REPORT N^{O} 171-00556-00

AMBIENT AIR QUALITY MONTHLY REPORT

JULY 2018

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Lafarge Canada Inc.

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

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Project Number: 171-00556-00

August 24, 2018

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Dear Ms. Brygger,

Subject: Ambient Air Quality Monthly Report – July 2018

The operational uptime for the meteorological systems and all analyzers at the Lagoon station was over 99% in July. There were no contraventions of the 24-hour TSP and $PM_{2.5}$ Alberta Ambient Air Quality Objectives (AAAQOs) in July at the Lagoon monitoring location.

All analyzers at the Windridge station had over 96% operational uptime in July. There were no exceedances of the 24-hour TSP AAAQO. There were no exceedances of the 24-hour $PM_{2.5}$ AAAQO nor the 1-hour $PM_{2.5}$ AAAQG.

Data collected at all of the GRIMM monitors are considered Industrial Ambient Monitors and are meant for assessing the performance of Lafarge Exshaw's Fugitive Dust Control Best Management Practices – Program. The operational uptime at the 3 monitors was as follows: 49.7% at the West monitor due to 1 hour of instrument maintenance and 15.5 days of pump failure, 62.0% at the Berm monitor due to 1 hour of instrument maintenance and 11.75 days of pump failure, and 99.9% at the Entrance monitor due to 1 hour of instrument error. The Entrance GRIMM monitor exceeded the 24-hour TSP AAAQO for 14 days and did not exceed the 24-hour $PM_{2.5}$ AAAQO, while the Berm GRIMM had 7 exceedances of the TSP Objective and 0 exceedances of the $PM_{2.5}$ Objective. The West GRIMM monitor did not record any exceedances of the 24-hour TSP or $PM_{2.5}$ Objective, as well as the 1-hour $PM_{2.5}$ AAAQG.

During the month of July, there was construction taking place in a variety of areas in Exshaw. Power lines and poles in the Exshaw community were being modified with tree removal and wood chipping. Also, to the west of the Lagoon monitor, building construction has been going on in the Industrial Park.

There were forest fires in the Okanagan region of British Columbia during July and appear to have created smoky conditions in the Bow Valley, Exshaw, area resulting in higher PM readings near the end of the month.

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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REVIEWED BY

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TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

1 INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon, Windridge, and the GRIMM monitors in Exshaw, AB. The station is operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and is a requirement of Lafarge's Approval 1702-02-04. This report contains data collected between July 1, 2018 and July 31, 2018.

This monthly report was prepared by Rowena Seto, Junior 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 JULY 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	18.8	0	8.0	-
SO_2 (ppb)	100.0	16.9	0	3.5	0
$PM_{2.5}$ ($\mu g/m^3$)	100.0	25.2	0	17.1	0
PM_{10} ($\mu g/m^3$)	100.0	129.3	-	33.1	-
TSP ($\mu g/m^3$)	100.0	196.4	-	49.8	0
Temperature (°C)	99.9	31.6	-	22.4	-
Wind Speed (km/hr) /Direction (Degrees)	99.9	43.3/W	-	24.7/WSW	-
Precipitation (mm)[2]	99.9	15.0	-	75.75*	-

* Monthly Total Accumulation of Precipitation (mm)

Data Quality Notes:

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

Calibration/Maintenance Notes:

- The NO_x and SO_2 analyzers had 100% uptime for the month of July.
- The $PM_{2.5}$, PM_{10}, and TSP analyzers had 100% uptime for the month of July.
- The meteorological analyzers had 99.9% uptime due to 1 hour of instrument maintenance on July 10th.

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	30.8	0*	15.1	0
PM_{10} (µg/m^3)	96.5	166.9	-	43.7	-
TSP (µg/m^3)	99.5	252.9	-	69.9	0

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

Data Quality Notes:

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

Calibration/Maintenance Notes:

- The $PM_{2.5}$ and TSP analyzers had 99.5% uptime for the month of July due to 4 hours of power outage (2 hours on July 5th and 2 hours on July 6th).
- The PM_{10} analyzer had 96.5% uptime for the month of July due to 4 hours of power outage (2 hours on July 5th and 2 hours on July 6th) and 22 hours of downtime because the filter tape roll in the instrument ran out (July 11th – 12th).

2.3 WEST GRIMM

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

Table 2-3 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
$PM_{2.5}$ (µg/m^3)	49.7	16.3	0*	7.3	0
PM_{10} (µg/m^3)	49.7	74.5	-	20.3	-
TSP (µg/m^3)	49.7	234.0	-	48.4	0

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

Data Quality Notes:

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

Calibration/Maintenance Notes:

- Due to 1 hour of instrument maintenance (July 12th) and an extended period of pump failure (July 16th – 31st), all analyzers had 49.7% uptime for the month of July.

2.4 BERM GRIMM

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

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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)	62.0	46.3	0*	15.4	0
PM_{10} (µg/m^3)	62.0	371.7	-	100.3	-
TSP (µg/m^3)	62.0	981.9	-	238.3	7

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

Data Quality Notes:

- There was no exceedance of the 24-hour $PM_{2.5}$ AAAQG.
- There was no exceedance of the 1-hour $PM_{2.5}$ AAAQG.
- There were 7 exceedances of the 24-hour TSP AAAQG.

Calibration/Maintenance Notes:

- Due to 1 hour of instrument maintenance (July 12th) and an extended period of pump failure (July 20th – 31st), the analyzer had 62.0% uptime for the month of July.

2.5 ENTRANCE GRIMM

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

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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)	99.9	85.2	1*	29.6	0
PM_{10} (µg/m^3)	99.9	406.3	-	108.4	-
TSP (µg/m^3)	99.9	684.7	-	203.4	14

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

Data Quality Notes:

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

Calibration/Maintenance Notes:

- All analyzers had 99.9% uptime for the month of July due to 1 hour of instrument error (July 30th).

3 LAGOON STATION

The Lagoon trailer contains NO_x, SO_2, TSP, PM_{10}, and $PM_{2.5}$ analyzers as well as meteorological sensors, and is shown in Figure 3-1. An ambient air quality station has been at this location since 2002, providing a long-term data record for air quality in the Exshaw area.

This section provides a summary of the monitoring activities for the Lagoon ambient air quality station, including: a table of instrumentation (Table 3-1), a data summary table (Table 3-2), site visit notes, a wind rose (Figure 3-2) and tables and graphs illustrating the monitoring results for July 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

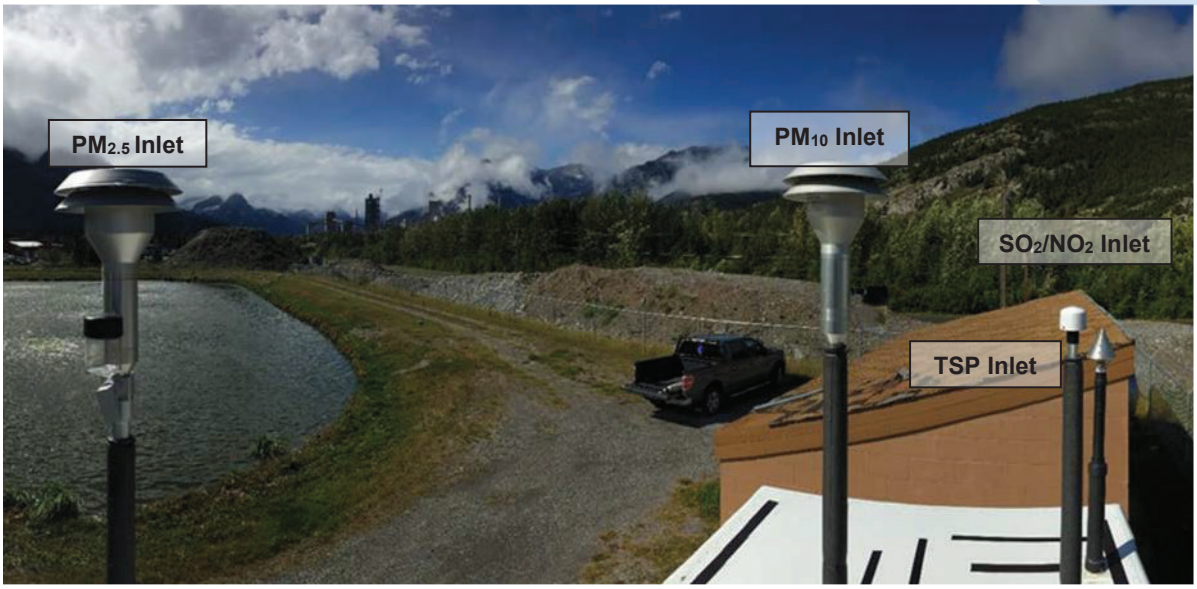

Figure 3-1 Inlets on the top of WSP's Lagoon monitor

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 was calibrated on July 10th. The monitor had 100% uptime in July.

3.1.2 SO_2 MONITORING

The SO_2 monitor was calibrated on July 10th. The monitor had 100% uptime in July.

3.1.3 PM MONITORING

All BAM monitors were calibrated on July 12th. For the month of July, the $PM_{2.5}$, PM_{10}, and TSP analyzers had 100% operation time.

3.1.4 METEOROLOGICAL MONITORING

All meteorological sensors had 99.9% operation time due to 1 hour of instrument maintenance on July 10th.

3.2 MONITORING RESULTS AND TRENDS

The following wind rose (Figure 3-2) illustrates the frequency of wind speed by wind direction for the month of July 2018. Table 3-2 summarizes the hourly and daily concentrations recorded in July 2018. Figure 3-3 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-4 shows daily average concentrations recorded during July 2018 for the pollutants listed in

Table 3-2.

There was no exceedance of both the 24-hour TSP (100 µg/m^3) and $PM_{2.5}$ (30 µg/m^3) AAAQO. Historically in July, the average number of 24-hour TSP AAQO exceedances and 24-hour $PM_{2.5}$ AAAQO exceedances are both zero. The maximum number of 24-hour TSP AAQO exceedances was 2 in 2014, while the maximum number of 24-hour $PM_{2.5}$ AAQO exceedances was 3 in 2017.

The wind rose (Figure 3-2) indicates that the winds predominantly came from the west-southwest, west, and east-northeast directions. These directions follow the general orientation of the valley, but the large percentage of winds from the east-northeast directions is atypical of the monthly winds recorded at the station. However, winds from this direction can be more prevalent in the summer months.

Table 3-2 Summary of July 2018 data at Lagoon

Parameter	Guideline / 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	-	4.0	18.8	17	23	1.6	48.7	8.0	16	100.0
SO_2 (ppb)	172	48	Lagoon	0	0	1.1	16.9	30	9	17.2	268.0	3.5	12	100.0
$PM_{2.5}$ ($\mu g/m^3$)	80	30	Lagoon	0	0	7.6	25.2	30	10	16.3	270.3	17.1	30	100.0
PM_{10} ($\mu g/m^3$)	-	-	Lagoon	-	-	19.0	129.3	13	21	28.5	78.3	33.1	13	100.0
TSP ($\mu g/m^3$)	-	100	Lagoon	-	0	25.9	196.4	13	21	28.5	78.3	49.8	13	100.0
Temperature (°C)	-	-	Lagoon	-	-	16.5	31.6	17	16	11.2	280.2	22.4	17	99.9
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	12.6	43.3/W	7	12	43.3	252.6	24.7/WSW	7	99.9
Precipitation (mm)	-	-	Lagoon	-	-	0.1	15.0					75.8	-	99.9

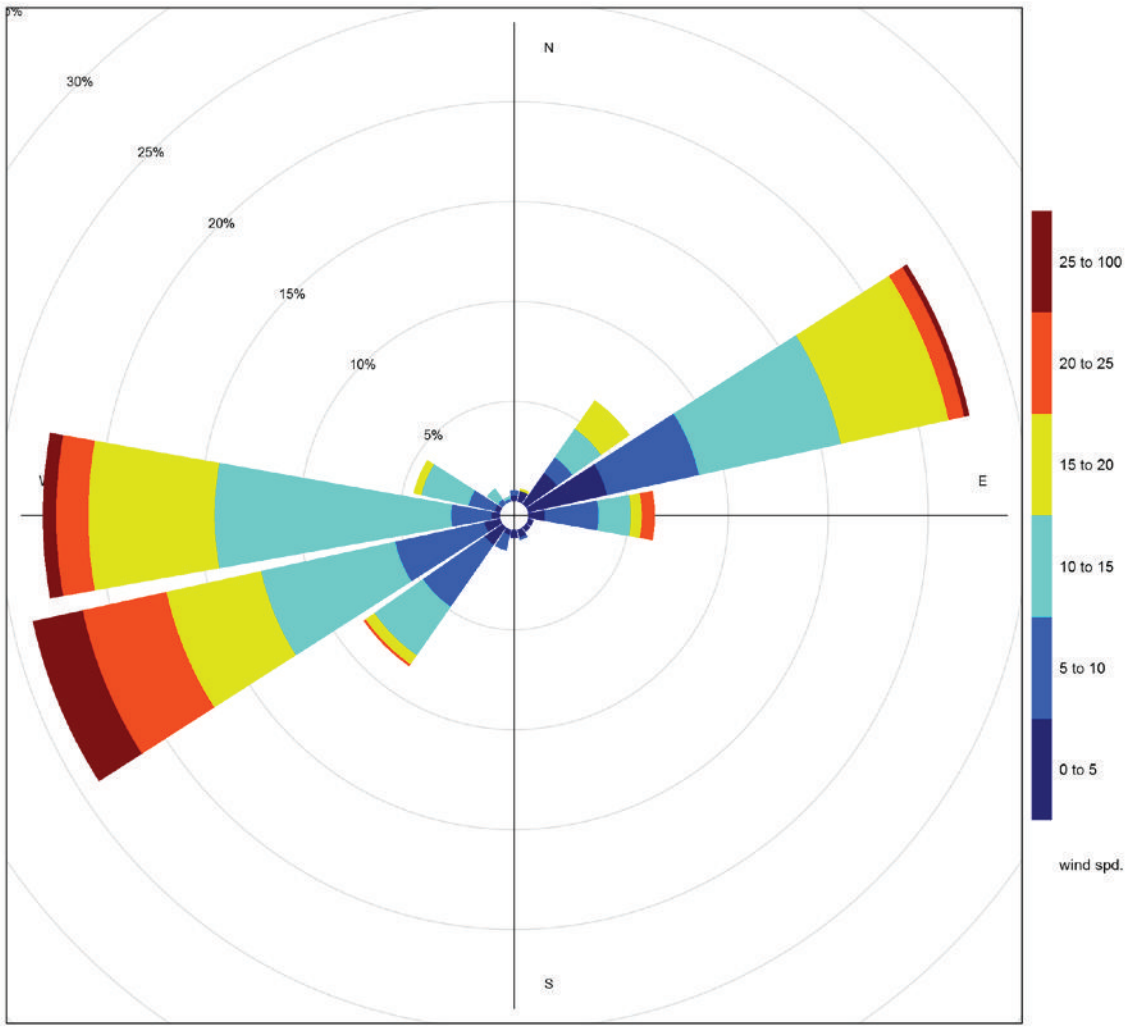

Figure 3-2 July 2018 wind rose from the Lagoon Station

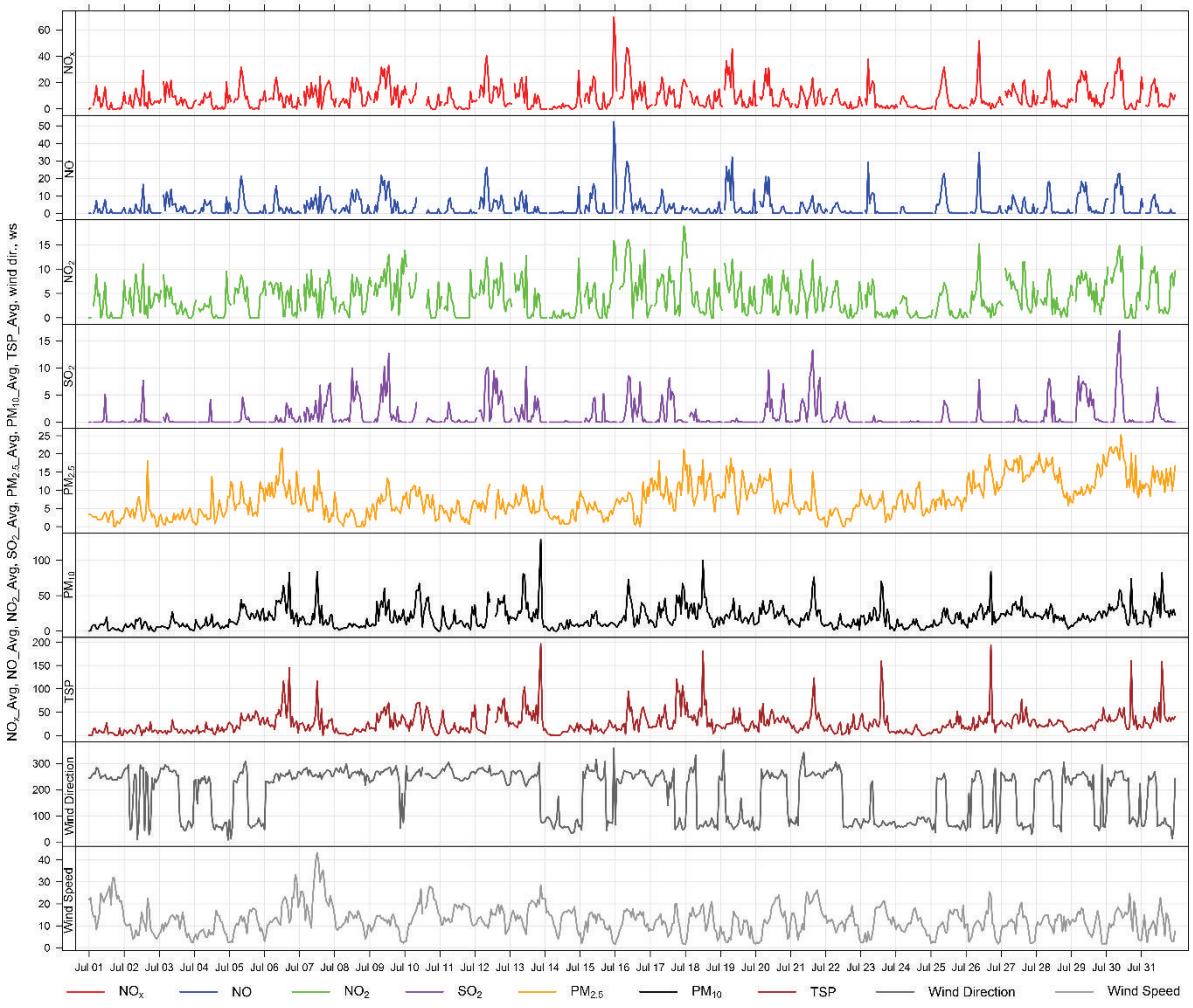

Figure 3-3 1-hour concentrations of NO_x, SO_2, particulate matter, wind direction and wind speed at the Lagoon monitor

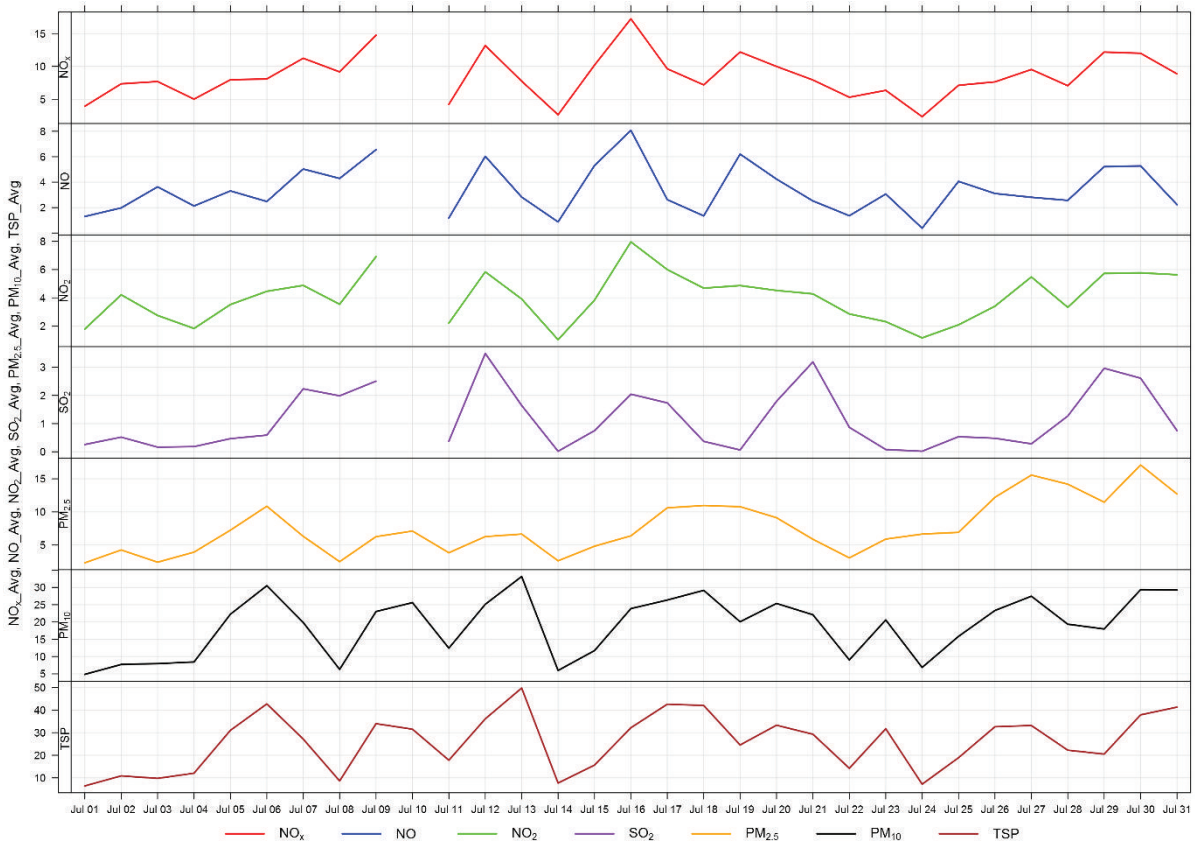

Figure 3-4 24-hour concentrations of NO_x, SO_2, and particulate matter at the Lagoon monitor

Figure 3-5 through Figure 3-7 show the variation in concentrations over various time averaging periods for PM, SO_2 and NO_x. The particulate matter plot in Figure 3-5 shows that PM_{10} and TSP concentrations show a diurnal pattern associated with Lafarge operations, daytime activities from other industrial sources and impacts from traffic. This month the diurnal pattern of TSP differs from PM_{10} through the afternoon hours. A larger percentage of winds from the east-northeast directions may have resulted in different sources (other than Lafarge) influencing the Lagoon monitor during those hours. PM_{10} and TSP are generally associated with dust from fugitive sources.

Figure 3-6 shows the variation of SO_2 over various time periods. SO_2 concentrations patterns are dependent on the timing of the highest SO_2 concentrations recorded in the month. Figure 3-7 shows the variation of NO_x, NO and NO_2, with the peak of all three pollutants occurring in the early morning. This may be indicative of a peak in traffic.

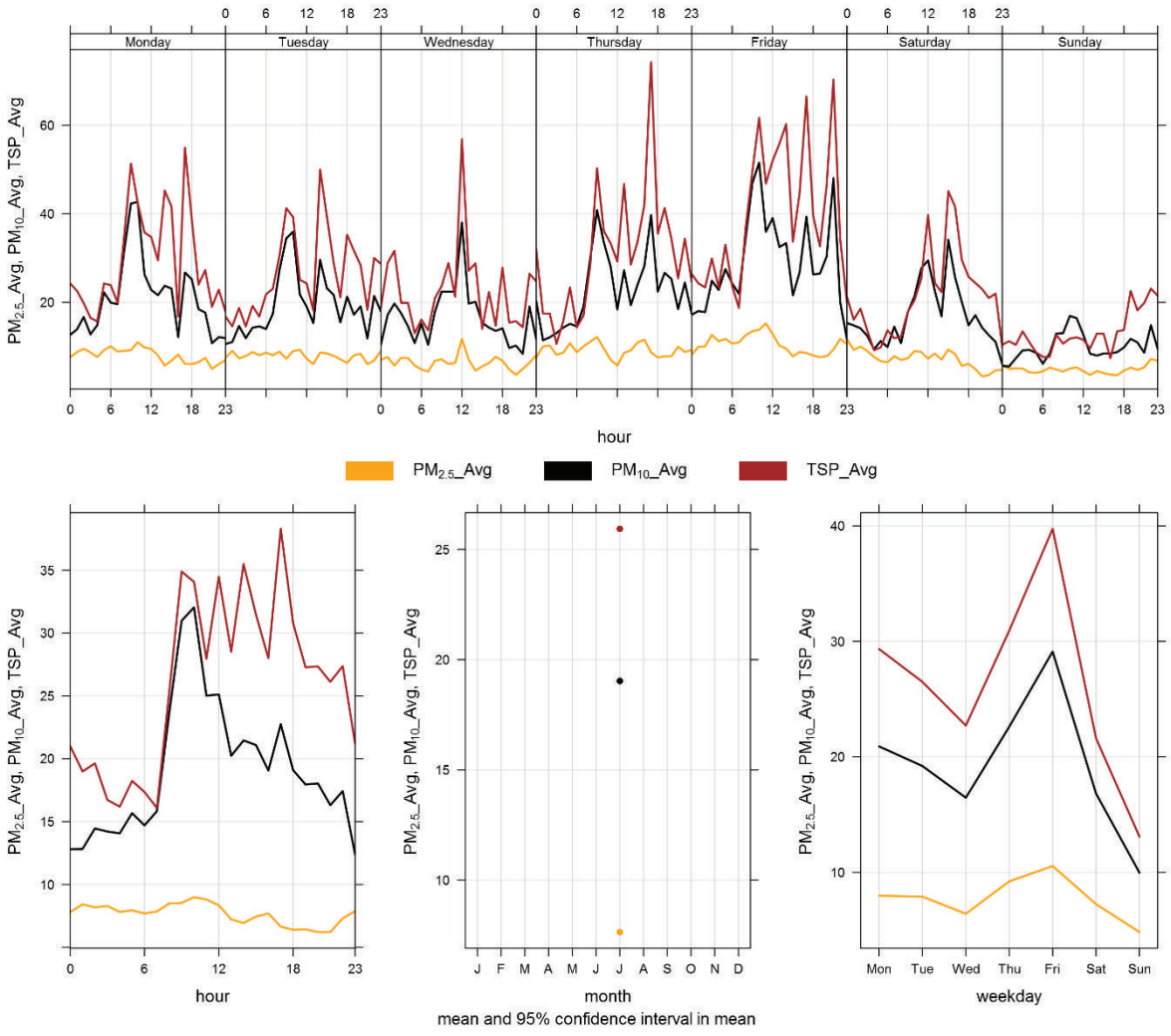

Figure 3-5 Lagoon Monitor particulate matter time variation

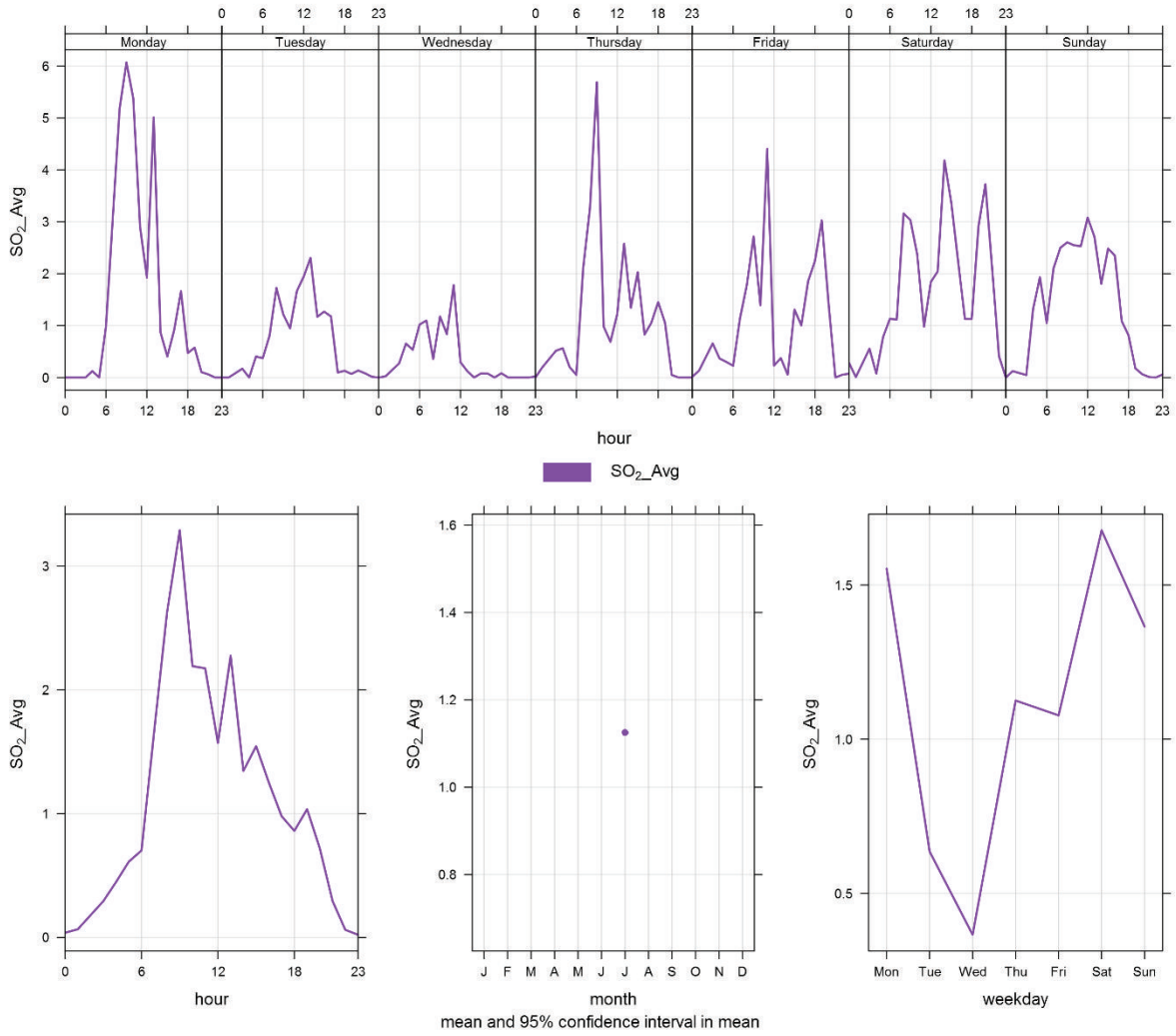

Figure 3-6 Lagoon Monitor SO_2 time variation

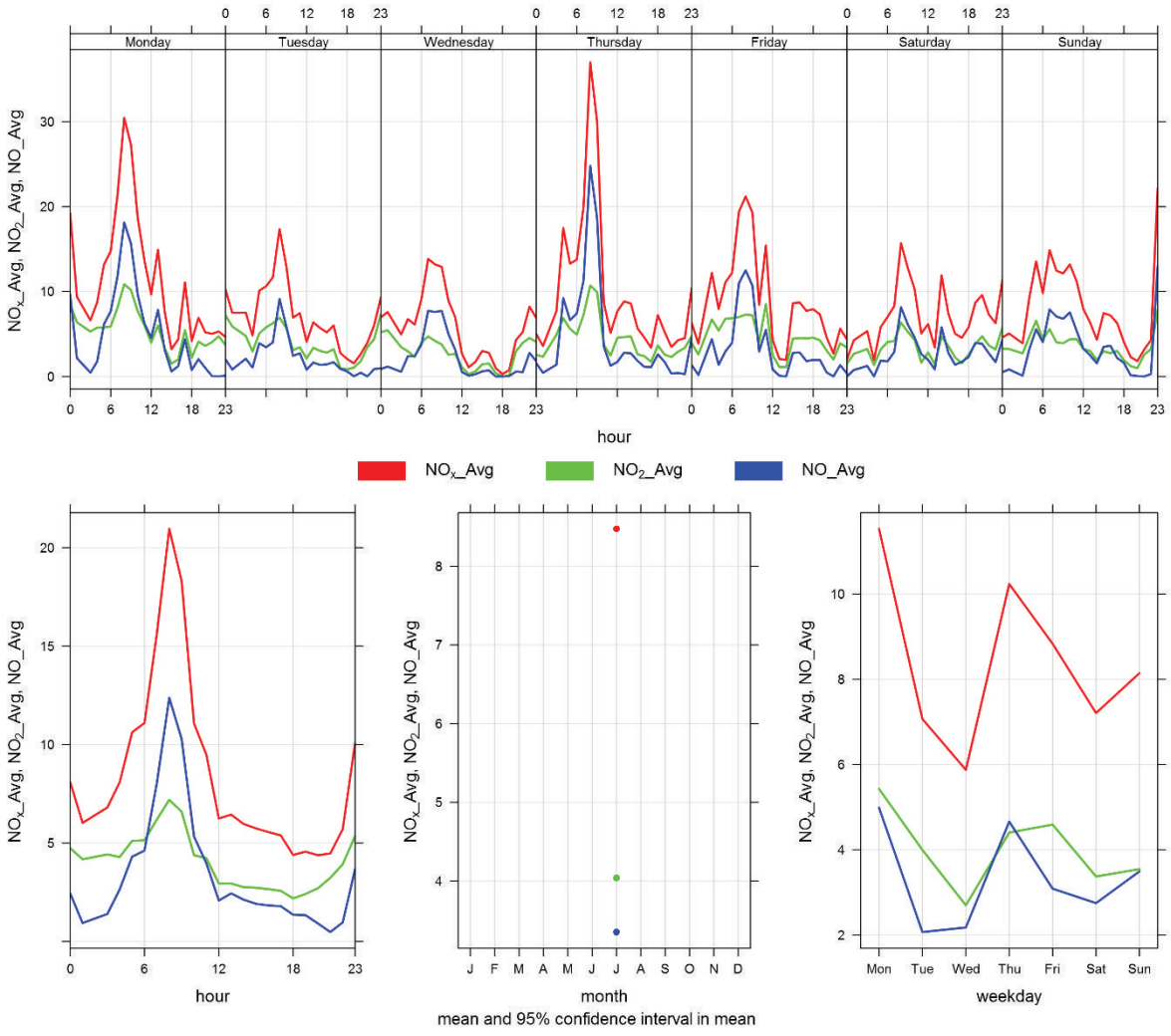

Figure 3-7 Lagoon Monitor NO_x time variation

4 WINDRIDGE STATION

The Windridge station contains TSP, PM_{10}, and $PM_{2.5}$ analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), a data summary table (Table 4-2), a table of recorded exceedances (Table 4-3), site visit notes, and graphs illustrating the monitoring results for July 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

4.1 SITE VISIT NOTES

All BAM monitors were calibrated on July 12th. The operation time for the $PM_{2.5}$ and TSP analyzers was 99.5% due to 4 hours of power outage (2 hours on July 5th and 2 hours on July 6th). On the other hand, the operation time for the PM_{10} analyzer was 96.5% due to 4 hours of power outage (2 hours on July 5th and 2 hours on July 6th) and 22 hours where the instrument's filter tape ran out (July 11th – 12th).

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in July 2018. Figure 4-1 illustrates the time series for hourly PM, Figure 4-2 illustrates the time series for daily PM, and Figure 4-3 illustrates the time series for hourly PM over different time periods.

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

Table 4-2 Summary of July 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	0	6.4	30.8	21	15	21.8	268.1	15.1	30	99.5
PM_{10} (µg/m^3)	-	-	Windridge	-	-	20.8	166.9	7	12	43.3	252.6	43.7	6	96.5
TSP (µg/m^3)	-	100	Windridge	-	0	29.9	252.9	7	20	18.9	273.1	69.9	13	99.5

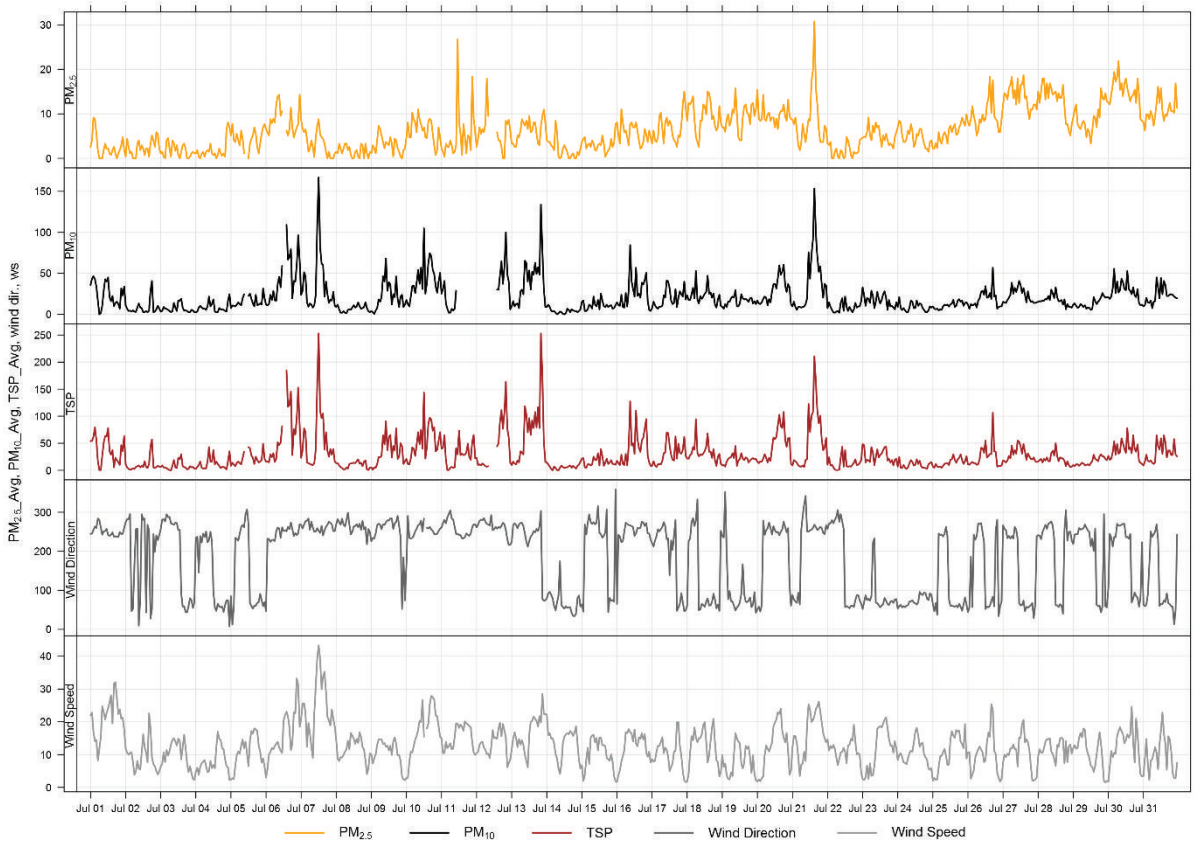

Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

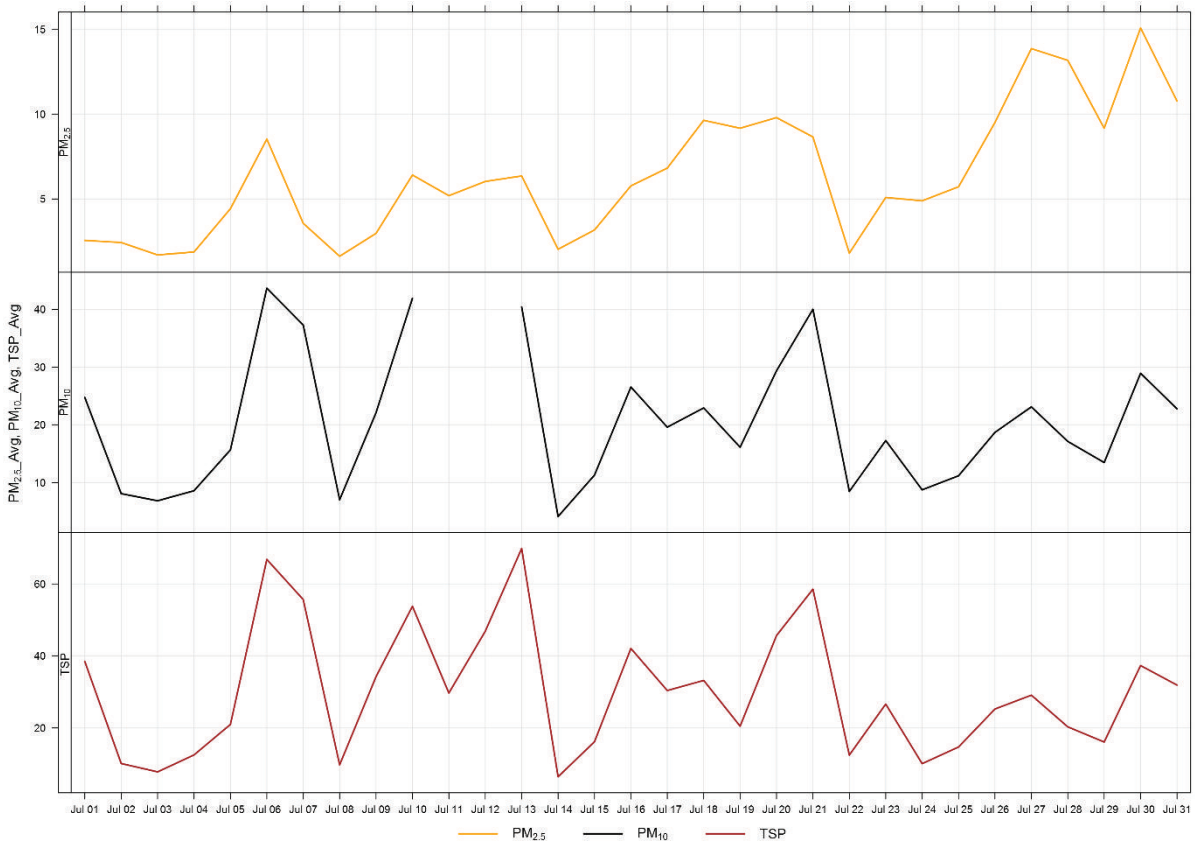

Figure 4-2 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-3 illustrates the hourly PM concentrations recorded at the Windridge monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-3 is based on data collected during July 2018 and indicates a diurnal pattern that is similar to PM_{10} at the Lagoon station.

