REPORT N$^{O}$ 171-00556-00

# AMBIENT AIR QUALITY MONTHLY REPORT

OCTOBER 2017

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WSP

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## OCTOBER 2017

**Lafarge Canada Inc.**

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

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Project Number: 171-00556-00

November 21, 2017

Janet Brygger
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Dear Ms. Brygger,

**Subject: Ambient Air Quality Monthly Report – October 2017**

The operational uptime for the meteorological systems and all analyzers at the Lagoon station was over 98% in October. The $PM_{2.5}$ analyzer had 98.1% operation time due to the sample pump malfunction. There was no contraventions of the 24-hour TSP and $PM_{2.5}$ Alberta Ambient Air Quality Objectives (AAAQOs) in October 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. While Berm and Entrance monitors had 100% operational time, West monitor had 99.6% operational time due to 3 hours of instrument error. The Entrance GRIMM monitor exceeded the 24-hour TSP AAAQG for 19 days and the $PM_{2.5}$ 24-hour AAAQG for 1 day while the Berm GRIMM had 20 exceedances of the TSP guideline and no exceedances of the $PM_{2.5}$ guideline. The West GRIMM monitor did not record any exceedances of the 24-hour TSP and $PM_{2.5}$ guidelines, as well as the 1-hour $PM_{2.5}$ AAAQG. The other GRIMM monitors recorded exceedances of the 1-hour $PM_{2.5}$ AAAQG.

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

Sincerely,

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

# SIGNATURES

PREPARED BY

Byeong Kim, B.Sc.
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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 October 1, 2017 and October 31, 2017.

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

# 2 OCTOBER 2017 REPORT SUMMARY

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

## 2.1 LAGOON STATION

**Table 2-1 Lagoon station data summary**

| Parameter | Data Completeness (%) | 1-Hour Average | | 24-hour Average | |
|---|---|---|---|---|---|
| | | Maximum Concentration | Exceedances of AAAQO or AAAQG | Maximum Concentration | Exceedances of AAAQO |
| $NO_2$ (ppb) | 100.0 | 19.8 | 0 | 9.2 | - |
| $SO_2$ (ppb) | 100.0 | 22.1 | 0 | 5.2 | 0 |
| $PM_{2.5}$ (µg/m$^3$) | 98.1 | 23.2 | 0 | 4.7 | 0 |
| $PM_{10}$ (µg/m$^3$) | 100.0 | 364.0 | - | 67.0 | - |
| TSP (µg/m$^3$) | 100.0 | 591.5 | - | 80.7 | 0 |
| Temperature (°C) | 100.0 | 20.5 | - | 13.2 | - |
| Wind Speed (km/hr) /Direction (Degrees) | 100.0 | 58.0/W | - | 45.3/WSW | - |
| Precipitation (mm) | 100.0 | 1.3 | - | 0.2* | - |

* Maximum 24-hour Total Accumulation of Precipitation (mm)

**Data Quality Notes:**

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

**Calibration/Maintenance Notes:**

- The PM2.5 analyzer had 98.1% operation time due to sample pump malfunction.
- WSP field technician was sent out to investigate and repair the precipitation gauge on November 2. The gauge was reported to have been damaged, likely by a vehicle while backing up (for more details see section 3.1.4). After the repair, the gauge was able to record precipitation events on November 3rd and 6th.

## 2.2 WEST GRIMM

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

**Table 2-2 West station data summary**

| Parameter | Data Completeness (%) | 1-Hour Average | | 24-hour Average | |
|---|---|---|---|---|---|
| | | Maximum Concentration | Exceedances of Guidelines | Maximum Concentration | Exceedances of Guidelines |
| $PM_{2.5}$ (µg/m$^3$) | 99.6 | 13.6 | 0* | 6.8 | 0 |
| $PM_{10}$ (µg/m$^3$) | 99.6 | 63.7 | - | 18.6 | - |
| TSP (µg/m$^3$) | 99.6 | 181.3 | - | 44.4 | 0 |

*Exceedance of 1-hour AAAQG

**Data Quality Notes:**

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

**Calibration/Maintenance Notes:**

- The monitor had 99.6% uptime for this month due to 3 hours of instrument error on October 31st.

## 2.3 BERM GRIMM

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

**Table 2-3 Berm station data summary**

| Parameter | Data Completeness (%) | 1-Hour Average | | 24-hour Average | |
|---|---|---|---|---|---|
| | | Maximum Concentration | Exceedances of Guidelines | Maximum Concentration | Exceedances of Guidelines |
| $PM_{2.5}$ (µg/m$^3$) | 100.0 | 144.6 | 3* | 25.5 | 0 |
| $PM_{10}$ (µg/m$^3$) | 100.0 | 1394.9 | - | 216.9 | - |
| TSP (µg/m$^3$) | 100.0 | 3294.3 | - | 920.7 | 20 |

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

**Data Quality Notes:**

- There were 0 and 20 exceedances of the 24-hour $PM_{2.5}$ and TSP AAAQO, respectively.
- There were 3 exceedances of the 1-hour $PM_{2.5}$ AAAQG.

**Calibration/Maintenance Notes:**

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

## 2.4 ENTRANCE GRIMM

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

**Table 2-4 Entrance station data summary**

| Parameter | Data Completeness (%) | 1-Hour Average | | 24-hour Average | |
|---|---|---|---|---|---|
| | | Maximum Concentration | Exceedances of Guidelines | Maximum Concentration | Exceedances of Guidelines |
| $PM_{2.5}$ (µg/m$^3$) | 100.0 | 236.7 | 5* | 36.3 | 1 |
| $PM_{10}$ (µg/m$^3$) | 100.0 | 1707.4 | - | 179.1 | - |
| TSP (µg/m$^3$) | 100.0 | 3197.5 | - | 528.5 | 19 |

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

**Data Quality Notes:**

- There were 1 and 19 exceedances of the 24-hour $PM_{2.5}$ and TSP AAAQO, respectively.
- There were 5 exceedances of the 1-hour $PM_{2.5}$ AAAQG.

**Calibration/Maintenance Notes:**

→ The monitor had 100% uptime for the month of October.

# 3 LAGOON STATION

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

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

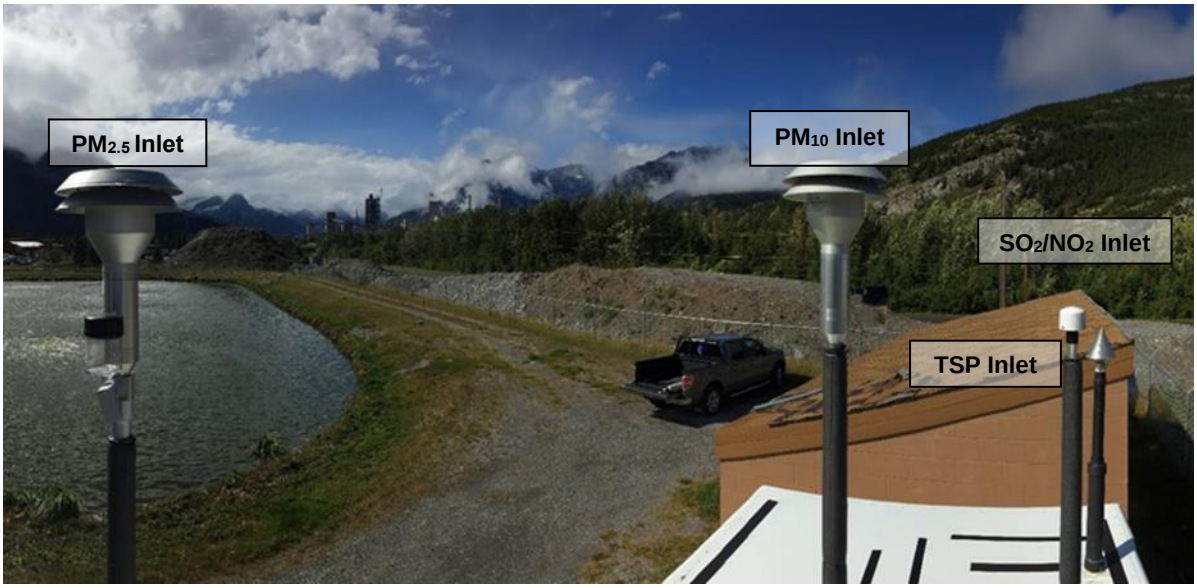


**Figure 3-1 Inlets on the top of WSP's Lagoon monitor**

## 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 October 16th and had 100% uptime.

### 3.1.2 $SO_2$ MONITORING

The $SO_2$ monitor underwent monthly calibration on October 16th and had 100% uptime.

### 3.1.3 PM MONITORING

All BAM monitors underwent monthly calibration on October 13th. The $PM_{2.5}$ monitor had 98.1% operation time due to the sample pump malfunction. The operation time for the $PM_{10}$ and TSP monitors was 100%.

### 3.1.4 METEOROLOGICAL MONITORING

All meteorological sensors had 100% uptime for the month of October. However, the precipitation gauge was found to be recording 0 during precipitation events. WSP field technician was sent out to investigate and repair the precipitation gauge on November 2. The gauge was reported to have been damaged by a car while backing up. The gauge may have been damaged sometime between October 23rd and 28th because the precipitation record on October 23rd was the last record that matched the Environment Canada's precipitation report at Bow Valley Station. The gauge did not record any subsequent precipitation events on October 28th and 29th. The short-lasting peak on

October 25th may be indicative of the car impact because there was no record of precipitation in the Environment Canada's daily report at Bow Valley.

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

There was no exceedance of both the 24-hour TSP (100 µg/m$^3$) and $PM_{2.5}$ (30 µg/m$^3$) AAAQO. Historically in October, there was 1 exceedance of the 24-hour TSP AAQO in 2012 and 2014 and no exceedances of the 24-hour $PM_{2.5}$ AAQO.

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 October 12, 2016.**

The wind rose (Figure 3-3) indicates that the winds predominantly came from the west, following the general orientation of the valley. As typical of the wind characteristics at the Lagoon site, the westerly winds were more intense than the easterly winds. In October, the frequency of high wind speeds over 20 km/h significantly increased. These high wind speeds accounted for roughly 35% of all hourly wind speed records this month as opposed to 3% in September. The substantial increase in the wind intensity was responsible for peak concentrations of particulate matter.

**Table 3-2 Summary of October 2017 data at Lagoon**

| Parameter | Objectives | | Station | Exceedances | | Monthly Average | 1-hour | | | | | 24-hour | | Operational Time (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | | 1-hr | 24-hr | | Maximum Concentration/ Meteorological Variable | Day | Hour | Wind Speed (km/hr) | Wind Direction (degrees) | Maximum Concentration/ Meteorological Variable | Day | |
| $NO_2$ (ppb) | 159 | - | Lagoon | 0 | - | 5.2 | 19.8 | 6 | 17 | 21.1 | 268.2 | 9.2 | 30 | 100.0 |
| $SO_2$ (ppb) | 172 | 48 | Lagoon | 0 | 0 | 1.2 | 22.1 | 5 | 7 | 20.8 | 262.1 | 5.2 | 5 | 100.0 |
| $PM_{2.5}$ ($\mu g/m^3$) | 80 | 30 | Lagoon | 0 | 0 | 1.8 | 23.2 | 4 | 2 | 15.4 | 264.9 | 4.7 | 11 | 98.1 |
| $PM_{10}$ ($\mu g/m^3$) | - | - | Lagoon | - | - | 25.5 | 364.0 | 17 | 10 | 56.8 | 254.8 | 67.0 | 17 | 100.0 |
| TSP ($\mu g/m^3$) | - | 100 | Lagoon | - | 0 | 31.8 | 591.5 | 6 | 14 | 35.9 | 272.8 | 80.7 | 17 | 100.0 |
| Temperature (°C) | - | - | Lagoon | - | - | 5.3 | 20.5 | 5 | 14 | 15.4 | 259.8 | 13.2 | 16 | 100.0 |
| Wind Speed (km/hr)/Direction (degrees) | - | - | Lagoon | - | - | 21.1 | 58.0/W | 16 | 17 | 58.0 | 249.4 | 45.3/WSW | 16 | 100.0 |
| Precipitation (mm) | - | - | Lagoon | - | - | 0.0 | 1.3 | | | | | 0.2 | 2 | 100.0 |

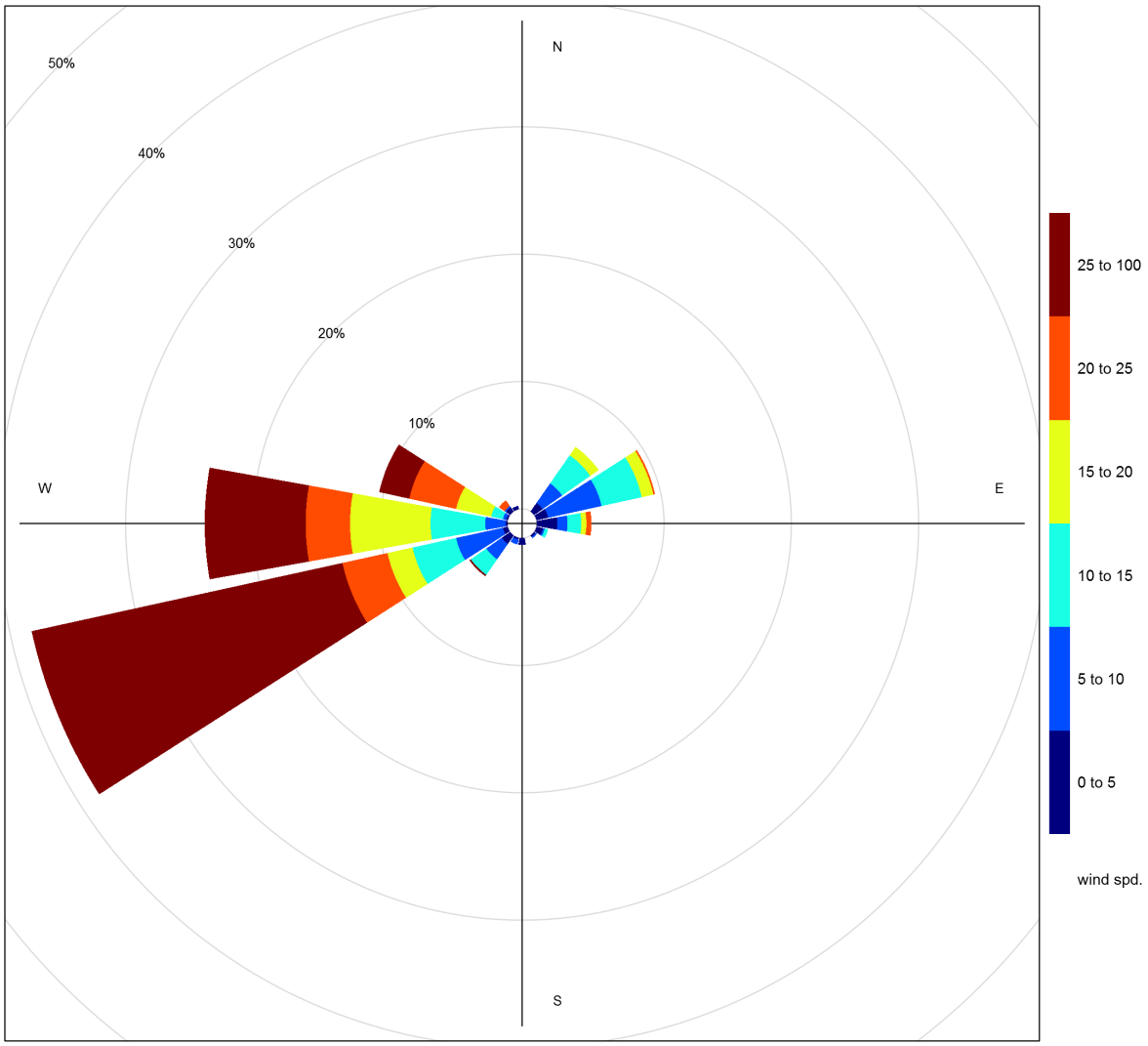


**Figure 3-3 October 2017 wind rose from the Lagoon Station**

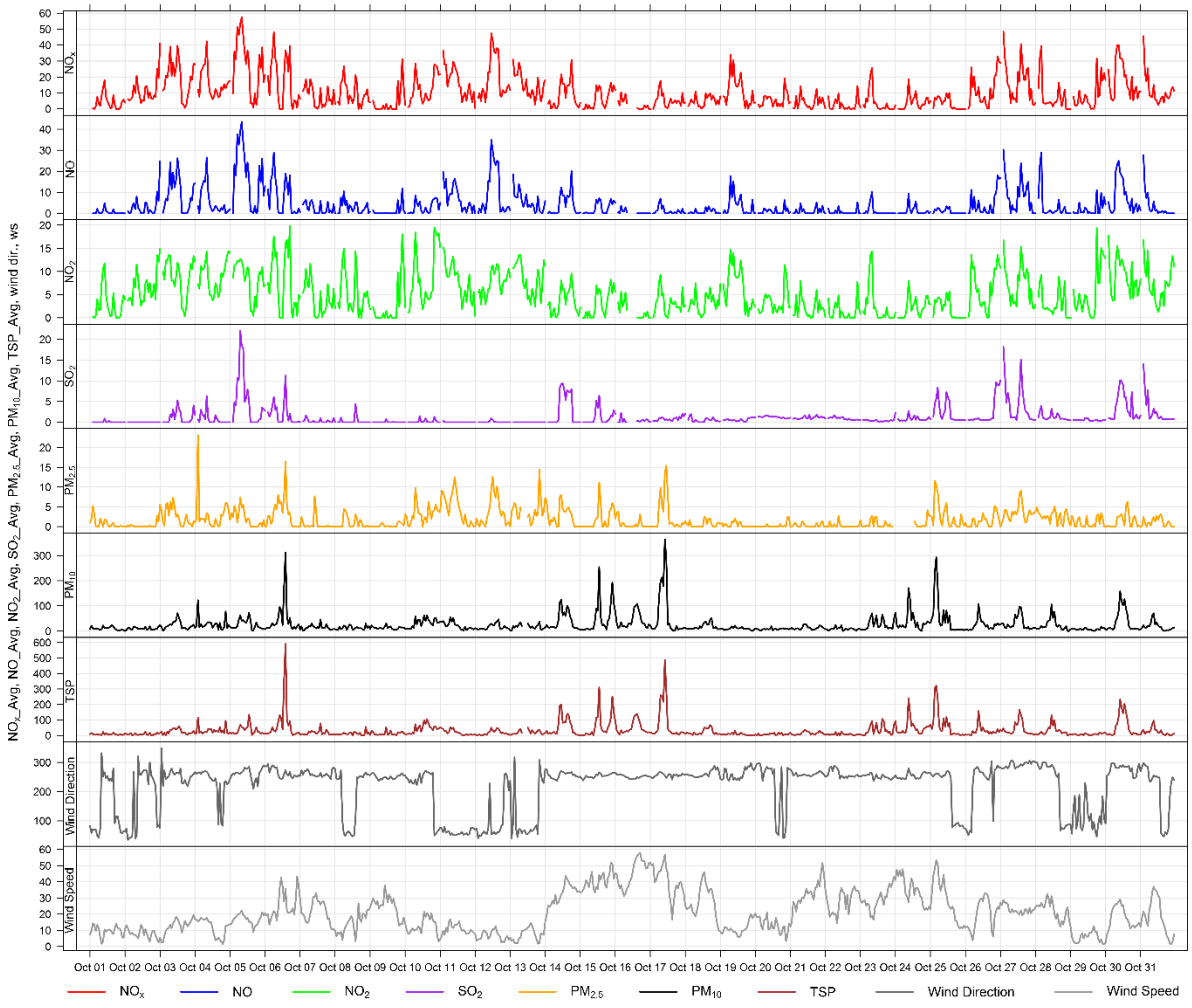


**Figure 3-4 1-hour concentrations of $NO_x$, $SO_2$, particulate matter, wind direction and wind speed at the Lagoon monitor**

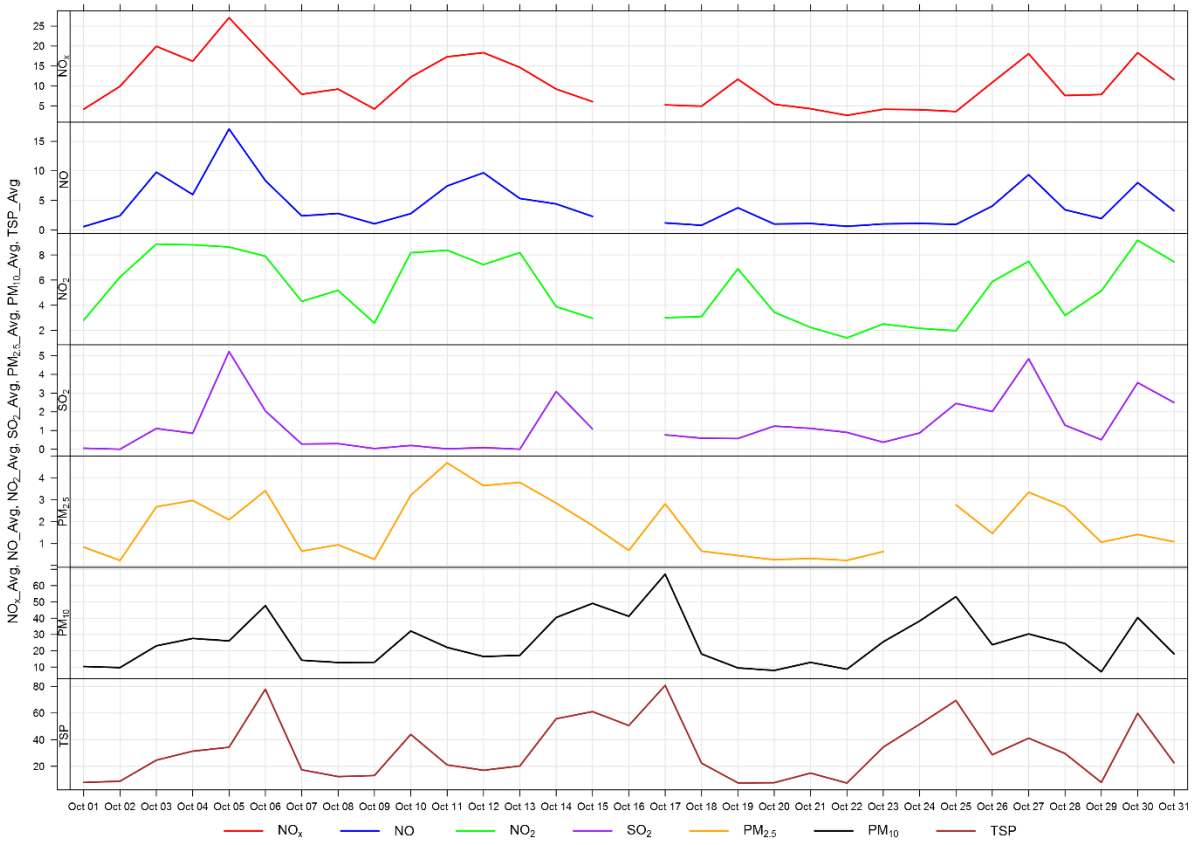


**Figure 3-5 24-hour concentrations of $NO_x$, $SO_2$, and particulate matter at the Lagoon monitor**

Figure 3-6 through Figure 3-8 show the variation in concentrations over various time averaging periods for PM, $SO_2$ and $NO_x$. The particulate matter plot in Figure 3-6 shows that $PM_{10}$ and TSP concentrations tended to rise through the morning before peaking mid-day and decreasing during the afternoon and evening. $PM_{10}$ and TSP are generally associated with dust from fugitive sources.

Figure 3-7 shows the variation of $SO_2$ over various time periods. $SO_2$ concentrations were very low in October. Figure 3-8 shows the variation of $NO_x$, NO and $NO_2$, with the peak of all three pollutants occurring in the morning between 6 am and noon. This may be indicative of a peak in traffic.

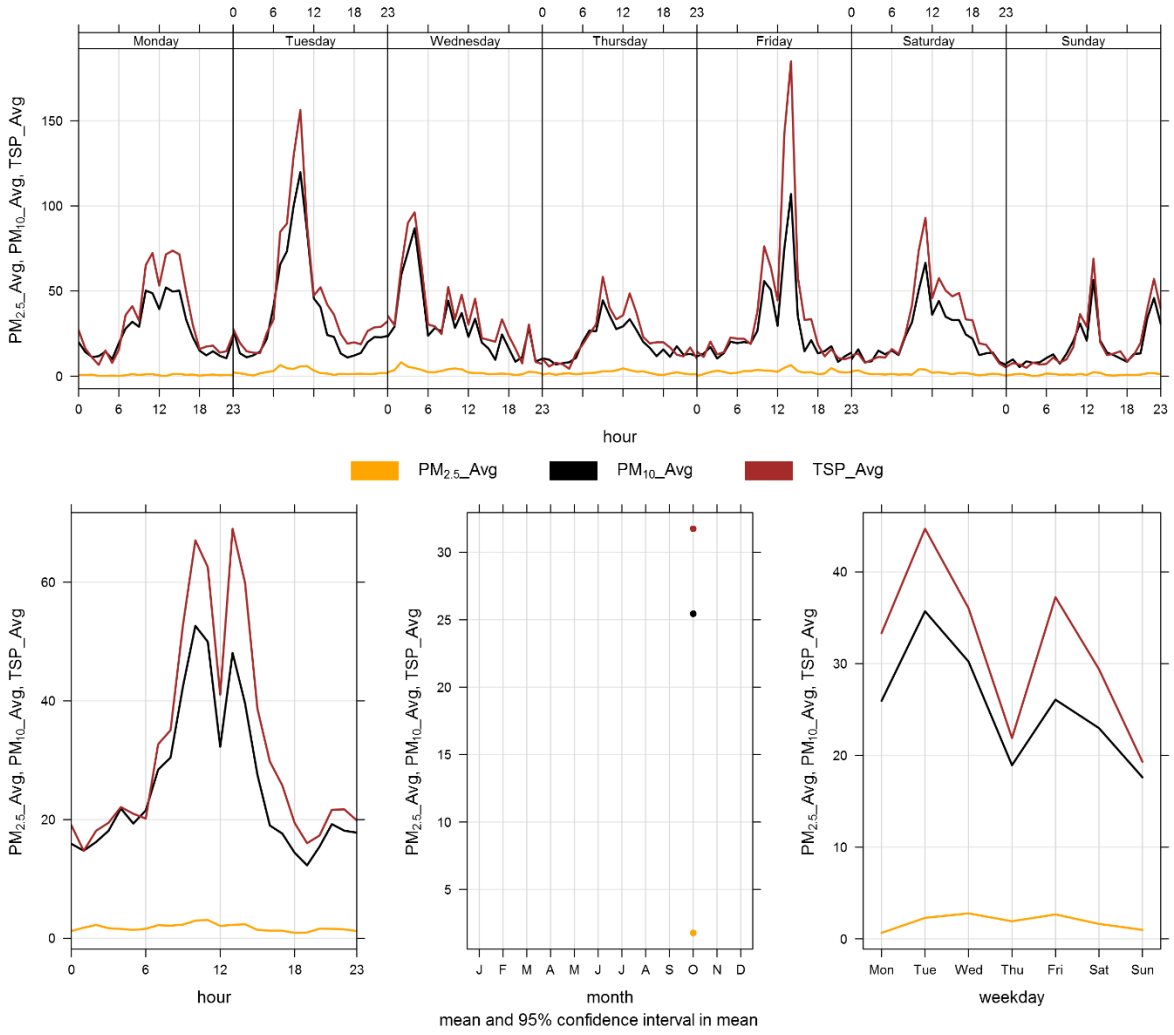


**Figure 3-6 Lagoon Monitor particulate matter time variation**

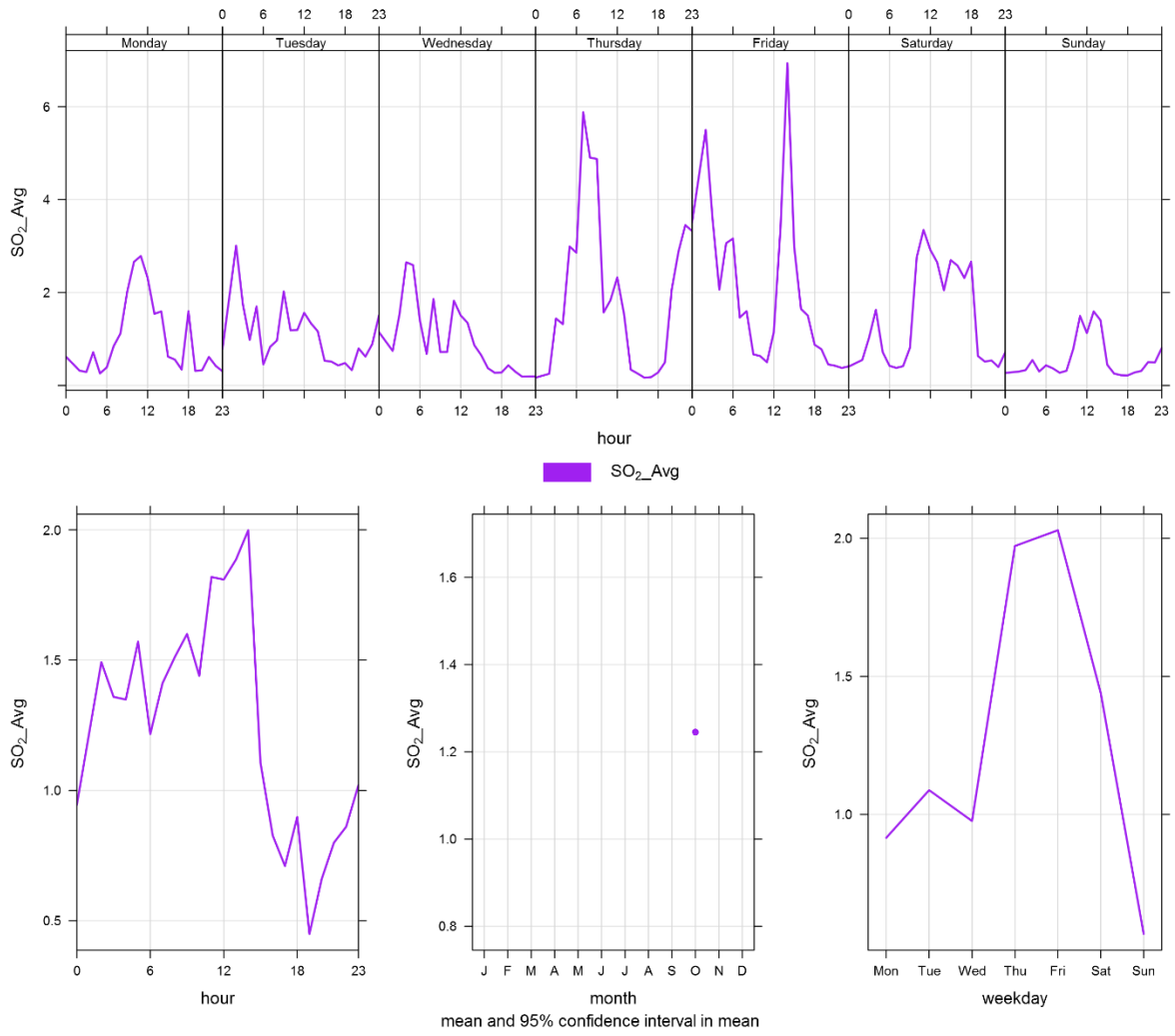


**Figure 3-7 Lagoon Monitor $SO_2$ time variation**

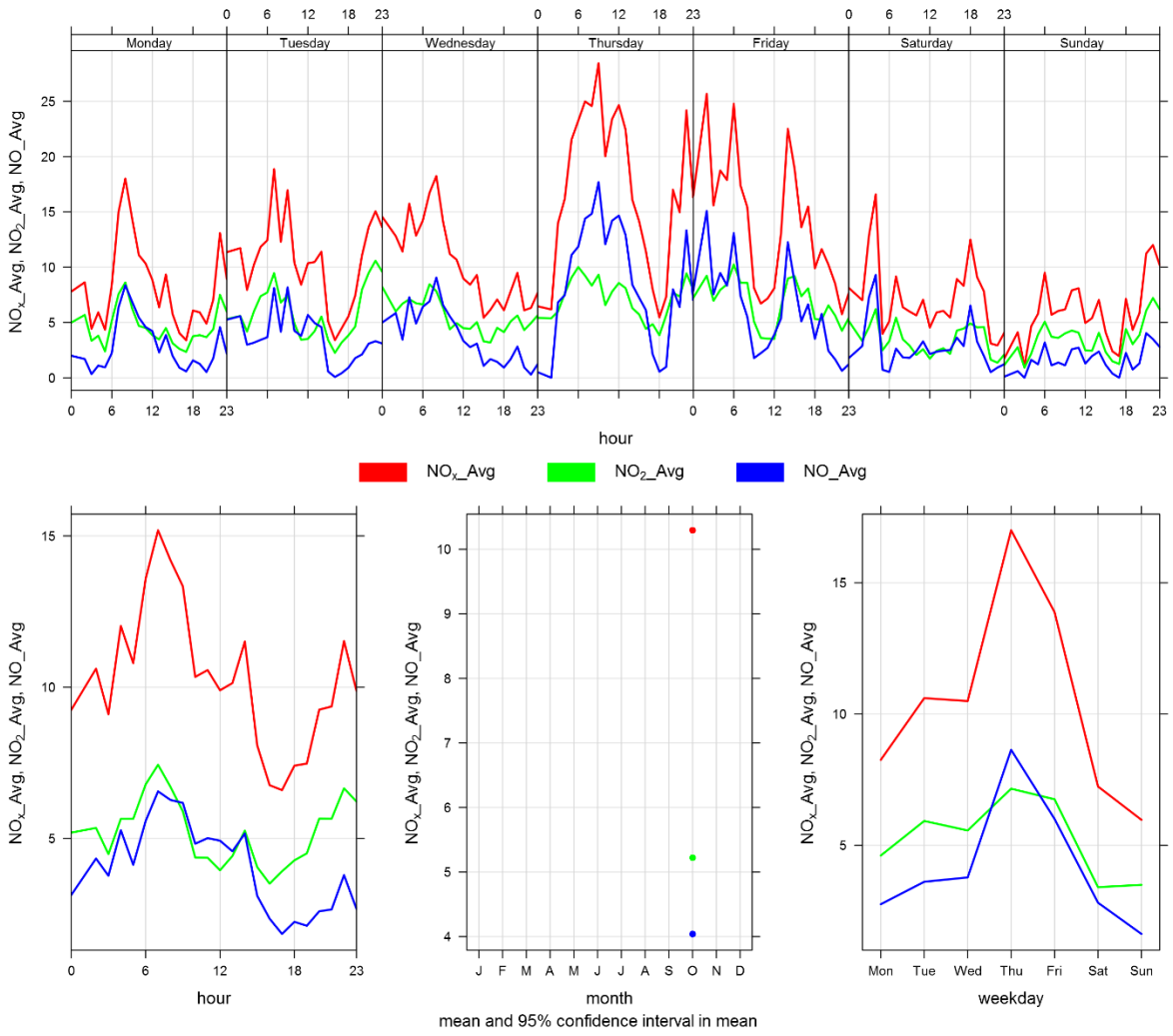


**Figure 3-8 Lagoon Monitor $NO_x$ time variation**

# 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 October, the West GRIMM had 99.6% uptime due to 3 hours of instrument error.

**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 October. 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 $PM_{2.5}$, $PM_{10}$ and TSP concentrations recorded over the month. There was no exceedance of both the 24-hour TSP (100 µg/m$^3$) and $PM_{2.5}$ (30 µg/m$^3$) AAAQO. Exceedances of the TSP Guideline at the West monitor in October are rare, with a maximum of 1 day exceeding the Guideline in 2013, and all other years reporting zero exceedances.

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

| Parameter | Guideline | | Station | Exceedances | | Monthly Average | Maximum 1-hour | | | | | Maximum 24-hour | | Operational Time (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | | 1-hr | 24-hr | | Maximum Concentration | Day | Hour | Wind Speed (km/hr) | Wind Direction (degrees) | Maximum Concentration | Day | |
| $PM_{2.5}$ (µg/m$^3$) | 80 | 30 | West | 0 | 0 | 2.5 | 13.6 | 13 | 9 | 9.8 | 65.3 | 6.8 | 12 | 99.6 |
| $PM_{10}$ (µg/m$^3$) | - | - | West | - | - | 6.9 | 63.7 | 4 | 15 | 4.3 | 220.5 | 18.6 | 4 | 99.6 |
| TSP (µg/m$^3$) | - | 100 | West | - | 0 | 15.3 | 181.3 | 4 | 9 | 15.9 | 261.8 | 44.4 | 4 | 99.6 |

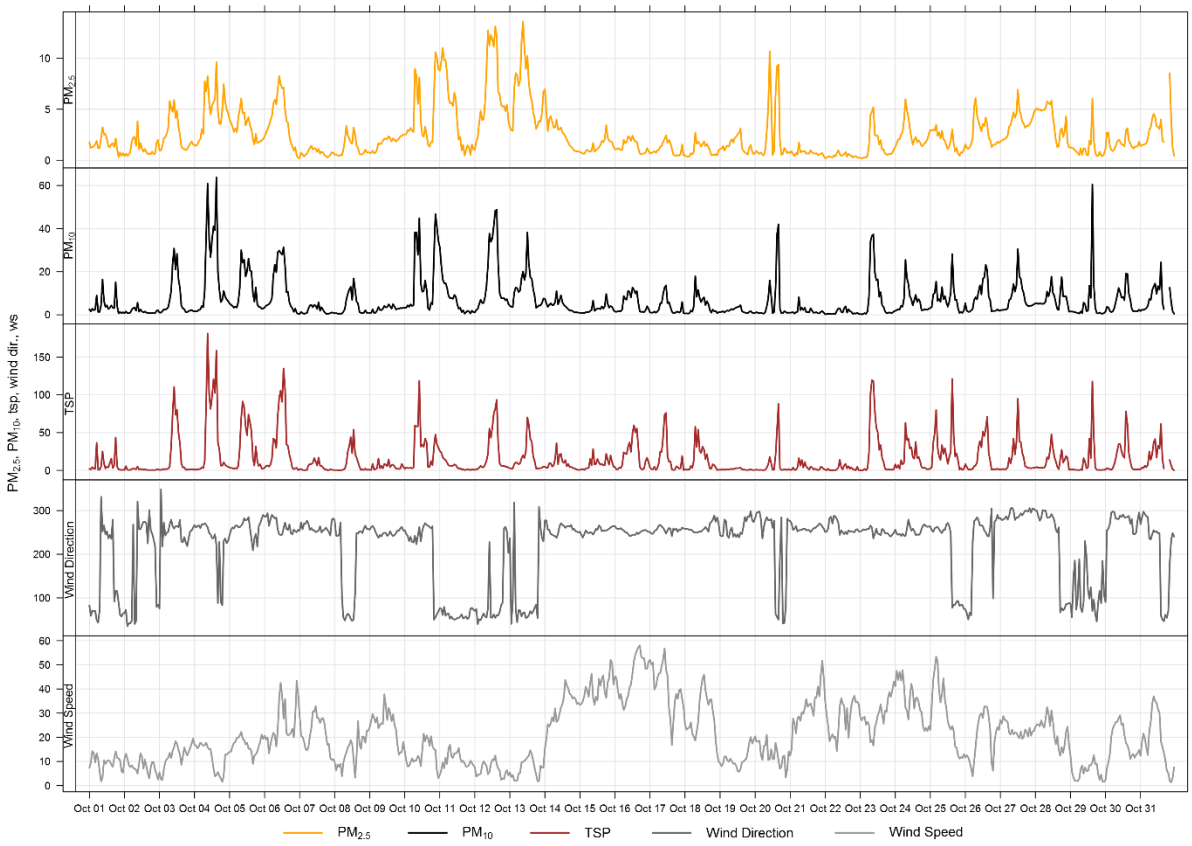


**Figure 4-1 1-hour particulate matter concentrations at the West monitor**

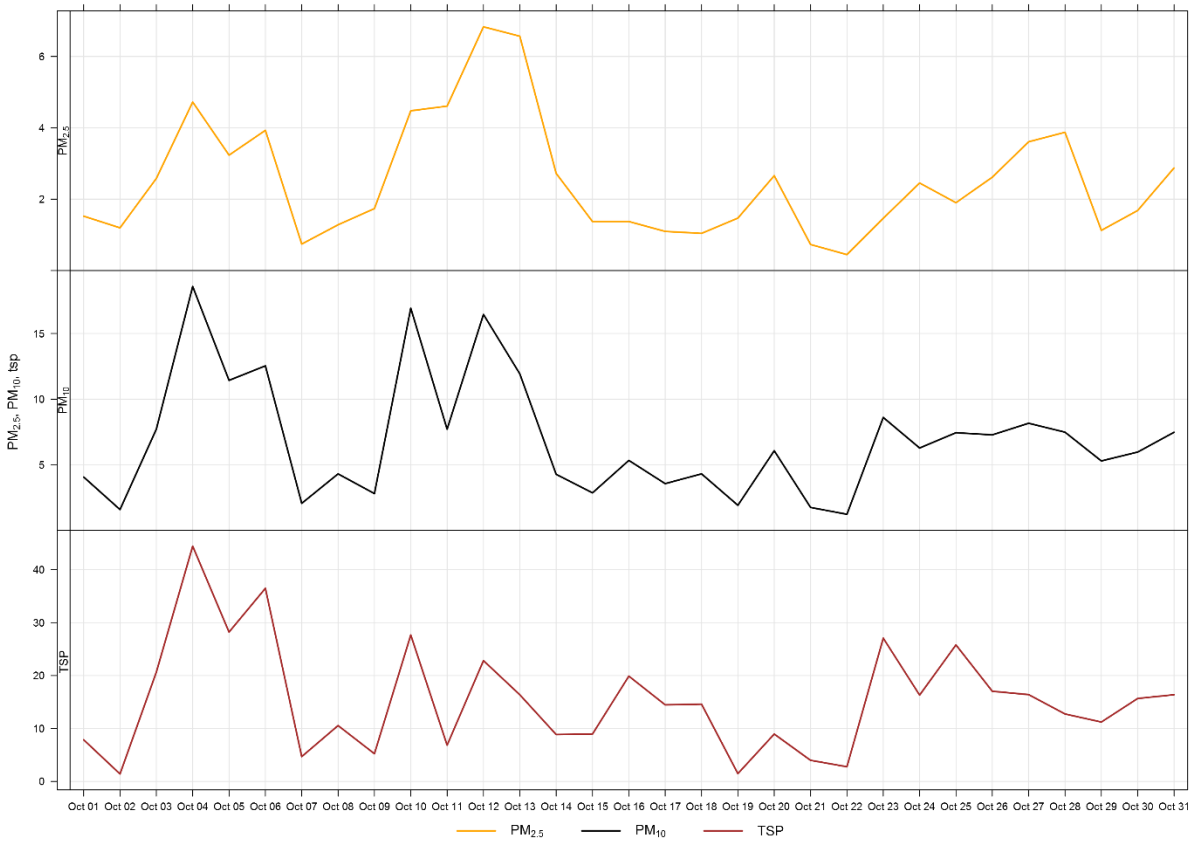


**Figure 4-2 24-hour particulate matter concentrations at the West monitor**

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 October 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.

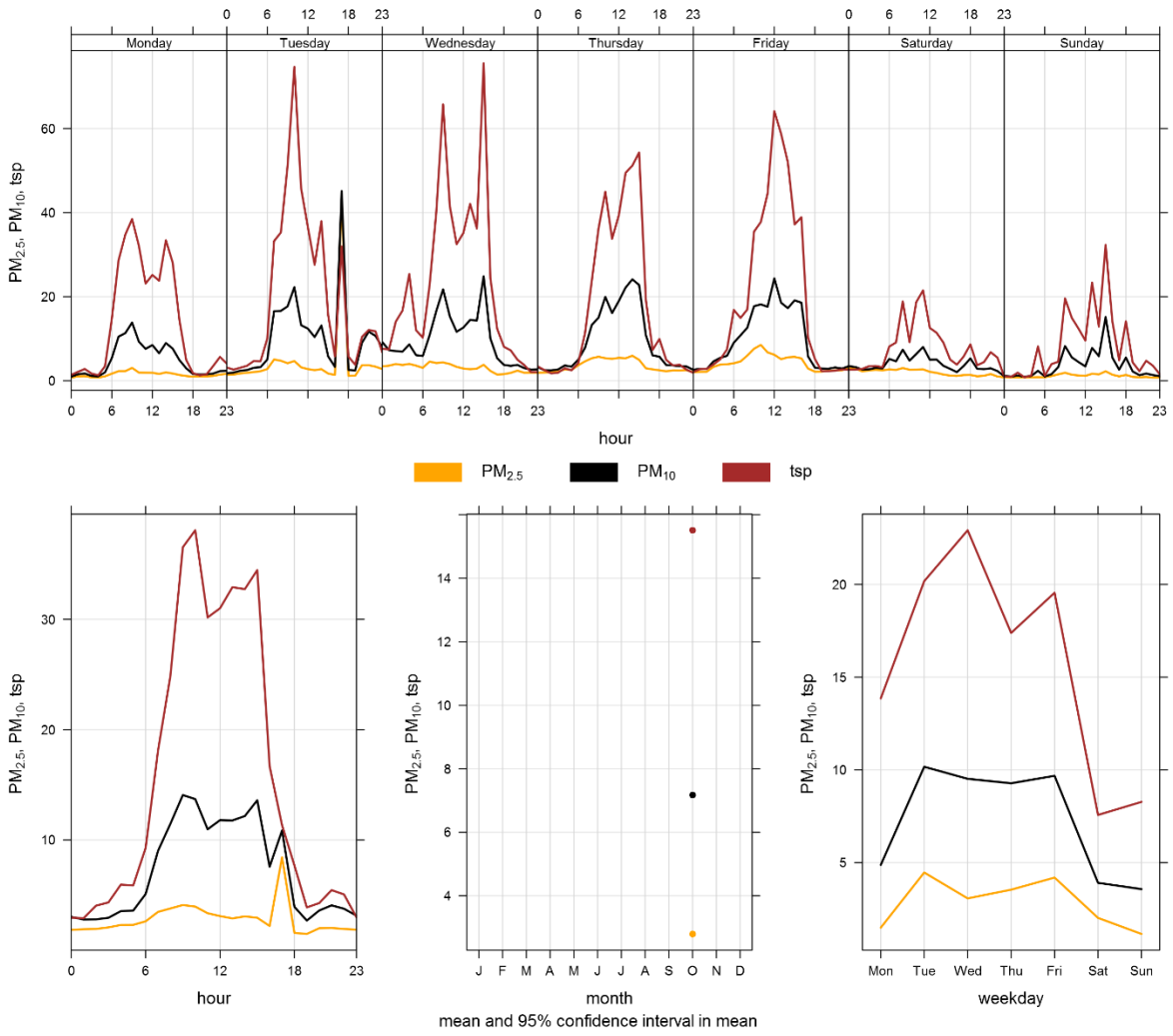


**Figure 4-3 West particulate matter time variation**

# 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 October, 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 for the facility in 2009. Figure 5-1 and Figure 5-2 show the hourly and daily $PM_{2.5}$, $PM_{10}$ and TSP concentrations recorded over the month. Table 5-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month, and Table 5-3 summarizes the recorded exceedances.

In October, there were 20 and 0 exceedances of the 24-hour TSP (30 µg/m$^3$) and $PM_{2.5}$ (100 µg/m$^3$) Guidelines. Historically, the Berm monitor records an average of 15 and 0 exceedances of the 24-hour TSP and $PM_{2.5}$ Guidelines respectively, during the month of October. The largest number of TSP exceedances recorded during October occurred in 2014, which had 21 days that exceeded the Guideline. The fewest number of TSP exceedances was recorded during October 2016, which had 9 days that exceeded the Guideline. The largest number of $PM_{2.5}$ exceedances recorded during October occurred in 2012, which had 1 day that exceeded the Guideline.

As mentioned previously, in October, the frequency of high wind speeds over 20 km/h significantly increased. These high wind speeds accounted for roughly 35% of all hourly wind speed records this month as opposed to 3% in September. The substantial increase in the wind intensity was responsible for the high concentrations of particulate recorded in October.

