

REPORT N° 171-0056-00

AMBIENT AIR QUALITY MONTHLY REPORT

FEBRUARY 2017

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Lafarge Canada Inc.

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

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Project Number: 171-00556-00

March 22, 2017

Janet Brygger
Lafarge Canada Inc.
Highway 1A
Exshaw, AB T0L 2C0

Dear Ms. Brygger,

Subject: Ambient Air Quality Monthly Report – February 2017

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

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 had operational uptime of 100% while the West GRIMM monitor had operational uptime of 53.9% due to an equipment malfunction and power outage. The Entrance GRIMM monitor exceeded the TSP AAAQO for 17 days while the West GRIMM monitor had no AAAQO exceedances during the month of February. The Berm GRIMM had 13 exceedances of the TSP objective.

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

Sincerely,

Tyler Abel, M.Sc.
Group Manager, Air Quality
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1

INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon monitoring location and the GRIMM monitors in Exshaw, AB. The station is operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and is a requirement of Lafarge's Approval 1702-02-04. This report contains data collected between February 1, 2017 and February 28, 2017.

February's 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

FEBRUARY 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.

2.1

LAGOON STATION

Table 2-1 Lagoon station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
NO ₂ (ppb)	99.9	39.1	0	24.8	-
SO ₂ (ppb)	99.9	12.2	0	4.0	0
PM _{2.5} (µg/m ³)	99.1	19.8	-	12.9	0
PM ₁₀ (µg/m ³)	99.1	174.8	-	43.3	-
TSP (µg/m ³)	99.1	262.9	-	59.6	0
Temperature (°C)	100.0	13.0	-	10.1	-
Wind Speed (km/hr) /Direction	100.0	50.8/W	-	37.0/WSW	-
Precipitation (mm)	100.0	0.8	-	1.5	-

Data Quality Notes:

- There were no exceedances of any AAAQOs.

Calibration/Maintenance Notes:

- The operational uptime for the meteorological systems was 100%.
- The operational uptime for all analyzers was over 99%. The data loss in February was caused by HVAC / Power issues which were addressed with the replacement of the HVAC breaker during the monthly site visit on February 9th.

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 Guideline	Maximum Concentration	Exceedances of Guideline
PM _{2.5} ($\mu\text{g}/\text{m}^3$)	53.9	45.5	-	10.8	0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	53.9	260.4	-	42.3	-
TSP ($\mu\text{g}/\text{m}^3$)	53.9	795.3	-	93.9	0

Data Quality Notes:

- There were no exceedances of Guidelines.

Calibration/Maintenance Notes:

- The monitor had 53.9% uptime for the month due to:
 - an equipment malfunction due to dryer pump and power supply issues from February 6 at 7:00 to February 16 at 12:00, and;
 - a localized power outage from February 21 at 1:00 to February 23 at 16:00.

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 Guideline	Maximum Concentration	Exceedances of Guideline
PM _{2.5} ($\mu\text{g}/\text{m}^3$)	100.0	72.4	-	20.8	0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	100.0	723.3	-	190.4	-
TSP ($\mu\text{g}/\text{m}^3$)	100.0	2636.9	-	725.8	13

Data Quality Notes:

- There were 13 exceedances of the 24-hour TSP Guideline.

Calibration/Maintenance Notes:

- The monitor had 100% uptime for the month.

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 Guideline	Maximum Concentration	Exceedances of Guideline
PM _{2.5} ($\mu\text{g}/\text{m}^3$)	100.0	37.7	-	18.9	0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	100.0	275.6	-	109.2	-
TSP ($\mu\text{g}/\text{m}^3$)	100.0	1683.7	-	272.1	17

Data Quality Notes:

- There were 17 exceedances of the 24-hour TSP Guideline.

Calibration/Maintenance Notes:

- The monitor had 100% uptime for the month.

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 February 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

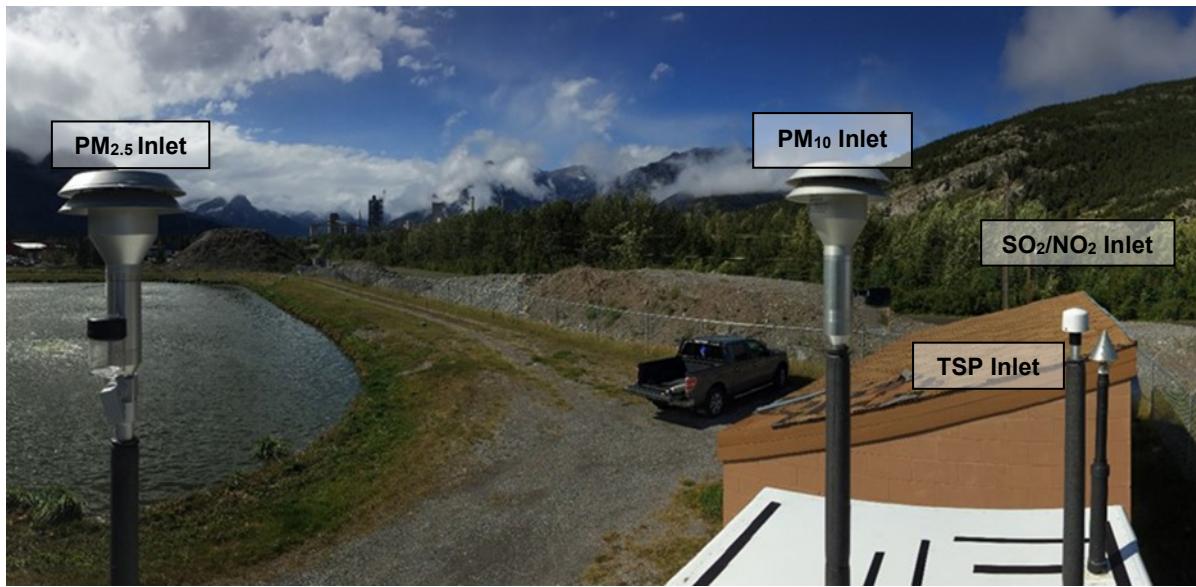


Figure 3-1 Inlets on the top of WSP's Lagoon monitor

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 February 9th, 2017 and had 99.9% uptime.

3.1.2 SO₂ MONITORING

The SO₂ monitor underwent monthly calibration February 9th, 2017 and had 99.9% uptime.

3.1.3 PM MONITORING

BAMs monthly calibration was conducted on February 9th, 2017. The BAM monitors had 99.1% uptime for the month.

3.1.4 METEOROLOGICAL MONITORING

All of the meteorological instruments (wind speed, wind direction, relative humidity, pressure, and precipitation) had an uptime of 100% for the month of February.

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 February 2017. Table 3-2 summarizes the hourly and daily concentrations recorded in February 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 February 2017 for the pollutants listed in Table 3-2.

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



Figure 3-2 Grass planted on the stockpiles near the Lagoon 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 February 2017 follows the general orientation of the valley. When the winds were blowing from the west, they tended to be higher while the winds from the east tended to be lighter (less than 20 km/hr).

Table 3-2 Summary of February 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	-	8.1	39.1	8	0	12.6	226.5	24.8	7	99.8
SO ₂ (ppb)	172	48	Lagoon	0	0	0.3	12.2	16	9	35.6	277.6	4.0	16	99.8
PM _{2.5} (µg/m ³)	-	30	Lagoon	-	0	2.9	19.8	7	20	2.5	64.2	12.9	7	99.1
PM ₁₀ (µg/m ³)	-	-	Lagoon	-	-	22.3	174.8	7	9	6.9	87.7	43.3	16	99.1
TSP (µg/m ³)	-	100	Lagoon	-	0	28.5	262.9	28	20	27.3	267.6	59.6	16	99.1
Temperature (°C)	-	-	Lagoon	-	-	-6.0	13.0	15	11	42.4	254.6	10.1	15	100.0
Wind Speed/Direction	-	-	Lagoon	-	-	17.9	50.8/W	12	9	50.8	247.8	37.0/WSW	12	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.8					1.5	12	100.0

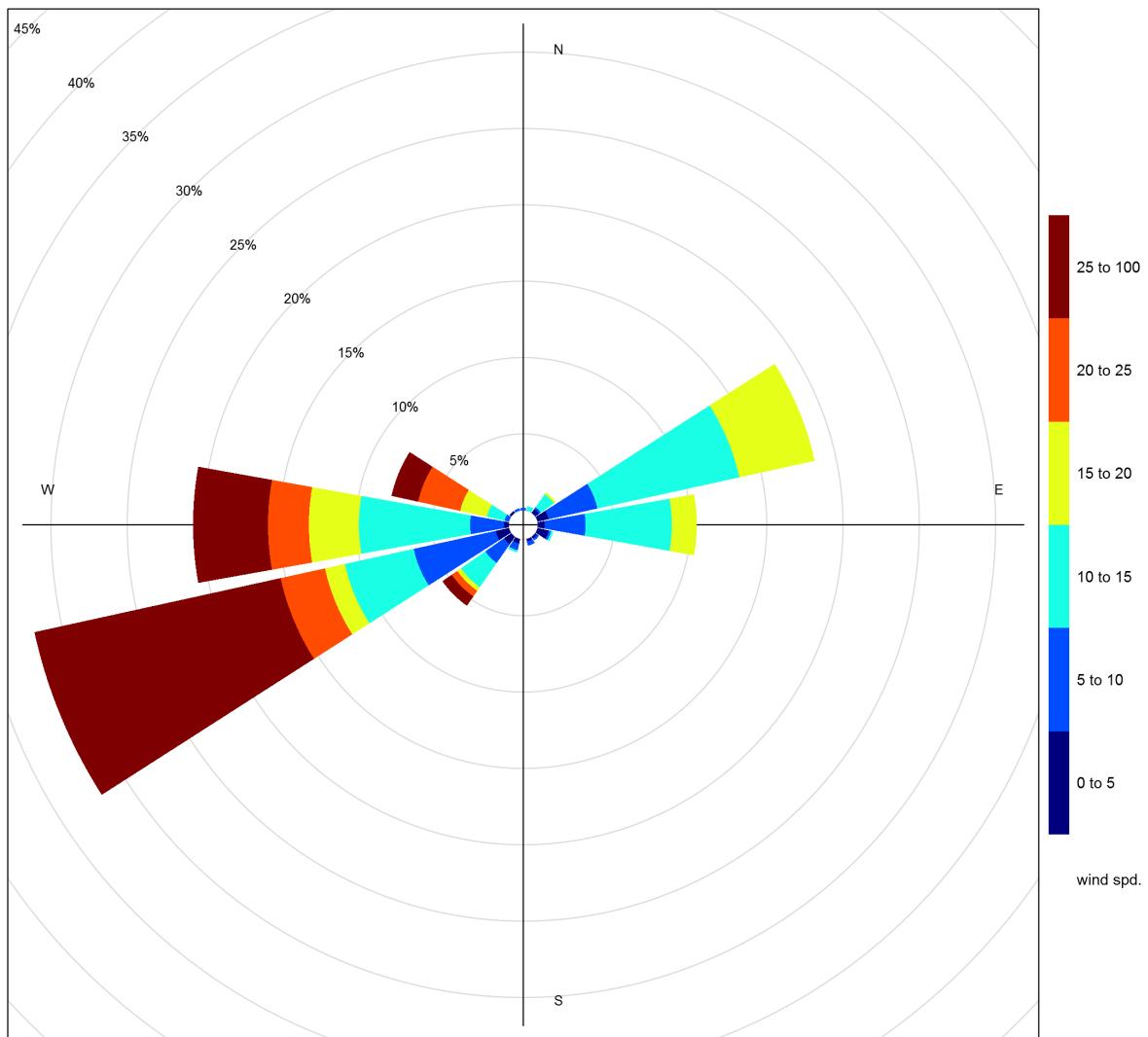


Figure 3-3 February 2017 wind rose from the Lagoon Station

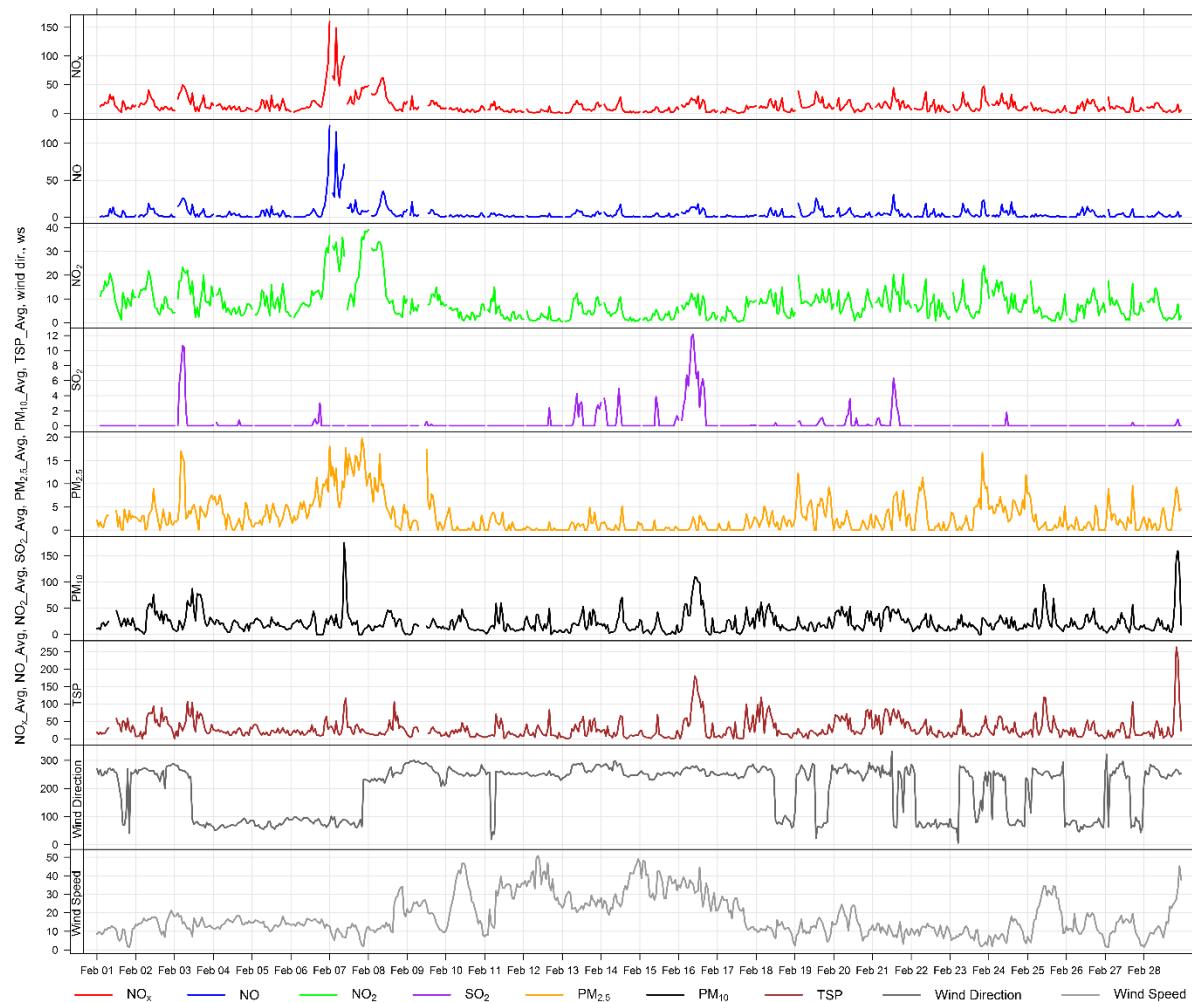


Figure 3-4 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon monitor

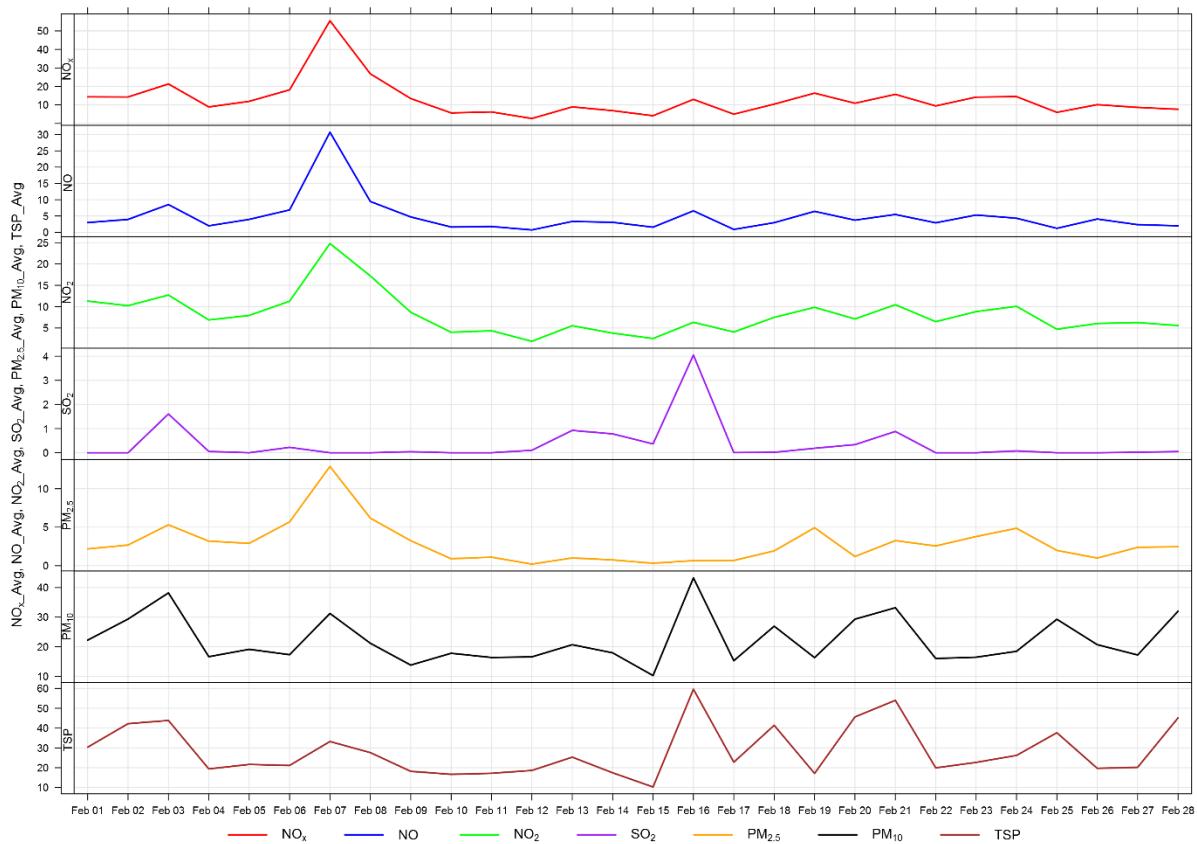


Figure 3-5 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

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 around noon and decreasing during the afternoon and evening. PM₁₀ and TSP are generally associated with dust from fugitive sources.

Figure 3-7 shows the variation of SO₂ over various time periods. SO₂ concentrations were low in February. 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 peaks in traffic or other combustion sources.

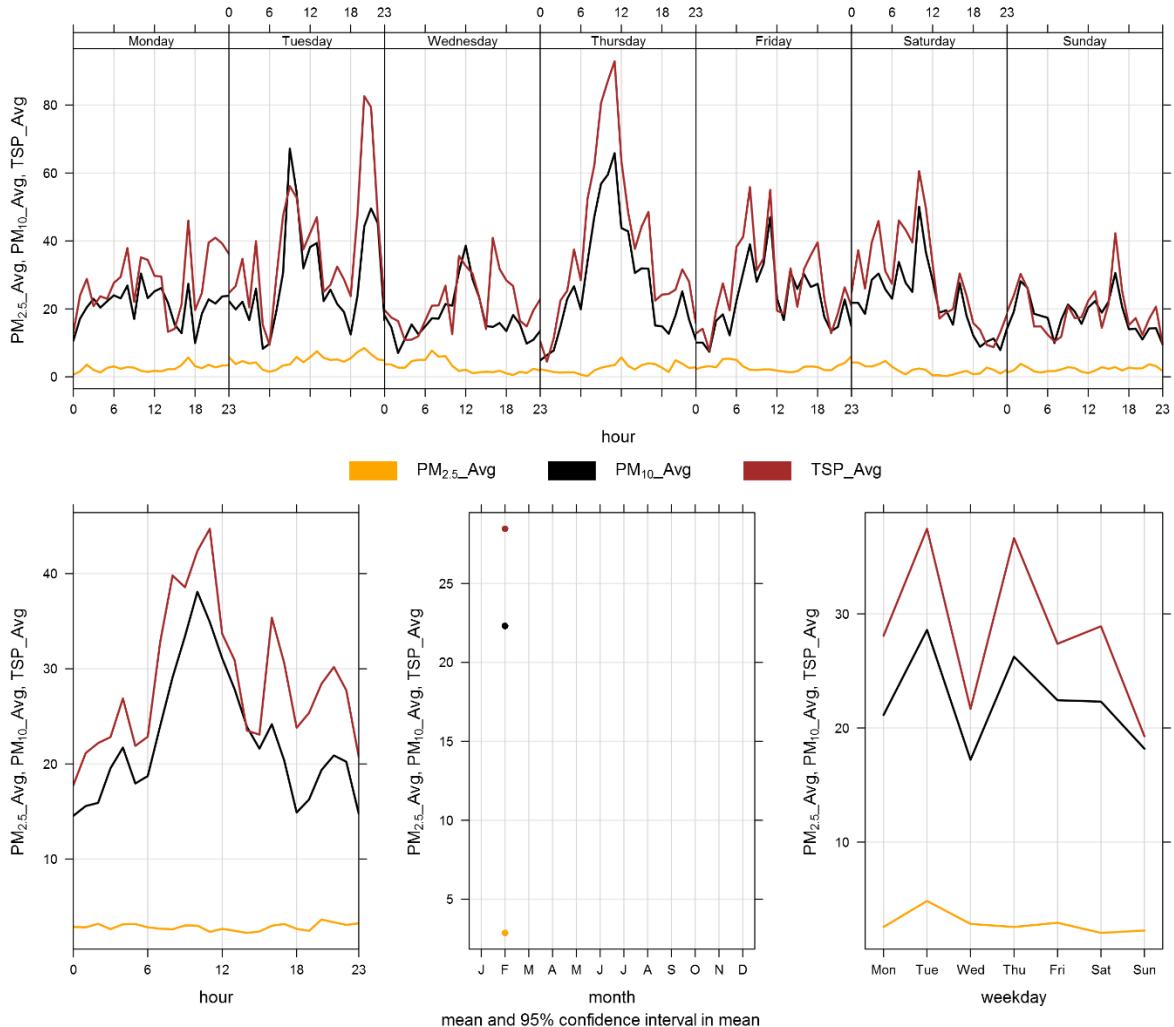


Figure 3-6 Lagoon Monitor particulate matter time variation

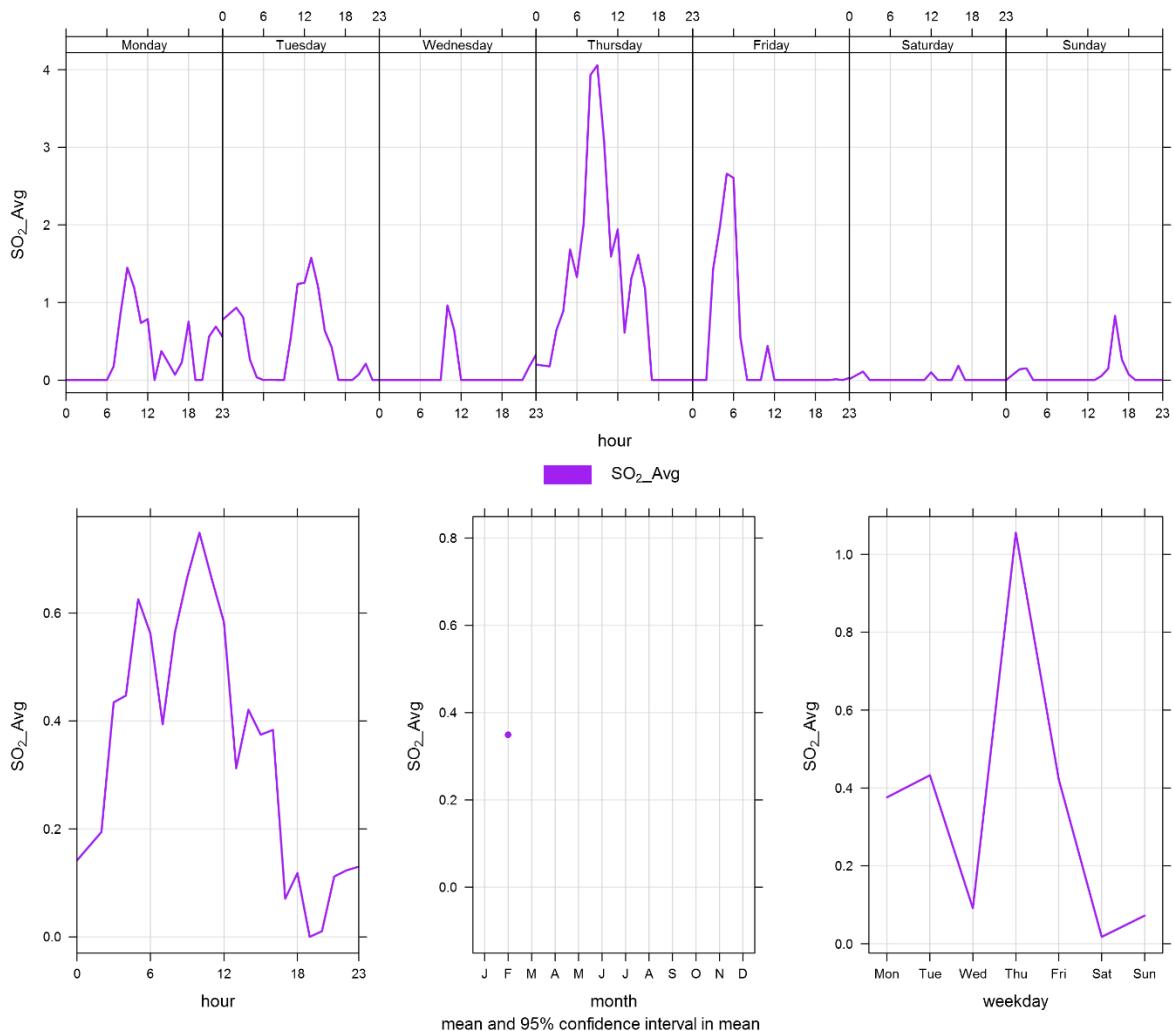


Figure 3-7 Lagoon Monitor SO_2 time variation

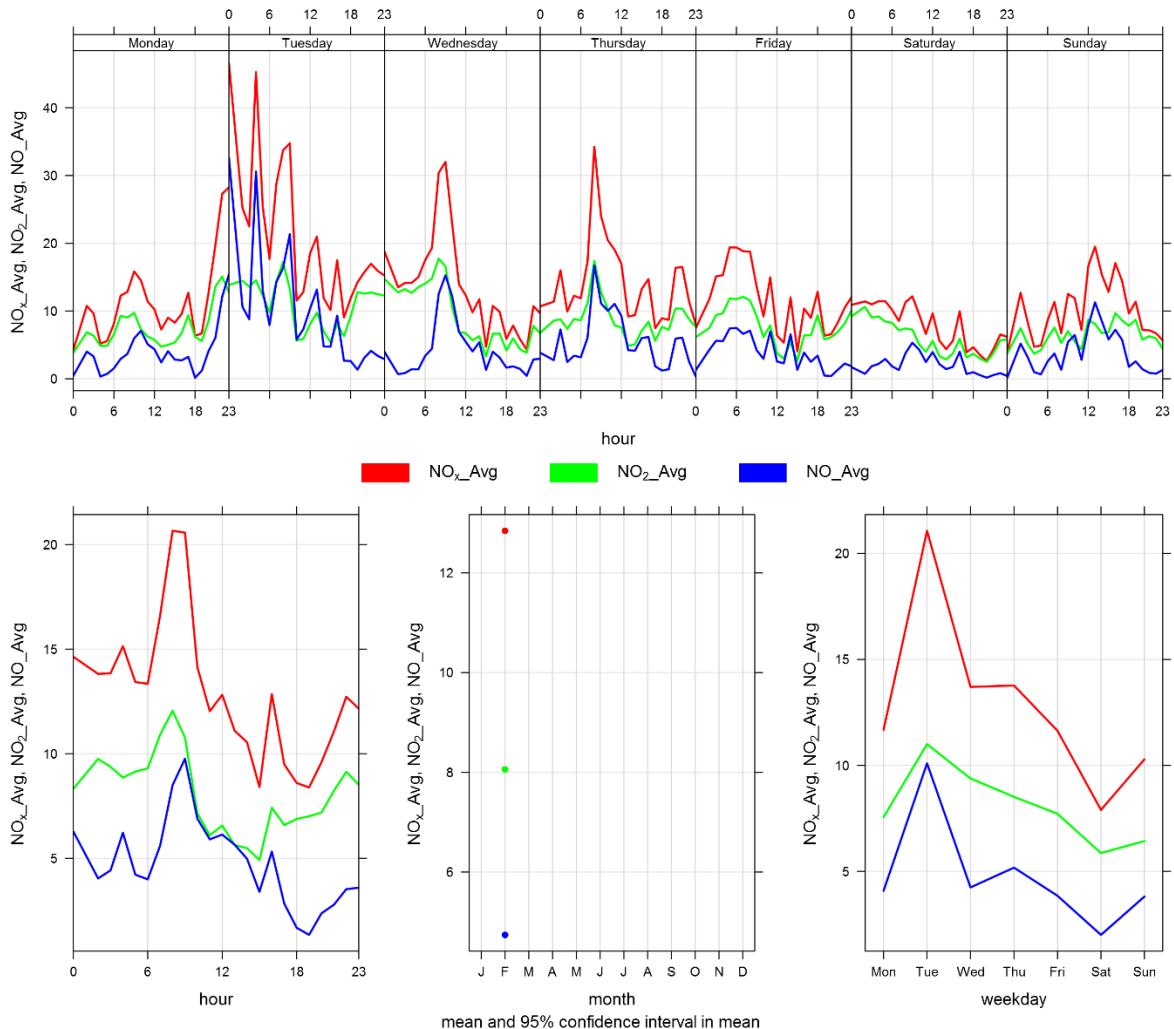


Figure 3-8 Lagoon Monitor NO_x time variation

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 February, the West GRIMM had 53.9% uptime due to an equipment malfunction related to dryer pump and power supply issues from February 6 at 7:00 to February 16 at 12:00 and a power outage from February 21 at 1:00 to February 23 at 16:00.

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 February. 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 no recorded exceedances of the 24-hour PM_{2.5} (30 µg/m³) or 24-hour TSP Guidelines (100 µg/m³).

