**Peace River Area Monitoring Program**

# AUGUST 2021

## Monthly Ambient Air Quality Monitoring Report

## PRAMP-202108

**Operation and Maintenance:**
Bureau Veritas Canada

**Data Validation and Report:**
Peace River Area Monitoring Program

September 15, 2021

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# LIST OF ACRONYMS

| | |
|---|---|
| AAAQOs | Alberta Ambient Air Quality Objectives |
| AEP | Alberta Environment and Parks |
| AMD | Air Monitoring Directive |
| AT | Ambient Temperature |
| BP | Barometric Pressure |
| CH4 | Methane |
| EPEA | Environmental Protection and Enhancement Act |
| H2S | Hydrogen Sulphide |
| kph | kilometers per hour |
| mb | millibar |
| mm | millimeter |
| NMHC | Non-Methane Hydrocarbons |
| ppb | parts per billion |
| ppm | parts per million |
| PRAMP | Peace River Area Monitoring Program |
| RH | Relative Humidity |
| SO2 | Sulphur Dioxide |
| ST | Station Temperature |
| THC | Total Hydrocarbons |
| TRS | Total Reduced Sulphur |
| VWD | Vector Wind Direction |
| VWS | Vector Wind Speed |
| WD | Wind Direction |
| WS | Wind Speed |
| °C | Degrees Celsius |

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September 15, 2021

**RE: PRAMP – August 2021 Monthly Ambient Air Quality Monitoring Report**

Enclosed is the August 2021 Monthly Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Peace River Area Monitoring Program (PRAMP) regional air quality monitoring network.

The representative of the Person Responsible for this monitoring program is

PRAMP Airshed
Michael Bisaga / Lily Lin, Technical Program Managers
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This report has been prepared, reviewed and submitted by Michael Bisaga & Lily Lin of the PRAMP Airshed.

# NETWORK STATION SUMMARY

## Listing of Continuous Monitoring Stations

The PRAMP continuous ambient air quality monitoring network stations are:

- 986c Station
- 842b Station
- Reno Station
- AQHI Cadotte Lake

| Station ID | Station Name | Latitude | Longitude |
|---|---|---|---|
| 1562 | 986c | 56.36980 | -116.92500 |
| 1561 | 842b | 56.27406 | -116.98129 |
| 1563 | Reno | 55.86936 | -117.05739 |
| 1651 | AQHI-Cadotte Lake | 56.49022 | -116.42739 |

## Listing of Intermittent Monitoring Stations

- VOC Canister Sampling Station
  - 986c Station
  - 842b Station
  - Reno Station

## Monitoring Notes during the Month of August 2021

### 986c Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement, except precipitation (54.7%). The AMD 90% requirement does not apply to this parameter as this instrumentation was added at the request of the landowner host.
- **Precipitation:**
  - The RM Young 5520 precipitation sensor, s/n: TB16325, was removed for troubleshooting as it failed the audit check on August 4. The EML ARG100 sensor, s/n: 190114, was installed and successfully audited on August 18. No data were collected between August 4 hour 17 and August 18 hour 16. Three hundred thirty-six hours of downtime were recorded due to this event.
  - No data were recorded on August 25 between 15:47 and 16:15, likely due to a power problem with the ADAM (analog/digital interface). Hour 16 data was deemed invalid as the 75% valid data for an hour requirement was not met. One hour of downtime was recorded as a result.

- **THC/CH4/NMHC:** Following the calibration on August 4, the analyzer was put in "maintenance" mode to replace the desiccant cartridge and run leak checks. A repeat zero-span check was completed afterwards. Three hours of downtime were recorded.
- **TRS:**
    - The analyzer spanned outside the lower acceptance limit on August 2. A repeat zero-span check that was completed on August 3 was within the limits. However, the analyzer failed the scheduled daily zero-span check on August 3. On August 4, a successful monthly calibration was completed, and the permeation tube was replaced to correct the drift. One hour of downtime was recorded due to the additional quality check.
    - The analyzer began to span outside the acceptance limit on August 9, including an additional zero-span check performed on August 10. It was determined that the cause was a pre-maturely-set expected span value as the new permeation tube had yet stabled. The expected value was updated on August 11 based on the span value obtained on August 8. Two hours of downtime were recorded due to the additional quality check.
    - The analyzer showed a significant drift in span check response again on August 18. An as-found points check that was completed on August 18 showed a similar response. A repeat calibration was completed on August 19 to correct the drift. Six hours of downtime were recorded due to additional quality checks.
    - The analyzer failed on August 27 due to firmware issues. The analyzer was reset remotely following a successful repeat zero-span check on August 28. Twenty hours of downtime were recorded due to this event.

## 842b Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **Precipitation:** The channel was put offline on August 5 hour 13 for troubleshooting the tipping bucket that was installed at the 986c site. One hour of downtime was recorded as a result.

## Reno Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **Precipitation:** During the precipitation system check/audit on August 20, it was noticed the path for water drainage was covered by debris. The debris was removed, and a successful sensor check/audit was completed. A blockage may delay water drainage from the collector down to the sensor; this may result in the data reported for a certain hour being representative of precipitation that occurred prior to the hour that the measurement was recorded. Data collected from the last valid check, which was June 15, to August 20 should be used with caution. As the precipitation channel was added to provide useful information for residents, not to meet a regulatory requirement, this incident did not require reporting to AEP.

**AQHI – Cadotte Lake Station**

- All data collected this month were compliant with the requirements outlined in the AMD 2016.

- All parameters met the 90% operational uptime requirement, except TRS (85.3). AEP reference #: 382077.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and /or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable, except PM2.5**.** One 24-hr exceedance was recorded this month. The exceedance recorded this month is believed to be the result of BC wildfire.

| Date | Time (MST) | Average Period | AAAQOs / AAAQGs (µg/m3) | Concentration (µg/m3) | Reference # |
|---|---|---|---|---|---|
| August 3 | - | 24-Hour | 29 | 30.1 | 381043 |

- **TRS**:
  - The analyzer failed the daily zero-span check on August 14 due to a convertor failure. On August 17, the CD Nova CDN-101 convertor, s/n 530, was removed and the CD Nova CDN-101 convertor, s/n 534, was installed. A successful post-repair calibration was completed afterwards. Data were invalidated back to the last valid zero-span check, which was August 13 hour 9. One hundred hours of data were invalidated due to this issue.
  - The analyzer failed on August 20, 21 and 28 due to firmware issues. The analyzer was reset remotely each time following a repeat zero-span check to confirm the analyzer's functionality. Nine hours of downtime were recorded due to these events.
- **PM2.5:** The PM unit failed on August 11 due to firmware issues. The equipment was reset remotely, and valid data collection resumed on August 12 hour 7. Ten hours of downtime were recorded due to this event.

## VOCs Canister Sampling program:

- The canister sampling program collects a 1-hour sample of air when the continuously measured non-methane hydrocarbon (NMHC) concentration reaches a specified trigger point. The current trigger point is 0.3 ppm for non-methane hydrocarbons. The trigger point is based on real-time monitoring data that are averaged over a 5-minute period.
- The canister sample collection systems are in place at Station 986c, 842b, and the Reno Station; a canister sample collection system is not part of the suite of instruments currently deployed at the AQHI-Cadotte Lake Station.
- Sample analysis and analytical results were prepared and provided by InnoTech Alberta.
- Elevated NMHC concentrations were recorded between August 1 and 5 across the region due to BC forest fires. Two canister events were recorded at the 986c station as a result.

| Station | Parameter | Date | Time | Concentration (ppm) |
|---|---|---|---|---|
| 986c | Non-methane HC | 1-Aug | 20:20 | 0.35 |
| 986c | Non-methane HC | 4-Aug | 06:10 | 0.34 |

- Non-methane Hydrocarbon-triggered sample was collected at the 986c station on August 1.

| Sample Date/Time | 2021-08-01 @ 20:25 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon | | | | | |
| Canister ID | 32227 | | | | | |
| Method | NA-025 | | Method | NA-024 | Method | AC-058 |
| Maximum Reading (ppmv) | 0.2 | Methane | Maximum Reading (ppmv) | 1.6 Carbon disulphide | Maximum Reading (ppmv) | 42.7 Isoprene |

Note: The methane concentration in the NA-025 analytical result was close to the method detection limit (0.2ppm). In Alberta's rural areas, methane has an expected background of about 1.8 – 2.0 ppm. The analytical laboratory cannot determine the reason for the sub-background concentration of methane and therefore, data should be used with caution.

- Blank sample was collected at the 986c station on August 1.

| Sample Date/Time | 2021-08-01 @ 20:25 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon - BLANK | | | | | |
| Canister ID | 28887 | | | | | |
| Method | NA-025 | | Method | NA-024 | Method | AC-058 |
| Maximum Reading (ppmv) | - | - | Maximum Reading (ppmv) | - - | Maximum Reading (ppmv) | 0.18 Isobutane |

- Non-methane Hydrocarbon-triggered sample was collected at the 986c station on August 4.

| Sample Date/Time | 2021-08-04 @06:15 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon | | | | | |
| Canister ID | 29016 | | | | | |
| Method | NA-025 | | Method | NA-024 | Method | AC-058 |
| Maximum Reading (ppmv) | 2.5 | Methane | Maximum Reading (ppmv) | - - | Maximum Reading (ppmv) | 8.58 n-Pentane |

- Blank sample was collected at the 986c station on August 4.

| Sample Date/Time | 2021-08-04 @06:15 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon - BLANK | | | | | |
| Canister ID | 28951 | | | | | |
| Method | NA-025 | | Method | NA-024 | Method | AC-058 |
| Maximum Reading (ppmv) | - | - | Maximum Reading (ppmv) | - - | Maximum Reading (ppmv) | 0.17 Isobutane |

## Revisions to Alberta's Ambient Air Quality Data Warehouse

No revisions to historical data previously submitted to the Alberta's Ambient Air Quality Data Warehouse were made this month.

## Deviations from Authorized Monitoring Methods

At the Reno station, nearby trees exceed the height allowed under section 2.3 of the wind speed and wind direction siting criteria in Chapter 3 of the AMD. This non-conformance was documented in the updated station site documents. Further actions are being considered including siting the wind sensor so that it meets AMD Chapter 3 siting requirements, or obtaining written authorization from "The Director" to deviate from AMD Siting requirements.

## Disclaimer

Baseline corrections were performed on the 1-minute data. 5-minute and hourly data were calculated based on the post-baseline correction 1-minute data set. Data verification/validation were then performed on the 5-minute and hourly data. Hourly data that are included in this report are the post-validation hourly data set.

Equipment calibration / maintenance records were provided by Bureau Veritas.

## Certification

This report was prepared and submitted by Lily Lin in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

Lily Lin, Technical Program Manager, PRAMP Airshed

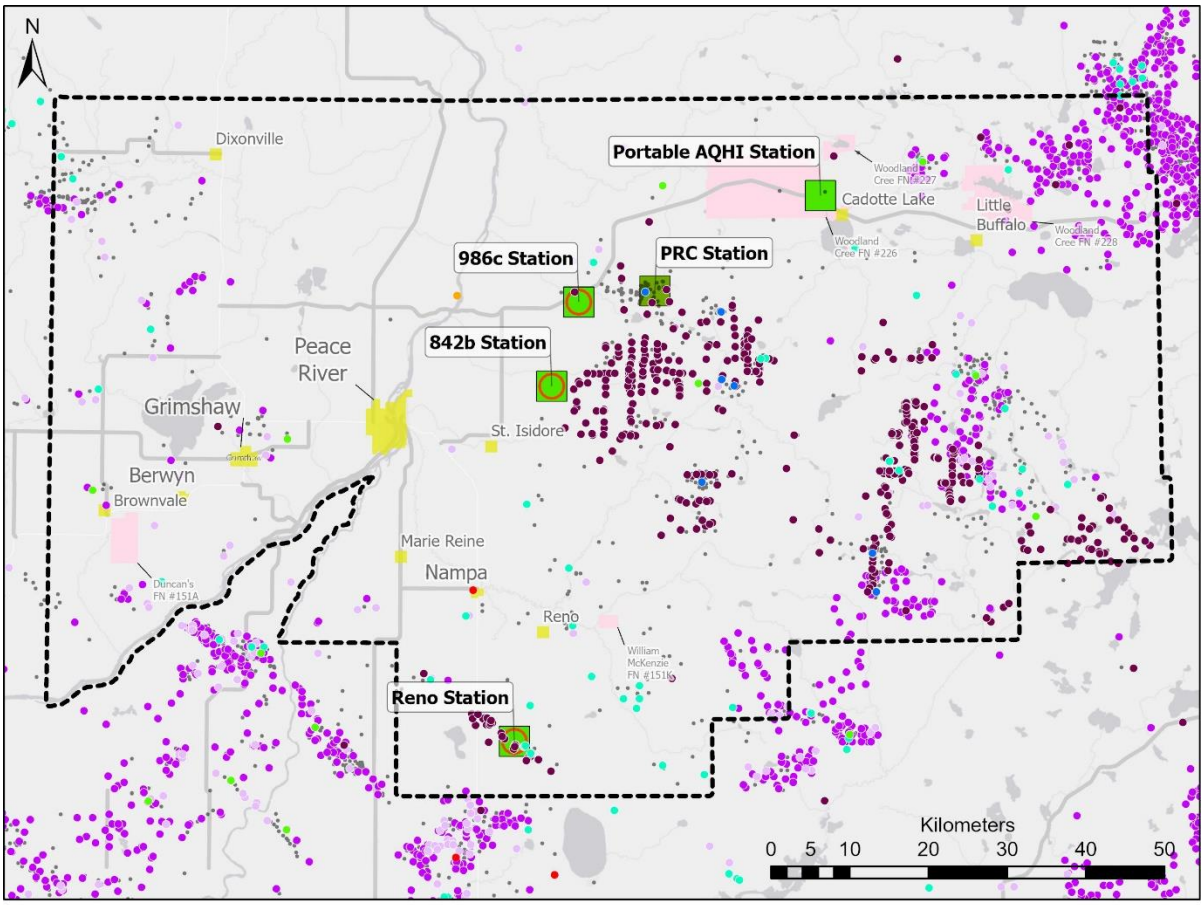
This report was reviewed by Mike Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

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. I also certify that at the time of this report's submission, all air data have been electronically uploaded to Alberta's Ambient Air Quality Data Warehouse as required by the AMD. Uploading of VOC data from the canister sampling program was not required at the time of completing this report.

Michael Bisaga, Technical Program Manager, PRAMP Airshed

September 15, 2021

## Map of PRAMP Continuous Monitoring Network




# Peace River Area Monitoring Program

pramp
PEACE RIVER AREA MONITORING PROGRAM

**Contact:** pramptech@prampairshed.ca

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**Sources:** Esri, © OpenStreetMap contributors, HERE, Garmin, USGS, EPA, NPS, NRCan, Esri, HERE, NPS

## Map Legend

### Monitoring Methods

- Continuous (existing)
- Continuous (planned)
- Triggered Canister (existing)

### Industrial Facilities

- Heavy Oil/Bitumen Well or Battery
- Conventional Oil Well or Battery
- In-Situ Oil Sands Facility
- Natural Gas Well or Battery
- Gas Plant or Processing Facility
- Compressor Station or Pipeline Facility
- Pulp and Paper
- Agricultural Storage and Transfer
- Well (Not Associated with Batteries)

# CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

## 986c Station

**Equipment Operation Summary**

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **SO2** | **Thermo / 43iQTL** | **1193585646** | |
| • A successful monthly calibration was performed on August 4.<br>• No operational issues were identified this month. | | | |
| **TRS** | **Thermo / 43iQTL** | **1191833341** | |
| • The analyzer spanned outside the lower acceptance limit on August 2. A repeat zero-span check that was completed on August 3 was within the limits. However, the analyzer failed the scheduled daily zero-span check on August 3. On August 4, a successful monthly calibration was completed, and the permeation tube was replaced to correct the drift. One hour of downtime was recorded due to the additional quality check.<br>• The analyzer began to span outside the acceptance limit on August 9, including an additional zero-span check performed on August 10. It was determined that the cause was a pre-maturely-set expected span value as the new permeation tube had yet stabled. The expected value was updated on August 11 based on the span value obtained on August 8. Two hours of downtime were recorded due to the additional quality check.<br>• The analyzer showed a significant drift in span check response again on August 18. An as-found points check that was completed on August 18 showed a similar response. A repeat calibration was completed on August 19, and the expected span value was updated on August 20. Six hours of downtime were recorded due to additional quality checks.<br>• The analyzer failed on August 27 due to firmware issues. The analyzer was reset remotely following a successful repeat zero-span check on August 28. Twenty hours of downtime were recorded due to this event. | | | |
| **THC/CH4/NMHC** | **Thermo / 55i** | **1193585652** | |
| • A successful monthly calibration was performed on August 4.<br>• Following the calibration on August 4, the analyzer was put in “maintenance” mode to replace the desiccant cartridge and run leak checks. A repeat zero-span check was completed afterwards. Three hours of downtime were recorded due to this maintenance. | | | |
| **Relative Humidity (RH)** | **Rotronic / HC2-S3** | **20357528** | |
| • The RH sensor was checked on August 4. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **Barometric Pressure (BP)** | **MetOne / 092** | **Y23358** | |
| • The BP sensor was checked on August 4. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |
| **Ambient Temperature (AT)** | **Rotronic / HC2-S3** | **20357528** | |
| • The temperature sensor was checked on August 4. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |
| **Station Temperature (ST)** | **Bureau Veritas Canada** | **N/A** | |
| • No operational issues were identified this month. | | | |
| **Precipitation (Precip)** | **RM Young 52202 / EML ARG100** | **TB 16325 / 190114** | |
| • The RM Young 5520 precipitation sensor, s/n: TB16325, was removed for troubleshooting as it failed the audit check on August 4. The tipping bucket was installed at the 842b station to verify its functionality on August 5. The equipment passed all check. Suspect the issue was from the serial interface. The EML ARG100 sensor, s/n: 190114, was installed and successfully audited on August 18. No data were collected between August 4 hour 17 and August 18 hour 16. Three hundred thirty-six hours of downtime were recorded due to this event.<br>• No data were recorded on August 25 between 15:47 and 16:15, likely due to a power problem with the ADAM (analog/digital interface). Hour 16 data was deemed invalid as the 75% valid data for an hour requirement was not met. One hour of downtime was recorded as a result. | | | |
| **Wind Speed/Wind Direction (WS/ WD)** | **RM Young / 05305L** | **174795** | |
| • Wind direction data contained in this report represents where the wind is coming from.<br>• The annual wind system calibration was completed on July 3, 2021.<br>• anemometer sensors were checked on August 4. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |

## Monitored Data Summary for 986c Station

| Parameter | Objectives/Guidelines | | | Exceedances | | | Monthly Avg. | Min. 1-hr | Max. 1-hr | Date/Time | VWS (km/hr) | VWD (sector) | Max. 24-hr | Date | Operational Uptime (%) | Valid Data (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | 30-day | 1-hr | 24-hr | 30-day | | | | | | | | | | |
| SO2 (ppb) | 172 | 48 | 11 | 0 | 0 | 0 | 0.0 | 0 | 1 | August 1 at hour 0 | 6.9 | ESE | 0.3 | August 1 | 100.0 | 95.0 |
| TRS (ppb) | 10 | 3 | - | - | - | - | 0.29 | 0.00 | 0.92 | August 6 at hour 8 | 14.6 | SSW | 0.56 | August 12 | 96.1 | 91.2 |
| THC (ppm) | - | - | - | - | - | - | 2.02 | 1.90 | 2.57 | August 2 at hour 2 | 5.6 | E | 2.17 | August 2 | 99.6 | 94.7 |
| CH4 (ppm) | - | - | - | - | - | - | 2.01 | 1.90 | 2.26 | August 2 at hour 3 | 5.4 | ESE | 2.09 | August 24 | 99.6 | 94.7 |
| NMHC (ppm) | - | - | - | - | - | - | 0.01 | 0.00 | 0.47 | August 2 at hour 0 | 4.6 | SSE | 0.09 | August 2 | 99.6 | 94.7 |
| RH (%) | - | - | - | - | - | - | 74.1 | 26 | 100 | August 3 at hour 1 | 3.4 | ESE | 95.4 | August 22 | 100.0 | 100.0 |
| BP (millibar) | - | - | - | - | - | - | 940 | 928 | 949 | August 1 at hour 0 | 6.9 | ESE | 949 | August 1 | 100.0 | 100.0 |
| Ext. Temp. (°C) | - | - | - | - | - | - | 15.4 | 1.3 | 31.0 | August 1 at hour 14 | 8.9 | ESE | 23.4 | August 1 | 100.0 | 100.0 |
| Stn. Temp. (°C) | - | - | - | - | - | - | 22.6 | 21.6 | 24.3 | August 4 at hour 4 | 4.1 | SE | 23.4 | August 4 | 100.0 | 100.0 |
| Precipitation (mm)* | - | - | - | - | - | - | 27.6 | 0.0 | 3.8 | August 31 at hour 20 | 18.4 | N | 10.4 | August 22 | 54.7 | 54.6 |
| WSV (km/hr) | - | - | - | - | - | - | 2.7 | 0.4 | 30.6 | August 15 at hour 14 | 30.6 | SW | 17.3 | August 22 | 100.0 | 100.0 |
| WDV (sector) | - | - | - | - | - | - | 215 (SSW) | - | - | - | - | - | - | - | 100.0 | 100.0 |

1- Date/ Time given is the first minimum and maximum value that was recorded

* Data represents the total (sum) for the indicated time frame

### Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances at 986c Station

The measured ambient air quality was within the AAAQOs for all monitored parameters.

## 842b Station

**Equipment Operation Summary**

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **SO2** | **Thermo / 43iQTL** | **1200736629** | |
| • A successful monthly calibration was performed on August 5.<br>• No operational issues were identified this month. | | | |
| **TRS** | **Thermo 43iQTL** | **1200736630** | |
| • A successful monthly calibration was performed on August 5.<br>• No operational issues were identified this month. | | | |
| **THC/CH4/NMHC** | **Thermo / 55i** | **1501663728** | |
| • The carrier gas cylinder was replaced on August 3.<br>• A successful monthly calibration was performed on August 5.<br>• No operational issues were identified this month. | | | |
| **Relative Humidity (RH)** | **Rotronic / HC2A-S3** | **20370767** | |
| • The RH sensor was checked on August 5. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |
| **Barometric Pressure (BP)** | **MetOne / 092** | **Y23362** | |
| • The BP sensor was checked on August 5. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |
| **Ambient Temperature (AT)** | **Rotronic / HC2A-S3** | **20370767** | |
| • The temperature sensor was checked on August 2. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **Station Temperature (ST)** | **Bureau Veritas Canada** | **N/A** | |
| • No operational issues were identified this month. | | | |
| **Precipitation (Precip)** | **RM Young / 52202** | **TB 15878** | |
| • The precipitation sensor was checked on August 5. The sensor passed the check requirements<br>• No operational issues were identified this month.<br>• The channel was put offline on August 5 hour 13 for troubleshooting the tipping bucket that was installed at the 986c site. One hour of downtime was recorded as a result. | | | |
| **Wind Speed/Wind Direction (WS/ WD)** | **RM Young / 05305AQ** | **174802** | |
| • Wind direction data contained in this report represents where the wind is coming from.<br>• The annual wind system calibration was completed on July 4, 2021.<br>• anemometer sensors were checked on August 5. The sensor passed the check requirements<br>• No operational issues were identified this month. | | | |

## Monitored Data Summary for 842b Station

| Parameter | Objectives/Guidelines | | | Exceedances | | | Monthly Avg. | Min. 1-hr | Max. 1-hr | Date/Time | VWS (km/hr) | VWD (sector) | Max. 24-hr | Date | Operational Uptime (%) | Valid Data (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | 30-day | 1-hr | 24-hr | 30-day | | | | | | | | | | |
| SO2 (ppb) | 172 | 48 | 11 | 0 | 0 | 0 | 0.0 | 0 | 0 | August 1 at hour 0 | 4.5 | ESE | 0.0 | August 1 | 100.0 | 95.0 |
| TRS (ppb) | 10 | 3 | - | - | - | - | 0.29 | 0.06 | 1.19 | August 2 at hour 5 | 4.5 | ENE | 0.54 | August 4 | 100.0 | 95.0 |
| THC (ppm) | - | - | - | - | - | - | 1.89 | 1.79 | 2.79 | August 2 at hour 5 | 4.5 | ENE | 2.20 | August 2 | 100.0 | 95.1 |
| CH4 (ppm) | - | - | - | - | - | - | 1.88 | 1.78 | 2.55 | August 2 at hour 5 | 4.5 | ENE | 2.06 | August 2 | 100.0 | 95.1 |
| NMHC (ppm) | - | - | - | - | - | - | 0.01 | 0.00 | 0.25 | August 2 at hour 2 | 5.2 | ENE | 0.13 | August 2 | 100.0 | 95.1 |
| RH (%) | - | - | - | - | - | - | 68.5 | 27 | 100 | August 19 at hour 3 | 2.7 | W | 91.3 | August 22 | 100.0 | 100.0 |
| BP (millibar) | - | - | - | - | - | - | 939 | 927 | 948 | August 1 at hour 0 | 4.5 | ESE | 948 | August 1 | 100.0 | 100.0 |
| Ext. Temp. (°C) | - | - | - | - | - | - | 15.6 | 2.1 | 30.7 | August 1 at hour 14 | 6.5 | NE | 23.2 | August 5 | 100.0 | 100.0 |
| Stn. Temp. (°C) | - | - | - | - | - | - | 22.9 | 21.0 | 24.1 | August 13 at hour 1 | 7.2 | SSE | 23.4 | August 6 | 100.0 | 100.0 |
| Precipitation (mm)* | - | - | - | - | - | - | 32.5 | 0.0 | 2.5 | August 31 at hour 20 | 13.7 | N | 9.6 | August 7 | 99.9 | 99.6 |
| WSV (km/hr) | - | - | - | - | - | - | 3.2 | 0.0 | 29.1 | August 15 at hour 16 | 29.1 | SW | 14.4 | August 9 | 100.0 | 100.0 |
| WDV (sector) | - | - | - | - | - | - | 237 (SW) | - | - | - | - | - | - | - | 100.0 | 100.0 |

1- Date/ Time given is the first minimum and maximum value that was recorded

* Data represents the total (sum) for the indicated time frame

### Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances at 842b Station

The measured ambient air quality was within the AAAQOs for all monitored parameters.

## Reno Station

**Equipment Operation Summary**

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **SO2** | **API / 100A** | **1502** | |
| • A successful monthly calibration was performed on August 20.<br>• No operational issues were identified this month. | | | |
| **TRS** | **Thermo / 43i-TLE** | **1162460022** | |
| • A successful monthly calibration was performed on August 20.<br>• No operational issues were identified this month. | | | |
| **THC/CH4/NMHC** | **Thermo / 55i** | **1505664392** | |
| • The carrier gas cylinder was replaced on August 3.<br>• A successful monthly calibration was performed on August 20.<br>• No operational issues were identified this month. | | | |
| **Relative Humidity (RH)** | **RM Young / 43172VC** | **60837897** | |
| • The RH sensor was checked on August 20. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |
| **Barometric Pressure (BP)** | **MetOne / 092** | **K12864** | |
| • The BP sensor was checked on August 20. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |
| **Ambient Temperature (AT)** | **RM Young / 43172VC** | **60837897** | |
| • The temperature sensor was checked on August 20. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **Station Temperature (ST)** | **Bureau Veritas Canada** | **N/A** | |
| • No operational issues were identified this month. | | | |
| **Precipitation (Precip)** | **RM Young / 5202** | **TB15877** | |
| • During the precipitation system check/audit on August 20, it was noticed the path for water drainage was covered by debris. The debris was removed, and a successful sensor check/audit was completed. A blockage may delay water drainage from the collector down to the sensor; this may result in the data reported for a certain hour being representative of precipitation that occurred prior to the hour that the measurement was recorded. Data collected from the last valid check, which was June 15, to August 20 should be used with caution. As the precipitation channel was added to provide useful information for residents, not to meet a regulatory requirement, this incident did not require reporting to AEP. | | | |
| **Wind Speed/Wind Direction (WS/ WD)** | **RM Young / 5305VK** | **149769** | |
| • Wind direction data contained in this report represents where the wind is coming from.<br>• The annual wind system calibration was completed on August 5, 2021.<br>• anemometer sensors were checked on August 20. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |

## Monitored Data Summary for Reno Station

| Parameter | Objectives/Guidelines | | | Exceedances | | | Monthly Avg. | Min. 1-hr | Max. 1-hr | Date/Time | VWS (km/hr) | VWD (sector) | Max. 24-hr | Date | Operational Uptime (%) | Valid Data (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | 30-day | 1-hr | 24-hr | 30-day | | | | | | | | | | |
| SO2 (ppb) | 172 | 48 | 11 | 0 | 0 | 0 | 0.0 | 0 | 1 | August 2 at hour 21 | 0.4 | SW | 0.0 | August 2 | 100.0 | 94.9 |
| TRS (ppb) | 10 | 3 | - | - | - | - | 0.41 | 0.03 | 10.50 | August 30 at hour 8 | 0.8 | SSW | 2.20 | August 30 | 100.0 | 94.9 |
| THC (ppm) | - | - | - | - | - | - | 1.91 | 1.76 | 2.30 | August 11 at hour 23 | 0.3 | SW | 2.04 | August 30 | 100.0 | 95.0 |
| CH4 (ppm) | - | - | - | - | - | - | 1.91 | 1.76 | 2.30 | August 11 at hour 23 | 0.3 | SW | 2.04 | August 30 | 100.0 | 95.0 |
| NMHC (ppm) | - | - | - | - | - | - | 0.00 | 0.00 | 0.10 | August 1 at hour 18 | 0.4 | W | 0.02 | August 1 | 100.0 | 95.0 |
| RH (%) | - | - | - | - | - | - | 65.0 | 18 | 100 | August 6 at hour 4 | 1 | S | 90.3 | August 31 | 100.0 | 100.0 |
| BP (millibar) | - | - | - | - | - | - | 937 | 927 | 947 | August 1 at hour 7 | 1.4 | SE | 946 | August 1 | 100.0 | 100.0 |
| Ext. Temp. (°C) | - | - | - | - | - | - | 15.7 | 3.8 | 32.0 | August 13 at hour 16 | 9.3 | W | 23.6 | August 1 | 100.0 | 100.0 |
| Stn. Temp. (°C) | - | - | - | - | - | - | 23.3 | 21.4 | 24.5 | August 20 at hour 1 | 2 | N | 23.9 | August 31 | 100.0 | 100.0 |
| Precipitation (mm)* | - | - | - | - | - | - | 32.0 | 0.0 | 3.0 | August 31 at hour 23 | 10.7 | NNW | 15.8 | August 31 | 100.0 | 99.7 |
| WSV (km/hr) | - | - | - | - | - | - | 2.1 | 0.0 | 20.8 | August 9 at hour 15 | 20.8 | WSW | 11.8 | August 22 | 100.0 | 100.0 |
| WDV (sector) | - | - | - | - | - | - | 259 (WSW) | - | - | - | - | - | - | - | 100.0 | 100.0 |

1- Date/ Time given is the first minimum and maximum value that was recorded

* Data represents the total (sum) for the indicated time frame

### Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances at Reno Station

The measured ambient air quality was within the AAAQOs for all monitored parameters.

## AQHI – Cadotte Lake Station

**Equipment Operation Summary**

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **SO2** | **Teledyne / T100** | **722** | |
| • A successful monthly calibration was performed on August 17.<br>• No operational issues were identified this month. | | | |
| **TRS** | **Teledyne T100U** | **132** | |
| • The analyzer failed the daily zero-span check on August 14 due to a convertor failure. On August 17, the CD Nova CDN-101 convertor, s/n 530, was removed and the CD Nova CDN-101 convertor, s/n 534, was installed. A successful post-repair calibration was completed afterwards. Data were invalidated back to the last valid zero-span check, which was August 13 hour 9. One hundred hours of data were invalidated due to this issue.<br>• The analyzer failed on August 20, 21 and 28 due to firmware issues. The analyzer was reset remotely each time following a repeat zero-span check to confirm the analyzer's functionality. Nine hours of downtime were recorded due to these events. | | | |
| **NOx/NO/NO2** | **Teledyne / T200** | **837** | |
| • A successful monthly calibration was performed on August 17.<br>• No operational issues were identified this month. | | | |
| **O3** | **Teledyne / T400** | **824** | |
| • A successful monthly calibration was performed on August 17.<br>• No operational issues were identified this month. | | | |
| **THC/CH4/NMHC** | **Thermo / 55i** | **1191032505** | |
| • A successful monthly calibration was performed on August 17.<br>• No operational issues were identified this month. | | | |

| Parameter | Make / Model | Serial Number | |
|---|---|---|---|
| **PM 2.5** | **Teledyne / T640** | **318** | |
| • The PM unit failed on August 11 due to firmware issues. The equipment was reset remotely, and valid data collection resumed on August 12 hour 7. Ten hours of downtime were recorded due to this event.<br>• A successful monthly calibration was performed on August 19. | | | |
| **Relative Humidity (RH)** | **Vaisala / HMP155** | **N2910506** | |
| • The sensor was checked on August 17. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |
| **Barometric Pressure (BP)** | **MetOne / 092** | **A23927** | |
| • The sensor was checked on August 17. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |
| **Ambient Temperature (AT)** | **Vaisala / HMP155** | **N2910506** | |
| • The sensor was checked on August 17. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |
| **Station Temperature (ST)** | **Bureau Veritas Canada** | **N/A** | |
| • No operational issues were identified this month. | | | |
| **Wind Speed/Wind Direction (WS/ WD)** | **RM Young 05305AQ** | **174801** | |
| • Wind direction data contained in this report represents where the wind is coming from.<br>• The annual wind system calibration was completed on July 22, 2021.<br>• The anemometer sensors were checked on August 17. The sensor passed the check requirements.<br>• No operational issues were identified this month. | | | |

## Monitored Data Summary for AQHI - Cadotte Lake Station

| Parameter | Objectives/Guidelines | | | Exceedances | | | Monthly Avg. | Min. 1-hr | Max. 1-hr | Date/Time | VWS (km/hr) | VWD (sector) | Max. 24-hr | Date | Operational Uptime (%) | Valid Data (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1-hr | 24-hr | 30-day | 1-hr | 24-hr | 30-day | | | | | | | | | | |
| SO2 (ppb) | 172 | 48 | 11 | 0 | 0 | 0 | 0.0 | 0 | 0 | August 1 at hour 0 | 0.3 | NNE | 0.0 | August 1 | 100.0 | 95.0 |
| TRS (ppb) | 10 | 3 | - | - | - | - | 0.38 | 0.00 | 2.13 | August 1 at hour 7 | 0.6 | SW | 0.75 | August 21 | 85.3 | 81.2 |
| NOx (ppb) | - | - | - | - | - | - | 0.8 | 0 | 7 | August 4 at hour 6 | 0.2 | WNW | 1.9 | August 3 | 100.0 | 94.6 |
| NO (ppb) | - | - | - | - | - | - | 0.1 | 0 | 4 | August 3 at hour 6 | 0.1 | E | 0.7 | August 4 | 100.0 | 94.6 |
| NO2 (ppb) | 159 | - | - | 0 | - | - | 0.6 | 0 | 5 | August 3 at hour 20 | 0.9 | NE | 1.6 | August 3 | 100.0 | 94.6 |
| O3 (ppb) | 76 | - | - | 0 | - | - | 23.5 | 4 | 49 | August 3 at hour 13 | 8.5 | W | 30.8 | August 10 | 100.0 | 95.1 |
| THC (ppm) | - | - | - | - | - | - | 1.97 | 1.86 | 2.39 | August 2 at hour 0 | 0.1 | SW | 2.21 | August 2 | 100.0 | 95.0 |
| CH4 (ppm) | - | - | - | - | - | - | 1.97 | 1.86 | 2.30 | August 1 at hour 5 | 0.2 | W | 2.10 | August 2 | 100.0 | 95.0 |
| NMHC (ppm) | - | - | - | - | - | - | 0.01 | 0.00 | 0.21 | August 2 at hour 0 | 0.1 | SW | 0.12 | August 2 | 100.0 | 95.0 |
| PM2.5 (µg/m3) | 80 | 30 | - | 0 | 1 | - | 8.6 | 0.0 | 67.0 | August 14 at hour 8 | 18.4 | WSW | 30.1 | August 3 | 98.7 | 98.5 |
| RH (%) | - | - | - | - | - | - | 72.7 | 26 | 99 | August 6 at hour 1 | 2.7 | WSW | 91.5 | August 22 | 100.0 | 100.0 |
| BP (millibar) | - | - | - | - | - | - | 943 | 931 | 953 | August 1 at hour 0 | 0.3 | NNE | 952 | August 1 | 100.0 | 100.0 |
| Ext. Temp. (°C) | - | - | - | - | - | - | 14.7 | -1.2 | 31.6 | August 1 at hour 17 | 5.6 | ENE | 22.8 | August 1 | 100.0 | 100.0 |
| Stn. Temp. (°C) | - | - | - | - | - | - | 22.8 | 21.4 | 24.1 | August 1 at hour 16 | 6.3 | ESE | 23.5 | August 22 | 100.0 | 100.0 |
| WSV (km/hr) | - | - | - | - | - | - | 2.4 | 0.0 | 23.7 | August 9 at hour 12 | 23.7 | WSW | 11.6 | August 9 | 100.0 | 100.0 |
| WDV (sector) | - | - | - | - | - | - | 259 (WSW) | - | - | - | - | - | - | - | 100.0 | 100.0 |

1- Date/ Time given is the first minimum and maximum value that was recorded

**Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances at AQHI - Cadotte Lake Station**

The following exceedance of AAAQOs were observed at the AQHI - Cadotte Lake Station.

| Date | Time (MST) | Parameter | Average Period | AAAQOs / AAAQGs | Concentration | Wind speed | Wind Direction | Reference # |
|---|---|---|---|---|---|---|---|---|
| August 3 | - | PM2.5 | 24-Hour | 29 µg/m3 | 30.1 µg/m3 | 0.9 km/hr | 296° (WNW) | 382077 |

The exceedances of the PM2.5 objective recorded this month is believed to be the result of BC wildfires, given the low wind speeds recorded at the time.

# TABLES, CHARTS, WIND ROSES AND EQUIPMENT CALIBRATION RECORDS

# 986c STATION

# PEACE RIVER AREA MONITORING PROGRAM

## 986c Station - August 2021

## Summary of Hourly Averages

## SULPHUR DIOXIDE ($SO_2$) in ppb

**Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb**

Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0 30-Day Exceedance: 0

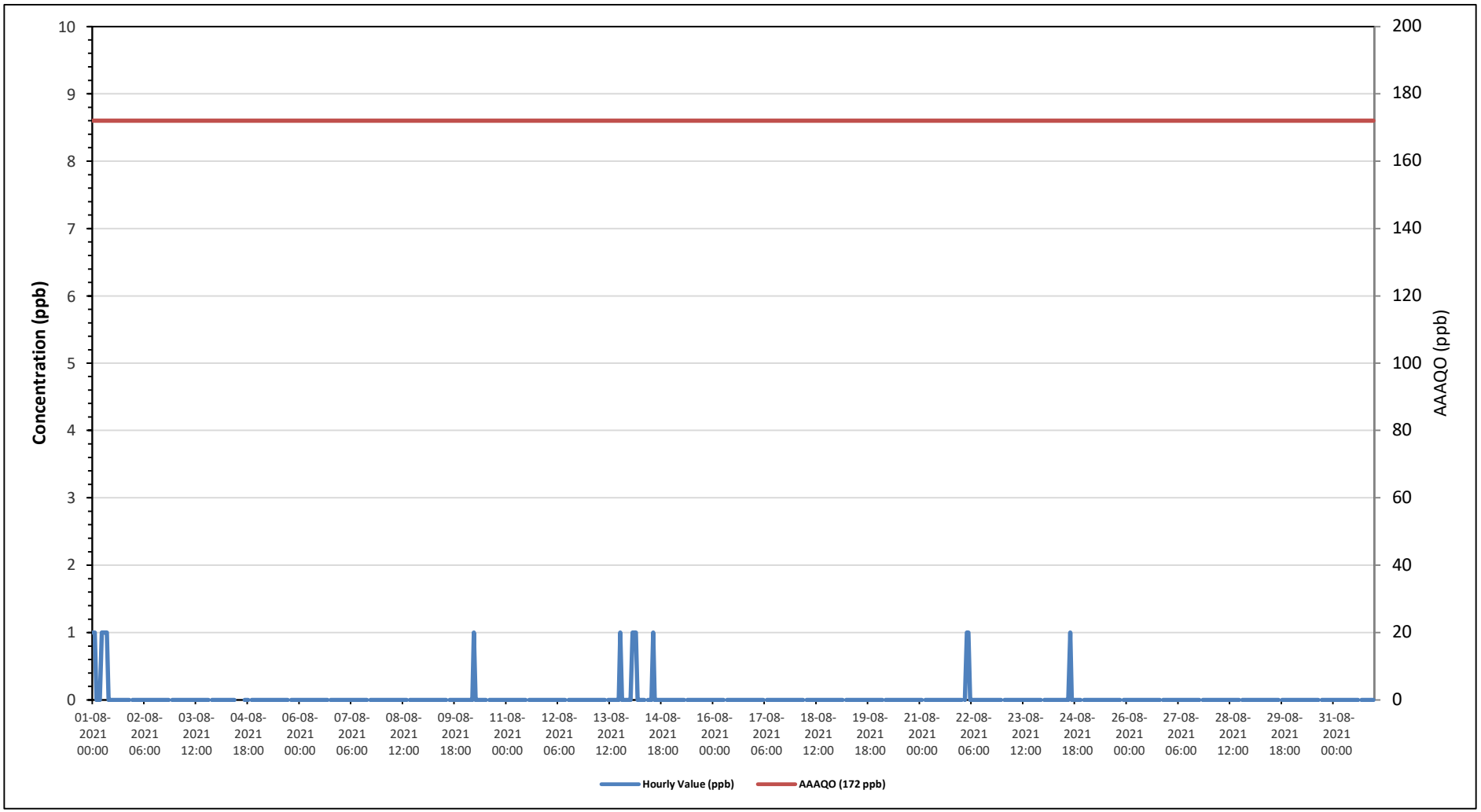
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 1 | ppb | on August 1 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.3 | ppb | on August 1 | Hours of Data: | 707 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 2 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 2 | Hours of Calibration: | 37 |
| Monthly Average: | 0.0 | ppb | | Operational Uptime: | 100.0 |

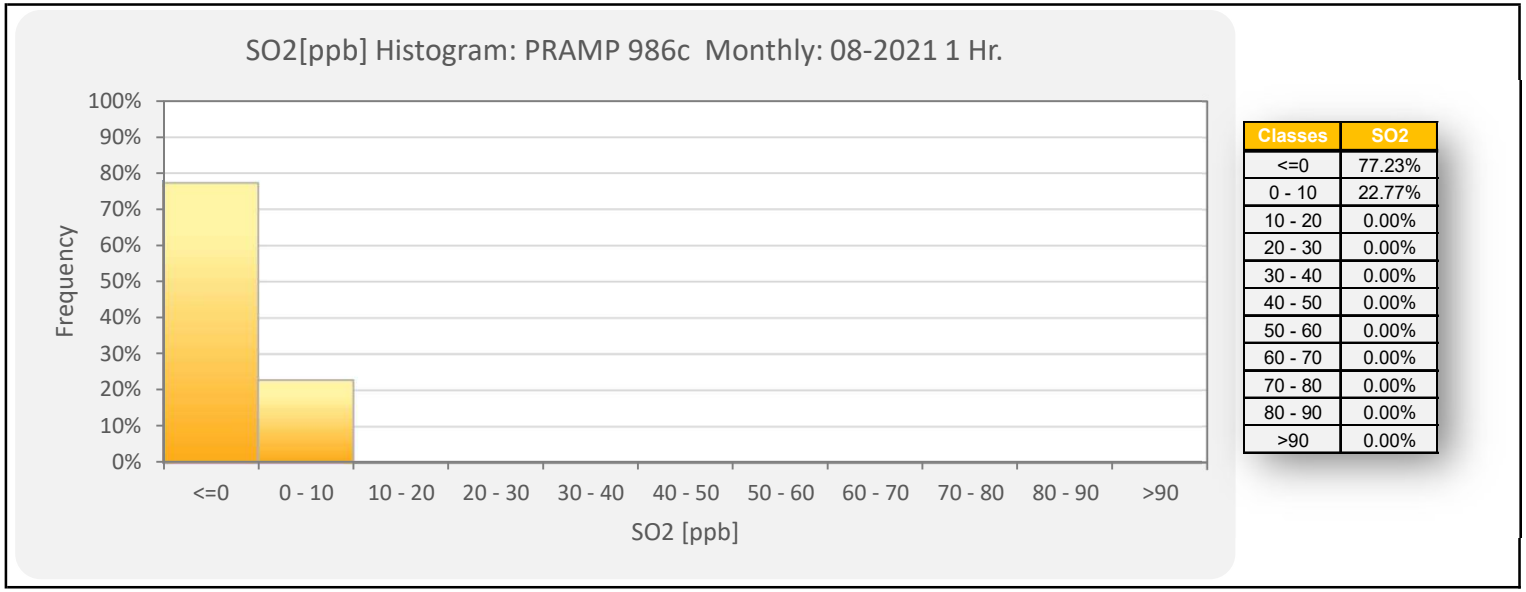
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 1 | 0.3 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0.0 |
| Aug 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | C | C | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 10 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 14 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.2 |
| Aug 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 17 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 18 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 19 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 20 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 21 | 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 |
| Aug 22 | 0 | S | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| Aug 23 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0.0 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 1 | 0.0 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0.0 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Diurnal Maximum | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | |
| Diurnal Average | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for SO2 - 986c Station*

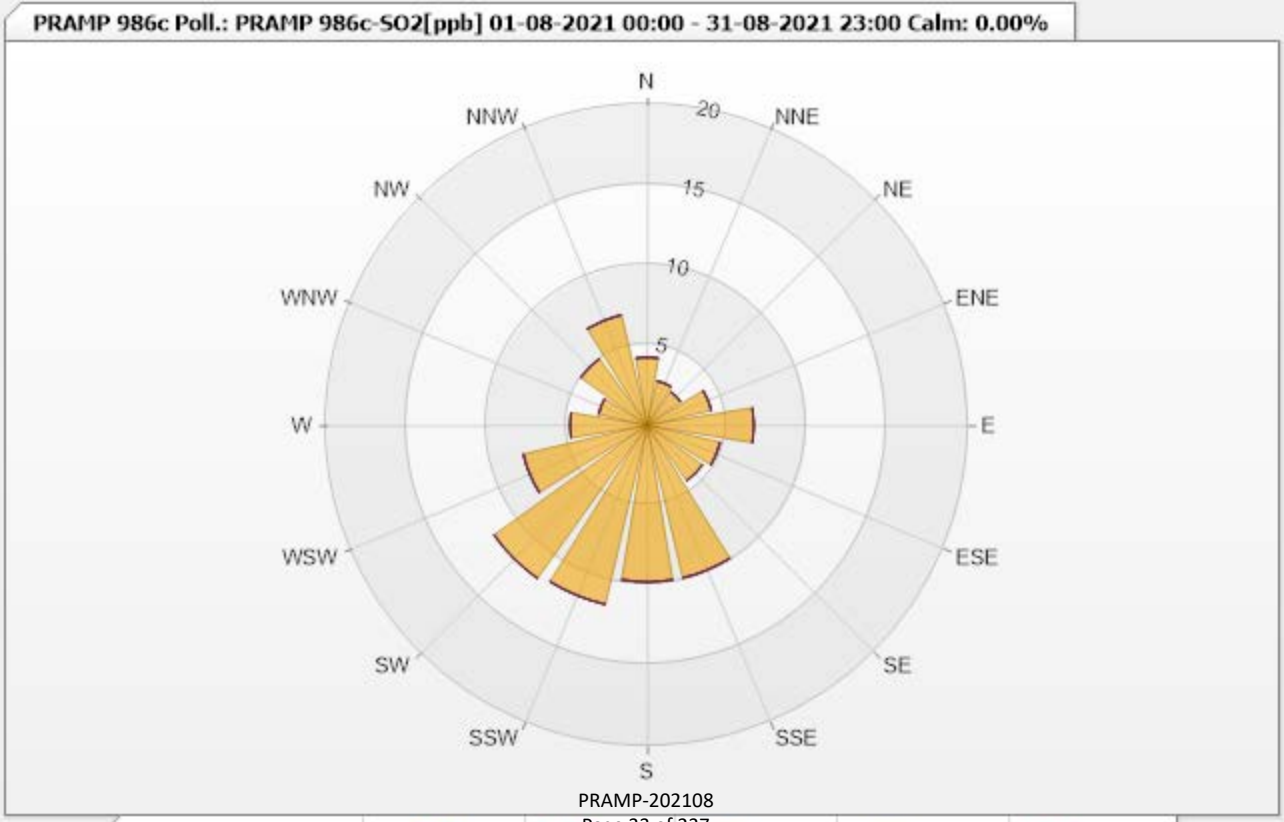





| Classes | SO2 |
|---|---|
| <=0 | 77.23% |
| 0 - 10 | 22.77% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

| Direction | 0-10 | 10-50 | 50-100 | 100-172 | >172.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| NNE | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| NE | 2.55 | 0 | 0 | 0 | 0 | 2.55 |
| ENE | 4.1 | 0 | 0 | 0 | 0 | 4.1 |
| E | 6.65 | 0 | 0 | 0 | 0 | 6.65 |
| ESE | 4.67 | 0 | 0 | 0 | 0 | 4.67 |
| SE | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| SSE | 9.76 | 0 | 0 | 0 | 0 | 9.76 |
| S | 9.76 | 0 | 0 | 0 | 0 | 9.76 |
| SSW | 11.46 | 0 | 0 | 0 | 0 | 11.46 |
| SW | 11.74 | 0 | 0 | 0 | 0 | 11.74 |
| WSW | 7.92 | 0 | 0 | 0 | 0 | 7.92 |
| W | 4.81 | 0 | 0 | 0 | 0 | 4.81 |
| WNW | 3.11 | 0 | 0 | 0 | 0 | 3.11 |
| NW | 5.09 | 0 | 0 | 0 | 0 | 5.09 |
| NNW | 7.07 | 0 | 0 | 0 | 0 | 7.07 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-10
0 10-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 986c Station - August 2021

## Summary of Hourly Averages

## TOTAL REDUCED SULPHUR (TRS) in ppb

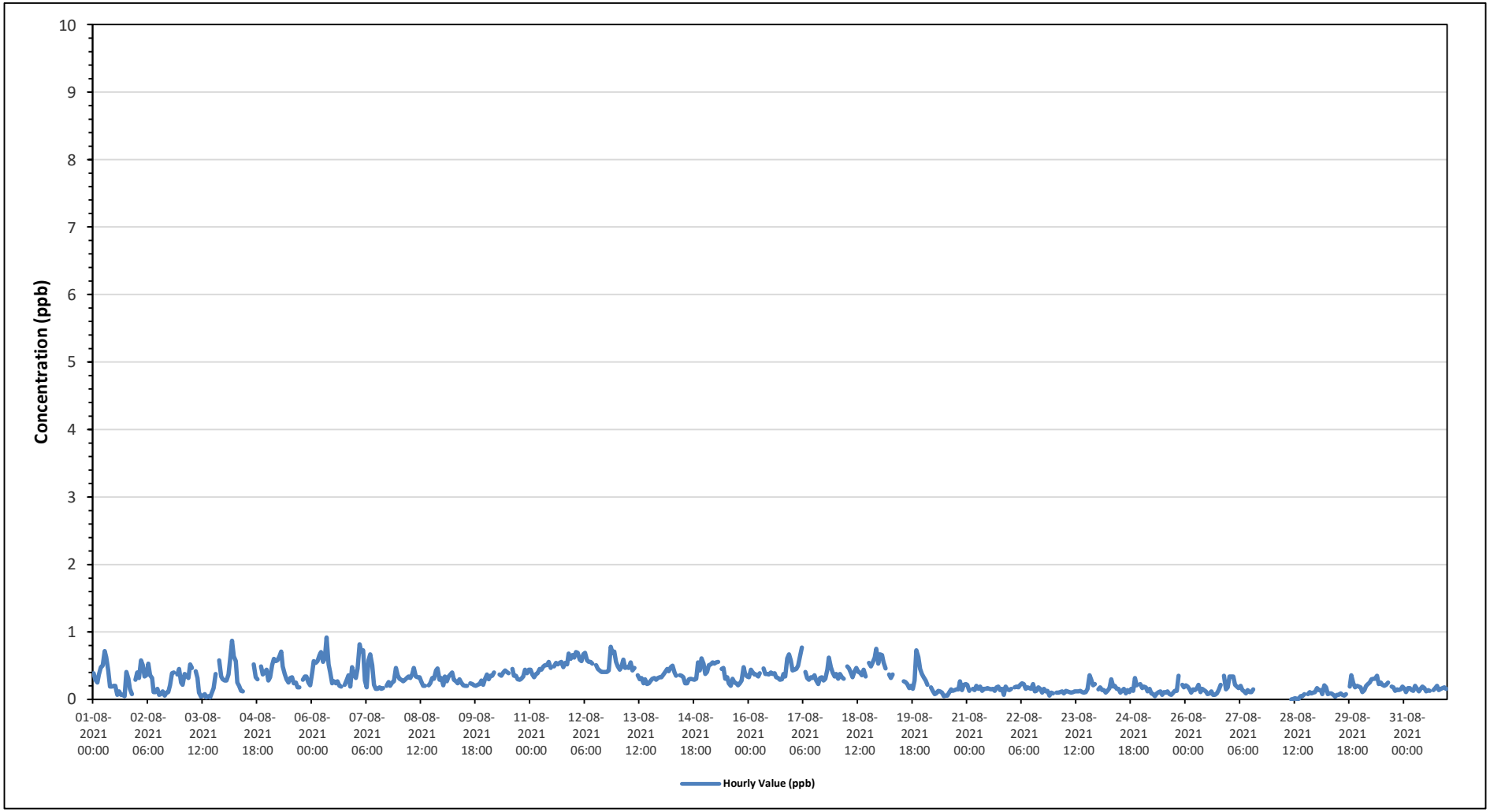
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0.92 | ppb | on August 6 at hour 8 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.56 | ppb | on August 12 | Hours of Data: | 679 |
| Minimum Hourly Value: | 0.00 | ppb | on August 28 at hour 10 | Hours of Missing Data: | 29 |
| Minimum Daily Value: | 0.13 | ppb | on August 25 | Hours of Calibration: | 36 |
| Monthly Average: | 0.29 | ppb | | Operational Uptime: | 96.1 |

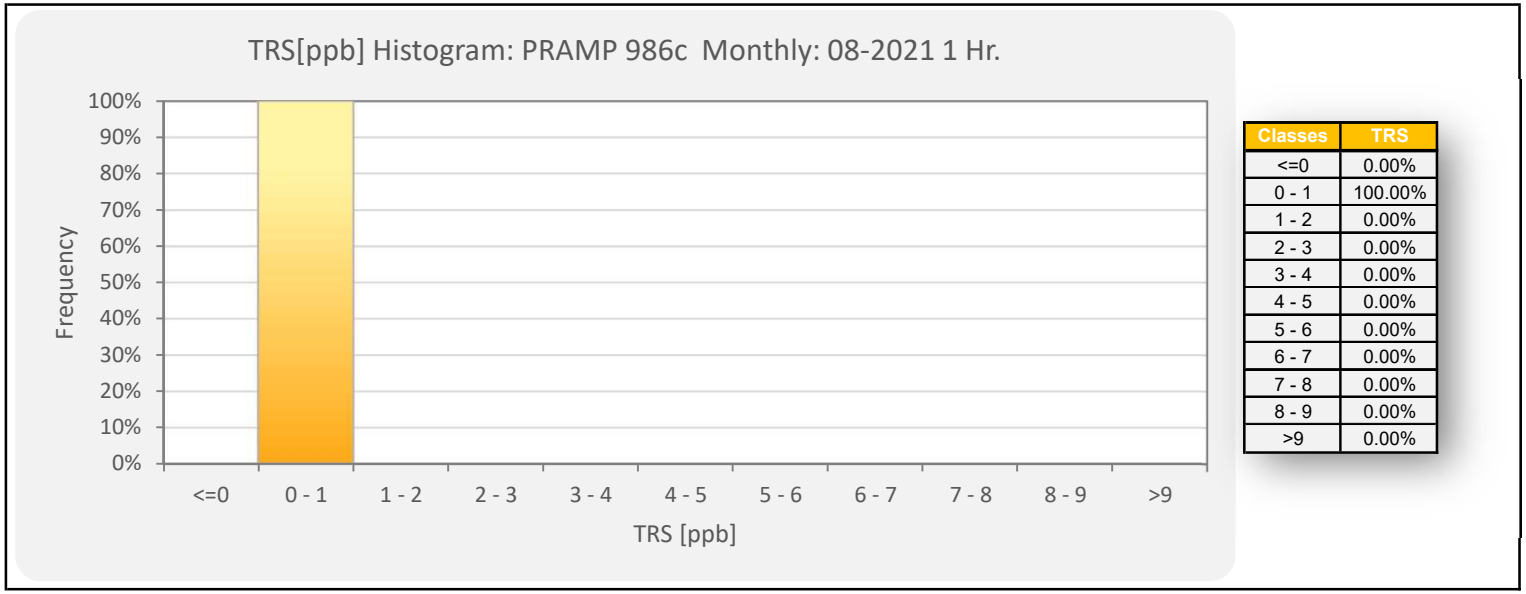
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 0.39 | 0.29 | 0.25 | 0.37 | 0.48 | 0.5 | 0.72 | 0.63 | 0.43 | 0.19 | 0.19 | 0.2 | 0.2 | 0.07 | 0.12 | 0.07 | 0.07 | 0.05 | 0.41 | 0.31 | 0.16 | 0.08 | S | 0.29 | 0.05 | 0.72 | 0.28 |
| Aug 2 | 0.4 | 0.32 | 0.58 | 0.51 | 0.34 | 0.36 | 0.53 | 0.36 | 0.32 | 0.11 | 0.11 | 0.16 | 0.07 | 0.08 | 0.12 | 0.06 | 0.1 | 0.11 | 0.21 | 0.39 | 0.4 | S | 0.37 | 0.45 | 0.06 | 0.58 | 0.28 |
| Aug 3 | 0.25 | 0.22 | 0.38 | 0.35 | 0.32 | 0.52 | 0.47 | NRM | 0.42 | 0.32 | 0.1 | 0.04 | 0.06 | 0.08 | 0.03 | 0.05 | 0.03 | 0.11 | 0.17 | 0.38 | S | 0.58 | 0.34 | 0.3 | 0.03 | 0.58 | 0.25 |
| Aug 4 | 0.28 | 0.28 | 0.37 | 0.58 | 0.87 | 0.64 | 0.57 | 0.25 | 0.2 | 0.13 | 0.12 | C | C | C | C | C | 0.52 | 0.33 | 0.3 | S | 0.49 | 0.37 | 0.41 | 0.44 | 0.12 | 0.87 | 0.40 |
| Aug 5 | 0.28 | 0.33 | 0.51 | 0.6 | 0.57 | 0.58 | 0.64 | 0.71 | 0.49 | 0.38 | 0.3 | 0.25 | 0.32 | 0.33 | 0.24 | 0.25 | 0.18 | 0.18 | S | 0.29 | 0.34 | 0.34 | 0.25 | 0.21 | 0.18 | 0.71 | 0.37 |
| Aug 6 | 0.4 | 0.57 | 0.54 | 0.57 | 0.66 | 0.7 | 0.56 | 0.61 | **0.92** | 0.52 | 0.41 | 0.24 | 0.27 | 0.24 | 0.27 | 0.2 | 0.19 | S | 0.22 | 0.28 | 0.36 | 0.19 | 0.48 | 0.38 | 0.19 | **0.92** | 0.43 |
| Aug 7 | 0.32 | 0.46 | 0.82 | 0.72 | 0.73 | 0.28 | 0.18 | 0.58 | 0.67 | 0.51 | 0.22 | 0.16 | 0.16 | 0.18 | 0.16 | 0.17 | S | 0.2 | 0.26 | 0.2 | 0.25 | 0.27 | 0.47 | 0.36 | 0.16 | 0.82 | 0.36 |
| Aug 8 | 0.31 | 0.29 | 0.27 | 0.29 | 0.32 | 0.34 | 0.32 | 0.38 | 0.47 | 0.34 | 0.33 | 0.33 | 0.27 | 0.2 | 0.2 | S | 0.21 | 0.24 | 0.32 | 0.31 | 0.43 | 0.46 | 0.29 | 0.32 | 0.20 | 0.47 | 0.31 |
| Aug 9 | 0.21 | 0.34 | 0.27 | 0.34 | 0.37 | 0.4 | 0.29 | 0.27 | 0.24 | 0.3 | 0.25 | 0.21 | 0.2 | 0.2 | S | 0.24 | 0.23 | 0.21 | 0.2 | 0.22 | 0.23 | 0.28 | 0.22 | 0.3 | 0.20 | 0.40 | 0.26 |
| Aug 10 | 0.37 | 0.3 | 0.35 | 0.35 | 0.4 | NRM | NRM | 0.37 | 0.35 | 0.4 | 0.43 | 0.41 | 0.39 | S | 0.45 | 0.35 | 0.35 | 0.3 | 0.29 | 0.31 | 0.34 | 0.44 | 0.39 | 0.44 | 0.29 | 0.45 | 0.37 |
| Aug 11 | 0.44 | 0.37 | 0.33 | 0.38 | 0.39 | 0.45 | 0.44 | 0.49 | 0.51 | 0.51 | 0.56 | 0.47 | S | 0.49 | 0.54 | 0.52 | 0.54 | 0.56 | 0.48 | 0.54 | 0.52 | 0.68 | 0.6 | 0.66 | 0.33 | 0.68 | 0.50 |
| Aug 12 | 0.62 | 0.7 | 0.69 | 0.59 | 0.57 | 0.67 | 0.69 | 0.58 | 0.56 | 0.56 | 0.53 | S | 0.51 | 0.45 | 0.43 | 0.41 | 0.41 | 0.41 | 0.41 | 0.43 | 0.78 | 0.69 | 0.71 | 0.56 | 0.41 | 0.78 | **0.56** |
| Aug 13 | 0.49 | 0.44 | 0.48 | 0.59 | 0.47 | 0.48 | 0.47 | 0.55 | 0.43 | 0.47 | S | 0.36 | 0.3 | 0.32 | 0.24 | 0.3 | 0.23 | 0.24 | 0.28 | 0.31 | 0.32 | 0.29 | 0.32 | 0.33 | 0.23 | 0.59 | 0.38 |
| Aug 14 | 0.33 | 0.37 | 0.41 | 0.45 | 0.42 | 0.48 | 0.5 | 0.4 | 0.35 | S | 0.36 | 0.35 | 0.33 | 0.24 | 0.24 | 0.3 | 0.31 | 0.3 | 0.29 | 0.31 | 0.55 | 0.43 | 0.61 | 0.53 | 0.24 | 0.61 | 0.39 |
| Aug 15 | 0.38 | 0.41 | 0.51 | 0.52 | 0.55 | 0.53 | 0.55 | 0.56 | S | 0.45 | 0.47 | 0.31 | 0.33 | 0.24 | 0.2 | 0.31 | 0.25 | 0.24 | 0.21 | 0.24 | 0.28 | 0.48 | 0.38 | 0.34 | 0.20 | 0.56 | 0.38 |
| Aug 16 | 0.33 | 0.44 | 0.41 | 0.37 | 0.37 | 0.34 | 0.39 | S | 0.46 | 0.38 | 0.38 | 0.37 | 0.4 | 0.38 | 0.39 | 0.33 | 0.32 | 0.29 | 0.3 | 0.38 | 0.34 | 0.61 | 0.67 | 0.58 | 0.29 | 0.67 | 0.40 |
| Aug 17 | 0.43 | 0.44 | 0.45 | 0.5 | 0.63 | 0.77 | S | 0.41 | 0.32 | 0.29 | 0.33 | 0.32 | 0.36 | 0.28 | 0.23 | 0.32 | 0.33 | 0.28 | 0.31 | 0.44 | 0.62 | 0.48 | 0.4 | 0.34 | 0.23 | 0.77 | 0.40 |
| Aug 18 | 0.38 | 0.31 | 0.38 | 0.33 | 0.31 | S | 0.49 | 0.46 | 0.39 | 0.33 | 0.42 | 0.47 | 0.41 | 0.4 | 0.36 | 0.44 | 0.34 | NRM | 0.54 | 0.49 | 0.55 | 0.62 | 0.75 | 0.53 | 0.31 | 0.75 | 0.44 |
| Aug 19 | 0.67 | 0.66 | 0.55 | 0.46 | S | 0.37 | 0.32 | 0.37 | NRM | NRM | NRM | NRM | NRM | 0.27 | 0.26 | 0.23 | 0.17 | 0.2 | 0.16 | 0.28 | 0.73 | 0.63 | 0.45 | 0.38 | 0.16 | 0.73 | 0.40 |
| Aug 20 | 0.33 | 0.28 | 0.22 | S | 0.18 | 0.13 | 0.08 | 0.09 | 0.13 | 0.12 | 0.1 | 0.05 | 0.06 | 0.06 | 0.11 | 0.15 | 0.13 | 0.14 | 0.15 | 0.15 | 0.27 | 0.14 | 0.22 | 0.23 | 0.05 | 0.33 | 0.15 |
| Aug 21 | 0.22 | 0.13 | S | 0.16 | 0.14 | 0.2 | 0.16 | 0.19 | 0.13 | 0.16 | 0.16 | 0.17 | 0.16 | 0.15 | 0.16 | 0.13 | 0.18 | 0.19 | 0.14 | 0.16 | 0.07 | 0.19 | 0.15 | 0.14 | 0.07 | 0.22 | 0.16 |
| Aug 22 | 0.16 | S | 0.18 | 0.19 | 0.18 | 0.22 | 0.24 | 0.23 | 0.16 | 0.18 | 0.17 | 0.16 | 0.23 | 0.12 | 0.13 | 0.18 | 0.16 | 0.1 | 0.16 | 0.12 | 0.13 | 0.06 | 0.1 | 0.09 | 0.06 | 0.24 | 0.16 |
| Aug 23 | S | 0.1 | 0.1 | 0.11 | 0.12 | 0.09 | 0.13 | 0.12 | 0.11 | 0.1 | 0.11 | 0.12 | 0.12 | 0.12 | 0.13 | 0.11 | 0.1 | 0.11 | 0.16 | 0.36 | 0.3 | 0.21 | 0.23 | S | 0.09 | 0.36 | 0.14 |
| Aug 24 | 0.15 | 0.18 | 0.14 | 0.14 | 0.1 | 0.13 | 0.17 | 0.3 | 0.19 | 0.2 | 0.16 | 0.16 | 0.1 | 0.13 | 0.16 | 0.09 | 0.14 | 0.11 | 0.16 | 0.13 | 0.32 | 0.21 | S | 0.23 | 0.09 | 0.32 | 0.17 |
| Aug 25 | 0.17 | 0.19 | 0.18 | 0.12 | 0.16 | 0.09 | 0.08 | 0.05 | 0.09 | 0.11 | 0.12 | 0.07 | 0.11 | 0.1 | 0.12 | 0.08 | 0.07 | 0.1 | 0.13 | 0.13 | 0.35 | S | 0.22 | 0.18 | 0.05 | 0.35 | 0.13 |
| Aug 26 | 0.21 | 0.19 | 0.15 | 0.1 | 0.15 | 0.14 | 0.17 | 0.22 | 0.11 | 0.16 | 0.14 | 0.12 | 0.08 | 0.09 | 0.12 | 0.07 | 0.07 | 0.09 | 0.14 | 0.22 | S | 0.35 | 0.15 | 0.18 | 0.07 | 0.35 | 0.15 |
| Aug 27 | 0.34 | 0.34 | 0.34 | 0.22 | 0.19 | 0.17 | 0.2 | 0.14 | 0.12 | 0.09 | 0.14 | 0.11 | 0.11 | 0.15 | X | X | X | X | X | X | X | X | X | X | 0.09 | 0.34 | - |
| Aug 28 | X | X | X | X | X | X | X | X | X | NRM | 0 | 0.01 | 0.02 | 0.01 | 0.01 | 0.05 | 0.05 | 0.08 | S | 0.08 | 0.11 | 0.09 | 0.1 | 0.11 | **0.00** | 0.11 | - |
| Aug 29 | 0.17 | 0.14 | 0.14 | 0.08 | 0.21 | 0.18 | 0.08 | 0.09 | 0.09 | 0.07 | 0.04 | 0.07 | 0.07 | 0.09 | 0.07 | 0.06 | 0.08 | S | 0.19 | 0.36 | 0.24 | 0.18 | 0.2 | 0.19 | 0.04 | 0.36 | 0.13 |
| Aug 30 | 0.18 | 0.11 | 0.14 | 0.2 | 0.23 | 0.25 | 0.3 | 0.31 | 0.31 | 0.35 | 0.23 | 0.25 | 0.22 | 0.2 | 0.22 | 0.25 | S | 0.19 | 0.18 | 0.13 | 0.15 | 0.14 | 0.15 | 0.19 | 0.11 | 0.35 | 0.21 |
| Aug 31 | 0.16 | 0.11 | 0.17 | 0.17 | 0.14 | 0.13 | 0.2 | 0.16 | 0.12 | 0.16 | 0.19 | 0.17 | 0.12 | 0.14 | 0.13 | S | 0.14 | 0.17 | 0.2 | 0.14 | 0.16 | 0.17 | 0.18 | 0.16 | 0.11 | 0.20 | 0.16 |
| Diurnal Maximum | 0.67 | 0.70 | 0.82 | 0.72 | 0.87 | 0.77 | 0.72 | 0.71 | 0.92 | 0.56 | 0.56 | 0.47 | 0.51 | 0.49 | 0.54 | 0.52 | 0.54 | 0.56 | 0.54 | 0.54 | 0.78 | 0.69 | 0.75 | 0.66 | | | |
| Diurnal Average | 0.32 | 0.32 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.35 | 0.32 | 0.28 | 0.24 | 0.22 | 0.21 | 0.20 | 0.21 | 0.21 | 0.21 | 0.20 | 0.25 | 0.28 | 0.35 | 0.35 | 0.35 | 0.33 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for TRS - 986c Station*

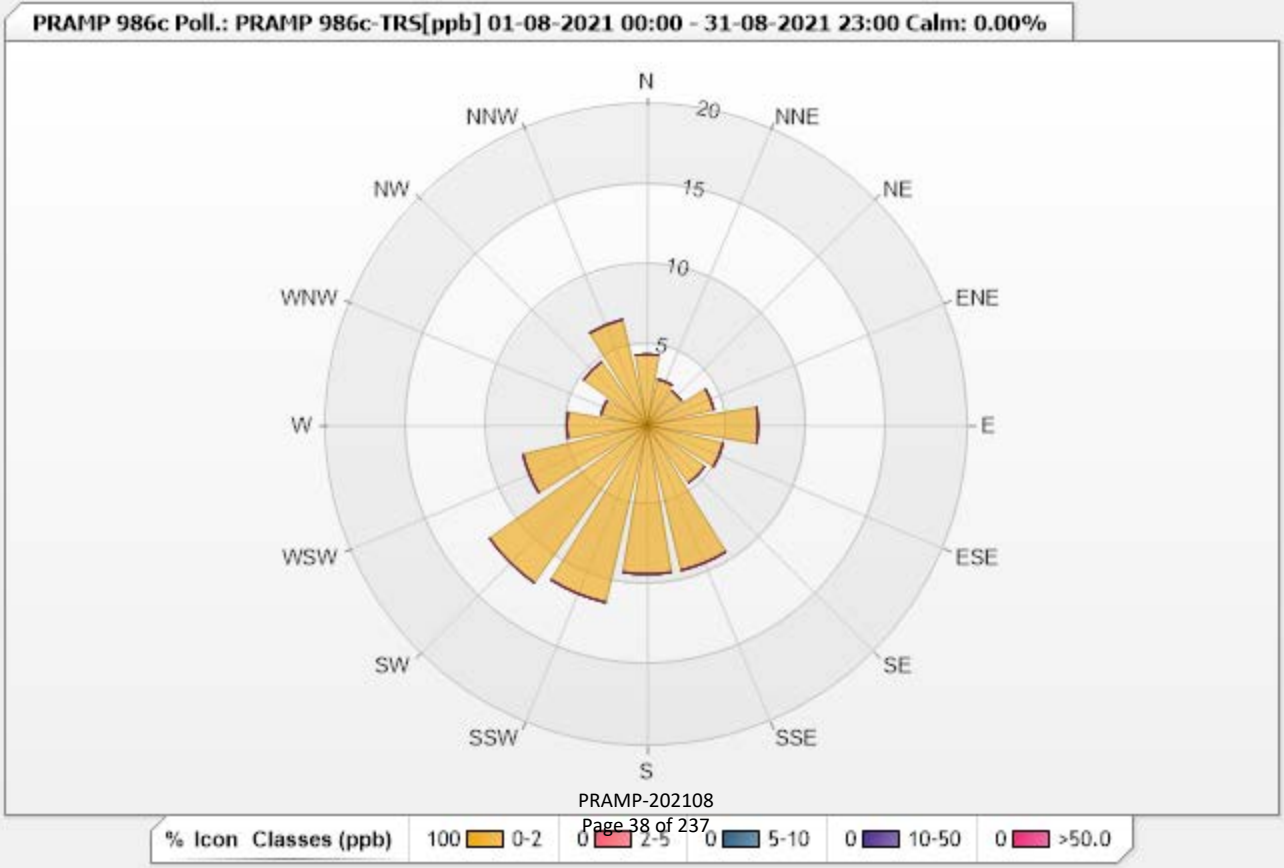





| Classes | TRS |
|---|---|
| <=0 | 0.00% |
| 0 - 1 | 100.00% |
| 1 - 2 | 0.00% |
| 2 - 3 | 0.00% |
| 3 - 4 | 0.00% |
| 4 - 5 | 0.00% |
| 5 - 6 | 0.00% |
| 6 - 7 | 0.00% |
| 7 - 8 | 0.00% |
| 8 - 9 | 0.00% |
| >9 | 0.00% |

Wind: PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 91.26% Calm Avg: 0.00 [ppb]

| Direction | 0-2 | 2-5 | 5-10 | 10-50 | >50.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.42 | 0 | 0 | 0 | 0 | 4.42 |
| NNE | 2.95 | 0 | 0 | 0 | 0 | 2.95 |
| NE | 2.65 | 0 | 0 | 0 | 0 | 2.65 |
| ENE | 4.27 | 0 | 0 | 0 | 0 | 4.27 |
| E | 6.92 | 0 | 0 | 0 | 0 | 6.92 |
| ESE | 4.86 | 0 | 0 | 0 | 0 | 4.86 |
| SE | 4.42 | 0 | 0 | 0 | 0 | 4.42 |
| SSE | 9.28 | 0 | 0 | 0 | 0 | 9.28 |
| S | 9.28 | 0 | 0 | 0 | 0 | 9.28 |
| SSW | 11.34 | 0 | 0 | 0 | 0 | 11.34 |
| SW | 12.08 | 0 | 0 | 0 | 0 | 12.08 |
| WSW | 7.95 | 0 | 0 | 0 | 0 | 7.95 |
| W | 5.01 | 0 | 0 | 0 | 0 | 5.01 |
| WNW | 2.95 | 0 | 0 | 0 | 0 | 2.95 |
| NW | 4.86 | 0 | 0 | 0 | 0 | 4.86 |
| NNW | 6.77 | 0 | 0 | 0 | 0 | 6.77 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 986c Station - August 2021

## Summary of Hourly Averages

## TOTAL HYDROCARBONS (THC) in ppm

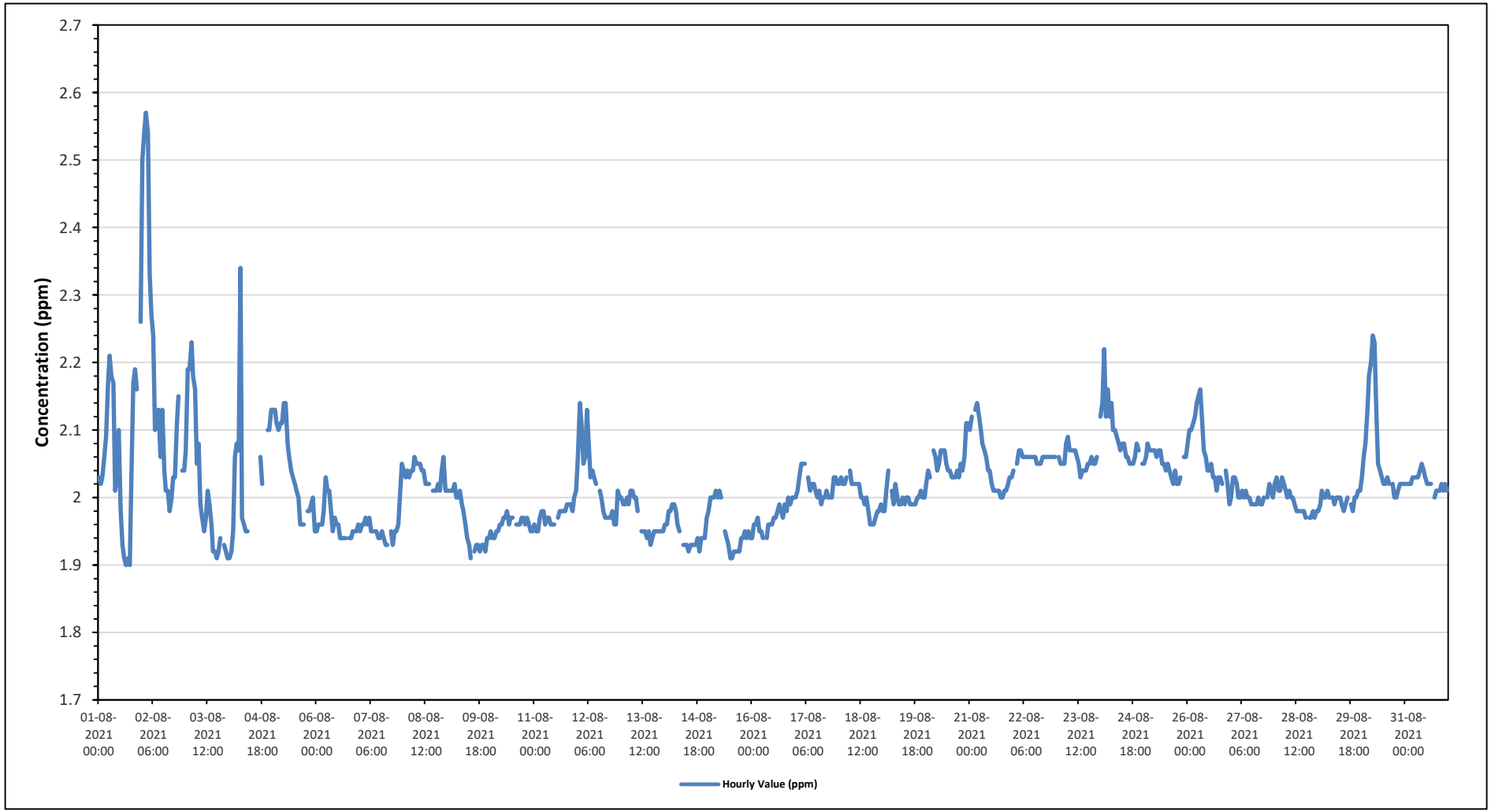
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.57 | ppm | on August 2 at hour 2 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.17 | ppm | on August 2 | Hours of Data: | 705 |
| Minimum Hourly Value: | 1.90 | ppm | on August 1 at hour 15 | Hours of Missing Data: | 3 |
| Minimum Daily Value: | 1.95 | ppm | on August 14 | Hours of Calibration: | 36 |
| Monthly Average: | 2.02 | ppm | | Operational Uptime: | 99.6 |

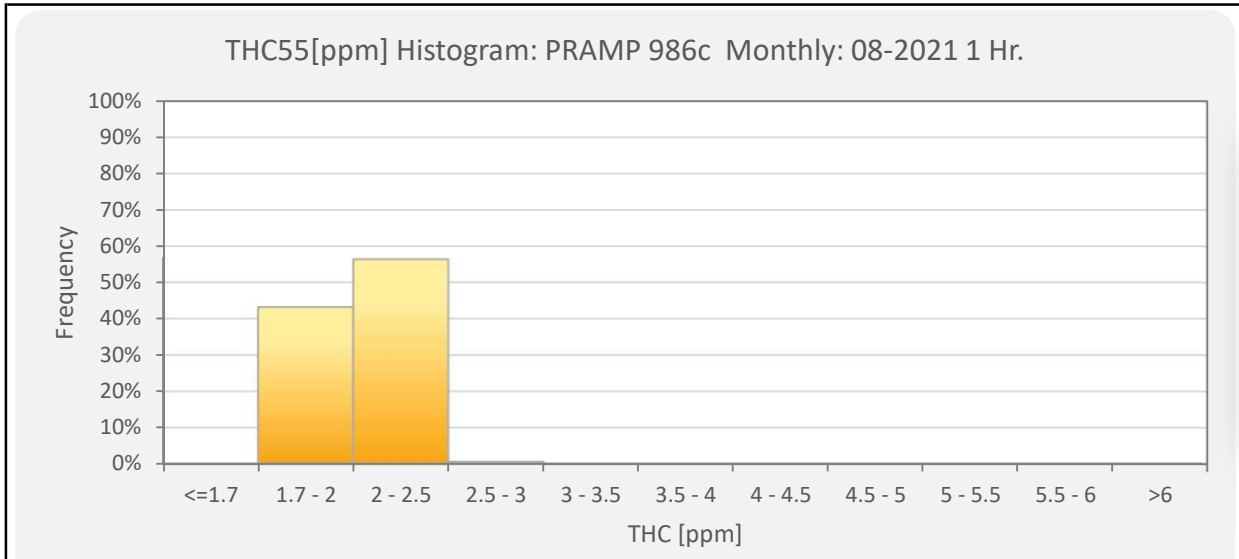
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 2.03 | 2.02 | 2.03 | 2.06 | 2.09 | 2.17 | 2.21 | 2.18 | 2.17 | 2.01 | 2.03 | 2.10 | 1.98 | 1.93 | 1.91 | 1.90 | 1.91 | 1.90 | 2.04 | 2.17 | 2.19 | 2.16 | S | 2.26 | **1.90** | 2.26 | 2.06 |
| Aug 2 | 2.50 | 2.54 | **2.57** | 2.54 | 2.33 | 2.27 | 2.24 | 2.10 | 2.11 | 2.13 | 2.06 | 2.13 | 2.04 | 2.01 | 2.01 | 1.98 | 2.00 | 2.03 | 2.03 | 2.11 | 2.15 | S | 2.04 | 2.04 | 1.98 | **2.57** | **2.17** |
| Aug 3 | 2.07 | 2.19 | 2.19 | 2.23 | 2.18 | 2.16 | 2.05 | 2.08 | 1.99 | 1.97 | 1.95 | 1.97 | 2.01 | 1.99 | 1.96 | 1.92 | 1.92 | 1.91 | 1.92 | 1.94 | S | 1.93 | 1.92 | 1.91 | 1.91 | 2.23 | 2.02 |
| Aug 4 | 1.91 | 1.92 | 1.95 | 2.06 | 2.08 | 2.07 | 2.34 | 1.97 | 1.96 | 1.95 | 1.95 | C | C | C | C | Y | Y | 2.06 | 2.02 | S | NRM | 2.10 | 2.10 | 2.13 | 1.91 | 2.34 | - |
| Aug 5 | 2.13 | 2.13 | 2.11 | 2.10 | 2.11 | 2.11 | 2.14 | 2.14 | 2.08 | 2.06 | 2.04 | 2.03 | 2.02 | 2.01 | 2.00 | 1.96 | 1.96 | 1.96 | S | 1.98 | 1.98 | 1.99 | 2.00 | 1.95 | 1.95 | 2.14 | 2.04 |
| Aug 6 | 1.95 | 1.96 | 1.96 | 1.96 | 1.98 | 2.03 | 2.01 | 2.01 | 1.98 | 1.95 | 1.97 | 1.96 | 1.96 | 1.94 | 1.94 | 1.94 | 1.94 | S | 1.94 | 1.94 | 1.95 | 1.95 | 1.95 | 1.96 | 1.94 | 2.03 | 1.96 |
| Aug 7 | 1.95 | 1.96 | 1.96 | 1.97 | 1.96 | 1.97 | 1.95 | 1.95 | 1.95 | 1.95 | 1.94 | 1.94 | 1.95 | 1.94 | 1.93 | 1.93 | S | 1.95 | 1.93 | 1.95 | 1.95 | 1.96 | 2.00 | 2.05 | 1.93 | 2.05 | 1.96 |
| Aug 8 | 2.04 | 2.03 | 2.04 | 2.03 | 2.04 | 2.04 | 2.06 | 2.05 | 2.05 | 2.05 | 2.04 | 2.04 | 2.02 | 2.02 | 2.02 | S | 2.01 | 2.01 | 2.01 | 2.02 | 2.01 | 2.04 | 2.06 | 2.01 | 2.01 | 2.06 | 2.03 |
| Aug 9 | 2.01 | 2.01 | 2.01 | 2.01 | 2.02 | 2.00 | 2.00 | 2.01 | 1.99 | 1.98 | 1.96 | 1.94 | 1.93 | 1.91 | S | 1.92 | 1.93 | 1.93 | 1.92 | 1.93 | 1.93 | 1.92 | 1.94 | 1.94 | 1.91 | 2.02 | 1.96 |
| Aug 10 | 1.95 | 1.94 | 1.94 | 1.95 | 1.95 | 1.96 | 1.96 | 1.97 | 1.97 | 1.98 | 1.96 | 1.97 | 1.97 | S | 1.96 | 1.96 | 1.96 | 1.97 | 1.97 | 1.96 | 1.97 | 1.96 | 1.95 | 1.95 | 1.94 | 1.98 | 1.96 |
| Aug 11 | 1.96 | 1.95 | 1.95 | 1.97 | 1.98 | 1.98 | 1.96 | 1.97 | 1.97 | 1.96 | 1.96 | 1.96 | S | 1.97 | 1.98 | 1.98 | 1.98 | 1.98 | 1.99 | 1.99 | 1.99 | 1.98 | 2.00 | 2.01 | 1.95 | 2.01 | 1.97 |
| Aug 12 | 2.06 | 2.14 | 2.11 | 2.05 | 2.06 | 2.13 | 2.08 | 2.03 | 2.04 | 2.03 | 2.02 | S | 2.01 | 2.00 | 1.98 | 1.97 | 1.97 | 1.97 | 1.97 | 1.97 | 1.98 | 1.96 | 1.96 | 2.01 | 1.96 | 2.14 | 2.02 |
| Aug 13 | 2.00 | 1.99 | 1.99 | 2.00 | 1.99 | 2.01 | 2.01 | 2.00 | 2.00 | 1.98 | S | 1.95 | 1.95 | 1.95 | 1.94 | 1.95 | 1.93 | 1.94 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.93 | 2.01 | 1.97 |
| Aug 14 | 1.96 | 1.96 | 1.98 | 1.98 | 1.99 | 1.99 | 1.98 | 1.96 | 1.95 | S | 1.93 | 1.93 | 1.93 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.92 | 1.94 | 1.94 | 1.94 | 1.97 | 1.92 | 1.99 | 1.95 |
| Aug 15 | 1.98 | 2.00 | 2.00 | 2.00 | 2.01 | 2.00 | 2.01 | 2.00 | S | 1.95 | 1.94 | 1.93 | 1.91 | 1.91 | 1.92 | 1.92 | 1.92 | 1.92 | 1.94 | 1.94 | 1.95 | 1.94 | 1.95 | 1.94 | 1.91 | 2.01 | 1.96 |
| Aug 16 | 1.94 | 1.96 | 1.96 | 1.97 | 1.95 | 1.95 | 1.94 | S | 1.94 | 1.96 | 1.96 | 1.96 | 1.97 | 1.97 | 1.98 | 1.99 | 1.98 | 1.97 | 1.99 | 1.98 | 2.00 | 1.99 | 2.00 | 2.00 | 1.94 | 2.00 | 1.97 |
| Aug 17 | 2.00 | 2.01 | 2.03 | 2.05 | 2.05 | 2.05 | S | 2.03 | 2.01 | 2.02 | 2.02 | 2.01 | 2.00 | 2.01 | 1.99 | 2.00 | 2.00 | 2.01 | 2.00 | 2.00 | 2.00 | 2.03 | 2.03 | 2.02 | 1.99 | 2.05 | 2.02 |
| Aug 18 | 2.02 | 2.03 | 2.02 | 2.02 | 2.03 | S | 2.04 | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 | 2.00 | 2.00 | 1.99 | 2.00 | 1.98 | 1.96 | 1.96 | 1.96 | 1.97 | 1.98 | 1.98 | 1.99 | 1.96 | 2.04 | 2.00 |
| Aug 19 | 1.98 | 1.98 | 2.01 | 2.04 | S | 2.01 | 1.99 | 2.02 | 2.00 | 1.99 | 1.99 | 2.00 | 1.99 | 2.00 | 2.00 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | 2.01 | 2.00 | 2.00 | 1.98 | 2.04 | 2.00 |
| Aug 20 | 2.02 | 2.04 | 2.03 | S | 2.07 | 2.06 | 2.04 | 2.05 | 2.07 | 2.07 | 2.07 | 2.05 | 2.04 | 2.04 | 2.03 | 2.03 | 2.03 | 2.04 | 2.03 | 2.05 | 2.04 | 2.06 | 2.11 | 2.11 | 2.02 | 2.11 | 2.05 |
| Aug 21 | 2.10 | 2.12 | S | 2.13 | 2.14 | 2.12 | 2.10 | 2.08 | 2.07 | 2.06 | 2.04 | 2.04 | 2.02 | 2.01 | 2.01 | 2.01 | 2.01 | 2.00 | 2.00 | 2.01 | 2.01 | 2.02 | 2.03 | 2.03 | 2.00 | 2.14 | 2.05 |
| Aug 22 | 2.04 | S | 2.05 | 2.07 | 2.07 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.05 | 2.05 | 2.05 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.04 | 2.07 | 2.06 |
| Aug 23 | S | 2.06 | 2.05 | 2.05 | 2.05 | 2.08 | 2.09 | 2.07 | 2.07 | 2.07 | 2.07 | 2.06 | 2.05 | 2.03 | 2.04 | 2.04 | 2.04 | 2.05 | 2.05 | 2.05 | 2.06 | 2.05 | 2.05 | 2.06 | S | 2.03 | 2.09 | 2.06 |
| Aug 24 | 2.12 | 2.14 | 2.22 | 2.12 | 2.16 | 2.12 | 2.14 | 2.10 | 2.10 | 2.09 | 2.08 | 2.07 | 2.08 | 2.08 | 2.06 | 2.06 | 2.05 | 2.05 | 2.05 | 2.06 | 2.08 | 2.07 | S | 2.05 | 2.05 | 2.22 | 2.09 |
| Aug 25 | 2.05 | 2.06 | 2.08 | 2.07 | 2.07 | 2.07 | 2.07 | 2.06 | 2.07 | 2.07 | 2.05 | 2.05 | 2.04 | 2.05 | 2.04 | 2.03 | 2.02 | 2.04 | 2.02 | 2.02 | 2.03 | S | 2.06 | 2.06 | 2.02 | 2.08 | 2.05 |
| Aug 26 | 2.08 | 2.10 | 2.10 | 2.11 | 2.12 | 2.14 | 2.15 | 2.16 | 2.11 | 2.07 | 2.06 | 2.04 | 2.04 | 2.05 | 2.03 | 2.03 | 2.01 | 2.03 | 2.03 | 2.02 | S | 2.04 | 2.02 | 1.99 | 1.99 | 2.16 | 2.07 |
| Aug 27 | 2.00 | 2.03 | 2.03 | 2.02 | 2.00 | 2.00 | 2.01 | 2.00 | 2.01 | 2.00 | 2.00 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 1.99 | 1.99 | 2.00 | S | 2.00 | 2.02 | 2.01 | 2.00 | 1.99 | 2.03 | 2.00 |
| Aug 28 | 2.02 | 2.03 | 2.01 | 2.01 | 2.03 | 2.02 | 2.01 | 2.00 | 2.01 | 2.00 | 2.00 | 1.99 | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 | 1.97 | S | 1.97 | 1.97 | 1.98 | 1.97 | 1.98 | 1.97 | 2.03 | 1.99 |
| Aug 29 | 1.98 | 1.99 | 2.01 | 2.00 | 2.00 | 2.01 | 2.00 | 2.00 | 2.00 | 1.99 | 2.00 | 2.00 | 2.00 | 1.99 | 1.98 | 1.99 | 2.00 | S | 1.99 | 1.98 | 2.00 | 2.00 | 2.01 | 2.01 | 1.98 | 2.01 | 2.00 |
| Aug 30 | 2.03 | 2.06 | 2.08 | 2.13 | 2.18 | 2.20 | 2.24 | 2.23 | 2.13 | 2.05 | 2.04 | 2.03 | 2.02 | 2.02 | 2.03 | 2.02 | S | 2.02 | 2.00 | 2.00 | 2.01 | 2.02 | 2.02 | 2.02 | 2.00 | 2.24 | 2.07 |
| Aug 31 | 2.02 | 2.02 | 2.02 | 2.02 | 2.03 | 2.03 | 2.03 | 2.03 | 2.04 | 2.05 | 2.04 | 2.03 | 2.02 | 2.02 | 2.02 | S | 2.00 | 2.01 | 2.01 | 2.01 | 2.02 | 2.01 | 2.02 | 2.01 | 2.00 | 2.05 | 2.02 |
| Diurnal Maximum | 2.50 | 2.54 | 2.57 | 2.54 | 2.33 | 2.27 | 2.34 | 2.23 | 2.17 | 2.13 | 2.08 | 2.13 | 2.08 | 2.08 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.17 | 2.19 | 2.16 | 2.11 | 2.26 | | | |
| Diurnal Average | 2.03 | 2.05 | 2.05 | 2.06 | 2.06 | 2.06 | 2.06 | 2.04 | 2.03 | 2.02 | 2.01 | 2.01 | 2.00 | 1.99 | 1.99 | 1.98 | 1.98 | 1.99 | 1.99 | 2.00 | 2.01 | 2.00 | 2.01 | 2.01 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for THC - 986c Station*

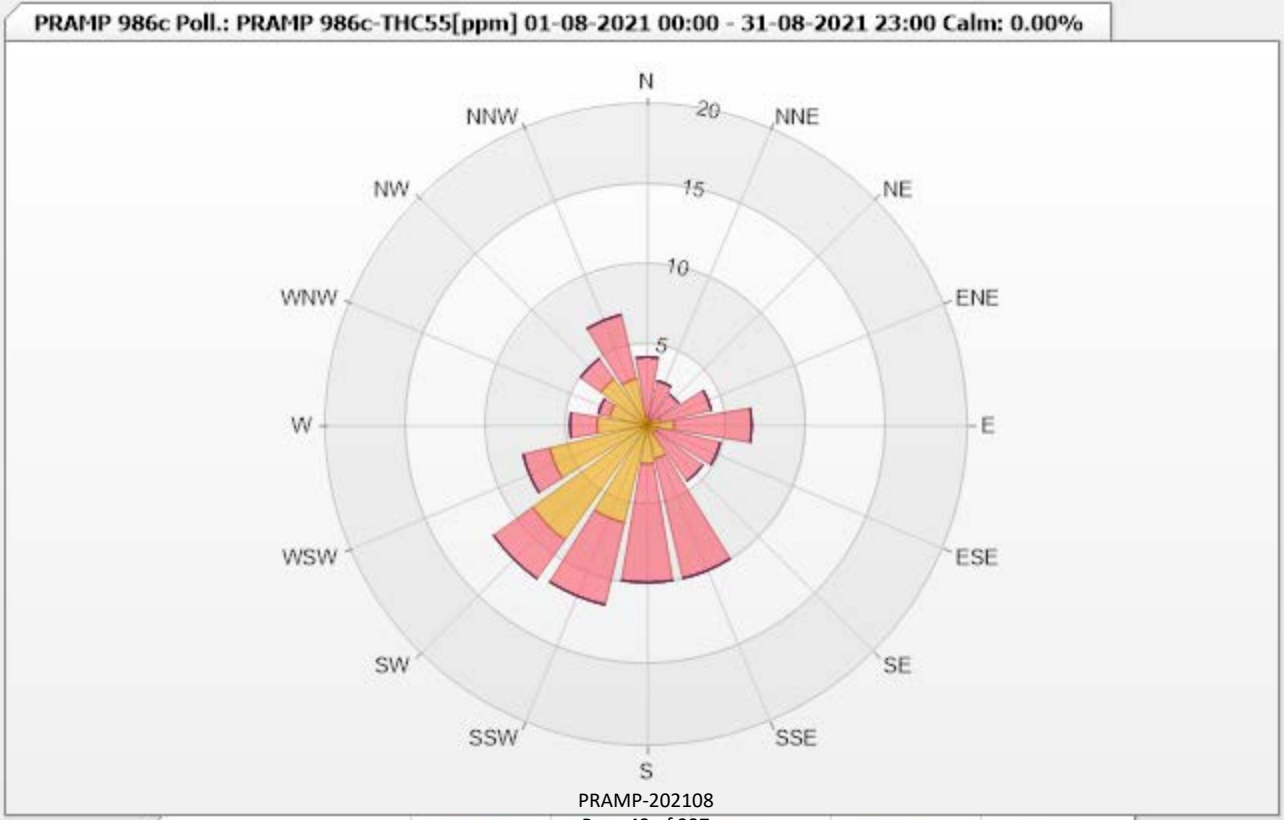





| Classes | THC55 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 43.12% |
| 2 - 2.5 | 56.31% |
| 2.5 - 3 | 0.57% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-40 | >40.0 | Total |
|---|---|---|---|---|---|---|
| N | 0.57 | 3.69 | 0 | 0 | 0 | 4.26 |
| NNE | 0.43 | 2.41 | 0 | 0 | 0 | 2.84 |
| NE | 0.28 | 2.13 | 0 | 0 | 0 | 2.41 |
| ENE | 0.85 | 3.26 | 0 | 0 | 0 | 4.11 |
| E | 1.7 | 4.82 | 0 | 0 | 0 | 6.52 |
| ESE | 0.71 | 3.97 | 0 | 0 | 0 | 4.68 |
| SE | 0.57 | 3.69 | 0 | 0 | 0 | 4.26 |
| SSE | 2.13 | 7.66 | 0 | 0 | 0 | 9.79 |
| S | 2.41 | 7.38 | 0 | 0 | 0 | 9.79 |
| SSW | 6.24 | 5.25 | 0 | 0 | 0 | 11.49 |
| SW | 8.79 | 2.98 | 0 | 0 | 0 | 11.77 |
| WSW | 6.24 | 1.7 | 0 | 0 | 0 | 7.94 |
| W | 3.12 | 1.7 | 0 | 0 | 0 | 4.82 |
| WNW | 2.41 | 0.71 | 0 | 0 | 0 | 3.12 |
| NW | 3.55 | 1.56 | 0 | 0 | 0 | 5.11 |
| NNW | 2.98 | 4.11 | 0 | 0 | 0 | 7.09 |
| Summary | 42.98 | 57.02 | 0 | 0 | 0 | 100 |


PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
43 0-2
57 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 986c Station - August 2021

## Summary of Hourly Averages

## METHANE (CH4) in ppm

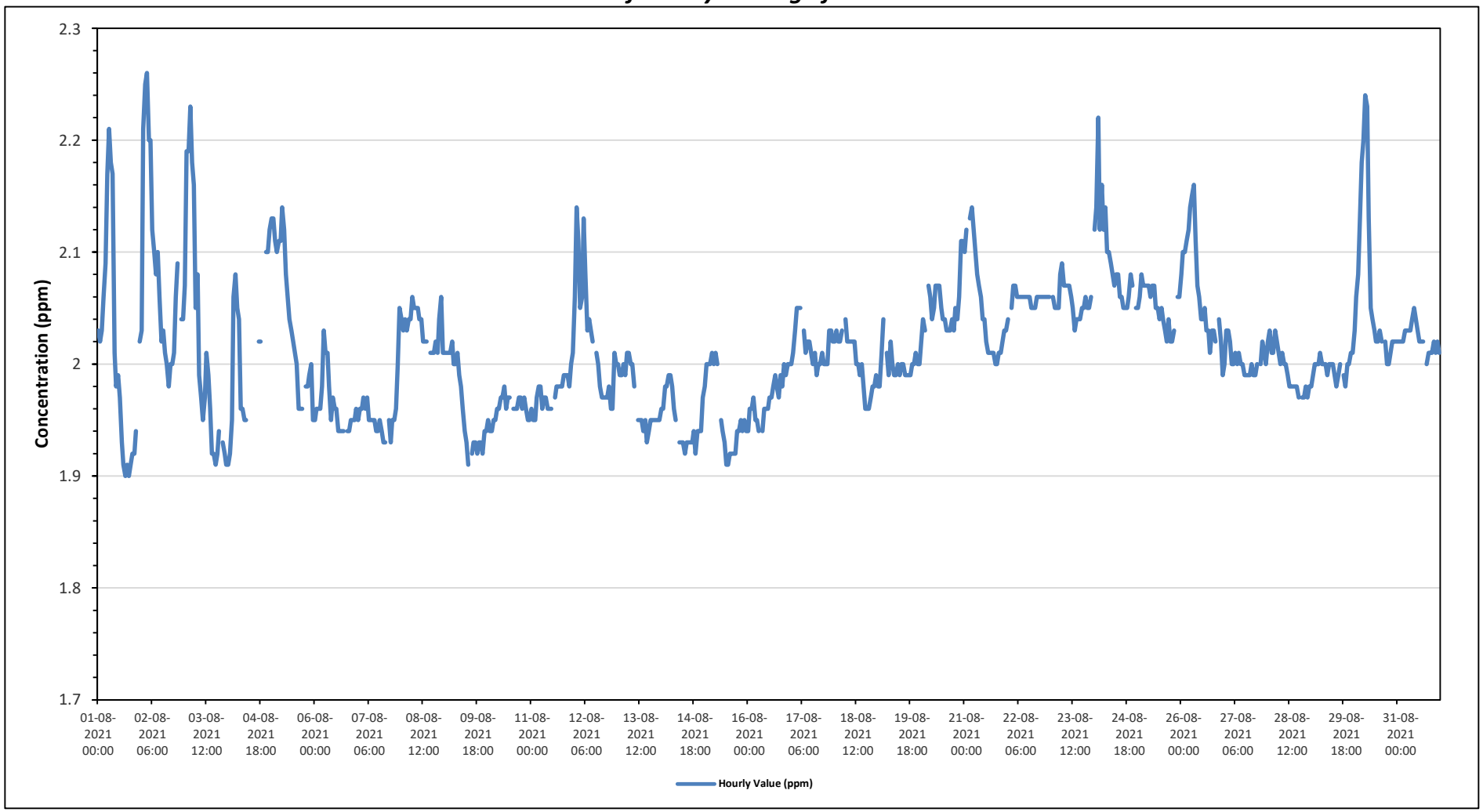
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.26 | ppm | on August 2 at hour 3 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.09 | ppm | on August 24 | Hours of Data: | 705 |
| Minimum Hourly Value: | 1.90 | ppm | on August 1 at hour 15 | Hours of Missing Data: | 3 |
| Minimum Daily Value: | 1.95 | ppm | on August 14 | Hours of Calibration: | 36 |
| Monthly Average: | 2.01 | ppm | | Operational Uptime: | 99.6 |

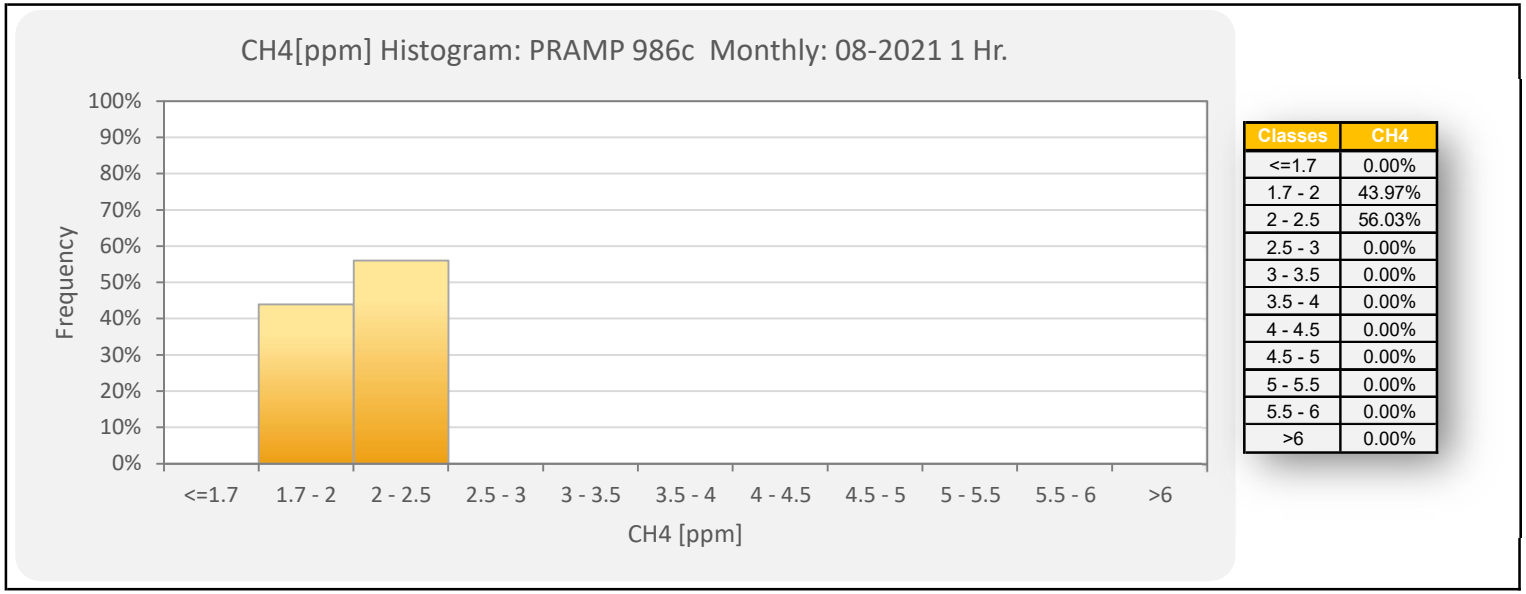
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 2.03 | 2.02 | 2.03 | 2.06 | 2.09 | 2.17 | 2.21 | 2.18 | 2.17 | 2.01 | 1.98 | 1.99 | 1.97 | 1.93 | 1.91 | 1.90 | 1.91 | 1.90 | 1.91 | 1.92 | 1.92 | 1.94 | S | 2.02 | **1.90** | 2.21 | 2.01 |
| Aug 2 | 2.03 | 2.21 | 2.25 | **2.26** | 2.20 | 2.20 | 2.12 | 2.10 | 2.08 | 2.10 | 2.06 | 2.02 | 2.03 | 2.01 | 2.00 | 1.98 | 2.00 | 2.00 | 2.01 | 2.06 | 2.09 | S | 2.04 | 2.04 | 1.98 | **2.26** | 2.08 |
| Aug 3 | 2.07 | 2.19 | 2.19 | 2.23 | 2.18 | 2.16 | 2.05 | 2.08 | 1.99 | 1.97 | 1.95 | 1.97 | 2.01 | 1.99 | 1.96 | 1.92 | 1.92 | 1.91 | 1.92 | 1.94 | S | 1.93 | 1.92 | 1.91 | 1.91 | 2.23 | 2.02 |
| Aug 4 | 1.91 | 1.92 | 1.95 | 2.06 | 2.08 | 2.05 | 2.04 | 1.96 | 1.96 | 1.95 | 1.95 | C | C | C | C | Y | Y | 2.02 | 2.02 | S | NRM | 2.10 | 2.10 | 2.12 | 1.91 | 2.12 | - |
| Aug 5 | 2.13 | 2.13 | 2.11 | 2.10 | 2.11 | 2.11 | 2.14 | 2.12 | 2.08 | 2.06 | 2.04 | 2.03 | 2.02 | 2.01 | 2.00 | 1.96 | 1.96 | 1.96 | S | 1.98 | 1.98 | 1.99 | 2.00 | 1.95 | 1.95 | 2.14 | 2.04 |
| Aug 6 | 1.95 | 1.96 | 1.96 | 1.96 | 1.98 | 2.03 | 2.01 | 2.01 | 1.98 | 1.95 | 1.97 | 1.96 | 1.96 | 1.94 | 1.94 | 1.94 | 1.94 | S | 1.94 | 1.94 | 1.95 | 1.95 | 1.95 | 1.96 | 1.94 | 2.03 | 1.96 |
| Aug 7 | 1.95 | 1.96 | 1.96 | 1.97 | 1.96 | 1.97 | 1.95 | 1.95 | 1.95 | 1.95 | 1.94 | 1.94 | 1.95 | 1.94 | 1.93 | 1.93 | S | 1.95 | 1.93 | 1.95 | 1.95 | 1.96 | 2.00 | 2.05 | 1.93 | 2.05 | 1.96 |
| Aug 8 | 2.04 | 2.03 | 2.04 | 2.03 | 2.04 | 2.04 | 2.06 | 2.05 | 2.05 | 2.05 | 2.04 | 2.04 | 2.02 | 2.02 | 2.02 | S | 2.01 | 2.01 | 2.01 | 2.02 | 2.01 | 2.04 | 2.06 | 2.01 | 2.01 | 2.06 | 2.03 |
| Aug 9 | 2.01 | 2.01 | 2.01 | 2.01 | 2.02 | 2.00 | 2.00 | 2.01 | 1.99 | 1.98 | 1.96 | 1.94 | 1.93 | 1.91 | S | 1.92 | 1.93 | 1.93 | 1.92 | 1.93 | 1.93 | 1.92 | 1.94 | 1.94 | 1.91 | 2.02 | 1.96 |
| Aug 10 | 1.95 | 1.94 | 1.94 | 1.95 | 1.95 | 1.96 | 1.96 | 1.97 | 1.97 | 1.98 | 1.96 | 1.97 | 1.97 | S | 1.96 | 1.96 | 1.96 | 1.97 | 1.97 | 1.96 | 1.97 | 1.96 | 1.95 | 1.95 | 1.94 | 1.98 | 1.96 |
| Aug 11 | 1.96 | 1.95 | 1.95 | 1.97 | 1.98 | 1.98 | 1.96 | 1.97 | 1.97 | 1.96 | 1.96 | 1.96 | S | 1.97 | 1.98 | 1.98 | 1.98 | 1.98 | 1.99 | 1.99 | 1.99 | 1.98 | 2.00 | 2.01 | 1.95 | 2.01 | 1.97 |
| Aug 12 | 2.06 | 2.14 | 2.11 | 2.05 | 2.06 | 2.13 | 2.08 | 2.03 | 2.04 | 2.03 | 2.02 | S | 2.01 | 2.00 | 1.98 | 1.97 | 1.97 | 1.97 | 1.97 | 1.98 | 1.96 | 1.96 | 2.01 | 2.00 | 1.96 | 2.14 | 2.02 |
| Aug 13 | 2.00 | 1.99 | 1.99 | 2.00 | 1.99 | 2.01 | 2.01 | 2.00 | 2.00 | 1.98 | S | 1.95 | 1.95 | 1.95 | 1.94 | 1.95 | 1.93 | 1.94 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.93 | 2.01 | 1.97 |
| Aug 14 | 1.96 | 1.96 | 1.98 | 1.98 | 1.99 | 1.99 | 1.98 | 1.96 | 1.95 | S | 1.93 | 1.93 | 1.93 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.92 | 1.94 | 1.94 | 1.94 | 1.97 | 1.92 | 1.99 | 1.95 |
| Aug 15 | 1.98 | 2.00 | 2.00 | 2.00 | 2.01 | 2.00 | 2.01 | 2.00 | S | 1.95 | 1.94 | 1.93 | 1.91 | 1.91 | 1.92 | 1.92 | 1.92 | 1.92 | 1.94 | 1.94 | 1.95 | 1.94 | 1.95 | 1.94 | 1.91 | 2.01 | 1.96 |
| Aug 16 | 1.94 | 1.96 | 1.96 | 1.97 | 1.95 | 1.95 | 1.94 | S | 1.94 | 1.96 | 1.96 | 1.96 | 1.97 | 1.97 | 1.98 | 1.99 | 1.98 | 1.97 | 1.99 | 1.98 | 2.00 | 1.99 | 2.00 | 2.00 | 1.94 | 2.00 | 1.97 |
| Aug 17 | 2.00 | 2.01 | 2.03 | 2.05 | 2.05 | 2.05 | S | 2.03 | 2.01 | 2.02 | 2.02 | 2.01 | 2.00 | 2.01 | 1.99 | 2.00 | 2.00 | 2.01 | 2.00 | 2.00 | 2.00 | 2.03 | 2.03 | 2.02 | 1.99 | 2.05 | 2.02 |
| Aug 18 | 2.02 | 2.03 | 2.02 | 2.02 | 2.03 | S | 2.04 | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 | 2.00 | 2.00 | 1.99 | 2.00 | 1.98 | 1.96 | 1.96 | 1.96 | 1.97 | 1.98 | 1.98 | 1.99 | 1.96 | 2.04 | 2.00 |
| Aug 19 | 1.98 | 1.98 | 2.01 | 2.04 | S | 2.01 | 1.99 | 2.02 | 2.00 | 1.99 | 1.99 | 2.00 | 1.99 | 2.00 | 2.00 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | 2.01 | 2.00 | 2.00 | 1.98 | 2.04 | 2.00 |
| Aug 20 | 2.02 | 2.04 | 2.03 | S | 2.07 | 2.06 | 2.04 | 2.05 | 2.07 | 2.07 | 2.07 | 2.05 | 2.04 | 2.04 | 2.03 | 2.03 | 2.03 | 2.04 | 2.03 | 2.05 | 2.04 | 2.06 | 2.11 | 2.11 | 2.02 | 2.11 | 2.05 |
| Aug 21 | 2.10 | 2.12 | S | 2.13 | 2.14 | 2.12 | 2.10 | 2.08 | 2.07 | 2.06 | 2.04 | 2.04 | 2.02 | 2.01 | 2.01 | 2.01 | 2.01 | 2.00 | 2.00 | 2.01 | 2.01 | 2.02 | 2.03 | 2.03 | 2.00 | 2.14 | 2.05 |
| Aug 22 | 2.04 | S | 2.05 | 2.07 | 2.07 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.05 | 2.05 | 2.05 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.04 | 2.07 | 2.06 |
| Aug 23 | S | 2.06 | 2.05 | 2.05 | 2.05 | 2.08 | 2.09 | 2.07 | 2.07 | 2.07 | 2.07 | 2.06 | 2.05 | 2.03 | 2.04 | 2.04 | 2.04 | 2.05 | 2.05 | 2.05 | 2.06 | 2.05 | 2.05 | S | 2.03 | 2.09 | 2.06 |
| Aug 24 | 2.12 | 2.14 | 2.22 | 2.12 | 2.16 | 2.12 | 2.14 | 2.10 | 2.10 | 2.09 | 2.08 | 2.07 | 2.08 | 2.08 | 2.06 | 2.06 | 2.05 | 2.05 | 2.05 | 2.06 | 2.08 | 2.07 | S | 2.05 | 2.05 | 2.22 | **2.09** |
| Aug 25 | 2.05 | 2.06 | 2.08 | 2.07 | 2.07 | 2.07 | 2.07 | 2.06 | 2.07 | 2.07 | 2.05 | 2.05 | 2.04 | 2.05 | 2.04 | 2.03 | 2.02 | 2.04 | 2.02 | 2.02 | 2.03 | S | 2.06 | 2.06 | 2.02 | 2.08 | 2.05 |
| Aug 26 | 2.08 | 2.10 | 2.10 | 2.11 | 2.12 | 2.14 | 2.15 | 2.16 | 2.11 | 2.07 | 2.06 | 2.04 | 2.04 | 2.05 | 2.03 | 2.03 | 2.01 | 2.03 | 2.03 | 2.02 | S | 2.04 | 2.02 | 1.99 | 1.99 | 2.16 | 2.07 |
| Aug 27 | 2.00 | 2.03 | 2.03 | 2.02 | 2.00 | 2.00 | 2.01 | 2.00 | 2.01 | 2.00 | 2.00 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 1.99 | 1.99 | 2.00 | S | 2.00 | 2.02 | 2.01 | 2.00 | 1.99 | 2.03 | 2.00 |
| Aug 28 | 2.02 | 2.03 | 2.01 | 2.01 | 2.03 | 2.02 | 2.01 | 2.00 | 2.01 | 2.00 | 2.00 | 1.99 | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 | 1.97 | S | 1.97 | 1.97 | 1.98 | 1.97 | 1.98 | 1.97 | 2.03 | 1.99 |
| Aug 29 | 1.98 | 1.99 | 2.00 | 2.00 | 2.00 | 2.01 | 2.00 | 2.00 | 2.00 | 1.99 | 2.00 | 2.00 | 2.00 | 1.99 | 1.98 | 1.99 | 2.00 | S | 1.99 | 1.98 | 2.00 | 2.00 | 2.01 | 2.01 | 1.98 | 2.01 | 2.00 |
| Aug 30 | 2.03 | 2.06 | 2.08 | 2.13 | 2.18 | 2.20 | 2.24 | 2.23 | 2.13 | 2.05 | 2.04 | 2.03 | 2.02 | 2.02 | 2.03 | 2.02 | S | 2.02 | 2.00 | 2.00 | 2.01 | 2.02 | 2.02 | 2.02 | 2.00 | 2.24 | 2.07 |
| Aug 31 | 2.02 | 2.02 | 2.02 | 2.02 | 2.03 | 2.03 | 2.03 | 2.03 | 2.04 | 2.05 | 2.04 | 2.03 | 2.02 | 2.02 | 2.02 | S | 2.00 | 2.01 | 2.01 | 2.01 | 2.02 | 2.01 | 2.02 | 2.01 | 2.00 | 2.05 | 2.02 |
| Diurnal Maximum | 2.13 | 2.21 | 2.25 | 2.26 | 2.20 | 2.20 | 2.24 | 2.23 | 2.17 | 2.10 | 2.08 | 2.07 | 2.08 | 2.08 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.09 | 2.10 | 2.11 | 2.12 | | | |
| Diurnal Average | 2.01 | 2.03 | 2.04 | 2.05 | 2.05 | 2.06 | 2.05 | 2.04 | 2.03 | 2.02 | 2.01 | 2.00 | 2.00 | 1.99 | 1.99 | 1.98 | 1.98 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 2.01 | 2.01 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for CH4 - 986c Station*

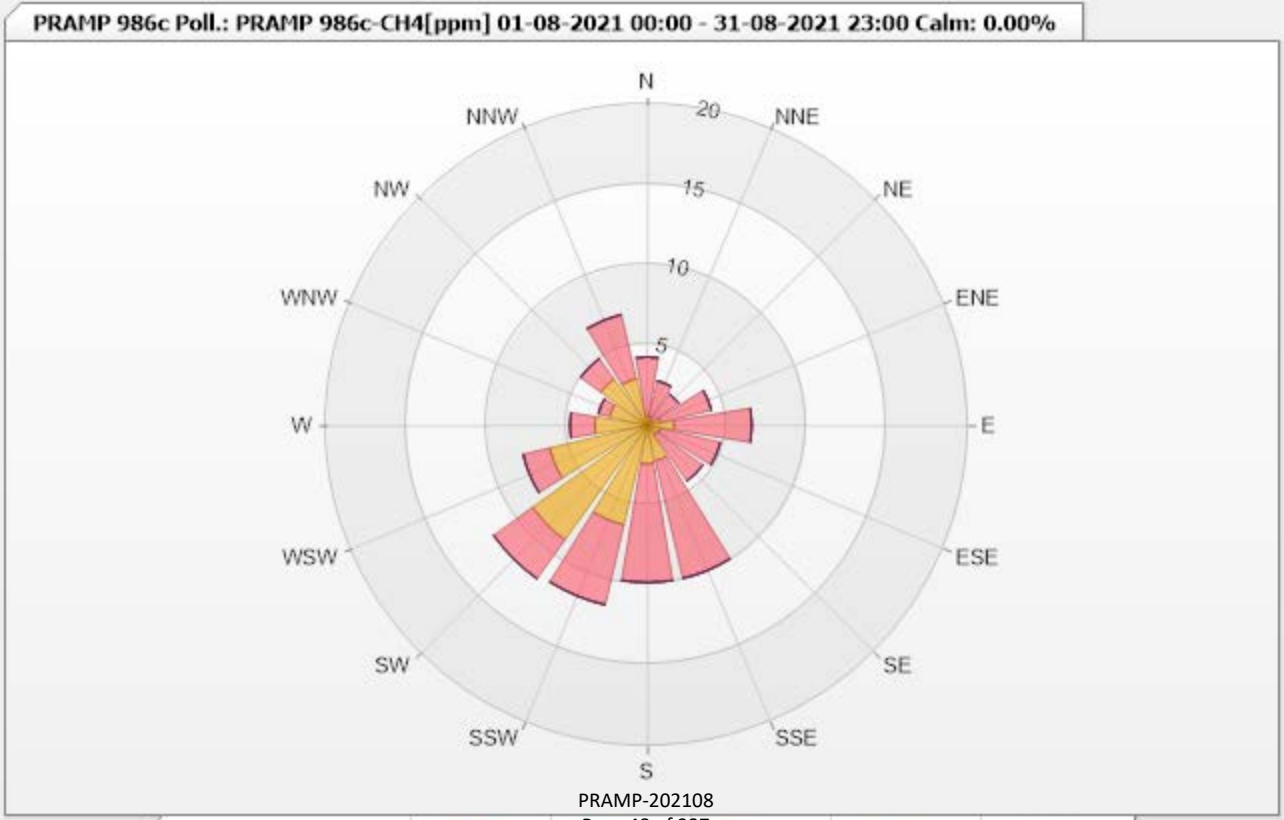





| Classes | CH4 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 43.97% |
| 2 - 2.5 | 56.03% |
| 2.5 - 3 | 0.00% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-20 | >20.0 | Total |
|---|---|---|---|---|---|---|
| N | 0.57 | 3.69 | 0 | 0 | 0 | 4.26 |
| NNE | 0.57 | 2.27 | 0 | 0 | 0 | 2.84 |
| NE | 0.28 | 2.13 | 0 | 0 | 0 | 2.41 |
| ENE | 0.85 | 3.26 | 0 | 0 | 0 | 4.11 |
| E | 1.7 | 4.82 | 0 | 0 | 0 | 6.52 |
| ESE | 0.85 | 3.83 | 0 | 0 | 0 | 4.68 |
| SE | 0.71 | 3.55 | 0 | 0 | 0 | 4.26 |
| SSE | 2.27 | 7.52 | 0 | 0 | 0 | 9.79 |
| S | 2.41 | 7.38 | 0 | 0 | 0 | 9.79 |
| SSW | 6.38 | 5.11 | 0 | 0 | 0 | 11.49 |
| SW | 8.79 | 2.98 | 0 | 0 | 0 | 11.77 |
| WSW | 6.24 | 1.7 | 0 | 0 | 0 | 7.94 |
| W | 3.26 | 1.56 | 0 | 0 | 0 | 4.82 |
| WNW | 2.41 | 0.71 | 0 | 0 | 0 | 3.12 |
| NW | 3.55 | 1.56 | 0 | 0 | 0 | 5.11 |
| NNW | 2.98 | 4.11 | 0 | 0 | 0 | 7.09 |
| Summary | 43.82 | 56.18 | 0 | 0 | 0 | 100 |


PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
44 0-2
56 2-5
0 5-10
0 10-20
0 >20.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## NON-METHANE HYDROCARBONS (NMHC) in ppm

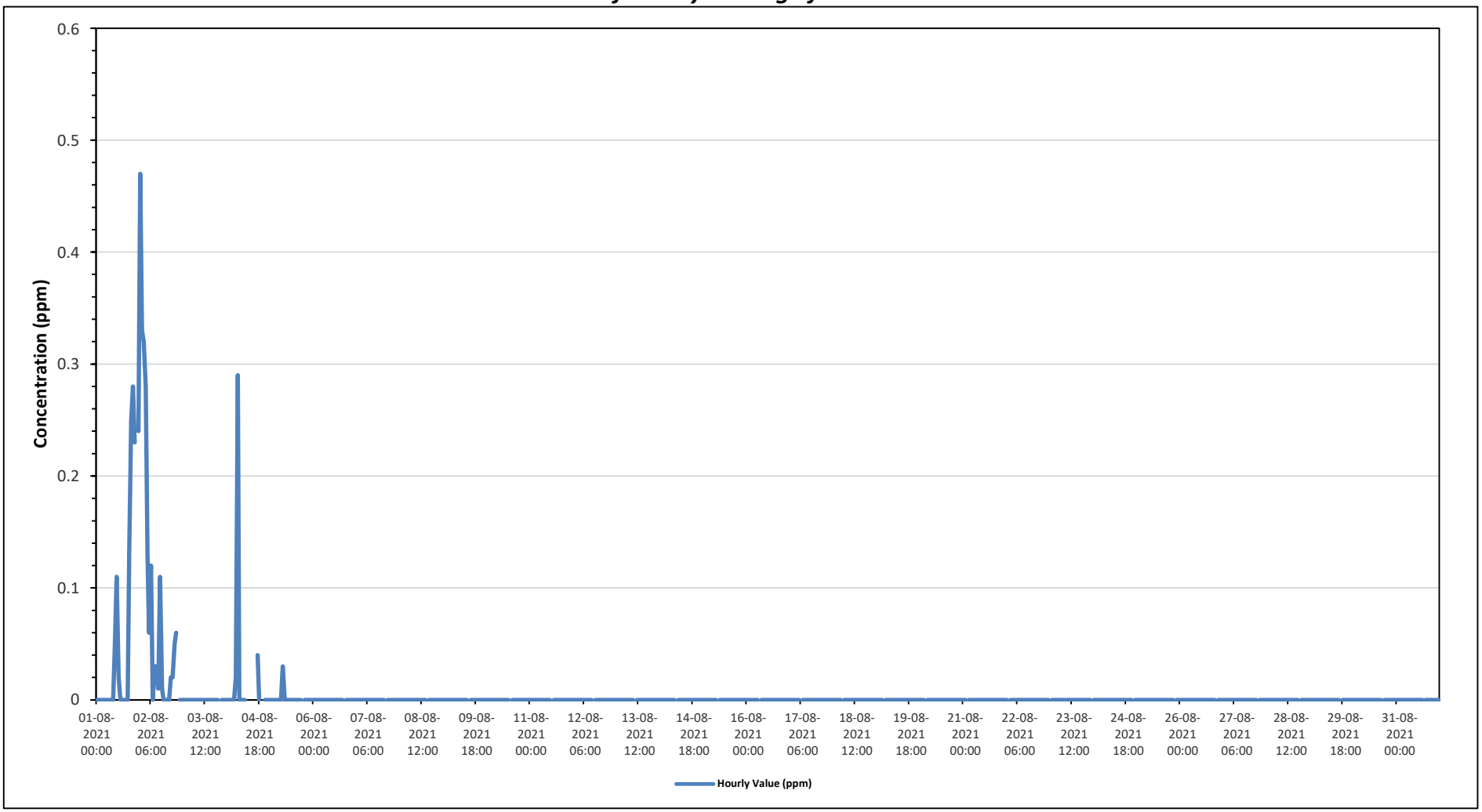
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0.47 | ppm | on August 2 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.09 | ppm | on August 2 | Hours of Data: | 705 |
| Minimum Hourly Value: | 0.00 | ppm | on August 1 at hour 0 | Hours of Missing Data: | 3 |
| Minimum Daily Value: | 0.00 | ppm | on August 3 | Hours of Calibration: | 36 |
| Monthly Average: | 0.01 | ppm | | Operational Uptime: | 99.6 |

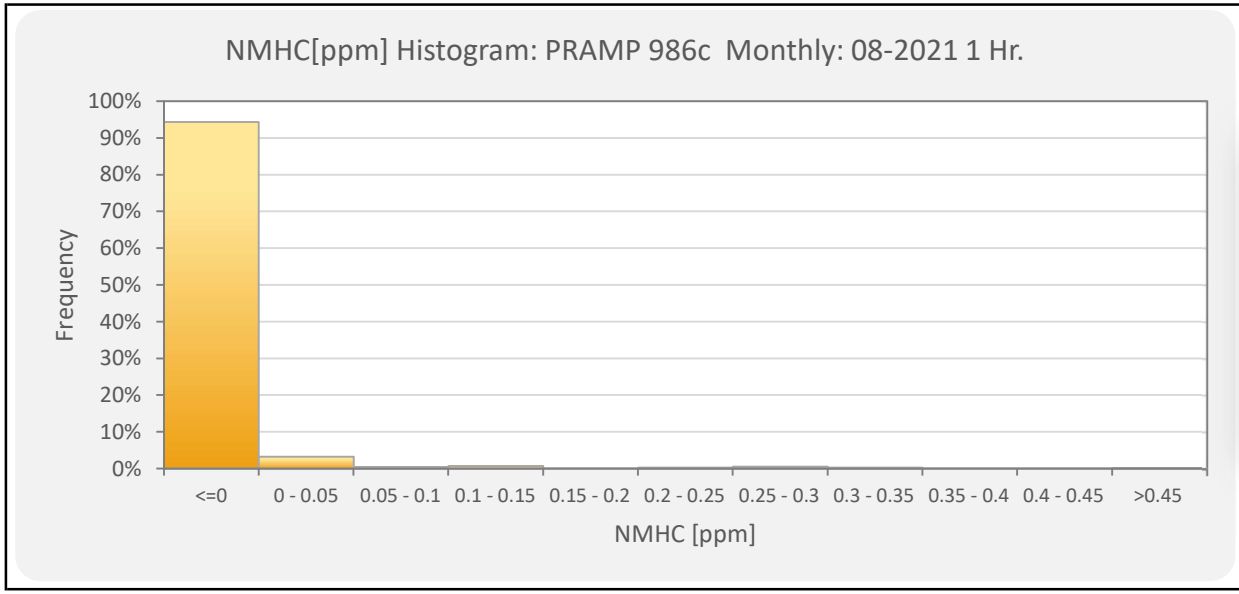
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.11 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.25 | 0.28 | 0.23 | S | 0.24 | 0.00 | 0.28 | 0.06 |
| Aug 2 | **0.47** | 0.33 | 0.32 | 0.28 | 0.13 | 0.06 | 0.12 | 0.00 | 0.03 | 0.03 | 0.01 | 0.11 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.05 | 0.06 | S | 0.00 | 0.00 | 0.00 | **0.47** | **0.09** |
| Aug 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.29 | 0.00 | 0.00 | 0.00 | 0.00 | C | C | C | C | Y | Y | 0.04 | 0.00 | S | NRM | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | - |
| Aug 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 |
| Aug 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 19 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 20 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 21 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 22 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 23 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 |
| Aug 24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Diurnal Maximum | 0.47 | 0.33 | 0.32 | 0.28 | 0.13 | 0.06 | 0.29 | 0.03 | 0.03 | 0.03 | 0.05 | 0.11 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.13 | 0.25 | 0.28 | 0.23 | 0.00 | 0.24 | | | |
| Diurnal Average | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NMHC - 986c Station*

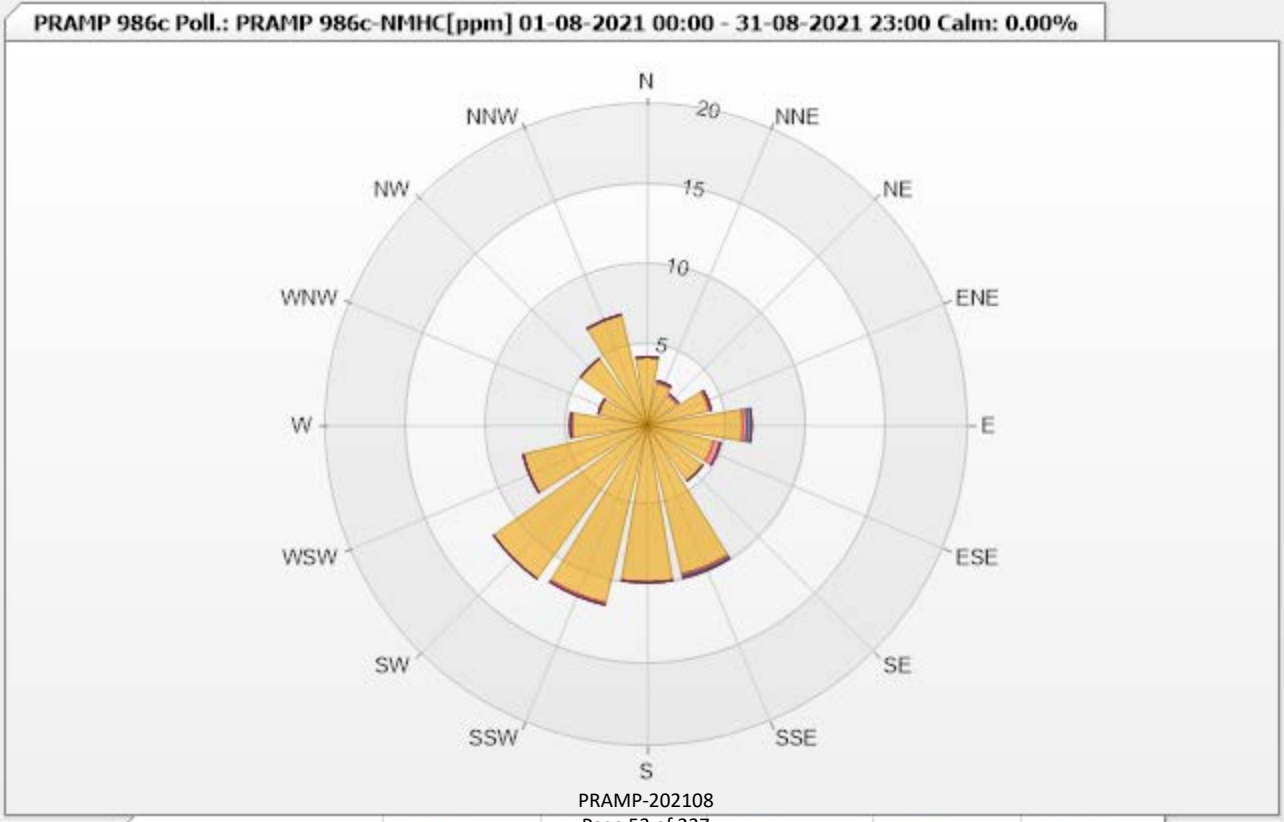





| Classes | NMHC |
|---|---|
| <=0 | 94.33% |
| 0 - 0.05 | 3.26% |
| 0.05 - 0.1 | 0.43% |
| 0.1 - 0.15 | 0.71% |
| 0.15 - 0.2 | 0.00% |
| 0.2 - 0.25 | 0.28% |
| 0.25 - 0.3 | 0.57% |
| 0.3 - 0.35 | 0.28% |
| 0.35 - 0.4 | 0.00% |
| 0.4 - 0.45 | 0.00% |
| >0.45 | 0.14% |

Wind: PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

| Direction | 0-0.1 | 0.1-0.3 | 0.3-0.9 | 0.9-2 | >2.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.26 | 0 | 0 | 0 | 0 | 4.26 |
| NNE | 2.7 | 0.14 | 0 | 0 | 0 | 2.84 |
| NE | 2.27 | 0.14 | 0 | 0 | 0 | 2.41 |
| ENE | 3.97 | 0.14 | 0 | 0 | 0 | 4.11 |
| E | 5.96 | 0.28 | 0.28 | 0 | 0 | 6.52 |
| ESE | 4.26 | 0.43 | 0 | 0 | 0 | 4.69 |
| SE | 4.26 | 0 | 0 | 0 | 0 | 4.26 |
| SSE | 9.5 | 0.14 | 0.14 | 0 | 0 | 9.78 |
| S | 9.79 | 0 | 0 | 0 | 0 | 9.79 |
| SSW | 11.35 | 0.14 | 0 | 0 | 0 | 11.49 |
| SW | 11.77 | 0 | 0 | 0 | 0 | 11.77 |
| WSW | 7.94 | 0 | 0 | 0 | 0 | 7.94 |
| W | 4.68 | 0.14 | 0 | 0 | 0 | 4.82 |
| WNW | 3.12 | 0 | 0 | 0 | 0 | 3.12 |
| NW | 5.11 | 0 | 0 | 0 | 0 | 5.11 |
| NNW | 7.09 | 0 | 0 | 0 | 0 | 7.09 |
| Summary | 98.03 | 1.55 | 0.42 | 0 | 0 | 100 |


PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
98 0-0.1
2 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## RELATIVE HUMIDITY (RH) in %

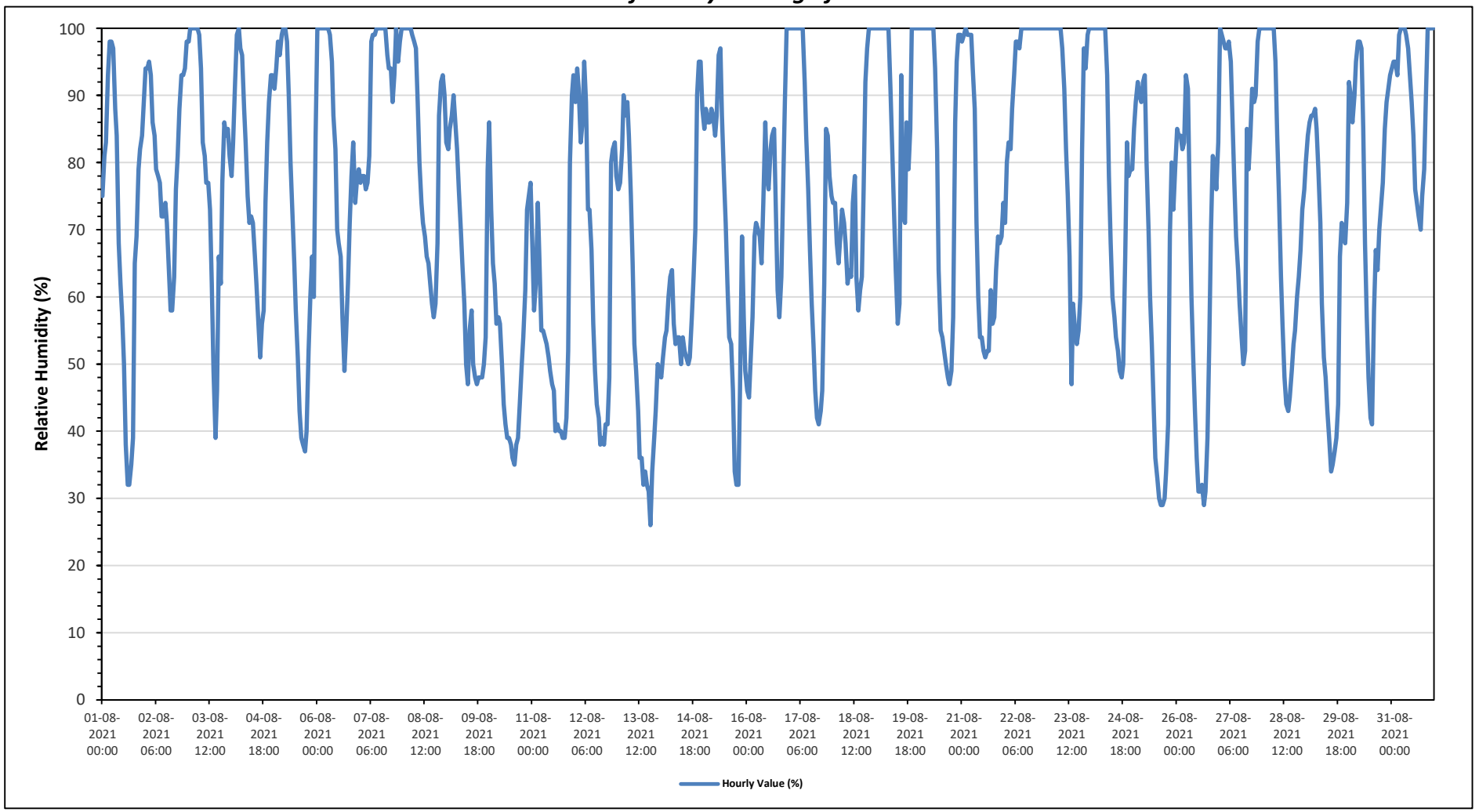
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 100 | % | on August 3 at hour 1 | Hours in Service: | 744 |
| Maximum Daily Value: | 95.4 | % | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 26 | % | on August 13 at hour 18 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 53.7 | % | on August 10 | Hours of Calibration: | 0 |
| Monthly Average: | 74.1 | % | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 75 | 81 | 83 | 93 | 98 | 98 | 97 | 88 | 84 | 68 | 62 | 57 | 50 | 38 | 32 | 32 | 35 | 39 | 65 | 69 | 79 | 82 | 84 | 89 | 32 | 98 | 69.9 |
| Aug 2 | 94 | 94 | 95 | 93 | 86 | 84 | 79 | 78 | 77 | 72 | 72 | 74 | 71 | 64 | 58 | 58 | 63 | 76 | 81 | 88 | 93 | 93 | 94 | 98 | 58 | 98 | 80.6 |
| Aug 3 | 98 | **100** | **100** | **100** | **100** | **100** | 99 | 94 | 83 | 81 | 77 | 77 | 73 | 62 | 49 | 39 | 46 | 66 | 62 | 77 | 86 | 84 | 85 | 81 | 39 | **100** | 80.0 |
| Aug 4 | 78 | 83 | 92 | 99 | **100** | 97 | 96 | 88 | 83 | 75 | 71 | 72 | 71 | 66 | 62 | 56 | 51 | 56 | 58 | 74 | 83 | 89 | 93 | 93 | 51 | **100** | 78.6 |
| Aug 5 | 91 | 94 | 98 | 96 | 99 | **100** | **100** | 98 | 90 | 80 | 73 | 65 | 58 | 51 | 43 | 39 | 38 | 37 | 40 | 52 | 60 | 66 | 60 | 84 | 37 | **100** | 71.3 |
| Aug 6 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 99 | 95 | 87 | 82 | 70 | 68 | 66 | 57 | 49 | 54 | 62 | 71 | 78 | 83 | 74 | 77 | 79 | 49 | **100** | 81.3 |
| Aug 7 | 77 | 78 | 78 | 76 | 77 | 81 | 98 | 99 | 99 | **100** | **100** | **100** | **100** | **100** | **100** | 96 | 94 | 94 | 89 | 93 | **100** | 95 | 98 | **100** | 76 | **100** | 92.6 |
| Aug 8 | **100** | **100** | **100** | **100** | **100** | 99 | 98 | 97 | 89 | 80 | 74 | 71 | 69 | 66 | 65 | 62 | 59 | 57 | 59 | 68 | 87 | 92 | 93 | 90 | 57 | **100** | 82.3 |
| Aug 9 | 83 | 82 | 85 | 87 | 90 | 86 | 82 | 76 | 70 | 65 | 59 | 50 | 47 | 55 | 58 | 50 | 48 | 47 | 48 | 48 | 48 | 50 | 54 | 79 | 47 | 90 | 64.5 |
| Aug 10 | 86 | 73 | 65 | 62 | 56 | 57 | 56 | 50 | 44 | 41 | 39 | 39 | 38 | 36 | 35 | 38 | 39 | 44 | 50 | 54 | 61 | 73 | 75 | 77 | 35 | 86 | 53.7 |
| Aug 11 | 68 | 58 | 62 | 74 | 66 | 55 | 55 | 54 | 53 | 51 | 49 | 47 | 46 | 40 | 41 | 40 | 40 | 39 | 39 | 42 | 52 | 80 | 90 | 93 | 39 | 93 | 55.6 |
| Aug 12 | 89 | 94 | 91 | 83 | 86 | 95 | 89 | 73 | 73 | 67 | 56 | 49 | 44 | 42 | 38 | 39 | 38 | 41 | 41 | 48 | 80 | 82 | 83 | 78 | 38 | 95 | 66.6 |
| Aug 13 | 76 | 77 | 82 | 90 | 87 | 89 | 84 | 75 | 65 | 53 | 49 | 43 | 36 | 36 | 32 | 34 | 32 | 31 | **26** | 34 | 39 | 43 | 50 | 49 | **26** | 90 | 54.7 |
| Aug 14 | 48 | 51 | 54 | 55 | 60 | 63 | 64 | 56 | 53 | 54 | 54 | 50 | 54 | 52 | 51 | 50 | 51 | 57 | 63 | 70 | 90 | 95 | 95 | 88 | 48 | 95 | 61.6 |
| Aug 15 | 85 | 88 | 86 | 86 | 88 | 87 | 84 | 87 | 96 | 97 | 87 | 78 | 71 | 62 | 54 | 53 | 46 | 34 | 32 | 32 | 46 | 69 | 57 | 49 | 32 | 97 | 68.9 |
| Aug 16 | 46 | 45 | 51 | 57 | 69 | 71 | 70 | 69 | 65 | 74 | 86 | 78 | 76 | 82 | 84 | 85 | 73 | 61 | 57 | 63 | 74 | 89 | **100** | **100** | 45 | **100** | 71.9 |
| Aug 17 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 92 | 84 | 76 | 67 | 59 | 53 | 46 | 42 | 41 | 43 | 46 | 62 | 85 | 84 | 78 | 75 | 41 | **100** | 76.4 |
| Aug 18 | 74 | 74 | 68 | 65 | 69 | 73 | 71 | 68 | 62 | 64 | 63 | 74 | 78 | 63 | 58 | 61 | 63 | 76 | 92 | 97 | **100** | **100** | **100** | **100** | 58 | **100** | 75.5 |
| Aug 19 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 91 | 82 | 73 | 64 | 56 | 59 | 93 | 72 | 71 | 86 | 79 | 85 | **100** | **100** | **100** | **100** | 56 | **100** | 88.0 |
| Aug 20 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 94 | 82 | 64 | 55 | 54 | 52 | 50 | 48 | 47 | 49 | 57 | 86 | 95 | 99 | 99 | 47 | **100** | 80.5 |
| Aug 21 | 98 | 99 | **100** | 99 | 99 | 99 | 94 | 88 | 71 | 60 | 54 | 54 | 52 | 51 | 52 | 52 | 61 | 56 | 57 | 64 | 69 | 68 | 69 | 74 | 51 | **100** | 72.5 |
| Aug 22 | 71 | 80 | 83 | 82 | 88 | 93 | 98 | 98 | 97 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 71 | **100** | **95.4** |
| Aug 23 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 97 | 91 | 82 | 75 | 66 | 47 | 59 | 55 | 53 | 55 | 60 | 82 | 97 | 94 | 99 | **100** | 47 | **100** | 83.8 |
| Aug 24 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 93 | 78 | 68 | 60 | 57 | 54 | 52 | 49 | 48 | 50 | 66 | 83 | 78 | 79 | 79 | 48 | **100** | 78.9 |
| Aug 25 | 85 | 89 | 92 | 90 | 89 | 92 | 93 | 80 | 70 | 60 | 53 | 43 | 36 | 33 | 30 | 29 | 29 | 30 | 34 | 41 | 69 | 80 | 73 | 79 | 29 | 93 | 62.5 |
| Aug 26 | 85 | 84 | 84 | 82 | 83 | 93 | 91 | 77 | 60 | 51 | 43 | 36 | 31 | 31 | 32 | 29 | 31 | 39 | 53 | 70 | 81 | 80 | 76 | 83 | 29 | 93 | 62.7 |
| Aug 27 | **100** | 99 | 98 | 97 | 97 | 98 | 95 | 86 | 77 | 69 | 64 | 59 | 54 | 50 | 52 | 85 | 79 | 84 | 91 | 89 | 90 | 98 | **100** | **100** | 50 | **100** | 83.8 |
| Aug 28 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 95 | 84 | 75 | 63 | 56 | 48 | 44 | 43 | 45 | 49 | 53 | 55 | 60 | 63 | 67 | 73 | 76 | 43 | **100** | 72.9 |
| Aug 29 | 80 | 84 | 86 | 87 | 87 | 88 | 85 | 79 | 71 | 59 | 51 | 48 | 43 | 39 | 34 | 35 | 37 | 39 | 44 | 66 | 71 | 70 | 68 | 74 | 34 | 88 | 63.5 |
| Aug 30 | 92 | 90 | 86 | 90 | 95 | 98 | 98 | 97 | 85 | 68 | 57 | 48 | 42 | 41 | 58 | 67 | 64 | 70 | 74 | 77 | 85 | 89 | 91 | 93 | 41 | 98 | 77.3 |
| Aug 31 | 94 | 95 | 95 | 93 | 99 | **100** | **100** | **100** | 99 | 97 | 93 | 89 | 84 | 76 | 74 | 72 | 70 | 75 | 79 | 90 | **100** | **100** | **100** | **100** | 70 | **100** | 90.6 |
| Diurnal Maximum | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | | |
| Diurnal Average | 86.2 | 86.8 | 87.5 | 88.3 | 89.3 | 90.2 | 89.5 | 85.5 | 79.8 | 73.9 | 68.5 | 63.4 | 59.2 | 55.4 | 54.7 | 53.7 | 53.3 | 56.2 | 59.5 | 67.6 | 78.7 | 82.5 | 83.6 | 85.8 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for RH - 986c Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## BAROMETRIC PRESSURE (BP) in millibar

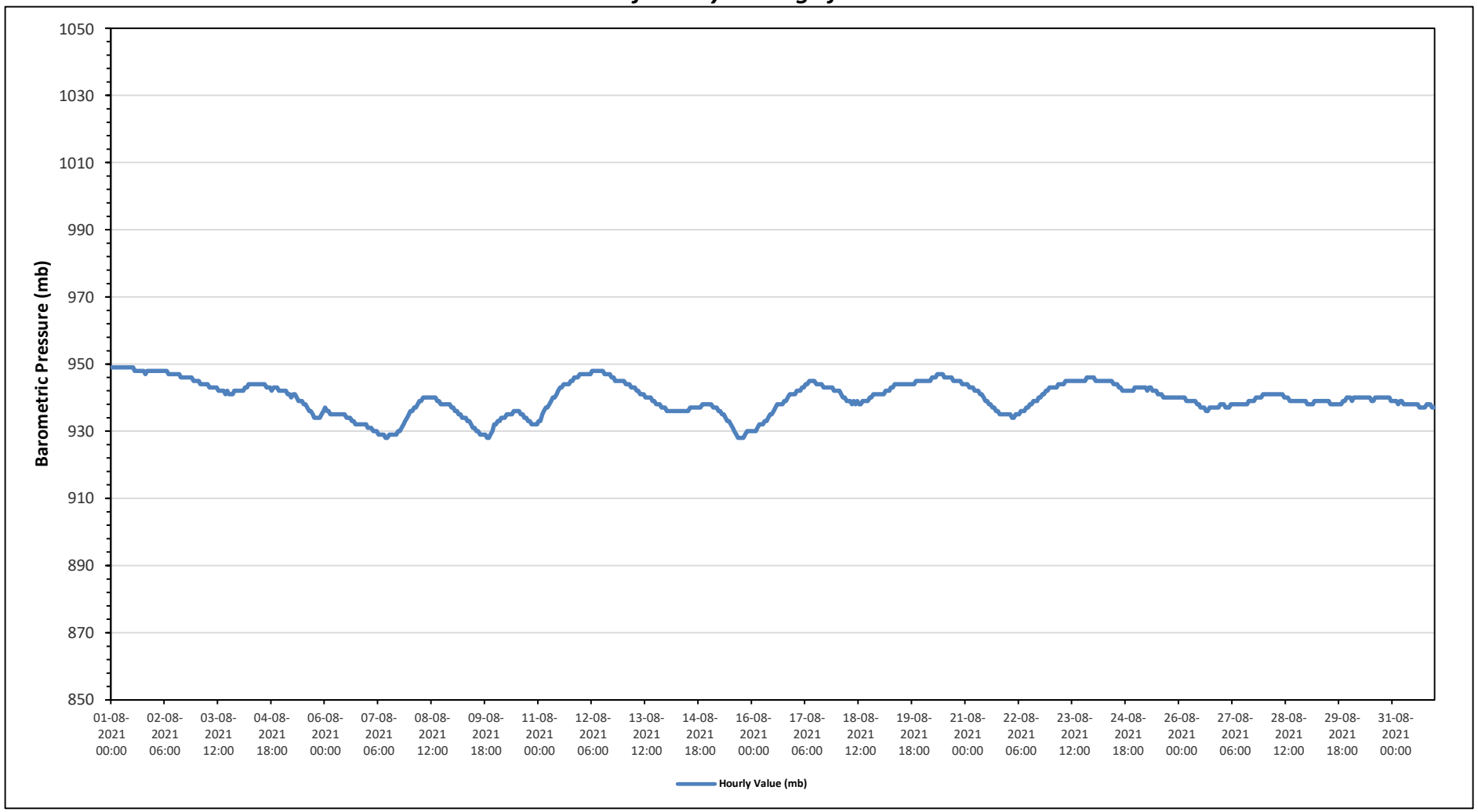
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 949 | mb | on August 1 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 949 | mb | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | 928 | mb | on August 7 at hour 10 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 930 | mb | on August 7 | Hours of Calibration: | 0 |
| Monthly Average: | 940 | mb | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | **949** | **949** | **949** | **949** | **949** | **949** | **949** | **949** | **949** | **949** | **949** | **949** | **949** | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 948 | 948 | 948 | 948 | 947 | **949** | **948.5** |
| Aug 2 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 948 | 946.9 |
| Aug 3 | 945 | 945 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 942 | 942 | 941 | 942 | 941 | 941 | 941 | 942 | 942 | 942 | 941 | 945 | 942.7 |
| Aug 4 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 942 | 943 | 943 | 943 | 942 | 942 | 942 | 944 | 943.2 |
| Aug 5 | 942 | 942 | 942 | 941 | 941 | 940 | 941 | 941 | 940 | 939 | 939 | 939 | 938 | 938 | 937 | 936 | 936 | 935 | 934 | 934 | 934 | 934 | 935 | 936 | 934 | 942 | 938.1 |
| Aug 6 | 937 | 936 | 936 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 934 | 934 | 934 | 933 | 933 | 932 | 932 | 932 | 932 | 932 | 932 | 932 | 932 | 937 | 934.0 |
| Aug 7 | 931 | 931 | 931 | 930 | 930 | 930 | 929 | 929 | 929 | 929 | **928** | **928** | 929 | 929 | 929 | 929 | 929 | 930 | 930 | 931 | 932 | 933 | 934 | 935 | **928** | 935 | 930.2 |
| Aug 8 | 936 | 936 | 937 | 937 | 938 | 939 | 939 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 936 | 940 | 938.5 |
| Aug 9 | 937 | 936 | 936 | 935 | 935 | 934 | 934 | 934 | 933 | 933 | 932 | 931 | 931 | 930 | 930 | 929 | 929 | 929 | 929 | **928** | **928** | 929 | 930 | 932 | **928** | 937 | 931.8 |
| Aug 10 | 932 | 933 | 933 | 934 | 934 | 934 | 935 | 935 | 935 | 935 | 936 | 936 | 936 | 936 | 935 | 935 | 934 | 934 | 933 | 933 | 932 | 932 | 932 | 932 | 932 | 936 | 934.0 |
| Aug 11 | 933 | 933 | 935 | 936 | 937 | 937 | 938 | 939 | 940 | 940 | 941 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 945 | 945 | 946 | 946 | 946 | 947 | 933 | 947 | 941.2 |
| Aug 12 | 947 | 947 | 947 | 947 | 947 | 947 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 947 | 947 | 947 | 946 | 946 | 945 | 945 | 945 | 945 | 945 | 945 | 948 | 946.8 |
| Aug 13 | 945 | 944 | 944 | 944 | 943 | 943 | 943 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 939 | 939 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 945 | 940.7 |
| Aug 14 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 938 | 938 | 938 | 938 | 936 | 938 | 936.6 |
| Aug 15 | 938 | 938 | 937 | 937 | 937 | 936 | 936 | 935 | 935 | 934 | 933 | 933 | 932 | 931 | 930 | 929 | **928** | **928** | **928** | **928** | 929 | 930 | 930 | 930 | **928** | 938 | 932.6 |
| Aug 16 | 930 | 930 | 930 | 931 | 932 | 932 | 932 | 933 | 933 | 934 | 935 | 935 | 936 | 937 | 938 | 938 | 938 | 938 | 939 | 939 | 940 | 941 | 941 | 941 | 930 | 941 | 935.5 |
| Aug 17 | 941 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 945 | 945 | 945 | 945 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 941 | 945 | 943.3 |
| Aug 18 | 942 | 942 | 941 | 940 | 940 | 939 | 939 | 939 | 938 | 939 | 938 | 939 | 938 | 938 | 939 | 939 | 939 | 939 | 940 | 940 | 941 | 941 | 941 | 941 | 938 | 942 | 939.7 |
| Aug 19 | 941 | 941 | 941 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 945 | 945 | 945 | 945 | 941 | 945 | 943.5 |
| Aug 20 | 945 | 945 | 945 | 945 | 945 | 946 | 946 | 946 | 947 | 947 | 947 | 947 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 945 | 945 | 944 | 944 | 944 | 947 | 945.6 |
| Aug 21 | 944 | 944 | 943 | 943 | 943 | 942 | 942 | 942 | 941 | 941 | 940 | 939 | 939 | 938 | 938 | 937 | 937 | 936 | 936 | 935 | 935 | 935 | 935 | 935 | 935 | 944 | 939.2 |
| Aug 22 | 935 | 935 | 934 | 934 | 935 | 935 | 935 | 936 | 936 | 936 | 937 | 937 | 938 | 938 | 939 | 939 | 939 | 940 | 940 | 941 | 941 | 942 | 942 | 943 | 934 | 943 | 937.8 |
| Aug 23 | 943 | 943 | 943 | 943 | 944 | 944 | 944 | 944 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 946 | 946 | 946 | 946 | 943 | 946 | 944.7 |
| Aug 24 | 946 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 944 | 944 | 944 | 943 | 943 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 943 | 942 | 946 | 943.8 |
| Aug 25 | 943 | 943 | 943 | 943 | 943 | 943 | 942 | 943 | 943 | 942 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 943 | 941.5 |
| Aug 26 | 940 | 940 | 940 | 940 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 937 | 937 | 937 | 936 | 936 | 937 | 937 | 937 | 937 | 937 | 937 | 938 | 936 | 940 | 938.0 |
| Aug 27 | 938 | 938 | 937 | 937 | 937 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 939 | 939 | 939 | 939 | 940 | 940 | 940 | 940 | 941 | 937 | 941 | 938.5 |
| Aug 28 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 940 | 940 | 940 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 941 | 940.0 |
| Aug 29 | 938 | 938 | 938 | 938 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 939 | 939 | 940 | 940 | 938 | 940 | 938.6 |
| Aug 30 | 940 | 939 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 940 | 939.8 |
| Aug 31 | 939 | 939 | 939 | 938 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 938 | 938 | 938 | 937 | 937 | 937 | 939 | 938.0 |
| Diurnal Maximum | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 948 | 948 | 948 | 948 | | | |
| Diurnal Average | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 939 | 939 | 939 | 939 | 940 | 940 | 940 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for BP - 986c Station*



peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 986c Station - August 2021

