

REPORT N° 171-00556-00

AMBIENT AIR QUALITY MONTHLY REPORT

JULY 2017

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Lafarge Canada Inc.

Project no: 171-00556-00
Date: July 2017

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Project Number: 171-00556-00

August 9, 2017

Janet Brygger
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Dear Ms. Brygger,

Subject: Ambient Air Quality Monthly Report – July 2017

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The operational uptime for the meteorological systems and all analyzers at the Lagoon station was 100% in July. There were 3 contraventions of the 24-hour PM_{2.5} Alberta Ambient Air Quality Objectives (AAAQOs) in July at the Lagoon monitoring location due to smoke from the wildfire activity in British Columbia and Alberta.

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 Entrance and Berm GRIMM monitors underwent server migration, resulting in the operational time of 82% and 71.1% respectively. The West GRIMM monitor had 100% operational time. The Entrance GRIMM monitor exceeded the TSP AAAQG for 14 days and the PM_{2.5} AAAQG for 10 days while the Berm GRIMM had 11 exceedances of the TSP guideline and 6 days above the PM_{2.5} guideline. The West GRIMM monitor had 7 days exceeding the PM_{2.5} guideline. The PM_{2.5} guideline exceedances, and to a lesser extent the exceedances of the TSP guideline, at the fugitive dust GRIMM monitors are due to smoke from the wildfire activity in British Columbia and Alberta.

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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TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	JULY 2017 REPORT SUMMARY.....	1
2.1	LAGOON STATION	1
2.2	WEST GRIMM	2
2.3	BERM GRIMM.....	2
2.4	ENTRANCE GRIMM	3
3	LAGOON STATION.....	4
3.1	SITE VISIT NOTES	5
3.1.1	NO _x MONITORING.....	5
3.1.2	SO ₂ MONITORING	5
3.1.3	PM MONITORING	5
3.1.4	METEOROLOGICAL MONITORING.....	5
3.2	MONITORING RESULTS AND TRENDS.....	5
4	WEST GRIMM	15
4.1	SITE VISIT NOTES	15
4.2	MONITORING RESULTS AND TRENDS.....	15
5	BERM GRIMM	22
5.1	SITE VISIT NOTES	22
5.2	MONITORING RESULTS AND TRENDS.....	22
6	ENTRANCE GRIMM.....	30
6.1	SITE VISIT NOTES	30
6.2	MONITORING RESULTS AND TRENDS.....	30
	BIBLIOGRAPHY	39

TABLES

TABLE 2-1	LAGOON STATION DATA SUMMARY	1
TABLE 2-2	WEST STATION DATA SUMMARY	2
TABLE 2-3	BERM STATION DATA SUMMARY	2
TABLE 2-4	ENTRANCE STATION DATA SUMMARY.....	3
TABLE 3-1	INSTRUMENTATION LIST AT THE LAGOON STATION.....	4
TABLE 3-2	SUMMARY OF JULY 2017 DATA AT LAGOON	7
TABLE 3-3	DAYS EXCEEDING THE GUIDELINE FOR TSP AT THE LAGOON MONITOR.....	8
TABLE 4-1	EQUIPMENT AT THE WEST MONITORING LOCATION	15
TABLE 4-2	SUMMARY OF JULY 2017 DATA AT THE WEST GRIMM	16
TABLE 4-3	DAYS EXCEEDING THE GUIDELINE FOR TSP AT THE WEST MONITOR	17
TABLE 5-1	EQUIPMENT AT THE BERM MONITORING LOCATION	22
TABLE 5-2	SUMMARY OF JULY 2017 DATA AT THE BERM GRIMM	23
TABLE 5-3	DAYS EXCEEDING THE GUIDELINE FOR TSP AT THE BERM MONITOR	24
TABLE 6-1	EQUIPMENT AT THE ENTRANCE MONITORING LOCATION.....	30
TABLE 6-2	SUMMARY OF JULY 2017 DATA AT THE ENTRANCE GRIMM.....	32
TABLE 6-3	DAYS EXCEEDING THE GUIDELINE FOR TSP AT THE ENTRANCE MONITOR	33

FIGURES

FIGURE 3-1	INLETS ON THE TOP OF WSP'S LAGOON MONITOR	5
FIGURE 3-2	GRASS PLANTED ON THE STOCKPILES NEAR THE LAGOON MONITOR. PHOTO TAKEN JULY 12, 2016.	6
FIGURE 3-3	JULY 2017 WIND ROSE FROM THE LAGOON STATION	9
FIGURE 3-4	1-HOUR CONCENTRATIONS OF NO _x , SO ₂ , PARTICULATE MATTER, WIND DIRECTION AND WIND SPEED AT THE LAGOON MONITOR.....	10
FIGURE 3-5	24-HOUR CONCENTRATIONS OF NO _x , SO ₂ , AND PARTICULATE MATTER AT THE LAGOON MONITOR	11
FIGURE 3-6	LAGOON MONITOR PARTICULATE MATTER TIME VARIATION.....	12
FIGURE 3-7	LAGOON MONITOR SO ₂ TIME VARIATION	13
FIGURE 3-8	LAGOON MONITOR NO _x TIME VARIATION.....	14
FIGURE 4-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE WEST MONITOR.....	18
FIGURE 4-2	24-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE WEST MONITOR.....	19

FIGURE 4-3	WIND ROSE FOR PM _{2.5} EXCEEDANCE DAYS RECORDED AT THE WEST GRIMM	20
FIGURE 4-4	WEST PARTICULATE MATTER TIME VARIATION	21
FIGURE 5-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE BERM MONITOR	25
FIGURE 5-2	24-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE BERM MONITOR	26
FIGURE 5-3	WIND ROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE BERM GRIMM	27
FIGURE 5-4	WIND ROSE FOR PM _{2.5} EXCEEDANCE DAYS RECORDED AT THE BERM GRIMM	28
FIGURE 5-5	BERM PARTICULATE MATTER TIME VARIATION	29
FIGURE 6-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE ENTRANCE MONITOR	34
FIGURE 6-2	24-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE ENTRANCE MONITOR	35
FIGURE 6-3	WIND ROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE ENTRANCE GRIMM	36
FIGURE 6-4	WIND ROSE FOR PM _{2.5} EXCEEDANCE DAYS RECORDED AT THE ENTRANCE GRIMM	37
FIGURE 6-5	ENTRANCE PARTICULATE MATTER TIME VARIATION	38

APPENDICES

A P P E N D I X A DATA & CALIBRATION REPORTS

1 INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon monitoring location and the GRIMM monitors in Exshaw, AB. The station is operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and is a requirement of Lafarge's Approval 1702-02-04. This report contains data collected between July 1, 2017 and July 31, 2017.

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

2 JULY 2017 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). Both the exceedances of the AAAQO and AAAQG for PM_{2.5} are due to smoke from the wildfire activity occurring in British Columbia and Alberta.

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	24.6	0	9.1	-
SO ₂ (ppb)	100.0	13.6	0	2.3	0
PM _{2.5} (µg/m ³)	100.0	124.0	5*	57.9	3
PM ₁₀ (µg/m ³)	100.0	200.5	-	89.6	-
TSP (µg/m ³)	100.0	576.1	-	96.9	0
Temperature (°C)	100.0	33.0	-	23.6	-
Wind Speed (km/hr) /Direction	100.0	32.4/W	-	20.0/WSW	-
Precipitation (mm)	100.0	23.0	-	31.0	-

* The exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³. The guideline level differs from the objectives (AAAQO) in that they are not used to assess compliance.

Data Quality Notes:

- There were 3 exceedances of the 24-hour PM_{2.5} AAAQ Objective and 5 exceedances of the PM_{2.5} 1-hour AAAQ Guideline. Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} exceedances at the Lagoon.

Calibration/Maintenance Notes:

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

2.2 WEST GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their Fugitive Dust Control Best Management Practices – Program (FDCBMP-P). The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P.

Table 2-2 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	100.0	135.7	32*	86.4	7
PM ₁₀ (µg/m ³)	100.0	141.7	-	97.8	-
TSP (µg/m ³)	100.0	236.9	-	90.7	0

*Exceedance of 1-hour AAAQG

Data Quality Notes:

- There were 7 exceedances of the PM_{2.5} 24-hour AAAQG and 32 exceedances of the PM_{2.5} 1-hour AAAQG. Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} guideline exceedances.

Calibration/Maintenance Notes:

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

2.3 BERM GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P.

Table 2-3 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)	71.1	96.5	14*	53.2	6

PM ₁₀ (µg/m ³)	71.1	353.4	-	112.9	-
TSP (µg/m ³)	71.1	1289.2	-	325.9	11

*Exceedance of 1-hour AAAQG

Data Quality Notes:

- There were 11 and 6 exceedances of the 24-hour TSP and PM_{2.5} AAAQG, respectively.
- There were 14 exceedances of the 1-hour PM_{2.5} AAAQG.
- Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} guideline exceedances.

Calibration/Maintenance Notes:

- The monitor had 71.1% uptime for this month due to annual maintenance and calibration and the data server migration from July 8th to 17th.

2.4

ENTRANCE GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P.

Table 2-4 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)	82.0	132.5	45*	91.2	10
PM ₁₀ (µg/m ³)	82.0	323.8	-	140.7	-
TSP (µg/m ³)	82.0	803.5	-	227.4	14

*Exceedance of 1-hour AAAQG

Data Quality Notes:

- There were 14 and 10 exceedances of the 24-hour TSP and PM_{2.5} AAAQG, respectively.
- There were 45 exceedances of the 1-hour PM_{2.5} AAAQG.
- Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} guideline exceedances.

Calibration/Maintenance Notes:

- The monitor had 82% uptime for this month due to annual maintenance and calibration and the data server migration from July 3rd to 8th.

3 LAGOON STATION

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

This section provides a summary of the monitoring activities for the Lagoon ambient air quality station, including: a table of instrumentation (Table 3-1), site visit notes, a wind rose (Figure 3-3) and tables and graphs illustrating the monitoring results for July 2017.

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

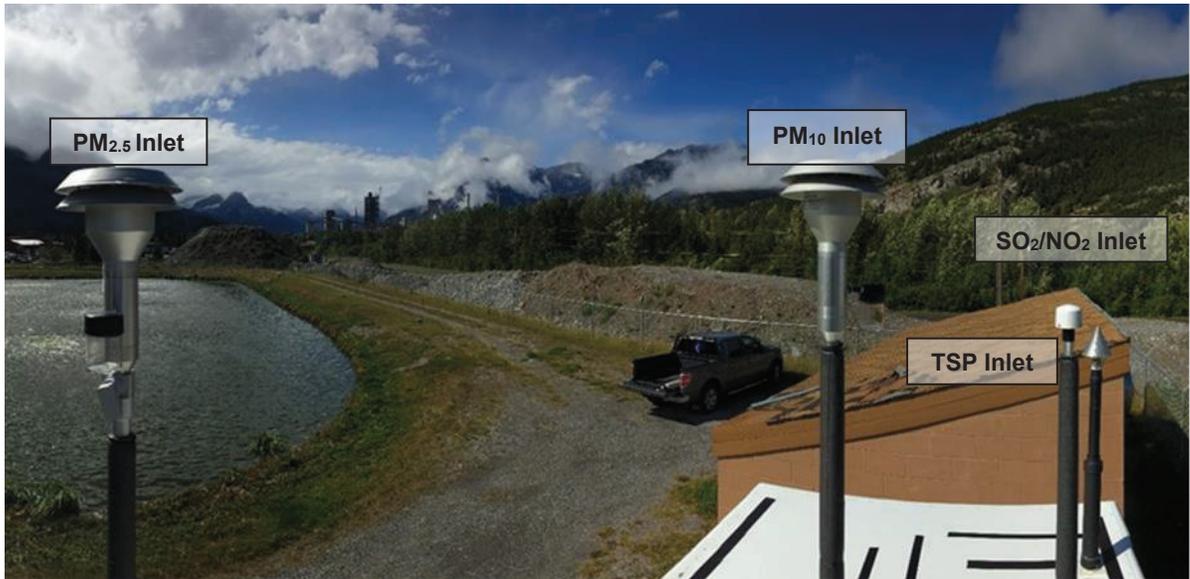


Figure 3-1 Inlets on the top of WSP's Lagoon monitor

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 underwent monthly calibration on July 17th and had 100% uptime.

3.1.2 SO₂ MONITORING

The SO₂ monitor underwent monthly calibration on July 17th and had 100% uptime.

3.1.3 PM MONITORING

All BAM monitors underwent monthly calibration on July 17th and had 100% uptime.

3.1.4 METEOROLOGICAL MONITORING

The precipitation sensor had 100% uptime for the month of July.

3.2 MONITORING RESULTS AND TRENDS

The following wind rose (Figure 3-3) illustrates the frequency of wind speed by wind direction for the month of July 2017. Table 3-2 summarizes the hourly and daily concentrations recorded in July 2017. Figure 3-4 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-5 shows daily average concentrations recorded during July 2017 for the pollutants listed in Table 3-2. Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} exceedances at the Lagoon.

Since flooding in 2013, the Municipal District has built up stockpiles of dirt on the far western edge of the wastewater treatment facility. During the summer of 2016, the Municipal District has planted grass seed on these stockpiles in an effort to reduce the amount of fugitive dust generated. Figure 3-2 shows the extent of the grass planted by the MD. It is WSP's understanding that in July, there was active work being performed by the Municipal District on this berm that likely impacted particulate matter readings during the month (Table 3-3).



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

The wind rose (Figure 3-3) indicates that the winds predominantly came from the west. The wind rose for July 2017 follows the general orientation of the valley. As typical of the wind characteristics at the Lagoon site, the westerly winds were more intense than the easterly winds. July 2017 saw a lower percentage of high wind speeds (> 20 km/h) in the valley, which likely lead to periods of stagnant air and the buildup of particulate matter from the wildfires in BC and Alberta.

Table 3-2 Summary of July 2017 data at Lagoon

Parameter	Objectives		Station	Exceedances		Monthly Average	1-hour					24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration/ Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable	Day	
NO ₂ (ppb)	159	-	Lagoon	0	-	5.1	24.6	14	7	10.3	68.0	9.1	19	100.0
SO ₂ (ppb)	172	48	Lagoon	0	0	0.8	13.6	19	2	14.5	262.4	2.3	22	100.0
PM _{2.5} (µg/m ³)	80*	30	Lagoon	5*	3	13.0	124.0	17	17	17.1	256.2	57.9	17	100.0
PM ₁₀ (µg/m ³)	-	-	Lagoon	-	-	36.2	200.5	14	14	17.3	67.1	89.6	17	100.0
TSP (µg/m ³)	-	100	Lagoon	-	0	46.5	576.1	14	14	17.3	67.1	96.9	17	100.0
Temperature (°C)	-	-	Lagoon	-	-	18.9	33.0	7	13	9.8	266.7	23.6	9	100.0
Wind Speed/Direction	-	-	Lagoon	-	-	12.7	32.4/W	17	0	32.4	253.4	20.0/WSW	21	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.1	23.0					31.0	10	100.0

* The exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³. The guideline level differs from the objectives (AAAQO) in that they are not used to assess compliance.

Table 3-3 Days exceeding the Guideline for TSP at the Lagoon Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction	Average Wind Speed	Average RH	Root Cause (Provided by Lafarge)
Berm						
7/17/2017	-	58	263.5	16.1	37.5	Forest fires
7/19/2017	-	39	253.3	10.7	42.3	Forest fires
7/31/2017	-	42	76.7	14.0	60.9	Forest fires
Total # of Exceedances	0	3				
Maximum # of Exceedances (July)	2 (2014)	1 (2014)				
Average # of Exceedances (July)	0	0				
Minimum # of Exceedances (July)	0 (2010, 2012, 2015, 2016)	0 (2010 ~ 2013, 2015, 2016)				

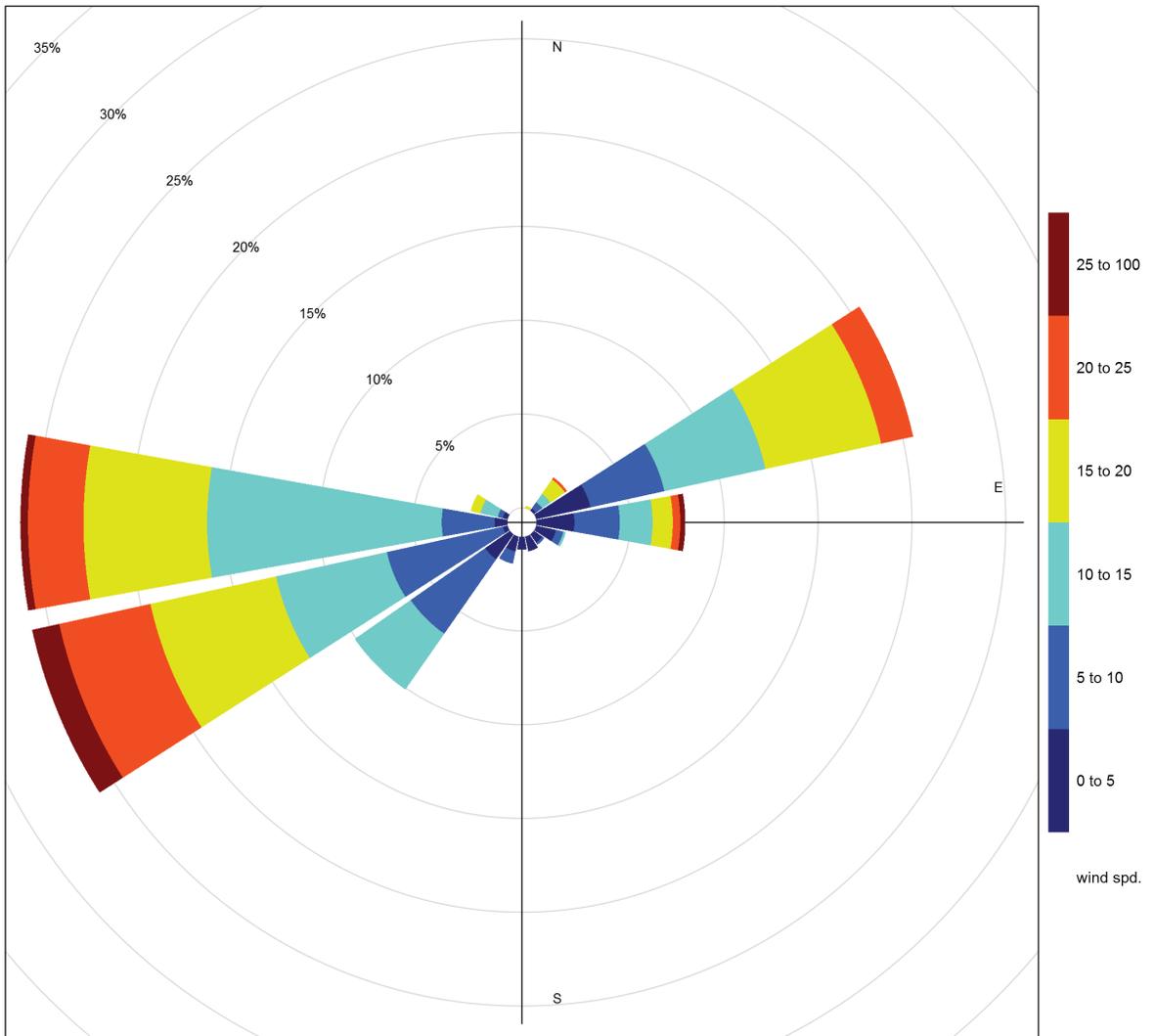


Figure 3-3 July 2017 wind rose from the Lagoon Station

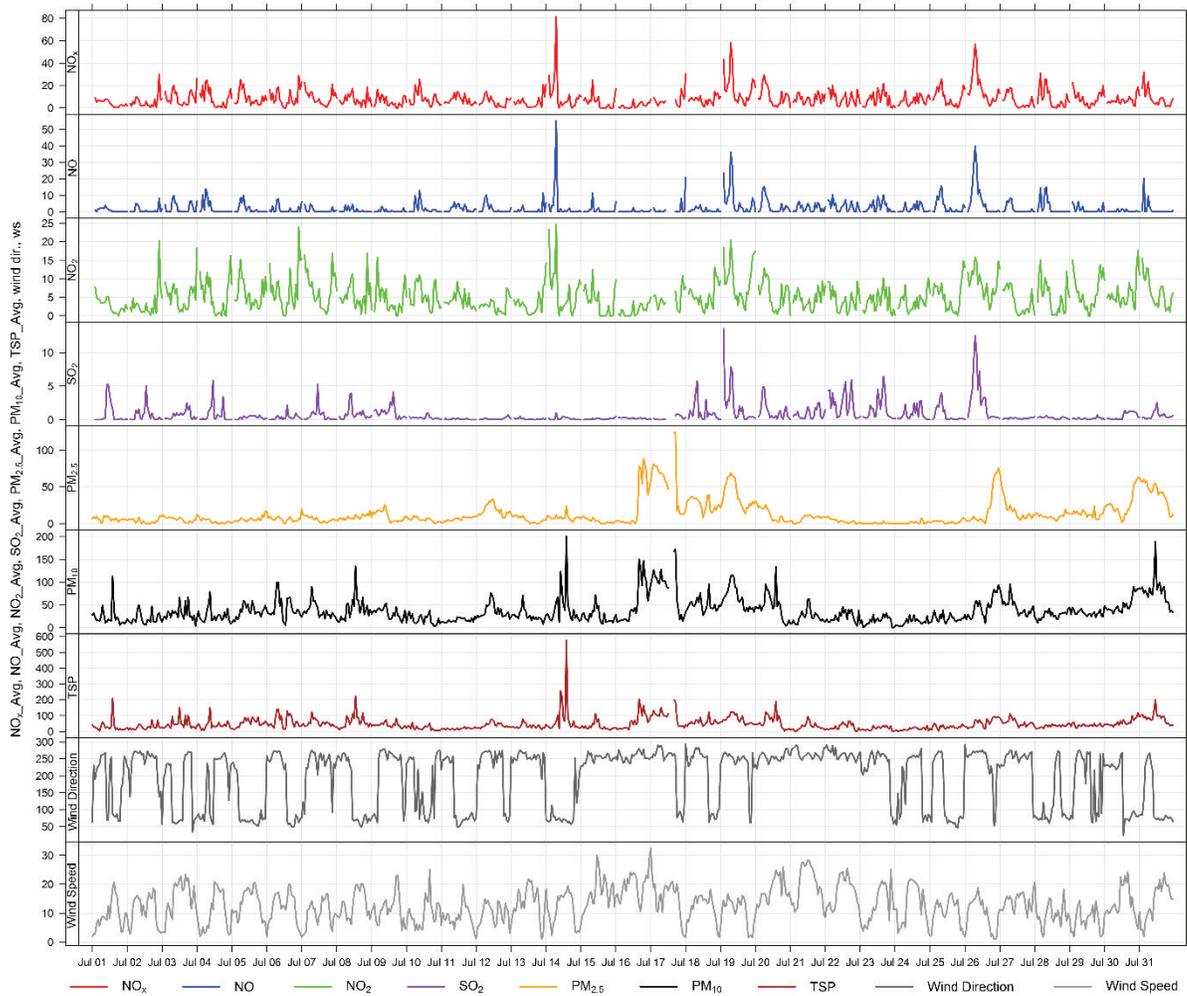


Figure 3-4 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon monitor

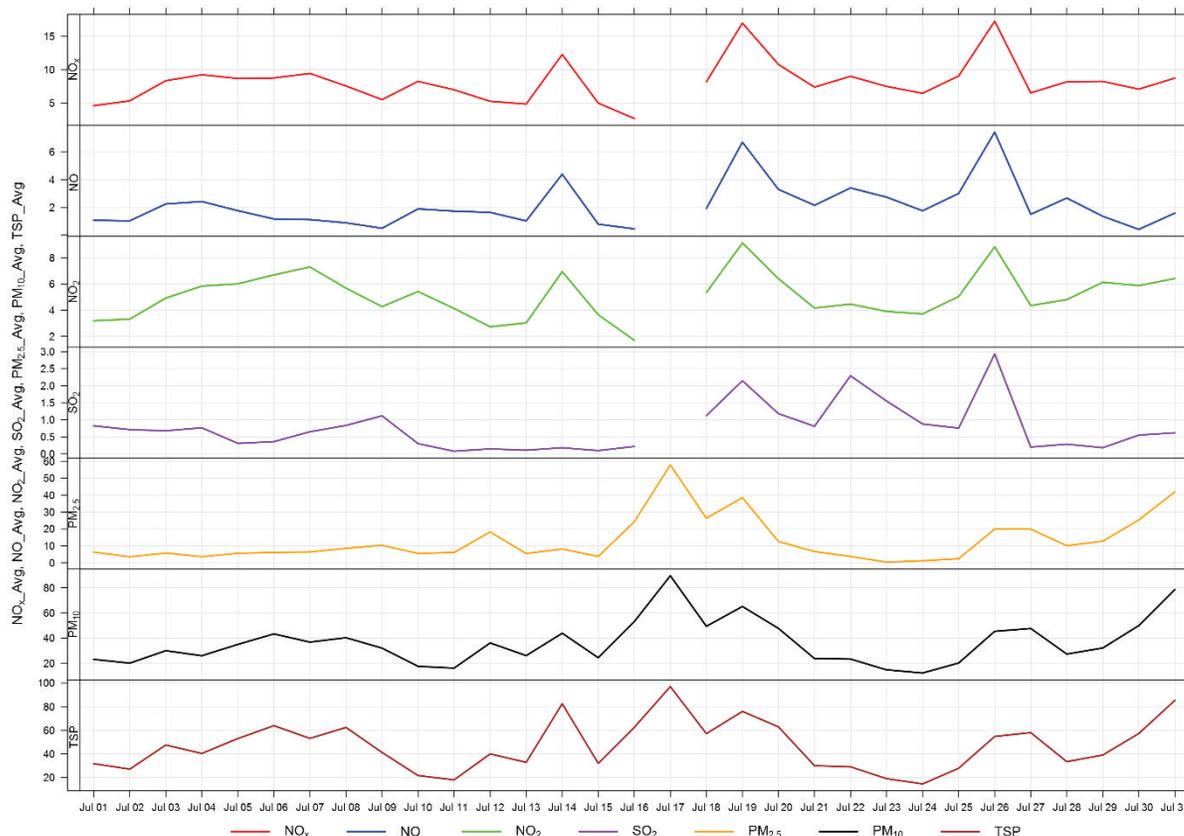


Figure 3-5 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

Figure 3-6 through Figure 3-8 show the variation in concentrations over various time averaging periods for PM, SO₂ and NO_x. The particulate matter plot in Figure 3-6 shows that PM₁₀ and TSP concentrations tended to rise through the morning before peaking mid-day and decreasing during the afternoon and evening. PM₁₀ and TSP are generally associated with dust from fugitive sources. PM_{2.5} levels associated with the wildfires do not show the same strong diurnal pattern as these emissions are not tied to operations at the Lafarge or other industrial facilities in the area.

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

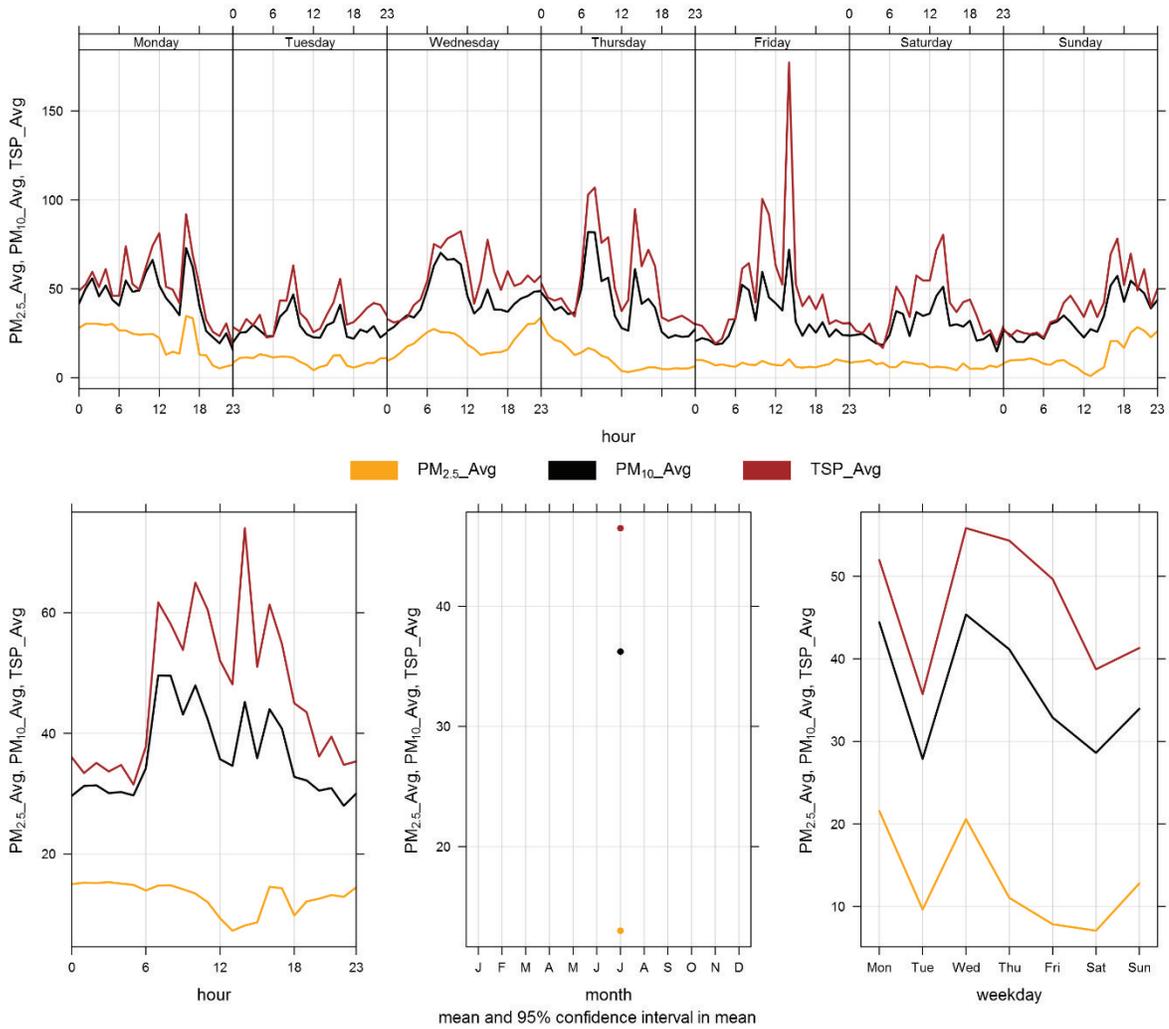


Figure 3-6 Lagoon Monitor particulate matter time variation

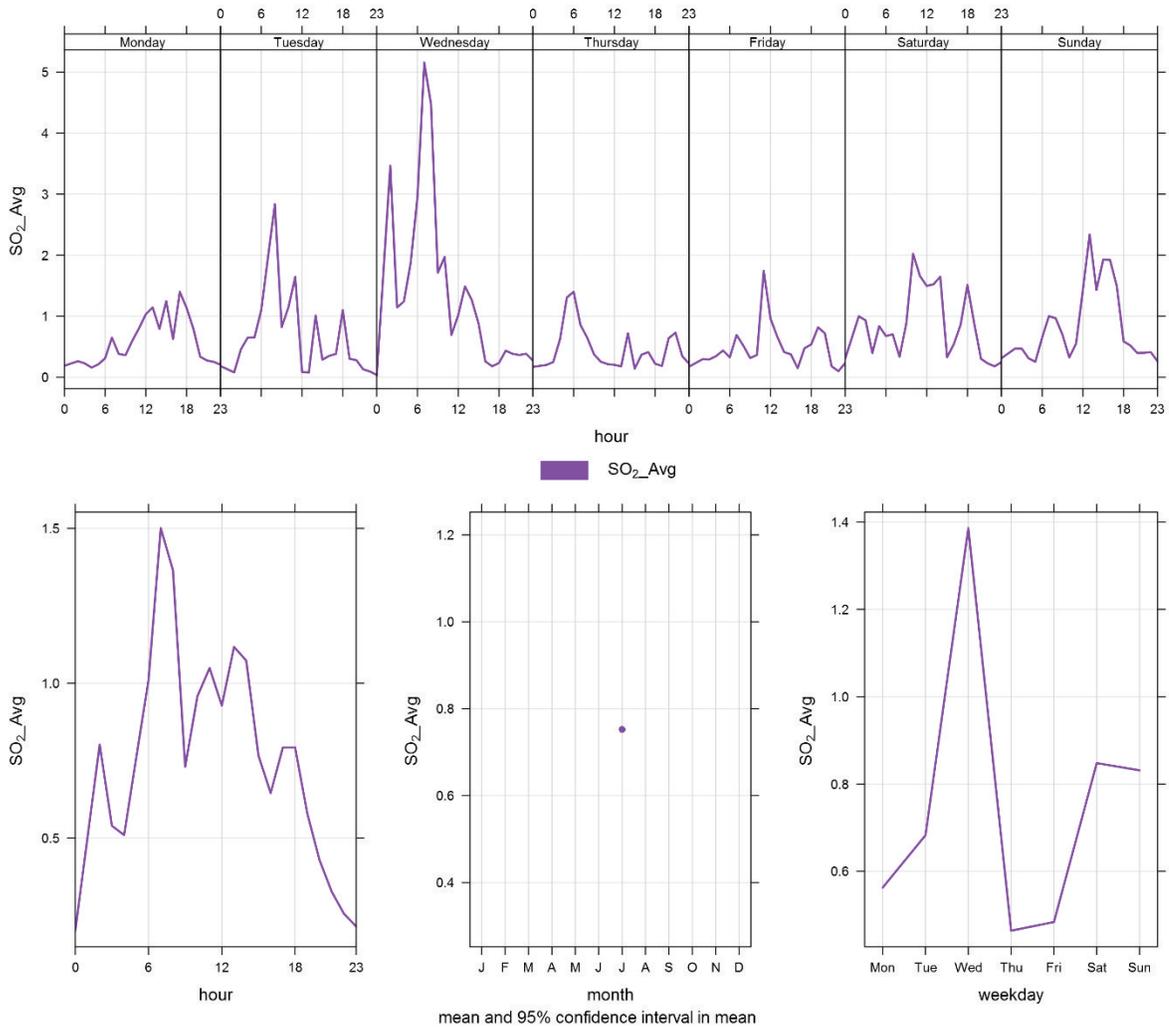


Figure 3-7 Lagoon Monitor SO₂ time variation

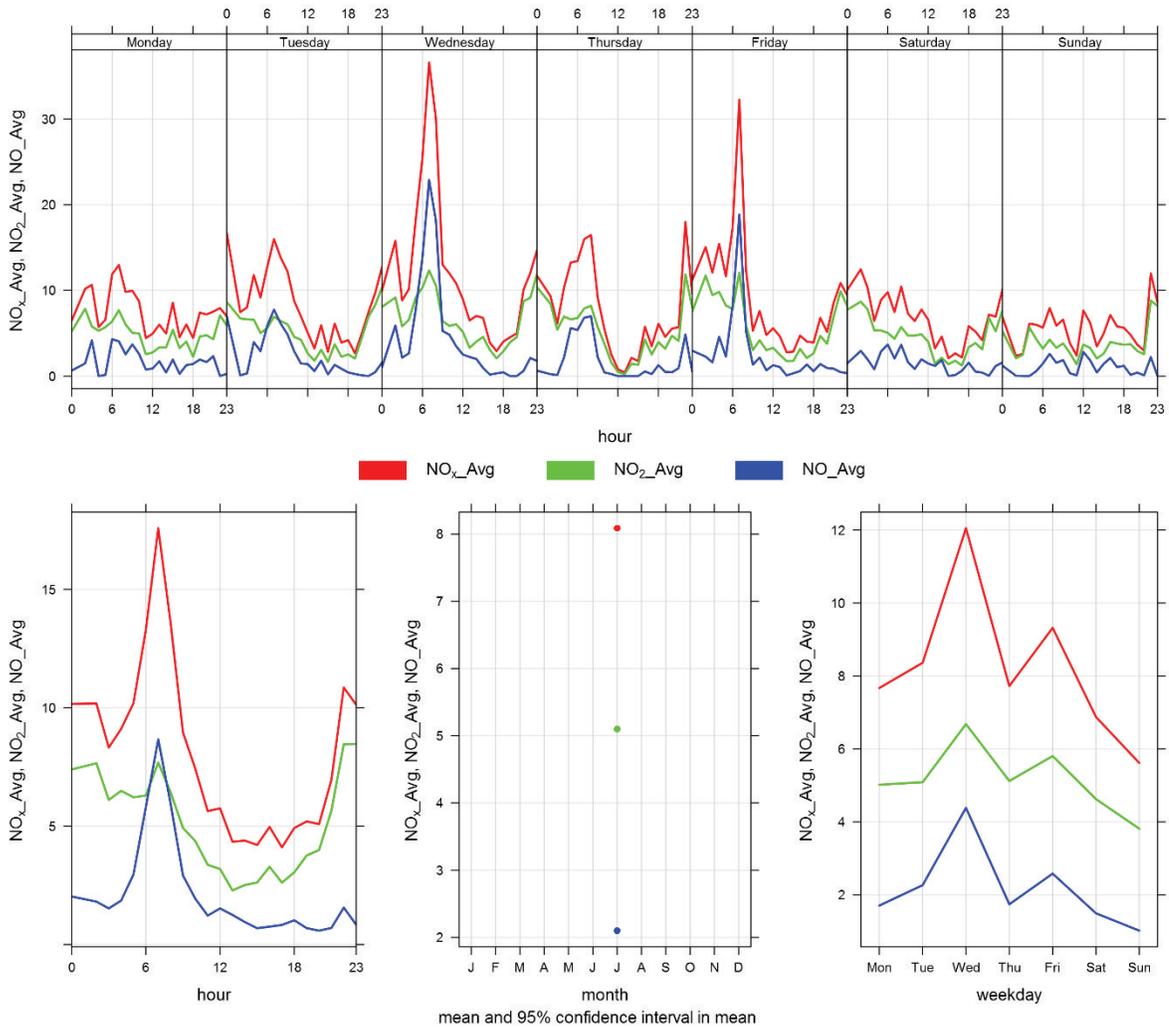


Figure 3-8 Lagoon Monitor NO_x time variation

4 WEST GRIMM

4.1 SITE VISIT NOTES

Table 4-1 indicates the equipment that is installed at the West monitoring location. During the month of July, the West GRIMM had 100% uptime.

Table 4-1 Equipment at the West monitoring location

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

4.2 MONITORING RESULTS AND TRENDS

The West GRIMM was installed in its current location in order to monitor “background” PM concentrations since the predominant wind pattern is from west to east in the valley. As indicated in Figure 3-3, the majority of winds came from the west during July. Table 4-2 summarizes the maximum 1-hour and 24-hour concentrations recorded over the course of the month.

