

REPORT N° 171-00556-00

AMBIENT AIR QUALITY MONTHLY REPORT

MARCH 2018

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MARCH 2018

Lafarge Canada Inc.

Project no: 171-00556-00
Date: March 2018

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Project Number: 171-00556-00

April 19, 2018

Janet Brygger
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Dear Ms. Brygger,

Subject: Ambient Air Quality Monthly Report – March 2017

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The operational uptime for the meteorological systems and all analyzers at the Lagoon station was 100% in March with an exception of PM₁₀ analyzer. Its operational uptime was 97% due to removal and installation audits on March 6th. There were no contraventions of the 24-hour TSP and PM_{2.5} Alberta Ambient Air Quality Objectives (AAQOs) in March at the Lagoon monitoring location.

All analyzers at the Windridge station had 99.5% operational uptime due to 4 hours of instrument error on March 15th. There were 2 days exceeding the 24-hour TSP AAAQO while there was 1 day of the 24-hour PM_{2.5} AAAQO exceedance.

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. All GRIMM monitors had 100% operational time in March. The Entrance GRIMM monitor exceeded the 24-hour TSP AAAQO for 11 days and the 24-hour PM_{2.5} AAAQO for 1 day in March, while the Berm GRIMM had 4 exceedances of the TSP Objective and no exceedances of the PM_{2.5} Objective. The West GRIMM monitor recorded 0 exceedance of the 24-hour TSP, 1 exceedance of PM_{2.5} Objective as well as the 1-hour PM_{2.5} AAAQG.

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements.

Sincerely,

Tyler Abel, M.Sc.
Group Manager, Air Quality
Environment

SIGNATURES

PREPARED BY



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1 INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon monitoring location 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 March 1, 2018 and March 31, 2018.

This monthly report was prepared by Byeong Kim, an Air Quality Specialist with WSP, on behalf of Lafarge and was reviewed by Tyler Abel, Manager of Air Quality and Air Quality Specialist at WSP.

2 MARCH 2018 REPORT SUMMARY

This summary section provides the pertinent details on data collected and maintenance/calibration activities at each of the monitoring locations. The monitoring results for the stations are described in further detail in their corresponding sections. Maximum hourly concentrations are shown for all particulate matter size fractions, but there are no Alberta Ambient Air Quality Objectives (AAAQO) for 1-hour PM concentrations. The exceedances reported for 1-hour PM_{2.5} are those above the 1-hour PM_{2.5} Alberta Ambient Air Quality Guidelines (AAAQG).

2.1 LAGOON STATION

Table 2-1 Lagoon station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
NO ₂ (ppb)	100.0	35.6	0	21.0	-
SO ₂ (ppb)	100.0	18.4	0	7.3	0
PM _{2.5} (µg/m ³)	100.0	48.9	0	29.5	0
PM ₁₀ (µg/m ³)	99.7	158.5	-	43.7	-
TSP (µg/m ³)	100.0	243.4	-	55.3	0
Temperature (°C)	100.0	14.2	-	4.0	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	50.8/W	-	35.8/WSW	-
Precipitation (mm)	100.0	2.5	-	17*	-

* Monthly Total Accumulation of Precipitation (mm)

Data Quality Notes:

- There was no exceedance of the 24-hour PM_{2.5} AAAQO and the 1-hour PM_{2.5} AAAQG.
- There was no exceedance of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- The Station had 100% uptime for the month of March, except for the PM₁₀ analyzer due to the removal and installation audits on March 6th.

2.2**WINDRIDGE STATION****Table 2-2 Windridge station data summary**

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
PM _{2.5} (µg/m ³)	99.5	51.3	0*	31.2	1
PM ₁₀ (µg/m ³)	99.5	379.2	-	105.6	-
TSP (µg/m ³)	99.5	413.0	-	147.8	2

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

Data Quality Notes:

- There was 1 and 0 exceedance of the 24-hour PM_{2.5} AAAQO and the 1-hour PM_{2.5} AAAQG. On the day of the 24-hour PM_{2.5} AAAQO exceedance, there was a significant odour in the area and there may have been prescribed fires near Exshaw. Winds were also from the east. With these conditions, it is reasonable to assume that Lafarge was not a significant contributor to this exceedance.
- There were 2 exceedances of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- The Station had 99.5% uptime for the month of March due to 4 hours of instrument error on March 15th.

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.

Table 2-3 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	100.0	49.8	0*	38.1	1
PM ₁₀ (µg/m ³)	100.0	113.3	-	44.9	-
TSP (µg/m ³)	100.0	544.1	-	81.0	0

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

Data Quality Notes:

- There was 1 and 0 exceedance of the 24-hour PM_{2.5} AAAQO or the 1-hour PM_{2.5} AAAQG. On the day of the 24-hour PM_{2.5} AAAQO exceedance, there was a significant odour in the area and there may have been prescribed fires near Exshaw. Winds were also from the east. With these conditions, it is reasonable to assume that Lafarge was not a significant contributor to this exceedance.
- There was no exceedance of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- The monitor had 100% uptime for the month of March.

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.

Table 2-4 Berm station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	100.0	50.8	0*	24.8	0
PM ₁₀ (µg/m ³)	100.0	356.2	-	116.3	-
TSP (µg/m ³)	100.0	1406.4	-	412.9	4

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

Data Quality Notes:

- There was no exceedance of the 24-hour PM_{2.5} AAAQO or the 1-hour PM_{2.5} AAAQG.
- There were 4 exceedances of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- The monitor had 100% uptime for the month of March.

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.

Table 2-5 Entrance station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	100.0	73.5	0*	41.0	1
PM ₁₀ (µg/m ³)	100.0	366.3	-	114.0	-
TSP (µg/m ³)	100.0	2007.8	-	341.3	11

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

Data Quality Notes:

- There was 1 and 0 exceedance of the 24-hour PM_{2.5} AAAQO or the 1-hour PM_{2.5} AAAQG. On the day of the 24-hour PM_{2.5} AAAQO exceedance, there was a significant odour in the area and there may have been prescribed fires near Exshaw. Winds were also from the east. With these conditions, it is reasonable to assume that Lafarge was not a significant contributor to this exceedance.
- There were 11 exceedances of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- The monitor had 100% uptime for the month of March.

3 LAGOON STATION

The Lagoon trailer contains NO_x, SO₂, TSP, PM₁₀, and PM_{2.5} analyzers as well as meteorological sensors, and is shown in Figure 3-1. An ambient air quality station has been at this location since 2002, providing a long-term data record for air quality in the Exshaw area.

This section provides a summary of the monitoring activities for the Lagoon ambient air quality station, including: a table of instrumentation (Table 3-1), site visit notes, wind roses (Figure 3-3, 3-4, 3-5) and tables and graphs illustrating the monitoring results for March 2018.

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

Table 3-1 Instrumentation List at the Lagoon Station

Equipment Description	Parameter Measured
MetOne BAM-1020 FRM Continuous Particulate Monitor	PM _{2.5} Concentrations
MetOne BAM-1020 Continuous Particulate Monitor	PM ₁₀ Concentrations
MetOne BAM-1020 Continuous Particulate Monitor	TSP Concentrations
TEI 42C	Oxides of Nitrogen
Teledyne API 102A	Sulphur Dioxide
MetOne 130 Rain/Snow Gauge	Precipitation
MetOne Wind Sensor	Wind Speed
	Wind Direction
MetOne Ambient Temperature Sensor	Ambient Temperature



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

3.1 SITE VISIT NOTES

A summary of site visit notes for each of the monitors is provided in this section.

3.1.1 NO_x MONITORING

The NO_x monitor underwent monthly calibration on March 1th and had 100% uptime.

3.1.2 SO₂ MONITORING

The SO₂ monitor underwent monthly calibration on March 1th and had 100% uptime.

3.1.3 PM MONITORING

All BAM monitors underwent monthly calibration on March 1st. Also on March 6th, removal and installation audits were conducted on the PM₁₀ monitor. The operation time for the PM₁₀ monitor was 99.7%.

3.1.4 METEOROLOGICAL MONITORING

All meteorological sensors had 100% uptime.

3.2 MONITORING RESULTS AND TRENDS

Figure 3-3 illustrates the frequency of wind speed by wind direction for the month of March 2018. Table 3-2 summarizes the hourly and daily concentrations recorded in March 2018. Figure 3-4 graphically illustrates the time series for hourly concentrations as well as wind speed and direction,

while Figure 3-5 shows daily average concentrations recorded during March 2018 for the pollutants listed in Table 3-2.

There was no exceedance of the 24-hour TSP ($100 \mu\text{g}/\text{m}^3$) and $\text{PM}_{2.5}$ ($30 \mu\text{g}/\text{m}^3$) AAAQO. Historically in March, there was 1 exceedance of the 24-hour TSP AAQO in 2015 and no exceedances of the 24-hour $\text{PM}_{2.5}$ AAQO (Table 3-3).

Since flooding in 2013, the Municipal District has built up stockpiles of dirt on the far western edge of the wastewater treatment facility. During the summer of 2016, the Municipal District has planted grass seed on these stockpiles in an effort to reduce the amount of fugitive dust generated. Figure 3-2 shows the extent of the grass planted by the MD.



Figure 3-2 Grass planted on the stockpiles near the Lagoon Station. Photo taken March 12, 2016.

The wind rose (Figure 3-3) indicates that the winds predominantly came from the west, following the general orientation of the valley. As typical of the wind characteristics at the Lagoon site, the westerly winds were more intense (higher than 20 km/hr) than the easterly winds. It should be noted that the frequency of easterly winds increased as spring is approaching.

Table 3-2 Summary of March 2018 data at Lagoon

Parameter	Objectives		Station	Exceedances		Monthly Average	1-hour					24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration/ Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable	Day	
NO ₂ (ppb)	159	-	Lagoon	0	-	7.3	35.6	8	0	3.9	216.6	21.0	5	100.0
SO ₂ (ppb)	172	48	Lagoon	0	0	2.0	18.4	14	13	7.4	66.1	7.3	14	100.0
PM _{2.5} (µg/m ³)	80	30	Lagoon	0	0	6.9	48.9	22	9	18.5	73.3	29.5	22	100.0
PM ₁₀ (µg/m ³)	-	-	Lagoon	-	-	22.0	158.5	23	6	47.7	258.0	43.7	22	99.7
TSP (µg/m ³)	-	100	Lagoon	-	0	23.4	243.4	14	16	15.0	55.5	55.3	14	100.0
Temperature (°C)	-	-	Lagoon	-	-	-2.2	14.2	13	15	17.8	256.0	4.0	14	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	16.0	50.8/W	27	6	50.8	255.0	35.8/WSW	26	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	2.5					17.0	-	100.0

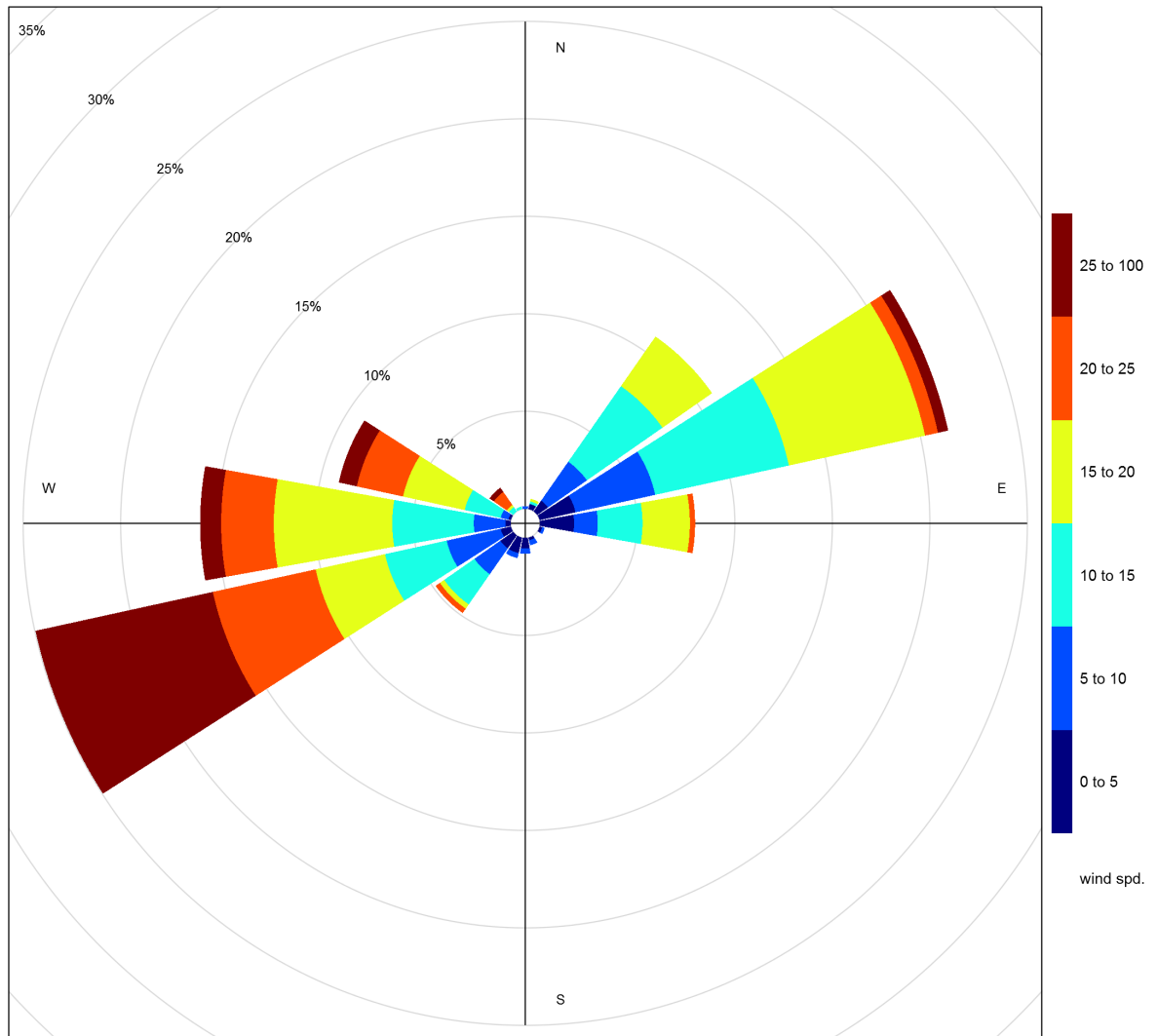


Figure 3-3 March 2018 wind rose from the Lagoon Station

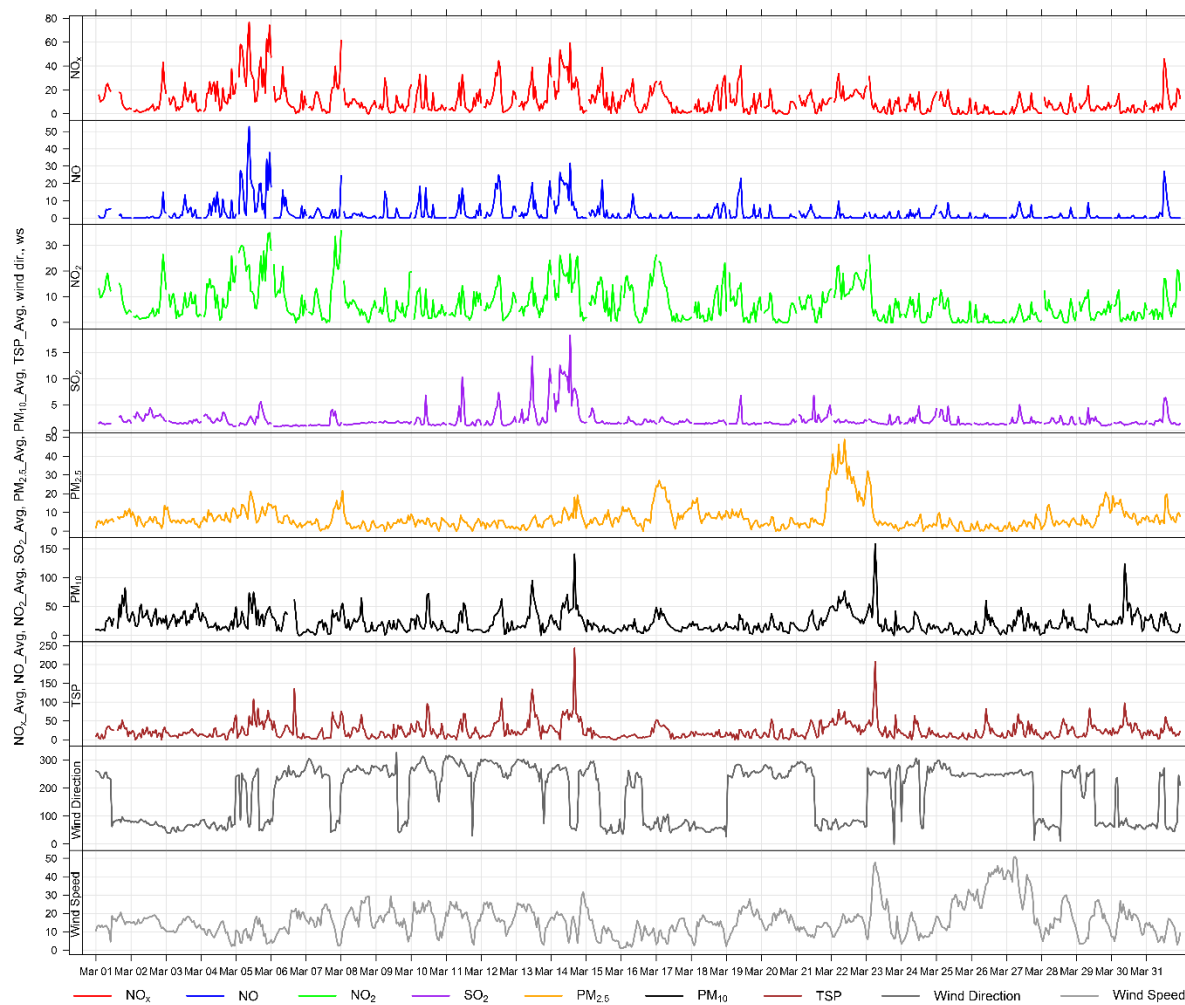


Figure 3-4 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon Station

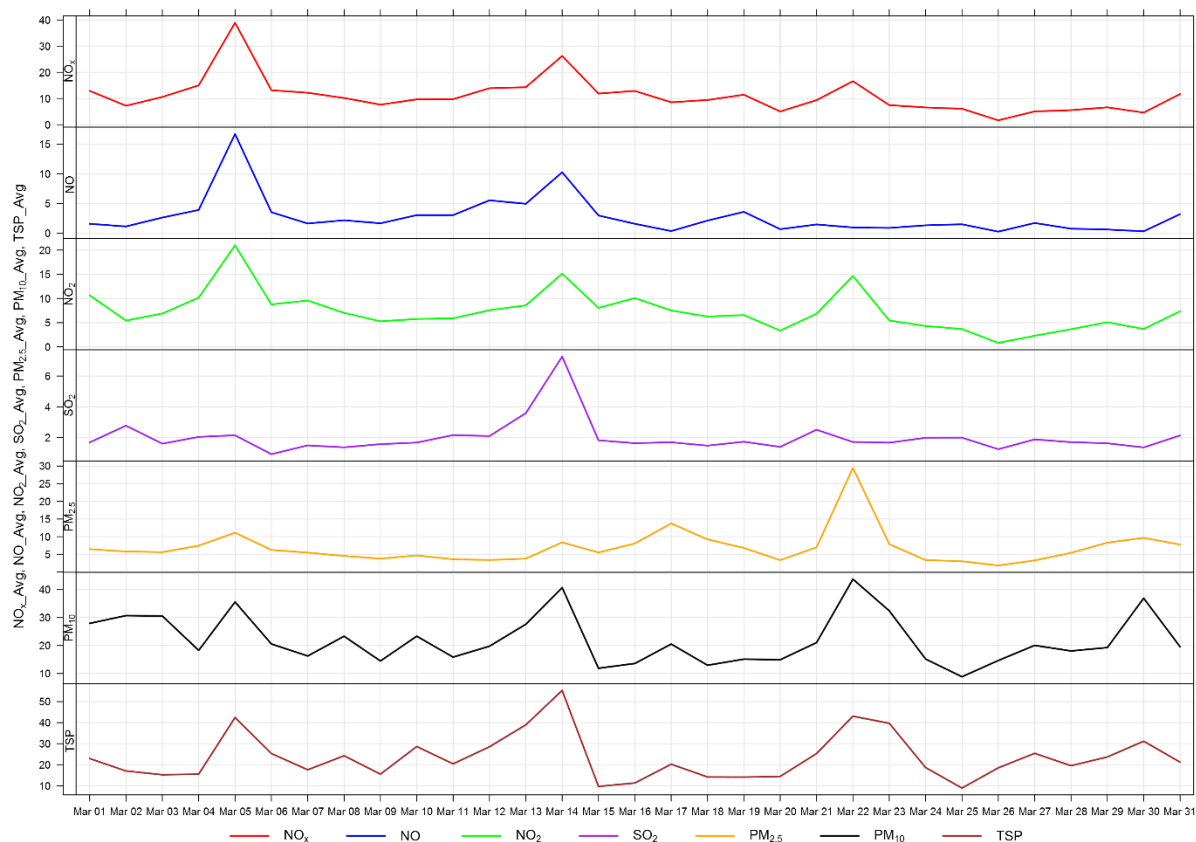


Figure 3-5 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon Station

Figure 3-6 through Figure 3-8 show the variation in concentrations over various time averaging periods for PM, SO₂ and NO_x. The particulate matter plot in Figure 3-6 shows that PM₁₀ and TSP concentrations tends to rise through the morning before peaking mid-day and decreasing during the afternoon and evening. PM₁₀ and TSP are generally associated with dust from fugitive sources.

Figure 3-7 shows the variation of SO₂ over various time periods. SO₂ concentrations were very low in March. Figure 3-8 shows the variation of NO_x, NO and NO₂, with the peak of all three pollutants occurring in the morning between 6 am and noon. This may be indicative of a peak in traffic.

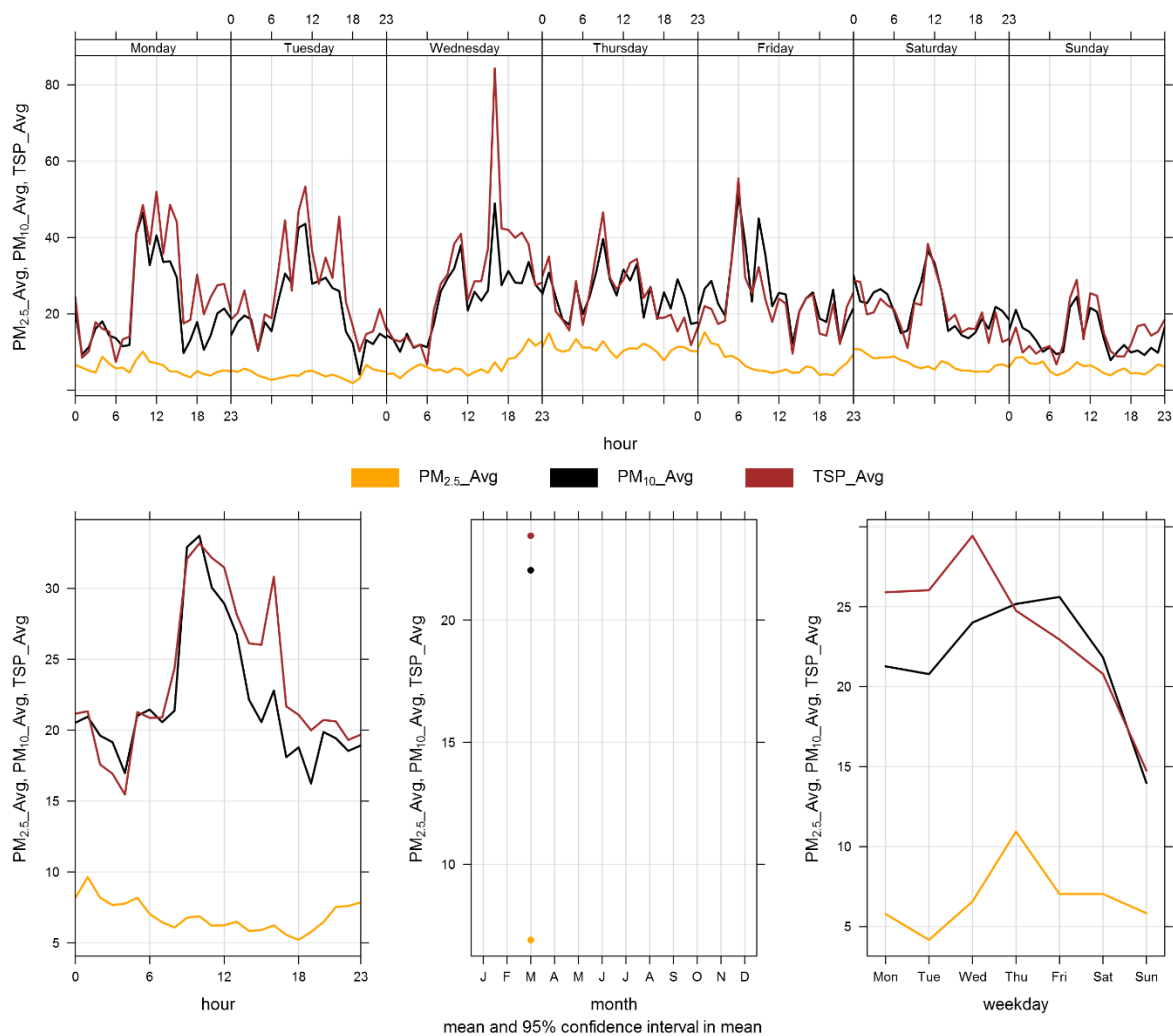


Figure 3-6 Lagoon Station particulate matter time variation

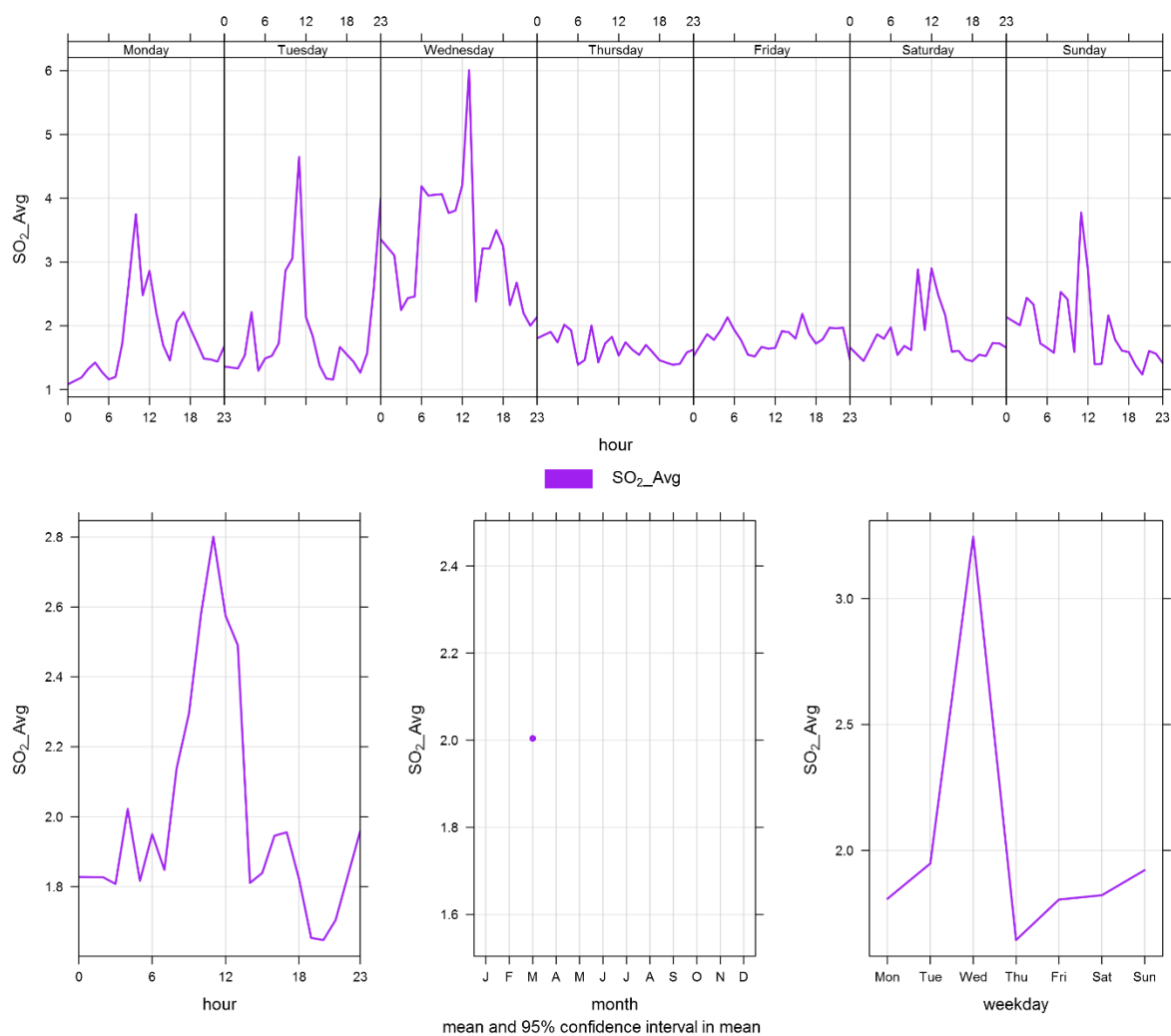


Figure 3-7 Lagoon Station SO₂ time variation

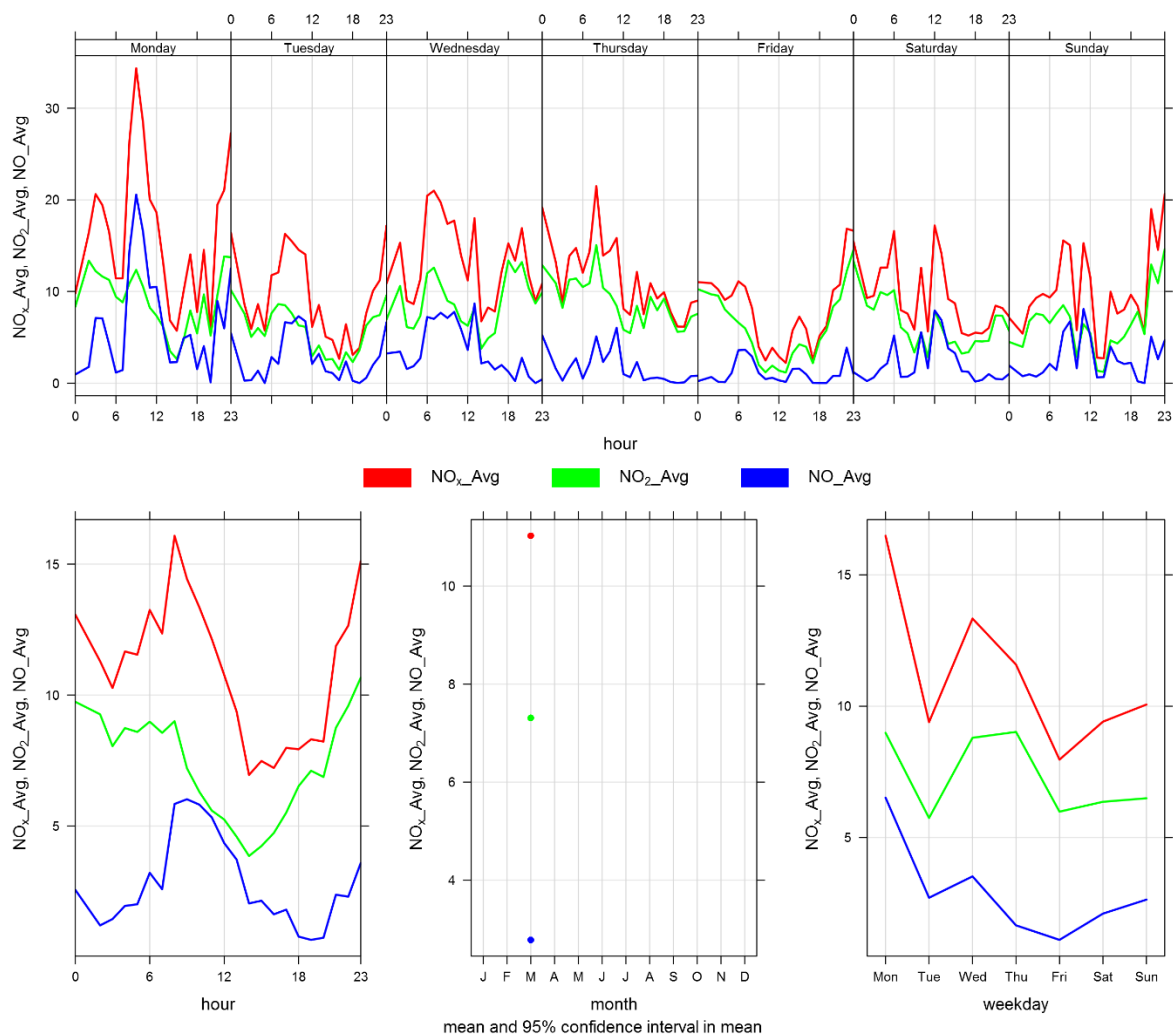


Figure 3-8 Lagoon Station NO_x time variation

4 WINDRIDGE STATION

4.1 SITE VISIT NOTES

The Windridge station contains TSP, PM₁₀, and PM_{2.5} analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), site visit notes, wind rose (Figure 4-3) and tables and graphs illustrating the monitoring results for March 2018.

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

Table 4-1 Equipment at the Windridge monitoring location

Equipment Description	Parameter Measured
MetOne BAM-1020 FRM Continuous Particulate Monitor	PM _{2.5} Concentrations
MetOne BAM-1020 Continuous Particulate Monitor	PM ₁₀ Concentrations
MetOne BAM-1020 Continuous Particulate Monitor	TSP Concentrations

4.2 SITE VISIT NOTES

All BAM monitors were calibrated on March 6th, and the operation time for the all BAM monitors was 99.5% in March due to 4 hours of instrument error on March 15th.

4.3 MONITORING RESULTS AND TRENDS

The following wind rose (Figure 4-3 and Figure 4-4) illustrate the frequency of wind speed by wind direction during TSP and PM_{2.5} exceedance days of March 2018. Table 4-2 summarizes the hourly and daily concentrations recorded in March 2018. Figure 4-5 illustrates the time series for hourly PM.

There were 2 and 1 exceedances of the 24-hour TSP (100 µg/m³) and the PM_{2.5} (30 µg/m³) AAAQO. On the day of the 24-hour PM_{2.5} AAAQO exceedance, there was a significant odour in the area and there may have been prescribed fires near Exshaw. Winds were also from the east (Figure 4-4). With these conditions, it is reasonable to assume that Lafarge was not a significant contributor to this exceedance.

Based on the limited data record at this station, it appears that TSP concentrations at this station are highest during high wind speed events from the WSW. The wind roses (Figure 4-3 and Figure 4-4) show the days exceeding the 24-hour TSP and PM_{2.5} Objectives. During the TSP exceedance days, the winds were predominantly from the WSW and over 20 km/hr.

Table 4-2 Summary of March 2018 data at the Windridge Station

Parameter	Guideline / Objective		Station	Exceedances		Monthly Average	Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM _{2.5} (µg/m ³)	80	30	Windridge	0	1	6.7	51.3	22	6	13.1	58.6	31.2	22	99.5
PM ₁₀ (µg/m ³)	-	-	Windridge	-	-	32.4	379.2	23	6	47.7	258.0	105.6	26	99.5
TSP (µg/m ³)	-	100	Windridge	-	2	42.6	413.0	23	6	47.7	258.0	147.8	26	99.5

Table 4-3 Days exceeding the Guideline for TSP and / or PM_{2.5} at the Windridge Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Windridge						
3/22/2018	-	31	73.4	14.9	86.0	Significant odour in the area potentially due to prescribed fires near Exshaw on this day
3/26/2018	147.8	-	247.3	35.8	37.4	high wind event
3/27/2018	103.6	-	254.1	32.6	50.1	high wind event
Total # of Exceedances	2	1				

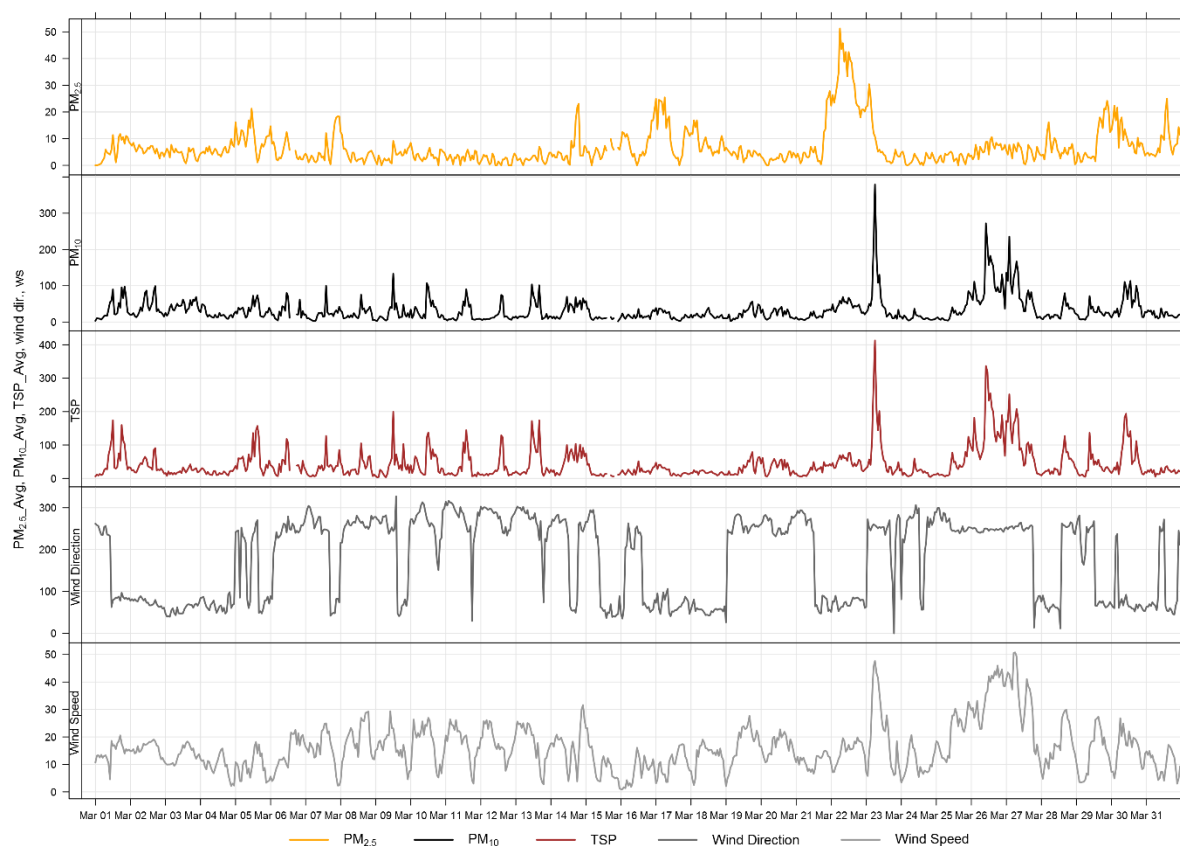


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge Station

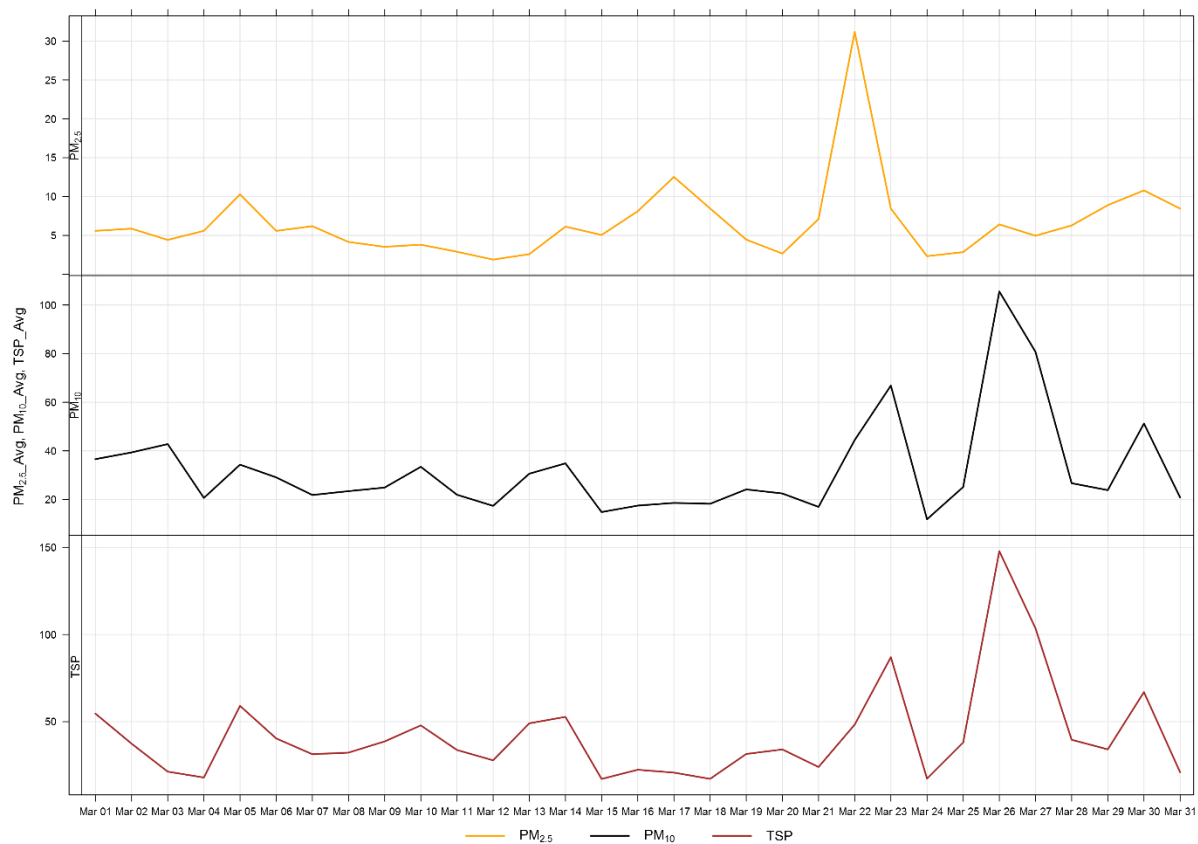


Figure 4-2 24-hour particulate matter concentrations at the Windridge Station

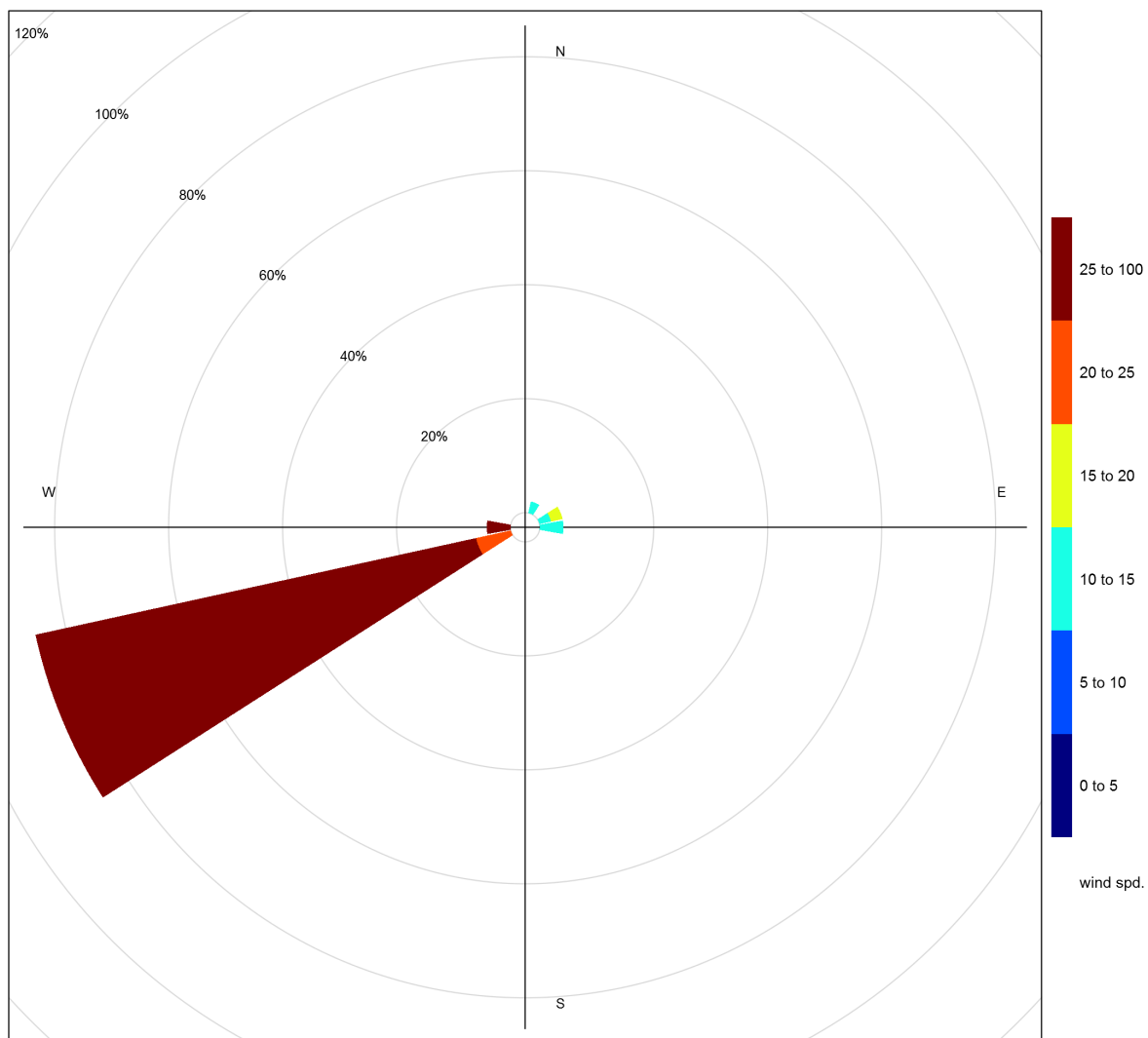


Figure 4-3 Wind rose for TSP exceedance days recorded at the Windridge Station

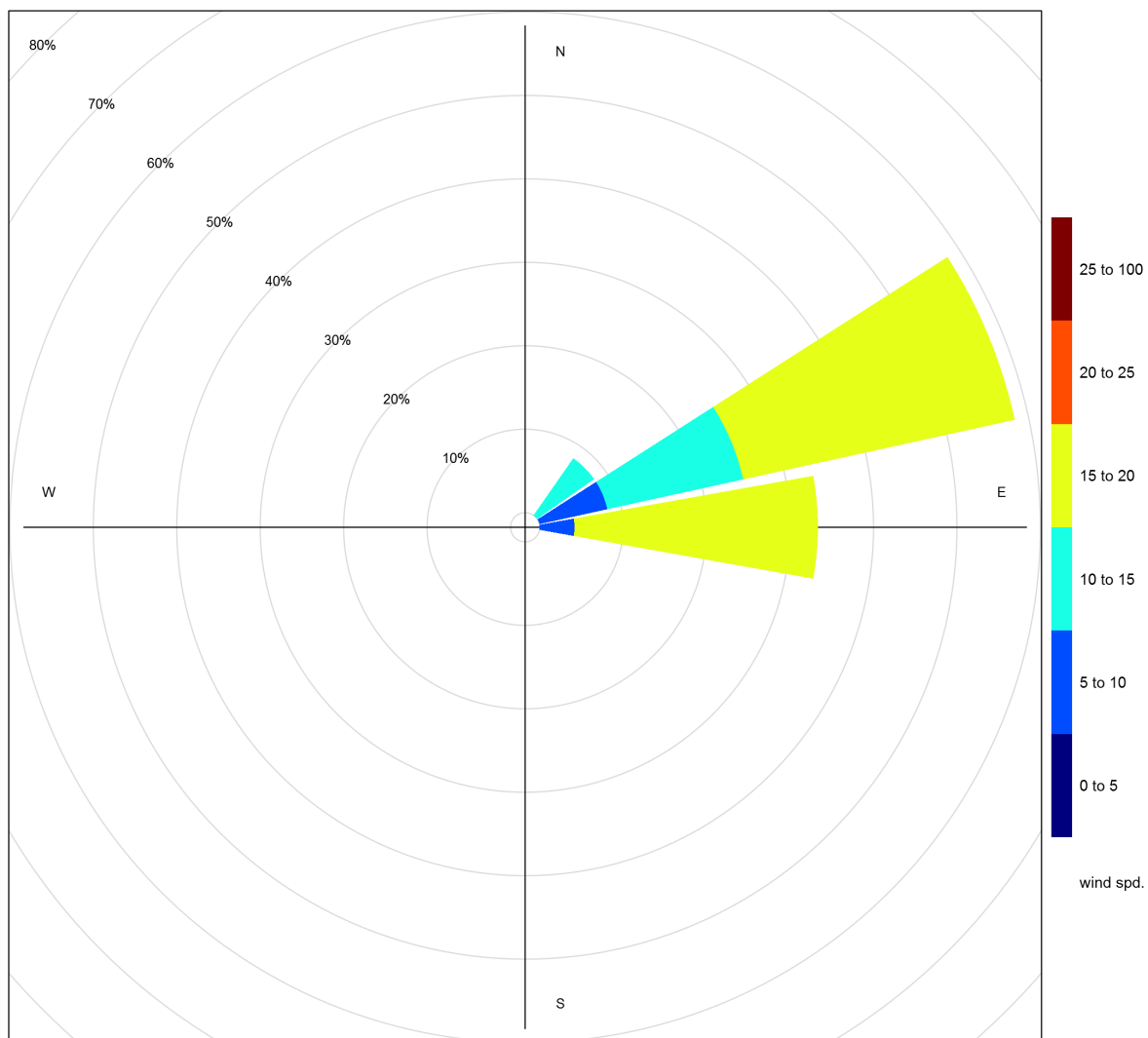


Figure 4-4 Wind rose for PM_{2.5} exceedance days recorded at the Windridge Station

Figure 4-5 illustrates the hourly PM concentrations recorded at the Windridge Station, 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 4-5 is based on data collected during March 2018 and indicates a diurnal pattern that is similar to the Lagoon station. Data from the Windridge station will be analyzed as the data record is added to at this station to see if the diurnal pattern of concentrations can be linked to emission sources, Lafarge or otherwise.