## Summary of Hourly Averages

## AMBIENT TEMPERATURE (AT) in Degree Celsius

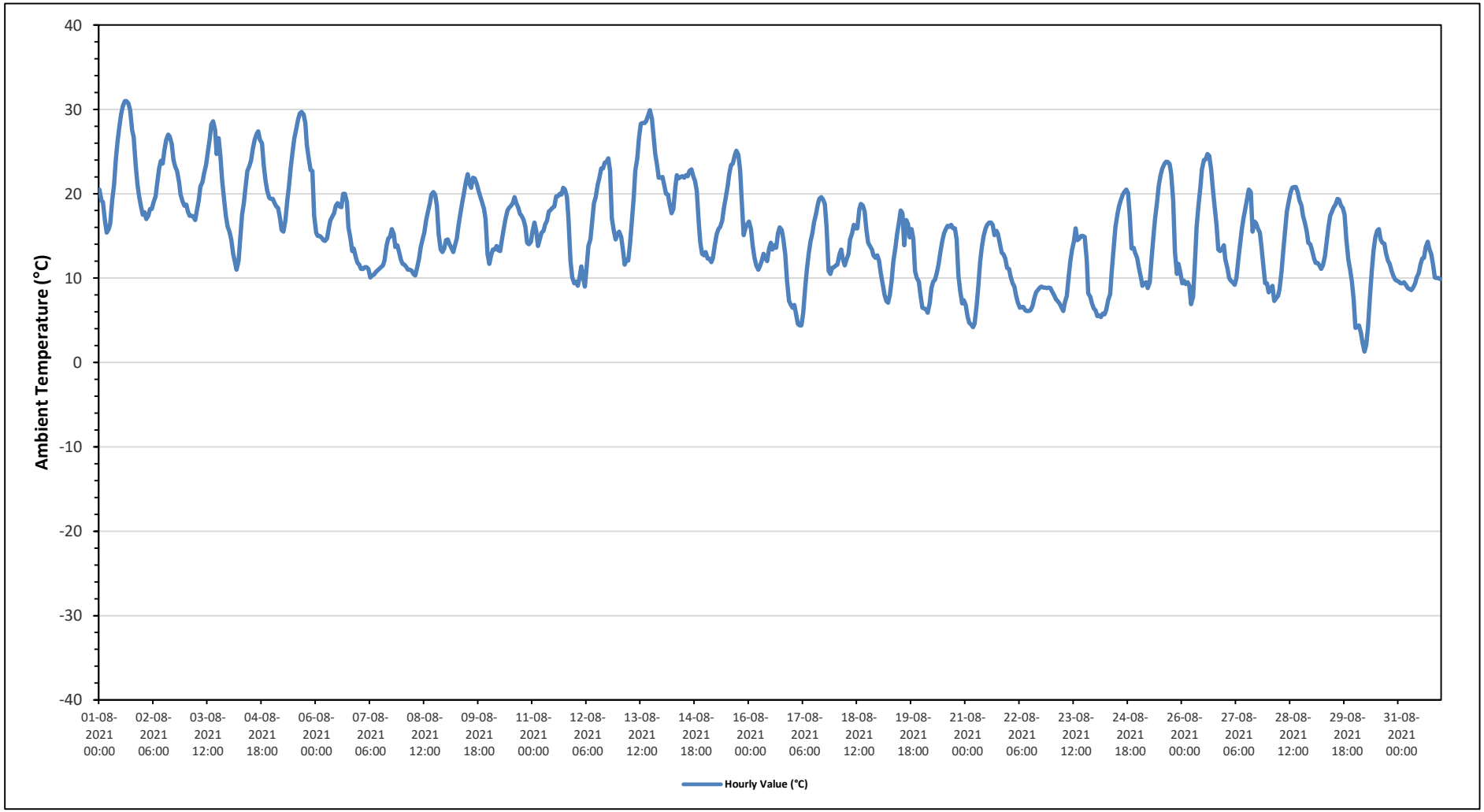
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 31.0 | °C | on August 1 at hour 14 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.4 | °C | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | 1.3 | °C | on August 30 at hour 5 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 8.0 | °C | on August 22 | Hours of Calibration: | 0 |
| Monthly Average: | 15.4 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 20.5 | 19.2 | 19 | 16.8 | 15.4 | 15.8 | 16.5 | 19.3 | 21 | 24 | 26.2 | 27.9 | 29.4 | 30.4 | **31** | **31** | 30.7 | 29.9 | 27.5 | 26.7 | 23.4 | 21.1 | 19.6 | 18.5 | 15.4 | **31.0** | **23.4** |
| Aug 2 | 17.5 | 17.8 | 17 | 17.4 | 18.2 | 18.2 | 19 | 19.7 | 21.2 | 23 | 23.9 | 23.6 | 25.2 | 26.4 | 27 | 26.8 | 25.9 | 24 | 23.2 | 22.7 | 21.4 | 19.9 | 19.1 | 18.6 | 17.0 | 27.0 | 21.5 |
| Aug 3 | 18.7 | 17.9 | 17.4 | 17.4 | 17.3 | 16.9 | 18.1 | 19.2 | 20.9 | 21.4 | 22.4 | 23.4 | 24.9 | 26.6 | 28.2 | 28.6 | 27.6 | 24.7 | 26.6 | 24.5 | 21.6 | 19.5 | 17.3 | 16.1 | 16.1 | 28.6 | 21.6 |
| Aug 4 | 15.5 | 14.6 | 12.8 | 12 | 11 | 12 | 14.4 | 17.5 | 18.9 | 21.1 | 22.7 | 23.3 | 24 | 25.4 | 26.4 | 27.1 | 27.4 | 26.4 | 26 | 23.4 | 21.6 | 20.3 | 19.5 | 19.4 | 11.0 | 27.4 | 20.1 |
| Aug 5 | 19.4 | 18.9 | 18.5 | 18.3 | 17 | 15.7 | 15.5 | 16.9 | 19.1 | 20.9 | 23.1 | 25.1 | 26.5 | 27.7 | 28.8 | 29.5 | 29.7 | 29.4 | 28.4 | 25.8 | 24.1 | 22.8 | 22.7 | 17.4 | 15.5 | 29.7 | 22.6 |
| Aug 6 | 15.4 | 15 | 15 | 14.8 | 14.5 | 14.4 | 14.7 | 15.9 | 16.8 | 17.3 | 17.7 | 18.6 | 18.9 | 18.5 | 18.4 | 20 | 20 | 19 | 16 | 14.7 | 13.2 | 13.5 | 12.5 | 11.8 | 11.8 | 20.0 | 16.1 |
| Aug 7 | 11.6 | 11.1 | 11.1 | 11.3 | 11.3 | 11.1 | 10.1 | 10.3 | 10.4 | 10.7 | 10.9 | 11.1 | 11.3 | 11.5 | 12.1 | 13.8 | 14.7 | 14.9 | 15.8 | 15.2 | 13.7 | 13.9 | 13.1 | 12.2 | 10.1 | 15.8 | 12.2 |
| Aug 8 | 11.7 | 11.6 | 11.3 | 11 | 11 | 10.9 | 10.5 | 10.3 | 11.3 | 12.3 | 13.7 | 14.6 | 15.4 | 16.8 | 17.8 | 18.9 | 19.9 | 20.2 | 19.9 | 18.6 | 15.2 | 13.4 | 13.1 | 13.5 | 10.3 | 20.2 | 14.3 |
| Aug 9 | 14.5 | 14.6 | 14 | 13.6 | 13.1 | 13.8 | 14.7 | 16.3 | 17.8 | 18.9 | 20.2 | 21.4 | 22.3 | 21.2 | 20.7 | 21.9 | 21.8 | 21.2 | 20.4 | 19.7 | 19 | 18.2 | 17 | 12.8 | 12.8 | 22.3 | 17.9 |
| Aug 10 | 11.7 | 12.7 | 13.4 | 13.4 | 13.8 | 13.3 | 13.2 | 14.6 | 15.8 | 17 | 18 | 18.3 | 18.6 | 18.9 | 19.6 | 18.9 | 18.4 | 17.6 | 17.4 | 16.9 | 16.1 | 14.2 | 14 | 14.3 | 11.7 | 19.6 | 15.8 |
| Aug 11 | 15.5 | 16.6 | 15.6 | 13.8 | 14.6 | 15.4 | 15.6 | 16.3 | 16.8 | 17.9 | 18.1 | 18.3 | 18.5 | 19.7 | 19.7 | 20 | 19.9 | 20.7 | 20.5 | 19.6 | 17 | 12 | 10.1 | 9.4 | 9.4 | 20.7 | 16.7 |
| Aug 12 | 9.6 | 9.1 | 10.1 | 11.4 | 10.1 | 9 | 11.3 | 13.8 | 14.6 | 16.4 | 18.9 | 19.6 | 21.1 | 21.8 | 23 | 23 | 23.7 | 23.8 | 24.2 | 22.7 | 17.1 | 15.6 | 14.6 | 15.2 | 9.0 | 24.2 | 16.7 |
| Aug 13 | 15.5 | 14.9 | 13.6 | 11.6 | 12.2 | 12.1 | 14 | 16.6 | 19.6 | 22.7 | 24.2 | 26.7 | 28.3 | 28.4 | 28.4 | 28.6 | 29.3 | 29.9 | 28.9 | 27 | 24.8 | 23.3 | 21.9 | 21.9 | 11.6 | 29.9 | 21.9 |
| Aug 14 | 22 | 21 | 20 | 19.9 | 18.8 | 17.7 | 18.2 | 20.8 | 22.2 | 21.8 | 22 | 22.1 | 21.9 | 22.2 | 22.1 | 22.7 | 22.9 | 22.1 | 21.5 | 20.3 | 16.5 | 14.2 | 12.9 | 12.7 | 12.7 | 22.9 | 19.9 |
| Aug 15 | 13.1 | 12.3 | 12.3 | 11.9 | 12.4 | 14 | 15.2 | 15.8 | 16.1 | 16.8 | 18.2 | 19.4 | 20.8 | 22.4 | 23.4 | 23.6 | 24.6 | 25.1 | 24.6 | 22.8 | 18.8 | 15.1 | 16 | 16.4 | 11.9 | 25.1 | 18.0 |
| Aug 16 | 16.7 | 15.8 | 13.8 | 12.4 | 11.5 | 11 | 11.4 | 12.1 | 12.9 | 12.4 | 12 | 13.5 | 14.2 | 13.4 | 13.9 | 13.6 | 15.3 | 16 | 15.7 | 14.7 | 12.8 | 9.7 | 7.3 | 6.9 | 6.9 | 16.7 | 12.9 |
| Aug 17 | 6.5 | 6.8 | 5.9 | 4.6 | 4.4 | 4.4 | 5.8 | 8.8 | 11.1 | 12.9 | 14.3 | 15.4 | 16.6 | 17.6 | 18.7 | 19.4 | 19.6 | 19.3 | 18.8 | 16 | 10.9 | 10.5 | 11.2 | 11.3 | 4.4 | 19.6 | 12.1 |
| Aug 18 | 11.5 | 11.6 | 12.8 | 13.4 | 12.3 | 11.5 | 12.2 | 12.9 | 14.6 | 15.3 | 16.3 | 15.9 | 15.9 | 18.2 | 18.8 | 18.6 | 17.9 | 15.7 | 14.2 | 13.8 | 13.4 | 12.7 | 12.4 | 12.7 | 11.5 | 18.8 | 14.4 |
| Aug 19 | 12.1 | 10.6 | 9.2 | 8 | 7.3 | 7.1 | 8 | 9.7 | 12 | 13.6 | 15.1 | 16.6 | 18 | 17.7 | 13.9 | 16.9 | 16.4 | 14.8 | 15.8 | 14.7 | 10.8 | 10 | 9.6 | 8.1 | 7.1 | 18.0 | 12.3 |
| Aug 20 | 6.5 | 6.4 | 6.3 | 5.9 | 7 | 8.8 | 9.6 | 9.8 | 10.6 | 11.6 | 13 | 14.4 | 15.3 | 15.8 | 16.2 | 16.1 | 16.3 | 15.9 | 15.9 | 14.6 | 10.3 | 8.5 | 7 | 7.4 | 5.9 | 16.3 | 11.2 |
| Aug 21 | 6.8 | 5.5 | 4.7 | 4.5 | 4.2 | 4.6 | 6.7 | 9.1 | 11.9 | 13.7 | 15 | 15.9 | 16.3 | 16.6 | 16.6 | 16.3 | 15.1 | 15.6 | 15.2 | 14 | 13 | 12.8 | 12.3 | 11.2 | 4.2 | 16.6 | 11.6 |
| Aug 22 | 11.1 | 10.2 | 9.4 | 9 | 7.9 | 7.1 | 6.5 | 6.6 | 6.6 | 6.2 | 6.1 | 6.1 | 6.2 | 6.7 | 7.5 | 8.3 | 8.6 | 8.9 | 9 | 8.9 | 8.9 | 8.8 | 8.9 | 8.8 | 6.1 | 11.1 | 8.0 |
| Aug 23 | 8.4 | 8 | 7.5 | 7.3 | 7 | 6.6 | 6.1 | 7.1 | 7.9 | 10.1 | 12 | 13.4 | 14.3 | 15.9 | 14.5 | 14.7 | 15 | 15 | 14.9 | 12.2 | 8.2 | 7.8 | 7 | 6.4 | 6.1 | 15.9 | 10.3 |
| Aug 24 | 6.2 | 5.5 | 5.6 | 5.4 | 5.8 | 5.7 | 6.3 | 7.4 | 8.1 | 10.7 | 13.6 | 16.1 | 17.6 | 18.5 | 19.2 | 19.9 | 20.2 | 20.5 | 20.1 | 17.3 | 13.5 | 13.6 | 13 | 12.4 | 5.4 | 20.5 | 12.6 |
| Aug 25 | 11.2 | 10.1 | 9.1 | 9.4 | 9.5 | 8.8 | 9.5 | 12.2 | 14.7 | 17 | 19 | 21 | 22.2 | 23 | 23.5 | 23.8 | 23.8 | 23.5 | 22.4 | 19.2 | 13.1 | 10.5 | 11.7 | 10.6 | 8.8 | 23.8 | 15.8 |
| Aug 26 | 9.4 | 9.7 | 9.3 | 9.5 | 9.1 | 6.9 | 7.8 | 11.7 | 16.1 | 18.5 | 20.8 | 22.9 | 24 | 24.1 | 24.7 | 24.5 | 22.8 | 20.7 | 18.6 | 16.3 | 13.4 | 13.2 | 13.4 | 13.9 | 6.9 | 24.7 | 15.9 |
| Aug 27 | 12.2 | 11.2 | 10 | 9.7 | 9.5 | 9.2 | 10 | 11.8 | 13.9 | 15.7 | 17.1 | 18.2 | 19.5 | 20.5 | 20.2 | 15.5 | 16.7 | 16.5 | 15.8 | 15.4 | 13.8 | 11.4 | 9.4 | 9.4 | 9.2 | 20.5 | 13.9 |
| Aug 28 | 8.3 | 8.8 | 9.1 | 7.3 | 7.6 | 7.9 | 8.7 | 10.8 | 13.3 | 15.3 | 17.9 | 19 | 20.1 | 20.7 | 20.8 | 20.8 | 20.2 | 19.2 | 18.6 | 17.4 | 16.5 | 15.5 | 14.2 | 14 | 7.3 | 20.8 | 14.7 |
| Aug 29 | 13.3 | 12.3 | 11.8 | 11.8 | 11.5 | 11.1 | 11.5 | 12.6 | 14.1 | 16.1 | 17.4 | 17.9 | 18.4 | 18.7 | 19.4 | 19.3 | 18.6 | 18.3 | 17.5 | 14.6 | 12.2 | 11 | 9.6 | 7.5 | 7.5 | 19.4 | 14.4 |
| Aug 30 | 4.1 | 4.2 | 4.4 | 3.5 | 2.4 | **1.3** | 2.1 | 4.2 | 7.5 | 10.9 | 13.3 | 14.8 | 15.6 | 15.8 | 14.6 | 14.2 | 14.1 | 13 | 12.1 | 11.7 | 10.8 | 10.3 | 9.8 | 9.7 | **1.3** | 15.8 | 9.4 |
| Aug 31 | 9.6 | 9.4 | 9.4 | 9.5 | 9.2 | 8.8 | 8.7 | 8.6 | 8.9 | 9.4 | 10.1 | 10.6 | 11.6 | 12.3 | 12.4 | 13.7 | 14.3 | 13.5 | 12.8 | 11.6 | 10.1 | 10 | 10 | 9.9 | 8.6 | 14.3 | 10.6 |
| Diurnal Maximum | 22.0 | 21.0 | 20.0 | 19.9 | 18.8 | 18.2 | 19.0 | 20.8 | 22.2 | 24.0 | 26.2 | 27.9 | 29.4 | 30.4 | 31.0 | 31.0 | 30.7 | 29.9 | 28.9 | 27.0 | 24.8 | 23.3 | 22.7 | 21.9 | | | |
| Diurnal Average | 12.5 | 12.0 | 11.6 | 11.2 | 10.9 | 10.7 | 11.4 | 12.9 | 14.4 | 15.9 | 17.2 | 18.2 | 19.1 | 19.8 | 20.0 | 20.3 | 20.4 | 19.8 | 19.3 | 17.8 | 15.3 | 14.0 | 13.2 | 12.6 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for AT - 986c Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## STATION TEMPERATURE (ST) in Degree Celsius

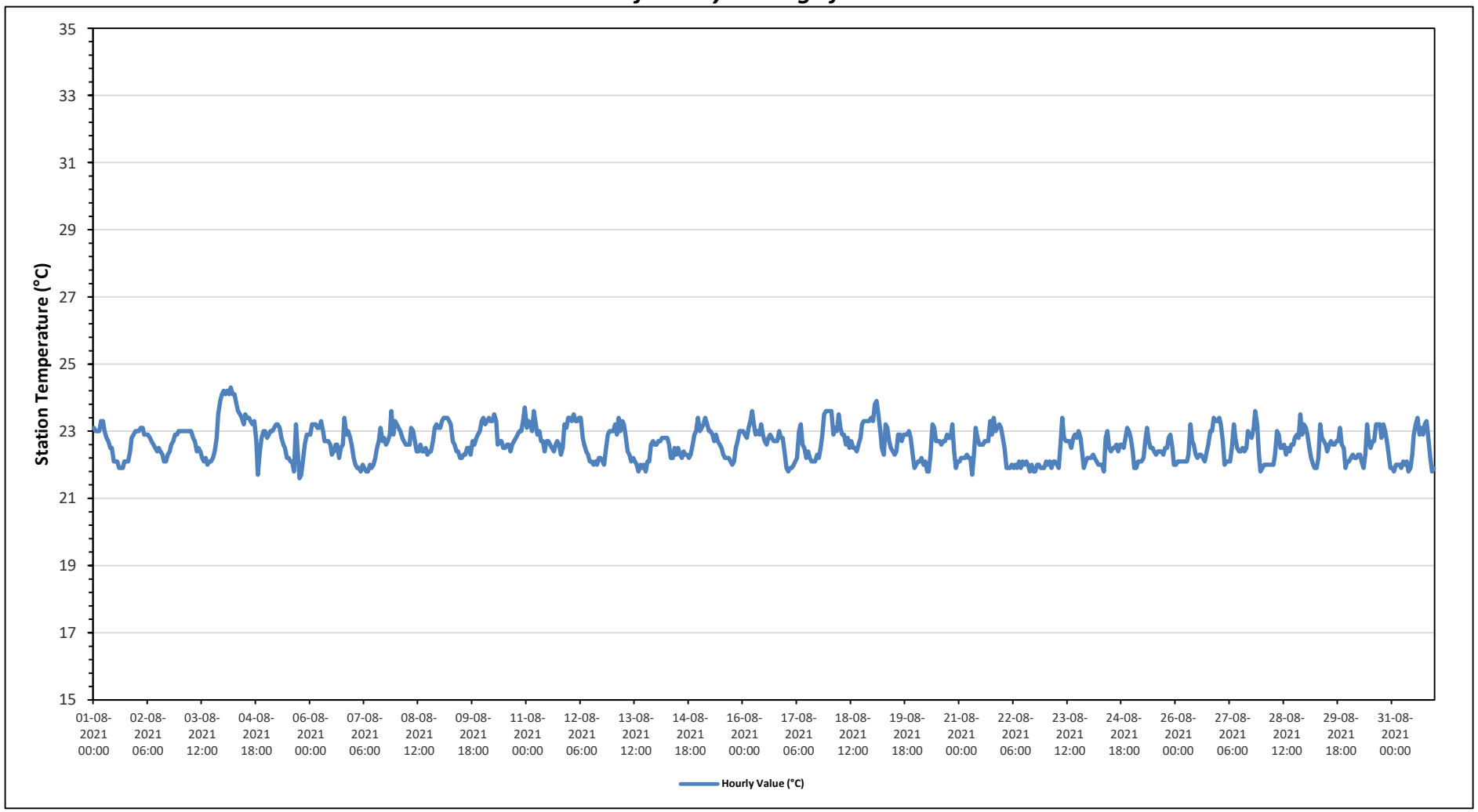
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 24.3 | °C | on August 4 at hour 4 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.4 | °C | on August 4 | Hours of Data: | 744 |
| Minimum Hourly Value: | 21.6 | °C | on August 5 at hour 18 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 22.0 | °C | on August 22 | Hours of Calibration: | 0 |
| Monthly Average: | 22.6 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 23.1 | 23.0 | 23.0 | 23.0 | 23.3 | 23.3 | 23.0 | 22.8 | 22.7 | 22.5 | 22.5 | 22.1 | 22.1 | 22.1 | 21.9 | 21.9 | 21.9 | 22.1 | 22.1 | 22.1 | 22.4 | 22.8 | 22.9 | 23.0 | 21.9 | 23.3 | 22.6 |
| Aug 2 | 23.0 | 23.0 | 23.1 | 23.1 | 22.9 | 22.9 | 22.9 | 22.8 | 22.7 | 22.6 | 22.5 | 22.4 | 22.5 | 22.4 | 22.3 | 22.1 | 22.1 | 22.3 | 22.4 | 22.6 | 22.7 | 22.9 | 22.9 | 23.0 | 22.1 | 23.1 | 22.7 |
| Aug 3 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 22.8 | 22.7 | 22.4 | 22.5 | 22.4 | 22.2 | 22.1 | 22.2 | 22.0 | 22.1 | 22.1 | 22.2 | 22.4 | 22.8 | 23.5 | 23.9 | 24.1 | 22.0 | 24.1 | 22.7 |
| Aug 4 | 24.2 | 24.1 | 24.2 | 24.1 | **24.3** | 24.1 | 24.1 | 23.8 | 23.6 | 23.5 | 23.4 | 23.2 | 23.5 | 23.4 | 23.4 | 23.3 | 23.2 | 23.3 | 22.7 | 21.7 | 22.4 | 22.8 | 23.0 | 23.0 | 21.7 | **24.3** | **23.4** |
| Aug 5 | 22.8 | 22.9 | 23.0 | 23.0 | 23.1 | 23.2 | 23.2 | 23.1 | 22.8 | 22.6 | 22.5 | 22.2 | 22.2 | 22.1 | 22.1 | 21.8 | 23.2 | 22.5 | **21.6** | 21.7 | 22.2 | 22.6 | 22.9 | 22.9 | **21.6** | 23.2 | 22.6 |
| Aug 6 | 22.9 | 23.2 | 23.2 | 23.2 | 23.1 | 23.1 | 23.3 | 23.0 | 22.7 | 22.7 | 22.7 | 22.6 | 22.3 | 22.4 | 22.6 | 22.6 | 22.2 | 22.5 | 22.6 | 23.4 | 22.9 | 23.0 | 22.8 | 22.6 | 22.2 | 23.4 | 22.8 |
| Aug 7 | 22.2 | 22.0 | 21.9 | 21.9 | 21.8 | 22.0 | 21.9 | 21.8 | 21.8 | 22.0 | 21.9 | 22.0 | 22.2 | 22.5 | 22.7 | 23.1 | 22.7 | 22.8 | 22.6 | 22.7 | 22.9 | 23.6 | 22.9 | 23.3 | 21.8 | 23.6 | 22.4 |
| Aug 8 | 23.2 | 23.1 | 23.0 | 22.8 | 22.7 | 22.6 | 22.6 | 22.6 | 23.1 | 23.0 | 22.7 | 22.4 | 22.4 | 22.6 | 22.4 | 22.4 | 22.5 | 22.3 | 22.4 | 22.4 | 22.7 | 23.1 | 23.2 | 23.1 | 22.3 | 23.2 | 22.7 |
| Aug 9 | 23.1 | 23.3 | 23.4 | 23.4 | 23.4 | 23.3 | 23.2 | 22.7 | 22.6 | 22.4 | 22.4 | 22.2 | 22.2 | 22.3 | 22.3 | 22.5 | 22.5 | 22.3 | 22.7 | 22.6 | 22.8 | 22.9 | 23.0 | 23.3 | 22.2 | 23.4 | 22.8 |
| Aug 10 | 23.4 | 23.2 | 23.3 | 23.4 | 23.3 | 23.3 | 23.5 | 23.3 | 22.6 | 22.7 | 22.7 | 22.5 | 22.5 | 22.6 | 22.6 | 22.4 | 22.6 | 22.7 | 22.8 | 22.9 | 23.0 | 23.0 | 23.3 | 23.7 | 22.4 | 23.7 | 23.0 |
| Aug 11 | 23.1 | 23.3 | 23.2 | 23.0 | 23.6 | 23.2 | 22.9 | 23.0 | 22.7 | 22.7 | 22.4 | 22.7 | 22.7 | 22.6 | 22.5 | 22.4 | 22.6 | 22.7 | 22.6 | 22.3 | 22.5 | 23.2 | 23.1 | 23.4 | 22.3 | 23.6 | 22.9 |
| Aug 12 | 23.4 | 23.3 | 23.5 | 23.3 | 23.3 | 23.4 | 23.4 | 22.8 | 22.6 | 22.4 | 22.3 | 22.1 | 22.1 | 22.0 | 22.1 | 22.0 | 22.2 | 22.2 | 22.1 | 22.0 | 22.5 | 22.9 | 23.0 | 23.0 | 22.0 | 23.5 | 22.7 |
| Aug 13 | 23.0 | 23.2 | 22.9 | 23.4 | 23.0 | 23.3 | 23.2 | 22.8 | 22.4 | 22.3 | 22.1 | 22.2 | 22.1 | 22.0 | 21.8 | 22.0 | 21.9 | 22.0 | 21.8 | 22.1 | 22.1 | 22.6 | 22.7 | 22.6 | 21.8 | 23.4 | 22.5 |
| Aug 14 | 22.6 | 22.7 | 22.7 | 22.8 | 22.8 | 22.8 | 22.8 | 22.6 | 22.2 | 22.2 | 22.5 | 22.3 | 22.5 | 22.3 | 22.2 | 22.4 | 22.3 | 22.3 | 22.2 | 22.3 | 22.6 | 22.9 | 23.0 | 23.4 | 22.2 | 23.4 | 22.6 |
| Aug 15 | 23.0 | 23.1 | 23.2 | 23.4 | 23.2 | 23.0 | 23.0 | 22.9 | 22.7 | 22.9 | 22.7 | 22.6 | 22.5 | 22.3 | 22.2 | 22.2 | 22.2 | 22.1 | 22.0 | 22.1 | 22.5 | 22.7 | 23.0 | 23.0 | 22.0 | 23.4 | 22.7 |
| Aug 16 | 23.0 | 22.9 | 22.8 | 23.1 | 23.3 | 23.6 | 23.2 | 22.9 | 23.0 | 22.9 | 23.2 | 22.9 | 22.7 | 22.6 | 22.8 | 22.9 | 22.8 | 22.7 | 22.7 | 22.7 | 23.0 | 22.8 | 22.8 | 22.4 | 22.4 | 23.6 | 22.9 |
| Aug 17 | 21.9 | 21.8 | 21.9 | 21.9 | 22.0 | 22.1 | 22.2 | 23.0 | 23.2 | 22.6 | 22.5 | 22.2 | 22.4 | 22.2 | 22.1 | 22.1 | 22.1 | 22.3 | 22.2 | 22.5 | 22.9 | 23.5 | 23.6 | 23.6 | 21.8 | 23.6 | 22.5 |
| Aug 18 | 23.6 | 23.6 | 22.9 | 23.1 | 23.0 | 23.5 | 23.1 | 22.9 | 22.9 | 22.6 | 22.8 | 22.5 | 22.7 | 22.5 | 22.5 | 22.4 | 22.6 | 22.8 | 23.2 | 23.3 | 23.3 | 23.3 | 23.3 | 23.4 | 22.4 | 23.6 | 23.0 |
| Aug 19 | 23.3 | 23.8 | 23.9 | 23.5 | 23.0 | 22.5 | 22.3 | 23.2 | 23.1 | 22.7 | 22.5 | 22.4 | 22.3 | 22.4 | 22.9 | 22.9 | 22.7 | 22.9 | 22.9 | 22.9 | 23.0 | 22.8 | 22.3 | 21.9 | 21.9 | 23.9 | 22.8 |
| Aug 20 | 22.0 | 22.1 | 22.1 | 22.2 | 22.0 | 22.1 | 21.8 | 21.8 | 22.3 | 23.2 | 23.1 | 22.7 | 22.7 | 22.7 | 22.6 | 22.7 | 22.7 | 22.9 | 22.8 | 22.8 | 23.2 | 22.4 | 21.9 | 22.1 | 21.8 | 23.2 | 22.5 |
| Aug 21 | 22.1 | 22.2 | 22.2 | 22.2 | 22.3 | 22.2 | 22.2 | 21.7 | 22.3 | 23.1 | 22.8 | 22.6 | 22.6 | 22.6 | 22.7 | 22.7 | 22.7 | 23.3 | 22.9 | 23.4 | 23.0 | 23.1 | 23.2 | 23.1 | 21.7 | 23.4 | 22.6 |
| Aug 22 | 22.8 | 22.5 | 21.9 | 21.9 | 21.9 | 22.0 | 21.9 | 22.0 | 21.9 | 22.1 | 21.9 | 22.1 | 22.0 | 22.1 | 22.0 | 21.8 | 22.0 | 21.8 | 21.8 | 22.0 | 22.0 | 21.9 | 21.9 | 21.9 | 21.8 | 22.8 | 22.0 |
| Aug 23 | 22.1 | 22.0 | 22.1 | 21.9 | 22.1 | 22.1 | 22.0 | 21.9 | 22.6 | 23.4 | 22.8 | 22.7 | 22.7 | 22.7 | 22.5 | 22.8 | 22.9 | 22.8 | 23.0 | 22.8 | 22.4 | 21.9 | 22.1 | 22.2 | 21.9 | 23.4 | 22.4 |
| Aug 24 | 22.2 | 22.2 | 22.3 | 22.2 | 22.1 | 22.0 | 22.0 | 22.0 | 21.8 | 22.8 | 23.0 | 22.5 | 22.4 | 22.5 | 22.5 | 22.6 | 22.4 | 22.6 | 22.6 | 22.5 | 22.8 | 23.1 | 23.0 | 22.8 | 21.8 | 23.1 | 22.5 |
| Aug 25 | 22.4 | 21.9 | 21.9 | 22.1 | 22.1 | 22.1 | 22.2 | 22.7 | 23.1 | 22.7 | 22.5 | 22.5 | 22.4 | 22.3 | 22.4 | 22.4 | 22.4 | 22.3 | 22.5 | 22.5 | 22.8 | 22.9 | 22.5 | 22.0 | 21.9 | 23.1 | 22.4 |
| Aug 26 | 22.0 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 22.3 | 23.2 | 22.7 | 22.6 | 22.3 | 22.2 | 22.3 | 22.3 | 22.2 | 22.1 | 22.4 | 22.6 | 23.0 | 23.0 | 23.4 | 23.3 | 23.3 | 22.0 | 23.4 | 22.5 |
| Aug 27 | 23.4 | 23.2 | 22.7 | 22.0 | 22.1 | 22.1 | 22.1 | 22.5 | 23.2 | 22.8 | 22.5 | 22.4 | 22.4 | 22.5 | 22.4 | 22.5 | 23.0 | 22.9 | 22.8 | 23.1 | 23.6 | 23.2 | 22.3 | 21.8 | 21.8 | 23.6 | 22.6 |
| Aug 28 | 21.9 | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | 22.0 | 22.3 | 23.0 | 22.9 | 22.5 | 22.5 | 22.6 | 22.3 | 22.5 | 22.4 | 22.6 | 22.6 | 22.8 | 22.9 | 22.8 | 23.5 | 22.9 | 23.2 | 21.9 | 23.5 | 22.5 |
| Aug 29 | 23.1 | 22.9 | 22.5 | 22.2 | 22.0 | 21.9 | 21.9 | 22.2 | 23.2 | 22.8 | 22.7 | 22.6 | 22.4 | 22.6 | 22.7 | 22.6 | 22.6 | 22.7 | 22.7 | 23.1 | 22.6 | 22.5 | 21.9 | 22.1 | 21.9 | 23.2 | 22.5 |
| Aug 30 | 22.1 | 22.2 | 22.3 | 22.2 | 22.2 | 22.3 | 22.3 | 22.1 | 21.9 | 22.3 | 23.2 | 22.7 | 22.5 | 22.7 | 22.7 | 23.2 | 23.2 | 23.2 | 22.8 | 23.2 | 23.0 | 22.7 | 22.3 | 21.9 | 21.9 | 23.2 | 22.6 |
| Aug 31 | 21.9 | 21.8 | 22.0 | 22.0 | 22.0 | 21.9 | 22.1 | 22.0 | 22.1 | 21.8 | 21.9 | 22.3 | 22.9 | 23.2 | 23.4 | 22.9 | 23.1 | 22.9 | 23.2 | 23.3 | 22.8 | 22.2 | 21.8 | 21.9 | 21.8 | 23.4 | 22.4 |
| Diurnal Maximum | 24.2 | 24.1 | 24.2 | 24.1 | 24.3 | 24.1 | 24.1 | 23.8 | 23.6 | 23.5 | 23.4 | 23.2 | 23.5 | 23.4 | 23.4 | 23.3 | 23.2 | 23.3 | 23.2 | 23.4 | 23.6 | 23.6 | 23.9 | 24.1 | | | |
| Diurnal Average | 22.8 | 22.8 | 22.7 | 22.7 | 22.7 | 22.7 | 22.6 | 22.6 | 22.7 | 22.7 | 22.6 | 22.4 | 22.4 | 22.4 | 22.5 | 22.5 | 22.5 | 22.6 | 22.5 | 22.6 | 22.7 | 22.9 | 22.8 | 22.8 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for ST - 986c Station*



# PEACE RIVER AREA MONITORING PROGRAM

## 986c Station - August 2021

## Summary of Hourly Averages

## PRECIPITATION in mm

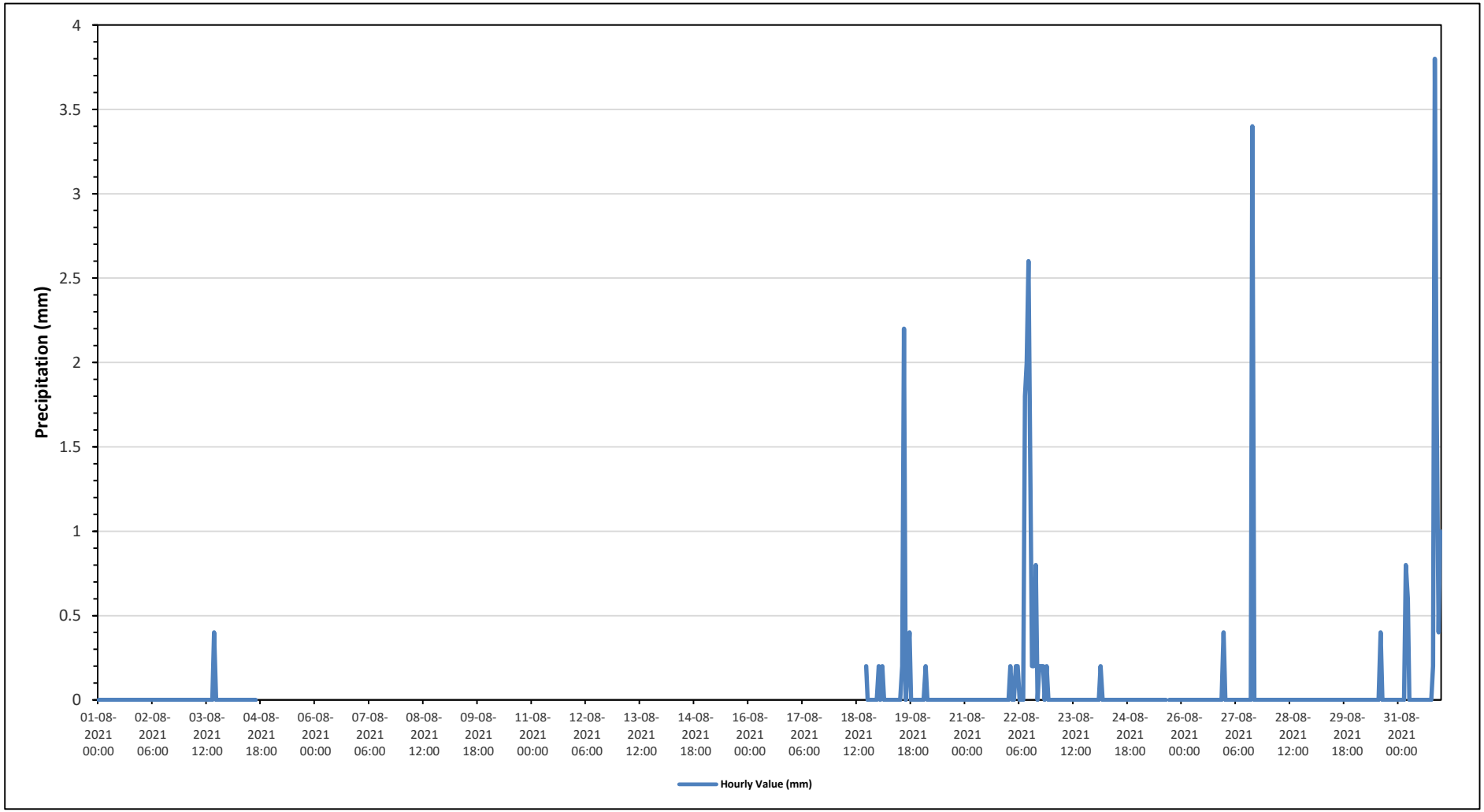
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 3.8 | mm | on August 31 at hour 20 | Hours in Service: | 744 |
| Maximum Daily Value: | 10.4 | mm | on August 22 | Hours of Data: | 406 |
| Minimum Hourly Value: | 0.0 | mm | on August 1 at hour 0 | Hours of Missing Data: | 337 |
| Minimum Daily Value: | 0.0 | mm | on August 1 | Hours of Calibration: | 1 |
| Monthly Total: | 27.6 | mm | | Operational Uptime: | 54.7 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Total |
| Aug 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 3 | 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 | 0.4 | 0.4 |
| Aug 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | N | N | N | N | N | N | N | 0.0 | 0.0 | - |
| Aug 5 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 6 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 7 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 8 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 9 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 10 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 11 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 12 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 13 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 14 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 15 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 16 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 17 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - | - | - |
| Aug 18 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | NRM | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 | - |
| Aug 19 | 0.2 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 2.2 | 0 | 0.2 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 2.2 | 3.4 |
| Aug 20 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 | 0.2 |
| Aug 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 |
| Aug 22 | 0 | 0.2 | 0 | 0 | 0.2 | 0.2 | 0 | 0 | 0 | 1.8 | 2 | 2.6 | 1.4 | 0.2 | 0.2 | 0.8 | 0 | 0.2 | 0.2 | 0.2 | 0 | 0.2 | 0 | 0 | 0.0 | 2.6 | **10.4** |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 24 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 | 0.2 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.0 | 0.4 | 0.4 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 3.4 | 3.4 |
| Aug 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 |
| Aug 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 |
| Aug 30 | 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 | 0.4 | 0.4 |
| Aug 31 | 0 | 0 | 0 | 0 | 0.8 | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | **3.8** | 1.8 | 0.4 | 1 | 0.0 | **3.8** | 8.6 |
| Diurnal Maximum | 0.2 | 0.2 | 0.2 | 0.2 | 0.8 | 0.6 | 0.0 | 0.0 | 0.0 | 1.8 | 2.0 | 2.6 | 1.4 | 0.2 | 2.2 | 3.4 | 0.4 | 0.4 | 0.2 | 0.2 | 3.8 | 1.8 | 0.4 | 1.0 | | | |
| Diurnal Average | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for Precipitation - 986c Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr

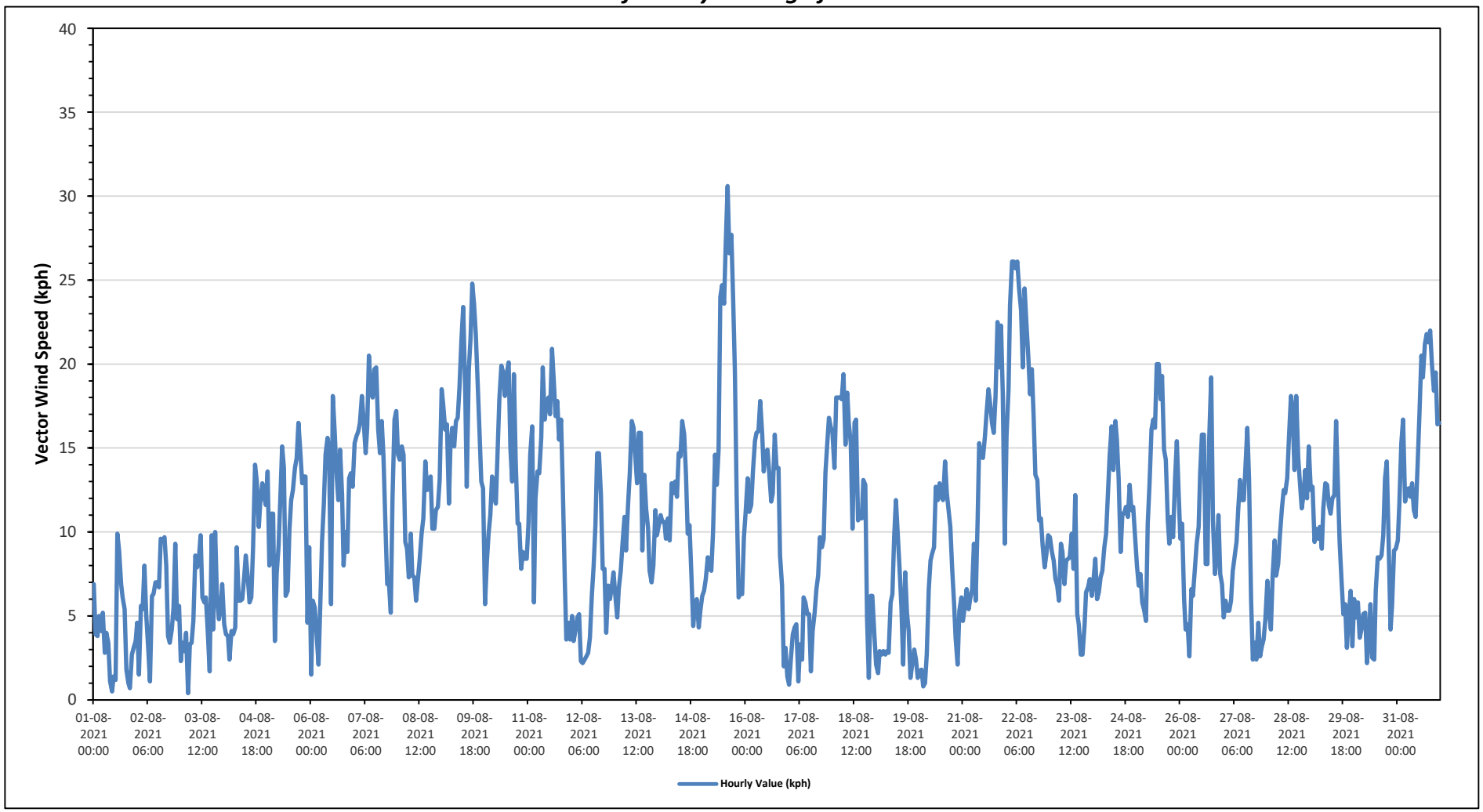
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 30.6 | kph | on August 15 at hour 14 | Hours in Service: | 744 |
| Maximum Daily Value: | 17.3 | kph | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.4 | kph | on August 3 at hour 4 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 2.6 | kph | on August 12 | Hours of Calibration: | 0 |
| Monthly Average: | 2.7 | kph | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 6.9 | 3.9 | 3.8 | 5.0 | 4.1 | 5.2 | 2.8 | 4.0 | 3.4 | 1.1 | 0.5 | 1.4 | 1.2 | 9.9 | 8.9 | 6.9 | 6.1 | 5.4 | 1.8 | 1.0 | 0.7 | 2.7 | 3.1 | 3.5 | 0.5 | 9.9 | 3.4 |
| Aug 2 | 4.6 | 1.5 | 5.6 | 5.4 | 8.0 | 5.1 | 3.1 | 1.1 | 6.2 | 6.3 | 7.0 | 7.0 | 6.7 | 9.6 | 9.5 | 9.7 | 8.0 | 3.8 | 3.4 | 4.2 | 5.5 | 9.3 | 4.8 | 5.6 | 1.1 | 9.7 | 5.0 |
| Aug 3 | 2.3 | 3.4 | 2.9 | 4.0 | **0.4** | 3.3 | 3.4 | 4.7 | 8.6 | 7.9 | 8.4 | 9.8 | 6.1 | 5.8 | 6.1 | 3.9 | 1.7 | 9.8 | 4.2 | 10.0 | 6.2 | 4.8 | 5.6 | 6.9 | **0.4** | 10.0 | 3.7 |
| Aug 4 | 4.5 | 3.9 | 3.8 | 2.4 | 4.1 | 3.9 | 4.3 | 9.1 | 5.9 | 5.9 | 6.0 | 7.2 | 8.6 | 7.3 | 5.8 | 6.1 | 9.0 | 14.0 | 13.0 | 10.3 | 11.8 | 12.9 | 12.1 | 11.6 | 2.4 | 14.0 | 5.2 |
| Aug 5 | 13.6 | 8.0 | 11.1 | 11.1 | 3.5 | 7.5 | 9.2 | 12.1 | 15.1 | 13.8 | 6.2 | 6.5 | 10.1 | 11.9 | 12.5 | 13.8 | 14.4 | 16.5 | 14.9 | 12.9 | 13.3 | 13.3 | 4.6 | 9.1 | 3.5 | 16.5 | 8.8 |
| Aug 6 | 1.5 | 5.9 | 5.5 | 4.0 | 2.1 | 5.1 | 9.4 | 11.6 | 14.6 | 15.6 | 15.0 | 5.7 | 18.1 | 15.8 | 13.7 | 11.9 | 14.9 | 12.2 | 8.0 | 10.0 | 8.8 | 13.2 | 13.5 | 12.7 | 1.5 | 18.1 | 8.7 |
| Aug 7 | 15.3 | 15.7 | 16.0 | 16.5 | 18.1 | 16.6 | 14.7 | 16.2 | 20.5 | 18.3 | 18.0 | 19.7 | 19.8 | 16.1 | 14.7 | 16.6 | 14.5 | 10.3 | 6.9 | 6.9 | 5.2 | 12.0 | 16.7 | 17.2 | 5.2 | 20.5 | 12.1 |
| Aug 8 | 14.6 | 14.3 | 15.1 | 14.6 | 9.4 | 9.0 | 7.3 | 9.9 | 7.4 | 7.3 | 5.9 | 7.3 | 8.3 | 9.9 | 10.8 | 14.2 | 12.5 | 12.8 | 13.3 | 10.2 | 10.2 | 11.3 | 11.5 | 13.1 | 5.9 | 15.1 | 4.1 |
| Aug 9 | 18.5 | 17.6 | 16.1 | 16.4 | 11.7 | 15.1 | 16.2 | 15.1 | 16.6 | 16.8 | 18.6 | 21.5 | 23.4 | 18.3 | 12.7 | 19.6 | 21.5 | 24.8 | 23.6 | 21.8 | 18.7 | 15.9 | 13.0 | 12.6 | 11.7 | 24.8 | 14.7 |
| Aug 10 | 5.7 | 8.2 | 9.9 | 11.0 | 13.3 | 12.1 | 11.7 | 14.8 | 17.9 | 19.9 | 19.5 | 18.1 | 19.4 | 20.1 | 15.0 | 13.0 | 19.4 | 14.3 | 10.5 | 10.5 | 7.8 | 8.8 | 8.4 | 8.4 | 5.7 | 20.1 | 12.0 |
| Aug 11 | 10.5 | 14.6 | 16.3 | 5.8 | 12.0 | 13.6 | 13.5 | 15.6 | 19.8 | 16.7 | 17.7 | 18.0 | 17.0 | 20.9 | 19.0 | 16.9 | 17.8 | 15.5 | 16.7 | 12.6 | 7.1 | 3.6 | 4.6 | 3.6 | 3.6 | 20.9 | 12.1 |
| Aug 12 | 5.0 | 3.5 | 4.2 | 4.9 | 5.1 | 2.3 | 2.2 | 2.4 | 2.6 | 2.8 | 3.7 | 6.3 | 8.0 | 10.4 | 14.7 | 14.7 | 12.2 | 7.8 | 7.8 | 4.0 | 6.8 | 6.0 | 6.7 | 7.6 | 2.2 | 14.7 | **2.6** |
| Aug 13 | 6.1 | 4.9 | 6.6 | 7.7 | 9.3 | 10.9 | 8.9 | 11.6 | 13.5 | 16.6 | 16.2 | 14.5 | 12.9 | 15.9 | 15.9 | 8.9 | 13.4 | 11.4 | 10.2 | 7.7 | 7.0 | 8.0 | 11.3 | 9.8 | 4.9 | 16.6 | 8.6 |
| Aug 14 | 10.4 | 11.0 | 10.6 | 10.6 | 9.6 | 10.8 | 9.5 | 12.9 | 12.3 | 13.0 | 12.1 | 14.7 | 14.5 | 16.6 | 15.8 | 13.4 | 9.9 | 10.4 | 7.3 | 4.4 | 5.7 | 6.0 | 4.3 | 5.4 | 4.3 | 16.6 | 8.1 |
| Aug 15 | 6.2 | 6.5 | 7.2 | 8.5 | 7.8 | 7.7 | 10.0 | 14.6 | 12.8 | 14.9 | 24.0 | 24.7 | 23.6 | 26.9 | **30.6** | 26.6 | 27.7 | 23.9 | 19.6 | 12.2 | 6.1 | 6.4 | 6.3 | 9.7 | 6.1 | **30.6** | 13.3 |
| Aug 16 | 11.2 | 13.2 | 11.2 | 11.6 | 13.6 | 15.4 | 15.9 | 16.0 | 17.8 | 15.8 | 13.6 | 14.7 | 14.9 | 13.5 | 11.8 | 12.3 | 15.8 | 13.8 | 13.8 | 8.6 | 6.8 | 2.0 | 3.1 | 1.4 | 1.4 | 17.8 | 9.7 |
| Aug 17 | 0.9 | 2.6 | 3.9 | 4.3 | 4.5 | 1.1 | 3.3 | 2.4 | 6.1 | 5.8 | 5.1 | 5.1 | 1.7 | 4.1 | 5.2 | 6.6 | 7.4 | 9.7 | 9.1 | 9.6 | 13.5 | 15.2 | 16.8 | 16.2 | 0.9 | 16.8 | 4.1 |
| Aug 18 | 15.9 | 13.8 | 18.0 | 18.0 | 18.0 | 17.9 | 19.4 | 15.2 | 18.3 | 16.5 | 15.3 | 10.2 | 16.5 | 16.7 | 10.7 | 10.9 | 10.8 | 13.1 | 12.8 | 4.8 | 1.3 | 6.2 | 6.2 | 3.9 | 1.3 | 19.4 | 11.7 |
| Aug 19 | 2.1 | 1.6 | 2.9 | 2.7 | 2.9 | 2.7 | 2.9 | 2.8 | 5.8 | 6.3 | 9.7 | 11.9 | 9.7 | 7.7 | 5.5 | 2.1 | 7.6 | 5.2 | 4.1 | 1.3 | 2.1 | 3.0 | 2.4 | 1.3 | 1.3 | 11.9 | 3.4 |
| Aug 20 | 1.7 | 1.8 | 0.8 | 1.0 | 2.7 | 6.6 | 8.3 | 8.7 | 9.1 | 12.7 | 11.9 | 12.9 | 12.1 | 11.9 | 14.2 | 12.3 | 11.3 | 10.3 | 7.9 | 5.7 | 3.7 | 2.1 | 5.3 | 6.1 | 0.8 | 14.2 | 6.2 |
| Aug 21 | 4.7 | 5.6 | 6.6 | 5.4 | 6.0 | 6.6 | 9.3 | 5.9 | 10.8 | 15.3 | 14.5 | 14.4 | 15.7 | 17.0 | 18.5 | 17.6 | 16.5 | 15.9 | 18.0 | 22.5 | 19.8 | 22.3 | 18.3 | 9.3 | 4.7 | 22.5 | 12.7 |
| Aug 22 | 15.7 | 18.5 | 23.5 | 26.1 | 26.1 | 25.7 | 26.1 | 24.5 | 23.2 | 19.8 | 24.5 | 22.5 | 20.4 | 18.2 | 19.7 | 16.9 | 13.4 | 13.1 | 10.7 | 10.8 | 9.2 | 7.9 | 8.7 | 9.8 | 7.9 | 26.1 | **17.3** |
| Aug 23 | 9.7 | 8.8 | 8.3 | 7.2 | 6.8 | 5.9 | 9.3 | 8.8 | 6.9 | 8.3 | 8.4 | 8.5 | 9.9 | 7.8 | 12.2 | 5.1 | 4.5 | 2.7 | 2.7 | 4.4 | 6.4 | 6.7 | 7.2 | 6.2 | 2.7 | 12.2 | 3.9 |
| Aug 24 | 7.0 | 8.4 | 6.0 | 6.4 | 7.3 | 7.7 | 9.1 | 9.9 | 12.5 | 14.5 | 16.3 | 13.7 | 16.6 | 15.5 | 13.2 | 8.8 | 11.1 | 11.1 | 11.5 | 10.9 | 12.8 | 11.3 | 11.5 | 9.6 | 6.0 | 16.6 | 10.3 |
| Aug 25 | 8.0 | 6.8 | 7.5 | 5.8 | 5.3 | 4.7 | 10.5 | 12.8 | 16.1 | 16.7 | 16.2 | 20.0 | 20.0 | 17.9 | 19.3 | 14.9 | 14.3 | 10.7 | 9.3 | 10.9 | 9.7 | 13.2 | 15.4 | 12.4 | 4.7 | 20.0 | 11.3 |
| Aug 26 | 9.6 | 10.5 | 6.0 | 4.2 | 4.5 | 2.6 | 6.6 | 6.2 | 7.8 | 9.3 | 10.3 | 13.5 | 15.8 | 15.8 | 8.1 | 8.1 | 15.5 | 19.2 | 10.7 | 7.5 | 8.4 | 11.0 | 7.5 | 6.9 | 2.6 | 19.2 | 8.6 |
| Aug 27 | 4.9 | 5.9 | 5.3 | 5.3 | 5.9 | 7.7 | 8.6 | 9.4 | 11.4 | 13.1 | 11.9 | 11.9 | 14.0 | 16.2 | 13.1 | 6.0 | 2.4 | 3.4 | 2.4 | 4.6 | 2.6 | 3.2 | 3.6 | 4.8 | 2.4 | 16.2 | 5.8 |
| Aug 28 | 7.1 | 5.3 | 4.2 | 7.4 | 9.5 | 7.4 | 8.1 | 9.8 | 11.4 | 12.5 | 12.3 | 13.2 | 15.6 | 18.1 | 17.4 | 13.7 | 18.1 | 14.4 | 13.1 | 11.4 | 12.2 | 13.7 | 12.0 | 15.1 | 4.2 | 18.1 | 10.9 |
| Aug 29 | 12.5 | 12.7 | 9.4 | 10.2 | 9.6 | 10.3 | 9.0 | 11.4 | 12.9 | 12.8 | 11.6 | 11.1 | 12.0 | 12.2 | 16.6 | 12.9 | 9.4 | 7.0 | 5.1 | 5.7 | 3.1 | 4.9 | 6.5 | 3.2 | 3.1 | 16.6 | 8.8 |
| Aug 30 | 6.0 | 4.9 | 5.8 | 3.7 | 4.2 | 5.1 | 5.2 | 2.2 | 3.6 | 5.7 | 2.5 | 2.4 | 6.5 | 8.5 | 8.4 | 8.6 | 9.8 | 13.2 | 14.2 | 9.7 | 4.2 | 5.6 | 8.9 | 9.0 | 2.2 | 14.2 | 2.7 |
| Aug 31 | 9.5 | 11.6 | 15.3 | 16.7 | 11.8 | 12.3 | 12.6 | 12.1 | 12.9 | 11.3 | 10.9 | 14.0 | 16.9 | 20.5 | 19.2 | 21.2 | 21.8 | 21.3 | 22.0 | 20.0 | 18.4 | 19.5 | 16.4 | 16.5 | 9.5 | 22.0 | 16.0 |
| Diurnal Maximum | 19 | 19 | 24 | 26 | 26 | 26 | 26 | 25 | 23 | 20 | 25 | 25 | 24 | 27 | 31 | 27 | 28 | 25 | 24 | 23 | 20 | 22 | 18 | 17 | | | |
| Diurnal Average | 8.1 | 8.2 | 8.7 | 8.5 | 8.3 | 8.6 | 9.4 | 10.1 | 11.7 | 12.0 | 12.1 | 12.3 | 13.4 | 14.1 | 13.5 | 12.1 | 12.7 | 12.2 | 10.6 | 9.3 | 8.2 | 9.1 | 8.9 | 8.7 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

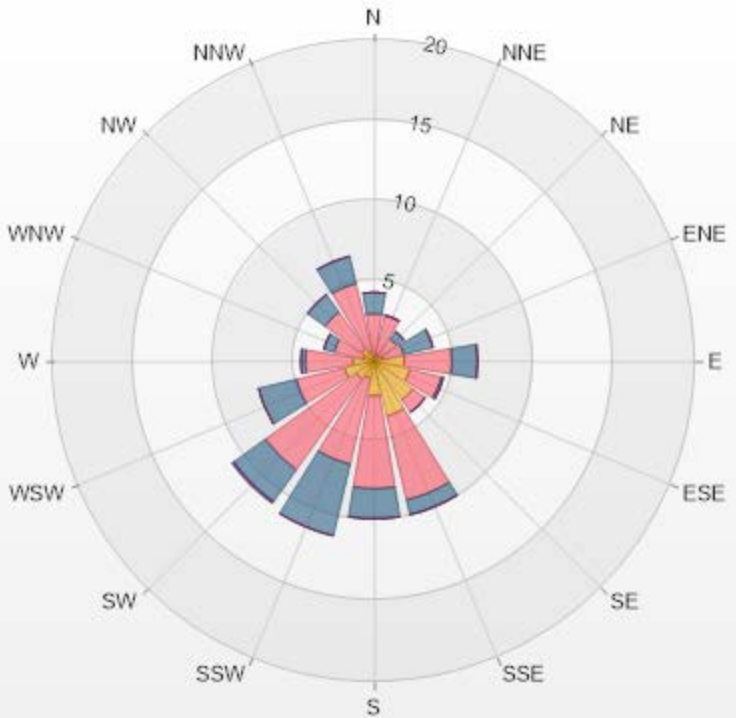
## *Timeseries Chart of Hourly Average for VWS - 986c Station*



Wind: PRAMP 986c Monitor: WDS [KPH] Monthly: 08-2021 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 3.23% Valid Data: 100.00%

| Direction | 1.8-6.0 | 6.0-15.0 | 15.0-29.0 | 29.0-39.0 | >39.0 | Total |
|---|---|---|---|---|---|---|
| N | 0.27 | 2.69 | 1.34 | 0 | 0 | 4.3 |
| NNE | 0.4 | 2.55 | 0 | 0 | 0 | 2.95 |
| NE | 0.4 | 1.34 | 0.54 | 0 | 0 | 2.28 |
| ENE | 0.54 | 1.34 | 1.88 | 0 | 0 | 3.76 |
| E | 1.88 | 2.96 | 1.61 | 0 | 0 | 6.45 |
| ESE | 2.28 | 2.02 | 0.13 | 0 | 0 | 4.43 |
| SE | 2.96 | 0.94 | 0 | 0 | 0 | 3.9 |
| SSE | 3.49 | 5.38 | 0.94 | 0 | 0 | 9.81 |
| S | 2.15 | 5.78 | 1.88 | 0 | 0 | 9.81 |
| SSW | 1.08 | 5.51 | 4.57 | 0 | 0 | 11.16 |
| SW | 1.34 | 6.99 | 2.42 | 0.13 | 0 | 10.88 |
| WSW | 1.88 | 3.09 | 2.42 | 0 | 0 | 7.39 |
| W | 1.34 | 2.96 | 0.27 | 0 | 0 | 4.57 |
| WNW | 0.67 | 1.88 | 0.67 | 0 | 0 | 3.22 |
| NW | 0.94 | 2.82 | 1.34 | 0 | 0 | 5.1 |
| NNW | 0.67 | 4.3 | 1.75 | 0 | 0 | 6.72 |
| Summary | 22.29 | 52.55 | 21.76 | 0.13 | 0 | 96.73 |

PRAMP 986c 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 3.23% Calm Wind Avg Speed: 1.23(KPH)




| % Icon Classes (KPH) | 22 1.8-6.0 | 53 6.0-15.0 | 22 15.0-29.0 | 0 29.0-39.0 | 0 >39.0 |
|---|---|---|---|---|---|

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## WIND DIRECTION (VWD) in sector

Monthly Average: 215 (SSW) degree

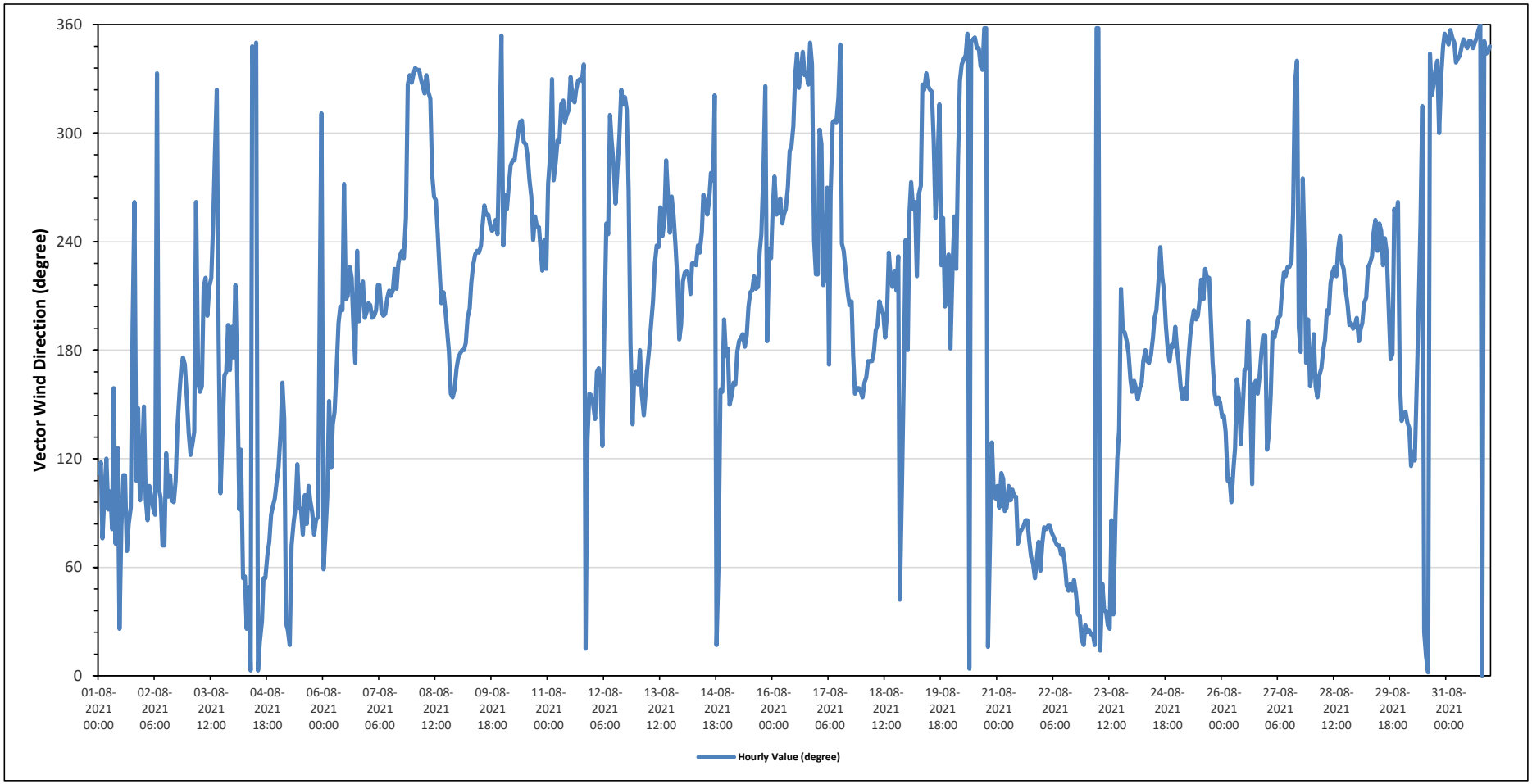
| | |
|---|---|
| Hours in Service: | 744 |
| Hours of Data: | 744 |
| Hours of Missing Data: | 0 |
| Hours of Calibration: | 0 |
| Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Degree | Quadrant |
| Aug 1 | ESE | ESE | ENE | E | ESE | E | E | E | SSE | ENE | SE | NNE | E | ESE | ESE | ENE | E | E | SSW | W | ESE | SE | E | ESE | 103 | ESE |
| Aug 2 | SSE | E | E | ESE | E | E | E | NNW | ESE | E | ENE | ENE | ESE | E | ESE | E | E | ESE | SE | SSE | S | S | S | SSE | 113 | ESE |
| Aug 3 | SE | ESE | SE | SE | W | SSE | SSE | SSE | SSW | SW | SSW | SSW | SW | WSW | WNW | NW | S | E | SE | SSE | SSE | SSW | SSE | S | 185 | S |
| Aug 4 | S | SW | SSE | E | SE | NE | NE | NNE | NE | N | NNW | NW | N | N | NNE | NNE | NE | NE | ENE | ENE | E | E | E | ESE | 60 | ENE |
| Aug 5 | ESE | SE | SSE | SE | NNE | NNE | NNE | ENE | E | E | ESE | E | E | ENE | E | E | ESE | E | E | ENE | E | E | SW | NW | 92 | E |
| Aug 6 | ENE | ENE | E | SSE | ESE | SE | SE | S | SSW | SSW | SSW | W | SSW | SSW | SW | SW | S | S | SW | SSW | SSW | SW | SSW | SSW | 197 | SSW |
| Aug 7 | SSW | SSW | SSW | SSW | SSW | SW | SW | SSW | SSW | SSW | SSW | SSW | SSW | SSW | SW | SSW | SW | SW | SW | SW | WSW | NW | NNW | NNW | 219 | SW |
| Aug 8 | NNW | NNW | NNW | NNW | NNW | NW | NW | NNW | NW | NW | W | W | W | WSW | SW | SSW | SSW | SSW | S | S | SSE | SSE | SSE | SSE | 258 | WSW |
| Aug 9 | S | S | S | S | S | SSW | SSW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | N | 232 | SW |
| Aug 10 | SW | W | WSW | W | W | WNW | WNW | WNW | WNW | NW | NW | WNW | WNW | WNW | W | W | WSW | WSW | WSW | WSW | SW | SW | WSW | SW | 274 | W |
| Aug 11 | W | WNW | NNW | W | WNW | WNW | WNW | NW | NW | NW | NW | NW | NNW | NW | NW | NW | NNW | NNW | NNW | NNW | NNE | SE | SSE | SSE | 315 | NW |
| Aug 12 | SSE | SE | SSE | SSE | SSE | SE | S | WSW | WSW | NW | WNW | W | W | W | WNW | NW | NW | NW | NW | W | S | SE | SSE | SSE | 263 | W |
| Aug 13 | SSE | S | SSE | SE | SSE | SSE | S | SSW | SSW | SW | SW | SW | WSW | WSW | WSW | WNW | W | WSW | W | WSW | SW | SW | S | SSW | 222 | SW |
| Aug 14 | SW | SW | SW | SW | SSW | SW | SW | SW | SW | SW | WSW | W | W | WSW | W | W | W | NW | NNE | ENE | SSE | SSE | SSW | S | 242 | WSW |
| Aug 15 | S | SSE | SSE | SSE | SSE | S | S | S | S | S | S | SSW | SSW | SSW | SW | SSW | SSW | SW | WSW | W | NW | S | SW | SW | 208 | SSW |
| Aug 16 | WSW | W | WSW | WSW | W | WSW | WSW | WSW | W | WNW | WNW | WNW | NNW | NNW | NW | NNW | NNW | NNW | NNW | NW | N | NNW | WSW | SW | 295 | WNW |
| Aug 17 | SW | WNW | WNW | SW | SW | W | S | W | NW | NW | NW | NW | NNW | WSW | SW | SW | SSW | SSW | SSW | S | SSE | SSE | SSE | SSE | 200 | SSW |
| Aug 18 | SSE | SSE | SSE | S | S | S | S | S | SSW | SSW | SSW | SSW | S | SSW | SW | SW | SSW | SW | SSW | SW | NE | ESE | SSE | WSW | 190 | S |
| Aug 19 | S | WSW | W | WSW | W | SW | W | W | NW | NW | NNW | NW | NW | NW | WNW | WSW | W | NW | SW | WSW | SSW | SW | SW | S | 295 | WNW |
| Aug 20 | SW | WSW | SW | WNW | NNW | NNW | NNW | NNW | N | N | N | N | N | NNW | NNW | NNW | NNW | N | N | NNE | ENE | SE | ESE | E | 354 | N |
| Aug 21 | ESE | E | ESE | ESE | E | E | ESE | E | ESE | E | E | ENE | ENE | E | E | E | E | ENE | ENE | ENE | NE | ENE | ENE | ENE | 80 | E |
| Aug 22 | ENE | E | E | E | E | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | NE | NE | NE | NE | NE | NE | NE | NNE | NNE | NNE | NNE | 65 | ENE |
| Aug 23 | NNE | NNE | NNE | NNE | NNE | N | N | NNE | NE | NE | NE | NNE | NNE | E | NE | E | ESE | SE | SSW | S | S | S | S | SSE | 43 | NE |
| Aug 24 | SSE | SSE | SSE | SSE | SSE | SSE | S | S | S | S | S | S | SSW | SSW | SW | SW | SW | SSW | SSW | S | S | S | S | S | 186 | S |
| Aug 25 | S | S | SSE | SSE | SSE | SSE | S | S | SSW | SSW | SSW | SSW | SSW | SW | SSW | SW | SW | SW | SSW | S | SSE | SSE | SSE | SSE | 190 | S |
| Aug 26 | SE | SE | SE | ESE | ESE | E | ESE | SE | SSE | SSE | SE | SE | SSE | SSE | SSW | SSE | ESE | SSE | SSE | SSE | SSE | S | S | S | 153 | SSE |
| Aug 27 | SE | SE | SSE | S | S | S | SSW | SSW | SSW | SW | SW | SW | SW | SW | WSW | NW | NNW | S | S | W | WSW | S | SSW | SSE | 212 | SSW |
| Aug 28 | SSE | S | SSE | SSE | SSE | SSE | S | S | SSW | SSW | SW | SW | SW | SW | SW | WSW | SW | SW | SSW | SSW | SSW | SSW | S | SSW | 206 | SSW |
| Aug 29 | SSW | S | S | SSW | SSW | SSW | SW | SW | SW | WSW | WSW | SW | WSW | WSW | SW | WSW | SW | SSW | S | S | WSW | WSW | W | SSE | 223 | SW |
| Aug 30 | SE | SE | SE | SE | SE | ESE | ESE | ESE | SSE | SSW | WSW | NW | NNE | NNE | N | NNW | NW | NW | NNW | NNW | WNW | NNW | NNW | N | 352 | N |
| Aug 31 | N | NNW | N | N | N | NNW | NNW | NNW | NNW | N | NNW | NNW | N | N | NNW | N | N | N | N | N | NNW | NNW | NNW | 351 | N | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **C** | Monthly Calibration | **S** | Daily Zero-Span Check | **Q** | Quality Assurance | | |
| **K** | Collection Error | **N** | No Data (Machine Not in Service) | **Y** | Routine Maintenance | **P** | Power Failure |
| **X** | InValid Data (Machine Malfunction /Recovery) | **NRM** | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for VWD - 986c Station*



peace river area monitoring program
pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 30.6 | kph | on August 15 at hour 14 | Hours in Service: | 744 |
| Maximum Daily Value: | 17.3 | kph | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.4 | kph | on August 3 at hour 4 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 2.6 | kph | on August 12 | Hours of Calibration: | 0 |
| Monthly Average: | 2.7 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 215 (SSW) degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 6.9 | 3.9 | 3.8 | 5.0 | 4.1 | 5.2 | 2.8 | 4.0 | 3.4 | 1.1 | 0.5 | 1.4 | 1.2 | 9.9 | 8.9 | 6.9 | 6.1 | 5.4 | 1.8 | 1.0 | 0.7 | 2.7 | 3.1 | 3.5 | 0.5 | 9.9 | 3.4 |
| | ESE | ESE | ENE | E | ESE | E | E | E | SSE | ENE | SE | NNE | E | ESE | ESE | ENE | E | E | SSW | W | ESE | SE | E | ESE | | | | |
| Aug 2 | 4.6 | 1.5 | 5.6 | 5.4 | 8.0 | 5.1 | 3.1 | 1.1 | 6.2 | 6.3 | 7.0 | 7.0 | 6.7 | 9.6 | 9.5 | 9.7 | 8.0 | 3.8 | 3.4 | 4.2 | 5.5 | 9.3 | 4.8 | 5.6 | 1.1 | 9.7 | 5.0 |
| | SSE | E | E | ESE | E | E | E | NNW | ESE | E | ENE | ENE | ESE | E | ESE | E | E | ESE | SE | SSE | S | S | S | SSE | | | |
| Aug 3 | 2.3 | 3.4 | 2.9 | 4.0 | **0.4** | 3.3 | 3.4 | 4.7 | 8.6 | 7.9 | 8.4 | 9.8 | 6.1 | 5.8 | 6.1 | 3.9 | 1.7 | 9.8 | 4.2 | 10.0 | 6.2 | 4.8 | 5.6 | 6.9 | **0.4** | 10.0 | 3.7 |
| | SE | ESE | SE | SE | W | SSE | SSE | SSE | SSW | SW | SSW | SSW | SW | WSW | WNW | NW | S | E | SE | SSE | SSE | SSW | SSE | S | | | |
| Aug 4 | 4.5 | 3.9 | 3.8 | 2.4 | 4.1 | 3.9 | 4.3 | 9.1 | 5.9 | 5.9 | 6.0 | 7.2 | 8.6 | 7.3 | 5.8 | 6.1 | 9.0 | 14.0 | 13.0 | 10.3 | 11.8 | 12.9 | 12.1 | 11.6 | 2.4 | 14.0 | 5.2 |
| | S | SW | SSE | E | SE | NE | NE | NNE | NE | N | NNW | NW | N | N | NNE | NNE | NE | NE | ENE | ENE | E | E | E | ESE | | | |
| Aug 5 | 13.6 | 8.0 | 11.1 | 11.1 | 3.5 | 7.5 | 9.2 | 12.1 | 15.1 | 13.8 | 6.2 | 6.5 | 10.1 | 11.9 | 12.5 | 13.8 | 14.4 | 16.5 | 14.9 | 12.9 | 13.3 | 13.3 | 4.6 | 9.1 | 3.5 | 16.5 | 8.8 |
| | ESE | SE | SSE | SE | NNE | NNE | NNE | ENE | E | E | ESE | E | E | ENE | E | E | ESE | E | E | ENE | E | E | SW | NW | | | |
| Aug 6 | 1.5 | 5.9 | 5.5 | 4.0 | 2.1 | 5.1 | 9.4 | 11.6 | 14.6 | 15.6 | 15.0 | 5.7 | 18.1 | 15.8 | 13.7 | 11.9 | 14.9 | 12.2 | 8.0 | 10.0 | 8.8 | 13.2 | 13.5 | 12.7 | 1.5 | 18.1 | 8.7 |
| | ENE | ENE | E | SSE | ESE | SE | SE | S | SSW | SSW | SSW | W | SSW | SSW | SW | SW | S | S | SW | SSW | SSW | SW | SSW | SSW | | | |
| Aug 7 | 15.3 | 15.7 | 16.0 | 16.5 | 18.1 | 16.6 | 14.7 | 16.2 | 20.5 | 18.3 | 18.0 | 19.7 | 19.8 | 16.1 | 14.7 | 16.6 | 14.5 | 10.3 | 6.9 | 6.9 | 5.2 | 12.0 | 16.7 | 17.2 | 5.2 | 20.5 | 12.1 |
| | SSW | SSW | SSW | SSW | SSW | SW | SW | SSW | SSW | SSW | SSW | SSW | SSW | SSW | SW | SSW | SW | SW | SW | SW | WSW | NW | NNW | NNW | | | |
| Aug 8 | 14.6 | 14.3 | 15.1 | 14.6 | 9.4 | 9.0 | 7.3 | 9.9 | 7.4 | 7.3 | 5.9 | 7.3 | 8.3 | 9.9 | 10.8 | 14.2 | 12.5 | 12.8 | 13.3 | 10.2 | 10.2 | 11.3 | 11.5 | 13.1 | 5.9 | 15.1 | 4.1 |
| | NNW | NNW | NNW | NNW | NNW | NW | NW | NNW | NW | NW | W | W | W | WSW | SW | SSW | SSW | SSW | S | S | SSE | SSE | SSE | SSE | | | |
| Aug 9 | 18.5 | 17.6 | 16.1 | 16.4 | 11.7 | 15.1 | 16.2 | 15.1 | 16.6 | 16.8 | 18.6 | 21.5 | 23.4 | 18.3 | 12.7 | 19.6 | 21.5 | 24.8 | 23.6 | 21.8 | 18.7 | 15.9 | 13.0 | 12.6 | 11.7 | 24.8 | 14.7 |
| | S | S | S | S | S | SSW | SSW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | N | | | |
| Aug 10 | 5.7 | 8.2 | 9.9 | 11.0 | 13.3 | 12.1 | 11.7 | 14.8 | 17.9 | 19.9 | 19.5 | 18.1 | 19.4 | 20.1 | 15.0 | 13.0 | 19.4 | 14.3 | 10.5 | 10.5 | 7.8 | 8.8 | 8.4 | 8.4 | 5.7 | 20.1 | 12.0 |
| | SW | W | WSW | W | W | WNW | WNW | WNW | WNW | NW | NW | WNW | WNW | WNW | W | W | WSW | WSW | WSW | WSW | SW | SW | WSW | SW | | | |
| Aug 11 | 10.5 | 14.6 | 16.3 | 5.8 | 12.0 | 13.6 | 13.5 | 15.6 | 19.8 | 16.7 | 17.7 | 18.0 | 17.0 | 20.9 | 19.0 | 16.9 | 17.8 | 15.5 | 16.7 | 12.6 | 7.1 | 3.6 | 4.6 | 3.6 | 3.6 | 20.9 | 12.1 |
| | W | WNW | NNW | W | WNW | WNW | WNW | NW | NW | NW | NW | NW | NNW | NW | NW | NW | NNW | NNW | NNW | NNW | NNE | SE | SSE | SSE | | | |
| Aug 12 | 5.0 | 3.5 | 4.2 | 4.9 | 5.1 | 2.3 | 2.2 | 2.4 | 2.6 | 2.8 | 3.7 | 6.3 | 8.0 | 10.4 | 14.7 | 14.7 | 12.2 | 7.8 | 7.8 | 4.0 | 6.8 | 6.0 | 6.7 | 7.6 | 2.2 | 14.7 | **2.6** |
| | SSE | SE | SSE | SSE | SSE | SE | S | WSW | WSW | NW | WNW | W | W | W | WNW | NW | NW | NW | NW | W | S | SE | SSE | SSE | | | |
| Aug 13 | 6.1 | 4.9 | 6.6 | 7.7 | 9.3 | 10.9 | 8.9 | 11.6 | 13.5 | 16.6 | 16.2 | 14.5 | 12.9 | 15.9 | 15.9 | 8.9 | 13.4 | 11.4 | 10.2 | 7.7 | 7.0 | 8.0 | 11.3 | 9.8 | 4.9 | 16.6 | 8.6 |
| | SSE | S | SSE | SE | SSE | SSE | S | SSW | SSW | SW | SW | SW | WSW | WSW | WSW | WNW | W | WSW | W | WSW | SW | SW | S | SSW | | | |
| Aug 14 | 10.4 | 11.0 | 10.6 | 10.6 | 9.6 | 10.8 | 9.5 | 12.9 | 12.3 | 13.0 | 12.1 | 14.7 | 14.5 | 16.6 | 15.8 | 13.4 | 9.9 | 10.4 | 7.3 | 4.4 | 5.7 | 6.0 | 4.3 | 5.4 | 4.3 | 16.6 | 8.1 |
| | SW | SW | SW | SW | SSW | SW | SW | SW | SW | SW | WSW | W | W | WSW | W | W | W | NW | NNE | ENE | SSE | SSE | SSW | S | | | |
| Aug 15 | 6.2 | 6.5 | 7.2 | 8.5 | 7.8 | 7.7 | 10.0 | 14.6 | 12.8 | 14.9 | 24.0 | 24.7 | 23.6 | 26.9 | **30.6** | 26.6 | 27.7 | 23.9 | 19.6 | 12.2 | 6.1 | 6.4 | 6.3 | 9.7 | 6.1 | **30.6** | 13.3 |
| | S | SSE | SSE | SSE | SSE | S | S | S | S | S | S | SSW | SSW | SSW | SW | SSW | SSW | SW | WSW | W | NW | S | SW | SW | | | |
| Aug 16 | 11.2 | 13.2 | 11.2 | 11.6 | 13.6 | 15.4 | 15.9 | 16.0 | 17.8 | 15.8 | 13.6 | 14.7 | 14.9 | 13.5 | 11.8 | 12.3 | 15.8 | 13.8 | 13.8 | 8.6 | 6.8 | 2.0 | 3.1 | 1.4 | 1.4 | 17.8 | 9.7 |
| | WSW | W | WSW | WSW | W | WSW | WSW | WSW | W | WNW | WNW | WNW | NNW | NNW | NW | NNW | NNW | NNW | NNW | NW | N | NNW | WSW | SW | | | |
| Aug 17 | 0.9 | 2.6 | 3.9 | 4.3 | 4.5 | 1.1 | 3.3 | 2.4 | 6.1 | 5.8 | 5.1 | 5.1 | 1.7 | 4.1 | 5.2 | 6.6 | 7.4 | 9.7 | 9.1 | 9.6 | 13.5 | 15.2 | 16.8 | 16.2 | 0.9 | 16.8 | 4.1 |
| | SW | WNW | WNW | SW | SW | W | S | W | NW | NW | NW | NW | NNW | WSW | SW | SW | SSW | SSW | SSW | S | SSE | SSE | SSE | SSE | | | |
| Aug 18 | 15.9 | 13.8 | 18.0 | 18.0 | 18.0 | 17.9 | 19.4 | 15.2 | 18.3 | 16.5 | 15.3 | 10.2 | 16.5 | 16.7 | 10.7 | 10.9 | 10.8 | 13.1 | 12.8 | 4.8 | 1.3 | 6.2 | 6.2 | 3.9 | 1.3 | 19.4 | 11.7 |
| | SSE | SSE | SSE | S | S | S | S | S | SSW | SSW | SSW | SSW | S | SSW | SW | SW | SSW | SW | SSW | SW | NE | ESE | SSE | WSW | | | |
| Aug 19 | 2.1 | 1.6 | 2.9 | 2.7 | 2.9 | 2.7 | 2.9 | 2.8 | 5.8 | 6.3 | 9.7 | 11.9 | 9.7 | 7.7 | 5.5 | 2.1 | 7.6 | 5.2 | 4.1 | 1.3 | 2.1 | 3.0 | 2.4 | 1.3 | 1.3 | 11.9 | 3.4 |
| | S | WSW | W | WSW | W | SW | W | W | NW | NW | NNW | NW | NW | NW | WNW | WSW | W | NW | SW | WSW | SSW | SW | SW | S | | | |
| Aug 20 | 1.7 | 1.8 | 0.8 | 1.0 | 2.7 | 6.6 | 8.3 | 8.7 | 9.1 | 12.7 | 11.9 | 12.9 | 12.1 | 11.9 | 14.2 | 12.3 | 11.3 | 10.3 | 7.9 | 5.7 | 3.7 | 2.1 | 5.3 | 6.1 | 0.8 | 14.2 | 6.2 |
| | SW | WSW | SW | WNW | NNW | NNW | NNW | NNW | N | N | N | N | N | NNW | NNW | NNW | NNW | N | N | NNE | ENE | SE | ESE | E | | | |

peace river area monitoring program
pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *986c Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 30.6 | kph | on August 15 at hour 14 | Hours in Service: | 744 |
| Maximum Daily Value: | 17.3 | kph | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.4 | kph | on August 3 at hour 4 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 2.6 | kph | on August 12 | Hours of Calibration: | 0 |
| Monthly Average: | 2.7 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 215 (SSW) degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 21 | 4.7 | 5.6 | 6.6 | 5.4 | 6.0 | 6.6 | 9.3 | 5.9 | 10.8 | 15.3 | 14.5 | 14.4 | 15.7 | 17.0 | 18.5 | 17.6 | 16.5 | 15.9 | 18.0 | 22.5 | 19.8 | 22.3 | 18.3 | 9.3 | 4.7 | 22.5 | 12.7 |
| | ESE | E | ESE | ESE | E | E | ESE | E | ESE | E | E | ENE | ENE | E | E | E | E | ENE | ENE | ENE | NE | ENE | ENE | ENE | | | |
| Aug 22 | 15.7 | 18.5 | 23.5 | 26.1 | 26.1 | 25.7 | 26.1 | 24.5 | 23.2 | 19.8 | 24.5 | 22.5 | 20.4 | 18.2 | 19.7 | 16.9 | 13.4 | 13.1 | 10.7 | 10.8 | 9.2 | 7.9 | 8.7 | 9.8 | 7.9 | 26.1 | **17.3** |
| | ENE | E | E | E | E | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | NE | NE | NE | NE | NE | NE | NE | NNE | NNE | NNE | NNE | | | |
| Aug 23 | 9.7 | 8.8 | 8.3 | 7.2 | 6.8 | 5.9 | 9.3 | 8.8 | 6.9 | 8.3 | 8.4 | 8.5 | 9.9 | 7.8 | 12.2 | 5.1 | 4.5 | 2.7 | 2.7 | 4.4 | 6.4 | 6.7 | 7.2 | 6.2 | 2.7 | 12.2 | 3.9 |
| | NNE | NNE | NNE | NNE | NNE | N | N | NNE | NE | NE | NE | NNE | NNE | E | NE | E | ESE | SE | SSW | S | S | S | S | SSE | | | |
| Aug 24 | 7.0 | 8.4 | 6.0 | 6.4 | 7.3 | 7.7 | 9.1 | 9.9 | 12.5 | 14.5 | 16.3 | 13.7 | 16.6 | 15.5 | 13.2 | 8.8 | 11.1 | 11.1 | 11.5 | 10.9 | 12.8 | 11.3 | 11.5 | 9.6 | 6.0 | 16.6 | 10.3 |
| | SSE | SSE | SSE | SSE | SSE | SSE | S | S | S | S | S | S | SSW | SSW | SW | SW | SW | SSW | SSW | S | S | S | S | S | | | |
| Aug 25 | 8.0 | 6.8 | 7.5 | 5.8 | 5.3 | 4.7 | 10.5 | 12.8 | 16.1 | 16.7 | 16.2 | 20.0 | 20.0 | 17.9 | 19.3 | 14.9 | 14.3 | 10.7 | 9.3 | 10.9 | 9.7 | 13.2 | 15.4 | 12.4 | 4.7 | 20.0 | 11.3 |
| | S | S | SSE | SSE | SSE | SSE | S | S | SSW | SSW | SSW | SSW | SSW | SW | SSW | SW | SW | SW | SSW | S | SSE | SSE | SSE | SSE | | | |
| Aug 26 | 9.6 | 10.5 | 6.0 | 4.2 | 4.5 | 2.6 | 6.6 | 6.2 | 7.8 | 9.3 | 10.3 | 13.5 | 15.8 | 15.8 | 8.1 | 8.1 | 15.5 | 19.2 | 10.7 | 7.5 | 8.4 | 11.0 | 7.5 | 6.9 | 2.6 | 19.2 | 8.6 |
| | SE | SE | SE | ESE | ESE | E | ESE | SE | SSE | SSE | SE | SE | SSE | SSE | SSW | SSE | ESE | SSE | SSE | SSE | SSE | S | S | S | | | |
| Aug 27 | 4.9 | 5.9 | 5.3 | 5.3 | 5.9 | 7.7 | 8.6 | 9.4 | 11.4 | 13.1 | 11.9 | 11.9 | 14.0 | 16.2 | 13.1 | 6.0 | 2.4 | 3.4 | 2.4 | 4.6 | 2.6 | 3.2 | 3.6 | 4.8 | 2.4 | 16.2 | 5.8 |
| | SE | SE | SSE | S | S | S | SSW | SSW | SSW | SW | SW | SW | SW | SW | WSW | NW | NNW | S | S | W | WSW | S | SSW | SSE | | | |
| Aug 28 | 7.1 | 5.3 | 4.2 | 7.4 | 9.5 | 7.4 | 8.1 | 9.8 | 11.4 | 12.5 | 12.3 | 13.2 | 15.6 | 18.1 | 17.4 | 13.7 | 18.1 | 14.4 | 13.1 | 11.4 | 12.2 | 13.7 | 12.0 | 15.1 | 4.2 | 18.1 | 10.9 |
| | SSE | S | SSE | SSE | SSE | SSE | S | S | SSW | SSW | SW | SW | SW | SW | SW | WSW | SW | SW | SSW | SSW | SSW | SSW | S | SSW | | | |
| Aug 29 | 12.5 | 12.7 | 9.4 | 10.2 | 9.6 | 10.3 | 9.0 | 11.4 | 12.9 | 12.8 | 11.6 | 11.1 | 12.0 | 12.2 | 16.6 | 12.9 | 9.4 | 7.0 | 5.1 | 5.7 | 3.1 | 4.9 | 6.5 | 3.2 | 3.1 | 16.6 | 8.8 |
| | SSW | S | S | SSW | SSW | SSW | SW | SW | SW | WSW | WSW | SW | WSW | WSW | SW | WSW | SW | SSW | S | S | WSW | WSW | W | SSE | | | |
| Aug 30 | 6.0 | 4.9 | 5.8 | 3.7 | 4.2 | 5.1 | 5.2 | 2.2 | 3.6 | 5.7 | 2.5 | 2.4 | 6.5 | 8.5 | 8.4 | 8.6 | 9.8 | 13.2 | 14.2 | 9.7 | 4.2 | 5.6 | 8.9 | 9.0 | 2.2 | 14.2 | 2.7 |
| | SE | SE | SE | SE | SE | ESE | ESE | ESE | SSE | SSW | WSW | NW | NNE | NNE | N | NNW | NW | NW | NNW | NNW | WNW | NNW | NNW | N | | | |
| Aug 31 | 9.5 | 11.6 | 15.3 | 16.7 | 11.8 | 12.3 | 12.6 | 12.1 | 12.9 | 11.3 | 10.9 | 14.0 | 16.9 | 20.5 | 19.2 | 21.2 | 21.8 | 21.3 | 22.0 | 20.0 | 18.4 | 19.5 | 16.4 | 16.5 | 9.5 | 22.0 | 16.0 |
| | N | NNW | N | N | N | NNW | NNW | NNW | NNW | N | NNW | NNW | N | N | NNW | N | N | N | N | N | N | NNW | NNW | NNW | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C** | Monthly Calibration | **S** | Daily Zero-Span Check | **Q** | Quality Assurance | |
| **K** | Collection Error | **N** | No Data (Machine Not in Service) | **Y** | Routine Maintenance | **P** Power Failure |
| **X** | InValid Data (Equipment Malfunction /Recovery) | **NRM** | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

# 842b STATION

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## SULPHUR DIOXIDE ($SO_2$) in ppb

**Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb**

Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0 30-Day Exceedance: 0

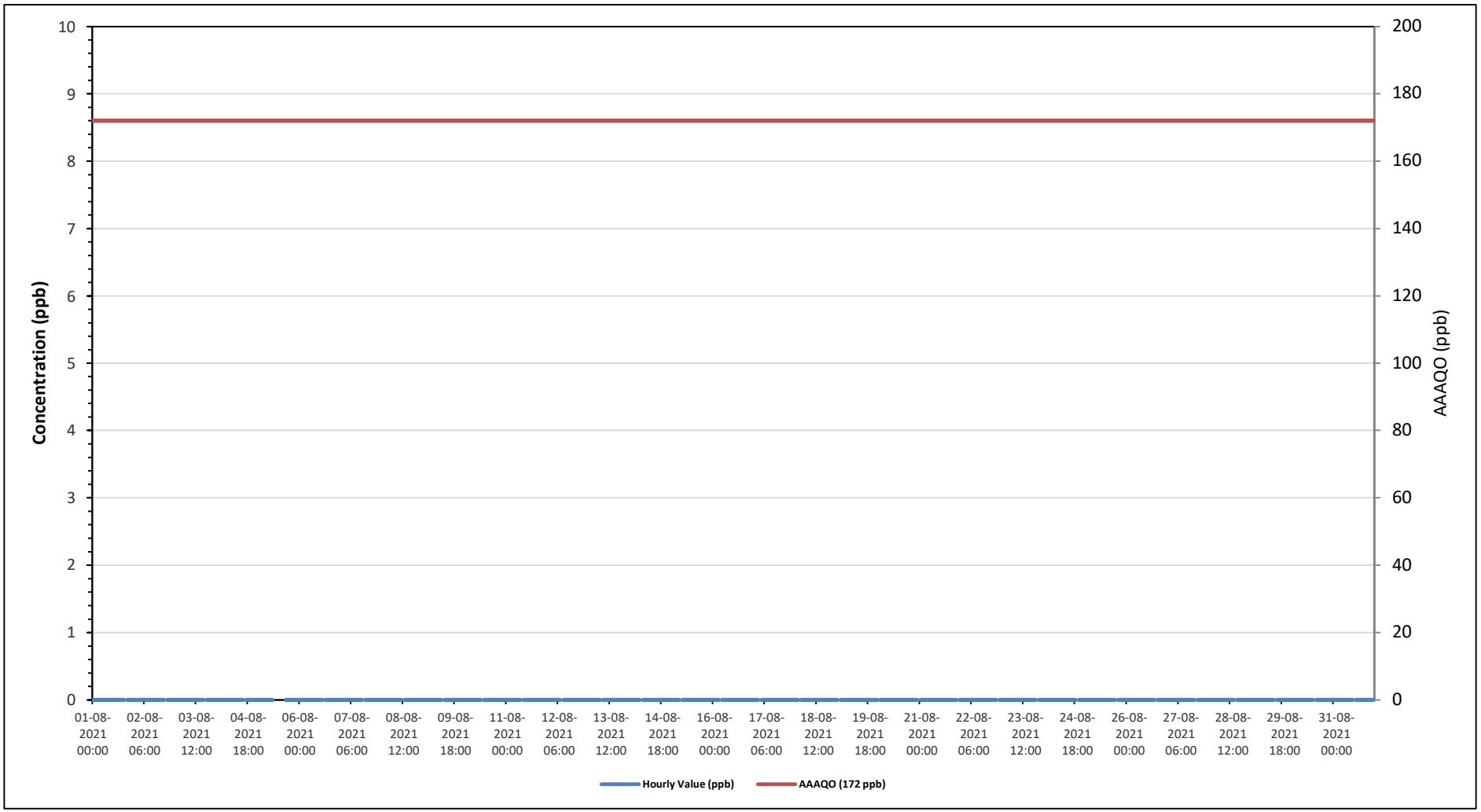
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0 | ppb | on August 1 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.0 | ppb | on August 1 | Hours of Data: | 707 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 0 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 1 | Hours of Calibration: | 37 |
| Monthly Average: | 0.0 | ppb | | Operational Uptime: | 100.0 |

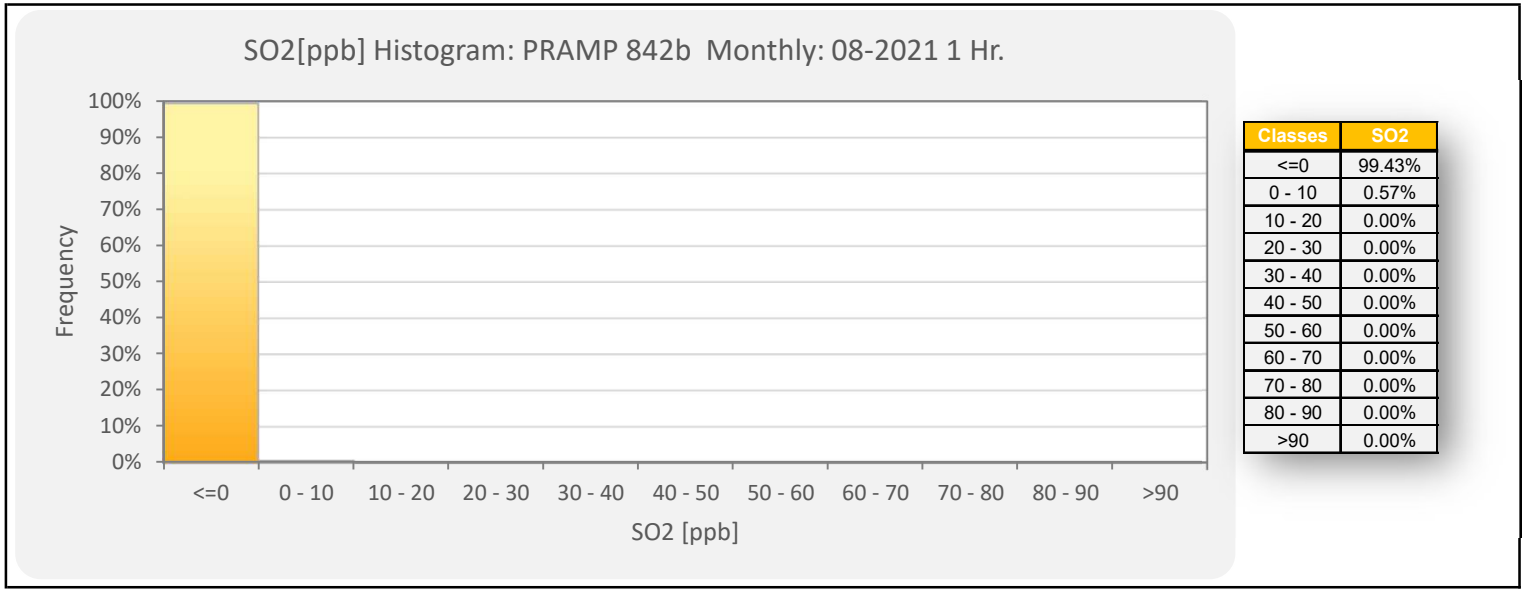
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | C | C | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 14 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 15 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 16 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 17 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 18 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 19 | 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 |
| Aug 20 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0.0 |
| Aug 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0.0 |
| Aug 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0.0 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Diurnal Maximum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Diurnal 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 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure | |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for SO2 - 842b Station*

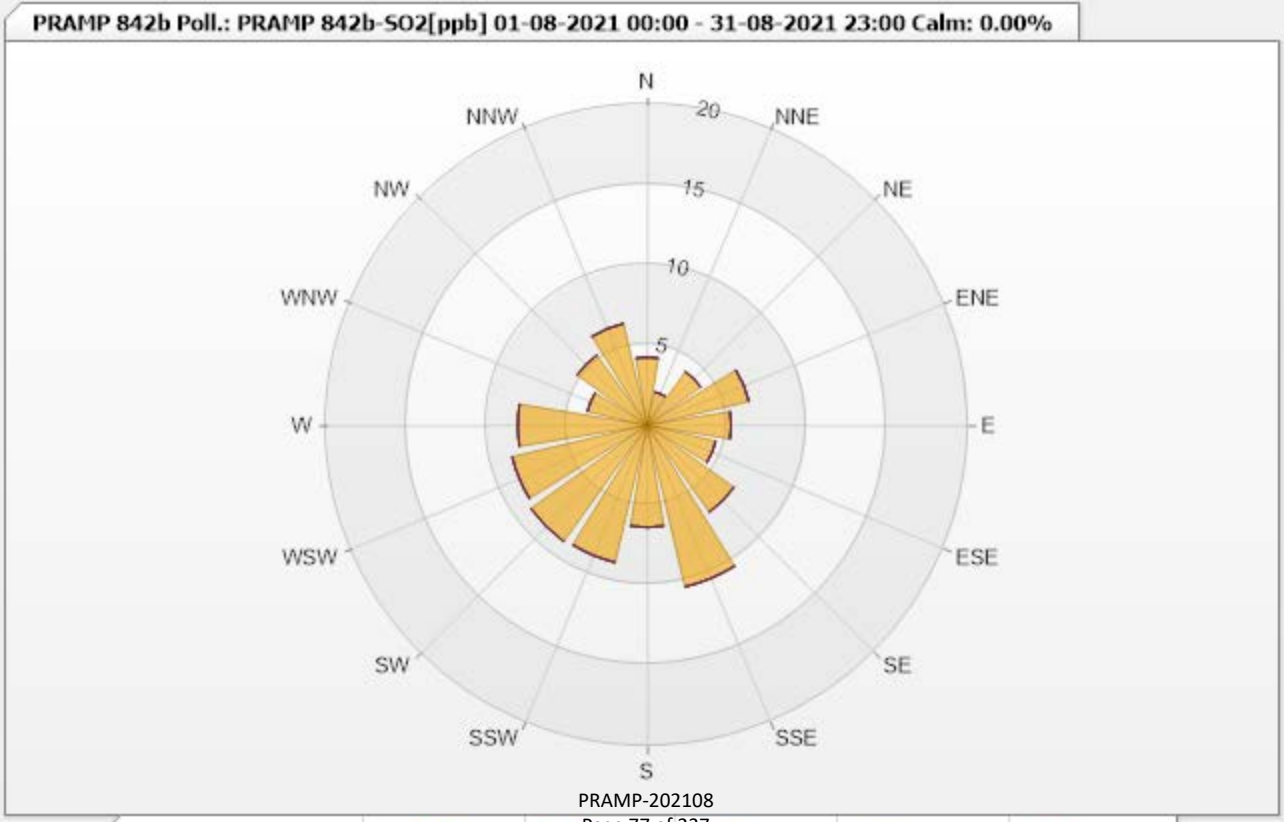





| Classes | SO2 |
|---|---|
| <=0 | 99.43% |
| 0 - 10 | 0.57% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: PRAMP 842b Poll.: PRAMP 842b-SO2[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

| Direction | 0-10 | 10-50 | 50-100 | 100-172 | >172.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| NNE | 2.12 | 0 | 0 | 0 | 0 | 2.12 |
| NE | 4.1 | 0 | 0 | 0 | 0 | 4.1 |
| ENE | 6.51 | 0 | 0 | 0 | 0 | 6.51 |
| E | 5.23 | 0 | 0 | 0 | 0 | 5.23 |
| ESE | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| SE | 6.65 | 0 | 0 | 0 | 0 | 6.65 |
| SSE | 10.33 | 0 | 0 | 0 | 0 | 10.33 |
| S | 6.36 | 0 | 0 | 0 | 0 | 6.36 |
| SSW | 8.77 | 0 | 0 | 0 | 0 | 8.77 |
| SW | 8.91 | 0 | 0 | 0 | 0 | 8.91 |
| WSW | 8.63 | 0 | 0 | 0 | 0 | 8.63 |
| W | 8.06 | 0 | 0 | 0 | 0 | 8.06 |
| WNW | 3.82 | 0 | 0 | 0 | 0 | 3.82 |
| NW | 5.37 | 0 | 0 | 0 | 0 | 5.37 |
| NNW | 6.51 | 0 | 0 | 0 | 0 | 6.51 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


PRAMP 842b Poll.: PRAMP 842b-SO2[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-10
0 10-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## TOTAL REDUCED SULPHUR (TRS) in ppb

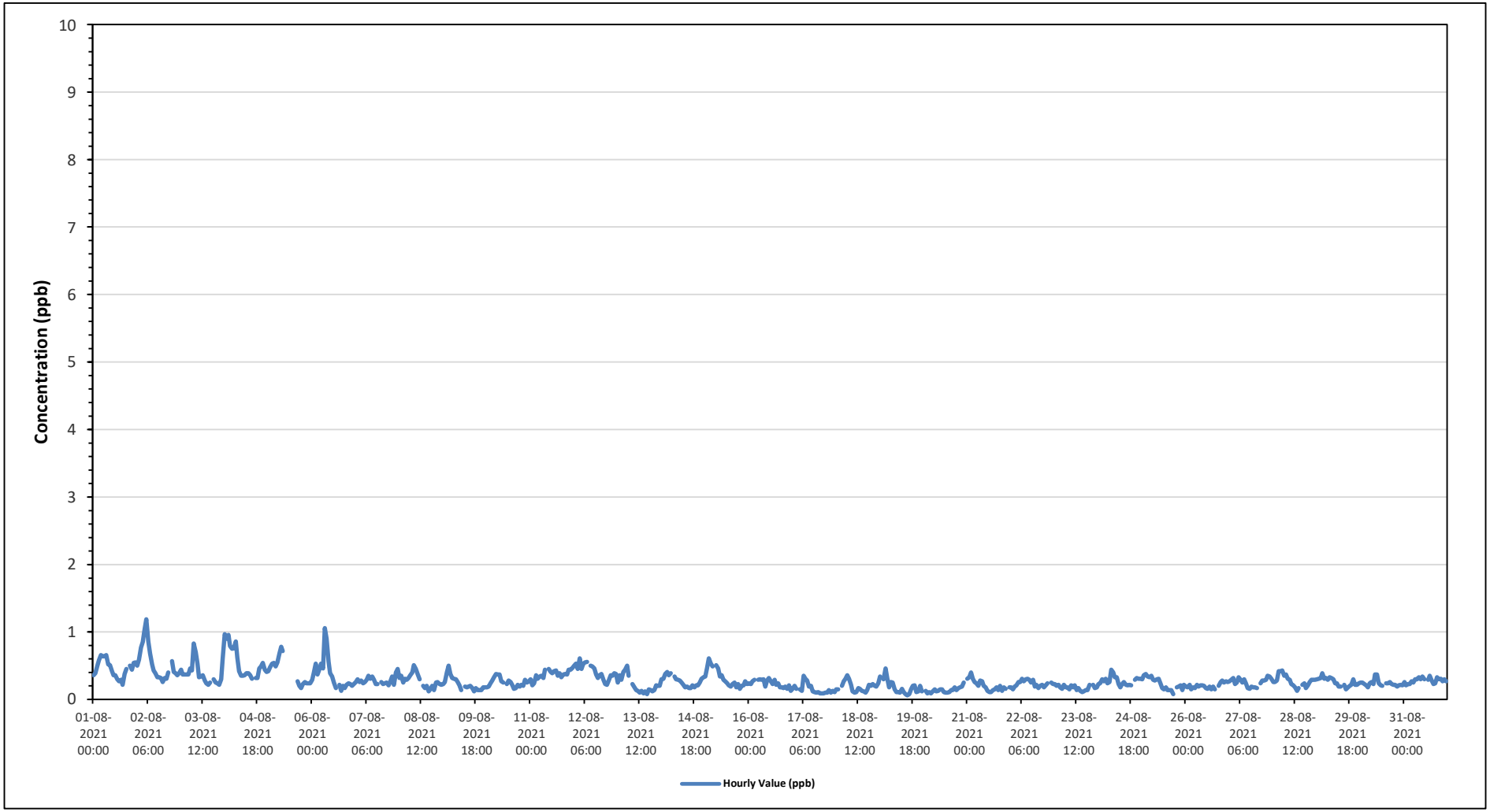
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 1.19 | ppb | on August 2 at hour 5 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.54 | ppb | on August 4 | Hours of Data: | 707 |
| Minimum Hourly Value: | 0.06 | ppb | on August 19 at hour 15 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.14 | ppb | on August 20 | Hours of Calibration: | 37 |
| Monthly Average: | 0.29 | ppb | | Operational Uptime: | 100.0 |

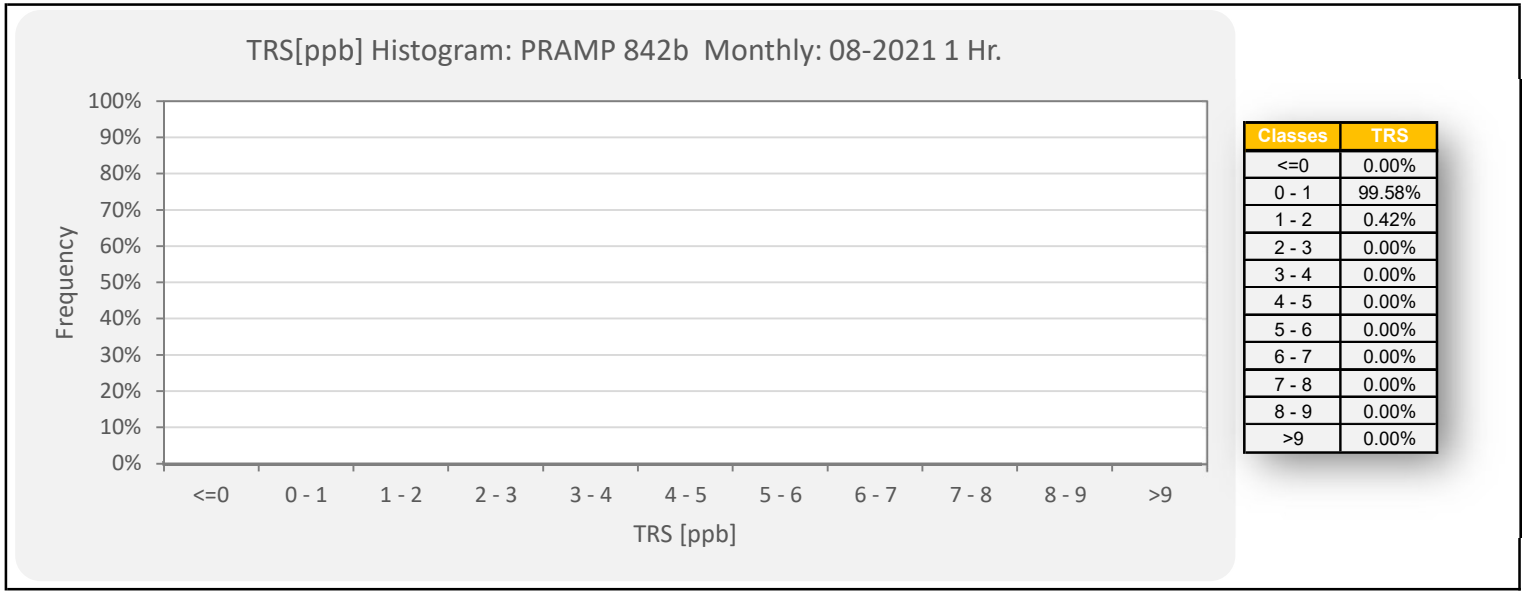
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.36 | 0.39 | 0.5 | 0.58 | 0.66 | 0.64 | 0.64 | 0.66 | 0.52 | 0.51 | 0.42 | 0.36 | 0.36 | 0.3 | 0.27 | 0.29 | 0.22 | 0.38 | 0.45 | S | 0.5 | 0.44 | 0.54 | 0.55 | 0.22 | 0.66 | 0.46 |
| Aug 2 | 0.5 | 0.59 | 0.77 | 0.85 | 1.03 | **1.19** | 0.86 | 0.68 | 0.52 | 0.43 | 0.39 | 0.33 | 0.33 | 0.32 | 0.26 | 0.32 | 0.31 | 0.4 | S | 0.57 | 0.41 | 0.39 | 0.36 | 0.39 | 0.26 | **1.19** | 0.53 |
| Aug 3 | 0.44 | 0.37 | 0.37 | 0.37 | 0.37 | 0.46 | 0.43 | 0.83 | 0.7 | 0.53 | 0.33 | 0.34 | 0.36 | 0.28 | 0.24 | 0.22 | 0.25 | S | 0.3 | 0.25 | 0.24 | 0.22 | 0.3 | 0.61 | 0.22 | 0.83 | 0.38 |
| Aug 4 | 0.97 | 0.9 | 0.96 | 0.79 | 0.75 | 0.76 | 0.86 | 0.62 | 0.42 | 0.35 | 0.35 | 0.36 | 0.39 | 0.39 | 0.36 | 0.31 | S | 0.32 | 0.32 | 0.46 | 0.49 | 0.54 | 0.44 | 0.41 | 0.31 | 0.97 | **0.54** |
| Aug 5 | 0.42 | 0.48 | 0.53 | 0.54 | 0.49 | 0.55 | 0.68 | 0.78 | 0.72 | C | C | C | C | C | 0.71 | S | 0.27 | 0.2 | 0.17 | 0.23 | 0.26 | 0.24 | 0.24 | 0.24 | 0.17 | 0.78 | 0.43 |
| Aug 6 | 0.29 | 0.39 | 0.53 | 0.37 | 0.45 | 0.53 | 0.46 | 1.06 | 0.9 | 0.56 | 0.39 | 0.34 | 0.25 | 0.17 | S | 0.22 | 0.13 | 0.2 | 0.17 | 0.22 | 0.24 | 0.23 | 0.2 | 0.23 | 0.13 | 1.06 | 0.37 |
| Aug 7 | 0.26 | 0.3 | 0.26 | 0.28 | 0.24 | 0.26 | 0.29 | 0.35 | 0.31 | 0.34 | 0.29 | 0.23 | 0.23 | S | 0.26 | 0.23 | 0.24 | 0.25 | 0.21 | 0.26 | 0.34 | 0.22 | 0.4 | 0.45 | 0.21 | 0.45 | 0.28 |
| Aug 8 | 0.32 | 0.35 | 0.25 | 0.31 | 0.29 | 0.32 | 0.36 | 0.4 | 0.51 | 0.45 | 0.38 | 0.3 | S | 0.2 | 0.17 | 0.2 | 0.12 | 0.15 | 0.2 | 0.14 | 0.25 | 0.26 | 0.23 | 0.22 | 0.12 | 0.51 | 0.28 |
| Aug 9 | 0.23 | 0.26 | 0.4 | 0.5 | 0.38 | 0.32 | 0.31 | 0.3 | 0.26 | 0.21 | 0.14 | S | 0.19 | 0.18 | 0.19 | 0.2 | 0.17 | 0.12 | 0.17 | 0.14 | 0.14 | 0.14 | 0.18 | 0.18 | 0.12 | 0.50 | 0.23 |
| Aug 10 | 0.18 | 0.19 | 0.24 | 0.28 | 0.33 | 0.38 | 0.37 | 0.37 | 0.27 | 0.25 | S | 0.23 | 0.28 | 0.26 | 0.21 | 0.16 | 0.17 | 0.22 | 0.19 | 0.22 | 0.2 | 0.29 | 0.25 | 0.27 | 0.16 | 0.38 | 0.25 |
| Aug 11 | 0.3 | 0.21 | 0.24 | 0.36 | 0.31 | 0.34 | 0.35 | 0.32 | 0.44 | S | 0.45 | 0.41 | 0.39 | 0.42 | 0.43 | 0.35 | 0.39 | 0.33 | 0.37 | 0.38 | 0.37 | 0.44 | 0.44 | 0.47 | 0.21 | 0.47 | 0.37 |
| Aug 12 | 0.5 | 0.53 | 0.45 | 0.61 | 0.45 | 0.53 | 0.55 | 0.56 | S | 0.5 | 0.49 | 0.46 | 0.37 | 0.32 | 0.36 | 0.38 | 0.29 | 0.23 | 0.22 | 0.28 | 0.36 | 0.35 | 0.39 | 0.38 | 0.22 | 0.61 | 0.42 |
| Aug 13 | 0.25 | 0.36 | 0.29 | 0.41 | 0.44 | 0.5 | 0.35 | S | 0.23 | 0.18 | 0.14 | 0.13 | 0.1 | 0.13 | 0.09 | 0.12 | 0.08 | 0.15 | 0.14 | 0.12 | 0.14 | 0.21 | 0.2 | 0.2 | 0.08 | 0.50 | 0.22 |
| Aug 14 | 0.3 | 0.31 | 0.38 | 0.41 | 0.36 | 0.39 | S | 0.34 | 0.3 | 0.29 | 0.28 | 0.25 | 0.22 | 0.18 | 0.19 | 0.17 | 0.17 | 0.21 | 0.18 | 0.21 | 0.21 | 0.25 | 0.31 | 0.33 | 0.17 | 0.41 | 0.27 |
| Aug 15 | 0.34 | 0.47 | 0.61 | 0.53 | 0.49 | S | 0.51 | 0.46 | 0.34 | 0.36 | 0.29 | 0.27 | 0.24 | 0.21 | 0.19 | 0.23 | 0.25 | 0.18 | 0.23 | 0.16 | 0.2 | 0.21 | 0.27 | 0.23 | 0.16 | 0.61 | 0.32 |
| Aug 16 | 0.24 | 0.23 | 0.27 | 0.29 | S | 0.29 | 0.3 | 0.29 | 0.3 | 0.19 | 0.28 | 0.32 | 0.27 | 0.23 | 0.29 | 0.22 | 0.24 | 0.18 | 0.18 | 0.17 | 0.19 | 0.16 | 0.21 | 0.13 | 0.13 | 0.32 | 0.24 |
| Aug 17 | 0.16 | 0.2 | 0.16 | S | 0.15 | 0.13 | 0.35 | 0.31 | 0.28 | 0.19 | 0.2 | 0.12 | 0.11 | 0.1 | 0.11 | 0.09 | 0.09 | 0.09 | 0.1 | 0.1 | 0.14 | 0.1 | 0.13 | 0.11 | 0.09 | 0.35 | 0.15 |
| Aug 18 | 0.15 | 0.15 | S | 0.2 | 0.27 | 0.31 | 0.36 | 0.31 | 0.22 | 0.12 | 0.1 | 0.11 | 0.17 | 0.16 | 0.13 | 0.12 | 0.1 | 0.14 | 0.22 | 0.2 | 0.23 | 0.2 | 0.19 | 0.24 | 0.10 | 0.36 | 0.19 |
| Aug 19 | 0.34 | S | 0.3 | 0.46 | 0.31 | 0.18 | 0.26 | 0.25 | 0.15 | 0.11 | 0.11 | 0.1 | 0.16 | 0.11 | 0.08 | 0.06 | 0.08 | 0.15 | 0.2 | 0.21 | 0.11 | 0.12 | 0.2 | 0.12 | **0.06** | 0.46 | 0.18 |
| Aug 20 | S | 0.13 | 0.09 | 0.11 | 0.09 | 0.12 | 0.15 | 0.12 | 0.13 | 0.15 | 0.15 | 0.11 | 0.1 | 0.1 | 0.11 | 0.14 | 0.14 | 0.18 | 0.14 | 0.17 | 0.18 | 0.19 | 0.25 | S | 0.09 | 0.25 | 0.14 |
| Aug 21 | 0.31 | 0.33 | 0.4 | 0.31 | 0.26 | 0.24 | 0.2 | 0.28 | 0.27 | 0.2 | 0.18 | 0.13 | 0.11 | 0.11 | 0.14 | 0.15 | 0.18 | 0.14 | 0.2 | 0.13 | 0.18 | 0.16 | S | 0.18 | 0.11 | 0.40 | 0.21 |
| Aug 22 | 0.18 | 0.15 | 0.19 | 0.21 | 0.26 | 0.26 | 0.31 | 0.27 | 0.3 | 0.31 | 0.29 | 0.25 | 0.29 | 0.19 | 0.22 | 0.17 | 0.2 | 0.22 | 0.18 | 0.21 | 0.24 | S | 0.25 | 0.23 | 0.15 | 0.31 | 0.23 |
| Aug 23 | 0.23 | 0.2 | 0.22 | 0.18 | 0.16 | 0.22 | 0.18 | 0.18 | 0.15 | 0.21 | 0.18 | 0.21 | 0.14 | 0.17 | 0.13 | 0.11 | 0.12 | 0.14 | 0.14 | 0.22 | S | 0.22 | 0.17 | 0.18 | 0.11 | 0.23 | 0.18 |
| Aug 24 | 0.23 | 0.24 | 0.3 | 0.27 | 0.31 | 0.24 | 0.26 | 0.44 | 0.4 | 0.33 | 0.33 | 0.23 | 0.18 | 0.23 | 0.26 | 0.22 | 0.21 | 0.22 | 0.21 | S | 0.29 | 0.32 | 0.31 | 0.31 | 0.18 | 0.44 | 0.28 |
| Aug 25 | 0.3 | 0.36 | 0.38 | 0.34 | 0.33 | 0.35 | 0.29 | 0.28 | 0.3 | 0.31 | 0.24 | 0.17 | 0.15 | 0.18 | 0.14 | 0.14 | 0.14 | 0.08 | S | 0.18 | 0.19 | 0.21 | 0.14 | 0.22 | 0.08 | 0.38 | 0.24 |
| Aug 26 | 0.19 | 0.18 | 0.22 | 0.15 | 0.18 | 0.17 | 0.22 | 0.19 | 0.21 | 0.21 | 0.2 | 0.17 | 0.16 | 0.19 | 0.15 | 0.19 | 0.15 | S | 0.2 | 0.26 | 0.28 | 0.25 | 0.27 | 0.26 | 0.15 | 0.28 | 0.20 |
| Aug 27 | 0.27 | 0.29 | 0.32 | 0.23 | 0.25 | 0.33 | 0.29 | 0.25 | 0.3 | 0.24 | 0.17 | 0.16 | 0.19 | 0.18 | 0.18 | 0.17 | S | 0.24 | 0.28 | 0.28 | 0.29 | 0.35 | 0.34 | 0.31 | 0.16 | 0.35 | 0.26 |
| Aug 28 | 0.26 | 0.26 | 0.28 | 0.42 | 0.42 | 0.43 | 0.35 | 0.37 | 0.31 | 0.29 | 0.23 | 0.21 | 0.18 | 0.13 | 0.17 | S | 0.22 | 0.24 | 0.17 | 0.21 | 0.26 | 0.29 | 0.29 | 0.29 | 0.13 | 0.43 | 0.27 |
| Aug 29 | 0.3 | 0.31 | 0.32 | 0.39 | 0.31 | 0.32 | 0.29 | 0.33 | 0.32 | 0.3 | 0.24 | 0.24 | 0.19 | 0.19 | S | 0.22 | 0.15 | 0.18 | 0.2 | 0.22 | 0.3 | 0.22 | 0.22 | 0.24 | 0.15 | 0.39 | 0.26 |
| Aug 30 | 0.25 | 0.25 | 0.23 | 0.21 | 0.18 | 0.24 | 0.26 | 0.23 | 0.37 | 0.37 | 0.24 | 0.21 | 0.2 | S | 0.24 | 0.24 | 0.26 | 0.23 | 0.22 | 0.22 | 0.19 | 0.21 | 0.22 | 0.21 | 0.18 | 0.37 | 0.24 |
| Aug 31 | 0.26 | 0.21 | 0.23 | 0.23 | 0.27 | 0.25 | 0.3 | 0.3 | 0.33 | 0.3 | 0.34 | 0.3 | S | 0.29 | 0.35 | 0.28 | 0.23 | 0.24 | 0.33 | 0.3 | 0.31 | 0.27 | 0.3 | 0.27 | 0.21 | 0.35 | 0.28 |
| Diurnal Maximum | 0.97 | 0.90 | 0.96 | 0.85 | 1.03 | 1.19 | 0.86 | 1.06 | 0.90 | 0.56 | 0.49 | 0.46 | 0.39 | 0.42 | 0.71 | 0.38 | 0.39 | 0.40 | 0.45 | 0.57 | 0.50 | 0.54 | 0.54 | 0.61 | | | |
| Diurnal Average | 0.31 | 0.32 | 0.36 | 0.37 | 0.36 | 0.38 | 0.38 | 0.40 | 0.36 | 0.30 | 0.27 | 0.24 | 0.23 | 0.21 | 0.23 | 0.20 | 0.19 | 0.21 | 0.22 | 0.23 | 0.26 | 0.26 | 0.27 | 0.28 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for TRS - 842b Station*

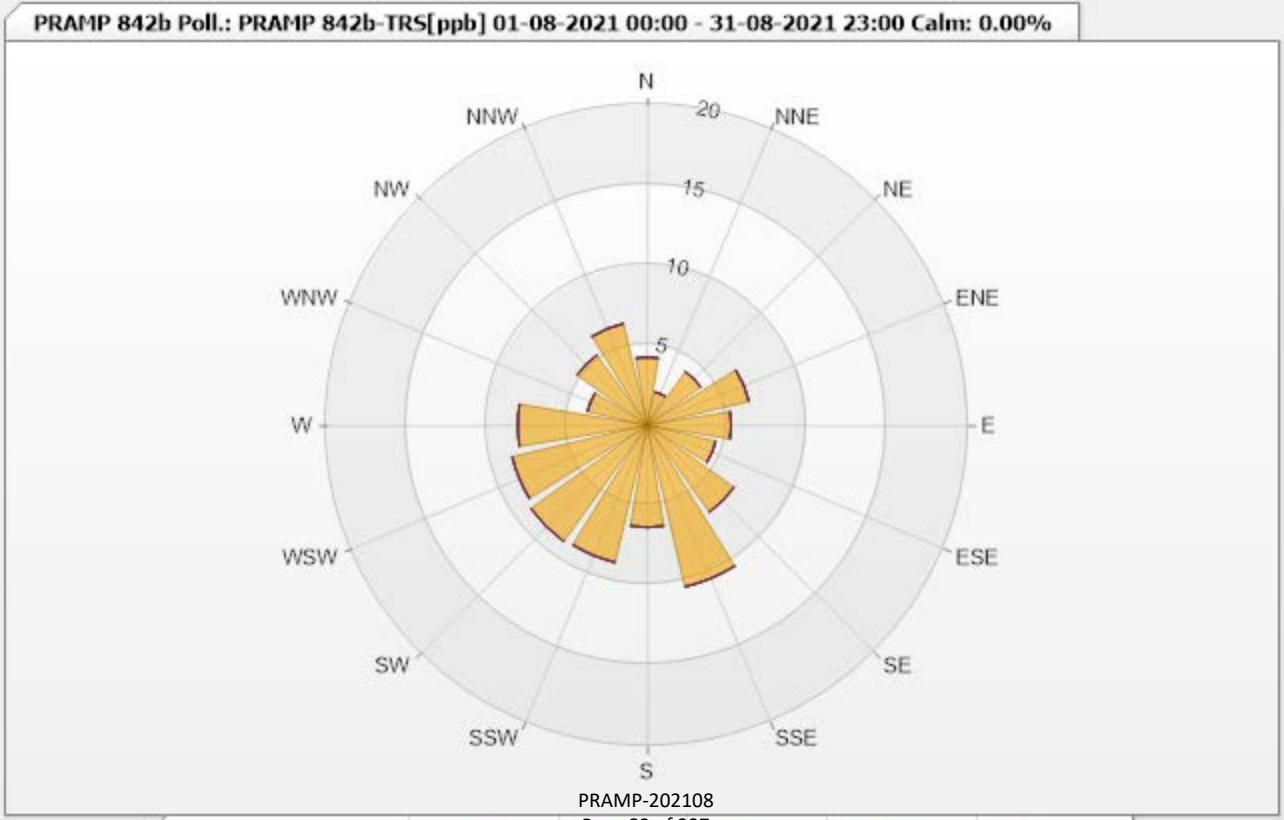





| Classes | TRS |
|---|---|
| <=0 | 0.00% |
| 0 - 1 | 99.58% |
| 1 - 2 | 0.42% |
| 2 - 3 | 0.00% |
| 3 - 4 | 0.00% |
| 4 - 5 | 0.00% |
| 5 - 6 | 0.00% |
| 6 - 7 | 0.00% |
| 7 - 8 | 0.00% |
| 8 - 9 | 0.00% |
| >9 | 0.00% |

Wind: PRAMP 842b Poll.: PRAMP 842b-TRS[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

| Direction | 0-2 | 2-5 | 5-10 | 10-50 | >50.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| NNE | 2.12 | 0 | 0 | 0 | 0 | 2.12 |
| NE | 4.1 | 0 | 0 | 0 | 0 | 4.1 |
| ENE | 6.51 | 0 | 0 | 0 | 0 | 6.51 |
| E | 5.23 | 0 | 0 | 0 | 0 | 5.23 |
| ESE | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| SE | 6.65 | 0 | 0 | 0 | 0 | 6.65 |
| SSE | 10.33 | 0 | 0 | 0 | 0 | 10.33 |
| S | 6.36 | 0 | 0 | 0 | 0 | 6.36 |
| SSW | 8.77 | 0 | 0 | 0 | 0 | 8.77 |
| SW | 8.91 | 0 | 0 | 0 | 0 | 8.91 |
| WSW | 8.63 | 0 | 0 | 0 | 0 | 8.63 |
| W | 8.06 | 0 | 0 | 0 | 0 | 8.06 |
| WNW | 3.82 | 0 | 0 | 0 | 0 | 3.82 |
| NW | 5.37 | 0 | 0 | 0 | 0 | 5.37 |
| NNW | 6.51 | 0 | 0 | 0 | 0 | 6.51 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


PRAMP 842b Poll.: PRAMP 842b-TRS[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## TOTAL HYDROCARBONS (THC) in ppm

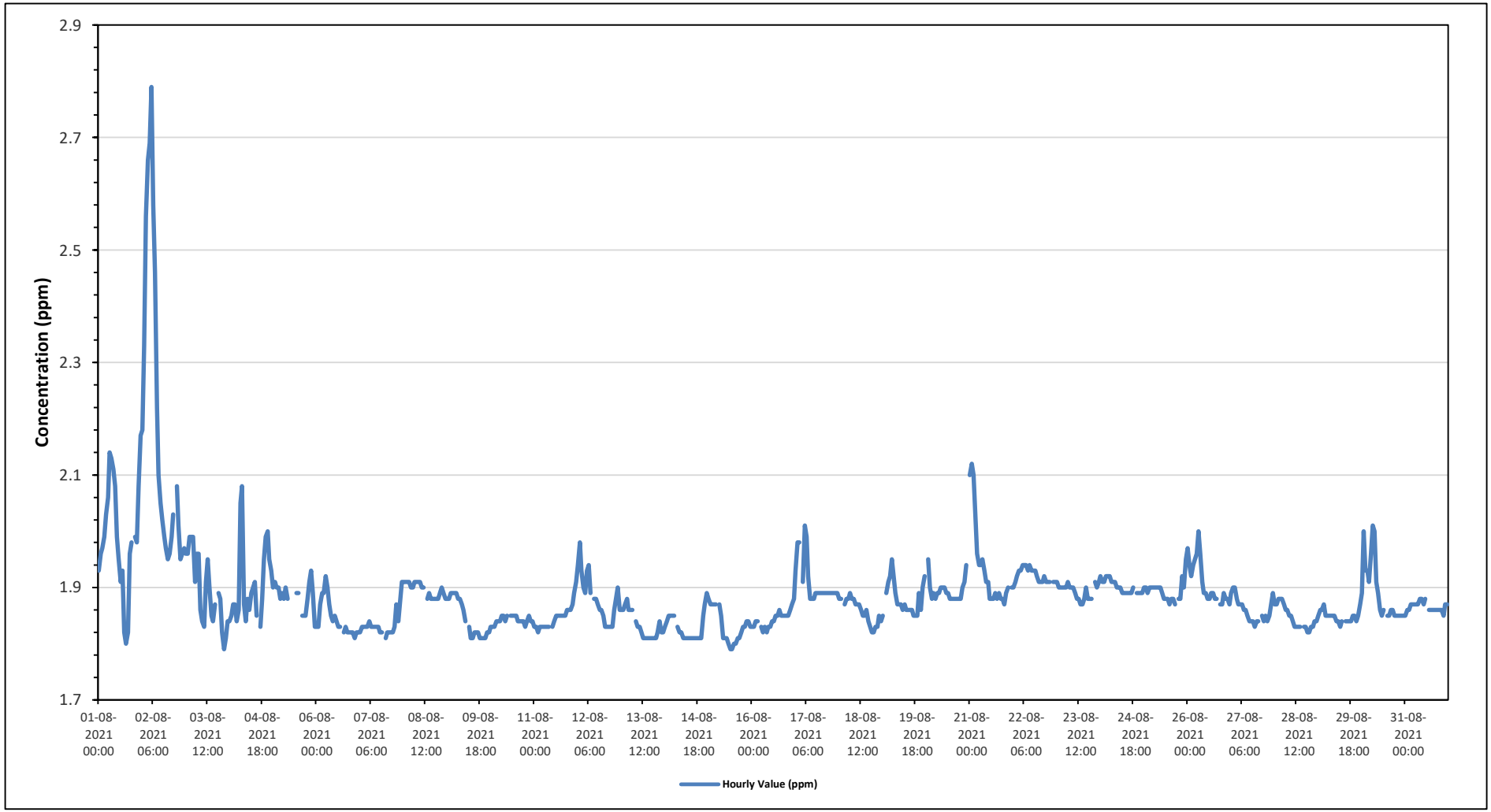
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.79 | ppm | on August 2 at hour 5 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.20 | ppm | on August 2 | Hours of Data: | 708 |
| Minimum Hourly Value: | 1.79 | ppm | on August 3 at hour 21 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.83 | ppm | on August 14 | Hours of Calibration: | 36 |
| Monthly Average: | 1.89 | ppm | | Operational Uptime: | 100.0 |

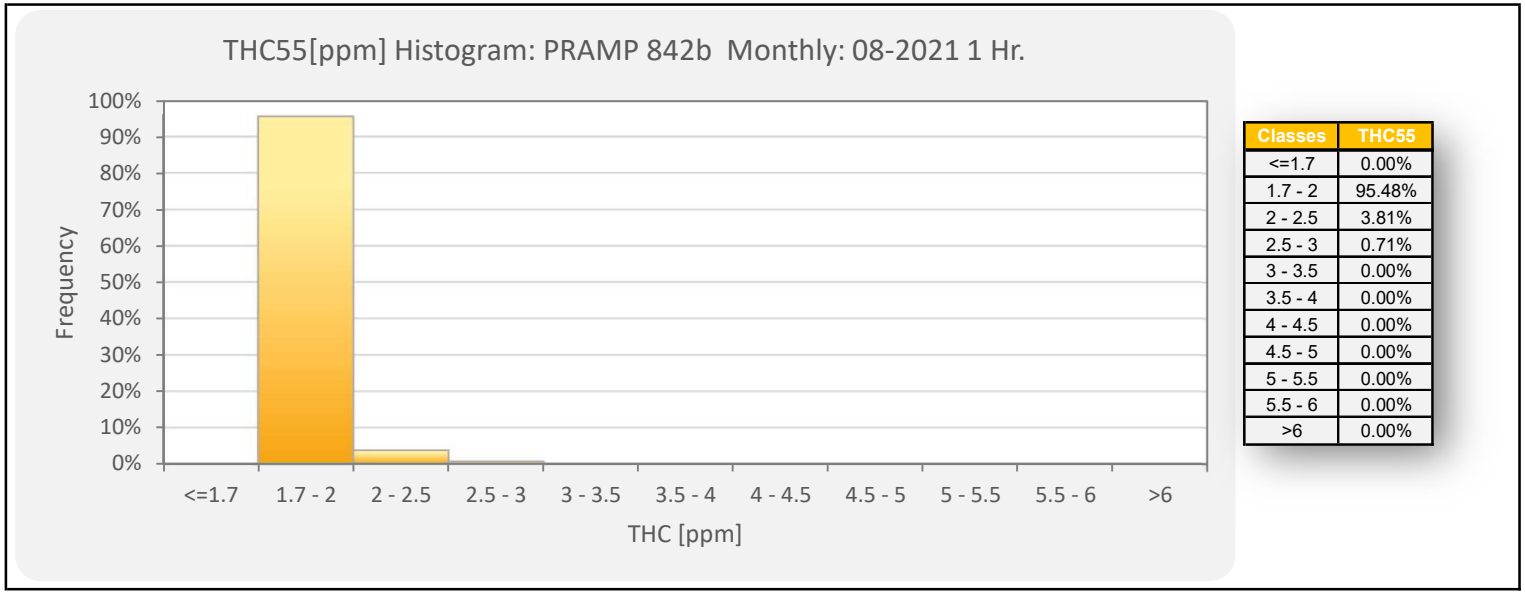
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 1.93 | 1.96 | 1.97 | 1.99 | 2.03 | 2.06 | 2.14 | 2.13 | 2.11 | 2.08 | 1.99 | 1.95 | 1.91 | 1.93 | 1.82 | 1.80 | 1.82 | 1.96 | 1.98 | S | 1.99 | 1.98 | 2.08 | 2.17 | 1.80 | 2.17 | 1.99 |
| Aug 2 | 2.18 | 2.33 | 2.56 | 2.66 | 2.69 | **2.79** | 2.58 | 2.46 | 2.22 | 2.10 | 2.05 | 2.02 | 1.99 | 1.97 | 1.95 | 1.96 | 1.99 | 2.03 | S | 2.08 | 2.01 | 1.95 | 1.96 | 1.97 | 1.95 | **2.79** | **2.20** |
| Aug 3 | 1.96 | 1.96 | 1.99 | 1.99 | 1.99 | 1.91 | 1.96 | 1.96 | 1.86 | 1.84 | 1.83 | 1.91 | 1.95 | 1.90 | 1.85 | 1.84 | 1.87 | S | 1.89 | 1.88 | 1.82 | 1.79 | 1.81 | 1.84 | **1.79** | 1.99 | 1.90 |
| Aug 4 | 1.84 | 1.85 | 1.87 | 1.87 | 1.84 | 1.86 | 2.05 | 2.08 | 1.87 | 1.84 | 1.88 | 1.86 | 1.89 | 1.90 | 1.91 | 1.85 | S | 1.83 | 1.88 | 1.95 | 1.99 | 2.00 | 1.95 | 1.93 | 1.83 | 2.08 | 1.90 |
| Aug 5 | 1.90 | 1.91 | 1.90 | 1.90 | 1.88 | 1.89 | 1.88 | 1.90 | 1.88 | C | C | C | C | 1.89 | 1.89 | S | 1.85 | 1.85 | 1.85 | 1.88 | 1.91 | 1.93 | 1.89 | 1.83 | 1.83 | 1.93 | 1.88 |
| Aug 6 | 1.83 | 1.83 | 1.87 | 1.89 | 1.89 | 1.92 | 1.90 | 1.87 | 1.85 | 1.84 | 1.85 | 1.84 | 1.83 | 1.83 | S | 1.82 | 1.83 | 1.82 | 1.82 | 1.82 | 1.82 | 1.81 | 1.82 | 1.82 | 1.81 | 1.92 | 1.84 |
| Aug 7 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 | 1.84 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | 1.82 | 1.82 | S | 1.81 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.87 | 1.84 | 1.87 | 1.91 | 1.81 | 1.91 | 1.83 |
| Aug 8 | 1.91 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | 1.91 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | S | 1.88 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.89 | 1.90 | 1.89 | 1.88 | 1.88 | 1.91 | 1.90 |
| Aug 9 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.89 | 1.88 | 1.88 | 1.87 | 1.86 | 1.84 | S | 1.83 | 1.81 | 1.81 | 1.82 | 1.82 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.82 | 1.81 | 1.89 | 1.85 |
| Aug 10 | 1.83 | 1.83 | 1.83 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.84 | 1.85 | S | 1.85 | 1.85 | 1.85 | 1.85 | 1.84 | 1.84 | 1.84 | 1.84 | 1.83 | 1.84 | 1.85 | 1.84 | 1.84 | 1.83 | 1.85 | 1.84 |
| Aug 11 | 1.83 | 1.83 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | S | 1.83 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.86 | 1.86 | 1.86 | 1.87 | 1.89 | 1.91 | 1.82 | 1.91 | 1.85 |
| Aug 12 | 1.94 | 1.98 | 1.93 | 1.90 | 1.89 | 1.93 | 1.94 | 1.89 | S | 1.88 | 1.88 | 1.87 | 1.86 | 1.86 | 1.85 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | 1.86 | 1.88 | 1.90 | 1.86 | 1.83 | 1.98 | 1.88 |
| Aug 13 | 1.86 | 1.86 | 1.87 | 1.88 | 1.86 | 1.86 | 1.86 | S | 1.84 | 1.83 | 1.83 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.84 | 1.82 | 1.82 | 1.81 | 1.88 | 1.83 |
| Aug 14 | 1.83 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | S | 1.83 | 1.82 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.85 | 1.87 | 1.89 | 1.81 | 1.89 | 1.83 |
| Aug 15 | 1.88 | 1.87 | 1.87 | 1.87 | 1.87 | S | 1.87 | 1.85 | 1.81 | 1.81 | 1.81 | 1.80 | 1.79 | 1.79 | 1.80 | 1.80 | 1.81 | 1.81 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.83 | **1.79** | 1.88 | 1.83 |
| Aug 16 | 1.83 | 1.83 | 1.84 | 1.84 | S | 1.83 | 1.82 | 1.83 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.85 | 1.85 | 1.86 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.86 | 1.87 | 1.88 | 1.82 | 1.88 | 1.84 |
| Aug 17 | 1.93 | 1.98 | 1.98 | S | 1.91 | 2.01 | 1.99 | 1.92 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.88 | 2.01 | 1.91 |
| Aug 18 | 1.88 | 1.88 | S | 1.87 | 1.88 | 1.88 | 1.89 | 1.88 | 1.88 | 1.87 | 1.87 | 1.87 | 1.86 | 1.85 | 1.85 | 1.86 | 1.84 | 1.83 | 1.82 | 1.82 | 1.83 | 1.83 | 1.85 | 1.84 | 1.82 | 1.89 | 1.86 |
| Aug 19 | 1.85 | S | 1.89 | 1.91 | 1.92 | 1.95 | 1.92 | 1.89 | 1.87 | 1.87 | 1.87 | 1.86 | 1.87 | 1.86 | 1.86 | 1.86 | 1.86 | 1.85 | 1.85 | 1.85 | 1.89 | 1.86 | 1.90 | 1.92 | 1.85 | 1.95 | 1.88 |
| Aug 20 | S | 1.95 | 1.90 | 1.88 | 1.89 | 1.88 | 1.89 | 1.89 | 1.90 | 1.90 | 1.90 | 1.89 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.90 | 1.91 | 1.94 | S | 1.88 | 1.95 | 1.89 |
| Aug 21 | 2.10 | 2.12 | 2.10 | 2.03 | 1.96 | 1.94 | 1.94 | 1.95 | 1.93 | 1.91 | 1.91 | 1.88 | 1.88 | 1.88 | 1.89 | 1.88 | 1.89 | 1.88 | 1.88 | 1.87 | 1.89 | 1.90 | S | 1.90 | 1.87 | 2.12 | 1.94 |
| Aug 22 | 1.90 | 1.91 | 1.92 | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.93 | 1.94 | 1.93 | 1.93 | 1.93 | 1.92 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | 1.91 | 1.91 | S | 1.91 | 1.91 | 1.90 | 1.94 | 1.92 |
| Aug 23 | 1.91 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.91 | 1.90 | 1.90 | 1.90 | 1.89 | 1.88 | 1.88 | 1.87 | 1.87 | 1.88 | 1.90 | 1.88 | 1.88 | 1.88 | S | 1.91 | 1.90 | 1.91 | 1.87 | 1.91 | 1.89 |
| Aug 24 | 1.92 | 1.91 | 1.91 | 1.92 | 1.92 | 1.92 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | 1.90 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.90 | S | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.92 | 1.90 |
| Aug 25 | 1.90 | 1.90 | 1.89 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.89 | 1.88 | 1.88 | 1.88 | 1.87 | 1.88 | 1.88 | 1.87 | S | 1.88 | 1.88 | 1.92 | 1.90 | 1.95 | 1.87 | 1.95 | 1.89 |
| Aug 26 | 1.97 | 1.94 | 1.92 | 1.94 | 1.95 | 1.96 | 2.00 | 1.96 | 1.91 | 1.89 | 1.89 | 1.88 | 1.88 | 1.89 | 1.89 | 1.88 | 1.88 | S | 1.87 | 1.87 | 1.89 | 1.88 | 1.88 | 1.87 | 1.87 | 2.00 | 1.91 |
| Aug 27 | 1.89 | 1.90 | 1.90 | 1.88 | 1.87 | 1.87 | 1.87 | 1.86 | 1.86 | 1.85 | 1.84 | 1.84 | 1.84 | 1.83 | 1.84 | 1.84 | S | 1.85 | 1.84 | 1.85 | 1.84 | 1.85 | 1.87 | 1.89 | 1.83 | 1.90 | 1.86 |
| Aug 28 | 1.87 | 1.87 | 1.88 | 1.88 | 1.88 | 1.87 | 1.86 | 1.86 | 1.85 | 1.85 | 1.84 | 1.83 | 1.83 | 1.83 | 1.83 | S | 1.83 | 1.83 | 1.82 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.82 | 1.88 | 1.85 |
| Aug 29 | 1.85 | 1.86 | 1.86 | 1.87 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.84 | 1.84 | 1.83 | 1.84 | S | 1.84 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.84 | 1.85 | 1.87 | 1.83 | 1.87 | 1.85 |
| Aug 30 | 1.89 | 2.00 | 1.93 | 1.93 | 1.91 | 1.96 | 2.01 | 2.00 | 1.91 | 1.89 | 1.86 | 1.85 | 1.86 | S | 1.85 | 1.85 | 1.86 | 1.86 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 2.01 | 1.89 |
| Aug 31 | 1.85 | 1.86 | 1.86 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.88 | 1.88 | 1.87 | 1.88 | S | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.85 | 1.87 | 1.87 | 1.85 | 1.88 | 1.87 |
| Diurnal Maximum | 2.18 | 2.33 | 2.56 | 2.66 | 2.69 | 2.79 | 2.58 | 2.46 | 2.22 | 2.10 | 2.05 | 2.02 | 1.99 | 1.97 | 1.95 | 1.96 | 1.99 | 2.03 | 1.98 | 2.08 | 2.01 | 2.00 | 2.08 | 2.17 | | | |
| Diurnal Average | 1.90 | 1.92 | 1.92 | 1.92 | 1.92 | 1.93 | 1.94 | 1.92 | 1.89 | 1.88 | 1.87 | 1.87 | 1.87 | 1.87 | 1.86 | 1.85 | 1.86 | 1.86 | 1.86 | 1.86 | 1.87 | 1.87 | 1.88 | 1.89 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for THC - 842b Station*

