3
22	22.4	34.5	48.2	108.0	114.9	102.4	78.1	164.3	658.8	1003.9	802.4	152.7	231.8	113.2	289.7	139.4	63.8	71.9	34.6	3.1	3.0	1.6	1.6	1.6	176.9	1003.9
23	1.7	14.0	16.8	18.1	7.1	7.1	4.4	15.4	11.4	45.7	21.0	36.3	336.4	104.0	131.3	81.9	95.2	19.8	60.8	21.0	26.4	18.1	15.4	11.3	46.7	336.4
24	15.4	14.0	16.9	30.6	25.0	8.5	18.2	27.9	32.0	37.2	23.7	23.8	22.6	9.9	15.4	20.5	32.1	51.2	16.9	29.1	7.1	8.6	23.7	27.8	22.4	51.2
25	25.2	45.8	39.1	85.3	80.5	25.2	60.9	25.3	63.6	30.7	51.3	26.4	19.5	15.5	31.9	7.3	40.3	45.7	9.9	7.7	16.8	20.9	0.2	3.0	32.4	85.3
26	7.1	15.4	3.0	3.0	4.4	5.7	3.0	1.6	4.4	15.4	9.9	7.1	8.5	7.3	44.6	73.3	33.4	33.5	51.5	93.3	233.3	113.2	454.9	105.0	55.5	454.9
27	20.7	305.4	226.9	231.9	83.0	51.3	26.4	16.8	16.8	12.6	10.2	2.9	0.0	16.9	34.7	9.9	19.8	82.9	26.6	54.0	31.5	19.5	9.9	5.7	54.9	305.4
28	5.8	20.9	3.0	7.1	5.7	7.1	4.4	8.5	7.4	9.7	12.7	15.5	37.5	34.8	52.7	37.5	37.2	25.1	23.7	12.6	22.3	15.4	5.8	19.5	18.0	52.7
29	10.1	23.8	36.1	12.7	7.1	5.7	1.6	0.0	12.7	19.6	19.6	18.2	35.3	89.9	44.7	41.7	40.2	16.8	5.7	4.4	3.0	8.6	41.6	23.6	21.8	89.9
30	3.0	25.1	23.7	7.1	3.0	12.7	16.9	36.1	12.7	20.6	56.9	61.1	69.3	54.1	47.2	38.8	7.1	21.0	37.5	14.0	4.4	14.0	15.4	11.3	25.5	69.3
31	4.4	5.7	4.4	14.0	18.3	14.0	14.1	27.9	32.0	45.9	61.3	27.8	14.0	5.7	9.8	15.4	12.7	27.8	15.9	9.9	7.1	16.8	27.8	12.6	18.6	61.3
NO.	31	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	31	31	31	740	100%
MEAN	23.1	38.5	27.6	31.2	23.9	22.7	23.5	25.9	46.8	78.1	73.2	46.2	65.2	58.2	64.8	55.1	42.6	46.3	44.3	31.1	36.5	31.1	46.0	25.3		
MAX	156.8	305.4	226.9	231.9	114.9	158.7	95.4	164.3	658.8	1003.9	802.4	152.7	336.4	185.6	289.7	261.5	161.1	129.5	202.6	95.3	233.3	113.2	454.9	105.0		



Number of 24HR Exceedences	1
Number of Non-Zero Readings	733
Maximum 1-HR Average	1003.9 UG/M3
Maximum 24-HR Average	176.9 UG/M3
Monthly Calibration	4
Standard Deviation	68.7
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	41.9 UG/M3

# Lagoon Temperature (°C) – January 2019

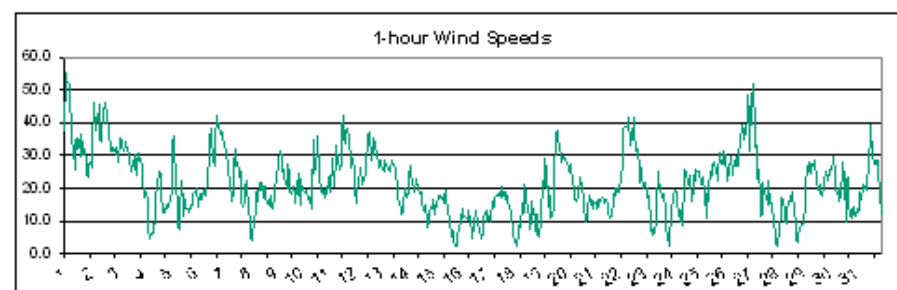
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	-7.6	-6.1	-4.6	-4.6	-4.1	-4.3	-5.0	-5.6	-6.4	-7.4	-6.5	-4.3	-3.4	-0.6	-0.2	0.1	0.1	-0.7	-0.3	-0.7	-1.4	-1.8	-2.7	-2.3	-3.3	0.1
2	-2.0	-0.3	-0.2	-0.7	-0.5	-0.9	-0.8	-0.4	2.1	1.9	2.4	4.1	6.2	7.2	7.4	7.5	7.2	5.7	6.2	3.7	2.1	1.7	2.0	3.0	2.7	7.5
3	2.7	3.4	4.3	2.7	2.2	2.3	1.8	1.6	1.8	1.9	3.0	3.3	3.3	2.8	2.7	2.5	2.3	2.4	2.7	3.1	5.2	5.7	5.2	4.5	3.1	5.7
4	3.4	3.3	3.2	3.4	3.2	3.5	3.0	2.6	2.0	1.9	2.3	2.8	3.3	3.0	3.1	3.5	3.0	3.0	2.5	2.4	3.5	3.6	3.3	2.8	3.0	3.6
5	2.9	3.0	3.5	3.3	3.3	2.4	1.2	1.1	-0.3	-1.2	-0.8	0.0	0.6	1.6	1.7	1.3	0.5	-0.6	-1.6	-2.0	-3.0	-3.7	-3.9	-4.4	0.2	3.5
6	-4.6	-4.6	-4.8	-4.8	-4.9	-4.0	-2.7	-1.4	-0.7	0.6	2.5	5.1	5.2	4.5	3.8	2.7	-0.2	0.9	0.7	0.5	0.3	0.3	0.2	0.0	-0.2	5.2
7	-0.3	-0.7	-0.9	-1.5	-2.2	-2.6	-3.5	-4.0	-4.5	-4.4	-3.3	-2.0	-0.8	-0.5	-1.1	-1.1	-1.3	-3.6	-7.2	-8.0	-8.1	-8.4	-9.4	-9.9	-3.7	-0.3
8	-11.1	-12.7	-14.5	-15.2	-10.3	-9.4	-10.0	-10.8	-11.6	-12.2	-11.9	-11.1	-9.9	-8.6	-8.1	-7.9	-7.9	-8.3	-8.5	-8.6	-8.7	-8.6	-7.9	-7.0	-10.0	-7.0
9	-6.1	-5.9	-6.9	-5.9	-6.0	-6.0	-5.9	-5.7	-5.7	-6.7	-5.2	-4.2	-3.1	-2.0	-1.4	-1.3	-0.7	-0.4	0.1	0.3	1.1	1.2	0.8	1.2	-3.0	1.2
10	1.5	2.3	2.7	3.4	3.6	3.6	3.9	4.4	4.0	4.7	7.1	7.7	8.1	8.1	7.6	7.0	6.6	6.0	6.1	5.5	4.2	3.5	2.9	2.3	4.9	8.1
11	1.6	1.6	1.6	1.8	3.0	2.1	2.0	1.6	0.8	0.3	0.4	2.0	3.1	4.2	4.3	4.6	4.7	4.0	3.7	3.1	2.6	1.6	0.9	0.5	2.3	4.7
12	0.1	-0.2	-0.5	-0.6	-1.2	-1.5	-2.0	-2.2	-2.1	-2.0	-2.0	-1.8	-0.7	0.6	0.8	0.8	0.5	0.1	-0.3	-1.1	-1.6	-2.7	-3.2	-3.8	-1.1	0.8
13	-4.6	-5.1	-6.6	-6.3	-6.6	-7.1	-7.2	-7.4	-7.3	-7.3	-6.8	-5.3	-3.1	-0.6	0.8	0.5	0.0	-0.7	-1.5	-2.8	-3.3	-4.5	-5.7	-6.4	-4.3	0.8
14	-6.6	-6.5	-6.4	-6.5	-6.8	-7.1	-7.6	-7.4	-7.4	-6.9	-6.1	-3.7	-1.5	0.1	-0.4	-0.4	-0.7	-1.5	-3.2	-4.3	-5.0	-5.6	-6.3	-6.7	-4.8	0.1
15	-8.3	-9.1	-9.7	-10.5	-11.2	-12.1	-12.5	-13.0	-13.5	-13.7	-12.6	-10.2	-7.8	-6.3	-6.2	-6.8	-7.5	-8.7	-10.5	-11.8	-12.6	-12.8	-11.7	-11.5	-10.4	-6.2
16	-11.4	-11.0	-11.3	-11.4	-11.7	-11.7	-11.9	-12.3	-12.4	-12.3	-12.3	-9.8	-7.9	-7.2	-6.9	-6.8	-6.7	-7.1	-8.1	-8.1	-7.4	-6.8	-6.7	-6.9	-9.4	-6.7
17	-7.1	-7.4	-7.5	-7.6	-7.7	-8.5	-9.4	-10.2	-11.1	-11.7	-11.8	-11.6	-11.4	-11.2	-11.2	-11.7	-12.3	-13.0	-13.7	-14.4	-14.7	-14.9	-15.0	-14.9	-11.3	-7.1
18	-14.9	-14.9	-14.8	-14.6	-13.3	-14.2	-14.5	-12.7	-7.0	-7.2	-13.1	-12.4	-11.3	-8.7	-8.7	-7.6	0.7	2.0	1.7	0.7	0.2	0.0	-0.5	-0.9	-7.7	2.0
19	-0.5	-0.3	0.9	1.3	1.1	0.8	0.0	0.4	1.7	1.7	-4.3	-7.3	-0.6	4.1	4.3	3.7	3.5	3.1	3.1	3.2	2.9	2.4	2.0	1.3	1.2	4.3
20	1.0	1.0	0.7	0.6	-0.2	-0.7	-0.8	-1.4	-2.1	-2.8	-2.9	-0.9	-0.3	0.1	0.4	0.3	-0.1	-0.6	-1.1	-1.6	-2.7	-3.8	-4.8	-5.9	-1.2	1.0
21	-6.4	-7.0	-7.2	-8.0	-8.9	-9.7	-10.8	-11.4	-11.0	-10.9	-10.1	-8.7	-6.7	-3.7	-2.7	-2.5	-2.5	-3.1	-3.3	-3.7	-4.1	-4.9	-5.9	-6.6	-6.6	-2.5
22	-7.1	-7.2	-6.9	-5.4	-4.0	-3.0	-1.3	-0.8	-0.7	-0.2	0.1	0.4	0.7	1.0	1.0	1.2	1.4	0.5	-0.7	-0.8	-0.6	-0.6	0.1	-0.2	-1.4	1.4
23	-1.1	-1.6	-1.7	-1.9	-2.2	-2.6	-2.8	-3.0	-3.1	-2.9	-3.3	-8.1	-9.0	-9.4	-9.7	-9.7	-9.8	-11.1	-12.0	-12.7	-14.1	-15.9	-15.9	-14.4	-7.4	-1.1
24	-13.9	-12.5	-12.5	-12.0	-11.6	-10.1	-9.5	-7.8	-6.7	-6.9	-4.4	-0.7	1.0	2.3	2.3	2.3	2.4	1.7	0.8	0.7	0.8	0.4	0.3	0.1	-3.9	2.4
25	0.2	0.2	0.0	-0.4	0.5	0.9	1.1	0.9	1.0	1.7	2.4	3.5	4.2	4.9	4.6	4.4	4.0	3.4	3.1	3.4	3.6	3.8	3.6	4.2	2.5	4.9
26	4.7	4.6	4.8	4.7	4.6	4.5	4.3	4.9	5.5	6.6	8.2	9.3	10.7	11.2	11.0	10.6	10.3	9.8	10.0	9.1	10.0	9.7	9.5		7.6	11.2
27	10.1	10.3	10.4	10.6	10.5	8.3	7.3	6.2	2.7	1.5	2.8	5.3	2.7	0.2	-1.5	-1.4	-2.0	-2.7	-3.1	-3.8	-4.7	-4.9	-5.6	-7.6	2.1	10.6
28	-9.6	-9.3	-8.7	-8.1	-8.4	-9.0	-9.7	-10.2	-11.1	-11.2	-10.5	-8.3	-6.6	-4.7	-3.5	-2.8	-4.1	-5.9	-8.7	-9.9	-9.5	-10.7	-10.8	-11.5	-8.4	-2.8
29	-12.1	-12.3	-12.2	-12.6	-12.6	-12.7	-12.4	-13.2	-13.0	-12.6	-10.9	-8.9	-6.7	-4.6	-2.7	-1.8	-2.2	-2.7	-3.1	-4.2	-5.0	-6.0	-6.5	-7.1	-8.3	-1.8
30	-7.5	-7.9	-7.8	-7.6	-7.3	-7.0	-6.0	-5.2	-4.5	-3.9	-2.3	-0.2	1.3	3.1	3.2	4.8	4.7	3.7	3.0	2.6	1.9	0.8	0.1	-0.2	-1.6	4.8
31	-0.4	-0.5	-0.2	0.7	0.9	0.9	1.0	0.6	0.7	0.4	0.9	3.8	5.8	6.2	5.1	4.4	4.4	4.4	4.3	4.8	5.8	5.9	1.8	-1.3	2.5	6.2
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	-3.7	-3.7	-3.6	-3.7	-3.5	-3.7	-3.9	-3.9	-3.9	-3.9	-3.6	-2.4	-1.1	-0.1	0.0	0.0	0.0	-0.6	-1.3	-1.8	-2.0	-2.4	-2.9	-3.2		
MAX	10.1	10.3	10.4	10.6	10.5	8.3	7.3	6.2	4.9	5.5	7.1	8.2	9.3	10.7	11.2	11.0	10.6	10.3	9.8	10.0	9.1	10.0	9.7	9.5		



Number of Non-Zero Readings	744
Maximum 1-HR Average	11.2 C
Maximum 24-HR Average	7.6 C
Monthly Calibration	0
Standard Deviation	5.896
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	-2.5 C

# Lagoon Wind Speed (km/hr) – January 2019

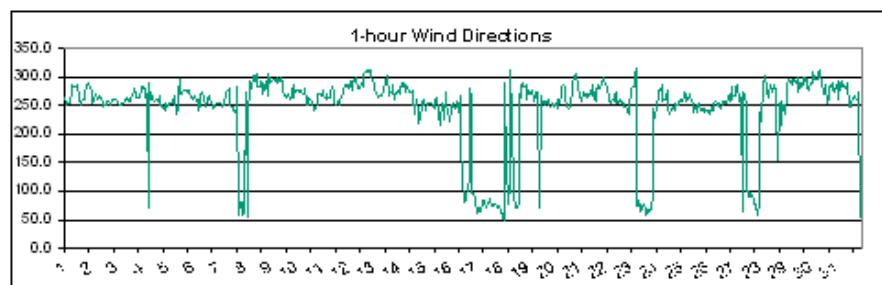
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	37.7	55.0	51.6	52.3	52.0	51.0	34.5	34.1	32.5	25.6	34.8	35.2	32.1	34.9	29.4	36.2	32.4	30.0	32.0	28.0	24.4	23.3	27.2	27.9	35.6	55.0
2	26.5	34.6	44.0	46.1	37.9	40.8	40.3	45.7	35.5	34.2	36.1	43.5	46.4	44.7	43.9	42.3	37.6	31.1	32.7	31.1	32.7	31.7	32.2	31.4	37.6	46.4
3	29.1	28.2	35.3	34.9	33.1	31.2	31.5	32.4	34.4	31.8	30.3	29.7	25.4	26.6	26.9	30.0	27.2	24.0	27.2	30.7	28.4	29.0	26.4	22.5	29.4	35.3
4	18.7	17.1	19.0	16.0	7.6	4.8	4.5	6.2	6.5	9.4	9.4	16.9	21.4	25.0	24.0	24.7	18.1	13.5	12.8	12.6	14.7	13.7	14.5	15.0	14.4	25.0
5	16.2	19.8	34.4	35.8	34.0	21.5	15.4	8.6	7.8	11.8	22.4	15.4	11.8	16.7	13.6	13.9	13.8	12.9	14.8	14.0	15.2	17.9	18.8	19.8	17.8	35.8
6	20.2	15.7	14.6	18.6	18.3	16.4	19.4	18.6	18.9	17.7	22.6	30.4	35.6	38.1	35.9	29.3	26.9	36.8	40.2	42.2	38.2	37.5	36.5	36.8	27.7	42.2
7	35.9	33.3	32.0	29.4	28.0	25.7	21.7	16.8	16.0	19.1	26.9	31.8	26.8	28.2	25.5	23.3	25.0	16.5	14.6	15.7	20.7	22.2	18.5	16.5	23.8	35.9
8	6.8	5.0	4.0	4.0	10.8	12.2	18.5	19.2	15.9	21.8	19.4	22.0	20.1	17.1	20.5	17.0	15.7	14.8	16.2	17.5	15.0	13.9	17.3	20.4	15.2	22.0
9	22.3	24.2	26.1	28.8	31.7	29.8	25.2	25.8	23.0	22.4	20.1	27.2	24.4	19.5	18.5	19.7	20.7	18.9	15.6	20.0	24.8	19.9	14.9	23.1	22.8	31.7
10	19.4	18.9	19.0	19.0	19.3	16.7	17.8	17.2	14.0	16.9	34.7	24.8	25.7	32.3	36.0	25.3	24.1	19.1	19.5	18.6	19.3	17.3	18.6	23.6	21.6	36.0
11	20.9	19.1	24.2	24.2	29.3	20.7	30.4	33.2	28.8	29.1	25.8	26.8	37.3	42.4	35.8	33.8	37.7	38.0	35.8	32.4	31.2	26.4	28.9	25.6	29.9	42.4
12	20.1	15.4	19.1	21.9	25.5	26.1	21.0	22.2	22.5	25.1	30.8	31.5	36.6	36.9	28.5	28.9	30.7	35.4	33.4	33.4	30.5	28.2	26.1	28.4	27.4	36.9
13	27.3	25.7	25.1	28.5	27.3	27.2	25.7	25.4	25.0	28.7	28.2	27.5	26.5	25.5	20.2	16.7	16.1	14.0	12.0	12.4	15.3	19.0	20.1	17.3	22.4	28.7
14	19.1	23.9	26.7	23.3	22.9	18.9	19.0	22.4	22.8	20.0	19.9	18.5	18.8	16.7	13.2	13.8	15.0	10.2	7.9	9.8	12.4	14.3	13.9	16.5	17.5	26.7
15	12.1	14.7	14.4	17.5	16.7	17.9	17.1	17.1	15.3	17.7	19.6	17.1	13.6	13.8	10.5	5.2	7.6	7.1	4.1	2.6	2.2	5.1	8.2	7.5	11.9	19.6
16	10.3	13.6	10.8	11.6	11.6	11.0	10.5	13.3	11.1	10.5	7.2	4.4	8.9	13.5	12.7	10.3	10.4	6.4	5.9	4.6	5.7	11.5	11.9	13.3	10.0	13.6
17	9.8	11.4	10.1	9.6	10.4	16.0	14.5	16.8	17.5	18.0	18.1	18.7	18.6	17.2	20.6	18.5	16.6	18.8	18.0	15.9	14.2	13.5	11.3	8.6	15.1	20.6
18	6.3	4.1	4.6	2.6	6.1	8.8	9.6	8.2	15.4	12.4	21.0	19.1	15.3	15.2	9.9	7.6	9.6	16.0	12.3	12.3	6.8	11.8	6.5	5.2	10.3	21.0
19	9.7	11.3	21.9	22.3	20.8	29.1	25.6	14.7	20.3	16.1	11.2	11.3	14.1	28.5	31.3	36.4	37.9	35.9	32.6	29.7	28.1	29.4	29.9	29.0	24.0	37.9
20	27.3	28.2	26.1	25.4	27.3	21.4	22.2	20.3	16.5	16.2	16.9	18.4	22.9	23.5	20.7	16.4	14.8	10.3	9.6	10.1	13.6	17.8	16.9	15.6	19.1	28.2
21	13.7	16.0	15.5	15.9	13.9	14.5	16.6	15.8	17.2	17.0	16.7	15.6	16.5	14.7	13.0	10.8	11.7	11.3	16.7	17.0	20.3	17.7	19.4	20.2	15.7	20.3
22	18.7	24.2	22.0	28.3	37.6	38.8	38.9	38.6	38.0	41.8	32.9	34.3	35.0	41.7	38.2	31.4	34.3	30.9	27.4	21.9	26.6	24.6	20.2	21.7	31.2	41.8
23	21.9	19.3	17.0	17.8	9.4	8.0	5.9	7.6	6.3	10.0	14.9	25.4	21.4	20.9	20.1	17.0	16.5	18.2	13.4	8.7	5.4	2.5	6.9	10.0	13.5	25.4
24	12.9	17.6	19.3	18.8	18.8	17.4	11.5	13.0	10.8	8.6	9.2	22.0	25.6	25.3	21.3	21.1	23.6	23.8	16.3	19.5	23.7	22.1	25.5	25.0	18.9	25.6
25	24.9	25.0	21.2	22.4	23.2	23.4	19.1	11.1	18.3	15.8	19.6	25.2	23.8	26.6	27.7	27.5	26.2	22.2	24.7	30.3	30.9	27.2	27.5	31.3	24.0	31.3
26	29.9	27.9	25.3	22.3	25.0	29.9	27.8	26.1	23.9	28.3	26.8	30.0	27.0	28.8	36.0	36.8	39.2	38.1	35.0	37.6	41.1	48.2	42.9	31.5	31.9	48.2
27	46.7	51.9	47.1	42.4	32.5	33.1	22.7	25.8	17.0	11.8	11.9	21.8	18.9	17.8	17.5	15.2	22.3	15.4	17.5	14.6	10.9	8.6	7.8	3.4	22.3	51.9
28	2.3	7.0	6.6	13.4	17.3	16.4	13.0	9.9	9.0	13.1	15.9	15.8	16.7	19.1	17.9	14.0	9.0	4.4	3.6	5.9	7.4	7.5	9.3	9.4	11.0	19.1
29	9.5	14.9	21.1	26.0	28.2	25.6	24.5	27.4	26.6	28.6	27.3	24.0	22.6	19.7	21.3	18.8	18.0	18.3	20.1	22.2	25.2	22.0	23.0	25.6	22.5	28.6
30	23.9	26.4	27.5	29.8	25.2	20.7	18.5	20.3	15.8	17.1	18.3	25.0	27.7	22.9	9.6	23.2	23.2	15.6	12.2	10.7	13.9	14.4	12.1	11.4	19.4	29.8
31	13.7	12.6	13.5	18.8	16.8	20.1	21.0	20.5	19.9	21.7	19.7	29.0	35.4	39.3	29.5	30.3	27.5	28.5	27.4	28.7	25.7	18.5	11.9	11.4	22.6	39.3
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	19.8	21.4	22.5	23.5	23.2	22.4	20.8	20.5	19.4	20.0	21.6	23.8	24.3	25.6	23.5	22.4	22.2	20.5	19.7	19.7	20.1	19.9	19.5	19.5		
MAX	46.7	55.0	51.6	52.3	52.0	51.0	40.3	45.7	38.0	41.8	36.1	43.5	46.4	44.7	43.9	42.3	39.2	38.1	40.2	42.2	41.1	48.2	42.9	36.8		