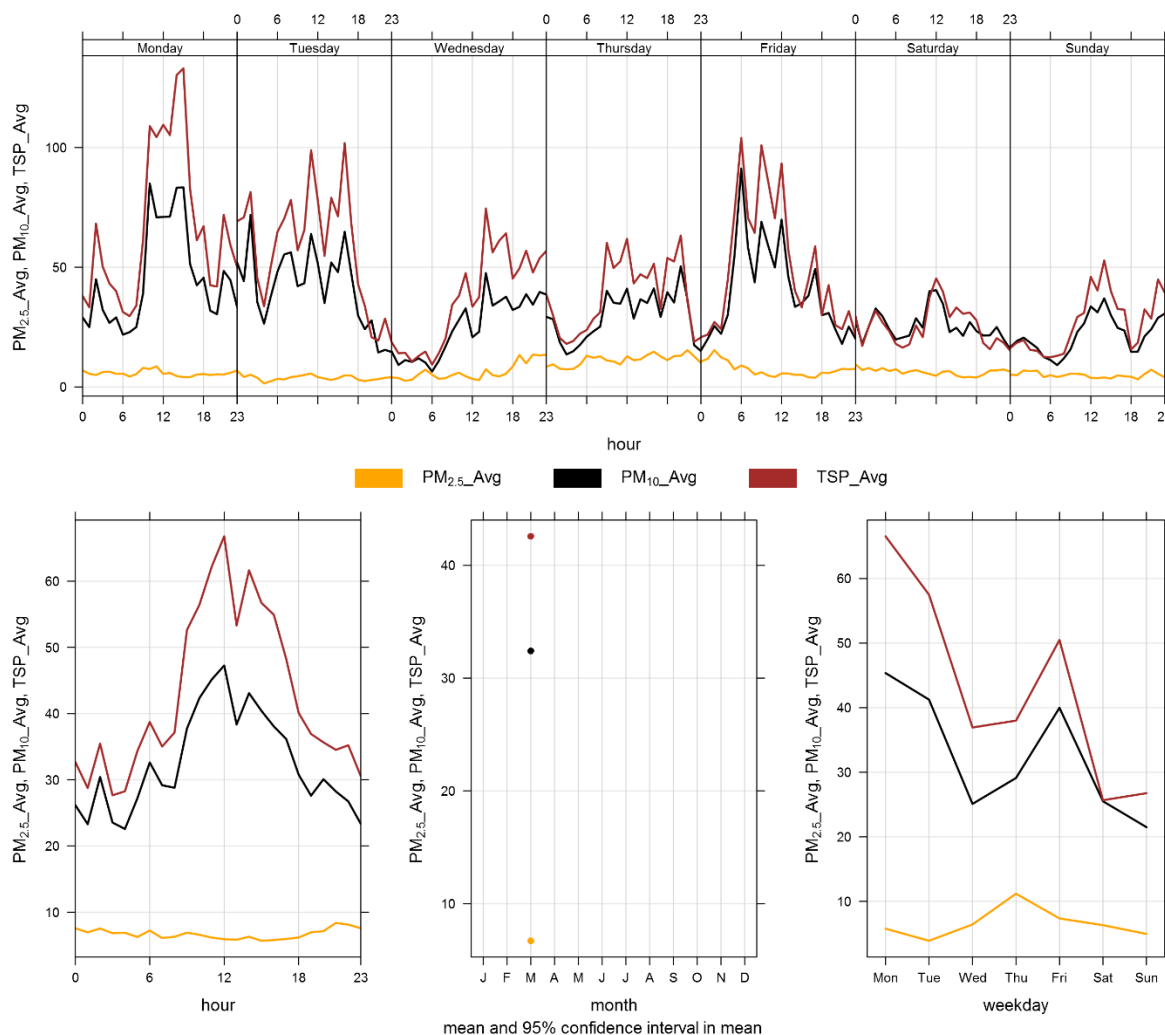


Figure 4-5 Windridge particulate matter time variation

5 WEST GRIMM

5.1 SITE VISIT NOTES

Table 5-1 indicates the equipment that is installed at the West monitoring location. During the month of March, the West GRIMM had 100 % uptime.

Table 5-1 Equipment at the West monitoring location

Equipment Description	Parameter Measured
GRIMM 365 Continuous Particulate Monitor	PM _{2.5} , PM ₁₀ , TSP Concentrations

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. As indicated in Figure 3-3, the majority of winds came from the west during March. Table 5-2 summarizes the maximum 1-hour and 24-hour concentrations recorded over the course of the month.

Figure 5-1 and Figure 5-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month. There was 0 and 1 exceedance of the 24-hour TSP (100 µg/m³) and PM_{2.5} (30 µg/m³) Guidelines, respectively. The maximum number of exceedances of the TSP Guideline at the West monitor was 10 days exceeding the Guideline in 2014. On the day of the 24-hour PM_{2.5} Guideline exceedance, there was a significant odour in the area and there may have been prescribed fires near Exshaw. Winds were also from the east (Figure 5-3). With these conditions, it is reasonable to assume that Lafarge was not a significant contributor to this exceedance. The maximum number of exceedances of the PM_{2.5} Guideline at the West monitor was 2 days exceeding the Guideline in 2010.

Table 5-2 Summary of March 2018 data at the West GRIMM

Parameter	Guideline		Station	Exceedances		Monthly Average	Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM _{2.5} (µg/m ³)	80	30	West	0	1	6.8	49.8	22	11	15.4	66.4	38.1	22	100.0
PM ₁₀ (µg/m ³)	-	-	West	-	-	16.0	113.3	5	10	5.2	75.1	44.9	22	100.0
TSP (µg/m ³)	-	100	West	-	0	32.9	544.1	30	15	19.7	58.7	81.0	1	100.0

Table 5-3 Days exceeding the Guideline for TSP and / or PM_{2.5} at the West GRIMM

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
West						
3/22/2018	-	38	73.4	14.9	86.0	Significant odour in the area potentially due to prescribed fires near Exshaw on this day
Total # of Exceedances	0	1				
Maximum # of Exceedances (March)	10 (2014)	2 (2010)				
Average # of Exceedances (March)	2	0				
Minimum # of Exceedances (March)	0 (2015, 2016)	0 (2011, 2012, 2014 ~ 2017)				

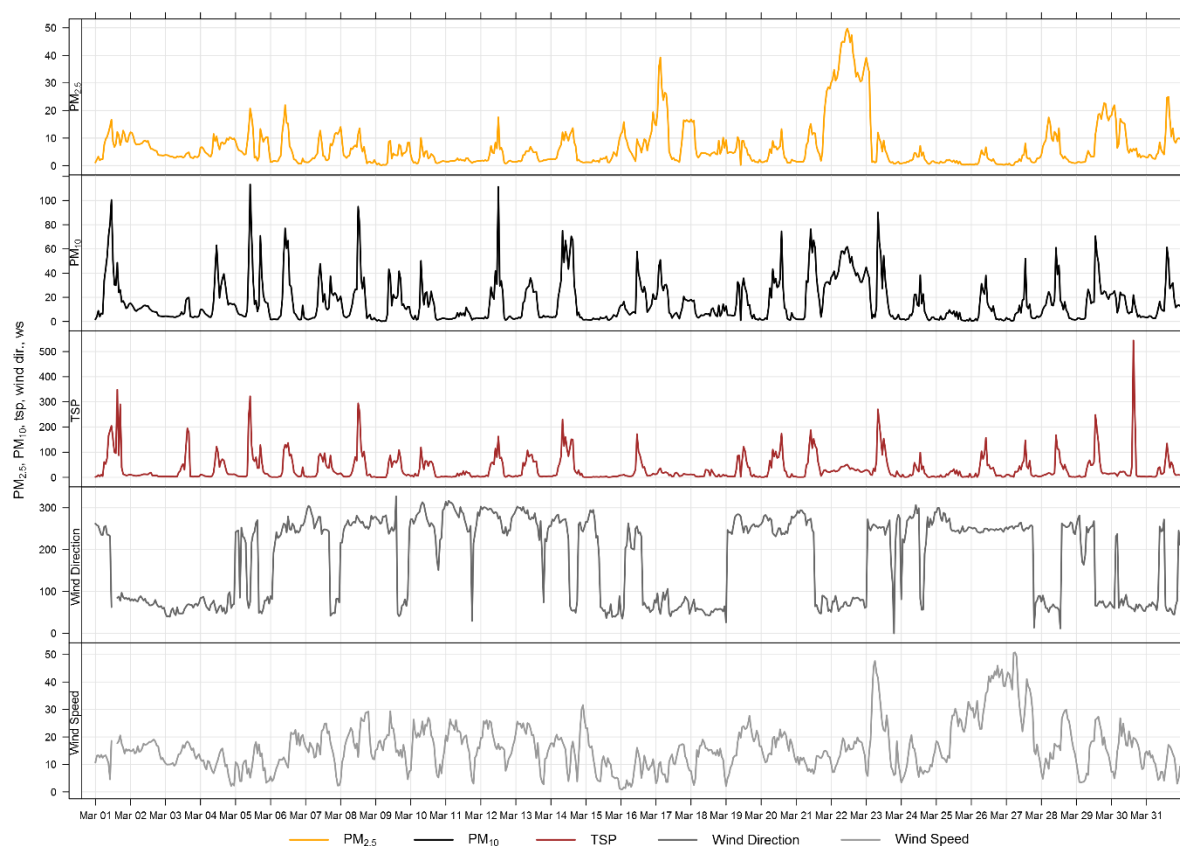


Figure 5-1 1-hour particulate matter concentrations at the West monitor

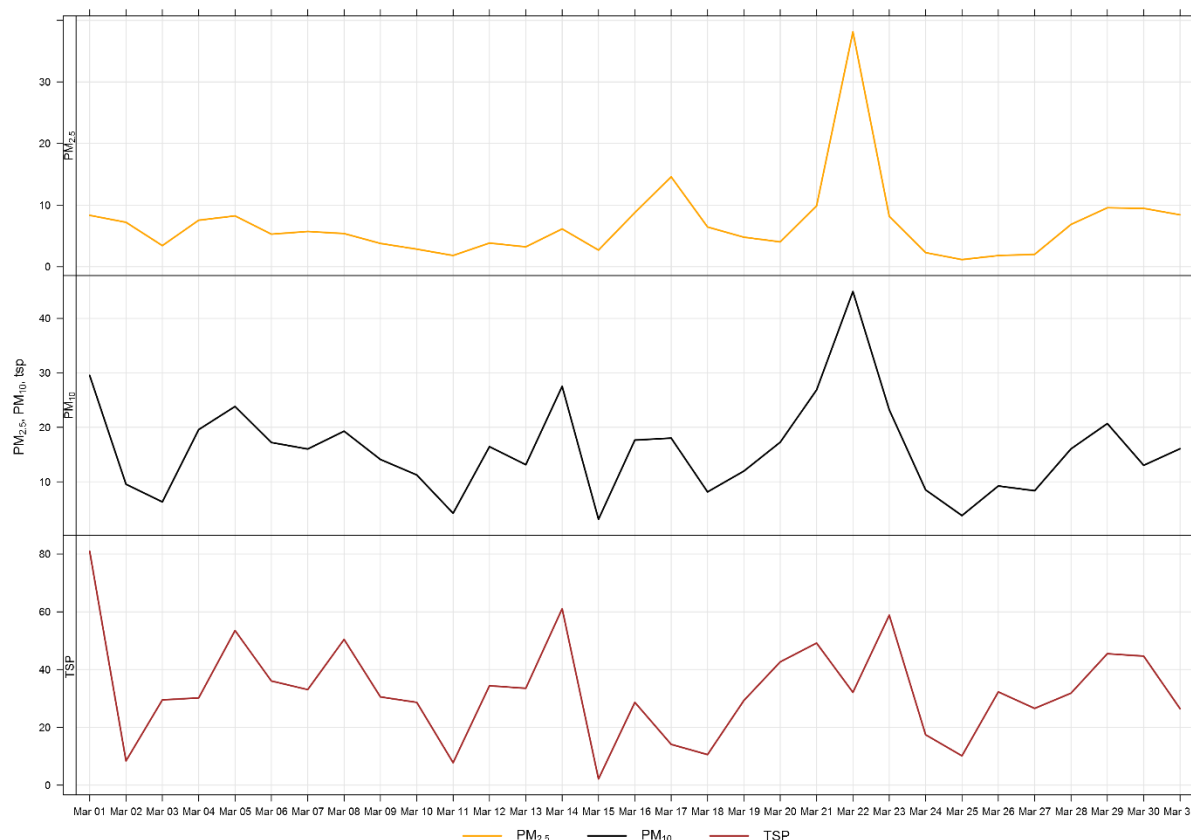


Figure 5-2 24-hour particulate matter concentrations at the West monitor

Figure 5-3 shows the wind rose for the 1 day which recorded a $PM_{2.5}$ exceedance. This wind rose shows that the winds were from the easterly direction on the day of the exceedance.

Figure 5-4 illustrates the hourly PM concentrations recorded at the West monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 5-4 is based on data collected during March 2018 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, the daily variations in PM may also be a result of higher traffic volume during daylight hours.

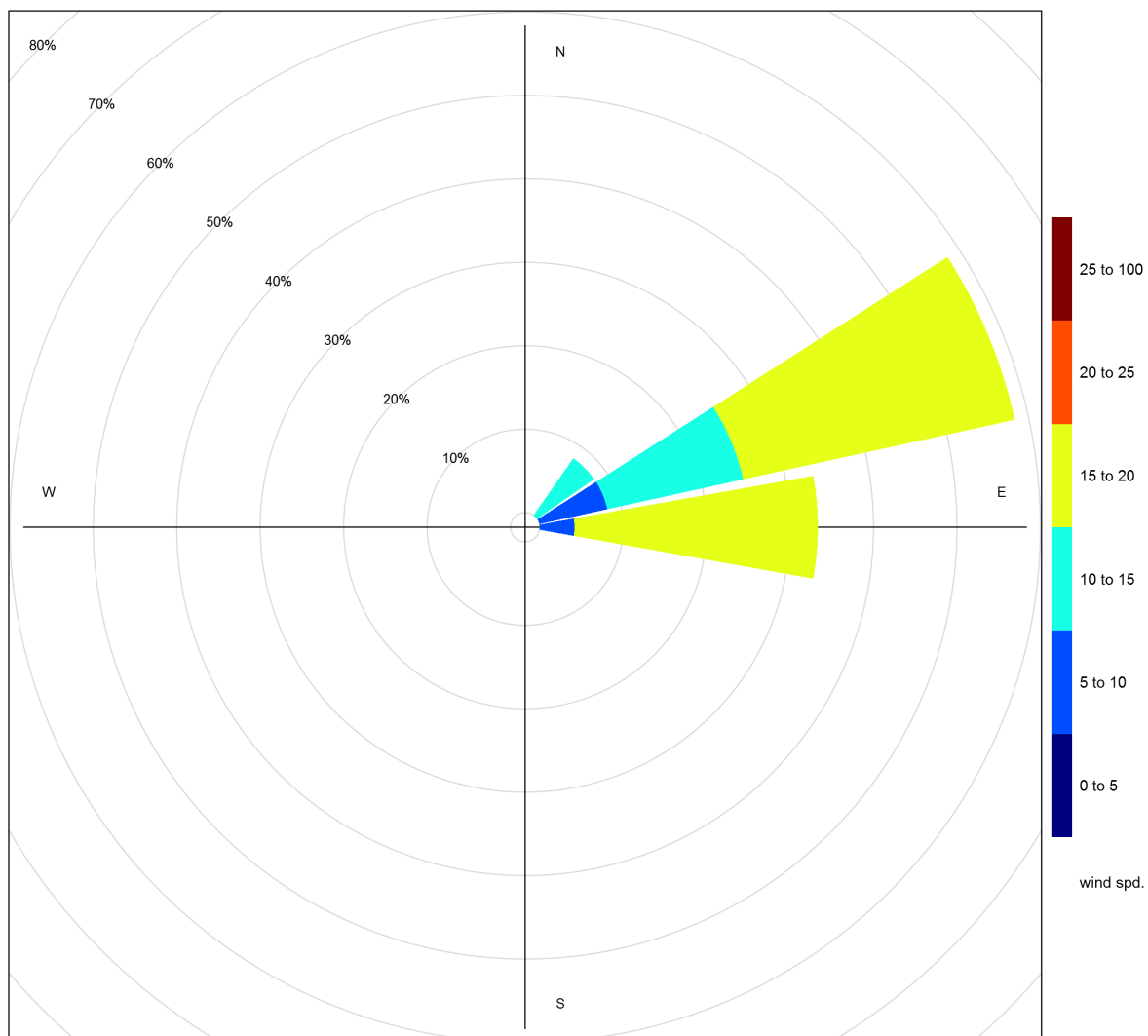


Figure 5-3 Wind rose for PM_{2.5} exceedance days recorded at the West GRIMM

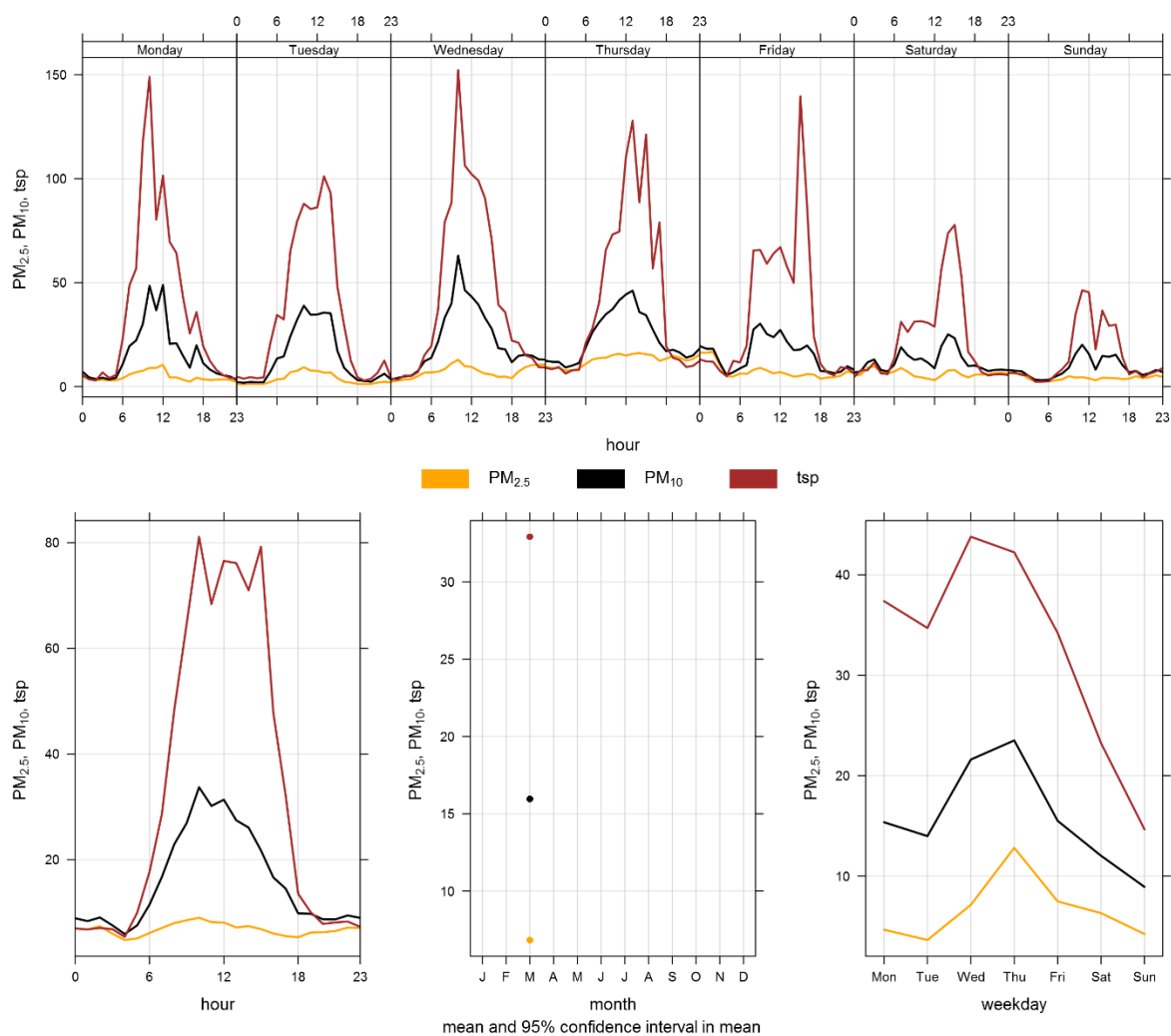


Figure 5-4 West particulate matter time variation

6

BERM GRIMM

6.1 SITE VISIT NOTES

During the month of March, the Berm GRIMM had 100% uptime.

Table 6-1 Equipment at the Berm monitoring location

Equipment Description	Parameter Measured
GRIMM 365 Continuous Particulate Monitor	PM _{2.5} , PM ₁₀ , TSP Concentrations

6.2 MONITORING RESULTS AND TRENDS

The Berm monitor was placed at its current location as a result of the dispersion modelling conducted for the facility in 2009. Figure 6-1 and Figure 6-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month. Table 6-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month, and Table 6-3 summarizes the recorded exceedances.

In March, there were 4 and 0 exceedances of the 24-hour TSP (30 µg/m³) and PM_{2.5} (100 µg/m³) Guidelines, respectively. Historically, the Berm monitor records an average of 14 and 0 exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of March. The largest number of TSP exceedances recorded during March occurred in 2010, which had 28 days that exceeded the Guideline. The fewest number of TSP exceedances were recorded during March 2017, which had 9 days that exceeded the Guideline. The largest number of PM_{2.5} exceedances recorded during March occurred in 2012, which each had a single day that exceeded the Guideline.

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

The 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. High TSP concentrations in the month generally corresponded to the high wind speed events recorded in March.

Table 6-2 Summary of March 2018 data at the Berm GRIMM

Parameter	Guideline		Station	Exceedances		Monthly Average	Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM _{2.5} (µg/m ³)	80	30	Berm	0	0	6.5	50.8	26	9	31.5	250.0	24.8	22	100.0
PM ₁₀ (µg/m ³)	-	-	Berm	-	-	24.0	356.2	26	9	31.5	250.0	116.3	26	100.0
TSP (µg/m ³)	-	100	Berm	-	4	65.4	1406.4	23	5	45.6	260.4	412.9	26	100.0

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

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Berm						
3/23/2018	251.6	-	254.3	22.0	42.5	high wind event
3/25/2018	110.4	-	256.1	21.5	43.7	high wind event
3/26/2018	412.9	-	247.3	35.8	37.4	high wind event
3/27/2018	299.3	-	254.1	32.6	50.1	high wind event
Total # of Exceedances	4	0				
Maximum # of Exceedances (March)	28 (2010)	1 (2012)				
Average # of Exceedances (March)	14	0				
Minimum # of Exceedances (March)	9 (2017)	0 (2010, 2011, 2013 ~ 2017)				

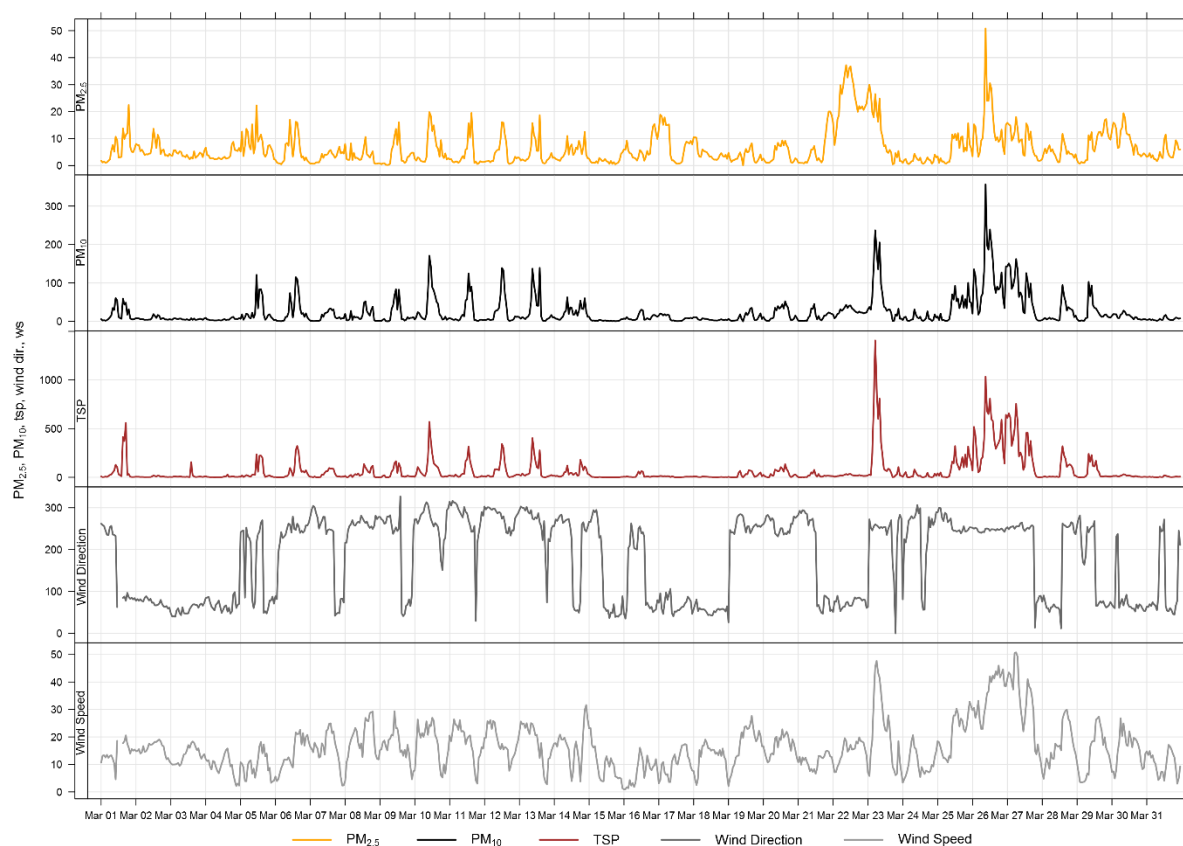


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

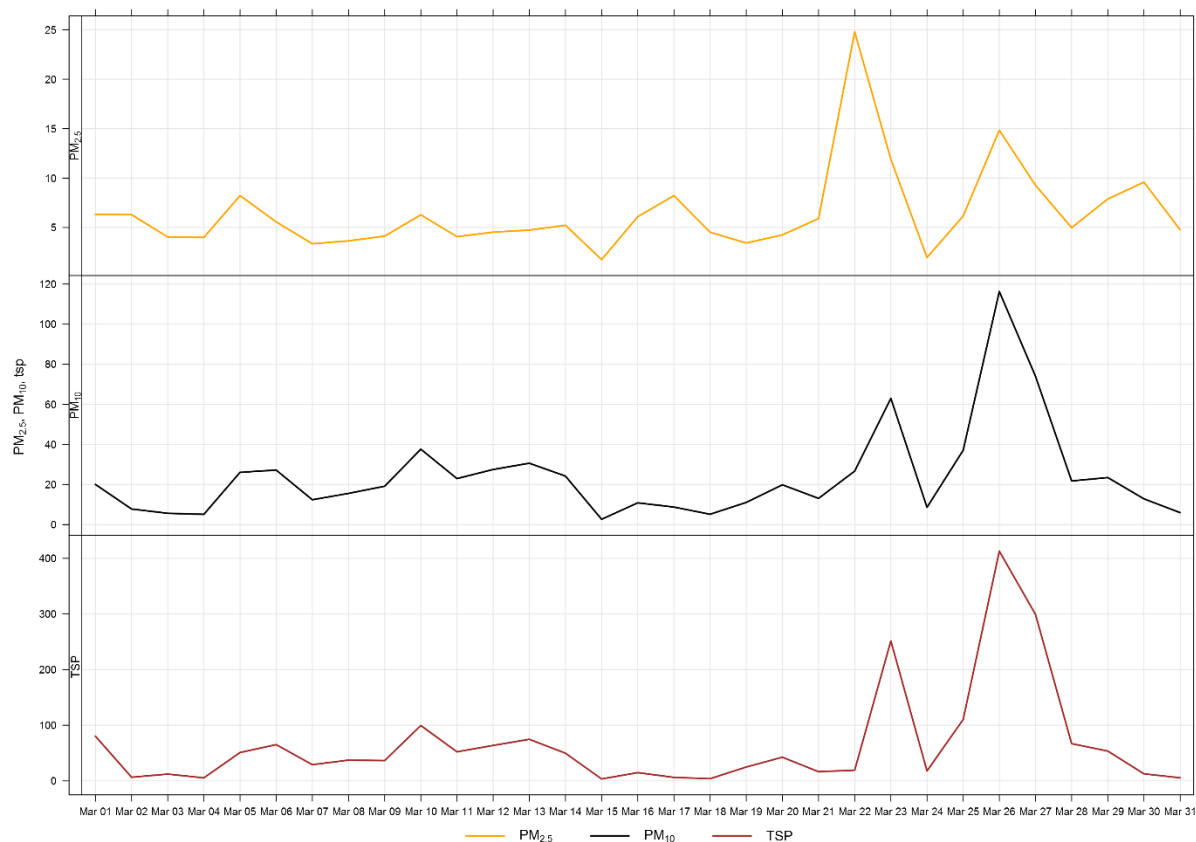


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 4 TSP exceedances. This wind rose shows that the winds predominantly come from the west and over 25 km/hr.

Figure 6-4 shows the variation of PM recorded at the Berm monitor over various time averaging periods. The Berm, on average, records elevated PM concentrations during standard operating hours of Lafarge.

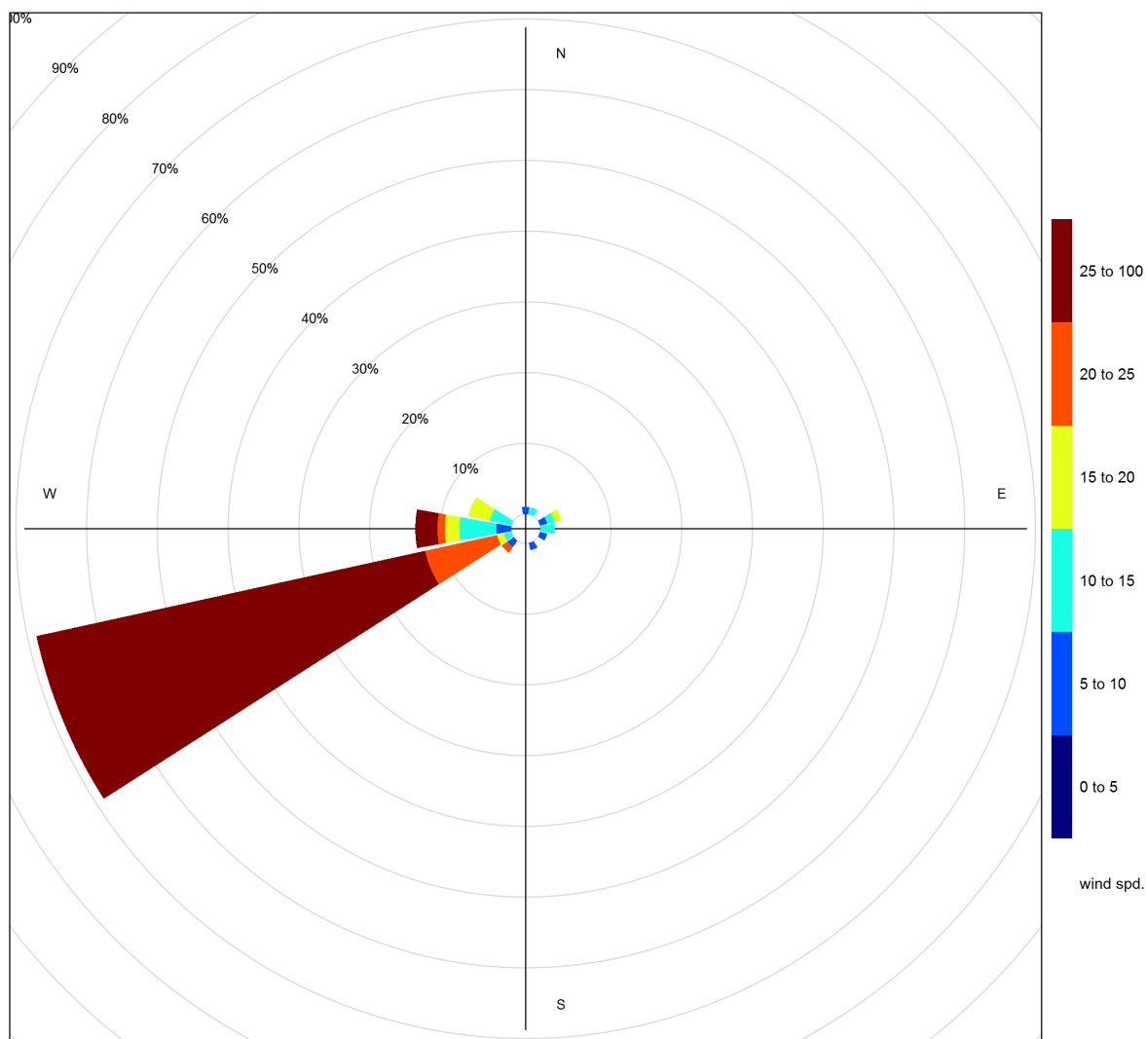


Figure 6-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM

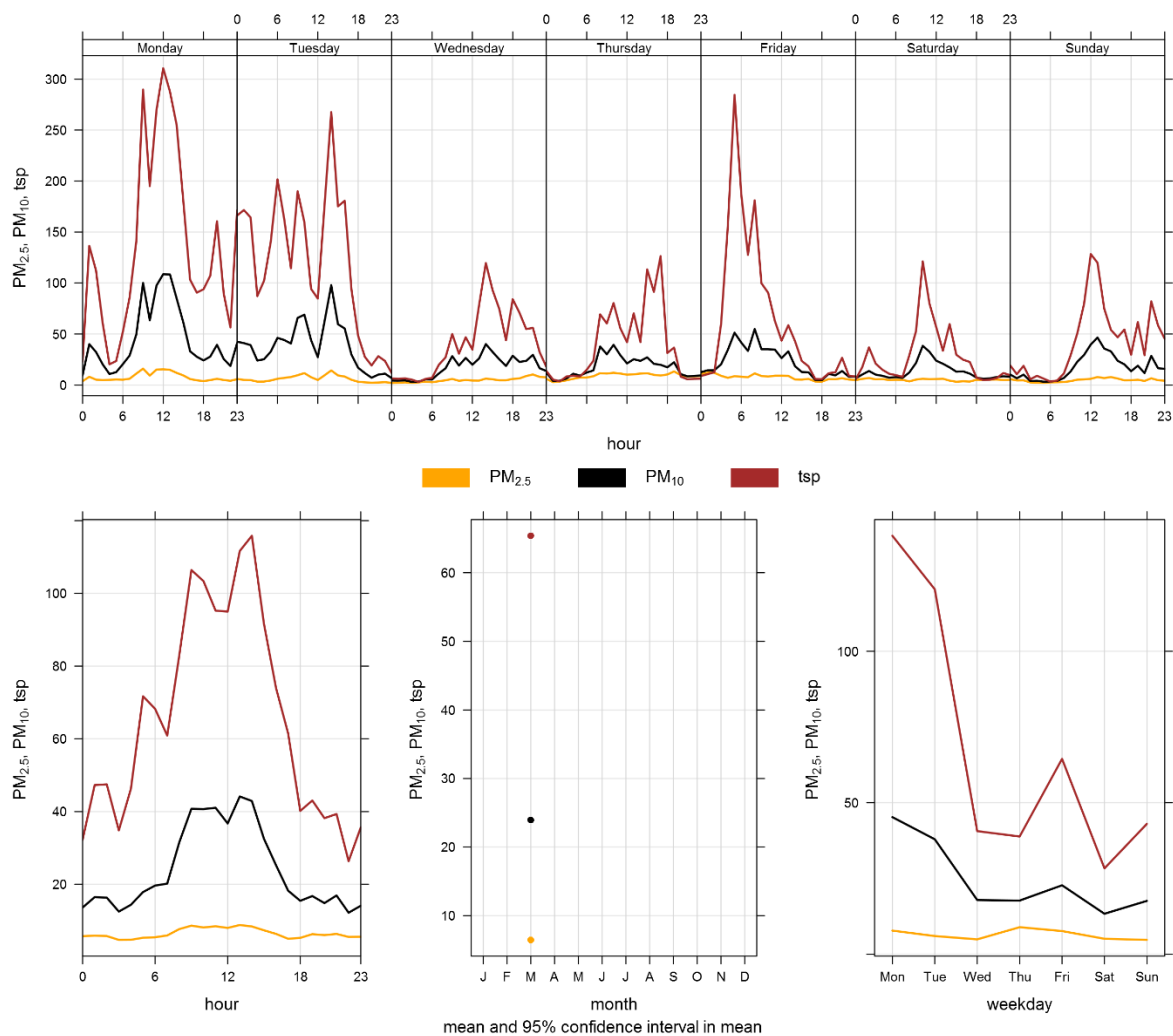


Figure 6-4 Berm particulate matter time variation

7 ENTRANCE GRIMM

7.1 SITE VISIT NOTES

This station was found to be in good operating condition and no repairs were required during the month. During the month of March, the Entrance GRIMM had 100% uptime.

Table 7-1 Equipment at the Entrance monitoring location

Equipment Description	Parameter Measured
GRIMM 365 Continuous Particulate Monitor	PM _{2.5} , PM ₁₀ , TSP Concentrations

7.2 MONITORING RESULTS AND TRENDS

The Entrance monitor was placed at its current location as a result of dispersion modelling conducted in 2009. This area was indicated as being the area where the maximum PM concentrations were expected. Figure 7-1 and Figure 7-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month. Table 7-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month. Table 7-3 summarizes the recorded exceedances.

During March, there were 11 and 1 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (30 µg/m³) Guideline, respectively. Historically, the Entrance monitor records an average of 11 and 0 exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of March. The largest number of TSP exceedances recorded during March occurred in 2014, which had 28 days that exceeded the Guideline. The fewest number of TSP exceedances recorded during March occurred in 2011, which had 0 day that exceeded the Guideline.

The largest number of PM_{2.5} exceedances was recorded this March. Previous there had never been an exceedance in March. On the day of the 24-hour PM_{2.5} AAAQO exceedance, there was a significant odour in the area and there may have been prescribed fires near Exshaw. Winds were also from the east (Figure 5-3). With these conditions, it is reasonable to assume that Lafarge was not a significant contributor to this exceedance.

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

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

Figure 7-3 and Figure 7-4 show the wind roses for the days that exceeded the TSP and PM_{2.5} Guidelines at the Entrance GRIMM. During the 11 TSP exceedance days, winds were predominantly

from the west, however, not all days were associated with high wind speeds. This suggests that there may have been more of an influence of traffic related dust during March at the Entrance location.

Table 7-2 Summary of March 2018 data at the Entrance GRIMM

Parameter	Guideline		Station	Exceedances		Monthly Average	Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM _{2.5} (µg/m ³)	80	30	Entrance	0	1	11.2	73.5	15	5	12.4	294.7	41.0	22	100.0
PM ₁₀ (µg/m ³)	-	-	Entrance	-	-	38.1	366.3	12	23	18.6	286.1	114.0	12	100.0
TSP (µg/m ³)	-	100	Entrance	-	11	98.9	2007.8	23	5	45.6	260.4	341.3	12	100.0

Table 7-3 Days exceeding the Guideline for TSP at the Entrance Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Entrance						
3/10/2018	155.1	-	274.6	17.7	45.3	
3/11/2018	211.8	-	287.6	18.0	45.3	
3/12/2018	341.3	-	283.0	18.1	40.0	
3/13/2018	337.7	-	279.1	17.9	39.6	
3/14/2018	212.9	-	270.4	17.0	44.5	
3/20/2018	111.5	-	254.6	16.8	46.9	
3/21/2018	153.6	-	4.1	11.3	57.6	
3/22/2018	-	41	73.4	14.9	86.0	Significant odour in the area potentially due to prescribed fires near Exshaw on this day
3/23/2018	250.8	-	254.3	22.0	42.5	high wind event
3/26/2018	239.4	-	247.3	35.8	37.4	high wind event
3/27/2018	145.2	-	254.1	32.6	50.1	high wind event
3/29/2018	107.4	-	68.4	14.1	62.9	
Total # of Exceedances	10	1				
Maximum # of Exceedances (March)	28 (2014)	0 (2010 ~ 2017)				
Average # of Exceedances (March)	11	0				
Minimum # of Exceedances (March)	0 (2011)	0 (2010 ~ 2017)				

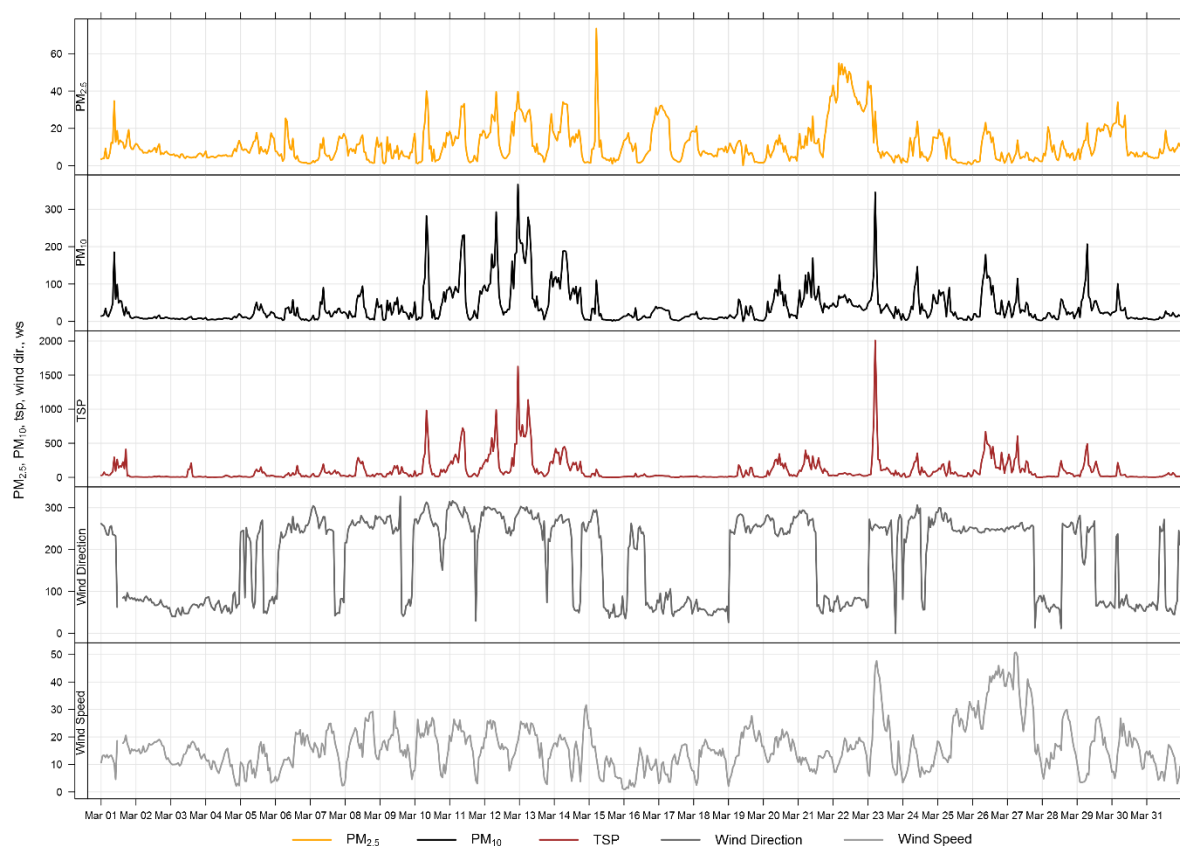


Figure 7-1 1-hour particulate matter concentrations recorded at the Entrance monitor

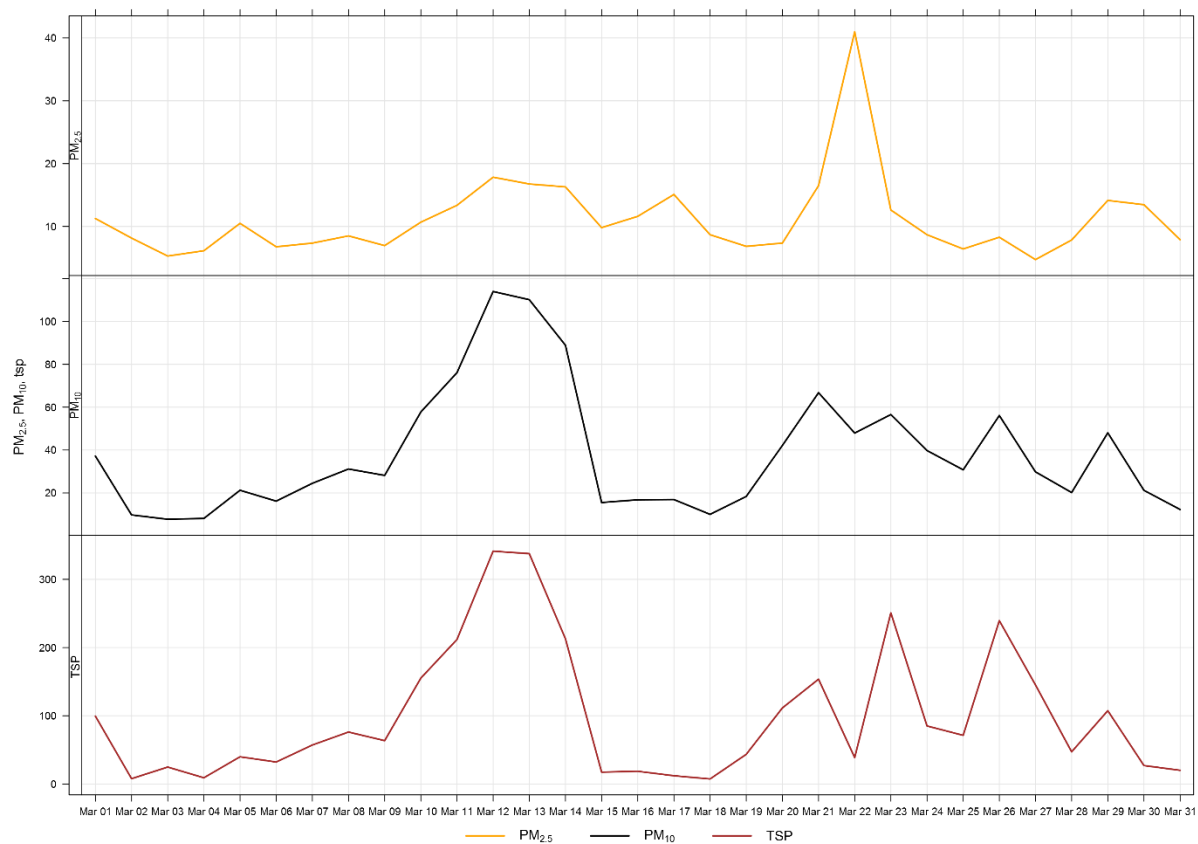


Figure 7-2 24-hour particulate matter concentrations at the Entrance monitor

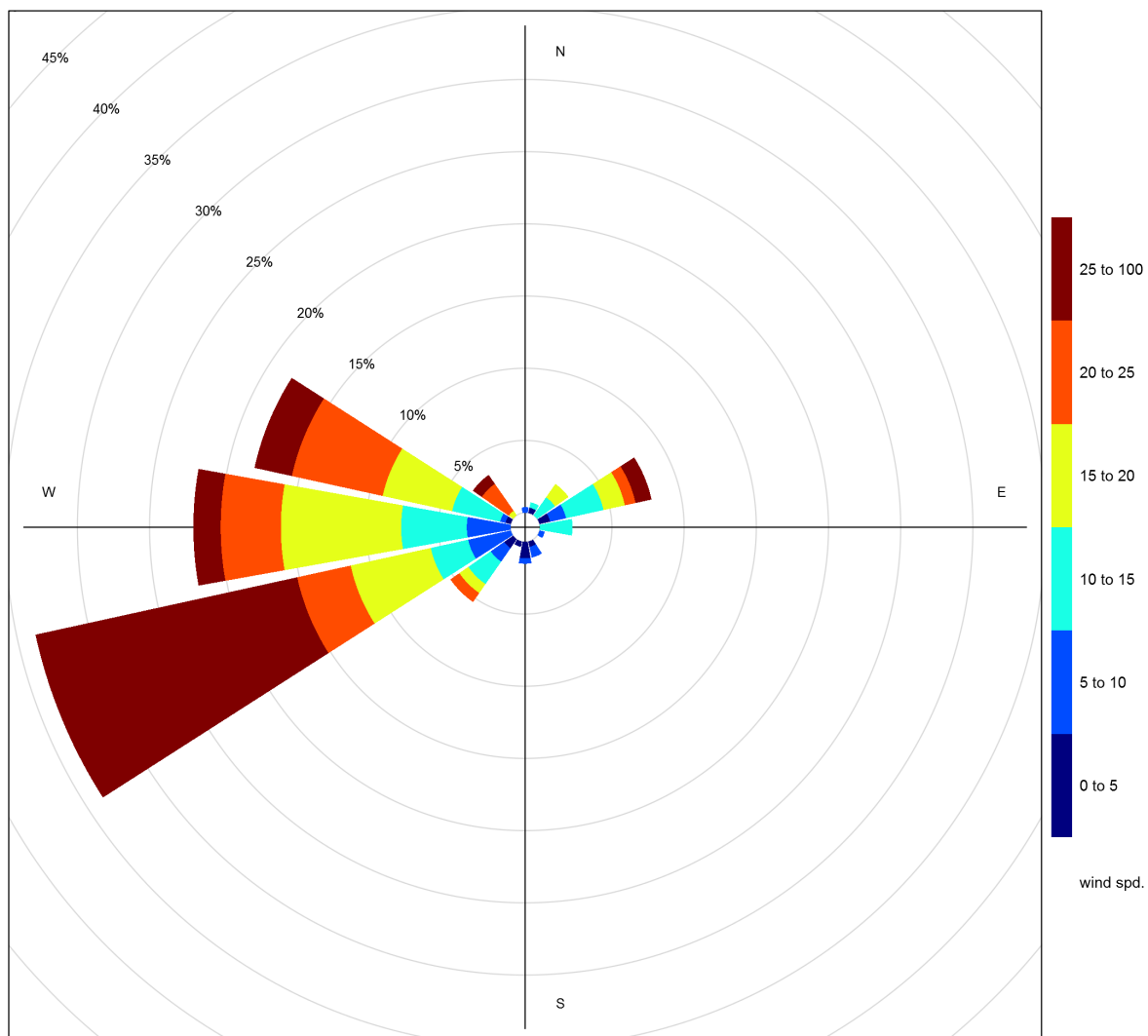


Figure 7-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

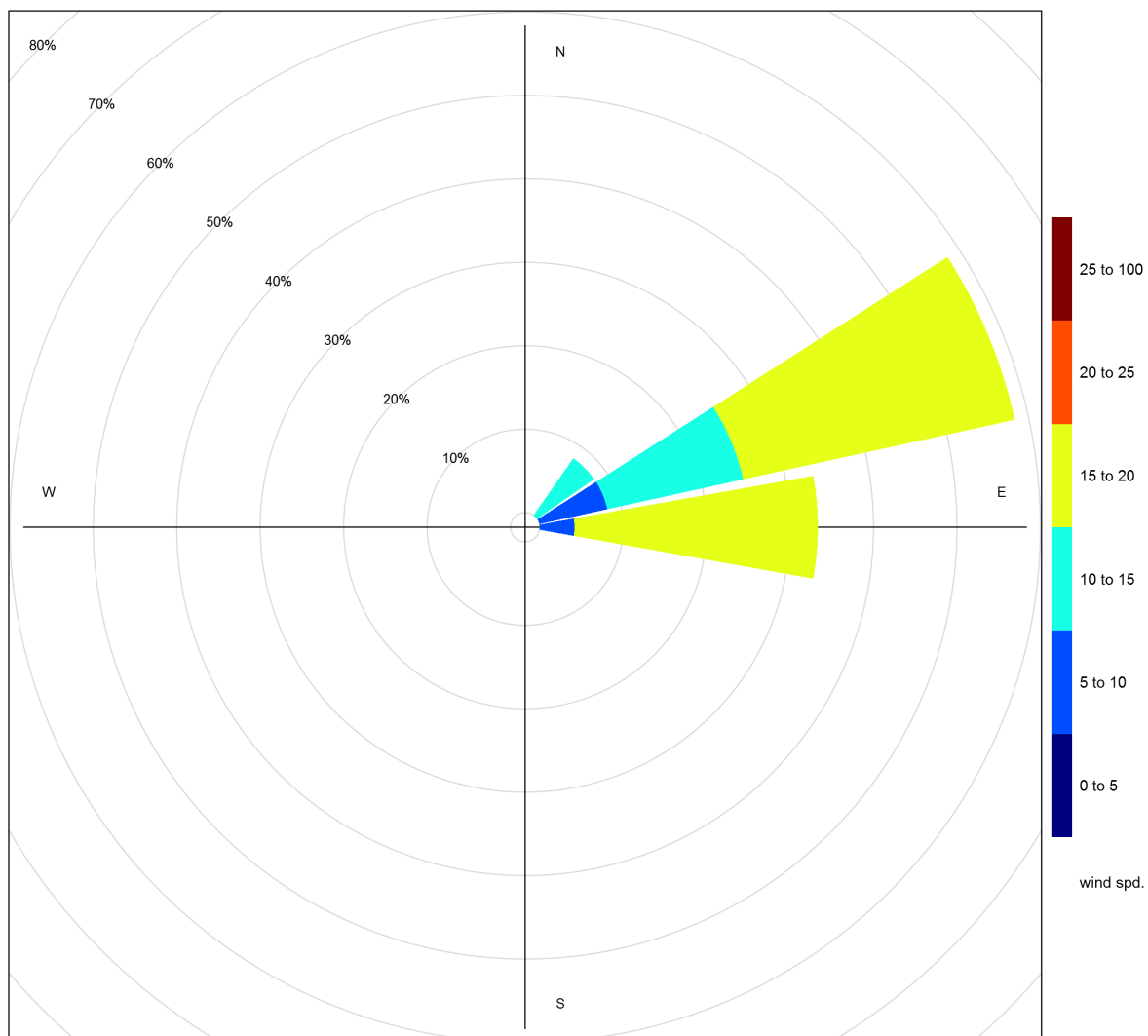


Figure 7-4 Wind rose for PM_{2.5} exceedance days recorded at the Entrance GRIMM

Figure 7-5 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 7-5 is based on data collected during March 2018 and shows that the diurnal pattern of higher PM concentrations was shifted earlier in the day during March 2018.