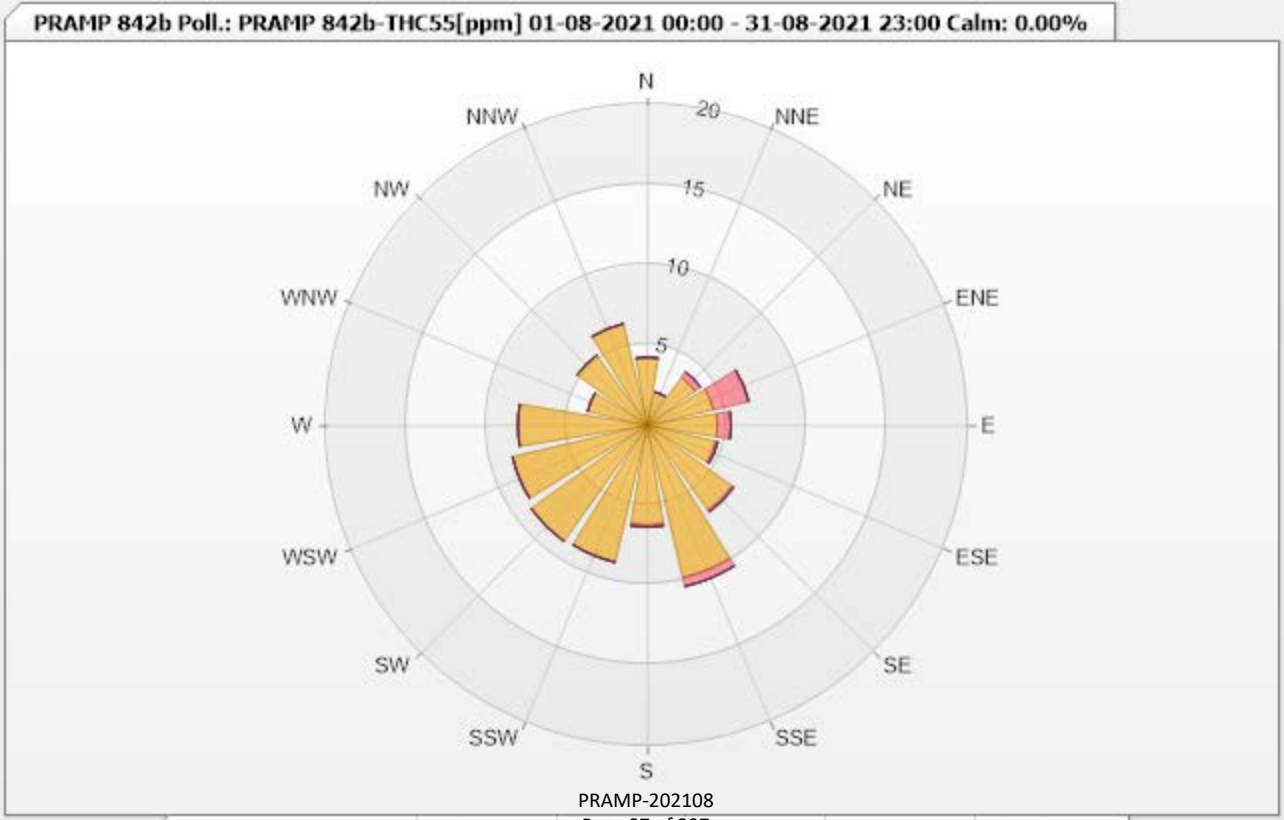





| Classes | THC55 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 95.48% |
| 2 - 2.5 | 3.81% |
| 2.5 - 3 | 0.71% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: PRAMP 842b Poll.: PRAMP 842b-THC55[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-40 | >40.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| NNE | 2.12 | 0 | 0 | 0 | 0 | 2.12 |
| NE | 3.67 | 0.42 | 0 | 0 | 0 | 4.09 |
| ENE | 4.24 | 2.26 | 0 | 0 | 0 | 6.5 |
| E | 4.38 | 0.85 | 0 | 0 | 0 | 5.23 |
| ESE | 4.38 | 0.14 | 0 | 0 | 0 | 4.52 |
| SE | 6.5 | 0.14 | 0 | 0 | 0 | 6.64 |
| SSE | 9.75 | 0.56 | 0 | 0 | 0 | 10.31 |
| S | 6.21 | 0.14 | 0 | 0 | 0 | 6.35 |
| SSW | 8.76 | 0 | 0 | 0 | 0 | 8.76 |
| SW | 8.9 | 0 | 0 | 0 | 0 | 8.9 |
| WSW | 8.62 | 0 | 0 | 0 | 0 | 8.62 |
| W | 8.05 | 0 | 0 | 0 | 0 | 8.05 |
| WNW | 3.81 | 0 | 0 | 0 | 0 | 3.81 |
| NW | 5.37 | 0 | 0 | 0 | 0 | 5.37 |
| NNW | 6.5 | 0 | 0 | 0 | 0 | 6.5 |
| Summary | 95.5 | 4.51 | 0 | 0 | 0 | 100 |


PRAMP 842b Poll.: PRAMP 842b-THC55[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
96 0-2
5 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## METHANE (CH4) in ppm

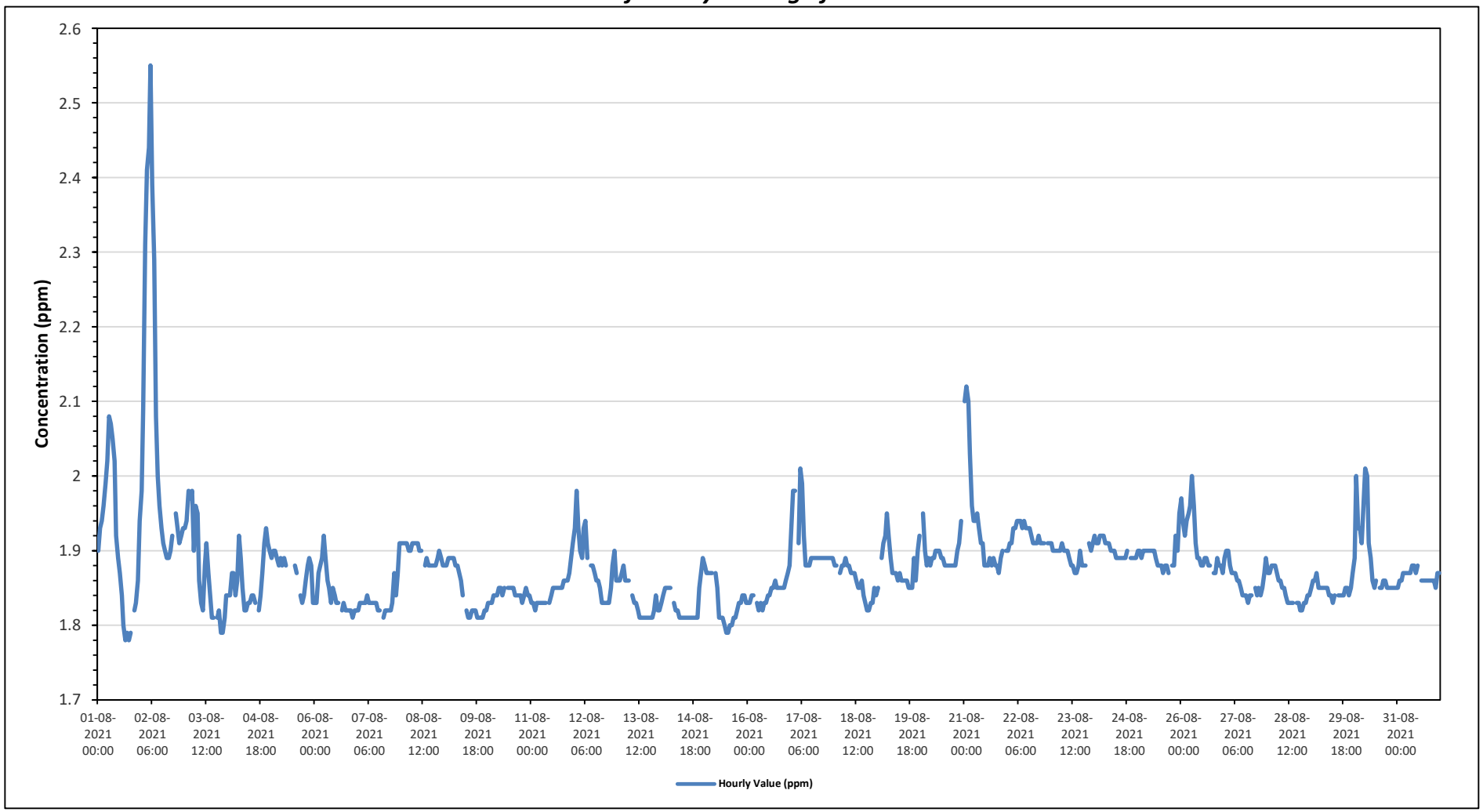
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.55 | ppm | on August 2 at hour 5 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.06 | ppm | on August 2 | Hours of Data: | 708 |
| Minimum Hourly Value: | 1.78 | ppm | on August 1 at hour 15 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.83 | ppm | on August 14 | Hours of Calibration: | 36 |
| Monthly Average: | 1.88 | ppm | | Operational Uptime: | 100.0 |

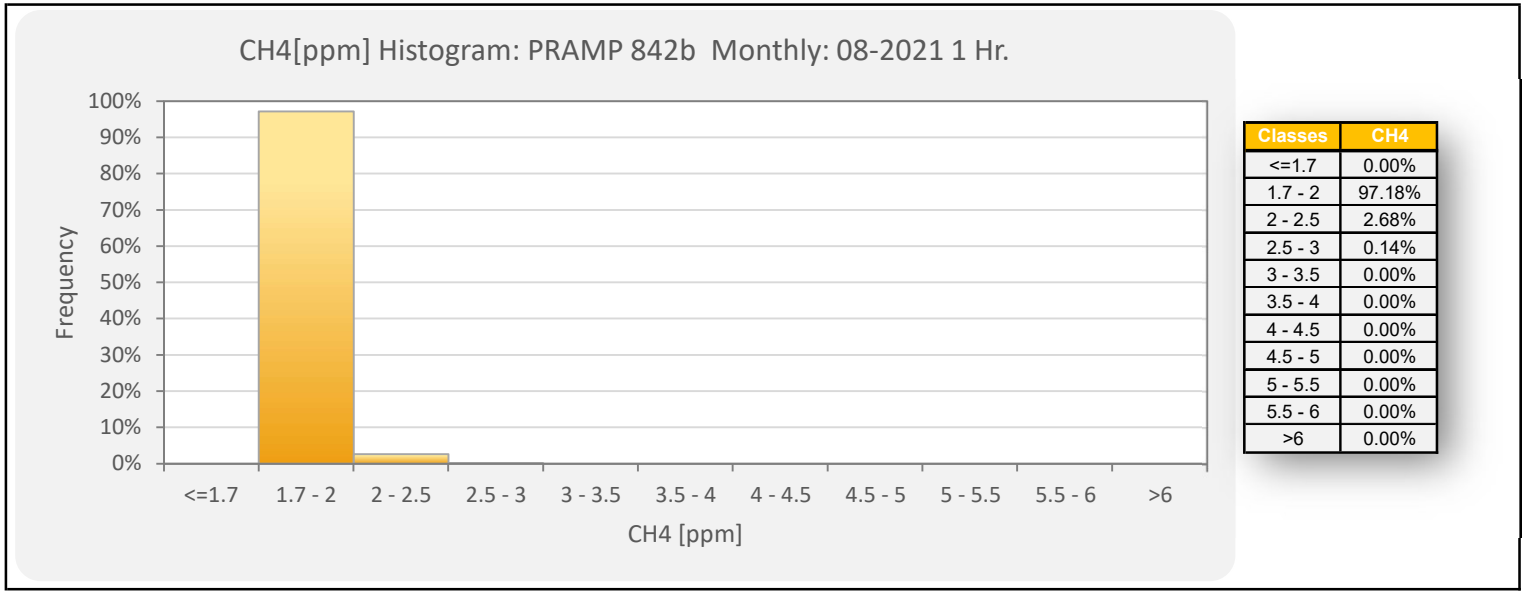
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 1.90 | 1.93 | 1.94 | 1.96 | 1.99 | 2.02 | 2.08 | 2.07 | 2.05 | 2.02 | 1.92 | 1.89 | 1.87 | 1.84 | 1.80 | 1.78 | 1.79 | 1.78 | 1.79 | S | 1.82 | 1.83 | 1.86 | 1.94 | **1.78** | 2.08 | 1.91 |
| Aug 2 | 1.98 | 2.09 | 2.31 | 2.41 | 2.44 | **2.55** | 2.39 | 2.29 | 2.08 | 2.00 | 1.96 | 1.93 | 1.91 | 1.90 | 1.89 | 1.89 | 1.90 | 1.92 | S | 1.95 | 1.93 | 1.91 | 1.92 | 1.93 | 1.89 | **2.55** | **2.06** |
| Aug 3 | 1.93 | 1.94 | 1.98 | 1.97 | 1.98 | 1.90 | 1.96 | 1.95 | 1.86 | 1.83 | 1.82 | 1.88 | 1.91 | 1.87 | 1.84 | 1.81 | 1.81 | S | 1.81 | 1.82 | 1.79 | 1.79 | 1.81 | 1.84 | 1.79 | 1.98 | 1.87 |
| Aug 4 | 1.84 | 1.84 | 1.87 | 1.87 | 1.84 | 1.86 | 1.92 | 1.89 | 1.85 | 1.82 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.83 | S | 1.82 | 1.84 | 1.87 | 1.91 | 1.93 | 1.91 | 1.90 | 1.82 | 1.93 | 1.86 |
| Aug 5 | 1.89 | 1.90 | 1.90 | 1.89 | 1.88 | 1.89 | 1.88 | 1.89 | 1.88 | C | C | C | C | 1.88 | 1.87 | S | 1.84 | 1.83 | 1.84 | 1.86 | 1.88 | 1.89 | 1.88 | 1.83 | 1.83 | 1.90 | 1.87 |
| Aug 6 | 1.83 | 1.83 | 1.87 | 1.88 | 1.89 | 1.92 | 1.89 | 1.86 | 1.85 | 1.83 | 1.85 | 1.84 | 1.83 | 1.83 | S | 1.82 | 1.83 | 1.82 | 1.82 | 1.82 | 1.82 | 1.81 | 1.82 | 1.82 | 1.81 | 1.92 | 1.84 |
| Aug 7 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 | 1.84 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | 1.82 | 1.82 | S | 1.81 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.87 | 1.84 | 1.87 | 1.91 | 1.81 | 1.91 | 1.83 |
| Aug 8 | 1.91 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | 1.91 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | S | 1.88 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.89 | 1.90 | 1.89 | 1.88 | 1.88 | 1.91 | 1.90 |
| Aug 9 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.89 | 1.88 | 1.88 | 1.87 | 1.86 | 1.84 | S | 1.82 | 1.81 | 1.81 | 1.82 | 1.82 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.82 | 1.81 | 1.89 | 1.84 |
| Aug 10 | 1.83 | 1.83 | 1.83 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.84 | 1.85 | S | 1.85 | 1.85 | 1.85 | 1.85 | 1.84 | 1.84 | 1.84 | 1.84 | 1.83 | 1.84 | 1.85 | 1.84 | 1.84 | 1.83 | 1.85 | 1.84 |
| Aug 11 | 1.83 | 1.83 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | S | 1.83 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.86 | 1.86 | 1.86 | 1.87 | 1.89 | 1.91 | 1.82 | 1.91 | 1.85 |
| Aug 12 | 1.93 | 1.98 | 1.93 | 1.90 | 1.89 | 1.93 | 1.94 | 1.89 | S | 1.88 | 1.88 | 1.87 | 1.86 | 1.86 | 1.85 | 1.83 | 1.83 | 1.83 | 1.83 | 1.83 | 1.85 | 1.88 | 1.90 | 1.86 | 1.83 | 1.98 | 1.88 |
| Aug 13 | 1.86 | 1.86 | 1.87 | 1.88 | 1.86 | 1.86 | 1.86 | S | 1.84 | 1.83 | 1.83 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.84 | 1.82 | 1.82 | 1.81 | 1.88 | 1.83 |
| Aug 14 | 1.83 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | S | 1.83 | 1.82 | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.85 | 1.87 | 1.89 | 1.81 | 1.89 | 1.83 |
| Aug 15 | 1.88 | 1.87 | 1.87 | 1.87 | 1.87 | S | 1.87 | 1.85 | 1.81 | 1.81 | 1.81 | 1.80 | 1.79 | 1.79 | 1.80 | 1.80 | 1.81 | 1.81 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.83 | 1.79 | 1.88 | 1.83 |
| Aug 16 | 1.83 | 1.83 | 1.84 | 1.84 | S | 1.83 | 1.82 | 1.83 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.85 | 1.85 | 1.86 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.86 | 1.87 | 1.88 | 1.82 | 1.88 | 1.84 |
| Aug 17 | 1.93 | 1.98 | 1.98 | S | 1.91 | 2.01 | 1.99 | 1.92 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.88 | 2.01 | 1.91 |
| Aug 18 | 1.88 | 1.88 | S | 1.87 | 1.88 | 1.88 | 1.89 | 1.88 | 1.88 | 1.87 | 1.87 | 1.87 | 1.86 | 1.85 | 1.85 | 1.86 | 1.84 | 1.83 | 1.82 | 1.82 | 1.83 | 1.83 | 1.85 | 1.84 | 1.82 | 1.89 | 1.86 |
| Aug 19 | 1.85 | S | 1.89 | 1.91 | 1.92 | 1.95 | 1.92 | 1.89 | 1.87 | 1.87 | 1.87 | 1.86 | 1.87 | 1.86 | 1.86 | 1.86 | 1.86 | 1.85 | 1.85 | 1.85 | 1.89 | 1.86 | 1.90 | 1.92 | 1.85 | 1.95 | 1.88 |
| Aug 20 | S | 1.95 | 1.90 | 1.88 | 1.89 | 1.88 | 1.89 | 1.89 | 1.90 | 1.90 | 1.90 | 1.89 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.90 | 1.91 | 1.94 | S | 1.88 | 1.95 | 1.89 |
| Aug 21 | 2.10 | 2.12 | 2.10 | 2.03 | 1.96 | 1.94 | 1.94 | 1.95 | 1.93 | 1.91 | 1.91 | 1.88 | 1.88 | 1.88 | 1.89 | 1.88 | 1.89 | 1.88 | 1.88 | 1.87 | 1.89 | 1.90 | S | 1.90 | 1.87 | 2.12 | 1.94 |
| Aug 22 | 1.90 | 1.91 | 1.91 | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.93 | 1.94 | 1.93 | 1.93 | 1.93 | 1.92 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | 1.91 | 1.91 | S | 1.91 | 1.91 | 1.90 | 1.94 | 1.92 |
| Aug 23 | 1.91 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.91 | 1.90 | 1.90 | 1.90 | 1.89 | 1.88 | 1.88 | 1.87 | 1.87 | 1.88 | 1.90 | 1.88 | 1.88 | 1.88 | S | 1.91 | 1.90 | 1.91 | 1.87 | 1.91 | 1.89 |
| Aug 24 | 1.92 | 1.91 | 1.91 | 1.92 | 1.92 | 1.92 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | 1.90 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.90 | S | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.92 | 1.90 |
| Aug 25 | 1.90 | 1.90 | 1.89 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.89 | 1.88 | 1.88 | 1.88 | 1.87 | 1.88 | 1.88 | 1.87 | S | 1.88 | 1.88 | 1.92 | 1.90 | 1.95 | 1.87 | 1.95 | 1.89 |
| Aug 26 | 1.97 | 1.94 | 1.92 | 1.94 | 1.95 | 1.96 | 2.00 | 1.96 | 1.91 | 1.89 | 1.89 | 1.88 | 1.88 | 1.89 | 1.89 | 1.88 | 1.88 | S | 1.87 | 1.87 | 1.89 | 1.88 | 1.88 | 1.87 | 1.87 | 2.00 | 1.91 |
| Aug 27 | 1.89 | 1.90 | 1.90 | 1.88 | 1.87 | 1.87 | 1.87 | 1.86 | 1.86 | 1.85 | 1.84 | 1.84 | 1.84 | 1.83 | 1.84 | 1.84 | S | 1.85 | 1.84 | 1.85 | 1.84 | 1.85 | 1.87 | 1.89 | 1.83 | 1.90 | 1.86 |
| Aug 28 | 1.87 | 1.87 | 1.88 | 1.88 | 1.88 | 1.87 | 1.86 | 1.86 | 1.85 | 1.85 | 1.84 | 1.83 | 1.83 | 1.83 | 1.83 | S | 1.83 | 1.83 | 1.82 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.82 | 1.88 | 1.85 |
| Aug 29 | 1.85 | 1.86 | 1.86 | 1.87 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.84 | 1.84 | 1.83 | 1.84 | S | 1.84 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.84 | 1.85 | 1.87 | 1.83 | 1.87 | 1.85 |
| Aug 30 | 1.89 | 2.00 | 1.93 | 1.93 | 1.91 | 1.96 | 2.01 | 2.00 | 1.91 | 1.89 | 1.86 | 1.85 | 1.86 | S | 1.85 | 1.85 | 1.86 | 1.86 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 2.01 | 1.89 |
| Aug 31 | 1.85 | 1.86 | 1.86 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.88 | 1.88 | 1.87 | 1.88 | S | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.85 | 1.87 | 1.87 | 1.85 | 1.88 | 1.87 |
| Diurnal Maximum | 2.10 | 2.12 | 2.31 | 2.41 | 2.44 | 2.55 | 2.39 | 2.29 | 2.08 | 2.02 | 1.96 | 1.93 | 1.93 | 1.92 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | 1.95 | 1.93 | 1.93 | 1.94 | 1.95 | | | |
| Diurnal Average | 1.89 | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 | 1.92 | 1.91 | 1.88 | 1.88 | 1.87 | 1.86 | 1.86 | 1.86 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.85 | 1.86 | 1.86 | 1.87 | 1.88 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for CH4 - 842b Station*

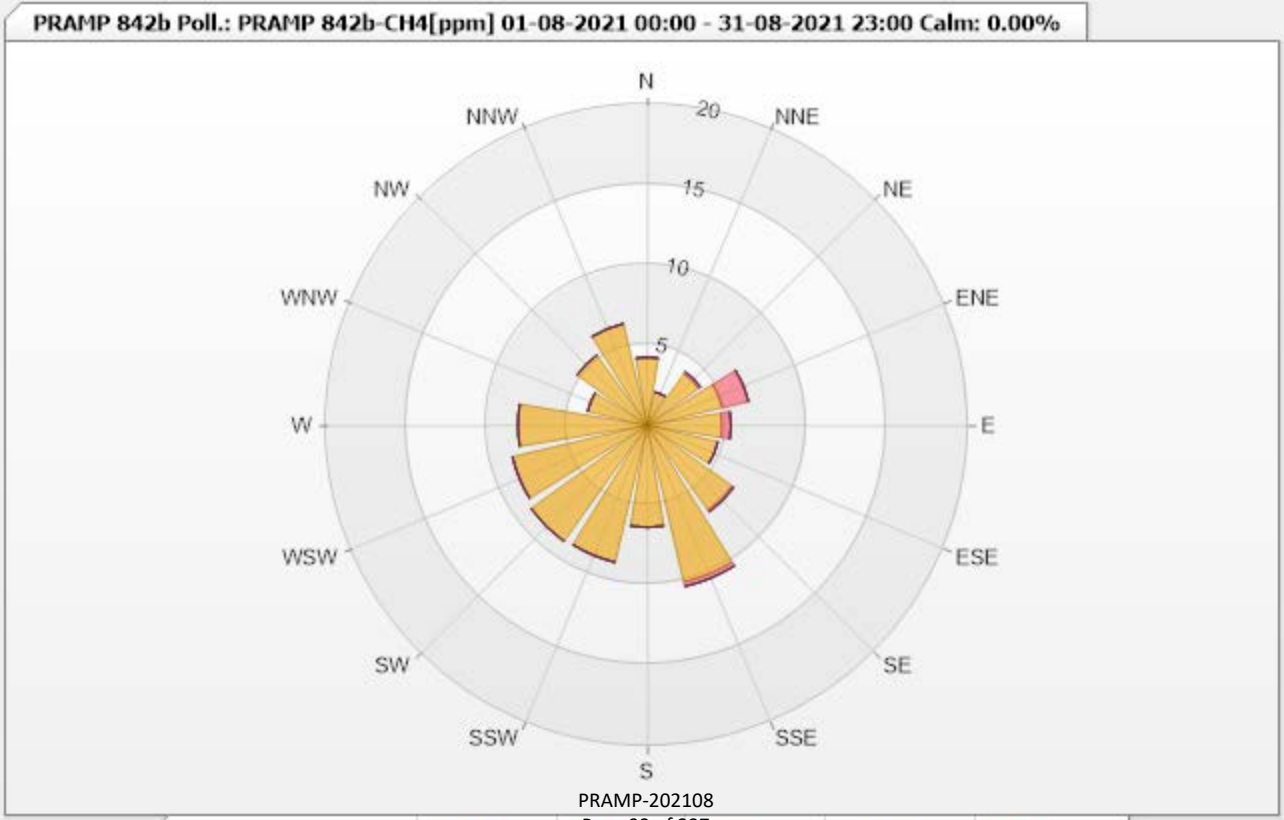





| Classes | CH4 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 97.18% |
| 2 - 2.5 | 2.68% |
| 2.5 - 3 | 0.14% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: PRAMP 842b Poll.: PRAMP 842b-CH4[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-20 | >20.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| NNE | 2.12 | 0 | 0 | 0 | 0 | 2.12 |
| NE | 3.95 | 0.14 | 0 | 0 | 0 | 4.09 |
| ENE | 4.8 | 1.69 | 0 | 0 | 0 | 6.49 |
| E | 4.66 | 0.56 | 0 | 0 | 0 | 5.22 |
| ESE | 4.52 | 0 | 0 | 0 | 0 | 4.52 |
| SE | 6.5 | 0.14 | 0 | 0 | 0 | 6.64 |
| SSE | 10.03 | 0.28 | 0 | 0 | 0 | 10.31 |
| S | 6.36 | 0 | 0 | 0 | 0 | 6.36 |
| SSW | 8.76 | 0 | 0 | 0 | 0 | 8.76 |
| SW | 8.9 | 0 | 0 | 0 | 0 | 8.9 |
| WSW | 8.62 | 0 | 0 | 0 | 0 | 8.62 |
| W | 8.05 | 0 | 0 | 0 | 0 | 8.05 |
| WNW | 3.81 | 0 | 0 | 0 | 0 | 3.81 |
| NW | 5.37 | 0 | 0 | 0 | 0 | 5.37 |
| NNW | 6.5 | 0 | 0 | 0 | 0 | 6.5 |
| Summary | 97.19 | 2.81 | 0 | 0 | 0 | 100 |


PRAMP 842b Poll.: PRAMP 842b-CH4[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
97 0-2
3 2-5
0 5-10
0 10-20
0 >20.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## NON-METHANE HYDROCARBONS (NMHC) in ppm

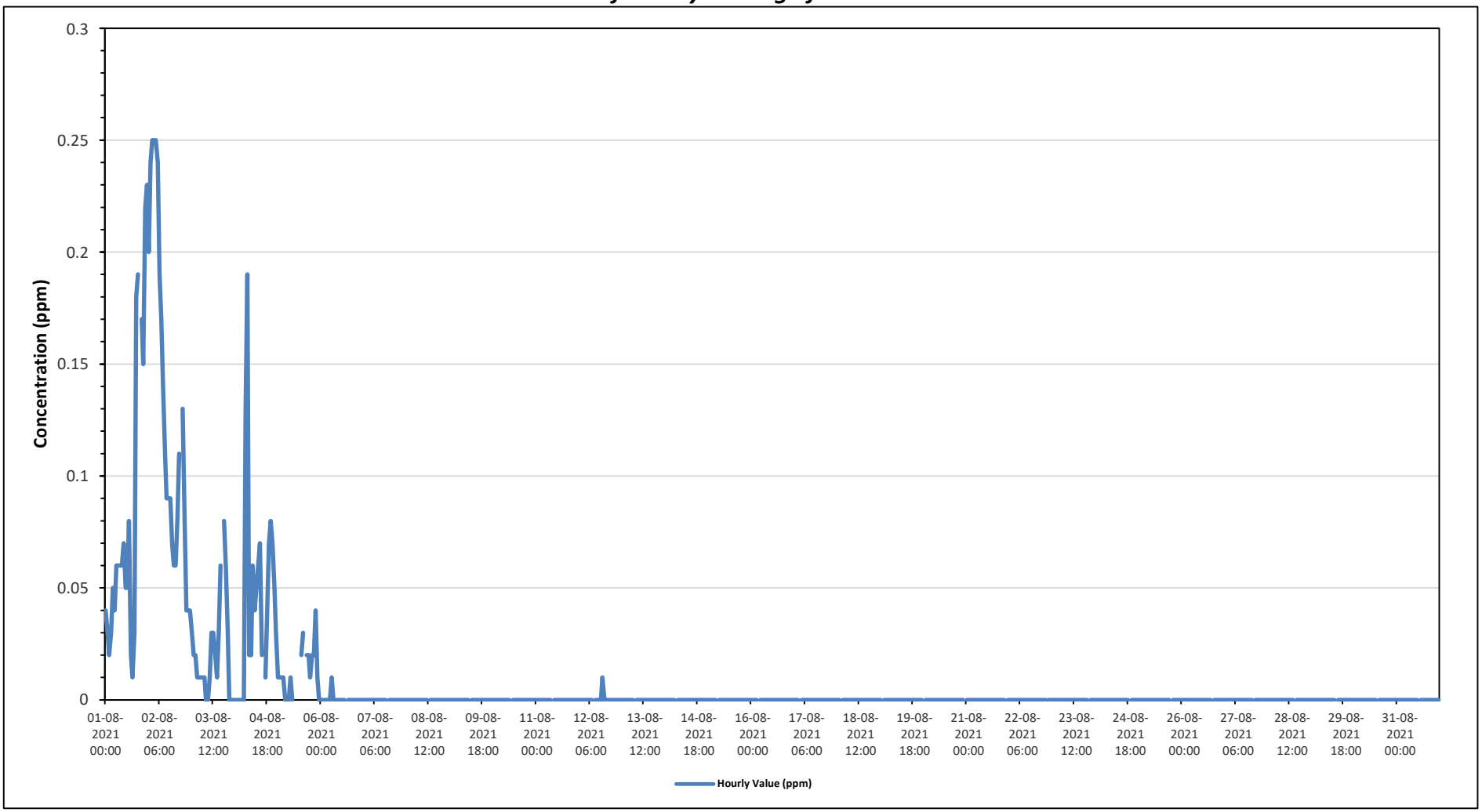
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0.25 | ppm | on August 2 at hour 2 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.13 | ppm | on August 2 | Hours of Data: | 708 |
| Minimum Hourly Value: | 0.00 | ppm | on August 3 at hour 8 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.00 | ppm | on August 7 | Hours of Calibration: | 36 |
| Monthly Average: | 0.01 | ppm | | Operational Uptime: | 100.0 |

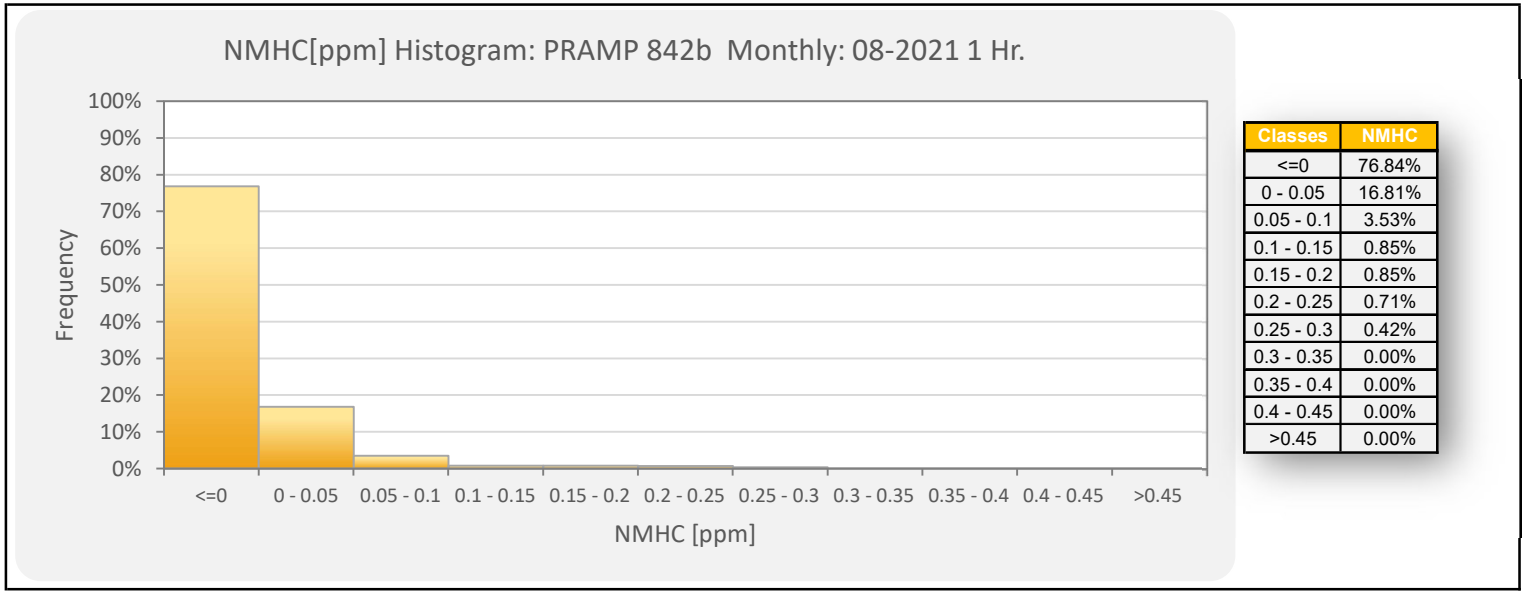
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 0.04 | 0.03 | 0.02 | 0.03 | 0.05 | 0.04 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.05 | 0.05 | 0.08 | 0.02 | 0.01 | 0.03 | 0.18 | 0.19 | S | 0.17 | 0.15 | 0.22 | 0.23 | 0.01 | 0.23 | 0.08 |
| Aug 2 | 0.20 | 0.24 | **0.25** | **0.25** | **0.25** | 0.24 | 0.19 | 0.17 | 0.14 | 0.11 | 0.09 | 0.09 | 0.09 | 0.07 | 0.06 | 0.06 | 0.08 | 0.11 | S | 0.13 | 0.08 | 0.04 | 0.04 | 0.04 | 0.04 | **0.25** | **0.13** |
| Aug 3 | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.03 | 0.03 | 0.02 | 0.01 | 0.03 | 0.06 | S | 0.08 | 0.06 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.02 |
| Aug 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.19 | 0.02 | 0.02 | 0.06 | 0.04 | 0.05 | 0.06 | 0.07 | 0.02 | S | 0.01 | 0.04 | 0.07 | 0.08 | 0.07 | 0.05 | 0.03 | 0.00 | 0.19 | 0.04 |
| Aug 5 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | C | C | C | C | 0.02 | 0.03 | S | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.04 | 0.01 | 0.00 | 0.00 | 0.04 | 0.01 |
| Aug 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| Aug 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| Aug 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 16 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 17 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 18 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 19 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 20 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 |
| Aug 21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Diurnal Maximum | 0.20 | 0.24 | 0.25 | 0.25 | 0.25 | 0.24 | 0.19 | 0.19 | 0.14 | 0.11 | 0.09 | 0.09 | 0.09 | 0.08 | 0.07 | 0.06 | 0.08 | 0.18 | 0.19 | 0.13 | 0.17 | 0.15 | 0.22 | 0.23 | | | |
| Diurnal Average | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NMHC - 842b Station*

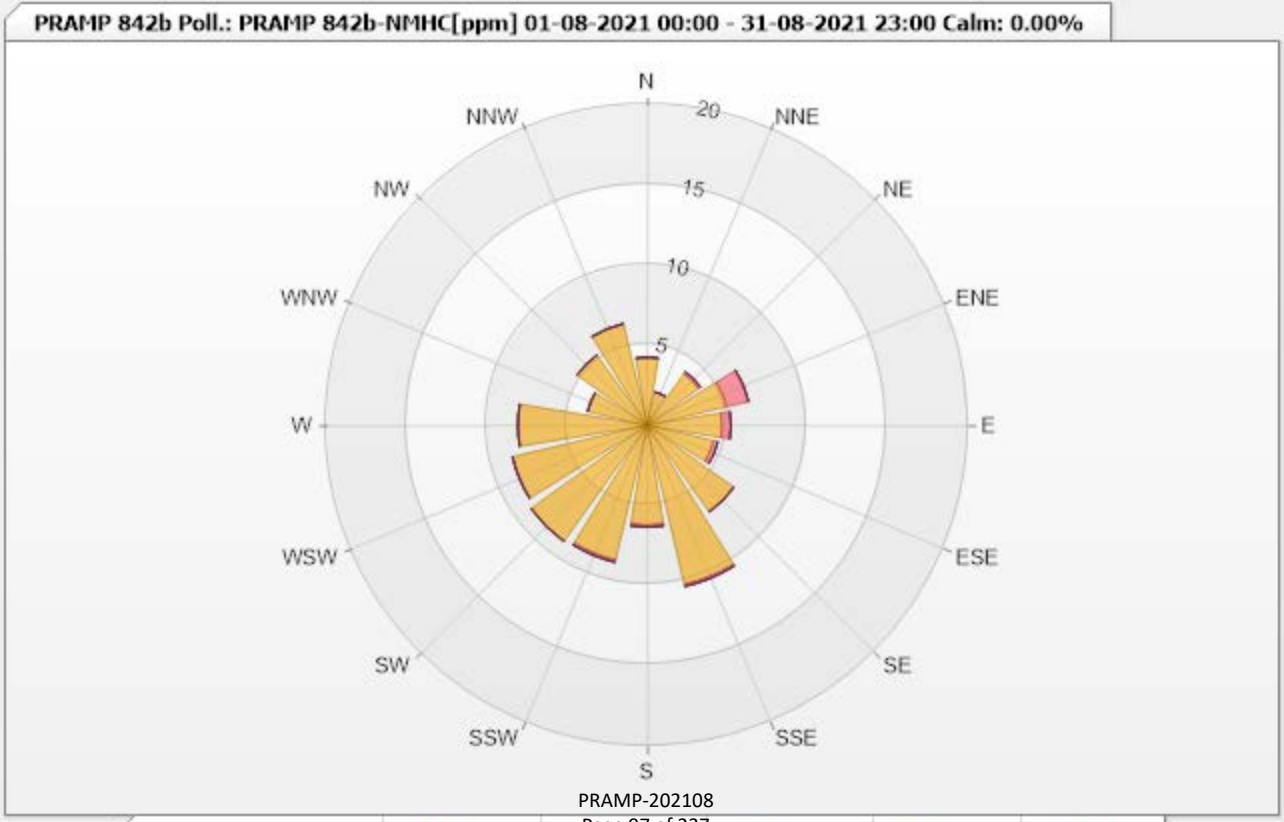





| Classes | NMHC |
|---|---|
| <=0 | 76.84% |
| 0 - 0.05 | 16.81% |
| 0.05 - 0.1 | 3.53% |
| 0.1 - 0.15 | 0.85% |
| 0.15 - 0.2 | 0.85% |
| 0.2 - 0.25 | 0.71% |
| 0.25 - 0.3 | 0.42% |
| 0.3 - 0.35 | 0.00% |
| 0.35 - 0.4 | 0.00% |
| 0.4 - 0.45 | 0.00% |
| >0.45 | 0.00% |

Wind: PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppm]

| Direction | 0-0.1 | 0.1-0.3 | 0.3-0.9 | 0.9-2 | >2.0 | Total |
|---|---|---|---|---|---|---|
| N | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| NNE | 2.12 | 0 | 0 | 0 | 0 | 2.12 |
| NE | 3.95 | 0.14 | 0 | 0 | 0 | 4.09 |
| ENE | 5.08 | 1.41 | 0 | 0 | 0 | 6.49 |
| E | 4.66 | 0.56 | 0 | 0 | 0 | 5.22 |
| ESE | 4.24 | 0.28 | 0 | 0 | 0 | 4.52 |
| SE | 6.64 | 0 | 0 | 0 | 0 | 6.64 |
| SSE | 10.17 | 0.14 | 0 | 0 | 0 | 10.31 |
| S | 6.21 | 0.14 | 0 | 0 | 0 | 6.35 |
| SSW | 8.62 | 0.14 | 0 | 0 | 0 | 8.76 |
| SW | 8.9 | 0 | 0 | 0 | 0 | 8.9 |
| WSW | 8.62 | 0 | 0 | 0 | 0 | 8.62 |
| W | 8.05 | 0 | 0 | 0 | 0 | 8.05 |
| WNW | 3.81 | 0 | 0 | 0 | 0 | 3.81 |
| NW | 5.37 | 0 | 0 | 0 | 0 | 5.37 |
| NNW | 6.5 | 0 | 0 | 0 | 0 | 6.5 |
| Summary | 97.18 | 2.81 | 0 | 0 | 0 | 100 |


PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
97 0-0.1
3 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## RELATIVE HUMIDITY (RH) in %

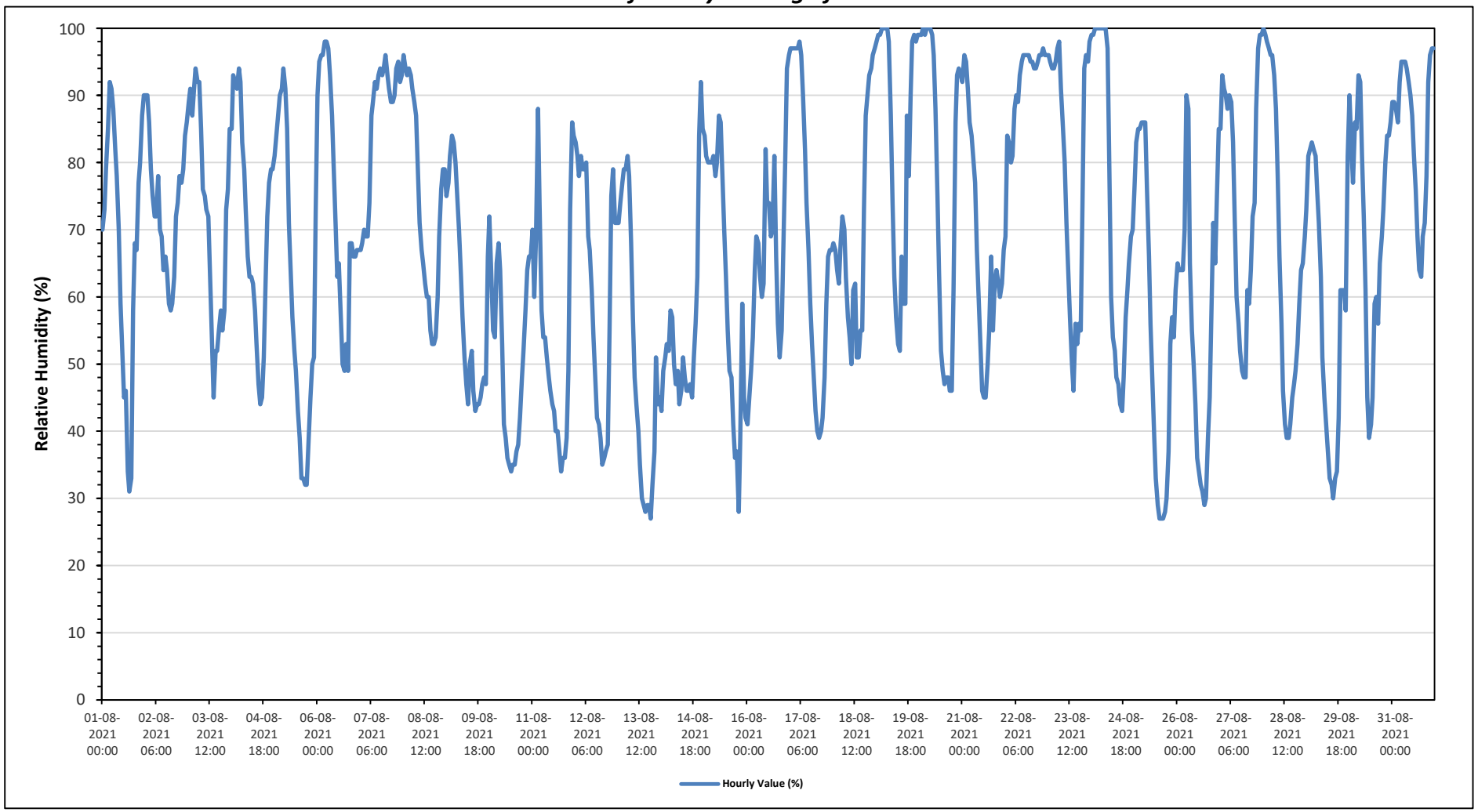
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 100 | % | on August 19 at hour 3 | Hours in Service: | 744 |
| Maximum Daily Value: | 91.3 | % | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 27 | % | on August 13 at hour 18 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 50.5 | % | on August 13 | Hours of Calibration: | 0 |
| Monthly Average: | 68.5 | % | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 70 | 73 | 79 | 85 | 92 | 91 | 88 | 82 | 78 | 70 | 59 | 52 | 45 | 46 | 34 | 31 | 33 | 58 | 68 | 67 | 77 | 80 | 87 | 90 | 31 | 92 | 68.1 |
| Aug 2 | 90 | 90 | 86 | 79 | 75 | 72 | 72 | 78 | 70 | 69 | 64 | 66 | 64 | 59 | 58 | 59 | 63 | 72 | 74 | 78 | 77 | 79 | 84 | 86 | 58 | 90 | 73.5 |
| Aug 3 | 89 | 91 | 87 | 91 | 94 | 92 | 92 | 85 | 76 | 75 | 73 | 72 | 63 | 54 | 45 | 52 | 52 | 55 | 58 | 55 | 58 | 73 | 76 | 85 | 45 | 94 | 72.6 |
| Aug 4 | 85 | 93 | 92 | 91 | 94 | 92 | 83 | 79 | 73 | 66 | 63 | 63 | 62 | 58 | 53 | 47 | 44 | 45 | 51 | 62 | 72 | 77 | 79 | 79 | 44 | 94 | 71.0 |
| Aug 5 | 81 | 84 | 87 | 90 | 91 | 94 | 91 | 85 | 71 | 64 | 57 | 52 | 49 | 43 | 39 | 33 | 33 | 32 | 32 | 39 | 45 | 50 | 51 | 73 | 32 | 94 | 61.1 |
| Aug 6 | 90 | 95 | 96 | 96 | 98 | 98 | 97 | 93 | 87 | 80 | 71 | 63 | 65 | 57 | 50 | 49 | 53 | 49 | 68 | 68 | 66 | 66 | 67 | 67 | 49 | 98 | 74.5 |
| Aug 7 | 67 | 68 | 70 | 69 | 69 | 74 | 87 | 89 | 92 | 91 | 93 | 94 | 93 | 94 | 96 | 93 | 91 | 89 | 89 | 90 | 94 | 95 | 92 | 93 | 67 | 96 | 86.3 |
| Aug 8 | 96 | 94 | 93 | 94 | 93 | 91 | 89 | 87 | 79 | 71 | 67 | 65 | 62 | 60 | 60 | 55 | 53 | 53 | 54 | 60 | 69 | 76 | 79 | 79 | 53 | 96 | 74.1 |
| Aug 9 | 75 | 77 | 81 | 84 | 83 | 80 | 75 | 70 | 63 | 57 | 51 | 47 | 44 | 50 | 52 | 46 | 43 | 44 | 44 | 45 | 47 | 48 | 47 | 66 | 43 | 84 | 59.1 |
| Aug 10 | 72 | 63 | 55 | 54 | 65 | 68 | 64 | 53 | 41 | 39 | 36 | 35 | 34 | 35 | 35 | 37 | 38 | 42 | 48 | 52 | 58 | 64 | 66 | 66 | 34 | 72 | 50.8 |
| Aug 11 | 70 | 60 | 69 | 88 | 74 | 58 | 54 | 54 | 51 | 48 | 46 | 44 | 43 | 40 | 40 | 37 | 34 | 36 | 36 | 39 | 49 | 73 | 86 | 84 | 34 | 88 | 54.7 |
| Aug 12 | 83 | 81 | 78 | 81 | 79 | 79 | 80 | 69 | 67 | 61 | 54 | 48 | 42 | 41 | 39 | 35 | 36 | 37 | 38 | 55 | 75 | 79 | 71 | 71 | 35 | 83 | 61.6 |
| Aug 13 | 71 | 74 | 77 | 79 | 79 | 81 | 78 | 68 | 57 | 48 | 44 | 40 | 35 | 30 | 29 | 28 | 29 | 29 | **27** | 32 | 37 | 51 | 44 | 45 | **27** | 81 | 50.5 |
| Aug 14 | 43 | 49 | 51 | 53 | 52 | 58 | 57 | 50 | 47 | 49 | 44 | 46 | 51 | 48 | 46 | 46 | 47 | 45 | 51 | 56 | 63 | 84 | 92 | 85 | 43 | 92 | 54.7 |
| Aug 15 | 84 | 81 | 80 | 80 | 80 | 81 | 78 | 80 | 87 | 86 | 79 | 70 | 63 | 55 | 49 | 48 | 41 | 36 | 37 | 28 | 39 | 59 | 45 | 42 | 28 | 87 | 62.8 |
| Aug 16 | 41 | 45 | 49 | 54 | 64 | 69 | 68 | 63 | 60 | 62 | 82 | 74 | 74 | 69 | 70 | 81 | 66 | 56 | 51 | 55 | 66 | 80 | 94 | 96 | 41 | 96 | 66.2 |
| Aug 17 | 97 | 97 | 97 | 97 | 97 | 98 | 96 | 90 | 82 | 74 | 67 | 59 | 53 | 48 | 43 | 40 | 39 | 40 | 42 | 48 | 59 | 66 | 67 | 67 | 39 | 98 | 69.3 |
| Aug 18 | 68 | 67 | 64 | 62 | 68 | 72 | 70 | 63 | 57 | 54 | 50 | 61 | 62 | 51 | 51 | 55 | 55 | 73 | 87 | 90 | 93 | 94 | 96 | 97 | 50 | 97 | 69.2 |
| Aug 19 | 98 | 99 | 99 | **100** | **100** | **100** | **100** | 98 | 87 | 74 | 63 | 57 | 53 | 52 | 66 | 59 | 59 | 87 | 78 | 90 | 98 | 99 | 98 | 99 | 52 | **100** | 83.9 |
| Aug 20 | 99 | 99 | **100** | 99 | **100** | **100** | **100** | 99 | 96 | 88 | 75 | 64 | 52 | 49 | 47 | 48 | 48 | 46 | 46 | 61 | 86 | 93 | 94 | 93 | 46 | **100** | 78.4 |
| Aug 21 | 92 | 96 | 95 | 91 | 86 | 84 | 81 | 77 | 67 | 60 | 53 | 46 | 45 | 45 | 50 | 55 | 66 | 55 | 62 | 64 | 62 | 60 | 62 | 67 | 45 | 96 | 67.5 |
| Aug 22 | 69 | 84 | 83 | 80 | 81 | 88 | 90 | 89 | 93 | 95 | 96 | 96 | 96 | 96 | 95 | 95 | 94 | 94 | 95 | 96 | 96 | 97 | 96 | 96 | 69 | 97 | **91.3** |
| Aug 23 | 96 | 95 | 94 | 94 | 95 | 97 | 98 | 91 | 86 | 80 | 71 | 64 | 57 | 50 | 46 | 56 | 53 | 56 | 55 | 74 | 94 | 96 | 95 | 98 | 46 | 98 | 78.8 |
| Aug 24 | 99 | 99 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 97 | 79 | 60 | 54 | 52 | 48 | 47 | 44 | 43 | 48 | 57 | 61 | 65 | 69 | 70 | 43 | **100** | 74.7 |
| Aug 25 | 76 | 83 | 85 | 85 | 86 | 86 | 86 | 76 | 66 | 56 | 48 | 39 | 33 | 29 | **27** | **27** | **27** | 28 | 30 | 37 | 53 | 57 | 54 | 61 | **27** | 86 | 55.6 |
| Aug 26 | 65 | 64 | 64 | 64 | 70 | 90 | 88 | 65 | 55 | 50 | 44 | 36 | 34 | 32 | 31 | 29 | 30 | 39 | 45 | 58 | 71 | 65 | 74 | 85 | 29 | 90 | 56.2 |
| Aug 27 | 85 | 93 | 91 | 90 | 88 | 90 | 89 | 83 | 71 | 60 | 56 | 52 | 49 | 48 | 48 | 61 | 59 | 64 | 72 | 74 | 88 | 97 | 99 | 99 | 48 | 99 | 75.3 |
| Aug 28 | **100** | 99 | 98 | 97 | 96 | 96 | 93 | 88 | 78 | 66 | 56 | 46 | 41 | 39 | 39 | 41 | 45 | 47 | 49 | 53 | 59 | 64 | 65 | 69 | 39 | **100** | 67.7 |
| Aug 29 | 73 | 81 | 82 | 83 | 82 | 81 | 76 | 71 | 63 | 51 | 45 | 41 | 37 | 33 | 32 | 30 | 33 | 34 | 42 | 61 | 61 | 61 | 58 | 81 | 30 | 83 | 58.0 |
| Aug 30 | 90 | 83 | 77 | 86 | 85 | 93 | 92 | 81 | 72 | 61 | 45 | 39 | 41 | 45 | 59 | 60 | 56 | 65 | 69 | 73 | 80 | 84 | 84 | 86 | 39 | 93 | 71.1 |
| Aug 31 | 89 | 89 | 88 | 86 | 92 | 95 | 95 | 95 | 94 | 92 | 90 | 87 | 81 | 76 | 69 | 64 | 63 | 69 | 71 | 78 | 92 | 96 | 97 | 97 | 63 | 97 | 85.2 |
| Diurnal Maximum | 100 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 97 | 96 | 96 | 96 | 96 | 96 | 95 | 94 | 94 | 95 | 96 | 98 | 99 | 99 | 99 | | | |
| Diurnal Average | 80.7 | 82.1 | 82.2 | 83.3 | 84.1 | 85.4 | 84.1 | 79.1 | 73.1 | 67.5 | 62.0 | 57.4 | 54.1 | 51.1 | 49.9 | 49.8 | 49.3 | 52.2 | 55.4 | 61.1 | 69.2 | 75.1 | 76.4 | 79.7 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for RH - 842b Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *842b Station - August 2021*

## Summary of Hourly Averages

## BAROMETRIC PRESSURE (BP) in millibar

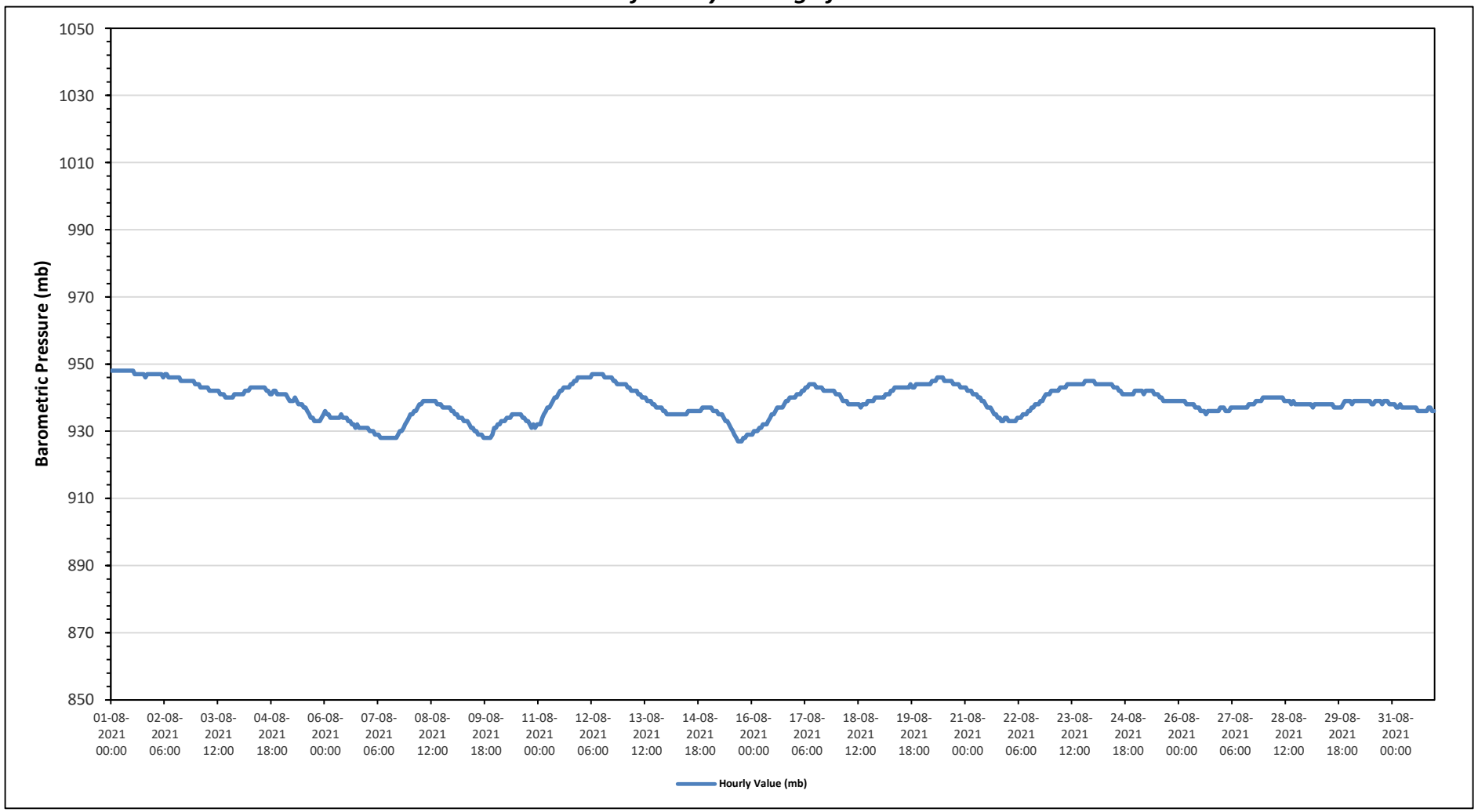
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 948 | mb | on August 1 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 948 | mb | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | 927 | mb | on August 15 at hour 16 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 929 | mb | on August 7 | Hours of Calibration: | 0 |
| Monthly Average: | 939 | mb | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | **948** | **948** | **948** | **948** | **948** | **948** | **948** | **948** | **948** | **948** | **948** | **948** | **948** | 947 | 947 | 947 | 947 | 947 | 947 | 946 | 947 | 947 | 947 | 947 | 946 | **948** | **947.5** |
| Aug 2 | 947 | 947 | 947 | 947 | 947 | 946 | 947 | 947 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 944 | 944 | 947 | 945.9 |
| Aug 3 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 942 | 942 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 940 | 941 | 941 | 941 | 940 | 944 | 941.7 |
| Aug 4 | 941 | 941 | 941 | 942 | 942 | 942 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 941 | 941 | 942 | 942 | 941 | 941 | 941 | 941 | 943 | 942.0 |
| Aug 5 | 941 | 941 | 941 | 940 | 939 | 939 | 939 | 940 | 939 | 938 | 938 | 938 | 937 | 937 | 936 | 935 | 934 | 934 | 933 | 933 | 933 | 933 | 934 | 935 | 933 | 941 | 937.0 |
| Aug 6 | 936 | 935 | 935 | 934 | 934 | 934 | 934 | 934 | 934 | 935 | 934 | 934 | 934 | 933 | 933 | 932 | 932 | 931 | 932 | 931 | 931 | 931 | 931 | 931 | 931 | 936 | 933.1 |
| Aug 7 | 931 | 930 | 930 | 930 | 929 | 929 | 929 | 928 | 928 | 928 | 928 | 928 | 928 | 928 | 928 | 928 | 928 | 929 | 930 | 930 | 931 | 932 | 933 | 934 | 928 | 934 | 929.5 |
| Aug 8 | 935 | 935 | 936 | 936 | 937 | 938 | 938 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 937 | 936 | 935 | 939 | 937.6 |
| Aug 9 | 936 | 935 | 935 | 934 | 934 | 934 | 933 | 933 | 933 | 932 | 931 | 931 | 930 | 930 | 929 | 929 | 929 | 928 | 928 | 928 | 928 | 928 | 929 | 931 | 928 | 936 | 931.2 |
| Aug 10 | 931 | 932 | 932 | 933 | 933 | 933 | 934 | 934 | 934 | 935 | 935 | 935 | 935 | 935 | 935 | 934 | 934 | 933 | 933 | 932 | 931 | 932 | 931 | 932 | 931 | 935 | 933.3 |
| Aug 11 | 932 | 932 | 934 | 935 | 936 | 937 | 937 | 938 | 939 | 940 | 940 | 941 | 942 | 942 | 943 | 943 | 943 | 943 | 944 | 944 | 945 | 945 | 946 | 946 | 932 | 946 | 940.3 |
| Aug 12 | 946 | 946 | 946 | 946 | 946 | 946 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 944 | 944 | 944 | 944 | 944 | 947 | 945.9 |
| Aug 13 | 944 | 944 | 943 | 943 | 942 | 942 | 942 | 942 | 941 | 941 | 940 | 940 | 940 | 939 | 939 | 939 | 938 | 938 | 937 | 937 | 937 | 937 | 936 | 936 | 936 | 944 | 939.9 |
| Aug 14 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 937 | 937 | 937 | 935 | 937 | 935.7 |
| Aug 15 | 937 | 937 | 936 | 936 | 936 | 935 | 935 | 935 | 934 | 933 | 933 | 932 | 931 | 930 | 929 | 928 | **927** | **927** | **927** | 928 | 928 | 929 | 929 | 929 | **927** | 937 | 931.7 |
| Aug 16 | 929 | 930 | 930 | 930 | 931 | 931 | 932 | 932 | 932 | 933 | 934 | 935 | 935 | 936 | 937 | 937 | 937 | 937 | 938 | 939 | 939 | 940 | 940 | 940 | 929 | 940 | 934.8 |
| Aug 17 | 940 | 941 | 941 | 941 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 941 | 940 | 944 | 942.3 |
| Aug 18 | 941 | 941 | 940 | 939 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 938 | 938 | 938 | 939 | 939 | 939 | 939 | 940 | 940 | 940 | 937 | 941 | 938.8 |
| Aug 19 | 940 | 940 | 940 | 941 | 941 | 941 | 942 | 942 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 944 | 943 | 943 | 944 | 944 | 944 | 944 | 940 | 944 | 942.5 |
| Aug 20 | 944 | 944 | 944 | 944 | 944 | 945 | 945 | 945 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 945 | 945 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 946 | 944.5 |
| Aug 21 | 943 | 942 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 939 | 939 | 938 | 937 | 937 | 937 | 936 | 935 | 935 | 934 | 934 | 933 | 933 | 934 | 934 | 933 | 943 | 937.8 |
| Aug 22 | 933 | 933 | 933 | 933 | 933 | 934 | 934 | 934 | 935 | 935 | 935 | 936 | 936 | 937 | 937 | 938 | 938 | 938 | 939 | 939 | 940 | 941 | 941 | 941 | 933 | 941 | 936.4 |
| Aug 23 | 942 | 942 | 942 | 942 | 942 | 943 | 943 | 943 | 943 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 945 | 945 | 945 | 945 | 945 | 942 | 945 | 943.6 |
| Aug 24 | 945 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 942 | 942 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 942 | 941 | 945 | 942.8 |
| Aug 25 | 942 | 942 | 942 | 942 | 941 | 942 | 942 | 942 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 942 | 940.5 |
| Aug 26 | 939 | 939 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 937 | 937 | 937 | 936 | 936 | 936 | 935 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 935 | 939 | 937.0 |
| Aug 27 | 937 | 937 | 936 | 936 | 936 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 938 | 938 | 938 | 938 | 939 | 939 | 939 | 939 | 940 | 936 | 940 | 937.5 |
| Aug 28 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 939 | 939 | 938 | 939 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 940 | 939.1 |
| Aug 29 | 938 | 938 | 938 | 937 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 937 | 938 | 939 | 939 | 939 | 937 | 939 | 937.9 |
| Aug 30 | 939 | 938 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 939 | 939 | 939 | 939 | 938 | 939 | 939 | 939 | 938 | 938 | 938 | 939 | 938.8 |
| Aug 31 | 938 | 938 | 937 | 937 | 938 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 937 | 936 | 936 | 936 | 938 | 936.8 |
| Diurnal Maximum | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 947 | 947 | 947 | 947 | 947 | 946 | 947 | 947 | 947 | 947 | | | |
| Diurnal Average | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 938 | 939 | 939 | 939 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for BP - 842b Station*



peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## AMBIENT TEMPERATURE (AT) in Degree Celsius

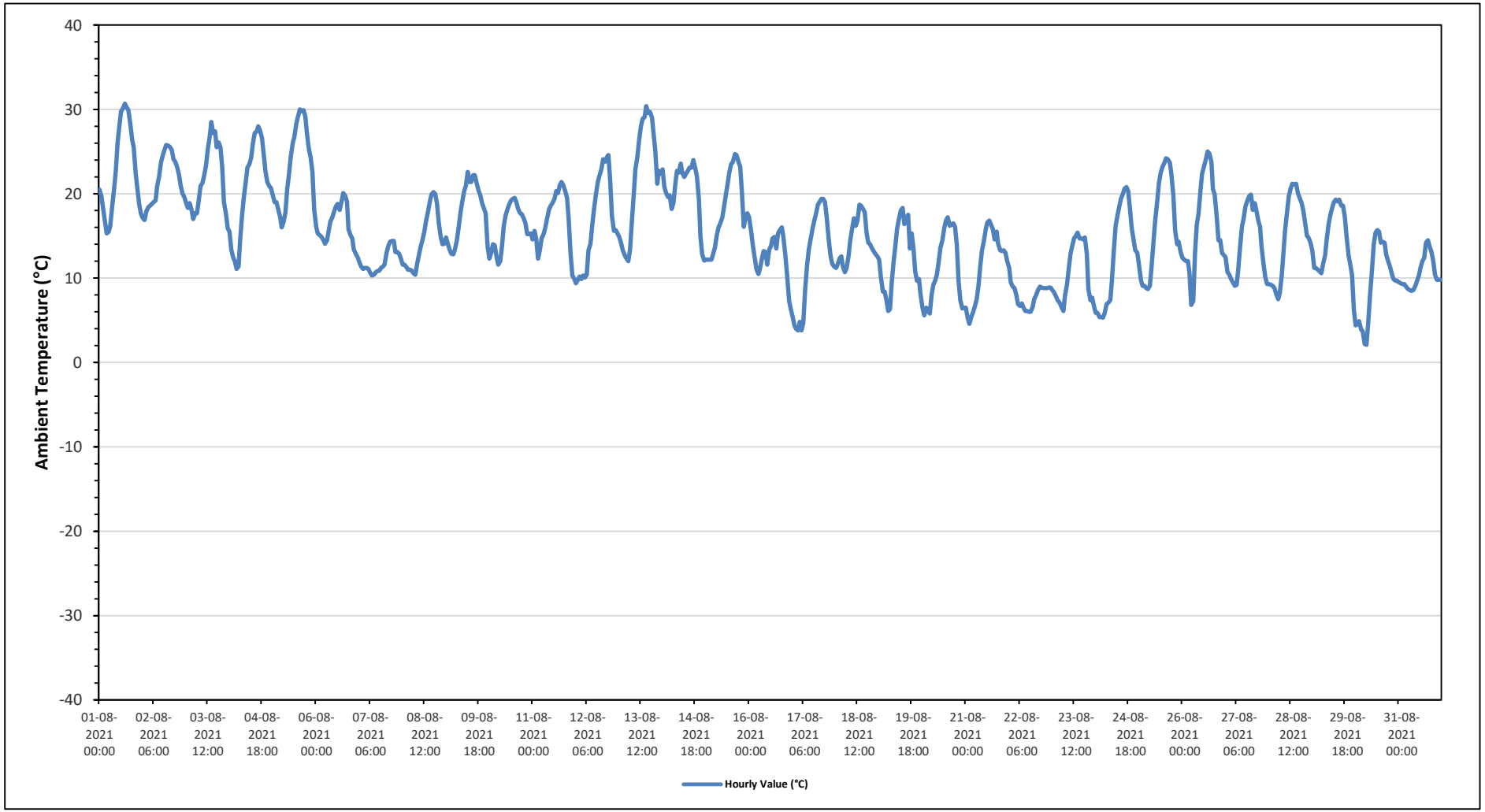
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 30.7 | °C | on August 1 at hour 14 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.2 | °C | on August 5 | Hours of Data: | 744 |
| Minimum Hourly Value: | 2.1 | °C | on August 30 at hour 6 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 7.9 | °C | on August 22 | Hours of Calibration: | 0 |
| Monthly Average: | 15.6 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 20.5 | 19.7 | 18.4 | 16.7 | 15.3 | 15.5 | 16.2 | 18.6 | 20.5 | 22.7 | 26 | 28 | 29.8 | 30.1 | **30.7** | 30.3 | 29.9 | 28.4 | 26.4 | 25.5 | 22.4 | 20.5 | 18.7 | 17.6 | 15.3 | **30.7** | 22.9 |
| Aug 2 | 17.1 | 16.9 | 17.9 | 18.4 | 18.6 | 18.8 | 19 | 19.2 | 20.9 | 22.1 | 23.7 | 24.5 | 25.2 | 25.8 | 25.7 | 25.6 | 25.2 | 24.1 | 23.8 | 23.2 | 22.2 | 21 | 20 | 19.6 | 16.9 | 25.8 | 21.6 |
| Aug 3 | 18.8 | 18.3 | 18.9 | 18 | 17 | 17.7 | 17.7 | 19.2 | 20.9 | 21.3 | 22.1 | 23.4 | 25.3 | 26.9 | 28.5 | 27.2 | 27.4 | 25.5 | 26.1 | 25.5 | 23.2 | 19 | 17.6 | 15.9 | 15.9 | 28.5 | 21.7 |
| Aug 4 | 15.5 | 13.4 | 12.4 | 12 | 11.1 | 11.4 | 14.4 | 17.5 | 19.6 | 21.5 | 23.1 | 23.5 | 24.3 | 26 | 27.2 | 27.4 | 28 | 27.5 | 26.6 | 24.6 | 22.6 | 21.4 | 20.9 | 20.7 | 11.1 | 28.0 | 20.5 |
| Aug 5 | 19.8 | 19 | 19 | 18.2 | 17.2 | 16 | 16.6 | 17.8 | 20.6 | 22.3 | 24.4 | 26 | 26.7 | 28.3 | 29.2 | 30 | 29.8 | 29.9 | 29.1 | 27.2 | 25.3 | 24.3 | 22.6 | 18.1 | 16.0 | 30.0 | **23.2** |
| Aug 6 | 16.1 | 15.3 | 15.1 | 14.9 | 14.5 | 14.1 | 14.5 | 15.7 | 16.7 | 17.2 | 17.9 | 18.5 | 18.8 | 18.1 | 19 | 20.1 | 19.8 | 19.1 | 15.8 | 15.1 | 14.7 | 13.4 | 12.9 | 12.5 | 12.5 | 20.1 | 16.2 |
| Aug 7 | 11.9 | 11.4 | 11.1 | 11.2 | 11.2 | 11.1 | 10.6 | 10.3 | 10.4 | 10.7 | 10.8 | 10.9 | 11.2 | 11.4 | 11.6 | 13 | 13.8 | 14.3 | 14.4 | 14.4 | 13.1 | 13.1 | 12.9 | 12.3 | 10.3 | 14.4 | 12.0 |
| Aug 8 | 11.6 | 11.6 | 11.3 | 11 | 11 | 10.9 | 10.6 | 10.4 | 11.8 | 12.8 | 13.8 | 14.6 | 15.5 | 16.8 | 17.8 | 19.1 | 19.9 | 20.2 | 20 | 18.9 | 16.6 | 14.9 | 14 | 14.1 | 10.4 | 20.2 | 14.6 |
| Aug 9 | 14.8 | 14.1 | 13.4 | 12.9 | 12.8 | 13.4 | 14.5 | 16 | 17.9 | 19 | 20.3 | 21 | 22.6 | 21.4 | 21.4 | 22.2 | 22.2 | 21.2 | 20.4 | 19.8 | 18.9 | 18.2 | 17.7 | 13.7 | 12.8 | 22.6 | 17.9 |
| Aug 10 | 12.3 | 13 | 14 | 13.9 | 12.4 | 11.6 | 12 | 13.8 | 16.2 | 17.4 | 18.2 | 18.7 | 19.2 | 19.4 | 19.5 | 19 | 18.2 | 17.7 | 17.6 | 17.1 | 16.5 | 15.2 | 15.2 | 15.3 | 11.6 | 19.5 | 16.0 |
| Aug 11 | 14.6 | 15.6 | 14.6 | 12.3 | 13.3 | 14.7 | 15.2 | 15.9 | 17.1 | 18.1 | 18.6 | 18.9 | 19.4 | 20.3 | 20.1 | 21 | 21.4 | 21 | 20.4 | 19.5 | 17.2 | 12.9 | 10.3 | 9.9 | 9.9 | 21.4 | 16.8 |
| Aug 12 | 9.4 | 9.8 | 10.2 | 9.9 | 10.3 | 10.1 | 10.4 | 13.3 | 14.1 | 16 | 18.2 | 19.8 | 21.4 | 22.1 | 22.9 | 24.1 | 23.8 | 24.3 | 24.6 | 21.6 | 17.4 | 15.6 | 15.7 | 15.3 | 9.4 | 24.6 | 16.7 |
| Aug 13 | 14.9 | 14.1 | 13.3 | 12.7 | 12.3 | 12 | 13.4 | 16.7 | 20.1 | 22.9 | 24.4 | 26.4 | 28 | 28.9 | 29.1 | 30.4 | 29.6 | 29.7 | 29 | 27.2 | 25.1 | 21.2 | 22.7 | 22.4 | 12.0 | 30.4 | 21.9 |
| Aug 14 | 22.9 | 20.8 | 20.1 | 19.6 | 19.8 | 18.2 | 18.9 | 21.3 | 22.7 | 22.5 | 23.6 | 22.5 | 22 | 22.4 | 22.7 | 23.1 | 23.1 | 24 | 23.1 | 22.1 | 19.4 | 15 | 12.8 | 12.1 | 12.1 | 24.0 | 20.6 |
| Aug 15 | 12.2 | 12.2 | 12.2 | 12.2 | 12.8 | 13.7 | 15.1 | 16 | 16.5 | 17.2 | 18.3 | 19.7 | 21.2 | 22.6 | 23.5 | 23.8 | 24.7 | 24.6 | 23.8 | 23.2 | 20 | 16.1 | 17.4 | 17.7 | 12.2 | 24.7 | 18.2 |
| Aug 16 | 17.2 | 15.6 | 13.9 | 12.5 | 11.1 | 10.5 | 11.1 | 12.3 | 13.2 | 13.1 | 11.6 | 13.4 | 13.8 | 14.7 | 14.9 | 13.5 | 15.3 | 15.7 | 16 | 14.9 | 12.7 | 10.3 | 7.3 | 6.4 | 6.4 | 17.2 | 13.0 |
| Aug 17 | 5.4 | 4.4 | 4 | 3.8 | 4.8 | 3.8 | 4.7 | 8.9 | 11.5 | 13.4 | 14.6 | 15.9 | 16.7 | 17.7 | 18.7 | 19 | 19.4 | 19.4 | 19 | 17.2 | 14.6 | 12.7 | 11.7 | 11.4 | 3.8 | 19.4 | 12.2 |
| Aug 18 | 11.2 | 11.6 | 12.3 | 12.6 | 11.4 | 10.7 | 11.2 | 12.7 | 14.4 | 15.9 | 17.1 | 16.2 | 16.8 | 18.7 | 18.6 | 18.2 | 17.8 | 15.4 | 14.2 | 14 | 13.5 | 13.2 | 12.8 | 12.6 | 10.7 | 18.7 | 14.3 |
| Aug 19 | 12.2 | 10.1 | 8.4 | 8.4 | 7.4 | 6.1 | 6.3 | 9.5 | 11.8 | 14 | 15.8 | 17.1 | 18 | 18.3 | 16.4 | 17.1 | 17.5 | 13.5 | 15.3 | 13.6 | 10.8 | 9.7 | 9.9 | 8.1 | 6.1 | 18.3 | 12.3 |
| Aug 20 | 6.5 | 5.6 | 6.5 | 6.2 | 5.8 | 8 | 9.2 | 9.7 | 10.4 | 11.9 | 13.6 | 14.5 | 15.9 | 16.8 | 17.2 | 16.2 | 16.3 | 16.5 | 16.1 | 14 | 9.7 | 7.4 | 6.4 | 6.5 | 5.6 | 17.2 | 11.1 |
| Aug 21 | 6.5 | 5.3 | 4.6 | 5.3 | 6 | 6.6 | 7.5 | 9.1 | 11.4 | 13.3 | 14.3 | 15.8 | 16.6 | 16.8 | 16.3 | 15.8 | 14.6 | 15.5 | 14.1 | 13.3 | 13.2 | 13.3 | 13 | 12 | 4.6 | 16.8 | 11.7 |
| Aug 22 | 11.2 | 9.5 | 9 | 8.8 | 8 | 6.9 | 6.7 | 7 | 6.5 | 6.1 | 6.1 | 6 | 6 | 6.6 | 7.5 | 8 | 8.6 | 9 | 8.9 | 8.8 | 8.8 | 8.8 | 8.9 | 8.9 | 6.0 | 11.2 | 7.9 |
| Aug 23 | 8.6 | 8.3 | 7.8 | 7.4 | 7.1 | 6.6 | 6.1 | 7.9 | 9.2 | 11.1 | 12.9 | 13.8 | 14.7 | 15 | 15.4 | 14.7 | 14.7 | 14.6 | 14.8 | 12.8 | 8.7 | 7.4 | 7.7 | 6.7 | 6.1 | 15.4 | 10.6 |
| Aug 24 | 5.9 | 5.9 | 5.4 | 5.4 | 5.3 | 5.9 | 6.9 | 7.1 | 7.4 | 9.6 | 13.3 | 16.2 | 17.5 | 18.4 | 19.4 | 20 | 20.6 | 20.8 | 20.3 | 18.2 | 15.9 | 14.4 | 13.3 | 13 | 5.3 | 20.8 | 12.8 |
| Aug 25 | 11.5 | 9.7 | 9.1 | 9.1 | 8.8 | 8.7 | 9.1 | 11.5 | 14.2 | 16.8 | 19.1 | 21.3 | 22.5 | 23.2 | 23.7 | 24.2 | 24.1 | 23.7 | 22.4 | 19.8 | 15.7 | 14 | 14.3 | 13.1 | 8.7 | 24.2 | 16.2 |
| Aug 26 | 12.4 | 12.2 | 12 | 12 | 10.6 | 6.8 | 7.3 | 13 | 16.3 | 17.7 | 20.5 | 22.4 | 23.3 | 24.1 | 25 | 24.8 | 23.8 | 20.6 | 19.9 | 17.3 | 14.5 | 14.5 | 13 | 12.7 | 6.8 | 25.0 | 16.5 |
| Aug 27 | 12.5 | 10.7 | 10.4 | 9.9 | 9.5 | 9.1 | 9.2 | 10.9 | 13.8 | 16.1 | 17.1 | 18.5 | 19.2 | 19.7 | 19.9 | 18.1 | 18.9 | 18.1 | 16.8 | 16.1 | 13.7 | 11.6 | 10.1 | 9.3 | 9.1 | 19.9 | 14.1 |
| Aug 28 | 9.3 | 9.2 | 9.1 | 8.8 | 8.1 | 7.5 | 8.2 | 10.3 | 13.1 | 15.6 | 17.8 | 19.7 | 20.6 | 21.2 | 21.1 | 21.2 | 20.1 | 19.5 | 18.9 | 18.1 | 16.5 | 15 | 14.8 | 14.2 | 7.5 | 21.2 | 14.9 |
| Aug 29 | 13.3 | 11.2 | 11.2 | 11 | 10.8 | 10.6 | 11.7 | 12.7 | 14.5 | 16.4 | 17.5 | 18.3 | 19 | 19.3 | 19.1 | 19.3 | 18.6 | 18.6 | 17.3 | 15 | 12.7 | 11.6 | 10.3 | 6.3 | 6.3 | 19.3 | 14.4 |
| Aug 30 | 4.4 | 4.5 | 4.9 | 3.9 | 3.7 | 2.2 | **2.1** | 4.7 | 7.9 | 11 | 14 | 15.4 | 15.7 | 15.5 | 14.2 | 14.3 | 14.2 | 12.8 | 12 | 11.4 | 10.5 | 9.9 | 9.7 | 9.7 | **2.1** | 15.7 | 9.5 |
| Aug 31 | 9.5 | 9.4 | 9.3 | 9.3 | 9 | 8.7 | 8.6 | 8.5 | 8.6 | 9.1 | 9.6 | 10.3 | 11.3 | 12 | 12.4 | 14.2 | 14.5 | 13.8 | 13.1 | 12 | 10.4 | 9.8 | 9.8 | 9.8 | 8.5 | 14.5 | 10.5 |
| Diurnal Maximum | 22.9 | 20.8 | 20.1 | 19.6 | 19.8 | 18.8 | 19.0 | 21.3 | 22.7 | 22.9 | 26.0 | 28.0 | 29.8 | 30.1 | 30.7 | 30.4 | 29.9 | 29.9 | 29.1 | 27.2 | 25.3 | 24.3 | 22.7 | 22.4 | | | |
| Diurnal Average | 12.6 | 11.9 | 11.6 | 11.2 | 10.9 | 10.6 | 11.1 | 12.8 | 14.5 | 16.0 | 17.4 | 18.4 | 19.3 | 20.0 | 20.3 | 20.5 | 20.5 | 20.0 | 19.4 | 18.1 | 16.0 | 14.4 | 13.7 | 12.8 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for AT - 842b Station*



peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## STATION TEMPERATURE (ST) in Degree Celsius

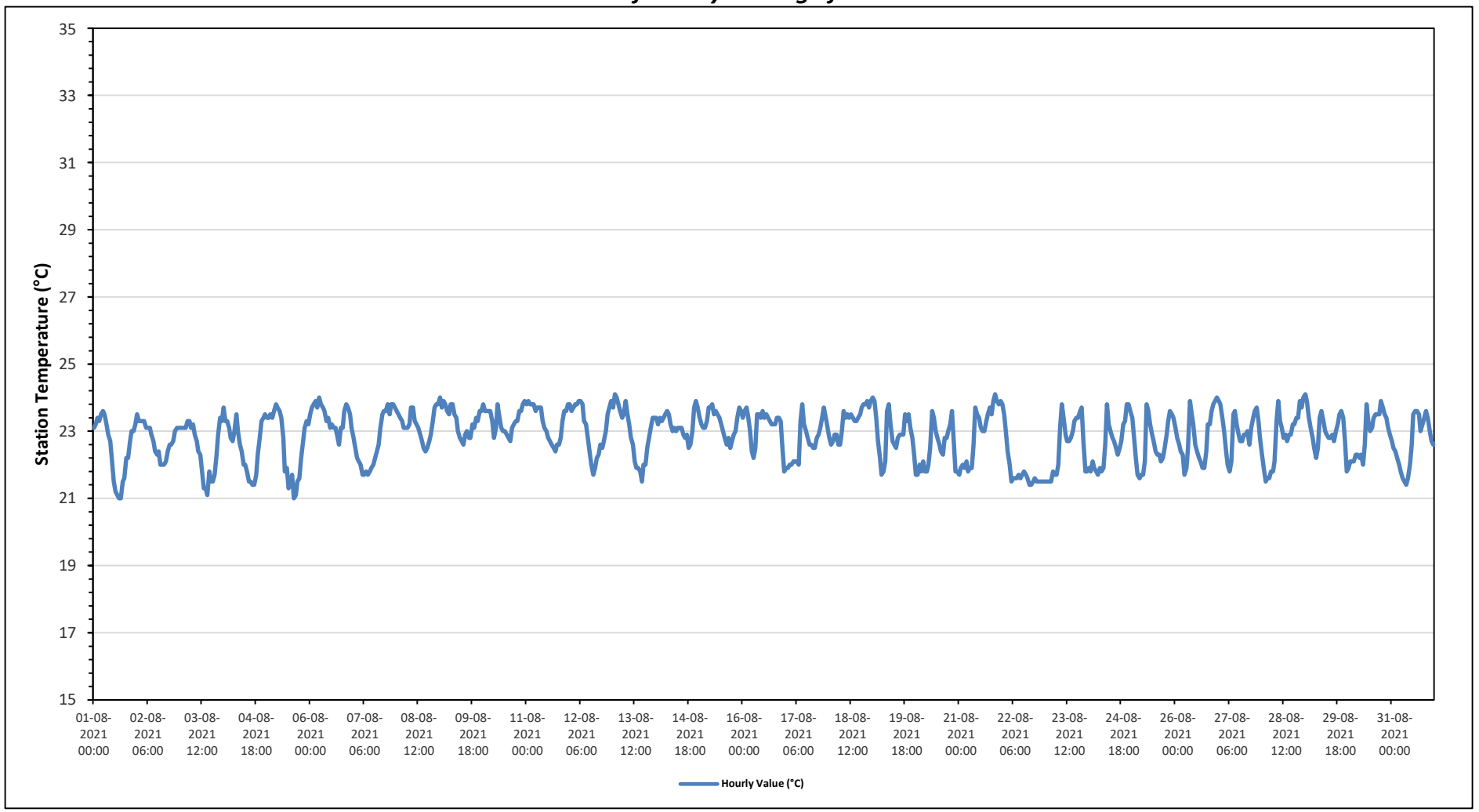
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 24.1 | °C | on August 13 at hour 1 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.4 | °C | on August 6 | Hours of Data: | 744 |
| Minimum Hourly Value: | 21.0 | °C | on August 1 at hour 14 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 21.9 | °C | on August 22 | Hours of Calibration: | 0 |
| Monthly Average: | 22.9 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 23.1 | 23.2 | 23.4 | 23.3 | 23.5 | 23.6 | 23.5 | 23.2 | 22.9 | 22.7 | 22.2 | 21.5 | 21.2 | 21.1 | **21.0** | **21.0** | 21.5 | 21.6 | 22.2 | 22.2 | 22.7 | 23.0 | 23.0 | 23.2 | **21.0** | 23.6 | 22.5 |
| Aug 2 | 23.5 | 23.3 | 23.3 | 23.3 | 23.3 | 23.1 | 23.1 | 23.1 | 22.9 | 22.7 | 22.4 | 22.3 | 22.4 | 22.0 | 22.0 | 22.0 | 22.1 | 22.4 | 22.6 | 22.6 | 22.7 | 23.0 | 23.1 | 23.1 | 22.0 | 23.5 | 22.8 |
| Aug 3 | 23.1 | 23.1 | 23.1 | 23.1 | 23.3 | 23.3 | 23.1 | 23.2 | 22.9 | 22.7 | 22.4 | 22.3 | 21.8 | 21.3 | 21.3 | 21.1 | 21.8 | 21.5 | 21.5 | 21.7 | 22.3 | 22.9 | 23.4 | 23.3 | 21.1 | 23.4 | 22.5 |
| Aug 4 | 23.7 | 23.3 | 23.3 | 23.1 | 22.8 | 22.7 | 23.0 | 23.5 | 23.0 | 22.6 | 22.4 | 22.0 | 22.0 | 21.8 | 21.5 | 21.5 | 21.4 | 21.4 | 21.7 | 22.3 | 22.8 | 23.3 | 23.4 | 23.5 | 21.4 | 23.7 | 22.6 |
| Aug 5 | 23.4 | 23.4 | 23.5 | 23.4 | 23.6 | 23.8 | 23.7 | 23.6 | 23.4 | 22.8 | 21.8 | 21.9 | 21.3 | 21.5 | 21.7 | **21.0** | 21.1 | 21.5 | 21.6 | 22.2 | 22.7 | 23.1 | 23.3 | 23.2 | **21.0** | 23.8 | 22.6 |
| Aug 6 | 23.5 | 23.7 | 23.8 | 23.9 | 23.7 | 24.0 | 23.8 | 23.7 | 23.6 | 23.3 | 23.4 | 23.1 | 23.2 | 23.1 | 23.1 | 22.9 | 22.6 | 23.1 | 23.1 | 23.6 | 23.8 | 23.7 | 23.5 | 23.1 | 22.6 | 24.0 | **23.4** |
| Aug 7 | 22.8 | 22.5 | 22.2 | 22.1 | 22.0 | 21.7 | 21.7 | 21.8 | 21.7 | 21.8 | 21.9 | 22.0 | 22.2 | 22.4 | 22.6 | 23.1 | 23.5 | 23.6 | 23.6 | 23.8 | 23.5 | 23.8 | 23.8 | 23.7 | 21.7 | 23.8 | 22.7 |
| Aug 8 | 23.6 | 23.5 | 23.4 | 23.3 | 23.1 | 23.1 | 23.1 | 23.2 | 23.7 | 23.7 | 23.3 | 23.2 | 23.1 | 22.9 | 22.7 | 22.5 | 22.4 | 22.5 | 22.7 | 22.9 | 23.3 | 23.7 | 23.8 | 23.8 | 22.4 | 23.8 | 23.2 |
| Aug 9 | 24.0 | 23.7 | 23.9 | 23.8 | 23.6 | 23.5 | 23.8 | 23.8 | 23.5 | 23.4 | 23.0 | 22.8 | 22.7 | 22.6 | 22.9 | 23.0 | 22.8 | 22.8 | 23.2 | 23.1 | 23.4 | 23.3 | 23.6 | 23.6 | 22.6 | 24.0 | 23.3 |
| Aug 10 | 23.8 | 23.6 | 23.6 | 23.6 | 23.6 | 23.3 | 22.8 | 23.1 | 23.8 | 23.4 | 23.1 | 23.0 | 23.0 | 22.9 | 22.8 | 22.7 | 23.1 | 23.2 | 23.3 | 23.3 | 23.6 | 23.6 | 23.8 | 23.9 | 22.7 | 23.9 | 23.3 |
| Aug 11 | 23.8 | 23.9 | 23.8 | 23.8 | 23.8 | 23.6 | 23.7 | 23.7 | 23.7 | 23.3 | 23.1 | 23.0 | 22.8 | 22.7 | 22.6 | 22.5 | 22.4 | 22.6 | 22.6 | 22.8 | 23.3 | 23.6 | 23.6 | 23.8 | 22.4 | 23.9 | 23.3 |
| Aug 12 | 23.8 | 23.6 | 23.7 | 23.8 | 23.8 | 23.9 | 23.9 | 23.8 | 23.3 | 23.2 | 22.8 | 22.4 | 22.0 | 21.7 | 21.9 | 22.2 | 22.3 | 22.6 | 22.5 | 22.7 | 23.0 | 23.5 | 23.7 | 23.9 | 21.7 | 23.9 | 23.1 |
| Aug 13 | 23.7 | **24.1** | 24.0 | 23.8 | 23.6 | 23.4 | 23.5 | 23.9 | 23.5 | 23.2 | 22.8 | 22.6 | 22.1 | 21.9 | 21.9 | 21.8 | 21.5 | 22.0 | 22.0 | 22.5 | 22.8 | 23.1 | 23.4 | 23.4 | 21.5 | **24.1** | 22.9 |
| Aug 14 | 23.4 | 23.2 | 23.4 | 23.3 | 23.4 | 23.5 | 23.6 | 23.5 | 23.2 | 23.0 | 23.1 | 23.0 | 23.1 | 23.1 | 23.1 | 22.9 | 22.8 | 22.9 | 22.5 | 22.6 | 23.0 | 23.7 | 23.9 | 23.7 | 22.5 | 23.9 | 23.2 |
| Aug 15 | 23.4 | 23.2 | 23.1 | 23.1 | 23.3 | 23.7 | 23.7 | 23.8 | 23.5 | 23.6 | 23.5 | 23.4 | 23.2 | 23.0 | 22.8 | 22.6 | 22.8 | 22.5 | 22.7 | 22.9 | 23.0 | 23.4 | 23.7 | 23.6 | 22.5 | 23.8 | 23.2 |
| Aug 16 | 23.4 | 23.6 | 23.7 | 23.4 | 23.0 | 22.4 | 22.2 | 22.5 | 23.5 | 23.5 | 23.4 | 23.6 | 23.4 | 23.5 | 23.4 | 23.3 | 23.2 | 23.2 | 23.2 | 23.4 | 23.4 | 23.3 | 22.5 | 21.8 | 21.8 | 23.7 | 23.2 |
| Aug 17 | 21.9 | 21.9 | 22.0 | 22.0 | 22.1 | 22.1 | 22.1 | 22.0 | 23.3 | 23.8 | 23.2 | 23.0 | 22.8 | 22.6 | 22.6 | 22.5 | 22.5 | 22.8 | 22.9 | 23.1 | 23.4 | 23.7 | 23.4 | 23.1 | 21.9 | 23.8 | 22.7 |
| Aug 18 | 22.8 | 22.6 | 22.7 | 22.9 | 22.9 | 22.6 | 22.6 | 23.0 | 23.6 | 23.4 | 23.5 | 23.4 | 23.5 | 23.4 | 23.3 | 23.3 | 23.4 | 23.5 | 23.7 | 23.8 | 23.8 | 23.9 | 23.7 | 23.9 | 22.6 | 23.9 | 23.3 |
| Aug 19 | 24.0 | 23.9 | 23.4 | 22.7 | 22.2 | 21.7 | 21.8 | 22.1 | 23.6 | 23.8 | 23.2 | 22.7 | 22.6 | 22.5 | 22.8 | 22.9 | 22.9 | 22.9 | 23.5 | 23.3 | 23.5 | 23.1 | 22.8 | 22.3 | 21.7 | 24.0 | 22.9 |
| Aug 20 | 21.7 | 21.7 | 22.0 | 21.8 | 22.1 | 21.8 | 21.8 | 22.0 | 22.5 | 23.6 | 23.4 | 23.0 | 22.8 | 22.6 | 22.4 | 22.3 | 22.8 | 22.8 | 23.0 | 23.2 | 23.6 | 22.7 | 21.8 | 21.8 | 21.7 | 23.6 | 22.5 |
| Aug 21 | 21.7 | 21.9 | 22.0 | 21.9 | 22.1 | 21.8 | 21.9 | 21.9 | 22.6 | 23.7 | 23.5 | 23.4 | 23.1 | 23.0 | 23.0 | 23.3 | 23.5 | 23.7 | 23.5 | 23.9 | **24.1** | 23.9 | 23.8 | 23.9 | 21.7 | **24.1** | 23.0 |
| Aug 22 | 23.8 | 23.5 | 22.9 | 22.4 | 22.0 | 21.5 | 21.6 | 21.6 | 21.6 | 21.7 | 21.6 | 21.7 | 21.8 | 21.7 | 21.6 | 21.4 | 21.4 | 21.5 | 21.6 | 21.5 | 21.5 | 21.5 | 21.5 | 21.5 | 21.4 | 23.8 | 21.9 |
| Aug 23 | 21.5 | 21.5 | 21.5 | 21.5 | 21.8 | 21.7 | 21.7 | 22.0 | 23.1 | 23.8 | 23.4 | 22.9 | 22.7 | 22.7 | 22.8 | 23.0 | 23.3 | 23.4 | 23.4 | 23.6 | 23.7 | 22.7 | 21.8 | 21.8 | 21.5 | 23.8 | 22.6 |
| Aug 24 | 21.9 | 21.8 | 22.1 | 21.9 | 21.8 | 21.7 | 21.9 | 21.8 | 21.9 | 22.6 | 23.8 | 23.2 | 23.0 | 22.8 | 22.7 | 22.5 | 22.3 | 22.5 | 22.7 | 23.2 | 23.3 | 23.8 | 23.8 | 23.6 | 21.7 | 23.8 | 22.6 |
| Aug 25 | 23.4 | 22.9 | 22.2 | 21.7 | 21.6 | 21.7 | 21.7 | 22.1 | 23.8 | 23.6 | 23.2 | 22.9 | 22.7 | 22.4 | 22.3 | 22.3 | 22.1 | 22.2 | 22.5 | 22.9 | 23.3 | 23.6 | 23.5 | 23.4 | 21.6 | 23.8 | 22.7 |
| Aug 26 | 23.1 | 22.8 | 22.6 | 22.4 | 22.3 | 21.7 | 21.9 | 22.5 | 23.9 | 23.5 | 23.2 | 22.6 | 22.4 | 22.2 | 22.1 | 21.9 | 21.9 | 22.4 | 23.2 | 23.2 | 23.6 | 23.8 | 23.9 | 24.0 | 21.7 | 24.0 | 22.8 |
| Aug 27 | 23.9 | 23.8 | 23.4 | 23.0 | 22.4 | 22.0 | 21.8 | 22.1 | 23.5 | 23.6 | 23.2 | 22.9 | 22.7 | 22.7 | 22.9 | 22.9 | 23.0 | 22.6 | 23.1 | 23.4 | 23.6 | 23.7 | 23.3 | 22.8 | 21.8 | 23.9 | 23.0 |
| Aug 28 | 22.3 | 21.9 | 21.5 | 21.6 | 21.6 | 21.8 | 21.8 | 22.1 | 23.3 | 23.9 | 23.3 | 23.1 | 22.8 | 22.9 | 22.7 | 22.9 | 22.9 | 23.2 | 23.2 | 23.4 | 23.4 | 23.9 | 23.7 | 24.0 | 21.5 | 24.0 | 22.8 |
| Aug 29 | **24.1** | 23.9 | 23.4 | 23.1 | 22.8 | 22.5 | 22.2 | 22.5 | 23.4 | 23.6 | 23.3 | 23.0 | 22.9 | 22.8 | 22.8 | 22.9 | 22.7 | 23.0 | 23.2 | 23.5 | 23.6 | 23.4 | 22.7 | 21.8 | 21.8 | **24.1** | 23.0 |
| Aug 30 | 21.9 | 22.1 | 22.1 | 22.1 | 22.3 | 22.3 | 22.2 | 22.3 | 22.0 | 22.6 | 23.8 | 23.3 | 23.0 | 23.1 | 23.4 | 23.5 | 23.5 | 23.5 | 23.9 | 23.7 | 23.5 | 23.4 | 23.1 | 22.9 | 21.9 | 23.9 | 22.9 |
| Aug 31 | 22.7 | 22.5 | 22.4 | 22.2 | 22.0 | 21.8 | 21.6 | 21.5 | 21.4 | 21.6 | 22.0 | 22.6 | 23.5 | 23.6 | 23.6 | 23.5 | 23.0 | 23.2 | 23.4 | 23.6 | 23.4 | 23.0 | 22.7 | 22.6 | 21.4 | 23.6 | 22.6 |
| Diurnal Maximum | 24.1 | 24.1 | 24.0 | 23.9 | 23.8 | 24.0 | 23.9 | 23.9 | 23.9 | 23.9 | 23.8 | 23.6 | 23.5 | 23.6 | 23.6 | 23.5 | 23.5 | 23.7 | 23.9 | 23.9 | 24.1 | 23.9 | 23.9 | 24.0 | | | |
| Diurnal Average | 23.1 | 23.0 | 22.9 | 22.8 | 22.8 | 22.6 | 22.6 | 22.7 | 23.1 | 23.2 | 23.0 | 22.8 | 22.6 | 22.5 | 22.5 | 22.5 | 22.5 | 22.7 | 22.8 | 23.0 | 23.2 | 23.4 | 23.3 | 23.2 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for ST - 842b Station*



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# *PEACE RIVER AREA MONITORING PROGRAM*

## *842b Station - August 2021*

## Summary of Hourly Averages

## PRECIPITATION in mm

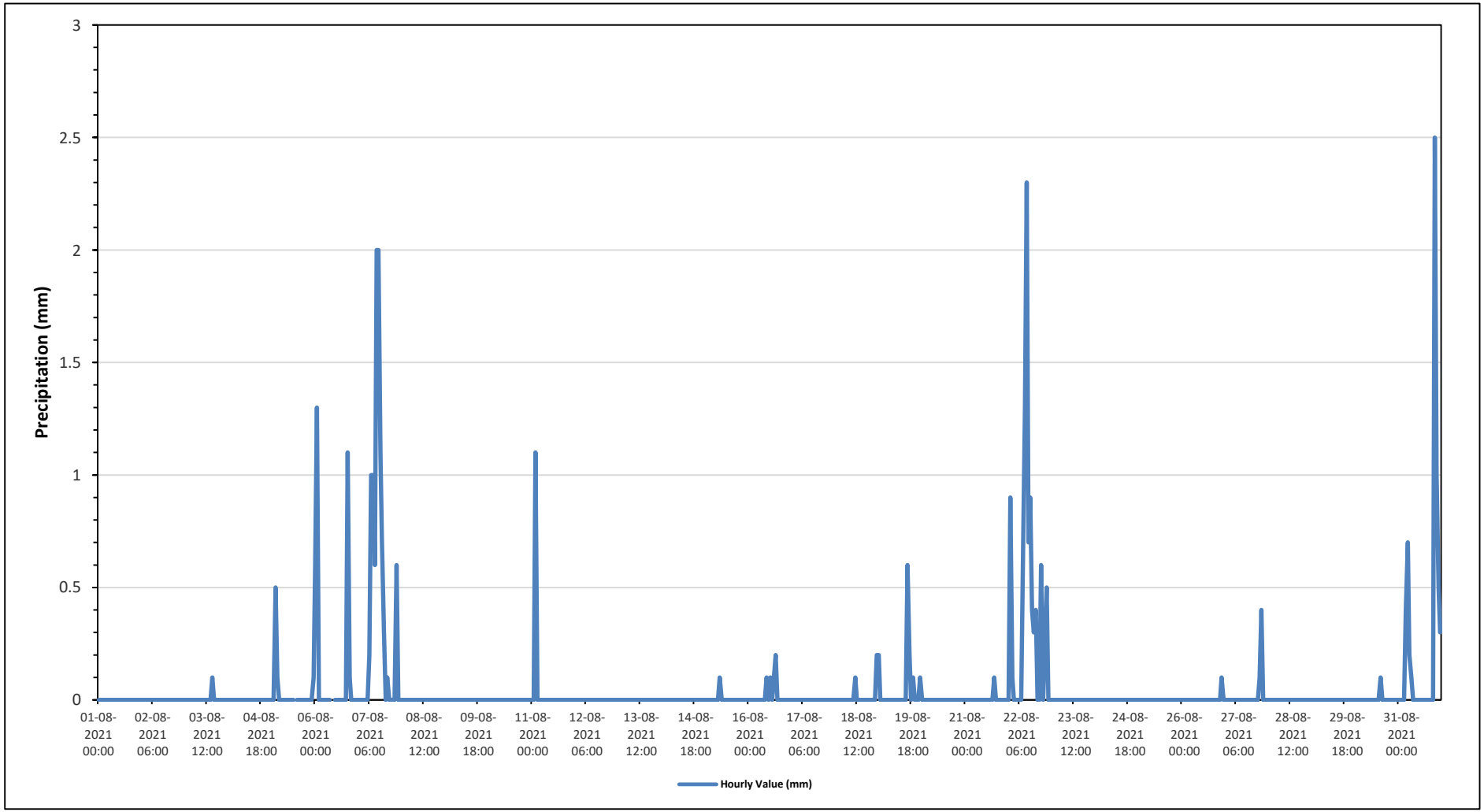
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.5 | mm | on August 31 at hour 20 | Hours in Service: | 744 |
| Maximum Daily Value: | 9.6 | mm | on August 7 | Hours of Data: | 741 |
| Minimum Hourly Value: | 0.0 | mm | on August 1 at hour 0 | Hours of Missing Data: | 1 |
| Minimum Daily Value: | 0.0 | mm | on August 1 | Hours of Calibration: | 2 |
| Monthly Total: | 32.5 | mm | | Operational Uptime: | 99.9 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Total |
| Aug 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 3 | 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 | 0.1 | 0.1 |
| Aug 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 |
| Aug 5 | 0 | 0 | 0.5 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.0 | 0.5 | 0.7 |
| Aug 6 | 0.6 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.1 | 0.1 | 0 | 0 | 0 | 0 | 0.0 | 1.3 | 3.1 |
| Aug 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 1 | 1 | 0.6 | 2 | 2 | 1.1 | 0.7 | 0.3 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0.6 | 0 | 0 | 0.0 | 2.0 | **9.6** |
| Aug 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 |
| Aug 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 |
| Aug 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 |
| Aug 11 | 0 | 0 | 1.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 1.1 | 1.1 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 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 |
| Aug 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 |
| Aug 15 | 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 | 0.1 | 0.1 |
| Aug 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 | 0.5 |
| Aug 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.0 | 0.2 | 0.3 |
| Aug 19 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.2 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0.0 | 0.6 | 1.2 |
| Aug 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 |
| Aug 21 | 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 | 0.1 | 0.1 |
| Aug 22 | 0 | 0.9 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0.7 | 1.3 | 2.3 | 0.7 | 0.9 | 0.4 | 0.3 | 0.4 | 0 | 0 | 0.6 | 0 | 0.2 | 0.5 | 0 | 0 | 0.0 | 2.3 | 9.3 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 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 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0.0 | 0.1 | 0.1 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.4 | 0 | 0 | 0 | 0.0 | 0.4 | 0.5 |
| Aug 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 |
| Aug 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 |
| Aug 30 | 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 | 0.1 | 0.1 |
| Aug 31 | 0 | 0 | 0 | 0 | 0.4 | 0.7 | 0.2 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **2.5** | 1 | 0.5 | 0.3 | 0.0 | **2.5** | 5.7 |
| Diurnal Maximum | 0.6 | 1.3 | 1.1 | 0.1 | 0.4 | 0.7 | 0.2 | 1.0 | 1.0 | 1.3 | 2.3 | 2.0 | 1.1 | 0.7 | 0.3 | 0.4 | 0.6 | 0.2 | 1.1 | 0.1 | 2.5 | 1.0 | 0.5 | 0.3 | | | |
| Diurnal Average | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for Precipitation - 842b Station*



peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## 842b Station - August 2021

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr

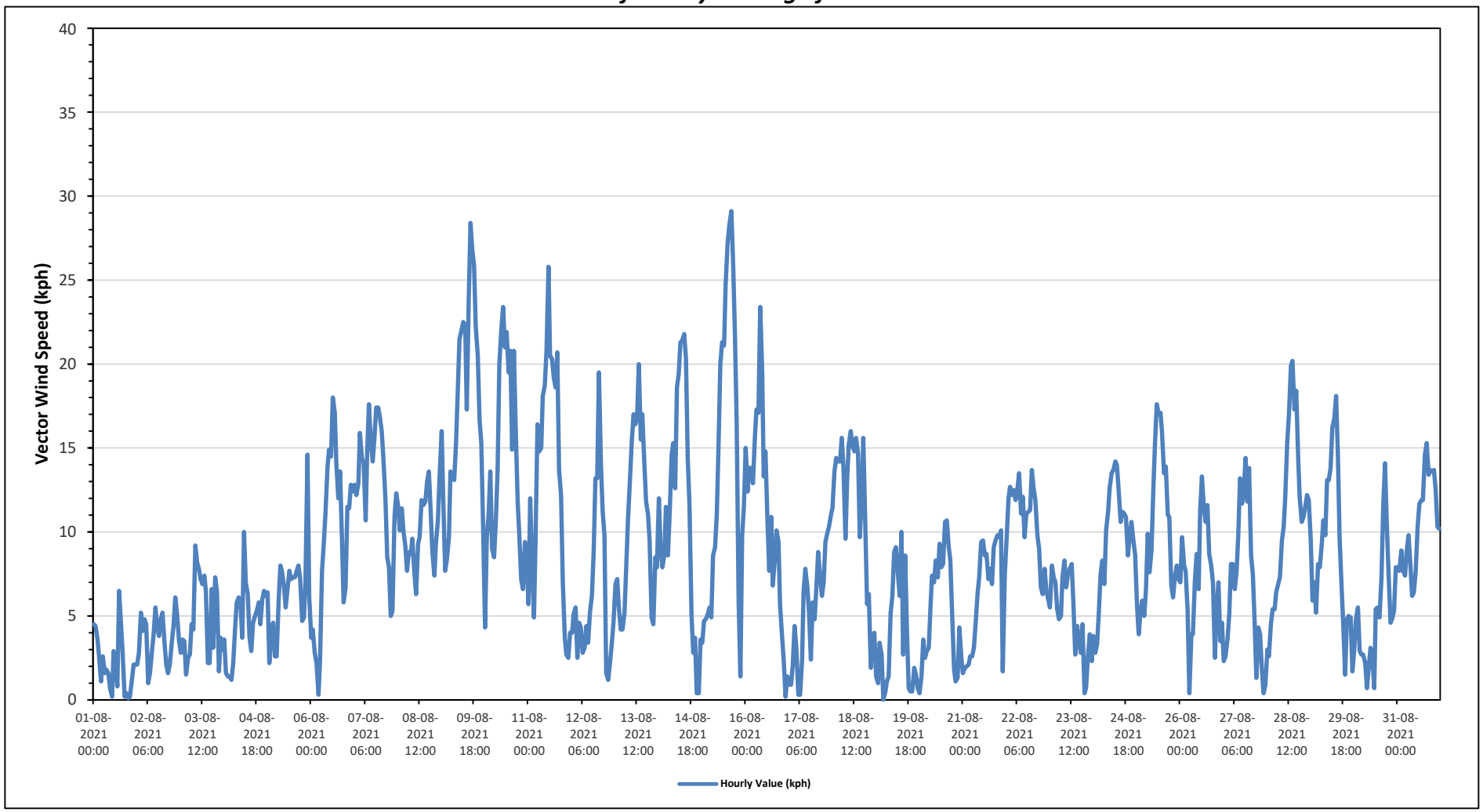
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 29.1 | kph | on August 15 at hour 16 | Hours in Service: | 744 |
| Maximum Daily Value: | 14.4 | kph | on August 9 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 19 at hour 4 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.8 | kph | on August 1 | Hours of Calibration: | 0 |
| Monthly Average: | 3.2 | kph | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 4.5 | 4.4 | 3.6 | 2.6 | 1.1 | 2.6 | 1.6 | 1.8 | 1.6 | 0.7 | 0.2 | 2.9 | 2.0 | 0.8 | 6.5 | 4.4 | 2.8 | 0.2 | 0.4 | 0.1 | 0.2 | 1.2 | 2.1 | 2.1 | 0.1 | 6.5 | **1.8** |
| Aug 2 | 2.1 | 2.8 | 5.2 | 4.1 | 4.8 | 4.5 | 1.0 | 1.6 | 2.9 | 3.8 | 5.5 | 4.3 | 3.8 | 4.8 | 5.2 | 3.4 | 2.1 | 1.6 | 2.1 | 3.4 | 4.4 | 6.1 | 5.1 | 3.5 | 1.0 | 6.1 | 2.8 |
| Aug 3 | 2.8 | 3.6 | 3.5 | 1.5 | 2.5 | 2.7 | 4.5 | 4.2 | 9.2 | 8.2 | 7.8 | 7.2 | 6.9 | 7.4 | 6.5 | 2.2 | 2.2 | 6.6 | 3.1 | 7.3 | 6.5 | 1.7 | 3.7 | 3.0 | 1.5 | 9.2 | 2.8 |
| Aug 4 | 3.6 | 1.6 | 1.4 | 1.4 | 1.2 | 2.2 | 4.4 | 5.8 | 6.1 | 5.7 | 3.7 | 10.0 | 7.0 | 6.3 | 3.7 | 2.9 | 4.6 | 5.0 | 5.3 | 5.8 | 4.5 | 6.0 | 6.5 | 6.2 | 1.2 | 10.0 | 3.0 |
| Aug 5 | 6.4 | 2.2 | 4.1 | 4.6 | 2.6 | 2.6 | 5.9 | 8.0 | 7.6 | 6.8 | 5.5 | 6.7 | 7.7 | 7.2 | 7.3 | 7.3 | 7.7 | 8.0 | 7.2 | 4.7 | 4.9 | 7.1 | 14.6 | 6.1 | 2.2 | 14.6 | 4.0 |
| Aug 6 | 3.7 | 4.2 | 2.8 | 2.2 | 0.3 | 2.3 | 7.7 | 9.3 | 11.2 | 13.9 | 14.9 | 14.5 | 18.0 | 17.1 | 14.1 | 12.0 | 13.6 | 9.3 | 5.8 | 6.7 | 11.5 | 11.4 | 12.8 | 12.4 | 0.3 | 18.0 | 8.4 |
| Aug 7 | 12.8 | 12.2 | 12.9 | 15.9 | 14.4 | 14.1 | 10.7 | 14.8 | 17.6 | 15.3 | 14.2 | 15.6 | 17.4 | 17.4 | 16.8 | 16.0 | 14.3 | 11.9 | 8.5 | 7.9 | 5.0 | 5.3 | 10.9 | 12.3 | 5.0 | 17.6 | 11.2 |
| Aug 8 | 11.6 | 10.1 | 11.4 | 10.0 | 9.2 | 7.7 | 8.8 | 8.7 | 9.6 | 7.6 | 6.3 | 9.3 | 9.7 | 11.9 | 11.6 | 11.8 | 13.0 | 13.6 | 11.3 | 8.8 | 7.4 | 9.3 | 10.7 | 13.4 | 6.3 | 13.6 | 4.5 |
| Aug 9 | 16.0 | 12.1 | 7.7 | 8.4 | 9.7 | 13.6 | 13.2 | 13.1 | 15.2 | 18.3 | 21.5 | 22.0 | 22.5 | 22.3 | 17.3 | 23.9 | 28.4 | 26.8 | 25.9 | 22.2 | 20.5 | 16.7 | 15.3 | 10.5 | 7.7 | 28.4 | **14.4** |
| Aug 10 | 4.3 | 9.7 | 11.0 | 13.6 | 9.0 | 8.5 | 10.7 | 13.7 | 20.0 | 22.1 | 23.4 | 21.0 | 21.9 | 19.5 | 20.8 | 14.9 | 20.8 | 16.3 | 11.8 | 10.0 | 7.2 | 6.6 | 9.4 | 8.2 | 4.3 | 23.4 | 13.3 |
| Aug 11 | 5.7 | 12.0 | 7.9 | 4.9 | 9.3 | 16.4 | 14.8 | 15.0 | 18.1 | 18.7 | 20.8 | 25.8 | 20.5 | 20.3 | 19.2 | 18.6 | 20.7 | 13.7 | 12.2 | 7.0 | 3.7 | 2.7 | 2.5 | 4.0 | 2.5 | 25.8 | 12.0 |
| Aug 12 | 4.0 | 5.1 | 5.5 | 2.5 | 4.6 | 4.3 | 2.8 | 3.1 | 4.4 | 3.4 | 5.2 | 6.2 | 8.8 | 13.2 | 13.2 | 19.5 | 14.0 | 11.2 | 9.8 | 1.6 | 1.2 | 2.2 | 3.3 | 4.6 | 1.2 | 19.5 | 3.0 |
| Aug 13 | 6.9 | 7.2 | 5.6 | 4.2 | 4.2 | 5.2 | 7.6 | 10.8 | 12.9 | 15.4 | 17.0 | 16.4 | 16.8 | 20.0 | 15.5 | 17.0 | 14.1 | 11.8 | 11.0 | 9.5 | 4.9 | 4.5 | 8.5 | 7.9 | 4.2 | 20.0 | 8.0 |
| Aug 14 | 12.0 | 9.0 | 7.9 | 8.7 | 11.5 | 8.6 | 11.1 | 14.6 | 15.3 | 12.6 | 18.6 | 19.4 | 21.3 | 21.4 | 21.8 | 20.3 | 14.4 | 11.6 | 5.1 | 2.8 | 3.7 | 0.4 | 0.4 | 3.6 | 0.4 | 21.8 | 10.1 |
| Aug 15 | 3.4 | 4.7 | 4.8 | 5.1 | 5.5 | 4.9 | 8.6 | 9.1 | 11.1 | 15.3 | 20.0 | 21.3 | 21.1 | 24.7 | 27.2 | 28.3 | **29.1** | 26.0 | 21.9 | 16.7 | 5.8 | 1.4 | 9.8 | 11.5 | 1.4 | **29.1** | 12.1 |
| Aug 16 | 15.0 | 12.4 | 13.8 | 13.8 | 12.9 | 15.7 | 17.3 | 17.1 | 23.4 | 19.5 | 13.3 | 14.8 | 10.6 | 7.7 | 10.9 | 6.8 | 8.3 | 10.1 | 9.4 | 5.7 | 3.8 | 2.3 | 0.2 | 1.4 | 0.2 | 23.4 | 9.3 |
| Aug 17 | 0.9 | 0.9 | 2.1 | 4.4 | 3.1 | 0.3 | 0.3 | 2.4 | 6.5 | 7.8 | 6.7 | 5.1 | 2.4 | 5.8 | 4.8 | 6.7 | 8.8 | 7.5 | 6.2 | 7.0 | 9.4 | 9.9 | 10.3 | 11.0 | 0.3 | 11.0 | 2.6 |
| Aug 18 | 11.4 | 13.6 | 14.4 | 14.2 | 14.2 | 15.6 | 13.8 | 9.6 | 13.3 | 15.2 | 16.0 | 15.1 | 14.8 | 15.6 | 14.7 | 9.7 | 12.0 | 15.6 | 10.4 | 5.7 | 6.3 | 1.9 | 3.7 | 4.0 | 1.9 | 16.0 | 10.4 |
| Aug 19 | 1.4 | 1.0 | 3.4 | 2.7 | **0.0** | 0.5 | 1.1 | 1.4 | 5.2 | 6.2 | 8.8 | 9.1 | 7.5 | 6.2 | 10.0 | 2.7 | 8.6 | 4.1 | 0.7 | 0.5 | 0.5 | 1.9 | 1.5 | 0.7 | **0.0** | 10.0 | 2.9 |
| Aug 20 | 0.4 | 1.4 | 3.6 | 2.5 | 2.9 | 3.1 | 5.6 | 7.4 | 7.0 | 8.3 | 7.3 | 9.3 | 7.9 | 8.1 | 10.6 | 10.7 | 9.2 | 8.3 | 5.2 | 1.8 | 1.1 | 1.3 | 4.3 | 2.5 | 0.4 | 10.7 | 5.0 |
| Aug 21 | 1.6 | 1.9 | 2.0 | 2.1 | 2.6 | 2.6 | 3.1 | 4.6 | 6.4 | 7.3 | 9.4 | 9.5 | 8.6 | 8.7 | 7.2 | 7.8 | 6.9 | 9.1 | 9.5 | 9.8 | 9.7 | 10.1 | 1.7 | 7.4 | 1.6 | 10.1 | 6.0 |
| Aug 22 | 9.5 | 12.0 | 12.7 | 12.2 | 12.5 | 11.9 | 12.5 | 13.5 | 11.1 | 12.1 | 9.7 | 11.1 | 11.2 | 11.3 | 13.7 | 12.6 | 11.9 | 9.8 | 9.0 | 6.7 | 6.3 | 7.8 | 6.5 | 6.0 | 6.0 | 13.7 | 10.3 |
| Aug 23 | 5.5 | 8.0 | 7.3 | 7.0 | 5.4 | 4.8 | 5.0 | 7.3 | 8.3 | 6.7 | 7.6 | 7.8 | 8.1 | 5.6 | 2.7 | 4.4 | 3.5 | 2.8 | 4.5 | 0.4 | 0.7 | 2.7 | 3.9 | 2.3 | 0.4 | 8.3 | 3.7 |
| Aug 24 | 3.8 | 2.8 | 3.3 | 5.2 | 7.5 | 8.3 | 6.9 | 10.1 | 11.2 | 12.6 | 13.5 | 13.7 | 14.2 | 14.0 | 12.5 | 10.6 | 11.2 | 11.1 | 10.9 | 8.6 | 9.7 | 10.6 | 9.6 | 8.6 | 2.8 | 14.2 | 8.6 |
| Aug 25 | 5.7 | 3.9 | 5.2 | 5.9 | 5.0 | 6.6 | 9.9 | 7.6 | 8.9 | 12.4 | 15.3 | 17.6 | 17.0 | 17.1 | 15.9 | 13.5 | 13.9 | 11.0 | 10.9 | 6.8 | 6.1 | 7.4 | 8.0 | 7.2 | 3.9 | 17.6 | 8.5 |
| Aug 26 | 7.0 | 9.7 | 8.0 | 7.7 | 5.3 | 0.4 | 3.9 | 3.9 | 7.1 | 8.7 | 6.6 | 11.3 | 13.3 | 11.4 | 10.6 | 11.6 | 8.7 | 8.0 | 7.0 | 2.5 | 5.3 | 7.0 | 3.5 | 4.6 | 0.4 | 13.3 | 5.3 |
| Aug 27 | 2.3 | 2.6 | 3.6 | 5.1 | 8.1 | 8.1 | 6.6 | 7.6 | 9.8 | 13.2 | 11.7 | 12.5 | 14.4 | 11.8 | 13.8 | 8.6 | 7.5 | 4.7 | 1.3 | 4.3 | 3.9 | 1.8 | 0.4 | 0.9 | 0.4 | 14.4 | 4.5 |
| Aug 28 | 3.0 | 2.6 | 4.5 | 5.4 | 5.4 | 6.4 | 6.9 | 7.3 | 9.5 | 10.3 | 12.0 | 15.3 | 17.0 | 19.9 | 20.2 | 17.3 | 18.4 | 14.3 | 12.0 | 10.6 | 10.9 | 11.5 | 12.2 | 11.9 | 2.6 | 20.2 | 9.7 |
| Aug 29 | 9.5 | 5.9 | 7.0 | 5.2 | 8.1 | 7.9 | 9.3 | 10.7 | 9.8 | 13.1 | 13.1 | 13.8 | 16.2 | 16.8 | 18.1 | 14.7 | 9.6 | 6.7 | 4.3 | 1.5 | 4.8 | 5.0 | 4.9 | 1.7 | 1.5 | 18.1 | 7.7 |
| Aug 30 | 2.9 | 4.8 | 5.5 | 2.9 | 2.7 | 2.7 | 2.2 | 0.7 | 1.9 | 3.1 | 2.7 | 0.7 | 5.4 | 5.5 | 4.9 | 7.3 | 11.6 | 14.1 | 10.5 | 7.6 | 4.6 | 4.8 | 5.3 | 7.9 | 0.7 | 14.1 | 2.4 |
| Aug 31 | 7.9 | 7.7 | 8.9 | 7.7 | 7.4 | 8.8 | 9.8 | 8.1 | 6.2 | 6.4 | 7.6 | 10.3 | 11.7 | 11.9 | 11.9 | 14.6 | 15.3 | 13.4 | 13.7 | 13.6 | 13.7 | 12.5 | 10.3 | 10.2 | 6.2 | 15.3 | 10.3 |
| Diurnal Maximum | 16 | 14 | 14 | 16 | 14 | 16 | 17 | 17 | 23 | 22 | 23 | 26 | 23 | 25 | 27 | 28 | 29 | 27 | 26 | 22 | 21 | 17 | 15 | 13 | | | |
| Diurnal Average | 6.1 | 6.2 | 6.5 | 6.2 | 6.2 | 6.6 | 7.3 | 8.2 | 9.9 | 10.7 | 11.2 | 12.2 | 12.4 | 12.6 | 12.6 | 11.7 | 11.8 | 10.5 | 8.6 | 6.7 | 6.1 | 5.8 | 6.5 | 6.4 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

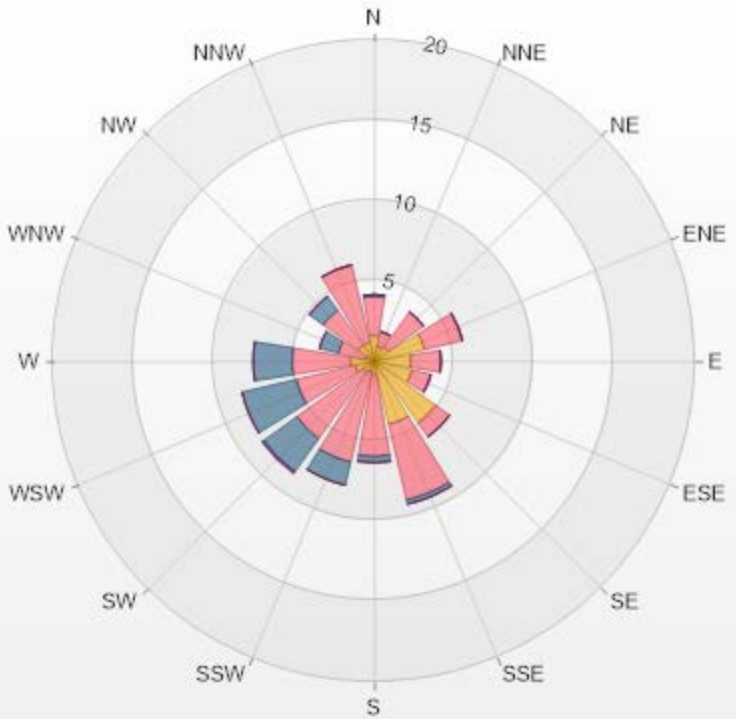
## *Timeseries Chart of Hourly Average for VWS - 842b Station*



Wind: PRAMP 842b Monitor: WDS [KPH] Monthly: 08-2021 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 8.33% Valid Data: 100.00%

| Direction | 1.8-6.0 | 6.0-15.0 | 15.0-29.0 | 29.0-39.0 | >39.0 | Total |
|---|---|---|---|---|---|---|
| N | 1.61 | 2.42 | 0.13 | 0 | 0 | 4.16 |
| NNE | 0.94 | 0.94 | 0 | 0 | 0 | 1.88 |
| NE | 1.08 | 2.69 | 0 | 0 | 0 | 3.77 |
| ENE | 3.23 | 2.42 | 0 | 0 | 0 | 5.65 |
| E | 2.28 | 1.88 | 0 | 0 | 0 | 4.16 |
| ESE | 2.42 | 1.21 | 0 | 0 | 0 | 3.63 |
| SE | 4.7 | 1.08 | 0 | 0 | 0 | 5.78 |
| SSE | 4.03 | 4.84 | 0.27 | 0 | 0 | 9.14 |
| S | 0.81 | 5.11 | 0.4 | 0 | 0 | 6.32 |
| SSW | 0.67 | 5.78 | 1.48 | 0 | 0 | 7.93 |
| SW | 0.81 | 5.11 | 2.55 | 0.13 | 0 | 8.6 |
| WSW | 1.21 | 3.76 | 3.49 | 0 | 0 | 8.46 |
| W | 1.48 | 3.63 | 2.42 | 0 | 0 | 7.53 |
| WNW | 0.54 | 1.75 | 1.21 | 0 | 0 | 3.5 |
| NW | 1.21 | 2.69 | 1.08 | 0 | 0 | 4.98 |
| NNW | 1.21 | 4.97 | 0 | 0 | 0 | 6.18 |
| Summary | 28.23 | 50.28 | 13.03 | 0.13 | 0 | 91.67 |

PRAMP 842b 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 8.33% Calm Wind Avg Speed: 0.99(KPH)




| % Icon Classes (KPH) | 28 1.8-6.0 | 50 6.0-15.0 | 13 15.0-29.0 | 0 29.0-39.0 | 0 >39.0 |
|---|---|---|---|---|---|

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *842b Station - August 2021*

## Summary of Hourly Averages

## WIND DIRECTION (VWD) in sector

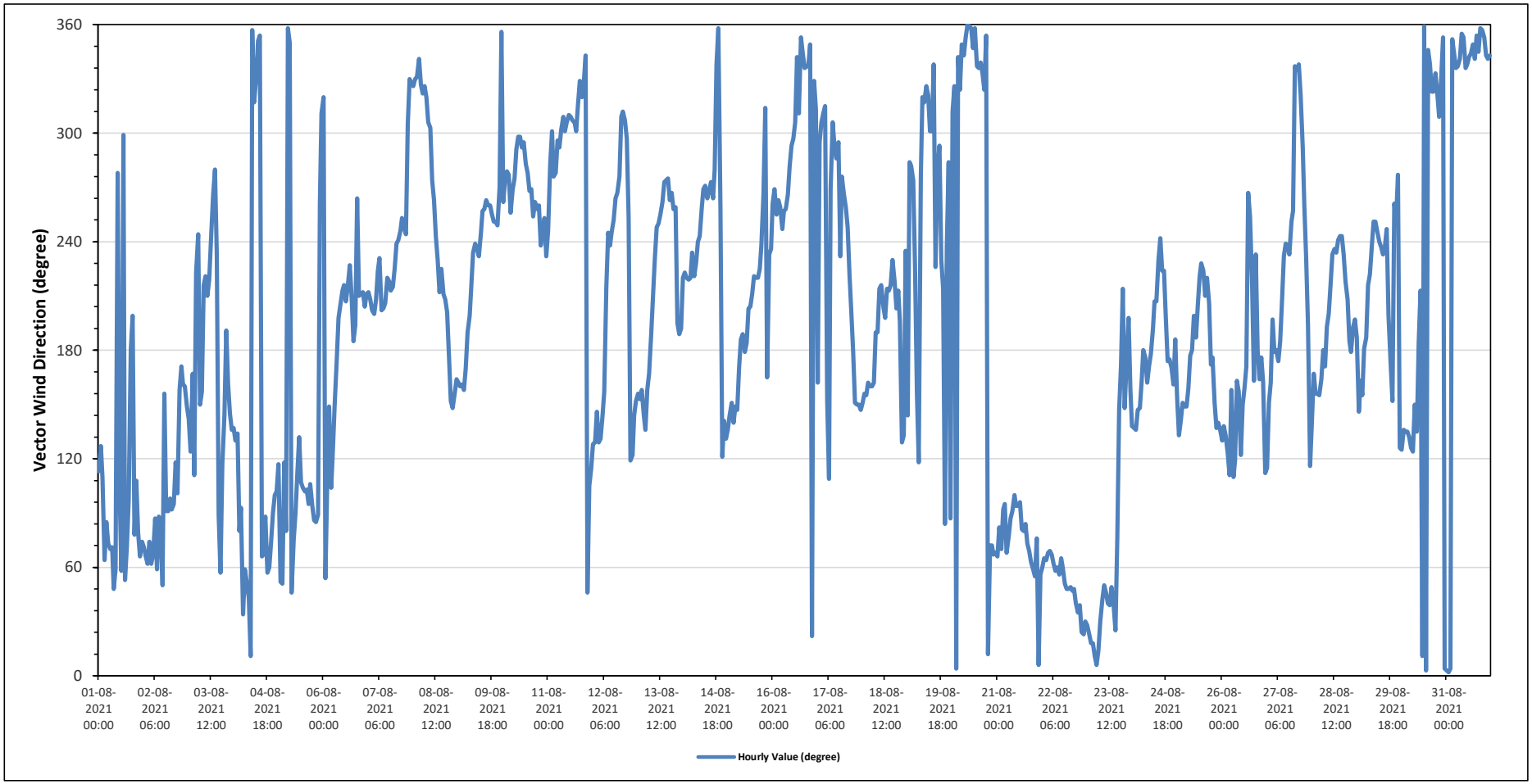
| | | | |
|---|---|---|---|
| Monthly Average: | 237 (SW) | degree | |
| Hours in Service: | 744 | | |
| Hours of Data: | 744 | | |
| Hours of Missing Data: | 0 | | |
| Hours of Calibration: | 0 | | |
| Operational Uptime: | 100.0 | | |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Degree | Quadrant |
| Aug 1 | ESE | SE | ESE | ENE | E | ENE | ENE | ENE | NE | ENE | W | ESE | ENE | WNW | NE | ENE | E | S | SSW | ENE | ESE | ENE | ENE | ENE | 82 | E |
| Aug 2 | ENE | ENE | ENE | ENE | ENE | ENE | E | ENE | E | E | NE | SSE | E | E | E | E | E | ESE | E | SSE | S | SSE | SSE | SSE | 101 | E |
| Aug 3 | SE | ESE | SSE | ESE | SW | WSW | SSE | SSE | SW | SW | SSW | SW | WSW | W | W | SW | E | ENE | ESE | SE | S | SSE | SE | SE | 194 | SSW |
| Aug 4 | SE | SE | SE | E | E | NE | ENE | NE | NE | NNE | N | NW | NNW | N | N | ENE | ENE | E | ENE | ENE | ENE | E | E | E | 49 | NE |
| Aug 5 | ESE | NE | NE | ESE | E | N | N | NE | ENE | E | ESE | SE | ESE | ESE | E | ESE | E | ESE | E | E | E | E | W | NW | 89 | E |
| Aug 6 | NW | NE | ESE | SSE | ESE | ESE | SSE | S | SSW | SSW | SSW | SW | SSW | SSW | SW | SSW | S | SSW | W | SSW | SSW | SSW | SSW | SSW | 205 | SSW |
| Aug 7 | SSW | SSW | SSW | SSW | SSW | SW | SW | SSW | SSW | SSW | SW | SW | SSW | SSW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | NNW | NW | 225 | SW |
| Aug 8 | NW | NNW | NNW | NNW | NW | NW | NW | NW | NW | WNW | W | W | WSW | SW | SSW | SW | SSW | SSW | SSW | S | SSE | SE | SSE | SSE | 251 | WSW |
| Aug 9 | SSE | SSE | SSE | SSE | SSE | S | SSW | SSW | SW | WSW | SW | SW | WSW | WSW | WSW | W | WSW | WSW | WSW | WSW | WSW | WSW | W | N | 239 | WSW |
| Aug 10 | W | W | W | W | WSW | W | W | WNW | WNW | WNW | WNW | WNW | W | W | W | W | WSW | W | WSW | WSW | SW | WSW | WSW | SW | 274 | W |
| Aug 11 | WSW | W | WNW | W | W | WNW | WNW | WNW | NW | WNW | NW | NW | NW | NW | NW | WNW | NW | NNW | NW | NNW | NNW | NE | ESE | ESE | 306 | NW |
| Aug 12 | SE | SE | SE | SE | SE | SE | SSE | SSW | WSW | SW | WSW | WSW | W | W | W | NW | NW | NW | WNW | WSW | ESE | ESE | SE | SSE | 264 | W |
| Aug 13 | SSE | SSE | SSE | SE | SE | SSE | SSE | S | SSW | SW | WSW | WSW | WSW | W | W | W | W | W | W | WSW | WSW | SSW | S | S | 235 | SW |
| Aug 14 | SW | SW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | W | W | W | W | W | W | W | NNW | N | WSW | ESE | SE | SE | 252 | WSW |
| Aug 15 | SE | SE | SSE | SE | SSE | SE | SSE | S | S | S | S | SSW | SSW | SSW | SW | SW | SW | SW | SW | W | NW | SSE | SW | SW | 210 | SSW |
| Aug 16 | W | W | WSW | W | WSW | WSW | WSW | WSW | W | W | WNW | WNW | NW | NNW | NW | N | NNW | NNW | NNW | NNW | NNW | NNE | NNW | NW | 285 | WNW |
| Aug 17 | SSE | WNW | NW | NW | NW | SSE | ESE | W | NW | WNW | WNW | WNW | SW | W | W | WSW | WSW | SW | SSW | S | SSE | SSE | SSE | SE | 227 | SW |
| Aug 18 | SSE | SSE | SSE | SSE | SSE | SSE | SSE | S | S | SSW | SW | SSW | SSW | SSW | SSW | SW | SW | SW | SSW | SSW | SSW | SE | SE | SW | 191 | S |
| Aug 19 | SE | WNW | W | W | SW | SSE | ESE | W | NW | NW | NW | NW | WNW | WNW | NNW | SW | W | WNW | SW | SSW | E | SW | WNW | E | 304 | WNW |
| Aug 20 | NW | NW | N | NNW | NW | NNW | NNW | N | N | N | N | NNW | N | NNW | NNW | NNW | NNW | NW | N | NNE | ENE | ENE | ENE | ENE | 350 | N |
| Aug 21 | ENE | E | ENE | E | E | ENE | ENE | E | E | E | E | E | E | E | E | E | ENE | ENE | ENE | ENE | NE | ENE | N | NE | 77 | ENE |
| Aug 22 | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | NE | ENE | ENE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NNE | NNE | NNE | 54 | NE |
| Aug 23 | NNE | NNE | NNE | NNE | NNE | N | NNE | NNE | NE | NE | NE | NE | NE | NE | NE | NNE | ENE | SE | S | SSW | SE | S | SSW | SSE | 39 | NE |
| Aug 24 | SE | SE | SE | SE | SE | SSE | S | S | SSE | S | S | S | SSW | SSW | SW | WSW | SW | SW | SSW | S | S | SSE | SSE | S | 187 | S |
| Aug 25 | SSE | SE | SE | SSE | SSE | SSE | SSE | S | S | SSW | S | SSW | SW | SW | SW | SSW | SW | SSW | S | S | SSE | SE | SE | SE | 188 | S |
| Aug 26 | SE | SE | SE | ESE | ESE | SSE | ESE | ESE | SSE | SSE | ESE | SSE | SSE | S | W | WSW | SW | SSE | SW | S | SSE | S | SSE | ESE | 163 | SSE |
| Aug 27 | ESE | SSE | SSE | SSW | S | S | S | S | SSW | SW | WSW | SW | SW | WSW | WSW | NNW | NNW | NNW | NW | WNW | WSW | SW | SSW | ESE | 232 | SW |
| Aug 28 | SE | SSE | SSE | SSE | SSE | SSE | S | S | S | SSW | SW | SW | SW | SW | WSW | WSW | WSW | SW | SW | SSW | S | S | S | SSW | 212 | SSW |
| Aug 29 | S | SE | SSE | SSE | S | S | SW | SW | WSW | WSW | WSW | WSW | WSW | SW | SW | SW | WSW | SSW | S | SSE | W | WSW | W | SE | 225 | SW |
| Aug 30 | SE | SE | SE | SE | SE | SE | ESE | SSE | SE | S | SSW | NNE | N | N | NNW | NNW | NW | NW | NNW | NW | NW | NNW | N | N | 343 | NNW |
| Aug 31 | N | N | N | N | NNW | NNW | NNW | NNW | N | N | NNW | NNW | NNW | NNW | NNW | NNW | N | NNW | N | N | N | NNW | NNW | NNW | 348 | NNW |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure |
| X | InValid Data (Machine Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for VWD - 842b Station*



peace river area monitoring program

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# *PEACE RIVER AREA MONITORING PROGRAM*

## *842b Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 29.1 | kph | on August 15 at hour 16 | Hours in Service: | 744 |
| Maximum Daily Value: | 14.4 | kph | on August 9 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 19 at hour 4 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.8 | kph | on August 1 | Hours of Calibration: | 0 |
| Monthly Average: | 3.2 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 237 (SW) degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 4.5 | 4.4 | 3.6 | 2.6 | 1.1 | 2.6 | 1.6 | 1.8 | 1.6 | 0.7 | 0.2 | 2.9 | 2.0 | 0.8 | 6.5 | 4.4 | 2.8 | 0.2 | 0.4 | 0.1 | 0.2 | 1.2 | 2.1 | 2.1 | 0.1 | 6.5 | **1.8** |
| | ESE | SE | ESE | ENE | E | ENE | ENE | ENE | NE | ENE | W | ESE | ENE | WNW | NE | ENE | E | S | SSW | ENE | ESE | ENE | ENE | ENE | | | |
| Aug 2 | 2.1 | 2.8 | 5.2 | 4.1 | 4.8 | 4.5 | 1.0 | 1.6 | 2.9 | 3.8 | 5.5 | 4.3 | 3.8 | 4.8 | 5.2 | 3.4 | 2.1 | 1.6 | 2.1 | 3.4 | 4.4 | 6.1 | 5.1 | 3.5 | 1.0 | 6.1 | 2.8 |
| | ENE | ENE | ENE | ENE | ENE | ENE | E | ENE | E | E | NE | SSE | E | E | E | E | E | ESE | E | SSE | S | SSE | SSE | SSE | | | |
| Aug 3 | 2.8 | 3.6 | 3.5 | 1.5 | 2.5 | 2.7 | 4.5 | 4.2 | 9.2 | 8.2 | 7.8 | 7.2 | 6.9 | 7.4 | 6.5 | 2.2 | 2.2 | 6.6 | 3.1 | 7.3 | 6.5 | 1.7 | 3.7 | 3.0 | 1.5 | 9.2 | 2.8 |
| | SE | ESE | SSE | ESE | SW | WSW | SSE | SSE | SW | SW | SSW | SW | WSW | W | W | SW | E | ENE | ESE | SE | S | SSE | SE | SE | | | |
| Aug 4 | 3.6 | 1.6 | 1.4 | 1.4 | 1.2 | 2.2 | 4.4 | 5.8 | 6.1 | 5.7 | 3.7 | 10.0 | 7.0 | 6.3 | 3.7 | 2.9 | 4.6 | 5.0 | 5.3 | 5.8 | 4.5 | 6.0 | 6.5 | 6.2 | 1.2 | 10.0 | 3.0 |
| | SE | SE | SE | E | E | NE | ENE | NE | NE | NNE | N | NW | NNW | N | N | ENE | ENE | E | ENE | ENE | ENE | E | E | E | | | |
| Aug 5 | 6.4 | 2.2 | 4.1 | 4.6 | 2.6 | 2.6 | 5.9 | 8.0 | 7.6 | 6.8 | 5.5 | 6.7 | 7.7 | 7.2 | 7.3 | 7.3 | 7.7 | 8.0 | 7.2 | 4.7 | 4.9 | 7.1 | 14.6 | 6.1 | 2.2 | 14.6 | 4.0 |
| | ESE | NE | NE | ESE | E | N | N | NE | ENE | E | ESE | SE | ESE | ESE | E | ESE | E | ESE | E | E | E | E | W | NW | | | |
| Aug 6 | 3.7 | 4.2 | 2.8 | 2.2 | 0.3 | 2.3 | 7.7 | 9.3 | 11.2 | 13.9 | 14.9 | 14.5 | 18.0 | 17.1 | 14.1 | 12.0 | 13.6 | 9.3 | 5.8 | 6.7 | 11.5 | 11.4 | 12.8 | 12.4 | 0.3 | 18.0 | 8.4 |
| | NW | NE | ESE | SSE | ESE | ESE | SSE | S | SSW | SSW | SSW | SW | SSW | SSW | SW | SSW | S | SSW | W | SSW | SSW | SSW | SSW | SSW | | | |
| Aug 7 | 12.8 | 12.2 | 12.9 | 15.9 | 14.4 | 14.1 | 10.7 | 14.8 | 17.6 | 15.3 | 14.2 | 15.6 | 17.4 | 17.4 | 16.8 | 16.0 | 14.3 | 11.9 | 8.5 | 7.9 | 5.0 | 5.3 | 10.9 | 12.3 | 5.0 | 17.6 | 11.2 |
| | SSW | SSW | SSW | SSW | SSW | SW | SW | SSW | SSW | SSW | SW | SW | SSW | SSW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | NNW | NW | | | |
| Aug 8 | 11.6 | 10.1 | 11.4 | 10.0 | 9.2 | 7.7 | 8.8 | 8.7 | 9.6 | 7.6 | 6.3 | 9.3 | 9.7 | 11.9 | 11.6 | 11.8 | 13.0 | 13.6 | 11.3 | 8.8 | 7.4 | 9.3 | 10.7 | 13.4 | 6.3 | 13.6 | 4.5 |
| | NW | NNW | NNW | NNW | NW | NW | NW | NW | NW | WNW | W | W | WSW | SW | SSW | SW | SSW | SSW | SSW | S | SSE | SE | SSE | SSE | | | |
| Aug 9 | 16.0 | 12.1 | 7.7 | 8.4 | 9.7 | 13.6 | 13.2 | 13.1 | 15.2 | 18.3 | 21.5 | 22.0 | 22.5 | 22.3 | 17.3 | 23.9 | 28.4 | 26.8 | 25.9 | 22.2 | 20.5 | 16.7 | 15.3 | 10.5 | 7.7 | 28.4 | **14.4** |
| | SSE | SSE | SSE | SSE | SSE | S | SSW | SSW | SW | WSW | SW | SW | WSW | WSW | WSW | W | WSW | WSW | WSW | WSW | WSW | WSW | W | N | | | |
| Aug 10 | 4.3 | 9.7 | 11.0 | 13.6 | 9.0 | 8.5 | 10.7 | 13.7 | 20.0 | 22.1 | 23.4 | 21.0 | 21.9 | 19.5 | 20.8 | 14.9 | 20.8 | 16.3 | 11.8 | 10.0 | 7.2 | 6.6 | 9.4 | 8.2 | 4.3 | 23.4 | 13.3 |
| | W | W | W | W | WSW | W | W | WNW | WNW | WNW | WNW | WNW | W | W | W | W | WSW | W | WSW | WSW | SW | WSW | WSW | SW | | | |
| Aug 11 | 5.7 | 12.0 | 7.9 | 4.9 | 9.3 | 16.4 | 14.8 | 15.0 | 18.1 | 18.7 | 20.8 | 25.8 | 20.5 | 20.3 | 19.2 | 18.6 | 20.7 | 13.7 | 12.2 | 7.0 | 3.7 | 2.7 | 2.5 | 4.0 | 2.5 | 25.8 | 12.0 |
| | WSW | W | WNW | W | W | WNW | WNW | WNW | NW | WNW | NW | NW | NW | NW | NW | WNW | NW | NNW | NW | NNW | NNW | NE | ESE | ESE | | | |
| Aug 12 | 4.0 | 5.1 | 5.5 | 2.5 | 4.6 | 4.3 | 2.8 | 3.1 | 4.4 | 3.4 | 5.2 | 6.2 | 8.8 | 13.2 | 13.2 | 19.5 | 14.0 | 11.2 | 9.8 | 1.6 | 1.2 | 2.2 | 3.3 | 4.6 | 1.2 | 19.5 | 3.0 |
| | SE | SE | SE | SE | SE | SE | SSE | SSW | WSW | SW | WSW | WSW | W | W | W | NW | NW | NW | WNW | WSW | ESE | ESE | SE | SSE | | | |
| Aug 13 | 6.9 | 7.2 | 5.6 | 4.2 | 4.2 | 5.2 | 7.6 | 10.8 | 12.9 | 15.4 | 17.0 | 16.4 | 16.8 | 20.0 | 15.5 | 17.0 | 14.1 | 11.8 | 11.0 | 9.5 | 4.9 | 4.5 | 8.5 | 7.9 | 4.2 | 20.0 | 8.0 |
| | SSE | SSE | SSE | SE | SE | SSE | SSE | S | SSW | SW | WSW | WSW | WSW | W | W | W | W | W | W | WSW | WSW | SSW | S | S | | | |
| Aug 14 | 12.0 | 9.0 | 7.9 | 8.7 | 11.5 | 8.6 | 11.1 | 14.6 | 15.3 | 12.6 | 18.6 | 19.4 | 21.3 | 21.4 | 21.8 | 20.3 | 14.4 | 11.6 | 5.1 | 2.8 | 3.7 | 0.4 | 0.4 | 3.6 | 0.4 | 21.8 | 10.1 |
| | SW | SW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | W | W | W | W | W | W | W | NNW | N | WSW | ESE | SE | SE | | | |
| Aug 15 | 3.4 | 4.7 | 4.8 | 5.1 | 5.5 | 4.9 | 8.6 | 9.1 | 11.1 | 15.3 | 20.0 | 21.3 | 21.1 | 24.7 | 27.2 | 28.3 | **29.1** | 26.0 | 21.9 | 16.7 | 5.8 | 1.4 | 9.8 | 11.5 | 1.4 | **29.1** | 12.1 |
| | SE | SE | SSE | SE | SSE | SE | SSE | S | S | S | S | SSW | SSW | SSW | SW | SW | SW | SW | SW | W | NW | SSE | SW | SW | | | |
| Aug 16 | 15.0 | 12.4 | 13.8 | 13.8 | 12.9 | 15.7 | 17.3 | 17.1 | 23.4 | 19.5 | 13.3 | 14.8 | 10.6 | 7.7 | 10.9 | 6.8 | 8.3 | 10.1 | 9.4 | 5.7 | 3.8 | 2.3 | 0.2 | 1.4 | 0.2 | 23.4 | 9.3 |
| | W | W | WSW | W | WSW | WSW | WSW | WSW | W | W | WNW | WNW | NW | NNW | NW | N | NNW | NNW | NNW | NNW | NNW | NNE | NNW | NW | | | |
| Aug 17 | 0.9 | 0.9 | 2.1 | 4.4 | 3.1 | 0.3 | 0.3 | 2.4 | 6.5 | 7.8 | 6.7 | 5.1 | 2.4 | 5.8 | 4.8 | 6.7 | 8.8 | 7.5 | 6.2 | 7.0 | 9.4 | 9.9 | 10.3 | 11.0 | 0.3 | 11.0 | 2.6 |
| | SSE | WNW | NW | NW | NW | SSE | ESE | W | NW | WNW | WNW | WNW | SW | W | W | WSW | WSW | SW | SSW | S | SSE | SSE | SSE | SE | | | |
| Aug 18 | 11.4 | 13.6 | 14.4 | 14.2 | 14.2 | 15.6 | 13.8 | 9.6 | 13.3 | 15.2 | 16.0 | 15.1 | 14.8 | 15.6 | 14.7 | 9.7 | 12.0 | 15.6 | 10.4 | 5.7 | 6.3 | 1.9 | 3.7 | 4.0 | 1.9 | 16.0 | 10.4 |
| | SSE | SSE | SSE | SSE | SSE | SSE | SSE | S | S | SSW | SW | SSW | SSW | SSW | SSW | SW | SW | SW | SSW | SSW | SSW | SE | SE | SW | | | |
| Aug 19 | 1.4 | 1.0 | 3.4 | 2.7 | **0.0** | 0.5 | 1.1 | 1.4 | 5.2 | 6.2 | 8.8 | 9.1 | 7.5 | 6.2 | 10.0 | 2.7 | 8.6 | 4.1 | 0.7 | 0.5 | 0.5 | 1.9 | 1.5 | 0.7 | **0.0** | 10.0 | 2.9 |
| | SE | WNW | W | W | SW | SSE | ESE | W | NW | NW | NW | NW | WNW | WNW | NNW | SW | W | WNW | SW | SSW | E | SW | WNW | E | | | |
| Aug 20 | 0.4 | 1.4 | 3.6 | 2.5 | 2.9 | 3.1 | 5.6 | 7.4 | 7.0 | 8.3 | 7.3 | 9.3 | 7.9 | 8.1 | 10.6 | 10.7 | 9.2 | 8.3 | 5.2 | 1.8 | 1.1 | 1.3 | 4.3 | 2.5 | 0.4 | 10.7 | 5.0 |
| | NW | NW | N | NNW | NW | NNW | NNW | N | N | N | N | NNW | N | NNW | NNW | NNW | NNW | NW | N | NNE | ENE | ENE | ENE | ENE | | | |

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# *PEACE RIVER AREA MONITORING PROGRAM*

## *842b Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 29.1 | kph | on August 15 at hour 16 | Hours in Service: | 744 |
| Maximum Daily Value: | 14.4 | kph | on August 9 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 19 at hour 4 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.8 | kph | on August 1 | Hours of Calibration: | 0 |
| Monthly Average: | 3.2 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 237 (SW) degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 21 | 1.6 | 1.9 | 2.0 | 2.1 | 2.6 | 2.6 | 3.1 | 4.6 | 6.4 | 7.3 | 9.4 | 9.5 | 8.6 | 8.7 | 7.2 | 7.8 | 6.9 | 9.1 | 9.5 | 9.8 | 9.7 | 10.1 | 1.7 | 7.4 | 1.6 | 10.1 | 6.0 |
| | ENE | E | ENE | E | E | ENE | ENE | E | E | E | E | E | E | E | E | E | ENE | ENE | ENE | ENE | NE | ENE | N | NE | | | |
| Aug 22 | 9.5 | 12.0 | 12.7 | 12.2 | 12.5 | 11.9 | 12.5 | 13.5 | 11.1 | 12.1 | 9.7 | 11.1 | 11.2 | 11.3 | 13.7 | 12.6 | 11.9 | 9.8 | 9.0 | 6.7 | 6.3 | 7.8 | 6.5 | 6.0 | 6.0 | 13.7 | 10.3 |
| | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | NE | ENE | ENE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NNE | NNE | NNE | | | |
| Aug 23 | 5.5 | 8.0 | 7.3 | 7.0 | 5.4 | 4.8 | 5.0 | 7.3 | 8.3 | 6.7 | 7.6 | 7.8 | 8.1 | 5.6 | 2.7 | 4.4 | 3.5 | 2.8 | 4.5 | 0.4 | 0.7 | 2.7 | 3.9 | 2.3 | 0.4 | 8.3 | 3.7 |
| | NNE | NNE | NNE | NNE | NNE | N | NNE | NNE | NE | NE | NE | NE | NE | NE | NE | NNE | ENE | SE | S | SSW | SE | S | SSW | SSE | | | |
| Aug 24 | 3.8 | 2.8 | 3.3 | 5.2 | 7.5 | 8.3 | 6.9 | 10.1 | 11.2 | 12.6 | 13.5 | 13.7 | 14.2 | 14.0 | 12.5 | 10.6 | 11.2 | 11.1 | 10.9 | 8.6 | 9.7 | 10.6 | 9.6 | 8.6 | 2.8 | 14.2 | 8.6 |
| | SE | SE | SE | SE | SE | SSE | S | S | SSE | S | S | S | SSW | SSW | SW | WSW | SW | SW | SSW | S | S | SSE | SSE | S | | | |
| Aug 25 | 5.7 | 3.9 | 5.2 | 5.9 | 5.0 | 6.6 | 9.9 | 7.6 | 8.9 | 12.4 | 15.3 | 17.6 | 17.0 | 17.1 | 15.9 | 13.5 | 13.9 | 11.0 | 10.9 | 6.8 | 6.1 | 7.4 | 8.0 | 7.2 | 3.9 | 17.6 | 8.5 |
| | SSE | SE | SE | SSE | SSE | SSE | SSE | S | S | SSW | S | SSW | SW | SW | SW | SSW | SW | SSW | S | S | SSE | SE | SE | SE | | | |
| Aug 26 | 7.0 | 9.7 | 8.0 | 7.7 | 5.3 | 0.4 | 3.9 | 3.9 | 7.1 | 8.7 | 6.6 | 11.3 | 13.3 | 11.4 | 10.6 | 11.6 | 8.7 | 8.0 | 7.0 | 2.5 | 5.3 | 7.0 | 3.5 | 4.6 | 0.4 | 13.3 | 5.3 |
| | SE | SE | SE | ESE | ESE | SSE | ESE | ESE | SSE | SSE | ESE | SSE | SSE | S | W | WSW | SW | SSE | SW | S | SSE | S | SSE | ESE | | | |
| Aug 27 | 2.3 | 2.6 | 3.6 | 5.1 | 8.1 | 8.1 | 6.6 | 7.6 | 9.8 | 13.2 | 11.7 | 12.5 | 14.4 | 11.8 | 13.8 | 8.6 | 7.5 | 4.7 | 1.3 | 4.3 | 3.9 | 1.8 | 0.4 | 0.9 | 0.4 | 14.4 | 4.5 |
| | ESE | SSE | SSE | SSW | S | S | S | S | SSW | SW | WSW | SW | SW | WSW | WSW | NNW | NNW | NNW | NW | WNW | WSW | SW | SSW | ESE | | | |
| Aug 28 | 3.0 | 2.6 | 4.5 | 5.4 | 5.4 | 6.4 | 6.9 | 7.3 | 9.5 | 10.3 | 12.0 | 15.3 | 17.0 | 19.9 | 20.2 | 17.3 | 18.4 | 14.3 | 12.0 | 10.6 | 10.9 | 11.5 | 12.2 | 11.9 | 2.6 | 20.2 | 9.7 |
| | SE | SSE | SSE | SSE | SSE | SSE | S | S | S | SSW | SW | SW | SW | SW | WSW | WSW | WSW | SW | SW | SSW | S | S | S | SSW | | | |
| Aug 29 | 9.5 | 5.9 | 7.0 | 5.2 | 8.1 | 7.9 | 9.3 | 10.7 | 9.8 | 13.1 | 13.1 | 13.8 | 16.2 | 16.8 | 18.1 | 14.7 | 9.6 | 6.7 | 4.3 | 1.5 | 4.8 | 5.0 | 4.9 | 1.7 | 1.5 | 18.1 | 7.7 |
| | S | SE | SSE | SSE | S | S | SW | SW | WSW | WSW | WSW | WSW | WSW | SW | SW | SW | WSW | SSW | S | SSE | W | WSW | W | SE | | | |
| Aug 30 | 2.9 | 4.8 | 5.5 | 2.9 | 2.7 | 2.7 | 2.2 | 0.7 | 1.9 | 3.1 | 2.7 | 0.7 | 5.4 | 5.5 | 4.9 | 7.3 | 11.6 | 14.1 | 10.5 | 7.6 | 4.6 | 4.8 | 5.3 | 7.9 | 0.7 | 14.1 | 2.4 |
| | SE | SE | SE | SE | SE | SE | ESE | SSE | SE | S | SSW | NNE | N | N | NNW | NNW | NW | NW | NNW | NW | NW | NNW | N | N | | | |
| Aug 31 | 7.9 | 7.7 | 8.9 | 7.7 | 7.4 | 8.8 | 9.8 | 8.1 | 6.2 | 6.4 | 7.6 | 10.3 | 11.7 | 11.9 | 11.9 | 14.6 | 15.3 | 13.4 | 13.7 | 13.6 | 13.7 | 12.5 | 10.3 | 10.2 | 6.2 | 15.3 | 10.3 |
| | N | N | N | N | NNW | NNW | NNW | NNW | N | N | NNW | NNW | NNW | NNW | NNW | NNW | N | NNW | N | N | N | NNW | NNW | NNW | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