Number of Non-Zero Readings	744
Maximum 1-HR Average	55.0 KMHR
Maximum 24-HR Average	37.6 KMHR
Operational Time	744 HRS
Monthly Calibration	0
Operational Uptime	100.0 %
Standard Deviation	9.576
Monthly Average	21.5 KMHR

# Lagoon Wind Direction (°) – January 2019

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	265.7	257.5	262.5	255.6	253.0	253.3	278.4	285.4	285.0	282.7	283.9	285.5	286.5	263.2	260.2	249.8	254.5	260.5	259.5	270.0	284.3	282.9	291.2	282.3	267.8	291.2
2	282.7	272.6	254.1	257.0	270.5	267.5	265.8	262.4	265.5	266.1	264.8	253.7	248.9	251.0	252.4	252.0	256.3	257.6	253.7	250.9	256.8	261.5	260.2	261.4	259.6	282.7
3	260.4	258.3	258.3	251.6	251.2	253.4	254.6	255.7	256.5	261.5	263.2	259.1	261.6	259.2	265.4	267.1	274.1	280.3	272.5	265.6	263.0	263.2	269.0	272.5	261.8	280.3
4	282.5	281.7	281.8	279.7	246.7	270.0	71.2	290.6	260.7	273.9	263.1	257.4	259.3	260.1	262.0	258.1	268.3	250.0	251.2	252.5	245.8	253.7	240.2	252.7	262.7	290.6
5	251.6	255.1	251.0	253.5	253.9	259.9	264.7	268.8	236.6	241.9	275.1	296.1	271.1	273.6	271.6	278.0	278.2	276.1	277.2	274.6	275.2	275.7	265.0	263.1	264.7	296.1
6	261.2	262.8	267.3	258.8	262.0	241.9	251.8	269.1	275.6	266.8	262.5	253.6	249.1	253.4	260.7	266.3	255.0	257.1	250.5	243.2	248.6	254.7	255.6	255.0	256.1	275.6
7	252.9	254.4	251.0	248.9	251.8	256.3	268.4	273.9	276.8	278.7	255.9	247.9	247.0	248.0	246.4	240.1	248.9	282.5	56.9	59.3	79.7	82.1	59.5	60.0	257.3	282.5
8	69.9	273.6	56.7	226.0	294.0	291.4	288.9	279.8	301.4	293.7	298.7	306.0	284.0	284.7	284.1	292.3	289.3	270.8	279.7	292.7	288.7	268.2	305.2	297.1	290.5	306.0
9	291.2	294.4	295.4	297.3	298.0	296.2	290.6	300.8	294.3	298.4	294.6	293.6	280.5	267.5	267.0	265.7	271.3	271.4	261.3	265.7	276.3	285.9	264.6	278.4	285.3	300.8
10	277.3	277.0	277.5	273.0	276.0	276.2	269.3	271.5	280.4	261.8	251.9	252.8	263.0	259.9	256.9	255.2	249.0	243.1	245.6	256.0	269.2	271.1	270.6	267.7	263.3	280.4
11	276.0	270.5	263.9	263.1	260.5	269.7	264.6	264.7	276.7	281.7	282.8	275.3	259.1	251.6	256.1	256.9	251.3	261.9	263.1	270.5	277.3	288.0	287.2	286.2	267.8	288.0
12	281.1	286.2	284.3	291.8	276.4	292.3	292.1	300.0	292.4	287.6	281.5	280.8	288.0	288.5	284.8	306.5	309.2	313.1	307.8	309.9	312.0	311.0	301.0	295.1	295.6	313.1
13	287.7	279.0	275.0	270.1	267.5	263.5	267.5	267.1	267.0	272.3	277.1	289.3	304.2	301.9	267.8	277.8	274.0	270.6	287.0	260.6	269.8	271.2	274.4	276.8	276.2	304.2
14	270.5	276.4	288.4	284.3	288.9	275.0	286.2	278.8	284.5	273.8	273.7	274.2	277.4	266.7	235.9	244.4	259.9	237.0	219.8	228.1	225.4	249.9	258.8	260.7	269.0	288.9
15	242.7	249.0	251.5	254.9	253.6	255.3	254.3	251.0	249.6	246.1	260.4	262.8	244.1	232.5	217.3	221.6	253.1	251.4	226.6	272.2	255.7	237.7	231.6	223.5	247.9	272.2
16	242.1	252.4	248.0	253.9	246.4	248.0	257.9	237.1	245.5	268.9	199.7	108.3	94.1	80.1	84.1	92.2	102.9	125.5	281.0	264.5	96.0	95.9	90.6	81.1	193.7	281.0
17	64.6	62.3	64.5	70.3	65.0	77.2	85.4	84.0	82.9	71.6	79.1	77.2	86.8	84.4	73.8	78.8	73.0	76.1	78.8	75.8	72.2	76.0	67.0	60.8	75.8	86.8
18	61.5	54.6	48.7	289.3	143.0	81.1	78.5	108.8	314.0	235.3	86.5	88.3	81.4	72.2	69.6	81.8	271.0	265.7	284.0	290.2	284.0	285.2	285.3	260.4	37.6	314.0
19	277.2	277.9	271.3	277.1	272.1	267.3	258.5	266.2	274.1	273.5	72.0	75.6	266.3	259.4	257.3	251.8	259.3	254.9	257.5	260.1	254.0	249.0	252.7	253.9	261.2	277.9
20	250.1	247.8	252.1	261.0	245.6	258.1	260.0	264.4	281.0	287.2	284.9	264.0	249.2	248.1	246.3	248.6	253.9	272.2	286.1	298.4	304.6	299.6	294.0	289.3	264.4	304.6
21	263.3	273.8	259.2	272.2	271.8	270.2	268.0	272.0	264.5	267.7	277.3	274.0	269.0	286.3	265.4	257.9	276.0	285.3	279.0	281.4	288.8	287.6	298.7	296.9	276.1	298.7
22	291.0	289.9	281.5	265.9	258.3	256.0	254.2	260.5	257.8	268.4	272.6	253.6	256.1	262.1	259.8	255.5	258.5	253.5	249.0	248.2	245.8	241.9	236.0	255.8	259.3	291.0
23	271.2	277.0	282.1	284.6	304.2	315.9	72.6	82.5	65.5	78.8	66.4	75.6	78.4	69.3	59.7	61.1	69.4	65.9	69.2	67.0	97.8	246.0	238.4	222.7	49.1	315.9
24	249.0	269.5	273.3	281.1	277.2	286.9	259.2	262.2	260.4	264.8	276.1	248.5	236.2	245.0	245.2	249.2	248.0	242.6	253.0	251.8	250.9	257.9	258.7	259.4	256.9	286.9
25	258.4	263.7	274.0	271.8	259.0	263.3	259.6	270.0	259.1	260.0	255.9	239.5	246.2	251.9	240.0	254.8	254.4	240.7	240.6	244.5	238.7	244.1	241.7	241.0	251.6	274.0
26	240.8	234.9	239.0	248.1	242.5	241.6	253.3	256.5	255.5	250.5	253.5	250.5	244.3	250.0	257.6	256.5	256.0	256.0	262.9	268.2	257.0	260.9	283.7	260.7	254.7	283.7
27	267.5	268.0	282.2	280.1	287.1	258.4	256.2	262.5	64.2	273.7	269.6	248.1	109.4	91.8	98.5	97.4	91.7	94.8	88.6	83.4	66.7	77.5	57.2	79.8	272.6	287.1
28	235.3	243.8	221.8	289.2	298.1	302.9	282.1	274.3	262.8	270.4	286.1	278.3	275.4	280.4	287.5	281.5	246.9	154.7	251.8	253.3	215.9	256.5	249.4	234.4	271.8	302.9
29	234.0	271.9	291.1	294.5	296.7	294.4	286.6	296.3	296.0	296.2	289.0	300.2	273.1	290.7	281.1	283.5	299.7	285.3	296.6	301.0	297.4	278.9	277.3	289.6	289.6	301.0
30	285.7	290.8	310.4	302.2	297.5	297.7	295.3	306.7	313.0	302.9	294.9	271.9	271.4	270.4	288.3	252.9	261.8	279.8	287.4	284.1	290.6	278.2	274.3	287.3	287.3	313.0
31	281.5	293.7	282.1	291.3	292.0	284.2	284.7	287.1	279.5	290.7	284.0	256.9	248.5	248.8	259.4	261.4	266.7	265.7	262.0	262.0	262.9	272.5	56.6	58.5	270.7	293.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	246.0	255.5	247.4	264.4	260.0	258.9	244.5	255.2	254.1	259.6	246.3	238.7	235.8	234.0	231.0	232.2	241.4	238.8	240.0	242.1	237.1	244.0	235.4	234.5		
MAX	291.2	294.4	310.4	302.2	304.2	315.9	295.3	306.7	314.0	302.9	298.7	306.0	304.2	301.9	288.3	306.5	309.2	313.1	307.8	309.9	312.0	311.0	305.2	297.1		

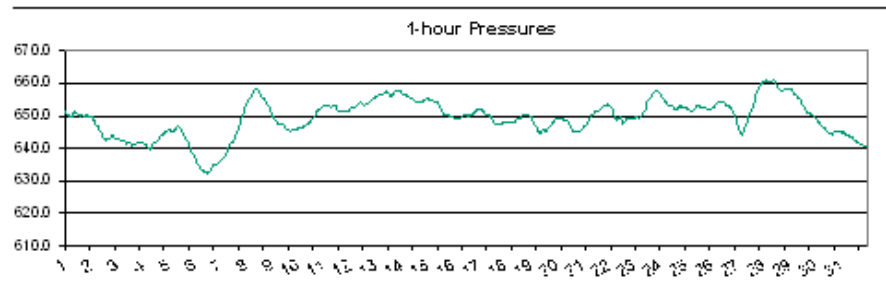


Number of Non-Zero Readings	744
Maximum 1-HR Average	316 degrees
Maximum 24-HR Average	296 degrees
Monthly Calibration	0
Standard Deviation	64.32
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	244.9 degrees



# Lagoon Pressure (mmHg) – January 2019

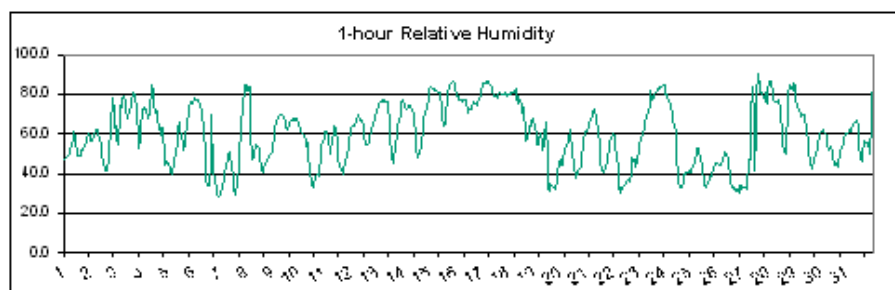
HOUR																											
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX	
1	651.3	650.4	650.2	650.1	649.8	649.8	649.9	650.7	651.0	651.3	651.1	651.0	650.5	650.0	650.1	650.1	650.1	650.0	650.0	650.2	650.1	650.0	649.5	649.7	650.3	651.3	
2	649.6	649.6	648.7	648.4	647.9	647.1	646.6	645.8	645.3	645.0	644.4	643.8	643.1	642.8	642.6	642.8	642.9	643.1	643.6	644.1	644.2	643.6	642.9	642.8	645.0	649.6	
3	642.9	642.7	642.7	642.6	642.3	642.1	642.1	642.2	641.6	641.2	641.6	641.7	641.5	641.2	640.8	641.0	641.2	641.3	641.6	641.5	641.6	641.8	641.9	641.7	641.8	642.9	
4	641.6	641.3	641.2	641.0	640.4	640.0	639.7	640.0	640.4	641.3	641.7	642.1	642.1	642.1	642.3	642.8	643.4	643.8	644.0	644.5	644.7	645.0	645.3	645.6	642.3	645.6	
5	645.7	645.7	645.5	645.3	645.3	645.6	646.0	646.3	646.7	647.0	646.3	645.7	645.2	644.5	644.0	643.6	643.0	642.3	641.7	641.0	640.2	639.5	638.7	637.9	643.9	647.0	
6	637.1	636.6	636.0	635.2	634.6	634.1	633.6	633.2	632.9	633.0	632.9	632.6	632.4	632.5	632.9	633.4	634.6	634.7	634.8	634.9	635.3	635.5	635.6	635.9	634.3	637.1	
7	636.2	636.6	637.0	637.4	637.8	638.3	638.7	639.6	640.5	641.3	641.7	642.0	642.4	642.9	643.8	644.8	645.7	646.7	647.7	648.4	649.5	651.2	652.4	653.1	643.2	653.1	
8	653.6	654.2	654.7	655.4	656.1	656.5	657.1	657.4	658.0	658.4	658.4	657.9	657.2	656.7	656.2	655.7	655.4	655.0	654.4	653.6	652.9	652.3	651.6	650.7	655.4	658.4	
9	650.0	649.5	649.0	648.6	648.1	647.7	647.7	647.4	647.4	647.7	647.5	646.9	646.5	646.0	645.7	645.6	645.4	645.4	645.7	645.7	645.6	645.9	646.0	645.9	647.0	650.0	
10	646.1	646.1	646.2	646.5	646.5	646.6	646.7	647.0	647.4	647.8	647.4	648.1	648.3	649.0	649.1	649.8	650.6	651.2	651.7	652.0	652.2	652.4	652.7	653.0	648.9	653.0	
11	653.4	653.3	653.4	653.4	653.2	653.0	652.8	652.8	653.1	653.4	653.4	653.0	652.3	651.7	651.5	651.5	651.4	651.5	651.5	651.4	651.5	651.4	651.6	651.6	652.4	653.4	
12	651.9	652.7	652.8	652.7	652.4	652.3	652.9	653.4	653.9	654.4	654.4	653.9	653.5	653.3	653.5	653.6	653.6	653.8	654.0	654.6	654.9	655.3	655.5	655.5	653.7	655.5	
13	655.8	656.0	656.4	656.5	656.6	656.5	656.7	656.9	657.0	657.3	657.5	657.1	656.3	655.9	655.9	656.4	656.7	657.0	657.5	657.6	657.7	657.8	657.9	657.8	656.9	657.9	
14	657.4	656.7	656.6	656.6	656.4	656.2	656.1	655.7	655.3	655.3	655.2	654.9	654.3	654.0	654.1	654.0	654.0	654.1	654.2	654.5	654.7	654.7	655.0	655.2	655.2	657.4	
15	655.2	655.0	655.1	655.1	655.0	654.6	654.4	654.2	654.1	654.0	653.6	652.9	652.1	651.2	650.7	650.6	650.4	650.3	650.1	650.1	649.9	649.8	649.6	649.5	652.4	655.2	
16	649.3	649.1	649.2	649.4	649.3	649.2	649.3	649.6	649.9	650.2	650.5	650.4	650.2	649.9	649.7	650.1	650.4	650.6	650.7	651.1	651.4	651.6	651.8	652.1	650.2	652.1	
17	652.3	652.0	651.8	651.6	651.2	650.7	650.6	650.4	650.1	650.1	650.0	649.5	648.8	648.1	647.6	647.4	647.4	647.4	647.4	647.4	647.4	647.5	647.8	647.9	649.3	652.3	
18	647.9	648.0	648.1	648.0	647.8	647.8	647.8	647.9	647.8	648.1	648.8	649.2	649.2	649.2	649.3	649.7	650.1	650.4	650.5	650.6	650.5	650.2	650.1	650.0	649.0	650.6	
19	649.7	648.9	648.3	647.4	647.2	646.2	645.5	644.9	644.6	644.8	645.6	645.8	645.6	645.2	645.4	645.7	646.1	646.6	647.1	647.5	648.0	648.4	648.7	649.0	646.8	649.7	
20	649.2	649.1	649.4	649.3	649.2	649.0	648.8	648.7	648.6	648.4	648.2	647.6	647.1	646.4	645.7	645.3	645.1	645.2	645.3	645.3	645.4	645.5	645.7	645.9	647.2	649.4	
21	646.5	646.8	647.1	647.6	648.1	648.6	649.2	649.8	650.2	650.6	651.1	651.3	651.2	651.2	651.4	651.5	651.8	652.3	652.7	653.0	653.1	653.3	653.4	653.5	650.6	653.5	
22	653.4	653.1	652.8	652.1	650.9	649.9	649.4	649.0	648.8	649.2	649.6	649.5	648.4	647.7	648.0	648.6	649.1	649.2	649.2	649.3	649.3	649.2	649.2	649.2	649.8	653.4	
23	649.4	649.5	649.5	649.3	649.4	649.5	649.7	650.1	650.6	651.3	652.2	653.8	654.8	655.0	655.4	655.9	656.2	656.9	657.2	657.4	657.5	657.5	657.2	657.2	653.4	657.5	
24	656.6	655.9	655.6	655.1	654.5	654.3	653.9	653.3	653.3	653.3	653.4	652.9	652.4	652.2	652.2	652.2	652.3	652.7	652.9	652.9	652.8	652.7	652.7	652.5	653.4	656.6	
25	652.4	652.3	652.0	651.7	651.3	651.4	651.8	652.0	652.4	652.9	653.0	653.1	653.1	652.7	652.4	652.6	652.7	652.8	652.7	652.1	651.8	652.3	652.0	652.1	652.3	653.1	
26	652.5	652.8	653.4	653.8	654.0	654.2	654.5	654.5	654.5	654.5	654.5	654.2	653.8	653.4	652.9	653.0	652.8	652.6	652.5	651.6	650.4	649.8	649.4	648.1	652.8	654.5	
27	646.3	645.3	644.5	644.0	644.3	645.3	646.0	646.8	648.7	649.6	650.4	650.7	651.5	652.6	653.6	654.5	656.0	657.2	658.0	658.9	659.5	659.9	660.1	660.5	651.8	660.5	
28	660.7	660.9	660.7	660.8	660.7	660.5	660.6	660.8	661.1	661.0	660.6	660.0	659.3	658.5	658.1	657.8	657.6	657.9	658.2	658.3	658.2	658.5	658.5	658.5	659.5	661.1	
29	658.4	658.0	657.6	657.2	656.8	656.6	656.2	655.7	655.4	655.2	654.9	654.2	653.1	652.7	651.8	651.5	651.1	650.9	650.7	650.6	650.4	650.4	650.0	649.8	653.7	658.4	
30	649.3	648.6	648.3	648.1	647.7	647.1	646.5	646.5	646.4	645.7	645.3	645.0	644.9	644.7	644.6	644.2	644.5	645.3	645.5	645.3	645.3	645.4	645.1	645.0	646.0	649.3	
31	644.8	645.0	644.6	644.6	644.2	644.1	644.0	643.5	643.3	643.3	643.3	643.0	642.5	642.0	642.1	641.7	641.5	641.3	641.1	641.0	640.7	640.5	640.4	640.7	642.6	645.0	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%	
MEAN	649.9	649.7	649.6	649.5	649.3	649.2	649.2	649.2	649.4	649.6	649.6	649.5	649.1	648.9	648.8	649.0	649.1	649.3	649.5	649.6	649.6	649.6	649.6	649.6	649.6		
MAX	660.7	660.9	660.7	660.8	660.7	660.5	660.6	660.8	661.1	661.0	660.6	660.0	659.3	658.5	658.1	657.8	657.6	657.9	658.2	658.9	659.5	659.9	660.1	660.5			