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

Parameter	Guideline		Exceedances	Monthly Average	Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)			
	1-hr	24-hr			Station	1-hr	24-hr	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)	-	30	West	-	0	6.6		45.5	28	11	9.3	241.0	10.8	19	53.9
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	-	-	West	-	-	18.9		260.4	28	11	9.3	241.0	42.3	27	53.9
TSP ($\mu\text{g}/\text{m}^3$)	-	100	West	-	0	36.7		795.3	3	14	12.4	81.6	93.9	27	53.9

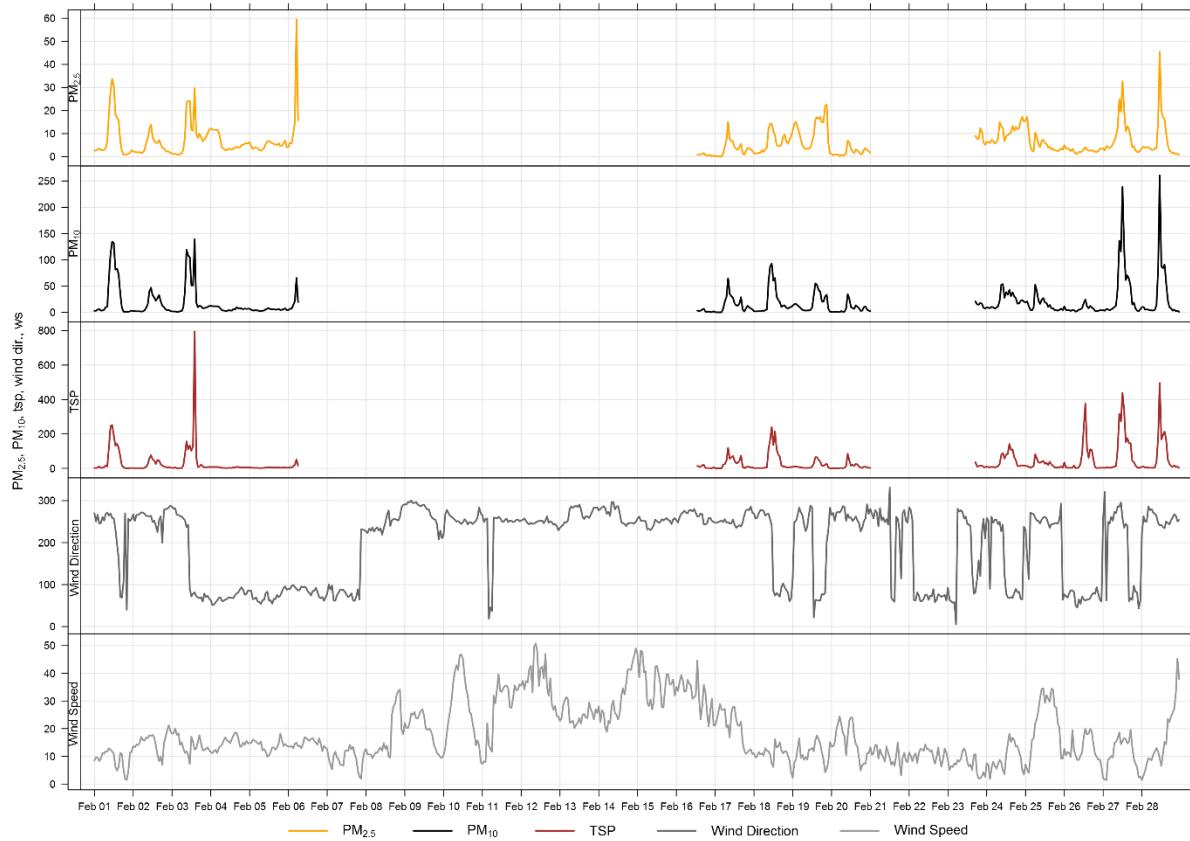


Figure 4-1 1-hour particulate matter concentrations at the West monitor

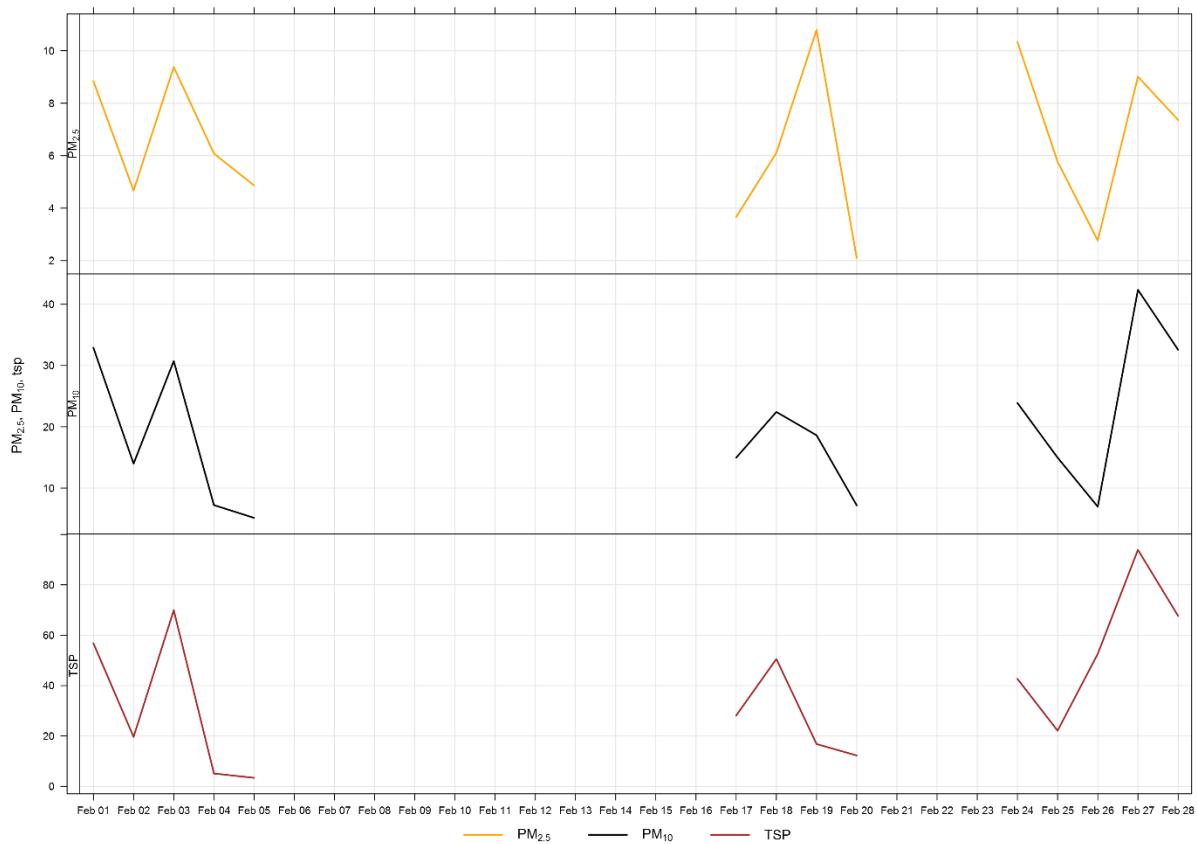


Figure 4-2 24-hour particulate matter concentrations at the West monitor

Figure 4-3 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 4-3 is based on data collected during February 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.

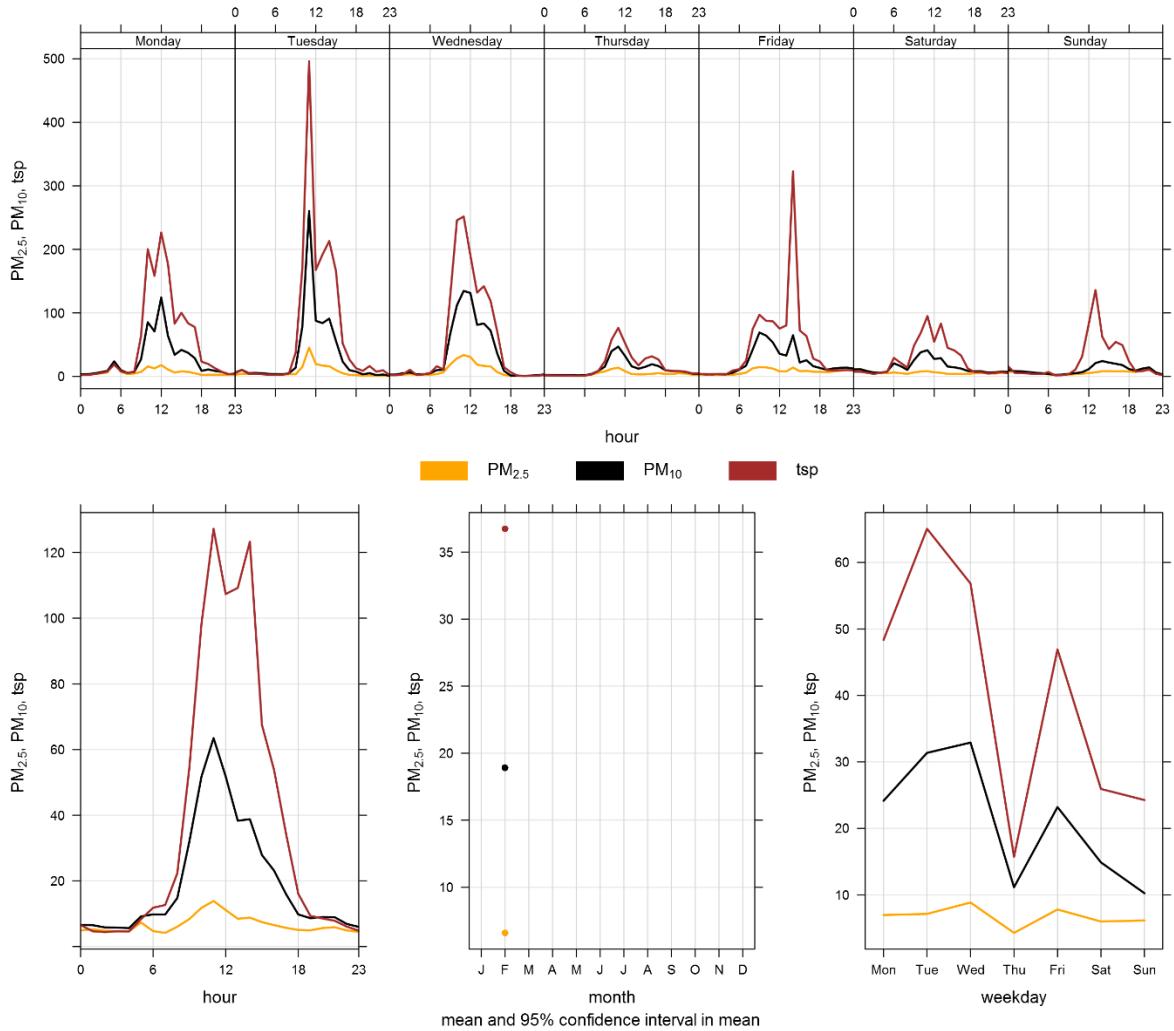


Figure 4-3 West particulate matter time variation

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 February, the Berm GRIMM had 100% 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 in 2009. Table 5-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month. The monitor had 100% uptime during the month of February.

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.

In February, there were 13 exceedances of the 24-hour TSP Guideline (100 µg/m³). Historically, the Berm monitor records an average of 18 and 0 exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of February. The largest number of TSP exceedances recorded during February occurred in 2013, which had 24 days that exceeded the Guideline. The fewest number of TSP exceedances recorded during February occurred in 2015, which had 9 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. The highest concentrations in the month correspond to the very high wind events recorded in February. The fugitive dust generated in the winter months is also impacted by cold weather conditions that prevent the use of water controls onsite, as well as the additional contribution to fugitive dust in the airshed by increased road salting and sanding.

Table 5-2 Summary of February 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} ($\mu\text{g}/\text{m}^3$)	-	30	Berm	-	0	7.2	72.4	25	9	31.1	245.6	20.8	25	100.0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	-	-	Berm	-	-	47.3	723.3	25	9	31.1	245.6	190.4	25	100.0
TSP ($\mu\text{g}/\text{m}^3$)	-	100	Berm	-	13	168.1	2636.9	25	9	31.1	245.6	725.8	25	100.0

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						
2/2/2017	231.1	-	264.9	15.1	56.6	
2/3/2017	170.4	-	4.1	14.3	64.9	
2/8/2017	299.1	-	249.9	16.9	66.7	
2/10/2017	230.2	-	253.4	27.9	52.3	high wind event
2/11/2017	433.3	-	256.8	27.1	47.3	high wind event
2/12/2017	584.9	-	248.9	37.0	36.5	high wind event
2/13/2017	123.2	-	267.2	25.0	45.9	high wind event
2/14/2017	171.0	-	262.3	31.0	45.0	high wind event
2/15/2017	199.0	-	250.2	36.6	40.5	high wind event
2/16/2017	390.6	-	263.5	32.2	46.5	high wind event
2/17/2017	192.8	-	251.0	20.5	42.2	high wind event
2/25/2017	725.8	-	251.5	22.4	51.7	high wind event
2/28/2017	382.4	-	255.5	16.1	53.6	
Total # of Exceedances	13	0				
Maximum # of Exceedances (February)	24 (2013)	1 (2011, 2015, 2016)				
Average # of Exceedances (February)	18	0				
Minimum # of Exceedances (February)	9 (2015)	0 (2010, 2012, 2013, 2014)				

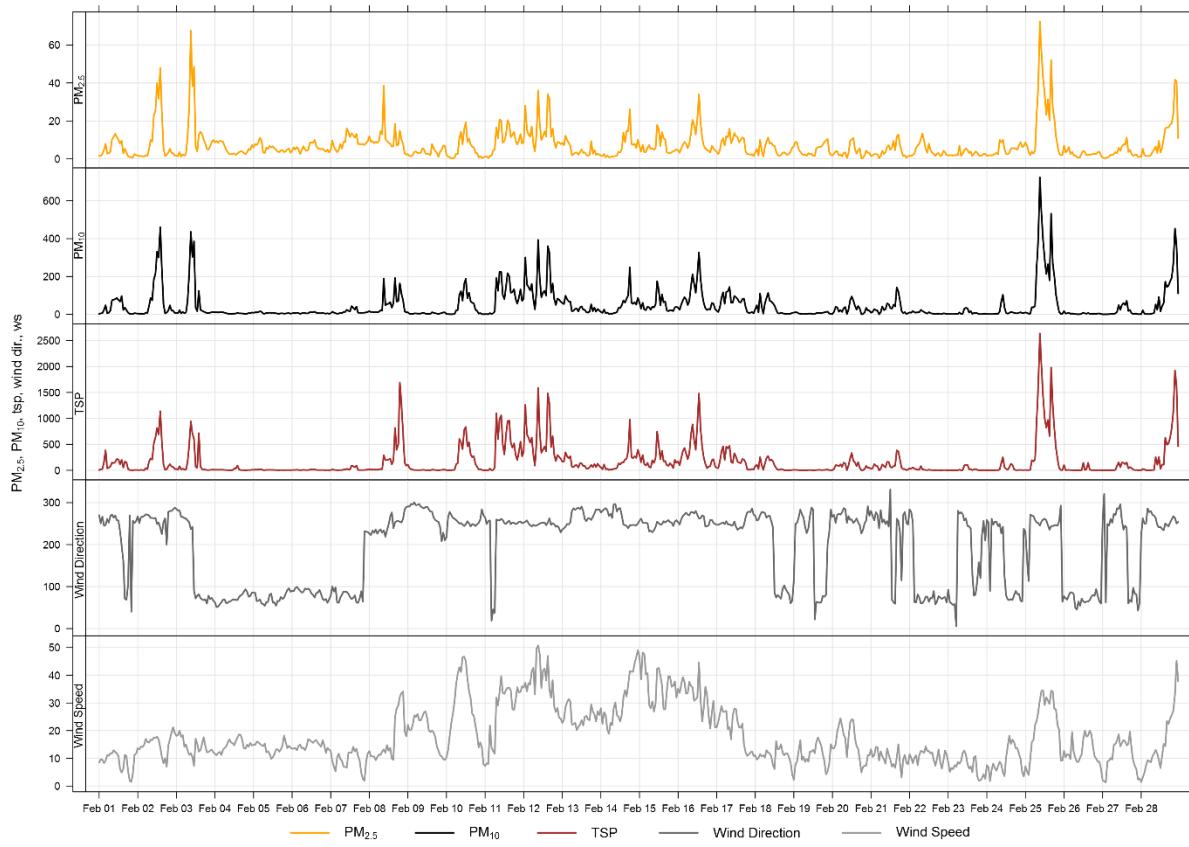


Figure 5-1 1-hour particulate matter concentrations recorded at the Berm monitor

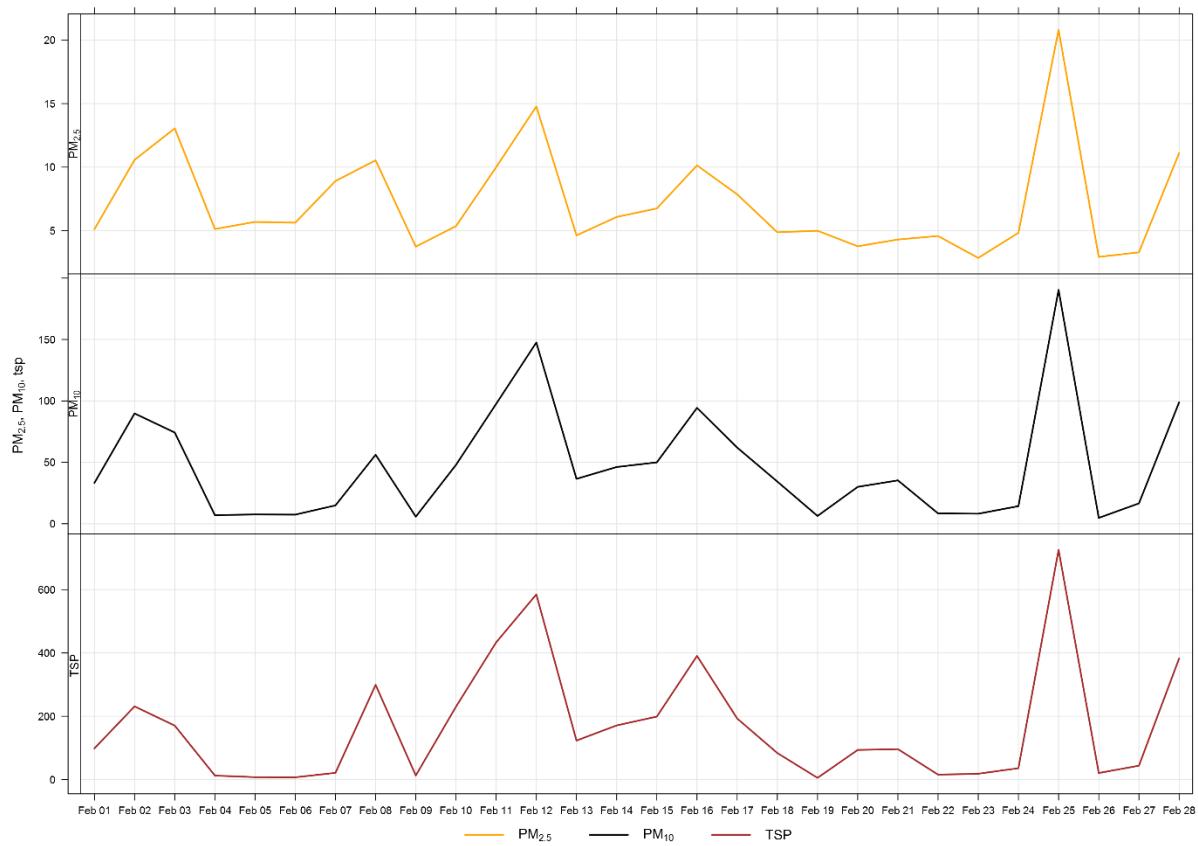


Figure 5-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 5-3 shows the wind rose for the 13 days which recorded a TSP exceedance. This wind rose shows that the winds predominantly come from the west and are over 25 km/hr.

Figure 5-4 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.

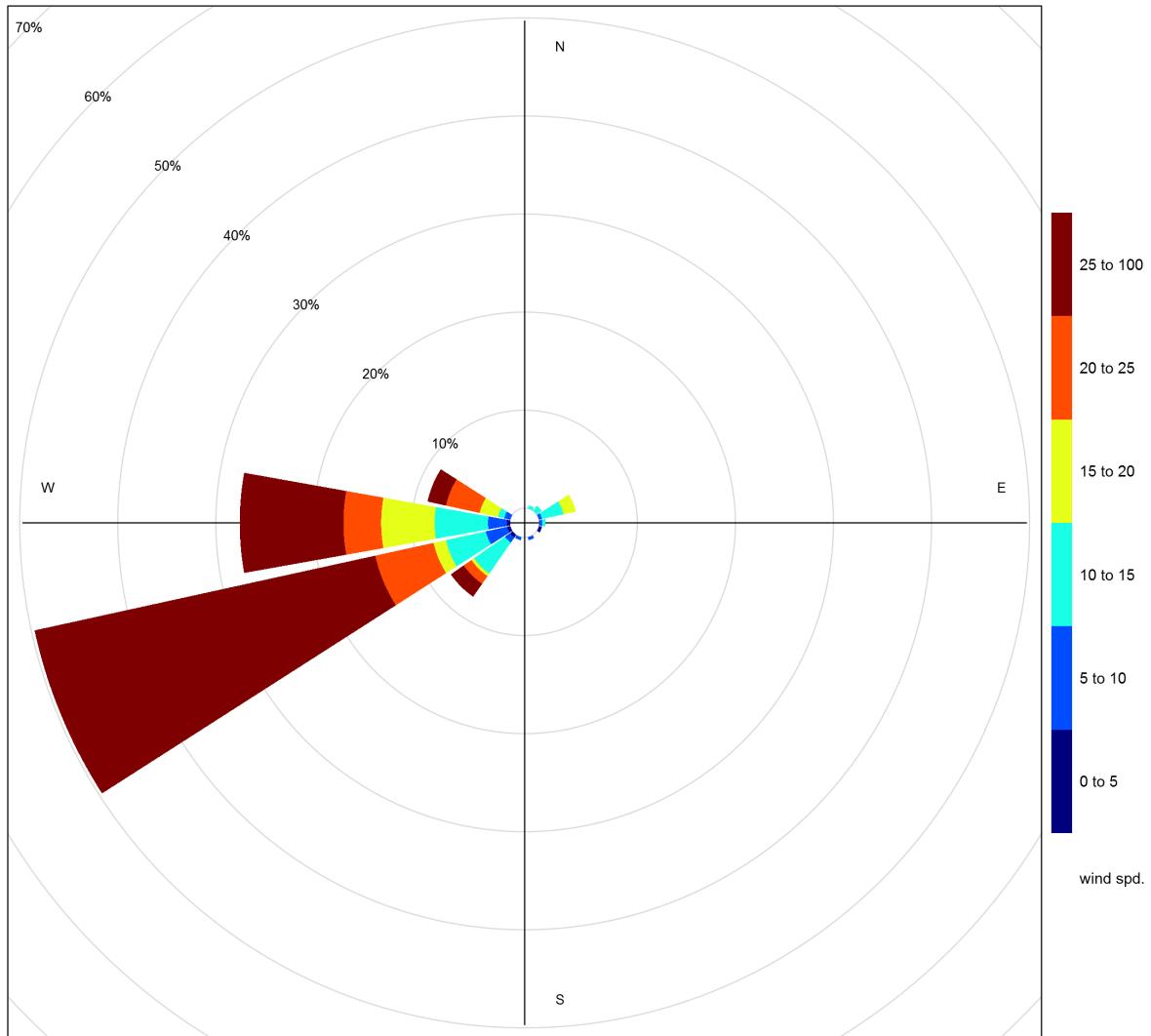


Figure 5-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM

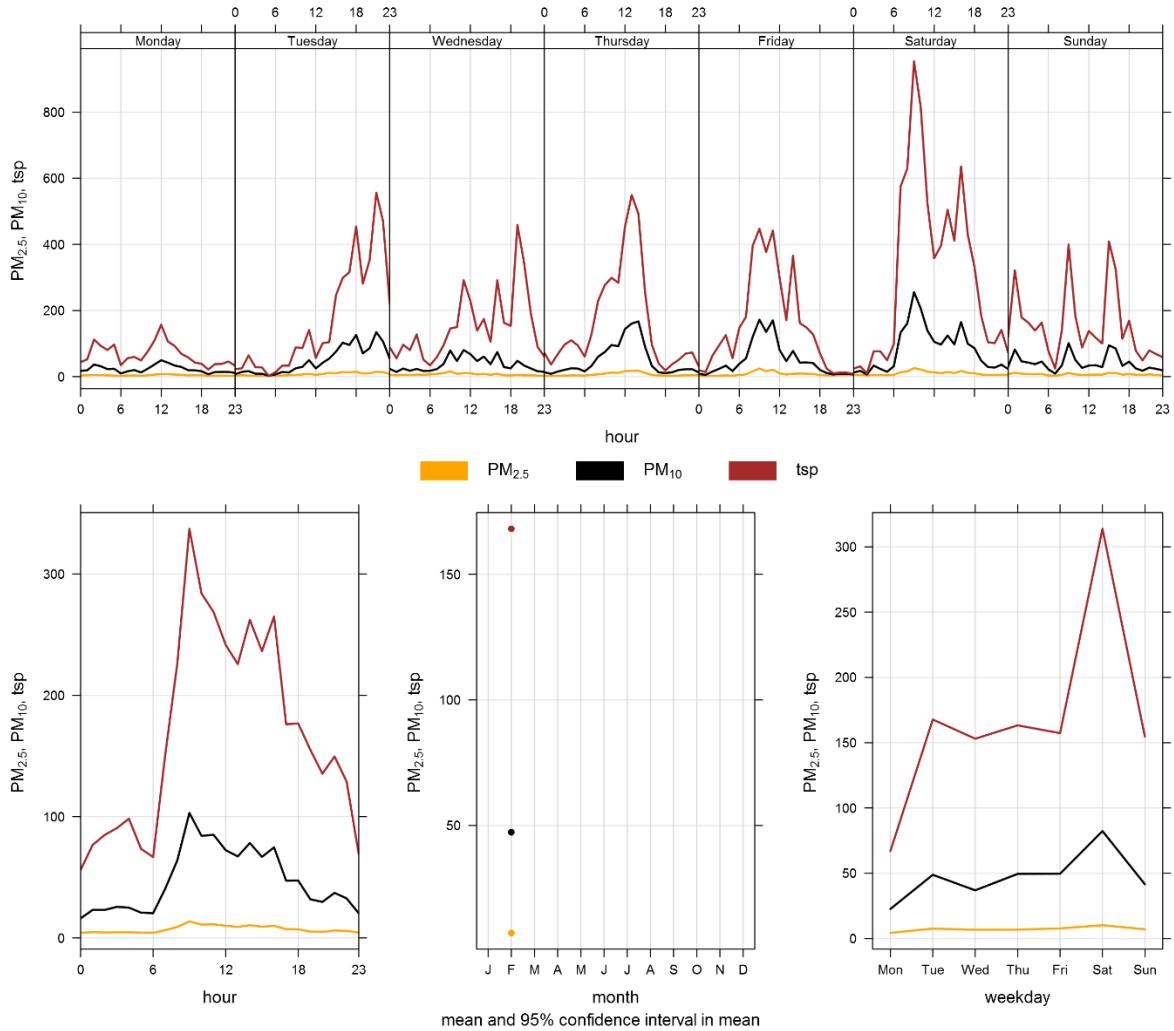


Figure 5-4 Berm particulate matter time variation

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 February, the Entrance GRIMM had 100% 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 100% uptime during the month of February.

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 February, there were 17 exceedances of the 24-hour TSP Guideline (100 µg/m³). Historically, the Entrance monitor records an average of 16 and 0 exceedances of the 24-hour TSP and PM_{2.5} Guidelines respectively, during the month of February. The largest number of TSP exceedances recorded during February occurred in 2014, which had 25 days that exceeded the Guideline. The previous fewest number of TSP exceedances recorded during February occurred in 2011, which had 6 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 and seasonal effects 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 shows the wind rose for the days which exceeded the TSP Guideline at the Entrance GRIMM. During these 17 days, winds were predominantly from the west and above 25 km/hr.

Table 6-2 Summary of February 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} ($\mu\text{g}/\text{m}^3$)	-	30	Entrance	-	0	8.9	37.7	21	22	8.4	252.3	18.9	21	100.0
PM ₁₀ ($\mu\text{g}/\text{m}^3$)	-	-	Entrance	-	-	36.2	275.6	2	19	14.6	277.9	109.2	21	100.0
TSP ($\mu\text{g}/\text{m}^3$)	-	100	Entrance	-	17	112.9	1683.7	8	21	34.1	261.4	272.1	8	100.0

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						
2/1/2017	148.6	-	255.5	8.9	64.5	
2/2/2017	224.8	-	264.9	15.1	56.6	
2/3/2017	152.5	-	4.1	14.3	64.9	
2/8/2017	272.1	-	249.9	16.9	66.7	
2/10/2017	206.4	-	253.4	27.9	52.3	high wind event
2/11/2017	127.6	-	256.8	27.1	47.3	high wind event
2/12/2017	200.7	-	248.9	37.0	36.5	high wind event
2/13/2017	148.7	-	267.2	25.0	45.9	high wind event
2/14/2017	173.3	-	262.3	31.0	45.0	high wind event
2/16/2017	124.3	-	263.5	32.2	46.5	high wind event
2/17/2017	113.4	-	251.0	20.5	42.2	high wind event
2/20/2017	127.1	-	264.8	15.3	53.6	
2/21/2017	225.0	-	265.5	10.1	57.3	
2/25/2017	146.8	-	251.5	22.4	51.7	high wind event
2/26/2017	112.6	-	70.9	12.8	75.0	
2/27/2017	113.5	-	272.6	10.9	62.9	
2/28/2017	152.0	-	255.5	16.1	53.6	
Total # of Exceedances	17	0				
Maximum # of Exceedances (February)	25 (2014)	2 (2015)				
Average # of Exceedances (February)	16	0				
Minimum # of Exceedances (February)	6 (2011)	0 (2010, 2011, 2013, 2016)				

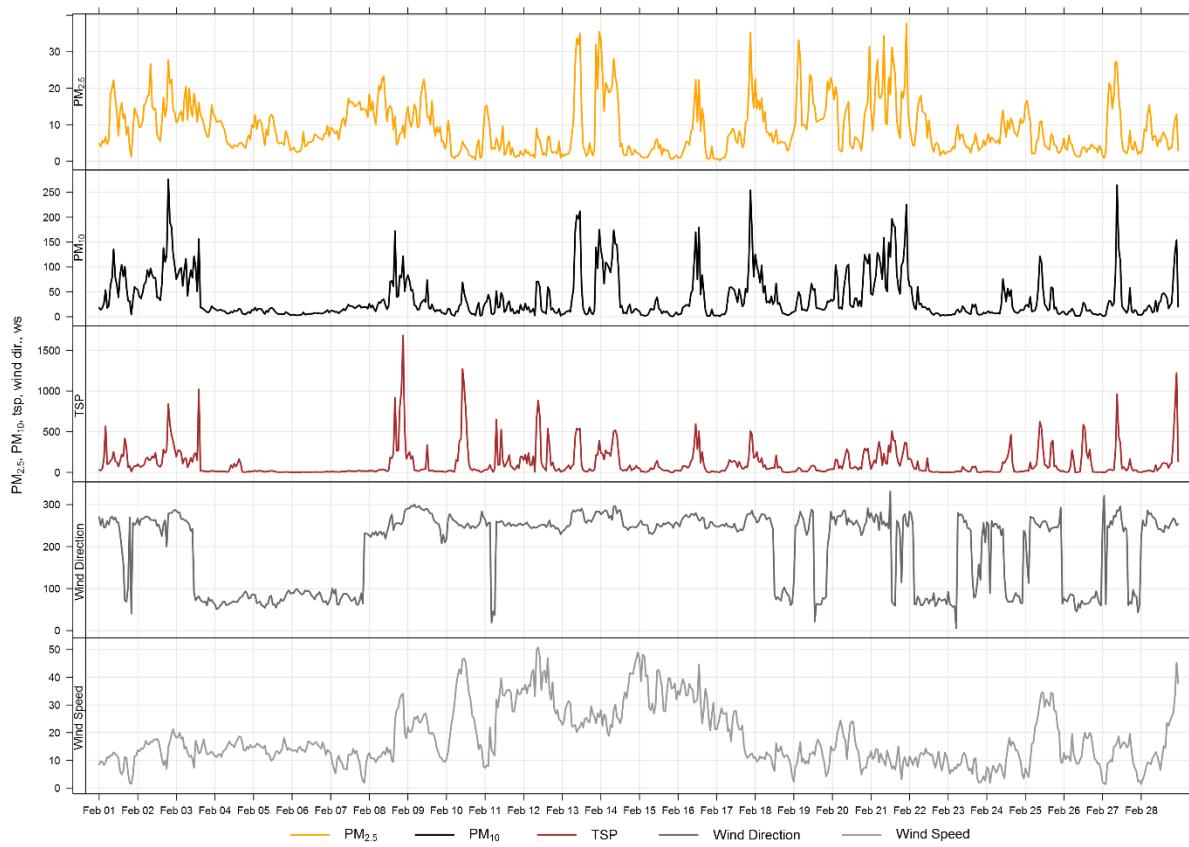


Figure 6-1 1-hour particulate matter concentrations recorded at the Entrance monitor

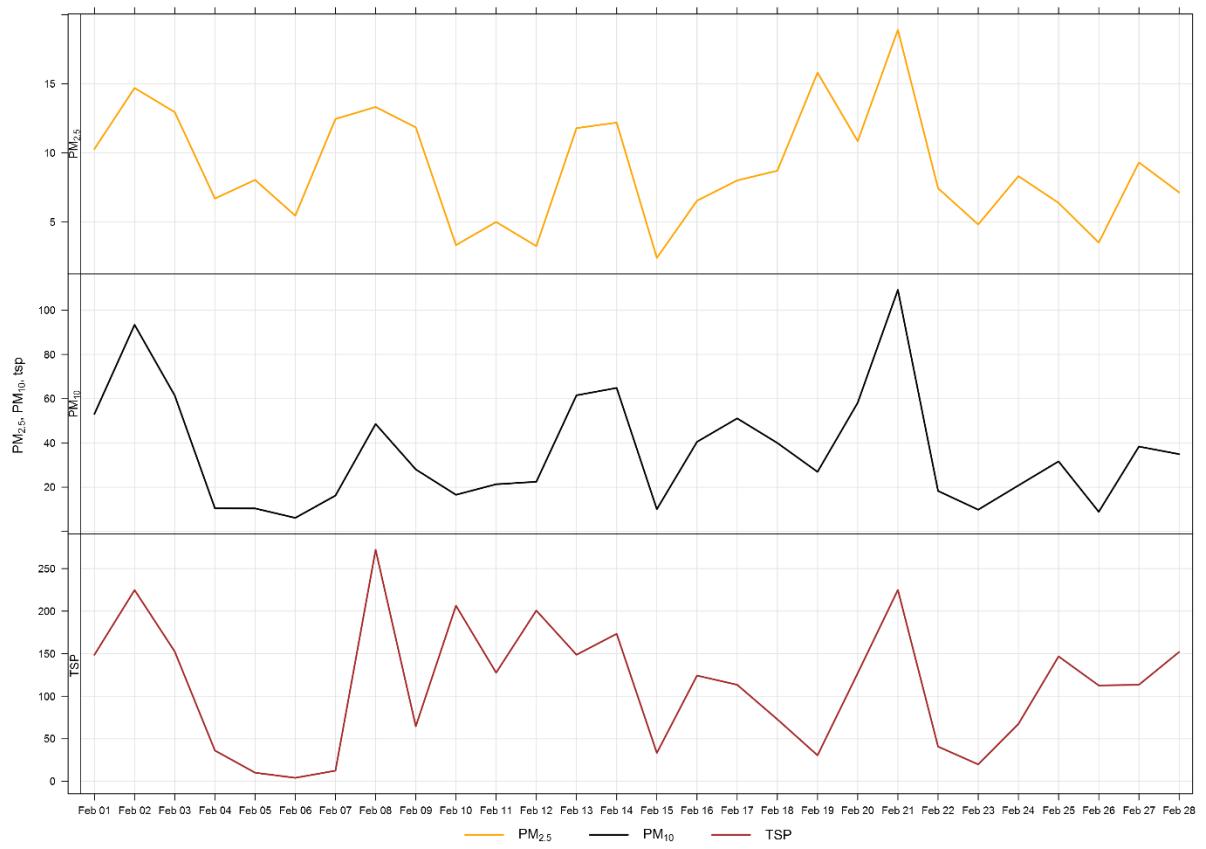


Figure 6-2 24-hour particulate matter concentrations at the Entrance monitor

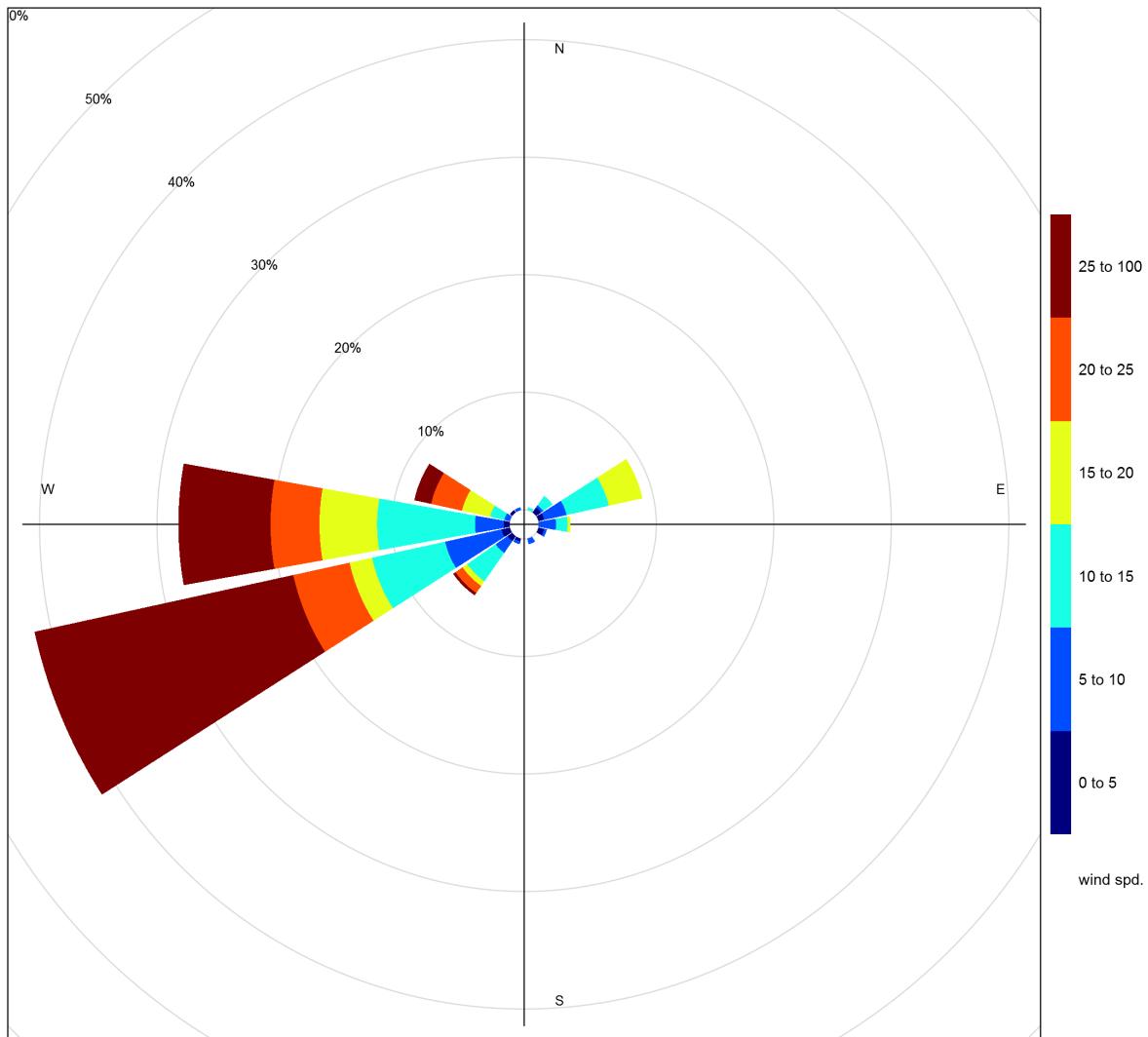


Figure 6-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM

Figure 6-4 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 6-4 is based on data collected during February 2017 and indicates a strong diurnal pattern that is typical at this station, but also an increase in the late evening because of high wind events.