# RENO STATION

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## SULPHUR DIOXIDE ($SO_2$) in ppb

**Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb**

Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0 30-Day Exceedance: 0

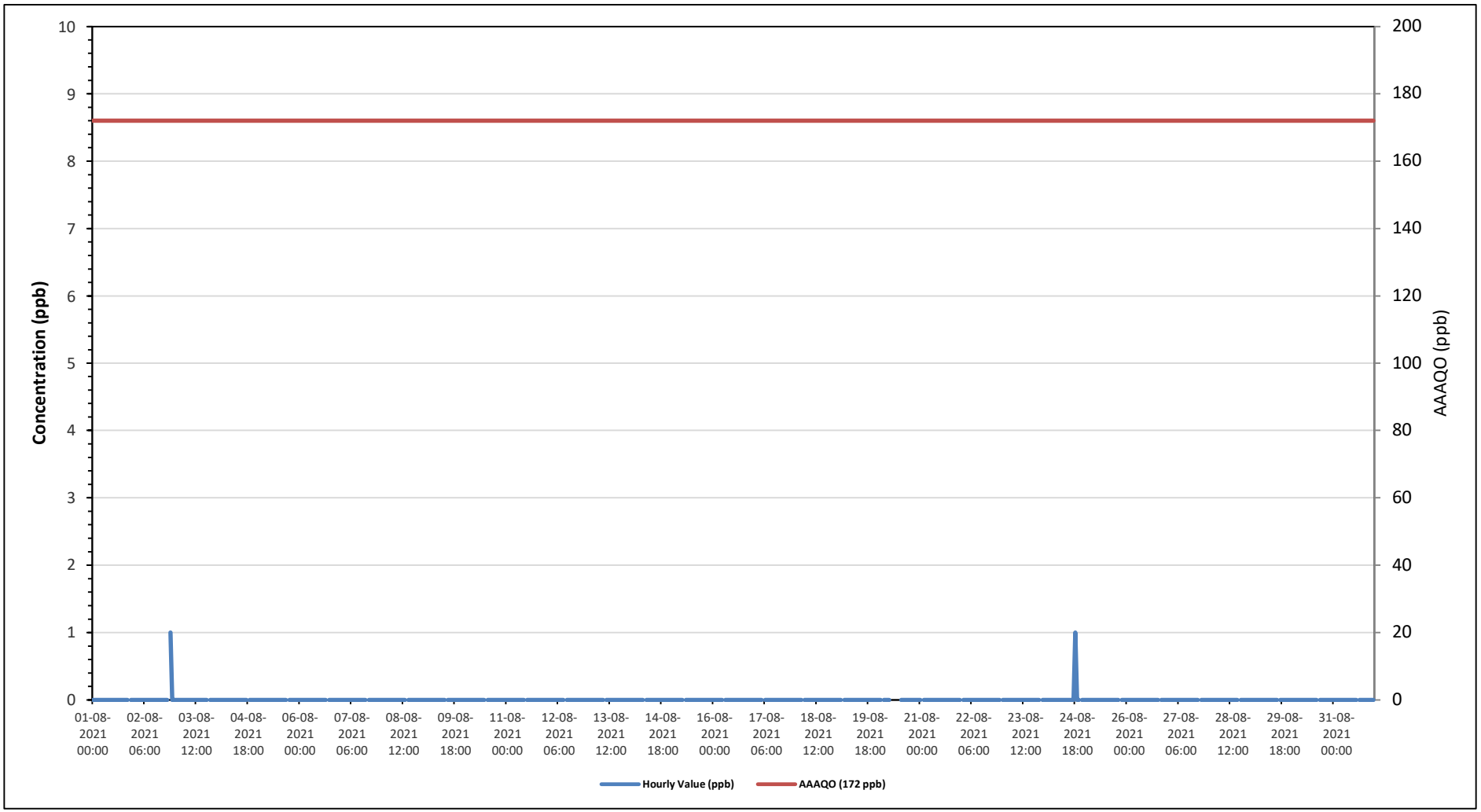
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 1 | ppb | on August 2 at hour 21 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.0 | ppb | on August 2 | Hours of Data: | 706 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 0 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 1 | Hours of Calibration: | 38 |
| Monthly Average: | 0.0 | ppb | | Operational Uptime: | 100.0 |

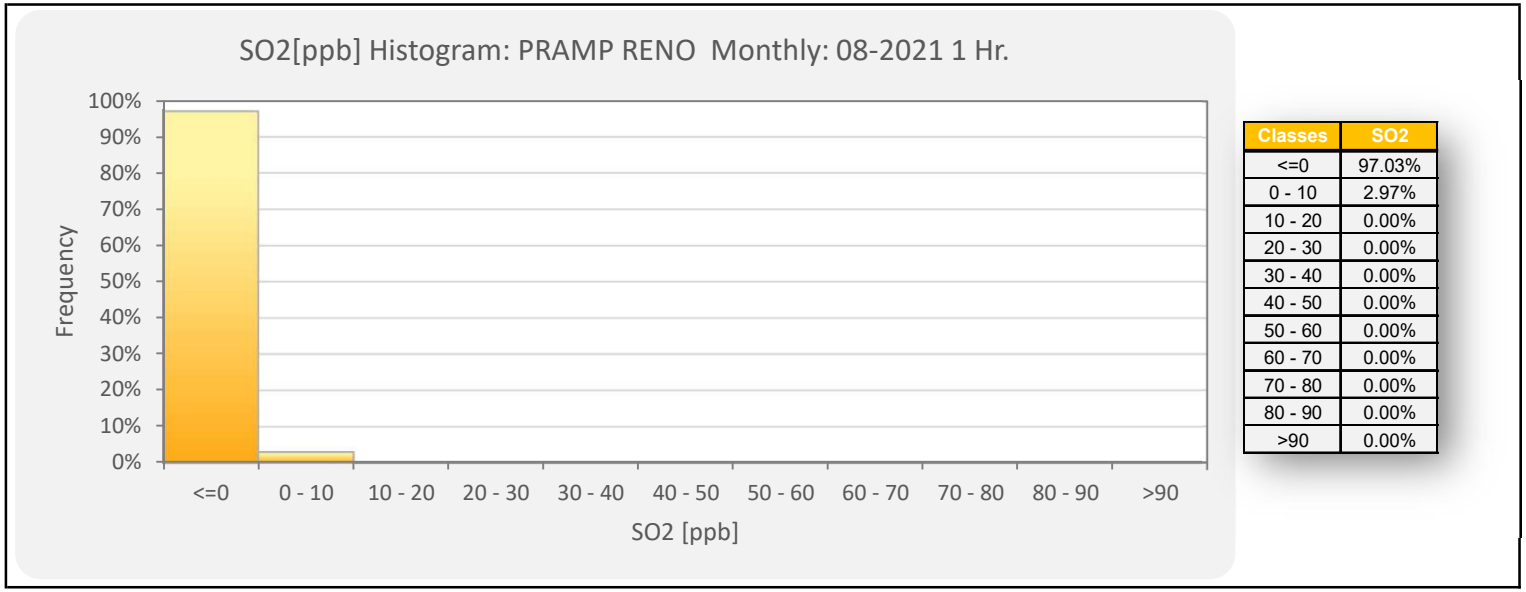
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 1 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 16 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 17 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 18 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 19 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 20 | 0 | 0 | S | 0 | 0 | 0 | 0 | C | C | C | C | C | C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Aug 21 | 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 |
| Aug 22 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0.0 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0.0 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | S | 0 | 0 | 0 | 1 | 0.0 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Diurnal Maximum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | | | |
| Diurnal 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 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure | |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for SO2 - Reno Station*



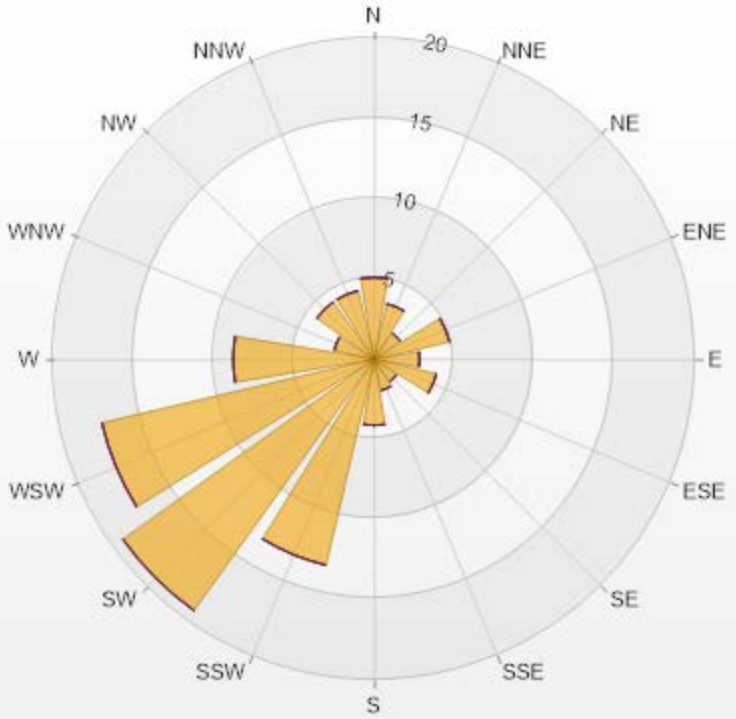



| Classes | SO2 |
|---|---|
| <=0 | 97.03% |
| 0 - 10 | 2.97% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: PRAMP RENO Poll.: PRAMP RENO-SO2[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.89% Calm Avg: 0.00 [ppb]

| Direction | 0-10 | 10-50 | 50-100 | 100-172 | >172.0 | Total |
|---|---|---|---|---|---|---|
| N | 5.1 | 0 | 0 | 0 | 0 | 5.1 |
| NNE | 3.54 | 0 | 0 | 0 | 0 | 3.54 |
| NE | 1.98 | 0 | 0 | 0 | 0 | 1.98 |
| ENE | 4.82 | 0 | 0 | 0 | 0 | 4.82 |
| E | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| ESE | 3.97 | 0 | 0 | 0 | 0 | 3.97 |
| SE | 1.7 | 0 | 0 | 0 | 0 | 1.7 |
| SSE | 1.98 | 0 | 0 | 0 | 0 | 1.98 |
| S | 4.11 | 0 | 0 | 0 | 0 | 4.11 |
| SSW | 13.17 | 0 | 0 | 0 | 0 | 13.17 |
| SW | 19.26 | 0 | 0 | 0 | 0 | 19.26 |
| WSW | 17.42 | 0 | 0 | 0 | 0 | 17.42 |
| W | 8.78 | 0 | 0 | 0 | 0 | 8.78 |
| WNW | 2.55 | 0 | 0 | 0 | 0 | 2.55 |
| NW | 4.39 | 0 | 0 | 0 | 0 | 4.39 |
| NNW | 4.39 | 0 | 0 | 0 | 0 | 4.39 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |

PRAMP RENO Poll.: PRAMP RENO-SO2[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%




| % Icon | Classes (ppb) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 0-10 | 0 | 10-50 | 0 | 50-100 | 0 | 100-172 | 0 | >172.0 |

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## *Reno Station - August 2021*

## Summary of Hourly Averages

## TOTAL REDUCED SULPHUR (TRS) in ppb

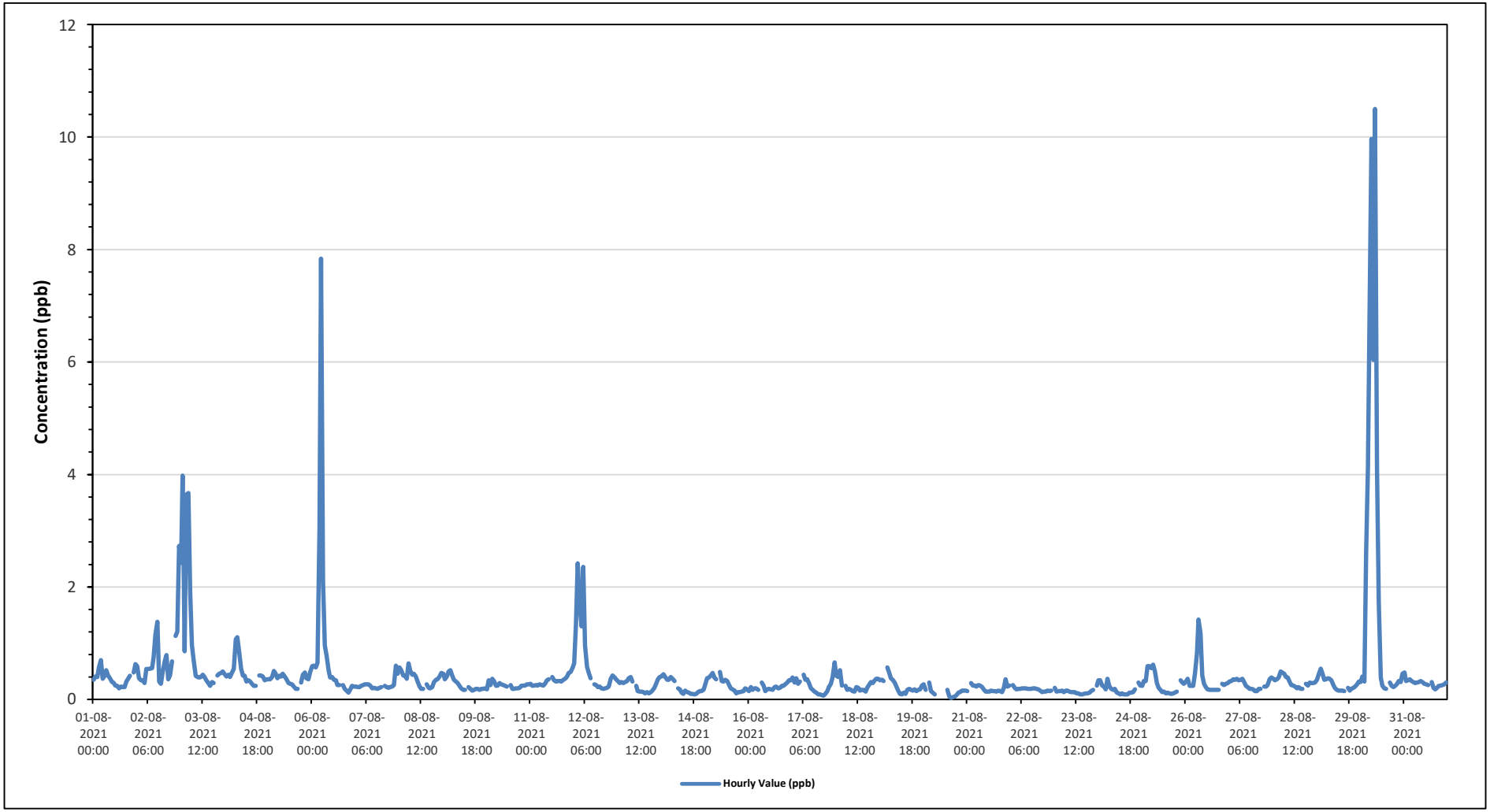
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 10.50 | ppb | on August 30 at hour 8 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.20 | ppb | on August 30 | Hours of Data: | 706 |
| Minimum Hourly Value: | 0.03 | ppb | on August 20 at hour 15 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.14 | ppb | on August 23 | Hours of Calibration: | 38 |
| Monthly Average: | 0.41 | ppb | | Operational Uptime: | 100.0 |

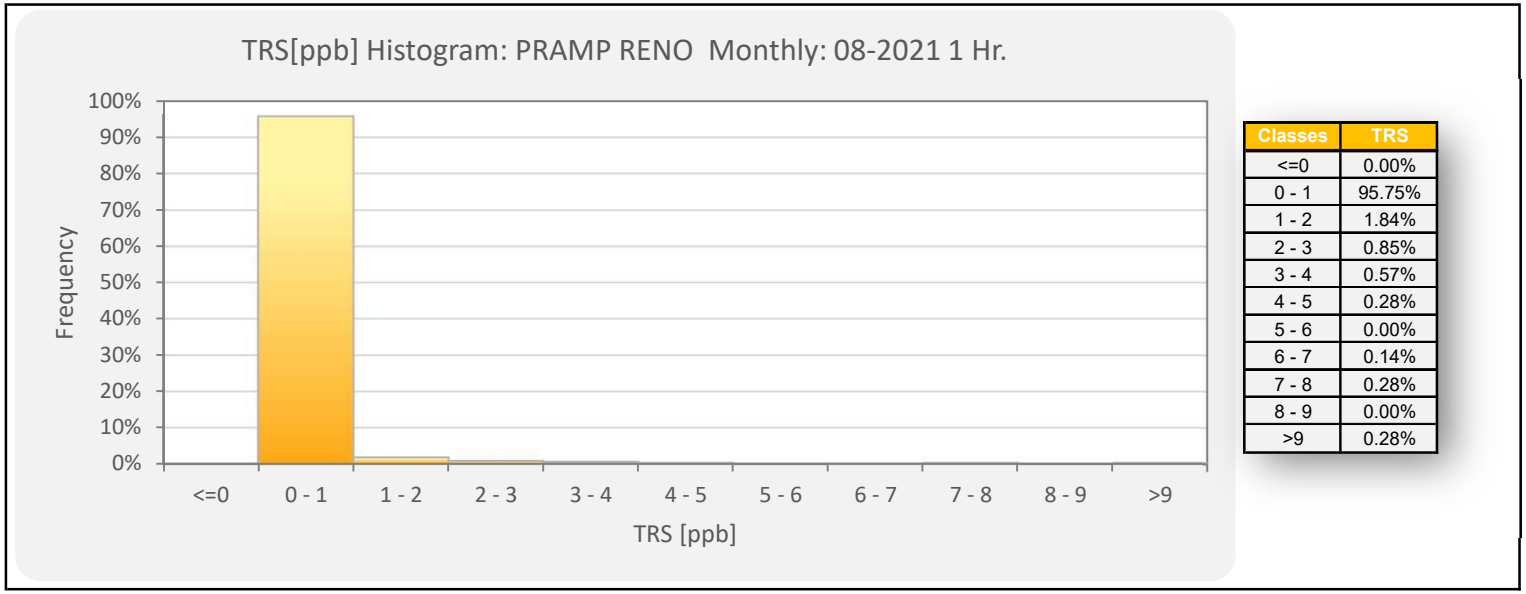
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.35 | 0.41 | 0.4 | 0.57 | 0.7 | 0.37 | 0.42 | 0.52 | 0.42 | 0.38 | 0.31 | 0.3 | 0.25 | 0.24 | 0.2 | 0.23 | 0.22 | 0.22 | 0.32 | 0.38 | 0.42 | S | 0.48 | 0.63 | 0.20 | 0.70 | 0.38 |
| Aug 2 | 0.59 | 0.38 | 0.34 | 0.34 | 0.29 | 0.54 | 0.54 | 0.55 | 0.56 | 0.75 | 1.15 | 1.38 | 0.32 | 0.28 | 0.49 | 0.68 | 0.79 | 0.36 | 0.43 | 0.68 | S | 1.13 | 1.21 | 2.73 | 0.28 | 2.73 | 0.72 |
| Aug 3 | 2.43 | 3.98 | 0.86 | 3.64 | 3.67 | 1.91 | 0.96 | 0.69 | 0.42 | 0.4 | 0.39 | 0.4 | 0.44 | 0.39 | 0.34 | 0.29 | 0.24 | 0.31 | 0.29 | S | 0.43 | 0.46 | 0.47 | 0.5 | 0.24 | 3.98 | 1.04 |
| Aug 4 | 0.45 | 0.41 | 0.44 | 0.4 | 0.48 | 0.54 | 1.07 | 1.11 | 0.86 | 0.55 | 0.43 | 0.42 | 0.32 | 0.34 | 0.32 | 0.28 | 0.24 | 0.24 | S | 0.43 | 0.43 | 0.41 | 0.34 | 0.36 | 0.24 | 1.11 | 0.47 |
| Aug 5 | 0.36 | 0.36 | 0.4 | 0.51 | 0.46 | 0.38 | 0.42 | 0.41 | 0.46 | 0.41 | 0.36 | 0.29 | 0.28 | 0.27 | 0.23 | 0.19 | 0.19 | S | 0.3 | 0.44 | 0.48 | 0.38 | 0.36 | 0.49 | 0.19 | 0.51 | 0.37 |
| Aug 6 | 0.59 | 0.6 | 0.57 | 0.65 | 3.07 | 7.84 | 2.08 | 0.96 | 0.78 | 0.52 | 0.39 | 0.4 | 0.35 | 0.34 | 0.26 | 0.26 | S | 0.26 | 0.19 | 0.16 | 0.12 | 0.18 | 0.24 | 0.23 | 0.12 | 7.84 | 0.91 |
| Aug 7 | 0.23 | 0.22 | 0.22 | 0.24 | 0.26 | 0.27 | 0.27 | 0.27 | 0.25 | 0.2 | 0.21 | 0.2 | 0.19 | 0.21 | 0.22 | S | 0.24 | 0.22 | 0.21 | 0.22 | 0.23 | 0.26 | 0.6 | 0.46 | 0.19 | 0.60 | 0.26 |
| Aug 8 | 0.57 | 0.52 | 0.43 | 0.42 | 0.37 | 0.64 | 0.51 | 0.44 | 0.46 | 0.41 | 0.32 | 0.23 | 0.19 | 0.19 | S | 0.27 | 0.21 | 0.2 | 0.22 | 0.31 | 0.35 | 0.36 | 0.41 | 0.47 | 0.19 | 0.64 | 0.37 |
| Aug 9 | 0.46 | 0.36 | 0.41 | 0.5 | 0.52 | 0.43 | 0.35 | 0.32 | 0.29 | 0.24 | 0.2 | 0.17 | 0.17 | S | 0.22 | 0.19 | 0.16 | 0.17 | 0.19 | 0.19 | 0.17 | 0.19 | 0.19 | 0.2 | 0.16 | 0.52 | 0.27 |
| Aug 10 | 0.18 | 0.34 | 0.26 | 0.37 | 0.33 | 0.24 | 0.25 | 0.29 | 0.27 | 0.26 | 0.24 | 0.23 | S | 0.26 | 0.19 | 0.19 | 0.2 | 0.2 | 0.21 | 0.24 | 0.25 | 0.25 | 0.27 | 0.27 | 0.18 | 0.37 | 0.25 |
| Aug 11 | 0.28 | 0.24 | 0.25 | 0.26 | 0.25 | 0.27 | 0.26 | 0.25 | 0.28 | 0.34 | 0.36 | S | 0.4 | 0.34 | 0.32 | 0.33 | 0.33 | 0.32 | 0.35 | 0.37 | 0.41 | 0.47 | 0.49 | 0.56 | 0.24 | 0.56 | 0.34 |
| Aug 12 | 0.64 | 1.34 | 2.42 | 1.68 | 1.3 | 2.36 | 0.96 | 0.58 | 0.47 | 0.38 | S | 0.27 | 0.26 | 0.22 | 0.23 | 0.2 | 0.19 | 0.2 | 0.21 | 0.23 | 0.37 | 0.43 | 0.4 | 0.36 | 0.19 | 2.42 | 0.68 |
| Aug 13 | 0.33 | 0.29 | 0.31 | 0.29 | 0.31 | 0.33 | 0.38 | 0.4 | 0.32 | S | 0.24 | 0.15 | 0.14 | 0.14 | 0.13 | 0.11 | 0.13 | 0.11 | 0.13 | 0.16 | 0.21 | 0.28 | 0.36 | 0.4 | 0.11 | 0.40 | 0.25 |
| Aug 14 | 0.41 | 0.45 | 0.4 | 0.35 | 0.35 | 0.4 | 0.37 | 0.33 | S | 0.2 | 0.18 | 0.12 | 0.1 | 0.16 | 0.13 | 0.12 | 0.1 | 0.1 | 0.09 | 0.1 | 0.13 | 0.15 | 0.15 | 0.17 | 0.09 | 0.45 | 0.22 |
| Aug 15 | 0.27 | 0.38 | 0.39 | 0.43 | 0.47 | 0.39 | 0.36 | S | 0.49 | 0.33 | 0.32 | 0.35 | 0.33 | 0.27 | 0.2 | 0.18 | 0.16 | 0.11 | 0.13 | 0.13 | 0.14 | 0.15 | 0.2 | 0.18 | 0.11 | 0.49 | 0.28 |
| Aug 16 | 0.15 | 0.22 | 0.17 | 0.2 | 0.2 | 0.17 | S | 0.3 | 0.25 | 0.15 | 0.18 | 0.19 | 0.18 | 0.17 | 0.22 | 0.23 | 0.2 | 0.21 | 0.24 | 0.24 | 0.27 | 0.3 | 0.34 | 0.34 | 0.15 | 0.34 | 0.22 |
| Aug 17 | 0.39 | 0.3 | 0.38 | 0.28 | 0.32 | S | 0.44 | 0.35 | 0.36 | 0.29 | 0.2 | 0.17 | 0.14 | 0.12 | 0.09 | 0.09 | 0.08 | 0.07 | 0.1 | 0.15 | 0.22 | 0.28 | 0.4 | 0.66 | 0.07 | 0.66 | 0.26 |
| Aug 18 | 0.43 | 0.4 | 0.52 | 0.25 | S | 0.24 | 0.17 | 0.19 | 0.17 | 0.15 | 0.14 | 0.22 | 0.21 | 0.16 | 0.17 | 0.17 | 0.14 | 0.21 | 0.26 | 0.31 | 0.29 | 0.34 | 0.37 | 0.37 | 0.14 | 0.52 | 0.26 |
| Aug 19 | 0.34 | 0.35 | 0.33 | S | 0.57 | 0.48 | 0.38 | 0.35 | 0.3 | 0.23 | 0.16 | 0.1 | 0.09 | 0.12 | 0.1 | 0.17 | 0.19 | 0.17 | 0.16 | 0.18 | 0.15 | 0.17 | 0.18 | 0.25 | 0.09 | 0.57 | 0.24 |
| Aug 20 | 0.27 | 0.17 | S | 0.3 | 0.15 | 0.12 | 0.09 | C | C | C | C | C | C | 0.17 | 0.05 | 0.03 | 0.04 | 0.05 | 0.08 | 0.12 | 0.13 | 0.16 | 0.16 | 0.16 | **0.03** | 0.30 | - |
| Aug 21 | 0.15 | S | 0.29 | 0.25 | 0.25 | 0.23 | 0.26 | 0.25 | 0.22 | 0.18 | 0.14 | 0.14 | 0.14 | 0.16 | 0.15 | 0.15 | 0.14 | 0.16 | 0.15 | 0.13 | 0.21 | 0.36 | 0.23 | 0.25 | 0.13 | 0.36 | 0.20 |
| Aug 22 | S | 0.26 | 0.21 | 0.18 | 0.19 | 0.19 | 0.2 | 0.2 | 0.2 | 0.19 | 0.19 | 0.19 | 0.2 | 0.2 | 0.19 | 0.18 | 0.16 | 0.13 | 0.14 | 0.14 | 0.16 | 0.15 | 0.16 | S | 0.13 | 0.26 | 0.18 |
| Aug 23 | 0.21 | 0.14 | 0.15 | 0.15 | 0.16 | 0.13 | 0.16 | 0.16 | 0.14 | 0.13 | 0.13 | 0.13 | 0.11 | 0.11 | 0.09 | 0.09 | 0.1 | 0.11 | 0.11 | 0.12 | 0.15 | 0.17 | S | 0.25 | 0.09 | 0.25 | 0.14 |
| Aug 24 | 0.34 | 0.34 | 0.25 | 0.23 | 0.18 | 0.37 | 0.23 | 0.19 | 0.17 | 0.19 | 0.12 | 0.11 | 0.09 | 0.11 | 0.09 | 0.09 | 0.09 | 0.12 | 0.12 | 0.13 | 0.18 | S | 0.3 | 0.25 | 0.09 | 0.37 | 0.19 |
| Aug 25 | 0.24 | 0.33 | 0.33 | 0.59 | 0.59 | 0.56 | 0.62 | 0.51 | 0.29 | 0.21 | 0.17 | 0.13 | 0.14 | 0.11 | 0.12 | 0.11 | 0.1 | 0.11 | 0.12 | 0.14 | S | 0.34 | 0.3 | 0.28 | 0.10 | 0.62 | 0.28 |
| Aug 26 | 0.32 | 0.37 | 0.24 | 0.24 | 0.24 | 0.46 | 0.82 | 1.42 | 1.18 | 0.43 | 0.28 | 0.22 | 0.18 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | S | 0.28 | 0.26 | 0.28 | 0.29 | 0.17 | 1.42 | 0.37 |
| Aug 27 | 0.32 | 0.33 | 0.36 | 0.35 | 0.37 | 0.34 | 0.35 | 0.37 | 0.31 | 0.24 | 0.22 | 0.19 | 0.19 | 0.18 | 0.15 | 0.15 | 0.19 | 0.19 | S | 0.23 | 0.23 | 0.26 | 0.36 | 0.39 | 0.15 | 0.39 | 0.27 |
| Aug 28 | 0.37 | 0.34 | 0.36 | 0.39 | 0.5 | 0.48 | 0.46 | 0.4 | 0.39 | 0.31 | 0.26 | 0.25 | 0.23 | 0.2 | 0.22 | 0.19 | 0.19 | S | 0.28 | 0.25 | 0.3 | 0.29 | 0.29 | 0.3 | 0.19 | 0.50 | 0.32 |
| Aug 29 | 0.35 | 0.45 | 0.55 | 0.47 | 0.35 | 0.36 | 0.38 | 0.37 | 0.34 | 0.26 | 0.2 | 0.17 | 0.16 | 0.16 | 0.16 | 0.15 | S | 0.21 | 0.16 | 0.19 | 0.21 | 0.23 | 0.27 | 0.32 | 0.15 | 0.55 | 0.28 |
| Aug 30 | 0.31 | 0.41 | 0.32 | 2.64 | 4.12 | 7.07 | 9.97 | 6.04 | **10.5** | 4.11 | 1.72 | 0.39 | 0.25 | 0.2 | 0.19 | S | 0.3 | 0.24 | 0.22 | 0.24 | 0.28 | 0.33 | 0.31 | 0.46 | 0.19 | **10.50** | **2.20** |
| Aug 31 | 0.48 | 0.33 | 0.34 | 0.36 | 0.33 | 0.31 | 0.29 | 0.3 | 0.31 | 0.33 | 0.31 | 0.28 | 0.27 | 0.26 | S | 0.31 | 0.21 | 0.18 | 0.21 | 0.24 | 0.25 | 0.26 | 0.27 | 0.3 | 0.18 | 0.48 | 0.29 |
| Diurnal Maximum | 2.43 | 3.98 | 2.42 | 3.64 | 4.12 | 7.84 | 9.97 | 6.04 | 10.50 | 4.11 | 1.72 | 1.38 | 0.44 | 0.39 | 0.49 | 0.68 | 0.79 | 0.36 | 0.43 | 0.68 | 0.48 | 1.13 | 1.21 | 2.73 | | | |
| Diurnal Average | 0.43 | 0.50 | 0.43 | 0.58 | 0.71 | 0.95 | 0.80 | 0.64 | 0.74 | 0.44 | 0.33 | 0.27 | 0.22 | 0.21 | 0.19 | 0.20 | 0.20 | 0.18 | 0.20 | 0.24 | 0.26 | 0.31 | 0.35 | 0.43 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for TRS - Reno Station*

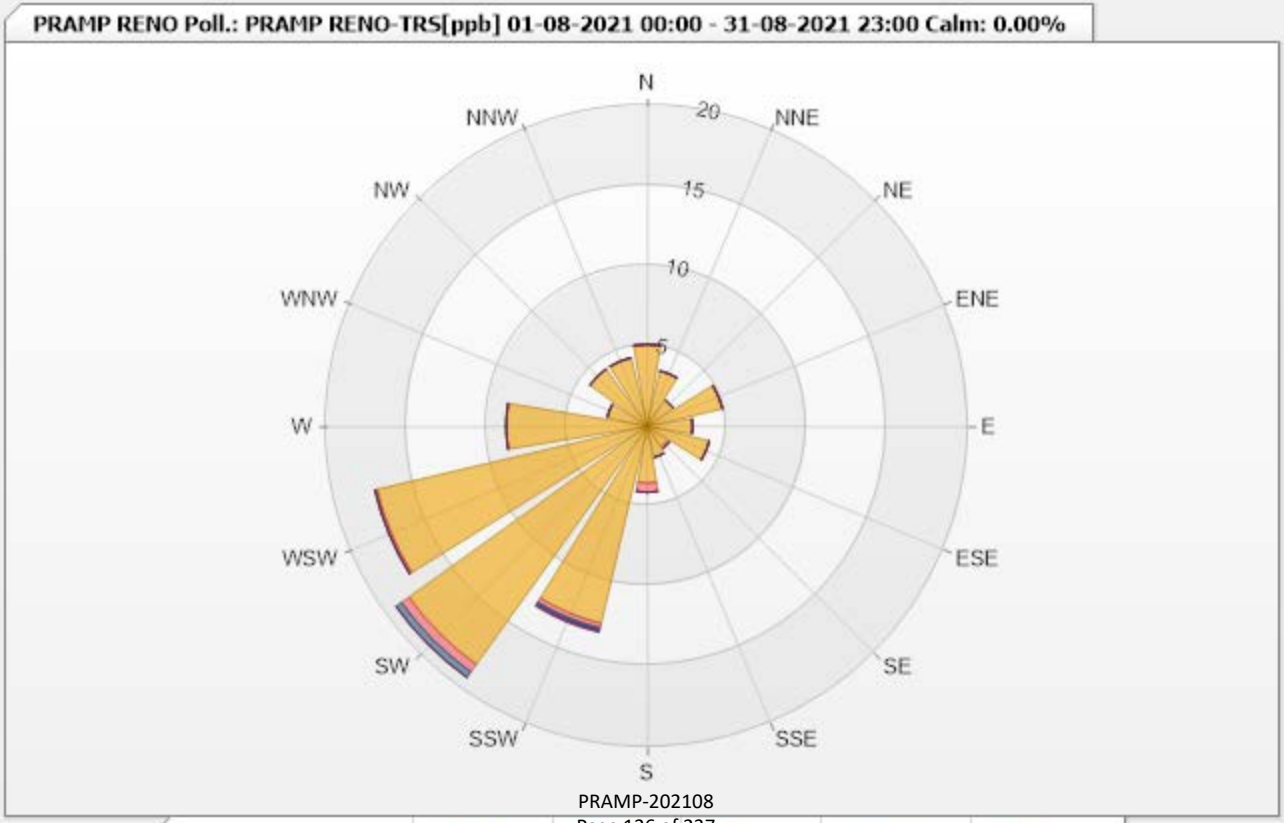





| Classes | TRS |
|---|---|
| <=0 | 0.00% |
| 0 - 1 | 95.75% |
| 1 - 2 | 1.84% |
| 2 - 3 | 0.85% |
| 3 - 4 | 0.57% |
| 4 - 5 | 0.28% |
| 5 - 6 | 0.00% |
| 6 - 7 | 0.14% |
| 7 - 8 | 0.28% |
| 8 - 9 | 0.00% |
| >9 | 0.28% |

Wind: PRAMP RENO Poll.: PRAMP RENO-TRS[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.89% Calm Avg: 0.00 [ppb]

| Direction | 0-2 | 2-5 | 5-10 | 10-50 | >50.0 | Total |
|---|---|---|---|---|---|---|
| N | 5.1 | 0 | 0 | 0 | 0 | 5.1 |
| NNE | 3.54 | 0 | 0 | 0 | 0 | 3.54 |
| NE | 1.98 | 0 | 0 | 0 | 0 | 1.98 |
| ENE | 4.82 | 0 | 0 | 0 | 0 | 4.82 |
| E | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| ESE | 3.97 | 0 | 0 | 0 | 0 | 3.97 |
| SE | 1.56 | 0.14 | 0 | 0 | 0 | 1.7 |
| SSE | 1.98 | 0 | 0 | 0 | 0 | 1.98 |
| S | 3.54 | 0.57 | 0 | 0 | 0 | 4.11 |
| SSW | 12.61 | 0.28 | 0.14 | 0.14 | 0 | 13.17 |
| SW | 18.27 | 0.57 | 0.42 | 0 | 0 | 19.26 |
| WSW | 17.28 | 0.14 | 0 | 0 | 0 | 17.42 |
| W | 8.78 | 0 | 0 | 0 | 0 | 8.78 |
| WNW | 2.55 | 0 | 0 | 0 | 0 | 2.55 |
| NW | 4.39 | 0 | 0 | 0 | 0 | 4.39 |
| NNW | 4.39 | 0 | 0 | 0 | 0 | 4.39 |
| Summary | 97.59 | 1.7 | 0.56 | 0.14 | 0 | 100 |


PRAMP RENO Poll.: PRAMP RENO-TRS[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
98 0-2
2 2-5
1 5-10
0 10-50
0 >50.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## *Reno Station - August 2021*

## Summary of Hourly Averages

## TOTAL HYDROCARBONS (THC) in ppm

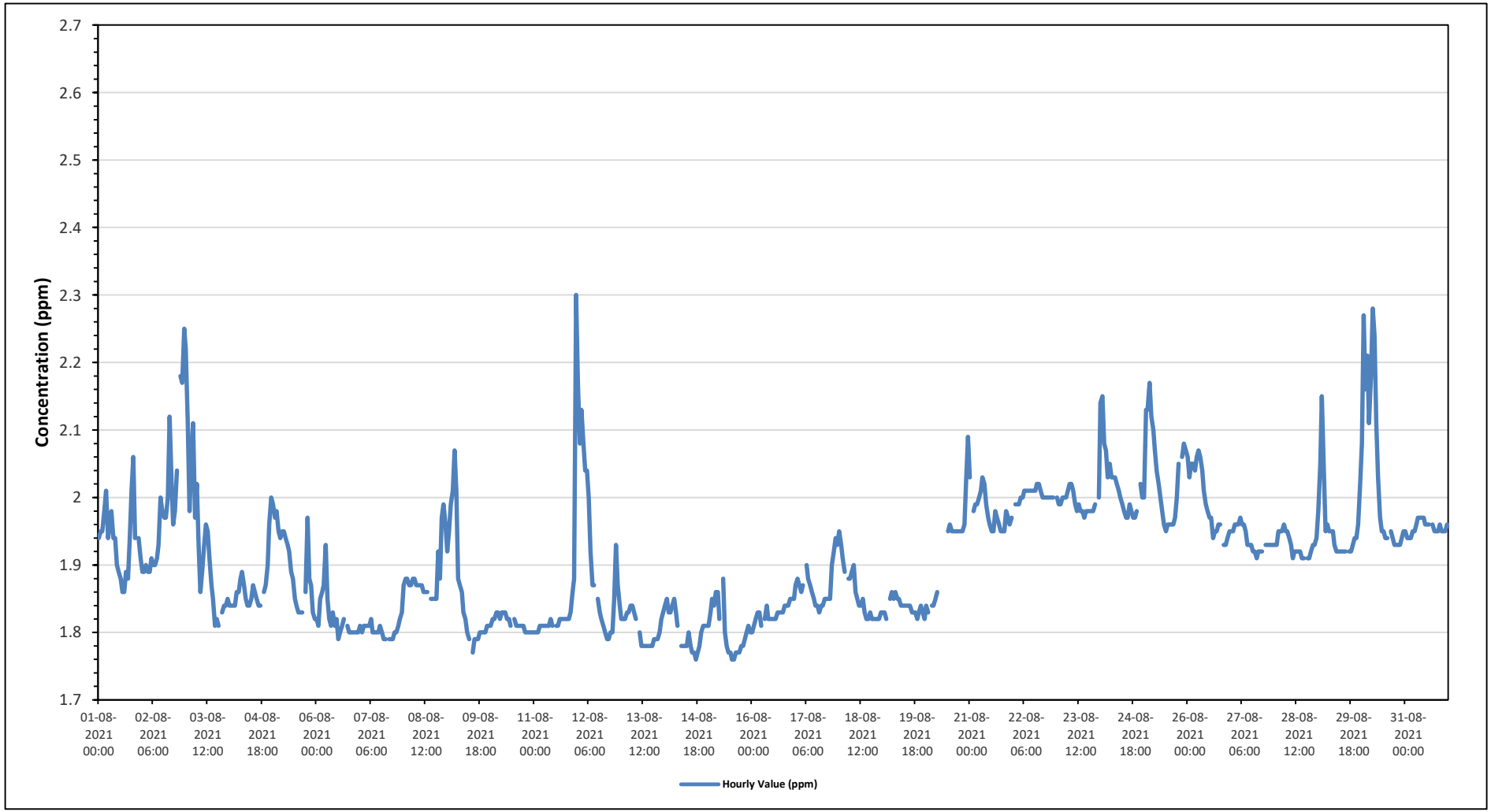
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.30 | ppm | on August 11 at hour 23 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.04 | ppm | on August 30 | Hours of Data: | 707 |
| Minimum Hourly Value: | 1.76 | ppm | on August 14 at hour 17 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.80 | ppm | on August 15 | Hours of Calibration: | 37 |
| Monthly Average: | 1.91 | ppm | | Operational Uptime: | 100.0 |

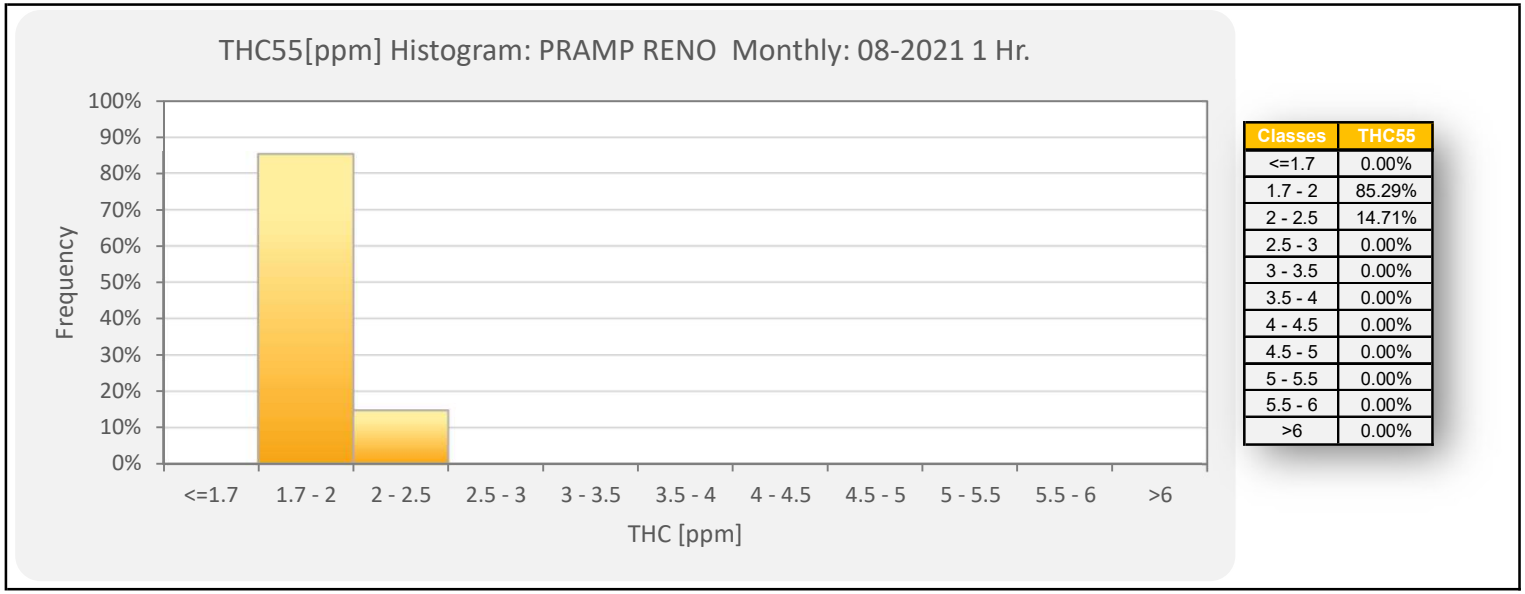
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 1.94 | 1.95 | 1.95 | 1.98 | 2.01 | 1.94 | 1.96 | 1.98 | 1.94 | 1.94 | 1.90 | 1.89 | 1.88 | 1.86 | 1.86 | 1.89 | 1.88 | 1.94 | 2.01 | 2.06 | 1.94 | S | 1.94 | 1.91 | 1.86 | 2.06 | 1.94 |
| Aug 2 | 1.89 | 1.89 | 1.90 | 1.89 | 1.89 | 1.91 | 1.90 | 1.90 | 1.91 | 1.93 | 2.00 | 1.98 | 1.97 | 1.97 | 2.00 | 2.12 | 2.02 | 1.96 | 1.98 | 2.04 | S | 2.18 | 2.17 | 2.25 | 1.89 | 2.25 | 1.98 |
| Aug 3 | 2.22 | 2.11 | 1.98 | 2.07 | 2.11 | 1.97 | 2.02 | 1.93 | 1.86 | 1.89 | 1.93 | 1.96 | 1.95 | 1.91 | 1.87 | 1.85 | 1.81 | 1.82 | 1.81 | S | 1.83 | 1.84 | 1.84 | 1.85 | 1.81 | 2.22 | 1.93 |
| Aug 4 | 1.84 | 1.84 | 1.84 | 1.84 | 1.86 | 1.86 | 1.88 | 1.89 | 1.87 | 1.85 | 1.84 | 1.84 | 1.85 | 1.87 | 1.86 | 1.85 | 1.84 | 1.84 | S | 1.86 | 1.87 | 1.90 | 1.96 | 2.00 | 1.84 | 2.00 | 1.87 |
| Aug 5 | 1.99 | 1.97 | 1.98 | 1.95 | 1.94 | 1.95 | 1.95 | 1.94 | 1.93 | 1.92 | 1.89 | 1.88 | 1.85 | 1.84 | 1.83 | 1.83 | 1.83 | S | 1.86 | 1.97 | 1.88 | 1.87 | 1.83 | 1.82 | 1.82 | 1.99 | 1.90 |
| Aug 6 | 1.82 | 1.81 | 1.85 | 1.86 | 1.87 | 1.93 | 1.85 | 1.82 | 1.81 | 1.83 | 1.81 | 1.82 | 1.79 | 1.80 | 1.81 | 1.82 | S | 1.81 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.79 | 1.93 | 1.82 |
| Aug 7 | 1.81 | 1.80 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.80 | 1.80 | 1.80 | 1.80 | 1.81 | 1.80 | 1.79 | 1.79 | S | 1.79 | 1.79 | 1.79 | 1.80 | 1.80 | 1.81 | 1.82 | 1.83 | 1.79 | 1.83 | 1.80 |
| Aug 8 | 1.87 | 1.88 | 1.88 | 1.87 | 1.87 | 1.88 | 1.88 | 1.87 | 1.87 | 1.87 | 1.87 | 1.86 | 1.86 | 1.86 | S | 1.85 | 1.85 | 1.85 | 1.85 | 1.92 | 1.88 | 1.97 | 1.99 | 1.96 | 1.85 | 1.99 | 1.88 |
| Aug 9 | 1.92 | 1.95 | 1.99 | 2.01 | 2.07 | 2.01 | 1.88 | 1.87 | 1.86 | 1.83 | 1.82 | 1.80 | 1.79 | S | 1.77 | 1.79 | 1.79 | 1.79 | 1.80 | 1.80 | 1.80 | 1.80 | 1.81 | 1.81 | 1.77 | 2.07 | 1.86 |
| Aug 10 | 1.81 | 1.82 | 1.82 | 1.83 | 1.83 | 1.82 | 1.83 | 1.83 | 1.83 | 1.82 | 1.82 | 1.81 | S | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.83 | 1.81 |
| Aug 11 | 1.80 | 1.80 | 1.80 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.81 | S | 1.81 | 1.81 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.86 | 1.88 | **2.30** | 1.80 | **2.30** | 1.84 |
| Aug 12 | 2.17 | 2.08 | 2.13 | 2.08 | 2.04 | 2.04 | 2.00 | 1.92 | 1.87 | 1.87 | S | 1.85 | 1.83 | 1.82 | 1.81 | 1.80 | 1.79 | 1.79 | 1.80 | 1.80 | 1.85 | 1.93 | 1.87 | 1.84 | 1.79 | 2.17 | 1.91 |
| Aug 13 | 1.82 | 1.82 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.83 | 1.82 | S | 1.80 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.79 | 1.79 | 1.79 | 1.80 | 1.82 | 1.83 | 1.78 | 1.84 | 1.81 |
| Aug 14 | 1.84 | 1.85 | 1.83 | 1.83 | 1.84 | 1.85 | 1.83 | 1.81 | S | 1.78 | 1.78 | 1.78 | 1.78 | 1.80 | 1.78 | 1.77 | 1.77 | 1.76 | 1.77 | 1.78 | 1.80 | 1.81 | 1.81 | 1.81 | **1.76** | 1.85 | 1.80 |
| Aug 15 | 1.81 | 1.83 | 1.85 | 1.84 | 1.86 | 1.86 | 1.82 | S | 1.88 | 1.80 | 1.78 | 1.77 | 1.77 | 1.76 | 1.76 | 1.77 | 1.77 | 1.77 | 1.78 | 1.78 | 1.79 | 1.80 | 1.81 | 1.80 | **1.76** | 1.88 | 1.80 |
| Aug 16 | 1.80 | 1.81 | 1.82 | 1.83 | 1.83 | 1.81 | S | 1.82 | 1.84 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.85 | 1.80 | 1.85 | 1.83 |
| Aug 17 | 1.87 | 1.88 | 1.87 | 1.86 | 1.87 | S | 1.90 | 1.88 | 1.87 | 1.86 | 1.85 | 1.84 | 1.84 | 1.83 | 1.84 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | 1.90 | 1.92 | 1.94 | 1.93 | 1.83 | 1.94 | 1.87 |
| Aug 18 | 1.95 | 1.93 | 1.91 | 1.89 | S | 1.88 | 1.88 | 1.89 | 1.90 | 1.86 | 1.85 | 1.84 | 1.84 | 1.85 | 1.83 | 1.82 | 1.82 | 1.83 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.82 | 1.95 | 1.86 |
| Aug 19 | 1.83 | 1.83 | 1.82 | S | 1.85 | 1.86 | 1.85 | 1.86 | 1.85 | 1.85 | 1.84 | 1.84 | 1.84 | 1.84 | 1.84 | 1.84 | 1.83 | 1.83 | 1.83 | 1.82 | 1.83 | 1.84 | 1.83 | 1.82 | 1.82 | 1.86 | 1.84 |
| Aug 20 | 1.84 | 1.83 | S | 1.84 | 1.84 | 1.85 | 1.86 | C | C | C | C | C | 1.95 | 1.96 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.96 | 2.03 | 2.09 | 1.83 | 2.09 | 1.93 |
| Aug 21 | 2.03 | S | 1.98 | 1.99 | 1.99 | 2.00 | 2.01 | 2.03 | 2.02 | 1.99 | 1.97 | 1.96 | 1.95 | 1.95 | 1.98 | 1.97 | 1.96 | 1.95 | 1.95 | 1.95 | 1.98 | 1.97 | 1.96 | 1.97 | 1.95 | 2.03 | 1.98 |
| Aug 22 | S | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.02 | 2.02 | 2.01 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | S | 1.99 | 2.02 | 2.00 |
| Aug 23 | 2.00 | 1.99 | 1.99 | 2.00 | 2.00 | 2.00 | 2.01 | 2.02 | 2.02 | 2.01 | 1.99 | 1.98 | 1.99 | 1.98 | 1.98 | 1.97 | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 | 1.99 | S | 2.00 | 1.97 | 2.02 | 1.99 |
| Aug 24 | 2.14 | 2.15 | 2.08 | 2.07 | 2.03 | 2.05 | 2.03 | 2.03 | 2.03 | 2.02 | 2.01 | 2.00 | 1.99 | 1.98 | 1.97 | 1.97 | 1.99 | 1.98 | 1.97 | 1.97 | 1.98 | S | 2.02 | 2.00 | 1.97 | 2.15 | 2.02 |
| Aug 25 | 2.00 | 2.13 | 2.13 | 2.17 | 2.12 | 2.10 | 2.07 | 2.04 | 2.02 | 2.00 | 1.98 | 1.96 | 1.95 | 1.96 | 1.96 | 1.96 | 1.96 | 1.97 | 2.00 | 2.05 | S | 2.06 | 2.08 | 2.07 | 1.95 | 2.17 | 2.03 |
| Aug 26 | 2.06 | 2.03 | 2.05 | 2.05 | 2.04 | 2.06 | 2.07 | 2.06 | 2.04 | 2.01 | 1.99 | 1.98 | 1.97 | 1.97 | 1.94 | 1.95 | 1.95 | 1.96 | 1.96 | S | 1.93 | 1.93 | 1.94 | 1.95 | 1.93 | 2.07 | 2.00 |
| Aug 27 | 1.95 | 1.95 | 1.96 | 1.96 | 1.96 | 1.97 | 1.96 | 1.96 | 1.95 | 1.93 | 1.93 | 1.93 | 1.92 | 1.92 | 1.91 | 1.92 | 1.92 | 1.92 | S | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.91 | 1.97 | 1.94 |
| Aug 28 | 1.93 | 1.93 | 1.95 | 1.95 | 1.95 | 1.96 | 1.95 | 1.95 | 1.94 | 1.93 | 1.91 | 1.92 | 1.92 | 1.92 | 1.92 | 1.91 | 1.91 | S | 1.91 | 1.91 | 1.92 | 1.93 | 1.93 | 1.94 | 1.91 | 1.96 | 1.93 |
| Aug 29 | 1.98 | 2.05 | 2.15 | 2.04 | 1.95 | 1.96 | 1.95 | 1.95 | 1.95 | 1.93 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | S | 1.92 | 1.92 | 1.93 | 1.94 | 1.94 | 1.96 | 2.02 | 1.92 | 2.15 | 1.96 |
| Aug 30 | 2.08 | 2.27 | 2.16 | 2.21 | 2.11 | 2.18 | 2.28 | 2.24 | 2.11 | 2.03 | 1.97 | 1.95 | 1.95 | 1.94 | 1.94 | S | 1.95 | 1.94 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.95 | 1.93 | 2.28 | **2.04** |
| Aug 31 | 1.95 | 1.94 | 1.94 | 1.94 | 1.95 | 1.95 | 1.96 | 1.97 | 1.97 | 1.97 | 1.97 | 1.96 | 1.96 | 1.96 | S | 1.96 | 1.95 | 1.95 | 1.95 | 1.96 | 1.95 | 1.95 | 1.95 | 1.96 | 1.94 | 1.97 | 1.96 |
| Diurnal Maximum | 2.22 | 2.27 | 2.16 | 2.21 | 2.12 | 2.18 | 2.28 | 2.24 | 2.11 | 2.03 | 2.01 | 2.01 | 2.01 | 2.02 | 2.02 | 2.12 | 2.02 | 2.00 | 2.01 | 2.06 | 2.00 | 2.18 | 2.17 | 2.30 | | | |
| Diurnal Average | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 | 1.94 | 1.94 | 1.93 | 1.92 | 1.90 | 1.89 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.89 | 1.88 | 1.90 | 1.91 | 1.93 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for THC - Reno Station*

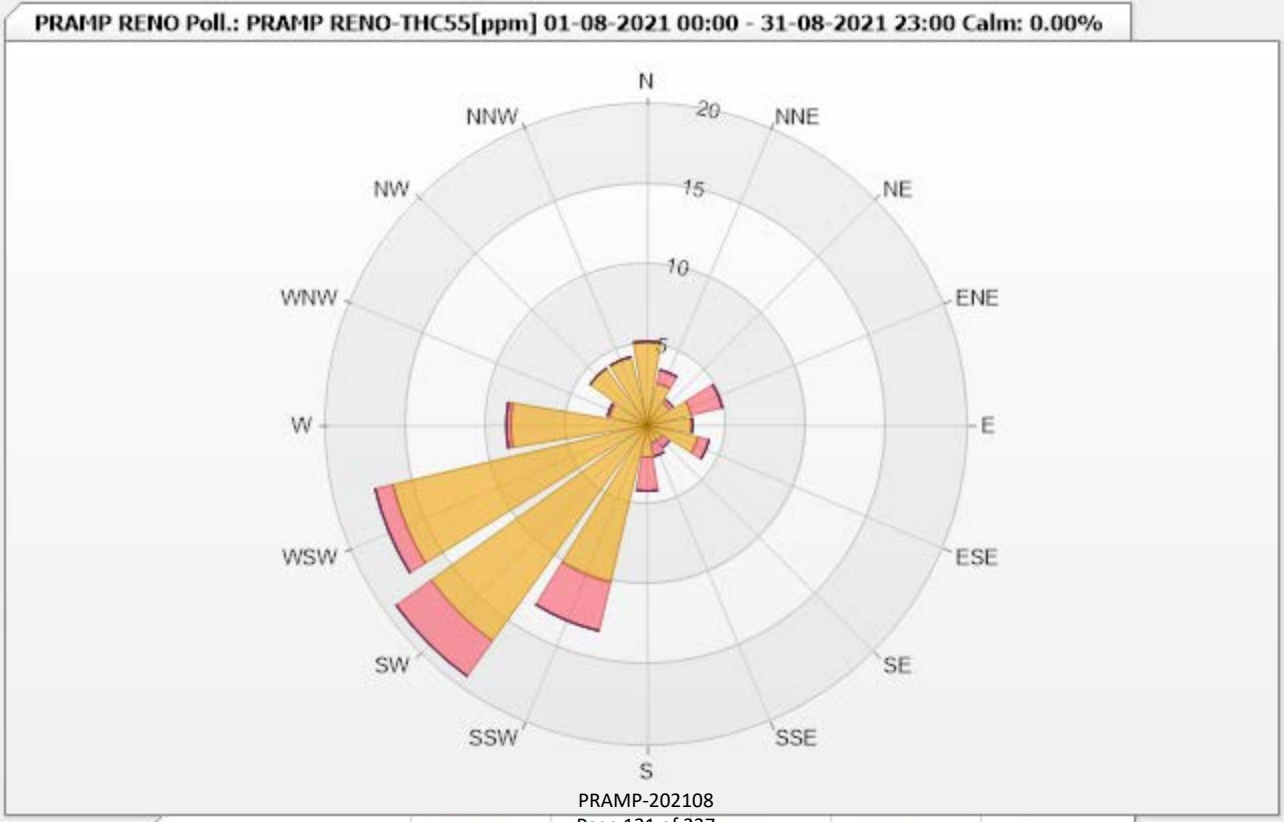





| Classes | THC55 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 85.29% |
| 2 - 2.5 | 14.71% |
| 2.5 - 3 | 0.00% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: PRAMP RENO Poll.: PRAMP RENO-THC55[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-40 | >40.0 | Total |
|---|---|---|---|---|---|---|
| N | 5.23 | 0 | 0 | 0 | 0 | 5.23 |
| NNE | 2.69 | 0.85 | 0 | 0 | 0 | 3.54 |
| NE | 1.7 | 0.28 | 0 | 0 | 0 | 1.98 |
| ENE | 2.83 | 1.98 | 0 | 0 | 0 | 4.81 |
| E | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| ESE | 3.25 | 0.71 | 0 | 0 | 0 | 3.96 |
| SE | 1.13 | 0.57 | 0 | 0 | 0 | 1.7 |
| SSE | 1.13 | 0.85 | 0 | 0 | 0 | 1.98 |
| S | 1.98 | 2.12 | 0 | 0 | 0 | 4.1 |
| SSW | 10.04 | 3.11 | 0 | 0 | 0 | 13.15 |
| SW | 16.55 | 2.69 | 0 | 0 | 0 | 19.24 |
| WSW | 16.27 | 1.13 | 0 | 0 | 0 | 17.4 |
| W | 8.49 | 0.28 | 0 | 0 | 0 | 8.77 |
| WNW | 2.4 | 0.14 | 0 | 0 | 0 | 2.54 |
| NW | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| NNW | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| Summary | 85.28 | 14.71 | 0 | 0 | 0 | 100 |


PRAMP RENO Poll.: PRAMP RENO-THC55[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
85 0-2
15 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## *Reno Station - August 2021*

## Summary of Hourly Averages

## METHANE (CH4) in ppm

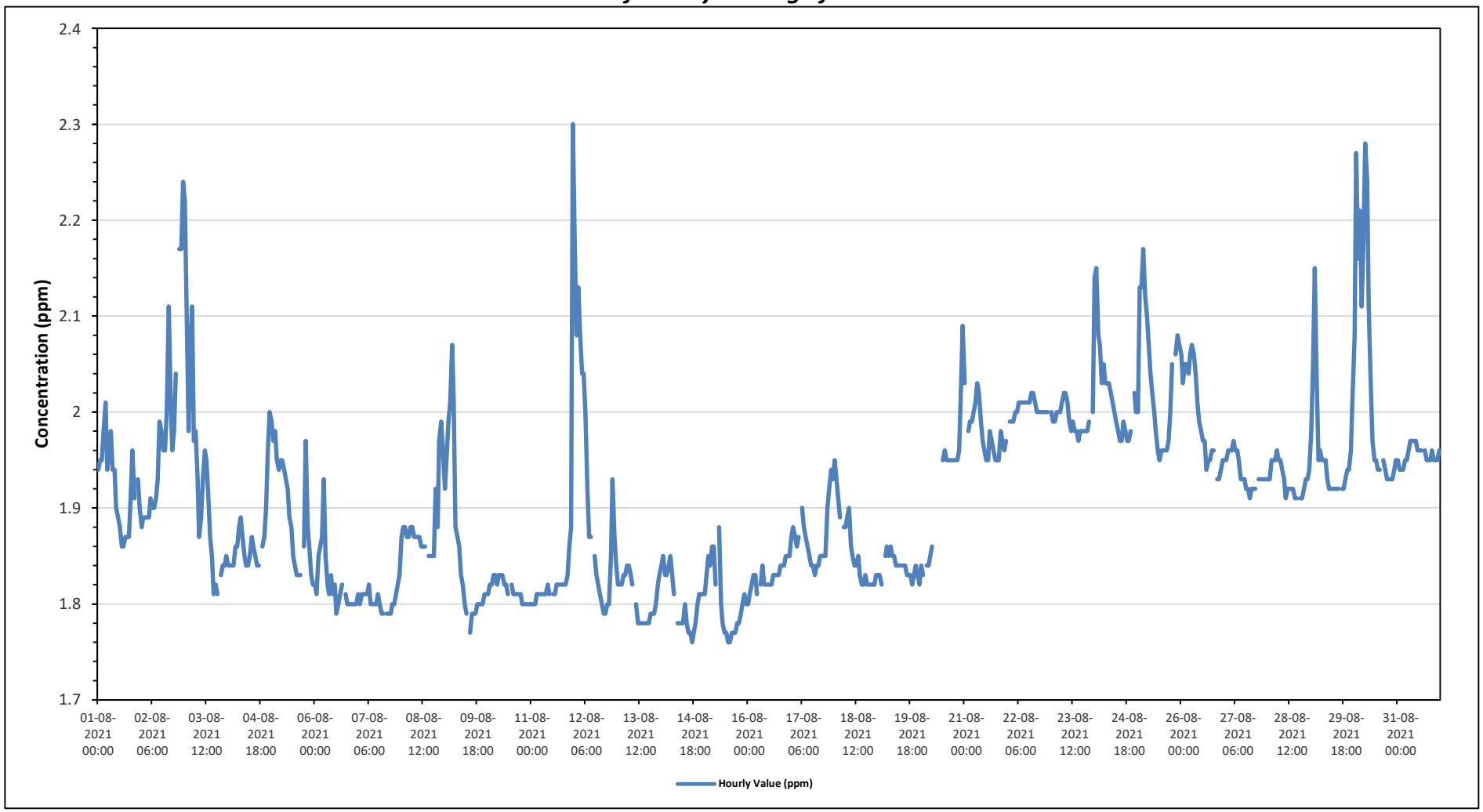
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.30 | ppm | on August 11 at hour 23 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.04 | ppm | on August 30 | Hours of Data: | 707 |
| Minimum Hourly Value: | 1.76 | ppm | on August 14 at hour 17 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.80 | ppm | on August 15 | Hours of Calibration: | 37 |
| Monthly Average: | 1.91 | ppm | | Operational Uptime: | 100.0 |

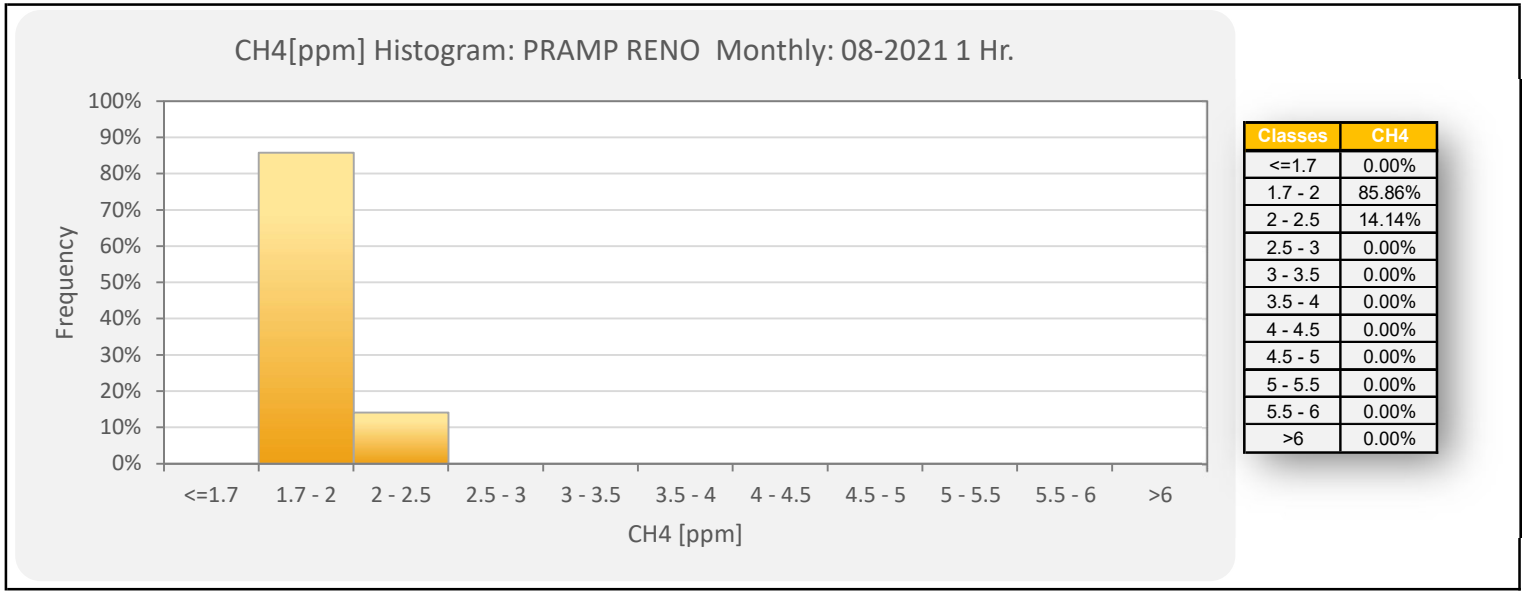
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 1.94 | 1.95 | 1.95 | 1.98 | 2.01 | 1.94 | 1.96 | 1.98 | 1.94 | 1.94 | 1.90 | 1.89 | 1.88 | 1.86 | 1.86 | 1.87 | 1.87 | 1.87 | 1.91 | 1.96 | 1.91 | S | 1.93 | 1.90 | 1.86 | 2.01 | 1.92 |
| Aug 2 | 1.88 | 1.89 | 1.89 | 1.89 | 1.89 | 1.91 | 1.90 | 1.90 | 1.91 | 1.93 | 1.99 | 1.98 | 1.96 | 1.96 | 2.00 | 2.11 | 2.02 | 1.96 | 1.98 | 2.04 | S | 2.17 | 2.17 | 2.24 | 1.88 | 2.24 | 1.98 |
| Aug 3 | 2.22 | 2.11 | 1.98 | 2.07 | 2.11 | 1.97 | 1.98 | 1.93 | 1.87 | 1.89 | 1.93 | 1.96 | 1.95 | 1.91 | 1.87 | 1.85 | 1.81 | 1.82 | 1.81 | S | 1.83 | 1.84 | 1.84 | 1.85 | 1.81 | 2.22 | 1.93 |
| Aug 4 | 1.84 | 1.84 | 1.84 | 1.84 | 1.86 | 1.86 | 1.88 | 1.89 | 1.87 | 1.85 | 1.84 | 1.84 | 1.85 | 1.87 | 1.86 | 1.85 | 1.84 | 1.84 | S | 1.86 | 1.87 | 1.90 | 1.96 | 2.00 | 1.84 | 2.00 | 1.87 |
| Aug 5 | 1.99 | 1.97 | 1.98 | 1.95 | 1.94 | 1.95 | 1.95 | 1.94 | 1.93 | 1.92 | 1.89 | 1.88 | 1.85 | 1.84 | 1.83 | 1.83 | 1.83 | S | 1.86 | 1.97 | 1.88 | 1.86 | 1.83 | 1.82 | 1.82 | 1.99 | 1.90 |
| Aug 6 | 1.82 | 1.81 | 1.85 | 1.86 | 1.87 | 1.93 | 1.85 | 1.82 | 1.81 | 1.83 | 1.81 | 1.82 | 1.79 | 1.80 | 1.81 | 1.82 | S | 1.81 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.79 | 1.93 | 1.82 |
| Aug 7 | 1.81 | 1.80 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.80 | 1.80 | 1.80 | 1.80 | 1.81 | 1.80 | 1.79 | 1.79 | S | 1.79 | 1.79 | 1.79 | 1.80 | 1.80 | 1.81 | 1.82 | 1.83 | 1.79 | 1.83 | 1.80 |
| Aug 8 | 1.87 | 1.88 | 1.88 | 1.87 | 1.87 | 1.88 | 1.88 | 1.87 | 1.87 | 1.87 | 1.87 | 1.86 | 1.86 | 1.86 | S | 1.85 | 1.85 | 1.85 | 1.85 | 1.92 | 1.88 | 1.97 | 1.99 | 1.96 | 1.85 | 1.99 | 1.88 |
| Aug 9 | 1.92 | 1.95 | 1.99 | 2.01 | 2.07 | 2.01 | 1.88 | 1.87 | 1.86 | 1.83 | 1.82 | 1.80 | 1.79 | S | 1.77 | 1.79 | 1.79 | 1.79 | 1.80 | 1.80 | 1.80 | 1.80 | 1.81 | 1.81 | 1.77 | 2.07 | 1.86 |
| Aug 10 | 1.81 | 1.82 | 1.82 | 1.83 | 1.83 | 1.82 | 1.83 | 1.83 | 1.83 | 1.82 | 1.82 | 1.81 | S | 1.82 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.83 | 1.81 |
| Aug 11 | 1.80 | 1.80 | 1.80 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.81 | 1.82 | 1.81 | S | 1.81 | 1.81 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.86 | 1.88 | **2.30** | 1.80 | **2.30** | 1.84 |
| Aug 12 | 2.17 | 2.08 | 2.13 | 2.08 | 2.04 | 2.04 | 2.00 | 1.92 | 1.87 | 1.87 | S | 1.85 | 1.83 | 1.82 | 1.81 | 1.80 | 1.79 | 1.79 | 1.80 | 1.80 | 1.85 | 1.93 | 1.87 | 1.84 | 1.79 | 2.17 | 1.91 |
| Aug 13 | 1.82 | 1.82 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.83 | 1.82 | S | 1.80 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.79 | 1.79 | 1.79 | 1.80 | 1.82 | 1.83 | 1.78 | 1.84 | 1.81 |
| Aug 14 | 1.84 | 1.85 | 1.83 | 1.83 | 1.84 | 1.85 | 1.83 | 1.81 | S | 1.78 | 1.78 | 1.78 | 1.78 | 1.80 | 1.78 | 1.77 | 1.77 | 1.76 | 1.77 | 1.78 | 1.80 | 1.81 | 1.81 | 1.81 | **1.76** | 1.85 | 1.80 |
| Aug 15 | 1.81 | 1.83 | 1.85 | 1.84 | 1.86 | 1.86 | 1.82 | S | 1.88 | 1.80 | 1.78 | 1.77 | 1.77 | 1.76 | 1.76 | 1.77 | 1.77 | 1.77 | 1.78 | 1.78 | 1.79 | 1.80 | 1.81 | 1.80 | **1.76** | 1.88 | 1.80 |
| Aug 16 | 1.80 | 1.81 | 1.82 | 1.83 | 1.83 | 1.81 | S | 1.82 | 1.84 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.85 | 1.80 | 1.85 | 1.83 |
| Aug 17 | 1.87 | 1.88 | 1.87 | 1.86 | 1.87 | S | 1.90 | 1.88 | 1.87 | 1.86 | 1.85 | 1.84 | 1.84 | 1.83 | 1.84 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | 1.90 | 1.92 | 1.94 | 1.93 | 1.83 | 1.94 | 1.87 |
| Aug 18 | 1.95 | 1.93 | 1.91 | 1.89 | S | 1.88 | 1.88 | 1.89 | 1.90 | 1.86 | 1.85 | 1.84 | 1.84 | 1.85 | 1.83 | 1.82 | 1.82 | 1.83 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.82 | 1.95 | 1.86 |
| Aug 19 | 1.83 | 1.83 | 1.82 | S | 1.85 | 1.86 | 1.85 | 1.86 | 1.85 | 1.85 | 1.84 | 1.84 | 1.84 | 1.84 | 1.84 | 1.84 | 1.83 | 1.83 | 1.83 | 1.82 | 1.83 | 1.84 | 1.83 | 1.82 | 1.82 | 1.86 | 1.84 |
| Aug 20 | 1.84 | 1.83 | S | 1.84 | 1.84 | 1.85 | 1.86 | C | C | C | C | C | 1.95 | 1.96 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.96 | 2.03 | 2.09 | 1.83 | 2.09 | 1.93 |
| Aug 21 | 2.03 | S | 1.98 | 1.99 | 1.99 | 2.00 | 2.01 | 2.03 | 2.02 | 1.99 | 1.97 | 1.96 | 1.95 | 1.95 | 1.98 | 1.97 | 1.96 | 1.95 | 1.95 | 1.95 | 1.98 | 1.97 | 1.96 | 1.97 | 1.95 | 2.03 | 1.98 |
| Aug 22 | S | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.02 | 2.02 | 2.01 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | S | 1.99 | 2.02 | 2.00 |
| Aug 23 | 2.00 | 1.99 | 1.99 | 2.00 | 2.00 | 2.00 | 2.01 | 2.02 | 2.02 | 2.01 | 1.99 | 1.98 | 1.99 | 1.98 | 1.98 | 1.97 | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 | 1.99 | S | 2.00 | 1.97 | 2.02 | 1.99 |
| Aug 24 | 2.14 | 2.15 | 2.08 | 2.07 | 2.03 | 2.05 | 2.03 | 2.03 | 2.03 | 2.02 | 2.01 | 2.00 | 1.99 | 1.98 | 1.97 | 1.97 | 1.99 | 1.98 | 1.97 | 1.97 | 1.98 | S | 2.02 | 2.00 | 1.97 | 2.15 | 2.02 |
| Aug 25 | 2.00 | 2.13 | 2.13 | 2.17 | 2.12 | 2.10 | 2.07 | 2.04 | 2.02 | 2.00 | 1.98 | 1.96 | 1.95 | 1.96 | 1.96 | 1.96 | 1.96 | 1.97 | 2.00 | 2.05 | S | 2.06 | 2.08 | 2.07 | 1.95 | 2.17 | 2.03 |
| Aug 26 | 2.06 | 2.03 | 2.05 | 2.05 | 2.04 | 2.06 | 2.07 | 2.06 | 2.04 | 2.01 | 1.99 | 1.98 | 1.97 | 1.97 | 1.94 | 1.95 | 1.95 | 1.96 | 1.96 | S | 1.93 | 1.93 | 1.94 | 1.95 | 1.93 | 2.07 | 2.00 |
| Aug 27 | 1.95 | 1.95 | 1.96 | 1.96 | 1.96 | 1.97 | 1.96 | 1.96 | 1.95 | 1.93 | 1.93 | 1.93 | 1.92 | 1.92 | 1.91 | 1.92 | 1.92 | 1.92 | S | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.91 | 1.97 | 1.94 |
| Aug 28 | 1.93 | 1.93 | 1.95 | 1.95 | 1.95 | 1.96 | 1.95 | 1.95 | 1.94 | 1.93 | 1.91 | 1.92 | 1.92 | 1.92 | 1.92 | 1.91 | 1.91 | S | 1.91 | 1.91 | 1.92 | 1.93 | 1.93 | 1.94 | 1.91 | 1.96 | 1.93 |
| Aug 29 | 1.98 | 2.05 | 2.15 | 2.04 | 1.95 | 1.96 | 1.95 | 1.95 | 1.95 | 1.93 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | S | 1.92 | 1.92 | 1.93 | 1.94 | 1.94 | 1.96 | 2.02 | 1.92 | 2.15 | 1.96 |
| Aug 30 | 2.08 | 2.27 | 2.16 | 2.21 | 2.11 | 2.18 | 2.28 | 2.24 | 2.11 | 2.03 | 1.97 | 1.95 | 1.95 | 1.94 | 1.94 | S | 1.95 | 1.94 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.95 | 1.93 | 2.28 | **2.04** |
| Aug 31 | 1.95 | 1.94 | 1.94 | 1.94 | 1.95 | 1.95 | 1.96 | 1.97 | 1.97 | 1.97 | 1.97 | 1.96 | 1.96 | 1.96 | S | 1.96 | 1.95 | 1.95 | 1.95 | 1.96 | 1.95 | 1.95 | 1.95 | 1.96 | 1.94 | 1.97 | 1.96 |
| Diurnal Maximum | 2.22 | 2.27 | 2.16 | 2.21 | 2.12 | 2.18 | 2.28 | 2.24 | 2.11 | 2.03 | 2.01 | 2.01 | 2.01 | 2.02 | 2.02 | 2.11 | 2.02 | 2.00 | 2.00 | 2.05 | 2.00 | 2.17 | 2.17 | 2.30 | | | |
| Diurnal Average | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 | 1.94 | 1.93 | 1.93 | 1.92 | 1.90 | 1.89 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.87 | 1.88 | 1.89 | 1.88 | 1.90 | 1.91 | 1.93 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for CH4 - Reno Station*

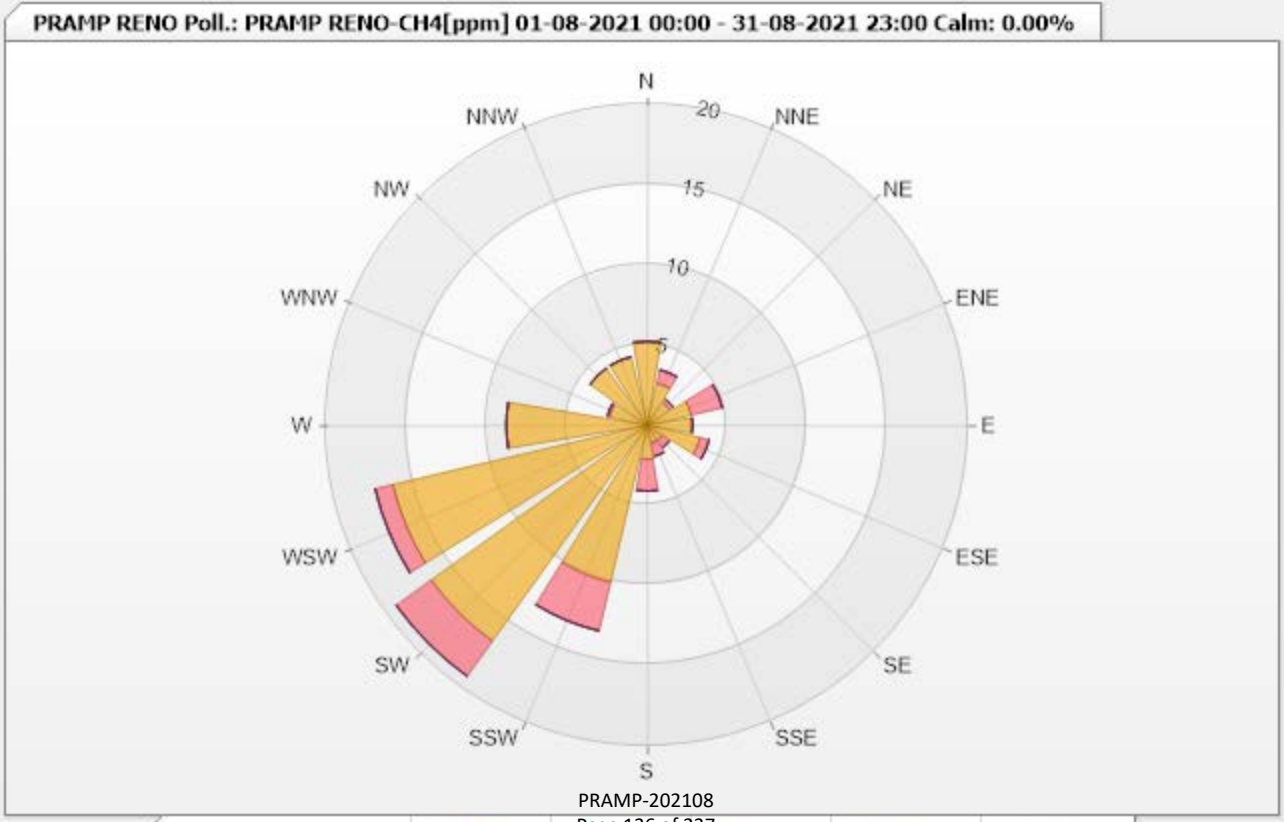





| Classes | CH4 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 85.86% |
| 2 - 2.5 | 14.14% |
| 2.5 - 3 | 0.00% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: PRAMP RENO Poll.: PRAMP RENO-CH4[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-20 | >20.0 | Total |
|---|---|---|---|---|---|---|
| N | 5.23 | 0 | 0 | 0 | 0 | 5.23 |
| NNE | 2.69 | 0.85 | 0 | 0 | 0 | 3.54 |
| NE | 1.7 | 0.28 | 0 | 0 | 0 | 1.98 |
| ENE | 2.83 | 1.98 | 0 | 0 | 0 | 4.81 |
| E | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| ESE | 3.39 | 0.57 | 0 | 0 | 0 | 3.96 |
| SE | 1.13 | 0.57 | 0 | 0 | 0 | 1.7 |
| SSE | 1.13 | 0.85 | 0 | 0 | 0 | 1.98 |
| S | 2.12 | 1.98 | 0 | 0 | 0 | 4.1 |
| SSW | 10.04 | 3.11 | 0 | 0 | 0 | 13.15 |
| SW | 16.55 | 2.69 | 0 | 0 | 0 | 19.24 |
| WSW | 16.27 | 1.13 | 0 | 0 | 0 | 17.4 |
| W | 8.77 | 0 | 0 | 0 | 0 | 8.77 |
| WNW | 2.4 | 0.14 | 0 | 0 | 0 | 2.54 |
| NW | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| NNW | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| Summary | 85.84 | 14.15 | 0 | 0 | 0 | 100 |


PRAMP RENO Poll.: PRAMP RENO-CH4[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
86 0-2
14 2-5
0 5-10
0 10-20
0 >20.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## NON-METHANE HYDROCARBONS (NMHC) in ppm

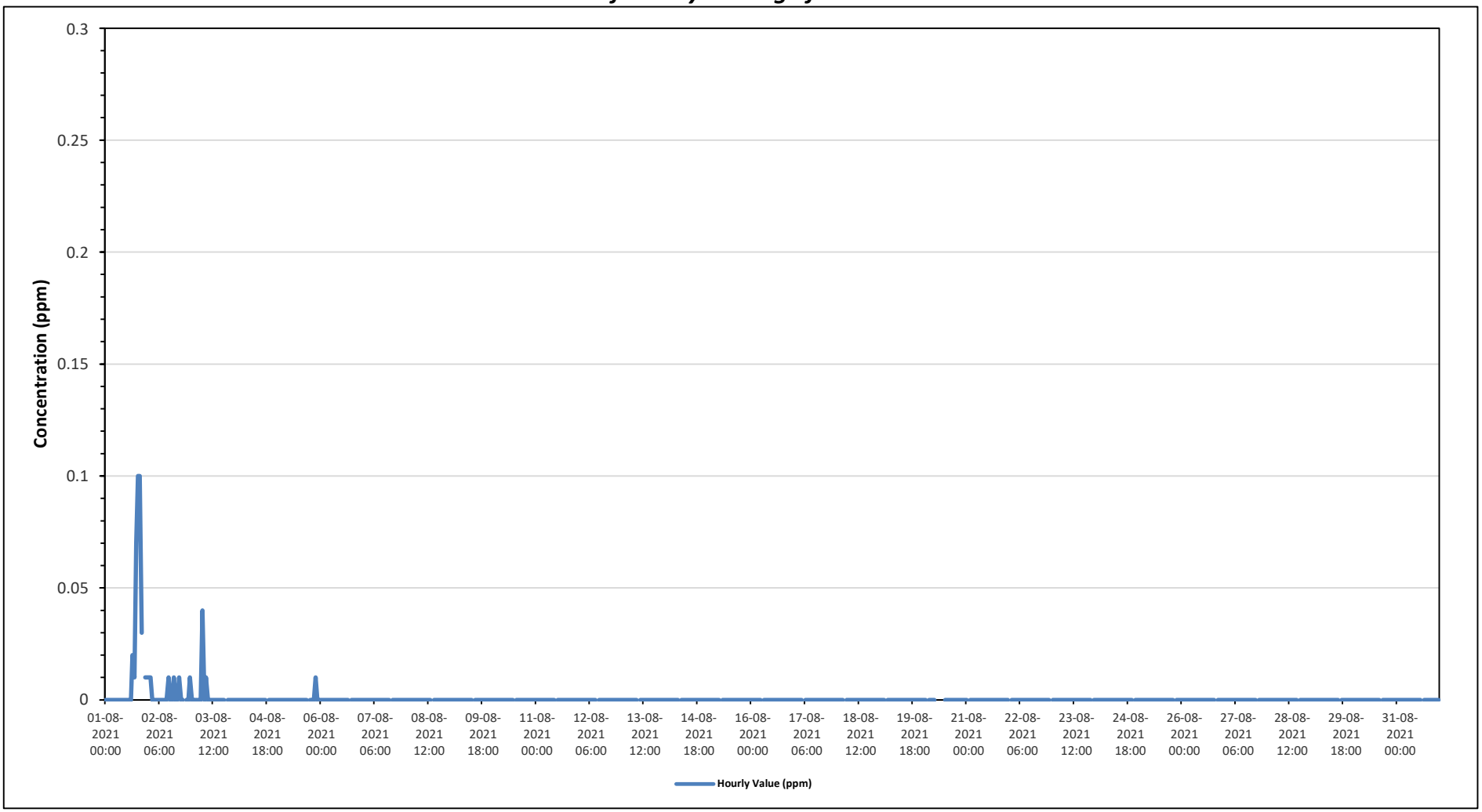
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0.10 | ppm | on August 1 at hour 18 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.02 | ppm | on August 1 | Hours of Data: | 707 |
| Minimum Hourly Value: | 0.00 | ppm | on August 1 at hour 0 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.00 | ppm | on August 4 | Hours of Calibration: | 37 |
| Monthly Average: | 0.00 | ppm | | Operational Uptime: | 100.0 |

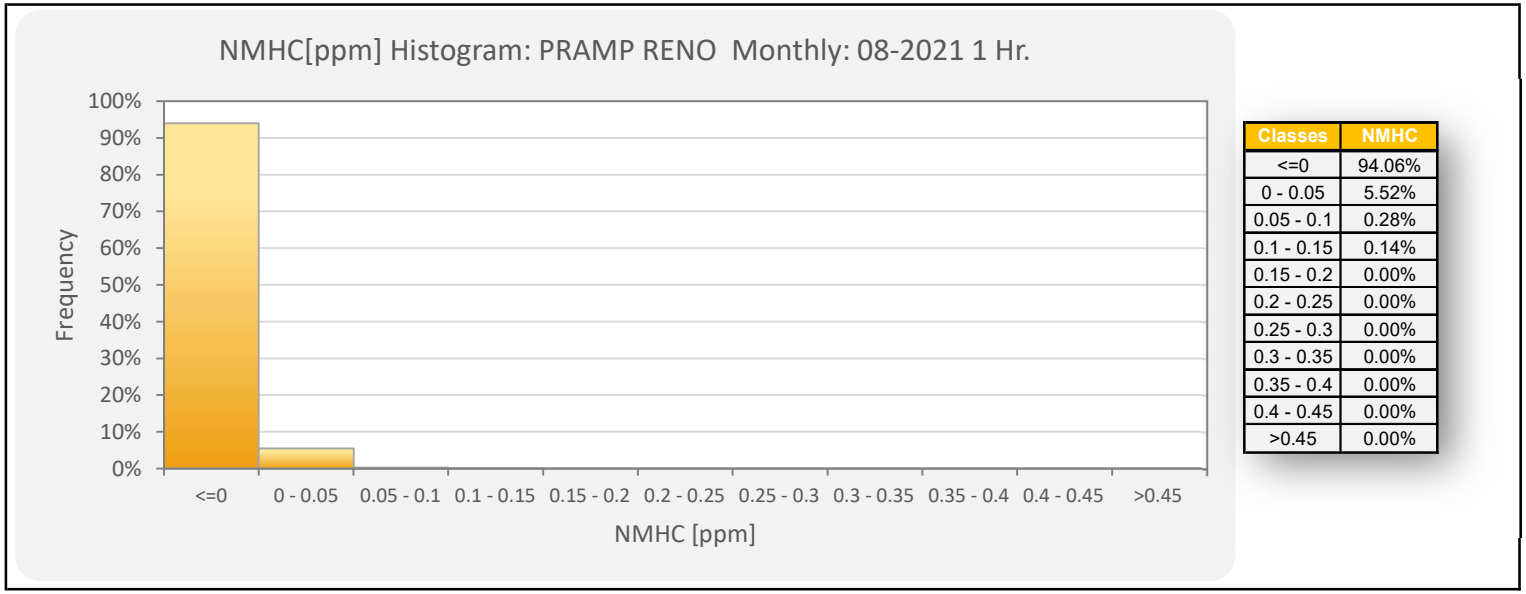
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.07 | **0.10** | **0.10** | 0.03 | S | 0.01 | 0.01 | 0.00 | **0.10** | **0.02** |
| Aug 2 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 |
| Aug 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 |
| Aug 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| Aug 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 18 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 19 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 20 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | C | C | C | C | C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 21 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 22 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 |
| Aug 23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Diurnal Maximum | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.02 | 0.01 | 0.07 | 0.10 | 0.10 | 0.03 | 0.01 | 0.01 | 0.01 | | | |
| Diurnal Average | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NMHC - Reno Station*

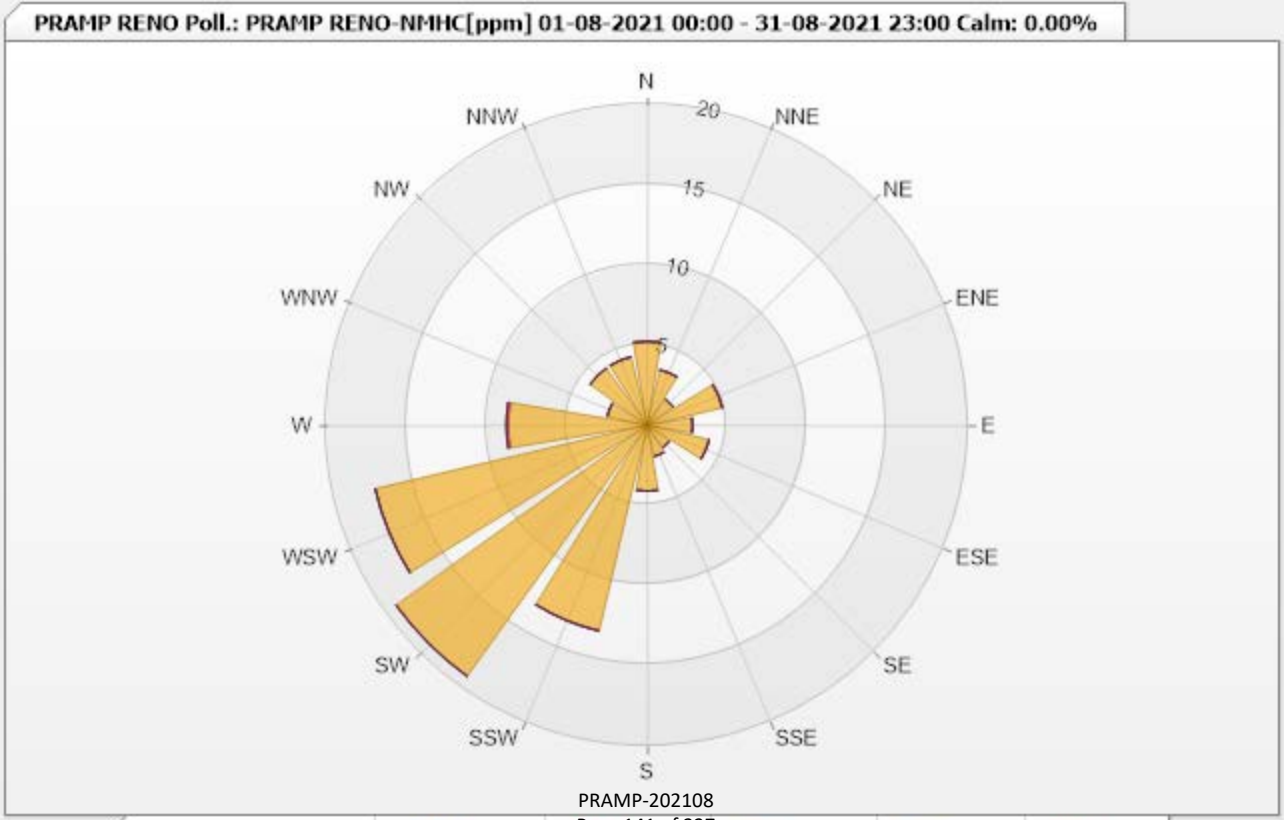





| Classes | NMHC |
|---|---|
| <=0 | 94.06% |
| 0 - 0.05 | 5.52% |
| 0.05 - 0.1 | 0.28% |
| 0.1 - 0.15 | 0.14% |
| 0.15 - 0.2 | 0.00% |
| 0.2 - 0.25 | 0.00% |
| 0.25 - 0.3 | 0.00% |
| 0.3 - 0.35 | 0.00% |
| 0.35 - 0.4 | 0.00% |
| 0.4 - 0.45 | 0.00% |
| >0.45 | 0.00% |

Wind: PRAMP RENO Poll.: PRAMP RENO-NMHC[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

| Direction | 0-0.1 | 0.1-0.3 | 0.3-0.9 | 0.9-2 | >2.0 | Total |
|---|---|---|---|---|---|---|
| N | 5.23 | 0 | 0 | 0 | 0 | 5.23 |
| NNE | 3.54 | 0 | 0 | 0 | 0 | 3.54 |
| NE | 1.98 | 0 | 0 | 0 | 0 | 1.98 |
| ENE | 4.81 | 0 | 0 | 0 | 0 | 4.81 |
| E | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| ESE | 3.96 | 0 | 0 | 0 | 0 | 3.96 |
| SE | 1.7 | 0 | 0 | 0 | 0 | 1.7 |
| SSE | 1.98 | 0 | 0 | 0 | 0 | 1.98 |
| S | 4.1 | 0 | 0 | 0 | 0 | 4.1 |
| SSW | 13.15 | 0 | 0 | 0 | 0 | 13.15 |
| SW | 19.24 | 0 | 0 | 0 | 0 | 19.24 |
| WSW | 17.4 | 0 | 0 | 0 | 0 | 17.4 |
| W | 8.63 | 0.14 | 0 | 0 | 0 | 8.77 |
| WNW | 2.55 | 0 | 0 | 0 | 0 | 2.55 |
| NW | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| NNW | 4.38 | 0 | 0 | 0 | 0 | 4.38 |
| Summary | 100 | 0.14 | 0 | 0 | 0 | 100 |


PRAMP RENO Poll.: PRAMP RENO-NMHC[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
100 0-0.1
0 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## RELATIVE HUMIDITY (RH) in %

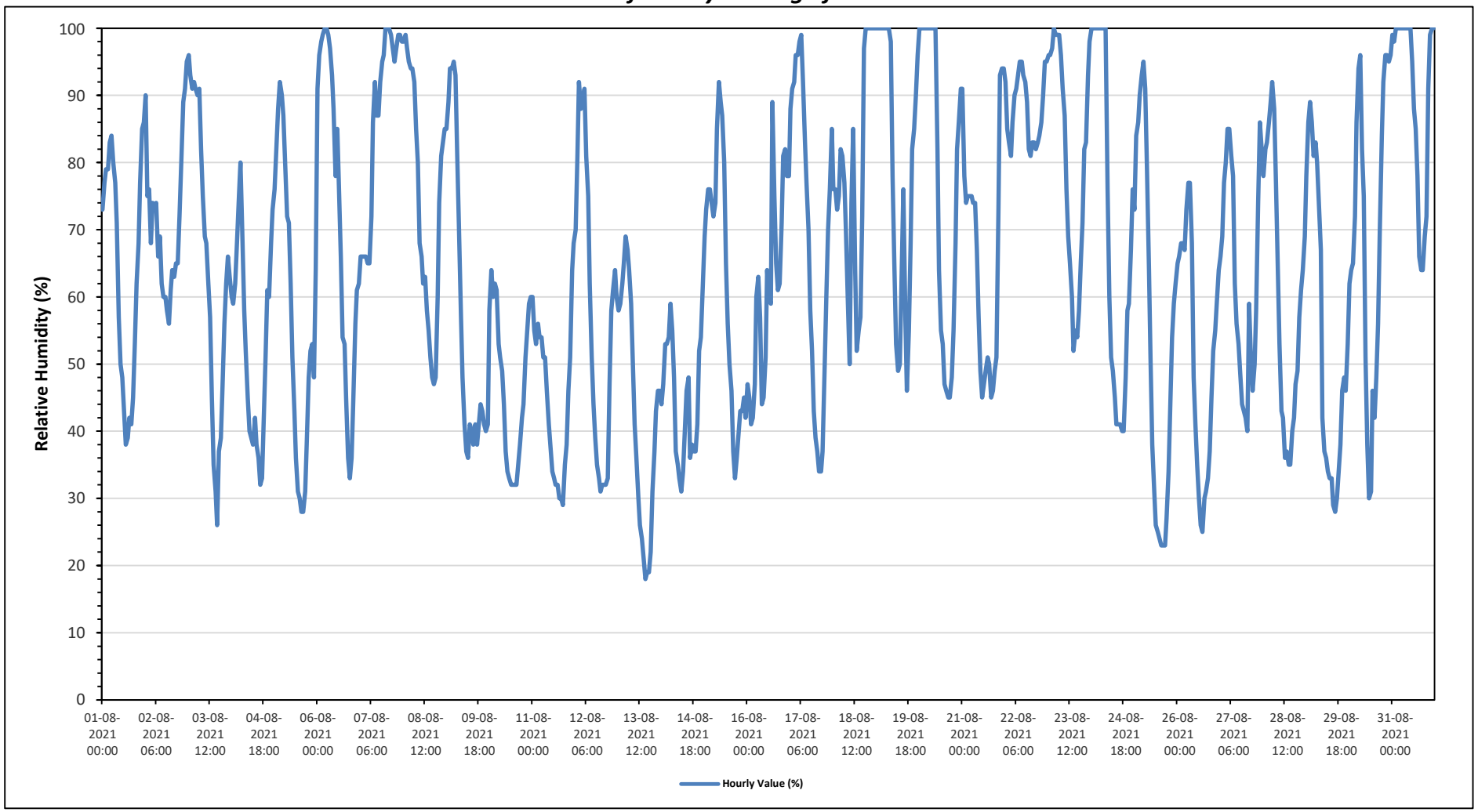
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 100 | % | on August 6 at hour 4 | Hours in Service: | 744 |
| Maximum Daily Value: | 90.3 | % | on August 31 | Hours of Data: | 744 |
| Minimum Hourly Value: | 18 | % | on August 13 at hour 15 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 42.2 | % | on August 13 | Hours of Calibration: | 0 |
| Monthly Average: | 65.0 | % | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 73 | 77 | 79 | 79 | 83 | 84 | 80 | 77 | 71 | 57 | 50 | 48 | 43 | 38 | 39 | 42 | 41 | 45 | 53 | 62 | 68 | 77 | 85 | 86 | 38 | 86 | 64.0 |
| Aug 2 | 90 | 75 | 76 | 68 | 74 | 73 | 74 | 66 | 69 | 62 | 60 | 60 | 58 | 56 | 61 | 64 | 63 | 65 | 65 | 72 | 81 | 89 | 91 | 95 | 56 | 95 | 71.1 |
| Aug 3 | 96 | 93 | 91 | 92 | 91 | 90 | 91 | 82 | 75 | 69 | 68 | 62 | 57 | 45 | 35 | 31 | 26 | 37 | 39 | 46 | 56 | 62 | 66 | 63 | 26 | 96 | 65.1 |
| Aug 4 | 60 | 59 | 62 | 68 | 75 | 80 | 70 | 58 | 52 | 45 | 40 | 39 | 38 | 42 | 38 | 36 | 32 | 33 | 42 | 51 | 61 | 60 | 68 | 73 | 32 | 80 | 53.4 |
| Aug 5 | 76 | 82 | 88 | 92 | 90 | 87 | 79 | 72 | 71 | 62 | 51 | 43 | 36 | 31 | 30 | 28 | 28 | 31 | 38 | 48 | 52 | 53 | 48 | 64 | 28 | 92 | 57.5 |
| Aug 6 | 91 | 96 | 98 | 99 | **100** | **100** | 99 | 97 | 93 | 88 | 78 | 85 | 77 | 66 | 54 | 53 | 45 | 36 | 33 | 36 | 45 | 56 | 61 | 62 | 33 | **100** | 72.8 |
| Aug 7 | 66 | 66 | 66 | 66 | 65 | 65 | 72 | 86 | 92 | 87 | 87 | 92 | 95 | 96 | **100** | **100** | **100** | 99 | 97 | 95 | 97 | 99 | 99 | 98 | 65 | **100** | 86.9 |
| Aug 8 | 98 | 99 | 97 | 95 | 94 | 94 | 92 | 85 | 80 | 68 | 66 | 62 | 63 | 58 | 55 | 51 | 48 | 47 | 48 | 60 | 74 | 81 | 83 | 85 | 47 | 99 | 74.3 |
| Aug 9 | 85 | 89 | 94 | 94 | 95 | 93 | 81 | 70 | 57 | 48 | 41 | 37 | 36 | 41 | 40 | 38 | 41 | 38 | 41 | 44 | 43 | 41 | 40 | 41 | 36 | 95 | 57.0 |
| Aug 10 | 58 | 64 | 60 | 62 | 61 | 53 | 51 | 49 | 44 | 37 | 34 | 33 | 32 | 32 | 32 | 32 | 35 | 38 | 42 | 44 | 51 | 55 | 59 | 60 | 32 | 64 | 46.6 |
| Aug 11 | 60 | 55 | 53 | 56 | 54 | 54 | 51 | 51 | 46 | 41 | 38 | 34 | 33 | 32 | 32 | 30 | 30 | 29 | 35 | 38 | 46 | 51 | 64 | 68 | 29 | 68 | 45.0 |
| Aug 12 | 70 | 81 | 92 | 88 | 89 | 91 | 81 | 75 | 62 | 51 | 44 | 39 | 35 | 33 | 31 | 32 | 32 | 32 | 33 | 47 | 58 | 61 | 64 | 60 | 31 | 92 | 57.5 |
| Aug 13 | 58 | 59 | 62 | 65 | 69 | 67 | 64 | 59 | 50 | 41 | 36 | 30 | 26 | 24 | 21 | **18** | 19 | 19 | 22 | 31 | 37 | 43 | 46 | 46 | **18** | 69 | 42.2 |
| Aug 14 | 44 | 47 | 53 | 53 | 54 | 59 | 55 | 48 | 37 | 35 | 33 | 31 | 34 | 40 | 46 | 48 | 36 | 38 | 37 | 37 | 41 | 52 | 54 | 61 | 31 | 61 | 44.7 |
| Aug 15 | 69 | 73 | 76 | 76 | 74 | 72 | 74 | 85 | 92 | 89 | 87 | 80 | 65 | 56 | 50 | 46 | 37 | 33 | 36 | 40 | 43 | 43 | 45 | 42 | 33 | 92 | 61.8 |
| Aug 16 | 47 | 45 | 41 | 42 | 47 | 60 | 63 | 57 | 44 | 45 | 51 | 64 | 60 | 59 | 89 | 75 | 65 | 61 | 62 | 71 | 81 | 82 | 78 | 78 | 41 | 89 | 61.1 |
| Aug 17 | 88 | 91 | 92 | 96 | 96 | 98 | 99 | 92 | 83 | 77 | 70 | 58 | 52 | 43 | 39 | 37 | 34 | 34 | 37 | 49 | 60 | 70 | 76 | 85 | 34 | 99 | 69.0 |
| Aug 18 | 76 | 76 | 73 | 75 | 82 | 81 | 77 | 70 | 59 | 50 | 74 | 85 | 64 | 52 | 55 | 57 | 72 | 97 | **100** | **100** | **100** | **100** | **100** | **100** | 50 | **100** | 78.1 |
| Aug 19 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 98 | 78 | 65 | 53 | 49 | 50 | 63 | 76 | 57 | 46 | 55 | 68 | 82 | 85 | 90 | 96 | 46 | **100** | 79.6 |
| Aug 20 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 82 | 64 | 55 | 53 | 47 | 46 | 45 | 45 | 48 | 55 | 68 | 82 | 86 | 91 | 45 | **100** | 77.8 |
| Aug 21 | 91 | 78 | 74 | 75 | 75 | 75 | 74 | 74 | 67 | 57 | 49 | 45 | 47 | 49 | 51 | 50 | 45 | 46 | 49 | 51 | 73 | 93 | 94 | 94 | 45 | 94 | 65.7 |
| Aug 22 | 92 | 85 | 83 | 81 | 86 | 90 | 91 | 93 | 95 | 95 | 93 | 92 | 89 | 82 | 81 | 83 | 83 | 82 | 83 | 84 | 86 | 90 | 95 | 95 | 81 | 95 | 87.9 |
| Aug 23 | 96 | 96 | 97 | **100** | 99 | 99 | 99 | 96 | 91 | 87 | 76 | 69 | 65 | 60 | 52 | 55 | 54 | 58 | 65 | 71 | 82 | 83 | 93 | 98 | 52 | **100** | 80.9 |
| Aug 24 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 76 | 60 | 51 | 49 | 45 | 41 | 41 | 41 | 40 | 40 | 48 | 58 | 59 | 67 | 76 | 40 | **100** | 70.5 |
| Aug 25 | 73 | 84 | 86 | 90 | 93 | 95 | 91 | 79 | 64 | 51 | 38 | 31 | 26 | 25 | 24 | 23 | 23 | 23 | 27 | 34 | 44 | 54 | 59 | 62 | 23 | 95 | 54.1 |
| Aug 26 | 65 | 66 | 68 | 68 | 67 | 73 | 77 | 77 | 68 | 48 | 41 | 35 | 30 | 26 | 25 | 30 | 31 | 33 | 37 | 45 | 52 | 55 | 59 | 64 | 25 | 77 | 51.7 |
| Aug 27 | 66 | 69 | 77 | 80 | 85 | 85 | 81 | 78 | 62 | 56 | 53 | 49 | 44 | 43 | 42 | 40 | 59 | 51 | 46 | 50 | 58 | 74 | 86 | 82 | 40 | 86 | 63.2 |
| Aug 28 | 78 | 82 | 83 | 86 | 89 | 92 | 88 | 77 | 65 | 53 | 43 | 42 | 36 | 37 | 35 | 35 | 40 | 42 | 47 | 49 | 57 | 61 | 64 | 69 | 35 | 92 | 60.4 |
| Aug 29 | 78 | 86 | 89 | 86 | 81 | 83 | 80 | 74 | 67 | 42 | 37 | 36 | 34 | 33 | 33 | 29 | 28 | 30 | 34 | 38 | 46 | 48 | 46 | 53 | 28 | 89 | 53.8 |
| Aug 30 | 62 | 64 | 65 | 72 | 86 | 94 | 96 | 82 | 75 | 51 | 38 | 30 | 31 | 46 | 42 | 48 | 56 | 70 | 84 | 92 | 96 | 96 | 95 | 96 | 30 | 96 | 69.5 |
| Aug 31 | 99 | 98 | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | 95 | 88 | 85 | 78 | 66 | 64 | 64 | 69 | 72 | 91 | 99 | **100** | **100** | 64 | **100** | **90.3** |
| Diurnal Maximum | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 95 | 95 | 96 | 100 | 100 | 100 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | | | |
| Diurnal Average | 77.6 | 78.5 | 79.8 | 80.8 | 82.4 | 83.5 | 81.6 | 77.7 | 71.9 | 62.8 | 57.5 | 54.0 | 49.9 | 47.7 | 47.1 | 46.5 | 45.5 | 46.5 | 49.8 | 55.7 | 64.1 | 69.5 | 72.9 | 75.6 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C** | Monthly Calibration | **S** | Daily Zero-Span Check | **Q** | Quality Assurance | |
| **K** | Collection Error | **N** | No Data (Machine Not in Service) | **Y** | Routine Maintenance | **P** Power Failure |
| **X** | InValid Data (Equipment Malfunction /Recovery) | **NRM** | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for RH - Reno Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## BAROMETRIC PRESSURE (BP) in millibar

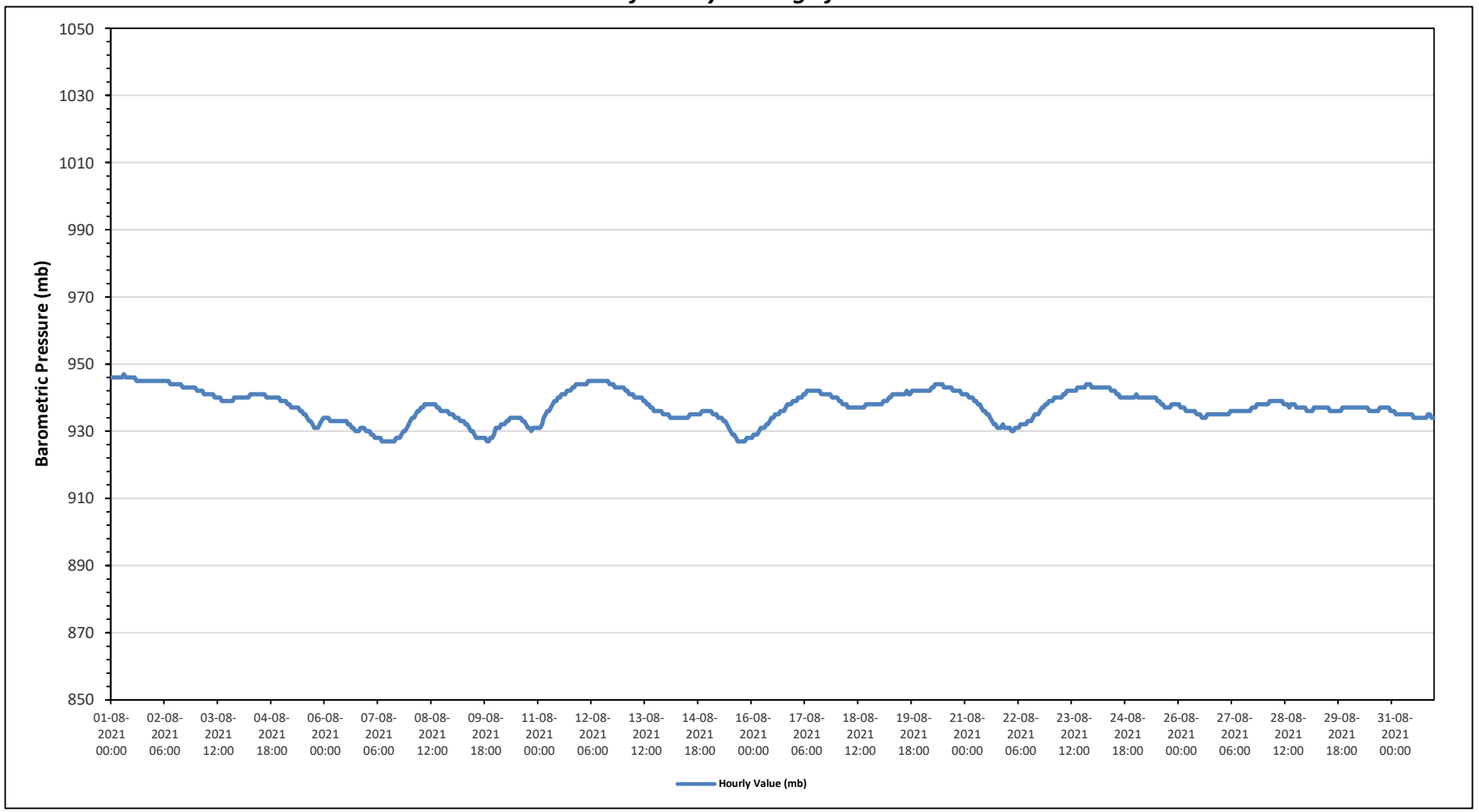
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 947 | mb | on August 1 at hour 7 | Hours in Service: | 744 |
| Maximum Daily Value: | 946 | mb | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | 927 | mb | on August 7 at hour 8 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 928 | mb | on August 7 | Hours of Calibration: | 0 |
| Monthly Average: | 937 | mb | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | **947** | 946 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | **947** | **945.6** |
| Aug 2 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 945 | 944.0 |
| Aug 3 | 942 | 942 | 942 | 942 | 941 | 941 | 941 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 940 | 940 | 940 | 939 | 942 | 940.3 |
| Aug 4 | 940 | 940 | 940 | 940 | 940 | 940 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 941 | 940.3 |
| Aug 5 | 939 | 939 | 939 | 938 | 938 | 937 | 937 | 937 | 937 | 937 | 936 | 936 | 935 | 935 | 934 | 933 | 933 | 932 | 931 | 931 | 931 | 932 | 933 | 934 | 931 | 939 | 935.2 |
| Aug 6 | 934 | 934 | 934 | 933 | 933 | 933 | 933 | 933 | 933 | 933 | 933 | 933 | 933 | 932 | 932 | 931 | 931 | 930 | 930 | 930 | 931 | 931 | 931 | 930 | 930 | 934 | 932.1 |
| Aug 7 | 930 | 930 | 929 | 929 | 928 | 928 | 928 | 928 | **927** | **927** | **927** | **927** | **927** | **927** | **927** | **927** | 928 | 928 | 928 | 929 | 930 | 930 | 931 | 932 | **927** | 932 | 928.4 |
| Aug 8 | 933 | 934 | 934 | 935 | 936 | 936 | 937 | 937 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 937 | 936 | 936 | 936 | 936 | 936 | 935 | 935 | 933 | 938 | 936.3 |
| Aug 9 | 935 | 934 | 934 | 934 | 933 | 933 | 933 | 932 | 932 | 931 | 930 | 930 | 929 | 928 | 928 | 928 | 928 | 928 | 928 | **927** | **927** | 928 | 928 | 929 | **927** | 935 | 930.3 |
| Aug 10 | 931 | 931 | 931 | 932 | 932 | 932 | 933 | 933 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 933 | 933 | 932 | 931 | 931 | 930 | 931 | 931 | 931 | 930 | 934 | 932.3 |
| Aug 11 | 931 | 931 | 932 | 934 | 935 | 936 | 936 | 937 | 938 | 939 | 939 | 940 | 940 | 941 | 941 | 941 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 931 | 944 | 939.0 |
| Aug 12 | 944 | 944 | 944 | 944 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 943 | 945 | 944.3 |
| Aug 13 | 943 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 938 | 938 | 937 | 937 | 936 | 936 | 936 | 936 | 936 | 935 | 935 | 935 | 943 | 938.7 |
| Aug 14 | 935 | 935 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 936 | 936 | 936 | 936 | 934 | 936 | 934.7 |
| Aug 15 | 936 | 936 | 935 | 935 | 935 | 934 | 934 | 934 | 933 | 933 | 932 | 931 | 930 | 929 | 929 | 928 | **927** | **927** | **927** | **927** | **927** | 928 | 928 | 928 | **927** | 936 | 931.0 |
| Aug 16 | 928 | 929 | 929 | 929 | 930 | 931 | 931 | 931 | 932 | 932 | 933 | 934 | 934 | 935 | 935 | 935 | 936 | 936 | 936 | 937 | 938 | 938 | 938 | 939 | 928 | 939 | 933.6 |
| Aug 17 | 939 | 939 | 940 | 940 | 940 | 941 | 941 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 941 | 941 | 941 | 941 | 941 | 941 | 940 | 940 | 940 | 939 | 942 | 940.9 |
| Aug 18 | 940 | 939 | 939 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 940 | 937.8 |
| Aug 19 | 938 | 938 | 939 | 939 | 939 | 940 | 940 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 942 | 941 | 941 | 942 | 942 | 942 | 942 | 942 | 942 | 938 | 942 | 940.7 |
| Aug 20 | 942 | 942 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 942 | 942 | 942 | 941 | 941 | 941 | 944 | 942.6 |
| Aug 21 | 941 | 941 | 940 | 940 | 940 | 939 | 939 | 938 | 938 | 937 | 936 | 936 | 935 | 935 | 934 | 933 | 932 | 932 | 931 | 931 | 931 | 932 | 931 | 931 | 931 | 941 | 935.5 |
| Aug 22 | 931 | 931 | 930 | 930 | 931 | 931 | 931 | 932 | 932 | 932 | 932 | 933 | 933 | 933 | 934 | 935 | 935 | 935 | 936 | 937 | 937 | 938 | 938 | 939 | 930 | 939 | 933.6 |
| Aug 23 | 939 | 939 | 940 | 940 | 940 | 940 | 940 | 941 | 941 | 942 | 942 | 942 | 942 | 942 | 942 | 943 | 943 | 943 | 943 | 943 | 944 | 944 | 944 | 943 | 939 | 944 | 941.8 |
| Aug 24 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 942 | 941 | 941 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 943 | 941.6 |
| Aug 25 | 941 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 939 | 939 | 938 | 938 | 937 | 937 | 937 | 937 | 938 | 938 | 938 | 938 | 937 | 941 | 939.0 |
| Aug 26 | 938 | 937 | 937 | 937 | 936 | 936 | 936 | 936 | 936 | 936 | 935 | 935 | 935 | 934 | 934 | 934 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 934 | 938 | 935.5 |
| Aug 27 | 935 | 935 | 935 | 935 | 935 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 937 | 937 | 938 | 938 | 938 | 938 | 935 | 938 | 936.3 |
| Aug 28 | 938 | 938 | 938 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 938 | 937 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 939 | 938.0 |
| Aug 29 | 936 | 936 | 936 | 936 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 936 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 937 | 937 | 937 | 936 | 937 | 936.5 |
| Aug 30 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 936 | 936 | 936 | 936 | 936 | 936 | 937 | 937 | 937 | 937 | 937 | 937 | 936 | 936 | 937 | 936.7 |
| Aug 31 | 936 | 936 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 935 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 934 | 935 | 935 | 934 | 934 | 934 | 936 | 934.7 |
| Diurnal Maximum | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 947 | 946 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | 945 | | | |
| Diurnal Average | 938 | 938 | 937 | 937 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 938 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | 937 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C** | Monthly Calibration | **S** | Daily Zero-Span Check | **Q** | Quality Assurance | |
| **K** | Collection Error | **N** | No Data (Machine Not in Service) | **Y** | Routine Maintenance | **P** Power Failure |
| **X** | InValid Data (Equipment Malfunction /Recovery) | **NRM** | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for BP - Reno Station*



peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## Reno Station - August 2021

## Summary of Hourly Averages

## AMBIENT TEMPERATURE (AT) in Degree Celsius

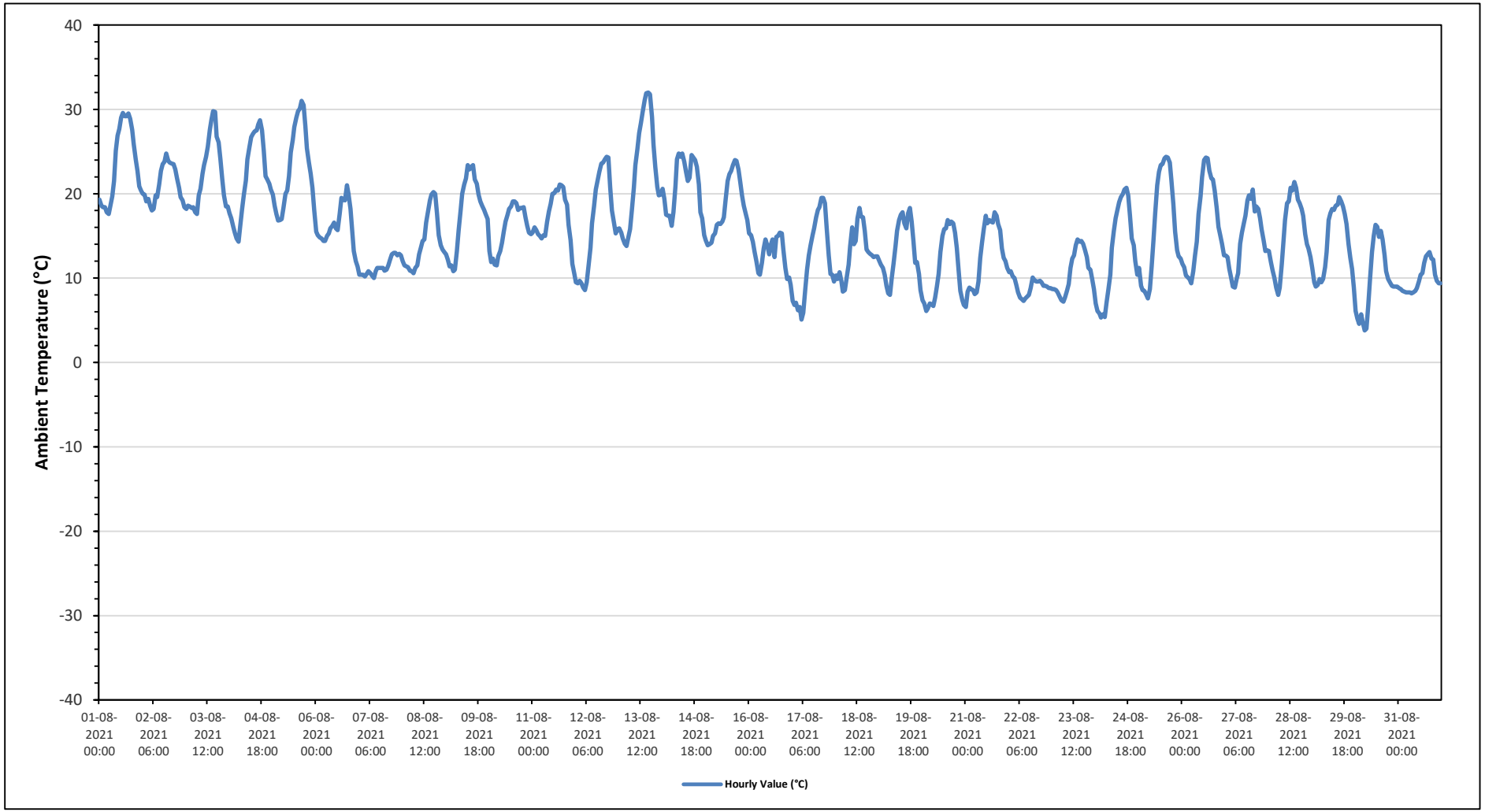
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 32.0 | °C | on August 13 at hour 16 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.6 | °C | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | 3.8 | °C | on August 30 at hour 5 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 9.0 | °C | on August 22 | Hours of Calibration: | 0 |
| Monthly Average: | 15.7 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 19.3 | 18.6 | 18.4 | 18.4 | 17.8 | 17.6 | 18.5 | 19.7 | 21.5 | 25.1 | 26.9 | 27.7 | 29 | 29.6 | 29.2 | 29.2 | 29.5 | 28.9 | 27.6 | 25.9 | 24.1 | 22.7 | 20.9 | 20.4 | 17.6 | 29.6 | **23.6** |
| Aug 2 | 20 | 19.9 | 19.1 | 19.4 | 18.6 | 18 | 18.2 | 19.8 | 19.6 | 21.1 | 22.7 | 23.5 | 23.8 | 24.8 | 23.9 | 23.7 | 23.6 | 23.5 | 22.9 | 21.8 | 20.7 | 19.6 | 19.2 | 18.4 | 18.0 | 24.8 | 21.1 |
| Aug 3 | 18.2 | 18.6 | 18.5 | 18.3 | 18.4 | 17.8 | 17.6 | 19.8 | 20.6 | 22.4 | 23.4 | 24.4 | 25.6 | 27.6 | 28.7 | 29.8 | 29.7 | 26.8 | 26.1 | 24.1 | 21.8 | 19.8 | 18.5 | 18.5 | 17.6 | 29.8 | 22.3 |
| Aug 4 | 17.7 | 17.1 | 16.1 | 15.4 | 14.7 | 14.3 | 16 | 18.2 | 19.9 | 21.6 | 24.1 | 25.5 | 26.7 | 27.1 | 27.4 | 27.5 | 28.2 | 28.7 | 27.5 | 25.1 | 22.1 | 21.7 | 21.2 | 20.5 | 14.3 | 28.7 | 21.8 |
| Aug 5 | 19.9 | 18.6 | 17.6 | 16.8 | 16.9 | 17 | 18.3 | 20 | 20.4 | 22.1 | 24.9 | 26.4 | 27.9 | 29 | 29.8 | 30.1 | 31 | 30.5 | 28 | 25.4 | 23.7 | 22.4 | 20.7 | 18.1 | 16.8 | 31.0 | 23.1 |
| Aug 6 | 15.5 | 15.1 | 14.8 | 14.7 | 14.4 | 14.4 | 15 | 15.3 | 15.9 | 16.2 | 16.6 | 15.9 | 15.7 | 17.6 | 19.5 | 19.3 | 19.2 | 21 | 20 | 18.2 | 15.5 | 13.2 | 12 | 11.4 | 11.4 | 21.0 | 16.1 |
| Aug 7 | 10.4 | 10.4 | 10.4 | 10.2 | 10.5 | 10.8 | 10.6 | 10.3 | 10 | 10.8 | 11.2 | 11.2 | 11.2 | 11.2 | 10.9 | 11 | 11.5 | 12.2 | 12.8 | 13 | 13 | 12.7 | 12.9 | 12.7 | 10.0 | 13.0 | 11.3 |
| Aug 8 | 12 | 11.5 | 11.4 | 11.3 | 10.9 | 10.8 | 10.6 | 11.2 | 11.5 | 12.8 | 13.6 | 14.4 | 14.6 | 16.6 | 17.8 | 19.2 | 19.9 | 20.2 | 20 | 17.7 | 15.1 | 13.9 | 13.4 | 13.1 | 10.6 | 20.2 | 14.3 |
| Aug 9 | 12.8 | 12.2 | 11.4 | 11.5 | 10.8 | 11 | 13.2 | 15.7 | 18.1 | 20 | 21.1 | 21.8 | 23.4 | 22.9 | 23.2 | 23.4 | 21.7 | 21.2 | 19.9 | 19.1 | 18.6 | 18.1 | 17.6 | 17 | 10.8 | 23.4 | 17.7 |
| Aug 10 | 13.2 | 11.9 | 12.3 | 11.6 | 11.5 | 12.6 | 13.2 | 14.2 | 15.5 | 16.7 | 17.5 | 18.2 | 18.5 | 19.1 | 19.1 | 18.9 | 18.1 | 18.3 | 18.3 | 18.4 | 17.2 | 16.2 | 15.4 | 15.2 | 11.5 | 19.1 | 15.9 |
| Aug 11 | 15.4 | 16 | 15.7 | 15.2 | 15 | 14.7 | 15.1 | 15 | 16.7 | 17.9 | 18.8 | 20 | 20.1 | 20.5 | 20.4 | 21.1 | 21 | 20.8 | 19.3 | 18.7 | 16.3 | 14.5 | 11.7 | 10.5 | 10.5 | 21.1 | 17.1 |
| Aug 12 | 9.5 | 9.4 | 9.7 | 9.4 | 8.9 | 8.6 | 9.5 | 11.4 | 13.6 | 16.5 | 18.5 | 20.5 | 21.7 | 22.6 | 23.6 | 23.7 | 24.1 | 24.4 | 24.3 | 20.8 | 18 | 16.6 | 15.3 | 15.8 | 8.6 | 24.4 | 16.5 |
| Aug 13 | 15.9 | 15.4 | 14.7 | 14.1 | 13.8 | 14.8 | 15.8 | 18 | 20.7 | 23.4 | 25.3 | 27.2 | 28.4 | 29.7 | 31.1 | 31.9 | **32** | 31.8 | 29.1 | 25.8 | 23.2 | 20.8 | 19.8 | 19.9 | 13.8 | **32.0** | 22.6 |
| Aug 14 | 20.6 | 19.4 | 17.5 | 17.4 | 17.4 | 16.2 | 17.8 | 20.9 | 24.1 | 24.8 | 24.4 | 24.8 | 23.8 | 22.6 | 21.5 | 21.9 | 24.6 | 24.3 | 24 | 23.2 | 21.1 | 17.8 | 17.1 | 15.1 | 15.1 | 24.8 | 20.9 |
| Aug 15 | 14.5 | 13.9 | 14 | 14.2 | 15 | 15.3 | 16.3 | 16.5 | 16.4 | 16.7 | 17.2 | 19.3 | 21.5 | 22.3 | 22.7 | 23.4 | 24 | 23.9 | 22.9 | 21.4 | 19.8 | 18.6 | 17.6 | 16.9 | 13.9 | 24.0 | 18.5 |
| Aug 16 | 15.3 | 15.1 | 14.3 | 13.1 | 12 | 10.6 | 10.4 | 11.8 | 13.5 | 14.6 | 13.9 | 12.8 | 14 | 14.6 | 12.5 | 14.9 | 15 | 15.4 | 15.3 | 13.4 | 11.2 | 9.9 | 10.1 | 9.2 | 9.2 | 15.4 | 13.0 |
| Aug 17 | 7.3 | 6.8 | 7.1 | 6.2 | 6.6 | 5.1 | 5.9 | 8.7 | 11 | 12.7 | 13.9 | 15.1 | 15.9 | 17.2 | 18.1 | 18.4 | 19.5 | 19.5 | 18.9 | 15.9 | 12.7 | 10.5 | 10.4 | 9.6 | 5.1 | 19.5 | 12.2 |
| Aug 18 | 10.3 | 9.9 | 10.7 | 9.7 | 8.4 | 8.6 | 10 | 11.6 | 13.8 | 16 | 14 | 14.4 | 17.1 | 18.3 | 17.3 | 17.2 | 15.6 | 13.4 | 13.1 | 12.9 | 12.7 | 12.5 | 12.6 | 12.6 | 8.4 | 18.3 | 13.0 |
| Aug 19 | 12.1 | 11.6 | 11.2 | 10.4 | 9.1 | 8.2 | 8 | 10 | 11.7 | 13.8 | 15.6 | 16.9 | 17.5 | 17.8 | 16.5 | 15.9 | 17.7 | 18.3 | 16.7 | 14.4 | 11.8 | 11.9 | 10.5 | 8.6 | 8.0 | 18.3 | 13.2 |
| Aug 20 | 7.4 | 7 | 6.1 | 6.4 | 7 | 6.9 | 6.7 | 7.7 | 9 | 10.5 | 13.1 | 15 | 15.8 | 15.9 | 16.9 | 16.4 | 16.7 | 16.5 | 15.4 | 13.6 | 11 | 8.5 | 7.4 | 6.8 | 6.1 | 16.9 | 11.0 |
| Aug 21 | 6.6 | 8.4 | 8.9 | 8.7 | 8.6 | 8.1 | 8.3 | 9.6 | 12.4 | 14.2 | 15.8 | 17.4 | 16.5 | 16.9 | 16.7 | 16.6 | 17.8 | 17.4 | 16.4 | 15.7 | 13.5 | 12.4 | 12 | 11.2 | 6.6 | 17.8 | 12.9 |
| Aug 22 | 10.7 | 10.8 | 10.2 | 10 | 9.2 | 8.3 | 7.7 | 7.5 | 7.3 | 7.6 | 7.8 | 8 | 8.8 | 10.1 | 9.8 | 9.6 | 9.6 | 9.7 | 9.5 | 9.1 | 9.1 | 9 | 8.8 | 8.8 | 7.3 | 10.8 | 9.0 |
| Aug 23 | 8.7 | 8.7 | 8.6 | 8.3 | 7.8 | 7.4 | 7.2 | 7.7 | 8.5 | 9.3 | 11.2 | 12.3 | 12.7 | 13.9 | 14.6 | 14.3 | 14.4 | 14.1 | 13.4 | 12.5 | 11.2 | 11 | 9.9 | 8.7 | 7.2 | 14.6 | 10.7 |
| Aug 24 | 7 | 6.1 | 5.8 | 5.3 | 5.7 | 5.4 | 7.1 | 8.6 | 10.4 | 13.6 | 15.6 | 17.1 | 18.2 | 19 | 19.6 | 20 | 20.5 | 20.7 | 19.8 | 17.4 | 14.7 | 13.9 | 12 | 10.4 | 5.3 | 20.7 | 13.1 |
| Aug 25 | 11.2 | 9.1 | 8.6 | 8.5 | 8 | 7.6 | 8.7 | 11.4 | 14.4 | 17.7 | 21 | 22.6 | 23.4 | 23.5 | 24.2 | 24.4 | 24.3 | 23.7 | 21.7 | 18.8 | 15.5 | 13.3 | 12.6 | 12.3 | 7.6 | 24.4 | 16.1 |
| Aug 26 | 11.7 | 11.3 | 10.3 | 10.1 | 9.9 | 9.4 | 10.8 | 12.7 | 14.3 | 17.6 | 19.7 | 22 | 24 | 24.3 | 24.2 | 22.7 | 21.8 | 21.7 | 20.4 | 18.3 | 16.1 | 15.1 | 14.1 | 12.7 | 9.4 | 24.3 | 16.5 |
| Aug 27 | 12.7 | 12.5 | 11.1 | 10.1 | 9 | 8.9 | 9.9 | 10.6 | 14.1 | 15.4 | 16.4 | 17.4 | 19.2 | 19.8 | 19.4 | 20.5 | 17.9 | 18.5 | 18.2 | 17.1 | 15.8 | 14.5 | 13.2 | 13.3 | 8.9 | 20.5 | 14.8 |
| Aug 28 | 13.2 | 11.9 | 10.9 | 10 | 8.9 | 8 | 8.9 | 11.6 | 14.4 | 16.9 | 18.9 | 19.1 | 20.7 | 20.4 | 21.4 | 20.7 | 19.3 | 18.9 | 18.2 | 17.4 | 15.2 | 14 | 13.5 | 12.5 | 8.0 | 21.4 | 15.2 |
| Aug 29 | 11.2 | 9.5 | 9 | 9.2 | 9.9 | 9.5 | 9.9 | 11.3 | 13.1 | 16.9 | 17.7 | 18.2 | 18.1 | 18.6 | 18.7 | 19.6 | 19.1 | 18.5 | 17.6 | 16.4 | 14 | 12.4 | 11.1 | 8.9 | 8.9 | 19.6 | 14.1 |
| Aug 30 | 6.1 | 5.2 | 4.6 | 5.7 | 4.8 | **3.8** | 4 | 6.7 | 9.8 | 13.1 | 15 | 16.3 | 16.1 | 14.9 | 15.6 | 14.6 | 12.7 | 10.8 | 9.9 | 9.5 | 9.1 | 9 | 9 | 9 | **3.8** | 16.3 | 9.8 |
| Aug 31 | 8.8 | 8.7 | 8.5 | 8.4 | 8.3 | 8.3 | 8.3 | 8.2 | 8.3 | 8.5 | 8.8 | 9.6 | 10.4 | 10.6 | 11.8 | 12.6 | 12.9 | 13.1 | 12.3 | 12.2 | 10.4 | 9.7 | 9.4 | 9.4 | 8.2 | 13.1 | 9.9 |
| Diurnal Maximum | 20.6 | 19.9 | 19.1 | 19.4 | 18.6 | 18.0 | 18.5 | 20.9 | 24.1 | 25.1 | 26.9 | 27.7 | 29.0 | 29.7 | 31.1 | 31.9 | 32.0 | 31.8 | 29.1 | 25.9 | 24.1 | 22.7 | 21.2 | 20.5 | | | |
| Diurnal Average | 12.7 | 12.3 | 11.9 | 11.5 | 11.2 | 10.9 | 11.5 | 13.0 | 14.5 | 16.3 | 17.6 | 18.5 | 19.4 | 20.0 | 20.2 | 20.4 | 20.4 | 20.2 | 19.3 | 17.8 | 15.9 | 14.7 | 13.9 | 13.1 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for AT - Reno Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## STATION TEMPERATURE (ST) in Degree Celsius

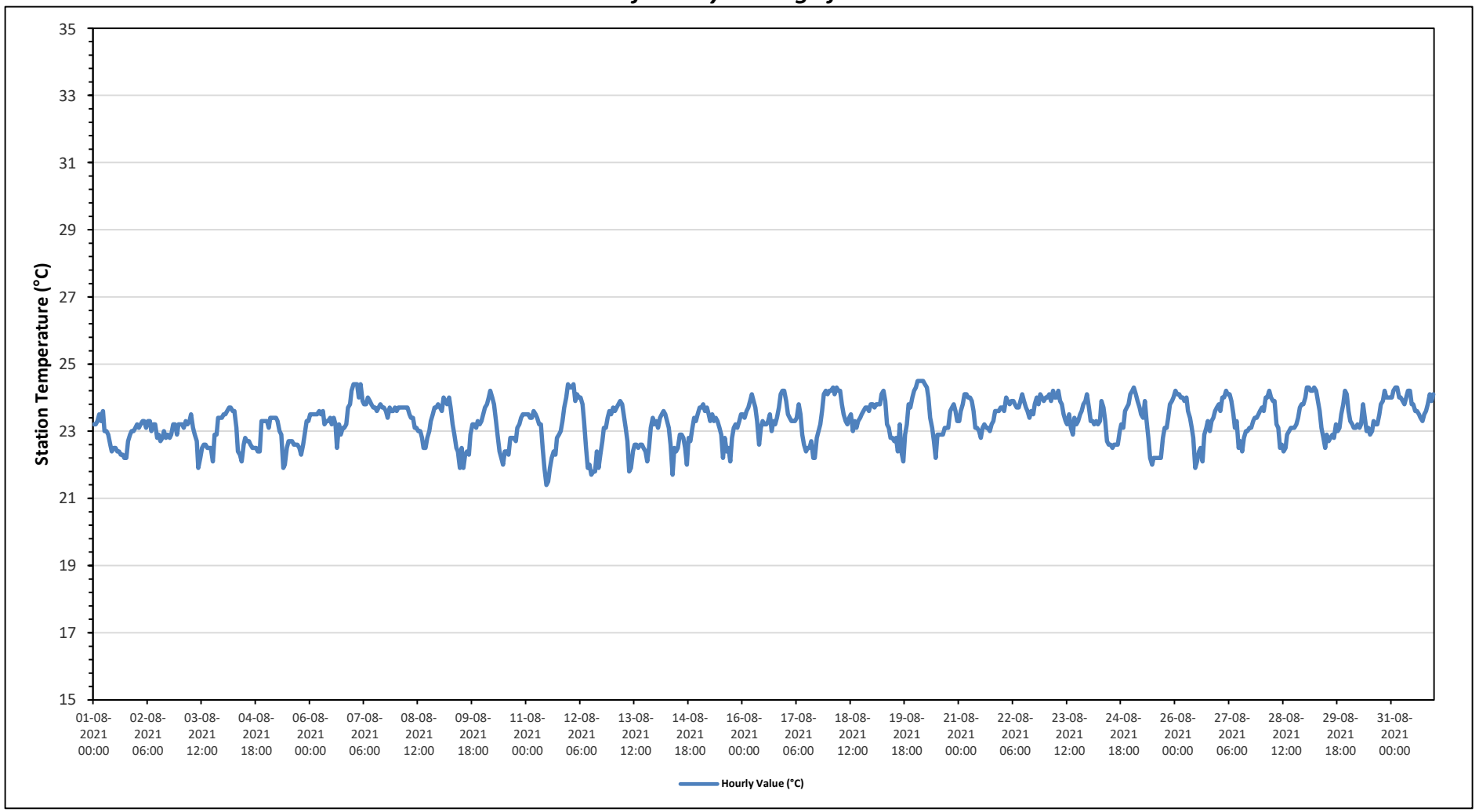
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 24.5 | °C | on August 20 at hour 1 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.9 | °C | on August 31 | Hours of Data: | 744 |
| Minimum Hourly Value: | 21.4 | °C | on August 11 at hour 11 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 22.8 | °C | on August 1 | Hours of Calibration: | 0 |
| Monthly Average: | 23.3 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 23.2 | 23.2 | 23.3 | 23.5 | 23.3 | 23.6 | 23.0 | 23.0 | 22.9 | 22.6 | 22.4 | 22.5 | 22.5 | 22.4 | 22.4 | 22.3 | 22.3 | 22.2 | 22.2 | 22.7 | 22.9 | 23.0 | 23.0 | 23.1 | 22.2 | 23.6 | 22.8 |
| Aug 2 | 23.2 | 23.1 | 23.2 | 23.3 | 23.3 | 23.1 | 23.3 | 23.3 | 23.0 | 23.2 | 23.2 | 22.8 | 22.9 | 22.7 | 22.8 | 23.0 | 22.8 | 22.9 | 22.8 | 22.9 | 23.2 | 23.2 | 22.9 | 23.2 | 22.7 | 23.3 | 23.1 |
| Aug 3 | 23.2 | 23.2 | 23.1 | 23.3 | 23.2 | 23.3 | 23.5 | 23.1 | 22.9 | 22.7 | 21.9 | 22.2 | 22.5 | 22.6 | 22.6 | 22.5 | 22.5 | 22.5 | 22.1 | 22.9 | 22.9 | 23.4 | 23.4 | 23.4 | 21.9 | 23.5 | 22.9 |
| Aug 4 | 23.5 | 23.5 | 23.6 | 23.7 | 23.7 | 23.6 | 23.6 | 23.1 | 22.4 | 22.3 | 22.1 | 22.6 | 22.8 | 22.7 | 22.7 | 22.6 | 22.5 | 22.5 | 22.5 | 22.4 | 22.4 | 23.3 | 23.3 | 23.3 | 22.1 | 23.7 | 22.9 |
| Aug 5 | 23.3 | 23.1 | 23.4 | 23.4 | 23.4 | 23.4 | 23.3 | 23.0 | 22.9 | 21.9 | 22.0 | 22.5 | 22.7 | 22.7 | 22.7 | 22.6 | 22.6 | 22.6 | 22.5 | 22.3 | 22.6 | 22.9 | 23.3 | 23.3 | 21.9 | 23.4 | 22.9 |
| Aug 6 | 23.5 | 23.5 | 23.5 | 23.5 | 23.5 | 23.6 | 23.5 | 23.6 | 23.2 | 23.3 | 23.3 | 23.4 | 23.2 | 23.4 | 23.2 | 22.5 | 23.2 | 22.9 | 23.1 | 23.1 | 23.2 | 23.7 | 23.8 | 24.2 | 22.5 | 24.2 | 23.4 |
| Aug 7 | 24.4 | 24.4 | 24.4 | 24.0 | 24.4 | 23.9 | 23.8 | 23.8 | 24.0 | 23.9 | 23.8 | 23.7 | 23.7 | 23.6 | 23.7 | 23.8 | 23.7 | 23.7 | 23.6 | 23.4 | 23.7 | 23.6 | 23.6 | 23.7 | 23.4 | 24.4 | 23.8 |
| Aug 8 | 23.6 | 23.7 | 23.7 | 23.7 | 23.7 | 23.7 | 23.7 | 23.5 | 23.4 | 23.4 | 23.1 | 23.1 | 23.0 | 23.0 | 22.8 | 22.5 | 22.5 | 22.8 | 23.0 | 23.3 | 23.5 | 23.7 | 23.7 | 23.8 | 22.5 | 23.8 | 23.3 |
| Aug 9 | 23.7 | 23.6 | 24.0 | 23.9 | 23.8 | 24.0 | 23.7 | 23.2 | 22.9 | 22.5 | 22.4 | 21.9 | 22.5 | 21.9 | 22.3 | 22.4 | 22.3 | 22.9 | 23.2 | 23.2 | 23.1 | 23.3 | 23.2 | 23.3 | 21.9 | 24.0 | 23.1 |
| Aug 10 | 23.5 | 23.7 | 23.8 | 24.0 | 24.2 | 24.0 | 23.8 | 23.3 | 22.9 | 22.4 | 22.2 | 22.0 | 22.4 | 22.4 | 22.3 | 22.8 | 22.8 | 22.8 | 22.7 | 23.1 | 23.2 | 23.4 | 23.5 | 23.5 | 22.0 | 24.2 | 23.1 |
| Aug 11 | 23.5 | 23.5 | 23.4 | 23.4 | 23.6 | 23.5 | 23.4 | 23.2 | 23.2 | 22.5 | 21.9 | **21.4** | 21.5 | 21.9 | 22.2 | 22.4 | 22.3 | 22.8 | 22.9 | 23.0 | 23.3 | 23.7 | 24.0 | 24.4 | **21.4** | 24.4 | 23.0 |
| Aug 12 | 24.3 | 24.3 | 24.4 | 23.9 | 24.1 | 24.0 | 24.0 | 23.8 | 23.3 | 22.5 | 21.9 | 22.0 | 21.7 | 21.8 | 21.8 | 22.4 | 21.9 | 22.3 | 22.7 | 23.1 | 23.1 | 23.4 | 23.6 | 23.5 | 21.7 | 24.4 | 23.1 |
| Aug 13 | 23.7 | 23.6 | 23.7 | 23.8 | 23.9 | 23.8 | 23.5 | 23.1 | 22.7 | 21.8 | 21.9 | 22.4 | 22.6 | 22.6 | 22.5 | 22.6 | 22.6 | 22.5 | 22.4 | 22.1 | 22.5 | 23.1 | 23.4 | 23.2 | 21.8 | 23.9 | 22.9 |
| Aug 14 | 23.3 | 23.1 | 23.4 | 23.5 | 23.6 | 23.5 | 23.3 | 23.1 | 22.6 | 21.7 | 22.5 | 22.4 | 22.5 | 22.9 | 22.9 | 22.8 | 22.5 | 22.0 | 22.8 | 22.7 | 23.1 | 23.4 | 23.3 | 23.5 | 21.7 | 23.6 | 22.9 |
| Aug 15 | 23.7 | 23.7 | 23.8 | 23.6 | 23.7 | 23.5 | 23.3 | 23.5 | 23.3 | 23.4 | 23.3 | 23.1 | 22.9 | 22.2 | 22.8 | 22.4 | 22.5 | 22.1 | 22.8 | 23.1 | 23.2 | 23.1 | 23.3 | 23.5 | 22.1 | 23.8 | 23.2 |
| Aug 16 | 23.5 | 23.4 | 23.6 | 23.7 | 23.9 | 24.1 | 23.9 | 23.7 | 23.3 | 22.6 | 23.1 | 23.3 | 23.2 | 23.2 | 23.3 | 23.5 | 23.0 | 23.3 | 23.2 | 23.4 | 23.7 | 24.1 | 24.2 | 24.2 | 22.6 | 24.2 | 23.5 |
| Aug 17 | 23.9 | 23.5 | 23.4 | 23.3 | 23.3 | 23.3 | 23.4 | 23.8 | 23.5 | 22.9 | 22.6 | 22.4 | 22.5 | 22.5 | 22.7 | 22.2 | 22.2 | 22.8 | 23.0 | 23.2 | 23.6 | 24.1 | 24.2 | 24.1 | 22.2 | 24.2 | 23.2 |
| Aug 18 | 24.2 | 24.2 | 24.3 | 24.1 | 24.3 | 24.2 | 24.2 | 23.8 | 23.5 | 23.3 | 23.2 | 23.4 | 23.5 | 23.0 | 23.3 | 23.1 | 23.3 | 23.4 | 23.5 | 23.6 | 23.7 | 23.7 | 23.6 | 23.8 | 23.0 | 24.3 | 23.7 |
| Aug 19 | 23.8 | 23.7 | 23.8 | 23.8 | 23.8 | 24.1 | 24.2 | 23.9 | 23.2 | 23.1 | 22.8 | 22.8 | 22.7 | 22.8 | 22.4 | 23.2 | 22.4 | 22.1 | 22.9 | 23.2 | 23.8 | 23.7 | 24.0 | 24.2 | 22.1 | 24.2 | 23.4 |
| Aug 20 | 24.3 | **24.5** | **24.5** | **24.5** | **24.5** | 24.4 | 24.3 | 24.0 | 23.4 | 23.1 | 22.7 | 22.2 | 22.9 | 22.9 | 22.9 | 22.9 | 23.1 | 23.1 | 23.1 | 23.6 | 23.7 | 23.8 | 23.6 | 23.3 | 22.2 | **24.5** | 23.6 |
| Aug 21 | 23.3 | 23.6 | 23.8 | 24.1 | 24.1 | 24.0 | 24.0 | 23.9 | 23.6 | 23.1 | 23.1 | 23.0 | 22.8 | 23.1 | 23.2 | 23.1 | 23.1 | 23.0 | 23.2 | 23.3 | 23.6 | 23.6 | 23.6 | 23.7 | 22.8 | 24.1 | 23.5 |
| Aug 22 | 23.7 | 23.6 | 24.0 | 23.9 | 23.8 | 23.9 | 23.9 | 23.8 | 23.7 | 23.7 | 23.9 | 24.1 | 23.9 | 23.7 | 23.6 | 23.4 | 23.6 | 23.5 | 23.8 | 24.0 | 23.8 | 24.1 | 24.0 | 23.9 | 23.4 | 24.1 | 23.8 |
| Aug 23 | 24.0 | 24.0 | 24.1 | 23.9 | 24.2 | 24.0 | 24.0 | 24.2 | 23.9 | 23.8 | 23.5 | 23.3 | 23.2 | 23.5 | 23.1 | 22.9 | 23.4 | 23.2 | 23.3 | 23.5 | 23.6 | 23.8 | 23.9 | 24.1 | 22.9 | 24.2 | 23.7 |
| Aug 24 | 23.7 | 23.3 | 23.3 | 23.2 | 23.3 | 23.2 | 23.3 | 23.9 | 23.7 | 23.3 | 22.7 | 22.6 | 22.6 | 22.5 | 22.6 | 22.6 | 22.6 | 23.0 | 23.2 | 23.1 | 23.6 | 23.7 | 23.8 | 24.1 | 22.5 | 24.1 | 23.2 |
| Aug 25 | 24.2 | 24.3 | 24.1 | 23.9 | 23.7 | 23.5 | 23.4 | 23.9 | 23.3 | 22.8 | 22.2 | 22.0 | 22.2 | 22.2 | 22.2 | 22.2 | 22.2 | 22.8 | 23.1 | 23.1 | 23.4 | 23.8 | 23.9 | 24.0 | 22.0 | 24.3 | 23.2 |
| Aug 26 | 24.2 | 24.1 | 24.1 | 24.0 | 24.0 | 23.9 | 24.0 | 23.6 | 23.4 | 23.1 | 22.8 | 21.9 | 22.1 | 22.4 | 22.5 | 22.1 | 22.9 | 23.1 | 23.3 | 23.0 | 23.3 | 23.4 | 23.6 | 23.7 | 21.9 | 24.2 | 23.3 |
| Aug 27 | 23.8 | 23.6 | 24.0 | 24.0 | 24.2 | 24.1 | 24.1 | 23.9 | 23.5 | 23.1 | 23.3 | 22.5 | 22.7 | 22.4 | 22.8 | 23.0 | 23.0 | 23.1 | 23.1 | 23.3 | 23.4 | 23.4 | 23.5 | 23.6 | 22.4 | 24.2 | 23.4 |
| Aug 28 | 23.7 | 23.6 | 24.0 | 24.0 | 24.2 | 24.0 | 23.9 | 23.9 | 23.2 | 23.1 | 22.5 | 22.6 | 22.4 | 22.5 | 22.9 | 23.0 | 23.1 | 23.1 | 23.1 | 23.2 | 23.4 | 23.7 | 23.8 | 23.8 | 22.4 | 24.2 | 23.4 |
| Aug 29 | 24.0 | 24.3 | 24.3 | 24.2 | 24.2 | 24.3 | 24.2 | 23.9 | 23.6 | 23.1 | 22.8 | 22.5 | 22.9 | 22.7 | 22.8 | 22.9 | 22.8 | 23.2 | 23.0 | 23.1 | 23.5 | 23.8 | 24.2 | 24.1 | 22.5 | 24.3 | 23.5 |
| Aug 30 | 23.6 | 23.3 | 23.2 | 23.1 | 23.1 | 23.2 | 23.1 | 23.2 | 23.8 | 23.4 | 23.0 | 23.1 | 22.9 | 23.0 | 23.3 | 23.2 | 23.2 | 23.5 | 23.8 | 23.9 | 24.2 | 24.0 | 24.0 | 24.0 | 22.9 | 24.2 | 23.4 |
| Aug 31 | 24.0 | 24.2 | 24.3 | 24.3 | 24.0 | 24.0 | 23.9 | 23.8 | 24.0 | 24.2 | 24.2 | 23.8 | 23.8 | 23.6 | 23.6 | 23.5 | 23.4 | 23.3 | 23.5 | 23.6 | 23.8 | 24.1 | 23.9 | 24.1 | 23.3 | 24.3 | **23.9** |
| Diurnal Maximum | 24.4 | 24.5 | 24.5 | 24.5 | 24.5 | 24.4 | 24.3 | 24.2 | 24.0 | 24.2 | 24.2 | 24.1 | 23.9 | 23.7 | 23.7 | 23.8 | 23.7 | 23.7 | 23.8 | 24.0 | 24.2 | 24.1 | 24.2 | 24.4 | | | |
| Diurnal Average | 23.7 | 23.7 | 23.8 | 23.8 | 23.8 | 23.8 | 23.7 | 23.6 | 23.3 | 23.0 | 22.8 | 22.7 | 22.8 | 22.7 | 22.8 | 22.8 | 22.8 | 22.9 | 23.0 | 23.1 | 23.4 | 23.6 | 23.6 | 23.7 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C** | Monthly Calibration | **S** | Daily Zero-Span Check | **Q** | Quality Assurance | |
| **K** | Collection Error | **N** | No Data (Machine Not in Service) | **Y** | Routine Maintenance | **P** Power Failure |
| **X** | InValid Data (Equipment Malfunction /Recovery) | **NRM** | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for ST - Reno Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## PRECIPITATION in mm