Number of Non-Zero Readings	744
Maximum 1-HR Average	661 MMHg
Maximum 24-HR Average	659 MMHg
Monthly Calibration	0
Standard Deviation	5.641
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	649.4 MMHg

# Lagoon Relative Humidity (%) – January 2019

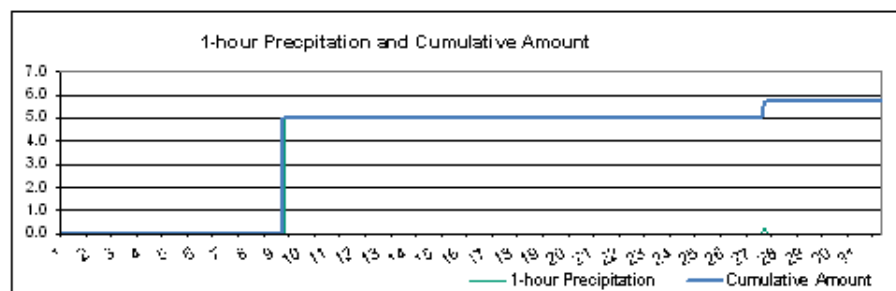
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	47.1	47.3	47.9	48.7	48.7	49.7	52.3	54.9	57.4	60.8	59.2	54.2	52.5	49.0	48.9	49.3	50.5	52.6	52.2	53.4	56.1	57.5	60.5	60.1	53.0	60.8
2	59.2	56.5	56.8	59.3	59.7	61.5	61.8	61.7	56.4	56.7	55.5	51.1	45.1	42.5	41.8	41.7	42.6	46.7	48.7	63.9	77.5	78.1	72.2	62.9	56.7	78.1
3	63.9	57.9	54.7	69.7	74.5	73.3	77.5	78.7	76.3	73.7	67.4	68.3	70.1	75.2	76.9	79.0	81.3	80.1	77.8	73.0	56.2	53.1	57.1	62.6	69.9	81.3
4	71.4	73.2	73.5	71.5	72.0	67.9	69.4	74.0	79.7	84.5	83.1	75.9	70.2	71.6	69.1	62.4	64.4	59.0	63.1	62.7	48.1	44.0	45.1	46.1	66.7	84.5
5	45.0	43.3	40.5	40.3	39.9	45.3	51.8	50.7	55.9	62.2	65.5	62.4	59.7	54.5	52.3	53.7	58.7	65.3	71.7	72.9	76.1	76.5	75.3	77.3	58.2	77.3
6	77.6	76.8	77.5	77.1	77.4	74.5	71.2	67.0	65.7	59.9	51.7	37.9	33.7	34.3	35.6	44.4	69.5	41.5	36.5	35.7	34.0	29.9	28.8	29.4	52.8	77.6
7	30.6	32.8	34.0	36.6	40.9	42.9	47.1	49.2	51.0	49.7	44.6	38.6	33.1	29.4	31.1	34.4	34.3	46.2	66.1	68.6	69.9	71.8	84.9	84.2	48.0	84.9
8	81.3	81.6	83.6	84.0	61.0	47.5	48.4	51.3	53.3	54.7	53.7	53.0	48.5	44.1	42.7	41.0	41.6	45.2	46.4	46.6	47.8	49.5	50.0	51.0	54.5	84.0
9	53.3	58.8	63.1	65.3	66.3	67.7	69.2	69.3	69.4	69.3	68.4	65.8	64.0	62.5	62.2	63.6	64.9	66.4	67.2	68.0	67.6	67.1	67.7	66.1	65.6	69.4
10	65.4	62.6	61.3	59.9	59.2	59.0	56.9	53.8	55.4	51.5	39.8	36.4	34.6	33.3	34.5	36.7	38.4	40.1	38.5	40.6	49.4	53.3	55.7	58.7	49.0	65.4
11	61.4	60.3	60.8	58.0	50.0	53.5	54.4	56.8	61.0	63.9	63.2	55.0	49.0	43.8	44.0	42.3	39.4	42.8	44.0	46.6	48.1	53.6	57.2	59.2	52.8	63.9
12	61.8	63.6	64.2	64.3	66.8	67.6	69.0	69.3	68.1	66.7	66.7	64.9	60.0	54.7	54.2	54.8	55.8	58.2	60.0	63.0	63.9	68.8	69.6	70.8	63.6	70.8
13	72.7	73.2	74.1	75.8	75.8	76.9	76.6	77.0	76.4	75.7	73.2	67.2	58.9	49.4	45.2	47.6	51.4	55.2	58.7	64.5	65.7	70.9	75.4	77.1	67.3	77.1
14	76.7	74.8	73.1	72.8	73.2	74.2	74.5	73.1	72.7	70.8	68.1	60.7	53.6	48.1	50.1	50.5	52.3	55.5	61.2	66.5	70.5	72.7	75.6	76.6	66.6	76.7
15	81.3	83.4	82.9	83.2	82.0	82.4	81.5	81.3	80.8	80.8	78.8	74.6	68.8	64.2	64.9	70.7	76.5	80.9	83.9	84.8	85.6	86.1	86.2	85.2	79.6	86.2
16	83.2	79.1	78.8	77.3	77.5	77.1	76.4	77.6	77.1	75.8	77.3	71.2	70.6	72.4	72.3	73.8	75.4	76.2	74.9	74.1	75.4	77.3	77.5	79.3	76.2	83.2
17	80.6	85.8	85.9	85.7	85.9	86.6	86.1	86.1	84.9	83.4	81.2	80.0	78.8	78.5	78.0	79.5	80.7	81.2	80.3	80.1	80.0	80.4	79.9	80.0	82.1	86.6
18	79.4	79.5	79.7	80.6	80.8	80.9	81.1	82.6	77.7	75.5	79.3	77.2	74.4	70.1	70.9	73.7	60.0	56.2	57.9	62.6	64.0	63.8	66.3	67.6	72.6	82.6
19	65.7	64.9	58.1	54.9	54.9	56.8	60.2	55.9	51.9	53.4	59.0	66.0	49.1	32.9	30.8	34.8	34.1	34.4	33.4	31.8	32.4	35.7	39.3	44.8	47.3	66.0
20	46.9	44.3	44.4	46.8	51.7	54.5	54.2	55.7	57.6	61.1	61.9	51.1	45.6	43.4	39.5	38.0	40.2	41.2	42.2	43.6	49.0	52.8	56.6	60.8	49.3	61.9
21	61.3	62.6	62.8	64.7	67.6	68.8	71.5	72.5	70.5	69.5	67.0	62.8	53.4	46.1	42.5	41.7	40.8	42.3	43.6	46.3	48.7	52.0	55.3	57.7	57.2	72.5
22	59.9	60.4	59.5	54.1	48.6	42.9	32.8	30.6	33.0	32.6	32.6	34.3	34.9	35.5	36.9	36.6	36.2	40.6	47.6	47.4	46.5	47.1	43.6	46.2	42.5	60.4
23	51.7	55.6	56.6	57.7	59.8	63.1	66.1	69.1	70.1	70.4	74.4	81.5	77.5	79.2	78.4	79.2	80.7	81.7	82.3	82.8	83.9	83.2	84.0	84.7	73.1	84.7
24	84.1	80.4	79.7	77.7	77.1	74.0	73.4	70.7	67.0	64.4	61.2	47.5	41.8	36.0	34.4	33.3	33.4	35.4	39.2	40.1	40.0	41.0	40.8	41.2	54.7	84.1
25	40.8	41.9	43.2	45.9	46.5	50.0	52.4	52.8	51.8	47.7	44.1	40.4	37.8	34.2	32.9	33.5	35.1	37.2	38.6	38.7	40.5	41.9	45.0	44.8	42.4	52.8
26	44.8	45.6	44.2	44.3	45.0	45.7	47.2	50.0	50.6	50.3	48.0	43.5	40.3	35.6	33.1	33.3	33.3	31.6	31.7	31.0	33.8	30.7	31.9	33.7	40.0	50.6
27	33.3	33.3	33.0	32.0	33.5	47.4	46.8	47.3	70.0	83.9	68.4	41.5	60.2	79.3	90.0	84.3	81.5	80.2	81.3	78.2	80.8	77.5	74.9	81.5	63.3	90.0
28	86.1	86.1	86.1	80.7	77.0	76.1	76.4	75.8	77.2	76.4	73.4	68.9	63.3	56.0	52.1	50.0	58.2	67.7	79.2	84.1	84.0	83.8	82.2	85.6	74.4	86.1
29	84.6	78.5	74.1	72.5	71.1	70.1	68.5	69.9	69.4	68.1	64.1	61.1	56.9	52.3	46.5	42.8	42.9	45.4	46.0	49.8	52.5	56.2	57.5	59.1	60.8	84.6
30	60.8	62.0	61.0	60.0	59.9	59.3	55.0	51.7	52.6	53.5	51.0	48.1	46.7	43.9	45.5	43.1	45.0	49.2	51.3	52.8	54.8	57.8	59.7	59.8	53.5	62.0
31	60.5	61.3	62.1	61.0	62.4	63.9	64.3	65.8	66.5	67.1	65.2	55.8	48.2	46.4	51.1	55.4	56.2	55.7	55.7	55.2	51.2	50.0	66.2	81.7	59.5	81.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	63.6	63.5	63.1	63.3	62.8	63.3	63.7	63.9	64.8	65.0	62.8	58.0	54.2	51.6	51.2	51.8	53.4	54.6	56.8	58.4	59.2	60.1	62.0	63.7		
MAX	86.1	86.1	86.1	85.7	85.9	86.6	86.1	86.1	84.9	84.5	83.1	81.5	78.8	79.3	90.0	84.3	81.5	81.7	83.9	84.8	85.6	86.1	86.2	85.6		



Number of Non-Zero Readings	744
Maximum 1-HR Average	90.0 %
Maximum 24-HR Average	82.1 %
Operational Time	744 HRS
Monthly Calibration	0
Operational Uptime	100.0 %
Standard Deviation	15.35
Monthly Average	59.8 %

# Lagoon Precipitation (mm) – January 2019

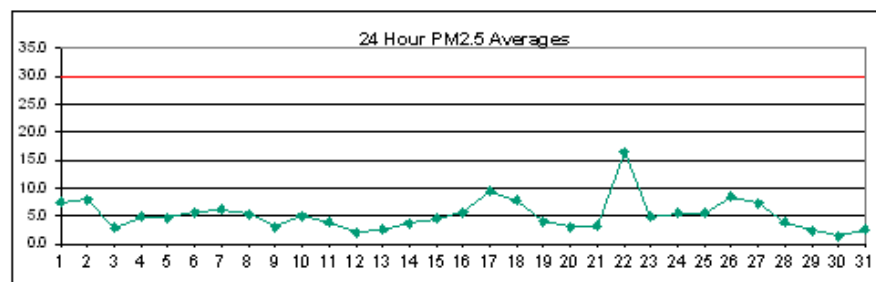
HOUR																										
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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
MAX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Number of Non-Zero Readings	4
Maximum 1-HR Average	5.0 MM
Maximum 24-HR Average	0.2 MM
Monthly Calibration	0
Standard Deviation	0.184
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	0.01 MM

# Windridge PM<sub>2.5</sub> (µg/m<sup>3</sup>) – January 2019

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	10.9	17.4	13.6	15.3	12.3	7.4	3.7	4.4	4.1	5.8	4.5	7.5	11.4	10.7	6.5	4.4	4.5	5.9	6.6	6.9	5.2	3.3	3.3	3.3	7.5	17.4
2	2.7	4.4	4.1	6.1	11.2	8.0	5.5	4.5	5.5	5.5	9.9	9.5	8.3	14.1	19.5	20.0	8.5	9.1	7.1	9.4	7.3	6.4	2.6	3.3	8.0	20.0
3	3.3	1.5	1.5	1.9	3.0	3.3	3.0	3.7	4.0	2.9	1.8	1.2	2.6	4.1	4.8	6.2	4.7	3.2	1.1	0.1	2.8	2.6	4.1	5.0	3.0	6.2
4	9.7	5.1	0.1	2.9	2.5	1.3	5.6	12.2	7.2	3.3	2.9	2.9	3.4	5.9	5.5	5.2	5.8	3.7	4.5	5.9	6.2	4.4	5.1	4.3	4.8	12.2
5	1.5	3.0	3.2	0.3	0.0	0.2	4.0	3.9	1.8	2.0	5.9	5.5	4.3	3.0	3.3	3.2	2.1	9.6	12.0	17.6	9.5	8.0	6.2	4.4	4.8	17.6
6	3.4	3.3	3.8	7.2	2.8	0.0	5.1	3.2	0.8	2.3	1.8	1.6	3.7	4.0	11.9	7.5	2.7	5.9	23.8	15.4	8.3	5.8	5.5	6.9	5.7	23.8
7	5.8	4.5	6.4	4.7	2.2	2.5	1.9	2.5	1.6	0.0	0.2	4.1	C	C	C	C	7.4	12.1	10.3	10.7	12.8	11.0	11.0	11.6	6.2	12.8
8	6.6	3.4	8.1	8.4	7.7	9.1	6.6	5.9	6.9	5.5	7.3	5.3	3.7	4.0	4.0	4.4	6.6	4.0	1.5	4.1	6.2	4.7	2.9	0.4	5.3	9.1
9	2.2	4.4	3.3	3.7	3.7	2.9	1.5	0.3	0.0	0.0	1.1	2.2	1.2	3.7	5.2	5.9	6.2	4.4	3.7	3.3	2.9	4.4	4.0	2.6	3.0	6.2
10	1.1	1.8	2.2	0.4	0.8	2.9	2.6	1.5	2.9	1.2	7.6	26.2	18.2	9.5	8.5	10.2	5.8	2.9	3.3	1.1	2.3	2.2	2.9	4.0	5.1	26.2
11	2.2	0.7	0.0	0.0	0.0	0.4	1.9	5.2	5.9	5.3	4.4	2.2	4.5	7.0	9.8	5.5	3.0	4.7	2.9	3.3	5.5	5.5	7.7	4.7	3.8	9.8
12	1.0	0.7	0.8	2.2	1.5	1.5	4.4	2.2	1.2	3.3	2.2	0.8	1.6	6.2	6.2	5.8	2.9	1.0	0.7	0.4	0.0	0.1	2.6	2.2	2.1	6.2
13	1.2	3.3	1.8	0.0	0.0	0.0	0.0	4.0	4.0	2.5	0.0	0.7	0.7	0.1	2.2	1.8	1.2	3.3	3.4	7.3	6.5	3.4	5.9	8.4	2.6	8.4
14	6.2	3.0	3.3	3.3	2.2	2.6	3.3	2.9	2.2	2.2	0.5	4.1	4.7	2.9	6.6	5.1	5.2	5.8	2.9	0.1	5.9	6.4	3.7	5.9	3.8	6.6
15	5.1	2.9	0.5	4.4	5.4	1.8	0.8	5.1	5.5	2.9	2.6	4.8	4.8	4.8	6.6	5.8	3.4	5.5	4.8	5.3	7.0	6.9	5.5	6.2	4.5	7.0
16	4.4	2.6	1.5	2.3	4.0	3.3	2.9	2.6	1.8	1.5	4.4	4.1	5.3	5.1	4.8	6.2	6.0	10.2	8.1	11.6	7.5	13.7	17.7	6.4	5.7	17.7
17	4.8	5.5	6.2	4.0	3.3	3.8	11.1	14.3	12.4	16.8	14.6	13.1	10.6	10.6	11.3	7.7	7.1	14.6	12.0	8.4	8.6	10.2	8.0	7.0	9.4	16.8
18	8.8	7.3	6.3	7.0	9.1	8.1	9.3	13.9	10.2	5.1	4.1	10.7	12.6	19.7	16.4	11.3	9.1	6.5	3.6	2.2	4.0	1.8	0.0	0.0	7.8	19.7
19	0.0	0.0	0.0	0.8	1.5	2.2	1.5	1.1	0.4	0.0	0.4	1.9	11.0	9.9	8.4	5.8	4.7	15.6	10.1	7.0	6.2	4.0	2.2	2.9	4.1	15.6
20	2.3	4.0	3.7	3.7	3.3	2.2	0.0	0.0	0.0	0.7	0.3	0.0	0.0	7.3	6.6	4.5	6.7	9.1	5.1	3.7	4.0	2.6	3.3	0.7	3.1	9.1
21	0.0	1.9	2.6	2.2	1.8	0.0	0.4	2.2	1.1	1.9	2.2	3.3	4.8	5.5	5.1	4.0	1.2	5.4	10.6	7.6	5.1	5.1	2.2	2.3	3.3	10.6
22	4.4	4.4	2.9	1.3	7.0	8.4	6.6	8.5	44.3	89.1	62.5	13.6	15.1	34.4	33.6	14.6	10.2	8.0	3.3	4.1	7.7	5.8	3.6	2.2	16.5	89.1
23	3.3	4.7	0.7	0.0	1.9	3.3	1.9	2.7	5.8	4.4	3.4	5.5	7.0	7.0	7.2	4.0	1.9	4.5	9.3	7.7	6.0	10.6	8.4	6.3	4.9	10.6
24	9.2	8.8	8.0	6.6	4.5	6.6	5.9	5.5	3.6	1.5	1.1	1.6	4.4	1.9	3.8	8.1	8.3	4.8	6.3	8.1	8.3	4.8	5.9	6.2	5.6	9.2
25	2.9	1.9	5.1	1.8	1.2	3.6	1.8	1.5	3.7	5.5	4.0	2.9	2.1	0.1	3.1	11.0	24.3	15.3	11.3	9.1	5.3	4.1	5.2	5.9	5.5	24.3
26	5.9	7.3	5.4	2.8	1.1	2.7	5.9	6.2	3.7	4.5	6.2	4.1	6.6	5.9	5.5	4.8	4.1	5.5	5.6	10.8	16.5	30.0	41.7	9.4	8.4	41.7
27	5.8	32.3	21.1	14.2	11.6	6.3	9.2	9.1	6.2	4.8	5.5	6.6	19.7	3.4	5.0	1.1	0.8	2.3	3.0	3.3	1.1	2.2	1.1	0.5	7.3	32.3
28	4.7	3.3	0.1	2.3	4.7	1.8	0.4	1.2	2.6	3.7	3.7	4.4	16.0	9.5	9.5	6.5	4.0	2.2	0.8	3.3	3.7	3.3	1.1	1.2	3.9	16.0
29	3.7	4.0	2.7	5.8	4.4	3.7	2.9	1.1	1.0	1.9	2.2	0.0	0.0	0.4	1.8	1.2	2.9	2.6	3.3	3.3	2.2	2.6	2.2	1.4	2.4	5.8
30	0.0	0.0	0.8	1.8	1.9	2.2	0.7	0.0	0.0	2.2	2.8	0.8	1.5	4.0	2.9	2.3	2.6	2.9	2.9	0.0	0.3	2.5	0.7	0.0	1.5	4.0
31	1.1	0.4	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.6	6.6	5.1	2.6	3.4	5.2	3.3	1.7	8.1	8.7	5.1	5.6	2.5	8.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	31	740	100%
MEAN	4.0	4.8	3.9	3.8	3.8	3.3	3.6	4.2	4.9	6.1	5.5	4.9	6.4	7.1	7.7	6.2	5.4	6.3	6.0	5.9	5.9	6.0	5.8	4.2		
MAX	10.9	32.3	21.1	15.3	12.3	9.1	11.1	14.3	44.3	89.1	62.5	26.2	19.7	34.4	33.6	20.0	24.3	15.6	23.8	17.6	16.5	30.0	41.7	11.6		



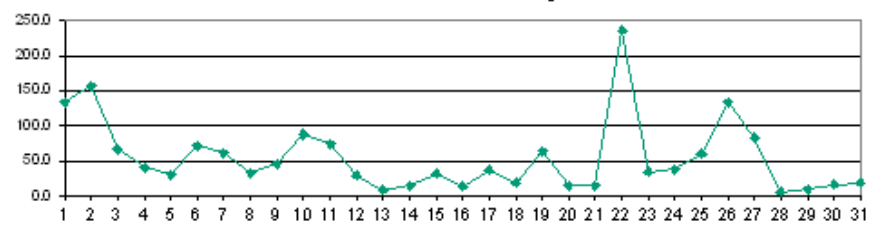
Number of 24HR Exceedences	0	Proposed Guideline	
Number of Non-Zero Readings	705		
Maximum 1-HR Average	89.1 UG/M3		
Maximum 24-HR Average	16.5 UG/M3		
Monthly Calibration	4	Operational Time	744 HRS
Standard Deviation	6.1	Operational Uptime	100.0 %
		Monthly Average	5.2 UG/M3