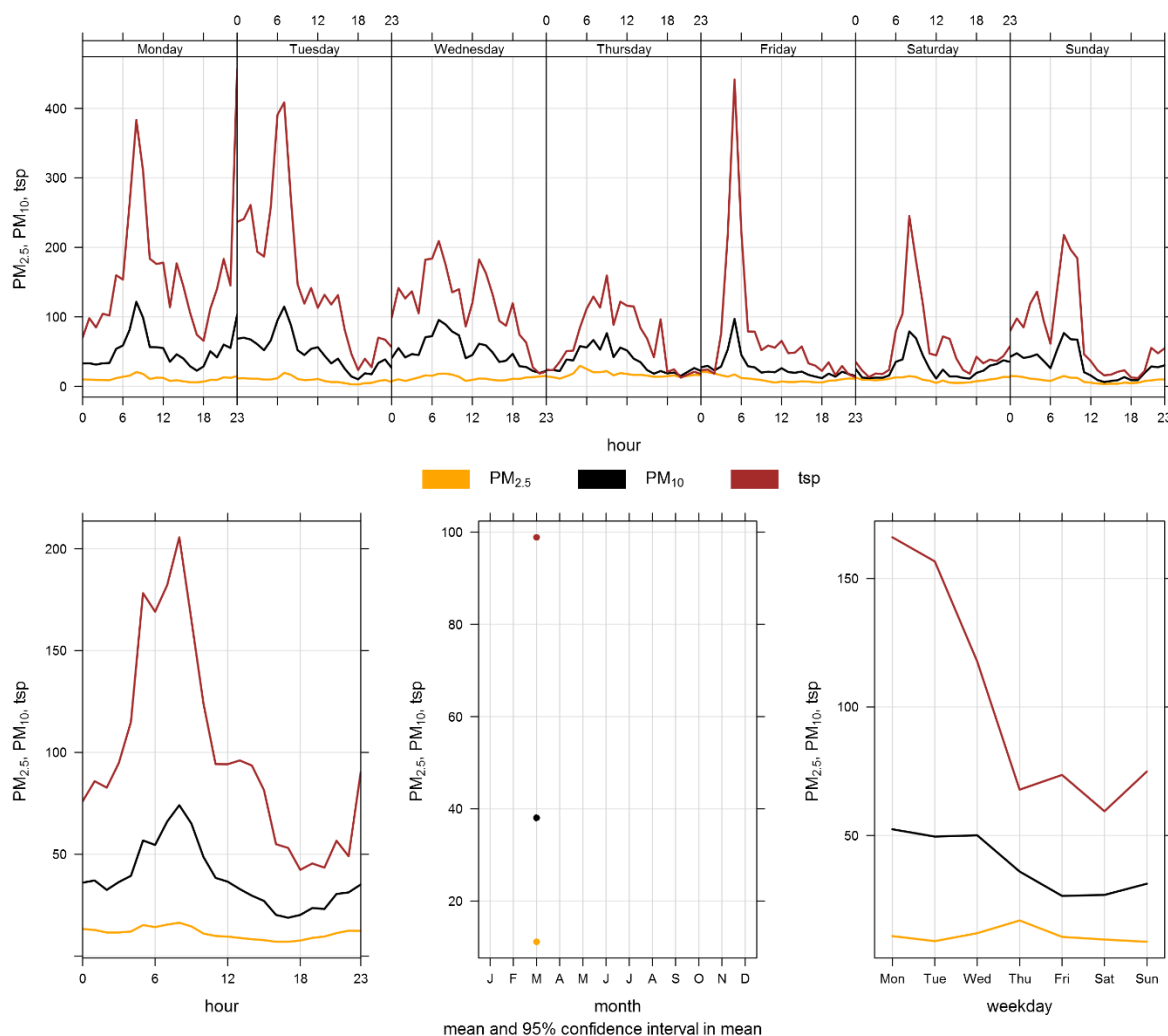


Figure 7-5 Entrance particulate matter time variation

BIBLIOGRAPHY

- Alberta Environment and Parks. (2016, June). Alberta Ambient Air Quality Objectives and Guidelines Summary. Alberta, Canada.
- Alberta Environment and Parks. (2016, March). Air Monitoring Directive. Alberta, Canada.
- Carslaw, D.C. and K. Ropkins, (2012). Openair — an R package for air quality data analysis. Environmental Modelling & Software. Volume 27–28, 52–61.
- Levelton Consultants Ltd. (2015, June 15). Comparison of GRIMM and E-BAM Data. Alberta, Canada.

Appendix A

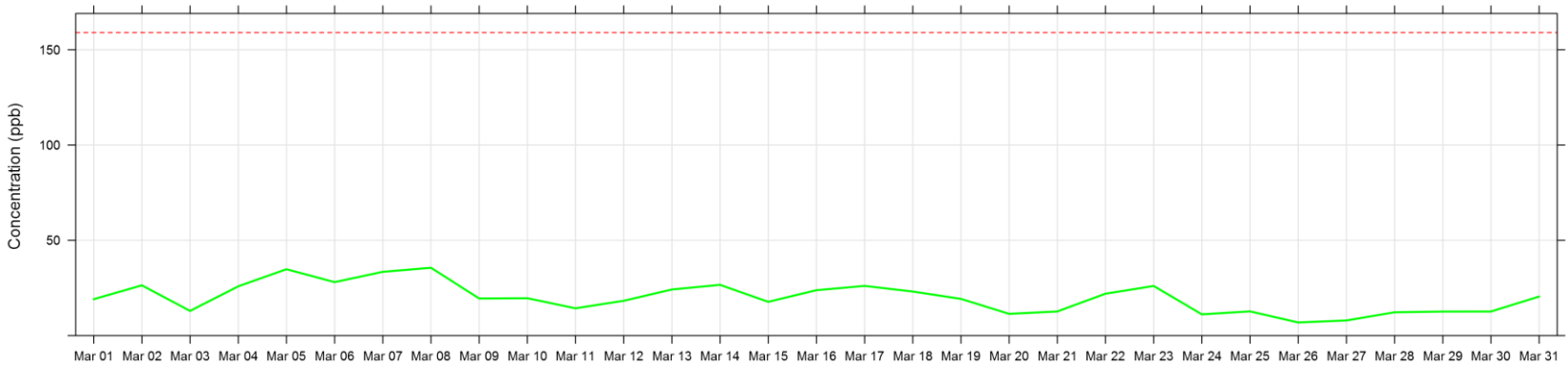
DATA & CALIBRATION REPORTS

Lagoon NO₂ (ppb) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	9.8	S	13.1	9.6	10.1	11.5	12.9	17.2	19.1	14.7	12.3	C	C	C	C	C	15.1	13.9	9.0	6.4	4.6	3.4	4.1	4.8	19.1	10.6
2	4.1	S	2.2	2.1	2.6	2.1	1.4	1.5	1.6	1.8	1.6	2.1	2.0	3.5	3.9	5.6	2.4	2.9	5.1	3.6	8.6	18.1	26.4	19.7	26.4	5.4
3	13.0	S	10.9	6.1	9.8	11.2	8.1	1.7	4.6	2.2	2.9	3.0	7.0	11.4	5.9	5.9	8.8	11.8	7.3	7.3	10.7	3.2	2.1	3.2	13.0	6.9
4	2.8	S	2.3	3.6	14.9	13.7	17.0	13.5	14.2	13.7	5.7	10.7	5.6	0.9	1.9	9.4	6.1	5.7	6.6	15.6	12.5	25.9	15.9	15.7	25.9	10.2
5	21.9	S	27.2	29.1	30.0	29.3	25.3	20.1	21.8	22.4	12.2	11.9	11.0	5.6	5.5	9.3	17.6	25.7	16.3	27.8	16.2	27.3	34.5	34.8	34.8	21.0
6	28.1	S	22.3	9.9	11.1	12.4	11.5	15.4	21.7	10.5	8.6	4.8	3.9	3.6	2.9	3.4	2.5	0.0	1.8	1.3	4.4	10.6	2.7	8.4	28.1	8.8
7	4.9	S	3.9	3.7	3.0	4.2	11.3	13.2	10.4	6.4	4.1	1.0	1.6	1.4	0.0	0.9	0.4	11.9	15.9	21.1	33.5	22.7	20.6	24.4	33.5	9.6
8	35.6	S	16.1	7.6	7.7	5.6	7.8	7.0	8.7	8.3	7.1	5.5	5.1	2.8	5.1	3.0	4.0	2.7	0.2	0.0	2.2	5.3	5.8	8.4	35.6	7.0
9	5.7	S	4.0	5.9	3.2	4.8	13.4	9.7	4.3	0.6	0.3	1.0	0.4	1.5	8.5	5.4	4.3	3.8	7.4	2.9	2.0	6.0	6.8	19.5	19.5	5.3
10	19.6	S	1.2	5.1	11.7	12.4	13.5	3.4	2.4	2.9	12.9	4.8	1.5	1.6	1.6	8.7	2.4	2.0	2.9	4.5	3.5	6.9	4.3	2.7	19.6	5.8
11	3.8	S	2.9	2.9	3.7	2.7	2.4	6.1	7.5	11.4	3.4	14.3	10.7	3.0	2.2	2.2	1.0	2.0	3.7	11.8	6.3	11.9	8.0	11.4	14.3	5.9
12	6.6	S	4.9	4.6	7.5	5.5	5.8	7.6	8.5	10.4	13.6	14.2	18.3	17.2	6.6	0.7	1.2	2.0	2.4	3.5	4.4	6.6	11.7	10.2	18.3	7.6
13	7.7	S	4.2	5.0	6.2	2.6	6.0	6.3	6.6	11.5	11.8	17.5	6.3	11.4	6.1	4.7	2.0	5.6	4.1	9.0	10.6	8.6	19.2	24.2	24.2	8.6
14	18.7	S	16.4	8.7	11.3	9.9	26.0	23.3	19.6	18.2	18.1	19.2	15.2	26.6	11.9	15.3	15.7	24.0	25.7	15.2	2.4	3.9	0.7	1.8	26.6	15.1
15	1.8	S	7.6	6.6	10.4	10.0	7.2	11.8	15.8	15.0	17.7	15.6	6.3	4.1	12.1	2.5	5.6	0.6	14.6	7.9	1.5	0.5	5.4	4.5	17.7	8.1
16	14.1	S	9.8	17.4	18.1	14.5	12.6	14.7	13.2	5.4	2.5	1.8	0.1	0.0	0.3	2.7	5.7	3.3	7.2	13.2	18.9	14.3	18.0	23.8	23.8	10.1
17	26.1	S	23.7	23.1	19.0	16.6	14.1	13.6	9.9	5.6	4.5	0.6	2.5	0.2	3.5	0.6	0.6	0.3	2.6	1.4	1.1	0.9	1.1	1.4	26.1	7.5
18	1.9	S	3.9	7.9	1.8	8.0	1.5	2.4	2.9	0.4	0.8	0.7	5.5	1.5	0.8	5.3	10.2	12.6	14.2	3.5	2.6	14.0	18.4	23.1	23.1	6.3
19	4.5	S	19.3	8.3	9.0	10.2	6.4	7.2	13.3	13.3	15.2	4.2	0.2	1.6	1.9	0.0	0.0	4.0	2.9	7.4	0.2	4.3	7.9	9.9	19.3	6.6
20	4.8	S	3.7	4.5	4.8	5.5	11.4	10.2	1.1	1.4	0.0	0.0	1.3	0.6	0.2	0.0	0.0	0.0	0.0	1.0	6.3	7.6	7.1	5.4	11.4	3.3
21	3.6	S	9.8	6.9	5.0	6.6	5.1	8.7	10.5	9.6	10.6	5.0	5.2	0.2	0.0	3.0	5.7	2.0	11.9	7.9	7.8	8.4	11.3	12.7	12.7	6.8
22	13.0	S	9.7	13.0	21.4	22.0	14.7	9.0	19.0	10.0	10.6	11.1	11.2	13.1	12.7	14.4	18.6	19.5	18.6	16.9	16.5	13.6	12.7	16.0	22.0	14.7
23	20.4	S	26.1	15.3	5.4	2.5	4.9	3.6	1.1	0.7	0.5	1.5	2.9	0.0	0.0	3.2	6.7	0.0	0.0	5.2	9.3	5.8	8.0	2.1	26.1	5.5
24	3.0	S	3.2	1.9	4.3	6.6	9.9	6.6	8.9	2.1	4.3	4.3	11.2	0.8	0.0	0.0	0.0	0.4	3.7	2.1	1.9	5.4	9.5	8.8	11.2	4.3
25	9.5	S	6.8	12.7	9.9	5.3	5.3	8.3	9.5	3.5	1.6	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.9	0.3	0.0	0.0	1.2	8.3	12.7	3.7
26	0.3	S	2.0	6.9	0.0	0.0	0.2	0.4	0.0	3.3	1.2	2.7	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	6.9	0.8
27	0.0	S	0.0	0.8	1.9	0.0	1.6	2.5	4.7	7.1	4.7	2.3	0.2	0.9	1.0	2.4	1.3	8.0	3.3	3.0	3.9	1.9	0.7	0.3	8.0	2.3
28	0.6	S	12.3	5.2	4.5	8.8	5.5	5.1	2.6	1.7	1.6	1.8	3.0	4.8	3.2	0.4	0.0	0.0	0.0	4.2	9.2	6.5	2.2	0.8	12.3	3.6
29	4.1	S	8.0	4.3	6.8	8.0	9.8	9.5	12.6	4.0	0.9	1.5	0.8	1.8	3.9	4.2	3.8	3.0	3.7	5.1	3.1	5.7	8.2	4.0	12.6	5.1
30	6.9	S	6.3	7.1	10.8	12.7	0.7	0.4	1.8	1.3	1.1	3.1	1.3	0.8	3.7	4.3	0.7	0.9	3.6	3.9	3.0	1.4	1.7	7.6	12.7	3.7
31	5.0	S	3.3	3.8	4.9	1.3	5.2	5.1	1.3	3.9	3.0	1.4	17.0	16.8	10.5	7.4	4.3	2.4	6.4	7.4	5.9	20.5	19.8	12.5	20.5	7.3
Hourly Max	35.6	-	27.2	29.1	30.0	29.3	26.0	23.3	21.8	22.4	18.1	19.2	18.3	26.6	12.7	15.3	18.6	25.7	25.7	27.8	33.5	27.3	34.5	34.8		
Hourly Average	9.7	-	9.3	8.0	8.7	8.6	9.0	8.6	9.0	7.2	6.3	5.6	5.2	4.6	3.9	4.2	4.7	5.5	6.5	7.1	6.9	8.7	9.6	10.7		

S = SPAN C = CALIBRATION

Daily 1-hour NO₂ Maximums (ppb) at Trailer

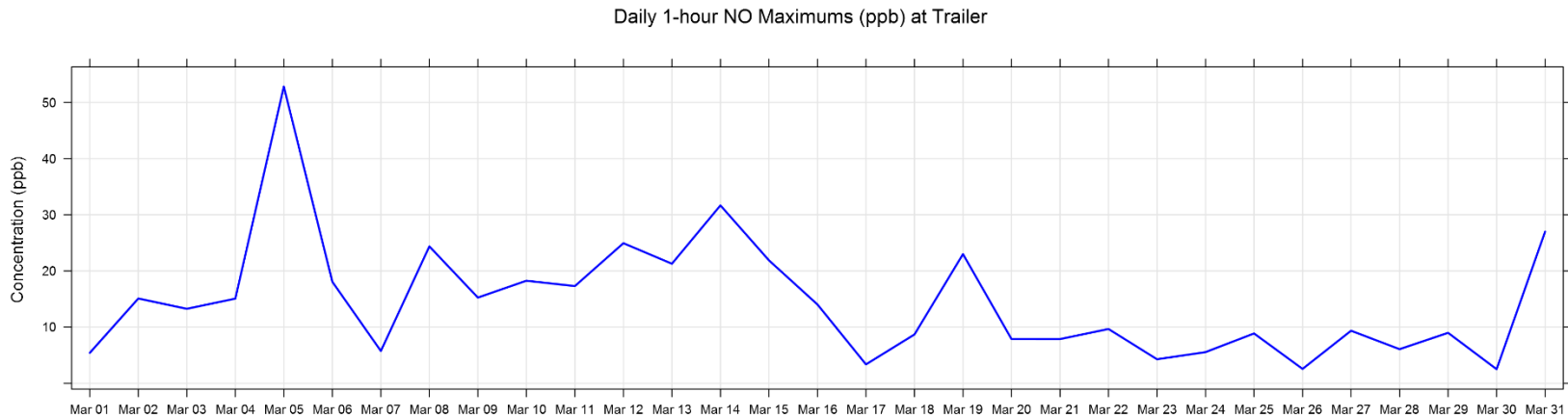


Number of 1HR Exceedances	0	Objective	159	PPB
Number of Non-Zero Readings	662			
Maximum 1-HR Average	35.6	PPB		
Maximum 24-HR Average	21.0	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	5	HRS	Operational Uptime	100.0 %
Standard Deviation	6.8		Monthly Average	7.3 PPB

Lagoon NO (ppb) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.8	S	1.3	0.0	0.0	0.0	0.9	5.0	4.8	5.3	5.4	C	C	C	C	C	1.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0	5.4	1.6
2	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	0.9	1.0	0.0	0.0	0.0	0.0	1.2	3.1	15.1	3.6	15.1	1.1
3	2.9	S	1.1	0.3	0.0	1.8	2.9	0.0	0.2	0.0	1.7	1.5	6.6	13.3	6.2	3.1	5.3	6.1	0.8	1.7	4.9	0.0	0.0	0.0	13.3	2.6
4	0.0	S	0.0	0.0	0.9	2.3	8.4	1.8	8.0	11.6	3.7	15.1	7.9	0.5	1.8	11.0	3.6	2.6	0.5	0.0	0.0	10.4	0.0	0.1	15.1	3.9
5	2.2	S	2.4	27.4	25.0	14.3	3.5	1.8	38.4	52.8	22.8	18.8	17.1	3.5	4.1	9.1	19.5	20.1	4.9	8.5	0.2	33.9	16.1	37.8	52.8	16.7
6	18.1	S	0.0	0.0	0.0	0.0	0.0	2.5	16.2	6.9	12.0	4.6	3.0	2.2	1.7	1.3	0.8	0.0	0.0	0.0	0.0	7.0	0.0	4.9	18.1	3.5
7	1.7	S	0.0	1.1	0.0	0.0	2.0	4.0	5.7	4.7	2.7	0.2	0.9	0.3	0.0	0.0	0.0	2.5	4.9	0.0	5.0	0.0	0.0	1.6	5.7	1.6
8	24.4	S	3.6	0.0	0.1	0.0	0.7	0.0	2.4	2.7	2.4	1.7	2.4	1.0	3.2	0.8	1.0	0.8	0.0	0.0	0.1	0.4	0.9	1.4	24.4	2.2
9	0.0	S	0.0	0.7	0.0	0.5	15.3	11.6	0.5	0.0	0.0	0.0	0.0	0.3	5.7	2.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	15.3	1.7
10	3.0	S	0.0	0.8	5.7	9.0	18.3	1.2	0.5	1.2	17.6	3.4	0.5	0.6	0.2	7.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	3.0
11	0.4	S	0.0	0.0	0.2	0.0	0.0	1.7	5.2	13.3	2.5	17.3	10.6	2.0	0.9	0.6	0.0	0.0	0.0	0.8	0.0	4.5	1.7	8.3	17.3	3.0
12	1.5	S	0.0	0.0	3.2	1.9	1.1	2.6	5.8	10.8	19.9	16.9	24.9	20.1	4.4	0.0	0.0	0.0	0.0	0.0	0.1	0.6	6.6	6.7	24.9	5.5
13	3.7	S	1.1	1.3	3.3	0.0	2.8	1.6	3.6	9.5	12.3	20.5	5.2	10.2	3.2	1.3	0.0	1.8	0.0	0.0	0.0	0.0	11.0	21.3	21.3	4.9
14	11.3	S	9.7	2.7	6.9	7.6	26.3	21.8	21.6	19.1	20.1	19.2	10.2	31.7	7.4	9.4	4.7	5.4	0.1	0.0	0.0	0.8	0.0	0.0	31.7	10.3
15	0.0	S	3.1	1.3	4.7	3.9	0.8	2.3	7.0	2.1	9.4	21.9	1.2	0.2	4.6	0.0	0.0	0.0	2.3	0.6	0.1	0.0	2.9	0.0	21.9	3.0
16	0.0	S	0.0	0.0	0.5	2.5	0.3	6.0	14.0	5.5	2.2	1.5	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.0	2.7	0.0	0.0	0.0	14.0	1.6
17	0.0	S	0.0	2.0	0.0	0.0	0.0	0.0	0.2	1.5	3.4	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	3.4	0.3
18	0.0	S	0.0	0.0	0.0	2.3	0.0	0.0	0.4	0.0	0.0	0.0	2.0	0.0	0.0	2.5	6.1	5.8	8.3	0.0	0.0	5.4	8.7	7.1	8.7	2.1
19	0.0	S	4.6	0.0	0.0	0.7	0.0	1.4	13.6	16.1	23.0	4.4	0.0	0.3	0.6	0.0	0.0	0.9	1.1	7.6	0.0	1.4	1.2	5.7	23.0	3.6
20	0.0	S	0.0	0.0	0.0	0.0	7.9	2.5	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.9	0.9	0.5	7.9	0.7
21	0.0	S	4.0	2.2	0.5	2.5	0.0	1.2	3.4	4.6	7.9	3.7	2.6	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	1.5
22	0.0	S	0.0	0.0	3.3	9.7	0.0	2.4	2.3	0.0	0.0	0.3	0.3	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	9.7	1.0
23	1.1	S	3.3	0.0	0.0	0.0	2.4	0.5	0.0	0.0	0.0	0.3	1.5	0.0	0.0	2.2	3.7	0.0	0.0	0.0	0.0	0.8	4.3	0.0	4.3	0.9
24	0.0	S	0.0	0.0	2.2	0.0	4.8	1.0	2.6	0.0	2.6	2.2	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.0	5.0	5.5	1.3
25	7.3	S	3.0	3.8	1.8	0.0	0.0	2.2	8.9	2.0	0.3	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	8.9	1.5
26	0.0	S	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.6	0.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.3
27	0.0	S	0.0	0.0	2.1	0.0	0.7	1.9	6.8	9.4	4.9	1.9	0.0	0.5	0.3	1.8	0.5	7.7	1.0	0.0	0.0	0.0	0.0	0.0	9.4	1.7
28	0.0	S	0.0	0.2	0.0	0.8	0.6	1.0	0.0	0.0	0.4	0.4	0.8	2.7	1.2	0.0	0.0	0.0	0.0	0.9	6.1	2.1	0.0	0.0	6.1	0.7
29	0.0	S	0.0	0.0	0.0	0.0	0.0	1.1	9.0	1.4	0.1	0.2	0.0	0.4	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.6
30	0.0	S	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.5	0.3
31	0.0	S	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.1	2.5	1.0	27.0	20.5	11.5	5.6	1.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	27.0	3.2
Hourly Max	24.4	-	9.7	27.4	25.0	14.3	26.3	21.8	38.4	52.8	23.0	21.9	27.0	31.7	11.5	11.0	19.5	20.1	8.3	8.5	6.1	33.9	16.1	37.8		
Hourly Average	2.6	-	1.2	1.4	1.9	2.0	3.2	2.6	5.8	6.0	5.8	5.3	4.3	3.7	2.0	2.1	1.6	1.8	0.8	0.6	0.7	2.4	2.3	3.6		

S = SPAN C = CALIBRATION



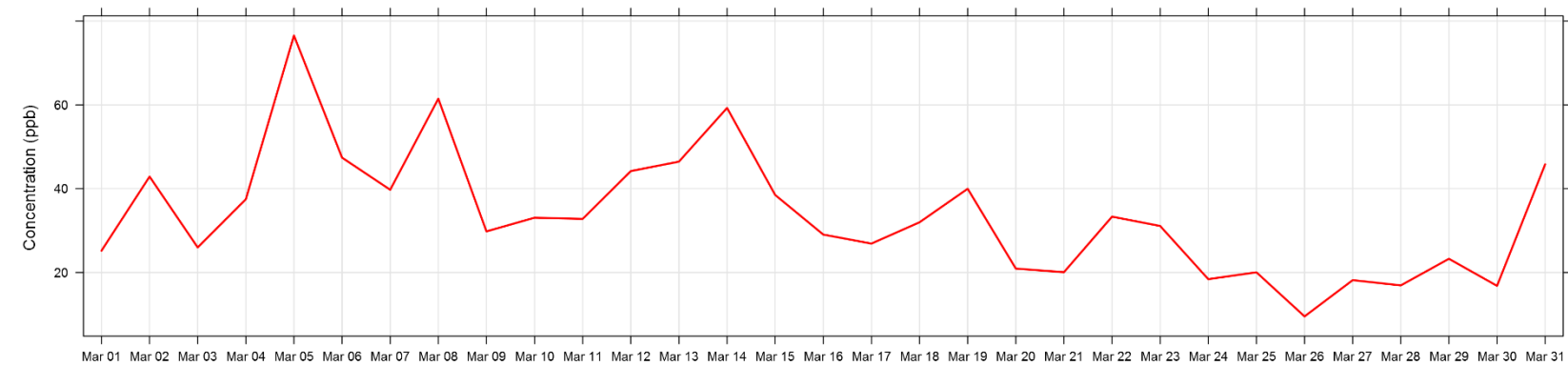
Number of 1HR Exceedances	n/a	Objective	n/a	PPB
Number of Non-Zero Readings	385			
Maximum 1-HR Average	52.8	PPB		
Maximum 24-HR Average	16.7	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	5	HRS	Operational Uptime	100.0 %
Standard Deviation	5.7		Monthly Average	2.8 PPB

Lagoon NO_x (ppb) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	12.8	S	15.6	10.2	11.1	11.9	15.1	23.5	25.2	21.3	19.0	C	C	C	C	C	17.8	17.2	8.9	6.3	4.5	3.3	4.1	4.7	25.2	12.9
2	4.1	S	2.2	2.2	3.3	2.0	1.4	1.5	1.9	2.4	2.4	4.0	3.1	5.1	6.0	7.8	2.9	3.2	5.7	4.0	11.0	22.5	42.9	24.5	42.9	7.2
3	17.1	S	13.2	7.6	10.9	14.3	12.3	2.6	6.0	3.1	5.8	5.7	14.9	26.0	13.3	10.3	15.4	19.2	9.4	10.3	16.9	3.5	2.1	3.5	26.0	10.6
4	2.8	S	2.1	3.7	17.0	17.2	26.6	16.5	23.4	26.5	10.6	27.0	14.6	2.5	4.8	21.5	10.9	9.5	8.2	16.2	12.6	37.5	16.3	16.8	37.5	15.0
5	25.2	S	30.9	57.9	56.5	45.0	30.0	22.9	61.5	76.6	36.3	31.8	29.2	10.2	10.6	19.6	38.3	47.1	22.4	37.4	17.5	62.5	52.0	74.1	76.6	38.9
6	47.4	S	22.8	10.0	12.0	12.7	12.4	19.0	39.1	18.6	21.8	10.5	8.1	6.8	5.7	5.8	4.4	0.2	2.1	1.3	5.2	18.9	3.4	14.5	47.4	13.2
7	7.8	S	5.2	6.1	3.1	5.2	14.5	18.5	17.3	12.4	8.1	2.3	3.6	2.8	0.6	1.8	1.0	15.5	21.9	22.1	39.8	23.0	20.7	27.2	39.8	12.2
8	61.5	S	20.9	7.5	8.9	5.6	9.7	8.2	12.3	12.3	10.7	8.6	8.8	5.1	9.5	4.9	6.0	4.6	0.3	0.0	3.4	6.8	7.8	10.9	61.5	10.2
9	5.8	S	4.5	7.7	3.4	6.5	29.8	22.5	5.9	1.5	0.8	1.6	1.2	2.7	15.3	9.2	5.7	4.9	8.3	3.1	2.1	6.1	6.8	20.7	29.8	7.6
10	23.9	S	1.1	7.1	18.6	22.6	33.1	5.9	4.2	5.3	31.7	9.4	3.2	3.3	2.9	17.4	3.5	2.5	2.9	4.4	3.8	7.6	4.7	3.0	33.1	9.7
11	5.3	S	3.8	3.6	5.0	3.0	2.6	9.0	13.7	25.9	6.9	32.8	22.4	5.9	4.0	3.7	1.4	2.5	3.8	13.5	6.6	17.3	10.6	20.6	32.8	9.7
12	9.0	S	5.9	5.1	11.7	8.4	7.8	11.1	15.3	22.2	34.5	32.1	44.2	38.3	11.8	1.3	1.7	2.5	2.9	4.0	5.4	8.0	19.2	17.8	44.2	13.9
13	12.3	S	6.2	7.1	10.4	3.6	9.7	8.8	11.1	21.9	25.1	39.0	12.4	22.4	10.1	6.9	2.8	8.2	4.3	9.1	10.9	9.1	31.0	46.5	46.5	14.3
14	30.9	S	27.0	12.2	19.1	18.4	53.5	46.2	42.1	38.2	39.2	39.4	26.3	59.3	20.1	25.7	21.4	30.4	26.7	15.7	3.3	5.6	0.7	2.2	59.3	26.2
15	2.6	S	11.6	8.8	16.0	14.8	9.0	14.8	23.7	18.0	28.1	38.5	8.3	5.1	17.8	3.2	6.3	0.6	18.0	9.6	3.2	0.7	9.9	4.5	38.5	11.9
16	15.2	S	10.4	17.6	20.3	18.7	14.6	22.4	29.1	12.6	6.3	5.0	1.3	0.9	1.0	4.8	8.2	3.7	7.7	13.9	23.3	15.4	18.8	25.3	29.1	12.9
17	26.9	S	24.6	26.9	19.6	16.8	14.6	14.3	11.7	8.8	9.6	0.8	3.6	0.6	6.1	1.3	1.2	0.5	3.1	1.3	1.2	0.8	1.0	1.4	26.9	8.6
18	2.0	S	4.2	8.0	1.9	12.1	1.8	3.1	5.0	0.6	2.1	1.3	9.2	2.6	2.1	9.6	18.0	20.1	24.3	3.6	2.7	21.2	28.9	32.0	32.0	9.4
19	4.5	S	25.6	9.9	9.5	12.5	7.0	10.2	28.6	31.2	40.0	10.3	1.1	3.6	4.2	0.0	0.0	6.6	5.8	16.7	0.3	7.4	10.8	17.3	40.0	11.4
20	6.0	S	5.5	5.0	6.4	6.6	20.9	14.3	1.7	3.3	0.1	0.8	3.0	1.9	1.5	0.2	0.0	0.0	0.0	1.1	10.3	10.2	9.7	7.5	20.9	5.0
21	4.2	S	15.5	10.7	7.1	10.7	6.1	11.5	15.5	15.8	20.1	10.4	9.5	0.7	0.1	4.3	8.6	2.7	12.4	8.9	7.7	8.3	11.4	13.0	20.1	9.4
22	13.3	S	9.7	13.3	26.4	33.3	16.2	12.9	23.0	11.0	11.9	12.9	13.0	15.7	14.5	15.8	19.8	20.4	18.8	16.9	16.5	13.7	12.5	20.3	33.3	16.6
23	23.2	S	31.1	16.4	7.0	3.8	9.0	5.8	1.9	1.5	1.5	3.4	6.1	0.8	0.0	7.0	12.0	0.0	0.0	6.0	11.0	8.3	14.0	2.1	31.1	7.5
24	3.0	S	3.6	1.9	8.2	7.9	16.3	9.2	13.1	3.3	8.6	8.2	18.4	1.7	0.0	0.0	0.2	0.5	4.5	2.1	2.3	9.4	13.1	15.4	18.4	6.6
25	18.4	S	11.4	18.2	13.3	6.7	6.4	12.1	20.1	7.1	3.5	0.0	0.0	0.0	0.0	5.2	0.0	0.0	2.2	0.4	0.0	0.0	2.3	13.1	20.1	6.1
26	0.3	S	3.4	9.5	0.0	0.0	0.9	1.5	0.3	7.5	3.3	6.0	0.0	0.3	0.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	9.5	1.7
27	0.0	S	0.0	1.5	5.7	0.0	4.0	6.1	13.1	18.2	11.3	5.9	1.0	3.0	2.9	5.9	3.5	17.3	5.9	3.8	4.1	2.1	0.7	0.3	18.2	5.1
28	0.5	S	13.5	7.0	5.2	11.2	7.8	7.8	3.9	3.1	3.6	3.8	5.5	9.3	6.1	1.2	0.3	0.0	0.0	6.8	16.9	10.2	3.1	1.0	16.9	5.6
29	5.7	S	8.4	4.2	6.9	8.1	10.3	12.2	23.3	7.0	2.5	3.3	2.3	3.9	6.9	6.2	4.6	3.3	3.7	6.0	3.2	6.3	9.4	4.6	23.3	6.6
30	6.9	S	6.4	7.2	11.3	16.8	0.8	0.5	2.3	1.6	1.4	5.3	2.8	1.5	6.4	7.4	0.8	1.1	4.2	4.2	3.3	1.5	1.7	10.6	16.8	4.6
31	6.5	S	3.9	4.3	5.8	1.4	6.7	7.8	2.8	8.6	7.2	4.1	45.8	39.2	23.6	14.5	7.0	3.3	7.7	9.0	6.0	20.9	20.0	12.9	45.8	11.7
Hourly Max	61.5	-	31.1	57.9	56.5	45.0	53.5	46.2	61.5	76.6	40.0	39.4	45.8	59.3	23.6	25.7	38.3	47.1	26.7	37.4	39.8	62.5	52.0	74.1		
Hourly Average	13.1	-	11.3	10.3	11.7	11.5	13.2	12.4	16.1	14.4	13.3	12.1	10.8	9.4	6.9	7.5	7.2	8.0	7.9	8.3	8.2	11.9	12.7	15.1		

S = SPAN C = CALIBRATION

Daily 1-hour NO_x Maximums (ppb) at Trailer



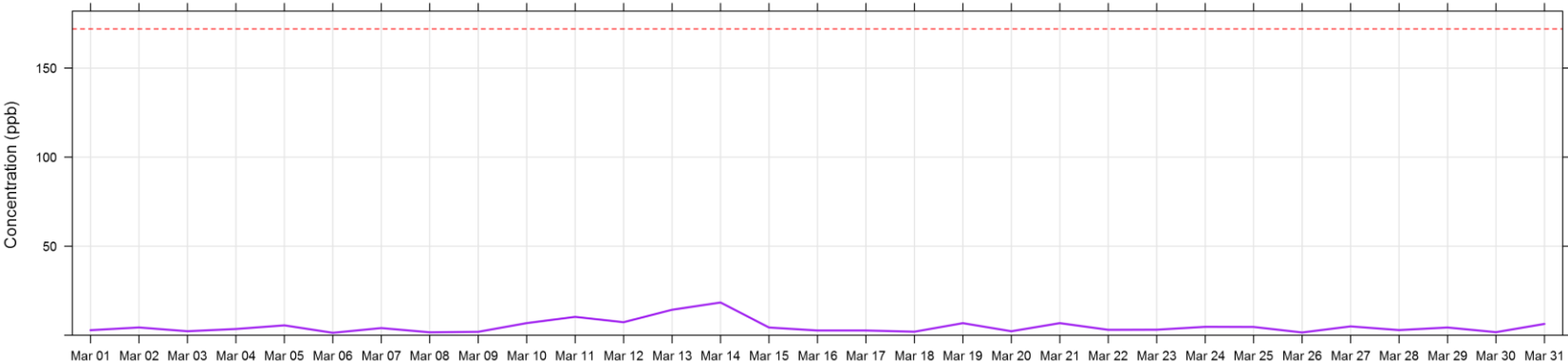
Number of 1HR Exceedances	n/a	Objective	n/a	PPB
Number of Non-Zero Readings	674			
Maximum 1-HR Average	76.6	PPB		
Maximum 24-HR Average	38.9	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	5	HRS	Operational Uptime	100.0 %
Standard Deviation	11.4		Monthly Average	11.0 PPB

Lagoon SO₂ (ppb) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.7	S	1.4	1.6	1.4	1.3	1.2	1.3	1.3	1.3	1.3	C	C	C	C	C	2.6	2.8	2.1	1.7	1.7	1.6	2.1	2.0	2.8	1.7
2	1.5	S	2.8	2.4	3.5	3.2	2.6	2.4	1.8	2.1	3.2	2.9	3.1	4.4	4.0	2.7	2.4	2.9	2.9	2.9	3.2	2.7	2.5	1.9	4.4	2.8
3	1.9	S	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.4	1.5	1.3	1.4	1.6	1.4	1.4	1.8	1.8	1.4	2.1	1.9	2.2	1.6	1.5	2.2	1.6
4	1.7	S	2.8	3.1	3.0	2.4	2.4	1.8	1.5	1.6	1.9	2.4	2.0	1.8	2.1	3.5	3.4	2.6	1.7	1.2	1.1	1.2	0.9	0.8	3.5	2.0
5	0.9	S	0.9	1.5	1.3	1.3	1.1	1.1	1.7	2.3	2.8	2.3	1.7	1.2	2.7	2.3	5.0	5.5	4.2	3.1	2.2	1.8	1.2	1.6	5.5	2.2
6	1.4	S	0.9	0.7	0.8	0.7	0.7	0.8	1.0	0.9	1.0	1.0	0.9	0.9	0.7	0.9	0.9	1.1	1.0	0.8	0.9	1.0	0.9	1.0	1.4	0.9
7	0.9	S	1.0	1.1	1.0	1.0	1.1	1.0	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.0	3.6	4.0	2.8	3.7	1.9	1.1	0.9	4.0	1.5
8	1.5	S	1.2	1.2	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.6	1.5	1.4	1.4	1.4	1.6	1.5	1.6	1.6	1.6	1.6	1.4
9	1.6	S	1.6	1.6	1.6	1.5	1.9	1.7	1.5	1.6	1.5	1.5	1.4	1.5	1.7	1.9	1.6	1.5	1.5	1.6	1.6	1.7	1.5	1.3	1.9	1.6
10	1.7	S	1.2	1.5	2.5	2.5	2.3	1.1	1.1	1.4	6.8	2.6	1.1	1.1	1.0	1.2	1.0	1.0	1.2	1.1	1.0	1.3	1.5	1.3	6.8	1.7
11	1.2	S	1.3	1.3	1.1	1.1	1.0	1.4	2.6	4.7	1.7	10.3	6.9	1.2	1.0	1.0	1.0	1.1	1.6	1.1	0.9	2.0	2.1	2.0	10.3	2.2
12	1.1	S	1.1	1.2	1.9	1.4	1.0	1.1	1.6	2.8	4.1	4.7	7.3	5.1	1.4	1.0	0.9	0.9	1.2	1.1	1.3	1.5	1.9	2.6	7.3	2.1
13	1.6	S	1.6	2.3	4.1	1.5	2.1	2.3	2.0	4.3	6.8	14.3	5.0	3.8	2.0	1.1	1.1	1.7	2.5	1.8	1.5	1.7	5.7	11.9	14.3	3.6
14	9.2	S	7.1	3.6	5.7	5.3	12.6	11.1	10.9	11.3	10.5	10.4	7.3	18.4	4.7	7.7	8.1	7.5	5.9	3.0	2.0	1.7	1.6	1.5	18.4	7.3
15	1.6	S	2.6	3.0	4.3	3.7	1.9	1.5	1.5	1.5	1.6	1.9	1.4	1.3	1.6	1.4	1.5	1.3	1.4	1.3	1.4	1.3	1.6	1.4	4.3	1.8
16	1.4	S	1.3	1.5	1.5	2.7	1.9	1.8	1.8	1.5	1.2	1.2	1.3	1.2	1.2	1.5	2.2	2.1	1.7	1.6	2.1	1.6	1.9	1.5	2.7	1.6
17	1.3	S	1.6	2.3	2.7	2.2	1.9	1.7	1.6	1.6	1.4	1.3	1.2	1.4	1.3	1.4	1.9	1.6	1.8	1.6	1.8	2.2	2.0	1.5	2.7	1.7
18	1.5	S	1.3	1.3	1.4	1.4	1.4	1.3	1.4	1.2	1.5	1.3	1.4	1.4	1.3	1.4	1.5	1.4	1.6	2.0	1.8	1.9	2.0	1.6	2.0	1.5
19	1.2	S	1.3	1.4	1.3	1.3	1.3	1.3	2.4	4.5	6.8	1.4	1.3	1.4	1.5	1.2	1.2	1.3	1.3	1.5	1.1	1.3	1.3	1.4	6.8	1.7
20	1.3	S	1.4	1.6	1.4	1.6	1.6	1.5	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.3	1.1	1.2	1.3	1.9	2.2	1.6	2.2	1.4
21	1.8	S	3.0	2.8	1.7	2.1	1.4	1.6	1.9	2.1	2.1	2.2	6.8	1.7	1.6	3.1	2.3	1.7	1.8	2.2	2.4	2.6	3.8	4.9	6.8	2.5
22	3.0	S	1.9	1.5	2.0	2.2	1.5	1.7	1.6	1.7	2.1	1.8	1.5	1.7	1.5	1.7	1.5	1.3	1.4	1.4	1.5	1.5	1.5	2.1	3.0	1.7
23	1.9	S	2.2	2.0	1.6	1.8	1.6	1.5	1.4	1.4	1.3	1.4	1.2	1.2	1.2	1.3	3.1	1.2	1.2	1.6	1.7	2.6	2.7	1.3	3.1	1.7
24	1.6	S	1.3	1.5	1.4	1.8	2.4	1.7	2.6	1.5	2.8	2.9	4.7	2.0	1.8	1.4	1.5	1.5	1.5	1.4	1.7	1.9	2.4	2.7	4.7	2.0
25	4.2	S	2.6	4.1	3.9	2.1	1.8	1.8	4.6	2.1	1.2	1.1	1.2	1.1	1.2	2.7	1.2	1.3	1.4	1.2	1.2	1.4	1.3	1.3	4.6	2.0
26	1.2	S	1.4	1.3	1.2	1.1	1.3	1.2	1.2	1.3	1.3	1.5	1.2	1.1	1.2	1.3	1.2	1.1	1.2	1.2	1.3	1.3	1.3	1.1	1.5	1.2
27	1.2	S	1.4	1.4	2.5	1.4	1.5	1.5	2.6	5.0	3.2	2.0	1.3	1.5	1.6	1.5	1.5	2.6	1.6	1.9	1.4	1.7	1.6	1.5	5.0	1.9
28	1.6	S	1.3	1.4	1.4	1.5	1.7	2.4	2.4	1.7	1.4	1.6	1.7	2.9	2.1	1.1	1.4	1.3	1.2	1.3	2.5	2.7	1.5	1.2	2.9	1.7
29	1.3	S	2.5	1.4	1.3	1.2	1.1	1.7	4.3	1.3	2.3	2.4	1.9	2.6	1.9	1.7	1.5	1.0	1.0	1.0	0.9	1.0	1.1	1.1	4.3	1.6
30	1.3	S	1.5	1.4	1.4	1.5	1.7	1.5	1.3	1.0	1.2	1.2	1.2	1.3	1.5	1.5	1.6	1.7	1.4	1.2	1.3	1.3	1.2	1.3	1.7	1.4
31	1.8	S	1.3	1.3	1.2	1.0	1.8	1.9	1.8	2.2	1.9	1.6	6.1	6.4	5.3	2.6	1.9	1.4	1.3	1.5	1.2	1.1	1.1	1.4	6.4	2.1
Hourly Max	9.2	-	7.1	4.1	5.7	5.3	12.6	11.1	10.9	11.3	10.5	14.3	7.3	18.4	5.3	7.7	8.1	7.5	5.9	3.1	3.7	2.7	5.7	11.9		
Hourly Average	1.8	-	1.8	1.8	2.0	1.8	1.9	1.8	2.1	2.3	2.6	2.8	2.6	2.5	1.8	1.8	1.9	2.0	1.8	1.7	1.6	1.7	1.8	2.0		

S = SPAN C = CALIBRATION

Daily 1-hour SO₂ Maximums (ppb) at Trailer

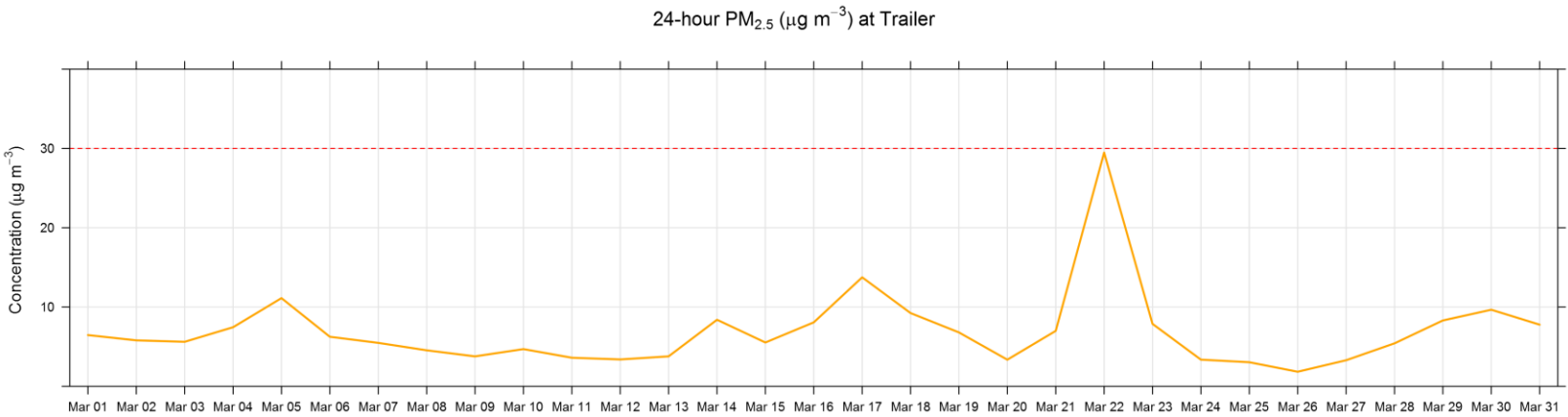


Number of 1HR Exceedances	0	Objective	172	PPB
Number of 24HR Exceedances	0	Objective	48	PPB
Number of Non-Zero Readings	708			
Maximum 1-HR Average	18.4	PPB		
Maximum 24-HR Average	7.3	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	5	HRS	Operational Uptime	100.0 %
Standard Deviation	1.7		Monthly Average	2.0 PPB