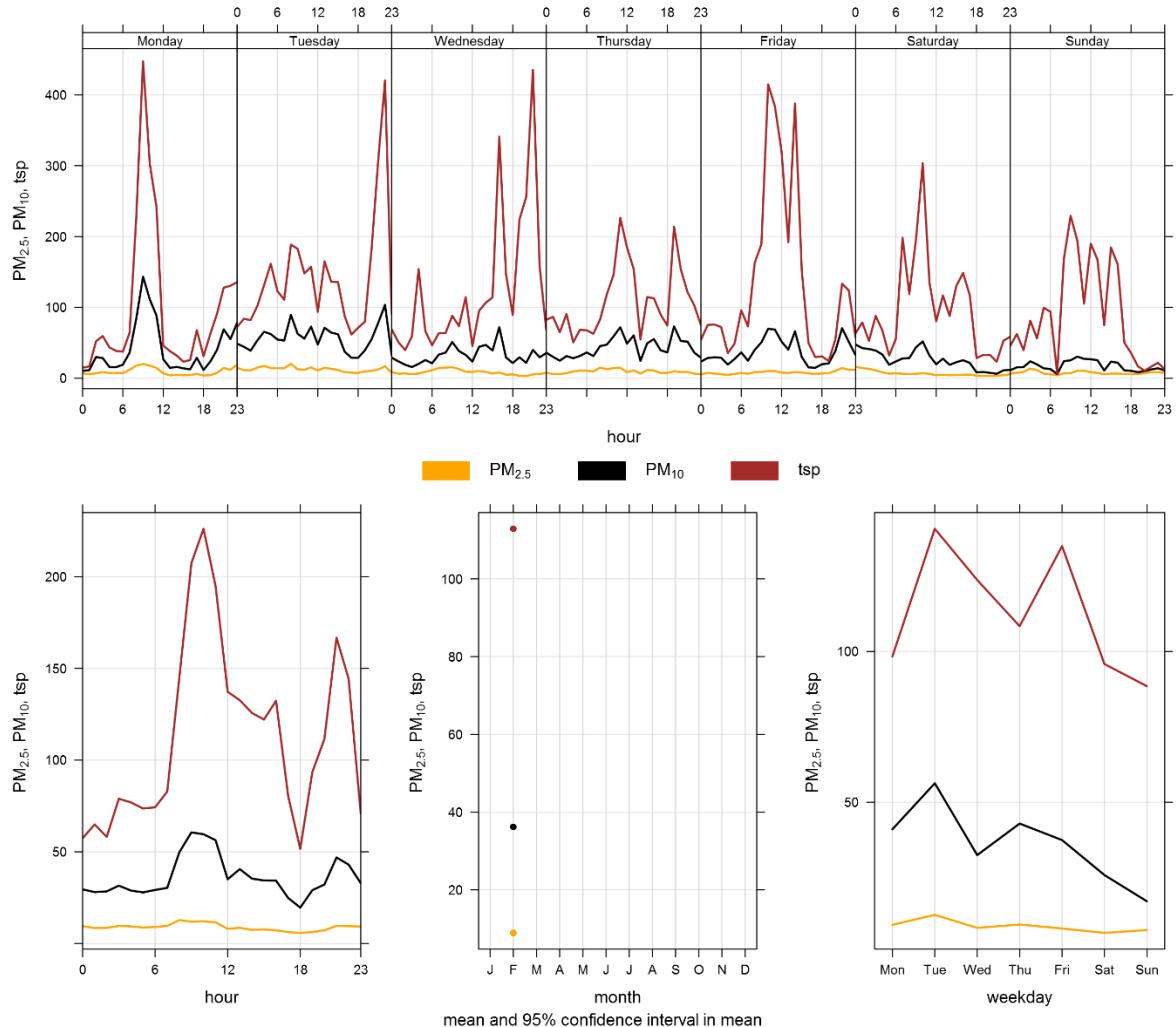


Figure 6-4 Entrance particulate matter time variation

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

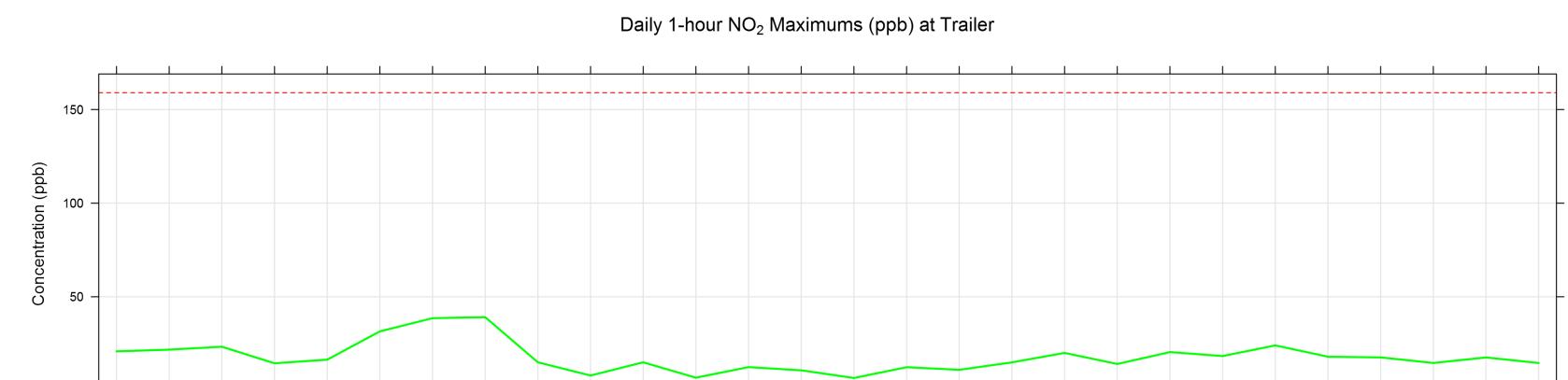
Appendix A

DATA & CALIBRATION REPORTS

Lagoon NO₂ (ppb) – February 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	12.1	S	11.0	13.4	13.5	17.4	15.3	16.5	20.8	18.6	15.4	10.0	7.5	5.0	3.3	1.2	12.7	10.1	6.0	10.3	8.5	6.9	13.7	10.6	20.8	11.3	
2	10.7	S	10.8	13.6	13.6	14.6	13.8	17.2	21.7	19.2	14.4	10.2	6.2	6.0	3.9	3.4	7.7	5.7	11.0	10.1	6.3	5.8	5.5	4.1	21.7	10.2	
3	4.2	S	9.9	17.5	17.5	23.3	21.6	20.9	22.0	16.3	11.9	17.6	8.7	2.2	6.4	2.4	8.4	12.5	20.1	9.3	8.6	8.9	7.1	15.4	12.7	23.3	12.7
4	10.9	S	11.6	12.1	14.5	11.3	5.8	8.9	4.6	6.2	4.9	3.2	5.5	6.2	3.7	4.4	6.8	2.9	3.0	3.8	5.2	7.9	8.0	7.1	14.5	6.9	
5	5.7	S	3.3	3.4	5.1	7.1	13.7	12.8	6.9	11.3	6.3	2.9	15.9	8.0	5.8	9.0	10.7	4.5	10.9	16.4	10.3	4.6	4.7	3.2	16.4	7.9	
6	2.6	S	2.2	3.7	4.5	5.4	6.9	7.9	8.4	7.5	7.4	6.6	7.7	13.3	11.5	12.7	13.0	13.7	11.8	9.9	15.2	26.4	31.5	29.4	31.5	11.3	
7	36.6	S	32.2	30.7	33.8	26.9	21.5	26.7	36.0	28.1	HP	5.4	9.2	12.1	10.6	6.8	16.1	18.0	19.3	27.4	36.1	34.9	38.6	38.1	38.6	24.8	
8	39.1	S	31.4	30.3	30.6	30.6	33.8	34.1	32.4	26.5	19.3	11.1	9.7	8.1	8.8	9.3	4.8	3.7	3.5	3.9	3.2	2.2	11.3	8.1	39.1	17.2	
9	9.9	S	3.8	10.0	5.0	6.4	4.9	7.5	C	C	C	C	7.6	7.9	11.6	12.0	10.9	15.0	9.3	11.7	7.5	8.5	7.1	15.0	8.7	15.0	8.7
10	7.5	S	5.9	6.3	5.1	5.5	5.6	6.0	1.9	4.6	1.5	0.8	1.9	3.2	2.4	1.3	4.4	3.8	1.0	2.8	2.6	2.9	7.2	7.9	7.9	7.9	4.0
11	5.3	S	5.4	4.5	10.2	8.9	15.0	3.8	6.6	7.0	3.1	3.3	1.6	1.6	2.5	1.1	0.8	4.3	4.6	1.5	1.8	3.1	3.1	1.4	15.0	4.4	
12	1.5	S	5.0	2.2	1.0	1.1	0.7	0.8	1.0	1.7	1.6	4.0	3.0	2.3	2.3	1.2	6.8	1.3	0.9	0.8	0.7	0.9	1.8	0.6	6.8	1.9	
13	0.6	S	0.6	0.7	0.7	1.5	5.3	10.2	10.3	12.4	7.4	8.5	8.2	4.0	3.7	3.5	5.1	5.0	3.3	3.3	5.0	10.3	10.7	7.2	12.4	5.5	
14	7.7	S	8.3	6.1	4.0	4.5	2.6	3.6	4.0	4.2	5.3	9.5	10.7	4.6	2.3	1.2	1.2	0.8	2.3	0.6	1.6	0.5	1.0	0.6	10.7	3.8	
15	1.6	S	1.0	1.9	2.1	0.6	1.1	1.2	3.7	3.0	5.4	4.5	1.8	1.2	1.0	2.0	3.7	3.0	4.8	1.4	1.2	1.6	3.7	6.6	6.6	6.6	2.5
16	4.1	S	7.3	5.4	6.5	8.6	7.5	9.7	12.4	9.8	10.4	6.2	12.2	3.0	6.5	11.2	9.6	1.2	0.9	1.6	2.0	4.2	4.2	1.3	12.4	6.3	
17	2.6	S	0.6	2.5	1.7	0.7	6.8	4.8	5.1	3.8	1.8	2.5	0.6	0.5	0.6	0.9	0.8	3.6	11.0	6.7	9.0	9.1	8.6	9.0	11.0	4.1	
18	9.2	S	7.9	10.3	8.2	8.5	8.0	9.4	13.0	14.0	9.5	6.7	12.6	3.9	3.7	9.0	14.9	4.8	3.6	2.4	2.0	1.9	6.0	2.7	14.9	7.5	
19	4.3	S	20.0	14.6	8.2	8.1	9.0	8.9	8.4	7.9	7.0	8.5	8.9	12.1	11.0	8.6	8.7	14.1	9.8	8.4	9.0	14.3	11.3	5.6	20.0	9.8	
20	7.8	S	7.1	13.6	3.6	4.7	6.6	9.5	9.9	12.8	10.5	5.9	4.1	0.7	3.1	4.3	2.4	2.4	6.1	5.3	11.0	14.1	9.7	8.4	14.1	7.1	
21	6.4	S	8.4	9.1	10.5	7.5	6.6	12.5	15.6	11.3	6.2	4.5	10.5	20.3	14.5	11.7	13.1	4.9	13.5	20.4	8.6	7.7	9.3	7.5	20.4	10.5	
22	6.2	S	7.6	7.3	4.4	5.5	6.0	7.4	14.0	18.3	1.9	2.1	8.0	8.4	12.0	0.7	5.5	9.8	2.5	8.2	4.6	4.7	2.6	1.4	18.3	6.5	
23	2.5	S	12.5	6.1	4.4	5.8	8.3	10.2	18.1	9.3	6.0	7.3	4.4	2.8	2.0	2.1	4.4	4.6	3.9	8.0	21.6	24.0	17.0	18.0	24.0	8.8	
24	10.4	S	13.7	11.2	14.4	18.0	13.1	16.7	17.2	12.2	9.4	10.7	3.9	6.0	12.3	6.0	11.9	5.8	5.4	4.4	4.4	6.9	9.7	8.0	18.0	10.1	
25	11.4	S	17.6	9.4	3.9	5.1	4.3	6.6	5.5	1.9	2.8	2.6	2.6	1.7	1.5	0.6	1.1	0.6	3.6	4.3	1.1	2.5	5.6	11.9	17.6	4.7	
26	3.2	S	1.5	0.6	0.6	0.6	0.7	7.8	4.7	7.2	7.1	1.9	7.2	10.0	7.9	8.8	12.7	14.6	9.8	9.3	3.0	5.2	6.1	8.4	14.6	6.1	
27	4.4	S	17.6	7.4	10.6	7.9	7.4	9.5	7.6	6.2	3.8	4.0	2.9	1.0	1.6	1.0	6.4	16.4	3.7	3.8	3.2	3.6	8.4	5.9	17.6	6.3	
28	4.7	S	8.9	8.6	9.7	10.2	8.5	14.6	13.4	9.5	5.4	4.2	1.9	2.0	0.7	1.9	2.1	1.4	1.8	2.7	4.0	7.9	1.1	2.9	14.6	5.6	
Hourly Max	39.1	-	32.2	30.7	33.8	30.6	33.8	34.1	36.0	28.1	19.3	17.6	15.9	20.3	14.5	12.7	16.1	18.0	20.1	27.4	36.1	34.9	38.6	38.1			
Hourly Average	8.3	-	9.8	9.4	8.9	9.1	9.3	10.9	12.1	10.8	7.2	6.1	6.6	5.6	5.5	4.9	7.4	6.6	6.9	7.0	7.2	8.2	9.1	8.5			

S = SPAN C = CALIBRATION HP = HVAC / POWER ISSUES



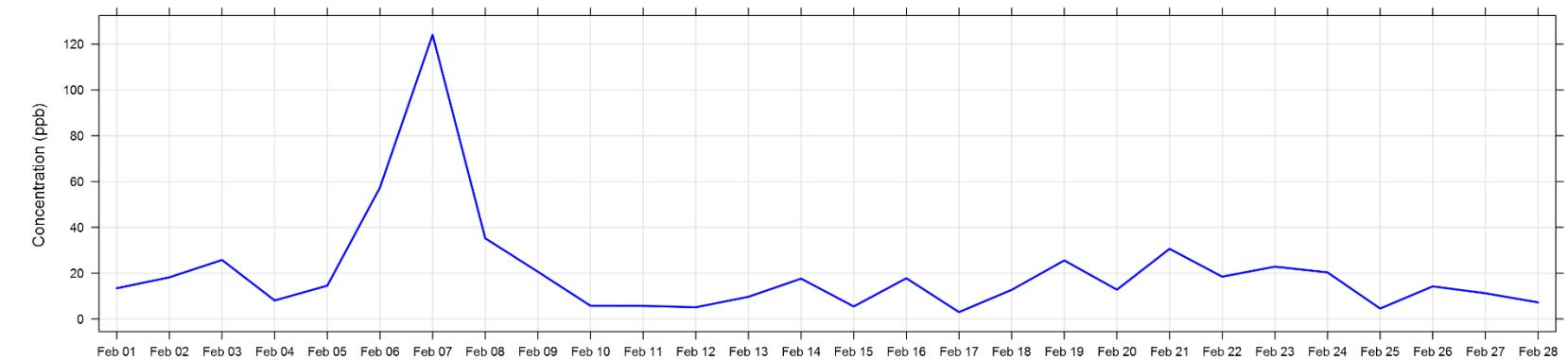
Number of 1HR Exceedances	

Lagoon NO (ppb) – February 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	5.8	S	0.2	1.4	0.8	1.1	1.6	1.9	11.3	5.5	13.4	4.0	3.1	1.7	0.7	0.0	8.9	6.2	0.0	0.0	0.0	0.5	0.4	0.3	13.4	3.0
2	2.7	S	0.2	3.3	2.6	0.7	3.3	4.6	18.2	11.2	10.5	11.9	4.7	4.5	2.2	1.1	2.2	0.8	0.4	0.8	0.7	0.6	3.6	0.2	18.2	4.0
3	0.2	S	14.7	16.7	20.9	25.7	24.7	19.3	9.2	5.9	3.3	17.2	6.0	0.5	4.4	0.3	5.0	6.5	11.2	1.5	0.3	0.1	0.2	2.4	25.7	8.5
4	3.7	S	1.1	1.7	1.7	0.7	0.4	1.2	0.8	3.7	8.1	2.5	4.2	5.5	2.5	2.2	4.1	0.4	0.0	0.0	0.0	1.5	0.1	0.0	8.1	2.0
5	0.0	S	0.1	0.2	0.7	1.8	9.3	9.0	1.2	10.6	5.8	0.5	14.5	4.1	3.3	4.1	5.0	0.1	3.1	9.1	5.6	0.0	1.9	1.6	14.5	4.0
6	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	3.0	2.5	3.8	6.6	11.2	7.5	3.3	0.8	0.0	1.2	10.7	15.5	33.5	57.4	57.4	6.9
7	124.0	S	32.2	27.1	115.2	46.3	26.4	49.2	53.9	71.1	HP	12.7	12.0	18.0	6.2	9.2	23.4	8.7	4.5	3.6	9.0	7.7	8.1	7.2	124.0	30.7
8	9.2	S	2.1	1.3	2.2	4.3	11.1	15.2	27.6	35.2	30.0	17.5	12.6	9.2	9.3	4.6	3.9	0.9	1.0	1.9	2.9	0.6	7.9	7.2	35.2	9.5
9	10.3	S	2.4	20.6	1.8	3.3	1.1	2.9	C	C	C	C	5.3	5.6	10.0	9.0	3.6	4.2	3.0	1.3	0.1	0.4	0.1	20.6	4.7	
10	1.3	S	1.0	3.1	0.5	0.9	1.6	2.9	0.6	2.9	1.2	0.5	1.1	3.0	1.5	0.6	2.1	1.6	0.1	0.3	0.1	2.7	5.7	2.3	5.7	1.6
11	0.1	S	0.2	1.2	5.7	3.9	5.5	1.7	2.9	3.9	2.4	2.6	0.8	0.9	1.5	0.4	0.1	1.9	2.4	0.2	0.6	0.6	1.0	0.6	5.7	1.8
12	0.3	S	1.9	0.6	0.2	0.1	0.0	0.0	0.0	0.5	0.5	2.3	1.5	1.3	1.2	0.7	5.1	0.5	0.0	0.0	0.0	0.1	0.4	0.0	5.1	0.7
13	0.0	S	0.0	0.1	0.0	0.2	2.8	4.5	5.1	9.7	8.6	6.9	8.1	2.3	2.2	1.7	1.3	1.0	0.3	3.2	1.5	6.1	7.8	3.9	9.7	3.3
14	5.6	S	6.7	3.6	1.2	1.6	2.5	0.3	2.4	2.4	8.7	10.3	17.6	3.2	1.2	0.5	0.3	0.1	0.8	0.0	1.4	0.0	0.3	0.1	17.6	3.1
15	0.7	S	0.2	0.7	1.2	0.1	0.3	0.1	1.6	1.9	4.8	5.5	1.2	0.8	0.6	0.6	1.3	1.2	5.3	0.2	0.5	0.6	2.9	4.3	5.5	1.6
16	2.3	S	6.6	4.7	5.1	8.7	7.2	11.2	13.7	13.1	13.3	10.4	17.8	4.3	7.5	12.2	10.3	0.6	0.3	0.0	0.0	0.8	1.5	0.0	17.8	6.6
17	1.1	S	0.0	0.4	0.2	0.0	3.0	1.2	1.4	0.9	0.6	1.2	0.1	0.0	0.1	0.3	0.1	0.2	2.4	0.2	1.3	1.9	1.4	2.7	3.0	0.9
18	2.8	S	1.1	2.1	1.0	2.6	0.5	0.7	8.3	12.7	4.7	2.3	9.0	1.1	1.1	4.5	11.4	0.5	0.2	0.0	0.0	0.0	1.5	0.3	12.7	3.0
19	0.1	S	18.7	12.3	3.1	0.8	1.0	0.9	1.7	3.2	6.1	5.6	8.1	25.5	20.9	11.1	8.9	14.6	1.3	0.2	0.1	2.1	0.4	1.4	25.5	6.4
20	1.6	S	5.9	12.8	0.4	2.6	3.1	4.4	5.8	9.5	12.7	5.2	3.3	0.2	2.1	1.9	0.6	0.0	0.0	0.4	4.3	2.6	6.4	0.4	12.8	3.7
21	0.9	S	2.1	4.4	6.0	2.4	2.8	5.2	4.5	4.7	3.8	2.3	10.5	30.6	11.5	8.1	10.2	1.3	4.7	0.9	0.2	1.6	4.8	2.4	30.6	5.5
22	0.2	S	0.3	0.0	1.5	0.1	0.5	0.5	9.6	18.5	0.4	0.7	5.0	4.4	10.9	0.0	1.9	4.2	0.3	5.2	2.5	0.1	0.2	0.1	18.5	2.9
23	0.1	S	1.8	0.4	0.4	0.9	1.1	5.5	18.3	9.1	6.2	10.9	5.3	2.7	1.3	0.8	3.1	2.3	0.0	1.8	21.7	22.8	4.6	1.0	22.8	5.3
24	2.5	S	1.4	2.4	0.6	3.1	0.7	3.2	17.2	7.1	6.7	9.1	3.0	5.7	20.3	4.1	8.3	1.6	0.0	0.0	0.0	0.7	1.6	0.1	20.3	4.3
25	0.4	S	0.5	2.5	0.3	4.5	1.0	1.5	3.3	0.9	2.1	2.6	1.8	1.1	0.6	0.1	0.3	0.0	1.3	1.9	0.1	0.2	0.7	0.8	4.5	1.2
26	0.1	S	0.0	0.0	0.0	0.0	0.0	5.0	2.4	7.5	13.5	2.8	7.1	14.2	8.7	7.3	9.9	7.9	2.7	1.1	0.0	1.4	0.4	2.3	14.2	4.1
27	0.1	S	10.1	0.3	1.0	0.1	0.3	2.9	3.7	3.9	4.1	5.8	2.3	0.6	0.7	0.3	5.7	11.2	0.3	0.0	0.0	0.7	0.0	11.2	2.4	
28	0.0	S	1.5	0.1	0.0	1.6	0.1	2.3	4.6	7.2	4.8	4.0	1.4	0.9	0.2	1.2	3.4	0.5	0.4	0.9	1.8	7.2	0.4	1.9	7.2	2.0
Hourly Max	124.0	-	32.2	27.1	115.2	46.3	26.4	49.2	53.9	71.1	30.0	17.5	17.8	30.6	20.9	12.2	23.4	14.6	11.2	9.1	21.7	22.8	33.5	57.4		
Hourly Average	6.3	-	4.0	4.4	6.2	4.2	4.0	5.6	8.5	9.8	6.9	5.9	6.1	5.7	5.0	3.4	5.3	2.8	1.7	1.3	2.4	2.8	3.5	3.6		

S = SPAN C = CALIBRATION HP = HVAC / POWER ISSUES

Daily 1-hour NO Maximums (ppb) at Trailer

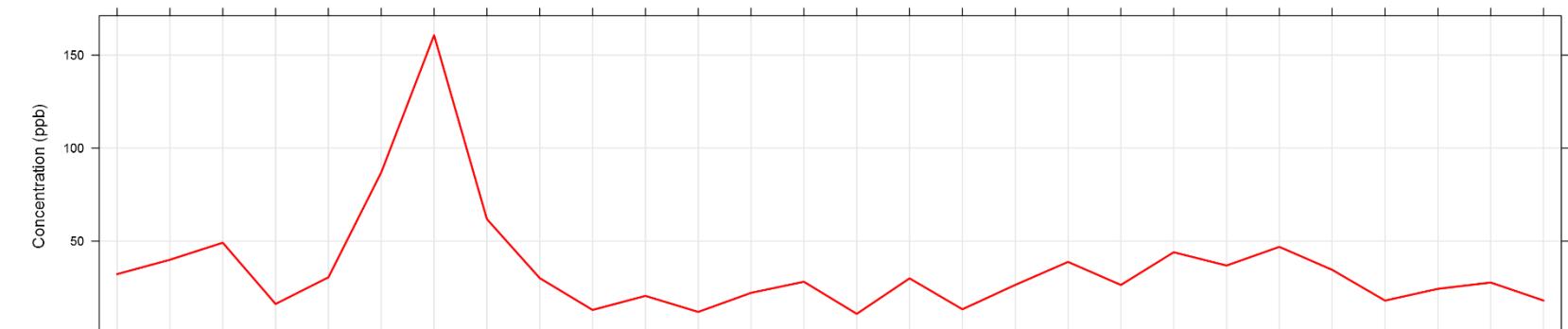


Lagoon NO_x (ppb) – February 2017

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	17.9	S	11.3	14.9	14.4	18.6	17.0	18.5	32.3	24.3	29.0	14.2	10.7	6.9	4.1	1.3	21.7	16.3	6.0	10.4	8.5	7.4	14.1	10.9	32.3	14.4
2	13.4	S	11.1	17.1	16.2	15.3	17.2	21.9	40.0	30.5	25.1	22.1	11.1	10.7	6.3	4.6	10.1	6.6	11.5	10.9	7.1	6.5	9.2	4.4	40.0	14.3
3	4.5	S	24.3	34.3	38.6	49.2	46.4	40.3	31.4	22.4	15.4	34.9	14.8	2.7	10.6	2.8	13.5	19.2	31.4	10.8	8.9	9.0	7.4	17.9	49.2	21.3
4	14.3	S	12.9	13.9	16.3	12.0	6.2	10.2	5.4	10.0	13.0	5.9	9.9	11.9	6.3	6.8	11.1	3.4	2.9	3.6	5.1	9.4	8.0	7.0	16.3	8.9
5	5.6	S	3.4	3.6	5.9	8.9	23.0	21.8	8.2	21.9	12.2	3.5	30.6	12.3	9.3	13.2	15.8	4.7	14.0	25.6	16.0	4.6	6.4	4.3	30.6	11.9
6	2.4	S	2.0	3.4	4.3	5.3	6.8	7.8	8.5	8.5	10.7	9.3	11.7	20.1	22.2	20.4	16.6	14.6	11.6	11.2	26.0	42.0	65.2	87.0	87.0	18.2
7	160.7	S	64.6	57.9	149.2	73.5	48.1	76.1	90.0	99.4	HP	16.0	21.3	28.9	17.0	15.9	39.6	26.9	24.0	31.1	45.3	42.8	46.8	45.5	160.7	55.5
8	48.4	S	33.6	31.7	32.9	35.1	45.1	49.4	60.2	61.9	49.5	28.8	22.4	17.5	18.3	14.1	8.8	4.8	4.7	6.0	6.1	2.7	19.3	15.5	61.9	26.8
9	20.3	S	6.0	30.2	6.8	9.7	6.0	10.5	C	C	C	C	13.1	13.7	21.7	21.2	14.6	19.3	12.4	13.1	7.6	8.9	7.3	30.2	13.5	
10	8.9	S	7.0	9.5	5.6	6.4	7.3	9.0	2.6	7.6	2.7	1.1	3.0	6.3	4.0	1.9	6.6	5.5	1.1	3.2	2.7	5.7	13.1	10.2	13.1	5.7
11	5.4	S	5.7	5.7	15.9	13.0	20.6	5.6	9.6	11.1	5.6	6.0	2.5	2.5	4.1	1.4	0.9	6.3	6.9	1.7	2.4	3.8	4.2	1.9	20.6	6.2
12	1.8	S	7.0	2.9	1.1	1.2	0.8	0.8	1.1	2.3	2.2	6.4	4.5	3.6	3.6	2.0	12.0	1.8	1.0	0.8	0.8	1.0	2.2	0.6	12.0	2.7
13	0.6	S	0.6	0.8	0.7	1.7	8.2	14.8	15.5	22.2	16.1	15.5	16.4	6.4	6.1	5.2	6.5	5.9	3.6	6.2	6.5	16.6	18.6	11.2	22.2	9.0
14	13.5	S	15.1	9.8	5.3	6.1	4.6	4.0	6.5	6.7	14.1	19.9	28.2	8.0	3.6	1.7	1.5	0.9	3.1	0.8	3.0	0.5	1.2	0.8	28.2	6.9
15	2.3	S	1.2	2.6	3.3	0.8	1.4	1.3	5.4	5.0	10.4	10.1	3.1	1.9	1.5	2.7	5.1	4.3	10.1	1.7	1.7	2.3	6.7	11.0	11.0	4.2
16	6.4	S	14.0	10.3	11.8	17.4	14.9	21.0	26.2	23.0	23.8	16.7	30.0	7.3	14.2	23.5	20.0	1.7	1.1	1.7	2.0	5.0	5.8	1.3	30.0	13.0
17	3.7	S	0.5	2.9	2.0	0.7	9.9	6.1	6.6	4.9	2.5	3.8	0.7	0.6	0.6	1.3	1.0	3.8	13.4	6.9	10.3	11.0	10.1	11.8	13.4	5.0
18	12.1	S	9.1	12.4	9.3	11.1	8.6	10.2	21.4	24.7	14.4	9.2	21.8	5.1	5.0	13.6	26.5	5.4	3.8	2.4	1.9	7.6	3.1	26.5	10.4	
19	4.4	S	38.9	27.0	11.3	8.9	10.1	9.9	10.3	11.2	13.3	14.3	17.1	37.7	31.9	19.8	17.7	28.6	11.1	8.6	9.2	16.5	11.8	7.0	38.9	16.4
20	9.5	S	12.7	26.5	4.1	7.4	9.7	14.1	15.9	22.5	23.3	11.2	7.5	0.9	5.3	6.3	3.0	2.5	6.1	5.7	15.4	16.7	16.2	8.9	26.5	10.9
21	7.3	S	10.6	13.6	16.7	10.0	9.5	17.7	20.2	16.1	10.2	7.0	21.2	44.1	26.1	19.9	23.4	6.3	18.3	21.4	8.8	9.3	14.2	9.9	44.1	15.7
22	6.4	S	7.9	7.4	6.0	5.5	6.6	8.0	23.6	36.9	2.4	2.8	13.1	13.0	23.1	0.8	7.4	14.2	2.8	13.4	7.2	4.8	2.8	1.5	36.9	9.5
23	2.6	S	14.5	6.6	4.9	6.7	9.4	15.8	36.5	18.4	12.4	18.3	9.8	5.7	3.4	3.1	7.6	7.0	4.0	9.8	43.3	47.0	21.7	19.1	47.0	14.2
24	12.9	S	15.2	13.7	15.1	21.2	13.9	20.0	34.6	19.4	16.3	20.0	7.0	11.8	32.8	10.2	20.3	7.5	5.4	4.4	4.4	7.7	11.4	8.2	34.6	14.5
25	11.9	S	18.1	11.9	4.3	9.7	5.4	8.3	8.9	2.9	5.0	5.3	4.5	2.9	2.1	0.7	1.4	0.6	5.0	6.3	1.2	2.7	6.3	12.8	18.1	6.0
26	3.3	S	1.6	0.6	0.6	0.6	0.7	12.9	7.2	14.8	19.8	4.6	14.4	24.4	16.7	16.3	22.7	22.6	12.6	10.5	3.0	6.6	6.5	10.7	24.4	10.2
27	4.5	S	27.8	7.8	11.6	8.1	7.8	12.5	11.5	10.2	8.0	9.6	5.4	1.7	2.5	1.3	12.2	27.7	4.0	3.8	3.2	3.6	9.1	6.0	27.8	8.7
28	4.8	S	10.5	8.8	9.8	11.9	8.7	17.0	18.1	16.8	10.4	8.3	3.5	3.0	1.0	3.1	5.4	2.0	2.2	3.7	5.8	15.2	1.5	4.8	18.1	7.7
Hourly Max	160.7	-	64.6	57.9	149.2	73.5	48.1	76.1	90.0	99.4	49.5	34.9	30.6	44.1	32.8	23.5	39.6	28.6	31.4	31.1	45.3	47.0	65.2	87.0		
Hourly Average	14.6	-	13.8	13.8	15.1	13.4	13.3	16.6	20.7	20.6	14.1	12.0	12.8	11.1	10.5	8.4	12.9	9.5	8.6	8.4	9.6	11.1	12.7	12.2		