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

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

**Table 5-2 Summary of October 2017 data at the Berm GRIMM**

| Parameter | Guideline | | Station | Exceedances | | Monthly Average | Maximum 1-hour | | | | | Maximum 24-hour | | Operational Time (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | | 1-hr | 24-hr | | Maximum Concentration | Day | Hour | Wind Speed (km/hr) | Wind Direction (degrees) | Maximum Concentration | Day | |
| $PM_{2.5}$ (µg/m$^3$) | 80 | 30 | Berm | 3 | 0 | 9.1 | 144.6 | 17 | 11 | 47.9 | 247.4 | 25.5 | 15 | 100.0 |
| $PM_{10}$ (µg/m$^3$) | - | - | Berm | - | - | 69.4 | 1394.9 | 17 | 11 | 47.9 | 247.4 | 216.9 | 15 | 100.0 |
| TSP (µg/m$^3$) | - | 100 | Berm | - | 20 | 263.5 | 3294.3 | 25 | 3 | 48.3 | 259.1 | 920.7 | 15 | 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 (degrees) | Average Wind Speed (km/hr) | Average RH (%) | Root Cause (Provided by Lafarge) |
|---|---|---|---|---|---|---|
| Berm | | | | | | |
| 10/6/2017 | 432.5 | - | 262.1 | 25.4 | 42.2 | high wind event |
| 10/7/2017 | 305.6 | - | 258.6 | 21.8 | 46.6 | high wind event |
| 10/8/2017 | 122.5 | - | 274.8 | 14.0 | 54.4 | |
| 10/9/2017 | 348.9 | - | 249.8 | 25.2 | 36.2 | high wind event |
| 10/10/2017 | 256.2 | - | 256.1 | 13.0 | 43.0 | |
| 10/14/2017 | 801.0 | - | 257.7 | 31.7 | 45.9 | high wind event |
| 10/15/2017 | 920.7 | - | 254.2 | 40.4 | 39.3 | high wind event |
| 10/16/2017 | 691.9 | - | 251.5 | 45.3 | 38.1 | high wind event |
| 10/17/2017 | 708.7 | - | 256.0 | 40.9 | 41.0 | high wind event |
| 10/18/2017 | 238.8 | - | 260.6 | 28.2 | 41.1 | high wind event |
| 10/21/2017 | 125.8 | - | 259.8 | 32.0 | 43.5 | high wind event |
| 10/22/2017 | 105.5 | - | 257.4 | 28.1 | 64.2 | high wind event |
| 10/23/2017 | 476.9 | - | 250.6 | 29.0 | 42.6 | high wind event |
| 10/24/2017 | 567.2 | - | 252.7 | 35.0 | 42.5 | high wind event |
| 10/25/2017 | 697.5 | - | 256.3 | 28.8 | 42.0 | high wind event |
| 10/26/2017 | 177.5 | - | 269.2 | 19.6 | 55.8 | |
| 10/27/2017 | 112.9 | - | 291.5 | 22.9 | 51.0 | high wind event |
| 10/28/2017 | 150.7 | - | 295.4 | 22.6 | 54.3 | high wind event |
| 10/30/2017 | 267.1 | - | 281.8 | 17.6 | 44.7 | |
| 10/31/2017 | 413.7 | - | 262.8 | 18.1 | 60.2 | |

| Date | TSP (ug/m$^3$) | $PM_{2.5}$ (ug/m$^3$) | Average Wind Direction (degrees) | Average Wind Speed (km/hr) | Average RH (%) | Root Cause (Provided by Lafarge) |
|---|---|---|---|---|---|---|
| Berm | | | | | | |
| **Total # of Exceedances** | **20** | **0** | | | | |
| **Maximum # of Exceedances (October)** | **21 (2014)** | **1 (2012)** | | | | |
| **Average # of Exceedances (October)** | **15** | **0** | | | | |
| **Minimum # of Exceedances (October)** | **9 (2016)** | **0 (2010, 2011, 2013 ~ 2016)** | | | | |

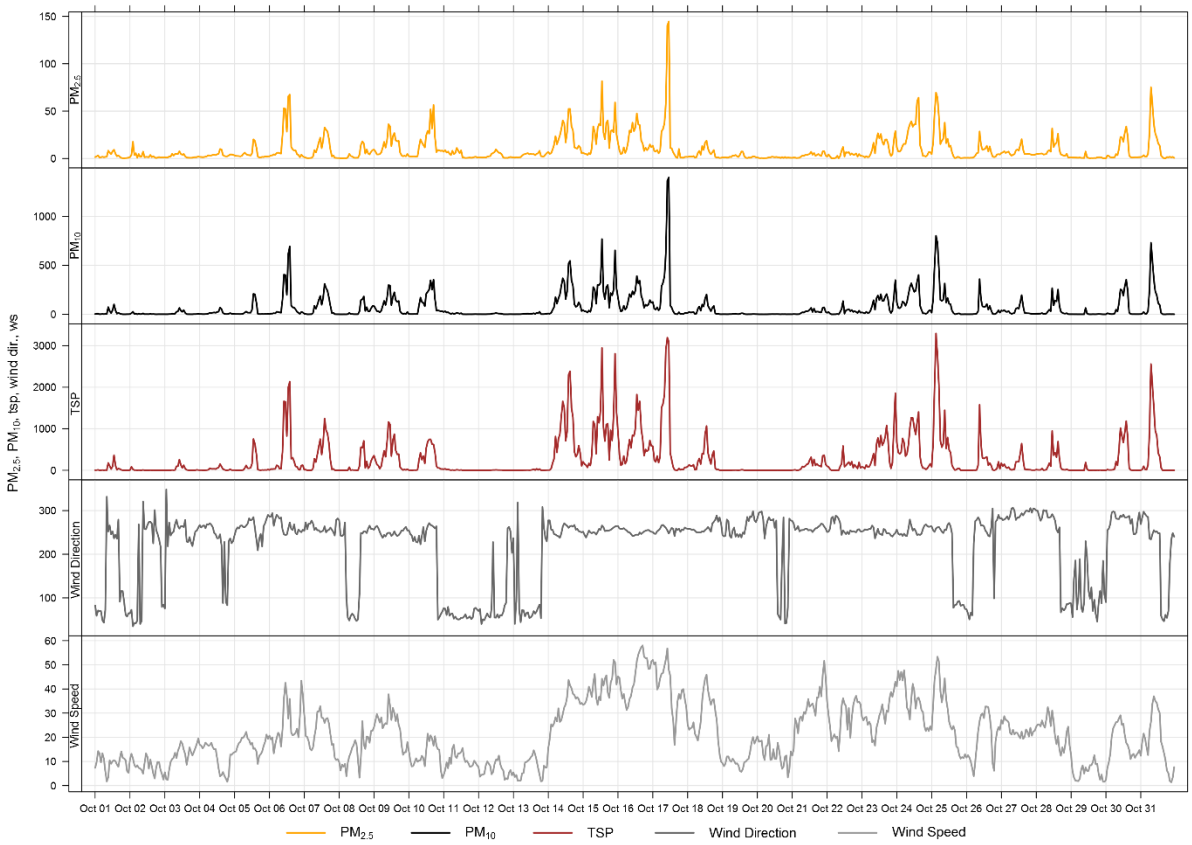


**Figure 5-1 1-hour particulate matter concentrations recorded at the Berm monitor**

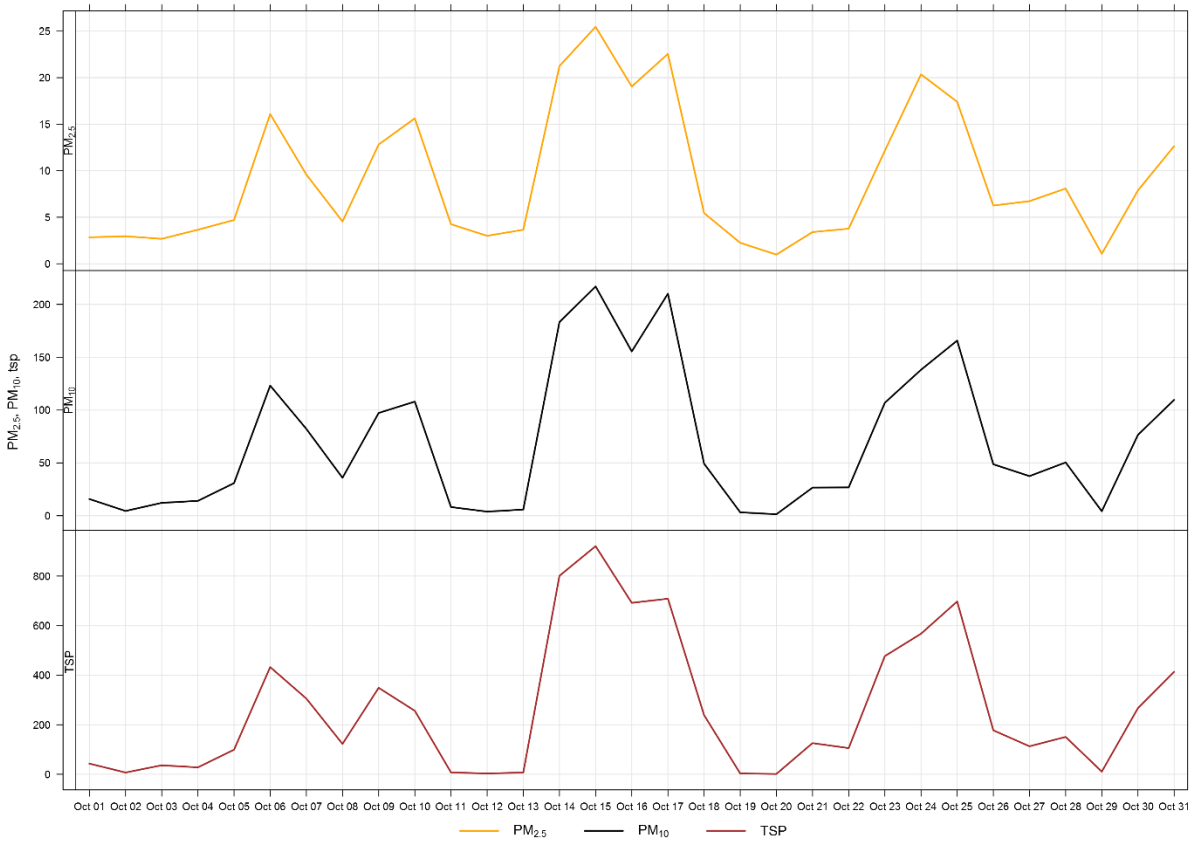


**Figure 5-2 24-hour particulate matter concentrations recorded at the Berm monitor**

Figure 5-3 shows the wind rose for the 20 days which recorded a TSP exceedance. This wind rose shows that the winds predominantly come from the west and over 25 km/kr.

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.

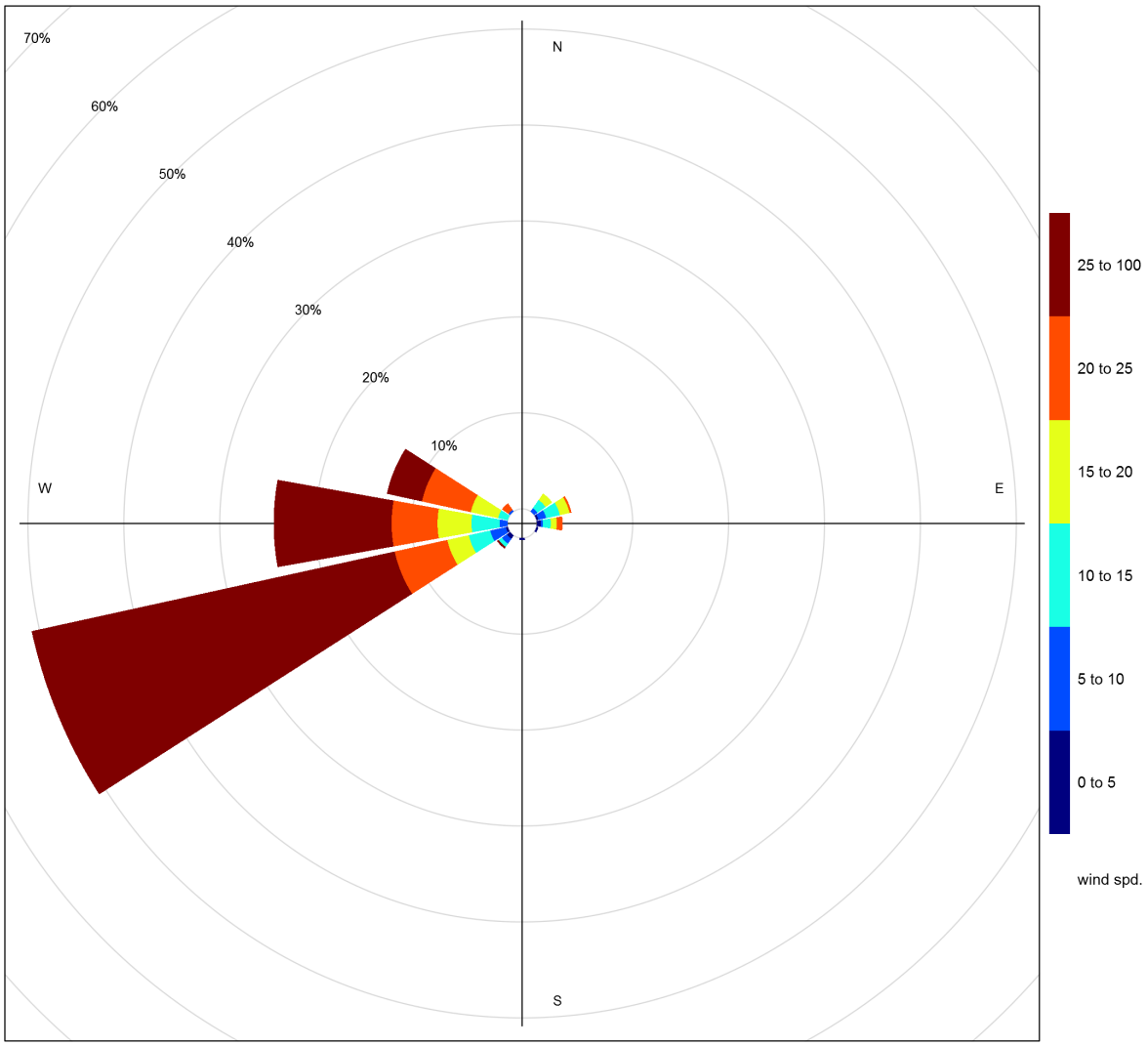


**Figure 5-3 Wind rose for TSP exceedance days recorded at the Berm GRIMM**

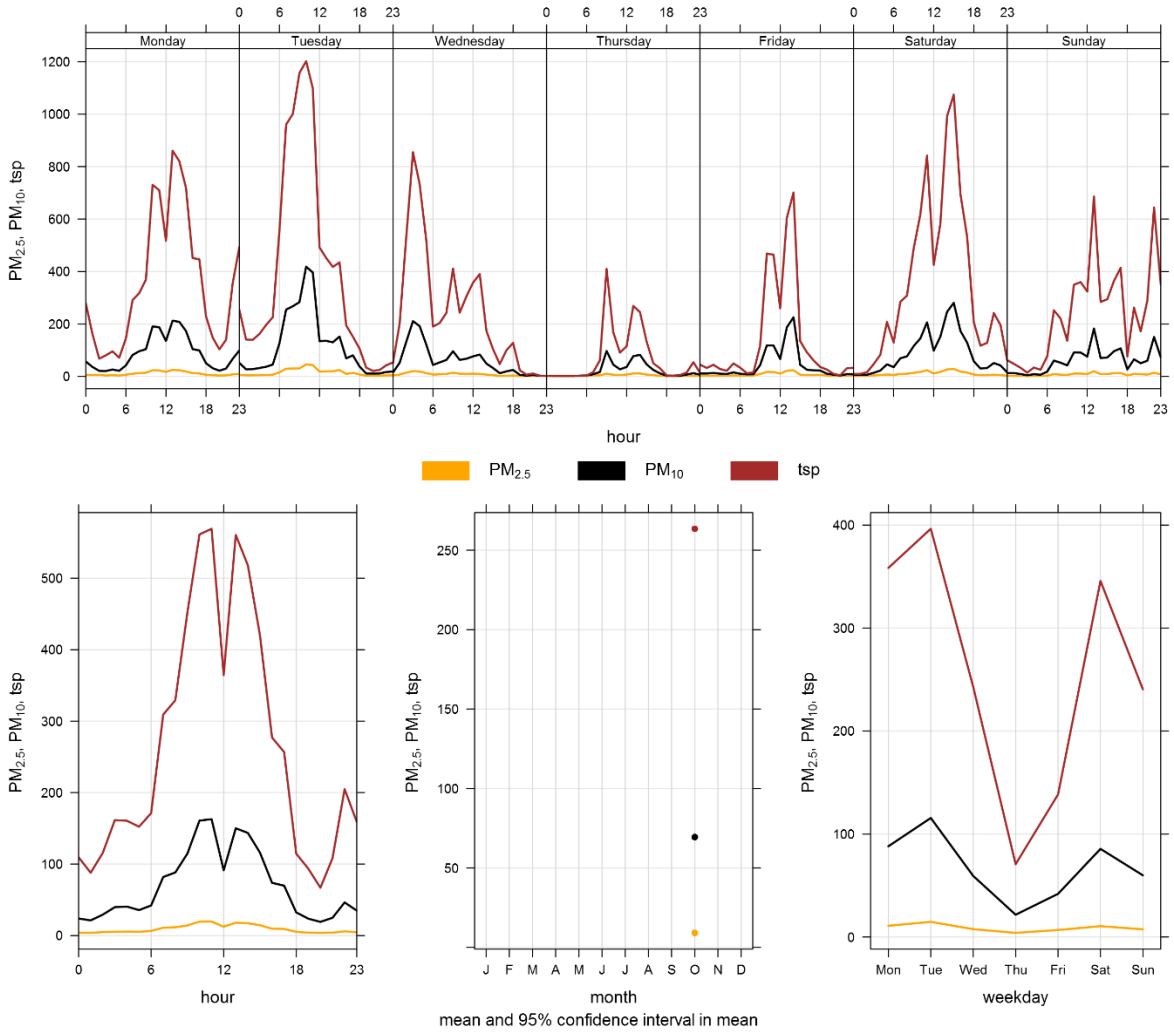


**Figure 5-4 Berm particulate matter time variation**

# 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 October, 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. Figure 6-1 and Figure 6-2 show the hourly and daily $PM_{2.5}$, $PM_{10}$ and TSP concentrations recorded over the month. Table 6-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month. Table 6-3 summarizes the recorded exceedances.

During October, there were 19 and 1 exceedances of the 24-hour TSP (100 µg/m$^3$) and $PM_{2.5}$ (30 µg/m$^3$) Guideline, respectively. Historically, the Entrance monitor records an average of 15 and 0 exceedances of the 24-hour TSP and $PM_{2.5}$ Guidelines respectively, during the month of October. The largest number of TSP exceedances recorded during October occurred in 2014, which had 26 days that exceeded the Guideline. The fewest number of TSP exceedances recorded during October occurred in 2011, which had 5 days that exceeded the Guideline. The largest number of $PM_{2.5}$ exceedances recorded during October occurred in 2010 and 2012, which had 2 days that exceeded the Guideline.

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

The Entrance monitor is impacted by fugitive dust from plant activities, and the high wind events described under the Berm monitor section. Trucks also queue nearby the Entrance monitor while waiting to be loaded with material. Additionally, the monitor is closely located to Highway 1A. Traffic, particularly large trucks, can create dust while crossing over the railway tracks. This can all lead to the monitor recording high TSP concentrations, which are typically associated with fugitive dust sources.

Figure 6-3 and Figure 6-4 show the wind roses for the days that exceeded the TSP and PM2.5 Guidelines at the Entrance GRIMM. During the 19 TSP exceedance days, winds were predominantly from the west and above 25 km/hr.

**Table 6-2 Summary of October 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 | |
| $PM_{2.5}$ ($\mu g/m^3$) | 80 | 30 | Entrance | 5 | 1 | 10.9 | 236.7 | 4 | 2 | 15.4 | 264.9 | 36.3 | 4 | 100.0 |
| $PM_{10}$ ($\mu g/m^3$) | - | - | Entrance | - | - | 58.4 | 1707.4 | 17 | 10 | 56.8 | 254.8 | 179.1 | 4 | 100.0 |
| TSP ($\mu g/m^3$) | - | 100 | Entrance | - | 19 | 178.8 | 3197.5 | 17 | 10 | 56.8 | 254.8 | 528.5 | 6 | 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 (degrees) | Average Wind Speed (km/hr) | Average RH (%) | Root Cause (Provided by Lafarge) |
|---|---|---|---|---|---|---|
| Entrance | | | | | | |
| 10/3/2017 | 158.7 | - | 253.4 | 12.4 | 75.0 | |
| 10/4/2017 | 275.3 | 36 | 254.0 | 11.7 | 64.3 | |
| 10/5/2017 | 251.9 | - | 263.2 | 16.8 | 56.5 | |
| 10/6/2017 | 528.5 | - | 262.1 | 25.4 | 42.2 | high wind event |
| 10/10/2017 | 141.5 | - | 256.1 | 13.0 | 43.0 | |
| 10/13/2017 | 119.8 | - | 63.8 | 7.1 | 81.4 | |
| 10/14/2017 | 217.4 | - | 257.7 | 31.7 | 45.9 | high wind event |
| 10/15/2017 | 336.4 | - | 254.2 | 40.4 | 39.3 | high wind event |
| 10/16/2017 | 342.6 | - | 251.5 | 45.3 | 38.1 | high wind event |
| 10/17/2017 | 510.2 | - | 256.0 | 40.9 | 41.0 | high wind event |
| 10/18/2017 | 264.6 | - | 260.6 | 28.2 | 41.1 | high wind event |
| 10/21/2017 | 185.4 | - | 259.8 | 32.0 | 43.5 | high wind event |
| 10/23/2017 | 172.2 | - | 250.6 | 29.0 | 42.6 | high wind event |
| 10/24/2017 | 119.6 | - | 252.7 | 35.0 | 42.5 | high wind event |
| 10/25/2017 | 359.1 | - | 256.3 | 28.8 | 42.0 | high wind event |
| 10/27/2017 | 377.8 | - | 291.5 | 22.9 | 51.0 | high wind event |
| 10/28/2017 | 320.4 | - | 295.4 | 22.6 | 54.3 | high wind event |
| 10/30/2017 | 258.7 | - | 281.8 | 17.6 | 44.7 | |
| 10/31/2017 | 165.0 | - | 262.8 | 18.1 | 60.2 | |
| **Total # of Exceedances** | **19** | **1** | | | | |
| **Maximum # of Exceedances (October)** | **26 (2014)** | **2 (2010, 2012)** | | | | |
| **Average # of Exceedances (October)** | **15** | **0** | | | | |
| **Minimum # of Exceedances (October)** | **5 (2011)** | **0 (2011, 2013 ~ 2016)** | | | | |

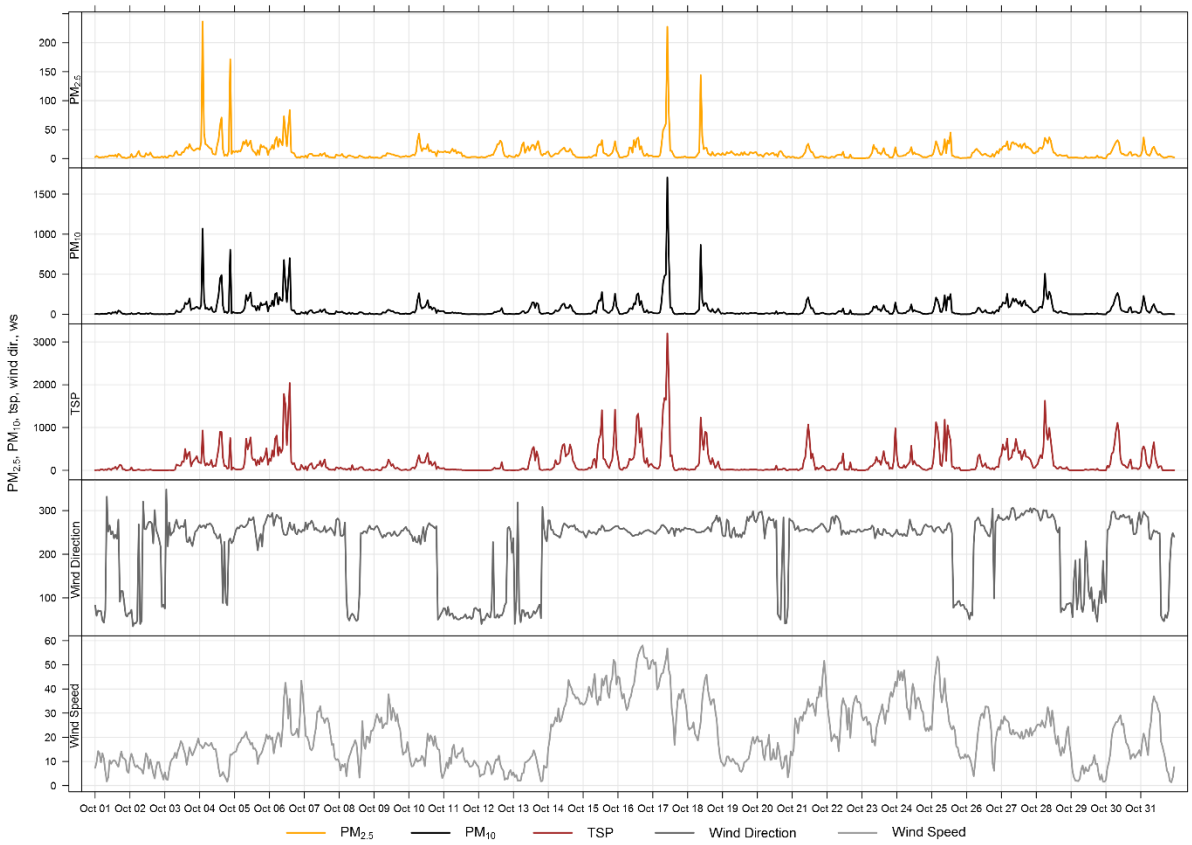


**Figure 6-1 1-hour particulate matter concentrations recorded at the Entrance monitor**

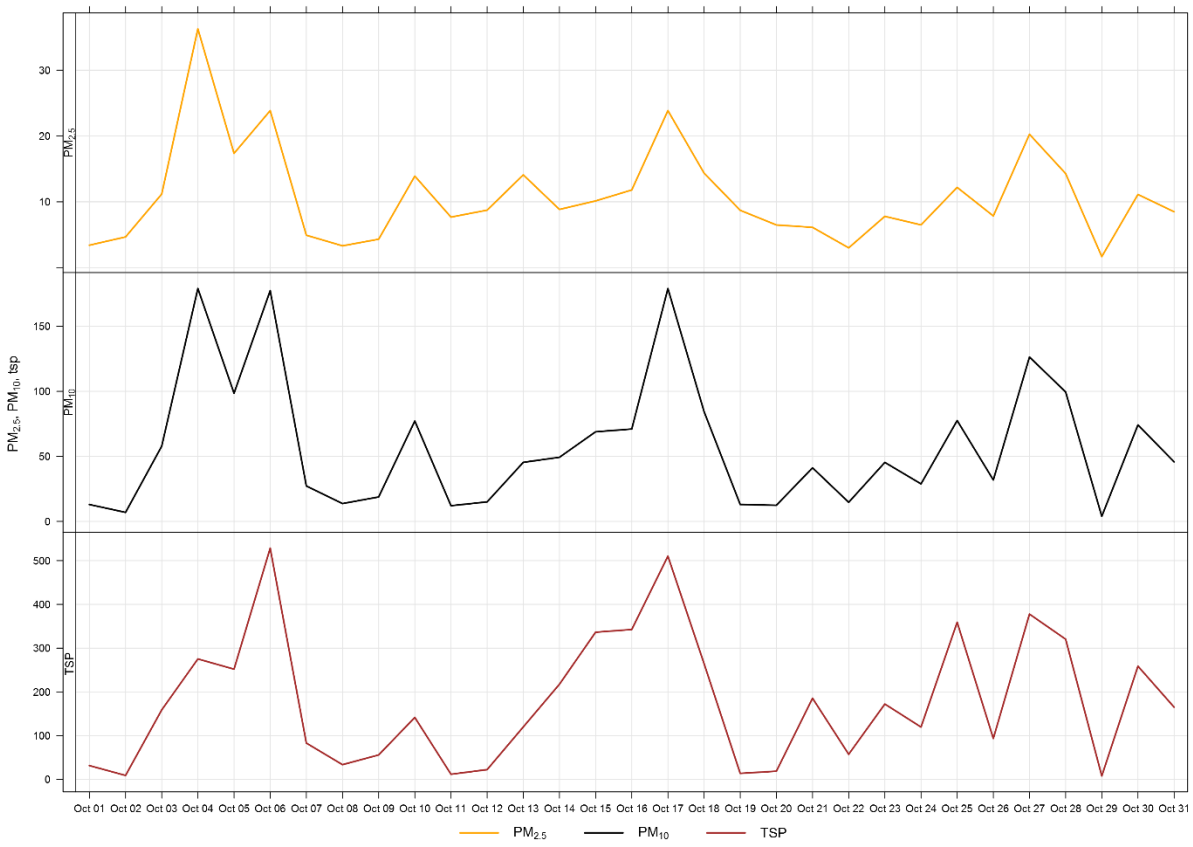


**Figure 6-2 24-hour particulate matter concentrations at the Entrance monitor**

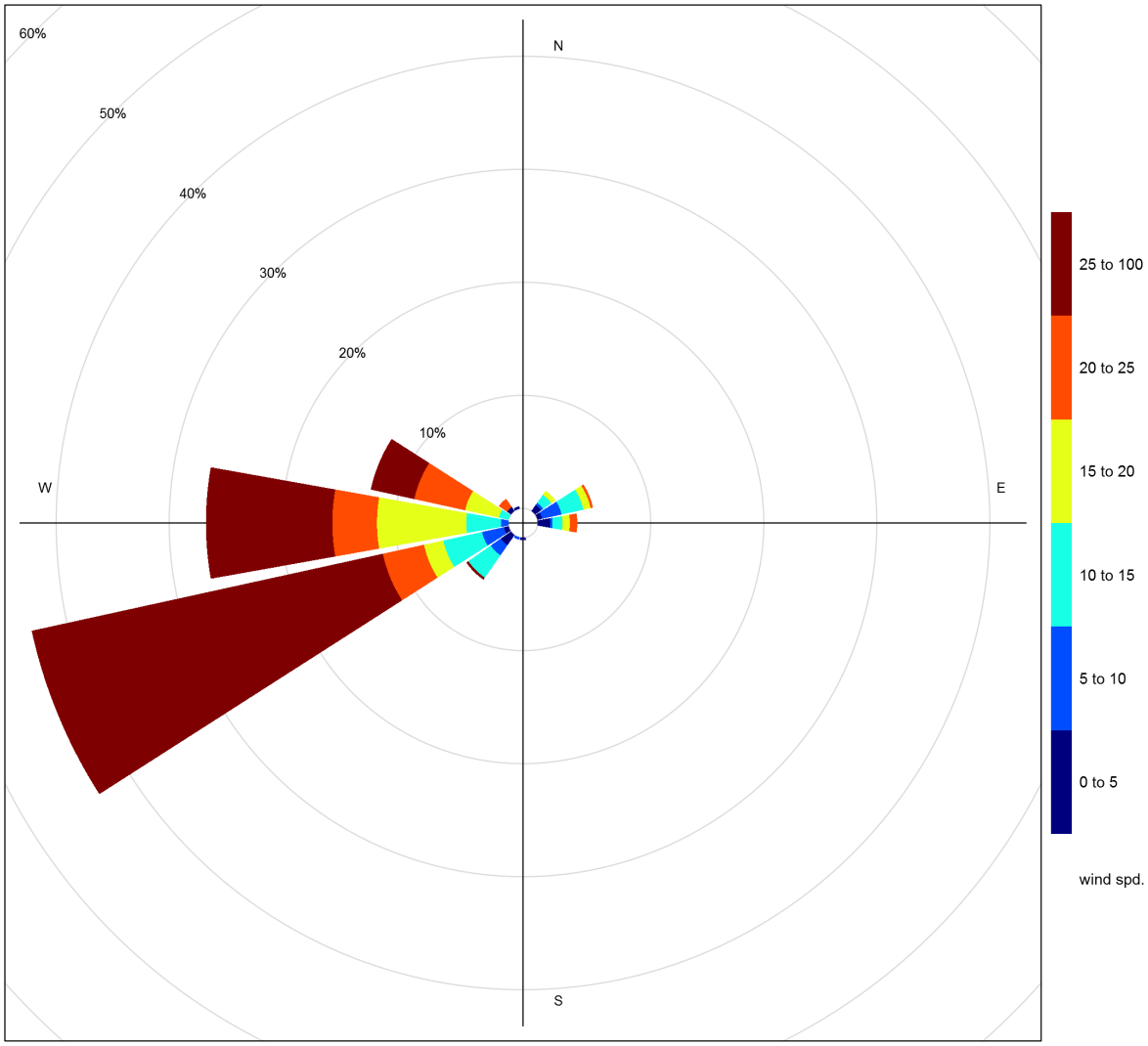


**Figure 6-3 Wind rose for TSP exceedance days recorded at the Entrance GRIMM**

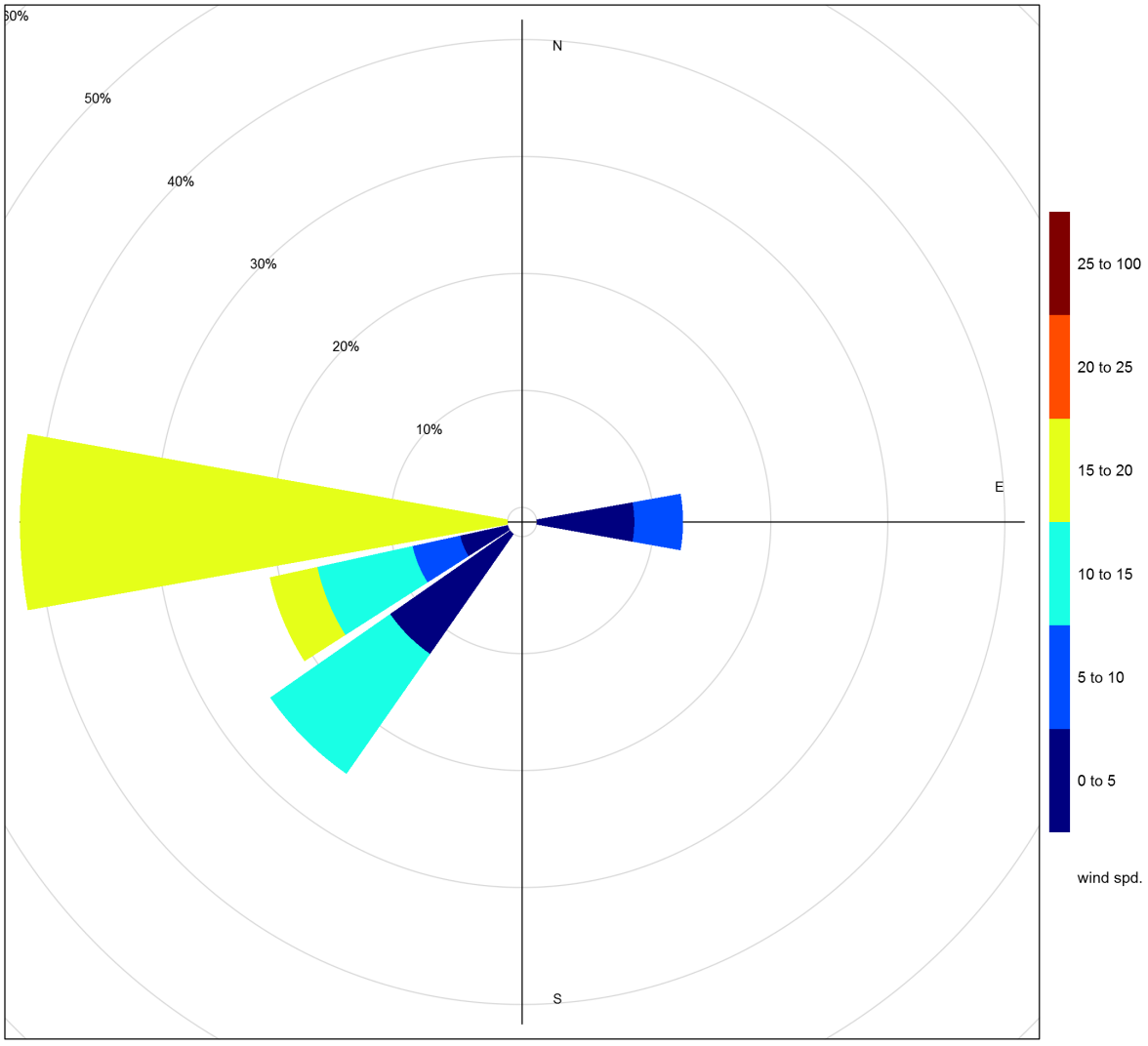


**Figure 6-4 Wind rose for PM2.5 exceedance days recorded at the Entrance GRIMM**

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

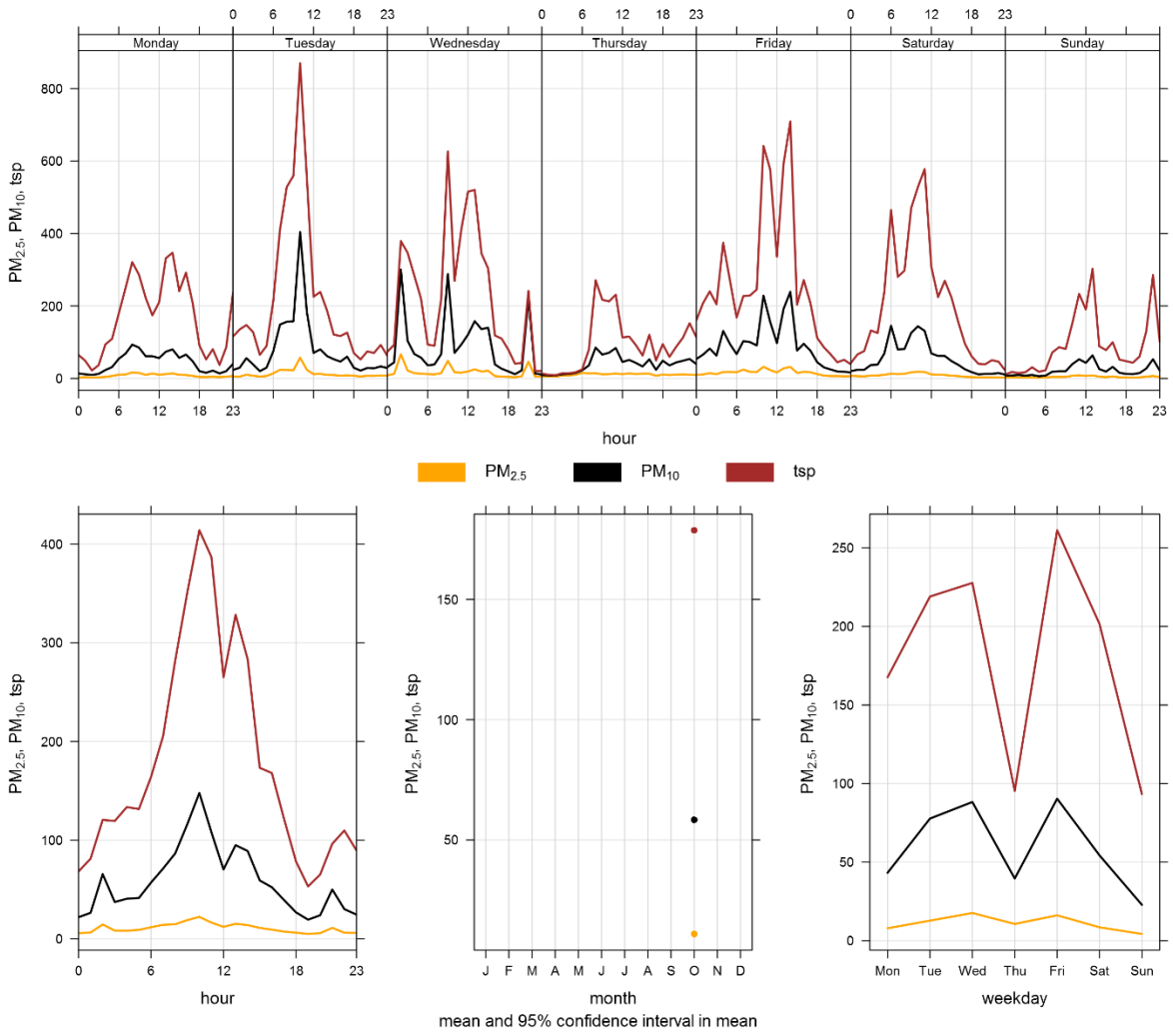


**Figure 6-5 Entrance particulate matter time variation**

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

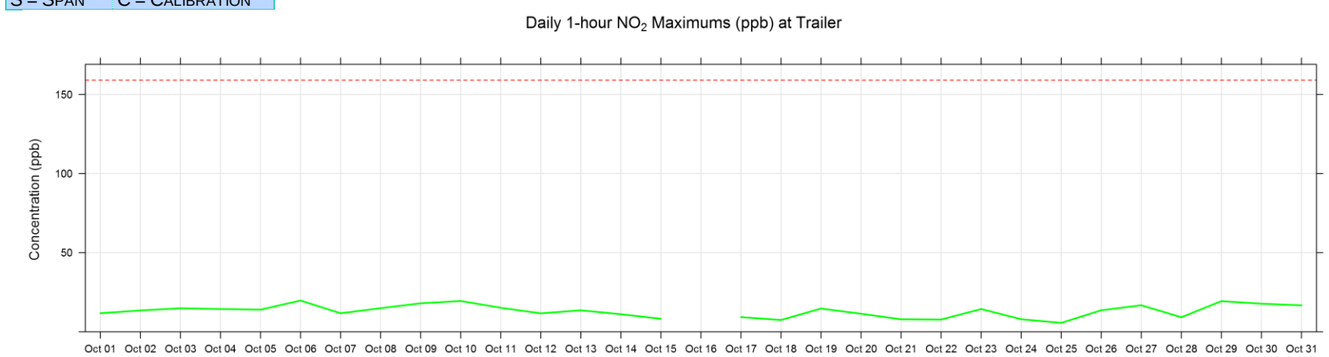
# Appendix A

**DATA & CALIBRATION REPORTS**

# Lagoon $NO_2$ (ppb) – October 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 | 1.3 | **S** | 0.2 | 0.0 | 0.5 | 4.0 | 1.6 | 1.7 | 7.4 | 10.7 | 11.7 | 5.0 | 2.6 | 1.3 | 0.3 | 0.6 | 5.3 | 1.7 | 0.0 | 0.0 | 0.0 | 0.5 | 3.2 | 4.8 | 11.7 | 2.8 |
| 2 | 3.9 | **S** | 3.6 | 4.3 | 4.3 | 2.6 | 8.4 | 6.6 | 11.5 | 8.4 | 5.3 | 2.5 | 3.6 | 3.6 | 7.5 | 8.2 | 5.5 | 7.5 | 4.4 | 4.9 | 7.4 | 4.0 | 13.5 | 12.0 | 13.5 | 6.2 |
| 3 | 14.9 | **S** | 10.1 | 8.2 | 12.4 | 12.3 | 13.5 | 13.4 | 7.9 | 8.2 | 6.7 | 8.8 | 11.9 | 10.6 | 8.1 | 2.0 | 1.6 | 0.3 | 2.3 | 6.3 | 8.8 | 11.7 | 10.5 | 13.3 | 14.9 | 8.9 |
| 4 | 12.1 | **S** | 7.3 | 6.3 | 11.1 | 10.4 | 10.6 | 11.9 | 14.3 | 8.3 | 5.0 | 4.9 | 3.8 | 4.3 | 7.5 | 6.6 | 4.4 | 5.6 | 9.7 | 8.8 | 10.0 | 11.9 | 13.4 | 14.4 | 14.4 | 8.8 |
| 5 | 14.0 | **S** | 8.6 | 11.4 | 11.5 | 12.3 | 12.1 | 12.7 | 12.2 | 10.9 | 7.9 | 9.2 | 11.0 | 10.3 | 1.4 | 1.4 | 0.4 | 4.6 | 2.2 | 7.4 | 9.8 | 9.3 | 11.0 | 6.8 | 14.0 | 8.6 |
| 6 | 7.0 | **S** | 7.6 | 5.2 | 9.4 | 13.1 | 17.6 | 13.2 | 14.2 | 5.3 | 0.0 | 0.0 | 0.0 | 10.1 | 16.1 | 16.8 | 13.0 | 19.8 | 1.6 | 0.0 | 3.2 | 3.2 | 0.4 | 5.0 | 19.8 | 7.9 |
| 7 | 4.4 | **S** | 5.4 | 6.4 | 10.6 | 7.0 | 6.6 | 11.7 | 8.0 | 5.1 | 0.2 | 0.0 | 0.0 | 0.8 | 5.8 | 0.2 | 1.3 | 1.1 | 2.6 | 7.3 | 3.2 | 3.0 | 2.1 | 6.2 | 11.7 | 4.3 |
| 8 | 2.0 | **S** | 3.3 | 2.0 | 7.6 | 12.5 | 14.9 | 10.2 | 7.1 | 1.5 | 3.2 | 2.4 | 1.2 | 3.7 | 14.3 | 9.4 | 0.0 | 2.0 | 0.0 | 3.0 | 5.4 | 4.6 | 5.8 | 3.2 | 14.9 | 5.2 |
| 9 | 1.8 | **S** | 2.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 1.5 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 9.8 | 2.4 | 9.4 | 18.0 | 11.6 | 18.0 | 2.6 |
| 10 | 2.1 | **S** | 1.1 | 1.3 | 5.2 | 6.0 | 11.3 | 18.4 | 13.6 | 7.6 | 8.5 | 4.2 | 1.8 | 3.2 | 5.6 | 4.5 | 3.9 | 4.2 | 5.5 | 5.9 | 19.5 | 18.4 | 17.7 | 18.2 | 19.5 | 8.2 |
| 11 | 15.2 | **S** | 15.2 | 14.4 | 9.9 | 8.7 | 8.9 | 10.6 | 11.9 | 13.2 | 9.2 | 9.5 | 9.9 | 6.7 | 6.5 | 1.9 | 4.0 | 5.9 | 3.4 | 6.5 | 9.3 | 3.6 | 2.6 | 5.6 | 15.2 | 8.4 |
| 12 | 0.3 | **S** | 5.4 | 6.1 | 2.9 | 6.6 | 5.9 | 2.9 | 4.4 | 6.2 | 6.3 | 10.8 | 11.3 | 9.4 | 10.4 | 11.7 | 11.1 | 6.4 | 5.0 | 7.4 | 8.1 | 7.8 | 9.2 | 10.5 | 11.7 | 7.2 |
| 13 | 8.7 | **S** | 10.7 | 11.1 | 11.9 | 12.4 | 13.6 | 13.5 | 10.9 | 7.2 | 6.4 | 8.3 | 3.9 | 4.7 | 2.8 | 6.3 | 5.1 | 2.4 | 6.6 | 10.4 | 8.6 | 3.1 | 7.2 | 12.4 | 13.6 | 8.2 |
| 14 | 11.1 | **S** | 2.8 | 3.4 | 0.1 | 0.6 | 2.1 | 0.3 | 0.0 | 1.1 | 4.8 | 8.1 | 5.9 | 6.2 | 2.9 | 5.3 | 5.5 | 6.7 | 9.5 | 6.3 | 3.4 | 1.8 | 1.2 | 0.4 | 11.1 | 3.9 |
| 15 | 2.3 | **S** | 0.0 | 0.0 | 1.3 | 0.0 | 1.4 | 0.0 | 0.1 | 0.0 | 1.5 | 6.9 | 5.1 | 6.3 | 5.6 | 1.7 | 1.2 | 0.0 | 2.6 | 4.7 | 6.4 | 8.2 | 5.3 | 7.5 | 8.2 | 3.0 |
| 16 | 5.6 | **S** | 3.3 | 1.0 | 5.6 | 2.4 | 3.4 | 5.5 | 1.7 | **C** | **C** | **C** | **C** | **C** | **C** | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.3 | 1.3 | 0.0 | - | - |
| 17 | 0.0 | **S** | 0.0 | 1.2 | 3.4 | 3.9 | 7.7 | 9.3 | 4.9 | 5.2 | 0.6 | 0.3 | 0.0 | 1.9 | 4.3 | 3.1 | 3.0 | 3.5 | 2.3 | 2.2 | 2.2 | 1.2 | 6.6 | 2.3 | 9.3 | 3.0 |
| 18 | 2.7 | **S** | 1.4 | 2.3 | 4.0 | 3.6 | 2.7 | 7.5 | 3.6 | 0.8 | 0.8 | 0.0 | 0.5 | 1.1 | 5.5 | 4.7 | 4.1 | 6.6 | 3.5 | 5.0 | 3.2 | 1.8 | 3.7 | 2.6 | 7.5 | 3.1 |
| 19 | 7.3 | **S** | 7.3 | 4.7 | 2.5 | 6.7 | 11.0 | 14.7 | 11.3 | 14.0 | 9.2 | 8.6 | 8.7 | 9.2 | 12.4 | 9.8 | 6.1 | 0.6 | 3.4 | 0.3 | 2.2 | 1.7 | 4.0 | 2.8 | 14.7 | 6.9 |
| 20 | 2.4 | **S** | 1.8 | 0.9 | 1.1 | 1.7 | 4.1 | 5.1 | 4.2 | 4.8 | 4.6 | 3.4 | 0.9 | 2.8 | 1.6 | 1.1 | 2.4 | 1.8 | 2.4 | 1.1 | 11.4 | 9.9 | 7.2 | 2.2 | 11.4 | 3.4 |
| 21 | 2.2 | **S** | 0.6 | 0.5 | 5.0 | 0.2 | 2.6 | 7.9 | 3.7 | 3.6 | 1.7 | 0.9 | 0.3 | 0.6 | 0.0 | 0.0 | 1.3 | 3.7 | 6.0 | 1.1 | 3.8 | 1.7 | 2.2 | 1.7 | 7.9 | 2.2 |
| 22 | 0.1 | **S** | 4.2 | 0.2 | 0.0 | 0.0 | 2.1 | 3.4 | 2.2 | 4.8 | 0.0 | 1.4 | 0.9 | 0.0 | 0.1 | 0.0 | 0.9 | 0.0 | 0.0 | 0.1 | 0.0 | 2.0 | 7.8 | 2.1 | 7.8 | 1.4 |
| 23 | 0.8 | **S** | 1.3 | 0.7 | 4.3 | 3.2 | 10.1 | 13.7 | 14.4 | 2.0 | 2.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.7 | 0.2 | 2.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 14.4 | 2.5 |
| 24 | 1.1 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 2.7 | 8.0 | 5.1 | 1.5 | 2.5 | 3.2 | 4.5 | 1.9 | 0.3 | 0.0 | 1.4 | 2.0 | 2.2 | 4.7 | 4.8 | 3.0 | 8.0 | 2.2 |
| 25 | 2.9 | **S** | 0.1 | 3.9 | 3.4 | 4.3 | 4.3 | 3.8 | 1.5 | 2.9 | 2.6 | 5.4 | 3.7 | 5.7 | 0.7 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 5.7 | 2.0 |
| 26 | 0.0 | **S** | 0.2 | 1.8 | 13.6 | 10.6 | 11.0 | 6.6 | 5.4 | 6.2 | 2.8 | 2.5 | 3.3 | 3.4 | 1.0 | 0.0 | 0.1 | 7.8 | 4.7 | 7.5 | 10.8 | 10.4 | 13.6 | 11.8 | 13.6 | 5.9 |
| 27 | 10.8 | **S** | 16.8 | 10.6 | 9.4 | 6.7 | 5.7 | 2.5 | 5.0 | 3.0 | 3.4 | 2.4 | 9.2 | 8.1 | 15.4 | 12.6 | 9.0 | 8.4 | 10.6 | 9.5 | 3.0 | 6.3 | 2.2 | 2.0 | 16.8 | 7.5 |
| 28 | 2.8 | **S** | 4.5 | 8.0 | 9.2 | 2.1 | 2.0 | 1.8 | 2.2 | 1.8 | 1.6 | 1.4 | 0.7 | 2.1 | 2.0 | 3.2 | 8.9 | 6.3 | 1.4 | 3.5 | 7.9 | 0.0 | 0.0 | 0.0 | 9.2 | 3.2 |
| 29 | 0.0 | **S** | 6.1 | 2.4 | 1.5 | 3.0 | 5.2 | 3.2 | 1.3 | 3.0 | 4.9 | 4.6 | 2.5 | 0.9 | 0.0 | 0.0 | 0.0 | 2.6 | 19.4 | 7.4 | 7.6 | 15.1 | 14.1 | 13.3 | 19.4 | 5.1 |
| 30 | 12.8 | **S** | 17.8 | 9.6 | 4.8 | 3.7 | 3.8 | 12.1 | 15.5 | 13.7 | 11.2 | 12.7 | 11.8 | 10.3 | 9.8 | 7.2 | 6.8 | 4.0 | 12.1 | 4.2 | 7.6 | 8.2 | 4.7 | 6.2 | 17.8 | 9.2 |
| 31 | 8.4 | **S** | 16.8 | 10.1 | 8.9 | 14.6 | 6.1 | 5.5 | 4.9 | 8.3 | 3.7 | 2.3 | 1.3 | 2.2 | 5.1 | 5.5 | 2.5 | 8.0 | 7.6 | 6.8 | 7.1 | 11.5 | 13.3 | 11.1 | 16.8 | 7.5 |
| Hourly Max | 15.2 | - | 17.8 | 14.4 | 13.6 | 14.6 | 17.6 | 18.4 | 15.5 | 14.0 | 11.7 | 12.7 | 11.9 | 10.6 | 16.1 | 16.8 | 13.0 | 19.8 | 19.4 | 10.4 | 19.5 | 18.4 | 18.0 | 18.2 | | |
| Hourly Average | 5.2 | - | 5.3 | 4.5 | 5.7 | 5.7 | 6.8 | 7.4 | 6.7 | 5.9 | 4.4 | 4.4 | 4.0 | 4.4 | 5.3 | 4.1 | 3.5 | 3.9 | 4.3 | 4.5 | 5.7 | 5.7 | 6.7 | 6.2 | | |

S = SPAN C = CALIBRATION

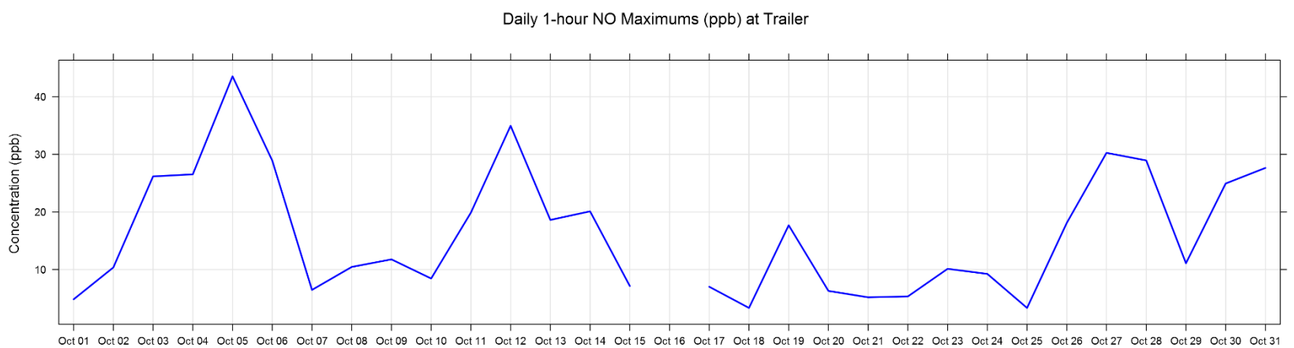



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | 0 | | Objective | 159 | PPB |
| Number of Non-Zero Readings | 632 | | | | |
| Maximum 1-HR Average | 19.8 | PPB | | | |
| Maximum 24-HR Average | 9.2 | PPB | | | |
| IZS Calibration Time | 31 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 6 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 4.5 | | Monthly Average | 5.2 | PPB |