Lagoon PM2.5 (µg/m³) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.9	5.1	5.5	4.2	5.1	3.3	4.7	6.2	4.4	5.8	5.8	6.5	5.1	C	C	7.6	6.5	7.6	7.6	7.6	10.9	8.3	10.3	11.9	11.9	6.5
2	7.6	10.1	8.3	5.8	2.6	8.0	7.3	4.8	3.3	2.2	4.8	4.7	5.5	7.6	5.8	4.7	7.6	7.3	4.0	4.4	3.3	1.5	4.0	13.7	13.7	5.8
3	11.6	12.7	8.3	5.5	4.7	5.8	5.4	4.4	5.8	4.9	4.0	6.2	6.2	5.1	4.0	5.1	5.5	4.7	6.5	6.5	3.6	4.0	2.2	1.9	12.7	5.6
4	4.8	5.1	7.6	5.8	4.9	11.2	8.3	9.4	7.3	5.1	6.2	7.3	8.3	8.3	6.2	6.2	5.5	9.8	7.2	5.6	4.8	10.1	12.3	11.6	12.3	7.5
5	9.1	6.9	8.6	8.3	14.1	13.7	12.3	9.4	6.5	16.2	21.3	18.0	15.2	10.1	4.4	5.1	6.9	9.8	13.0	9.8	8.4	11.2	14.8	13.7	21.3	11.1
6	14.1	12.3	13.0	13.4	8.3	4.7	5.1	4.4	4.0	8.0	8.0	8.3	7.3	4.4	3.6	5.8	4.4	3.3	1.9	3.1	4.4	1.9	3.0	3.3	14.1	6.2
7	4.0	5.1	4.7	5.1	3.3	4.0	4.0	6.5	5.5	1.5	0.1	1.2	1.2	1.2	2.9	1.5	2.9	4.4	7.3	11.9	13.0	16.2	11.6	12.3	16.2	5.5
8	16.2	21.6	9.8	6.9	3.7	4.4	3.7	1.5	1.5	2.2	1.9	2.3	3.0	1.2	3.3	5.5	4.2	1.5	0.0	0.0	1.2	4.7	5.5	3.3	21.6	4.5
9	1.9	1.9	2.2	3.0	3.3	3.0	0.1	1.2	4.7	3.3	1.5	2.6	4.4	4.0	4.4	6.2	4.7	6.5	4.7	4.0	4.1	4.8	8.3	5.8	8.3	3.8
10	9.1	7.6	5.1	2.2	4.8	6.2	4.4	5.8	5.5	4.0	3.7	6.9	6.5	3.7	2.2	4.0	4.4	4.0	1.5	0.0	2.6	7.2	6.2	5.1	9.1	4.7
11	4.7	4.0	2.6	2.3	3.7	4.0	1.5	0.0	1.2	3.7	8.3	6.2	5.5	4.7	4.7	2.6	2.6	1.5	0.0	1.9	4.0	4.7	6.5	5.5	8.3	3.6
12	2.6	4.7	4.0	1.2	4.4	3.3	2.2	3.3	4.7	5.5	4.1	1.5	5.8	5.5	5.8	5.5	3.7	1.9	1.9	2.6	1.5	2.6	1.9	1.2	5.8	3.4
13	2.2	1.9	1.2	0.4	3.0	3.3	1.2	0.4	1.5	2.4	4.4	6.2	7.3	8.3	5.1	2.2	3.7	2.2	1.9	5.1	5.8	6.5	6.5	8.0	8.3	3.8
14	8.3	5.8	2.6	4.0	4.0	5.1	4.7	4.4	10.5	12.5	10.9	9.1	5.8	7.6	9.4	6.9	18.0	6.9	19.1	14.5	12.6	8.3	6.2	4.0	19.1	8.4
15	1.5	3.7	3.7	6.2	4.0	6.4	7.3	6.2	4.4	3.3	3.7	3.6	6.2	8.7	6.5	11.2	7.3	4.4	2.2	5.8	7.3	6.9	4.7	7.6	11.2	5.5
16	8.7	13.1	10.5	11.2	10.5	12.3	10.9	8.3	6.5	7.3	4.0	2.9	3.0	4.0	2.2	0.0	5.8	6.5	5.5	6.2	4.4	13.7	15.9	20.2	20.2	8.1
17	24.1	23.8	27.0	24.5	22.7	23.1	23.4	16.9	15.5	16.2	10.9	7.9	3.7	1.2	4.7	9.4	6.2	8.3	6.4	9.4	10.1	10.5	11.7	12.3	27.0	13.7
18	11.9	16.2	14.8	15.2	17.7	11.2	6.9	4.0	6.2	6.4	9.4	8.3	9.8	8.0	6.9	6.9	7.3	6.5	8.0	10.3	7.7	6.2	8.3	7.6	17.7	9.2
19	10.9	9.8	7.2	6.9	11.6	8.7	8.3	10.1	7.3	9.4	11.7	8.0	6.2	6.5	6.5	6.5	4.0	0.8	3.0	4.4	5.5	5.5	2.6	1.9	11.7	6.8
20	3.3	2.8	3.7	4.0	4.0	3.0	4.0	7.6	7.3	2.6	0.0	1.2	0.1	0.4	3.3	3.7	1.2	1.2	1.9	3.0	7.3	6.9	4.7	3.5	7.6	3.4
21	3.7	4.4	1.9	4.0	3.7	4.0	4.4	3.0	1.9	1.9	6.5	6.9	4.8	6.2	4.7	4.0	3.7	4.0	3.0	5.5	11.2	23.1	22.0	29.5	29.5	7.0
22	32.4	41.0	31.8	30.2	31.7	46.4	36.4	36.0	37.1	48.9	38.1	28.1	34.5	29.9	25.6	29.0	25.2	22.0	15.9	21.3	17.0	17.7	13.4	18.4	48.9	29.5
23	25.6	32.0	27.4	24.5	12.3	7.6	5.1	4.4	3.0	5.5	4.4	3.3	4.0	4.7	3.7	3.0	4.0	4.0	2.6	1.5	3.3	1.5	0.1	1.5	32.0	7.9
24	1.2	1.9	1.9	4.0	5.1	3.0	3.3	3.7	3.3	2.6	4.7	4.4	6.7	9.1	4.4	0.1	1.2	2.6	1.9	3.3	3.0	2.2	4.0	3.3	9.1	3.4
25	3.0	8.7	9.8	5.1	1.2	3.7	3.3	2.2	3.3	6.9	5.5	3.3	2.6	1.5	0.0	0.0	4.7	5.1	2.6	0.4	0.0	0.0	0.0	0.0	9.8	3.0
26	4.0	2.2	0.8	2.2	5.1	2.2	0.1	0.8	0.0	0.8	3.3	2.2	1.2	4.0	3.0	2.6	1.5	1.2	2.2	0.1	0.0	0.0	1.5	3.0	5.1	1.8
27	1.2	2.2	4.7	2.2	0.1	2.2	0.4	0.0	1.2	3.0	2.6	4.0	5.8	4.4	2.3	4.7	4.7	4.0	1.9	1.2	9.1	6.5	6.2	4.4	9.1	3.3
28	0.8	2.2	3.3	5.8	12.7	14.1	10.9	6.9	3.7	2.6	5.5	4.7	3.5	4.0	4.9	5.8	4.7	4.7	3.6	2.2	4.8	6.2	6.9	5.5	14.1	5.4
29	4.0	3.5	3.7	2.9	8.4	6.5	3.7	6.2	4.4	4.0	2.2	1.9	3.0	4.4	8.0	8.0	13.4	14.4	13.4	17.0	20.6	18.8	17.5	9.8	20.6	8.3
30	10.9	18.8	13.0	15.2	14.8	14.4	17.0	13.4	10.2	7.6	10.5	9.0	7.6	6.9	6.5	9.4	9.1	5.1	3.3	5.1	4.4	6.9	7.1	5.8	18.8	9.7
31	8.0	7.6	5.1	5.4	5.5	4.7	7.8	8.7	6.9	3.7	5.5	5.8	4.0	19.1	19.8	9.8	8.7	6.2	7.6	5.5	4.7	8.7	9.8	8.0	19.8	7.8
Hourly Max	32.4	41.0	31.8	30.2	31.7	46.4	36.4	36.0	37.1	48.9	38.1	28.1	34.5	29.9	25.6	29.0	25.2	22.0	19.1	21.3	20.6	23.1	22.0	29.5		
Hourly Average	8.2	9.6	8.2	7.7	7.8	8.2	7.0	6.5	6.1	6.8	6.9	6.2	6.2	6.5	5.8	5.9	6.2	5.6	5.2	5.8	6.5	7.5	7.6	7.9		

C = CALIBRATION

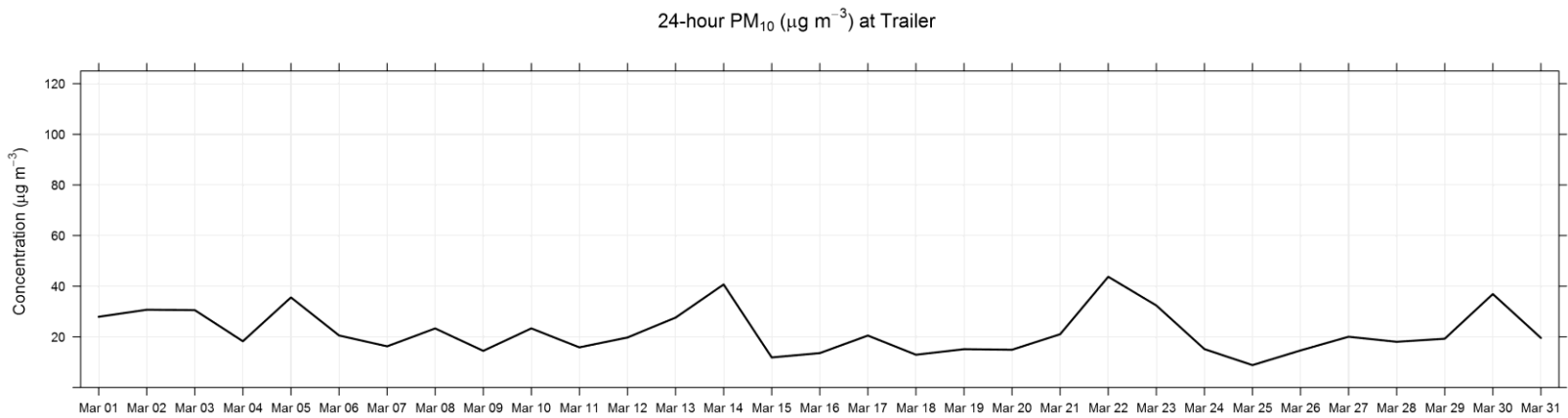


Number of 1HR Exceedances	0	Guideline	80	UG/M3
Number of 24HR Exceedances	0	Objective	30	UG/M3
Number of Non-Zero Readings	725			
Maximum 1-HR Average	48.9	UG/M3		
Maximum 24-HR Average	29.5	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	2	HRS	Operational Uptime	100.0 %
Standard Deviation	6.5		Monthly Average	6.9 UG/M3

Lagoon PM₁₀ (µg/m³) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	10.1	10.1	10.1	8.0	10.1	10.1	8.0	25.0	25.6	31.7	27.7	16.2	29.0	C	C	12.8	53.4	31.8	69.0	51.2	81.9	41.9	27.0	23.6	81.9	27.9
2	33.1	40.5	33.8	17.5	15.5	20.2	47.3	53.4	30.4	32.4	35.1	43.9	29.7	26.3	15.5	28.4	37.9	46.0	18.2	30.4	29.7	20.9	29.0	21.6	53.4	30.7
3	33.8	11.2	16.9	23.6	27.7	36.5	32.4	15.5	27.7	22.3	31.1	29.0	40.6	42.6	17.5	25.0	22.3	36.5	27.7	43.3	39.9	55.5	46.7	28.4	55.5	30.6
4	24.3	39.2	31.8	31.1	22.6	13.5	14.1	15.5	14.1	16.2	21.6	8.7	16.2	9.4	10.9	14.1	13.5	15.5	11.4	7.4	18.2	25.0	11.0	33.1	39.2	18.3
5	49.4	14.8	18.2	20.2	41.2	31.1	18.9	13.5	11.4	73.1	61.6	38.5	74.4	58.8	18.9	43.9	16.8	31.8	36.5	15.5	31.1	39.5	45.3	49.4	74.4	35.6
6	38.0	31.1	30.4	25.0	8.0	17.5	8.0	7.5	18.2	35.8	40.6	36.5	R	I	C	C	61.5	34.5	5.3	0.0	0.0	1.9	5.3	6.0	61.5	20.6
7	6.0	10.8	8.0	5.3	6.1	4.6	0.6	3.3	16.8	24.3	21.6	26.3	10.1	21.6	16.8	1.9	1.9	4.0	43.9	31.1	34.5	39.2	25.7	25.7	43.9	16.3
8	48.7	55.5	37.9	14.1	12.8	27.0	9.4	15.5	22.3	29.0	22.9	23.6	28.4	34.0	64.9	24.3	22.9	6.7	6.0	6.7	8.0	22.5	8.7	8.0	64.9	23.3
9	8.0	14.8	18.2	17.5	23.6	16.8	0.6	4.1	18.9	25.0	12.9	10.7	25.0	12.1	10.3	27.7	25.0	19.5	15.7	10.7	7.4	5.3	8.7	8.9	27.7	14.5
10	29.0	27.0	27.7	11.4	35.2	31.8	19.6	14.1	11.4	11.4	22.3	70.3	72.4	22.3	13.5	23.6	18.9	14.8	8.7	10.7	11.4	25.7	14.8	12.1	72.4	23.3
11	6.7	6.7	6.7	6.0	5.3	8.0	9.4	4.0	6.0	36.5	41.9	21.6	56.1	51.4	31.1	9.4	10.1	8.7	7.4	9.4	9.4	10.1	9.4	9.4	56.1	15.8
12	9.1	6.0	5.3	6.0	8.0	7.4	15.5	17.2	18.2	33.1	35.8	37.8	42.6	48.0	62.9	32.4	1.9	3.3	21.6	6.7	9.4	25.0	10.1	10.7	62.9	19.8
13	10.8	16.2	14.1	13.5	16.8	16.8	13.5	21.6	32.4	29.0	66.8	94.7	65.6	54.8	41.9	35.8	22.3	0.0	20.9	4.6	7.4	14.8	16.8	31.1	94.7	27.6
14	35.1	27.0	19.6	25.7	16.8	11.4	9.4	42.5	56.1	48.0	58.2	70.3	39.2	43.9	45.3	48.0	140.8	45.3	52.1	33.8	35.2	31.7	24.3	16.8	140.8	40.7
15	6.7	27.0	18.9	20.1	9.4	21.6	18.2	16.8	14.8	6.0	8.0	10.1	16.8	6.7	10.1	11.4	7.4	7.4	4.6	3.3	8.0	10.7	11.4	9.4	27.0	11.9
16	7.4	10.1	17.5	11.4	8.7	17.3	16.8	18.2	11.4	28.2	14.8	6.0	6.7	6.0	4.0	3.3	15.5	7.4	8.0	10.7	18.2	19.6	22.9	35.8	35.8	13.6
17	48.7	38.5	27.7	46.6	34.5	37.5	30.4	25.0	20.1	17.5	14.1	13.5	10.7	9.0	8.9	8.0	6.7	6.1	14.8	12.8	12.8	12.1	16.2	20.2	48.7	20.5
18	16.2	23.5	16.8	19.6	19.6	10.1	10.1	9.4	10.1	12.8	13.5	12.1	12.1	15.5	6.7	6.7	10.1	11.4	12.1	18.9	8.0	9.4	11.4	14.8	23.5	12.9
19	22.3	14.8	14.8	14.1	12.1	11.4	16.2	12.1	9.1	36.5	28.4	28.4	9.4	10.7	22.3	18.2	4.0	3.3	2.6	15.5	15.5	9.4	20.9	11.4	36.5	15.1
20	6.0	5.9	16.2	20.2	9.4	10.1	23.6	37.2	27.7	14.1	14.8	9.4	10.1	22.3	21.6	6.7	6.7	6.7	4.6	3.2	22.3	20.9	21.6	16.8	37.2	14.9
21	14.1	10.7	8.7	9.4	8.0	7.4	8.7	10.1	17.5	32.4	35.1	43.9	22.3	16.8	9.4	10.1	24.3	29.7	16.8	25.7	25.0	31.8	39.2	48.0	48.0	21.0
22	49.4	51.4	45.3	42.6	43.3	67.0	55.5	60.2	62.9	77.1	56.8	48.0	56.1	48.7	39.9	32.4	31.7	28.8	29.0	26.3	21.1	27.7	20.2	28.2	77.1	43.7
23	33.8	42.6	54.1	46.0	30.6	87.3	158.5	96.8	21.6	15.5	18.9	6.7	10.1	29.0	12.8	8.0	9.0	13.5	4.7	0.0	41.9	8.9	17.5	10.1	158.5	32.4
24	12.1	14.1	14.1	10.1	6.0	6.0	8.7	12.1	11.4	41.2	37.2	34.5	25.7	16.2	8.8	8.0	5.3	2.6	16.8	20.2	11.4	11.4	18.2	12.1	41.2	15.2
25	15.5	14.8	10.1	4.6	4.6	8.7	11.4	8.9	10.1	21.6	20.9	15.5	1.9	6.0	5.3	1.3	6.7	11.8	8.7	6.0	1.3	0.0	7.4	8.7	21.6	8.8
26	2.6	1.9	6.7	24.3	10.7	7.4	4.0	3.3	8.7	20.9	60.2	26.3	35.8	16.8	31.1	23.6	16.2	14.1	10.8	4.6	1.3	6.7	9.4	4.0	60.2	14.6
27	2.6	18.2	17.5	15.5	7.4	27.0	16.8	27.7	43.9	32.8	48.2	33.8	8.0	8.7	25.0	37.9	13.5	20.2	18.2	8.7	22.9	10.7	15.5	0.6	48.2	20.1
28	2.3	4.6	4.0	18.9	13.5	24.3	26.3	14.1	12.8	12.1	12.8	11.4	12.1	20.9	22.3	44.6	28.7	31.1	12.1	22.3	17.5	31.7	21.6	11.4	44.6	18.1
29	10.1	10.1	10.1	8.0	10.1	12.1	8.7	4.6	29.7	54.1	29.7	26.3	27.7	25.7	17.5	14.2	20.1	18.9	19.6	19.6	26.3	20.2	19.6	19.6	54.1	19.3
30	17.5	24.9	19.6	20.9	19.6	29.7	32.4	20.2	33.8	123.9	94.7	42.6	56.1	52.1	18.6	35.8	33.1	41.9	47.3	37.6	34.5	7.4	10.7	31.1	123.9	36.9
31	27.1	25.7	27.7	36.5	29.0	14.1	12.1	8.0	7.5	25.6	37.2	35.1	17.3	40.6	28.9	19.6	18.9	8.0	7.4	6.7	4.7	4.6	8.0	19.6	40.6	19.6
Hourly Max	49.4	55.5	54.1	46.6	43.3	87.3	158.5	96.8	62.9	123.9	94.7	94.7	74.4	58.8	64.9	48.0	140.8	46.0	69.0	51.2	81.9	55.5	46.7	49.4		
Hourly Average	20.5	21.0	19.6	19.2	17.0	21.0	21.5	20.6	21.4	32.9	33.7	30.1	28.9	26.8	22.1	20.6	22.8	18.1	18.8	16.2	19.9	19.4	18.5	18.9		

R = REMOVAL AUDIT I = INSTALLATION C = CALIBRATION

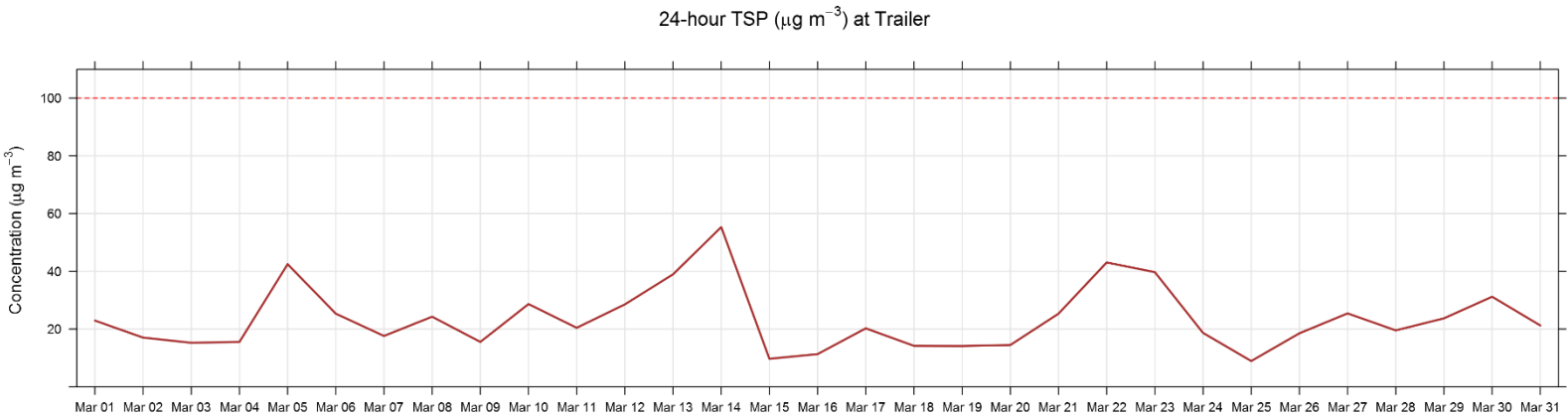


Number of 1HR Exceedances	n/a	Objective	n/a	UG/M3
Number of Non-Zero Readings	733			
Maximum 1-HR Average	158.5	UG/M3		
Maximum 24-HR Average	43.7	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	742 HRS
Monthly Calibration Time	4	HRS	Operational Uptime	99.7 %
Standard Deviation	17.5		Monthly Average	22.0 UG/M3

Lagoon TSP (µg/m³) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	8.5	16.8	4.3	3.0	14.0	3.0	5.7	28.4	34.8	36.1	27.8	26.5	25.1	C	C	25.1	37.5	29.2	52.0	37.5	29.2	30.6	8.5	20.9	52.0	22.9
2	16.8	23.7	19.6	0.2	4.4	14.0	16.8	5.7	28.1	14.0	20.9	33.4	15.4	20.9	8.4	22.3	18.2	26.5	7.1	16.8	16.8	0.2	25.1	33.4	33.4	17.0
3	19.6	19.6	14.0	8.5	8.5	9.9	11.2	9.9	4.4	15.4	11.3	11.3	19.6	19.6	15.4	19.6	19.6	25.1	29.2	19.6	18.2	12.6	8.5	15.4	29.2	15.2
4	14.0	14.0	11.3	9.9	7.1	8.5	15.4	8.5	7.1	29.2	30.6	8.5	8.5	9.9	11.1	15.4	15.4	0.2	0.2	18.2	25.6	30.6	19.1	54.1	54.1	15.5
5	65.2	4.4	14.0	18.2	34.8	29.2	14.0	11.2	14.0	62.4	43.0	38.9	108.0	51.3	34.8	83.1	40.3	43.1	50.0	27.9	48.4	54.1	77.6	51.3	108.0	42.5
6	51.3	26.5	48.6	27.8	9.9	7.1	5.7	8.5	16.8	23.6	37.7	37.5	32.0	20.9	19.6	12.6	135.6	44.4	6.0	7.1	4.4	3.0	16.8	4.3	135.6	25.3
7	7.1	8.5	7.1	4.4	1.6	3.0	3.0	1.6	7.1	16.8	22.3	30.6	1.5	3.0	5.9	4.3	4.3	5.7	73.4	54.1	47.2	37.5	30.6	41.7	73.4	17.6
8	74.9	65.2	29.2	9.9	8.5	18.2	5.7	14.0	32.0	32.0	30.6	20.9	23.6	43.1	66.5	30.6	26.5	11.3	4.3	1.6	4.3	14.0	8.5	7.1	74.9	24.3
9	3.0	4.3	8.5	20.9	20.9	18.2	5.7	7.1	14.0	12.6	5.7	1.6	40.3	7.1	9.9	38.9	28.3	36.1	24.9	16.8	7.1	8.5	18.2	14.0	40.3	15.5
10	41.7	29.2	22.3	20.9	48.6	47.2	26.5	27.9	7.1	9.9	25.1	95.6	85.9	27.8	13.9	29.2	18.2	14.0	4.3	15.4	14.0	43.1	16.8	3.0	95.6	28.6
11	3.0	15.4	12.6	8.5	7.1	9.9	8.5	0.2	16.9	37.5	54.1	20.9	69.3	67.9	27.8	14.0	4.3	5.7	16.9	16.8	33.4	19.6	16.8	3.0	69.3	20.4
12	5.7	11.3	8.5	7.1	9.9	11.3	9.9	20.9	26.5	44.4	43.0	48.6	48.6	67.9	109.3	49.9	9.9	14.1	43.0	16.8	14.0	26.5	16.8	20.9	109.3	28.5
13	11.3	20.9	16.8	14.0	15.4	22.3	27.9	26.5	52.7	32.0	98.3	134.2	95.5	59.7	65.1	52.7	26.5	1.6	37.5	19.5	20.9	18.2	26.5	38.9	134.2	39.0
14	37.5	33.4	28.2	20.9	20.9	18.2	0.0	54.3	74.8	65.2	72.0	79.0	52.7	69.3	61.0	80.3	243.4	70.7	65.1	47.2	61.0	45.8	14.0	12.6	243.4	55.3
15	11.3	30.6	22.3	32.0	3.0	24.7	12.6	14.0	11.3	7.1	5.7	7.1	7.1	7.1	5.7	7.1	7.1	3.0	1.6	0.2	0.0	1.7	5.7	4.3	32.0	9.7
16	8.7	9.9	11.8	8.5	5.7	8.5	9.9	11.2	11.3	15.4	11.3	5.7	5.7	6.2	4.3	7.1	5.7	7.1	8.5	8.5	9.9	30.6	19.6	40.3	40.3	11.3
17	52.7	51.3	40.3	36.1	36.1	38.9	34.8	30.6	27.8	20.9	3.0	16.8	1.6	4.3	8.5	7.1	4.3	4.3	15.4	15.4	5.7	7.1	9.9	12.6	52.7	20.2
18	20.9	19.6	8.5	20.9	15.4	14.0	14.0	12.6	16.8	11.6	14.3	16.8	15.4	14.0	16.8	8.5	8.6	20.9	12.6	26.5	7.1	7.1	8.5	8.5	26.5	14.2
19	19.6	12.6	12.6	19.6	5.7	14.0	0.0	15.4	0.2	26.5	26.5	18.2	11.3	7.1	19.6	22.3	4.3	4.0	18.2	25.1	27.8	11.3	11.3	5.7	27.8	14.1
20	4.3	9.9	19.6	16.8	8.5	7.1	27.8	54.8	40.5	5.7	3.0	0.0	5.7	23.7	29.2	3.0	4.3	5.7	3.0	0.2	7.1	27.8	27.8	11.3	54.8	14.5
21	18.2	8.5	8.5	11.2	11.3	7.1	1.6	16.8	22.3	36.1	52.7	45.8	33.1	19.6	5.7	8.5	49.0	52.7	15.4	33.4	32.0	34.8	36.1	47.2	52.7	25.3
22	47.2	56.9	38.9	38.9	44.4	80.4	54.1	55.5	61.0	74.6	41.7	47.2	50.0	48.6	40.3	33.1	38.9	33.1	21.6	38.9	14.2	26.5	20.9	26.5	80.4	43.1
23	40.3	41.7	51.3	36.2	43.0	106.6	207.5	91.4	33.2	22.3	18.2	8.5	20.9	34.8	5.7	9.9	23.7	14.0	7.1	3.0	65.2	18.2	27.8	22.3	207.5	39.7
24	16.8	16.8	11.4	11.3	5.7	4.3	22.3	0.2	14.3	63.8	41.7	50.0	26.5	18.2	7.1	9.9	9.9	4.3	14.4	32.0	14.0	23.7	15.4	14.0	63.8	18.7
25	8.5	16.8	7.1	7.1	8.6	11.3	8.5	5.7	7.1	18.2	16.8	7.1	8.5	7.1	4.3	3.0	7.1	8.5	18.2	5.7	3.0	0.0	16.9	8.5	18.2	8.9
26	7.1	5.7	5.7	26.5	14.0	7.1	5.7	5.7	15.4	30.6	81.7	47.2	40.3	16.8	30.6	20.9	15.4	12.6	9.9	9.9	7.1	18.2	5.7	4.4	81.7	18.5
27	7.1	23.7	19.6	11.5	8.6	43.1	14.0	34.8	67.9	43.0	48.6	41.7	12.6	7.1	25.0	49.2	15.4	40.6	20.9	14.0	26.5	12.6	13.9	8.5	67.9	25.4
28	3.0	3.0	7.1	19.6	11.4	19.6	22.3	11.3	7.1	3.0	6.3	8.5	7.1	22.3	41.7	55.5	40.6	40.3	14.0	25.1	25.1	34.8	29.2	11.3	55.5	19.5
29	7.1	5.7	8.5	8.5	8.5	16.8	7.1	15.4	41.7	83.1	41.7	30.6	38.9	34.8	25.1	25.1	25.1	18.2	15.4	20.9	29.2	22.3	15.4	23.7	83.1	23.7
30	11.3	30.6	15.4	20.9	16.8	25.1	37.5	32.0	40.3	96.9	62.4	40.3	37.5	44.4	19.6	25.1	44.4	41.7	26.5	26.5	14.0	3.0	18.2	18.2	96.9	31.2
31	12.6	25.1	11.4	25.1	20.9	11.3	11.3	15.4	1.5	4.3	30.6	18.2	27.8	61.0	45.8	33.4	23.7	33.4	16.8	19.6	9.9	15.4	12.6	22.3	61.0	21.2
Hourly Max Hourly Average	74.9	65.2	51.3	38.9	48.6	106.6	207.5	91.4	74.8	96.9	98.3	134.2	108.0	69.3	109.3	83.1	243.4	70.7	73.4	54.1	65.2	54.1	77.6	54.1		
	21.2	21.3	17.6	16.9	15.5	21.3	20.9	20.9	24.4	32.1	33.2	32.2	31.5	28.2	26.1	26.0	30.8	21.7	21.1	20.0	20.7	20.6	19.3	19.7		

C = CALIBRATION

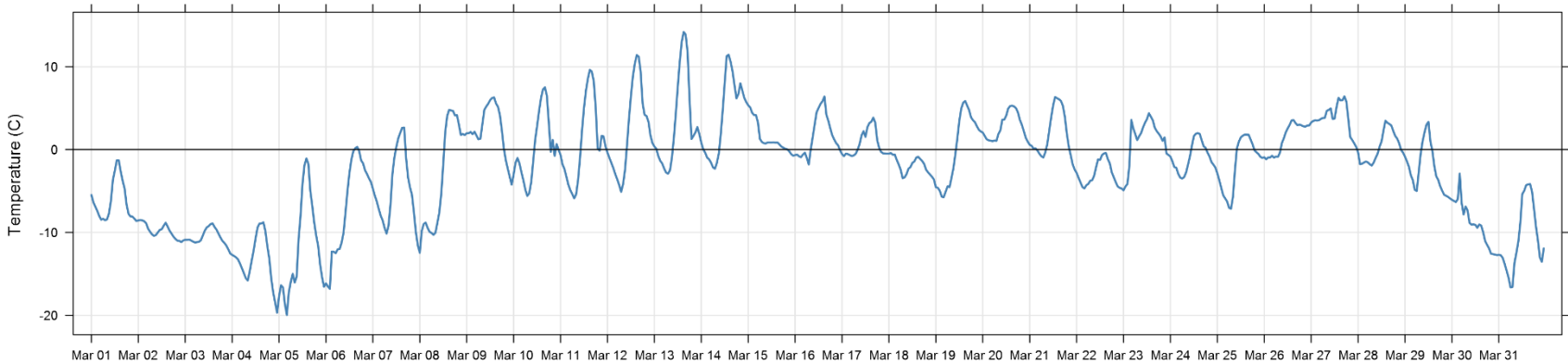


Number of 24HR Exceedances	0	Objective	100	UG/M3
Number of Non-Zero Readings	737			
Maximum 1-HR Average	243.4	UG/M3		
Maximum 24-HR Average	55.3	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	2	HRS	Operational Uptime	100.0 %
Standard Deviation	22.4		Monthly Average	23.4 UG/M3

Lagoon Temperature (°C) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	-5.5	-6.4	-6.9	-7.4	-8.0	-8.5	-8.4	-8.5	-8.4	-7.7	-6.2	-3.7	-2.5	-1.3	-1.3	-2.6	-3.8	-4.7	-6.6	-7.8	-8.1	-8.1	-8.3	-8.6	-1.3	-6.2
2	-8.6	-8.5	-8.5	-8.6	-8.9	-9.5	-9.9	-10.2	-10.4	-10.3	-10.0	-9.7	-9.6	-9.2	-8.8	-9.3	-9.8	-10.1	-10.5	-10.8	-11.0	-11.0	-11.2	-11.0	-8.5	-9.8
3	-10.9	-10.9	-10.9	-11.0	-11.1	-11.2	-11.2	-11.1	-10.9	-10.4	-9.8	-9.4	-9.2	-9.0	-8.9	-9.3	-9.7	-10.1	-10.6	-11.0	-11.3	-11.6	-12.0	-12.5	-8.9	-10.6
4	-12.7	-12.9	-13.0	-13.3	-13.8	-14.3	-14.9	-15.5	-15.8	-14.7	-13.4	-12.2	-10.7	-9.4	-8.9	-8.9	-8.8	-9.8	-11.6	-13.1	-15.5	-17.2	-18.5	-19.7	-8.8	-13.3
5	-17.7	-16.4	-16.7	-18.7	-20.0	-17.2	-16.0	-15.0	-16.1	-15.3	-10.8	-8.0	-4.2	-1.9	-1.1	-1.7	-5.0	-6.8	-8.8	-10.4	-11.6	-13.9	-15.4	-16.6	-1.1	-11.9
6	-16.2	-16.5	-16.8	-12.3	-12.3	-12.5	-12.0	-12.0	-11.2	-10.0	-7.6	-5.0	-2.8	-1.2	-0.2	0.2	0.3	-0.2	-1.3	-1.7	-2.5	-3.0	-3.5	-3.9	0.3	-6.8
7	-4.7	-5.6	-6.3	-7.2	-8.0	-8.6	-9.5	-10.1	-9.2	-6.7	-3.0	-1.0	0.3	1.4	2.0	2.6	2.7	-1.0	-3.4	-4.6	-5.5	-7.6	-10.0	-11.6	2.7	-4.8
8	-12.5	-9.8	-9.0	-8.8	-9.4	-9.9	-10.1	-10.3	-10.0	-8.8	-7.6	-5.3	-1.7	2.1	4.0	4.8	4.7	4.7	4.1	4.2	3.0	1.8	1.9	1.8	4.8	-3.2
9	2.0	2.0	2.1	1.9	2.2	1.7	1.2	1.3	3.0	4.8	5.2	5.5	6.0	6.2	6.3	5.6	5.2	4.2	2.3	0.2	-1.3	-2.3	-3.3	-4.2	6.3	2.4
10	-3.0	-1.6	-1.0	-1.7	-2.8	-3.7	-4.8	-5.6	-5.3	-3.9	-1.4	1.1	2.8	4.6	6.2	7.2	7.5	6.5	3.2	-0.3	1.2	-0.8	0.7	0.0	7.5	0.2
11	-0.7	-1.8	-2.3	-3.3	-4.2	-4.9	-5.4	-5.9	-5.4	-3.6	-1.0	2.3	5.0	7.1	8.6	9.6	9.4	8.3	5.0	0.1	-0.1	1.6	1.6	0.4	9.6	0.9
12	-0.4	-1.0	-1.6	-2.2	-3.0	-3.6	-4.3	-5.1	-4.2	-2.4	0.5	3.7	6.4	8.8	10.4	11.4	11.2	9.4	5.6	4.2	4.0	3.3	1.7	0.8	11.4	2.2
13	0.4	0.1	-0.8	-1.4	-1.7	-2.3	-2.8	-2.9	-2.5	-0.9	1.5	4.4	7.6	10.6	13.0	14.2	13.9	11.7	6.1	1.3	1.6	2.1	2.7	1.9	14.2	3.2
14	0.8	0.0	-0.4	-1.0	-1.2	-1.6	-2.2	-2.3	-1.6	-0.4	1.9	4.8	8.1	11.3	11.5	10.6	9.4	7.8	6.2	6.7	8.0	7.1	6.2	5.7	11.5	4.0
15	5.4	5.1	4.5	4.2	4.2	3.3	1.3	0.9	0.8	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.6	0.4	0.2	0.1	0.0	-0.2	-0.6	-0.7	5.4	1.5
16	-0.7	-0.6	-0.8	-0.9	-0.6	-0.4	-1.0	-1.8	0.0	1.5	3.0	4.5	5.0	5.5	5.8	6.4	4.2	3.5	2.6	1.7	1.2	0.8	0.5	-0.1	6.4	1.6
17	-0.5	-0.8	-0.5	-0.5	-0.7	-0.8	-0.7	-0.5	0.0	0.7	1.7	2.2	1.5	2.7	3.2	3.4	3.9	3.2	1.1	0.2	-0.3	-0.5	-0.5	-0.5	3.9	0.7
18	-0.5	-0.4	-0.6	-0.6	-1.2	-1.8	-2.4	-3.5	-3.4	-3.0	-2.3	-2.1	-1.6	-1.4	-1.0	-0.9	-1.1	-1.4	-1.7	-2.4	-2.7	-3.0	-3.3	-3.6	-0.4	-1.9
19	-4.5	-4.6	-5.0	-5.7	-5.8	-5.1	-4.4	-4.5	-3.4	-2.2	-0.5	1.3	3.5	5.0	5.7	5.9	5.3	4.8	3.9	3.5	3.3	2.8	2.4	2.2	5.9	0.2
20	2.1	1.7	1.2	1.1	1.1	1.0	1.1	1.0	1.9	2.3	3.6	3.6	4.1	4.9	5.3	5.3	5.2	5.0	4.5	3.6	3.0	2.2	1.4	1.0	5.3	2.8
21	0.6	0.5	0.1	0.1	-0.1	-0.5	-0.8	-0.9	-0.3	0.6	2.3	3.9	5.3	6.4	6.2	6.1	5.9	5.3	3.9	1.9	0.4	-0.7	-1.8	-2.4	6.4	1.7
22	-2.8	-3.4	-4.0	-4.5	-4.7	-4.3	-4.1	-3.8	-3.7	-3.1	-2.1	-1.2	-1.3	-0.7	-0.5	-0.4	-1.2	-1.7	-2.8	-3.3	-3.9	-4.4	-4.6	-4.7	-0.4	-3.0
23	-4.9	-4.5	-4.1	-1.9	3.6	2.6	1.9	1.1	1.6	2.0	2.7	3.2	3.7	4.4	4.0	3.5	2.6	2.2	1.9	1.6	1.1	1.5	-0.5	-0.6	4.4	1.2
24	-0.8	-1.4	-2.1	-2.2	-2.9	-3.4	-3.5	-3.3	-2.8	-1.8	-0.8	0.5	1.6	1.9	2.0	1.9	1.1	0.4	0.2	-0.4	-0.8	-1.5	-1.8	-2.2	2.0	-0.9
25	-2.9	-3.7	-4.6	-5.5	-5.9	-6.3	-7.0	-7.1	-5.7	-2.5	0.1	0.9	1.5	1.7	1.8	1.8	1.8	1.2	0.7	-0.1	-0.3	-0.5	-0.9	-1.0	1.8	-1.8
26	-0.9	-1.2	-0.9	-1.0	-0.7	-1.0	-0.8	-0.9	-0.4	0.8	1.4	2.1	2.6	3.0	3.5	3.6	3.2	2.9	3.0	2.9	2.8	2.8	2.9	2.9	3.6	1.4
27	3.3	3.5	3.5	3.5	3.5	3.7	3.8	3.8	4.7	4.8	5.0	3.7	3.7	5.1	6.3	5.9	6.0	6.4	5.8	3.7	1.5	1.2	0.8	0.3	6.4	3.9
28	-0.3	-1.8	-1.7	-1.6	-1.4	-1.5	-1.8	-1.9	-1.6	-1.0	-0.5	0.4	1.0	2.3	3.5	3.2	3.1	2.9	2.2	1.6	1.3	0.8	0.0	-0.4	3.5	0.3
29	-0.9	-1.4	-2.1	-3.1	-3.7	-4.9	-5.0	-2.8	-0.5	1.0	2.1	3.0	3.3	1.0	-0.2	-2.0	-3.2	-3.7	-4.4	-5.0	-5.4	-5.6	-5.7	-5.9	3.3	-2.3
30	-6.1	-6.2	-6.3	-6.0	-2.9	-6.5	-7.8	-6.9	-7.3	-8.8	-9.1	-9.0	-9.1	-9.4	-9.0	-9.2	-10.0	-11.0	-11.5	-11.9	-12.6	-12.6	-12.7	-12.7	-2.9	-8.9
31	-12.7	-12.8	-13.1	-13.8	-14.6	-15.5	-16.6	-16.6	-13.7	-12.5	-11.1	-8.8	-5.4	-5.0	-4.3	-4.2	-4.2	-5.1	-7.2	-9.3	-11.0	-13.0	-13.5	-11.9	-4.2	-10.7
Hourly Max	5.4	5.1	4.5	4.2	4.2	3.7	3.8	3.8	4.7	4.8	5.2	5.5	8.1	11.3	13.0	14.2	13.9	11.7	6.2	6.7	8.0	7.1	6.2	5.7		
Hourly Average	-3.8	-3.9	-4.1	-4.3	-4.4	-4.8	-5.1	-5.2	-4.6	-3.6	-2.1	-0.7	0.5	1.6	2.1	2.1	1.6	0.8	-0.6	-1.8	-2.3	-2.9	-3.4	-3.8		

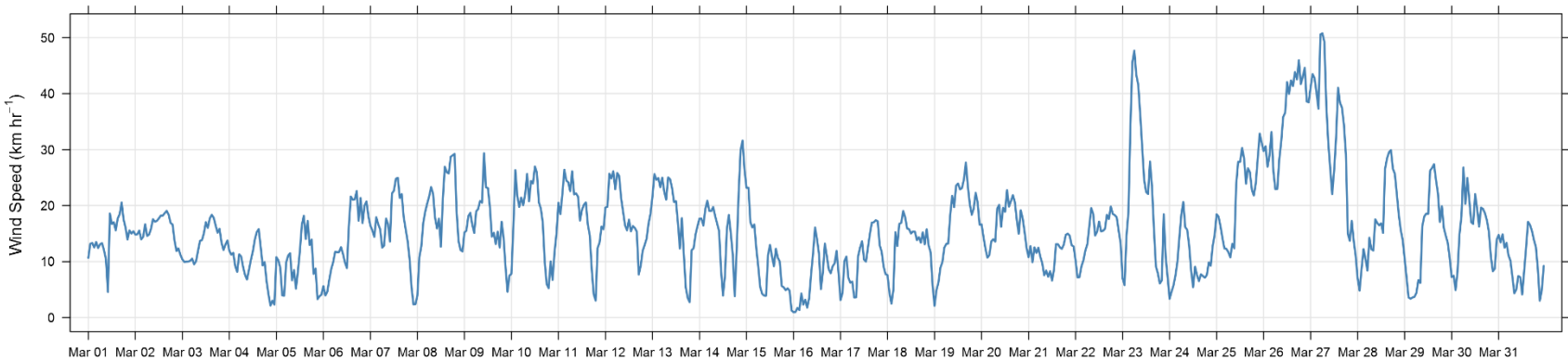
1-hour Temperature (C) at Trailer



Lagoon Wind Speed (km/hr) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	10.7	13.2	13.3	12.5	13.5	12.4	13.1	13.3	12.0	10.4	4.6	18.6	16.7	17.0	15.6	17.7	18.5	20.6	17.5	16.1	14.0	15.6	15.0	15.4	20.6	14.5
2	14.8	14.9	15.5	14.0	14.4	16.7	14.6	14.8	15.9	17.6	17.1	17.3	17.7	18.2	18.2	18.7	19.1	18.4	16.9	16.6	13.8	11.9	12.4	11.2	19.1	15.9
3	10.4	9.9	10.0	10.0	10.1	10.5	9.5	10.1	11.9	13.7	13.8	15.1	17.0	16.0	17.7	18.4	17.8	16.5	15.2	15.9	13.4	12.1	13.1	13.8	18.4	13.4
4	11.9	11.2	11.6	9.2	8.2	11.3	10.9	9.1	7.6	6.8	8.5	10.3	11.8	13.9	15.3	15.8	12.6	9.3	9.9	6.5	4.1	2.1	3.0	2.3	15.8	9.3
5	10.8	10.2	8.9	4.0	3.9	9.8	11.1	11.5	6.7	8.5	5.2	8.2	11.9	16.6	18.2	14.0	17.3	13.0	13.9	7.8	8.8	3.3	3.8	4.1	18.2	9.6
6	5.6	3.9	4.6	6.8	8.7	9.9	11.7	11.7	11.7	12.6	11.4	9.9	8.8	16.2	21.6	21.1	21.1	22.6	17.3	21.4	16.9	20.0	20.8	18.1	22.6	13.9
7	16.4	15.6	14.4	17.9	16.7	15.8	12.5	12.9	17.7	16.7	13.6	22.2	22.7	24.8	25.0	21.4	22.1	18.0	15.8	13.7	10.5	5.4	2.3	2.4	25.0	15.7
8	3.9	10.8	12.7	17.0	18.9	20.4	21.6	23.3	22.1	17.8	15.9	17.7	12.7	21.2	26.9	26.0	25.7	28.7	29.0	29.2	19.1	13.7	12.1	11.8	29.2	19.1
9	15.2	15.5	18.1	18.7	16.6	15.1	19.0	19.4	20.8	20.5	29.4	23.3	23.1	19.8	14.5	15.2	13.1	15.3	12.5	17.1	14.2	9.0	4.6	7.5	29.4	16.6
10	7.8	16.3	26.3	21.7	19.8	21.4	20.1	22.1	25.7	20.8	24.4	24.0	27.0	25.9	20.6	19.5	17.0	10.0	6.0	5.3	10.0	6.7	11.7	15.0	27.0	17.7
11	20.5	18.5	22.0	26.4	24.5	24.2	22.6	26.1	22.0	22.2	21.6	17.3	19.2	20.2	20.6	16.6	14.7	8.6	4.2	3.0	12.4	13.4	16.3	15.8	26.4	18.0
12	19.7	19.8	25.7	24.8	26.1	22.9	25.8	25.3	21.4	18.9	16.5	15.6	17.5	15.4	16.4	16.0	15.4	7.7	9.3	11.9	13.0	14.1	16.8	18.6	26.1	18.1
13	21.6	25.6	24.6	24.9	23.3	25.0	22.5	21.1	25.0	24.7	23.1	20.6	20.8	16.9	12.3	17.8	11.3	5.4	3.5	2.8	12.0	12.4	14.9	16.4	25.6	17.9
14	17.7	17.7	16.4	19.4	20.9	19.1	19.0	19.8	18.2	16.8	15.5	8.5	3.9	7.4	15.8	18.3	15.0	11.2	3.8	12.3	22.2	29.9	31.6	26.4	31.6	17.0
15	23.2	23.2	17.0	16.1	16.6	12.4	9.1	5.4	4.2	3.9	3.9	11.2	13.0	10.9	9.2	12.3	10.7	10.0	5.7	5.4	4.9	5.2	4.8	1.3	23.2	10.0
16	1.0	1.0	1.7	1.4	4.3	2.3	3.2	1.8	3.5	7.8	11.6	16.1	14.0	11.4	5.1	8.1	13.2	11.0	8.6	7.9	9.2	9.7	11.9	7.9	16.1	7.2
17	3.1	4.4	10.1	10.9	7.1	6.2	6.4	3.6	3.6	11.0	12.5	13.6	10.4	10.0	12.5	15.0	17.0	17.0	17.4	17.2	12.9	11.8	9.1	7.8	17.4	10.4
18	7.6	4.4	2.5	5.0	15.3	12.8	16.7	16.9	19.0	17.9	15.9	15.8	15.0	15.4	15.3	13.8	14.4	13.4	15.2	13.1	15.8	12.9	11.7	5.7	19.0	13.0
19	2.1	4.9	6.3	8.9	9.9	12.5	13.2	13.2	18.3	21.7	19.7	23.6	23.9	22.9	23.1	24.7	27.7	23.5	20.3	18.4	19.5	22.3	20.6	16.6	27.7	17.4
20	16.7	14.4	12.3	10.7	11.2	13.6	14.0	13.6	19.5	20.1	16.2	19.6	18.9	22.8	19.8	20.8	21.9	20.7	17.4	15.0	19.2	17.7	15.2	12.4	22.8	16.8
21	10.8	12.8	9.9	12.5	11.5	12.5	10.9	9.7	7.6	8.4	7.3	8.3	6.6	8.6	13.1	13.1	12.5	12.3	13.1	14.8	15.0	14.6	12.9	12.7	15.0	11.3
22	10.2	7.2	7.2	9.1	10.2	12.0	13.1	16.3	19.6	18.5	14.7	15.4	17.1	15.4	15.5	15.8	18.3	17.6	19.8	18.5	18.3	17.9	15.5	13.3	19.8	14.9
23	7.0	5.8	14.6	19.0	34.2	45.6	47.7	43.3	41.6	36.2	30.5	24.7	22.5	22.1	27.9	23.4	15.8	9.2	7.9	6.1	6.6	18.5	10.8	7.1	47.7	22.0
24	3.3	4.6	5.8	7.5	10.0	14.4	18.5	20.7	16.1	15.7	12.8	8.4	5.4	9.1	7.6	6.5	7.7	7.4	7.1	7.6	9.8	9.3	12.8	14.8	20.7	10.1
25	18.5	18.0	16.3	14.2	12.3	12.3	11.7	10.8	13.2	12.4	23.7	27.8	27.8	30.3	28.5	23.9	26.7	26.0	22.8	21.8	24.0	28.5	32.9	31.3	32.9	21.5
26	29.7	30.6	26.9	28.9	33.2	26.1	22.9	23.0	28.3	31.5	35.9	36.6	42.1	40.0	42.4	41.3	43.9	42.5	46.0	41.7	43.0	44.6	38.6	38.4	46.0	35.8
27	41.2	43.5	42.8	40.2	37.3	50.6	50.8	49.3	37.9	31.3	26.7	22.0	26.3	32.2	41.1	38.4	37.5	34.5	29.2	15.0	13.7	17.3	13.7	11.0	50.8	32.6
28	7.0	4.8	8.7	12.2	10.5	8.4	14.3	12.2	12.0	17.6	16.9	16.5	16.8	15.1	26.6	28.4	29.5	29.9	26.6	25.7	22.1	18.4	15.6	13.8	29.9	17.1
29	10.5	7.1	3.6	3.4	3.6	3.7	4.4	6.7	6.2	16.3	18.0	18.6	18.5	26.3	26.7	27.4	24.6	22.2	17.1	19.9	16.0	14.6	13.4	10.7	27.4	14.1
30	7.2	7.5	4.9	8.2	14.8	18.1	26.8	20.3	24.9	21.0	17.0	16.7	22.1	19.4	16.3	19.7	19.4	18.6	17.4	15.3	10.9	8.3	8.7	13.9	26.8	15.7
31	14.8	13.4	14.9	12.5	13.3	11.1	10.2	7.4	4.3	5.0	7.4	7.2	4.1	8.2	12.5	17.1	16.5	15.5	13.9	12.6	8.7	3.0	4.9	9.2	17.1	10.3
Hourly Max	41.2	43.5	42.8	40.2	37.3	50.6	50.8	49.3	41.6	36.2	35.9	36.6	42.1	40.0	42.4	41.3	43.9	42.5	46.0	41.7	43.0	44.6	38.6	38.4		
Hourly Average	12.9	13.3	13.9	14.5	15.5	16.4	17.0	16.6	16.7	16.9	16.5	17.1	17.3	18.4	19.5	19.5	19.3	17.3	15.5	14.7	14.6	14.3	13.9	13.1		