S = SPAN C = CALIBRATION HP = HVAC / POWER ISSUES

Daily 1-hour NO_x Maximums (ppb) at Trailer

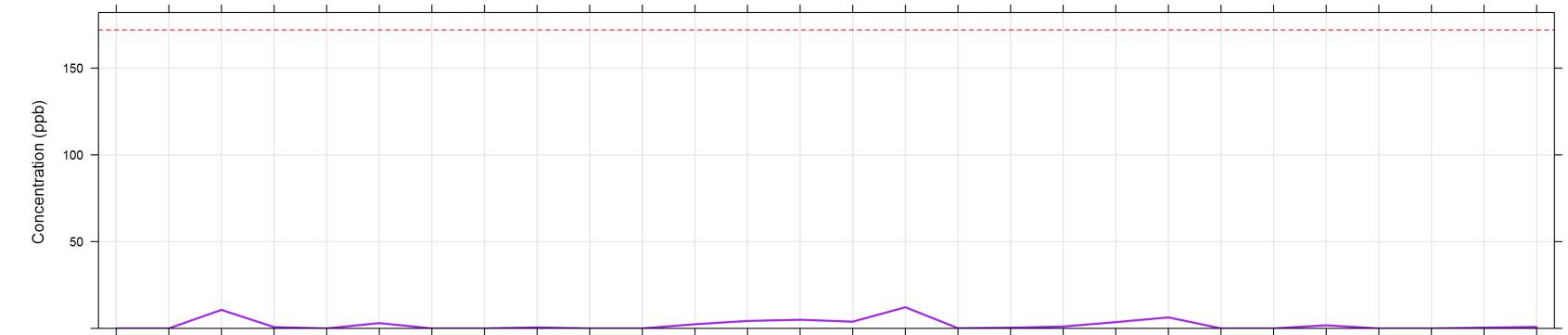


Lagoon SO₂ (ppb) – February 2017

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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	S	0.0	5.7	7.9	10.6	10.4	2.2	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	10.6	
4	0.1	S	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	
5	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	0.3	0.5	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.2
7	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	HP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.1	0.6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	
10	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	
13	0.0	S	0.0	0.0	0.0	0.0	0.5	2.2	4.3	1.2	2.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	
14	3.1	S	3.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	5.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	
15	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	
16	0.8	S	0.7	2.6	3.6	6.7	5.3	8.1	11.8	12.2	9.2	6.3	7.2	2.4	5.3	6.2	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	
17	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
18	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
19	0.0	S	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.9	1.1	0.3	0.0	0.0	0.0	0.0	0.0	1.1	
20	0.0	S	0.0	0.0	0.0	0.0	0.0	0.2	1.2	1.5	3.6	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	
21	0.0	S	0.1	0.9	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	6.3	4.8	2.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.3	
22	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	
25	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
28	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.8	
Hourly Max	3.1	-	3.6	5.7	7.9	10.6	10.4	8.1	11.8	12.2	9.2	6.3	7.2	6.3	5.3	6.2	4.7	1.1	3.0	0.0	0.3	2.1	2.7	2.2		
Hourly Average	0.1	-	0.2	0.4	0.4	0.6	0.6	0.4	0.6	0.7	0.7	0.6	0.3	0.4	0.4	0.4	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.8	

S = SPAN C = CALIBRATION HP = HVAC / POWER ISSUES

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	115			
Maximum 1-HR Average	12.2	PPB		
Maximum 24-HR Average	4.0	PPB		
IZS Calibration Time	28	HRS	Operational Time	671 HRS
Monthly Calibration Time	3	HRS</		

Lagoon PM_{2.5} ($\mu\text{g}/\text{m}^3$) – February 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	2.1	0.8	1.8	0.8	0.5	2.1	3.1	3.1	HP	HP	HP	HP	4.1	0.8	2.8	0.1	0.0	4.5	2.8	1.7	4.1	2.5	3.1	2.8	4.5	2.2	
2	2.8	2.5	2.1	1.8	3.1	3.0	0.0	0.4	3.1	3.8	4.5	8.9	5.5	3.8	1.8	0.0	1.8	4.5	2.5	1.1	1.1	3.8	1.4	1.0	8.9	2.7	
3	1.9	1.8	2.1	5.2	17.0	15.7	14.7	2.5	2.8	4.1	3.5	4.9	5.5	4.1	2.1	0.0	5.2	4.1	3.8	2.7	3.5	5.8	6.9	7.5	17.0	5.3	
4	6.5	7.2	5.5	5.8	7.5	6.2	3.5	3.1	0.1	3.5	2.7	1.0	0.1	0.0	0.8	1.4	2.5	1.1	0.0	2.5	5.9	5.2	2.4	2.1	7.5	3.2	
5	0.8	0.8	1.4	1.4	1.4	2.1	1.1	2.8	3.1	5.5	3.8	1.7	4.0	5.8	4.1	3.1	2.8	0.8	1.8	2.5	4.1	5.5	5.2	4.0	5.8	2.9	
6	2.5	1.4	3.0	2.1	2.5	4.2	6.0	4.5	6.2	4.5	2.5	3.5	5.5	5.2	6.2	7.2	11.3	7.6	4.9	7.2	9.9	9.6	11.0	8.2	11.3	5.7	
7	18.1	11.6	13.7	9.6	13.3	6.9	4.8	6.2	10.6	9.2	17.7	11.9	16.4	14.7	13.0	11.6	16.0	15.7	13.0	15.0	19.8	18.1	13.3	9.6	19.8	12.9	
8	11.6	12.3	8.9	6.0	11.4	8.6	8.2	16.4	9.6	9.9	7.5	5.2	4.2	3.6	2.5	5.2	4.1	0.8	0.8	0.4	0.0	2.1	5.5	3.6	16.4	6.2	
9	4.1	1.1	0.0	1.4	2.1	2.1	1.8	0.0	M	M	C	C	17.4	5.8	4.5	7.8	7.3	4.5	1.4	0.0	1.8	1.1	0.0	0.8	17.4	3.3	
10	2.5	3.5	4.8	2.5	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.4	1.8	0.1	0.0	0.0	0.1	3.1	1.8	4.8	0.9
11	0.0	0.0	0.0	1.8	3.1	3.8	3.5	1.8	1.4	1.2	1.8	3.8	0.8	0.0	0.0	1.1	0.0	1.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.1
12	0.4	0.1	0.8	0.6	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.8	0.2	
13	0.0	0.0	0.0	0.0	0.1	1.1	1.7	1.4	0.0	1.1	1.4	0.8	1.1	1.3	0.0	0.0	1.1	4.8	1.4	1.4	3.8	1.4	0.0	0.1	4.8	1.0	
14	1.5	1.4	1.8	1.1	0.1	0.4	0.0	0.0	0.0	1.1	0.4	0.0	1.8	5.2	1.4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.8	5.2	0.8
15	1.1	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.5	0.0	0.0	0.0	0.0	0.8	0.4	2.1	0.3
16	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.4	1.4	2.8	1.8	0.0	0.0	3.1	2.5	1.1	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.7
17	0.1	1.4	0.4	0.0	0.0	0.0	0.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.5	2.1	0.4	0.8	1.8	2.8	3.5	0.7	
18	2.5	1.7	0.6	1.8	2.5	5.2	4.2	2.1	0.8	2.8	4.1	1.4	0.8	1.8	0.1	0.1	2.1	3.0	1.8	0.8	2.1	2.1	0.8	1.1	5.2	1.9	
19	2.5	6.9	12.3	8.2	3.8	2.8	2.8	2.1	5.2	5.8	6.5	3.5	0.0	0.0	5.5	5.2	6.9	6.5	3.8	2.8	5.8	9.3	7.5	2.8	12.3	4.9	
20	0.0	1.8	2.5	0.8	0.4	1.8	1.1	2.1	4.1	2.8	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.8	2.1	1.4	0.4	0.1	1.4	3.5	4.1	1.2	
21	0.8	0.4	3.1	2.5	1.4	1.0	0.0	0.4	2.8	4.2	4.5	1.4	0.0	7.2	7.5	8.2	4.5	2.1	5.5	8.6	4.8	0.8	3.1	3.5	8.6	3.3	
22	0.1	0.0	0.0	3.8	6.5	9.2	8.6	11.4	8.2	6.2	2.1	0.0	0.0	0.0	0.0	0.8	0.8	1.4	0.0	0.0	1.8	0.0	0.0	0.8	11.4	2.6	
23	1.8	3.8	3.5	1.8	0.0	0.1	0.8	0.0	1.1	1.4	3.1	1.5	0.0	0.0	0.0	4.8	5.2	5.2	6.9	4.5	16.7	10.6	9.0	9.2	16.7	3.8	
24	4.5	4.8	5.2	3.6	3.8	5.5	5.2	7.2	5.5	3.8	5.2	3.8	1.8	2.1	2.8	6.5	6.2	5.2	4.1	3.1	3.8	6.5	4.5	11.9	11.9	4.9	
25	7.9	7.9	6.5	2.8	1.8	3.5	0.8	0.0	0.5	0.8	1.1	1.8	0.1	0.0	0.0	0.4	1.1	0.4	0.8	2.8	0.9	0.8	5.2	7.9	2.0		
26	1.4	0.0	0.8	1.1	0.8	0.1	2.8	1.8	0.0	0.0	0.8	0.4	1.4	1.8	1.1	0.0	0.1	5.2	4.1	0.1	0.0	0.0	0.0	0.0	5.2	1.0	
27	0.0	3.1	8.9	5.2	2.1	3.5	3.5	1.4	1.1	2.3	1.7	1.4	0.4	0.0	2.8	1.8	1.4	9.6	4.1	0.0	0.0	0.0	0.0	0.0	9.6	2.4	
28	2.8	1.4	0.0	2.5	2.1	0.1	1.1	1.4	0.1	0.0	0.8	3.8	4.8	3.1	0.4	0.0	0.0	0.0	3.5	5.5	9.2	7.9	4.1	4.5	9.2	2.5	
Hourly Max	18.1	12.3	13.7	9.6	17.0	15.7	14.7	16.4	245.1	9.9	245.1	11.9	17.4	14.7	13.0	11.6	16.0	15.7	13.0	15.0	19.8	18.1	13.3	11.9			
Hourly Average	2.9	2.8	3.2	2.6	3.1	3.2	2.8	2.7	11.6	3.0	12.0	2.4	2.7	2.5	2.2	2.4	3.0	3.2	2.7	2.5	3.6	3.4	3.1	3.3			

M = MAINTENANCE C = CALIBRATION HP = HVAC / POWER ISSUES

24-hour PM_{2.5} ($\mu\text{g m}^{-3}$) at Trailer



Number of 1HR Exceedances	0	Guideline	80	UG/M3
</tbl_header

Lagoon PM₁₀ ($\mu\text{g}/\text{m}^3$) – February 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	10.8	12.1	9.4	20.2	22.3	16.2	19.6	24.3	HP	HP	HP	HP	45.3	36.1	25.1	14.8	23.0	30.3	16.2	30.4	19.6	17.7	31.1	20.2	45.3	22.2
2	8.0	11.4	9.4	6.7	4.7	0.6	5.3	46.7	56.2	58.9	51.4	75.8	37.2	44.6	34.5	27.7	44.0	20.8	37.9	37.9	25.7	28.4	20.9	10.1	75.8	29.4
3	8.7	6.0	7.4	26.3	20.2	9.1	18.9	32.4	64.3	56.2	54.1	87.2	45.3	26.3	77.4	75.1	75.8	65.0	41.9	22.3	16.2	19.7	32.4	28.4	87.2	38.2
4	23.0	19.6	27.7	26.3	18.9	21.3	21.6	12.8	9.4	4.0	4.0	10.1	22.3	27.0	23.6	23.0	14.1	12.1	10.1	5.3	14.8	20.3	6.7	21.6	27.7	16.6
5	21.8	21.6	29.0	30.7	27.7	26.4	20.9	12.8	13.1	15.5	18.2	14.1	32.4	23.6	21.6	16.9	23.0	15.5	15.5	14.8	14.1	9.7	9.4	11.0	32.4	19.1
6	11.4	20.3	21.7	24.3	27.0	22.8	27.7	20.3	14.6	12.8	10.1	15.6	17.5	29.2	44.0	32.5	0.0	0.0	0.0	0.0	0.0	15.5	29.1	19.2	44.0	17.3
7	28.4	35.4	27.1	17.6	37.6	18.3	12.1	12.2	41.3	174.8	124.5	44.0	31.8	27.7	17.5	22.9	19.6	25.7	0.0	0.0	0.0	7.4	11.5	12.8	174.8	31.3
8	17.7	14.8	7.4	7.4	15.9	14.2	15.5	17.6	15.5	14.2	25.7	36.5	46.0	42.6	45.3	31.1	30.4	14.8	23.6	29.1	28.4	10.8	4.0	0.0	46.0	21.2
9	0.6	0.0	0.0	3.3	18.2	19.6	18.4	15.5	M	M	C	C	15.4	12.1	13.4	21.6	30.4	24.5	17.0	12.8	14.8	11.4	15.5	11.4	30.4	13.8
10	12.1	10.1	9.4	25.0	28.4	9.4	19.6	25.7	36.5	24.1	48.0	33.1	31.1	25.0	12.8	10.8	8.7	8.6	7.4	8.7	10.1	7.4	8.0	7.4	48.0	17.8
11	4.7	1.3	4.7	11.4	15.3	16.9	11.6	58.9	26.3	20.9	60.2	39.2	8.0	5.3	20.2	16.9	9.4	10.8	8.9	6.0	8.0	8.0	9.4	10.8	60.2	16.4
12	8.0	27.0	34.5	23.0	15.5	11.1	16.2	6.7	37.2	37.9	22.3	13.8	7.4	19.6	11.4	21.6	49.4	0.0	3.3	7.4	5.6	4.0	7.4	8.0	49.4	16.6
13	4.0	4.0	8.7	8.7	2.6	3.3	18.2	21.6	20.2	17.5	16.9	28.4	38.5	53.5	15.5	8.7	18.2	42.6	17.5	47.4	42.6	16.7	22.3	18.9	53.5	20.7
14	20.2	16.2	20.2	11.2	17.5	1.9	4.0	4.7	5.3	9.4	25.0	33.2	63.6	70.4	22.3	21.6	12.8	8.8	6.7	9.3	8.7	8.7	15.5	13.4	70.4	17.9
15	27.7	25.4	2.6	4.7	7.4	8.7	3.3	0.0	7.4	10.7	23.0	42.6	25.9	14.8	7.4	5.3	0.0	0.0	1.3	1.3	5.6	2.6	0.6	18.2	42.6	10.3
16	4.0	5.3	10.1	39.9	58.2	57.5	35.5	35.6	70.4	90.7	109.6	108.3	100.2	99.5	56.1	65.0	41.9	6.7	4.6	0.0	31.1	5.3	3.5	109.6	43.3	
17	4.0	3.3	3.3	6.0	5.3	6.7	25.7	28.0	24.1	9.4	10.8	35.8	3.3	2.6	0.0	4.0	10.8	23.6	52.1	28.5	16.2	20.9	31.8	10.8	52.1	15.3
18	38.5	48.7	26.2	61.6	42.6	14.8	39.9	52.8	58.2	41.9	41.3	18.2	35.8	15.5	17.6	8.0	18.2	12.8	11.4	8.7	7.2	8.0	9.4	61.6	26.9	
19	8.7	14.8	33.8	20.2	14.8	10.1	15.5	8.7	6.7	20.9	23.6	16.2	5.3	7.4	19.6	22.4	14.1	16.9	17.5	12.8	12.1	33.1	25.0	11.4	33.8	16.3
20	20.2	41.3	44.7	46.0	35.7	53.5	39.9	33.8	43.3	16.9	53.5	17.5	15.5	8.4	16.9	16.9	13.5	10.1	6.7	16.2	38.5	44.6	26.3	44.0	53.5	29.3
21	22.3	17.0	30.4	27.7	39.9	6.1	15.5	44.6	49.4	53.5	51.2	25.0	46.7	47.4	41.3	39.9	48.0	37.2	27.7	29.1	22.3	22.3	30.4	21.9	53.5	33.2
22	16.2	6.0	8.7	12.1	16.2	11.1	20.9	27.0	28.5	39.4	14.1	13.5	37.2	21.6	15.2	8.7	5.3	18.2	12.8	12.1	8.4	8.0	8.0	15.6	39.4	16.0
23	6.7	8.7	11.4	9.4	10.8	29.1	20.2	38.0	14.8	20.9	17.5	13.4	22.4	15.0	18.2	13.5	11.0	8.3	0.0	0.0	31.8	29.7	25.7	18.9	38.0	16.5
24	15.5	20.9	9.4	8.7	19.6	23.6	25.0	36.5	31.1	22.3	19.6	31.8	12.9	12.8	33.1	13.5	25.7	8.6	8.0	10.8	11.4	10.8	18.9	36.5	18.5	
25	21.0	17.5	15.5	14.8	44.8	50.1	18.9	10.8	16.9	33.1	94.8	79.2	47.2	27.7	16.9	13.5	68.7	36.5	18.2	15.3	11.4	8.7	6.0	15.5	94.8	29.3
26	18.2	13.5	15.3	31.1	16.2	24.3	16.9	11.5	10.1	10.8	12.8	18.2	36.5	38.5	23.0	27.7	35.8	50.1	19.8	21.6	12.1	10.1	15.6	7.4	50.1	20.7
27	6.7	3.1	6.7	12.8	16.2	9.4	10.1	16.7	29.3	20.9	41.2	31.1	29.1	13.5	10.8	3.3	19.8	56.8	15.5	10.8	10.1	9.4	16.9	13.5	56.8	17.2
28	18.2	10.8	10.8	10.2	8.7	6.7	7.4	15.5	26.3	31.1	16.9	25.7	10.8	12.1	8.0	18.2	5.3	4.7	15.5	57.2	146.3	159.9	123.4	18.2	159.9	32.0
Hourly Max	38.5	48.7	44.7	61.6	58.2	57.5	39.9	58.9	485.2	174.8	485.2	108.3	100.2	99.5	77.4	75.1	75.8	65.0	52.1	57.2	146.3	159.9	123.4	44.0		
Hourly Average	14.5	15.6	15.9	19.5	21.7	17.9	18.7	24.0	46.0	33.4	54.6	34.9	31.1	27.8	23.9	21.6	24.2	20.4	14.9							

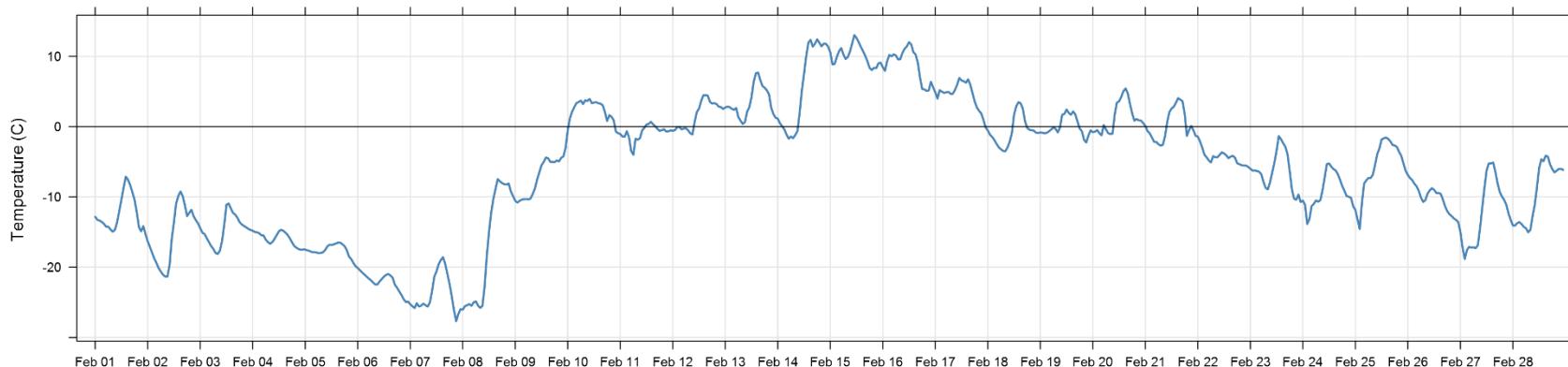
Lagoon TSP ($\mu\text{g}/\text{m}^3$) – February 2017

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	17.9	12.1	18.9	13.5	15.5	16.2	24.3	31.1	HP	HP	HP	HP	57.6	43.3	41.9	19.9	51.4	47.4	25.7	58.2	27.0	18.9	37.9	28.4	58.2	30.3
2	6.7	6.7	8.0	19.9	0.0	18.9	12.3	62.3	73.1	74.7	71.8	93.3	46.0	55.5	38.4	35.2	87.9	49.4	62.3	62.7	41.9	36.2	32.4	17.9	93.3	42.2
3	0.5	21.6	6.7	45.9	34.2	22.9	35.2	50.1	106.8	67.7	63.6	104.3	36.5	20.2	77.9	58.2	73.1	66.3	44.6	24.3	16.4	14.8	20.2	40.6	106.8	43.9
4	25.7	24.3	21.6	25.7	20.2	23.0	18.9	18.9	14.8	20.2	10.8	9.4	16.2	21.6	14.8	25.7	31.1	25.7	10.8	8.0	17.5	18.9	9.4	32.4	32.4	19.4
5	28.4	39.2	40.6	38.2	24.3	16.2	10.8	17.5	12.1	18.9	10.8	10.8	23.0	23.0	17.2	18.9	29.7	16.2	21.8	31.1	20.2	16.2	24.4	10.8	40.6	21.7
6	9.4	17.5	24.3	17.0	25.4	20.3	11.3	20.3	11.2	11.4	16.2	23.9	20.3	39.7	18.9	28.4	10.8	10.8	8.1	9.4	10.8	51.6	63.7	21.1	63.7	21.1
7	33.9	35.2	28.4	14.6	50.2	20.3	10.8	14.9	35.3	97.5	116.5	33.8	32.4	32.4	17.5	12.7	36.5	40.6	31.1	17.6	28.4	23.6	18.3	14.8	116.5	33.2
8	16.2	12.1	12.1	12.1	9.4	9.4	10.8	18.9	13.2	14.2	10.8	20.3	24.3	52.8	31.1	24.7	105.6	51.4	65.0	29.6	35.2	33.8	28.4	21.6	105.6	27.6
9	12.1	7.1	4.0	8.0	31.1	32.4	32.5	20.3	M	M	C	C	C	14.8	16.2	28.4	33.5	23.0	20.2	16.2	18.9	7.8	9.4	9.4	33.5	18.4
10	18.0	8.0	5.3	18.9	24.3	14.8	25.7	17.5	26.8	20.1	46.0	31.9	19.1	36.5	20.2	5.3	5.6	6.7	4.0	14.8	10.8	8.0	6.7	5.0	46.0	16.7
11	4.0	5.6	6.7	8.0	10.3	10.8	6.7	70.3	41.9	29.7	58.2	40.6	1.3	4.0	16.2	20.2	12.1	14.8	10.8	9.4	5.3	5.3	13.5	6.7	70.3	17.2
12	7.6	24.3	41.9	17.5	10.8	9.4	17.5	4.0	28.4	39.3	27.4	20.2	12.1	10.3	8.0	27.0	82.6	9.4	9.4	9.4	7.7	1.3	17.5	4.0	82.6	18.6
13	5.3	4.0	1.3	0.0	1.0	2.6	28.4	21.6	41.9	29.7	20.2	47.4	48.7	63.6	9.4	6.7	21.6	54.1	20.2	50.1	58.2	20.2	27.0	24.3	63.6	25.3
14	18.9	24.3	24.8	6.7	35.2	11.1	8.0	2.6	17.5	6.7	14.8	47.4	65.0	63.6	6.7	3.6	0.0	4.0	9.4	9.4	8.0	9.4	10.8	10.8	65.0	17.4
15	21.6	24.0	8.1	5.7	4.0	4.0	2.6	1.3	6.7	10.8	16.2	69.0	12.1	10.8	6.7	3.6	2.6	4.0	5.3	1.3	0.0	0.0	2.6	23.7	69.0	10.3
16	13.7	0.0	15.9	49.8	58.2	59.5	35.1	43.3	100.2	132.7	180.1	169.2	131.3	116.6	89.3	106.9	56.8	6.7	3.5	1.3	6.7	44.6	5.3	4.0	180.1	59.6
17	6.7	9.4	4.0	4.0	13.7	9.4	29.7	32.4	31.7	13.5	0.0	47.4	3.3	1.4	1.3	0.0	0.8	51.4	98.9	47.4	20.2	33.8	67.7	18.9	98.9	22.8
18	55.5	97.5	48.7	118.8	88.0	16.2	58.2	84.2	93.4	69.0	55.5	31.1	44.6	7.9	24.3	16.2	13.5	12.1	13.5	13.5	10.8	4.0	2.6	14.8	118.8	41.4
19	16.2	13.5	29.3	17.5	16.2	4.0	7.9	14.8	0.0	20.0	24.3	21.6	16.6	14.8	8.0	15.8	13.5	25.7	14.8	12.5	14.8	41.4	29.7	18.0	41.4	17.1
20	36.8	69.0	65.4	60.9	49.5	65.0	57.5	51.4	71.8	28.4	59.6	20.5	24.3	12.1	19.9	18.9	14.8	13.5	27.4	29.7	78.3	82.6	56.8	81.2	82.6	45.6
21	28.4	32.4	68.2	39.0	66.3	12.1	17.5	63.6	85.3	83.8	70.4	39.2	69.0	85.3	66.3	58.2	81.1	65.0	41.9	56.8	31.1	48.7	48.7	37.9	85.3	54.0
22	23.0	21.6	26.5	12.1	14.8	18.2	28.4	32.4	43.3	55.5	10.8	17.5	36.5	14.8	13.7	8.0	4.0	24.3	17.5	17.8	4.0	6.7	9.4	17.5	55.5	19.9
23	9.4	4.0	17.5	12.1	12.1	39.2	33.8	83.9	13.5	34.5	9.4	16.2	13.5	6.7	6.7	16.0	10.8	10.8	17.5	35.2	37.9	65.0	32.4	83.9	22.7	
24	25.7	17.5	14.8	9.4	37.9	31.1	62.3	64.9	58.1	24.3	29.7	36.5	18.9	16.2	28.4	18.9	47.4	18.9	10.8	5.3	4.0	18.1	10.8	18.9	64.9	26.2
25	13.8	21.6	27.0	5.6	65.0	74.7	25.7	10.8	23.0	39.2	117.8	117.8	70.4	35.2	20.2	17.5	65.0	43.3	28.4	24.3	4.0	6.7	27.0	19.9	117.8	37.7
26	24.3	18.9	9.4	31.1	8.0	29.8	13.5	5.3	6.7	5.3	6.7	17.5	37.9	52.8	24.4	24.3	43.3	50.1	14.8	16.2	6.7	9.4	10.9	5.3	52.8	19.7
27	0.0	5.3	24.3	5.3	18.9	4.0	13.5	24.3	26.7	18.9	44.6	46.0	25.7	2.6	4.8	2.6	37.9	105.6	23.0	9.4	10.8	9.3	9.4	12.1	105.6	20.2
28	17.5	14.8	17.5	21.6	8.0	17.9	1.3	35.2	51.4	36.5	9.4	29.7	2.6	6.7	9.4	33.8	12.1	5.3	12.6	107.0	262.9	235.8	111.1	23.2	262.9	45.1
Hourly Max	55.5	97.5	68.2	118.8	88.0	74.7	62.3	84.2	106.8	132.7	180.1	169.2	131.3	116.6	89.3	106.9	105.6	105.6	98.9	107.0	262.9	235.8	111.1	81.2		
Hourly Average	17.7	21.1	22.2	22.8	26.9	21.9	22.9	32.8	39.1	38.6	41.6	44.7	33.7	30.9	23.5	2										