# Lagoon NO (ppb) – October 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 | 2.2 | 0.3 | 0.0 | 0.0 | 1.4 | 4.8 | 1.1 | 0.7 | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 4.8 | 0.5 |
| 2 | 0.0 | S | 1.1 | 0.0 | 0.4 | 3.2 | 4.9 | 2.0 | 7.9 | 2.5 | 1.7 | 0.0 | 0.4 | 0.2 | 5.3 | 4.5 | 0.1 | 1.6 | 0.8 | 0.0 | 0.0 | 2.3 | 10.4 | 5.9 | 10.4 | 2.4 |
| 3 | 24.7 | S | 0.2 | 3.1 | 7.0 | 6.1 | 10.8 | 24.2 | 11.4 | 19.3 | 12.3 | 15.8 | 26.2 | 19.7 | 13.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.6 | 2.7 | 7.3 | 6.4 | 13.8 | 26.2 | 9.8 |
| 4 | 14.2 | S | 3.5 | 0.0 | 10.7 | 13.4 | 15.5 | 15.0 | 26.5 | 10.5 | 4.5 | 2.2 | 1.0 | 1.9 | 3.6 | 2.7 | 1.3 | 1.0 | 2.6 | 1.8 | 4.1 | 0.0 | 0.6 | 1.2 | 26.5 | 6.0 |
| 5 | 2.0 | S | 0.0 | 23.3 | 18.1 | 37.6 | 32.6 | 39.1 | 43.5 | 34.0 | 25.8 | 17.3 | 24.1 | 17.2 | 0.9 | 1.0 | 0.0 | 3.6 | 0.0 | 1.0 | 22.7 | 14.9 | 26.0 | 8.5 | 43.5 | 17.1 |
| 6 | 12.9 | S | 11.5 | 1.9 | 15.7 | 18.7 | 28.9 | 17.0 | 11.7 | 0.6 | 0.0 | 0.0 | 0.0 | 9.4 | 19.0 | 14.4 | 8.8 | 18.1 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 | 2.5 | 28.9 | 8.4 |
| 7 | 0.6 | S | 4.2 | 5.5 | 6.5 | 2.2 | 1.4 | 5.6 | 6.3 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 5.9 | 0.0 | 0.2 | 0.0 | 0.8 | 5.5 | 0.5 | 1.3 | 0.0 | 4.3 | 6.5 | 2.4 |
| 8 | 0.0 | S | 0.0 | 0.0 | 7.5 | 3.9 | 10.4 | 3.8 | 6.2 | 0.4 | 3.9 | 3.0 | 0.9 | 2.0 | 5.4 | 5.1 | 0.0 | 0.0 | 0.0 | 1.3 | 2.0 | 3.2 | 5.0 | 0.0 | 10.4 | 2.8 |
| 9 | 0.8 | S | 1.5 | 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 | 6.3 | 0.0 | 1.9 | 11.8 | 1.3 | 11.8 | 1.0 |
| 10 | 0.0 | S | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 8.4 | 5.0 | 3.3 | 5.6 | 1.3 | 0.0 | 0.7 | 2.8 | 0.9 | 0.0 | 0.4 | 4.5 | 6.5 | 7.0 | 7.4 | 6.8 | 1.6 | 8.4 | 2.8 |
| 11 | 5.0 | S | 19.9 | 11.9 | 16.3 | 3.6 | 7.9 | 9.5 | 9.1 | 14.8 | 16.4 | 13.1 | 10.2 | 5.9 | 5.7 | 0.7 | 2.1 | 2.8 | 0.2 | 2.8 | 5.3 | 3.7 | 0.2 | 3.8 | 19.9 | 7.4 |
| 12 | 0.0 | S | 0.0 | 2.4 | 0.6 | 4.6 | 3.4 | 0.0 | 5.9 | 15.4 | 15.2 | 35.0 | 30.1 | 25.0 | 22.9 | 25.0 | 24.5 | 0.7 | 1.1 | 2.9 | 0.7 | 1.2 | 2.9 | 3.1 | 35.0 | 9.7 |
| 13 | 1.4 | S | 18.6 | 8.1 | 7.7 | 7.5 | 14.0 | 10.6 | 5.6 | 3.1 | 5.0 | 9.1 | 2.9 | 4.1 | 3.0 | 4.8 | 3.6 | 0.0 | 0.9 | 8.2 | 1.3 | 0.4 | 0.0 | 2.4 | 18.6 | 5.3 |
| 14 | 5.9 | S | 0.0 | 0.8 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.5 | 7.9 | 12.4 | 8.6 | 8.6 | 2.9 | 8.5 | 7.8 | 8.7 | 20.1 | 6.0 | 2.0 | 0.3 | 0.0 | 0.0 | 20.1 | 4.4 |
| 15 | 0.5 | S | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 6.6 | 4.8 | 7.1 | 6.5 | 0.8 | 0.0 | 0.0 | 0.1 | 2.4 | 4.5 | 7.0 | 4.4 | 6.0 | 7.1 | 2.3 |
| 16 | 5.0 | S | 0.5 | 0.0 | 3.7 | 1.0 | 0.9 | 2.8 | 0.6 | C | C | C | C | C | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - |
| 17 | 0.0 | S | 0.0 | 0.1 | 1.2 | 1.3 | 5.3 | 7.0 | 2.0 | 3.4 | 0.0 | 0.0 | 0.0 | 0.5 | 0.9 | 0.0 | 0.0 | 0.6 | 0.1 | 1.7 | 0.9 | 0.0 | 2.2 | 0.0 | 7.0 | 1.2 |
| 18 | 0.0 | S | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 2.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.9 | 3.3 | 1.9 | 0.9 | 2.2 | 2.0 | 0.0 | 0.4 | 0.0 | 3.3 | 0.8 |
| 19 | 0.0 | S | 0.0 | 1.6 | 0.0 | 0.4 | 3.5 | 17.7 | 7.7 | 15.1 | 6.5 | 4.2 | 4.0 | 6.4 | 9.1 | 3.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 6.3 | 0.0 | 17.7 | 3.7 |
| 20 | 0.2 | S | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 1.9 | 0.7 | 1.7 | 1.8 | 1.1 | 0.0 | 0.0 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 1.0 | 2.5 | 0.0 | 6.3 | 1.0 |
| 21 | 0.6 | S | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 | 4.8 | 0.8 | 2.1 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 5.2 | 0.0 | 2.3 | 0.5 | 3.7 | 0.6 | 5.2 | 1.1 |
| 22 | 0.0 | S | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 3.5 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 5.3 | 0.0 | 5.3 | 0.6 |
| 23 | 0.0 | S | 0.0 | 0.0 | 1.1 | 0.2 | 3.7 | 7.0 | 10.1 | 0.1 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.1 | 1.0 |
| 24 | 0.0 | S | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 9.2 | 1.9 | 0.1 | 2.1 | 3.1 | 5.6 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 1.2 | 0.0 | 9.2 | 1.1 |
| 25 | 0.7 | S | 0.0 | 1.9 | 1.3 | 2.6 | 2.3 | 1.0 | 0.3 | 1.0 | 1.3 | 3.3 | 2.2 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 0.9 |
| 26 | 0.0 | S | 0.0 | 0.0 | 11.2 | 1.8 | 7.9 | 0.8 | 2.2 | 6.2 | 0.8 | 0.4 | 0.5 | 2.9 | 0.7 | 0.0 | 0.0 | 4.1 | 0.5 | 0.0 | 8.5 | 9.6 | 18.1 | 16.4 | 18.1 | 4.0 |
| 27 | 16.8 | S | 30.3 | 20.1 | 14.4 | 7.2 | 7.1 | 0.0 | 4.0 | 1.7 | 2.1 | 0.6 | 12.7 | 8.0 | 23.9 | 15.2 | 8.0 | 8.5 | 13.1 | 15.0 | 1.2 | 5.2 | 0.0 | 0.0 | 30.3 | 9.4 |
| 28 | 0.0 | S | 7.2 | 22.7 | 28.9 | 0.6 | 0.3 | 0.2 | 0.4 | 0.8 | 1.4 | 0.7 | 0.0 | 0.8 | 1.0 | 1.5 | 6.6 | 0.5 | 0.0 | 1.6 | 3.1 | 0.0 | 0.0 | 0.0 | 28.9 | 3.4 |
| 29 | 0.0 | S | 0.6 | 0.0 | 0.0 | 0.0 | 5.2 | 0.4 | 0.7 | 0.3 | 2.8 | 2.1 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 11.1 | 0.0 | 0.0 | 9.7 | 2.5 | 7.9 | 11.1 | 1.9 |
| 30 | 4.2 | S | 5.4 | 1.6 | 0.3 | 0.3 | 1.7 | 20.0 | 23.2 | 24.9 | 19.4 | 17.9 | 16.5 | 8.9 | 10.1 | 5.3 | 4.4 | 1.2 | 7.0 | 0.0 | 2.6 | 4.7 | 0.8 | 3.8 | 24.9 | 8.0 |
| 31 | 1.5 | S | 27.6 | 11.7 | 7.2 | 9.7 | 1.8 | 0.9 | 1.3 | 5.6 | 1.4 | 1.7 | 0.1 | 0.8 | 0.5 | 1.2 | 0.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.6 | 3.2 |
| Hourly Max | 24.7 | - | 30.3 | 23.3 | 28.9 | 37.6 | 32.6 | 39.1 | 43.5 | 34.0 | 25.8 | 35.0 | 30.1 | 25.0 | 23.9 | 25.0 | 24.5 | 18.1 | 20.1 | 15.0 | 22.7 | 14.9 | 26.0 | 16.4 | | |
| Hourly Average | 3.1 | - | 4.3 | 3.8 | 5.3 | 4.1 | 5.6 | 6.6 | 6.3 | 6.2 | 4.8 | 5.0 | 4.9 | 4.6 | 5.2 | 3.1 | 2.4 | 1.8 | 2.2 | 2.1 | 2.6 | 2.7 | 3.8 | 2.7 | | |

S = SPAN C = CALIBRATION

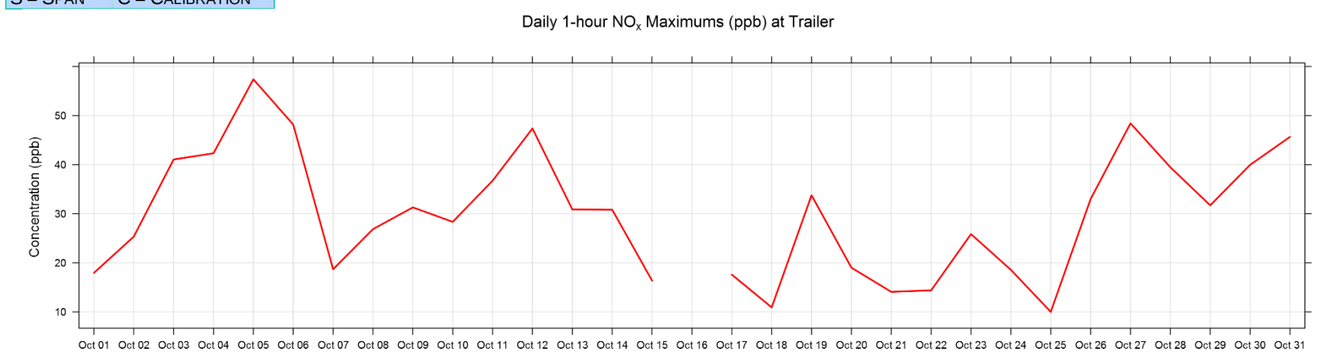



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | n/a | | Objective | n/a | PPB |
| Number of Non-Zero Readings | 474 | | | | |
| Maximum 1-HR Average | 43.5 | PPB | | | |
| Maximum 24-HR Average | 17.1 | PPB | | | |
| IZS Calibration Time | 31 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 6 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 6.7 | | Monthly Average | 4.0 | PPB |

# Lagoon $NO_x$ (ppb) – October 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 | 1.4 | **S** | 0.4 | 0.0 | 1.8 | 7.6 | 3.3 | 1.9 | 8.5 | 13.4 | 18.0 | 7.5 | 4.7 | 2.6 | 0.5 | 0.8 | 8.6 | 2.6 | 0.0 | 0.0 | 0.0 | 1.0 | 4.8 | 5.9 | 18.0 | 4.1 |
| 2 | 3.9 | **S** | 6.1 | 5.2 | 6.0 | 7.2 | 14.7 | 9.9 | 20.8 | 12.2 | 8.4 | 3.6 | 5.3 | 5.2 | 14.1 | 14.1 | 7.0 | 10.5 | 6.6 | 6.2 | 8.4 | 7.6 | 25.3 | 19.3 | 25.3 | 9.9 |
| 3 | 41.1 | **S** | 11.6 | 12.7 | 20.7 | 19.8 | 25.8 | 39.1 | 20.8 | 29.0 | 20.5 | 26.1 | 39.6 | 31.7 | 22.6 | 3.6 | 2.8 | 0.7 | 2.4 | 8.3 | 12.8 | 20.4 | 18.2 | 28.6 | 41.1 | 19.9 |
| 4 | 27.7 | **S** | 12.2 | 7.6 | 23.3 | 25.2 | 27.5 | 28.4 | 42.3 | 20.1 | 10.8 | 8.5 | 6.1 | 7.6 | 12.5 | 10.7 | 7.2 | 8.1 | 13.7 | 12.0 | 15.5 | 12.9 | 15.5 | 17.1 | 42.3 | 16.2 |
| 5 | 17.5 | **S** | 9.8 | 36.2 | 31.1 | 51.4 | 46.3 | 53.4 | 57.4 | 46.4 | 35.3 | 28.0 | 36.6 | 29.0 | 3.7 | 3.8 | 1.0 | 9.7 | 2.5 | 9.8 | 34.0 | 25.7 | 38.5 | 16.7 | 57.4 | 27.1 |
| 6 | 21.3 | **S** | 20.6 | 8.6 | 26.6 | 33.3 | 48.2 | 31.7 | 27.5 | 7.3 | 0.0 | 0.0 | 0.0 | 21.0 | 36.6 | 32.8 | 23.2 | 39.4 | 2.6 | 0.0 | 5.5 | 4.5 | 0.8 | 8.9 | 48.2 | 17.4 |
| 7 | 6.4 | **S** | 11.1 | 13.4 | 18.5 | 10.6 | 9.4 | 18.7 | 15.7 | 10.3 | 1.2 | 1.0 | 0.1 | 1.9 | 13.1 | 1.0 | 2.8 | 1.6 | 4.9 | 14.2 | 5.1 | 5.8 | 2.6 | 12.0 | 18.7 | 7.9 |
| 8 | 3.0 | **S** | 4.4 | 2.7 | 16.5 | 17.8 | 26.9 | 15.3 | 14.7 | 3.4 | 8.4 | 6.9 | 3.5 | 7.1 | 21.1 | 15.9 | 0.0 | 3.4 | 0.1 | 5.7 | 8.8 | 9.2 | 12.3 | 4.7 | 26.9 | 9.2 |
| 9 | 4.1 | **S** | 5.2 | 1.5 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.1 | 0.0 | 3.2 | 0.0 | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 17.5 | 2.5 | 12.7 | 31.3 | 14.3 | 31.3 | 4.2 |
| 10 | 2.3 | **S** | 1.2 | 1.4 | 7.1 | 7.3 | 13.2 | 28.4 | 20.0 | 12.3 | 15.5 | 7.0 | 3.3 | 5.4 | 9.9 | 6.9 | 5.3 | 6.1 | 11.5 | 14.0 | 28.0 | 27.4 | 26.0 | 21.3 | 28.4 | 12.2 |
| 11 | 21.7 | **S** | 36.7 | 27.9 | 27.8 | 13.8 | 18.2 | 21.6 | 22.6 | 29.6 | 27.2 | 24.2 | 21.6 | 14.1 | 13.7 | 4.0 | 7.6 | 10.2 | 5.1 | 10.8 | 16.0 | 8.7 | 4.3 | 10.8 | 36.7 | 17.3 |
| 12 | 0.4 | **S** | 6.8 | 10.0 | 4.9 | 12.8 | 10.7 | 4.2 | 11.8 | 23.2 | 23.0 | 47.4 | 43.1 | 36.1 | 34.9 | 38.3 | 37.2 | 8.6 | 7.6 | 11.8 | 10.2 | 10.4 | 13.5 | 15.1 | 47.4 | 18.3 |
| 13 | 11.6 | **S** | 30.9 | 20.8 | 21.0 | 21.3 | 29.1 | 25.7 | 17.7 | 11.3 | 12.3 | 18.5 | 7.9 | 9.9 | 6.7 | 12.0 | 9.7 | 2.7 | 8.6 | 19.6 | 10.9 | 4.6 | 8.1 | 15.9 | 30.9 | 14.7 |
| 14 | 18.1 | **S** | 3.3 | 5.4 | 0.3 | 1.1 | 3.6 | 0.6 | 0.3 | 2.7 | 13.8 | 21.6 | 15.6 | 16.0 | 6.9 | 14.9 | 14.4 | 16.5 | 30.8 | 13.5 | 6.5 | 3.1 | 1.9 | 0.7 | 30.8 | 9.2 |
| 15 | 3.8 | **S** | 0.0 | 0.0 | 2.9 | 0.1 | 2.4 | 0.2 | 0.4 | 0.0 | 4.0 | 14.7 | 11.1 | 14.5 | 13.2 | 3.6 | 2.0 | 0.3 | 3.9 | 8.2 | 12.0 | 16.4 | 10.7 | 14.7 | 16.4 | 6.0 |
| 16 | 11.8 | **S** | 5.0 | 2.2 | 10.5 | 4.5 | 5.4 | 9.5 | 3.4 | **C** | **C** | **C** | **C** | **C** | **C** | 0.7 | 0.0 | 0.0 | 0.0 | 0.1 | 2.2 | 1.0 | 2.3 | 0.0 | - | - |
| 17 | 0.0 | **S** | 0.0 | 2.6 | 5.9 | 6.6 | 14.2 | 17.6 | 8.2 | 10.0 | 1.5 | 1.0 | 0.6 | 3.8 | 6.5 | 3.6 | 4.1 | 5.5 | 3.7 | 5.2 | 4.5 | 1.9 | 10.1 | 3.5 | 17.6 | 5.2 |
| 18 | 4.0 | **S** | 1.8 | 3.2 | 6.1 | 4.4 | 3.4 | 10.9 | 5.3 | 1.6 | 1.7 | 0.2 | 1.1 | 2.0 | 9.8 | 6.9 | 8.8 | 9.8 | 5.6 | 8.4 | 6.4 | 2.8 | 5.5 | 2.9 | 10.9 | 4.9 |
| 19 | 7.9 | **S** | 7.9 | 7.6 | 2.6 | 8.3 | 15.8 | 33.8 | 20.2 | 30.5 | 17.0 | 14.1 | 14.0 | 17.0 | 22.8 | 14.1 | 7.3 | 0.6 | 5.3 | 0.1 | 3.2 | 2.5 | 11.6 | 3.9 | 33.8 | 11.7 |
| 20 | 3.9 | **S** | 2.8 | 1.1 | 2.2 | 1.8 | 7.8 | 8.3 | 6.3 | 7.8 | 7.8 | 5.8 | 1.3 | 4.2 | 6.1 | 1.7 | 3.2 | 1.7 | 3.4 | 1.2 | 19.0 | 12.2 | 11.0 | 3.4 | 19.0 | 5.4 |
| 21 | 4.2 | **S** | 0.6 | 0.6 | 8.1 | 0.1 | 3.9 | 14.1 | 5.7 | 7.0 | 3.3 | 2.2 | 0.9 | 1.7 | 0.0 | 0.0 | 1.8 | 7.4 | 12.5 | 2.5 | 7.4 | 3.5 | 7.1 | 3.6 | 14.1 | 4.3 |
| 22 | 0.3 | **S** | 7.9 | 0.3 | 0.0 | 0.0 | 3.3 | 6.2 | 3.5 | 9.6 | 0.2 | 3.6 | 1.8 | 0.0 | 0.3 | 0.0 | 1.3 | 0.0 | 0.0 | 0.3 | 0.0 | 3.5 | 14.4 | 3.3 | 14.4 | 2.6 |
| 23 | 1.0 | **S** | 2.4 | 0.8 | 6.7 | 4.7 | 15.0 | 22.0 | 25.9 | 3.5 | 4.2 | 2.8 | 0.6 | 0.0 | 0.0 | 0.3 | 0.9 | 0.1 | 3.5 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 25.9 | 4.1 |
| 24 | 2.4 | **S** | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 5.2 | 18.6 | 8.4 | 2.8 | 5.8 | 7.4 | 11.2 | 3.5 | 0.8 | 0.0 | 2.2 | 3.0 | 2.5 | 6.6 | 7.2 | 3.4 | 18.6 | 4.0 |
| 25 | 4.8 | **S** | 0.6 | 6.9 | 5.8 | 8.0 | 7.8 | 5.9 | 2.8 | 5.1 | 5.0 | 9.9 | 7.0 | 10.0 | 1.2 | 0.1 | 0.9 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 3.6 |
| 26 | 0.0 | **S** | 0.2 | 2.2 | 26.0 | 13.6 | 20.2 | 8.6 | 8.9 | 13.7 | 4.8 | 4.1 | 4.9 | 7.6 | 2.9 | 0.4 | 0.3 | 13.2 | 6.5 | 7.6 | 20.6 | 21.2 | 33.0 | 29.5 | 33.0 | 10.9 |
| 27 | 28.9 | **S** | 48.4 | 32.0 | 25.1 | 15.1 | 14.1 | 3.7 | 10.2 | 6.0 | 6.7 | 4.3 | 23.2 | 17.3 | 40.7 | 29.1 | 18.3 | 18.1 | 25.0 | 25.7 | 5.5 | 12.7 | 3.1 | 2.4 | 48.4 | 18.1 |
| 28 | 3.9 | **S** | 13.0 | 32.0 | 39.5 | 4.0 | 3.5 | 3.3 | 3.8 | 3.9 | 4.2 | 3.4 | 1.5 | 4.0 | 4.2 | 5.9 | 16.6 | 7.8 | 1.7 | 6.2 | 12.2 | 0.0 | 0.0 | 0.0 | 39.5 | 7.6 |
| 29 | 0.0 | **S** | 7.9 | 2.3 | 2.0 | 3.4 | 11.6 | 4.8 | 3.2 | 4.5 | 9.0 | 7.8 | 3.7 | 2.8 | 0.0 | 0.3 | 0.0 | 3.4 | 31.7 | 7.4 | 8.5 | 26.1 | 17.8 | 22.4 | 31.7 | 7.8 |
| 30 | 18.1 | **S** | 24.5 | 12.4 | 6.3 | 5.2 | 6.7 | 33.4 | 40.0 | 39.9 | 31.8 | 31.8 | 29.5 | 20.3 | 21.2 | 13.6 | 12.3 | 6.4 | 20.3 | 5.3 | 11.3 | 14.0 | 6.6 | 11.1 | 40.0 | 18.3 |
| 31 | 11.0 | **S** | 45.7 | 23.0 | 17.2 | 25.5 | 9.0 | 7.5 | 7.3 | 15.0 | 6.2 | 5.2 | 2.5 | 4.1 | 6.7 | 7.9 | 4.0 | 10.1 | 7.9 | 6.6 | 7.4 | 11.9 | 13.8 | 11.2 | 45.7 | 11.6 |
| Hourly Max | 41.1 | - | 48.4 | 36.2 | 39.5 | 51.4 | 48.2 | 53.4 | 57.4 | 46.4 | 35.3 | 47.4 | 43.1 | 36.1 | 40.7 | 38.3 | 37.2 | 39.4 | 31.7 | 25.7 | 34.0 | 27.4 | 38.5 | 29.5 | | |
| Hourly Average | 9.2 | - | 10.6 | 9.1 | 12.0 | 10.8 | 13.6 | 15.2 | 14.2 | 13.3 | 10.3 | 10.6 | 9.9 | 10.1 | 11.5 | 8.1 | 6.8 | 6.6 | 7.4 | 7.5 | 9.3 | 9.4 | 11.5 | 9.9 | | |

S = Span C = Calibration

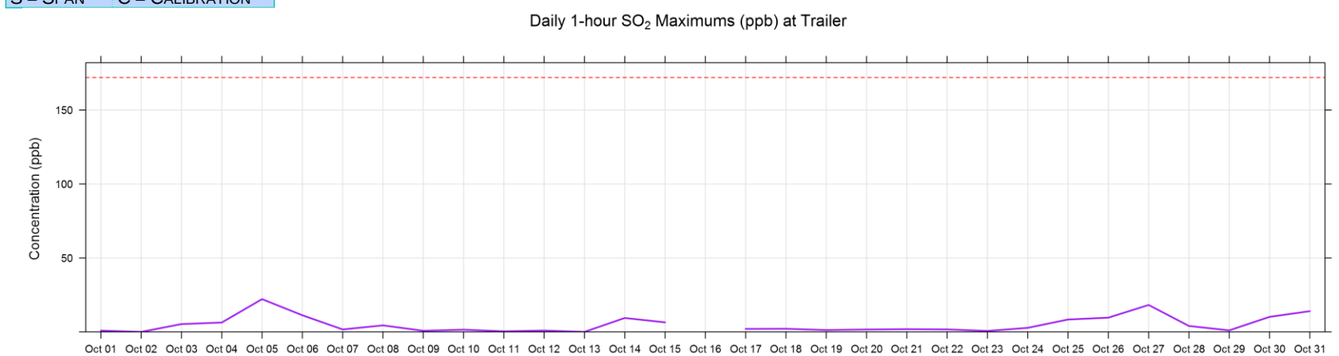



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | n/a | | Objective | n/a | PPB |
| Number of Non-Zero Readings | 648 | | | | |
| Maximum 1-HR Average | 57.4 | PPB | | | |
| Maximum 24-HR Average | 27.1 | PPB | | | |
| IZS Calibration Time | 31 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 6 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 10.6 | | Monthly Average | 10.3 | PPB |

# Lagoon $SO_2$ (ppb) – October 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 | 0.9 | 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 | 0.9 | 0.1 |
| 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 | 0.0 |
| 3 | 0.0 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 1.2 | 3.1 | 0.7 | 2.4 | 5.3 | 3.2 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.9 | 4.0 | 5.3 | 1.1 |
| 4 | 1.8 | **S** | 0.7 | 0.0 | 3.0 | 1.9 | 1.5 | 0.7 | 6.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 0.9 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 0.9 |
| 5 | 0.0 | **S** | 0.0 | 4.8 | 4.0 | 10.7 | 10.3 | 22.1 | 18.4 | 17.9 | 4.9 | 5.7 | 7.9 | 5.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.8 | 3.5 | 3.2 | 22.1 | 5.2 |
| 6 | 2.8 | **S** | 2.4 | 1.3 | 2.2 | 3.9 | 6.1 | 3.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.1 | 5.0 | 11.2 | 2.4 | 0.4 | 2.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 11.2 | 2.0 |
| 7 | 0.0 | **S** | 0.2 | 0.4 | 1.6 | 1.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.2 | 0.0 | 0.0 | 1.0 | 1.6 | 0.3 |
| 8 | 0.0 | **S** | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.4 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.4 | 0.3 |
| 9 | 0.0 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 |
| 10 | 0.0 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 0.2 | 1.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 0.5 | 0.0 | 0.0 | 1.5 | 0.2 |
| 11 | 0.0 | **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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 |
| 12 | 0.0 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.9 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.1 |
| 13 | 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 | 0.0 |
| 14 | 0.0 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 8.3 | 9.2 | 9.4 | 7.9 | 5.4 | 7.7 | 7.4 | 7.2 | 7.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.4 | 3.1 |
| 15 | 0.0 | **S** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 5.2 | 3.4 | 6.5 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.7 | 1.6 | 1.4 | 2.9 | 6.5 | 1.1 |
| 16 | 2.0 | **S** | 0.0 | 0.0 | 2.3 | 0.0 | 0.8 | 0.0 | 0.0 | **C** | **C** | **C** | **C** | **C** | **C** | 0.4 | 0.3 | 0.1 | 0.4 | 0.6 | 0.3 | 0.6 | 0.7 | 0.2 | - | - |
| 17 | 0.1 | **S** | 0.3 | 0.4 | 0.4 | 0.3 | 1.0 | 1.0 | 1.1 | 1.0 | 0.6 | 0.7 | 0.4 | 0.7 | 0.4 | 0.3 | 0.9 | 1.0 | 1.2 | 0.4 | 1.4 | 0.8 | 2.0 | 1.5 | 2.0 | 0.8 |
| 18 | 2.1 | **S** | 0.6 | 1.6 | 1.9 | 0.1 | 0.0 | 0.5 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.9 | 1.0 | 0.6 | 0.5 | 0.6 | 1.2 | 0.7 | 0.3 | 0.3 | 0.2 | 2.1 | 0.6 |
| 19 | 0.2 | **S** | 0.4 | 0.5 | 0.6 | 0.8 | 0.4 | 0.5 | 0.4 | 0.6 | 0.4 | 0.2 | 0.3 | 0.4 | 0.8 | 0.5 | 0.2 | 0.1 | 0.2 | 1.1 | 1.0 | 1.1 | 1.2 | 1.2 | 1.2 | 0.6 |
| 20 | 1.2 | **S** | 1.4 | 1.3 | 1.3 | 1.2 | 1.4 | 1.6 | 1.5 | 1.5 | 1.3 | 1.5 | 1.2 | 1.4 | 1.3 | 1.2 | 1.3 | 1.1 | 0.9 | 1.2 | 1.0 | 0.8 | 0.9 | 0.9 | 1.6 | 1.2 |
| 21 | 1.1 | **S** | 0.8 | 1.0 | 0.9 | 0.8 | 0.7 | 0.9 | 0.9 | 1.4 | 1.7 | 0.9 | 0.9 | 1.8 | 0.7 | 0.9 | 1.2 | 1.3 | 1.8 | 1.2 | 1.0 | 1.4 | 1.1 | 1.3 | 1.8 | 1.1 |
| 22 | 0.9 | **S** | 0.9 | 1.1 | 1.2 | 1.0 | 1.7 | 1.4 | 0.9 | 1.1 | 0.9 | 1.3 | 1.3 | 0.7 | 0.8 | 0.6 | 0.8 | 0.7 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 1.7 | 0.9 |
| 23 | 0.5 | **S** | 0.6 | 0.4 | 0.6 | 0.6 | 0.4 | 0.4 | 0.4 | 0.3 | 0.5 | 0.6 | 0.2 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.5 | 0.4 | 0.5 | 0.6 | 0.4 |
| 24 | 2.3 | **S** | 0.7 | 0.3 | 0.5 | 0.4 | 0.5 | 0.3 | 0.6 | 2.7 | 1.1 | 0.5 | 1.0 | 1.7 | 0.6 | 1.5 | 0.9 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.8 | 1.3 | 2.7 | 0.9 |
| 25 | 0.7 | **S** | 1.4 | 4.5 | 5.7 | 8.4 | 4.1 | 1.5 | 0.8 | 1.9 | 2.9 | 7.3 | 6.0 | 5.3 | 0.8 | 0.8 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.5 | 0.6 | 8.4 | 2.4 |
| 26 | 0.5 | **S** | 0.5 | 0.5 | 0.7 | 0.5 | 0.8 | 0.8 | 0.8 | 1.0 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.9 | 0.9 | 6.6 | 9.6 | 9.0 | 8.9 | 9.6 | 2.0 |
| 27 | 10.1 | **S** | 18.2 | 11.7 | 4.7 | 7.1 | 5.2 | 1.2 | 1.2 | 1.2 | 1.3 | 0.5 | 3.2 | 7.3 | 15.2 | 8.3 | 4.9 | 2.8 | 2.4 | 2.0 | 0.8 | 0.9 | 0.6 | 0.5 | 18.2 | 4.8 |
| 28 | 0.5 | **S** | 1.2 | 2.7 | 4.0 | 1.1 | 0.9 | 0.6 | 0.7 | 1.0 | 1.1 | 3.2 | 1.4 | 1.0 | 1.1 | 2.2 | 1.7 | 0.8 | 0.9 | 0.8 | 0.8 | 0.7 | 0.5 | 0.5 | 4.0 | 1.3 |
| 29 | 0.5 | **S** | 0.5 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 1.0 | 1.0 | 0.9 | 0.4 | 0.3 | 0.3 | 0.4 | 0.4 | 0.6 | 0.3 | 0.2 | 0.3 | 0.5 | 0.5 | 1.0 | 0.5 |
| 30 | 0.6 | **S** | 1.0 | 1.0 | 0.7 | 0.7 | 0.8 | 3.8 | 5.2 | 7.8 | 10.1 | 9.8 | 9.1 | 6.0 | 6.1 | 2.6 | 2.2 | 1.3 | 7.3 | 0.8 | 1.1 | 1.9 | 1.1 | 0.8 | 10.1 | 3.6 |
| 31 | 1.6 | **S** | 14.0 | 8.0 | 4.1 | 7.8 | 0.8 | 1.0 | 1.9 | 3.3 | 2.1 | 2.4 | 1.1 | 1.0 | 1.3 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 14.0 | 2.5 |
| Hourly Max | 10.1 | - | 18.2 | 11.7 | 5.7 | 10.7 | 10.3 | 22.1 | 18.4 | 17.9 | 10.1 | 9.8 | 9.4 | 7.9 | 15.2 | 8.3 | 7.4 | 7.2 | 7.9 | 2.0 | 6.6 | 9.6 | 9.0 | 8.9 | | |
| Hourly Average | 0.9 | - | 1.5 | 1.4 | 1.3 | 1.6 | 1.2 | 1.4 | 1.5 | 1.6 | 1.4 | 1.8 | 1.8 | 1.9 | 2.0 | 1.1 | 0.8 | 0.7 | 0.9 | 0.4 | 0.7 | 0.8 | 0.9 | 1.0 | | |

S = SPAN C = CALIBRATION

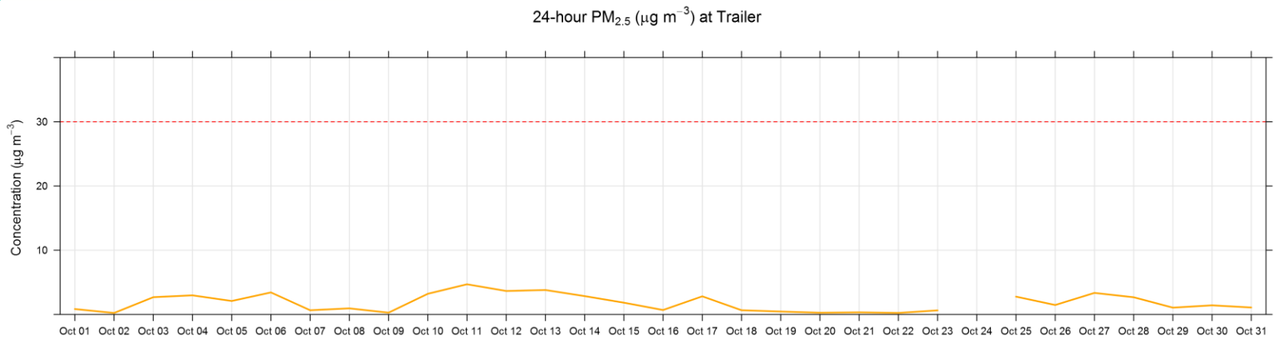



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | 0 | | Objective | 172 | PPB |
| Number of 24HR Exceedances | 0 | | Objective | 48 | PPB |
| Number of Non-Zero Readings | 459 | | | | |
| Maximum 1-HR Average | 22.1 | PPB | | | |
| Maximum 24-HR Average | 5.2 | PPB | | | |
| IZS Calibration Time | 31 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 6 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 2.5 | | Monthly Average | 1.2 | PPB |

# Lagoon $PM_{2.5}$ (µg/m$^3$) – October 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 | 1.0 | 2.0 | 5.2 | 3.1 | 0.0 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 1.7 | 1.7 | 0.6 | 0.0 | 0.0 | 0.6 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 5.2 | 0.8 |
| 2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.5 | 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 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 1.3 | 2.8 | 0.2 |
| 3 | 5.5 | 4.2 | 1.2 | 0.3 | 5.6 | 5.9 | 2.8 | 6.3 | 4.3 | 7.3 | 4.9 | 2.5 | 3.1 | 2.0 | 0.3 | 0.0 | 0.0 | 1.3 | 3.1 | 1.3 | 0.6 | 0.6 | 0.0 | 1.3 | 7.3 | 2.7 |
| 4 | 1.0 | 2.0 | 23.2 | 1.3 | 2.0 | 2.0 | 2.0 | 1.0 | 3.5 | 3.1 | 0.6 | 0.3 | 0.0 | 0.0 | 2.0 | 1.0 | 0.0 | 0.3 | 3.1 | 2.8 | 4.2 | 5.9 | 5.9 | 4.2 | 23.2 | 3.0 |
| 5 | 1.7 | 3.5 | 2.4 | 5.2 | 4.2 | 1.0 | 3.5 | 7.3 | 4.9 | 5.6 | 2.8 | 1.0 | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 1.0 | 0.0 | 1.7 | 7.3 | 2.1 |
| 6 | 0.0 | 0.0 | 2.8 | 2.8 | 0.6 | 1.3 | 4.2 | 5.6 | 4.4 | 8.0 | 5.9 | 6.3 | 3.5 | 8.0 | 16.5 | 5.2 | 3.1 | 3.5 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.5 | 3.4 |
| 7 | 0.0 | 2.4 | 1.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 7.7 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 7.7 | 0.7 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 4.2 | 3.1 | 2.0 | 0.0 | 0.0 | 0.0 | 0.5 | 3.1 | 2.0 | 0.0 | 1.7 | 1.3 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 4.5 | 0.9 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.6 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.3 | 1.0 | 0.6 | 0.3 | 1.3 | 0.3 |
| 10 | 3.1 | 2.5 | 0.3 | 0.0 | 1.0 | 2.8 | 2.0 | 9.8 | 6.6 | 3.5 | 3.1 | 3.2 | 0.0 | 2.0 | 2.4 | 1.0 | 6.3 | 4.2 | 2.0 | 3.8 | 4.2 | 5.6 | 4.2 | 3.8 | 9.8 | 3.2 |
| 11 | 3.8 | 9.1 | 8.7 | 7.3 | 6.3 | 4.2 | 2.8 | 7.0 | 8.0 | 10.2 | 12.4 | 9.6 | 6.6 | 4.9 | 3.5 | 1.7 | 0.6 | 3.1 | 1.0 | 0.0 | 0.0 | 1.3 | 0.6 | 0.0 | 12.4 | 4.7 |
| 12 | 0.0 | 2.0 | 0.6 | 0.0 | 1.7 | 1.2 | 0.5 | 0.0 | 2.0 | 3.5 | 4.9 | 9.6 | 12.6 | 8.7 | 7.3 | 10.2 | 7.4 | 3.7 | 2.8 | 3.7 | 3.2 | 0.3 | 0.6 | 1.1 | 12.6 | 3.7 |
| 13 | 0.0 | 3.8 | 4.9 | 5.9 | 5.2 | 2.0 | 2.0 | 4.9 | **C** | **C** | **C** | **C** | 2.4 | 3.1 | 0.3 | 0.6 | 2.4 | 4.3 | 2.8 | 3.1 | 14.4 | 7.3 | 2.8 | 3.8 | 14.4 | 3.8 |
| 14 | 7.3 | 6.3 | 2.5 | 0.3 | 1.7 | 1.3 | 2.4 | 1.3 | 0.0 | 0.0 | 7.5 | 8.0 | 4.5 | 3.8 | 3.8 | 4.5 | 4.9 | 3.8 | 3.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 | 2.9 |
| 15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 2.0 | 2.4 | 11.2 | 6.3 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 3.8 | 4.4 | 5.9 | 5.2 | 11.2 | 1.8 |
| 16 | 2.0 | 3.5 | 3.8 | 0.6 | 0.0 | 1.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.6 | 3.1 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 | 0.7 |
| 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.9 | 9.8 | 5.6 | 3.8 | 13.7 | 15.4 | 8.0 | 0.6 | 1.0 | 1.0 | 0.3 | 0.0 | 0.6 | 0.3 | 0.0 | 0.0 | 1.0 | 0.6 | 15.4 | 2.8 |
| 18 | 1.4 | 0.6 | 0.3 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 2.0 | 0.6 | 2.0 | 2.0 | 0.6 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 2.5 | 0.7 |
| 19 | 0.6 | 1.0 | 0.0 | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 | 1.3 | 1.0 | 2.0 | 1.3 | 0.0 | 1.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.5 |
| 20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.3 | 0.0 | 2.4 | 2.4 | 2.4 | 0.3 |
| 21 | 0.0 | 0.0 | 0.3 | 1.0 | 0.6 | 0.0 | 0.0 | 0.0 | 1.3 | 1.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 1.3 | 0.0 | 1.3 | 0.3 |
| 22 | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 2.8 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 2.8 | 0.2 |
| 23 | 1.7 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 2.0 | 2.7 | 0.0 | 2.5 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 0.6 | 0.0 | 0.6 | 0.0 | 0.0 | **E** | 2.7 | 0.6 |
| 24 | **E** | **E** | **E** | **E** | **E** | **E** | **E** | **E** | **E** | **E** | **E** | **E** | **E** | 1.3 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.3 | 4.2 | 2.8 | - | - |
| 25 | 2.8 | 2.4 | 0.3 | 11.6 | 10.5 | 8.7 | 4.5 | 1.3 | 0.3 | 3.1 | 4.9 | 5.9 | 1.7 | 0.0 | 0.0 | 1.0 | 2.4 | 0.6 | 0.0 | 0.0 | 0.0 | 3.1 | 1.3 | 0.3 | 11.6 | 2.8 |
| 26 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 1.3 | 1.3 | 1.3 | 3.5 | 2.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 2.4 | 5.2 | 4.9 | 3.4 | 1.7 | 5.2 | 1.5 |
| 27 | 0.0 | 1.0 | 2.0 | 4.2 | 4.2 | 2.8 | 1.7 | 1.4 | 3.8 | 3.1 | 3.8 | 3.1 | 4.2 | 8.4 | 9.1 | 5.9 | 2.8 | 1.0 | 1.1 | 3.1 | 4.2 | 3.1 | 3.2 | 3.5 | 9.1 | 3.4 |
| 28 | 3.8 | 4.9 | 3.5 | 3.1 | 2.4 | 2.0 | 2.8 | 2.0 | 2.8 | 2.4 | 0.6 | 3.5 | 3.5 | 5.1 | 3.5 | 0.0 | 2.4 | 3.5 | 0.6 | 0.0 | 3.5 | 4.5 | 3.1 | 1.0 | 5.1 | 2.7 |
| 29 | 0.3 | 2.8 | 1.7 | 0.0 | 0.0 | 2.0 | 2.4 | 0.3 | 0.0 | 0.0 | 0.0 | 2.8 | 0.3 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 2.8 | 3.1 | 0.6 | 3.5 | 2.4 | 0.0 | 3.5 | 1.1 |
| 30 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 2.6 | 2.8 | 3.1 | 1.7 | 0.3 | 5.2 | 6.3 | 3.1 | 0.0 | 0.0 | 2.0 | 2.8 | 1.3 | 0.0 | 0.3 | 6.3 | 1.4 |
| 31 | 0.0 | 0.0 | 2.4 | 1.0 | 0.0 | 1.0 | 1.0 | 0.3 | 1.7 | 2.4 | 1.3 | 2.8 | 1.7 | 2.8 | 3.2 | 1.7 | 0.0 | 0.0 | 0.6 | 1.3 | 1.0 | 0.0 | 0.0 | 0.0 | 3.2 | 1.1 |
| Hourly Max | 7.3 | 9.1 | 23.2 | 11.6 | 10.5 | 8.7 | 5.9 | 9.8 | 8.0 | 10.2 | 13.7 | 15.4 | 12.6 | 11.2 | 16.5 | 10.2 | 7.4 | 4.3 | 3.2 | 3.8 | 14.4 | 7.3 | 5.9 | 255.0 | | |
| Hourly Average | 1.2 | 1.8 | 2.3 | 1.7 | 1.6 | 1.4 | 1.6 | 2.2 | 2.1 | 2.3 | 3.0 | 3.1 | 2.1 | 2.3 | 2.4 | 1.4 | 1.3 | 1.3 | 0.9 | 1.0 | 1.6 | 1.6 | 1.5 | 9.4 | | |

C = CALIBRATION  E = INSTRUMENT ERROR

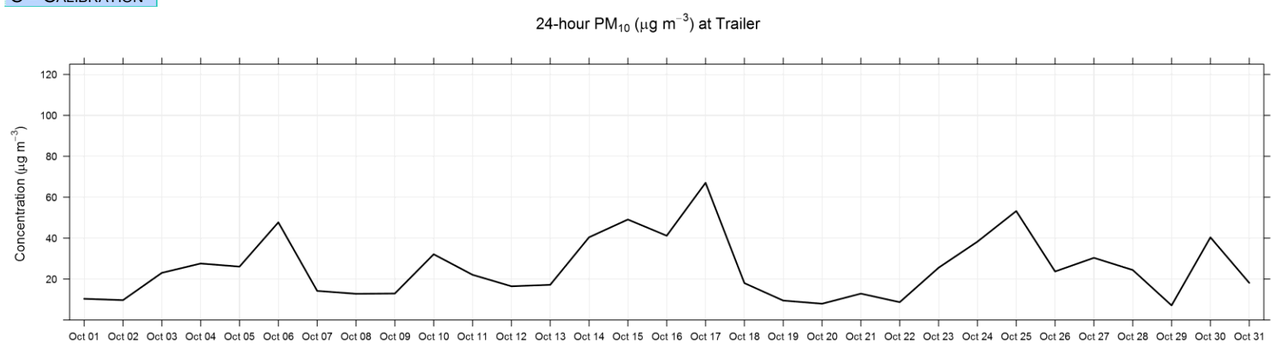



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | 0 | | Guideline | 80 | UG/M3 |
| Number of 24HR Exceedances | 0 | | Objective | 30 | UG/M3 |
| Number of Non-Zero Readings | 438 | | | | |
| Maximum 1-HR Average | 23.2 | UG/M3 | | | |
| Maximum 24-HR Average | 4.7 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 730 | HRS |
| Monthly Calibration Time | 4 | HRS | Operational Uptime | 98.1 | % |
| Standard Deviation | 2.6 | | Monthly Average | 1.8 | UG/M3 |

# Lagoon $PM_{10}$ (µg/m$^3$) – October 2017

| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.0 | 20.9 | 9.7 | 9.0 | 9.0 | 9.0 | 7.5 | 4.7 | 7.5 | 21.9 | 12.5 | 11.1 | 11.9 | 13.2 | 18.1 | 23.1 | 18.8 | 9.0 | 6.1 | 1.9 | 1.2 | 4.0 | 6.1 | 3.3 | 23.1 | 10.3 |
| 2 | 0.0 | 4.7 | 11.8 | 11.8 | 6.8 | 6.1 | 18.1 | 15.3 | 13.2 | 9.0 | 8.9 | 9.0 | 8.9 | 8.3 | 17.4 | 4.7 | 8.3 | 18.1 | 5.4 | 5.4 | 6.1 | 8.3 | 9.1 | 18.1 | 18.1 | 9.7 |
| 3 | 24.5 | 16.0 | 1.0 | 6.1 | 17.4 | 18.1 | 22.3 | 26.6 | 24.5 | 35.6 | 36.4 | 42.1 | 70.6 | 51.9 | 37.5 | 10.4 | 12.5 | 12.5 | 8.3 | 5.4 | 10.4 | 17.4 | 20.2 | 25.2 | 70.6 | 23.0 |
| 4 | 12.5 | 20.9 | 122.4 | 15.3 | 28.3 | 16.1 | 18.8 | 22.3 | 30.8 | 35.0 | 35.0 | 32.9 | 13.2 | 21.6 | 29.4 | 29.4 | 6.1 | 32.2 | 5.4 | 6.1 | 16.0 | 77.3 | 11.8 | 23.0 | 122.4 | 27.6 |
| 5 | 16.0 | 13.2 | 11.8 | 11.8 | 12.5 | 19.5 | 44.9 | 62.5 | 41.4 | 42.8 | 37.1 | 32.2 | 45.6 | 72.3 | 44.9 | 2.3 | 2.6 | 16.3 | 34.3 | 18.1 | 14.6 | 11.8 | 9.7 | 7.5 | 72.3 | 26.1 |
| 6 | 7.5 | 11.8 | 13.2 | 11.8 | 19.5 | 31.5 | 22.3 | 25.2 | 30.1 | 52.6 | 94.9 | 83.2 | 23.5 | 174.5 | 312.5 | 56.9 | 28.0 | 52.6 | 13.2 | 7.7 | 18.1 | 9.2 | 19.5 | 25.7 | 312.5 | 47.7 |
| 7 | 5.4 | 18.1 | 0.5 | 4.7 | 11.8 | 11.8 | 20.2 | 17.7 | 29.4 | 18.8 | 16.0 | 10.4 | 16.0 | 11.1 | 45.6 | 11.1 | 12.5 | 12.5 | 27.3 | 13.2 | 8.3 | 4.0 | 6.8 | 7.8 | 45.6 | 14.2 |
| 8 | 7.5 | 5.4 | 3.5 | 17.4 | 7.5 | 10.4 | 21.6 | 19.5 | 5.4 | 16.7 | 25.9 | 21.6 | 5.4 | 7.5 | 12.5 | 15.3 | 11.0 | 11.1 | 11.1 | 5.4 | 4.7 | 29.3 | 12.5 | 18.8 | 29.3 | 12.8 |
| 9 | 9.0 | 22.3 | 16.7 | 12.1 | 12.5 | 9.3 | 10.4 | 12.5 | 10.3 | 9.7 | 17.4 | 30.1 | 12.5 | 16.0 | 18.1 | 8.9 | 6.1 | 4.7 | 4.7 | 9.0 | 16.7 | 13.9 | 14.5 | 13.2 | 30.1 | 12.9 |
| 10 | 9.7 | 7.5 | 8.3 | 9.0 | 9.0 | 19.5 | 13.2 | 57.6 | 27.3 | 44.9 | 44.9 | 20.2 | 35.7 | 62.5 | 40.0 | 61.8 | 44.3 | 36.4 | 27.2 | 22.3 | 49.8 | 52.6 | 33.6 | 33.6 | 62.5 | 32.1 |
| 11 | 36.4 | 35.7 | 39.3 | 30.9 | 17.4 | 20.9 | 28.7 | 55.5 | 37.8 | 51.9 | 26.6 | 23.1 | 23.1 | 17.8 | 7.5 | 4.7 | 2.3 | 16.7 | 4.0 | 8.3 | 12.5 | 12.5 | 9.7 | 6.8 | 55.5 | 22.1 |
| 12 | 11.1 | 9.0 | 5.4 | 8.3 | 9.7 | 8.3 | 8.3 | 6.1 | 7.5 | 18.1 | 25.2 | 28.7 | 24.5 | 23.1 | 33.6 | 37.8 | 46.3 | 9.7 | 9.0 | 11.1 | 19.5 | 13.9 | 12.5 | 9.0 | 46.3 | 16.5 |
| 13 | 2.6 | 1.9 | 19.5 | 13.2 | 20.2 | 16.7 | 27.3 | 34.3 | 20.2 | **C** | **C** | **C** | 30.8 | 20.2 | 13.2 | 18.1 | 11.1 | 9.7 | 19.5 | 23.8 | 36.4 | 4.7 | 6.8 | 10.4 | 36.4 | 17.2 |
| 14 | 13.2 | 23.8 | 14.6 | 13.2 | 16.7 | 14.6 | 16.3 | 11.1 | 17.4 | 41.4 | 113.2 | 124.5 | 62.5 | 74.5 | 59.7 | 99.8 | 90.7 | 58.3 | 44.9 | 16.7 | 12.5 | 11.8 | 11.1 | 7.5 | 124.5 | 40.4 |
| 15 | 6.1 | 6.8 | 4.0 | 4.7 | 8.3 | 9.0 | 6.8 | 6.8 | 10.4 | 9.0 | 37.8 | 89.3 | 82.2 | 254.1 | 57.6 | 23.0 | 25.9 | 18.8 | 6.2 | 41.4 | 50.5 | 116.8 | 192.9 | 109.7 | 254.1 | 49.1 |
| 16 | 77.3 | 31.5 | 11.1 | 16.7 | 35.0 | 17.4 | 20.2 | 16.4 | 13.9 | 28.7 | 30.9 | 26.6 | 56.9 | 94.9 | 100.5 | 108.3 | 86.4 | 66.7 | 37.1 | 28.7 | 28.7 | 16.0 | 11.8 | 26.6 | 108.3 | 41.2 |
| 17 | 22.3 | 9.7 | 10.4 | 9.7 | 16.7 | 28.0 | 135.0 | 198.4 | 212.5 | 178.7 | 364.0 | 284.4 | 26.6 | 29.4 | 11.1 | 4.7 | 0.5 | 1.9 | 20.9 | 6.2 | 8.3 | 7.5 | 9.7 | 12.5 | 364.0 | 67.0 |
| 18 | 11.8 | 9.0 | 9.0 | 10.4 | 9.0 | 8.3 | 10.4 | 13.9 | 12.3 | 8.3 | 18.8 | 11.8 | 24.5 | 34.3 | 37.8 | 25.9 | 25.2 | 44.9 | 50.5 | 13.2 | 11.1 | 17.4 | 7.5 | 7.5 | 50.5 | 18.0 |
| 19 | 7.8 | 10.4 | 6.8 | 4.0 | 6.8 | 6.8 | 7.8 | 11.8 | 18.1 | 11.1 | 21.6 | 13.9 | 10.4 | 11.1 | 12.5 | 16.0 | 9.0 | 9.0 | 8.3 | 8.3 | 8.3 | 2.6 | 0.0 | 5.4 | 21.6 | 9.5 |
| 20 | 9.7 | 9.0 | 6.8 | 3.3 | 1.9 | 6.8 | 8.3 | 6.8 | 8.3 | 6.8 | 7.9 | 18.8 | 2.6 | 7.5 | 8.9 | 4.7 | 6.8 | 9.0 | 10.4 | 11.1 | 9.0 | 10.4 | 9.0 | 6.8 | 18.8 | 7.9 |
| 21 | 9.0 | 12.1 | 8.3 | 6.1 | 10.4 | 11.1 | 6.8 | 6.1 | 11.1 | 25.9 | 28.0 | 25.9 | 13.9 | 14.6 | 10.4 | 4.0 | 4.7 | 7.5 | 11.1 | 13.2 | 22.3 | 20.2 | 15.3 | 11.1 | 28.0 | 12.9 |
| 22 | 7.5 | 6.8 | 1.9 | 4.0 | 9.0 | 8.3 | 9.7 | 23.8 | 9.0 | 11.8 | 13.2 | 22.3 | 0.0 | 4.0 | 10.4 | 6.1 | 6.1 | 11.1 | 11.0 | 9.0 | 6.1 | 1.9 | 6.1 | 9.7 | 23.8 | 8.7 |
| 23 | 6.8 | 6.1 | 5.4 | 5.4 | 8.3 | 11.1 | 37.1 | 55.5 | 70.2 | 17.4 | 36.4 | 61.1 | 16.7 | 15.3 | 23.8 | 64.6 | 46.0 | 14.6 | 19.5 | 9.7 | 12.5 | 13.2 | 8.3 | 47.7 | 70.2 | 25.5 |
| 24 | 73.1 | 21.6 | 13.2 | 22.3 | 16.0 | 23.1 | 15.3 | 13.9 | 40.7 | 171.0 | 128.0 | 42.9 | 73.1 | 42.7 | 15.3 | 34.3 | 9.0 | 3.3 | 0.0 | 30.8 | 26.6 | 29.4 | 38.6 | 34.3 | 171.0 | 38.3 |
| 25 | 32.2 | 50.5 | 66.7 | 235.3 | 292.8 | 179.4 | 37.1 | 21.1 | 24.5 | 82.2 | 32.9 | 80.8 | 31.5 | 61.1 | 4.0 | 4.7 | 4.7 | 4.0 | 5.4 | 6.1 | 5.4 | 6.1 | 5.4 | 3.3 | 292.8 | 53.2 |
| 26 | 6.8 | 6.1 | 3.3 | 6.1 | 3.6 | 8.3 | 19.5 | 26.6 | 38.6 | 106.2 | 58.6 | 35.7 | 36.4 | 27.3 | 17.4 | 24.5 | 8.3 | 11.8 | 11.1 | 8.0 | 28.0 | 21.9 | 30.1 | 24.5 | 106.2 | 23.7 |
| 27 | 26.6 | 30.1 | 28.7 | 13.2 | 12.5 | 25.9 | 19.5 | 13.9 | 18.8 | 20.2 | 64.6 | 49.8 | 61.1 | 97.0 | 93.5 | 61.8 | 12.5 | 13.2 | 10.4 | 16.0 | 6.8 | 9.0 | 11.1 | 12.5 | 97.0 | 30.4 |
| 28 | 11.8 | 8.9 | 9.1 | 11.1 | 20.9 | 13.9 | 16.7 | 14.6 | 35.0 | 40.7 | 44.9 | 105.5 | 51.9 | 76.5 | 23.8 | 16.7 | 23.7 | 19.5 | 4.7 | 6.2 | 10.4 | 19.5 | 0.0 | 0.0 | 105.5 | 24.4 |
| 29 | 6.8 | 9.0 | 7.5 | 8.3 | 5.4 | 4.0 | 7.5 | 9.0 | 4.0 | 6.8 | 13.9 | 10.4 | 4.7 | 4.0 | 5.4 | 1.9 | 0.0 | 1.9 | 7.5 | 7.5 | 4.0 | 17.4 | 11.8 | 11.8 | 17.4 | 7.1 |
| 30 | 6.8 | 6.1 | 11.1 | 12.5 | 9.7 | 6.1 | 11.1 | 40.1 | 51.9 | 80.1 | 157.6 | 116.8 | 102.0 | 125.9 | 88.6 | 64.6 | 19.5 | 9.7 | 8.3 | 8.3 | 9.0 | 8.3 | 8.9 | 6.2 | 157.6 | 40.4 |
| 31 | 6.8 | 12.5 | 22.4 | 13.9 | 13.2 | 20.2 | 18.8 | 31.5 | 61.8 | 70.3 | 25.9 | 33.6 | 22.3 | 16.0 | 16.7 | 4.0 | 0.5 | 0.5 | 4.0 | 3.3 | 4.7 | 7.7 | 11.8 | 12.5 | 70.3 | 18.1 |
| Hourly Max | 77.3 | 50.5 | 122.4 | 235.3 | 292.8 | 179.4 | 135.0 | 198.4 | 212.5 | 178.7 | 364.0 | 284.4 | 102.0 | 254.1 | 312.5 | 108.3 | 90.7 | 66.7 | 50.5 | 41.4 | 50.5 | 116.8 | 192.9 | 109.7 | | |
| Hourly Average | 15.9 | 14.8 | 16.2 | 18.1 | 21.9 | 19.3 | 21.5 | 28.4 | 30.4 | 42.4 | 52.6 | 50.0 | 32.3 | 48.1 | 39.6 | 27.6 | 19.0 | 17.6 | 14.4 | 12.3 | 15.4 | 19.2 | 18.1 | 17.8 | | |