Figure 4-1 and Figure 4-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month. There were 0 and 7 recorded exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (30 µg/m³) Guidelines, respectively. Historically, the West monitor records an average of zero exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of July. Exceedances of the TSP Guideline at the West monitor are rare, with a maximum of 1 day that exceeding the Guideline in 2010 and 2014, and all other years reporting zero exceedances. Prior to July 2017, the largest number of PM_{2.5} exceedances recorded during July occurred in 2014, which had 3 days that exceeded the Guideline. Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} exceedances at the West monitor.

Table 4-2 Summary of July 2017 data at the West GRIMM

Parameter	Guideline		Station	Exceedances		Monthly Average	Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr		Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM _{2.5} (µg/m ³)	80	30	West	32	7	18.9	135.7	17	1	22.9	253.6	86.4	17	100.0
PM ₁₀ (µg/m ³)	-	-	West	-	-	28.8	141.7	17	1	22.9	253.6	97.8	17	100.0
TSP (µg/m ³)	-	100	West	-	0	33.6	236.9	16	16	12.7	279.3	90.7	17	100.0

Table 4-3 Days exceeding the Guideline for TSP at the West Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction	Average Wind Speed	Average RH	Root Cause (Provided by Lafarge)
Berm						
7/16/2017	-	39	255.4	19.4	24.2	Forest fires
7/17/2017	-	86	263.5	16.1	37.5	Forest fires
7/18/2017	-	38	265.4	11.6	45.0	Forest fires
7/19/2017	-	47	253.3	10.7	42.3	Forest fires
7/26/2017	-	31	262.4	9.6	45.3	Forest fires
7/30/2017	-	33	155.2	13.6	44.9	Forest fires
7/31/2017	-	54	76.7	14.0	60.9	Forest fires
Total # of Exceedances	0	7				
Maximum # of Exceedances (July)	1 (2010, 2014)	3 (2014)				
Average # of Exceedances (July)	0	0				
Minimum # of Exceedances (July)	0 (2011 ~ 2013, 2015, 2016)	0 (2010 ~ 2013, 2015, 2016)				

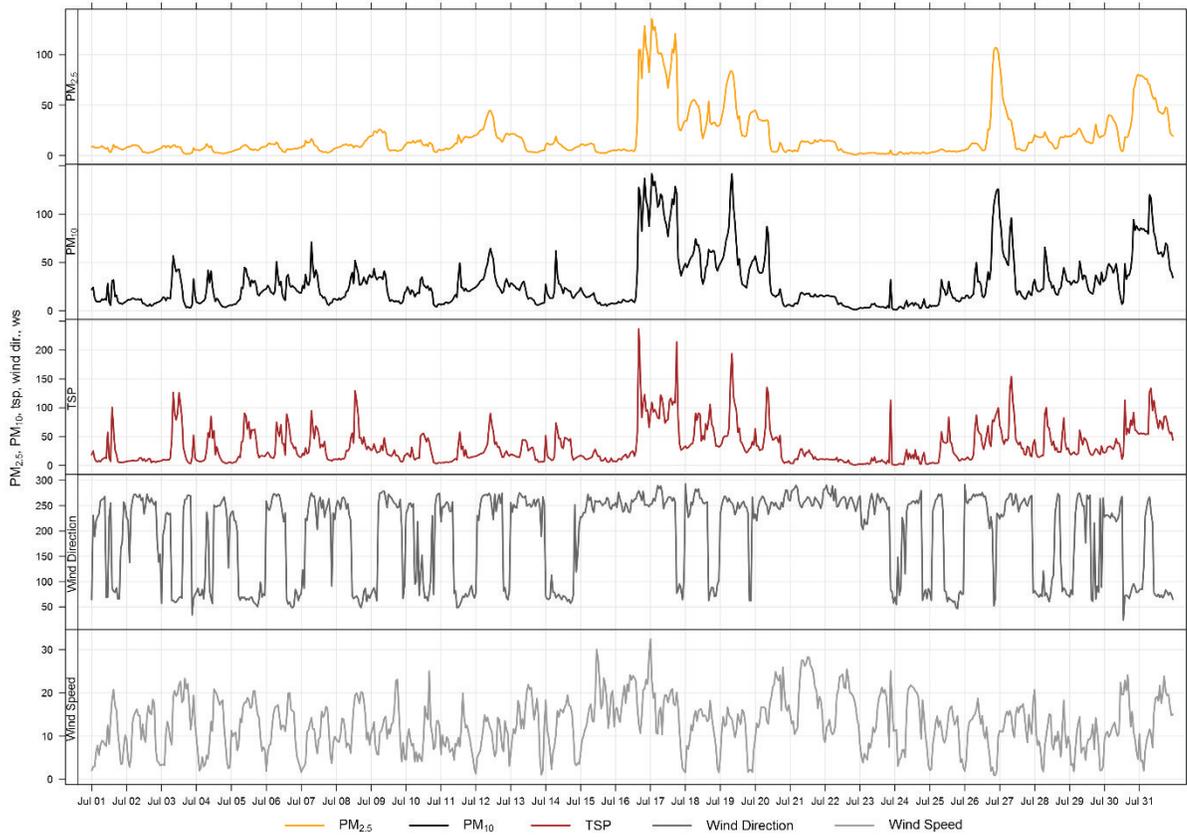


Figure 4-1 1-hour particulate matter concentrations at the West monitor

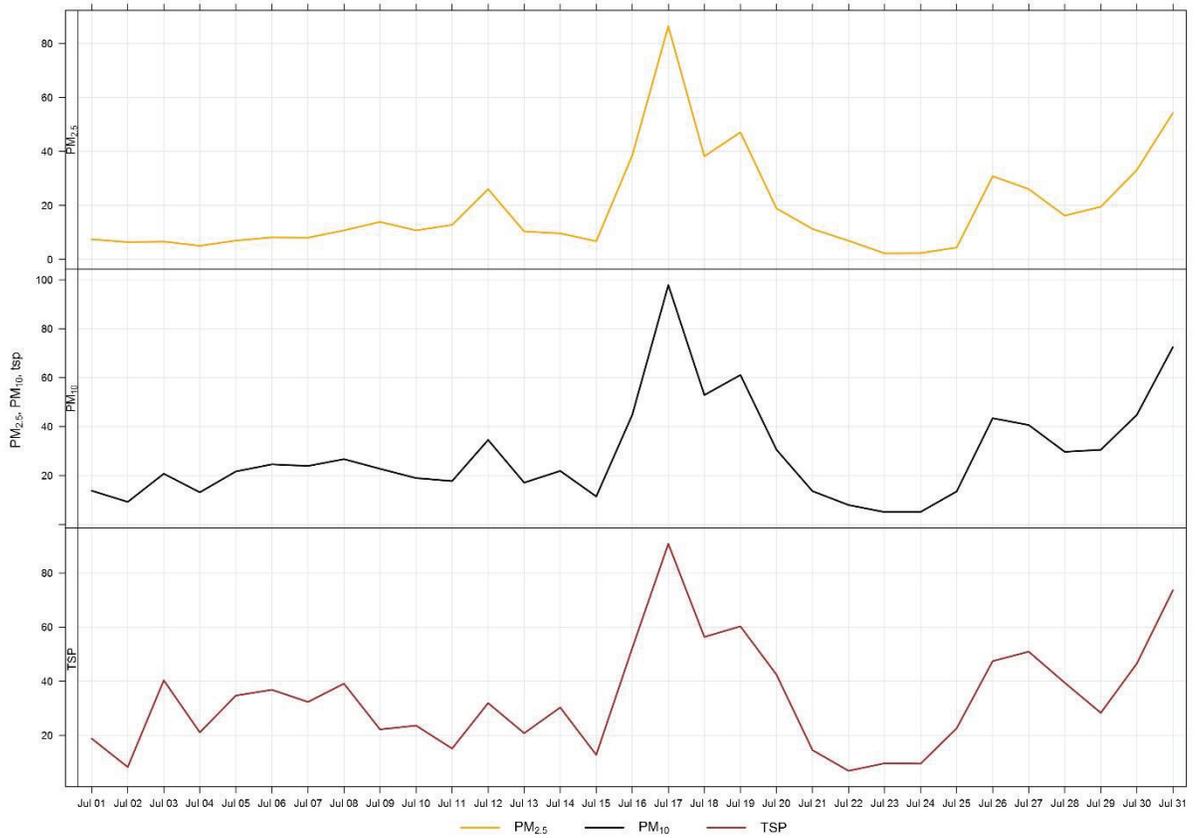


Figure 4-2 24-hour particulate matter concentrations at the West monitor

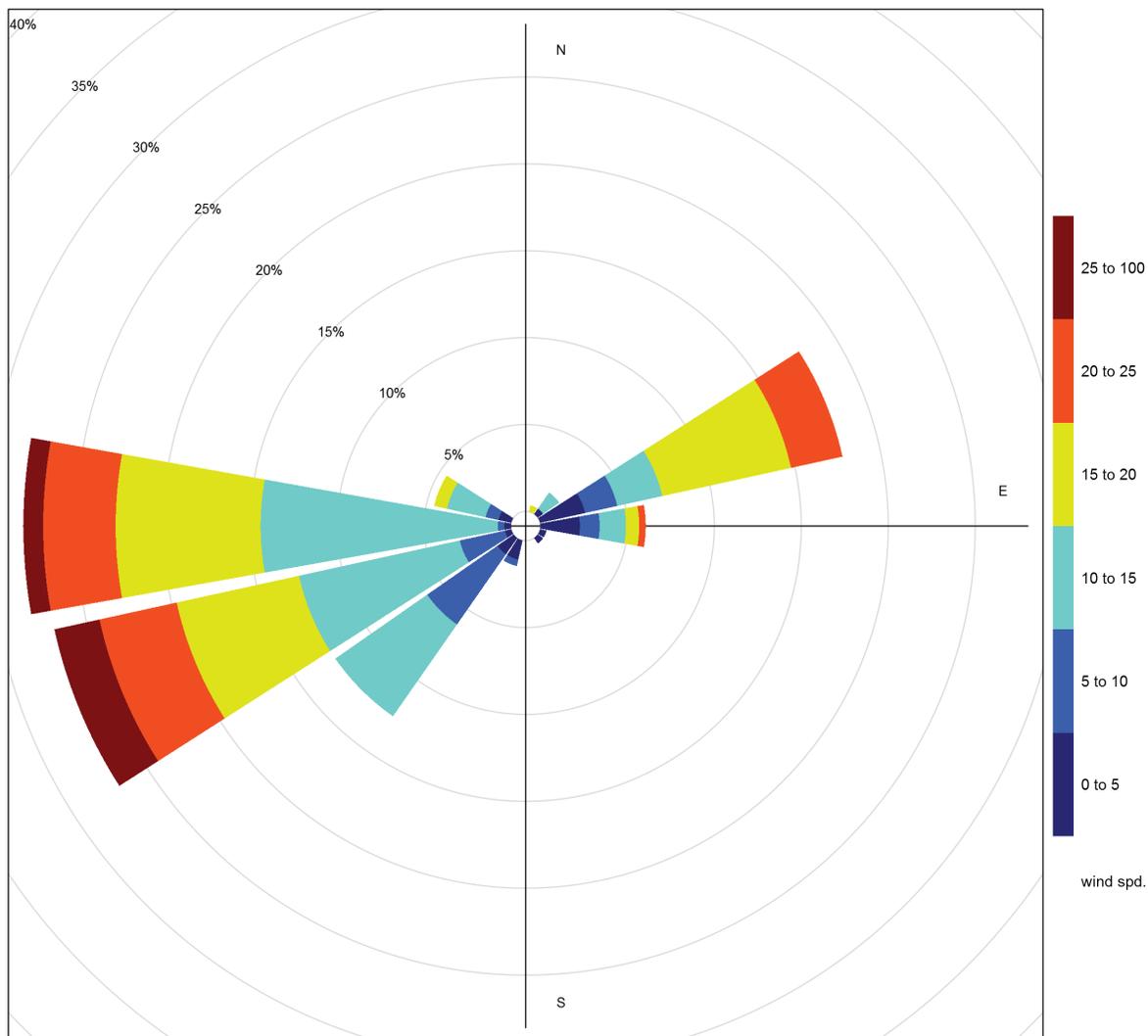


Figure 4-3 Wind rose for PM_{2.5} exceedance days recorded at the West GRIMM

Figure 4-4 illustrates the hourly PM concentrations recorded at the West monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-4 is based on data collected during July 2017 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. The diurnal variation in PM_{2.5} concentrations is indicative of the build-up of particulate from the wildfires in BC and Alberta during more stagnant conditions from evening until morning, with lower concentrations recorded during the day when winds would typically mix some of the stagnant air.

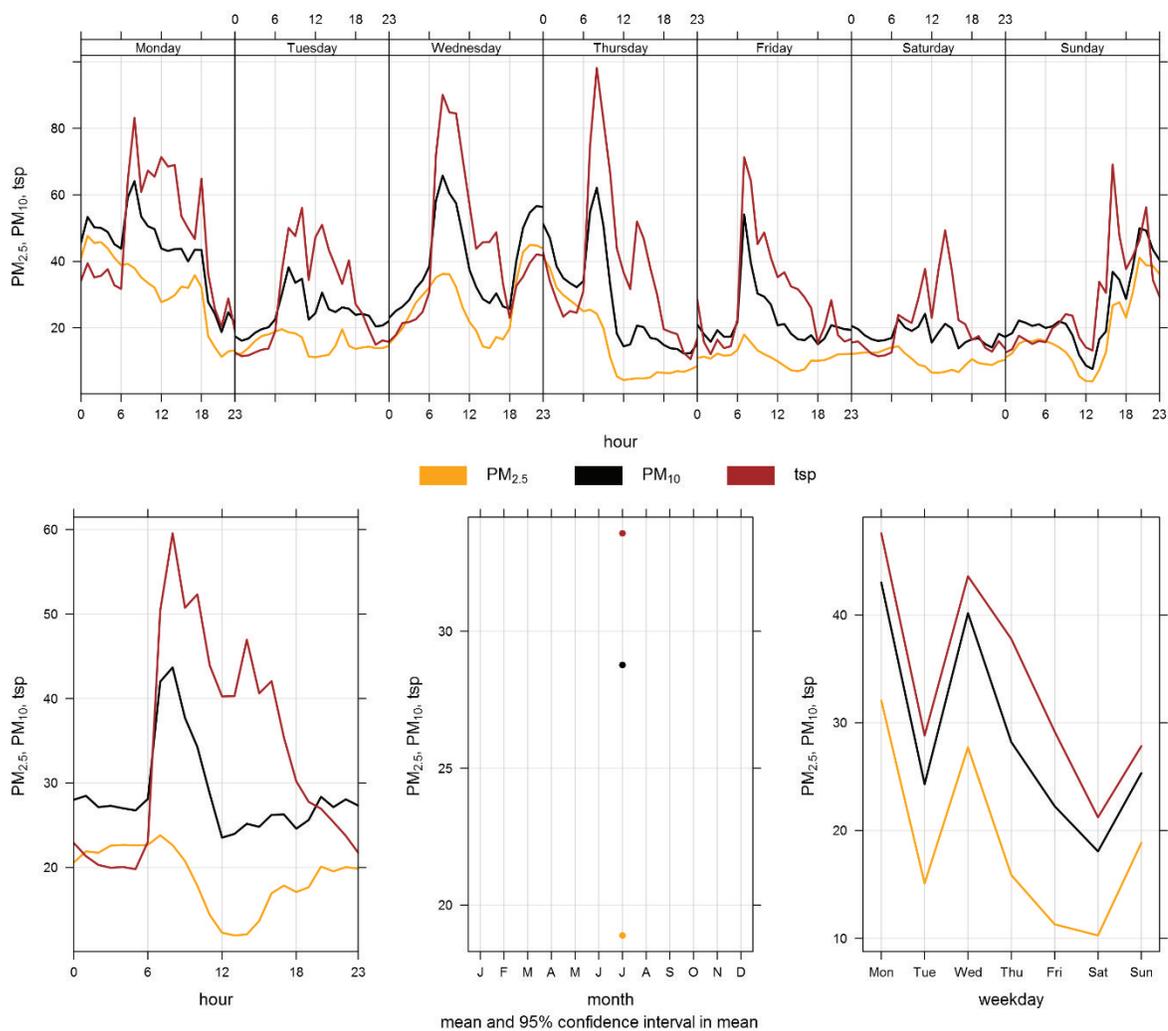


Figure 4-4 West particulate matter time variation

5 BERM GRIMM

5.1 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 Berm GRIMM underwent server migration resulting in 71.1% uptime.

Table 5-1 Equipment at the Berm 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 Berm monitor was placed at its current location as a result of the dispersion modelling conducted for the facility in 2009. Table 5-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month. The monitor had 71.1% uptime during the month of July due to annual calibration and maintenance activities and the data server migration from July 8th to 17th.

Figure 5-1 and Figure 5-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month. Table 5-3 summarizes the recorded exceedances.

During July, there were 11 and 6 exceedances of the 24-hour TSP (30 µg/m³) and PM_{2.5} (100 µg/m³) Guidelines. Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} exceedances at the Berm monitor. The smoke would also impact the TSP concentrations recorded.

Historically, the Berm monitor records an average of 12 and 0 exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of July. The largest number of TSP exceedances recorded during July occurred in 2010, which had 22 days that exceeded the Guideline. The fewest number of TSP exceedances was recorded during July 2013, which had 3 days that exceeded the Guideline. Prior to July 2017, the largest number of PM_{2.5} exceedances recorded during July occurred in 2014, which had 2 days that exceeded the Guideline.

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

The Berm monitor is located along a ridge at the edge of the Lafarge property and is in an area where on-site trucks drive through site, which can create fugitive dust. Quarry blasting also has the potential to impact short term PM immediately following a blast. High TSP concentrations in the month generally corresponded to the high wind speed events recorded in July.

Table 5-2 Summary of July 2017 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	14	6	19.6	96.5	31	4	6.8	229.8	53.2	31	71.1
PM ₁₀ (µg/m ³)	-	-	Berm	-	-	59.2	353.4	20	12	21.3	255.7	112.9	20	71.1
TSP (µg/m ³)	-	100	Berm	-	11	134.1	1289.2	20	14	24.9	256.2	325.9	20	71.1

Table 5-3 Days exceeding the Guideline for TSP at the Berm Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction	Average Wind Speed	Average RH	Root Cause (Provided by Lafarge)
Berm						
7/3/2017	129.8	-	30.1	15.2	46.6	
7/18/2017	113.4	38	265.4	11.6	45.0	Forest fires
7/19/2017	191.5	52	253.3	10.7	42.3	Forest fires
7/20/2017	325.9	-	254.2	17.8	46.7	Influenced by forest fires
7/21/2017	251.9	-	260.7	20.0	43.1	high wind event
7/22/2017	212.5	-	261.4	17.3	39.4	Influenced by forest fires
7/25/2017	118.6	-	43.8	10.5	51.8	Influenced by forest fires
7/26/2017	145.6	31	262.4	9.6	45.3	Forest fires
7/27/2017	252.5	30	255.8	13.8	33.2	Forest fires
7/30/2017	126.4	33	155.2	13.6	44.9	Forest fires
7/31/2017	110.2	53	76.7	14.0	60.9	Forest fires
Total # of Exceedances	11	6				
Maximum # of Exceedances (July)	22 (2010)	2 (2014)				
Average # of Exceedances (July)	12	0				
Minimum # of Exceedances (July)	3 (2013)	0 (2010 ~ 2016)				

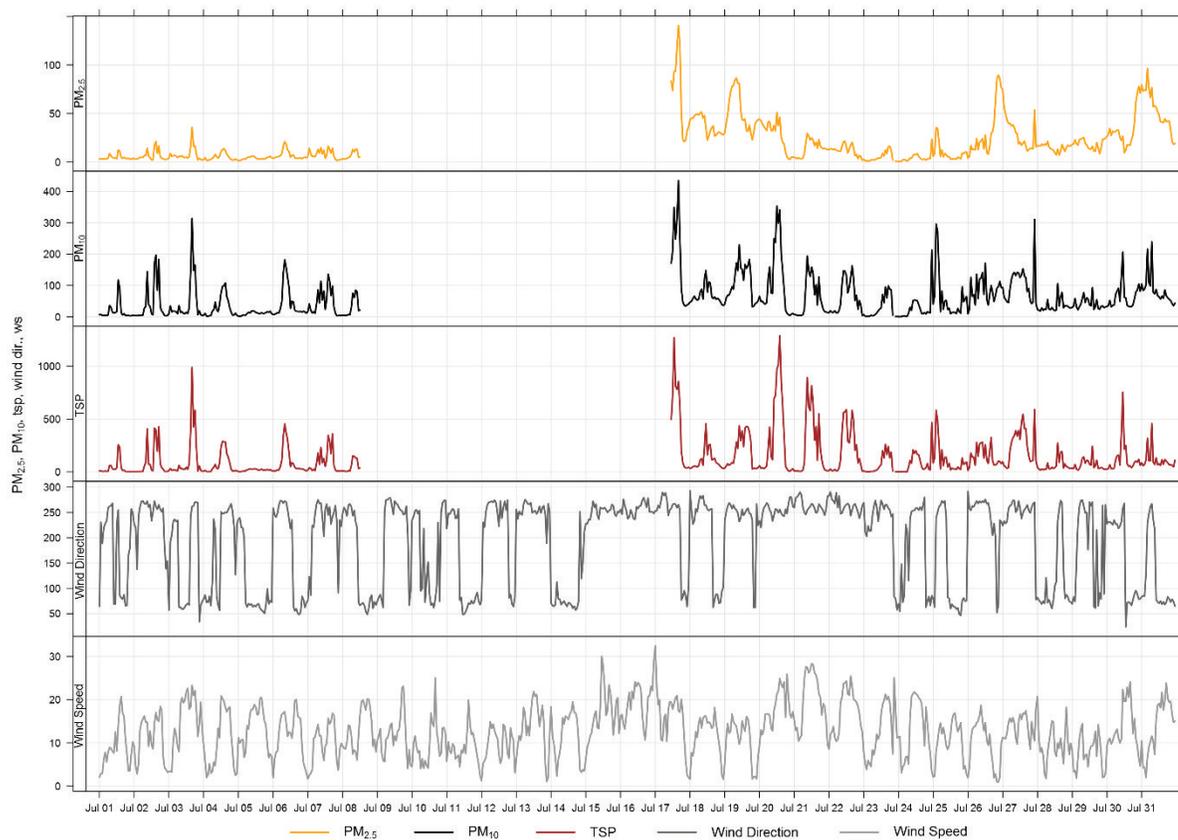


Figure 5-1 1-hour particulate matter concentrations recorded at the Berm monitor

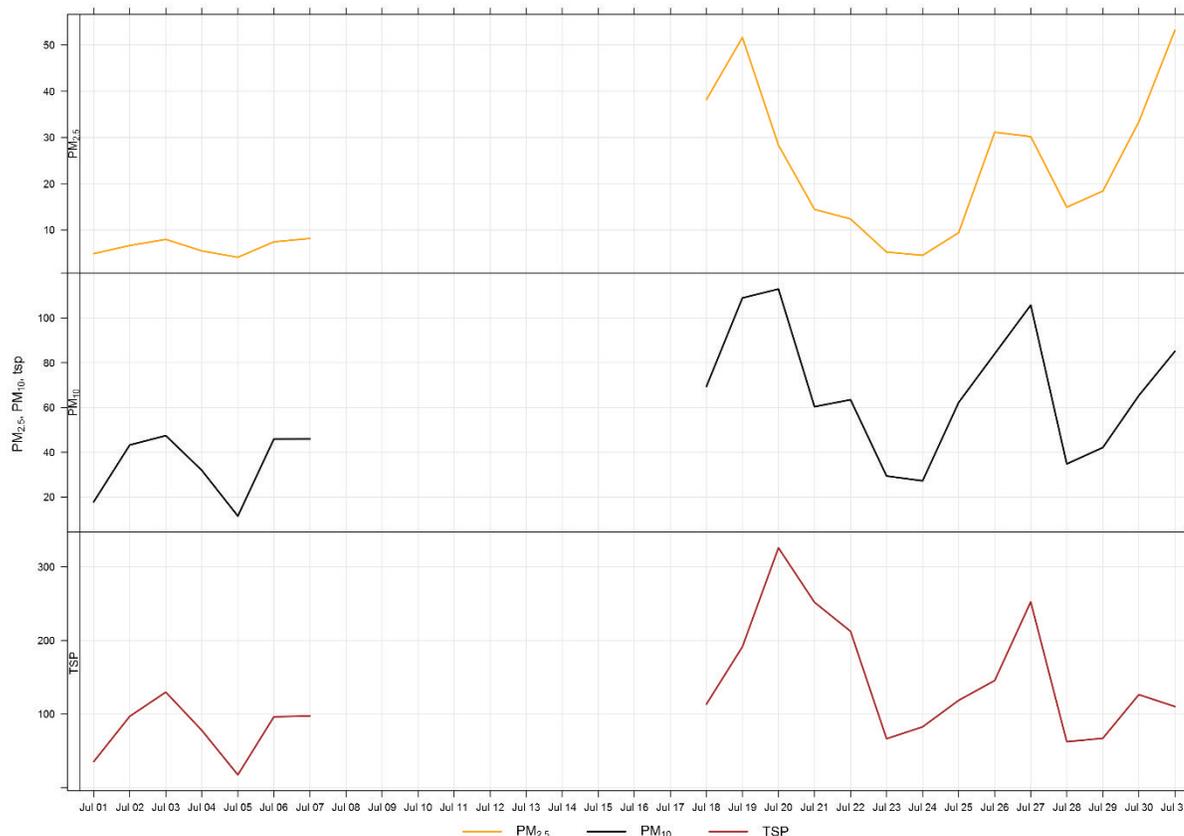


Figure 5-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 5-3 and Figure 5-4 shows the wind roses for the 11 and 6 days of TSP and $PM_{2.5}$ exceedances, respectively. This wind roses show that despite lower wind speeds recorded in July, exceedances were recorded. This indicates that the build-up of pollutants from the wildfires in BC and Alberta during more stagnant wind conditions was the primary cause of $PM_{2.5}$ exceedances, and a contributor to TSP exceedances, during the month

Figure 5-5 shows the variation of PM recorded at the Berm monitor over various time averaging periods. Similar to the Entrance monitor, the Berm, on average, records elevated PM concentrations during standard operating hours of Lafarge.

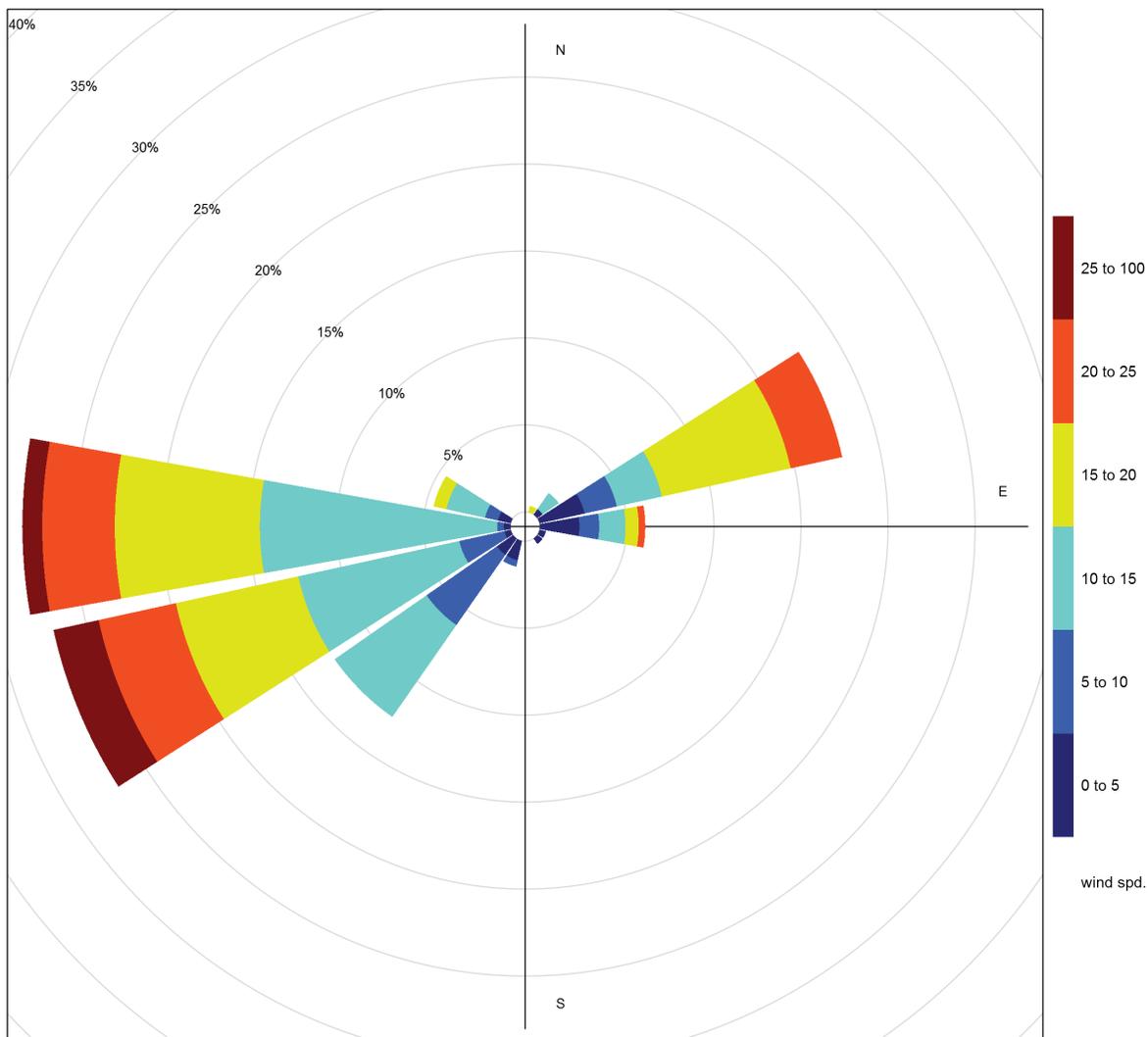


Figure 5-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM

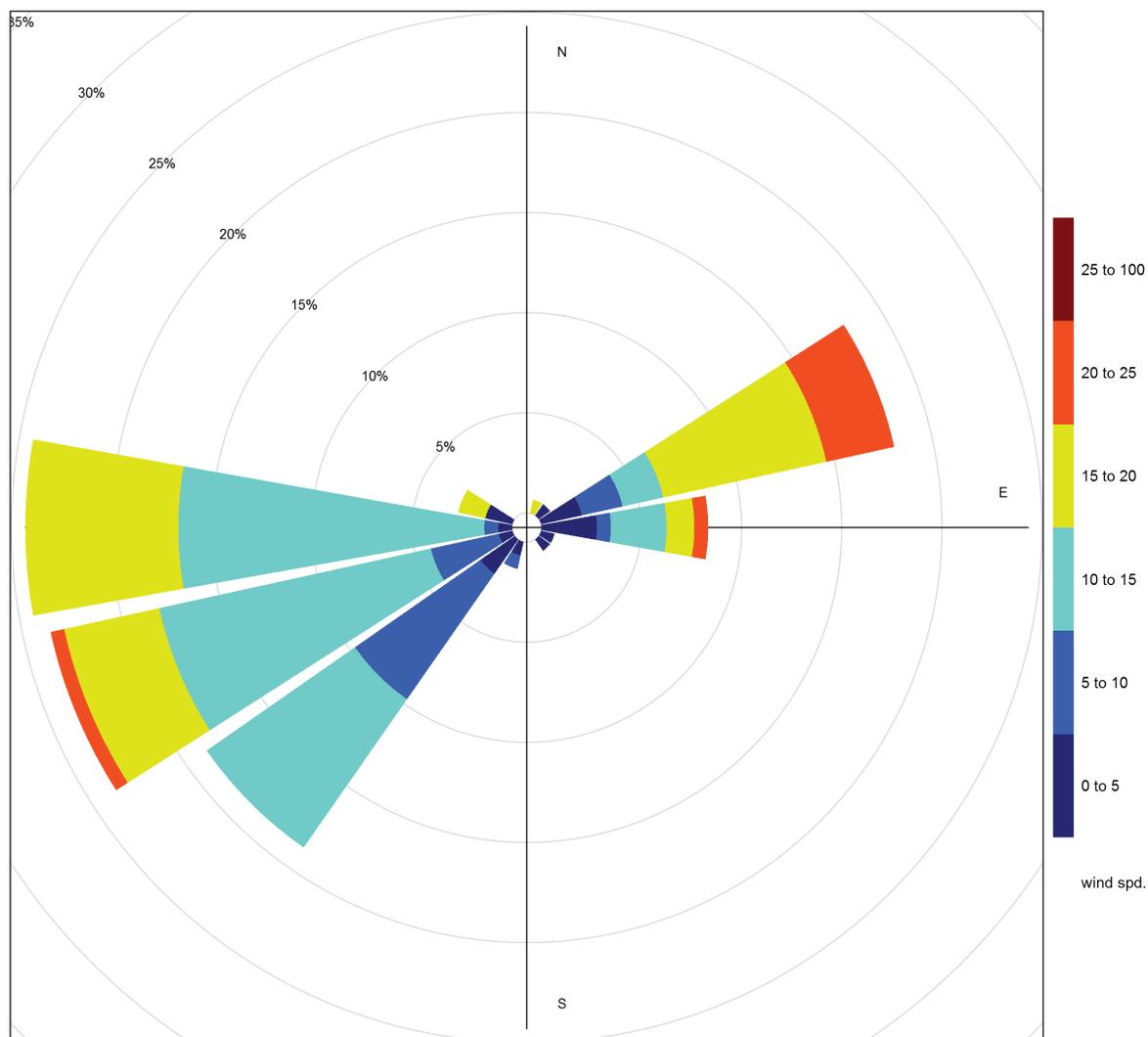


Figure 5-4 Wind rose for PM_{2.5} exceedance days recorded at the Berm GRIMM

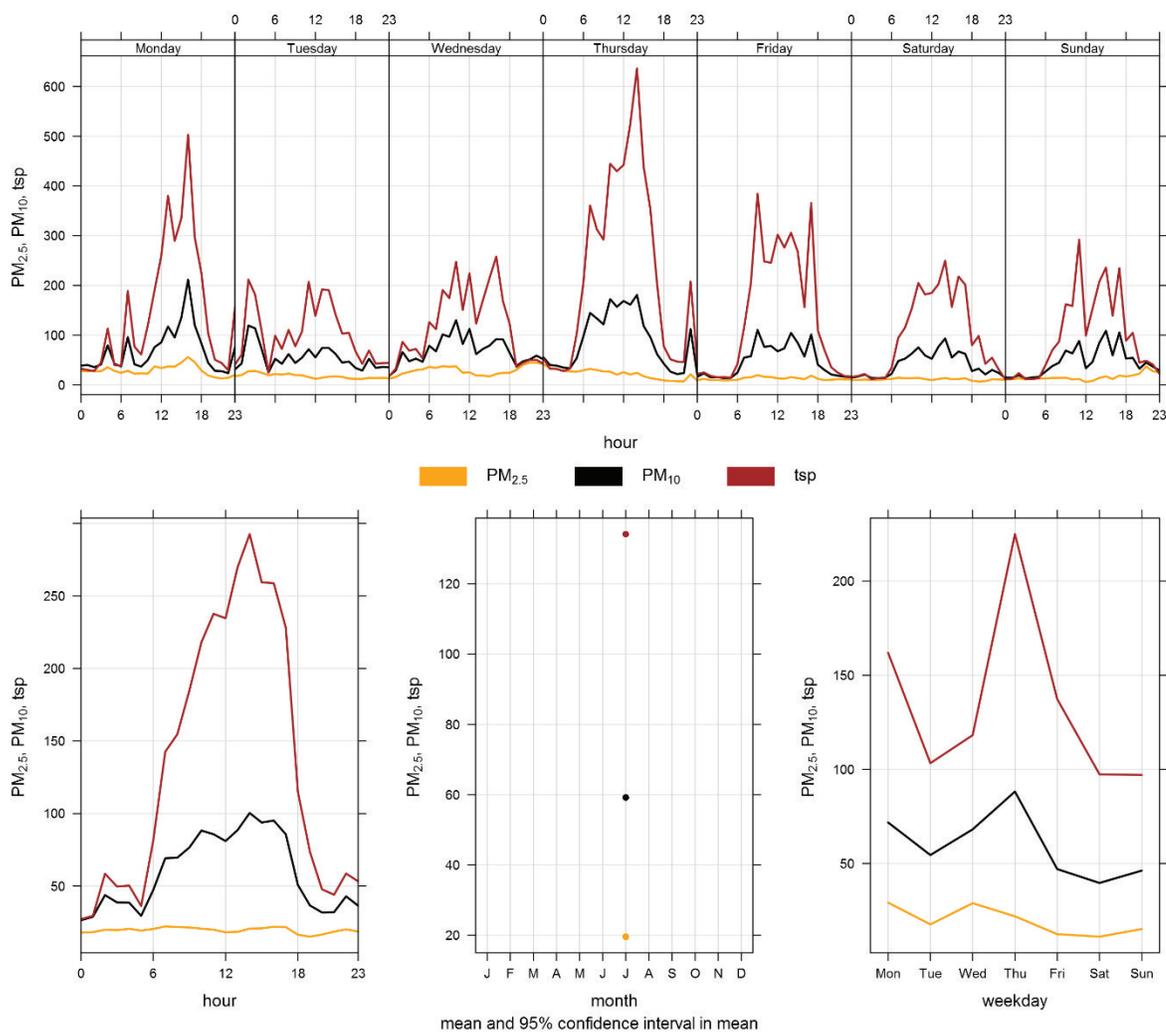


Figure 5-5 Berm particulate matter time variation

6 ENTRANCE GRIMM

6.1 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 underwent server migration from July 3rd to 8th resulting in 82% uptime.

Table 6-1 Equipment at the Entrance 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 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. Table 6-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month. The monitor had 82% uptime during the month of July due to annual calibration and maintenance activities and the data server migration from July 3rd to 8th.

Figure 6-1 and Figure 6-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month. Table 6-3 summarizes the recorded exceedances.

During July, there were 14 and 10 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (30 µg/m³) Guideline, respectively. Smoke from the forest fires in BC and Alberta are the likely cause of the PM_{2.5} exceedances at the Entrance monitor. The smoke would also impact the TSP concentrations recorded.

Historically, the Entrance monitor records an average of 19 and 2 exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of July. The largest number of TSP exceedances recorded during July occurred in 2014, which had 30 days that exceeded the Guideline. The fewest number of TSP exceedances recorded during July occurred in 2011, which had 8 days that exceeded the Guideline. The largest number of PM_{2.5} exceedances recorded during July occurred in 2014, which had 11 days that exceeded the Guideline.