Lagoon Temperature (°C) – February 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	-13.3	-13.4	-13.6	-13.8	-14.2	-14.2	-14.6	-14.9	-14.7	-13.6	-12.0	-10.4	-8.7	-7.1	-7.6	-8.3	-9.3	-10.4	-12.2	-14.3	-14.9	-14.2	-15.3	-7.1	-12.4
2	-16.3	-17.1	-17.9	-18.8	-19.4	-20.1	-20.6	-21.1	-21.3	-21.3	-19.7	-16.0	-13.6	-11.0	-9.9	-9.2	-9.9	-11.2	-12.7	-12.3	-11.8	-12.8	-13.3	-13.8	-9.2	-15.5
3	-14.4	-15.1	-15.3	-15.9	-16.4	-17.0	-17.4	-18.0	-18.1	-17.6	-16.3	-13.9	-11.1	-10.9	-11.6	-12.3	-12.5	-13.0	-13.6	-13.9	-14.1	-14.3	-14.5	-14.7	-10.9	-14.7
4	-14.8	-15.0	-15.0	-15.2	-15.5	-15.5	-16.1	-16.4	-16.7	-16.4	-16.0	-15.4	-14.9	-14.7	-14.8	-15.1	-15.4	-15.9	-16.5	-17.0	-17.2	-17.4	-17.5	-17.5	-14.7	-15.9
5	-17.5	-17.6	-17.7	-17.8	-17.9	-17.9	-18.0	-18.0	-17.9	-17.6	-17.1	-16.8	-16.8	-16.8	-16.6	-16.5	-16.5	-16.7	-17.0	-17.6	-18.5	-18.8	-19.4	-19.8	-16.5	-17.6
6	-20.1	-20.4	-20.7	-21.0	-21.3	-21.6	-21.8	-22.2	-22.5	-22.5	-22.0	-21.7	-21.3	-21.1	-21.0	-21.2	-21.5	-22.5	-22.9	-23.5	-23.9	-24.6	-24.9	-24.9	-20.1	-22.1
7	-25.3	-25.6	-25.8	-25.1	-25.6	-25.5	-25.2	-25.4	-25.6	-25.0	-23.4	-21.4	-20.6	-19.6	-19.0	-18.6	-19.6	-21.0	-22.4	-24.2	-26.1	-27.7	-26.7	-26.0	-18.6	-23.7
8	-26.0	-25.5	-25.4	-25.2	-25.5	-25.0	-24.9	-25.5	-25.8	-25.5	-22.8	-18.4	-15.0	-12.2	-10.3	-8.9	-7.5	-7.8	-8.0	-8.2	-8.2	-8.1	-9.2	-9.9	-7.5	-17.0
9	-10.6	-10.8	-10.6	-10.4	-10.3	-10.4	-10.2	-9.6	-8.8	-7.5	-6.5	-5.5	-5.0	-4.4	-4.5	-5.0	-5.0	-5.0	-4.8	-5.0	-4.5	-4.2	-3.0	-3.0	-7.2	
10	-0.5	1.2	2.1	2.8	3.4	3.5	3.7	3.2	3.7	3.6	3.9	3.3	3.4	3.5	3.3	3.3	3.0	2.1	0.8	1.6	1.4	0.9	-0.7	-0.9	3.9	2.3
11	-1.1	-1.4	-1.4	-0.7	-1.5	-3.5	-4.0	-1.7	-1.9	-1.7	-0.5	-0.2	0.3	0.4	0.7	0.3	0.0	-0.3	-0.6	-0.5	-0.4	-0.7	-0.7	-0.5	0.7	-0.9
12	-0.6	-0.5	-0.1	0.0	-0.4	-0.3	-0.2	-0.5	-1.0	-1.1	0.7	2.1	2.6	3.6	4.5	4.4	4.4	3.5	3.3	3.3	3.2	2.8	2.8	2.5	4.5	1.6
13	2.7	2.8	2.5	2.4	2.6	1.3	0.8	0.4	0.6	2.1	2.8	4.2	6.4	7.6	7.7	6.6	5.8	5.5	5.2	4.6	2.7	1.8	1.3	7.7	3.5	
14	1.1	0.5	0.0	-0.4	-1.1	-1.7	-1.4	-1.7	-1.2	-0.6	2.0	5.1	7.5	10.0	11.9	12.3	11.4	11.8	12.4	11.9	11.4	11.8	11.8	11.4	12.4	5.7
15	10.6	8.8	8.9	9.9	10.7	11.2	10.3	9.6	9.9	10.7	11.8	13.0	12.6	12.0	11.3	10.7	10.0	9.3	8.3	8.0	8.4	8.3	9.0	9.1	13.0	10.1
16	8.4	7.9	9.3	10.2	10.0	10.3	10.1	9.5	9.6	10.5	11.1	11.4	12.0	11.7	10.6	10.3	9.1	7.0	5.4	5.3	5.1	5.1	6.4	5.6	12.0	8.8
17	4.9	4.0	5.2	5.0	4.8	4.9	4.9	4.7	4.7	5.2	6.0	6.9	6.6	6.4	6.2	6.7	6.0	4.8	3.6	2.7	2.2	1.9	1.0	-0.1	6.9	4.5
18	-0.5	-1.2	-1.5	-1.9	-2.5	-2.9	-3.2	-3.5	-3.5	-3.0	-2.1	-0.9	1.7	2.9	3.5	3.3	2.5	0.8	-0.2	-0.4	-0.5	-0.6	-0.9	-0.9	3.5	-0.6
19	-0.9	-0.9	-1.0	-0.9	-0.7	-0.4	-0.1	-0.3	-0.8	-0.1	1.7	1.8	2.4	1.9	1.7	2.1	1.7	0.7	-0.3	-0.7	-1.9	-2.3	-1.3	-0.5	2.4	0.0
20	-0.8	-0.7	-0.5	-1.0	-1.2	0.2	-0.4	-0.9	-1.1	-1.0	1.7	3.4	3.6	4.2	5.0	5.4	4.7	3.2	1.9	0.8	1.1	0.9	0.9	0.5	5.4	1.2
21	0.1	-0.6	-1.0	-1.5	-2.2	-2.2	-2.5	-2.7	-2.6	-1.4	0.6	2.1	2.6	2.8	3.4	4.1	3.8	3.6	1.8	-1.3	-0.5	0.1	-0.5	-1.3	4.1	0.2
22	-1.4	-2.1	-3.0	-4.0	-4.4	-5.1	-4.2	-4.4	-4.4	-4.0	-3.7	-3.8	-4.1	-4.5	-4.3	-4.2	-4.4	-5.2	-5.3	-5.5	-5.5	-5.5	-5.7	-1.4	-4.3	
23	-6.0	-6.3	-6.2	-6.3	-6.4	-6.8	-7.9	-8.7	-8.9	-7.9	-6.5	-5.1	-3.4	-1.4	-1.8	-2.4	-2.9	-3.9	-6.4	-9.0	-10.3	-10.4	-9.7	-10.7	-1.4	-6.5
24	-10.5	-11.1	-13.9	-13.2	-11.3	-11.0	-10.5	-10.7	-10.5	-9.0	-7.2	-5.3	-5.3	-5.7	-6.0	-6.2	-6.8	-7.6	-8.5	-9.1	-9.9	-10.0	-10.1	-11.3	-5.3	-9.2
25	-11.8	-13.2	-14.6	-10.9	-8.1	-7.7	-7.3	-7.3	-6.8	-5.5	-3.9	-3.1	-1.8	-1.7	-1.6	-1.8	-2.1	-2.6	-2.7	-2.9	-3.6	-4.2	-5.3	-6.3	-1.6	-5.7
26	-6.9	-7.3	-7.6	-8.1	-8.5	-9.2	-10.1	-10.7	-10.5	-9.5	-9.1	-8.8	-9.0	-9.4	-9.4	-9.6	-10.4	-11.3	-12.0	-12.5	-12.7	-13.1	-13.3	-6.9	-10.1	
27	-14.9	-17.2	-18.8	-17.6	-17.1	-17.2	-17.2	-17.3	-16.9	-14.4	-11.5	-8.7	-6.2	-5.3	-5.3	-5.1	-6.4	-8.1	-9.3	-9.9	-10.4	-11.1	-12.3	-13.3	-5.1	-12.2
28	-14.1	-14.1	-13.7	-13.6	-13.9	-14.3	-14.5	-15.0	-14.7	-12.7	-11.1	-8.7	-5.9	-4.7	-4.9	-4.1	-4.3	-5.4	-6.0	-6.5	-6.3	-6.0	-6.2	-4.1	-9.4	
Hourly Max	10.6	8.8	9.3	10.2	10.7	11.2	10.3	9.6	9.9	10.7	11.8	13.0	12.6	12.0	11.9	12.3	11.4	11.8	12.4	11.9	11.4	11.8	11.4			
Hourly Average	-7.1	-7.6	-7.7	-7.6	-7.7	-8.0	-8.2	-8.2	-7.5	-6.2	-4.8	-3.8	-3.1	-2.8	-2.7	-3.2	-4.1	-4.9	-5.5	-5.9	-6.2	-6.3	-6.6			

1-hour Temperature (C) at Trailer



Lagoon Wind Speed (km/hr) – February 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	8.5	9.7	9.5	8.3	9.2	11.2	10.9	11.8	11.8	12.9	12.3	11.8	10.8	6.1	4.9	6.2	11.2	10.8	5.3	1.9	1.5	4.6	11.3	11.7	12.9	8.9
2	13.7	13.2	14.2	14.1	14.9	17.1	15.9	15.7	16.7	16.6	17.6	17.4	17.8	16.8	13.9	10.5	8.2	10.0	6.9	14.6	16.9	19.3	21.2	19.2	21.2	15.1
3	18.1	18.3	20.0	17.8	18.3	14.2	15.0	12.9	11.3	11.8	10.4	7.3	17.1	15.3	12.4	12.9	15.2	17.6	14.6	12.2	12.3	12.8	13.2	12.2	20.0	14.3
4	11.6	11.1	12.0	12.3	11.2	13.1	13.7	14.2	15.8	16.8	15.7	15.5	14.7	16.3	17.5	18.6	18.4	16.6	13.6	13.5	14.9	14.2	15.5	14.7	18.6	14.7
5	14.9	14.8	16.0	15.8	15.2	14.7	14.4	15.4	12.2	12.6	11.6	9.8	10.4	11.5	13.2	13.2	12.4	13.2	14.7	18.2	15.9	13.7	14.4	13.9	18.2	13.8
6	13.4	13.5	13.7	12.9	14.6	14.9	13.6	13.8	12.9	14.4	16.9	16.6	16.0	15.6	16.2	16.6	15.5	14.9	14.2	16.5	14.7	11.9	13.8	13.1	16.9	14.6
7	12.6	9.0	6.9	5.3	10.3	11.7	9.7	9.1	7.0	6.9	6.6	12.0	12.2	12.0	14.2	12.5	13.5	10.8	9.2	4.8	2.5	2.0	8.7	11.7	14.2	9.2
8	12.6	10.7	10.7	10.6	9.3	10.5	11.4	11.2	12.5	13.2	12.0	14.8	12.8	13.8	9.9	9.5	24.9	28.1	29.0	32.2	33.6	34.1	19.8	17.9	34.1	16.9
9	22.1	20.2	20.2	22.1	25.5	25.0	26.0	23.7	23.7	25.1	26.6	26.9	24.4	20.1	19.5	20.0	19.3	17.7	14.3	12.8	11.1	10.7	9.7	9.4	26.9	19.8
10	10.4	13.0	18.2	22.8	26.2	30.5	36.9	40.6	42.9	41.2	46.5	46.7	45.1	38.9	34.3	31.7	26.1	25.3	21.9	18.6	14.0	15.7	13.9	7.8	46.7	27.9
11	7.2	8.2	8.0	21.9	13.9	12.7	11.7	31.9	29.2	33.9	39.6	33.7	33.3	34.7	35.5	35.5	34.5	27.8	27.5	31.0	35.6	33.8	34.0	36.0	39.6	27.1
12	35.5	37.3	34.2	37.2	36.7	41.5	42.7	33.1	49.6	50.8	47.6	35.4	41.7	42.4	38.1	47.0	34.9	31.9	38.2	28.7	26.7	28.2	24.6	24.4	50.8	37.0
13	22.8	23.9	28.5	30.3	31.5	30.4	22.2	22.3	22.9	20.2	21.4	22.1	23.8	21.9	25.0	25.3	24.0	23.8	29.5	27.0	25.8	23.3	27.0	25.7	31.5	25.0
14	28.1	22.4	26.7	25.7	20.5	18.8	22.8	22.0	28.3	30.2	25.6	25.0	23.3	25.6	31.9	34.6	32.4	36.5	41.5	41.3	41.3	44.4	46.5	49.0	49.0	31.0
15	46.8	38.5	48.2	47.6	40.3	40.7	29.3	28.1	30.5	26.9	29.8	42.4	42.6	39.9	36.5	27.8	27.7	34.2	39.6	39.6	35.9	36.2	37.8	32.0	48.2	36.6
16	35.1	33.6	36.8	39.4	37.5	33.3	33.6	37.6	36.2	35.6	30.8	31.3	32.0	44.6	31.4	23.3	28.2	35.9	33.0	25.5	20.8	26.5	30.8	21.1	44.6	32.2
17	21.2	23.2	26.0	28.9	26.8	26.8	27.1	20.5	21.3	16.9	25.6	27.9	27.8	23.3	21.2	21.0	22.5	15.0	12.1	10.9	11.4	12.2	12.5	10.8	28.9	20.5
18	11.1	9.6	10.1	11.6	10.7	11.1	10.3	12.9	12.0	11.8	10.6	7.5	6.1	16.2	13.2	13.5	15.1	12.1	11.1	11.8	11.8	10.3	8.5	4.1	16.2	11.0
19	2.2	7.8	8.9	12.8	16.5	9.4	10.6	8.7	9.7	8.8	12.4	12.5	13.1	11.9	15.9	17.5	16.1	14.6	11.5	9.0	4.2	5.3	8.0	15.1	17.5	10.9
20	13.7	13.6	15.0	19.7	22.0	24.4	21.7	18.5	17.3	10.4	17.3	23.0	24.1	23.7	17.4	14.5	13.4	9.4	4.9	6.9	7.4	7.4	11.1	11.1	24.4	15.3
21	13.3	10.5	11.1	14.1	14.0	9.2	12.5	10.8	9.7	8.1	13.5	11.3	9.4	7.0	7.9	6.6	10.3	15.1	8.2	3.1	9.6	11.2	8.4	7.9	15.1	10.1
22	11.5	10.2	8.2	10.3	11.1	7.5	11.2	12.7	12.5	11.9	14.3	12.6	12.6	11.8	12.2	9.3	7.3	9.8	13.2	8.9	6.3	9.1	12.8	11.3	14.3	10.8
23	8.6	5.1	6.5	6.1	7.5	7.0	8.7	8.1	9.1	11.9	12.8	11.4	7.9	6.3	7.0	5.0	10.4	10.8	3.6	2.0	2.1	2.9	4.3	2.6	12.8	7.0
24	7.5	6.9	1.8	5.9	8.1	6.5	5.6	7.2	8.8	7.8	4.9	3.6	10.3	14.4	18.2	15.2	16.7	15.8	13.6	13.6	11.6	9.7	4.9	3.4	18.2	9.2
25	7.1	5.2	4.0	9.6	15.9	16.5	22.0	23.5	26.7	31.1	34.4	34.6	29.3	32.1	30.8	29.6	34.4	34.1	28.0	27.7	21.8	20.3	9.1	9.2	34.6	22.4
26	12.7	10.4	11.5	11.3	9.8	19.5	12.4	10.2	8.7	8.7	10.3	11.5	17.1	20.0	17.9	18.2	20.0	18.8	14.3	10.8	9.9	8.8	8.8	6.3	20.0	12.8
27	2.1	1.7	1.4	8.8	9.2	10.1	9.6	14.8	15.2	16.5	18.7	14.4	15.5	16.6	16.1	14.7	15.3	19.6	13.4	9.2	7.3	6.1	2.4	2.7	19.6	10.9
28	1.4	3.1	4.8	7.4	9.3	9.0	8.6	10.7	11.7	13.0	11.7	9.3	6.5	10.9	15.2	14.4	23.4	24.4	22.4	25.7	27.3	33.0	45.3	37.9	45.3	16.1
Hourly Max	46.8	38.5	48.2	47.6	40.3	41.5	42.7	40.6	49.6	50.8	47.6	46.7	45.1	44.6	38.1	47.0	34.9	36.5	41.5	41.3	41.3	44.4	46.5	49.0		
Hourly Average	15.2	14.5	15.5	17.5	17.7	17.8	17.5	17.9	18.8	18.8	19.9	19.6	19.9	20.3	19.6	18.7	19.7									

Lagoon Wind Direction (°) – February 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	270.0	250.7	266.5	245.2	246.6	261.1	252.5	268.3	271.5	264.3	269.5	258.2	257.3	231.7	197.0	161.4	70.8	69.1	105.2	269.6	40.1	257.1	251.7	256.2	271.5	220.5
2	267.3	251.3	265.6	266.2	268.4	272.1	271.4	269.1	263.4	263.6	262.7	263.8	249.1	252.7	240.0	225.1	253.2	262.8	199.8	277.9	280.2	280.2	283.6	288.0	288.0	261.6
3	285.4	281.3	281.3	266.1	265.9	263.1	262.2	257.5	253.4	236.8	242.6	90.1	71.9	78.2	81.6	72.7	69.5	67.8	69.5	59.6	78.4	70.0	73.4	66.2	285.4	160.2
4	62.6	51.1	52.5	57.8	62.3	68.6	69.3	60.6	61.5	64.3	65.9	69.1	69.3	68.2	68.0	75.1	78.9	81.4	88.2	93.4	87.5	76.0	77.8	85.7	93.4	70.6
5	85.1	85.3	65.3	66.2	69.5	59.9	58.4	54.2	62.9	63.9	80.5	82.9	62.1	62.1	54.6	66.1	65.4	75.2	70.1	73.9	83.2	91.8	95.7	87.8	95.7	71.8
6	90.0	89.3	96.7	99.2	94.2	90.0	86.0	87.4	95.3	93.8	95.1	92.0	83.6	80.4	74.0	84.5	85.4	92.1	82.5	70.5	67.6	70.4	61.4	69.5	99.2	84.6
7	78.3	100.3	88.4	97.7	62.3	61.5	74.2	80.7	88.1	87.7	87.2	82.8	75.5	70.1	73.6	79.0	62.1	61.3	71.6	88.8	64.2	232.1	230.8	230.0	232.1	97.0
8	226.5	222.9	233.2	228.1	236.0	226.1	233.1	236.3	228.4	233.9	219.0	234.3	247.8	266.6	276.6	239.4	253.3	255.9	256.4	254.4	252.7	261.4	284.2	289.5	289.5	245.7
9	291.0	290.9	296.8	295.9	300.2	294.1	294.7	296.7	290.7	288.5	286.4	290.0	290.0	283.7	278.5	278.5	264.6	258.7	255.9	254.4	242.4	207.7	228.3	210.5	300.2	273.7
10	217.7	266.2	278.0	270.5	263.6	261.6	258.3	254.4	250.3	251.4	247.9	244.3	248.5	255.7	251.1	243.2	249.0	248.0	244.3	248.5	251.7	259.9	283.9	269.5	283.9	254.9
11	265.1	249.0	256.2	257.5	18.4	45.6	37.3	259.7	258.5	257.4	261.5	258.6	250.7	249.3	254.1	257.1	248.8	252.5	251.7	248.9	250.4	254.3	254.9	250.9	265.1	227.0
12	252.3	254.4	257.7	250.7	246.7	243.3	247.2	244.8	245.4	247.8	250.4	251.6	252.2	252.5	246.3	252.4	262.4	247.0	250.9	248.6	242.6	244.7	239.3	229.4	262.4	248.4
13	235.6	239.1	242.6	249.1	248.2	253.2	280.1	286.4	282.8	286.2	287.9	284.6	290.7	279.4	260.7	256.1	263.1	262.2	258.8	266.1	274.4	283.8	283.4	284.2	290.7	268.3
14	276.6	280.4	284.1	286.8	282.3	268.4	273.4	263.5	296.1	296.5	279.2	286.0	286.8	269.8	248.2	246.2	244.6	239.4	246.0	246.4	247.1	246.6	245.9	249.9	296.5	266.3
15	257.1	261.9	252.5	251.4	251.8	251.0	231.6	232.9	229.6	233.9	242.2	254.6	251.2	247.8	248.6	255.7	252.8	256.0	258.2	253.8	252.4	244.4	255.1	258.1	261.9	249.4
16	253.3	248.0	260.9	268.1	271.9	275.8	271.3	270.0	277.7	277.6	274.3	280.1	270.9	262.2	262.9	269.7	267.4	243.0	244.0	245.8	258.8	259.0	251.8	249.4	280.1	263.1
17	247.2	247.0	249.2	250.8	253.1	248.8	255.8	248.1	248.8	245.6	246.1	255.0	243.0	235.2	238.6	241.6	238.4	247.6	264.9	276.5	278.6	277.6	286.0	271.4	286.0	253.9
18	268.9	257.2	259.6	270.2	277.5	277.2	275.1	264.4	267.9	268.6	255.3	241.4	85.2	74.0	79.9	75.5	71.3	94.2	103.0	93.6	87.0	81.8	60.2	66.9	277.5	173.2
19	115.5	249.5	251.7	264.9	283.3	272.5	264.7	242.7	227.4	238.2	267.9	288.5	282.7	21.9	63.6	63.0	61.5	62.4	77.5	75.8	80.4	202.1	228.8	283.2	288.5	186.2
20	266.1	270.5	251.8	271.0	273.8	271.6	276.9	286.8	284.6	251.7	267.8	259.0	259.7	251.6	256.0	262.2	252.8	246.2	226.7	235.0	250.7	257.5	291.2	268.8	291.2	262.1
21	280.3	268.0	257.8	277.2	271.4	239.0	282.2	252.8	259.8	248.9	256.0	242.8	331.4	68.7	62.7	59.2	261.6	256.4	229.9	114.7	270.0	277.7	252.3	247.7	331.4	232.0
22	284.1	277.3	253.2	63.2	62.2	81.2	74.0	59.9	60.7	66.2	76.1	76.0	63.7	73.3	72.0	89.2	57.7	64.1	77.0	74.1	70.9	73.1	75.1	62.3	284.1	95.3
23	92.4	63.2	60.0	56.4	58.3	5.5	280.6	273.8	277.2	272.8	257.6	262.2	244.4	243.2	238.4	129.8	78.5	81.7	111.2	157.8	120.3	223.5	256.5	209.9	280.6	169.0
24	258.5	252.8	89.8	261.6	247.2	254.8	254.5	244.0	249.2	227.1	242.9	125.0	78.8	69.4	67.9	70.1	68.3	80.1	89.5	82.0	82.6	66.2	64.7	237.8	261.6	156.9
25	230.9	165.3	113.2	271.4	269.2	267.9	258.8	252.7	251.6	245.6	254.9	259.8	261.6	257.9	246.3	235.5	244.2	244.3	246.0	247.0	245.1	255.9	293.1	236.7		
26	76.9	72.3	69.1	79.7	86.6	86.0	82.3	50.0	45.2	64.6	54.4	71.3	64.8	62.2	64.1	64.6	67.6	76.1	80.1	78.2	93.8	77.8	64.5	59.5	93.8	70.5
27	257.8	320.7	62.4	249.2	245.3	261.1	252.3	273.5	270.4	286.4	285.6	295.8	257.6	235.8	245.0	240.0	60.3	68.1	63.6	97.2	83.1	81.9	43.0	62.1	320.7	191.6
28	221.4	262.7</td																								

Lagoon Pressure (mmHg) – February 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	657.6	657.8	658.2	658.7	659.0	659.4	659.6	660.0	660.5	660.8	660.8	660.8	660.5	660.2	659.9	659.9	660.3	660.5	660.5	660.3	660.3	660.5	660.7	660.8	659.9	
2	660.6	660.4	660.3	660.2	660.2	659.9	659.9	659.7	659.6	659.5	659.1	658.6	657.5	656.6	655.9	655.4	654.9	654.6	654.3	653.8	653.3	653.1	652.7	652.4	660.6	657.2
3	651.9	651.4	651.0	650.4	649.7	649.1	648.5	648.3	648.2	648.0	647.9	647.6	647.4	647.0	646.7	646.8	646.8	647.2	647.5	647.5	647.5	647.6	647.6	647.6	651.9	648.3
4	647.7	647.5	647.6	647.7	647.8	648.0	647.9	647.8	647.8	647.6	647.5	647.1	646.7	646.3	646.0	645.9	645.8	645.9	645.9	645.7	645.7	645.6	645.3	645.3	648.0	646.8
5	645.1	645.1	645.0	644.9	644.8	644.4	644.4	644.5	644.6	644.7	645.0	645.2	645.1	644.9	644.9	645.1	645.2	645.0	644.8	644.8	644.6	644.4	644.1	643.9	645.2	644.8
6	643.5	642.9	642.5	642.0	641.6	641.2	640.9	640.7	640.7	640.6	640.5	640.2	640.3	641.0	641.7	641.4	641.7	642.0	642.2	642.4	642.8	643.2	643.5	643.5	641.7	644.1
7	643.7	643.8	644.0	644.2	644.3	644.3	644.3	644.1	644.5	646.8	647.7	647.4	646.8	646.4	645.9	646.0	646.2	646.5	646.4	646.4	646.6	646.7	646.6	646.8	647.7	645.7
8	647.0	647.3	647.6	647.9	648.3	648.6	648.9	649.1	649.2	649.2	649.1	648.6	648.0	647.5	647.2	646.9	646.9	646.8	646.6	646.6	646.1	645.5	644.8	644.6	649.3	647.6
9	644.1	643.5	642.5	641.4	640.1	639.0	637.9	636.8	636.2	636.1	635.8	635.1	635.2	634.7	633.8	633.5	633.1	632.9	633.3	633.1	632.9	632.9	633.0	633.1	644.1	636.3
10	633.6	634.4	635.0	635.2	635.7	636.0	635.8	635.8	636.0	636.5	636.8	637.2	637.3	637.5	637.7	638.0	638.5	639.0	639.3	639.5	639.5	639.8	640.3	640.5	637.3	
11	640.8	641.0	642.0	643.1	644.5	645.8	646.7	647.4	648.7	649.5	650.2	651.4	651.8	651.6	652.0	652.9	653.4	654.3	654.8	655.3	655.5	655.6	655.7	655.9	655.9	650.0
12	655.4	655.1	654.7	654.2	654.6	654.8	655.0	655.6	654.8	654.3	654.8	655.5	654.7	654.0	653.6	652.4	653.3	653.4	652.4	653.5	654.0	654.3	654.4	654.7	655.6	654.3
13	655.4	655.6	655.9	656.3	656.4	656.8	657.2	657.3	657.6	658.2	658.1	658.0	657.6	657.2	657.0	656.9	656.8	656.8	656.9	656.8	656.9	656.8	656.8	658.2	656.9	
14	656.9	657.2	656.9	656.5	656.2	656.0	655.8	655.4	654.8	654.4	654.0	653.4	652.9	651.9	651.0	650.4	649.6	649.0	648.5	648.0	647.6	647.1	646.9	646.5	657.2	652.4
15	646.4	646.4	645.7	645.4	644.6	643.9	643.5	642.8	642.4	642.4	642.0	641.7	642.5	643.3	643.9	644.5	644.6	644.1	643.4	642.2	641.7	641.2	640.5	639.8	646.4	643.3
16	639.4	638.5	638.1	637.2	636.7	636.6	636.2	636.2	636.1	635.5	634.7	634.4	633.8	632.6	633.2	633.6	633.9	634.0	634.8	634.9	635.0	634.5	634.6	635.7	639.4	635.4
17	636.7	637.2	637.5	638.1	638.3	638.7	639.4	640.3	640.8	641.3	641.3	641.4	641.7	641.8	641.8	641.7	641.6	641.7	642.1	642.2	642.2	642.3	642.3	640.6	642.3	
18	642.4	642.5	642.4	642.4	642.3	642.1	642.0	641.8	641.6	641.4	641.1	640.6	639.9	639.2	638.7	638.2	638.1	637.9	637.7	637.4	637.0	636.8	636.7	642.5	639.9	
19	636.2	636.2	636.1	636.0	636.0	636.4	636.7	636.9	637.2	637.3	637.3	637.5	637.5	637.5	637.8	637.9	638.5	639.1	639.6	640.0	640.2	640.5	640.7	640.8	640.8	
20	641.1	641.4	641.6	641.5	641.3	641.3	641.2	641.2	641.3	641.3	641.2	640.8	640.2	639.9	640.1	640.4	640.5	640.8	640.9	641.1	641.5	641.9	642.0	642.0	641.0	
21	642.1	642.3	642.7	642.6	642.6	642.8	643.0	643.3	643.5	643.4	643.2	643.3	643.3	643.1	643.0	643.0	643.5	643.7	644.2	644.6	644.9	645.3	645.7	646.0	646.0	643.5
22	646.5	646.8	647.4	647.8	648.4	648.9	649.2	649.5	649.8	650.1	650.3	650.4	650.4	650.4	650.6	650.7	650.9	651.0	651.3	651.5	651.5	651.5	651.7	651.7	649.9	
23	651.7	651.7	651.7	651.5	651.5	651.5	651.7	651.7	651.9	651.9	651.6	651.1	650.8	650.2	649.8	649.6	649.5	649.5	649.4	649.7	649.7	650.0	650.2	650.5	651.9	650.8
24	650.6	650.7	650.9	651.0	651.1	651.4	651.6	651.9	652.4	652.8	653.0	652.9	652.7	652.5	652.3	652.0	651.9	651.9	651.8	651.7	651.7	651.6	651.1	650.5	653.0	651.8
25	649.9	649.3	648.6	648.0	647.4	647.0	646.5	646.2	645.7	645.2	644.5	643.7	643.3	642.4	642.1	641.5	640.7	640.9	641.3	642.0	642.6	643.1	643.7	644.1	649.9	644.6
26	644.5	644.7	645.0	645.3	645.7	646.1	646.6	646.6	646.7	646.7	646.8	646.6	646.3	645.8	645.4	645.0	645.0	645.1	645.2	645.3	645.2	645.0	644.7	644.2	646.8	645.5
27	643.7	643.2	643.0	642.5	642.1	641.7	641.2	640.8	640.6	640.6	640.6	640.3	639.8													

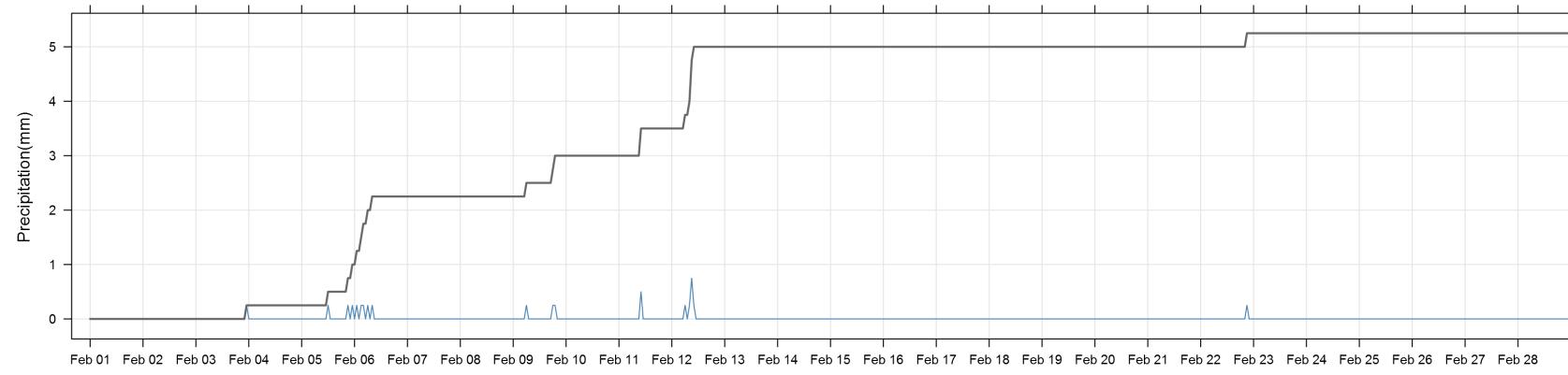
Lagoon Relative Humidity (%) – February 2017