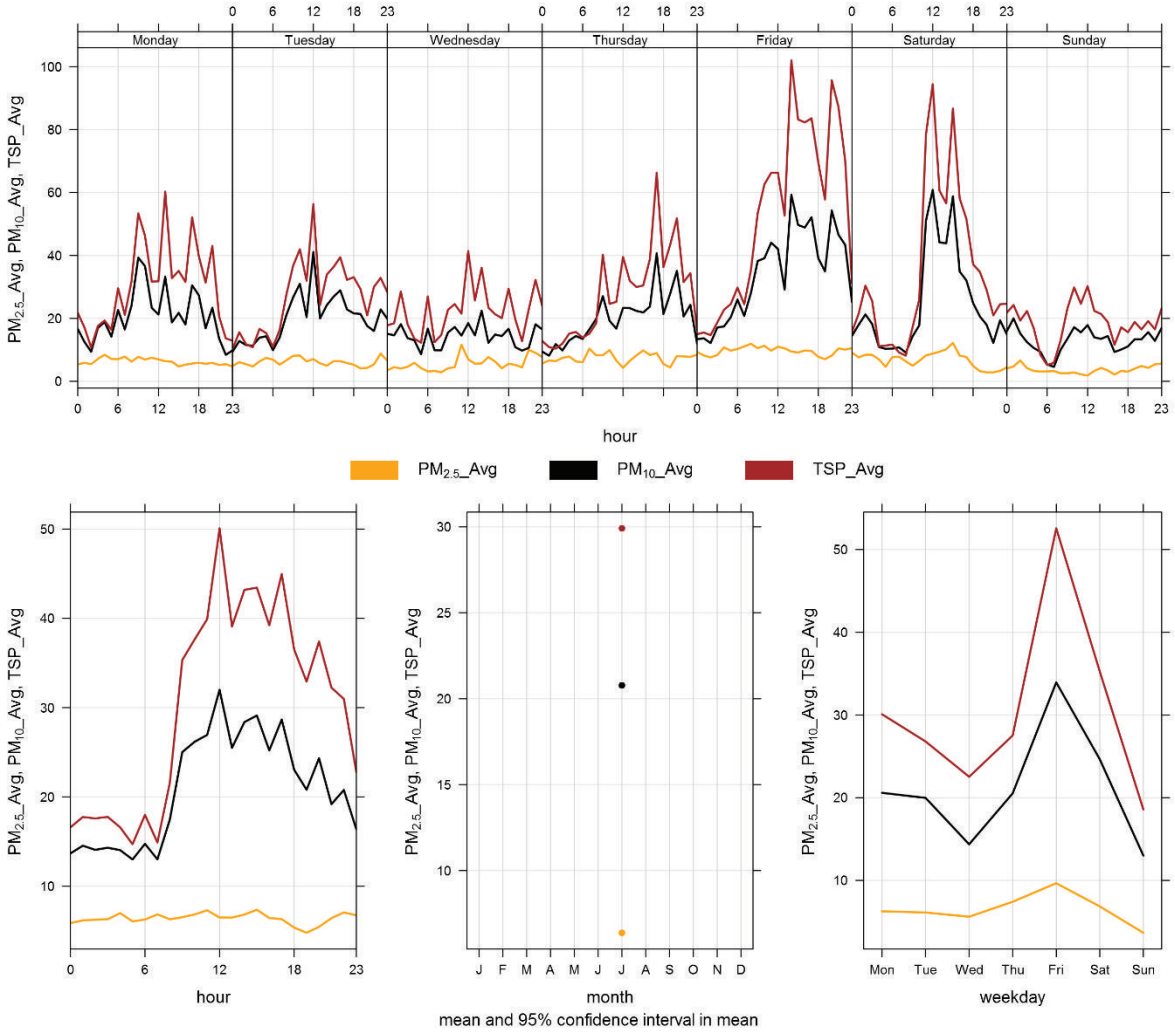

Figure 4-3 Windridge particulate matter time variation

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 July, the West GRIMM had 49.7% uptime due to 1 hour of instrument maintenance (July 12th) and an extended period of pump failure (July 16th – 31st).

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 3-2, the majority of winds came from the west-southwest, west, and east-northeast directions during July. 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 $PM_{2.5}$, PM_{10} and TSP concentrations recorded over the month. There was no exceedance of both the 24-hour TSP (100 µg/m^3) and $PM_{2.5}$ (30 µg/m^3) guidelines. It should be noted, however, that the WEST GRIMM was only operational for 49.7% of the month. Historically in July, the average number of 24-hour TSP AAQO exceedances and 24-hour $PM_{2.5}$ AAAQO exceedances are 0 and 1, respectively. The maximum number of 24-hour TSP AAQO exceedances was 1 in 2010 and 2014, while the maximum number of 24-hour $PM_{2.5}$ AAQO exceedances was 7 in 2017.

Table 5-2 Summary of July 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	
$PM_{2.5}$ ($\mu g/m^3$)	80	30	West	0	0	3.5	16.3	3	17	12.0	44.4	7.3	6	49.7
PM_{10} ($\mu g/m^3$)	-	-	West	-	-	10.3	74.5	3	17	12.0	44.4	20.3	13	49.7
TSP ($\mu g/m^3$)	-	100	West	-	0	18.9	234.0	13	21	28.5	78.3	48.4	13	49.7

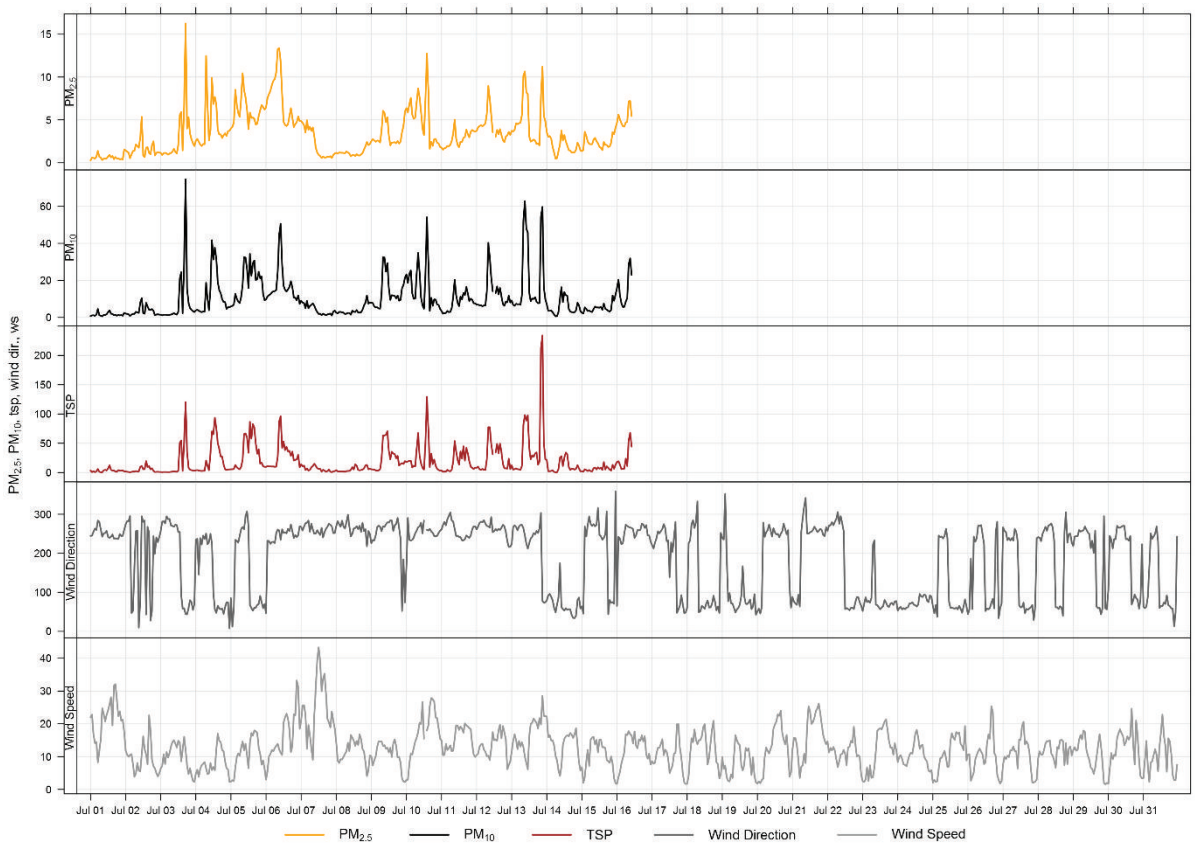

Figure 5-1 1-hour particulate matter concentrations at the West monitor

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

Figure 5-3 illustrates the hourly PM concentrations recorded at the West monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 5-3 is based on data collected during July 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.

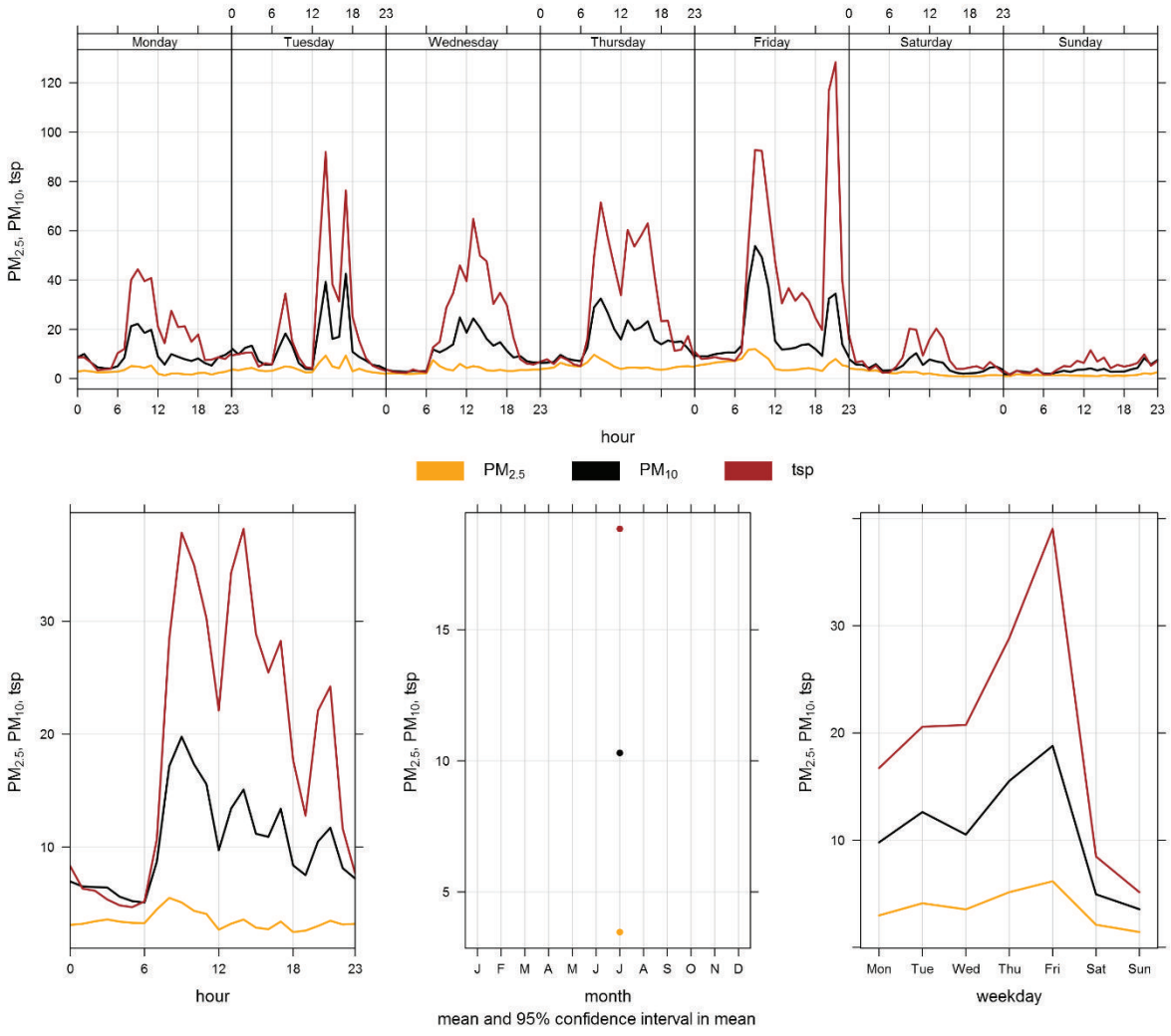

Figure 5-3 West particulate matter time variation

6 BERM GRIMM

6.1 SITE VISIT NOTES

During the month of July, the Berm GRIMM had 62% uptime due to 1 hour of instrument maintenance (July 12th) and an extended period of pump failure (July 20th – 31st).

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 $PM_{2.5}$, PM_{10} 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 July, there were 7 and 0 exceedances of the 24-hour TSP (30 µg/m^3) and $PM_{2.5}$ (100 µg/m^3) guidelines, respectively. It should be noted, however, that the BERM GRIMM was only operational for 62% of the month. Historically during the month of July, the Berm monitor records an average of 12 and 1 exceedances of the 24-hour TSP and $PM_{2.5}$ guidelines respectively. The maximum number of TSP exceedances recorded during July occurred in 2010 where there were 22 days that exceeded the guideline. The minimum number of TSP exceedances was recorded during July 2013, which had 3 days that exceeded the guideline. The maximum number of $PM_{2.5}$ exceedances occurred in July 2017 where 6 days of exceedances was observed.

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.

Table 6-2 Summary of July 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	7.6	46.3	6	13	22.0	253.4	15.4	6	62.0
PM_{10} (µg/m^3)	-	-	Berm	-	-	37.9	371.7	6	13	22.0	253.4	100.3	13	62.0
TSP (µg/m^3)	-	100	Berm	-	7	80.7	981.9	13	19	21.7	263.6	238.3	13	62.0

Table 6-3 Days exceeding the Guideline for TSP 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						
7/1/2018	118.5	-	247.7	21.3	47.8	high wind event
7/6/2018	211.1	-	248.7	16.1	49.7	
7/7/2018	179.2	-	260.3	24.7	38.4	high wind event
7/10/2018	121.7	-	254.9	17.4	60.2	
7/11/2018	115.2	-	256.1	15.4	44.6	
7/12/2018	153.8	-	264.9	13.2	39.2	
7/13/2018	238.3	-	256.3	16.8	40.6	
Total # of Exceedances	**7**	**0**				
Maximum # of Exceedances (July)	**22 (2010)**	**6 (2017)**				
Average # of Exceedances (July)	**12**	**1**				
Minimum # of Exceedances (July)	**3 (2013)**	**0 (2010 ~ 2013, 2015 ~ 2016)**				

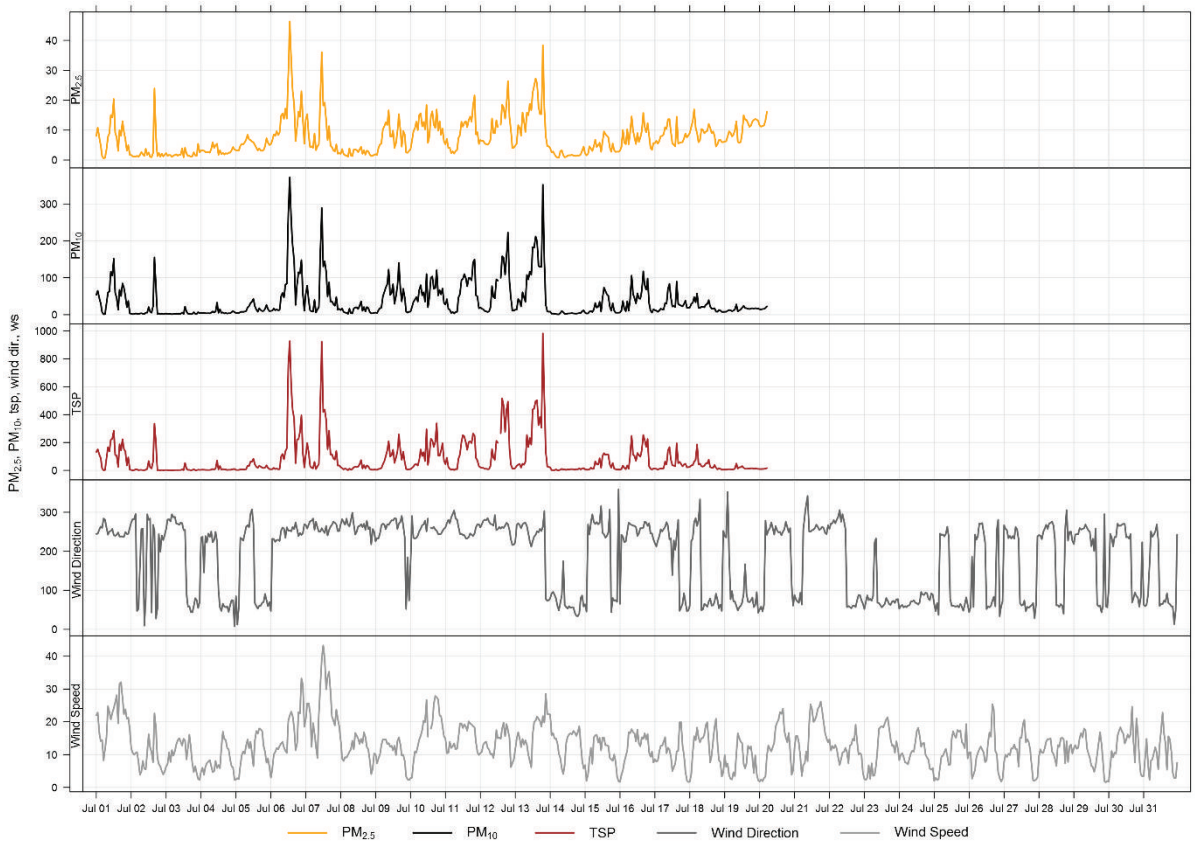

Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

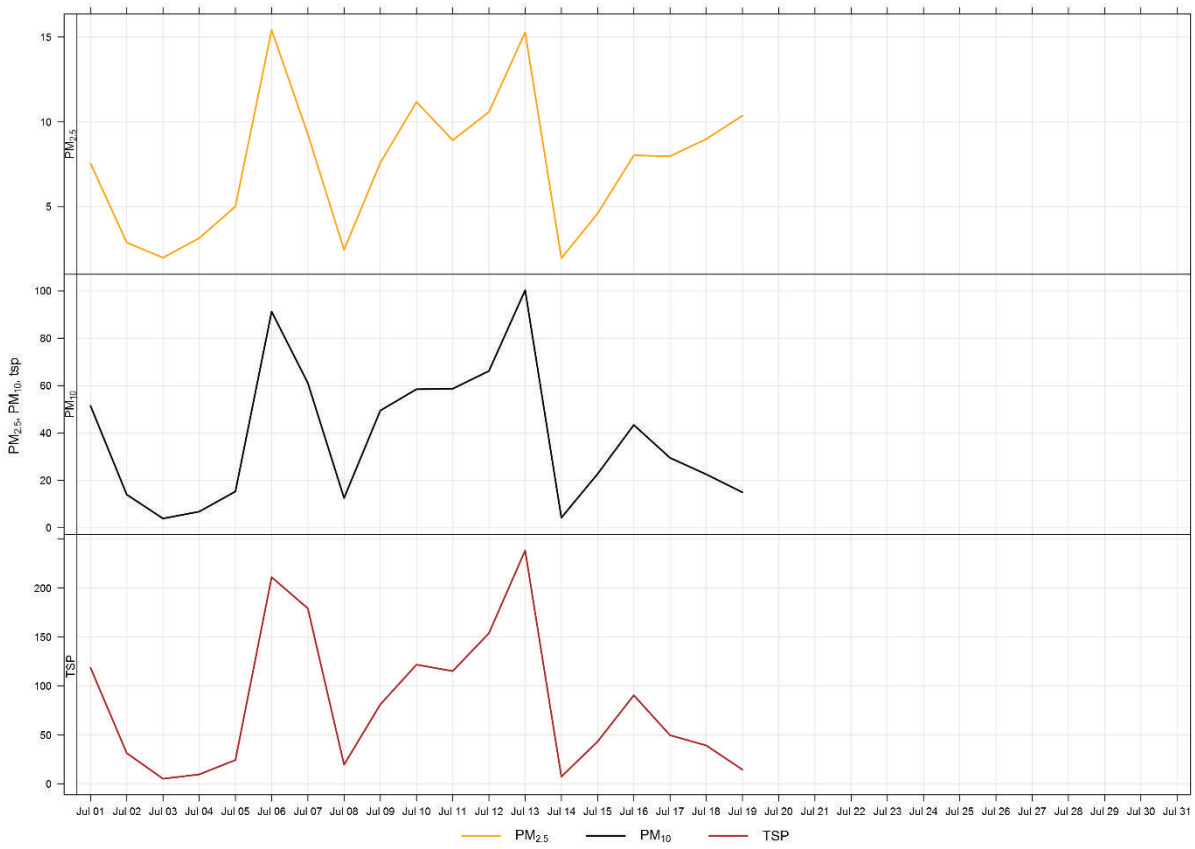

Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind roses for the 7 days of TSP exceedances. The wind rose shows that the winds predominantly come from the west and west-southwest directions, and were over 20 km/kr.

Figure 6-4 shows the variation of PM recorded at the Berm monitor over various time averaging periods. The Berm monitor, on average, recorded elevated PM concentrations during standard operating hours of Lafarge and consistent with the diurnal patterns associated with higher wind speeds.

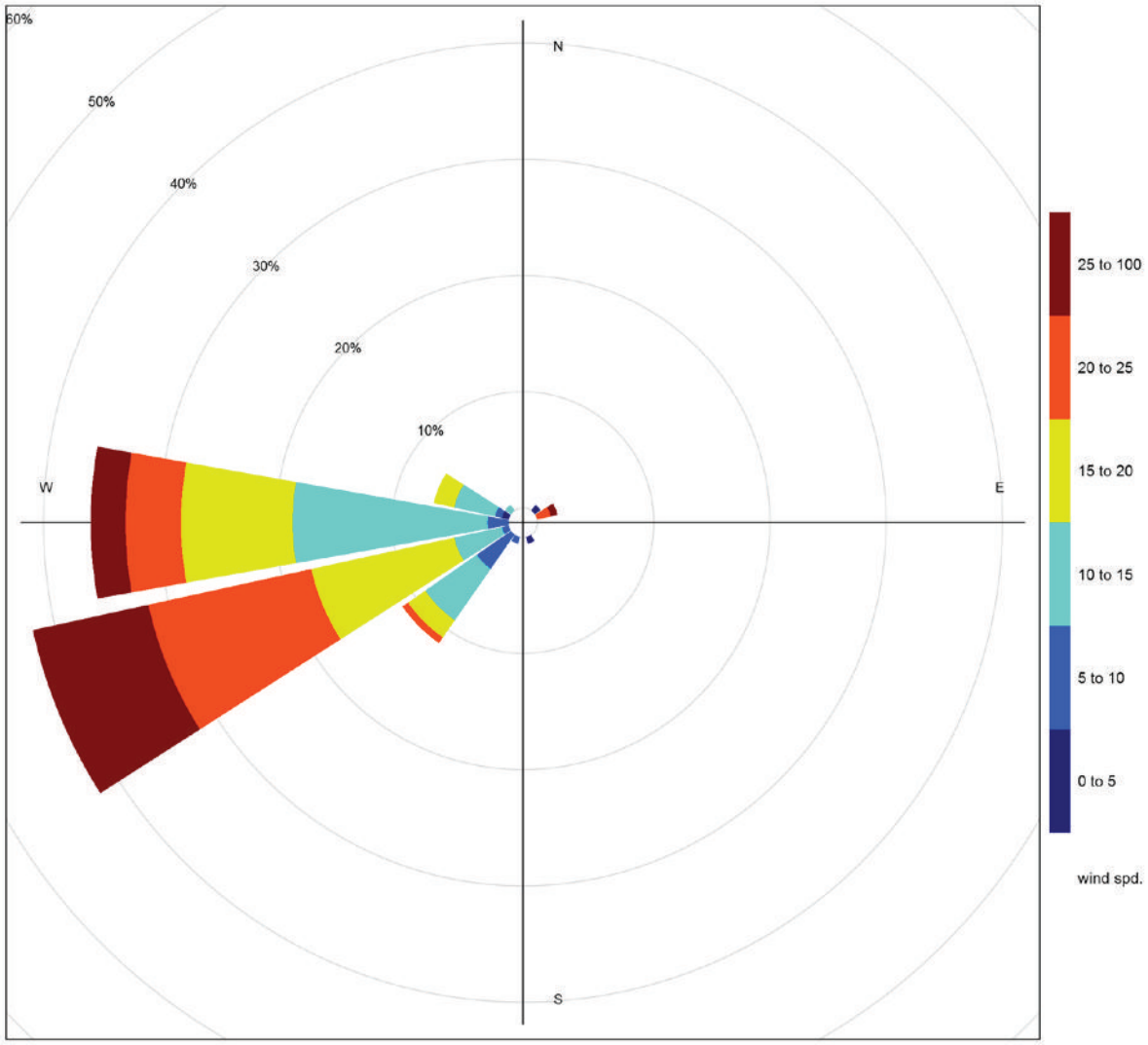

Figure 6-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM

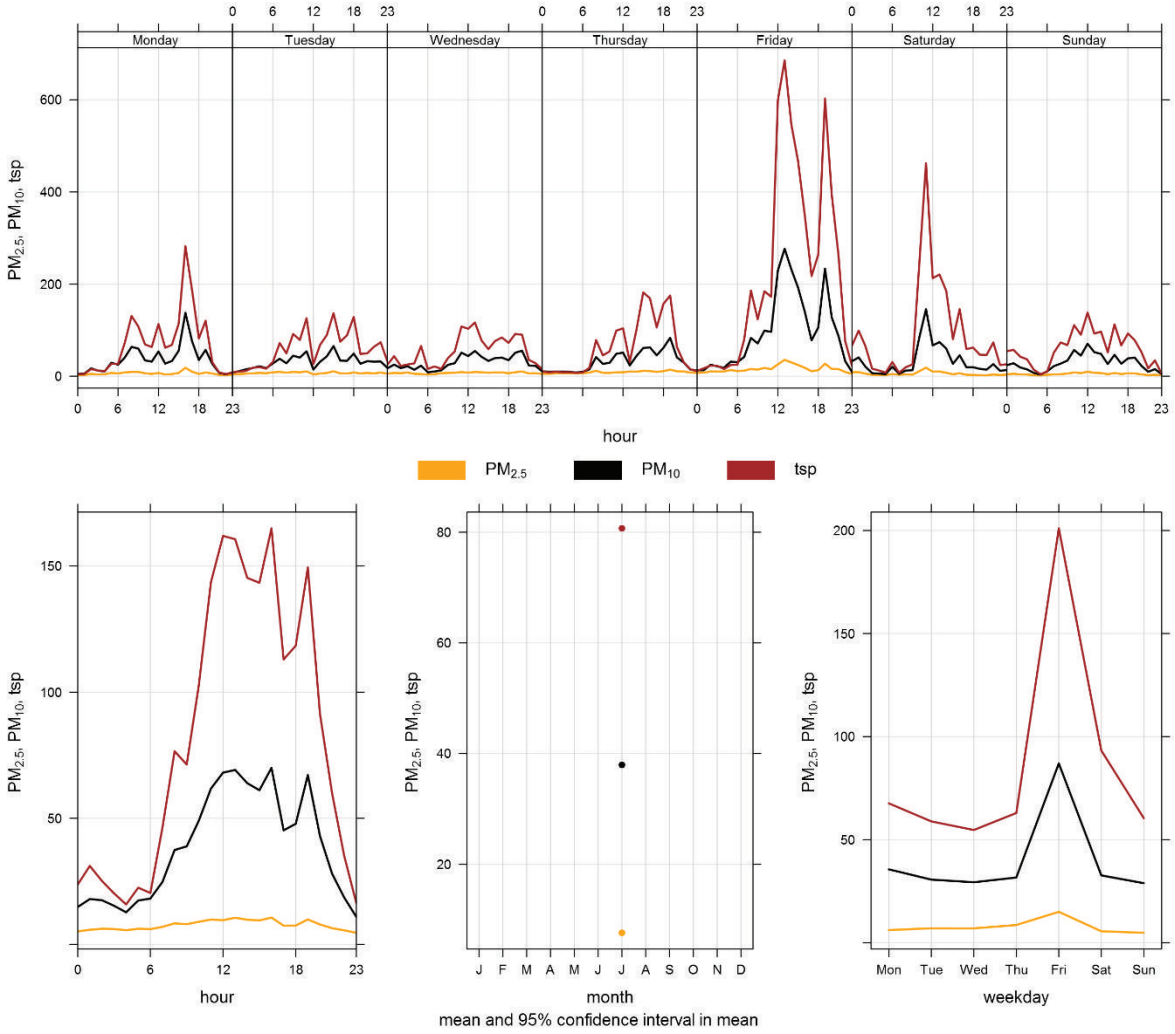

Figure 6-4 Berm particulate matter time variation

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 July, the Entrance GRIMM had 99.9% uptime due to 1 hour of instrument error (July 30th).

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 $PM_{2.5}$, PM_{10} 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 July, there were 14 and 0 exceedances of the 24-hour TSP (100 µg/m^3) and $PM_{2.5}$ (30 µg/m^3) guidelines, respectively. Historically, the Entrance monitor records an average of 18 and 3 exceedances of the 24-hour TSP and $PM_{2.5}$ guidelines respectively, during the month of July. The maximum number of TSP exceedances recorded during July occurred in 2014, which had 30 days that exceeded the guideline. The minimum number of TSP exceedances recorded during July occurred in 2011, which had 8 days that exceeded the guideline. On the other hand, the maximum number of $PM_{2.5}$ exceedances recorded during the month of July was 11 days of exceedance in 2014. The fewest number of $PM_{2.5}$ exceedances for July was 0 days of exceedances occurring in 2011, 2013, and 2016.

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

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

Figure 7-3 shows the wind roses for the 14 days that exceeded the TSP Guideline at the Entrance GRIMM. High wind speeds were not a primary factor in TSP exceedances in July at the Entrance station, which would suggest that some of the other sources, such as traffic and rail may have contributed to the exceedances.

Table 7-2 Summary of July 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	1	0	12.3	85.2	30	7	17.2	265.5	29.6	30	99.9
PM_{10} (µg/m^3)	-	-	Entrance	-	-	47.8	406.3	30	7	17.2	265.5	108.4	30	99.9
TSP (µg/m^3)	-	100	Entrance	-	14	96.2	684.7	6	12	20.4	252.6	203.4	30	99.9

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						
7/5/2018	121.2	-	37.6	10.9	61.6	
7/6/2018	149.8	-	248.7	16.1	49.7	
7/7/2018	107.3	-	260.3	24.7	38.4	high wind event
7/9/2018	111.2	-	265.3	10.7	40.2	
7/10/2018	166.1	-	254.9	17.4	60.2	
7/11/2018	107.7	-	256.1	15.4	44.6	
7/12/2018	136.4	-	264.9	13.2	39.2	
7/13/2018	165.3	-	256.3	16.8	40.6	
7/16/2018	144.1	-	258.2	12.4	34.1	
7/17/2018	143.9	-	247.4	10.2	35.6	
7/18/2018	159.1	-	47.0	12.6	62.4	
7/20/2018	143.0	-	255.0	12.3	51.2	
7/30/2018	203.4	-	243.5	12.9	50.7	
7/31/2018	119.3	-	65.7	10.0	63.2	
Total # of Exceedances	**14**	**0**				
Maximum # of Exceedances (July)	**30 (2014)**	**11 (2014)**				
Average # of Exceedances (July)	**18**	**3**				
Minimum # of Exceedances (July)	**8 (2011)**	**0 (2011, 2013, 2016)**				

Note: The rail crossing, on the 1A highway is in need of repair. Traffic hits the crossing and dust is dislodged from haul trucks as well as dust/dirt from the road, caught in the crossing, is lifted up and airborne. The particulate seems to be influencing the entrance monitor due to its proximity to the highway.

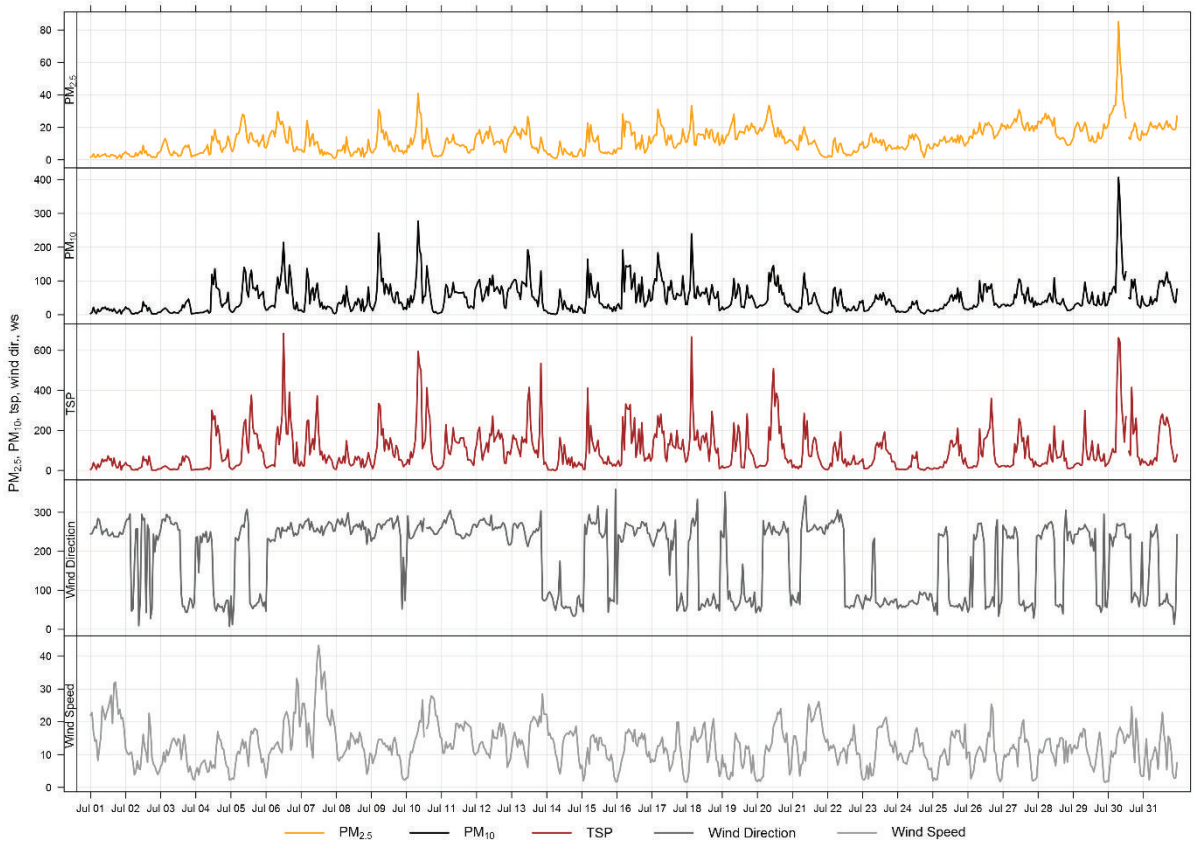

Figure 7-1 1-hour particulate matter concentrations recorded at the Entrance monitor

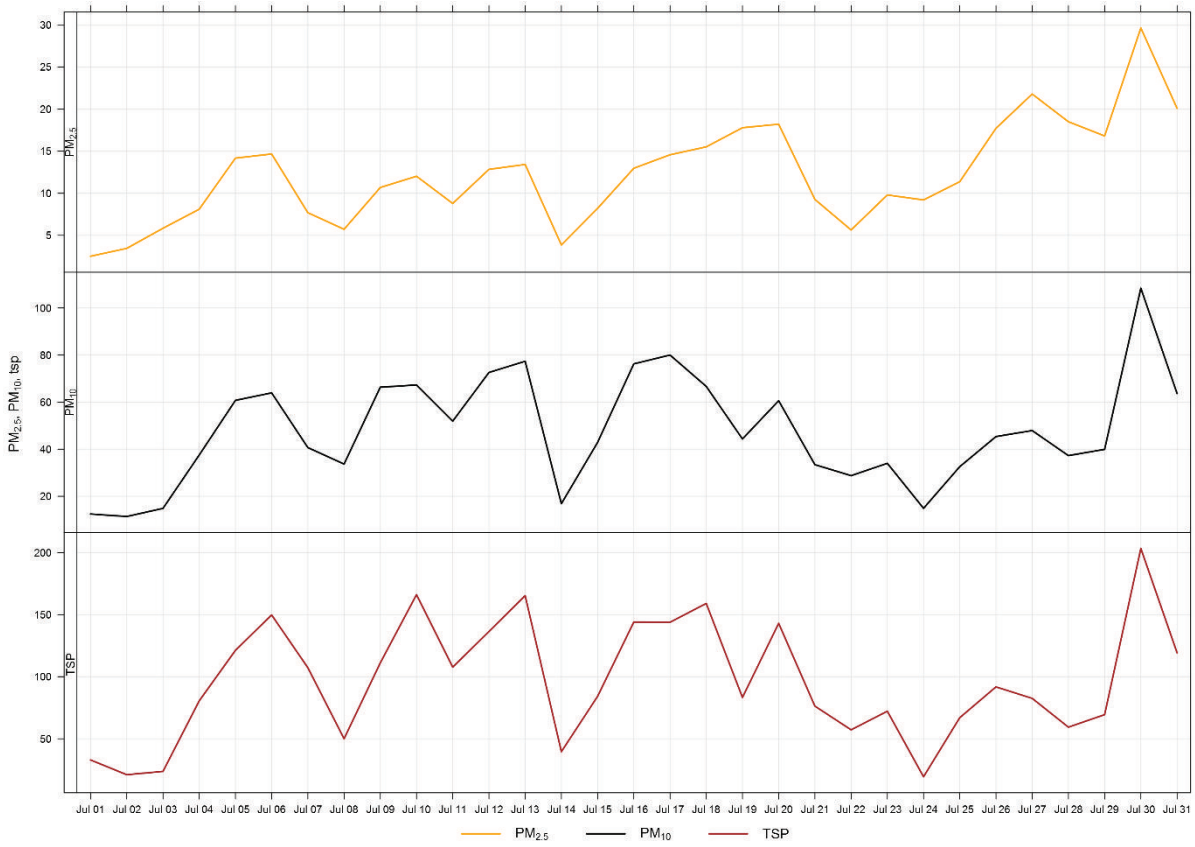

Figure 7-2 24-hour particulate matter concentrations at the Entrance monitor

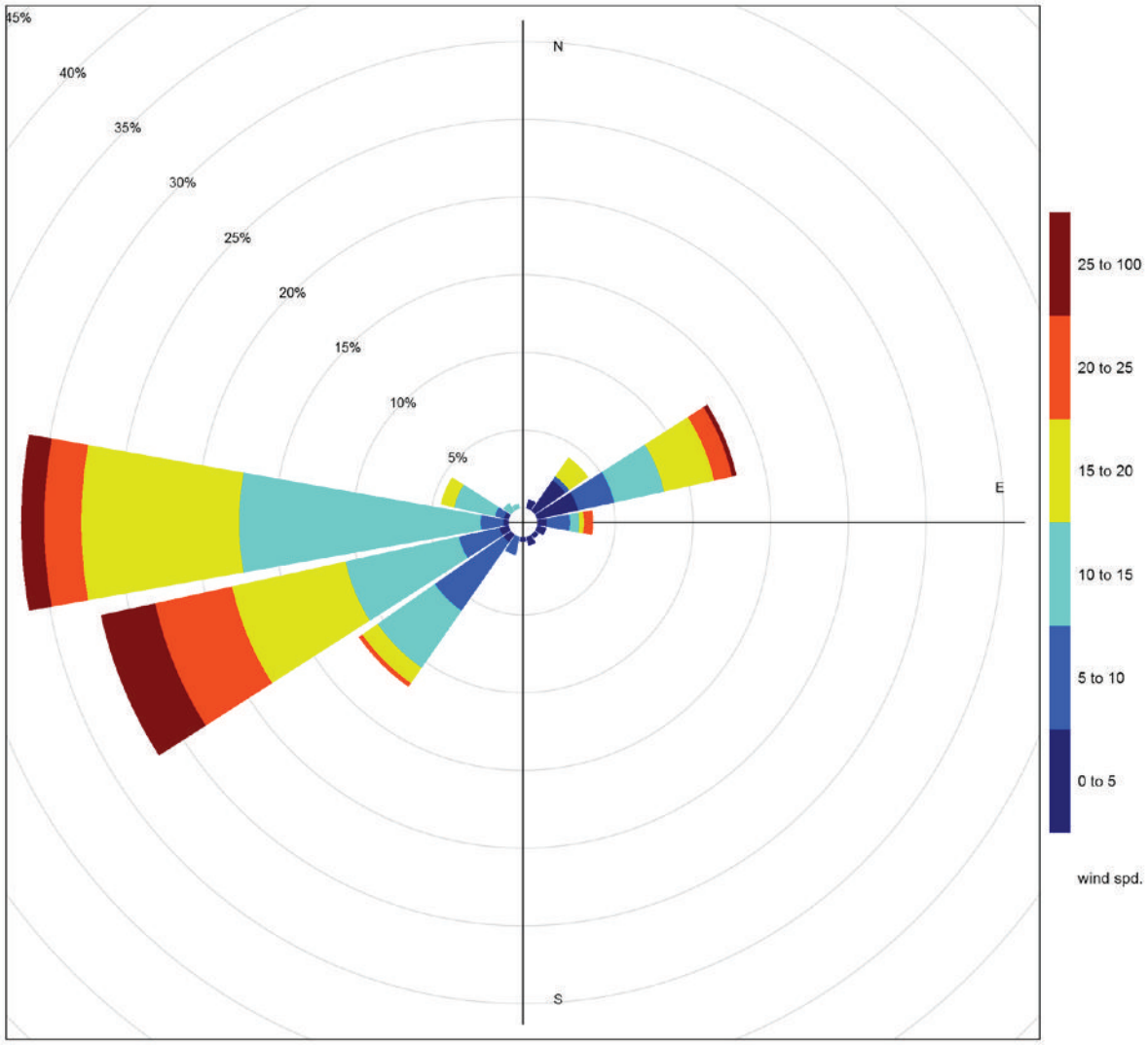

Figure 7-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

Figure 7-4 illustrates the hourly PM concentrations recorded at the Entrance monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 7-4 is based on data collected during July 2018 and indicates a diurnal pattern at this station that records higher concentrations during the week, suggesting increased traffic during the week is influencing this station.