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

The Entrance monitor is impacted by fugitive dust from plant activities, and the high wind events described under the Berm monitor section. Trucks also queue nearby the Entrance monitor while waiting to be loaded with material. 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 6-3 and Figure 6-4 show the wind roses for the days which exceeded the TSP and PM_{2.5} Guidelines at the Entrance GRIMM. Despite lower wind speeds recorded in July, exceedances were recorded. This indicates that the build-up of pollutants from the wildfires in BC and Alberta during more stagnant wind conditions was the primary cause of PM_{2.5} exceedances, and a contributor to TSP exceedances, during the month.

Table 6-2 Summary of July 2017 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	45	10	28.2	132.5	17	14	20.5	266.4	91.2	17	82.0
PM ₁₀ (µg/m ³)	-	-	Entrance	-	-	67.6	323.8	17	14	20.5	266.4	140.7	17	82.0
TSP (µg/m ³)	-	100	Entrance	-	14	111.0	803.5	20	14	24.9	256.2	227.4	20	82.0

Table 6-3 Days exceeding the Guideline for TSP at the Entrance Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction	Average Wind Speed	Average RH	Root Cause (Provided by Lafarge)
Entrance						
7/9/2017	107.6	-	261.2	11.7	46.7	Influenced by forest fires
7/10/2017	106.9	-	137.7	9.9	68.4	Influenced by forest fires
7/12/2017	108.8	39	263.4	9.5	62.5	Forest Fires
7/13/2017	132.9	-	256.8	13.5	45.2	Influenced by forest fires
7/15/2017	112.9	-	253.4	16.6	36.7	Influenced by forest fires
7/16/2017	159.1	41	255.4	19.4	24.2	Forest Fires
7/17/2017	170.4	91	263.5	16.1	37.5	Forest Fires
7/18/2017	178.0	48	265.4	11.6	45.0	Forest Fires
7/19/2017	156.1	59	253.3	10.7	42.3	Forest Fires
7/20/2017	227.4	32	254.2	17.8	46.7	Forest Fires
7/26/2017	176.6	41	262.4	9.6	45.3	Forest Fires
7/27/2017	161.8	36	255.8	13.8	33.2	Forest Fires
7/30/2017	123.1	40	155.2	13.6	44.9	Forest Fires
7/31/2017	123.1	57	76.7	14.0	60.9	Forest Fires
Total # of Exceedances	14	10				
Maximum # of Exceedances (July)	30 (2014)	11 (2014)				
Average # of Exceedances (July)	19	2				
Minimum # of Exceedances (July)	8 (2011)	0 (2011, 2013, 2016)				

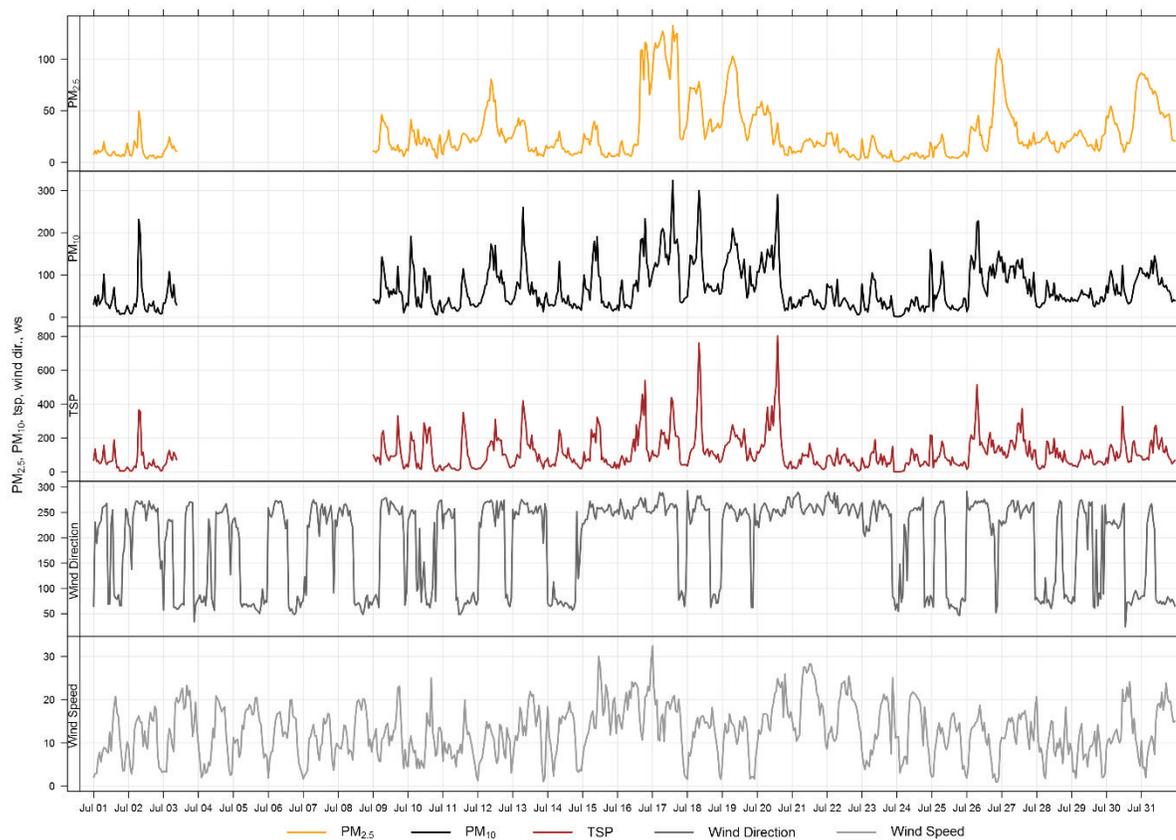


Figure 6-1 1-hour particulate matter concentrations recorded at the Entrance monitor

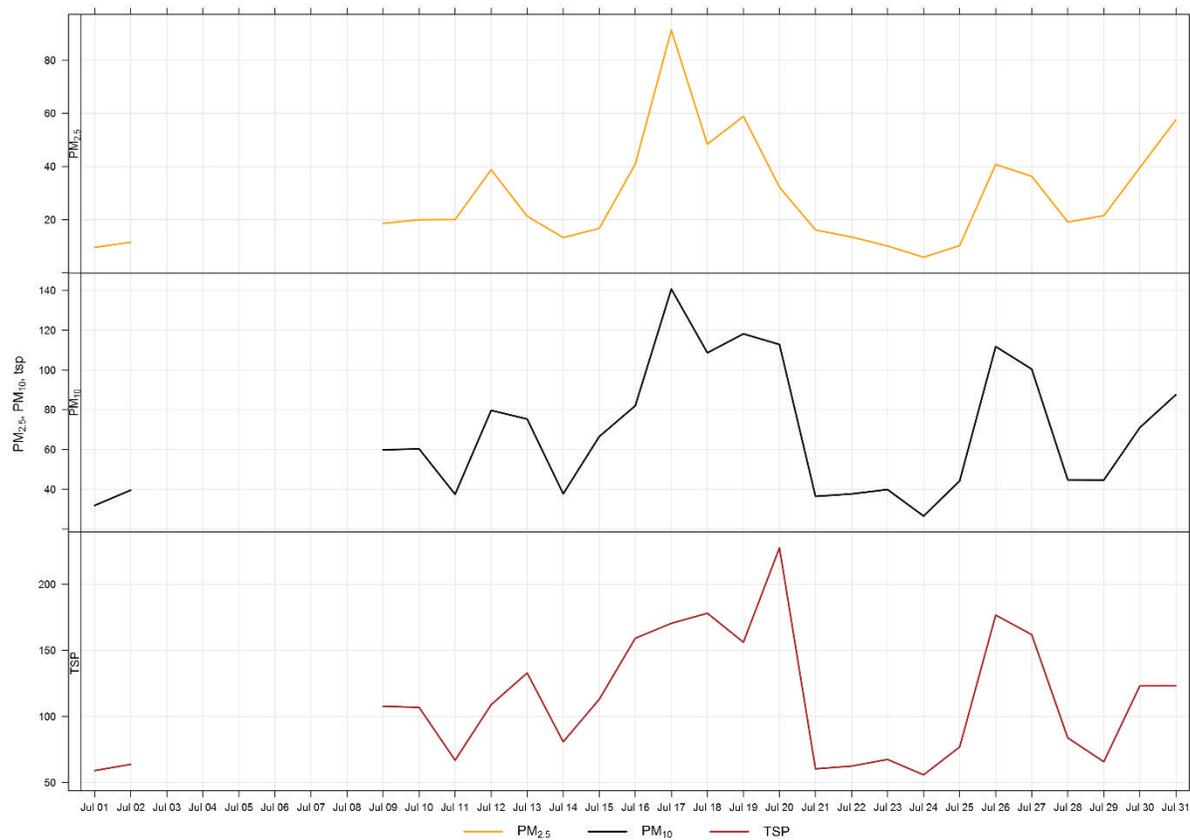


Figure 6-2 24-hour particulate matter concentrations at the Entrance monitor

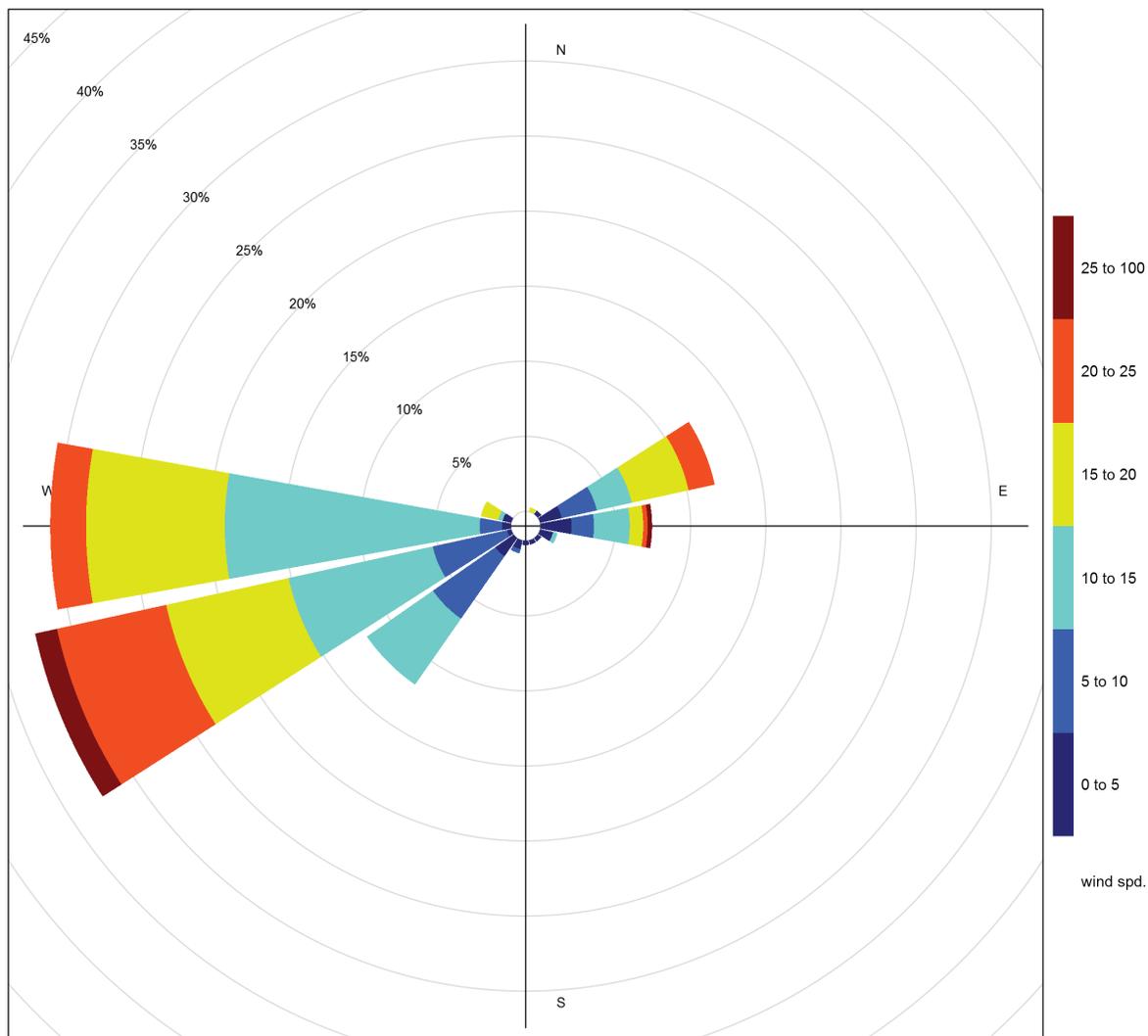


Figure 6-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

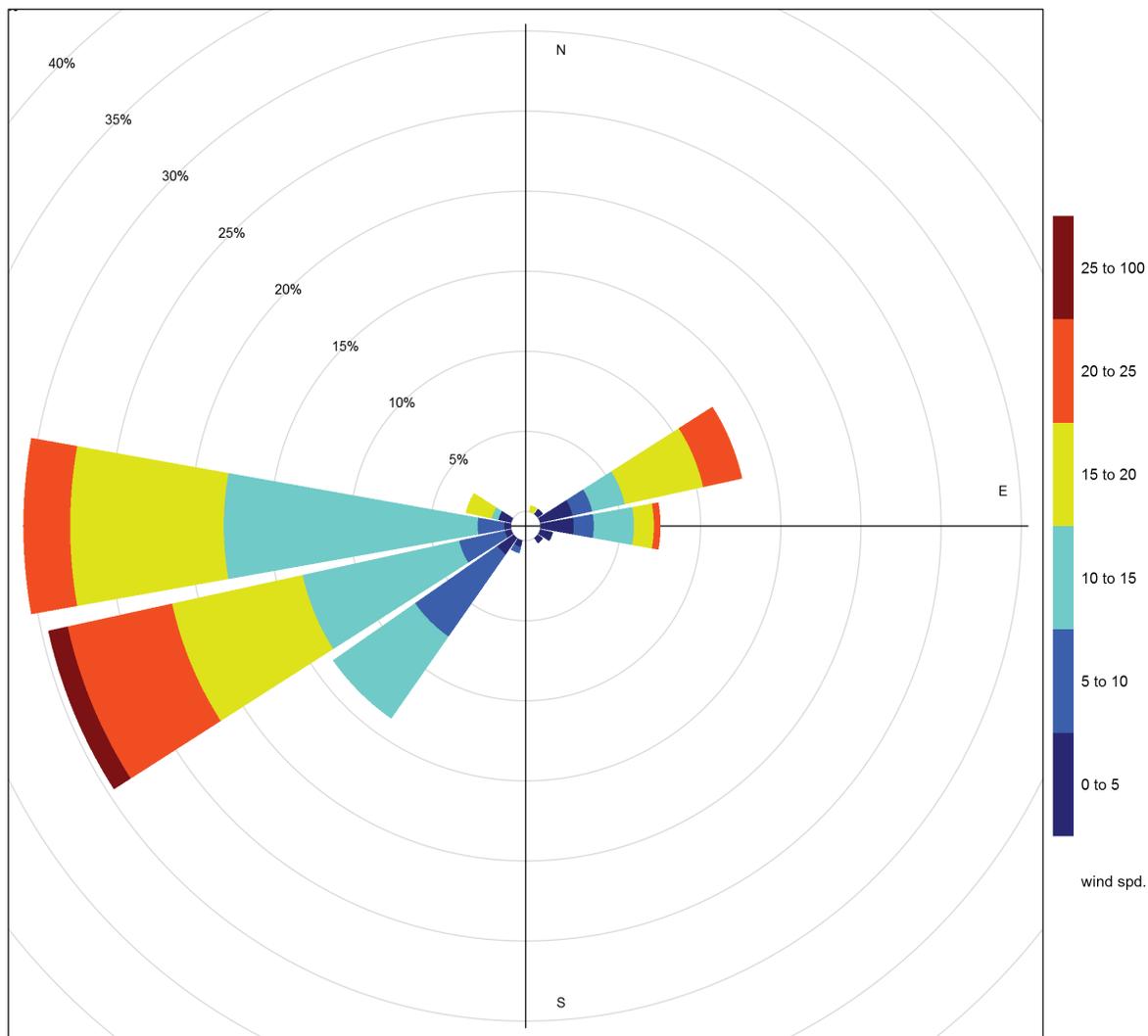


Figure 6-4 Wind rose for PM_{2.5} exceedance days recorded at the Entrance GRIMM

Figure 6-5 illustrates the hourly PM concentrations recorded at the Entrance monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 6-5 is based on data collected during July 2017 and indicates a strong weekday (Monday – Friday) diurnal pattern that is typical at this station.

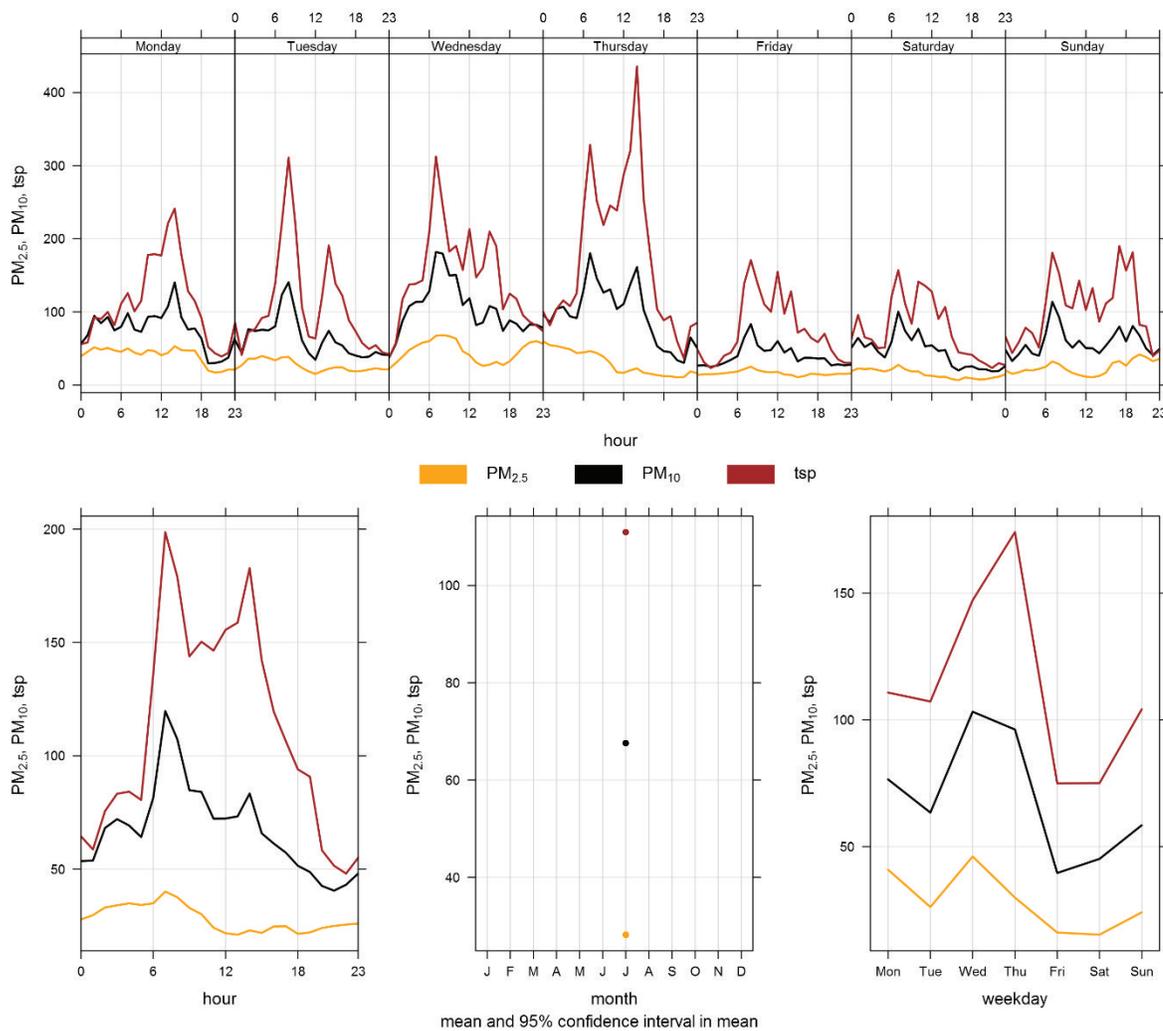


Figure 6-5 Entrance particulate matter time variation

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Appendix A

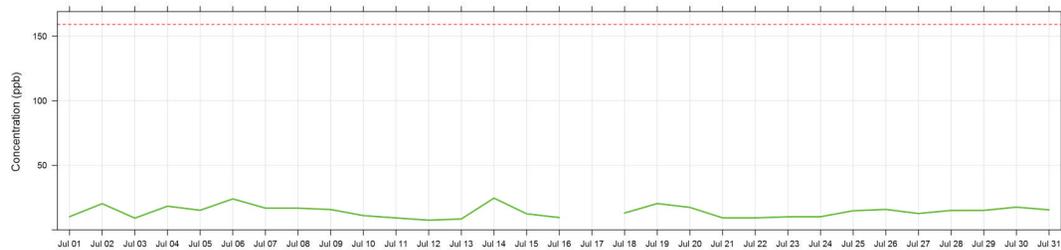
DATA & CALIBRATION REPORTS

Lagoon NO₂ (ppb) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	10.3	S	7.8	4.9	4.4	4.3	3.4	3.4	3.6	3.7	5.3	5.1	3.3	1.7	1.0	0.7	0.9	0.5	0.0	1.2	2.0	1.8	1.1	3.0	10.3	3.2
2	1.9	S	2.3	1.2	4.8	2.0	3.0	3.4	2.6	1.5	1.0	1.1	1.0	3.4	1.3	1.2	0.1	2.0	0.6	5.6	0.7	7.9	20.3	7.2	20.3	3.3
3	4.8	S	9.1	7.6	5.4	6.2	3.0	7.5	8.7	6.0	7.2	2.3	1.0	1.8	1.1	3.2	2.1	1.6	1.8	6.7	7.9	6.2	7.9	4.2	9.1	4.9
4	18.4	S	11.9	7.1	8.3	3.7	8.3	11.8	7.8	10.3	3.1	3.8	0.7	0.0	0.5	0.9	0.7	0.0	3.5	0.3	0.0	7.2	9.9	16.2	18.4	5.8
5	8.4	S	4.3	4.0	4.7	11.1	15.2	10.0	9.9	6.7	3.1	5.5	6.2	1.5	3.6	2.8	4.4	4.1	1.8	1.9	3.3	9.9	5.1	10.7	15.2	6.0
6	6.6	S	14.1	6.3	8.3	4.2	4.7	8.9	9.4	4.6	3.9	0.6	0.0	0.0	3.5	3.3	12.8	6.1	3.3	1.8	8.4	4.2	24.0	14.9	24.0	6.7
7	15.4	S	16.4	11.7	12.8	8.6	7.9	9.2	6.2	3.9	4.2	5.1	7.3	2.1	2.0	1.8	1.4	0.4	1.5	4.8	6.3	16.8	10.7	11.5	16.8	7.3
8	6.7	S	4.8	4.7	3.4	4.4	5.7	4.4	7.6	7.8	10.3	11.4	4.1	1.9	4.3	2.9	4.0	0.4	4.3	5.4	0.7	16.8	5.6	8.8	16.8	5.7
9	1.6	S	1.2	4.6	15.8	8.0	4.0	7.5	6.8	3.7	7.3	1.7	1.4	2.7	2.9	1.8	2.7	0.0	0.0	3.2	2.2	1.0	7.2	10.9	15.8	4.3
10	5.1	S	7.4	3.0	3.0	2.7	9.1	10.0	9.1	11.1	9.1	3.5	4.8	5.6	3.8	5.4	1.1	0.8	1.2	9.2	9.7	4.2	3.8	2.0	11.1	5.4
11	2.4	S	3.7	3.5	3.6	3.1	3.9	4.1	4.4	6.3	4.1	9.3	6.7	5.1	4.4	1.9	7.3	3.6	2.5	6.1	2.4	1.8	2.6	2.2	9.3	4.1
12	1.3	S	2.1	2.8	3.2	2.5	3.2	3.1	2.8	2.3	4.5	4.0	3.9	1.1	0.2	2.2	1.1	1.2	0.6	0.7	0.2	7.5	7.0	5.4	7.5	2.7
13	4.8	S	4.3	2.9	3.9	4.4	2.5	3.1	3.7	2.7	2.7	0.7	0.2	0.2	0.4	0.8	0.8	1.5	2.3	6.5	4.3	0.9	7.9	8.5	8.5	3.0
14	14.2	S	23.3	9.0	7.1	11.4	11.4	24.6	3.4	0.0	2.5	1.5	2.5	3.0	3.6	4.4	8.4	1.4	0.0	1.6	2.2	7.2	7.5	9.6	24.6	6.9
15	8.5	S	6.6	8.5	5.6	3.4	4.3	3.5	12.4	5.7	4.4	3.9	6.5	0.1	0.0	0.0	0.1	0.0	0.6	2.8	0.0	0.0	0.0	7.0	12.4	3.6
16	9.6	S	0.6	0.0	1.7	1.2	0.0	0.1	0.0	0.0	0.5	4.0	0.0	0.3	0.7	2.3	3.4	3.1	1.4	1.8	1.3	3.6	3.5	9.6	9.6	1.7
17	4.9	S	5.3	5.5	3.7	1.6	2.9	4.7	4.3	3.0	3.5	C	C	C	C	C	6.7	2.2	1.3	0.8	7.6	10.8	7.0	-	-	
18	7.7	S	5.9	7.2	6.7	5.3	4.3	5.0	4.6	3.0	5.4	2.8	1.1	0.6	3.4	2.0	5.9	4.9	3.0	1.8	13.1	10.7	10.4	8.1	13.1	5.3
19	9.3	S	18.5	8.5	8.6	10.8	11.6	20.4	14.9	8.2	4.6	5.4	2.8	6.2	6.0	4.7	2.3	1.5	6.3	5.8	9.0	11.5	16.2	16.9	20.4	9.1
20	17.4	S	8.2	5.7	7.7	9.0	12.8	10.6	11.2	10.3	3.9	3.6	1.2	0.8	1.6	0.4	1.8	2.1	8.6	2.7	5.3	8.0	8.3	6.4	17.4	6.4
21	0.2	S	3.5	5.6	4.3	7.5	6.5	4.1	4.7	1.5	2.2	2.9	3.3	4.6	1.0	0.8	1.1	5.8	3.7	8.3	5.9	3.5	9.3	5.5	9.3	4.2
22	8.1	S	9.1	9.1	4.4	8.1	5.1	6.7	1.2	0.7	0.7	2.3	3.5	3.6	5.2	0.1	0.9	3.0	6.4	4.2	2.7	1.5	9.3	6.6	9.3	4.5
23	3.5	S	1.5	0.7	1.7	4.2	4.5	5.7	3.4	5.7	1.3	1.4	7.2	5.3	2.7	6.4	10.2	4.7	7.8	1.4	7.7	0.9	0.0	1.7	10.2	3.9
24	0.2	S	1.9	2.5	4.8	5.1	4.2	8.4	2.4	0.4	1.1	1.7	1.8	3.8	1.8	5.1	2.0	5.6	4.7	4.3	2.9	2.5	8.0	10.2	10.2	3.7
25	6.2	S	5.4	8.6	7.8	8.1	5.8	6.8	8.9	4.5	5.8	1.1	2.0	1.5	4.0	1.8	0.9	0.6	1.2	0.0	2.1	7.9	10.3	14.8	14.8	5.0
26	13.2	S	11.8	7.9	9.8	12.2	11.2	15.8	14.7	8.4	11.2	9.4	7.8	4.4	6.2	8.7	4.5	1.6	2.8	7.3	5.7	6.1	8.2	14.8	15.8	8.8
27	12.7	S	7.1	6.8	8.0	8.8	7.1	8.9	8.5	5.3	4.5	1.5	0.5	0.0	0.3	0.8	1.5	0.4	1.8	1.9	0.8	3.3	7.3	2.4	12.7	4.4
28	0.3	S	3.7	11.5	15.1	5.4	5.4	10.3	9.2	6.8	7.8	2.6	0.1	0.3	0.4	0.0	1.9	0.9	5.5	4.1	0.6	0.6	12.1	6.1	15.1	4.8
29	5.0	S	15.1	11.7	8.9	6.4	6.6	3.8	3.8	5.8	2.9	1.7	2.6	0.0	0.0	3.2	3.1	2.3	5.5	5.6	10.2	13.7	10.1	13.0	15.1	6.1
30	9.6	S	4.9	5.9	4.4	6.1	4.5	4.5	3.7	8.1	3.9	2.2	4.7	5.0	2.9	2.9	4.7	8.9	6.9	7.0	2.3	1.7	12.9	17.6	17.6	5.9
31	11.0	S	15.5	10.2	9.5	12.9	12.7	7.7	5.6	4.7	3.9	2.7	3.4	2.3	6.7	7.9	7.9	5.5	1.4	1.6	2.4	1.0	4.9	6.1	15.5	6.4
Hourly Max	18.4	-	23.3	11.7	15.8	12.9	15.2	24.6	14.9	11.1	11.2	11.4	7.8	6.2	6.7	8.7	12.8	8.9	8.6	9.2	13.1	16.8	24.0	17.6	-	-
Hourly Average	7.4	-	7.7	6.1	6.5	6.2	6.3	7.7	6.4	4.9	4.4	3.4	3.2	2.3	2.5	2.6	3.3	2.6	3.1	3.8	4.0	5.7	8.5	8.5	-	-

S = SPAN C = CALIBRATION

Daily 1-hour NO₂ Maximums (ppb) at Trailer



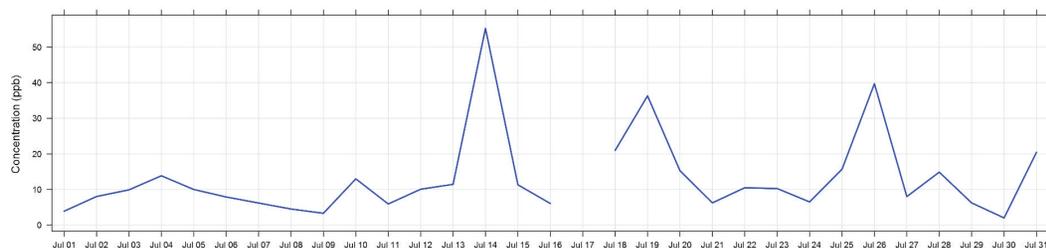
Number of 1HR Exceedances	0	Objective	159	PPB
Number of Non-Zero Readings	682			
Maximum 1-HR Average	24.6	PPB		
Maximum 24-HR Average	9.1	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0 %
Standard Deviation	4.1		Monthly Average	5.1 PPB

Lagoon NO (ppb) – July 2017

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	3.1	S	1.1	0.0	1.9	2.0	2.4	2.3	2.0	3.9	2.2	1.5	0.9	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	1.1	
2	0.0	S	0.2	0.0	0.0	0.2	5.2	4.5	3.2	0.1	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	8.0	0.0	8.0	1.0	
3	1.8	S	4.4	0.0	0.0	0.0	0.0	7.9	9.9	5.2	5.2	0.0	0.7	0.0	0.0	0.2	0.0	0.0	0.0	6.0	6.6	3.5	0.0	0.0	9.9	2.2	
4	6.3	S	0.0	0.7	10.4	1.1	13.9	11.3	3.5	6.8	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	13.9	2.4	
5	0.0	S	0.0	0.0	0.0	3.6	8.5	5.5	10.0	3.6	0.7	2.8	3.2	0.0	0.6	0.0	0.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	10.0	1.8	
6	0.0	S	0.9	0.0	3.4	0.0	0.4	7.3	7.9	0.8	0.1	0.0	0.0	0.0	0.0	0.0	2.2	0.1	0.0	0.0	0.0	0.0	3.3	0.3	7.9	1.2	
7	6.2	S	4.6	1.0	0.0	0.0	4.8	3.7	1.3	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.8	6.2	1.1	
8	0.9	S	0.4	0.0	0.0	0.0	4.2	0.6	3.7	0.6	1.9	4.5	0.0	0.0	1.8	0.0	0.1	0.0	1.0	0.0	0.0	0.2	0.0	0.0	4.5	0.9	
9	0.0	S	0.0	0.0	0.0	1.1	0.0	3.3	2.0	0.0	1.7	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	3.3	0.5	
10	0.0	S	0.0	0.0	0.0	0.0	10.0	3.4	0.8	13.0	6.5	1.2	0.8	2.2	0.7	0.9	0.0	0.0	1.3	1.1	1.4	0.1	0.0	0.0	13.0	1.9	
11	0.0	S	0.0	0.4	0.0	0.0	1.0	3.1	3.0	5.9	2.0	4.2	5.0	2.1	0.5	4.4	2.9	0.0	1.0	0.0	0.0	0.0	0.0	1.9	5.9	1.7	
12	1.3	S	0.0	0.0	0.0	3.1	8.4	10.1	4.6	1.6	4.7	2.0	0.5	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	10.1	1.6	
13	2.5	S	0.0	0.0	0.0	1.5	0.2	1.4	3.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	11.5	0.3	11.5	1.0	
14	5.6	S	4.3	0.0	3.9	3.7	20.6	55.2	0.3	0.0	1.9	0.0	0.0	0.7	0.2	1.3	2.2	0.0	0.0	0.0	0.4	0.0	0.6	55.2	4.4	55.2	4.4
15	0.2	S	0.0	0.0	0.0	0.0	1.6	1.1	11.3	0.3	0.0	1.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.8	
16	6.1	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	6.1	0.4	
17	1.3	S	2.4	0.4	0.0	0.0	0.6	0.0	0.1	0.3	1.2	C	C	C	C	C	C	0.0	0.0	0.0	0.0	8.0	0.0	0.0	-	-	
18	21.0	S	0.0	0.0	1.4	0.9	1.4	3.3	2.3	2.0	4.3	1.0	0.0	0.0	2.6	0.0	0.8	0.5	0.3	0.0	0.4	0.0	1.8	0.0	21.0	1.9	
19	0.0	S	23.6	6.1	4.6	9.1	10.6	36.3	27.9	5.0	0.6	0.4	0.5	5.7	2.7	2.5	0.0	0.0	1.8	0.0	0.0	2.4	8.4	6.0	36.3	6.7	
20	0.0	S	0.0	0.5	3.2	14.2	15.3	10.5	8.3	5.8	0.8	0.9	0.0	0.0	0.0	0.0	0.0	0.8	5.1	0.4	1.8	3.7	2.8	1.5	15.3	3.3	
21	0.0	S	0.1	0.9	0.0	5.0	6.3	2.4	4.2	0.0	0.6	2.6	5.1	3.4	0.0	0.0	0.0	5.4	2.3	5.6	3.8	0.0	1.8	0.0	6.3	2.1	
22	3.1	S	7.3	6.0	2.1	10.5	4.0	5.4	0.0	0.0	0.0	2.6	3.5	5.0	7.4	0.0	0.5	3.1	6.7	2.6	0.3	0.0	5.9	2.3	10.5	3.4	
23	0.0	S	0.0	0.0	0.0	1.5	2.1	4.6	2.5	7.2	0.0	0.0	9.5	6.9	1.2	5.5	10.3	4.5	5.0	0.0	2.0	0.0	0.0	0.0	10.3	2.7	
24	0.0	S	0.0	0.0	0.0	0.0	1.3	5.8	0.9	0.0	0.0	1.9	1.8	4.7	1.0	6.5	1.0	6.4	5.7	2.5	0.1	0.0	0.0	0.5	6.5	1.7	
25	0.5	S	0.4	0.0	4.0	9.6	7.2	13.3	15.7	4.8	4.3	0.0	0.6	0.2	2.5	0.3	0.0	0.0	1.2	0.0	0.0	0.0	4.3	0.0	15.7	3.0	
26	2.7	S	0.0	2.5	6.0	14.9	27.3	39.7	30.2	10.9	13.3	8.8	5.8	3.2	4.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	39.7	7.4	
27	0.0	S	0.0	0.0	2.0	6.7	5.6	8.0	7.9	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	8.0	1.5	
28	0.0	S	0.0	4.5	14.5	0.4	1.3	14.0	14.9	5.3	6.2	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	2.7	
29	0.0	S	6.0	3.8	0.0	1.9	6.2	0.9	1.2	3.2	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.7	0.0	0.0	5.6	6.2	1.3	
30	0.0	S	0.0	0.0	0.0	0.0	0.0	0.5	0.0	2.0	0.0	0.4	2.0	1.4	0.1	1.6	0.3	0.2	0.0	0.0	0.0	0.7	0.0	0.0	2.0	0.4	
31	0.0	S	0.5	20.5	0.0	0.6	9.6	3.2	0.9	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	20.5	1.6	
Hourly Max	21.0	-	23.6	20.5	14.5	14.9	27.3	55.2	30.2	13.0	8.8	9.5	6.9	7.4	6.5	10.3	6.4	6.7	6.0	6.6	8.0	11.5	6.0				
Hourly Average	2.0	-	1.8	1.5	1.9	3.0	5.8	8.7	5.9	2.9	1.9	1.2	1.5	1.3	1.0	0.7	0.8	0.8	1.0	0.7	0.6	0.7	1.6	0.8			

S = SPAN C = CALIBRATION

Daily 1-hour NO Maximums (ppb) at Trailer



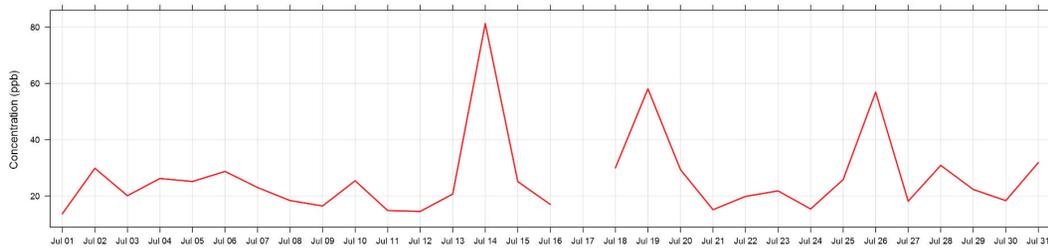
Number of 1HR Exceedances	n/a	Objective	n/a	PPB
Number of Non-Zero Readings	375			
Maximum 1-HR Average	55.2	PPB		
Maximum 24-HR Average	7.4	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0 %
Standard Deviation	4.6		Monthly Average	2.1 PPB