C = CALIBRATION

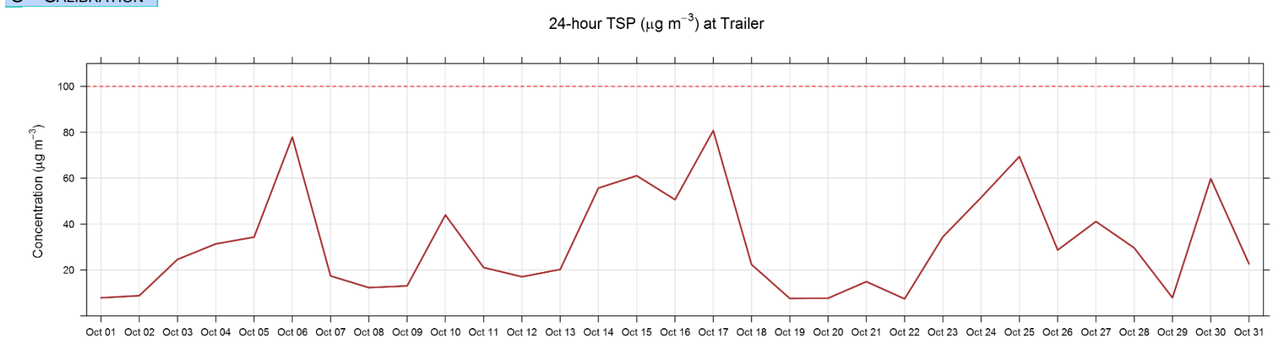



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | n/a | | Objective | n/a | UG/M3 |
| Number of Non-Zero Readings | 734 | | | | |
| Maximum 1-HR Average | 364.0 | UG/M3 | | | |
| Maximum 24-HR Average | 67.0 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 3 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 36.8 | | Monthly Average | 25.5 | UG/M3 |

# Lagoon TSP (µg/m$^3$) – October 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 | 8.49 | 15.4 | 9.88 | 4.349 | 4.347 | 8.5 | 6.008 | 3.889 | 2.967 | 22.32 | 5.731 | 14.02 | 7.113 | 4.345 | 5.73 | 8.49 | 18.17 | 8.59 | 8.49 | 1.584 | 4.35 | 8.5 | 2.967 | 4.349 | 22.3 | 7.9 |
| 2 | 14.07 | 8.54 | 8.5 | 8.5 | 15.4 | 0.203 | 4.349 | 15.41 | 4.351 | 2.967 | 5.73 | 7.113 | 7.114 | 9.88 | 25.08 | 4.347 | 2.965 | 18.17 | 0 | 1.585 | 8.5 | 8.5 | 16.93 | 12.64 | 25.1 | 8.8 |
| 3 | 15.41 | 25.08 | 1.585 | 16.88 | 1.585 | 25.08 | 12.64 | 37.52 | 36.13 | 45.8 | 45.81 | 38.16 | 45.81 | 58.25 | 43.37 | 15.41 | 16.74 | 19.55 | 7.114 | 7.114 | 15.41 | 14.02 | 16.79 | 29.23 | 58.3 | 24.6 |
| 4 | 11.26 | 14.02 | 114.9 | 16.79 | 26.46 | 12.64 | 19.55 | 22.31 | 20.93 | 41.66 | 38.89 | 41.67 | 18.17 | 34.76 | 25.07 | 30.59 | 20.93 | 54.11 | 19.55 | 31.99 | 14.02 | 94.2 | 15.41 | 12.64 | 114.9 | 31.4 |
| 5 | 19.55 | 12.64 | 16.7 | 12.64 | 11.26 | 14.02 | 41.66 | 67.88 | 54.09 | 48.93 | 34.75 | 47.18 | 52.47 | 134.2 | 73.43 | 2.961 | 14.01 | 25.07 | 52.72 | 23.7 | 22.31 | 11.26 | 17.2 | 12.64 | 134.2 | 34.3 |
| 6 | 11.53 | 11.21 | 11.49 | 16.7 | 25.08 | 54.1 | 31.99 | 25.08 | 41.66 | 87.3 | 130.1 | 112.1 | 38.88 | 356.7 | 591.5 | 94.2 | 63.78 | 91.4 | 19.55 | 1.584 | 7.114 | 9.88 | 16.79 | 19.46 | 591.5 | 77.9 |
| 7 | 5.729 | 8.5 | 9.88 | 5.731 | 5.732 | 7.113 | 26.46 | 18.17 | 30.6 | 22.32 | 22.31 | 12.64 | 14.02 | 26.46 | 77.6 | 7.113 | 16.79 | 9.88 | 37.93 | 23.61 | 5.732 | 8.5 | 8.5 | 5.731 | 77.6 | 17.4 |
| 8 | 5.73 | 8.5 | 5.731 | 5.639 | 8.45 | 9.88 | 16.79 | 11.26 | 8.5 | 8.54 | 19.55 | 19.41 | 0.203 | 22.32 | 20.93 | 11.26 | 8.5 | 16.79 | 0.202 | 0.203 | 0.203 | 55.48 | 11.26 | 19.55 | 55.5 | 12.3 |
| 9 | 2.966 | 29.22 | 22.32 | 7.114 | 5.732 | 2.967 | 4.35 | 7.113 | 5.727 | 4.346 | 8.77 | 52.72 | 4.348 | 8.49 | 31.99 | 7.111 | 8.49 | 5.731 | 1.585 | 16.79 | 15.41 | 19.6 | 25.08 | 15.4 | 52.7 | 13.1 |
| 10 | 8.5 | 8.5 | 9.88 | 11.16 | 8.5 | 16.79 | 12.64 | 72.07 | 26.46 | 48.56 | 63.76 | 23.69 | 52.56 | 98.4 | 74.82 | 105.2 | 77.59 | 54.05 | 48.57 | 33.37 | 59.63 | 55.49 | 40.28 | 44.43 | 105.2 | 44.0 |
| 11 | 51.34 | 47.19 | 41.67 | 27.84 | 27.84 | 12.64 | 20.93 | 54.11 | 41.66 | 49.95 | 25.08 | 23.47 | 18.17 | 16.69 | 11.17 | 2.967 | 0 | 2.967 | 7.113 | 2.967 | 4.35 | 7.113 | 3.611 | 4.35 | 54.1 | 21.0 |
| 12 | 7.113 | 0.203 | 2.966 | 5.732 | 0 | 0.203 | 7.112 | 5.731 | 3.704 | 19.55 | 24.57 | 49.96 | 31.99 | 23.7 | 33.37 | 48.58 | 43.05 | 26.46 | 14.02 | 18.17 | 11.4 | 15.41 | 9.88 | 5.731 | 50.0 | 17.0 |
| 13 | 2.967 | 7.113 | 9.88 | 9.88 | 9.88 | 14.07 | 31.99 | 41.66 | 15.4 | **C** | **C** | **C** | 51.34 | 30.61 | 12.64 | 33.37 | 19.55 | 12.64 | 19.55 | 31.99 | 37.52 | 15.41 | 7.113 | 9.88 | 51.3 | 20.2 |
| 14 | 16.79 | 28.58 | 9.88 | 16.79 | 12.64 | 16.79 | 23.7 | 12.64 | 12.64 | 69.3 | 192.3 | 200.1 | 81.7 | 85.9 | 85.9 | 139.8 | 133.9 | 85.9 | 65.16 | 16.79 | 19.41 | 4.073 | 4.35 | 1.585 | 200.1 | 55.7 |
| 15 | 1.584 | 2.967 | 0 | 1.585 | 14.02 | 9.88 | 7.114 | 8.5 | 22.32 | 1.583 | 44.43 | 114.9 | 119.1 | 311.1 | 65.46 | 31.98 | 25.07 | 26.46 | 19.55 | 52.72 | 72.07 | 114.9 | 251.7 | 146.7 | 311.1 | 61.1 |
| 16 | 94.2 | 33.37 | 16.79 | 7.114 | 33.05 | 15.4 | 21.26 | 25.08 | 29.23 | 25.07 | 37.5 | 40.27 | 86.9 | 121.8 | 134.2 | 137 | 108 | 80.3 | 40.27 | 34.74 | 29.21 | 23.69 | 19.54 | 20.92 | 137.0 | 50.6 |
| 17 | 19.54 | 15.4 | 11.25 | 9.87 | 20.92 | 27.83 | 103.8 | 259.9 | 252.4 | 217.1 | 487.9 | 287.6 | 43.58 | 27.83 | 23.7 | 11.26 | 11.26 | 9.88 | 19.55 | 8.45 | 8.5 | 20.93 | 20.93 | 18.17 | 487.9 | 80.7 |
| 18 | 9.88 | 16.79 | 15.41 | 11.26 | 9.88 | 2.967 | 20.93 | 8.49 | 8.49 | 8.49 | 14.02 | 8.5 | 25.08 | 49.96 | 48.57 | 43.04 | 47.19 | 66.54 | 59.68 | 18.17 | 8.5 | 16.79 | 8.49 | 9.88 | 66.5 | 22.4 |
| 19 | 8.49 | 5.728 | 7.111 | 5.727 | 4.349 | 9.88 | 9.88 | 8.49 | 18.17 | 7.112 | 29.22 | 8.5 | 7.113 | 7.113 | 18.17 | 9.88 | 8.49 | 4.348 | 1.584 | 0.203 | 0 | 0.202 | 0 | 1.585 | 29.2 | 7.6 |
| 20 | 5.73 | 0.203 | 14.02 | 0 | 0.202 | 2.966 | 7.113 | 7.113 | 5.731 | 4.349 | 14.16 | 12.64 | 11.26 | 16.79 | 1.585 | 4.349 | 19.55 | 8.5 | 18.17 | 1.537 | 7.113 | 5.73 | 5.73 | 9.88 | 19.6 | 7.7 |
| 21 | 18.17 | 7.114 | 4.35 | 1.585 | 4.348 | 7.113 | 6.192 | 7.113 | 20.93 | 25.08 | 36.18 | 29.22 | 25.08 | 20.93 | 7.113 | 14.02 | 8.5 | 7.113 | 14.02 | 19.55 | 29.23 | 19.23 | 16.79 | 8.5 | 36.2 | 14.9 |
| 22 | 4.027 | 5.73 | 9.88 | 2.967 | 5.73 | 5.73 | 4.349 | 22.32 | 0 | 15.41 | 0 | 23.7 | 11.26 | 7.113 | 7.114 | 5.732 | 5.732 | 11.26 | 7.113 | 1.585 | 1.584 | 3.842 | 7.114 | 8.49 | 23.7 | 7.4 |
| 23 | 7.113 | 2.967 | 0 | 0.203 | 18.17 | 17.2 | 40.28 | 70.69 | 91.4 | 8.49 | 41.67 | 81.7 | 25.08 | 13.93 | 26.46 | 106.6 | 92.8 | 27.85 | 33.37 | 16.79 | 23.7 | 2.967 | 7.113 | 69.3 | 106.6 | 34.4 |
| 24 | 91.4 | 23.7 | 15.4 | 20.93 | 15.41 | 30.61 | 16.79 | 18.17 | 61.01 | 240.7 | 148.1 | 59.61 | 76.19 | 58.23 | 34.74 | 38.89 | 12.64 | 11.63 | 9.88 | 36.13 | 47.19 | 52.72 | 59.73 | 58.24 | 240.7 | 51.6 |
| 25 | 69.3 | 41.67 | 84.5 | 304.1 | 320.7 | 235.1 | 59.89 | 31.98 | 27.83 | 109.3 | 55.46 | 117.7 | 59.61 | 80.4 | 4.348 | 8.5 | 12.64 | 9.88 | 8.5 | 11.44 | 2.967 | 2.967 | 5.73 | 1.631 | 320.7 | 69.4 |
| 26 | 5.731 | 3.888 | 4.348 | 3.843 | 1.586 | 29.23 | 15.4 | 17.02 | 45.81 | 157.8 | 72.07 | 27.84 | 51.34 | 29.22 | 23.7 | 30.61 | 11.26 | 23.7 | 11.26 | 25.08 | 16.69 | 19.41 | 40.28 | 20.93 | 157.8 | 28.7 |
| 27 | 37.52 | 26.46 | 45.81 | 24.62 | 20.93 | 19.55 | 16.79 | 14.02 | 12.64 | 22.31 | 84.5 | 66.54 | 76.17 | 164.7 | 134.3 | 102.5 | 29.22 | 21.3 | 16.79 | 11.26 | 11.26 | 11.4 | 9.88 | 5.916 | 164.7 | 41.1 |
| 28 | 8.49 | 8.5 | 7.113 | 14.11 | 22.32 | 12.64 | 7.115 | 14.11 | 33.37 | 49.96 | 44.42 | 130.1 | 62.37 | 96.9 | 30.59 | 26.45 | 36.12 | 30.6 | 14.02 | 16.69 | 19.55 | 20.93 | 0 | 4.35 | 130.1 | 29.6 |
| 29 | 7.111 | 5.73 | 8.49 | 9.88 | 7.114 | 0 | 1.584 | 8.5 | 5.731 | 1.583 | 15.41 | 9.88 | 7.113 | 0.203 | 0 | 4.119 | 8.5 | 9.88 | 8.5 | 5.731 | 19.27 | 14.02 | 12.64 | 18.17 | 19.3 | 7.9 |
| 30 | 17.02 | 7.113 | 7.113 | 9.88 | 2.967 | 2.967 | 7.112 | 61.01 | 74.84 | 121.8 | 232.4 | 179.9 | 142.6 | 203.4 | 150.8 | 102.6 | 36.14 | 18.17 | 4.35 | 16.79 | 12.64 | 14.3 | 4.349 | 4.348 | 232.4 | 59.8 |
| 31 | 4.349 | 25.08 | 34.76 | 9.88 | 20.93 | 26.28 | 19.55 | 36.14 | 72.07 | 95.6 | 36.14 | 34.75 | 18.17 | 18.17 | 33.37 | 9.88 | 5.731 | 0.203 | 14.02 | 8.49 | 1.585 | 0 | 7.111 | 11.49 | 95.6 | 22.7 |
| Hourly Max | 94.2 | 47.2 | 114.9 | 304.1 | 320.7 | 235.1 | 103.8 | 259.9 | 252.4 | 240.7 | 487.9 | 287.6 | 142.6 | 356.7 | 591.5 | 139.8 | 133.9 | 91.4 | 65.2 | 52.7 | 72.1 | 114.9 | 251.7 | 146.7 | | |
| Hourly Average | 19.1 | 14.7 | 18.1 | 19.5 | 22.1 | 21.0 | 20.2 | 32.7 | 35.1 | 52.8 | 67.0 | 62.5 | 41.0 | 69.0 | 59.9 | 38.7 | 29.8 | 25.8 | 19.4 | 16.0 | 17.3 | 21.7 | 21.7 | 19.9 | | |

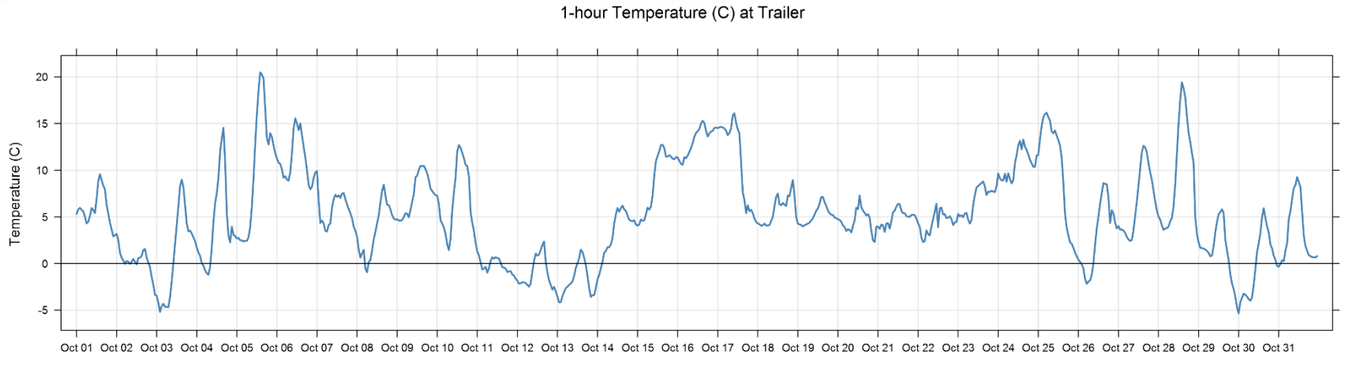
C = CALIBRATION




| | | | | | |
|---|---|---|---|---|---|
| Number of 24HR Exceedances | 0 | | Objective | 100 | UG/M3 |
| Number of Non-Zero Readings | 727 | | | | |
| Maximum 1-HR Average | 591.5 | UG/M3 | | | |
| Maximum 24-HR Average | 80.7 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 3 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 51.7 | | Monthly Average | 31.8 | UG/M3 |

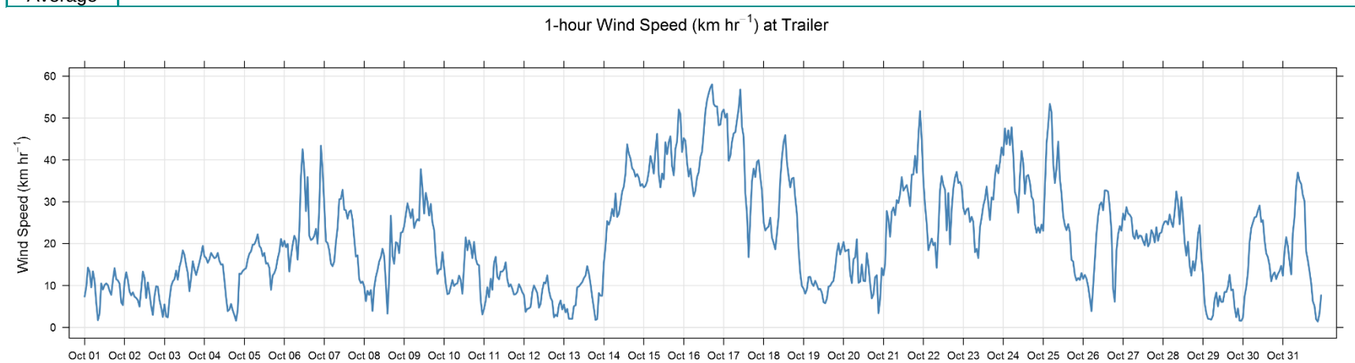
# Lagoon Temperature (°C) – October 2017

| 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 | 5.3 | 5.8 | 6.0 | 5.8 | 5.6 | 5.0 | 4.3 | 4.5 | 5.1 | 5.9 | 5.7 | 5.4 | 6.9 | 8.8 | 9.6 | 8.9 | 8.4 | 8.0 | 6.3 | 5.4 | 4.4 | 3.7 | 2.9 | 3.0 | 9.6 | 5.9 |
| 2 | 3.2 | 2.5 | 1.2 | 0.6 | 0.3 | 0.0 | 0.3 | 0.2 | 0.0 | 0.2 | 0.5 | 0.2 | -0.1 | 0.6 | 0.6 | 0.8 | 1.4 | 1.6 | 0.6 | 0.1 | -0.4 | -1.5 | -2.3 | -3.4 | 3.2 | 0.3 |
| 3 | -3.4 | -4.2 | -5.2 | -4.6 | -4.3 | -4.6 | -4.6 | -4.7 | -3.6 | -1.9 | 0.0 | 2.1 | 4.1 | 6.2 | 8.3 | 9.0 | 8.2 | 6.3 | 4.3 | 3.4 | 3.5 | 3.2 | 2.8 | 2.4 | 9.0 | 0.9 |
| 4 | 1.7 | 1.2 | 0.8 | 0.0 | -0.2 | -0.7 | -1.0 | -1.2 | -0.4 | 1.7 | 4.5 | 6.5 | 7.5 | 9.2 | 12.0 | 13.4 | 14.6 | 10.8 | 5.4 | 3.0 | 2.3 | 3.9 | 3.1 | 2.9 | 14.6 | 4.2 |
| 5 | 2.7 | 2.7 | 2.5 | 2.5 | 2.4 | 2.4 | 2.4 | 2.8 | 3.9 | 6.1 | 9.1 | 12.8 | 16.0 | 18.6 | 20.5 | 20.2 | 19.8 | 16.5 | 13.4 | 12.8 | 14.0 | 13.6 | 12.6 | 11.8 | 20.5 | 10.1 |
| 6 | 11.3 | 10.8 | 10.7 | 10.1 | 9.2 | 9.4 | 9.0 | 8.9 | 9.8 | 11.8 | 14.5 | 15.6 | 15.0 | 14.3 | 15.0 | 13.8 | 12.5 | 11.4 | 10.0 | 8.4 | 7.9 | 8.2 | 9.2 | 9.8 | 15.6 | 11.1 |
| 7 | 9.9 | 6.8 | 4.3 | 4.6 | 4.3 | 3.5 | 3.4 | 4.1 | 4.3 | 6.0 | 6.9 | 7.4 | 7.1 | 7.3 | 7.0 | 7.5 | 7.5 | 6.9 | 6.3 | 5.8 | 5.4 | 4.8 | 3.9 | 3.5 | 9.9 | 5.8 |
| 8 | 2.9 | 1.5 | 0.6 | 1.1 | 1.5 | -0.6 | -0.9 | 0.2 | 0.4 | 1.4 | 2.6 | 3.4 | 4.3 | 5.2 | 6.6 | 7.8 | 8.4 | 7.3 | 6.3 | 6.3 | 5.8 | 5.2 | 4.8 | 4.7 | 8.4 | 3.6 |
| 9 | 4.8 | 4.6 | 4.6 | 4.7 | 5.0 | 5.4 | 5.3 | 5.0 | 5.8 | 6.6 | 7.5 | 9.2 | 9.4 | 10.0 | 10.5 | 10.4 | 10.5 | 10.1 | 9.7 | 8.9 | 8.0 | 7.8 | 7.5 | 7.3 | 10.5 | 7.4 |
| 10 | 7.3 | 6.4 | 4.6 | 4.3 | 3.9 | 3.2 | 2.1 | 1.4 | 2.6 | 5.7 | 7.6 | 9.2 | 12.0 | 12.7 | 12.4 | 11.9 | 11.3 | 10.6 | 10.4 | 9.3 | 5.5 | 4.4 | 3.5 | 2.2 | 12.7 | 6.8 |
| 11 | 1.3 | 0.9 | 0.1 | -0.6 | -0.5 | -0.3 | -1.0 | -0.5 | 0.3 | 0.7 | 0.5 | 0.7 | 0.6 | 0.5 | 0.1 | -0.4 | -0.4 | -0.5 | -0.9 | -0.8 | -0.8 | -1.2 | -1.3 | -1.6 | 1.3 | -0.2 |
| 12 | -1.8 | -2.2 | -2.1 | -2.0 | -2.0 | -2.1 | -2.3 | -2.5 | -2.1 | -0.9 | 0.3 | 1.1 | 0.8 | 1.0 | 1.5 | 2.0 | 2.4 | 0.2 | -0.9 | -1.8 | -2.3 | -2.8 | -2.5 | -3.0 | 2.4 | -1.0 |
| 13 | -3.5 | -4.2 | -4.1 | -3.5 | -3.0 | -2.6 | -2.5 | -2.3 | -2.1 | -1.9 | -1.3 | -0.5 | 0.0 | 0.6 | 1.5 | 1.3 | 0.6 | -0.2 | -1.3 | -2.6 | -3.6 | -3.4 | -3.4 | -2.6 | 1.5 | -1.9 |
| 14 | -1.7 | -1.2 | -0.5 | 0.2 | 1.2 | 1.3 | 1.7 | 1.7 | 2.0 | 2.7 | 4.3 | 5.3 | 5.9 | 5.6 | 5.9 | 6.2 | 5.8 | 5.7 | 5.1 | 4.7 | 4.6 | 4.5 | 4.6 | 4.2 | 6.2 | 3.3 |
| 15 | 4.1 | 4.2 | 4.7 | 4.6 | 4.6 | 5.2 | 6.0 | 5.8 | 6.1 | 7.3 | 9.4 | 11.0 | 11.5 | 12.0 | 12.7 | 12.7 | 12.4 | 11.5 | 11.5 | 11.6 | 11.4 | 11.2 | 11.2 | 11.4 | 12.7 | 8.9 |
| 16 | 11.4 | 11.0 | 10.7 | 10.6 | 11.4 | 11.3 | 11.6 | 12.0 | 12.4 | 12.9 | 13.6 | 14.0 | 14.2 | 14.4 | 15.0 | 15.3 | 15.1 | 14.2 | 13.6 | 13.9 | 14.1 | 14.2 | 14.5 | 14.6 | 15.3 | 13.2 |
| 17 | 14.5 | 14.6 | 14.6 | 14.6 | 14.5 | 14.2 | 13.8 | 14.0 | 14.5 | 15.9 | 16.1 | 15.1 | 14.4 | 13.9 | 10.9 | 7.7 | 6.8 | 5.4 | 6.2 | 5.6 | 5.8 | 5.4 | 4.8 | 4.5 | 16.1 | 11.2 |
| 18 | 4.3 | 4.2 | 4.0 | 4.1 | 4.3 | 4.1 | 4.1 | 4.1 | 4.6 | 5.0 | 6.1 | 7.1 | 7.5 | 6.3 | 6.2 | 6.5 | 6.3 | 6.2 | 7.3 | 7.2 | 8.1 | 8.9 | 7.2 | 5.0 | 8.9 | 5.8 |
| 19 | 4.3 | 4.2 | 4.1 | 4.0 | 4.1 | 4.2 | 4.3 | 4.4 | 4.6 | 4.8 | 5.2 | 5.7 | 5.9 | 6.4 | 7.1 | 7.1 | 6.6 | 6.2 | 5.7 | 5.4 | 5.2 | 5.2 | 4.9 | 4.9 | 7.1 | 5.2 |
| 20 | 4.7 | 4.7 | 4.5 | 4.1 | 3.9 | 3.5 | 3.7 | 3.6 | 3.3 | 4.0 | 4.6 | 6.0 | 5.8 | 7.3 | 6.1 | 5.7 | 5.4 | 5.1 | 5.3 | 4.9 | 3.5 | 2.5 | 2.3 | 4.0 | 7.3 | 4.5 |
| 21 | 4.0 | 3.7 | 4.2 | 4.1 | 3.4 | 4.3 | 4.3 | 3.7 | 4.5 | 5.5 | 5.7 | 6.1 | 6.4 | 6.4 | 5.6 | 5.4 | 5.4 | 5.1 | 5.0 | 5.0 | 5.2 | 5.2 | 5.2 | 4.8 | 6.4 | 4.9 |
| 22 | 4.3 | 3.9 | 2.8 | 2.3 | 2.4 | 3.6 | 3.2 | 3.0 | 4.0 | 4.7 | 5.6 | 6.4 | 3.9 | 5.9 | 6.0 | 5.3 | 5.3 | 4.9 | 4.9 | 5.1 | 4.8 | 4.1 | 4.4 | 4.5 | 6.4 | 4.4 |
| 23 | 5.3 | 5.1 | 5.2 | 5.0 | 5.4 | 5.4 | 4.7 | 4.3 | 4.7 | 6.3 | 7.3 | 8.1 | 8.3 | 8.5 | 8.6 | 8.8 | 8.2 | 7.3 | 7.7 | 7.7 | 7.8 | 7.7 | 7.7 | 8.3 | 8.8 | 6.8 |
| 24 | 9.6 | 9.1 | 8.9 | 8.9 | 9.6 | 8.8 | 9.7 | 9.1 | 8.6 | 8.9 | 10.8 | 11.6 | 12.7 | 13.1 | 12.2 | 13.3 | 12.5 | 12.2 | 11.7 | 11.1 | 10.7 | 10.4 | 10.4 | 11.6 | 13.3 | 10.6 |
| 25 | 11.6 | 13.3 | 14.7 | 15.7 | 16.0 | 16.2 | 15.7 | 15.3 | 14.2 | 14.0 | 14.3 | 13.7 | 13.2 | 12.6 | 11.4 | 8.7 | 5.3 | 3.9 | 3.0 | 2.3 | 2.1 | 1.7 | 1.2 | 0.8 | 16.2 | 10.0 |
| 26 | 0.4 | 0.2 | -0.1 | -0.5 | -1.6 | -2.2 | -1.9 | -1.8 | -1.2 | 0.0 | 2.0 | 3.7 | 5.0 | 6.4 | 7.5 | 8.6 | 8.5 | 8.5 | 7.1 | 4.3 | 5.7 | 5.4 | 4.4 | 3.8 | 8.6 | 3.0 |
| 27 | 4.0 | 3.6 | 3.6 | 3.5 | 3.3 | 2.9 | 2.6 | 2.4 | 2.5 | 3.6 | 5.1 | 6.6 | 8.3 | 10.2 | 11.9 | 12.6 | 12.5 | 11.9 | 10.7 | 9.8 | 9.0 | 7.8 | 6.7 | 5.7 | 12.6 | 6.7 |
| 28 | 5.0 | 4.7 | 4.1 | 3.6 | 3.8 | 3.8 | 4.0 | 4.5 | 4.9 | 6.1 | 8.4 | 11.8 | 15.0 | 17.5 | 19.4 | 18.8 | 17.8 | 15.8 | 14.0 | 13.0 | 11.9 | 10.8 | 5.0 | 3.2 | 19.4 | 9.5 |
| 29 | 2.3 | 1.7 | 1.7 | 1.6 | 1.5 | 1.4 | 1.1 | 0.8 | 0.9 | 1.9 | 3.3 | 4.5 | 5.3 | 5.5 | 5.8 | 5.4 | 2.5 | 1.4 | 0.3 | -1.1 | -2.1 | -2.7 | -3.5 | -4.7 | 5.8 | 1.4 |
| 30 | -5.4 | -4.1 | -3.7 | -3.2 | -3.3 | -3.5 | -3.8 | -4.0 | -3.6 | -2.3 | -0.6 | 1.2 | 2.2 | 3.3 | 4.9 | 5.9 | 4.9 | 4.0 | 3.3 | 2.0 | 1.6 | 0.8 | 0.4 | -0.2 | 5.9 | -0.1 |
| 31 | -0.3 | -0.1 | 0.4 | 0.3 | 1.4 | 2.2 | 4.7 | 5.6 | 6.9 | 8.1 | 8.4 | 9.3 | 8.7 | 8.2 | 5.5 | 3.0 | 1.9 | 1.4 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 9.3 | 3.3 |
| Hourly Max | 14.5 | 14.6 | 14.7 | 15.7 | 16.0 | 16.2 | 15.7 | 15.3 | 14.5 | 15.9 | 16.1 | 15.6 | 16.0 | 18.6 | 20.5 | 20.2 | 19.8 | 16.5 | 14.0 | 13.9 | 14.1 | 14.2 | 14.5 | 14.6 | | |
| Hourly Average | 4.0 | 3.7 | 3.5 | 3.4 | 3.5 | 3.4 | 3.3 | 3.4 | 3.8 | 4.9 | 6.1 | 7.1 | 7.7 | 8.3 | 8.7 | 8.5 | 8.0 | 7.1 | 6.2 | 5.5 | 5.2 | 4.8 | 4.3 | 4.0 | | |



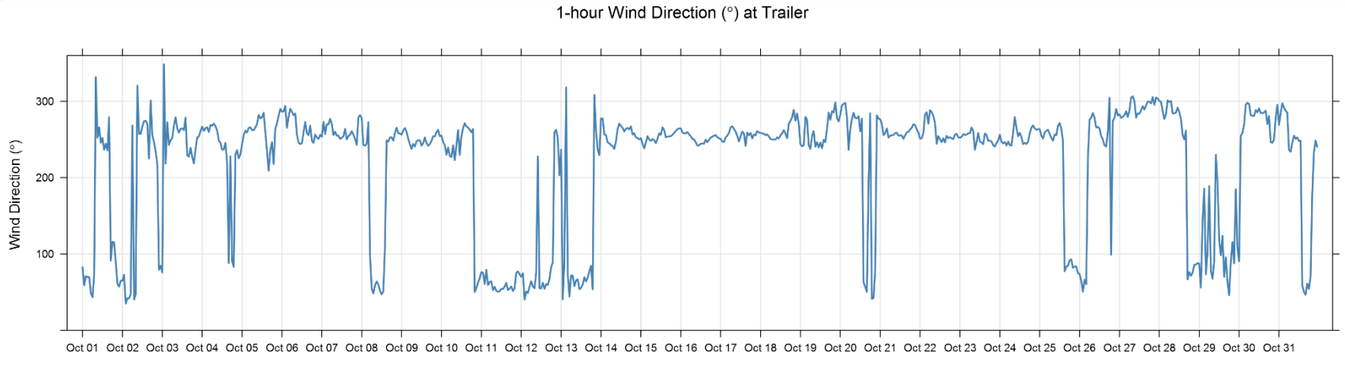
# Lagoon Wind Speed (km/hr) – October 2017

| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.4 | 9.7 | 14.3 | 13.3 | 9.6 | 13.4 | 11.1 | 5.9 | 1.7 | 3.4 | 10.5 | 9.0 | 10.1 | 10.5 | 10.1 | 8.7 | 7.8 | 11.3 | 14.1 | 11.5 | 11.2 | 10.4 | 6.0 | 5.3 | 14.3 | 9.4 |
| 2 | 10.9 | 13.2 | 11.3 | 8.6 | 7.7 | 8.4 | 7.3 | 7.0 | 6.5 | 5.0 | 9.1 | 13.3 | 11.9 | 7.0 | 10.7 | 8.0 | 5.0 | 3.0 | 7.4 | 9.8 | 9.7 | 6.5 | 4.7 | 2.5 | 13.3 | 8.1 |
| 3 | 5.5 | 2.6 | 2.4 | 6.7 | 9.8 | 11.0 | 11.5 | 13.6 | 11.4 | 14.4 | 16.0 | 18.4 | 17.3 | 14.9 | 13.0 | 8.6 | 11.9 | 15.8 | 13.9 | 12.5 | 14.0 | 15.6 | 17.3 | 19.5 | 19.5 | 12.4 |
| 4 | 16.9 | 16.6 | 15.4 | 16.3 | 17.8 | 17.1 | 16.5 | 16.8 | 17.8 | 15.9 | 15.0 | 15.1 | 11.3 | 7.2 | 3.9 | 4.3 | 5.6 | 4.1 | 2.9 | 1.6 | 4.1 | 12.8 | 12.8 | 13.5 | 17.8 | 11.7 |
| 5 | 13.9 | 14.1 | 16.2 | 17.6 | 18.1 | 19.7 | 19.9 | 20.8 | 22.2 | 19.5 | 18.9 | 17.0 | 17.8 | 15.2 | 15.4 | 14.2 | 9.0 | 12.4 | 13.0 | 14.1 | 16.4 | 18.1 | 21.1 | 19.3 | 22.2 | 16.8 |
| 6 | 20.7 | 19.2 | 19.9 | 13.3 | 17.0 | 19.7 | 21.9 | 20.9 | 16.2 | 23.1 | 36.1 | 42.5 | 37.4 | 27.8 | 35.9 | 21.9 | 20.9 | 21.1 | 21.9 | 23.5 | 20.0 | 28.5 | 43.4 | 37.4 | 43.4 | 25.4 |
| 7 | 29.4 | 20.6 | 20.1 | 18.4 | 15.2 | 14.6 | 15.8 | 20.3 | 23.8 | 30.6 | 30.7 | 32.9 | 28.1 | 28.0 | 25.9 | 27.6 | 28.0 | 25.7 | 21.2 | 16.9 | 17.2 | 11.5 | 10.6 | 11.0 | 32.9 | 21.8 |
| 8 | 9.8 | 6.3 | 8.7 | 7.8 | 8.9 | 3.9 | 9.5 | 12.1 | 13.7 | 15.7 | 16.8 | 18.8 | 17.1 | 10.6 | 3.3 | 11.7 | 26.7 | 17.0 | 15.2 | 20.3 | 20.1 | 17.7 | 22.6 | 22.7 | 26.7 | 14.0 |
| 9 | 24.2 | 26.9 | 29.6 | 28.0 | 26.1 | 28.2 | 23.7 | 25.1 | 25.8 | 25.5 | 37.8 | 33.3 | 27.2 | 32.1 | 30.1 | 26.7 | 29.5 | 25.1 | 23.3 | 16.9 | 12.8 | 13.8 | 13.8 | 18.0 | 37.8 | 25.2 |
| 10 | 14.3 | 10.4 | 7.9 | 8.1 | 9.7 | 11.3 | 9.9 | 10.4 | 10.5 | 12.4 | 11.3 | 8.0 | 14.7 | 21.5 | 18.4 | 20.8 | 19.5 | 16.6 | 20.4 | 16.4 | 15.1 | 14.8 | 6.5 | 3.1 | 21.5 | 13.0 |
| 11 | 4.4 | 6.4 | 9.6 | 7.2 | 11.6 | 9.0 | 15.4 | 16.9 | 12.1 | 11.5 | 13.4 | 13.3 | 13.9 | 15.5 | 11.5 | 9.7 | 10.3 | 9.2 | 7.8 | 7.9 | 8.5 | 10.3 | 9.5 | 8.4 | 16.9 | 10.5 |
| 12 | 7.7 | 3.7 | 4.4 | 4.5 | 4.9 | 8.4 | 10.0 | 9.1 | 8.2 | 4.7 | 5.6 | 8.9 | 10.7 | 10.5 | 12.4 | 8.8 | 7.1 | 6.3 | 2.4 | 3.0 | 2.7 | 5.3 | 6.4 | 4.3 | 12.4 | 6.7 |
| 13 | 5.5 | 3.6 | 4.4 | 2.1 | 2.1 | 2.0 | 5.1 | 5.2 | 9.6 | 9.8 | 10.3 | 10.8 | 11.8 | 12.4 | 14.6 | 12.9 | 10.4 | 7.2 | 4.6 | 1.8 | 2.0 | 8.2 | 7.6 | 7.6 | 14.6 | 7.1 |
| 14 | 15.4 | 19.3 | 25.4 | 24.5 | 25.8 | 28.3 | 26.6 | 32.0 | 26.4 | 27.1 | 29.6 | 32.4 | 33.6 | 36.8 | 43.7 | 41.5 | 40.3 | 38.0 | 37.5 | 36.0 | 36.6 | 35.8 | 33.8 | 34.2 | 43.7 | 31.7 |
| 15 | 33.4 | 33.8 | 34.9 | 37.2 | 40.9 | 39.2 | 36.7 | 42.4 | 46.2 | 36.5 | 33.4 | 36.8 | 35.4 | 44.2 | 41.4 | 44.2 | 45.6 | 38.5 | 36.3 | 42.6 | 44.4 | 52.0 | 50.9 | 41.9 | 52.0 | 40.4 |
| 16 | 45.2 | 44.6 | 39.4 | 36.0 | 37.9 | 34.3 | 31.3 | 32.7 | 35.9 | 37.1 | 40.6 | 41.9 | 46.5 | 51.5 | 54.3 | 55.9 | 57.3 | 58.0 | 53.3 | 52.8 | 52.8 | 48.3 | 48.4 | 51.4 | 58.0 | 45.3 |
| 17 | 52.0 | 50.1 | 51.1 | 39.8 | 40.9 | 44.3 | 46.3 | 46.6 | 49.5 | 52.3 | 56.8 | 47.9 | 45.5 | 32.1 | 27.1 | 16.8 | 26.5 | 34.8 | 37.9 | 35.9 | 39.5 | 39.9 | 35.9 | 32.6 | 56.8 | 40.9 |
| 18 | 25.2 | 23.1 | 23.7 | 24.1 | 26.2 | 21.5 | 20.2 | 18.6 | 22.5 | 26.4 | 35.3 | 40.6 | 44.2 | 45.9 | 39.5 | 36.2 | 33.4 | 35.5 | 35.7 | 30.9 | 27.2 | 18.7 | 13.0 | 9.9 | 45.9 | 28.2 |
| 19 | 9.3 | 8.0 | 9.1 | 12.0 | 12.1 | 10.5 | 9.9 | 11.1 | 10.2 | 9.0 | 9.2 | 8.3 | 6.0 | 5.7 | 6.9 | 9.7 | 9.9 | 10.7 | 11.2 | 14.1 | 17.8 | 20.1 | 17.4 | 18.8 | 20.1 | 11.1 |
| 20 | 20.4 | 18.2 | 18.4 | 18.6 | 12.7 | 10.6 | 16.3 | 16.7 | 21.0 | 10.6 | 10.9 | 15.0 | 11.1 | 11.0 | 17.7 | 14.6 | 10.4 | 6.9 | 7.9 | 12.0 | 12.4 | 3.4 | 6.7 | 14.2 | 21.0 | 13.3 |
| 21 | 12.4 | 15.1 | 27.8 | 25.7 | 21.7 | 27.6 | 28.6 | 26.8 | 30.4 | 29.7 | 32.0 | 35.9 | 32.7 | 33.4 | 34.0 | 31.8 | 29.0 | 36.5 | 36.5 | 41.0 | 36.9 | 45.7 | 51.7 | 44.7 | 51.7 | 32.0 |
| 22 | 35.0 | 29.2 | 24.8 | 18.4 | 19.9 | 21.2 | 19.6 | 20.2 | 14.2 | 22.9 | 32.8 | 36.2 | 34.0 | 32.9 | 23.2 | 32.1 | 19.8 | 28.2 | 33.2 | 35.8 | 37.1 | 34.5 | 34.8 | 33.7 | 37.1 | 28.1 |
| 23 | 28.5 | 27.0 | 28.2 | 28.4 | 25.2 | 26.4 | 25.2 | 18.0 | 18.7 | 16.6 | 23.9 | 26.2 | 29.1 | 30.6 | 33.6 | 29.6 | 25.7 | 31.0 | 30.5 | 36.1 | 38.8 | 36.8 | 39.5 | 43.0 | 43.0 | 29.0 |
| 24 | 41.1 | 47.5 | 43.7 | 47.1 | 43.5 | 47.8 | 41.4 | 32.3 | 31.1 | 27.4 | 36.2 | 42.1 | 39.3 | 31.9 | 36.1 | 36.4 | 34.6 | 31.2 | 30.4 | 24.7 | 22.6 | 23.9 | 22.6 | 24.5 | 47.8 | 35.0 |
| 25 | 23.1 | 33.3 | 43.9 | 48.3 | 53.4 | 51.3 | 39.4 | 34.5 | 38.1 | 44.4 | 35.7 | 31.9 | 26.6 | 24.4 | 23.2 | 24.7 | 22.8 | 16.1 | 15.7 | 12.6 | 11.2 | 11.8 | 11.3 | 13.0 | 53.4 | 28.8 |
| 26 | 11.6 | 12.5 | 11.6 | 9.8 | 7.0 | 3.9 | 9.8 | 16.0 | 22.4 | 26.7 | 29.3 | 29.9 | 28.0 | 32.7 | 32.7 | 32.4 | 28.6 | 23.0 | 9.2 | 6.1 | 18.3 | 22.2 | 24.2 | 23.1 | 32.7 | 19.6 |
| 27 | 27.2 | 25.7 | 28.7 | 27.2 | 26.9 | 26.2 | 21.9 | 21.1 | 23.2 | 21.2 | 21.9 | 21.8 | 20.6 | 19.6 | 22.3 | 19.3 | 20.2 | 23.2 | 22.3 | 20.3 | 23.9 | 20.7 | 22.4 | 22.7 | 28.7 | 22.9 |
| 28 | 24.4 | 25.3 | 25.4 | 24.6 | 27.0 | 25.1 | 24.0 | 27.6 | 32.5 | 29.7 | 24.6 | 31.1 | 26.4 | 20.3 | 17.2 | 20.5 | 14.8 | 12.4 | 15.8 | 13.6 | 16.8 | 22.3 | 24.4 | 16.7 | 32.5 | 22.6 |
| 29 | 12.6 | 5.8 | 3.4 | 2.1 | 2.0 | 1.9 | 2.8 | 6.7 | 8.3 | 5.0 | 7.5 | 6.1 | 6.1 | 8.5 | 8.4 | 9.7 | 12.6 | 8.9 | 9.0 | 4.8 | 2.4 | 4.5 | 1.6 | 1.6 | 12.6 | 5.9 |
| 30 | 2.3 | 7.4 | 9.6 | 13.1 | 20.3 | 23.7 | 25.0 | 26.3 | 26.4 | 27.9 | 29.1 | 25.2 | 25.6 | 20.9 | 17.7 | 16.8 | 14.8 | 11.0 | 12.5 | 13.1 | 11.5 | 12.7 | 13.5 | 14.7 | 29.1 | 17.6 |
| 31 | 12.4 | 18.1 | 21.5 | 19.4 | 15.8 | 12.6 | 22.5 | 26.3 | 33.8 | 37.0 | 35.1 | 34.3 | 31.6 | 30.2 | 18.2 | 16.0 | 13.5 | 10.6 | 6.3 | 5.1 | 1.9 | 1.4 | 3.3 | 7.7 | 37.0 | 18.1 |
| Hourly Max | 52.0 | 50.1 | 51.1 | 48.3 | 53.4 | 51.3 | 46.3 | 46.6 | 49.5 | 52.3 | 56.8 | 47.9 | 46.5 | 51.5 | 54.3 | 55.9 | 57.3 | 58.0 | 53.3 | 52.8 | 52.8 | 52.0 | 51.7 | 51.4 | | |
| Hourly Average | 19.4 | 19.3 | 20.5 | 19.6 | 19.9 | 20.1 | 20.2 | 20.7 | 21.6 | 21.9 | 24.4 | 25.3 | 24.2 | 23.4 | 22.7 | 21.7 | 21.0 | 20.3 | 19.7 | 19.2 | 19.6 | 20.3 | 20.6 | 20.0 | | |