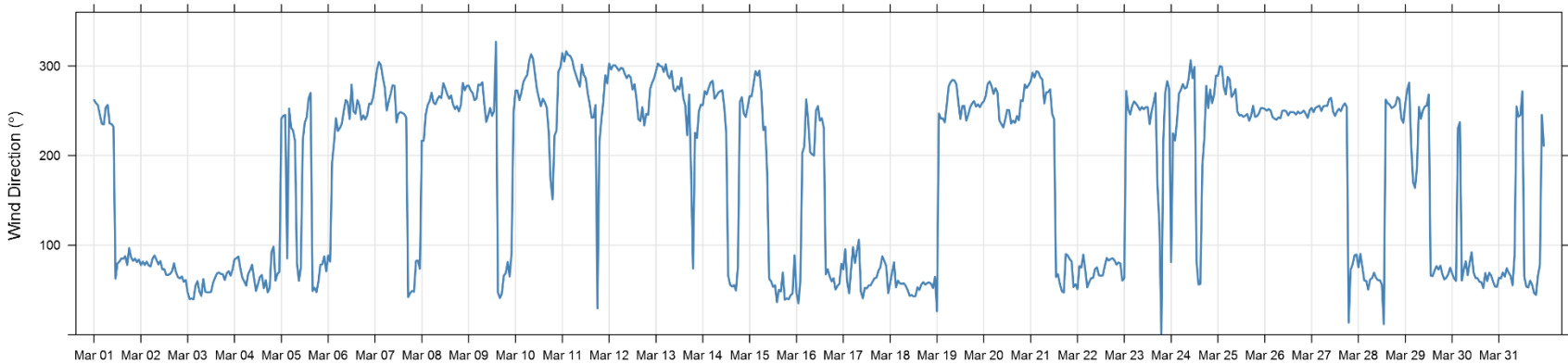
1-hour Wind Speed (km hr⁻¹) at Trailer



Lagoon Wind Direction (°) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	261.9	258.5	256.2	245.4	235.5	234.7	253.7	256.5	235.9	235.2	232.1	62.6	79.5	81.6	85.2	84.8	87.7	77.9	96.8	86.4	82.5	85.0	81.0	84.0	261.9	102.4
2	77.9	81.6	77.8	81.6	77.3	76.3	84.9	88.6	83.7	78.5	82.3	73.2	73.3	66.8	66.8	68.0	71.0	79.8	69.9	64.3	63.0	65.1	59.1	61.1	88.6	74.0
3	47.2	39.9	40.4	39.6	54.6	59.8	48.4	43.4	62.3	48.1	47.4	47.4	47.9	58.0	63.5	68.4	69.5	67.8	67.6	61.1	68.5	71.0	65.9	72.9	72.9	58.0
4	84.3	85.4	87.4	74.2	63.7	59.5	54.8	67.9	72.1	78.2	63.1	48.9	56.3	64.3	66.8	52.0	60.9	47.3	51.8	92.5	98.3	60.3	67.9	70.3	98.3	66.2
5	241.2	244.4	245.3	85.2	252.5	231.3	227.9	216.2	80.4	60.2	75.1	217.2	236.7	242.9	264.0	270.0	48.9	52.5	47.5	59.4	78.1	78.7	87.6	70.8	270.0	243.1
6	88.6	81.7	192.3	214.4	241.6	227.5	230.7	235.6	250.0	262.0	259.7	240.9	279.2	249.5	246.7	261.9	255.9	239.9	244.9	240.4	244.9	257.9	257.4	264.5	279.2	248.0
7	279.3	295.6	304.5	301.0	287.1	276.1	250.3	260.3	268.6	278.4	277.8	236.9	246.6	248.5	247.6	246.2	242.5	42.0	46.5	48.9	48.0	82.3	82.9	73.6	304.5	273.5
8	216.6	216.7	245.8	256.4	260.8	270.2	259.0	257.2	263.1	266.3	264.1	280.9	275.1	268.4	263.4	267.0	257.0	251.9	255.2	249.3	256.5	281.0	272.9	277.8	281.0	260.8
9	278.1	272.7	269.9	261.8	263.6	279.2	278.6	281.9	257.7	237.5	244.4	253.1	244.3	249.6	326.9	47.2	41.0	45.9	66.0	68.7	81.3	65.1	91.8	247.7	326.9	273.9
10	272.5	272.6	261.9	270.0	281.9	286.5	289.9	305.5	313.1	308.1	290.7	273.7	264.1	255.1	263.4	259.6	253.7	226.9	172.3	151.0	222.3	227.7	293.9	298.5	313.1	274.6
11	314.4	305.0	316.4	312.3	311.3	307.0	296.7	289.8	283.0	276.8	301.5	290.1	286.4	269.8	258.0	242.3	242.5	256.5	29.5	215.0	239.3	259.8	289.6	280.6	316.4	287.6
12	302.7	296.0	300.8	300.8	298.0	294.7	297.8	297.3	291.2	286.4	289.9	287.2	273.6	279.7	263.2	240.7	238.4	254.0	233.5	246.4	245.5	274.4	281.1	286.1	302.7	283.0
13	294.2	302.7	300.0	299.6	293.2	302.0	289.8	286.1	294.5	274.6	271.7	277.3	274.0	286.8	264.4	256.0	222.7	268.1	181.3	74.0	225.5	219.6	249.7	256.8	302.7	279.1
14	256.2	271.9	268.3	275.5	281.5	283.4	263.5	266.5	270.4	271.8	273.0	253.9	224.6	66.1	55.7	53.8	55.5	49.3	76.6	259.9	265.2	247.1	243.2	254.3	283.4	270.4
15	266.5	266.0	279.7	294.2	289.3	294.7	272.0	228.4	232.3	180.0	62.6	59.7	53.5	55.2	36.4	50.2	48.4	69.5	39.1	40.7	39.5	44.2	45.9	88.7	294.7	332.8
16	46.6	35.2	60.6	203.2	210.0	262.7	239.0	203.8	201.4	200.0	250.2	255.3	239.0	241.6	231.0	67.5	73.2	65.3	59.7	63.1	50.4	54.4	57.0	79.3	262.7	96.7
17	73.0	95.5	58.5	46.3	73.8	97.8	80.0	94.1	106.2	48.3	40.7	52.4	51.6	55.1	55.2	59.3	63.1	63.8	71.4	75.4	87.6	82.3	76.6	46.5	106.2	65.3
18	57.7	69.6	80.9	53.0	60.5	57.4	56.8	57.4	54.6	49.8	43.5	44.4	42.8	43.2	53.0	50.0	56.1	58.7	55.9	57.7	58.4	56.7	52.1	64.7	80.9	53.8
19	26.1	246.9	241.2	241.5	237.0	256.4	277.2	282.1	284.5	283.7	279.1	258.7	240.9	255.4	255.5	239.1	245.5	253.8	258.1	260.8	254.6	257.1	254.1	258.3	284.5	258.1
20	260.6	266.6	280.0	282.7	277.3	268.8	275.3	270.6	239.1	235.1	231.4	240.5	251.1	250.6	235.7	238.9	236.4	244.1	239.4	261.6	260.9	279.3	275.5	278.8	282.7	254.6
21	282.8	292.5	287.1	294.2	293.0	287.2	284.9	258.1	270.4	270.9	273.9	246.7	240.8	64.4	67.7	56.6	48.7	47.1	90.1	88.5	84.5	82.0	53.4	56.5	294.2	4.1
22	50.8	76.7	75.1	89.5	72.7	53.0	58.6	63.2	63.4	73.3	75.2	66.4	65.7	66.3	76.8	85.7	82.9	84.5	85.4	82.9	78.2	80.6	79.6	60.5	89.5	73.4
23	63.1	272.1	252.0	245.9	255.1	260.4	258.0	254.9	250.7	254.2	251.7	254.0	254.0	235.1	249.4	258.8	269.9	166.2	122.5	0.1	217.3	270.4	283.1	274.1	283.1	254.3
24	81.1	224.8	216.9	238.5	269.0	273.4	279.8	274.8	276.2	286.1	306.4	286.3	298.8	83.0	56.1	56.7	189.1	218.6	277.8	253.1	273.8	258.5	267.4	289.2	306.4	273.4
25	289.0	299.9	299.0	276.0	268.3	287.8	285.1	265.4	268.8	274.2	249.0	244.7	245.3	243.3	244.5	246.4	238.9	244.4	243.3	243.3	243.8	247.0	253.0	252.9	299.9	256.1
26	252.0	250.1	252.0	250.2	242.9	241.2	240.0	242.5	241.6	250.0	250.3	249.4	244.7	248.6	248.4	248.2	245.8	249.2	247.0	248.1	250.3	246.5	242.1	250.5	252.0	247.3
27	253.2	248.4	253.4	254.6	255.7	249.7	255.0	255.6	255.5	262.8	264.4	249.1	244.3	249.2	252.2	249.6	255.1	258.3	254.4	13.6	72.6	78.4	88.7	89.6	264.4	254.1
28	75.3	90.2	75.7	60.5	60.1	50.4	61.9	63.2	69.3	63.7	60.9	60.9	55.8	11.8	262.4	258.5	256.8	253.1	254.3	256.7	265.3	263.0	241.3	236.5	265.3	288.5
29	257.8	273.4	281.3	213.0	170.3	163.9	186.1	254.2	241.1	250.1	254.7	255.7	268.1	66.1	65.4	71.6	76.7	72.8	77.1	67.6	61.7	63.6	67.5	74.8	281.3	68.4
30	68.5	63.0	60.0	230.8	237.3	60.5	73.1	82.0	66.5	80.6	92.1	69.9	63.4	63.2	59.1	58.7	52.1	68.9	59.9	69.2	66.2	59.4	53.7	53.5	237.3	67.5
31	63.6	62.9	69.5	65.0	74.3	69.2	65.7	55.3	88.1	254.9	243.4	245.3	271.8	65.0	53.9	52.8	60.4	55.7	46.6	44.5	66.2	77.9	245.3	210.9	271.8	61.2
Hourly Max Hourly Average	314.4	305.0	316.4	312.3	311.3	307.0	297.8	305.5	313.1	308.1	306.4	290.1	298.8	286.8	326.9	270.0	269.9	268.1	277.8	261.6	273.8	281.0	293.9	298.5		
	176.9	198.7	202.9	205.1	211.3	207.2	205.6	205.1	201.1	202.6	200.1	193.0	197.1	163.4	171.8	153.8	149.9	143.0	133.3	130.5	150.0	154.1	163.2	169.8		

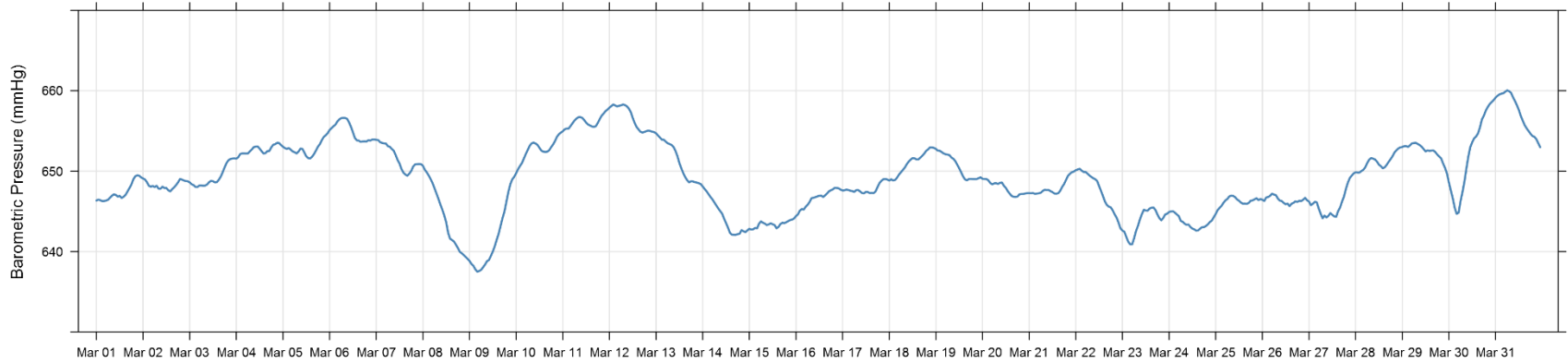
1-hour Wind Direction (°) at Trailer



Lagoon Pressure (mmHg) – March 2018

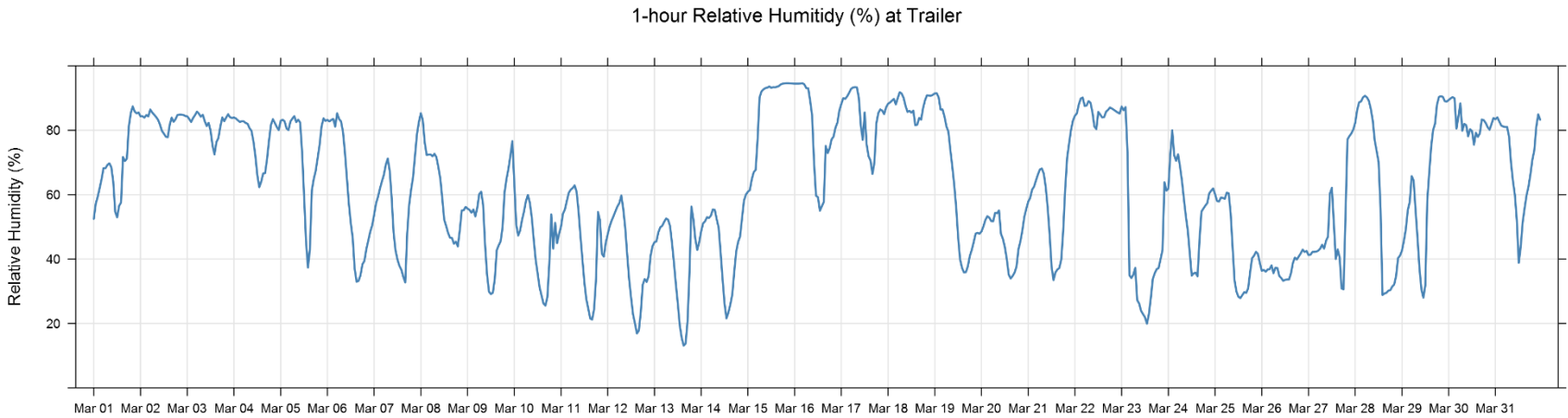
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	646.3	646.5	646.4	646.3	646.3	646.4	646.4	646.7	646.9	647.1	647.0	646.8	646.9	646.7	646.8	647.0	647.5	647.9	648.3	649.0	649.4	649.5	649.4	649.2	649.5	647.4
2	649.1	649.0	648.6	648.2	648.1	648.2	648.0	648.2	647.8	647.8	648.1	647.9	647.9	647.6	647.5	647.8	648.0	648.3	648.6	649.0	649.0	648.8	648.8	648.7	649.1	648.3
3	648.6	648.4	648.3	648.0	648.0	648.2	648.2	648.2	648.2	648.4	648.6	648.8	648.7	648.6	648.6	648.9	649.3	649.9	650.5	651.0	651.4	651.5	651.6	651.6	651.6	649.2
4	651.5	651.7	652.1	652.2	652.2	652.2	652.2	652.5	652.7	653.0	653.0	653.1	652.8	652.5	652.2	652.2	652.5	652.5	653.0	653.3	653.4	653.5	653.5	653.2	653.5	652.6
5	653.0	652.9	652.8	652.9	652.7	652.5	652.4	652.2	652.4	652.8	652.8	652.3	651.8	651.6	651.6	651.8	652.1	652.6	653.0	653.4	653.9	654.3	654.5	654.7	654.7	652.8
6	655.1	655.4	655.6	655.8	656.2	656.4	656.6	656.6	656.6	656.5	656.1	655.5	654.8	654.1	653.8	653.8	653.6	653.7	653.7	653.7	653.9	653.8	653.9	654.0	656.6	655.0
7	653.9	653.9	653.6	653.5	653.5	653.4	653.1	653.0	652.8	652.5	652.0	651.4	650.9	650.3	649.8	649.6	649.4	649.7	650.0	650.6	650.8	650.9	650.9	650.9	653.9	651.7
8	650.7	650.2	649.9	649.5	649.0	648.5	647.9	647.2	646.6	645.9	645.2	644.5	643.6	642.3	641.6	641.4	641.2	640.9	640.5	640.0	639.8	639.6	639.3	639.1	650.7	644.3
9	638.8	638.5	638.2	637.8	637.5	637.6	637.7	638.1	638.4	638.8	639.0	639.5	640.0	640.7	641.5	642.2	643.2	644.2	645.0	646.2	647.4	648.4	649.0	649.3	649.3	641.5
10	649.7	650.3	650.7	651.0	651.6	652.2	652.7	653.2	653.5	653.5	653.4	653.3	652.9	652.6	652.4	652.4	652.6	652.6	653.0	653.3	653.7	654.3	654.6	654.8	654.8	652.7
11	655.0	655.2	655.3	655.3	655.6	656.0	656.3	656.5	656.7	656.7	656.6	656.4	656.0	655.8	655.7	655.6	655.5	655.6	656.0	656.5	656.9	657.2	657.5	657.7	657.7	656.1
12	657.9	658.1	658.3	658.2	658.0	658.1	658.2	658.3	658.2	658.1	657.8	657.3	656.6	656.0	655.5	655.2	654.9	654.8	654.9	655.0	655.0	655.0	654.9	654.9	658.3	656.6
13	654.7	654.4	654.2	653.9	653.9	653.7	653.5	653.4	653.3	653.0	652.5	651.9	651.0	650.4	649.8	649.3	648.9	648.6	648.7	648.7	648.6	648.6	648.5	648.4	654.7	651.3
14	648.1	647.8	647.5	647.1	646.8	646.5	646.1	645.7	645.4	645.0	644.7	644.1	643.6	643.0	642.3	642.1	642.1	642.1	642.2	642.2	642.7	642.5	642.4	642.6	648.1	644.4
15	642.8	642.7	642.8	642.9	642.9	643.5	643.8	643.6	643.5	643.3	643.4	643.5	643.4	643.3	642.9	643.1	643.4	643.6	643.5	643.7	643.8	643.9	644.0	644.1	644.1	643.4
16	644.4	644.6	645.1	645.3	645.2	645.6	645.8	646.2	646.6	646.7	646.8	646.9	646.9	647.0	646.8	647.0	647.2	647.5	647.6	647.7	647.9	647.9	647.9	647.7	647.9	646.6
17	647.6	647.6	647.7	647.6	647.6	647.5	647.4	647.6	647.7	647.5	647.3	647.2	647.4	647.4	647.3	647.3	647.3	647.5	648.0	648.5	648.8	649.0	649.0	649.0	649.0	647.8
18	648.8	649.0	648.8	648.9	649.2	649.6	649.9	650.2	650.4	650.9	651.2	651.4	651.6	651.6	651.5	651.5	651.7	651.9	652.2	652.5	652.7	653.0	652.9	652.9	653.0	651.0
19	652.8	652.6	652.5	652.4	652.2	652.1	652.1	652.0	651.7	651.5	651.2	650.8	650.4	649.9	649.3	649.0	648.9	649.0	649.0	649.0	649.0	649.0	649.1	649.2	652.8	650.6
20	649.1	649.0	649.0	648.9	648.5	648.4	648.5	648.5	648.4	648.6	648.6	648.2	647.9	647.5	647.2	646.9	646.8	646.8	646.9	647.1	647.2	647.2	647.2	647.3	649.1	647.9
21	647.3	647.2	647.3	647.2	647.2	647.3	647.3	647.5	647.7	647.6	647.7	647.5	647.4	647.2	647.2	647.3	647.6	648.0	648.4	648.9	649.4	649.7	649.9	650.0	650.0	647.9
22	650.1	650.2	650.3	650.1	649.9	649.9	649.7	649.5	649.3	649.1	649.0	648.8	648.1	647.5	646.9	646.2	645.8	645.6	645.5	645.1	644.6	644.2	643.6	642.9	650.3	647.6
23	642.6	642.5	641.8	641.2	640.9	640.9	641.6	642.6	643.2	644.0	644.7	645.2	645.1	645.1	645.4	645.5	645.5	645.2	644.6	644.2	643.9	644.2	644.6	644.7	645.5	643.7
24	644.9	645.0	645.0	644.8	644.6	644.4	643.8	643.7	643.5	643.3	643.4	643.1	642.9	642.8	642.6	642.6	642.9	643.0	643.0	643.2	643.4	643.7	643.9	644.3	645.0	643.7
25	644.7	645.2	645.4	645.7	646.1	646.4	646.5	646.9	647.0	646.9	646.8	646.5	646.3	646.1	646.0	646.0	645.9	646.0	646.3	646.4	646.5	646.6	646.4	646.5	647.0	646.2
26	646.5	646.3	646.7	646.8	646.9	647.2	647.1	647.0	646.6	646.3	646.3	646.1	645.9	646.0	645.6	646.0	646.1	646.3	646.2	646.3	646.3	646.5	646.7	646.4	647.2	646.4
27	646.2	645.8	645.9	646.2	646.1	645.4	644.7	644.1	644.5	644.3	644.4	644.8	644.6	644.4	644.3	645.0	645.5	646.2	646.8	647.8	648.6	649.1	649.5	649.7	649.7	646.0
28	649.9	649.8	649.8	650.0	650.2	650.5	651.0	651.4	651.6	651.6	651.4	651.2	650.8	650.6	650.4	650.5	650.8	651.2	651.5	651.9	652.3	652.6	652.8	653.0	653.0	651.1
29	653.0	653.1	653.1	653.0	653.2	653.5	653.5	653.5	653.4	653.2	653.0	652.7	652.5	652.6	652.5	652.5	652.6	652.4	652.1	651.8	651.6	651.0	650.4	649.7	653.5	652.5
30	648.6	647.6	646.6	645.4	644.7	644.8	646.3	647.4	648.7	650.3	651.8	653.0	653.6	654.1	654.3	654.7	655.5	656.4	656.9	657.5	658.0	658.3	658.6	658.8	658.8	652.2
31	659.1	659.4	659.5	659.6	659.7	659.9	660.0	659.9	659.7	659.2	658.7	658.2	657.6	656.9	656.3	655.7	655.3	655.0	654.6	654.4	654.3	654.0	653.5	653.0	660.0	657.2
Hourly Max	659.1	659.4	659.5	659.6	659.7	659.9	660.0	659.9	659.7	659.2	658.7	658.2	657.6	656.9	656.3	655.7	655.5	656.4	656.9	657.5	658.0	658.3	658.6	658.8		
Hourly Average	649.4	649.3	649.3	649.2	649.2	649.2	649.3	649.4	649.4	649.5	649.4	649.3	649.1	648.8	648.6	648.6	648.7	648.9	649.1	649.3	649.5	649.6	649.6	649.6		

1-hour Barometric Pressures (mmHg) at Trailer



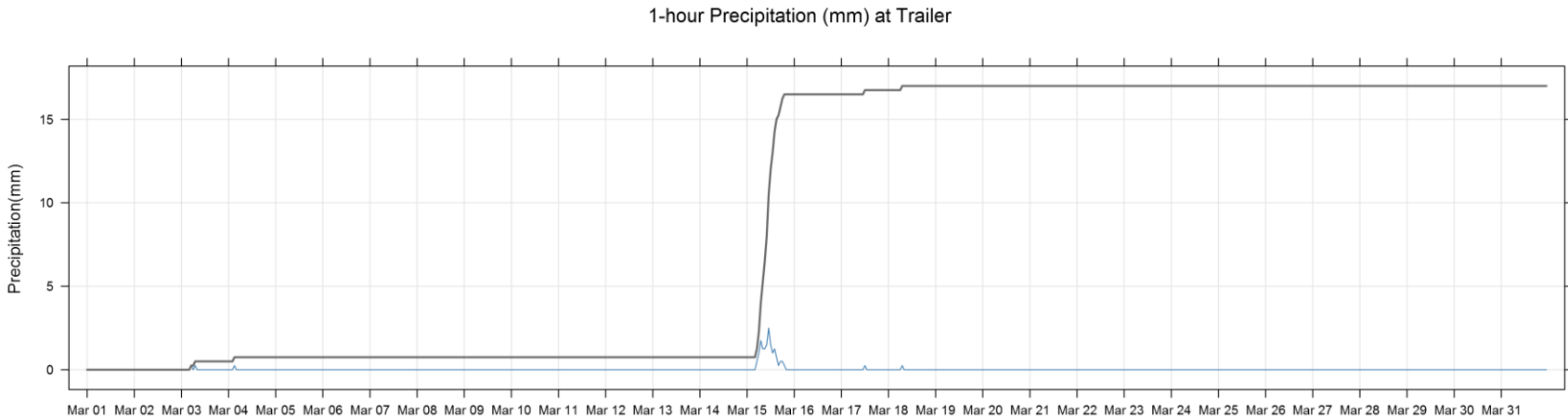
Lagoon Relative Humidity (%) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	52.5	57.2	59.3	62.0	64.8	68.2	68.2	69.2	69.7	68.5	64.0	54.7	52.9	56.5	57.5	71.7	70.4	71.2	81.2	85.3	87.4	85.8	85.2	85.5	87.4	68.7
2	84.3	84.4	83.9	84.7	84.3	86.4	85.5	84.8	84.1	83.2	81.7	79.8	78.9	78.0	77.8	81.7	83.9	82.6	83.5	84.8	84.8	84.8	84.8	84.4	86.4	83.2
3	84.3	83.5	82.6	83.8	84.7	85.8	85.1	84.2	84.8	82.8	81.3	82.3	79.8	75.2	72.5	76.3	77.6	81.1	84.0	82.8	83.9	85.0	84.0	83.8	85.8	82.1
4	84.0	83.7	83.1	82.6	82.8	82.8	82.2	82.0	80.7	79.8	76.6	72.0	66.1	62.3	64.0	66.6	66.7	71.1	76.8	81.7	83.4	82.2	81.0	80.0	84.0	77.2
5	82.9	83.3	82.8	80.6	80.0	82.7	83.6	84.4	82.5	83.3	82.4	73.2	59.8	45.8	37.4	42.9	61.3	64.9	67.4	71.4	75.5	81.2	83.7	82.9	84.4	73.2
6	83.2	82.7	83.2	83.5	81.1	85.3	83.5	82.8	79.5	73.2	65.2	57.3	51.3	46.5	37.0	33.0	33.2	35.0	38.4	39.4	43.1	45.7	48.5	50.4	85.3	60.1
7	53.8	57.3	59.4	61.9	64.1	66.1	69.3	71.2	67.4	59.1	48.2	42.7	39.8	37.9	36.7	34.5	32.7	48.0	56.8	61.5	65.4	72.1	78.7	82.6	82.6	57.0
8	85.3	83.2	76.2	72.3	72.5	72.5	71.9	72.7	71.6	68.5	65.0	58.9	52.2	50.3	48.1	46.6	46.5	44.8	45.4	43.9	48.9	55.1	55.1	56.2	85.3	61.0
9	55.6	55.3	54.4	55.4	53.2	55.9	60.2	60.9	56.8	44.4	35.3	29.9	29.1	29.6	33.9	42.7	44.3	45.5	49.9	60.7	64.9	68.0	72.1	76.6	76.6	51.4
10	63.9	50.7	47.3	48.9	52.2	54.8	58.1	59.9	57.5	52.9	46.0	39.7	35.5	31.2	28.7	26.2	25.5	28.2	38.6	53.9	43.2	51.2	45.0	47.8	63.9	45.3
11	50.1	54.1	55.4	58.0	60.6	61.6	62.1	62.9	60.9	55.0	47.1	39.9	32.8	27.6	24.6	21.6	21.2	24.4	33.9	54.6	52.1	41.6	40.8	45.1	62.9	45.3
12	47.7	50.2	51.9	53.4	54.9	56.4	57.4	59.7	55.5	49.6	41.4	33.8	28.0	22.9	20.0	16.9	17.8	23.6	32.0	33.8	32.9	34.7	41.0	44.0	59.7	40.0
13	45.2	45.5	48.3	49.9	50.3	51.6	52.6	52.2	50.3	45.1	39.0	32.3	26.2	19.5	15.6	13.1	13.8	20.6	35.8	56.3	52.4	46.2	42.8	45.3	56.3	39.6
14	48.6	51.1	51.7	53.0	52.8	53.5	55.4	55.3	52.3	49.7	41.9	33.8	26.2	21.6	23.4	25.9	29.0	36.1	42.3	45.3	47.0	52.7	58.2	60.0	60.0	44.5
15	60.9	61.4	64.7	67.0	67.7	77.3	90.2	92.1	92.7	93.1	93.2	93.6	93.2	93.4	93.3	93.5	93.8	94.3	94.5	94.6	94.6	94.6	94.6	94.5	94.6	86.8
16	94.4	94.4	94.5	94.5	94.6	94.2	93.1	93.0	89.1	84.5	69.9	59.7	59.2	55.0	56.4	57.7	75.1	72.9	74.4	77.2	78.0	80.8	82.4	86.1	94.6	79.6
17	88.2	90.0	89.7	90.5	91.6	92.8	93.3	93.4	93.3	90.0	81.5	77.0	85.5	75.6	71.9	70.6	66.4	70.0	82.1	85.3	86.4	86.1	85.0	87.1	93.4	84.3
18	88.2	88.6	89.2	89.7	88.0	90.0	91.8	91.4	90.0	87.5	85.7	86.0	85.4	86.1	81.5	81.7	83.8	83.3	86.9	89.3	90.8	90.7	90.7	91.0	91.8	87.8
19	91.4	91.5	90.2	86.4	86.4	84.2	81.2	79.6	73.9	68.8	63.1	56.0	46.9	39.9	37.3	35.8	36.0	37.7	40.9	42.8	45.2	47.9	48.1	47.9	91.5	60.8
20	48.6	50.1	52.1	53.3	52.9	51.8	51.7	54.3	54.2	55.1	47.8	46.3	43.7	40.0	35.2	33.9	34.8	35.8	37.7	43.1	45.5	48.9	53.1	55.6	55.6	46.9
21	57.8	59.0	61.5	62.5	64.4	66.3	67.8	68.1	66.5	62.4	56.1	47.7	37.7	33.5	35.8	36.8	37.2	39.9	49.0	61.8	71.4	75.9	80.1	83.0	83.0	57.6
22	84.5	85.2	88.0	89.8	90.1	87.5	87.7	89.1	88.5	85.6	81.2	80.3	85.7	84.9	84.0	84.1	85.7	86.3	87.1	86.7	86.3	85.9	85.5	85.2	90.1	86.0
23	87.4	86.2	87.2	73.2	35.0	34.1	35.1	37.3	27.3	26.2	23.9	22.9	21.9	19.9	22.9	28.0	33.8	35.6	36.8	37.2	40.0	42.8	63.8	61.2	87.4	42.5
24	61.9	72.5	80.0	72.2	70.5	72.5	68.7	64.2	58.5	53.3	48.8	41.8	34.9	35.6	35.8	34.7	45.8	54.7	55.7	56.6	57.4	60.4	61.2	61.9	80.0	56.6
25	60.1	58.0	57.8	59.1	59.0	58.7	60.6	60.4	54.2	43.7	33.4	29.9	28.3	27.9	28.8	29.7	29.5	30.9	35.9	40.3	41.0	42.2	41.6	38.7	60.6	43.7
26	36.3	36.6	36.1	36.7	36.9	38.0	35.6	37.3	37.2	34.7	34.1	33.2	33.6	33.6	33.7	35.6	38.8	40.4	39.9	40.8	41.8	42.9	42.2	42.5	42.9	37.4
27	41.3	41.3	42.2	42.2	42.3	42.6	43.2	44.4	43.3	45.7	47.0	60.3	62.1	51.3	40.0	43.0	40.5	30.9	30.6	53.4	77.1	78.2	79.0	80.2	80.2	50.1
28	82.4	86.3	88.7	89.0	90.2	90.7	90.2	89.1	86.6	83.0	76.9	73.5	70.2	55.5	28.9	29.3	29.5	30.2	30.3	31.5	32.1	34.8	40.3	41.1	90.7	61.7
29	42.6	45.7	49.3	55.2	57.7	65.8	64.4	55.1	46.4	37.1	30.6	28.0	31.8	58.1	66.7	74.8	80.0	82.0	88.0	90.3	90.6	90.4	89.0	88.9	90.6	62.9
30	89.4	89.9	90.3	89.9	80.5	84.2	88.4	79.9	82.0	81.6	78.1	80.3	79.7	75.5	79.2	77.9	79.0	83.3	83.1	82.3	81.0	80.2	81.9	83.8	90.3	82.6
31	83.4	84.0	82.7	81.5	81.2	81.0	81.0	78.1	70.1	64.3	59.9	52.1	38.8	43.7	51.3	55.8	59.8	62.5	66.3	70.8	73.8	81.0	84.9	83.3	84.9	69.6
Hourly Max	94.4	94.4	94.5	94.5	94.6	94.2	93.3	93.4	93.3	93.1	93.2	93.6	93.2	93.4	93.3	93.5	93.8	94.3	94.5	94.6	94.6	94.6	94.6	94.5		
Hourly Average	68.4	69.1	69.8	69.8	68.6	70.2	70.9	70.6	68.0	64.2	58.9	54.8	51.5	48.6	46.7	48.5	50.8	53.2	57.6	62.6	64.5	66.1	67.9	68.9		



Lagoon Precipitation (mm) – March 2018

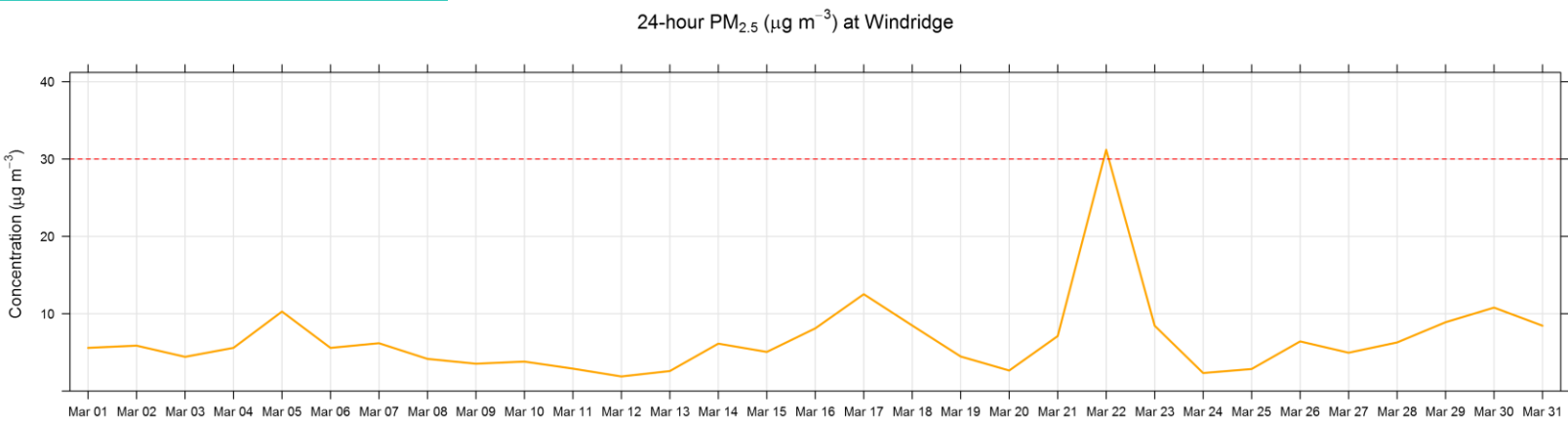
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Total
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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	0.0	0.0	0.3	0.5
4	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	0.3	0.3
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.8	1.3	1.3	1.5	2.5	1.5	1.0	1.3	0.8	0.3	0.5	0.5	0.3	0.0	0.0	0.0	0.0	2.5	15.8
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	0.3	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
18	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	0.3	0.3
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hourly Max	0.0	0.0	0.0	0.3	0.0	0.5	1.0	1.8	1.3	1.3	1.5	2.5	1.5	1.0	1.3	0.8	0.3	0.5	0.5	0.3	0.0	0.0	0.0	0.0		
Hourly Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		



Windridge PM_{2.5} (µg/m³) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	0.0	0.0	0.2	0.4	0.7	1.8	2.7	5.9	4.8	4.4	4.0	5.8	11.4	5.5	1.1	4.4	10.6	11.7	9.5	10.6	8.1	11.0	10.6	8.8	11.7	5.6
2	8.1	7.3	8.4	6.6	5.1	6.2	7.7	6.6	6.3	4.4	4.8	5.5	6.6	6.3	7.3	7.3	5.9	4.4	6.2	4.4	2.6	4.8	4.8	3.3	8.4	5.9
3	4.8	6.2	5.1	2.9	7.7	5.9	4.8	6.2	5.1	4.8	4.8	5.1	3.3	1.5	0.7	2.9	6.6	5.1	5.9	6.3	3.7	1.8	1.5	3.3	7.7	4.4
4	4.4	4.8	5.1	4.4	6.6	5.2	7.2	5.2	4.0	5.1	6.2	5.5	4.0	4.0	3.3	4.8	6.2	7.0	4.8	4.8	7.0	9.9	7.7	7.0	9.9	5.6
5	16.1	11.4	7.7	9.5	13.2	12.8	10.3	7.0	10.3	16.9	13.9	21.3	15.4	10.6	5.1	1.1	2.6	5.9	8.1	7.0	8.1	10.6	11.0	11.0	21.3	10.3
6	14.7	8.1	8.8	6.6	2.2	1.8	2.9	2.6	4.0	6.6	9.2	12.5	9.5	5.7	C	C	C	5.5	2.9	2.2	3.3	2.2	2.2	3.7	14.7	5.6
7	4.4	3.3	1.1	2.2	3.7	2.9	1.5	1.1	1.8	4.8	4.4	2.9	3.3	1.8	12.1	7.3	2.2	0.4	5.1	11.4	16.1	18.0	18.3	18.3	18.3	6.2
8	12.5	11.4	6.2	6.2	5.5	3.7	2.2	1.1	4.8	4.8	2.2	1.5	2.2	2.2	2.6	2.6	0.4	1.8	3.3	4.8	5.1	5.5	4.4	2.9	12.5	4.2
9	1.5	0.4	3.7	2.2	0.0	1.5	2.6	1.8	1.8	2.6	1.1	0.7	9.2	7.0	4.0	4.0	4.6	5.1	3.7	3.9	5.9	4.4	6.2	7.0	9.2	3.5
10	8.4	5.9	2.9	1.8	4.0	4.4	2.9	2.2	1.5	2.9	2.2	2.9	5.1	6.6	3.7	4.0	2.6	3.0	2.6	0.0	5.9	5.9	5.1	4.8	8.4	3.8
11	3.3	1.8	2.8	4.0	2.6	0.4	2.9	2.6	4.0	3.3	0.0	2.9	3.3	1.5	4.4	5.9	4.0	1.8	3.7	2.2	5.5	5.1	1.1	0.4	5.9	2.9
12	1.5	2.6	3.9	3.3	3.7	1.8	0.4	0.9	4.4	3.3	0.0	0.0	1.5	0.7	0.0	2.2	2.2	2.9	2.6	0.0	0.0	0.0	2.9	4.4	4.4	1.9
13	3.7	1.8	2.2	2.6	1.1	0.0	1.8	2.6	2.2	1.8	2.2	2.9	3.7	3.7	2.6	1.5	7.0	5.9	2.2	1.1	0.4	1.1	3.3	4.8	7.0	2.6
14	4.8	3.3	4.0	2.9	2.9	5.1	4.8	4.4	2.2	1.8	3.3	3.7	0.7	0.2	9.2	6.6	7.3	16.9	21.6	23.1	3.7	3.7	3.7	7.3	23.1	6.1
15	6.6	4.8	5.1	2.6	0.0	2.9	4.4	6.6	5.9	4.4	2.2	2.9	4.8	7.3	5.5	E	E	9.9	7.0	5.9	E	E	6.6	5.9	9.9	5.1
16	8.4	12.5	12.1	10.6	11.7	10.3	7.3	4.8	3.3	4.4	1.8	0.0	1.5	4.0	3.7	5.1	3.7	4.8	8.8	11.0	10.3	16.9	16.9	20.9	20.9	8.1
17	24.9	13.6	24.5	24.2	23.8	19.1	25.5	13.9	17.2	18.3	9.2	5.9	4.0	3.3	2.6	2.9	0.0	2.2	3.7	9.9	14.7	13.9	12.5	11.0	25.5	12.5
18	12.1	11.7	16.9	14.3	16.9	9.9	5.1	5.1	7.0	9.2	10.5	8.1	6.4	7.2	5.5	3.7	5.1	4.8	5.5	4.4	8.8	11.0	8.8	5.5	16.9	8.5
19	6.6	5.9	5.1	4.4	3.7	5.1	4.8	3.7	2.2	6.6	7.3	4.4	1.1	2.6	2.6	5.5	5.5	3.7	3.3	5.5	5.1	4.4	3.7	4.4	7.3	4.5
20	3.3	2.8	1.8	0.7	0.0	0.0	2.2	2.6	1.8	2.2	2.2	2.9	2.6	4.4	4.0	1.8	1.1	1.8	3.3	5.1	5.2	2.9	4.8	4.0	5.2	2.7
21	2.9	4.4	2.9	0.7	1.8	4.8	4.8	3.3	2.9	3.3	7.0	5.5	4.8	7.0	3.7	1.5	1.7	0.4	3.3	12.5	13.6	24.5	25.6	27.8	27.8	7.1
22	22.4	26.4	23.5	26.4	30.0	34.4	51.3	43.6	45.8	38.8	42.5	33.3	42.5	39.6	38.5	32.2	30.0	23.4	22.3	22.0	18.0	20.9	20.9	20.2	51.3	31.2
23	22.0	22.4	30.4	25.6	17.2	12.1	10.8	8.1	5.1	5.9	4.8	5.1	4.0	3.7	1.5	1.5	1.5	0.7	1.1	2.9	5.9	3.9	3.3	3.3	30.4	8.5
24	4.8	5.1	3.3	0.4	0.0	0.2	0.7	1.1	2.2	4.4	3.3	2.6	1.5	0.4	1.1	0.0	1.5	4.8	3.7	2.6	2.6	4.8	3.3	1.8	5.1	2.3
25	0.7	1.4	2.9	3.7	1.5	1.1	4.4	3.9	4.0	4.8	5.1	4.4	1.5	2.2	2.6	0.0	4.0	4.4	3.3	1.5	0.4	2.9	4.4	3.3	5.1	2.9
26	3.7	2.2	3.3	7.7	5.1	2.2	7.0	5.9	4.8	5.1	8.8	8.8	4.0	9.5	10.6	7.6	6.2	8.4	7.7	7.5	8.1	5.8	6.2	7.7	10.6	6.4
27	5.5	4.0	7.7	5.5	2.6	7.9	6.6	5.1	8.4	7.3	6.6	4.0	0.7	0.4	2.2	7.7	6.6	5.9	3.7	1.5	2.9	7.0	5.1	4.0	8.4	5.0
28	3.7	4.0	2.2	6.2	12.8	16.1	9.5	4.8	7.9	10.3	9.2	5.8	4.8	2.6	4.8	4.4	6.6	4.8	4.0	6.6	6.2	8.1	5.1	0.4	16.1	6.3
29	1.1	4.8	3.3	1.1	1.5	3.7	4.8	3.9	2.9	2.9	2.6	3.3	3.3	1.5	9.9	14.3	18.0	16.9	13.9	21.3	20.9	24.2	21.3	12.5	24.2	8.9
30	13.2	16.5	22.3	16.9	21.6	6.6	16.5	18.0	9.5	13.6	11.4	9.5	7.2	7.3	8.8	7.7	4.8	4.4	10.3	7.0	8.4	8.1	5.7	3.7	22.3	10.8
31	4.4	4.8	3.7	4.4	4.0	3.8	3.3	4.4	6.5	4.8	11.3	10.6	9.5	20.5	25.0	13.9	9.5	5.9	4.0	7.0	7.7	8.1	14.3	11.4	25.0	8.5
Hourly Max	24.9	26.4	30.4	26.4	30.0	34.4	51.3	43.6	45.8	38.8	42.5	33.3	42.5	39.6	38.5	32.2	30.0	23.4	22.3	23.1	20.9	24.5	25.6	27.8		
Hourly Average	7.7	7.0	7.7	6.9	7.0	6.3	7.3	6.1	6.3	7.0	6.4	6.0	5.8	5.3	5.6	5.4	5.7	6.0	6.2	7.0	7.1	8.4	7.9	7.4		

C = CALIBRATION E = INSTRUMENT ERROR

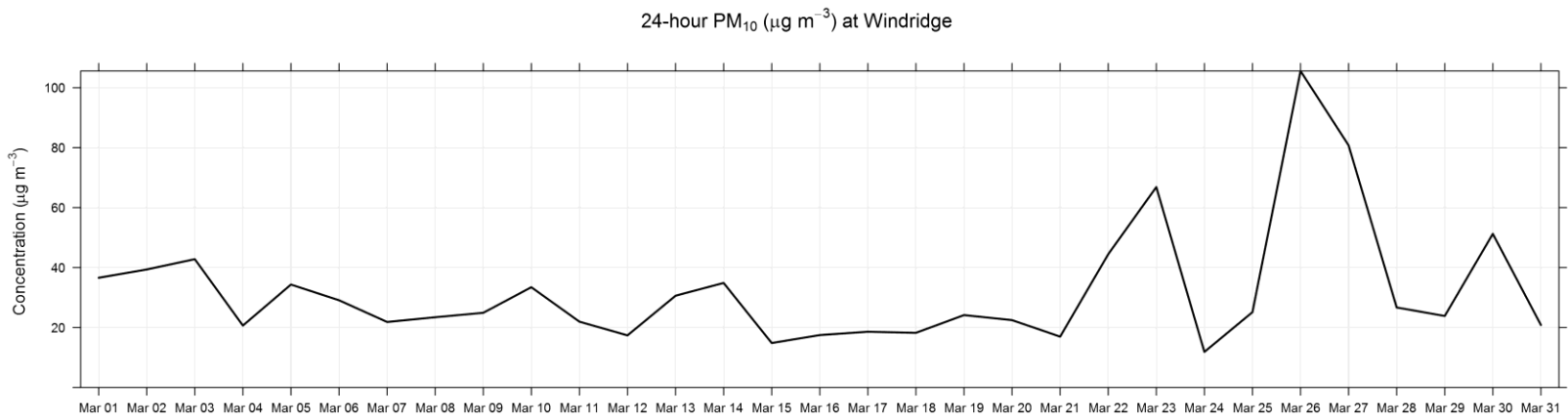


Number of 1HR Exceedances	0	Guideline	80	UG/M3
Number of 24HR Exceedances	1	Objective	30	UG/M3
Number of Non-Zero Readings	724			
Maximum 1-HR Average	51.3	UG/M3		
Maximum 24-HR Average	31.2	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	740 HRS
Monthly Calibration Time	3	HRS	Operational Uptime	99.5 %
Standard Deviation	6.9		Monthly Average	6.7 UG/M3