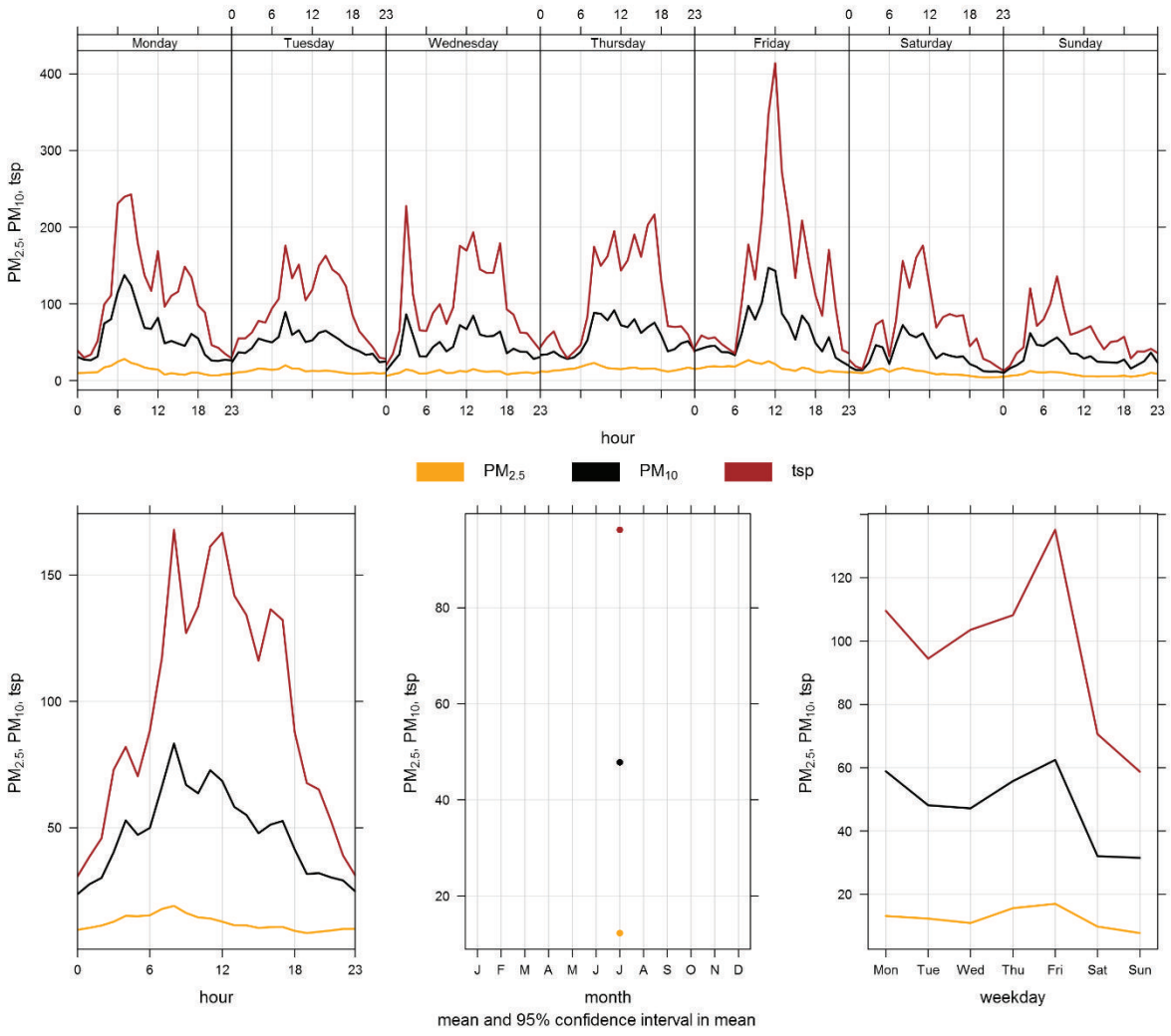

Figure 7-4 Entrance particulate matter time variation

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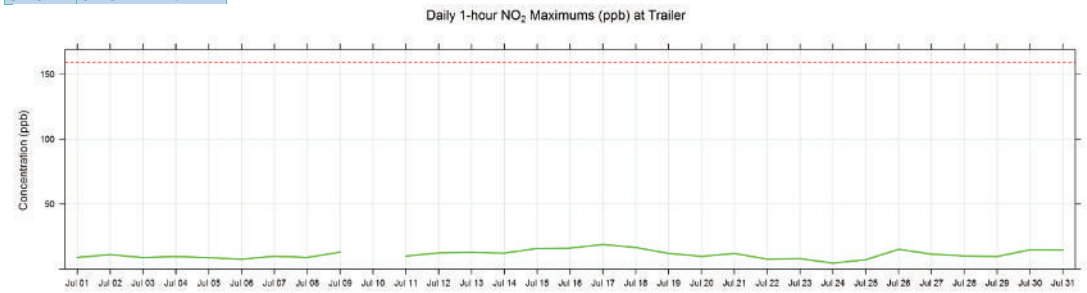
Appendix A

DATA & CALIBRATION REPORTS

Lagoon NO_2 (ppb) – July 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	0.1	S	2.5	4.9	8.9	4.4	4.9	0.0	0.7	4.0	7.2	0.6	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	8.9	1.8
2	7.6	3.5	S	2.9	6.1	2.0	0.4	5.8	8.9	6.2	4.5	1.0	5.3	11.0	0.7	2.4	0.0	6.5	1.9	2.3	3.2	5.0	4.7	4.8	11.0	4.2
3	3.3	5.5	S	8.8	2.3	6.6	5.6	3.9	6.2	3.0	2.6	2.9	0.8	0.9	1.9	3.4	0.6	1.4	2.0	0.8	0.1	0.0	0.0	0.6	8.8	2.7
4	2.3	3.5	S	1.9	1.3	1.7	1.7	2.9	2.3	2.4	2.1	4.4	0.9	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6	9.5	3.9	9.5	1.8
5	3.0	2.6	S	2.9	6.1	5.9	5.1	6.7	8.7	7.8	5.1	3.3	6.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.0	5.5	8.7	3.5
6	7.6	4.6	S	6.8	7.3	6.8	4.8	6.5	7.1	6.9	3.8	7.2	5.3	0.3	0.3	5.1	5.6	2.1	6.5	0.7	0.4	1.1	0.0	5.7	7.6	4.5
7	2.6	1.4	S	6.8	1.4	8.9	5.3	4.2	9.8	4.8	4.3	5.9	2.4	0.0	8.1	0.0	1.2	5.0	7.4	7.1	9.8	8.1	3.7	3.9	9.8	4.9
8	0.9	4.3	S	1.2	2.6	2.7	3.3	1.6	1.5	0.8	0.0	4.5	8.9	4.3	4.7	8.3	7.3	4.7	6.8	0.7	1.3	1.3	3.6	6.5	8.9	3.5
9	8.3	6.5	S	4.7	7.1	4.4	6.7	6.3	8.4	7.5	10.0	6.4	10.7	13.0	7.7	1.5	2.5	7.1	4.3	9.9	0.5	4.4	12.2	9.0	13.0	6.9
10	13.8	10.5	S	7.1	4.1	4.1	5.0	6.0	9.1	C	C	C	C	C	C	2.0	5.7	1.7	0.0	0.0	0.0	0.0	1.9	7.3	-	-
11	1.9	4.4	S	1.8	2.3	1.5	7.1	6.2	3.7	3.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	4.4	4.1	9.9	2.2
12	4.0	4.9	S	4.7	7.7	6.6	4.9	9.4	12.4	8.9	2.3	1.9	2.7	7.7	7.1	8.1	4.6	6.2	11.3	8.9	2.0	1.3	3.1	3.7	12.4	5.8
13	3.9	2.4	S	9.0	5.3	6.7	5.6	7.6	9.6	6.2	2.1	12.8	0.0	0.0	0.0	0.7	0.4	6.0	2.1	5.0	4.7	0.0	0.0	0.0	12.8	3.9
14	0.0	0.0	S	0.0	0.0	0.0	1.4	0.2	0.0	0.5	0.0	0.0	1.6	0.3	0.8	0.7	1.0	0.0	0.0	0.0	0.0	1.2	3.7	12.2	12.2	1.0
15	4.3	1.0	S	4.3	5.5	7.2	1.9	4.1	3.4	6.5	7.2	2.0	0.9	0.0	0.0	0.0	5.0	0.7	0.0	2.5	2.0	6.6	7.2	15.8	15.8	3.8
16	14.5	9.7	S	5.9	6.4	6.5	7.3	12.8	15.4	16.0	14.5	8.9	0.0	5.5	7.2	3.5	6.5	10.8	3.8	8.3	13.9	4.4	0.0	1.1	16.0	8.0
17	2.2	2.6	S	2.5	3.1	8.0	6.4	7.5	8.9	8.5	2.7	1.4	6.3	10.5	7.2	7.5	7.6	0.7	1.4	2.5	0.4	8.1	13.3	18.8	18.8	6.0
18	16.5	12.3	S	10.0	6.9	2.8	2.2	5.1	5.4	2.5	1.1	1.0	1.3	0.6	1.0	4.9	6.1	1.6	0.0	0.0	10.0	5.1	4.2	7.2	16.5	4.7
19	2.4	1.6	S	11.1	8.2	6.3	5.2	7.1	12.0	7.9	2.1	2.3	5.5	6.5	9.5	1.2	2.9	0.7	0.4	0.8	6.3	2.9	2.4	6.4	12.0	4.9
20	1.5	0.8	S	0.9	1.4	5.1	7.9	7.9	4.9	8.9	4.7	8.4	1.0	1.4	2.4	0.6	0.7	4.3	7.3	9.7	6.1	5.5	8.2	4.4	9.7	4.5
21	0.9	3.6	S	2.4	0.7	1.2	5.4	9.8	7.1	5.8	4.8	0.0	3.4	4.7	5.7	11.9	4.9	1.0	1.5	6.1	8.4	5.2	1.3	2.4	11.9	4.3
22	4.4	6.2	S	2.1	2.2	5.4	5.3	7.5	7.6	3.6	1.3	1.0	1.2	2.6	1.1	0.0	0.0	2.7	0.0	0.1	1.0	0.9	1.9	7.4	7.6	2.9
23	5.0	1.8	S	4.7	2.1	7.1	4.8	4.7	8.0	6.4	0.0	1.3	0.9	0.5	1.0	0.1	0.3	0.1	1.1	0.0	0.4	1.3	1.7	0.0	8.0	2.3
24	2.1	0.7	S	2.9	3.5	4.5	4.0	4.1	1.1	0.7	0.0	0.1	0.3	0.5	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	4.5	1.2
25	0.1	1.6	S	0.0	1.3	3.1	5.0	4.7	5.4	7.2	6.5	5.2	2.2	0.5	1.4	0.2	0.0	0.0	0.0	0.5	1.8	0.2	0.0	1.1	7.2	2.1
26	0.9	0.1	S	1.0	5.5	3.6	4.5	5.8	9.7	15.1	5.4	2.3	3.6	2.0	2.2	1.2	2.1	0.0	2.8	0.6	0.8	2.8	2.9	3.4	15.1	3.4
27	2.8	2.6	S	10.1	7.6	8.5	9.1	6.0	7.5	6.7	5.6	5.7	3.7	2.8	1.6	11.4	11.4	5.6	2.4	1.6	1.0	1.4	7.4	3.5	11.4	5.5
28	2.4	5.6	S	3.7	3.2	2.6	4.1	2.6	8.4	10.0	8.1	0.6	3.9	0.8	4.1	1.7	1.8	0.2	1.3	2.1	0.7	0.2	3.9	4.4	10.0	3.3
29	6.7	4.6	S	3.5	8.0	8.6	6.9	9.7	7.6	8.0	9.4	7.2	4.5	8.0	3.8	5.5	1.3	7.0	2.7	2.8	0.6	4.0	3.5	7.7	9.7	5.7
30	6.7	10.4	S	8.2	7.1	8.9	10.3	10.8	13.5	14.8	9.5	12.5	3.0	0.0	0.0	0.0	0.6	2.7	0.0	0.0	0.0	5.1	5.2	3.5	14.8	5.8
31	14.6	10.1	S	2.5	1.7	2.2	7.9	9.7	9.2	10.6	7.1	9.4	1.0	1.6	1.6	0.9	2.1	1.0	0.9	1.9	8.4	9.1	6.5	9.6	14.6	5.6
Hourly Max	16.5	12.3	-	11.1	8.2	8.9	10.3	12.8	15.4	16.0	14.5	12.8	10.7	13.0	9.5	11.9	11.4	10.8	11.3	9.9	13.9	9.9	13.3	18.8		
Hourly Average	4.7	4.2	-	4.4	4.3	5.1	5.1	6.2	7.2	6.6	4.4	4.2	2.9	2.9	2.8	2.7	2.7	2.6	2.2	2.4	2.7	3.2	3.9	5.4		

S = SPAN C = CALIBRATION

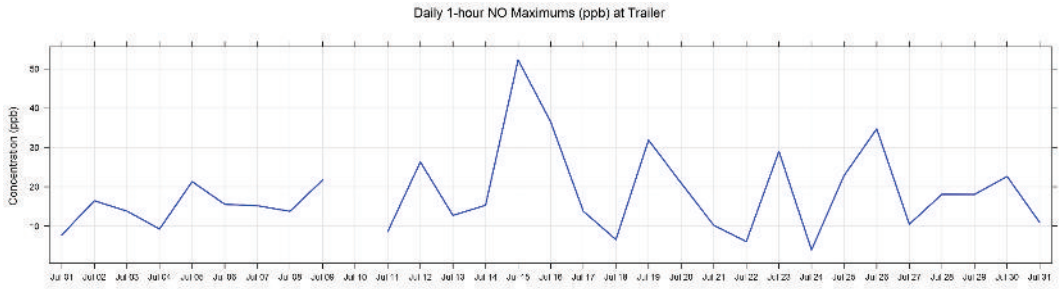


Number of 1HR Exceedances	0		Objective	159	PPB
Number of Non-Zero Readings	612				
Maximum 1-HR Average	18.8	PPB			
Maximum 24-HR Average	8.0	PPB			
IZS Calibration Time	31	HRS	Operational Time	744	HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0	%
Standard Deviation	3.6		Monthly Average	4.0	PPB

Lagoon NO (ppb) – July 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	S	0.0	2.3	7.2	0.7	2.7	0.0	0.3	4.3	7.7	0.6	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	7.7	1.3
2	3.3	0.0	S	0.0	2.8	0.0	0.0	0.6	5.3	1.9	1.7	0.0	6.0	16.4	0.0	0.9	0.0	5.3	1.2	0.0	0.0	0.0	0.0	0.0	16.4	2.0
3	0.0	0.4	S	10.4	1.5	12.3	9.6	3.8	13.8	4.8	5.1	5.5	1.1	1.1	2.1	3.8	0.6	4.4	3.0	0.0	0.0	0.0	0.0	0.0	13.8	3.6
4	1.5	1.4	S	0.1	0.5	3.2	1.0	7.8	4.9	4.8	5.7	7.1	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0	9.3	0.0	9.3	2.1
5	6.1	1.5	S	0.5	0.1	0.0	1.8	12.8	21.3	16.2	8.4	2.9	2.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.3	0.1	21.3	3.3
6	4.9	0.0	S	0.0	0.0	0.1	0.9	10.4	15.6	8.1	1.3	3.1	2.4	0.0	0.0	3.5	2.1	0.4	3.0	0.0	0.0	0.0	0.0	1.4	15.6	2.5
7	0.0	0.1	S	4.9	0.0	7.1	3.6	2.2	8.9	2.7	6.8	10.5	3.4	0.0	15.2	0.0	2.2	6.6	8.2	10.3	10.2	9.0	2.0	1.9	15.2	5.0
8	0.0	2.4	S	0.0	0.7	2.1	3.1	1.3	4.5	1.5	0.0	8.1	13.3	7.3	6.7	13.8	12.2	7.9	8.0	0.0	0.3	0.0	0.9	4.8	13.8	4.3
9	0.0	0.0	S	0.0	4.6	0.8	9.2	11.8	21.7	16.0	18.8	7.4	15.5	18.3	9.8	0.1	0.5	7.8	1.5	6.6	0.0	0.0	0.1	0.2	21.7	6.6
10	1.8	0.0	S	0.0	0.0	0.0	3.2	3.3	8.9	C	C	C	C	C	C	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	-	-
11	0.0	0.0	S	0.0	0.8	1.3	7.6	8.6	2.6	2.7	0.2	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.7	8.6	1.2
12	0.2	0.2	S	2.6	9.0	8.3	2.8	21.8	26.3	15.9	1.7	1.2	2.7	8.0	6.7	7.1	2.7	4.4	10.4	6.8	0.0	0.0	0.0	0.0	26.3	6.0
13	0.0	0.0	S	8.9	1.4	3.5	2.1	10.2	12.7	5.6	1.1	10.1	0.0	0.0	0.0	0.6	0.0	3.9	0.5	3.8	0.5	0.0	0.0	0.0	12.7	2.8
14	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.0	1.2	0.0	0.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	1.8	15.3	15.3	0.9
15	0.0	0.0	S	0.0	4.5	3.2	0.9	11.6	8.7	16.9	14.5	2.6	0.6	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.5	52.3	52.3	5.3
16	36.5	2.6	S	0.6	1.4	0.3	6.8	21.7	29.5	26.7	17.0	7.6	0.0	4.4	5.6	1.9	4.9	8.5	1.0	3.6	5.0	0.0	0.0	0.0	36.5	8.1
17	0.0	0.0	S	0.0	0.0	3.4	3.0	5.8	13.8	8.0	0.9	0.0	2.1	5.2	2.5	3.2	5.8	0.0	0.0	0.0	0.0	0.0	4.3	2.4	13.8	2.6
18	1.9	3.3	S	2.1	3.0	0.6	0.0	1.5	2.9	0.5	0.0	0.0	0.0	0.0	0.0	1.7	2.8	0.0	0.0	0.0	2.3	0.0	1.8	6.6	6.6	1.4
19	0.0	0.0	S	2.1	26.9	18.2	24.9	7.6	31.9	7.8	0.4	0.4	0.9	2.2	3.4	0.0	1.0	0.0	0.0	0.0	1.3	0.0	0.0	13.6	31.9	6.2
20	0.0	0.7	S	6.8	4.0	3.8	10.3	21.0	11.2	20.8	4.0	5.1	0.0	0.0	0.0	0.0	0.0	0.9	3.6	4.0	1.3	0.0	0.0	0.0	21.0	4.2
21	0.0	0.0	S	0.0	0.0	0.0	0.0	6.3	6.4	3.7	2.0	0.0	2.2	3.3	6.8	10.2	2.9	0.0	0.9	5.5	5.2	1.9	0.6	0.0	10.2	2.5
22	2.5	1.3	S	0.3	0.0	3.3	3.6	5.8	6.1	3.0	1.2	0.5	0.4	1.4	0.2	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.5	6.1	1.4
23	0.0	0.0	S	1.6	0.0	29.0	5.6	10.1	11.8	11.0	0.0	1.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0	3.1
24	0.0	0.0	S	0.0	3.8	3.9	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.4
25	0.0	0.0	S	0.0	5.3	4.5	6.4	13.0	19.9	22.9	14.1	5.4	1.4	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	4.1
26	0.0	0.0	S	0.4	0.8	0.0	0.2	2.9	19.7	34.7	3.5	0.5	1.0	0.5	0.9	0.2	0.9	0.0	0.0	0.0	0.0	0.2	0.9	4.3	34.7	3.1
27	0.5	0.0	S	1.8	0.0	4.4	2.6	2.3	10.5	8.3	5.4	3.5	0.9	0.3	0.0	6.9	9.2	2.2	0.6	0.0	0.0	0.0	5.3	0.0	10.5	2.8
28	0.0	2.9	S	0.0	0.0	0.4	3.5	3.0	17.4	18.1	8.7	0.0	0.9	0.0	0.9	0.7	0.1	0.3	0.0	0.0	0.0	0.0	2.3	0.0	18.1	2.6
29	0.0	0.4	S	0.1	8.6	11.9	11.8	18.1	16.1	12.3	17.6	8.0	1.4	3.7	0.8	1.4	0.0	1.8	0.0	0.6	0.0	0.0	0.0	5.4	18.1	5.2
30	8.3	8.2	S	0.0	0.0	0.6	16.7	14.5	22.3	22.6	10.7	15.1	1.0	0.0	0.0	0.0	0.7	0.2	0.0	0.0	0.0	0.2	0.0	0.2	22.6	5.3
31	8.2	3.7	S	0.0	0.0	0.0	0.5	6.9	9.1	10.9	3.7	5.3	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	10.9	2.2
Hourly Max	36.5	8.2	-	10.4	26.9	29.0	24.9	21.8	31.9	34.7	18.8	15.1	15.5	18.3	15.2	13.8	12.2	8.5	10.4	10.3	10.2	9.0	9.3	52.3		
Hourly Average	2.4	0.9	-	1.4	2.6	4.3	4.6	8.1	12.4	10.3	5.3	4.0	2.1	2.4	2.1	1.9	1.8	1.8	1.4	1.3	0.9	0.5	1.0	3.7		

S = SPAN C = CALIBRATION

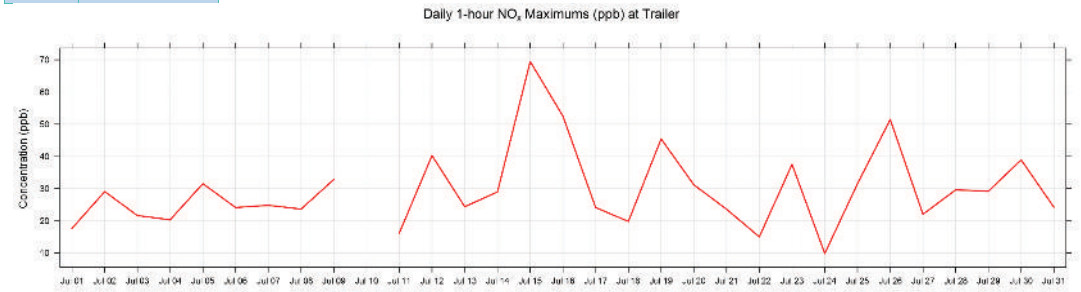


Number of 1HR Exceedances	n/a		Objective	n/a	PPB
Number of Non-Zero Readings	430				
Maximum 1-HR Average	52.3	PPB			
Maximum 24-HR Average	8.1	PPB			
IZS Calibration Time	31	HRS	Operational Time	744	HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0	%
Standard Deviation	5.9		Monthly Average	3.4	PPB

Lagoon NO_x (ppb) – July 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	0.6	**S**	3.3	8.7	17.6	6.6	9.1	1.3	2.5	9.8	16.5	2.8	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.7	0.0	0.6	5.0	17.6	3.9
2	12.5	4.4	**S**	3.8	10.4	2.8	0.8	7.9	15.7	9.5	7.6	2.3	12.8	29.1	2.2	4.8	0.4	13.3	4.6	3.0	3.7	5.9	5.0	6.1	29.1	7.3
3	4.3	7.3	**S**	20.7	5.3	20.3	16.7	9.2	21.6	9.3	9.3	10.0	3.3	3.5	5.4	8.7	2.7	7.3	6.4	2.2	0.6	0.6	0.4	1.9	21.6	7.7
4	5.4	6.4	**S**	3.5	3.3	6.5	4.2	12.1	8.7	8.7	9.2	13.0	3.0	0.0	0.1	2.7	0.0	0.8	0.0	1.7	0.0	1.0	20.3	4.7	20.3	5.0
5	10.6	5.7	**S**	4.8	7.6	7.0	8.3	20.9	31.5	25.5	15.0	7.8	10.0	4.3	0.4	1.3	0.0	0.0	0.7	0.7	0.0	7.5	6.5	6.9	31.5	8.0
6	13.8	5.7	**S**	7.0	8.2	8.2	7.1	18.3	24.1	16.4	6.6	11.8	9.1	1.1	1.3	10.1	9.1	3.8	11.0	1.4	1.3	2.1	0.0	8.5	24.1	8.1
7	3.7	2.9	**S**	13.2	2.3	17.4	10.3	7.7	20.1	8.8	12.6	17.8	7.2	1.1	24.8	0.0	4.9	13.1	17.1	18.8	21.5	18.6	7.2	7.3	24.8	11.2
8	1.6	8.1	**S**	1.8	4.7	6.2	7.9	4.2	7.4	3.6	0.6	14.0	23.6	13.1	12.9	23.5	21.1	14.1	16.3	2.1	2.9	2.2	6.0	12.9	23.6	9.2
9	9.3	6.9	**S**	5.1	13.0	6.6	17.2	19.5	31.6	25.1	30.3	15.3	27.6	32.8	19.0	3.1	4.4	16.4	7.3	18.0	1.0	5.2	13.7	10.6	32.8	14.7
10	17.1	11.0	**S**	7.4	4.4	5.1	9.6	10.8	19.5	**C**	**C**	**C**	**C**	**C**	**C**	2.8	9.1	3.1	0.5	0.0	0.0	0.0	3.3	11.2	-	-
11	2.3	5.2	**S**	2.8	4.5	4.2	16.1	16.2	7.7	7.1	2.1	0.6	0.0	1.6	1.5	0.0	0.0	0.0	0.6	0.0	0.3	13.3	4.9	6.2	16.2	4.2
12	5.5	6.4	**S**	8.7	18.1	16.3	9.1	32.7	40.3	26.2	5.5	4.4	6.8	17.1	15.3	16.7	8.7	12.0	23.3	17.3	3.4	1.6	3.5	4.0	40.3	13.2
13	4.4	3.6	**S**	19.4	8.1	11.6	9.1	19.3	23.7	13.1	4.6	24.4	0.0	0.0	0.0	2.8	1.9	11.4	4.1	10.2	6.6	0.0	0.0	0.0	24.4	7.7
14	0.0	0.0	**S**	0.0	0.0	0.0	2.1	0.9	0.6	1.9	2.2	0.5	4.2	1.4	2.5	2.3	2.7	1.0	0.0	0.0	0.6	1.5	7.0	29.0	29.0	2.6
15	5.2	1.3	**S**	5.7	11.4	11.9	4.2	17.1	13.5	24.8	23.1	5.9	2.9	0.0	0.0	0.0	12.4	1.8	0.1	3.6	3.0	7.9	9.0	69.5	69.5	10.2
16	52.5	13.6	**S**	7.9	9.1	8.1	15.5	36.0	46.5	44.2	33.0	17.9	0.0	11.3	14.3	6.9	12.8	20.8	6.2	13.3	20.4	4.9	0.0	1.4	52.5	17.2
17	2.5	3.0	**S**	2.8	3.7	12.6	10.7	14.7	24.1	17.9	5.0	2.4	9.8	17.1	11.1	12.1	14.8	1.3	2.0	3.0	0.6	8.8	19.0	22.5	24.1	9.6
18	19.8	16.9	**S**	13.5	11.2	4.8	3.3	8.0	9.6	4.3	2.4	2.3	2.6	1.0	1.9	8.0	10.3	2.9	0.2	0.3	13.6	5.5	7.4	15.2	19.8	7.2
19	2.8	1.9	**S**	14.6	36.6	25.9	31.6	16.1	45.4	17.0	4.0	4.1	7.9	10.1	14.2	1.9	5.2	1.5	0.9	1.8	8.9	3.6	2.8	21.4	45.4	12.2
20	2.4	2.8	**S**	9.1	6.8	10.3	19.6	30.3	17.6	31.2	10.1	14.9	2.1	2.6	3.4	1.9	1.8	6.6	12.2	15.1	8.9	6.9	8.4	4.7	31.2	10.0
21	1.2	4.2	**S**	3.6	0.9	1.4	6.6	17.5	14.8	10.8	8.2	0.5	7.0	9.4	13.9	23.6	9.1	2.3	3.9	13.1	15.0	8.4	3.4	3.6	23.6	7.9
22	8.3	8.8	**S**	3.8	3.6	10.1	10.2	14.7	15.0	8.0	3.9	2.9	3.0	5.5	2.7	0.6	0.4	5.2	0.0	0.8	1.4	1.3	2.2	9.2	15.0	5.3
23	5.3	2.1	**S**	7.6	3.2	37.5	11.8	16.2	21.1	18.8	0.9	3.7	2.6	1.4	2.5	0.8	1.4	0.6	2.4	0.2	0.9	2.4	2.3	0.1	37.5	6.3
24	3.1	1.1	**S**	3.9	8.7	9.8	6.3	5.6	1.9	1.9	1.3	1.3	1.4	1.8	2.5	0.8	0.3	0.3	0.0	0.0	0.0	0.3	0.6	0.7	9.8	2.3
25	0.5	1.9	**S**	0.0	8.0	9.0	12.8	19.1	26.8	31.5	22.0	12.0	5.0	1.7	3.4	1.3	0.8	0.4	0.3	1.0	3.2	1.1	0.3	1.5	31.5	7.1
26	1.2	0.3	**S**	2.7	7.6	3.9	6.0	10.1	30.8	51.5	10.2	4.2	6.0	3.9	4.5	2.7	4.4	0.0	4.1	1.2	1.5	4.4	5.2	9.2	51.5	7.6
27	4.7	3.3	**S**	13.3	8.7	14.2	13.1	9.6	19.4	16.5	12.4	10.6	6.0	4.5	3.1	19.8	22.0	9.2	4.4	2.4	1.6	1.7	14.1	4.2	22.0	9.5
28	3.0	9.9	**S**	4.6	4.5	4.5	9.0	7.0	27.3	29.6	18.2	1.4	6.2	1.8	6.4	3.8	3.3	1.9	2.1	2.8	1.2	0.6	7.6	5.3	29.6	7.1
29	8.0	6.4	**S**	4.9	18.0	22.0	20.1	29.2	25.1	21.7	28.5	16.7	7.3	13.2	6.0	8.3	2.1	10.3	4.0	4.9	0.9	4.4	3.8	14.4	29.2	12.2
30	16.4	19.9	**S**	8.6	8.0	10.8	28.4	26.8	37.4	38.9	21.6	29.0	5.3	0.0	0.0	0.4	2.7	4.2	0.3	0.0	0.0	6.6	5.5	5.0	38.9	12.0
31	24.2	15.1	**S**	2.8	1.9	2.7	9.7	18.0	19.7	22.9	12.2	16.1	1.8	3.1	3.8	1.6	3.1	1.7	1.4	2.5	11.9	10.2	6.9	10.4	24.2	8.9
Hourly Max	52.5	19.9	-	20.7	36.6	37.5	31.6	36.0	46.5	51.5	33.0	29.0	27.6	32.8	24.8	23.6	22.0	20.8	23.3	18.8	21.5	18.6	20.3	69.5		
Hourly Average	8.1	6.0	-	6.8	8.1	10.6	11.1	15.6	21.0	18.3	11.1	9.5	6.2	6.4	6.0	5.7	5.6	5.4	4.4	4.6	4.4	4.5	5.7	10.1		

S = SPAN C = CALIBRATION

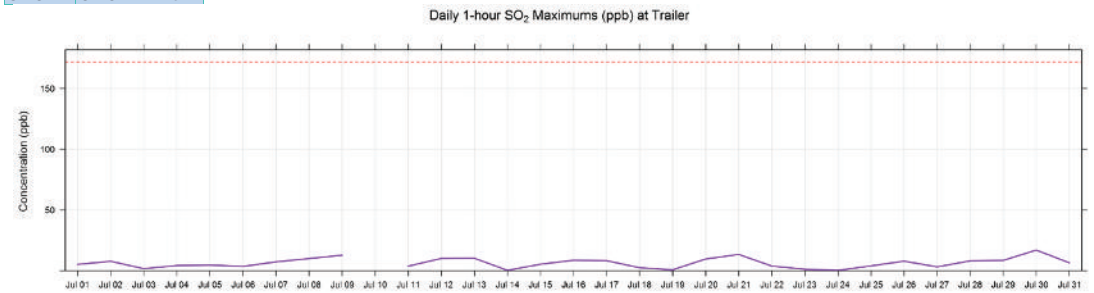


Number of 1HR Exceedances	n/a		Objective	n/a	PPB
Number of Non-Zero Readings	654				
Maximum 1-HR Average	69.5	PPB			
Maximum 24-HR Average	17.2	PPB			
IZS Calibration Time	31	HRS	Operational Time	744	HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0	%
Standard Deviation	8.9		Monthly Average	8.5	PPB

Lagoon SO_2 (ppb) – July 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	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.1	0.3
2	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.2	0.0	2.6	7.7	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.5
3	0.0	0.0	S	0.9	0.0	1.6	1.1	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	1.6	0.2
4	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.2
5	0.0	0.0	S	0.0	0.0	0.0	0.0	0.1	0.6	4.6	3.1	0.9	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.5
6	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	1.2	0.4	0.0	0.8	0.0	0.0	0.0	3.5	2.7	0.9	2.5	0.7	0.7	0.0	0.0	0.3	3.5	0.6
7	1.1	0.0	S	1.9	0.0	2.7	2.2	0.1	1.5	0.5	1.4	3.9	1.3	0.0	6.8	0.0	1.3	3.3	3.0	5.0	6.7	7.2	1.6	0.0	7.2	2.2
8	0.0	0.4	S	0.2	0.5	0.0	0.3	0.5	0.4	0.8	0.0	2.5	10.0	3.8	4.4	7.5	5.5	5.0	3.3	0.4	0.0	0.0	0.0	0.0	10.0	2.0
9	0.0	0.0	S	0.0	0.6	0.0	1.5	3.7	7.0	3.7	10.2	4.8	5.7	12.7	1.8	0.4	1.3	0.7	0.3	2.8	0.0	0.3	0.0	0.0	12.7	2.5
10	0.0	0.0	S	0.0	0.0	0.0	0.7	1.7	3.6	C	C	C	C	C	C	0.0	0.8	0.5	0.4	0.0	0.2	0.0	0.0	0.0	-	-
11	0.0	0.1	S	0.0	0.8	0.6	3.7	2.0	0.3	0.3	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.7	0.4
12	0.0	0.8	S	2.1	2.3	0.8	0.2	8.3	9.9	10.1	0.2	0.8	4.3	9.4	5.3	8.1	3.3	4.2	5.8	4.2	0.2	0.0	0.0	0.0	10.1	3.5
13	0.1	0.5	S	2.6	1.5	1.2	0.1	1.1	3.2	0.9	0.5	10.2	0.0	0.3	0.0	1.2	1.0	4.8	2.2	4.4	2.1	0.0	0.0	0.0	10.2	1.6
14	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
15	0.0	0.0	S	0.0	0.8	0.2	0.1	0.6	0.9	4.2	4.6	0.0	0.1	0.0	0.0	0.0	5.3	0.1	0.2	0.2	0.0	0.0	0.0	0.0	5.3	0.7
16	0.0	0.0	S	0.0	0.0	0.0	0.5	1.9	4.4	8.5	8.2	3.1	0.0	4.4	2.4	1.0	2.8	7.4	1.7	0.1	0.5	0.0	0.0	0.0	8.5	2.0
17	0.0	0.0	S	0.0	0.0	0.4	0.1	2.2	5.0	2.3	0.0	0.2	5.7	8.2	4.1	5.5	4.9	0.0	0.0	0.3	0.3	0.4	0.1	0.0	8.2	1.7
18	0.0	0.0	S	1.1	1.8	1.5	0.4	2.4	0.0	0.5	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.4	0.4
19	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.7	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1
20	0.0	0.0	S	0.0	0.0	0.0	0.8	3.4	2.8	9.6	2.0	4.2	0.7	0.7	0.2	0.5	0.3	1.5	4.2	7.1	2.9	0.0	0.2	0.0	9.6	1.8
21	0.0	0.0	S	0.4	0.0	0.4	0.2	3.2	4.2	3.5	2.3	0.0	2.2	8.2	9.6	13.3	7.1	1.1	1.5	6.7	8.2	1.2	0.0	0.0	13.3	3.2
22	0.0	0.2	S	0.0	0.5	1.0	1.0	2.4	3.7	1.0	0.6	1.0	2.4	3.7	1.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.9
23	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1
24	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
25	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	1.1	3.9	3.3	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.5
26	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	2.3	7.8	0.6	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	7.8	0.5
27	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.4	0.2	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.3
28	0.0	0.0	S	0.0	0.3	0.1	2.1	1.1	6.9	8.0	5.9	0.0	3.9	0.0	0.1	0.0	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	8.0	1.3
29	0.0	0.0	S	0.0	4.9	8.5	3.9	7.0	7.5	7.0	7.0	4.0	2.9	6.0	3.1	4.3	0.8	0.3	0.6	0.3	0.3	0.1	0.0	0.0	8.5	3.0
30	0.0	0.0	S	0.0	0.0	0.0	2.9	9.8	13.9	16.9	8.2	6.6	1.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	16.9	2.6
31	0.0	0.0	S	0.0	0.0	0.0	0.0	0.1	0.0	2.4	3.6	6.5	2.1	1.0	0.5	0.6	0.2	0.0	0.3	0.0	0.2	0.0	0.0	0.0	6.5	0.8
Hourly Max	1.1	0.8	-	2.6	4.9	8.5	3.9	9.8	13.9	16.9	10.2	10.2	10.0	12.7	9.6	13.3	7.1	7.4	5.8	7.1	8.2	7.2	1.6	0.3		
Hourly Average	0.0	0.1	-	0.3	0.4	0.6	0.7	1.7	2.6	3.3	2.2	2.2	1.6	2.3	1.3	1.5	1.3	1.0	0.9	1.0	0.7	0.3	0.1	0.0		

S = SPAN C = CALIBRATION

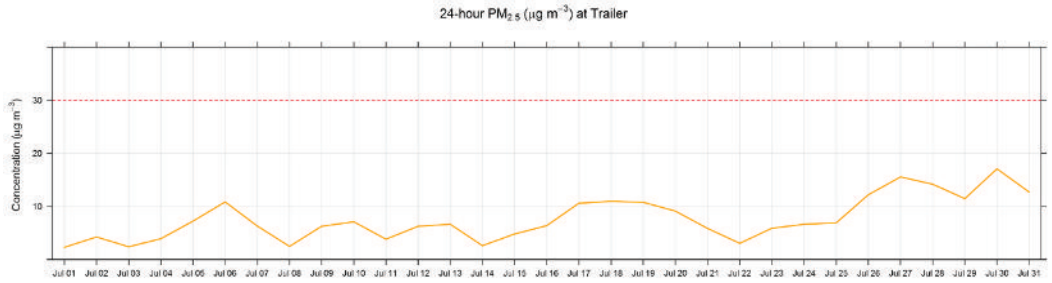


Number of 1HR Exceedances	0		Objective	172	PPB
Number of 24HR Exceedances	0		Objective	48	PPB
Number of Non-Zero Readings	322				
Maximum 1-HR Average	16.9	PPB			
Maximum 24-HR Average	3.5	PPB			
IZS Calibration Time	31	HRS	Operational Time	744	HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0	%
Standard Deviation	2.3		Monthly Average	1.1	PPB