# Lagoon Wind Direction (°) – October 2017

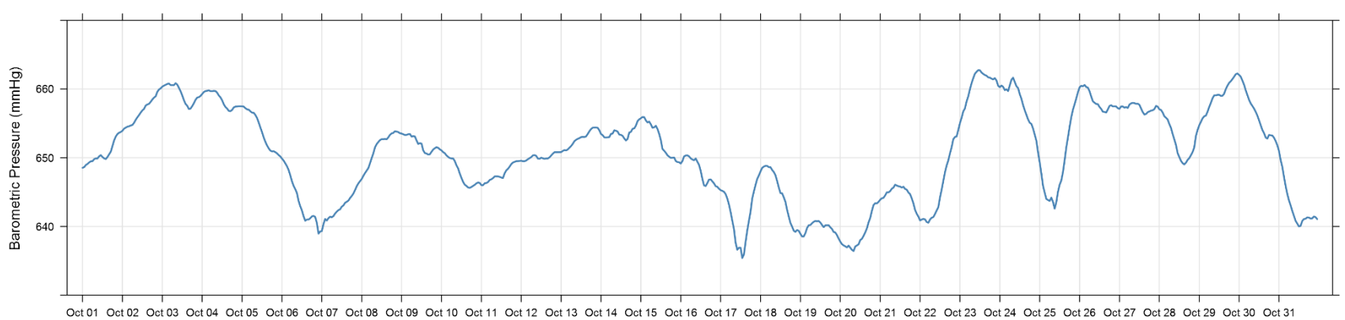
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| b | 82.6 | 59.0 | 71.0 | 69.6 | 69.8 | 48.9 | 43.4 | 72.3 | 331.7 | 252.3 | 265.9 | 245.7 | 252.1 | 236.5 | 244.5 | 235.6 | 279.2 | 91.3 | 115.9 | 115.3 | 89.1 | 61.0 | 57.1 | 64.9 | 331.7 | 78.0 |
| 2 | 64.7 | 72.8 | 35.0 | 41.9 | 41.7 | 47.7 | 268.3 | 40.2 | 47.3 | 320.5 | 257.5 | 257.2 | 267.0 | 273.9 | 274.5 | 270.2 | 225.0 | 301.1 | 255.5 | 246.6 | 234.3 | 218.0 | 79.3 | 84.6 | 320.5 | 303.1 |
| 3 | 75.7 | 348.4 | 218.3 | 272.4 | 242.9 | 248.9 | 251.8 | 268.5 | 279.1 | 264.5 | 258.8 | 263.9 | 264.4 | 262.3 | 278.6 | 229.2 | 227.5 | 239.2 | 227.1 | 218.7 | 236.8 | 252.4 | 254.1 | 260.9 | 348.4 | 253.4 |
| 4 | 266.8 | 261.3 | 264.9 | 265.9 | 259.8 | 268.9 | 268.0 | 270.8 | 267.5 | 261.8 | 248.7 | 245.5 | 236.7 | 237.0 | 245.5 | 220.5 | 88.2 | 228.0 | 90.5 | 83.1 | 230.3 | 236.1 | 225.3 | 230.3 | 270.8 | 254.0 |
| 5 | 243.8 | 255.7 | 261.4 | 259.1 | 265.2 | 265.8 | 262.4 | 262.1 | 265.7 | 270.0 | 282.2 | 277.7 | 279.1 | 284.9 | 259.8 | 234.8 | 209.1 | 235.7 | 246.5 | 217.9 | 264.2 | 270.9 | 281.0 | 290.0 | 290.0 | 263.2 |
| 6 | 286.6 | 286.6 | 293.9 | 265.2 | 279.7 | 290.2 | 286.4 | 281.8 | 284.0 | 256.7 | 245.8 | 244.0 | 245.0 | 259.1 | 272.8 | 258.2 | 255.6 | 268.2 | 248.6 | 245.5 | 256.5 | 252.6 | 250.7 | 256.1 | 293.9 | 262.1 |
| 7 | 253.5 | 273.1 | 257.1 | 270.0 | 269.8 | 277.0 | 270.4 | 255.8 | 260.2 | 255.0 | 254.9 | 250.7 | 252.1 | 254.2 | 263.8 | 250.1 | 254.4 | 256.3 | 260.9 | 256.3 | 250.8 | 242.9 | 278.6 | 281.9 | 281.9 | 258.6 |
| 8 | 277.9 | 242.8 | 241.7 | 244.6 | 272.6 | 99.5 | 54.7 | 48.3 | 58.9 | 64.0 | 60.2 | 52.0 | 47.1 | 51.0 | 110.3 | 248.8 | 247.1 | 252.8 | 252.6 | 248.5 | 258.8 | 265.4 | 258.0 | 257.9 | 277.9 | 274.8 |
| 9 | 256.3 | 262.0 | 264.9 | 259.8 | 250.9 | 243.6 | 237.5 | 244.1 | 240.8 | 247.6 | 249.1 | 248.9 | 241.9 | 245.0 | 252.5 | 245.5 | 241.8 | 243.9 | 248.2 | 254.2 | 254.0 | 259.4 | 262.6 | 254.3 | 264.9 | 249.8 |
| 10 | 255.1 | 246.5 | 242.7 | 230.0 | 239.6 | 228.1 | 227.0 | 242.3 | 222.8 | 242.6 | 262.2 | 229.6 | 253.8 | 264.9 | 271.4 | 267.0 | 265.5 | 262.8 | 259.3 | 263.8 | 50.1 | 55.4 | 62.5 | 68.4 | 271.4 | 256.1 |
| 11 | 76.3 | 75.3 | 60.8 | 79.3 | 59.3 | 63.1 | 64.2 | 52.5 | 57.1 | 51.9 | 50.6 | 51.1 | 54.4 | 54.1 | 57.2 | 62.3 | 52.7 | 54.7 | 57.5 | 51.3 | 55.2 | 75.2 | 77.3 | 73.5 | 79.3 | 59.6 |
| 12 | 70.0 | 74.6 | 40.1 | 50.9 | 48.9 | 57.3 | 64.3 | 57.5 | 55.0 | 76.0 | 227.8 | 55.1 | 54.7 | 62.3 | 54.4 | 60.5 | 59.7 | 67.4 | 82.7 | 89.0 | 259.3 | 262.8 | 251.8 | 203.1 | 262.8 | 59.9 |
| 13 | 236.8 | 40.5 | 92.2 | 318.3 | 73.5 | 44.3 | 71.9 | 71.4 | 57.9 | 65.3 | 66.8 | 54.0 | 55.6 | 60.2 | 69.7 | 64.1 | 69.1 | 77.6 | 84.6 | 53.6 | 308.4 | 261.2 | 237.0 | 229.5 | 318.3 | 63.8 |
| 14 | 277.5 | 277.4 | 256.5 | 255.8 | 246.3 | 244.9 | 242.7 | 241.3 | 237.6 | 247.3 | 263.5 | 270.8 | 267.6 | 265.1 | 260.5 | 263.9 | 265.1 | 263.2 | 267.1 | 256.5 | 258.1 | 252.7 | 251.7 | 250.1 | 277.5 | 257.7 |
| 15 | 251.7 | 244.2 | 238.3 | 246.0 | 254.2 | 250.0 | 248.1 | 250.5 | 249.3 | 245.1 | 251.0 | 258.1 | 256.0 | 265.9 | 262.3 | 252.9 | 253.8 | 253.7 | 254.5 | 256.0 | 258.6 | 261.3 | 263.4 | 264.5 | 265.9 | 254.2 |
| 16 | 264.6 | 259.2 | 257.9 | 258.1 | 259.7 | 256.6 | 254.4 | 250.7 | 250.0 | 246.4 | 242.0 | 242.3 | 244.3 | 244.7 | 244.4 | 249.8 | 246.5 | 249.4 | 252.3 | 253.8 | 254.9 | 255.7 | 253.1 | 251.4 | 264.6 | 251.5 |
| 17 | 250.7 | 247.1 | 246.8 | 252.7 | 255.0 | 258.6 | 266.0 | 267.2 | 263.7 | 260.4 | 254.8 | 247.4 | 254.3 | 260.3 | 257.9 | 241.5 | 259.0 | 255.5 | 258.5 | 251.3 | 256.5 | 255.4 | 261.1 | 259.1 | 267.2 | 256.0 |
| 18 | 258.4 | 258.1 | 257.6 | 255.5 | 256.7 | 254.0 | 250.6 | 249.9 | 250.0 | 250.0 | 252.7 | 251.3 | 255.3 | 258.0 | 262.2 | 257.7 | 251.6 | 270.3 | 274.4 | 279.0 | 288.8 | 274.5 | 284.0 | 270.4 | 288.8 | 260.6 |
| 19 | 243.9 | 241.1 | 242.3 | 279.4 | 276.0 | 242.5 | 237.6 | 254.5 | 261.1 | 240.5 | 246.3 | 239.6 | 245.9 | 238.5 | 249.6 | 246.5 | 263.8 | 285.3 | 275.8 | 286.9 | 285.4 | 298.5 | 278.1 | 273.5 | 298.5 | 264.8 |
| 20 | 282.4 | 294.7 | 296.6 | 297.8 | 279.4 | 236.3 | 263.2 | 276.9 | 284.8 | 278.0 | 277.7 | 280.5 | 260.7 | 277.2 | 63.1 | 56.6 | 50.3 | 192.3 | 284.2 | 41.3 | 42.4 | 78.4 | 281.5 | 277.3 | 297.8 | 293.3 |
| 21 | 276.4 | 270.3 | 255.8 | 258.2 | 264.5 | 252.4 | 255.0 | 255.4 | 255.9 | 258.3 | 258.7 | 254.9 | 255.5 | 255.2 | 250.9 | 255.2 | 259.2 | 260.0 | 263.1 | 265.4 | 270.0 | 268.9 | 263.4 | 258.9 | 276.4 | 259.8 |
| 22 | 251.0 | 251.6 | 258.5 | 282.8 | 285.7 | 270.7 | 288.4 | 286.0 | 280.8 | 271.4 | 244.3 | 254.4 | 250.2 | 246.4 | 251.5 | 246.1 | 254.7 | 251.9 | 252.9 | 251.5 | 250.4 | 256.3 | 257.4 | 252.6 | 288.4 | 257.4 |
| 23 | 252.4 | 253.4 | 257.0 | 255.9 | 256.3 | 258.1 | 258.1 | 265.6 | 261.1 | 236.5 | 246.6 | 258.4 | 247.2 | 246.1 | 243.7 | 257.9 | 255.8 | 248.2 | 248.4 | 247.3 | 242.6 | 240.7 | 245.4 | 248.6 | 265.6 | 250.6 |
| 24 | 256.4 | 246.9 | 244.7 | 246.7 | 242.1 | 247.1 | 242.5 | 242.2 | 258.5 | 279.3 | 265.4 | 254.2 | 258.6 | 253.3 | 243.9 | 245.5 | 244.1 | 247.0 | 257.8 | 265.5 | 268.4 | 264.6 | 262.7 | 263.5 | 279.3 | 252.7 |
| 25 | 263.6 | 255.0 | 251.2 | 259.1 | 261.5 | 262.5 | 257.2 | 252.0 | 248.6 | 256.3 | 255.5 | 267.8 | 271.6 | 264.1 | 248.2 | 77.3 | 83.5 | 84.5 | 91.6 | 93.1 | 82.0 | 83.5 | 83.6 | 74.7 | 271.6 | 256.3 |
| 26 | 73.9 | 64.6 | 50.7 | 66.2 | 60.3 | 224.6 | 275.7 | 278.8 | 284.7 | 278.3 | 265.7 | 266.4 | 264.2 | 254.2 | 249.9 | 242.2 | 240.9 | 260.0 | 304.7 | 98.9 | 274.4 | 278.3 | 290.0 | 281.4 | 304.7 | 269.2 |
| 27 | 283.0 | 278.3 | 279.6 | 281.8 | 286.9 | 279.5 | 287.9 | 304.7 | 306.5 | 300.2 | 278.6 | 284.1 | 283.6 | 288.1 | 293.6 | 289.1 | 294.7 | 299.8 | 299.5 | 297.3 | 305.6 | 295.3 | 304.8 | 303.7 | 306.5 | 291.5 |
| 28 | 300.2 | 299.6 | 286.9 | 276.8 | 283.2 | 301.2 | 299.0 | 300.3 | 284.3 | 284.2 | 285.3 | 291.7 | 285.9 | 276.9 | 256.1 | 250.0 | 261.6 | 66.8 | 76.3 | 71.4 | 75.6 | 85.8 | 86.1 | 88.0 | 301.2 | 295.4 |
| 29 | 87.3 | 56.0 | 143.4 | 185.6 | 73.3 | 101.5 | 188.9 | 78.2 | 67.5 | 90.1 | 229.9 | 193.9 | 118.5 | 98.3 | 123.9 | 70.0 | 95.7 | 63.1 | 46.0 | 89.6 | 115.8 | 87.7 | 184.9 | 107.6 | 229.9 | 95.0 |
| 30 | 90.4 | 254.9 | 258.6 | 269.2 | 295.4 | 297.9 | 296.5 | 281.7 | 281.0 | 280.8 | 288.4 | 285.6 | 290.8 | 284.6 | 284.3 | 285.5 | 287.7 | 270.1 | 280.5 | 246.5 | 245.6 | 249.9 | 278.3 | 295.5 | 297.9 | 281.8 |
| 31 | 269.0 | 284.5 | 297.5 | 291.9 | 287.4 | 285.1 | 236.3 | 233.9 | 245.6 | 255.1 | 250.9 | 252.6 | 247.9 | 248.2 | 58.8 | 50.3 | 46.6 | 61.2 | 54.2 | 69.6 | 177.6 | 232.9 | 248.6 | 240.3 | 297.5 | 262.8 |
| Hourly Max | 300.2 | 348.4 | 297.5 | 318.3 | 295.4 | 301.2 | 299.0 | 304.7 | 331.7 | 320.5 | 288.4 | 291.7 | 290.8 | 288.1 | 293.6 | 289.1 | 294.7 | 301.1 | 304.7 | 297.3 | 308.4 | 298.5 | 304.8 | 303.7 | | |
| Hourly Average | 215.5 | 220.5 | 216.9 | 230.5 | 219.3 | 216.4 | 226.4 | 217.3 | 225.8 | 231.8 | 238.3 | 230.0 | 227.8 | 228.1 | 218.1 | 209.2 | 206.1 | 208.4 | 208.8 | 192.4 | 216.1 | 217.2 | 224.3 | 219.9 | | |



# Lagoon Pressure (mmHg) – October 2017

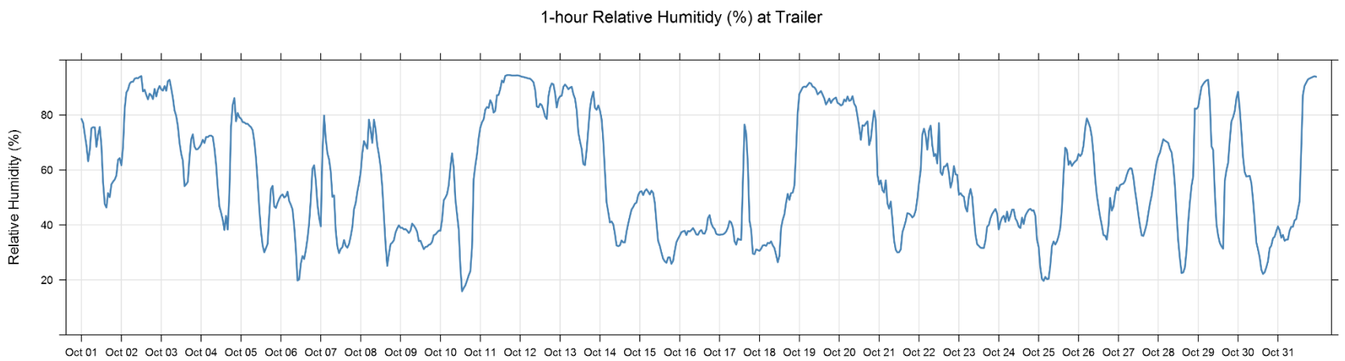
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 648.5 | 648.6 | 649.0 | 649.1 | 649.3 | 649.5 | 649.5 | 649.8 | 649.9 | 649.9 | 650.2 | 650.4 | 650.1 | 649.9 | 649.8 | 650.1 | 650.5 | 650.9 | 651.7 | 652.5 | 653.1 | 653.4 | 653.6 | 653.8 | 653.8 | 650.5 |
| 2 | 653.9 | 654.2 | 654.4 | 654.5 | 654.6 | 654.7 | 654.8 | 655.1 | 655.5 | 655.9 | 656.2 | 656.6 | 656.9 | 657.1 | 657.6 | 657.8 | 657.8 | 658.1 | 658.5 | 658.7 | 658.9 | 659.6 | 659.9 | 660.1 | 660.1 | 656.7 |
| 3 | 660.3 | 660.5 | 660.6 | 660.7 | 660.8 | 660.6 | 660.6 | 660.6 | 660.9 | 660.6 | 660.2 | 659.7 | 659.1 | 658.4 | 657.8 | 657.6 | 657.1 | 657.2 | 657.5 | 657.9 | 658.4 | 658.8 | 658.8 | 659.0 | 660.9 | 659.3 |
| 4 | 659.3 | 659.6 | 659.7 | 659.7 | 659.8 | 659.7 | 659.7 | 659.7 | 659.7 | 659.5 | 659.1 | 658.8 | 658.4 | 657.8 | 657.4 | 657.2 | 656.8 | 656.8 | 657.0 | 657.3 | 657.4 | 657.5 | 657.5 | 657.5 | 659.8 | 658.4 |
| 5 | 657.5 | 657.4 | 657.2 | 657.1 | 657.0 | 656.8 | 656.6 | 656.5 | 656.2 | 655.8 | 655.1 | 654.4 | 653.7 | 653.0 | 652.3 | 651.8 | 651.4 | 651.1 | 650.9 | 651.0 | 650.8 | 650.6 | 650.4 | 650.2 | 657.5 | 654.0 |
| 6 | 649.9 | 649.6 | 649.2 | 648.8 | 648.2 | 647.5 | 646.6 | 645.9 | 645.4 | 644.9 | 643.7 | 643.0 | 642.3 | 641.5 | 640.8 | 641.0 | 641.0 | 641.2 | 641.5 | 641.5 | 641.4 | 640.5 | 639.0 | 639.3 | 649.9 | 643.9 |
| 7 | 639.3 | 640.4 | 641.1 | 640.9 | 641.2 | 641.4 | 641.3 | 641.5 | 641.9 | 642.2 | 642.4 | 642.5 | 642.9 | 643.1 | 643.4 | 643.6 | 643.8 | 644.1 | 644.4 | 644.8 | 645.3 | 645.9 | 646.3 | 646.6 | 646.6 | 642.9 |
| 8 | 646.9 | 647.4 | 647.8 | 648.1 | 648.5 | 649.2 | 649.9 | 650.6 | 651.5 | 652.0 | 652.3 | 652.6 | 652.7 | 652.7 | 652.7 | 652.7 | 653.0 | 653.3 | 653.5 | 653.6 | 653.9 | 653.8 | 653.7 | 653.6 | 653.9 | 651.5 |
| 9 | 653.5 | 653.4 | 653.3 | 653.3 | 653.4 | 653.5 | 653.1 | 653.1 | 653.1 | 652.5 | 652.0 | 652.1 | 652.1 | 651.1 | 650.7 | 650.6 | 650.5 | 650.5 | 650.9 | 651.2 | 651.4 | 651.5 | 651.5 | 651.2 | 653.5 | 652.1 |
| 10 | 651.1 | 650.8 | 650.7 | 650.3 | 650.1 | 650.0 | 649.9 | 649.9 | 649.5 | 648.9 | 648.5 | 647.7 | 647.1 | 646.5 | 646.1 | 645.9 | 645.7 | 645.6 | 645.7 | 645.9 | 646.1 | 646.3 | 646.4 | 646.3 | 651.1 | 648.0 |
| 11 | 646.0 | 646.0 | 646.3 | 646.3 | 646.5 | 646.8 | 646.9 | 647.0 | 647.3 | 647.3 | 647.3 | 647.2 | 647.1 | 647.0 | 647.7 | 648.2 | 648.4 | 648.7 | 649.1 | 649.3 | 649.4 | 649.5 | 649.5 | 649.5 | 649.5 | 647.7 |
| 12 | 649.6 | 649.5 | 649.5 | 649.6 | 649.8 | 649.9 | 650.1 | 650.3 | 650.4 | 650.3 | 649.9 | 649.8 | 650.0 | 649.9 | 649.8 | 649.9 | 649.9 | 650.1 | 650.3 | 650.6 | 650.8 | 650.8 | 650.8 | 650.8 | 650.8 | 650.1 |
| 13 | 650.8 | 651.0 | 651.1 | 651.1 | 651.2 | 651.5 | 651.7 | 652.0 | 652.4 | 652.6 | 652.8 | 652.9 | 653.0 | 653.0 | 653.0 | 653.1 | 653.5 | 653.8 | 654.2 | 654.4 | 654.4 | 654.4 | 654.4 | 654.0 | 654.4 | 652.8 |
| 14 | 653.5 | 653.3 | 653.0 | 652.9 | 653.0 | 653.0 | 653.5 | 653.5 | 654.0 | 653.9 | 653.8 | 653.4 | 653.3 | 653.2 | 652.8 | 652.5 | 652.7 | 653.7 | 653.8 | 654.2 | 654.3 | 654.7 | 655.3 | 655.6 | 655.6 | 653.6 |
| 15 | 655.8 | 655.9 | 655.9 | 655.4 | 655.1 | 655.3 | 654.9 | 654.4 | 654.4 | 654.7 | 654.2 | 653.5 | 652.6 | 651.3 | 651.0 | 650.7 | 650.4 | 650.2 | 650.0 | 650.0 | 650.0 | 649.5 | 649.4 | 649.3 | 655.9 | 652.7 |
| 16 | 649.2 | 649.5 | 650.2 | 650.3 | 650.3 | 650.2 | 649.9 | 649.7 | 649.6 | 649.9 | 649.4 | 649.0 | 648.1 | 646.9 | 646.0 | 645.9 | 646.3 | 646.8 | 646.9 | 646.6 | 646.3 | 645.9 | 645.8 | 645.5 | 650.3 | 648.1 |
| 17 | 645.3 | 645.2 | 645.1 | 644.7 | 644.1 | 643.2 | 642.1 | 640.9 | 639.6 | 637.6 | 636.6 | 636.9 | 636.9 | 635.4 | 635.9 | 637.7 | 639.4 | 640.8 | 642.2 | 644.1 | 645.1 | 646.0 | 646.9 | 647.4 | 647.4 | 641.6 |
| 18 | 648.0 | 648.5 | 648.7 | 648.8 | 648.8 | 648.6 | 648.6 | 648.2 | 647.9 | 647.5 | 646.6 | 645.7 | 644.9 | 644.8 | 644.2 | 643.6 | 642.4 | 641.4 | 640.5 | 640.0 | 639.4 | 639.2 | 639.5 | 639.4 | 648.8 | 644.8 |
| 19 | 638.9 | 638.5 | 638.5 | 639.0 | 639.8 | 640.2 | 640.2 | 640.5 | 640.7 | 640.8 | 640.7 | 640.8 | 640.6 | 640.2 | 639.9 | 640.2 | 640.2 | 640.2 | 639.9 | 639.6 | 639.2 | 639.1 | 638.7 | 638.2 | 640.8 | 639.8 |
| 20 | 637.8 | 637.4 | 637.2 | 637.1 | 637.0 | 637.2 | 636.9 | 636.6 | 636.4 | 637.1 | 637.2 | 637.4 | 638.0 | 638.2 | 638.6 | 639.1 | 639.7 | 640.6 | 641.2 | 642.3 | 643.1 | 643.4 | 643.4 | 643.6 | 643.6 | 639.0 |
| 21 | 643.9 | 644.1 | 644.2 | 644.5 | 645.0 | 645.0 | 645.1 | 645.5 | 645.7 | 646.1 | 646.0 | 645.9 | 645.8 | 645.7 | 645.8 | 645.5 | 645.4 | 644.9 | 644.7 | 644.1 | 643.4 | 642.4 | 641.8 | 641.4 | 646.1 | 644.7 |
| 22 | 640.9 | 641.0 | 641.1 | 641.0 | 640.6 | 640.5 | 641.0 | 641.3 | 641.4 | 641.8 | 642.3 | 642.8 | 644.2 | 645.4 | 646.6 | 647.9 | 648.9 | 649.6 | 650.6 | 651.5 | 652.7 | 653.0 | 653.1 | 654.0 | 654.0 | 645.6 |
| 23 | 655.0 | 655.8 | 656.7 | 657.2 | 658.2 | 658.9 | 660.0 | 660.8 | 661.6 | 662.2 | 662.5 | 662.7 | 662.7 | 662.4 | 662.2 | 662.0 | 661.9 | 661.7 | 661.7 | 661.5 | 661.4 | 661.6 | 661.2 | 660.5 | 662.7 | 660.5 |
| 24 | 660.3 | 660.5 | 660.3 | 659.8 | 660.0 | 659.7 | 660.5 | 661.4 | 661.6 | 661.0 | 660.4 | 660.1 | 659.2 | 658.6 | 657.7 | 656.9 | 656.2 | 655.6 | 655.1 | 654.9 | 654.2 | 653.4 | 652.5 | 650.8 | 661.6 | 658.0 |
| 25 | 649.3 | 647.7 | 645.9 | 644.9 | 644.0 | 643.9 | 643.7 | 644.2 | 643.6 | 642.6 | 643.5 | 645.0 | 646.1 | 646.7 | 647.9 | 649.6 | 651.5 | 653.0 | 654.5 | 655.9 | 657.0 | 657.8 | 658.6 | 659.5 | 659.5 | 649.0 |
| 26 | 660.3 | 660.5 | 660.4 | 660.6 | 660.3 | 660.2 | 659.7 | 658.9 | 658.2 | 658.0 | 657.8 | 657.8 | 657.4 | 657.1 | 656.7 | 656.7 | 656.6 | 657.0 | 657.5 | 657.6 | 657.5 | 657.5 | 657.5 | 657.2 | 660.6 | 658.3 |
| 27 | 657.1 | 657.5 | 657.5 | 657.3 | 657.4 | 657.2 | 657.7 | 657.9 | 658.0 | 657.9 | 657.9 | 657.9 | 657.7 | 657.2 | 656.6 | 656.3 | 656.4 | 656.6 | 656.7 | 656.9 | 656.9 | 657.1 | 657.5 | 657.4 | 658.0 | 657.3 |
| 28 | 657.1 | 657.0 | 656.6 | 656.0 | 655.8 | 655.6 | 654.9 | 654.3 | 653.5 | 652.7 | 651.9 | 650.7 | 650.1 | 649.6 | 649.2 | 649.0 | 649.3 | 649.7 | 649.9 | 650.4 | 650.8 | 651.5 | 653.2 | 654.0 | 657.1 | 652.6 |
| 29 | 654.7 | 655.2 | 655.7 | 656.0 | 656.1 | 656.7 | 657.4 | 658.0 | 658.7 | 659.1 | 659.1 | 659.2 | 659.2 | 659.0 | 659.0 | 659.3 | 660.0 | 660.5 | 660.9 | 661.1 | 661.5 | 661.8 | 662.2 | 662.3 | 662.3 | 658.9 |
| 30 | 662.0 | 661.8 | 661.2 | 660.6 | 659.8 | 659.1 | 658.4 | 657.9 | 657.5 | 657.1 | 656.7 | 656.1 | 655.4 | 654.7 | 654.0 | 653.6 | 652.9 | 652.8 | 653.3 | 653.3 | 653.2 | 652.9 | 652.4 | 651.8 | 662.0 | 656.2 |
| 31 | 651.0 | 649.7 | 648.7 | 647.2 | 645.9 | 644.7 | 643.8 | 643.1 | 642.3 | 641.5 | 640.8 | 640.4 | 640.0 | 640.1 | 640.8 | 641.1 | 641.1 | 641.3 | 641.3 | 641.2 | 641.2 | 641.5 | 641.4 | 641.1 | 651.0 | 643.0 |
| Hourly Max | 662.0 | 661.8 | 661.2 | 660.7 | 660.8 | 660.6 | 660.6 | 661.4 | 661.6 | 662.2 | 662.5 | 662.7 | 662.7 | 662.4 | 662.2 | 662.0 | 661.9 | 661.7 | 661.7 | 661.5 | 661.5 | 661.8 | 662.2 | 662.3 | | |
| Hourly Average | 651.2 | 651.2 | 651.2 | 651.1 | 651.0 | 651.0 | 650.9 | 650.9 | 650.9 | 650.8 | 650.6 | 650.4 | 650.2 | 649.9 | 649.8 | 649.9 | 650.0 | 650.3 | 650.5 | 650.8 | 650.9 | 651.0 | 651.0 | 651.0 | | |

1-hour Barometric Pressures (mmHg) at Trailer



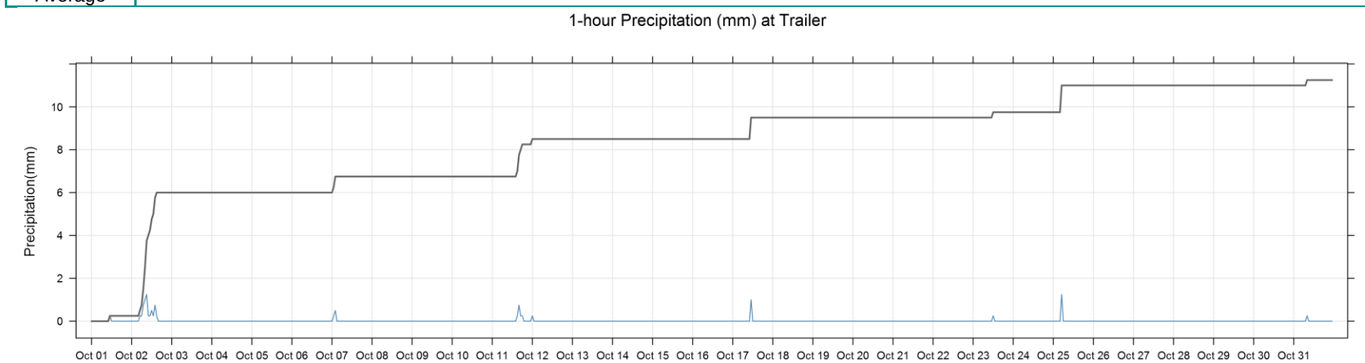
# Lagoon Relative Humidity (%) – October 2017

| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 78.6 | 77.1 | 72.9 | 68.9 | 63.1 | 67.2 | 75.2 | 75.6 | 75.5 | 68.4 | 72.8 | 75.6 | 68.8 | 55.5 | 47.6 | 46.3 | 51.6 | 50.1 | 54.8 | 55.7 | 56.5 | 58.0 | 63.7 | 64.3 | 78.6 | 64.3 |
| 2 | 61.7 | 68.4 | 82.2 | 88.2 | 89.2 | 91.4 | 92.1 | 92.1 | 93.2 | 93.4 | 93.3 | 93.8 | 94.2 | 88.6 | 89.2 | 87.3 | 85.7 | 87.7 | 87.1 | 85.7 | 89.5 | 86.7 | 89.2 | 90.6 | 94.2 | 87.5 |
| 3 | 89.3 | 88.9 | 90.5 | 88.8 | 92.3 | 92.8 | 89.7 | 86.2 | 81.7 | 79.6 | 75.9 | 69.9 | 65.9 | 63.3 | 54.1 | 54.8 | 55.7 | 64.4 | 71.1 | 72.9 | 68.5 | 67.5 | 67.6 | 68.3 | 92.8 | 75.0 |
| 4 | 69.3 | 71.0 | 69.8 | 72.0 | 71.9 | 72.5 | 72.5 | 72.0 | 67.9 | 62.1 | 53.6 | 46.7 | 44.5 | 41.9 | 38.2 | 43.3 | 38.3 | 51.7 | 75.7 | 83.7 | 86.1 | 77.7 | 80.7 | 79.1 | 86.1 | 64.3 |
| 5 | 78.7 | 77.4 | 77.3 | 76.8 | 76.8 | 76.1 | 75.6 | 74.4 | 70.4 | 64.3 | 55.8 | 45.9 | 37.9 | 32.6 | 30.0 | 31.5 | 33.1 | 43.9 | 53.0 | 54.2 | 46.7 | 46.1 | 48.0 | 49.5 | 78.7 | 56.5 |
| 6 | 50.6 | 51.1 | 49.9 | 50.4 | 52.1 | 48.7 | 47.3 | 45.6 | 39.5 | 31.2 | 19.8 | 20.2 | 25.9 | 28.7 | 27.6 | 30.8 | 35.0 | 40.6 | 49.5 | 60.4 | 61.7 | 56.1 | 47.5 | 42.6 | 61.7 | 42.2 |
| 7 | 39.5 | 66.0 | 79.8 | 71.3 | 66.1 | 63.8 | 59.3 | 50.2 | 50.7 | 38.0 | 32.1 | 29.7 | 31.3 | 31.9 | 34.5 | 32.4 | 31.7 | 33.1 | 35.8 | 39.2 | 45.7 | 48.0 | 52.1 | 55.2 | 79.8 | 46.6 |
| 8 | 59.2 | 66.1 | 70.5 | 69.1 | 67.7 | 78.3 | 74.5 | 69.8 | 78.3 | 74.7 | 68.9 | 65.5 | 61.1 | 53.8 | 43.2 | 32.9 | 25.1 | 29.4 | 33.0 | 33.5 | 34.4 | 37.3 | 38.7 | 39.8 | 78.3 | 54.4 |
| 9 | 38.9 | 39.0 | 38.4 | 38.5 | 37.9 | 37.0 | 38.0 | 40.5 | 39.8 | 38.8 | 37.4 | 34.1 | 34.2 | 32.7 | 31.2 | 32.0 | 32.1 | 32.8 | 33.0 | 33.9 | 36.3 | 36.5 | 37.3 | 37.9 | 40.5 | 36.2 |
| 10 | 37.9 | 41.9 | 49.0 | 49.9 | 51.2 | 54.5 | 60.9 | 66.0 | 60.8 | 49.4 | 43.8 | 38.4 | 24.9 | 15.8 | 17.0 | 18.0 | 19.7 | 21.6 | 23.1 | 31.6 | 56.7 | 61.6 | 65.6 | 71.5 | 71.5 | 43.0 |
| 11 | 75.4 | 77.3 | 78.4 | 81.9 | 82.9 | 82.6 | 85.4 | 84.1 | 80.9 | 81.5 | 87.2 | 87.3 | 89.5 | 92.5 | 91.8 | 94.2 | 94.5 | 94.6 | 94.5 | 94.3 | 94.3 | 94.3 | 94.4 | 94.4 | 94.6 | 87.8 |
| 12 | 94.1 | 93.9 | 93.8 | 93.6 | 93.5 | 93.3 | 93.2 | 92.6 | 91.9 | 89.1 | 83.1 | 82.8 | 84.1 | 83.5 | 81.8 | 79.5 | 78.5 | 86.7 | 90.0 | 91.5 | 91.2 | 87.9 | 82.7 | 85.8 | 94.1 | 88.3 |
| 13 | 86.8 | 87.0 | 90.3 | 91.1 | 90.3 | 89.4 | 89.9 | 90.3 | 87.6 | 85.9 | 81.6 | 73.6 | 70.3 | 67.7 | 62.1 | 61.8 | 67.3 | 74.9 | 82.5 | 86.3 | 88.5 | 82.6 | 81.9 | 83.5 | 91.1 | 81.4 |
| 14 | 81.6 | 78.5 | 70.6 | 59.3 | 48.2 | 44.7 | 40.9 | 41.3 | 40.2 | 36.8 | 32.5 | 32.3 | 32.5 | 34.4 | 33.7 | 33.6 | 37.5 | 40.4 | 43.1 | 45.6 | 46.5 | 47.7 | 48.1 | 50.8 | 81.6 | 45.9 |
| 15 | 52.0 | 52.3 | 50.8 | 52.3 | 53.0 | 52.1 | 51.1 | 52.5 | 51.6 | 48.1 | 40.9 | 34.2 | 32.4 | 29.9 | 27.7 | 26.8 | 26.2 | 28.2 | 28.2 | 25.8 | 26.9 | 30.5 | 33.7 | 35.0 | 53.0 | 39.3 |
| 16 | 36.1 | 37.4 | 37.6 | 37.9 | 36.3 | 37.8 | 37.6 | 38.1 | 38.9 | 37.8 | 36.5 | 36.4 | 37.6 | 38.1 | 36.9 | 36.8 | 38.3 | 42.5 | 43.6 | 40.6 | 39.2 | 38.5 | 36.8 | 36.5 | 43.6 | 38.1 |
| 17 | 36.4 | 36.5 | 36.6 | 36.9 | 37.6 | 39.0 | 41.4 | 40.9 | 39.0 | 34.0 | 32.8 | 35.1 | 34.7 | 34.5 | 55.2 | 76.5 | 73.2 | 62.1 | 41.6 | 38.1 | 29.6 | 29.3 | 31.1 | 30.8 | 76.5 | 41.0 |
| 18 | 30.6 | 31.4 | 32.5 | 32.7 | 32.4 | 33.5 | 33.3 | 34.0 | 32.5 | 31.6 | 29.1 | 26.4 | 28.7 | 38.9 | 41.9 | 43.9 | 48.1 | 51.3 | 49.1 | 51.6 | 51.7 | 54.3 | 66.8 | 81.0 | 81.0 | 41.1 |
| 19 | 87.6 | 88.8 | 90.0 | 90.4 | 90.1 | 90.9 | 91.7 | 91.4 | 90.3 | 90.1 | 89.2 | 87.5 | 88.1 | 88.7 | 87.4 | 86.0 | 83.8 | 84.8 | 86.0 | 84.3 | 85.4 | 86.0 | 86.4 | 84.4 | 91.7 | 87.9 |
| 20 | 84.0 | 83.5 | 83.8 | 85.6 | 84.9 | 86.7 | 85.1 | 85.4 | 86.8 | 84.1 | 83.0 | 79.4 | 75.6 | 70.9 | 76.3 | 76.0 | 76.9 | 77.7 | 69.0 | 71.3 | 76.9 | 81.6 | 78.0 | 58.2 | 86.8 | 79.2 |
| 21 | 54.7 | 56.2 | 52.6 | 51.8 | 56.2 | 47.9 | 45.9 | 48.5 | 41.9 | 34.3 | 31.0 | 30.0 | 30.1 | 31.1 | 37.3 | 39.2 | 41.4 | 44.3 | 44.1 | 43.6 | 42.7 | 43.3 | 45.3 | 49.6 | 56.2 | 43.5 |
| 22 | 55.2 | 59.8 | 72.9 | 75.0 | 72.6 | 67.4 | 74.3 | 76.1 | 68.9 | 65.0 | 65.8 | 62.4 | 77.1 | 59.1 | 58.1 | 61.2 | 61.3 | 62.3 | 58.8 | 53.6 | 56.0 | 61.4 | 58.4 | 58.2 | 77.1 | 64.2 |
| 23 | 51.0 | 51.6 | 50.7 | 50.2 | 46.3 | 44.8 | 50.3 | 53.1 | 50.2 | 42.8 | 36.4 | 33.0 | 32.4 | 31.7 | 31.6 | 31.6 | 34.3 | 39.3 | 40.0 | 42.4 | 44.0 | 44.9 | 45.8 | 44.1 | 53.1 | 42.6 |
| 24 | 38.4 | 41.0 | 42.7 | 43.3 | 41.1 | 44.9 | 41.5 | 43.3 | 45.6 | 45.6 | 42.3 | 41.3 | 39.4 | 38.9 | 42.7 | 40.3 | 43.4 | 44.5 | 45.5 | 45.9 | 45.2 | 45.3 | 43.3 | 34.6 | 45.9 | 42.5 |
| 25 | 32.0 | 24.5 | 20.3 | 19.6 | 21.1 | 20.3 | 20.4 | 25.2 | 32.3 | 34.0 | 32.9 | 34.0 | 35.9 | 38.9 | 46.0 | 58.6 | 68.1 | 67.2 | 61.8 | 63.2 | 61.5 | 62.4 | 63.1 | 63.6 | 68.1 | 42.0 |
| 26 | 65.8 | 65.0 | 65.9 | 68.9 | 75.1 | 78.7 | 77.2 | 75.4 | 72.0 | 65.7 | 56.8 | 50.9 | 46.7 | 42.9 | 39.8 | 36.3 | 36.1 | 34.6 | 39.7 | 49.8 | 45.2 | 46.6 | 50.9 | 53.7 | 78.7 | 55.8 |
| 27 | 52.6 | 54.5 | 54.8 | 55.0 | 56.0 | 58.2 | 59.9 | 60.6 | 60.5 | 57.3 | 52.5 | 48.4 | 43.8 | 39.6 | 36.2 | 36.0 | 38.0 | 40.3 | 44.3 | 47.9 | 50.7 | 54.9 | 59.0 | 62.7 | 62.7 | 51.0 |
| 28 | 64.9 | 66.3 | 68.8 | 71.1 | 70.6 | 70.3 | 69.8 | 67.7 | 66.4 | 61.8 | 54.4 | 43.8 | 34.2 | 27.8 | 22.5 | 22.7 | 24.5 | 30.7 | 41.0 | 48.2 | 54.2 | 57.7 | 82.4 | 82.2 | 82.4 | 54.3 |
| 29 | 83.0 | 86.7 | 90.2 | 91.2 | 92.0 | 92.6 | 92.8 | 85.1 | 68.7 | 67.2 | 52.0 | 40.4 | 36.2 | 33.5 | 32.2 | 31.4 | 56.0 | 59.8 | 62.5 | 70.6 | 77.6 | 79.2 | 81.4 | 86.1 | 92.8 | 68.7 |
| 30 | 88.5 | 82.2 | 73.9 | 64.6 | 59.2 | 57.6 | 57.7 | 57.9 | 55.2 | 49.2 | 41.6 | 33.7 | 31.1 | 28.2 | 23.7 | 22.2 | 22.8 | 24.6 | 26.8 | 31.5 | 32.5 | 35.1 | 35.7 | 37.7 | 88.5 | 44.7 |
| 31 | 39.5 | 38.1 | 35.4 | 36.4 | 34.2 | 34.7 | 34.7 | 37.9 | 39.3 | 39.3 | 41.6 | 42.1 | 45.5 | 48.5 | 67.1 | 87.2 | 90.6 | 91.7 | 92.9 | 93.3 | 93.5 | 93.9 | 94.1 | 93.9 | 94.1 | 60.2 |
| Hourly Max | 94.1 | 93.9 | 93.8 | 93.6 | 93.5 | 93.3 | 93.2 | 92.6 | 93.2 | 93.4 | 93.3 | 93.8 | 94.2 | 92.5 | 91.8 | 94.2 | 94.5 | 94.6 | 94.5 | 94.3 | 94.3 | 94.3 | 94.4 | 94.4 | | |
| Hourly Average | 61.1 | 62.6 | 63.6 | 63.3 | 62.6 | 62.9 | 63.2 | 63.0 | 61.2 | 57.5 | 53.4 | 50.1 | 48.8 | 46.6 | 46.6 | 48.1 | 50.0 | 52.8 | 54.9 | 57.1 | 58.6 | 59.1 | 61.0 | 61.5 | | |



# Lagoon Precipitation (mm) – October 2017

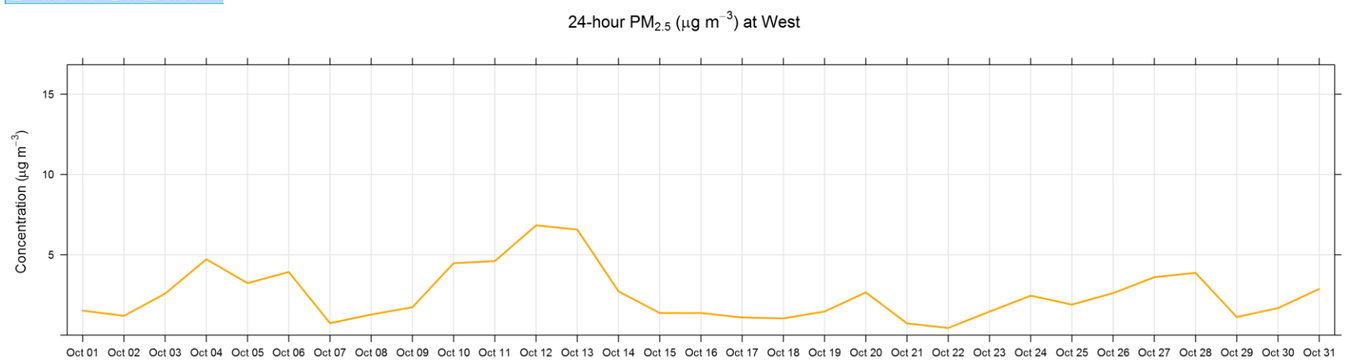
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0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



# West $PM_{2.5}$ (µg/m$^3$) – October 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 | 1.8 | 1.2 | 1.3 | 1.3 | 1.6 | 1.9 | 1.2 | 1.2 | 2.2 | 3.2 | 2.5 | 2.6 | 2.1 | 1.4 | 1.3 | 1.6 | 1.7 | 1.3 | 2.1 | 1.1 | 0.3 | 0.8 | 0.5 | 0.7 | 3.2 | 1.5 |
| 2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 | 1.8 | 2.2 | 2.2 | 1.4 | 3.8 | 1.1 | 1.7 | 1.1 | 0.8 | 1.1 | 0.8 | 0.6 | 0.7 | 0.6 | 0.8 | 0.6 | 0.6 | 1.7 | 2.0 | 3.8 | 1.2 |
| 3 | 1.0 | 0.9 | 1.4 | 2.2 | 2.2 | 2.6 | 3.2 | 5.8 | 5.1 | 4.8 | 5.9 | 4.2 | 4.9 | 3.2 | 2.5 | 1.3 | 1.2 | 1.1 | 1.0 | 1.1 | 1.4 | 1.6 | 1.8 | 1.5 | 5.9 | 2.6 |
| 4 | 1.5 | 1.4 | 1.6 | 1.9 | 2.1 | 3.0 | 2.6 | 7.7 | 6.7 | 8.2 | 5.7 | 4.5 | 5.3 | 5.7 | 6.0 | 9.6 | 4.8 | 3.6 | 3.6 | 4.9 | 7.5 | 5.7 | 5.0 | 4.6 | 9.6 | 4.7 |
| 5 | 4.0 | 3.7 | 3.3 | 2.8 | 3.1 | 2.7 | 4.2 | 5.0 | 6.1 | 4.6 | 4.7 | 3.4 | 3.9 | 4.2 | 3.4 | 3.1 | 2.1 | 1.5 | 2.6 | 1.7 | 1.8 | 1.9 | 1.9 | 2.1 | 6.1 | 3.2 |
| 6 | 2.3 | 2.7 | 3.0 | 3.4 | 3.9 | 4.3 | 5.5 | 6.0 | 5.5 | 6.9 | 8.2 | 7.5 | 7.1 | 7.1 | 5.0 | 3.9 | 3.7 | 2.4 | 1.7 | 1.4 | 0.9 | 1.3 | 0.5 | 0.2 | 8.2 | 3.9 |
| 7 | 0.2 | 0.8 | 0.6 | 0.4 | 0.5 | 0.7 | 0.9 | 1.2 | 1.4 | 1.1 | 1.2 | 1.1 | 0.8 | 1.1 | 0.6 | 0.8 | 0.8 | 0.5 | 0.4 | 0.3 | 0.4 | 0.5 | 0.8 | 0.7 | 1.4 | 0.7 |
| 8 | 0.5 | 0.6 | 0.5 | 0.4 | 0.5 | 0.5 | 1.1 | 2.0 | 3.4 | 2.4 | 2.1 | 1.8 | 1.6 | 3.2 | 2.5 | 1.4 | 1.2 | 0.6 | 0.6 | 0.6 | 0.7 | 1.0 | 0.8 | 0.8 | 3.4 | 1.3 |
| 9 | 0.7 | 0.7 | 0.9 | 0.7 | 0.7 | 1.1 | 1.7 | 1.6 | 1.6 | 1.9 | 2.1 | 2.1 | 2.1 | 2.4 | 2.2 | 1.8 | 2.1 | 2.0 | 1.8 | 2.0 | 2.1 | 2.4 | 2.4 | 2.5 | 2.5 | 1.7 |
| 10 | 2.5 | 2.5 | 2.9 | 2.9 | 3.2 | 2.9 | 2.8 | 9.0 | 8.3 | 5.5 | 8.1 | 3.8 | 2.5 | 2.3 | 3.3 | 2.5 | 1.5 | 1.3 | 1.8 | 1.8 | 6.3 | 10.6 | 10.1 | 9.0 | 10.6 | 4.5 |
| 11 | 8.8 | 9.6 | 11.0 | 9.8 | 9.8 | 8.4 | 6.1 | 5.6 | 5.6 | 5.3 | 6.6 | 6.0 | 3.6 | 2.0 | 2.3 | 1.0 | 1.5 | 0.5 | 1.0 | 1.5 | 1.2 | 0.5 | 1.6 | 1.1 | 11.0 | 4.6 |
| 12 | 1.0 | 1.8 | 2.2 | 3.7 | 4.8 | 4.0 | 4.0 | 5.6 | 8.9 | 12.7 | 11.3 | 12.3 | 11.8 | 11.1 | 13.1 | 12.2 | 6.7 | 6.5 | 5.4 | 5.3 | 5.3 | 4.8 | 5.4 | 3.9 | 13.1 | 6.8 |
| 13 | 3.2 | 3.0 | 2.9 | 7.1 | 8.5 | 8.3 | 7.3 | 7.8 | 11.6 | 13.6 | 11.0 | 9.0 | 10.2 | 7.5 | 6.4 | 5.8 | 4.7 | 4.1 | 3.1 | 3.4 | 3.9 | 3.8 | 4.6 | 6.7 | 13.6 | 6.6 |
| 14 | 7.0 | 4.8 | 2.9 | 4.0 | 4.3 | 3.8 | 3.2 | 3.2 | 4.0 | 3.0 | 3.0 | 3.2 | 2.7 | 2.6 | 2.4 | 2.0 | 1.7 | 1.4 | 1.3 | 1.2 | 1.0 | 0.9 | 0.9 | 0.9 | 7.0 | 2.7 |
| 15 | 0.8 | 0.7 | 0.7 | 0.6 | 0.9 | 1.0 | 0.9 | 0.8 | 0.9 | 1.7 | 0.8 | 1.0 | 1.1 | 1.3 | 1.5 | 1.9 | 1.8 | 2.0 | 3.4 | 2.2 | 1.9 | 1.9 | 1.8 | 1.3 | 3.4 | 1.4 |
| 16 | 1.1 | 1.1 | 1.2 | 1.1 | 1.0 | 1.0 | 2.0 | 1.7 | 1.8 | 2.3 | 2.2 | 1.9 | 2.4 | 2.0 | 1.8 | 1.8 | 1.2 | 0.7 | 0.6 | 0.6 | 0.7 | 0.7 | 1.2 | 0.9 | 2.4 | 1.4 |
| 17 | 0.7 | 0.7 | 0.8 | 0.9 | 0.7 | 1.0 | 1.0 | 1.3 | 1.4 | 1.8 | 2.1 | 2.4 | 1.7 | 2.0 | 1.7 | 1.1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 1.5 | 0.5 | 2.4 | 1.1 |
| 18 | 0.4 | 0.4 | 0.3 | 0.4 | 0.7 | 0.6 | 0.8 | 2.7 | 1.6 | 1.8 | 1.6 | 1.3 | 1.6 | 1.8 | 1.4 | 1.6 | 1.3 | 1.0 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 1.0 | 2.7 | 1.0 |
| 19 | 1.1 | 1.1 | 1.4 | 0.9 | 1.2 | 1.4 | 1.3 | 1.8 | 2.1 | 1.7 | 2.2 | 2.3 | 2.6 | 2.7 | 3.1 | 1.2 | 0.9 | 0.8 | 0.7 | 0.6 | 1.2 | 1.5 | 0.8 | 0.6 | 3.1 | 1.5 |
| 20 | 0.7 | 0.9 | 0.7 | 0.6 | 0.8 | 0.6 | 0.5 | 1.1 | 2.8 | 5.2 | 10.7 | 6.0 | 0.5 | 0.9 | 6.5 | 9.2 | 9.4 | 1.9 | 0.5 | 0.6 | 1.2 | 1.0 | 0.7 | 0.8 | 10.7 | 2.7 |
| 21 | 0.7 | 0.9 | 0.6 | 0.4 | 0.7 | 0.6 | 1.7 | 0.8 | 0.9 | 0.8 | 0.9 | 0.6 | 0.7 | 0.6 | 1.0 | 0.8 | 0.7 | 0.6 | 0.7 | 0.5 | 0.5 | 0.6 | 0.7 | 0.4 | 1.7 | 0.7 |
| 22 | 0.2 | 0.2 | 0.4 | 0.4 | 0.3 | 0.3 | 0.5 | 0.4 | 0.7 | 1.0 | 0.6 | 0.4 | 0.5 | 0.6 | 0.8 | 0.4 | 0.6 | 0.5 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.2 | 1.0 | 0.4 |
| 23 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 1.5 | 4.4 | 4.8 | 5.2 | 2.5 | 2.4 | 2.4 | 1.5 | 2.0 | 1.0 | 1.0 | 0.7 | 0.6 | 0.5 | 0.6 | 0.6 | 0.7 | 1.1 | 5.2 | 1.5 |
| 24 | 1.3 | 1.6 | 2.0 | 2.1 | 2.5 | 2.7 | 3.9 | 6.0 | 4.9 | 4.2 | 3.1 | 2.2 | 1.5 | 2.0 | 2.3 | 1.8 | 2.0 | 1.7 | 1.4 | 1.4 | 1.7 | 1.8 | 2.1 | 2.6 | 6.0 | 2.5 |
| 25 | 3.0 | 2.9 | 3.0 | 2.9 | 3.5 | 2.4 | 2.7 | 2.1 | 2.9 | 2.1 | 1.9 | 1.4 | 1.1 | 1.4 | 1.9 | 3.0 | 1.7 | 0.9 | 1.2 | 0.6 | 0.4 | 0.8 | 0.7 | 1.0 | 3.5 | 1.9 |
| 26 | 1.6 | 1.2 | 1.1 | 1.2 | 1.6 | 2.2 | 5.2 | 6.1 | 4.4 | 3.8 | 3.3 | 2.8 | 3.5 | 3.4 | 4.2 | 3.5 | 2.2 | 2.0 | 1.3 | 1.5 | 1.5 | 1.6 | 1.8 | 1.7 | 6.1 | 2.6 |
| 27 | 1.8 | 1.9 | 2.0 | 2.1 | 2.2 | 2.4 | 3.3 | 3.5 | 4.1 | 4.7 | 4.2 | 4.6 | 6.9 | 5.0 | 4.5 | 3.8 | 3.6 | 3.2 | 3.4 | 3.4 | 3.5 | 3.8 | 4.2 | 4.7 | 6.9 | 3.6 |
| 28 | 5.0 | 5.1 | 4.9 | 5.0 | 4.9 | 4.9 | 4.9 | 5.1 | 5.8 | 5.6 | 5.5 | 5.8 | 4.3 | 3.2 | 2.0 | 1.3 | 1.4 | 2.8 | 3.1 | 2.3 | 2.8 | 4.3 | 1.7 | 1.2 | 5.8 | 3.9 |
| 29 | 1.3 | 1.2 | 1.2 | 1.0 | 0.9 | 0.7 | 0.5 | 1.2 | 0.5 | 1.2 | 1.2 | 0.5 | 0.5 | 1.9 | 1.5 | 6.0 | 1.9 | 0.8 | 0.4 | 0.4 | 0.8 | 0.5 | 0.4 | 0.6 | 6.0 | 1.1 |
| 30 | 1.1 | 2.7 | 2.7 | 1.4 | 1.0 | 0.9 | 1.1 | 1.4 | 1.8 | 2.0 | 1.8 | 1.6 | 1.5 | 1.4 | 2.9 | 3.1 | 1.9 | 1.7 | 1.3 | 1.2 | 1.3 | 1.4 | 1.3 | 1.8 | 3.1 | 1.7 |
| 31 | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 | 2.1 | 3.0 | 3.2 | 4.1 | 4.6 | 4.2 | 3.3 | 3.3 | 3.1 | 4.0 | 1.9 | 1.8 | **E** | **E** | **E** | 8.5 | 3.9 | 1.2 | 0.4 | 8.5 | 2.9 |
| Hourly Max | 8.8 | 9.6 | 11.0 | 9.8 | 9.8 | 8.4 | 7.3 | 9.0 | 11.6 | 13.6 | 11.3 | 12.3 | 11.8 | 11.1 | 13.1 | 12.2 | 9.4 | 6.5 | 5.4 | 5.3 | 8.5 | 10.6 | 10.1 | 9.0 | | |
| Hourly Average | 1.8 | 1.9 | 1.9 | 2.1 | 2.3 | 2.3 | 2.6 | 3.5 | 3.8 | 4.1 | 4.0 | 3.4 | 3.1 | 2.9 | 3.1 | 2.9 | 2.2 | 1.6 | 1.6 | 1.5 | 2.0 | 2.0 | 1.9 | 1.9 | | |