Windridge PM₁₀ (µg/m³) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	3.3	10.4	9.7	9.0	6.9	11.1	16.7	18.2	16.7	35.2	54.8	59.0	89.8	21.7	21.0	24.5	52.7	39.3	95.7	66.1	97.8	68.2	27.5	23.1	97.8	36.6
2	19.6	20.3	24.5	16.7	13.2	18.1	27.3	40.7	30.3	53.4	80.9	86.5	43.5	32.2	42.8	54.1	85.1	99.2	29.4	35.8	27.3	26.6	21.7	15.3	99.2	39.4
3	25.2	17.4	23.8	40.0	48.5	34.4	31.7	40.7	50.6	44.2	44.2	45.6	61.9	52.0	25.2	34.4	37.2	60.5	45.6	61.9	58.3	68.9	44.2	30.8	68.9	42.8
4	27.3	48.5	47.8	42.8	21.7	14.6	19.6	16.0	13.2	11.8	20.0	13.2	13.2	25.2	16.7	18.8	19.6	14.6	9.4	9.0	17.4	19.6	12.5	23.1	48.5	20.7
5	28.7	23.1	39.3	34.4	37.2	40.0	24.5	11.8	16.0	39.8	28.7	40.7	72.4	42.8	61.9	73.8	52.0	16.7	15.3	13.5	18.2	28.0	25.9	39.3	73.8	34.3
6	31.6	19.0	21.0	10.4	7.0	4.2	29.0	16.7	43.5	41.4	30.8	80.2	70.3	11.6	C	C	C	C	21.0	21.0	61.9	11.8	30.1	19.6	80.2	29.1
7	21.0	10.4	10.4	7.9	5.5	3.3	2.6	4.0	17.4	25.2	23.8	25.9	14.6	16.0	99.9	26.5	21.0	22.4	23.8	16.0	27.3	32.3	25.2	42.1	99.9	21.9
8	31.6	27.3	9.7	11.0	12.5	17.4	12.5	18.9	13.2	24.5	18.1	12.5	10.4	23.8	75.3	34.4	37.9	23.8	30.8	35.1	42.1	28.0	5.4	6.2	75.3	23.4
9	4.0	3.3	9.7	16.0	13.9	11.1	6.9	4.0	7.0	31.0	41.4	38.6	133.4	34.4	52.0	30.5	11.1	13.9	13.9	47.8	21.7	14.6	24.6	13.2	133.4	24.9
10	34.4	11.1	19.6	42.1	36.5	25.9	18.9	11.8	10.4	21.7	10.4	107.0	97.8	67.4	43.5	59.7	41.4	41.4	31.5	13.9	11.8	19.6	17.4	7.6	107.0	33.4
11	7.6	4.0	7.6	6.9	9.0	10.4	6.1	4.0	9.7	27.3	23.1	18.9	56.9	44.2	90.2	64.7	41.5	48.2	8.3	6.9	6.2	8.3	8.3	9.0	90.2	22.0
12	7.6	5.4	8.5	6.9	8.3	8.3	8.3	11.1	11.8	11.8	16.7	18.8	21.7	32.2	74.6	71.7	13.9	16.0	14.6	9.6	7.6	6.2	13.9	11.8	74.6	17.4
13	15.3	10.2	13.9	16.0	14.6	16.0	11.8	13.9	15.3	24.5	45.6	103.5	73.2	61.9	42.1	40.7	101.3	37.9	7.6	10.4	12.5	22.4	9.0	15.3	103.5	30.6
14	15.3	10.4	14.6	9.0	14.6	10.4	8.8	15.3	26.6	35.1	42.8	69.6	28.0	50.6	47.8	40.0	25.9	68.2	41.2	50.6	59.7	34.4	65.3	52.7	69.6	34.9
15	57.7	36.5	35.8	13.9	7.6	5.4	10.4	13.9	9.0	13.9	11.1	9.0	9.7	10.4	11.3	E	E	13.7	7.6	10.4	E	E	1.9	7.6	57.7	14.8
16	13.9	23.8	13.9	9.0	16.0	20.9	16.7	12.5	10.4	19.6	10.4	16.0	35.9	13.2	18.0	11.1	14.6	13.9	16.0	17.4	8.3	25.9	33.0	29.4	35.9	17.5
17	38.6	20.3	36.5	36.5	35.1	25.9	31.5	24.5	25.9	28.0	11.1	6.9	13.2	9.7	6.2	4.6	3.3	4.0	11.8	11.1	20.3	16.7	12.4	12.4	38.6	18.6
18	20.3	11.8	18.9	18.1	23.8	17.4	14.6	11.8	21.0	14.9	25.2	33.4	39.3	23.8	20.3	16.0	11.1	11.1	15.3	12.5	16.7	19.6	9.7	11.1	39.3	18.2
19	9.7	11.0	21.0	3.2	4.0	9.7	7.0	11.8	10.4	23.8	22.4	12.5	33.0	27.3	31.5	33.7	41.4	52.8	56.2	21.3	13.2	28.7	48.5	45.6	56.2	24.1
20	25.2	34.4	17.1	9.0	6.2	9.0	11.1	23.8	28.0	37.9	35.8	17.9	33.5	37.0	42.1	16.0	30.6	21.0	35.1	25.9	11.8	12.5	9.7	9.0	42.1	22.5
21	13.2	8.6	6.1	9.0	7.6	6.2	5.4	9.0	10.4	12.5	26.6	16.9	29.4	16.7	11.1	12.5	16.7	16.0	11.8	31.5	28.7	33.7	32.4	35.1	35.1	17.0
22	32.3	48.5	30.1	27.3	40.1	46.4	59.0	51.3	68.9	55.5	55.5	50.6	66.8	60.4	49.2	38.6	44.9	42.8	43.5	48.1	35.1	24.4	26.6	21.0	68.9	44.5
23	26.6	32.3	49.9	44.2	70.3	210.7	379.2	188.7	108.4	130.3	66.8	45.6	41.4	37.2	14.6	18.8	24.5	19.6	9.7	10.0	18.9	9.0	33.7	14.6	379.2	66.9
24	14.6	9.0	18.1	13.9	7.6	4.0	5.5	9.7	11.1	36.5	20.3	17.4	16.0	16.7	12.2	8.3	7.6	10.9	11.1	7.6	6.2	6.2	6.9	7.6	36.5	11.9
25	11.1	12.5	8.3	6.2	11.1	7.6	4.7	4.7	4.0	9.0	23.8	40.7	25.2	31.5	20.8	20.3	26.6	20.3	25.9	30.8	44.3	49.2	85.1	79.5	85.1	25.1
26	70.3	60.5	111.2	84.4	57.6	58.3	47.8	56.9	61.9	80.9	272.0	211.3	157.0	182.4	164.8	154.2	97.8	84.4	96.4	83.0	82.7	131.0	90.2	36.8	272.0	105.6
27	135.8	113.3	235.3	106.3	78.1	121.8	140.8	166.9	138.1	64.7	61.2	54.1	29.4	29.8	71.7	87.2	62.6	82.3	55.5	39.3	25.2	11.1	13.2	14.6	235.3	80.8
28	9.7	7.6	13.9	16.0	20.3	21.0	9.0	15.3	13.2	20.3	18.8	18.8	11.1	9.0	31.5	56.9	79.5	44.2	52.0	35.8	39.3	37.2	35.8	24.5	79.5	26.7
29	21.7	18.9	8.3	6.9	7.6	7.6	6.2	13.9	18.1	71.7	36.5	42.8	28.7	26.6	26.5	42.9	29.0	26.6	20.3	16.7	26.6	25.2	25.9	17.4	71.7	23.9
30	12.2	20.3	29.4	25.2	37.2	14.6	25.9	45.6	62.6	110.5	95.7	62.8	95.0	113.3	40.1	60.5	55.5	99.9	80.9	43.5	44.3	13.9	13.2	28.0	113.3	51.3
31	26.2	32.3	29.4	31.6	20.3	30.8	11.8	16.7	9.3	13.2	37.9	23.1	13.2	28.0	27.7	16.7	17.4	18.8	16.7	13.2	11.4	13.9	19.6	21.0	37.9	20.8
Hourly Max	135.8	113.3	235.3	106.3	78.1	210.7	379.2	188.7	138.1	130.3	272.0	211.3	157.0	182.4	164.8	154.2	101.3	99.9	96.4	83.0	97.8	131.0	90.2	79.5		
Hourly Average	26.2	23.0	30.5	23.3	22.6	27.1	33.3	29.6	29.4	38.6	42.5	45.9	48.4	38.7	43.6	41.3	38.8	36.7	31.2	28.1	30.7	28.7	27.0	23.4		

C = CALIBRATION E = INSTRUMENT ERROR

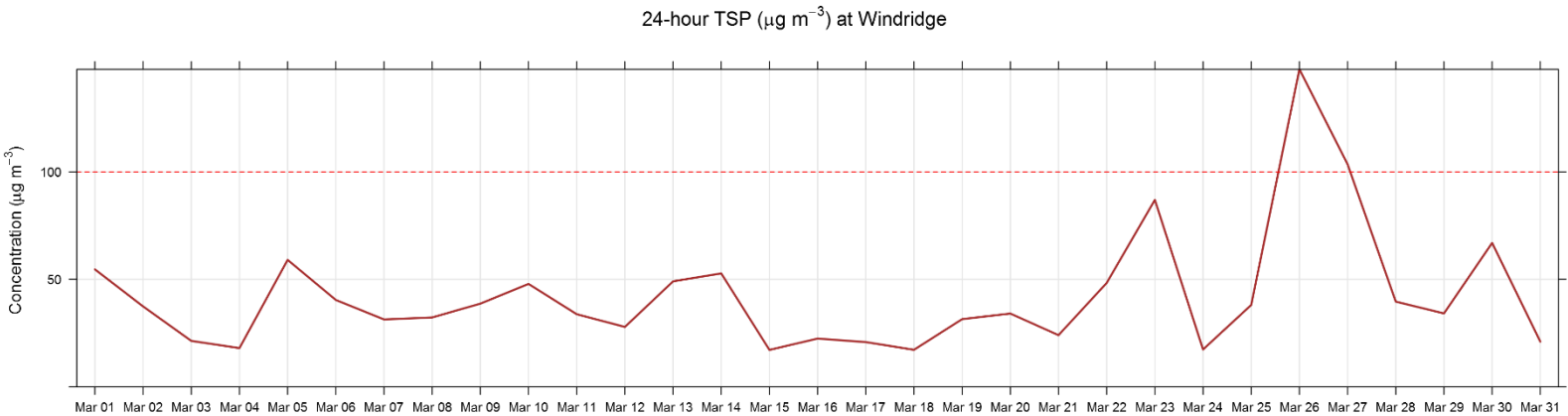


Number of 1HR Exceedances	n/a	Objective	n/a	UG/M3
Number of Non-Zero Readings	736			
Maximum 1-HR Average	379.2	UG/M3		
Maximum 24-HR Average	105.6	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	740 HRS
Monthly Calibration Time	4	HRS	Operational Uptime	99.5 %
Standard Deviation	33.8		Monthly Average	32.4 UG/M3

Windridge TSP (µg/m³) – March 2018

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	6.2	11.2	8.8	13.2	9.7	12.5	24.5	29.5	27.3	70.3	88.6	115.6	174.0	32.2	29.4	34.4	75.3	53.4	159.8	114.1	103.3	57.3	27.3	33.5	174.0	54.6
2	32.3	23.8	25.2	18.1	17.4	27.3	38.6	45.6	42.7	56.9	64.7	57.6	36.5	33.7	32.2	25.9	85.1	90.8	24.0	26.6	24.5	29.4	23.8	14.6	90.8	37.4
3	16.0	7.6	21.0	12.5	17.4	11.8	16.7	12.5	17.6	18.1	21.7	16.0	33.0	25.9	17.4	25.2	33.0	42.1	25.0	24.5	28.0	30.8	18.2	20.3	42.1	21.3
4	25.2	30.8	28.0	21.0	12.5	19.6	12.5	11.1	9.7	21.7	22.4	9.7	10.4	16.5	13.2	13.9	21.0	17.6	11.6	9.0	21.0	23.1	21.7	28.7	30.8	18.0
5	37.1	28.0	60.5	59.1	59.8	65.4	41.3	21.7	28.0	71.8	49.2	60.5	135.9	65.4	143.6	157.0	123.2	32.1	23.8	8.3	20.3	41.4	30.8	53.4	157.0	59.1
6	39.3	36.5	30.1	15.3	8.8	6.9	43.8	18.9	56.2	54.1	42.1	118.3	106.3	24.5	C	C	C	C	38.6	40.0	28.0	14.6	52.7	33.0	118.3	40.4
7	24.5	13.2	8.3	6.2	6.2	10.4	6.2	8.3	21.0	37.2	28.7	39.3	23.8	31.5	127.4	37.9	35.1	40.7	35.8	20.3	30.1	37.9	37.2	85.1	127.4	31.3
8	46.4	36.5	10.4	11.8	16.3	21.7	9.0	23.8	25.9	25.2	27.8	13.2	12.5	43.5	104.9	55.5	48.5	29.4	36.5	64.0	67.5	25.9	6.9	11.1	104.9	32.2
9	6.9	3.3	4.0	25.9	22.4	14.6	7.6	3.3	13.9	37.2	47.1	61.2	200.1	40.7	71.7	50.8	28.7	39.7	23.8	102.8	38.6	25.9	41.4	16.7	200.1	38.7
10	39.3	16.0	29.2	66.1	60.5	43.5	28.0	18.2	14.6	10.4	11.8	122.5	137.3	102.0	58.3	87.1	66.1	71.7	61.2	19.6	16.0	30.8	28.0	10.4	137.3	47.9
11	11.1	12.5	16.0	11.8	16.0	11.2	9.0	9.0	13.2	31.5	35.8	21.3	107.7	76.0	144.3	102.0	54.8	64.7	6.7	7.6	11.8	6.2	18.1	12.2	144.3	33.8
12	10.4	12.5	9.0	10.4	13.9	9.0	13.9	13.2	13.2	18.1	23.8	21.7	29.4	68.2	128.8	122.5	24.5	36.5	25.9	8.3	11.8	10.4	16.7	16.0	128.8	27.8
13	21.0	16.7	13.9	10.4	15.3	18.1	18.9	13.9	27.3	30.8	80.2	171.9	127.4	96.4	78.1	79.5	174.1	69.6	18.1	7.6	15.3	31.5	24.5	16.7	174.1	49.1
14	25.9	19.6	24.5	8.3	17.4	12.5	9.7	20.3	33.0	48.5	64.0	99.9	50.8	77.4	87.9	71.0	54.1	103.5	48.5	70.3	101.3	60.4	91.5	66.1	103.5	52.8
15	75.3	40.7	43.5	23.1	10.4	13.2	11.1	9.0	8.5	8.3	13.3	8.3	6.2	13.2	13.9	E	E	9.7	6.5	6.2	E	E	11.1	11.8	75.3	17.2
16	18.1	24.5	16.7	11.1	17.4	26.6	21.0	14.6	10.4	26.6	11.1	28.7	51.3	19.6	30.8	20.2	20.3	18.1	22.3	23.1	13.9	23.8	33.0	35.1	51.3	22.4
17	47.1	28.0	40.7	40.7	33.0	30.8	31.5	27.3	25.9	27.3	9.7	9.0	15.3	11.1	8.3	11.1	9.0	6.2	13.9	16.0	16.1	15.3	12.5	13.2	47.1	20.8
18	16.7	15.3	24.5	18.7	21.0	11.1	22.4	23.1	24.5	21.7	16.1	15.3	17.4	18.8	21.0	16.0	14.6	12.5	9.0	11.1	17.4	18.9	15.3	10.4	24.5	17.2
19	12.5	10.4	21.7	10.4	10.4	10.4	13.2	12.5	10.4	32.3	25.9	16.0	39.4	32.2	36.5	53.4	49.9	66.8	78.8	25.2	14.6	46.6	62.6	63.3	78.8	31.5
20	44.2	61.2	30.1	7.6	5.9	11.8	22.4	40.7	49.9	58.3	49.2	32.2	40.0	54.1	56.9	26.6	55.5	31.5	46.3	31.5	8.3	16.7	23.1	13.9	61.2	34.1
21	15.3	9.0	6.9	5.7	5.9	9.7	9.0	6.9	13.2	21.0	33.0	25.2	49.2	28.7	22.4	28.7	28.7	34.4	17.4	49.2	36.5	39.6	37.9	42.8	49.2	24.0
22	37.9	46.4	30.8	32.3	47.8	57.0	69.6	56.9	70.3	60.5	61.2	52.8	76.0	76.0	45.6	35.8	44.9	36.5	42.8	56.2	50.6	24.5	21.3	26.1	76.0	48.3
23	30.8	35.3	56.9	40.7	119.6	284.0	413.0	209.9	144.4	201.5	112.6	75.3	54.0	50.6	23.1	18.1	35.5	33.3	10.4	16.0	23.1	28.0	48.5	23.1	413.0	87.0
24	28.7	9.7	16.7	12.5	7.6	6.2	8.3	9.7	18.1	59.3	29.4	21.7	23.8	26.6	25.2	16.7	21.2	16.7	17.4	6.2	4.0	8.3	10.4	11.8	59.3	17.3
25	11.8	15.3	9.7	10.4	11.1	8.5	5.9	9.0	8.3	11.8	42.8	77.4	48.5	49.9	33.0	27.8	40.0	34.4	35.5	46.3	79.5	66.1	124.6	106.3	124.6	38.1
26	92.2	82.3	181.7	121.1	88.7	75.3	56.9	71.0	84.4	123.2	336.8	319.2	233.2	254.9	212.0	199.3	132.4	109.8	140.1	128.1	121.1	189.3	126.7	67.5	336.8	147.8
27	172.3	169.0	251.5	148.6	104.9	164.1	174.0	207.8	178.9	85.1	90.8	73.1	37.9	44.2	102.0	107.7	76.0	102.0	68.2	56.2	31.5	14.6	13.9	11.1	251.5	103.6
28	9.0	14.6	17.4	22.4	22.4	26.7	12.5	21.0	13.9	30.8	26.6	25.9	10.4	12.5	60.4	87.2	126.7	78.1	79.5	58.3	59.8	53.4	48.5	33.3	126.7	39.6
29	27.3	14.6	9.0	9.7	11.8	6.9	4.7	23.1	23.8	136.6	57.6	72.4	40.7	51.3	41.4	56.2	37.2	34.4	23.7	21.7	31.5	34.4	28.0	21.0	136.6	34.1
30	16.0	22.4	33.0	25.2	47.8	12.5	40.0	79.5	110.5	182.4	193.7	129.5	124.6	141.5	42.8	51.4	54.1	111.9	70.3	44.2	29.4	13.6	11.8	18.9	193.7	67.0
31	16.7	24.5	19.6	27.3	16.7	24.5	5.5	14.6	12.5	13.2	31.5	18.1	17.4	33.7	36.7	25.9	23.7	18.8	21.7	25.9	14.6	16.7	23.7	20.3	36.7	21.0
Hourly Max Hourly Average	172.3	169.0	251.5	148.6	119.6	284.0	413.0	209.9	178.9	201.5	336.8	319.2	233.2	254.9	212.0	199.3	174.1	111.9	159.8	128.1	121.1	189.3	126.7	106.3		
	33.2	28.9	36.0	27.7	28.6	34.6	39.8	35.7	38.0	53.9	57.3	63.7	68.4	54.0	62.5	57.8	56.0	49.2	40.7	37.3	36.4	35.1	35.6	30.9		

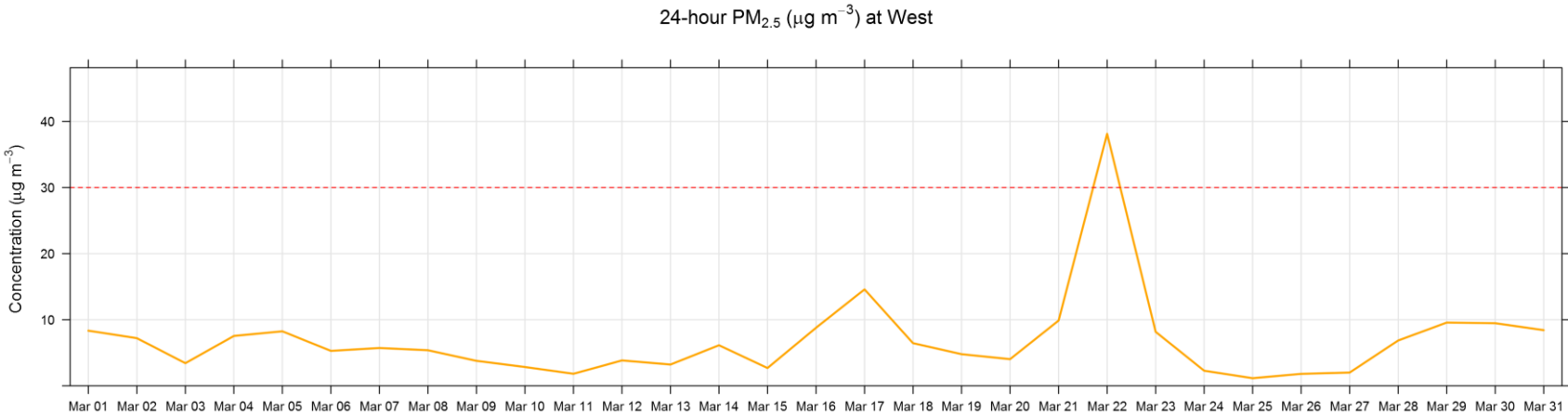
C = CALIBRATION E = INSTRUMENT ERROR



Number of 24HR Exceedances	2	Objective	100	UG/M3
Number of Non-Zero Readings	736			
Maximum 1-HR Average	413.0	UG/M3		
Maximum 24-HR Average	147.8	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	740 HRS
Monthly Calibration Time	4	HRS	Operational Uptime	99.5 %
Standard Deviation	46.1		Monthly Average	42.6 UG/M3

West PM_{2.5} (µg/m³) – March 2018

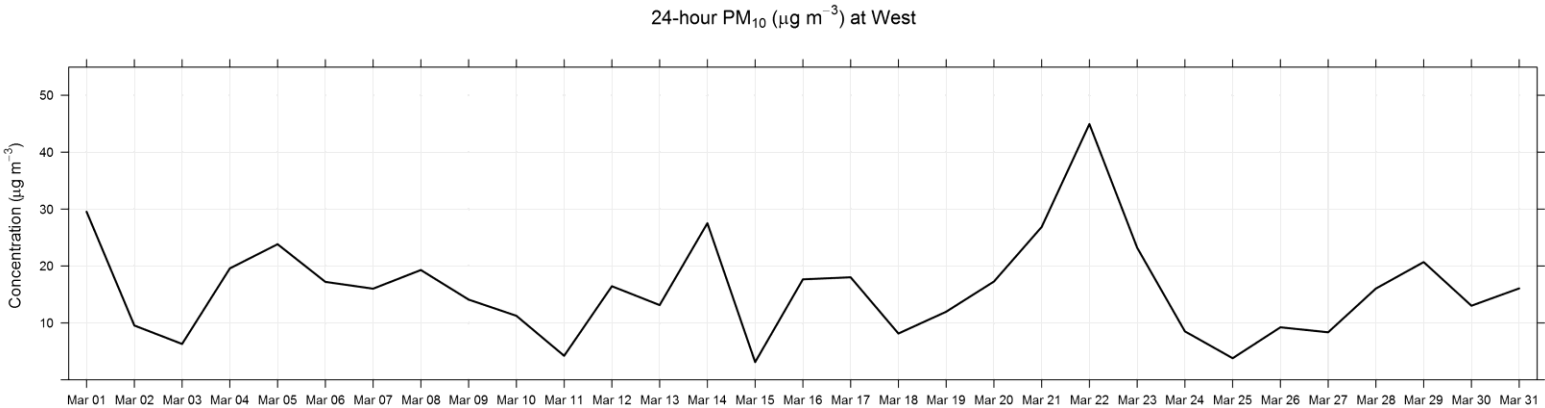
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.2	2.2	3.3	2.0	2.3	2.4	7.4	9.6	10.5	12.1	14.3	16.7	8.9	6.8	7.8	12.2	11.1	7.5	9.4	12.7	11.4	8.9	8.6	10.9	16.7	8.3
2	12.1	12.0	10.6	8.5	7.7	7.8	7.7	8.0	8.2	8.9	9.1	8.7	9.0	7.4	6.1	6.1	5.7	5.5	5.3	3.9	3.8	3.8	3.7	3.7	12.1	7.2
3	3.9	3.9	3.7	3.4	3.3	3.2	2.9	2.9	3.4	3.2	3.3	3.3	2.9	3.2	4.2	4.6	4.9	3.1	2.9	2.7	3.4	3.1	3.1	3.7	4.9	3.4
4	6.6	6.7	6.1	5.0	4.5	4.2	3.5	3.3	4.7	11.5	8.9	10.6	7.7	5.9	8.2	8.5	7.9	8.2	9.9	9.3	10.3	10.1	9.6	9.9	11.5	7.5
5	8.9	7.1	5.8	5.4	5.2	4.6	4.0	4.2	8.4	13.2	20.7	17.8	13.3	2.9	3.3	1.8	3.1	13.3	10.8	8.6	9.7	10.3	10.3	5.1	20.7	8.2
6	1.4	1.3	1.8	1.7	1.6	1.6	2.8	3.7	12.1	16.1	22.0	15.5	15.3	7.1	6.1	4.6	2.3	2.1	1.4	0.8	0.7	0.8	2.6	1.4	22.0	5.3
7	1.3	1.2	1.3	1.7	2.2	2.8	2.6	3.7	4.4	10.0	12.7	8.5	3.6	3.4	2.0	2.0	2.5	7.9	7.3	8.8	11.5	12.0	11.4	12.5	12.7	5.7
8	14.1	9.0	3.8	3.4	2.8	3.5	3.7	6.3	6.0	6.9	7.4	6.8	11.6	13.6	7.2	5.1	6.8	3.6	0.8	1.3	1.5	1.0	1.0	2.1	14.1	5.4
9	1.1	0.4	0.9	0.3	0.1	0.4	0.3	0.3	1.0	8.8	9.0	2.6	4.5	3.9	3.8	3.8	7.6	7.1	3.5	4.6	4.7	5.3	8.4	8.3	9.0	3.8
10	3.9	2.0	1.1	1.3	0.8	0.9	2.8	10.1	5.9	3.2	5.1	5.3	2.6	3.0	4.2	3.8	3.1	1.2	0.9	1.0	1.3	1.5	1.7	1.6	10.1	2.8
11	1.5	1.5	1.5	1.7	1.7	1.8	1.7	2.0	2.6	2.0	2.3	1.9	2.0	1.7	2.7	2.7	1.9	1.5	0.9	1.4	1.4	1.6	1.7	1.8	2.7	1.8
12	1.8	1.9	1.7	2.1	1.8	1.9	4.0	7.2	4.8	4.5	8.4	6.3	17.5	6.0	6.5	5.0	1.2	0.8	1.0	1.6	1.9	1.6	1.4	1.4	17.5	3.8
13	1.4	1.5	1.8	1.5	1.8	3.8	4.0	5.3	5.3	5.3	6.9	5.9	4.9	4.8	5.0	2.7	1.5	1.6	1.6	2.0	2.0	2.1	2.3	2.3	6.9	3.2
14	2.4	2.3	2.5	2.4	2.8	5.3	6.5	7.6	12.1	9.2	12.3	10.6	9.1	11.2	12.3	13.6	8.4	7.1	1.8	2.2	1.6	1.4	1.2	1.2	13.6	6.1
15	1.3	1.3	1.2	1.2	1.2	2.1	1.6	1.6	1.8	1.2	2.6	2.4	2.7	2.5	3.3	1.3	1.2	2.0	3.1	4.9	4.2	3.5	6.7	9.8	9.8	2.7
16	11.5	12.3	15.9	10.3	9.0	6.8	5.5	4.7	3.7	2.7	1.6	9.6	7.9	6.9	4.7	7.1	9.6	9.2	5.5	8.4	10.5	12.5	19.4	15.6	19.4	8.8
17	14.6	19.0	35.7	39.2	28.1	23.7	26.5	26.0	19.4	5.2	3.6	2.4	2.8	2.0	2.0	1.7	1.3	5.5	10.3	16.5	16.0	16.6	16.1	15.8	39.2	14.6
18	16.8	15.8	16.3	7.1	3.7	2.9	3.7	4.6	4.6	4.6	4.5	4.2	4.1	3.6	4.4	4.7	4.9	4.2	4.1	9.1	4.3	5.8	10.2	6.5	16.8	6.4
19	9.3	4.5	4.8	5.0	4.8	4.6	4.9	6.4	10.4	9.0	0.3	9.0	8.9	6.7	6.3	4.0	3.9	2.5	1.7	2.0	1.4	1.3	1.1	2.2	10.4	4.8
20	1.4	1.2	1.4	1.7	1.5	3.2	6.0	4.6	9.0	6.6	7.0	5.8	6.4	7.0	13.3	6.3	2.9	2.5	1.1	1.1	1.0	2.2	1.8	1.7	13.3	4.0
21	1.5	1.4	1.5	1.4	1.4	1.5	2.9	7.5	8.5	13.2	15.2	11.3	11.9	11.7	6.9	5.2	4.1	1.8	4.9	16.7	23.0	27.2	28.5	27.9	28.5	9.9
22	30.2	31.2	34.8	30.9	31.8	34.9	40.2	44.5	45.1	44.8	48.3	49.8	48.2	44.7	47.4	40.7	37.5	32.3	33.8	32.2	30.5	30.9	33.8	36.7	49.8	38.1
23	39.1	36.2	34.0	15.1	1.3	1.6	1.1	1.5	12.0	9.7	8.4	5.1	9.2	5.6	4.4	2.8	1.5	1.1	1.3	0.7	0.7	1.2	1.4	0.8	39.1	8.2
24	0.8	0.9	1.0	1.0	1.5	1.3	1.9	1.9	2.4	4.6	4.5	3.2	3.2	7.2	3.6	4.8	2.4	1.7	0.9	0.6	0.9	1.6	1.7	1.2	7.2	2.3
25	1.1	1.0	0.9	1.6	1.1	1.2	1.3	2.1	1.9	2.2	1.7	1.4	1.9	1.1	1.8	0.7	1.5	0.6	0.4	0.4	0.4	0.5	0.4	0.6	2.2	1.2
26	0.3	0.4	0.4	0.7	0.5	1.1	3.4	5.6	4.2	3.8	6.7	2.9	2.3	2.1	1.7	2.5	1.3	0.6	0.6	0.5	0.5	0.5	0.3	0.4	6.7	1.8
27	0.7	0.4	0.8	0.2	0.2	0.3	1.3	1.4	1.5	2.5	1.6	3.8	3.9	8.1	3.0	2.5	2.7	1.5	1.2	1.2	1.4	2.6	2.7	3.0	8.1	2.0
28	4.0	7.0	8.3	9.2	13.7	17.5	15.4	9.9	8.9	12.3	11.5	8.8	13.6	4.3	3.6	2.6	3.4	2.6	2.2	1.4	1.3	1.0	1.0	0.9	17.5	6.9
29	1.0	1.3	1.3	1.2	1.3	1.3	1.4	3.4	5.4	4.3	3.3	3.3	3.3	11.3	14.9	18.6	18.8	16.9	20.0	22.7	22.3	18.0	16.4	17.9	22.7	9.6
30	18.2	20.8	21.9	17.0	6.4	8.0	17.0	15.9	15.5	15.3	10.8	5.9	4.7	6.1	5.2	6.1	5.6	6.3	3.2	4.2	3.0	3.5	3.5	3.2	21.9	9.5
31	3.0	3.1	4.1	3.8	2.9	2.5	2.4	4.0	4.7	8.5	5.8	4.8	4.1	11.2	24.7	25.0	16.9	10.6	13.6	9.1	8.3	9.7	10.0	9.7	25.0	8.4
Hourly Max	39.1	36.2	35.7	39.2	31.8	34.9	40.2	44.5	45.1	44.8	48.3	49.8	48.2	44.7	47.4	40.7	37.5	32.3	33.8	32.2	30.5	30.9	33.8	36.7		
Hourly Average	7.0	6.8	7.4	6.0	4.8	5.1	6.1	7.1	8.0	8.6	9.0	8.2	8.1	7.2	7.4	6.9	6.0	5.6	5.3	6.2	6.3	6.5	7.2	7.1		



Number of 1HR Exceedances	0	Guideline	80	UG/M3
Number of 24HR Exceedances	1	Guideline	30	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	49.8	UG/M3		
Maximum 24-HR Average	38.1	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	8.2		Monthly Average	6.8 UG/M3

West PM₁₀ (µg/m³) – March 2018

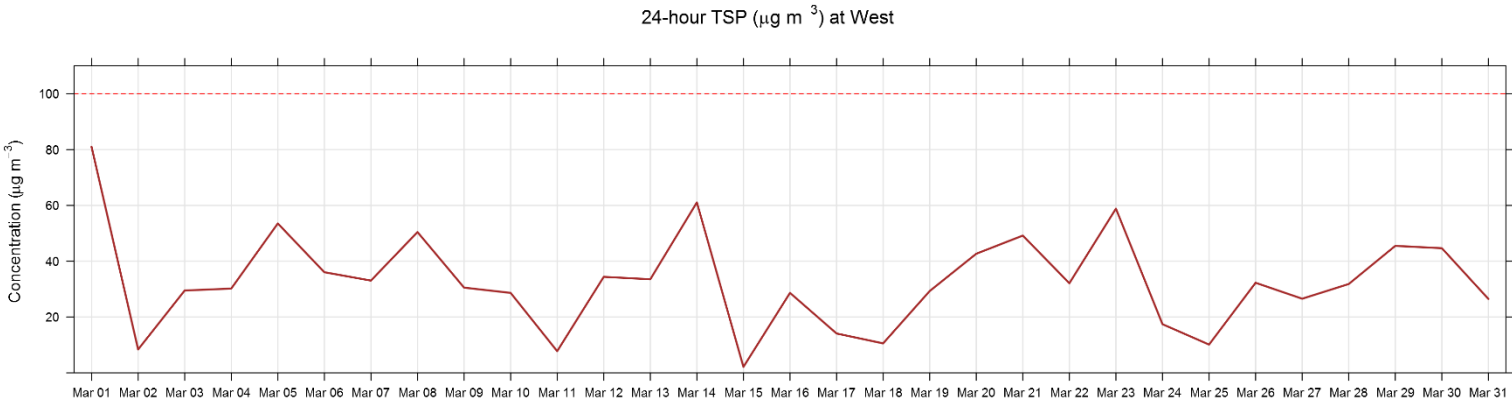
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.8	4.0	8.9	4.1	6.8	6.3	33.4	43.3	53.1	70.5	81.0	100.6	51.1	30.4	29.9	48.6	24.1	26.2	16.2	17.0	14.7	10.9	11.6	14.4	100.6	29.5
2	15.1	13.9	11.9	9.5	8.6	9.8	10.4	10.9	11.8	13.0	13.4	12.8	12.9	10.7	9.6	8.4	8.1	8.0	7.7	5.0	4.5	4.4	4.3	4.3	15.1	9.5
3	4.4	4.4	4.2	3.9	3.9	4.0	3.5	3.6	4.4	4.5	5.2	7.8	5.9	6.9	17.6	19.4	19.8	4.2	3.8	3.3	4.2	3.8	3.8	4.6	19.8	6.3
4	9.8	10.0	8.8	6.7	5.6	4.9	3.8	3.5	6.3	17.2	41.9	63.0	40.9	19.5	29.2	35.5	39.3	30.6	20.9	13.8	15.1	14.7	14.1	14.6	63.0	19.6
5	12.9	9.0	6.3	5.7	5.5	4.7	4.1	4.2	9.5	49.2	113.3	71.7	36.3	14.3	17.4	8.3	13.1	70.9	38.5	22.2	16.9	15.4	15.2	7.2	113.3	23.8
6	1.7	1.6	1.9	1.9	1.7	1.7	3.6	4.9	18.1	54.4	77.0	60.5	66.8	30.5	28.8	18.3	7.4	6.2	4.1	1.9	1.5	1.8	13.3	3.2	77.0	17.2
7	2.5	1.7	1.6	2.2	2.4	3.1	3.0	4.9	12.2	36.3	47.7	32.4	16.1	22.8	11.1	9.8	11.3	37.4	23.4	21.7	23.6	22.1	16.8	18.4	47.7	16.0
8	20.8	12.7	4.7	3.8	3.2	4.3	5.0	9.3	14.8	23.2	26.5	26.5	95.0	78.3	35.4	27.0	36.5	16.7	2.6	4.3	5.8	1.8	1.6	3.1	95.0	19.3
9	1.5	0.6	1.3	0.7	0.2	0.4	0.3	0.6	6.0	43.3	37.8	13.1	22.3	19.9	19.2	21.0	41.5	35.3	13.4	14.4	11.0	10.1	12.4	12.1	43.3	14.1
10	5.7	3.3	1.9	4.9	1.4	2.2	11.2	50.2	26.6	13.8	23.4	24.3	11.9	15.7	24.9	18.7	14.3	3.0	1.3	1.5	1.9	2.3	2.9	2.6	50.2	11.2
11	2.3	2.2	1.8	2.1	2.0	2.6	2.6	3.6	7.1	4.2	7.3	5.2	6.9	4.6	11.7	8.8	7.2	4.4	1.3	2.5	2.3	3.0	2.8	2.6	11.7	4.2
12	2.6	2.8	2.3	3.9	2.5	3.2	15.4	28.4	21.1	18.6	41.8	31.0	111.4	29.5	33.6	24.7	3.2	1.1	2.0	3.7	4.4	3.1	2.2	2.0	111.4	16.4
13	2.6	2.4	3.4	2.9	4.4	15.5	17.0	26.5	28.2	29.4	36.0	32.2	24.3	24.7	24.7	10.3	3.5	3.2	3.5	4.9	3.8	3.9	4.3	3.6	36.0	13.1
14	3.8	3.3	3.9	3.6	5.9	19.5	26.9	34.1	75.0	48.9	66.9	57.1	43.4	57.4	70.4	67.0	29.8	21.2	5.1	7.6	3.3	3.3	1.5	1.4	75.0	27.5
15	1.6	1.4	1.4	1.3	1.4	2.7	2.0	2.1	2.2	1.5	3.4	2.6	2.9	3.0	4.3	1.4	1.2	2.1	3.3	5.4	4.7	4.0	7.2	11.5	11.5	3.1
16	13.4	13.3	16.4	10.4	9.0	6.8	5.5	6.5	7.5	8.0	6.8	57.9	40.2	34.6	27.0	24.2	28.8	23.0	7.8	9.6	11.5	14.1	22.7	18.5	57.9	17.7
17	18.5	24.0	45.8	50.9	30.0	25.6	30.2	30.5	25.2	7.4	6.2	2.9	4.9	6.4	7.4	4.6	2.4	7.2	11.6	20.7	18.2	17.7	16.9	17.3	50.9	18.0
18	18.1	16.7	17.5	7.3	4.0	3.0	4.0	5.3	5.0	5.3	6.5	6.0	6.4	4.5	9.9	11.1	7.5	5.0	4.3	13.3	4.4	6.9	14.3	8.6	18.1	8.1
19	12.7	5.2	5.2	5.2	5.0	4.7	5.3	14.2	32.8	29.9	1.0	28.5	35.7	27.9	24.3	13.4	13.9	5.8	2.6	5.7	2.1	2.0	1.3	2.6	35.7	12.0
20	1.5	1.3	1.5	3.0	1.9	10.4	27.6	19.6	43.4	31.8	35.6	28.2	29.2	35.3	74.6	29.6	11.2	10.0	2.3	1.5	1.2	7.1	3.6	2.8	74.6	17.3
21	2.0	1.8	1.8	1.7	1.7	1.7	3.9	33.6	32.5	56.3	76.3	56.9	67.1	60.5	35.8	24.9	16.3	3.7	10.9	27.3	31.7	32.6	32.6	30.7	76.3	26.9
22	36.6	38.4	41.6	35.0	37.3	41.4	50.8	58.0	58.1	55.9	60.2	61.8	56.7	48.5	53.6	45.5	42.2	37.9	40.1	37.0	32.7	32.5	36.0	40.5	61.8	44.9
23	44.9	40.0	36.2	16.0	2.7	5.6	3.6	12.2	90.1	65.8	54.6	27.3	54.4	35.0	24.2	13.8	6.4	4.3	4.8	2.3	2.1	3.0	5.7	2.1	90.1	23.2
24	1.7	2.0	1.9	1.3	1.9	2.2	5.5	5.0	8.4	22.2	22.5	13.8	12.7	38.3	14.8	22.7	8.3	5.3	2.3	0.8	1.6	3.4	3.7	2.1	38.3	8.5
25	1.8	1.7	1.3	4.6	1.6	2.0	2.6	6.9	6.7	9.6	7.2	6.4	8.7	4.2	8.1	2.0	7.4	1.5	0.9	0.8	0.7	1.3	0.6	2.5	9.6	3.8
26	0.6	0.6	0.9	2.3	0.8	4.3	18.5	31.2	25.5	22.6	38.0	15.7	12.1	10.6	8.2	12.7	6.2	1.8	2.1	1.4	2.1	1.2	0.8	1.1	38.0	9.2
27	3.2	1.9	2.2	0.8	0.7	0.9	5.9	7.1	7.6	13.4	7.2	17.6	18.5	52.0	12.8	10.7	14.2	3.7	2.6	2.5	2.9	4.5	3.5	4.1	52.0	8.4
28	5.6	10.0	12.2	13.7	20.0	24.6	21.7	13.7	13.2	18.4	61.0	39.0	46.5	17.5	15.0	9.8	16.2	9.5	7.4	2.8	2.6	1.8	1.6	1.3	61.0	16.0
29	1.6	2.9	2.9	1.9	2.0	2.1	2.8	18.0	26.5	22.9	15.1	16.1	16.0	70.6	56.1	49.2	33.3	22.7	23.0	25.0	24.4	20.5	18.5	22.4	70.6	20.7
30	22.6	23.3	25.3	19.9	7.3	12.0	24.2	21.8	22.0	21.3	13.9	7.9	6.5	7.8	7.8	21.9	14.1	8.7	3.8	5.3	3.5	4.0	3.9	3.6	25.3	13.0
31	3.3	3.4	4.6	4.3	3.0	2.7	2.6	5.6	10.7	16.5	10.5	9.1	8.6	29.7	61.2	51.0	27.3	29.8	31.9	18.4	11.6	13.0	13.7	12.9	61.2	16.1
Hourly Max Hourly Average	44.9	40.0	45.8	50.9	37.3	41.4	50.8	58.0	90.1	70.5	113.3	100.6	111.4	78.3	74.6	67.0	42.2	70.9	40.1	37.0	32.7	32.6	36.0	40.5		
	8.9	8.4	9.1	7.6	5.9	7.6	11.5	16.8	22.9	26.9	33.7	30.2	31.4	27.5	26.1	21.8	16.6	14.5	9.9	9.8	8.7	8.7	9.5	9.0		



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	113.3	UG/M3		
Maximum 24-HR Average	44.9	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	17.9		Monthly Average	16.0 UG/M3

West TSP (µg/m³) – March 2018

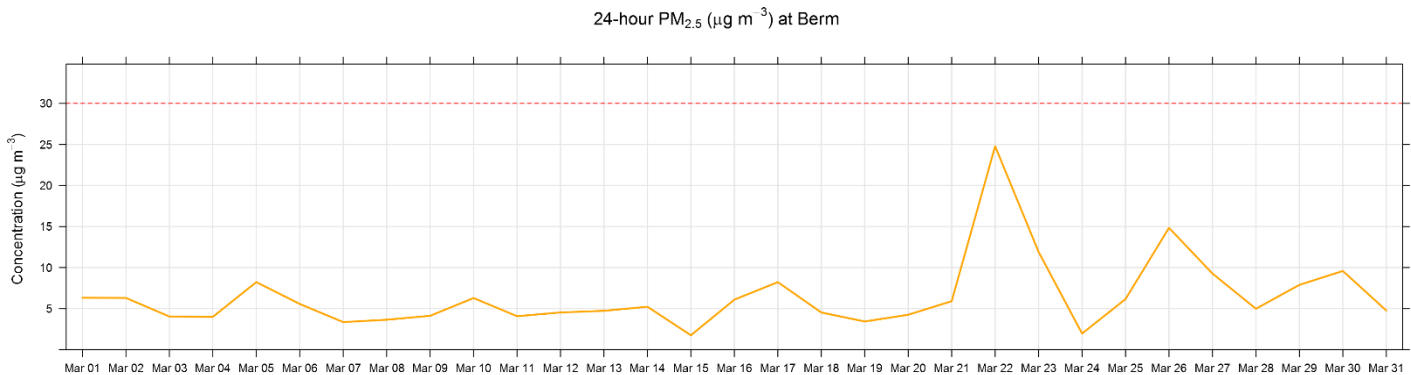
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.5	3.3	9.1	3.9	10.4	4.9	61.1	52.9	75.8	164.6	186.0	204.6	155.0	100.3	95.7	348.2	87.6	290.1	40.1	12.6	10.3	7.6	8.2	10.1	348.2	81.0
2	10.4	9.1	7.9	6.4	5.8	6.8	7.8	8.5	10.7	12.3	12.3	11.7	11.5	16.1	19.0	7.1	7.1	7.5	7.8	3.6	3.1	3.0	2.8	2.9	19.0	8.4
3	2.9	2.9	2.8	2.6	2.6	2.7	2.4	2.5	3.1	18.6	24.8	42.9	53.0	30.3	120.6	194.7	177.8	3.6	2.9	2.3	3.3	2.7	2.8	3.4	194.7	29.5
4	10.1	10.0	7.9	5.0	4.0	3.3	2.5	2.3	5.7	19.7	68.5	121.9	98.5	41.0	64.3	72.0	66.6	41.7	19.2	12.2	12.1	11.9	11.7	12.4	121.9	30.2
5	10.4	6.3	4.1	3.8	3.6	3.0	2.6	2.7	8.3	239.6	322.1	126.4	71.6	64.0	79.6	36.8	36.8	128.6	63.1	23.3	15.0	14.3	13.0	5.7	322.1	53.5
6	2.2	1.1	1.3	1.3	1.1	1.2	3.2	4.2	19.0	108.1	130.0	118.8	136.7	85.4	91.3	62.7	20.4	13.4	7.5	2.7	3.0	5.1	40.1	5.3	136.7	36.0
7	4.7	1.2	2.3	1.7	1.9	2.2	2.1	4.5	18.3	83.3	93.9	82.0	61.4	96.0	48.4	38.2	37.3	86.7	39.5	25.3	19.9	15.9	12.2	14.6	96.0	33.1
8	16.5	10.0	3.2	2.5	2.2	3.1	4.1	9.1	24.7	51.8	80.7	66.4	294.3	256.5	114.2	81.7	102.7	53.2	8.1	8.5	12.3	1.3	1.4	2.3	294.3	50.4
9	1.0	0.4	0.9	0.8	0.1	0.3	0.2	0.6	17.1	64.8	87.0	40.7	61.5	65.0	57.6	68.7	108.4	76.6	27.8	15.0	11.3	7.3	10.6	9.3	108.4	30.5
10	4.5	7.7	2.0	15.1	6.7	6.3	33.9	118.9	63.3	31.8	65.0	64.1	44.7	62.6	63.0	54.7	29.0	3.6	0.9	1.2	1.3	3.0	2.0	2.3	118.9	28.7
11	3.3	2.4	1.9	2.2	1.3	2.3	2.4	3.6	15.7	5.7	15.8	9.5	24.6	10.4	23.4	17.8	18.6	6.2	0.9	4.0	1.6	4.6	5.6	2.3	24.6	7.8
12	1.8	2.6	2.3	4.4	8.5	4.4	33.7	56.0	59.8	51.4	114.5	80.4	162.4	75.7	78.8	55.7	6.0	1.2	3.9	8.2	6.0	3.0	1.5	3.5	162.4	34.4
13	6.3	3.2	6.6	7.0	9.4	58.0	45.8	65.5	106.7	82.0	88.6	89.8	61.4	62.8	63.7	17.5	5.2	2.9	2.4	4.3	3.7	3.2	4.3	4.3	106.7	33.5
14	4.0	3.8	8.3	6.7	10.1	40.5	56.2	83.8	229.6	124.5	159.7	114.4	84.1	115.7	151.2	149.9	33.3	20.5	14.7	27.9	8.5	15.2	2.0	0.9	229.6	61.1
15	1.1	0.9	0.9	0.9	0.9	2.1	1.5	1.9	1.7	1.1	2.5	1.7	1.9	2.0	3.4	1.0	0.8	1.3	2.2	3.5	3.1	2.7	4.6	7.4	7.4	2.1
16	8.7	8.6	10.6	6.7	5.8	4.4	3.6	4.4	6.4	16.2	31.6	171.7	103.0	88.0	62.2	38.8	41.4	19.5	6.1	6.3	7.5	9.2	14.9	12.1	171.7	28.6
17	12.2	15.8	29.6	36.3	19.4	16.5	19.5	19.8	16.7	7.8	10.4	3.0	4.0	16.4	19.2	13.3	4.9	5.4	7.7	14.2	12.2	11.6	11.2	11.3	36.3	14.1
18	11.9	10.8	11.4	4.8	2.8	2.0	2.7	3.8	3.5	4.7	30.0	29.3	25.8	6.5	30.5	19.6	10.4	3.6	2.9	11.5	2.9	4.7	10.8	6.4	30.5	10.6
19	9.0	3.6	3.4	3.4	3.3	3.1	3.8	32.3	85.9	86.7	2.1	67.2	121.5	104.2	63.4	40.4	38.9	8.2	3.0	10.5	2.6	2.7	0.9	3.4	121.5	29.3
20	1.0	0.9	1.0	3.8	1.8	22.7	65.9	38.3	110.5	83.2	102.9	77.1	79.9	109.2	174.0	77.2	26.7	23.4	2.9	1.0	0.8	13.3	3.2	3.5	174.0	42.7
21	2.4	1.2	1.1	1.1	1.3	1.1	3.6	47.8	56.8	128.2	187.5	115.7	152.8	125.7	114.8	62.2	35.9	5.5	14.7	27.5	29.3	22.9	21.3	20.0	187.5	49.2
22	23.9	25.2	27.5	22.8	24.4	27.4	35.4	42.7	43.2	43.5	48.8	50.7	41.7	32.4	36.9	34.3	29.9	26.5	31.2	28.2	22.1	21.2	23.7	27.0	50.7	32.1
23	29.6	27.3	23.5	11.0	8.6	34.6	23.9	64.9	270.2	213.9	153.4	89.4	153.8	113.1	67.3	39.3	19.5	8.6	9.8	4.5	3.0	24.6	12.6	5.7	270.2	58.8
24	1.5	10.8	1.5	1.0	1.6	2.9	10.6	7.1	11.6	57.9	44.4	29.8	22.7	98.3	32.0	44.0	16.0	11.3	2.0	0.5	1.4	3.1	4.5	1.7	98.3	17.4
25	1.3	3.1	1.4	9.3	1.3	1.8	2.4	13.0	8.5	18.0	24.4	24.5	32.6	13.8	28.0	7.6	23.7	5.1	0.8	2.0	1.9	3.3	1.0	14.5	32.6	10.1
26	0.8	1.6	2.2	15.9	1.2	12.1	51.9	103.5	73.0	93.1	157.4	47.3	50.4	34.7	35.4	38.4	20.7	5.3	7.6	7.6	8.1	1.8	1.4	3.3	157.4	32.3
27	9.8	10.2	9.2	4.2	5.2	1.4	22.9	21.4	25.5	44.8	30.5	56.0	66.9	147.1	43.3	35.0	65.9	10.2	5.2	3.8	7.7	5.2	2.6	3.3	147.1	26.6
28	4.4	7.4	9.7	10.8	14.6	17.2	16.0	10.9	11.8	17.7	167.9	113.1	110.2	59.3	48.2	32.4	50.7	30.8	19.8	3.8	2.7	1.4	2.0	1.2	167.9	31.8
29	2.2	2.7	6.4	1.3	1.4	2.4	2.9	33.1	56.6	67.7	47.9	49.3	59.6	248.1	192.8	141.1	62.9	23.8	15.3	16.6	16.0	14.4	12.2	15.3	248.1	45.5
30	15.7	15.3	16.8	13.2	4.8	15.9	22.8	20.9	23.1	21.6	11.3	6.6	5.7	6.5	43.6	544.1	257.4	8.7	2.9	4.6	2.5	2.7	2.8	2.5	544.1	44.7
31	2.1	2.4	3.3	3.2	2.0	1.7	1.7	7.4	36.5	40.5	12.9	13.7	19.9	73.1	134.4	82.2	37.7	60.1	47.4	16.9	8.6	9.1	9.6	8.9	134.4	26.5
Hourly Max Hourly Average	29.6	27.3	29.6	36.3	24.4	58.0	65.9	118.9	270.2	239.6	322.1	204.6	294.3	256.5	192.8	544.1	257.4	290.1	63.1	28.2	29.3	24.6	40.1	27.0		
	7.0	6.8	7.1	6.9	5.4	9.9	17.7	28.7	48.4	64.7	81.1	68.4	76.6	76.1	71.0	79.2	47.7	32.0	13.6	10.1	7.9	8.1	8.3	7.3		