Lagoon $PM_{2.5}$ (µg/m^3) – July 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	3.3	3.0	2.6	2.6	2.6	1.9	1.9	1.9	2.2	3.3	4.0	2.9	1.2	2.6	4.0	4.4	0.0	0.0	1.5	1.2	0.8	2.2	2.2	4.4	2.3
2	3.0	5.1	5.1	4.0	2.6	4.4	4.7	2.2	4.0	6.5	8.3	6.0	2.9	1.5	1.9	4.0	18.0	4.7	4.4	2.6	3.3	2.6	0.0	0.0	18.0	4.3
3	2.6	3.3	1.5	0.5	0.4	2.6	1.5	1.2	1.2	1.2	3.7	1.9	3.0	3.3	1.9	3.0	4.7	1.9	2.2	2.9	4.0	5.1	3.0	1.3	5.1	2.4
4	1.2	0.4	1.2	4.7	4.7	4.0	3.3	2.6	3.3	1.9	2.2	2.2	13.7	7.3	0.8	1.9	3.7	7.3	5.5	3.3	2.6	3.7	4.4	8.3	13.7	3.9
5	8.0	12.3	11.6	6.9	4.5	6.1	6.2	6.2	12.3	10.5	6.5	6.2	5.8	3.3	8.0	5.5	2.9	3.7	4.0	2.9	7.3	12.3	10.5	10.5	12.3	7.2
6	6.9	10.6	8.7	11.9	8.3	12.1	8.0	8.3	14.1	11.4	13.4	19.8	21.6	11.9	10.5	8.0	9.8	12.8	8.3	6.2	6.2	6.5	15.2	10.1	21.6	10.9
7	8.3	5.8	9.1	10.7	6.9	5.5	4.0	4.7	4.4	4.4	11.3	8.7	7.3	15.5	9.1	9.4	5.1	1.9	5.8	4.4	1.2	1.5	3.7	2.9	15.5	6.3
8	9.4	6.5	2.6	1.5	1.2	0.8	0.1	2.6	3.7	2.6	2.9	4.7	4.4	3.7	1.9	0.0	0.0	0.0	0.0	1.5	0.0	0.8	5.1	3.7	9.4	2.5
9	1.9	4.0	6.2	5.1	1.9	6.6	8.0	6.2	8.9	6.9	7.3	7.6	13.4	12.3	8.3	4.4	4.7	4.4	5.5	4.7	4.4	3.7	5.8	8.3	13.4	6.3
10	7.6	9.4	6.2	5.1	10.1	10.1	11.2	11.2	8.3	8.3	10.8	8.7	6.2	3.7	6.2	8.7	8.7	5.5	5.1	8.7	5.5	1.5	1.9	1.9	11.2	7.1
11	5.8	5.8	5.1	3.7	4.4	3.7	2.2	1.3	5.1	4.0	3.7	4.4	7.3	6.9	3.3	1.9	2.6	1.2	2.2	1.2	0.6	3.4	5.5	6.9	7.3	3.8
12	7.3	6.5	5.1	6.5	4.4	7.0	6.2	4.0	6.2	10.1	11.6	C	C	C	2.2	7.3	10.1	5.1	4.7	7.6	4.7	3.3	5.1	6.5	11.6	6.3
13	5.8	5.8	5.1	5.8	9.1	6.9	5.8	6.5	8.3	11.5	8.3	10.8	8.0	5.8	4.0	3.7	7.3	3.7	4.0	4.0	4.4	7.6	11.2	6.2	11.5	6.7
14	4.4	4.7	3.9	2.6	2.2	1.9	3.0	2.6	2.2	2.9	0.8	0.8	1.9	0.8	0.8	0.8	0.8	1.2	4.4	4.7	2.0	1.5	6.9	5.1	6.9	2.6
15	9.8	8.3	8.0	6.5	5.5	3.7	6.5	5.8	5.1	4.6	6.9	5.5	4.4	4.0	4.4	2.9	1.2	2.0	2.6	1.5	3.7	4.4	3.3	5.1	9.8	4.8
16	6.2	7.6	7.3	6.2	7.3	8.0	7.3	6.9	6.9	9.4	9.1	8.3	6.2	0.8	0.4	2.9	1.5	0.0	4.7	12.3	8.3	6.5	10.8	8.3	12.3	6.4
17	13.0	13.4	9.8	12.7	11.6	10.1	18.0	8.7	9.1	7.6	9.4	13.7	9.4	6.2	9.4	7.3	4.4	4.4	9.8	11.9	12.3	8.7	12.8	21.3	21.3	10.6
18	15.5	17.0	9.1	17.0	13.0	8.0	5.8	7.6	8.7	13.7	13.7	11.6	18.4	7.3	8.3	12.3	13.0	14.8	11.2	7.6	4.0	8.3	8.7	8.8	18.4	11.0
19	8.0	8.0	9.4	8.0	16.6	14.4	12.1	18.7	14.8	16.2	10.1	5.8	3.3	5.8	10.8	15.5	13.4	10.1	7.3	9.4	10.5	11.9	9.8	9.1	18.7	10.8
20	9.1	9.8	12.3	14.4	10.9	11.9	13.5	13.0	12.6	12.6	15.9	11.6	6.9	3.7	5.2	7.3	5.5	3.7	5.5	6.5	6.2	6.5	5.5	9.1	15.9	9.1
21	15.9	9.4	6.9	5.5	5.1	4.7	3.3	5.1	4.7	4.7	6.9	6.5	5.1	4.4	4.4	15.2	11.2	6.9	4.0	2.2	1.9	1.9	2.2	2.6	15.9	5.9
22	0.0	0.0	2.2	4.7	3.0	3.8	4.7	5.1	4.7	3.3	2.2	0.8	0.0	0.1	2.2	2.2	2.2	1.5	2.9	5.1	5.1	6.1	5.5	5.8	6.1	3.1
23	10.1	8.3	7.6	6.2	5.8	6.9	8.7	7.3	5.5	4.7	5.1	5.5	6.5	7.6	6.9	9.8	5.8	1.2	3.3	3.3	1.9	2.6	5.5	5.5	10.1	5.9
24	4.7	7.5	8.7	9.1	10.1	6.2	4.0	5.8	9.1	6.9	6.2	6.5	4.7	5.5	10.5	10.9	12.3	8.0	3.3	3.0	3.7	5.1	4.0	3.9	12.3	6.7
25	5.5	7.3	7.5	4.5	7.6	7.3	8.0	5.8	10.1	8.9	4.7	6.9	7.6	6.9	5.8	6.1	5.8	7.6	8.3	7.3	7.3	4.4	6.9	8.0	10.1	6.9
26	6.9	13.4	14.8	11.2	9.1	15.5	10.5	11.2	11.2	11.9	10.1	9.1	8.0	16.6	15.5	15.5	19.8	15.9	14.1	11.2	8.7	12.3	9.8	10.9	19.8	12.2
27	10.9	13.5	14.1	18.4	16.6	16.0	15.5	15.9	15.2	18.4	17.7	18.7	14.8	19.5	18.4	12.3	12.6	14.1	14.1	13.7	14.4	16.6	15.2	17.0	19.5	15.6
28	18.0	17.0	20.2	17.3	16.2	14.8	15.5	18.8	16.6	17.3	17.0	19.1	14.8	13.0	14.1	11.9	16.2	12.6	10.1	8.3	8.0	9.4	5.8	8.3	20.2	14.2
29	6.9	6.6	9.8	9.8	8.7	9.4	8.9	10.9	8.7	9.1	9.8	11.6	10.5	9.1	11.2	10.8	10.5	14.1	17.3	16.6	13.7	14.4	19.8	17.3	19.8	11.5
30	16.6	18.8	21.3	22.0	20.6	20.2	21.6	22.0	19.8	18.4	25.2	21.6	18.4	17.7	10.8	13.0	10.8	20.2	12.3	9.4	19.5	9.4	8.0	12.6	25.2	17.1
31	9.4	11.6	10.5	11.9	11.6	11.2	8.3	13.4	16.6	12.3	14.8	15.5	13.0	11.6	15.2	12.6	9.4	15.9	11.2	13.7	16.2	9.8	12.6	16.7	16.7	12.7
Hourly Max	18.0	18.8	21.3	22.0	20.6	20.2	21.6	22.0	19.8	18.4	25.2	21.6	21.6	19.5	18.4	15.5	19.8	20.2	17.3	16.6	19.5	16.6	19.8	21.3		
Hourly Average	7.8	8.4	8.2	8.3	7.8	7.9	7.7	7.9	8.5	8.5	9.0	8.8	8.3	7.2	6.9	7.4	7.7	6.6	6.4	6.4	6.2	6.2	7.3	7.9		

C = CALIBRATION

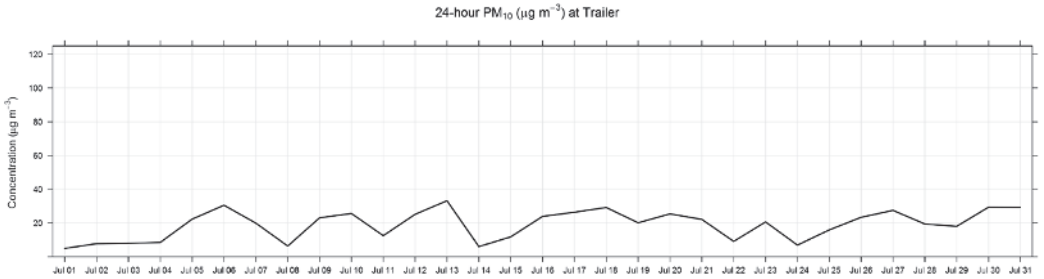


Number of 1HR Exceedances	0		Guideline	80	UG/M3
Number of 24HR Exceedances	0		Objective	30	UG/M3
Number of Non-Zero Readings	728				
Maximum 1-HR Average	25.2	UG/M3			
Maximum 24-HR Average	17.1	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	744	HRS
Monthly Calibration Time	3	HRS	Operational Uptime	100.0	%
Standard Deviation	5.0		Monthly Average	7.6	UG/M3

Lagoon PM_{10} (µg/m^3) – July 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	0.6	6.7	8.8	8.7	3.3	3.3	7.4	9.7	9.4	8.5	12.1	19.5	0.5	0.6	2.6	4.6	3.3	1.9	1.3	3.3	0.5	0.0	0.0	19.5	4.9
2	6.0	10.1	5.4	6.0	8.0	10.7	7.4	3.3	16.2	14.1	17.5	18.2	2.7	8.0	13.5	12.2	5.3	1.3	6.7	1.9	0.0	0.0	5.3	5.3	18.2	7.7
3	5.2	5.4	7.4	6.0	5.3	4.6	3.3	6.0	16.2	27.0	14.8	10.9	12.1	10.1	6.0	7.4	10.6	6.7	6.0	9.2	6.0	1.9	2.6	0.6	27.0	8.0
4	1.3	15.5	9.4	6.7	3.3	4.6	7.4	8.0	19.4	7.4	8.7	12.1	23.6	5.3	7.2	10.1	12.1	7.4	3.3	6.6	4.0	6.0	8.0	5.3	23.6	8.4
5	16.8	12.8	12.8	12.1	10.0	9.4	15.1	23.6	43.9	32.1	37.8	33.8	23.6	20.2	16.8	25.0	24.3	18.2	20.2	29.0	22.3	14.8	27.7	31.7	43.9	22.3
6	14.1	18.9	15.1	28.0	22.3	21.6	15.5	16.2	42.8	41.2	43.3	39.2	47.3	64.2	46.4	25.0	38.5	82.5	17.5	29.7	10.7	20.2	25.0	6.7	82.5	30.5
7	18.2	14.8	20.9	17.5	9.4	10.1	10.1	8.7	10.1	24.4	16.2	42.6	83.9	37.8	11.4	35.8	8.0	11.4	15.5	8.7	10.1	22.3	22.9	6.0	83.9	19.9
8	3.3	4.0	4.0	1.3	2.6	3.3	4.0	4.6	4.0	6.0	10.7	9.4	6.0	10.1	9.4	7.4	6.0	4.6	6.7	5.7	7.4	4.6	17.5	8.7	17.5	6.3
9	6.7	7.4	10.1	7.4	8.7	41.9	14.1	34.4	42.6	33.8	60.2	22.2	31.6	44.1	14.8	12.1	12.3	29.0	19.4	12.1	21.6	15.5	20.4	30.4	60.2	23.0
10	15.5	8.7	19.6	13.5	27.7	18.3	18.9	35.1	57.5	56.8	67.0	39.9	6.0	26.1	33.8	46.0	48.0	27.7	19.5	16.2	7.1	4.0	1.9	0.0	67.0	25.6
11	0.0	8.0	35.8	21.6	9.4	6.0	2.6	4.6	9.4	11.4	29.7	10.1	10.7	11.5	14.8	13.7	8.7	5.3	10.1	10.7	5.3	1.9	33.8	23.1	35.8	12.4
12	37.0	11.4	6.7	7.2	10.1	6.0	4.0	8.0	19.5	54.8	41.2	C	C	C	20.9	25.2	45.3	37.8	41.9	39.9	50.7	21.6	28.4	10.1	54.8	25.1
13	20.9	18.2	18.9	17.5	15.5	20.9	28.4	25.0	31.1	80.5	79.1	31.7	40.5	18.9	18.2	12.8	26.3	18.9	31.1	17.5	71.0	129.3	18.2	5.4	129.3	33.1
14	6.7	5.2	1.9	0.6	3.3	5.3	0.6	0.0	0.0	2.8	10.1	10.7	6.7	2.6	4.6	15.5	3.3	15.5	8.7	8.0	6.7	8.7	10.1	6.0	15.5	6.0
15	7.9	8.7	7.4	11.4	11.4	14.8	6.7	7.4	23.6	17.5	24.3	28.4	10.7	11.2	8.0	6.7	8.7	9.3	6.7	7.4	10.1	11.5	11.4	10.1	28.4	11.7
16	8.0	5.3	8.0	12.8	12.1	17.5	21.5	14.1	46.0	72.4	49.3	41.9	27.7	6.0	9.4	21.6	10.1	22.9	39.9	37.2	34.4	22.9	20.9	11.1	72.4	23.9
17	15.5	13.5	11.2	4.9	6.7	25.0	39.9	18.9	31.1	29.0	46.0	23.6	14.8	12.8	9.4	8.0	15.5	15.5	50.7	39.9	50.0	23.6	67.0	60.2	67.0	26.3
18	31.7	39.9	18.2	32.4	38.5	24.3	39.2	17.5	16.8	38.5	31.7	35.8	99.5	47.3	47.3	27.0	25.0	18.2	17.5	5.3	5.3	15.5	18.9	8.3	99.5	29.2
19	19.6	16.9	10.1	20.2	23.6	20.2	18.2	28.4	29.0	46.0	16.7	16.8	15.5	35.8	16.2	11.4	16.2	18.9	18.2	10.7	16.8	21.9	25.6	8.7	46.0	20.1
20	9.4	10.7	12.8	33.1	23.8	42.6	29.7	23.6	26.3	29.7	42.6	42.6	34.4	17.5	20.2	27.7	21.6	25.6	29.0	35.8	20.9	22.3	18.2	8.7	42.6	25.4
21	15.5	16.8	12.8	10.7	8.7	8.7	5.3	18.2	15.5	14.8	21.6	25.6	15.2	26.3	33.8	64.2	75.8	34.4	20.9	29.7	29.0	11.4	8.7	6.5	75.8	22.1
22	8.8	7.7	8.7	12.1	10.7	2.6	1.9	5.3	3.3	14.8	24.3	10.1	9.4	7.4	5.3	9.4	8.0	4.6	9.4	16.8	9.4	8.3	16.8	1.7	24.3	9.0
23	21.6	20.3	22.3	8.7	11.4	12.8	25.7	14.7	16.8	33.1	30.4	14.7	15.5	23.6	69.7	61.6	18.2	6.7	30.4	23.6	2.6	6.0	3.3	0.6	69.7	20.6
24	5.3	16.8	6.7	8.1	10.1	4.0	1.9	4.0	2.6	6.0	8.7	9.4	16.5	8.7	16.8	8.7	5.3	1.3	1.7	1.3	2.6	6.7	5.3	6.0	16.8	6.9
25	8.7	5.3	15.5	9.4	7.4	8.2	11.4	11.4	26.0	32.4	19.5	31.7	18.2	14.8	11.2	10.7	11.4	23.3	25.6	16.1	26.3	10.0	15.5	10.1	32.4	15.8
26	7.9	4.6	18.9	12.8	13.5	25.0	20.9	16.4	27.7	30.4	38.5	33.8	16.1	25.6	23.6	34.4	27.0	83.9	9.4	27.0	11.4	15.5	16.2	19.6	83.9	23.3
27	24.3	24.3	24.3	20.9	29.7	25.0	23.6	22.9	37.8	36.5	41.2	30.3	33.8	29.3	48.7	20.9	20.9	30.4	27.6	22.9	18.9	20.4	18.9	25.7	48.7	27.5
28	20.9	22.3	20.9	20.9	16.2	20.9	23.6	31.1	17.5	29.0	37.8	31.7	12.2	23.6	17.5	20.9	15.5	18.9	14.1	21.9	11.4	7.9	2.6	5.4	37.8	19.4
29	8.0	6.7	10.1	12.1	12.8	18.9	14.8	17.5	24.3	17.5	16.9	22.3	17.5	12.8	16.5	16.2	14.8	21.9	24.3	27.7	24.6	18.2	28.4	27.0	28.4	18.0
30	20.9	26.3	37.6	29.0	33.7	28.4	31.1	31.4	37.2	58.2	56.1	34.4	36.5	26.3	11.4	8.0	14.8	73.7	29.7	17.5	29.7	9.4	10.7	12.1	73.7	29.3
31	11.4	10.7	28.4	27.0	21.6	20.9	6.0	22.9	29.7	53.4	43.3	25.0	46.0	18.9	81.9	46.0	29.0	26.3	28.4	19.5	29.7	22.9	30.4	22.9	81.9	29.3
Hourly Max	37.0	39.9	37.6	33.1	38.5	42.6	39.9	35.1	57.5	80.5	79.1	42.6	99.5	64.2	81.9	64.2	75.8	83.9	50.7	39.9	71.0	129.3	67.0	60.2		
Hourly Average	12.8	12.8	14.5	14.2	14.1	15.7	14.7	15.8	23.7	31.0	32.0	25.0	25.1	20.2	21.5	21.1	19.1	22.8	19.1	18.0	18.0	16.3	17.4	12.4		

C = CALIBRATION

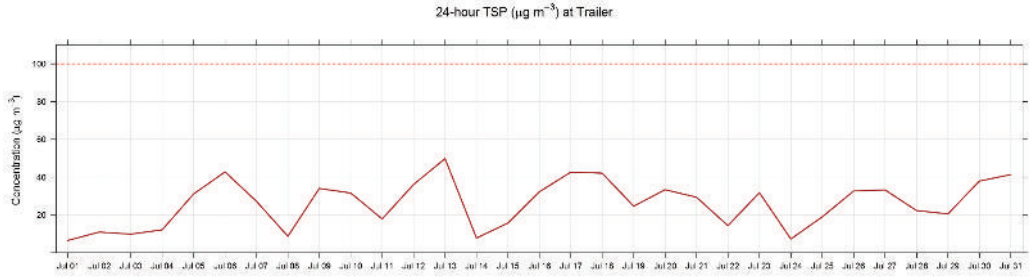


Number of 1HR Exceedances	n/a		Objective	n/a	UG/M3
Number of Non-Zero Readings	732				
Maximum 1-HR Average	129.3	UG/M3			
Maximum 24-HR Average	33.1	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	744	HRS
Monthly Calibration Time	3	HRS	Operational Uptime	100.0	%
Standard Deviation	15.4		Monthly Average	19.0	UG/M3

Lagoon TSP (µg/m^3) – July 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	0.2	0.0	0.0	13.9	15.4	5.7	5.7	11.3	8.5	5.7	5.7	15.4	26.5	3.0	5.7	5.7	5.7	3.0	0.2	0.2	1.6	15.4	0.0	0.0	26.5	6.4
2	11.3	9.9	4.3	8.5	11.3	11.3	5.7	3.7	9.9	20.9	22.3	14.0	0.2	11.3	7.1	16.8	12.6	9.9	29.2	7.1	8.5	11.3	9.9	4.3	29.2	10.9
3	9.9	9.9	5.7	7.1	9.9	3.0	9.9	7.1	8.5	33.4	16.8	12.6	14.0	5.7	5.9	12.6	8.5	4.3	5.8	11.3	9.9	7.1	4.3	11.3	33.4	9.8
4	8.5	9.9	20.9	4.3	8.5	8.5	9.9	7.1	27.8	14.0	14.0	11.3	15.4	4.3	1.6	8.5	22.3	8.5	9.9	18.2	7.1	12.6	12.6	23.7	27.8	12.1
5	27.8	23.6	20.9	5.8	11.3	20.9	16.6	14.0	47.2	34.7	32.0	32.0	37.5	45.8	32.0	32.0	41.7	37.7	52.3	48.6	36.1	22.3	33.4	38.9	52.3	31.0
6	23.7	27.8	37.5	23.7	19.5	22.3	20.9	12.6	44.4	44.4	55.5	41.7	70.6	116.3	80.3	37.5	62.4	145.2	18.2	40.5	18.2	26.5	30.6	5.7	145.2	42.7
7	25.1	25.0	26.5	19.6	9.9	12.6	23.7	9.9	18.2	19.5	27.8	46.9	116.3	33.4	12.6	56.9	0.0	19.5	20.9	15.4	32.0	32.0	36.1	12.6	116.3	27.2
8	5.7	15.4	7.1	4.3	4.3	4.0	4.3	4.3	1.6	0.0	1.6	3.0	1.6	9.9	15.4	9.9	12.6	7.1	7.1	14.0	11.3	9.9	23.7	29.2	29.2	8.6
9	14.0	16.8	15.4	15.4	9.9	47.2	27.8	36.1	51.3	48.6	61.0	43.3	62.4	69.3	16.8	33.4	12.6	48.6	27.8	19.5	30.6	25.1	44.4	38.9	69.3	34.0
10	34.8	19.6	22.3	9.9	32.9	20.9	34.8	49.9	67.9	69.3	70.7	43.0	11.3	26.5	47.2	62.4	52.7	36.1	19.5	15.4	5.7	1.6	0.0	3.0	70.7	31.5
11	19.5	27.8	54.1	25.1	15.4	5.7	4.3	5.7	14.0	14.0	26.5	11.3	8.5	5.7	19.4	12.6	15.4	8.5	15.4	15.4	5.7	7.1	49.9	40.3	54.1	17.8
12	65.1	18.2	12.6	11.3	9.9	8.5	5.7	4.0	25.1	66.5	54.1	C	C	C	27.8	32.0	61.0	57.2	47.2	73.4	79.0	30.6	49.9	19.5	79.0	36.1
13	28.8	24.7	26.5	22.3	19.5	16.8	30.6	26.0	32.0	90.0	103.8	47.2	65.1	44.4	48.6	32.0	52.7	32.0	65.1	25.9	117.6	196.4	34.7	11.5	196.4	49.8
14	14.0	7.1	3.0	3.0	0.2	1.5	0.2	0.0	0.0	0.0	0.0	3.0	7.1	8.5	8.5	7.1	11.3	20.9	16.8	14.0	7.1	16.8	26.5	8.5	26.5	7.7
15	23.7	18.2	14.0	12.6	9.9	14.0	14.0	3.0	33.4	15.4	12.6	22.3	8.5	11.3	14.0	7.1	4.3	9.9	14.0	18.2	32.0	27.8	18.2	16.9	33.4	15.6
16	22.3	9.9	14.0	12.6	11.3	22.3	24.7	3.0	49.9	94.2	51.3	61.0	33.4	11.3	29.2	34.7	7.1	33.4	52.7	61.0	49.9	37.5	29.2	16.8	94.2	32.2
17	18.2	16.8	19.6	18.2	19.5	32.0	43.3	18.2	40.3	38.3	65.5	36.1	17.1	12.6	15.4	14.0	32.0	26.0	120.4	92.8	95.5	41.7	106.6	83.1	120.4	42.6
18	44.4	70.7	38.9	38.9	41.7	32.0	44.4	32.0	20.9	48.6	58.2	40.3	181.2	65.1	76.2	18.2	26.5	18.2	34.7	4.3	8.5	22.3	22.3	20.9	181.2	42.1
19	18.2	15.4	16.8	14.1	23.7	25.1	23.7	26.5	25.1	58.2	27.8	38.9	26.5	58.2	27.8	20.9	20.9	8.5	14.0	9.9	16.8	26.5	30.6	15.4	58.2	24.6
20	21.2	18.2	7.1	54.1	27.8	67.9	22.3	20.9	34.7	20.9	41.7	55.5	47.2	26.5	34.7	37.5	30.6	27.8	37.5	41.7	30.6	26.5	37.5	29.2	67.9	33.3
21	23.6	15.4	21.1	11.3	7.1	5.7	11.3	15.4	11.3	17.1	23.6	29.2	14.5	32.0	43.0	83.1	123.2	48.6	34.7	48.6	34.7	20.9	18.2	9.9	123.2	29.3
22	12.6	9.9	19.6	22.3	12.6	8.5	3.0	4.3	5.7	22.3	27.8	1.6	3.0	4.3	7.1	24.9	3.0	19.4	18.2	45.8	14.2	14.0	14.0	23.7	45.8	14.2
23	40.4	47.2	20.9	15.4	14.0	9.9	27.8	22.3	19.3	34.7	33.4	22.3	18.2	30.6	159.1	110.7	32.0	22.3	41.7	9.9	5.7	8.5	8.5	7.1	159.1	31.7
24	4.3	9.9	5.7	11.1	7.1	4.3	5.7	14.0	5.7	5.7	4.3	1.6	8.5	18.2	23.7	12.6	11.3	5.7	0.0	0.0	0.2	3.0	4.3	5.7	23.7	7.2
25	3.0	7.1	12.6	11.3	14.0	5.9	5.7	9.9	20.9	18.2	16.8	22.3	22.3	33.4	18.2	16.8	25.1	23.7	51.3	23.7	41.7	15.4	20.9	14.0	51.3	18.9
26	16.8	12.6	19.6	11.3	18.2	38.9	11.3	23.7	16.8	41.7	30.6	29.2	23.7	36.1	26.5	49.9	44.4	193.6	28.6	33.4	5.7	22.3	23.7	25.1	193.6	32.6
27	32.0	26.5	22.3	19.6	26.5	25.1	20.9	15.4	36.1	43.0	45.8	43.0	25.1	36.1	77.4	27.8	33.4	61.0	37.5	22.3	19.5	32.0	34.7	33.4	77.4	33.2
28	22.3	16.8	23.7	20.9	19.6	19.4	19.6	22.3	19.5	34.7	30.6	22.3	20.9	23.7	25.1	33.4	32.0	29.2	30.6	19.5	18.2	14.2	7.1	8.5	34.7	22.3
29	9.9	12.6	11.3	14.0	12.6	11.3	11.3	15.4	14.0	9.9	11.3	18.2	18.2	19.5	22.3	16.8	11.3	27.8	29.2	34.7	32.0	32.0	59.6	37.5	59.6	20.5
30	33.4	29.2	44.4	30.6	32.0	30.6	33.4	34.8	44.4	58.2	44.4	38.3	59.6	25.1	14.0	12.6	19.5	160.5	43.0	22.3	41.7	12.6	22.3	22.3	160.5	37.9
	16.8	16.8	40.3	26.5	26.5	23.7	15.4	26.0	30.6	59.6	38.9	32.0	70.7	27.8	157.7	95.5	40.3	33.4	30.6	38.9	30.6	38.2	34.7	40.4	157.7	41.3
Hourly Max	65.1	70.7	54.1	54.1	41.7	67.9	44.4	49.9	67.9	94.2	103.8	61.0	181.2	116.3	159.1	110.7	123.2	193.6	120.4	92.8	117.6	196.4	106.6	83.1		
Hourly Average	21.0	19.0	19.6	16.7	16.2	18.2	17.4	16.1	25.3	34.9	34.1	27.9	34.5	28.5	35.5	31.5	28.0	38.3	30.8	27.3	27.3	26.1	27.4	21.2		

C = CALIBRATION

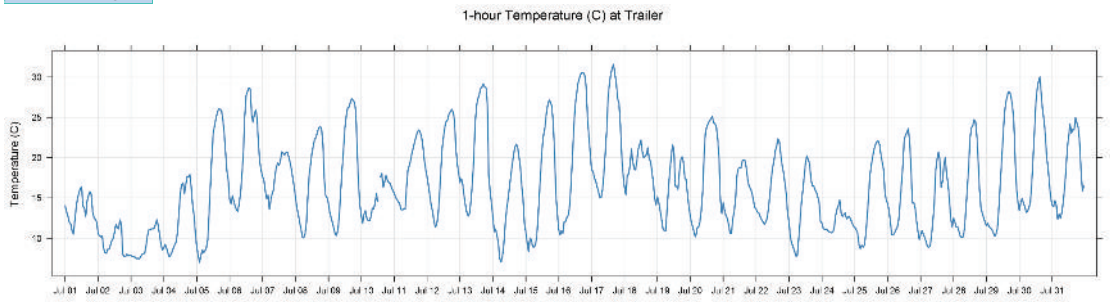


Number of 24HR Exceedances	0		Objective	100	UG/M3
Number of Non-Zero Readings	728				
Maximum 1-HR Average	196.4	UG/M3			
Maximum 24-HR Average	49.8	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	744	HRS
Monthly Calibration Time	3	HRS	Operational Uptime	100.0	%
Standard Deviation	24.3		Monthly Average	25.9	UG/M3

Lagoon Temperature (°C) – July 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	14.0	13.3	12.7	12.0	11.8	11.0	10.5	12.1	13.8	15.0	15.6	16.2	16.4	13.9	13.8	12.7	14.6	15.3	15.8	15.5	13.3	12.6	12.3	12.0	16.4	13.6
2	10.6	10.3	10.2	10.3	8.8	8.2	8.1	8.6	8.6	9.1	9.7	10.0	10.7	11.7	11.3	11.2	12.3	11.6	8.0	7.8	7.8	8.0	7.8	7.9	12.3	9.5
3	7.9	7.7	7.7	7.7	7.5	7.5	7.4	7.7	8.0	8.0	8.2	9.0	10.3	11.0	11.0	11.2	11.1	11.3	11.8	12.3	11.4	10.3	9.1	8.5	12.3	9.3
4	8.8	9.2	8.8	8.1	7.7	7.9	8.3	8.8	9.3	9.5	10.8	13.3	15.6	16.7	16.8	15.5	16.6	17.7	17.6	17.9	16.2	14.0	12.8	10.6	17.9	12.4
5	8.9	7.9	7.0	7.8	8.5	8.2	8.4	8.8	9.9	13.1	16.8	20.2	23.1	23.9	24.9	25.6	26.0	26.0	25.9	24.7	23.2	20.6	18.3	17.2	26.0	16.9
6	14.8	14.3	15.3	14.6	13.9	13.5	13.4	14.4	15.7	18.1	20.6	25.2	27.7	28.2	28.7	28.5	25.3	24.4	25.4	25.9	24.9	21.7	19.4	18.3	28.7	20.5
7	17.6	17.2	15.8	14.9	15.4	13.6	14.8	15.5	16.0	17.8	18.8	19.3	19.1	19.6	20.7	20.6	20.3	20.6	20.7	20.1	19.4	18.6	17.5	16.4	20.7	17.9
8	15.1	13.8	13.0	12.0	11.2	10.2	10.1	10.5	11.9	15.1	17.9	19.2	20.6	21.5	22.3	22.5	23.2	23.7	23.9	23.6	21.7	17.4	15.3	15.0	23.9	17.1
9	14.3	13.2	12.6	11.9	11.2	10.5	10.4	11.2	12.9	15.8	18.6	21.0	23.6	25.1	26.2	26.3	26.8	27.3	27.1	26.9	25.8	20.8	16.7	14.1	27.3	18.8
10	12.8	11.9	13.0	13.4	12.4	12.2	12.2	12.7	13.7	13.6	14.3	15.5	14.6	**M**	17.6	18.0	16.3	17.0	17.8	17.3	16.9	16.8	16.3	15.9	18.0	14.9
11	15.6	15.1	14.8	14.5	14.3	13.6	13.5	13.6	13.6	16.3	18.4	19.0	19.7	20.6	21.3	22.0	22.6	23.2	23.4	23.2	22.5	21.4	19.7	18.5	23.4	18.4
12	17.6	16.5	15.3	14.1	13.3	12.1	11.4	11.7	12.8	15.2	18.2	21.2	22.6	23.8	24.5	24.7	25.5	25.7	26.0	25.6	24.6	21.2	19.2	18.1	26.0	19.2
13	16.9	17.4	16.7	15.2	14.1	13.2	12.7	13.1	14.7	16.9	19.6	24.0	26.4	27.3	27.8	28.6	28.8	29.1	28.8	28.7	26.6	17.7	15.8	14.3	29.1	20.6
14	12.7	10.8	11.1	10.3	9.4	7.4	7.1	7.8	9.3	11.8	13.5	14.8	16.2	17.7	19.0	20.2	21.3	21.7	21.4	20.2	18.9	16.6	14.9	11.8	21.7	14.4
15	10.8	9.5	8.4	10.0	9.8	9.0	8.9	9.2	10.2	12.7	15.8	18.7	21.3	22.9	23.8	25.4	26.5	27.1	26.9	26.4	24.2	20.4	15.5	13.0	27.1	16.9
16	11.1	10.4	10.9	10.6	12.1	12.1	12.6	12.9	14.0	16.6	20.0	23.7	26.4	27.8	29.2	29.8	30.3	30.5	30.5	30.2	28.9	25.0	22.6	20.6	30.5	20.8
17	18.4	18.3	17.5	17.1	16.4	15.8	15.0	15.1	16.1	18.1	20.7	23.5	27.4	29.2	30.4	31.1	31.6	30.4	29.2	27.3	26.8	24.0	20.1	17.9	31.6	22.4
18	16.3	15.4	17.8	18.0	19.0	21.1	19.7	18.6	18.5	19.5	21.0	21.6	22.2	20.7	20.0	20.2	20.4	21.2	19.9	19.5	18.3	16.9	15.0	14.2	22.2	19.0
19	15.1	14.4	13.4	12.4	11.2	10.9	10.9	13.5	15.9	18.3	19.9	21.5	21.1	16.4	16.4	16.1	18.2	19.7	20.1	19.4	17.5	17.3	15.4	13.8	21.5	16.2
20	12.7	11.8	11.3	10.5	10.2	11.3	11.4	12.0	13.4	15.8	20.0	23.1	23.8	24.2	24.6	24.8	25.1	24.3	24.2	23.8	22.3	20.0	14.7	13.1	25.1	17.8
21	14.4	13.5	12.8	12.5	11.7	10.6	10.6	12.4	13.2	14.9	17.7	18.6	18.8	18.7	19.6	19.7	19.6	18.5	17.1	16.4	16.1	15.6	14.8	13.8	19.7	15.5
22	13.6	13.2	13.1	12.7	12.3	12.1	11.7	12.0	12.5	13.6	15.3	17.2	18.7	19.5	20.9	21.4	22.3	21.9	20.3	19.0	18.1	16.8	15.5	13.1	22.3	16.1
23	11.9	10.1	9.4	8.9	8.4	7.8	7.8	9.9	11.9	14.3	15.9	17.6	19.3	20.2	19.8	19.2	17.4	16.5	16.5	16.0	15.7	15.1	14.4	12.1	20.2	14.0
24	11.9	11.2	11.1	11.1	11.0	10.8	10.8	10.7	10.8	11.3	12.8	13.6	14.0	14.7	13.2	12.7	13.0	13.1	12.4	12.6	12.7	12.3	11.9	11.5	14.7	12.1
25	11.4	11.0	10.6	9.3	8.7	9.1	8.9	9.1	10.5	12.6	14.9	17.7	19.1	20.1	21.0	21.6	22.0	22.1	21.7	20.4	19.4	18.5	15.6	14.7	22.1	15.4
26	14.3	13.4	11.9	10.4	10.4	10.7	11.0	11.4	12.3	14.4	16.6	18.9	22.2	22.8	23.1	23.6	21.9	18.7	14.4	14.4	13.8	12.2	10.9	9.8	23.6	15.1
27	10.5	11.0	10.5	10.1	9.6	9.0	8.9	9.1	10.4	12.2	14.5	18.3	19.8	20.7	19.7	16.3	17.1	19.2	20.0	17.9	16.8	14.8	12.5	11.4	20.7	14.2
28	12.5	12.0	11.4	11.4	10.8	10.2	10.1	10.2	11.2	13.5	16.2	18.6	22.2	23.7	23.9	24.7	24.5	22.7	19.6	16.0	13.8	13.1	12.6	12.0	24.7	15.7
29	11.5	11.8	11.4	11.2	11.1	10.7	10.3	10.5	11.2	13.5	16.5	19.3	22.1	25.1	26.8	27.5	28.2	28.2	27.5	26.4	24.4	19.6	16.1	14.5	28.2	18.1
30	13.4	14.4	14.9	14.4	13.9	13.2	13.3	13.8	14.5	16.6	19.8	23.2	26.6	28.4	29.4	30.0	27.9	25.9	24.6	22.7	20.0	18.7	16.5	15.0	30.0	19.6
31	14.1	14.0	14.7	14.1	12.4	13.0	12.5	13.2	14.5	16.2	18.3	21.3	22.6	24.2	23.1	23.5	23.4	25.0	24.3	23.7	21.9	18.5	15.9	16.5	25.0	18.4
Hourly Max	18.4	18.3	17.8	18.0	19.0	21.1	19.7	18.6	18.5	19.5	21.0	25.2	27.7	29.2	30.4	31.1	31.6	30.5	30.5	30.2	28.9	25.0	22.6	20.6		
Hourly Average	13.3	12.7	12.4	12.0	11.6	11.2	11.1	11.6	12.6	14.5	16.7	18.8	20.5	21.4	21.6	21.8	21.9	21.9	21.4	20.7	19.5	17.3	15.3	14.1		

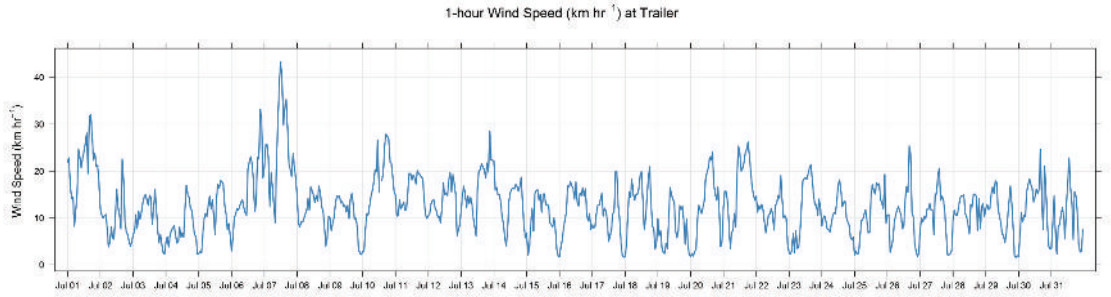
M = MAINTENANCE



Lagoon Wind Speed (km/hr) – July 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	22.0	22.8	16.8	14.1	14.5	8.2	11.7	15.3	24.7	23.0	20.8	22.7	24.1	25.9	28.1	19.5	31.6	32.1	27.3	22.4	23.8	20.9	21.3	17.6	32.1	21.3
2	11.9	10.6	10.0	10.5	10.8	7.8	3.9	4.8	8.1	5.7	5.5	10.8	16.2	12.2	10.7	7.7	22.6	18.0	9.0	7.1	6.4	5.0	4.0	4.9	22.6	9.3
3	6.4	7.2	10.7	7.8	11.4	9.7	11.0	13.1	14.4	15.0	13.9	12.8	14.8	14.3	8.6	12.2	16.0	12.0	7.3	4.7	6.5	4.4	2.6	2.3	16.0	10.0
4	4.8	6.0	3.8	6.3	7.4	7.9	8.3	6.5	4.7	5.0	8.1	5.9	6.8	5.9	12.2	17.0	14.8	14.4	12.0	11.6	8.5	6.5	6.1	2.3	17.0	8.0
5	2.4	2.8	2.5	6.7	9.8	11.0	10.3	12.8	14.6	12.0	13.9	10.4	6.5	14.3	17.2	16.4	18.0	17.7	17.2	12.7	10.8	7.5	8.8	6.3	18.0	10.9
6	3.0	5.6	10.1	10.8	12.0	11.6	12.6	13.3	13.9	12.2	11.2	10.5	20.4	22.0	23.1	21.7	18.2	11.4	13.3	22.9	22.6	33.2	31.2	18.5	33.2	16.1
7	20.9	25.6	25.7	22.7	12.4	19.6	16.5	12.5	9.0	22.5	31.0	39.4	43.3	39.1	29.9	33.7	35.3	29.2	21.6	20.4	18.9	23.8	20.9	18.6	43.3	24.7
8	14.5	8.8	8.1	9.2	9.1	9.9	10.9	11.6	14.2	11.7	16.6	15.8	14.9	13.3	14.8	13.6	16.8	15.3	12.4	11.5	8.2	4.1	5.7	10.3	16.8	11.7
9	10.1	7.3	8.9	10.1	12.9	14.6	14.5	14.7	13.3	13.5	12.4	12.7	11.3	12.7	9.9	14.1	15.2	13.2	9.7	9.9	8.1	3.3	2.4	2.2	15.2	10.7
10	2.8	3.0	7.7	10.9	10.6	12.6	14.6	15.7	17.5	20.3	19.9	26.7	15.5	**M**	18.0	19.5	25.4	27.9	27.5	26.8	22.0	21.7	18.7	15.5	27.9	17.4
11	14.9	10.4	10.6	13.9	12.0	12.6	13.4	11.6	11.9	15.4	19.5	19.5	18.1	19.2	18.5	17.3	20.1	19.5	19.2	18.7	18.4	13.7	10.7	9.9	20.1	15.4
12	10.5	10.9	13.0	13.7	13.9	12.1	11.5	10.1	10.3	9.0	12.3	17.5	15.0	15.2	14.8	18.0	19.7	15.6	19.3	17.4	15.2	6.2	7.4	8.5	19.7	13.2
13	11.5	14.9	16.8	15.0	12.3	14.8	13.1	14.4	12.9	9.9	8.1	6.1	16.2	20.0	20.4	21.6	20.9	20.2	18.6	21.7	19.8	28.5	22.4	22.3	28.5	16.8
14	22.2	16.0	16.5	14.9	15.0	13.4	10.2	8.9	5.7	4.1	6.9	13.5	15.4	16.2	16.5	16.2	17.2	16.7	15.7	16.9	18.7	13.4	8.2	5.8	22.2	13.5
15	6.7	2.0	3.9	8.6	12.1	7.2	15.2	15.8	16.0	13.8	15.1	11.3	15.1	15.2	12.8	12.9	12.6	9.0	8.6	8.1	10.0	7.8	3.4	1.9	16.0	10.2
16	1.7	3.8	5.3	7.9	9.6	11.3	16.8	16.6	17.7	16.9	16.4	14.0	17.7	13.4	12.5	15.3	14.8	16.5	14.7	16.2	10.7	9.4	10.9	7.6	17.7	12.4
17	8.6	7.9	8.2	10.9	12.7	12.7	13.9	15.3	10.4	12.1	11.5	9.4	5.0	6.2	7.3	11.0	11.2	19.9	19.9	12.7	9.8	4.8	2.1	1.6	19.9	10.2
18	1.7	4.1	10.6	15.6	14.4	18.3	15.2	13.8	15.0	15.0	16.2	19.1	19.9	13.9	7.6	9.7	14.2	18.4	20.9	13.7	8.3	7.7	3.3	4.6	20.9	12.6
19	9.8	6.2	7.3	3.7	2.6	2.4	4.6	3.5	10.2	16.5	15.0	14.0	13.5	7.3	5.8	7.4	12.6	11.8	12.5	9.2	4.4	9.8	4.1	2.1	16.5	8.2
20	1.8	2.4	1.9	2.8	3.3	9.8	12.8	11.8	11.0	12.3	13.6	18.6	19.8	20.7	22.9	22.4	24.0	17.2	15.2	13.8	16.6	11.2	3.9	5.1	24.0	12.3
21	12.1	15.7	15.6	13.5	9.1	3.5	6.8	7.4	10.9	8.0	19.1	25.3	23.8	20.0	20.5	21.8	24.0	24.7	26.2	23.3	19.9	16.6	14.9	13.8	26.2	16.5
22	14.6	11.3	12.7	11.9	12.9	11.8	9.1	6.8	8.6	10.7	10.8	12.0	10.8	7.4	12.8	13.0	14.8	14.2	19.1	13.9	10.1	10.5	9.9	4.3	19.1	11.4
23	2.5	2.3	3.0	6.7	2.6	7.3	3.5	3.7	6.6	11.5	17.9	18.4	18.6	18.3	19.5	20.7	21.4	18.2	14.8	12.8	12.9	10.6	14.1	11.9	21.4	11.7
24	8.3	9.9	10.5	9.3	7.6	7.5	7.0	8.9	10.5	11.2	10.9	13.7	17.1	18.1	15.8	12.4	13.4	13.6	10.0	9.1	8.5	5.7	5.4	5.9	18.1	10.4
25	2.0	2.9	2.3	2.5	6.2	9.5	9.6	10.8	11.8	9.6	6.8	7.0	14.7	17.1	15.8	15.1	17.5	17.0	17.3	13.9	13.2	12.0	19.3	8.8	19.3	10.9
26	10.6	10.7	2.7	3.9	5.2	9.1	10.5	11.6	12.4	11.5	10.6	7.7	8.3	13.8	16.7	15.5	25.4	23.6	11.1	10.2	4.5	2.9	1.8	2.6	25.4	10.1
27	7.6	10.0	9.2	10.3	9.9	11.9	11.8	13.1	11.7	11.6	6.4	15.2	15.2	19.3	20.6	13.8	14.7	13.8	11.5	6.6	2.2	2.1	2.4	3.0	20.6	10.6
28	9.4	11.6	10.6	10.6	12.0	14.0	14.8	14.7	15.0	10.9	10.2	8.7	6.6	12.9	12.4	15.0	15.1	14.7	7.4	14.1	7.7	12.5	13.0	10.4	15.1	11.8
29	12.0	12.9	11.8	12.1	15.2	16.6	15.3	18.0	17.5	12.0	10.3	9.0	6.6	6.2	4.8	6.6	10.0	13.4	16.8	13.3	8.2	1.9	1.6	2.0	18.0	10.6
30	1.7	6.3	11.1	9.2	10.6	10.4	15.7	17.2	18.3	17.2	16.3	13.4	14.5	16.2	15.2	16.2	24.6	13.9	7.6	21.0	16.5	9.0	4.0	3.4	24.6	12.9
31	3.5	9.0	14.8	7.1	2.3	8.2	8.6	10.5	12.2	10.6	5.5	13.0	17.5	22.8	16.4	13.3	5.4	15.6	14.7	11.0	4.5	2.8	2.9	7.5	22.8	10.0
Hourly Max	22.2	25.6	25.7	22.7	15.2	19.6	16.8	18.0	24.7	23.0	31.0	39.4	43.3	39.1	29.9	33.7	35.3	32.1	27.5	26.8	23.8	33.2	31.2	22.3		
Hourly Average	8.8	9.1	9.8	10.1	10.1	10.9	11.4	11.8	12.6	12.6	13.3	14.6	15.6	16.0	15.6	15.8	18.3	17.4	15.4	14.4	12.1	10.6	9.3	7.8		