E = Instrument Error

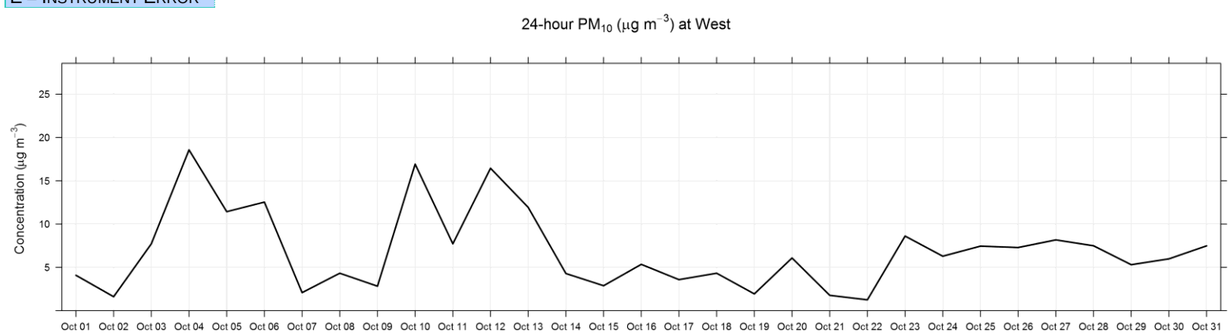



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | 0 | | Guideline | 80 | UG/M3 |
| Number of 24HR Exceedances | 0 | | Guideline | 30 | UG/M3 |
| Number of Non-Zero Readings | 741 | | | | |
| Maximum 1-HR Average | 13.6 | UG/M3 | | | |
| Maximum 24-HR Average | 6.8 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 741 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 99.6 | % |
| Standard Deviation | 2.3 | | Monthly Average | 2.5 | UG/M3 |

# West $PM_{10}$ (µg/m$^3$) – October 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 | 2.5 | 1.6 | 2.8 | 2.1 | 2.5 | 8.9 | 1.3 | 1.4 | 4.5 | 16.4 | 6.4 | 3.7 | 4.4 | 2.6 | 3.3 | 4.3 | 3.3 | 3.1 | 15.0 | 4.1 | 0.6 | 1.3 | 0.7 | 1.2 | 16.4 | 4.1 |
| 2 | 0.7 | 1.5 | 0.8 | 0.7 | 1.0 | 2.4 | 3.1 | 3.3 | 1.9 | 5.6 | 1.4 | 2.4 | 1.6 | 1.1 | 1.5 | 1.1 | 0.7 | 0.8 | 0.7 | 0.9 | 0.7 | 0.7 | 1.9 | 2.1 | 5.6 | 1.6 |
| 3 | 1.0 | 1.0 | 1.7 | 2.5 | 2.4 | 2.7 | 3.6 | 6.9 | 11.0 | 23.6 | 30.8 | 21.0 | 28.3 | 16.6 | 12.6 | 4.1 | 3.0 | 2.6 | 1.2 | 1.3 | 1.7 | 2.0 | 2.2 | 1.7 | 30.8 | 7.7 |
| 4 | 1.7 | 1.5 | 1.7 | 2.2 | 2.5 | 4.1 | 3.5 | 11.5 | 37.5 | 60.8 | 35.4 | 26.8 | 34.7 | 41.0 | 39.2 | 63.7 | 20.3 | 11.8 | 5.9 | 6.9 | 11.1 | 8.4 | 7.2 | 6.4 | 63.7 | 18.6 |
| 5 | 5.3 | 4.6 | 4.2 | 3.3 | 3.9 | 3.4 | 6.0 | 12.8 | 30.0 | 24.2 | 25.5 | 17.8 | 20.1 | 26.1 | 20.6 | 20.2 | 10.1 | 6.1 | 12.7 | 4.9 | 3.7 | 3.5 | 2.8 | 2.9 | 30.0 | 11.4 |
| 6 | 3.4 | 4.2 | 4.5 | 5.0 | 5.8 | 7.7 | 18.1 | 23.3 | 19.7 | 29.0 | 29.8 | 28.7 | 28.0 | 31.3 | 23.0 | 10.5 | 10.6 | 5.7 | 4.0 | 3.1 | 1.4 | 2.9 | 0.9 | 0.4 | 31.3 | 12.5 |
| 7 | 0.3 | 1.3 | 0.8 | 0.5 | 0.7 | 0.8 | 2.8 | 4.3 | 4.6 | 3.5 | 4.6 | 4.2 | 2.7 | 5.7 | 1.8 | 3.5 | 2.4 | 1.2 | 0.6 | 0.4 | 0.6 | 0.7 | 1.1 | 0.9 | 5.7 | 2.1 |
| 8 | 0.7 | 0.8 | 0.5 | 0.5 | 0.6 | 0.5 | 1.4 | 2.7 | 7.0 | 9.7 | 11.7 | 13.0 | 6.8 | 16.9 | 11.6 | 6.2 | 5.2 | 1.3 | 0.8 | 0.8 | 0.9 | 2.1 | 0.9 | 0.9 | 16.9 | 4.3 |
| 9 | 0.9 | 0.9 | 2.5 | 0.9 | 0.9 | 1.9 | 3.6 | 2.3 | 2.1 | 2.8 | 4.1 | 3.5 | 3.5 | 4.8 | 3.9 | 2.9 | 5.0 | 3.8 | 2.5 | 2.7 | 2.8 | 3.1 | 3.0 | 3.2 | 5.0 | 2.8 |
| 10 | 3.2 | 3.3 | 4.4 | 3.7 | 4.8 | 4.1 | 4.4 | 38.3 | 38.2 | 27.8 | 44.8 | 14.5 | 10.7 | 11.1 | 15.9 | 11.7 | 3.0 | 2.2 | 5.6 | 4.9 | 27.2 | 46.7 | 41.2 | 34.5 | 46.7 | 16.9 |
| 11 | 31.4 | 23.3 | 16.5 | 14.7 | 14.7 | 12.5 | 8.8 | 7.7 | 7.7 | 7.4 | 9.2 | 8.3 | 4.8 | 2.8 | 3.2 | 1.3 | 2.1 | 0.5 | 1.2 | 1.8 | 1.5 | 0.6 | 1.9 | 1.3 | 31.4 | 7.7 |
| 12 | 1.1 | 2.2 | 2.7 | 5.0 | 7.0 | 5.5 | 5.5 | 8.2 | 13.3 | 23.0 | 37.7 | 33.9 | 35.5 | 41.4 | 48.3 | 48.7 | 23.5 | 10.2 | 7.9 | 7.6 | 7.8 | 6.7 | 7.3 | 5.0 | 48.7 | 16.4 |
| 13 | 4.1 | 3.7 | 3.6 | 10.3 | 12.6 | 12.3 | 10.6 | 11.3 | 16.9 | 20.1 | 16.2 | 19.2 | 38.2 | 23.8 | 17.5 | 16.7 | 11.8 | 8.6 | 3.2 | 3.7 | 4.4 | 4.3 | 5.4 | 7.5 | 38.2 | 11.9 |
| 14 | 7.5 | 5.3 | 3.6 | 4.6 | 5.3 | 4.5 | 4.6 | 5.8 | 10.9 | 4.8 | 6.6 | 9.1 | 5.9 | 4.6 | 4.0 | 3.3 | 2.6 | 1.9 | 2.0 | 1.8 | 1.2 | 1.1 | 1.1 | 1.0 | 10.9 | 4.3 |
| 15 | 0.9 | 0.9 | 0.8 | 0.7 | 1.2 | 1.3 | 1.2 | 1.8 | 2.3 | 6.6 | 1.8 | 2.5 | 2.9 | 3.0 | 2.6 | 3.9 | 2.9 | 3.9 | 9.6 | 5.1 | 3.3 | 4.0 | 3.7 | 2.2 | 9.6 | 2.9 |
| 16 | 1.5 | 1.4 | 1.6 | 1.6 | 1.7 | 2.6 | 8.7 | 7.3 | 7.1 | 11.1 | 10.6 | 8.1 | 12.6 | 11.7 | 9.9 | 11.0 | 5.5 | 1.6 | 1.3 | 1.4 | 1.3 | 2.1 | 4.0 | 2.7 | 12.6 | 5.3 |
| 17 | 1.1 | 1.0 | 1.0 | 1.5 | 0.9 | 1.5 | 2.3 | 5.3 | 5.4 | 9.7 | 12.7 | 13.6 | 5.4 | 5.9 | 3.7 | 1.5 | 0.7 | 0.8 | 1.3 | 1.5 | 1.0 | 1.6 | 6.0 | 0.7 | 13.6 | 3.6 |
| 18 | 0.6 | 0.7 | 0.6 | 0.7 | 2.0 | 1.4 | 4.0 | 17.9 | 8.4 | 11.5 | 7.9 | 5.9 | 7.4 | 8.1 | 4.5 | 6.3 | 5.0 | 2.2 | 1.0 | 2.4 | 1.7 | 1.8 | 0.7 | 1.2 | 17.9 | 4.3 |
| 19 | 1.3 | 1.4 | 1.6 | 1.0 | 1.7 | 1.9 | 1.8 | 2.3 | 2.7 | 2.4 | 3.0 | 3.3 | 3.6 | 3.8 | 4.5 | 1.7 | 1.2 | 1.0 | 0.8 | 0.7 | 1.4 | 1.7 | 1.0 | 0.7 | 4.5 | 1.9 |
| 20 | 0.9 | 1.2 | 0.9 | 0.8 | 0.9 | 0.7 | 0.5 | 1.3 | 4.0 | 7.7 | 16.0 | 8.8 | 0.7 | 1.3 | 12.1 | 37.3 | 42.0 | 2.7 | 0.7 | 0.8 | 1.6 | 1.3 | 0.8 | 1.0 | 42.0 | 6.1 |
| 21 | 0.9 | 1.1 | 1.2 | 0.6 | 1.2 | 1.4 | 8.2 | 2.2 | 3.2 | 2.2 | 3.3 | 1.2 | 1.3 | 1.1 | 3.0 | 1.9 | 0.9 | 1.0 | 1.2 | 0.7 | 0.7 | 1.4 | 1.7 | 1.0 | 8.2 | 1.8 |
| 22 | 0.3 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 | 0.6 | 0.5 | 1.8 | 3.0 | 3.0 | 1.4 | 1.0 | 3.1 | 3.9 | 1.0 | 2.5 | 1.6 | 1.3 | 0.4 | 0.7 | 0.5 | 1.0 | 0.4 | 3.9 | 1.3 |
| 23 | 0.3 | 0.2 | 0.4 | 0.8 | 0.5 | 1.6 | 8.4 | 33.8 | 36.7 | 37.3 | 19.8 | 16.0 | 16.5 | 8.4 | 10.5 | 4.4 | 3.6 | 1.6 | 0.7 | 0.8 | 1.1 | 0.9 | 0.9 | 1.5 | 37.3 | 8.6 |
| 24 | 1.8 | 2.1 | 2.6 | 2.4 | 4.2 | 3.8 | 7.6 | 25.5 | 17.0 | 14.2 | 8.6 | 7.2 | 4.4 | 6.8 | 9.2 | 6.0 | 7.2 | 6.0 | 2.1 | 2.1 | 2.6 | 2.4 | 2.3 | 2.8 | 25.5 | 6.3 |
| 25 | 3.2 | 3.6 | 9.4 | 10.1 | 15.4 | 6.4 | 7.3 | 6.0 | 12.9 | 7.2 | 8.7 | 5.7 | 3.7 | 6.1 | 10.4 | 28.2 | 12.8 | 6.9 | 7.0 | 3.0 | 0.8 | 1.3 | 0.9 | 2.0 | 28.2 | 7.5 |
| 26 | 5.3 | 1.8 | 1.4 | 1.4 | 2.0 | 2.6 | 6.9 | 8.1 | 7.2 | 10.6 | 13.7 | 9.5 | 16.7 | 17.4 | 23.2 | 20.5 | 8.4 | 6.8 | 1.6 | 1.8 | 1.7 | 1.9 | 2.5 | 1.8 | 23.2 | 7.3 |
| 27 | 2.0 | 2.3 | 2.3 | 2.4 | 2.4 | 3.0 | 6.9 | 7.3 | 9.8 | 14.2 | 10.7 | 13.6 | 30.5 | 17.8 | 16.6 | 12.0 | 9.9 | 6.0 | 4.6 | 4.1 | 4.0 | 4.2 | 4.4 | 4.9 | 30.5 | 8.2 |
| 28 | 5.2 | 5.3 | 5.1 | 5.2 | 5.1 | 5.1 | 5.2 | 6.2 | 10.8 | 8.6 | 11.1 | 17.7 | 10.1 | 8.7 | 5.4 | 2.6 | 2.3 | 9.8 | 17.5 | 8.6 | 8.6 | 8.6 | 5.4 | 1.4 | 17.7 | 7.5 |
| 29 | 1.5 | 1.5 | 1.4 | 1.2 | 1.0 | 0.8 | 0.6 | 1.5 | 0.7 | 5.7 | 5.0 | 1.7 | 1.9 | 13.5 | 7.9 | 60.5 | 13.6 | 3.2 | 0.8 | 0.6 | 1.0 | 0.6 | 0.5 | 0.8 | 60.5 | 5.3 |
| 30 | 1.5 | 3.7 | 3.4 | 1.7 | 1.3 | 1.6 | 3.0 | 5.8 | 8.9 | 12.5 | 10.5 | 8.0 | 8.3 | 6.7 | 19.1 | 18.9 | 9.8 | 7.0 | 2.7 | 1.6 | 1.8 | 1.7 | 1.7 | 2.4 | 19.1 | 6.0 |
| 31 | 1.7 | 2.4 | 2.3 | 2.6 | 3.1 | 4.1 | 7.3 | 6.8 | 11.4 | 13.2 | 14.5 | 9.8 | 13.3 | 11.7 | 24.3 | 5.7 | 2.6 | **E** | **E** | **E** | 12.6 | 5.8 | 1.6 | 0.5 | 24.3 | 7.5 |
| Hourly Max | 31.4 | 23.3 | 16.5 | 14.7 | 15.4 | 12.5 | 18.1 | 38.3 | 38.2 | 60.8 | 44.8 | 33.9 | 38.2 | 41.4 | 48.3 | 63.7 | 42.0 | 11.8 | 17.5 | 8.6 | 27.2 | 46.7 | 41.2 | 34.5 | | |
| Hourly Average | 3.0 | 2.8 | 2.8 | 2.9 | 3.5 | 3.6 | 5.1 | 9.0 | 11.5 | 14.1 | 13.7 | 11.0 | 11.8 | 11.8 | 12.2 | 13.6 | 7.6 | 4.1 | 3.9 | 2.7 | 3.6 | 4.1 | 3.8 | 3.1 | | |

E = Instrument Error

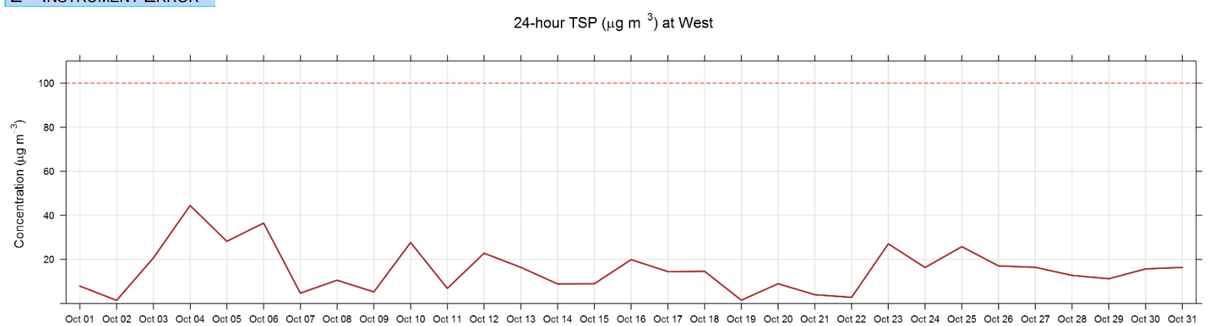



| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | n/a | | Guideline | n/a | UG/M3 |
| Number of Non-Zero Readings | 741 | | | | |
| Maximum 1-HR Average | 63.7 | UG/M3 | | | |
| Maximum 24-HR Average | 18.6 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 741 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 99.6 | % |
| Standard Deviation | 9.1 | | Monthly Average | 6.9 | UG/M3 |

# West TSP (μg/m$^3$) – October 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 | 1.3 | 4.3 | 2.1 | 2.5 | 36.6 | 0.9 | 0.9 | 5.1 | 25.1 | 8.9 | 2.7 | 4.8 | 4.0 | 10.0 | 15.6 | 3.0 | 6.9 | 43.5 | 4.8 | 1.5 | 0.9 | 0.4 | 0.9 | 43.5 | 7.9 |
| 2 | 0.5 | 5.7 | 0.9 | 0.5 | 0.7 | 1.7 | 2.4 | 2.2 | 1.5 | 5.0 | 1.1 | 1.9 | 1.3 | 0.9 | 1.1 | 0.8 | 0.5 | 0.6 | 0.5 | 0.6 | 0.5 | 0.5 | 1.2 | 1.4 | 5.7 | 1.4 |
| 3 | 0.7 | 0.6 | 1.3 | 1.7 | 1.6 | 1.8 | 2.4 | 5.1 | 31.3 | 74.1 | 110.6 | 73.6 | 80.1 | 50.5 | 36.3 | 8.9 | 3.9 | 4.1 | 0.9 | 0.9 | 1.2 | 1.5 | 1.5 | 1.1 | 110.6 | 20.7 |
| 4 | 1.1 | 1.0 | 1.1 | 1.7 | 2.0 | 3.7 | 3.0 | 12.7 | 90.2 | 181.3 | 102.4 | 81.4 | 96.8 | 120.6 | 102.5 | 158.6 | 37.2 | 28.0 | 6.4 | 6.2 | 10.8 | 7.5 | 5.7 | 4.8 | 181.3 | 44.4 |
| 5 | 3.8 | 3.2 | 3.0 | 2.3 | 3.1 | 2.4 | 5.8 | 29.8 | 70.0 | 91.2 | 83.3 | 58.2 | 46.6 | 73.8 | 63.8 | 51.4 | 16.2 | 6.4 | 31.9 | 12.2 | 5.8 | 8.0 | 2.6 | 2.4 | 91.2 | 28.2 |
| 6 | 3.4 | 5.9 | 6.5 | 5.1 | 7.6 | 15.1 | 42.1 | 40.4 | 29.6 | 71.9 | 95.7 | 105.9 | 90.8 | 134.8 | 108.7 | 34.5 | 32.3 | 20.6 | 13.2 | 3.2 | 1.6 | 2.9 | 3.4 | 0.4 | 134.8 | 36.5 |
| 7 | 1.2 | 1.9 | 0.6 | 0.4 | 0.5 | 0.6 | 6.6 | 8.5 | 8.4 | 9.9 | 16.3 | 11.6 | 6.4 | 16.9 | 6.3 | 6.0 | 3.9 | 1.5 | 1.5 | 0.3 | 0.4 | 1.5 | 0.7 | 0.7 | 16.9 | 4.7 |
| 8 | 0.4 | 0.5 | 0.4 | 0.3 | 0.4 | 0.4 | 1.1 | 2.3 | 8.9 | 24.8 | 32.3 | 43.9 | 22.7 | 53.9 | 21.9 | 16.9 | 11.0 | 4.7 | 0.6 | 1.2 | 0.6 | 2.4 | 0.7 | 1.0 | 53.9 | 10.6 |
| 9 | 0.6 | 0.6 | 8.7 | 1.1 | 1.8 | 3.0 | 15.6 | 2.8 | 5.8 | 2.7 | 8.6 | 7.7 | 5.4 | 14.5 | 4.1 | 7.2 | 7.6 | 5.3 | 2.2 | 2.2 | 2.0 | 2.4 | 8.5 | 5.0 | 15.6 | 5.2 |
| 10 | 2.1 | 3.7 | 3.1 | 3.0 | 3.6 | 2.7 | 3.6 | 59.3 | 58.4 | 58.2 | 118.6 | 31.6 | 34.0 | 31.3 | 42.1 | 36.9 | 4.3 | 4.7 | 12.5 | 7.0 | 30.7 | 47.4 | 35.2 | 30.1 | 118.6 | 27.7 |
| 11 | 25.9 | 23.8 | 17.6 | 15.0 | 13.7 | 10.3 | 6.6 | 6.2 | 6.0 | 6.2 | 7.9 | 7.0 | 3.7 | 2.4 | 3.0 | 1.0 | 1.7 | 0.4 | 0.8 | 1.4 | 1.1 | 0.4 | 1.4 | 0.9 | 25.9 | 6.8 |
| 12 | 0.7 | 1.5 | 1.8 | 3.8 | 6.0 | 4.2 | 4.2 | 7.5 | 12.8 | 21.9 | 55.4 | 43.3 | 56.7 | 75.4 | 81.5 | 93.4 | 36.3 | 9.3 | 6.2 | 6.0 | 6.2 | 4.8 | 5.1 | 3.5 | 93.4 | 22.8 |
| 13 | 2.9 | 2.6 | 2.5 | 8.3 | 10.4 | 10.1 | 8.3 | 9.2 | 15.8 | 20.0 | 16.5 | 25.7 | 70.2 | 60.5 | 41.9 | 38.0 | 18.5 | 12.2 | 2.6 | 2.4 | 2.9 | 2.9 | 3.6 | 5.0 | 70.2 | 16.4 |
| 14 | 4.9 | 3.6 | 3.6 | 9.5 | 9.4 | 5.2 | 6.4 | 15.2 | 36.0 | 8.1 | 21.2 | 21.8 | 11.6 | 10.0 | 13.6 | 5.4 | 8.5 | 4.3 | 4.6 | 3.6 | 2.6 | 2.0 | 1.0 | 0.7 | 36.0 | 8.9 |
| 15 | 0.6 | 1.5 | 1.7 | 0.6 | 2.4 | 3.1 | 3.1 | 15.1 | 6.7 | 28.3 | 8.1 | 8.6 | 15.2 | 10.3 | 7.6 | 8.6 | 6.6 | 7.0 | 21.8 | 14.2 | 7.6 | 19.8 | 11.3 | 5.0 | 28.3 | 9.0 |
| 16 | 4.3 | 1.3 | 1.6 | 3.7 | 2.9 | 7.2 | 23.9 | 22.3 | 21.6 | 31.4 | 37.1 | 24.6 | 49.1 | 59.7 | 50.2 | 55.4 | 30.2 | 5.0 | 1.8 | 1.2 | 2.9 | 12.5 | 16.8 | 10.8 | 59.7 | 19.9 |
| 17 | 3.7 | 1.7 | 1.3 | 4.8 | 0.6 | 3.1 | 9.2 | 24.9 | 24.5 | 44.5 | 73.7 | 76.1 | 18.4 | 11.7 | 12.2 | 1.1 | 0.6 | 0.6 | 5.2 | 4.3 | 2.5 | 3.0 | 19.1 | 0.5 | 76.1 | 14.5 |
| 18 | 1.3 | 0.8 | 1.0 | 1.2 | 6.0 | 3.3 | 13.1 | 57.9 | 31.2 | 53.9 | 26.3 | 23.0 | 31.5 | 27.6 | 14.9 | 21.5 | 10.5 | 2.6 | 2.6 | 8.1 | 7.0 | 4.0 | 0.5 | 0.8 | 57.9 | 14.6 |
| 19 | 0.9 | 0.9 | 1.1 | 0.7 | 1.4 | 1.5 | 1.3 | 1.6 | 2.0 | 1.8 | 2.3 | 3.0 | 3.0 | 3.1 | 3.6 | 1.4 | 1.0 | 0.8 | 0.6 | 0.5 | 0.9 | 1.1 | 0.7 | 0.5 | 3.6 | 1.5 |
| 20 | 0.7 | 0.9 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 0.9 | 3.8 | 8.0 | 17.7 | 9.4 | 0.6 | 1.2 | 19.9 | 53.0 | 88.0 | 2.4 | 0.6 | 0.6 | 1.3 | 1.0 | 0.5 | 1.7 | 88.0 | 8.9 |
| 21 | 0.6 | 0.7 | 3.8 | 0.5 | 0.9 | 3.8 | 16.2 | 6.2 | 13.8 | 3.9 | 11.1 | 5.0 | 2.9 | 1.0 | 4.8 | 4.0 | 1.3 | 2.2 | 1.2 | 0.4 | 0.9 | 4.7 | 3.9 | 1.8 | 16.2 | 4.0 |
| 22 | 1.2 | 0.2 | 2.2 | 0.3 | 0.3 | 0.2 | 0.4 | 0.3 | 1.4 | 3.6 | 14.0 | 4.0 | 1.3 | 6.6 | 8.6 | 2.7 | 5.4 | 2.3 | 3.9 | 1.3 | 1.0 | 0.4 | 4.6 | 0.3 | 14.0 | 2.8 |
| 23 | 0.4 | 0.1 | 0.3 | 2.1 | 0.3 | 2.6 | 23.1 | 100.5 | 119.3 | 118.4 | 78.9 | 56.4 | 50.6 | 27.2 | 33.5 | 16.3 | 11.0 | 2.1 | 1.0 | 1.1 | 1.1 | 0.9 | 0.8 | 1.5 | 119.3 | 27.1 |
| 24 | 8.1 | 3.4 | 6.9 | 2.0 | 13.4 | 8.2 | 10.3 | 62.8 | 40.6 | 41.9 | 29.0 | 30.7 | 17.4 | 15.5 | 37.8 | 16.3 | 18.0 | 12.0 | 4.5 | 3.0 | 3.8 | 2.3 | 1.7 | 1.8 | 62.8 | 16.3 |
| 25 | 2.3 | 4.2 | 36.6 | 48.9 | 79.9 | 30.8 | 18.3 | 13.9 | 33.4 | 21.7 | 29.4 | 18.5 | 8.6 | 17.8 | 24.5 | 121.1 | 48.1 | 18.5 | 22.5 | 13.2 | 1.1 | 3.1 | 0.7 | 1.9 | 121.1 | 25.8 |
| 26 | 8.4 | 4.5 | 1.1 | 0.9 | 1.4 | 1.9 | 5.6 | 6.4 | 10.4 | 30.2 | 38.8 | 30.5 | 51.4 | 45.6 | 55.8 | 71.0 | 23.2 | 12.9 | 1.0 | 1.3 | 1.6 | 1.3 | 2.3 | 1.2 | 71.0 | 17.0 |
| 27 | 1.3 | 1.6 | 1.8 | 1.6 | 1.7 | 4.2 | 16.7 | 9.3 | 18.5 | 42.1 | 21.2 | 37.2 | 95.0 | 38.6 | 37.3 | 23.3 | 16.8 | 5.4 | 4.4 | 2.9 | 3.3 | 2.8 | 3.2 | 3.5 | 95.0 | 16.4 |
| 28 | 3.9 | 4.5 | 3.3 | 3.4 | 3.3 | 3.3 | 3.4 | 6.6 | 17.3 | 14.8 | 26.3 | 47.5 | 29.3 | 17.7 | 11.8 | 4.9 | 1.6 | 15.0 | 27.3 | 10.5 | 13.8 | 19.0 | 16.4 | 1.0 | 47.5 | 12.7 |
| 29 | 1.1 | 1.0 | 1.0 | 0.8 | 0.7 | 0.5 | 0.4 | 1.1 | 0.5 | 16.1 | 11.5 | 2.7 | 3.9 | 41.9 | 16.3 | 117.8 | 44.5 | 3.4 | 0.9 | 0.4 | 0.7 | 0.4 | 0.8 | 0.6 | 117.8 | 11.2 |
| 30 | 1.2 | 2.9 | 2.4 | 1.3 | 0.8 | 2.9 | 8.3 | 15.4 | 25.7 | 34.9 | 34.9 | 25.1 | 19.3 | 16.8 | 78.2 | 60.9 | 22.9 | 11.9 | 3.7 | 1.3 | 1.2 | 1.3 | 1.1 | 1.7 | 78.2 | 15.7 |
| 31 | 1.3 | 3.9 | 2.9 | 6.3 | 4.3 | 7.4 | 24.9 | 14.1 | 21.5 | 37.2 | 41.5 | 16.9 | 32.7 | 28.9 | 61.4 | 14.6 | 2.4 | **E** | **E** | **E** | 13.8 | 6.3 | 1.4 | 0.3 | 61.4 | 16.4 |
| Hourly Max | 25.9 | 23.8 | 36.6 | 48.9 | 79.9 | 36.6 | 42.1 | 100.5 | 119.3 | 181.3 | 118.6 | 105.9 | 96.8 | 134.8 | 108.7 | 158.6 | 88.0 | 28.0 | 43.5 | 14.2 | 30.7 | 47.4 | 35.2 | 30.1 | | |
| Hourly Average | 2.9 | 2.9 | 4.0 | 4.3 | 5.9 | 5.9 | 9.3 | 18.1 | 24.9 | 36.5 | 38.1 | 30.2 | 31.0 | 32.9 | 32.7 | 34.5 | 16.7 | 7.1 | 7.7 | 3.9 | 4.3 | 5.4 | 5.1 | 3.0 | | |

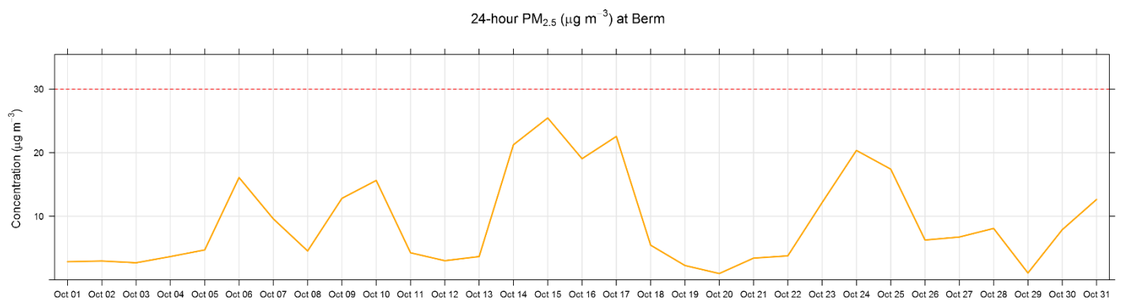
E = INSTRUMENT ERROR




| | | | | | |
|---|---|---|---|---|---|
| Number of 24HR Exceedances | 0 | | Guideline | 100 | UG/M3 |
| Number of Non-Zero Readings | 741 | | | | |
| Maximum 1-HR Average | 181.3 | UG/M3 | | | |
| Maximum 24-HR Average | 44.4 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 741 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 99.6 | % |
| Standard Deviation | 24.4 | | Monthly Average | 15.3 | UG/M3 |

# Berm $PM_{2.5}$ (µg/m$^3$) – October 2017

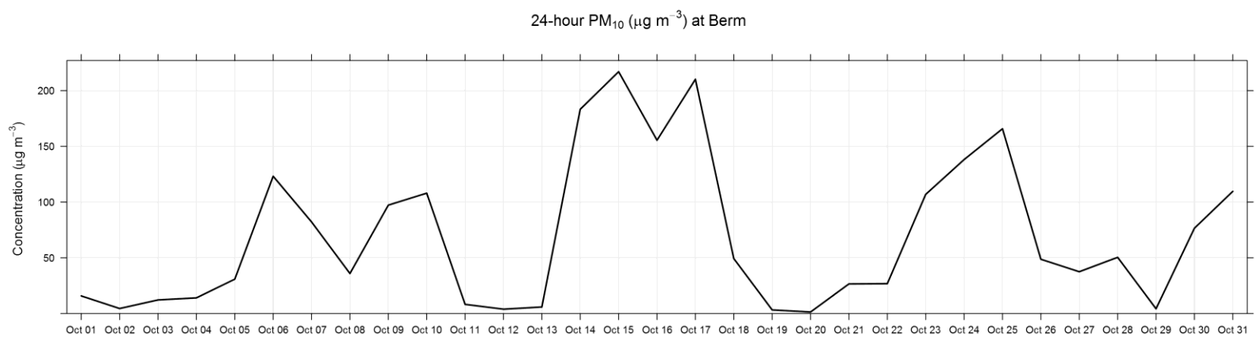
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.5 | 2.3 | 3.3 | 1.1 | 1.4 | 1.9 | 1.4 | 1.7 | 1.9 | 8.3 | 6.3 | 4.5 | 7.7 | 9.3 | 5.0 | 2.3 | 3.2 | 1.7 | 0.7 | 0.4 | 0.3 | 0.5 | 0.6 | 0.9 | 9.3 | 2.8 |
| 2 | 1.5 | 3.9 | 17.7 | 3.7 | 5.5 | 0.8 | 4.8 | 1.8 | 2.2 | 7.3 | 1.4 | 1.8 | 1.7 | 1.5 | 3.7 | 1.5 | 2.5 | 1.3 | 0.5 | 1.0 | 1.5 | 1.1 | 1.2 | 1.3 | 17.7 | 3.0 |
| 3 | 1.2 | 1.1 | 1.1 | 2.2 | 2.2 | 4.9 | 3.1 | 4.8 | 4.9 | 4.8 | 7.7 | 4.9 | 4.0 | 4.8 | 2.3 | 1.0 | 0.8 | 0.8 | 0.7 | 0.8 | 1.3 | 1.4 | 1.5 | 2.1 | 7.7 | 2.7 |
| 4 | 1.7 | 1.6 | 1.4 | 1.6 | 2.0 | 2.5 | 3.3 | 3.1 | 3.2 | 3.9 | 3.9 | 3.7 | 4.5 | 5.0 | 10.0 | 9.6 | 3.7 | 2.7 | 2.3 | 2.4 | 3.2 | 4.3 | 4.3 | 3.9 | 10.0 | 3.7 |
| 5 | 3.3 | 2.7 | 2.6 | 2.5 | 2.3 | 2.8 | 4.8 | 6.2 | 4.6 | 3.8 | 3.6 | 3.2 | 5.4 | 20.2 | 18.6 | 11.9 | 2.2 | 1.0 | 1.2 | 1.7 | 1.6 | 2.2 | 2.1 | 2.4 | 20.2 | 4.7 |
| 6 | 2.3 | 3.2 | 3.4 | 4.4 | 4.0 | 5.7 | 6.1 | 5.7 | 5.2 | 24.4 | 53.1 | 52.3 | 28.4 | 65.5 | 67.4 | 12.3 | 9.6 | 8.4 | 8.6 | 4.6 | 3.7 | 1.4 | 4.0 | 2.4 | 67.4 | 16.1 |
| 7 | 1.4 | 0.9 | 0.4 | 0.4 | 0.6 | 0.7 | 2.0 | 8.9 | 6.5 | 11.0 | 17.1 | 22.0 | 10.9 | 18.9 | 32.7 | 30.2 | 28.4 | 20.5 | 9.3 | 2.3 | 3.1 | 0.7 | 0.6 | 0.5 | 32.7 | 9.6 |
| 8 | 0.5 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 1.2 | 4.8 | 2.7 | 2.2 | 1.0 | 0.7 | 0.7 | 0.8 | 4.0 | 14.4 | 18.0 | 15.8 | 5.3 | 9.5 | 5.2 | 4.3 | 7.2 | 8.8 | 18.0 | 4.5 |
| 9 | 9.4 | 7.4 | 4.4 | 4.4 | 4.6 | 6.5 | 11.3 | 17.5 | 11.5 | 19.3 | 36.1 | 34.1 | 13.1 | 23.4 | 26.9 | 19.1 | 18.2 | 18.6 | 6.3 | 3.3 | 2.4 | 2.9 | 2.4 | 4.8 | 36.1 | 12.8 |
| 10 | 2.5 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.4 | 12.4 | 20.2 | 16.9 | 14.3 | 11.7 | 24.7 | 29.1 | 26.3 | 51.9 | 31.8 | 56.5 | 22.5 | 6.8 | 9.0 | 8.6 | 8.0 | 8.4 | 56.5 | 15.6 |
| 11 | 7.1 | 8.8 | 6.4 | 7.3 | 5.1 | 3.7 | 8.2 | 4.6 | 5.9 | 11.2 | 8.2 | 5.7 | 8.6 | 1.1 | 0.9 | 0.6 | 0.7 | 0.8 | 1.0 | 0.7 | 1.0 | 1.5 | 1.9 | 1.2 | 11.2 | 4.3 |
| 12 | 1.2 | 1.3 | 1.1 | 1.1 | 1.3 | 1.1 | 1.9 | 2.4 | 2.5 | 5.0 | 5.8 | 6.8 | 9.7 | 7.6 | 6.1 | 5.8 | 4.3 | 1.1 | 0.6 | 0.7 | 0.6 | 1.2 | 1.6 | 1.3 | 9.7 | 3.0 |
| 13 | 1.1 | 1.0 | 1.3 | 1.1 | 1.3 | 1.5 | 3.0 | 4.3 | 4.7 | 5.3 | 5.6 | 4.5 | 4.9 | 4.5 | 4.7 | 3.6 | 5.0 | 5.5 | 8.2 | 2.5 | 2.3 | 2.3 | 4.1 | 5.8 | 8.2 | 3.7 |
| 14 | 6.9 | 4.9 | 5.6 | 9.5 | 14.5 | 23.7 | 15.0 | 19.6 | 24.4 | 30.9 | 40.2 | 37.0 | 17.0 | 28.5 | 52.3 | 52.4 | 33.9 | 29.7 | 11.8 | 11.0 | 10.5 | 13.6 | 11.6 | 5.6 | 52.4 | 21.2 |
| 15 | 6.0 | 5.1 | 5.0 | 3.7 | 5.7 | 4.5 | 11.1 | 33.8 | 28.1 | 15.2 | 32.0 | 36.5 | 34.8 | 81.6 | 27.7 | 20.3 | 37.8 | 40.2 | 10.9 | 29.0 | 30.0 | 27.7 | 59.1 | 25.4 | 81.6 | 25.5 |
| 16 | 16.8 | 8.7 | 4.5 | 5.7 | 11.8 | 6.0 | 9.8 | 17.7 | 29.5 | 27.8 | 37.8 | 28.8 | 32.9 | 47.5 | 36.1 | 35.3 | 19.0 | 15.8 | 8.0 | 11.4 | 8.8 | 10.7 | 14.8 | 12.0 | 47.5 | 19.1 |
| 17 | 13.6 | 8.0 | 7.4 | 9.0 | 5.6 | 7.8 | 28.6 | 31.1 | 36.9 | 58.3 | 140.2 | 144.6 | 11.3 | 10.7 | 6.6 | 4.0 | 1.3 | 0.6 | 10.1 | 0.9 | 0.9 | 0.8 | 1.6 | 1.8 | 144.6 | 22.6 |
| 18 | 1.7 | 2.1 | 2.0 | 2.1 | 2.6 | 1.0 | 1.4 | 5.7 | 8.0 | 4.1 | 13.2 | 9.0 | 16.9 | 18.8 | 10.5 | 6.5 | 4.5 | 6.6 | 9.0 | 1.7 | 1.0 | 1.2 | 0.6 | 0.7 | 18.8 | 5.4 |
| 19 | 1.1 | 1.2 | 1.3 | 0.9 | 1.0 | 1.8 | 1.5 | 3.2 | 3.0 | 3.7 | 2.4 | 1.6 | 4.0 | 7.3 | 7.3 | 2.4 | 0.8 | 0.5 | 1.0 | 0.9 | 1.2 | 2.5 | 2.1 | 1.4 | 7.3 | 2.2 |
| 20 | 1.0 | 0.6 | 0.4 | 0.6 | 0.4 | 0.4 | 0.5 | 0.7 | 1.2 | 1.2 | 1.9 | 1.7 | 1.4 | 1.7 | 1.3 | 1.2 | 0.5 | 1.5 | 0.6 | 1.6 | 0.6 | 1.0 | 0.8 | 0.7 | 1.9 | 1.0 |
| 21 | 0.7 | 1.0 | 0.9 | 0.5 | 0.7 | 0.8 | 2.0 | 3.1 | 2.7 | 3.9 | 3.8 | 4.3 | 4.9 | 7.1 | 4.1 | 5.8 | 2.9 | 3.8 | 4.7 | 3.4 | 2.7 | 7.5 | 7.6 | 3.2 | 7.6 | 3.4 |
| 22 | 2.0 | 4.3 | 2.2 | 0.4 | 0.2 | 0.3 | 0.8 | 2.8 | 0.3 | 2.8 | 8.3 | 12.1 | 2.1 | 6.6 | 6.2 | 6.7 | 3.9 | 5.4 | 4.1 | 4.1 | 5.4 | 2.1 | 4.7 | 2.8 | 12.1 | 3.8 |
| 23 | 2.7 | 2.4 | 1.3 | 2.5 | 1.4 | 1.9 | 4.8 | 9.2 | 16.6 | 5.5 | 19.3 | 26.6 | 21.4 | 25.8 | 17.6 | 14.6 | 19.9 | 20.1 | 15.7 | 6.5 | 2.6 | 4.6 | 19.7 | 28.9 | 28.9 | 12.2 |
| 24 | 12.0 | 7.4 | 7.2 | 9.2 | 13.6 | 15.6 | 15.4 | 22.6 | 31.4 | 36.1 | 39.3 | 33.6 | 36.0 | 36.3 | 60.6 | 64.2 | 14.1 | 9.5 | 2.7 | 2.7 | 2.2 | 3.5 | 6.8 | 6.7 | 64.2 | 20.4 |
| 25 | 4.6 | 16.3 | 47.2 | 69.5 | 64.3 | 44.2 | 15.2 | 18.8 | 20.9 | 37.8 | 16.2 | 20.8 | 12.4 | 13.6 | 6.8 | 2.4 | 0.4 | 0.8 | 1.9 | 1.2 | 0.4 | 0.6 | 0.7 | 0.8 | 69.5 | 17.4 |
| 26 | 0.7 | 0.8 | 0.6 | 0.8 | 0.8 | 1.4 | 2.9 | 5.5 | 6.0 | 28.5 | 14.2 | 9.1 | 9.7 | 10.6 | 13.4 | 7.6 | 12.7 | 6.3 | 2.0 | 1.6 | 1.9 | 4.3 | 4.6 | 4.2 | 28.5 | 6.3 |
| 27 | 5.8 | 6.4 | 7.7 | 5.9 | 6.9 | 7.3 | 4.4 | 3.0 | 4.0 | 4.6 | 8.5 | 9.6 | 8.4 | 14.1 | 20.4 | 9.3 | 4.7 | 4.6 | 4.8 | 4.9 | 4.5 | 3.9 | 3.8 | 4.1 | 20.4 | 6.7 |
| 28 | 4.6 | 4.8 | 5.1 | 5.2 | 5.3 | 4.2 | 4.5 | 4.9 | 7.8 | 8.8 | 7.2 | 31.8 | 12.2 | 15.2 | 16.7 | 26.1 | 8.6 | 4.4 | 3.6 | 3.0 | 2.9 | 4.9 | 1.0 | 1.2 | 31.8 | 8.1 |
| 29 | 1.2 | 1.0 | 1.0 | 0.9 | 0.9 | 0.8 | 1.0 | 0.6 | 0.6 | 0.5 | 7.4 | 1.3 | 0.6 | 0.3 | 0.5 | 0.5 | 0.6 | 0.5 | 1.2 | 1.3 | 1.3 | 1.1 | 0.3 | 0.3 | 7.4 | 1.1 |
| 30 | 0.3 | 3.1 | 2.7 | 1.4 | 1.1 | 1.1 | 1.4 | 4.7 | 3.6 | 10.4 | 22.8 | 22.3 | 17.8 | 27.3 | 33.7 | 23.4 | 3.2 | 1.4 | 1.0 | 1.2 | 1.3 | 1.3 | 1.3 | 1.5 | 33.7 | 7.9 |
| 31 | 1.5 | 2.1 | 3.5 | 1.9 | 2.0 | 4.9 | 27.0 | 75.3 | 57.9 | 36.2 | 26.3 | 22.1 | 15.9 | 13.7 | 3.1 | 1.4 | 0.2 | 0.2 | 1.5 | 1.3 | 1.8 | 1.2 | 1.7 | 0.7 | 75.3 | 12.6 |
| Hourly Max | 16.8 | 16.3 | 47.2 | 69.5 | 64.3 | 44.2 | 28.6 | 75.3 | 57.9 | 58.3 | 140.2 | 144.6 | 36.0 | 81.6 | 67.4 | 64.2 | 37.8 | 56.5 | 22.5 | 29.0 | 30.0 | 27.7 | 59.1 | 28.9 | | |
| Hourly Average | 3.8 | 3.8 | 4.9 | 5.2 | 5.5 | 5.2 | 6.5 | 11.0 | 11.6 | 14.2 | 19.5 | 19.6 | 12.4 | 18.0 | 17.2 | 14.5 | 9.6 | 9.2 | 5.2 | 4.0 | 3.7 | 4.0 | 5.9 | 4.7 | | |




| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | 3 | | Guideline | 80 | UG/M3 |
| Number of 24HR Exceedances | 0 | | Guideline | 30 | UG/M3 |
| Number of Non-Zero Readings | 744 | | | | |
| Maximum 1-HR Average | 144.6 | UG/M3 | | | |
| Maximum 24-HR Average | 25.5 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 14.0 | | Monthly Average | 9.1 | UG/M3 |