Number of 24HR Exceedances	0	Guideline	100	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	544.1	UG/M3		
Maximum 24-HR Average	81.0	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	51.9		Monthly Average	32.9 UG/M3

Berm PM_{2.5} (µg/m³) – March 2018

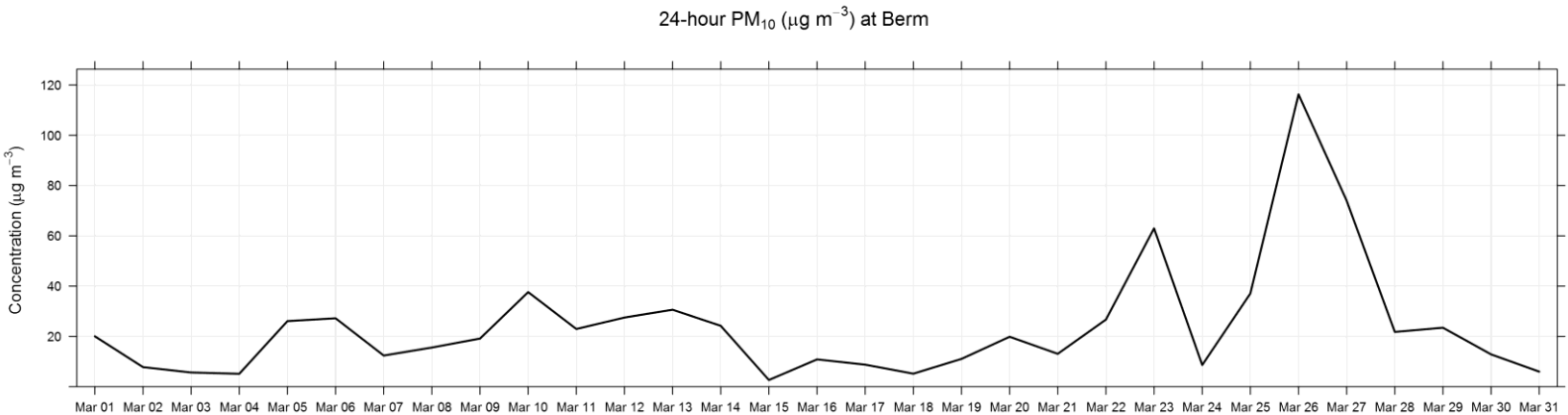
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	1.8	1.2	1.5	1.0	1.2	1.8	2.3	5.6	7.6	5.2	10.7	9.4	3.0	3.1	3.2	13.8	9.9	11.4	12.0	22.5	7.0	5.2	5.0	6.2	22.5	6.3
2	8.0	7.6	7.6	5.4	5.9	5.1	3.9	4.2	4.1	4.4	4.5	7.3	13.7	10.3	6.5	11.4	9.9	4.3	5.6	6.0	3.8	3.9	3.5	4.3	13.7	6.3
3	3.8	3.6	5.6	5.8	4.8	4.4	5.2	5.1	3.5	3.5	3.1	4.0	3.1	2.4	3.1	2.6	5.3	2.9	3.4	4.0	4.8	4.4	3.2	5.4	5.8	4.0
4	6.7	3.9	3.8	2.7	2.8	2.8	2.4	2.5	2.5	2.9	2.5	2.4	2.9	3.3	2.6	2.7	2.9	3.7	7.9	8.8	5.8	5.6	5.4	6.5	8.8	4.0
5	5.2	12.6	3.5	7.2	13.6	12.5	7.3	6.0	15.3	4.5	6.8	22.3	8.9	10.1	11.5	9.2	4.3	3.3	4.3	7.3	7.6	6.5	5.3	2.4	22.3	8.2
6	2.1	1.2	0.9	0.8	0.5	1.3	1.8	7.9	8.4	7.4	17.0	9.2	3.3	7.6	16.2	16.0	11.8	5.7	3.0	3.4	1.9	3.0	1.8	1.3	17.0	5.6
7	0.7	0.8	0.7	0.8	1.2	1.2	1.2	2.3	4.4	2.9	4.1	4.0	4.3	5.3	5.8	4.5	3.9	2.9	3.5	5.3	7.0	4.5	5.0	4.5	7.0	3.4
8	8.0	2.5	2.1	2.2	8.2	2.1	4.8	2.8	2.9	2.6	2.1	2.3	3.8	6.9	10.6	4.2	3.7	3.0	4.2	5.3	0.9	0.7	0.7	0.9	10.6	3.6
9	0.8	0.5	0.9	0.9	0.3	0.2	0.3	0.8	5.8	7.2	10.9	13.6	7.7	16.1	6.6	1.8	1.7	1.0	1.5	3.2	3.4	4.4	4.8	4.8	16.1	4.1
10	2.5	1.9	3.0	2.8	1.8	1.6	1.5	1.4	3.1	12.6	19.8	18.4	12.8	14.9	10.5	7.2	6.2	3.3	9.5	3.8	2.8	4.5	2.3	2.7	19.8	6.3
11	2.3	2.4	1.5	1.2	1.5	1.5	1.0	1.6	2.6	3.5	2.7	6.0	6.3	15.6	10.4	19.5	9.8	1.0	1.5	0.6	0.9	1.6	1.4	1.3	19.5	4.1
12	1.4	1.6	1.6	1.8	1.2	1.8	1.7	4.5	5.3	5.9	5.8	9.7	16.1	15.9	11.4	8.6	1.3	0.6	0.8	1.0	1.7	3.3	2.7	3.1	16.1	4.5
13	2.8	1.9	2.3	2.0	1.7	2.3	2.5	3.7	6.9	15.7	11.4	9.9	5.5	5.5	18.7	2.7	1.1	0.8	0.9	2.0	2.4	3.2	4.7	2.9	18.7	4.7
14	3.0	2.5	2.2	2.0	1.8	2.9	3.2	4.2	5.7	11.0	4.1	7.0	7.8	3.9	4.7	6.7	6.0	9.2	7.3	4.2	6.8	12.5	4.1	2.7	12.5	5.2
15	2.6	1.5	1.0	1.2	1.0	1.6	0.9	2.8	2.3	1.7	1.8	2.5	1.6	1.4	0.7	1.7	0.7	1.3	0.5	0.8	1.1	2.1	4.4	5.0	5.0	1.8
16	6.0	5.9	9.3	5.5	4.6	4.5	3.1	2.9	2.6	1.9	3.2	5.8	5.2	4.2	1.8	3.2	5.4	4.0	4.4	10.9	14.5	15.4	12.2	9.9	15.4	6.1
17	13.3	18.8	18.3	15.1	17.8	15.0	15.1	15.2	3.9	2.0	1.9	1.4	0.8	0.7	0.8	0.9	1.5	4.5	7.6	8.9	8.6	8.2	9.2	7.9	18.8	8.2
18	10.5	10.5	10.3	4.6	3.3	3.2	6.0	5.4	5.2	5.0	4.2	3.3	3.4	2.7	2.2	2.2	2.1	2.7	3.9	4.6	3.7	3.2	4.0	2.5	10.5	4.5
19	4.7	2.6	1.3	1.9	2.1	2.5	2.5	3.8	4.9	3.0	0.1	4.4	6.2	4.9	5.2	7.1	8.3	3.8	1.3	1.0	1.7	2.7	4.2	1.9	8.3	3.4
20	2.6	1.6	1.1	1.0	1.0	1.5	1.9	2.4	7.4	5.8	8.4	7.5	7.1	9.3	7.5	9.2	7.5	6.6	3.7	1.2	1.1	1.7	2.7	2.3	9.3	4.3
21	1.1	1.0	1.0	1.0	0.8	1.4	1.0	2.2	3.7	6.0	6.0	7.3	4.0	1.9	2.8	1.9	1.2	2.1	7.7	11.9	16.9	20.0	20.0	18.7	20.0	5.9
22	15.9	7.6	11.3	17.1	18.7	29.8	26.5	29.6	33.8	37.2	32.6	36.0	36.8	32.9	30.1	25.7	23.0	20.0	22.0	21.1	22.0	20.6	21.8	23.0	37.2	24.8
23	27.1	30.0	26.5	19.7	17.9	26.5	20.3	16.2	24.9	13.0	10.8	7.2	7.5	5.2	4.7	5.8	4.8	0.5	0.7	4.6	3.1	5.4	1.6	1.7	30.0	11.9
24	1.0	2.0	2.5	1.0	0.6	0.9	1.6	1.7	4.4	3.2	2.4	1.9	2.9	1.1	0.7	1.0	1.9	3.1	2.2	2.0	0.7	1.4	4.1	3.0	4.4	2.0
25	3.4	1.0	2.8	1.5	1.6	0.9	0.8	1.3	1.4	3.5	11.5	10.1	11.7	9.5	12.0	6.5	10.4	10.9	5.1	6.6	5.5	15.7	7.9	6.5	15.7	6.2
26	3.4	15.3	14.4	8.3	3.3	4.9	9.3	10.2	19.1	50.8	24.1	24.0	30.5	28.5	19.3	12.5	9.4	10.6	8.8	9.6	13.3	7.0	4.3	15.2	50.8	14.8
27	15.9	15.3	14.9	9.3	10.2	12.4	18.0	13.9	8.7	9.4	9.8	3.9	3.7	15.6	14.6	9.5	12.6	7.3	5.0	3.6	3.6	1.9	1.8	1.9	18.0	9.3
28	2.5	4.5	6.3	4.6	6.3	7.5	5.3	6.1	4.6	3.7	2.2	1.2	1.3	5.9	11.8	9.2	7.1	4.2	5.3	4.4	4.4	4.0	2.8	4.2	11.8	5.0
29	2.0	0.9	0.8	1.4	1.1	1.0	2.0	2.0	11.3	9.5	12.4	6.0	5.2	7.9	11.1	12.4	12.5	10.9	12.5	16.8	17.2	12.4	10.3	9.6	17.2	7.9
30	13.0	15.9	15.4	13.5	6.5	6.8	13.0	14.1	19.4	17.7	12.0	11.5	11.5	9.1	7.3	4.0	7.9	7.2	4.2	4.1	3.4	3.9	4.6	4.0	19.4	9.6
31	3.2	3.5	4.6	3.0	3.9	2.5	2.4	1.6	2.6	5.1	3.3	2.8	9.6	11.5	6.2	4.1	3.3	3.0	3.0	5.6	9.4	8.3	6.0	6.0	11.5	4.8
Hourly Max Hourly Average	27.1	30.0	26.5	19.7	18.7	29.8	26.5	29.6	33.8	50.8	32.6	36.0	36.8	32.9	30.1	25.7	23.0	20.0	22.0	22.5	22.0	20.6	21.8	23.0		
	5.7	5.9	5.8	4.7	4.7	5.3	5.4	5.9	7.7	8.6	8.1	8.5	8.0	8.8	8.4	7.4	6.4	5.0	5.3	6.3	6.0	6.4	5.5	5.6		



Number of 1HR Exceedances	0		Guideline	80	UG/M3
Number of 24HR Exceedances	0		Guideline	30	UG/M3
Number of Non-Zero Readings	744				
Maximum 1-HR Average	50.8	UG/M3			
Maximum 24-HR Average	24.8	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	744	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0	%
Standard Deviation	6.4		Monthly Average	6.5	UG/M3

Berm PM₁₀ (µg/m³) – March 2018

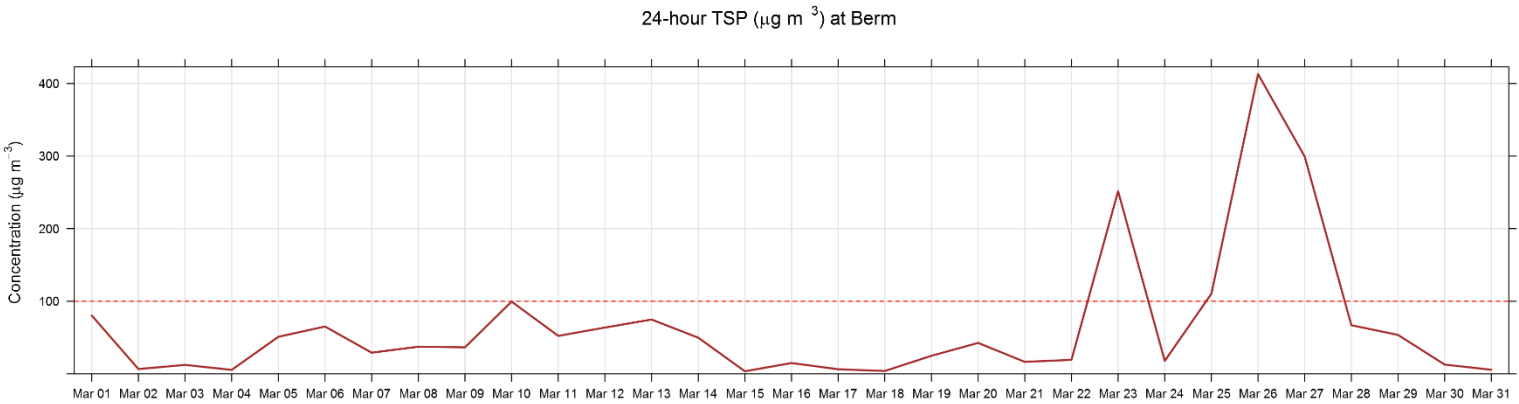
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	5.8	2.2	3.1	1.9	3.2	6.3	10.3	15.9	34.7	29.7	60.6	54.5	11.4	8.5	6.9	59.2	43.8	48.6	17.6	31.8	7.9	5.4	5.2	6.4	60.6	20.0
2	8.5	7.9	7.8	5.5	6.1	5.3	4.0	4.3	4.2	4.7	4.7	9.3	18.9	14.3	8.9	16.6	14.3	5.7	7.9	8.3	4.9	5.0	4.2	5.6	18.9	7.8
3	4.7	4.4	7.6	8.0	6.5	6.0	7.3	7.2	4.7	4.8	4.2	5.5	4.1	3.0	8.1	3.9	7.5	3.8	4.6	5.4	6.7	6.0	4.0	7.5	8.1	5.6
4	9.3	4.9	4.6	2.8	2.9	2.9	2.5	2.5	2.7	3.2	2.6	2.5	4.7	5.9	3.4	4.6	4.2	7.4	10.6	11.7	6.5	6.3	6.0	8.3	11.7	5.1
5	6.8	18.0	4.3	10.7	20.4	18.1	10.2	7.6	22.6	9.3	19.5	121.0	34.0	83.3	83.7	69.9	17.1	4.2	8.7	16.5	18.3	11.1	7.5	3.0	121.0	26.1
6	4.4	1.4	1.0	0.9	0.5	1.6	2.3	11.2	12.1	22.1	73.5	45.2	10.3	39.1	114.9	109.9	79.1	34.4	19.3	21.3	11.7	20.8	10.6	5.2	114.9	27.2
7	1.9	1.8	0.8	1.0	1.3	1.3	1.4	3.4	17.8	11.8	21.3	22.4	24.4	32.0	33.5	29.1	30.9	11.5	8.1	8.5	10.8	6.5	8.1	7.9	33.5	12.4
8	19.7	2.7	2.7	5.5	27.3	3.7	13.5	10.4	11.4	9.9	6.2	6.8	15.6	48.7	52.0	26.7	20.2	15.1	30.0	38.4	3.0	1.2	1.4	1.5	52.0	15.6
9	1.5	1.4	4.4	6.4	0.8	0.3	0.5	3.3	32.7	41.2	67.4	83.5	30.2	82.6	38.3	5.3	5.7	2.0	4.1	11.1	6.9	9.4	9.2	10.8	83.5	19.1
10	4.8	11.4	23.9	21.3	13.6	9.0	6.5	4.8	18.2	76.8	170.7	143.7	88.3	80.7	66.8	50.9	45.4	17.9	13.8	4.6	5.9	12.3	4.0	7.2	170.7	37.6
11	8.4	7.0	4.9	3.8	5.7	4.1	2.0	4.1	12.7	17.3	13.3	54.6	57.6	124.6	77.6	90.4	42.1	2.7	3.5	0.9	1.9	4.2	4.3	3.1	124.6	23.0
12	3.7	3.6	5.3	5.7	2.8	4.3	4.6	24.8	28.3	29.3	35.4	69.5	139.0	132.0	72.6	44.2	5.5	1.3	2.3	2.9	5.5	12.9	11.7	12.4	139.0	27.5
13	10.4	7.0	11.0	8.7	6.0	10.3	12.7	19.6	51.7	137.0	97.0	73.1	41.2	40.6	139.3	13.3	2.3	1.2	1.4	6.0	7.4	10.7	16.5	10.1	139.3	30.6
14	10.2	7.1	6.7	4.5	4.2	8.6	12.4	23.6	27.4	62.4	19.3	36.5	35.1	17.6	18.3	28.8	14.9	27.2	53.8	33.1	31.9	60.1	25.3	12.0	62.4	24.2
15	11.8	4.7	1.8	2.5	1.6	2.2	1.2	4.1	3.3	2.1	1.9	2.6	1.7	1.7	0.7	1.8	0.7	1.3	0.5	0.8	1.1	2.3	5.4	5.8	11.8	2.7
16	7.4	6.4	11.1	6.7	5.1	5.2	3.3	3.7	4.2	6.5	16.9	25.9	30.5	28.4	4.1	5.0	8.4	6.0	4.7	11.6	16.2	16.7	14.4	11.9	30.5	10.9
17	15.4	20.6	19.2	15.4	18.7	15.6	17.3	16.2	4.2	2.1	2.7	1.5	0.9	0.7	0.9	1.1	1.9	4.7	7.9	8.9	8.6	8.3	9.4	8.0	20.6	8.8
18	10.9	10.8	10.8	5.2	4.0	3.9	7.9	7.1	6.5	6.3	5.3	3.9	4.2	3.0	2.4	2.5	2.3	2.8	4.2	5.3	3.9	3.3	4.6	2.8	10.9	5.2
19	6.4	3.2	1.4	2.0	2.1	2.6	2.7	10.2	18.3	5.7	0.2	12.9	22.7	16.6	22.4	33.4	35.1	14.6	2.9	2.9	6.2	13.4	20.8	6.4	35.1	11.0
20	11.5	5.0	2.0	1.6	1.5	7.1	7.6	9.6	35.2	28.8	39.5	33.4	36.5	44.1	33.5	52.2	41.5	35.4	13.3	2.7	3.6	6.8	15.0	9.0	52.2	19.8
21	2.1	1.8	1.4	1.4	1.1	2.4	1.3	10.2	13.7	33.9	32.2	45.2	17.0	5.2	14.2	5.0	2.5	7.9	15.6	15.5	20.2	23.0	21.3	19.7	45.2	13.1
22	17.7	7.9	12.2	19.1	20.9	31.9	27.6	31.4	36.5	43.2	34.8	40.7	41.4	33.9	30.8	26.8	23.8	22.2	25.6	22.9	23.0	20.8	22.0	23.3	43.2	26.7
23	31.1	37.3	30.6	64.3	150.8	237.0	182.9	135.7	205.4	97.9	69.8	38.5	35.6	27.2	30.8	31.5	22.5	1.3	1.7	17.8	14.9	32.8	7.0	7.3	237.0	63.0
24	3.3	10.5	11.9	2.5	1.0	2.3	4.6	5.1	31.3	17.5	10.5	7.9	12.1	2.9	1.4	3.6	8.2	26.1	6.6	5.2	1.2	3.4	18.0	9.6	31.3	8.6
25	12.7	3.5	20.4	3.7	3.9	1.9	1.5	2.2	5.6	26.2	70.2	56.7	92.4	52.5	59.2	34.5	46.4	68.0	35.7	57.8	34.3	100.3	51.2	48.9	100.3	37.1
26	20.3	135.2	118.4	62.3	17.7	25.1	64.3	72.8	129.4	356.2	198.5	186.5	238.9	201.9	160.5	96.5	74.3	90.7	82.4	89.2	127.5	64.5	34.6	143.0	356.2	116.3
27	143.3	150.8	142.4	84.6	92.9	111.9	162.2	135.9	63.6	75.3	65.7	24.2	21.0	125.5	103.9	62.9	98.6	48.4	33.4	16.6	5.7	2.3	2.1	2.4	162.2	74.0
28	3.3	6.4	9.1	5.1	6.9	9.6	6.3	7.8	6.4	5.1	3.4	2.1	3.0	49.4	94.5	66.7	52.5	28.1	37.1	33.4	31.6	28.6	11.1	15.3	94.5	21.8
29	6.2	2.0	1.2	2.7	1.9	2.0	8.4	9.4	102.8	65.6	93.3	41.8	35.6	33.5	27.7	21.0	15.2	11.7	12.9	17.2	18.0	12.7	10.4	9.8	102.8	23.5
30	14.2	19.1	18.6	18.3	9.0	8.6	17.3	19.8	27.9	25.1	16.7	16.5	16.5	12.7	9.8	5.3	11.4	10.3	5.7	5.6	4.3	4.7	5.7	5.3	27.9	12.8
31	4.0	4.4	5.9	3.5	5.1	2.9	2.7	1.7	2.9	6.8	4.0	4.0	13.8	16.7	9.0	5.5	3.9	3.3	3.3	6.3	9.8	8.9	7.0	7.8	16.7	6.0
Hourly Max Hourly Average	143.3	150.8	142.4	84.6	150.8	237.0	182.9	135.9	205.4	356.2	198.5	186.5	238.9	201.9	160.5	109.9	98.6	90.7	82.4	89.2	127.5	100.3	51.2	143.0		
	13.6	16.5	16.3	12.5	14.4	17.9	19.7	20.2	31.6	40.8	40.7	41.0	36.7	44.2	42.9	32.5	25.2	18.2	15.5	16.8	14.8	16.9	12.2	14.1		



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	356.2	UG/M3		
Maximum 24-HR Average	116.3	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	36.9		Monthly Average	24.0 UG/M3

Berm TSP (µg/m³) – March 2018

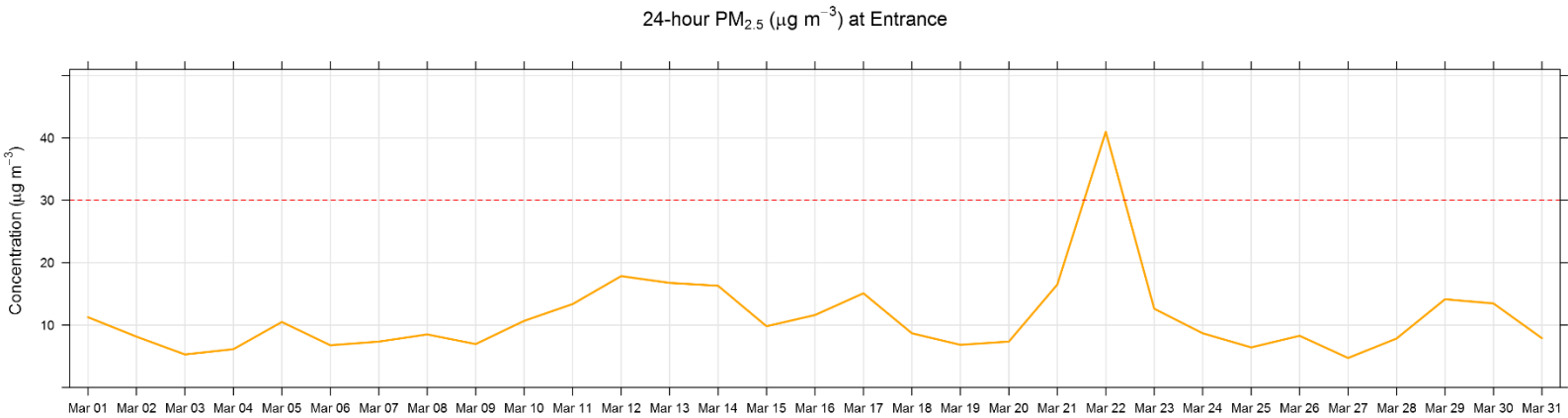
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	7.9	2.4	3.6	6.8	3.8	13.6	24.3	29.2	50.2	70.0	128.5	105.2	30.9	21.5	11.8	414.1	373.0	559.3	22.4	33.6	6.1	3.5	3.3	4.1	559.3	80.4
2	5.5	5.1	5.1	3.5	3.9	3.4	2.6	2.8	2.7	3.0	3.1	7.8	18.6	14.2	8.3	17.6	15.4	5.0	7.7	7.4	4.2	4.3	3.1	4.4	18.6	6.6
3	3.8	3.4	7.2	7.3	6.1	5.6	7.0	7.1	4.2	4.7	3.6	5.7	3.8	2.4	157.0	21.5	7.8	3.3	4.2	5.6	6.8	5.8	3.4	7.2	157.0	12.3
4	9.6	4.5	3.9	1.8	1.9	1.9	1.6	1.6	1.7	2.1	1.7	1.6	4.8	7.7	10.0	28.7	4.7	5.1	8.5	9.4	4.4	4.3	3.9	6.0	28.7	5.5
5	5.0	19.0	3.1	11.4	23.2	18.5	9.5	6.5	25.2	29.6	26.3	235.7	57.8	221.7	223.0	202.1	40.8	3.4	10.3	14.9	19.8	9.2	5.9	2.1	235.7	51.0
6	3.5	1.0	0.6	0.6	0.3	1.5	1.9	11.4	12.4	28.2	95.7	65.7	14.0	66.6	278.3	322.0	259.8	106.4	56.0	62.8	49.3	72.7	39.5	14.3	322.0	65.2
7	4.5	4.6	0.9	7.4	0.9	0.8	1.5	2.9	27.5	24.2	48.8	63.5	64.9	95.8	88.6	89.9	86.4	38.1	14.3	7.6	9.2	4.5	6.0	6.1	95.8	29.1
8	14.6	1.8	1.8	16.0	24.6	2.4	19.4	32.7	25.8	38.9	17.3	23.3	31.3	135.6	101.1	77.4	54.7	46.5	102.2	119.2	6.0	0.9	1.9	1.3	135.6	37.4
9	2.1	1.4	14.4	21.9	0.8	0.2	0.9	8.3	58.7	77.1	145.9	165.3	44.6	143.7	103.3	9.8	9.5	4.7	8.4	17.3	11.4	9.9	7.6	8.5	165.3	36.5
10	4.5	35.0	105.6	81.2	50.8	35.0	19.8	12.9	56.3	195.3	570.1	376.3	243.7	145.0	127.7	114.0	99.3	56.8	16.4	4.6	5.3	11.4	7.2	14.3	570.1	99.5
11	19.9	13.8	14.4	10.6	27.4	15.4	3.6	6.8	27.3	37.0	35.8	169.1	184.4	315.5	170.1	107.7	53.4	3.8	4.6	0.6	4.3	5.2	14.7	9.1	315.5	52.3
12	11.2	6.0	16.7	16.9	5.2	6.2	11.3	81.1	83.3	80.3	73.6	175.0	342.2	300.3	143.2	63.2	14.0	0.9	4.6	5.5	12.4	19.8	27.5	29.6	342.2	63.8
13	24.6	17.8	38.0	23.5	18.2	29.7	31.5	43.2	152.3	403.6	269.5	168.6	105.1	92.2	277.8	20.0	4.3	1.8	0.9	5.6	11.9	15.3	24.0	15.2	403.6	74.8
14	16.5	12.5	15.7	7.5	5.7	11.7	19.8	51.0	54.8	120.9	28.1	44.3	44.7	23.4	36.0	46.1	16.0	22.5	179.5	129.3	73.2	112.6	88.5	35.1	179.5	49.8
15	29.1	15.7	3.6	4.0	1.5	1.7	0.9	3.7	2.9	1.5	1.2	1.7	1.1	1.3	0.5	1.1	0.4	0.8	0.3	0.5	0.7	1.6	4.0	4.2	29.1	3.5
16	5.8	4.7	8.4	5.5	4.1	4.0	2.3	3.1	3.4	25.3	59.3	35.8	63.5	56.9	4.6	5.7	7.6	6.7	3.2	7.6	10.9	10.9	9.9	7.9	63.5	14.9
17	10.3	14.1	12.9	10.0	12.1	10.1	11.7	10.6	2.8	8.4	6.2	1.1	0.6	0.5	0.6	0.8	2.8	3.0	5.1	5.8	5.6	5.3	6.1	5.2	14.1	6.3
18	7.1	7.0	7.0	3.8	3.1	3.3	7.0	6.6	6.0	5.7	4.6	3.3	3.6	2.1	1.7	1.8	1.6	1.9	2.9	4.0	2.7	2.1	3.2	1.9	7.1	3.9
19	4.9	2.5	0.9	1.3	1.4	1.7	1.9	47.4	67.3	15.0	0.2	17.4	34.5	31.5	74.2	67.9	65.8	31.1	3.9	9.7	19.4	36.8	49.9	11.2	74.2	24.9
20	25.3	10.1	4.0	1.1	1.5	34.0	18.3	18.4	79.0	72.8	61.2	66.5	104.4	89.8	58.1	135.0	84.8	62.1	18.1	2.3	8.4	23.2	29.0	14.9	135.0	42.6
21	2.0	1.5	0.9	2.6	0.7	3.9	2.0	18.6	20.1	50.8	38.6	76.7	23.6	7.5	34.2	9.3	4.7	8.4	17.6	13.3	16.6	15.7	14.0	13.0	76.7	16.5
22	11.9	5.1	8.0	12.8	13.9	21.4	18.2	20.8	26.2	33.5	25.7	33.5	34.6	23.0	20.3	18.8	16.9	17.6	23.5	18.7	16.0	13.5	14.3	15.0	34.6	19.3
23	21.1	27.4	21.5	253.1	759.2	1406.4	913.0	602.2	809.3	364.7	226.1	86.2	71.7	64.7	88.3	79.9	46.2	1.9	3.7	19.7	32.0	104.9	19.8	15.9	1406.4	251.6
24	4.1	30.8	53.2	3.2	0.7	2.3	7.6	8.2	79.9	50.3	23.3	13.2	16.5	2.8	1.4	3.9	10.5	47.3	7.2	3.6	1.7	5.2	36.9	14.8	79.9	17.8
25	40.4	17.2	49.7	6.3	3.5	4.1	1.0	2.5	10.1	71.6	160.8	144.1	320.6	154.1	117.5	78.0	127.3	206.8	102.6	232.6	105.4	316.5	212.0	164.2	320.6	110.4
26	70.2	518.5	428.6	212.2	51.4	67.4	186.6	208.7	389.1	1033.9	680.1	650.3	808.0	597.5	579.3	385.0	292.3	326.8	356.8	398.8	590.8	293.3	142.6	641.8	1033.9	412.9
27	611.3	657.3	614.5	323.4	388.8	496.6	754.9	578.5	214.2	255.2	212.2	76.0	115.5	455.7	456.4	223.7	373.7	205.8	117.9	39.6	6.9	1.7	1.5	1.6	754.9	299.3
28	2.5	5.8	8.3	3.3	4.5	7.2	4.8	6.3	5.6	4.2	7.1	2.8	5.6	187.4	319.6	227.1	191.1	106.4	125.2	133.2	120.2	91.3	20.3	16.7	319.6	67.0
29	5.4	1.5	0.8	1.9	1.9	2.3	11.3	32.3	241.2	157.9	229.0	115.0	111.9	170.0	76.5	55.5	11.5	7.8	8.4	11.2	11.9	8.3	6.8	6.4	241.2	53.6
30	9.6	14.4	13.4	15.7	9.6	8.6	16.9	21.2	31.4	28.7	17.7	19.0	18.8	13.5	10.1	5.0	12.7	11.3	5.7	5.5	3.4	3.4	5.2	4.9	31.4	12.7
31	3.5	4.0	5.5	2.9	4.9	2.1	2.1	1.1	2.1	5.3	2.8	3.3	19.9	17.3	11.7	8.0	3.6	2.5	3.5	4.5	6.7	6.1	5.2	6.4	19.9	5.6
Hourly Max	611.3	657.3	614.5	323.4	759.2	1406.4	913.0	602.2	809.3	1033.9	680.1	650.3	808.0	597.5	579.3	414.1	373.7	559.3	356.8	398.8	590.8	316.5	212.0	641.8		
Hourly Average	32.2	47.3	47.5	34.8	46.3	71.7	68.2	60.9	83.0	106.4	103.4	95.3	95.0	111.6	115.8	91.6	74.0	61.5	40.2	43.0	38.2	39.3	26.4	35.6		



Number of 24HR Exceedances	4	Guideline	100	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	1406.4	UG/M3		
Maximum 24-HR Average	412.9	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	140.7		Monthly Average	65.4 UG/M3

Entrance PM_{2.5} (µg/m³) – March 2018

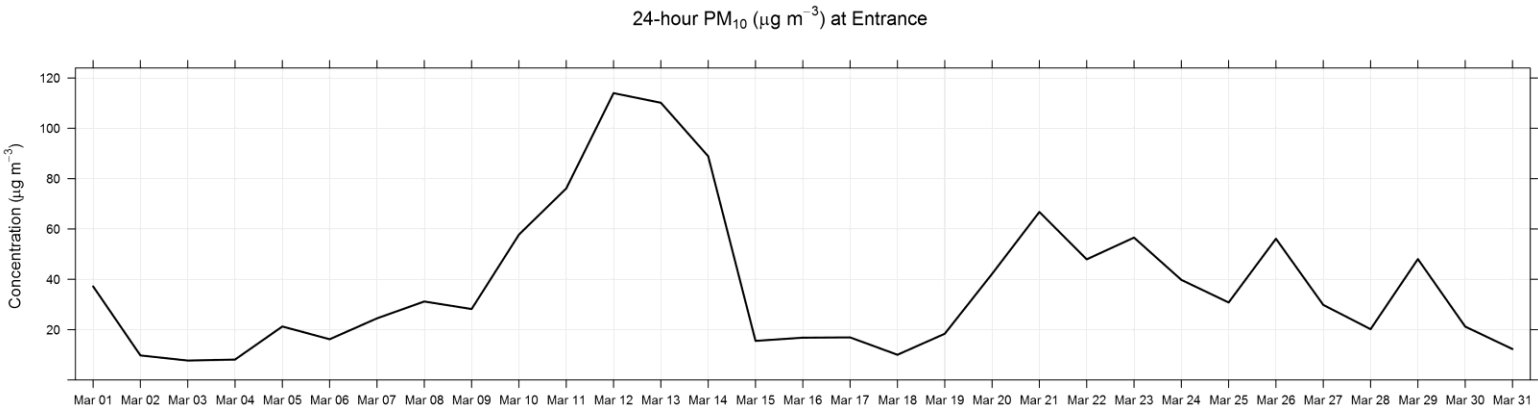
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	3.6	3.8	3.9	9.3	3.9	4.0	6.8	12.5	12.1	34.7	12.7	18.8	11.6	13.7	12.9	12.4	9.3	10.5	15.5	19.2	10.7	9.0	8.8	10.7	34.7	11.3
2	11.8	11.2	9.8	8.5	8.4	6.9	7.1	7.0	7.0	8.3	7.5	7.8	8.8	9.7	7.2	10.2	11.7	6.0	6.8	6.3	7.3	7.7	6.6	6.1	11.8	8.2
3	5.8	5.9	6.2	5.2	5.7	5.2	4.3	6.1	6.2	4.6	4.0	5.0	4.8	4.5	4.3	4.4	4.7	4.4	5.3	6.3	6.7	6.3	5.0	6.1	6.7	5.3
4	7.8	4.4	4.3	4.6	5.0	4.9	4.5	4.5	5.1	5.7	5.4	5.2	5.6	5.5	5.8	5.1	5.2	5.2	5.1	7.6	9.1	7.6	10.8	13.4	13.4	6.1
5	11.5	8.7	8.3	8.9	8.6	7.4	6.8	8.8	10.5	13.0	13.2	17.7	13.5	6.5	10.1	8.0	7.4	8.7	6.3	8.4	11.8	17.5	15.5	14.6	17.7	10.5
6	7.7	7.5	6.1	5.2	6.3	2.4	3.8	25.4	23.7	13.9	9.5	8.5	14.6	5.1	3.6	5.3	2.6	2.1	1.8	1.7	1.5	1.8	1.3	1.1	25.4	6.8
7	1.2	1.7	2.7	1.8	2.8	2.9	4.3	11.7	9.3	15.0	6.8	5.6	5.0	5.5	3.1	3.1	4.5	6.4	8.2	12.3	15.8	14.7	14.8	17.1	17.1	7.4
8	15.8	13.2	5.4	8.6	9.2	7.7	8.9	6.7	11.4	11.3	11.9	15.1	16.4	7.4	7.2	3.1	3.3	1.9	2.0	1.4	1.5	9.6	15.1	10.0	16.4	8.5
9	11.3	12.2	1.8	1.1	2.3	15.4	7.8	11.7	4.2	3.8	8.1	6.8	10.8	3.6	6.2	8.0	5.5	5.1	5.1	4.8	3.8	7.2	7.0	13.3	15.4	7.0
10	17.2	1.6	1.2	2.0	1.8	2.7	18.5	23.9	40.0	33.0	9.1	10.6	2.5	8.7	2.2	3.0	3.0	3.8	6.6	9.1	12.4	9.8	17.6	16.1	40.0	10.7
11	18.4	16.1	10.7	12.4	15.8	14.6	14.9	21.8	31.9	31.5	33.2	10.5	5.5	2.5	1.7	2.3	2.6	5.5	3.6	2.3	11.3	16.9	16.2	18.9	33.2	13.4
12	18.1	14.8	15.1	16.8	17.9	27.3	26.1	23.9	39.6	25.2	11.7	8.4	5.8	4.4	3.9	4.2	5.4	6.6	15.3	23.6	16.0	28.5	29.9	39.7	39.7	17.8
13	30.6	30.1	28.7	25.6	23.5	27.3	29.2	30.0	23.8	10.5	10.4	7.3	11.8	6.3	6.6	5.7	5.2	1.9	3.8	7.3	9.3	20.8	27.7	18.6	30.6	16.8
14	16.8	14.8	13.4	18.1	17.7	26.6	34.2	33.1	33.2	32.6	18.1	10.2	14.9	15.7	12.5	17.0	14.8	19.2	14.4	6.0	2.6	1.7	1.8	2.0	34.2	16.3
15	1.7	1.6	8.9	9.0	13.1	73.5	40.3	10.0	13.7	4.8	4.1	4.1	3.1	3.3	2.6	4.0	1.0	4.2	2.2	3.2	3.1	5.4	8.2	10.6	73.5	9.8
16	13.4	14.0	14.9	17.5	12.2	11.8	7.8	9.2	11.9	1.9	1.7	1.6	2.1	2.7	4.2	5.7	6.7	7.8	8.3	18.1	22.1	24.9	31.0	27.2	31.0	11.6
17	29.3	32.0	32.3	30.0	29.3	27.1	26.2	24.9	8.4	4.9	3.8	3.1	2.8	2.1	1.9	2.6	4.7	8.7	11.9	12.7	13.6	13.7	17.8	18.6	32.3	15.1
18	18.4	18.1	21.2	9.0	6.5	5.2	7.5	8.0	6.9	6.9	6.1	6.5	6.4	5.5	4.9	5.7	5.0	9.1	8.8	9.1	9.0	7.5	10.4	7.0	21.2	8.7
19	9.0	12.1	10.2	8.5	6.7	9.8	11.9	13.2	13.5	10.2	0.2	5.1	11.2	7.4	5.8	6.9	6.9	4.8	1.9	2.2	1.8	1.6	1.6	1.7	13.5	6.8
20	1.6	2.4	4.5	11.1	6.3	4.5	6.9	8.3	12.0	13.7	11.2	16.4	11.7	12.0	7.4	10.7	6.9	5.1	2.5	4.9	4.7	4.4	4.8	2.7	16.4	7.4
21	10.1	17.2	9.2	10.4	9.4	15.9	11.0	20.3	19.6	13.3	26.5	12.4	12.0	12.1	14.5	7.4	5.9	4.6	14.2	19.6	26.5	29.4	37.0	37.4	37.4	16.5
22	43.1	37.9	33.7	36.6	54.9	48.9	54.5	48.8	52.7	49.1	44.6	50.4	49.0	43.5	40.3	37.2	36.4	32.7	34.3	32.1	29.8	29.0	30.9	33.1	54.9	41.0
23	45.3	41.6	42.9	28.7	12.3	29.1	15.2	7.6	7.0	4.1	7.6	5.2	6.8	7.3	6.4	5.4	4.8	2.9	1.6	5.3	4.4	5.8	4.1	1.4	45.3	12.6
24	4.0	2.6	2.2	1.9	5.6	15.0	11.4	5.3	14.7	15.4	23.7	14.8	4.4	7.5	5.2	4.7	4.7	2.4	4.0	5.4	8.2	15.4	15.1	14.9	23.7	8.7
25	14.7	19.3	16.4	17.6	13.6	10.4	3.7	11.9	15.2	5.2	3.5	3.0	3.4	2.1	1.5	1.8	1.8	1.4	1.2	1.2	0.8	2.1	1.7	0.8	19.3	6.4
26	1.1	2.7	3.1	2.0	2.1	2.4	10.1	15.3	18.4	23.0	17.1	18.3	17.9	12.5	15.3	9.4	3.9	3.2	3.2	2.6	7.1	4.2	1.4	2.8	23.0	8.3
27	5.6	6.7	4.4	1.5	2.8	5.1	6.7	13.7	6.8	3.8	4.4	4.9	4.6	7.2	6.8	3.0	3.4	2.8	2.3	4.4	4.0	3.8	2.5	2.3	13.7	4.7
28	2.4	6.6	5.3	10.3	20.8	17.8	11.1	7.4	11.1	6.2	3.4	2.9	5.5	11.2	13.3	9.4	8.6	5.0	6.5	4.3	6.3	6.7	2.9	3.5	20.8	7.9
29	6.6	9.0	3.5	8.6	10.6	13.5	13.8	22.8	11.7	9.1	5.4	6.7	8.7	13.4	19.6	20.2	18.3	19.6	18.8	22.2	21.7	21.3	18.7	15.5	22.8	14.1
30	20.4	22.3	22.7	23.3	34.1	22.1	21.7	20.6	20.7	26.9	10.5	5.4	6.0	7.4	6.9	6.6	4.8	7.1	4.9	5.3	4.9	5.2	7.4	6.1	34.1	13.5
31	6.8	4.8	5.0	4.4	4.4	4.0	4.3	4.2	4.4	9.0	6.6	6.6	9.7	18.9	12.3	9.7	8.0	8.3	9.6	7.4	8.9	9.7	12.1	10.5	18.9	7.9
Hourly Max																										
Hourly Average																										



Number of 1HR Exceedances	0	Guideline	80	UG/M3
Number of 24HR Exceedances	1	Guideline	30	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	73.5	UG/M3		
Maximum 24-HR Average	41.0	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	9.9		Monthly Average	11.2 UG/M3

Entrance PM₁₀ (µg/m³) – March 2018

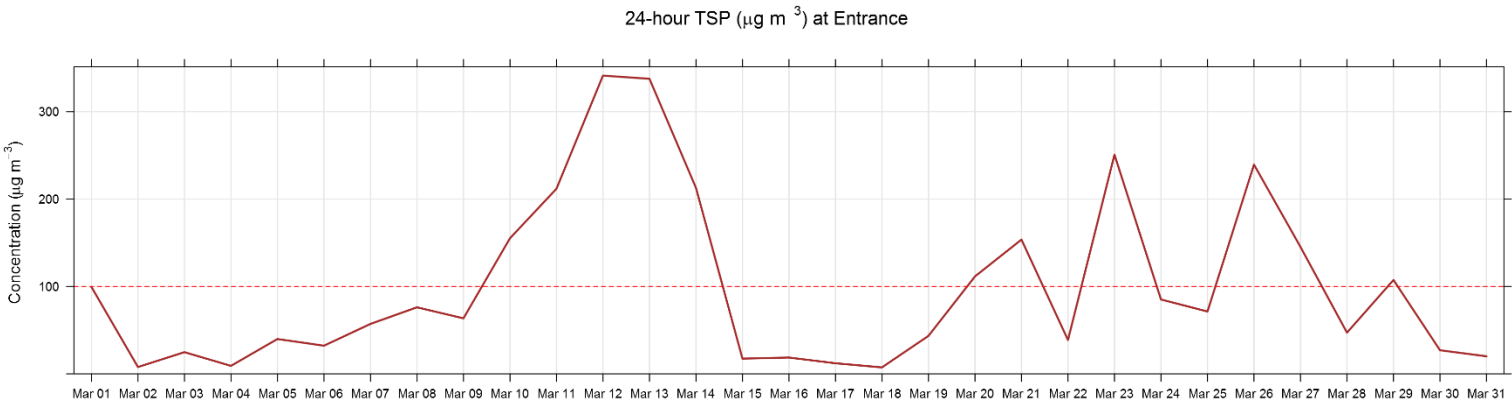
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	14.4	15.0	18.0	34.6	16.8	13.0	23.2	33.5	49.3	185.3	59.5	98.8	49.4	55.5	53.9	30.9	16.0	38.4	20.9	25.7	11.5	9.2	9.0	10.9	185.3	37.2
2	12.0	11.4	10.1	8.7	8.7	7.2	7.4	7.3	7.3	9.8	8.1	8.4	10.3	12.7	8.7	14.0	16.7	7.9	9.3	8.4	10.4	11.0	9.5	8.3	16.7	9.7
3	7.4	7.5	8.1	6.7	7.5	6.9	5.7	7.7	8.4	6.1	5.3	6.9	9.5	11.3	12.7	6.4	6.5	6.0	7.2	8.8	9.3	8.6	6.5	7.8	12.7	7.7
4	10.3	4.6	4.5	4.9	5.5	5.4	4.8	4.8	6.2	7.1	6.7	6.0	7.4	9.5	9.0	7.7	8.2	6.5	5.8	10.9	13.4	9.8	15.2	20.1	20.1	8.1
5	17.2	11.6	10.1	12.0	11.3	8.4	7.0	8.9	13.6	20.2	38.1	50.9	32.0	30.3	45.8	33.9	23.3	20.1	10.3	15.9	17.7	26.2	23.3	21.9	50.9	21.2
6	11.3	10.7	9.0	7.7	9.0	2.8	4.8	34.3	35.5	38.4	22.7	24.3	58.0	18.0	15.3	37.5	14.0	9.0	4.3	6.4	3.6	6.5	3.2	2.0	58.0	16.2
7	3.2	8.0	16.2	4.4	6.1	4.6	11.5	52.3	46.5	90.5	32.3	23.7	21.4	27.4	13.6	13.4	21.9	27.0	22.8	33.5	35.0	24.5	22.2	25.4	90.5	24.5
8	23.6	19.3	8.6	27.9	18.8	11.5	14.3	12.6	56.1	70.3	66.6	77.6	94.3	38.7	31.7	10.0	10.4	5.5	6.0	7.8	4.4	34.2	60.4	37.6	94.3	31.2
9	39.5	43.8	5.1	3.0	7.5	56.5	29.5	49.1	18.0	25.9	50.7	45.3	63.9	20.1	26.8	42.7	25.5	24.5	23.6	15.4	5.9	22.9	10.8	20.0	63.9	28.2
10	52.1	4.3	5.3	11.4	7.3	13.6	95.5	119.0	282.2	215.9	59.4	48.3	9.4	31.1	6.0	9.7	6.8	15.8	39.8	52.5	79.2	52.8	83.7	84.8	282.2	57.7
11	92.3	83.3	63.0	78.5	92.5	83.4	77.7	141.0	201.3	229.7	230.5	52.1	22.2	7.7	3.7	8.2	12.4	29.1	15.0	8.3	49.4	81.5	73.8	89.9	230.5	76.1
12	96.9	84.0	81.3	96.9	102.3	180.1	143.7	149.9	292.6	168.4	71.5	43.1	32.8	17.9	25.8	25.0	32.3	32.4	78.6	161.6	87.8	179.5	185.0	366.3	366.3	114.0
13	222.8	208.8	209.0	169.8	155.8	192.8	278.8	253.5	182.7	61.4	57.5	37.8	67.5	28.8	29.6	34.0	25.8	4.7	15.8	30.7	43.1	107.7	132.5	92.8	278.8	110.2
14	114.1	119.4	103.8	116.6	87.2	130.8	187.8	188.7	187.1	152.5	86.8	58.1	75.9	89.1	72.7	93.2	48.2	78.8	90.5	24.9	12.6	4.6	5.0	5.2	188.7	88.9
15	4.0	2.9	34.3	34.6	20.2	110.2	60.4	15.0	20.5	6.0	4.9	4.8	3.6	3.8	3.2	4.4	1.2	4.5	2.3	3.6	3.2	5.5	8.7	11.1	110.2	15.5
16	14.4	14.2	15.4	20.8	16.5	15.5	9.9	13.4	36.1	4.8	3.6	5.9	7.9	12.6	15.1	10.7	9.8	10.5	10.5	21.7	26.8	32.1	40.0	34.8	40.0	16.8
17	36.8	36.3	36.0	33.5	31.5	29.3	29.8	28.5	8.9	5.5	4.5	3.4	3.3	2.5	2.5	4.6	7.7	9.5	12.6	12.9	13.8	14.0	18.9	19.5	36.8	16.9
18	19.4	18.8	26.3	9.8	7.7	5.7	9.0	10.0	8.3	8.0	7.3	7.9	7.8	6.6	5.6	6.5	5.8	9.9	10.8	11.0	10.3	8.5	11.5	7.7	26.3	10.0
19	12.0	17.3	13.3	10.7	8.7	14.4	20.2	59.2	52.8	28.3	0.4	9.0	40.7	21.0	16.4	41.7	35.4	17.7	3.3	6.1	4.4	2.6	2.8	2.4	59.2	18.4
20	2.3	6.1	14.9	53.7	23.8	25.2	43.3	55.7	84.9	84.6	68.7	124.3	73.7	79.1	42.3	71.5	41.2	30.9	10.2	19.2	17.4	15.0	15.8	7.9	124.3	42.2
21	42.6	83.5	39.0	51.4	63.7	123.8	75.1	131.3	106.6	64.0	169.4	74.3	57.6	68.9	93.8	51.1	37.4	23.5	48.5	38.1	40.4	34.4	42.1	41.8	169.4	66.8
22	49.1	42.5	38.3	42.0	68.5	62.6	65.8	65.2	71.2	61.2	50.1	60.3	56.5	45.6	41.6	40.3	40.6	38.7	43.1	38.3	32.4	29.9	32.0	34.5	71.2	47.9
23	47.9	53.2	57.5	80.0	133.0	345.3	149.4	45.8	44.7	22.0	30.5	34.0	39.4	46.5	37.4	29.5	23.6	17.1	8.4	38.9	19.8	31.8	17.7	4.1	345.3	56.6
24	20.3	8.8	3.1	4.6	9.8	23.7	40.3	32.5	89.2	106.0	146.3	59.0	19.8	47.2	29.5	30.3	25.1	9.2	13.4	20.8	34.5	71.7	60.8	48.7	146.3	39.8
25	47.8	83.5	69.2	77.0	78.4	51.1	12.9	55.2	90.7	26.5	24.1	15.3	24.8	12.6	6.2	8.1	8.4	7.7	3.9	5.4	3.1	14.3	9.5	2.9	90.7	30.8
26	6.0	20.1	20.2	12.9	12.3	12.7	64.1	107.1	127.6	178.5	116.2	121.9	114.7	72.0	96.1	59.3	24.5	19.9	22.2	18.7	56.7	31.6	9.9	21.5	178.5	56.1
27	38.2	54.1	36.5	11.0	19.3	43.0	52.7	115.0	49.2	23.1	30.9	29.1	25.8	50.4	44.7	16.0	20.5	11.9	9.7	18.5	5.3	4.8	3.0	2.7	115.0	29.8
28	2.9	9.2	7.6	13.0	23.1	23.1	14.7	9.6	15.8	8.3	5.0	5.8	25.7	59.7	55.8	37.6	32.8	18.1	25.0	19.2	22.9	24.8	7.6	17.0	59.7	20.2
29	24.1	37.2	11.1	53.2	62.3	91.4	116.0	206.7	67.0	59.5	29.0	36.8	54.2	55.1	43.4	30.8	22.6	22.7	20.8	23.8	23.5	24.4	21.0	16.4	206.7	48.0
30	22.9	25.1	26.0	29.6	100.6	60.3	30.5	28.9	30.1	36.5	12.0	7.1	8.7	10.3	9.7	9.1	6.9	9.9	6.7	6.9	6.5	7.1	9.9	7.6	100.6	21.2
31	9.3	5.8	6.3	5.5	5.2	4.6	5.0	5.9	6.0	12.0	8.6	9.7	14.1	27.7	20.4	20.6	14.5	15.2	23.7	17.0	12.1	13.1	17.3	14.7	27.7	12.3
Hourly Max Hourly Average	222.8	208.8	209.0	169.8	155.8	345.3	278.8	253.5	292.6	229.7	230.5	124.3	114.7	89.1	96.1	93.2	48.2	78.8	90.5	161.6	87.8	179.5	185.0	366.3		
	36.0	37.1	32.5	36.3	39.4	56.7	54.5	66.1	74.1	65.1	48.6	38.4	36.5	32.9	29.6	27.1	20.2	18.8	20.2	23.6	23.1	30.5	31.3	35.1		