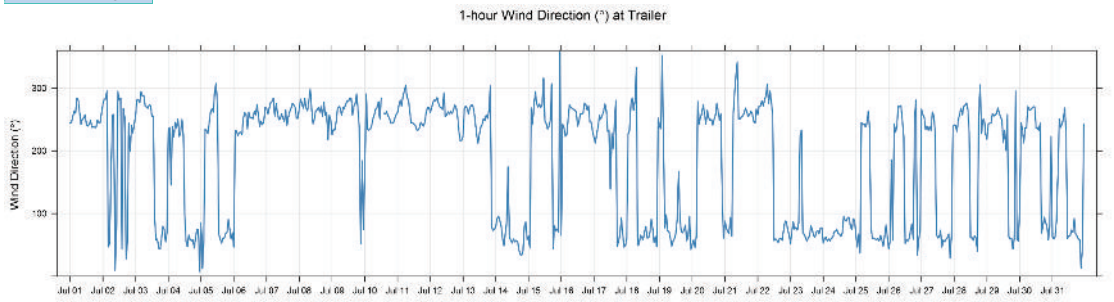
M = MAINTENANCE



Lagoon Wind Direction (°) – July 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	244.6	245.2	255.1	263.4	259.8	284.0	280.5	261.0	242.7	250.9	252.1	257.2	241.8	239.7	242.5	248.2	237.6	238.3	237.6	237.0	249.2	244.5	244.8	260.1	284.0	247.7
2	273.9	282.3	282.3	295.5	47.0	52.5	163.7	256.7	257.8	9.6	79.9	294.8	280.6	283.9	43.2	267.7	252.7	27.6	53.4	244.0	199.4	240.6	228.8	241.7	295.5	291.4
3	257.3	281.1	281.8	276.6	294.7	287.3	288.2	271.2	270.2	267.7	273.5	271.9	254.5	254.7	92.3	58.3	59.0	44.4	43.6	59.2	79.7	74.8	54.7	69.7	294.7	294.4
4	234.5	237.0	145.7	239.0	222.6	245.4	236.9	250.5	223.0	229.1	249.8	225.3	98.4	56.3	47.3	65.7	58.4	56.6	58.4	44.7	62.0	74.6	74.4	7.9	250.5	69.6
5	84.9	12.2	59.4	234.5	231.9	227.3	244.9	262.4	267.2	261.9	295.6	307.4	270.0	67.4	59.6	52.9	60.5	60.7	67.9	70.0	90.8	74.7	59.4	69.7	307.4	37.6
6	46.7	232.0	231.4	224.3	228.9	229.7	226.4	252.3	260.8	258.1	234.9	261.4	252.6	253.4	251.1	262.5	256.6	273.8	257.1	238.9	246.8	241.7	246.5	269.5	273.8	248.7
7	267.3	258.5	268.4	277.1	278.6	283.8	255.4	275.4	261.3	249.8	250.7	259.1	252.6	247.1	265.1	240.5	254.1	262.8	268.2	275.5	273.1	269.0	251.6	252.0	283.8	260.3
8	269.3	282.3	274.8	267.8	283.6	268.3	263.9	279.8	298.7	268.5	243.2	250.1	263.5	264.8	269.4	262.1	270.4	255.3	277.9	256.8	261.5	217.8	256.9	249.5	298.7	265.7
9	225.8	233.9	233.2	245.9	266.8	270.7	268.1	256.5	268.9	267.5	274.2	279.3	278.7	284.3	283.8	257.2	271.1	275.4	290.6	265.6	236.5	52.1	184.3	74.0	290.6	265.3
10	166.2	290.5	234.2	233.0	234.3	240.1	251.3	257.8	266.8	268.7	278.3	251.1	284.0	**M**	260.1	258.5	262.6	255.8	252.5	244.5	243.7	244.9	252.1	257.8	290.5	254.9
11	260.9	272.2	280.6	271.7	286.9	295.7	304.4	284.1	281.3	262.3	244.5	245.0	241.8	241.1	233.4	233.2	236.1	245.7	242.3	239.6	245.6	261.8	268.9	269.3	304.4	256.1
12	261.3	268.7	277.7	281.1	279.7	285.0	275.9	270.1	269.0	265.8	292.6	254.4	256.7	262.3	258.1	262.4	259.8	265.7	273.0	269.1	254.7	230.7	216.1	216.9	292.6	264.9
13	223.3	267.4	271.6	267.5	259.0	268.7	272.5	272.9	264.2	245.7	225.1	212.1	226.0	237.9	242.1	251.5	248.6	257.2	251.8	263.6	303.3	78.3	73.2	74.6	303.3	256.3
14	79.3	92.2	95.8	88.5	79.3	59.9	48.7	68.3	87.3	174.4	62.0	57.2	53.1	59.3	55.1	57.0	56.2	42.0	34.5	33.8	40.6	80.1	86.6	58.6	174.4	63.8
15	63.8	45.4	268.4	243.3	273.4	294.5	275.1	270.0	274.6	269.1	273.1	315.9	247.3	243.7	234.9	239.4	248.7	307.0	43.8	80.2	73.1	74.8	70.6	358.5	358.5	272.2
16	65.4	242.2	237.4	223.3	225.7	250.2	273.2	269.7	267.6	266.0	264.9	261.9	239.5	246.2	259.3	259.0	260.1	276.0	273.7	265.2	271.9	245.6	245.6	230.3	276.0	258.2
17	220.7	212.6	227.4	238.4	256.3	251.1	256.7	262.6	274.7	264.5	231.0	232.8	139.1	227.8	204.1	240.5	280.2	47.5	55.8	65.7	92.4	69.5	46.6	48.7	280.2	247.4
18	60.8	226.3	232.8	275.0	284.6	265.1	279.8	332.9	49.0	51.2	65.3	62.3	57.9	71.0	79.2	61.0	61.5	70.7	91.1	76.2	54.0	63.3	47.2	252.2	332.9	47.0
19	239.1	235.4	351.9	196.4	77.1	98.1	72.0	71.1	60.1	48.3	56.3	60.2	68.8	91.1	167.0	90.9	70.9	69.7	74.2	81.3	57.0	63.2	95.3	42.7	351.9	69.8
20	50.8	57.9	45.8	62.9	278.7	242.2	253.5	259.1	273.6	259.5	243.0	264.4	253.3	248.3	249.8	241.1	250.1	256.3	275.5	262.3	249.0	259.1	113.1	60.8	278.7	255.0
21	87.8	76.4	71.4	68.0	93.7	63.7	254.3	291.0	320.1	341.8	251.0	250.3	254.0	255.7	259.8	268.1	262.4	254.6	257.5	263.0	259.5	247.3	244.2	266.6	341.8	261.9
22	257.6	271.3	271.8	279.7	271.8	280.9	288.2	305.7	275.7	295.0	277.1	256.7	57.0	59.6	57.4	54.0	60.3	60.5	57.2	74.5	87.7	87.5	74.1	65.7	305.7	356.9
23	52.0	70.1	87.1	75.1	78.0	73.4	85.5	221.6	232.7	68.3	67.2	62.0	56.5	60.7	64.9	80.2	73.6	64.9	62.5	70.9	73.1	67.8	76.8	77.5	232.7	69.7
24	52.9	59.7	62.4	56.3	59.5	56.7	61.1	61.6	71.2	71.7	74.4	68.1	67.1	63.5	69.2	95.7	89.4	88.0	94.0	92.9	78.9	75.0	92.0	88.9	95.7	72.8
25	65.0	46.8	67.3	37.1	245.4	241.5	243.0	238.2	244.7	262.8	237.2	77.3	60.6	60.6	59.2	58.3	60.4	56.4	65.2	57.7	47.8	63.6	81.8	63.4	262.8	60.4
26	44.0	56.4	186.0	57.3	242.6	229.7	238.8	271.0	270.1	272.2	248.5	223.0	52.1	58.3	56.5	60.1	73.3	83.4	59.0	253.9	280.7	33.7	58.9	71.6	280.7	48.3
27	266.5	257.8	253.9	233.7	239.3	232.9	238.9	232.6	261.9	256.0	230.7	67.1	61.1	62.5	73.3	46.7	57.5	55.1	59.0	61.5	67.6	28.9	63.5	238.4	266.5	39.5
28	241.4	240.1	231.1	249.8	258.2	267.8	257.6	271.1	272.8	276.2	266.0	230.4	61.4	61.6	57.2	64.5	60.4	40.0	255.0	305.3	227.4	249.5	250.3	227.0	305.3	267.9
29	218.6	242.9	243.8	244.0	259.4	255.7	257.4	259.1	268.4	260.5	253.5	249.5	213.2	231.9	200.6	257.9	63.5	59.2	60.5	43.5	59.3	295.2	59.2	56.3	295.2	256.9
30	106.0	244.5	234.9	212.7	236.5	236.3	270.4	265.5	265.6	268.0	270.3	270.0	236.0	237.0	232.7	244.1	68.9	79.6	94.1	85.4	81.1	58.2	81.3	223.0	270.4	243.5
31	63.2	59.4	63.2	88.3	162.9	250.9	237.4	243.1	250.5	268.5	230.6	60.2	64.9	64.6	73.6	70.1	92.2	67.5	64.5	59.2	58.4	13.3	47.2	242.3	268.5	65.7
Hourly Max	273.9	290.5	351.9	295.5	294.7	295.7	304.4	332.9	320.1	341.8	295.6	315.9	284.0	284.3	283.8	268.1	280.2	307.0	290.6	305.3	303.3	295.2	268.9	358.5		
Hourly Average	162.9	190.4	204.2	203.5	219.2	222.2	233.0	246.6	240.4	228.4	219.2	207.7	175.6	169.9	161.4	168.0	158.6	145.1	146.8	159.4	158.2	141.3	137.0	160.8		

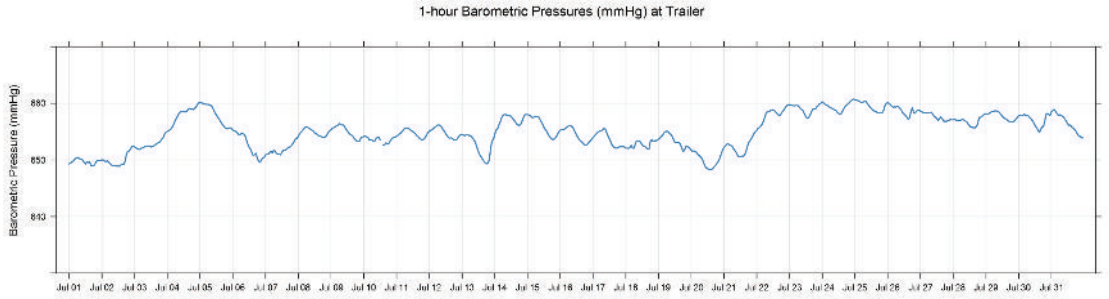
M = MAINTENANCE



Lagoon Pressure (mmHg) – July 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	649.3	649.4	649.6	649.8	650.1	650.3	650.4	650.3	650.2	650.2	650.0	649.6	649.3	649.7	649.5	649.7	649.0	648.9	649.0	649.3	649.8	649.9	649.9	650.0	650.4	649.7
2	650.0	650.0	649.8	649.7	649.8	649.6	649.4	649.1	649.0	649.0	648.9	648.9	648.9	648.9	649.1	649.3	649.1	649.8	651.0	651.5	651.6	651.9	652.3	652.5	652.5	650.0
3	652.3	652.1	652.0	651.9	651.8	652.1	652.1	652.3	652.4	652.5	652.5	652.5	652.3	652.4	652.5	652.6	652.8	653.0	653.1	653.3	653.7	653.9	654.6	654.8	654.8	652.7
4	655.0	655.2	655.3	655.6	656.0	656.5	657.1	657.5	658.0	658.4	658.5	658.5	658.5	658.5	658.5	658.8	659.1	659.0	659.0	658.9	659.1	659.3	659.8	660.1	660.1	657.9
5	660.1	660.1	660.0	659.9	659.9	659.8	659.8	659.7	659.6	659.3	658.8	658.3	657.9	657.5	657.2	656.8	656.4	656.1	655.8	655.5	655.5	655.6	655.7	655.6	660.1	657.9
6	655.3	655.2	655.0	654.9	654.6	654.4	654.6	654.7	654.6	654.3	653.5	652.8	652.2	651.9	651.3	650.7	651.0	651.2	650.2	649.8	649.6	650.0	650.4	650.4	655.3	652.6
7	650.9	651.0	651.0	651.3	651.5	651.2	651.7	651.5	651.1	651.0	651.0	650.9	651.3	651.6	651.7	651.8	652.0	652.2	652.3	652.5	652.9	653.3	653.7	653.8	653.8	651.8
8	654.2	654.6	654.9	655.2	655.5	655.7	655.8	655.7	655.6	655.4	655.2	655.1	654.8	654.7	654.5	654.3	654.2	654.1	654.0	654.0	654.1	654.5	654.9	655.2	655.8	654.8
9	655.3	655.6	655.7	655.8	656.0	656.1	656.4	656.3	656.2	656.2	655.8	655.4	655.1	654.8	654.5	654.4	654.2	653.8	653.5	653.3	653.3	653.4	653.9	654.0	656.4	655.0
10	654.1	654.2	654.1	654.0	653.6	653.5	653.5	653.2	653.4	653.8	654.0	654.0	653.5	**M**	652.6	652.6	653.0	652.9	652.8	653.2	653.6	653.9	653.9	654.0	654.2	653.5
11	654.2	654.3	654.6	654.7	655.0	655.3	655.6	655.6	655.6	655.5	655.3	655.1	655.0	654.8	654.6	654.3	654.1	653.8	653.6	653.5	653.7	653.9	654.4	654.8	655.6	654.6
12	655.1	655.2	655.3	655.6	655.7	655.9	656.2	656.2	656.1	655.9	655.3	655.1	654.7	654.3	654.0	653.8	653.9	653.8	653.5	653.5	653.6	653.9	654.3	654.5	656.2	654.8
13	654.5	654.4	654.3	654.4	654.4	654.3	654.3	654.1	653.8	653.5	652.9	652.2	651.5	650.9	650.5	650.2	649.7	649.5	649.3	649.4	650.0	652.1	653.3	653.6	654.5	652.4
14	654.6	655.3	655.5	656.1	656.7	657.5	657.8	658.0	658.1	657.8	657.9	657.8	657.7	657.4	657.0	656.7	656.3	656.2	656.1	656.3	656.8	657.5	658.0	658.0	658.1	657.0
15	658.0	657.9	657.8	657.6	657.4	657.6	657.7	657.7	657.6	657.2	656.8	656.3	655.8	655.4	655.0	654.6	654.2	653.9	653.6	653.6	653.7	654.1	654.5	655.0	658.0	656.0
16	655.2	655.3	655.4	655.4	655.6	655.8	656.0	656.0	656.0	655.8	655.4	654.8	654.4	654.0	653.5	653.3	653.1	652.8	652.6	652.6	652.8	653.1	653.4	653.7	656.0	654.4
17	654.0	654.2	654.5	654.8	654.9	655.1	655.2	655.3	655.6	655.5	654.8	654.2	653.7	653.2	652.6	652.3	652.2	652.1	652.1	652.3	652.4	652.3	652.4	652.3	655.6	653.7
18	652.1	652.1	652.0	652.2	652.6	652.1	652.0	652.8	653.3	653.3	653.3	653.1	652.6	652.5	652.4	652.1	651.9	651.9	653.2	653.6	653.3	653.4	653.4	653.5	653.6	652.7
19	653.7	653.8	654.2	654.4	654.8	655.0	655.0	655.0	654.7	654.5	654.1	653.6	653.1	653.1	653.1	653.0	652.8	652.1	651.5	651.7	652.3	652.4	652.2	652.1	655.0	653.4
20	651.7	651.5	651.6	651.4	651.3	650.9	650.8	650.5	650.2	649.6	649.0	648.6	648.4	648.4	648.3	648.3	648.5	648.9	649.1	649.4	649.8	650.4	651.1	651.7	651.7	650.0
21	652.2	652.4	652.7	652.9	652.6	652.5	652.4	652.0	651.6	651.3	650.8	650.6	650.6	650.7	650.6	650.9	651.4	652.2	653.1	653.4	653.7	654.2	654.7	655.0	655.0	652.3
22	655.2	655.6	655.7	656.0	656.3	656.9	657.6	658.4	658.5	658.6	658.7	658.8	658.8	658.7	658.4	658.2	657.9	657.9	658.2	658.5	658.9	659.3	659.5	659.7	659.7	657.9
23	659.7	659.7	659.6	659.6	659.6	659.6	659.6	659.4	659.1	658.9	658.7	658.1	657.6	657.4	657.5	657.8	658.5	658.9	659.0	659.0	659.4	659.6	659.9	660.0	660.0	659.0
24	660.3	660.1	659.8	659.7	659.6	659.5	659.2	659.1	659.0	658.9	658.8	658.4	658.2	658.0	658.2	658.7	659.1	659.5	659.7	659.9	660.1	660.4	660.6	660.7	660.7	659.4
25	660.6	660.6	660.5	660.4	660.2	660.1	660.2	660.4	660.3	660.0	659.7	659.3	659.0	658.8	658.7	658.6	658.4	658.3	658.4	658.4	658.3	658.7	659.6	660.0	660.6	659.5
26	660.1	660.0	659.7	659.5	659.3	659.4	659.3	659.5	659.4	659.1	658.8	658.3	658.1	657.9	657.6	657.2	657.4	658.4	659.2	658.3	658.3	658.6	658.8	658.8	660.1	658.8
27	658.6	658.5	658.3	658.3	658.3	658.3	658.4	658.4	658.4	658.1	657.7	657.5	657.3	657.0	657.3	657.6	657.3	656.8	656.8	656.8	656.9	657.0	657.2	657.1	658.6	657.7
28	657.1	657.2	657.0	657.0	657.0	657.0	657.1	657.2	657.0	656.8	656.7	656.3	656.1	655.8	655.7	655.7	655.7	655.9	656.3	657.5	657.5	657.7	657.9	658.1	658.1	656.8
29	658.1	658.1	658.1	658.3	658.5	658.5	658.6	658.7	658.6	658.5	658.3	658.0	657.7	657.4	657.3	657.2	656.9	656.8	656.8	656.8	656.8	656.9	657.2	657.5	658.7	657.7
30	657.8	657.8	657.8	657.8	658.1	657.9	657.9	657.8	657.5	657.3	656.9	656.6	656.1	655.7	655.3	654.9	655.3	655.8	655.9	656.6	658.0	658.2	658.0	657.8	658.2	657.0
31	658.5	658.7	658.9	658.6	658.2	657.9	658.0	657.9	657.7	657.5	657.2	656.7	656.4	656.1	656.1	655.8	655.6	655.3	655.0	654.6	654.3	654.1	653.9	653.9	658.9	656.5
Hourly Max	660.6	660.6	660.5	660.4	660.2	660.1	660.2	660.4	660.3	660.0	659.7	659.3	659.0	658.8	658.7	658.8	659.1	659.5	659.7	659.9	660.1	660.4	660.6	660.7		
Hourly Average	655.4	655.5	655.5	655.6	655.6	655.7	655.8	655.8	655.7	655.6	655.3	655.0	654.7	654.6	654.4	654.3	654.2	654.2	654.3	654.4	654.6	654.9	655.3	655.4		

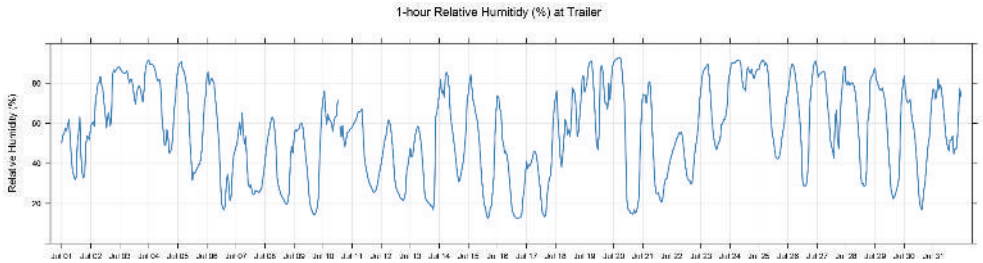
M = MAINTENANCE



Lagoon Relative Humidity (%) – July 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	50.4	54.1	54.8	57.4	56.4	59.2	61.8	53.4	43.1	35.8	34.1	31.9	33.2	50.7	55.6	63.1	43.2	34.9	32.8	33.8	49.7	53.7	52.9	51.9	63.1	47.8
2	58.6	60.0	60.8	58.6	71.8	75.4	80.0	80.4	83.5	78.9	77.1	70.6	64.8	57.7	63.4	65.4	58.9	60.5	83.9	86.7	85.5	86.8	87.6	88.2	88.2	72.7
3	87.9	86.6	85.7	85.2	84.9	85.4	86.2	82.7	80.1	82.1	81.7	78.1	72.8	69.6	75.2	77.7	78.8	77.2	74.2	70.7	76.4	86.1	89.5	91.1	91.1	81.1
4	91.6	89.4	89.6	89.5	88.6	87.2	84.3	81.4	81.5	81.8	76.7	62.0	55.9	48.8	49.5	56.9	52.2	45.0	46.2	48.0	55.7	67.3	71.9	81.7	91.6	70.1
5	87.2	89.4	90.3	90.7	86.5	86.1	83.5	79.8	75.3	64.8	51.6	42.1	31.7	35.5	35.0	36.5	37.5	39.3	39.6	42.2	48.2	60.6	70.2	74.0	90.7	61.6
6	83.8	85.6	79.2	81.6	82.4	81.2	79.8	72.2	66.1	57.8	49.9	34.8	20.2	18.0	16.7	18.6	30.0	34.6	30.0	21.5	23.6	35.4	43.7	45.9	85.6	49.7
7	48.2	50.4	55.6	60.5	54.4	65.2	55.4	49.8	53.4	40.8	30.3	28.2	29.4	26.9	24.5	24.5	26.5	26.1	26.2	25.4	26.5	27.1	31.4	35.5	65.2	38.4
8	41.2	47.0	51.5	54.8	58.1	62.0	63.1	61.8	56.8	47.8	33.4	29.1	26.7	24.7	23.4	22.7	21.1	20.0	19.6	21.3	25.9	43.8	48.4	45.1	63.1	39.6
9	52.7	56.9	56.0	56.8	57.3	59.4	60.2	59.3	53.7	47.5	40.8	36.5	26.8	20.5	17.6	16.1	14.7	14.5	15.6	17.6	22.3	41.2	55.3	66.4	66.4	40.2
10	72.2	76.0	65.8	59.7	64.3	61.9	61.5	60.0	55.9	61.4	63.1	63.8	71.4	**M**	58.5	53.2	59.1	51.8	48.4	51.9	55.3	55.6	56.9	57.5	76.0	60.2
11	58.0	59.8	60.5	61.8	63.2	66.0	65.7	66.2	67.1	56.0	44.2	39.3	36.0	32.9	30.6	29.1	27.9	26.0	25.6	26.0	27.3	29.9	33.8	36.8	67.1	44.6
12	40.0	44.0	47.8	51.7	54.0	58.6	61.7	60.7	57.1	50.9	43.5	33.3	28.6	26.4	25.4	24.2	22.5	22.3	21.4	22.5	25.2	36.2	38.8	42.8	61.7	39.2
13	47.6	43.4	43.7	48.9	53.8	56.5	58.5	57.9	53.8	49.9	42.0	33.8	23.8	21.9	21.2	20.2	20.0	18.7	18.7	16.8	24.3	63.4	65.1	69.9	69.9	40.6
14	75.2	81.7	75.5	76.4	73.1	84.2	85.5	83.7	77.8	65.6	60.1	55.8	50.7	45.8	39.8	34.7	30.9	31.9	34.8	38.5	41.6	48.7	56.3	71.8	85.5	59.2
15	75.0	80.8	84.3	77.4	71.1	68.8	64.9	62.9	57.9	51.3	42.3	32.7	25.4	19.5	18.1	14.4	12.6	13.6	17.5	18.7	25.6	33.9	53.8	66.6	84.3	45.4
16	73.9	72.7	67.1	66.1	52.4	49.5	45.3	45.8	43.7	38.6	31.9	24.4	17.2	15.0	13.9	12.9	12.7	12.7	12.9	13.0	14.2	22.4	26.2	33.6	73.9	34.1
17	41.1	37.5	39.3	39.0	40.8	42.7	45.8	45.8	44.4	40.5	34.8	29.5	22.3	15.7	14.4	13.4	14.0	24.1	28.6	33.2	33.7	45.0	60.6	68.0	68.0	35.6
18	73.1	76.3	62.6	53.2	42.8	38.3	44.5	52.2	61.9	59.7	54.3	56.7	53.4	61.2	77.6	76.4	74.6	66.8	53.3	55.9	64.3	71.9	81.8	84.0	84.0	62.4
19	75.6	77.8	80.3	87.7	90.0	91.0	91.1	83.3	72.4	59.3	49.7	46.9	55.2	86.1	88.9	86.3	77.3	69.9	70.0	66.9	80.0	71.8	80.6	88.2	91.1	76.1
20	90.3	91.5	91.9	92.3	92.9	93.0	92.0	85.7	78.1	69.6	46.0	21.5	17.2	16.5	15.2	15.3	14.7	16.8	15.3	16.1	18.9	23.7	49.9	64.9	93.0	51.2
21	74.4	74.3	74.3	69.9	74.5	80.4	80.9	72.2	55.8	43.0	31.0	25.2	25.0	25.3	22.6	21.1	20.8	24.8	29.9	32.3	32.7	36.2	39.3	42.1	80.9	46.2
22	44.4	46.7	48.1	50.1	52.3	53.3	55.3	55.0	55.6	52.7	46.9	40.6	36.0	32.3	31.7	31.1	29.6	30.9	37.5	44.9	49.4	53.6	59.2	71.2	71.2	46.2
23	76.2	83.0	85.8	87.2	87.7	89.2	89.3	83.1	73.9	63.9	56.8	51.9	48.7	46.9	49.0	50.6	51.8	59.3	59.8	62.0	62.2	65.2	69.8	83.3	89.3	68.2
24	84.6	89.6	90.4	90.1	90.2	91.0	91.3	91.6	91.5	89.8	82.8	77.7	77.4	76.3	85.8	88.0	85.8	85.1	87.1	84.0	82.3	84.6	86.3	86.9	91.6	86.3
25	86.9	89.5	90.7	91.4	91.3	89.0	90.0	88.6	82.0	72.3	62.8	54.7	52.1	47.0	43.1	42.4	42.4	43.8	47.1	52.6	56.4	59.8	67.9	72.7	91.4	67.4
26	74.6	80.1	85.7	89.2	89.5	88.0	84.5	79.7	74.4	67.1	60.8	50.3	31.5	28.8	28.9	28.8	33.3	42.9	67.6	76.2	82.2	88.3	90.3	91.1	91.1	67.2
27	87.7	83.1	84.7	84.7	85.5	86.0	86.0	82.6	74.9	67.6	62.1	52.0	48.6	46.3	42.7	62.7	66.5	52.1	47.5	61.3	72.6	79.1	86.4	88.7	88.7	70.5
28	80.1	79.2	81.0	79.2	79.8	80.4	79.5	77.9	73.6	66.8	58.4	50.0	35.1	29.8	30.2	28.4	29.0	36.8	60.9	65.0	81.7	83.4	83.8	86.5	86.5	64.0
29	87.5	81.8	80.3	78.3	76.5	76.7	77.7	75.1	71.9	66.2	57.6	47.7	38.3	27.6	24.8	22.5	23.3	25.1	27.4	29.5	34.5	60.8	73.9	79.7	87.5	56.0
30	83.6	76.8	71.8	70.2	70.8	71.9	64.9	60.8	57.5	52.4	44.9	35.7	25.6	19.7	17.4	16.9	26.4	28.7	35.5	44.0	50.4	53.5	64.4	72.5	83.6	50.7
31	77.1	76.0	72.0	75.0	82.2	77.0	79.4	76.4	70.0	63.6	57.2	50.7	48.2	46.2	51.9	51.7	53.7	44.6	47.4	47.1	53.1	66.1	77.5	73.3	82.2	63.2
Hourly Max	91.6	91.5	91.9	92.3	92.9	93.0	92.0	91.6	91.5	89.8	82.8	78.1	77.4	86.1	88.9	88.0	85.8	85.1	87.1	86.7	85.5	88.3	90.3	91.1		
Hourly Average	70.3	71.6	71.2	71.4	71.6	72.7	72.6	69.9	66.0	59.5	51.9	44.8	39.6	37.3	38.5	38.9	38.4	38.1	40.7	42.8	47.8	56.0	63.0	68.1		

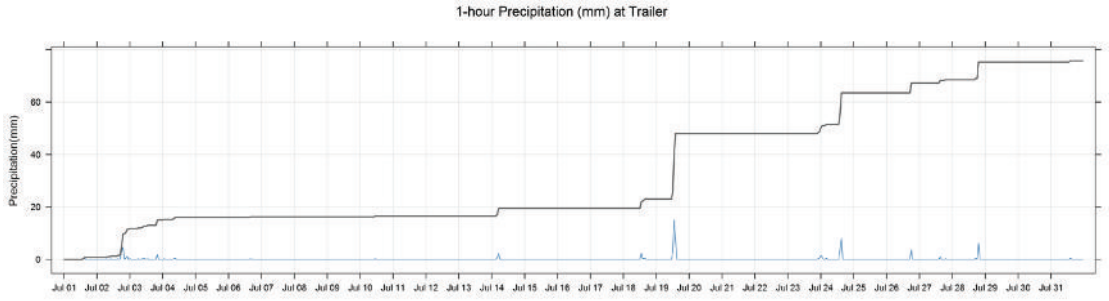
M = MAINTENANCE



Lagoon Precipitation (mm) – July 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	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.3	3.5	4.5	0.0	0.5	1.3	0.0	4.5	10.8
3	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	3.5
4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
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	0.3	0.0	**M**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
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	0.8	2.3	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	2.3	3.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.3	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.5
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	2.8	15.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	25.0
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	0.3	0.5	0.5	0.8
24	1.5	0.8	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	14.8
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	3.8	0.0	0.0	0.0	0.0	0.0	3.8	3.8
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	1.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.0	1.3
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	6.3	0.0	0.0	0.0	0.0	6.3	6.8
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	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Hourly Max	1.5	0.8	0.0	0.0	0.8	2.3	0.3	0.3	0.3	0.5	0.3	0.3	2.8	15.0	7.3	8.3	0.3	0.5	3.8	6.3	2.0	0.5	1.3	0.5		
Hourly Average	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.4	0.3	0.0	0.0	0.2	0.4	0.1	0.0	0.0	0.0		

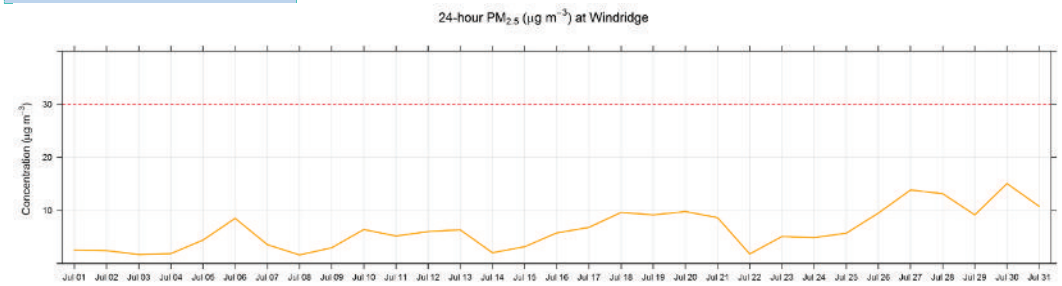
M = MAINTENANCE



Windridge $PM_{2.5}$ (µg/m^3) – July 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	2.6	4.1	9.2	8.8	5.5	1.8	0.0	0.0	0.0	1.8	3.3	2.2	2.2	1.1	0.7	1.8	2.6	1.1	0.0	1.1	1.8	3.0	4.8	1.8	9.2	2.6
2	0.4	4.4	2.6	1.1	1.5	0.0	0.0	0.0	3.3	4.0	1.8	2.9	2.2	0.7	2.2	2.2	0.4	3.3	5.1	4.0	2.6	5.9	5.5	2.2	5.9	2.4
3	1.1	1.5	0.4	0.0	4.0	4.5	2.2	0.4	4.0	3.4	1.7	2.9	0.7	0.0	1.5	2.9	3.3	2.2	0.0	0.0	0.4	1.1	1.5	1.1	4.5	1.7
4	1.1	1.8	0.4	0.0	1.1	1.5	0.4	1.5	1.8	1.5	3.3	1.1	0.7	1.1	0.0	0.7	2.2	1.1	0.6	1.1	0.4	6.6	8.1	7.0	8.1	1.9
5	5.1	7.7	4.0	3.7	5.5	4.0	2.9	6.2	4.5	1.1	**PO**	**PO**	0.0	3.3	4.4	5.1	7.0	5.5	2.6	1.1	3.3	5.5	7.0	7.7	7.7	4.4
6	6.6	5.9	5.1	8.8	7.9	8.9	8.1	12.1	14.0	14.3	9.6	10.6	**PO**	**PO**	6.2	5.1	6.5	11.4	7.0	4.7	5.9	7.0	7.7	14.3	14.3	8.5
7	8.7	6.6	5.9	6.5	4.4	1.5	2.2	4.0	2.6	0.3	4.8	7.3	8.8	5.3	4.8	4.4	3.4	1.5	0.0	1.5	0.0	0.0	0.0	1.1	8.8	3.6
8	1.5	1.1	3.3	2.2	1.1	2.2	3.3	3.3	1.8	2.6	0.7	0.0	0.0	1.5	1.8	0.4	0.0	3.3	2.9	0.0	3.3	1.1	0.0	1.5	3.3	1.6
9	1.1	2.9	2.2	1.1	4.0	7.3	6.6	5.1	3.7	2.3	3.7	3.3	3.0	4.8	3.3	0.4	4.4	4.0	2.2	1.5	0.4	0.0	1.8	2.2	7.3	3.0
10	4.8	8.1	4.8	4.7	10.3	8.8	8.1	5.9	11.0	8.8	7.7	6.2	7.0	4.8	4.6	8.4	8.9	8.4	5.5	2.9	0.7	1.8	7.0	4.8	11.0	6.4
11	2.2	1.5	0.4	3.3	2.6	2.6	4.0	2.9	1.1	1.5	2.9	26.7	8.1	5.5	0.7	7.7	4.8	1.1	5.1	4.8	1.8	18.3	9.0	5.9	26.7	5.2
12	2.6	4.4	7.0	5.5	6.6	5.9	7.7	18.0	9.5	**C**	**C**	**C**	**C**	**C**	5.9	4.0	4.0	2.6	0.0	0.0	8.4	7.7	8.7	6.2	18.0	6.0
13	3.3	3.3	2.6	2.6	5.1	4.8	6.2	8.8	8.1	7.3	8.4	6.6	9.5	5.9	6.2	8.1	8.1	5.5	3.3	3.0	7.3	9.5	11.0	8.1	11.0	6.4
14	4.0	3.7	3.7	2.9	2.6	1.8	8.4	5.9	0.4	0.0	0.4	2.2	2.9	2.2	1.5	0.0	0.0	0.7	1.1	0.0	0.0	1.5	0.7	2.2	8.4	2.0
15	3.7	4.4	4.8	2.2	2.9	3.3	2.6	4.0	3.3	1.8	1.8	2.9	3.3	3.0	5.1	3.3	0.4	1.1	1.8	2.2	4.4	2.6	3.4	7.7	7.7	3.2
16	8.1	5.1	3.3	11.0	8.1	5.9	6.2	4.8	2.9	7.7	8.1	7.0	7.0	8.1	6.2	4.0	2.2	2.6	3.7	6.6	5.3	3.7	6.2	4.8	11.0	5.8
17	3.3	6.2	4.0	3.7	4.8	9.5	10.3	6.6	3.4	8.1	9.2	7.3	8.4	7.7	5.1	4.0	3.7	2.6	5.1	4.8	7.3	12.1	15.0	11.4	15.0	6.8
18	8.4	12.5	12.1	12.8	13.9	8.7	4.8	3.7	2.6	8.4	8.4	12.1	11.7	9.9	15.0	14.7	12.8	8.8	9.5	7.3	6.2	7.0	11.7	8.1	15.0	9.6
19	7.0	7.0	6.0	8.8	9.9	7.3	8.4	11.0	10.2	15.8	9.9	4.8	4.0	4.0	9.2	11.7	12.1	10.3	9.9	7.7	12.1	12.4	9.5	11.0	15.8	9.2
20	15.4	8.9	8.4	8.8	14.3	8.8	8.4	9.9	10.3	8.4	9.2	9.2	7.0	8.9	6.6	9.9	10.6	10.6	12.1	9.4	8.4	13.2	9.5	8.8	15.4	9.8
21	8.7	7.7	9.2	6.2	2.9	1.8	3.4	7.7	5.5	3.7	6.4	8.8	8.4	17.2	19.8	30.8	15.8	12.1	6.6	3.7	3.7	3.7	7.3	6.6	30.8	8.7
22	3.3	3.0	3.7	0.0	0.0	1.5	2.2	0.4	0.0	1.8	1.5	0.0	0.4	4.8	4.0	2.6	0.7	0.0	1.5	1.1	1.1	1.5	4.0	4.4	4.8	1.8
23	4.6	4.9	4.8	5.9	9.2	5.1	4.0	7.3	5.9	8.1	7.0	7.3	4.8	2.6	5.1	4.0	5.5	4.1	2.9	3.3	2.9	2.2	4.8	5.9	9.2	5.1
24	7.0	8.4	8.1	5.1	3.7	3.7	4.4	6.2	5.5	7.7	6.2	2.6	3.3	5.5	5.1	6.6	6.6	4.8	3.3	2.2	2.2	1.5	3.7	4.0	8.4	4.9
25	2.2	2.2	3.4	2.3	5.9	4.0	3.3	5.1	5.9	5.1	3.3	6.6	7.3	5.9	7.0	7.7	5.3	5.5	7.0	7.7	9.2	8.1	7.3	9.9	9.9	5.7
26	8.1	7.3	8.8	11.7	9.5	8.1	5.1	6.2	8.8	8.1	9.9	8.4	8.8	12.1	13.6	18.3	10.3	17.6	9.5	8.8	8.4	5.9	5.9	8.8	18.3	9.5
27	12.1	14.7	14.3	13.2	15.8	16.5	18.3	13.6	15.4	12.1	18.0	12.5	16.5	16.6	18.7	13.6	13.9	11.0	8.8	11.0	11.0	12.1	12.1	11.0	18.7	13.9
28	15.0	12.5	15.0	18.0	18.0	13.2	16.9	13.6	16.9	15.8	14.3	14.7	15.0	12.8	14.7	13.6	13.6	16.5	11.7	7.7	7.7	6.2	5.1	7.7	18.0	13.2
29	9.2	11.0	12.1	7.7	7.0	6.6	7.7	8.4	7.7	4.8	6.6	5.9	3.3	6.2	9.5	9.2	7.0	11.0	9.2	15.8	13.6	13.2	14.7	12.8	15.8	9.2
30	12.6	12.1	14.3	16.5	19.4	17.2	18.3	21.9	15.4	16.9	14.0	16.9	18.0	15.8	14.3	12.8	13.9	14.3	15.4	12.5	18.0	14.3	8.8	8.4	21.9	15.1
31	8.1	6.2	9.9	9.9	8.8	10.6	9.5	7.3	9.5	12.5	16.1	12.5	15.8	10.6	8.4	9.9	9.5	11.0	12.5	10.6	10.6	10.3	16.9	11.4	16.9	10.8
Hourly Max	15.4	14.7	15.0	18.0	19.4	17.2	18.3	21.9	16.9	16.9	18.0	26.7	18.0	17.2	19.8	30.8	15.8	17.6	15.4	15.8	18.0	18.3	15.0	14.3		
Hourly Average	5.8	6.2	6.1	6.2	6.9	5.9	6.2	6.8	6.2	6.3	6.5	7.1	6.2	6.3	6.8	7.3	6.3	6.1	5.1	4.6	5.3	6.3	6.7	6.6		