Lagoon NO_x (ppb) – July 2017

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	13.7	S	9.0	4.9	6.6	6.6	6.1	6.1	5.9	7.9	7.8	7.0	4.7	3.1	1.5	0.7	1.0	0.4	0.2	2.4	2.8	2.0	1.7	3.6	13.7	4.6
2	2.1	S	4.0	1.7	5.8	3.6	9.7	9.4	7.3	3.0	1.7	2.5	2.1	5.9	2.1	1.9	0.4	3.0	1.2	7.7	0.7	9.7	29.9	7.1	29.9	5.3
3	8.1	S	15.0	8.4	5.5	6.9	3.9	16.9	20.1	12.7	13.9	3.8	3.2	2.5	2.2	4.9	3.4	2.6	2.9	14.2	16.0	11.2	9.2	4.5	20.1	8.3
4	26.2	S	12.8	9.2	20.1	6.2	23.6	24.5	12.6	18.5	5.4	5.8	1.4	0.4	1.1	1.6	1.3	0.2	5.1	0.4	0.0	8.4	10.5	17.1	26.2	9.2
5	8.5	S	4.2	4.0	4.8	16.1	25.1	16.9	21.4	11.7	5.3	9.7	10.8	2.3	5.6	4.1	6.5	6.8	2.9	2.5	3.5	10.5	5.7	10.8	25.1	8.7
6	6.5	S	16.4	7.1	13.1	4.7	6.4	17.6	18.7	6.7	5.4	1.0	0.0	0.0	4.5	4.0	16.5	7.6	3.9	2.6	8.7	4.6	28.7	16.6	28.7	8.8
7	23.0	S	22.4	14.0	13.0	9.4	14.0	14.3	8.8	5.2	5.4	6.3	8.1	3.6	3.5	2.6	1.8	0.7	2.6	5.7	6.8	21.2	10.9	13.6	23.0	9.4
8	9.1	S	6.6	4.7	3.3	5.0	11.3	6.4	12.7	9.7	13.6	17.3	5.5	2.9	7.6	4.3	5.5	0.6	6.7	6.7	0.7	18.4	6.0	9.1	18.4	7.6
9	1.6	S	1.2	4.8	16.4	10.5	5.2	12.2	10.1	4.3	10.3	2.4	2.3	4.0	5.1	2.5	3.9	0.0	0.0	4.3	2.6	0.9	10.9	11.0	16.4	5.5
10	5.1	S	7.7	3.0	3.0	3.2	20.5	14.8	11.2	25.4	16.9	6.0	6.9	9.1	5.8	7.6	1.6	0.7	3.9	11.7	12.4	5.7	5.0	2.5	25.4	8.2
11	2.8	S	4.2	5.3	4.8	4.2	6.2	8.5	8.7	13.6	7.4	14.8	13.0	8.5	7.8	3.7	13.1	7.8	3.6	8.4	2.9	2.3	3.6	5.4	14.8	7.0
12	4.0	S	2.7	3.9	4.4	7.0	13.0	14.5	8.7	5.3	10.5	7.3	5.7	1.6	0.3	4.5	1.4	1.4	0.8	0.7	0.1	8.7	7.5	7.0	14.5	5.3
13	8.7	S	5.3	3.0	4.9	7.2	4.0	5.9	8.9	4.4	4.1	1.2	0.3	0.4	1.0	1.0	1.0	1.6	3.4	9.4	4.2	0.8	20.7	10.1	20.7	4.8
14	21.2	S	29.0	9.3	12.3	16.4	33.3	81.3	5.0	0.0	5.7	2.2	3.7	5.0	5.1	7.1	11.9	1.9	0.0	1.7	2.2	8.9	7.6	11.5	81.3	12.3
15	10.0	S	6.7	9.0	5.6	3.5	7.2	5.8	25.1	7.2	5.2	6.4	10.2	0.3	0.1	0.1	0.2	0.0	1.1	3.2	0.0	0.0	0.0	7.8	25.1	5.0
16	17.0	S	0.5	0.0	2.0	2.4	0.0	0.4	0.0	0.0	0.0	0.6	7.9	0.2	0.6	1.3	3.4	5.2	5.4	2.3	1.8	1.8	4.3	4.4	17.0	2.7
17	7.6	S	9.0	7.2	4.4	1.7	4.8	5.7	5.6	4.6	6.0	C	C	C	C	C	C	7.2	2.6	1.4	0.8	16.9	11.5	7.9	-	-
18	30.0	S	5.9	7.8	9.3	7.4	7.0	9.5	8.1	6.2	10.9	5.0	2.0	1.0	7.2	2.6	7.9	6.6	4.5	1.8	14.7	11.0	13.4	8.0	30.0	8.2
19	10.2	S	43.4	15.8	14.5	21.1	23.5	58.1	44.1	14.4	6.4	7.0	4.6	13.2	9.9	8.5	3.2	1.8	9.4	6.4	10.2	15.2	25.9	24.1	58.1	17.0
20	18.3	S	8.7	7.3	12.2	24.4	29.4	22.3	20.7	17.2	5.9	5.7	2.0	1.3	2.5	0.9	3.0	4.2	14.9	4.2	8.3	12.9	12.4	9.1	29.4	10.8
21	0.2	S	4.9	7.7	5.5	13.7	14.0	7.7	10.0	2.6	4.0	6.7	9.6	9.2	2.1	1.8	1.9	12.4	7.2	15.1	10.9	3.8	12.4	6.1	15.1	7.4
22	12.4	S	17.6	16.4	7.8	19.8	10.3	13.3	2.3	1.5	1.7	6.1	8.3	9.8	13.9	1.0	2.7	7.4	14.3	8.0	4.3	1.6	16.5	10.2	19.8	9.0
23	4.0	S	1.5	0.7	1.8	7.0	7.8	11.6	7.1	14.3	2.1	2.6	18.0	13.5	5.2	13.1	21.8	10.5	14.0	1.8	11.0	0.8	0.0	2.0	21.8	7.5
24	0.4	S	2.0	2.8	5.9	6.3	6.7	15.4	4.5	1.4	2.4	4.8	4.8	9.8	4.0	12.8	4.2	13.2	11.6	8.0	4.3	2.9	8.5	11.8	15.4	6.5
25	7.8	S	6.9	9.8	13.0	18.9	14.2	21.4	25.8	10.5	11.3	2.2	3.8	3.0	7.7	3.3	2.2	1.0	3.6	0.0	2.2	8.0	11.2	20.4	25.8	9.1
26	17.1	S	12.8	11.6	17.0	28.4	39.8	56.9	46.3	20.5	25.8	19.4	14.8	8.9	12.2	10.1	4.5	1.7	3.0	8.5	6.1	6.0	9.0	16.9	56.9	17.3
27	13.3	S	7.0	7.0	11.1	16.7	13.9	18.1	17.6	8.2	6.3	2.3	0.8	0.0	0.5	1.1	2.5	0.5	2.1	2.1	1.0	4.5	10.2	2.9	18.1	6.5
28	0.3	S	3.9	17.3	30.9	7.1	7.9	25.7	25.3	13.3	15.2	3.9	0.8	0.7	0.4	0.0	3.3	1.1	5.9	4.6	0.7	0.6	12.6	6.5	30.9	8.2
29	5.1	S	22.3	16.7	9.1	9.4	14.1	5.8	6.2	10.2	3.7	2.0	4.3	0.0	0.0	4.3	3.9	2.4	6.8	5.7	13.3	13.9	10.5	19.8	22.3	8.2
30	9.9	S	4.7	5.7	4.6	6.6	5.5	6.2	4.9	11.3	5.1	3.8	8.0	7.5	4.3	5.8	6.2	10.3	7.6	7.8	2.3	1.6	14.9	18.3	18.3	7.1
31	11.0	S	17.3	31.9	9.9	14.7	23.4	12.1	7.8	5.8	4.4	3.2	4.9	2.6	7.9	8.9	8.9	6.4	1.3	1.8	2.5	1.0	5.5	8.2	31.9	8.7
Hourly Max	30.0	-	43.4	31.9	30.9	28.4	39.8	81.3	46.3	25.4	25.8	19.4	18.0	13.5	13.9	13.1	21.8	13.2	14.9	15.1	16.0	21.2	29.9	24.1		
Hourly Average	10.2	-	10.2	8.3	9.1	10.2	13.3	17.6	13.6	9.0	7.4	5.6	5.8	4.3	4.4	4.2	5.0	4.1	4.9	5.2	5.1	7.0	10.9	10.1		

S = SPAN C = CALIBRATION

Daily 1-hour NO_x Maximums (ppb) at Trailer



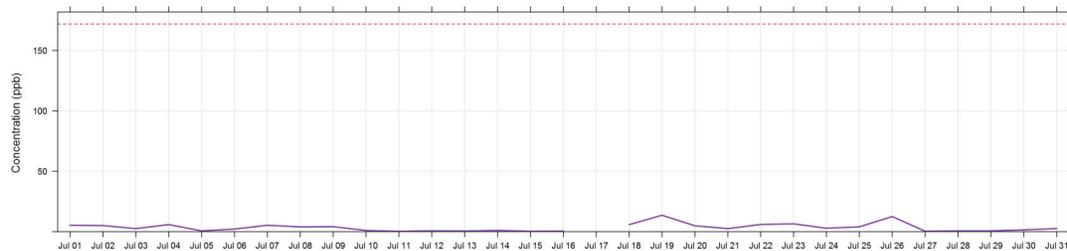
Number of 1HR Exceedances	n/a	Objective	n/a	PPB
Number of Non-Zero Readings	685			
Maximum 1-HR Average	81.3	PPB		
Maximum 24-HR Average	17.3	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0 %
Standard Deviation	7.8	Monthly Average	8.1	PPB

Lagoon SO₂ (ppb) – July 2017

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	S	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	5.3	5.2	3.6	2.4	1.6	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	5.3	0.8	
2	0.1	S	0.1	0.0	0.0	0.0	1.4	1.0	1.6	0.3	0.1	0.8	1.1	5.0	1.9	1.0	0.2	1.0	0.3	0.0	0.0	0.1	0.3	0.1	5.0	0.7	
3	0.0	S	0.2	0.2	0.1	0.1	0.1	0.4	1.0	0.6	1.0	0.7	0.7	1.0	0.7	0.9	1.2	2.5	1.5	2.0	0.2	0.1	0.5	0.1	2.5	0.7	
4	0.3	S	0.0	0.0	0.2	0.0	0.1	0.2	1.3	1.6	2.0	5.8	0.2	0.1	0.8	0.6	0.4	0.5	3.4	0.2	0.0	0.0	0.0	0.0	5.8	0.8	
5	0.0	S	0.0	0.0	0.0	0.2	0.4	0.1	0.5	0.4	0.3	0.4	0.6	0.6	0.6	0.6	0.5	0.3	0.3	0.7	0.3	0.3	0.1	0.2	0.7	0.3	
6	0.2	S	0.0	0.0	0.1	0.0	0.2	0.6	0.5	0.1	0.4	0.0	0.3	0.2	2.1	0.4	0.4	0.2	0.2	0.4	1.0	0.6	0.4	0.2	2.1	0.4	
7	0.1	S	0.1	0.0	0.2	0.3	0.5	1.0	1.2	0.8	0.9	5.3	1.0	0.7	1.0	1.1	0.0	0.0	0.3	0.2	0.0	0.1	0.0	0.1	5.3	0.7	
8	0.0	S	0.5	0.0	0.1	0.1	0.9	0.6	0.9	3.7	3.9	0.8	0.4	0.5	0.9	0.9	1.1	0.6	1.4	0.7	0.2	0.4	0.4	0.3	3.9	0.8	
9	0.6	S	1.3	1.6	1.0	0.6	0.8	1.5	1.1	1.4	0.8	1.1	1.3	2.6	2.2	4.1	1.7	0.2	0.1	0.6	0.1	0.3	0.5	0.4	4.1	1.1	
10	0.3	S	0.5	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	1.0	0.9	0.3	0.3	0.1	0.1	0.2	0.1	0.2	0.1	1.0	0.3	
11	0.1	S	0.1	0.2	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.0	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.1	
12	0.0	S	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.4	0.4	0.7	0.3	0.7	0.2	
13	0.2	S	0.3	0.1	0.2	0.1	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.5	0.1	
14	0.2	S	0.2	0.0	0.0	0.0	0.1	1.0	0.1	0.0	0.1	0.4	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.2	0.0	0.0	0.0	0.0	1.0	0.2	
15	0.0	S	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.1	
16	0.4	S	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.0	0.2	0.4	0.2	
17	0.1	S	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	C	C	C	C	C	C	0.6	0.8	0.8	0.6	0.6	0.1	0.2	-	-	
18	0.4	S	0.1	1.4	0.8	0.5	2.4	4.2	5.8	0.3	1.1	0.3	0.0	0.1	3.0	0.4	0.9	0.8	0.7	1.0	0.9	0.4	0.2	0.0	5.8	1.1	
19	0.0	S	13.6	3.1	1.7	2.9	2.8	7.8	7.2	1.9	0.3	0.2	0.5	2.0	1.2	1.9	0.3	0.0	0.1	0.4	0.4	0.4	0.4	0.4	13.6	2.1	
20	0.2	S	0.4	0.7	2.0	4.8	4.8	2.4	1.6	1.1	0.3	0.6	0.3	0.3	0.6	0.1	0.9	1.3	0.4	0.1	1.3	2.0	0.6	0.3	4.8	1.2	
21	0.0	S	0.5	0.8	0.7	1.2	0.4	0.3	0.2	0.1	0.2	1.0	1.9	1.3	0.2	0.1	0.3	1.7	1.5	2.5	2.5	0.3	0.2	0.7	2.5	0.8	
22	1.5	S	4.3	4.5	1.7	4.0	2.1	2.7	0.3	0.4	0.5	1.9	3.3	4.6	5.7	0.6	1.4	3.4	5.9	2.8	0.6	0.2	0.3	0.3	5.9	2.3	
23	0.5	S	0.4	0.3	0.2	0.3	0.7	2.1	1.7	1.6	0.4	0.6	4.5	3.0	1.5	3.5	6.5	4.7	1.2	0.6	0.5	0.4	0.2	0.2	6.5	1.6	
24	0.2	S	0.2	0.2	0.2	0.5	0.9	2.3	0.5	0.2	0.2	0.8	0.6	2.5	1.0	2.5	0.4	2.7	2.8	0.7	0.4	0.1	0.1	0.0	2.8	0.9	
25	0.0	S	0.0	0.3	1.6	2.1	1.9	3.4	4.0	1.2	1.4	0.2	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.1	4.0	0.8	
26	0.0	S	0.3	1.5	3.2	4.3	8.4	12.5	10.1	4.4	7.2	2.1	2.8	3.3	3.2	1.0	0.2	0.3	0.5	0.5	0.4	0.4	0.3	0.3	12.5	2.9	
27	0.2	S	0.1	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2
28	0.4	S	0.4	0.4	0.5	0.3	0.3	0.4	0.6	0.3	0.3	0.3	0.4	0.2	0.1	0.0	0.1	0.1	0.3	0.4	0.4	0.3	0.2	0.1	0.6	0.3	
29	0.0	S	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.7	0.3	0.3	0.1	0.3	0.7	0.2	
30	0.0	S	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.8	1.4	0.9	1.0	1.3	1.2	1.3	1.2	1.1	1.0	0.4	1.4	0.6	
31	0.4	S	0.3	0.4	0.2	0.1	0.2	0.3	0.2	0.7	1.4	1.5	2.6	0.9	0.5	0.7	0.6	0.8	0.5	0.4	0.3	0.4	0.4	0.6	2.6	0.6	
Hourly Max	1.5	-	13.6	4.5	3.2	4.8	8.4	12.5	10.1	4.4	7.2	5.8	4.5	5.0	5.7	4.1	6.5	4.7	5.9	2.8	2.5	2.0	1.0	0.7			
Hourly Average	0.2	-	0.8	0.5	0.5	0.8	1.0	1.5	1.4	0.7	1.0	1.0	0.9	1.1	1.1	0.8	0.6	0.8	0.8	0.6	0.4	0.3	0.3	0.2			

S = SPAN C = CALIBRATION

Daily 1-hour SO₂ Maximums (ppb) at Trailer

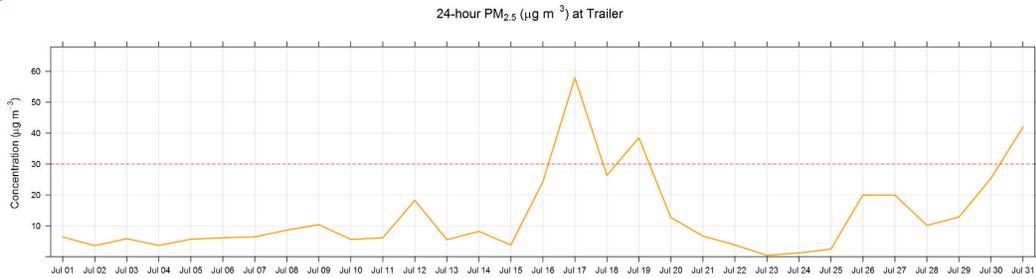


Number of 1HR Exceedances	0	Objective	172	PPB
Number of 24HR Exceedances	0	Objective	48	PPB
Number of Non-Zero Readings	642			
Maximum 1-HR Average	13.6	PPB		
Maximum 24-HR Average	2.9	PPB		
IZS Calibration Time	31	HRS	Operational Time	744 HRS
Monthly Calibration Time	6	HRS	Operational Uptime	100.0 %
Standard Deviation	1.4		Monthly Average	0.8 PPB

Lagoon PM_{2.5} (µg/m³) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	7.4	9.1	7.0	9.8	6.3	5.6	1.0	1.7	11.2	9.5	9.4	10.1	7.0	3.8	6.3	4.5	7.3	5.6	2.0	4.9	5.6	6.3	6.1	5.5	11.2	6.4
2	4.5	5.6	5.9	6.3	6.6	3.5	1.0	2.7	8.7	3.1	0.0	3.5	1.7	0.0	0.0	0.0	0.3	2.4	1.0	0.6	4.2	3.8	9.4	10.9	10.9	3.6
3	9.1	11.6	9.1	7.7	7.7	9.1	7.7	8.0	7.4	6.3	4.9	5.5	8.4	7.7	5.9	3.1	1.1	0.6	0.6	4.2	2.0	1.7	4.9	5.2	11.6	5.8
4	11.9	10.9	7.0	3.8	7.3	6.3	5.2	5.9	6.6	5.2	1.4	0.6	2.0	2.4	0.3	0.0	0.0	1.7	0.6	0.0	1.0	3.1	3.1	1.0	11.9	3.6
5	1.0	1.9	3.5	4.2	3.1	3.8	6.7	7.4	5.6	4.2	2.7	4.9	4.5	7.7	6.6	4.5	4.5	4.2	7.3	5.9	4.2	12.3	8.7	16.5	16.5	5.7
6	16.1	8.0	9.4	7.3	5.6	4.5	6.6	8.4	10.1	7.0	6.6	3.6	0.0	0.6	5.2	6.6	9.3	5.9	2.4	3.8	3.5	3.1	6.6	6.3	16.1	6.1
7	19.7	11.6	11.2	10.2	10.5	8.7	8.0	10.1	6.7	5.2	8.4	5.6	2.5	1.2	1.7	3.5	2.0	1.4	1.7	3.8	3.6	6.3	5.9	4.9	19.7	6.4
8	4.9	3.8	7.7	7.0	5.1	7.3	4.9	7.4	10.1	6.8	6.6	7.0	6.3	12.3	9.8	8.7	6.3	9.1	13.0	10.5	10.5	13.3	10.9	17.3	17.3	8.6
9	8.7	16.1	13.7	15.1	17.9	18.2	17.2	16.1	17.5	25.6	21.4	12.3	6.3	1.0	2.7	3.1	3.1	3.6	2.4	4.2	3.5	3.5	5.9	9.4	25.6	10.4
10	9.8	7.3	5.9	4.9	6.7	10.8	8.7	10.3	7.0	5.2	4.9	4.5	5.2	3.8	6.7	7.7	6.6	4.9	3.8	1.3	0.0	2.0	3.1	2.7	10.8	5.6
11	1.3	1.3	3.5	2.8	4.5	4.5	3.8	3.5	4.9	5.9	7.0	7.3	7.4	5.1	5.2	9.8	9.1	8.0	8.0	8.7	8.4	8.0	9.4	9.4	9.8	6.1
12	9.1	11.6	13.0	11.6	14.0	15.6	21.4	26.4	26.4	30.6	29.5	33.4	31.6	21.8	18.2	18.6	14.0	19.7	8.0	7.7	8.7	15.4	14.4	17.2	33.4	18.2
13	13.7	9.1	10.9	10.8	11.6	7.7	9.8	8.0	11.2	8.0	4.9	3.6	2.7	0.0	1.3	1.9	1.0	0.6	0.0	0.0	1.7	3.5	4.9	5.2	13.7	5.5
14	5.2	10.8	10.2	8.0	6.6	6.6	6.6	11.6	7.3	7.7	9.5	6.6	7.2	7.7	24.2	9.8	6.6	4.9	2.4	4.2	7.7	8.4	8.4	8.0	24.2	8.2
15	7.0	10.0	8.7	8.4	7.0	5.6	4.9	3.1	8.0	6.3	3.0	4.3	3.8	1.3	0.0	0.0	0.0	0.6	2.4	1.3	0.6	2.4	0.0	2.0	10.0	3.8
16	4.2	3.1	3.8	3.0	2.0	2.7	1.3	1.0	1.7	0.6	0.0	3.8	3.5	0.0	2.7	13.7	77.8	76.0	54.2	88.7	81.6	69.7	39.0	48.0	88.7	24.3
17	58.3	73.9	81.0	78.5	78.1	73.6	68.3	69.3	67.9	65.1	57.4	55.4	47.1	C	C	C	123.5	124.0	17.9	23.9	13.0	13.7	13.0	13.4	124.0	57.9
18	19.0	30.6	32.3	33.8	37.3	35.5	33.8	34.8	33.0	30.9	27.4	21.1	7.7	15.1	22.1	38.0	39.3	17.5	14.4	17.5	22.1	18.6	25.0	25.7	39.3	26.4
19	21.4	27.1	36.9	51.7	54.5	64.4	64.4	69.0	65.1	64.0	61.6	45.7	33.7	33.4	26.3	21.8	17.5	13.4	21.8	21.1	27.3	24.6	30.2	27.1	69.0	38.5
20	30.9	27.1	21.4	23.9	21.8	20.4	21.1	25.7	20.4	18.3	13.0	7.3	3.5	4.5	4.8	2.4	1.7	9.8	10.1	4.9	2.7	2.8	2.4	2.8	30.9	12.6
21	3.8	3.5	0.0	0.0	0.3	1.0	1.7	2.4	6.7	8.4	11.5	10.1	10.9	11.9	11.2	8.4	7.2	8.7	9.1	9.1	9.4	7.3	9.1	8.7	11.9	6.7
22	9.1	8.4	10.1	7.7	5.9	6.6	6.0	4.9	4.8	1.3	2.7	4.2	3.2	1.7	2.0	1.7	0.0	1.7	1.8	3.6	2.7	0.0	0.0	0.6	10.1	3.8
23	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.0	0.0	0.0	0.0	0.0	3.8	1.1	0.0	1.1	0.3	0.0	0.0	0.0	3.8	0.4
24	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	1.7	2.7	2.0	1.1	2.7	1.7	0.0	0.0	7.7	4.5	0.0	0.0	2.0	2.0	7.7	1.2
25	1.8	1.7	3.2	3.8	3.8	3.8	2.7	3.5	3.1	3.1	0.3	0.0	0.0	2.0	0.6	2.4	2.0	0.0	0.0	1.0	1.7	3.5	6.3	8.0	8.0	2.4
26	6.6	4.2	3.1	3.1	5.2	6.6	10.1	7.0	5.9	3.5	5.9	6.3	4.5	2.4	0.0	10.1	20.7	20.7	26.4	51.4	63.2	68.3	68.3	75.3	75.3	19.9
27	69.0	54.2	43.6	38.7	28.5	18.6	19.3	24.9	20.0	16.5	20.0	15.8	9.1	7.7	4.5	8.0	11.6	7.0	7.3	10.5	13.3	11.2	7.2	11.9	69.0	19.9
28	11.6	14.0	13.7	9.8	12.6	10.5	8.4	10.0	8.7	7.3	8.7	9.4	8.0	7.3	4.7	3.1	6.6	9.8	10.5	10.5	10.0	19.5	14.4	14.0	19.5	10.1
29	13.7	13.7	12.6	17.2	13.7	16.8	13.4	13.0	11.6	18.6	17.2	13.7	8.7	11.9	11.9	12.4	7.7	23.5	5.9	5.6	5.6	12.3	13.0	14.0	23.5	12.8
30	22.5	23.9	26.6	26.0	27.8	24.9	20.0	16.5	19.6	20.4	14.0	7.7	1.7	3.8	13.0	12.6	18.2	20.0	26.7	32.5	52.8	55.6	59.5	62.6	62.6	25.4
31	62.6	58.8	56.3	60.2	55.6	57.7	47.8	45.4	41.8	44.3	53.5	55.2	49.2	39.4	43.2	41.8	42.5	37.6	34.6	29.2	19.3	9.1	9.1	12.6	62.6	42.0
Hourly Max	69.0	73.9	81.0	78.5	78.1	73.6	68.3	69.3	67.9	65.1	61.6	55.4	49.2	39.4	43.2	41.8	42.5	37.6	34.6	29.2	19.3	9.1	9.1	12.6		
Hourly Average	15.0	15.2	15.2	15.3	15.1	14.9	14.0	14.8	14.8	14.2	13.4	12.0	9.3	7.3	8.1	8.7	14.6	14.3	9.8	12.1	12.6	13.2	12.9	14.5		

C = CALIBRATION



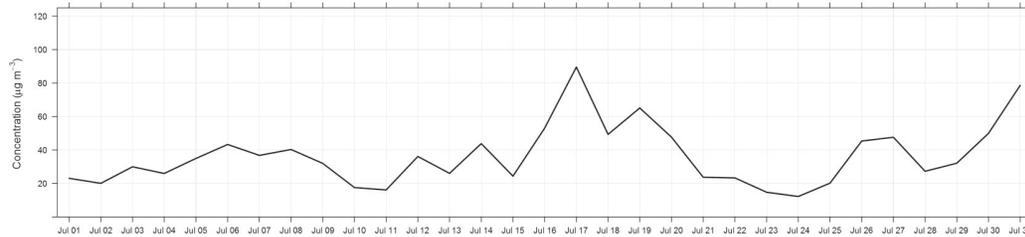
Number of 1HR Exceedances	5	Guideline	80	UG/M3	
Number of 24HR Exceedances	3	Objective	30	UG/M3	
Number of Non-Zero Readings	684				
Maximum 1-HR Average	124.0	UG/M3			
Maximum 24-HR Average	57.9	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	744	HRS
Monthly Calibration Time	3	HRS	Operational Uptime	100.0	%
Standard Deviation	17.2		Monthly Average	13.0	UG/M3

Lagoon PM₁₀ (µg/m³) – July 2017

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	27.3	31.5	22.3	15.3	16.0	13.9	23.0	49.1	28.7	10.9	12.5	18.1	16.0	14.6	113.0	36.4	16.7	23.0	18.8	5.3	9.2	11.9	9.0	10.8	113.0	23.0
2	19.2	14.4	11.1	9.0	18.8	16.7	12.5	39.2	49.8	36.4	19.4	9.2	6.1	6.1	17.3	16.0	12.5	47.2	13.2	13.2	13.2	29.4	32.2	19.2	49.8	20.0
3	12.5	22.3	24.5	18.8	35.7	31.5	21.9	37.1	30.8	35.0	30.9	22.3	66.0	35.0	27.3	18.8	58.6	27.0	67.0	24.4	25.2	16.0	27.0	3.2	67.0	29.9
4	22.3	35.7	20.2	16.7	13.2	11.8	21.7	40.7	51.2	78.7	16.0	16.7	25.2	15.3	24.4	28.3	25.9	16.7	18.8	33.6	21.6	42.1	17.4	8.7	78.7	25.9
5	10.4	16.0	13.2	23.8	17.4	25.2	40.7	34.3	59.0	55.0	43.5	51.9	34.3	31.5	58.3	47.0	30.1	32.9	34.3	32.9	23.0	35.6	39.9	48.5	59.0	34.9
6	37.8	30.8	30.1	28.1	32.9	28.7	66.7	99.1	98.8	47.0	63.9	15.3	9.7	5.4	63.9	64.8	66.7	47.0	34.3	31.9	31.5	39.9	36.7	28.0	99.1	43.3
7	23.0	32.2	35.7	30.8	38.6	40.7	50.5	90.0	57.6	59.0	50.6	43.5	22.3	27.3	28.0	35.0	19.3	37.8	27.3	28.3	19.7	32.9	27.8	24.4	90.0	36.8
8	17.4	12.5	12.7	24.4	17.4	19.5	13.9	51.6	53.3	22.3	35.7	61.1	47.0	134.9	62.5	59.0	32.2	43.5	66.7	28.7	37.1	48.4	25.9	39.2	134.9	40.3
9	29.4	35.7	37.1	33.6	39.9	42.8	39.2	37.1	39.9	48.4	53.3	33.6	18.8	18.1	20.9	31.5	25.2	45.6	26.6	24.4	16.0	10.4	22.3	37.8	53.3	32.0
10	10.4	28.0	35.7	19.3	30.2	12.5	9.7	9.7	13.2	24.5	28.0	18.1	7.5	25.1	21.6	28.2	37.7	9.8	9.0	2.6	3.3	7.5	20.2	9.0	37.7	17.5
11	11.8	13.2	11.1	10.4	11.9	16.7	13.1	13.2	13.9	13.9	12.5	23.2	22.3	21.7	20.2	21.2	20.2	15.3	13.9	16.0	13.1	20.9	12.5	24.5	24.5	16.1
12	19.5	26.6	22.9	25.2	26.6	27.3	30.1	49.1	47.7	50.6	76.6	70.9	59.7	32.2	29.5	43.7	30.1	40.7	24.4	25.2	25.9	30.1	33.6	18.8	76.6	36.1
13	23.8	28.0	28.7	24.4	24.5	20.2	34.3	38.5	70.2	40.0	37.5	20.9	23.0	26.9	15.3	24.4	18.8	22.3	17.5	22.3	20.1	16.7	7.5	18.6	70.2	26.0
14	27.4	30.8	23.1	16.1	15.3	25.2	41.4	57.5	66.7	11.8	123.1	80.0	49.1	37.8	200.5	51.0	37.1	20.2	15.7	39.2	20.9	28.0	19.3	14.6	200.5	43.8
15	16.7	30.1	31.5	19.5	17.4	13.2	30.8	23.0	37.1	35.7	71.7	42.3	47.7	19.3	9.7	8.2	31.5	11.8	12.5	13.9	14.6	14.6	10.4	21.6	71.7	24.4
16	28.0	11.8	13.9	15.3	16.7	16.7	18.8	18.1	13.9	14.6	37.1	39.2	35.0	43.5	30.8	54.0	149.8	129.3	92.1	147.0	113.2	99.8	58.4	76.7	149.8	53.1
17	95.1	109.7	126.6	111.6	109.0	98.4	97.0	128.0	102.7	103.3	101.2	89.2	86.9	C	C	C	168.1	171.8	60.5	38.5	17.4	28.7	13.9	23.3	171.8	89.6
18	34.3	40.0	46.4	54.1	57.6	48.4	46.3	54.7	66.7	56.1	76.6	49.8	26.8	32.9	40.7	52.6	95.9	44.2	42.1	42.1	50.5	36.4	40.0	49.1	95.9	49.3
19	47.0	54.1	63.9	68.2	73.8	80.8	94.9	113.3	115.3	113.0	89.0	86.8	60.5	55.7	61.8	66.7	39.3	35.7	43.5	35.7	45.9	40.7	42.8	34.3	115.3	65.1
20	45.6	43.5	42.1	49.8	36.4	45.6	49.1	94.5	84.3	80.8	67.4	56.1	41.4	48.4	133.6	46.3	56.9	49.1	26.0	11.8	8.3	4.0	7.5	16.1	133.6	47.7
21	8.3	8.3	16.0	8.7	6.8	6.8	20.9	26.0	36.4	26.0	22.3	31.5	62.5	61.9	33.2	20.2	20.1	32.8	28.3	25.2	19.5	14.6	18.8	13.9	62.5	23.7
22	12.5	18.1	12.5	11.8	16.7	16.0	16.0	27.3	18.8	13.9	33.6	25.2	45.6	32.2	39.9	18.2	39.2	31.5	40.0	26.6	15.3	8.2	3.5	37.1	45.6	23.3
23	9.2	16.7	0.7	1.7	6.1	9.0	9.0	17.8	11.8	28.7	11.1	16.1	20.9	13.9	14.4	19.5	30.1	22.3	31.5	20.9	23.3	18.8	0.0	0.0	31.5	14.7
24	3.3	5.4	4.0	3.3	3.3	2.6	7.5	11.1	19.5	10.3	28.0	13.1	16.1	28.0	13.9	19.5	14.6	13.2	8.6	9.7	12.5	10.4	25.9	9.0	28.0	12.2
25	11.1	12.5	25.5	37.9	23.8	16.0	13.2	28.7	20.2	38.5	12.5	8.2	16.7	20.2	32.7	23.0	22.3	16.1	13.2	16.7	17.4	16.8	20.9	19.6	38.5	20.2
26	28.0	17.4	28.7	23.8	17.8	20.2	32.9	55.6	59.0	46.9	58.3	45.6	29.2	25.2	9.7	41.4	54.0	43.8	46.1	72.3	83.6	77.7	77.6	93.5	93.5	45.3
27	85.1	71.0	51.3	57.0	49.5	51.9	50.5	95.6	73.8	49.7	56.1	47.0	37.8	25.2	31.5	30.8	35.0	39.2	25.4	23.8	35.7	31.5	41.4	47.0	95.6	47.6
28	23.7	17.8	10.4	19.5	16.0	21.6	21.6	35.6	36.4	32.2	42.1	25.9	33.6	24.4	26.6	19.2	18.1	29.5	30.1	32.2	32.2	33.4	30.1	42.1	42.1	27.3
29	44.2	28.7	44.2	38.8	29.4	29.4	36.4	36.4	41.4	34.4	31.5	27.3	24.4	29.4	30.8	24.4	30.8	34.3	22.3	30.1	32.2	39.9	25.2	24.4	44.2	32.1
30	47.7	42.1	38.6	40.7	38.5	37.8	30.1	38.5	42.8	47.0	35.7	35.7	32.3	55.0	45.6	52.9	42.1	42.1	50.5	67.4	89.2	79.4	82.2	85.1	89.2	50.0
31	86.5	85.0	88.6	75.9	81.4	74.5	66.7	87.3	75.9	72.3	109.0	188.6	82.9	91.4	99.1	74.4	85.7	89.1	56.1	56.3	55.4	34.4	38.0	32.9	188.6	78.6
Hourly Max	95.1	109.7	126.6	111.6	109.0	98.4	97.0	128.0	115.3	113.0	123.1	188.6	86.9	134.9	200.5	74.4	168.1	171.8	92.1	147.0	113.2	99.8	82.2	93.5		
Hourly Average	29.6	31.3	31.4	30.1	30.3	29.7	34.2	49.6	49.6	43.1	47.9	42.3	35.7	34.6	45.2	35.9	44.0	40.8	32.8	32.2	30.5	30.9	28.0	30.0		

C = CALIBRATION

24-hour PM₁₀ (µg m⁻³) at Trailer

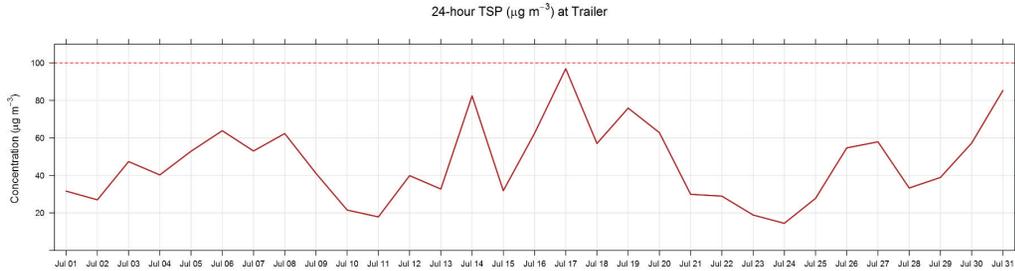


Number of 1HR Exceedances	n/a	Objective	n/a	UG/M3
Number of Non-Zero Readings	739			
Maximum 1-HR Average	200.5	UG/M3		
Maximum 24-HR Average	89.6	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	3	HRS	Operational Uptime	100.0 %
Standard Deviation	27.2		Monthly Average	36.2 UG/M3