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	69.0	65.5	64.1	66.8	73.0	71.5	68.8	69.5	68.2	67.5	62.2	56.8	51.8	46.6	33.6	36.0	53.4	70.5	75.5	78.9	81.6	79.9	70.1	67.3	81.6	64.5	
2	65.2	68.5	69.4	71.6	71.4	70.1	71.4	70.7	70.5	70.3	67.1	57.1	50.0	44.1	41.8	40.1	40.7	46.6	52.3	46.2	41.0	43.0	44.3	45.7	71.6	56.6	
3	47.5	49.5	49.5	52.5	54.8	57.1	59.0	60.5	61.8	61.3	57.9	52.4	47.3	49.7	68.6	77.8	81.3	81.7	81.2	80.4	81.5	81.8	81.6	81.4	81.8	64.9	
4	80.6	80.7	79.9	80.8	80.1	79.3	78.2	78.3	78.1	75.5	70.3	67.2	67.3	68.6	68.8	71.8	74.2	76.3	77.9	77.3	78.1	78.0	77.4	77.1	80.8	75.9	
5	76.3	77.5	77.4	79.6	80.0	80.0	80.0	79.3	78.6	78.6	75.0	73.4	78.2	78.0	77.3	77.6	77.9	79.3	79.5	77.7	77.9	78.0	77.0	76.4	80.0	77.9	
6	76.5	76.7	76.2	76.1	75.7	75.6	76.5	76.4	75.6	74.5	72.1	72.2	72.1	72.0	72.2	71.7	72.3	72.0	72.8	73.8	73.5	74.1	74.6	74.5	76.7	74.1	
7	74.5	74.3	74.2	74.6	74.2	74.3	74.3	74.0	74.1	74.1	73.7	70.3	66.9	64.1	63.6	63.0	61.7	65.4	69.0	75.1	73.5	72.2	74.6	74.4	75.1	71.3	
8	74.3	74.4	74.5	74.4	74.9	74.9	74.4	74.3	74.4	74.2	66.5	60.9	58.7	59.4	61.7	55.8	58.3	58.4	58.7	58.3	57.6	62.3	65.6	74.9	66.7		
9	68.0	69.6	69.8	72.8	78.5	80.2	80.0	80.4	79.7	77.8	77.8	76.1	74.6	78.2	79.0	81.6	85.4	85.7	89.2	91.5	90.6	89.8	89.7	88.9	91.5	80.6	
10	82.5	77.8	73.0	66.5	57.6	53.9	49.4	48.6	42.0	40.2	36.8	38.5	35.1	38.0	34.8	36.4	37.1	47.1	60.6	48.9	48.0	53.4	73.3	75.4	82.5	52.3	
11	75.2	74.7	71.7	70.7	76.5	86.3	82.8	39.7	35.1	33.3	29.8	30.2	30.0	31.3	31.5	33.2	35.2	36.9	38.6	37.2	37.3	39.1	39.4	39.6	86.3	47.3	
12	41.0	41.6	40.5	42.1	44.3	44.1	44.6	46.0	48.7	50.0	39.2	34.7	33.1	29.1	25.8	25.5	24.7	26.5	27.5	29.3	31.5	33.8	36.1	37.3	50.0	36.5	
13	37.0	37.2	38.6	39.9	40.8	40.7	45.3	47.6	49.9	50.0	46.7	45.9	43.2	39.4	38.5	39.5	44.4	47.5	48.2	49.3	51.2	57.6	60.6	62.2	62.2	45.9	
14	62.6	64.9	66.3	67.1	69.5	71.8	70.3	71.0	69.2	67.1	58.3	48.3	41.2	33.8	26.2	23.0	23.8	22.0	19.8	20.4	21.2	20.4	20.6	21.6	71.8	45.0	
15	23.9	28.7	28.4	25.8	24.3	25.7	30.7	35.4	37.9	39.1	38.3	37.7	38.9	40.4	43.6	45.7	48.7	52.1	55.8	56.4	55.0	55.7	53.1	51.8	56.4	40.5	
16	53.7	55.8	49.7	45.8	45.5	43.9	44.7	47.3	45.5	40.5	39.2	36.9	35.0	34.5	40.1	41.8	45.2	58.1	65.1	57.7	53.4	48.3	40.6	48.4	65.1	46.5	
17	58.7	64.8	45.7	44.7	45.3	41.0	38.5	39.5	38.5	36.8	35.0	32.0	31.7	32.2	32.7	30.8	32.5	35.8	41.0	44.1	47.0	49.8	54.1	59.6	64.8	42.2	
18	61.6	65.1	67.1	68.8	70.7	71.4	72.2	73.2	73.4	70.2	66.8	62.4	50.8	44.9	48.5	54.5	66.1	84.1	90.8	89.8	87.5	86.8	87.5	87.6	90.8	70.9	
19	88.3	88.9	88.3	86.1	84.8	84.1	82.4	84.0	86.6	84.0	75.2	74.6	72.7	72.6	73.2	70.9	72.4	77.0	81.5	82.6	86.6	88.2	84.1	79.5	88.9	81.2	
20	77.1	72.5	66.3	68.2	68.7	56.0	58.1	59.8	61.6	63.0	52.3	40.9	38.0	34.2	31.4	30.9	34.6	43.1	48.1	52.6	52.7	56.5	58.8	61.7	77.1	53.6	
21	64.4	68.2	69.1	70.0	71.0	69.2	69.9	70.9	70.4	65.4	57.5	51.7	51.4	52.0	49.9	46.2	40.1	32.7	45.4	66.0	50.3	44.0	47.4	51.6	71.0	57.3	
22	51.1	53.8	58.4	66.1	70.8	74.5	77.3	75.7	80.4	86.0	81.0	75.8	81.9	84.4	88.7	81.4	77.8	80.9	88.8	90.2	88.6	89.4	89.2	83.3	90.2	78.1	
23	85.8	87.9	89.0	89.7	89.8	87.8	87.4	85.6	81.3	74.1	68.1	63.5	56.2	46.8	46.4	52.6	63.8	70.3	79.7	85.2	86.8	87.3	82.9	85.8	89.8	76.4	
24	82.7	82.6	82.9	82.7	84.6	85.9	81.7	82.5	81.2	73.7	61.1	54.6	62.7	66.2	71.9	69.7	77.4	81.0	82.4	81.9	83.8	84.0	83.6	84.2	85.9	77.7	
25	85.5	86.2	85.4	77.6	60.4	55.2	51.1	51.0	49.0	44.4	38.0	36.7	34.9	35.8	36.4	37.9	40.1	42.4	40.0	39.4	42.5	43.3	55.6	72.1	86.2	51.7	
26	79.2	79.0	80.1	81.1	74.9	71.8	71.9	78.0	73.6	66.7	68.2	66.8	70.8	73.3	67.7	67.2	71.1	77.0	79.3	80.2	81.0	79.9	80.8	81.0	81.1	75.0	
27	81.0	81.7	81.1	80.2	80.0	77.5	75.2	72.9	65.1	55.7	48.5	41.6	36.1	35.1	35.4	44.7	48.3	55.6	63.6	62.2	66.2	71.2	74.7	81.7	62.9	81.8	37.6
28	78.2	79.3	81.8	80.9	79.8	77.8	76.9	78.0	75.1	67.2	61.7	52.5	42.4	35.8	34.8	29.2	26.2	29.0	30.8	33.6	31.4	31.3	34.5	37.6	81.8	53.6	
Hourly Max	88.3	88.9	89.0	89.7	89.8	87.8	87.4	85.6	86.6	86.0	81.0	76.1	81.9	84.4	88.7	81.6	85.4	85.7	90.8	91.5	90.6	89.8	89.7	88.9			
Hourly Average																											

Lagoon Precipitation (mm) – February 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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
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	0.00	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	0.25	0.25	
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	0.00	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	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.30	
6	0.0	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1.25	
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	0.00	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	0.00	0.00	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.00	0.75	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.50	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.8	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	0.75	1.50	
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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
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	0.00	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	0.25	0.25	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
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	0.00	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	0.00	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	0.00	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	0.00	0.00	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
Hourly Max	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.3	0.8	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.3	0.0	0.3	0.00	0.00	
Hourly Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	

1-hour Precipitation (mm) at Trailer

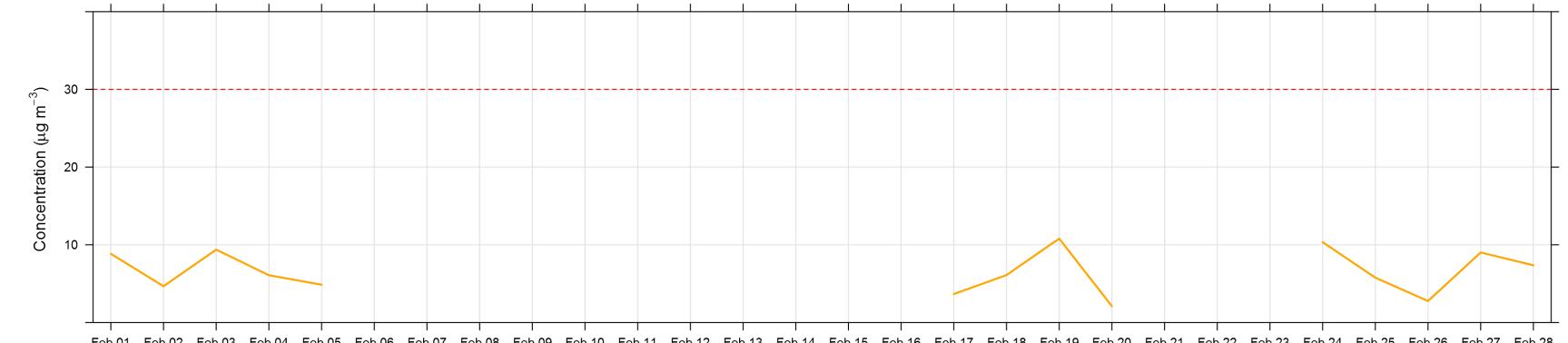


West PM_{2.5} (µg/m³) – February 2017

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	2.6	2.8	3.1	3.6	3.0	2.7	2.9	3.6	6.9	18.9	28.7	33.7	30.8	18.6	16.7	15.9	6.8	2.5	0.9	1.0	0.9	1.2	1.7	2.8	33.7	8.8	
2	2.3	2.1	1.9	1.9	1.9	1.6	1.8	2.8	5.9	8.0	11.9	14.0	8.3	6.9	6.0	6.0	7.2	5.4	3.8	3.7	2.6	2.2	2.2	1.7	14.0	4.7	
3	1.4	1.2	1.1	0.9	0.8	1.3	1.3	3.1	8.6	23.6	24.2	24.1	11.6	11.3	29.6	10.3	8.1	9.9	8.4	6.6	7.5	8.4	10.0	11.8	29.6	9.4	
4	12.3	11.7	11.7	11.7	11.5	10.5	7.1	3.9	3.4	2.9	2.7	3.5	3.2	3.0	3.7	3.7	4.4	3.8	4.0	5.0	5.2	5.7	5.7	5.9	12.3	6.1	
5	6.2	4.5	3.3	3.8	4.0	3.7	2.8	2.6	3.1	3.7	5.6	6.7	6.9	6.3	5.8	5.5	5.3	5.0	5.7	4.6	4.8	6.0	6.9	4.0	6.9	4.9	
6	4.2	6.1	5.7	9.9	15.1	59.5	15.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0.8	0.7	0.9	1.3	1.6	0.7	0.6	0.7	0.5	0.2	0.5	-	-
17	0.2	0.2	0.2	0.1	0.1	1.3	4.5	7.4	15.1	7.7	6.9	6.5	4.1	3.4	3.0	4.1	5.5	1.4	0.9	2.2	3.8	3.6	3.1	2.6	15.1	3.7	
18	1.5	1.4	1.4	1.7	1.7	2.8	2.0	3.4	3.7	12.2	14.3	14.3	11.0	9.3	5.1	4.6	4.7	5.3	8.6	9.5	6.7	5.6	7.4	8.7	14.3	6.1	
19	11.4	14.3	15.1	12.6	10.4	7.4	4.9	3.8	3.3	3.5	3.4	4.3	6.6	9.5	16.1	17.1	16.4	17.2	15.0	15.0	21.9	22.6	6.0	1.4	22.6	10.8	
20	1.1	0.7	0.8	0.9	0.9	0.3	0.7	0.5	0.7	1.6	6.9	6.2	3.4	2.2	1.6	3.1	2.6	2.0	1.0	1.3	2.9	3.7	2.8	2.4	6.9	2.1	
21	1.7	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
22	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
24	6.5	6.2	6.0	7.3	6.8	5.6	6.4	7.8	15.0	13.3	12.2	6.8	8.8	9.3	9.9	10.7	13.2	11.2	13.0	11.8	12.3	15.5	17.2	15.2	17.2	10.3	
25	15.6	17.2	10.4	4.3	2.7	2.2	10.4	8.5	5.4	4.2	6.8	7.4	5.8	5.5	3.9	4.3	3.2	3.5	2.7	2.6	2.4	2.8	3.5	3.0	17.2	5.8	
26	5.0	3.6	3.5	3.2	2.4	3.4	2.2	1.3	1.4	2.0	2.0	2.3	3.1	4.1	3.1	2.6	2.6	2.7	2.6	2.0	2.0	2.5	3.4	3.4	5.0	2.8	
27	3.6	2.8	4.6	4.2	3.6	4.3	5.4	7.1	8.9	12.8	24.8	19.3	32.7	20.0	11.0	13.2	11.9	8.3	4.1	4.5	2.7	2.1	1.8	2.7	32.7	9.0	
28	3.8	4.3	3.8	4.1	4.0	3.5	3.0	2.9	3.6	3.5	15.2	45.5	19.8	17.1	16.3	10.0	5.1	2.7	2.1	1.4	1.7	1.0	1.2	0.9	45.5	7.4	
Hourly Max	15.6	17.2	15.1	12.6	15.1	59.5	15.6	8.5	15.1	23.6	28.7	45.5	32.7	20.0	29.6	17.1	16.4	17.2	15.0	15.0	21.9	22.6	17.2	15.2			
Hourly Average	5.0	5.3	4.8	4.7	4.6	7.3	4.7	4.2	6.1	8.4	11.8	13.9	10.4	8.5	8.8	7.5	6.6	5.7	5.1	5.0	5.6	5.9	5.0	4.5			

C = CALIBRATION X = INSTRUMENTAL ERROR

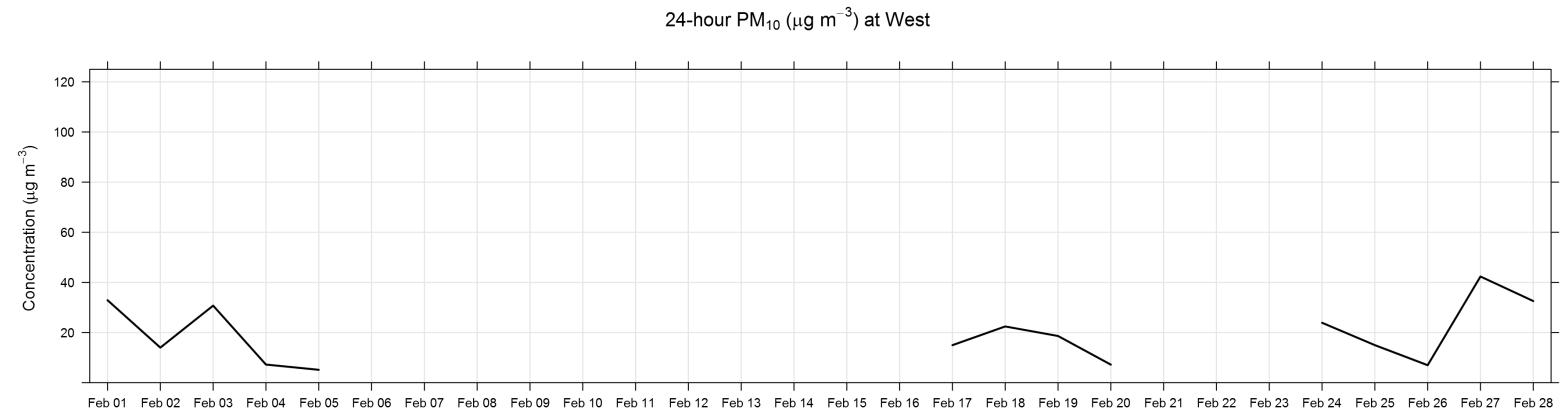
24-hour PM_{2.5} (µg m⁻³) at West



Number of 1HR Exceedances	0	Guideline	80	UG/M3
Number of 24HR Exceedances	0	Guideline	30	UG/M3
Number of Non-Zero Readings	362			
Maximum 1-HR Average	45.5	UG/M3		
Maximum 24-HR Average	10.8	UG/M3	</	

West PM₁₀ ($\mu\text{g}/\text{m}^3$) – February 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	3.0	3.2	5.3	6.5	3.4	3.6	5.1	10.0	10.9	67.3	112.2	134.7	131.4	81.3	83.4	72.3	36.0	8.9	1.6	1.5	1.0	1.5	2.0	3.4	134.7	32.9	
2	2.6	2.4	2.1	2.1	2.1	1.7	2.1	4.0	8.7	15.5	39.9	47.0	32.4	28.6	22.1	27.0	33.1	21.3	12.9	10.2	5.9	4.4	4.5	2.9	47.0	14.0	
3	2.0	1.8	1.9	1.2	1.0	2.4	2.2	9.7	39.8	119.3	108.4	104.7	51.5	51.5	139.1	18.8	9.8	12.9	11.6	8.0	8.3	9.1	10.5	12.1	139.1	30.7	
4	12.5	11.8	11.8	11.8	11.7	10.7	7.2	3.9	3.5	3.0	2.9	4.1	3.7	3.4	6.4	5.4	9.8	7.9	7.6	7.3	6.3	7.2	6.7	7.0	12.5	7.2	
5	6.9	5.2	3.5	3.9	4.0	3.7	2.8	2.6	3.1	3.8	5.8	7.3	7.6	6.3	5.9	5.8	5.4	5.3	6.6	4.6	5.0	6.2	7.5	4.4	7.6	5.1	
6	4.6	7.0	7.0	13.7	21.6	65.6	19.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3.4	2.5	3.3	5.6	6.9	1.4	1.6	1.6	1.0	0.5	2.2	-	-
17	0.5	0.3	0.2	0.2	0.4	7.7	21.0	29.5	65.0	35.4	31.0	28.1	17.3	13.5	12.9	16.8	29.0	5.4	1.7	7.2	12.6	9.9	7.7	5.7	65.0	15.0	
18	2.3	2.0	2.1	2.4	2.1	3.5	2.5	4.8	5.4	58.4	87.6	92.8	60.4	65.4	30.1	23.9	19.8	10.5	12.7	13.3	9.1	7.4	9.4	10.4	92.8	22.4	
19	12.9	15.6	16.5	13.4	10.8	7.6	5.0	3.9	3.4	3.8	3.7	4.8	9.6	32.6	55.2	52.3	42.6	39.3	21.0	20.4	30.4	33.6	7.2	1.4	55.2	18.6	
20	1.2	0.7	1.0	1.0	1.0	0.6	2.5	1.0	1.6	7.5	34.6	26.1	10.1	8.5	6.7	13.4	10.8	8.0	2.9	3.4	10.1	11.2	5.3	3.4	34.6	7.2	
21	2.3	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
22	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
24	9.7	8.9	8.1	10.6	9.8	7.4	9.0	11.6	22.5	52.8	53.8	27.8	38.5	33.9	42.7	30.9	38.1	30.6	27.1	16.7	17.2	22.0	23.5	20.5	53.8	23.9	
25	19.1	20.8	12.0	4.8	4.1	9.4	52.6	40.4	22.5	16.2	24.1	27.2	18.8	18.0	10.5	14.0	8.0	7.9	4.5	4.2	3.4	5.0	7.2	4.4	52.6	15.0	
26	11.5	4.6	4.3	4.1	2.8	4.7	4.2	1.5	2.6	5.1	6.1	8.2	17.7	24.5	11.9	7.9	12.2	9.3	7.3	3.0	2.4	3.0	4.2	4.1	24.5	7.0	
27	4.2	3.3	6.7	5.7	4.3	5.6	7.6	10.3	13.1	46.8	136.2	115.6	238.7	119.9	61.5	70.3	63.8	49.6	15.0	18.8	7.7	3.4	2.2	6.0	238.7	42.3	
28	10.1	10.4	5.4	5.7	5.2	4.2	3.8	3.6	5.0	13.9	78.7	260.4	87.6	84.1	91.1	55.9	23.4	10.0	7.7	3.5	5.3	2.2	3.2	1.2	260.4	32.6	
Hourly Max	19.1	20.8	16.5	13.7	21.6	65.6	52.6	40.4	65.0	119.3	136.2	260.4	238.7	119.9	139.1	72.3	63.8	49.6	27.1	20.4	30.4	33.6	23.5	20.5			
Hourly Average	6.6	6.5	5.9	5.8	5.6	9.2	9.8	9.8	14.8	32.1	51.8	63.5	48.5	38.3	38.8	27.9	23.2	15.9	9.8	8.7	9.0	9.0	6.9	6.0			



Number of 1HR Exceedances	n/a	Guideline	n/a	UG/M3
Number of Non-Zero Readings	362			
Maximum 1-HR Average	260.4	UG/M3		
Maximum 24-HR Average	42.3	UG/M3		
IZS Calibration Time	0	HRS	Operational Time	362 HRS
Monthly Calibration Time	0	HRS	Operational Uptime	53.9 %
Standard Deviation	30.6</			

West TSP ($\mu\text{g}/\text{m}^3$) – February 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	2.1	3.6	10.6	2.3	3.4	5.4	16.2	11.1	127.0	245.9	251.7	190.6	131.9	142.1	119.1	70.4	14.7	6.7	1.4	0.7	1.0	1.4	2.3	251.7	56.8	
2	1.7	1.6	1.4	1.4	1.4	1.1	1.4	3.2	8.4	23.9	57.9	76.5	52.6	45.9	25.3	48.5	45.8	24.0	15.8	10.8	8.1	4.7	7.1	2.9	76.5	19.6	
3	3.0	1.7	5.5	1.0	1.1	1.8	1.5	16.0	79.4	156.3	109.9	132.5	102.2	128.3	795.3	65.7	7.3	10.4	21.7	11.3	5.6	6.2	6.9	7.9	795.3	69.9	
4	8.1	7.6	7.6	7.6	7.5	6.9	4.7	2.5	2.3	1.9	1.9	2.7	2.2	5.1	4.1	9.2	7.2	5.2	6.4	4.4	5.2	4.6	4.7	9.2	5.1		
5	4.6	3.5	2.3	2.6	2.6	2.4	1.8	1.7	2.0	2.4	3.8	4.7	4.9	4.1	3.8	3.8	4.1	3.4	4.3	3.0	3.2	4.0	4.9	4.9	3.4		
6	3.0	4.6	4.9	11.4	20.2	50.9	15.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14.2	9.7	8.0	17.9	19.7	2.2	1.8	1.8	1.7	0.4	5.3	-	-
17	0.7	0.2	0.1	0.7	0.7	21.1	24.6	44.9	119.2	56.1	64.0	71.6	45.0	29.1	32.4	44.3	74.0	9.5	1.2	6.1	10.1	7.3	6.7	5.1	119.2	28.1	
18	1.7	1.3	2.4	1.6	1.5	2.5	1.9	4.9	5.5	111.4	165.6	240.4	135.1	215.7	111.5	80.6	67.2	15.9	11.2	9.8	6.9	5.5	6.5	7.1	240.4	50.6	
19	8.7	10.1	10.6	8.7	7.0	4.9	3.3	2.5	2.2	2.6	2.6	3.3	9.8	27.9	64.6	64.2	48.7	38.8	15.2	14.2	21.0	26.9	4.7	0.9	64.6	16.8	
20	0.8	0.5	0.7	0.6	0.6	1.3	2.3	1.2	2.6	13.4	84.5	45.0	15.0	21.7	13.7	26.0	21.9	10.4	3.1	2.4	9.1	8.9	5.8	2.4	84.5	12.2	
21	2.6	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
22	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-	-	
23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	36.2	11.0	12.5	15.8	16.8	7.5	6.4	-	-	
24	10.0	7.4	6.1	8.6	7.7	5.2	8.3	13.2	25.4	78.8	88.9	56.5	79.0	83.9	141.2	107.1	109.7	64.9	47.6	13.2	12.6	16.3	17.0	15.9	141.2	42.7	
25	13.0	13.7	7.9	3.2	8.5	12.7	81.3	57.5	34.5	32.6	38.1	42.4	26.3	32.0	18.9	38.5	22.6	15.0	4.9	4.6	2.9	5.9	10.0	3.6	81.3	22.1	
26	34.4	3.6	3.1	3.3	2.0	4.3	16.1	1.1	2.0	5.9	25.8	85.8	233.7	376.2	119.8	61.6	110.3	105.9	51.0	6.9	1.7	2.1	3.0	2.9	376.2	52.6	
27	2.9	2.2	5.6	4.3	2.9	4.0	6.6	9.9	13.4	114.5	316.5	271.7	438.1	332.8	152.5	174.4	145.8	145.0	43.7	36.9	17.0	6.1	1.5	5.4	438.1	93.9	
28	8.2	10.1	4.5	4.4	3.6	2.8	2.7	2.7	4.9	37.5	171.2	496.1	167.7	192.1	213.1	165.9	52.0	26.6	12.9	9.0	16.5	7.6	9.8	2.0	496.1	67.7	
Hourly Max	34.4	13.7	10.6	11.4	20.2	50.9	81.3	57.5	119.2	156.3	316.5	496.1	438.1	376.2	795.3	174.4	145.8	145.0	51.0	36.9	21.0	26.9	17.0	15.9			
Hourly Average	6.6	4.7	4.4	4.7	4.6	8.4	11.8	12.7	22.3	54.6	98.3	127.2	100.5	109.2	123.3	67.5	53.8	34.2	16.1	9.4	8.6	7.9	6.1	4.8			

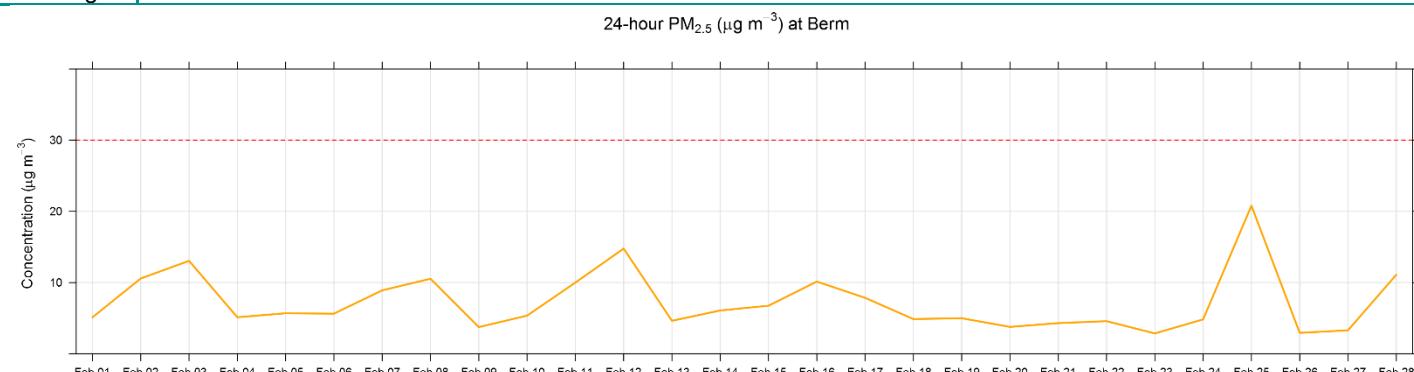
24-hour TSP ($\mu\text{g m}^{-3}$) at West



Number of 24HR Exceedances	0	Guideline	100	UG/M3	
Number of Non-Zero Readings	362				
Maximum 1-HR Average	795.3	UG/M3			
Maximum 24-HR Average	93.9	UG/M3			
IZS Calibration Time	0	HRS	Operational Time	362	HRS
Monthly Calibration Time	0	HRS	Operational Uptime	53.9	%
Standard Deviation	76.6		Monthly Average	36.7	UG/M3

Berm PM_{2.5} ($\mu\text{g}/\text{m}^3$) – February 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	1.6	1.6	2.6	4.8	8.0	2.8	3.0	3.9	10.4	11.6	13.2	11.6	10.0	8.2	9.6	2.9	5.3	3.3	1.3	1.1	0.7	0.9	2.5	1.9	13.2	5.1
2	1.9	1.4	1.5	1.4	1.3	1.9	1.7	5.0	10.0	9.2	22.8	25.3	39.9	31.7	47.9	24.5	5.8	1.6	2.3	3.3	5.3	3.3	3.0	1.8	47.9	10.6
3	1.7	1.4	3.6	1.3	2.4	1.7	2.6	11.8	27.9	67.5	38.2	48.6	6.5	3.9	12.9	14.3	13.1	10.2	8.1	5.3	5.0	6.6	8.9	9.9	67.5	13.0
4	8.8	9.4	8.4	9.5	9.4	9.1	6.8	4.8	3.6	2.4	2.5	2.7	2.8	2.2	2.8	3.6	4.0	3.8	3.2	2.4	3.5	5.3	4.7	7.4	9.5	5.1
5	6.0	7.8	7.4	8.6	11.2	9.7	3.4	3.2	5.9	5.4	6.9	6.1	6.6	5.7	4.9	3.8	3.6	4.5	4.6	3.6	4.0	5.0	5.4	3.3	11.2	5.7
6	4.4	6.1	5.0	6.3	5.0	2.6	4.6	6.7	5.1	4.3	4.7	8.5	8.5	8.6	9.9	6.9	5.6	5.4	5.1	5.3	4.5	3.8	4.9	3.5	9.9	5.6
7	4.7	9.7	6.5	4.9	3.6	4.7	7.9	5.5	9.0	9.0	16.1	14.2	11.6	13.5	12.5	11.2	13.1	7.9	7.9	7.7	7.9	7.4	8.4	9.3	16.1	8.9
8	11.9	9.1	9.4	8.3	9.0	8.4	9.6	14.6	13.0	38.5	10.6	9.4	8.5	8.0	6.5	6.8	18.5	7.0	7.4	14.9	10.1	7.9	2.8	2.3	38.5	10.5
9	2.5	1.6	1.4	2.1	3.7	3.9	3.1	3.1	3.3	5.6	5.0	2.8	2.6	2.6	2.0	7.8	5.7	4.1	3.3	1.1	3.7	4.9	7.1	7.0	7.8	3.7
10	2.0	1.2	0.9	0.3	0.4	0.6	2.7	2.6	11.0	14.3	7.7	15.8	19.3	9.0	10.8	7.7	6.4	6.1	3.3	3.0	0.9	1.4	0.5	0.8	19.3	5.4
11	1.2	1.3	0.5	1.6	1.8	4.3	5.0	16.6	10.9	20.7	20.1	8.6	9.4	12.7	20.4	18.3	11.5	12.7	14.3	9.5	7.7	9.6	13.1	8.1	20.7	10.0
12	8.9	28.0	15.4	12.7	11.7	17.0	7.8	4.0	13.1	36.1	18.3	9.9	11.9	14.5	11.7	34.2	31.5	11.7	16.0	9.0	5.9	8.8	8.8	7.8	36.1	14.8
13	8.4	7.1	12.2	9.9	8.5	6.8	1.9	2.6	3.2	3.4	2.2	3.5	5.0	3.3	3.4	2.1	1.6	2.3	9.4	2.7	4.7	2.1	2.7	2.1	12.2	4.6
14	1.7	1.5	2.5	1.0	1.7	0.9	1.0	1.3	1.4	1.5	1.7	3.8	3.5	5.4	13.9	8.7	14.7	14.6	26.2	7.9	7.4	8.0	5.7	10.1	26.2	6.1
15	6.9	3.8	7.4	3.6	3.7	5.8	7.3	5.3	5.6	4.8	5.7	17.9	15.6	6.9	14.0	10.9	10.3	3.6	3.0	3.2	3.4	4.1	4.3	5.0	17.9	6.8
16	4.6	3.2	5.6	7.5	8.9	8.0	5.6	8.0	13.5	20.5	18.0	12.9	21.1	34.1	19.1	11.1	6.9	5.5	4.7	4.3	3.4	6.9	5.6	4.4	34.1	10.1
17	3.7	2.6	4.5	9.2	10.9	7.0	12.0	11.4	15.9	8.2	10.4	13.6	11.9	11.5	8.7	10.0	11.3	10.7	3.9	2.5	2.5	2.2	2.5	1.5	15.9	7.9
18	3.4	5.2	1.9	10.1	4.4	1.3	6.4	9.1	11.2	8.1	8.4	7.1	7.0	3.9	1.9	1.7	2.0	3.1	3.5	2.7	2.1	2.7	3.8	5.9	11.2	4.9
19	6.7	8.9	8.7	5.0	3.8	2.7	2.0	2.4	1.6	3.0	2.5	2.7	1.6	1.5	5.7	6.1	6.3	6.4	7.5	8.9	9.6	10.6	3.6	2.1	10.6	5.0
20	1.9	2.9	3.9	4.0	1.9	2.3	1.3	3.2	3.4	0.5	3.0	9.6	10.2	11.1	5.1	2.8	4.5	5.5	0.4	0.6	1.9	4.4	3.3	3.1	11.1	3.8
21	1.4	1.7	2.5	2.5	2.4	0.4	1.6	4.3	2.6	3.6	6.4	7.2	4.8	6.1	9.5	4.6	11.9	12.9	7.4	4.2	1.5	1.9	0.7	1.4	12.9	4.3
22	1.7	1.6	2.1	2.7	5.8	7.1	7.9	10.7	13.3	9.4	5.3	3.3	8.0	4.6	3.3	2.6	1.6	2.7	3.1	1.5	1.8	4.3	3.6	2.0	13.3	4.6
23	1.9	1.9	2.0	1.8	2.0	2.0	2.0	7.0	1.6	2.7	4.6	5.5	4.7	3.1	3.9	1.5	2.8	3.9	3.3	1.9	1.5	1.8	2.6	2.7	7.0	2.9
24	1.7	1.9	1.9	1.9	2.1	2.6	3.1	2.4	10.1	8.8	10.1	5.2	2.7	2.4	3.2	5.5	5.7	5.6	5.3	4.9	7.2	8.8	6.3	6.8	10.1	4.8
25	8.6	7.0	3.7	2.0	3.9	2.9	4.2	23.6	38.2	72.4	55.7	42.3	34.0	23.2	31.3	20.4	52.1	26.8	21.2	12.0	6.8	2.7	2.0	2.1	72.4	20.8
26	7.1	3.4	4.3	6.2	2.6	3.7	1.8	1.9	0.9	0.7	0.9	3.1	4.3	3.7	2.0	2.1	2.4	2.3	2.7	2.8	2.6	3.5	3.8	1.9	7.1	2.9
27	0.6	0.5	0.5	0.9	1.3	2.2	2.0	2.6	3.5	3.0	5.9	4.2	6.6	7.7	7.6	11.2	3.6	4.8	2.5	1.6	2.1	2.3	1.1	1.1	11.2	3.3
28	1.1	5.3	2.1	1.5	1.6	1.5	2.0	3.6	4.9	6.5	3.2	9.5	3.4	5.9	10.8	16.0	16.6	16.6	18.1	18.8	24.0	41.7	40.8	11.0	41.7	11.1
Hourly Max	11.9	28.0	15.4	12.7	11.7	17.0	12.0	23.6	38.2	72.4	55.7	48.6	39.9	34.1	47.9	34.2	52.1	26.8	26.2	18.8	24.0	41.7	40.8	11.0		
Hourly Average	4.2	4.9	4.6	4.7	4.7	4.4	4.3	6.5	9.1	13.6	11.1	11.2	10.1	9.1	10.5	9.3	9.9	7.3	7.1	5.2	5.1	6.2	5.8	4.5		