C = CALIBRATION PO = POWER OUTAGE

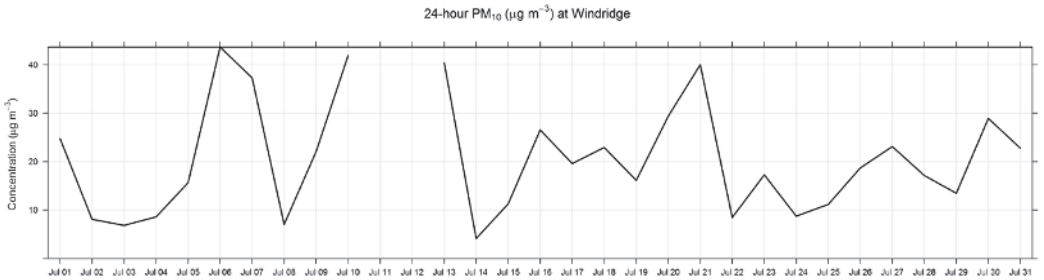


Number of 1HR Exceedances	0		Guideline	80	UG/M3
Number of 24HR Exceedances	0		Objective	30	UG/M3
Number of Non-Zero Readings	705				
Maximum 1-HR Average	30.8	UG/M3			
Maximum 24-HR Average	15.1	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	740	HRS
Monthly Calibration Time	5	HRS	Operational Uptime	99.5	%
Standard Deviation	4.7		Monthly Average	6.4	UG/M3

Windridge PM_{10} (µg/m^3) – July 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	35.8	43.5	46.4	42.8	33.7	16.7	0.0	1.6	10.4	28.7	42.8	40.0	44.9	21.0	16.0	22.4	10.0	13.9	15.3	12.5	6.9	31.5	23.1	34.0	46.4	24.7
2	11.1	6.9	4.0	4.4	3.3	4.7	3.3	3.0	8.3	13.2	8.3	7.6	2.6	2.6	4.0	2.6	4.4	29.4	40.7	2.6	3.3	6.2	10.4	6.9	40.7	8.1
3	3.3	4.2	9.0	6.9	6.6	5.5	4.0	2.6	3.9	13.9	8.4	4.0	16.9	16.7	18.8	8.3	4.4	4.7	4.0	2.6	2.6	5.4	4.7	2.6	18.8	6.8
4	2.5	3.3	8.3	10.4	8.3	6.9	6.9	5.4	9.7	21.7	9.7	12.5	18.1	3.3	2.6	2.6	7.6	6.2	6.2	5.4	4.3	3.3	16.7	24.5	24.5	8.6
5	7.6	10.7	10.4	9.7	11.8	14.6	12.5	11.1	19.6	24.5	**PO**	**PO**	22.4	25.1	18.8	13.2	9.7	23.8	11.4	11.8	13.2	11.8	31.5	19.6	31.5	15.7
6	11.8	11.1	12.5	23.8	17.4	28.4	17.0	16.7	37.2	45.6	33.0	59.0	**PO**	**PO**	109.1	66.8	69.6	79.5	19.6	40.7	40.0	59.7	96.4	65.4	109.1	43.7
7	23.8	28.7	51.3	46.3	14.6	9.3	13.2	11.8	8.3	11.1	23.8	108.4	166.9	82.1	61.9	60.4	21.7	40.0	24.5	13.9	18.1	16.7	27.3	10.4	166.9	37.3
8	9.0	11.8	6.2	1.9	1.9	3.8	1.9	1.2	5.5	6.2	5.7	8.3	11.1	8.3	9.7	14.6	9.7	6.9	7.6	9.0	14.6	7.6	3.8	2.6	14.6	7.0
9	4.0	2.6	0.5	4.7	7.6	18.1	15.3	21.0	46.4	40.0	68.2	28.7	39.3	36.5	11.8	24.5	21.0	46.2	18.8	9.0	21.7	23.8	9.0	11.8	68.2	22.1
10	17.4	12.5	9.7	21.7	34.4	35.1	25.9	38.6	54.1	37.2	56.9	30.8	104.9	25.2	38.6	63.3	74.6	70.8	54.1	49.2	34.4	26.4	39.7	50.6	104.9	41.9
11	25.2	30.8	40.7	13.1	6.9	1.9	1.9	6.6	4.7	6.9	28.7	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	-	-
12	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**T**	**C**	**C**	**C**	**C**	**C**	30.1	30.1	47.8	64.7	37.2	56.9	100.1	48.5	40.0	6.2	-	-
13	9.7	16.0	9.7	12.5	13.2	7.6	28.0	30.1	24.5	65.4	62.6	40.0	53.4	30.1	52.0	48.5	62.9	49.2	57.6	48.5	133.8	76.0	30.1	9.0	133.8	40.4
14	9.0	11.8	9.0	4.3	3.3	4.0	1.9	0.0	1.2	3.3	2.6	0.5	0.0	1.2	6.9	5.4	2.6	6.2	4.7	4.0	4.0	2.6	4.0	6.2	11.8	4.1
15	15.3	16.7	4.0	4.0	6.2	11.8	10.4	7.0	21.7	11.8	9.7	17.4	6.2	25.2	16.7	9.9	9.0	11.8	9.0	10.4	11.1	7.0	7.6	11.1	25.2	11.3
16	14.6	11.2	10.4	23.8	9.0	8.3	25.9	9.5	28.9	84.4	40.0	30.8	21.7	56.9	22.4	25.2	20.3	38.6	36.5	42.1	50.6	16.7	5.4	4.0	84.4	26.5
17	7.6	15.3	11.1	8.2	6.9	9.6	9.3	10.4	23.1	20.7	41.4	40.0	31.7	16.7	12.5	13.9	30.8	8.7	20.3	28.0	24.5	21.7	39.9	18.1	41.4	19.6
18	23.1	17.4	17.4	24.5	32.3	19.6	52.7	17.7	13.2	22.4	18.8	21.7	25.2	27.3	47.1	25.2	26.6	20.3	25.5	11.8	8.3	18.1	23.8	10.4	52.7	22.9
19	9.0	6.9	12.5	9.0	15.3	15.3	19.6	21.7	20.3	29.4	9.7	9.7	13.2	24.5	19.6	18.3	18.8	17.4	15.3	19.6	20.3	13.2	16.0	12.5	29.4	16.1
20	16.8	13.2	12.5	14.6	18.9	21.7	20.3	11.1	18.6	14.6	28.0	36.5	37.2	31.5	44.2	59.7	48.5	52.0	60.4	35.4	27.3	36.7	33.0	12.0	60.4	29.4
21	9.7	15.3	9.0	5.4	9.0	9.0	8.3	9.0	9.5	12.5	19.6	75.7	43.5	72.4	90.8	153.5	97.8	70.3	52.0	58.3	37.2	20.3	37.2	35.1	153.5	40.0
22	7.6	14.6	9.0	5.5	2.3	1.9	3.3	4.0	1.9	13.9	19.6	4.2	21.7	9.0	4.0	9.0	5.4	2.6	6.2	13.9	8.3	9.7	9.7	16.0	21.7	8.5
23	33.0	23.1	10.4	20.0	18.9	13.9	28.7	22.4	7.6	15.3	27.3	18.8	13.2	17.4	24.5	28.0	20.3	5.4	17.4	9.7	10.4	8.3	6.2	14.6	33.0	17.3
24	9.0	21.0	7.6	5.3	7.6	4.7	2.6	2.6	8.3	16.7	15.3	7.6	7.8	16.9	10.4	13.2	12.5	7.6	5.3	2.6	2.6	4.7	9.7	8.3	21.0	8.7
25	9.7	6.9	6.2	6.9	4.7	6.2	5.5	9.7	11.8	11.1	11.9	9.4	12.0	13.2	17.7	9.0	10.4	16.7	18.4	15.3	16.7	10.4	13.9	14.6	18.4	11.2
26	11.8	6.9	12.5	10.8	11.8	13.2	8.3	16.7	19.6	27.3	28.7	23.8	34.4	20.3	21.0	26.0	18.8	56.9	21.7	23.1	6.9	9.0	9.7	9.7	56.9	18.7
27	15.3	14.3	13.9	17.4	20.3	23.8	38.6	25.2	32.3	27.3	33.0	40.7	35.8	25.9	31.9	23.8	14.6	28.0	18.8	15.3	16.0	13.9	13.9	14.6	40.7	23.1
28	15.3	16.0	15.8	16.7	16.7	18.9	18.1	22.4	17.4	30.1	25.2	20.0	33.0	21.0	16.0	16.0	17.4	11.8	18.1	6.2	12.5	9.2	8.9	8.3	33.0	17.1
29	11.8	13.2	10.4	7.9	9.0	12.5	11.1	9.0	10.9	6.9	8.3	7.8	5.4	6.4	21.0	16.0	12.5	15.3	17.4	21.0	25.9	22.4	20.3	21.0	25.9	13.5
30	20.8	18.9	21.7	31.8	55.5	25.9	40.0	26.6	29.4	43.5	39.3	30.8	29.4	52.7	30.8	28.5	24.5	33.0	23.1	21.0	30.8	13.2	11.2	11.8	55.5	28.9
31	9.7	11.1	20.3	14.6	13.9	16.7	7.6	15.3	16.0	44.9	33.0	19.6	44.2	24.5	40.7	35.8	22.4	22.3	24.3	24.5	23.8	21.7	20.3	19.6	44.9	22.8
Hourly Max	35.8	43.5	51.3	46.3	55.5	35.1	52.7	38.6	54.1	84.4	68.2	108.4	166.9	82.1	109.1	153.5	97.8	79.5	60.4	58.3	133.8	76.0	96.4	65.4		
Hourly Average	13.8	14.6	13.9	14.3	14.0	12.9	15.0	12.9	17.5	24.3	25.9	27.2	31.5	25.5	28.0	28.9	25.3	28.9	23.0	20.7	24.4	19.1	20.8	16.3		

C = Calibration PO = Power Outage T = Filter Tape Out

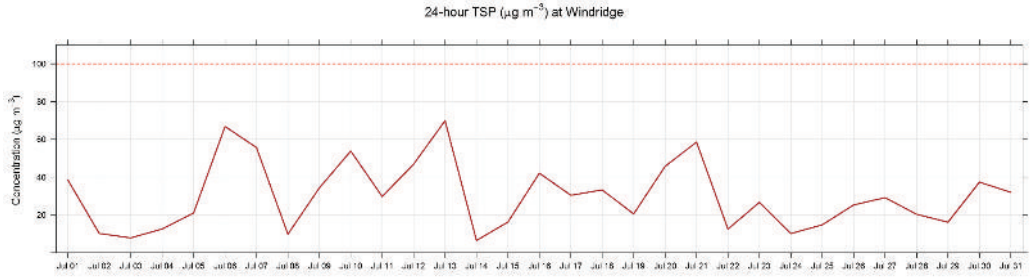


Number of 1HR Exceedances	n/a		Objective	n/a	UG/M3
Number of Non-Zero Readings	710				
Maximum 1-HR Average	166.9	UG/M3			
Maximum 24-HR Average	43.7	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	718	HRS
Monthly Calibration Time	5	HRS	Operational Uptime	96.5	%
Standard Deviation	19.4		Monthly Average	20.8	UG/M3

Windridge TSP (µg/m^3) – July 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	54.1	54.1	62.2	79.2	55.5	16.7	0.5	0.5	26.6	51.3	63.3	62.6	78.1	35.1	28.7	37.2	5.4	23.1	18.8	14.6	10.1	46.3	35.8	63.3	79.2	38.5
2	11.1	5.4	2.6	1.2	1.9	3.9	2.6	6.2	7.6	9.0	5.4	8.3	6.2	16.7	6.2	4.2	11.8	44.9	56.9	5.4	4.0	6.2	8.3	6.9	56.9	10.1
3	6.2	9.0	5.4	4.7	4.0	1.9	0.5	0.0	8.3	18.9	5.4	4.0	23.1	20.3	29.7	7.6	6.2	4.7	1.9	2.6	7.6	5.4	6.2	3.3	29.7	7.8
4	2.6	6.2	9.7	16.0	4.7	3.3	4.0	3.3	16.4	42.8	16.0	16.0	37.2	11.1	16.0	11.8	8.3	4.0	6.2	6.2	4.3	1.9	16.7	35.1	42.8	12.5
5	8.3	13.9	10.4	7.6	13.9	16.0	13.2	11.1	22.6	34.4	**PO**	**PO**	42.8	40.7	27.3	23.1	11.8	25.2	18.8	14.6	16.0	18.8	49.2	21.6	49.2	21.0
6	16.0	16.0	14.9	29.4	24.5	31.5	15.3	21.7	52.0	46.9	51.3	81.6	**PO**	**PO**	184.5	117.6	120.4	145.8	28.0	75.9	66.3	95.0	152.8	82.3	184.5	66.8
7	23.1	37.2	77.4	71.0	14.6	13.2	11.8	10.4	9.7	13.2	38.6	158.5	252.9	109.8	96.4	104.9	38.6	70.3	35.8	25.2	39.3	28.7	39.3	16.0	252.9	55.7
8	13.2	13.2	9.0	6.2	4.0	1.7	1.9	4.7	3.3	11.8	12.5	13.2	13.9	13.2	16.7	20.3	12.3	13.9	7.6	16.0	18.1	1.9	0.5	4.7	20.3	9.7
9	5.4	1.2	5.5	4.7	11.3	24.5	23.8	26.6	64.7	47.8	90.8	37.2	61.2	65.4	23.8	44.9	37.1	77.4	21.0	25.2	49.9	44.2	11.8	16.7	90.8	34.2
10	21.0	11.8	11.1	21.7	42.1	40.0	26.6	47.1	70.3	48.5	74.6	39.8	143.6	21.7	43.9	86.5	97.1	93.6	73.1	79.5	35.1	37.9	54.1	70.3	143.6	53.8
11	40.0	41.4	64.7	18.8	0.5	0.5	4.7	6.2	4.7	5.4	40.9	29.4	73.1	28.0	30.8	28.0	28.7	33.0	49.2	24.5	19.6	52.7	65.4	22.4	73.1	29.7
12	23.1	9.6	11.0	9.0	12.5	10.4	7.6	6.9	7.6	**C**	**C**	**C**	**C**	**C**	44.2	49.9	90.1	111.2	76.7	106.3	163.4	76.7	60.5	13.9	163.4	46.9
13	9.7	16.0	12.5	11.1	18.1	14.6	35.1	33.0	29.4	118.3	103.4	70.3	96.4	65.4	92.2	78.3	107.7	79.5	116.9	78.1	252.9	171.1	51.3	15.3	252.9	69.9
14	14.6	11.1	6.9	2.6	0.0	6.9	4.2	0.5	0.0	4.7	8.8	6.2	4.0	5.4	5.4	7.6	9.0	4.7	8.3	5.4	3.3	8.3	10.4	16.0	16.0	6.4
15	21.7	22.4	5.5	4.7	11.1	11.1	9.0	11.1	25.2	19.6	18.8	31.5	8.7	39.3	25.9	8.3	13.9	21.7	11.8	13.9	18.7	11.8	11.8	10.4	39.3	16.2
16	17.4	13.2	9.7	28.7	11.8	9.7	30.1	9.0	44.2	127.4	46.3	49.9	30.6	110.5	57.6	41.4	34.1	55.5	60.4	77.4	94.6	27.3	14.6	8.3	127.4	42.1
17	8.3	16.7	9.0	6.2	11.1	11.8	11.1	17.4	31.5	33.0	69.6	68.7	45.6	28.7	19.6	18.1	62.6	21.7	49.2	32.4	30.8	37.9	61.9	26.6	69.6	30.4
18	21.7	21.5	28.0	30.7	42.8	38.4	94.3	32.0	25.9	29.5	28.0	30.9	35.8	43.4	68.2	34.4	34.4	23.1	39.3	18.7	8.3	25.2	30.1	12.5	94.3	33.2
19	8.8	9.7	6.9	16.0	21.0	23.1	24.5	31.5	22.4	44.9	8.3	18.1	21.0	31.5	21.7	18.8	23.8	22.4	14.6	18.1	21.0	22.4	20.3	21.0	44.9	20.5
20	16.0	13.2	16.7	16.0	21.7	29.7	23.1	14.6	23.1	17.4	41.0	60.4	57.6	61.9	83.0	102.7	81.6	78.3	107.7	56.2	43.5	59.0	59.7	11.8	107.7	45.7
21	9.0	18.9	16.4	13.9	9.0	7.2	6.9	9.0	6.2	18.9	21.0	122.5	71.0	100.6	107.7	210.6	162.7	109.8	87.2	100.9	56.9	37.2	42.1	59.8	210.6	58.5
22	10.4	24.0	8.7	10.4	5.5	1.2	0.5	0.5	1.2	23.1	43.5	6.9	37.2	7.6	6.9	7.6	6.9	10.4	13.9	20.3	9.7	10.4	13.6	18.8	43.5	12.5
23	48.3	46.4	14.6	19.6	18.1	15.3	42.8	33.0	9.7	23.8	38.6	23.8	28.7	30.8	37.2	42.8	43.5	18.1	21.0	14.6	18.8	9.0	19.6	21.0	48.3	26.6
24	6.9	24.5	4.7	4.0	9.7	4.7	2.6	5.4	13.2	18.7	15.3	8.7	10.4	20.3	11.8	17.4	7.6	4.7	4.7	4.0	2.6	11.2	13.2	15.3	24.5	10.1
25	6.9	4.7	11.8	6.9	6.2	6.9	4.7	8.3	11.8	13.2	13.2	9.7	19.6	20.3	29.4	19.6	13.9	20.3	23.1	29.4	18.8	11.8	16.7	25.9	29.4	14.7
26	11.1	10.4	13.2	15.3	13.2	13.2	10.2	11.1	21.0	41.4	40.9	32.4	54.8	23.6	26.6	30.1	30.1	106.3	35.1	34.4	6.9	8.3	7.6	9.0	106.3	25.3
27	18.2	16.7	14.6	18.2	26.6	22.4	45.6	28.7	37.2	30.8	54.8	52.7	44.9	30.8	48.5	34.4	19.6	31.0	25.9	21.0	20.2	23.7	16.7	15.3	54.8	29.1
28	16.0	18.9	21.0	14.6	21.0	18.2	23.8	16.7	16.7	31.8	35.8	27.3	49.9	26.6	16.7	23.8	22.4	21.7	17.4	7.6	16.7	9.7	6.2	6.9	49.9	20.3
29	9.7	7.6	11.1	11.1	8.3	10.9	13.9	12.5	9.0	9.9	11.1	9.0	13.2	16.7	28.7	21.0	19.6	16.7	25.9	29.4	25.9	25.2	21.0	18.8	29.4	16.1
30	26.6	19.6	21.4	33.7	53.4	28.6	48.5	30.8	33.3	59.0	49.9	39.3	32.2	78.1	39.3	42.1	31.5	64.7	39.3	34.4	47.8	16.7	13.9	11.8	78.1	37.3
31	9.0	16.0	28.7	17.4	16.3	18.1	13.9	11.8	14.6	64.7	44.9	38.6	59.0	30.1	64.6	52.0	23.8	36.5	36.5	28.0	28.7	57.6	29.1	25.9	64.7	31.9
Hourly Max	54.1	54.1	77.4	79.2	55.5	40.0	94.3	47.1	70.3	127.4	103.4	158.5	252.9	110.5	184.5	210.6	162.7	145.8	116.9	106.3	252.9	171.1	152.8	82.3		
Hourly Average	16.8	17.8	17.2	17.8	16.6	14.6	18.1	15.0	21.8	34.3	37.4	40.0	49.8	39.4	42.5	43.2	39.7	45.3	36.5	33.1	37.7	31.4	31.0	22.7		

C = CALIBRATION PO = POWER OUTAGE

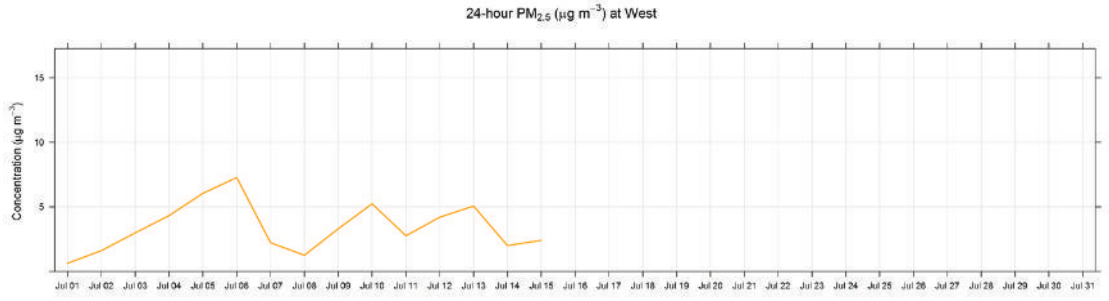


Number of 24HR Exceedances	0		Objective	100	UG/M3
Number of Non-Zero Readings	732				
Maximum 1-HR Average	252.9	UG/M3			
Maximum 24-HR Average	69.9	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	740	HRS
Monthly Calibration Time	5	HRS	Operational Uptime	99.5	%
Standard Deviation	31.3		Monthly Average	29.9	UG/M3

West $PM_{2.5}$ (µg/m^3) – July 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	0.3	0.6	0.6	0.5	0.7	1.4	0.7	0.6	0.3	0.5	0.5	0.5	0.7	0.9	0.6	0.8	0.4	0.7	0.5	0.5	0.4	0.5	0.4	1.6	1.6	0.6
2	1.4	1.3	1.2	0.5	1.0	1.4	1.4	2.1	2.0	1.8	2.9	5.4	0.8	0.7	1.8	1.8	1.1	1.0	2.0	2.5	0.8	1.1	1.2	1.2	5.4	1.6
3	1.1	0.9	1.1	1.2	1.1	0.9	1.1	1.1	1.3	1.6	1.3	1.1	2.1	5.6	5.9	1.4	6.8	16.3	4.0	5.3	3.4	2.8	2.3	1.9	16.3	3.0
4	2.6	2.8	2.4	2.1	2.0	2.2	2.2	12.5	6.7	2.6	3.8	9.9	6.9	7.7	6.8	3.8	3.3	3.3	2.9	3.2	3.4	3.1	3.7	3.7	12.5	4.3
5	4.0	4.2	4.7	8.5	6.8	5.8	5.4	7.6	10.4	8.5	7.6	6.2	3.9	5.8	5.2	5.3	5.1	4.5	4.6	5.5	6.1	6.7	6.5	6.2	10.4	6.0
6	6.4	7.6	8.0	8.4	9.1	9.6	9.8	10.6	13.3	13.4	11.8	8.0	4.8	4.4	4.3	4.5	5.4	6.4	5.3	4.2	4.5	4.7	5.4	4.9	13.4	7.3
7	4.9	4.7	4.4	3.5	5.0	3.9	4.2	3.7	4.1	3.1	1.7	1.2	0.9	0.8	0.5	0.7	0.6	0.6	0.7	0.7	0.8	0.5	0.9	1.1	5.0	2.2
8	1.2	1.1	1.2	1.2	1.2	1.1	1.1	1.3	1.2	1.1	0.7	0.9	0.9	0.8	1.0	0.9	0.8	1.0	1.1	1.5	1.9	2.4	2.1	2.2	2.4	1.2
9	2.5	2.7	2.6	2.4	2.6	2.6	2.4	3.7	6.1	5.8	4.8	5.3	3.2	2.0	2.3	2.4	2.4	2.3	2.5	2.2	2.5	3.6	4.3	6.0	6.1	3.3
10	6.4	5.9	6.8	7.6	5.6	5.1	5.3	7.0	8.7	7.6	5.9	4.0	3.2	7.2	12.7	8.4	1.6	2.4	2.0	2.7	2.8	2.3	2.2	1.8	12.7	5.2
11	1.8	1.5	1.7	1.7	2.0	1.9	2.1	2.5	3.4	5.0	2.8	2.1	1.8	2.4	2.4	2.9	3.0	3.9	3.3	3.0	3.6	3.8	3.7	3.7	5.0	2.8
12	3.7	4.1	4.3	4.4	4.3	4.4	4.6	5.7	9.0	7.5	5.6	3.6	**M**	3.0	3.8	3.3	3.9	3.2	2.6	2.4	3.1	3.2	3.6	3.2	9.0	4.2
13	3.7	3.7	3.8	4.6	4.5	4.6	4.7	5.6	10.2	10.6	8.2	8.0	3.1	2.5	2.6	2.7	2.6	2.2	2.3	2.0	7.7	11.2	5.5	4.8	11.2	5.1
14	3.5	3.0	3.1	2.8	1.8	1.2	0.5	0.5	1.4	2.1	3.7	2.6	3.2	2.5	2.0	1.5	1.4	1.2	1.2	1.2	1.5	2.3	2.0	1.4	3.7	2.0
15	1.4	1.5	3.6	3.1	2.5	2.2	2.2	2.2	2.7	2.9	2.5	2.3	1.9	1.7	1.5	2.4	2.1	2.1	1.8	1.9	2.3	3.6	3.3	4.1	4.1	2.4
16	4.7	5.6	5.1	4.6	4.3	4.2	4.7	4.8	7.2	7.2	5.4	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
17	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
18	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
19	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
20	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
21	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
22	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
23	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
24	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
25	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
26	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
27	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
28	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
29	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
30	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
31	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
Hourly Max	6.4	7.6	8.0	8.5	9.1	9.6	9.8	12.5	13.3	13.4	11.8	9.9	6.9	7.7	12.7	8.4	6.8	16.3	5.3	5.5	7.7	11.2	6.5	6.2		
Hourly Average	3.1	3.2	3.4	3.6	3.4	3.3	3.3	4.5	5.5	5.1	4.3	4.1	2.7	3.2	3.6	2.9	2.7	3.4	2.5	2.6	3.0	3.5	3.1	3.2		

M = MAINTENANCE PF = PUMP FAILURE

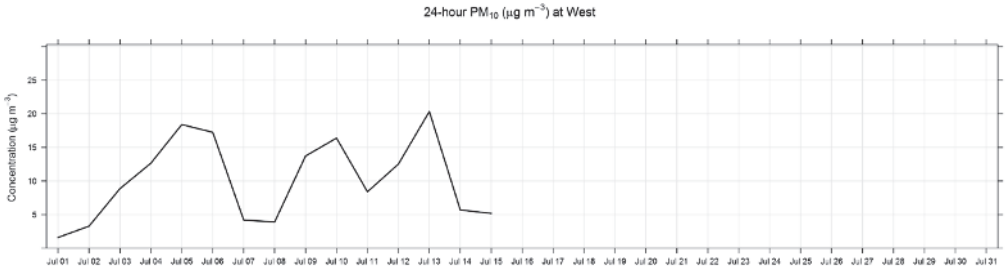


Number of 1HR Exceedances	0		Guideline	80	UG/M3
Number of 24HR Exceedances	0		Guideline	30	UG/M3
Number of Non-Zero Readings	370				
Maximum 1-HR Average	16.3	UG/M3			
Maximum 24-HR Average	7.3	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	370	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	49.7	%
Standard Deviation	2.6		Monthly Average	3.5	UG/M3

West PM_{10} (µg/m^3) – July 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	0.7	1.1	1.2	0.9	1.5	4.6	1.1	0.9	0.6	1.3	1.3	1.7	2.9	3.8	2.0	1.9	1.2	1.4	1.0	1.4	1.1	1.3	0.9	2.5	4.6	1.6
2	2.1	1.9	1.7	0.8	1.5	1.9	1.9	3.0	2.7	2.4	8.0	10.4	2.3	2.0	7.9	5.9	4.1	4.0	4.5	3.6	1.1	1.5	1.7	1.5	10.4	3.3
3	1.4	1.1	1.4	1.4	1.4	1.2	1.4	1.5	1.8	2.3	1.8	1.5	3.1	20.7	24.4	2.3	30.4	74.5	15.5	7.9	5.0	4.1	3.4	2.9	74.5	8.9
4	3.8	4.1	3.6	3.1	2.8	3.2	3.2	18.7	10.1	3.9	15.8	41.7	31.3	37.6	31.7	19.0	14.7	13.1	9.8	8.3	8.3	4.6	5.5	5.5	41.7	12.6
5	5.9	6.2	7.0	12.7	10.1	8.5	7.7	11.2	17.6	32.6	32.3	26.2	15.9	34.3	22.6	29.3	30.8	20.1	20.7	24.7	21.2	22.1	12.7	9.3	34.3	18.4
6	9.6	11.3	12.0	12.5	13.5	14.1	14.2	14.9	24.7	44.8	50.5	28.3	17.1	14.9	14.0	15.1	16.5	19.5	16.3	10.7	10.6	9.3	11.9	7.3	50.5	17.2
7	9.0	8.1	7.7	5.0	8.9	4.9	6.1	6.8	7.6	6.3	4.3	2.9	1.8	2.0	1.2	2.0	1.6	1.1	1.6	1.8	2.1	1.0	3.2	3.7	9.0	4.2
8	2.6	2.2	3.0	3.0	2.7	2.5	1.8	2.0	2.5	2.4	1.5	3.6	3.1	2.9	4.0	2.6	2.5	2.8	4.2	6.5	7.9	11.8	7.5	8.0	11.8	3.9
9	8.0	7.7	5.9	5.4	5.5	4.8	4.7	12.2	32.5	32.4	24.7	29.3	15.7	9.5	12.0	11.8	11.6	10.3	11.8	9.0	9.5	15.8	17.5	21.5	32.5	13.7
10	23.2	18.6	23.6	25.4	13.0	10.1	10.2	23.2	34.9	24.4	10.7	6.5	4.7	22.6	54.1	30.0	3.5	10.6	6.3	9.7	9.6	7.0	6.8	4.6	54.1	16.4
11	3.5	2.0	2.3	2.4	3.5	2.8	3.0	5.0	11.3	20.3	12.0	7.9	6.1	11.2	9.8	13.2	12.0	16.5	12.8	8.8	10.1	9.5	7.7	7.6	20.3	8.4
12	6.9	6.9	6.6	6.5	6.0	6.4	6.5	13.9	40.3	32.5	21.6	14.1	**M**	13.1	16.7	12.5	15.9	11.3	7.1	6.3	8.5	8.1	11.8	8.1	40.3	12.5
13	9.1	6.8	6.3	7.3	7.1	7.2	6.9	12.0	52.1	62.8	48.0	45.7	13.3	8.8	10.2	10.0	10.9	8.4	7.7	7.8	54.3	59.7	15.9	9.8	62.8	20.3
14	7.0	3.5	3.5	3.8	2.8	1.6	0.6	0.7	3.0	10.2	16.3	8.2	13.7	12.0	11.7	4.7	3.2	2.9	2.7	2.8	3.8	7.9	6.5	3.4	16.3	5.7
15	2.5	2.1	5.4	4.6	3.4	3.7	3.1	2.9	4.5	5.9	5.4	5.4	5.2	5.8	4.1	7.5	4.6	4.2	3.5	3.2	4.1	11.9	9.0	12.3	12.3	5.2
16	15.8	20.4	12.1	7.6	5.7	5.7	8.5	10.3	28.7	31.9	22.9	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
17	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
18	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
19	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
20	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
21	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
22	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
23	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
24	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
25	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
26	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
27	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
28	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
29	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
30	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
31	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
Hourly Max	23.2	20.4	23.6	25.4	13.5	14.1	14.2	23.2	52.1	62.8	50.5	45.7	31.3	37.6	54.1	30.0	30.8	74.5	20.7	24.7	54.3	59.7	17.5	21.5		
Hourly Average	6.9	6.5	6.4	6.4	5.6	5.2	5.1	8.7	17.2	19.8	17.3	15.6	9.7	13.4	15.1	11.2	10.9	13.4	8.4	7.5	10.5	11.7	8.1	7.2		

M = MAINTENANCE PF = PUMP FAILURE

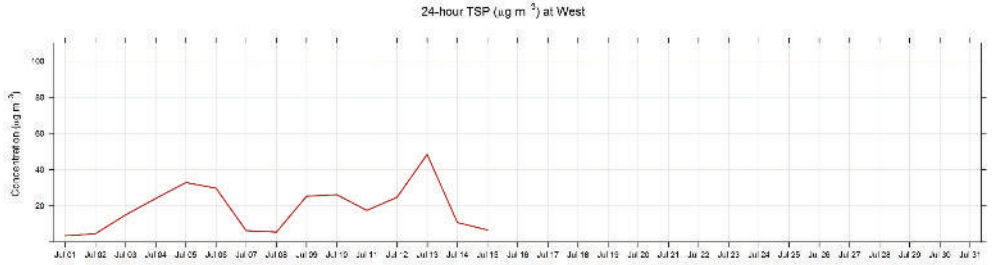


Number of 1HR Exceedances	n/a		Guideline	n/a	UG/M3
Number of Non-Zero Readings	370				
Maximum 1-HR Average	74.5	UG/M3			
Maximum 24-HR Average	20.3	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	370	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	49.7	%
Standard Deviation	11.1		Monthly Average	10.3	UG/M3

West TSP (µg/m^3) – July 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	3.5	0.7	2.2	0.7	2.1	6.0	1.4	0.6	0.7	3.9	4.6	3.7	7.2	12.4	4.6	3.4	3.5	1.8	1.4	4.3	3.4	3.2	3.7	2.0	12.4	3.4
2	1.8	1.3	1.1	0.5	1.2	1.6	1.5	2.5	2.0	2.0	9.9	11.1	5.7	6.0	19.6	9.4	11.0	5.5	7.3	3.1	0.9	1.2	1.3	1.0	19.6	4.5
3	1.0	0.8	1.0	1.0	1.0	0.8	0.9	1.2	1.6	2.2	1.6	1.3	3.1	50.6	54.7	2.8	53.3	120.5	35.8	8.3	5.0	4.1	3.6	3.0	120.5	15.0
4	3.9	4.3	3.5	3.0	2.7	3.1	3.0	20.5	11.2	4.0	33.0	70.2	65.5	93.5	75.8	50.3	40.3	27.6	27.1	13.7	5.7	4.2	5.3	5.3	93.5	24.0
5	5.7	5.6	6.3	13.0	9.1	7.0	5.6	9.9	21.7	65.7	66.7	59.9	33.8	86.5	58.2	82.7	76.7	49.1	32.2	39.7	15.2	16.8	10.9	9.8	86.5	32.8
6	9.6	11.0	10.5	10.6	10.4	10.5	9.7	10.4	27.1	87.4	96.2	42.2	52.9	38.3	44.1	36.3	37.0	28.5	35.7	20.7	21.6	22.8	30.2	9.0	96.2	29.7
7	14.0	11.0	11.9	4.3	6.9	3.5	4.6	8.9	11.2	15.0	11.7	7.4	6.4	6.3	1.7	4.7	3.4	1.4	2.7	5.0	1.5	0.7	2.2	2.4	15.0	6.2
8	4.2	2.1	1.9	1.9	1.9	1.7	1.3	2.5	2.8	2.8	4.7	9.1	5.3	14.0	11.8	4.4	3.9	4.3	5.1	7.1	12.2	13.1	5.6	6.5	14.0	5.4
9	5.6	5.3	5.0	3.7	3.6	3.7	5.9	22.4	63.3	63.3	64.6	70.6	36.6	22.7	35.5	32.5	31.5	24.4	28.5	12.1	14.5	16.2	14.6	19.5	70.6	25.2
10	17.9	19.1	19.9	20.2	8.7	11.7	10.6	39.4	67.5	28.2	15.6	8.1	5.2	49.1	129.2	73.7	9.3	32.3	14.5	22.3	11.6	6.4	4.5	3.3	129.2	26.2
11	3.5	1.3	1.5	1.7	4.7	2.8	2.2	4.9	18.8	53.8	36.3	21.6	13.7	36.1	24.0	44.9	20.4	42.0	32.6	19.3	10.0	8.0	6.1	8.5	53.8	17.4
12	8.1	10.1	5.6	4.8	6.3	4.6	4.5	22.4	77.4	77.3	48.8	31.4	**M**	34.2	49.0	33.3	49.3	34.9	14.5	7.3	7.3	6.8	23.7	6.2	77.4	24.7
13	12.3	5.0	6.0	6.9	5.9	5.4	4.8	11.4	81.6	98.2	88.8	97.6	41.7	22.8	29.4	26.8	32.5	34.4	13.5	18.8	212.2	234.0	49.1	22.8	234.0	48.4
14	21.3	2.3	2.3	2.9	3.7	1.2	0.5	0.6	6.0	25.5	28.0	11.3	25.5	34.3	31.2	9.9	4.5	6.5	6.5	5.1	6.4	12.8	7.1	2.3	34.3	10.7
15	2.2	1.8	5.6	4.3	2.6	4.5	2.5	2.1	7.5	8.6	5.4	8.9	6.8	8.1	4.4	17.8	5.3	10.7	8.1	5.0	3.5	13.2	6.5	13.4	17.8	6.6
16	18.2	19.4	13.6	6.0	6.5	6.7	23.7	11.2	54.9	67.8	44.3	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
17	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
18	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
19	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
20	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
21	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
22	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
23	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
24	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
25	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
26	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
27	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
28	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
29	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
30	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
31	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
Hourly Max	21.3	19.4	19.9	20.2	10.4	11.7	23.7	39.4	81.6	98.2	96.2	97.6	65.5	93.5	129.2	82.7	76.7	120.5	35.8	39.7	212.2	234.0	49.1	22.8		
Hourly Average	8.3	6.3	6.1	5.3	4.8	4.7	5.2	10.7	28.4	37.9	35.0	30.3	22.1	34.3	38.2	28.9	25.5	28.3	17.7	12.8	22.1	24.2	11.6	7.7		

M = MAINTENANCE PF = PUMP FAILURE

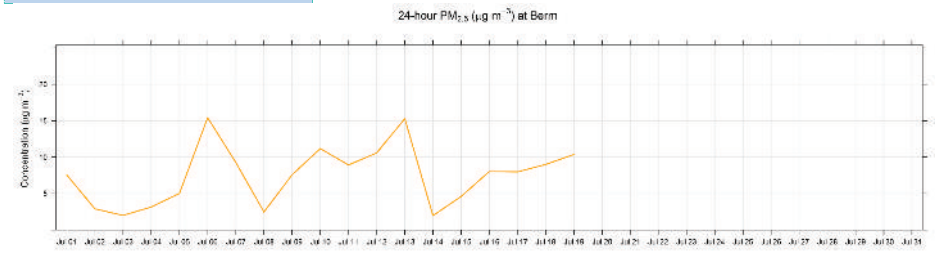


Number of 24HR Exceedances	0		Guideline	100	UG/M3
Number of Non-Zero Readings	370				
Maximum 1-HR Average	234.0	UG/M3			
Maximum 24-HR Average	48.4	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	370	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	49.7	%
Standard Deviation	26.9		Monthly Average	18.9	UG/M3