Lagoon TSP ($\mu\text{g}/\text{m}^3$) – July 2017

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	43.04	30.61	26.46	19.55	14.02	2.964	30.59	59.61	47.17	20.92	27.83	25.07	18.16	30.59	209.1	41.65	12.63	21.57	8.49	16.73	12.63	11.26	9.88	18.17	209.1	31.6
2	23.7	9.88	20.94	12.64	16.79	11.25	14.02	27.83	44.6	43.03	31.98	16.78	14.01	12.63	26.45	30.59	20.92	73.38	29.21	23.69	22.4	70.66	26.45	23.7	73.4	27.0
3	26.46	22.32	25.08	33.37	44.42	33.54	19.54	94.2	45.79	47.17	44.41	48.56	150.8	48.56	43.03	25.07	99.7	38.88	101.1	47.17	20.92	29.21	30.59	17.2	150.8	47.4
4	36.18	48.58	30.61	7.114	19.55	7.11	31.98	47.4	59.61	150.8	23.55	37.5	30.59	30.59	34.74	56.85	34.74	30.59	36.12	47.17	33.36	65.14	47.19	19.55	150.8	40.3
5	19.55	14.02	14.02	22.32	29.23	25.07	56.85	52.7	56.85	87.2	67.9	83.1	63.75	45.79	91.4	77.57	65.14	60.16	91.4	43.03	37.5	51.32	48.56	65.14	91.4	52.9
6	54.1	34.75	45.81	47.19	30.61	20.92	88.6	139.7	141.1	72.04	99.7	20.88	14.01	15.4	128.6	98.3	113.5	96.9	52.7	27.83	60.12	60.21	38.52	30.6	141.1	63.8
7	37.51	49.96	34.75	36.14	37.52	58.23	49.94	121.8	78.95	85.9	72.23	69.28	39.02	31.98	52.7	59.61	44.5	60.25	54.08	51.32	34.74	45.79	36.12	30.59	121.8	53.0
8	27.83	18.16	12.63	23.64	23.69	27.83	29.21	98.3	80.3	44.41	62.37	109.3	80.6	223.6	91.4	87.2	44.41	59.61	116.7	59.61	44.41	51.32	29.21	50.26	223.6	62.3
9	34.74	40.27	37.5	41.65	41.65	40.27	43.03	52.98	45.79	60.94	73.43	34.74	36.12	30.59	24.93	47.17	37.5	81.7	41.65	38.24	25.07	15.4	25.07	36.58	81.7	41.1
10	20.93	31.98	31.98	18.16	55.65	18.16	11.26	32.95	19.55	15.54	14.01	12.63	25.07	33.36	29.21	36.12	52.7	6.232	18.17	8.49	4.349	5.73	8.5	5.728	55.7	21.5
11	16.6	13.89	18.17	9.88	20.93	15.4	11.07	15.41	16.79	8.49	14.02	20.93	9.87	17.28	19.54	20.92	31.93	15.4	23.69	23.69	18.17	19.55	27.84	27.84	31.9	17.9
12	22.31	19.69	22.5	18.17	30.61	30.61	36.13	49.94	43.03	48.56	74.81	76.19	67.9	40.27	34.74	54.08	47.17	52.7	37.5	30.55	27.83	34.74	27.84	29.23	76.2	39.9
13	26.46	29.23	26.46	23.7	29.23	19.55	26.45	38.88	77.57	58.23	56.85	26.31	29.21	38.88	23.69	41.65	36.12	20.92	29.21	41.65	25.07	11.26	25.07	23.69	77.6	32.7
14	44.43	34.75	27.84	19.69	20.88	36.32	47.17	65.14	99.7	18.16	257.2	215.7	73.43	65.14	576.1	88.6	54.08	27.69	34.74	65.14	26.68	31.98	25.08	22.36	576.1	82.4
15	23.51	36.09	19.88	33.69	19.82	16.78	33.36	24.75	49.94	45.79	112.6	60.39	77.57	26.13	19.54	15.4	30.59	16.78	19.54	12.63	8.49	16.78	19.4	25.07	112.6	31.9
16	23.69	12.63	16.69	19.73	18.16	19.45	22.58	23.64	20.92	9.87	62.37	67.9	41.65	70.66	43.03	59.61	203.1	154.9	99.7	163.6	113.5	102.5	56.86	70.69	203.1	62.4
17	99.6	101.1	131.5	110.8	105.2	98.1	101.1	150.8	119	98.3	97.8	92.8	111	C	C	C	197.8	189.5	73.43	33.37	31.98	33.6	36.14	22.31	197.8	96.9
18	43.05	32	48.58	51.25	61.02	49.96	47.18	73.43	69.28	52.75	88.6	55.6	32.9	41.79	52.47	63.75	121	52.7	44.41	49.94	74.81	58.29	51.34	52.72	121.0	57.0
19	59.64	60	74.83	70.7	77.13	95.6	91.4	123.2	123.2	103.4	112.1	112.1	76.19	60.99	77.94	98.3	59.61	38.88	48.56	46.53	52.99	54.1	50.1	43.05	123.2	75.9
20	46.27	44.43	48.58	55.49	40.28	36.46	52.71	121.2	114.9	103.9	74.81	88.6	59.61	96.9	189.5	67.9	100.9	73.43	25.07	19.55	2.964	14.02	11.72	18.17	189.5	62.8
21	9.88	14.02	15.4	0	2.966	9.92	16.64	20.92	38.88	34.74	33.77	52.7	92.9	74.81	40.27	29.21	29.21	54.08	36.12	27.83	26.45	19.54	20.93	16.78	92.9	29.9
22	9.88	16.79	11.25	17.2	18.17	16.69	17.2	36.12	15.4	14.01	40.27	43.86	59.61	47.17	43.03	26.45	63.75	64.95	40.27	51.27	15.4	1.58	2.961	21.52	65.0	29.0
23	8.49	9.87	14.35	8.49	8.49	14.25	5.725	7.106	9.87	37.5	22.3	16.78	30.59	29.21	19.54	29.21	37.5	26.45	37.5	23.69	15.4	36.22	1.722	2.968	37.5	18.9
24	4.35	7.112	1.584	3.797	6.099	5.73	11.3	9.87	8.49	9.87	22.3	16.78	21.75	26.08	26.45	23.69	12.63	15.4	12.63	23.69	22.31	12.64	37.52	4.35	37.5	14.4
25	18.17	9.88	34.76	49.96	40.29	18.17	2.962	37.5	27.83	40.73	19.68	16.78	29.21	20.92	34.79	27.83	34.74	20.92	20.92	19.31	30.59	25.08	45.81	38.95	50.0	27.7
26	30.84	30.61	17.06	25.07	26.46	25.08	33.64	74.81	69.28	54.08	74.81	58.23	49.94	19.54	15.4	80.3	66.52	45.79	62.37	86.6	94.2	90	88.6	92.9	94.2	54.7
27	85.9	72.07	52.72	52.72	55.48	61.01	66.52	112.1	94.2	69.28	84.7	65.14	47.17	23.69	37.5	43.03	37.5	59.61	28.8	38.89	45.79	54.09	54.96	47.17	112.1	57.9
28	29.26	18.16	19.55	20.93	26.46	26.46	18.16	37.5	40.27	30.59	39.02	29.21	47.17	37.5	40.17	32.9	33.36	41.65	29.21	43.03	33.04	31.98	40.22	52.86	52.9	33.3
29	51.34	30.61	55.53	58.25	25.08	19.55	40.27	37.5	31.98	45.79	44.41	34.74	37.5	31.98	39.07	40.27	33.36	49.94	34.79	34.74	41.65	53.03	31.98	30.6	58.3	38.9
30	47.18	43	43.93	43.54	37.51	41.74	27.83	44.41	41.65	59.61	40.82	65.73	48.51	74.81	56.85	44.41	48.56	54.91	52.56	99.7	69.28	80.3	90.1	116.3	116.3	57.2
31	92.8	99.7	107.6	89.2	94.2	74.84	87.3	81.9	70.66	77.57	132.8	200.5	97.8	96.9	99.7	83.1	96.9	94.2	54.08	49.94	49.43	36.12	40.27	38.89	200.5	85.3
Hourly Max	99.6	101.1	131.5	110.8	105.2	98.1	101.1	150.8	141.1	150.8	257.2	215.7	150.8	223.6	576.1	98.3	203.1	189.5	116.7	163.6	113.5	102.5	90.1	116.3		
Hourly Average	36.1	33.4	35.1	33.7	34.8	31.5	37.8	61.7	58.1	53.8	65.0	60.5	52.1	48.1	74.0	51.0	61.4	54.8	45.0	43.5	36.2	39.5	34.8	35.4		

C = CALIBRATION

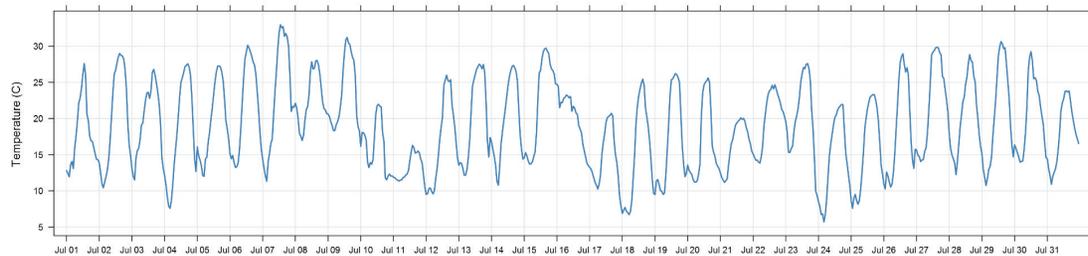


Number of 24HR Exceedances	0	Objective	100	UG/M3
Number of Non-Zero Readings	740			
Maximum 1-HR Average	576.1	UG/M3		
Maximum 24-HR Average	96.9	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744
Monthly Calibration Time	3	HRS	Operational Uptime	100.0
Standard Deviation	39.4		Monthly Average	46.5
				UG/M3

Lagoon Temperature (°C) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	12.8	12.4	11.9	13.6	14.1	13.1	15.9	17.6	19.7	22.1	22.9	24.2	26.1	27.6	26.0	20.6	19.7	17.6	16.9	16.8	16.0	15.1	14.4	14.3	27.6	18.0
2	13.9	12.6	11.0	10.4	11.2	12.0	12.9	14.4	16.9	20.2	23.4	26.1	26.6	27.6	28.5	29.0	28.7	28.7	28.2	26.8	24.0	19.3	16.4	14.8	29.0	20.2
3	13.1	12.0	11.5	14.5	15.6	15.9	17.1	19.1	19.4	21.0	22.5	23.5	23.6	22.8	23.8	26.4	26.8	26.0	24.9	23.6	22.0	19.3	14.6	13.1	26.8	19.7
4	12.1	10.9	9.2	7.9	7.6	8.7	10.9	13.6	15.6	17.7	20.2	22.9	25.0	25.6	26.4	27.2	27.4	27.6	27.1	26.0	23.0	18.8	14.6	12.7	27.6	18.3
5	16.1	14.9	14.3	13.5	12.1	12.0	14.4	14.7	16.7	18.1	19.8	21.4	23.3	25.1	26.5	27.2	27.3	27.1	26.4	25.2	22.7	19.7	18.6	17.2	27.3	19.8
6	15.1	14.4	14.9	13.9	13.2	13.3	13.9	15.8	18.7	22.3	25.5	28.2	29.2	30.1	29.7	29.2	28.6	27.8	27.4	26.1	23.8	21.2	18.1	15.7	30.1	21.5
7	14.4	13.1	12.0	11.3	14.0	15.1	16.5	17.2	20.4	23.6	26.3	29.4	31.8	33.0	32.5	32.7	31.4	31.7	31.3	30.0	26.0	21.0	21.7	21.6	33.0	23.2
8	22.1	21.5	20.0	17.9	17.6	17.0	17.7	19.7	21.2	21.6	23.2	26.5	27.8	26.8	27.0	28.0	28.0	27.4	26.1	24.2	22.3	21.4	21.2	20.7	28.0	22.8
9	20.6	20.3	19.6	19.0	18.3	18.4	19.2	19.6	20.2	21.6	23.3	26.6	29.1	30.9	31.2	30.4	30.2	29.2	28.5	28.0	25.8	20.4	18.9	18.3	31.2	23.6
10	16.2	18.1	18.0	17.7	17.0	14.0	13.2	13.9	13.7	14.3	17.3	20.6	21.8	22.0	21.7	21.6	18.1	16.9	11.8	11.5	12.0	12.3	12.0	12.1	22.0	16.2
11	11.9	11.8	11.6	11.5	11.4	11.5	11.5	11.8	11.9	12.2	12.3	12.8	14.1	15.4	16.3	16.0	15.2	15.3	15.5	15.3	14.4	13.9	12.3	10.6	16.3	13.2
12	9.5	9.6	10.3	10.4	10.0	9.6	10.0	11.7	13.0	14.9	17.2	18.8	20.2	24.6	25.3	26.0	25.2	25.1	25.4	21.9	20.5	18.9	16.7	14.6	26.0	17.0
13	13.6	13.9	13.8	13.1	12.2	12.2	13.0	14.7	17.1	20.8	24.4	25.3	26.1	26.8	27.2	27.5	27.3	26.9	27.5	26.4	22.3	16.8	14.7	17.4	27.5	20.0
14	16.8	15.7	14.8	13.5	11.3	10.8	13.4	16.5	18.2	19.7	21.2	22.8	24.4	25.7	26.5	27.1	27.4	27.0	26.5	25.2	21.3	17.8	15.8	14.4	27.4	19.7
15	14.6	15.3	14.8	14.1	13.7	13.7	14.0	14.7	15.4	18.0	22.6	26.3	26.7	28.2	29.2	29.6	29.7	29.3	29.0	27.5	26.9	26.6	26.2	24.8	29.7	22.1
16	24.7	24.5	21.5	22.2	22.2	22.8	22.9	23.3	23.1	22.9	23.0	21.0	21.7	21.4	20.8	20.6	19.1	18.6	18.0	16.5	15.6	14.8	13.8	13.5	24.7	20.4
17	13.3	13.0	12.5	11.8	11.2	10.8	10.3	11.0	12.2	15.0	16.6	17.8	19.4	20.1	20.3	20.5	20.7	20.3	16.9	15.0	13.9	12.0	9.3	7.9	20.7	14.7
18	6.9	7.3	7.7	7.2	7.0	6.7	7.2	8.7	11.8	14.9	19.1	21.6	23.1	24.1	24.9	25.4	24.6	21.5	20.3	18.9	17.0	14.4	11.6	9.6	25.4	15.1
19	9.5	11.3	11.6	10.9	10.0	9.9	9.5	9.7	12.4	15.7	19.2	23.2	25.4	25.5	25.9	26.2	26.1	25.6	25.0	20.5	16.2	13.7	11.9	12.4	26.2	17.0
20	13.6	12.8	12.5	12.3	11.6	11.2	11.2	11.4	12.3	13.6	20.3	23.5	24.7	25.0	25.2	25.6	25.0	21.3	16.2	15.3	14.8	13.8	13.4	13.1	25.6	16.7
21	12.5	11.9	11.5	11.2	11.4	11.7	13.6	15.2	16.5	17.1	18.1	19.0	19.4	19.6	19.8	20.1	19.9	20.0	19.6	18.7	18.2	17.2	16.5	15.5	20.1	16.4
22	15.1	14.7	14.2	14.3	14.0	13.8	14.7	16.1	19.0	20.6	22.2	23.3	23.8	24.0	24.6	24.1	24.7	24.1	23.4	22.8	22.2	21.3	21.0	20.3	24.7	19.9
23	19.6	18.2	15.3	15.3	15.8	16.2	18.2	19.6	20.3	21.4	22.9	25.0	26.2	27.0	26.9	27.5	27.6	27.0	25.3	21.2	18.6	14.6	9.9	9.3	27.6	20.4
24	8.5	7.9	6.7	6.8	5.7	6.7	8.9	11.9	14.9	16.4	17.8	19.1	20.1	20.5	21.1	21.5	21.8	22.0	21.9	18.4	15.2	13.8	12.3	10.7	22.0	14.6
25	8.7	7.6	9.0	9.5	8.7	8.1	8.7	10.3	12.7	15.3	18.6	20.1	21.4	22.3	23.0	23.2	23.3	23.3	22.6	21.5	19.7	16.7	13.5	12.4	23.3	15.8
26	10.9	10.3	12.6	12.1	11.2	10.5	10.9	12.5	15.1	18.5	21.8	25.4	27.8	28.6	28.9	27.5	26.4	27.0	26.0	21.3	16.8	14.3	13.1	15.8	28.9	18.6
27	15.6	14.9	14.8	14.0	14.3	14.3	15.5	16.0	18.0	21.1	24.6	28.8	29.2	29.4	29.8	29.9	29.8	29.1	28.8	25.8	25.5	24.0	22.6	20.9	29.9	22.4
28	17.8	15.9	14.9	14.4	13.8	12.2	14.1	16.4	18.8	20.5	22.3	23.0	24.7	25.7	27.6	28.8	28.0	27.8	25.9	25.1	21.9	20.0	17.7	16.2	28.8	20.6
29	15.1	13.0	11.9	10.7	11.7	12.9	13.4	14.6	17.5	20.0	22.4	25.5	28.6	29.9	30.6	30.3	29.6	29.8	27.5	25.2	22.7	18.9	16.3	14.7	30.6	20.5
30	16.3	15.9	15.3	14.7	14.0	14.1	14.1	15.8	18.1	21.6	26.7	28.5	29.2	28.0	25.5	25.6	25.2	23.8	23.2	21.7	20.4	19.2	16.7	14.6	29.2	20.3
31	14.4	13.0	12.1	10.9	12.0	12.5	13.1	14.0	15.7	18.0	21.1	22.2	22.7	23.7	23.8	23.6	23.8	22.4	20.9	19.8	18.7	17.8	17.2	16.6	23.8	17.9
Hourly Max	24.7	24.5	21.5	22.2	22.2	22.8	22.9	23.3	23.1	23.6	26.7	29.4	31.8	33.0	32.5	32.7	31.4	31.7	31.3	30.0	26.9	26.6	26.2	24.8		
Hourly Average	14.4	13.8	13.3	12.9	12.7	12.6	13.5	14.9	16.7	18.7	21.2	23.3	24.6	25.4	25.7	25.8	25.4	24.7	23.7	22.0	20.0	17.7	15.9	15.0		

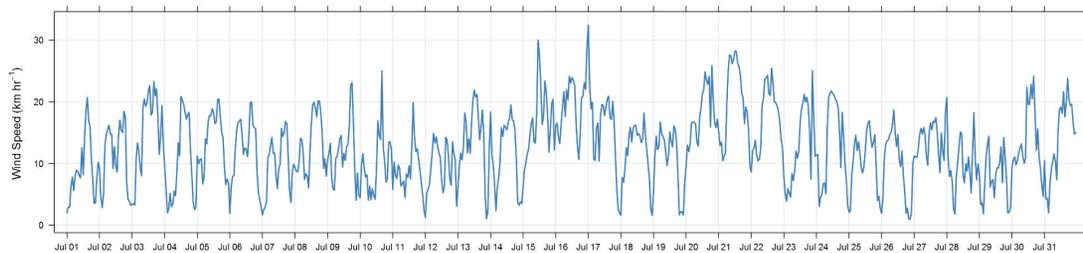
1-hour Temperature (C) at Trailer



Lagoon Wind Speed (km/hr) – July 2017

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	2.0	2.9	2.9	6.3	7.8	5.6	7.8	8.9	8.7	8.0	7.7	12.5	8.2	14.1	18.5	20.7	17.0	16.0	10.8	7.5	3.5	3.6	7.4	10.2	20.7	9.1
2	9.2	4.6	2.8	5.1	13.0	14.8	15.5	16.2	14.8	14.8	9.2	12.7	9.6	8.6	14.6	17.0	15.3	15.0	18.5	17.6	7.1	4.2	3.9	3.2	18.5	11.1
3	3.4	3.5	3.3	10.6	13.3	11.9	9.2	8.0	19.1	20.5	19.3	19.9	21.9	22.6	17.8	18.3	23.3	21.0	22.1	17.5	11.5	14.4	19.4	12.9	23.3	15.2
4	9.6	6.0	2.0	2.6	5.2	3.0	3.4	5.5	4.8	8.7	13.4	11.2	20.9	20.3	19.6	18.3	17.2	17.9	18.3	12.1	8.1	3.8	2.5	2.9	20.9	9.9
5	11.2	10.0	10.7	10.8	6.7	7.8	14.0	13.2	16.8	17.8	17.7	18.9	18.3	16.5	16.7	20.4	20.5	17.5	15.0	14.2	9.5	6.6	7.4	6.8	20.5	13.5
6	1.9	6.2	7.9	8.1	12.3	15.3	16.6	16.9	17.2	14.7	11.5	12.5	12.3	11.1	14.3	19.8	20.0	16.2	15.8	15.6	8.8	5.3	4.1	3.0	20.0	12.0
7	1.7	2.5	3.0	3.8	11.0	11.4	13.0	14.2	11.6	11.7	8.1	5.9	9.2	9.8	15.7	14.4	15.0	16.8	16.4	11.0	5.5	3.7	8.5	9.9	16.8	9.7
8	9.3	8.7	8.6	10.2	14.1	13.9	11.8	7.4	8.3	8.0	6.1	11.9	16.5	19.5	19.9	18.9	17.6	20.2	20.1	18.3	15.0	9.2	10.8	8.0	20.2	13.0
9	10.6	11.7	13.3	7.6	5.9	5.7	10.9	11.1	12.4	14.1	14.5	9.4	11.6	10.5	12.7	13.1	16.1	22.7	23.1	16.6	9.1	4.1	8.4	4.8	23.1	11.7
10	4.5	9.9	11.6	9.2	7.8	8.2	4.1	6.3	4.1	5.9	4.8	4.2	9.1	16.9	14.6	13.8	25.0	12.5	10.4	7.0	7.5	13.4	13.6	12.2	25.0	9.9
11	5.8	10.2	8.1	7.6	9.8	9.2	6.3	6.7	7.2	4.5	8.3	7.7	9.6	7.5	12.6	19.9	14.3	11.9	12.4	10.7	9.0	6.9	4.9	2.4	19.9	8.9
12	1.3	5.2	5.9	6.6	9.1	11.7	14.9	13.3	14.3	12.8	11.7	11.0	7.3	5.3	6.4	14.3	13.8	11.2	7.5	6.4	13.5	11.6	10.6	3.1	14.9	9.5
13	6.1	9.5	11.7	10.6	12.6	18.2	16.8	11.7	14.0	11.7	16.7	20.2	21.9	20.8	21.2	17.5	13.8	16.1	18.7	14.8	5.0	1.0	2.1	12.1	21.9	13.5
14	18.3	11.5	9.7	6.4	2.3	6.2	7.7	10.3	15.8	14.4	16.2	15.9	15.4	16.7	17.3	19.5	17.1	16.9	15.3	10.6	3.7	3.2	3.8	3.5	19.5	11.6
15	6.2	9.0	10.1	11.6	12.3	14.6	16.5	17.4	13.5	13.3	18.3	30.0	27.7	22.8	16.3	17.4	23.4	21.6	17.9	11.9	15.3	19.7	20.4	12.2	30.0	16.6
16	16.2	16.6	14.3	13.2	16.4	19.3	21.7	17.6	22.0	20.3	24.1	23.0	24.0	23.5	22.6	16.7	12.7	10.7	14.7	20.7	20.9	23.1	22.1	28.9	28.9	19.4
17	32.4	22.9	18.8	19.9	10.7	10.5	15.7	16.6	10.4	17.7	19.5	19.4	17.8	19.1	20.5	20.9	17.4	17.1	20.1	16.8	11.1	5.9	2.6	2.0	32.4	16.1
18	1.6	7.8	7.0	9.2	12.6	11.3	14.6	15.8	13.5	15.7	16.2	16.2	14.6	14.8	14.5	13.4	13.8	18.2	14.7	12.3	10.0	7.4	2.6	1.6	18.2	11.6
19	5.2	11.2	14.5	12.3	12.7	16.7	14.9	14.3	13.9	11.9	9.7	11.1	15.1	13.7	12.7	16.1	15.6	13.5	8.3	1.7	2.1	2.2	1.7	7.0	16.7	10.7
20	9.5	13.0	11.9	13.2	16.6	16.7	16.7	16.4	13.4	12.8	17.5	19.0	21.3	22.0	24.9	23.5	22.9	24.1	15.9	25.9	20.5	16.7	15.8	17.2	25.9	17.8
21	15.3	12.9	13.5	10.4	11.2	11.8	19.5	24.9	27.6	27.5	26.2	26.9	28.3	28.2	26.3	25.7	24.3	21.4	20.6	16.5	19.1	18.3	15.4	9.6	28.3	20.0
22	8.6	12.1	12.5	13.8	11.3	10.4	10.8	12.4	19.4	20.6	23.7	23.9	24.3	21.3	21.1	25.4	23.2	20.0	19.9	19.4	18.5	16.8	14.0	12.5	25.4	17.3
23	7.9	5.2	3.8	5.9	5.2	4.5	8.4	7.2	8.8	12.0	10.9	11.9	16.5	18.8	19.8	21.2	20.0	20.8	19.3	15.3	7.5	25.1	17.8	11.2	25.1	12.7
24	11.3	11.5	3.0	4.5	5.0	6.7	6.9	5.1	15.9	20.7	21.4	21.8	21.4	21.1	20.4	20.1	19.1	15.3	9.3	18.3	14.5	10.2	7.4	3.2	21.8	13.1
25	2.1	2.3	8.1	10.3	13.1	14.6	12.1	13.5	11.8	9.3	8.5	9.5	12.1	15.4	16.6	16.9	14.3	12.6	13.5	14.6	9.6	4.0	4.7	2.7	16.9	10.5
26	1.9	4.4	10.8	13.1	13.7	13.8	14.6	15.1	16.3	18.7	15.1	12.8	14.7	10.6	9.5	12.0	8.1	5.5	1.9	2.8	1.0	1.0	2.1	10.0	18.7	9.6
27	11.2	11.1	11.0	12.4	14.7	15.7	14.8	15.9	14.7	11.2	9.7	14.9	16.6	15.5	16.8	16.7	17.4	15.0	11.4	8.5	14.9	12.2	10.5	18.3	18.3	13.8
28	20.7	10.9	7.9	8.8	7.1	2.7	1.8	7.8	10.2	12.6	15.1	14.9	8.1	6.9	10.0	8.8	11.1	8.5	5.2	11.9	18.3	10.6	7.3	9.9	20.7	9.9
29	8.4	3.3	3.6	1.8	6.8	11.1	13.1	14.4	6.2	7.1	7.4	4.4	8.1	9.3	9.3	10.3	12.7	6.9	14.2	11.2	7.5	2.0	2.1	3.0	14.4	7.7
30	9.2	10.6	11.1	9.8	10.5	11.7	12.5	13.2	11.1	10.0	10.8	22.4	19.6	19.6	22.9	20.6	24.2	18.1	12.2	15.6	11.0	9.2	6.4	4.6	24.2	13.6
31	10.5	4.2	4.4	2.0	6.8	9.0	10.3	11.6	10.4	7.4	15.5	18.7	19.1	18.1	21.7	17.6	19.8	23.8	20.4	19.4	19.6	16.7	14.8	15.0	23.8	14.0
Hourly Max	32.4	22.9	18.8	19.9	16.6	19.3	21.7	24.9	27.6	27.5	26.2	30.0	28.3	28.2	26.3	25.7	25.0	24.1	23.1	25.9	20.9	25.1	22.1	28.9		
Hourly Average	8.8	8.7	8.6	9.0	10.2	11.1	12.2	12.6	13.2	13.4	14.0	15.3	16.2	16.2	17.0	17.7	17.6	16.3	15.0	13.6	10.9	9.4	8.9	8.5		

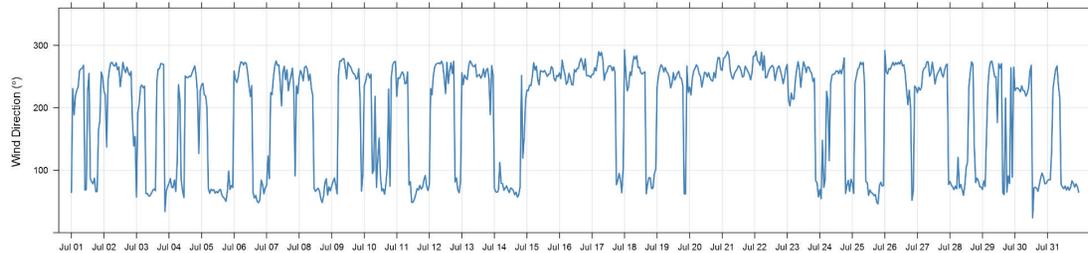
1-hour Wind Speed (km hr⁻¹) at Trailer



Lagoon Wind Direction (°) – July 2017

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
b	64.5	230.7	188.7	219.7	228.0	233.4	259.2	262.3	263.5	268.2	68.4	69.1	227.2	255.0	86.5	81.1	78.4	87.4	65.6	66.1	164.8	179.1	257.3	249.6	268.2	173.1
2	226.7	220.6	137.4	242.3	260.8	271.8	272.8	268.1	266.8	272.3	260.8	265.5	233.7	251.0	272.8	262.2	256.5	265.1	256.8	251.8	258.2	181.1	138.8	153.9	272.8	239.5
3	57.1	192.3	206.0	233.6	236.5	231.9	234.7	62.5	62.9	58.8	59.2	63.1	67.8	70.1	67.2	242.3	262.0	262.8	271.1	270.1	269.5	33.9	66.5	74.1	271.1	152.3
4	79.2	86.8	72.5	72.3	84.5	66.0	111.0	237.1	214.5	83.7	67.0	56.4	251.2	248.3	248.4	250.8	249.9	255.9	261.8	267.2	251.6	222.8	127.0	227.2	267.2	170.5
5	236.7	239.3	220.8	219.3	199.9	71.3	63.1	69.6	67.5	69.0	63.4	66.1	63.8	68.3	69.2	60.2	57.0	54.4	50.3	65.4	98.8	69.3	75.6	72.4	239.3	99.6
6	259.0	245.6	240.7	248.7	264.8	273.4	272.8	268.6	272.8	270.9	255.9	236.4	218.2	235.5	64.1	55.6	59.7	50.4	48.0	52.8	84.3	77.0	62.4	72.0	273.4	174.6
7	75.9	122.9	86.5	224.2	221.1	248.1	267.0	275.2	267.9	268.9	241.4	203.1	256.6	266.7	245.1	261.0	227.4	241.6	250.6	263.4	232.2	91.1	235.3	222.8	275.2	220.7
8	248.1	259.8	254.0	243.1	264.7	266.8	261.8	243.7	254.1	231.2	220.0	71.8	66.2	68.9	71.4	66.5	54.3	48.4	59.1	80.3	86.4	60.2	73.5	67.2	266.8	150.9
9	74.7	82.1	87.5	76.1	62.2	252.7	275.1	274.8	278.4	278.8	264.5	246.5	272.8	268.0	265.4	259.4	254.8	253.4	245.8	247.6	262.7	208.7	66.7	95.4	278.8	206.4
10	235.2	241.8	253.5	255.2	247.8	253.9	94.9	100.1	218.4	72.5	117.6	151.8	89.1	67.0	70.2	61.7	79.1	105.2	230.1	74.4	249.8	268.9	273.5	274.4	274.4	170.3
11	218.2	247.9	247.0	252.4	257.7	253.8	238.6	239.4	257.4	76.6	81.9	48.3	48.9	53.9	61.2	70.7	68.4	75.9	69.8	72.8	84.7	91.6	74.6	67.5	257.7	135.8
12	77.2	230.7	221.0	251.9	265.5	270.0	271.2	272.0	270.2	274.8	269.0	247.0	222.8	272.9	238.8	259.6	272.1	254.9	274.6	81.4	87.8	69.2	63.9	81.8	274.8	212.5
13	256.1	237.1	252.3	247.9	245.3	266.2	275.4	271.9	266.9	266.1	269.4	249.5	252.0	253.4	247.3	252.1	262.5	249.0	260.2	263.1	246.2	189.0	267.7	252.9	275.4	254.1
14	70.8	65.7	64.6	67.9	112.5	79.2	78.6	68.0	71.6	75.0	68.8	64.3	71.7	70.4	67.1	60.8	64.9	57.0	61.1	74.0	251.7	119.6	154.1	212.8	251.7	89.7
15	228.4	227.8	236.1	235.6	250.9	272.3	260.6	266.6	244.7	236.7	259.8	258.3	257.3	259.8	255.6	250.2	254.1	254.8	266.0	263.3	246.8	242.9	252.0	250.1	272.3	251.3
16	256.0	246.7	276.4	263.0	253.7	237.8	240.8	255.3	248.0	237.5	236.6	261.4	257.5	262.9	263.4	273.9	279.3	271.1	260.5	278.4	251.3	251.4	251.3	248.4	279.3	256.8
17	253.4	253.6	264.2	259.3	273.5	290.0	283.6	289.0	276.9	244.2	254.9	257.8	265.7	267.6	266.4	259.3	265.6	256.2	76.9	83.5	95.0	84.4	64.1	104.1	290.0	220.4
18	293.0	253.9	227.1	233.9	257.5	251.9	271.4	282.8	278.0	283.4	264.4	264.9	256.2	253.9	256.1	257.6	62.4	78.0	88.4	87.5	70.5	71.8	94.4	102.0	293.0	201.7
19	233.5	251.1	262.4	269.0	265.5	257.5	264.7	257.9	255.3	249.0	232.0	238.8	256.4	244.4	249.3	255.5	258.5	248.4	246.7	235.1	62.3	62.2	266.8	224.6	269.0	235.3
20	233.3	220.5	247.2	259.2	263.4	268.9	265.1	255.1	250.2	233.1	244.6	256.9	255.7	249.6	256.2	248.6	244.2	242.8	256.6	248.0	268.5	280.6	280.2	261.7	280.6	253.8
21	259.9	279.1	281.0	284.8	290.3	284.2	259.7	250.2	246.1	254.6	258.6	261.9	267.6	265.2	258.6	249.2	251.1	266.7	262.7	258.2	253.4	244.8	256.1	282.5	290.3	263.6
22	283.3	290.5	275.8	273.3	268.0	289.1	260.1	283.3	248.1	248.9	257.1	262.7	265.7	267.9	263.8	243.8	255.2	264.8	267.1	259.5	250.4	238.7	249.2	263.4	290.5	263.7
23	269.4	211.8	202.9	223.6	213.8	214.1	243.9	261.8	273.8	260.5	232.7	255.9	273.8	267.2	256.5	265.7	264.9	258.6	255.0	242.3	247.3	83.4	79.7	57.6	273.8	225.7
24	69.1	54.5	147.9	72.6	85.9	226.5	212.1	115.4	238.0	252.0	254.1	254.1	258.9	259.2	254.7	260.8	254.4	264.6	280.1	62.8	75.1	83.8	66.1	85.8	280.1	174.5
25	79.4	62.8	239.5	250.4	261.6	264.6	273.0	269.3	272.9	239.8	82.2	80.0	59.9	68.6	64.0	63.1	59.3	61.3	48.8	46.2	75.4	80.9	74.7	75.6	273.0	131.4
26	291.7	258.3	254.2	263.0	261.5	267.5	273.0	267.9	272.4	269.6	273.0	270.0	275.9	267.4	269.0	254.7	228.3	204.9	228.4	200.4	51.9	67.4	234.9	232.0	291.7	239.1
27	224.1	232.9	228.4	232.3	258.0	263.5	265.1	273.8	273.7	250.7	255.1	273.1	259.0	238.1	249.7	255.6	259.5	264.8	254.1	249.2	260.0	267.7	270.1	77.4	273.8	247.3
28	82.1	76.6	73.2	69.0	74.6	70.2	120.8	71.7	77.2	68.9	59.9	76.3	104.4	113.1	234.2	256.5	273.6	269.5	136.5	80.2	87.3	83.3	73.9	73.2	273.6	112.8
29	69.3	82.9	74.1	156.1	233.1	262.3	273.7	274.8	262.6	249.6	249.7	176.5	270.7	263.4	270.8	64.0	61.0	215.5	65.1	91.0	78.9	264.0	88.8	265.1	274.8	181.8
30	227.7	231.4	231.8	229.2	225.8	235.2	227.4	227.1	218.7	223.1	231.8	258.5	268.1	23.8	71.6	72.9	70.9	66.3	77.5	88.7	95.6	88.7	78.4	79.1	268.1	160.4
31	83.3	85.2	84.6	129.8	229.8	247.1	261.7	267.0	236.4	216.4	77.7	73.1	70.5	74.9	68.5	73.3	68.0	72.5	83.2	79.2	73.0	78.3	73.7	64.8	267.0	119.7
Hourly Max	293.0	290.5	281.0	284.8	290.3	290.0	283.6	289.0	278.4	283.4	273.0	273.1	275.9	272.9	272.8	273.9	279.3	271.1	280.1	278.4	269.5	280.6	280.2	282.5		
Hourly Average	181.2	194.3	198.0	211.6	223.2	233.6	233.3	228.5	232.4	212.4	194.6	187.7	202.1	196.7	189.8	188.7	182.5	187.8	179.3	160.8	166.8	143.1	151.3	157.1		