# Windridge PM<sub>10</sub> (µg/m<sup>3</sup>) – January 2019

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	140.8	484.8	247.2	192.3	204.2	112.1	49.1	81.8	119.9	202.8	64.1	168.4	184.9	172.8	89.1	98.5	65.1	63.9	79.5	79.4	92.6	71.6	114.9	50.2	133.6	464.8
2	25.7	68.8	38.8	198.8	269.4	315.9	167.9	145.0	226.3	229.9	265.1	216.5	208.2	218.2	212.6	158.9	153.5	185.5	155.1	90.4	48.8	39.3	41.0	82.7	156.7	315.9
3	108.7	100.1	103.0	57.9	46.7	38.2	29.4	44.4	46.4	50.2	57.9	36.2	51.5	41.1	49.6	44.8	57.8	45.2	50.5	48.4	65.6	140.3	235.1	49.3	66.6	235.1
4	33.9	6.7	3.9	1.2	1.1	0.9	58.0	17.9	13.2	12.4	8.8	5.7	27.9	57.5	57.4	37.2	86.2	94.6	82.5	39.0	64.1	40.8	182.6	40.1	40.5	182.6
5	13.8	11.2	17.4	98.5	112.7	63.4	16.2	3.5	6.2	6.4	15.0	69.7	29.2	26.2	80.3	79.6	18.1	18.1	16.7	16.4	8.9	8.2	8.1	4.7	31.2	112.7
6	3.4	4.0	3.3	2.6	1.2	0.0	2.7	4.7	3.2	1.3	3.0	32.8	165.5	76.8	203.4	104.7	113.6	53.1	325.2	197.5	59.9	138.4	144.0	86.9	72.1	325.2
7	78.1	47.5	42.2	43.4	26.2	47.5	9.6	8.6	17.3	28.9	36.8	107.3	C	C	C	C	55.1	112.3	100.8	52.2	17.8	31.7	68.8	287.4	61.0	287.4
8	48.1	10.2	132.0	4.1	14.4	70.4	20.4	28.1	11.0	21.6	18.9	19.5	48.8	49.9	40.9	55.2	34.1	48.8	50.1	50.8	14.7	5.3	1.3	6.0	33.5	132.0
9	109.5	91.0	101.9	120.5	114.9	93.7	23.9	1.7	2.7	9.1	13.5	17.8	31.0	27.2	115.3	121.9	37.5	13.5	12.0	6.8	10.8	11.3	14.6	0.9	46.0	121.9
10	1.3	2.7	6.7	4.1	9.4	6.6	1.6	1.7	26.6	75.8	79.1	544.8	308.2	183.9	162.5	259.9	93.0	64.5	37.7	30.5	69.1	67.6	61.4	13.7	88.0	544.8
11	24.0	5.3	1.7	5.5	12.2	16.9	22.0	115.4	125.3	160.2	171.2	36.5	105.0	69.5	94.7	88.7	53.0	62.7	81.8	67.7	211.6	132.4	110.8	17.5	74.6	211.6
12	13.7	9.3	5.3	5.4	7.1	29.5	17.3	4.0	2.9	19.3	40.5	37.9	113.7	106.5	146.1	57.5	16.1	9.8	28.4	29.8	8.9	4.1	1.6	0.0	29.8	146.1
13	0.0	0.0	0.0	0.0	2.6	2.7	4.1	2.8	9.1	6.6	4.0	4.0	5.4	9.4	8.1	12.1	9.4	10.8	12.0	8.1	10.8	11.2	31.3	40.0	8.5	40.0
14	9.3	5.3	2.6	2.6	2.6	0.0	0.0	0.0	0.1	6.7	8.0	5.9	22.9	21.4	26.1	46.0	43.4	45.6	25.3	8.2	13.9	36.2	20.2	17.2	15.4	46.0
15	1.2	0.0	0.0	1.3	2.6	1.3	0.0	0.3	21.9	38.6	139.1	43.0	88.9	65.2	73.1	67.1	35.1	31.1	28.3	23.1	31.1	30.8	16.8	10.7	31.3	139.1
16	6.7	8.1	8.0	4.0	2.6	1.3	1.2	0.2	15.1	27.0	23.0	21.6	20.3	21.8	29.7	32.0	12.2	13.5	14.5	9.4	8.2	16.2	16.4	20.3	13.9	32.0
17	20.1	12.2	15.0	21.3	5.3	5.5	14.8	13.6	20.2	19.3	39.1	32.1	20.2	17.3	68.4	38.6	70.8	86.2	122.6	88.3	89.7	37.5	20.2	18.3	37.4	122.6
18	52.1	18.7	6.8	10.8	11.6	10.8	12.3	20.1	12.6	35.0	25.8	32.5	32.6	35.3	41.5	20.4	24.1	13.5	13.4	9.4	8.0	6.1	1.2	0.0	16.9	52.1
19	0.0	0.0	5.7	21.4	20.1	16.5	86.6	8.0	5.9	28.5	31.9	7.1	27.1	103.2	181.7	125.2	95.7	303.4	171.0	122.5	84.7	56.0	16.3	20.1	64.1	303.4
20	14.7	24.5	30.9	20.1	14.6	21.2	2.7	6.7	6.3	5.3	3.9	2.1	23.3	37.8	33.5	21.8	31.3	38.4	4.0	4.0	4.0	4.0	4.0	4.0	15.1	38.4
21	4.0	4.0	5.4	9.3	5.2	0.0	0.0	2.7	7.0	19.0	24.3	23.1	29.5	17.5	16.2	16.2	17.1	45.8	34.6	12.2	15.4	38.6	10.8	10.7	15.4	45.8
22	8.1	9.7	24.3	82.7	198.3	215.7	170.0	266.8	984.8	983.7	928.3	170.0	226.9	253.0	448.4	206.9	128.5	116.9	75.4	56.8	41.8	32.6	16.3	18.9	236.0	984.8
23	20.1	14.6	4.2	5.3	2.6	0.0	0.0	0.1	8.5	9.6	18.0	42.4	278.3	69.3	77.7	43.1	90.5	22.5	55.8	12.1	9.3	6.8	9.5	12.2	33.9	278.3
24	16.0	6.7	8.2	13.4	9.3	6.7	5.4	6.7	8.1	10.7	6.7	8.8	39.0	30.4	55.4	50.9	77.8	101.2	84.3	95.1	101.7	52.1	77.3	58.1	38.7	101.7
25	51.8	65.6	88.1	39.3	39.1	30.0	40.3	27.3	36.4	83.5	64.4	39.1	32.9	49.0	57.5	30.9	79.8	179.7	102.8	43.5	50.9	30.0	43.8	131.6	59.9	179.7
26	28.3	23.2	30.6	11.1	24.4	25.5	18.9	20.8	41.4	72.7	52.2	27.3	37.9	41.9	197.4	126.1	77.5	88.5	155.8	254.5	279.6	597.8	822.8	149.4	133.6	822.8
27	64.9	508.9	424.1	314.0	237.6	50.9	32.1	19.0	21.8	8.0	6.8	12.1	27.9	11.7	43.5	8.1	10.5	50.8	29.1	54.9	32.0	15.9	5.3	2.6	83.0	508.9
28	0.0	0.0	0.0	1.3	1.2	0.0	0.0	0.0	1.3	4.0	3.9	1.8	21.4	15.1	25.5	20.0	10.7	8.0	5.3	3.9	3.0	17.1	0.0	0.0	6.0	25.5
29	12.0	7.4	30.3	1.7	4.0	5.3	5.2	0.0	0.0	4.2	11.6	9.5	11.6	40.0	17.6	17.5	14.7	9.0	7.9	3.9	1.3	2.8	8.0	5.3	9.6	40.0
30	2.7	4.1	6.6	3.9	0.0	0.0	4.5	21.2	2.6	3.3	26.0	38.9	96.6	62.7	28.0	14.0	21.6	34.6	14.5	1.2	0.0	1.3	2.6	1.2	16.3	96.6
31	0.0	1.7	1.4	5.6	13.3	8.0	8.3	16.1	14.1	37.6	46.8	26.1	39.1	33.9	34.6	16.4	23.2	29.9	24.9	14.9	16.4	24.3	22.7	14.6	19.0	46.8
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	740	100%
MEAN	29.4	49.6	45.0	42.0	45.7	38.6	26.5	28.7	58.7	71.6	72.2	59.4	78.5	65.5	90.5	67.3	53.4	64.6	64.3	49.6	47.8	55.1	68.4	37.6		
MAX	140.6	508.9	424.1	314.0	269.4	315.9	170.0	266.8	984.8	983.7	928.3	544.8	308.2	253.0	448.4	259.9	153.5	303.4	325.2	254.5	279.6	597.8	822.8	287.4		

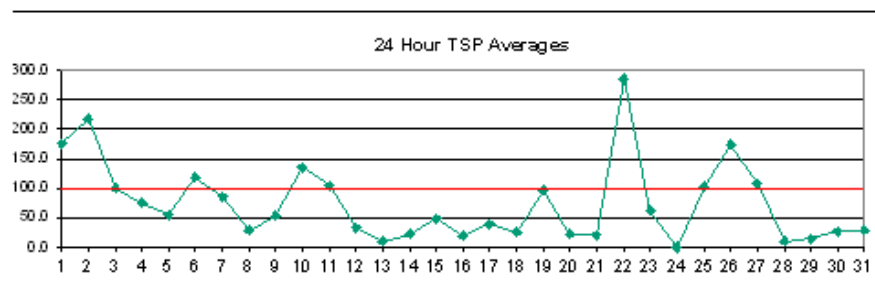
24 Hour PM10 Averages



Number of Non-Zero Readings	710
Maximum 1-HR Average	984.8 UG/M3
Maximum 24-HR Average	236.0 UG/M3
Monthly Calibration	4
Standard Deviation	96.86
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	54.5 UG/M3

# Windridge TSP ( $\mu\text{g}/\text{m}^3$ ) – January 2019

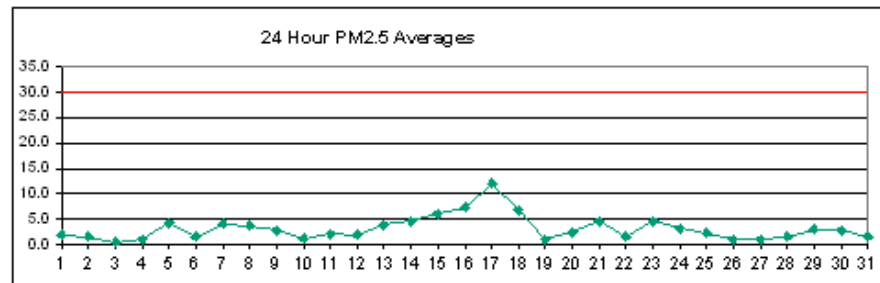
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	MAX
1	193.1	445.6	338.2	288.2	211.9	140.4	84.7	113.0	107.4	260.7	92.2	178.9	239.8	202.8	137.3	176.4	121.4	109.5	142.5	147.2	146.2	118.0	168.4	63.1	176.1	445.6
2	39.4	84.1	62.2	328.4	445.0	279.9	233.9	191.6	274.8	295.5	341.6	295.3	313.2	241.1	314.5	219.5	252.0	288.7	260.7	153.7	74.4	48.2	63.7	120.0	217.5	445.0
3	170.8	152.1	170.8	97.3	62.1	46.9	44.0	59.0	59.0	59.9	85.2	67.4	84.3	60.0	66.7	65.6	90.0	62.6	67.9	59.6	102.0	231.1	380.5	68.0	100.5	380.5
4	41.5	3.5	7.5	5.3	1.9	5.0	91.6	38.7	20.4	25.3	8.9	6.3	33.1	77.4	76.0	60.1	154.1	191.1	172.1	78.2	139.5	91.7	413.7	64.3	75.3	413.7
5	33.1	16.7	40.0	183.1	219.6	128.8	24.9	14.6	14.0	17.4	19.7	122.1	48.8	42.7	141.4	132.5	19.8	25.6	16.7	14.7	15.7	5.5	6.2	6.5	54.6	219.6
6	15.8	8.9	6.2	6.9	6.9	7.5	4.7	3.0	4.0	1.9	2.0	52.9	313.7	136.8	182.1	175.1	203.8	103.8	498.4	332.4	110.7	279.2	238.0	160.4	119.0	498.4
7	151.2	76.7	77.5	82.0	34.3	71.1	15.4	18.4	26.5	44.0	59.8	164.3	C	C	C	C	65.2	183.1	143.3	55.7	22.2	38.8	73.3	331.3	86.7	331.3
8	78.8	8.1	9.4	8.3	13.2	4.0	3.9	2.2	6.7	8.1	22.2	23.8	61.3	69.3	38.7	61.6	42.3	53.6	75.7	68.8	22.5	9.3	5.5	13.5	29.6	78.8
9	88.3	99.0	140.8	171.0	99.6	78.1	27.7	9.3	7.7	13.5	14.7	11.8	40.1	38.9	138.2	167.9	54.0	13.4	10.7	9.5	11.0	17.8	23.7	6.8	53.9	171.0
10	2.5	0.0	10.6	5.6	13.3	7.9	2.5	0.7	43.7	125.2	130.4	846.6	455.8	280.4	243.3	339.6	174.3	122.9	73.8	56.5	117.2	98.3	79.2	22.6	135.5	846.6
11	37.1	14.5	5.8	18.9	18.2	35.4	35.1	178.1	158.2	184.0	189.9	51.3	154.4	116.0	136.6	127.4	91.6	111.8	108.5	117.7	252.6	157.5	171.0	32.7	104.3	252.6
12	13.5	14.4	3.9	2.9	11.5	29.2	14.3	0.0	2.4	21.5	55.1	48.3	108.5	111.8	129.4	73.0	32.1	25.9	66.4	30.3	9.2	3.8	0.0	1.8	33.7	129.4
13	1.3	2.6	1.1	0.0	0.0	2.8	8.0	5.3	4.2	9.3	5.3	4.2	9.9	13.5	14.8	14.9	16.0	12.0	9.6	8.2	10.8	11.8	38.1	42.2	10.2	42.2
14	11.7	0.0	1.2	0.0	0.0	0.0	0.0	0.0	4.2	10.9	14.6	11.4	28.5	29.8	32.8	76.6	61.3	69.3	34.3	12.7	28.9	58.3	25.9	31.4	22.6	76.6
15	2.7	3.9	2.6	2.6	1.3	1.3	2.7	4.6	22.7	55.3	163.7	63.4	123.5	94.6	121.3	101.7	67.8	68.3	48.5	42.5	55.7	58.2	22.6	13.4	48.5	163.7
16	10.6	5.4	7.9	4.5	3.9	2.6	2.6	2.0	21.0	39.0	32.5	32.8	35.0	31.7	45.8	50.1	16.2	17.2	17.2	9.7	18.3	20.3	20.2	17.5	19.2	50.1
17	15.8	6.7	7.0	14.5	6.6	5.8	16.2	18.6	45.0	54.8	103.1	75.8	38.6	26.0	99.1	70.0	92.5	67.7	66.5	36.6	37.1	17.4	13.2	6.7	39.2	103.1
18	7.6	6.6	5.4	6.9	12.4	14.7	12.6	25.5	21.9	61.3	36.6	39.6	48.1	66.5	67.6	31.0	33.3	22.0	30.5	16.6	24.6	0.1	4.3	2.6	24.9	67.6
19	1.3	1.7	14.5	38.9	29.6	29.5	119.2	17.3	11.4	52.7	48.9	20.6	34.4	185.7	249.9	192.8	142.8	351.9	267.7	183.0	147.4	102.5	25.0	40.1	96.2	351.9
20	28.7	37.2	53.5	36.2	28.5	30.2	8.3	13.2	6.6	5.3	3.9	3.6	28.3	57.8	45.5	34.4	49.1	56.4	10.6	6.6	5.3	5.2	2.6	2.7	23.3	57.8
21	4.0	4.0	4.5	15.7	2.6	2.6	1.3	1.7	12.5	17.8	29.9	32.5	33.6	28.2	22.7	34.8	29.3	81.7	56.2	8.3	16.5	54.0	17.4	12.4	21.8	81.7
22	18.7	15.7	39.0	135.6	298.5	332.9	254.3	456.0	983.0	983.0	951.4	203.9	313.4	326.1	528.1	284.2	195.2	161.0	120.5	84.3	57.1	61.3	37.0	21.9	285.0	983.0
23	28.2	23.5	3.1	13.0	2.6	1.2	0.1	5.8	17.7	20.5	27.3	55.1	548.2	219.5	119.4	92.1	120.0	42.7	90.9	28.7	4.0	6.0	22.1	18.7	62.9	548.2
24	14.6	9.6	15.3	26.5	13.2	5.3	5.3	5.5	9.3	7.4	8.5	21.1	64.1	45.4	94.5	87.2	128.6	182.3	149.7	164.6	175.7	88.4	128.9	100.1	N/A	228.2
25	96.4	133.0	165.9	82.0	66.1	60.0	68.4	53.1	62.8	137.5	116.4	64.6	55.2	81.2	94.1	53.6	139.1	248.1	182.2	70.2	93.1	53.0	65.7	228.2	102.9	248.1
26	43.2	41.7	64.2	16.3	49.9	40.2	30.9	27.1	61.6	106.1	82.5	48.0	58.2	66.0	270.5	201.4	124.7	128.6	219.6	258.2	432.5	694.4	949.8	182.7	174.9	949.8
27	107.1	664.7	537.1	321.2	249.0	82.1	38.3	18.2	32.6	13.0	1.6	8.9	28.7	35.6	46.1	48.6	48.9	112.7	55.9	92.2	30.3	10.6	6.6	3.9	108.1	664.7
28	1.2	0.0	0.0	4.0	3.9	1.3	1.3	2.6	1.3	1.3	1.2	1.4	34.8	26.5	45.3	28.2	23.6	7.4	9.2	4.0	5.2	31.1	0.0	0.4	9.8	45.3
29	19.7	7.1	46.2	9.5	12.1	10.6	6.5	2.1	3.1	13.4	12.2	9.7	17.6	49.5	27.0	27.1	27.7	12.0	9.3	7.3	5.2	3.3	17.1	6.7	15.1	49.5
30	6.7	7.9	18.2	1.2	0.1	4.3	11.4	24.6	1.7	12.4	49.2	63.1	139.1	95.5	48.9	22.4	41.4	57.9	20.6	0.0	0.0	7.1	4.2	1.7	26.7	139.1
31	0.1	3.9	2.8	8.0	26.2	8.0	7.4	23.2	29.0	62.4	63.9	40.1	58.6	38.2	43.6	20.7	31.6	42.6	27.1	32.0	52.3	41.0	18.3	4.5	28.6	63.9
NO.	31	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	31	740	100%
MEAN	41.4	61.3	60.1	62.4	62.7	47.4	38.0	43.1	67.0	87.8	90.1	86.1	118.4	96.5	120.6	101.7	86.8	97.8	98.8	70.6	71.6	78.2	96.1	52.5		
MAX	193.1	664.7	537.1	328.4	445.0	332.9	254.3	456.0	983.0	983.0	951.4	846.6	548.2	326.1	526.1	339.6	252.0	351.9	496.4	332.4	432.5	694.4	949.8	331.3		



Number of 24HR Exceedences	10	Proposed Guideline
Number of Non-Zero Readings	725	
Maximum 1-HR Average	983.0 UG/M3	
Maximum 24-HR Average	285.0 UG/M3	
IZS Calibration Time		Operational Time 744 HRS
Down Time	0	Operational Uptime 100.0 %
Standard Deviation	118.8	Monthly Average 76.4 UG/M3

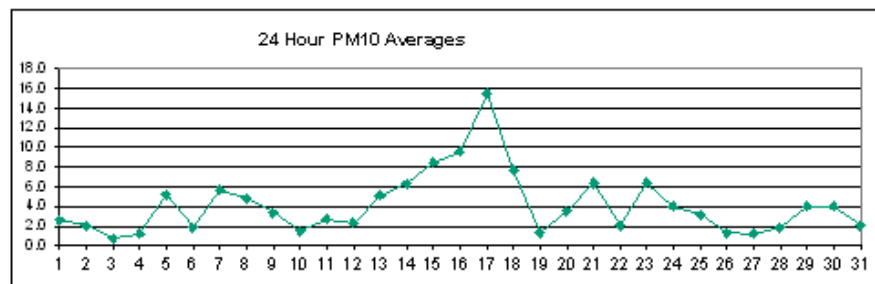
# West PM<sub>2.5</sub> (µg/m<sup>3</sup>) – January 2019