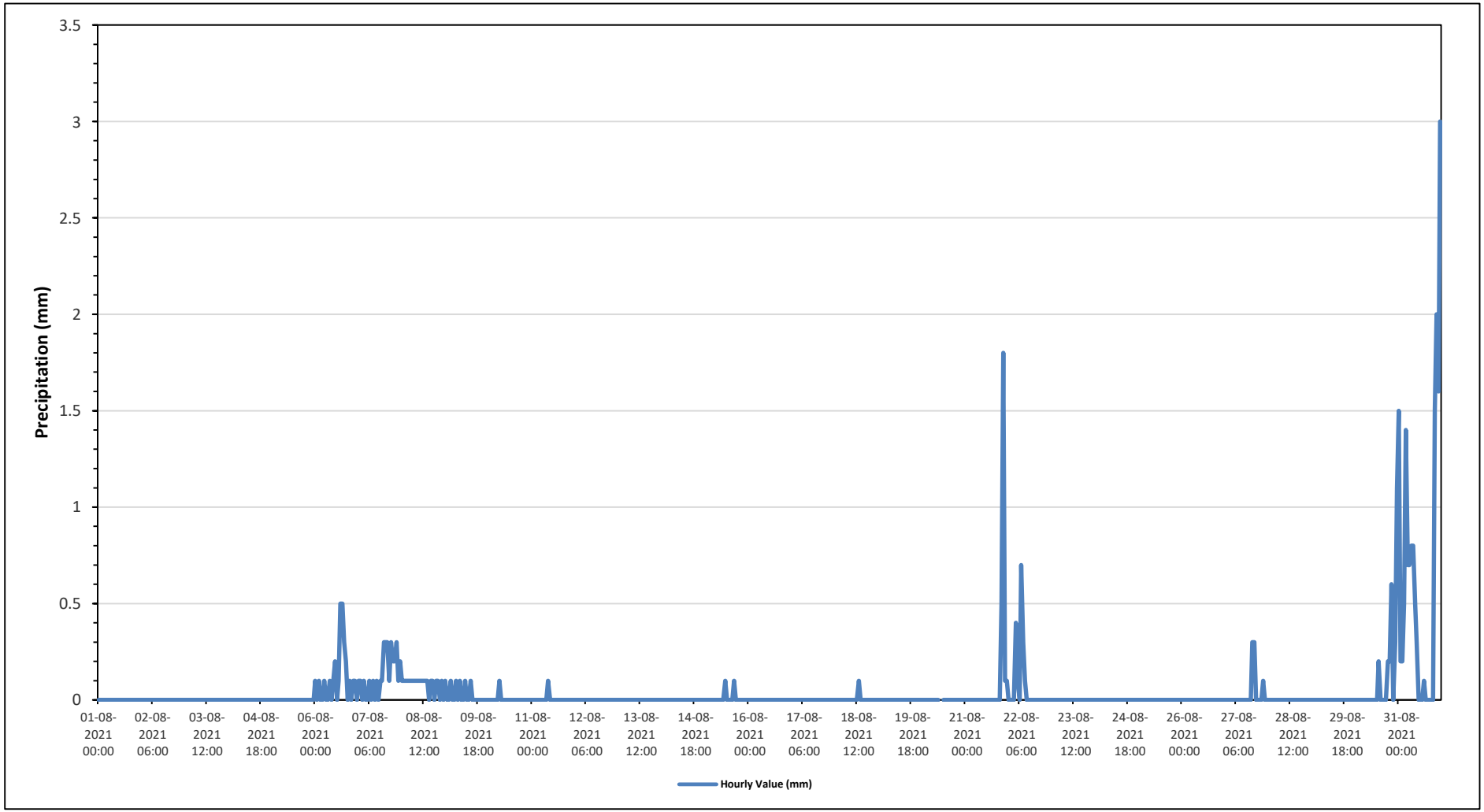
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 3.0 | mm | on August 31 at hour 23 | Hours in Service: | 744 |
| Maximum Daily Value: | 15.8 | mm | on August 31 | Hours of Data: | 742 |
| Minimum Hourly Value: | 0.0 | mm | on August 1 at hour 0 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | mm | on August 1 | Hours of Calibration: | 2 |
| Monthly Total: | 32.0 | mm | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Total |
| Aug 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 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 |
| Aug 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 |
| Aug 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 |
| Aug 6 | 0.1 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0.1 | 0.2 | 0 | 0.1 | 0.5 | 0.5 | 0.3 | 0.2 | 0 | 0.1 | 0 | 0.1 | 0.1 | 0 | 0.0 | 0.5 | 2.6 |
| Aug 7 | 0.1 | 0.1 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0.1 | 0 | 0.1 | 0.1 | 0.3 | 0.3 | 0.3 | 0.1 | 0.3 | 0.2 | 0.2 | 0.3 | 0.1 | 0.2 | 0.0 | 0.3 | 3.1 |
| Aug 8 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0 | 0.1 | 0.1 | 0 | 0.1 | 0.1 | 0 | 0.1 | 0 | 0.0 | 0.1 | 2.0 |
| Aug 9 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.1 | 0.6 |
| Aug 10 | 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 | 0.1 | 0.1 |
| Aug 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.1 | 0.1 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 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 |
| Aug 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 |
| Aug 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.1 | 0.2 |
| Aug 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 |
| Aug 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 18 | 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 | 0.1 | 0.1 |
| Aug 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 |
| Aug 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 1.8 | 0.1 | 0.1 | 0.0 | 1.8 | 2.5 |
| Aug 22 | 0 | 0 | 0 | 0 | 0.4 | 0.1 | 0 | 0.7 | 0.3 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.7 | 1.6 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 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 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Aug 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 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.0 | 0.3 | 0.7 |
| Aug 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 |
| Aug 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 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0.2 | 0.2 | 0.6 | 0 | 0.3 | 1.1 | 0.0 | 1.1 | 2.6 |
| Aug 31 | 1.5 | 0.2 | 0.2 | 0.5 | 1.4 | 0.7 | 0.7 | 0.8 | 0.8 | 0.5 | 0.3 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 1.5 | 2 | 1.6 | **3** | 0.0 | **3.0** | **15.8** |
| Diurnal Maximum | 1.5 | 0.2 | 0.2 | 0.5 | 1.4 | 0.7 | 0.7 | 0.8 | 0.8 | 0.5 | 0.3 | 0.2 | 0.1 | 0.2 | 0.5 | 0.5 | 0.3 | 0.2 | 0.3 | 0.2 | 1.5 | 2.0 | 1.6 | 3.0 | | | |
| Diurnal Average | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 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 | 0.1 | 0.1 | 0.1 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for Precipitation - Reno Station*



peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## *Reno Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr

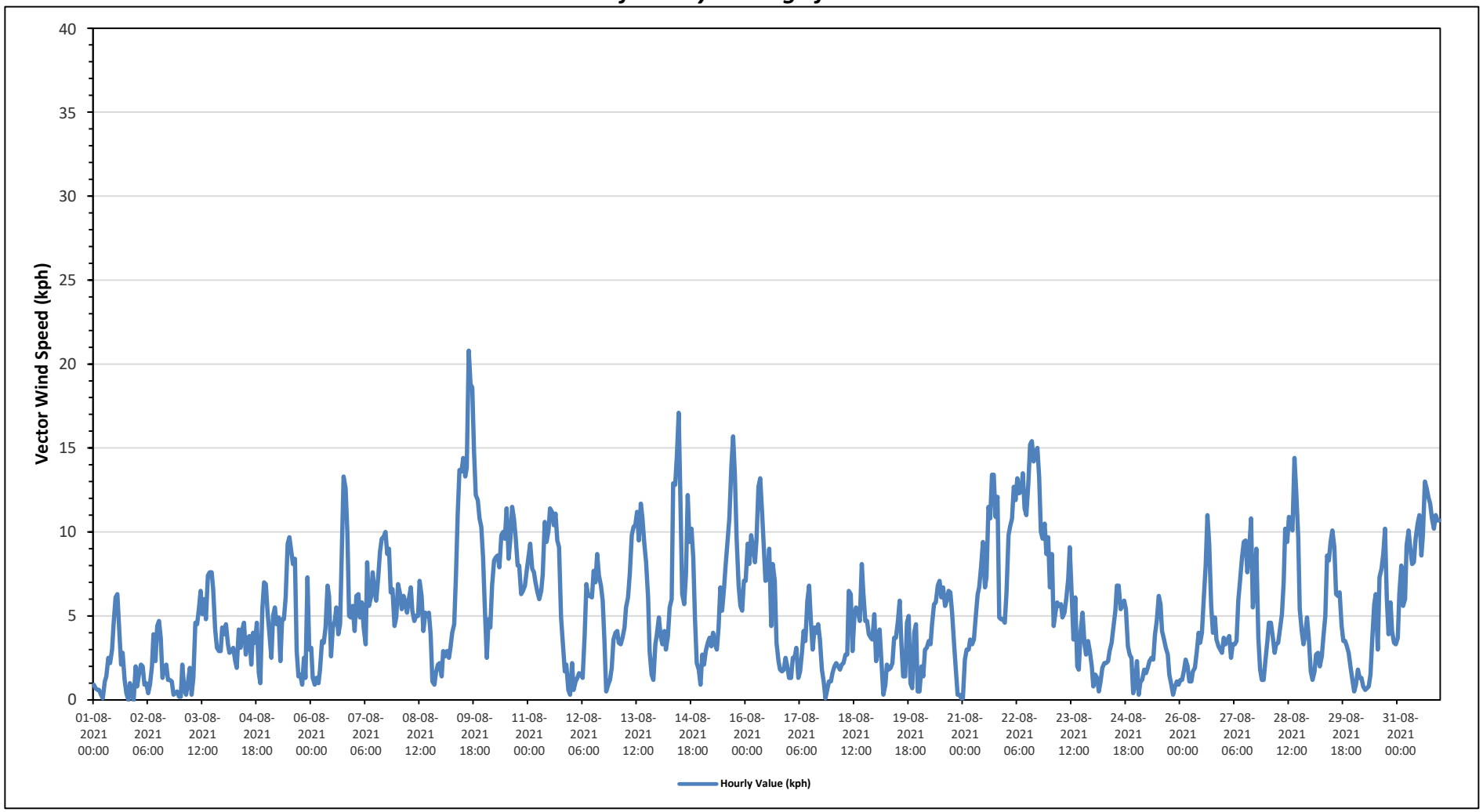
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 20.8 | kph | on August 9 at hour 15 | Hours in Service: | 744 |
| Maximum Daily Value: | 11.8 | kph | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 1 at hour 19 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.9 | kph | on August 2 | Hours of Calibration: | 0 |
| Monthly Average: | 2.1 | kph | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.9 | 0.7 | 0.6 | 0.6 | 0.3 | 0.1 | 1.1 | 1.4 | 2.5 | 2.2 | 3.0 | 4.5 | 6.1 | 6.3 | 4.3 | 2.1 | 2.8 | 1.2 | 0.4 | **0.0** | 1.0 | 0.4 | **0.0** | 2.0 | **0.0** | 6.3 | 1.2 |
| Aug 2 | 0.8 | 1.5 | 2.1 | 2.0 | 0.9 | 1.0 | 0.4 | 0.9 | 2.0 | 3.9 | 2.3 | 4.4 | 4.7 | 3.7 | 1.3 | 1.9 | 2.1 | 1.2 | 1.2 | 1.1 | 0.3 | 0.4 | 0.5 | 0.2 | 0.2 | 4.7 | **0.9** |
| Aug 3 | 0.2 | 2.1 | 0.6 | 0.3 | 1.1 | 1.9 | 0.3 | 1.3 | 4.6 | 4.5 | 5.4 | 6.5 | 5.1 | 6.0 | 4.8 | 7.4 | 7.6 | 7.6 | 6.6 | 4.2 | 3.1 | 2.9 | 2.9 | 4.3 | 0.2 | 7.6 | 3.4 |
| Aug 4 | 3.9 | 4.5 | 3.3 | 2.8 | 2.9 | 3.1 | 2.3 | 1.9 | 4.2 | 3.1 | 4.2 | 4.6 | 2.7 | 3.7 | 3.8 | 2.1 | 4.0 | 3.4 | 4.6 | 1.6 | 1.0 | 5.4 | 7.0 | 6.9 | 1.0 | 7.0 | 1.3 |
| Aug 5 | 5.2 | 4.0 | 2.5 | 5.0 | 5.5 | 4.5 | 4.9 | 2.3 | 4.8 | 4.8 | 6.1 | 9.3 | 9.7 | 8.9 | 8.1 | 8.4 | 2.9 | 1.4 | 1.5 | 0.9 | 2.5 | 1.3 | 7.3 | 3.0 | 0.9 | 9.7 | 3.1 |
| Aug 6 | 3.1 | 1.3 | 0.9 | 1.3 | 1.0 | 1.8 | 3.5 | 3.4 | 4.3 | 6.8 | 6.2 | 2.6 | 4.3 | 4.7 | 5.5 | 3.9 | 4.5 | 9.5 | 13.3 | 12.6 | 10.0 | 5.0 | 4.9 | 5.6 | 0.9 | 13.3 | 4.4 |
| Aug 7 | 4.1 | 6.2 | 6.3 | 4.9 | 5.8 | 4.3 | 3.3 | 8.2 | 5.6 | 6.1 | 7.6 | 6.5 | 5.9 | 7.3 | 8.8 | 9.6 | 9.7 | 10.0 | 8.7 | 9.0 | 6.4 | 6.6 | 4.4 | 4.9 | 3.3 | 10.0 | 6.2 |
| Aug 8 | 6.9 | 6.4 | 5.4 | 6.2 | 5.8 | 5.2 | 6.0 | 6.7 | 5.3 | 4.7 | 5.0 | 5.0 | 7.1 | 6.2 | 4.1 | 5.2 | 5.0 | 5.2 | 3.9 | 1.1 | 0.9 | 1.6 | 2.1 | 2.2 | 0.9 | 7.1 | 3.0 |
| Aug 9 | 1.4 | 2.9 | 2.6 | 2.9 | 2.5 | 3.1 | 4.0 | 4.5 | 7.4 | 11.1 | 13.7 | 13.6 | 14.4 | 13.3 | 13.8 | **20.8** | 18.8 | 18.6 | 14.8 | 12.2 | 11.9 | 10.8 | 10.3 | 8.5 | 1.4 | **20.8** | 9.4 |
| Aug 10 | 5.1 | 2.5 | 4.8 | 4.3 | 6.8 | 8.3 | 8.5 | 8.6 | 7.9 | 9.8 | 10.0 | 9.6 | 11.4 | 8.4 | 9.6 | 11.5 | 10.8 | 9.7 | 8.0 | 8.0 | 6.3 | 6.5 | 6.8 | 7.7 | 2.5 | 11.5 | 7.5 |
| Aug 11 | 8.5 | 9.3 | 7.8 | 7.6 | 7.0 | 6.4 | 6.0 | 6.5 | 7.5 | 10.6 | 9.4 | 10.1 | 11.4 | 11.2 | 10.4 | 11.1 | 9.5 | 9.1 | 4.9 | 3.4 | 1.7 | 2.1 | 0.6 | 0.3 | 0.3 | 11.4 | 6.6 |
| Aug 12 | 2.2 | 0.6 | 1.1 | 1.3 | 1.6 | 1.5 | 1.3 | 3.8 | 6.9 | 6.2 | 6.2 | 6.1 | 7.7 | 7.0 | 8.7 | 7.4 | 6.8 | 5.9 | 3.5 | 0.5 | 0.9 | 1.2 | 1.9 | 3.6 | 0.5 | 8.7 | 2.9 |
| Aug 13 | 4.0 | 4.1 | 3.4 | 3.3 | 3.7 | 4.3 | 5.5 | 6.1 | 7.5 | 9.8 | 10.3 | 10.4 | 11.2 | 9.5 | 11.7 | 10.9 | 9.3 | 8.2 | 6.1 | 2.9 | 1.5 | 1.2 | 3.3 | 3.9 | 1.2 | 11.7 | 5.8 |
| Aug 14 | 4.9 | 3.8 | 3.3 | 4.1 | 3.0 | 3.8 | 5.5 | 6.0 | 12.9 | 12.8 | 14.6 | 17.1 | 11.8 | 6.3 | 5.7 | 7.5 | 12.2 | 9.4 | 10.2 | 8.5 | 4.8 | 2.2 | 1.8 | 0.9 | 0.9 | 17.1 | 6.8 |
| Aug 15 | 2.7 | 2.1 | 2.9 | 3.4 | 3.7 | 3.2 | 4.0 | 3.3 | 3.0 | 4.3 | 6.7 | 5.3 | 6.7 | 8.0 | 9.5 | 10.8 | 13.9 | 15.7 | 13.4 | 9.6 | 6.8 | 5.6 | 5.3 | 7.1 | 2.1 | 15.7 | 6.3 |
| Aug 16 | 7.1 | 9.3 | 8.1 | 9.8 | 9.1 | 8.2 | 9.5 | 12.7 | 13.2 | 11.0 | 9.2 | 7.1 | 7.2 | 9.0 | 4.4 | 8.1 | 7.1 | 3.4 | 2.3 | 1.8 | 1.7 | 1.8 | 2.5 | 2.0 | 1.7 | 13.2 | 6.6 |
| Aug 17 | 1.3 | 1.3 | 2.5 | 2.5 | 3.1 | 1.3 | 1.7 | 2.9 | 4.1 | 3.5 | 5.9 | 6.8 | 4.7 | 3.0 | 4.3 | 4.0 | 4.5 | 3.6 | 1.8 | 1.1 | 0.1 | 0.6 | 1.1 | 1.1 | 0.1 | 6.8 | 2.6 |
| Aug 18 | 1.6 | 2.0 | 2.2 | 2.0 | 1.8 | 2.1 | 2.2 | 2.7 | 2.7 | 6.5 | 6.3 | 2.9 | 5.1 | 5.5 | 5.2 | 4.7 | 8.1 | 6.4 | 4.7 | 4.7 | 3.9 | 3.7 | 3.6 | 5.1 | 1.6 | 8.1 | 3.8 |
| Aug 19 | 2.3 | 3.0 | 4.2 | 2.1 | 0.3 | 0.9 | 2.1 | 1.8 | 1.9 | 2.2 | 3.7 | 3.7 | 4.7 | 5.9 | 3.3 | 1.4 | 1.4 | 4.6 | 5.0 | 1.0 | 0.7 | 4.0 | 4.5 | 0.5 | 0.3 | 5.9 | 1.8 |
| Aug 20 | 0.5 | 2.0 | 1.4 | 3.0 | 3.1 | 3.5 | 3.3 | 4.5 | 5.7 | 5.8 | 6.8 | 7.1 | 6.1 | 6.7 | 5.6 | 5.9 | 6.5 | 6.4 | 5.2 | 3.3 | 2.0 | 0.3 | 0.3 | 0.1 | 0.1 | 7.1 | 3.8 |
| Aug 21 | 0.1 | 2.4 | 3.0 | 3.0 | 3.6 | 3.3 | 3.6 | 4.9 | 6.3 | 6.7 | 8.0 | 9.4 | 6.7 | 7.3 | 11.5 | 10.8 | 13.4 | 13.4 | 10.9 | 12.1 | 4.9 | 4.8 | 4.8 | 4.6 | 0.1 | 13.4 | 6.2 |
| Aug 22 | 6.4 | 9.8 | 10.3 | 10.8 | 12.7 | 11.9 | 13.2 | 12.3 | 12.4 | 13.5 | 11.4 | 11.0 | 12.9 | 15.2 | 15.4 | 14.2 | 14.6 | 15.0 | 13.3 | 10.0 | 9.6 | 10.5 | 8.7 | 9.7 | 6.4 | 15.4 | **11.8** |
| Aug 23 | 6.7 | 8.7 | 4.4 | 5.2 | 5.8 | 5.6 | 5.7 | 4.9 | 5.2 | 6.0 | 7.2 | 9.1 | 6.2 | 3.6 | 6.1 | 2.0 | 1.8 | 4.2 | 5.2 | 3.3 | 2.7 | 3.5 | 2.9 | 2.0 | 1.8 | 9.1 | 2.5 |
| Aug 24 | 0.8 | 1.5 | 1.3 | 0.5 | 1.1 | 1.9 | 2.2 | 2.2 | 2.3 | 2.9 | 3.4 | 4.3 | 5.3 | 6.8 | 6.8 | 5.4 | 5.6 | 5.9 | 5.4 | 3.2 | 2.7 | 2.5 | 0.4 | 0.9 | 0.4 | 6.8 | 2.9 |
| Aug 25 | 2.3 | 0.3 | 1.1 | 1.2 | 1.8 | 1.6 | 1.9 | 2.3 | 2.5 | 2.4 | 3.9 | 4.7 | 6.2 | 5.7 | 4.1 | 3.6 | 3.1 | 2.7 | 1.5 | 0.9 | 0.3 | 0.8 | 1.1 | 0.9 | 0.3 | 6.2 | 2.2 |
| Aug 26 | 1.2 | 1.2 | 1.8 | 2.4 | 2.0 | 1.1 | 1.1 | 1.7 | 1.9 | 2.8 | 4.0 | 3.4 | 4.0 | 6.2 | 8.0 | 11.0 | 9.3 | 5.6 | 4.0 | 4.9 | 3.6 | 3.2 | 3.0 | 2.8 | 1.1 | 11.0 | 2.8 |
| Aug 27 | 3.7 | 3.3 | 3.6 | 3.8 | 2.5 | 3.3 | 3.3 | 3.5 | 5.9 | 7.1 | 8.5 | 9.4 | 9.5 | 7.6 | 8.8 | 10.8 | 5.5 | 6.8 | 9.0 | 3.7 | 1.8 | 1.2 | 1.2 | 2.3 | 1.2 | 10.8 | 5.0 |
| Aug 28 | 3.5 | 4.6 | 4.6 | 3.8 | 2.8 | 3.3 | 3.4 | 4.2 | 5.1 | 7.0 | 10.2 | 9.4 | 10.9 | 10.4 | 10.1 | 14.4 | 12.4 | 9.7 | 5.4 | 4.1 | 3.3 | 3.9 | 4.9 | 3.7 | 2.8 | 14.4 | 6.3 |
| Aug 29 | 1.7 | 1.2 | 1.7 | 2.7 | 2.8 | 2.0 | 2.6 | 3.7 | 5.0 | 8.6 | 8.3 | 9.4 | 10.1 | 9.1 | 6.3 | 6.2 | 6.4 | 4.4 | 3.5 | 3.5 | 3.2 | 2.8 | 1.9 | 1.2 | 1.2 | 10.1 | 4.3 |
| Aug 30 | 0.5 | 0.9 | 1.8 | 1.3 | 1.3 | 0.8 | 0.6 | 0.7 | 0.8 | 1.5 | 3.6 | 5.7 | 6.3 | 3.0 | 7.3 | 7.8 | 8.7 | 10.2 | 6.1 | 3.9 | 5.8 | 4.1 | 3.4 | 3.3 | 0.5 | 10.2 | 2.1 |
| Aug 31 | 3.7 | 6.3 | 8.0 | 5.6 | 6.0 | 9.2 | 10.1 | 9.0 | 8.1 | 8.2 | 9.6 | 10.5 | 11.0 | 8.6 | 9.8 | 13.0 | 12.6 | 12.0 | 11.7 | 10.8 | 10.2 | 11.0 | 10.7 | 10.7 | 3.7 | 13.0 | 9.3 |
| Diurnal Maximum | 9 | 10 | 10 | 11 | 13 | 12 | 13 | 13 | 13 | 14 | 15 | 17 | 14 | 15 | 15 | 21 | 19 | 19 | 15 | 13 | 12 | 11 | 11 | 11 | | | |
| Diurnal Average | 3.1 | 3.5 | 3.5 | 3.5 | 3.6 | 3.6 | 4.0 | 4.5 | 5.5 | 6.3 | 7.1 | 7.4 | 7.6 | 7.2 | 7.3 | 7.9 | 7.8 | 7.4 | 6.3 | 4.8 | 3.7 | 3.6 | 3.7 | 3.6 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | |

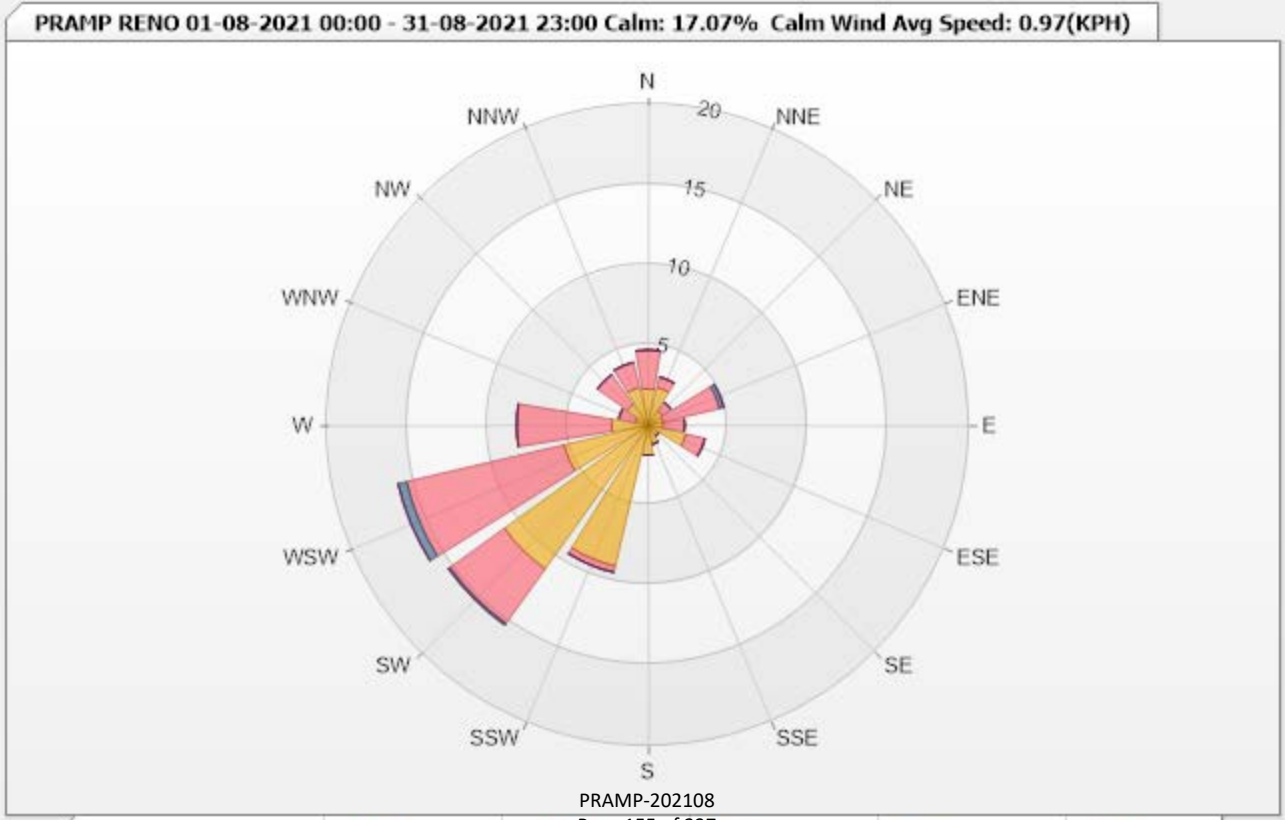
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for VWS - Reno Station*



Wind: PRAMP RENO Monitor: WDS [KPH] Monthly: 08-2021 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 17.07% Valid Data: 100.00%

| Direction | 1.8-6.0 | 6.0-15.0 | 15.0-29.0 | 29.0-39.0 | >39.0 | Total |
|---|---|---|---|---|---|---|
| N | 2.28 | 2.42 | 0 | 0 | 0 | 4.7 |
| NNE | 2.42 | 0.67 | 0 | 0 | 0 | 3.09 |
| NE | 1.08 | 0.67 | 0 | 0 | 0 | 1.75 |
| ENE | 0.94 | 3.63 | 0.27 | 0 | 0 | 4.84 |
| E | 0.94 | 1.34 | 0 | 0 | 0 | 2.28 |
| ESE | 2.42 | 1.21 | 0 | 0 | 0 | 3.63 |
| SE | 0.81 | 0 | 0 | 0 | 0 | 0.81 |
| SSE | 1.21 | 0 | 0 | 0 | 0 | 1.21 |
| S | 1.88 | 0 | 0 | 0 | 0 | 1.88 |
| SSW | 9.01 | 0.4 | 0 | 0 | 0 | 9.41 |
| SW | 11.02 | 4.17 | 0.13 | 0 | 0 | 15.32 |
| WSW | 5.38 | 10.08 | 0.54 | 0 | 0 | 16 |
| W | 2.28 | 5.91 | 0 | 0 | 0 | 8.19 |
| WNW | 0.81 | 1.08 | 0 | 0 | 0 | 1.89 |
| NW | 1.61 | 2.28 | 0 | 0 | 0 | 3.89 |
| NNW | 2.42 | 1.61 | 0 | 0 | 0 | 4.03 |
| Summary | 46.51 | 35.47 | 0.94 | 0 | 0 | 82.92 |


PRAMP RENO 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 17.07% Calm Wind Avg Speed: 0.97(KPH)
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (KPH)
47 1.8-6.0
35 6.0-15.0
1 15.0-29.0
0 29.0-39.0
0 >39.0

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# PEACE RIVER AREA MONITORING PROGRAM

## *Reno Station - August 2021*

## Summary of Hourly Averages

## WIND DIRECTION (VWD) in sector

Monthly Average: 259 (WSW) degree

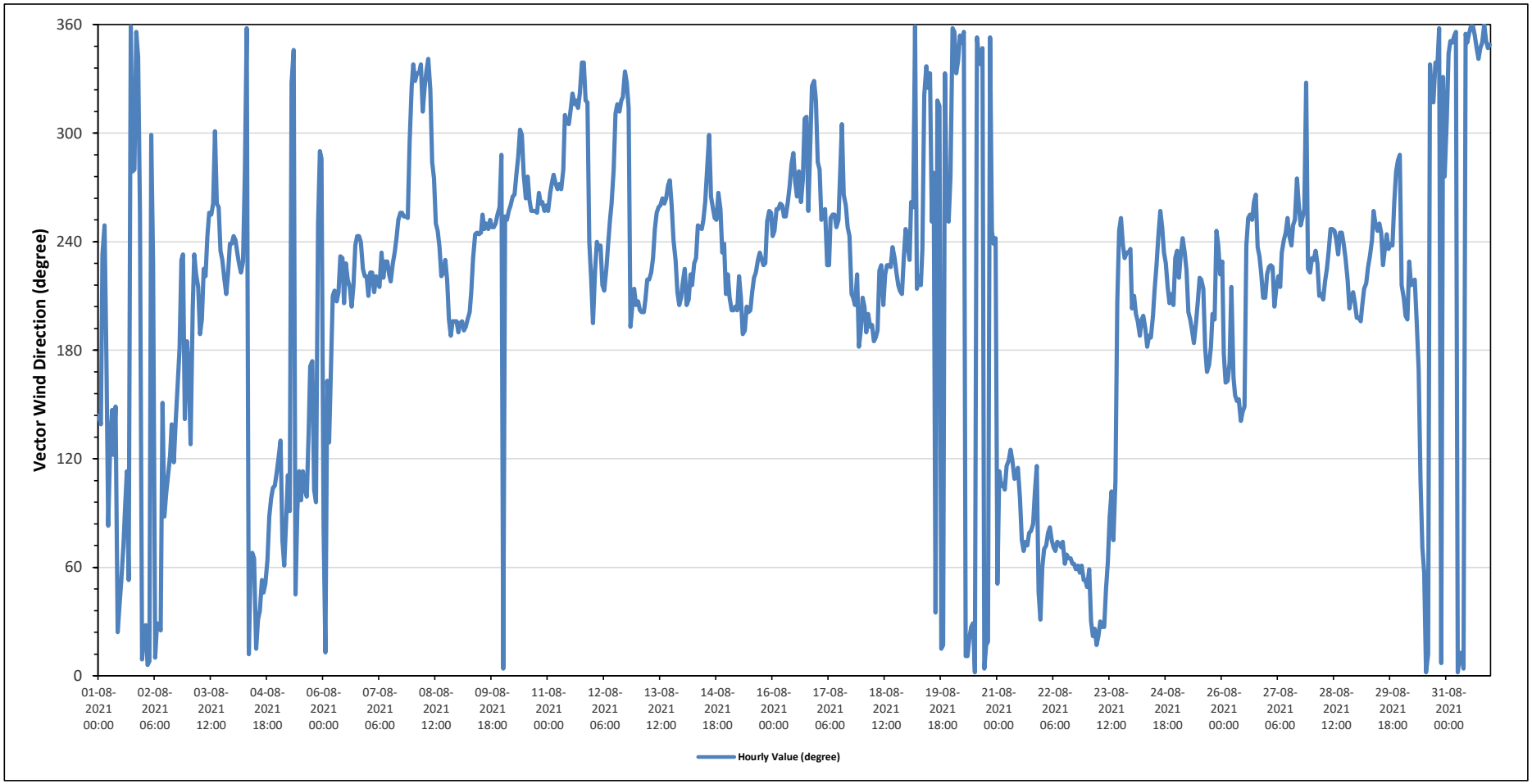
| | |
|---|---|
| Hours in Service: | 744 |
| Hours of Data: | 744 |
| Hours of Missing Data: | 0 |
| Hours of Calibration: | 0 |
| Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Degree | Quadrant |
| Aug 1 | SE | SE | SW | WSW | S | E | SE | SE | ESE | SSE | NNE | NE | NE | ENE | E | ESE | NE | N | W | W | N | NNW | WSW | N | 70 | ENE |
| Aug 2 | NNE | NNE | N | N | WNW | SW | N | NNE | NNE | NNE | SSE | E | E | ESE | ESE | SE | ESE | SE | SSE | S | SW | SW | SE | S | 87 | E |
| Aug 3 | S | SE | SSW | SW | SW | SSW | S | SSW | SW | SW | WSW | WSW | WSW | W | WNW | W | WSW | SW | SW | SW | SSW | SW | WSW | WSW | 241 | WSW |
| Aug 4 | WSW | WSW | SW | SW | SW | SW | W | N | NNE | ENE | ENE | ENE | NNE | NNE | NE | NE | NE | NE | ENE | E | E | ESE | ESE | ESE | 71 | ENE |
| Aug 5 | ESE | SE | ENE | ENE | E | ESE | E | NNW | NNW | NE | E | ESE | E | ESE | ESE | E | SE | S | S | ESE | E | WSW | WNW | WNW | 96 | E |
| Aug 6 | E | NNE | SSE | SE | S | SSW | SSW | SSW | SSW | SW | SW | SSW | SW | SW | SSW | SSW | SW | SW | WSW | WSW | WSW | SW | SW | SW | 226 | SW |
| Aug 7 | SSW | SW | SW | SSW | SW | SW | SSW | SW | SW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | NW | 238 | SW |
| Aug 8 | NNW | NNW | NNW | NNW | NNW | NW | NW | NNW | NNW | NW | WNW | W | WSW | WSW | SW | SW | SW | SW | SW | SSW | S | SSW | SSW | SSW | 289 | WNW |
| Aug 9 | S | SSW | SSW | S | S | SSW | SSW | SSW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | 245 | WSW |
| Aug 10 | N | WSW | WSW | WSW | WSW | W | W | W | WNW | WNW | WNW | W | W | W | W | WSW | WSW | WSW | WSW | W | W | W | WSW | WSW | 269 | W |
| Aug 11 | WSW | W | W | W | W | W | W | W | W | NW | NW | WNW | NW | NW | NW | NW | NW | NW | NNW | NNW | NW | NW | WSW | SW | 298 | WNW |
| Aug 12 | SSW | SW | WSW | SW | SW | SW | SSW | SW | WSW | WSW | W | W | NW | NW | NW | NW | NW | NNW | NNW | NW | S | SSW | SSW | SSW | 281 | W |
| Aug 13 | SSW | SSW | SSW | SSW | SSW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | W | W | W | W | W | WSW | WSW | SW | SSW | SSW | SSW | 245 | WSW |
| Aug 14 | SW | SW | SSW | SSW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | W | W | WNW | W | WSW | WSW | WSW | W | WSW | SW | WSW | SSW | 250 | WSW |
| Aug 15 | SW | SSW | SSW | SSW | SSW | SSW | SW | SSW | S | S | SSW | SSW | SSW | SSW | SW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | 223 | SW |
| Aug 16 | WSW | WSW | WSW | WSW | W | WSW | WSW | WSW | W | W | W | WNW | W | W | W | W | W | NW | NW | WSW | WNW | NW | NNW | NW | 267 | W |
| Aug 17 | WNW | W | WSW | WSW | WSW | SW | SW | WSW | WSW | WSW | WSW | WSW | W | WNW | W | WSW | WSW | WSW | SSW | SSW | SSW | SW | S | S | 253 | WSW |
| Aug 18 | SSW | SSW | S | SSW | S | SSW | S | S | S | SW | SW | SSW | SW | SW | SW | SW | SW | SW | SW | SW | SSW | SSW | SW | WSW | 220 | SW |
| Aug 19 | SW | SW | W | WSW | N | SSW | SW | SW | SW | NW | NNW | NW | NNW | WSW | W | NE | NW | NW | NNE | NNE | NNW | WSW | WSW | W | 286 | WNW |
| Aug 20 | N | N | NNW | NNW | N | N | N | NNE | NNE | NNE | NNE | NNE | N | N | NNW | NNW | NNW | N | NNE | NNE | N | WSW | WSW | WSW | 2 | N |
| Aug 21 | NE | ESE | ESE | ESE | ESE | ESE | ESE | SE | ESE | ESE | ESE | ESE | E | ENE | ENE | ENE | ENE | ENE | E | E | E | ESE | NE | NNE | 90 | E |
| Aug 22 | ENE | ENE | ENE | ENE | E | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | NE | NE | 67 | ENE |
| Aug 23 | NE | ENE | NNE | NNE | NNE | NNE | NNE | NNE | NNE | NNE | NE | ENE | E | E | ENE | ESE | SSW | WSW | WSW | WSW | SW | SW | SW | SW | 42 | NE |
| Aug 24 | SSW | SSW | SSW | SSW | S | SSW | SSW | S | S | S | S | SSW | SSW | SW | WSW | WSW | WSW | SW | SW | SSW | SSW | SSW | SSW | SW | 219 | SW |
| Aug 25 | SW | SW | SW | WSW | SW | SW | SSW | SSW | S | S | SSW | SSW | SW | SW | SSW | S | SSE | S | S | SSW | SSW | WSW | SW | SW | 206 | SSW |
| Aug 26 | SW | S | SSE | SSE | S | SSW | SSE | SSE | SSE | SSE | SE | SE | SSE | SW | WSW | WSW | WSW | W | W | SW | SW | SW | SSW | SSW | 222 | SW |
| Aug 27 | SW | SW | SW | SW | SSW | SSW | SW | SSW | SW | WSW | WSW | WSW | WSW | SW | WSW | WSW | W | WSW | WSW | WSW | WSW | NNW | SW | SW | 243 | WSW |
| Aug 28 | SW | SW | SW | SW | SSW | SSW | SSW | SW | SW | SW | WSW | WSW | WSW | WSW | SW | WSW | WSW | WSW | SW | SW | SSW | SSW | SSW | SSW | 234 | SW |
| Aug 29 | SSW | SSW | SSW | SSW | SSW | SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | SW | SW | WSW | SW | WSW | SW | W | W | WNW | WNW | 242 | WSW |
| Aug 30 | SW | SSW | SSW | SSW | SW | SW | SW | SW | SSW | SSE | ESE | ENE | ENE | N | NNE | NNW | NW | NW | NNW | NNW | N | N | NNW | W | 346 | NNW |
| Aug 31 | NW | NNW | N | N | N | N | N | NNE | NNE | N | N | N | N | N | N | N | NNW | NNW | NNW | N | N | N | NNW | NNW | 353 | N |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure |
| X | InValid Data (Machine Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for VWD - Reno Station*



peace river area monitoring program
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# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 20.8 | kph | on August 9 at hour 15 | Hours in Service: | 744 |
| Maximum Daily Value: | 11.8 | kph | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 1 at hour 19 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.9 | kph | on August 2 | Hours of Calibration: | 0 |
| Monthly Average: | 2.1 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 259 (WSW degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.9 | 0.7 | 0.6 | 0.6 | 0.3 | 0.1 | 1.1 | 1.4 | 2.5 | 2.2 | 3.0 | 4.5 | 6.1 | 6.3 | 4.3 | 2.1 | 2.8 | 1.2 | 0.4 | **0.0** | 1.0 | 0.4 | **0.0** | 2.0 | **0.0** | 6.3 | 1.2 |
| | SE | SE | SW | WSW | S | E | SE | SE | ESE | SSE | NNE | NE | NE | ENE | E | ESE | NE | N | W | W | N | NNW | WSW | N | | | |
| Aug 2 | 0.8 | 1.5 | 2.1 | 2.0 | 0.9 | 1.0 | 0.4 | 0.9 | 2.0 | 3.9 | 2.3 | 4.4 | 4.7 | 3.7 | 1.3 | 1.9 | 2.1 | 1.2 | 1.2 | 1.1 | 0.3 | 0.4 | 0.5 | 0.2 | 0.2 | 4.7 | **0.9** |
| | NNE | NNE | N | N | WNW | SW | N | NNE | NNE | NNE | SSE | E | E | ESE | ESE | SE | ESE | SE | SSE | S | SW | SW | SE | S | | | |
| Aug 3 | 0.2 | 2.1 | 0.6 | 0.3 | 1.1 | 1.9 | 0.3 | 1.3 | 4.6 | 4.5 | 5.4 | 6.5 | 5.1 | 6.0 | 4.8 | 7.4 | 7.6 | 7.6 | 6.6 | 4.2 | 3.1 | 2.9 | 2.9 | 4.3 | 0.2 | 7.6 | 3.4 |
| | S | SE | SSW | SW | SW | SSW | S | SSW | SW | SW | WSW | WSW | WSW | W | WNW | W | WSW | SW | SW | SW | SSW | SW | WSW | WSW | | | |
| Aug 4 | 3.9 | 4.5 | 3.3 | 2.8 | 2.9 | 3.1 | 2.3 | 1.9 | 4.2 | 3.1 | 4.2 | 4.6 | 2.7 | 3.7 | 3.8 | 2.1 | 4.0 | 3.4 | 4.6 | 1.6 | 1.0 | 5.4 | 7.0 | 6.9 | 1.0 | 7.0 | 1.3 |
| | WSW | WSW | SW | SW | SW | SW | W | N | NNE | ENE | ENE | ENE | NNE | NNE | NE | NE | NE | NE | ENE | E | E | ESE | ESE | ESE | | | |
| Aug 5 | 5.2 | 4.0 | 2.5 | 5.0 | 5.5 | 4.5 | 4.9 | 2.3 | 4.8 | 4.8 | 6.1 | 9.3 | 9.7 | 8.9 | 8.1 | 8.4 | 2.9 | 1.4 | 1.5 | 0.9 | 2.5 | 1.3 | 7.3 | 3.0 | 0.9 | 9.7 | 3.1 |
| | ESE | SE | ENE | ENE | E | ESE | E | NNW | NNW | NE | E | ESE | E | ESE | ESE | E | SE | S | S | ESE | E | WSW | WNW | WNW | | | |
| Aug 6 | 3.1 | 1.3 | 0.9 | 1.3 | 1.0 | 1.8 | 3.5 | 3.4 | 4.3 | 6.8 | 6.2 | 2.6 | 4.3 | 4.7 | 5.5 | 3.9 | 4.5 | 9.5 | 13.3 | 12.6 | 10.0 | 5.0 | 4.9 | 5.6 | 0.9 | 13.3 | 4.4 |
| | E | NNE | SSE | SE | S | SSW | SSW | SSW | SSW | SW | SW | SSW | SW | SW | SSW | SSW | SW | SW | WSW | WSW | WSW | SW | SW | SW | | | |
| Aug 7 | 4.1 | 6.2 | 6.3 | 4.9 | 5.8 | 4.3 | 3.3 | 8.2 | 5.6 | 6.1 | 7.6 | 6.5 | 5.9 | 7.3 | 8.8 | 9.6 | 9.7 | 10.0 | 8.7 | 9.0 | 6.4 | 6.6 | 4.4 | 4.9 | 3.3 | 10.0 | 6.2 |
| | SSW | SW | SW | SSW | SW | SW | SSW | SW | SW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | NW | | | |
| Aug 8 | 6.9 | 6.4 | 5.4 | 6.2 | 5.8 | 5.2 | 6.0 | 6.7 | 5.3 | 4.7 | 5.0 | 5.0 | 7.1 | 6.2 | 4.1 | 5.2 | 5.0 | 5.2 | 3.9 | 1.1 | 0.9 | 1.6 | 2.1 | 2.2 | 0.9 | 7.1 | 3.0 |
| | NNW | NNW | NNW | NNW | NNW | NW | NW | NNW | NNW | NW | WNW | W | WSW | WSW | SW | SW | SW | SW | SW | SSW | S | SSW | SSW | SSW | | | |
| Aug 9 | 1.4 | 2.9 | 2.6 | 2.9 | 2.5 | 3.1 | 4.0 | 4.5 | 7.4 | 11.1 | 13.7 | 13.6 | 14.4 | 13.3 | 13.8 | **20.8** | 18.8 | 18.6 | 14.8 | 12.2 | 11.9 | 10.8 | 10.3 | 8.5 | 1.4 | **20.8** | 9.4 |
| | S | SSW | SSW | S | S | SSW | SSW | SSW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WNW | | | |
| Aug 10 | 5.1 | 2.5 | 4.8 | 4.3 | 6.8 | 8.3 | 8.5 | 8.6 | 7.9 | 9.8 | 10.0 | 9.6 | 11.4 | 8.4 | 9.6 | 11.5 | 10.8 | 9.7 | 8.0 | 8.0 | 6.3 | 6.5 | 6.8 | 7.7 | 2.5 | 11.5 | 7.5 |
| | N | WSW | WSW | WSW | WSW | W | W | W | WNW | WNW | WNW | W | W | W | W | WSW | WSW | WSW | WSW | W | W | W | WSW | WSW | | | |
| Aug 11 | 8.5 | 9.3 | 7.8 | 7.6 | 7.0 | 6.4 | 6.0 | 6.5 | 7.5 | 10.6 | 9.4 | 10.1 | 11.4 | 11.2 | 10.4 | 11.1 | 9.5 | 9.1 | 4.9 | 3.4 | 1.7 | 2.1 | 0.6 | 0.3 | 0.3 | 11.4 | 6.6 |
| | WSW | W | W | W | W | W | W | W | W | NW | NW | WNW | NW | NW | NW | NW | NW | NW | NNW | NNW | NW | NW | WSW | SW | | | |
| Aug 12 | 2.2 | 0.6 | 1.1 | 1.3 | 1.6 | 1.5 | 1.3 | 3.8 | 6.9 | 6.2 | 6.2 | 6.1 | 7.7 | 7.0 | 8.7 | 7.4 | 6.8 | 5.9 | 3.5 | 0.5 | 0.9 | 1.2 | 1.9 | 3.6 | 0.5 | 8.7 | 2.9 |
| | SSW | SW | WSW | SW | SW | SW | SSW | SW | WSW | WSW | W | W | NW | NW | NW | NW | NW | NNW | NNW | NW | S | SSW | SSW | SSW | | | |
| Aug 13 | 4.0 | 4.1 | 3.4 | 3.3 | 3.7 | 4.3 | 5.5 | 6.1 | 7.5 | 9.8 | 10.3 | 10.4 | 11.2 | 9.5 | 11.7 | 10.9 | 9.3 | 8.2 | 6.1 | 2.9 | 1.5 | 1.2 | 3.3 | 3.9 | 1.2 | 11.7 | 5.8 |
| | SSW | SSW | SSW | SSW | SSW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | W | W | W | W | W | WSW | WSW | SW | SSW | SSW | SSW | | | |
| Aug 14 | 4.9 | 3.8 | 3.3 | 4.1 | 3.0 | 3.8 | 5.5 | 6.0 | 12.9 | 12.8 | 14.6 | 17.1 | 11.8 | 6.3 | 5.7 | 7.5 | 12.2 | 9.4 | 10.2 | 8.5 | 4.8 | 2.2 | 1.8 | 0.9 | 0.9 | 17.1 | 6.8 |
| | SW | SW | SSW | SSW | SW | SW | SW | SW | WSW | WSW | WSW | WSW | W | W | WNW | W | WSW | WSW | WSW | W | WSW | SW | WSW | SSW | | | |
| Aug 15 | 2.7 | 2.1 | 2.9 | 3.4 | 3.7 | 3.2 | 4.0 | 3.3 | 3.0 | 4.3 | 6.7 | 5.3 | 6.7 | 8.0 | 9.5 | 10.8 | 13.9 | 15.7 | 13.4 | 9.6 | 6.8 | 5.6 | 5.3 | 7.1 | 2.1 | 15.7 | 6.3 |
| | SW | SSW | SSW | SSW | SSW | SSW | SW | SSW | S | S | SSW | SSW | SSW | SSW | SW | SW | SW | SW | SW | SW | SW | WSW | WSW | WSW | | | |
| Aug 16 | 7.1 | 9.3 | 8.1 | 9.8 | 9.1 | 8.2 | 9.5 | 12.7 | 13.2 | 11.0 | 9.2 | 7.1 | 7.2 | 9.0 | 4.4 | 8.1 | 7.1 | 3.4 | 2.3 | 1.8 | 1.7 | 1.8 | 2.5 | 2.0 | 1.7 | 13.2 | 6.6 |
| | WSW | WSW | WSW | WSW | W | WSW | WSW | WSW | W | W | W | WNW | W | W | W | W | W | NW | NW | WSW | WNW | NW | NNW | NW | | | |
| Aug 17 | 1.3 | 1.3 | 2.5 | 2.5 | 3.1 | 1.3 | 1.7 | 2.9 | 4.1 | 3.5 | 5.9 | 6.8 | 4.7 | 3.0 | 4.3 | 4.0 | 4.5 | 3.6 | 1.8 | 1.1 | 0.1 | 0.6 | 1.1 | 1.1 | 0.1 | 6.8 | 2.6 |
| | WNW | W | WSW | WSW | WSW | SW | SW | WSW | WSW | WSW | WSW | WSW | W | WNW | W | WSW | WSW | WSW | SSW | SSW | SSW | SW | S | S | | | |
| Aug 18 | 1.6 | 2.0 | 2.2 | 2.0 | 1.8 | 2.1 | 2.2 | 2.7 | 2.7 | 6.5 | 6.3 | 2.9 | 5.1 | 5.5 | 5.2 | 4.7 | 8.1 | 6.4 | 4.7 | 4.7 | 3.9 | 3.7 | 3.6 | 5.1 | 1.6 | 8.1 | 3.8 |
| | SSW | SSW | S | SSW | S | SSW | S | S | S | SW | SW | SSW | SW | SW | SW | SW | SW | SW | SW | SW | SSW | SSW | SW | WSW | | | |
| Aug 19 | 2.3 | 3.0 | 4.2 | 2.1 | 0.3 | 0.9 | 2.1 | 1.8 | 1.9 | 2.2 | 3.7 | 3.7 | 4.7 | 5.9 | 3.3 | 1.4 | 1.4 | 4.6 | 5.0 | 1.0 | 0.7 | 4.0 | 4.5 | 0.5 | 0.3 | 5.9 | 1.8 |
| | SW | SW | W | WSW | N | SSW | SW | SW | SW | NW | NNW | NW | NNW | WSW | W | NE | NW | NW | NNE | NNE | NNW | WSW | WSW | W | | | |
| Aug 20 | 0.5 | 2.0 | 1.4 | 3.0 | 3.1 | 3.5 | 3.3 | 4.5 | 5.7 | 5.8 | 6.8 | 7.1 | 6.1 | 6.7 | 5.6 | 5.9 | 6.5 | 6.4 | 5.2 | 3.3 | 2.0 | 0.3 | 0.3 | 0.1 | 0.1 | 7.1 | 3.8 |
| | N | N | NNW | NNW | N | N | N | NNE | NNE | NNE | NNE | NNE | N | N | NNW | NNW | NNW | N | NNE | NNE | N | WSW | WSW | WSW | | | |

peace river area monitoring program
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# *PEACE RIVER AREA MONITORING PROGRAM*

## *Reno Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 20.8 | kph | on August 9 at hour 15 | Hours in Service: | 744 |
| Maximum Daily Value: | 11.8 | kph | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 1 at hour 19 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.9 | kph | on August 2 | Hours of Calibration: | 0 |
| Monthly Average: | 2.1 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 259 (WSW degree

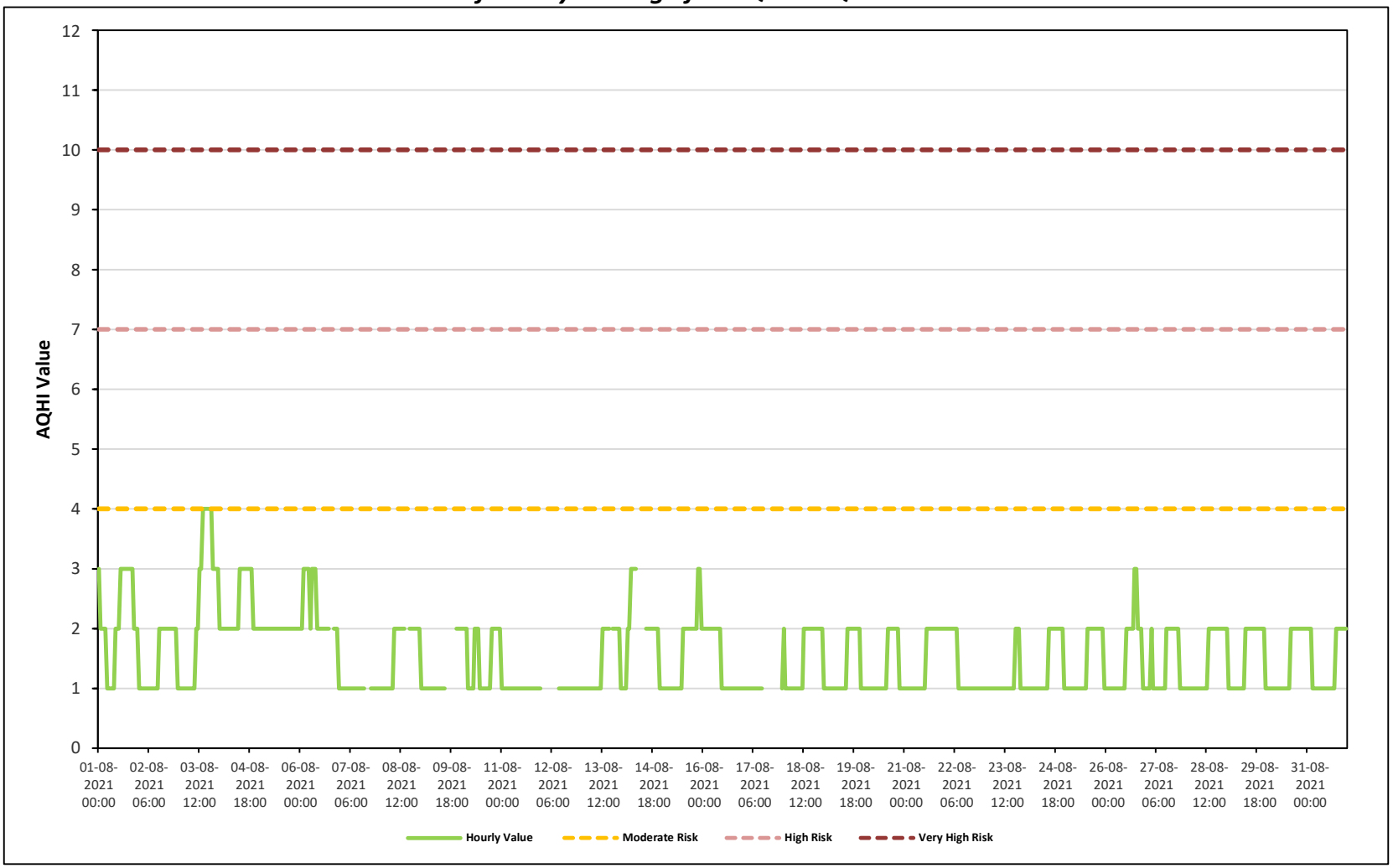
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 21 | 0.1 | 2.4 | 3.0 | 3.0 | 3.6 | 3.3 | 3.6 | 4.9 | 6.3 | 6.7 | 8.0 | 9.4 | 6.7 | 7.3 | 11.5 | 10.8 | 13.4 | 13.4 | 10.9 | 12.1 | 4.9 | 4.8 | 4.8 | 4.6 | 0.1 | 13.4 | 6.2 |
| | NE | ESE | ESE | ESE | ESE | ESE | ESE | SE | ESE | ESE | ESE | ESE | E | ENE | ENE | ENE | ENE | ENE | E | E | E | ESE | NE | NNE | | | |
| Aug 22 | 6.4 | 9.8 | 10.3 | 10.8 | 12.7 | 11.9 | 13.2 | 12.3 | 12.4 | 13.5 | 11.4 | 11.0 | 12.9 | 15.2 | 15.4 | 14.2 | 14.6 | 15.0 | 13.3 | 10.0 | 9.6 | 10.5 | 8.7 | 9.7 | 6.4 | 15.4 | **11.8** |
| | ENE | ENE | ENE | ENE | E | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | ENE | NE | NE | | | |
| Aug 23 | 6.7 | 8.7 | 4.4 | 5.2 | 5.8 | 5.6 | 5.7 | 4.9 | 5.2 | 6.0 | 7.2 | 9.1 | 6.2 | 3.6 | 6.1 | 2.0 | 1.8 | 4.2 | 5.2 | 3.3 | 2.7 | 3.5 | 2.9 | 2.0 | 1.8 | 9.1 | 2.5 |
| | NE | ENE | NNE | NNE | NNE | NNE | NNE | NNE | NNE | NNE | NE | ENE | E | E | ENE | ESE | SSW | WSW | WSW | WSW | SW | SW | SW | SW | | | |
| Aug 24 | 0.8 | 1.5 | 1.3 | 0.5 | 1.1 | 1.9 | 2.2 | 2.2 | 2.3 | 2.9 | 3.4 | 4.3 | 5.3 | 6.8 | 6.8 | 5.4 | 5.6 | 5.9 | 5.4 | 3.2 | 2.7 | 2.5 | 0.4 | 0.9 | 0.4 | 6.8 | 2.9 |
| | SSW | SSW | SSW | SSW | S | SSW | SSW | S | S | S | S | SSW | SSW | SW | WSW | WSW | WSW | SW | SW | SSW | SSW | SSW | SSW | SW | | | |
| Aug 25 | 2.3 | 0.3 | 1.1 | 1.2 | 1.8 | 1.6 | 1.9 | 2.3 | 2.5 | 2.4 | 3.9 | 4.7 | 6.2 | 5.7 | 4.1 | 3.6 | 3.1 | 2.7 | 1.5 | 0.9 | 0.3 | 0.8 | 1.1 | 0.9 | 0.3 | 6.2 | 2.2 |
| | SW | SW | SW | WSW | SW | SW | SSW | SSW | S | S | SSW | SSW | SW | SW | SSW | S | SSE | S | S | SSW | SSW | WSW | SW | SW | | | |
| Aug 26 | 1.2 | 1.2 | 1.8 | 2.4 | 2.0 | 1.1 | 1.1 | 1.7 | 1.9 | 2.8 | 4.0 | 3.4 | 4.0 | 6.2 | 8.0 | 11.0 | 9.3 | 5.6 | 4.0 | 4.9 | 3.6 | 3.2 | 3.0 | 2.8 | 1.1 | 11.0 | 2.8 |
| | SW | S | SSE | SSE | S | SSW | SSE | SSE | SSE | SSE | SE | SE | SSE | SW | WSW | WSW | WSW | W | W | SW | SW | SW | SSW | SSW | | | |
| Aug 27 | 3.7 | 3.3 | 3.6 | 3.8 | 2.5 | 3.3 | 3.3 | 3.5 | 5.9 | 7.1 | 8.5 | 9.4 | 9.5 | 7.6 | 8.8 | 10.8 | 5.5 | 6.8 | 9.0 | 3.7 | 1.8 | 1.2 | 1.2 | 2.3 | 1.2 | 10.8 | 5.0 |
| | SW | SW | SW | SW | SSW | SSW | SW | SSW | SW | WSW | WSW | WSW | WSW | SW | WSW | WSW | W | WSW | WSW | WSW | WSW | NNW | SW | SW | | | |
| Aug 28 | 3.5 | 4.6 | 4.6 | 3.8 | 2.8 | 3.3 | 3.4 | 4.2 | 5.1 | 7.0 | 10.2 | 9.4 | 10.9 | 10.4 | 10.1 | 14.4 | 12.4 | 9.7 | 5.4 | 4.1 | 3.3 | 3.9 | 4.9 | 3.7 | 2.8 | 14.4 | 6.3 |
| | SW | SW | SW | SW | SSW | SSW | SSW | SW | SW | SW | WSW | WSW | WSW | WSW | SW | WSW | WSW | WSW | SW | SW | SSW | SSW | SSW | SSW | | | |
| Aug 29 | 1.7 | 1.2 | 1.7 | 2.7 | 2.8 | 2.0 | 2.6 | 3.7 | 5.0 | 8.6 | 8.3 | 9.4 | 10.1 | 9.1 | 6.3 | 6.2 | 6.4 | 4.4 | 3.5 | 3.5 | 3.2 | 2.8 | 1.9 | 1.2 | 1.2 | 10.1 | 4.3 |
| | SSW | SSW | SSW | SSW | SSW | SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | SW | SW | WSW | SW | WSW | SW | W | W | WNW | WNW | | | |
| Aug 30 | 0.5 | 0.9 | 1.8 | 1.3 | 1.3 | 0.8 | 0.6 | 0.7 | 0.8 | 1.5 | 3.6 | 5.7 | 6.3 | 3.0 | 7.3 | 7.8 | 8.7 | 10.2 | 6.1 | 3.9 | 5.8 | 4.1 | 3.4 | 3.3 | 0.5 | 10.2 | 2.1 |
| | SW | SSW | SSW | SSW | SW | SW | SW | SW | SSW | SSE | ESE | ENE | ENE | N | NNE | NNW | NW | NW | NNW | NNW | N | N | NNW | W | | | |
| Aug 31 | 3.7 | 6.3 | 8.0 | 5.6 | 6.0 | 9.2 | 10.1 | 9.0 | 8.1 | 8.2 | 9.6 | 10.5 | 11.0 | 8.6 | 9.8 | 13.0 | 12.6 | 12.0 | 11.7 | 10.8 | 10.2 | 11.0 | 10.7 | 10.7 | 3.7 | 13.0 | 9.3 |
| | NW | NNW | N | N | N | N | N | NNE | NNE | N | N | N | N | N | N | N | NNW | NNW | NNW | N | N | N | NNW | NNW | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C** | Monthly Calibration | **S** | Daily Zero-Span Check | **Q** | Quality Assurance | |
| **K** | Collection Error | **N** | No Data (Machine Not in Service) | **Y** | Routine Maintenance | **P** Power Failure |
| **X** | InValid Data (Equipment Malfunction /Recovery) | **NRM** | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

# AQHI CADOTTE LAKE STATION

## *Timeseries Chart of Hourly Average for AQHI - AQHI - Cadotte Lake Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## SULPHUR DIOXIDE ($SO_2$) in ppb

**Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb**

Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0 30-Day Exceedance: 0

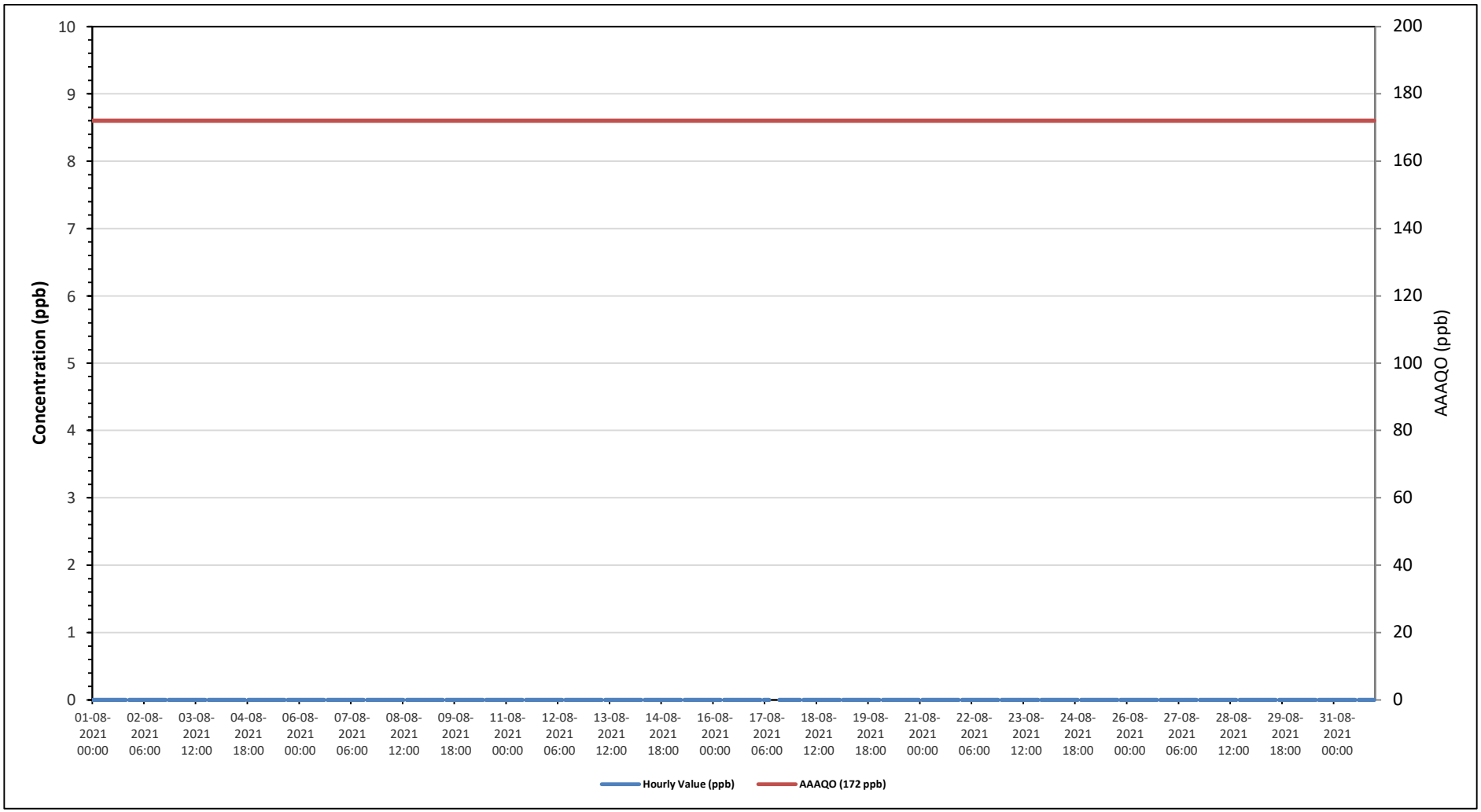
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0 | ppb | on August 1 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.0 | ppb | on August 1 | Hours of Data: | 707 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 0 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 1 | Hours of Calibration: | 37 |
| Monthly Average: | 0.0 | ppb | | Operational Uptime: | 100.0 |

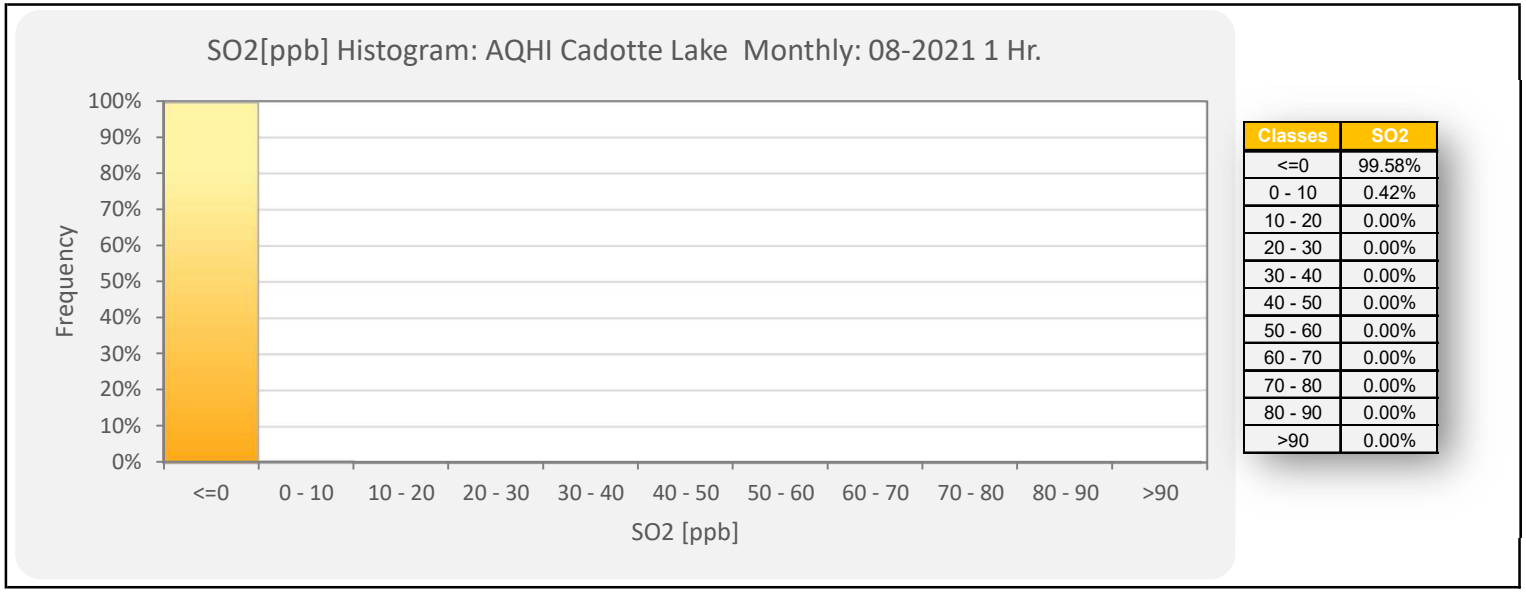
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 15 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 16 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 17 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | C | C | C | C | C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 18 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 19 | 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 |
| Aug 20 | 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 |
| Aug 21 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0.0 |
| Aug 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0.0 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0.0 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Diurnal Maximum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Diurnal 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 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for SO2 - AQHI - Cadotte Lake Station*

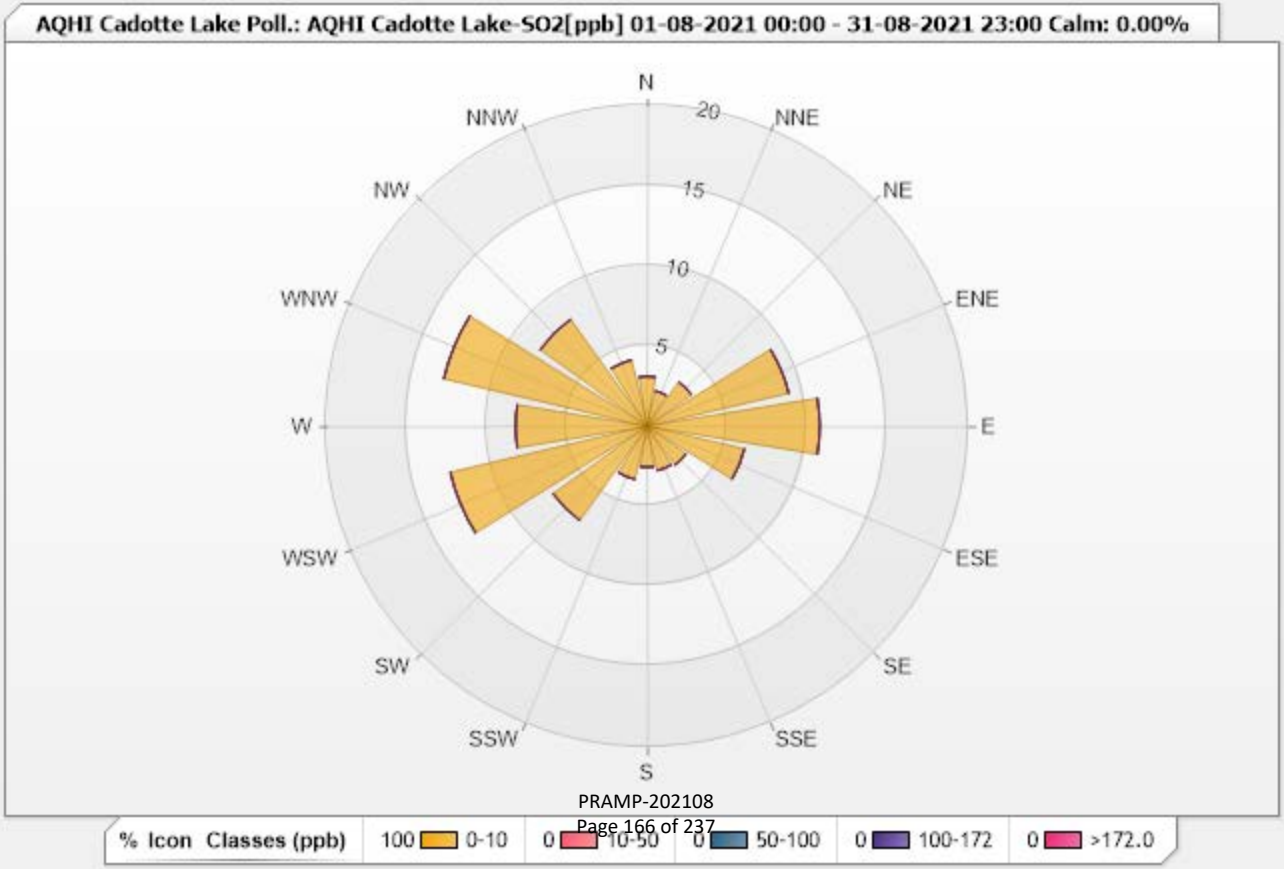





| Classes | SO2 |
|---|---|
| <=0 | 99.58% |
| 0 - 10 | 0.42% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-SO2[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

| Direction | 0-10 | 10-50 | 50-100 | 100-172 | >172.0 | Total |
|---|---|---|---|---|---|---|
| N | 3.11 | 0 | 0 | 0 | 0 | 3.11 |
| NNE | 2.26 | 0 | 0 | 0 | 0 | 2.26 |
| NE | 3.39 | 0 | 0 | 0 | 0 | 3.39 |
| ENE | 9.05 | 0 | 0 | 0 | 0 | 9.05 |
| E | 10.75 | 0 | 0 | 0 | 0 | 10.75 |
| ESE | 6.22 | 0 | 0 | 0 | 0 | 6.22 |
| SE | 2.97 | 0 | 0 | 0 | 0 | 2.97 |
| SSE | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| S | 2.55 | 0 | 0 | 0 | 0 | 2.55 |
| SSW | 3.39 | 0 | 0 | 0 | 0 | 3.39 |
| SW | 7.21 | 0 | 0 | 0 | 0 | 7.21 |
| WSW | 12.59 | 0 | 0 | 0 | 0 | 12.59 |
| W | 8.2 | 0 | 0 | 0 | 0 | 8.2 |
| WNW | 13.01 | 0 | 0 | 0 | 0 | 13.01 |
| NW | 8.2 | 0 | 0 | 0 | 0 | 8.2 |
| NNW | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-SO2[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-10
0 10-50
0 50-100
0 100-172
0 >172.0

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# PEACE RIVER AREA MONITORING PROGRAM

## AQHI - Cadotte Lake Station - August 2021

### Summary of Hourly Averages

### TOTAL REDUCED SULPHUR (TRS) in ppb

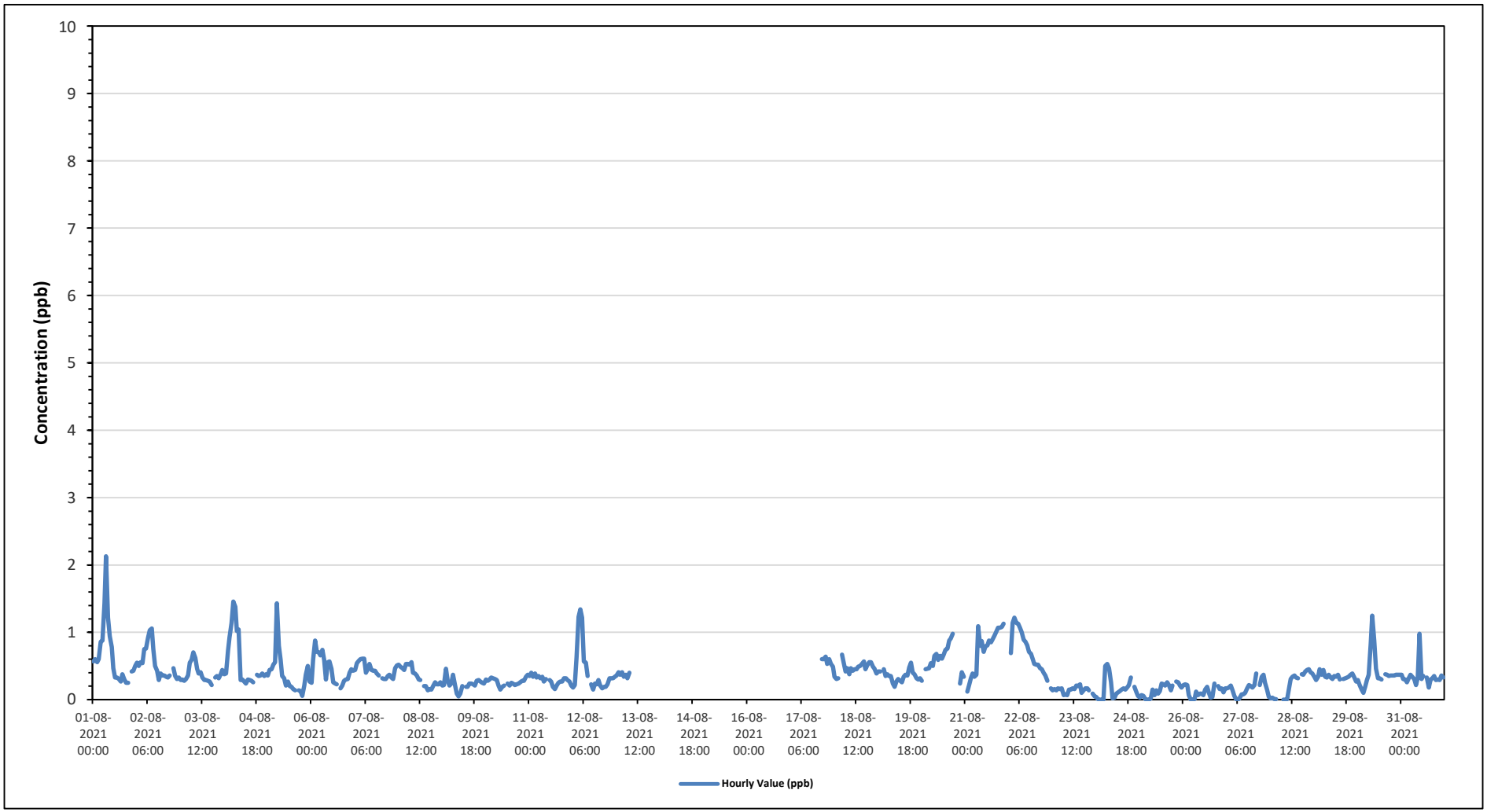
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.13 | ppb | on August 1 at hour 7 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.75 | ppb | on August 21 | Hours of Data: | 604 |
| Minimum Hourly Value: | 0.00 | ppb | on August 24 at hour 2 | Hours of Missing Data: | 109 |
| Minimum Daily Value: | 0.12 | ppb | on August 26 | Hours of Calibration: | 31 |
| Monthly Average: | 0.38 | ppb | | Operational Uptime: | 85.3 |

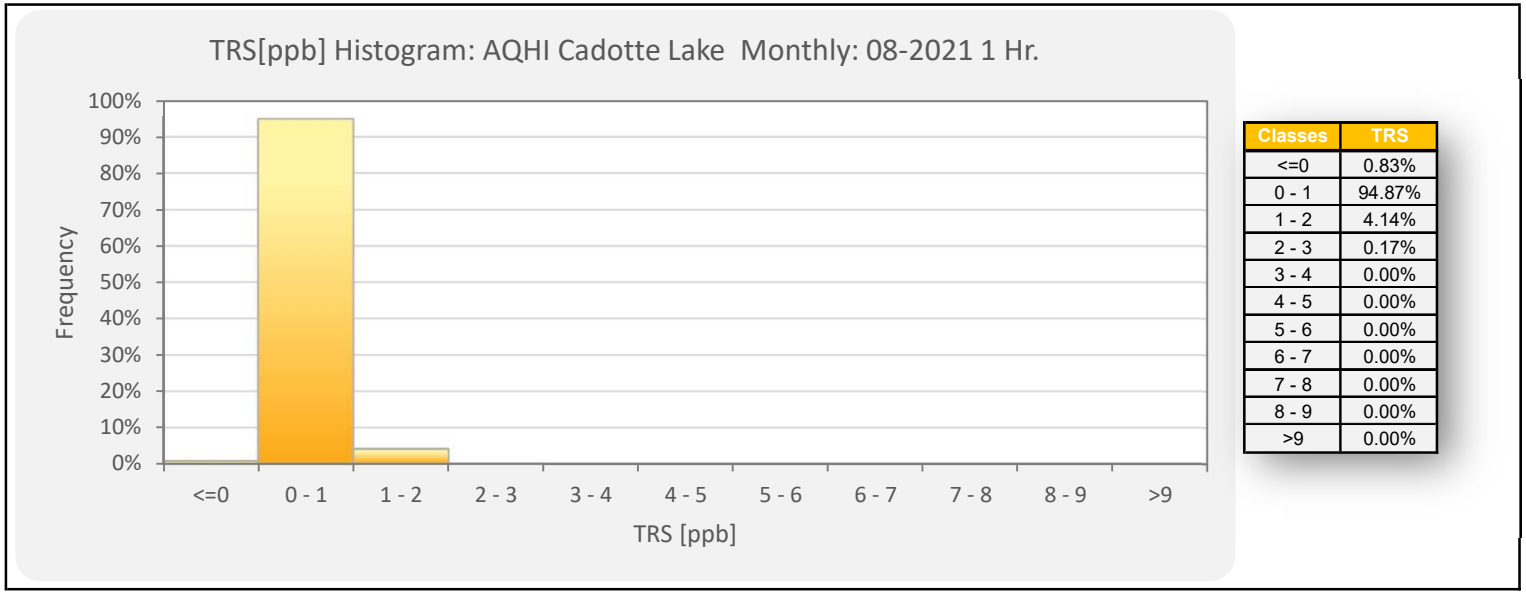
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 0.57 | 0.6 | 0.56 | 0.6 | 0.86 | 0.88 | 1.43 | **2.13** | 1.22 | 0.94 | 0.78 | 0.47 | 0.33 | 0.33 | 0.31 | 0.27 | 0.38 | 0.3 | 0.25 | 0.25 | S | 0.42 | 0.43 | 0.5 | 0.25 | **2.13** | 0.64 |
| Aug 2 | 0.55 | 0.5 | 0.56 | 0.54 | 0.75 | 0.76 | 0.92 | 1.03 | 1.06 | 0.75 | 0.5 | 0.43 | 0.29 | 0.39 | 0.36 | 0.36 | 0.34 | 0.33 | 0.36 | S | 0.47 | 0.35 | 0.31 | 0.33 | 0.29 | 1.06 | 0.53 |
| Aug 3 | 0.29 | 0.3 | 0.28 | 0.31 | 0.36 | 0.55 | 0.59 | 0.7 | 0.62 | 0.46 | 0.39 | 0.41 | 0.33 | 0.29 | 0.29 | 0.28 | 0.27 | 0.22 | S | 0.33 | 0.35 | 0.32 | 0.38 | 0.44 | 0.22 | 0.70 | 0.38 |
| Aug 4 | 0.38 | 0.39 | 0.73 | 0.93 | 1.14 | 1.46 | 1.38 | 1.02 | 1.04 | 0.29 | 0.3 | 0.27 | 0.24 | 0.3 | 0.29 | 0.28 | 0.26 | S | 0.37 | 0.35 | 0.36 | 0.39 | 0.35 | 0.38 | 0.24 | 1.46 | 0.56 |
| Aug 5 | 0.36 | 0.44 | 0.45 | 0.52 | 0.56 | 1.43 | 0.8 | 0.59 | 0.35 | 0.32 | 0.21 | 0.27 | 0.2 | 0.19 | 0.16 | 0.14 | S | 0.14 | 0.13 | 0.06 | 0.21 | 0.37 | 0.5 | 0.27 | 0.06 | 1.43 | 0.38 |
| Aug 6 | 0.25 | 0.59 | 0.88 | 0.71 | 0.7 | 0.66 | 0.74 | 0.59 | 0.3 | 0.56 | 0.57 | 0.46 | 0.26 | 0.24 | 0.23 | S | 0.17 | 0.21 | 0.28 | 0.3 | 0.31 | 0.4 | 0.45 | 0.43 | 0.17 | 0.88 | 0.45 |
| Aug 7 | 0.44 | 0.54 | 0.58 | 0.6 | 0.61 | 0.61 | 0.4 | 0.45 | 0.53 | 0.44 | 0.43 | 0.43 | 0.39 | 0.36 | S | 0.32 | 0.31 | 0.31 | 0.35 | 0.37 | 0.33 | 0.31 | 0.47 | 0.51 | 0.31 | 0.61 | 0.44 |
| Aug 8 | 0.52 | 0.49 | 0.47 | 0.44 | 0.53 | 0.53 | 0.52 | 0.56 | 0.4 | 0.39 | 0.36 | 0.3 | 0.29 | S | 0.2 | 0.2 | 0.14 | 0.16 | 0.15 | 0.2 | 0.26 | 0.23 | 0.23 | 0.26 | 0.14 | 0.56 | 0.34 |
| Aug 9 | 0.21 | 0.22 | 0.46 | 0.28 | 0.21 | 0.24 | 0.37 | 0.22 | 0.09 | 0.05 | 0.09 | 0.2 | S | 0.19 | 0.19 | 0.24 | 0.24 | 0.23 | 0.21 | 0.28 | 0.29 | 0.27 | 0.25 | 0.24 | 0.05 | 0.46 | 0.23 |
| Aug 10 | 0.3 | 0.28 | 0.3 | 0.33 | 0.32 | 0.31 | 0.29 | 0.21 | 0.15 | 0.19 | 0.21 | S | 0.24 | 0.21 | 0.25 | 0.24 | 0.22 | 0.23 | 0.24 | 0.26 | 0.28 | 0.28 | 0.34 | 0.37 | 0.15 | 0.37 | 0.26 |
| Aug 11 | 0.35 | 0.4 | 0.34 | 0.39 | 0.33 | 0.35 | 0.32 | 0.34 | 0.27 | 0.31 | S | 0.29 | 0.27 | 0.19 | 0.16 | 0.21 | 0.25 | 0.27 | 0.27 | 0.32 | 0.32 | 0.29 | 0.27 | 0.21 | 0.16 | 0.40 | 0.29 |
| Aug 12 | 0.18 | 0.22 | 0.63 | 1.23 | 1.34 | 1.22 | 0.57 | 0.55 | 0.35 | S | 0.23 | 0.15 | 0.24 | 0.23 | 0.29 | 0.21 | 0.17 | 0.19 | 0.19 | 0.23 | 0.32 | 0.32 | 0.32 | 0.34 | 0.15 | 1.34 | 0.42 |
| Aug 13 | 0.36 | 0.41 | 0.37 | 0.41 | 0.34 | 0.37 | 0.32 | 0.4 | S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | 0.32 | 0.41 | - |
| Aug 14 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| Aug 15 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| Aug 16 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| Aug 17 | X | X | X | X | X | X | X | X | X | X | X | X | X | C | C | C | C | 0.6 | 0.6 | 0.64 | 0.53 | 0.6 | 0.53 | 0.49 | 0.49 | 0.64 | - |
| Aug 18 | 0.34 | 0.31 | 0.32 | S | 0.67 | 0.54 | 0.42 | 0.47 | 0.38 | 0.47 | 0.43 | 0.45 | 0.45 | 0.49 | 0.5 | 0.53 | 0.57 | 0.45 | 0.51 | 0.56 | 0.56 | 0.49 | 0.46 | 0.39 | 0.31 | 0.67 | 0.47 |
| Aug 19 | 0.42 | 0.42 | S | 0.45 | 0.35 | 0.38 | 0.35 | 0.35 | 0.24 | 0.19 | 0.27 | 0.31 | 0.28 | 0.26 | 0.34 | 0.37 | 0.36 | 0.48 | 0.55 | 0.4 | 0.38 | 0.32 | 0.3 | 0.32 | 0.19 | 0.55 | 0.35 |
| Aug 20 | 0.28 | S | 0.45 | 0.46 | 0.47 | 0.54 | 0.5 | 0.65 | 0.68 | 0.59 | 0.65 | 0.61 | 0.67 | 0.74 | 0.76 | 0.88 | 0.91 | 0.98 | X | X | NRM | 0.24 | 0.41 | 0.34 | 0.24 | 0.98 | 0.59 |
| Aug 21 | S | 0.12 | 0.22 | 0.32 | 0.39 | 0.34 | 0.37 | 1.09 | 0.8 | 0.87 | 0.71 | 0.79 | 0.81 | 0.88 | 0.85 | 0.9 | 0.95 | 1.01 | 1.07 | 1.07 | 1.08 | 1.13 | X | NRM | 0.12 | 1.13 | **0.75** |
| Aug 22 | NRM | 0.69 | 1.14 | 1.22 | 1.14 | 1.13 | 1.07 | 1 | 0.89 | 0.86 | 0.81 | 0.71 | 0.68 | 0.6 | 0.53 | 0.52 | 0.52 | 0.47 | 0.45 | 0.4 | 0.36 | 0.28 | S | 0.17 | 0.17 | 1.22 | 0.71 |
| Aug 23 | 0.14 | 0.16 | 0.14 | 0.17 | 0.16 | 0.17 | 0.07 | 0.08 | 0.07 | 0.15 | 0.15 | 0.17 | 0.16 | 0.21 | 0.2 | 0.23 | 0.1 | 0.14 | 0.17 | 0.17 | 0.14 | S | 0.09 | 0.05 | 0.05 | 0.23 | 0.14 |
| Aug 24 | 0.04 | 0.01 | 0 | 0 | 0 | 0.5 | 0.53 | 0.47 | 0.26 | 0.02 | 0.03 | 0.09 | 0.11 | 0.13 | 0.15 | 0.17 | 0.15 | 0.18 | 0.22 | 0.33 | S | 0.19 | 0.12 | 0.06 | **0.00** | 0.53 | 0.16 |
| Aug 25 | 0.03 | 0.07 | 0.06 | 0.01 | 0 | 0 | 0.02 | 0.15 | 0.07 | 0.14 | 0.09 | 0.13 | 0.24 | 0.23 | 0.21 | 0.26 | 0.22 | 0.14 | 0.21 | S | 0.27 | 0.26 | 0.21 | 0.18 | **0.00** | 0.27 | 0.14 |
| Aug 26 | 0.22 | 0.23 | 0.22 | 0.07 | 0 | 0 | 0.01 | 0.12 | 0.07 | 0.09 | 0.09 | 0.07 | 0.15 | 0.19 | 0.1 | 0.03 | 0.04 | 0.24 | S | 0.2 | 0.16 | 0.17 | 0.11 | 0.17 | **0.00** | 0.24 | 0.12 |
| Aug 27 | 0.17 | 0.18 | 0.21 | 0.14 | 0.06 | 0.01 | 0 | 0.03 | 0.08 | 0.08 | 0.1 | 0.17 | 0.22 | 0.2 | 0.18 | 0.22 | 0.39 | S | 0.22 | 0.34 | 0.37 | 0.25 | 0.15 | 0.04 | **0.00** | 0.39 | 0.17 |
| Aug 28 | 0.02 | 0.03 | 0.01 | 0.01 | X | X | X | 0 | 0 | 0.01 | 0.14 | 0.31 | 0.34 | 0.36 | 0.33 | 0.32 | S | 0.38 | 0.37 | 0.42 | 0.44 | 0.45 | 0.41 | 0.39 | **0.00** | 0.45 | 0.24 |
| Aug 29 | 0.34 | 0.29 | 0.34 | 0.45 | 0.37 | 0.44 | 0.34 | 0.33 | 0.37 | 0.33 | 0.31 | 0.35 | 0.34 | 0.37 | 0.3 | S | 0.31 | 0.32 | 0.33 | 0.34 | 0.37 | 0.39 | 0.33 | 0.27 | 0.27 | 0.45 | 0.34 |
| Aug 30 | 0.29 | 0.22 | 0.15 | 0.1 | 0.19 | 0.29 | 0.37 | 0.83 | 1.25 | 0.88 | 0.46 | 0.32 | 0.32 | 0.3 | S | 0.38 | 0.37 | 0.35 | 0.36 | 0.36 | 0.36 | 0.37 | 0.37 | 0.37 | 0.10 | 1.25 | 0.40 |
| Aug 31 | 0.37 | 0.31 | 0.3 | 0.26 | 0.32 | 0.37 | 0.34 | 0.31 | 0.22 | 0.33 | 0.98 | 0.31 | 0.35 | S | 0.33 | 0.18 | 0.3 | 0.32 | 0.35 | 0.29 | 0.3 | 0.29 | 0.36 | 0.33 | 0.18 | 0.98 | 0.34 |
| Diurnal Maximum | 0.57 | 0.69 | 1.14 | 1.23 | 1.34 | 1.46 | 1.43 | 2.13 | 1.25 | 0.94 | 0.98 | 0.79 | 0.81 | 0.88 | 0.85 | 0.90 | 0.95 | 1.01 | 1.07 | 1.07 | 1.08 | 1.13 | 0.53 | 0.51 | | | |
| Diurnal Average | 0.30 | 0.32 | 0.39 | 0.42 | 0.47 | 0.54 | 0.50 | 0.54 | 0.45 | 0.39 | 0.37 | 0.34 | 0.33 | 0.33 | 0.31 | 0.32 | 0.33 | 0.35 | 0.34 | 0.35 | 0.37 | 0.36 | 0.33 | 0.30 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for TRS - AQHI - Cadotte Lake Station*

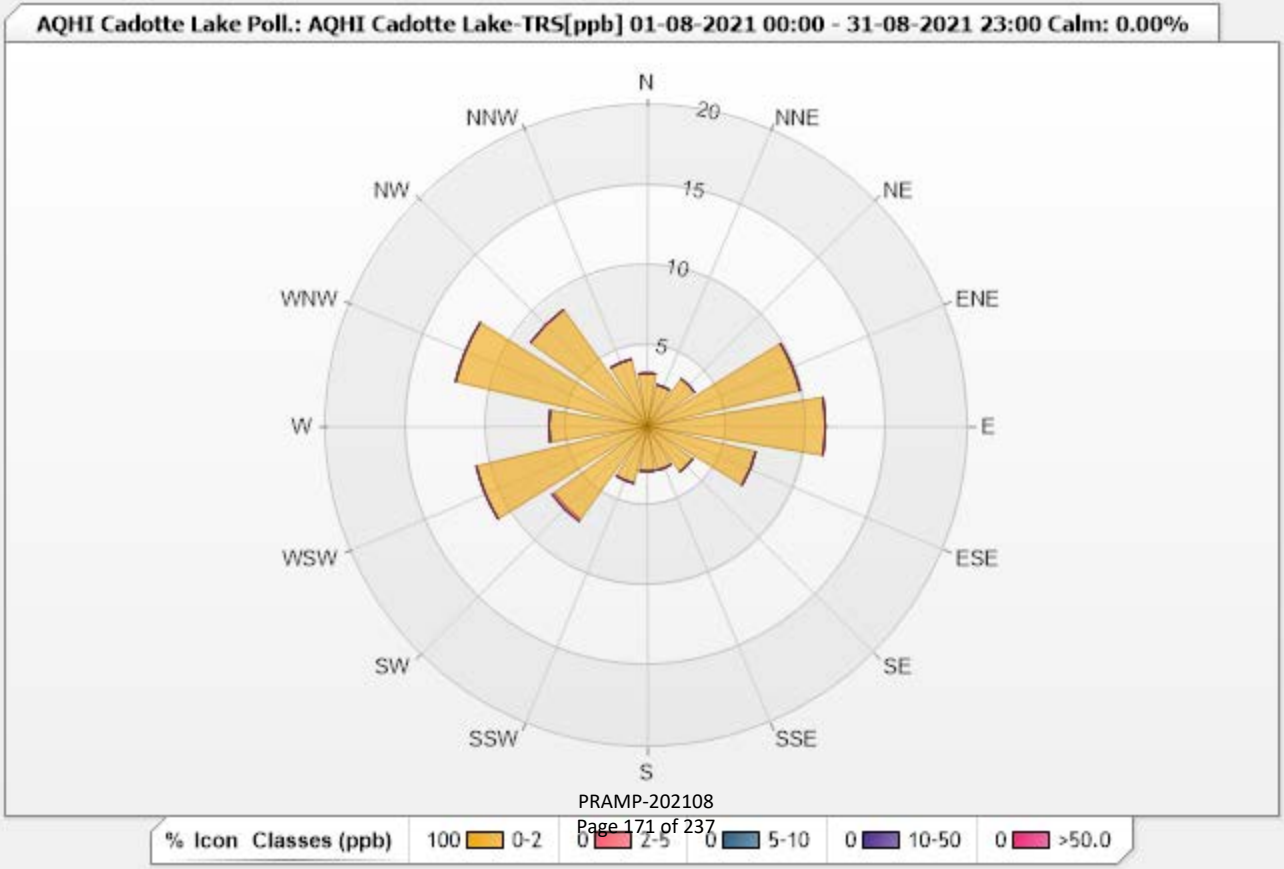





| Classes | TRS |
|---|---|
| <=0 | 0.83% |
| 0 - 1 | 94.87% |
| 1 - 2 | 4.14% |
| 2 - 3 | 0.17% |
| 3 - 4 | 0.00% |
| 4 - 5 | 0.00% |
| 5 - 6 | 0.00% |
| 6 - 7 | 0.00% |
| 7 - 8 | 0.00% |
| 8 - 9 | 0.00% |
| >9 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-TRS[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 81.18% Calm Avg: 0.00 [ppb]

| Direction | 0-2 | 2-5 | 5-10 | 10-50 | >50.0 | Total |
|---|---|---|---|---|---|---|
| N | 3.31 | 0 | 0 | 0 | 0 | 3.31 |
| NNE | 2.65 | 0 | 0 | 0 | 0 | 2.65 |
| NE | 3.64 | 0 | 0 | 0 | 0 | 3.64 |
| ENE | 9.77 | 0 | 0 | 0 | 0 | 9.77 |
| E | 11.09 | 0 | 0 | 0 | 0 | 11.09 |
| ESE | 6.95 | 0 | 0 | 0 | 0 | 6.95 |
| SE | 3.48 | 0 | 0 | 0 | 0 | 3.48 |
| SSE | 2.81 | 0 | 0 | 0 | 0 | 2.81 |
| S | 2.81 | 0 | 0 | 0 | 0 | 2.81 |
| SSW | 3.64 | 0 | 0 | 0 | 0 | 3.64 |
| SW | 7.12 | 0.17 | 0 | 0 | 0 | 7.29 |
| WSW | 10.93 | 0 | 0 | 0 | 0 | 10.93 |
| W | 6.13 | 0 | 0 | 0 | 0 | 6.13 |
| WNW | 12.25 | 0 | 0 | 0 | 0 | 12.25 |
| NW | 8.94 | 0 | 0 | 0 | 0 | 8.94 |
| NNW | 4.3 | 0 | 0 | 0 | 0 | 4.3 |
| Summary | 100 | 0.17 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-TRS[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## OXIDES OF NITROGEN (NOx) in ppb

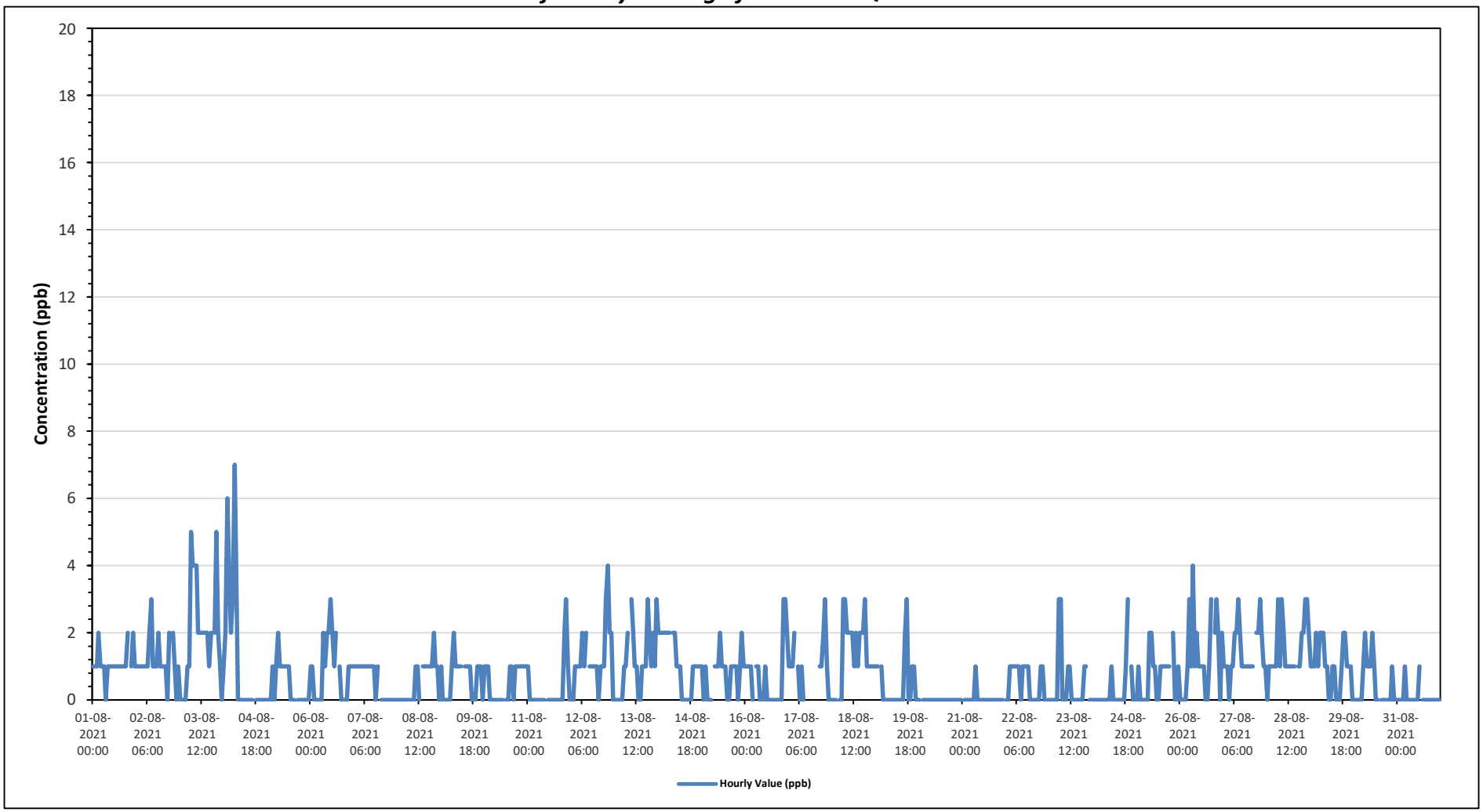
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 7 | ppb | on August 4 at hour 6 | Hours in Service: | 744 |
| Maximum Daily Value: | 1.9 | ppb | on August 3 | Hours of Data: | 704 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 7 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 20 | Hours of Calibration: | 40 |
| Monthly Average: | 0.8 | ppb | | Operational Uptime: | 100.0 |

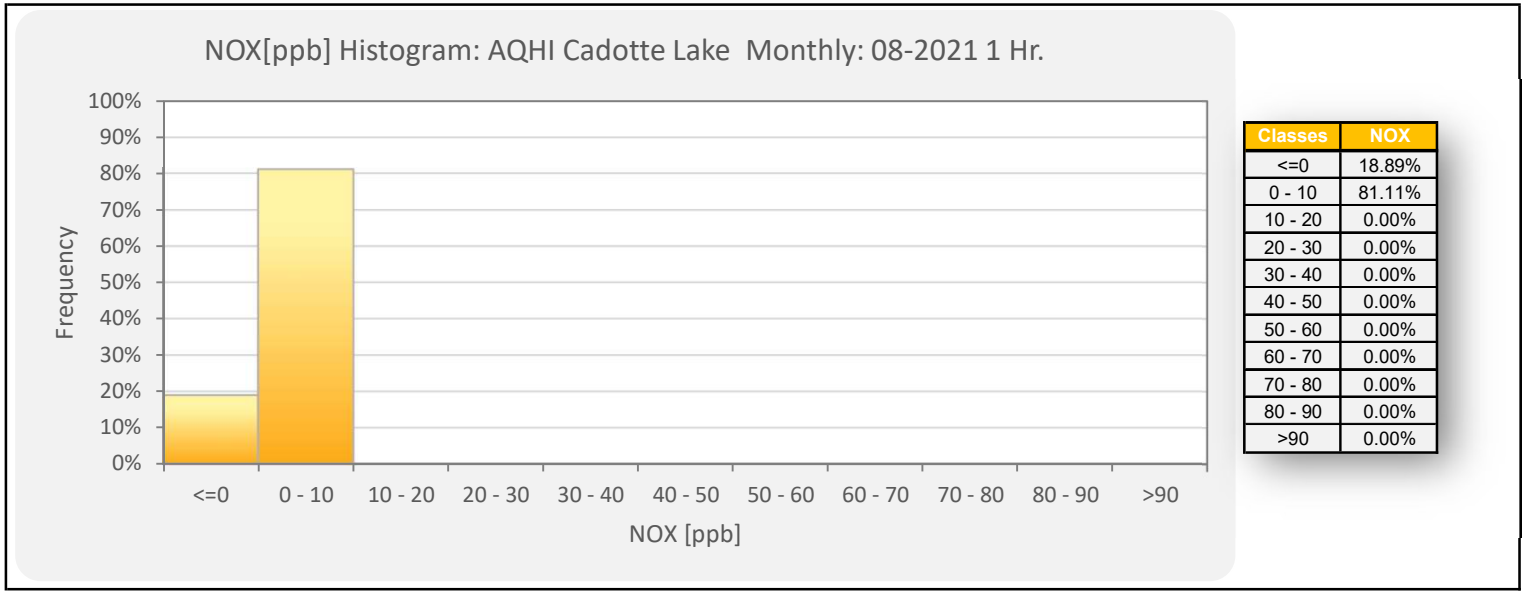
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | S | 1 | 2 | 1 | 0 | 2 | 1.1 |
| Aug 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 2 | S | 2 | 1 | 0 | 1 | 0 | 3 | 1.2 |
| Aug 3 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | S | 2 | 5 | 2 | 1 | 0 | 0 | 5 | **1.9** |
| Aug 4 | 1 | 2 | 6 | 4 | 2 | 3 | **7** | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** | 1.3 |
| Aug 5 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.4 |
| Aug 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 2 | S | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 3 | 0.9 |
| Aug 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.6 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | S | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 0.5 |
| Aug 9 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | S | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0.7 |
| Aug 10 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0.5 |
| Aug 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 3 | 0.3 |
| Aug 12 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | S | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 3 | 4 | 2 | 2 | 0 | 0 | 4 | 1.2 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | S | 3 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 2 | 1 | 2 | 1 | 3 | 0 | 3 | 1.1 |
| Aug 14 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | S | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 1.1 |
| Aug 15 | 1 | 0 | 1 | 0 | 0 | 0 | S | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 2 | 0.8 |
| Aug 16 | 1 | 1 | 1 | 1 | 0 | S | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 3 | 0.7 |
| Aug 17 | 1 | 1 | 1 | 2 | S | 1 | 0 | 1 | 0 | C | C | C | C | C | C | C | C | 1 | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 3 | - |
| Aug 18 | 0 | 0 | 0 | S | 0 | 0 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 0 | 3 | 1.4 |
| Aug 19 | 1 | 1 | S | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0.4 |
| Aug 20 | 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 |
| Aug 21 | S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 1 | 0.0 |
| Aug 22 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | S | 0 | 0 | 1 | 0.5 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | S | 0 | 0 | 0 | 3 | 0.4 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | S | 1 | 0 | 0 | 0 | 3 | 0.3 |
| Aug 25 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | S | 2 | 0 | 0 | 1 | 0 | 2 | 0.7 |
| Aug 26 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 4 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 3 | S | 2 | 3 | 2 | 0 | 2 | 0 | 4 | 1.3 |
| Aug 27 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | S | 2 | 2 | 3 | 2 | 1 | 1 | 0 | 3 | 1.4 |
| Aug 28 | 0 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | S | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 0 | 3 | 1.5 |
| Aug 29 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | S | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 1.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0.4 |
| Aug 31 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| Diurnal Maximum | 2 | 2 | 6 | 4 | 2 | 3 | 7 | 4 | 4 | 4 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 5 | 3 | 3 | 3 | | | |
| Diurnal Average | 0.5 | 0.5 | 0.7 | 0.7 | 0.5 | 0.8 | 1.4 | 1.3 | 1.0 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 1.0 | 1.3 | 1.1 | 0.8 | 0.6 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NOx - AQHI - Cadotte Lake Station*

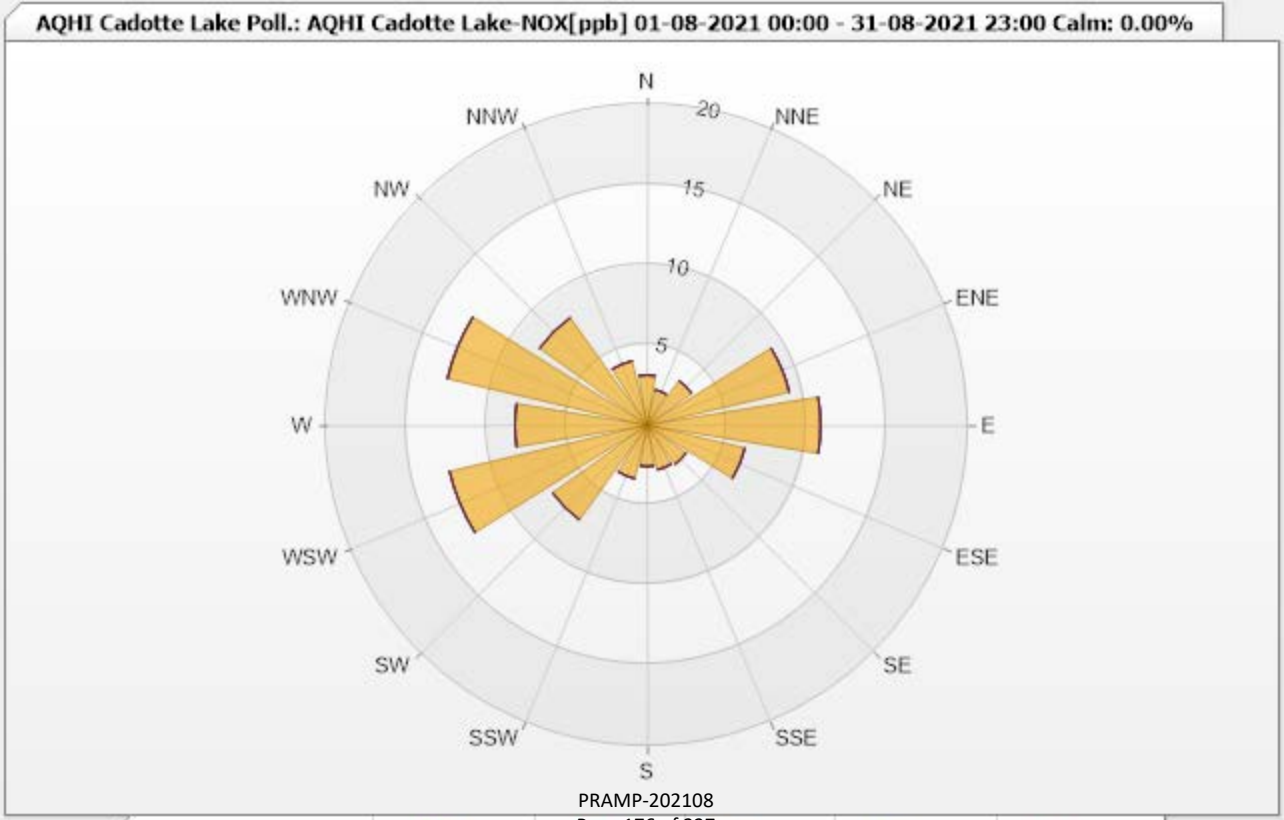





| Classes | NOX |
|---|---|
| <=0 | 18.89% |
| 0 - 10 | 81.11% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NOX[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.62% Calm Avg: 0.00 [ppb]

| Direction | 0-30 | 30-50 | 50-76 | 76-159 | >159.0 | Total |
|---|---|---|---|---|---|---|
| N | 3.13 | 0 | 0 | 0 | 0 | 3.13 |
| NNE | 2.27 | 0 | 0 | 0 | 0 | 2.27 |
| NE | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| ENE | 9.09 | 0 | 0 | 0 | 0 | 9.09 |
| E | 10.8 | 0 | 0 | 0 | 0 | 10.8 |
| ESE | 6.25 | 0 | 0 | 0 | 0 | 6.25 |
| SE | 2.98 | 0 | 0 | 0 | 0 | 2.98 |
| SSE | 2.84 | 0 | 0 | 0 | 0 | 2.84 |
| S | 2.56 | 0 | 0 | 0 | 0 | 2.56 |
| SSW | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| SW | 7.24 | 0 | 0 | 0 | 0 | 7.24 |
| WSW | 12.64 | 0 | 0 | 0 | 0 | 12.64 |
| W | 8.24 | 0 | 0 | 0 | 0 | 8.24 |
| WNW | 12.78 | 0 | 0 | 0 | 0 | 12.78 |
| NW | 8.24 | 0 | 0 | 0 | 0 | 8.24 |
| NNW | 4.12 | 0 | 0 | 0 | 0 | 4.12 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NOX[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-30
0 30-50
0 50-76
0 76-159
0 >159.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## NITRIC OXIDE (NO) in ppb

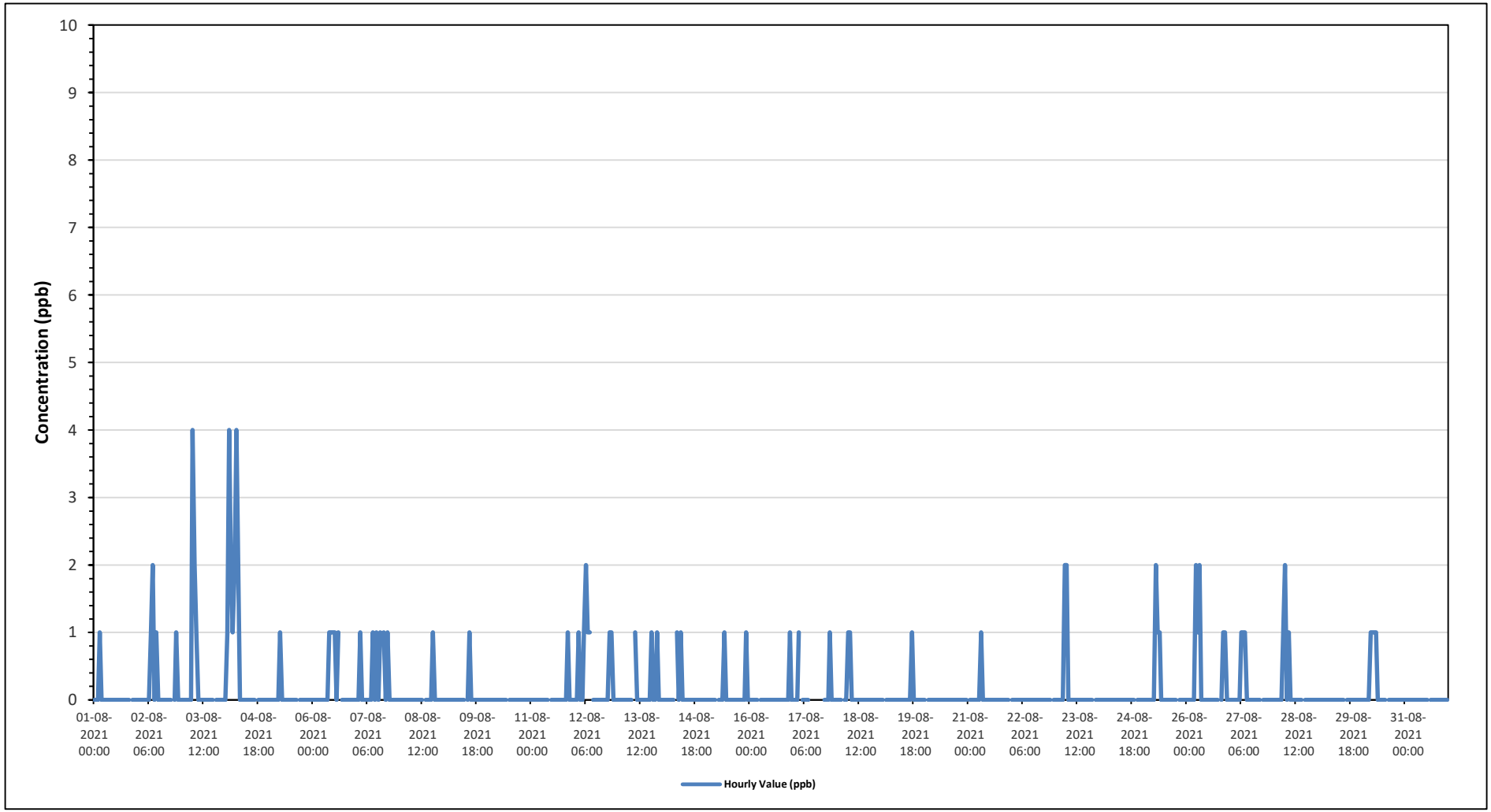
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 4 | ppb | on August 3 at hour 6 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.7 | ppb | on August 4 | Hours of Data: | 704 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 0 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 10 | Hours of Calibration: | 40 |
| Monthly Average: | 0.1 | ppb | | Operational Uptime: | 100.0 |

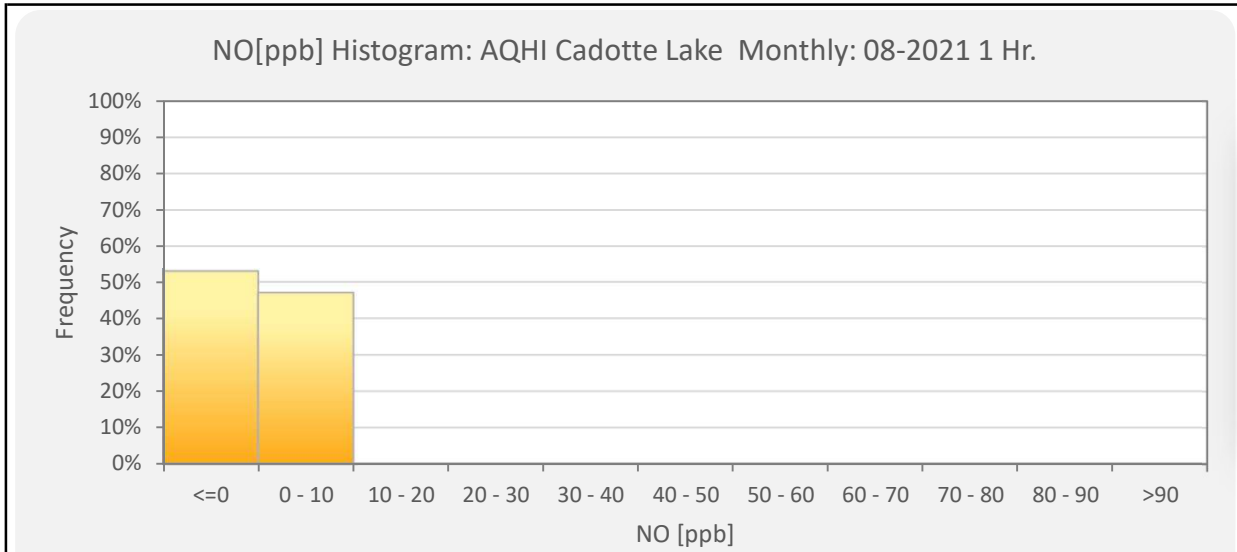
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 1 | 0 | 0 | 0 | 2 | 0.2 |
| Aug 3 | 0 | 0 | 0 | 0 | 0 | 0 | **4** | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | **4** | 0.3 |
| Aug 4 | 0 | 1 | **4** | 2 | 1 | 2 | **4** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4** | **0.7** |
| Aug 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.2 |
| Aug 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | S | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.3 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 12 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0.3 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0.1 |
| Aug 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| Aug 15 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0.1 |
| Aug 16 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0.0 |
| Aug 17 | 0 | 0 | 0 | 1 | S | 0 | 0 | 0 | 0 | C | C | C | C | C | C | C | C | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | - |
| Aug 18 | 0 | 0 | 0 | S | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| Aug 19 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Aug 20 | 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 |
| Aug 21 | S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 1 | 0.0 |
| Aug 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0.0 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 2 | 0.2 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 2 | 0.2 |
| Aug 26 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0.3 |
| Aug 27 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| Aug 28 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.2 |
| Aug 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.2 |
| Aug 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Diurnal Maximum | 0 | 1 | 4 | 2 | 1 | 2 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | | | |
| Diurnal Average | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.3 | 0.6 | 0.5 | 0.3 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure | |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NO - AQHI - Cadotte Lake Station*

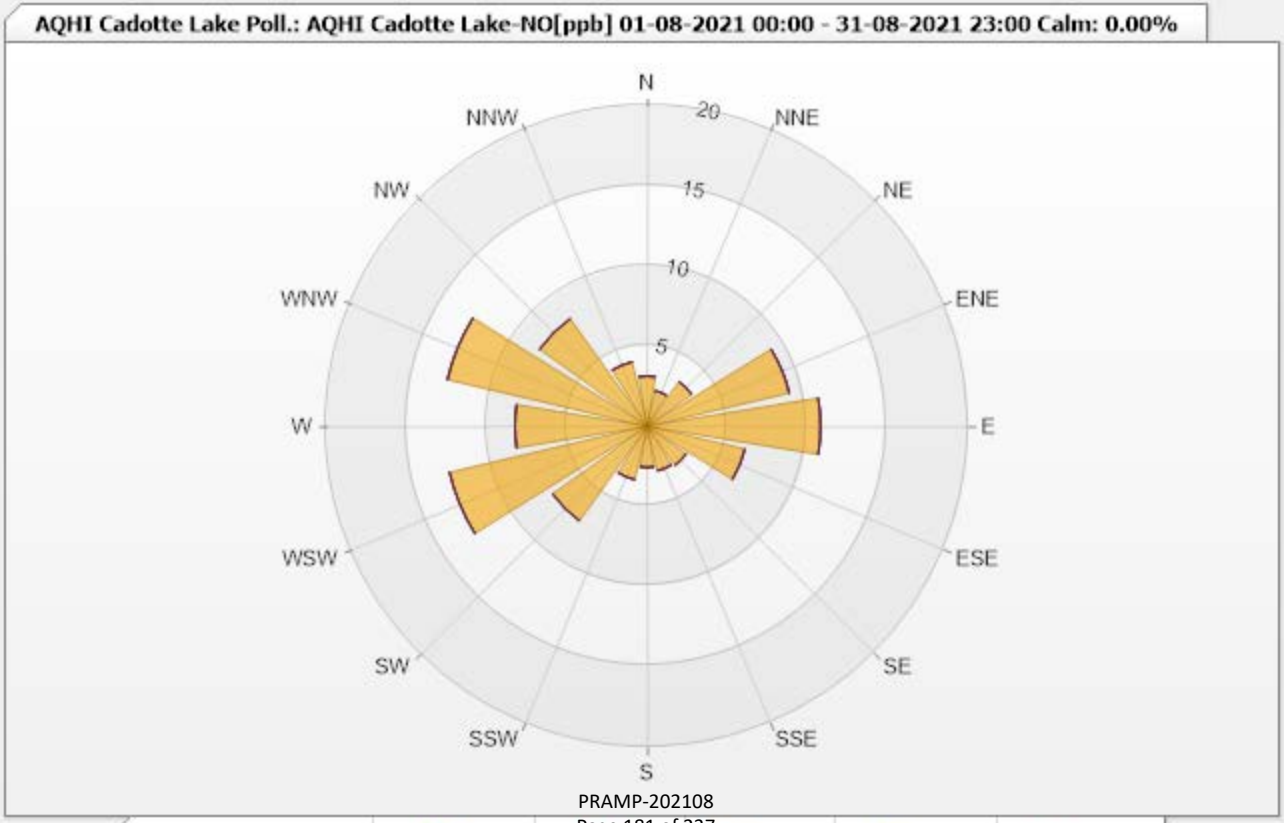





| Classes | NO |
|---|---|
| <=0 | 52.98% |
| 0 - 10 | 47.02% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.62% Calm Avg: 0.00 [ppb]

| Direction | 0-30 | 30-50 | 50-76 | 76-159 | >159.0 | Total |
|---|---|---|---|---|---|---|
| N | 3.13 | 0 | 0 | 0 | 0 | 3.13 |
| NNE | 2.27 | 0 | 0 | 0 | 0 | 2.27 |
| NE | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| ENE | 9.09 | 0 | 0 | 0 | 0 | 9.09 |
| E | 10.8 | 0 | 0 | 0 | 0 | 10.8 |
| ESE | 6.25 | 0 | 0 | 0 | 0 | 6.25 |
| SE | 2.98 | 0 | 0 | 0 | 0 | 2.98 |
| SSE | 2.84 | 0 | 0 | 0 | 0 | 2.84 |
| S | 2.56 | 0 | 0 | 0 | 0 | 2.56 |
| SSW | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| SW | 7.24 | 0 | 0 | 0 | 0 | 7.24 |
| WSW | 12.64 | 0 | 0 | 0 | 0 | 12.64 |
| W | 8.24 | 0 | 0 | 0 | 0 | 8.24 |
| WNW | 12.78 | 0 | 0 | 0 | 0 | 12.78 |
| NW | 8.24 | 0 | 0 | 0 | 0 | 8.24 |
| NNW | 4.12 | 0 | 0 | 0 | 0 | 4.12 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-30
0 30-50
0 50-76
0 76-159
0 >159.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## NITROGEN DIOXIDE ($NO_2$) in ppb

**Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb**

Number of 1-Hour Exceedances: 0

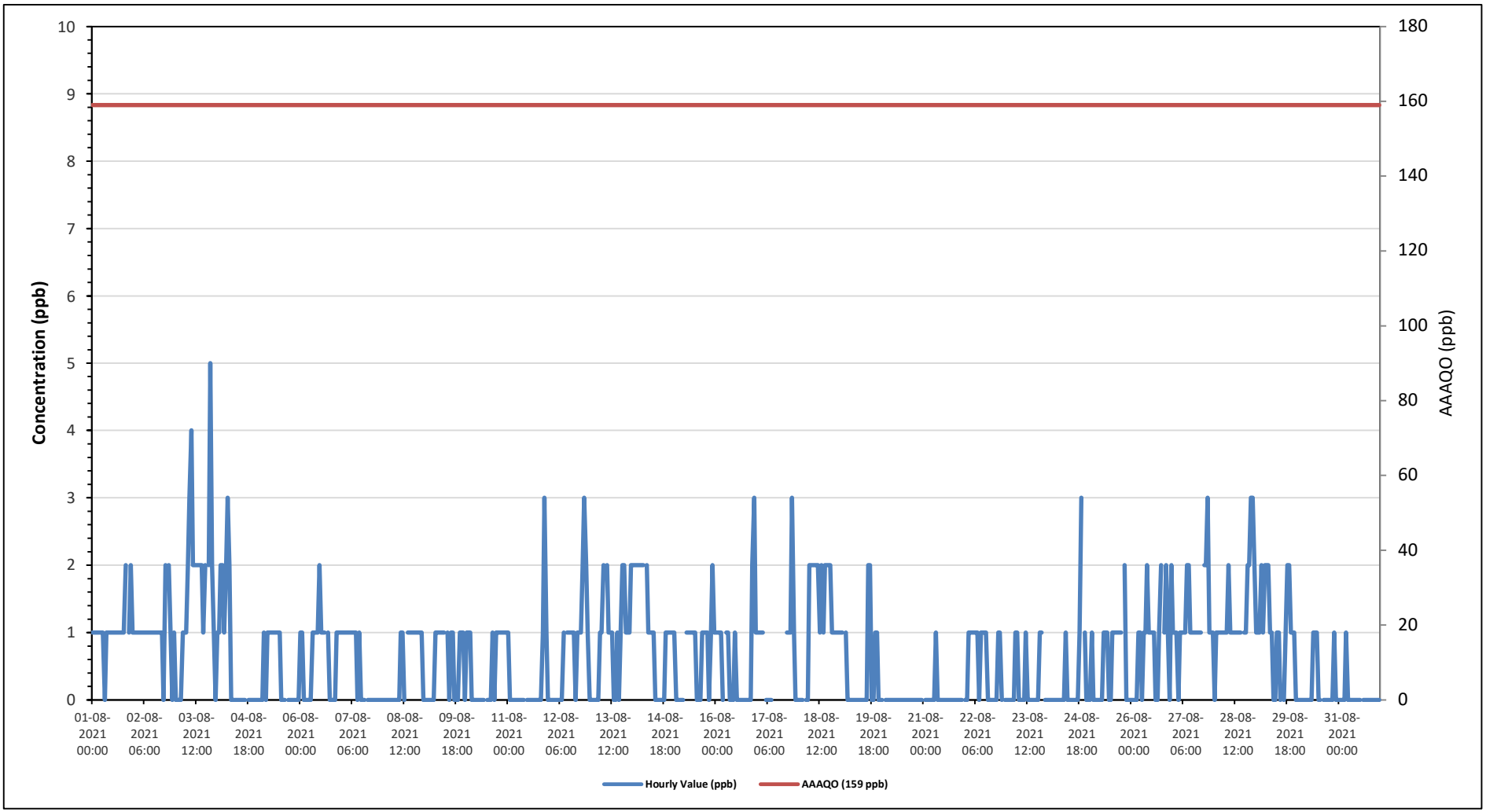
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 5 | ppb | on August 3 at hour 20 | Hours in Service: | 744 |
| Maximum Daily Value: | 1.6 | ppb | on August 3 | Hours of Data: | 704 |
| Minimum Hourly Value: | 0 | ppb | on August 1 at hour 7 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.0 | ppb | on August 20 | Hours of Calibration: | 40 |
| Monthly Average: | 0.6 | ppb | | Operational Uptime: | 100.0 |

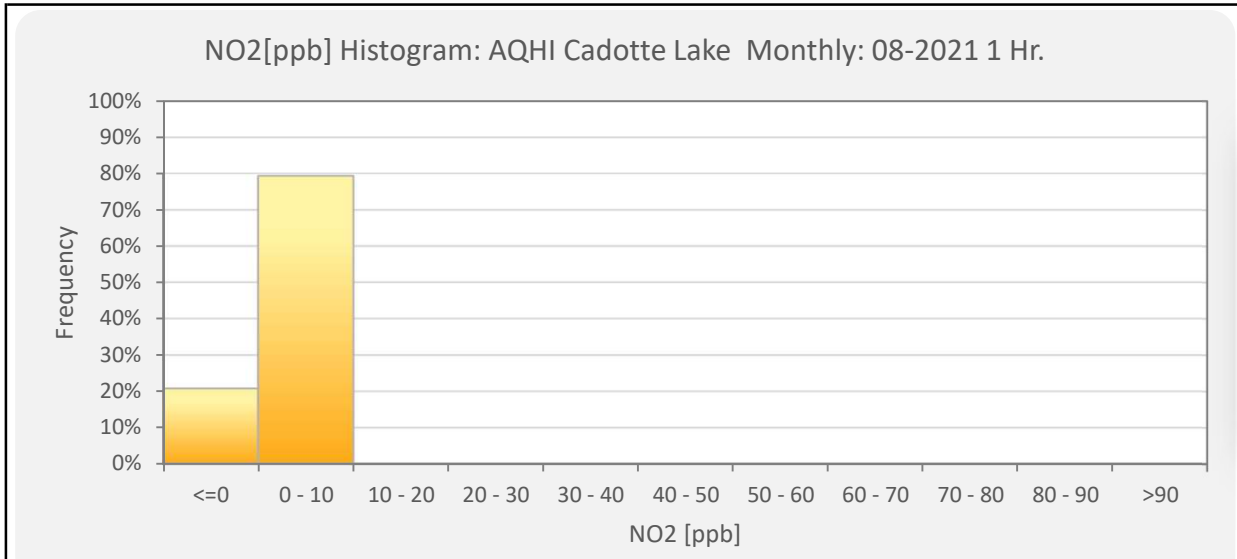
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | S | 1 | 2 | 1 | 0 | 2 | 1.0 |
| Aug 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | S | 2 | 1 | 0 | 1 | 0 | 2 | 1.0 |
| Aug 3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | S | 2 | 5 | 2 | 1 | 0 | 0 | 5 | 1.6 |
| Aug 4 | 1 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0.6 |
| Aug 5 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.4 |
| Aug 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | S | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 0.7 |
| Aug 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.4 |
| Aug 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | S | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0.5 |
| Aug 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | S | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0.5 |
| Aug 10 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0.5 |
| Aug 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 3 | 0.3 |
| Aug 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | S | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 3 | 0.7 |
| Aug 13 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | S | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 0 | 2 | 0.9 |
| Aug 14 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | S | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 1.1 |
| Aug 15 | 1 | 0 | 0 | 0 | 0 | 0 | S | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 2 | 0.7 |
| Aug 16 | 1 | 1 | 1 | 1 | 0 | S | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 3 | 0.6 |
| Aug 17 | 1 | 1 | 1 | 1 | S | 0 | 0 | 0 | 0 | C | C | C | C | C | C | C | C | 1 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 3 | - |
| Aug 18 | 0 | 0 | 0 | S | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 1.3 |
| Aug 19 | 1 | 1 | S | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0.4 |
| Aug 20 | 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 |
| Aug 21 | S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 1 | 0.0 |
| Aug 22 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | S | 0 | 0 | 1 | 0.5 |
| Aug 23 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | S | 0 | 0 | 0 | 1 | 0.2 |
| Aug 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | S | 1 | 0 | 0 | 0 | 3 | 0.3 |
| Aug 25 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | S | 2 | 0 | 0 | 0 | 0 | 2 | 0.5 |
| Aug 26 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | S | 1 | 2 | 1 | 0 | 2 | 0 | 2 | 0.8 |
| Aug 27 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | S | 2 | 2 | 3 | 1 | 1 | 1 | 0 | 3 | 1.2 |
| Aug 28 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | S | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 0 | 3 | 1.3 |
| Aug 29 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | S | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 1.0 |
| Aug 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0.2 |
| Aug 31 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Diurnal Maximum | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 5 | 3 | 3 | 2 | | | |
| Diurnal Average | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.6 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.6 | 0.5 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.9 | 1.1 | 1.0 | 0.7 | 0.5 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NO2 - AQHI - Cadotte Lake Station*

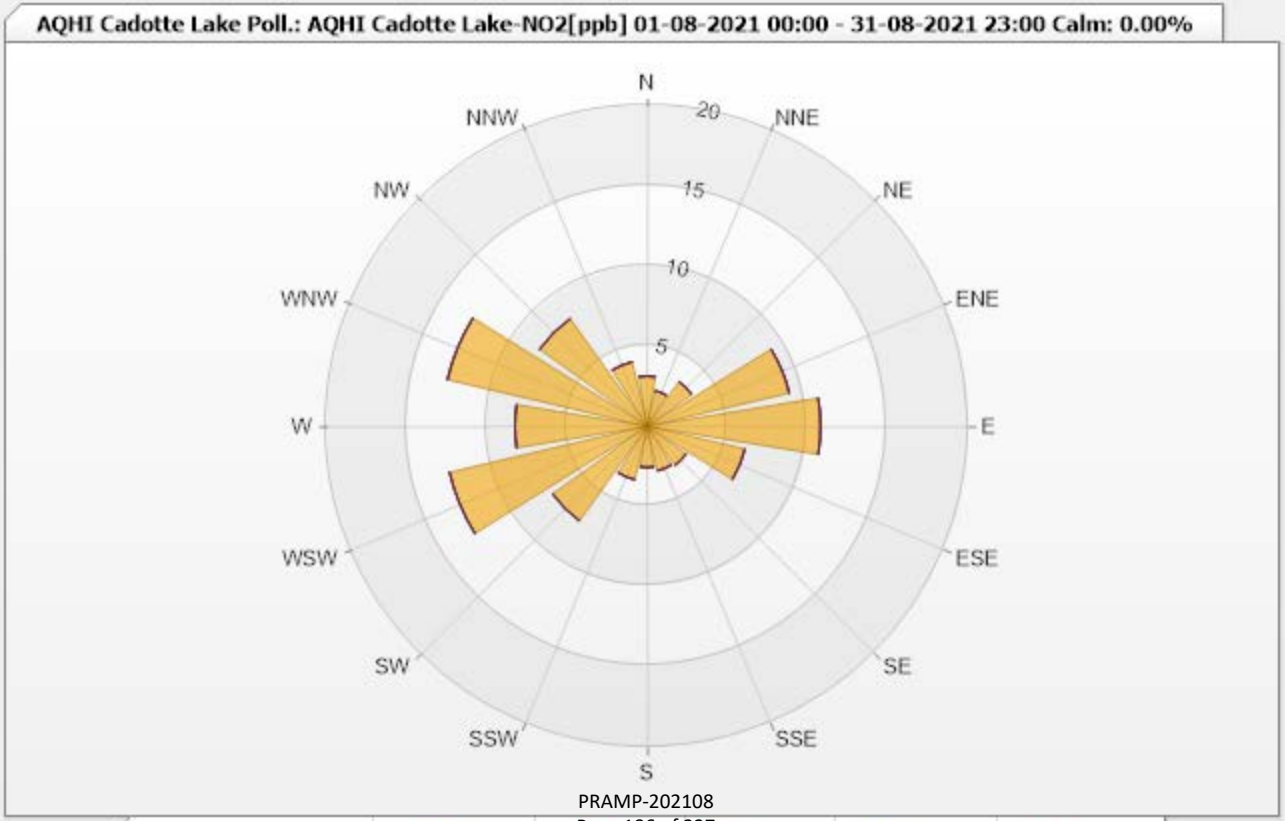





| Classes | NO2 |
|---|---|
| <=0 | 20.74% |
| 0 - 10 | 79.26% |
| 10 - 20 | 0.00% |
| 20 - 30 | 0.00% |
| 30 - 40 | 0.00% |
| 40 - 50 | 0.00% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO2[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.62% Calm Avg: 0.00 [ppb]

| Direction | 0-30 | 30-50 | 50-76 | 76-159 | >159.0 | Total |
|---|---|---|---|---|---|---|
| N | 3.13 | 0 | 0 | 0 | 0 | 3.13 |
| NNE | 2.27 | 0 | 0 | 0 | 0 | 2.27 |
| NE | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| ENE | 9.09 | 0 | 0 | 0 | 0 | 9.09 |
| E | 10.8 | 0 | 0 | 0 | 0 | 10.8 |
| ESE | 6.25 | 0 | 0 | 0 | 0 | 6.25 |
| SE | 2.98 | 0 | 0 | 0 | 0 | 2.98 |
| SSE | 2.84 | 0 | 0 | 0 | 0 | 2.84 |
| S | 2.56 | 0 | 0 | 0 | 0 | 2.56 |
| SSW | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| SW | 7.24 | 0 | 0 | 0 | 0 | 7.24 |
| WSW | 12.64 | 0 | 0 | 0 | 0 | 12.64 |
| W | 8.24 | 0 | 0 | 0 | 0 | 8.24 |
| WNW | 12.78 | 0 | 0 | 0 | 0 | 12.78 |
| NW | 8.24 | 0 | 0 | 0 | 0 | 8.24 |
| NNW | 4.12 | 0 | 0 | 0 | 0 | 4.12 |
| Summary | 100 | 0 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO2[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
100 0-30
0 30-50
0 50-76
0 76-159
0 >159.0

# PEACE RIVER AREA MONITORING PROGRAM

## AQHI - Cadotte Lake Station - August 2021

### Summary of Hourly Averages

### OZONE ($O_3$) in ppb

**Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb**

Number of 1-Hour Exceedances: 0

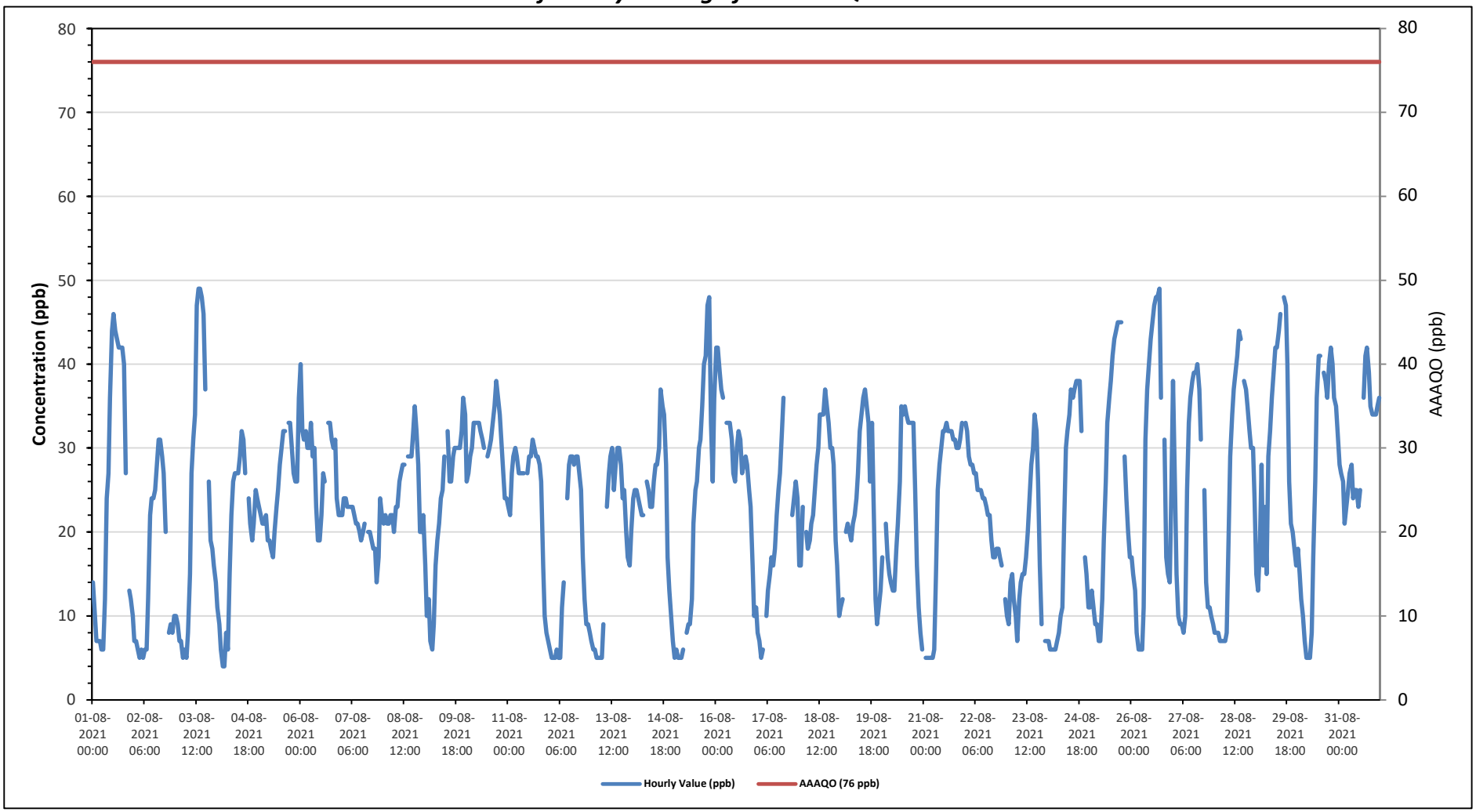
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 49 | ppb | on August 3 at hour 13 | Hours in Service: | 744 |
| Maximum Daily Value: | 30.8 | ppb | on August 10 | Hours of Data: | 708 |
| Minimum Hourly Value: | 4 | ppb | on August 4 at hour 3 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 15.5 | ppb | on August 2 | Hours of Calibration: | 36 |
| Monthly Average: | 23.5 | ppb | | Operational Uptime: | 100.0 |

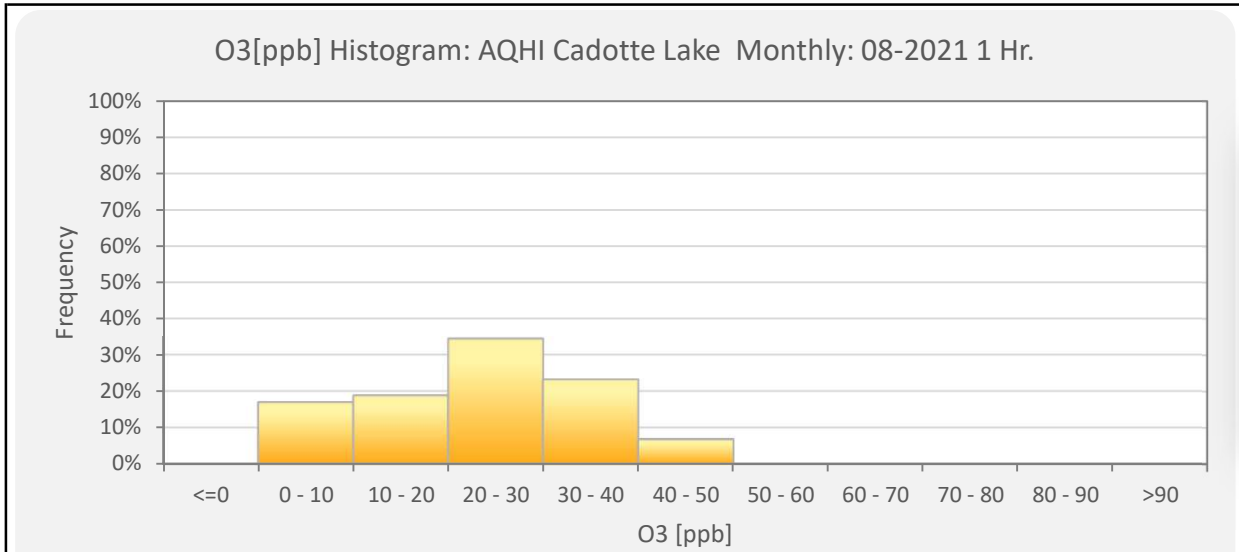
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 14 | 11 | 7 | 7 | 7 | 6 | 6 | 12 | 24 | 27 | 36 | 44 | 46 | 44 | 43 | 42 | 42 | 42 | 40 | 27 | S | 13 | 12 | 10 | 6.0 | 46.0 | 24.4 |
| Aug 2 | 7 | 7 | 6 | 5 | 6 | 5 | 6 | 6 | 12 | 22 | 24 | 24 | 25 | 28 | 31 | 31 | 29 | 27 | 20 | S | 8 | 9 | 8 | 10 | 5.0 | 31.0 | 15.5 |
| Aug 3 | 10 | 9 | 7 | 7 | 5 | 6 | 5 | 8 | 15 | 27 | 31 | 34 | 47 | 49 | 49 | 48 | 46 | 37 | S | 26 | 19 | 18 | 16 | 14 | 5.0 | 49.0 | 23.2 |
| Aug 4 | 11 | 9 | 6 | 4 | 4 | 8 | 6 | 15 | 22 | 26 | 27 | 27 | 27 | 29 | 32 | 31 | 27 | S | 24 | 21 | 19 | 21 | 25 | 24 | 4.0 | 32.0 | 19.3 |
| Aug 5 | 23 | 22 | 21 | 21 | 22 | 19 | 19 | 18 | 17 | 20 | 23 | 25 | 28 | 30 | 32 | 32 | S | 33 | 33 | 30 | 27 | 26 | 26 | 36 | 17.0 | 36.0 | 25.3 |
| Aug 6 | 40 | 32 | 31 | 32 | 30 | 30 | 33 | 29 | 30 | 23 | 19 | 19 | 22 | 27 | 26 | S | 33 | 33 | 31 | 30 | 31 | 24 | 22 | 22 | 19.0 | 40.0 | 28.2 |
| Aug 7 | 22 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 21 | 21 | 20 | 19 | 20 | 21 | S | 20 | 20 | 19 | 18 | 18 | 14 | 17 | 24 | 22 | 14.0 | 24.0 | 20.8 |
| Aug 8 | 21 | 22 | 21 | 21 | 22 | 22 | 20 | 23 | 23 | 26 | 27 | 28 | 28 | S | 29 | 29 | 29 | 32 | 35 | 32 | 28 | 20 | 20 | 22 | 20.0 | 35.0 | 25.2 |
| Aug 9 | 16 | 10 | 12 | 7 | 6 | 9 | 16 | 19 | 21 | 24 | 25 | 29 | S | 32 | 26 | 26 | 29 | 30 | 30 | 30 | 30 | 32 | 36 | 34 | 6.0 | 36.0 | 23.0 |
| Aug 10 | 26 | 27 | 29 | 30 | 33 | 33 | 33 | 33 | 32 | 31 | 30 | S | 29 | 30 | 31 | 33 | 35 | 38 | 36 | 34 | 31 | 27 | 24 | 24 | 24.0 | 38.0 | 30.8 |
| Aug 11 | 23 | 22 | 27 | 29 | 30 | 29 | 27 | 27 | 27 | 27 | S | 27 | 29 | 29 | 31 | 30 | 29 | 29 | 28 | 26 | 16 | 10 | 8 | 7 | 7.0 | 31.0 | 24.7 |
| Aug 12 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 11 | 14 | S | 24 | 28 | 29 | 29 | 28 | 29 | 29 | 27 | 25 | 17 | 12 | 9 | 9 | 8 | 5.0 | 29.0 | 15.9 |
| Aug 13 | 7 | 6 | 6 | 5 | 5 | 5 | 5 | 9 | S | 23 | 27 | 29 | 30 | 25 | 28 | 30 | 30 | 28 | 24 | 25 | 20 | 17 | 16 | 20 | 5.0 | 30.0 | 18.3 |
| Aug 14 | 24 | 25 | 25 | 24 | 23 | 22 | 22 | S | 26 | 25 | 23 | 23 | 26 | 28 | 28 | 30 | 37 | 35 | 34 | 28 | 17 | 13 | 10 | 7 | 7.0 | 37.0 | 24.1 |
| Aug 15 | 5 | 6 | 5 | 5 | 5 | 6 | S | 8 | 9 | 9 | 12 | 21 | 25 | 26 | 30 | 31 | 35 | 40 | 41 | 47 | 48 | 33 | 26 | 36 | 5.0 | 48.0 | 22.1 |
| Aug 16 | 42 | 42 | 39 | 37 | 36 | S | 33 | 33 | 33 | 31 | 27 | 26 | 30 | 32 | 31 | 27 | 28 | 29 | 28 | 25 | 23 | 16 | 10 | 11 | 10.0 | 42.0 | 29.1 |
| Aug 17 | 8 | 7 | 5 | 6 | S | 10 | 13 | 15 | 17 | 16 | 18 | 22 | 25 | 27 | 32 | 36 | C | C | C | C | 22 | 24 | 26 | 24 | 5.0 | 36.0 | 18.6 |
| Aug 18 | 16 | 16 | 23 | S | 20 | 18 | 19 | 21 | 22 | 25 | 28 | 30 | 34 | 34 | 34 | 37 | 35 | 33 | 30 | 30 | 28 | 19 | 16 | 10 | 10.0 | 37.0 | 25.1 |
| Aug 19 | 11 | 12 | S | 20 | 21 | 20 | 19 | 21 | 22 | 24 | 27 | 32 | 34 | 36 | 37 | 35 | 33 | 26 | 33 | 24 | 12 | 9 | 11 | 13 | 9.0 | 37.0 | 23.1 |
| Aug 20 | 17 | S | 21 | 17 | 15 | 14 | 13 | 13 | 18 | 21 | 26 | 35 | 34 | 35 | 34 | 33 | 33 | 33 | 33 | 25 | 16 | 11 | 8 | 6 | 6.0 | 35.0 | 22.2 |
| Aug 21 | S | 5 | 5 | 5 | 5 | 5 | 6 | 15 | 25 | 28 | 30 | 32 | 32 | 33 | 32 | 32 | 32 | 31 | 31 | 30 | 30 | 31 | 33 | S | 5.0 | 33.0 | 23.1 |
| Aug 22 | 33 | 32 | 29 | 28 | 28 | 27 | 27 | 25 | 25 | 25 | 24 | 24 | 23 | 22 | 22 | 19 | 17 | 17 | 18 | 18 | 17 | 16 | S | 12 | 12.0 | 33.0 | 23.0 |
| Aug 23 | 10 | 9 | 14 | 15 | 12 | 10 | 7 | 12 | 14 | 15 | 15 | 17 | 20 | 24 | 28 | 30 | 34 | 32 | 26 | 16 | 9 | S | 7 | 7 | 7.0 | 34.0 | 16.7 |
| Aug 24 | 7 | 6 | 6 | 6 | 6 | 7 | 8 | 10 | 11 | 21 | 30 | 32 | 34 | 37 | 36 | 37 | 38 | 38 | 38 | 32 | S | 17 | 15 | 11 | 6.0 | 38.0 | 21.0 |
| Aug 25 | 11 | 13 | 11 | 9 | 9 | 7 | 7 | 12 | 19 | 26 | 33 | 36 | 38 | 41 | 43 | 44 | 45 | 45 | 45 | S | 29 | 24 | 20 | 17 | 7.0 | 45.0 | 25.4 |
| Aug 26 | 17 | 15 | 13 | 8 | 6 | 6 | 6 | 11 | 31 | 37 | 40 | 43 | 45 | 47 | 48 | 48 | 49 | 36 | S | 31 | 17 | 15 | 14 | 26 | 6.0 | 49.0 | 26.5 |
| Aug 27 | 38 | 25 | 15 | 10 | 9 | 9 | 8 | 10 | 25 | 33 | 36 | 38 | 39 | 39 | 40 | 37 | 31 | S | 25 | 14 | 11 | 11 | 10 | 9 | 8.0 | 40.0 | 22.7 |
| Aug 28 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 8 | 20 | 29 | 34 | 37 | 39 | 41 | 44 | 43 | S | 38 | 37 | 35 | 32 | 30 | 30 | 24 | 7.0 | 44.0 | 24.9 |
| Aug 29 | 15 | 13 | 18 | 28 | 16 | 23 | 15 | 29 | 32 | 36 | 39 | 42 | 42 | 44 | 46 | S | 48 | 47 | 40 | 26 | 21 | 20 | 18 | 16 | 13.0 | 48.0 | 29.3 |
| Aug 30 | 18 | 15 | 12 | 10 | 7 | 5 | 5 | 5 | 8 | 17 | 26 | 36 | 41 | 41 | S | 39 | 38 | 36 | 40 | 42 | 40 | 36 | 35 | 32 | 5.0 | 42.0 | 25.4 |
| Aug 31 | 28 | 27 | 26 | 21 | 23 | 25 | 27 | 28 | 24 | 25 | 25 | 23 | 25 | S | 36 | 41 | 42 | 39 | 35 | 34 | 34 | 34 | 35 | 36 | 21.0 | 42.0 | 30.1 |
| Diurnal Maximum | 42 | 42 | 39 | 37 | 36 | 33 | 33 | 33 | 33 | 37 | 40 | 44 | 47 | 49 | 49 | 48 | 49 | 47 | 45 | 47 | 48 | 36 | 36 | 36 | | | |
| Diurnal Average | 17.8 | 16.1 | 15.9 | 15.1 | 14.9 | 14.0 | 14.9 | 16.9 | 21.3 | 24.7 | 26.9 | 29.4 | 31.5 | 33.1 | 34.0 | 33.8 | 34.0 | 33.2 | 31.4 | 27.6 | 22.8 | 20.1 | 19.0 | 18.3 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for O3 - AQHI - Cadotte Lake Station*