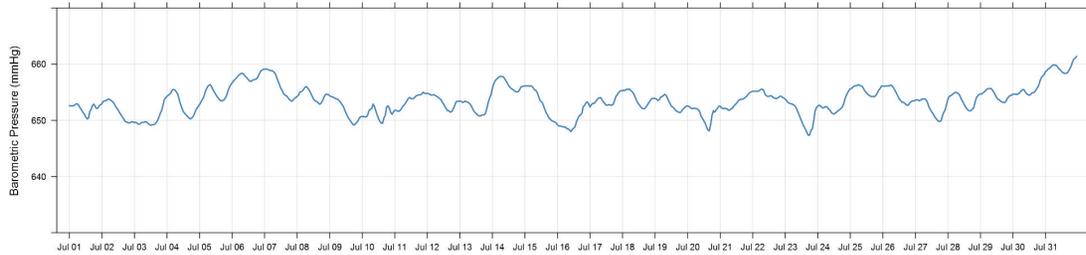
1-hour Wind Direction (°) at Trailer



Lagoon Pressure (mmHg) – July 2017

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	652.6	652.6	652.5	652.6	652.7	652.9	652.9	652.6	652.2	651.8	651.4	651.1	650.6	650.3	650.3	651.5	651.9	652.6	652.9	652.5	652.1	652.2	652.6	652.8	652.9	652.1
2	653.0	653.4	653.5	653.5	653.7	653.8	653.7	653.5	653.3	653.0	652.5	652.2	651.8	651.4	651.0	650.6	650.3	649.9	649.7	649.6	649.5	649.6	649.7	649.7	653.8	651.7
3	649.6	649.7	649.5	649.3	649.4	649.6	649.7	649.6	649.8	649.7	649.4	649.2	649.1	649.2	649.2	649.3	649.6	650.0	650.6	651.2	651.7	652.6	653.7	654.0	654.0	650.2
4	654.3	654.5	654.7	654.9	655.5	655.5	655.4	655.0	654.6	653.7	652.8	652.2	651.6	651.2	651.0	650.7	650.5	650.3	650.4	650.6	651.0	651.7	652.1	652.5	655.5	652.8
5	652.8	653.2	653.7	654.1	654.9	655.6	656.0	656.3	656.4	655.9	655.4	655.0	654.6	654.2	653.9	653.6	653.4	653.5	653.6	654.0	654.5	655.3	655.9	656.3	656.4	654.7
6	656.7	657.0	657.2	657.5	657.8	658.1	658.2	658.4	658.3	658.1	657.8	657.5	657.2	657.0	656.9	657.1	657.2	657.3	657.4	657.7	658.2	658.7	658.9	659.1	659.1	657.7
7	659.1	659.2	659.1	659.0	658.9	658.8	658.8	658.6	658.2	657.6	656.9	656.3	655.7	655.3	654.7	654.5	654.4	654.1	653.8	653.6	653.4	653.6	653.9	654.1	659.2	656.3
8	654.2	654.5	655.0	655.1	655.3	655.6	655.9	656.0	655.6	655.3	654.8	654.3	653.8	653.6	653.4	653.3	652.9	652.9	653.2	653.7	654.2	654.6	654.6	654.6	656.0	654.4
9	654.4	654.2	654.2	654.1	653.9	653.8	653.7	653.5	653.2	652.8	652.5	651.9	651.3	650.8	650.4	650.0	649.7	649.3	649.2	649.4	649.6	650.0	650.5	650.7	654.4	651.8
10	650.7	650.7	650.6	650.6	650.9	651.7	652.0	652.1	652.9	652.5	651.7	650.9	650.3	649.8	649.5	649.5	650.4	650.9	652.4	652.6	652.2	651.4	651.1	651.5	652.9	651.2
11	651.8	651.8	651.7	651.6	651.8	652.1	652.5	652.7	653.1	653.5	653.9	654.1	653.9	653.8	653.9	654.2	654.4	654.5	654.6	654.7	655.0	654.8	654.8	654.8	655.0	653.5
12	654.8	654.7	654.6	654.5	654.5	654.6	654.4	654.3	654.1	653.9	653.7	653.2	652.9	652.4	652.1	651.7	651.7	651.5	651.6	652.0	652.5	653.2	653.4	653.4	654.8	653.3
13	653.5	653.4	653.2	653.3	653.4	653.3	653.2	653.0	652.8	652.3	651.8	651.4	651.2	651.0	650.8	650.8	650.9	651.0	651.3	652.2	653.2	654.0	654.6	654.6	654.6	652.4
14	655.7	656.5	657.0	657.3	657.5	657.8	657.8	657.8	657.8	657.4	657.0	656.6	656.2	655.9	655.6	655.5	655.3	655.1	655.1	655.4	655.9	656.0	656.1	657.8	657.8	656.4
15	656.1	656.1	656.1	656.1	656.1	656.1	655.8	655.4	655.3	655.0	654.3	653.6	653.3	653.1	652.4	651.7	651.2	650.8	650.3	650.1	649.9	649.8	649.7	649.6	656.1	653.3
16	649.2	649.0	649.0	648.9	648.9	648.8	648.8	648.5	648.5	648.3	648.0	648.4	648.6	648.9	649.8	650.3	650.8	651.0	651.3	652.4	652.6	653.1	653.3	652.9	653.3	650.0
17	652.4	652.8	653.0	653.0	653.3	653.6	653.9	654.0	654.0	653.6	653.3	653.0	652.7	652.7	652.8	652.7	652.7	652.8	653.5	654.2	654.5	654.9	655.2	655.3	655.3	653.5
18	655.3	655.3	655.4	655.6	655.5	655.6	655.3	655.1	654.8	654.3	653.7	653.2	652.9	652.5	652.2	652.1	652.1	652.3	652.6	653.0	653.4	653.8	653.9	653.9	655.6	653.9
19	653.9	653.8	653.5	653.6	654.1	654.2	654.4	654.6	654.5	654.0	653.5	653.0	652.5	652.4	652.2	651.8	651.6	651.5	651.4	651.5	651.8	652.1	652.3	652.5	654.6	652.9
20	652.6	652.5	652.3	652.1	652.1	652.2	652.1	652.0	651.9	651.5	650.7	650.3	649.9	649.5	648.8	648.3	648.1	649.3	650.9	651.7	651.4	651.9	652.1	652.5	652.6	651.1
21	652.5	652.2	652.1	652.1	652.1	652.1	651.8	651.8	652.0	652.2	652.5	652.8	653.0	653.3	653.6	653.7	653.7	653.8	654.0	654.2	654.4	654.8	655.0	655.1	655.1	653.1
22	655.2	655.2	655.2	655.2	655.2	655.3	655.5	655.4	654.7	654.4	654.3	654.3	654.3	654.4	654.1	654.0	653.9	653.9	654.1	654.3	654.3	654.3	654.1	654.0	655.5	654.6
23	653.8	653.5	653.2	653.1	652.9	652.9	652.7	652.6	652.2	651.7	651.1	650.5	649.9	649.3	648.8	648.4	647.9	647.4	647.4	648.2	648.5	649.9	651.6	652.3	653.8	650.8
24	652.5	652.7	652.5	652.3	652.2	652.3	652.4	652.4	652.0	651.8	651.4	651.2	651.1	651.3	651.5	651.7	651.9	652.1	652.3	652.9	653.8	654.4	654.9	655.3	655.3	652.5
25	655.6	655.7	655.9	656.1	656.2	656.2	656.3	656.2	656.1	656.0	655.5	655.1	654.9	654.6	654.4	654.3	654.2	654.2	654.2	654.5	654.9	655.4	655.7	656.1	656.3	654.4
26	656.1	656.1	656.1	656.1	656.1	656.1	656.3	656.1	655.7	655.3	654.8	654.4	653.9	653.6	653.2	653.1	652.8	652.7	652.8	653.1	653.4	653.4	653.4	653.5	656.3	654.5
27	653.6	653.7	653.6	653.5	653.6	653.8	653.8	653.8	653.6	653.1	652.4	651.9	651.5	651.2	650.8	650.4	650.1	649.8	649.8	650.0	650.8	651.5	651.9	652.8	653.8	652.1
28	653.7	654.3	654.4	654.6	654.8	654.9	655.0	654.9	654.7	654.3	653.7	653.3	652.8	652.4	652.0	651.8	651.7	651.7	652.0	652.2	653.2	654.0	654.4	654.6	655.0	653.6
29	654.7	654.7	654.9	655.1	655.3	655.6	655.7	655.7	655.7	655.3	654.9	654.5	654.0	653.7	653.6	653.4	653.3	653.2	653.2	653.5	654.0	654.2	654.4	654.5	655.7	654.5
30	654.7	654.7	654.6	654.6	654.7	655.0	655.2	655.5	655.5	655.1	654.8	654.6	654.5	654.6	654.9	654.9	655.1	655.5	655.8	656.3	657.1	657.6	657.9	658.2	658.2	655.5
31	658.7	658.9	659.2	659.3	659.5	659.7	659.9	659.8	659.7	659.5	659.1	659.0	658.6	658.5	658.4	658.4	658.4	658.8	659.2	659.7	660.5	660.9	661.1	661.4	661.4	659.4
Hourly Max	659.1	659.2	659.2	659.3	659.5	659.7	659.9	659.8	659.7	659.5	659.1	659.0	658.6	658.5	658.4	658.4	658.4	658.8	659.2	659.7	660.5	660.9	661.1	661.4		
Hourly Average	654.0	654.1	654.1	654.1	654.3	654.4	654.5	654.4	654.3	654.0	653.5	653.2	652.9	652.6	652.5	652.4	652.3	652.4	652.6	652.9	653.2	653.6	653.9	654.1		

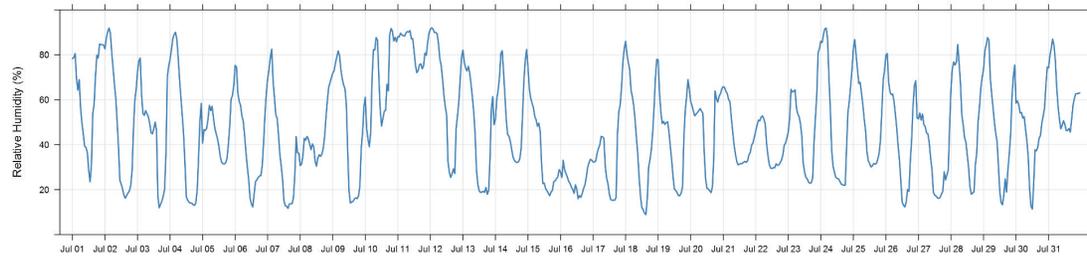
1-hour Barometric Pressures (mmHg) at Trailer



Lagoon Relative Humidity (%) – July 2017

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	78.3	78.8	80.5	69.4	64.3	68.9	56.4	49.7	44.7	39.3	38.8	36.5	28.6	23.5	30.9	53.8	58.1	70.7	79.8	78.6	84.8	84.6	84.5	84.3	84.8	61.2
2	82.6	87.5	90.3	91.9	89.5	80.9	73.9	66.7	60.4	50.1	38.4	24.1	22.5	20.2	17.4	16.2	17.5	18.5	19.5	21.9	28.5	46.9	59.6	64.7	91.9	49.6
3	72.5	77.3	78.6	62.2	53.9	53.1	55.1	53.8	52.4	49.4	45.4	44.9	47.1	50.1	46.4	17.0	12.0	13.5	15.0	17.2	20.3	36.9	70.2	75.0	78.6	46.6
4	78.0	82.3	87.1	89.0	90.0	87.0	78.8	69.0	61.0	53.0	44.3	31.6	16.8	15.3	14.4	14.0	14.0	13.3	13.0	14.1	19.8	33.9	50.3	58.4	90.0	47.0
5	40.7	46.7	46.3	47.3	51.4	57.5	55.2	57.1	52.0	47.4	45.0	42.6	39.4	34.9	32.3	31.5	31.4	31.9	33.9	40.0	48.2	60.1	61.9	66.3	66.3	45.9
6	75.3	74.5	63.0	59.3	57.5	52.8	50.4	44.1	36.5	30.1	24.5	16.3	13.7	12.3	17.8	23.6	24.4	25.4	26.1	26.3	30.8	41.0	53.4	62.9	75.3	39.2
7	69.5	73.5	79.1	82.5	68.3	61.0	53.3	51.8	44.2	35.6	30.5	24.6	15.1	12.9	12.6	11.7	13.6	13.8	13.8	16.3	26.3	43.6	36.4	36.3	82.5	38.6
8	30.7	31.4	35.2	42.8	42.0	43.7	42.6	40.1	37.8	40.4	39.1	32.6	30.5	34.1	35.5	34.8	35.9	38.4	43.7	52.2	59.5	65.6	67.6	69.9	69.9	42.8
9	71.8	72.9	76.3	79.0	81.7	79.7	73.4	69.3	66.6	64.9	58.1	37.6	19.3	14.1	14.5	14.8	15.9	16.4	16.0	17.2	21.6	38.5	45.2	56.9	81.7	46.7
10	61.1	47.3	42.4	39.1	45.6	69.4	82.3	82.1	87.7	86.4	70.3	55.7	48.3	51.6	54.8	55.4	66.9	63.9	88.8	91.7	90.5	86.1	87.7	85.8	91.7	68.4
11	88.1	87.9	89.6	88.9	88.5	88.3	89.7	90.4	90.1	90.8	87.1	87.2	81.5	75.4	72.0	73.1	75.6	76.0	73.7	75.2	80.7	79.7	85.4	89.6	90.8	83.5
12	91.4	92.0	91.4	89.9	89.9	89.3	85.0	78.2	75.2	69.2	62.0	56.9	53.2	32.5	27.8	25.5	27.1	29.2	27.2	47.1	52.8	59.2	69.1	78.9	92.0	62.5
13	82.1	76.8	74.2	72.8	74.9	72.0	66.9	61.1	54.5	44.8	28.9	22.5	19.5	18.8	19.0	19.2	18.8	21.0	18.0	19.6	33.8	56.1	61.4	48.9	82.1	45.2
14	51.4	60.2	64.3	70.2	80.5	81.8	72.2	61.7	50.9	44.5	43.7	41.4	37.8	34.5	33.0	32.3	32.1	32.4	33.9	38.6	53.3	68.9	77.6	82.4	82.4	53.3
15	74.5	64.9	60.7	58.5	56.4	52.6	51.0	48.3	49.6	45.8	31.8	22.7	22.9	20.5	19.5	18.4	17.3	18.9	19.7	23.5	23.9	24.8	25.7	28.9	74.5	36.7
16	27.9	25.4	33.1	28.9	27.2	25.7	23.7	22.8	21.2	20.1	18.4	22.2	20.3	16.0	17.3	16.6	18.3	20.5	22.1	25.4	29.8	31.9	33.5	33.1	33.5	24.2
17	32.4	32.2	32.9	36.2	38.3	40.0	43.7	43.5	42.8	30.4	25.2	22.7	18.1	15.6	15.3	15.3	15.3	16.5	44.9	54.6	57.8	65.5	76.7	82.8	82.8	37.5
18	86.0	80.3	76.6	73.4	64.2	61.4	57.4	51.0	43.0	35.7	25.3	16.9	12.0	11.0	9.5	8.9	16.1	30.0	33.4	37.8	45.6	56.6	69.9	77.9	86.0	45.0
19	77.8	63.4	54.5	49.5	50.4	49.0	49.9	50.2	45.7	39.0	33.1	25.8	20.2	19.7	18.6	17.3	17.4	18.5	21.2	43.4	55.2	61.4	68.9	64.7	77.8	42.3
20	59.2	57.4	54.9	52.8	53.6	54.3	55.2	56.1	54.9	53.9	36.5	24.9	20.7	20.3	19.5	18.7	21.2	33.4	64.0	60.5	59.0	61.6	62.7	64.9	64.9	46.7
21	65.8	65.5	63.7	62.8	60.1	59.1	51.9	45.8	39.9	35.9	32.6	31.1	31.4	31.6	31.6	32.2	32.6	32.1	32.9	35.5	36.7	39.9	40.9	43.4	65.8	43.1
22	46.2	48.7	51.0	50.6	52.3	52.8	51.5	49.1	40.5	35.2	31.2	29.6	29.4	29.9	29.7	31.5	30.9	31.0	31.9	33.2	35.4	39.8	40.8	43.0	52.8	39.4
23	45.7	51.6	64.6	63.4	63.7	64.4	56.4	53.7	52.5	49.3	43.6	31.8	27.9	25.5	24.8	23.3	22.9	23.1	25.3	41.1	52.0	62.0	80.8	82.9	82.9	47.2
24	86.0	85.5	89.3	91.6	91.9	87.0	69.4	55.9	37.8	30.6	27.9	25.5	25.0	24.8	23.8	22.5	22.3	21.9	22.0	39.0	54.6	59.3	66.2	73.6	91.9	51.4
25	82.7	86.8	80.1	73.6	67.3	67.8	62.9	57.7	51.3	46.3	37.1	32.9	31.6	30.1	30.6	31.7	31.4	31.6	33.6	36.2	42.1	55.2	68.8	73.1	86.8	51.8
26	79.9	80.6	68.1	63.5	62.3	62.5	59.2	53.6	47.3	39.6	33.1	24.1	14.4	13.1	12.3	14.6	20.1	19.2	32.5	42.5	57.2	66.3	68.5	51.9	80.6	45.3
27	51.5	54.1	51.0	53.6	49.0	48.1	45.2	44.8	40.8	34.0	28.9	18.9	17.5	17.2	16.3	16.1	16.6	18.0	19.3	27.9	24.3	26.6	28.8	48.2	54.1	33.2
28	64.7	73.7	76.8	75.4	76.8	84.6	76.2	67.4	53.3	48.9	43.2	41.2	35.4	29.9	21.3	18.0	18.5	19.1	31.1	36.3	50.2	56.6	65.0	69.9	84.6	51.4
29	73.4	81.8	84.5	87.7	86.5	69.6	62.7	56.6	50.1	45.2	41.3	30.5	19.2	14.1	13.3	17.8	24.8	19.0	28.9	36.0	44.7	61.3	70.2	75.4	87.7	49.8
30	58.5	59.5	57.7	54.1	54.3	51.8	52.5	46.8	41.6	34.2	20.3	12.7	11.4	22.5	37.7	37.3	38.8	42.9	44.1	49.6	52.7	56.2	66.4	74.5	74.5	44.9
31	74.2	79.8	83.1	87.0	84.2	77.3	65.4	56.8	51.3	47.1	48.6	50.7	49.1	46.3	46.3	47.2	45.6	51.2	57.5	60.5	62.6	62.7	62.8	63.1	87.0	60.9
Hourly Max	91.4	92.0	91.4	91.9	91.9	89.3	89.7	90.4	90.1	90.8	87.1	87.2	81.5	75.4	72.0	73.1	75.6	76.0	88.8	91.7	90.5	86.1	87.7	89.6		
Hourly Average	66.5	67.1	67.1	66.0	65.1	64.3	60.3	56.0	50.9	45.7	39.2	32.9	28.4	26.4	26.3	26.1	27.5	29.4	34.4	40.0	46.3	54.5	61.5	64.9		

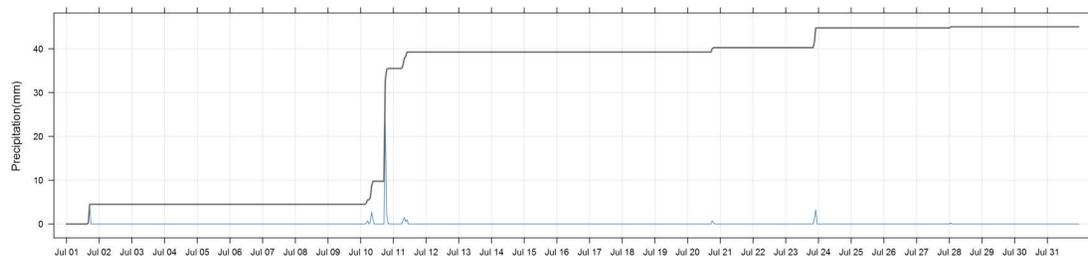
1-hour Relative Humidity (%) at Trailer



Lagoon Precipitation (mm) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Total	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.25	4.50
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
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	0.00	0.00
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
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	0.00	0.00
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	0.00	0.00
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	0.00	0.00
10	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.5	2.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	2.5	0.3	0.0	0.0	0.0	23.00	31.00	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	3.75	
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	0.00	0.00	
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	0.00	0.00	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
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	0.00	0.00	
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	0.00	0.00	
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	0.00	0.00	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
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	0.8	0.3	0.0	0.0	0.0	0.0	0.75	1.00	
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	0.00	0.00	
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	0.00	0.00	
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	1.3	3.3	3.25	4.50	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
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	0.00	0.00	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
28	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.25	
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	0.00	0.00	
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	0.00	0.00	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
Hourly Max	0.0	0.3	0.0	0.0	0.3	0.8	0.0	0.8	2.8	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	4.3	23.0	2.5	0.3	1.3	3.3	0.0			
Hourly Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.1	0.0	0.0	0.1	0.0			

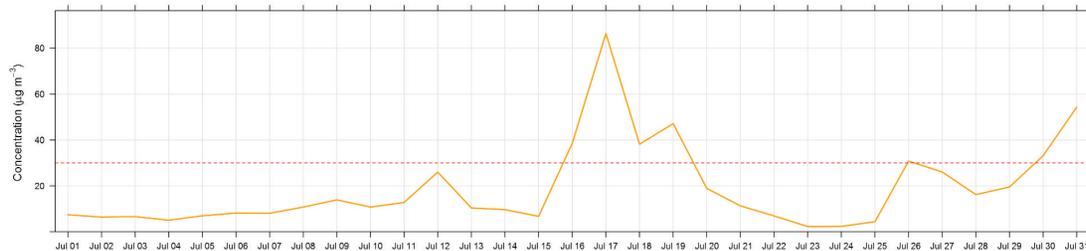
1-hour Precipitation (mm) at Trailer



West PM_{2.5} (µg/m³) – July 2017

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	8.6	9.1	8.0	7.8	7.6	7.9	8.4	9.6	8.1	7.6	6.4	7.7	4.2	3.0	6.2	10.8	8.0	9.0	7.7	6.8	6.5	5.7	6.3	7.1	10.8	7.4
2	7.9	9.0	8.6	9.2	10.3	10.5	10.2	10.0	9.8	7.8	6.4	3.6	3.5	3.1	2.8	2.7	3.1	3.1	3.5	4.5	5.1	5.7	6.2	7.0	10.5	6.4
3	7.7	9.4	9.7	7.9	9.7	9.5	7.8	8.8	10.1	10.5	8.6	8.8	8.3	8.2	5.0	2.8	2.0	1.6	1.9	2.0	2.2	2.7	7.6	5.5	10.5	6.6
4	5.5	5.7	5.1	5.5	6.5	7.2	8.5	11.6	9.3	8.0	9.5	5.4	3.4	2.8	3.1	2.9	2.6	2.2	2.0	2.1	2.3	2.6	3.2	3.6	11.6	5.0
5	3.7	4.4	5.2	5.4	5.9	6.4	6.8	8.8	9.3	10.6	10.5	9.1	7.7	6.1	6.2	5.3	6.1	5.8	5.2	5.9	7.4	8.2	8.5	8.9	10.6	7.0
6	9.2	11.2	12.3	11.4	11.5	11.5	11.0	13.4	11.5	7.7	6.9	4.5	3.7	3.4	5.8	6.5	6.0	6.2	6.4	6.6	6.8	6.6	7.4	8.0	13.4	8.2
7	7.9	9.5	9.1	14.7	12.8	13.0	13.3	16.7	14.5	10.3	9.8	8.5	5.6	4.6	4.3	3.4	3.7	3.6	2.8	3.0	3.9	4.6	6.1	7.1	16.7	8.0
8	7.5	7.8	8.5	8.7	9.8	10.7	10.8	11.3	10.0	10.0	10.9	10.0	7.8	9.7	9.4	9.1	8.3	8.6	10.0	12.3	14.7	15.3	17.8	18.8	18.8	10.8
9	19.3	19.6	24.0	23.9	22.6	25.1	26.0	24.8	22.7	23.9	22.4	10.2	5.9	4.6	5.3	5.5	5.4	5.1	4.4	4.8	4.9	5.9	7.3	10.0	26.0	13.9
10	11.2	13.0	13.0	12.4	13.1	14.8	12.5	13.3	14.6	13.9	15.4	11.9	10.1	9.9	11.1	9.1	12.8	12.3	10.7	4.8	3.5	3.3	5.3	5.9	15.4	10.8
11	5.1	5.7	5.4	6.8	7.3	6.1	6.9	7.6	8.8	10.3	12.2	11.6	20.5	16.5	12.6	15.6	17.7	18.9	18.3	17.9	17.9	18.3	18.7	20.0	20.5	12.8
12	20.1	21.1	22.9	24.9	25.4	26.0	30.4	36.1	40.1	44.0	44.8	41.4	37.8	26.8	19.8	17.3	17.2	15.7	13.3	15.7	19.8	21.9	21.3	20.4	44.8	26.0
13	21.5	21.3	21.2	21.2	19.5	19.3	18.3	18.1	16.1	12.8	7.3	4.9	3.8	3.9	3.8	3.5	3.4	3.0	2.9	3.6	4.2	4.8	5.0	5.2	21.5	10.4
14	10.3	12.3	11.5	10.7	11.1	11.5	13.9	19.0	13.8	12.1	11.1	9.9	8.2	7.7	6.3	5.5	5.3	5.5	5.4	6.5	7.7	8.3	8.7	9.2	19.0	9.6
15	10.8	11.5	10.9	10.1	10.2	11.2	11.5	12.0	11.5	11.1	5.0	3.4	3.2	2.9	2.6	2.5	2.3	2.7	2.8	3.9	4.3	4.8	5.0	4.9	12.0	6.7
16	5.2	5.1	6.0	5.5	5.2	6.2	6.1	5.4	4.9	4.7	4.7	5.2	4.6	4.5	9.2	35.2	104.7	104.7	76.6	103.2	128.3	107.1	100.4	82.6	128.3	38.6
17	105.5	135.7	124.7	127.6	117.6	102.3	100.7	101.8	99.1	91.3	85.4	79.5	66.9	78.3	87.7	105.5	101.9	120.6	98.0	30.7	25.3	25.1	29.0	33.3	135.7	86.4
18	34.5	34.7	41.7	48.5	52.6	54.6	55.2	53.5	50.3	49.3	41.8	24.6	16.9	22.1	27.8	36.0	53.8	33.0	30.9	32.4	33.1	30.3	28.9	29.7	55.2	38.2
19	31.5	38.5	44.9	55.5	68.6	74.9	79.7	83.8	83.5	79.1	64.5	46.1	36.5	39.0	25.7	19.7	19.6	18.7	20.1	30.8	39.7	42.7	43.1	44.3	83.8	47.1
20	44.8	41.8	36.8	35.7	34.9	34.5	34.4	34.6	35.2	33.9	12.5	5.0	3.8	3.9	3.7	3.9	6.2	12.9	10.9	6.3	3.9	3.2	4.8	5.5	44.8	18.9
21	5.1	4.6	3.9	5.4	4.7	4.2	7.8	13.2	14.5	13.8	13.7	13.3	14.1	12.9	12.0	12.1	12.6	15.4	13.8	13.8	15.0	15.8	14.9	14.0	15.8	11.3
22	14.3	14.7	14.9	14.6	14.2	14.2	13.9	12.7	8.8	5.2	5.5	6.6	4.3	3.3	3.2	2.7	2.3	2.2	1.8	1.4	1.1	0.9	1.1	1.7	14.9	6.9
23	2.4	2.2	1.8	2.0	2.1	2.3	2.5	2.6	2.9	3.0	2.7	2.1	2.0	2.0	1.9	1.9	2.0	1.8	1.8	2.2	1.9	5.4	1.8	0.9	5.4	2.3
24	1.0	0.8	1.7	3.3	3.6	2.4	1.7	2.0	2.4	1.7	2.4	3.2	2.9	2.0	2.7	2.3	2.4	2.0	2.3	3.2	3.1	2.2	2.1	2.2	3.6	2.3
25	2.8	3.1	3.7	3.5	3.9	4.3	4.9	5.7	6.4	5.8	5.1	4.0	4.0	4.8	4.2	4.1	4.1	4.3	3.6	4.1	4.3	4.4	5.0	5.0	6.4	4.4
26	5.3	6.4	6.4	8.7	10.4	12.2	11.8	12.0	12.1	11.0	9.2	7.5	5.2	4.8	6.1	13.4	26.2	26.1	40.9	84.0	104.3	106.9	106.4	102.0	106.9	30.8
27	89.3	77.9	58.0	51.4	47.2	41.6	36.2	35.9	34.3	25.2	17.9	7.3	6.0	7.3	6.1	5.3	4.9	4.7	5.5	9.1	13.1	12.5	12.9	15.4	89.3	26.0
28	20.6	19.0	18.6	18.3	18.1	18.5	18.4	23.3	19.8	16.8	13.7	12.8	11.9	9.1	6.6	6.9	8.6	16.1	18.4	18.1	17.9	19.7	18.8	18.6	23.3	16.2
29	19.5	18.9	20.8	21.9	21.3	23.4	26.3	26.7	23.3	20.0	17.0	14.4	13.4	13.5	12.6	12.0	12.7	21.3	30.9	22.7	19.0	17.7	19.4	19.3	30.9	19.5
30	20.7	25.9	36.1	40.2	39.8	38.9	35.4	33.6	30.6	24.2	14.1	6.3	4.1	5.5	18.0	18.3	18.5	23.9	29.2	38.2	65.6	70.2	77.7	80.4	80.4	33.1
31	79.0	79.5	78.7	77.6	75.7	76.3	71.6	70.5	63.6	58.5	55.8	57.3	50.6	44.3	42.8	42.3	41.1	42.7	47.9	46.7	36.8	23.1	20.7	19.3	79.5	54.3
Hourly Max	105.5	135.7	124.7	127.6	117.6	102.3	100.7	101.8	99.1	91.3	85.4	79.5	66.9	78.3	87.7	105.5	104.7	120.6	98.0	103.2	128.3	107.1	106.4	102.0		
Hourly Average	20.6	21.9	21.7	22.6	22.7	22.6	22.7	23.8	22.6	20.8	17.9	14.4	12.3	12.0	12.1	13.7	16.9	17.9	17.1	17.7	20.1	19.5	20.0	19.9		

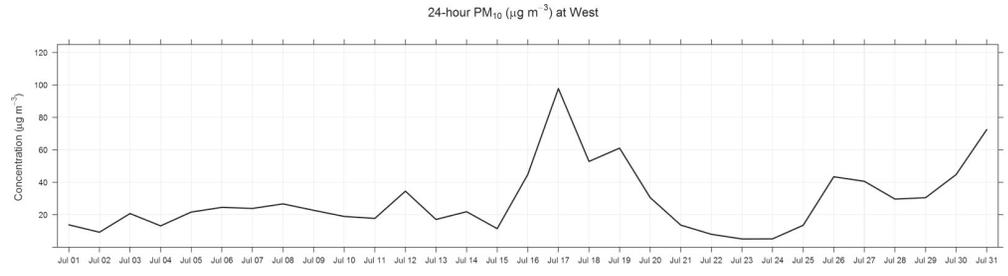
24-hour PM_{2.5} (µg m⁻³) at West



Number of 1HR Exceedances	32	Guideline	80	UG/M3
Number of 24HR Exceedances	7	Guideline	30	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	135.7	UG/M3		
Maximum 24-HR Average	86.4	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	23.7		Monthly Average	18.9 UG/M3

West PM₁₀ (µg/m³) – July 2017

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	24.2	13.5	9.8	9.2	9.4	9.7	12.1	11.0	12.4	11.0	28.2	9.0	5.8	31.1	31.8	14.9	16.1	9.7	7.9	7.7	7.0	8.1	9.0	31.8	13.8
2	10.2	11.5	11.1	11.9	13.0	12.6	11.7	11.6	12.0	11.3	12.1	7.6	7.5	6.2	5.1	5.2	6.8	4.9	5.8	7.5	7.7	8.9	9.0	9.9	13.0	9.2
3	11.3	13.9	13.7	10.7	13.7	13.1	12.6	31.5	56.9	47.3	40.5	42.4	43.0	34.2	25.6	10.8	6.7	3.4	4.0	3.3	3.2	6.4	32.9	16.4	56.9	20.7
4	8.9	8.4	7.5	8.0	9.3	10.5	12.6	23.2	41.8	28.9	41.1	24.8	15.8	9.7	12.8	11.1	8.0	5.7	4.1	3.9	3.6	4.4	5.1	5.9	41.8	13.1
5	5.5	6.2	6.7	6.9	8.8	10.6	12.1	24.2	23.2	44.6	43.5	35.7	33.8	25.2	31.7	29.1	31.1	26.8	17.1	15.6	18.4	19.6	21.2	22.1	44.6	21.7
6	22.8	26.2	23.9	19.6	18.4	17.1	21.0	50.7	36.5	26.6	30.2	17.1	12.7	10.8	35.3	37.3	26.7	24.5	25.9	24.4	23.1	20.4	19.8	18.4	50.7	24.6
7	18.6	26.0	23.1	37.4	28.1	26.4	32.8	71.0	46.2	34.5	42.3	37.3	24.6	16.6	15.9	13.3	14.2	11.3	6.9	6.0	8.3	8.2	12.1	12.3	71.0	23.9
8	11.6	10.9	13.1	11.4	12.9	14.0	14.4	19.9	20.4	25.6	34.3	39.6	28.1	51.9	45.4	39.6	26.9	26.9	29.4	34.6	30.4	27.7	34.1	37.1	51.9	26.7
9	34.7	35.1	43.5	35.5	32.2	34.3	34.7	34.6	32.5	41.0	36.6	21.2	14.7	9.9	11.2	10.6	9.1	10.3	9.4	10.1	7.5	7.8	10.2	18.7	43.5	22.7
10	20.3	24.7	21.5	17.1	21.4	19.8	14.5	17.1	18.9	17.9	32.2	34.9	26.8	25.3	23.6	25.6	21.2	23.5	19.3	6.5	4.8	4.0	6.5	7.2	34.9	18.9
11	6.2	7.1	6.5	8.5	8.9	7.7	8.7	9.4	11.2	14.1	16.6	14.0	36.0	49.5	24.2	23.7	20.6	23.0	20.6	20.3	20.6	21.8	22.7	23.6	49.5	17.7
12	24.4	26.1	27.9	30.5	31.8	32.4	36.6	44.0	48.6	58.4	64.5	58.2	53.3	36.5	30.3	25.8	24.0	21.6	18.2	20.2	28.7	33.1	29.0	24.9	64.5	34.5
13	28.6	28.0	26.3	25.2	22.6	22.8	21.1	25.6	28.9	30.3	23.4	16.1	12.2	13.5	13.2	11.7	10.6	6.9	6.2	6.2	6.6	7.5	8.1	8.2	30.3	17.1
14	27.4	18.2	15.3	12.9	12.9	13.5	20.3	61.9	37.3	28.0	27.4	23.4	17.9	23.8	23.0	21.6	20.2	20.2	14.9	12.8	15.0	17.5	19.0	20.3	61.9	21.9
15	23.8	20.4	17.3	15.2	13.7	14.6	14.5	16.0	16.7	18.5	12.2	9.6	7.4	8.7	6.0	5.7	5.8	6.9	4.9	6.6	6.7	7.8	7.7	7.2	23.8	11.4
16	7.5	7.8	9.4	8.6	8.3	11.3	11.1	9.8	9.8	9.6	10.9	11.4	9.8	8.8	14.2	42.5	127.6	116.9	82.5	111.8	136.9	114.1	108.0	87.4	136.9	44.8
17	111.7	141.7	129.6	133.7	122.5	107.4	110.4	120.6	118.2	102.6	93.4	88.4	76.9	92.0	101.5	115.5	109.8	128.6	121.2	54.3	44.6	36.2	41.3	45.7	141.7	97.8
18	48.9	44.8	48.0	52.8	55.5	57.3	62.8	74.4	68.0	67.9	59.9	35.0	27.7	33.0	44.5	47.6	63.4	60.8	60.6	62.3	61.0	45.5	41.3	45.9	74.4	52.9
19	49.0	51.9	55.2	63.1	73.4	78.6	87.7	125.4	141.5	109.1	91.7	70.5	47.5	53.7	36.1	27.5	26.4	25.1	23.9	34.0	43.4	47.2	51.5	52.6	141.5	61.1
20	56.7	49.7	41.5	39.3	38.9	40.0	47.3	60.1	87.3	78.1	30.6	18.6	16.2	15.7	14.3	16.1	16.4	22.6	15.0	7.7	4.6	4.4	5.8	6.6	87.3	30.6
21	5.7	5.0	4.6	7.1	8.0	7.1	11.6	17.9	18.9	17.7	16.5	17.7	17.3	18.2	14.8	14.9	14.4	17.2	15.0	14.5	15.5	16.3	15.7	14.9	18.9	13.6
22	15.3	16.0	15.9	15.2	15.3	14.7	14.9	13.9	10.5	6.5	7.5	8.2	5.8	4.9	4.4	4.1	4.0	3.0	2.3	1.7	1.4	1.1	1.6	2.3	16.0	7.9
23	3.0	2.8	2.7	3.2	3.1	3.1	3.2	3.6	7.0	6.4	7.5	5.0	4.6	4.2	3.7	3.8	4.0	3.2	2.7	5.2	3.3	32.1	2.8	1.2	32.1	5.1
24	1.2	1.0	2.1	4.2	4.4	3.0	2.0	6.8	10.6	4.4	6.1	7.3	8.3	5.3	8.3	6.4	6.5	2.6	2.7	6.6	12.1	4.6	3.1	3.2	12.1	5.1
25	5.9	4.3	5.3	4.9	4.8	5.2	6.3	13.7	32.1	23.4	21.5	16.2	18.4	30.3	20.9	16.7	12.8	13.5	10.6	10.5	9.5	10.2	13.7	13.0	32.1	13.5
26	13.2	16.1	15.7	13.1	13.7	15.7	17.5	39.7	49.8	29.9	30.3	27.2	15.2	13.9	16.7	27.4	40.1	32.4	43.8	91.2	109.8	118.9	124.9	125.9	125.9	43.4
27	96.8	84.2	62.3	55.9	53.9	49.2	46.9	83.3	96.0	67.4	47.7	21.2	16.6	20.3	20.0	15.8	14.3	12.3	12.5	17.3	20.3	16.9	16.0	27.9	96.8	40.6
28	32.3	23.3	20.4	19.8	20.4	22.5	22.4	65.7	55.7	41.2	31.4	29.6	23.4	26.0	19.3	16.8	16.5	22.6	23.7	34.1	44.5	38.9	31.6	30.1	65.7	29.7
29	30.4	26.8	29.1	31.5	29.2	29.0	31.5	51.3	42.0	32.4	36.8	35.6	27.7	21.6	19.4	18.2	17.5	25.4	36.8	33.4	29.4	26.9	39.8	30.4	51.3	30.5
30	31.5	35.0	44.4	48.7	46.4	44.3	39.2	42.7	48.6	37.8	22.0	13.9	6.9	9.1	48.6	32.7	36.8	37.1	43.2	55.9	94.4	83.4	87.7	84.6	94.4	44.8
31	83.2	85.5	84.4	84.8	82.3	82.5	79.7	119.9	116.2	95.3	80.7	75.5	64.4	58.8	59.5	60.6	55.8	59.5	69.8	68.1	56.4	42.7	39.8	34.3	119.9	72.5
Hourly Max	111.7	141.7	129.6	133.7	122.5	107.4	110.4	125.4	141.5	109.1	93.4	88.4	76.9	92.0	101.5	115.5	127.6	128.6	121.2	111.8	136.9	118.9	124.9	125.9		
Hourly Average	28.0	28.5	27.1	27.3	27.0	26.8	28.1	42.0	43.7	37.7	34.3	28.7	23.5	24.0	25.2	24.8	26.2	26.3	24.6	25.6	28.4	27.1	28.1	27.3		



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	141.7	UG/M3		
Maximum 24-HR Average	97.8	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	27.3		Monthly Average	28.8 UG/M3