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	1.1	1.7	1.0	1.2	0.9	0.9	0.7	1.2	0.8	0.9	1.1	2.2	3.9	4.8	3.9	2.8	2.5	2.8	2.6	2.1	2.1	1.4	1.3	1.2	1.9	4.8
2	1.7	1.3	1.3	1.8	1.4	1.6	1.7	2.1	1.7	1.9	1.8	1.6	3.8	3.6	2.8	2.2	0.8	1.1	0.9	0.7	0.8	0.9	0.5	0.4	1.6	3.8
3	0.4	0.4	0.2	0.2	0.1	0.2	0.5	0.4	0.6	0.6	0.7	0.8	0.8	0.9	0.8	1.1	1.1	1.2	1.0	0.3	0.2	0.1	0.1	0.6	0.6	1.2
4	0.8	0.4	0.3	0.4	0.3	0.2	0.2	0.5	1.2	1.7	2.0	2.5	1.5	1.1	1.9	1.0	0.9	1.0	2.0	1.4	0.4	1.0	0.3	0.3	1.0	2.5
5	0.3	0.4	0.3	0.3	0.3	0.7	1.2	2.2	1.3	1.6	3.3	5.2	4.6	5.0	4.2	5.0	9.2	12.3	9.2	11.6	11.2	6.6	4.6	3.6	4.3	12.3
6	3.4	3.3	2.0	1.8	1.4	1.9	1.8	1.7	1.4	1.1	1.1	1.9	1.4	1.8	1.3	1.6	0.6	0.5	0.7	1.0	1.1	1.5	0.9	1.0	1.5	3.4
7	0.5	0.5	0.4	0.3	0.8	1.2	2.8	4.4	5.2	4.1	6.0	3.3	3.0	Y	3.7	3.2	2.1	1.8	4.7	10.1	10.9	12.5	8.6	4.7	4.1	12.5
8	3.8	3.5	5.1	4.1	2.4	1.8	1.3	1.2	1.4	1.8	2.0	2.4	3.0	3.6	7.2	7.7	8.1	7.5	6.3	4.8	3.9	2.9	2.2	1.5	3.7	8.1
9	1.2	1.1	1.0	0.9	0.9	0.9	0.8	0.8	0.9	0.9	1.5	3.1	4.8	6.5	7.2	8.0	5.6	4.2	4.0	3.1	2.1	2.7	2.2	1.5	2.7	8.0
10	1.5	1.0	0.9	0.7	0.4	0.4	0.4	0.5	1.1	1.3	1.6	2.9	2.8	2.0	1.2	1.1	0.9	0.9	0.9	0.9	1.3	1.1	1.1	0.9	1.2	2.9
11	0.8	0.8	0.6	0.6	0.5	0.5	0.8	1.0	1.7	2.1	2.1	3.0	6.0	4.5	5.5	4.3	3.3	2.8	2.2	1.5	1.3	1.3	1.2	1.2	2.1	6.0
12	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.5	2.1	4.3	4.6	4.0	2.7	2.1	1.9	2.0	1.9	1.9	1.9	1.8	2.0	1.9	4.6
13	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.3	2.6	3.3	3.5	4.6	4.3	4.4	6.0	4.2	5.5	6.9	6.6	6.3	6.5	6.1	4.9	3.9	6.9
14	3.9	2.8	2.4	2.0	2.4	2.0	1.9	2.1	3.4	3.4	5.1	6.4	7.0	7.1	6.6	6.6	5.1	6.2	6.2	5.2	4.7	5.8	8.4	4.7	4.6	8.4
15	4.4	4.0	4.1	4.7	5.0	4.3	3.9	3.6	5.8	8.8	8.7	7.1	6.9	6.1	6.4	6.1	5.4	7.6	5.6	7.9	7.7	6.7	7.7	6.7	6.1	8.8
16	5.8	4.8	3.5	2.7	2.5	2.5	3.2	3.1	5.2	7.0	6.5	5.5	6.0	8.4	8.1	8.5	9.1	9.0	10.1	11.9	14.2	18.2	11.3	8.3	7.3	18.2
17	7.5	5.1	3.7	3.7	3.6	8.2	14.2	18.1	21.0	21.8	21.5	19.1	18.4	16.3	14.8	13.2	14.6	15.3	10.7	8.2	8.0	7.8	7.4	8.7	12.1	21.8
18	8.4	8.7	9.3	9.5	11.1	11.9	11.7	10.7	9.4	8.3	10.9	9.2	7.3	5.9	3.7	3.2	2.3	2.5	3.1	3.2	3.0	2.8	2.9	2.4	6.7	11.9
19	2.8	2.0	1.3	1.0	0.7	0.6	0.7	0.4	0.4	0.6	0.9	2.1	2.4	1.6	1.2	1.0	0.7	0.8	0.7	0.5	0.5	0.6	0.6	0.4	1.0	2.8
20	0.3	0.3	0.3	0.2	0.2	0.3	0.9	0.7	0.7	0.8	1.3	7.4	7.1	6.6	4.0	2.8	3.1	3.2	3.5	3.1	3.8	2.9	3.6	2.3	2.5	7.4
21	2.3	2.9	2.6	2.9	1.5	1.4	2.5	5.7	7.6	9.1	8.8	11.0	7.9	5.6	5.3	6.0	3.8	6.6	5.2	4.3	3.5	2.7	1.9	1.6	4.7	11.0
22	1.7	1.2	1.5	1.2	1.7	1.6	2.5	2.7	2.7	2.1	1.6	2.0	1.9	1.5	1.9	2.2	0.8	0.9	0.9	0.7	0.5	0.8	1.1	0.8	1.5	2.7
23	0.7	0.7	1.2	1.0	0.9	1.5	1.0	2.9	6.1	4.9	4.9	12.3	5.9	5.1	4.0	3.7	5.5	6.2	6.6	6.9	7.7	7.4	7.5	7.6	4.7	12.3
24	7.7	5.7	5.6	4.7	4.2	3.3	2.5	2.0	2.1	1.9	2.0	2.7	4.7	4.8	4.8	4.2	2.2	1.3	1.7	2.1	1.9	1.4	1.7	1.3	3.2	7.7
25	1.1	1.0	0.9	1.0	1.2	1.1	1.4	1.6	2.0	2.7	6.1	9.6	6.4	4.9	3.8	3.1	1.1	1.0	1.0	0.7	0.6	0.5	0.6	0.6	2.3	9.6
26	0.4	0.3	0.3	0.3	0.3	0.4	0.7	1.0	0.5	0.4	0.6	3.9	2.8	1.7	1.2	1.6	0.8	0.6	1.0	0.5	0.7	0.6	0.5	1.4	0.9	3.9
27	1.7	2.2	1.1	1.6	0.5	0.3	0.4	0.5	1.1	0.5	0.7	1.1	1.4	1.0	1.7	0.9	1.1	0.9	0.7	0.6	0.4	0.5	0.5	0.5	0.9	2.2
28	0.7	1.1	1.9	1.6	1.8	0.9	0.9	0.7	0.9	1.2	2.0	2.4	2.0	2.5	2.6	2.1	1.7	0.9	0.7	1.3	1.6	2.0	1.6	1.6	1.5	2.6
29	2.6	2.6	1.2	1.1	0.9	0.8	1.1	1.5	1.8	1.9	4.0	6.4	7.9	6.6	5.7	6.6	4.5	2.6	3.4	2.0	1.6	1.4	1.3	1.1	2.9	7.9
30	1.0	1.0	0.8	0.8	0.8	0.9	1.3	2.3	3.5	5.3	6.3	7.2	7.3	7.2	6.4	5.7	2.0	1.1	1.3	1.4	1.3	1.0	1.1	1.1	2.8	7.3
31	0.9	0.9	0.8	0.8	0.7	0.6	0.8	1.3	1.7	1.5	1.3	1.8	5.2	3.9	3.9	2.5	1.4	1.0	0.8	0.8	0.7	0.6	0.6	2.5	1.5	5.2
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	743	100%
MEAN	2.3	2.1	1.9	1.8	1.7	1.8	2.2	2.6	3.1	3.4	3.9	4.9	4.9	4.6	4.3	4.1	3.4	3.6	3.4	3.5	3.4	3.4	2.9	2.5		
MAX	8.4	8.7	9.3	9.5	11.1	11.9	14.2	18.1	21.0	21.8	21.5	19.1	18.4	16.3	14.8	13.2	14.6	15.3	10.7	11.9	14.2	18.2	11.3	8.7		



# West PM<sub>10</sub> (µg/m<sup>3</sup>) – January 2019

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	1.5	2.4	1.4	1.6	1.1	1.1	0.9	1.6	1.0	1.1	1.5	3.2	5.7	7.1	5.8	4.0	3.7	4.1	3.7	3.0	2.9	1.8	1.5	1.3	2.6	7.1
2	1.9	1.5	1.6	2.1	1.6	1.9	2.0	2.7	2.3	2.5	2.2	2.3	5.5	5.2	4.2	3.1	1.1	1.5	1.1	0.8	1.0	1.0	0.5	0.4	2.1	5.5
3	0.5	0.5	0.2	0.3	0.2	0.3	0.6	0.6	0.9	0.8	0.9	1.1	1.2	1.2	1.0	1.5	1.4	1.4	1.1	0.4	0.3	0.1	0.1	0.6	0.7	1.5
4	0.8	0.4	0.3	0.4	0.4	0.2	0.3	0.6	1.7	2.4	2.5	3.6	2.1	1.5	2.5	1.2	1.1	1.2	2.2	1.5	0.5	1.4	0.4	0.3	1.2	3.6
5	0.4	0.4	0.3	0.4	0.3	0.8	1.7	3.1	1.7	2.3	4.1	6.6	6.8	7.0	6.0	7.0	11.9	14.5	10.5	12.2	11.4	6.7	4.8	3.7	5.2	14.5
6	3.6	3.4	2.0	1.9	1.5	2.2	2.0	2.0	1.6	1.4	1.4	2.8	2.1	2.5	1.8	2.3	0.7	0.6	0.9	1.3	1.5	2.1	1.1	1.4	1.8	3.6
7	0.6	0.6	0.4	0.4	1.0	1.6	4.1	6.4	7.6	5.9	8.6	4.8	4.5	Y	8.6	4.6	3.1	2.5	5.9	12.9	13.7	15.5	11.2	5.7	5.7	15.5
8	4.2	4.0	5.9	4.6	2.8	2.1	1.5	1.5	1.7	2.4	2.8	3.5	4.1	5.1	10.3	10.7	11.2	10.4	8.6	6.5	5.0	3.6	2.7	1.8	4.9	11.2
9	1.5	1.4	1.1	1.1	1.0	1.0	0.9	0.8	1.0	1.1	1.9	3.8	6.5	9.6	10.1	10.5	7.3	4.7	4.1	3.1	2.1	2.7	2.3	1.5	3.4	10.5
10	1.7	1.1	0.9	0.8	0.5	0.5	0.5	0.6	1.5	1.6	2.3	4.2	4.1	2.9	1.7	1.6	1.3	1.3	1.3	1.2	1.7	1.2	1.2	0.9	1.5	4.2
11	0.8	0.8	0.6	0.6	0.5	0.5	1.0	1.2	2.2	2.5	2.4	3.9	8.7	6.5	8.1	6.3	4.9	3.8	2.9	1.7	1.6	1.5	1.3	1.2	2.7	8.7
12	1.2	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.3	1.4	1.6	2.7	6.2	6.7	5.8	3.9	2.7	2.1	2.2	2.0	1.9	2.0	1.9	2.0	2.3	6.7
13	2.1	2.0	2.1	2.0	1.9	2.0	2.1	2.2	2.8	3.2	4.4	4.7	6.5	6.2	6.4	8.7	6.1	7.8	9.9	9.2	8.7	8.6	7.5	5.4	5.1	9.9
14	4.2	3.0	2.5	2.1	2.5	2.1	2.1	2.5	4.5	4.7	7.1	9.2	10.3	10.3	9.6	9.7	7.5	9.2	9.1	7.6	6.5	8.1	11.4	5.8	6.3	11.4
15	5.1	4.7	4.8	5.4	5.8	5.1	5.0	4.9	8.6	13.2	13.0	10.5	10.1	9.0	9.4	8.9	8.1	11.2	8.4	11.6	11.2	9.7	11.1	9.0	8.5	13.2
16	6.9	5.6	4.0	3.0	2.8	2.8	4.2	4.1	7.4	10.2	9.4	8.1	8.5	11.0	10.4	10.6	11.3	11.3	13.1	15.7	18.6	25.1	14.9	10.8	9.6	25.1
17	9.0	5.6	4.1	3.9	3.7	9.0	15.6	22.8	29.7	28.8	28.8	23.9	21.6	19.6	16.9	19.0	20.6	13.7	10.3	10.4	10.4	9.8	11.9	11.9	15.5	29.7
18	10.9	10.9	12.5	12.7	12.3	12.7	12.4	11.2	10.1	9.2	12.3	10.2	8.6	6.9	4.8	3.8	2.8	2.9	3.4	3.3	3.2	2.9	3.0	2.4	7.7	12.7
19	2.9	2.1	1.3	1.0	0.7	0.7	0.7	0.5	0.4	0.8	1.2	3.1	3.6	2.3	1.6	1.4	0.9	1.1	0.9	0.7	0.6	0.8	0.8	0.5	1.3	3.6
20	0.4	0.4	0.3	0.3	0.3	0.4	1.2	0.9	0.9	1.0	1.7	10.9	10.5	9.6	5.8	4.2	4.6	4.7	5.1	4.5	5.6	4.1	4.8	2.8	3.5	10.9
21	2.5	3.2	2.8	3.2	1.7	1.5	3.3	8.4	11.2	13.4	12.7	13.7	10.6	8.2	7.8	8.8	5.5	9.2	7.2	5.7	4.7	3.5	2.3	1.9	6.4	13.7
22	2.0	1.3	1.8	1.5	2.4	2.3	3.7	3.9	3.9	3.0	2.3	2.9	2.6	2.1	2.8	3.2	1.2	1.2	1.1	0.8	0.6	1.0	1.4	1.0	2.1	3.9
23	0.8	0.8	1.4	1.1	1.0	2.0	1.1	3.6	8.8	6.8	7.2	18.5	8.7	7.5	5.4	4.8	7.9	9.2	9.5	9.6	10.3	9.9	9.7	9.3	6.5	18.5
24	8.7	6.2	6.0	5.2	4.7	3.7	2.9	2.2	2.7	2.3	2.8	3.9	6.9	7.0	6.9	6.1	3.1	1.8	2.3	2.9	2.6	1.7	2.1	1.6	4.0	8.7
25	1.2	1.1	1.1	1.2	1.5	1.4	1.9	2.3	2.8	4.0	8.9	13.8	9.3	7.2	5.5	4.5	1.6	1.3	1.4	0.9	0.7	0.6	0.8	0.8	3.2	13.8
26	0.4	0.3	0.3	0.3	0.3	0.5	1.0	1.3	0.6	0.5	0.8	5.7	4.1	2.5	1.7	2.3	1.0	0.8	1.3	0.7	1.0	0.8	0.6	2.0	1.3	5.7
27	2.6	3.2	1.5	2.3	0.7	0.5	0.5	0.7	1.5	0.7	0.9	1.5	2.0	1.5	2.3	1.1	1.5	1.2	0.8	0.7	0.5	0.6	0.6	0.6	1.3	3.2
28	0.7	1.2	2.0	1.7	1.8	1.0	1.0	0.8	1.0	1.6	2.4	3.0	2.5	3.4	3.7	3.0	2.5	1.1	0.9	1.6	1.9	2.4	1.7	1.6	1.9	3.7
29	2.6	2.6	1.3	1.2	1.0	0.9	1.5	2.0	2.3	2.6	5.8	9.2	11.3	9.7	8.3	9.7	6.5	3.6	4.8	2.7	2.1	1.8	1.6	1.3	4.0	11.3
30	1.2	1.2	0.9	0.9	0.9	1.0	1.7	3.2	5.0	7.8	9.1	10.6	10.6	10.4	9.2	8.2	2.9	1.5	1.7	1.8	1.7	1.1	1.3	1.2	4.0	10.6
31	1.0	1.0	0.9	0.9	0.7	0.6	1.0	1.6	2.2	1.9	1.6	2.4	7.6	5.6	5.6	3.5	1.9	1.2	0.9	0.9	0.7	0.7	0.6	3.4	2.0	7.6
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	743	100%
MEAN	2.7	2.4	2.2	2.1	1.9	2.0	2.6	3.3	4.2	4.5	5.3	6.7	7.0	6.6	6.2	5.7	4.7	4.8	4.5	4.4	4.4	4.3	3.7	3.1		
MAX	10.9	10.9	12.5	12.7	12.3	12.7	15.6	22.8	29.7	28.8	28.8	23.9	23.9	21.6	19.6	16.9	19.0	20.6	13.7	15.7	18.6	25.1	14.9	11.9		

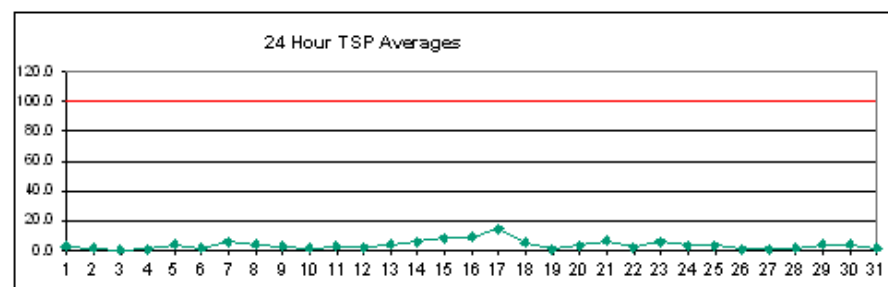


Number of Non-Zero Readings		743	
Maximum 1-HR Average		29.7 UG/M3	
Maximum 24-HR Average		15.5 UG/M3	
IZS Calibration Time		OperatioEi Time	
Down Time		743 HRS	
Standard Deviation		OperatioEi Uptime	
0		99.9 %	
4.4		Monthly Average	
		4.1 UG/M3	



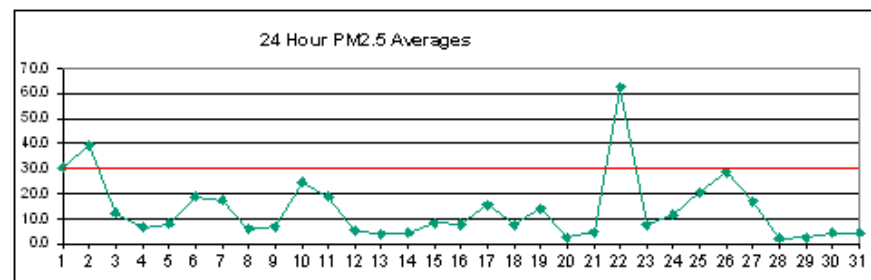
# West TSP ( $\mu\text{g}/\text{m}^3$ ) – January 2019

Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	1.2	2.2	1.3	1.5	1.0	0.9	0.8	1.5	0.8	0.9	1.3	3.2	6.2	8.0	6.1	4.2	3.8	4.3	3.7	2.9	2.8	1.4	1.1	0.9	2.6	8.0
2	1.3	1.0	1.3	1.5	1.0	1.4	1.4	2.3	2.1	2.1	1.8	2.2	6.1	5.7	4.5	3.3	1.0	1.3	0.9	0.6	0.7	0.7	0.4	0.3	1.9	6.1
3	0.3	0.4	0.2	0.2	0.1	0.2	0.5	0.5	0.8	0.6	0.8	1.1	1.1	1.1	0.9	1.2	1.0	0.9	0.8	0.3	0.2	0.1	0.1	0.4	0.6	1.2
4	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.4	1.6	1.9	2.0	3.4	1.9	1.3	2.0	1.0	0.8	0.9	1.4	1.0	0.3	1.4	0.3	0.2	1.0	3.4
5	0.3	0.4	0.3	0.3	0.2	0.7	1.8	3.3	1.7	2.4	3.5	5.8	7.4	7.0	6.1	6.5	9.3	9.8	7.3	7.9	7.4	4.3	3.1	2.5	4.1	9.8
6	2.4	2.2	1.3	1.3	1.0	1.6	1.4	1.5	1.1	1.0	1.1	2.7	2.0	2.5	1.7	2.3	0.5	0.5	0.7	1.1	1.3	2.0	1.0	1.3	1.5	2.7
7	0.4	0.4	0.3	0.3	0.9	1.4	4.1	6.9	8.3	6.5	9.8	5.3	4.9	Y	14.8	5.0	3.1	2.3	6.4	14.0	15.3	17.6	10.0	4.1	6.2	17.6
8	2.8	2.7	4.0	3.1	1.9	1.5	1.1	1.0	1.3	2.2	2.5	3.4	3.7	4.6	11.2	11.6	12.1	10.6	8.0	5.6	3.7	2.6	1.9	1.5	4.4	12.1
9	1.1	1.1	0.8	0.8	0.7	0.7	0.6	0.5	0.7	0.7	1.4	3.0	5.8	10.6	10.7	11.1	6.3	3.4	2.7	2.0	1.4	1.8	1.5	1.0	2.9	11.1
10	1.1	0.7	0.6	0.5	0.3	0.4	0.4	0.5	1.6	1.3	2.4	4.6	4.4	3.0	1.8	1.6	1.3	1.3	1.2	1.0	1.4	0.8	0.8	0.6	1.4	4.6
11	0.5	0.6	0.4	0.4	0.3	0.3	0.7	0.9	1.8	2.0	1.8	3.4	9.5	6.9	9.2	6.8	5.0	3.4	2.5	1.3	1.1	1.1	0.9	0.8	2.6	9.5
12	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.1	2.2	6.5	7.2	6.2	3.7	2.3	1.5	1.5	1.3	1.3	1.3	1.2	1.3	1.9	7.2
13	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	2.1	2.4	3.8	4.3	6.4	6.3	6.4	9.2	5.6	6.3	8.5	7.3	8.6	6.4	5.0	3.5	4.3	9.2
14	2.8	1.9	1.6	1.4	1.6	1.4	1.4	2.0	3.8	4.2	7.2	9.9	11.8	11.6	10.8	11.1	8.5	9.8	9.2	7.0	5.8	6.8	8.2	4.1	6.0	11.8
15	3.4	3.1	3.2	3.6	3.8	3.5	3.6	3.8	8.6	14.9	15.0	12.1	11.5	10.2	10.6	9.9	8.7	12.3	9.3	11.8	11.4	8.7	12.2	7.5	8.4	15.0
16	4.6	3.8	2.7	1.9	1.9	1.9	3.5	3.6	7.2	10.9	10.4	8.7	9.2	10.6	10.5	11.9	12.8	12.6	13.6	15.7	17.3	20.4	11.2	8.8	9.0	20.4
17	6.6	3.9	2.8	2.5	2.4	6.0	10.2	16.1	24.6	29.9	30.0	27.1	25.5	22.2	20.1	18.5	19.9	20.5	14.8	11.5	10.1	9.1	8.4	9.4	14.7	30.0
18	8.0	7.8	9.6	9.1	8.1	8.3	8.1	7.3	6.8	6.2	8.5	6.9	6.5	5.1	4.0	2.9	2.0	2.1	2.3	2.1	2.1	2.0	1.9	1.6	5.4	9.6
19	1.9	1.3	0.9	0.7	0.5	0.4	0.5	0.4	0.3	0.5	1.0	3.4	3.9	2.5	1.5	1.2	0.8	1.0	0.8	0.6	0.5	0.6	0.7	0.4	1.1	3.9
20	0.3	0.3	0.2	0.2	0.2	0.3	1.1	0.8	0.7	0.8	1.5	12.5	12.0	10.7	6.2	4.4	5.1	5.0	4.9	4.3	5.4	3.6	3.6	2.0	3.6	12.5
21	1.7	2.1	1.8	2.2	1.2	1.0	3.0	9.1	12.7	15.5	14.6	15.5	10.9	9.1	8.4	9.7	5.1	8.3	6.1	4.4	4.1	2.8	1.6	1.4	6.4	15.5
22	1.5	0.9	1.3	1.2	2.5	2.3	3.9	4.2	4.3	3.1	2.3	3.0	2.7	2.0	2.9	3.4	1.1	1.0	0.9	0.7	0.5	0.8	1.1	0.8	2.0	4.3
23	0.6	0.6	1.0	0.8	0.7	1.9	0.8	2.7	9.4	6.7	8.0	21.2	9.6	8.2	5.1	4.3	8.2	9.9	9.4	8.8	8.2	7.5	6.7	6.2	6.1	21.2
24	5.7	4.0	3.9	3.4	3.1	2.5	1.9	1.5	2.1	1.8	2.7	4.1	7.5	7.7	7.5	6.6	3.2	1.6	2.0	2.6	2.4	1.4	1.6	1.1	3.4	7.7
25	0.9	0.8	0.8	0.8	1.2	1.0	1.8	2.4	3.0	4.5	10.2	15.9	10.5	7.9	6.1	4.9	1.4	1.2	1.3	0.7	0.6	0.5	0.6	0.7	3.3	15.9
26	0.3	0.2	0.2	0.2	0.2	0.4	0.8	1.0	0.5	0.4	0.7	6.1	4.2	2.4	1.6	2.3	0.9	0.7	1.0	0.5	0.8	0.7	0.4	2.1	1.2	6.1
27	2.8	3.6	1.5	2.5	0.7	0.4	0.5	0.6	1.6	0.5	0.8	1.4	2.2	1.4	1.7	0.8	1.1	0.9	0.6	0.5	0.4	0.4	0.4	0.4	1.2	3.6
28	0.5	0.8	1.3	1.1	1.2	0.6	0.7	0.5	0.7	1.3	1.9	2.3	2.0	3.4	3.9	3.3	2.6	0.9	0.6	1.2	1.4	1.7	1.2	1.0	1.5	3.9
29	1.7	1.7	0.8	0.8	0.7	0.7	1.3	1.8	2.0	2.3	6.1	10.2	12.7	10.8	9.3	11.0	6.9	3.5	4.9	2.3	1.7	1.4	1.2	0.9	4.0	12.7
30	0.8	0.8	0.6	0.7	0.6	0.7	1.5	3.2	5.3	8.7	10.3	11.9	12.0	11.8	10.3	9.1	3.1	1.2	1.3	1.3	1.2	0.8	1.0	0.9	4.1	12.0
31	0.7	0.7	0.6	0.6	0.5	0.4	0.7	1.3	2.0	1.5	1.3	2.3	8.3	6.0	5.9	3.4	1.7	0.9	0.6	0.6	0.5	0.5	0.4	3.3	1.9	8.3
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	743	100%
MEAN	1.9	1.7	1.5	1.5	1.3	1.4	1.9	2.7	3.9	4.5	5.3	7.1	7.4	6.9	6.7	6.0	4.7	4.5	4.2	4.0	3.9	3.6	2.9	2.3		
MAX	8.0	7.8	9.6	9.1	8.1	8.3	10.2	16.1	24.6	29.9	30.0	27.1	25.5	22.2	20.1	18.5	19.9	20.5	14.8	15.7	17.3	20.4	12.2	9.4		



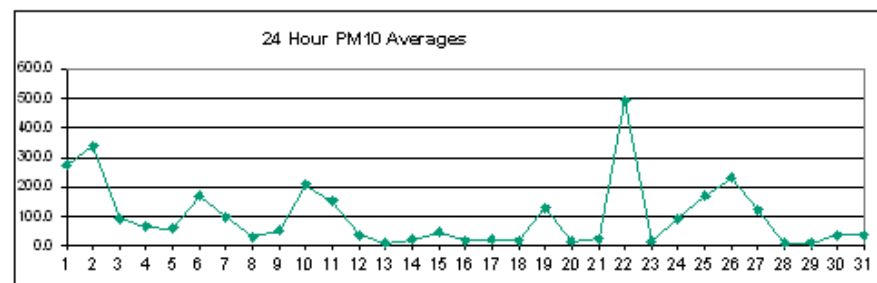
# Berm PM<sub>2.5</sub> (µg/m<sup>3</sup>) – January 2019

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	50.8	42.7	74.6	62.2	41.8	22.3	13.2	11.2	29.7	10.1	20.5	33.7	34.1	21.3	32.9	37.5	36.6	38.4	30.7	27.6	13.8	22.7	8.9	10.2	30.3	74.6
2	15.7	6.5	73.9	70.6	42.0	29.1	30.4	50.0	42.2	69.1	48.2	79.7	54.6	49.6	29.7	48.4	53.0	39.9	32.5	19.7	9.1	9.0	21.3	20.3	39.4	79.7
3	18.9	26.6	13.6	6.0	5.0	2.4	5.6	6.8	8.1	9.6	8.5	11.6	7.3	8.3	7.2	11.7	7.9	7.3	10.6	16.8	27.0	52.0	11.0	4.7	12.3	52.0
4	2.0	1.4	0.8	0.5	0.4	14.6	1.9	2.3	2.9	1.6	1.7	5.2	6.2	6.3	8.8	21.5	16.7	13.6	5.3	6.8	2.9	24.6	8.6	5.0	6.7	24.6
5	1.7	3.2	22.3	26.9	19.3	3.8	1.2	0.7	2.1	4.8	10.6	6.9	3.7	12.8	21.3	4.1	6.2	6.8	9.1	6.6	6.6	5.1	3.8	3.6	8.0	26.9
6	2.6	2.8	2.1	1.7	1.6	1.2	1.0	1.0	1.1	0.9	9.5	32.0	23.0	27.4	27.6	47.2	12.4	70.6	49.5	18.6	43.4	27.6	18.0	32.8	19.0	70.6
7	10.0	10.0	8.3	2.7	4.1	1.3	2.7	3.6	5.8	7.2	17.9	35.6	33.4	30.6	X	11.7	26.4	29.0	14.8	11.7	15.2	37.2	70.4	11.2	17.4	70.4
8	3.8	8.7	10.7	9.1	3.2	1.7	1.3	1.6	2.0	3.9	4.0	10.5	8.1	6.6	8.5	8.2	10.1	9.0	9.9	6.0	3.7	2.1	2.9	8.0	6.0	10.7
9	8.6	11.3	13.9	11.6	13.4	4.2	2.1	1.6	3.2	3.9	3.9	8.6	6.9	17.5	16.9	8.4	5.4	4.8	4.1	3.8	3.3	3.9	2.0	1.5	6.9	17.5
10	1.1	1.8	1.3	1.5	1.2	0.3	1.0	6.3	13.1	23.9	166.6	90.5	46.0	58.1	48.2	28.1	21.0	14.6	13.1	15.9	11.8	15.9	4.0	6.5	24.7	166.6
11	1.5	1.0	2.5	2.6	4.2	5.7	25.6	30.7	28.4	40.0	5.1	29.3	31.0	30.8	20.2	14.0	25.6	19.2	22.2	53.5	27.6	22.1	3.9	2.8	18.7	53.5
12	2.5	1.9	2.8	4.9	4.3	2.2	1.7	1.6	3.7	6.8	6.8	14.0	19.5	17.3	7.4	4.9	4.0	4.4	3.9	3.8	2.3	2.0	1.9	1.7	5.3	19.5
13	1.8	1.8	1.7	2.3	4.8	3.4	2.8	2.5	3.0	3.1	3.2	3.7	3.9	3.3	3.7	3.6	4.3	5.3	3.8	3.9	4.8	8.0	13.4	7.2	4.1	13.4
14	3.6	2.6	2.1	1.8	1.8	1.6	1.7	2.9	3.1	3.7	4.1	5.3	4.8	7.5	8.4	6.7	8.3	4.9	4.3	4.0	6.4	4.9	5.1	2.8	4.3	8.4
15	2.8	3.1	3.0	3.0	9.4	5.2	3.3	4.3	6.6	23.5	9.4	16.8	16.6	19.2	14.8	18.9	6.8	5.3	4.3	4.2	6.3	3.4	3.7	4.9	8.3	23.5
16	4.2	4.6	2.7	2.0	1.9	1.9	1.7	4.7	8.6	6.8	8.5	10.3	14.1	11.7	11.0	8.4	8.6	8.4	7.6	7.7	14.9	14.5	9.4	11.1	7.7	14.9
17	14.4	13.0	7.2	4.1	4.3	12.5	18.7	26.3	28.7	29.4	21.9	18.8	17.0	26.6	19.8	17.0	22.0	19.7	12.4	9.2	7.4	6.4	6.8	7.6	15.5	29.4
18	7.5	7.6	8.6	9.5	10.8	12.6	11.2	10.5	12.2	8.3	10.1	9.8	10.5	10.3	7.2	5.8	4.9	5.1	3.7	4.3	2.4	2.2	2.3	2.0	7.5	12.6
19	2.1	2.7	6.0	3.5	3.6	16.8	3.2	0.7	3.4	6.3	5.1	10.7	23.2	44.7	35.1	21.9	37.4	45.7	26.8	14.4	12.4	3.4	5.5	2.8	14.1	45.7
20	2.2	5.2	3.9	3.8	1.9	1.1	1.1	0.8	0.6	0.9	1.4	3.8	5.9	4.7	4.4	3.0	3.0	2.0	2.9	1.4	4.4	1.8	2.1	1.7	2.7	5.9
21	4.0	3.5	2.7	2.6	1.8	1.8	1.9	2.4	4.3	5.2	6.0	11.5	7.9	3.8	3.9	4.5	8.3	8.1	5.6	4.8	7.3	3.5	3.2	2.1	4.6	11.5
22	2.1	3.5	15.9	60.1	57.2	38.7	96.4	210.6	300.2	174.1	38.2	84.1	88.2	134.2	55.9	40.8	36.5	22.0	10.7	8.9	4.5	6.7	5.1	3.1	62.4	300.2
23	1.0	0.9	1.4	0.9	0.8	0.7	1.2	3.5	2.9	4.2	12.6	54.0	16.2	10.7	6.3	13.4	6.0	15.1	7.3	5.0	4.9	4.5	3.9	6.7	7.7	54.0
24	6.7	5.5	5.5	4.3	3.6	3.0	2.4	1.8	1.7	1.7	2.9	10.0	9.8	22.2	15.9	20.5	33.7	32.5	19.8	22.8	9.7	16.4	12.0	11.9	11.5	33.7
25	17.3	20.2	6.4	6.3	5.3	6.9	5.7	5.5	22.4	14.9	10.6	13.5	22.1	24.3	13.1	28.3	50.3	41.9	24.3	56.2	15.4	21.6	45.6	16.3	20.6	56.2
26	13.6	22.4	4.6	9.7	9.5	11.7	3.3	16.2	14.5	18.7	7.1	7.5	11.8	57.4	37.8	21.3	18.7	31.7	35.6	51.7	108.0	137.2	24.3	12.9	28.6	137.2
27	125.2	94.4	58.1	40.5	17.6	5.5	3.9	4.1	2.2	1.9	2.4	10.3	3.4	4.8	0.9	1.0	11.9	3.5	7.2	3.7	2.6	1.4	0.7	0.5	17.0	125.2
28	0.4	0.7	3.5	1.8	1.0	0.8	0.9	1.1	1.3	2.4	2.2	4.8	3.8	4.6	2.9	3.0	2.0	0.7	0.3	2.1	2.6	1.2	1.6	3.9	2.1	4.8
29	4.5	7.5	1.6	1.2	2.5	1.8	2.1	2.7	2.1	2.4	2.0	2.7	4.4	3.7	3.1	3.0	2.3	1.6	1.7	1.5	1.4	1.9	1.6	1.8	2.6	7.5
30	2.0	2.8	0.8	0.9	1.0	1.9	3.7	1.1	1.9	3.3	12.9	23.1	14.1	6.2	2.6	6.5	8.4	2.4	1.4	1.2	1.1	1.1	1.0	0.8	4.3	23.1
31	1.4	1.2	1.0	2.4	1.2	1.1	2.8	3.2	6.0	6.9	5.3	11.7	8.3	6.9	3.2	5.4	5.8	3.3	4.4	6.6	6.4	2.5	1.5	8.4	4.5	11.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	743	100%
MEAN	10.8	10.4	11.7	11.6	9.1	7.0	8.3	13.6	18.3	16.1	15.1	21.6	18.1	22.4	16.0	15.4	16.3	16.7	12.6	13.0	12.6	15.1	9.9	7.0		
MAX	125.2	94.4	74.6	70.6	57.2	38.7	96.4	210.6	300.2	174.1	166.6	90.5	88.2	134.2	55.9	48.4	53.0	70.6	49.5	56.2	108.0	137.2	70.4	32.8		



# Berm PM<sub>10</sub> (µg/m<sup>3</sup>) – January 2019

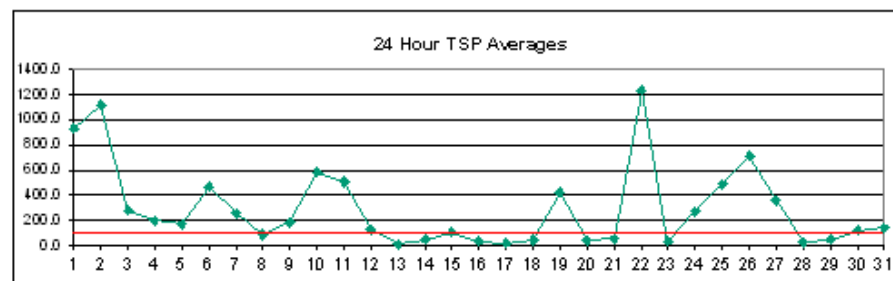
DAY	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	485.3	423.7	631.3	490.0	303.7	185.4	119.7	119.5	315.3	88.7	202.6	343.6	319.6	204.1	321.9	330.8	330.0	311.4	288.0	246.1	129.7	234.1	80.4	81.6	274.4	631.3
2	126.0	45.8	669.1	655.7	361.0	270.3	261.7	476.5	368.4	585.4	412.6	663.8	452.1	422.1	237.7	439.8	477.0	391.2	281.1	197.9	59.7	13.5	65.2	226.0	340.0	669.1
3	222.3	277.7	128.7	41.5	7.5	3.6	8.4	10.1	12.1	14.4	91.5	128.8	78.0	49.5	10.8	17.6	11.8	11.0	15.9	69.0	323.1	550.0	82.3	26.6	91.3	550.0
4	7.6	2.1	1.1	1.4	1.2	78.8	8.8	12.3	4.3	2.3	2.3	7.8	14.0	9.5	48.1	281.2	255.0	215.0	55.0	76.2	28.5	356.3	76.5	54.2	66.6	356.3
5	14.6	40.8	229.8	262.0	181.1	30.1	6.2	2.9	8.2	10.1	116.9	55.0	23.8	144.7	232.4	17.4	16.4	8.6	11.9	6.9	7.3	6.2	4.7	4.9	60.1	262.0
6	3.0	3.1	2.4	2.0	1.9	1.9	2.1	1.4	1.9	1.7	84.0	285.8	199.7	208.1	210.5	633.3	86.0	693.9	444.1	161.7	404.8	261.9	170.1	203.1	169.5	693.9
7	86.1	75.8	74.9	21.2	24.9	7.9	16.6	25.1	51.9	59.7	140.3	215.6	219.8	196.3	X	77.0	226.1	227.2	57.2	38.1	49.5	253.0	135.1	15.9	99.8	253.0
8	4.5	9.3	11.7	10.0	3.9	2.5	3.1	6.7	7.5	26.0	25.8	81.1	69.6	47.3	57.6	55.4	58.8	65.7	66.9	23.3	10.3	4.1	12.0	77.1	30.8	81.1
9	86.8	115.8	147.2	98.6	125.4	33.7	10.1	8.4	15.6	20.3	25.1	45.5	26.8	192.4	183.4	43.0	12.1	11.7	10.1	11.8	12.4	20.2	2.7	3.6	52.6	192.4
10	1.8	8.7	6.8	12.5	6.8	0.7	3.9	63.8	150.1	211.9	1316.8	742.6	403.2	462.7	400.1	252.6	193.1	145.9	98.2	155.3	137.7	144.1	32.2	54.6	208.6	1316.8
11	8.6	2.7	16.0	16.8	34.0	47.6	216.3	237.4	255.6	296.0	37.8	222.8	231.0	233.0	143.3	102.3	199.0	175.3	204.9	481.0	245.9	211.2	31.1	16.6	152.8	481.0
12	14.3	7.3	13.6	29.6	31.6	10.3	4.1	5.8	26.3	51.8	55.7	110.3	164.7	145.8	62.3	33.0	24.1	29.6	18.9	18.9	6.2	4.0	3.5	2.1	36.4	164.7
13	2.2	2.1	1.8	3.8	8.7	6.8	3.8	3.2	4.1	4.4	4.3	9.5	14.3	12.0	12.5	10.1	11.6	11.8	6.5	6.8	9.2	22.9	28.5	10.0	8.8	28.5
14	4.6	3.4	2.6	2.2	2.0	1.8	1.9	3.9	4.3	19.1	17.2	35.1	29.2	51.0	75.1	55.2	56.8	18.9	17.1	17.5	41.2	20.2	16.7	3.1	20.8	75.1
15	3.0	3.6	3.2	3.2	13.3	6.7	3.9	5.9	9.9	35.2	21.5	169.2	176.3	186.4	141.1	165.8	39.4	23.3	14.0	15.6	23.2	4.3	4.5	5.7	44.9	186.4
16	4.8	5.8	3.1	2.3	2.2	2.3	1.9	6.7	12.5	10.1	23.1	63.1	69.0	40.1	37.0	17.7	12.4	13.6	12.0	12.0	20.1	17.4	11.8	14.4	17.3	69.0
17	19.3	17.7	9.5	4.5	4.7	14.5	22.4	33.9	36.4	39.8	28.5	23.0	19.8	36.5	27.2	23.4	32.0	27.7	17.5	12.3	9.0	7.0	7.3	8.7	20.1	39.8
18	8.4	8.7	10.4	11.9	12.0	15.7	14.4	12.0	17.7	11.4	14.5	24.2	38.0	47.9	40.0	29.9	24.5	31.1	16.5	23.8	4.1	3.1	2.4	2.1	17.7	47.9
19	2.1	16.1	53.9	33.7	33.8	161.8	22.2	3.8	44.9	71.8	7.7	24.7	245.1	381.7	311.9	212.6	383.7	435.5	272.4	168.0	133.6	29.3	50.8	21.5	130.1	435.5
20	16.5	52.1	42.5	30.8	13.0	4.8	6.3	4.3	1.8	3.3	6.3	25.3	30.4	23.8	27.1	19.3	16.3	7.5	9.1	3.6	15.2	4.3	5.2	4.2	15.5	52.1
21	11.1	10.8	6.2	6.1	4.2	3.9	4.7	8.7	29.4	40.7	33.3	48.7	32.1	22.0	24.0	25.3	77.8	41.6	16.9	16.1	61.0	14.2	14.7	7.0	23.4	77.8
22	11.1	27.0	159.6	494.7	463.7	309.9	760.8	1670.9	2402.7	1396.7	321.4	629.4	671.1	1028.2	450.2	321.6	268.2	175.9	79.7	60.7	36.4	54.4	35.2	22.4	493.8	2402.7
23	3.9	3.8	7.1	3.7	1.6	0.8	4.3	9.0	5.4	13.3	57.6	80.7	23.9	15.6	8.7	19.3	8.1	21.7	9.2	5.9	6.3	6.3	5.0	8.6	13.7	80.7
24	8.3	7.0	7.3	5.2	4.1	3.4	2.9	2.7	4.2	4.9	15.6	88.1	87.6	161.3	124.1	185.7	323.5	301.1	190.6	212.2	103.8	167.2	102.9	122.3	93.2	323.5
25	171.0	184.4	61.4	67.9	53.9	68.6	54.5	61.5	239.8	142.8	86.4	106.3	147.8	168.3	103.5	208.9	414.8	356.4	210.6	388.6	112.2	155.6	409.2	108.0	170.1	414.8
26	104.0	211.0	32.1	74.5	64.6	59.9	21.6	118.9	113.4	120.6	43.0	44.1	85.7	458.1	296.9	151.1	161.1	274.6	323.9	454.8	889.2	1158.4	184.6	95.3	230.9	1158.4
27	965.0	754.0	495.7	344.9	128.5	28.7	18.5	20.5	18.3	2.8	8.5	45.5	33.2	20.9	1.3	1.4	17.7	5.1	10.7	5.4	3.6	1.9	0.8	0.6	122.2	965.0
28	0.5	0.9	5.0	2.3	1.1	1.0	1.1	1.4	1.8	3.5	3.8	38.5	22.7	44.2	22.5	19.1	9.1	1.2	0.4	3.1	3.8	1.5	2.1	5.7	8.2	44.2
29	6.3	11.1	2.2	1.6	3.6	2.7	17.1	7.4	10.2	12.1	8.4	15.6	41.6	23.5	22.7	22.5	9.3	5.1	5.9	4.1	4.5	7.9	6.2	4.7	10.7	41.6
30	11.6	20.9	1.7	2.3	4.2	12.3	34.5	3.2	5.7	25.3	128.2	239.6	136.7	62.5	15.0	60.0	92.8	18.0	2.9	1.8	4.0	3.0	2.7	1.4	37.1	239.6
31	4.5	3.0	5.3	26.7	7.3	7.1	29.9	32.7	69.5	71.4	51.7	107.6	68.8	52.7	17.9	41.3	49.8	23.3	39.6	65.7	58.0	24.5	3.7	12.1	36.4	107.6
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	743	100%
MEAN	78.0	76.0	91.7	89.2	61.6	44.7	54.4	96.1	137.1	109.6	109.4	152.3	134.7	166.2	122.2	125.0	125.8	131.6	90.6	95.6	95.3	121.4	51.3	39.5		
MAX	965.0	754.0	669.1	655.7	463.7	309.9	760.8	1670.9	2402.7	1396.7	1316.8	742.6	671.1	1028.2	450.2	633.3	477.0	693.9	444.1	481.0	889.2	1158.4	409.2	226.0		