Berm PM₁₀ (µg/m³) – February 2017

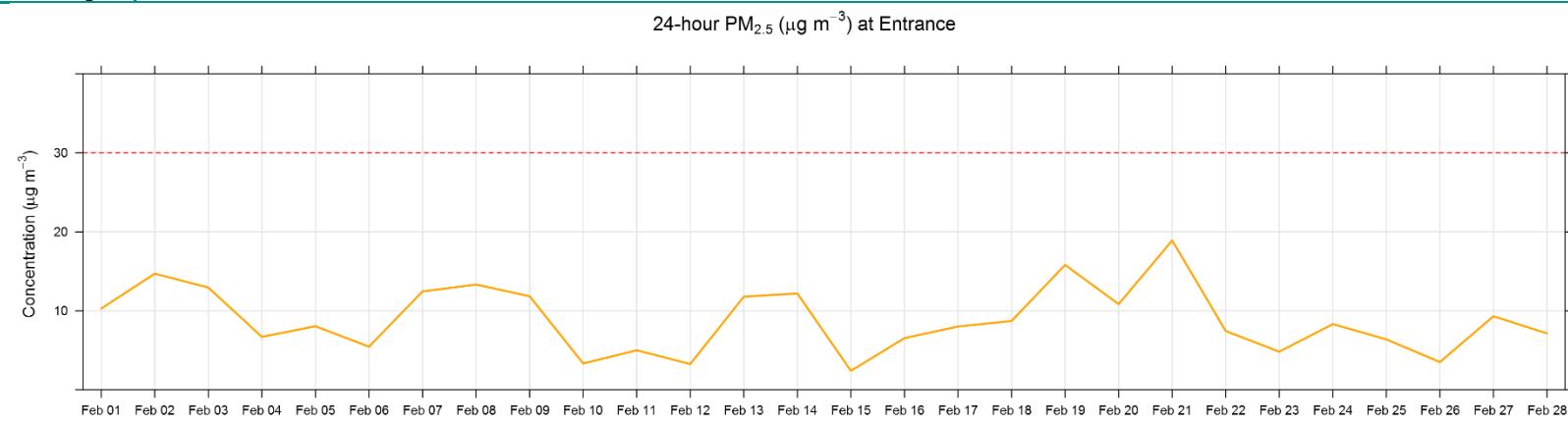
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Max	24-hour Average
1	3.3	5.6	6.6	24.0	48.4	6.5	8.8	21.3	75.0	77.7	80.9	87.0	76.3	68.1	96.9	23.9	36.1	22.5	9.2	3.3	2.3	2.0	6.8	5.2	96.9	33.2
2	4.9	3.4	4.2	3.1	2.6	9.5	7.5	43.9	87.0	74.2	184.9	214.0	331.0	301.1	460.0	238.0	54.8	5.2	9.9	20.1	47.7	20.2	19.9	7.9	460.0	89.8
3	8.3	5.9	22.1	4.9	13.2	6.1	10.7	72.3	219.1	436.2	303.5	386.1	36.4	17.1	123.9	23.9	19.2	14.8	11.3	7.0	6.4	9.1	11.7	12.9	436.2	74.3
4	10.8	11.8	10.2	12.1	12.0	11.3	8.9	6.3	4.6	3.0	3.2	3.4	4.7	4.7	8.5	5.7	5.5	5.3	4.1	2.8	4.3	7.1	6.1	10.1	12.1	6.9
5	8.2	11.2	10.6	12.5	16.3	14.0	4.6	4.1	8.2	7.2	9.2	7.8	8.6	7.1	6.0	4.5	4.0	5.8	5.7	4.3	5.0	6.4	6.7	4.2	16.3	7.6
6	5.8	8.3	6.8	8.9	6.9	3.2	6.0	9.0	6.8	5.4	5.9	11.7	11.8	11.7	14.4	8.7	6.8	6.5	6.4	7.2	5.8	4.3	6.1	3.7	14.4	7.4
7	5.9	14.5	9.3	6.3	4.0	4.9	8.5	6.6	13.2	13.0	24.1	18.9	16.6	43.7	34.6	26.1	41.3	8.8	8.5	8.2	8.5	9.0	10.8	13.1	43.7	14.9
8	17.1	12.4	12.8	11.3	12.7	11.4	13.9	21.7	19.3	188.9	49.3	54.8	56.4	65.1	36.1	59.5	192.2	68.0	70.6	164.0	108.8	73.9	16.7	10.7	192.2	56.2
9	10.8	3.7	2.4	3.1	5.3	5.6	4.4	4.4	4.7	8.3	7.5	4.0	3.6	3.6	2.4	11.3	8.4	6.0	4.7	1.4	5.2	7.1	10.5	10.3	11.3	5.8
10	2.9	1.6	1.3	0.7	1.6	2.2	20.9	23.2	103.6	122.9	72.9	160.9	188.3	84.7	114.7	69.5	62.0	57.9	24.8	19.7	4.3	6.9	1.9	1.1	188.3	47.9
11	1.7	1.9	0.8	6.8	2.6	6.1	15.3	191.7	124.8	224.5	224.0	102.9	81.0	145.6	217.7	200.7	114.5	117.3	133.6	81.7	57.1	86.8	131.9	70.9	224.5	97.6
12	83.6	300.8	158.0	144.4	127.6	160.9	78.9	27.0	125.8	393.3	187.6	90.4	114.7	124.8	99.1	360.4	324.6	115.2	163.6	81.0	50.3	83.5	77.9	67.3	393.3	147.5
13	60.9	54.5	98.8	79.6	68.8	67.2	16.4	19.7	29.2	30.3	16.3	36.7	42.5	24.9	24.1	11.8	9.4	15.7	53.1	17.2	35.9	14.6	28.8	20.3	98.8	36.5
14	13.3	8.1	25.6	5.9	9.7	2.9	4.7	3.4	7.0	8.2	12.6	35.0	33.3	48.8	73.3	62.1	82.7	101.7	249.4	61.5	55.8	64.2	51.5	87.7	249.4	46.2
15	62.7	30.6	61.1	25.3	23.0	40.3	37.6	25.1	40.9	37.0	51.6	175.5	127.3	48.8	105.3	64.0	67.0	20.9	17.3	22.2	21.1	17.7	37.1	40.3	175.5	50.0
16	35.8	24.9	53.0	74.2	90.9	80.0	49.6	70.8	147.4	211.8	161.0	114.7	210.5	327.5	188.8	106.0	59.5	32.7	23.4	28.7	26.8	60.2	56.9	29.0	327.5	94.3
17	19.8	13.1	36.2	87.4	116.0	56.2	119.0	122.3	144.8	61.4	61.7	97.6	90.7	81.6	65.4	63.8	81.2	82.9	39.1	12.7	7.5	8.9	12.9	5.5	144.8	62.0
18	28.1	48.4	10.9	111.2	41.2	4.3	58.5	87.0	113.3	72.4	67.9	58.8	46.4	24.6	6.4	5.0	8.1	6.2	4.1	3.0	2.3	2.9	4.3	8.3	113.3	34.3
19	9.6	11.3	10.5	5.3	3.9	2.8	2.1	3.2	2.0	4.3	4.9	3.6	2.0	2.2	7.0	7.4	7.9	7.1	8.7	10.7	13.2	14.6	5.0	3.0	14.6	6.3
20	3.0	13.9	40.2	36.9	14.4	22.7	13.5	32.6	38.8	1.4	25.5	74.8	94.6	73.3	45.7	25.4	44.2	30.7	0.8	1.9	10.3	35.0	21.3	19.6	94.6	30.0
21	8.9	13.8	27.9	22.5	20.1	0.5	11.6	42.3	23.2	27.3	57.7	54.2	33.8	30.3	51.4	41.8	142.5	120.8	72.1	18.0	7.1	11.9	1.6	6.4	142.5	35.3
22	10.4	8.9	17.7	11.0	9.3	11.0	11.5	23.6	17.7	12.8	7.5	4.7	11.9	6.8	4.8	3.7	2.2	3.9	4.4	2.0	2.3	5.8	5.0	2.7	23.6	8.4
23	2.4	2.3	2.4	2.1	2.5	2.7	2.7	10.4	2.2	3.9	30.0	35.0	31.4	9.9	17.5	2.7	7.6	8.7	6.0	2.2	1.7	2.1	3.4	3.7	35.0	8.1
24	2.0	2.2	2.0	2.0	2.4	3.3	4.4	3.4	15.0	68.8	103.4	36.1	7.5	4.2	7.7	13.4	10.7	8.1	6.5	5.3	8.9	11.0	7.3	7.8	103.4	14.3
25	10.2	8.1	4.2	4.2	37.9	37.4	44.6	249.3	401.9	723.3	528.7	391.0	289.3	213.0	265.0	179.7	532.0	269.5	202.0	105.4	54.3	12.3	3.3	3.5	723.3	190.4
26	17.4	4.6	5.9	8.9	3.4	5.4	2.5	2.6	1.1	0.8	1.1	4.4	9.2	5.4	3.9	7.4	3.9	3.1	3.7	3.5	3.4	4.9	5.3	2.4	17.4	4.8
27	0.7	0.5	0.5	1.0	1.4	2.7	2.5	3.4	5.4	13.8	49.1	24.0	50.1	59.4	50.2	71.8	18.0	23.6	6.3	2.8	4.1	4.2	1.2	1.4	71.8	16.6
28	1.6	21.4	4.5	1.8	1.8	1.9	2.7	5.0	7.3	52.5	24.4	91.9	16.1	43.9	60.2	172.7	144.2	152.5	174.7	194.3	271.6	453.4	361.3	111.0	453.4	98.9
Hourly Max	83.6	300.8	158.0	144.4	127.6	160.9	119.0	249.3	401.9	723.3	528.7	391.0	331.0	327.5	460.0	360.4	532.0	269.5	249.4	194.3	271.6	453.4	361.3	111.0		
Hourly Average	16.1	23.1	23.1	25.6	25.0	20.8	20.4	40.6	63.9	103.0	84.2	85.0	72.4	67.2	78.2	66.8	74									

Berm TSP ($\mu\text{g}/\text{m}^3$) – February 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	3.7	20.6	24.3	156.8	386.5	38.5	46.0	77.4	149.0	137.7	161.1	216.6	209.0	114.1	200.9	53.2	167.5	153.6	21.9	5.6	4.1	1.9	7.5	6.7	386.5	98.5
2	7.1	4.1	9.6	5.4	2.7	42.4	22.6	170.0	227.4	207.7	520.5	631.9	814.4	694.1	1139.6	545.0	115.7	8.8	19.7	75.8	117.7	74.4	65.0	25.2	1139.6	231.1
3	26.4	13.0	79.3	13.9	31.7	14.6	10.9	161.6	490.6	943.1	706.2	602.8	69.1	45.0	717.8	74.6	20.9	15.7	11.3	6.2	5.3	8.3	10.6	11.3	943.1	170.4
4	8.9	10.4	8.8	10.5	10.1	9.3	7.8	5.6	3.9	2.3	2.5	2.7	33.4	36.8	92.2	16.7	5.1	4.8	3.5	1.9	3.6	6.6	5.4	10.4	92.2	12.6
5	8.2	12.4	11.5	13.2	18.6	15.9	4.5	3.9	8.5	7.3	9.4	7.6	8.8	6.5	5.3	3.6	3.0	5.2	5.0	3.6	4.4	5.6	6.0	3.7	18.6	7.6
6	5.4	8.5	7.1	9.9	7.1	2.8	5.7	8.8	6.6	5.1	5.2	11.8	12.5	12.4	16.0	8.2	5.8	5.6	5.8	7.1	4.6	3.0	5.1	2.5	16.0	7.2
7	5.5	15.5	8.7	5.3	2.7	3.4	6.0	5.1	12.8	13.2	27.9	16.8	16.0	90.9	78.3	58.8	92.2	7.3	5.5	5.4	5.8	7.0	8.9	12.8	92.2	21.3
8	18.8	12.1	12.3	10.6	13.0	10.5	14.5	24.5	22.1	290.1	197.3	199.0	208.1	224.1	114.8	190.6	816.5	395.7	501.8	1692.4	1265.6	710.4	145.9	88.5	1692.4	299.1
9	107.2	44.1	20.8	10.9	5.7	6.3	4.7	4.7	5.2	9.4	8.4	4.4	3.3	3.5	1.9	12.3	9.5	6.4	4.6	1.1	5.0	7.7	11.7	11.5	107.2	12.9
10	3.0	1.6	1.3	3.1	7.6	7.9	117.5	137.2	603.8	539.4	408.7	781.4	834.6	462.1	540.8	309.9	254.1	270.7	119.9	68.2	19.5	21.7	8.8	1.0	834.6	230.2
11	1.8	1.8	0.6	32.1	2.3	6.3	52.6	1099.1	600.0	986.3	1060.0	504.3	306.8	677.8	948.3	958.7	533.2	438.8	517.9	297.8	198.9	353.8	551.6	268.8	1099.1	433.3
12	361.2	1261.8	693.3	627.4	533.8	630.5	300.7	89.7	553.7	1586.4	717.6	337.3	398.4	458.4	365.3	1481.7	1272.8	446.7	662.2	299.8	179.0	294.6	259.3	226.3	1586.4	584.9
13	166.9	171.3	345.9	268.1	234.9	268.5	64.7	64.1	95.0	98.1	53.8	135.0	134.3	85.9	84.9	34.3	34.5	56.6	105.4	62.5	120.0	61.1	128.8	82.0	345.9	123.2
14	55.7	20.0	111.5	21.1	27.8	4.9	19.8	10.8	28.6	30.9	45.4	132.4	114.4	149.5	150.6	206.9	224.7	375.3	975.9	258.0	233.0	270.6	240.5	396.2	975.9	171.0
15	293.1	155.2	294.3	120.6	93.0	144.4	66.0	53.5	193.4	143.5	235.6	746.7	483.9	212.8	377.4	173.4	179.8	98.8	86.7	135.4	99.0	42.4	201.6	146.2	746.7	199.0
16	173.6	96.9	240.8	369.0	430.5	324.2	212.9	321.4	682.7	886.1	572.0	396.4	894.0	1479.9	803.1	448.1	240.6	123.1	40.6	70.4	80.3	194.4	213.1	80.6	1479.9	390.6
17	46.3	40.4	171.6	360.1	461.4	198.6	455.1	422.7	471.8	163.7	141.8	327.9	264.0	165.2	145.8	138.2	217.2	206.4	147.6	19.6	9.9	11.8	24.9	15.4	471.8	192.8
18	80.2	106.6	27.7	253.4	100.8	11.0	128.8	237.5	275.5	189.4	205.6	175.4	95.0	45.2	9.4	9.0	22.4	17.1	2.8	2.0	1.5	2.1	2.9	7.5	275.5	83.7
19	8.6	8.3	7.3	3.5	2.6	1.8	1.4	2.9	1.7	4.7	7.6	3.5	1.6	1.9	7.1	6.2	10.3	4.7	6.0	7.5	10.6	12.8	4.6	2.8	12.8	5.4
20	3.2	29.8	96.5	94.4	79.3	115.0	67.0	147.6	128.6	2.6	92.7	231.9	334.7	180.7	152.9	80.9	155.3	47.8	0.6	3.9	23.1	83.1	48.3	47.9	334.7	93.7
21	28.1	39.9	119.4	88.6	78.9	0.4	26.4	112.9	83.2	55.9	163.1	160.9	65.8	51.7	80.0	89.0	383.6	365.0	203.0	48.3	24.7	23.9	3.8	13.5	383.6	96.2
22	39.4	33.7	55.2	33.1	18.5	13.4	10.0	80.9	14.8	11.2	6.0	4.4	11.9	6.5	4.7	3.5	1.8	3.6	3.9	1.7	1.8	5.5	4.9	2.5	80.9	15.5
23	1.9	1.7	1.7	1.4	1.8	2.6	2.4	11.9	2.0	4.1	95.1	103.3	103.2	19.2	23.2	3.5	20.4	22.2	10.5	1.6	1.1	1.5	3.2	3.7	103.3	18.5
24	1.4	1.5	1.3	1.3	1.6	2.7	4.7	3.5	17.1	143.0	251.1	55.6	28.3	10.4	58.4	126.6	102.5	16.0	5.0	3.6	6.5	8.0	4.9	5.3	251.1	35.9
25	7.1	5.6	3.0	9.9	192.9	172.3	207.8	957.2	1637.7	2636.9	1991.6	1413.1	997.0	823.1	968.7	660.9	1981.0	1254.7	801.0	431.4	213.2	42.6	5.7	4.2	2636.9	725.8
26	101.5	3.6	5.1	9.4	3.0	5.6	2.2	2.4	0.8	0.5	0.8	4.1	144.1	6.1	24.5	144.0	15.4	3.1	3.5	3.1	2.8	4.0	4.6	1.9	144.1	20.7
27	0.4	0.3	0.3	0.7	1.0	2.1	1.9	3.0	8.8	90.7	153.0	59.2	147.2	144.9	118.7	151.6	37.7	61.6	44.3	13.0	4.7	6.9	0.8	0.9	153.0	43.9
28	1.2	26.1	17.9	1.3	1.2	1.4	2.3	4.6	8.0	253.4	109.8	254.6	29.8	110.6	109.6	630.0	494.1	516.5	632.5	814.9	1144.5	1922.6	1628.5	462.6	1922.6	382.4
Hourly Max	361.2	1261.8	693.3	627.4	533.8	630.5	455.1	1099.1	1637.7	2636.9	1991.6	1413.1	997.0	1479.9	1139.6</td											

Entrance PM_{2.5} ($\mu\text{g}/\text{m}^3$) – February 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	4.8	4.1	5.6	5.1	6.7	4.7	5.9	18.2	20.1	22.2	17.4	13.4	7.0	13.8	16.0	11.8	12.9	7.2	9.3	3.6	1.3	8.1	14.5	13.0	22.2	10.3
2	12.2	9.4	9.5	10.9	15.5	16.0	17.8	18.2	26.7	15.0	14.1	14.5	7.4	6.2	5.6	10.7	17.4	12.2	14.7	27.7	21.3	22.4	14.2	13.3	27.7	14.7
3	10.6	11.1	12.9	13.6	11.0	17.4	20.5	11.3	20.0	14.4	12.3	18.5	15.5	10.7	16.1	12.5	11.9	10.2	8.3	6.8	6.7	9.9	15.4	12.9	20.5	12.9
4	12.2	10.8	10.8	11.1	10.8	9.5	8.6	6.0	4.7	4.7	3.9	3.5	4.5	4.2	4.1	4.8	5.1	4.9	4.0	3.6	6.0	7.2	5.9	9.9	12.2	6.7
5	9.3	12.7	8.8	11.2	11.3	10.3	7.5	4.4	8.6	7.1	11.9	12.7	12.3	9.4	7.6	5.3	4.9	5.1	4.9	4.5	8.3	7.3	5.0	2.9	12.7	8.0
6	3.4	3.8	2.9	2.4	2.8	2.6	4.1	8.1	4.1	4.3	5.2	5.2	5.3	5.7	7.4	7.2	6.6	6.4	6.1	5.9	7.5	7.5	9.7	6.9	9.7	5.5
7	9.2	9.0	8.1	7.7	8.3	5.9	8.8	11.2	11.8	9.7	12.6	17.2	16.1	16.3	15.8	15.0	15.4	15.8	16.3	14.0	14.4	14.3	14.0	12.1	17.2	12.5
8	18.4	13.9	16.4	12.6	10.0	16.0	20.7	19.6	22.5	23.3	16.2	10.9	14.6	15.2	14.2	8.7	12.3	4.4	5.5	7.5	7.8	9.9	6.5	12.5	23.3	13.3
9	15.0	11.2	9.4	11.5	15.6	14.3	9.2	9.9	17.7	20.6	22.5	18.5	12.1	12.3	10.1	16.5	10.1	6.9	9.4	7.9	9.5	5.3	5.5	3.5	22.5	11.8
10	4.9	11.1	8.1	1.5	1.1	0.8	1.5	1.5	2.2	3.1	5.5	4.4	3.7	3.3	1.8	1.5	1.1	1.2	0.5	4.2	5.8	0.9	1.3	8.8	11.1	3.3
11	14.7	15.3	12.1	9.0	3.3	3.7	3.3	6.4	4.8	2.9	5.3	9.6	1.7	2.3	4.4	5.5	1.8	3.6	1.5	1.1	1.6	1.4	2.8	2.0	15.3	5.0
12	1.6	3.3	2.2	2.6	1.6	1.5	1.9	0.9	9.1	6.3	5.8	3.7	1.7	2.3	1.5	6.5	6.9	3.0	2.3	2.5	2.6	2.1	5.5	0.9	9.1	3.3
13	2.0	1.4	1.9	1.9	2.0	3.5	7.4	11.3	26.8	33.7	32.0	35.0	13.6	4.1	2.9	1.4	2.1	5.0	2.7	1.5	3.3	32.0	19.8	35.5	35.5	11.8
14	33.3	24.2	13.7	21.5	20.5	18.8	19.2	20.8	28.1	23.2	20.7	15.0	4.0	4.9	1.9	1.7	1.6	4.2	3.9	1.8	1.8	3.2	2.5	2.1	33.3	12.2
15	2.1	1.2	1.1	1.0	1.1	1.1	1.8	2.8	3.3	3.5	5.5	6.1	3.5	4.6	1.7	3.5	2.9	3.0	2.8	0.9	0.6	0.7	1.3	1.6	6.1	2.4
16	0.9	1.0	1.3	2.5	3.6	5.3	5.4	4.4	8.1	8.8	15.4	22.3	10.8	22.3	8.2	14.6	11.1	3.3	0.8	0.6	0.9	4.1	0.8	0.7	22.3	6.5
17	0.7	0.6	0.3	0.7	0.9	1.0	2.3	6.8	7.4	7.9	9.0	8.0	5.6	5.0	8.3	7.0	3.7	4.9	10.5	11.2	19.9	35.3	20.7	14.7	35.3	8.0
18	22.6	14.4	16.6	14.1	17.3	10.7	13.5	8.0	7.8	6.9	7.7	5.1	6.4	8.6	4.8	5.0	5.5	5.1	5.2	4.6	2.9	3.6	5.5	7.1	22.6	8.7
19	8.3	10.8	22.1	33.2	28.1	9.8	10.1	9.6	8.7	13.4	23.6	22.9	16.0	14.9	10.8	11.0	11.3	11.6	11.6	12.3	15.0	21.9	19.5	22.9	33.2	15.8
20	21.0	17.0	20.3	17.7	3.3	2.9	2.7	10.6	13.5	14.9	16.3	4.4	3.8	3.5	6.6	6.4	5.6	4.5	2.9	7.0	12.9	14.8	16.3	31.4	10.8	
21	13.9	8.5	13.5	22.9	27.8	17.4	17.3	18.8	34.3	10.5	10.2	23.0	18.3	31.2	27.3	23.8	11.4	8.5	6.2	19.1	17.3	20.9	37.7	13.8	37.7	18.9
22	9.4	6.8	4.3	4.3	8.7	14.6	16.7	18.0	13.7	13.3	12.7	6.3	11.2	7.0	3.9	2.5	4.7	5.0	4.3	1.6	2.4	2.9	2.0	2.4	18.0	7.4
23	2.7	2.6	3.1	4.0	3.4	7.9	9.9	6.0	7.3	7.3	5.2	4.1	3.7	3.8	2.3	4.4	5.0	7.6	5.1	2.9	3.6	3.8	5.7	4.3	9.9	4.8
24	5.9	7.4	5.1	6.6	6.0	5.4	5.1	5.9	4.7	10.3	14.0	9.6	6.6	11.1	8.8	11.8	10.6	8.3	7.5	6.8	9.0	11.6	10.4	14.0	8.3	
25	15.6	16.7	13.6	10.7	2.1	2.2	2.1	5.5	6.0	10.8	11.0	7.1	4.4	3.9	3.5	3.2	7.5	6.8	4.5	4.3	2.6	2.2	2.9	4.1	16.7	6.4
26	6.3	3.5	3.1	7.1	5.0	4.5	2.8	1.7	1.4	1.3	1.3	3.2	4.0	3.6	2.4	3.5	3.4	4.7	4.1	3.6	3.6	2.4	4.3	3.5	7.1	3.5
27	1.5	0.9	2.7	13.5	21.4	20.7	14.4	17.7	27.3	26.8	17.8	13.4	5.4	2.9	2.5	2.1	3.6	8.4	3.7	3.0	5.4	3.6	1.9	2.7	27.3	9.3
28	2.2	3.9	8.8	8.2	12.8	15.4	11.8	5.7	7.0	6.8	4.2	5.9	5.4	7.2	7.9	6.6	5.8	3.1	3.8	3.7	8.2	11.4	12.8	2.9	15.4	7.1
Hourly Max	33.3	24.2	22.1	33.2	28.1	20.7	20.7	20.8	34.3	33.7	32.0	35.0	18.3	31.2	27.3	23.8	17.4	15.8	16.3	27.7	21.3	35.3	37.7	35.5		
Hourly Average	9.5	8.4	8.5	9.6	9.4	8.7	9.0	9.6	12.8	11.9	12.1	11.6	8.0	8.6	7.4	7.7	7.2	6.2	5.8	6.2	7.2	9.7	9.5	9.3		



Entrance PM₁₀ ($\mu\text{g}/\text{m}^3$) – February 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	17.8	13.6	17.6	27.4	53.4	17.7	22.0	62.5	77.7	135.6	79.2	63.3	38.9	83.5	104.3	80.9	100.7	60.0	32.2	31.1	4.3	33.6	59.9	56.4	135.6	53.1
2	53.9	40.2	36.7	47.6	64.9	69.2	93.7	80.2	97.0	83.8	77.6	78.4	38.9	37.9	33.1	64.1	138.0	109.9	123.1	275.6	189.5	180.1	125.5	102.5	275.6	93.4
3	75.4	84.2	94.8	98.0	61.7	95.4	116.6	42.1	73.7	93.4	78.0	121.4	100.4	50.5	156.0	18.6	17.4	15.0	12.1	9.3	8.7	13.0	21.0	17.5	156.0	61.4
4	15.7	12.9	12.8	13.7	13.6	11.4	11.4	7.7	6.0	6.9	10.1	8.4	12.4	11.1	12.0	16.2	14.5	6.6	5.1	4.4	7.5	9.6	7.3	13.8	16.2	10.5
5	12.8	18.4	12.4	16.1	16.3	14.8	9.9	5.4	11.9	9.3	16.3	17.5	16.6	11.8	8.6	5.8	5.0	5.6	5.1	4.9	9.4	7.6	5.3	3.2	18.4	10.4
6	3.6	4.2	3.2	2.7	3.1	3.0	4.5	8.6	4.4	4.7	5.5	5.6	5.7	6.2	7.9	7.4	6.9	6.6	6.3	6.3	8.9	10.1	13.3	8.4	13.3	6.1
7	11.5	12.3	10.9	9.3	9.9	6.7	10.3	12.4	15.6	12.7	18.2	24.3	21.3	21.4	19.6	17.0	19.0	21.8	22.9	17.9	19.4	19.2	19.4	16.1	24.3	16.2
8	26.0	18.3	22.8	15.5	10.9	21.8	29.3	28.0	33.3	34.8	23.7	15.0	21.4	70.4	71.8	61.2	172.0	39.7	40.9	83.0	79.0	121.8	51.1	73.9	172.0	48.6
9	83.5	72.2	52.7	53.8	23.4	21.4	13.8	14.9	26.6	30.8	33.7	29.3	73.5	18.5	15.1	24.7	14.8	10.2	13.7	11.6	14.1	7.7	8.0	4.7	83.5	28.0
10	7.3	16.7	15.3	5.0	3.1	1.8	11.0	10.1	22.1	25.3	68.8	47.9	34.4	25.2	12.3	7.6	5.0	6.2	2.3	17.8	27.9	2.1	3.0	19.4	68.8	16.6
11	27.4	30.4	44.2	34.2	6.2	4.7	9.1	51.7	18.1	19.2	48.1	40.5	9.3	13.0	25.8	31.0	11.0	16.0	6.7	6.9	12.3	7.0	23.9	15.1	51.7	21.3
12	12.7	26.4	14.3	19.6	9.1	10.7	16.6	2.4	70.7	70.5	60.2	14.6	9.2	9.0	5.9	59.5	52.8	14.2	17.0	10.4	7.3	8.0	15.7	2.0	70.7	22.5
13	4.9	4.9	8.8	10.8	11.9	9.8	35.2	56.2	170.6	203.5	196.8	211.7	59.9	17.2	7.2	4.1	6.7	19.0	8.0	4.7	12.8	139.4	97.4	174.8	211.7	61.5
14	134.7	115.7	66.4	109.4	105.3	98.3	88.7	116.7	173.6	146.7	144.4	90.5	18.7	22.1	6.8	8.7	6.0	18.9	24.5	7.5	9.4	14.7	15.9	12.6	173.6	64.8
15	10.7	3.5	3.0	2.2	2.2	2.9	8.5	16.2	14.3	14.7	32.1	39.2	17.0	13.4	6.2	10.9	8.9	10.9	6.6	2.1	0.9	0.9	5.2	8.8	39.2	10.0
16	3.8	5.1	6.0	18.8	20.3	23.7	23.4	21.2	47.1	53.5	109.1	169.6	74.9	179.1	44.5	83.5	48.8	13.2	2.1	1.6	2.4	14.5	3.2	2.1	179.1	40.5
17	2.7	2.5	0.8	4.2	4.6	4.8	11.8	39.2	58.3	59.5	56.9	53.4	41.4	28.7	55.5	40.2	20.3	26.3	56.3	48.6	107.2	254.0	168.3	80.5	254.0	51.1
18	125.3	102.9	88.2	68.4	103.1	48.5	61.6	28.2	31.3	27.4	40.9	24.8	32.2	66.5	25.2	28.1	17.1	7.1	6.1	4.8	3.0	3.8	6.2	8.8	125.3	40.0
19	9.8	12.3	32.6	49.8	42.1	13.9	14.8	13.0	11.7	19.8	43.6	66.2	53.3	55.9	17.0	17.1	16.3	15.1	14.1	14.1	19.2	31.1	29.3	34.3	66.2	26.9
20	31.5	35.4	103.9	80.2	16.5	19.0	15.2	53.2	78.4	100.9	104.6	23.8	20.3	19.2	36.9	21.2	32.4	20.3	75.1	124.4	115.1	106.4	125.6	125.6	58.2	
21	45.9	44.0	64.9	82.4	127.9	121.2	101.9	75.3	158.3	59.2	50.7	149.1	119.7	196.4	183.6	179.3	86.7	58.2	45.6	103.8	110.7	150.4	225.1	79.9	225.1	109.2
22	61.5	59.7	32.6	18.0	14.6	60.3	24.7	26.8	19.2	19.4	18.5	14.4	16.8	10.2	5.6	3.6	6.5	6.9	6.1	1.9	2.9	3.6	2.4	3.0	61.5	18.3
23	3.3	3.1	3.8	4.9	4.4	11.6	14.7	8.8	10.9	21.4	16.1	10.4	8.4	6.3	5.1	24.5	19.6	24.7	6.8	3.6	4.3	4.6	8.5	6.2	24.7	9.8
24	8.6	10.9	7.4	9.0	7.5	6.4	6.4	7.5	6.0	24.1	75.6	52.1	30.4	56.8	41.2	53.6	18.5	11.1	8.6	7.2	9.5	13.6	12.9	13.8	75.6	20.8
25	22.2	23.9	19.5	39.9	10.7	11.4	12.8	24.1	58.2	121.3	108.5	54.4	24.9	20.0	12.6	15.2	59.1	57.1	15.5	19.0	7.5	4.7	7.2	10.1	121.3	31.7
26	9.6	4.6	4.0	10.1	10.5	16.5	10.6	2.2	1.8	1.8	2.1	11.2	28.3	24.8	12.1	11.2	13.7	9.5	5.6	5.0	4.7	2.9	5.9	4.4	28.3	8.9
27	1.9	0.9	3.8	20.0	31.8	31.0	21.6	26.5	84.7	264.4	138.5	112.3	22.3	15.7	12.1	7.6	15.4	57.7	12.0	7.8	13.5	11.4	3.3	4.4	264.4	38.4
28	3.0	5.7	13.1	12.3	19.2	23.0	17.6	8.4	10.4	32.2	10.4	27.4	30.6	45.1	47.5	43.7	37.9	16.5	22.5	28.1	80.6	129.4	153.8	19.9	153.8	34.9
Hourly Max	134.7	115.7	103.9	109.4	127.9	121.2	116.6	116.7	173.6	264.4	196.8	211.7	119.7	196.4	183.6	179.3	172.0	109.9	123.1	275.6	189.5	254.0	225.1	174.8		
Hourly Average	29.5	28.0	28.5	31.5	28.9	27.9	29.2	30.3																		