West TSP ($\mu\text{g}/\text{m}^3$) – July 2017

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	18.4	24.7	12.2	7.1	6.2	8.1	6.3	9.9	11.7	13.4	12.0	57.5	12.8	7.1	100.8	64.4	27.3	19.1	6.5	5.2	5.1	4.7	5.5	6.1	100.8	18.8
2	6.8	7.6	7.3	7.8	8.5	8.3	7.7	7.9	9.3	13.2	13.0	8.3	11.2	7.1	8.4	11.3	11.9	4.5	7.1	6.6	5.3	6.9	7.0	7.6	13.2	8.4
3	7.8	9.8	9.6	8.9	9.7	9.1	12.6	45.3	126.5	90.7	78.9	90.4	125.8	106.2	82.7	31.1	20.5	10.7	6.1	3.9	3.0	14.0	52.3	13.1	126.5	40.4
4	8.7	7.9	6.4	6.7	7.5	8.4	11.5	27.6	56.3	49.0	84.8	47.4	60.0	18.4	32.0	21.9	14.4	9.6	6.0	5.1	3.5	3.6	4.8	5.9	84.8	21.1
5	4.1	4.3	5.7	5.7	10.1	15.4	13.5	40.8	42.2	90.4	85.5	63.0	75.7	46.4	61.8	60.7	62.6	44.8	22.4	13.3	16.3	16.8	16.2	15.8	90.4	34.7
6	19.5	22.8	18.8	14.2	13.2	12.4	19.5	74.9	59.2	50.3	70.3	38.1	37.3	17.9	88.9	78.0	60.2	40.2	36.2	29.4	31.9	20.5	16.4	14.7	88.9	36.9
7	14.7	20.6	17.5	30.3	20.4	21.8	40.1	94.8	66.2	46.4	68.2	64.1	54.5	30.8	35.9	32.2	41.3	19.8	10.9	9.0	9.2	7.4	10.3	10.4	94.8	32.4
8	10.8	9.9	12.1	9.7	11.2	10.9	13.8	25.8	25.1	28.5	47.0	56.0	38.6	129.5	112.0	90.9	47.8	47.7	37.0	49.0	36.1	27.6	32.7	29.7	129.5	39.1
9	25.9	28.0	37.3	28.1	22.2	22.9	24.2	34.2	26.1	47.6	32.2	20.1	18.4	17.0	16.0	20.3	26.4	16.8	17.3	14.4	7.9	5.8	7.6	16.7	47.6	22.2
10	18.8	21.3	17.0	14.4	31.4	16.0	9.5	11.6	12.7	12.1	51.0	54.1	55.5	49.1	40.9	47.5	40.6	27.1	16.5	5.0	4.0	2.8	4.3	4.7	55.5	23.7
11	4.2	4.8	4.4	5.7	5.9	5.3	5.9	6.3	7.5	9.8	11.5	9.4	36.9	57.6	28.1	32.9	16.1	26.9	14.1	13.2	13.3	14.4	14.9	15.3	57.6	15.2
12	15.8	17.1	18.3	19.8	20.7	21.3	25.3	30.9	36.9	67.4	90.2	70.2	58.9	36.6	40.3	31.5	32.1	23.8	14.7	14.1	20.7	24.9	19.2	16.3	90.2	32.0
13	19.1	19.1	17.2	16.5	14.8	14.9	13.8	25.6	44.1	43.7	44.0	39.7	25.3	27.7	30.3	31.6	22.1	9.1	10.4	5.8	6.0	6.4	6.0	7.1	44.1	20.8
14	51.6	17.5	12.7	11.7	8.6	9.2	15.2	73.5	61.9	46.6	46.7	31.5	29.7	48.1	47.2	45.5	42.3	45.9	17.6	9.0	11.7	13.1	15.0	15.7	73.5	30.3
15	17.4	15.9	14.8	11.3	10.1	10.9	12.1	13.3	15.1	23.3	27.7	20.6	15.3	16.2	8.0	7.8	9.5	12.8	6.8	5.6	6.6	12.4	7.0	7.7	27.7	12.8
16	6.4	7.3	11.0	11.0	9.7	15.0	16.6	19.5	13.0	14.7	20.4	23.9	24.5	16.0	25.2	58.0	236.9	156.0	83.0	108.6	122.6	94.4	95.5	66.0	236.9	52.3
17	88.8	109.3	92.9	96.7	90.5	82.5	81.1	122.1	115.8	96.4	73.5	78.0	79.3	111.7	116.4	105.0	110.6	108.5	214.1	81.5	37.3	26.7	28.2	30.9	214.1	90.7
18	33.5	29.6	31.3	34.3	37.2	38.0	53.7	90.3	78.5	90.6	88.6	42.2	51.4	44.5	72.3	62.1	79.4	105.8	72.0	65.8	52.5	33.4	33.8	31.7	105.8	56.4
19	33.9	38.0	47.7	50.8	50.4	51.2	65.0	152.4	193.9	120.4	106.3	95.9	57.4	64.4	41.5	37.7	31.5	25.0	22.1	24.8	28.9	30.9	41.1	35.4	193.9	60.3
20	63.4	33.4	33.3	26.0	27.2	28.1	43.3	67.3	135.4	124.0	63.8	52.2	44.2	45.3	48.4	48.4	40.1	51.9	13.7	7.3	3.8	5.8	5.1	7.7	135.4	42.5
21	3.7	3.3	3.2	9.5	11.3	9.9	18.5	27.8	28.7	20.6	15.6	22.6	22.3	26.5	20.0	18.2	10.9	15.0	10.5	9.6	10.4	10.7	10.8	10.5	28.7	14.6
22	10.1	10.9	10.5	10.0	10.3	9.7	10.2	9.8	13.6	6.5	10.1	9.3	8.6	5.4	4.9	5.3	9.1	2.9	3.1	1.1	1.0	0.8	1.4	2.0	13.6	6.9
23	2.0	2.0	1.9	2.7	2.4	4.0	2.2	3.0	12.6	7.6	14.4	5.1	5.9	7.6	6.8	9.5	6.6	5.4	2.7	8.3	4.4	113.2	2.3	0.9	113.2	9.7
24	0.9	0.7	1.6	2.9	3.0	2.1	1.4	14.8	27.3	10.2	20.5	11.9	18.2	11.2	26.9	10.8	15.5	3.1	2.3	14.8	22.1	3.5	2.1	2.3	27.3	9.6
25	4.2	3.7	4.9	3.9	3.2	3.5	4.9	24.4	58.0	41.1	39.6	38.6	40.6	83.4	41.6	37.1	23.0	19.0	16.6	13.1	8.3	8.4	11.5	10.4	83.4	22.6
26	9.7	12.1	14.2	10.8	9.3	11.4	18.9	64.2	87.3	61.2	56.0	53.7	36.4	27.8	39.5	53.6	68.9	39.7	32.9	78.5	75.8	85.4	91.9	99.7	99.7	47.4
27	68.5	61.1	44.1	36.8	45.1	42.9	47.5	132.2	153.9	111.7	87.8	45.5	39.8	35.9	40.3	29.6	29.3	19.1	18.2	32.6	30.9	17.2	15.0	37.5	153.9	50.9
28	44.2	21.5	15.0	14.4	15.3	17.1	16.9	89.2	100.0	67.1	64.4	45.9	34.5	41.6	26.6	30.7	22.5	23.4	22.8	54.0	82.1	40.2	27.6	30.0	100.0	39.5
29	21.3	18.3	20.8	23.2	19.6	19.1	20.7	60.9	47.5	35.7	47.4	45.2	39.6	28.9	21.1	18.1	17.9	23.2	28.6	26.8	21.2	18.9	33.6	22.8	60.9	28.3
30	21.9	23.2	30.7	32.7	33.2	30.2	27.9	34.6	46.2	37.7	38.4	28.3	10.9	18.4	113.1	53.6	63.9	56.2	78.4	69.5	91.7	61.1	59.9	55.7	113.1	46.6
31	54.4	56.1	54.9	55.6	53.7	54.4	54.0	128.2	133.5	95.0	112.7	93.1	78.0	64.3	78.0	73.8	62.6	84.3	85.4	76.0	62.1	54.9	57.4	44.0	133.5	73.6
Hourly Max	88.8	109.3	92.9	96.7	90.5	82.5	81.1	152.4	193.9	124.0	112.7	95.9	125.8	129.5	116.4	105.0	236.9	156.0	214.1	108.6	122.6	113.2	95.5	99.7		
Hourly Average	22.9	21.3	20.3	20.0	20.1	19.8	23.0	50.4	59.6	50.7	52.3	43.9	40.2	40.3	47.0	40.6	42.1	35.4	30.2	27.8	27.0	25.4	23.8	21.8		

24-hour TSP ($\mu\text{g}/\text{m}^3$) at West



Number of 24HR Exceedances	0	Guideline	100	UG/M3
Number of Non-Zero Readings	744			
Maximum 1-HR Average	236.9	UG/M3		
Maximum 24-HR Average	90.7	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	744 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	100.0 %
Standard Deviation	32.1		Monthly Average	33.6 UG/M3

Berm PM_{2.5} (µg/m³) – July 2017

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	3.6	3.2	3.4	3.6	3.3	4.3	8.9	6.3	4.7	4.5	4.6	3.5	12.5	11.3	5.2	3.8	4.9	4.0	3.5	4.0	3.3	3.0	4.0	12.5	4.9	
2	3.4	3.6	3.4	4.0	4.9	4.8	4.7	6.8	6.9	14.4	6.2	4.5	2.4	2.5	17.6	21.2	9.1	16.6	5.7	4.2	3.4	2.8	2.9	3.0	21.2	6.6	
3	4.2	9.0	6.1	6.6	7.0	6.3	4.6	6.0	5.7	6.7	5.1	4.6	5.1	4.2	5.8	16.1	35.8	16.3	16.5	8.0	2.3	4.0	2.8	2.2	35.8	8.0	
4	2.5	4.7	2.0	1.8	2.7	2.8	3.9	5.5	7.8	5.7	4.2	6.3	11.0	13.0	13.9	11.9	8.1	6.4	3.9	3.0	2.0	2.2	3.3	2.2	13.9	5.5	
5	1.7	1.7	2.1	2.9	3.2	3.3	4.6	5.4	5.3	6.1	6.3	5.7	4.3	3.6	3.4	3.2	3.6	3.3	3.4	4.0	4.8	5.3	6.0	4.6	6.3	4.1	
6	4.3	4.5	5.2	5.6	5.7	6.8	8.7	16.6	21.1	18.5	12.6	10.6	5.0	7.1	7.3	4.4	3.9	4.0	4.0	4.3	3.7	4.7	5.0	4.5	21.1	7.4	
7	6.1	14.1	8.7	5.8	5.9	5.7	8.9	13.1	9.4	15.0	8.6	12.2	4.0	6.9	16.5	13.1	9.1	14.2	6.0	3.0	1.8	2.2	2.4	2.9	16.5	8.1	
8	3.2	3.4	3.5	3.9	4.8	5.3	7.8	13.1	10.6	13.3	13.1	5.1	5.6	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-	
9	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
10	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
11	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
12	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
13	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
14	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
15	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
16	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
17	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-															
18	43.7	45.3	45.2	47.6	49.1	49.6	48.6	50.8	51.5	45.5	47.8	34.9	22.5	26.8	32.3	35.3	37.1	26.9	27.9	30.0	31.0	30.1	28.8	28.1	51.5	38.2	
19	30.3	40.4	48.7	62.2	72.0	77.8	79.2	84.4	86.8	81.1	81.2	53.5	43.6	43.0	44.3	32.3	32.0	38.1	29.9	22.9	30.3	39.6	42.2	43.7	86.8	51.6	
20	44.3	42.8	39.4	36.8	34.6	32.5	41.5	41.5	32.7	32.2	37.6	32.2	51.1	37.7	46.0	25.7	20.3	18.8	10.1	5.4	3.6	2.8	5.2	5.3	51.1	28.3	
21	5.0	4.5	3.6	4.5	3.6	3.5	4.2	8.9	20.4	29.6	26.8	22.8	25.0	22.9	17.0	20.3	14.3	23.3	16.7	14.6	14.2	14.2	13.6	13.0	29.6	14.4	
22	12.8	13.8	13.6	13.1	13.4	12.5	11.8	11.4	11.2	16.4	20.9	21.6	15.9	9.4	13.8	17.7	20.4	14.6	6.7	7.9	3.5	6.8	5.7	1.9	21.6	12.4	
23	3.0	1.6	1.0	1.3	1.2	2.3	2.2	2.2	2.7	3.4	4.3	4.2	4.8	9.1	6.4	12.4	8.7	16.3	16.4	12.3	2.1	E	1.1	0.9	16.4	5.2	
24	0.8	0.6	0.8	2.5	2.9	2.0	1.2	2.2	4.2	4.0	6.8	8.1	7.8	8.7	6.0	4.2	2.9	2.7	3.3	2.2	3.2	3.9	3.6	23.6	4.5		
25	6.1	9.0	35.6	34.5	21.1	5.6	12.6	5.5	8.9	7.7	5.5	5.7	2.9	3.3	3.3	3.5	3.1	5.1	4.4	3.5	9.3	8.9	10.3	10.3	35.6	9.4	
26	4.3	5.8	17.2	12.9	13.4	12.6	24.3	12.9	20.6	21.9	24.1	13.6	28.0	10.0	8.2	15.5	29.7	31.3	39.2	63.3	85.9	89.7	85.8	76.6	89.7	31.1	
27	74.9	55.8	49.7	43.2	39.8	40.0	37.4	38.4	35.6	30.5	29.2	18.7	20.4	17.4	19.6	21.7	16.6	11.4	12.7	14.4	14.3	13.6	53.7	15.6	74.9	30.2	
28	17.2	16.9	16.7	18.5	17.3	18.6	17.5	21.4	15.8	14.0	13.3	12.2	9.9	7.5	13.3	7.2	11.0	18.2	14.2	11.1	15.3	17.4	16.6	16.8	21.4	14.9	
29	18.4	18.8	23.0	18.8	17.6	23.3	23.7	24.5	25.4	19.4	17.9	14.8	13.5	13.6	16.4	11.3	11.2	20.1	14.5	8.7	14.8	23.4	23.8	24.7	25.4	18.4	
30	26.4	28.7	34.7	27.6	31.8	31.2	31.5	33.1	32.8	25.3	22.3	26.7	9.7	12.3	17.9	17.7	17.4	23.2	28.2	40.7	61.8	71.3	78.0	71.2	78.0	33.4	
31	79.7	73.2	74.5	74.1	96.5	76.0	66.6	76.8	57.1	58.2	56.2	52.1	48.6	41.5	41.4	40.6	44.6	41.8	42.2	42.4	33.4	21.5	18.2	19.2	96.5	53.2	
Hourly Max	79.7	73.2	74.5	74.1	96.5	77.8	79.2	84.4	86.8	81.1	81.2	83.6	73.5	93.4	93.7	118.6	140.7	121.2	52.4	63.3	85.9	89.7	85.8	76.6	-	-	
Hourly Average	18.0	18.3	19.9	19.6	20.6	19.4	20.4	22.2	21.8	21.5	20.7	19.9	18.2	18.5	20.7	20.9	22.0	21.8	16.5	15.1	16.6	18.6	20.2	18.7	-	-	

SM = SERVER MIGRATION E = INSTRUMENT ERROR

24-hour PM_{2.5} (µg m⁻³) at Berm



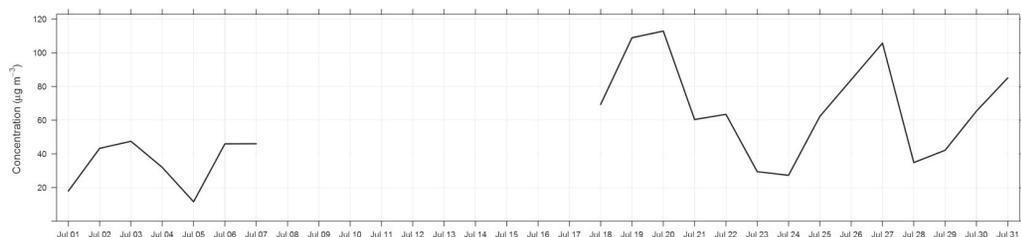
Number of 1HR Exceedances	14	Guideline	80	UG/M3
Number of 24HR Exceedances	6	Guideline	30	UG/M3
Number of Non-Zero Readings	529			
Maximum 1-HR Average	96.5	UG/M3		
Maximum 24-HR Average	53.2	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	529 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	71.1 %
Standard Deviation	21.4		Monthly Average	19.6 UG/M3

Berm PM₁₀ (µg/m³) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average	
1	7.0	7.6	4.6	4.4	5.1	4.0	6.2	36.4	30.9	14.7	12.6	14.0	16.7	117.8	91.5	13.5	6.2	10.2	4.6	4.2	4.5	3.7	3.7	5.0	117.8	17.9	
2	4.0	4.4	3.9	4.7	5.7	5.3	5.7	27.4	33.8	144.3	38.9	33.1	9.5	6.6	170.4	197.0	85.0	183.3	31.8	19.2	12.7	4.1	3.7	4.0	197.0	43.3	
3	10.5	34.8	16.7	18.1	17.8	16.4	10.2	35.8	14.3	16.3	11.4	10.4	14.7	10.8	28.5	143.7	314.0	148.3	165.4	63.4	6.9	19.1	7.0	4.4	314.0	47.4	
4	5.0	11.2	2.9	2.3	4.1	3.8	18.1	23.3	46.9	22.4	16.9	39.4	77.3	96.8	99.6	108.6	64.5	50.5	28.9	15.1	5.5	6.3	12.1	4.9	108.6	31.9	
5	2.7	2.3	3.0	5.8	6.2	5.6	10.8	14.8	12.3	18.4	19.3	17.9	14.6	12.7	11.0	10.9	12.9	11.1	11.5	13.7	16.3	14.6	18.1	10.0	19.3	11.5	
6	8.0	8.4	10.0	13.7	12.3	26.4	48.4	139.0	182.1	157.9	126.0	92.9	27.2	49.8	47.6	21.3	17.9	17.6	17.1	17.8	15.6	18.2	16.0	11.7	182.1	45.9	
7	17.7	41.1	21.2	12.7	16.1	11.6	42.3	86.4	44.6	114.3	53.7	82.0	24.0	57.1	136.0	115.5	68.6	98.3	31.8	11.9	3.6	4.2	4.2	5.0	136.0	46.0	
8	5.6	5.3	4.7	5.3	7.3	6.9	29.1	75.5	62.3	85.3	80.3	19.8	21.9	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-	
9	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
10	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
11	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
12	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
13	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
14	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
15	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
16	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
17	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	171.4	210.2	349.4	248.4	313.0	434.6	252.7	90.9	47.9	37.0	34.4	38.1	41.1	-	-
18	47.5	49.5	58.9	66.2	57.5	53.2	57.0	79.2	88.0	56.9	123.0	148.1	78.7	111.6	108.3	64.1	58.7	63.5	56.2	59.3	55.6	48.1	39.1	36.5	148.1	69.4	
19	41.0	60.4	68.6	70.0	81.4	95.9	88.6	129.3	171.7	147.5	229.9	156.3	151.3	116.7	167.4	155.2	163.3	183.6	132.0	31.8	34.2	42.1	45.2	51.1	229.9	108.9	
20	65.5	49.5	50.0	43.0	41.2	45.8	125.0	159.2	76.9	75.0	249.0	237.7	353.4	299.1	341.2	203.0	144.8	86.9	20.9	11.5	7.1	4.4	9.1	10.6	353.4	112.9	
21	7.6	7.0	4.9	5.1	4.2	5.0	7.1	23.8	103.0	194.3	145.8	129.3	158.9	141.1	71.3	102.6	38.0	127.2	61.0	41.3	23.9	17.1	15.5	14.0	194.3	60.4	
22	13.5	19.9	14.5	14.3	19.6	13.4	12.9	20.6	40.2	104.9	147.1	146.0	132.7	76.7	94.7	127.3	162.9	122.3	52.2	69.0	24.7	52.0	38.1	4.0	162.9	63.5	
23	7.3	2.6	1.2	2.1	1.7	5.5	3.5	4.2	8.2	12.6	19.4	25.2	28.4	71.2	44.9	95.4	60.5	99.1	88.5	86.5	5.6	E	1.4	1.2	99.1	29.4	
24	1.0	0.8	1.0	3.0	3.7	2.3	1.6	12.5	30.9	21.0	51.7	53.8	53.2	51.7	38.7	25.6	11.1	9.9	13.8	9.2	16.9	14.0	13.4	213.6	27.3		
25	41.2	68.4	295.7	272.7	152.0	16.8	82.3	24.7	50.7	52.6	24.1	27.4	10.1	14.2	14.9	14.2	11.0	26.7	16.8	11.6	96.1	48.3	56.6	65.0	295.7	62.2	
26	10.1	24.2	126.3	66.4	70.8	37.7	136.5	58.5	120.2	124.1	141.0	72.1	171.1	56.2	37.8	71.1	100.0	79.4	49.2	68.3	91.7	96.3	112.9	93.9	171.1	84.0	
27	94.2	62.0	55.9	47.9	45.9	88.8	119.1	135.8	141.9	131.8	142.0	140.1	125.6	134.6	153.5	130.4	124.8	80.5	90.2	50.3	42.4	48.1	311.0	40.9	311.0	105.7	
28	23.9	20.9	18.8	28.7	20.9	25.6	24.3	54.8	24.6	22.9	29.8	23.6	19.7	22.1	106.2	34.6	64.1	78.4	28.9	36.1	35.0	34.0	29.0	28.3	106.2	34.8	
29	30.5	34.5	59.0	31.7	22.6	32.7	40.2	59.2	77.3	45.7	61.4	56.9	38.5	35.4	93.4	23.9	32.5	54.5	26.5	24.3	33.7	34.7	30.0	31.5	93.4	42.1	
30	33.1	36.0	52.6	32.0	37.0	37.3	71.9	82.1	91.6	49.9	131.4	206.5	62.4	60.8	37.2	33.6	32.5	33.3	38.2	57.7	79.1	85.8	104.8	82.0	206.5	65.4	
31	104.8	84.2	89.1	101.5	216.5	108.7	99.2	239.7	78.7	73.0	87.4	68.0	64.0	56.9	65.8	59.0	86.2	67.6	61.1	56.6	52.2	42.5	35.7	43.7	239.7	85.1	
Hourly Max	104.8	84.2	295.7	272.7	216.5	108.7	136.5	239.7	182.1	194.3	249.0	237.7	353.4	349.4	341.2	313.0	434.6	252.7	165.4	86.5	96.1	96.3	311.0	213.6			
Hourly Average	26.4	28.9	43.8	38.7	38.6	29.5	47.3	69.2	69.6	76.6	88.3	85.7	81.0	88.6	100.4	93.8	95.2	85.7	50.8	36.7	31.8	32.0	42.9	36.5			

SM = SERVER MIGRATION AND ANNUAL CALIBRATION / MAINTENANCE E = INSTRUMENT ERROR

24-hour PM₁₀ (µg m⁻³) at Berm



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	529			
Maximum 1-HR Average	353.4	UG/M3		
Maximum 24-HR Average	112.9	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	529 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	71.1 %
Standard Deviation	63.8		Monthly Average	59.2 UG/M3

Berm TSP ($\mu\text{g}/\text{m}^3$) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average	
1	9.2	8.2	4.0	4.1	6.4	3.9	5.3	61.4	59.2	27.7	22.9	22.7	40.1	256.3	232.0	37.9	13.2	15.1	3.3	2.9	3.0	2.4	2.8	3.5	256.3	35.3	
2	2.7	3.0	2.6	3.2	3.8	3.5	4.5	52.7	90.6	407.2	71.6	69.8	16.0	10.5	415.2	394.5	195.1	426.6	76.2	39.8	25.9	4.8	3.6	3.8	426.6	97.0	
3	10.9	30.1	14.3	19.8	18.5	13.1	10.9	61.9	30.3	32.1	21.2	24.3	42.2	23.0	74.9	383.4	989.4	426.9	582.5	223.9	7.6	54.9	14.2	5.0	989.4	129.8	
4	5.3	13.1	3.6	3.0	3.5	3.2	28.0	44.1	70.5	34.2	28.6	85.0	237.0	287.7	284.9	282.1	171.3	137.6	85.3	24.9	7.1	7.7	13.6	7.3	287.7	77.9	
5	3.9	1.5	3.5	5.2	6.1	10.5	19.1	23.0	28.6	26.8	27.1	28.9	27.8	21.8	15.6	19.3	24.6	16.0	18.8	17.3	22.5	16.8	22.0	11.2	28.9	17.4	
6	8.4	6.4	10.9	18.3	17.4	50.3	110.7	337.3	453.2	372.0	300.8	174.5	49.4	87.4	74.9	42.3	31.0	30.0	31.3	27.9	28.3	22.8	16.2	9.7	453.2	96.3	
7	16.1	38.8	31.7	12.5	23.8	12.0	85.1	178.6	69.3	230.6	85.5	124.5	51.2	115.5	345.6	287.3	172.1	359.2	59.3	17.9	4.5	8.7	4.6	7.5	359.2	97.6	
8	7.5	6.9	3.7	4.1	9.5	7.5	55.4	150.7	147.0	131.4	127.9	30.9	37.9	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-	
9	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
10	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
11	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
12	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
13	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
14	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
15	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
16	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
17	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	496.5	723.4	1271.1	809.8	782.2	857.1	632.6	198.9	86.3	48.7	37.4	37.0	41.9	-	-
18	33.6	37.0	48.4	54.8	52.6	45.2	59.5	112.7	123.6	61.5	247.5	456.6	160.1	255.4	258.8	114.2	117.6	129.7	86.7	78.2	68.4	50.2	37.5	31.7	456.6	113.4	
19	34.7	55.2	76.6	61.6	73.4	88.0	80.8	164.9	280.2	221.7	435.2	294.3	388.9	238.2	415.5	430.0	424.4	382.7	285.3	26.6	35.8	31.1	30.9	40.2	435.2	191.5	
20	57.5	34.1	39.3	31.9	38.4	58.8	226.4	423.9	143.3	114.7	694.1	721.8	970.3	1015.5	1289.2	863.2	618.8	342.5	51.2	27.4	8.9	4.7	17.0	29.9	1289.2	325.9	
21	7.4	8.4	6.9	5.6	4.1	5.4	17.7	86.1	513.5	893.0	616.7	579.3	815.4	657.4	300.3	426.9	109.2	549.5	232.3	116.5	51.5	19.8	14.0	9.3	893.0	251.9	
22	12.4	25.4	10.6	11.0	22.7	9.7	11.1	38.0	111.9	370.3	559.7	568.3	589.4	289.0	275.1	393.0	582.0	480.1	202.7	257.1	83.8	125.4	65.9	4.7	589.4	212.5	
23	7.0	3.8	0.8	1.9	1.7	3.9	3.3	5.3	12.2	16.8	30.9	52.7	65.9	199.3	131.0	260.6	164.9	239.1	133.5	185.7	6.9	E	1.0	0.9	260.6	66.5	
24	0.7	0.6	0.7	2.1	2.8	1.6	1.7	46.0	107.8	81.5	207.3	175.0	199.2	165.2	160.4	104.5	48.3	24.3	27.9	37.9	79.0	21.7	19.1	467.9	467.9	82.6	
25	84.3	132.6	582.8	486.8	263.1	26.6	208.8	59.6	136.9	137.2	45.4	80.4	18.5	33.0	27.7	28.9	20.9	46.2	29.6	23.6	131.4	70.6	79.5	93.1	582.8	118.6	
26	13.0	40.3	178.8	139.4	137.1	61.6	278.1	148.3	263.0	275.0	279.5	129.2	256.1	109.5	78.9	195.5	325.1	105.6	63.3	63.3	75.9	102.0	98.0	77.6	325.1	145.6	
27	95.1	55.9	46.2	33.3	41.1	198.4	277.4	321.0	342.3	389.4	338.9	392.4	307.1	469.8	544.7	408.6	409.7	236.9	150.5	98.8	103.2	109.8	590.1	99.3	590.1	252.5	
28	42.2	27.3	15.2	27.5	19.1	25.7	22.4	83.6	28.4	28.8	42.6	32.6	38.9	55.5	271.8	88.8	186.9	189.3	36.0	74.1	50.0	44.5	34.4	33.4	271.8	62.4	
29	34.1	31.1	69.6	25.5	15.6	30.9	64.7	128.4	141.1	81.1	108.5	105.2	71.8	62.2	241.7	39.5	58.0	109.0	33.5	34.8	40.3	35.8	23.3	23.9	241.7	67.1	
30	25.3	30.2	67.0	29.6	28.7	33.9	113.3	152.0	157.7	62.4	373.9	753.7	215.2	250.3	75.2	52.4	56.7	38.2	56.9	88.4	101.5	91.9	118.3	61.7	753.7	126.4	
31	86.1	58.9	69.4	112.6	318.0	105.1	103.2	458.2	91.5	69.8	132.2	67.1	74.1	61.2	113.4	70.4	116.8	101.0	86.0	66.4	67.0	61.7	46.9	108.9	458.2	110.2	
Hourly Max	95.1	132.6	582.8	486.8	318.0	198.4	278.1	458.2	513.5	893.0	694.1	753.7	970.3	1271.1	1289.2	863.2	989.4	632.6	582.5	257.1	131.4	125.4	590.1	467.9			
Hourly Average	27.1	29.5	58.5	49.7	50.4	36.3	81.2	142.6	154.6	184.8	218.1	237.6	234.6	269.8	292.6	259.3	258.8	228.1	115.0	73.6	47.8	44.0	58.6	53.3			

SM = SERVER MIGRATION AND ANNUAL CALIBRATION / MAINTENANCE E = INSTRUMENT ERROR

24-hour TSP ($\mu\text{g m}^{-3}$) at Berm

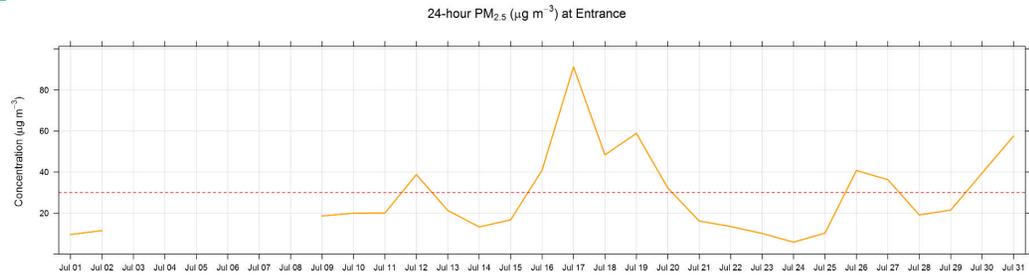


Number of 24HR Exceedances	11	Guideline	100	UG/M3
Number of Non-Zero Readings	529			
Maximum 1-HR Average	1289.2	UG/M3		
Maximum 24-HR Average	325.9	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	529 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	71.1 %
Standard Deviation	192.3		Monthly Average	134.1 UG/M3

Entrance PM_{2.5} (µg/m³) – July 2017

Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	7.8	11.2	8.2	11.9	9.6	11.0	11.7	20.0	11.2	9.3	7.5	6.5	6.3	9.3	10.7	7.7	6.3	7.5	6.0	6.1	7.6	6.0	10.5	18.3	20.0	9.5
2	12.4	6.7	6.2	11.2	20.9	16.4	14.0	49.6	40.5	18.0	9.3	6.1	4.2	3.6	6.5	6.5	6.0	7.2	4.0	4.0	6.0	4.9	4.7	5.6	49.6	11.4
3	9.7	12.2	14.4	17.7	24.4	17.8	13.6	15.9	11.8	10.8	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
4	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
5	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
6	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
7	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
8	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	-	-
9	11.0	10.8	9.5	11.3	13.0	32.9	46.2	40.1	38.3	34.8	34.0	17.8	16.7	12.1	14.4	11.8	12.2	17.2	10.3	12.1	11.2	5.7	8.8	13.1	46.2	18.6
10	11.2	22.5	41.4	30.4	31.0	19.9	16.5	31.9	18.7	17.4	19.2	24.3	23.3	15.8	22.7	21.9	17.4	12.5	12.9	5.8	4.2	20.8	26.6	10.0	41.4	19.9
11	7.5	17.2	20.1	22.5	31.0	20.7	14.5	14.5	16.3	11.8	11.5	14.2	18.1	26.1	28.0	27.5	26.3	24.5	21.2	18.8	22.9	23.5	20.5	20.6	31.0	20.0
12	21.7	25.3	26.5	33.1	39.3	49.7	53.1	59.8	59.9	80.5	75.3	58.9	60.4	36.2	29.1	25.3	33.1	27.1	24.7	18.8	22.2	23.5	23.6	23.1	80.5	38.8
13	26.2	29.2	34.9	35.4	42.9	35.6	39.9	40.8	39.6	33.0	19.2	10.8	10.9	12.9	10.2	11.1	14.5	6.3	8.8	7.0	7.5	5.7	11.5	16.4	42.9	21.3
14	13.5	14.2	15.3	15.2	14.0	17.7	21.8	20.9	30.0	19.9	13.5	13.7	10.3	9.7	11.3	7.9	7.9	6.6	8.1	8.8	8.3	9.8	9.8	8.9	30.0	13.2
15	16.7	27.7	23.0	22.6	22.7	17.0	23.1	34.5	39.7	31.7	35.8	16.6	15.8	7.8	7.9	5.8	4.8	5.2	9.4	7.8	5.8	5.7	6.0	6.8	39.7	16.7
16	8.1	5.9	17.8	20.8	11.8	8.3	7.6	8.2	7.2	5.8	8.1	15.9	17.7	16.4	17.2	41.1	108.3	108.7	80.1	116.4	113.5	97.2	65.4	73.3	116.4	40.9
17	88.0	106.8	115.4	110.6	112.4	116.2	121.4	126.9	121.4	102.0	96.6	90.3	80.4	103.5	132.5	117.0	123.5	124.6	67.4	23.3	22.1	22.5	30.9	33.4	132.5	91.2
18	41.4	58.6	72.5	71.8	71.6	71.8	66.6	71.9	78.1	68.3	52.7	36.3	22.4	26.8	33.4	40.4	41.9	29.7	30.9	33.6	34.0	37.9	33.4	34.5	78.1	48.4
19	39.5	56.4	63.6	75.6	87.1	92.9	96.4	102.8	99.3	93.9	88.0	62.7	49.3	44.8	38.8	37.4	27.1	21.3	23.8	34.8	38.8	46.1	46.2	45.7	102.8	58.8
20	53.6	52.8	54.4	59.0	50.7	45.6	46.6	55.1	48.3	48.0	32.2	17.1	20.9	29.0	38.2	22.9	14.7	16.9	14.7	7.1	7.5	6.7	15.5	14.5	59.0	32.2
21	8.7	10.8	9.3	10.2	10.9	11.3	9.7	14.6	19.5	20.3	21.9	20.9	23.2	21.7	19.7	14.7	15.7	20.7	18.0	18.7	16.5	15.8	15.6	17.7	23.2	16.1
22	28.5	27.8	27.9	29.1	22.9	15.7	19.7	27.3	11.0	9.3	11.3	13.5	12.8	10.3	10.4	6.0	4.7	6.6	7.6	5.6	3.8	2.5	2.7	5.1	29.1	13.4
23	22.7	10.6	4.3	5.5	4.3	11.0	19.7	26.1	24.9	19.9	13.3	10.8	8.5	8.9	4.4	7.0	6.5	4.3	5.1	4.4	11.5	4.2	1.6	1.1	26.1	10.0
24	1.0	0.8	1.4	2.1	3.8	6.0	4.5	4.5	3.3	7.7	8.4	8.7	6.1	9.7	8.8	5.6	4.3	6.1	6.8	3.1	5.1	6.0	5.8	19.5	19.5	5.8
25	14.9	4.8	15.6	13.6	16.2	18.6	20.1	27.4	21.2	9.3	6.3	5.4	5.0	4.2	5.4	4.7	4.6	4.4	4.1	5.4	6.5	7.3	10.5	9.3	27.4	10.2
26	5.2	8.6	25.9	34.7	33.4	31.2	30.4	39.4	45.3	26.0	26.6	16.6	13.3	11.3	10.7	20.8	34.7	33.4	49.1	71.0	94.5	105.0	110.0	100.3	110.0	40.7
27	99.3	81.3	70.7	58.6	53.1	50.3	46.9	43.3	43.4	35.3	39.2	24.1	18.2	18.2	19.9	16.1	16.9	17.2	13.3	21.7	16.4	20.5	28.7	17.6	99.3	36.3
28	19.1	19.1	19.5	20.5	23.2	23.0	23.8	29.9	25.6	20.6	19.0	17.8	20.6	11.6	10.5	9.5	13.6	19.3	18.3	13.6	17.5	20.7	20.3	20.8	29.9	19.1
29	23.0	23.8	27.8	26.2	26.0	30.2	31.2	28.6	24.7	23.5	19.9	16.0	15.7	17.3	16.1	12.9	11.1	22.3	13.4	10.9	14.0	25.2	26.4	28.3	31.2	21.4
30	45.0	42.4	49.2	54.5	49.6	41.6	36.7	37.6	32.1	28.8	17.5	17.2	9.8	12.6	19.3	18.4	18.7	25.8	32.6	46.3	66.5	78.4	82.2	85.3	85.3	39.5
31	86.5	84.9	85.3	80.7	81.7	76.5	71.8	71.4	66.1	69.1	66.7	62.3	53.2	47.0	48.2	46.5	43.2	44.9	45.9	46.8	36.7	22.1	21.2	20.7	86.5	57.5
Hourly Max	99.3	106.8	115.4	110.6	112.4	116.2	121.4	126.9	121.4	102.0	96.6	90.3	80.4	103.5	132.5	117.0	123.5	124.6	80.1	116.4	113.5	105.0	110.0	100.3		
Hourly Average	27.8	29.7	33.1	34.0	34.9	34.2	34.9	40.1	37.6	32.9	30.1	24.2	21.7	21.1	23.0	21.9	24.7	24.8	21.5	22.1	24.0	25.0	25.5	26.0		

SM = SERVER MIGRATION AND ANNUAL CALIBRATION / MAINTENANCE

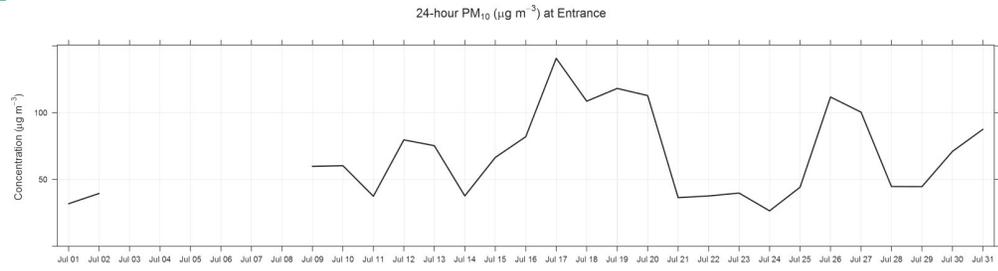


Number of 1HR Exceedances	45	Guideline	80	UG/M3
Number of 24HR Exceedances	10	Guideline	30	UG/M3
Number of Non-Zero Readings	610			
Maximum 1-HR Average	132.5	UG/M3		
Maximum 24-HR Average	91.2	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	610 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	82.0 %
Standard Deviation	26.4		Monthly Average	28.2 UG/M3