# Berm $PM_{10}$ (µg/m$^3$) – October 2017

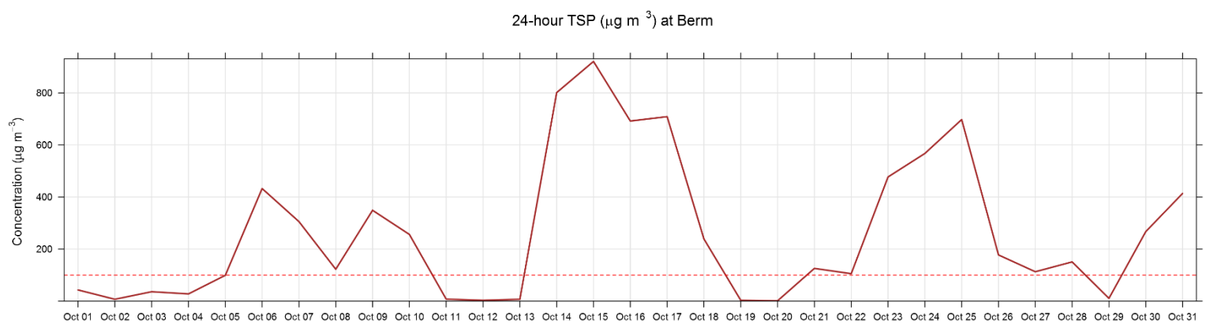
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.3 | 6.2 | 6.8 | 1.3 | 2.1 | 4.5 | 2.1 | 4.5 | 2.9 | 73.9 | 34.6 | 12.5 | 43.1 | 101.2 | 40.5 | 6.9 | 15.7 | 7.9 | 3.3 | 0.9 | 0.6 | 0.9 | 1.6 | 1.7 | 101.2 | 15.8 |
| 2 | 3.0 | 12.4 | 26.4 | 5.0 | 8.1 | 1.0 | 6.7 | 2.6 | 3.0 | 10.3 | 1.9 | 2.6 | 2.4 | 2.1 | 5.5 | 2.1 | 3.6 | 1.6 | 0.6 | 1.2 | 1.8 | 1.2 | 1.4 | 1.4 | 26.4 | 4.5 |
| 3 | 1.3 | 1.1 | 1.2 | 2.8 | 2.9 | 7.2 | 4.1 | 6.9 | 25.9 | 30.3 | 65.5 | 38.2 | 26.0 | 43.0 | 15.0 | 2.5 | 1.3 | 1.3 | 0.8 | 1.1 | 2.6 | 2.4 | 3.6 | 5.6 | 65.5 | 12.2 |
| 4 | 3.4 | 3.6 | 2.1 | 2.0 | 3.1 | 4.1 | 8.0 | 15.3 | 13.4 | 16.8 | 19.0 | 15.8 | 24.0 | 27.8 | 69.2 | 53.1 | 14.0 | 5.9 | 3.1 | 3.0 | 6.6 | 12.5 | 5.9 | 5.3 | 69.2 | 14.0 |
| 5 | 4.5 | 3.2 | 3.3 | 3.2 | 2.9 | 3.7 | 6.9 | 18.4 | 28.1 | 17.2 | 16.8 | 16.1 | 46.7 | 208.5 | 204.2 | 122.8 | 6.2 | 2.9 | 2.8 | 4.5 | 2.9 | 4.7 | 3.9 | 5.6 | 208.5 | 30.8 |
| 6 | 3.7 | 8.1 | 7.8 | 11.9 | 9.5 | 26.0 | 23.3 | 19.7 | 16.4 | 149.8 | 404.9 | 400.1 | 198.5 | 615.7 | 692.0 | 88.9 | 71.3 | 68.5 | 50.3 | 26.4 | 15.5 | 4.2 | 24.2 | 19.2 | 692.0 | 123.2 |
| 7 | 6.7 | 4.2 | 0.6 | 0.6 | 1.2 | 1.3 | 13.1 | 86.1 | 57.4 | 96.9 | 146.5 | 187.4 | 97.6 | 167.8 | 310.2 | 266.4 | 240.0 | 167.9 | 86.4 | 13.5 | 16.4 | 2.0 | 1.2 | 0.8 | 310.2 | 82.2 |
| 8 | 0.8 | 0.4 | 0.4 | 0.7 | 0.5 | 0.4 | 2.3 | 14.4 | 3.5 | 3.8 | 1.7 | 1.4 | 1.3 | 1.8 | 31.7 | 145.2 | 154.0 | 182.0 | 34.5 | 72.8 | 30.8 | 30.8 | 61.9 | 84.3 | 182.0 | 35.9 |
| 9 | 86.4 | 59.2 | 33.1 | 31.8 | 20.1 | 37.1 | 85.0 | 137.4 | 95.9 | 168.4 | 298.0 | 293.7 | 93.9 | 177.7 | 224.6 | 144.3 | 126.1 | 136.2 | 31.0 | 11.7 | 5.1 | 9.1 | 4.2 | 23.8 | 298.0 | 97.2 |
| 10 | 3.9 | 3.1 | 2.7 | 3.0 | 3.7 | 3.0 | 5.9 | 91.7 | 170.6 | 126.2 | 117.5 | 83.2 | 210.4 | 230.4 | 252.8 | 347.5 | 251.1 | 353.0 | 155.8 | 38.5 | 38.5 | 36.4 | 30.3 | 32.5 | 353.0 | 108.0 |
| 11 | 24.0 | 31.6 | 18.9 | 21.4 | 11.4 | 4.8 | 11.3 | 5.7 | 7.8 | 15.9 | 11.3 | 7.2 | 12.1 | 1.2 | 1.1 | 0.7 | 0.8 | 0.9 | 1.2 | 0.9 | 1.2 | 1.9 | 2.4 | 1.4 | 31.6 | 8.2 |
| 12 | 1.4 | 1.5 | 1.2 | 1.2 | 1.4 | 1.1 | 2.0 | 2.5 | 2.7 | 6.5 | 8.5 | 9.5 | 13.2 | 10.2 | 8.2 | 7.9 | 6.2 | 1.4 | 0.7 | 0.8 | 0.7 | 1.4 | 1.9 | 1.4 | 13.2 | 3.9 |
| 13 | 1.2 | 1.1 | 1.5 | 1.2 | 1.4 | 1.6 | 3.7 | 5.2 | 5.4 | 6.6 | 7.4 | 4.8 | 6.2 | 6.9 | 11.1 | 4.1 | 15.2 | 10.1 | 26.8 | 2.6 | 2.4 | 2.4 | 4.8 | 6.6 | 26.8 | 5.8 |
| 14 | 8.8 | 6.6 | 14.8 | 45.4 | 73.8 | 175.9 | 109.5 | 161.6 | 201.4 | 289.5 | 367.7 | 336.6 | 155.5 | 235.3 | 517.5 | 545.5 | 347.1 | 291.0 | 102.3 | 77.1 | 84.7 | 122.5 | 94.2 | 33.4 | 545.5 | 183.2 |
| 15 | 42.3 | 31.9 | 29.5 | 18.7 | 38.3 | 26.1 | 84.5 | 278.1 | 253.7 | 108.5 | 300.9 | 296.9 | 323.7 | 767.3 | 230.0 | 154.9 | 277.0 | 300.0 | 67.8 | 216.3 | 193.3 | 252.0 | 652.1 | 262.8 | 767.3 | 216.9 |
| 16 | 174.0 | 80.6 | 28.8 | 37.8 | 87.5 | 48.6 | 69.7 | 133.1 | 206.4 | 177.0 | 234.7 | 203.5 | 243.0 | 390.4 | 318.2 | 342.3 | 191.5 | 146.9 | 67.7 | 98.8 | 86.8 | 100.0 | 145.0 | 119.0 | 390.4 | 155.5 |
| 17 | 126.2 | 56.7 | 49.8 | 71.4 | 40.9 | 62.7 | 285.4 | 321.5 | 386.2 | 627.3 | 1359.9 | 1394.9 | 91.0 | 68.3 | 30.7 | 7.8 | 3.2 | 1.5 | 21.0 | 3.4 | 5.3 | 3.0 | 12.6 | 12.9 | 1394.9 | 210.2 |
| 18 | 14.2 | 24.1 | 18.5 | 20.0 | 23.9 | 4.3 | 7.5 | 55.4 | 80.3 | 37.1 | 100.4 | 80.0 | 161.2 | 202.1 | 86.8 | 59.5 | 32.6 | 66.3 | 86.0 | 9.6 | 4.1 | 6.2 | 1.8 | 0.9 | 202.1 | 49.3 |
| 19 | 1.5 | 1.6 | 1.6 | 1.0 | 1.3 | 2.7 | 2.1 | 4.7 | 4.4 | 5.5 | 3.4 | 2.3 | 6.0 | 11.0 | 10.8 | 3.5 | 1.2 | 0.6 | 1.3 | 1.1 | 1.6 | 3.4 | 3.0 | 1.9 | 11.0 | 3.2 |
| 20 | 1.4 | 0.9 | 0.5 | 0.7 | 0.5 | 0.5 | 0.6 | 0.9 | 1.6 | 1.5 | 2.6 | 2.2 | 2.0 | 2.4 | 2.5 | 1.7 | 0.6 | 2.1 | 1.4 | 2.1 | 0.7 | 1.3 | 1.0 | 1.1 | 2.6 | 1.4 |
| 21 | 0.9 | 3.2 | 2.2 | 1.1 | 1.3 | 2.7 | 12.9 | 20.6 | 18.4 | 28.9 | 33.1 | 33.9 | 47.9 | 65.7 | 24.1 | 57.8 | 23.5 | 28.2 | 26.9 | 20.7 | 20.3 | 67.6 | 70.6 | 25.6 | 70.6 | 26.6 |
| 22 | 15.5 | 23.9 | 8.2 | 0.5 | 0.3 | 0.8 | 1.2 | 4.2 | 0.6 | 23.8 | 55.1 | 135.1 | 7.3 | 41.4 | 46.8 | 52.4 | 32.5 | 43.8 | 25.3 | 32.2 | 23.9 | 13.8 | 37.1 | 17.3 | 135.1 | 26.8 |
| 23 | 19.2 | 16.2 | 9.7 | 25.3 | 13.0 | 16.9 | 41.5 | 86.5 | 144.1 | 47.8 | 163.2 | 191.6 | 144.5 | 204.8 | 139.5 | 138.0 | 180.0 | 206.7 | 150.5 | 43.1 | 13.3 | 37.7 | 183.8 | 349.1 | 349.1 | 106.9 |
| 24 | 123.7 | 66.5 | 62.1 | 76.0 | 131.0 | 118.8 | 87.0 | 124.1 | 202.1 | 277.9 | 316.6 | 269.8 | 229.7 | 240.1 | 337.1 | 400.8 | 89.1 | 45.5 | 9.4 | 10.8 | 5.9 | 12.6 | 35.8 | 42.1 | 400.8 | 138.1 |
| 25 | 16.9 | 148.2 | 489.9 | 800.0 | 728.6 | 469.1 | 148.0 | 137.3 | 149.1 | 314.0 | 121.3 | 166.3 | 108.1 | 102.5 | 38.2 | 13.8 | 1.4 | 3.6 | 8.6 | 10.0 | 0.5 | 0.7 | 0.7 | 1.5 | 800.0 | 165.8 |
| 26 | 0.8 | 1.0 | 0.7 | 1.3 | 1.0 | 3.3 | 3.6 | 7.4 | 32.2 | 358.8 | 150.9 | 80.7 | 77.7 | 78.4 | 105.7 | 49.4 | 85.3 | 41.1 | 5.5 | 2.0 | 4.6 | 18.7 | 40.4 | 17.7 | 358.8 | 48.7 |
| 27 | 38.5 | 34.3 | 42.8 | 28.0 | 25.4 | 33.2 | 13.2 | 5.8 | 9.8 | 14.2 | 57.9 | 65.2 | 58.4 | 123.3 | 195.8 | 82.7 | 14.9 | 12.0 | 10.9 | 10.4 | 8.0 | 5.2 | 4.9 | 4.7 | 195.8 | 37.5 |
| 28 | 6.5 | 6.7 | 7.4 | 7.8 | 12.6 | 4.6 | 6.0 | 8.1 | 29.1 | 47.1 | 32.2 | 266.7 | 91.4 | 139.6 | 133.3 | 252.3 | 82.7 | 28.2 | 15.5 | 9.2 | 7.9 | 11.7 | 2.2 | 1.3 | 266.7 | 50.4 |
| 29 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.9 | 1.1 | 0.7 | 0.7 | 0.7 | 64.7 | 9.4 | 1.9 | 0.6 | 0.7 | 1.8 | 1.1 | 1.0 | 2.3 | 3.8 | 2.9 | 1.6 | 0.4 | 0.3 | 64.7 | 4.3 |
| 30 | 0.4 | 11.5 | 7.7 | 3.2 | 2.3 | 3.1 | 7.9 | 48.8 | 30.7 | 115.7 | 254.3 | 245.6 | 191.4 | 287.8 | 352.9 | 239.4 | 17.6 | 4.4 | 1.9 | 2.0 | 2.1 | 1.8 | 1.9 | 2.1 | 352.9 | 76.5 |
| 31 | 2.6 | 7.4 | 23.7 | 6.6 | 5.5 | 33.8 | 249.0 | 730.1 | 552.2 | 355.0 | 233.1 | 195.0 | 114.3 | 96.4 | 14.9 | 1.8 | 0.2 | 0.3 | 1.7 | 1.4 | 2.0 | 1.3 | 1.9 | 0.8 | 730.1 | 109.6 |
| Hourly Max | 174.0 | 148.2 | 489.9 | 800.0 | 728.6 | 469.1 | 285.4 | 730.1 | 552.2 | 627.3 | 1359.9 | 1394.9 | 323.7 | 767.3 | 692.0 | 545.5 | 347.1 | 353.0 | 155.8 | 216.3 | 193.3 | 252.0 | 652.1 | 349.1 | | |
| Hourly Average | 23.8 | 21.2 | 29.2 | 39.7 | 40.5 | 35.6 | 42.1 | 81.9 | 88.3 | 114.6 | 160.8 | 162.8 | 91.3 | 150.1 | 143.6 | 116.1 | 73.8 | 69.8 | 32.4 | 23.6 | 19.1 | 24.9 | 46.3 | 35.0 | | |




| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | n/a | | Guideline | n/a | UG/M3 |
| Number of Non-Zero Readings | 744 | | | | |
| Maximum 1-HR Average | 1394.9 | UG/M3 | | | |
| Maximum 24-HR Average | 216.9 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 133.7 | | Monthly Average | 69.4 | UG/M3 |

# Berm TSP (µg/m$^3$) – October 2017

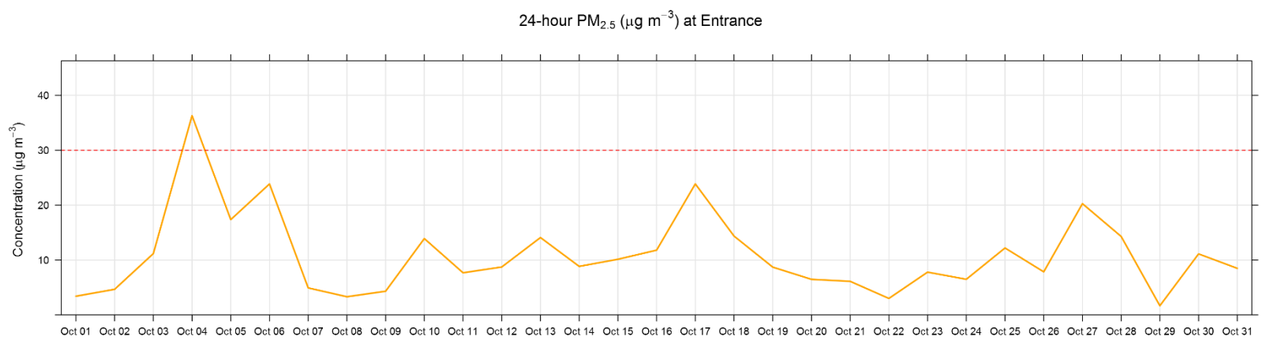
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.2 | 5.8 | 11.4 | 0.9 | 2.5 | 7.6 | 2.3 | 6.0 | 2.8 | 178.3 | 104.5 | 30.6 | 94.5 | 363.6 | 115.4 | 11.3 | 44.3 | 30.2 | 10.4 | 2.0 | 0.5 | 2.8 | 1.8 | 1.9 | 363.6 | 43.1 |
| 2 | 5.0 | 84.7 | 23.7 | 4.2 | 6.0 | 0.7 | 5.5 | 2.5 | 2.3 | 10.0 | 1.6 | 2.3 | 2.2 | 2.2 | 4.9 | 1.9 | 3.8 | 1.4 | 0.4 | 0.9 | 1.3 | 0.9 | 0.9 | 0.9 | 84.7 | 7.1 |
| 3 | 0.9 | 0.8 | 0.8 | 2.3 | 2.5 | 7.5 | 3.6 | 7.0 | 95.5 | 99.2 | 256.5 | 129.2 | 57.1 | 121.2 | 41.8 | 11.3 | 4.1 | 1.4 | 0.5 | 1.8 | 2.8 | 3.1 | 11.4 | 7.2 | 256.5 | 36.2 |
| 4 | 3.7 | 4.9 | 2.4 | 1.5 | 3.9 | 5.6 | 12.6 | 50.1 | 35.1 | 34.4 | 36.1 | 30.4 | 52.5 | 66.6 | 150.7 | 90.6 | 29.8 | 13.1 | 2.1 | 2.1 | 6.3 | 23.1 | 5.2 | 4.0 | 150.7 | 27.8 |
| 5 | 5.2 | 2.2 | 2.4 | 2.5 | 2.2 | 3.0 | 7.2 | 52.1 | 117.6 | 51.4 | 50.1 | 57.3 | 156.6 | 753.3 | 637.7 | 397.3 | 20.8 | 6.5 | 2.6 | 9.1 | 6.8 | 9.5 | 7.2 | 17.1 | 753.3 | 99.1 |
| 6 | 7.0 | 30.3 | 28.8 | 32.7 | 34.0 | 119.9 | 104.8 | 37.6 | 38.8 | 435.5 | 1660.3 | 1646.8 | 825.4 | 1997.1 | 2133.2 | 276.7 | 304.1 | 215.7 | 94.9 | 86.5 | 24.4 | 10.0 | 115.8 | 120.8 | 2133.2 | 432.5 |
| 7 | 12.2 | 14.6 | 0.4 | 0.4 | 2.6 | 1.7 | 42.5 | 277.3 | 199.0 | 381.4 | 571.7 | 750.9 | 379.0 | 656.9 | 1243.9 | 963.6 | 885.7 | 642.1 | 243.6 | 24.0 | 34.0 | 3.2 | 2.3 | 0.8 | 1243.9 | 305.6 |
| 8 | 0.6 | 0.3 | 0.2 | 0.5 | 0.4 | 0.3 | 3.1 | 74.1 | 2.6 | 10.0 | 5.0 | 4.7 | 2.3 | 1.7 | 101.1 | 554.4 | 543.2 | 708.3 | 55.1 | 211.8 | 47.1 | 89.3 | 224.2 | 299.6 | 708.3 | 122.5 |
| 9 | 354.3 | 242.3 | 142.2 | 111.0 | 39.1 | 99.7 | 296.8 | 468.6 | 325.9 | 673.9 | 1165.8 | 1107.9 | 342.5 | 720.9 | 868.7 | 475.8 | 383.9 | 389.0 | 75.7 | 32.4 | 6.0 | 19.0 | 7.9 | 25.1 | 1165.8 | 348.9 |
| 10 | 3.6 | 3.5 | 1.9 | 3.5 | 6.4 | 3.9 | 11.5 | 246.4 | 420.9 | 255.2 | 343.4 | 167.2 | 541.8 | 690.9 | 745.1 | 746.6 | 631.1 | 621.7 | 432.1 | 100.5 | 55.6 | 54.8 | 31.2 | 31.0 | 746.6 | 256.2 |
| 11 | 26.0 | 36.2 | 18.2 | 22.0 | 11.0 | 3.4 | 9.2 | 3.9 | 5.8 | 12.8 | 8.8 | 5.2 | 10.6 | 0.8 | 0.8 | 0.4 | 0.5 | 0.6 | 0.8 | 0.7 | 0.9 | 1.2 | 1.7 | 1.1 | 36.2 | 7.6 |
| 12 | 1.0 | 1.1 | 0.8 | 0.8 | 0.9 | 0.7 | 1.3 | 1.7 | 1.8 | 5.9 | 8.4 | 7.9 | 10.5 | 8.1 | 6.6 | 6.8 | 5.9 | 1.0 | 0.5 | 0.6 | 0.4 | 1.0 | 1.3 | 0.9 | 10.5 | 3.2 |
| 13 | 0.8 | 0.7 | 1.1 | 0.8 | 1.0 | 1.1 | 2.7 | 3.8 | 3.7 | 5.5 | 6.2 | 3.3 | 6.7 | 12.9 | 25.2 | 5.2 | 36.0 | 9.4 | 31.3 | 1.7 | 1.5 | 1.6 | 3.4 | 4.6 | 36.0 | 7.1 |
| 14 | 6.7 | 5.9 | 42.5 | 174.1 | 280.5 | 814.0 | 430.5 | 755.8 | 870.7 | 1295.9 | 1659.5 | 1510.9 | 711.1 | 935.7 | 2298.3 | 2382.9 | 1507.5 | 1276.0 | 450.6 | 326.0 | 380.1 | 590.3 | 411.0 | 107.2 | 2382.9 | 801.0 |
| 15 | 204.8 | 151.7 | 124.3 | 69.4 | 164.9 | 115.7 | 374.4 | 1175.4 | 1097.3 | 399.9 | 1288.8 | 1145.2 | 1433.8 | 2945.7 | 1040.4 | 703.7 | 1102.7 | 1123.1 | 246.5 | 962.0 | 717.9 | 1308.7 | 2806.1 | 1394.7 | 2945.7 | 920.7 |
| 16 | 947.4 | 388.5 | 121.2 | 148.4 | 342.9 | 157.1 | 233.5 | 505.5 | 739.4 | 539.9 | 843.6 | 828.2 | 1009.5 | 1823.7 | 1446.3 | 1658.6 | 1007.9 | 754.0 | 352.6 | 502.3 | 457.7 | 492.7 | 717.3 | 588.2 | 1823.7 | 691.9 |
| 17 | 579.0 | 250.3 | 201.2 | 343.9 | 186.7 | 319.3 | 1510.8 | 1600.9 | 1813.4 | 2911.7 | 3193.6 | 3096.0 | 417.6 | 249.1 | 81.2 | 10.9 | 3.1 | 3.7 | 43.2 | 12.0 | 23.9 | 17.7 | 70.2 | 69.8 | 3193.6 | 708.7 |
| 18 | 89.9 | 130.8 | 105.1 | 102.4 | 133.5 | 12.6 | 21.2 | 204.7 | 283.6 | 151.3 | 400.7 | 392.5 | 873.0 | 1065.4 | 420.6 | 269.5 | 152.1 | 371.7 | 463.3 | 47.3 | 17.1 | 19.2 | 2.9 | 0.8 | 1065.4 | 238.8 |
| 19 | 1.4 | 1.3 | 1.2 | 0.7 | 1.2 | 2.7 | 1.8 | 4.9 | 4.6 | 6.0 | 3.4 | 2.0 | 6.1 | 11.6 | 11.4 | 3.2 | 0.9 | 0.4 | 1.0 | 0.9 | 1.3 | 3.3 | 2.9 | 1.8 | 11.6 | 3.2 |
| 20 | 1.3 | 0.8 | 0.3 | 0.5 | 0.3 | 0.4 | 0.4 | 0.7 | 1.2 | 1.2 | 2.4 | 1.9 | 2.0 | 2.4 | 3.8 | 1.4 | 0.5 | 1.9 | 2.3 | 2.8 | 0.5 | 0.9 | 0.7 | 0.9 | 3.8 | 1.3 |
| 21 | 4.2 | 8.3 | 11.5 | 2.6 | 2.4 | 10.2 | 35.5 | 90.5 | 76.9 | 104.4 | 143.9 | 155.9 | 247.5 | 315.2 | 110.1 | 262.6 | 116.7 | 155.8 | 116.6 | 106.4 | 88.2 | 348.6 | 363.7 | 141.6 | 363.7 | 125.8 |
| 22 | 100.6 | 81.1 | 28.5 | 0.4 | 0.2 | 2.4 | 1.2 | 4.5 | 0.6 | 90.7 | 161.4 | 585.9 | 86.4 | 116.9 | 162.0 | 198.1 | 127.2 | 207.5 | 62.9 | 133.9 | 84.1 | 45.9 | 191.2 | 58.5 | 585.9 | 105.5 |
| 23 | 83.1 | 72.4 | 43.3 | 129.8 | 80.5 | 86.3 | 156.2 | 264.6 | 399.6 | 115.6 | 624.1 | 779.6 | 563.1 | 838.0 | 601.4 | 672.2 | 806.5 | 1079.0 | 713.8 | 202.6 | 46.6 | 183.1 | 1049.5 | 1855.7 | 1855.7 | 476.9 |
| 24 | 682.0 | 430.0 | 395.3 | 436.8 | 767.7 | 668.9 | 341.8 | 388.9 | 612.3 | 1014.4 | 1269.4 | 1260.9 | 1028.8 | 863.3 | 1156.1 | 1404.8 | 331.7 | 131.3 | 52.9 | 52.4 | 21.2 | 45.9 | 98.9 | 157.0 | 1404.8 | 567.2 |
| 25 | 84.5 | 630.3 | 2007.1 | 3294.3 | 2784.5 | 2048.9 | 717.6 | 555.6 | 643.9 | 1445.2 | 526.8 | 790.9 | 494.2 | 428.9 | 122.6 | 53.2 | 5.5 | 13.9 | 44.5 | 43.5 | 1.4 | 0.4 | 0.5 | 1.7 | 3294.3 | 697.5 |
| 26 | 0.6 | 0.8 | 0.5 | 1.4 | 0.6 | 4.9 | 3.1 | 6.7 | 122.1 | 1576.6 | 612.6 | 295.6 | 285.6 | 302.3 | 324.1 | 122.4 | 172.4 | 115.8 | 10.0 | 2.0 | 11.7 | 46.2 | 205.1 | 35.7 | 1576.6 | 177.5 |
| 27 | 170.1 | 96.8 | 147.4 | 78.7 | 50.3 | 76.3 | 26.5 | 7.8 | 16.2 | 24.3 | 203.7 | 204.5 | 205.9 | 404.9 | 643.0 | 253.8 | 27.8 | 16.6 | 15.4 | 13.0 | 11.8 | 5.1 | 4.8 | 5.6 | 643.0 | 112.9 |
| 28 | 15.3 | 10.5 | 9.0 | 9.8 | 44.0 | 4.0 | 7.7 | 14.5 | 86.4 | 171.7 | 96.8 | 949.7 | 363.5 | 424.2 | 314.8 | 690.7 | 273.3 | 57.8 | 18.0 | 12.4 | 9.9 | 24.2 | 7.7 | 0.9 | 949.7 | 150.7 |
| 29 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 0.8 | 0.5 | 0.5 | 0.6 | 188.1 | 31.8 | 1.8 | 2.0 | 1.5 | 4.0 | 3.4 | 0.7 | 5.1 | 2.7 | 6.6 | 1.2 | 0.3 | 0.2 | 188.1 | 10.7 |
| 30 | 0.3 | 16.7 | 8.7 | 8.5 | 9.4 | 13.0 | 31.6 | 213.2 | 121.0 | 505.9 | 1017.1 | 831.2 | 669.4 | 917.7 | 1183.3 | 786.8 | 54.4 | 7.9 | 2.4 | 2.2 | 4.5 | 1.5 | 1.2 | 1.5 | 1183.3 | 267.1 |
| 31 | 2.3 | 18.8 | 98.5 | 22.3 | 16.5 | 128.5 | 911.4 | 2558.6 | 2061.0 | 1506.7 | 946.4 | 838.5 | 414.4 | 333.5 | 63.2 | 1.3 | 0.1 | 0.2 | 1.1 | 0.9 | 1.4 | 0.8 | 1.3 | 0.6 | 2558.6 | 413.7 |
| Hourly Max | 947.4 | 630.3 | 2007.1 | 3294.3 | 2784.5 | 2048.9 | 1510.8 | 2558.6 | 2061.0 | 2911.7 | 3193.6 | 3096.0 | 1433.8 | 2945.7 | 2298.3 | 2382.9 | 1507.5 | 1276.0 | 713.8 | 962.0 | 717.9 | 1308.7 | 2806.1 | 1855.7 | | |
| Hourly Average | 109.6 | 87.8 | 115.5 | 161.5 | 160.6 | 152.3 | 171.3 | 309.2 | 329.1 | 452.1 | 561.3 | 569.2 | 364.4 | 560.5 | 518.0 | 420.1 | 277.0 | 256.7 | 114.6 | 93.5 | 66.9 | 108.2 | 204.8 | 159.3 | | |




| | | | | | |
|---|---|---|---|---|---|
| Number of 24HR Exceedances | 20 | | Guideline | 100 | UG/M3 |
| Number of Non-Zero Readings | 744 | | | | |
| Maximum 1-HR Average | 3294.3 | UG/M3 | | | |
| Maximum 24-HR Average | 920.7 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 492.5 | | Monthly Average | 263.5 | UG/M3 |

# Entrance $PM_{2.5}$ (µg/m$^3$) – October 2017

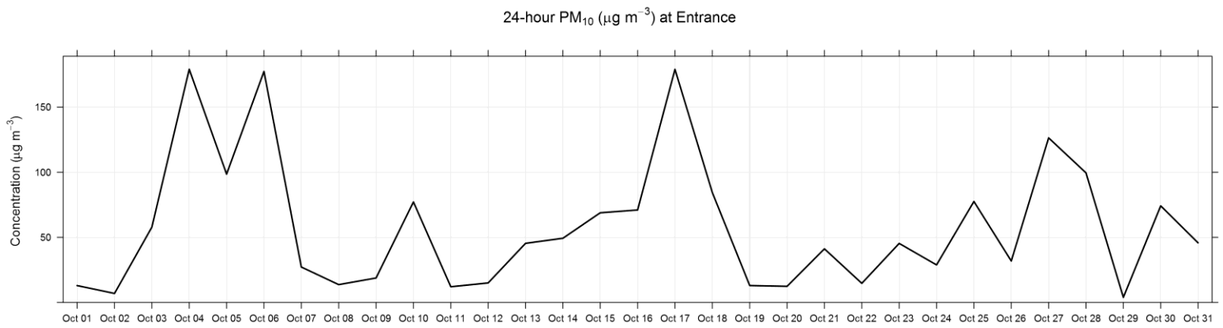
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.4 | 4.5 | 2.9 | 1.5 | 2.1 | 2.7 | 2.3 | 3.3 | 2.7 | 3.9 | 5.5 | 4.3 | 5.4 | 4.0 | 6.4 | 2.6 | 8.3 | 6.4 | 3.0 | 1.7 | 1.7 | 0.9 | 0.9 | 2.3 | 8.3 | 3.4 |
| 2 | 2.2 | 7.7 | 2.4 | 3.0 | 3.5 | 8.5 | 13.0 | 5.6 | 3.9 | 3.9 | 2.8 | 9.1 | 6.1 | 6.0 | 10.5 | 5.3 | 2.5 | 1.9 | 1.9 | 2.7 | 1.7 | 2.2 | 3.6 | 1.8 | 13.0 | 4.7 |
| 3 | 3.9 | 1.7 | 1.8 | 5.5 | 4.8 | 4.1 | 4.5 | 10.1 | 12.8 | 7.2 | 6.6 | 6.4 | 11.3 | 11.1 | 16.6 | 19.5 | 17.4 | 25.0 | 18.8 | 15.5 | 13.5 | 15.3 | 17.2 | 17.7 | 25.0 | 11.2 |
| 4 | 15.3 | 28.2 | 236.7 | 43.4 | 24.7 | 23.3 | 20.2 | 17.8 | 17.4 | 8.3 | 7.3 | 7.1 | 22.8 | 32.9 | 57.1 | 70.9 | 16.0 | 4.7 | 6.7 | 4.6 | 13.1 | 171.5 | 8.1 | 12.6 | 236.7 | 36.3 |
| 5 | 11.0 | 13.1 | 11.2 | 13.5 | 12.3 | 18.3 | 29.2 | 25.0 | 31.7 | 21.5 | 25.5 | 30.8 | 16.4 | 12.5 | 10.7 | 5.7 | 14.6 | 6.8 | 23.9 | 19.5 | 21.3 | 18.0 | 17.9 | 6.3 | 31.7 | 17.4 |
| 6 | 14.7 | 16.6 | 23.3 | 16.5 | 31.8 | 37.1 | 20.3 | 33.9 | 28.6 | 22.9 | 72.8 | 46.3 | 21.1 | 55.9 | 83.5 | 11.6 | 10.0 | 9.2 | 3.5 | 1.5 | 2.7 | 1.3 | 4.0 | 3.3 | 83.5 | 23.9 |
| 7 | 2.3 | 5.0 | 1.2 | 7.0 | 8.1 | 8.5 | 5.2 | 4.6 | 5.0 | 5.4 | 4.7 | 8.6 | 4.8 | 7.8 | 9.5 | 3.4 | 5.0 | 2.4 | 2.5 | 1.9 | 1.5 | 1.4 | 6.9 | 5.6 | 9.5 | 4.9 |
| 8 | 5.5 | 5.3 | 7.9 | 3.7 | 2.9 | 1.7 | 4.3 | 5.7 | 4.4 | 3.9 | 2.9 | 1.3 | 1.9 | 2.3 | 5.2 | 3.9 | 3.0 | 1.9 | 1.1 | 1.4 | 1.4 | 3.9 | 1.7 | 2.1 | 7.9 | 3.3 |
| 9 | 1.1 | 1.8 | 2.0 | 1.2 | 0.9 | 1.5 | 4.5 | 4.6 | 4.7 | 9.4 | 8.6 | 8.7 | 7.2 | 7.2 | 6.1 | 4.9 | 4.6 | 4.2 | 2.6 | 2.7 | 3.4 | 3.6 | 4.6 | 3.5 | 9.4 | 4.3 |
| 10 | 3.6 | 3.9 | 5.4 | 6.8 | 5.5 | 11.4 | 31.1 | 42.6 | 22.1 | 12.8 | 18.0 | 16.9 | 16.6 | 24.5 | 12.5 | 14.8 | 11.4 | 11.2 | 10.7 | 4.0 | 13.5 | 11.2 | 11.7 | 11.4 | 42.6 | 13.9 |
| 11 | 11.4 | 12.6 | 10.6 | 11.8 | 9.6 | 12.6 | 16.9 | 12.2 | 14.9 | 8.7 | 11.7 | 9.7 | 10.4 | 3.8 | 5.2 | 2.7 | 2.3 | 1.7 | 1.7 | 2.8 | 2.8 | 2.9 | 2.9 | 2.2 | 16.9 | 7.7 |
| 12 | 1.4 | 2.1 | 2.9 | 2.3 | 1.7 | 2.3 | 3.8 | 4.7 | 4.5 | 6.5 | 6.3 | 12.1 | 16.8 | 24.7 | 25.1 | 31.1 | 27.1 | 11.8 | 4.4 | 3.7 | 2.2 | 5.0 | 4.2 | 2.9 | 31.1 | 8.7 |
| 13 | 2.7 | 2.6 | 6.5 | 3.8 | 6.4 | 11.7 | 23.6 | 27.7 | 9.9 | 15.2 | 21.0 | 13.4 | 18.9 | 23.8 | 23.0 | 15.0 | 24.2 | 30.2 | 18.6 | 7.4 | 5.1 | 8.6 | 7.8 | 11.4 | 30.2 | 14.1 |
| 14 | 12.1 | 5.9 | 3.1 | 4.4 | 6.7 | 8.8 | 8.4 | 8.4 | 12.6 | 14.7 | 17.0 | 19.0 | 13.1 | 11.9 | 12.2 | 16.7 | 13.2 | 7.0 | 6.1 | 2.8 | 2.4 | 1.9 | 1.8 | 1.8 | 19.0 | 8.8 |
| 15 | 1.7 | 1.7 | 1.7 | 1.6 | 3.3 | 2.0 | 2.7 | 4.8 | 6.1 | 4.7 | 20.0 | 24.2 | 23.4 | 31.7 | 10.0 | 8.5 | 7.8 | 4.6 | 5.2 | 7.5 | 9.7 | 16.9 | 30.0 | 13.6 | 31.7 | 10.1 |
| 16 | 9.7 | 2.5 | 1.9 | 1.8 | 3.1 | 3.3 | 3.9 | 6.0 | 19.4 | 18.9 | 10.2 | 31.8 | 20.0 | 33.9 | 36.2 | 15.8 | 21.2 | 10.6 | 4.8 | 5.0 | 8.6 | 3.9 | 5.2 | 5.3 | 36.2 | 11.8 |
| 17 | 3.8 | 3.1 | 3.6 | 3.5 | 3.7 | 5.8 | 23.8 | 48.3 | 53.8 | 60.4 | 227.6 | 79.2 | 13.5 | 13.2 | 7.6 | 2.9 | 2.1 | 1.3 | 2.3 | 2.0 | 2.7 | 2.4 | 3.9 | 2.2 | 227.6 | 23.9 |
| 18 | 1.9 | 1.6 | 2.3 | 2.0 | 1.8 | 1.9 | 3.9 | 7.8 | 11.3 | 143.9 | 39.7 | 16.3 | 18.3 | 18.3 | 8.9 | 7.2 | 5.3 | 11.3 | 6.3 | 5.0 | 7.8 | 9.0 | 7.3 | 6.0 | 143.9 | 14.4 |
| 19 | 9.6 | 6.7 | 6.7 | 11.0 | 9.1 | 9.6 | 12.6 | 9.7 | 7.7 | 5.9 | 8.1 | 5.9 | 6.0 | 10.4 | 6.0 | 11.3 | 7.3 | 7.1 | 6.6 | 10.8 | 10.3 | 8.9 | 10.4 | 11.1 | 12.6 | 8.7 |
| 20 | 7.1 | 5.1 | 6.8 | 5.2 | 2.8 | 7.3 | 9.2 | 8.9 | 6.4 | 7.6 | 9.4 | 9.6 | 5.6 | 7.6 | 3.3 | 11.3 | 13.1 | 10.4 | 5.3 | 4.1 | 1.3 | 3.3 | 3.1 | 1.9 | 13.1 | 6.5 |
| 21 | 3.1 | 2.8 | 1.1 | 1.5 | 0.8 | 1.2 | 2.8 | 3.5 | 7.4 | 11.2 | 21.4 | 25.5 | 16.2 | 11.4 | 10.8 | 4.9 | 1.2 | 1.8 | 1.8 | 3.3 | 4.3 | 3.8 | 2.2 | 3.0 | 25.5 | 6.1 |
| 22 | 1.4 | 1.0 | 1.3 | 3.3 | 2.9 | 2.1 | 4.4 | 6.1 | 6.4 | 7.0 | 5.6 | 11.8 | 2.2 | 2.0 | 1.2 | 1.1 | 6.8 | 1.2 | 1.2 | 0.5 | 0.8 | 0.5 | 0.5 | 0.5 | 11.8 | 3.0 |
| 23 | 0.5 | 0.4 | 0.5 | 1.2 | 0.9 | 1.9 | 5.6 | 10.1 | 23.7 | 16.5 | 17.0 | 9.8 | 10.2 | 7.0 | 11.0 | 17.9 | 8.7 | 6.3 | 6.2 | 1.9 | 2.0 | 1.6 | 6.8 | 19.5 | 23.7 | 7.8 |
| 24 | 8.1 | 4.1 | 4.0 | 4.2 | 4.3 | 5.9 | 5.7 | 8.9 | 9.8 | 12.6 | 19.7 | 7.2 | 10.7 | 7.5 | 7.5 | 7.1 | 5.6 | 4.0 | 2.3 | 2.7 | 2.2 | 2.6 | 4.1 | 4.9 | 19.7 | 6.5 |
| 25 | 4.9 | 7.8 | 17.2 | 29.9 | 23.0 | 14.3 | 7.0 | 6.9 | 14.6 | 33.4 | 9.4 | 31.4 | 25.7 | 45.0 | 5.0 | 4.5 | 2.6 | 2.6 | 2.5 | 1.2 | 0.6 | 1.0 | 1.1 | 1.2 | 45.0 | 12.2 |
| 26 | 1.0 | 1.5 | 1.3 | 2.6 | 9.8 | 10.9 | 14.7 | 16.7 | 13.5 | 11.5 | 7.8 | 5.7 | 7.4 | 8.6 | 5.9 | 4.7 | 3.8 | 3.4 | 7.9 | 3.2 | 8.2 | 12.8 | 8.7 | 16.7 | 16.7 | 7.8 |
| 27 | 14.7 | 20.2 | 21.8 | 21.6 | 29.8 | 15.4 | 15.7 | 26.8 | 28.4 | 25.1 | 25.9 | 23.1 | 20.5 | 24.6 | 17.6 | 23.9 | 26.1 | 18.4 | 20.7 | 17.9 | 16.9 | 13.0 | 9.3 | 8.8 | 29.8 | 20.3 |
| 28 | 11.9 | 11.7 | 17.8 | 18.8 | 16.7 | 22.1 | 35.7 | 31.3 | 26.4 | 36.5 | 30.9 | 18.2 | 10.3 | 9.4 | 5.9 | 4.8 | 6.4 | 5.9 | 4.5 | 4.6 | 5.0 | 5.7 | 1.5 | 1.3 | 36.5 | 14.3 |
| 29 | 1.7 | 1.5 | 1.4 | 1.9 | 1.6 | 1.2 | 1.1 | 1.1 | 0.8 | 1.1 | 3.4 | 1.4 | 1.2 | 1.2 | 1.8 | 1.4 | 1.3 | 1.9 | 4.9 | 2.0 | 2.5 | 2.4 | 0.6 | 0.6 | 4.9 | 1.7 |
| 30 | 0.6 | 5.9 | 7.9 | 8.4 | 13.0 | 18.7 | 24.1 | 28.7 | 31.7 | 27.2 | 11.3 | 8.0 | 8.1 | 5.8 | 5.6 | 5.7 | 10.2 | 11.7 | 5.0 | 6.8 | 7.5 | 7.0 | 4.1 | 4.1 | 31.7 | 11.1 |
| 31 | 5.5 | 12.9 | 36.4 | 17.0 | 7.8 | 6.4 | 5.0 | 9.6 | 17.4 | 20.4 | 14.4 | 9.2 | 6.0 | 7.8 | 4.5 | 2.9 | 1.1 | 1.6 | 2.3 | 3.5 | 4.0 | 3.4 | 2.7 | 2.0 | 36.4 | 8.5 |
| Hourly Max | 15.3 | 28.2 | 236.7 | 43.4 | 31.8 | 37.1 | 35.7 | 48.3 | 53.8 | 143.9 | 227.6 | 79.2 | 25.7 | 55.9 | 83.5 | 70.9 | 27.1 | 30.2 | 23.9 | 19.5 | 21.3 | 171.5 | 30.0 | 19.5 | | |
| Hourly Average | 5.7 | 6.5 | 14.6 | 8.4 | 8.2 | 9.1 | 11.8 | 14.2 | 14.8 | 19.0 | 22.3 | 16.5 | 12.2 | 15.3 | 14.0 | 11.1 | 9.4 | 7.4 | 6.3 | 5.0 | 5.8 | 11.2 | 6.3 | 6.0 | | |




| | | | | | |
|---|---|---|---|---|---|
| Number of1HR Exceedances | 5 | | Guideline | 80 | UG/M3 |
| Number of 24HR Exceedances | 1 | | Guideline | 30 | UG/M3 |
| Number of Non-Zero Readings | 744 | | | | |
| Maximum 1-HR Average | 236.7 | UG/M3 | | | |
| Maximum 24-HR Average | 36.3 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 17.3 | | Monthly Average | 10.9 | UG/M3 |

# Entrance $PM_{10}$ (µg/m$^3$) – October 2017

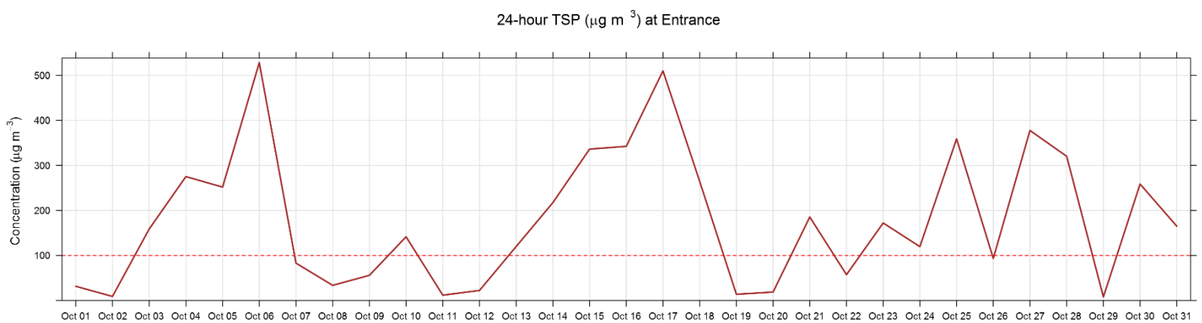
| Day/Hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Daily Max | 24-hour Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.4 | 6.6 | 4.5 | 2.0 | 7.1 | 7.9 | 4.7 | 9.3 | 4.7 | 18.5 | 17.3 | 6.1 | 25.2 | 19.5 | 32.4 | 9.8 | 47.1 | 41.1 | 19.9 | 6.6 | 9.3 | 1.4 | 2.1 | 5.0 | 47.1 | 13.0 |
| 2 | 5.0 | 15.6 | 3.3 | 4.0 | 4.7 | 12.4 | 19.2 | 8.3 | 5.3 | 5.5 | 4.0 | 13.4 | 9.0 | 9.0 | 15.5 | 7.9 | 3.7 | 2.6 | 2.5 | 3.8 | 2.2 | 2.8 | 4.5 | 2.0 | 19.2 | 6.9 |
| 3 | 4.3 | 1.8 | 2.2 | 7.6 | 5.6 | 4.2 | 4.6 | 14.4 | 47.9 | 32.7 | 29.5 | 32.5 | 66.5 | 70.3 | 144.4 | 126.9 | 138.4 | 198.7 | 53.3 | 72.3 | 70.7 | 84.8 | 95.1 | 79.1 | 198.7 | 57.8 |
| 4 | 68.5 | 114.2 | 1069.2 | 181.1 | 68.2 | 81.2 | 60.6 | 63.1 | 91.4 | 35.3 | 29.6 | 38.4 | 141.7 | 241.0 | 448.4 | 489.8 | 109.5 | 24.5 | 33.6 | 15.8 | 44.1 | 807.2 | 11.9 | 29.5 | 1069.2 | 179.1 |
| 5 | 20.1 | 19.7 | 16.7 | 20.2 | 18.4 | 27.4 | 43.9 | 80.7 | 241.1 | 169.4 | 214.8 | 272.9 | 110.5 | 97.6 | 102.3 | 47.9 | 106.0 | 55.1 | 145.1 | 113.1 | 123.9 | 121.0 | 158.3 | 38.3 | 272.9 | 98.5 |
| 6 | 104.3 | 104.2 | 171.2 | 101.7 | 255.5 | 266.0 | 121.7 | 213.7 | 178.0 | 169.5 | 677.6 | 391.4 | 152.7 | 417.2 | 701.1 | 60.7 | 47.4 | 48.5 | 13.9 | 3.2 | 9.7 | 3.6 | 26.7 | 18.8 | 701.1 | 177.4 |
| 7 | 10.4 | 32.3 | 1.8 | 33.8 | 47.3 | 50.3 | 21.4 | 18.4 | 23.8 | 30.8 | 33.2 | 57.4 | 28.4 | 50.1 | 64.9 | 21.3 | 22.1 | 8.0 | 10.1 | 6.4 | 7.7 | 5.4 | 39.1 | 28.7 | 64.9 | 27.2 |
| 8 | 24.5 | 27.1 | 34.7 | 18.5 | 14.8 | 5.5 | 10.4 | 23.5 | 6.2 | 17.6 | 9.1 | 3.7 | 7.2 | 9.6 | 25.6 | 25.0 | 21.9 | 7.4 | 2.9 | 4.7 | 3.0 | 16.3 | 4.0 | 5.8 | 34.7 | 13.7 |
| 9 | 1.7 | 5.4 | 7.2 | 2.5 | 1.3 | 3.3 | 25.6 | 22.2 | 21.3 | 46.6 | 57.4 | 49.5 | 37.9 | 42.3 | 24.1 | 18.3 | 22.4 | 17.8 | 5.8 | 4.3 | 7.4 | 8.2 | 12.9 | 5.5 | 57.4 | 18.8 |
| 10 | 7.0 | 8.2 | 21.0 | 32.0 | 21.1 | 61.2 | 181.9 | 264.0 | 116.1 | 72.9 | 84.0 | 91.7 | 123.2 | 177.1 | 79.1 | 98.9 | 62.4 | 81.2 | 76.0 | 17.3 | 54.0 | 38.8 | 40.9 | 42.9 | 264.0 | 77.2 |
| 11 | 39.7 | 19.6 | 15.8 | 17.7 | 14.2 | 18.8 | 25.1 | 17.9 | 22.1 | 12.6 | 16.5 | 13.5 | 14.7 | 5.1 | 7.4 | 3.7 | 3.1 | 2.1 | 2.1 | 3.8 | 3.6 | 3.7 | 3.8 | 2.9 | 39.7 | 12.1 |
| 12 | 1.5 | 2.6 | 3.4 | 2.9 | 1.8 | 2.6 | 4.5 | 6.2 | 5.5 | 8.8 | 12.5 | 31.4 | 27.4 | 37.0 | 37.6 | 46.5 | 78.7 | 17.6 | 6.4 | 5.1 | 3.0 | 7.2 | 5.9 | 4.0 | 78.7 | 15.0 |
| 13 | 3.5 | 3.3 | 9.2 | 5.1 | 9.0 | 17.0 | 35.3 | 41.5 | 14.3 | 22.6 | 31.4 | 63.2 | 98.9 | 148.2 | 150.4 | 81.2 | 141.6 | 129.5 | 27.7 | 10.0 | 6.2 | 12.3 | 11.1 | 16.8 | 150.4 | 45.4 |
| 14 | 18.0 | 8.4 | 4.6 | 10.9 | 22.8 | 51.1 | 41.4 | 43.0 | 65.1 | 103.7 | 129.4 | 133.0 | 78.0 | 81.5 | 79.6 | 118.9 | 91.5 | 42.4 | 32.7 | 7.9 | 7.3 | 3.9 | 3.3 | 4.7 | 133.0 | 49.3 |
| 15 | 3.2 | 3.4 | 4.1 | 5.2 | 11.7 | 8.6 | 12.8 | 35.5 | 46.5 | 18.2 | 128.8 | 175.5 | 172.7 | 278.0 | 60.0 | 49.4 | 37.0 | 18.9 | 19.5 | 42.6 | 53.0 | 115.3 | 257.2 | 95.9 | 278.0 | 68.9 |
| 16 | 60.2 | 9.0 | 4.0 | 3.4 | 13.1 | 15.3 | 19.1 | 35.8 | 73.6 | 77.4 | 65.0 | 134.9 | 127.3 | 244.2 | 263.2 | 116.7 | 167.2 | 88.2 | 30.5 | 29.0 | 54.5 | 18.7 | 25.6 | 28.7 | 263.2 | 71.0 |
| 17 | 19.3 | 13.7 | 13.7 | 12.4 | 13.8 | 29.8 | 154.0 | 382.1 | 476.1 | 497.1 | 1707.4 | 718.2 | 85.6 | 82.4 | 26.1 | 4.8 | 3.2 | 2.4 | 8.1 | 6.6 | 10.8 | 7.0 | 15.4 | 6.2 | 1707.4 | 179.0 |
| 18 | 5.6 | 4.4 | 7.3 | 7.1 | 6.5 | 9.1 | 25.7 | 41.7 | 64.2 | 865.7 | 186.2 | 105.7 | 142.3 | 133.1 | 65.3 | 45.5 | 32.5 | 68.5 | 33.4 | 20.2 | 40.6 | 69.5 | 36.9 | 8.9 | 865.7 | 84.4 |
| 19 | 14.3 | 9.9 | 9.9 | 16.5 | 13.7 | 14.4 | 18.8 | 14.5 | 11.5 | 8.7 | 12.0 | 8.8 | 8.9 | 15.6 | 9.0 | 16.9 | 11.0 | 10.6 | 9.8 | 16.2 | 15.5 | 13.4 | 15.7 | 16.7 | 18.8 | 13.0 |
| 20 | 10.6 | 7.6 | 10.2 | 7.7 | 4.1 | 10.9 | 13.7 | 13.3 | 9.5 | 11.4 | 14.1 | 14.4 | 9.2 | 39.8 | 5.4 | 16.9 | 19.5 | 16.5 | 24.2 | 19.4 | 1.7 | 3.9 | 8.3 | 5.1 | 39.8 | 12.4 |
| 21 | 9.1 | 7.6 | 2.9 | 8.0 | 1.5 | 4.6 | 13.4 | 13.7 | 48.9 | 86.1 | 181.0 | 211.1 | 126.6 | 74.3 | 78.0 | 32.5 | 3.1 | 11.1 | 5.7 | 10.9 | 17.0 | 21.3 | 12.3 | 7.6 | 211.1 | 41.2 |
| 22 | 3.4 | 2.9 | 2.4 | 10.9 | 12.3 | 7.4 | 9.3 | 23.7 | 40.6 | 41.7 | 32.0 | 73.9 | 6.0 | 6.3 | 3.3 | 4.9 | 51.3 | 5.7 | 6.0 | 1.0 | 4.5 | 0.9 | 1.0 | 0.9 | 73.9 | 14.7 |
| 23 | 1.0 | 0.7 | 1.0 | 6.5 | 3.5 | 9.7 | 31.0 | 42.7 | 99.7 | 82.7 | 105.5 | 63.0 | 65.3 | 40.4 | 69.9 | 114.9 | 59.2 | 37.3 | 40.2 | 8.5 | 10.2 | 6.4 | 41.3 | 147.8 | 147.8 | 45.3 |
| 24 | 55.1 | 17.9 | 13.4 | 12.7 | 11.2 | 19.2 | 14.9 | 36.9 | 41.8 | 60.6 | 123.7 | 33.3 | 53.9 | 40.8 | 35.6 | 31.4 | 26.8 | 16.6 | 6.8 | 7.4 | 3.8 | 4.8 | 11.1 | 12.7 | 123.7 | 28.8 |
| 25 | 12.4 | 39.3 | 109.2 | 209.7 | 181.0 | 120.7 | 33.3 | 31.4 | 90.3 | 239.1 | 49.8 | 216.9 | 185.1 | 253.2 | 23.4 | 21.7 | 10.3 | 12.1 | 8.8 | 7.0 | 0.8 | 1.6 | 1.7 | 2.5 | 253.2 | 77.5 |
| 26 | 1.4 | 2.8 | 2.4 | 6.6 | 16.2 | 16.3 | 22.0 | 42.6 | 82.9 | 76.5 | 44.3 | 23.1 | 35.0 | 54.5 | 22.5 | 20.7 | 15.5 | 11.7 | 34.8 | 9.3 | 34.5 | 53.6 | 35.5 | 99.7 | 99.7 | 31.8 |
| 27 | 95.6 | 147.9 | 139.4 | 137.8 | 256.1 | 87.1 | 97.4 | 143.3 | 199.4 | 160.1 | 191.6 | 154.5 | 129.8 | 164.6 | 100.1 | 148.7 | 174.3 | 111.2 | 113.2 | 89.7 | 81.0 | 57.2 | 28.2 | 24.8 | 256.1 | 126.4 |
| 28 | 43.4 | 47.3 | 86.1 | 96.4 | 81.0 | 170.5 | 506.0 | 244.7 | 187.4 | 283.2 | 232.2 | 123.4 | 42.4 | 42.5 | 25.5 | 18.5 | 33.7 | 39.3 | 21.2 | 19.9 | 18.0 | 20.0 | 4.6 | 1.4 | 506.0 | 99.5 |
| 29 | 2.0 | 1.8 | 1.7 | 2.2 | 1.9 | 1.4 | 1.3 | 1.3 | 1.2 | 3.4 | 11.1 | 5.5 | 4.3 | 5.4 | 7.9 | 5.3 | 3.3 | 5.0 | 14.1 | 4.4 | 4.5 | 3.3 | 1.0 | 0.9 | 14.1 | 3.9 |
| 30 | 0.8 | 26.9 | 32.6 | 46.4 | 93.2 | 116.4 | 176.4 | 233.1 | 266.5 | 214.3 | 75.2 | 46.0 | 41.7 | 32.6 | 28.6 | 26.1 | 77.1 | 91.3 | 22.0 | 32.7 | 34.3 | 33.0 | 16.6 | 16.8 | 266.5 | 74.2 |
| 31 | 31.1 | 106.2 | 230.2 | 128.2 | 48.6 | 35.1 | 19.0 | 46.4 | 99.9 | 125.9 | 77.4 | 42.6 | 22.5 | 31.1 | 23.8 | 3.7 | 1.3 | 2.1 | 3.0 | 4.6 | 5.2 | 4.6 | 3.4 | 2.5 | 230.2 | 45.8 |
| Hourly Max | 104.3 | 147.9 | 1069.2 | 209.7 | 256.1 | 266.0 | 506.0 | 382.1 | 476.1 | 865.7 | 1707.4 | 718.2 | 185.1 | 417.2 | 701.1 | 489.8 | 174.3 | 198.7 | 145.1 | 113.1 | 123.9 | 807.2 | 257.2 | 147.8 | | |
| Hourly Average | 22.0 | 26.4 | 65.6 | 37.4 | 40.7 | 41.5 | 57.0 | 71.3 | 86.5 | 116.1 | 147.9 | 108.0 | 70.3 | 95.0 | 89.0 | 59.2 | 52.3 | 39.5 | 26.9 | 19.5 | 23.9 | 50.0 | 30.2 | 24.6 | | |




| | | | | | |
|---|---|---|---|---|---|
| Number of 1HR Exceedances | n/a | | Guideline | n/a | UG/M3 |
| Number of Non-Zero Readings | 744 | | | | |
| Maximum 1-HR Average | 1707.4 | UG/M3 | | | |
| Maximum 24-HR Average | 179.1 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 116.0 | | Monthly Average | 58.4 | UG/M3 |