Berm $PM_{2.5}$ (µg/m^3) – July 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	8.1	10.8	7.7	5.0	1.3	0.6	0.8	3.5	7.8	8.9	15.0	14.2	20.4	9.1	7.6	3.1	10.0	8.1	13.0	9.5	6.9	3.1	4.9	1.8	20.4	7.5
2	1.7	1.2	1.2	1.2	1.4	1.1	1.7	2.7	1.9	1.4	3.7	1.7	2.5	1.1	1.0	2.3	23.9	7.8	1.3	2.4	1.1	2.1	1.2	1.7	23.9	2.9
3	2.3	1.4	1.7	1.6	1.1	1.5	1.7	1.9	1.5	1.8	1.8	3.9	0.9	4.1	2.2	1.3	1.4	1.1	1.2	2.6	1.5	1.4	5.4	2.6	5.4	2.0
4	3.1	3.3	3.1	2.7	2.6	2.7	2.5	3.7	5.9	4.0	5.0	5.4	1.8	3.2	2.0	2.4	1.9	2.3	2.1	2.5	2.5	3.2	4.3	3.5	5.9	3.1
5	3.3	3.2	3.2	4.7	5.4	5.3	5.9	6.8	8.5	6.9	6.7	6.2	5.9	5.0	4.1	3.2	3.9	3.2	3.1	3.4	4.6	7.3	5.8	5.0	8.5	5.0
6	5.3	6.5	8.6	8.1	9.6	8.3	9.1	14.7	15.5	13.8	17.2	13.9	28.9	46.3	32.8	23.0	18.6	6.3	10.9	16.2	14.5	23.0	13.6	5.4	46.3	15.4
7	13.6	15.3	8.2	4.3	4.6	4.1	8.9	3.3	4.5	5.3	20.8	36.0	18.2	19.2	13.4	6.6	11.3	4.8	4.3	3.2	2.9	5.2	2.1	2.3	36.0	9.3
8	2.1	3.7	2.0	1.6	1.5	1.1	3.9	1.6	1.3	3.5	3.5	3.4	2.6	3.5	4.4	2.1	3.2	1.8	3.1	2.9	1.9	1.3	1.4	1.8	4.4	2.5
9	1.9	1.7	4.1	5.2	5.6	10.3	11.3	12.6	11.7	16.6	7.9	7.8	9.8	4.1	5.7	9.5	15.4	10.1	4.5	9.7	8.5	2.5	2.4	3.1	16.6	7.6
10	3.6	6.4	9.6	10.6	12.8	10.0	15.0	15.6	11.3	12.7	10.3	18.4	5.8	8.0	14.7	16.3	11.8	10.7	16.9	9.8	13.0	8.4	10.5	6.2	18.4	11.2
11	5.3	7.1	4.0	4.1	2.3	2.9	2.2	3.0	3.4	7.4	8.4	12.8	11.2	12.5	13.0	11.0	13.4	14.5	12.8	18.2	21.6	8.6	9.3	5.4	21.6	8.9
12	6.7	6.5	6.4	5.6	5.3	5.2	5.6	6.9	13.9	9.1	9.0	13.3	11.0	**M**	11.8	18.4	17.6	13.8	18.5	26.3	14.3	10.1	4.0	4.1	26.3	10.6
13	4.8	5.5	11.6	10.7	8.2	15.9	12.9	9.4	15.9	15.0	18.8	16.7	22.6	24.8	27.3	25.5	17.9	15.4	15.4	38.3	17.1	7.9	4.7	4.5	38.3	15.3
14	4.0	2.6	2.8	1.9	1.1	0.8	0.8	3.0	3.2	1.6	0.9	1.1	1.5	1.6	1.6	1.7	1.5	1.4	1.3	1.6	1.5	1.9	3.2	4.5	4.5	2.0
15	2.2	1.6	2.1	4.6	3.8	3.0	4.6	6.8	4.3	5.0	5.8	2.7	6.2	9.5	8.6	8.1	7.6	4.2	2.7	5.5	3.3	2.7	2.8	2.8	9.5	4.6
16	3.1	4.4	10.1	5.8	5.3	10.3	5.3	9.3	14.5	9.8	7.4	5.4	9.0	6.1	7.5	9.7	15.7	11.1	9.2	12.3	8.2	4.1	3.4	5.7	15.7	8.0
17	5.7	6.4	5.5	6.4	8.0	8.0	8.6	11.0	10.4	13.6	13.7	9.4	5.6	5.2	4.6	14.5	5.6	5.7	5.9	6.0	7.2	8.8	7.6	8.3	14.5	8.0
18	9.0	11.1	13.0	16.9	10.9	9.0	6.0	6.7	10.4	10.1	9.0	9.5	9.7	12.1	10.8	9.0	9.5	8.2	4.5	5.3	6.7	6.7	6.0	6.0	16.9	9.0
19	6.2	6.3	7.9	9.6	9.1	7.9	8.5	10.0	13.0	6.1	5.8	6.1	9.2	15.0	13.5	13.4	12.3	11.1	11.5	12.8	13.4	13.7	13.5	13.1	15.0	10.4
20	11.5	11.2	11.4	11.5	13.2	16.1	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
21	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
22	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
23	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
24	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
25	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
26	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
27	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
28	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
29	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
30	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
31	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
Hourly Max	13.6	15.3	13.0	16.9	13.2	16.1	15.0	15.6	15.9	16.6	20.8	36.0	28.9	46.3	32.8	25.5	23.9	15.4	18.5	38.3	21.6	23.0	13.6	13.1		
Hourly Average	5.2	5.8	6.2	6.1	5.6	6.2	6.1	7.0	8.4	8.0	9.0	9.9	9.6	10.6	9.8	9.5	10.7	7.5	7.5	9.9	7.9	6.4	5.6	4.6		

M = Maintenance PF = Pump Failure

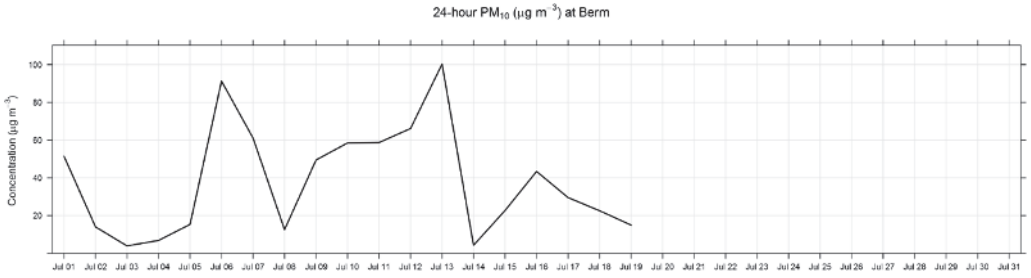


Number of 1HR Exceedances	0		Guideline	80	UG/M3
Number of 24HR Exceedances	0		Guideline	30	UG/M3
Number of Non-Zero Readings	461				
Maximum 1-HR Average	46.3	UG/M3			
Maximum 24-HR Average	15.4	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	461	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	62.0	%
Standard Deviation	6.1		Monthly Average	7.6	UG/M3

Berm PM_{10} (µg/m^3) – July 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	53.9	64.8	45.7	31.1	6.8	1.1	1.7	30.0	59.7	63.3	116.5	106.0	151.5	59.1	45.4	13.3	67.3	50.5	84.6	72.4	49.3	20.2	37.1	3.6	151.5	51.5
2	2.5	1.6	1.9	3.4	2.7	1.7	3.4	3.8	2.6	1.8	5.4	5.4	20.8	8.3	5.3	22.6	155.1	74.3	1.7	3.3	1.5	3.1	1.6	2.4	155.1	14.0
3	3.3	1.9	2.3	2.2	1.3	2.0	2.3	2.7	2.1	2.6	2.6	5.8	1.8	21.8	8.2	2.9	2.7	1.5	2.2	6.6	2.7	2.0	6.8	3.9	21.8	3.9
4	4.7	4.9	4.6	4.0	3.7	4.0	3.6	5.4	8.8	6.0	8.6	32.8	5.0	14.8	4.8	6.0	3.4	4.5	3.1	4.0	3.7	6.9	9.9	6.8	32.8	6.8
5	4.6	4.4	4.5	7.0	7.9	7.7	8.4	9.9	19.4	23.4	31.2	35.5	42.6	22.9	13.8	8.0	17.5	12.5	9.9	10.2	15.8	26.3	15.1	9.6	42.6	15.3
6	10.3	10.9	16.5	12.0	14.3	11.8	13.0	49.0	58.6	46.8	80.9	84.4	275.6	371.7	251.7	185.6	147.1	26.5	81.8	115.0	111.7	147.9	56.1	10.9	371.7	91.3
7	56.7	78.6	38.2	11.2	9.3	8.4	39.9	5.9	14.2	20.1	164.7	288.9	130.6	144.6	116.6	49.4	87.3	35.8	36.0	28.5	24.4	47.8	13.9	15.7	288.9	61.1
8	12.4	16.6	7.7	5.5	4.9	2.1	16.2	4.3	3.3	16.8	19.4	20.0	15.2	24.0	35.8	10.5	20.7	8.8	20.7	17.9	7.0	3.5	3.8	4.8	35.8	12.6
9	5.7	4.1	12.3	17.3	19.1	49.6	61.1	73.6	82.7	122.2	53.6	59.1	82.5	29.6	50.4	77.6	140.0	71.7	36.1	70.2	47.0	8.4	5.5	8.0	140.0	49.5
10	8.3	20.5	34.7	40.5	47.4	35.6	67.2	79.9	52.4	60.6	35.4	110.2	20.1	49.1	100.0	103.5	70.2	72.4	120.4	52.1	66.2	55.0	70.5	31.8	120.4	58.5
11	27.2	41.9	15.9	13.2	4.6	7.1	3.2	7.3	7.9	46.9	56.1	93.4	97.2	110.1	98.9	77.2	99.3	98.9	92.9	141.2	149.6	52.3	49.4	17.2	149.6	58.7
12	19.7	16.1	14.5	10.1	8.9	7.4	8.9	20.2	77.2	48.3	44.4	95.6	92.3	**M**	99.7	158.1	153.9	108.6	158.1	222.4	90.3	45.5	11.3	10.6	222.4	66.2
13	13.6	14.0	42.5	36.7	22.3	60.7	47.6	35.0	107.6	95.6	116.9	108.1	183.0	181.6	211.9	198.6	132.4	129.4	129.9	351.9	143.6	26.7	9.3	7.9	351.9	100.3
14	8.4	2.9	3.2	2.2	2.0	1.1	1.0	4.4	10.3	6.3	2.4	2.0	3.2	3.5	3.6	4.2	3.4	3.1	2.9	3.5	4.3	4.4	9.3	11.7	11.7	4.3
15	5.4	3.3	3.4	8.2	10.1	7.2	13.8	31.5	19.1	21.6	34.7	8.4	44.6	73.5	63.9	55.2	51.2	22.2	10.6	31.0	11.1	5.2	5.2	5.3	73.5	22.7
16	5.9	11.3	37.0	15.5	9.5	36.3	10.7	44.5	105.7	55.7	44.2	30.4	57.9	44.0	43.3	65.1	117.3	79.8	67.7	97.8	31.1	10.7	5.6	14.7	117.3	43.4
17	11.9	10.8	7.7	11.0	16.2	14.6	13.9	31.3	29.7	70.3	83.3	46.4	22.0	23.2	20.7	89.6	29.1	26.3	24.4	22.4	28.8	37.9	18.6	18.8	89.6	29.5
18	19.4	28.9	32.1	47.6	33.6	57.6	18.8	18.0	21.8	21.3	20.1	27.0	29.1	39.3	22.1	16.5	15.6	17.6	8.4	8.1	12.7	11.3	7.6	7.5	57.6	22.6
19	7.9	8.0	10.5	12.5	11.8	9.6	11.0	14.2	27.8	8.9	11.5	14.4	19.0	24.0	18.1	17.4	16.1	15.1	16.7	17.3	16.6	17.5	16.9	16.6	27.8	15.0
20	14.8	14.5	15.3	15.5	18.3	22.6	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
21	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
22	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
23	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
24	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
25	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
26	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
27	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
28	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
29	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
30	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
31	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
Hourly Max	56.7	78.6	45.7	47.6	47.4	60.7	67.2	79.9	107.6	122.2	164.7	288.9	275.6	371.7	251.7	198.6	155.1	129.4	158.1	351.9	149.6	147.9	70.5	31.8		
Hourly Average	14.8	18.0	17.5	15.3	12.7	17.4	18.2	24.8	37.4	38.9	49.1	61.8	68.1	69.2	63.9	61.1	70.0	45.2	47.8	67.1	43.0	28.0	18.6	10.9		

M = Maintenance PF = Pump Failure

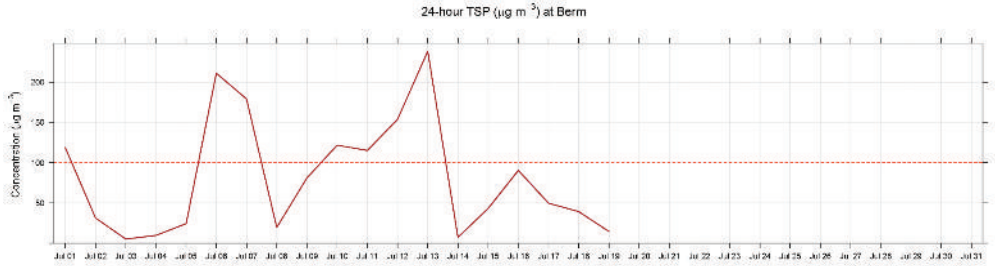


Number of 1HR Exceedances	n/a		Guideline	n/a	UG/M3
Number of Non-Zero Readings	461				
Maximum 1-HR Average	371.7	UG/M3			
Maximum 24-HR Average	100.3	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	461	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	62.0	%
Standard Deviation	49.9		Monthly Average	37.9	UG/M3

Berm TSP (µg/m^3) – July 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	132.0	151.1	115.2	88.9	14.7	1.2	3.1	85.0	165.9	138.0	220.1	227.1	283.9	110.3	105.8	25.5	187.5	143.5	223.4	153.0	134.9	36.0	93.1	6.0	283.9	118.5
2	2.7	1.1	1.9	7.2	6.9	1.3	3.4	3.4	2.1	1.4	4.8	10.6	67.3	22.4	14.3	61.9	334.9	194.1	1.2	2.8	1.1	2.8	1.3	2.0	334.9	31.4
3	3.1	1.6	1.9	1.7	0.9	1.7	2.0	2.7	2.0	2.6	2.6	6.5	1.7	53.2	11.4	3.4	3.6	1.2	2.6	7.7	1.8	1.5	4.7	3.3	53.2	5.2
4	4.1	4.7	4.4	3.5	3.0	3.1	2.8	5.6	9.8	6.6	13.0	70.2	6.7	31.4	6.1	9.1	7.6	5.9	2.7	4.3	3.6	5.7	9.0	10.2	70.2	9.7
5	3.3	3.1	3.1	6.2	6.5	6.4	6.6	8.7	33.1	31.4	62.4	62.3	82.9	44.0	25.5	18.2	32.9	27.2	19.7	16.2	19.8	36.0	18.4	9.8	82.9	24.3
6	8.1	9.5	18.2	10.1	13.1	8.4	9.7	97.6	117.5	79.1	136.7	160.1	761.4	926.9	595.8	430.3	372.2	51.8	221.1	223.4	275.5	394.6	123.7	21.1	926.9	211.1
7	111.1	196.0	128.6	31.1	18.3	14.8	60.9	10.0	28.3	46.1	479.3	921.9	418.3	436.3	362.0	151.9	283.5	113.4	115.5	85.4	77.6	139.7	34.6	35.5	921.9	179.2
8	23.8	15.7	7.5	13.4	9.2	1.4	12.8	5.3	9.6	22.2	25.8	24.3	27.1	43.7	73.4	14.3	37.3	14.5	35.4	28.1	9.8	6.2	3.8	5.5	73.4	19.6
9	5.0	3.9	9.8	12.4	16.5	43.9	65.7	102.2	143.0	208.9	99.9	111.1	147.9	53.6	91.3	134.4	257.4	145.2	75.7	133.8	60.0	10.1	6.2	7.9	257.4	81.1
10	9.6	17.4	27.1	42.5	44.5	34.7	75.6	149.8	103.3	130.0	66.6	294.8	39.7	116.4	226.5	213.8	169.3	203.9	337.3	107.9	104.8	142.0	194.0	70.0	337.3	121.7
11	45.1	90.5	25.0	10.8	4.5	7.9	2.3	9.8	8.6	84.2	114.8	204.1	252.9	242.5	201.3	148.0	203.1	207.9	195.8	263.9	250.6	89.5	70.8	30.5	263.9	115.2
12	21.9	16.9	18.1	11.3	11.8	8.7	10.0	33.0	152.6	90.8	76.9	211.4	197.8	**M**	266.3	515.9	461.4	276.4	436.1	492.7	160.2	41.2	14.2	12.0	515.9	153.8
13	16.7	32.7	40.1	46.5	20.3	47.8	40.8	62.3	254.3	168.1	232.2	184.8	436.7	444.1	496.8	502.3	325.5	382.9	307.0	981.9	512.7	131.1	28.3	24.2	981.9	238.3
14	21.7	1.9	2.1	1.4	6.7	0.8	0.7	4.9	10.8	5.5	6.4	3.2	7.3	5.2	8.8	8.9	7.6	4.6	8.6	7.7	14.8	6.9	13.7	16.7	21.7	7.4
15	7.3	5.0	4.2	7.9	19.1	10.9	13.3	64.4	44.0	42.1	86.5	18.6	103.0	123.6	110.7	115.7	112.7	43.0	19.2	53.1	12.7	8.9	5.7	5.4	123.6	43.2
16	5.0	9.8	34.7	17.7	9.4	35.3	11.6	112.6	247.1	113.9	102.2	68.2	124.7	109.3	98.5	145.3	254.0	217.1	168.5	224.6	29.2	12.1	6.7	13.3	254.0	90.4
17	12.9	11.2	5.7	10.9	14.2	13.0	15.3	62.8	43.7	142.6	166.7	76.1	37.0	34.2	29.6	193.6	52.0	61.1	45.7	29.2	42.0	48.0	22.0	23.2	193.6	49.7
18	25.7	35.4	37.6	61.9	76.4	185.7	42.6	48.1	30.0	27.6	33.2	49.5	49.3	75.7	24.2	19.3	18.6	38.4	18.7	7.5	15.4	11.3	5.1	4.9	185.7	39.3
19	5.3	5.3	7.8	8.5	7.9	6.3	7.7	13.1	49.2	13.6	21.7	23.1	30.9	18.3	12.1	11.6	12.7	13.8	15.0	16.1	10.9	15.3	12.1	10.9	49.2	14.6
20	9.8	9.6	10.4	11.0	13.4	16.5	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
21	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
22	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
23	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
24	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
25	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
26	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
27	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
28	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
29	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
30	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
31	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	**PF**	-	-
Hourly Max	132.0	196.0	128.6	88.9	76.4	185.7	75.6	149.8	254.3	208.9	479.3	921.9	761.4	926.9	595.8	515.9	461.4	382.9	436.1	981.9	512.7	394.6	194.0	70.0		
Hourly Average	23.7	31.1	25.2	20.2	15.9	22.5	20.4	46.4	76.6	71.3	102.7	143.6	161.9	160.6	145.3	143.3	164.9	112.9	118.4	149.4	91.4	59.9	35.1	16.4		

M = MAINTENANCE PF = PUMP FAILURE

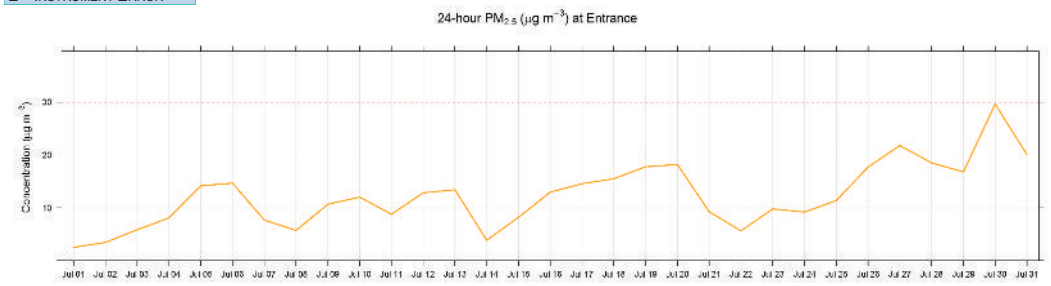


Number of 24HR Exceedances	7		Guideline	100	UG/M3
Number of Non-Zero Readings	461				
Maximum 1-HR Average	981.9	UG/M3			
Maximum 24-HR Average	238.3	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	461	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	62.0	%
Standard Deviation	131.0		Monthly Average	80.7	UG/M3

Entrance $PM_{2.5}$ (µg/m^3) – July 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	2.0	3.6	1.6	1.8	3.4	2.0	2.3	3.0	3.0	3.7	2.2	2.4	1.9	3.1	3.2	2.3	2.5	1.0	1.9	3.1	1.0	3.6	4.1	4.1	2.5
2	5.0	3.8	3.7	2.4	1.9	2.2	2.0	4.3	2.3	3.8	5.3	3.6	8.9	4.3	5.4	2.7	3.3	2.5	1.5	1.9	1.5	1.7	4.3	4.6	8.9	3.4
3	5.6	8.6	11.1	13.1	10.9	7.1	4.3	2.9	2.8	5.3	4.0	3.9	2.2	2.6	2.9	6.3	7.7	8.9	7.7	9.2	6.0	1.8	2.7	2.5	13.1	5.8
4	3.3	3.2	3.8	4.2	4.3	4.3	6.1	6.8	9.4	3.3	3.5	14.6	11.9	18.6	13.1	10.5	11.9	6.9	4.8	7.3	7.3	9.5	14.6	11.5	18.6	8.1
5	7.0	5.1	7.3	12.2	16.0	15.8	18.5	24.2	28.0	27.3	20.9	13.0	10.3	16.2	16.8	12.5	11.6	10.9	12.1	8.3	10.7	12.2	15.4	7.7	28.0	14.2
6	7.4	9.7	13.8	15.9	17.9	17.8	14.2	20.1	29.7	24.5	21.8	23.8	20.9	14.6	10.5	10.3	20.5	18.1	9.5	5.1	5.6	8.0	6.1	6.1	29.7	14.7
7	6.3	5.1	4.8	10.6	24.2	18.8	8.5	13.6	16.1	9.1	10.5	11.3	7.6	3.7	6.4	2.7	5.0	3.4	4.6	3.7	3.5	2.9	1.2	1.1	24.2	7.7
8	1.8	5.8	5.8	5.5	6.0	9.1	4.3	14.1	7.4	5.1	2.2	2.6	4.3	5.1	4.7	7.2	6.3	2.2	7.5	1.6	4.1	4.9	12.6	6.7	14.1	5.7
9	4.6	4.3	6.2	7.0	13.1	30.9	28.7	17.0	18.2	12.5	17.3	14.2	8.7	11.5	7.9	5.7	4.9	8.9	8.8	5.4	5.3	5.8	3.8	5.5	30.9	10.7
10	4.6	8.8	7.6	13.4	9.3	12.1	16.2	23.2	40.9	29.4	28.4	6.8	12.4	10.4	19.5	14.6	10.1	6.4	2.9	2.0	2.7	2.0	2.2	2.5	40.9	12.0
11	2.7	4.5	7.6	12.5	13.6	10.3	10.8	11.6	15.8	10.5	9.8	9.4	9.1	8.3	9.2	9.2	7.7	7.8	4.7	4.2	6.1	6.4	6.1	12.8	15.8	8.8
12	16.0	16.2	18.6	13.6	10.1	12.0	15.9	17.5	13.2	20.5	16.7	14.0	9.3	10.6	11.4	11.2	10.0	12.6	11.0	5.0	4.6	10.1	13.5	14.4	20.5	12.8
13	16.3	17.0	20.5	19.3	15.3	16.4	13.0	19.2	18.1	16.0	15.5	26.6	22.0	10.6	7.4	7.8	6.6	7.5	4.2	7.5	14.0	10.0	5.7	5.7	26.6	13.4
14	4.2	3.2	3.7	2.3	1.6	1.2	0.9	1.5	4.7	11.5	6.6	3.0	7.0	5.3	4.1	3.6	2.9	4.9	1.8	2.4	1.9	2.4	5.2	6.7	11.5	3.9
15	5.7	2.2	2.6	11.1	22.7	10.9	21.6	15.2	11.7	11.0	12.9	14.8	6.0	4.9	4.5	4.0	4.7	3.8	5.0	4.0	3.8	3.4	6.3	4.1	22.7	8.2
16	6.4	7.3	6.9	7.0	28.3	14.4	23.9	23.2	23.4	22.4	15.1	16.5	17.1	6.5	9.0	10.7	6.6	15.2	9.2	4.2	5.7	7.7	14.5	10.1	28.3	13.0
17	11.3	14.1	15.4	15.2	31.1	27.2	22.0	20.5	19.5	12.0	8.9	14.9	12.4	15.3	10.4	7.3	7.3	8.8	10.2	9.8	11.7	19.1	14.4	10.9	31.1	14.6
18	11.1	15.4	19.4	33.3	24.0	9.4	9.1	15.6	16.1	15.3	15.6	15.5	12.8	19.3	17.3	13.3	18.5	18.5	12.5	10.7	13.5	16.6	8.9	10.6	33.3	15.5
19	15.3	10.1	12.4	15.2	15.3	18.2	21.4	23.9	28.2	12.7	12.6	15.8	17.7	16.9	17.1	16.1	20.0	21.2	17.9	19.1	22.5	20.1	20.4	16.9	28.2	17.8
20	15.8	17.7	19.8	17.7	19.2	21.5	24.2	29.0	33.5	29.9	23.5	19.9	14.7	14.0	20.0	14.5	18.1	13.4	14.5	10.0	10.6	11.2	12.4	11.8	33.5	18.2
21	11.4	9.4	8.5	6.1	6.2	15.2	11.6	16.9	20.3	15.9	14.1	9.3	10.1	9.8	11.0	12.1	9.8	7.5	5.6	3.5	2.5	2.3	1.7	1.7	20.3	9.3
22	1.7	2.7	1.9	2.1	11.4	13.5	7.1	4.7	9.7	10.2	6.7	4.0	3.9	2.5	3.4	2.9	2.8	3.8	5.7	4.7	4.8	5.9	9.8	9.3	13.5	5.6
23	11.3	7.2	7.5	8.1	9.5	15.2	16.4	11.2	10.5	13.6	11.0	10.7	12.4	8.9	12.3	10.5	5.7	7.4	9.1	8.7	6.6	7.0	7.4	6.7	16.4	9.8
24	8.6	6.9	7.7	7.9	6.9	6.1	7.5	9.0	15.2	13.0	15.8	12.3	15.9	14.8	13.3	11.5	5.8	4.3	1.4	4.6	8.7	9.7	7.1	7.1	15.9	9.2
25	7.1	10.0	9.6	8.3	9.4	12.3	11.5	12.4	14.5	10.5	11.4	11.3	12.5	13.9	11.0	12.8	10.7	15.2	10.4	15.0	13.8	10.4	8.5	10.4	15.2	11.4
26	10.8	14.2	14.4	13.2	18.7	16.0	16.3	17.8	22.9	17.3	15.4	19.7	22.5	21.3	23.0	21.5	20.7	18.4	13.0	14.7	15.0	17.3	18.7	22.3	23.0	17.7
27	20.8	20.9	18.9	21.7	19.6	19.6	21.8	22.8	25.4	23.3	26.8	30.9	28.4	22.3	19.8	18.2	22.3	22.9	17.9	19.6	21.0	17.7	21.0	19.3	30.9	21.8
28	23.8	23.7	22.4	25.6	25.4	28.7	25.2	27.4	25.0	23.9	20.8	26.0	16.4	14.0	13.9	12.6	13.4	13.7	12.7	10.3	9.0	9.2	9.5	11.5	28.7	18.5
29	13.3	18.8	21.2	23.0	21.3	17.7	17.9	20.2	23.1	20.5	15.7	11.8	11.4	14.7	11.1	10.7	11.5	16.8	13.1	13.2	15.2	22.2	19.4	19.8	23.1	16.8
30	21.9	27.7	28.4	30.5	33.4	33.6	52.1	85.2	61.6	51.9	36.8	31.7	25.8	**E**	13.7	12.6	17.3	18.2	22.7	20.3	14.0	12.4	12.0	17.7	85.2	29.6
31	15.1	16.1	15.3	17.3	20.5	23.1	20.6	19.9	21.1	19.3	21.0	22.6	20.6	18.8	19.2	22.0	24.0	20.3	22.0	19.9	18.9	18.5	19.0	27.0	27.0	20.1
Hourly Max	23.8	27.7	28.4	33.3	33.4	33.6	52.1	85.2	61.6	51.9	36.8	31.7	28.4	22.3	23.0	22.0	24.0	22.9	22.7	20.3	22.5	22.2	21.0	27.0		
Hourly Average	9.6	10.4	11.3	12.8	15.1	15.0	15.3	17.8	19.1	16.3	14.5	14.1	12.8	11.4	11.4	10.4	10.6	10.7	9.2	8.3	8.8	9.3	9.9	10.0		

E = INSTRUMENT ERROR

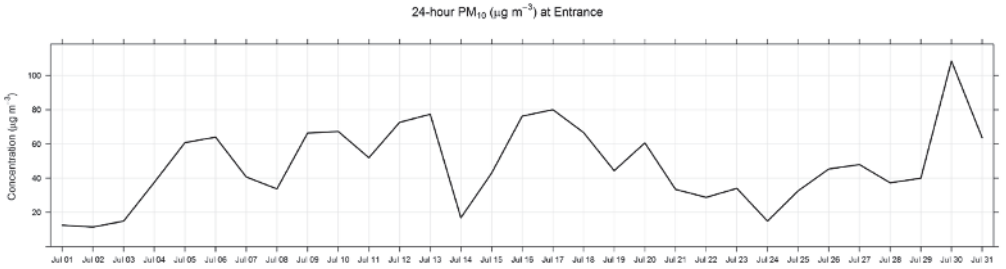


Number of1HR Exceedances	1		Guideline	80	UG/M3
Number of 24HR Exceedances	0		Guideline	30	UG/M3
Number of Non-Zero Readings	743				
Maximum 1-HR Average	85.2	UG/M3			
Maximum 24-HR Average	29.6	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	743	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	99.9	%
Standard Deviation	8.3		Monthly Average	12.3	UG/M3

Entrance PM_{10} (µg/m^3) – July 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	6.5	21.7	8.4	3.2	16.7	9.2	12.7	20.5	18.4	22.6	14.7	19.0	12.1	15.7	9.6	17.5	10.6	4.3	8.9	14.6	2.2	12.1	15.0	22.6	12.5
2	22.9	17.7	17.5	12.5	3.4	3.1	2.9	6.2	3.2	7.0	9.9	9.7	38.2	26.4	27.0	11.0	21.2	11.8	2.0	2.7	2.0	2.4	6.4	6.8	38.2	11.4
3	8.4	12.9	16.6	19.7	16.4	10.6	6.4	4.2	4.2	7.9	6.0	5.7	4.4	11.2	13.2	29.1	21.1	34.9	40.2	46.0	27.9	2.4	3.7	3.6	46.0	14.9
4	4.8	4.8	5.6	6.2	6.3	6.4	9.0	10.1	14.0	4.8	8.5	119.3	89.3	135.7	80.7	77.8	73.1	36.1	22.4	31.0	33.9	37.3	66.3	17.1	135.7	37.5
5	10.2	7.2	10.7	18.3	23.9	23.6	27.7	36.4	88.6	140.4	127.0	69.2	52.5	112.6	131.5	78.5	79.0	71.7	87.0	48.0	58.7	61.2	68.5	25.5	140.4	60.7
6	13.9	14.5	20.6	23.6	26.7	26.5	21.5	71.0	111.5	78.1	103.4	144.9	214.0	116.1	66.1	63.0	146.8	110.6	64.3	19.0	16.1	37.0	12.8	12.7	214.0	63.9
7	14.3	9.1	8.2	46.8	136.4	107.7	32.1	70.3	79.9	42.6	70.5	93.3	51.6	23.2	37.0	17.4	25.0	16.2	25.0	23.8	21.0	16.8	5.4	3.1	136.4	40.7
8	5.7	31.3	36.2	32.2	36.5	58.4	23.7	84.6	45.3	27.8	10.0	12.9	22.3	37.8	29.1	48.3	39.1	11.8	46.3	9.4	21.6	29.3	81.9	27.1	84.6	33.7
9	20.3	12.3	24.9	38.4	80.6	241.2	178.5	98.8	107.4	60.5	91.0	80.8	60.2	90.3	58.5	41.4	34.8	65.5	66.9	33.5	37.6	31.9	15.7	21.5	241.2	66.4
10	15.8	46.6	22.3	56.4	36.4	47.7	78.6	130.1	276.6	190.2	177.6	34.5	54.1	55.8	144.2	103.2	70.1	34.8	11.6	6.2	9.2	3.7	3.7	5.9	276.6	67.3
11	6.7	17.3	43.8	89.4	81.4	50.5	52.0	63.0	95.1	65.9	67.4	65.2	64.0	64.4	65.0	66.6	50.7	52.5	23.9	19.6	25.9	22.9	18.4	74.6	95.1	51.9
12	86.5	97.5	103.6	70.1	39.6	48.1	67.1	83.8	56.9	107.4	86.7	116.1	69.2	75.3	82.4	72.7	61.5	84.6	70.8	21.8	19.0	64.5	78.8	78.3	116.1	72.6
13	90.8	97.9	104.1	102.1	67.1	64.7	45.2	97.9	94.1	91.5	83.2	192.2	168.1	88.6	54.0	51.0	42.2	43.3	24.0	64.2	129.0	36.6	12.4	12.7	192.2	77.4
14	9.5	3.6	4.5	2.6	3.0	1.6	1.1	3.6	22.4	75.0	43.9	15.2	41.1	25.8	16.6	18.8	10.4	29.2	6.4	12.1	7.3	8.0	24.7	17.8	75.0	16.9
15	18.5	5.8	4.7	46.0	164.5	50.3	121.8	75.4	57.3	51.0	65.8	94.9	35.1	32.8	29.8	20.7	23.1	19.3	30.6	18.5	19.7	9.5	23.3	11.1	164.5	42.9
16	26.9	32.5	18.8	17.0	191.4	68.0	144.7	142.8	142.9	146.6	75.4	100.1	123.1	34.9	58.3	89.8	37.5	110.9	54.1	23.3	34.4	42.1	74.1	40.6	191.4	76.3
17	44.9	87.0	106.2	99.6	183.3	142.0	124.8	99.0	97.1	41.5	30.9	82.3	72.9	101.4	65.0	46.6	45.1	63.5	59.0	56.3	58.5	115.2	67.9	30.3	183.3	80.0
18	30.0	58.8	74.9	239.3	136.1	51.6	47.8	84.2	62.1	54.8	65.7	66.0	60.9	79.2	53.5	29.5	63.2	89.0	59.5	47.9	51.0	68.5	12.2	14.8	239.3	66.7
19	22.9	15.1	17.6	21.1	21.7	26.1	31.4	56.9	107.3	48.9	61.5	91.6	76.8	23.6	23.2	20.8	47.3	87.4	50.0	49.7	57.8	47.8	36.3	21.7	107.3	44.4
20	20.8	24.4	28.3	26.1	28.5	30.6	35.1	43.4	124.8	98.7	135.0	145.7	91.5	84.8	116.5	66.6	87.5	58.8	64.4	32.4	30.8	23.5	32.1	24.1	145.7	60.6
21	16.0	13.7	11.4	8.0	8.4	22.1	17.0	65.8	123.3	78.2	74.7	29.4	33.6	33.2	53.8	64.9	50.7	33.2	25.3	13.9	8.8	8.5	4.1	4.4	123.3	33.4
22	3.0	8.9	6.4	9.9	73.4	80.7	45.8	26.5	61.7	75.1	39.1	19.0	23.9	9.8	17.9	13.3	12.1	18.9	25.2	12.9	12.7	19.3	38.6	35.9	80.7	28.8
23	42.5	10.7	11.1	11.8	14.1	22.8	24.5	34.0	38.1	58.7	47.1	45.0	61.0	42.7	64.6	52.7	29.2	37.5	46.7	41.1	25.9	26.8	19.8	7.8	64.6	34.0
24	11.7	8.0	8.7	9.3	8.4	6.9	9.5	11.8	22.6	18.9	39.1	29.3	33.8	41.6	17.2	13.6	6.3	6.0	1.8	6.3	12.7	14.0	10.1	9.4	41.6	14.9
25	9.6	14.5	13.5	11.1	13.6	18.3	16.9	18.2	30.5	27.0	35.1	38.5	54.3	58.9	40.8	57.0	46.5	78.9	37.1	67.9	39.9	20.7	16.4	16.9	78.9	32.6
26	14.1	17.1	19.6	17.5	27.9	23.1	23.7	33.2	100.6	52.0	39.6	90.0	90.7	67.1	83.3	76.6	90.8	58.6	28.7	33.0	28.6	21.4	22.5	29.1	100.6	45.4
27	29.9	30.2	24.9	30.2	26.7	26.2	31.0	32.8	60.1	50.1	84.4	105.6	99.4	60.0	60.8	33.4	63.0	80.4	43.3	36.7	50.5	22.6	40.0	28.0	105.6	47.9
28	33.7	29.5	30.4	37.7	36.8	42.6	36.9	54.4	63.6	45.1	36.7	109.0	49.2	33.6	34.3	29.3	36.6	47.3	29.8	22.1	12.7	13.3	13.4	16.5	109.0	37.3
29	18.6	28.1	31.8	34.5	31.9	26.4	26.8	57.1	96.4	65.5	39.7	33.0	44.0	66.6	31.2	28.9	26.7	56.5	30.8	28.9	34.1	66.7	26.3	28.2	96.4	39.9
30	42.0	63.8	60.6	77.2	83.2	65.4	224.6	406.3	328.9	206.5	120.2	102.5	127.4	**E**	50.1	46.9	103.9	78.7	104.9	68.5	30.8	25.5	20.2	54.8	406.3	108.4
31	36.4	30.0	25.8	26.4	29.5	52.9	30.3	39.7	46.6	39.9	75.3	100.3	97.5	101.9	85.4	104.0	126.3	94.6	97.7	77.4	59.4	39.8	35.4	76.1	126.3	63.7
Hourly Max	90.8	97.9	106.2	239.3	191.4	241.2	224.6	406.3	328.9	206.5	177.6	192.2	214.0	135.7	144.2	104.0	146.8	110.9	104.9	77.4	129.0	115.2	81.9	78.3		
Hourly Average	23.7	27.7	30.2	40.3	52.9	47.2	49.9	66.3	83.3	67.0	63.6	72.8	68.5	58.3	55.1	47.8	51.2	52.7	41.4	31.7	32.0	30.4	29.1	24.9		

E = INSTRUMENT ERROR

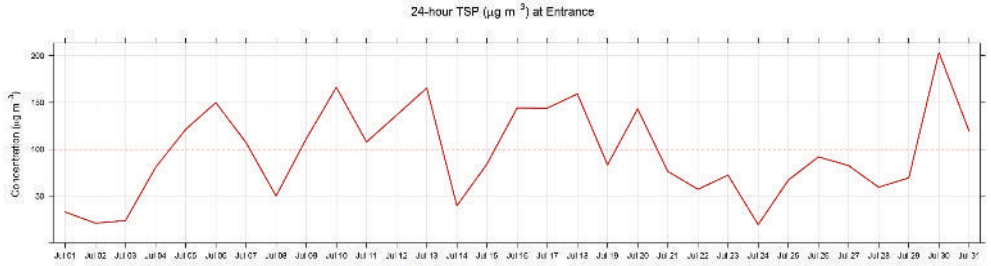


Number of 1HR Exceedances	n/a		Guideline	n/a	UG/M3
Number of Non-Zero Readings	743				
Maximum 1-HR Average	406.3	UG/M3			
Maximum 24-HR Average	108.4	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	743	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	99.9	%
Standard Deviation	43.1		Monthly Average	47.8	UG/M3