Entrance PM₁₀ (µg/m³) – July 2017

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	30.3	48.3	26.2	52.3	30.0	38.1	45.3	102.0	36.9	30.5	29.6	20.2	30.8	45.2	70.4	26.0	12.9	15.8	6.9	7.4	9.1	7.2	15.1	27.4	102.0	31.8
2	18.1	8.8	7.8	16.5	31.3	24.5	48.9	231.9	196.4	70.6	50.1	20.4	14.0	11.9	31.4	27.2	26.3	37.4	15.2	11.3	22.0	10.5	7.3	9.1	231.9	39.5
3	33.2	33.5	47.1	72.4	107.8	63.8	45.9	77.3	36.9	29.2	SM	-	-													
4	SM	-	-																							
5	SM	-	-																							
6	SM	-	-																							
7	SM	-	-																							
8	SM	-	-																							
9	41.3	40.7	32.4	39.5	32.5	47.7	143.2	126.2	98.6	68.6	69.8	47.7	62.3	54.0	66.2	55.1	55.7	120.2	60.0	60.6	50.5	10.3	20.0	32.7	143.2	59.8
10	27.1	86.5	191.3	131.7	120.6	55.2	24.7	47.6	26.1	22.6	53.6	116.3	107.2	57.8	97.7	97.7	42.3	24.6	18.8	7.0	5.5	31.2	39.9	14.5	191.3	60.3
11	10.6	25.5	30.1	33.7	46.4	31.0	21.4	20.8	23.3	16.5	14.1	17.7	23.5	84.2	114.5	84.9	69.3	48.6	45.2	27.8	29.7	30.5	25.1	24.6	114.5	37.5
12	27.0	33.5	33.5	46.8	56.0	73.7	77.9	110.1	118.7	173.0	161.7	111.7	169.5	95.2	96.7	82.4	110.7	78.8	82.3	37.9	38.4	35.8	30.5	30.1	173.0	79.7
13	39.0	43.4	60.3	83.0	77.1	66.9	139.0	260.7	169.5	145.0	94.0	63.8	53.5	82.7	54.2	63.6	63.4	25.6	46.6	29.7	31.4	13.0	44.5	57.5	260.7	75.3
14	34.7	26.8	29.3	29.4	26.1	29.5	50.3	61.3	131.8	65.5	36.7	43.8	33.9	32.0	51.1	27.7	29.4	20.9	32.1	29.3	20.6	24.5	21.2	16.5	131.8	37.7
15	48.4	100.0	69.6	65.1	65.0	40.0	88.3	145.6	180.1	133.5	190.6	97.6	95.4	33.9	37.7	25.4	24.8	21.8	35.2	28.4	17.7	14.7	19.6	17.6	190.6	66.5
16	28.5	15.9	64.4	87.8	42.6	23.1	29.7	27.5	25.0	20.5	37.9	76.6	73.7	87.2	60.8	118.6	183.3	186.2	144.0	233.5	130.6	112.7	72.2	86.0	233.5	82.0
17	103.3	116.7	129.1	119.8	125.5	154.2	202.1	209.9	199.2	141.4	148.0	124.6	155.7	245.6	323.8	175.9	175.7	184.9	144.6	36.9	34.0	36.4	43.9	46.0	323.8	140.7
18	49.3	91.0	146.7	143.9	125.2	129.4	140.3	218.2	300.2	242.3	138.1	88.7	57.7	71.2	79.8	70.4	73.7	63.4	60.6	64.7	63.7	79.1	54.4	55.3	300.2	108.6
19	71.6	111.1	120.9	130.7	151.6	153.7	164.0	210.3	192.1	171.2	173.9	138.3	119.3	92.3	110.2	137.3	81.4	45.2	57.5	120.9	74.3	76.3	60.0	71.9	210.3	118.2
20	107.9	106.6	123.7	153.9	122.7	104.9	126.4	160.6	146.5	142.0	170.2	112.5	159.9	215.3	290.5	150.9	75.4	55.5	36.4	15.4	21.4	17.1	44.3	47.9	290.5	112.8
21	19.5	30.6	22.4	24.4	31.3	41.6	26.7	47.0	45.3	50.4	49.7	48.5	65.0	61.4	49.5	30.1	28.2	41.7	34.3	34.3	22.9	19.1	19.2	30.8	65.0	36.4
22	78.4	71.4	70.2	73.7	48.2	26.4	49.7	89.3	26.2	25.7	34.2	42.0	45.8	38.8	34.2	23.2	17.2	24.3	28.8	18.9	11.7	5.3	6.2	13.6	89.3	37.7
23	78.6	41.1	16.4	20.2	12.1	36.5	76.4	104.9	89.2	88.1	46.6	36.5	37.5	46.0	19.7	37.4	29.2	18.0	23.1	21.6	50.8	22.2	2.3	1.5	104.9	39.8
24	1.3	1.1	1.9	2.8	5.4	8.6	21.0	21.8	13.2	25.3	41.1	36.2	26.3	47.8	46.2	22.6	14.6	24.5	27.2	12.3	25.7	24.3	24.8	160.0	160.0	26.5
25	125.1	14.3	52.5	43.9	55.1	63.9	79.1	131.5	98.4	41.7	31.0	24.9	22.4	17.9	28.0	19.7	19.1	18.0	15.2	21.3	23.0	26.0	45.0	43.4	131.5	44.2
26	13.0	23.0	108.7	145.9	133.3	114.1	142.9	225.4	228.1	105.5	115.5	78.2	67.2	58.2	49.5	103.9	120.8	98.2	125.3	92.7	107.7	136.5	156.4	132.4	228.1	111.8
27	143.2	106.2	128.7	84.3	81.7	102.9	121.0	119.2	121.7	92.4	128.1	135.5	119.0	114.6	139.0	92.9	95.5	78.5	55.5	89.6	48.7	60.9	105.7	45.5	143.2	100.4
28	25.7	23.9	22.9	25.9	32.7	32.0	41.4	86.5	72.8	46.8	53.6	51.3	81.2	40.0	51.0	39.0	54.3	49.2	42.0	45.9	37.0	41.3	40.3	36.2	86.5	44.7
29	46.3	37.9	41.5	39.1	37.6	46.3	53.0	64.2	53.9	54.9	52.7	51.5	45.3	68.0	49.4	27.4	24.8	37.2	31.6	31.9	47.6	47.6	36.3	45.0	68.0	44.6
30	74.4	57.4	90.5	110.3	96.5	68.1	52.1	78.4	55.1	57.8	50.7	122.3	64.9	52.3	38.8	31.5	33.5	37.8	56.0	76.3	85.4	94.2	103.1	116.9	122.3	71.0
31	115.8	103.3	103.7	96.3	105.8	91.7	104.8	134.6	103.3	145.2	129.5	100.3	77.4	78.5	93.6	74.4	70.8	75.5	63.0	62.6	55.1	36.1	41.2	39.1	145.2	87.6
Hourly Max	143.2	116.7	191.3	153.9	151.6	154.2	202.1	260.7	300.2	242.3	190.6	138.3	169.5	245.6	323.8	175.9	183.3	186.2	144.6	233.5	130.6	136.5	156.4	160.0		
Hourly Average	53.5	53.8	68.1	72.1	69.2	64.2	81.4	119.7	107.3	84.9	84.0	72.3	72.3	73.3	83.4	65.8	61.3	57.3	51.5	48.7	42.6	40.5	43.1	48.1		

SM = SERVER MIGRATION AND ANNUAL CALIBRATION / MAINTENANCE



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	610			
Maximum 1-HR Average	323.8	UG/M3		
Maximum 24-HR Average	140.7	UG/M3		
Izs Calibration Time	0	HRS	Operational Time	610 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	82.0 %
Standard Deviation	51.9		Monthly Average	67.6 UG/M3

Entrance TSP ($\mu\text{g}/\text{m}^3$) – July 2017

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	69.1	134.3	63.3	66.4	48.8	52.5	78.9	156.9	63.2	43.1	57.4	60.9	60.8	68.3	188.6	85.1	26.0	28.5	4.6	5.5	6.3	5.1	14.1	28.8	188.6	59.0	
2	18.3	6.3	5.3	15.4	32.7	25.8	87.0	365.2	355.2	98.9	114.4	24.2	21.6	20.2	54.5	42.9	36.5	72.5	35.7	26.4	34.1	22.1	6.8	7.8	365.2	63.7	
3	32.3	39.8	54.1	103.2	127.0	82.8	68.9	116.3	97.3	72.3	SM	-	-														
4	SM	-	-																								
5	SM	-	-																								
6	SM	-	-																								
7	SM	-	-																								
8	SM	-	-																								
9	100.1	84.7	61.9	87.3	81.1	43.4	221.5	242.9	152.4	103.4	82.3	66.3	94.1	91.8	90.4	94.3	102.6	330.5	189.2	111.8	59.9	17.8	28.6	44.9	330.5	107.6	
10	28.3	85.2	234.8	183.6	186.6	85.3	22.2	50.7	19.6	15.4	105.9	288.9	253.8	170.4	250.2	264.4	158.2	55.0	18.1	4.7	3.8	27.5	39.3	12.4	288.9	106.9	
11	8.3	27.1	32.0	35.1	49.9	32.4	19.4	18.7	19.8	11.2	9.3	11.6	20.0	199.9	349.2	269.5	195.7	98.8	79.1	38.3	22.8	22.8	17.3	16.0	349.2	66.8	
12	18.4	22.2	22.2	35.0	45.7	59.8	70.5	146.3	153.8	182.6	178.6	126.3	309.2	183.8	200.2	185.9	188.2	97.9	105.3	100.8	77.6	48.2	25.9	27.3	309.2	108.8	
13	37.3	34.0	65.2	102.2	86.8	82.4	262.0	419.3	348.7	278.3	163.2	158.1	139.4	216.4	130.3	134.1	109.4	61.7	104.8	65.3	45.6	18.6	60.8	64.5	419.3	132.9	
14	81.8	36.5	30.7	40.9	45.2	34.2	84.0	125.7	247.5	213.1	116.1	99.9	97.7	80.4	142.0	87.4	73.2	54.7	75.9	49.3	47.9	32.4	22.4	18.9	247.5	80.7	
15	42.2	117.2	62.5	71.1	77.0	64.1	250.2	204.3	225.7	171.9	322.6	293.9	265.0	73.2	85.0	56.8	74.8	45.0	43.1	38.0	24.3	26.3	56.6	20.1	322.6	112.9	
16	45.2	22.2	69.7	95.1	70.8	40.9	83.0	60.2	60.4	62.9	135.6	191.9	124.0	277.3	155.8	270.7	324.3	456.3	334.5	539.3	133.7	114.6	62.4	87.0	539.3	159.1	
17	125.9	94.8	99.2	88.7	97.6	161.3	247.9	219.7	233.6	167.1	193.8	135.8	254.3	438.6	412.6	273.3	209.6	210.7	201.5	57.3	39.9	40.0	44.1	41.3	438.6	170.4	
18	34.7	71.1	114.8	134.3	138.6	163.0	272.3	466.7	759.2	568.1	229.9	121.6	101.2	125.6	136.1	90.7	122.3	123.2	102.1	97.4	76.6	104.5	56.4	61.1	759.2	178.0	
19	79.4	120.8	155.0	159.9	173.4	176.9	229.9	276.9	244.4	207.1	217.2	195.5	194.0	146.2	178.7	252.8	149.2	66.2	82.0	138.9	94.7	72.4	61.8	72.3	276.9	156.1	
20	119.0	110.5	128.5	162.2	146.5	159.8	264.8	380.3	245.2	246.8	388.6	272.9	434.7	512.7	803.5	445.5	232.9	135.6	70.1	35.4	30.8	18.9	51.2	62.1	803.5	227.4	
21	19.6	31.4	22.9	20.7	38.1	74.1	45.5	107.9	94.2	98.7	99.5	86.0	168.8	126.8	101.3	46.8	41.4	61.5	41.5	37.2	24.3	15.6	16.5	27.6	168.8	60.3	
22	88.4	96.1	97.0	77.6	47.5	35.3	139.1	54.5	45.1	88.2	96.2	105.7	89.2	56.2	73.9	35.5	48.3	56.9	30.0	26.2	6.5	8.0	13.6	139.1	62.4		
23	83.3	53.9	22.7	32.8	25.1	40.5	103.3	117.2	114.0	189.9	64.9	46.3	66.7	106.0	42.9	94.3	67.2	29.7	54.6	46.1	64.4	150.1	1.7	1.1	189.9	67.4	
24	1.0	0.8	1.8	2.1	4.7	7.9	49.9	53.8	41.3	62.7	137.0	122.9	66.3	104.7	101.0	53.8	30.9	41.6	43.4	63.2	57.3	40.5	34.5	216.6	216.6	55.8	
25	213.8	24.9	70.2	60.8	86.3	88.4	123.8	180.4	153.8	85.1	79.2	65.6	69.6	38.2	87.5	55.4	49.4	43.7	39.1	36.4	48.3	35.9	60.3	48.8	213.8	76.9	
26	16.0	28.6	174.5	217.1	196.4	192.9	326.9	513.7	338.6	157.9	175.1	150.3	136.2	111.7	102.3	190.7	232.5	146.8	187.5	114.1	113.1	138.5	155.6	121.0	513.7	176.6	
27	144.3	100.1	118.1	82.6	90.2	134.1	184.5	185.8	161.9	131.2	184.5	285.2	286.7	231.7	373.2	181.7	189.3	113.9	90.7	181.7	102.4	72.5	127.6	128.9	373.2	161.8	
28	45.2	25.6	15.9	21.4	36.5	24.6	48.4	182.1	170.6	105.1	115.6	114.7	198.1	85.3	140.8	80.8	115.9	76.7	58.4	123.8	71.3	57.5	52.1	44.0	198.1	83.8	
29	49.6	35.3	37.9	33.9	27.9	53.5	71.3	127.8	104.3	75.1	97.1	91.6	79.7	131.1	96.9	47.2	42.5	49.5	60.4	61.9	59.4	55.4	41.0	45.7	131.1	65.7	
30	83.9	51.9	133.3	161.3	144.7	105.5	64.9	119.6	80.3	89.4	127.3	385.2	206.9	167.6	89.8	55.9	63.9	61.4	168.9	183.5	119.6	95.7	98.1	95.4	385.2	123.1	
31	91.9	70.2	72.0	74.0	83.6	72.2	166.2	187.5	112.2	257.8	274.9	168.2	134.0	171.0	200.9	120.1	114.2	151.8	103.0	82.8	72.8	47.9	57.8	67.8	274.9	123.1	
Hourly Max	213.8	134.3	234.8	217.1	196.4	192.9	326.9	513.7	759.2	568.1	388.6	385.2	434.7	512.7	803.5	445.5	324.3	456.3	334.5	539.3	133.7	150.1	155.6	216.6			
Hourly Average	64.5	58.7	75.6	83.3	84.2	80.5	135.8	198.7	178.9	143.8	150.3	146.4	155.5	158.7	182.8	142.2	119.4	106.5	94.0	90.8	58.3	51.5	48.0	55.0			

SM = SERVER MIGRATION AND ANNUAL CALIBRATION / MAINTENANCE

24-hour TSP ($\mu\text{g m}^{-3}$) at Entrance



Number of 24HR Exceedances	14	Guideline	100	UG/M3
Number of Non-Zero Readings	610			
Maximum 1-HR Average	803.5	UG/M3		
Maximum 24-HR Average	227.4	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	610 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	82.0 %
Standard Deviation	99.3		Monthly Average	111.0 UG/M3



AIR QUALITY MONITORING

MetOne BAM PM_{2.5} Calibration

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

OPERATOR: Darrin Pike
DATE: July 17, 2017
END TIME (MST): 16:00

MONITOR INFO / PARAMETER VALUES:

Make/Model MetOne BAM
Configuration PM2.5
Serial Number T19087

Audit Device Model Delta Cal
Audit Device S/N 620
Certification Date 14-Jun-17

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (^o C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>As Found Data</i>					
Audit values (I)	19.5	652	0.00	16.7	14:34
MEASURED (AF)	22.1	647	0.20	16.75	14:33
AF Difference (AF-I)	2.6	-5	0.20	0.05	0:01
<i>Adjusted Data</i>					
MEASURED (M)	19.5	652	0.20	16.70	14:34
Adj Difference (M-I)	0.0	0	0.20	0.00	0:00
LIMITS	± 4.0 ^oC	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Cleaned.

Status of sampling tape: 1/2 roll left

Nozzle Inspection / cleanliness: Inspected and cleaned.

COMMENTS:

Performed self-test, all passed.



AIR QUALITY MONITORING

MetOne BAM PM₁₀ Calibration

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

OPERATOR: Darrin Pike
DATE: July 17, 2017
END TIME (MST): 16:00

MONITOR INFO / PARAMETER VALUES:

Make/Model MetOne BAM
Configuration PM10
Serial Number A3315

Audit Device Model Delta Cal
Audit Device S/N 620
Certification Date 14-Jun-17

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>As Found Data</i>					
Audit values (I)	20.0	651	0.00	16.7	13:47
MEASURED (AF)	20.0	651	0.10	16.76	13:47
AF Difference (AF-I)	0.5	0	0.10	0.06	0:00
<i>Adjusted Data</i>					
MEASURED (M)	20.0	651	0.10	16.70	13:47
Adj Difference (M-I)	0.0	0	0.10	0.00	0:00
LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Cleaned

Status of sampling tape: New roll

Nozzle Inspection / cleanliness: Inspected and cleaned

COMMENTS:

Performed self test, all passed.

MetOne BAM TSP Calibration



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

OPERATOR: Darrin Pike
 DATE: July 17, 2017
 END TIME (MST): 16:00

MONITOR INFO / PARAMETER VALUES:

Make/Model MetOne BAM
 Configuration TSP
 Serial Number A3589

Audit Device Model Delta Cal
 Audit Device S/N 620
 Certification Date 14-Jun-17

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>Audit values (I)</i>	20.0	652	0.00	16.6	14:02
As Found Data					
MEASURED (AF)	20.0	651	0.50	16.70	14:01
AF Difference (AF-I)	0.0	-1	0.50	0.10	0:01
Adjusted Data					
MEASURED (M)	20.0	652	0.50	16.68	14:02
Adj Difference (M-I)	0.0	0	0.50	0.08	0:00
LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Cleaned

Status of sampling tape: 1/2 roll left

Nozzle Inspection / cleanliness: Inspected and cleaned.

COMMENTS:

Performed self test, all passed.

Calibration Report



AIR QUALITY MONITORING

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

Station Information

Calibration Date	July 17, 2017	Previous Calibration	June 15, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Reason:	Routine	Installation	Removal
Start Time (MST)	11:45	End Time (MST)	16:20
Barometric Pressure	651 mmHg	Station Temperature	23.0 Deg C
Calibrator	SABIO 2010	Serial Number	103951108
NO Cal Gas Conc	51.4 ppm	Cal Gas Expiry Date	July 26, 2019
NO _x Cal Gas Conc	51.5 ppm	Cal Gas Serial #	cc27839

DACS Information

DACS make	Campbell Scientific CR1000	DACS serial No.	67802
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Parameter	NO ₂	NO _x	NO
Before			
Data Slope	1.005517	0.993257	0.993657
Data Offset	-1.415798	0.759357	0.890109
After			
Data Slope	1.003662	0.995307	0.993783
Data Offset	-0.228641	1.888096	2.137261
Channel #	3	1	2
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	T200	Analyzer serial #	642
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO Slope	1.035		1.042	
NO Offset	-0.1	mV	-0.1	mV
NO _x Slope	1.034		1.045	
NO _x Offset	0.2	mV	0.2	mV
HVPS	771	V	771	V
Moly Temp	315.2	degC	315.0	degC
O ₃ Flow	80	ccm	80	ccm
RxCeII Press	5.7	inHg	5.6	inHg
Sample press	24.0	inHg	24.0	inHg
Sample flow	436	ccm	440	ccm

Notes: Adjusted Span.

Calibration Report



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

Station Information

Calibration Date: July 17, 2017 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	-1.1	-1.2	-1.1	N/A	N/A	
1	5000	40.00	408.7	407.9	0.8	409.3	408.8	-0.4	0.9986	0.9979	
2	5000	25.00	256.2	255.7	0.5	254.9	254.9	-0.8	1.0050	1.0033	
3	7000	14.00	102.8	102.6	0.2	100.7	100.0	-0.5	1.0213	1.0256	
AFZ	5000	0.00	0.0	0.0	0.0	-1.2	-1.4	-1.1	0.0000	0.0000	
AFS	5000	40.00	408.7	407.9	0.8	401.1	399.6	0.5	1.0191	1.0208	
									Average Correction Factor	1.0083	1.0090

As Found Concentrations: NO_x= 403.1 NO= 401.9 As Found Percent Change NO_x= -1.4% NO= -1.5%

GPT Calibration Data

Dilution Flow 5000 ccm Source Gas Flow 40.00 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	-1.1	-1.2	-1.1	N/A	N/A	N/A	N/A	
NO point	409.9	409.9	0.0	410.0	409.9	-0.9	0.9998	1.0000	N/A	N/A	
0.96V	409.9	42.9	367.1	409.1	42.9	365.1	1.0019	1.0000	1.0054	99.5%	
0.52V	409.9	228.0	181.9	411.8	228.0	182.6	0.9955	1.0000	0.9966	100.3%	
0.36V	409.9	300.6	109.4	412.3	300.6	110.3	0.9944	1.0000	0.9915	100.9%	
							Average Correction Factor	0.9973	1.0000	0.9978	100.2%

AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.2	-1.8	0.3	ppb	0.6	-1.4	0.8	ppb
Auto span	397.3	-1.7	397.8	ppb	398.2	-2.4	399.2	ppb

Calibration Performed By: Darrin Pike

Calibration Summary



Parameter NO₂
 Air Monitoring Network Lafarge - Exshaw

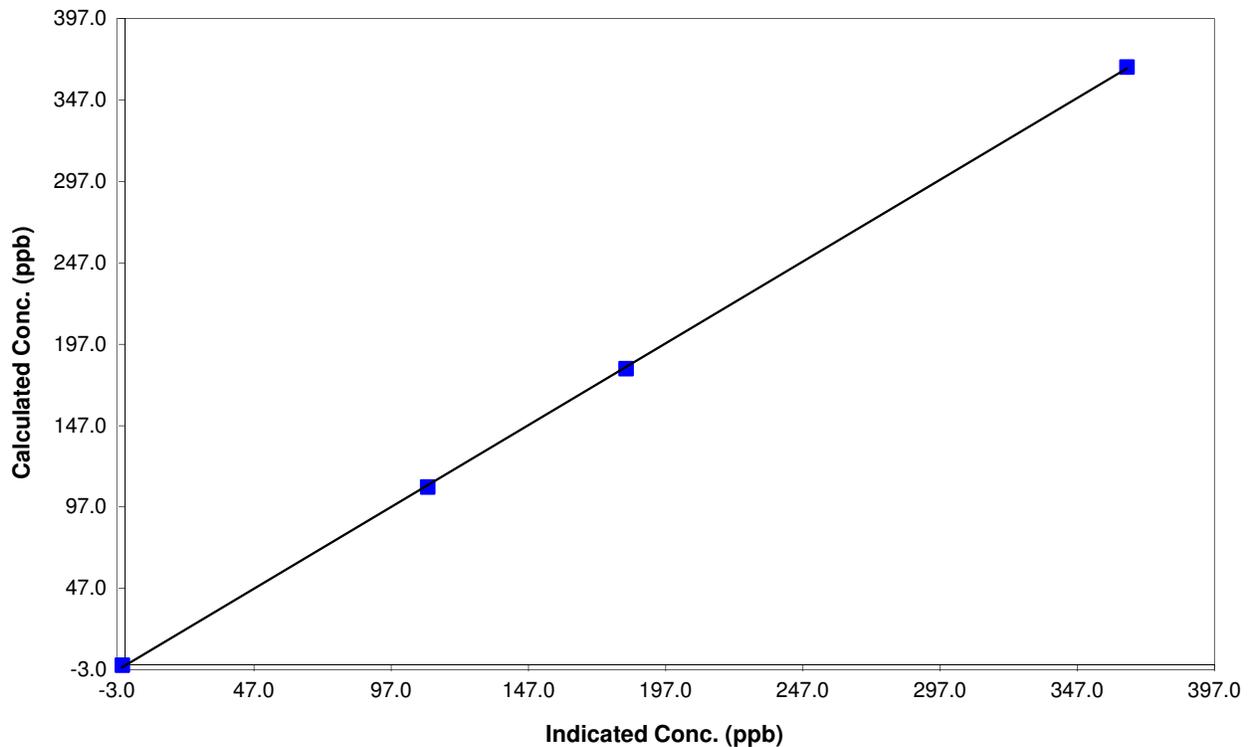
Station Information

Calibration Date	July 17, 2017	Previous Calibration	June 15, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:45	End Time (MST)	16:20
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.1	N/A	Correlation Coefficient	0.999932
367.1	365.1	1.0054		
181.9	182.6	0.9966	Slope	1.003662
109.4	110.3	0.9915		
			Intercept	-0.228641

NO₂ Calibration Curve



Calibration Summary



Parameter NO_x
 Air Monitoring Network Lafarge - Exshaw

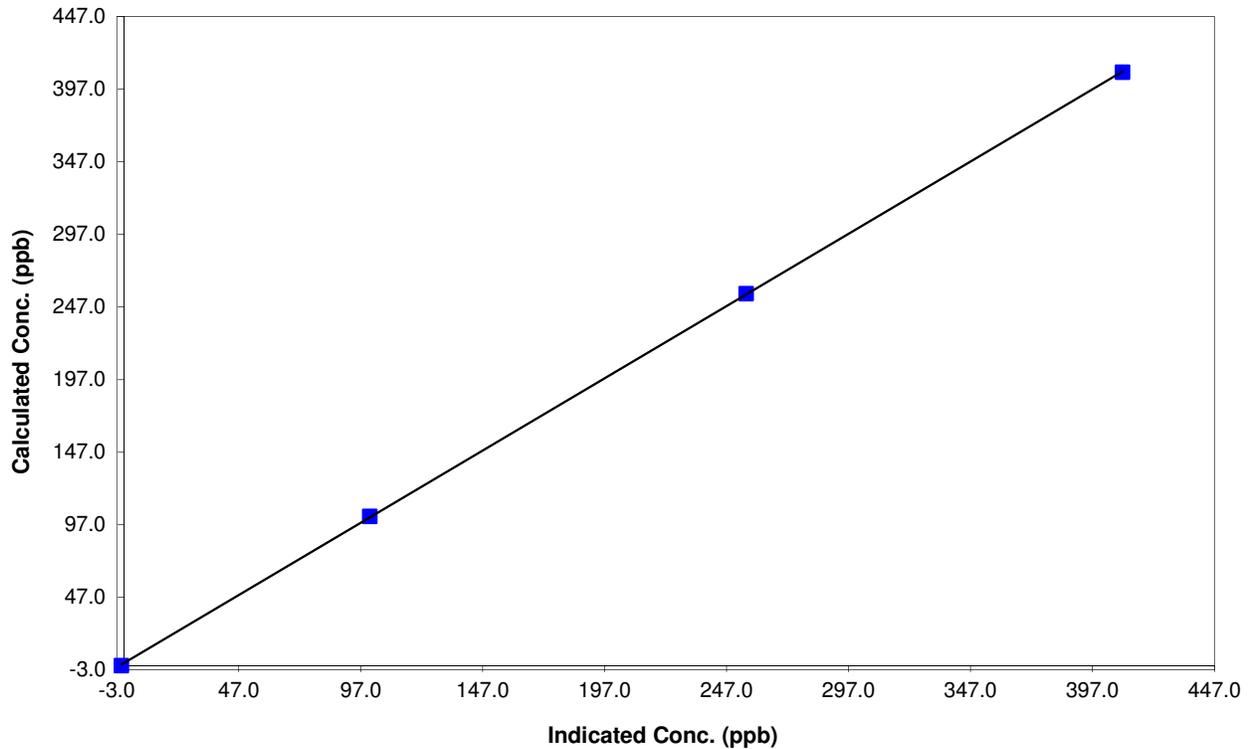
Station Information

Calibration Date	July 17, 2017	Previous Calibration	June 15, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:45	End Time (MST)	16:20
Analyzer make	T200	Analyzer serial #	642

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.1	N/A	Correlation Coefficient	0.999982
408.7	409.3	0.9986		
256.2	254.9	1.0050	Slope	0.995307
102.8	100.7	1.0213		
			Intercept	1.888096

NO_x Calibration Curve



Calibration Summary



Parameter NO
 Air Monitoring Network Lafarge - Exshaw

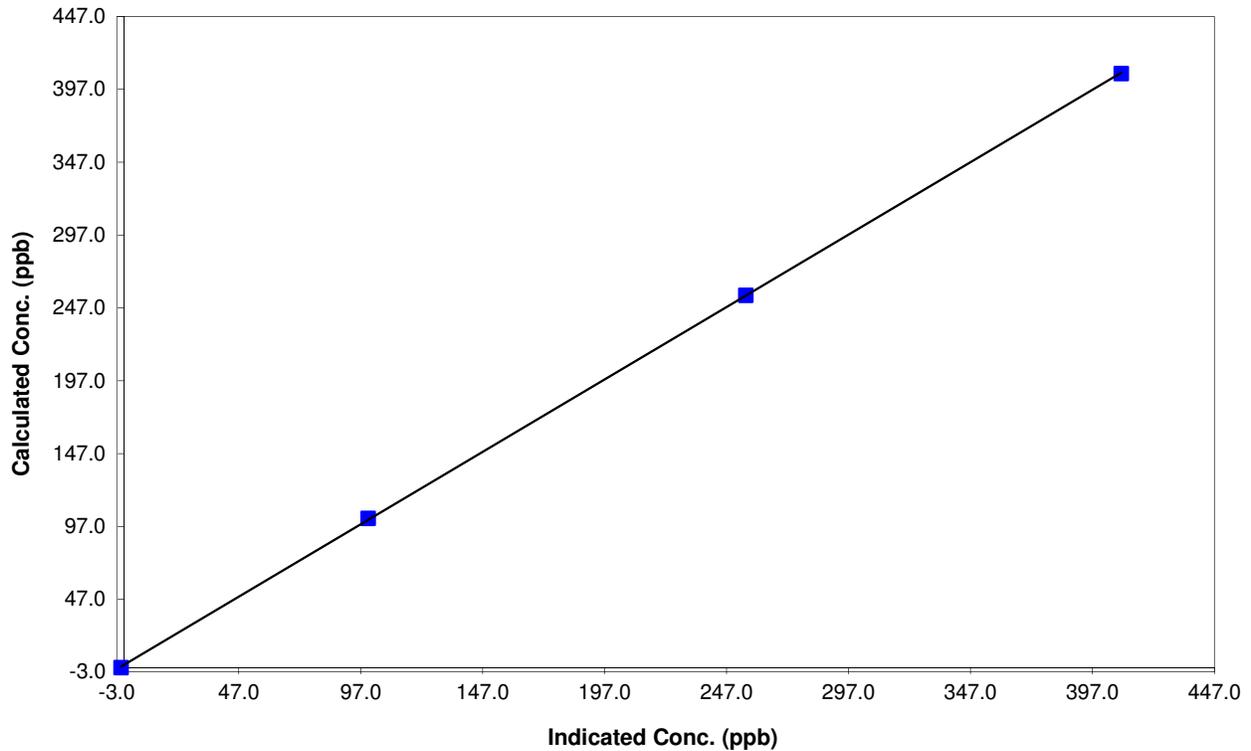
Station Information

Calibration Date	July 17, 2017	Previous Calibration	June 15, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:45	End Time (MST)	16:20
Analyzer make	T200	Analyzer serial #	642

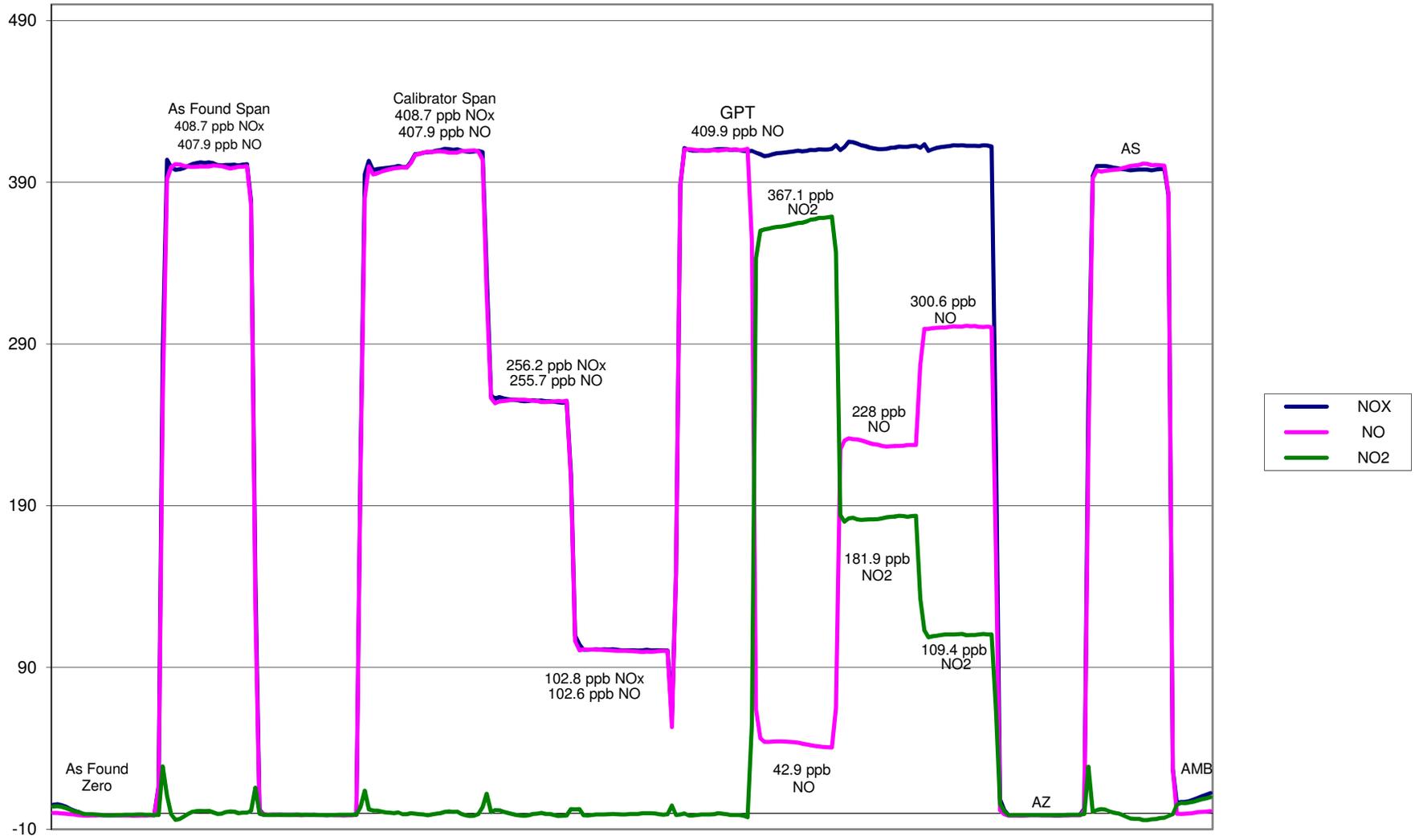
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.2	N/A	Correlation Coefficient	0.999977
407.9	408.8	0.9979		
255.7	254.9	1.0033	Slope	0.993783
102.6	100.0	1.0256		
			Intercept	2.137261

NO Calibration Curve



NOx Calibration



Calibration Report



Parameter SO2
 Air Monitoring Network Lafarge - Exshaw

Station Information

Calibration Date	July 17, 2017	Previous Calibration	June 15, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	11:45	End Time (MST)	16:20
Barometric Pressure	651 mmHg	Station Temperature	23.0 Deg C
Calibrator	SABIO 2010	Serial Number	103951108
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	July 14, 2020
Gas Cert Reference	cc278389		
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	0.995061	Calculated slope	0.998781
Calculated intercept	0.431012	Calculated intercept	0.270957
Analyzer make	API Model 102A	Analyzer serial #	393

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Slope	0.943		0.953	
Offset	46.4	mV	46.4	mV
Pressure	23.5	in Hg	23.4	in Hg
Sample Flow	488	ccm	476	ccm
UV Lamp	2900	mV	2841	mV
HVPS	690	V	690	V
PMT Temp	7.5	degC	7.5	degC

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5000	0.00	0.0	0.3	N/A
5000	40.00	403.2	403.6	0.9988
5000	25.00	252.7	252.7	1.0003
7000	14.00	101.4	100.5	1.0085
5000	0.00	0.0	-0.2	As found zero
5000	40.00	403.2	399.0	As found span
Average Correction Factor				1.0026

Calculated value of As Found Response: 397.7 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	394.7	ppm	393.6	ppm

Notes: Span adjustment made.

Calibration Performed By: Darrin Pike

Calibration Summary



Parameter SO2
 Air Monitoring Network Lafarge - Exshaw

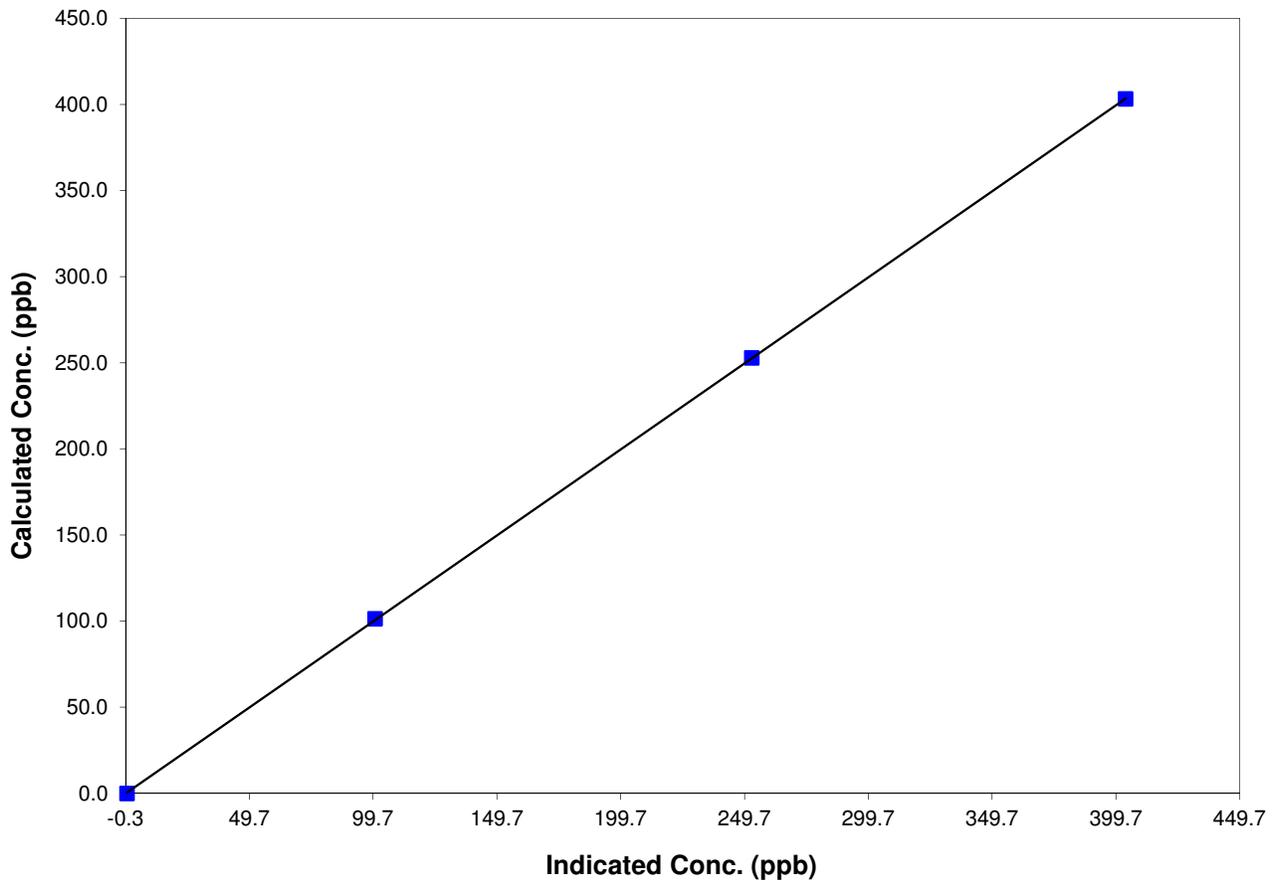
Station Information

Calibration Date	July 17, 2017	Previous Calibration	June 15, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	11:45	End Time (MST)	16:20
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	Correlation Coefficient	0.999990
403.2	403.6	0.9988		
252.7	252.7	1.0003	Slope	0.998781
101.4	100.5	1.0085		
			Intercept	0.270957

SO2 Calibration Curve



SO2 Calibration