Entrance TSP ($\mu\text{g}/\text{m}^3$) – February 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	29.4	24.1	47.4	172.5	567.0	100.5	108.0	142.7	164.3	251.4	140.5	125.2	72.9	136.9	217.7	194.7	417.1	296.3	61.4	81.2	9.3	52.9	79.3	74.1	567.0	148.6
2	100.9	72.9	67.7	78.6	96.5	162.1	183.5	150.5	156.3	198.1	178.3	240.9	103.9	79.1	67.1	107.4	281.4	238.0	270.9	839.1	595.5	458.3	382.8	285.0	839.1	224.8
3	191.6	268.9	272.9	237.7	107.5	165.9	175.8	61.5	111.4	179.0	126.2	219.1	238.2	148.8	1020.1	20.7	19.0	16.5	12.8	9.1	7.6	12.1	19.9	16.8	1020.1	152.5
4	13.1	9.8	9.8	11.2	10.6	9.3	10.3	6.5	4.9	26.7	90.8	56.1	109.1	71.5	102.9	163.5	109.4	6.2	4.2	3.5	7.0	9.4	6.1	14.8	163.5	36.1
5	13.8	21.0	13.4	18.2	18.6	16.7	9.6	4.5	12.1	9.3	17.4	19.0	17.3	10.8	6.6	4.0	3.3	3.7	3.3	3.2	6.1	4.9	3.4	2.1	21.0	10.1
6	2.4	2.7	2.1	1.8	2.0	2.0	2.9	5.6	2.8	3.0	3.5	3.6	3.7	4.0	5.2	4.8	4.5	4.3	4.1	4.1	5.8	6.8	9.2	5.5	9.2	4.0
7	7.5	9.0	7.7	6.1	6.4	4.3	6.7	8.1	10.4	8.4	12.9	19.9	16.2	15.7	14.9	12.0	14.6	20.5	21.2	14.8	16.6	15.2	17.2	12.0	21.2	12.4
8	25.1	15.1	22.6	12.7	7.3	19.7	30.2	29.1	36.0	36.9	25.2	14.4	22.9	181.9	172.7	232.8	916.7	263.5	267.7	810.0	1009.8	1683.7	528.2	165.4	1683.7	272.1
9	209.6	249.2	164.3	201.5	27.1	24.8	16.0	17.2	30.9	35.8	39.1	42.9	335.2	21.4	17.4	28.6	16.3	10.7	15.0	12.5	15.0	8.2	8.4	4.4	335.2	64.6
10	7.7	19.0	21.3	23.6	8.1	8.4	152.8	139.0	382.2	411.8	1271.6	1061.4	764.5	362.7	98.7	40.6	25.1	42.3	31.4	24.4	25.6	5.8	3.7	21.9	1271.6	206.4
11	30.2	33.5	43.6	93.4	40.7	4.3	49.2	649.9	92.1	93.1	525.2	147.5	68.4	102.2	141.7	213.1	73.0	63.1	34.5	41.6	87.5	51.3	191.1	192.4	649.9	127.6
12	151.1	216.8	110.4	239.4	86.8	91.3	199.4	7.1	648.9	882.8	698.2	115.6	72.6	45.6	22.9	537.0	337.3	83.1	123.4	50.2	17.5	28.5	45.7	4.9	882.8	200.7
13	18.9	18.1	43.1	62.6	86.6	39.7	78.2	96.5	437.8	540.0	526.1	537.7	87.1	27.9	14.7	7.1	14.0	42.7	23.9	17.8	34.2	212.4	215.0	387.4	540.0	148.7
14	239.4	228.3	158.2	272.4	238.9	238.6	200.3	340.0	505.0	516.7	455.6	228.9	48.1	30.3	19.5	31.9	22.1	53.9	86.4	24.1	39.9	47.4	82.7	51.5	516.7	173.3
15	51.5	10.2	9.4	6.3	4.0	8.5	22.0	53.6	36.3	45.3	108.4	141.6	65.4	52.0	31.0	25.7	25.1	22.1	22.2	3.8	1.5	1.5	24.2	27.3	141.6	33.3
16	17.4	22.2	24.7	79.2	75.9	74.1	55.1	74.6	133.8	170.5	325.5	594.7	285.1	506.2	117.6	250.0	95.7	37.2	6.6	1.7	1.8	16.7	11.9	3.8	594.7	124.3
17	8.4	2.7	2.9	21.3	21.7	16.3	50.0	87.1	153.5	131.2	133.3	141.4	121.9	63.8	131.5	82.3	43.5	49.6	73.2	58.8	178.7	506.5	462.7	179.8	506.5	113.4
18	190.0	251.8	138.9	123.0	177.5	64.1	90.4	37.7	45.8	43.6	55.7	54.2	54.6	207.8	54.0	71.2	56.9	6.4	4.5	3.2	2.0	2.5	4.6	6.6	251.8	72.8
19	6.7	8.2	31.6	56.6	48.1	13.9	15.8	12.8	10.7	21.1	50.9	81.3	82.6	75.0	21.4	24.7	21.8	11.6	10.2	9.8	14.5	30.2	33.1	39.8	82.6	30.5
20	36.4	45.3	159.4	151.6	49.2	76.9	44.0	124.7	210.7	285.9	238.2	58.4	48.5	51.6	71.5	57.8	29.5	62.3	41.9	206.3	295.4	265.1	294.2	144.9	295.4	127.1
21	40.3	92.6	147.1	114.7	257.5	376.5	263.9	86.8	227.8	114.9	103.4	332.6	248.6	507.9	393.2	387.8	205.4	117.5	78.9	162.7	250.7	365.3	360.1	162.6	507.9	225.0
22	169.6	153.7	79.7	44.4	38.4	137.5	26.2	28.7	17.4	19.3	20.2	176.6	20.4	10.5	5.5	3.3	5.3	5.9	5.9	1.3	2.1	2.7	1.7	2.7	176.6	40.8
23	2.5	2.2	2.7	3.4	3.2	12.6	16.3	9.1	11.2	69.1	41.1	27.0	14.6	9.4	17.0	72.1	58.0	74.4	5.5	2.8	3.0	3.4	8.8	6.4	74.4	19.8
24	8.7	9.9	6.4	6.4	5.1	4.3	4.5	5.1	4.3	34.8	127.8	114.6	156.0	192.6	300.9	464.6	111.5	10.8	6.4	4.9	6.3	9.5	9.1	464.6	67.4	
25	20.5	19.8	18.7	124.2	40.3	50.6	72.3	99.2	331.5	622.2	542.7	282.5	89.5	85.2	52.8	73.7	355.1	392.4	70.8	82.8	35.6	30.2	9.1	20.8	622.2	146.8
26	10.0	3.8	3.2	10.8	71.5	275.5	151.0	1.8	1.8	3.9	9.8	205.3	587.4	537.6	248.7	172.8	281.2	101.7	5.4	4.7	4.3	2.3	4.9	3.5	587.4	112.6
27	1.4	0.8	3.8	22.2	36.0	35.8	24.9	30.8	264.0	960.8	443.3	367.2	45.3	69.5	36.8	23.7	54.5	162.4	55.0	20.9	27.7	27.2	3.7	5.1	960.8	113.5
28	2.5	5.7	15.1	14.1	22.0	26.5	20.3	8.6	11.3	90.8	20.0	47.7	62.1	106.1	116.7	111.3	108.1	55.2	98.5	117.0	422.3	808.5	1221.7	134.9	1221.7	152.0
Hourly Max	239.4	268.9	272.9	272.4	567.0	376.5	263.9	649.9	648.9	960.8	1271.															

MetOne BAM PM_{2.5} Calibration



AIR QUALITY MONITORING

STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 10:00

OPERATOR: Lenin Flores
DATE: February 9, 2017
END TIME (MST): 12:00

MONITOR INFO / PARAMETER VALUES:

Make/Model	<u>Met One BAM</u>	Audit Device Model	<u>Delta Cal</u>
Configuration	<u>PM2.5</u>	Audit Device S/N	<u>682</u>
Serial Number	<u>T19087</u>	Certification Date	<u>06-Mar-16</u>

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (l)	-8.4	631	0.00	16.7
	MEASURED (AF)	<u>-6.7</u>	<u>632</u>	<u>0.20</u>	<u>16.90</u>
Adjusted Data	AF Difference (AF-l)	1.7	1	0.20	0:00
	MEASURED (M)	<u>-8.8</u>	<u>631</u>	<u>0.20</u>	<u>16.72</u>
	Adj Difference (M-l)	-0.4	0	0.20	0:00
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min
					±2 min

Sample Head Inspect/Cleaning: Sample head cleaned.

Status of sampling tape: 3/4 roll left

Nozzle Inspection / cleanliness: Inspected, cleaned.

COMMENTS:

Performed self test - all passed. Performed leak check and full flow calibration

No issues noted.

MetOne BAM PM₁₀ Calibration



AIR QUALITY MONITORING

STATION: Lafarge
LOCATION: Exshaw - Lagoon
START TIME (MST): 10:00

OPERATOR: Lenin Flores
DATE: February 9, 2017
END TIME (MST): 12:00

MONITOR INFO / PARAMETER VALUES:

Make/Model	<u>MetOne BAM</u>	Audit Device Model	<u>Delta Cal</u>
Configuration	<u>PM10</u>	Audit Device S/N	<u>682</u>
Serial Number	<u>A 3315</u>	Certification Date	<u>06-Mar-16</u>

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (l)	-8.1	631	0.00	16.7
	MEASURED (AF)	-6.8	632	0.40	16.60
Adjusted Data	AF Difference (AF-l)	1.3	1	0.40	-0.10
	MEASURED (M)	-8.1	632	0.40	16.69
	Adj Difference (M-l)	0.0	1	0.40	-0.01
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min
					±2 min

Sample Head Inspect/Cleaning: Sample head cleaned.

Status of sampling tape: 3/4 roll left

Nozzle Inspection / cleanliness: Inspected and cleaned.

COMMENTS:

Performed self test - all passed. Performed leak check and full flow calibration

No issues noted.

MetOne BAM TSP Calibration



AIR QUALITY MONITORING

STATION: Lafarge
LOCATION: Exshaw
START TIME (MST): 10:00

OPERATOR: Lenin Flores/Gagandeep Singh
DATE: February 9, 2017
END TIME (MST): 12:00

MONITOR INFO / PARAMETER VALUES:

Make/Model	<u>MetOne BAM</u>	Audit Device Model	<u>Delta Cal</u>
Configuration	<u>TSP</u>	Audit Device S/N	<u>682</u>
Serial Number	<u>A 3589</u>	Certification Date	<u>06-Mar-16</u>

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mmHg)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
Adjusted Data	Audit values (l)	-8.1	631	0.00	16.7
	MEASURED (AF)	-7.6	632	0.50	16.60
	AF Difference (AF-l)	0.5	1	0.50	-0.10
	MEASURED (M)	-8.1	631	0.50	16.71
	Adj Difference (M-l)	0.0	0	0.50	0.01
	LIMITS	± 4.0 °C	5 mm Hg	1.0 L/min	± 1.0 L/min

Sample Head Inspect/Cleaning: Sample head cleaned.

Status of sampling tape: 3/4 roll left

Nozzle Inspection / cleanliness: Inspected and cleaned

COMMENTS:

Performed self test, all passed. Performed leak check and full flow calibration

No issues noted.

Calibration Report



Parameter

NO_x-NO-NO₂

Air Monitoring Network

Lafarge - Exshaw

AIR QUALITY MONITORING

Station Information

Calibration Date	February 9, 2017		Previous Calibration	January 20, 2017
Station Number	N/A		Station Location	Exshaw - Lagoon
Reason:	Routine	Installation	Removal	Other:
Start Time (MST)	8:00		End Time (MST)	12:30
Barometric Pressure	635	mmHg	Station Temperature	19.0 Deg C
Calibrator	SABIO 2010		Serial Number	9700712
NO Cal Gas Conc	52.4	ppm	Cal Gas Expiry Date	July 12, 2019
NOx Cal Gas Conc	52.6	ppm	Cal Gas Serial #	EY962

DACS Information

DACS make	Campbell Scientific CR1000	DACS serial No.	67802
Parameter	NO2	NOx	NO
Before	Data Slope 0.999519	1.002544	1.001667
	Data Offset -0.237108	2.018737	1.969289
After	Data Slope 1.003862	1.005239	0.997415
	Data Offset 0.271657	2.107439	2.267044
Channel #	3	1	2
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TECO 42C	Analyzer serial #	64179-342	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NOX COEF	0.999		0.992	
NOX BKG	1.0		0.9	
NO COEF	0.892		0.828	
NO BKG	0.8		0.8	
Cooler Temp	-3.9	Deg C	-4.1	Deg C
Converter Temp	319.0	Deg C	319.0	Deg C
Pressure	149.1	mmHg	146.2	mmHg
Sample Flow	0.596	LPM	0.609	LPM
Ozonator Flow	0.072	LPM	0.071	LPM

Notes: Span adjusted.

Calibration Report

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



AIR QUALITY MONITORING

Station Information

Calibration Date: February 9, 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 NO ₂ conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NOx Correction factor	NO Correction factor
zero	5000	0.00	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
1	5000	40.00	417.5	415.9	1.6	415.4	417.0	-1.6	1.0049	0.9973
2	5000	25.00	261.7	260.7	1.0	255.1	255.9	-0.8	1.0260	1.0189
3	7000	14.00	105.0	104.6	0.4	101.2	101.2	-0.1	1.0375	1.0331
AFZ	5000	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0000	0.0000
AFS	5000	40.00	417.5	415.9	1.6	452.2	450.5	1.5	0.9232	0.9231
									Average Correction Factor	1.0228
										1.0164

As Found Concentrations: NO_x= 454.2 NO= 452.5 As Found Percent Change NO_x= 8.8% NO= 8.8%

GPT Calibration Data

Dilution Flow 5000 ccm Source Gas Flow 40.00 ccm

O ₃ Setpoint (V)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NOx Correction factor	NO Correction factor	NO ₂ Correction factor	Converter Efficiency	
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A	
NO point	412.6	412.6	0.0	411.8	412.6	-0.8	1.0019	1.0000	N/A	N/A	
0.76V	412.6	83.6	329.1	410.9	83.6	327.7	1.0042	1.0000	1.0041	99.6%	
0.58V	412.6	177.1	235.5	411.3	177.1	234.3	1.0033	1.0000	1.0050	99.5%	
0.39V	412.6	275.6	137.1	411.3	275.6	135.8	1.0032	1.0000	1.0094	99.1%	
							Average Correction Factor	1.0036	1.0000	1.0061	99.4%

AIC Data

Parameter	Previous calibration				Current calibration				
	NOx	NO ₂	NO	ppb	NOx	NO ₂	NO	ppb	
Auto zero	-0.5	1.5	0.0	ppb	2.1	0.3	2.3	ppb	
Auto span	393.8	0.0	392.6	ppb	385.3	-0.3	383.0	ppb	

Calibration Performed By: Lenin Flores

Calibration Summary

Parameter **NO₂**
 Air Monitoring Network **Lafarge - Exshaw**

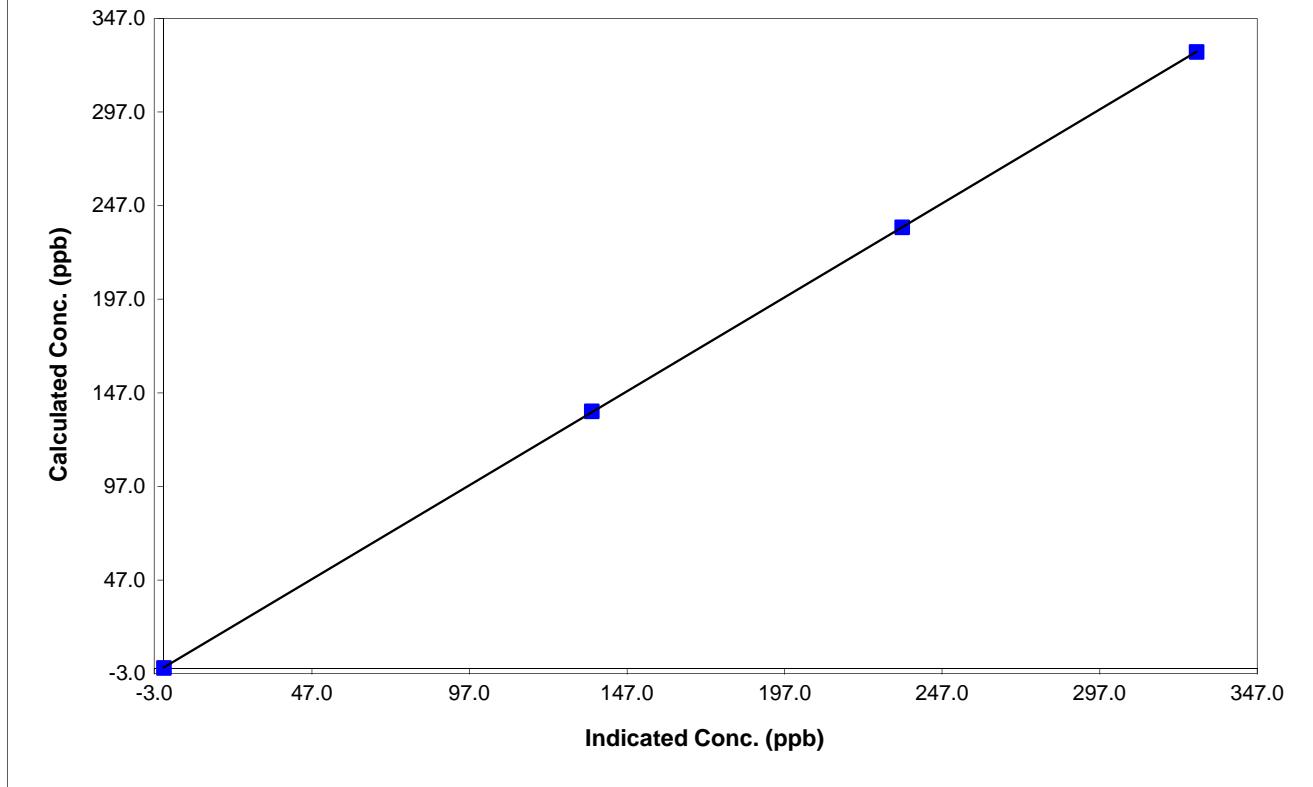


Station Information			
Calibration Date	February 9, 2017	Previous Calibration	January 20, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	8:00	End Time (MST)	12:30
Analyzer make	TECO 42C	Analyzer serial #	64179-342

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
329.1	327.7	1.0041	Correlation Coefficient	0.999994
235.5	234.3	1.0050		
137.1	135.8	1.0094	Slope	1.003862
			Intercept	0.271657

NO₂ Calibration Curve



Calibration Summary

Parameter **NO_x**
 Air Monitoring Network **Lafarge - Exshaw**

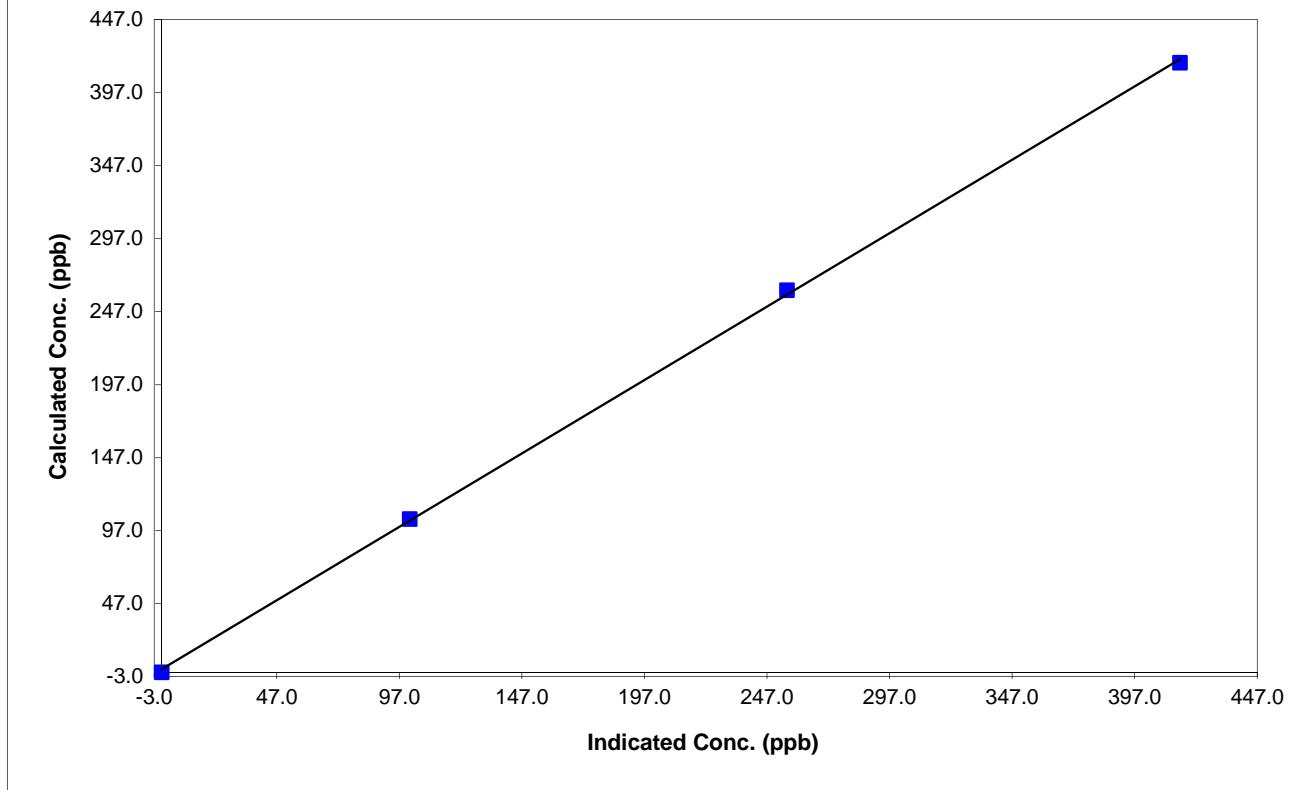


Station Information			
Calibration Date	February 9, 2017	Previous Calibration	January 20, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	8:00	End Time (MST)	12:30
Analyzer make	TECO 42C	Analyzer serial #	64179-342

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
417.5	415.4	1.0049	Correlation Coefficient	0.999791
261.7	255.1	1.0260		
105.0	101.2	1.0375	Slope	1.005239
			Intercept	2.107439

NOx Calibration Curve



Calibration Summary

Parameter NO
 Air Monitoring Network Lafarge - Exshaw

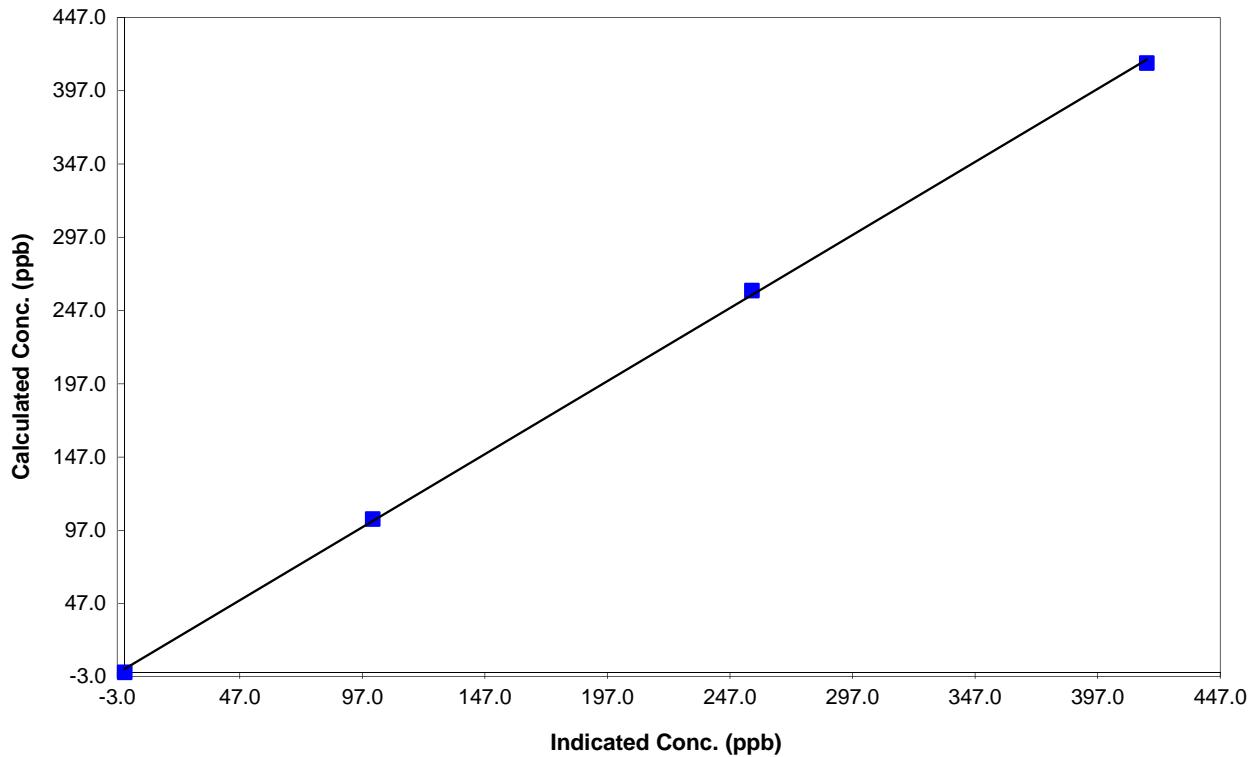


Station Information			
Calibration Date	February 9, 2017	Previous Calibration	January 20, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	8:00	End Time (MST)	12:30
Analyzer make	TECO 42C	Analyzer serial #	64179-342

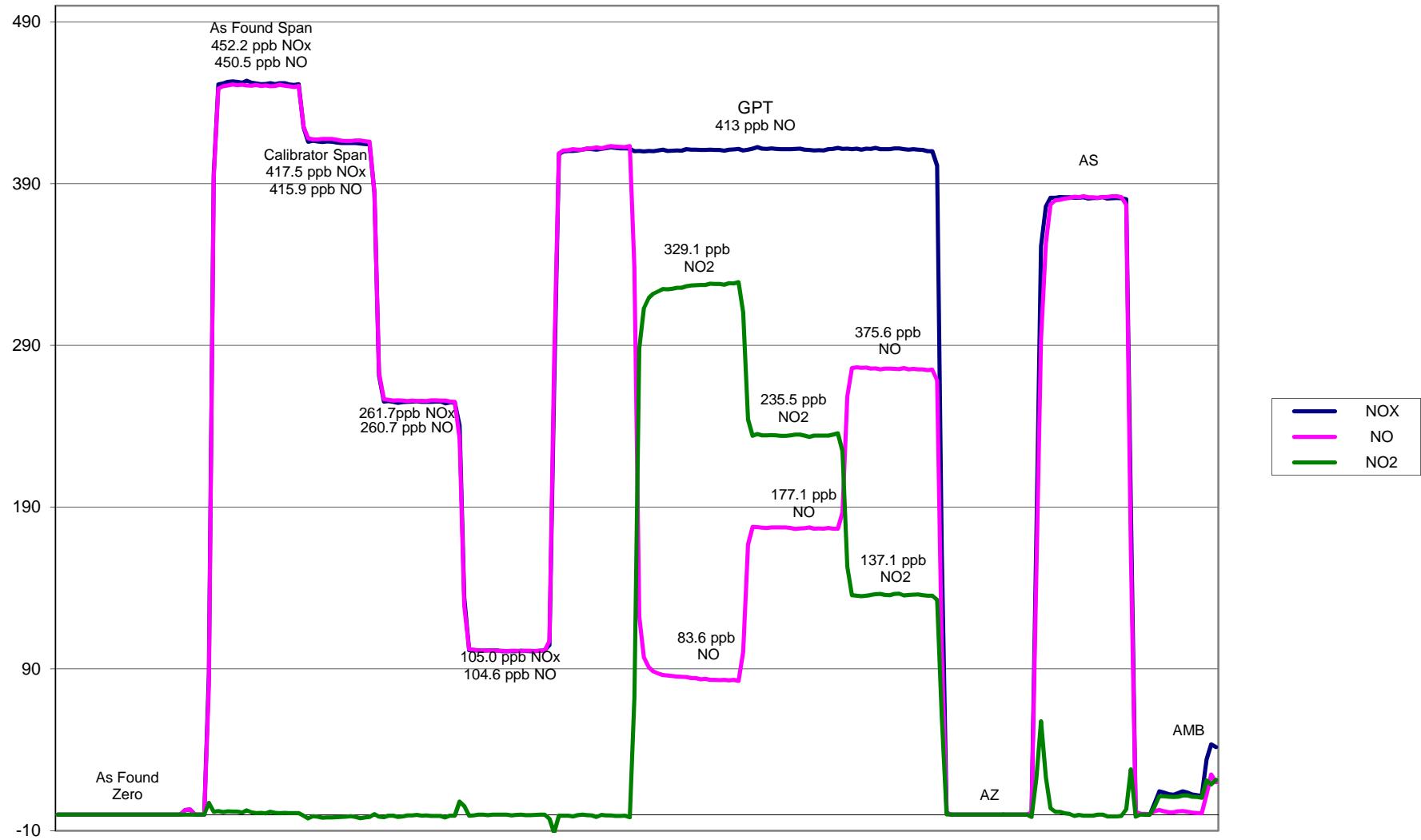
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
415.9	417.0	0.9973	Correlation Coefficient	0.999771
260.7	255.9	1.0189		
104.6	101.2	1.0331	Slope	0.997415
			Intercept	2.267044

NO Calibration Curve



NOX Calibration



Calibration Report



Parameter SO2
Air Monitoring Network Lafarge - Exshaw

AIR QUALITY MONITORING

Station Information

Calibration Date	February 9, 2017	Previous Calibration	January 20, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	8:00	End Time (MST)	11:00
Barometric Pressure	635 mmHg	Station Temperature	19.0 Deg C
Calibrator	SABIO 2010	Serial Number	04090809
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	7/14/2020
Gas Cert Reference	EY643	DACS serial No.	67802
DACS make	Campbell Scientific CR1000	DACS channel #	4
DACS voltage range	0 - 5 VDC		
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.986166	Calculated slope	0.997738
Calculated intercept	1.573114	Calculated intercept	1.876184
Analyzer make	API Model 102A	Analyzer serial #	393
Concentration range	before	after	
	0-500 ppb	0-500 ppb	
Slope	0.976	0.976	
Offset	47.7 mV	47.7 mV	
Pressure	23.1 in Hg	23.1 in Hg	
Sample Flow	450 ccm	467 ccm	
UV Lamp	3047 mV	3013.8 mV	
Lamp Ratio	112.8 %	112.8 %	
PMT Temp	7.5 degC	7.6 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	-2.1	N/A
5000	40.00	395.2	393.9	1.0034
5000	25.00	247.8	247.0	1.0030
7000	14.00	99.4	97.7	1.0169
5000	0.00	0.0	-2.1	As found zero
5000	40.00	395.2	393.9	As found span
		Average Correction Factor		1.0078

Calculated value of As Found Response: 392.1 ppm Percent Change of As Found: 0.8%

Auto zero Auto span	before calibration		after calibration	
	-0.9 ppm		-1.4 ppm	
	381.1 ppm		386.3 ppm	

Notes: No adjustments made

Calibration Performed By: Lenin Flores

Calibration Summary



AIR QUALITY MONITORING

Parameter SO₂
Air Monitoring Network Lafarge - Exshaw

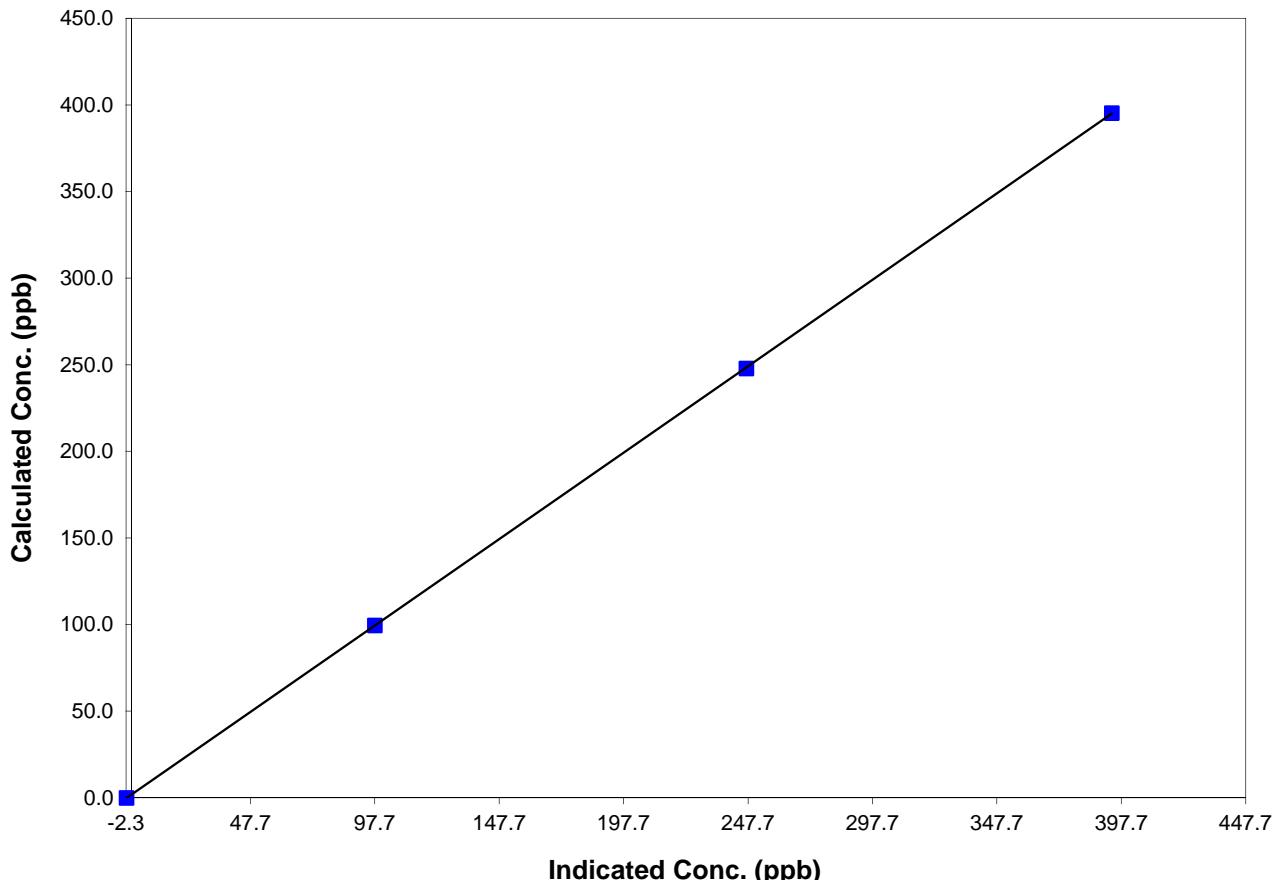
Station Information

Calibration Date	February 9, 2017	Previous Calibration	January 20, 2017
Station Number	N/A	Station Location	Exshaw - Lagoon
Start Time (MST)	8:00	End Time (MST)	11:00
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	-2.1	N/A		
395.2	393.9	1.0034	Correlation Coefficient	0.999994
247.8	247.0	1.0030	Slope	0.997738
99.4	97.7	1.0169	Intercept	1.876184

SO₂ Calibration Curve



SO2 Calibration