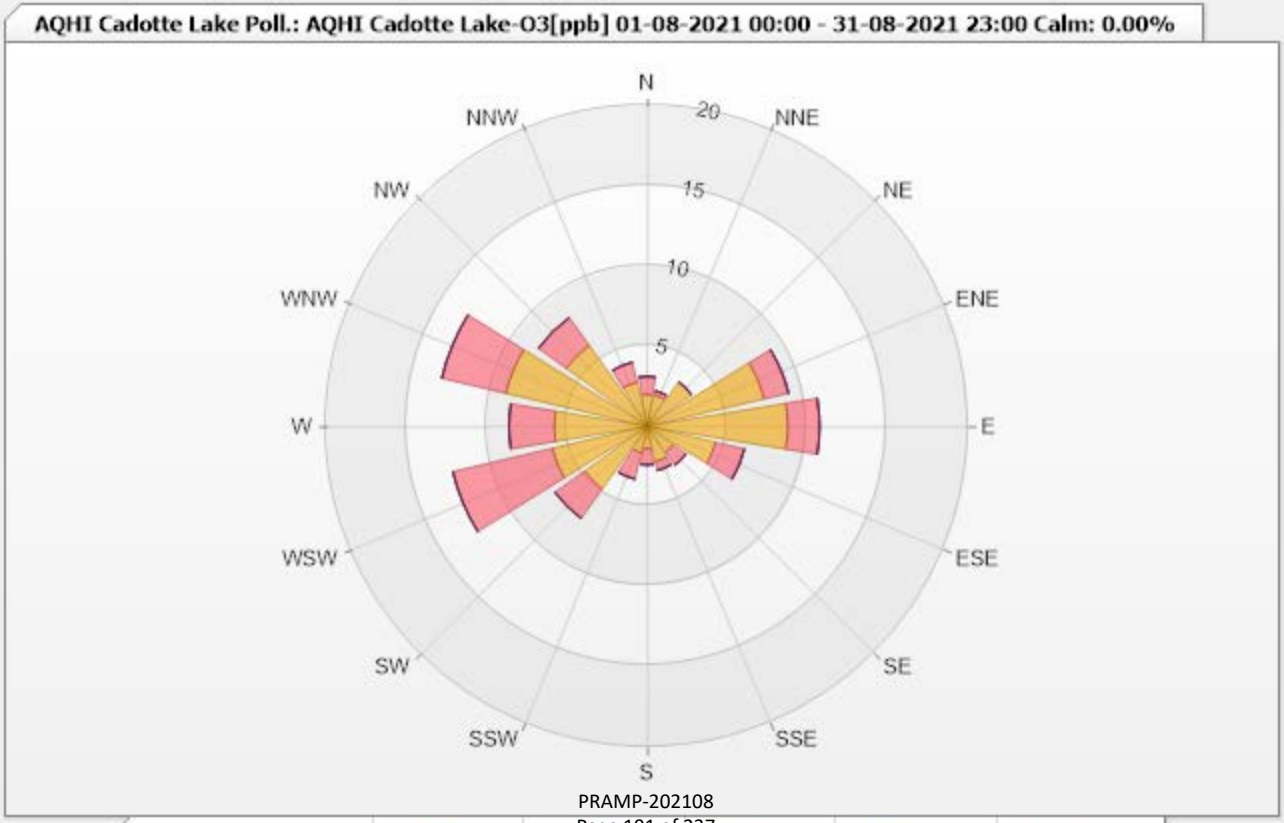





| Classes | O3 |
|---|---|
| <=0 | 0.00% |
| 0 - 10 | 16.95% |
| 10 - 20 | 18.79% |
| 20 - 30 | 34.32% |
| 30 - 40 | 23.16% |
| 40 - 50 | 6.78% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.00% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-O3[ppb] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppb]

| Direction | 0-30 | 30-50 | 50-76 | 76-159 | >159.0 | Total |
|---|---|---|---|---|---|---|
| N | 1.98 | 1.13 | 0 | 0 | 0 | 3.11 |
| NNE | 1.98 | 0.28 | 0 | 0 | 0 | 2.26 |
| NE | 3.39 | 0 | 0 | 0 | 0 | 3.39 |
| ENE | 7.49 | 1.55 | 0 | 0 | 0 | 9.04 |
| E | 8.76 | 1.98 | 0 | 0 | 0 | 10.74 |
| ESE | 4.38 | 1.84 | 0 | 0 | 0 | 6.22 |
| SE | 1.98 | 0.99 | 0 | 0 | 0 | 2.97 |
| SSE | 2.26 | 0.56 | 0 | 0 | 0 | 2.82 |
| S | 1.41 | 0.99 | 0 | 0 | 0 | 2.4 |
| SSW | 1.69 | 1.69 | 0 | 0 | 0 | 3.38 |
| SW | 4.8 | 2.26 | 0 | 0 | 0 | 7.06 |
| WSW | 6.07 | 6.36 | 0 | 0 | 0 | 12.43 |
| W | 5.79 | 2.82 | 0 | 0 | 0 | 8.61 |
| WNW | 9.04 | 4.1 | 0 | 0 | 0 | 13.14 |
| NW | 6.21 | 2.12 | 0 | 0 | 0 | 8.33 |
| NNW | 2.82 | 1.27 | 0 | 0 | 0 | 4.09 |
| Summary | 70.05 | 29.94 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-O3[ppb] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppb)
70 0-30
30 30-50
0 50-76
0 76-159
0 >159.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## AQHI - Cadotte Lake Station - August 2021

## Summary of Hourly Averages

## TOTAL HYDROCARBONS (THC) in ppm

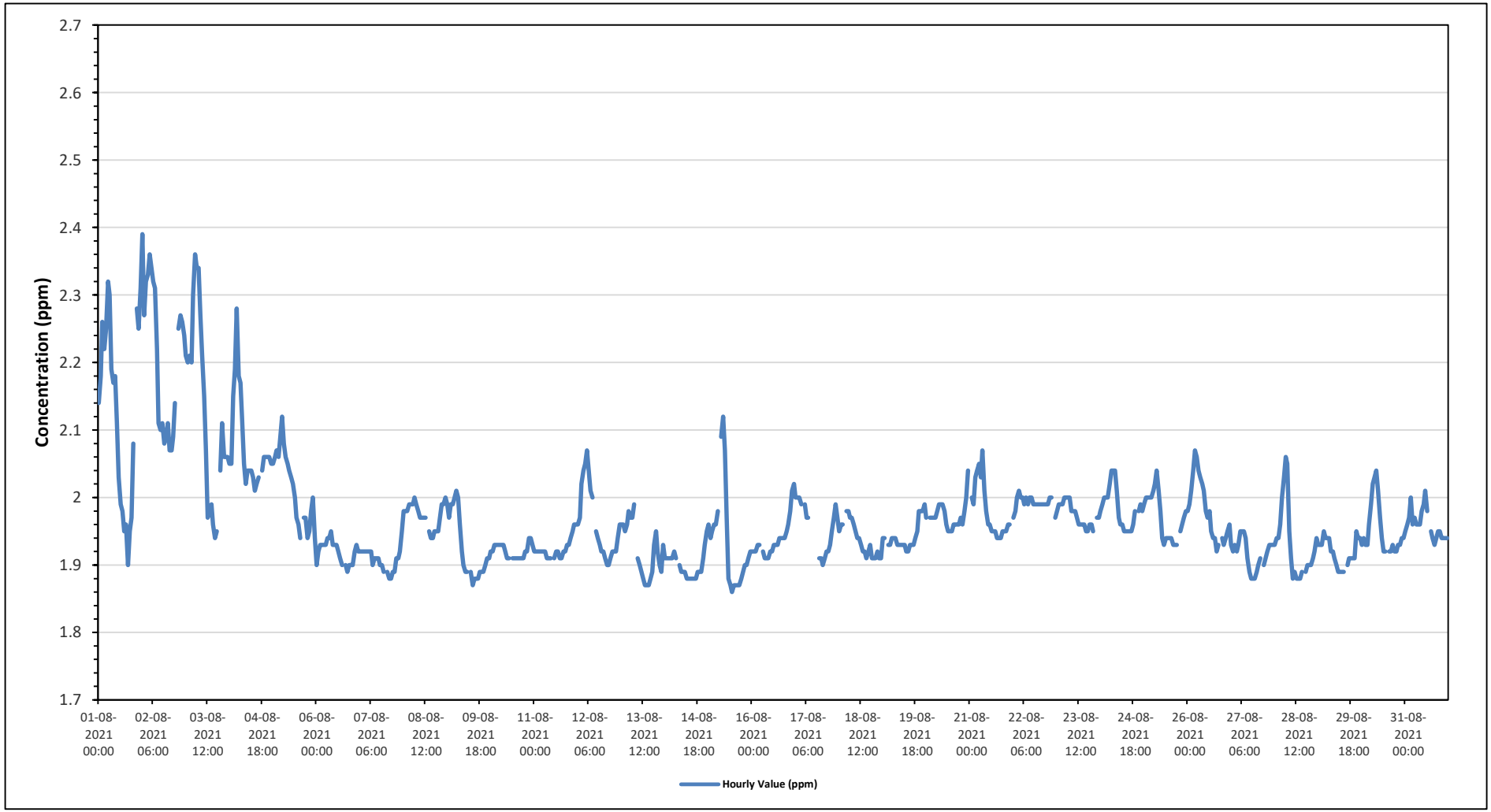
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.39 | ppm | on August 2 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.21 | ppm | on August 2 | Hours of Data: | 707 |
| Minimum Hourly Value: | 1.86 | ppm | on August 15 at hour 13 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.90 | ppm | on August 14 | Hours of Calibration: | 37 |
| Monthly Average: | 1.97 | ppm | | Operational Uptime: | 100.0 |

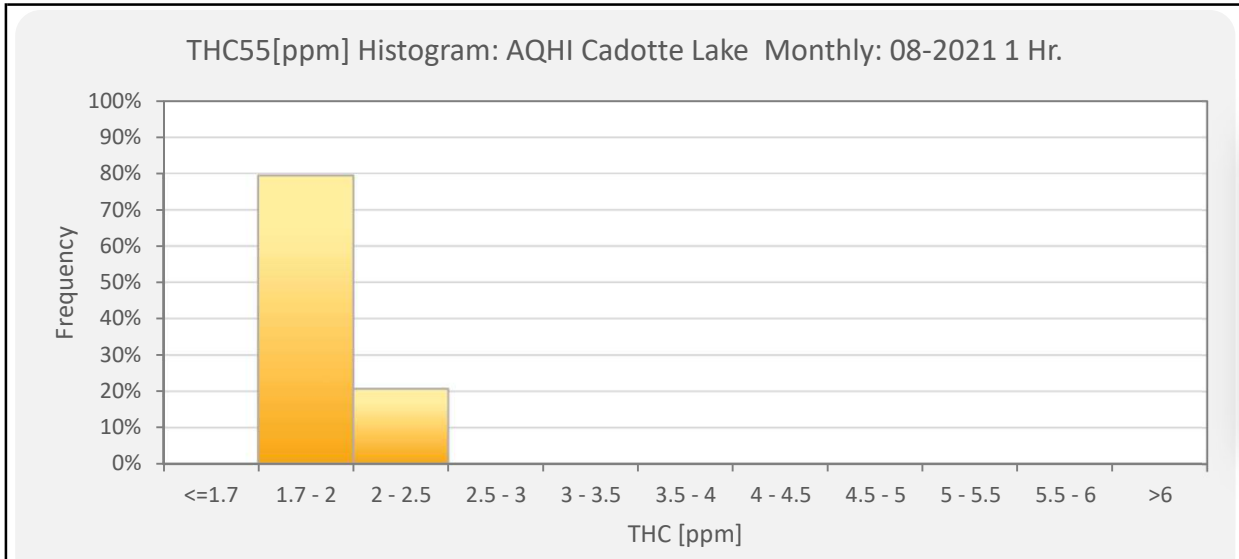
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 2.14 | 2.18 | 2.26 | 2.22 | 2.25 | 2.32 | 2.30 | 2.19 | 2.17 | 2.18 | 2.11 | 2.03 | 1.99 | 1.98 | 1.95 | 1.96 | 1.90 | 1.95 | 1.97 | 2.08 | S | 2.28 | 2.25 | 2.31 | 1.90 | 2.32 | 2.13 |
| Aug 2 | **2.39** | 2.27 | 2.32 | 2.33 | 2.36 | 2.34 | 2.32 | 2.31 | 2.22 | 2.11 | 2.10 | 2.11 | 2.08 | 2.09 | 2.11 | 2.07 | 2.07 | 2.09 | 2.14 | S | 2.25 | 2.27 | 2.26 | 2.24 | 2.07 | **2.39** | **2.21** |
| Aug 3 | 2.21 | 2.20 | 2.21 | 2.20 | 2.30 | 2.36 | 2.34 | 2.34 | 2.27 | 2.21 | 2.15 | 2.07 | 1.97 | 1.98 | 1.99 | 1.96 | 1.94 | 1.95 | S | 2.04 | 2.11 | 2.06 | 2.06 | 2.06 | 1.94 | 2.36 | 2.13 |
| Aug 4 | 2.05 | 2.05 | 2.15 | 2.19 | 2.28 | 2.18 | 2.17 | 2.12 | 2.05 | 2.02 | 2.04 | 2.04 | 2.04 | 2.03 | 2.01 | 2.02 | 2.03 | S | 2.04 | 2.06 | 2.06 | 2.06 | 2.06 | 2.05 | 2.01 | 2.28 | 2.08 |
| Aug 5 | 2.05 | 2.06 | 2.07 | 2.06 | 2.09 | 2.12 | 2.08 | 2.06 | 2.05 | 2.04 | 2.03 | 2.02 | 2.00 | 1.97 | 1.96 | 1.94 | S | 1.97 | 1.97 | 1.94 | 1.95 | 1.98 | 2.00 | 1.94 | 1.94 | 2.12 | 2.02 |
| Aug 6 | 1.90 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.94 | 1.95 | 1.93 | 1.93 | 1.93 | 1.92 | 1.91 | 1.90 | S | 1.90 | 1.89 | 1.90 | 1.90 | 1.90 | 1.92 | 1.93 | 1.92 | 1.89 | 1.95 | 1.92 |
| Aug 7 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.90 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | 1.89 | S | 1.89 | 1.88 | 1.88 | 1.89 | 1.89 | 1.91 | 1.91 | 1.92 | 1.95 | 1.88 | 1.95 | 1.91 |
| Aug 8 | 1.98 | 1.98 | 1.98 | 1.99 | 1.99 | 1.99 | 2.00 | 1.99 | 1.98 | 1.97 | 1.97 | 1.97 | 1.97 | S | 1.95 | 1.94 | 1.94 | 1.95 | 1.95 | 1.95 | 1.97 | 1.99 | 1.99 | 2.00 | 1.94 | 2.00 | 1.97 |
| Aug 9 | 1.99 | 1.97 | 1.99 | 1.99 | 2.00 | 2.01 | 2.00 | 1.96 | 1.92 | 1.90 | 1.89 | 1.89 | S | 1.89 | 1.87 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.90 | 1.91 | 1.91 | 1.87 | 2.01 | 1.93 |
| Aug 10 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.92 | 1.91 | 1.91 | S | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 | 1.92 | 1.94 | 1.94 | 1.93 | 1.91 | 1.94 | 1.92 |
| Aug 11 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.91 | 1.91 | 1.91 | S | 1.91 | 1.92 | 1.92 | 1.91 | 1.91 | 1.92 | 1.92 | 1.93 | 1.93 | 1.94 | 1.95 | 1.96 | 1.96 | 1.91 | 1.96 | 1.92 |
| Aug 12 | 1.96 | 1.97 | 2.02 | 2.04 | 2.05 | 2.07 | 2.04 | 2.01 | 2.00 | S | 1.95 | 1.94 | 1.93 | 1.92 | 1.92 | 1.91 | 1.90 | 1.90 | 1.91 | 1.92 | 1.92 | 1.92 | 1.94 | 1.96 | 1.90 | 2.07 | 1.96 |
| Aug 13 | 1.96 | 1.96 | 1.95 | 1.96 | 1.98 | 1.97 | 1.97 | 1.99 | S | 1.91 | 1.90 | 1.89 | 1.88 | 1.87 | 1.87 | 1.87 | 1.88 | 1.89 | 1.93 | 1.95 | 1.92 | 1.90 | 1.89 | 1.93 | 1.87 | 1.99 | 1.92 |
| Aug 14 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | S | 1.90 | 1.89 | 1.89 | 1.89 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.91 | 1.93 | 1.95 | 1.88 | 1.95 | 1.90 |
| Aug 15 | 1.96 | 1.94 | 1.95 | 1.96 | 1.96 | 1.98 | S | 2.09 | 2.12 | 2.07 | 1.97 | 1.88 | 1.87 | 1.86 | 1.87 | 1.87 | 1.87 | 1.87 | 1.88 | 1.89 | 1.90 | 1.90 | 1.91 | 1.92 | **1.86** | 2.12 | 1.93 |
| Aug 16 | 1.92 | 1.92 | 1.92 | 1.93 | 1.93 | S | 1.92 | 1.91 | 1.91 | 1.91 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 | 1.95 | 1.96 | 1.98 | 2.01 | 2.02 | 1.91 | 2.02 | 1.94 |
| Aug 17 | 2.00 | 2.00 | 2.00 | 1.99 | S | 1.99 | 1.97 | 1.97 | C | C | C | C | C | 1.91 | 1.91 | 1.90 | 1.91 | 1.92 | 1.92 | 1.93 | 1.95 | 1.97 | 1.99 | 1.97 | 1.90 | 2.00 | 1.96 |
| Aug 18 | 1.95 | 1.96 | 1.96 | S | 1.98 | 1.98 | 1.97 | 1.97 | 1.96 | 1.95 | 1.94 | 1.94 | 1.93 | 1.92 | 1.92 | 1.91 | 1.92 | 1.93 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | 1.91 | 1.91 | 1.98 | 1.94 |
| Aug 19 | 1.94 | 1.94 | S | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.94 | 1.95 | 1.98 | 1.98 | 1.98 | 1.99 | 1.92 | 1.99 | 1.94 |
| Aug 20 | 1.97 | S | 1.97 | 1.97 | 1.97 | 1.97 | 1.98 | 1.99 | 1.99 | 1.99 | 1.98 | 1.96 | 1.95 | 1.95 | 1.95 | 1.96 | 1.96 | 1.96 | 1.96 | 1.97 | 1.96 | 1.98 | 2.00 | 2.04 | 1.95 | 2.04 | 1.97 |
| Aug 21 | S | 2.00 | 1.99 | 2.03 | 2.04 | 2.05 | 2.03 | 2.07 | 2.01 | 1.98 | 1.96 | 1.96 | 1.95 | 1.95 | 1.95 | 1.94 | 1.94 | 1.94 | 1.95 | 1.95 | 1.95 | 1.96 | 1.96 | S | 1.94 | 2.07 | 1.98 |
| Aug 22 | 1.97 | 1.98 | 2.00 | 2.01 | 2.00 | 2.00 | 1.99 | 2.00 | 1.99 | 2.00 | 2.00 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | S | 1.97 | 1.97 | 2.01 | 1.99 |
| Aug 23 | 1.98 | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | 2.00 | 2.00 | 1.98 | 1.98 | 1.98 | 1.97 | 1.96 | 1.96 | 1.96 | 1.96 | 1.95 | 1.95 | 1.96 | 1.96 | 1.95 | S | 1.97 | 1.97 | 1.95 | 2.00 | 1.97 |
| Aug 24 | 1.98 | 1.99 | 2.00 | 2.00 | 2.00 | 2.02 | 2.04 | 2.04 | 2.04 | 2.01 | 1.97 | 1.96 | 1.96 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.96 | 1.98 | S | 1.98 | 1.99 | 1.98 | 1.95 | 2.04 | 1.98 |
| Aug 25 | 1.99 | 2.00 | 2.00 | 2.00 | 2.00 | 2.01 | 2.02 | 2.04 | 2.01 | 1.98 | 1.94 | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 | 1.93 | 1.93 | 1.93 | S | 1.95 | 1.96 | 1.97 | 1.98 | 1.93 | 2.04 | 1.97 |
| Aug 26 | 1.98 | 1.99 | 2.01 | 2.04 | 2.07 | 2.06 | 2.04 | 2.03 | 2.02 | 2.01 | 1.98 | 1.97 | 1.98 | 1.95 | 1.94 | 1.94 | 1.92 | 1.93 | S | 1.94 | 1.93 | 1.94 | 1.95 | 1.96 | 1.92 | 2.07 | 1.98 |
| Aug 27 | 1.93 | 1.92 | 1.93 | 1.92 | 1.93 | 1.95 | 1.95 | 1.95 | 1.94 | 1.91 | 1.89 | 1.88 | 1.88 | 1.88 | 1.89 | 1.90 | 1.91 | S | 1.90 | 1.91 | 1.92 | 1.93 | 1.93 | 1.93 | 1.88 | 1.95 | 1.92 |
| Aug 28 | 1.93 | 1.94 | 1.94 | 1.96 | 2.00 | 2.03 | 2.06 | 2.05 | 1.95 | 1.91 | 1.88 | 1.89 | 1.88 | 1.88 | 1.88 | 1.89 | S | 1.89 | 1.90 | 1.90 | 1.90 | 1.91 | 1.92 | 1.94 | 1.88 | 2.06 | 1.93 |
| Aug 29 | 1.93 | 1.93 | 1.93 | 1.95 | 1.94 | 1.94 | 1.94 | 1.92 | 1.92 | 1.91 | 1.90 | 1.89 | 1.89 | 1.89 | 1.89 | S | 1.90 | 1.91 | 1.91 | 1.91 | 1.91 | 1.95 | 1.94 | 1.94 | 1.89 | 1.95 | 1.92 |
| Aug 30 | 1.93 | 1.94 | 1.93 | 1.93 | 1.96 | 1.99 | 2.02 | 2.03 | 2.04 | 2.01 | 1.97 | 1.94 | 1.92 | 1.92 | S | 1.92 | 1.92 | 1.93 | 1.92 | 1.92 | 1.93 | 1.93 | 1.94 | 1.94 | 1.92 | 2.04 | 1.95 |
| Aug 31 | 1.95 | 1.96 | 1.97 | 2.00 | 1.96 | 1.97 | 1.96 | 1.96 | 1.96 | 1.98 | 1.99 | 2.01 | 1.98 | S | 1.95 | 1.94 | 1.93 | 1.94 | 1.95 | 1.95 | 1.94 | 1.94 | 1.94 | 1.94 | 1.93 | 2.01 | 1.96 |
| Diurnal Maximum | 2.39 | 2.27 | 2.32 | 2.33 | 2.36 | 2.36 | 2.34 | 2.34 | 2.27 | 2.21 | 2.15 | 2.11 | 2.08 | 2.09 | 2.11 | 2.07 | 2.07 | 2.09 | 2.14 | 2.08 | 2.25 | 2.28 | 2.26 | 2.31 | | | |
| Diurnal Average | 1.99 | 1.99 | 2.00 | 2.01 | 2.02 | 2.03 | 2.02 | 2.02 | 2.00 | 1.98 | 1.96 | 1.95 | 1.94 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.94 | 1.95 | 1.97 | 1.98 | 1.98 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for THC - AQHI - Cadotte Lake Station*

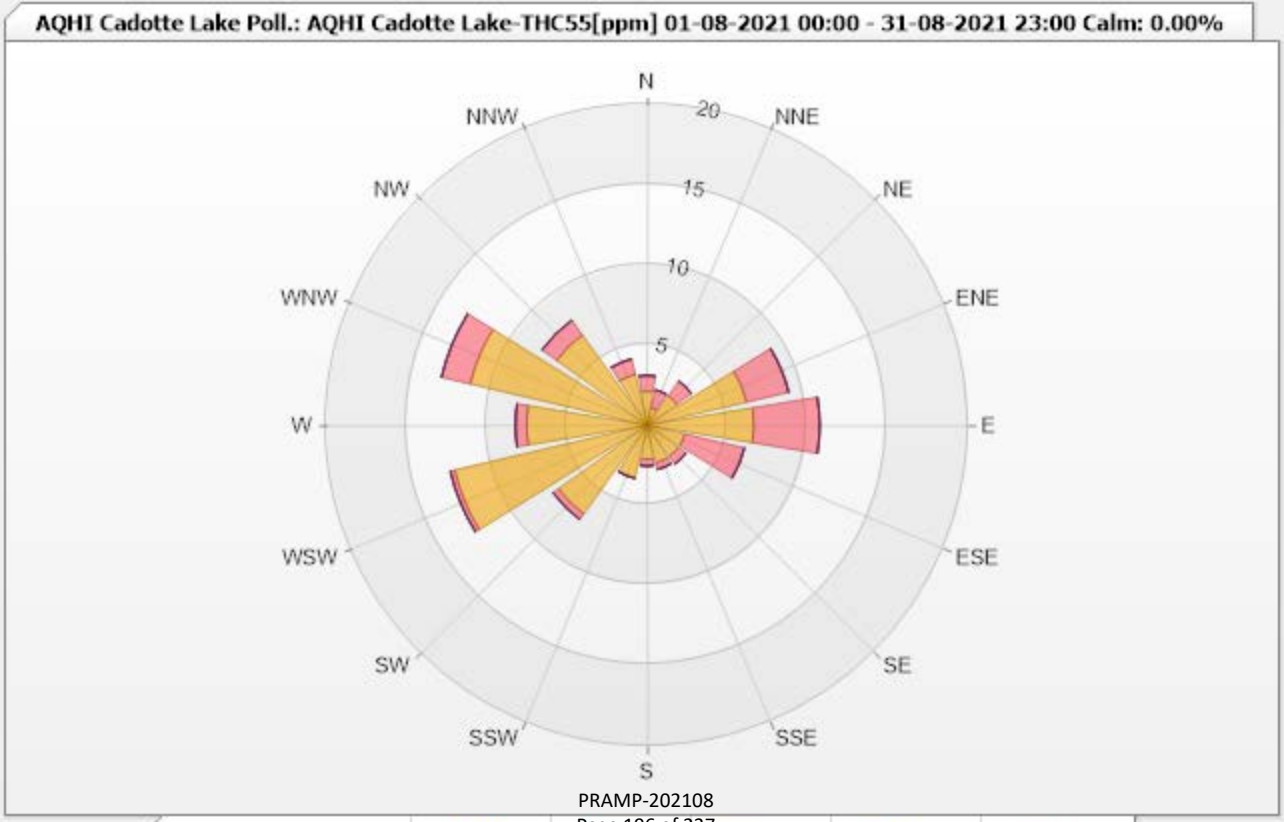





| Classes | THC55 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 79.35% |
| 2 - 2.5 | 20.65% |
| 2.5 - 3 | 0.00% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-THC55[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-40 | >40.0 | Total |
|---|---|---|---|---|---|---|
| N | 2.12 | 0.99 | 0 | 0 | 0 | 3.11 |
| NNE | 1.13 | 1.13 | 0 | 0 | 0 | 2.26 |
| NE | 2.26 | 1.13 | 0 | 0 | 0 | 3.39 |
| ENE | 6.36 | 2.69 | 0 | 0 | 0 | 9.05 |
| E | 6.65 | 4.1 | 0 | 0 | 0 | 10.75 |
| ESE | 2.4 | 3.82 | 0 | 0 | 0 | 6.22 |
| SE | 2.4 | 0.57 | 0 | 0 | 0 | 2.97 |
| SSE | 2.4 | 0.42 | 0 | 0 | 0 | 2.82 |
| S | 2.12 | 0.42 | 0 | 0 | 0 | 2.54 |
| SSW | 3.39 | 0 | 0 | 0 | 0 | 3.39 |
| SW | 6.79 | 0.42 | 0 | 0 | 0 | 7.21 |
| WSW | 12.31 | 0.28 | 0 | 0 | 0 | 12.59 |
| W | 7.5 | 0.71 | 0 | 0 | 0 | 8.21 |
| WNW | 11.32 | 1.84 | 0 | 0 | 0 | 13.16 |
| NW | 6.93 | 1.13 | 0 | 0 | 0 | 8.06 |
| NNW | 3.25 | 0.99 | 0 | 0 | 0 | 4.24 |
| Summary | 79.33 | 20.64 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-THC55[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
79 0-2
21 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## METHANE (CH4) in ppm

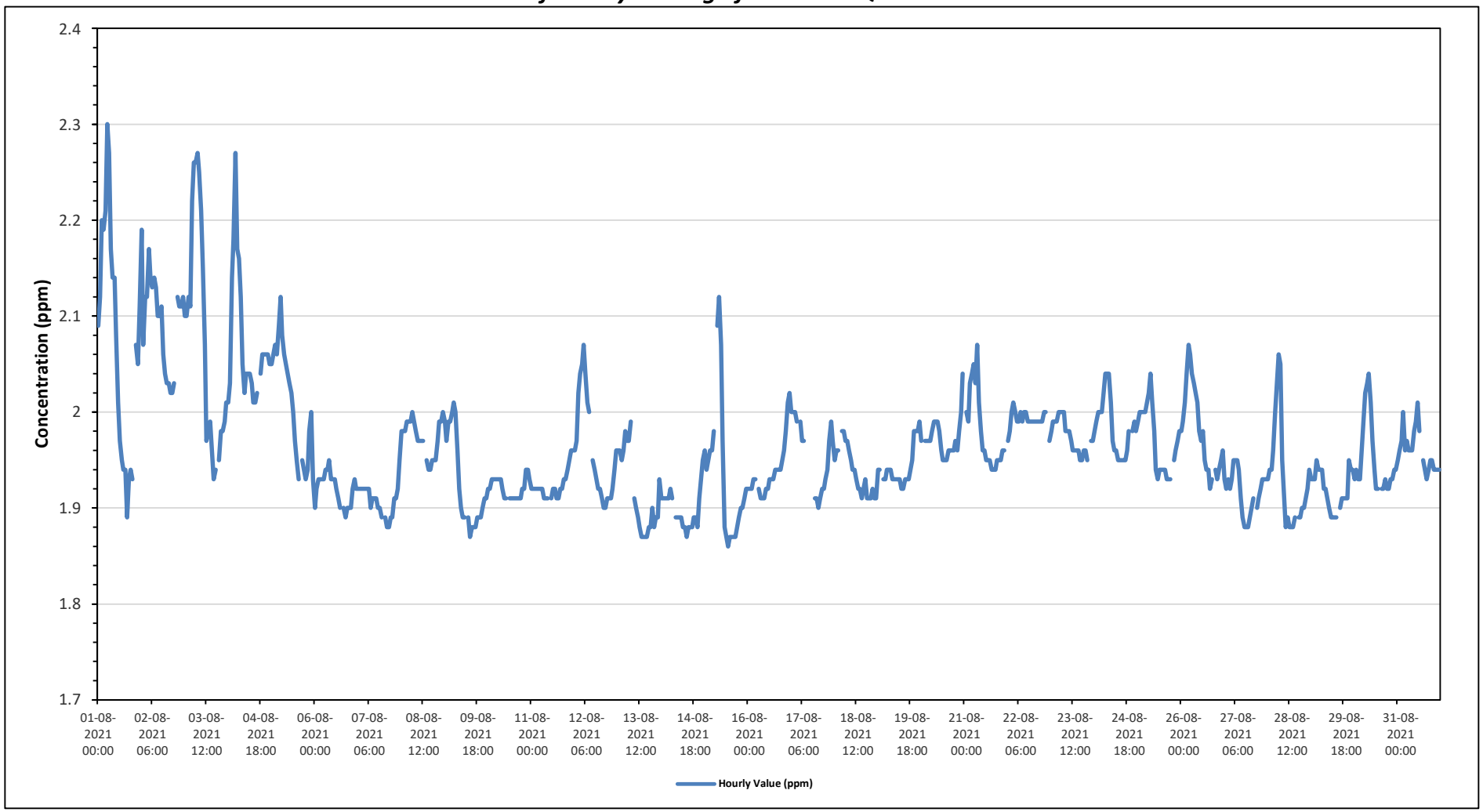
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 2.30 | ppm | on August 1 at hour 5 | Hours in Service: | 744 |
| Maximum Daily Value: | 2.10 | ppm | on August 2 | Hours of Data: | 707 |
| Minimum Hourly Value: | 1.86 | ppm | on August 15 at hour 13 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 1.90 | ppm | on August 14 | Hours of Calibration: | 37 |
| Monthly Average: | 1.97 | ppm | | Operational Uptime: | 100.0 |

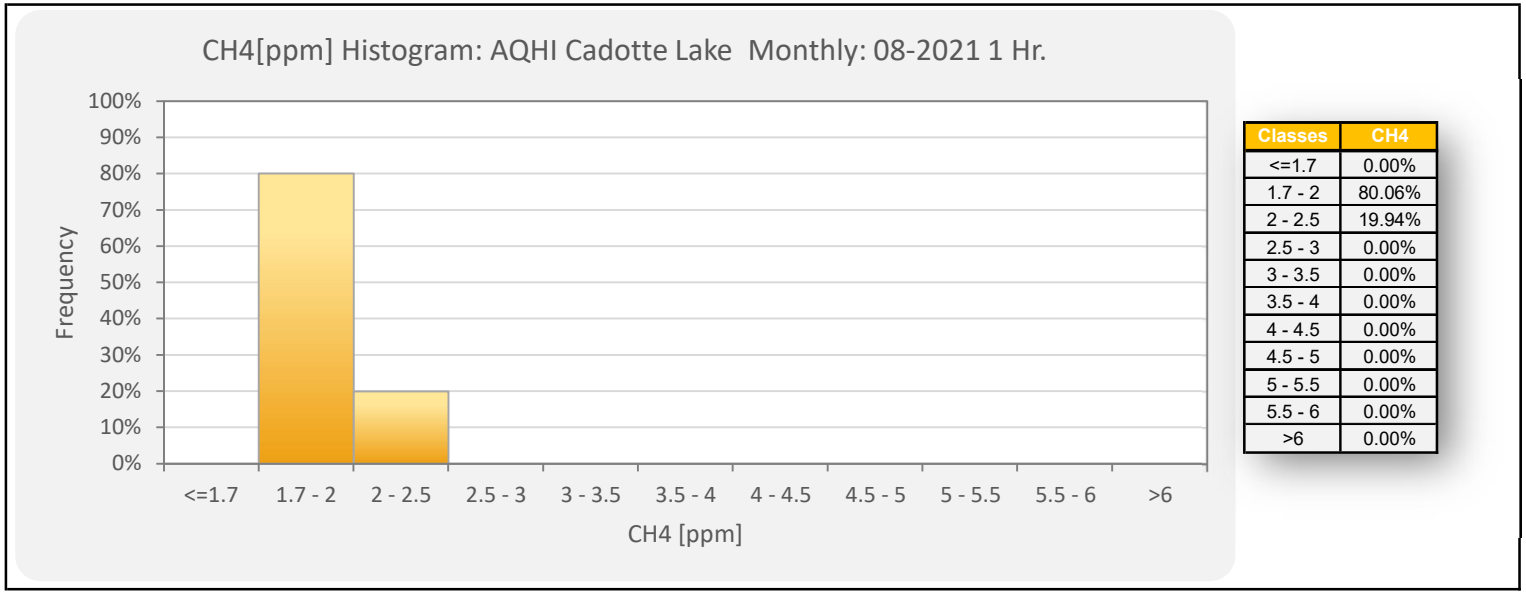
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 2.09 | 2.12 | 2.20 | 2.19 | 2.21 | **2.30** | 2.27 | 2.17 | 2.14 | 2.14 | 2.08 | 2.01 | 1.97 | 1.95 | 1.94 | 1.94 | 1.89 | 1.93 | 1.94 | 1.93 | S | 2.07 | 2.05 | 2.11 | 1.89 | **2.30** | 2.07 |
| Aug 2 | 2.19 | 2.07 | 2.12 | 2.12 | 2.17 | 2.14 | 2.13 | 2.14 | 2.13 | 2.10 | 2.10 | 2.11 | 2.06 | 2.04 | 2.03 | 2.03 | 2.02 | 2.02 | 2.03 | S | 2.12 | 2.11 | 2.11 | 2.12 | 2.02 | 2.19 | **2.10** |
| Aug 3 | 2.10 | 2.10 | 2.12 | 2.11 | 2.22 | 2.26 | 2.26 | 2.27 | 2.25 | 2.21 | 2.15 | 2.07 | 1.97 | 1.98 | 1.99 | 1.96 | 1.93 | 1.94 | S | 1.95 | 1.98 | 1.98 | 1.99 | 2.01 | 1.93 | 2.27 | 2.08 |
| Aug 4 | 2.01 | 2.03 | 2.14 | 2.18 | 2.27 | 2.17 | 2.16 | 2.12 | 2.05 | 2.02 | 2.04 | 2.04 | 2.04 | 2.03 | 2.01 | 2.01 | 2.02 | S | 2.04 | 2.06 | 2.06 | 2.06 | 2.06 | 2.05 | 2.01 | 2.27 | 2.07 |
| Aug 5 | 2.05 | 2.06 | 2.07 | 2.06 | 2.09 | 2.12 | 2.08 | 2.06 | 2.05 | 2.04 | 2.03 | 2.02 | 2.00 | 1.97 | 1.95 | 1.93 | S | 1.95 | 1.94 | 1.93 | 1.94 | 1.98 | 2.00 | 1.93 | 1.93 | 2.12 | 2.01 |
| Aug 6 | 1.90 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.94 | 1.95 | 1.93 | 1.93 | 1.93 | 1.92 | 1.91 | 1.90 | S | 1.90 | 1.89 | 1.90 | 1.90 | 1.90 | 1.92 | 1.93 | 1.92 | 1.89 | 1.95 | 1.92 |
| Aug 7 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.90 | 1.91 | 1.91 | 1.91 | 1.90 | 1.90 | 1.89 | S | 1.89 | 1.88 | 1.88 | 1.89 | 1.89 | 1.91 | 1.91 | 1.92 | 1.95 | 1.88 | 1.95 | 1.91 |
| Aug 8 | 1.98 | 1.98 | 1.98 | 1.99 | 1.99 | 1.99 | 2.00 | 1.99 | 1.98 | 1.97 | 1.97 | 1.97 | 1.97 | S | 1.95 | 1.94 | 1.94 | 1.95 | 1.95 | 1.95 | 1.97 | 1.99 | 1.99 | 2.00 | 1.94 | 2.00 | 1.97 |
| Aug 9 | 1.99 | 1.97 | 1.99 | 1.99 | 2.00 | 2.01 | 2.00 | 1.96 | 1.92 | 1.90 | 1.89 | 1.89 | S | 1.89 | 1.87 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.90 | 1.91 | 1.91 | 1.87 | 2.01 | 1.93 |
| Aug 10 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.92 | 1.91 | 1.91 | S | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 | 1.92 | 1.94 | 1.94 | 1.93 | 1.91 | 1.94 | 1.92 |
| Aug 11 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.92 | 1.91 | 1.91 | 1.91 | S | 1.91 | 1.92 | 1.92 | 1.91 | 1.91 | 1.92 | 1.92 | 1.93 | 1.93 | 1.94 | 1.95 | 1.96 | 1.96 | 1.91 | 1.96 | 1.92 |
| Aug 12 | 1.96 | 1.97 | 2.02 | 2.04 | 2.05 | 2.07 | 2.04 | 2.01 | 2.00 | S | 1.95 | 1.94 | 1.93 | 1.92 | 1.92 | 1.91 | 1.90 | 1.90 | 1.91 | 1.91 | 1.91 | 1.92 | 1.94 | 1.96 | 1.90 | 2.07 | 1.96 |
| Aug 13 | 1.96 | 1.96 | 1.95 | 1.96 | 1.98 | 1.97 | 1.97 | 1.99 | S | 1.91 | 1.90 | 1.89 | 1.88 | 1.87 | 1.87 | 1.87 | 1.87 | 1.88 | 1.88 | 1.90 | 1.88 | 1.89 | 1.89 | 1.93 | 1.87 | 1.99 | 1.92 |
| Aug 14 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | S | 1.89 | 1.89 | 1.89 | 1.89 | 1.88 | 1.88 | 1.87 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.88 | 1.91 | 1.93 | 1.95 | 1.87 | 1.95 | 1.90 |
| Aug 15 | 1.96 | 1.94 | 1.95 | 1.96 | 1.96 | 1.98 | S | 2.09 | 2.12 | 2.07 | 1.97 | 1.88 | 1.87 | 1.86 | 1.87 | 1.87 | 1.87 | 1.87 | 1.88 | 1.89 | 1.90 | 1.90 | 1.91 | 1.92 | **1.86** | 2.12 | 1.93 |
| Aug 16 | 1.92 | 1.92 | 1.92 | 1.93 | 1.93 | S | 1.92 | 1.91 | 1.91 | 1.91 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 | 1.95 | 1.96 | 1.98 | 2.01 | 2.02 | 1.91 | 2.02 | 1.94 |
| Aug 17 | 2.00 | 2.00 | 2.00 | 1.99 | S | 1.99 | 1.97 | 1.97 | C | C | C | C | C | 1.91 | 1.91 | 1.90 | 1.91 | 1.92 | 1.92 | 1.93 | 1.94 | 1.97 | 1.99 | 1.97 | 1.90 | 2.00 | 1.96 |
| Aug 18 | 1.95 | 1.96 | 1.96 | S | 1.98 | 1.98 | 1.97 | 1.97 | 1.96 | 1.95 | 1.94 | 1.94 | 1.93 | 1.92 | 1.92 | 1.91 | 1.92 | 1.93 | 1.91 | 1.91 | 1.91 | 1.92 | 1.91 | 1.91 | 1.91 | 1.98 | 1.94 |
| Aug 19 | 1.94 | 1.94 | S | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.94 | 1.95 | 1.98 | 1.98 | 1.98 | 1.99 | 1.92 | 1.99 | 1.94 |
| Aug 20 | 1.97 | S | 1.97 | 1.97 | 1.97 | 1.97 | 1.98 | 1.99 | 1.99 | 1.99 | 1.98 | 1.96 | 1.95 | 1.95 | 1.95 | 1.96 | 1.96 | 1.96 | 1.96 | 1.97 | 1.96 | 1.98 | 2.00 | 2.04 | 1.95 | 2.04 | 1.97 |
| Aug 21 | S | 2.00 | 1.99 | 2.03 | 2.04 | 2.05 | 2.03 | 2.07 | 2.01 | 1.98 | 1.96 | 1.96 | 1.95 | 1.95 | 1.95 | 1.94 | 1.94 | 1.94 | 1.95 | 1.95 | 1.95 | 1.96 | 1.96 | S | 1.94 | 2.07 | 1.98 |
| Aug 22 | 1.97 | 1.98 | 2.00 | 2.01 | 2.00 | 1.99 | 1.99 | 2.00 | 1.99 | 2.00 | 2.00 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | S | 1.97 | 1.97 | 2.01 | 1.99 |
| Aug 23 | 1.98 | 1.99 | 1.99 | 1.99 | 2.00 | 2.00 | 2.00 | 2.00 | 1.98 | 1.98 | 1.98 | 1.97 | 1.96 | 1.96 | 1.96 | 1.96 | 1.95 | 1.95 | 1.96 | 1.96 | 1.95 | S | 1.97 | 1.97 | 1.95 | 2.00 | 1.97 |
| Aug 24 | 1.98 | 1.99 | 2.00 | 2.00 | 2.00 | 2.02 | 2.04 | 2.04 | 2.04 | 2.01 | 1.97 | 1.96 | 1.96 | 1.95 | 1.95 | 1.95 | 1.95 | 1.95 | 1.96 | 1.98 | S | 1.98 | 1.99 | 1.98 | 1.95 | 2.04 | 1.98 |
| Aug 25 | 1.99 | 2.00 | 2.00 | 2.00 | 2.00 | 2.01 | 2.02 | 2.04 | 2.01 | 1.98 | 1.94 | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 | 1.93 | 1.93 | 1.93 | S | 1.95 | 1.96 | 1.97 | 1.98 | 1.93 | 2.04 | 1.97 |
| Aug 26 | 1.98 | 1.99 | 2.01 | 2.04 | 2.07 | 2.06 | 2.04 | 2.03 | 2.02 | 2.01 | 1.98 | 1.97 | 1.98 | 1.95 | 1.94 | 1.94 | 1.92 | 1.93 | S | 1.94 | 1.93 | 1.94 | 1.95 | 1.96 | 1.92 | 2.07 | 1.98 |
| Aug 27 | 1.93 | 1.92 | 1.93 | 1.92 | 1.93 | 1.95 | 1.95 | 1.95 | 1.94 | 1.91 | 1.89 | 1.88 | 1.88 | 1.88 | 1.89 | 1.90 | 1.91 | S | 1.90 | 1.91 | 1.92 | 1.93 | 1.93 | 1.93 | 1.88 | 1.95 | 1.92 |
| Aug 28 | 1.93 | 1.94 | 1.94 | 1.96 | 2.00 | 2.03 | 2.06 | 2.05 | 1.95 | 1.91 | 1.88 | 1.89 | 1.88 | 1.88 | 1.88 | 1.89 | S | 1.89 | 1.89 | 1.90 | 1.90 | 1.91 | 1.92 | 1.94 | 1.88 | 2.06 | 1.93 |
| Aug 29 | 1.93 | 1.93 | 1.93 | 1.95 | 1.94 | 1.94 | 1.94 | 1.92 | 1.92 | 1.91 | 1.90 | 1.89 | 1.89 | 1.89 | 1.89 | S | 1.90 | 1.91 | 1.91 | 1.91 | 1.91 | 1.95 | 1.94 | 1.94 | 1.89 | 1.95 | 1.92 |
| Aug 30 | 1.93 | 1.94 | 1.93 | 1.93 | 1.96 | 1.99 | 2.02 | 2.03 | 2.04 | 2.01 | 1.97 | 1.94 | 1.92 | 1.92 | S | 1.92 | 1.92 | 1.93 | 1.92 | 1.92 | 1.93 | 1.93 | 1.94 | 1.94 | 1.92 | 2.04 | 1.95 |
| Aug 31 | 1.95 | 1.96 | 1.97 | 2.00 | 1.96 | 1.97 | 1.96 | 1.96 | 1.96 | 1.98 | 1.99 | 2.01 | 1.98 | S | 1.95 | 1.94 | 1.93 | 1.94 | 1.95 | 1.95 | 1.94 | 1.94 | 1.94 | 1.94 | 1.93 | 2.01 | 1.96 |
| Diurnal Maximum | 2.19 | 2.12 | 2.20 | 2.19 | 2.27 | 2.30 | 2.27 | 2.27 | 2.25 | 2.21 | 2.15 | 2.11 | 2.06 | 2.04 | 2.03 | 2.03 | 2.02 | 2.02 | 2.04 | 2.06 | 2.12 | 2.11 | 2.11 | 2.12 | | | |
| Diurnal Average | 1.97 | 1.98 | 1.99 | 2.00 | 2.01 | 2.02 | 2.01 | 2.01 | 2.00 | 1.98 | 1.96 | 1.95 | 1.94 | 1.93 | 1.93 | 1.93 | 1.92 | 1.93 | 1.93 | 1.93 | 1.94 | 1.96 | 1.96 | 1.97 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for CH4 - AQHI - Cadotte Lake Station*

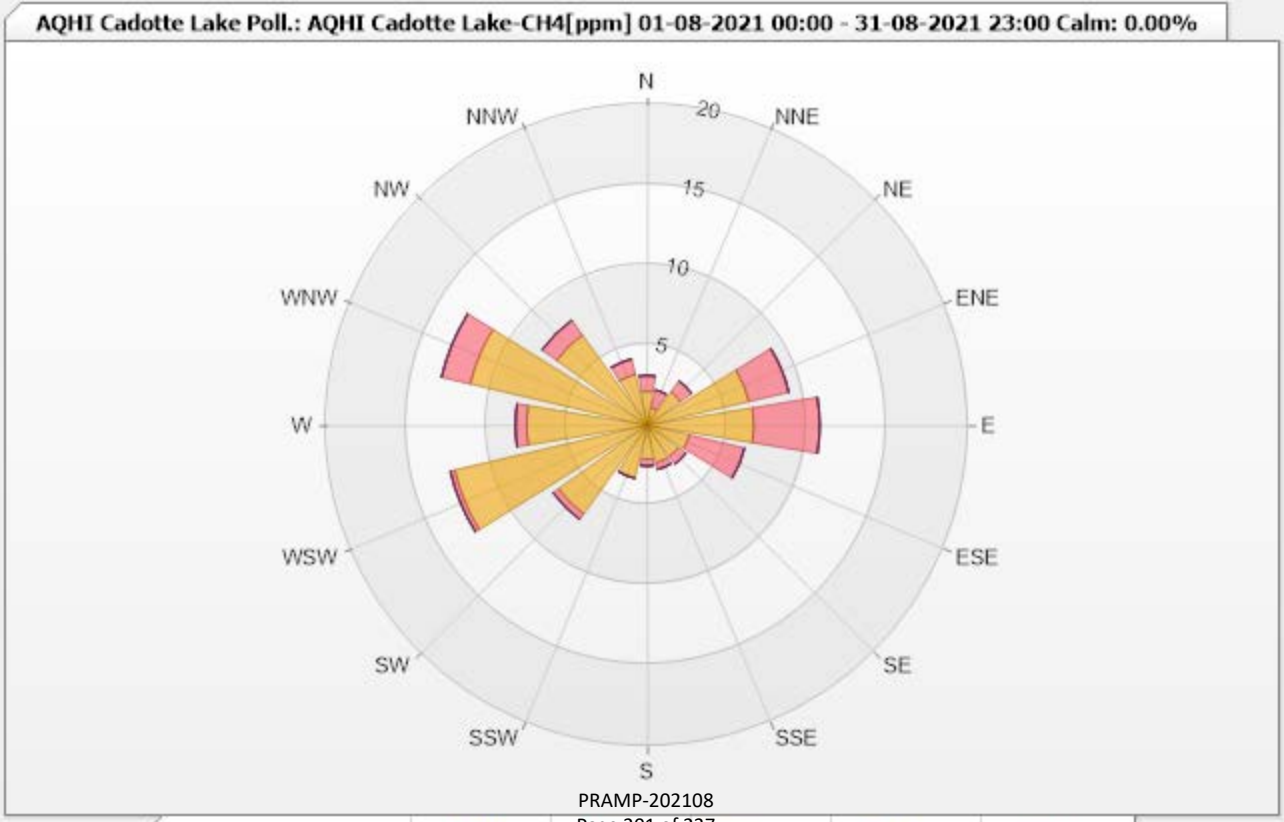





| Classes | CH4 |
|---|---|
| <=1.7 | 0.00% |
| 1.7 - 2 | 80.06% |
| 2 - 2.5 | 19.94% |
| 2.5 - 3 | 0.00% |
| 3 - 3.5 | 0.00% |
| 3.5 - 4 | 0.00% |
| 4 - 4.5 | 0.00% |
| 4.5 - 5 | 0.00% |
| 5 - 5.5 | 0.00% |
| 5.5 - 6 | 0.00% |
| >6 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-CH4[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

| Direction | 0-2 | 2-5 | 5-10 | 10-20 | >20.0 | Total |
|---|---|---|---|---|---|---|
| N | 2.12 | 0.99 | 0 | 0 | 0 | 3.11 |
| NNE | 1.13 | 1.13 | 0 | 0 | 0 | 2.26 |
| NE | 2.55 | 0.85 | 0 | 0 | 0 | 3.4 |
| ENE | 6.51 | 2.55 | 0 | 0 | 0 | 9.06 |
| E | 6.65 | 4.1 | 0 | 0 | 0 | 10.75 |
| ESE | 2.69 | 3.54 | 0 | 0 | 0 | 6.23 |
| SE | 2.4 | 0.57 | 0 | 0 | 0 | 2.97 |
| SSE | 2.4 | 0.42 | 0 | 0 | 0 | 2.82 |
| S | 2.12 | 0.42 | 0 | 0 | 0 | 2.54 |
| SSW | 3.39 | 0 | 0 | 0 | 0 | 3.39 |
| SW | 6.79 | 0.42 | 0 | 0 | 0 | 7.21 |
| WSW | 12.31 | 0.28 | 0 | 0 | 0 | 12.59 |
| W | 7.5 | 0.71 | 0 | 0 | 0 | 8.21 |
| WNW | 11.32 | 1.84 | 0 | 0 | 0 | 13.16 |
| NW | 6.93 | 1.13 | 0 | 0 | 0 | 8.06 |
| NNW | 3.25 | 0.99 | 0 | 0 | 0 | 4.24 |
| Summary | 80.06 | 19.94 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-CH4[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
80 0-2
20 2-5
0 5-10
0 10-20
0 >20.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## NON-METHANE HYDROCARBONS (NMHC) in ppm

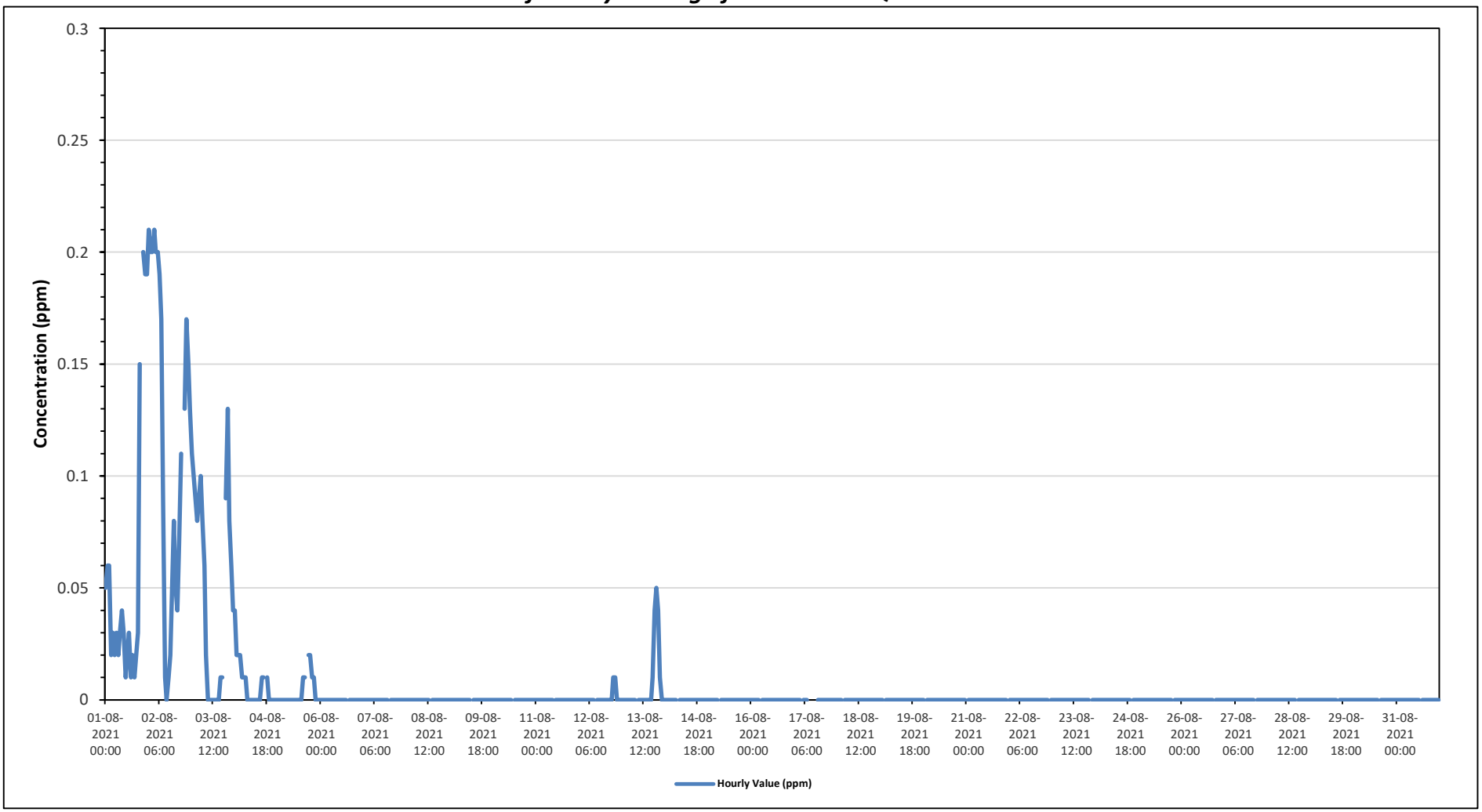
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 0.21 | ppm | on August 2 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 0.12 | ppm | on August 2 | Hours of Data: | 707 |
| Minimum Hourly Value: | 0.00 | ppm | on August 2 at hour 10 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.00 | ppm | on August 6 | Hours of Calibration: | 37 |
| Monthly Average: | 0.01 | ppm | | Operational Uptime: | 100.0 |

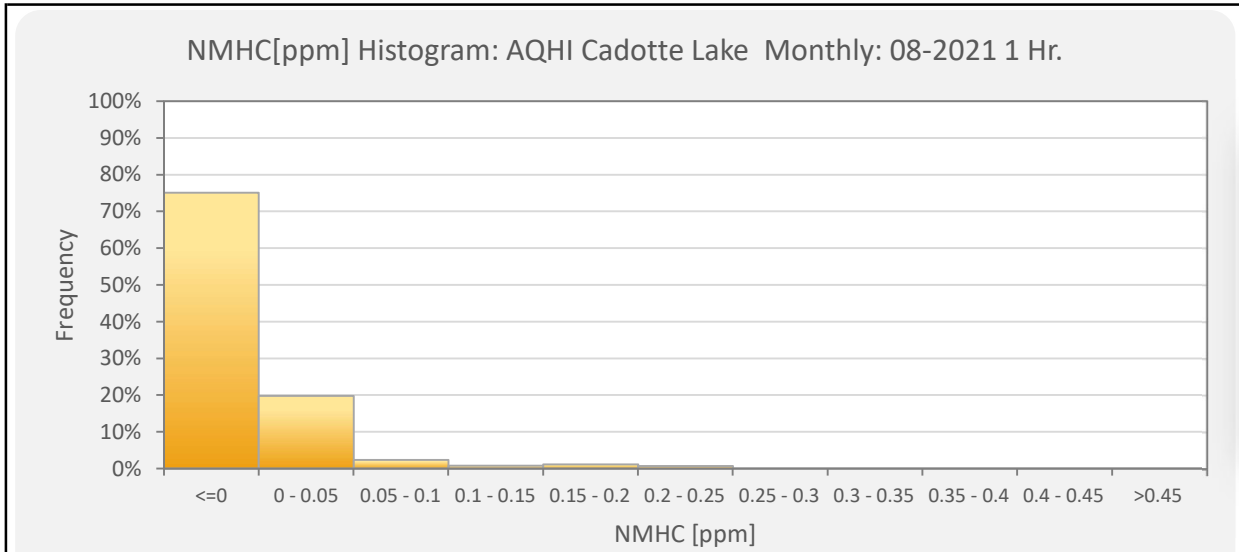
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 0.05 | 0.06 | 0.06 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.03 | 0.04 | 0.03 | 0.01 | 0.02 | 0.03 | 0.01 | 0.02 | 0.01 | 0.02 | 0.03 | 0.15 | S | 0.20 | 0.19 | 0.19 | 0.01 | 0.20 | 0.06 |
| Aug 2 | **0.21** | 0.20 | 0.20 | **0.21** | 0.20 | 0.20 | 0.19 | 0.17 | 0.09 | 0.01 | 0.00 | 0.01 | 0.02 | 0.05 | 0.08 | 0.05 | 0.04 | 0.07 | 0.11 | S | 0.13 | 0.17 | 0.15 | 0.13 | 0.00 | **0.21** | **0.12** |
| Aug 3 | 0.11 | 0.10 | 0.09 | 0.08 | 0.09 | 0.10 | 0.08 | 0.06 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | S | 0.09 | 0.13 | 0.08 | 0.06 | 0.04 | 0.00 | 0.13 | 0.05 |
| Aug 4 | 0.04 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | S | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 |
| Aug 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | S | 0.02 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| Aug 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| Aug 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 0.05 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.05 | 0.01 |
| Aug 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 17 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | C | C | C | C | C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 18 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 19 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 20 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 21 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 |
| Aug 22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | S | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Diurnal Maximum | 0.21 | 0.20 | 0.20 | 0.21 | 0.20 | 0.20 | 0.19 | 0.17 | 0.09 | 0.04 | 0.03 | 0.01 | 0.02 | 0.05 | 0.08 | 0.05 | 0.04 | 0.07 | 0.11 | 0.15 | 0.13 | 0.20 | 0.19 | 0.19 | | | |
| Diurnal Average | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure | |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for NMHC - AQHI - Cadotte Lake Station*

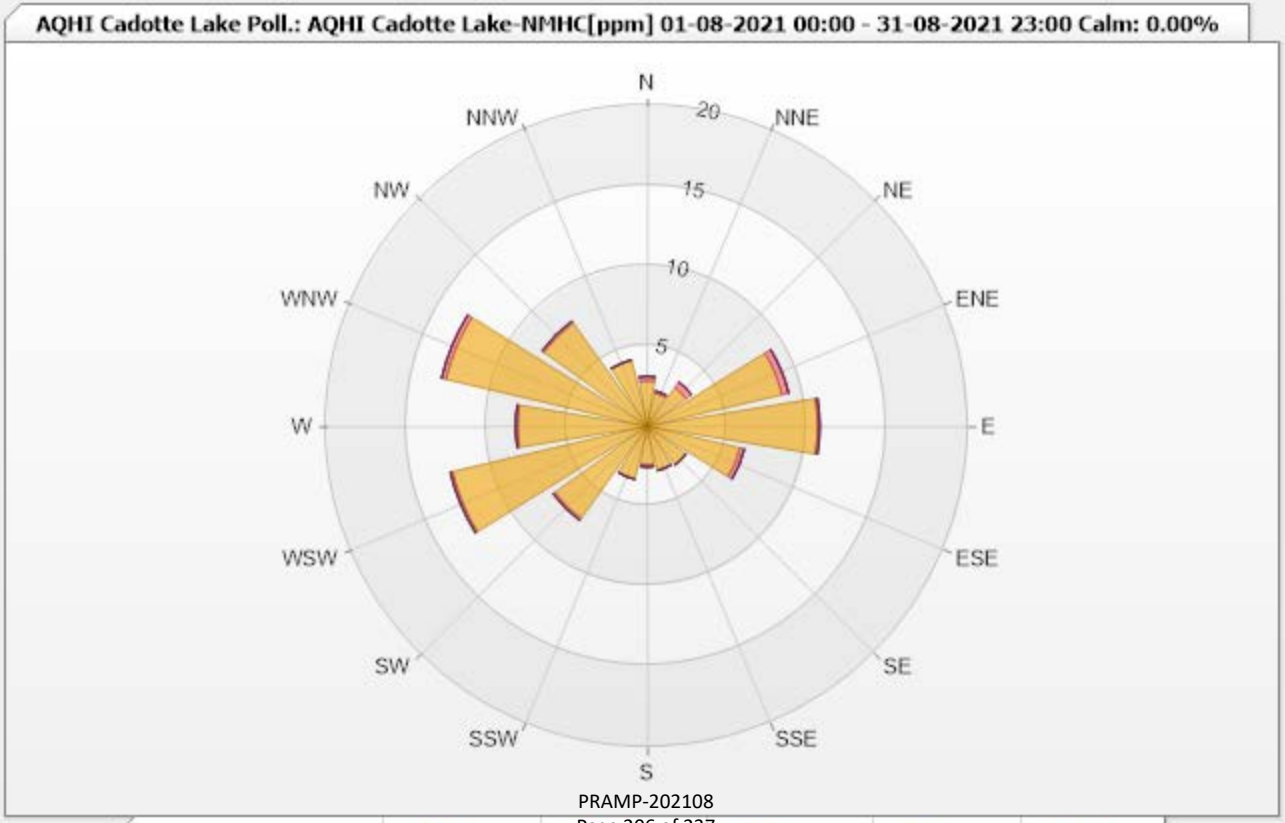





| Classes | NMHC |
|---|---|
| <=0 | 75.11% |
| 0 - 0.05 | 19.80% |
| 0.05 - 0.1 | 2.40% |
| 0.1 - 0.15 | 0.85% |
| 0.15 - 0.2 | 1.13% |
| 0.2 - 0.25 | 0.71% |
| 0.25 - 0.3 | 0.00% |
| 0.3 - 0.35 | 0.00% |
| 0.35 - 0.4 | 0.00% |
| 0.4 - 0.45 | 0.00% |
| >0.45 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NMHC[ppm] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

| Direction | 0-0.1 | 0.1-0.3 | 0.3-0.9 | 0.9-2 | >2.0 | Total |
|---|---|---|---|---|---|---|
| N | 2.83 | 0.28 | 0 | 0 | 0 | 3.11 |
| NNE | 2.12 | 0.14 | 0 | 0 | 0 | 2.26 |
| NE | 2.97 | 0.42 | 0 | 0 | 0 | 3.39 |
| ENE | 8.63 | 0.42 | 0 | 0 | 0 | 9.05 |
| E | 10.61 | 0.14 | 0 | 0 | 0 | 10.75 |
| ESE | 5.94 | 0.28 | 0 | 0 | 0 | 6.22 |
| SE | 2.97 | 0 | 0 | 0 | 0 | 2.97 |
| SSE | 2.83 | 0 | 0 | 0 | 0 | 2.83 |
| S | 2.4 | 0.14 | 0 | 0 | 0 | 2.54 |
| SSW | 3.39 | 0 | 0 | 0 | 0 | 3.39 |
| SW | 7.07 | 0.14 | 0 | 0 | 0 | 7.21 |
| WSW | 12.45 | 0.14 | 0 | 0 | 0 | 12.59 |
| W | 8.06 | 0.14 | 0 | 0 | 0 | 8.2 |
| WNW | 12.87 | 0.28 | 0 | 0 | 0 | 13.15 |
| NW | 7.92 | 0.14 | 0 | 0 | 0 | 8.06 |
| NNW | 4.24 | 0 | 0 | 0 | 0 | 4.24 |
| Summary | 97.3 | 2.66 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NMHC[ppm] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ppm)
97 0-0.1
3 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

peace river area monitoring program pramp

# PEACE RIVER AREA MONITORING PROGRAM

## AQHI - Cadotte Lake Station - August 2021

### Summary of Hourly Averages

### PARTICULATE MATTER 2.5 ($PM_{2.5}$) in $\mu g/m^3$

**Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3**

Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 1

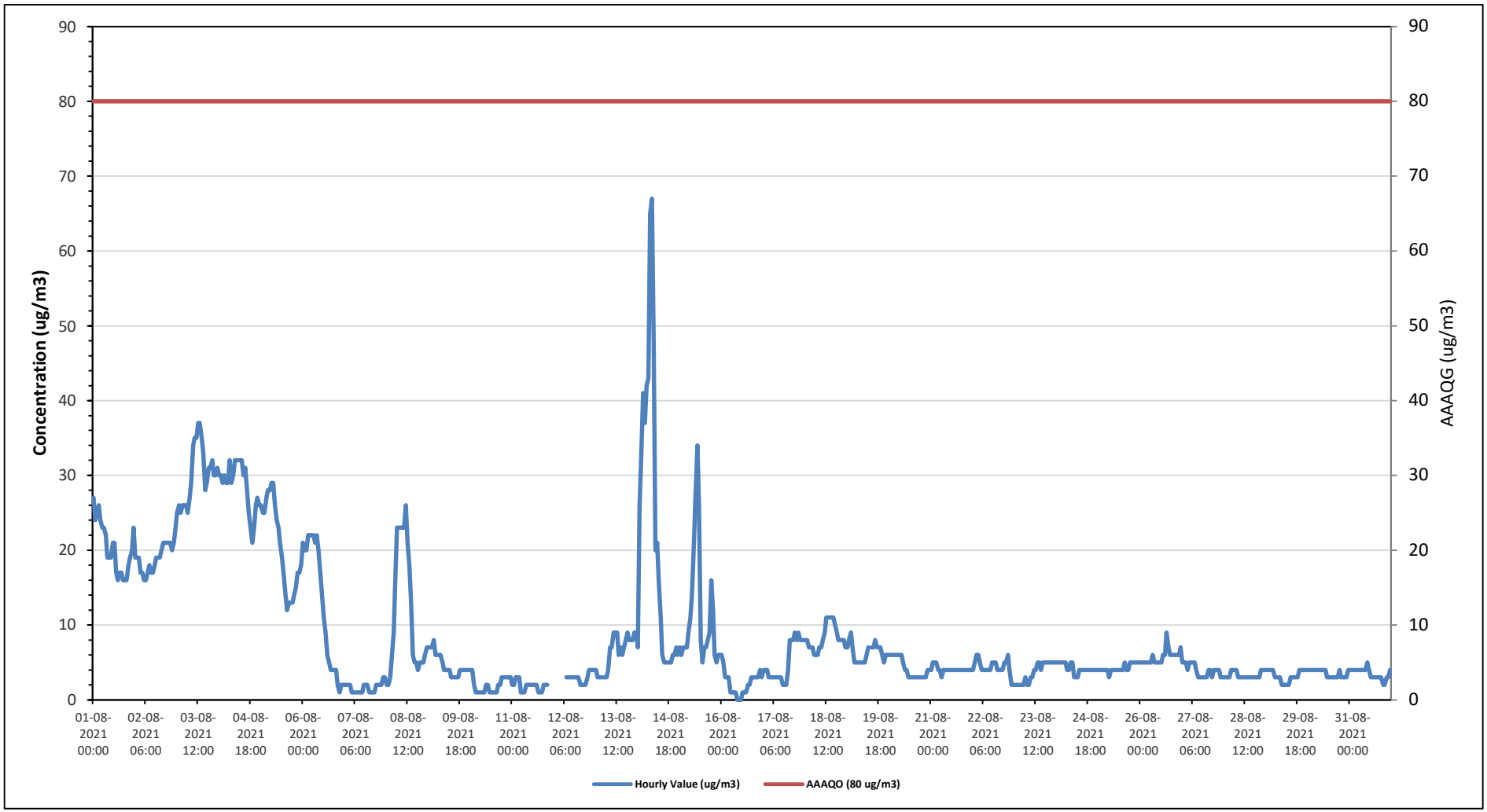
| | | | | |
|---|---|---|---|---|
| Maximum Hourly Value: | 67 | $\mu g/m^3$ on August 14 at hour 8 | Hours in Service: | 744 |
| Maximum Daily Value: | 30.1 | $\mu g/m^3$ on August 3 | Hours of Data: | 733 |
| Minimum Hourly Value: | 0 | $\mu g/m^3$ on August 16 at hour 9 | Hours of Missing Data: | 10 |
| Minimum Daily Value: | 1.6 | $\mu g/m^3$ on August 7 | Hours of Calibration: | 1 |
| Monthly Average: | 8.6 | $\mu g/m^3$ | Operational Uptime: | 98.7 |

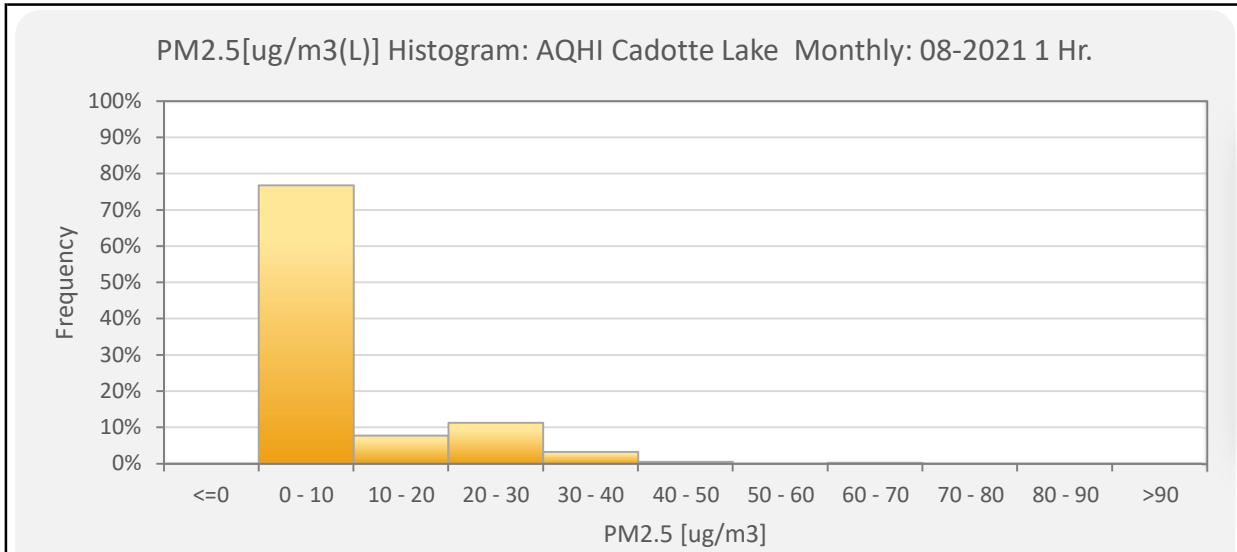
| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 1 | 27 | 24 | 25 | 26 | 24 | 23 | 23 | 22 | 19 | 19 | 19 | 21 | 21 | 17 | 16 | 17 | 17 | 16 | 16 | 16 | 18 | 19 | 20 | 23 | 16 | 27 | 20.3 |
| Aug 2 | 19 | 19 | 19 | 17 | 17 | 16 | 16 | 17 | 18 | 17 | 17 | 18 | 19 | 19 | 19 | 20 | 21 | 21 | 21 | 21 | 21 | 20 | 21 | 23 | 16 | 23 | 19.0 |
| Aug 3 | 25 | 26 | 25 | 26 | 26 | 26 | 25 | 27 | 29 | 34 | 35 | 35 | 37 | 37 | 35 | 33 | 28 | 29 | 31 | 31 | 32 | 30 | 30 | 31 | 25 | 37 | **30.1** |
| Aug 4 | 30 | 30 | 29 | 30 | 29 | 29 | 32 | 29 | 30 | 32 | 32 | 32 | 32 | 32 | 30 | 31 | 28 | 25 | 23 | 21 | 23 | 26 | 27 | 26 | 21 | 32 | 28.7 |
| Aug 5 | 26 | 25 | 25 | 27 | 28 | 28 | 29 | 29 | 26 | 24 | 23 | 21 | 19 | 17 | 14 | 12 | 13 | 13 | 13 | 14 | 15 | 17 | 17 | 18 | 12 | 29 | 20.5 |
| Aug 6 | 21 | 20 | 20 | 22 | 22 | 22 | 22 | 21 | 22 | 20 | 17 | 14 | 11 | 9 | 6 | 5 | 4 | 4 | 4 | 4 | 2 | 1 | 2 | 2 | 1 | 22 | 12.4 |
| Aug 7 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 1.6 |
| Aug 8 | 2 | 2 | 3 | 6 | 9 | 17 | 23 | 23 | 23 | 23 | 23 | 26 | 21 | 18 | 13 | 6 | 5 | 5 | 4 | 5 | 5 | 5 | 6 | 7 | 2 | 26 | 11.7 |
| Aug 9 | 7 | 7 | 7 | 8 | 6 | 6 | 6 | 6 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 8 | 4.7 |
| Aug 10 | 4 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 4 | 2.0 |
| Aug 11 | 2 | 2 | 3 | 3 | 3 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | X | X | X | 1 | 3 | 1.9 |
| Aug 12 | X | X | X | X | X | X | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 2 | 4 | - |
| Aug 13 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 7 | 7 | 9 | 9 | 9 | 6 | 7 | 6 | 7 | 8 | 9 | 8 | 8 | 8 | 9 | 9 | 3 | 9 | 6.3 |
| Aug 14 | 7 | 26 | 33 | 41 | 37 | 42 | 43 | 65 | **67** | 48 | 20 | 21 | 16 | 11 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 7 | 6 | 5 | **67** | 22.2 |
| Aug 15 | 7 | 6 | 7 | 7 | 7 | 9 | 11 | 14 | 21 | 27 | 34 | 26 | 8 | 5 | 7 | 7 | 8 | 9 | 16 | 12 | 6 | 5 | 6 | 6 | 5 | 34 | 11.3 |
| Aug 16 | 6 | 5 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | **0** | 6 | 2.2 |
| Aug 17 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 8 | 8 | 8 | 9 | 8 | 9 | 8 | 8 | 8 | 2 | 9 | 5.0 |
| Aug 18 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 8 | 9 | 11 | 11 | 11 | 11 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 7 | 6 | 11 | 8.3 |
| Aug 19 | 7 | 8 | 9 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 7 | C | 7 | 7 | 8 | 7 | 7 | 7 | 6 | 5 | 6 | 6 | 5 | 9 | 6.3 |
| Aug 20 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 6 | 4.3 |
| Aug 21 | 4 | 5 | 5 | 5 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 5 | 4.1 |
| Aug 22 | 4 | 5 | 6 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 6 | 4 | 2 | 2 | 2 | 6 | 4.4 |
| Aug 23 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 5 | 3.6 |
| Aug 24 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 5 | 4.2 |
| Aug 25 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 5 | 4.3 |
| Aug 26 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 9 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 5 | 9 | 5.7 |
| Aug 27 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 5 | 3.9 |
| Aug 28 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 3.3 |
| Aug 29 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 3.2 |
| Aug 30 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 3.5 |
| Aug 31 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 4 | 2 | 5 | 3.5 |
| Diurnal Maximum | 30 | 30 | 33 | 41 | 37 | 42 | 43 | 65 | 67 | 48 | 35 | 35 | 37 | 37 | 35 | 33 | 28 | 29 | 31 | 31 | 32 | 30 | 30 | 31 | | | |
| Diurnal Average | 8.6 | 9.1 | 9.3 | 9.7 | 9.4 | 9.6 | 10.0 | 10.6 | 10.9 | 10.4 | 9.7 | 9.5 | 8.6 | 8.0 | 7.5 | 7.3 | 7.1 | 7.0 | 7.5 | 7.3 | 7.3 | 7.4 | 7.7 | 8.0 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for PM2.5 - AQHI - Cadotte Lake Station*

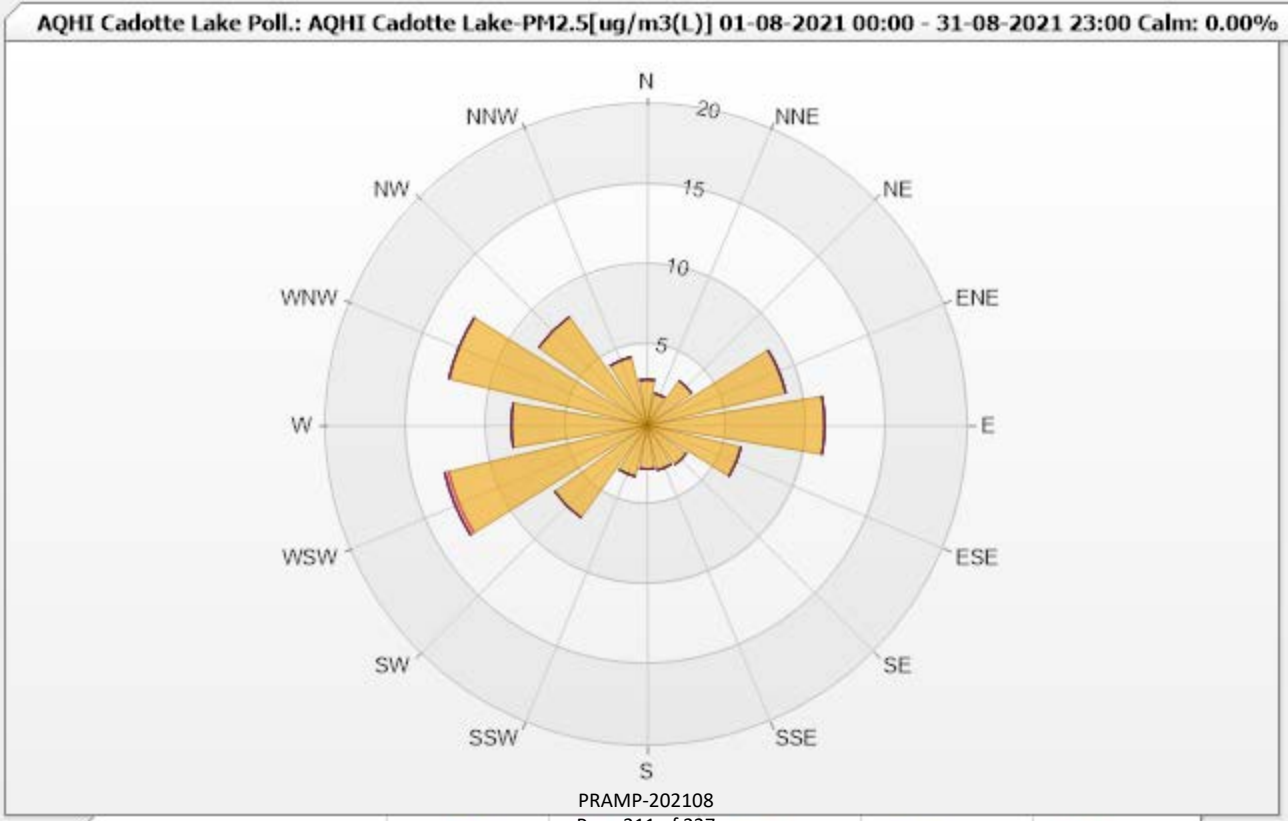





| Classes | PM2.5 |
|---|---|
| <=0 | 0.00% |
| 0 - 10 | 76.81% |
| 10 - 20 | 7.78% |
| 20 - 30 | 11.32% |
| 30 - 40 | 3.27% |
| 40 - 50 | 0.55% |
| 50 - 60 | 0.00% |
| 60 - 70 | 0.27% |
| 70 - 80 | 0.00% |
| 80 - 90 | 0.00% |
| >90 | 0.00% |

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-PM2.5[ug/m3(L)] Monthly: 08-2021 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 98.52% Calm Avg: 0.00 [ug/m3(L)]

| Direction | 0-50 | 50-80 | 80-120 | 120-240 | >240.0 | Total |
|---|---|---|---|---|---|---|
| N | 2.86 | 0 | 0 | 0 | 0 | 2.86 |
| NNE | 2.05 | 0 | 0 | 0 | 0 | 2.05 |
| NE | 3.41 | 0 | 0 | 0 | 0 | 3.41 |
| ENE | 8.87 | 0 | 0 | 0 | 0 | 8.87 |
| E | 11.05 | 0 | 0 | 0 | 0 | 11.05 |
| ESE | 6 | 0 | 0 | 0 | 0 | 6 |
| SE | 3 | 0 | 0 | 0 | 0 | 3 |
| SSE | 2.86 | 0 | 0 | 0 | 0 | 2.86 |
| S | 2.73 | 0 | 0 | 0 | 0 | 2.73 |
| SSW | 3.27 | 0 | 0 | 0 | 0 | 3.27 |
| SW | 7.09 | 0 | 0 | 0 | 0 | 7.09 |
| WSW | 12.69 | 0.27 | 0 | 0 | 0 | 12.96 |
| W | 8.46 | 0 | 0 | 0 | 0 | 8.46 |
| WNW | 12.69 | 0 | 0 | 0 | 0 | 12.69 |
| NW | 8.32 | 0 | 0 | 0 | 0 | 8.32 |
| NNW | 4.37 | 0 | 0 | 0 | 0 | 4.37 |
| Summary | 100 | 0.27 | 0 | 0 | 0 | 100 |


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-PM2.5[ug/m3(L)] 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (ug/m3(L))
100 0-50
0 50-80
0 80-120
0 120-240
0 >240.0

peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## RELATIVE HUMIDITY (RH) in %

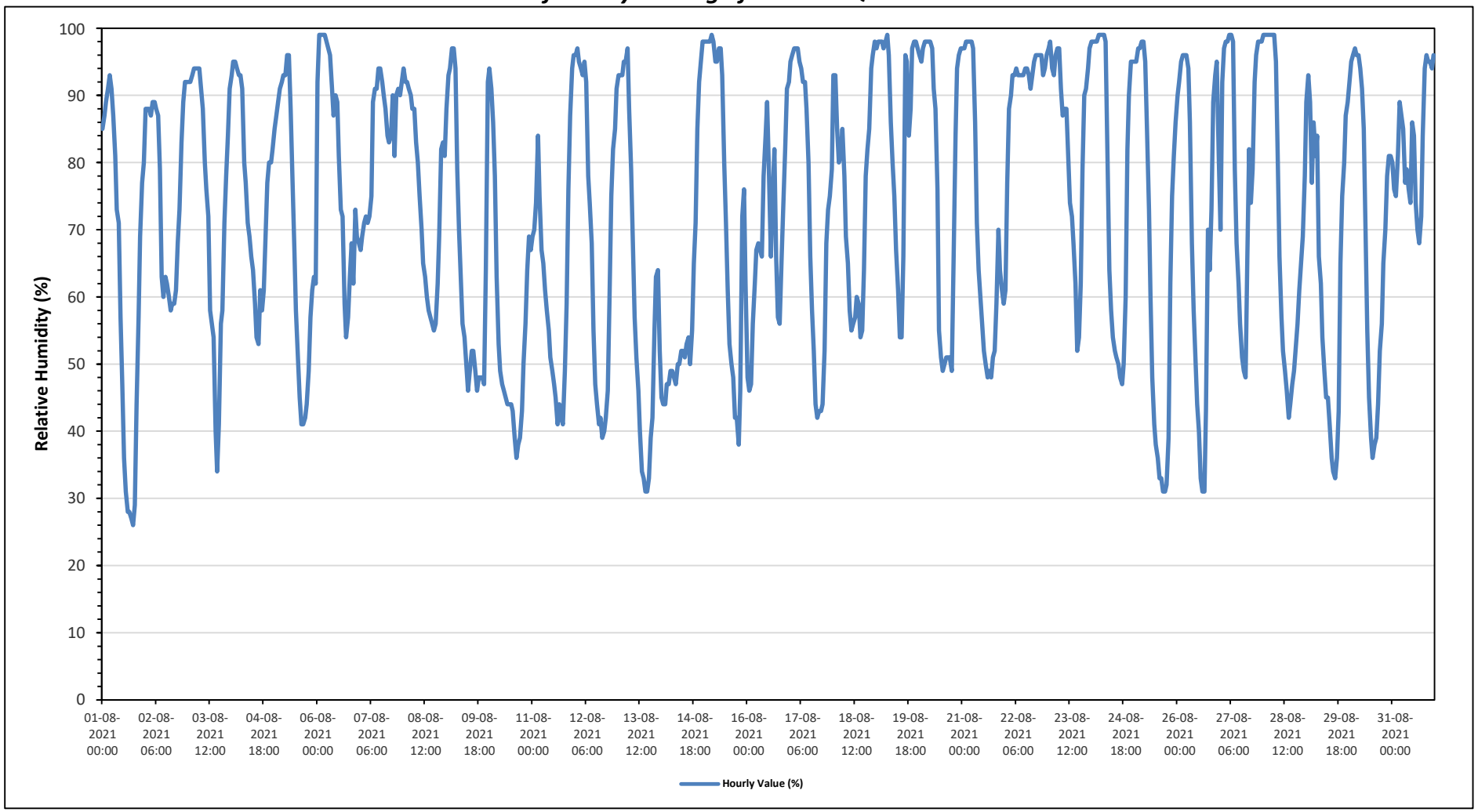
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 99 | % | on August 6 at hour 1 | Hours in Service: | 744 |
| Maximum Daily Value: | 91.5 | % | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 26 | % | on August 1 at hour 17 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 55.3 | % | on August 10 | Hours of Calibration: | 0 |
| Monthly Average: | 72.7 | % | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 85 | 87 | 89 | 91 | 93 | 91 | 87 | 81 | 73 | 71 | 57 | 47 | 36 | 31 | 28 | 28 | 27 | **26** | 29 | 44 | 57 | 69 | 77 | 80 | **26** | 93 | 61.8 |
| Aug 2 | 88 | 88 | 88 | 87 | 89 | 89 | 88 | 87 | 79 | 63 | 60 | 63 | 62 | 60 | 58 | 59 | 59 | 61 | 68 | 73 | 83 | 89 | 92 | 92 | 58 | 92 | 76.0 |
| Aug 3 | 92 | 92 | 93 | 94 | 94 | 94 | 94 | 91 | 88 | 80 | 76 | 72 | 58 | 56 | 54 | 40 | 34 | 41 | 56 | 58 | 71 | 78 | 84 | 91 | 34 | 94 | 74.2 |
| Aug 4 | 93 | 95 | 95 | 94 | 93 | 93 | 91 | 80 | 77 | 71 | 69 | 66 | 64 | 59 | 54 | 53 | 61 | 58 | 61 | 69 | 77 | 80 | 80 | 82 | 53 | 95 | 75.6 |
| Aug 5 | 85 | 87 | 89 | 91 | 92 | 93 | 93 | 96 | 96 | 88 | 78 | 67 | 58 | 51 | 45 | 41 | 41 | 42 | 44 | 49 | 57 | 61 | 63 | 62 | 41 | 96 | 69.5 |
| Aug 6 | 92 | **99** | **99** | **99** | **99** | 98 | 97 | 96 | 91 | 87 | 90 | 89 | 81 | 73 | 72 | 59 | 54 | 57 | 63 | 68 | 62 | 73 | 69 | 68 | 54 | **99** | 80.6 |
| Aug 7 | 67 | 69 | 71 | 72 | 71 | 72 | 75 | 89 | 91 | 91 | 94 | 94 | 92 | 90 | 88 | 84 | 83 | 84 | 90 | 81 | 90 | 91 | 90 | 92 | 67 | 94 | 83.8 |
| Aug 8 | 94 | 92 | 92 | 91 | 90 | 88 | 88 | 83 | 80 | 75 | 70 | 65 | 63 | 60 | 58 | 57 | 56 | 55 | 56 | 62 | 69 | 82 | 83 | 81 | 55 | 94 | 74.6 |
| Aug 9 | 88 | 93 | 94 | 97 | 97 | 94 | 79 | 70 | 62 | 56 | 54 | 50 | 46 | 49 | 52 | 52 | 49 | 46 | 48 | 48 | 48 | 47 | 64 | 92 | 46 | 97 | 65.6 |
| Aug 10 | 94 | 91 | 86 | 78 | 63 | 53 | 49 | 47 | 46 | 45 | 44 | 44 | 44 | 43 | 39 | 36 | 38 | 39 | 43 | 50 | 56 | 64 | 69 | 67 | 36 | 94 | 55.3 |
| Aug 11 | 69 | 70 | 74 | 84 | 75 | 67 | 65 | 61 | 58 | 55 | 51 | 49 | 47 | 45 | 41 | 44 | 42 | 41 | 49 | 59 | 76 | 87 | 94 | 96 | 41 | 96 | 62.5 |
| Aug 12 | 96 | 97 | 95 | 94 | 93 | 95 | 92 | 78 | 74 | 68 | 55 | 47 | 44 | 41 | 42 | 39 | 40 | 42 | 46 | 60 | 75 | 82 | 85 | 91 | 39 | 97 | 69.6 |
| Aug 13 | 93 | 93 | 93 | 95 | 95 | 97 | 88 | 79 | 68 | 57 | 51 | 46 | 40 | 34 | 33 | 31 | 31 | 33 | 39 | 42 | 55 | 63 | 64 | 52 | 31 | 97 | 61.3 |
| Aug 14 | 45 | 44 | 44 | 47 | 47 | 49 | 49 | 48 | 47 | 50 | 50 | 52 | 52 | 51 | 53 | 54 | 50 | 55 | 65 | 71 | 85 | 92 | 95 | 98 | 44 | 98 | 58.0 |
| Aug 15 | 98 | 98 | 98 | 98 | **99** | 98 | 95 | 95 | 97 | 97 | 93 | 80 | 71 | 61 | 53 | 50 | 48 | 42 | 42 | 38 | 46 | 72 | 76 | 62 | 38 | **99** | 75.3 |
| Aug 16 | 48 | 46 | 47 | 56 | 62 | 67 | 68 | 67 | 66 | 78 | 84 | 89 | 79 | 66 | 74 | 82 | 66 | 57 | 56 | 66 | 73 | 82 | 91 | 92 | 46 | 92 | 69.3 |
| Aug 17 | 95 | 96 | 97 | 97 | 97 | 95 | 94 | 92 | 92 | 88 | 80 | 66 | 58 | 52 | 44 | 42 | 43 | 43 | 44 | 52 | 68 | 73 | 75 | 79 | 42 | 97 | 73.4 |
| Aug 18 | 93 | 93 | 85 | 80 | 81 | 85 | 78 | 69 | 65 | 58 | 55 | 56 | 57 | 60 | 59 | 54 | 55 | 64 | 78 | 82 | 85 | 94 | 96 | 98 | 54 | 98 | 74.2 |
| Aug 19 | 97 | 98 | 98 | 98 | 97 | 98 | **99** | 96 | 86 | 80 | 75 | 67 | 61 | 54 | 54 | 66 | 96 | 95 | 84 | 88 | 97 | 98 | 98 | 97 | 54 | **99** | 86.5 |
| Aug 20 | 96 | 95 | 97 | 98 | 98 | 98 | 98 | 97 | 91 | 88 | 76 | 55 | 51 | 49 | 50 | 51 | 51 | 51 | 49 | 65 | 84 | 94 | 96 | 97 | 49 | 98 | 78.1 |
| Aug 21 | 97 | 97 | 98 | 98 | 98 | 98 | 97 | 86 | 71 | 64 | 60 | 56 | 52 | 50 | 48 | 49 | 48 | 51 | 52 | 59 | 70 | 64 | 61 | 59 | 48 | 98 | 70.1 |
| Aug 22 | 61 | 77 | 88 | 90 | 93 | 93 | 94 | 93 | 93 | 93 | 93 | 94 | 94 | 93 | 91 | 93 | 95 | 96 | 96 | 96 | 96 | 93 | 94 | 96 | 61 | 96 | **91.5** |
| Aug 23 | 97 | 98 | 94 | 93 | 96 | 97 | 97 | 91 | 87 | 88 | 88 | 81 | 74 | 72 | 68 | 62 | 52 | 54 | 62 | 79 | 90 | 91 | 94 | 97 | 52 | 98 | 83.4 |
| Aug 24 | 98 | 98 | 98 | 98 | **99** | **99** | **99** | **99** | 98 | 80 | 64 | 58 | 54 | 52 | 51 | 50 | 48 | 47 | 50 | 60 | 82 | 90 | 95 | 95 | 47 | **99** | 77.6 |
| Aug 25 | 95 | 95 | 97 | 97 | 98 | 98 | 95 | 85 | 73 | 60 | 48 | 41 | 38 | 36 | 33 | 33 | 31 | 31 | 32 | 39 | 62 | 75 | 81 | 86 | 31 | 98 | 65.0 |
| Aug 26 | 90 | 92 | 95 | 96 | 96 | 96 | 94 | 86 | 68 | 58 | 51 | 44 | 40 | 33 | 31 | 31 | 43 | 70 | 64 | 73 | 89 | 93 | 95 | 81 | 31 | 96 | 71.2 |
| Aug 27 | 70 | 92 | 97 | 98 | 98 | **99** | **99** | 98 | 79 | 68 | 62 | 56 | 51 | 49 | 48 | 66 | 82 | 74 | 79 | 92 | 96 | 98 | 98 | 98 | 48 | **99** | 81.1 |
| Aug 28 | **99** | **99** | **99** | **99** | **99** | **99** | **99** | 95 | 81 | 66 | 57 | 52 | 49 | 46 | 42 | 44 | 47 | 49 | 52 | 56 | 61 | 65 | 69 | 78 | 42 | **99** | 70.9 |
| Aug 29 | 89 | 93 | 89 | 77 | 86 | 81 | 84 | 66 | 62 | 54 | 49 | 45 | 45 | 41 | 36 | 34 | 33 | 36 | 43 | 65 | 75 | 80 | 87 | 89 | 33 | 93 | 64.1 |
| Aug 30 | 92 | 95 | 96 | 97 | 96 | 96 | 94 | 91 | 85 | 70 | 55 | 45 | 39 | 36 | 38 | 39 | 44 | 52 | 56 | 65 | 70 | 78 | 81 | 81 | 36 | 97 | 70.5 |
| Aug 31 | 80 | 76 | 75 | 81 | 89 | 87 | 85 | 77 | 79 | 76 | 74 | 86 | 84 | 74 | 70 | 68 | 72 | 84 | 94 | 96 | 95 | 95 | 94 | 96 | 68 | 96 | 82.8 |
| Diurnal Maximum | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 98 | 97 | 94 | 94 | 94 | 93 | 91 | 93 | 96 | 96 | 96 | 96 | 97 | 98 | 98 | 98 | | | |
| Diurnal Average | 86.3 | 88.2 | 88.7 | 89.2 | 89.5 | 88.9 | 87.2 | 82.9 | 77.5 | 71.7 | 66.5 | 62.0 | 57.5 | 53.8 | 51.8 | 51.3 | 52.2 | 54.1 | 57.7 | 64.7 | 74.2 | 80.4 | 83.5 | 84.7 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for RH - AQHI - Cadotte Lake Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## BAROMETRIC PRESSURE (BP) in millibar

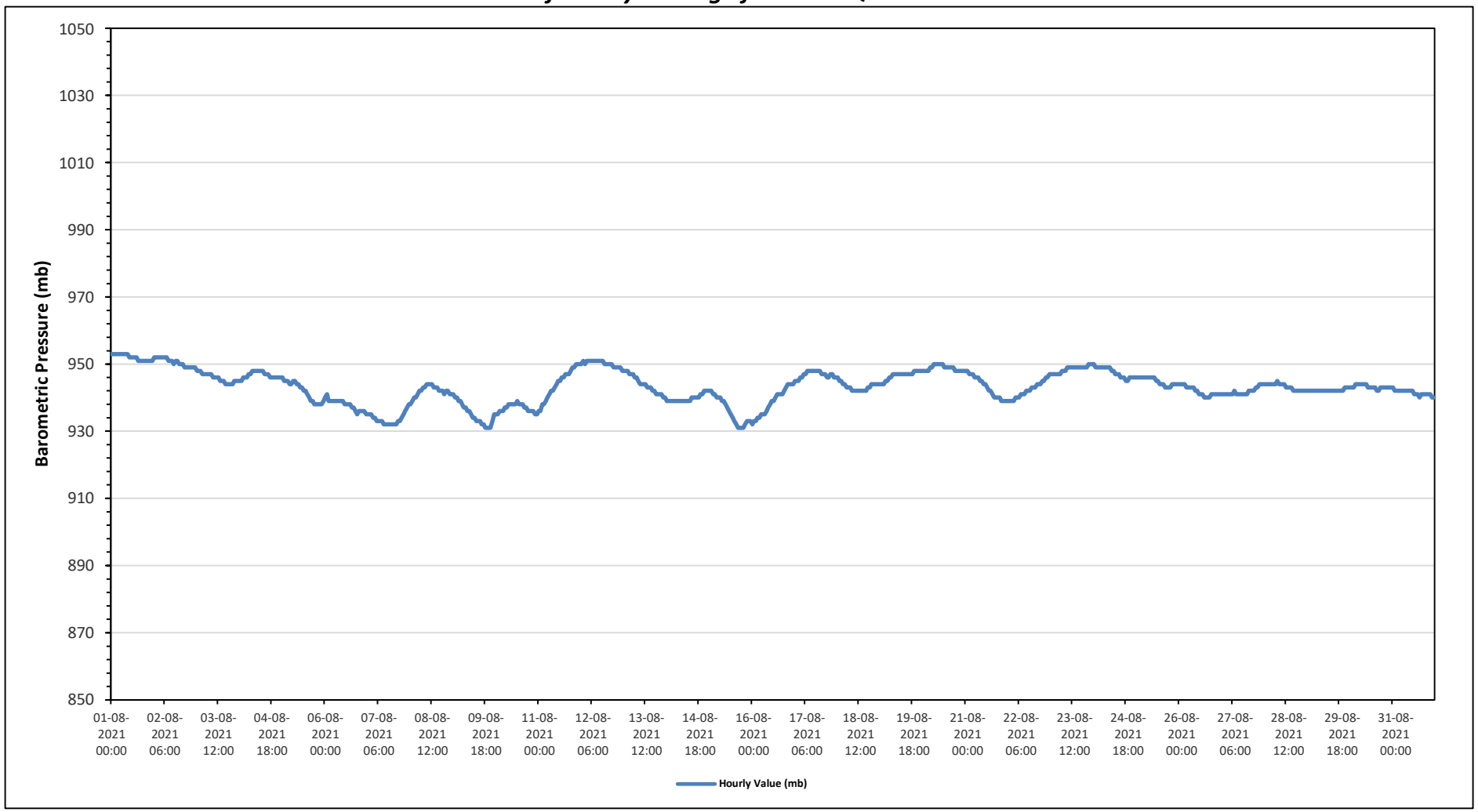
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 953 | mb | on August 1 at hour 0 | Hours in Service: | 744 |
| Maximum Daily Value: | 952 | mb | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | 931 | mb | on August 9 at hour 18 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 934 | mb | on August 7 | Hours of Calibration: | 0 |
| Monthly Average: | 943 | mb | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | **953** | **953** | **953** | **953** | **953** | **953** | **953** | **953** | **953** | **953** | 952 | 952 | 952 | 952 | 952 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | **953** | **952.0** |
| Aug 2 | 952 | 952 | 952 | 952 | 952 | 952 | 952 | 952 | 951 | 951 | 951 | 950 | 951 | 951 | 950 | 950 | 950 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 952 | 950.6 |
| Aug 3 | 948 | 948 | 948 | 947 | 947 | 947 | 947 | 947 | 947 | 946 | 946 | 946 | 946 | 945 | 945 | 945 | 944 | 944 | 944 | 944 | 944 | 945 | 945 | 945 | 944 | 948 | 945.8 |
| Aug 4 | 945 | 945 | 946 | 946 | 946 | 947 | 947 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 947 | 947 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 945 | 948 | 946.7 |
| Aug 5 | 946 | 945 | 945 | 945 | 944 | 944 | 945 | 945 | 944 | 944 | 943 | 943 | 942 | 942 | 941 | 940 | 939 | 939 | 938 | 938 | 938 | 938 | 938 | 939 | 938 | 946 | 941.9 |
| Aug 6 | 940 | 941 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 938 | 938 | 938 | 938 | 937 | 937 | 936 | 935 | 936 | 936 | 936 | 936 | 935 | 935 | 941 | 937.8 |
| Aug 7 | 935 | 935 | 935 | 934 | 934 | 933 | 933 | 933 | 933 | 932 | 932 | 932 | 932 | 932 | 932 | 932 | 932 | 933 | 933 | 934 | 935 | 936 | 937 | 938 | 932 | 938 | 933.6 |
| Aug 8 | 938 | 939 | 940 | 940 | 941 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 942 | 942 | 942 | 941 | 942 | 942 | 941 | 941 | 938 | 944 | 941.9 |
| Aug 9 | 941 | 940 | 940 | 939 | 939 | 938 | 937 | 937 | 936 | 936 | 935 | 934 | 934 | 933 | 933 | 933 | 932 | 932 | **931** | **931** | **931** | **931** | 933 | 935 | **931** | 941 | 935.0 |
| Aug 10 | 935 | 935 | 936 | 936 | 936 | 937 | 937 | 938 | 938 | 938 | 938 | 938 | 939 | 938 | 938 | 938 | 937 | 937 | 936 | 936 | 936 | 936 | 935 | 935 | 935 | 939 | 936.8 |
| Aug 11 | 936 | 936 | 938 | 938 | 939 | 940 | 941 | 942 | 942 | 943 | 944 | 945 | 945 | 946 | 946 | 947 | 947 | 947 | 948 | 949 | 949 | 950 | 950 | 950 | 936 | 950 | 944.1 |
| Aug 12 | 950 | 951 | 950 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 950 | 950 | 950 | 950 | 950 | 949 | 949 | 949 | 949 | 949 | 948 | 948 | 951 | 950.2 |
| Aug 13 | 948 | 948 | 948 | 947 | 947 | 947 | 946 | 946 | 945 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 942 | 942 | 941 | 941 | 941 | 941 | 940 | 940 | 940 | 948 | 944.0 |
| Aug 14 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 940 | 940 | 940 | 940 | 940 | 941 | 941 | 942 | 942 | 942 | 939 | 942 | 939.8 |
| Aug 15 | 942 | 942 | 941 | 941 | 940 | 940 | 940 | 939 | 939 | 938 | 937 | 936 | 935 | 934 | 933 | 932 | **931** | **931** | **931** | **931** | 932 | 933 | 933 | 933 | **931** | 942 | 936.0 |
| Aug 16 | 932 | 933 | 933 | 934 | 934 | 935 | 935 | 935 | 936 | 937 | 938 | 939 | 939 | 940 | 941 | 941 | 941 | 941 | 942 | 943 | 944 | 944 | 944 | 944 | 932 | 944 | 938.5 |
| Aug 17 | 945 | 945 | 945 | 946 | 946 | 947 | 947 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 947 | 947 | 947 | 946 | 946 | 947 | 947 | 946 | 946 | 945 | 948 | 946.8 |
| Aug 18 | 946 | 945 | 945 | 944 | 944 | 943 | 943 | 943 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 944 | 944 | 942 | 946 | 943.2 |
| Aug 19 | 944 | 944 | 944 | 945 | 945 | 946 | 946 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 948 | 948 | 948 | 948 | 948 | 944 | 948 | 946.6 |
| Aug 20 | 948 | 948 | 948 | 948 | 949 | 949 | 950 | 950 | 950 | 950 | 950 | 950 | 949 | 949 | 949 | 949 | 949 | 949 | 948 | 948 | 948 | 948 | 948 | 948 | 948 | 950 | 948.8 |
| Aug 21 | 948 | 948 | 947 | 947 | 947 | 946 | 946 | 946 | 945 | 945 | 944 | 944 | 943 | 942 | 942 | 941 | 940 | 940 | 940 | 940 | 939 | 939 | 939 | 939 | 939 | 948 | 943.2 |
| Aug 22 | 939 | 939 | 939 | 939 | 940 | 940 | 940 | 941 | 941 | 941 | 942 | 942 | 942 | 943 | 943 | 943 | 944 | 944 | 944 | 945 | 945 | 946 | 946 | 947 | 939 | 947 | 942.3 |
| Aug 23 | 947 | 947 | 947 | 947 | 947 | 947 | 948 | 948 | 948 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 950 | 950 | 950 | 947 | 950 | 948.5 |
| Aug 24 | 950 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 948 | 948 | 947 | 947 | 947 | 946 | 946 | 946 | 945 | 945 | 946 | 946 | 946 | 946 | 945 | 950 | 947.5 |
| Aug 25 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 946 | 945 | 945 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 944 | 944 | 944 | 944 | 943 | 946 | 944.8 |
| Aug 26 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 941 | 941 | 941 | 940 | 940 | 940 | 940 | 941 | 941 | 941 | 941 | 941 | 941 | 940 | 944 | 941.8 |
| Aug 27 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 942 | 941 | 941 | 941 | 941 | 941 | 941 | 941 | 942 | 942 | 942 | 942 | 943 | 943 | 944 | 944 | 944 | 941 | 944 | 941.8 |
| Aug 28 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 945 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 945 | 943.2 |
| Aug 29 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 943 | 943 | 942 | 943 | 942.1 |
| Aug 30 | 943 | 943 | 943 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 942 | 942 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 942 | 944 | 943.2 |
| Aug 31 | 943 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 942 | 941 | 941 | 941 | 940 | 941 | 941 | 941 | 941 | 941 | 941 | 940 | 940 | 940 | 943 | 941.4 |
| Diurnal Maximum | 953 | 953 | 953 | 953 | 953 | 953 | 953 | 953 | 953 | 953 | 952 | 952 | 952 | 952 | 952 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | 951 | | | |
| Diurnal Average | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 944 | 943 | 943 | 943 | 943 | 943 | 943 | 943 | 942 | 943 | 943 | 943 | 943 | 943 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for BP - AQHI - Cadotte Lake Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## AMBIENT TEMPERATURE (AT) in Degree Celsius

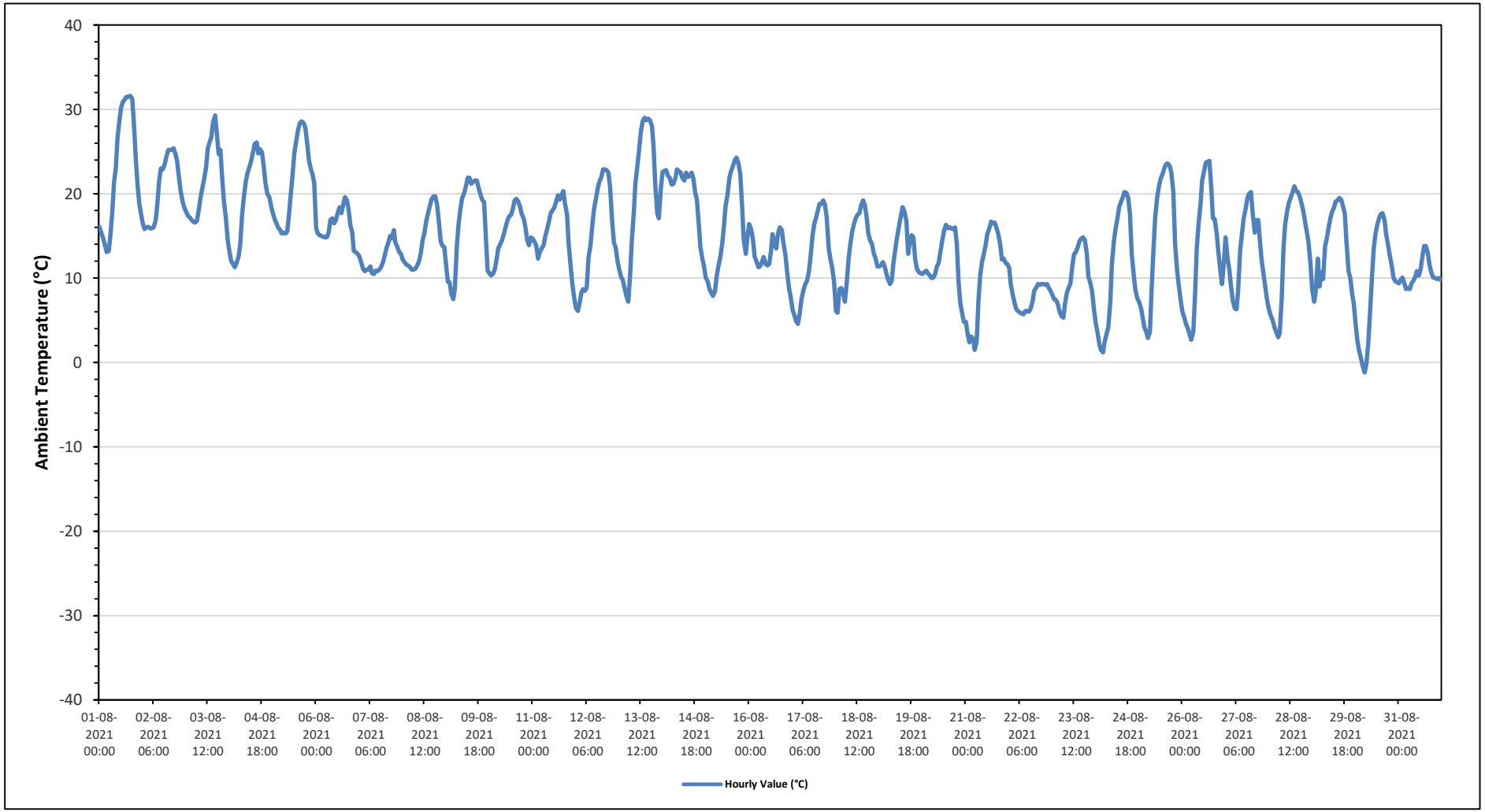
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 31.6 | °C | on August 1 at hour 17 | Hours in Service: | 744 |
| Maximum Daily Value: | 22.8 | °C | on August 1 | Hours of Data: | 744 |
| Minimum Hourly Value: | -1.2 | °C | on August 30 at hour 5 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 7.8 | °C | on August 22 | Hours of Calibration: | 0 |
| Monthly Average: | 14.7 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 16.1 | 15.3 | 14.8 | 13.9 | 13.1 | 13.2 | 14.9 | 17.8 | 21.4 | 23 | 26.7 | 28.6 | 30.2 | 30.9 | 31.2 | 31.5 | 31.5 | **31.6** | 31.3 | 28.7 | 24.3 | 21.2 | 18.9 | 17.6 | 13.1 | **31.6** | **22.8** |
| Aug 2 | 16.5 | 15.8 | 16 | 16.1 | 15.9 | 15.9 | 16 | 16.8 | 18.5 | 21.6 | 23 | 22.9 | 23.4 | 24.3 | 25.2 | 25.2 | 25.2 | 25.4 | 24.8 | 23.9 | 21.8 | 20.4 | 19.1 | 18.3 | 15.8 | 25.4 | 20.5 |
| Aug 3 | 17.8 | 17.4 | 17.2 | 16.9 | 16.7 | 16.6 | 16.8 | 18.1 | 19.5 | 20.8 | 21.7 | 23.1 | 25.4 | 26.2 | 26.7 | 28.5 | 29.3 | 27.4 | 24.7 | 25.2 | 21.8 | 19.1 | 17 | 14.5 | 14.5 | 29.3 | 21.2 |
| Aug 4 | 13.1 | 12 | 11.6 | 11.3 | 11.8 | 12.6 | 13.8 | 17.5 | 19.6 | 21.5 | 22.4 | 23.2 | 23.9 | 24.9 | 25.9 | 26.1 | 24.8 | 25.3 | 24.9 | 23.2 | 21.2 | 20 | 19.6 | 18.7 | 11.3 | 26.1 | 19.5 |
| Aug 5 | 17.7 | 17 | 16.5 | 16 | 15.7 | 15.3 | 15.4 | 15.3 | 15.5 | 17.5 | 19.9 | 22.5 | 24.8 | 26.3 | 27.6 | 28.4 | 28.6 | 28.4 | 27.8 | 26.3 | 24 | 23 | 22.3 | 21.3 | 15.3 | 28.6 | 21.4 |
| Aug 6 | 15.9 | 15.3 | 15.1 | 15 | 14.9 | 14.8 | 14.9 | 15.5 | 16.9 | 17.1 | 16.5 | 16.9 | 17.7 | 18.4 | 17.7 | 18.7 | 19.6 | 19.2 | 18.2 | 16.2 | 15.4 | 13.2 | 13.1 | 12.9 | 12.9 | 19.6 | 16.2 |
| Aug 7 | 12.6 | 11.9 | 11.1 | 10.8 | 11 | 11 | 11.4 | 10.6 | 10.5 | 10.9 | 10.8 | 11 | 11.3 | 11.9 | 12.6 | 13.6 | 14.2 | 15 | 14.7 | 15.7 | 14.2 | 13.7 | 13.1 | 12.9 | 10.5 | 15.7 | 12.4 |
| Aug 8 | 12.2 | 11.9 | 11.6 | 11.5 | 11.3 | 11 | 11 | 11.1 | 11.5 | 12 | 13 | 14.5 | 15.3 | 16.7 | 17.6 | 18.6 | 19.3 | 19.7 | 19.7 | 18.8 | 16.9 | 14.3 | 13.8 | 13.7 | 11.0 | 19.7 | 14.5 |
| Aug 9 | 11.6 | 9.6 | 9.5 | 8.1 | 7.5 | 8.8 | 13.9 | 16.5 | 18.4 | 19.5 | 20.1 | 20.9 | 21.9 | 21.9 | 21.2 | 21.4 | 21.6 | 21.6 | 20.7 | 20 | 19.3 | 19 | 15.4 | 10.9 | 7.5 | 21.9 | 16.6 |
| Aug 10 | 10.6 | 10.3 | 10.5 | 11 | 12.3 | 13.5 | 14 | 14.5 | 15.2 | 16 | 16.9 | 17.3 | 17.5 | 18.2 | 19.2 | 19.4 | 19.1 | 18.4 | 17.6 | 17.1 | 16 | 14.5 | 13.9 | 14.8 | 10.3 | 19.4 | 15.3 |
| Aug 11 | 14.7 | 14.3 | 13.8 | 12.3 | 13.1 | 13.5 | 13.9 | 14.9 | 15.8 | 16.7 | 17.7 | 18 | 18.4 | 19.1 | 19.8 | 19.3 | 19.8 | 20.3 | 18.8 | 17.5 | 14.2 | 11.5 | 9.3 | 7.5 | 7.5 | 20.3 | 15.6 |
| Aug 12 | 6.5 | 6.1 | 7.1 | 8.3 | 8.7 | 8.5 | 8.9 | 12.4 | 13.9 | 15.9 | 18.2 | 19.3 | 20.7 | 21.4 | 22 | 22.9 | 22.9 | 22.8 | 22.5 | 20.7 | 17.1 | 14.2 | 13.6 | 12.1 | 6.1 | 22.9 | 15.3 |
| Aug 13 | 11 | 10.1 | 9.8 | 8.7 | 7.8 | 7.2 | 10.3 | 14.5 | 17.9 | 21.2 | 23.3 | 25.3 | 27.4 | 28.6 | 29 | 28.7 | 28.9 | 28.7 | 28 | 25.7 | 21 | 17.7 | 17.1 | 20.6 | 7.2 | 29.0 | 19.5 |
| Aug 14 | 22.6 | 22.7 | 22.8 | 22.1 | 21.9 | 21.1 | 21.2 | 21.9 | 22.9 | 22.7 | 22.5 | 21.9 | 21.6 | 22.5 | 22 | 22.1 | 22.5 | 21.8 | 20.2 | 19.3 | 16.2 | 13.7 | 12.4 | 11.3 | 11.3 | 22.9 | 20.5 |
| Aug 15 | 10.1 | 9.6 | 8.7 | 8.2 | 7.9 | 8.5 | 10.3 | 11.5 | 12.5 | 14.2 | 16.1 | 18.6 | 20 | 21.9 | 22.7 | 23.3 | 24 | 24.3 | 23.6 | 22.4 | 18.7 | 14.5 | 12.9 | 14.7 | 7.9 | 24.3 | 15.8 |
| Aug 16 | 16.4 | 15.8 | 14.7 | 12.6 | 12 | 11.3 | 11.4 | 11.9 | 12.5 | 11.7 | 11.5 | 11.7 | 13.2 | 15.2 | 14.1 | 13.5 | 15.3 | 16 | 15.7 | 14.2 | 12.8 | 10.7 | 8.7 | 7.8 | 7.8 | 16.4 | 12.9 |
| Aug 17 | 6.2 | 5.6 | 4.9 | 4.6 | 5.8 | 7.5 | 8.5 | 9.3 | 9.7 | 10.7 | 12.6 | 15.1 | 16.3 | 17.2 | 18 | 18.8 | 18.8 | 19.2 | 18.7 | 17.2 | 13.5 | 12.2 | 11.2 | 9.6 | 4.6 | 19.2 | 12.1 |
| Aug 18 | 6.1 | 5.9 | 8.7 | 8.8 | 8.4 | 7.2 | 9.3 | 12.3 | 13.9 | 15.5 | 16.4 | 17.1 | 17.5 | 17.7 | 18.6 | 19.2 | 18.7 | 17.3 | 15.3 | 14.5 | 14 | 13 | 12.3 | 11.4 | 5.9 | 19.2 | 13.3 |
| Aug 19 | 11.4 | 11.5 | 11.9 | 11.4 | 10.5 | 9.8 | 9.3 | 9.7 | 11.9 | 13.6 | 14.8 | 16.2 | 17.3 | 18.4 | 17.9 | 16.8 | 12.9 | 14.2 | 15.1 | 14.8 | 12.2 | 11.1 | 10.7 | 10.6 | 9.3 | 18.4 | 13.1 |
| Aug 20 | 10.5 | 10.7 | 10.9 | 10.6 | 10.3 | 10 | 10.1 | 10.5 | 11.4 | 11.8 | 13.1 | 14.6 | 15.7 | 16.3 | 15.9 | 16 | 15.9 | 15.8 | 16 | 14.1 | 9.6 | 7 | 5.7 | 4.8 | 4.8 | 16.3 | 12.0 |
| Aug 21 | 4.8 | 3.4 | 2.4 | 3.1 | 2.8 | 1.5 | 2.5 | 7.4 | 10.4 | 11.9 | 12.8 | 14 | 15.2 | 15.9 | 16.7 | 16.5 | 16.6 | 15.9 | 15.3 | 14 | 12.2 | 12.3 | 11.8 | 11.7 | 1.5 | 16.7 | 10.5 |
| Aug 22 | 11.2 | 9.3 | 8 | 7.1 | 6.3 | 6.1 | 5.9 | 5.8 | 5.7 | 6.1 | 6.1 | 6 | 6.4 | 7.3 | 8.5 | 8.9 | 9.3 | 9.2 | 9.3 | 9.3 | 9.2 | 9.3 | 8.8 | 8.5 | 5.7 | 11.2 | 7.8 |
| Aug 23 | 8 | 7.5 | 7.4 | 7 | 6 | 5.5 | 5.3 | 6.9 | 8.3 | 8.9 | 9.4 | 11.4 | 12.8 | 13.1 | 13.6 | 14.4 | 14.7 | 14.8 | 14.5 | 12.8 | 10.2 | 9.4 | 8.4 | 6.3 | 5.3 | 14.8 | 9.9 |
| Aug 24 | 4.7 | 3.6 | 2.1 | 1.5 | 1.2 | 2.5 | 3.4 | 4.2 | 7.2 | 11.6 | 14.3 | 15.9 | 17.2 | 18.4 | 19 | 19.6 | 20.2 | 20.1 | 19.5 | 17.6 | 12.8 | 10.3 | 8.7 | 7.6 | 1.2 | 20.2 | 11.0 |
| Aug 25 | 7.2 | 6.4 | 5.4 | 4.2 | 3.6 | 2.9 | 3.6 | 8.8 | 13.3 | 17.2 | 19.6 | 20.9 | 21.8 | 22.3 | 23.1 | 23.5 | 23.6 | 23.3 | 22.5 | 20.2 | 14 | 10.9 | 9.3 | 7.4 | 2.9 | 23.6 | 14.0 |
| Aug 26 | 6 | 5.4 | 4.6 | 4 | 3.4 | 2.7 | 3.6 | 7.9 | 13.6 | 16.4 | 18.8 | 21.5 | 22.7 | 23.7 | 23.8 | 23.9 | 20.5 | 17.1 | 17 | 15.3 | 13 | 11 | 9.3 | 12 | 2.7 | 23.9 | 13.2 |
| Aug 27 | 14.8 | 12.4 | 11 | 9 | 7.3 | 6.4 | 6.3 | 8.6 | 13.3 | 15.2 | 17.1 | 18.1 | 19.5 | 20 | 20.2 | 17.6 | 15.4 | 16.9 | 16.9 | 14.2 | 12.2 | 10.4 | 8.9 | 7.4 | 6.3 | 20.2 | 13.3 |
| Aug 28 | 6.3 | 5.5 | 5 | 4.2 | 3.6 | 3 | 3.5 | 7.7 | 13.5 | 16.2 | 17.9 | 18.9 | 19.5 | 20.1 | 20.9 | 20.4 | 20.2 | 19.7 | 18.8 | 18 | 16.6 | 15.4 | 14.3 | 11.7 | 3.0 | 20.9 | 13.4 |
| Aug 29 | 8.6 | 7.2 | 8.5 | 12.3 | 9 | 10.7 | 9.9 | 13.8 | 14.6 | 16 | 17.1 | 17.9 | 18.3 | 19.1 | 19.2 | 19.5 | 19.3 | 18.5 | 17.7 | 14.2 | 10.8 | 10 | 8.2 | 6.9 | 6.9 | 19.5 | 13.6 |
| Aug 30 | 4.6 | 2.6 | 1.4 | 0.4 | -0.4 | **-1.2** | -0.1 | 2.2 | 5.8 | 10.2 | 13.5 | 15.3 | 16.3 | 17.1 | 17.6 | 17.7 | 16.8 | 15.2 | 13.9 | 12.6 | 11.4 | 10.1 | 9.6 | 9.5 | **-1.2** | 17.7 | 9.3 |
| Aug 31 | 9.4 | 9.8 | 10.1 | 9.4 | 8.7 | 8.8 | 8.7 | 9.4 | 9.7 | 10.2 | 10.8 | 10.3 | 11.1 | 12.6 | 13.8 | 13.8 | 12.9 | 11.6 | 10.6 | 10.1 | 10 | 9.9 | 10 | 9.8 | 8.7 | 13.8 | 10.5 |
| Diurnal Maximum | 22.6 | 22.7 | 22.8 | 22.1 | 21.9 | 21.1 | 21.2 | 21.9 | 22.9 | 23.0 | 26.7 | 28.6 | 30.2 | 30.9 | 31.2 | 31.5 | 31.5 | 31.6 | 31.3 | 28.7 | 24.3 | 23.0 | 22.3 | 21.3 | | | |
| Diurnal Average | 11.1 | 10.4 | 10.1 | 9.7 | 9.3 | 9.2 | 9.9 | 11.8 | 13.7 | 15.3 | 16.6 | 17.7 | 18.7 | 19.6 | 20.0 | 20.3 | 20.1 | 19.8 | 19.2 | 17.9 | 15.4 | 13.6 | 12.5 | 11.8 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for AT - AQHI - Cadotte Lake Station*



peace river area monitoring program pramp

# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## STATION TEMPERATURE (ST) in Degree Celsius

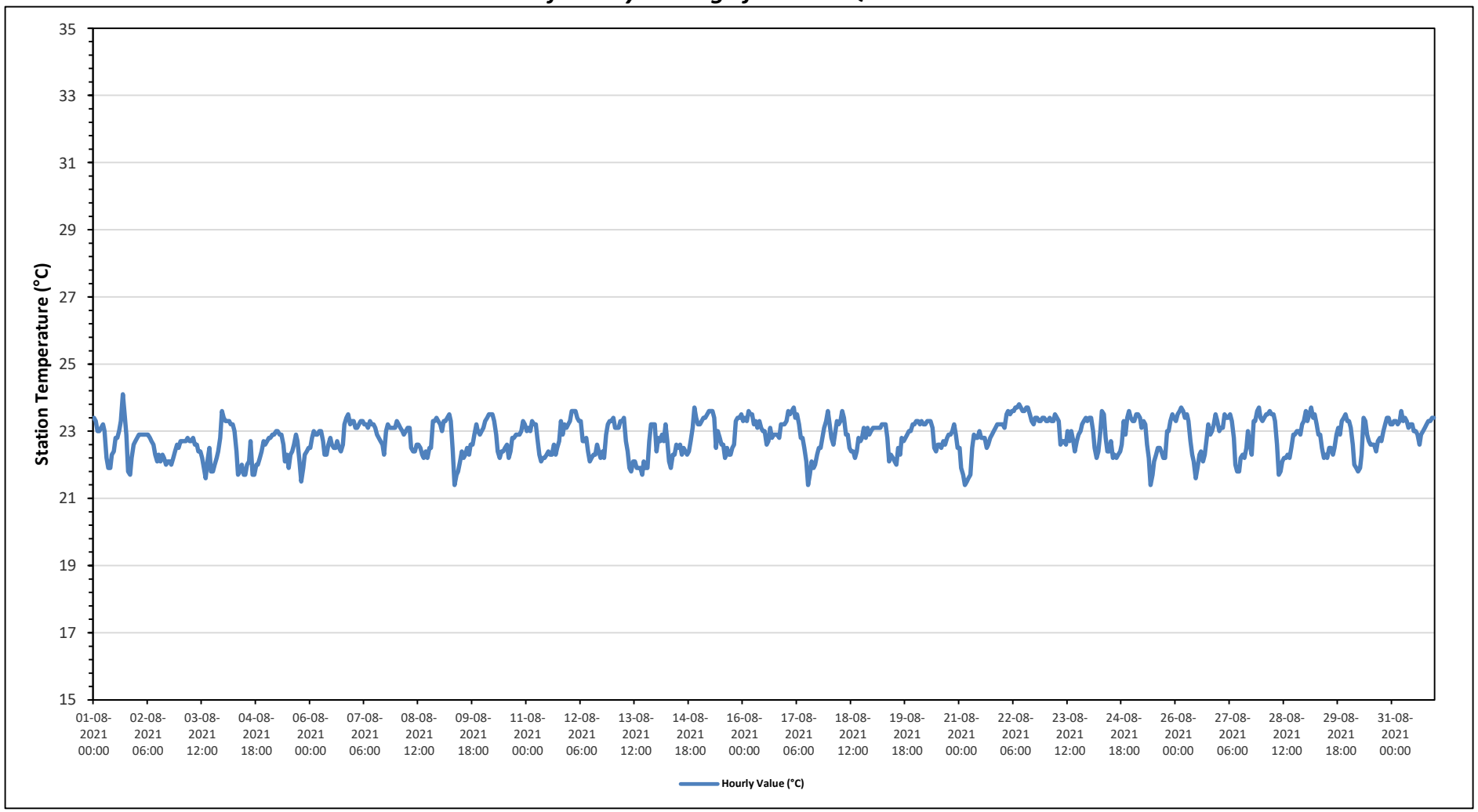
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 24.1 | °C | on August 1 at hour 16 | Hours in Service: | 744 |
| Maximum Daily Value: | 23.5 | °C | on August 22 | Hours of Data: | 744 |
| Minimum Hourly Value: | 21.4 | °C | on August 9 at hour 8 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 22.4 | °C | on August 4 | Hours of Calibration: | 0 |
| Monthly Average: | 22.8 | °C | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 23.4 | 23.3 | 23.0 | 23.0 | 23.1 | 23.2 | 23.0 | 22.2 | 21.9 | 21.9 | 22.3 | 22.4 | 22.8 | 22.8 | 23.0 | 23.3 | **24.1** | 23.6 | 22.9 | 21.8 | 21.7 | 22.2 | 22.6 | 22.7 | 21.7 | **24.1** | 22.8 |
| Aug 2 | 22.8 | 22.9 | 22.9 | 22.9 | 22.9 | 22.9 | 22.9 | 22.8 | 22.7 | 22.6 | 22.3 | 22.1 | 22.3 | 22.1 | 22.3 | 22.2 | 22.0 | 22.1 | 22.1 | 22.0 | 22.2 | 22.4 | 22.6 | 22.5 | 22.0 | 22.9 | 22.5 |
| Aug 3 | 22.7 | 22.7 | 22.7 | 22.7 | 22.8 | 22.7 | 22.7 | 22.8 | 22.6 | 22.6 | 22.4 | 22.4 | 22.2 | 21.9 | 21.6 | 22.1 | 22.5 | 21.8 | 21.8 | 22.0 | 22.2 | 22.4 | 22.8 | 23.6 | 21.6 | 23.6 | 22.4 |
| Aug 4 | 23.4 | 23.3 | 23.3 | 23.3 | 23.2 | 23.2 | 23.0 | 22.4 | 21.7 | 21.8 | 22.0 | 21.7 | 21.7 | 22.0 | 22.1 | 22.7 | 21.7 | 21.7 | 22.0 | 22.0 | 22.2 | 22.4 | 22.7 | 22.6 | 21.7 | 23.4 | 22.4 |
| Aug 5 | 22.7 | 22.8 | 22.8 | 22.9 | 22.9 | 23.0 | 23.0 | 22.9 | 22.9 | 22.6 | 22.1 | 22.3 | 21.9 | 22.3 | 22.4 | 22.6 | 22.9 | 22.7 | 22.1 | 21.5 | 21.9 | 22.3 | 22.4 | 22.5 | 21.5 | 23.0 | 22.5 |
| Aug 6 | 22.5 | 22.8 | 23.0 | 22.9 | 22.9 | 23.0 | 23.0 | 22.7 | 22.3 | 22.3 | 22.6 | 22.8 | 22.6 | 22.5 | 22.5 | 22.7 | 22.5 | 22.4 | 22.6 | 23.2 | 23.4 | 23.5 | 23.2 | 23.3 | 22.3 | 23.5 | 22.8 |
| Aug 7 | 23.3 | 23.1 | 23.1 | 23.2 | 23.3 | 23.3 | 23.2 | 23.2 | 23.1 | 23.3 | 23.2 | 23.2 | 23.1 | 22.9 | 22.8 | 22.7 | 22.6 | 22.3 | 23.0 | 23.2 | 23.1 | 23.1 | 23.1 | 23.1 | 22.3 | 23.3 | 23.1 |
| Aug 8 | 23.3 | 23.2 | 23.1 | 23.0 | 22.9 | 23.0 | 23.1 | 23.1 | 22.5 | 22.4 | 22.4 | 22.6 | 22.6 | 22.5 | 22.3 | 22.2 | 22.4 | 22.2 | 22.5 | 22.5 | 23.3 | 23.3 | 23.4 | 23.3 | 22.2 | 23.4 | 22.8 |
| Aug 9 | 23.2 | 23.0 | 23.3 | 23.3 | 23.4 | 23.5 | 23.3 | 22.4 | **21.4** | 21.7 | 21.8 | 22.1 | 22.4 | 22.2 | 22.3 | 22.5 | 22.3 | 22.6 | 22.6 | 22.9 | 23.2 | 23.0 | 22.9 | 23.0 | **21.4** | 23.5 | 22.7 |
| Aug 10 | 23.1 | 23.3 | 23.4 | 23.5 | 23.5 | 23.5 | 23.3 | 22.9 | 22.4 | 22.2 | 22.4 | 22.4 | 22.5 | 22.6 | 22.2 | 22.4 | 22.8 | 22.8 | 22.9 | 22.9 | 22.9 | 23.0 | 23.3 | 23.2 | 22.2 | 23.5 | 22.9 |
| Aug 11 | 23.0 | 23.1 | 23.0 | 23.3 | 23.2 | 23.2 | 22.8 | 22.3 | 22.1 | 22.2 | 22.2 | 22.3 | 22.4 | 22.3 | 22.3 | 22.6 | 22.3 | 22.5 | 22.7 | 23.3 | 22.9 | 23.2 | 23.1 | 23.2 | 22.1 | 23.3 | 22.7 |
| Aug 12 | 23.3 | 23.6 | 23.6 | 23.6 | 23.4 | 23.3 | 23.3 | 22.7 | 22.7 | 22.8 | 22.4 | 22.1 | 22.2 | 22.3 | 22.3 | 22.6 | 22.4 | 22.2 | 22.4 | 22.2 | 22.9 | 23.2 | 23.3 | 23.3 | 22.1 | 23.6 | 22.8 |
| Aug 13 | 23.4 | 23.1 | 23.1 | 23.1 | 23.3 | 23.3 | 23.4 | 22.7 | 22.4 | 21.9 | 21.8 | 22.1 | 22.1 | 21.9 | 21.9 | 21.9 | 21.7 | 22.1 | 21.9 | 21.9 | 22.7 | 23.2 | 23.2 | 23.2 | 21.7 | 23.4 | 22.6 |
| Aug 14 | 22.4 | 22.8 | 22.7 | 22.9 | 22.7 | 23.2 | 22.7 | 22.1 | 21.9 | 22.3 | 22.3 | 22.6 | 22.5 | 22.6 | 22.3 | 22.5 | 22.4 | 22.3 | 22.4 | 22.7 | 23.1 | 23.7 | 23.4 | 23.2 | 21.9 | 23.7 | 22.7 |
| Aug 15 | 23.2 | 23.3 | 23.4 | 23.4 | 23.5 | 23.6 | 23.6 | 23.6 | 23.4 | 22.5 | 23.0 | 22.8 | 22.6 | 22.6 | 22.2 | 22.5 | 22.3 | 22.3 | 22.5 | 22.6 | 23.3 | 23.4 | 23.4 | 23.5 | 22.2 | 23.6 | 23.0 |
| Aug 16 | 23.3 | 23.4 | 23.3 | 23.6 | 23.5 | 23.5 | 23.2 | 23.3 | 23.1 | 23.3 | 23.1 | 23.0 | 23.0 | 22.6 | 22.7 | 23.1 | 22.8 | 22.9 | 22.9 | 22.9 | 22.8 | 23.2 | 23.2 | 23.2 | 22.6 | 23.6 | 23.1 |
| Aug 17 | 23.3 | 23.6 | 23.5 | 23.6 | 23.7 | 23.4 | 23.5 | 23.2 | 22.8 | 22.8 | 22.5 | 22.1 | **21.4** | 21.7 | 22.1 | 21.9 | 22.0 | 22.3 | 22.5 | 22.5 | 22.8 | 23.1 | 23.3 | 23.6 | **21.4** | 23.7 | 22.8 |
| Aug 18 | 23.2 | 22.8 | 22.6 | 22.9 | 23.3 | 23.2 | 23.3 | 23.6 | 23.4 | 22.9 | 22.9 | 22.5 | 22.4 | 22.4 | 22.2 | 22.4 | 22.8 | 22.7 | 22.8 | 23.1 | 22.8 | 23.1 | 22.9 | 23.0 | 22.2 | 23.6 | 22.9 |
| Aug 19 | 23.1 | 23.1 | 23.1 | 23.1 | 23.1 | 23.2 | 23.2 | 23.2 | 22.8 | 22.1 | 22.3 | 22.2 | 22.1 | 22.0 | 22.5 | 22.3 | 22.8 | 22.7 | 22.8 | 22.9 | 23.0 | 23.0 | 23.2 | 23.2 | 22.0 | 23.2 | 22.8 |
| Aug 20 | 23.3 | 23.3 | 23.2 | 23.3 | 23.2 | 23.2 | 23.3 | 23.3 | 23.3 | 23.1 | 22.5 | 22.4 | 22.6 | 22.6 | 22.5 | 22.7 | 22.6 | 22.8 | 22.9 | 22.9 | 23.0 | 23.2 | 22.9 | 22.5 | 22.4 | 23.3 | 22.9 |
| Aug 21 | 22.5 | 21.9 | 21.7 | **21.4** | 21.5 | 21.6 | 21.7 | 22.5 | 22.9 | 22.8 | 22.8 | 23.0 | 22.8 | 22.8 | 22.8 | 22.5 | 22.6 | 22.8 | 22.9 | 23.0 | 23.1 | 23.2 | 23.2 | 23.2 | **21.4** | 23.2 | 22.6 |
| Aug 22 | 23.2 | 23.1 | 23.5 | 23.6 | 23.5 | 23.6 | 23.6 | 23.7 | 23.7 | 23.8 | 23.7 | 23.6 | 23.6 | 23.7 | 23.7 | 23.5 | 23.3 | 23.2 | 23.4 | 23.4 | 23.3 | 23.3 | 23.4 | 23.4 | 23.1 | 23.8 | **23.5** |
| Aug 23 | 23.3 | 23.3 | 23.4 | 23.3 | 23.3 | 23.5 | 23.4 | 23.3 | 22.6 | 22.7 | 22.7 | 22.6 | 23.0 | 22.7 | 23.0 | 22.7 | 22.4 | 22.7 | 22.9 | 23.0 | 23.2 | 23.3 | 23.4 | 23.3 | 22.4 | 23.5 | 23.0 |
| Aug 24 | 23.4 | 23.4 | 23.0 | 22.5 | 22.2 | 22.4 | 23.0 | 23.6 | 23.5 | 22.8 | 22.4 | 22.4 | 22.7 | 22.2 | 22.3 | 22.2 | 22.3 | 22.4 | 22.6 | 23.3 | 22.9 | 23.4 | 23.6 | 23.4 | 22.2 | 23.6 | 22.8 |
| Aug 25 | 23.3 | 23.3 | 23.5 | 23.5 | 23.4 | 23.1 | 23.3 | 23.2 | 22.6 | 22.2 | **21.4** | 21.7 | 22.1 | 22.3 | 22.5 | 22.5 | 22.4 | 22.2 | 22.2 | 23.0 | 23.0 | 23.3 | 23.5 | 23.4 | **21.4** | 23.5 | 22.8 |
| Aug 26 | 23.3 | 23.5 | 23.6 | 23.7 | 23.6 | 23.4 | 23.5 | 23.3 | 22.7 | 22.3 | 22.1 | 21.6 | 21.9 | 22.3 | 22.4 | 22.1 | 22.3 | 22.8 | 23.2 | 22.9 | 23.0 | 23.2 | 23.5 | 23.3 | 21.6 | 23.7 | 22.9 |
| Aug 27 | 23.0 | 23.1 | 23.1 | 23.5 | 23.4 | 23.4 | 23.5 | 23.3 | 22.8 | 22.0 | 21.8 | 21.8 | 22.2 | 22.3 | 22.2 | 22.5 | 23.0 | 22.6 | 22.3 | 23.3 | 23.3 | 23.6 | 23.7 | 23.4 | 21.8 | 23.7 | 22.9 |
| Aug 28 | 23.3 | 23.4 | 23.5 | 23.5 | 23.6 | 23.5 | 23.5 | 23.3 | 22.6 | 21.7 | 21.8 | 22.1 | 22.2 | 22.2 | 22.3 | 22.2 | 22.5 | 22.9 | 22.9 | 23.0 | 23.0 | 22.9 | 23.2 | 23.3 | 21.7 | 23.6 | 22.9 |
| Aug 29 | 23.6 | 23.3 | 23.5 | 23.7 | 23.4 | 23.5 | 23.2 | 22.9 | 22.9 | 22.5 | 22.2 | 22.3 | 22.2 | 22.5 | 22.5 | 22.3 | 22.5 | 22.9 | 23.1 | 22.9 | 23.3 | 23.4 | 23.5 | 23.3 | 22.2 | 23.7 | 23.0 |
| Aug 30 | 23.3 | 23.1 | 22.6 | 22.0 | 21.9 | 21.8 | 21.9 | 22.3 | 23.4 | 23.3 | 22.9 | 22.7 | 22.6 | 22.6 | 22.6 | 22.4 | 22.7 | 22.8 | 22.7 | 23.0 | 23.2 | 23.4 | 23.4 | 23.2 | 21.8 | 23.4 | 22.7 |
| Aug 31 | 23.2 | 23.3 | 23.3 | 23.2 | 23.3 | 23.6 | 23.3 | 23.4 | 23.3 | 23.1 | 23.2 | 23.2 | 23.0 | 23.0 | 22.9 | 22.6 | 22.9 | 23.0 | 23.1 | 23.2 | 23.3 | 23.3 | 23.4 | 23.4 | 22.6 | 23.6 | 23.2 |
| Diurnal Maximum | 23.6 | 23.6 | 23.6 | 23.7 | 23.7 | 23.6 | 23.6 | 23.7 | 23.7 | 23.8 | 23.7 | 23.6 | 23.6 | 23.7 | 23.7 | 23.5 | 24.1 | 23.6 | 23.4 | 23.4 | 23.4 | 23.7 | 23.7 | 23.6 | | | |
| Diurnal Average | 23.1 | 23.1 | 23.1 | 23.1 | 23.1 | 23.2 | 23.1 | 23.0 | 22.7 | 22.5 | 22.4 | 22.4 | 22.4 | 22.4 | 22.4 | 22.5 | 22.5 | 22.6 | 22.6 | 22.7 | 22.9 | 23.1 | 23.2 | 23.2 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for ST - AQHI - Cadotte Lake Station*



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# PEACE RIVER AREA MONITORING PROGRAM