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	366.3	UG/M3		
Maximum 24-HR Average	114.0	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	47.3		Monthly Average	38.1 UG/M3

Entrance TSP (µg/m³) – March 2018

Day/ Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	29.8	33.3	75.0	41.8	40.5	30.9	33.6	61.4	84.4	294.2	94.2	263.3	140.4	169.0	154.0	225.4	129.4	410.1	20.9	27.2	8.6	5.9	5.9	7.1	410.1	99.4
2	7.8	7.4	6.6	5.6	5.6	4.7	4.8	4.7	4.7	7.1	5.3	5.6	8.1	12.0	7.1	13.8	18.1	7.1	8.9	7.5	8.7	10.3	8.3	6.6	18.1	7.8
3	5.4	5.5	6.3	5.3	6.5	6.2	4.9	6.1	8.0	5.6	4.6	6.6	120.1	120.5	209.2	16.4	6.4	5.7	7.0	9.0	9.5	8.1	5.4	6.7	209.2	24.8
4	10.1	3.0	2.9	3.2	3.6	3.5	3.1	3.1	4.1	4.8	4.7	4.2	7.2	18.7	30.9	24.0	16.1	5.0	3.9	8.8	11.6	7.5	13.8	20.6	30.9	9.1
5	15.8	8.5	6.6	8.6	7.7	5.4	4.5	5.8	10.9	25.8	85.5	116.5	84.9	91.9	149.9	67.2	76.0	50.2	19.0	23.4	18.6	28.3	25.2	20.5	149.9	39.9
6	9.9	8.2	9.1	7.5	8.5	1.9	3.7	32.5	38.7	66.7	25.1	30.4	68.0	37.1	54.2	172.3	61.6	49.3	11.8	22.5	9.1	28.2	10.6	5.9	172.3	32.2
7	6.0	35.4	55.1	19.0	13.5	11.6	20.7	62.6	112.4	195.1	80.7	64.5	67.3	86.0	46.7	51.5	75.6	102.0	55.8	80.2	59.3	20.9	22.0	26.5	195.1	57.1
8	20.5	16.2	12.7	34.1	21.8	11.9	21.2	22.9	216.2	290.1	231.9	201.8	233.9	136.9	88.5	18.0	26.0	17.3	20.6	38.9	10.3	36.8	57.6	41.5	290.1	76.2
9	51.4	47.0	13.9	6.5	7.6	55.0	46.4	82.7	40.3	104.1	167.1	133.0	172.6	49.7	59.3	153.9	76.2	65.5	62.5	44.6	12.1	40.7	10.8	21.5	172.6	63.5
10	95.9	18.7	28.2	53.1	45.9	63.7	275.2	353.9	980.5	650.5	227.9	123.2	39.7	54.0	14.6	16.0	9.2	24.8	112.7	80.6	113.7	70.0	105.1	166.0	980.5	155.1
11	192.6	239.1	196.2	284.4	337.5	286.1	217.5	467.7	622.9	723.5	660.0	125.2	52.6	13.0	7.5	14.2	37.1	57.5	31.2	13.7	55.8	139.4	123.5	184.3	723.5	211.8
12	220.8	262.4	229.1	334.7	344.4	579.6	382.5	564.4	988.6	488.0	151.2	85.6	69.1	39.8	76.9	84.9	64.2	66.9	98.3	287.3	163.6	491.7	491.1	1626.1	1626.1	341.3
13	713.5	606.2	771.2	600.2	596.0	673.2	1136.0	835.4	610.1	185.6	132.3	68.3	125.7	47.7	67.1	77.4	53.5	13.1	21.7	44.7	77.3	212.1	233.5	202.5	1136.0	337.7
14	323.1	420.4	354.0	366.5	191.0	306.6	427.9	449.1	397.9	223.8	157.8	96.6	154.0	217.1	186.1	216.8	99.2	132.0	230.9	62.5	58.5	17.4	11.6	8.3	449.1	212.9
15	11.5	4.4	53.2	54.2	22.7	117.4	69.3	15.5	22.6	4.1	3.3	3.2	2.4	2.5	2.4	2.9	0.8	3.0	1.5	2.4	2.0	3.6	5.7	7.2	117.4	17.4
16	9.3	9.2	9.9	15.5	13.2	13.8	8.3	11.2	58.4	9.6	6.5	19.2	26.5	25.3	48.7	24.7	10.6	8.1	8.4	15.4	18.6	23.8	29.0	23.9	58.4	18.6
17	26.2	24.8	25.1	23.2	20.7	19.2	19.6	18.7	5.8	3.6	5.3	2.3	2.6	1.8	3.0	12.6	8.8	6.5	8.6	8.4	9.0	9.1	12.4	12.6	26.2	12.1
18	12.6	12.2	20.5	7.1	5.7	4.2	7.0	9.0	7.0	5.8	5.9	6.5	6.5	5.0	4.1	4.9	4.0	6.7	7.7	8.2	7.7	5.8	7.9	5.0	20.5	7.4
19	9.3	13.8	9.7	7.6	6.4	13.7	23.9	181.2	147.6	58.4	0.8	23.2	105.1	45.9	29.5	139.7	139.4	38.7	6.0	17.2	12.6	4.6	4.4	3.9	181.2	43.4
20	3.2	13.6	15.7	97.9	30.5	87.7	124.8	162.8	251.0	264.3	190.6	343.3	178.8	202.3	130.9	208.6	127.9	85.9	24.8	38.5	18.9	36.3	22.3	14.5	343.3	111.5
21	65.4	103.2	91.2	152.4	200.1	395.2	274.2	316.5	178.5	115.1	311.4	172.5	126.4	185.9	283.6	158.0	113.9	61.6	126.1	90.8	82.6	24.5	29.6	28.2	395.2	153.6
22	33.1	28.1	25.5	28.1	51.0	52.4	53.1	55.7	66.2	56.2	40.1	55.4	50.3	31.6	28.3	31.5	34.4	35.5	46.2	37.9	25.0	19.8	21.0	22.5	66.2	38.7
23	31.2	40.1	43.0	329.8	857.7	2007.8	1032.4	264.0	256.1	100.6	106.3	114.9	111.5	141.3	119.3	86.3	53.2	59.9	25.8	100.1	37.0	65.6	28.3	8.2	2007.8	250.8
24	42.4	59.3	2.9	6.5	11.0	26.3	97.5	137.6	225.3	234.0	354.3	87.1	36.7	148.9	70.6	90.4	56.2	19.6	14.4	21.2	44.1	84.3	79.2	91.8	354.3	85.1
25	103.1	136.3	119.5	181.3	197.8	82.0	17.8	79.7	237.7	53.0	66.4	48.4	79.1	55.9	20.4	23.8	25.9	23.3	7.9	16.2	13.4	68.7	45.0	9.2	237.7	71.3
26	33.3	107.3	93.7	66.7	49.5	40.7	203.9	302.3	386.7	668.9	497.4	479.1	453.1	277.9	451.7	283.9	143.8	141.2	138.8	117.7	365.3	208.6	59.9	174.6	668.9	239.4
27	220.4	335.7	248.3	69.1	112.2	266.9	298.5	604.2	181.3	69.9	127.9	124.1	79.7	239.8	218.7	66.5	82.9	38.1	35.6	52.9	4.5	3.6	2.2	1.8	604.2	145.2
28	2.1	7.2	5.9	8.8	15.5	16.1	12.2	8.1	13.2	7.0	9.1	10.6	133.4	241.9	136.0	103.6	88.4	53.2	65.7	63.7	51.3	46.0	10.3	22.0	241.9	47.1
29	24.9	33.9	10.5	94.9	121.1	210.1	380.9	490.6	177.3	152.9	72.6	85.5	152.9	234.6	147.5	64.7	18.3	16.5	14.3	15.9	16.1	17.3	14.3	10.8	490.6	107.4
30	15.5	16.9	17.5	21.1	214.4	127.1	32.7	32.0	34.0	38.8	8.0	5.1	8.4	9.6	8.9	7.9	7.1	8.4	5.7	5.2	5.1	5.7	7.7	5.4	214.4	27.0
31	7.0	4.1	4.6	4.0	3.5	3.2	3.4	6.0	5.8	10.1	6.6	17.1	23.6	33.7	44.4	64.4	37.2	33.3	69.8	46.4	15.5	10.5	15.5	11.7	69.8	20.1
Hourly Max Hourly Average	713.5	606.2	771.2	600.2	857.7	2007.8	1136.0	835.4	988.6	723.5	660.0	479.1	453.1	277.9	451.7	283.9	143.8	410.1	230.9	287.3	365.3	491.7	491.1	1626.1		
	75.9	85.8	82.7	94.8	114.9	178.2	169.1	182.2	205.6	165.1	123.9	94.3	94.2	96.0	93.6	81.5	54.9	53.1	42.3	45.4	43.4	56.6	49.0	90.2		



Number of 24HR Exceedances	11	Guideline	100	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	2007.8	UG/M3		
Maximum 24-HR Average	341.3	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	174.2		Monthly Average	98.9 UG/M3

MetOne BAM PM_{2.5} Calibration



STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 13:00

OPERATOR: Darrin Pike
DATE: March 1, 2018
END TIME (MST): 13:40

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM2.5	Audit Device S/N	682
Serial Number	T19087	Certification Date	11-May-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (° C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	-0.7	645	0.00	16.7	13:34
	MEASURED (AF)	-3.5	649	0.30	16.40	13:35
	AF Difference (AF-I)	-2.8	4	0.30	-0.30	0:01
Adjusted Data	MEASURED (M)	-3.5	649	0.30	16.70	13:35
	Adj Difference (M-I)	-2.8	4	0.30	0.00	0:01
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: inspected and cleaned

Status of sampling tape: new roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed Self-tests - all passed.

MetOne BAM PM₁₀ Calibration



STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 13:40

OPERATOR: Darrin Pike
DATE: March 1, 2018
END TIME (MST): 14:05

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM10	Audit Device S/N	682
Serial Number	F4643	Certification Date	11-May-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (° C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	-3.7	649	0.00	16.7	14:01
	MEASURED (AF)	-3.7	649	0.90	16.90	14:00
	AF Difference (AF-I)	0.5	0	0.90	0.20	0:01
Adjusted Data	MEASURED (M)	-3.7	649	0.90	16.70	14:01
	Adj Difference (M-I)	0.0	0	0.90	0.00	0:00
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: inspected and cleanded

Status of sampling tape: new roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed Self-tests - all passed.

MetOne BAM PM₁₀ Calibration



STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 12:30

OPERATOR: Darrin Pike
DATE: March 6, 2018
END TIME (MST): 12:45

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM10	Audit Device S/N	682
Serial Number	F4643	Certification Date	11-May-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (° C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	-1.8	653	0.00	16.7	12:41
	MEASURED (AF)	2.0	653	0.80	16.99	12:40
	AF Difference (AF-I)	0.5	0	0.80	0.29	0:01
Adjusted Data	MEASURED (M)	-1.6	653	0.80	16.99	12:40
	Adj Difference (M-I)	0.2	0	0.80	0.29	0:01
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: inspected and cleanded

Status of sampling tape: full roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

removal Audit

MetOne BAM PM₁₀ Calibration



STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 12:45

OPERATOR: Darrin Pike
DATE: March 6, 2018
END TIME (MST): 13:25

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM10	Audit Device S/N	682
Serial Number	A3315	Certification Date	11-May-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (° C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	-1.4	654	0.00	16.7	13:21
	MEASURED (AF)	-1.1	653	0.50	15.90	13:20
	AF Difference (AF-I)	0.5	-1	0.50	-0.80	0:01
Adjusted Data	MEASURED (M)	-1.1	653	0.50	16.62	13:21
	Adj Difference (M-I)	0.3	-1	0.50	-0.08	0:00
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Inspected and cleanded

Status of sampling tape: New roll

Nozzle Inspection / cleanliness: Clean

COMMENTS:

Install calibration - performed self tests - all passed.

MetOne BAM TSP Calibration



STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 14:00

OPERATOR: Darrin Pike
DATE: March 1, 2018
END TIME (MST): 15:00

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	TSP	Audit Device S/N	682
Serial Number	A3589	Certification Date	11-May-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. ($^{\circ}$ C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	-2.0	644	0.00	16.7	14:08
	MEASURED (AF)	-1.1	645	0.40	16.69	14:07
	AF Difference (AF-I)	0.9	1	0.40	-0.01	0:01
Adjusted Data	MEASURED (M)	-1.1	645	0.40	16.69	14:08
	Adj Difference (M-I)	0.9	1	0.40	-0.01	0:00
	LIMITS	$\pm 4.0^{\circ}$ C	5 mm Hg	1.0 L/min	± 1.0 L/min	± 2 min

Sample Head Inspect/Cleaning: inspected and cleaned

Status of sampling tape: new roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed self tests - all passed.

Calibration Report

Parameter **NO_x-NO-NO₂**
Air Monitoring Network **Lafarge - Exshaw**



Station Information

Calibration Date	March 1, 2018	Previous Calibration	February 1, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	11:05	End Time (MST)	15:10
Barometric Pressure	647 mmHg	Station Temperature	22.5 Deg C
Calibrator	SABIO 2010	Serial Number	103951108
NO Cal Gas Conc	51.4 ppm	Cal Gas Expiry Date	February 14, 2020
NOx Cal Gas Conc	51.5 ppm	Cal Gas Serial #	cc27839

DACS Information

DACS make **Campbell Scientific CR1000** DACS serial No. **67802**

	Parameter	NO2	NOx	NO
Before	Data Slope	1.005809	0.996277	0.997004
	Data Offset	1.445425	0.860160	0.717368
After	Data Slope	1.002831	0.997506	0.996470
	Data Offset	1.279423	2.096216	2.383206
Channel #		3	1	2
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model **T200** Analyzer serial # **642**

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO Slope	1.040		1.037	
NO Offset	0.0	mV	0.0	mV
NOX Slope	1.043		1.037	
NOX Offset	0.6	mV	0.6	mV
HVPS	771	V	771	V
Moly Temp	315.1	degC	316.5	degC
O3 Flow	81	ccm	81	ccm
RxCell Press	6.4	inHg	6.5	inHg
Sample press	23.8	inHg	23.6	inHg
Sample flow	438	ccm	438	ccm

Notes: Small span adjustment

Calibration Report

Parameter **NOx-NO-NO₂**
Air Monitoring Network **Lafarge - Exshaw**



Station Information

Calibration Date: **March 1, 2018** Station Location: **Exshaw - Lagoon**

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	5000	0.00	0.0	0.0	0.0	-1.4	-1.3	-1.3	N/A	N/A
1	5000	39.00	398.6	397.8	0.8	397.9	397.3	-0.2	1.0017	1.0012
2	5000	20.00	205.2	204.8	0.4	203.0	202.7	-0.4	1.0107	1.0102
3	7000	14.00	102.8	102.6	0.2	100.4	99.3	-0.1	1.0242	1.0328
AFZ	5000	0.00	0.0	0.0	0.0	-1.4	-1.3	-1.3	0.0000	0.0000
AFS	5000	40.00	408.7	407.9	0.8	398.9	396.6	1.5	1.0245	1.0287
Average Correction Factor									1.0122	1.0147

As Found Concentrations: **NO_x= 401.2** **NO= 398.6** As Found Percent Change **NO_x= -1.8%** **NO= -2.3%**

GPT Calibration Data

Dilution Flow **5000** ccm Source Gas Flow **39.00** ccm

O3 Setpoint (V)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-1.3	-1.3	0.0	-1.4	-1.3	-1.3	N/A	N/A	N/A	N/A
NO point	398.7	398.7	0.0	399.0	398.7	-0.3	0.9993	1.0000	N/A	N/A
0.755V	398.7	122.5	276.2	397.2	122.5	273.9	1.0038	1.0000	1.0083	99.2%
0.5V	398.7	229.1	169.6	398.5	229.1	168.3	1.0006	1.0000	1.0074	99.3%
0.3V	398.7	319.5	79.2	397.9	319.5	77.4	1.0020	1.0000	1.0233	97.7%
Average Correction Factor							1.0021	1.0000	1.0130	98.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	0.5	-0.2	ppb	1.0	0.2	1.4	ppb
Auto span	391.0	1.3	390.9	ppb	386.0	1.3	385.3	ppb

Calibration Performed By: **Darrin Pike**

Calibration Summary

Parameter NO₂

Air Monitoring Network Lafarge - Exshaw



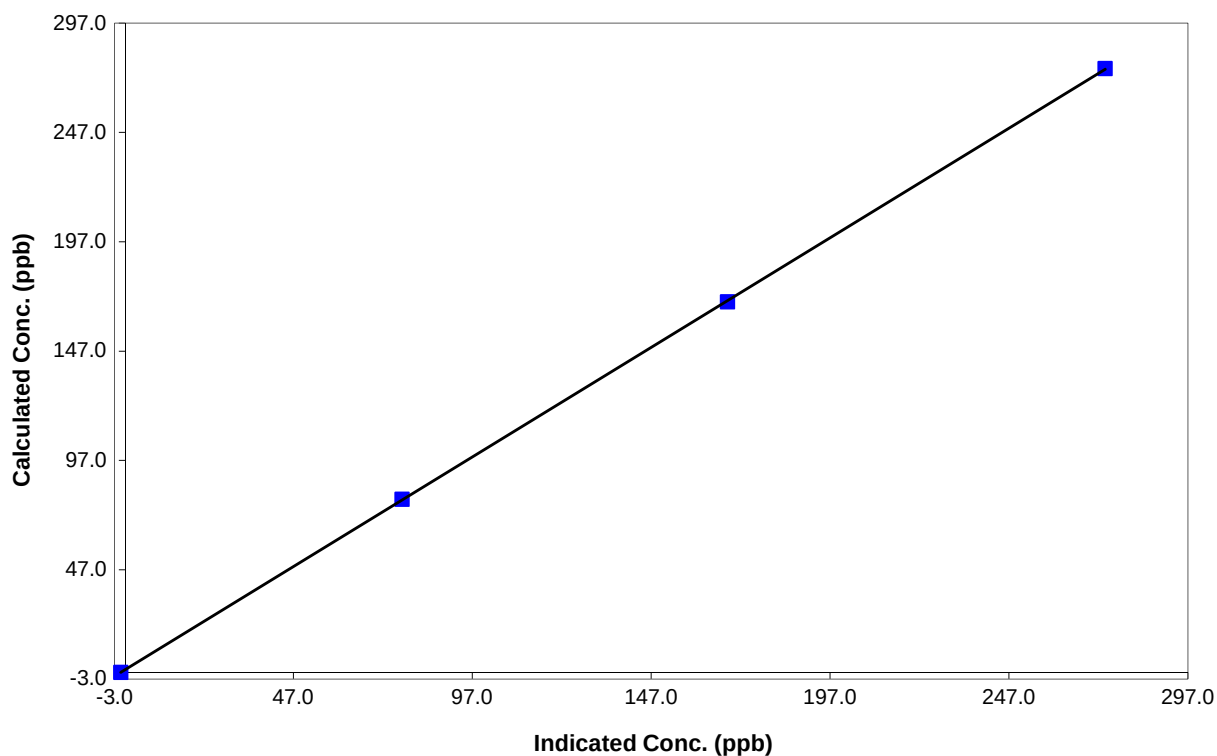
Station Information

Calibration Date	March 1, 2018	Previous Calibration	February 1, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:05	End Time (MST)	15:10
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.3	N/A	Correlation Coefficient	0.999990
276.2	273.9	1.0083		
169.6	168.3	1.0074		
79.2	77.4	1.0233	Slope	1.002831
			Intercept	1.279423

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network Lafarge - Exshaw



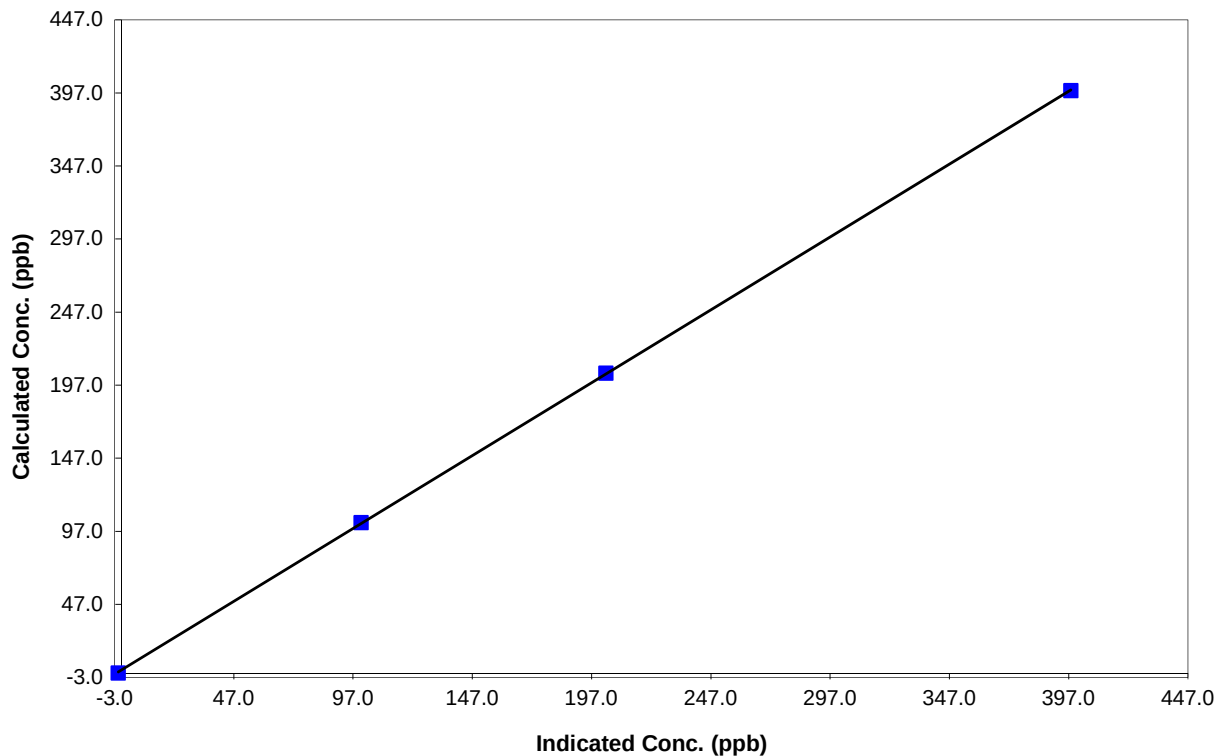
Station Information

Calibration Date	March 1, 2018	Previous Calibration	February 1, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:05	End Time (MST)	15:10
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.4	N/A	Correlation Coefficient	0.999984
398.6	397.9	1.0017		
205.2	203.0	1.0107		
102.8	100.4	1.0242	Slope	0.997506
			Intercept	2.096216

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network Lafarge - Exshaw



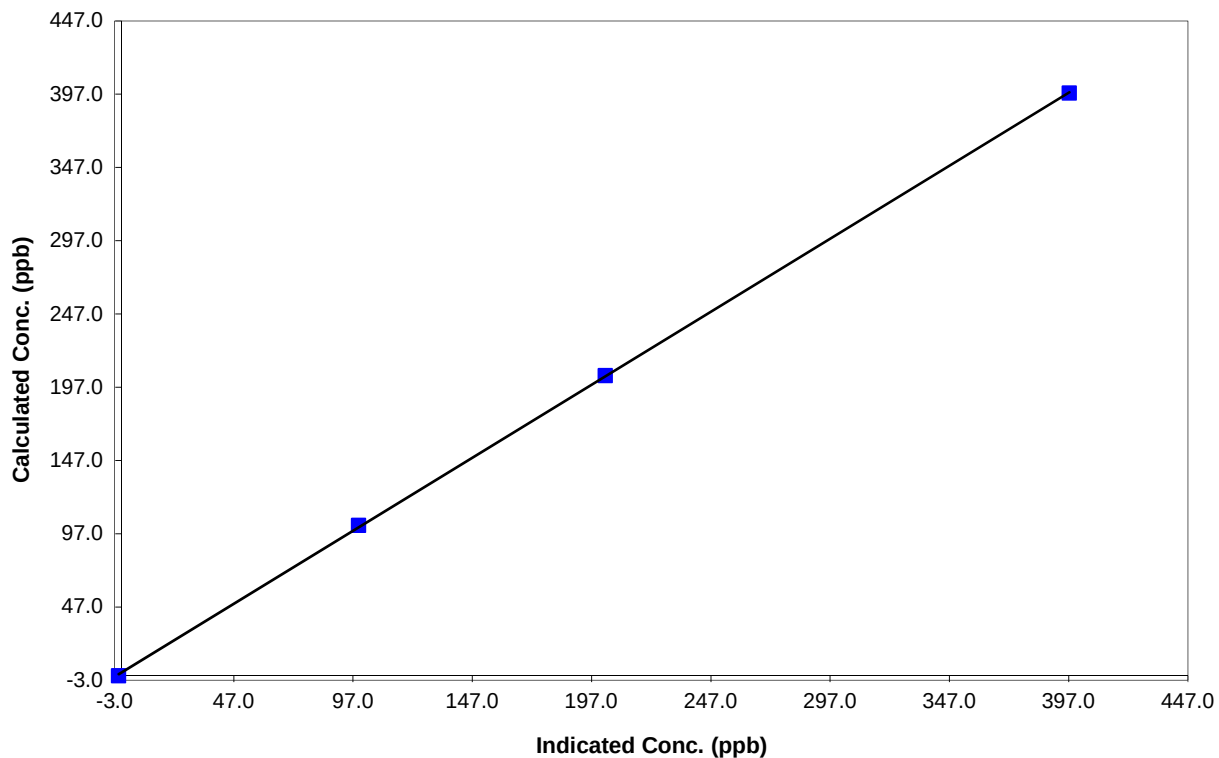
Station Information

Calibration Date	March 1, 2018	Previous Calibration	February 1, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:05	End Time (MST)	15:10
Analyzer make	T200	Analyzer serial #	642

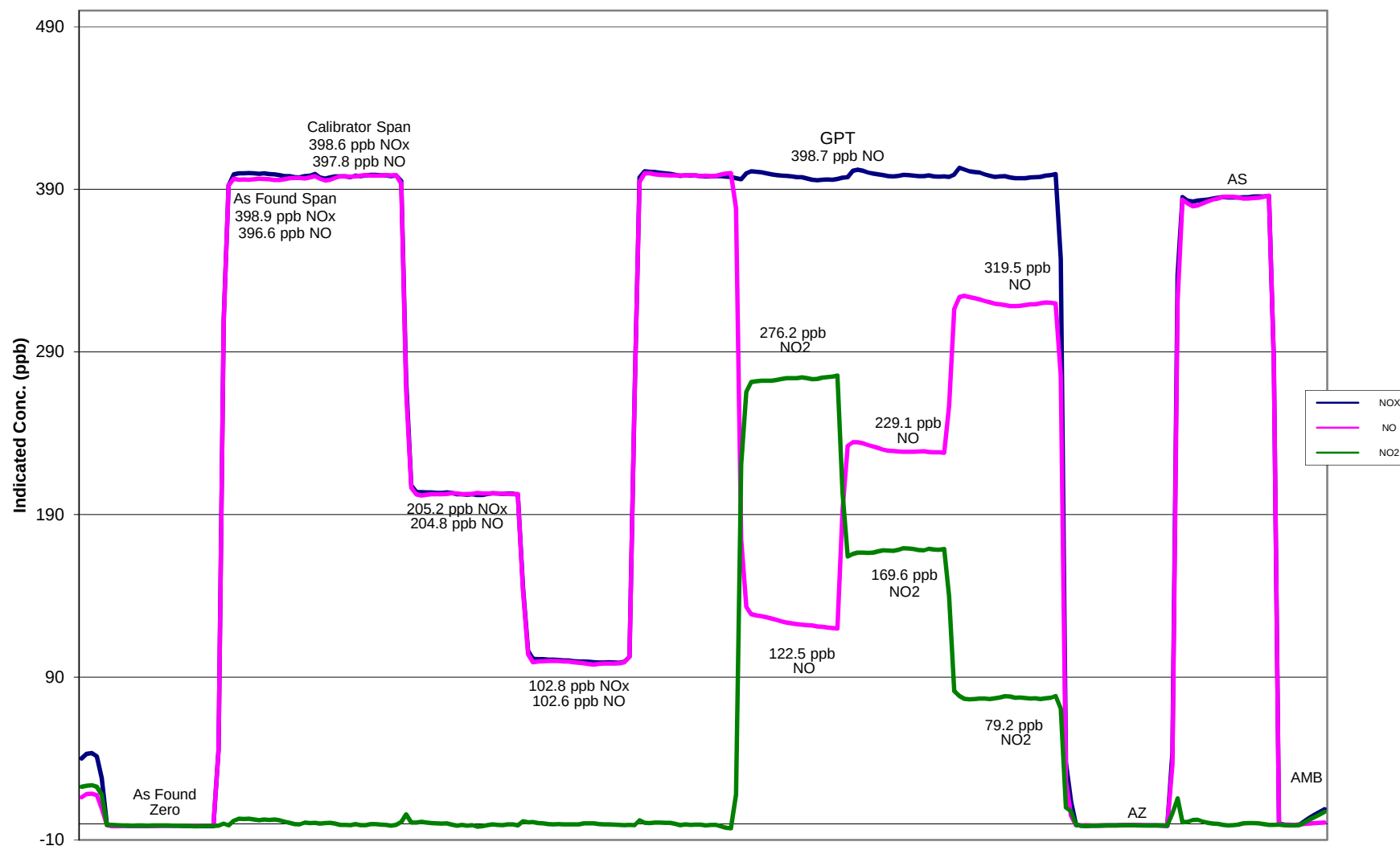
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.3	N/A	Correlation Coefficient	0.999964
397.8	397.3	1.0012		
204.8	202.7	1.0102		
102.6	99.3	1.0328	Slope	0.996470
			Intercept	2.383206

NO Calibration Curve



NOX Calibration



March 1, 2018

Calibration Report



Parameter SO2

Air Monitoring Network Lafarge - Exshaw

Station Information

Calibration Date	March 1, 2018	Previous Calibration	February 1, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Reason:	☐ Routine	☐ Install	☐ Removal
			Other:
Start Time (MST)	11:05	End Time (MST)	15:05
Barometric Pressure	652 mmHg	Station Temperature	22.1 Deg C
Calibrator	SABIO 2010	Serial Number	103951108
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	July 14, 2020
Gas Cert Reference	cc27839		
DACS make	Campbell Scientific CR1000	DACS serial No.	67802
DACS voltage range	0 - 5 VDC	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.998833	Calculated slope	0.999226
Calculated intercept	-1.112410	Calculated intercept	-0.411304
Analyzer make	API Model 102A	Analyzer serial #	393

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Slope	0.918		0.911	
Offset	44.4	mV	44.4	mV
Pressure	23.7	in Hg	23.5	in Hg
Sample Flow	490	ccm	463	ccm
UV Lamp	2683	mV	2637	mV
HVPS	690	V	690	V
PMT Temp	7.3	degC	7.3	degC

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
5000	0.00	0.0	1.3	N/A
5000	39.00	393.2	394.4	0.9969
5000	20.00	202.4	202.4	0.9999
7000	14.00	101.4	101.1	1.0033
5000	0.00	0.0	1.3	As found zero
5000	39.00	393.2	394.6	As found span
Average Correction Factor				1.0000

Calculated value of As Found Response: 391.7 ppb Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.9	ppb	1.4	ppb
Auto span	388.4	ppb	386.0	ppb

Notes: Small span adjustment.

Calibration Performed By: Darrin Pike

Calibration Summary

Parameter SO2

Air Monitoring Network Lafarge - Exshaw



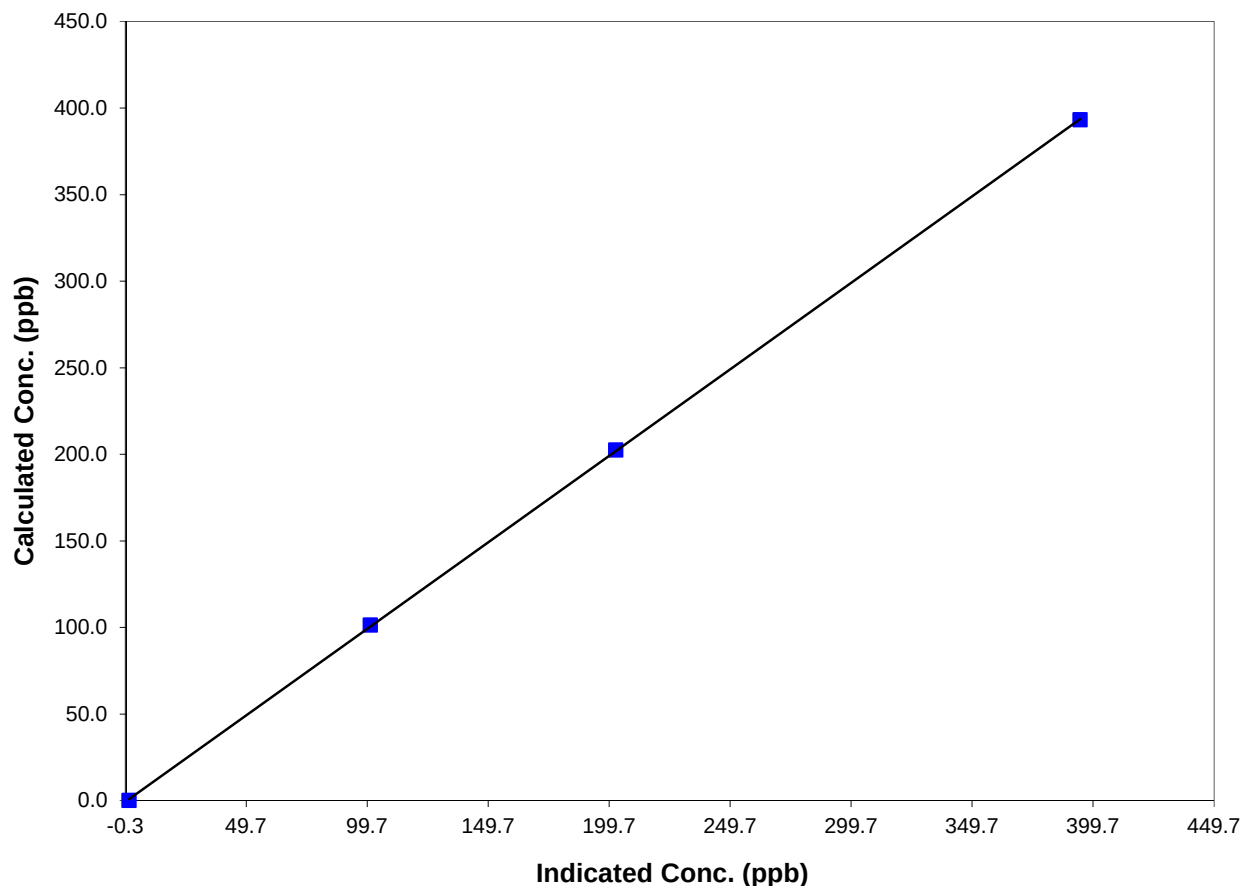
Station Information

Calibration Date	March 1, 2018	Previous Calibration	February 1, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:05	End Time (MST)	15:05
Analyzer make/model	API Model 102A	Analyzer serial #	393

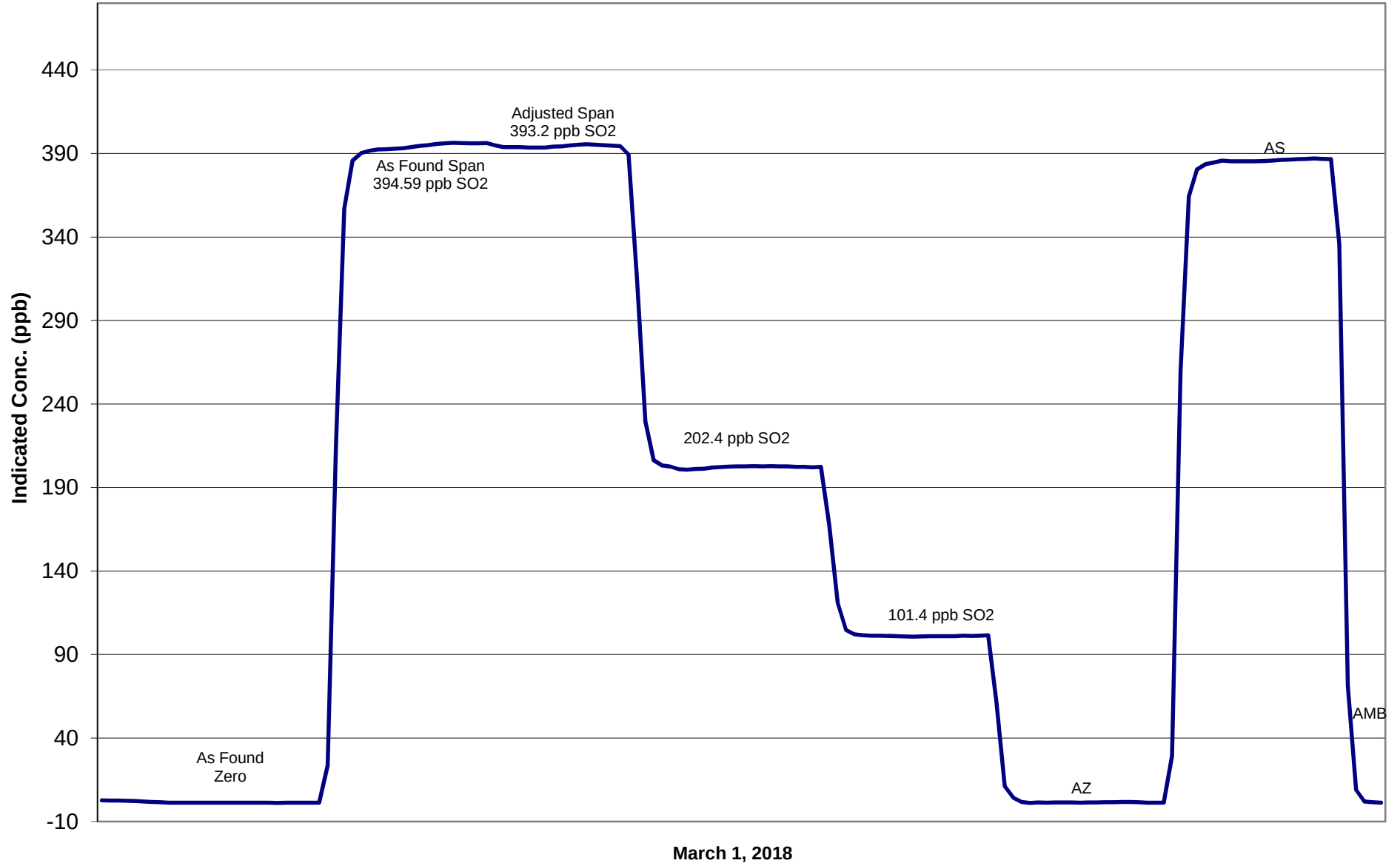
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.3	N/A	Correlation Coefficient	0.999976
393.2	394.4	0.9969		
202.4	202.4	0.9999		
101.4	101.1	1.0033	Slope	0.999226
			Intercept	-0.411304

SO2 Calibration Curve



SO2 Calibration



AIR QUALITY MONITORING
Field Service Report

Air Monitoring Network / Client: Lafarge – Exshaw

Station Information

Visit Date: March 1, 2018	Project Number: 151-09626-00
Station Location: Exshaw – Lagoon	Station Name: Lafarge – Exshaw
Reason for Visit: Routine monthly calibrations	
Arrival Time: 10:30 MST	Departure Time: 15:30 MST
Weather Conditions: overcast and -2 degC.	

Record of Hours

Parts Used

Employee	Category	Hours	Qty	Parts Description
DP	TRA	3	2	47mm filters
DP	CAL	5		

Station Information

Time (MST) Comments

10:30 – Signed in at Lafarge Plant

10:45 - Arrived at station. Started unloading and setting up gear

11:10 - Started AF calibrator Zero on NOx and SO2.

11:31 – AF Zero was good. Started AF calibrator Span.

11:45 - NOx/SO2 spans adjusted

12:54 - SO2 calibration completed, no issues noted. NOx GPT reference point started, no issues noted in the first portion of the calibration.

13:00 – Flagged all PM channels for calibrations.

13:15 - Started introducing O3 for GPT portion of calibration.

13:40 - BAM PM2.5 calibration completed with no issues.

14:05 - BAM PM10 calibration completed with no issues.

14:18 - GPT portion of calibration went well, no issues noted. Started AIC on NOx and SO2.

14:25 - BAM TSP calibration completed with no issues

15:30 Left plant after signing out.

AIR QUALITY MONITORING
Field Service Report

NOTES:

- All analyzers in sample mode → OK
- Confirmed operation of manifold intake fan → OK
- All sample lines connected properly → OK

Technicians – Darrin Pike

AIR QUALITY MONITORING
Field Service Report

Air Monitoring Network / Client: Lafarge – Exshaw

Station Information

Visit Date: March 6, 2018	Project Number: 151-09626-00
Station Location: Exshaw – Lagoon	Station Name: Lafarge – Exshaw
Reason for Visit: Replace BAM PM10 analyzer	
Arrival Time: 12:00 MST	Departure Time: 13:30 MST
Weather Conditions: overcast and -4 degC.	

Record of Hours

Parts Used

Employee	Category	Hours	Qty	Parts Description
DP	Site work	1.5		

Station Information

Time (MST) Comments

12:00 – Signed in at Lafarge Plant

12:30 – arrived at Lagoon site

12:40- completed a removal audit on PM 10 analyzer S/N F4643

12:40 – installed PM10 analyzer S/N A3315

13:25 – completed install calibration for PM10 analyzer

13:30 – left the lagoon site

NOTES:

- All analyzers in sample mode → OK
- Confirmed operation of manifold intake fan → OK
- All sample lines connected properly → OK

Technicians – Darrin Pike

MetOne BAM PM_{2.5} Calibration



STATION: Lafarge
LOCATION: Exshaw - Windridge
START TIME (MST): 13:50

OPERATOR: Darrin Pike
DATE: March 6, 2018
END TIME (MST): 14:14

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM2.5	Audit Device S/N	624
Serial Number	U21074	Certification Date	30-Nov-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (° C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>As Found Data</i>	Audit values (I)	-0.4	646	0.00	16.7	14:08
	MEASURED (AF)	-0.3	651	0.50	17.04	14:09
	AF Difference (AF-I)	0.1	5	0.50	0.34	0:01
<i>Adjusted Data</i>	MEASURED (M)		651	0.50	16.65	14:08
	Adj Difference (M-I)	#VALUE!	5	0.50	-0.05	0:00
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: inspected and cleaned

Status of sampling tape: New roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

MetOne BAM PM₁₀ Calibration



STATION: Lafarge
LOCATION: Exshaw - Windridge
START TIME (MST): 14:10

OPERATOR: Darrin Pike
DATE: March 6, 2018
END TIME (MST): 14:40

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
	PM10	Audit Device S/N	624
Serial Number	U21075	Certification Date	30-Nov-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>As Found Data</i>	Audit values (I)	-0.8	647	0.00	16.7	14:35
	MEASURED (AF)	-0.3	651	0.40	17.10	14:34
	AF Difference (AF-I)	0.5	4	0.40	0.40	0:01
<i>Adjusted Data</i>	MEASURED (M)	-0.3	651	0.40	16.70	14:35
	Adj Difference (M-I)	0.5	4	0.40	0.00	0:00
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: inspected and cleaned

Status of sampling tape: new roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed self tests - all passed.

MetOne BAM TSP Calibration



STATION: Lafarge
LOCATION: Exshaw - Windridge
START TIME (MST): 14:14

OPERATOR: Darrin Pike
DATE: March 6, 2018
END TIME (MST): 14:55

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	TSP	Audit Device S/N	624
Serial Number	U21073	Certification Date	30-Nov-17

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>As Found Data</i>	Audit values (I)	0.5	648	0.00	16.7	14:47
	MEASURED (AF)	-0.2	651	0.40	17.50	14:48
	AF Difference (AF-I)	-0.7	3	0.40	0.80	0:01
<i>Adjusted Data</i>	MEASURED (M)	-0.2	651	0.40	16.72	14:47
	Adj Difference (M-I)	-0.7	3	0.40	0.02	0:00
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: inspected and cleaned

Status of sampling tape: new roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

AIR QUALITY MONITORING
Field Service Report

Air Monitoring Network / Client: Lafarge – Exshaw

Station Information

Visit Date: March 6, 2018	Project Number: 151-09626-00
Station Location: Exshaw – Windridge	Station Name: Lafarge – Windridge
Reason for Visit: Routine monthly calibrations	
Arrival Time: 13:30 MST	Departure Time: 16:30 MST
Weather Conditions: clear and -1degC.	

Record of Hours

Parts Used

Employee	Category	Hours	Qty	Parts Description
DP	CAL	3		
	TRV	3		

Station Information

Time (MST) Comments

12:00 – Arrived at LaFarge plant, signed in at the Plant

12:30 – Arrived at the lagoon site to replace PM10 sampler

13:30 - Arrived at Windridge site

13:50 - Flagged all PM channels at Windridge site

13:50 - BAM PM2.5 calibration completed with no issues.

14:10 - BAM PM10 calibration completed with no issues. .

14:30 - BAM TSP calibration completed with no issues.

15:00 – left Windridge to audit Grimms

West Sharp:
No access

Berm Sharp:
No access

Entrance Sharp:
Measured Sample flow = 1.1 LPM
Sharp AmbT = -1 degC
Audit AmbT = -0 degC

16:30 - Left site after signing out of control room.



AIR QUALITY MONITORING
Field Service Report

NOTES:

- All analyzers in sample mode → OK
- Confirmed operation of manifold intake fan → OK
- All sample lines connected properly → OK

Technician: Darrin Pike