Entrance TSP (µg/m^3) – July 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	5.0	12.0	38.7	22.4	6.0	32.2	15.5	31.5	56.7	44.8	53.2	46.8	72.7	52.3	59.7	22.7	61.4	29.1	12.8	15.3	45.4	2.8	22.6	27.6	72.7	32.9
2	39.0	26.6	24.3	22.9	5.6	2.8	2.6	6.1	2.5	10.8	13.1	18.5	69.7	50.1	54.0	27.7	72.2	33.4	1.5	2.2	1.6	2.0	7.1	7.3	72.2	21.0
3	9.0	14.6	18.9	22.6	18.6	12.0	6.8	3.9	4.2	7.8	5.5	5.3	7.2	33.7	27.1	71.2	44.9	73.2	68.5	62.6	42.2	2.1	3.0	3.3	73.2	23.7
4	5.1	4.8	5.6	6.5	6.6	6.7	9.9	11.1	15.7	5.1	12.8	300.3	254.9	272.9	173.1	224.4	183.0	94.0	45.1	50.0	52.9	68.4	105.3	17.8	300.3	80.5
5	9.0	5.9	10.5	19.3	25.4	24.3	29.7	42.3	159.9	237.4	254.2	127.1	88.6	278.6	375.7	216.6	182.9	186.4	178.5	107.8	130.7	99.5	89.3	30.2	375.7	121.2
6	14.4	13.6	19.7	22.4	26.9	25.9	19.7	161.5	218.4	129.3	193.5	275.8	684.7	335.8	182.4	181.5	390.7	242.5	183.1	41.8	33.8	140.7	34.7	21.9	684.7	149.8
7	44.0	24.8	21.7	112.9	245.7	251.8	77.9	124.4	159.2	105.2	238.5	372.3	189.5	77.1	95.2	53.3	78.4	36.3	57.5	74.4	61.2	49.3	15.5	7.9	372.3	107.3
8	5.9	40.0	63.7	37.9	36.9	71.5	36.9	148.0	84.5	34.5	23.5	26.0	33.3	69.2	52.1	69.9	61.5	16.2	58.9	14.9	23.9	48.4	88.0	54.6	148.0	50.0
9	25.7	9.3	33.2	84.5	121.1	334.7	323.2	176.9	208.4	97.1	154.5	134.5	102.9	162.4	128.1	77.5	65.8	123.7	105.3	52.0	54.6	44.8	18.9	28.4	334.7	111.2
10	33.4	55.0	31.8	93.7	64.0	94.1	147.7	282.9	594.9	524.6	497.0	109.8	129.3	155.3	413.0	300.3	263.7	99.2	36.8	19.2	19.6	5.3	6.7	10.1	594.9	166.1
11	14.8	25.3	70.7	228.3	133.8	86.8	79.7	123.6	213.4	152.1	142.6	137.8	137.6	162.7	162.8	162.9	117.7	116.0	51.9	53.4	50.8	36.7	24.8	98.5	228.3	107.7
12	130.5	194.7	215.7	121.0	51.2	83.6	108.3	138.9	91.9	182.6	174.7	270.9	142.7	162.0	175.2	201.1	157.0	183.6	151.7	38.5	34.8	91.5	91.7	79.9	270.9	136.4
13	121.6	177.4	156.5	156.8	119.9	99.2	69.4	166.5	140.5	156.6	137.4	347.0	415.1	220.7	141.6	108.5	87.8	101.5	64.8	184.2	535.4	188.0	31.7	40.0	535.4	165.3
14	23.8	2.5	3.3	1.8	5.5	1.2	0.8	8.0	49.2	164.8	112.4	31.9	128.3	66.0	30.7	62.8	25.9	67.0	13.2	39.6	18.3	24.9	41.5	26.3	164.8	39.6
15	31.9	6.3	5.7	99.0	411.2	85.8	223.9	150.2	119.1	95.0	114.0	150.8	76.2	66.0	58.3	34.6	41.5	30.9	71.2	35.9	37.9	22.3	30.9	21.3	411.2	84.2
16	35.2	48.5	22.1	31.2	268.0	102.6	331.7	310.0	305.5	329.3	135.3	173.4	262.9	66.2	112.1	206.7	83.7	238.6	97.3	46.6	60.6	58.8	83.6	47.6	331.7	144.1
17	64.3	155.6	182.5	165.2	273.9	216.8	281.5	186.4	196.5	69.2	45.1	132.2	128.7	185.9	126.4	117.5	111.0	199.8	112.6	111.0	106.2	154.3	88.8	41.8	281.5	143.9
18	52.5	95.4	173.2	667.3	300.6	151.5	153.9	201.5	124.3	102.0	167.1	174.0	141.1	187.1	126.6	46.1	126.2	295.1	199.7	112.1	87.9	109.9	9.8	12.7	667.3	159.1
19	22.7	11.9	14.3	16.6	17.0	22.0	28.7	101.5	238.0	95.9	151.6	226.0	181.4	16.2	15.4	14.0	112.2	283.0	110.8	104.0	85.0	74.7	41.6	14.6	283.0	83.3
20	14.9	20.3	25.6	21.4	24.4	22.1	28.2	48.7	217.7	151.5	382.5	509.0	320.9	385.2	360.1	185.3	220.3	107.3	132.4	60.4	56.5	37.6	47.4	52.5	509.0	143.0
21	14.6	26.3	13.5	19.4	8.3	22.3	16.8	96.3	285.0	157.0	248.0	78.4	69.0	71.6	140.7	165.1	151.9	90.4	62.1	44.1	23.7	13.3	7.5	5.6	285.0	76.3
22	4.1	11.4	37.1	20.1	113.1	141.1	96.7	49.6	120.2	193.0	52.6	35.9	58.2	19.8	43.3	28.3	31.4	51.4	74.9	31.8	34.3	32.4	45.2	46.5	193.0	57.2
23	58.0	9.9	9.6	10.0	12.6	22.9	24.9	41.8	58.8	123.0	139.2	117.4	139.7	107.6	163.0	192.3	105.8	96.0	84.0	82.8	43.7	45.8	38.2	5.2	192.3	72.2
24	8.5	5.2	5.7	6.1	5.7	4.5	6.5	8.4	21.9	17.3	76.7	62.3	60.9	93.1	13.4	9.2	4.2	5.5	1.3	6.0	12.9	13.6	8.3	7.0	93.1	19.3
25	7.0	12.4	11.0	8.4	11.4	18.0	15.1	16.5	45.2	37.0	58.3	91.2	144.8	150.9	117.7	128.6	136.0	211.8	75.1	128.8	59.2	32.3	62.2	28.6	211.8	67.0
26	13.6	11.9	16.4	13.4	23.7	19.9	19.8	49.2	208.5	83.0	68.0	155.8	161.6	170.4	195.9	214.3	360.2	213.4	80.6	34.1	29.8	17.6	17.8	24.0	360.2	91.8
27	23.9	24.3	17.4	24.7	19.8	18.8	24.3	28.3	133.4	90.7	137.9	258.3	235.1	145.4	163.3	59.8	136.8	172.9	65.7	51.9	56.7	17.8	45.9	27.9	258.3	82.5
28	26.2	20.0	23.4	34.1	32.5	39.6	32.3	85.3	130.7	57.6	42.3	221.8	104.9	62.4	64.5	66.1	79.4	147.8	46.7	61.3	10.7	11.1	10.0	12.8	221.8	59.3
29	15.3	28.8	33.5	36.9	34.6	26.2	27.1	120.6	299.7	102.4	55.6	54.1	92.6	147.6	58.3	49.0	56.2	130.7	68.4	46.5	48.6	83.3	20.3	29.8	299.7	69.4
30	38.3	56.2	80.5	108.9	89.9	91.0	471.8	663.5	638.7	334.5	244.5	141.9	269.3	**E**	95.6	75.6	415.0	182.2	201.5	261.3	71.0	62.3	27.2	56.6	663.5	203.4
31	38.6	44.8	36.0	25.6	27.6	50.7	28.0	51.2	63.4	48.3	132.4	215.1	266.1	281.9	234.4	226.2	266.5	239.5	208.4	123.6	89.6	43.4	43.8	78.7	281.9	119.3
Hourly Max	130.5	194.7	215.7	667.3	411.2	334.7	471.8	663.5	638.7	524.6	497.0	509.0	684.7	385.2	413.0	300.3	415.0	295.1	208.4	261.3	535.4	188.0	105.3	98.5		
Hourly Average	30.7	38.6	45.9	72.9	82.0	70.4	88.4	117.2	167.9	127.1	137.6	161.3	166.8	141.9	134.2	116.1	136.5	132.2	87.8	67.7	65.1	52.7	39.0	31.2		

E = INSTRUMENT ERROR



Number of 24HR Exceedances	14		Guideline	100	UG/M3
Number of Non-Zero Readings	743				
Maximum 1-HR Average	684.7	UG/M3			
Maximum 24-HR Average	203.4	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	743	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	99.9	%
Standard Deviation	102.2		Monthly Average	96.2	UG/M3

MetOne BAM $PM_{2.5}$ Calibration

AIR QUALITY MONITORING

STATION:	Lafarge	OPERATOR:	Darrin Pike
LOCATION:	Exshaw - Lagoon	DATE:	July 12, 2018
START TIME (MST):	10:00	END TIME (MST):	10:25

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM2.5	Audit Device S/N	624
Serial Number	T19087	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)
	Audit values (I)	20.4	654	0.00	16.7	10:25
As Found Data	MEASURED (AF)	20.8	654	0.30	17.01	10:24
	AF Difference (AF-I)	0.4	0	0.30	0.31	0:01
Adjusted Data	MEASURED (M)	20.4	654	0.30	16.67	10:25
	Adj Difference (M-I)	0.0	0	0.30	-0.03	0:00
	LIMITS	**± 4.0 ^{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: 3/4 roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed self test - all passed

MetOne BAM PM_{10} Calibration

AIR QUALITY MONITORING

STATION:	Lafarge	OPERATOR:	Darrin Pike
LOCATION:	Exshaw - Lagoon	DATE:	July 12, 2018
START TIME (MST):	10:25	END TIME (MST):	10:45

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	PM10	Audit Device S/N	624
Serial Number	A3315	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)
	Audit values (I)	20.8	654	0.00	16.7	10:40
As Found Data	MEASURED (AF)	20.8	654	0.40	16.80	10:39
	AF Difference (AF-I)	0	0	0.40	0.10	0:01
Adjusted Data	MEASURED (M)	20.8	654	0.40	16.70	10:40
	Adj Difference (M-I)	0.0	0	0.40	0.00	0:00
	LIMITS	**± 4.0 ^{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: 1/2 roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed self tests - all passed

MetOne BAM TSP Calibration

AIR QUALITY MONITORING

STATION:	Lafarge	OPERATOR:	Darrin Pike
LOCATION:	Exshaw - Lagoon	DATE:	July 12, 2018
START TIME (MST):	10:45	END TIME (MST):	11:55

MONITOR INFO / PARAMETER VALUES:

Make/Model	MetOne BAM	Audit Device Model	Delta Cal
Configuration	TSP	Audit Device S/N	624
Serial Number	A3589	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)
	Audit values (I)	20.7	653	0.00	16.7	10:50
As Found Data	MEASURED (AF)	20.9	653	0.70	16.60	10:49
	AF Difference (AF-I)	0.2	0	0.70	-0.10	0:01
Adjusted Data	MEASURED (M)	20.7	653	0.70	16.71	10:50
	Adj Difference (M-I)	0.0	0	0.70	0.01	0:00
	LIMITS	**± 4.0 ^{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

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 20, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	9:05		End Time (MST)	13:20	
Barometric Pressure	654	mmHg	Station Temperature	23.1	Deg C
Calibrator	SABIO		Serial Number	7201211	
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	0.993336	0.996712	0.996303
	Data Offset	0.122430	2.677736	2.642271
After	Data Slope	0.992219	0.995135	0.999077
	Data Offset	0.546812	2.547983	2.023977
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	0.962		0.948	
NO Offset	-0.6	mV	-0.6	mV
NOX Slope	0.964		0.954	
NOX Offset	0.6	mV	0.6	mV
HVPS	771.0	V	771.0	V
Moly Temp	316.8	degC	316.5	degC
O3 Flow	81.0	ccm	81.0	ccm
RxCell Press	4.5	inHg	4.3	inHg
Sample press	23.8	inHg	23.9	inHg
Sample flow	438	ccm	439	ccm

Notes: Adjusted span

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date: July 10, 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	-1.5	-1.2	-1.6	N/A	N/A
1	5000	39.00	398.6	397.8	0.8	398.8	396.8	0.8	0.9995	1.0025
2	5000	20.00	205.2	204.8	0.4	202.3	201.8	-0.3	1.0140	1.0149
3	7000	14.00	102.8	102.6	0.2	100.2	100.3	-1.5	1.0264	1.0227
AFZ	5000	0	0.0	0.0	0.0	-1.5	-1.2	-1.6	0.0000	0.0000
AFS	5000	39	398.6	397.8	0.8	401.8	400.8	0.1	0.9919	0.9927
							Average Correction Factor		1.0133	1.0133

As Found Concentrations: NO_X= 406.0 NO= 404.6 As Found Percent Change NO_X= 1.9% NO= 1.7%

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	-1.2	-1.2	0.0	-1.5	-1.2	-1.6	N/A	N/A	N/A	N/A
NO point	394.8	394.8	0.0	397.2	394.8	1.2	0.9940	1.0000	N/A	N/A
0.67V	394.8	118.2	276.6	396.8	118.2	277.5	0.9950	1.0000	0.9968	100.3%
0.47V	394.8	219.2	175.6	397.4	219.2	177.0	0.9935	1.0000	0.9920	100.8%
0.28V	394.8	320.4	74.4	397.3	320.4	75.7	0.9936	1.0000	0.9834	101.7%
					Average Correction Factor		0.9940	1.0000	0.9907	100.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	1.4	-1.5	1.5	ppb	1.2	-1.0	0.9	ppb
Auto span	391.6	-1.4	391.9	ppb	390.8	2.0	389.2	ppb

Calibration Performed By: Darrin Pike

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

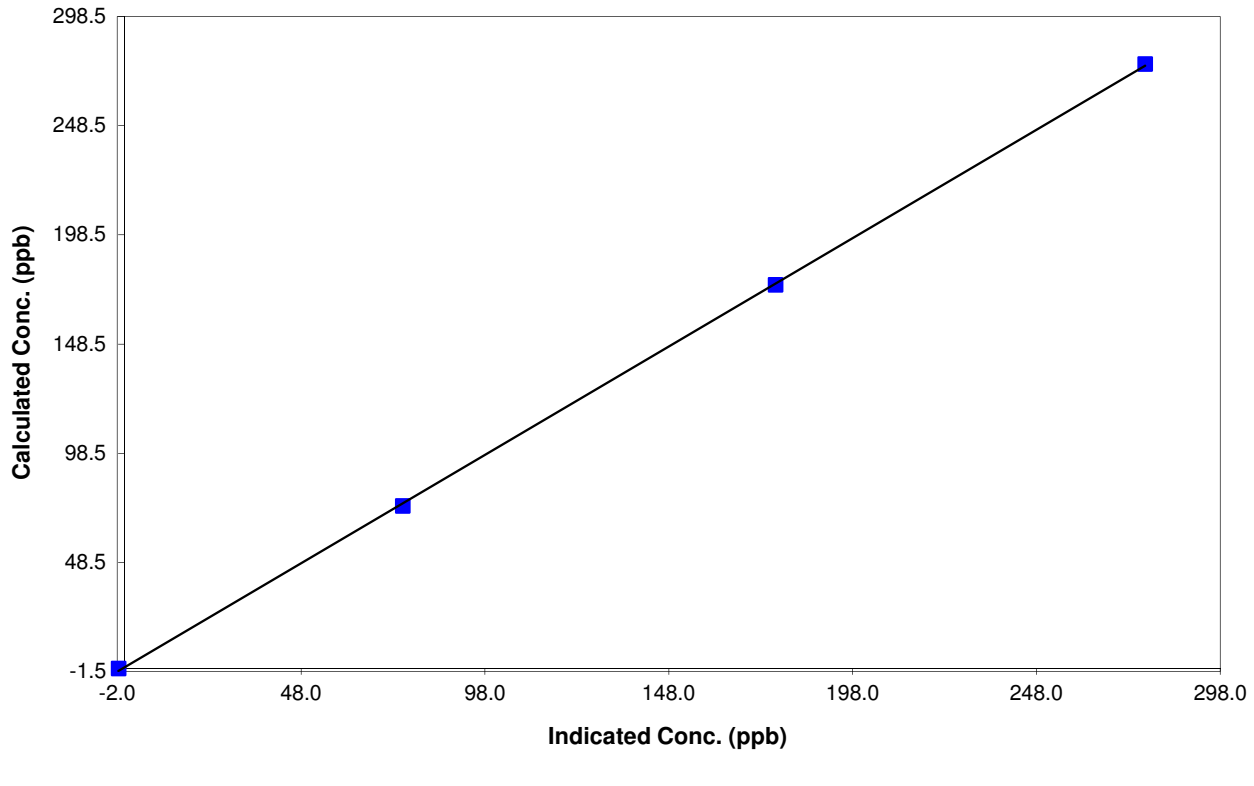
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 20, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	9:05	End Time (MST)	13:20
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.6	N/A		
276.6	277.5	0.9968	Correlation Coefficient	0.999919
175.6	177.0	0.9920		
74.4	75.7	0.9834	Slope	0.992219
			Intercept	0.546812

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

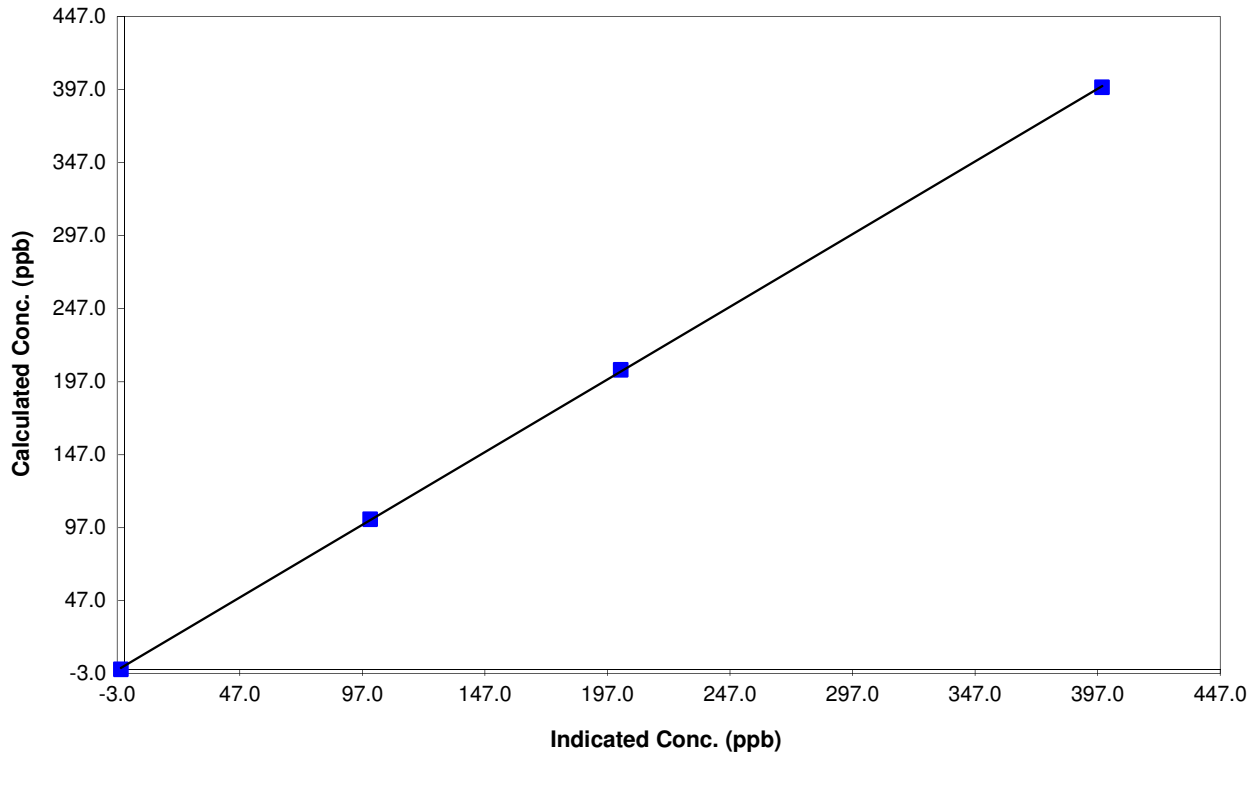
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 20, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	9:05	End Time (MST)	13:20
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.5	N/A		
398.6	398.8	0.9995	Correlation Coefficient	0.999957
205.2	202.3	1.0140		
102.8	100.2	1.0264	Slope	0.995135
			Intercept	2.547983

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

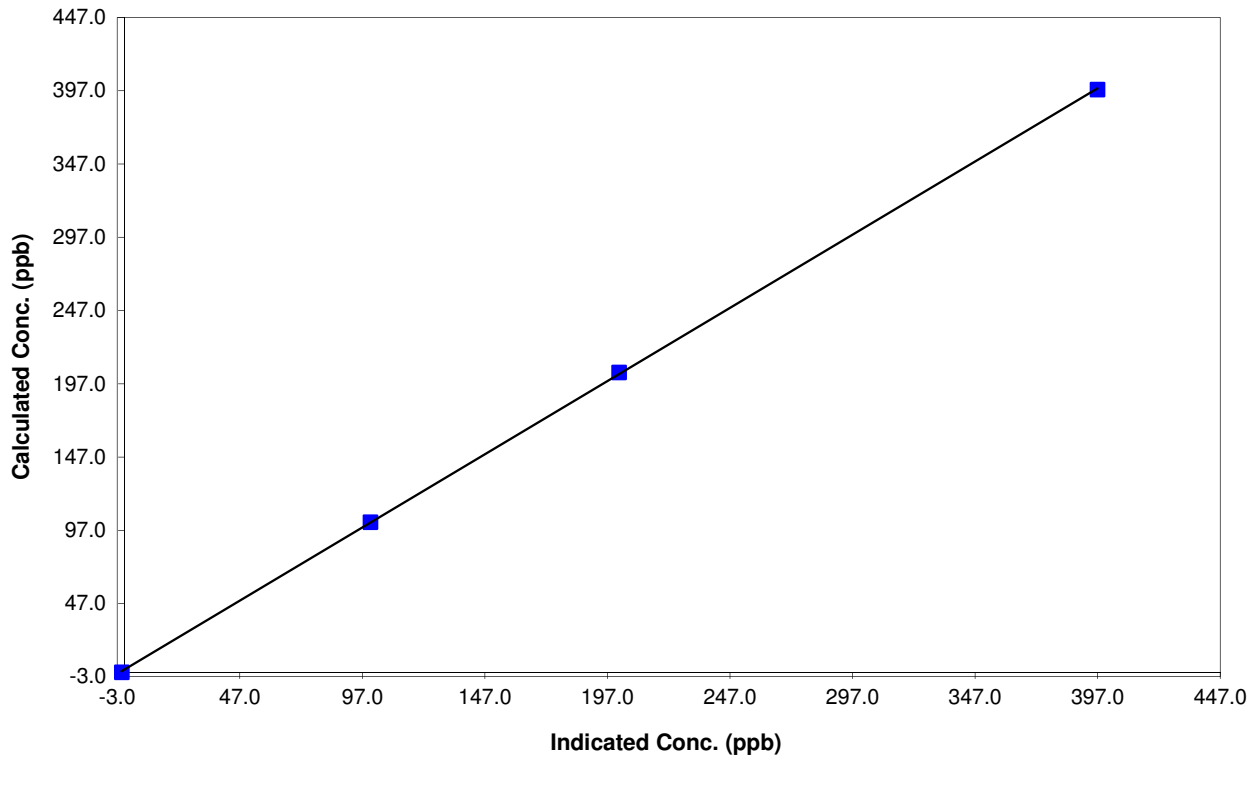
Station Information

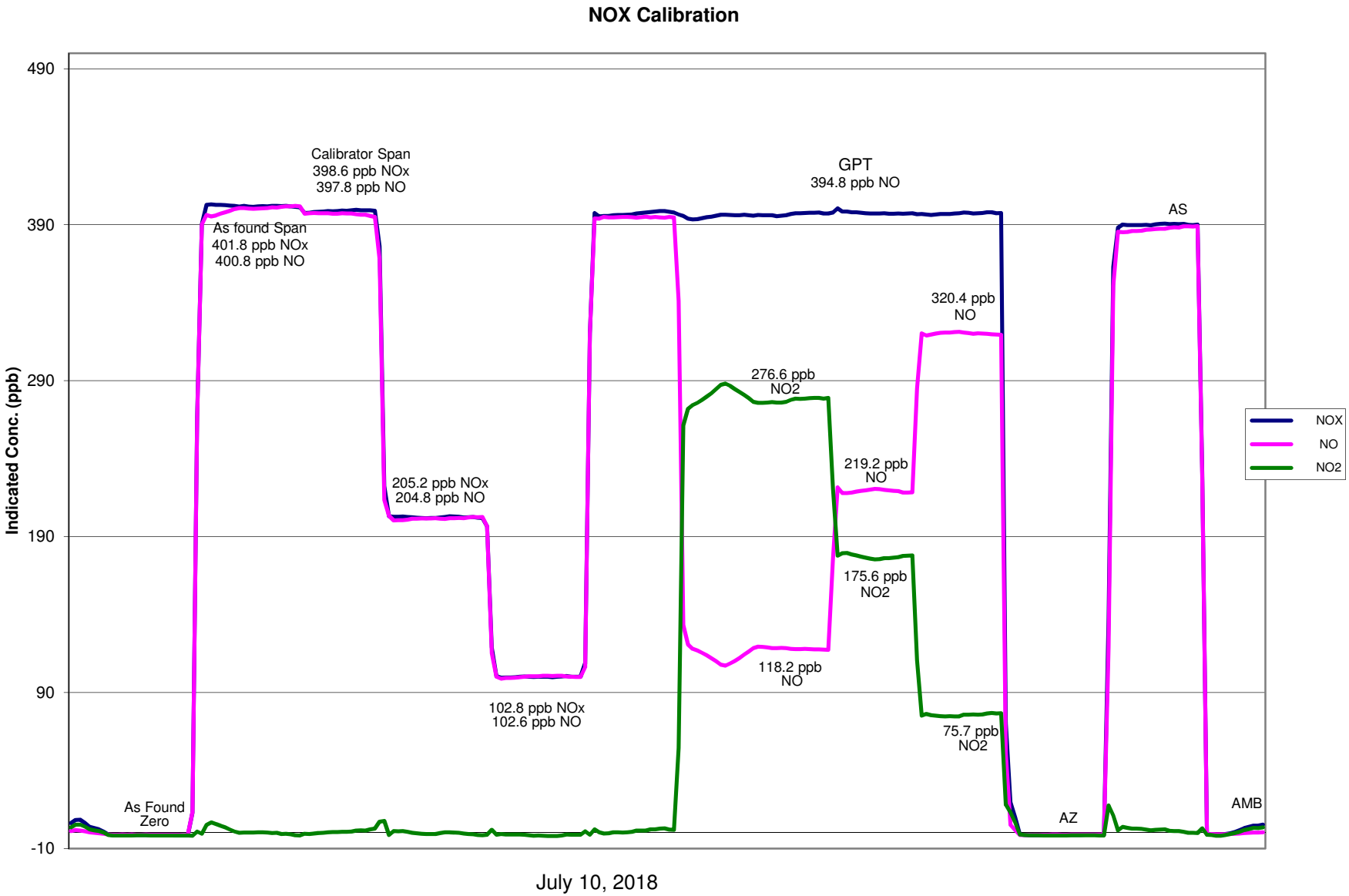
Calibration Date	July 10, 2018	Previous Calibration	June 20, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	9:05	End Time (MST)	13:20
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.2	N/A		
397.8	396.8	1.0025	Correlation Coefficient	0.999970
204.8	201.8	1.0149		
102.6	100.3	1.0227	Slope	0.999077
			Intercept	2.023977

NO Calibration Curve




NOX Calibration
490
390
290
190
90
-10
Indicated Conc. (ppb)
Calibrator Span
398.6 ppb NOx
397.8 ppb NO
As found Span
401.8 ppb NOx
400.8 ppb NO
205.2 ppb NOx
204.8 ppb NO
102.8 ppb NOx
102.6 ppb NO
GPT
394.8 ppb NO
276.6 ppb
NO2
320.4 ppb
NO
219.2 ppb
NO
175.6 ppb
NO2
118.2 ppb
NO
75.7 ppb
NO2
AS
AZ
AMB
As Found
Zero
NOX
NO
NO2
July 10, 2018

Calibration Report

Parameter **SO2**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 20, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:05	End Time (MST)	13:15
Barometric Pressure	654 mmHg	Station Temperature	23.0 Deg C
Calibrator	SABIO 2010	Serial Number	7201211
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
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.995214	Calculated slope	0.998967
Calculated intercept	1.601082	Calculated intercept	0.780003
Analyzer make	API Model 102A	Analyzer serial #	393

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Slope	0.921		0.927	
Offset	53.8	mV	53.8	mV
Pressure	23.7	in Hg	23.7	in Hg
Sample Flow	481	ccm	477	ccm
UV Lamp	2022.4	mV	1933	mV
HVPS	690	V	690	V
PMT Temp	7.4	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	-0.3	N/A
5000	39.00	393.2	393.4	0.9995
5000	20.00	202.4	200.6	1.0089
7000	14.00	101.4	100.9	1.0049
5000	0	0.0	-0.3	As found zero
5000	39	393.2	388.2	As found span
			Average Correction Factor	1.0044

Calculated value of As Found Response: 388.3 ppb Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	-1.4	ppb	0.2	ppb
Auto span	387.0	ppb	389.9	ppb

Notes:

Calibration Performed By: Darrin Pike

Calibration Summary

Parameter **SO2**

Air Monitoring Network **Lafarge - Exshaw**

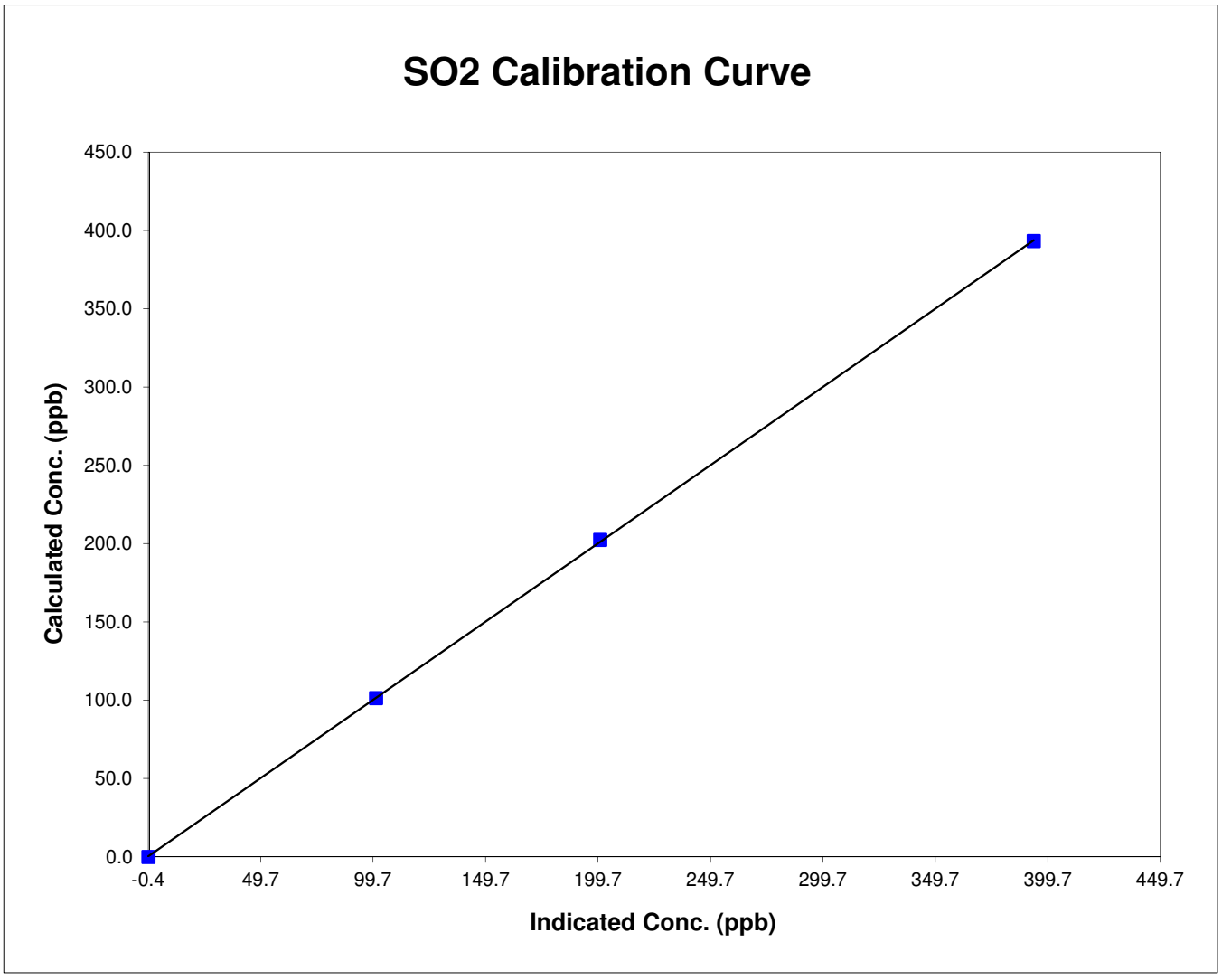
WSP AIR QUALITY MONITORING

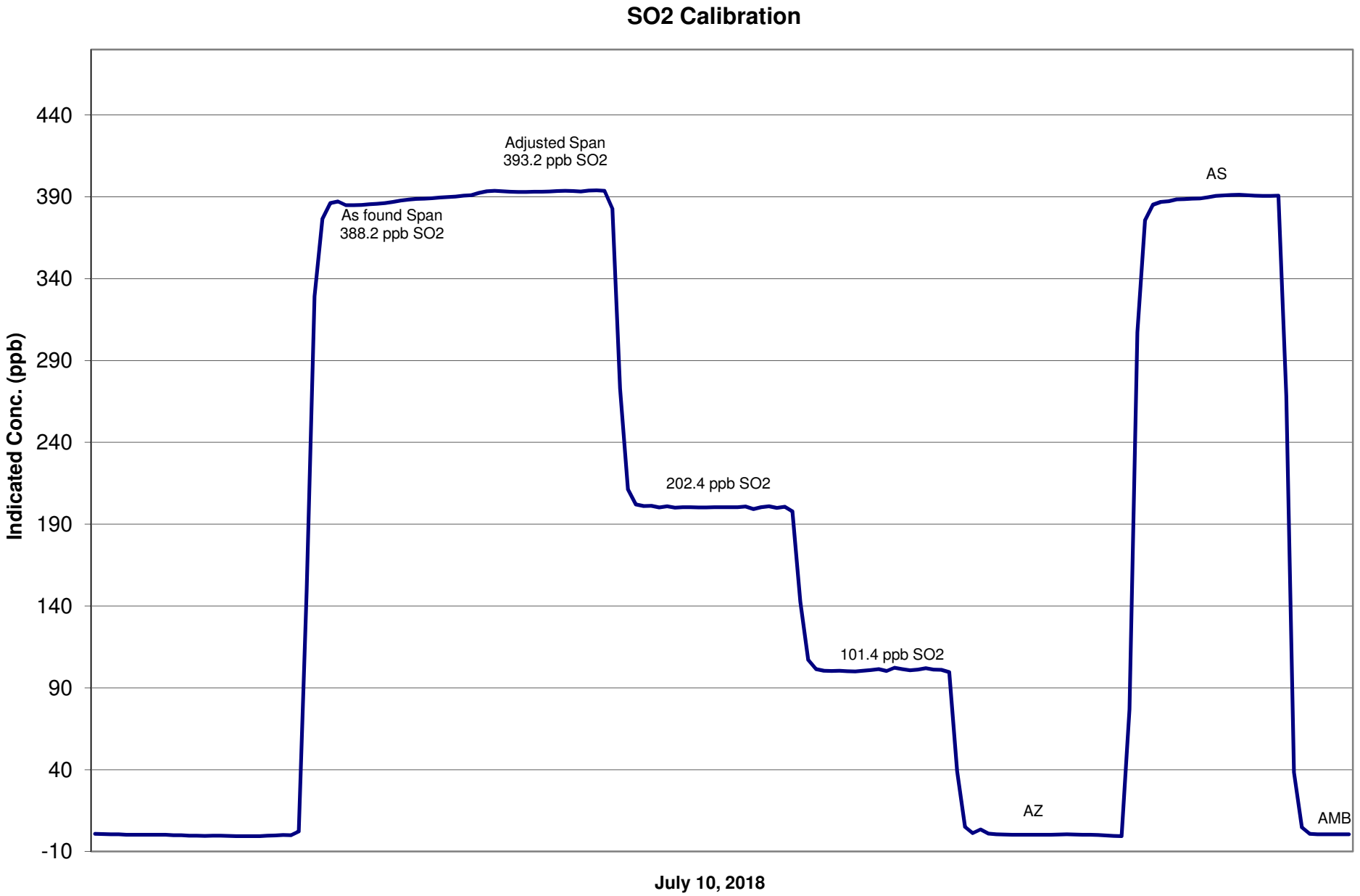
Station Information

Calibration Date	July 10, 2018	Previous Calibration	June 20, 2018
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	9:05	End Time (MST)	13:15
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	-0.3	N/A		
393.2	393.4	0.9995	Correlation Coefficient	0.999976
202.4	200.6	1.0089		
101.4	100.9	1.0049	Slope	0.998967
			Intercept	0.780003




SO2 Calibration
Indicated Conc. (ppb)
440
390
340
290
240
190
140
90
40
-10
Adjusted Span
393.2 ppb SO2
As found Span
388.2 ppb SO2
202.4 ppb SO2
101.4 ppb SO2
AZ
AS
AMB
July 10, 2018

AIR QUALITY MONITORING

Field Service Report

Air Monitoring Network / Client: Lafarge – Exshaw

Station Information

Visit Date: July 10, 2018
Station Location: Exshaw – Lagoon
Reason for Visit: Routine monthly calibrations
Arrival Time: 08:30 MST
Weather Conditions: light rain

Project Number: 151-09626-00
Station Name: Lafarge – Exshaw

Departure Time: 14:00 MST

Record of Hours ***Parts Used***

Employee	Category	Hours	Qty	Parts Description
DP	TRA	3	2	47mm filters
DP	CAL	5.5		

Station Information

Time (MST) Comments

08:30 – Signed in at Lafarge Plant

08:45 - Arrived at station. Started unloading and setting up gear

09:05 - Started AF calibrator Zero on NOx and SO2.

09:32 – AF Zero was good. Started AF calibrator Span.

09:55 - NOx/SO2 spans adjusted

10:55 - SO2 calibration completed, no issues noted. NOx GPT reference point started, no issues noted in the first portion of the calibration.

11:15 - Started introducing O3 for GPT portion of calibration.

13:22 - GPT portion of calibration went well, no issues noted. Started AIC on NOx and SO2.

12:25 – Calibrations complete.

14:00 Left plant after signing out.

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: July 12, 2018
Station Location: Exshaw – Lagoon
Reason for Visit: Routine monthly calibrations
Arrival Time: 10:00 MST
Weather Conditions: light rain

Project Number: 151-09626-00
Station Name: Lafarge – Exshaw

Departure Time: 13:30 MST

Record of Hours ***Parts Used***

Employee	Category	Hours	Qty	Parts Description
DP	TRA	3	1	GRIMM dryer pump rebuild kit
DP	CAL	3.5		
DP	ER	1		

Station Information

Time (MST) Comments

10:00 – arrived at Lagoon site

10:00 - Flagged all PM channels at Windridge site for BAM 1020 calibrations.

10:25 - BAM PM2.5 calibration completed with no issues.

10:45 - BAM PM10 calibration completed with no issues.

11:55 - BAM TSP calibration completed with no issues.

12:00 Left lagoon site and proceeded to GRIMM locations.

West Sharp:
Measured Sample flow = 1.17 LPM
Sharp AmbT = 25 degC
Audit AmbT = 24 degC

Berm Sharp:
Failed a self-test. The dryer pump was the issue. Rebuilt dryer pump issue was resolved.
Measured Sample flow = 1.113 LPM
Sharp AmbT = 23 degC
Audit AmbT = 24.8 degC

Entrance Sharp:
Measured Sample flow = 1.12 LPM
Sharp AmbT = 25 degC
Audit AmbT = 25 degC

13:15 – Grimms audit completed 13:30 – signed out at the LaFarge plant.   *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

AIR QUALITY MONITORING

STATION:	Lafarge	OPERATOR:	Darrin Pike
LOCATION:	Exshaw - Windridge	DATE:	July 12, 2018
START TIME (MST):	8:10	END TIME (MST):	9:10

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)
	Audit values (I)	16.0	653	0.00	16.7	9:08
As Found Data	MEASURED (AF)	16.5	653	0.50	17.15	9:09
	AF Difference (AF-I)	0.5	0	0.50	0.45	0:01
Adjusted Data	MEASURED (M)	16.0	653	0.50	16.64	9:08
	Adj Difference (M-I)	0.0	0	0.50	-0.06	0:00
	LIMITS	**± 4.0 ^{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-test - all passed

MetOne BAM PM_{10} Calibration

AIR QUALITY MONITORING

STATION:	Lafarge	OPERATOR:	Darrin Pike
LOCATION:	Exshaw - Windridge	DATE:	July 12, 2018
START TIME (MST):	9:10	END TIME (MST):	9:35

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)
	Audit values (I)	16.1	653	0.00	16.7	9:33
As Found Data	MEASURED (AF)	16.1	653	0.40	17.04	9:34
	AF Difference (AF-I)	0.0	0	0.40	0.34	0:01
Adjusted Data	MEASURED (M)	16.1	653	0.40	16.68	9:33
	Adj Difference (M-I)	0.0	0	0.40	-0.02	0:00
	LIMITS	**± 4.0 ^{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: 1/2 roll

Nozzle Inspection / cleanliness: clean

COMMENTS:

Performed self-test - all passed

MetOne BAM TSP Calibration

AIR QUALITY MONITORING

STATION:	Lafarge	OPERATOR:	Darrin Pike
LOCATION:	Exshaw - Windridge	DATE:	July 12, 2018
START TIME (MST):	9:35	END TIME (MST):	10:00

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)
	Audit values (I)	17.1	653	0.00	16.7	9:54
As Found Data	MEASURED (AF)	17.6	653	0.50	16.86	9:55
	AF Difference (AF-I)	0.5	0	0.50	0.16	0:01
Adjusted Data	MEASURED (M)	17.1	653	0.50	16.67	9:54
	Adj Difference (M-I)	0.0	0	0.50	-0.03	0:00
	LIMITS	**± 4.0 ^{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-test - all passed

AIR QUALITY MONITORING

Field Service Report

Air Monitoring Network / Client: Lafarge – Exshaw

Station Information

Visit Date: July 12, 2018
Station Location: Exshaw – Windridge
Reason for Visit: Routine monthly calibrations
Arrival Time: 8:00 MST
Weather Conditions: clear and 12 degC.

Project Number: 151-09626-00
Station Name: Lafarge – Windridge

Departure Time: 10:00 MST

Record of Hours ***Parts Used***

Employee	Category	Hours	Qty	Parts Description
DP	CAL	2		
DP	TRV	3		

Station Information

Time (MST) Comments

08:00 – Arrived at Lafarge plant and signed in

08:10 - Flagged all PM channels at Windridge site for BAM 1020 calibrations.

09:10 - BAM PM2.5 calibration completed with no issues.

09:35 - BAM PM10 calibration completed with no issues.

10:00 - BAM TSP calibration completed with no issues.

10:00 – Left Windridge site and proceeded to the Lagoon site.

NOTES:
- All analyzers in sample mode → OK
- All sample lines connected properly → OK

Technician: Darrin Pike