Number of Non-Zero Readings	743
Maximum 1-HR Average	2402.7 UG/M3
Maximum 24-HR Average	493.8 UG/M3
Operational Time	743 HRS
Monthly Calibration	0
Operational Uptime	99.9 %
Standard Deviation	193.3
Monthly Average	99.9 UG/M3

# Berm TSP ( $\mu\text{g}/\text{m}^3$ ) – January 2019

DAY	HOUR																								MEAN	MAX
1	1815.3	1539.2	2052.2	1612.0	951.3	603.1	528.0	505.2	1110.9	325.9	793.0	1178.1	1130.9	667.7	1023.4	1078.5	1038.5	910.2	969.2	724.2	427.4	788.6	297.3	264.9	930.6	2052.2
2	405.7	161.5	2211.7	2267.0	1378.9	1041.7	976.4	1684.1	1306.4	1911.7	1418.7	2020.1	1411.7	1383.1	798.3	1347.6	1358.9	1162.5	820.4	652.4	214.2	15.5	154.7	789.5	1120.5	2267.0
3	699.2	875.0	412.6	250.3	7.4	3.5	7.6	10.1	13.7	16.5	320.5	463.5	286.8	159.5	12.2	20.4	13.7	12.5	18.3	174.5	1046.2	1601.0	239.4	56.5	280.0	1601.0
4	15.5	2.1	1.0	3.4	2.6	98.6	8.7	13.6	4.6	2.2	2.2	8.7	23.2	10.7	153.3	961.9	937.4	652.3	177.0	252.0	76.6	972.1	181.7	187.4	197.9	972.1
5	53.0	134.0	666.6	799.3	586.4	109.4	12.2	5.4	23.7	20.4	368.1	171.6	60.9	428.0	634.1	24.9	30.8	11.3	18.8	4.5	5.1	5.1	4.0	4.7	174.3	799.3
6	2.3	2.3	1.7	1.6	1.4	2.9	10.4	1.0	3.7	4.1	218.2	804.9	591.3	549.9	610.4	1134.2	346.3	1924.5	1184.7	529.0	1300.1	847.3	550.5	625.0	468.7	1924.5
7	287.3	250.3	247.1	78.9	82.4	22.4	63.6	82.4	132.8	145.1	395.4	445.1	446.2	438.9	X	204.2	675.1	540.5	150.6	79.3	123.1	778.5	236.0	16.8	257.5	778.5
8	3.3	6.1	7.7	6.7	3.8	3.7	5.2	32.1	23.5	73.5	62.7	260.7	201.7	132.6	181.2	136.8	141.6	201.5	223.0	43.7	15.3	13.7	42.8	254.0	86.6	260.7
9	327.5	475.9	624.7	368.3	508.3	130.0	41.1	27.9	53.9	72.2	90.3	125.3	76.6	526.6	633.6	127.8	23.2	22.3	23.0	26.1	38.7	77.9	2.6	5.4	184.6	633.6
10	1.7	27.1	27.1	53.1	26.0	1.8	14.0	220.6	491.0	502.5	3317.5	2055.4	1145.3	1296.1	1280.0	807.6	669.8	427.9	202.9	371.5	383.9	375.8	124.2	212.7	584.8	3317.5
11	31.1	4.4	63.0	51.6	97.4	156.8	731.7	707.1	790.3	855.8	136.2	617.9	715.4	789.3	526.9	362.1	674.7	653.7	749.9	1646.9	865.7	751.1	120.2	58.4	506.6	1646.9
12	47.4	15.0	56.8	130.5	139.2	39.5	18.0	15.5	102.6	190.9	221.0	363.6	538.8	480.3	180.5	105.8	91.8	130.8	65.9	88.8	32.6	11.2	10.2	1.9	128.3	538.8
13	2.5	1.4	1.2	4.7	7.9	5.5	3.4	2.7	3.5	3.9	3.8	27.1	58.3	29.7	29.2	14.4	14.2	10.4	5.6	5.0	7.9	26.6	33.5	9.9	13.0	58.3
14	3.8	2.8	3.0	2.6	1.4	1.2	1.4	3.8	4.1	51.8	62.1	130.5	69.5	135.4	188.7	144.3	127.2	32.8	37.2	33.9	93.9	46.2	45.9	2.1	51.1	188.7
15	2.0	2.6	2.1	2.1	13.2	6.2	2.9	5.8	10.8	40.8	34.6	450.7	475.7	509.0	345.7	357.1	96.1	39.9	24.0	33.2	52.0	3.2	3.2	4.1	104.9	509.0
16	3.3	5.0	2.3	1.5	1.6	1.6	1.4	7.1	13.5	10.5	52.6	131.8	192.9	110.5	82.3	30.8	11.5	16.6	12.0	19.2	23.3	12.3	8.8	12.1	31.9	192.9
17	14.7	13.0	7.9	3.0	3.1	11.7	18.0	28.5	31.4	37.7	25.2	18.1	14.8	34.1	25.7	23.0	34.6	29.5	17.8	11.9	7.3	4.9	5.1	6.4	17.8	37.7
18	6.2	6.2	7.5	8.5	8.3	12.3	11.3	8.9	18.6	10.3	17.8	68.2	113.7	182.0	113.5	111.5	82.1	113.7	52.8	99.8	7.7	4.9	2.3	2.0	44.6	182.0
19	1.4	63.4	174.8	122.7	139.7	515.7	71.8	14.4	173.2	216.9	9.5	54.2	769.3	1097.0	934.1	739.0	1314.0	1423.7	907.6	584.6	471.0	97.0	190.1	64.6	422.9	1423.7
20	47.1	205.1	154.4	117.8	38.5	12.3	21.4	15.9	3.8	5.6	10.4	62.1	55.0	55.9	78.9	38.8	38.1	17.6	8.6	5.0	14.9	5.3	5.5	5.1	42.6	205.1
21	11.3	23.3	7.5	7.6	8.9	4.3	5.2	21.2	84.4	107.1	98.6	126.7	77.2	57.8	58.9	59.3	191.2	100.0	33.4	27.8	176.3	31.5	41.3	18.1	57.5	191.2
22	53.7	97.1	592.1	1632.2	1498.4	1030.5	2236.0	3479.1	3947.9	3075.6	961.5	1750.8	1937.5	2841.9	1371.8	925.2	743.3	554.4	249.8	165.4	108.0	160.6	85.2	64.0	1231.7	3947.9
23	13.0	17.0	22.2	9.1	2.5	0.6	8.0	16.5	8.1	25.5	362.8	92.9	25.4	15.4	8.0	20.6	7.0	23.4	7.9	4.1	5.0	5.9	3.9	6.3	29.6	362.8
24	6.1	5.8	6.4	3.8	2.8	2.4	2.2	4.2	8.8	16.5	35.7	240.7	223.6	439.4	297.7	529.9	1059.4	958.1	631.5	582.1	344.1	479.1	299.6	423.7	275.2	1059.4
25	596.8	634.0	222.7	259.3	208.7	231.0	215.7	175.6	741.4	404.2	230.7	237.1	297.8	386.5	264.3	524.3	1242.9	975.5	642.2	882.5	278.3	418.6	1411.5	277.9	490.0	1411.5
26	381.2	787.7	95.6	228.9	188.1	135.8	63.4	302.0	306.3	301.9	147.1	113.3	258.4	1434.8	942.2	477.7	589.4	926.1	1158.8	1466.3	2565.6	3267.5	626.2	281.9	710.3	3267.5
27	2296.3	2399.5	1694.1	1076.0	405.1	70.8	28.1	45.4	131.2	2.5	7.0	47.2	226.4	146.4	1.0	1.1	19.7	5.4	11.7	5.6	3.4	1.6	0.6	0.5	359.4	2399.5
28	0.3	0.7	5.0	1.9	0.7	0.7	0.8	1.2	1.6	3.6	7.6	182.2	67.9	154.6	86.0	57.7	14.4	2.0	0.3	3.3	3.9	1.1	1.8	5.9	25.2	182.2
29	5.9	12.3	1.9	1.4	3.5	5.3	211.5	69.9	110.5	78.5	43.3	51.4	140.2	79.0	92.7	67.4	21.3	14.0	18.0	9.5	14.6	22.7	29.3	20.3	46.8	211.5
30	66.3	131.3	5.5	11.5	24.2	46.7	138.5	11.6	12.5	89.0	447.6	737.2	419.8	197.2	45.7	165.8	290.3	50.6	3.8	2.6	15.6	7.9	5.1	2.4	122.0	737.2
31	10.0	7.8	26.0	129.9	33.5	32.1	142.3	169.9	283.3	270.6	248.6	333.6	245.7	210.3	58.6	150.4	177.7	98.6	139.7	260.9	213.8	92.5	9.5	10.3	139.8	333.6
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	743	100%
MEAN	232.6	255.1	303.4	298.3	205.7	140.0	180.7	248.0	321.0	286.2	327.4	431.3	396.7	483.2	368.6	346.8	389.6	388.5	276.3	283.7	288.2	352.5	153.9	119.2		
MAX	2296.3	2399.5	2211.7	2267.0	1498.4	1041.7	2236.0	3479.1	3947.9	3075.6	3317.5	2055.4	1937.5	2841.9	1371.8	1347.6	1358.9	1924.5	1184.7	1646.9	2565.6	3267.5	1411.5	789.5		

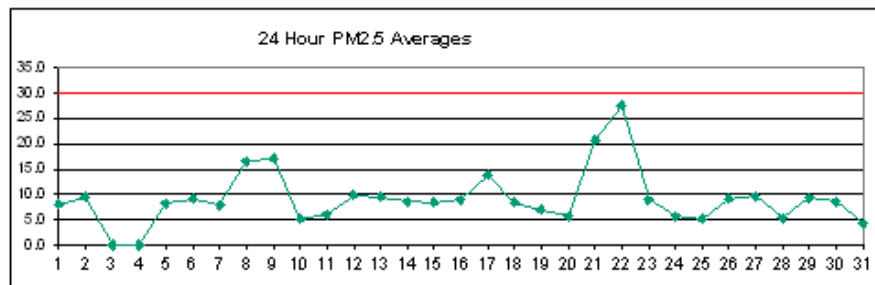


Number of 24HR Exceedences	20	Proposed Guideline
Number of Non-Zero Readings	743	
Maximum 1-HR Average	3947.9 UG/M3	
Maximum 24-HR Average	1231.7 UG/M3	
IZS Calibration Time		Operational Time 743 HRS
Monthly Calibration	0	Operational Uptime 99.9 %
Standard Deviation	515.3	Monthly Average 294.8 UG/M3



# Entrance PM<sub>2.5</sub> (µg/m<sup>3</sup>) – January 2019

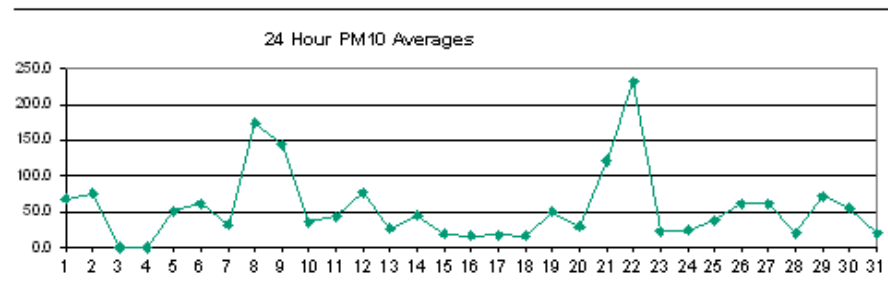
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	18.2	18.3	13.6	15.0	10.0	5.1	6.9	7.5	10.0	16.5	16.1	8.8	5.5	4.8	4.3	3.7	4.4	6.2	2.1	2.1	2.2	3.8	4.4	5.0	8.1	18.3
2	2.5	3.2	11.4	14.4	6.9	5.4	7.8	19.0	24.0	21.0	19.9	23.0	11.6	18.3	13.0	8.9	7.3	2.4	4.1	1.4	1.7	1.1	0.8	0.9	9.6	24.0
3	0.6	0.4	1.2	1.3	2.1	1.4	1.8	2.4	1.3	2.4	2.8	1.8	1.8	1.7	1.6	1.0	2.3	X	X	X	X	X	X	X		
4	X	X	X	X	X	X	X	X	X	X	X	X	1.7	1.1	X	10.4	9.2	9.5	11.4	4.8	4.7	3.0	1.1	0.6		
5	0.8	1.8	1.1	1.7	1.6	0.8	0.8	5.1	11.6	10.9	8.5	18.7	16.8	9.2	7.1	8.3	15.6	17.8	11.0	10.2	11.2	8.5	6.6	12.3	8.2	18.7
6	7.2	6.5	6.0	6.7	6.2	7.4	5.9	5.4	7.1	16.8	9.5	24.1	8.7	7.3	12.5	23.7	9.8	14.7	7.7	4.5	5.3	5.8	5.1	4.6	9.1	24.1
7	2.4	2.4	1.6	0.9	1.1	0.9	2.3	6.9	8.4	9.9	7.8	7.3	8.7	8.2	5.8	3.8	6.0	9.1	17.4	14.7	11.8	18.6	27.2	6.8	7.9	27.2
8	4.6	6.7	8.2	7.2	5.1	2.0	7.3	10.5	13.5	15.2	15.1	31.2	35.0	39.9	22.7	25.3	22.1	16.3	18.7	20.1	8.6	5.1	14.7	41.9	16.5	41.9
9	26.4	14.5	10.6	12.9	20.3	12.6	8.6	12.1	23.4	23.2	17.4	31.6	17.4	10.7	10.5	23.1	22.5	17.8	20.7	22.5	15.6	14.0	9.0	13.3	17.1	31.6
10	10.6	4.8	3.1	1.5	1.4	2.6	2.3	5.3	7.3	11.2	16.0	9.9	7.3	10.7	10.1	3.9	3.5	3.8	2.4	1.1	1.5	1.3	0.9	1.0	5.1	16.0
11	2.1	1.1	0.7	0.8	1.2	2.6	4.4	4.2	3.6	4.6	4.8	12.3	11.9	14.8	9.9	8.2	8.3	8.8	8.1	7.4	4.5	5.6	9.6	4.9	6.0	14.8
12	5.5	7.7	6.7	9.2	14.2	11.0	9.4	9.1	12.1	12.1	11.0	16.0	10.9	12.9	9.8	9.8	11.7	17.0	14.6	9.4	4.7	4.5	4.7	3.2	9.9	17.0
13	4.3	4.4	6.3	6.3	12.0	15.1	17.6	6.5	6.3	8.2	6.5	6.3	7.2	5.1	5.2	6.6	4.8	5.4	5.8	7.5	10.6	28.2	27.2	13.6	9.5	28.2
14	5.9	5.4	4.3	3.6	3.1	2.8	4.0	5.7	9.8	12.0	11.4	16.9	14.1	11.7	11.0	8.8	10.4	13.4	8.8	5.2	7.1	13.1	10.3	7.6	8.6	16.9
15	5.3	6.8	6.1	6.6	5.2	4.3	4.1	7.8	10.5	11.5	11.5	10.7	11.7	17.4	15.8	11.8	7.0	7.4	4.8	8.9	8.9	6.2	6.4	8.1	8.5	17.4
16	4.9	4.0	3.2	2.4	2.8	3.2	2.9	4.1	10.1	12.0	7.2	7.3	15.3	15.5	15.4	11.0	10.3	8.9	9.2	9.8	14.4	15.1	17.2	9.3	9.0	17.2
17	8.6	6.8	5.5	5.3	5.5	12.5	16.9	22.6	23.9	26.1	20.7	18.9	15.6	24.3	18.1	18.0	17.7	16.9	10.0	8.8	7.1	6.7	6.9	7.7	13.8	26.1
18	7.3	8.3	8.3	8.5	11.1	11.1	9.9	13.5	19.3	20.3	9.4	8.2	10.1	10.5	7.8	2.8	4.7	6.6	5.1	4.0	3.6	4.7	3.9	5.6	8.5	20.3
19	7.3	4.1	1.9	2.1	2.2	3.8	4.9	6.6	8.2	3.8	9.5	14.9	14.9	11.5	9.9	6.1	16.4	14.6	9.0	6.3	3.6	2.8	3.3	1.6	7.1	16.4
20	1.2	0.9	1.2	1.6	0.6	0.5	0.7	2.4	6.6	5.7	7.0	3.8	4.5	4.9	4.5	2.6	4.6	5.8	14.4	14.1	12.8	11.1	13.2	13.3	5.7	14.4
21	17.0	11.3	6.9	13.9	11.2	15.9	10.7	17.9	26.7	18.6	27.9	32.2	23.1	13.4	16.2	21.8	20.6	22.5	34.5	41.4	18.2	28.1	27.8	18.0	20.7	41.4
22	19.0	13.1	10.6	15.8	32.0	21.2	27.7	117.4	185.3	68.0	15.5	32.6	21.8	31.0	15.6	9.1	11.4	4.7	4.5	2.0	1.6	1.1	1.0	0.7	27.6	185.3
23	0.8	2.2	1.3	1.9	9.7	8.7	8.9	8.3	7.2	7.0	14.8	41.2	8.9	10.1	6.5	9.7	5.9	12.9	7.7	6.8	6.6	8.7	7.4	11.2	8.9	41.2
24	11.5	10.8	12.8	8.5	6.1	3.4	7.6	9.2	4.4	2.5	5.1	2.8	3.4	5.1	5.0	6.8	12.2	5.4	2.5	1.8	1.5	2.3	2.5	4.0	5.7	12.8
25	6.0	8.3	2.9	4.5	2.6	6.2	2.8	6.6	4.7	6.1	6.7	7.8	6.9	6.7	9.8	11.1	6.5	4.5	3.8	4.0	2.2	0.9	1.8	1.5	5.2	11.1
26	0.8	0.6	0.5	1.6	1.1	1.2	1.5	5.4	5.2	5.3	4.5	4.1	3.5	11.6	18.7	10.9	8.9	13.0	9.3	17.7	15.4	62.0	13.3	1.8	9.1	62.0
27	60.5	54.0	41.3	9.5	7.6	2.7	2.1	3.1	1.6	3.2	3.2	1.7	1.8	5.7	0.7	0.8	10.4	7.2	6.6	4.5	2.2	1.1	0.6	0.9	9.7	60.5
28	0.5	1.9	3.5	6.4	3.4	2.8	4.1	5.0	6.8	8.0	8.9	9.6	10.8	8.8	6.2	8.2	7.8	2.9	2.2	4.7	2.9	3.6	4.3	5.6	5.4	10.8
29	6.8	6.1	10.3	5.9	5.9	4.1	6.5	6.6	11.0	14.4	13.5	16.2	11.6	10.3	9.8	12.0	8.9	8.1	6.4	5.6	8.4	12.4	11.1	12.1	9.3	16.2
30	15.8	18.3	14.5	7.6	9.9	10.0	11.6	9.1	12.0	9.2	10.0	8.4	6.7	5.7	7.5	4.7	9.5	6.4	5.1	3.3	5.7	5.7	4.8	4.5	8.6	18.3
31	6.5	5.0	6.2	2.9	4.9	6.3	2.1	2.8	3.4	4.8	4.2	3.1	4.5	7.3	2.8	2.9	4.3	4.5	2.5	1.4	2.4	3.6	3.6	9.8	4.2	9.8
NO.	30	30	30	30	30	30	30	30	30	30	30	30	31	31	30	31	31	30	30	30	30	30	30	30	724	97%
MEAN	9.0	8.0	7.1	6.2	6.9	6.2	6.8	11.6	16.2	13.0	10.9	14.4	10.8	11.5	9.8	9.5	9.8	9.8	9.0	8.5	6.9	9.6	8.4	7.7		
MAX	60.5	54.0	41.3	15.8	32.0	21.2	27.7	117.4	185.3	68.0	27.9	41.2	35.0	39.9	22.7	25.3	22.5	22.5	34.5	41.4	18.2	62.0	27.8	41.9		