## AQHI - Cadotte Lake Station - August 2021

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr

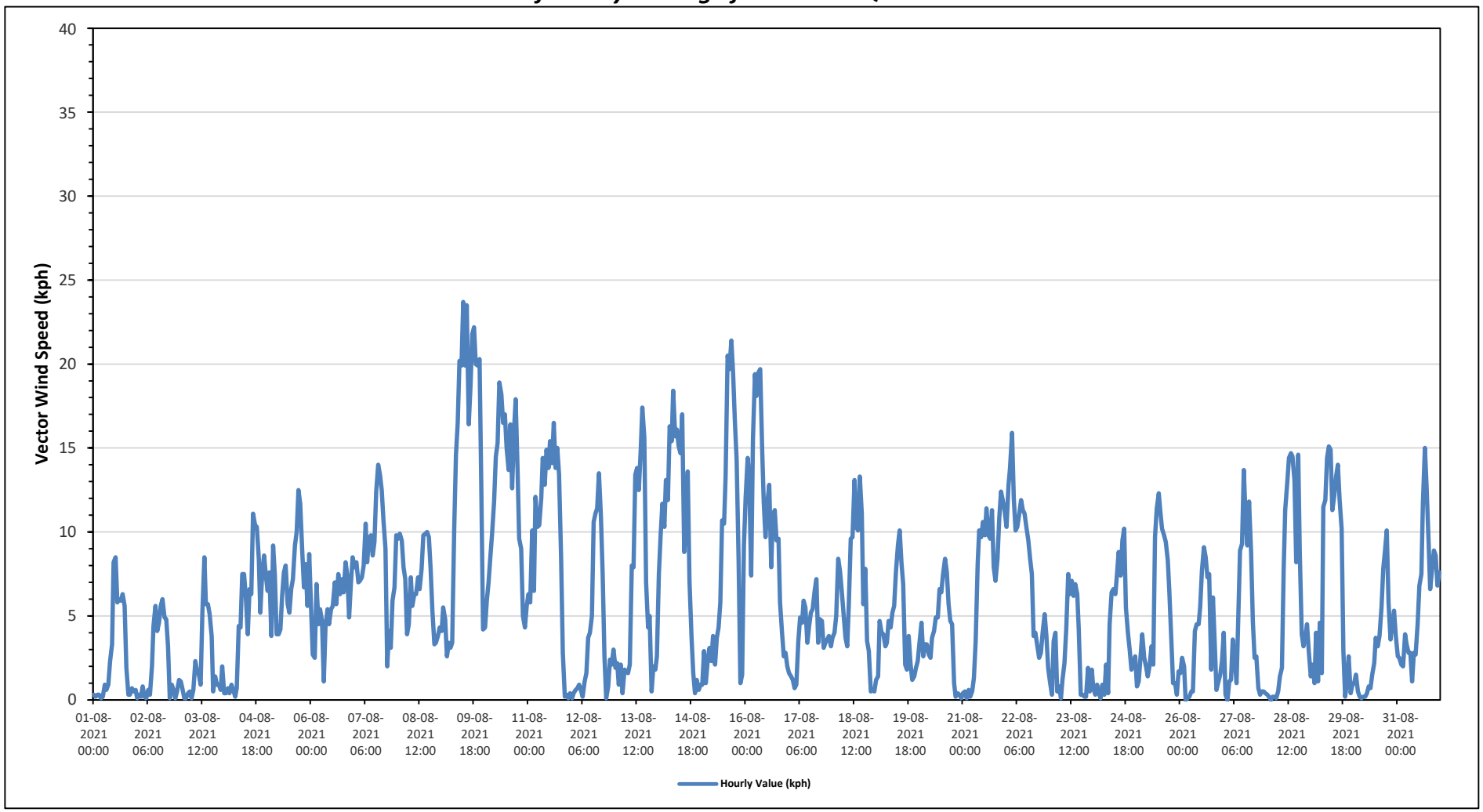
| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 23.7 | kph | on August 9 at hour 12 | Hours in Service: | 744 |
| Maximum Daily Value: | 11.6 | kph | on August 9 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 26 at hour 3 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.9 | kph | on August 3 | Hours of Calibration: | 0 |
| Monthly Average: | 2.4 | kph | | Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.3 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 0.9 | 0.6 | 0.9 | 2.3 | 3.3 | 8.2 | 8.5 | 5.8 | 6.0 | 5.9 | 6.3 | 5.6 | 1.9 | 0.3 | 0.3 | 0.7 | 0.5 | 0.6 | 0.1 | 8.5 | 2.0 |
| Aug 2 | 0.1 | 0.3 | 0.2 | 0.8 | 0.2 | 0.1 | 0.6 | 0.3 | 2.0 | 4.4 | 5.6 | 4.1 | 4.6 | 5.6 | 6.0 | 4.9 | 4.8 | 3.2 | 0.1 | 0.9 | 0.6 | 0.1 | 0.5 | 1.2 | 0.1 | 6.0 | 1.9 |
| Aug 3 | 1.1 | 0.7 | 0.1 | 0.1 | 0.4 | 0.5 | 0.1 | 0.6 | 2.3 | 1.7 | 1.5 | 0.9 | 5.2 | 8.5 | 5.7 | 5.7 | 5.1 | 3.8 | 0.5 | 1.4 | 0.9 | 0.9 | 0.6 | 2.0 | 0.1 | 8.5 | **0.9** |
| Aug 4 | 0.4 | 0.4 | 0.7 | 0.4 | 0.9 | 0.6 | 0.2 | 0.7 | 4.4 | 4.3 | 7.5 | 7.5 | 6.2 | 3.9 | 6.6 | 6.3 | 11.1 | 10.4 | 10.3 | 8.4 | 5.2 | 7.7 | 8.6 | 7.4 | 0.2 | 11.1 | 4.6 |
| Aug 5 | 6.5 | 7.6 | 3.8 | 9.2 | 7.4 | 3.9 | 3.9 | 4.2 | 6.2 | 7.6 | 8.0 | 5.7 | 5.2 | 6.6 | 7.2 | 9.2 | 10.0 | 12.5 | 11.7 | 8.9 | 6.7 | 8.1 | 5.6 | 8.7 | 3.8 | 12.5 | 6.3 |
| Aug 6 | 5.2 | 2.7 | 2.5 | 6.9 | 4.5 | 5.4 | 4.7 | 1.1 | 4.4 | 5.4 | 4.5 | 5.4 | 5.6 | 7.0 | 5.7 | 7.5 | 6.3 | 7.2 | 6.4 | 8.2 | 7.4 | 4.9 | 6.9 | 8.5 | 1.1 | 8.5 | 4.1 |
| Aug 7 | 7.9 | 8.2 | 7.0 | 7.1 | 7.3 | 8.0 | 10.5 | 8.2 | 9.6 | 9.8 | 8.6 | 9.4 | 12.4 | 14.0 | 13.4 | 12.5 | 10.7 | 9.0 | 2.0 | 4.1 | 3.1 | 5.9 | 6.7 | 9.8 | 2.0 | 14.0 | 7.5 |
| Aug 8 | 9.6 | 9.9 | 9.5 | 7.9 | 7.2 | 3.9 | 4.5 | 7.3 | 5.6 | 6.3 | 6.3 | 7.3 | 6.6 | 7.8 | 9.8 | 9.9 | 10.0 | 9.7 | 7.8 | 5.3 | 3.3 | 3.4 | 3.8 | 4.3 | 3.3 | 10.0 | 4.7 |
| Aug 9 | 4.1 | 5.5 | 4.8 | 2.6 | 3.4 | 3.1 | 3.4 | 10.2 | 14.6 | 16.5 | 20.2 | 19.9 | **23.7** | 19.9 | 23.5 | 16.4 | 18.7 | 21.8 | 22.2 | 20.0 | 19.9 | 20.3 | 12.7 | 4.2 | 2.6 | **23.7** | **11.6** |
| Aug 10 | 4.3 | 5.9 | 7.0 | 8.5 | 9.9 | 11.8 | 14.5 | 15.3 | 18.9 | 18.2 | 16.5 | 17.0 | 15.0 | 13.7 | 16.4 | 12.6 | 15.9 | 17.9 | 13.5 | 9.6 | 9.0 | 5.0 | 4.3 | 5.6 | 4.3 | 18.9 | 11.3 |
| Aug 11 | 6.3 | 5.8 | 10.1 | 6.5 | 12.1 | 10.3 | 10.4 | 12.0 | 14.4 | 12.8 | 14.9 | 13.8 | 15.4 | 14.1 | 16.5 | 13.8 | 15.0 | 13.4 | 8.6 | 2.8 | 0.2 | 0.3 | 0.1 | 0.4 | 0.1 | 16.5 | 9.1 |
| Aug 12 | 0.1 | 0.4 | 0.6 | 0.7 | 0.9 | 0.6 | 0.2 | 1.1 | 1.6 | 3.7 | 4.0 | 5.0 | 10.6 | 11.1 | 11.4 | 13.5 | 10.9 | 7.4 | 2.6 | 0.1 | 0.8 | 2.4 | 2.1 | 3.0 | 0.1 | 13.5 | 3.1 |
| Aug 13 | 1.9 | 2.2 | 0.9 | 2.1 | 0.4 | 1.8 | 1.7 | 1.6 | 2.1 | 8.0 | 7.9 | 13.4 | 13.8 | 12.5 | 15.0 | 17.4 | 15.6 | 7.0 | 4.3 | 5.0 | 0.5 | 2.0 | 1.8 | 2.6 | 0.4 | 17.4 | 4.4 |
| Aug 14 | 7.5 | 9.8 | 11.7 | 10.3 | 13.1 | 11.9 | 16.3 | 15.4 | 18.4 | 15.7 | 16.1 | 15.1 | 14.7 | 17.0 | 8.8 | 10.5 | 13.6 | 7.1 | 3.8 | 1.6 | 0.4 | 1.2 | 0.6 | 0.9 | 0.4 | 18.4 | 9.5 |
| Aug 15 | 0.9 | 2.9 | 1.0 | 2.4 | 3.1 | 2.3 | 3.8 | 2.1 | 3.7 | 4.3 | 5.8 | 10.7 | 10.5 | 13.3 | 20.5 | 19.7 | 21.4 | 19.4 | 16.6 | 14.3 | 8.2 | 1.0 | 1.5 | 9.2 | 0.9 | 21.4 | 5.8 |
| Aug 16 | 12.1 | 14.4 | 13.3 | 7.4 | 15.5 | 19.4 | 18.1 | 19.5 | 19.7 | 14.8 | 11.8 | 9.7 | 11.8 | 12.8 | 7.9 | 10.9 | 11.3 | 9.5 | 9.6 | 5.8 | 4.0 | 2.6 | 2.8 | 2.0 | 2.0 | 19.7 | 10.7 |
| Aug 17 | 1.6 | 1.4 | 1.2 | 0.7 | 0.9 | 3.5 | 4.9 | 4.6 | 5.9 | 5.5 | 3.4 | 4.4 | 5.2 | 5.4 | 6.5 | 7.2 | 3.4 | 4.8 | 4.7 | 3.1 | 3.4 | 3.6 | 3.8 | 3.2 | 0.7 | 7.2 | 2.4 |
| Aug 18 | 3.7 | 4.0 | 5.0 | 8.4 | 7.7 | 6.5 | 5.2 | 3.7 | 3.2 | 5.6 | 9.6 | 9.7 | 13.1 | 10.3 | 10.1 | 13.3 | 11.1 | 5.7 | 7.8 | 3.5 | 2.9 | 0.5 | 0.6 | 0.5 | 0.5 | 13.3 | 3.6 |
| Aug 19 | 1.2 | 1.4 | 4.7 | 4.0 | 3.9 | 3.2 | 3.4 | 4.7 | 4.3 | 5.2 | 5.6 | 7.6 | 9.2 | 10.1 | 8.2 | 6.9 | 2.1 | 1.8 | 3.8 | 2.2 | 1.2 | 1.4 | 1.9 | 2.3 | 1.2 | 10.1 | 4.1 |
| Aug 20 | 3.4 | 4.6 | 2.6 | 3.3 | 3.3 | 2.7 | 2.5 | 3.7 | 4.1 | 4.9 | 4.9 | 6.6 | 6.4 | 7.5 | 8.4 | 7.6 | 5.7 | 4.7 | 4.5 | 1.0 | 0.2 | 0.4 | 0.3 | 0.1 | 0.1 | 8.4 | 3.7 |
| Aug 21 | 0.4 | 0.5 | 0.1 | 0.6 | 0.2 | 0.5 | 1.3 | 3.5 | 8.1 | 10.1 | 9.7 | 10.6 | 9.8 | 11.4 | 9.8 | 9.6 | 11.3 | 7.9 | 7.1 | 8.4 | 10.8 | 12.4 | 11.9 | 11.2 | 0.1 | 12.4 | 6.6 |
| Aug 22 | 10.3 | 12.8 | 13.8 | 15.9 | 12.0 | 10.1 | 10.3 | 11.0 | 11.9 | 11.3 | 11.1 | 10.3 | 9.5 | 8.4 | 7.5 | 3.8 | 4.0 | 3.2 | 2.5 | 2.8 | 4.0 | 5.1 | 3.8 | 1.9 | 1.9 | 15.9 | 8.1 |
| Aug 23 | 1.1 | 0.3 | 3.5 | 4.0 | 0.5 | 0.8 | 0.1 | 1.2 | 2.2 | 4.2 | 7.5 | 6.3 | 7.1 | 6.2 | 6.9 | 6.3 | 4.2 | 0.3 | 0.3 | 0.2 | 0.2 | 1.9 | 0.5 | 1.8 | 0.1 | 7.5 | 1.8 |
| Aug 24 | 0.7 | 0.3 | 0.9 | 0.4 | 0.1 | 0.9 | 0.3 | 2.1 | 0.4 | 4.5 | 6.4 | 6.6 | 6.3 | 7.4 | 8.8 | 7.4 | 9.5 | 10.2 | 5.5 | 4.0 | 3.0 | 1.8 | 2.1 | 2.6 | 0.1 | 10.2 | 2.4 |
| Aug 25 | 0.8 | 1.1 | 2.5 | 3.9 | 2.5 | 2.0 | 1.4 | 2.0 | 3.2 | 2.1 | 9.7 | 11.4 | 12.3 | 11.1 | 10.2 | 9.8 | 9.4 | 8.3 | 6.5 | 3.6 | 1.0 | 1.0 | 0.3 | 1.7 | 0.3 | 12.3 | 3.4 |
| Aug 26 | 1.6 | 2.5 | 2.0 | **0.0** | 0.1 | 0.2 | 0.5 | 0.5 | 4.1 | 4.5 | 4.5 | 5.5 | 7.7 | 9.1 | 8.5 | 7.3 | 7.5 | 1.8 | 6.1 | 3.0 | 0.6 | 1.1 | 1.5 | 2.3 | **0.0** | 9.1 | 2.5 |
| Aug 27 | 4.0 | 0.3 | **0.0** | 1.1 | 1.2 | 3.6 | 2.4 | 1.0 | 4.9 | 8.9 | 9.3 | 13.7 | 10.9 | 9.2 | 11.8 | 8.8 | 4.7 | 2.5 | 2.6 | 0.7 | 0.3 | 0.5 | 0.5 | 0.4 | **0.0** | 13.7 | 3.4 |
| Aug 28 | 0.3 | 0.2 | **0.0** | 0.2 | 0.2 | 0.1 | 0.5 | 1.4 | 1.9 | 7.8 | 11.3 | 12.9 | 14.4 | 14.7 | 14.5 | 13.1 | 8.2 | 14.6 | 8.9 | 3.9 | 3.2 | 3.7 | 4.5 | 2.9 | **0.0** | 14.7 | 5.4 |
| Aug 29 | 1.4 | 2.1 | 1.0 | 4.0 | 1.1 | 4.6 | 1.6 | 11.5 | 11.9 | 14.4 | 15.1 | 14.9 | 11.3 | 12.2 | 13.3 | 14.0 | 11.9 | 10.2 | 2.9 | 0.2 | 1.0 | 2.6 | 0.4 | 0.9 | 0.2 | 15.1 | 6.3 |
| Aug 30 | 1.0 | 1.5 | 0.5 | 0.2 | 0.1 | 0.2 | 0.2 | 0.4 | 0.8 | 0.7 | 1.5 | 2.2 | 3.7 | 3.2 | 3.8 | 5.5 | 7.8 | 8.9 | 10.1 | 5.8 | 3.6 | 4.4 | 5.3 | 3.8 | 0.1 | 10.1 | 2.8 |
| Aug 31 | 2.6 | 2.5 | 2.1 | 2.0 | 3.9 | 3.3 | 2.8 | 2.8 | 1.1 | 2.8 | 2.7 | 4.5 | 6.8 | 7.5 | 11.7 | 15.0 | 12.6 | 9.3 | 6.6 | 7.7 | 8.9 | 8.6 | 6.8 | 7.6 | 1.1 | 15.0 | 5.6 |
| Diurnal Maximum | 12 | 14 | 14 | 16 | 16 | 19 | 18 | 20 | 20 | 18 | 20 | 20 | 24 | 20 | 24 | 20 | 21 | 22 | 22 | 20 | 20 | 20 | 13 | 11 | | | |
| Diurnal Average | 3.3 | 3.6 | 3.7 | 3.9 | 4.0 | 4.1 | 4.2 | 5.0 | 6.3 | 7.4 | 8.2 | 9.0 | 9.8 | 9.9 | 10.3 | 10.1 | 9.7 | 8.4 | 6.5 | 4.7 | 3.7 | 3.7 | 3.3 | 3.7 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure | |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | | |

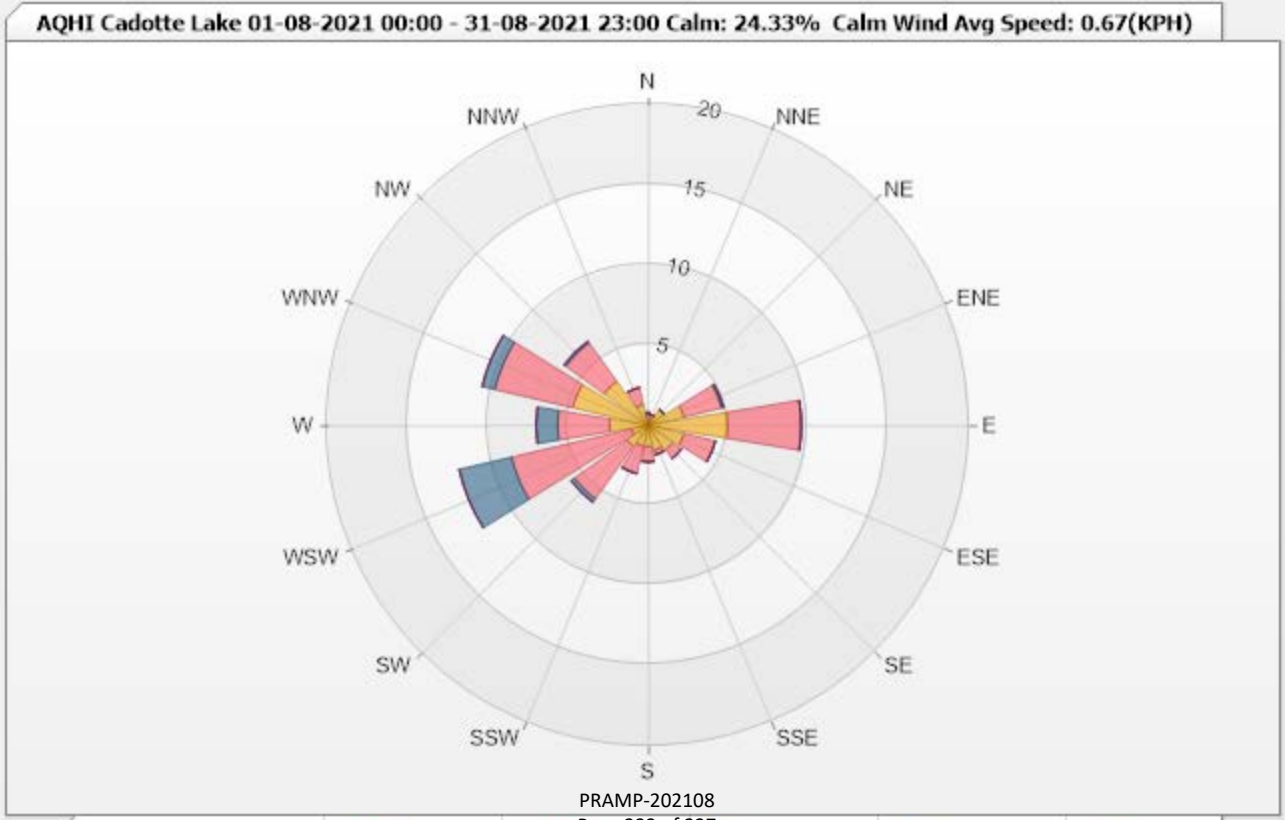
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for VWS - AQHI - Cadotte Lake Station*



Wind: AQHI Cadotte Lake Monitor: WDS [KPH] Monthly: 08-2021 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 24.33% Valid Data: 100.00%

| Direction | 1.8-6.0 | 6.0-15.0 | 15.0-29.0 | 29.0-39.0 | >39.0 | Total |
|---|---|---|---|---|---|---|
| N | 0.13 | 0.54 | 0.13 | 0 | 0 | 0.8 |
| NNE | 0.67 | 0 | 0 | 0 | 0 | 0.67 |
| NE | 1.21 | 0 | 0 | 0 | 0 | 1.21 |
| ENE | 2.28 | 2.42 | 0.13 | 0 | 0 | 4.83 |
| E | 4.97 | 4.57 | 0 | 0 | 0 | 9.54 |
| ESE | 2.28 | 2.02 | 0 | 0 | 0 | 4.3 |
| SE | 1.88 | 0.67 | 0 | 0 | 0 | 2.55 |
| SSE | 1.61 | 0.27 | 0 | 0 | 0 | 1.88 |
| S | 1.34 | 0.94 | 0 | 0 | 0 | 2.28 |
| SSW | 1.34 | 1.75 | 0 | 0 | 0 | 3.09 |
| SW | 1.61 | 4.03 | 0.27 | 0 | 0 | 5.91 |
| WSW | 1.08 | 7.66 | 3.36 | 0 | 0 | 12.1 |
| W | 2.42 | 3.23 | 1.34 | 0 | 0 | 6.99 |
| WNW | 4.84 | 4.97 | 0.81 | 0 | 0 | 10.62 |
| NW | 3.36 | 2.96 | 0.13 | 0 | 0 | 6.45 |
| NNW | 1.34 | 1.08 | 0 | 0 | 0 | 2.42 |
| Summary | 32.36 | 37.11 | 6.17 | 0 | 0 | 75.64 |


AQHI Cadotte Lake 01-08-2021 00:00 - 31-08-2021 23:00 Calm: 24.33% Calm Wind Avg Speed: 0.67(KPH)
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
20
15
10
5
% Icon Classes (KPH)
32 1.8-6.0
37 6.0-15.0
6 15.0-29.0
0 29.0-39.0
0 >39.0

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# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## WIND DIRECTION (VWD) in sector

Monthly Average: 259 (WSW) degree

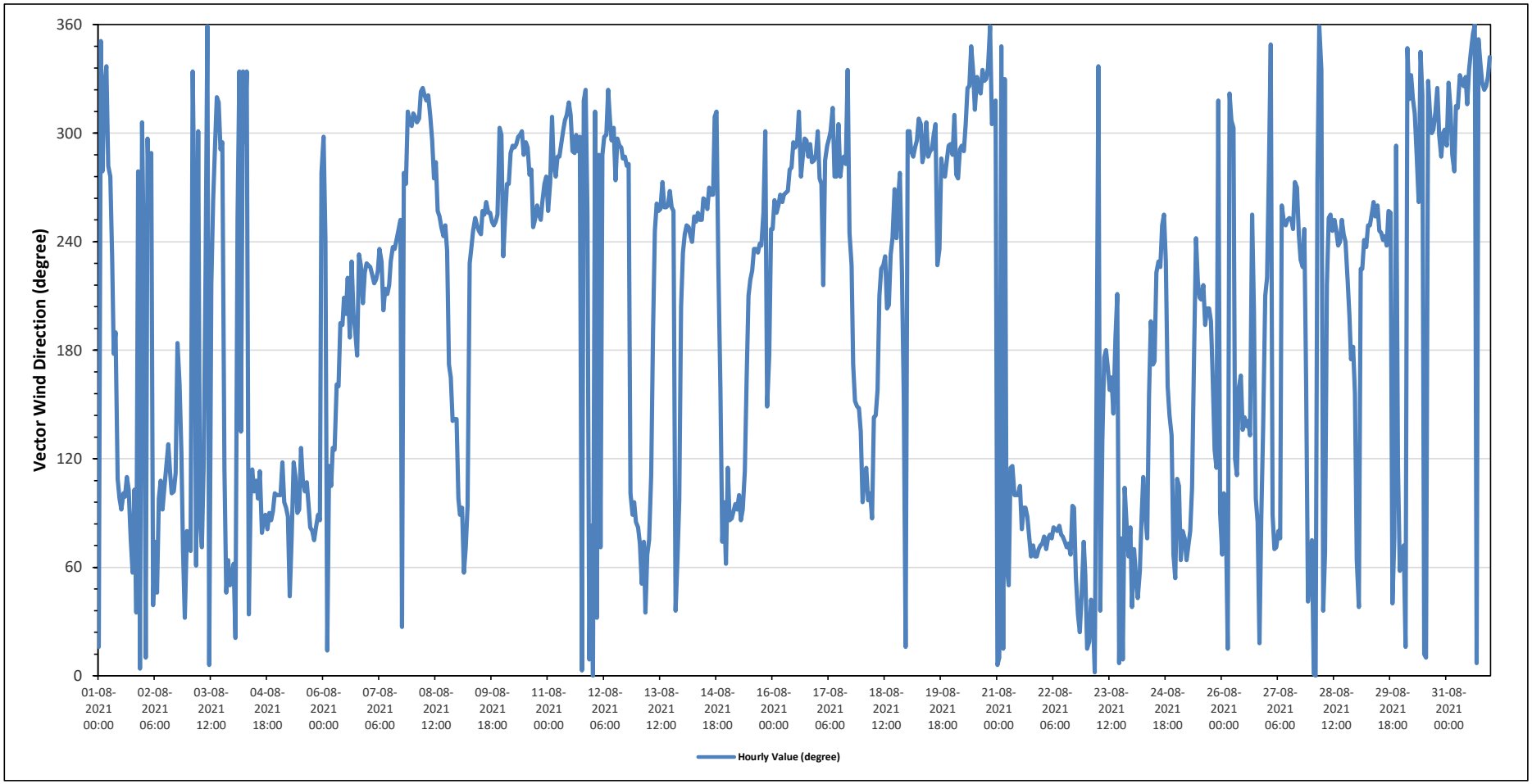
| | |
|---|---|
| Hours in Service: | 744 |
| Hours of Data: | 744 |
| Hours of Missing Data: | 0 |
| Hours of Calibration: | 0 |
| Operational Uptime: | 100.0 |

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Degree | Quadrant |
| Aug 1 | NNE | N | W | NW | NNW | W | W | SW | S | S | ESE | E | E | E | E | ESE | ESE | ENE | ENE | ESE | NE | W | N | NW | 98 | E |
| Aug 2 | SW | N | WNW | WSW | WNW | NE | ENE | NE | E | ESE | E | ESE | ESE | SE | ESE | E | E | ESE | S | SSE | ESE | ENE | NNE | E | 107 | ESE |
| Aug 3 | ENE | ENE | NNW | W | ENE | WNW | E | ENE | ESE | SW | N | N | SW | W | WNW | NW | NW | WNW | WNW | ESE | NE | ENE | NE | NE | 296 | WNW |
| Aug 4 | ENE | NNE | WSW | NNW | SE | NNW | WNW | NNW | NE | E | ESE | E | ESE | E | ESE | ENE | E | E | E | E | E | E | E | E | 92 | E |
| Aug 5 | E | E | ESE | E | E | E | NE | ENE | ESE | ESE | E | E | SE | ESE | E | ESE | E | E | E | ENE | E | E | E | W | 93 | E |
| Aug 6 | WNW | WSW | NNE | ESE | ESE | SE | SE | SSE | SSE | SSW | SSW | SSW | SSW | SW | S | SW | SSW | S | S | SW | SW | SSW | SW | SW | 199 | SSW |
| Aug 7 | SW | SW | SW | SW | SW | SW | SW | SW | SSW | SSW | SSW | SW | SW | SW | SW | WSW | WSW | WSW | NNE | W | W | NW | NW | WNW | 237 | SW |
| Aug 8 | NW | NW | NW | NW | NW | NW | NW | NW | NW | NW | WNW | W | WNW | WSW | WSW | WSW | WSW | WSW | SW | S | SSE | SE | SE | SE | 278 | W |
| Aug 9 | E | E | E | ENE | ENE | E | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | W | WSW | WSW | WSW | WSW | WSW | WSW | WNW | WNW | 253 | WSW |
| Aug 10 | SW | WSW | W | W | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | W | W | WSW | WSW | WSW | WSW | WSW | W | W | W | 279 | W |
| Aug 11 | WSW | W | NW | W | W | WNW | WNW | WNW | WNW | NW | NW | NW | NW | WNW | WNW | WNW | WNW | WNW | N | NW | NW | WSW | N | E | 298 | WNW |
| Aug 12 | N | NW | NNE | WNW | ENE | WNW | WNW | WNW | NW | NW | WNW | WNW | W | WNW | WNW | WNW | WNW | WNW | W | W | E | E | E | E | 294 | WNW |
| Aug 13 | E | ENE | NE | ENE | NE | ENE | ENE | ESE | S | WSW | W | WSW | WSW | W | WSW | WSW | WSW | W | WSW | WSW | NE | ENE | E | SSW | 258 | WSW |
| Aug 14 | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | W | W | WSW | W | W | W | NW | NW | SW | SSE | ENE | E | ENE | 256 | WSW |
| Aug 15 | ESE | E | E | E | E | E | E | E | E | ESE | SSE | SSW | SW | SW | SW | SW | SW | WSW | SW | WSW | WNW | SSE | S | WSW | 228 | SW |
| Aug 16 | WSW | W | WSW | WSW | W | W | W | W | W | W | W | WNW | WNW | WNW | NW | W | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | 275 | W |
| Aug 17 | WNW | W | W | SW | WNW | WNW | WNW | WNW | NW | W | W | WNW | W | WNW | WNW | W | NNW | WSW | SW | S | SSE | SSE | SE | SE | 273 | W |
| Aug 18 | E | ESE | ESE | E | E | E | SE | SE | SSE | SSW | SW | SW | SW | SSW | SSW | SW | WSW | W | WSW | W | W | SW | SSE | NNE | 203 | SSW |
| Aug 19 | WNW | WNW | WNW | WNW | WNW | WNW | NW | WNW | WNW | WNW | NW | WNW | WNW | WNW | WNW | WNW | SW | SW | WNW | W | W | WNW | WNW | WNW | 291 | WNW |
| Aug 20 | WNW | NW | W | W | WNW | WNW | WNW | WNW | NW | NW | NNW | NNW | NW | NNW | NW | NW | NNW | NNW | NNW | NNW | N | WNW | NW | NW | 319 | NW |
| Aug 21 | N | N | NNW | NNE | NNW | ENE | NE | ESE | ESE | E | E | E | ESE | E | E | E | E | ENE | ENE | ENE | ENE | ENE | ENE | ENE | 84 | E |
| Aug 22 | ENE | ENE | ENE | ENE | ENE | ENE | E | E | E | E | ENE | ENE | ENE | ENE | ENE | ENE | E | E | NE | NE | NNE | NE | ENE | NE | 74 | ENE |
| Aug 23 | NNE | NNE | NE | NE | N | SSE | NNW | NE | SE | S | S | SSE | SSE | SSE | SE | S | SSW | N | ENE | N | ESE | E | ENE | E | 154 | SSE |
| Aug 24 | NE | ENE | NE | NE | ENE | E | ESE | E | ENE | SSE | SSW | S | S | SW | SW | SW | WSW | WSW | SW | SSE | SE | SE | ENE | NE | 205 | SSW |
| Aug 25 | ESE | ESE | ENE | E | ENE | ENE | ENE | E | ESE | S | WSW | SW | SSW | SSW | SW | SSW | SSW | SSW | SSW | SSE | SE | ESE | NW | E | 195 | SSW |
| Aug 26 | ENE | E | E | NNE | NW | NW | WNW | ESE | ESE | SSE | SSE | SE | SE | SE | SE | SE | WSW | SSW | E | E | NNE | E | SE | SSW | 138 | SE |
| Aug 27 | SW | W | NNW | E | ENE | ENE | E | ENE | WSW | WSW | WSW | WSW | WSW | WSW | WSW | W | W | WSW | SW | SW | WSW | SSE | NE | ENE | 252 | WSW |
| Aug 28 | ENE | N | N | W | N | NNW | NE | ENE | SW | WSW | WSW | WSW | WSW | WSW | SW | WSW | WSW | WSW | WSW | SW | SSW | S | S | SSE | 239 | WSW |
| Aug 29 | ENE | NE | SW | SW | WSW | SW | WSW | WSW | WSW | W | WSW | WSW | WSW | WSW | WSW | WSW | SW | WSW | WSW | NE | ENE | WNW | ESE | ENE | 250 | WSW |
| Aug 30 | ENE | ENE | NNE | NNW | NW | NNW | NW | NW | WNW | W | NNW | NW | NNE | N | NNW | NW | WNW | WNW | NW | NW | WNW | WNW | WNW | WNW | 315 | NW |
| Aug 31 | WNW | NNW | NW | WNW | W | NW | NW | NNW | NNW | NW | NNW | NW | NNW | NNW | N | N | N | N | NNW | NNW | NW | NW | NNW | NNW | 338 | NNW |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P | Power Failure |
| X | InValid Data (Machine Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## *Timeseries Chart of Hourly Average for VWD - AQHI - Cadotte Lake Station*



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# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

### Summary of Hourly Averages

### VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 23.7 | kph | on August 9 at hour 12 | Hours in Service: | 744 |
| Maximum Daily Value: | 11.6 | kph | on August 9 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 26 at hour 3 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.9 | kph | on August 3 | Hours of Calibration: | 0 |
| Monthly Average: | 2.4 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 259 (WSW degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | | Daily | Daily | Daily |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Minimum | Maximum | Average |
| Aug 1 | 0.3 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 0.9 | 0.6 | 0.9 | 2.3 | 3.3 | 8.2 | 8.5 | 5.8 | 6.0 | 5.9 | 6.3 | 5.6 | 1.9 | 0.3 | 0.3 | 0.7 | 0.5 | 0.6 | 0.1 | 8.5 | 2.0 |
| | NNE | N | W | NW | NNW | W | W | SW | S | S | ESE | E | E | E | E | ESE | ESE | ENE | ENE | ESE | NE | W | N | NW | | | |
| Aug 2 | 0.1 | 0.3 | 0.2 | 0.8 | 0.2 | 0.1 | 0.6 | 0.3 | 2.0 | 4.4 | 5.6 | 4.1 | 4.6 | 5.6 | 6.0 | 4.9 | 4.8 | 3.2 | 0.1 | 0.9 | 0.6 | 0.1 | 0.5 | 1.2 | 0.1 | 6.0 | 1.9 |
| | SW | N | WNW | WSW | WNW | NE | ENE | NE | E | ESE | E | ESE | ESE | SE | ESE | E | E | ESE | S | SSE | ESE | ENE | NNE | E | | | |
| Aug 3 | 1.1 | 0.7 | 0.1 | 0.1 | 0.4 | 0.5 | 0.1 | 0.6 | 2.3 | 1.7 | 1.5 | 0.9 | 5.2 | 8.5 | 5.7 | 5.7 | 5.1 | 3.8 | 0.5 | 1.4 | 0.9 | 0.9 | 0.6 | 2.0 | 0.1 | 8.5 | **0.9** |
| | ENE | ENE | NNW | W | ENE | WNW | E | ENE | ESE | SW | N | N | SW | W | WNW | NW | NW | WNW | WNW | ESE | NE | ENE | NE | NE | | | |
| Aug 4 | 0.4 | 0.4 | 0.7 | 0.4 | 0.9 | 0.6 | 0.2 | 0.7 | 4.4 | 4.3 | 7.5 | 7.5 | 6.2 | 3.9 | 6.6 | 6.3 | 11.1 | 10.4 | 10.3 | 8.4 | 5.2 | 7.7 | 8.6 | 7.4 | 0.2 | 11.1 | 4.6 |
| | ENE | NNE | WSW | NNW | SE | NNW | WNW | NNW | NE | E | ESE | E | ESE | E | ESE | ENE | E | E | E | E | E | E | E | E | | | |
| Aug 5 | 6.5 | 7.6 | 3.8 | 9.2 | 7.4 | 3.9 | 3.9 | 4.2 | 6.2 | 7.6 | 8.0 | 5.7 | 5.2 | 6.6 | 7.2 | 9.2 | 10.0 | 12.5 | 11.7 | 8.9 | 6.7 | 8.1 | 5.6 | 8.7 | 3.8 | 12.5 | 6.3 |
| | E | E | ESE | E | E | E | NE | ENE | ESE | ESE | E | E | SE | ESE | E | ESE | E | E | E | ENE | E | E | E | W | | | |
| Aug 6 | 5.2 | 2.7 | 2.5 | 6.9 | 4.5 | 5.4 | 4.7 | 1.1 | 4.4 | 5.4 | 4.5 | 5.4 | 5.6 | 7.0 | 5.7 | 7.5 | 6.3 | 7.2 | 6.4 | 8.2 | 7.4 | 4.9 | 6.9 | 8.5 | 1.1 | 8.5 | 4.1 |
| | WNW | WSW | NNE | ESE | ESE | SE | SE | SSE | SSE | SSW | SSW | SSW | SSW | SW | S | SW | SSW | S | S | SW | SW | SSW | SW | SW | | | |
| Aug 7 | 7.9 | 8.2 | 7.0 | 7.1 | 7.3 | 8.0 | 10.5 | 8.2 | 9.6 | 9.8 | 8.6 | 9.4 | 12.4 | 14.0 | 13.4 | 12.5 | 10.7 | 9.0 | 2.0 | 4.1 | 3.1 | 5.9 | 6.7 | 9.8 | 2.0 | 14.0 | 7.5 |
| | SW | SW | SW | SW | SW | SW | SW | SW | SSW | SSW | SSW | SW | SW | SW | SW | WSW | WSW | WSW | NNE | W | W | NW | NW | WNW | | | |
| Aug 8 | 9.6 | 9.9 | 9.5 | 7.9 | 7.2 | 3.9 | 4.5 | 7.3 | 5.6 | 6.3 | 6.3 | 7.3 | 6.6 | 7.8 | 9.8 | 9.9 | 10.0 | 9.7 | 7.8 | 5.3 | 3.3 | 3.4 | 3.8 | 4.3 | 3.3 | 10.0 | 4.7 |
| | NW | NW | NW | NW | NW | NW | NW | NW | NW | NW | WNW | W | WNW | WSW | WSW | WSW | WSW | WSW | SW | S | SSE | SE | SE | SE | | | |
| Aug 9 | 4.1 | 5.5 | 4.8 | 2.6 | 3.4 | 3.1 | 3.4 | 10.2 | 14.6 | 16.5 | 20.2 | 19.9 | **23.7** | 19.9 | 23.5 | 16.4 | 18.7 | 21.8 | 22.2 | 20.0 | 19.9 | 20.3 | 12.7 | 4.2 | 2.6 | **23.7** | **11.6** |
| | E | E | E | ENE | ENE | E | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | W | WSW | WSW | WSW | WSW | WSW | WSW | WNW | WNW | | | |
| Aug 10 | 4.3 | 5.9 | 7.0 | 8.5 | 9.9 | 11.8 | 14.5 | 15.3 | 18.9 | 18.2 | 16.5 | 17.0 | 15.0 | 13.7 | 16.4 | 12.6 | 15.9 | 17.9 | 13.5 | 9.6 | 9.0 | 5.0 | 4.3 | 5.6 | 4.3 | 18.9 | 11.3 |
| | SW | WSW | W | W | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | W | W | WSW | WSW | WSW | WSW | WSW | W | W | W | | | |
| Aug 11 | 6.3 | 5.8 | 10.1 | 6.5 | 12.1 | 10.3 | 10.4 | 12.0 | 14.4 | 12.8 | 14.9 | 13.8 | 15.4 | 14.1 | 16.5 | 13.8 | 15.0 | 13.4 | 8.6 | 2.8 | 0.2 | 0.3 | 0.1 | 0.4 | 0.1 | 16.5 | 9.1 |
| | WSW | W | NW | W | W | WNW | WNW | WNW | WNW | NW | NW | NW | NW | WNW | WNW | WNW | WNW | WNW | N | NW | NW | WSW | N | E | | | |
| Aug 12 | 0.1 | 0.4 | 0.6 | 0.7 | 0.9 | 0.6 | 0.2 | 1.1 | 1.6 | 3.7 | 4.0 | 5.0 | 10.6 | 11.1 | 11.4 | 13.5 | 10.9 | 7.4 | 2.6 | 0.1 | 0.8 | 2.4 | 2.1 | 3.0 | 0.1 | 13.5 | 3.1 |
| | N | NW | NNE | WNW | ENE | WNW | WNW | WNW | NW | NW | WNW | WNW | W | WNW | WNW | WNW | WNW | WNW | W | W | E | E | E | E | | | |
| Aug 13 | 1.9 | 2.2 | 0.9 | 2.1 | 0.4 | 1.8 | 1.7 | 1.6 | 2.1 | 8.0 | 7.9 | 13.4 | 13.8 | 12.5 | 15.0 | 17.4 | 15.6 | 7.0 | 4.3 | 5.0 | 0.5 | 2.0 | 1.8 | 2.6 | 0.4 | 17.4 | 4.4 |
| | E | ENE | NE | ENE | NE | ENE | ENE | ESE | S | WSW | W | WSW | WSW | W | WSW | WSW | WSW | W | WSW | WSW | NE | ENE | E | SSW | | | |
| Aug 14 | 7.5 | 9.8 | 11.7 | 10.3 | 13.1 | 11.9 | 16.3 | 15.4 | 18.4 | 15.7 | 16.1 | 15.1 | 14.7 | 17.0 | 8.8 | 10.5 | 13.6 | 7.1 | 3.8 | 1.6 | 0.4 | 1.2 | 0.6 | 0.9 | 0.4 | 18.4 | 9.5 |
| | SW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | WSW | W | W | WSW | W | W | W | NW | NW | SW | SSE | ENE | E | ENE | | | |
| Aug 15 | 0.9 | 2.9 | 1.0 | 2.4 | 3.1 | 2.3 | 3.8 | 2.1 | 3.7 | 4.3 | 5.8 | 10.7 | 10.5 | 13.3 | 20.5 | 19.7 | 21.4 | 19.4 | 16.6 | 14.3 | 8.2 | 1.0 | 1.5 | 9.2 | 0.9 | 21.4 | 5.8 |
| | ESE | E | E | E | E | E | E | E | E | ESE | SSE | SSW | SW | SW | SW | SW | SW | WSW | SW | WSW | WNW | SSE | S | WSW | | | |
| Aug 16 | 12.1 | 14.4 | 13.3 | 7.4 | 15.5 | 19.4 | 18.1 | 19.5 | 19.7 | 14.8 | 11.8 | 9.7 | 11.8 | 12.8 | 7.9 | 10.9 | 11.3 | 9.5 | 9.6 | 5.8 | 4.0 | 2.6 | 2.8 | 2.0 | 2.0 | 19.7 | 10.7 |
| | WSW | W | WSW | WSW | W | W | W | W | W | W | W | WNW | WNW | WNW | NW | W | WNW | WNW | WNW | WNW | WNW | WNW | WNW | WNW | | | |
| Aug 17 | 1.6 | 1.4 | 1.2 | 0.7 | 0.9 | 3.5 | 4.9 | 4.6 | 5.9 | 5.5 | 3.4 | 4.4 | 5.2 | 5.4 | 6.5 | 7.2 | 3.4 | 4.8 | 4.7 | 3.1 | 3.4 | 3.6 | 3.8 | 3.2 | 0.7 | 7.2 | 2.4 |
| | WNW | W | W | SW | WNW | WNW | WNW | WNW | NW | W | W | WNW | W | WNW | WNW | W | NNW | WSW | SW | S | SSE | SSE | SE | SE | | | |
| Aug 18 | 3.7 | 4.0 | 5.0 | 8.4 | 7.7 | 6.5 | 5.2 | 3.7 | 3.2 | 5.6 | 9.6 | 9.7 | 13.1 | 10.3 | 10.1 | 13.3 | 11.1 | 5.7 | 7.8 | 3.5 | 2.9 | 0.5 | 0.6 | 0.5 | 0.5 | 13.3 | 3.6 |
| | E | ESE | ESE | E | E | E | SE | SE | SSE | SSW | SW | SW | SW | SSW | SSW | SW | WSW | W | WSW | W | W | SW | SSE | NNE | | | |
| Aug 19 | 1.2 | 1.4 | 4.7 | 4.0 | 3.9 | 3.2 | 3.4 | 4.7 | 4.3 | 5.2 | 5.6 | 7.6 | 9.2 | 10.1 | 8.2 | 6.9 | 2.1 | 1.8 | 3.8 | 2.2 | 1.2 | 1.4 | 1.9 | 2.3 | 1.2 | 10.1 | 4.1 |
| | WNW | WNW | WNW | WNW | WNW | WNW | NW | WNW | WNW | WNW | NW | WNW | WNW | WNW | WNW | WNW | SW | SW | WNW | W | W | WNW | WNW | WNW | | | |
| Aug 20 | 3.4 | 4.6 | 2.6 | 3.3 | 3.3 | 2.7 | 2.5 | 3.7 | 4.1 | 4.9 | 4.9 | 6.6 | 6.4 | 7.5 | 8.4 | 7.6 | 5.7 | 4.7 | 4.5 | 1.0 | 0.2 | 0.4 | 0.3 | 0.1 | 0.1 | 8.4 | 3.7 |
| | WNW | NW | W | W | WNW | WNW | WNW | WNW | NW | NW | NNW | NNW | NW | NNW | NW | NW | NNW | NNW | NNW | NNW | N | WNW | NW | NW | | | |

peace river area monitoring program
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# *PEACE RIVER AREA MONITORING PROGRAM*

## *AQHI - Cadotte Lake Station - August 2021*

## Summary of Hourly Averages

## VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

**WIND SPEED**

| | | | | | |
|---|---|---|---|---|---|
| Maximum Hourly Value: | 23.7 | kph | on August 9 at hour 12 | Hours in Service: | 744 |
| Maximum Daily Value: | 11.6 | kph | on August 9 | Hours of Data: | 744 |
| Minimum Hourly Value: | 0.0 | kph | on August 26 at hour 3 | Hours of Missing Data: | 0 |
| Minimum Daily Value: | 0.9 | kph | on August 3 | Hours of Calibration: | 0 |
| Monthly Average: | 2.4 | kph | | Operational Uptime: | 100 |

**WIND DIRECTION**

Monthly Average: 259 (WSW degree

| Day | Hourly Period Starting at (MST) | | | | | | | | | | | | | | | | | | | | | | | Daily Minimum | Daily Maximum | Daily Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | |
| Aug 21 | 0.4 | 0.5 | 0.1 | 0.6 | 0.2 | 0.5 | 1.3 | 3.5 | 8.1 | 10.1 | 9.7 | 10.6 | 9.8 | 11.4 | 9.8 | 9.6 | 11.3 | 7.9 | 7.1 | 8.4 | 10.8 | 12.4 | 11.9 | 11.2 | 0.1 | 12.4 | 6.6 |
| | N | N | NNW | NNE | NNW | ENE | NE | ESE | ESE | E | E | E | ESE | E | E | E | E | ENE | ENE | ENE | ENE | ENE | ENE | ENE | | | |
| Aug 22 | 10.3 | 12.8 | 13.8 | 15.9 | 12.0 | 10.1 | 10.3 | 11.0 | 11.9 | 11.3 | 11.1 | 10.3 | 9.5 | 8.4 | 7.5 | 3.8 | 4.0 | 3.2 | 2.5 | 2.8 | 4.0 | 5.1 | 3.8 | 1.9 | 1.9 | 15.9 | 8.1 |
| | ENE | ENE | ENE | ENE | ENE | ENE | E | E | E | E | ENE | ENE | ENE | ENE | ENE | ENE | E | E | NE | NE | NNE | NE | ENE | NE | | | |
| Aug 23 | 1.1 | 0.3 | 3.5 | 4.0 | 0.5 | 0.8 | 0.1 | 1.2 | 2.2 | 4.2 | 7.5 | 6.3 | 7.1 | 6.2 | 6.9 | 6.3 | 4.2 | 0.3 | 0.3 | 0.2 | 0.2 | 1.9 | 0.5 | 1.8 | 0.1 | 7.5 | 1.8 |
| | NNE | NNE | NE | NE | N | SSE | NNW | NE | SE | S | S | SSE | SSE | SSE | SE | S | SSW | N | ENE | N | ESE | E | ENE | E | | | |
| Aug 24 | 0.7 | 0.3 | 0.9 | 0.4 | 0.1 | 0.9 | 0.3 | 2.1 | 0.4 | 4.5 | 6.4 | 6.6 | 6.3 | 7.4 | 8.8 | 7.4 | 9.5 | 10.2 | 5.5 | 4.0 | 3.0 | 1.8 | 2.1 | 2.6 | 0.1 | 10.2 | 2.4 |
| | NE | ENE | NE | NE | ENE | E | ESE | E | ENE | SSE | SSW | S | S | SW | SW | SW | WSW | WSW | SW | SSE | SE | SE | ENE | NE | | | |
| Aug 25 | 0.8 | 1.1 | 2.5 | 3.9 | 2.5 | 2.0 | 1.4 | 2.0 | 3.2 | 2.1 | 9.7 | 11.4 | 12.3 | 11.1 | 10.2 | 9.8 | 9.4 | 8.3 | 6.5 | 3.6 | 1.0 | 1.0 | 0.3 | 1.7 | 0.3 | 12.3 | 3.4 |
| | ESE | ESE | ENE | E | ENE | ENE | ENE | E | ESE | S | WSW | SW | SSW | SSW | SW | SSW | SSW | SSW | SSW | SSE | SE | ESE | NW | E | | | |
| Aug 26 | 1.6 | 2.5 | 2.0 | **0.0** | 0.1 | 0.2 | 0.5 | 0.5 | 4.1 | 4.5 | 4.5 | 5.5 | 7.7 | 9.1 | 8.5 | 7.3 | 7.5 | 1.8 | 6.1 | 3.0 | 0.6 | 1.1 | 1.5 | 2.3 | **0.0** | 9.1 | 2.5 |
| | ENE | E | E | NNE | NW | NW | WNW | ESE | ESE | SSE | SSE | SE | SE | SE | SE | SE | WSW | SSW | E | E | NNE | E | SE | SSW | | | |
| Aug 27 | 4.0 | 0.3 | **0.0** | 1.1 | 1.2 | 3.6 | 2.4 | 1.0 | 4.9 | 8.9 | 9.3 | 13.7 | 10.9 | 9.2 | 11.8 | 8.8 | 4.7 | 2.5 | 2.6 | 0.7 | 0.3 | 0.5 | 0.5 | 0.4 | **0.0** | 13.7 | 3.4 |
| | SW | W | NNW | E | ENE | ENE | E | ENE | WSW | WSW | WSW | WSW | WSW | WSW | WSW | W | W | WSW | SW | SW | WSW | SSE | NE | ENE | | | |
| Aug 28 | 0.3 | 0.2 | **0.0** | 0.2 | 0.2 | 0.1 | 0.5 | 1.4 | 1.9 | 7.8 | 11.3 | 12.9 | 14.4 | 14.7 | 14.5 | 13.1 | 8.2 | 14.6 | 8.9 | 3.9 | 3.2 | 3.7 | 4.5 | 2.9 | **0.0** | 14.7 | 5.4 |
| | ENE | N | N | W | N | NNW | NE | ENE | SW | WSW | WSW | WSW | WSW | WSW | WSW | SW | WSW | WSW | WSW | WSW | SW | SSW | S | S | SSE | | | |
| Aug 29 | 1.4 | 2.1 | 1.0 | 4.0 | 1.1 | 4.6 | 1.6 | 11.5 | 11.9 | 14.4 | 15.1 | 14.9 | 11.3 | 12.2 | 13.3 | 14.0 | 11.9 | 10.2 | 2.9 | 0.2 | 1.0 | 2.6 | 0.4 | 0.9 | 0.2 | 15.1 | 6.3 |
| | ENE | NE | SW | SW | WSW | SW | WSW | WSW | WSW | W | WSW | WSW | WSW | WSW | WSW | WSW | SW | WSW | WSW | NE | ENE | WNW | ESE | ENE | | | |
| Aug 30 | 1.0 | 1.5 | 0.5 | 0.2 | 0.1 | 0.2 | 0.2 | 0.4 | 0.8 | 0.7 | 1.5 | 2.2 | 3.7 | 3.2 | 3.8 | 5.5 | 7.8 | 8.9 | 10.1 | 5.8 | 3.6 | 4.4 | 5.3 | 3.8 | 0.1 | 10.1 | 2.8 |
| | ENE | ENE | NNE | NNW | NW | NNW | NW | NW | WNW | W | NNW | NW | NNE | N | NNW | NW | WNW | WNW | NW | NW | WNW | WNW | WNW | WNW | | | |
| Aug 31 | 2.6 | 2.5 | 2.1 | 2.0 | 3.9 | 3.3 | 2.8 | 2.8 | 1.1 | 2.8 | 2.7 | 4.5 | 6.8 | 7.5 | 11.7 | 15.0 | 12.6 | 9.3 | 6.6 | 7.7 | 8.9 | 8.6 | 6.8 | 7.6 | 1.1 | 15.0 | 5.6 |
| | WNW | NNW | NW | WNW | W | NW | NW | NNW | NNW | NW | NNW | NW | NNW | NNW | N | N | N | N | NNW | NNW | NW | NW | NNW | NNW | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C | Monthly Calibration | S | Daily Zero-Span Check | Q | Quality Assurance | |
| K | Collection Error | N | No Data (Machine Not in Service) | Y | Routine Maintenance | P Power Failure |
| X | InValid Data (Equipment Malfunction /Recovery) | NRM | UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance) | | | |

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

# VOC CANISTER SAMPLING RESULTS

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## *PEACE RIVER AREA MONITORING PROGRAM*

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-01 @ 20:25 |
|---|---|
| Canister Sample | Non-methane Hydrocarbon |
| Canister ID | 32227 |

| Method | NA-025 | | Method | NA-024 | | Method | AC-058 | |
|---|---|---|---|---|---|---|---|---|
| Maximum Reading (ppmv) | 0.2 | Methane | Maximum Reading (ppmv) | 1.6 | Carbon disulphide | Maximum Reading (ppmv) | 42.7 | Isoprene |

| Parameter | Result (ppmv) | RDL (ppmv) |
|---|---|---|
| 1-Butene | 0 | 0.16 |
| Acetylene | 0 | 0.12 |
| cis-2-Butene | 0 | 0.06 |
| Ethane | 0 | 0.2 |
| Ethylacetylene | 0 | 0.09 |
| Ethylene | 0 | 0.11 |
| Isobutane | 0 | 0.2 |
| Isobutylene | 0 | 0.2 |
| Methane | 0.2 | 0.2 |
| n-Butane | 0 | 0.3 |
| n-Propane | 0 | 0.11 |
| Propylene | 0 | 0.2 |
| Propyne | 0 | 0.2 |
| trans-2-Butene | 0 | 0.14 |

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| 2,5-Dimethylthiophene | 0 | 0.5 |
| 2-Ethylthiophene | 0 | 0.3 |
| 2-Methylthiophene | 0 | 0.3 |
| 3-Methylthiophene | 0 | 0.5 |
| Butyl mercaptan | 0 | 0.5 |
| Carbon disulphide | **1.6** | 0.3 |
| Carbonyl sulphide | 0 | 0.5 |
| Dimethyl disulphide | 0 | 0.3 |
| Dimethyl sulphide | 0 | 0.3 |
| Ethyl mercaptan | 0 | 0.5 |
| Ethyl sulphide | 0 | 0.5 |
| Hydrogen sulphide | 0 | 0.5 |
| Isobutyl mercaptan | 0 | 0.5 |
| Isopropyl mercaptan | 0 | 0.5 |
| Methyl mercaptan | 0 | 0.3 |
| Pentyl mercaptan | 0 | 0.6 |
| Propyl mercaptan | 0 | 0.6 |
| tert-Butyl mercaptan | 0 | 0.5 |
| Thiophene | 0 | 0.3 |

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| 1,1,1-Trichloroethane | 0 | 0.03 |
| 1,1,2,2-Tetrachloroethane | 0 | 0.03 |
| 1,1,2-Trichloroethane | 0 | 0.03 |
| 1,1-Dichloroethane | 0 | 0.03 |
| 1,1-Dichloroethylene | 0 | 0.06 |
| 1,2,3-Trimethylbenzene | 0.17 | 0.08 |
| 1,2,4-Trichlorobenzene | 0 | 1.2 |
| 1,2,4-Trimethylbenzene | 0.34 | 0.08 |
| 1,2-Dibromoethane | 0 | 0.03 |
| 1,2-Dichlorobenzene | 0 | 0.05 |
| 1,2-Dichloroethane | 0 | 0.02 |
| 1,2-Dichloropropane | 0 | 0.02 |
| 1,3,5-Trimethylbenzene | 0 | 0.03 |
| 1,3-Butadiene | 0 | 0.03 |
| 1,3-Dichlorobenzene | 0 | 0.5 |
| 1,4-Dichlorobenzene | 0 | 0.6 |
| 1,4-Dioxane | 0 | 0.6 |
| 1-Butene/Isobutylene | 2.24 | 0.03 |
| 1-Hexene/2-Methyl-1-pentene | 0.16 | 0.03 |
| 1-Pentene | 0.61 | 0.02 |
| 2,2,4-Trimethylpentane | 0 | 0.02 |
| 2,2-Dimethylbutane | 0 | 0.02 |
| 2,3,4-Trimethylpentane | 0 | 0.02 |
| 2,3-Dimethylbutane | 1.01 | 0.03 |
| 2,3-Dimethylpentane | 0.05 | 0.03 |
| 2,4-Dimethylpentane | 0 | 0.02 |
| 2-Methylheptane | 0 | 0.02 |
| 2-Methylhexane | 0 | 0.02 |
| 2-Methylpentane | 0 | 0.02 |
| 3-Methylheptane | 0 | 0.03 |
| 3-Methylhexane | 0 | 0.03 |
| 3-Methylpentane | 0 | 0.02 |
| Acetone | 13.8 | 3.7 |
| Acrolein | 1 | 0.5 |
| Benzene | 0.22 | 0.02 |
| Benzyl chloride | 0 | 0.6 |
| Bromodichloromethane | 0 | 0.03 |
| Bromoform | 0 | 0.03 |
| Bromomethane | 0 | 0.02 |
| Carbon disulfide | 0.35 | 0.02 |
| Carbon tetrachloride | 0.07 | 0.02 |
| Chlorobenzene | 0 | 0.03 |
| Chloroethane | 0 | 0.03 |
| Chloroform | 0 | 0.03 |
| Chloromethane | 0.94 | 0.03 |
| cis-1,2-Dichloroethene | 0 | 0.02 |
| cis-1,3-Dichloropropene | 0 | 0.06 |
| cis-2-Butene | 0 | 0.03 |
| cis-2-Pentene | 0 | 0.03 |
| Cyclohexane | 0 | 0.03 |
| Cyclopentane | 0 | 0.02 |
| Dibromochloromethane | 0 | 0.02 |
| Ethanol | 10.7 | 2.8 |
| Ethyl acetate | 0 | 0.6 |
| Ethylbenzene | 0.18 | 0.02 |
| Freon-11 | 0.21 | 0.03 |
| Freon-113 | 0.05 | 0.02 |
| Freon-114 | 0 | 0.03 |

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## *PEACE RIVER AREA MONITORING PROGRAM*

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-01 @ 20:25 |
|---|---|
| Canister Sample | Non-methane Hydrocarbon |
| Canister ID | 32227 |

| Method | NA-025 | | Method | NA-024 | | Method | AC-058 | |
|---|---|---|---|---|---|---|---|---|
| Maximum Reading (ppmv) | 0.2 | Methane | Maximum Reading (ppmv) | 1.6 | Carbon disulphide | Maximum Reading (ppmv) | 42.7 | Isoprene |

| Parameter | Result (ppmv) | RDL (ppmv) |
|---|---|---|

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| Freon-12 | 0.53 | 0.03 |
| Hexachloro-1,3-butadiene | 0 | 0.78 |
| Isobutane | 0 | 0.03 |
| Isopentane | 0.61 | 0.05 |
| Isoprene | 42.7 | 0.02 |
| Isopropyl alcohol | 0.8 | 3.7 |
| Isopropylbenzene | 0 | 0.02 |
| m,p-Xylene | 0.34 | 0.05 |
| m-Diethylbenzene | 0 | 0.06 |
| m-Ethyltoluene | 0 | 0.12 |
| Methyl butyl ketone | 0 | 0.78 |
| Methyl ethyl ketone | 1.2 | 0.5 |
| Methyl isobutyl ketone | 0 | 0.6 |
| Methyl methacrylate | 0 | 0.11 |
| Methyl tert butyl ether | 0 | 0.05 |
| Methylcyclohexane | 0.08 | 0.02 |
| Methylcyclopentane | 0.08 | 0.03 |
| Methylene chloride | 0 | 0.5 |
| n-Butane | 0.55 | 0.05 |
| n-Decane | 0 | 0.09 |
| n-Dodecane | 0 | 0.6 |
| n-Heptane | 0.18 | 0.02 |
| n-Hexane | 0.16 | 0.02 |
| n-Nonane | 0 | 0.02 |
| n-Octane | 0.17 | 0.03 |
| n-Pentane | 0.29 | 0.2 |
| n-Propylbenzene | 0 | 0.08 |
| n-Undecane | 0 | 0.8 |
| Naphthalene | 0 | 0.8 |
| o-Ethyltoluene | 0 | 0.02 |
| o-Xylene | 0 | 0.02 |
| p-Diethylbenzene | 0 | 0.06 |
| p-Ethyltoluene | 0 | 0.11 |
| Styrene | 0 | 0.06 |
| Tetrachloroethylene | 0 | 0.06 |
| Tetrahydrofuran | 0 | 0.6 |
| Toluene | 0.36 | 0.02 |
| trans-1,2-Dichloroethylene | 3.5 | 0.09 |
| trans-1,3-Dichloropropylene | 0 | 0.06 |
| trans-2-Butene | 0 | 0.02 |
| trans-2-Pentene | 0 | 0.03 |
| Trichloroethylene | 0 | 0.06 |
| Vinyl acetate | 0 | 0.6 |
| Vinyl chloride | 0 | 0.03 |

peace river area monitoring program pramp

## *PEACE RIVER AREA MONITORING PROGRAM*

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-01 @ 20:25 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon - BLANK | | | | | |
| Canister ID | 28887 | | | | | |
| **Method** | **NA-025** | | **Method** | **NA-024** | **Method** | **AC-058** |
| **Maximum Reading (ppmv)** | - | - | **Maximum Reading (ppmv)** | - - | **Maximum Reading (ppmv)** | **0.18 Isobutane** |
| **Parameter** | **Result (ppmv)** | **RDL (ppmv)** | **Parameter** | **Result (ppbv) RDL (ppbv)** | **Parameter** | **Result (ppbv) RDL (ppbv)** |
| 1-Butene | 0 | 0.16 | 2,5-Dimethylthiophene | 0 0.5 | 1,1,1-Trichloroethane | 0 0.03 |
| Acetylene | 0 | 0.12 | 2-Ethylthiophene | 0 0.3 | 1,1,2,2-Tetrachloroethane | 0 0.03 |
| cis-2-Butene | 0 | 0.06 | 2-Methylthiophene | 0 0.3 | 1,1,2-Trichloroethane | 0 0.03 |
| Ethane | 0 | 0.2 | 3-Methylthiophene | 0 0.5 | 1,1-Dichloroethane | 0 0.03 |
| Ethylacetylene | 0 | 0.09 | Butyl mercaptan | 0 0.5 | 1,1-Dichloroethylene | 0 0.06 |
| Ethylene | 0 | 0.11 | Carbon disulphide | 0 0.3 | 1,2,3-Trimethylbenzene | 0 0.08 |
| Isobutane | 0 | 0.2 | Carbonyl sulphide | 0 0.5 | 1,2,4-Trichlorobenzene | 0 1.2 |
| Isobutylene | 0 | 0.2 | Dimethyl disulphide | 0 0.3 | 1,2,4-Trimethylbenzene | 0 0.08 |
| Methane | 0 | 0.2 | Dimethyl sulphide | 0 0.3 | 1,2-Dibromoethane | 0 0.03 |
| n-Butane | 0 | 0.3 | Ethyl mercaptan | 0 0.5 | 1,2-Dichlorobenzene | 0 0.05 |
| n-Propane | 0 | 0.11 | Ethyl sulphide | 0 0.5 | 1,2-Dichloroethane | 0 0.02 |
| Propylene | 0 | 0.2 | Hydrogen sulphide | 0 0.5 | 1,2-Dichloropropane | 0 0.02 |
| Propyne | 0 | 0.2 | Isobutyl mercaptan | 0 0.5 | 1,3,5-Trimethylbenzene | 0 0.03 |
| trans-2-Butene | 0 | 0.14 | Isopropyl mercaptan | 0 0.5 | 1,3-Butadiene | 0 0.03 |
| | | | Methyl mercaptan | 0 0.3 | 1,3-Dichlorobenzene | 0 0.5 |
| | | | Pentyl mercaptan | 0 0.6 | 1,4-Dichlorobenzene | 0 0.6 |
| | | | Propyl mercaptan | 0 0.6 | 1,4-Dioxane | 0 0.6 |
| | | | tert-Butyl mercaptan | 0 0.5 | 1-Butene/Isobutylene | 0 0.03 |
| | | | Thiophene | 0 0.3 | 1-Hexene/2-Methyl-1-pentene | 0 0.03 |
| | | | | | 1-Pentene | 0 0.02 |
| | | | | | 2,2,4-Trimethylpentane | 0 0.02 |
| | | | | | 2,2-Dimethylbutane | 0 0.02 |
| | | | | | 2,3,4-Trimethylpentane | 0 0.02 |
| | | | | | 2,3-Dimethylbutane | 0 0.03 |
| | | | | | 2,3-Dimethylpentane | 0 0.03 |
| | | | | | 2,4-Dimethylpentane | 0 0.02 |
| | | | | | 2-Methylheptane | 0 0.02 |
| | | | | | 2-Methylhexane | 0 0.02 |
| | | | | | 2-Methylpentane | 0 0.02 |
| | | | | | 3-Methylheptane | 0 0.03 |
| | | | | | 3-Methylhexane | 0 0.03 |
| | | | | | 3-Methylpentane | 0 0.02 |
| | | | | | Acetone | 0 3.7 |
| | | | | | Acrolein | 0 0.5 |
| | | | | | Benzene | 0 0.02 |
| | | | | | Benzyl chloride | 0 0.6 |
| | | | | | Bromodichloromethane | 0 0.03 |
| | | | | | Bromoform | 0 0.03 |
| | | | | | Bromomethane | 0 0.02 |
| | | | | | Carbon disulfide | 0 0.02 |
| | | | | | Carbon tetrachloride | 0 0.02 |
| | | | | | Chlorobenzene | 0 0.03 |
| | | | | | Chloroethane | 0 0.03 |
| | | | | | Chloroform | 0 0.03 |
| | | | | | Chloromethane | 0 0.03 |
| | | | | | cis-1,2-Dichloroethene | 0 0.02 |
| | | | | | cis-1,3-Dichloropropene | 0 0.06 |
| | | | | | cis-2-Butene | 0 0.03 |
| | | | | | cis-2-Pentene | 0 0.03 |
| | | | | | Cyclohexane | 0 0.03 |
| | | | | | Cyclopentane | 0 0.02 |
| | | | | | Dibromochloromethane | 0 0.02 |
| | | | | | Ethanol | 0 2.8 |
| | | | | | Ethyl acetate | 0 0.6 |
| | | | | | Ethylbenzene | 0 0.02 |
| | | | | | Freon-11 | 0 0.03 |
| | | | | | Freon-113 | 0 0.02 |
| | | | | | Freon-114 | 0 0.03 |

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## *PEACE RIVER AREA MONITORING PROGRAM*

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-01 @ 20:25 |
|---|---|
| Canister Sample | Non-methane Hydrocarbon - BLANK |
| Canister ID | 28887 |

| Method | NA-025 | Method | NA-024 | Method | AC-058 |
|---|---|---|---|---|---|
| Maximum Reading (ppmv) | - - | Maximum Reading (ppmv) | - - | Maximum Reading (ppmv) | 0.18 Isobutane |

| Parameter | Result (ppmv) | RDL (ppmv) | Parameter | Result (ppbv) | RDL (ppbv) | Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Freon-12 | 0 | 0.03 |
| | | | | | | Hexachloro-1,3-butadiene | 0 | 0.78 |
| | | | | | | Isobutane | 0.18 | 0.03 |
| | | | | | | Isopentane | 0 | 0.05 |
| | | | | | | Isoprene | 0 | 0.02 |
| | | | | | | Isopropyl alcohol | 0 | 3.7 |
| | | | | | | Isopropylbenzene | 0 | 0.02 |
| | | | | | | m,p-Xylene | 0 | 0.05 |
| | | | | | | m-Diethylbenzene | 0 | 0.06 |
| | | | | | | m-Ethyltoluene | 0 | 0.12 |
| | | | | | | Methyl butyl ketone | 0 | 0.78 |
| | | | | | | Methyl ethyl ketone | 0 | 0.5 |
| | | | | | | Methyl isobutyl ketone | 0 | 0.6 |
| | | | | | | Methyl methacrylate | 0 | 0.11 |
| | | | | | | Methyl tert butyl ether | 0 | 0.05 |
| | | | | | | Methylcyclohexane | 0 | 0.02 |
| | | | | | | Methylcyclopentane | 0 | 0.03 |
| | | | | | | Methylene chloride | 0 | 0.5 |
| | | | | | | n-Butane | 0.13 | 0.05 |
| | | | | | | n-Decane | 0 | 0.09 |
| | | | | | | n-Dodecane | 0 | 0.6 |
| | | | | | | n-Heptane | 0 | 0.02 |
| | | | | | | n-Hexane | 0 | 0.02 |
| | | | | | | n-Nonane | 0 | 0.02 |
| | | | | | | n-Octane | 0 | 0.03 |
| | | | | | | n-Pentane | 0 | 0.2 |
| | | | | | | n-Propylbenzene | 0 | 0.08 |
| | | | | | | n-Undecane | 0 | 0.8 |
| | | | | | | Naphthalene | 0 | 0.8 |
| | | | | | | o-Ethyltoluene | 0 | 0.02 |
| | | | | | | o-Xylene | 0 | 0.02 |
| | | | | | | p-Diethylbenzene | 0 | 0.06 |
| | | | | | | p-Ethyltoluene | 0 | 0.11 |
| | | | | | | Styrene | 0 | 0.06 |
| | | | | | | Tetrachloroethylene | 0 | 0.06 |
| | | | | | | Tetrahydrofuran | 0 | 0.6 |
| | | | | | | Toluene | 0 | 0.02 |
| | | | | | | trans-1,2-Dichloroethylene | 0 | 0.09 |
| | | | | | | trans-1,3-Dichloropropylene | 0 | 0.06 |
| | | | | | | trans-2-Butene | 0 | 0.02 |
| | | | | | | trans-2-Pentene | 0 | 0.03 |
| | | | | | | Trichloroethylene | 0 | 0.06 |
| | | | | | | Vinyl acetate | 0 | 0.6 |
| | | | | | | Vinyl chloride | 0 | 0.03 |

peace river area monitoring program pramp

## *PEACE RIVER AREA MONITORING PROGRAM*

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-04 @06:15 |
|---|---|
| Canister Sample | Non-methane Hydrocarbon |
| Canister ID | 29016 |

| Method | NA-025 | | Method | NA-024 | | Method | AC-058 | |
|---|---|---|---|---|---|---|---|---|
| Maximum Reading (ppmv) | 2.5 | Methane | Maximum Reading (ppmv) | - | - | Maximum Reading (ppmv) | 8.58 | n-Pentane |

| Parameter | Result (ppmv) | RDL (ppmv) |
|---|---|---|
| 1-Butene | 0 | 0.1 |
| Acetylene | 0 | 0.08 |
| cis-2-Butene | 0 | 0.04 |
| Ethane | 0 | 0.1 |
| Ethylacetylene | 0 | 0.06 |
| Ethylene | 0 | 0.07 |
| Isobutane | 0 | 0.1 |
| Isobutylene | 0 | 0.1 |
| Methane | 2.5 | 0.1 |
| n-Butane | 0 | 0.2 |
| n-Propane | 0 | 0.07 |
| Propylene | 0 | 0.1 |
| Propyne | 0 | 0.1 |
| trans-2-Butene | 0 | 0.09 |

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| 2,5-Dimethylthiophene | 0 | 0.3 |
| 2-Ethylthiophene | 0 | 0.2 |
| 2-Methylthiophene | 0 | 0.2 |
| 3-Methylthiophene | 0 | 0.3 |
| Butyl mercaptan | 0 | 0.3 |
| Carbon disulphide | 1.6 | 0.2 |
| Carbonyl sulphide | 0 | 0.3 |
| Dimethyl disulphide | 0 | 0.2 |
| Dimethyl sulphide | 0 | 0.2 |
| Ethyl mercaptan | 0 | 0.3 |
| Ethyl sulphide | 0 | 0.3 |
| Hydrogen sulphide | 0 | 0.3 |
| Isobutyl mercaptan | 0 | 0.3 |
| Isopropyl mercaptan | 0 | 0.3 |
| Methyl mercaptan | 0 | 0.2 |
| Pentyl mercaptan | 0 | 0.4 |
| Propyl mercaptan | 0 | 0.4 |
| tert-Butyl mercaptan | 0 | 0.3 |
| Thiophene | 0 | 0.2 |

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| 1,1,1-Trichloroethane | 0 | 0.02 |
| 1,1,2,2-Tetrachloroethane | 0 | 0.02 |
| 1,1,2-Trichloroethane | 0 | 0.02 |
| 1,1-Dichloroethane | 0 | 0.02 |
| 1,1-Dichloroethylene | 0 | 0.04 |
| 1,2,3-Trimethylbenzene | 0 | 0.05 |
| 1,2,4-Trichlorobenzene | 0 | 0.8 |
| 1,2,4-Trimethylbenzene | 0 | 0.05 |
| 1,2-Dibromoethane | 0 | 0.02 |
| 1,2-Dichlorobenzene | 0 | 0.03 |
| 1,2-Dichloroethane | 0 | 0.01 |
| 1,2-Dichloropropane | 0 | 0.01 |
| 1,3,5-Trimethylbenzene | 0 | 0.02 |
| 1,3-Butadiene | 0 | 0.02 |
| 1,3-Dichlorobenzene | 0 | 0.3 |
| 1,4-Dichlorobenzene | 0 | 0.4 |
| 1,4-Dioxane | 0 | 0.4 |
| 1-Butene/Isobutylene | 0.89 | 0.02 |
| 1-Hexene/2-Methyl-1-pentene | 0 | 0.02 |
| 1-Pentene | 0.14 | 0.01 |
| 2,2,4-Trimethylpentane | 0 | 0.01 |
| 2,2-Dimethylbutane | 0.28 | 0.01 |
| 2,3,4-Trimethylpentane | 0 | 0.01 |
| 2,3-Dimethylbutane | 0.35 | 0.02 |
| 2,3-Dimethylpentane | 0.2 | 0.02 |
| 2,4-Dimethylpentane | 0.11 | 0.01 |
| 2-Methylheptane | 0.28 | 0.01 |
| 2-Methylhexane | 0.76 | 0.01 |
| 2-Methylpentane | 1.32 | 0.01 |
| 3-Methylheptane | 0.2 | 0.02 |
| 3-Methylhexane | 0.61 | 0.02 |
| 3-Methylpentane | 1.21 | 0.01 |
| Acetone | 6 | 0.4 |
| Acrolein | 0 | 0.3 |
| Benzene | 0.47 | 0.01 |
| Benzyl chloride | 0 | 0.4 |
| Bromodichloromethane | 0 | 0.02 |
| Bromoform | 0 | 0.02 |
| Bromomethane | 0 | 0.01 |
| Carbon disulfide | 0.26 | 0.01 |
| Carbon tetrachloride | 0.05 | 0.01 |
| Chlorobenzene | 0 | 0.02 |
| Chloroethane | 0 | 0.02 |
| Chloroform | 0 | 0.02 |
| Chloromethane | 0.52 | 0.02 |
| cis-1,2-Dichloroethene | 0 | 0.01 |
| cis-1,3-Dichloropropene | 0 | 0.04 |
| cis-2-Butene | 0 | 0.02 |
| cis-2-Pentene | 0 | 0.02 |
| Cyclohexane | 0.72 | 0.02 |
| Cyclopentane | 0.24 | 0.01 |
| Dibromochloromethane | 0 | 0.01 |
| Ethanol | 4.4 | 0.3 |
| Ethyl acetate | 0 | 0.4 |
| Ethylbenzene | 0 | 0.01 |
| Freon-11 | 0.19 | 0.02 |
| Freon-113 | 0.04 | 0.01 |
| Freon-114 | 0 | 0.02 |
| Freon-12 | 0.47 | 0.02 |
| Hexachloro-1,3-butadiene | 0 | 0.50 |
| Isobutane | 1.08 | 0.02 |
| Isopentane | 8.49 | 0.03 |

*PEACE RIVER AREA MONITORING PROGRAM*

*986c Site - August 2021*

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-04 @06:15 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon | | | | | |
| Canister ID | 29016 | | | | | |
| **Method** | **NA-025** | **Method** | **NA-024** | **Method** | **AC-058** | |
| **Maximum Reading (ppmv)** | **2.5 Methane** | **Maximum Reading (ppmv)** | **- -** | **Maximum Reading (ppmv)** | **8.58 n-Pentane** | |
| **Parameter** | **Result (ppmv) RDL (ppmv)** | **Parameter** | **Result (ppbv) RDL (ppbv)** | **Parameter** | **Result (ppbv)** | **RDL (ppbv)** |
| | | | | Isoprene | 3.59 | 0.01 |
| | | | | Isopropyl alcohol | 0 | 0.4 |
| | | | | Isopropylbenzene | 0 | 0.01 |
| | | | | m,p-Xylene | 0.28 | 0.03 |
| | | | | m-Diethylbenzene | 0 | 0.04 |
| | | | | m-Ethyltoluene | 0 | 0.08 |
| | | | | Methyl butyl ketone | 0 | 0.50 |
| | | | | Methyl ethyl ketone | 0.5 | 0.3 |
| | | | | Methyl isobutyl ketone | 0 | 0.4 |
| | | | | Methyl methacrylate | 0.35 | 0.07 |
| | | | | Methyl tert butyl ether | 0 | 0.03 |
| | | | | Methylcyclohexane | 0.84 | 0.01 |
| | | | | Methylcyclopentane | 0.57 | 0.02 |
| | | | | Methylene chloride | 0 | 0.3 |
| | | | | n-Butane | 3.08 | 0.03 |
| | | | | n-Decane | 0 | 0.06 |
| | | | | n-Dodecane | 0 | 0.4 |
| | | | | n-Heptane | 1.41 | 0.01 |
| | | | | n-Hexane | 3.55 | 0.01 |
| | | | | n-Nonane | 0.16 | 0.01 |
| | | | | n-Octane | 0.32 | 0.02 |
| | | | | n-Pentane | **8.58** | 0.1 |
| | | | | n-Propylbenzene | 0 | 0.05 |
| | | | | n-Undecane | 0 | 0.5 |
| | | | | Naphthalene | 0 | 0.5 |
| | | | | o-Ethyltoluene | 0 | 0.01 |
| | | | | o-Xylene | 0 | 0.01 |
| | | | | p-Diethylbenzene | 0 | 0.04 |
| | | | | p-Ethyltoluene | 0 | 0.07 |
| | | | | Styrene | 0 | 0.04 |
| | | | | Tetrachloroethylene | 0 | 0.04 |
| | | | | Tetrahydrofuran | 0 | 0.4 |
| | | | | Toluene | 0.59 | 0.01 |
| | | | | trans-1,2-Dichloroethylene | 0.2 | 0.01 |
| | | | | trans-1,3-Dichloropropylene | 0 | 0.04 |
| | | | | trans-2-Butene | 0 | 0.01 |
| | | | | trans-2-Pentene | 0 | 0.02 |
| | | | | Trichloroethylene | 0 | 0.04 |
| | | | | Vinyl acetate | 0 | 0.4 |
| | | | | Vinyl chloride | 0 | 0.02 |

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## *PEACE RIVER AREA MONITORING PROGRAM*

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-04 @06:15 |
|---|---|
| Canister Sample | Non-methane Hydrocarbon - BLANK |
| Canister ID | 28951 |

| Method | NA-025 | | Method | NA-024 | | Method | AC-058 | |
|---|---|---|---|---|---|---|---|---|
| Maximum Reading (ppmv) | - | - | Maximum Reading (ppmv) | - | - | Maximum Reading (ppmv) | 0.17 | Isobutane |

| Parameter | Result (ppmv) | RDL (ppmv) |
|---|---|---|
| 1-Butene | 0 | 0.1 |
| Acetylene | 0 | 0.08 |
| cis-2-Butene | 0 | 0.04 |
| Ethane | 0 | 0.1 |
| Ethylacetylene | 0 | 0.06 |
| Ethylene | 0 | 0.07 |
| Isobutane | 0 | 0.1 |
| Isobutylene | 0 | 0.1 |
| Methane | 0 | 0.1 |
| n-Butane | 0 | 0.2 |
| n-Propane | 0 | 0.07 |
| Propylene | 0 | 0.1 |
| Propyne | 0 | 0.1 |
| trans-2-Butene | 0 | 0.09 |

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| 2,5-Dimethylthiophene | 0 | 0.3 |
| 2-Ethylthiophene | 0 | 0.2 |
| 2-Methylthiophene | 0 | 0.2 |
| 3-Methylthiophene | 0 | 0.3 |
| Butyl mercaptan | 0 | 0.3 |
| Carbon disulphide | 0 | 0.2 |
| Carbonyl sulphide | 0 | 0.3 |
| Dimethyl disulphide | 0 | 0.2 |
| Dimethyl sulphide | 0 | 0.2 |
| Ethyl mercaptan | 0 | 0.3 |
| Ethyl sulphide | 0 | 0.3 |
| Hydrogen sulphide | 0 | 0.3 |
| Isobutyl mercaptan | 0 | 0.3 |
| Isopropyl mercaptan | 0 | 0.3 |
| Methyl mercaptan | 0 | 0.2 |
| Pentyl mercaptan | 0 | 0.4 |
| Propyl mercaptan | 0 | 0.4 |
| tert-Butyl mercaptan | 0 | 0.3 |
| Thiophene | 0 | 0.2 |

| Parameter | Result (ppbv) | RDL (ppbv) |
|---|---|---|
| 1,1,1-Trichloroethane | 0 | 0.02 |
| 1,1,2,2-Tetrachloroethane | 0 | 0.02 |
| 1,1,2-Trichloroethane | 0 | 0.02 |
| 1,1-Dichloroethane | 0 | 0.02 |
| 1,1-Dichloroethylene | 0 | 0.04 |
| 1,2,3-Trimethylbenzene | 0 | 0.05 |
| 1,2,4-Trichlorobenzene | 0 | 0.8 |
| 1,2,4-Trimethylbenzene | 0 | 0.05 |
| 1,2-Dibromoethane | 0 | 0.02 |
| 1,2-Dichlorobenzene | 0 | 0.03 |
| 1,2-Dichloroethane | 0 | 0.01 |
| 1,2-Dichloropropane | 0 | 0.01 |
| 1,3,5-Trimethylbenzene | 0 | 0.02 |
| 1,3-Butadiene | 0 | 0.02 |
| 1,3-Dichlorobenzene | 0 | 0.3 |
| 1,4-Dichlorobenzene | 0 | 0.4 |
| 1,4-Dioxane | 0 | 0.4 |
| 1-Butene/Isobutylene | 0 | 0.02 |
| 1-Hexene/2-Methyl-1-pentene | 0 | 0.02 |
| 1-Pentene | 0 | 0.01 |
| 2,2,4-Trimethylpentane | 0 | 0.01 |
| 2,2-Dimethylbutane | 0 | 0.01 |
| 2,3,4-Trimethylpentane | 0 | 0.01 |
| 2,3-Dimethylbutane | 0 | 0.02 |
| 2,3-Dimethylpentane | 0.04 | 0.02 |
| 2,4-Dimethylpentane | 0 | 0.01 |
| 2-Methylheptane | 0 | 0.01 |
| 2-Methylhexane | 0 | 0.01 |
| 2-Methylpentane | 0 | 0.01 |
| 3-Methylheptane | 0 | 0.02 |
| 3-Methylhexane | 0 | 0.02 |
| 3-Methylpentane | 0 | 0.01 |
| Acetone | 0 | 0.4 |
| Acrolein | 0 | 0.3 |
| Benzene | 0 | 0.01 |
| Benzyl chloride | 0 | 0.4 |
| Bromodichloromethane | 0 | 0.02 |
| Bromoform | 0 | 0.02 |
| Bromomethane | 0 | 0.01 |
| Carbon disulfide | 0 | 0.01 |
| Carbon tetrachloride | 0 | 0.01 |
| Chlorobenzene | 0 | 0.02 |
| Chloroethane | 0 | 0.02 |
| Chloroform | 0 | 0.02 |
| Chloromethane | 0 | 0.02 |
| cis-1,2-Dichloroethene | 0 | 0.01 |
| cis-1,3-Dichloropropene | 0 | 0.04 |
| cis-2-Butene | 0 | 0.02 |
| cis-2-Pentene | 0 | 0.02 |
| Cyclohexane | 0 | 0.02 |
| Cyclopentane | 0 | 0.01 |
| Dibromochloromethane | 0 | 0.01 |
| Ethanol | 0 | 0.3 |
| Ethyl acetate | 0 | 0.4 |
| Ethylbenzene | 0 | 0.01 |
| Freon-11 | 0 | 0.02 |
| Freon-113 | 0 | 0.01 |
| Freon-114 | 0 | 0.02 |
| Freon-12 | 0 | 0.02 |
| Hexachloro-1,3-butadiene | 0 | 0.50 |
| Isobutane | 0.17 | 0.02 |
| Isopentane | 0.11 | 0.03 |

peace river area monitoring program pramp

***PEACE RIVER AREA MONITORING PROGRAM***

***986c Site - August 2021***

**Volatile Organic Compounds (VOCs) Results**

| Sample Date/Time | 2021-08-04 @06:15 | | | | | |
|---|---|---|---|---|---|---|
| Canister Sample | Non-methane Hydrocarbon - BLANK | | | | | |
| Canister ID | 28951 | | | | | |
| **Method** | **NA-025** | | **Method** | **NA-024** | **Method** | **AC-058** |
| **Maximum Reading (ppmv)** | - | - | **Maximum Reading (ppmv)** | - - | **Maximum Reading (ppmv)** | **0.17 Isobutane** |
| **Parameter** | **Result (ppmv)** | **RDL (ppmv)** | **Parameter** | **Result (ppbv) RDL (ppbv)** | **Parameter** | **Result (ppbv) RDL (ppbv)** |
| | | | | | Isoprene | 0 0.01 |
| | | | | | Isopropyl alcohol | 0 0.4 |
| | | | | | Isopropylbenzene | 0 0.01 |
| | | | | | m,p-Xylene | 0 0.03 |
| | | | | | m-Diethylbenzene | 0 0.04 |
| | | | | | m-Ethyltoluene | 0 0.08 |
| | | | | | Methyl butyl ketone | 0 0.50 |
| | | | | | Methyl ethyl ketone | 0 0.3 |
| | | | | | Methyl isobutyl ketone | 0 0.4 |
| | | | | | Methyl methacrylate | 0 0.07 |
| | | | | | Methyl tert butyl ether | 0 0.03 |
| | | | | | Methylcyclohexane | 0 0.01 |
| | | | | | Methylcyclopentane | 0 0.02 |
| | | | | | Methylene chloride | 0 0.3 |
| | | | | | n-Butane | 0.17 0.03 |
| | | | | | n-Decane | 0 0.06 |
| | | | | | n-Dodecane | 0 0.4 |
| | | | | | n-Heptane | 0 0.01 |
| | | | | | n-Hexane | 0 0.01 |
| | | | | | n-Nonane | 0 0.01 |
| | | | | | n-Octane | 0 0.02 |
| | | | | | n-Pentane | 0.07 0.1 |
| | | | | | n-Propylbenzene | 0 0.05 |
| | | | | | n-Undecane | 0 0.5 |
| | | | | | Naphthalene | 0 0.5 |
| | | | | | o-Ethyltoluene | 0 0.01 |
| | | | | | o-Xylene | 0 0.01 |
| | | | | | p-Diethylbenzene | 0 0.04 |
| | | | | | p-Ethyltoluene | 0 0.07 |
| | | | | | Styrene | 0 0.04 |
| | | | | | Tetrachloroethylene | 0 0.04 |
| | | | | | Tetrahydrofuran | 0 0.4 |
| | | | | | Toluene | 0 0.01 |
| | | | | | trans-1,2-Dichloroethylene | 0 0.01 |
| | | | | | trans-1,3-Dichloropropylene | 0 0.04 |
| | | | | | trans-2-Butene | 0 0.01 |
| | | | | | trans-2-Pentene | 0 0.02 |
| | | | | | Trichloroethylene | 0 0.04 |
| | | | | | Vinyl acetate | 0 0.4 |
| | | | | | Vinyl chloride | 0 0.02 |

# END OF REPORT

This page, 237 of 237, ends the August 2021 Monthly Ambient Air Quality Monitoring Report.

**Peace River Area Monitoring Program**

# AUGUST 2021

## Ambient Air Monitoring Calibration Report

## - 842b STATION-

## CAL-PRAMP-202108-01561

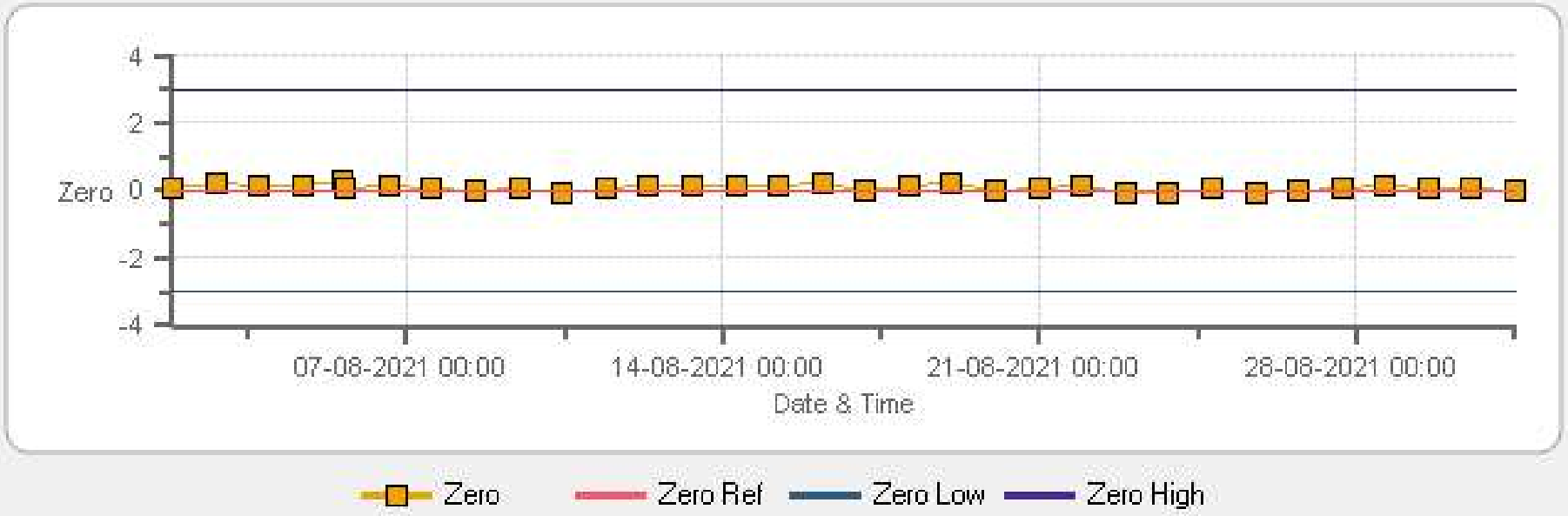
**Operation and Maintenance:**
Bureau Veritas Canada

**Data Validation and Report:**
Bureau Veritas Canada

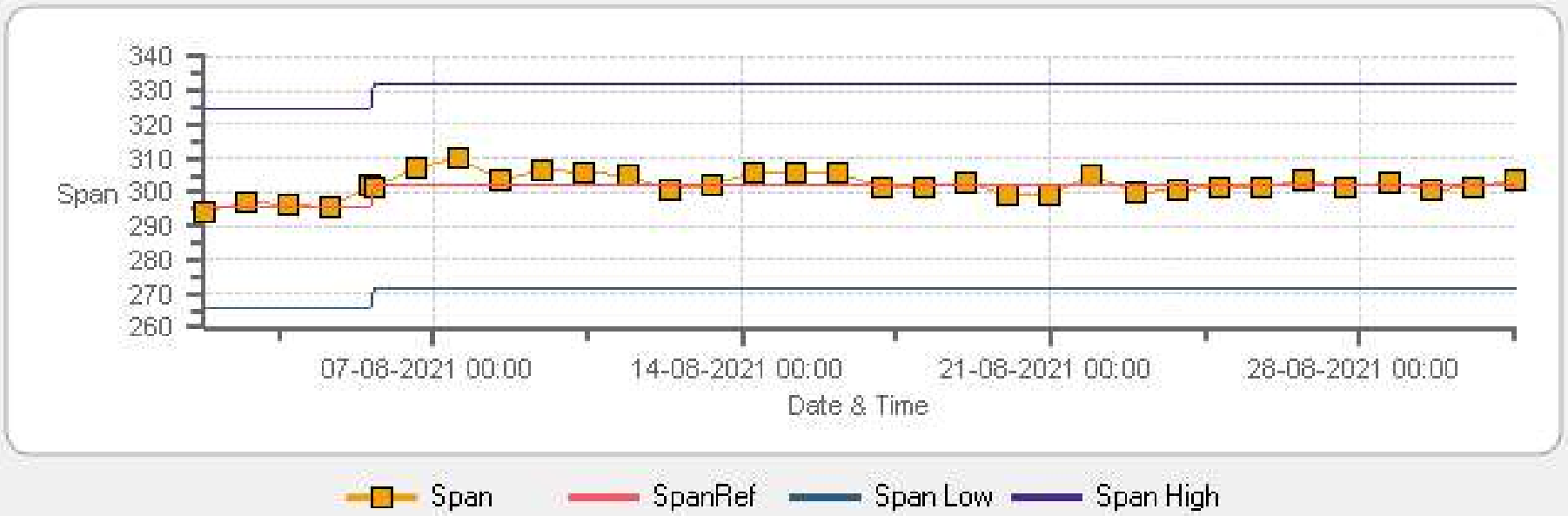
September 14, 2021

# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

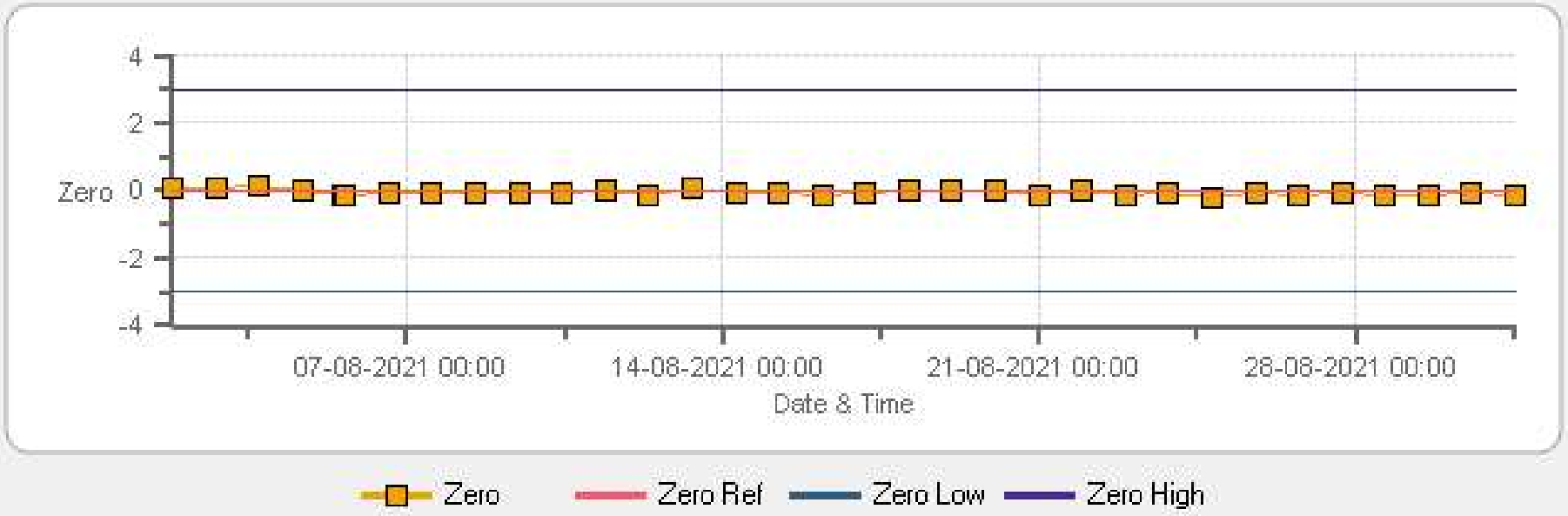
SO2[ppb] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Zero



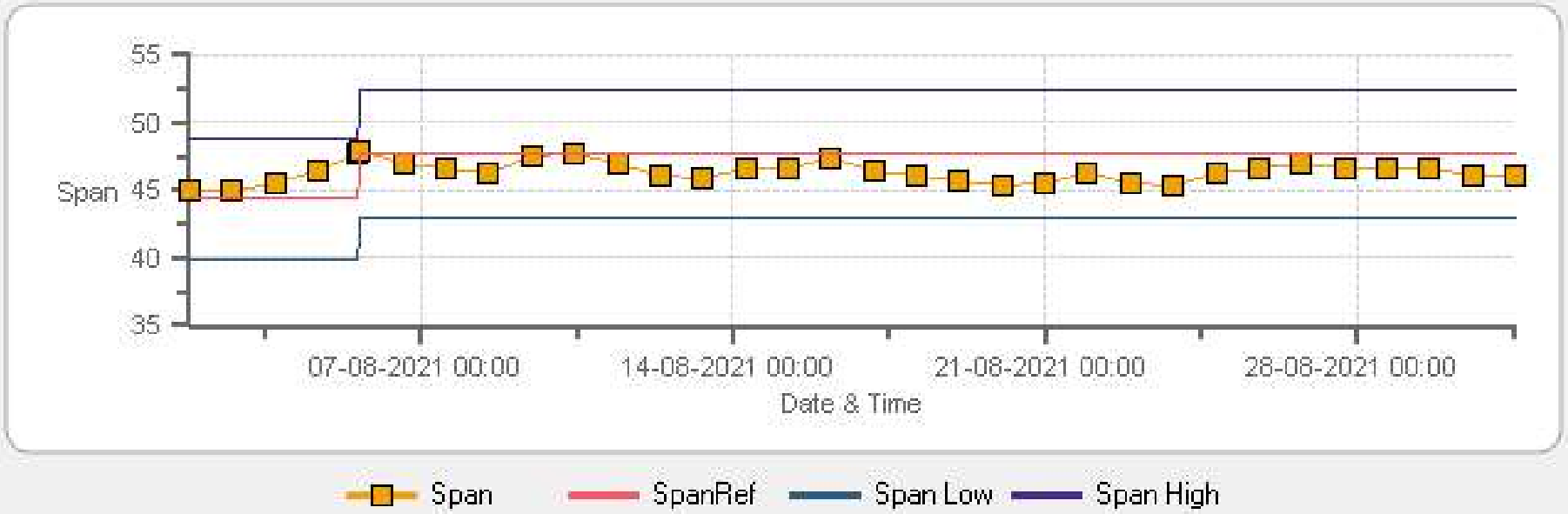

SO2[ppb] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Span



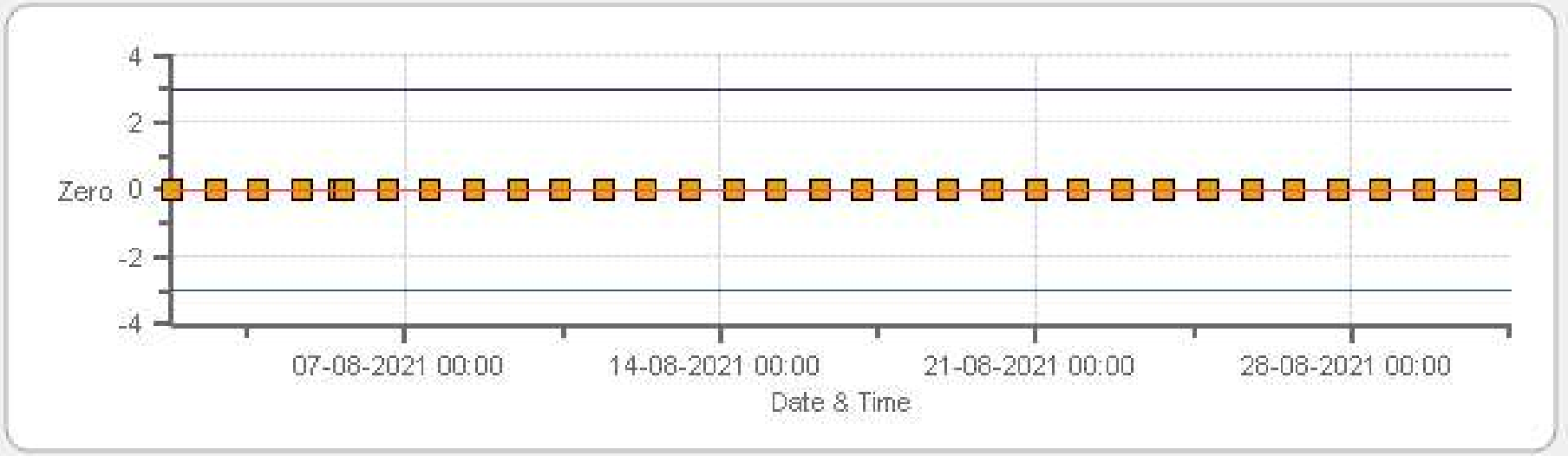
TRS[ppb] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Zero



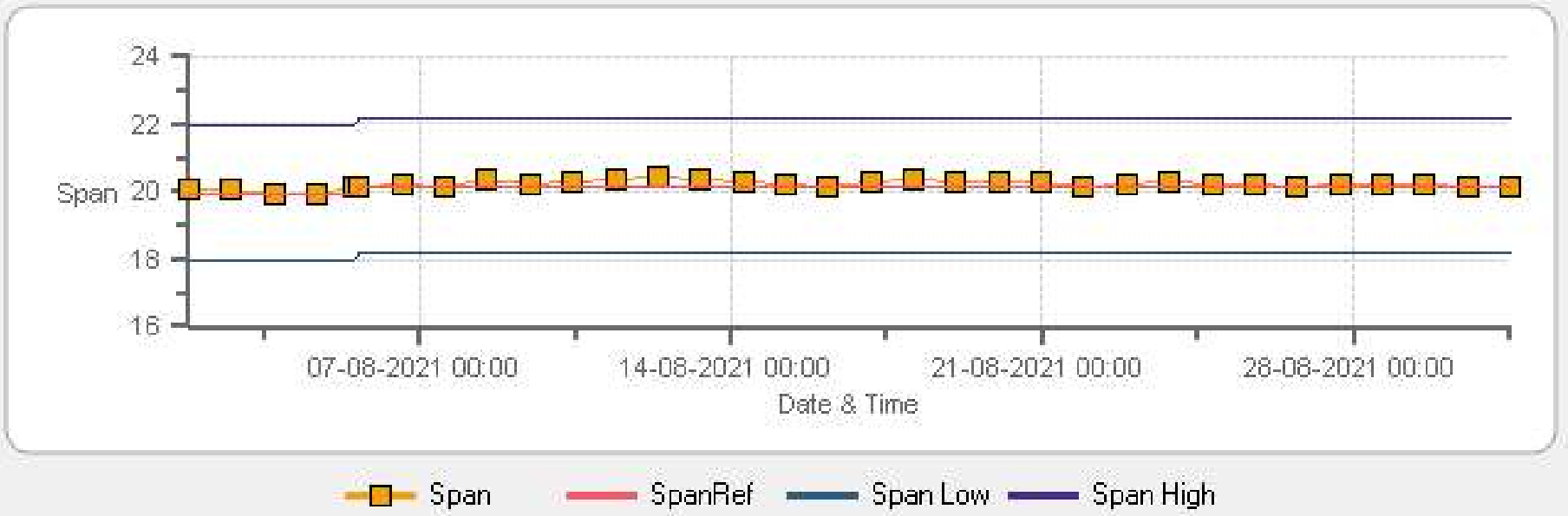

TRS[ppb] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Span



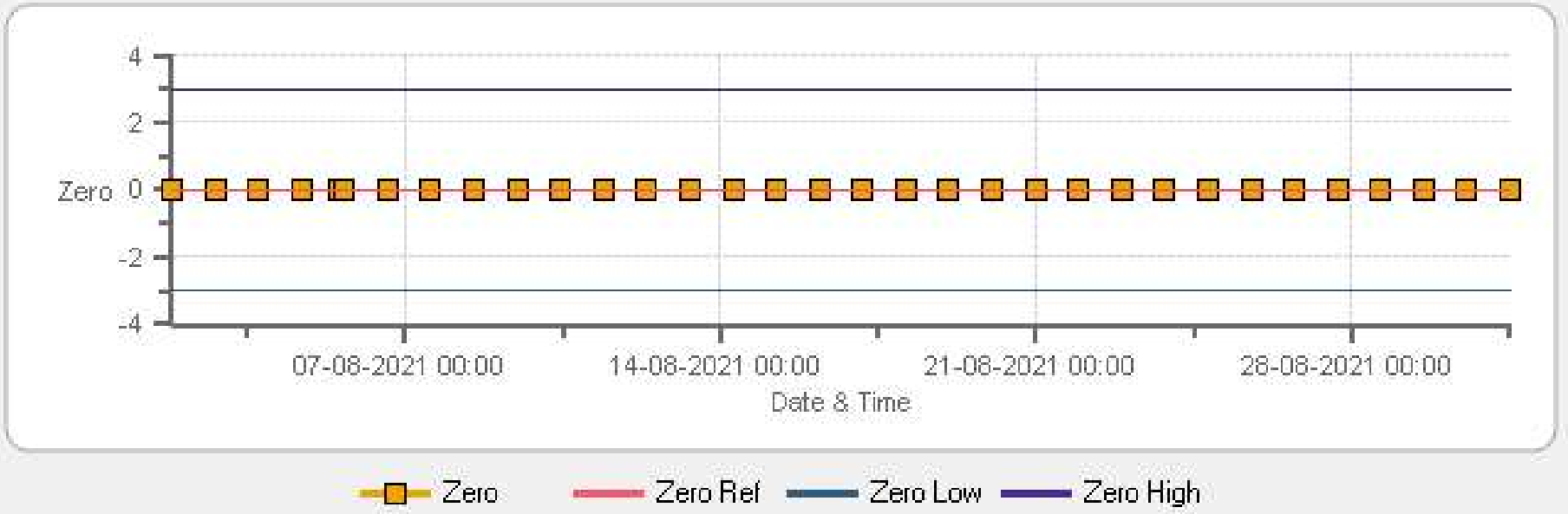
THC55[ppm] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Zero



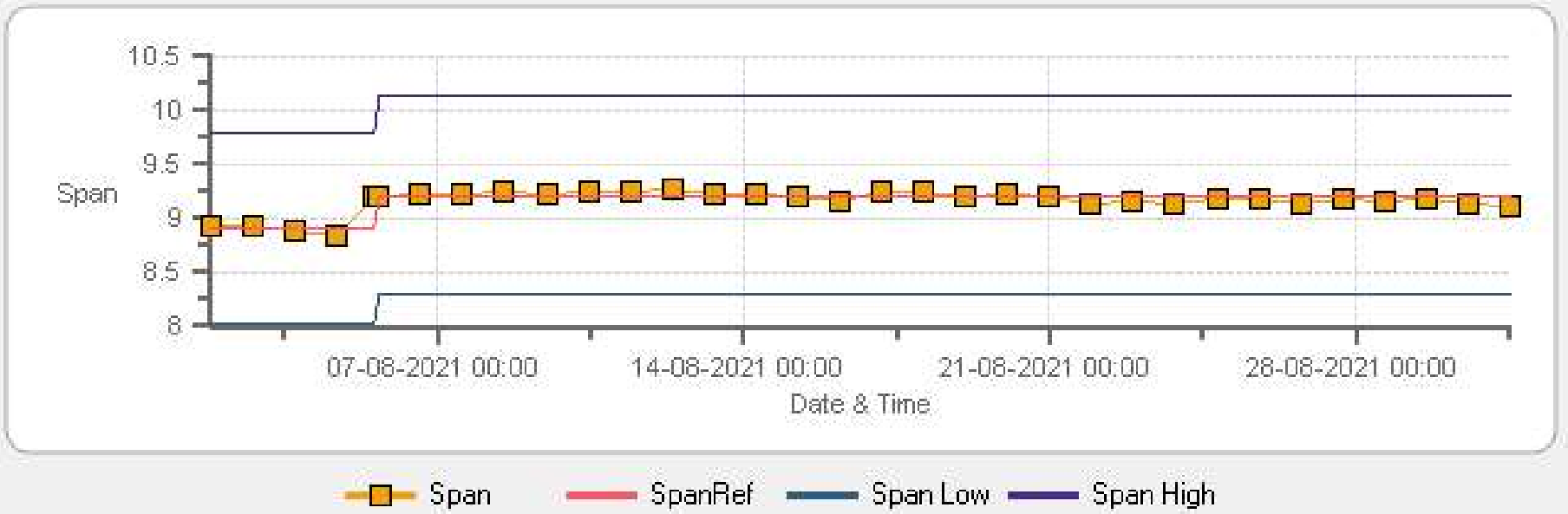

THC55[ppm] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Span



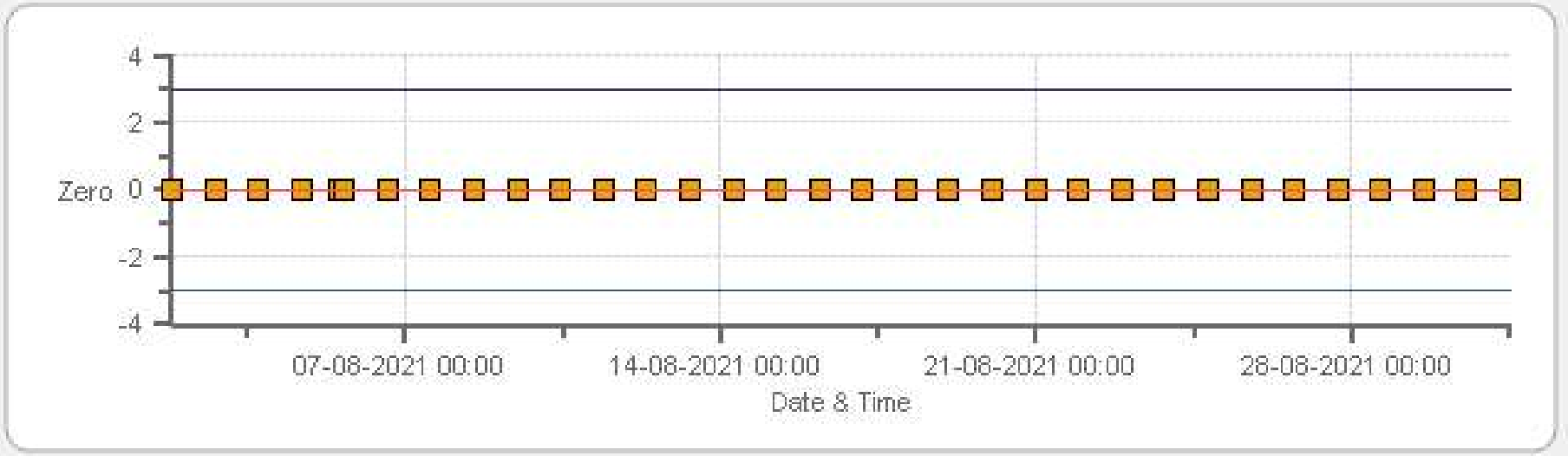
CH4[ppm] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Zero



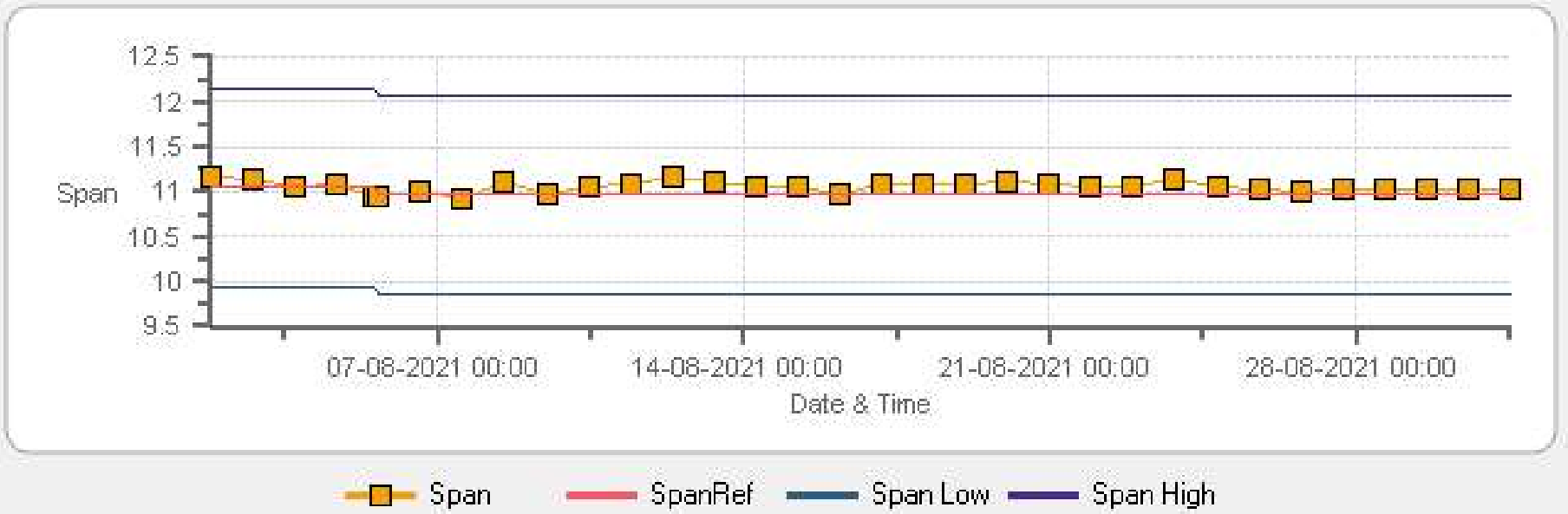

CH4[ppm] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Span



NMHC[ppm] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Zero




NMHC[ppm] Calibration: PRAMP 842b Monthly: 08-2021 Type: SpanAndZero - Span



# MULTI-POINT CALIBRATION RECORDS

# SO2 Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 05-Aug-2021 | PREVIOUS CALIBRATION DATE: | 04-Jul-2021 |
| PARAMETER: | SO2 | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.4 |
| LOCATION: | 842b | BAROMETRIC (mBar): | 938 |
| PURPOSE | Routine | START TIME (MST): | 09:04 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 14:02 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43iQTL | RANGE | 500 ppb |
| SERIAL # | 1200736629 | FLOW (mL/min) | 424 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 12.5 | BKG/OFFSET | 7.6 |
| COEF/SLOPE | 1.081 | COEF/SLOPE | 1.097 |
| Expected (reference) Value | 295.5 | Expected (reference) Value | 302 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002357 | HIGH ID | n/a |
| CONC (ppm): | 24.90 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1390 | LOW ID | n/a |
| EXPIRY DATE | 13-Nov-2024 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 390 | 190 | 95 |
| RANGE | 300 - 400 | 150 - 200 | 50 - 100 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4001 | | 4001 | 0.00 | -0.2 | 0 | | |
| 3939 | 61.03 | 4000 | 379.96 | 370 | 380.2 | 1.026 | 0.999 |
| 3969 | 30.49 | 4000 | 189.83 | n/a | 190.8 | n/a | 0.995 |
| 3984 | 14.41 | 3998 | 89.76 | n/a | 89.3 | n/a | 1.005 |

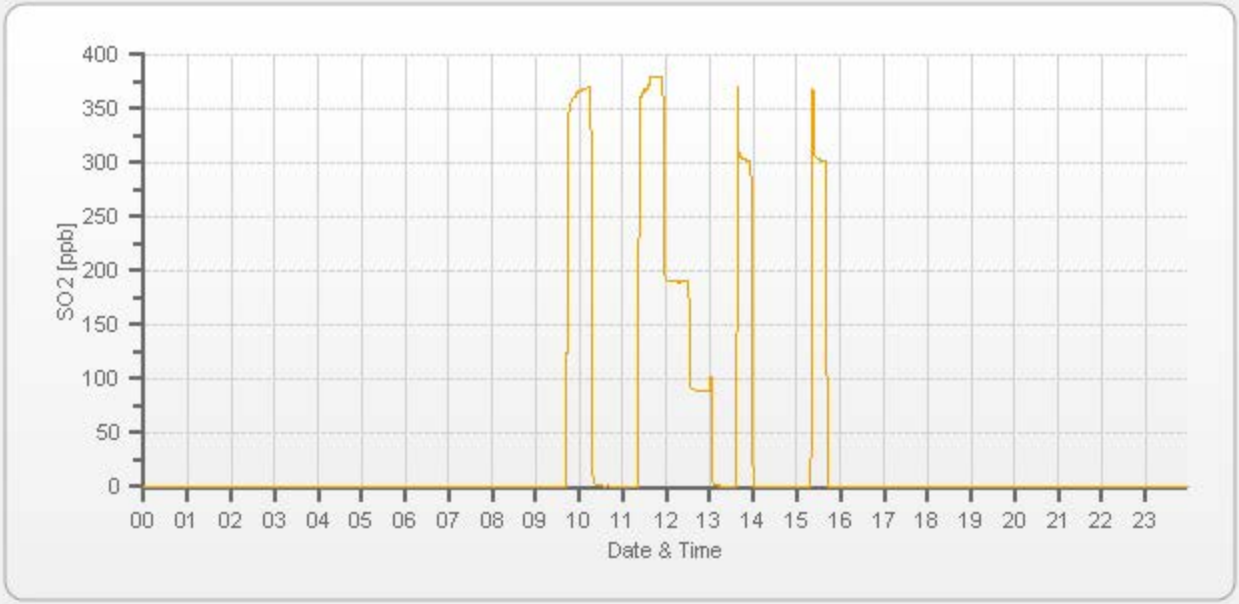
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.001 | 0.0% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues.

SO2[ppb] Station: PRAMP 842b Daily: 05-08-2021 Type: AVG 1 Min. [1 Min.]



# TRS Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 05-Aug-2021 | PREVIOUS CALIBRATION DATE: | 04-Jul-2021 |
| PARAMETER: | TRS | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.4 |
| LOCATION: | 842b | BAROMETRIC (mBar): | 938 |
| PURPOSE | Routine | START TIME (MST): | 09:04 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 14:07 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43iQTL | RANGE | 100 ppb |
| SERIAL # | 1200736630 | FLOW (mL/min) | 371 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 12 | BKG/OFFSET | 12.2 |
| COEF/SLOPE | 0.91 | COEF/SLOPE | 0.91 |
| Expected (reference) Value | 44.43 | Expected (reference) Value | 47.68 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002472 | HIGH ID | n/a |
| CONC (ppm): | 9.41 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1610 | LOW ID | n/a |
| EXPIRY DATE | 10-Nov-2023 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 78 | 38 | 19 |
| RANGE | 60 - 80 | 30 - 40 | 10 - 20 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4001 | | 4001 | 0.00 | 0.17 | 0 | | |
| 3967 | 33.15 | 4000 | 77.98 | 78.43 | 77.98 | 0.996 | 1.000 |
| 3984 | 16.16 | 4000 | 38.02 | n/a | 37.65 | n/a | 1.010 |
| 3990 | 8.09 | 3998 | 19.04 | n/a | 19.04 | n/a | 1.000 |

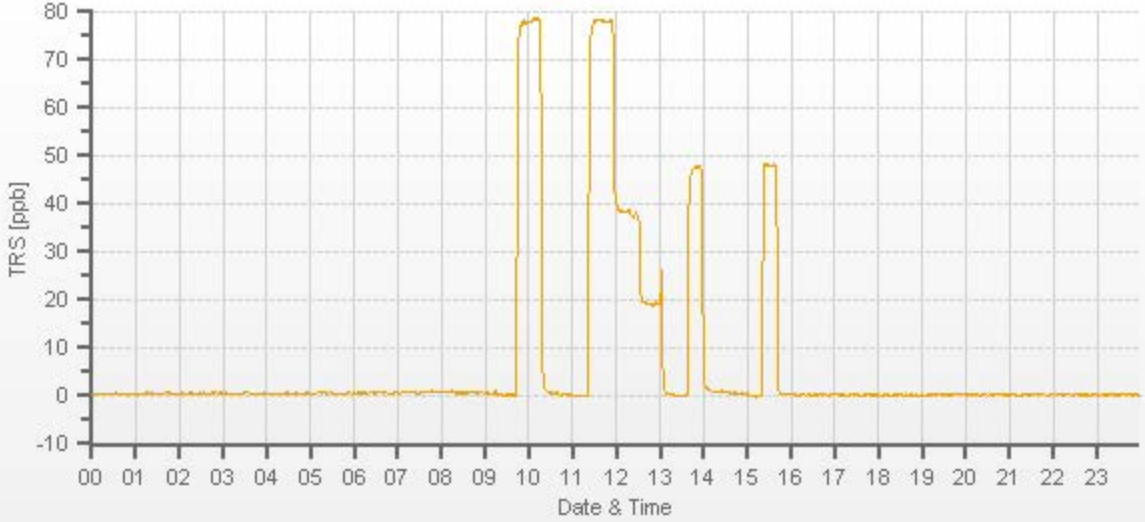
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 0.999 | -0.1% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues. TRS Converter CDNOVA CDN-101# 576

TRS[ppb] Station: PRAMP 842b Daily: 05-08-2021 Type: AVG 1 Min. [1 Min.]



# Methane/Non-Methane Analyzer Calibration by Dilution

**CALIBRATION:**

| | | | |
|---|---|---|---|
| DATE: | 05-Aug-2021 | PREVIOUS CALIBRATION DATE: | 04-Jul-2021 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.4 |
| LOCATION: | 842b | BAROMETRIC (mBar): | 938 |
| PURPOSE | Routine | START TIME (MST): | 09:04 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 13:04 |

**ANALYZER:**

| VALUE | MAKE/MODEL | SERIAL | FLOW (mL/min) |
|---|---|---|---|
| | Thermo 55i | 1501663728 | 1048.1 |
| PARAMETER: | CH4 | NMHC | THC |
| RANGE (ppm): | 20 | 20 | 40 |
| PREVIOUS CF: | 0.999 | 0.999 | 0.999 |

**CALIBRATION SYSTEM:**

| CALIBRATOR: | | ZERO AIR: | | CALIBRATION GAS: | | | FLOWMETERS (if applicable): | |
|---|---|---|---|---|---|---|---|---|
| MAKE: | Sabio | MAKE: | API | CYLINDER ID: | LL84567 | | HIGH ID: | n/a |
| MODEL: | 2010 | MODEL: | 701 | $CH_4/C_3H_8$ (ppm): | 591.0 | 200.0 | HIGH EXPIRY: | n/a |
| ID: | 17100415 | ID: | 850 | CYLINDER (psi): | 710 | | LOW ID: | n/a |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | 00941 | EXPIRY DATE | 17-Jul-2027 | | LOW EXPIRY: | n/a |

**CALIBRATION PARAMETERS:**

| POINT (CH4/NMHC) | HIGH | MID | LOW | CH4 EQUIVILANCE | |
|---|---|---|---|---|---|
| TARGET | 14 | 7 | 3.5 | $C_3H_8$ as $CH_4$ | 550.0 |
| RANGE | 12 - 16 | 6 - 8 | 2 - 4 | THC as $CH_4$ | 1141.0 |

**EXPECTED (REFERENCE) VALUE:**

| INITIAL | CH4 | NMHC | THC | FINAL | CH4 | NMHC | THC |
|---|---|---|---|---|---|---|---|
| | 8.91 | 11.05 | 19.96 | | 9.21 | 10.96 | 20.17 |

**CALIBRATION:**

| FLOW RATE | | | CONCENTRATION (PPM) | | | | | | | | | CORRECTION FACTOR (CF.) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (mL/min) | | | CALCULATED | | | INITIAL INDICATED | | | FINAL INDICATED | | | INITIAL | | | FINAL | | |
| DILUENT | GAS | TOTAL | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC |
| 2998 | | 2998 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| 2924 | 73.60 | 2998 | 14.51 | 13.50 | 28.01 | 13.87 | 13.58 | 27.46 | 14.51 | 13.51 | 28.02 | 1.046 | 0.994 | 1.020 | 1.000 | 0.999 | 1.000 |
| 2960 | 36.80 | 2997 | 7.26 | 6.75 | 14.01 | n/a | n/a | n/a | 7.12 | 6.71 | 13.83 | n/a | n/a | n/a | 1.019 | 1.006 | 1.013 |
| 2980 | 18.40 | 2998 | 3.63 | 3.38 | 7.00 | n/a | n/a | n/a | 3.51 | 3.32 | 6.83 | n/a | n/a | n/a | 1.033 | 1.017 | 1.025 |

**LINEAR REGRESSION ANALYSIS:**

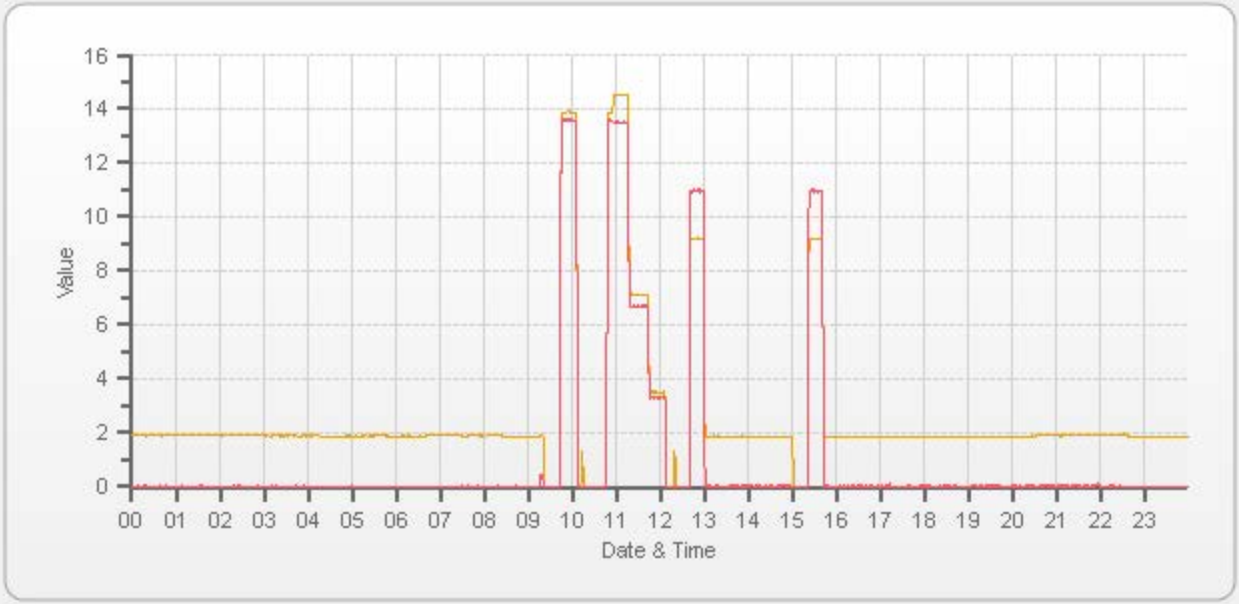
| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| CH4 | 1.000 | 1.002 | -0.4% |
| NMHC | 1.000 | 1.002 | -0.2% |
| THC | 1.000 | 1.002 | -0.3% |

**Comments:**

**Sample filter changed. Monthly calibration - no issues.**

**Use Zero Chrom?** **No**

Station: PRAMP 842b Daily: 05-08-2021 Type: AVG 1 Min. [1 Min.]



# Meteorological System Checklist

| | |
|---|---|
| Date: | August 5, 2021 |
| Technician: | Ferdinand Roy |
| Station: | PRAMP 842b |

| Unit: | Make: | Model: | Serial #: |
|---|---|---|---|
| Precipitation Sampler: | RM Young | 52202 | TB 15878 |
| Temperature Sensor: | Rotronic | HC2A-S3 | 20370767 |
| Barometric Pressure Sensor: | MetOne | 92 | Y23362 |
| Relative Humidity Sensor: | Rotronic | HC2A-S3 | 20370767 |
| Anemometer: | RM Young | 05305AQ | 174802 |

**PRECIPITATION SENSOR CHECK**

| Checklist: | Reply: | Comments: |
|---|---|---|
| Previous check date: | June 2, 2021 | |
| Is the sensor Level? | yes | |
| Is the heater operating properly? | | |
| Are the bucket drain holes clean? | yes | |
| Is the screen on the housing? (screen should be on between July and September | | |
| Is the housing clean? | yes | |
| Is the area around the housing clean and free from obstacles? | yes | |

**TIP TEST - Slowly pour water until 5 tips are heard. (10 tips = 1 ml)**

| # of Tips | Data Logger Response (ml): | Manual Specification = +/- 0.1 ml |
|---|---|---|
| **10** | 1.0 | 0.00 |

**AMBIENT TEMPERATURE SENSOR CHECK**

| | |
|---|---|
| Previous check date: | June 2, 2021 |
| Parameter: | Temperature @ 2 metres |
| Reference Thermometer ID: | F.S. 160348895 expires Sep 4, 2022 |
| Reference Temperature ($^{o}$C): | 26.4 |
| Station - Ambient Temperature ($^{o}$C): | 26.8 |
| Temperature Difference ($^{o}$C): | -0.4 |

**BAROMETRIC PRESSURE SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | June 2, 2021 | |
| Reference Barometer ID: | FS 10528 expires Feb 17, 2022 | |
| Reference Pressure - Units/Reading: | millibar | 937 |
| Station Pressure - Units/Reading: | millibar | 937.5 |
| Pressure Tolerance +/- 15% of error: | 796 - 1078 | -0.05% |

**RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | June 2, 2021 | |
| Reference Hygrometer ID: | F.S. 160348895 expires Sep 4, 2022 | |
| Reference Hygrometer % RH- Reading: | 51.27 | |
| Station Hygrometer % RH- Reading: | 47.00 | |
| RH Tolerance +/- 15% of difference: | 43.58 - 58.96 | 8.3% |

**ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK**

| WIND SPEED | | WIND DIRECTION | |
|---|---|---|---|
| Previous check date: | June 2, 2021 | Previous check date: | June 2, 2021 |
| Wind Speed Observed (kph): | 5~10 | Wind Direction Observed: | NE |
| Wind speed on Data Logger (kph): | 7.6 | Wind Direction on Data Logger: | NE |
| | | Wind Direction Pass/Fail?: | Pass |

Comments

No issues

# Meteorological Sensor Audit/Calibration

**Location Information**

| | | | |
|---|---|---|---|
| **Company:** | PRAMP | **Performed By:** | Limin Li |
| **Audit Location:** | 842b | **Reviewed By:** | Chris Wesson |
| **Audit Date:** | July 4, 2021 | **Start/End Time (mst):** | 12:16/13:43 |
| **Calibration Purpose:** | routine annual | **Weather Conditions:** | Mainly cloudy with sunny breaks |

**Wind Sensor Information**

| **Sensor ID Data:** | | **Sensor Outputs:** | |
|---|---|---|---|
| **Sensor Make:** | RM Young | **Velocity Voltage Output Range:** | n/a |
| **Sensor Model:** | 05305AQ | **Velocity Unit Output Range:** | 0-200 |
| **Serial #:** | 174802 | **Direction Voltage Output Range:** | 0-1 |
| **Previous Cal/Audit Date:** | December 16, 2020 | **Direction Unit Output Range:** | 0-360 |

**Wind Calibrator Information**

**Calibrator I.D. and Expiry Date:** RM Young 18802 id# CA03309 expires June 07, 2023

**Wind Speed Audit Data **+/- 2% of the average correction factor is the limit****

| RPM | Wind Speed Generated kph | Clockwise Wind Speed kph | Counter Clockwise Wind Speed kph | Correction Factor |
|---|---|---|---|---|
| 0 | 0 | 0.0 | 0.0 | - |
| 1000 | 18.4 | 18.3 | 18.3 | 1.007 |
| 2000 | 36.9 | 36.7 | 36.7 | 1.004 |
| 3000 | 55.3 | 55.1 | 55.1 | 1.003 |
| 4000 | 73.7 | 73.6 | 73.6 | 1.002 |
| 5000 | 92.2 | 92.0 | 92.0 | 1.002 |
| 6000 | 110.6 | 110.5 | 110.5 | 1.001 |
| 7000 | 129.0 | 128.9 | 128.9 | 1.001 |
| 8000 | 147.4 | 147.3 | 147.3 | 1.001 |
| 9000 | 165.9 | 165.8 | 165.8 | 1.000 |
| 10000 | 184.3 | 184.2 | 184.2 | 1.001 |
| | | **The audit meets AMD requirements.** | **Average Correction Factor=** | **1.002** |

**Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit****

| Generated Wind Direction 0-360 (Up) | Generated Wind Direction 360-0 (Down) | Indicated Wind Direction 0-360 (Up) | Indicated Wind Direction 360-0 (Down) | Degrees Difference 0-360 (Up) | Degrees Difference 360-0 (Down) | Average Absolute Degrees Difference |
|---|---|---|---|---|---|---|
| 0 | 355 | 0 | 355 | 0.0 | 0.0 | 0.0 |
| 30 | 330 | 29 | 331 | 1.0 | -1.0 | 1.0 |
| 60 | 300 | 58 | 301 | 2.0 | -1.0 | 1.5 |
| 90 | 270 | 88 | 272 | 2.0 | -2.0 | 2.0 |
| 120 | 240 | 118 | 241 | 2.0 | -1.0 | 1.5 |
| 150 | 210 | 149 | 211 | 1.0 | -1.0 | 1.0 |
| 180 | 180 | 179 | 180 | 1.0 | 0.0 | 0.5 |
| 210 | 150 | 210 | 149 | 0.0 | 1.0 | 0.5 |
| 240 | 120 | 241 | 119 | -1.0 | 1.0 | 1.0 |
| 270 | 90 | 272 | 88 | -2.0 | 2.0 | 2.0 |
| 300 | 60 | 301 | 58 | -1.0 | 2.0 | 1.5 |
| 330 | 30 | 331 | 29 | -1.0 | 1.0 | 1.0 |
| 355 | 0 | 355 | 0 | 0.0 | 0.0 | 0.0 |
| **The audit meets AMD requirements.** | | | **Average Absolute Degrees Difference=** | | | **1.0** |

**Comments:**

Change 2 speed bearing.

**Peace River Area Monitoring Program**

# AUGUST 2021

## Ambient Air Monitoring Calibration Report

## - 986c STATION-

## CAL-PRAMP-202108-01562

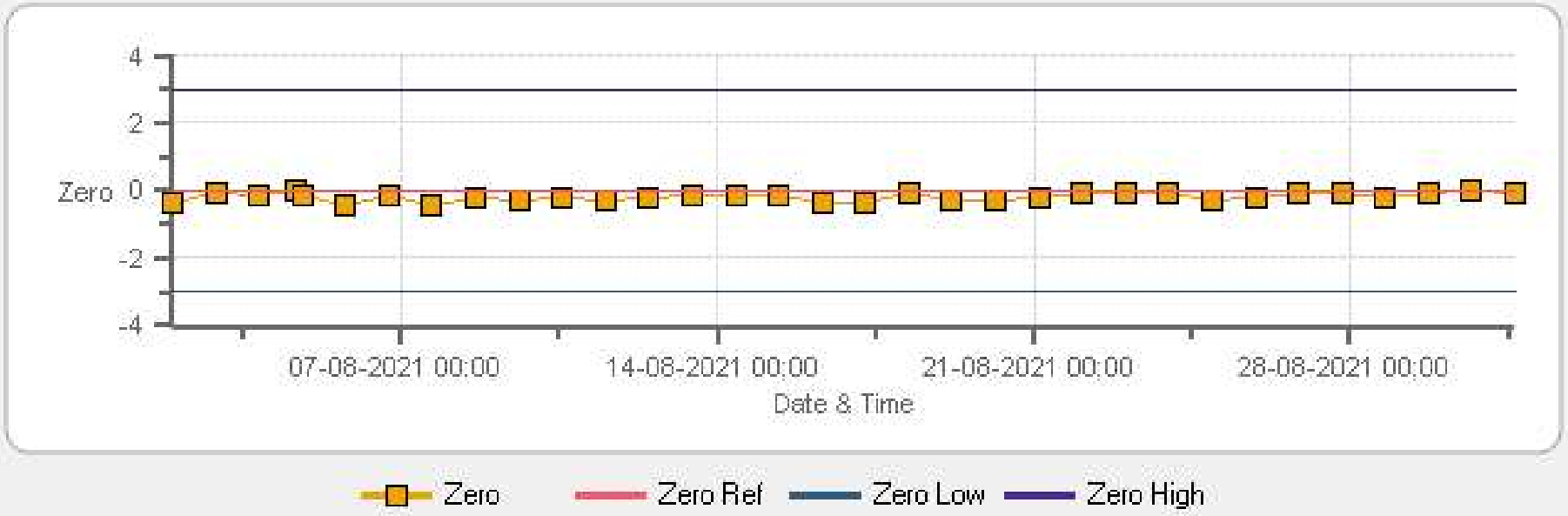
**Operation and Maintenance:**
Bureau Veritas Canada

**Data Validation and Report:**
Bureau Veritas Canada

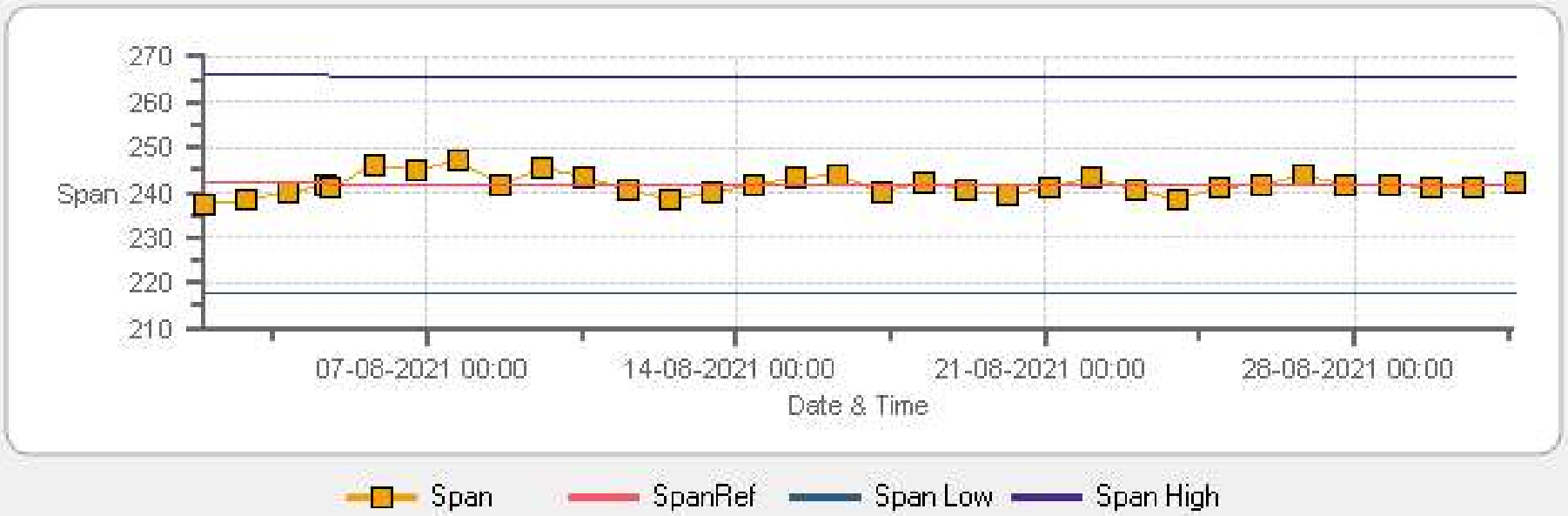
September 14, 2021

# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

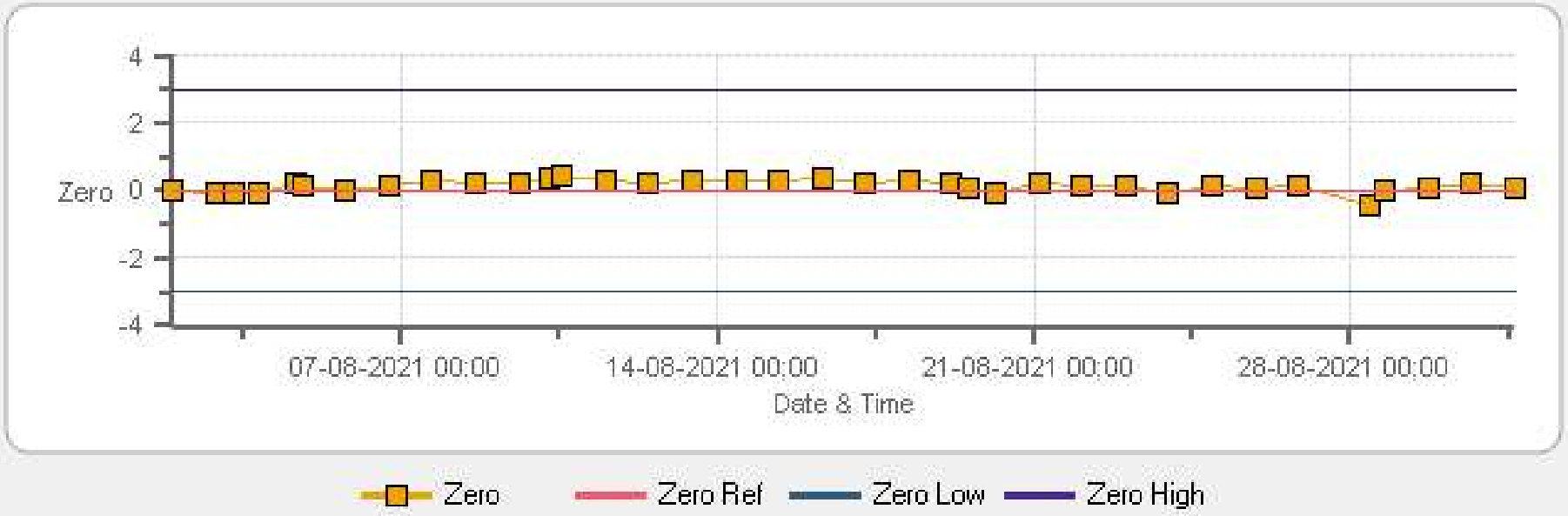
SO2[ppb] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Zero



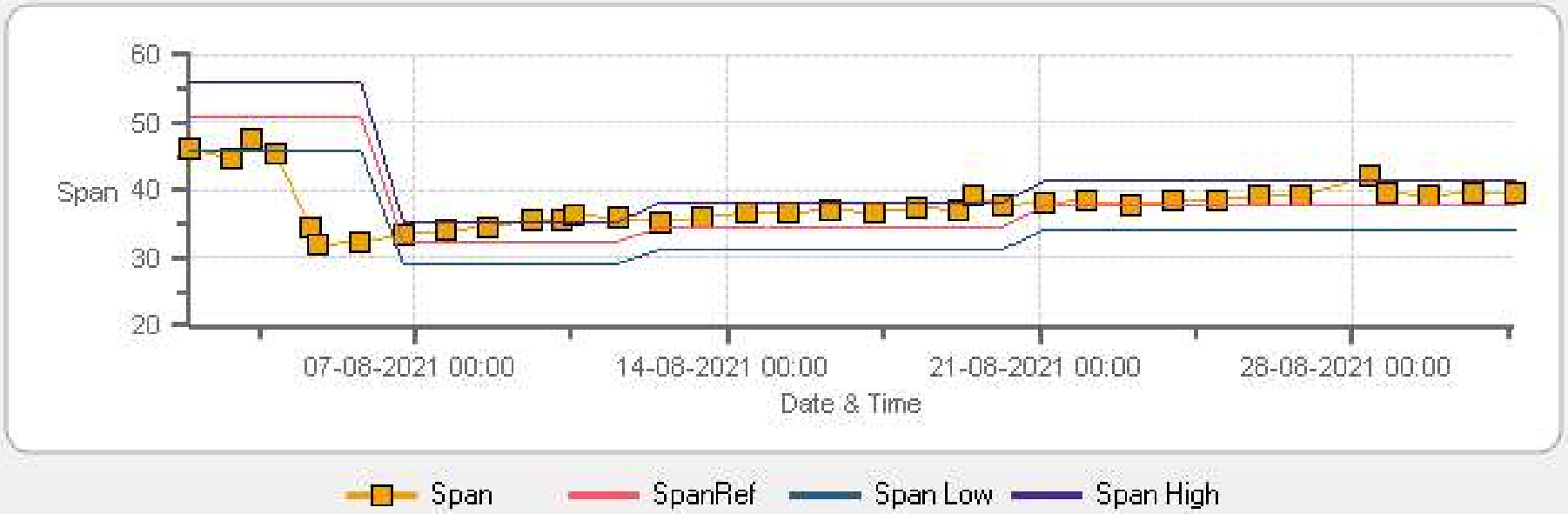

SO2[ppb] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Span



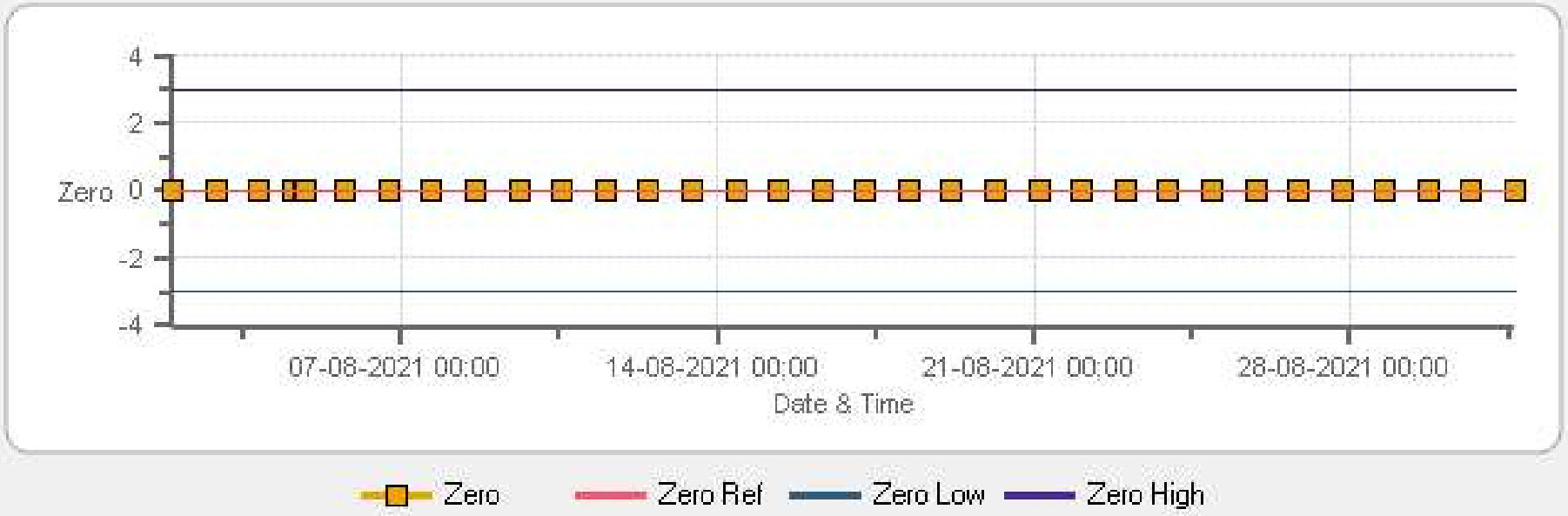
TRS[ppb] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Zero



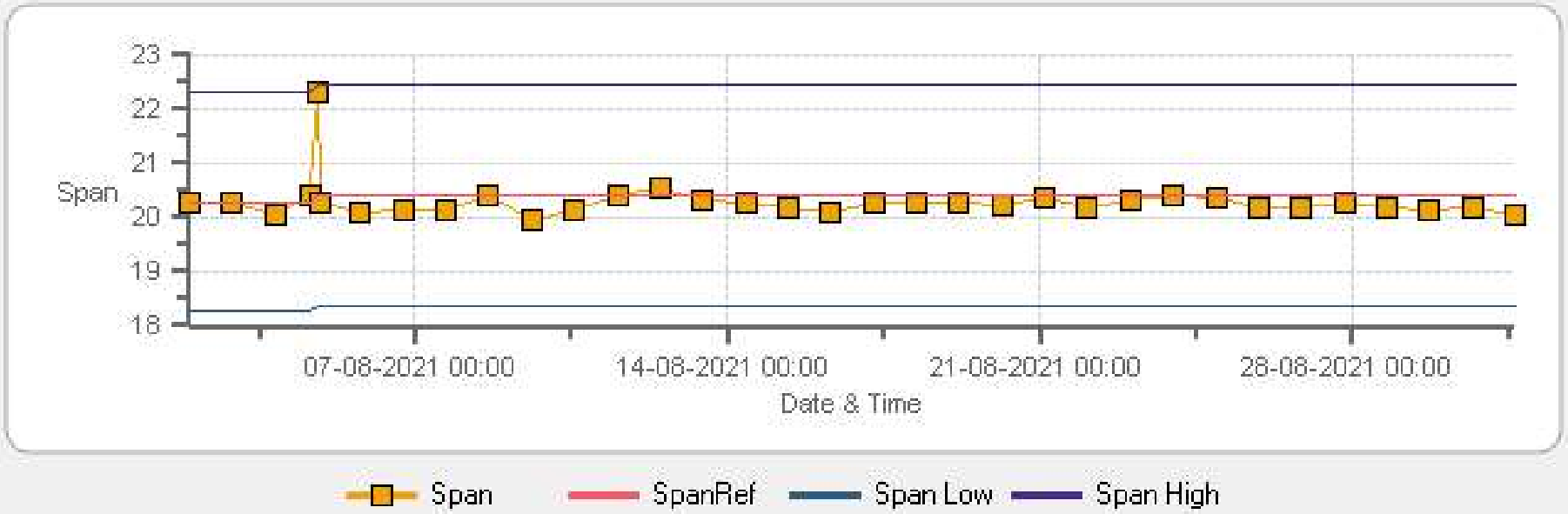

TRS[ppb] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Span



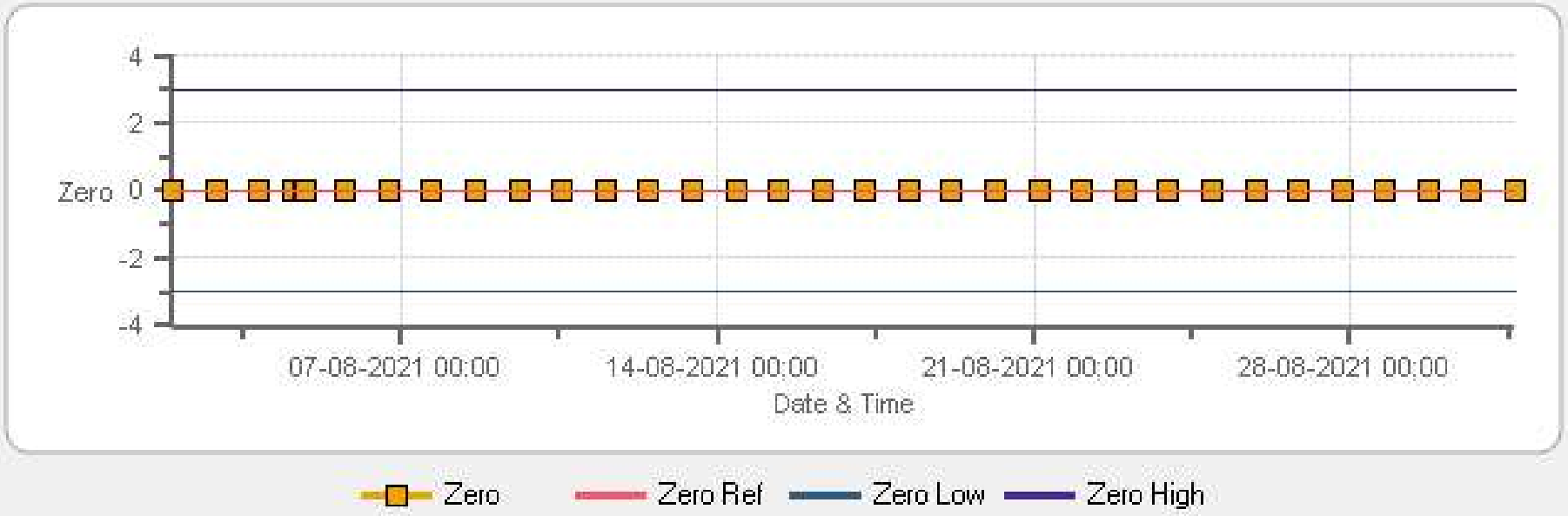
THC55[ppm] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Zero



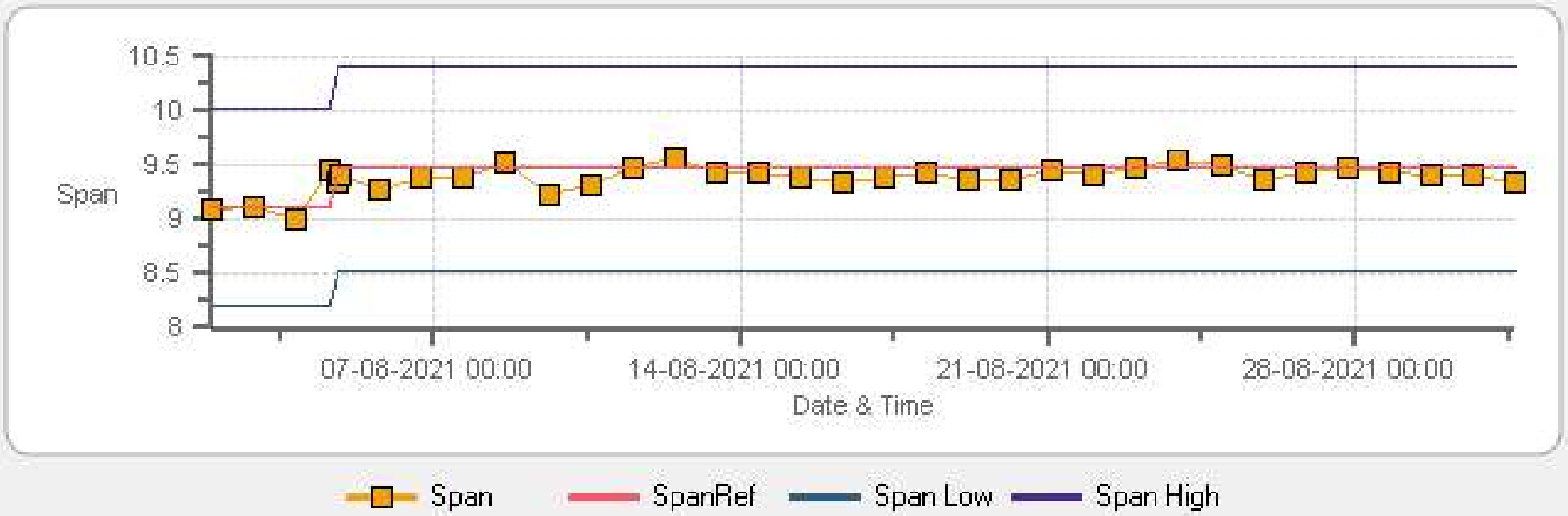

THC55[ppm] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Span



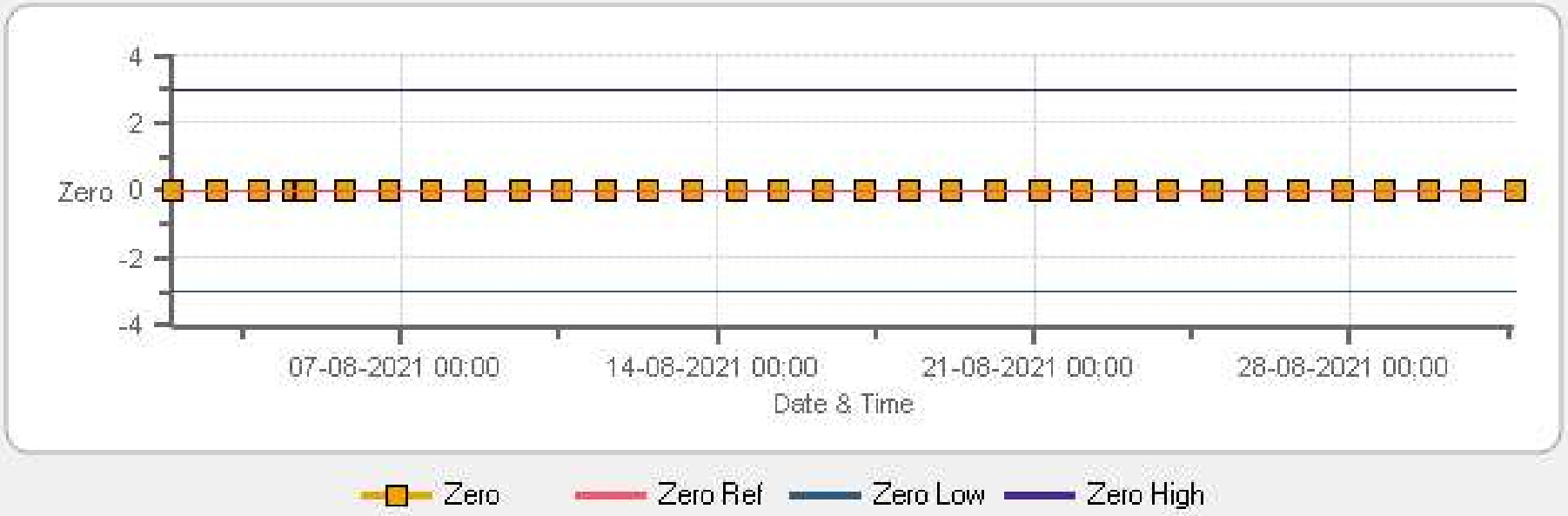
CH4[ppm] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Zero



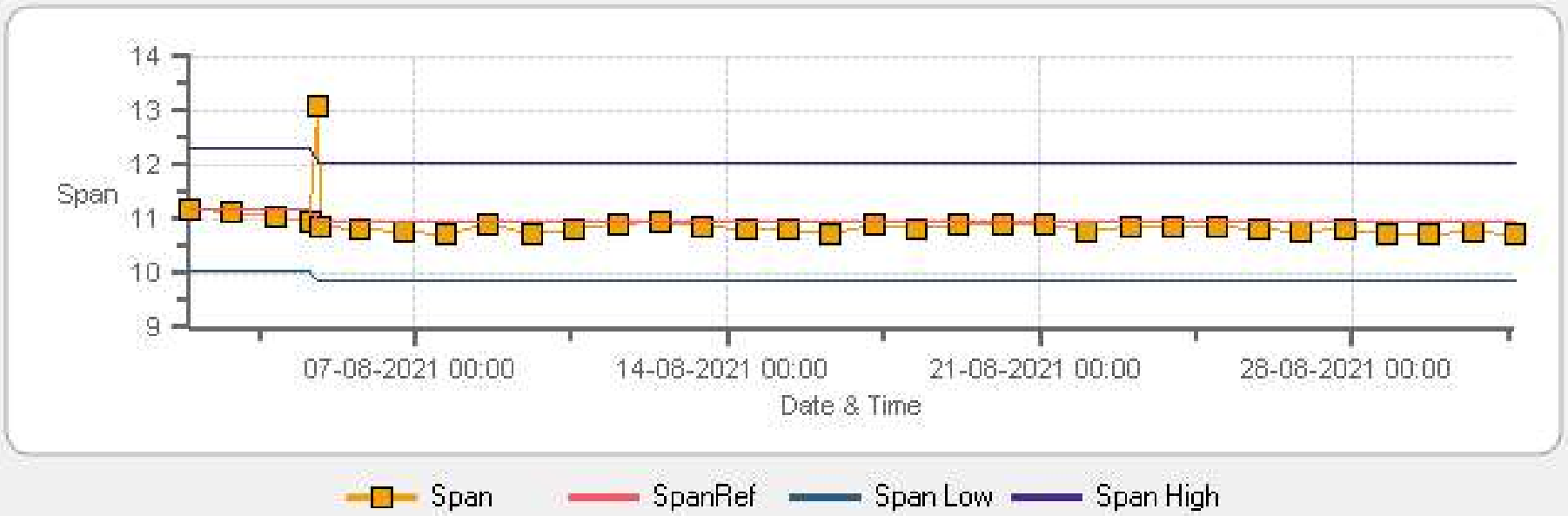

CH4[ppm] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Span



NMHC[ppm] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Zero




NMHC[ppm] Calibration: PRAMP 986c Monthly: 08-2021 Type: SpanAndZero - Span



# MULTI-POINT CALIBRATION RECORDS

# SO2 Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 04-Aug-2021 | PREVIOUS CALIBRATION DATE: | 03-Jul-2021 |
| PARAMETER: | SO2 | PREVIOUS CORRECTION FACTOR: | 1.001 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.6 |
| LOCATION: | 986C | BAROMETRIC (mBar): | 944 |
| PURPOSE | Routine | START TIME (MST): | 10:50 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 15:58 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43iQTL | RANGE | 500 ppb |
| SERIAL # | 1193585646 | FLOW (mL/min) | 430 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 12.5 | BKG/OFFSET | 12.8 |
| COEF/SLOPE | 0.995 | COEF/SLOPE | 1.01 |
| Expected (reference) Value | 242 | Expected (reference) Value | 241.7 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002357 | HIGH ID | n/a |
| CONC (ppm): | 24.90 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1400 | LOW ID | n/a |
| EXPIRY DATE | 13-Nov-2024 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 390 | 190 | 95 |
| RANGE | 300 - 400 | 150 - 200 | 50 - 100 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4001 | | 4001 | 0.00 | -0.1 | 0 | | |
| 3939 | 61.03 | 4000 | 379.95 | 372.7 | 380.1 | 1.019 | 1.000 |
| 3969 | 30.49 | 4000 | 189.83 | n/a | 190.9 | n/a | 0.994 |
| 3984 | 14.41 | 3998 | 89.76 | n/a | 89.3 | n/a | 1.005 |

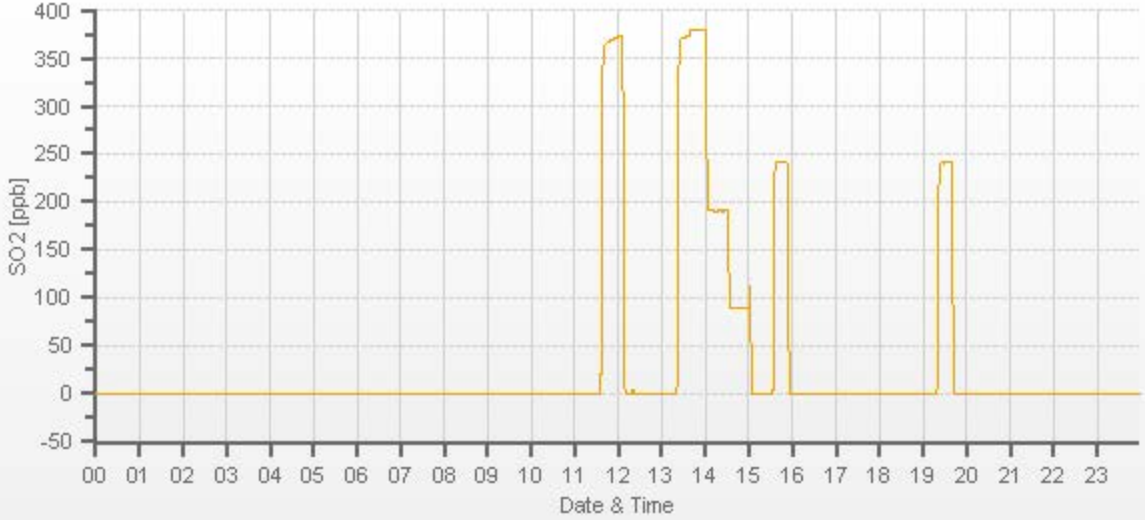
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.001 | 0.0% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues.