# Entrance TSP (µg/m$^3$) – October 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 | 2.8 | 6.6 | 8.8 | 2.5 | 22.8 | 20.7 | 5.3 | 16.7 | 6.6 | 36.9 | 33.8 | 6.5 | 48.8 | 46.9 | 81.6 | 24.5 | 72.5 | 128.7 | 117.6 | 25.3 | 26.9 | 1.0 | 4.0 | 7.3 | 128.7 | 31.5 |
| 2 | 14.3 | 69.2 | 2.5 | 3.4 | 3.4 | 11.2 | 17.0 | 8.2 | 4.4 | 4.8 | 3.4 | 11.9 | 8.4 | 9.9 | 15.7 | 8.2 | 3.5 | 2.2 | 2.1 | 3.2 | 1.8 | 2.0 | 3.1 | 1.3 | 69.2 | 9.0 |
| 3 | 2.9 | 1.2 | 1.8 | 7.1 | 4.1 | 2.7 | 3.0 | 14.4 | 134.6 | 119.1 | 108.4 | 110.7 | 213.9 | 193.9 | 498.2 | 267.0 | 386.0 | 427.3 | 92.1 | 187.2 | 231.3 | 274.8 | 330.6 | 197.1 | 498.2 | 158.7 |
| 4 | 178.9 | 167.4 | 931.4 | 227.2 | 109.5 | 164.7 | 119.2 | 142.4 | 241.5 | 78.4 | 113.4 | 101.8 | 308.6 | 503.9 | 899.3 | 896.0 | 294.2 | 95.5 | 103.9 | 38.2 | 56.1 | 757.1 | 11.1 | 66.5 | 931.4 | 275.3 |
| 5 | 34.9 | 22.3 | 17.8 | 22.7 | 20.3 | 31.3 | 50.8 | 196.3 | 738.9 | 486.2 | 612.0 | 769.7 | 294.3 | 241.2 | 258.5 | 109.9 | 240.1 | 140.2 | 307.2 | 198.6 | 264.0 | 344.3 | 514.0 | 130.8 | 769.7 | 251.9 |
| 6 | 277.8 | 217.8 | 464.5 | 317.1 | 745.0 | 811.7 | 341.2 | 543.5 | 411.8 | 490.5 | 1784.8 | 1526.4 | 588.3 | 1323.3 | 2039.7 | 198.7 | 144.3 | 171.8 | 55.8 | 9.5 | 12.2 | 11.6 | 127.4 | 68.9 | 2039.7 | 528.5 |
| 7 | 25.9 | 94.6 | 1.7 | 100.5 | 142.0 | 165.1 | 48.9 | 40.9 | 67.7 | 132.1 | 123.0 | 219.1 | 90.1 | 161.6 | 255.2 | 68.5 | 58.7 | 18.1 | 14.2 | 10.4 | 17.6 | 5.4 | 70.4 | 59.0 | 255.2 | 82.9 |
| 8 | 37.6 | 65.4 | 42.1 | 28.1 | 36.7 | 11.4 | 27.4 | 45.9 | 5.2 | 121.2 | 22.4 | 15.9 | 39.4 | 25.7 | 66.7 | 73.9 | 70.2 | 12.9 | 4.6 | 10.7 | 5.5 | 24.2 | 4.2 | 8.2 | 121.2 | 33.6 |
| 9 | 1.6 | 14.0 | 24.6 | 7.9 | 2.1 | 7.0 | 72.6 | 68.6 | 69.7 | 125.0 | 251.8 | 184.5 | 103.2 | 142.3 | 58.1 | 40.0 | 61.8 | 39.3 | 13.7 | 3.6 | 9.8 | 10.8 | 21.9 | 5.4 | 251.8 | 55.8 |
| 10 | 8.8 | 10.1 | 50.7 | 68.5 | 43.6 | 101.2 | 241.6 | 354.4 | 195.4 | 175.6 | 176.8 | 189.7 | 305.2 | 403.1 | 145.3 | 211.4 | 110.1 | 146.7 | 196.4 | 30.5 | 87.4 | 48.8 | 49.1 | 46.0 | 403.1 | 141.5 |
| 11 | 55.0 | 21.4 | 14.8 | 16.9 | 12.7 | 19.1 | 24.5 | 16.1 | 21.6 | 10.9 | 13.4 | 10.7 | 13.1 | 4.1 | 6.5 | 2.6 | 2.3 | 1.4 | 1.5 | 3.1 | 2.6 | 2.6 | 2.8 | 2.1 | 55.0 | 11.7 |
| 12 | 1.0 | 1.9 | 2.3 | 2.3 | 1.2 | 1.7 | 3.1 | 4.6 | 3.8 | 7.2 | 28.9 | 63.9 | 37.0 | 40.6 | 41.2 | 52.6 | 191.3 | 19.4 | 6.6 | 4.7 | 2.6 | 7.5 | 5.1 | 3.2 | 191.3 | 22.2 |
| 13 | 2.9 | 2.4 | 7.3 | 3.7 | 8.7 | 18.4 | 39.4 | 46.5 | 13.7 | 24.0 | 35.4 | 217.4 | 341.6 | 493.6 | 546.3 | 230.8 | 442.5 | 318.3 | 29.9 | 9.4 | 5.3 | 12.2 | 10.2 | 15.9 | 546.3 | 119.8 |
| 14 | 18.8 | 8.2 | 16.5 | 44.3 | 74.6 | 236.9 | 144.0 | 149.4 | 182.5 | 446.8 | 587.0 | 612.8 | 326.9 | 369.7 | 390.2 | 603.8 | 480.4 | 222.3 | 162.1 | 62.7 | 38.1 | 14.0 | 11.1 | 15.1 | 612.8 | 217.4 |
| 15 | 9.7 | 11.2 | 18.8 | 27.6 | 62.0 | 46.9 | 69.3 | 234.6 | 271.7 | 63.3 | 517.5 | 741.9 | 835.7 | 1403.5 | 270.6 | 253.1 | 158.7 | 93.9 | 49.8 | 170.5 | 239.3 | 621.3 | 1416.8 | 485.4 | 1416.8 | 336.4 |
| 16 | 306.5 | 51.8 | 16.6 | 7.9 | 63.7 | 49.4 | 63.9 | 134.3 | 273.0 | 245.8 | 256.0 | 306.8 | 593.1 | 1262.3 | 1322.5 | 651.7 | 989.9 | 591.0 | 214.6 | 166.8 | 284.3 | 84.9 | 130.4 | 154.0 | 1322.5 | 342.6 |
| 17 | 100.8 | 63.2 | 56.1 | 37.5 | 49.8 | 124.9 | 719.2 | 1416.4 | 1689.6 | 1647.4 | 3197.5 | 2164.4 | 329.7 | 352.9 | 89.7 | 8.6 | 2.7 | 6.1 | 34.6 | 24.6 | 43.4 | 15.7 | 49.7 | 20.7 | 3197.5 | 510.2 |
| 18 | 22.3 | 6.2 | 16.7 | 21.8 | 17.0 | 22.4 | 90.3 | 100.9 | 178.7 | 1235.9 | 728.1 | 479.0 | 899.7 | 872.2 | 388.5 | 231.3 | 142.8 | 283.8 | 166.4 | 53.9 | 112.1 | 204.6 | 65.1 | 9.7 | 1235.9 | 264.6 |
| 19 | 15.8 | 10.7 | 10.4 | 17.8 | 15.0 | 16.2 | 21.2 | 15.5 | 11.9 | 8.5 | 12.0 | 7.7 | 8.8 | 15.9 | 8.8 | 18.0 | 11.0 | 10.7 | 9.7 | 17.1 | 15.9 | 14.3 | 17.0 | 18.3 | 21.2 | 13.7 |
| 20 | 10.6 | 7.1 | 10.5 | 8.1 | 4.0 | 11.6 | 15.0 | 14.8 | 10.1 | 12.3 | 15.6 | 16.3 | 12.2 | 111.5 | 7.2 | 19.2 | 22.2 | 22.5 | 45.8 | 37.2 | 1.4 | 2.7 | 17.1 | 13.1 | 111.5 | 18.7 |
| 21 | 14.2 | 15.2 | 13.3 | 28.2 | 1.3 | 12.2 | 41.0 | 35.4 | 226.2 | 312.3 | 705.4 | 1072.5 | 708.1 | 276.2 | 384.0 | 185.1 | 11.0 | 67.0 | 27.2 | 49.7 | 63.2 | 107.8 | 81.0 | 12.7 | 1072.5 | 185.4 |
| 22 | 3.2 | 5.4 | 3.9 | 26.8 | 30.8 | 12.4 | 10.6 | 59.7 | 144.9 | 178.3 | 168.3 | 393.5 | 19.3 | 23.5 | 7.8 | 17.0 | 186.0 | 17.0 | 28.7 | 2.8 | 27.0 | 2.3 | 2.5 | 3.4 | 393.5 | 57.3 |
| 23 | 2.2 | 0.6 | 0.9 | 13.0 | 10.2 | 58.6 | 97.3 | 96.8 | 148.5 | 176.6 | 314.6 | 206.8 | 222.8 | 129.4 | 268.7 | 447.8 | 235.6 | 152.1 | 190.2 | 33.3 | 58.4 | 35.7 | 250.2 | 981.9 | 981.9 | 172.2 |
| 24 | 359.7 | 109.9 | 67.9 | 62.6 | 56.3 | 119.8 | 57.2 | 111.3 | 150.6 | 201.1 | 571.3 | 136.6 | 219.7 | 151.4 | 109.2 | 115.9 | 85.1 | 50.9 | 25.1 | 16.3 | 6.8 | 8.7 | 30.5 | 45.5 | 571.3 | 119.6 |
| 25 | 39.1 | 177.2 | 553.8 | 1122.2 | 996.0 | 674.8 | 140.5 | 101.5 | 428.9 | 1181.5 | 221.9 | 1051.5 | 841.0 | 701.5 | 85.7 | 83.8 | 35.4 | 59.1 | 46.4 | 67.0 | 1.8 | 2.3 | 2.1 | 3.7 | 1181.5 | 359.1 |
| 26 | 1.0 | 5.4 | 4.3 | 14.1 | 20.4 | 18.4 | 24.4 | 102.0 | 329.2 | 366.6 | 197.8 | 83.0 | 112.6 | 164.4 | 59.4 | 72.6 | 39.1 | 27.3 | 55.5 | 17.5 | 66.7 | 83.4 | 73.2 | 303.5 | 366.6 | 93.4 |
| 27 | 350.4 | 604.1 | 478.9 | 490.5 | 740.5 | 243.2 | 276.8 | 304.5 | 480.9 | 455.3 | 731.4 | 546.5 | 402.6 | 446.4 | 244.2 | 365.6 | 476.7 | 316.5 | 315.5 | 287.4 | 246.9 | 152.0 | 51.1 | 58.8 | 740.5 | 377.8 |
| 28 | 110.7 | 147.1 | 271.0 | 356.5 | 283.9 | 542.7 | 1626.3 | 896.1 | 714.1 | 991.4 | 698.3 | 407.6 | 104.9 | 90.8 | 49.0 | 35.2 | 73.7 | 74.9 | 40.1 | 39.6 | 37.0 | 74.1 | 22.8 | 0.9 | 1626.3 | 320.4 |
| 29 | 1.4 | 1.2 | 1.1 | 1.5 | 1.2 | 0.9 | 1.0 | 1.0 | 2.6 | 7.3 | 22.7 | 10.5 | 7.8 | 13.8 | 17.8 | 22.5 | 11.7 | 7.6 | 38.0 | 7.1 | 4.1 | 2.7 | 0.7 | 0.8 | 38.0 | 7.8 |
| 30 | 0.5 | 108.4 | 65.8 | 151.0 | 390.0 | 421.2 | 646.6 | 938.7 | 1109.6 | 880.2 | 287.4 | 160.9 | 122.9 | 114.1 | 70.7 | 56.3 | 169.9 | 255.3 | 35.7 | 55.5 | 48.9 | 53.0 | 25.9 | 40.7 | 1109.6 | 258.7 |
| 31 | 105.6 | 491.9 | 561.1 | 463.4 | 171.4 | 99.8 | 47.6 | 156.9 | 470.5 | 654.3 | 296.8 | 169.2 | 58.9 | 93.4 | 96.9 | 2.7 | 0.9 | 1.5 | 2.2 | 3.7 | 3.9 | 3.8 | 2.4 | 1.9 | 654.3 | 165.0 |
| Hourly Max | 359.7 | 604.1 | 931.4 | 1122.2 | 996.0 | 811.7 | 1626.3 | 1416.4 | 1689.6 | 1647.4 | 3197.5 | 2164.4 | 899.7 | 1403.5 | 2039.7 | 896.0 | 989.9 | 591.0 | 315.5 | 287.4 | 284.3 | 757.1 | 1416.8 | 981.9 | | |
| Hourly Average | 68.3 | 81.3 | 120.6 | 119.4 | 133.6 | 131.6 | 164.1 | 205.4 | 281.9 | 350.9 | 414.1 | 387.0 | 265.1 | 328.5 | 283.3 | 173.4 | 168.1 | 122.0 | 78.5 | 53.1 | 65.2 | 96.3 | 109.8 | 89.7 | | |




| | | | | | |
|---|---|---|---|---|---|
| Number of 24HR Exceedances | 19 | | Guideline | 100 | UG/M3 |
| Number of Non-Zero Readings | 744 | | | | |
| Maximum 1-HR Average | 3197.5 | UG/M3 | | | |
| Maximum 24-HR Average | 528.5 | UG/M3 | | | |
| IZS Calibration Time | 0 | HRS | Operational Time | 744 | HRS |
| Monthly Calibration Time | 0 | HRS | Operational Uptime | 100.0 | % |
| Standard Deviation | 310.6 | | Monthly Average | 178.8 | UG/M3 |

# MetOne BAM $PM_{2.5}$ Calibration

AIR QUALITY MONITORING

| | | | |
|---|---|---|---|
| STATION: | Lafarge | OPERATOR: | Darrin Pike |
| LOCATION: | Exshaw - Lagoon | DATE: | October 13, 2017 |
| START TIME (MST): | 8:30 | END TIME (MST): | 9:30 |

MONITOR INFO / PARAMETER VALUES:

| | | | |
|---|---|---|---|
| Make/Model | MetOne BAM | Audit Device Model | Delta Cal |
| Configuration | PM2.5 | Audit Device S/N | 624 |
| Serial Number | T19087 | Certification Date | 02-Dec-16 |

AUDIT / CALIBRATION RESULTS:

| | | Ambient Temp. (˚C) | Ambient Pres. (mmHg) | Leak Check (L/min) | Flow Rate (lpm) | Time settings (hh:mm) |
|---|---|---|---|---|---|---|
| | Audit values (I) | -2.6 | 650 | 0.00 | 16.7 | 9:23 |
| *As Found Data* | MEASURED ( AF ) | -2.0 | 650 | 0.30 | 16.30 | 9:22 |
| | AF Difference (AF-I) | 0.6 | 0 | 0.30 | -0.40 | 0:00 |
| *Adjusted Data* | MEASURED ( M ) | -2.0 | 650 | 0.30 | 16.74 | 9:23 |
| | Adj Difference (M-I) | 0.6 | 0 | 0.30 | 0.04 | 0:00 |
| | *LIMITS* | ± 4.0 $^{0}$C | 5 mm Hg | 1.0 L/min | ± 1.0 L/min | ±2 min |

Sample Head Inspect/Cleaning: Cleaned.

Status of sampling tape: New roll

Nozzle Inspection / cleanliness: Inspected and cleaned.

*COMMENTS:*

Performed self-test, all passed.

# MetOne BAM $PM_{2.5}$ Calibration

AIR QUALITY MONITORING

| | | | |
|---|---|---|---|
| STATION: | Lafarge | OPERATOR: | Darrin Pike |
| LOCATION: | Exshaw - Lagoon | DATE: | October 13, 2017 |
| START TIME (MST): | 10:00 | END TIME (MST): | 11:00 |

MONITOR INFO / PARAMETER VALUES:

| | | | |
|---|---|---|---|
| Make/Model | MetOne BAM | Audit Device Model | Delta Cal |
| Configuration | PM2.5 | Audit Device S/N | 624 |
| Serial Number | T19087 | Certification Date | 02-Dec-16 |

AUDIT / CALIBRATION RESULTS:

| | | Ambient Temp. (˚C) | Ambient Pres. (mmHg) | Leak Check (L/min) | Flow Rate (lpm) | Time settings (hh:mm) |
|---|---|---|---|---|---|---|
| | Audit values (I) | 23.8 | 658 | 0.00 | 16.7 | 11:31 |
| *As Found Data* | MEASURED ( AF ) | 11.0 | 658 | 0.10 | 16.90 | 11:31 |
| | AF Difference (AF-I) | -12.8 | 0 | 0.10 | 0.20 | 0:00 |
| *Adjusted Data* | MEASURED ( M ) | 11.0 | 658 | 0.10 | 16.70 | 11:31 |
| | Adj Difference (M-I) | -12.8 | 0 | 0.10 | 0.00 | 0:00 |
| | *LIMITS* | ± 4.0 $^{0}$C | 5 mm Hg | 1.0 L/min | ± 1.0 L/min | ±2 min |

Sample Head Inspect/Cleaning: Cleaned.

Status of sampling tape: 3/4 roll

Nozzle Inspection / cleanliness: Inspected and cleaned.

*COMMENTS:*

Sample pump malfunctioned, installed replacement. Performed leack check and flow calibration. Self-test passed OK.

# MetOne BAM $PM_{10}$ Calibration

AIR QUALITY MONITORING

| | | | |
|---|---|---|---|
| STATION: | Lafarge | OPERATOR: | Darrin Pike |
| LOCATION: | Exshaw - Lagoon | DATE: | October 13, 2017 |
| START TIME (MST): | 9:30 | END TIME (MST): | 10:00 |

MONITOR INFO / PARAMETER VALUES:

| | | | |
|---|---|---|---|
| Make/Model | MetOne BAM | Audit Device Model | Delta Cal |
| Configuration | PM10 | Audit Device S/N | 624 |
| Serial Number | A3315 | Certification Date | 02-Dec-16 |

AUDIT / CALIBRATION RESULTS:

| | | Ambient Temp. ( ˚ C ) | Ambient Pres. (mmHg) | Leak Check (L/min) | Flow Rate (lpm) | Time settings (hh:mm) |
|---|---|---|---|---|---|---|
| | Audit values (I) | -1.8 | 651 | 0.00 | 16.7 | 9:56 |
| *As Found Data* | MEASURED ( AF ) | -1.7 | 651 | 0.40 | 16.47 | 9:55 |
| | AF Difference (AF-I) | 0.5 | 0 | 0.40 | -0.23 | 0:00 |
| *Adjusted Data* | MEASURED ( M ) | -1.7 | 651 | 0.40 | 16.63 | 9:56 |
| | Adj Difference (M-I) | 0.1 | 0 | 0.40 | -0.07 | 0:00 |
| | *LIMITS* | ± 4.0 $^{0}$C | 5 mm Hg | 1.0 L/min | ± 1.0 L/min | ±2 min |

Sample Head Inspect/Cleaning: Cleaned

Status of sampling tape: new roll

Nozzle Inspection / cleanliness: Inspected and cleaned

*COMMENTS:*

Performed self test, all passed.

# MetOne BAM TSP Calibration

AIR QUALITY MONITORING

| | | | |
|---|---|---|---|
| STATION: | Lafarge | OPERATOR: | Darrin Pike |
| LOCATION: | Exshaw - Lagoon | DATE: | October 13, 2017 |
| START TIME (MST): | 10:00 | END TIME (MST): | 10:30 |

MONITOR INFO / PARAMETER VALUES:

| | | | |
|---|---|---|---|
| Make/Model | MetOne BAM | Audit Device Model | Delta Cal |
| Configuration | TSP | Audit Device S/N | 624 |
| Serial Number | A3589 | Certification Date | 02-Dec-16 |

AUDIT / CALIBRATION RESULTS:

| | | Ambient Temp. ( ˚ C ) | Ambient Pres. (mmHg) | Leak Check (L/min) | Flow Rate (lpm) | Time settings (hh:mm) |
|---|---|---|---|---|---|---|
| | Audit values (I) | -1.7 | 650 | 0.00 | 16.7 | 12:06 |
| *As Found Data* | MEASURED ( AF ) | -1.1 | 650 | 0.60 | 16.15 | 12:05 |
| | AF Difference (AF-I) | 0.6 | 0 | 0.60 | -0.55 | 0:01 |
| *Adjusted Data* | MEASURED ( M ) | -1.1 | 650 | 0.60 | 16.71 | 12:06 |
| | Adj Difference (M-I) | 0.6 | 0 | 0.60 | 0.01 | 0:00 |
| | *LIMITS* | ± 4.0 $^{0}$C | 5 mm Hg | 1.0 L/min | ± 1.0 L/min | ±2 min |

Sample Head Inspect/Cleaning: Cleaned

Status of sampling tape: New roll

Nozzle Inspection / cleanliness: Inspected and cleaned.

*COMMENTS:*

Performed self test, all passed.

# Calibration Report

Parameter **$NO_X$-NO-$NO_2$**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

## Station Information

| | | | |
|---|---|---|---|
| Calibration Date | October 16, 2017 | Previous Calibration | September 11, 2017 |
| Station Number | N/A | Station Location | Exshaw - Lagoon |

Reason: Routine | Installation | Removal | Other:

| | | | | | |
|---|---|---|---|---|---|
| Start Time (MST) | 9:50 | | End Time (MST) | 14:55 | |
| Barometric Pressure | 651 | mmHg | Station Temperature | 23.0 | Deg C |
| Calibrator | SABIO 2010 | | Serial Number | 103951108 | |
| NO Cal Gas Conc | 51.4 | ppm | Cal Gas Expiry Date | July 26, 2019 | |
| NOx Cal Gas Conc | 51.5 | ppm | Cal Gas Serial # | cc27839 | |

## DACS Information

DACS make: Campbell Scientific CR1000 | DACS serial No.: 67802

| Parameter | | NO2 | NOx | NO |
|---|---|---|---|---|
| Before | Data Slope | 0.998039 | 0.998368 | 0.999391 |
| | Data Offset | 1.609560 | 3.366560 | 3.333772 |
| After | Data Slope | 0.995179 | 0.991116 | 0.995311 |
| | Data Offset | -0.629602 | 2.309463 | 2.544159 |
| Channel # | | 3 | 1 | 2 |
| Voltage Range | | 0 - 5 VDC | 0 - 5 VDC | 0 - 5 VDC |

## Analyzer Information

Analyzer make/model: T200 | Analyzer serial #: 642

| Test Point | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| NO Slope | 1.010 | | 1.033 | |
| NO Offset | 0.2 | mV | 0.2 | mV |
| NOX Slope | 1.010 | | 1.039 | |
| NOX Offset | 0.2 | mV | 0.6 | mV |
| HVPS | 771 | V | 771 | V |
| Moly Temp | 316.9 | degC | 316.8 | degC |
| O3 Flow | 79 | ccm | 80 | ccm |
| RxCell Press | 6.0 | inHg | 6.4 | inHg |
| Sample press | 24.0 | inHg | 24.2 | inHg |
| Sample flow | 437 | ccm | 446 | ccm |

Notes: Zero and Span adjusted.

# Calibration Report

Parameter **NOx-NO-$NO_2$**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

## Station Information

Calibration Date: October 16, 2017 Station Location: Exshaw - Lagoon

## Calibration Data

| | Dilution flow rate (ccm) | Source gas flow rate (ccm) | Calculated NOx conc (ppb) | Calculated NO conc (ppb) | Calculated NO2 conc (ppb) | Indicated NOx conc (ppb) | Indicated NO conc (ppb) | Indicated NO2 conc (ppb) | NOx Correction factor | NO Correction factor |
|---|---|---|---|---|---|---|---|---|---|---|
| zero | 5000 | 0.00 | 0.0 | 0.0 | 0.0 | -1.4 | -1.4 | -1.2 | N/A | N/A |
| 1 | 5000 | 39.00 | 398.6 | 397.8 | 0.8 | 400.2 | 397.5 | 1.7 | 0.9960 | 1.0007 |
| 2 | 5000 | 20.00 | 205.2 | 204.8 | 0.4 | 204.5 | 203.2 | 0.5 | 1.0032 | 1.0076 |
| 3 | 7000 | 14.00 | 102.8 | 102.6 | 0.2 | 100.2 | 98.9 | 0.1 | 1.0255 | 1.0372 |
| | | | | | | | | | | |
| AFZ | 5000 | 0.00 | 0.0 | 0.0 | 0.0 | -1.4 | -1.3 | -1.3 | 0.0000 | 0.0000 |
| AFS | 5000 | 40.00 | 408.7 | 407.9 | 0.8 | 386.7 | 386.5 | -0.7 | 1.0571 | 1.0555 |
| | | | | | | | Average Correction Factor | | 1.0082 | 1.0152 |

As Found Concentrations: $NO_X$= 391.4 NO= 391.1 As Found Percent Change $NO_X$= -4.2% NO= -4.1%

## GPT Calibration Data

Dilution Flow 5000 ccm Source Gas Flow 39.00 ccm

| O3 Setpoint (V) | Indicated NO high point (ppb) | Indicated NO drop conc (ppb) | Calculated NO2 conc (ppb) | Indicated NOx conc (ppb) | Indicated NO conc (ppb) | Indicated NO2 conc (ppb) | NOx Correction factor | NO Correction factor | NO2 Correction factor | Converter Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | -1.4 | -1.4 | 0.0 | -1.4 | -1.4 | -1.2 | N/A | N/A | N/A | N/A |
| NO point | 398.4 | 398.4 | 0.0 | 401.9 | 398.4 | 2.4 | 0.9914 | 1.0000 | N/A | N/A |
| 0.87V | 398.4 | 83.5 | 314.9 | 400.4 | 83.5 | 315.8 | 0.9950 | 1.0000 | 0.9972 | 100.3% |
| 0.54V | 398.4 | 218.0 | 180.5 | 402.4 | 218.0 | 183.3 | 0.9901 | 1.0000 | 0.9846 | 101.6% |
| 0.30V | 398.4 | 313.3 | 85.2 | 402.5 | 313.3 | 88.1 | 0.9899 | 1.0000 | 0.9673 | 103.4% |
| | | | | | Average Correction Factor | | 0.9917 | 1.0000 | 0.9830 | 101.7% |

## AIC Data

| | Previous calibration | | | | Current calibration | | | |
|---|---|---|---|---|---|---|---|---|
| Parameter | NOx | NO2 | NO | | NOx | NO2 | NO | |
| Auto zero | 1.7 | -0.3 | 1.8 | ppb | 0.8 | -1.9 | 1.2 | ppb |
| Auto span | 380.6 | -0.2 | 381.5 | ppb | 388.8 | 0.4 | 388.8 | ppb |

Calibration Performed By: Darrin Pike

# Calibration Summary

Parameter **$NO_2$**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

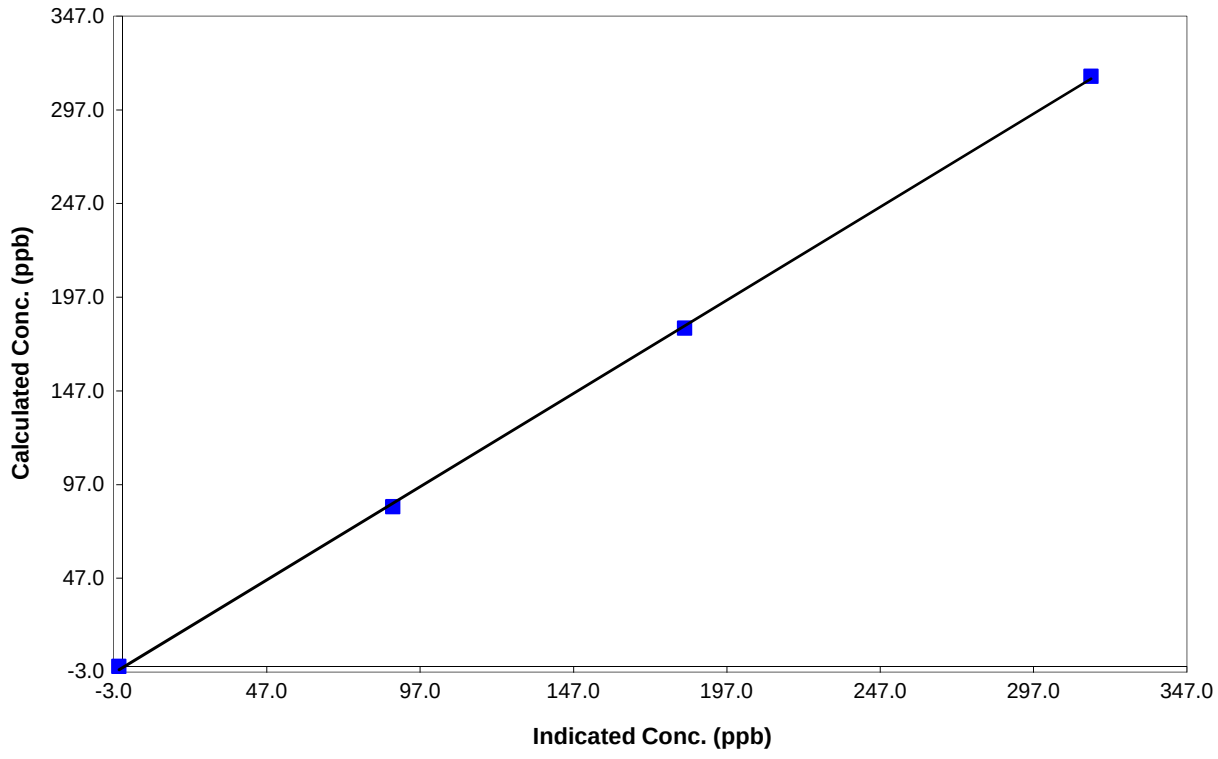
### *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | October 16, 2017 | Previous Calibration | September 11, 2017 |
| Station Number | N/A | Station Location | Exshaw - Lagoon |
| Start Time (MST) | 9:50 | End Time (MST) | 14:55 |
| Analyzer make | T200 | Analyzer serial # | 642 |

### *Calibration Data*

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -1.2 | N/A | | |
| 314.9 | 315.8 | 0.9972 | Correlation Coefficient | 0.999814 |
| 180.5 | 183.3 | 0.9846 | | |
| 85.2 | 88.1 | 0.9673 | Slope | 0.995179 |
| | | | | |
| | | | Intercept | -0.629602 |
| | | | | |

## $NO_2$ Calibration Curve



# Calibration Summary

Parameter **$NO_x$**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

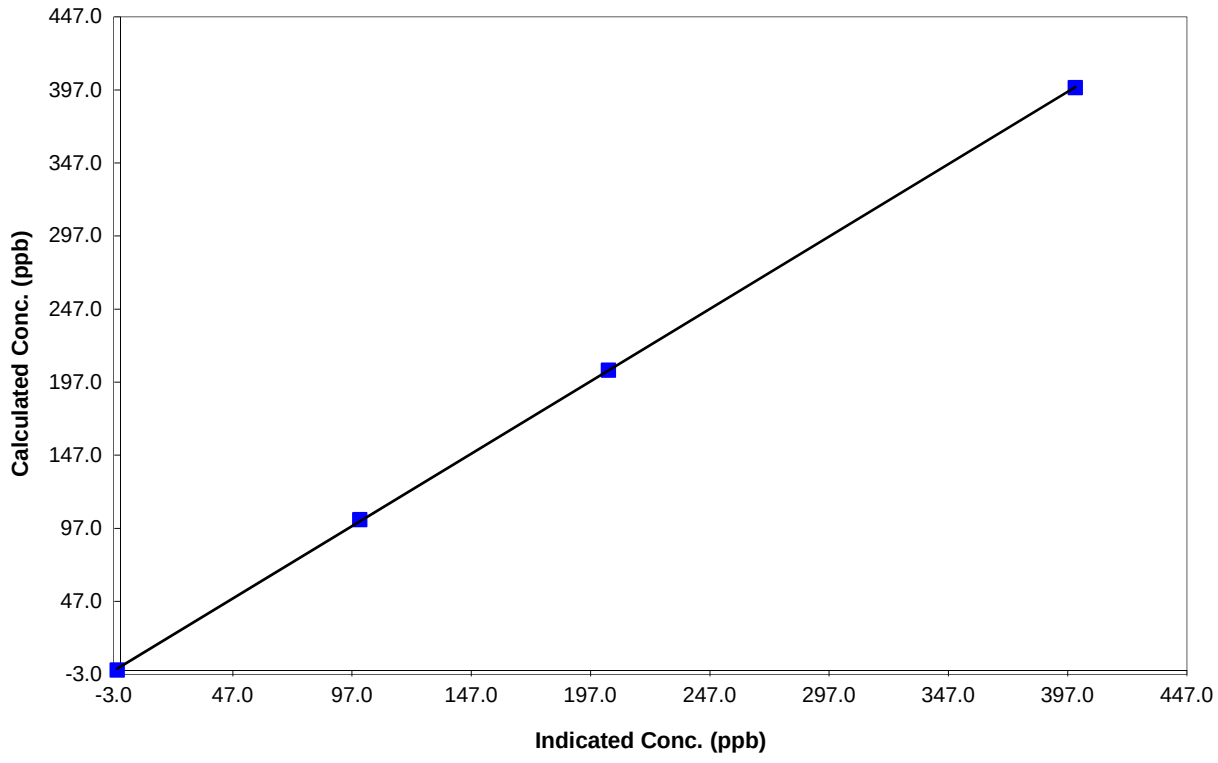
### *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | October 16, 2017 | Previous Calibration | September 11, 2017 |
| Station Number | N/A | Station Location | Exshaw - Lagoon |
| Start Time (MST) | 9:50 | End Time (MST) | 14:55 |
| Analyzer make | T200 | Analyzer serial # | 642 |

### *Calibration Data*

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -1.4 | N/A | | |
| 398.6 | 400.2 | 0.9960 | Correlation Coefficient | 0.999973 |
| 205.2 | 204.5 | 1.0032 | | |
| 102.8 | 100.2 | 1.0255 | Slope | 0.991116 |
| | | | | |
| | | | Intercept | 2.309463 |
| | | | | |

## NOx Calibration Curve



# Calibration Summary

Parameter **NO**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

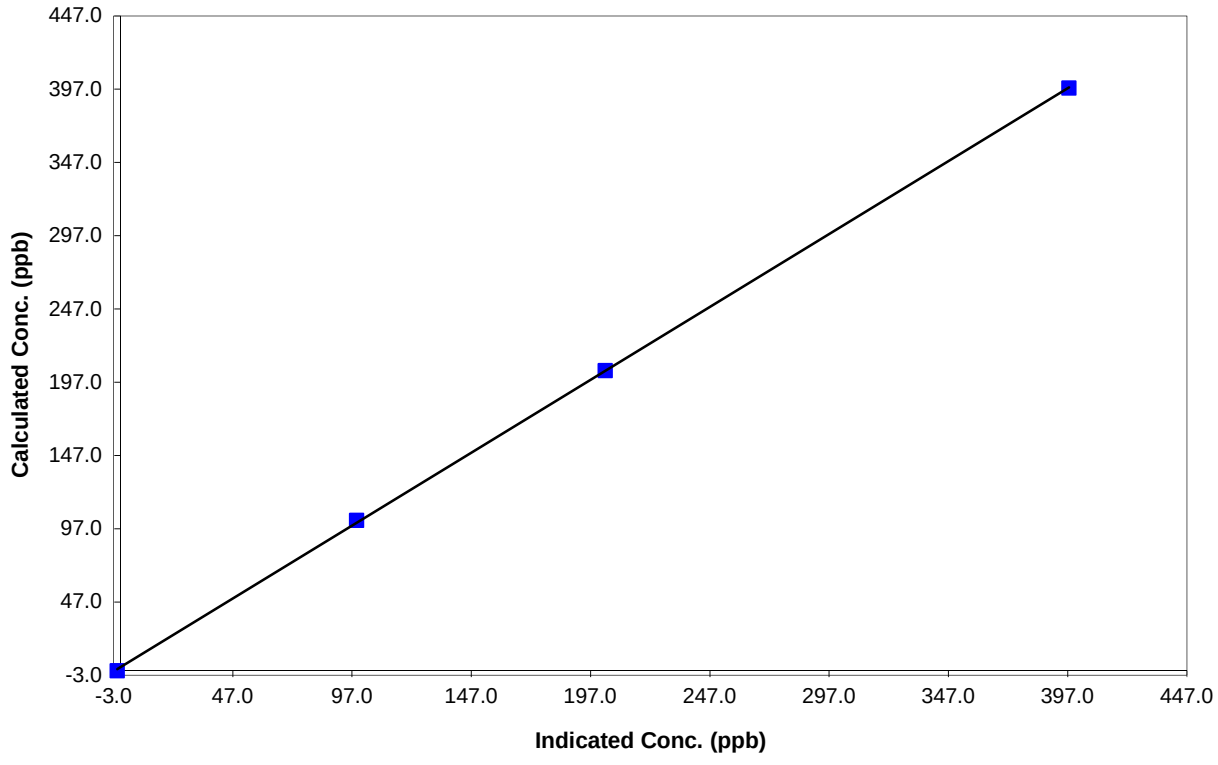
### *Station Information*

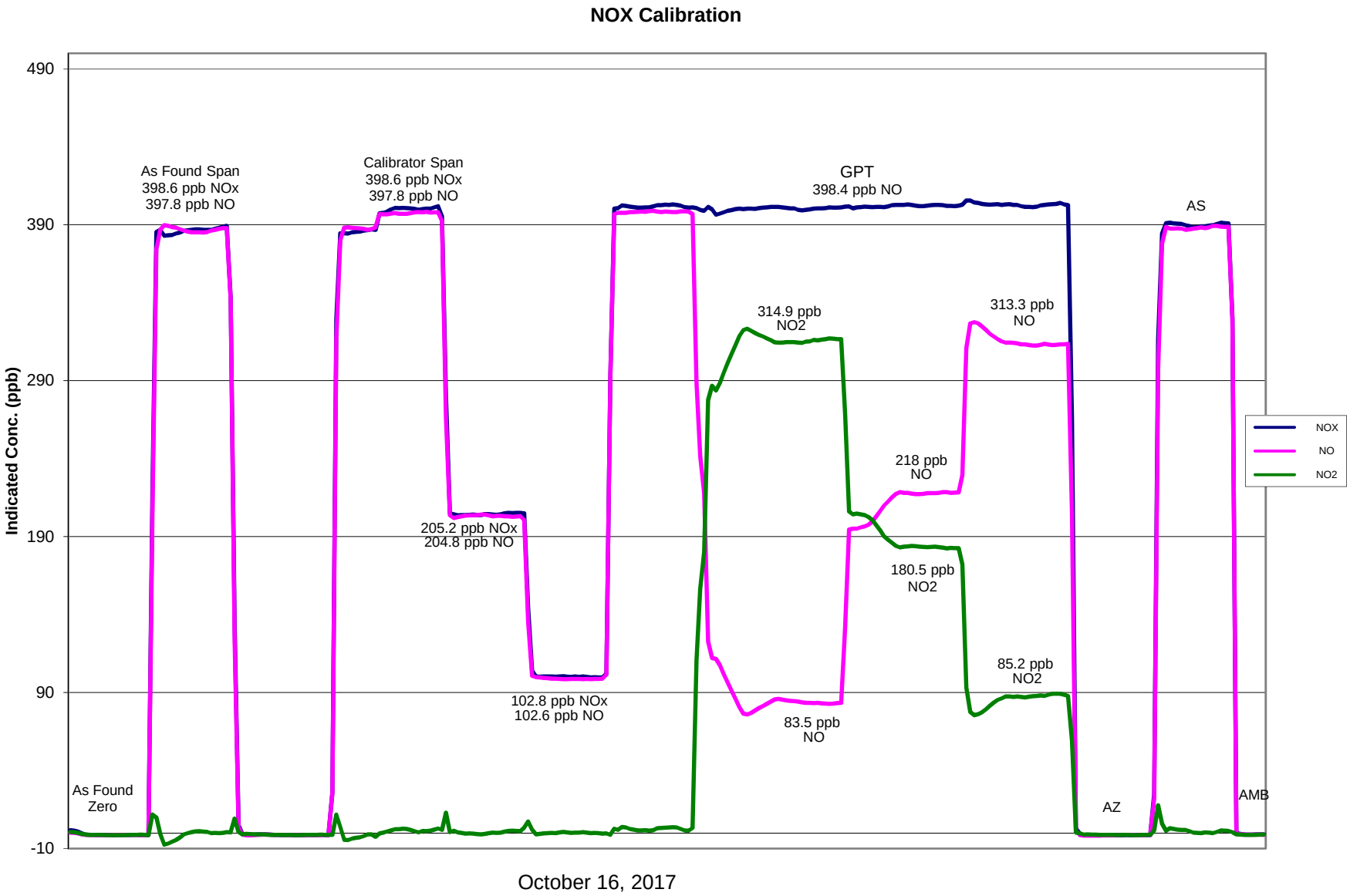
| | | | |
|---|---|---|---|
| Calibration Date | October 16, 2017 | Previous Calibration | September 11, 2017 |
| Station Number | N/A | Station Location | Exshaw - Lagoon |
| Start Time (MST) | 9:50 | End Time (MST) | 14:55 |
| Analyzer make | T200 | Analyzer serial # | 642 |

### *Calibration Data*

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -1.4 | N/A | | |
| 397.8 | 397.5 | 1.0007 | Correlation Coefficient | 0.999953 |
| 204.8 | 203.2 | 1.0076 | | |
| 102.6 | 98.9 | 1.0372 | Slope | 0.995311 |
| | | | | |
| | | | Intercept | 2.544159 |
| | | | | |

## NO Calibration Curve




NOX Calibration
490
390
290
190
90
-10
Indicated Conc. (ppb)
As Found Span
398.6 ppb NOx
397.8 ppb NO
Calibrator Span
398.6 ppb NOx
397.8 ppb NO
GPT
398.4 ppb NO
AS
314.9 ppb
NO2
313.3 ppb
NO
218 ppb
NO
205.2 ppb NOx
204.8 ppb NO
180.5 ppb
NO2
85.2 ppb
NO2
102.8 ppb NOx
102.6 ppb NO
83.5 ppb
NO
As Found
Zero
AZ
AMB
NOX
NO
NO2
October 16, 2017

# Calibration Report

Parameter **SO2**

Air Monitoring Network **Lafarge - Exshaw**

WSP AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | October 16, 2017 | Previous Calibration | September 11, 2017 |
| Station Number | N/A | Station Location | Exshaw - Lagoon |
| Reason: Routine | Install | Removal | Other: |
| Start Time (MST) | 9:50 | End Time (MST) | 14:55 |
| Barometric Pressure | 650 mmHg | Station Temperature | 23.0 Deg C |
| Calibrator | SABIO 2010 | Serial Number | 103951108 |
| Cal Gas Concentratio | 50.8 ppm | Cal Gas Expiry Date | July 14, 2020 |
| Gas Cert Reference | cc27839 | | |
| DACS make | Campbell Scientific CR1000 | DACS serial No. | 67802 |
| DACS voltage range | 0 - 5 VDC | DACS channel # | 4 |
| | Before | | After |
| DACS Scale High | 500 | DACS slope | 500 |
| DACS Scale Low | 0 | DACS intercept | 0 |
| Calculated slope | 0.994786 | Calculated slope | 0.992125 |
| Calculated intercept | 1.579001 | Calculated intercept | 1.020080 |
| Analyzer make | API Model 102A | Analyzer serial # | 393 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0-500 | ppb | 0-500 | ppb |
| Slope | 0.897 | | 0.911 | |
| Offset | 47.2 | mV | 45.4 | mV |
| Pressure | 23.6 | in Hg | 23.5 | in Hg |
| Sample Flow | 488 | ccm | 482 | ccm |
| UV Lamp | 2802 | mV | 2772 | mV |
| HVPS | 690 | V | 690 | V |
| PMT Temp | 7.4 | degC | 7.3 | degC |

## *Calibration Data*

| Dilution air flow rate (cc/min) | Source gas flow rate (cc/min) | Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) |
|---|---|---|---|---|
| 5000 | 0.00 | 0.0 | 0.2 | N/A |
| 5000 | 39.00 | 393.2 | 395.9 | 0.9931 |
| 5000 | 20.00 | 202.4 | 202.3 | 1.0004 |
| 7000 | 14.00 | 101.4 | 100.0 | 1.0141 |
| | | | | |
| 5000 | 0.00 | 0.0 | -1.0 | As found zero |
| 5000 | 39.00 | 393.2 | 385.0 | As found span |
| | | | Average Correction Factor | 1.0026 |

Calculated value of As Found Response: 385.6 ppb Percent Change of As Found: 1.9%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.2 | ppb | 0.1 | ppb |
| Auto span | 379.2 | ppb | 385.5 | ppb |

Notes: Adjusted Zero and Span.

Calibration Performed By: Darrin Pike

# Calibration Summary

Parameter **SO2**

Air Monitoring Network **Lafarge - Exshaw**

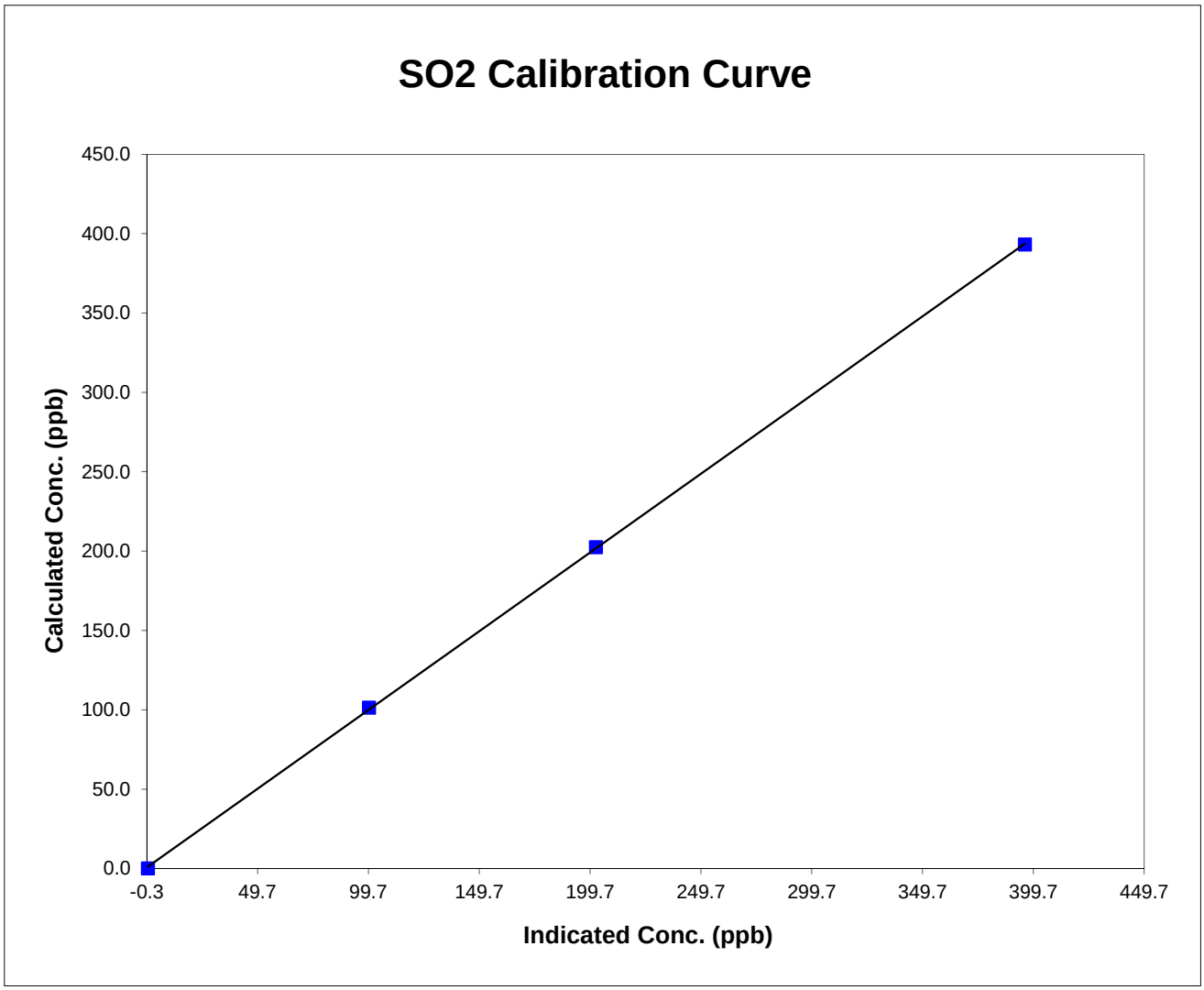
WSP AIR QUALITY MONITORING

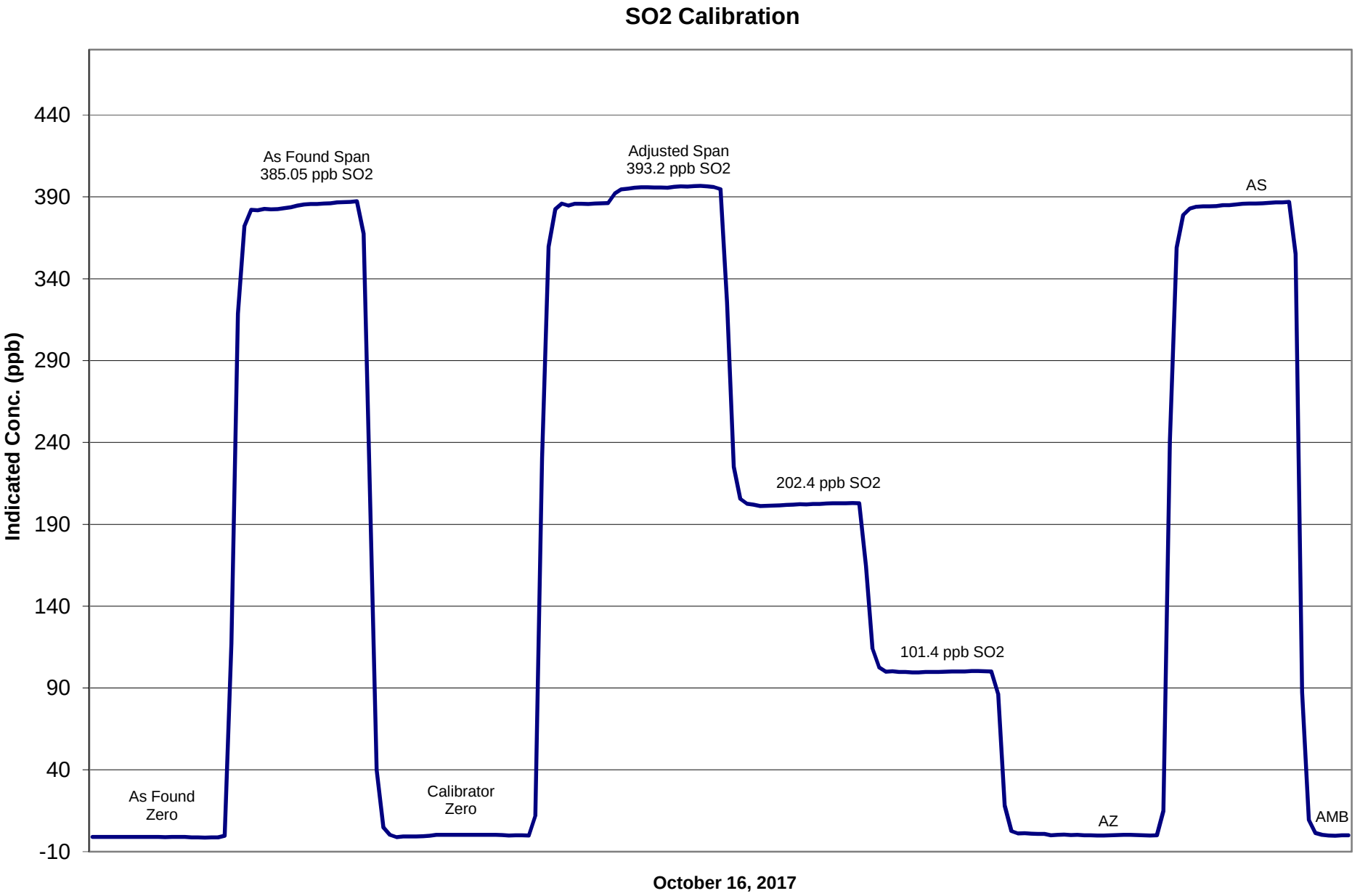
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | October 16, 2017 | Previous Calibration | September 11, 2017 |
| Station Number | N/A | Station Location | Exshaw - Lagoon |
| Start Time (MST) | 9:50 | End Time (MST) | 14:55 |
| Analyzer make/model | API Model 102A | Analyzer serial # | 393 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.2 | N/A | | |
| 393.2 | 395.9 | 0.9931 | Correlation Coefficient | 0.999956 |
| 202.4 | 202.3 | 1.0004 | | |
| 101.4 | 100.0 | 1.0141 | Slope | 0.992125 |
| | | | | |
| | | | Intercept | 1.020080 |
| | | | | |




SO2 Calibration
Indicated Conc. (ppb)
440
390
340
290
240
190
140
90
40
-10
As Found Span
385.05 ppb SO2
Adjusted Span
393.2 ppb SO2
AS
202.4 ppb SO2
101.4 ppb SO2
As Found
Zero
Calibrator
Zero
AZ
AMB
October 16, 2017