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	724	
Maximum 1-HR Average	185.3 UG/M3	
Maximum 24-HR Average	27.6 UG/M3	
Monthly Calibration	0	
Standard Deviation	11.03	
Operational Time	724 HRS	
Operational Uptime	97.3 %	
Monthly Average	9.5 UG/M3	

# Entrance PM<sub>10</sub> (µg/m<sup>3</sup>) – January 2019

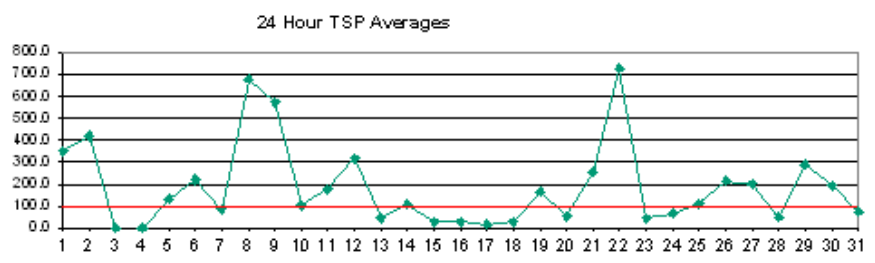
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	186.6	188.8	130.4	144.5	89.5	48.8	57.7	55.8	81.4	146.7	137.8	71.6	36.8	32.7	28.0	22.5	24.4	44.1	12.9	14.4	11.0	19.5	27.1	29.9	68.5	188.8
2	10.8	22.9	98.0	137.0	57.8	41.0	55.8	135.6	185.2	178.2	153.8	198.8	87.8	161.9	113.6	71.2	48.0	10.1	28.9	5.6	3.0	1.4	1.1	3.0	75.4	198.8
3	1.3	1.3	7.0	4.6	3.1	2.0	2.6	3.5	1.9	3.9	18.3	16.1	11.3	2.3	2.3	1.4	3.3	X	X	X	X	X	X	X		
4	X	X	X	X	X	X	X	X	X	X	X	X	4.0	2.0	X	30.3	25.5	27.8	67.6	34.2	46.6	24.7	5.2	1.7		
5	2.2	10.5	7.1	16.0	11.7	4.3	3.3	30.2	158.7	94.0	56.8	220.4	181.3	62.6	28.6	38.4	88.8	102.5	20.3	16.3	16.7	12.5	9.4	18.2	50.5	220.4
6	10.7	9.7	8.9	10.0	9.3	12.4	30.9	31.9	58.1	64.9	56.1	128.4	73.8	72.5	100.4	283.1	34.2	154.4	73.0	45.6	55.9	57.5	49.3	38.5	61.2	283.1
7	17.0	13.9	9.0	2.8	5.0	3.3	9.6	34.7	47.6	62.0	49.7	40.4	58.6	55.7	28.4	18.5	33.2	39.7	57.2	44.8	22.8	48.9	39.9	9.2	31.3	62.0
8	5.8	8.2	10.4	10.3	7.6	5.4	56.8	80.7	123.0	162.0	179.6	413.5	434.3	485.4	238.9	277.7	250.7	146.9	205.0	242.4	79.8	37.2	161.4	539.1	173.4	539.1
9	278.0	158.5	103.1	114.6	196.1	111.9	68.4	118.2	244.1	233.0	185.4	307.9	135.5	43.5	38.5	136.8	192.9	134.0	157.6	155.4	122.0	105.6	47.4	65.8	143.9	307.9
10	50.4	22.4	13.4	5.7	5.1	10.8	10.7	28.6	45.4	77.6	172.1	78.0	53.1	91.3	82.5	28.4	21.7	19.3	14.9	2.9	6.7	4.6	3.1	3.4	35.5	172.1
11	7.3	2.6	1.5	1.9	5.5	14.5	35.7	31.2	21.8	23.7	36.7	107.5	114.7	128.0	72.5	50.6	63.2	64.4	61.3	64.7	31.2	29.5	49.6	27.4	43.6	128.0
12	34.8	43.3	40.7	73.8	124.4	87.4	68.0	57.8	88.5	88.1	69.1	154.2	91.7	107.3	83.5	80.2	98.4	172.0	125.5	71.2	23.4	18.9	25.2	9.4	76.5	172.0
13	6.3	6.5	9.4	9.4	18.0	22.5	26.4	9.6	9.3	12.3	15.0	39.5	41.4	28.0	19.8	25.1	13.9	17.9	16.9	20.5	48.7	171.4	40.7	20.3	27.0	171.4
14	8.8	7.9	6.2	5.6	4.4	3.9	5.9	8.5	14.7	76.7	94.6	169.6	116.0	81.0	62.8	37.0	61.2	99.9	65.5	22.2	22.1	62.2	15.4	11.2	44.3	169.6
15	7.5	10.1	9.0	9.9	7.6	6.2	6.0	11.6	15.7	17.2	17.2	52.4	62.2	90.9	35.6	17.7	10.6	11.0	7.2	13.3	13.1	8.9	8.8	10.9	19.2	90.9
16	5.7	5.1	4.2	2.9	3.6	4.5	4.0	5.9	15.1	18.0	27.4	47.2	53.8	37.6	22.7	15.9	13.8	12.4	13.0	14.0	18.8	18.0	23.3	11.9	16.6	53.8
17	10.2	8.3	6.6	6.5	6.4	13.6	18.8	27.3	29.7	33.7	25.3	22.9	17.4	32.8	23.4	23.8	23.9	23.0	13.2	12.1	8.8	8.1	7.8	9.1	17.2	33.7
18	8.1	10.3	9.6	9.7	13.9	15.4	12.6	17.8	28.9	32.8	14.4	11.8	14.4	24.9	27.4	6.6	19.1	26.0	14.5	11.9	13.4	22.1	12.3	19.8	16.6	32.8
19	29.9	18.9	8.0	10.4	8.9	41.7	24.6	30.2	42.2	19.8	18.1	30.7	125.8	113.8	97.7	54.3	158.0	143.6	78.4	53.3	34.2	26.7	25.7	10.8	50.2	158.0
20	11.2	6.6	9.2	9.1	1.9	1.8	2.9	9.3	40.2	29.3	33.9	19.4	26.8	31.1	24.6	16.8	19.1	26.0	68.7	73.4	62.4	51.0	57.3	59.0	28.8	73.4
21	72.6	50.2	23.7	52.7	46.1	65.4	39.3	72.4	122.7	95.8	143.4	161.1	133.3	93.9	108.9	138.3	130.2	177.1	214.5	269.4	125.4	217.1	241.7	119.9	121.5	269.4
22	167.7	99.0	90.2	143.1	261.1	179.8	228.6	1068.4	1648.0	575.0	111.6	239.5	157.0	229.1	106.5	61.2	76.0	28.9	44.7	11.1	10.0	4.4	3.1	2.5	231.9	1648.0
23	2.0	7.0	3.1	6.7	39.6	36.0	100.3	62.3	35.7	34.5	25.9	61.6	12.7	14.9	9.2	13.8	7.9	18.2	9.8	8.6	8.5	11.7	9.4	15.6	23.1	100.3
24	16.2	16.0	19.2	12.7	8.8	4.3	11.0	35.4	27.9	11.0	30.0	15.2	20.7	39.7	32.4	46.9	96.0	39.4	12.4	7.5	8.8	18.1	22.5	36.6	24.5	96.0
25	60.0	75.4	21.7	36.9	19.8	50.0	22.6	34.9	22.8	35.9	44.1	60.1	49.6	43.3	66.1	103.8	51.4	32.0	23.7	37.5	14.6	4.0	12.4	10.3	38.9	103.8
26	3.0	1.8	1.3	13.3	5.5	6.4	9.0	35.8	27.3	30.3	22.6	21.1	18.8	79.6	128.3	68.0	48.4	79.6	54.2	136.4	117.5	462.7	106.5	11.0	62.0	462.7
27	501.3	409.3	274.7	76.1	59.0	18.1	11.6	16.6	6.2	4.9	10.7	4.9	17.2	14.1	1.1	1.1	15.5	10.7	9.8	6.6	3.0	1.3	0.7	1.1	61.5	501.3
28	0.6	2.5	4.7	9.5	5.0	4.1	6.2	7.4	10.1	11.9	45.7	55.9	73.7	50.0	30.0	53.5	64.8	16.3	3.1	7.0	4.1	5.2	6.0	8.0	20.2	73.7
29	9.8	9.0	15.4	8.8	8.8	8.9	34.1	20.3	62.9	159.3	140.1	190.1	107.2	86.1	76.2	92.6	76.5	69.0	61.6	53.8	77.1	124.5	114.6	119.4	71.9	190.1
30	150.8	155.8	103.2	48.2	58.0	69.8	88.1	45.8	66.9	69.7	76.6	49.7	29.3	26.0	34.4	20.0	47.1	26.7	25.9	17.2	32.8	39.3	27.2	21.4	55.4	155.8
31	37.2	25.7	34.7	14.2	27.1	30.0	7.3	11.0	21.1	20.3	18.8	19.1	32.6	60.1	12.3	14.7	28.1	20.4	8.2	5.1	6.6	13.8	9.8	13.2	20.5	60.1
NO.	30	30	30	30	30	30	30	30	30	30	30	30	31	31	30	31	31	30	30	30	30	30	30	30	724	97%
MEAN	57.1	46.9	36.1	33.6	37.3	30.8	35.3	71.3	110.1	80.7	67.7	101.0	77.2	78.1	57.9	59.7	59.5	59.8	52.3	49.3	35.0	54.4	38.8	41.9		
MAX	501.3	409.3	274.7	144.5	261.1	179.8	228.6	1068.4	1648.0	575.0	185.4	413.5	434.3	485.4	238.9	283.1	250.7	177.1	214.5	269.4	125.4	462.7	241.7	539.1		



Number of Non-Zero Readings	724
Maximum 1-HR Average	1648.0 UG/M3
Maximum 24-HR Average	231.9 UG/M3
Monthly Calibration	0
Standard Deviation	100.3
Operational Time	724 HRS
Operational Uptime	97.3 %
Monthly Average	57.2 UG/M3

# Entrance TSP ( $\mu\text{g}/\text{m}^3$ ) – January 2019

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	1117.4	1189.7	772.4	886.2	582.8	356.2	282.7	248.9	339.4	594.5	559.0	264.9	151.7	155.7	119.4	100.0	95.7	169.0	57.7	75.7	34.7	55.9	102.5	111.1	351.0	1189.7
2	55.1	146.7	630.2	923.6	335.5	276.8	375.6	676.2	789.0	946.3	807.2	1150.0	421.4	896.7	736.2	429.6	230.4	28.4	121.8	22.5	9.0	1.1	1.1	17.1	417.8	1150.0
3	2.4	3.7	32.2	20.4	2.8	1.8	2.4	3.2	1.8	5.4	85.2	80.1	44.8	2.3	2.3	1.4	3.1	X	X	X	X	X	X	X		
4	X	X	X	X	X	X	X	X	X	X	X	X	11.8	1.9	X	58.2	47.7	46.1	176.3	105.1	112.2	53.9	10.9	2.2		
5	4.9	26.3	28.8	63.8	51.1	21.0	6.3	58.1	461.0	200.8	175.6	772.1	517.7	154.3	47.6	66.8	182.1	174.3	29.3	19.4	18.4	12.6	9.5	19.8	130.1	772.1
6	11.6	10.4	9.4	10.6	10.3	15.9	86.5	85.5	198.6	135.1	149.8	347.2	304.6	314.5	343.7	762.1	191.7	659.6	347.6	217.8	299.9	310.1	260.5	202.9	220.3	762.1
7	82.6	65.0	29.4	12.9	20.5	9.9	40.1	72.7	89.9	136.6	139.5	101.7	163.1	140.1	61.2	47.1	85.0	75.6	111.7	102.7	59.2	331.7	45.7	8.7	84.7	331.7
8	4.2	6.0	7.8	9.4	18.7	32.0	226.0	247.2	386.6	582.7	683.8	1719.3	1727.2	1755.1	865.4	1083.0	983.8	522.0	822.0	1008.4	322.0	153.2	707.2	2300.7	673.9	2300.7
9	1227.0	845.0	544.3	552.4	960.0	537.3	313.1	501.2	983.4	850.5	781.2	1130.5	493.7	92.2	75.9	369.2	702.4	506.6	542.6	555.8	445.8	413.3	155.4	148.2	572.0	1227.0
10	91.7	47.6	33.8	15.3	10.3	18.9	24.8	67.5	107.8	189.8	546.4	239.6	175.2	310.4	314.2	88.1	58.9	34.6	29.3	4.3	22.0	13.9	12.5	18.1	103.1	546.4
11	9.8	6.9	8.7	6.1	20.4	54.8	152.7	131.9	83.0	64.8	150.8	408.9	470.7	550.8	283.8	191.7	262.7	298.5	302.4	312.7	163.9	127.6	121.0	84.0	177.8	550.8
12	119.6	100.4	124.5	290.1	498.8	360.7	282.3	205.2	316.8	315.0	243.5	678.1	412.4	460.6	369.8	318.0	460.3	820.9	570.2	329.6	104.6	63.8	128.3	38.0	317.1	820.9
13	6.1	6.2	9.6	9.3	19.9	25.0	29.8	9.6	9.3	13.3	24.1	175.5	137.2	85.8	56.0	46.0	15.6	29.6	17.6	23.5	80.6	182.5	46.6	23.3	45.1	182.5
14	8.9	8.1	6.2	5.5	3.8	3.3	6.2	9.4	16.8	263.9	327.4	512.2	303.5	187.3	133.0	53.0	132.2	233.3	122.4	45.9	37.1	106.6	17.4	10.8	106.4	512.2
15	6.6	10.0	8.8	9.6	7.1	5.2	5.9	12.2	17.9	19.4	19.8	138.0	153.7	143.2	41.5	20.2	11.8	12.5	7.8	14.4	11.0	7.2	6.7	9.2	29.2	153.7
16	3.8	4.0	3.4	2.2	3.2	4.5	3.8	6.0	17.3	20.8	65.3	136.9	180.4	101.9	23.9	15.2	11.2	10.4	10.4	12.0	14.2	12.7	17.0	10.2	28.8	180.4
17	7.5	6.4	5.1	4.8	4.7	9.8	14.1	23.6	24.8	30.3	21.0	18.0	12.8	30.6	22.0	23.5	23.2	23.4	12.5	11.6	7.3	6.3	5.7	6.9	14.8	30.6
18	5.8	9.1	7.0	6.6	9.6	13.3	10.3	16.1	33.4	53.8	25.9	17.6	13.5	69.8	71.2	14.5	32.7	33.5	21.0	23.5	47.6	86.2	36.0	30.0	28.7	86.2
19	54.1	52.7	28.9	32.6	22.6	167.3	36.7	44.8	97.9	54.9	33.9	64.0	442.6	378.1	361.5	158.5	547.5	510.1	274.6	207.6	121.6	104.3	88.1	78.6	165.2	547.5
20	79.6	21.3	34.7	44.7	8.7	2.8	6.3	17.6	85.9	61.0	55.4	41.3	69.9	87.9	60.2	44.5	32.2	39.3	81.7	84.9	64.6	77.0	82.6	81.7	52.7	87.9
21	126.1	99.5	28.7	66.4	64.8	111.2	66.5	123.0	218.7	207.2	309.0	324.9	271.7	211.6	196.4	217.5	248.2	451.2	415.7	544.3	279.8	542.0	682.8	361.2	257.0	682.8
22	578.3	343.6	343.9	560.1	1098.3	755.6	874.9	2892.3	3931.4	1902.3	413.4	1011.0	583.3	923.9	400.4	204.3	240.4	82.8	167.4	30.1	54.2	20.3	11.3	9.1	726.4	3931.4
23	6.3	9.3	6.0	12.6	62.3	84.3	252.9	220.7	76.5	89.6	45.0	71.4	13.2	16.5	9.4	14.3	7.3	17.7	8.4	6.6	6.4	9.7	6.8	11.3	44.3	252.9
24	11.9	15.1	21.8	13.9	8.9	3.5	11.6	102.3	118.4	30.2	103.7	49.0	72.2	108.5	84.6	115.2	234.9	110.1	31.6	23.0	22.7	63.0	70.3	109.3	64.0	234.9
25	190.2	249.8	73.7	134.9	64.8	190.0	75.5	59.7	51.2	69.2	101.9	173.8	125.3	99.7	167.7	321.3	143.9	77.6	61.9	127.6	40.4	14.4	44.6	40.5	112.5	321.3
26	8.6	7.5	3.7	51.7	19.4	19.5	24.0	100.2	71.6	91.9	70.2	54.1	43.6	237.8	354.4	185.9	132.0	224.7	159.2	506.5	513.6	1770.1	465.4	26.4	214.3	1770.1
27	1456.4	1340.6	923.4	345.6	217.9	63.6	24.3	35.9	39.1	4.7	16.2	12.7	132.2	150.8	1.0	0.8	17.9	11.3	10.9	7.1	2.6	0.9	0.5	0.8	200.7	1456.4
28	0.5	2.1	3.8	10.3	5.1	4.1	6.5	8.2	11.4	13.3	151.5	141.7	230.5	118.1	56.3	124.6	182.6	44.4	3.4	7.6	3.6	5.1	5.8	7.3	47.8	230.5
29	9.1	9.3	17.8	9.8	10.1	17.1	103.1	70.0	271.4	726.2	664.0	840.4	419.7	291.3	251.6	263.8	272.4	255.6	254.5	227.3	349.7	519.5	521.3	552.6	288.6	840.4
30	707.4	688.7	419.7	208.5	195.8	270.0	359.1	142.6	252.6	244.9	259.0	178.1	67.4	62.5	48.9	49.7	82.0	41.1	49.7	41.3	68.9	103.3	71.3	41.5	193.9	707.4
31	109.6	67.5	105.3	44.6	80.1	73.2	18.3	35.6	83.7	61.4	59.0	78.0	168.7	380.9	47.6	66.1	113.0	54.3	23.4	20.1	11.3	19.7	13.7	10.1	72.7	380.9
NO.	30	30	30	30	30	30	30	30	30	30	30	30	31	31	30	31	31	30	30	30	30	30	30	30	724	97%
MEAN	203.4	179.9	142.4	145.5	147.3	117.0	124.1	207.6	306.2	266.0	236.3	364.4	268.9	274.9	186.9	175.9	186.6	186.6	161.5	157.3	111.0	172.9	124.9	145.7		
MAX	1456.4	1340.6	923.4	923.6	1098.3	755.6	874.9	2892.3	3931.4	1902.3	807.2	1719.3	1727.2	1755.1	865.4	1083.0	983.8	820.9	822.0	1008.4	513.6	1770.1	707.2	2300.7		



Number of 24HR Exceedences	18	Proposed Guideline
Number of Non-Zero Readings	724	
Maximum 1-HR Average	3931.4	UG/M3
Maximum 24-HR Average	726.4	UG/M3
Monthly Calibration	0	
Standard Deviation	332.6	
Operational Time	724	HRS
Operational Uptime	97.3	%
Monthly Average	191.6	UG/M3