SO2[ppb] Station: PRAMP 986c Daily: 04-08-2021 Type: AVG 1 Min. [1 Min.]



# TRS Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 04-Aug-2021 | PREVIOUS CALIBRATION DATE: | 03-Jul-2021 |
| PARAMETER: | TRS | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.6 |
| LOCATION: | 986C | BAROMETRIC (mBar): | 944 |
| PURPOSE | Routine | START TIME (MST): | 10:50 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 15:58 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43iQTL | RANGE | 100 ppb |
| SERIAL # | 1191833341 | FLOW (mL/min) | 427 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 12.7 | BKG/OFFSET | 12 |
| COEF/SLOPE | 0.918 | COEF/SLOPE | 0.889 |
| Expected (reference) Value | 50.78 | Expected (reference) Value | 32.21 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002472 | HIGH ID | n/a |
| CONC (ppm): | 9.41 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1620 | LOW ID | n/a |
| EXPIRY DATE | 10-Nov-2023 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 78 | 38 | 19 |
| RANGE | 60 - 80 | 30 - 40 | 10 - 20 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4001 | | 4001 | 0.00 | -0.2 | 0 | | |
| 3967 | 33.23 | 4000 | 78.17 | 79.44 | 78.19 | 0.982 | 1.000 |
| 3984 | 16.16 | 4000 | 38.02 | n/a | 37.64 | n/a | 1.010 |
| 3990 | 8.09 | 3998 | 19.04 | n/a | 18.52 | n/a | 1.028 |

**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.002 | -0.3% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues. TRS Converter CDNOVA CDN-101#583

TRS[ppb] Station: PRAMP 986c Daily: 04-08-2021 Type: AVG 1 Min. [1 Min.]

# TRS Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 18-Aug-2021 | PREVIOUS CALIBRATION DATE: | 04-Aug-2021 |
| PARAMETER: | TRS | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.7 |
| LOCATION: | 986C | BAROMETRIC (mBar): | 939 |
| PURPOSE | As-Found | START TIME (MST): | 16:54 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 18:05 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43iQTL | RANGE | 100 ppb |
| SERIAL # | 1191833341 | FLOW (mL/min) | 425 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 12.1 | BKG/OFFSET | n/a |
| COEF/SLOPE | 0.889 | COEF/SLOPE | n/a |
| Expected (reference) Value | 34.58 | Expected (reference) Value | n/a |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002472 | HIGH ID | n/a |
| CONC (ppm): | 9.41 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1620 | LOW ID | n/a |
| EXPIRY DATE | 10-Nov-2023 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 78 | 38 | 19 |
| RANGE | 60 - 80 | 30 - 40 | 10 - 20 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4002 | | 4002 | 0.00 | 0.23 | n/a | | |
| 3967 | 33.19 | 4000 | 78.08 | 72.97 | n/a | 1.073 | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

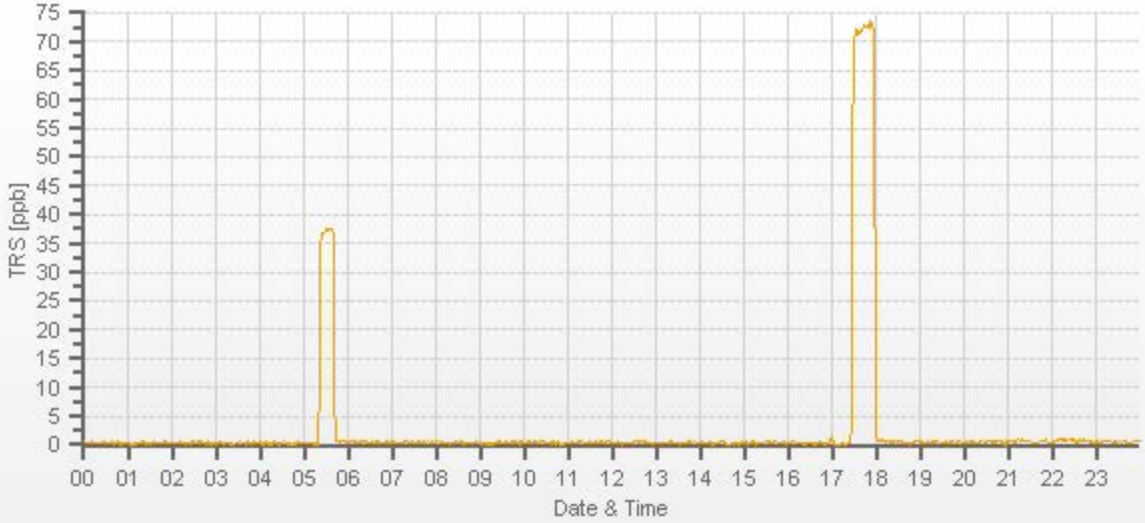
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | n/a | n/a | **n/a** |

**COMMENTS:**

Analyzer drift ~7%. Will do repeat calibration tomorrow.
TRS Converter CDNOVA CDN-101#583

TRS[ppb] Station: PRAMP 986c Daily: 18-08-2021 Type: AVG 1 Min. [1 Min.]



# TRS Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 19-Aug-2021 | PREVIOUS CALIBRATION DATE: | 04-Aug-2021 |
| PARAMETER: | TRS | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.3 |
| LOCATION: | 986C | BAROMETRIC (mBar): | 942 |
| PURPOSE | Repeat | START TIME (MST): | 07:50 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 12:43 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43iQTL | RANGE | 100 ppb |
| SERIAL # | 1191833341 | FLOW (mL/min) | 427 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 12.1 | BKG/OFFSET | 12.6 |
| COEF/SLOPE | 0.889 | COEF/SLOPE | 0.91 |
| Expected (reference) Value | 34.58 | Expected (reference) Value | 37.81 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002472 | HIGH ID | n/a |
| CONC (ppm): | 9.41 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1520 | LOW ID | n/a |
| EXPIRY DATE | 10-Nov-2023 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 78 | 38 | 19 |
| RANGE | 60 - 80 | 30 - 40 | 10 - 20 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | 08:26 | SO2 Conc (ppb) | 380 |
| END TIME: | 08:44 | Analyzer Response (ppb) | 0.1 |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4002 | | 4002 | 0.00 | 0.21 | 0 | | |
| 3967 | 33.17 | 4000 | 78.05 | 74.07 | 78.05 | 1.057 | 1.000 |
| 3984 | 16.17 | 4000 | 38.04 | n/a | 37.47 | n/a | 1.015 |
| 3992 | 8.09 | 4000 | 19.03 | n/a | 18.35 | n/a | 1.037 |

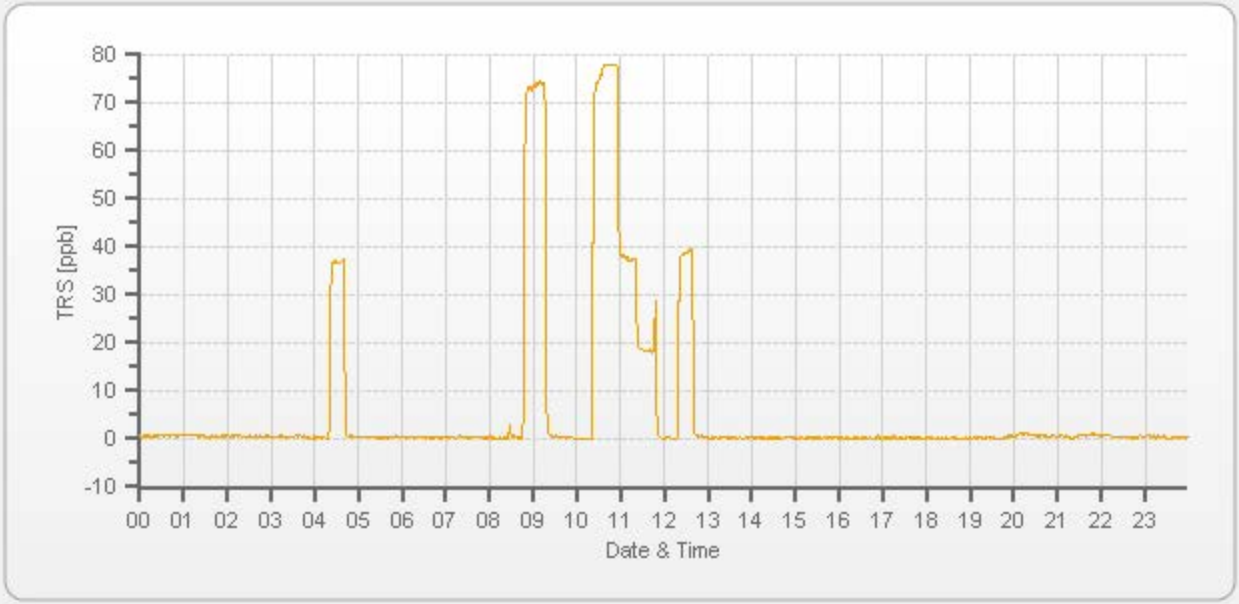
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.002 | -0.4% |

**COMMENTS:**

Repeat calibration - no issues. TRS Converter CDNOVA CDN-101#583

TRS[ppb] Station: PRAMP 986c Daily: 19-08-2021 Type: AVG 1 Min. [1 Min.]



# Methane/Non-Methane Analyzer Calibration by Dilution

**CALIBRATION:**

| | | | |
|---|---|---|---|
| DATE: | 04-Aug-2021 | PREVIOUS CALIBRATION DATE: | 03-Jul-2021 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.6 |
| LOCATION: | 986C | BAROMETRIC (mBar): | 944 |
| PURPOSE | Routine | START TIME (MST): | 10:50 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 15:09 |

**ANALYZER:**

| VALUE | MAKE/MODEL | SERIAL | FLOW (mL/min) |
|---|---|---|---|
| | Thermo 55i | 1193585652 | 1275.4 |
| PARAMETER: | CH4 | NMHC | THC |
| RANGE (ppm): | 20 | 20 | 40 |
| PREVIOUS CF: | 0.999 | 1.002 | 1.000 |

**CALIBRATION SYSTEM:**

| CALIBRATOR: | | ZERO AIR: | | CALIBRATION GAS: | | | FLOWMETERS (if applicable): | |
|---|---|---|---|---|---|---|---|---|
| MAKE: | Sabio | MAKE: | API | CYLINDER ID: | LL84567 | | HIGH ID: | n/a |
| MODEL: | 2010 | MODEL: | 701 | $CH_4/C_3H_8$ (ppm): | 591.0 | 200.0 | HIGH EXPIRY: | n/a |
| ID: | 17100415 | ID: | 850 | CYLINDER (psi): | 710 | | LOW ID: | n/a |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | 00941 | EXPIRY DATE | 17-Jul-2027 | | LOW EXPIRY: | n/a |

**CALIBRATION PARAMETERS:**

| POINT (CH4/NMHC) | HIGH | MID | LOW | CH4 EQUIVILANCE | |
|---|---|---|---|---|---|
| TARGET | 14 | 7 | 3.5 | $C_3H_8$ as $CH_4$ | 550.0 |
| RANGE | 12 - 16 | 6 - 8 | 2 - 4 | THC as $CH_4$ | 1141.0 |

**EXPECTED (REFERENCE) VALUE:**

| INITIAL | CH4 | NMHC | THC | FINAL | CH4 | NMHC | THC |
|---|---|---|---|---|---|---|---|
| | 9.12 | 11.18 | 20.29 | | 9.47 | 10.96 | 20.42 |

**CALIBRATION:**

| FLOW RATE | | | CONCENTRATION (PPM) | | | | | | | | | CORRECTION FACTOR (CF.) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (mL/min) | | | CALCULATED | | | INITIAL INDICATED | | | FINAL INDICATED | | | INITIAL | | | FINAL | | |
| DILUENT | GAS | TOTAL | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC |
| 3197 | | 3197 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| 3122 | 78.50 | 3200 | 14.50 | 13.49 | 27.99 | 13.98 | 13.76 | 27.73 | 14.48 | 13.50 | 27.98 | 1.037 | 0.981 | 1.009 | 1.001 | 0.999 | 1.000 |
| 3159 | 39.30 | 3198 | 7.26 | 6.76 | 14.02 | n/a | n/a | n/a | 7.31 | 6.80 | 14.14 | n/a | n/a | n/a | 0.994 | 0.994 | 0.992 |
| 3180 | 19.60 | 3200 | 3.62 | 3.37 | 6.99 | n/a | n/a | n/a | 3.63 | 3.41 | 7.04 | n/a | n/a | n/a | 0.997 | 0.988 | 0.993 |

**LINEAR REGRESSION ANALYSIS:**

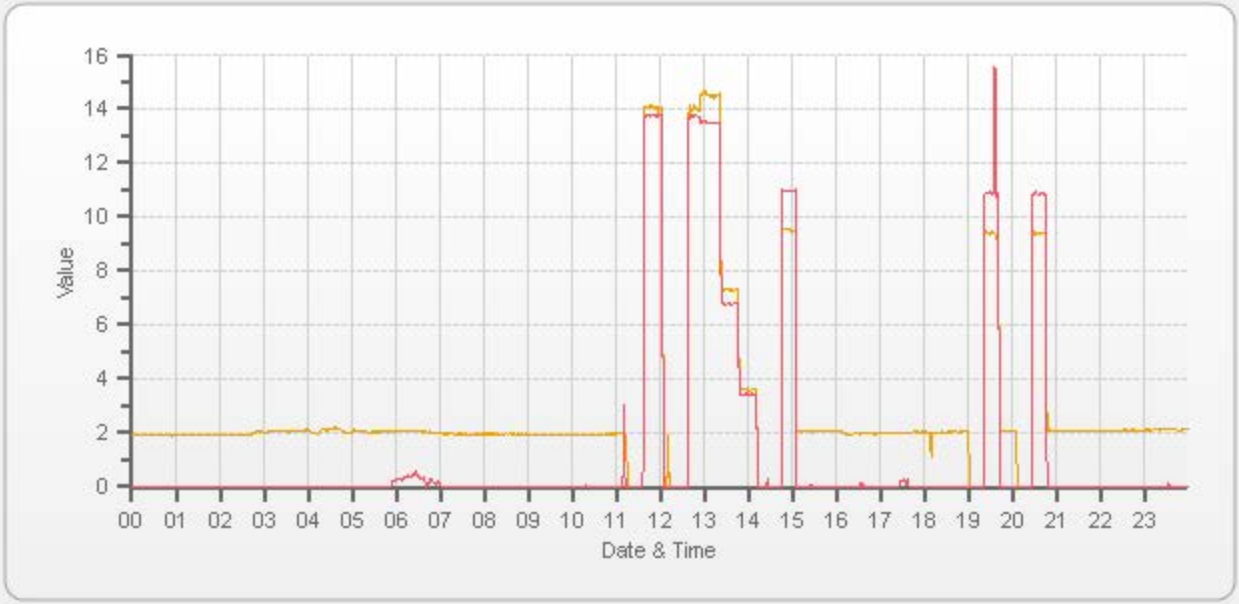
| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| CH4 | 1.000 | 0.999 | 0.1% |
| NMHC | 1.000 | 1.000 | 0.1% |
| THC | 1.000 | 0.999 | 0.1% |

**Comments:**

**Sample filter changed. Monthly calibration - no issues.**

**Use Zero Chrom?** **No**

Station: PRAMP 986c Daily: 04-08-2021 Type: AVG 1 Min. [1 Min.]



# Meteorological System Checklist

| | |
|---|---|
| Date: | August 4, 2021 |
| Technician: | Ferdinand Roy |
| Station: | PRAMP 986c |

| Unit: | Make: | Model: | Serial #: |
|---|---|---|---|
| Precipitation Sampler: | RM Young | 52202 | TB 16325 |
| Temperature Sensor: | Rotronic | HC2-S3 | 20357528 |
| Barometric Pressure Sensor: | MetOne | 092 | Y23358 |
| Relative Humidity Sensor: | Rotronic | HC2-S3 | 20357528 |
| Anemometer: | RM Young | 05305L | 174795 |

**PRECIPITATION SENSOR CHECK**

| Checklist: | Reply: | Comments: |
|---|---|---|
| Previous check date: | December 12, 2019 | |
| Is the sensor Level? | yes | |
| Is the heater operating properly? | other - see comments | plugged-in but OFF - high ambient temperature |
| Are the bucket drain holes clean? | yes | |
| Is the screen on the housing? (screen should be on between July and September | yes | |
| Is the housing clean? | yes | |
| Is the area around the housing clean and free from obstacles? | yes | |

**TIP TEST - Slowly pour water until 10 tips are heard. (10 tips = 1 ml)**

| # of Tips | Data Logger Response (ml): | Manual Specification = +/- 0.1 ml |
|---|---|---|
| **10** | 0.3 | 0.70 |

**AMBIENT TEMPERATURE SENSOR CHECK**

| | |
|---|---|
| Previous check date: | June 3, 2021 |
| Parameter: | Temperature @ 2 metres |
| Reference Thermometer ID: | F.S. 160348895 expires Sep 4, 2022 |
| Reference Temperature ($^{o}$C): | 26.0 |
| Station - Ambient Temperature ($^{o}$C): | 26.0 |
| Temperature Difference ($^{o}$C): | 0.0 |

**BAROMETRIC PRESSURE SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | June 3, 2021 | |
| Reference Barometer ID: | FS 10528 expires Feb 17, 2022 | |
| Reference Pressure - Units/Reading: | millibar | 943 |
| Station Pressure - Units/Reading: | millibar | 943.6 |
| Pressure Tolerance +/- 15% of error: | 802 - 1084 | -0.06% |

**RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | June 3, 2021 | |
| Reference Hygrometer ID: | F.S. 160348895 expires Sep 4, 2022 | |
| Reference Hygrometer % RH- Reading: | 56.61 | |
| Station Hygrometer % RH- Reading: | 62.40 | |
| RH Tolerance +/- 15% of difference: | 48.12 - 65.10 | -10.2% |

**ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK**

| WIND SPEED | | WIND DIRECTION | |
|---|---|---|---|
| Previous check date: | June 3, 2021 | Previous check date: | June 3, 2021 |
| Wind Speed Observed (kph): | 10~15 | Wind Direction Observed: | NE |
| Wind speed on Data Logger (kph): | 11.6 | Wind Direction on Data Logger: | NE |
| | | Wind Direction Pass/Fail?: | Pass |

Comments

Precipitation Sensor check failed. Tipping Bucket checked at 842b station - no issues. Maybe serial interface problem - to be confirmed on next site visit.

# Meteorological System Checklist

| | | | |
|---|---|---|---|
| Date: | August 18, 2021 | | |
| Technician: | Ferdinand Roy | | |
| Station: | PRAMP 986c | | |
| **Unit:** | **Make:** | **Model:** | **Serial #:** |
| Precipitation Sampler: | EML | ARG100 | 190114 |
| Temperature Sensor: | Rotronic | HC2-S3 | 20357528 |
| Barometric Pressure Sensor: | MetOne | 092 | Y23358 |
| Relative Humidity Sensor: | Rotronic | HC2-S3 | 20357528 |
| Anemometer: | RM Young | 05305L | 174795 |

**PRECIPITATION SENSOR CHECK**

| **Checklist:** | **Reply:** | **Comments:** |
|---|---|---|
| Previous check date: | June 3, 2021 | |
| Is the sensor Level? | yes | |
| Is the heater operating properly? | other - see comments | No heater |
| Are the bucket drain holes clean? | yes | |
| Is the screen on the housing? (screen should be on between July and September | yes | |
| Is the housing clean? | yes | |
| Is the area around the housing clean and free from obstacles? | yes | |

**TIP TEST - Slowly pour water until 5 tips are heard. (5 tips = 1 ml)**

| **# of Tips** | **Data Logger Response (ml):** | **Manual Specification = +/- 0.1 ml** |
|---|---|---|
| **5** | 1.0 | 1.00 |

Comments

Checked Rain Gauge at 15:58 - 15:59 and 16:18 - 16:19. Reset flag at 16:26

# Meteorological Sensor Audit/Calibration

**Location Information**

| | | | |
|---|---|---|---|
| **Company:** | PRAMP | **Performed By:** | Limin Li |
| **Audit Location:** | 986C | **Reviewed By:** | Chris Wesson |
| **Audit Date:** | July 3, 2021 | **Start/End Time (mst):** | 15:58 / 17:20 |
| **Calibration Purpose:** | routine annual | **Weather Conditions:** | Mainly cloudy with sunny breaks |

**Wind Sensor Information**

| **Sensor ID Data:** | | **Sensor Outputs:** | |
|---|---|---|---|
| **Sensor Make:** | RM Young | **Velocity Voltage Output Range:** | n/a |
| **Sensor Model:** | 05305L | **Velocity Unit Output Range:** | 0-180 |
| **Serial #:** | 174795 | **Direction Voltage Output Range:** | n/a |
| **Previous Cal/Audit Date:** | July 16, 2020 | **Direction Unit Output Range:** | 0-360 |

**Wind Calibrator Information**

**Calibrator I.D. and Expiry Date:** RM Young 18802 id# CA03309 expires June 07, 2023

**Wind Speed Audit Data **+/- 2% of the average correction factor is the limit****

| RPM | Wind Speed Generated kph | Clockwise Wind Speed kph | Counter Clockwise Wind Speed kph | Correction Factor |
|---|---|---|---|---|
| 0 | 0 | 0.0 | 0.0 | - |
| 1000 | 18.4 | 18.3 | 18.3 | 1.007 |
| 2000 | 36.9 | 36.7 | 36.7 | 1.004 |
| 3000 | 55.3 | 55.1 | 55.1 | 1.003 |
| 4000 | 73.7 | 73.6 | 73.6 | 1.002 |
| 5000 | 92.2 | 92.0 | 92.0 | 1.002 |
| 6000 | 110.6 | 110.5 | 110.5 | 1.001 |
| 7000 | 129.0 | 128.9 | 128.9 | 1.001 |
| 8000 | 147.4 | 147.3 | 147.3 | 1.001 |
| 9000 | 165.9 | 165.8 | 165.8 | 1.000 |
| 10000 | 184.3 | 184.2 | 184.2 | 1.001 |
| | | **The audit meets AMD requirements.** | **Average Correction Factor=** | **1.002** |

**Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit****

| Generated Wind Direction 0-360 (Up) | Generated Wind Direction 360-0 (Down) | Indicated Wind Direction 0-360 (Up) | Indicated Wind Direction 360-0 (Down) | Degrees Difference 0-360 (Up) | Degrees Difference 360-0 (Down) | Average Absolute Degrees Difference |
|---|---|---|---|---|---|---|
| 0 | 355 | 1 | 354 | 1.0 | 1.0 | 1.0 |
| 30 | 330 | 30 | 333 | 0.0 | -3.0 | 1.5 |
| 60 | 300 | 59 | 303 | 1.0 | -3.0 | 2.0 |
| 90 | 270 | 88 | 273 | 2.0 | -3.0 | 2.5 |
| 120 | 240 | 118 | 243 | 2.0 | -3.0 | 2.5 |
| 150 | 210 | 147 | 209 | 3.0 | 1.0 | 2.0 |
| 180 | 180 | 177 | 177 | 3.0 | 3.0 | 3.0 |
| 210 | 150 | 209 | 147 | 1.0 | 3.0 | 2.0 |
| 240 | 120 | 242 | 117 | -2.0 | 3.0 | 2.5 |
| 270 | 90 | 273 | 87 | -3.0 | 3.0 | 3.0 |
| 300 | 60 | 303 | 59 | -3.0 | 1.0 | 2.0 |
| 330 | 30 | 333 | 30 | -3.0 | 0.0 | 1.5 |
| 355 | 0 | 354 | 1 | 1.0 | 1.0 | 1.0 |
| **The audit meets AMD requirements.** | | | **Average Absolute Degrees Difference=** | | | **2.0** |

**Comments:**

Magnetic declination = 15Deg(E)

**Peace River Area Monitoring Program**

# AUGUST 2021

## Ambient Air Monitoring Calibration Report

## - RENO STATION-

## CAL-PRAMP-202108-01563

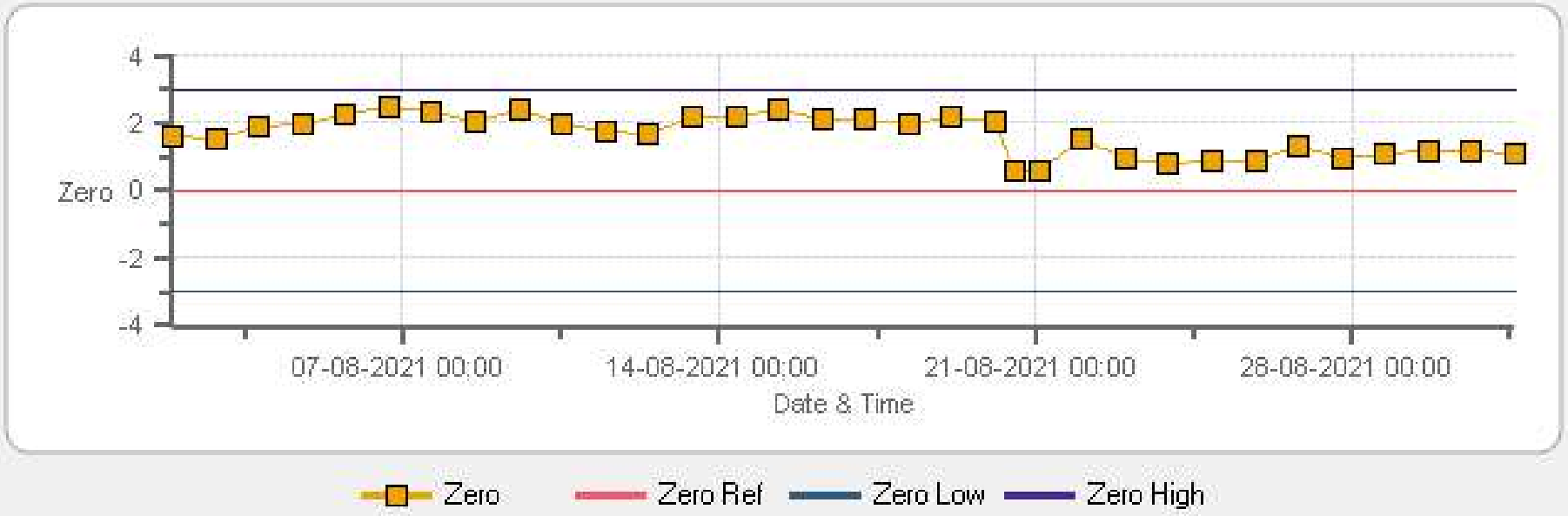
**Operation and Maintenance:**
Bureau Veritas Canada

**Data Validation and Report:**
Bureau Veritas Canada

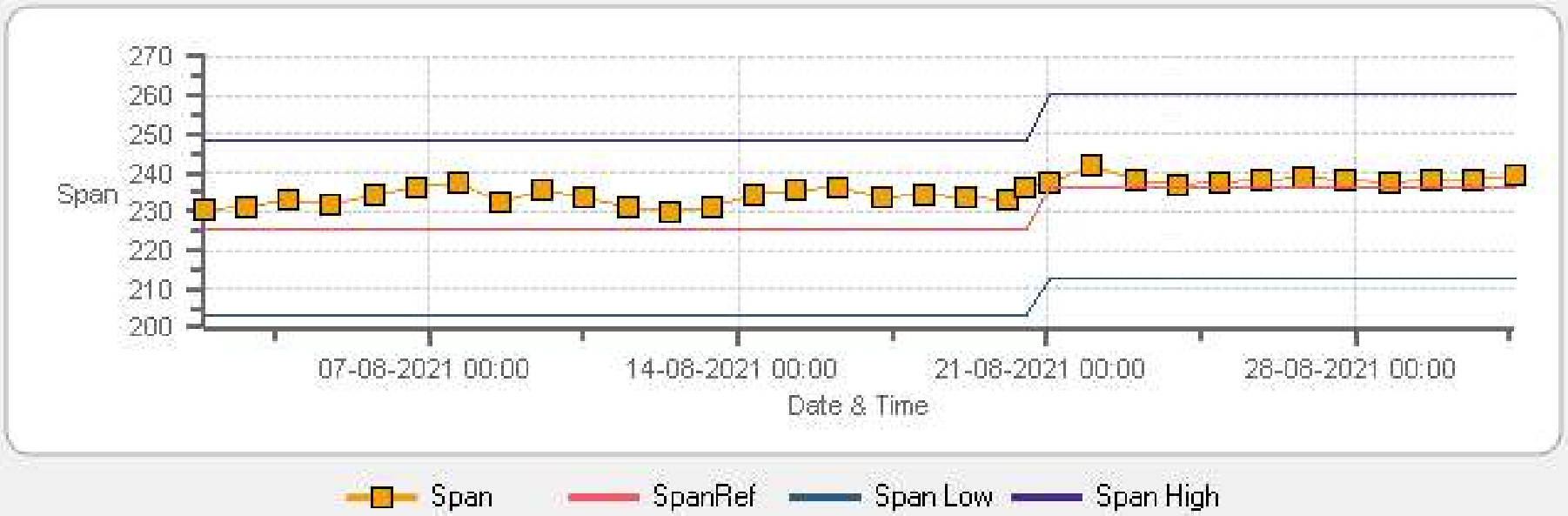
September 14, 2021

# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

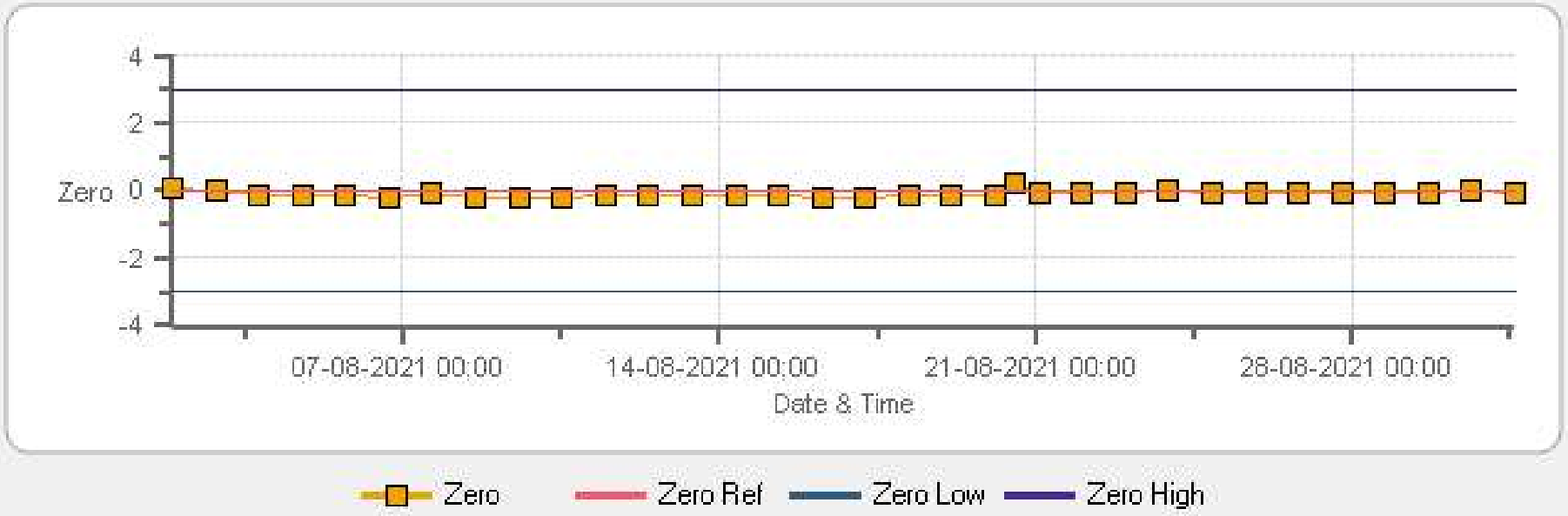
SO2[ppb] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Zero



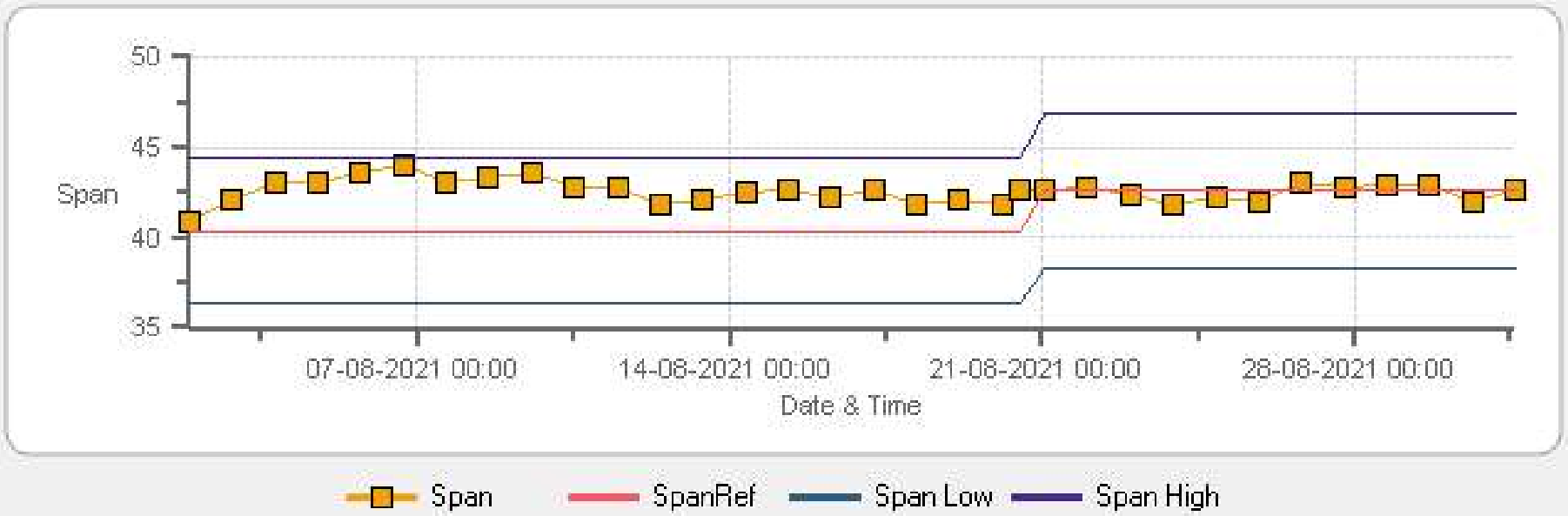

SO2[ppb] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Span



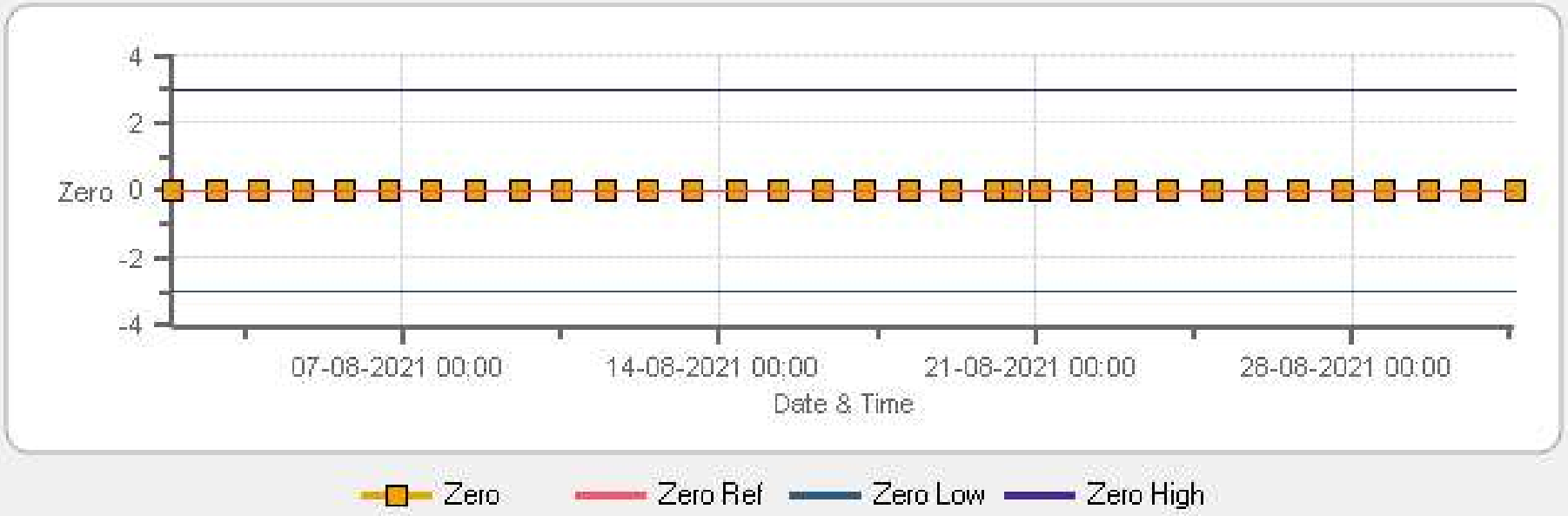
TRS[ppb] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Zero



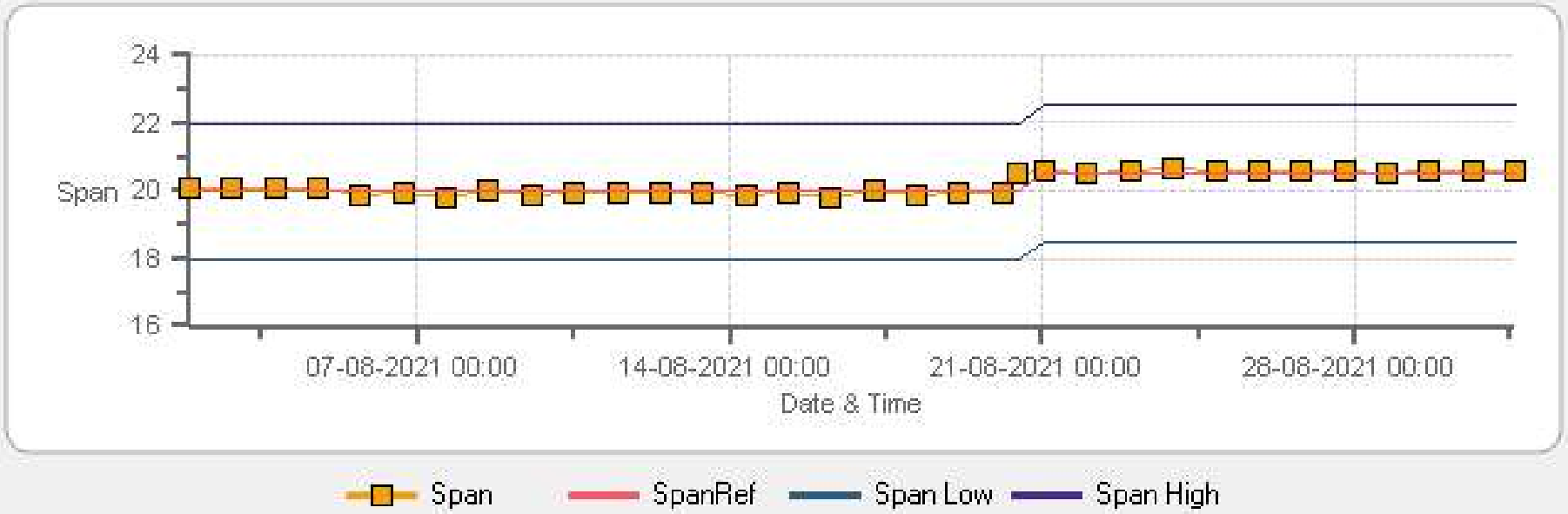

TRS[ppb] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Span



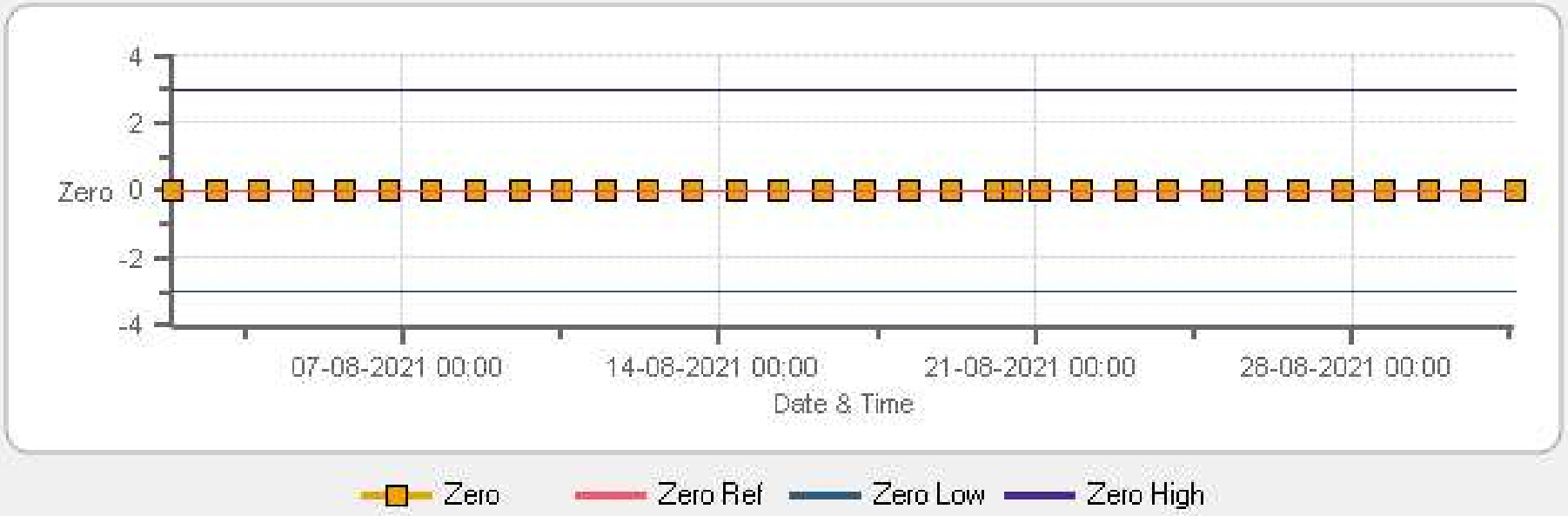
THC55[ppm] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Zero



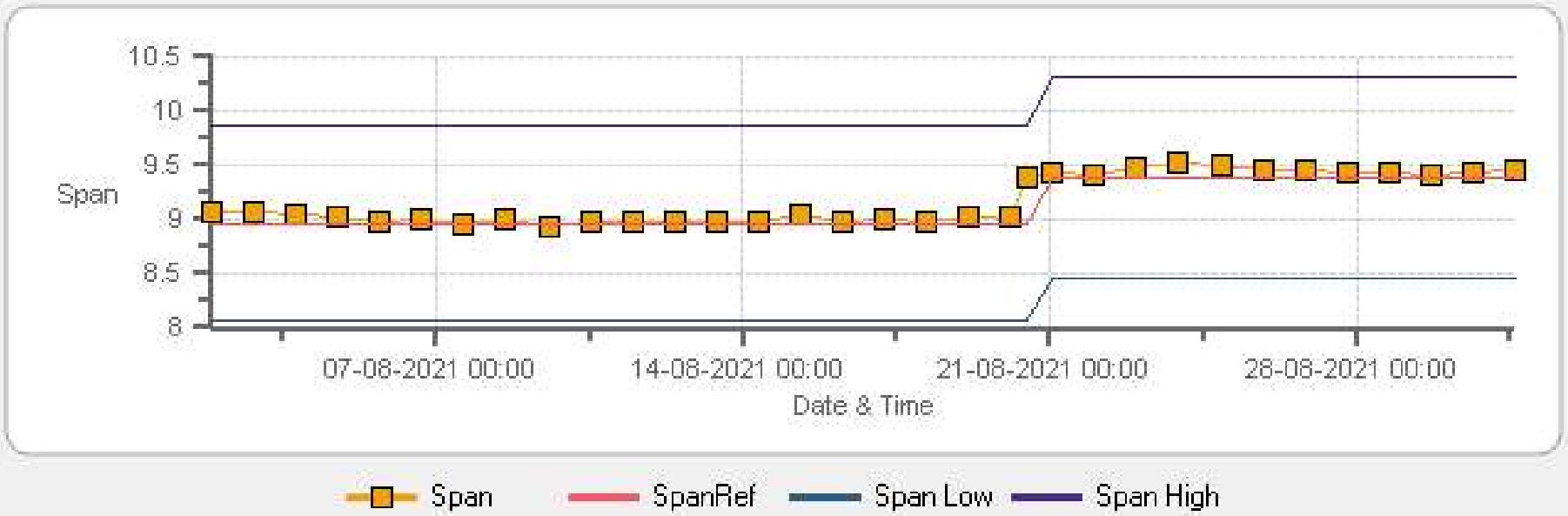

THC55[ppm] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Span



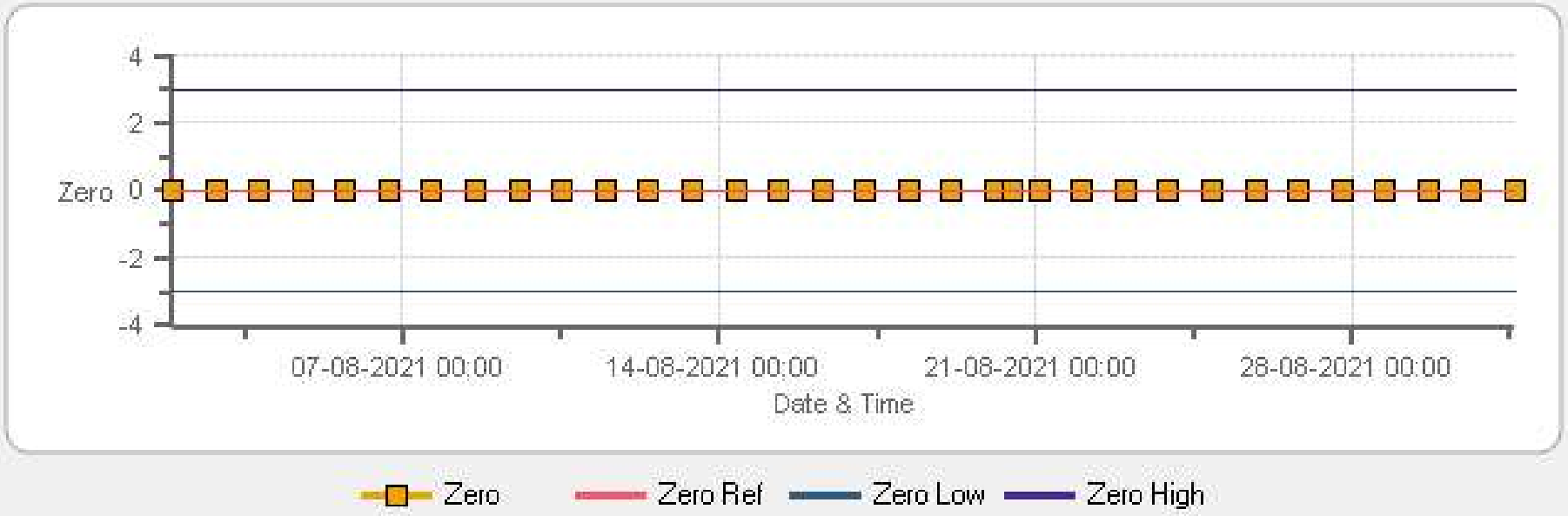
CH4[ppm] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Zero



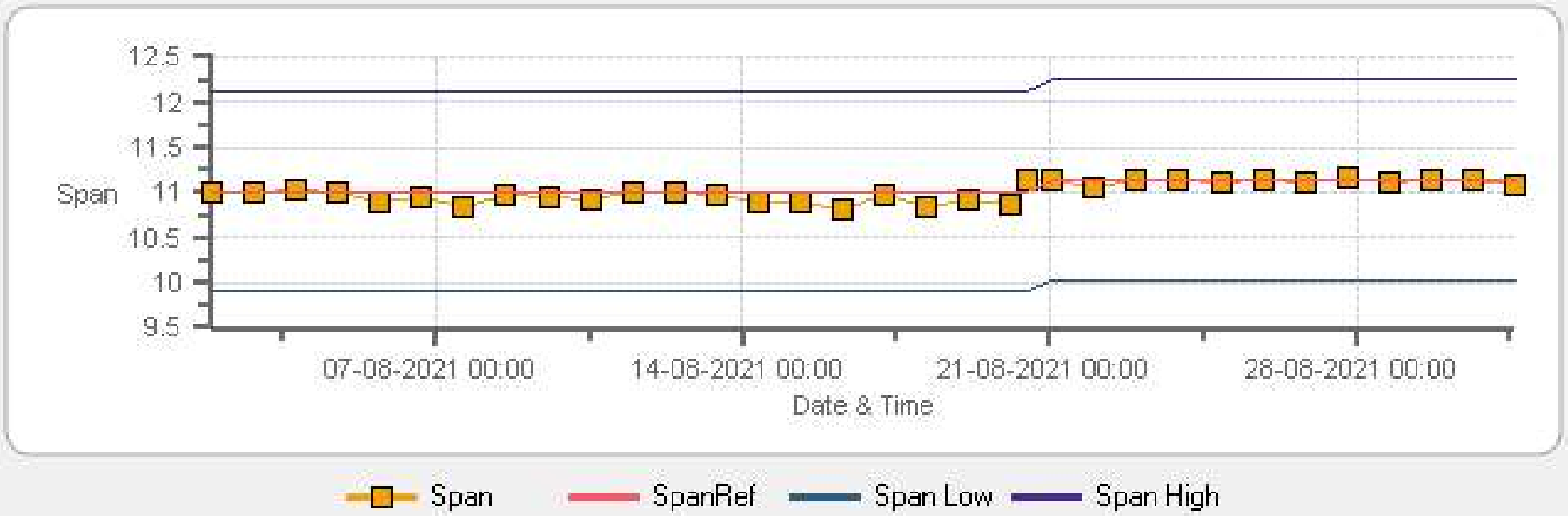

CH4[ppm] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Span



NMHC[ppm] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Zero




NMHC[ppm] Calibration: PRAMP RENO Monthly: 08-2021 Type: SpanAndZero - Span



# MULTI-POINT CALIBRATION RECORDS

# SO2 Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 20-Aug-2021 | PREVIOUS CALIBRATION DATE: | 05-Jul-2021 |
| PARAMETER: | SO2 | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.7 |
| LOCATION: | Reno | BAROMETRIC (mBar): | 942 |
| PURPOSE | Routine | START TIME (MST): | 07:36 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 12:40 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | API 100A | RANGE | 500 ppb |
| SERIAL # | 1502 | FLOW (mL/min) | 657 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 82.1 | BKG/OFFSET | 84.8 |
| COEF/SLOPE | 1.024 | COEF/SLOPE | 1.048 |
| Expected (reference) Value | 225.7 | Expected (reference) Value | 236.5 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002357 | HIGH ID | n/a |
| CONC (ppm): | 24.90 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1300 | LOW ID | n/a |
| EXPIRY DATE | 13-Nov-2024 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 390 | 190 | 95 |
| RANGE | 300 - 400 | 150 - 200 | 50 - 100 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 3999 | | 3999 | 0.00 | 1.4 | 0 | | |
| 3939 | 61.03 | 4000 | 379.89 | 370 | 380 | 1.031 | 1.000 |
| 3972 | 28.86 | 4001 | 179.62 | n/a | 179.5 | n/a | 1.001 |
| 3987 | 14.43 | 4001 | 89.81 | n/a | 89.1 | n/a | 1.008 |

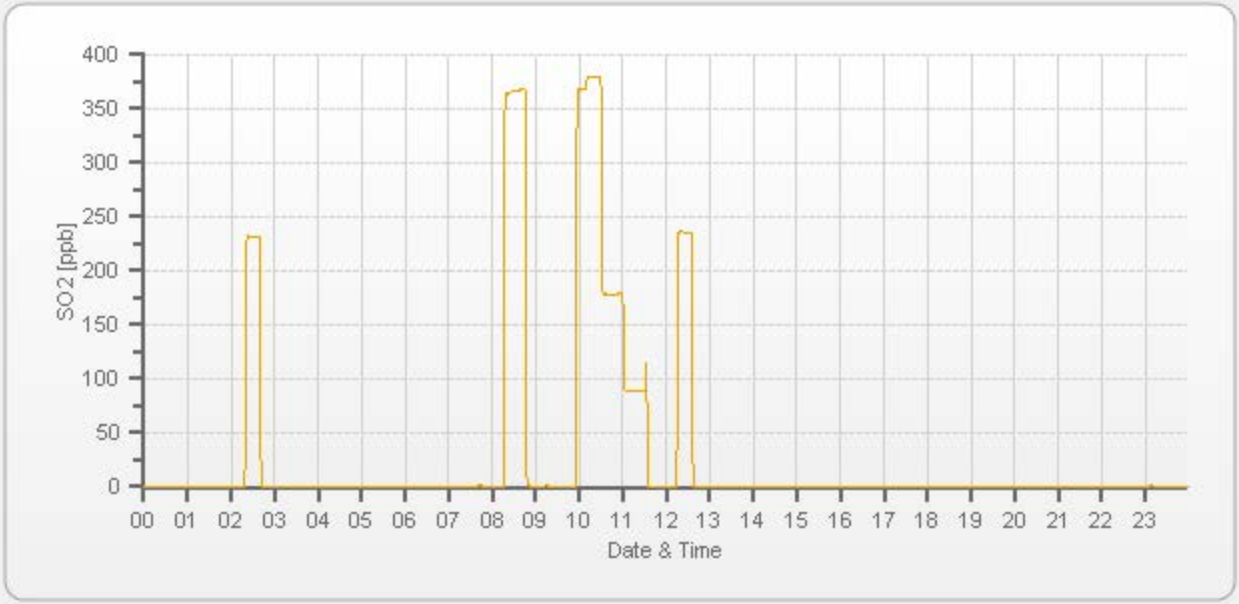
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.001 | -0.1% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues.

SO2[ppb] Station: PRAMP RENO Daily: 20-08-2021 Type: AVG 1 Min. [1 Min.]



# TRS Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 20-Aug-2021 | PREVIOUS CALIBRATION DATE: | 05-Jul-2021 |
| PARAMETER: | TRS | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.7 |
| LOCATION: | Reno | BAROMETRIC (mBar): | 942 |
| PURPOSE | Routine | START TIME (MST): | 07:36 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 12:40 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Thermo 43I-TLE | RANGE | 100 ppb |
| SERIAL # | 1162460022 | FLOW (mL/min) | 410 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 3.03 | BKG/OFFSET | 2.92 |
| COEF/SLOPE | 0.984 | COEF/SLOPE | 0.985 |
| Expected (reference) Value | 40.38 | Expected (reference) Value | 42.6 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002472 | HIGH ID | n/a |
| CONC (ppm): | 9.41 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1510 | LOW ID | n/a |
| EXPIRY DATE | 10-Nov-2023 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 78 | 38 | 19 |
| RANGE | 60 - 80 | 30 - 40 | 10 - 20 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 3999 | | 3999 | 0.00 | 0.02 | 0 | | |
| 3967 | 33.19 | 4000 | 78.06 | 77.94 | 78.01 | 1.002 | 1.001 |
| 3985 | 16.17 | 4001 | 38.02 | n/a | 38.18 | n/a | 0.996 |
| 3993 | 8.09 | 4001 | 19.02 | n/a | 18.92 | n/a | 1.005 |

**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.000 | 0.0% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues.
Converter CD NOVA CDN-101 #552


TRS[ppb] Station: PRAMP RENO Daily: 20-08-2021 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

# Methane/Non-Methane Analyzer Calibration by Dilution

**CALIBRATION:**

| | | | |
|---|---|---|---|
| DATE: | 20-Aug-2021 | PREVIOUS CALIBRATION DATE: | 05-Jul-2021 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 24.7 |
| LOCATION: | Reno | BAROMETRIC (mBar): | 942 |
| PURPOSE | Routine | START TIME (MST): | 07:35 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 11:42 |

**ANALYZER:**

| VALUE | MAKE/MODEL | SERIAL | FLOW (mL/min) |
|---|---|---|---|
| | Thermo 55i | 1505664392 | 1039.2 |
| PARAMETER: | CH4 | NMHC | THC |
| RANGE (ppm): | 20 | 20 | 40 |
| PREVIOUS CF: | 0.995 | 1.001 | 0.998 |

**CALIBRATION SYSTEM:**

| CALIBRATOR: | | ZERO AIR: | | CALIBRATION GAS: | | | FLOWMETERS (if applicable): | |
|---|---|---|---|---|---|---|---|---|
| MAKE: | Sabio | MAKE: | API | CYLINDER ID: | LL84567 | | HIGH ID: | n/a |
| MODEL: | 2010 | MODEL: | 701 | $CH_4/C_3H_8$ (ppm): | 591.0 | 200.0 | HIGH EXPIRY: | n/a |
| ID: | 17100415 | ID: | 850 | CYLINDER (psi): | 630 | | LOW ID: | n/a |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | 00941 | EXPIRY DATE | 17-Jul-2027 | | LOW EXPIRY: | n/a |

**CALIBRATION PARAMETERS:**

| POINT (CH4/NMHC) | HIGH | MID | LOW | CH4 EQUIVILANCE | |
|---|---|---|---|---|---|
| TARGET | 14 | 7 | 3.5 | $C_3H_8$ as $CH_4$ | 550.0 |
| RANGE | 12 - 16 | 6 - 8 | 2 - 4 | THC as $CH_4$ | 1141.0 |

**EXPECTED (REFERENCE) VALUE:**

| INITIAL | CH4 | NMHC | THC | FINAL | CH4 | NMHC | THC |
|---|---|---|---|---|---|---|---|
| | 8.96 | 11.01 | 19.98 | | 9.39 | 11.13 | 20.52 |

**CALIBRATION:**

| FLOW RATE (mL/min) | | | CONCENTRATION (PPM) | | | | | | | | | CORRECTION FACTOR (CF.) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CALCULATED | | | INITIAL INDICATED | | | FINAL INDICATED | | | INITIAL | | | FINAL | | |
| DILUENT | GAS | TOTAL | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC |
| 2998 | | 2998 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| 2924 | 73.60 | 2998 | 14.51 | 13.50 | 28.01 | 13.88 | 13.37 | 27.25 | 14.53 | 13.52 | 28.05 | 1.045 | 1.010 | 1.028 | 0.999 | 0.999 | 0.999 |
| 2960 | 36.80 | 2997 | 7.26 | 6.75 | 14.01 | n/a | n/a | n/a | 7.27 | 6.85 | 14.12 | n/a | n/a | n/a | 0.998 | 0.986 | 0.992 |
| 2980 | 18.40 | 2998 | 3.63 | 3.38 | 7.00 | n/a | n/a | n/a | 3.63 | 3.51 | 7.14 | n/a | n/a | n/a | 0.999 | 0.962 | 0.981 |

**LINEAR REGRESSION ANALYSIS:**

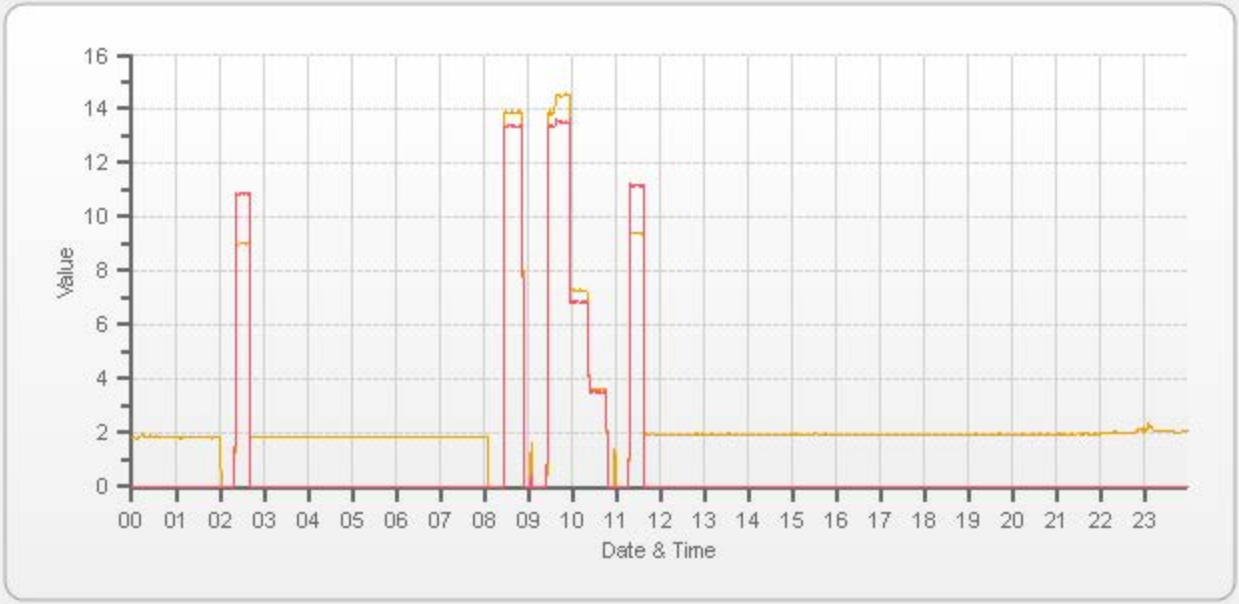
| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| CH4 | 1.000 | 1.002 | 0.0% |
| NMHC | 1.000 | 0.999 | 0.3% |
| THC | 1.000 | 1.000 | 0.2% |

**Comments:**

**Sample filter changed. Monthly calibration - no issues.**

**Use Zero Chrom?** **No**

Station: PRAMP RENO Daily: 20-08-2021 Type: AVG 1 Min. [1 Min.]



# Meteorological System Checklist

| | |
|---|---|
| Date: | August 20, 2021 |
| Technician: | Ferdinand Roy |
| Station: | PRAMP Reno |

| Unit: | Make: | Model: | Serial #: |
|---|---|---|---|
| Precipitation Sampler: | RM Young | 52202 | TB 15877 |
| Temperature Sensor: | RM Young | 43172VC | 60837897 |
| Barometric Pressure Sensor: | MetOne | 92 | K12864 |
| Relative Humidity Sensor: | RM Young | 43172VC | 60837897 |
| Anemometer: | RM Young | 05305VK | 149769 |

**PRECIPITATION SENSOR CHECK**

| Checklist: | Reply: | Comments: |
|---|---|---|
| Previous check date: | June 15, 2021 | |
| Is the heater operating properly? | yes | |
| Are the bucket drain holes clean? | no | Found hole blocked. Removed blockage. Tip test OK only after cleaning |
| Is the screen on the housing? (screen should be on between July and September | no | Screen missing. Added temporary screen. |
| Is the housing clean? | yes | |
| Is the area around the housing clean and free from obstacles? | yes | |

**TIP TEST - Slowly pour water until 10 tip are heard. (10 tips = 1 ml)**

| # of Tips | Data Logger Response (ml): | Manual Specification = +/- 0.1 ml |
|---|---|---|
| **10** | 1.00 | 0.00 |

**AMBIENT TEMPERATURE SENSOR CHECK**

| | |
|---|---|
| Previous check date: | June 15, 2021 |
| Parameter: | Temperature @ 2 metres |
| Reference Thermometer ID: | FS 160348895 expires September 4, 2022 |
| Reference Temperature ($^{o}$C): | 10.8 |
| Station - Ambient Temperature ($^{o}$C): | 10.2 |
| Temperature Difference ($^{o}$C): | 0.6 |

**BAROMETRIC PRESSURE SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | June 15, 2021 | |
| Reference Barometer ID: | FS 10528 expires February 17, 2022 | |
| Reference Pressure - Units/Reading: | millibar | 942 |
| Station  Pressure - Units/Reading: | millibar | 943.7 |
| Pressure Tolerance +/- 15% of error: | 801 - 1083 | -0.18% |

**RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | June 15, 2021 | |
| Reference Hygrometer ID: | FS 160348895 expires September 4, 2022 | |
| Reference Hygrometer % RH- Reading: | 88.24 | |
| Station Hygrometer % RH- Reading: | 100.00 | |
| RH Tolerance +/- 15% of difference: | 75.00 - 101.48 | -13.3% |

**ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK**

| WIND SPEED | | WIND DIRECTION | |
|---|---|---|---|
| Previous check date: | June 15, 2021 | Previous check date: | June 15, 2021 |
| Wind Speed Observed (kph): | 5~10 | Wind Direction Observed: | NE |
| Wind speed on Data Logger (kph): | 8.4 | Wind Direction on Data Logger: | NE |
| | | Wind Direction Pass/Fail?: | Pass |

Comments

Operator error - forgot to flag Precip channel while adding screen to the hole. Precip data at 11:28 not valid. Redo precip check 11:47 - 11:49 - 10 tips.

# Meteorological Sensor Audit/Calibration

**Location Information**

| | | | |
|---|---|---|---|
| **Company:** | PRAMP | **Performed By:** | Limin Li |
| **Audit Location:** | Reno | **Reviewed By:** | |
| **Audit Date:** | July 5, 2021 | **Start/End Time (mst):** | 12:46/13:50 |
| **Calibration Purpose:** | routine annual | **Weather Conditions:** | Mainly sunny |

**Wind Sensor Information**

| **Sensor ID Data:** | | **Sensor Outputs:** | |
|---|---|---|---|
| **Sensor Make:** | RM Young | **Velocity Voltage Output Range:** | 0-1 |
| **Sensor Model:** | 05305VK | **Velocity Unit Output Range:** | 0-200 |
| **Serial #:** | 149769 | **Direction Voltage Output Range:** | 0-1 |
| **Previous Cal/Audit Date:** | June 17, 2020 | **Direction Unit Output Range:** | 0-360 |

**Wind Calibrator Information**

**Calibrator I.D. and Expiry Date:** RM Young 18802 id# CA03309 expires June 07, 2023

**Wind Speed Audit Data **+/- 2% of the average correction factor is the limit****

| RPM | Wind Speed Generated kph | Clockwise Wind Speed kph | Counter Clockwise Wind Speed kph | Correction Factor |
|---|---|---|---|---|
| 0 | 0 | 0.0 | 0.0 | - |
| 1000 | 18.4 | 18.4 | 18.4 | 1.002 |
| 2000 | 36.9 | 36.8 | 36.8 | 1.002 |
| 3000 | 55.3 | 55.2 | 55.2 | 1.002 |
| 4000 | 73.7 | 73.6 | 73.6 | 1.002 |
| 5000 | 92.2 | 92.2 | 92.2 | 0.999 |
| 6000 | 110.6 | 110.6 | 110.6 | 1.000 |
| 7000 | 129.0 | 129.2 | 129.2 | 0.999 |
| 8000 | 147.4 | 147.6 | 147.6 | 0.999 |
| 9000 | 165.9 | 166.2 | 166.2 | 0.998 |
| 10000 | 184.3 | 184.8 | 184.8 | 0.997 |
| | | **The audit meets AMD requirements.** | **Average Correction Factor=** | **1.000** |

**Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit****

| Generated Wind Direction 0-360 (Up) | Generated Wind Direction 360-0 (Down) | Indicated Wind Direction 0-360 (Up) | Indicated Wind Direction 360-0 (Down) | Degrees Difference 0-360 (Up) | Degrees Difference 360-0 (Down) | Average Absolute Degrees Difference |
|---|---|---|---|---|---|---|
| 0 | 355 | 1 | 354 | 1.0 | 1.0 | 1.0 |
| 30 | 330 | 32 | 329 | -2.0 | 1.0 | 1.5 |
| 60 | 300 | 62 | 300 | -2.0 | 0.0 | 1.0 |
| 90 | 270 | 93 | 270 | -3.0 | 0.0 | 1.5 |
| 120 | 240 | 122 | 240 | -2.0 | 0.0 | 1.0 |
| 150 | 210 | 152 | 211 | -2.0 | -1.0 | 1.5 |
| 180 | 180 | 182 | 181 | -2.0 | -1.0 | 1.5 |
| 210 | 150 | 212 | 151 | -2.0 | -1.0 | 1.5 |
| 240 | 120 | 241 | 121 | -1.0 | -1.0 | 1.0 |
| 270 | 90 | 270 | 91 | 0.0 | -1.0 | 0.5 |
| 300 | 60 | 300 | 61 | 0.0 | -1.0 | 0.5 |
| 330 | 30 | 329 | 31 | 1.0 | -1.0 | 1.0 |
| 355 | 0 | 354 | 0 | 1.0 | 0.0 | 0.5 |
| **The audit meets AMD requirements.** | | | **Average Absolute Degrees Difference=** | | | **1.1** |

**Comments:**

Bearings replaced. Declination = 15deg East

**Peace River Area Monitoring Program**

# AUGUST 2021

## Ambient Air Monitoring Calibration Report

## - AQHI - CADOTTE LAKE STATION-

## CAL-PRAMP-202108-01651

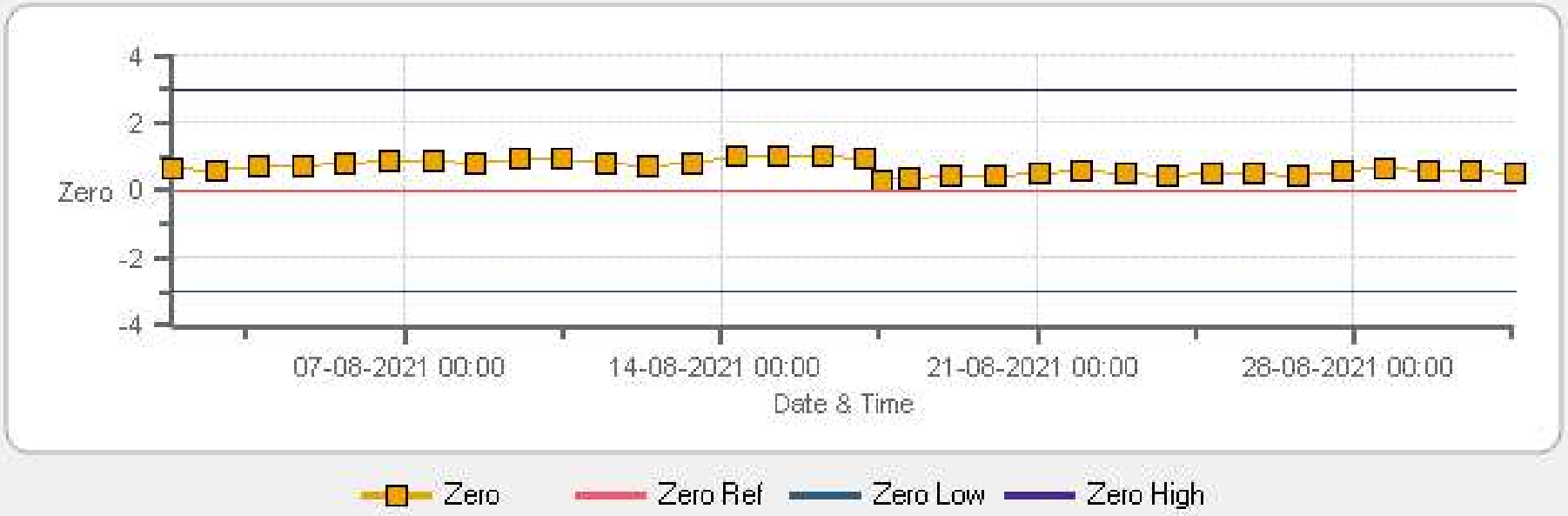
**Operation and Maintenance:**
Bureau Veritas Canada

**Data Validation and Report:**
Bureau Veritas Canada

September 14, 2021

# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero

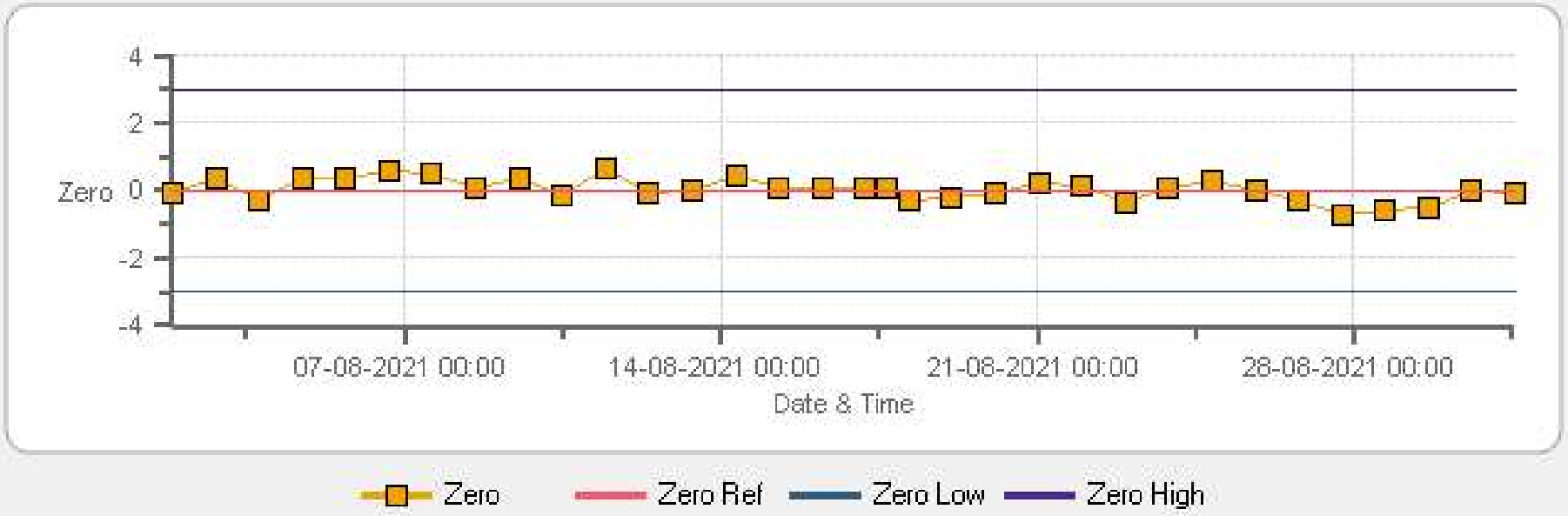



SO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span

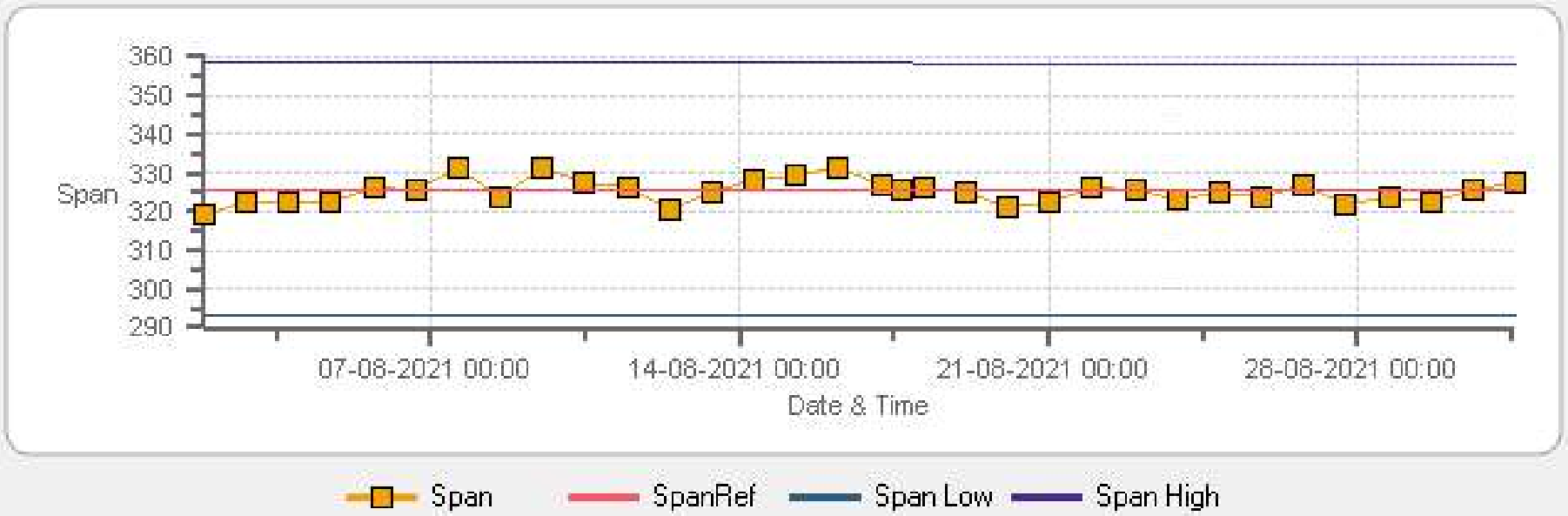
TRS[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero


TRS[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span

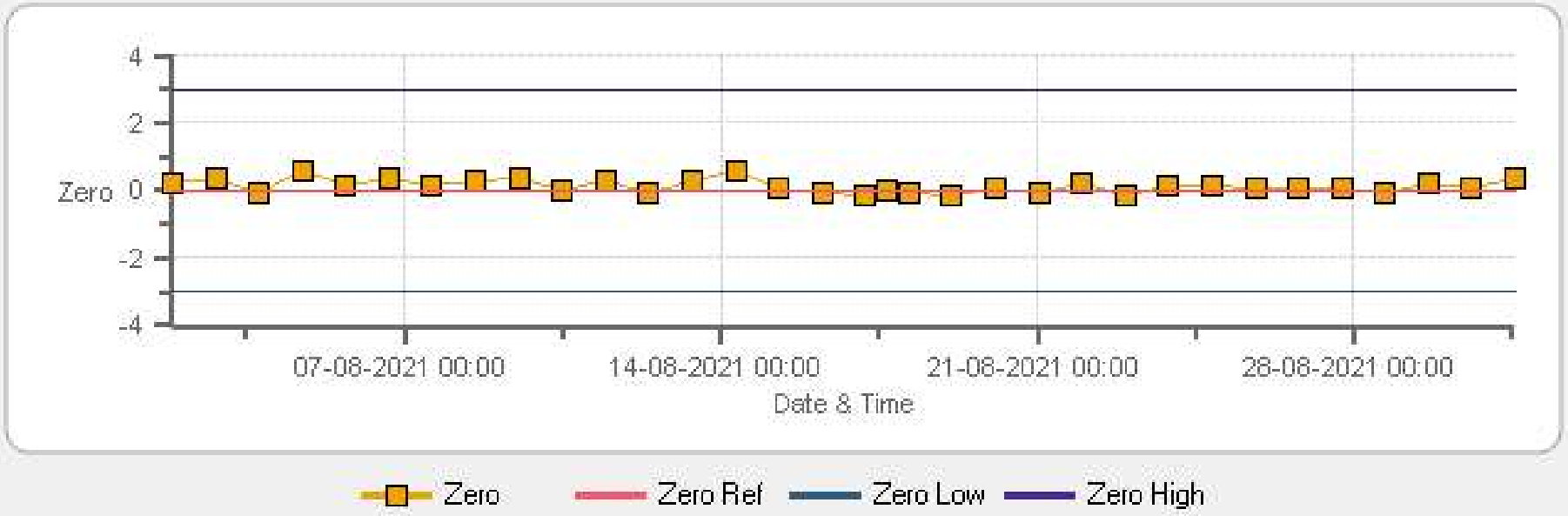
NOX[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero



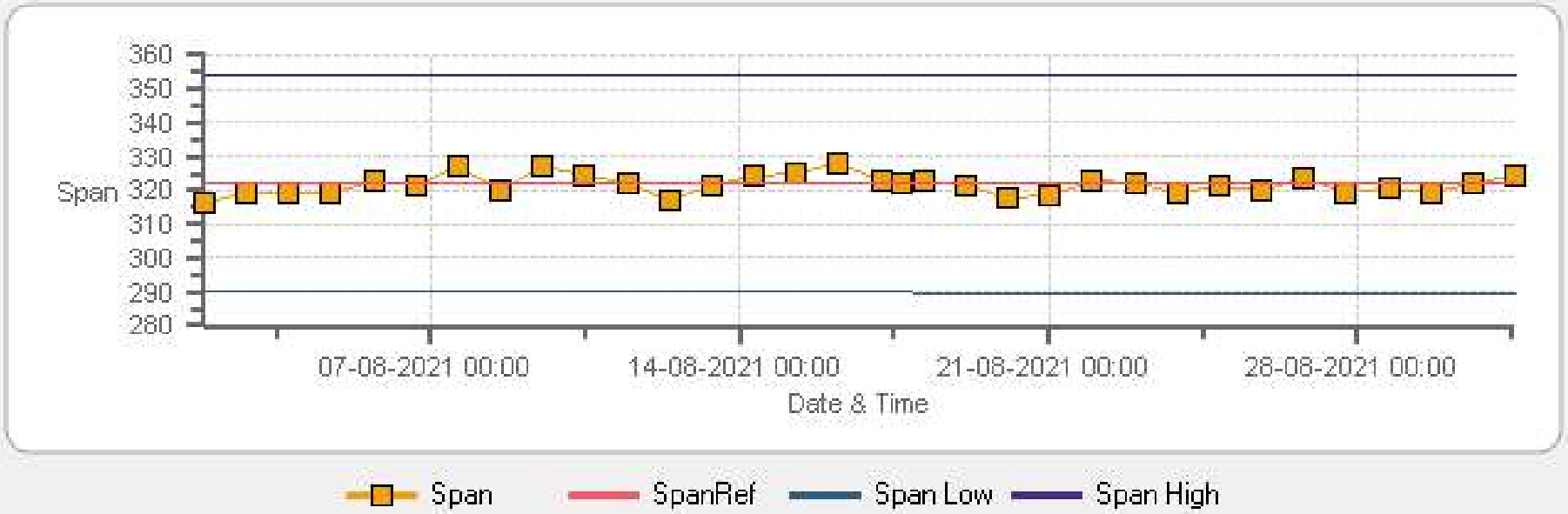

NOX[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span

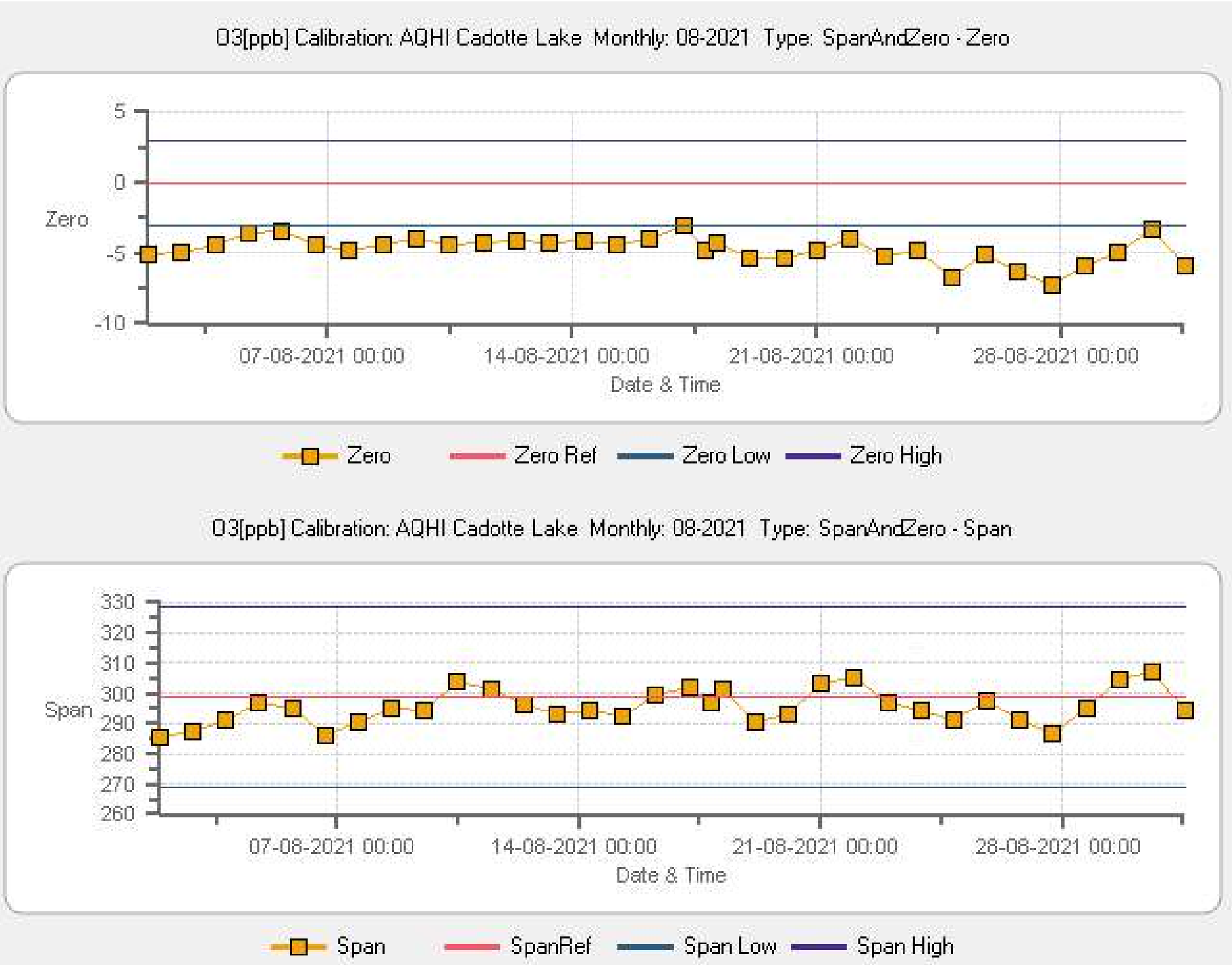


NO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero

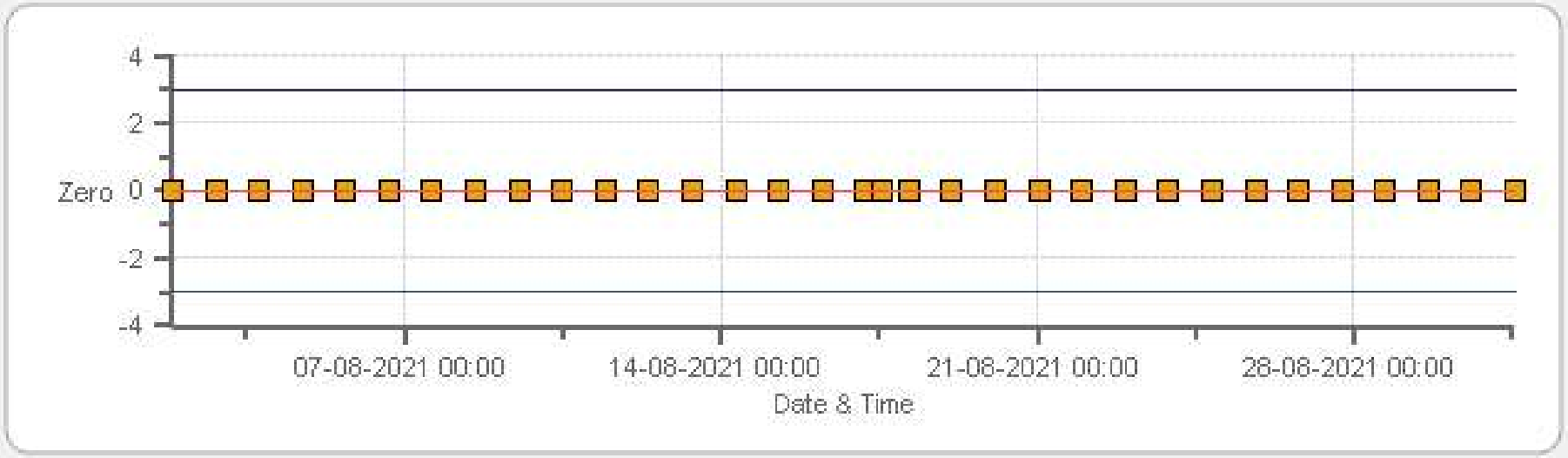



NO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span

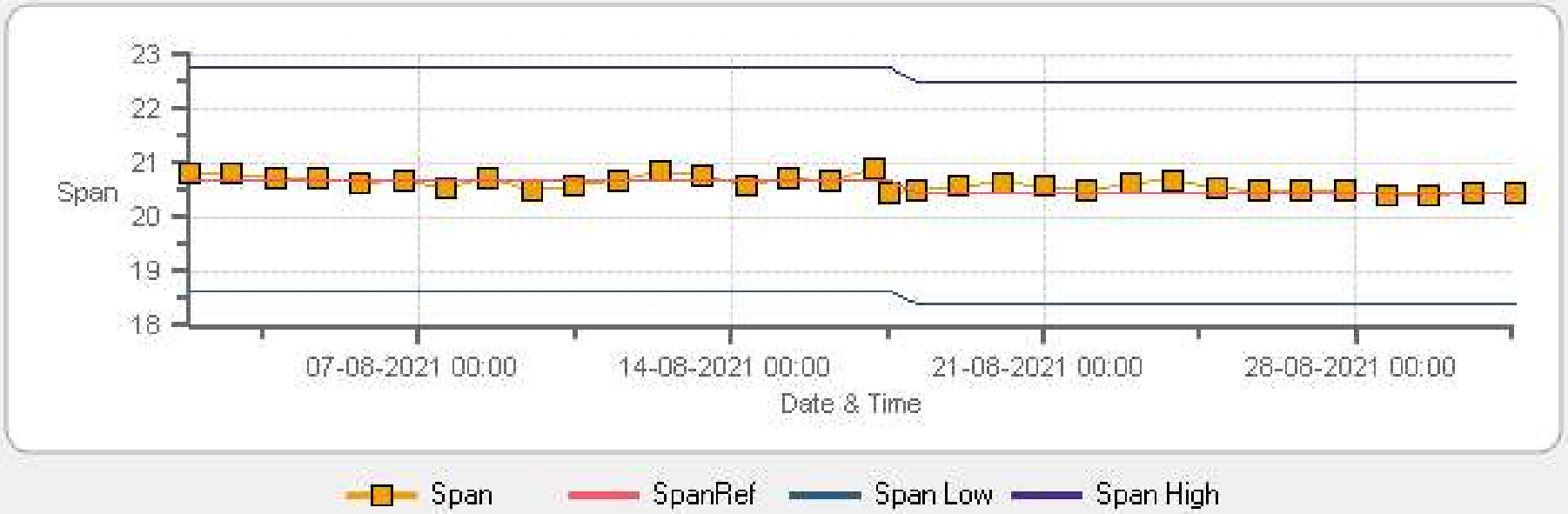



O3[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero
5
0
-5
-10
Zero
07-08-2021 00:00
14-08-2021 00:00
21-08-2021 00:00
28-08-2021 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span
330
320
310
300
290
280
270
260
Span
07-08-2021 00:00
14-08-2021 00:00
21-08-2021 00:00
28-08-2021 00:00
Date & Time
Span
SpanRef
Span Low
Span High

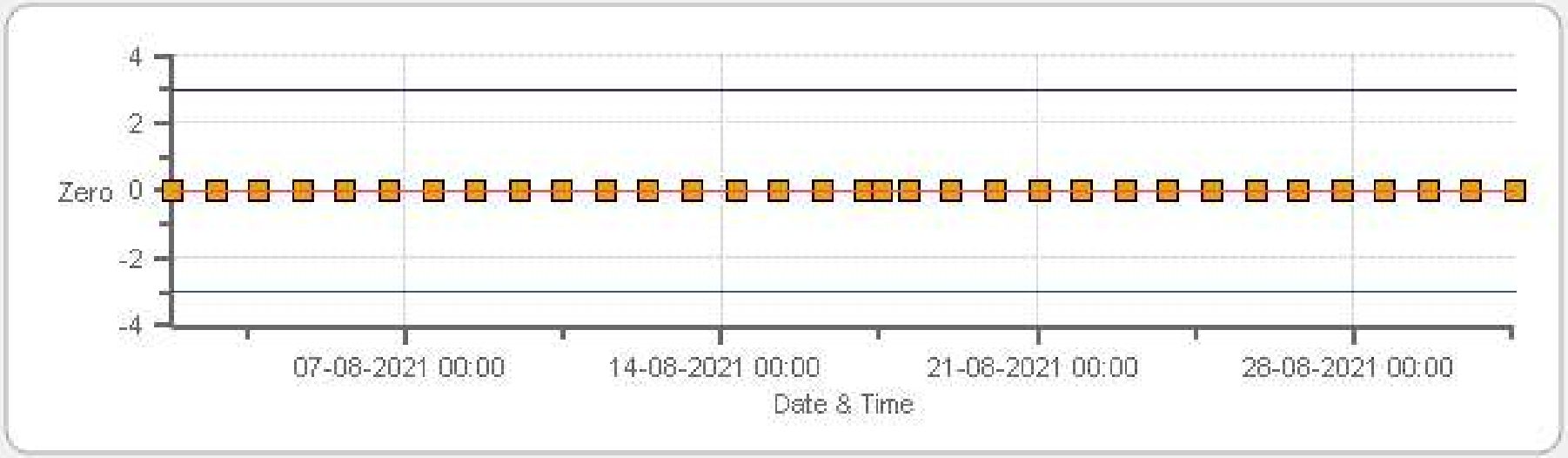
THC55[ppm] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero



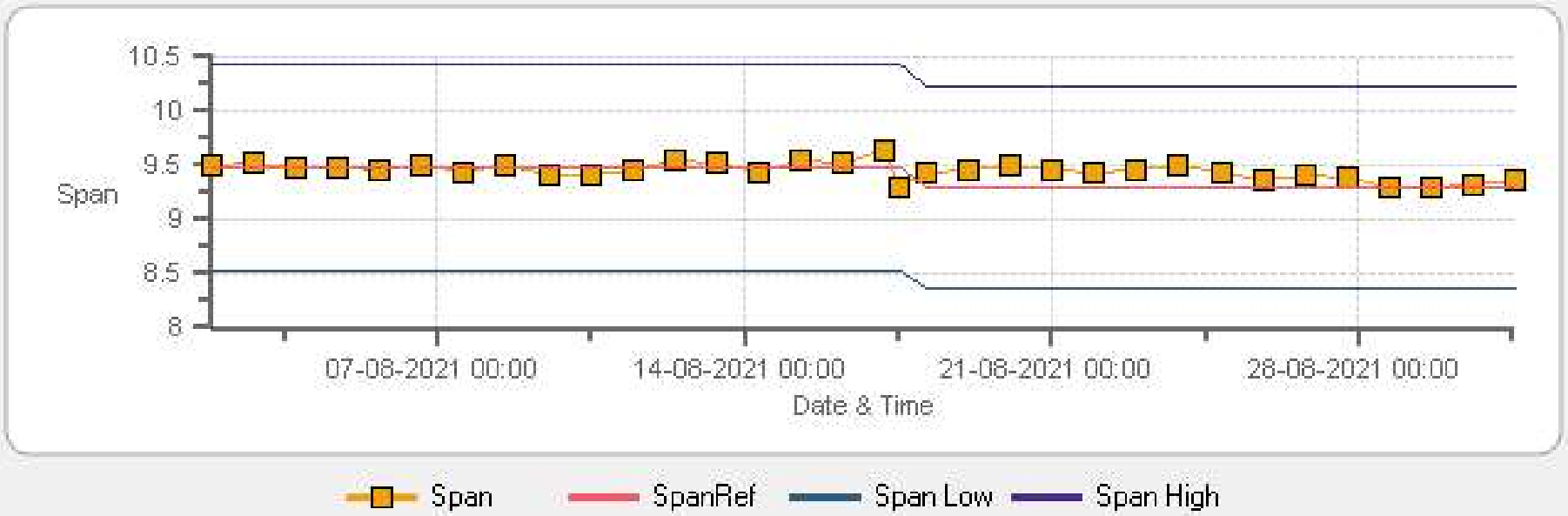

THC55[ppm] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span



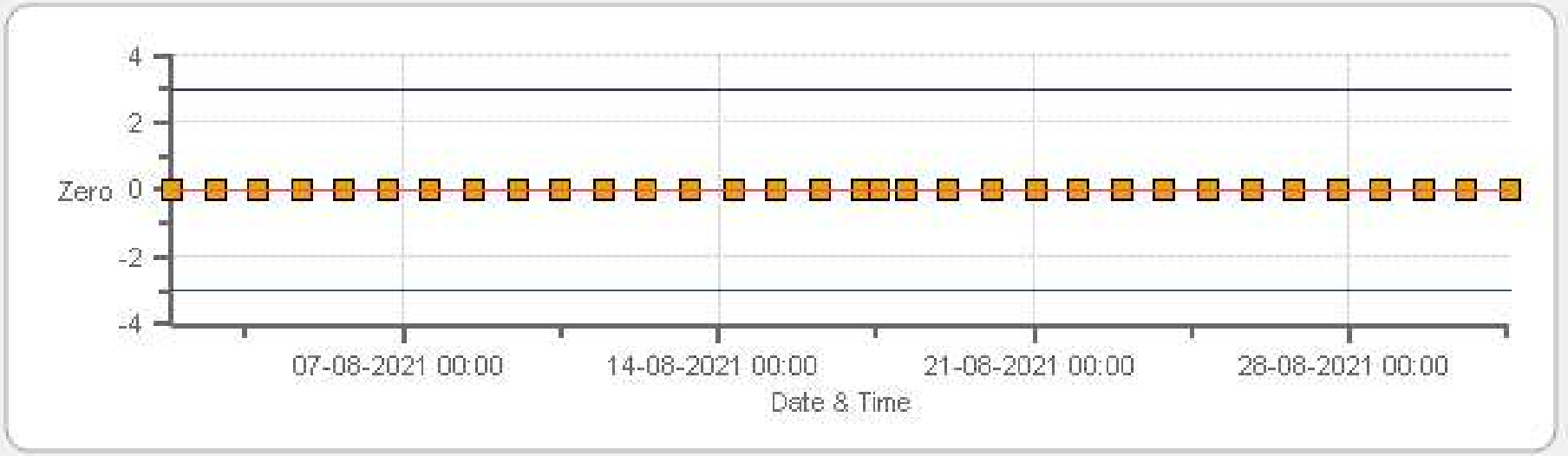
CH4[ppm] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero



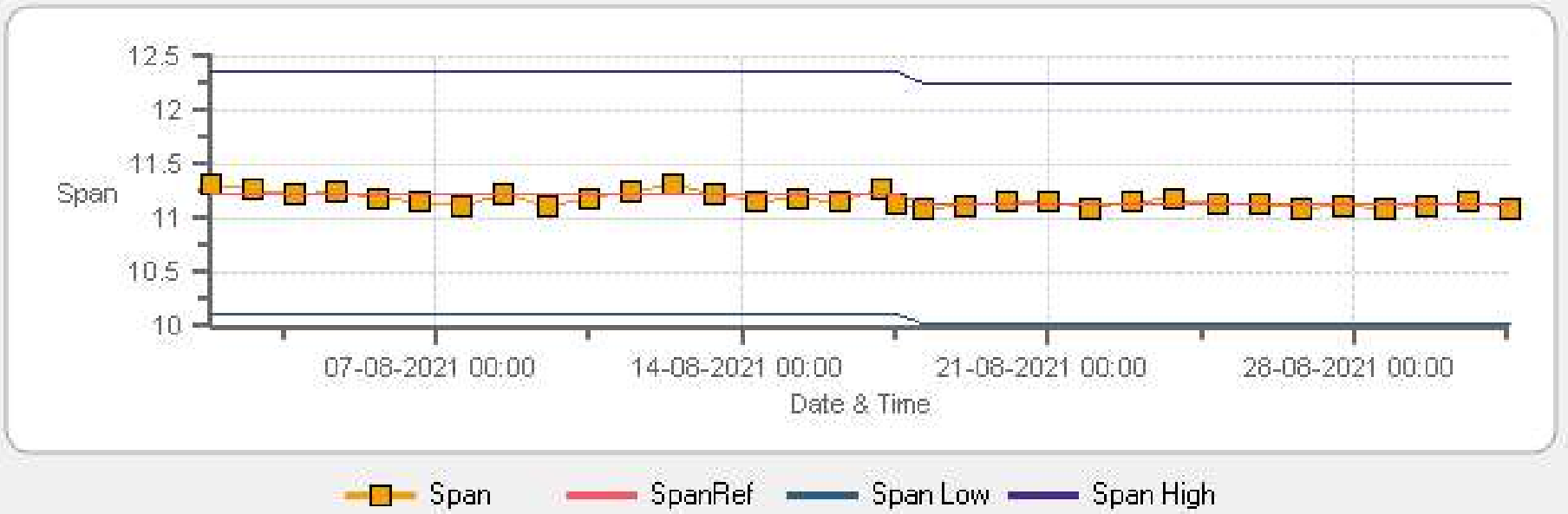

CH4[ppm] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span



NMHC[ppm] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Zero




NMHC[ppm] Calibration: AQHI Cadotte Lake Monthly: 08-2021 Type: SpanAndZero - Span



# MULTI-POINT CALIBRATION RECORDS

# SO2 Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 17-Aug-2021 | PREVIOUS CALIBRATION DATE: | 22-Jul-2021 |
| PARAMETER: | SO2 | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.2 |
| LOCATION: | Cadotte Lake | BAROMETRIC (mBar): | 947 |
| PURPOSE | Routine | START TIME (MST): | 08:48 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 13:18 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Teledyne T100 | RANGE | 500 ppb |
| SERIAL # | 722 | FLOW (mL/min) | 536 |
| INITIAL | | FINAL | |
| BKG/OFFSET | 21 | BKG/OFFSET | 21.8 |
| COEF/SLOPE | 0.934 | COEF/SLOPE | 0.921 |
| Expected (reference) Value | 271.3 | Expected (reference) Value | 263.3 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Sabio | MAKE: | API |
| MODEL: | 2010 | MODEL: | 701 |
| ID: | 17100415 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002493 | HIGH ID | n/a |
| CONC (ppm): | 49.40 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1000 | LOW ID | n/a |
| EXPIRY DATE | 13-Nov-2028 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 390 | 190 | 95 |
| RANGE | 300 - 400 | 150 - 200 | 50 - 100 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | n/a | SO2 Conc (ppb) | n/a |
| END TIME: | n/a | Analyzer Response (ppb) | n/a |

**CALIBRATION:**

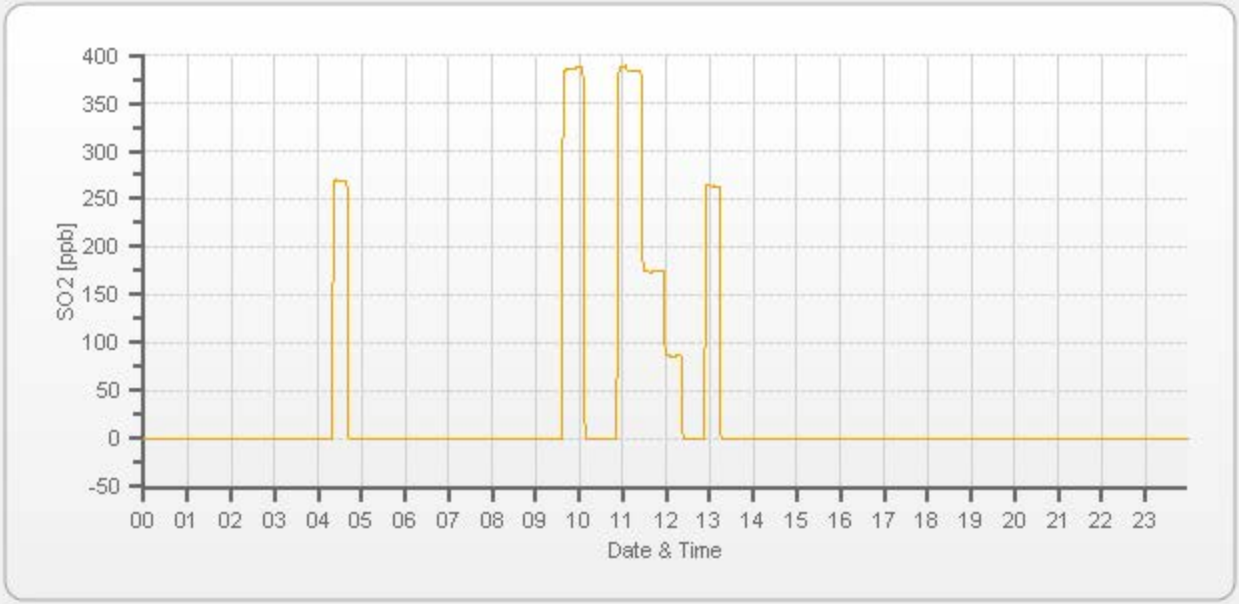
| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4997 | | 4997 | 0.00 | 0.2 | 0 | | |
| 4958 | 38.80 | 4997 | 383.57 | 387.9 | 383.6 | 0.989 | 1.000 |
| 4980 | 17.70 | 4998 | 174.95 | n/a | 174.3 | n/a | 1.004 |
| 4988 | 8.80 | 4997 | 87.00 | n/a | 87.2 | n/a | 0.998 |

**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.000 | 0.0% |

**COMMENTS:**

Sample filter changed. Monthly calibration - no issues.


SO2[ppb] Station: AQHI Cadotte Lake Daily: 17-08-2021 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
SO2 [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
SO2 [ppb]

# TRS Analyzer Calibration by Dilution

| | | | |
|---|---|---|---|
| DATE: | 17-Aug-2021 | PREVIOUS CALIBRATION DATE: | n/a |
| PARAMETER: | TRS | PREVIOUS CORRECTION FACTOR: | n/a |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 21.0 |
| LOCATION: | Cadotte Lake | BAROMETRIC (mBar): | 947 |
| PURPOSE | Install/Post-Repair | START TIME (MST): | 12:43 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 16:16 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Teledyne T100U | RANGE | 100 ppb |
| SERIAL # | 132 | FLOW (mL/min) | 514 |
| INITIAL | | FINAL | |
| BKG/OFFSET | n/a | BKG/OFFSET | 25 |
| COEF/SLOPE | n/a | COEF/SLOPE | 1.09 |
| Expected (reference) Value | n/a | Expected (reference) Value | 55.72 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Environics | MAKE: | API |
| MODEL: | 2000 | MODEL: | 701 |
| ID: | 1991 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| CALIBRATION GAS: | | FLOWMETERS (if applicable): | |
| CYLINDER ID: | EY0002472 | HIGH ID | n/a |
| CONC (ppm): | 9.41 | EXPIRY DATE | n/a |
| CYLINDER (psi): | 1590 | LOW ID | n/a |
| EXPIRY DATE | 10-Nov-2023 | EXPIRY DATE | n/a |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| TARGET | 78 | 38 | 19 |
| RANGE | 60 - 80 | 30 - 40 | 10 - 20 |

**SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):**

| | | | |
|---|---|---|---|
| START TIME: | 13:25 | SO2 Conc (ppb) | 380 |
| END TIME: | 13:43 | Analyzer Response (ppb) | 0.1 |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4001 | | 4001 | 0.00 | n/a | 0 | | |
| 3968 | 33.15 | 4001 | 77.95 | n/a | 77.94 | n/a | 1.000 |
| 3986 | 16.18 | 4002 | 38.04 | n/a | 37.58 | n/a | 1.012 |
| 3993 | 8.09 | 4001 | 19.03 | n/a | 18.31 | n/a | 1.039 |

**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.002 | -0.4% |

**COMMENTS:**

TRS Converter (CDNOVA CDN-101 #530) failed on arrival. Shutdown not possible.
Swapped with CDNOVA CDN-101 #534.
Post-Repair calibration and filter changed - no issues.


TRS[ppb] Station: AQHI Cadotte Lake Daily: 17-08-2021 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

# NOx Calibration by Dilution/Gas-Phase Titration

| CALIBRATION: | | | | ANALYZER: | | | |
|---|---|---|---|---|---|---|---|
| DATE: | 17-Aug-2021 | PREVIOUS CALIBRATION DATE: | 21-Jul-2021 | MAKE/MODEL: | Teledyne T200 | PREVIOUS CF. | |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.2 | SERIAL #: | 837 | NOx | 1.000 |
| LOCATION: | Cadotte Lake | BAROMETRIC (mBar): | 947 | FLOW (mL/min) | 447 | NO | 1.000 |
| PURPOSE | Routine | START TIME (MST): | 08:48 | RANGE (ppb) | 500 | NO2 | 1.001 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 16:31 | GPT FOR O3? | | Yes | |

**CALIBRATION SYSTEM:**

| CALIBRATOR: | | ZERO AIR: | | CALIBRATION GAS: | | | FLOWMETERS (if applicable): | |
|---|---|---|---|---|---|---|---|---|
| MAKE: | Sabio | MAKE: | API | CYLINDER ID: | EY0002493 | | HIGH ID: | n/a |
| MODEL: | 2010 | MODEL: | 701 | NO/NOx (PPM): | 50.9 | 51.1 | HIGH EXPIRY: | n/a |
| ID: | 17100415 | ID: | 850 | CYLINDER (psi): | 1000 | | LOW ID: | n/a |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a | EXPIRY DATE | 13-Nov-2028 | | LOW EXPIRY: | n/a |

**CALIBRATION SETTINGS:**

| INITIAL | NOx | NO | NO2 | FINAL | NOx | NO | NO2 |
|---|---|---|---|---|---|---|---|
| BKG/OFFSET: | -0.3 | -0.4 | n/a | BKG/OFFSET: | 0.4 | 0.2 | n/a |
| SLOPE/COEF/CE: | 1.113 | 1.103 | 0.9993 | SLOPE/COEF/CE: | 1.105 | 1.101 | 0.999 |

**EXPECTED (REFERENCE) VALUE:**

| INITIAL | NOx | NO | NO2 | FINAL | NOx | NO | NO2 |
|---|---|---|---|---|---|---|---|
| | 325.9 | 3.9 | 322.1 | | 325.8 | 3.9 | 321.9 |

**CALIBRATION PARAMETERS:**

| POINT | NO TARGET (PPB) | NO2 TARGET (PPB) | NO2 RANGE | O3 POINT |
|---|---|---|---|---|
| HIGH | 395 | 250 | 240-275 | n/a |
| MID | 180 | 154 | 150-157 | Mid |
| LOW | 90 | 54 | 50-58 | Low |
| EXTRA 1 | n/a | 340 | 300-370 | High |

**NO/NOx CALIBRATION:**

| FLOW RATE (mL/min) | | | CONCENTRATION (ppb) | | | | | | | | | CORRECTION FACTOR (CF.) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CALCULATED | | | INITIAL INDICATED | | | FINAL INDICATED | | | INITIAL | | | FINAL | | |
| DILUENT | GAS | TOTAL | NO | NOx | NO2 | NO | NOx | NO2 | NO | NOx | NO2 | NO | NOx | NO2 | NO | NOx | NO2 |
| 4997 | | 4997 | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | | | | | | |
| 4958 | 38.80 | 4997 | 395.2 | 396.8 | 1.6 | 399.5 | 401.9 | 2.4 | 395.1 | 396.8 | 1.7 | 0.990 | 0.988 | | 1.000 | 1.000 | |
| 4980 | 17.70 | 4998 | 180.3 | 181.0 | 0.7 | n/a | n/a | n/a | 179.6 | 180.4 | 0.8 | n/a | n/a | | 1.004 | 1.003 | |
| 4988 | 8.80 | 4997 | 89.6 | 90.0 | 0.4 | n/a | n/a | n/a | 90.0 | 90.4 | 1.2 | n/a | n/a | | 0.996 | 0.995 | |

**GPT CALIBRATION:**

| Point | CALIBRATOR | | | INDICATED (ppb) | | | NO DROP / O3 Conc (ppb) | NO2 GAIN (ppb) | NO2 Corr. FACTOR | CONV. EFFICIENCY |
|---|---|---|---|---|---|---|---|---|---|---|
| | GAS | TOTAL | O3 SETPOINT | NO | NOx | NO2 | | | | |
| REFERENCE | 38.80 | 4997 | 0 | 396.9 | 397.0 | 0.1 | | | | |
| AS-FOUND HIGH | 38.80 | 4997 | 250 | 145.2 | 398.9 | 253.7 | 251.7 | 253.6 | 0.993 | 100.75% |
| ADJUSTED HIGH | 38.80 | 4997 | 250 | 143.6 | 397.1 | 253.5 | 253.3 | 253.4 | 1.000 | 100.04% |
| MID | 38.80 | 4997 | 150 | 243.6 | 396.9 | 153.3 | 153.3 | 153.2 | 1.001 | 99.93% |
| LOW | 38.80 | 4997 | 50 | 341.8 | 396.1 | 54.2 | 55.1 | 54.1 | 1.018 | 98.19% |
| NO2 COEF/CONVERTER EFFICIENCY ADJUSTED | | | | | | | | | AVERAGE: | 99.39% |

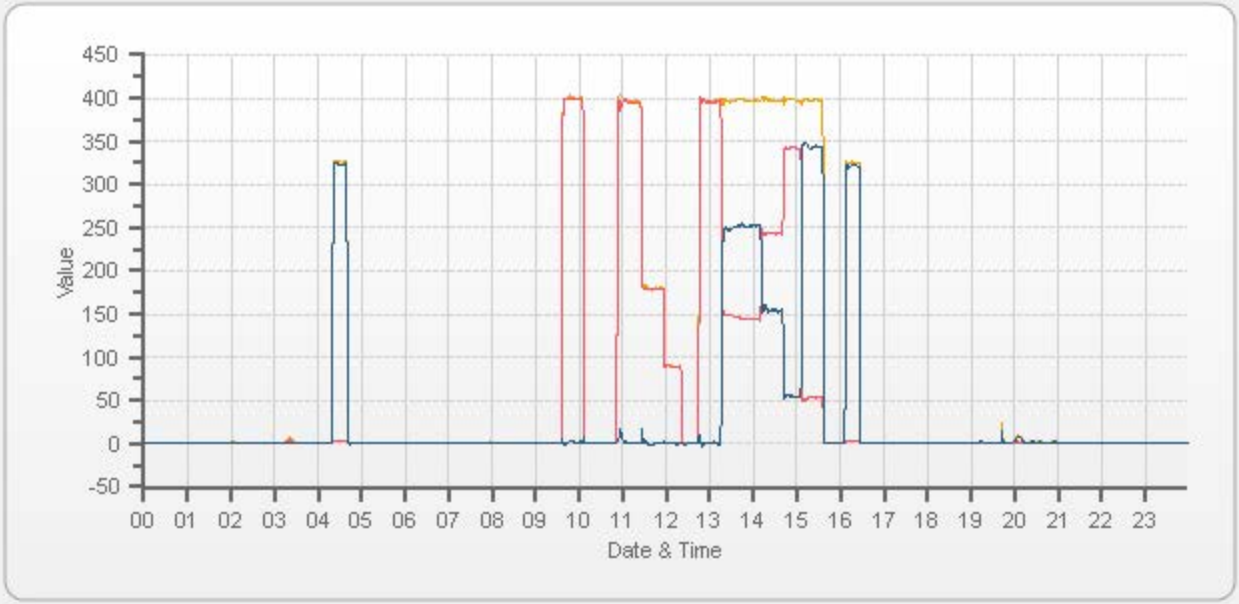
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| NO | 1.000 | 0.999 | 0.00% |
| NOx | 1.000 | 1.000 | 0.01% |
| NO2 | 1.000 | 1.006 | -0.24% |

**COMMENTS:**

Sample filter changed. Monthly calibration = no issues.
Extra O3 SETPOINT = 340; NO DROP/O3 = 342.9

Station: AQHI Cadotte Lake Daily: 17-08-2021 Type: AVG 1 Min. [1 Min.]



# Ozone Calibration by Direct GPT

| | | | |
|---|---|---|---|
| DATE: | 17-Aug-2021 | PREVIOUS CALIBRATION DATE: | 22-Jul-2021 |
| PARAMETER: | O3 | PREVIOUS CORRECTION FACTOR: | 1.000 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 21.2 |
| LOCATION: | Cadotte Lake | BAROMETRIC (mBar): | 946 |
| PURPOSE | Routine | START TIME (MST): | 15:47 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 20:05 |

**ANALYZER:**

| | | | |
|---|---|---|---|
| MAKE/MODEL | Teledyne T400 | RANGE | 500 ppb |
| SERIAL # | 824 | FLOW (mL/min) | 760 |
| INITIAL | | FINAL | |
| BKG/OFFSET | -1 | BKG/OFFSET | -1.1 |
| COEF/SLOPE | 1.029 | COEF/SLOPE | 1.035 |
| Expected (reference) Value | 298.9 | Expected (reference) Value | 298.9 |

**CALIBRATION SYSTEM:**

| | | | |
|---|---|---|---|
| CALIBRATOR: | | ZERO AIR: | |
| MAKE: | Sabio | MAKE: | API |
| MODEL: | 2010 | MODEL: | 701 |
| ID: | 17100415 | ID: | 850 |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | n/a |
| | CALIBRATION METHOD: | Direct GPT | |
| GPT DATE: | 17-Aug-2021 | GPT END TIME: | 15:36 |

**CALIBRATION PARAMETERS:**

| POINT | HIGH | MID | LOW |
|---|---|---|---|
| RANGE | 300 - 400 | 150 - 200 | 50 - 100 |

**CALIBRATION:**

| FLOW RATES (mL/min) | | | CONCENTRATION (ppb) | | | CORRECTION FACTOR | |
|---|---|---|---|---|---|---|---|
| | | | ACTUAL | INDICATED | | Initial | Final |
| DILUENT | GAS | TOTAL | | Initial | Final | | |
| 4997 | | 4997 | 0.0 | 0.1 | 0.0 | | |
| 4997 | | 4997 | 342.9 | 345.7 | 342.9 | 0.992 | 1.000 |
| 4997 | | 4997 | 153.3 | n/a | 155.0 | n/a | 0.989 |
| 4997 | | 4997 | 55.1 | n/a | 54.6 | n/a | 1.009 |

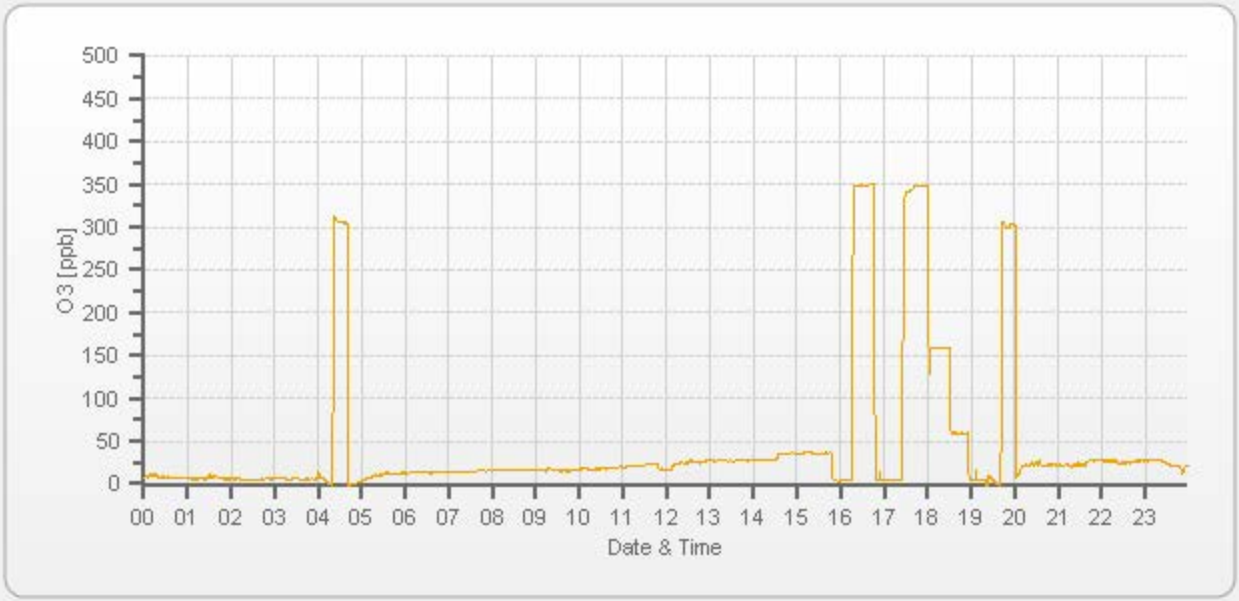
**LINEAR REGRESSION ANALYSIS:**

| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| VALUE | 1.000 | 1.001 | 0.0% |

**COMMENTS:**

Sample filter changed.
Operator error - wrong Ozone concentration set on calibrator for mid point.
Abort IZS at 19:07 and restart service for the new EVs of the other analyzers to take effect.

O3[ppb] Station: AQHI Cadotte Lake Daily: 17-08-2021 Type: AVG 1 Min. [1 Min.]



# Methane/Non-Methane Analyzer Calibration by Dilution

**CALIBRATION:**

| | | | |
|---|---|---|---|
| DATE: | 17-Aug-2021 | PREVIOUS CALIBRATION DATE: | 21-Jul-2021 |
| CLIENT: | PRAMP | TEMPERATURE (°C): | 22.1 |
| LOCATION: | Cadotte Lake | BAROMETRIC (mBar): | 947 |
| PURPOSE | Routine | START TIME (MST): | 08:48 |
| PERFORMED BY: | Ferdinand Roy | END TIME (MST): | 13:13 |

**ANALYZER:**

| VALUE | MAKE/MODEL | SERIAL | FLOW (mL/min) |
|---|---|---|---|
| | Thermo 55i | 1191032505 | 1061.6 |
| PARAMETER: | CH4 | NMHC | THC |
| RANGE (ppm): | 20 | 20 | 40 |
| PREVIOUS CF: | 0.998 | 0.999 | 0.999 |

**CALIBRATION SYSTEM:**

| CALIBRATOR: | | ZERO AIR: | | CALIBRATION GAS: | | | FLOWMETERS (if applicable): | |
|---|---|---|---|---|---|---|---|---|
| MAKE: | Environics | MAKE: | API | CYLINDER ID: | LL84567 | | HIGH ID: | n/a |
| MODEL: | 2000 | MODEL: | 701 | $CH_4/C_3H_8$ (ppm): | 591.0 | 200.0 | HIGH EXPIRY: | n/a |
| ID: | 1991 | ID: | 850 | CYLINDER (psi): | 690 | | LOW ID: | n/a |
| MFC CALIBRATION DATE: | 23-Mar-2021 | OXIDIZER ID: | 00941 | EXPIRY DATE | 17-Jul-2027 | | LOW EXPIRY: | n/a |

**CALIBRATION PARAMETERS:**

| POINT (CH4/NMHC) | HIGH | MID | LOW | CH4 EQUIVILANCE | |
|---|---|---|---|---|---|
| TARGET | 14 | 7 | 3.5 | $C_3H_8$ as $CH_4$ | 550.0 |
| RANGE | 12 - 16 | 6 - 8 | 2 - 4 | THC as $CH_4$ | 1141.0 |

**EXPECTED (REFERENCE) VALUE:**

| INITIAL | CH4 | NMHC | THC | FINAL | CH4 | NMHC | THC |
|---|---|---|---|---|---|---|---|
| | 9.48 | 11.23 | 20.70 | | 9.29 | 11.14 | 20.44 |

**CALIBRATION:**

| FLOW RATE | | | CONCENTRATION (PPM) | | | | | | | | | CORRECTION FACTOR (CF.) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (mL/min) | | | CALCULATED | | | INITIAL INDICATED | | | FINAL INDICATED | | | INITIAL | | | FINAL | | |
| DILUENT | GAS | TOTAL | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC | CH4 | NMHC | THC |
| 3001 | | 3001 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| 2928 | 73.59 | 3002 | 14.49 | 13.48 | 27.97 | 14.75 | 13.64 | 28.39 | 14.49 | 13.46 | 27.95 | 0.982 | 0.988 | 0.985 | 1.000 | 1.002 | 1.001 |
| 2966 | 36.79 | 3003 | 7.24 | 6.74 | 13.98 | n/a | n/a | n/a | 7.25 | 6.72 | 13.97 | n/a | n/a | n/a | 0.999 | 1.003 | 1.001 |
| 2984 | 18.39 | 3002 | 3.62 | 3.37 | 6.99 | n/a | n/a | n/a | 3.62 | 3.35 | 6.97 | n/a | n/a | n/a | 1.000 | 1.006 | 1.003 |

**LINEAR REGRESSION ANALYSIS:**

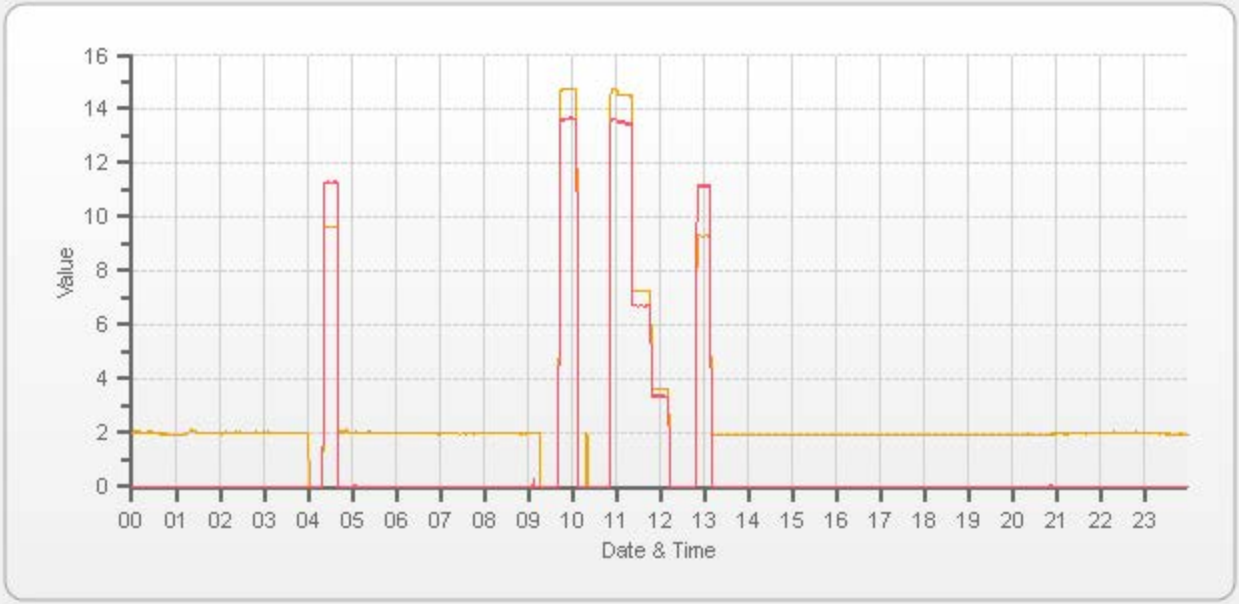
| | CORRELATION | SLOPE | INTERCEPT |
|---|---|---|---|
| CH4 | 1.000 | 1.000 | 0.0% |
| NMHC | 1.000 | 0.999 | 0.0% |
| THC | 1.000 | 0.999 | 0.0% |

**Comments:**

**Sample filter changed. Monthly calibration - no issues.**

**Use Zero Chrom?** **Yes**

Station: AQHI Cadotte Lake Daily: 17-08-2021 Type: AVG 1 Min. [1 Min.]



# Teledyne T640 Audit/Calibration

| | | | | | |
|---|---|---|---|---|---|
| **Date/Previous Audit Date:** | August 19, 2021 | July 21, 2021 | **Weather Conditions:** | Mix of sun and clouds | |
| **Company:** | PRAMP | | **Start Time (mst):** | 13:16 | |
| **Station:** | Cadotte Lake | | **End Time (mst):** | 14:11 | |
| **Parameter:** | PM 2.5 | | **Performed By/Reviewer:** | Ferdinand Roy | Chris Wesson |

**Instrument Data:**

| | | | |
|---|---|---|---|
| **Make/Model:** | Teledyne T640 | **Serial Number:** | 318 |
| **Owner:** | PRAMP | **Alarms (detail in comments):** | No |

**Reference Standards/I.D./Expiry Date:**

**Flow Standard:** Maxxam ID #3 expires June 29, 2022
**Digital Manometer:** Dwyer 475 Mark III id# 2 expires Feb 17, 2022
**Temperature:** F.S. 160348895 expires Sep 4, 2022
**Pressure:** F.S. 10528 expires Feb 17, 2022

**DIAGNOSTICS:**

| | | | | | |
|---|---|---|---|---|---|
| Ambient Pressure (mmHg) | 709.6 | Ambient Temp (°C) | 19.2 | ASC Heater Duty (%) | 20.0 |
| Box Temp (°C) | 25.9 | Current PMT HV (V) | 1541 | LED Temp (°C) | 34.63 |
| P3 Value | 47 | PMT Setting (V) | 1547 | Pump PWM (%) | 37 |
| Sample Flow (L/min) | 5.00 | Sample RH (%RH) | 34.6 | Sample Temp (°C) | 25.5 |

| Item: | As-found | | As-left | | Tolerance |
|---|---|---|---|---|---|
| | Reference | T640x | Reference | T640x | |
| Zero Test (Leak Check) | PM10 | 0.0 | 0 | 0.0 | 0.0 to 0.2 |
| | PM2.5 | 0.0 | 0 | 0.0 | |
| Ambient Pressure (mmHg) | 709.6 | 709.5 | 709.5582 | 709.5 | +/- 10 mm Hg |
| Ambient Temperature (°C) | 19.32 | 20 | n/a | | +/- 2°C |
| Sample Flow (L/min) | 5.02 | 5.02 | 5.03 | 5.01 | +/-5% of T640x (e.g., 4.75 – 5.25 lpm) |
| ***Additional Monthly Maintenance :*** | | | | | ***Completed*** |
| | | | | Inlet cleaned? | Yes |
| | | | | Sample tubing inspected (inner and outer)? | Yes |

**Comments:**

No issues.

# Meteorological System Checklist

| | | | |
|---|---|---|---|
| Date: | August 17, 2021 | | |
| Technician: | Ferdinand Roy | | |
| Station: | PRAMP Cadotte Lake | | |
| **Unit:** | **Make:** | **Model:** | **Serial #:** |
| Temperature Sensor: | Vaisala | HMP155 | N2910506 |
| Barometric Pressure Sensor: | Met One | 92 | A2397 |
| Relative Humidity Sensor: | Vaisala | HMP155 | N2910506 |
| Anemometer: | RM Young | 05305AQ | 174801 |

**AMBIENT TEMPERATURE SENSOR CHECK**

| | |
|---|---|
| Previous check date: | July 21, 2021 |
| Parameter: | Temperature @ 2 metres |
| Reference Thermometer ID: | F.S. 160348895 expires Sep 4, 2022 |
| Reference Temperature ($^{o}$C): | 12.2 |
| Station - Ambient Temperature ($^{o}$C): | 11.9 |
| Temperature Difference ($^{o}$C): | 0.3 |

**BAROMETRIC PRESSURE SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | July 21, 2021 | |
| Reference Barometer ID: | FS 10528 February 17, 2022 | |
| Reference Pressure - Units/Reading: | millibar | 947 |
| Station Pressure - Units/Reading: | millibar | 948.5 |
| Pressure Tolerance +/- 15% of error: | 805 - 1089 | -0.16% |

**RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK**

| | | |
|---|---|---|
| Previous check date: | July 21, 2021 | |
| Reference Hygrometer ID: | F.S. 160348895 expires Sep 4, 2022 | |
| Reference Hygrometer % RH- Reading: | 77.63 | |
| Station Hygrometer % RH- Reading: | 82.80 | |
| RH Tolerance +/- 15% of difference: | 65.99 - 89.27 | -6.7% |

**ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK**

| WIND SPEED | | WIND DIRECTION | |
|---|---|---|---|
| Previous check date: | July 21, 2021 | Previous check date: | July 21, 2021 |
| Wind Speed Observed (kph): | 5~10 | Wind Direction Observed: | W |
| Wind speed on Data Logger (kph): | 9 | Wind Direction on Data Logger: | W |
| | | Wind Direction Pass/Fail?: | Pass |

Comments

No issues.

# Meteorological Sensor Audit/Calibration

**Location Information**

| | | | |
|---|---|---|---|
| **Company:** | PRAMP | **Performed By:** | Ferdinand Roy |
| **Audit Location:** | Cadotte Lake | **Reviewed By:** | Chris Wesson |
| **Audit Date:** | July 22, 2021 | **Start/End Time (mst):** | 12:47-15:52 |
| **Calibration Purpose:** | routine annual | **Weather Conditions:** | Cloudy/Overcast |

**Wind Sensor Information**

| **Sensor ID Data:** | | **Sensor Outputs:** | |
|---|---|---|---|
| **Sensor Make:** | RM Young | **Velocity Voltage Output Range:** | n/a |
| **Sensor Model:** | 05305AQ | **Velocity Unit Output Range:** | 0-180 |
| **Serial #:** | 174801 | **Direction Voltage Output Range:** | n/a |
| **Previous Cal/Audit Date:** | June 18, 2020 | **Direction Unit Output Range:** | 0-360 |

**Wind Calibrator Information**

**Calibrator I.D. and Expiry Date:** RM Young 18802 id# CA03309 expires June 7, 2023

**Wind Speed Audit Data **+/- 2% of the average correction factor is the limit****

| RPM | Wind Speed Generated kph | Clockwise Wind Speed kph | Counter Clockwise Wind Speed kph | Correction Factor |
|---|---|---|---|---|
| 0 | 0 | 0.0 | 0.0 | - |
| 1000 | 18.4 | 18.3 | 18.3 | 1.007 |
| 2000 | 36.9 | 36.7 | 36.7 | 1.004 |
| 3000 | 55.3 | 55.1 | 55.1 | 1.003 |
| 4000 | 73.7 | 73.6 | 73.6 | 1.002 |
| 5000 | 92.2 | 92.0 | 92.0 | 1.002 |
| 6000 | 110.6 | 110.5 | 110.5 | 1.001 |
| 7000 | 129.0 | 128.9 | 128.9 | 1.001 |
| 8000 | 147.4 | 147.3 | 147.3 | 1.001 |
| 9000 | 165.9 | 165.8 | 165.8 | 1.000 |
| 10000 | 184.3 | 184.2 | 184.2 | 1.001 |
| | | | **Average Correction Factor=** | **1.002** |

**Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit****

| Generated Wind Direction 0-360 (Up) | Generated Wind Direction 360-0 (Down) | Indicated Wind Direction 0-360 (Up) | Indicated Wind Direction 360-0 (Down) | Degrees Difference 0-360 (Up) | Degrees Difference 360-0 (Down) | Average Absolute Degrees Difference |
|---|---|---|---|---|---|---|
| 0 | 355 | 0 | 353 | 0.1 | 2.0 | 1.1 |
| 30 | 330 | 27 | 330 | 3.5 | -0.3 | 1.9 |
| 60 | 300 | 56 | 300 | 3.9 | 0.1 | 2.0 |
| 90 | 270 | 87 | 269 | 3.5 | 1.1 | 2.3 |
| 120 | 240 | 118 | 238 | 2.4 | 2.5 | 2.5 |
| 150 | 210 | 149 | 207 | 1.5 | 3.5 | 2.5 |
| 180 | 180 | 178 | 177 | 1.8 | 2.8 | 2.3 |
| 210 | 150 | 208 | 148 | 2.1 | 2.5 | 2.3 |
| 240 | 120 | 239 | 117 | 1.1 | 2.9 | 2.0 |
| 270 | 90 | 270 | 86 | -0.1 | 3.6 | 1.9 |
| 300 | 60 | 300 | 57 | 0.2 | 3.5 | 1.8 |
| 330 | 30 | 330 | 27 | -0.1 | 3.0 | 1.6 |
| 355 | 0 | 353 | 0 | 1.8 | 0.1 | 1.0 |
| **The audit meets AMD requirements.** | | | | **Average Absolute Degrees Difference=** | | **1.9** |

**Comments:**

Physical inspection completed - no issues.

**Peace River Area Monitoring Program**

# AUGUST 2021

## Ambient Air Monitoring

## Certified Laboratory Analysis Report

## LAB-PRAMP-202108

**Operation and Maintenance:**
Bureau Veritas Canada

**Data Validation and Report:**
Peace River Area Monitoring Program

July 23, 2021

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

EAS CANISTER
Sample ID 21080029-001 Priority Normal

Customer ID: PRAMP
Cust Samp ID: PRAMP_986c-20210801

Date Received- Lab Use Only
RECEIVED
AUG 05 2021
JMP

**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842b Station □ 986c Station □ Reno Station
Address: □ 842b (Lat. 56.27406N, Long. 116.98129W)
□ 986c (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)** ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519
Email: Graham.Knox@innotechalberta.ca

| **Sample ID (PRAMP_station_yyyymmdd)** (Find Sample ID from BV's email) | **Canister ID** (Find canister ID from canister tag) | **Sample Description** | **Date/Time Canister Triggered** (Find Date/Time from BV's email) | | **Analysis Requested** |
|---|---|---|---|---|---|
| | | | **Date (yyyy/mm/dd)** | **Time (24 Hr) (MST)** | |
| PRAMP_842b- | | □ Methane Trigger | | | * C1C4 Air, VOC Full, RSC Air |
| PRAMP_986c- 20210801 | 32227 | ☑ NMHC Trigger | 2021/08/01 | 20:25 | * Unknowns to be reported |
| PRAMP_Reno- | | □ Methane Blank | | | * Carbon Isotopic Analysis (if sample is collected from Methane trigger) |
| | | □ NMHC Blank | | | |
| | | □ Expired Canister – No further analysis is required. | | | |

**Sample Collection:**

**Collected By** FERDINAND ROY **(Name) of** BUREAU VERITAS **(Company) on** 2021/08/03 @ 20:09 **(Date/Time) (MST).**

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

**EAS CANISTER**
**Sample ID** 21080029-002 **Priority** Normal
**Customer ID:** PRAMP
**Cust Samp ID:** PRAMP_986c-Blank

Date Received- Lab Use Only
RECEIVED
AUG 05 2021
JMP

**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842b Station □ 986c Station □ Reno Station
Address: □ 842b (Lat. 56.27406N, Long. 116.98129W)
□ 986c (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)** ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519
Email: Graham.Knox@innotechalberta.ca

| **Sample ID (PRAMP_station_yyyymmdd)** (Find Sample ID from BV's email) | **Canister ID** (Find canister ID from canister tag) | **Sample Description** | **Date/Time Canister Triggered** (Find Date/Time from BV's email) | | **Analysis Requested** |
|---|---|---|---|---|---|
| | | | **Date (yyyy/mm/dd)** | **Time (24 Hr) (MST)** | |
| PRAMP_842b- | | □ Methane Trigger<br>□ NMHC Trigger<br>□ Methane Blank | | | * C1C4 Air, VOC Full, RSC Air<br>* Unknowns to be reported<br>* Carbon Isotopic Analysis (if sample is collected from Methane trigger) |
| PRAMP_986c- BLANK ~~20210841~~ | | | | | |
| PRAMP_Reno- | 28887 | ☑ NMHC Blank | n/a | n/a | |
| | | □ Expired Canister – No further analysis is required. | | | |

**Sample Collection:**

**Collected By** FERDINAND ROY **(Name) of** BUREAU VERITAS **(Company) on** 2021/08/03 @ 20:09 **(Date/Time) (MST).**

InnoTech ALBERTA

Canister ID: 32227

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: DO54 on: MAY 3 1 2021

Evacuated: JUN 0 4 2021 Recertified: _____

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_986C-20210801

Sampled By: FERDINAND ROY

Ø Osi JMP

| Starting Vacuum: | End Vacuum: |
|---|---|
| -27 "Hg | -0.3 "Hg/psig |

InnoTech ALBERTA

Canister ID: 28887

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: DO54 on: MAY 3 1 2021

Evacuated: JUN 0 4 2021 Recertified: _____

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_986C-BLANK

Sampled By: FERDINAND ROY

-27 "Hg JMP

| Starting Vacuum: | End Pressure: |
|---|---|
| -27.0 "Hg | -27.0 "Hg/ psig |

**Sample ID** 21080029-001 **Priority** Normal

**Customer ID:** PRAMP

**Cust Samp ID:** PRAMP_986c-20210801

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



**RESULTS:** Karla Reesor 403 807 2995
Peace River Area Monitoring Program Committee

**INVOICE:** Office Manager

**CLIENT SAMPLE ID:** PRAMP_986c-20210801

**Matrix:** Ambient Air

**CANISTER ID:** 32227
**PRIORITY:** Normal
**DESCRIPTION:** NMHC Trigger

**DATE SAMPLED:** 01-Aug-21 20:25
**DATE RECEIVED:** 05-Aug-21
**REPORT CREATED:** 13-Aug-21
**REPORT NUMBER:** 21080029
**REPORT REVISED:** 15-Sep-21
**VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-001 | 1-Butene | K, T, U | < 0.14 | ppmv | 0.14 | NA-025 | 06-Aug-21 |
| 21080029-001 | Acetylene | K, T, U | < 0.11 | ppmv | 0.11 | NA-025 | 06-Aug-21 |
| 21080029-001 | n-Butane | K, T, U | < 0.3 | ppmv | 0.3 | NA-025 | 06-Aug-21 |
| 21080029-001 | cis-2-Butene | K, T, U | < 0.05 | ppmv | 0.05 | NA-025 | 06-Aug-21 |
| 21080029-001 | Ethane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-001 | Ethylacetylene | K, T, U | < 0.08 | ppmv | 0.08 | NA-025 | 06-Aug-21 |
| 21080029-001 | Ethylene | K, T, U | < 0.10 | ppmv | 0.10 | NA-025 | 06-Aug-21 |
| 21080029-001 | Isobutane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-001 | Isobutylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-001 | Methane | I | 0.2 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-001 | n-Propane | K, T, U | < 0.10 | ppmv | 0.10 | NA-025 | 06-Aug-21 |
| 21080029-001 | Propylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-001 | Propyne | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-001 | trans-2-Butene | K, T, U | < 0.12 | ppmv | 0.12 | NA-025 | 06-Aug-21 |
| 21080029-001 | 2,5-Dimethylthiophene | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | 2-Ethylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | 2-Methylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | 3-Methylthiophene | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: September 15, 2021

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210801 | 32227 | Ambient Air | 01-Aug-21 20:25 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-001 | Butyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Carbon disulphide | | 1.6 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | Carbonyl sulphide | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Dimethyl disulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | Dimethyl sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | Ethyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Ethyl sulphide | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Hydrogen sulphide | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Isobutyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Isopropyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Methyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | Pentyl mercaptan | K, T, U | < 0.5 | ppbv | 0.5 | NA-024 | 06-Aug-21 |
| 21080029-001 | Propyl mercaptan | K, T, U | < 0.5 | ppbv | 0.5 | NA-024 | 06-Aug-21 |
| 21080029-001 | tert-Butyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 06-Aug-21 |
| 21080029-001 | Thiophene/sec-Butyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 06-Aug-21 |
| 21080029-001 | 1,1,1-Trichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,1,2,2-Tetrachloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,1,2-Trichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,1-Dichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,1-Dichloroethylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,2,3-Trimethylbenzene | | 0.17 | ppbv | 0.07 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,2,4-Trichlorobenzene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,2,4-Trimethylbenzene | | 0.34 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,2-Dibromoethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,2-Dichlorobenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210801 | 32227 | Ambient Air | 01-Aug-21 20:25 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-001 | 1,2-Dichloroethane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,2-Dichloropropane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,3,5-Trimethylbenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,3-Butadiene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,3-Dichlorobenzene | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,4-Dichlorobenzene | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1,4-Dioxane | K, T, U | < 0.7 | ppbv | 0.7 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1-Butene/Isobutylene | | 2.24 | ppbv | 0.08 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1-Hexene/2-Methyl-1-pentene | I | 0.16 | ppbv | 0.10 | AC-058 | 10-Aug-21 |
| 21080029-001 | 1-Pentene | | 0.61 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2,2,4-Trimethylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2,2-Dimethylbutane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2,3,4-Trimethylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2,3-Dimethylbutane | | 1.01 | ppbv | 0.12 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2,3-Dimethylpentane | I | 0.05 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2,4-Dimethylpentane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2-Methylheptane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2-Methylhexane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 2-Methylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 3-Methylheptane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | 3-Methylhexane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | 3-Methylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Acetone | | 13.8 | ppbv | 0.5 | AC-058 | 10-Aug-21 |
| 21080029-001 | Acrolein | | 1.0 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Benzene | I | 0.22 | ppbv | 0.04 | AC-058 | 10-Aug-21 |

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210801 | 32227 | Ambient Air | 01-Aug-21 20:25 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-001 | Benzyl chloride | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Bromodichloromethane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Bromoform | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Bromomethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Carbon disulfide | | 0.35 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Carbon tetrachloride | I | 0.07 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Chlorobenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Chloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Chloroform | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Chloromethane | | 0.94 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | cis-1,2-Dichloroethene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | cis-1,3-Dichloropropene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | cis-2-Butene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | cis-2-Pentene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Cyclohexane | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | Cyclopentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Dibromochloromethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Ethanol | | 10.7 | ppbv | 0.7 | AC-058 | 10-Aug-21 |
| 21080029-001 | Ethyl acetate | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Ethylbenzene | I | 0.18 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Freon-11 | | 0.21 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Freon-113 | I | 0.05 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Freon-114 | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Freon-12 | | 0.53 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Hexachloro-1,3-butadiene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210801 | 32227 | Ambient Air | 01-Aug-21 20:25 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-001 | Isobutane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Isopentane | | 0.61 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | Isoprene | | 42.7 | ppbv | 0.08 | AC-058 | 10-Aug-21 |
| 21080029-001 | Isopropyl alcohol | | 0.8 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Isopropylbenzene | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | m,p-Xylene | I | 0.34 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | m-Diethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | m-Ethyltoluene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methyl butyl ketone | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methyl ethyl ketone | | 1.2 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methyl isobutyl ketone | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methyl methacrylate | K, T, U | < 0.11 | ppbv | 0.11 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methyl tert butyl ether | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methylcyclohexane | I | 0.08 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methylcyclopentane | I | 0.08 | ppbv | 0.07 | AC-058 | 10-Aug-21 |
| 21080029-001 | Methylene chloride | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Butane | | 0.55 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Decane | K, T, U | < 0.08 | ppbv | 0.08 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Dodecane | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Heptane | I | 0.18 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Hexane | I | 0.16 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Octane | | 0.17 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Pentane | | 0.29 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Propylbenzene | K, T, U | < 0.08 | ppbv | 0.08 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Undecane | K, T, U | < 0.7 | ppbv | 0.7 | AC-058 | 10-Aug-21 |

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210801 | 32227 | Ambient Air | 01-Aug-21 20:25 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-001 | Naphthalene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | n-Nonane | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | o-Ethyltoluene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | o-Xylene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | p-Diethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | p-Ethyltoluene | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | Styrene | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080029-001 | Tetrachloroethylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Tetrahydrofuran | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Toluene | | 0.36 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | trans-1,2-Dichloroethylene | | 3.50 | ppbv | 0.08 | AC-058 | 10-Aug-21 |
| 21080029-001 | trans-1,3-Dichloropropylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | trans-2-Butene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080029-001 | trans-2-Pentene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Trichloroethylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080029-001 | Vinyl acetate | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080029-001 | Vinyl chloride | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: September 15, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28887 | Ambient Air | 01-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-002 | 1-Butene | K, T, U | < 0.10 | ppmv | 0.10 | NA-025 | 06-Aug-21 |
| 21080029-002 | Acetylene | K, T, U | < 0.08 | ppmv | 0.08 | NA-025 | 06-Aug-21 |
| 21080029-002 | n-Butane | K, T, U | < 0.2 | ppmv | 0.2 | NA-025 | 06-Aug-21 |
| 21080029-002 | cis-2-Butene | K, T, U | < 0.04 | ppmv | 0.04 | NA-025 | 06-Aug-21 |
| 21080029-002 | Ethane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-002 | Ethylacetylene | K, T, U | < 0.06 | ppmv | 0.06 | NA-025 | 06-Aug-21 |
| 21080029-002 | Ethylene | K, T, U | < 0.07 | ppmv | 0.07 | NA-025 | 06-Aug-21 |
| 21080029-002 | Isobutane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-002 | Isobutylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-002 | Methane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-002 | n-Propane | K, T, U | < 0.07 | ppmv | 0.07 | NA-025 | 06-Aug-21 |
| 21080029-002 | Propylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-002 | Propyne | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 06-Aug-21 |
| 21080029-002 | trans-2-Butene | K, T, U | < 0.09 | ppmv | 0.09 | NA-025 | 06-Aug-21 |
| 21080029-002 | 2,5-Dimethylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | 2-Ethylthiophene | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | 2-Methylthiophene | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | 3-Methylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Butyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Carbon disulphide | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | Carbonyl sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Dimethyl disulphide | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | Dimethyl sulphide | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | Ethyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Ethyl sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28887 | Ambient Air | 01-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-002 | Hydrogen sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Isobutyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Isopropyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Methyl mercaptan | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | Pentyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 05-Aug-21 |
| 21080029-002 | Propyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 05-Aug-21 |
| 21080029-002 | tert-Butyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 05-Aug-21 |
| 21080029-002 | Thiophene/sec-Butyl mercaptan | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 05-Aug-21 |
| 21080029-002 | 1,1,1-Trichloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,1,2,2-Tetrachloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,1,2-Trichloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,1-Dichloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,1-Dichloroethylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2,3-Trimethylbenzene | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2,4-Trichlorobenzene | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2,4-Trimethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2-Dibromoethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2-Dichlorobenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2-Dichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,2-Dichloropropane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,3,5-Trimethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,3-Butadiene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,3-Dichlorobenzene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,4-Dichlorobenzene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1,4-Dioxane | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: September 15, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28887 | Ambient Air | 01-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-002 | 1-Butene/Isobutylene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1-Hexene/2-Methyl-1-pentene | K, T, U | < 0.07 | ppbv | 0.07 | AC-058 | 09-Aug-21 |
| 21080029-002 | 1-Pentene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2,2,4-Trimethylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2,2-Dimethylbutane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2,3,4-Trimethylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2,3-Dimethylbutane | K, T, U | < 0.09 | ppbv | 0.09 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2,3-Dimethylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2,4-Dimethylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2-Methylheptane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2-Methylhexane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 2-Methylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 3-Methylheptane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | 3-Methylhexane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | 3-Methylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Acetone | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080029-002 | Acrolein | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Benzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Benzyl chloride | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Bromodichloromethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Bromoform | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Bromomethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Carbon disulfide | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Carbon tetrachloride | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Chlorobenzene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: September 15, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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(780) 632-8211

# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28887 | Ambient Air | 01-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-002 | Chloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Chloroform | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Chloromethane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | cis-1,2-Dichloroethene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | cis-1,3-Dichloropropene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | cis-2-Butene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | cis-2-Pentene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Cyclohexane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | Cyclopentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Dibromochloromethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Ethanol | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 09-Aug-21 |
| 21080029-002 | Ethyl acetate | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Ethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Freon-11 | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Freon-113 | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Freon-114 | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Freon-12 | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Hexachloro-1,3-butadiene | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Isobutane | | 0.18 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Isopentane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | Isoprene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Isopropyl alcohol | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Isopropylbenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | m,p-Xylene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | m-Diethylbenzene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: September 15, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28887 | Ambient Air | 01-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-002 | m-Ethyltoluene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methyl butyl ketone | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methyl ethyl ketone | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methyl isobutyl ketone | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methyl methacrylate | K, T, U | < 0.08 | ppbv | 0.08 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methyl tert butyl ether | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methylcyclohexane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methylcyclopentane | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 09-Aug-21 |
| 21080029-002 | Methylene chloride | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Butane | | 0.13 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Decane | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Dodecane | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Heptane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Hexane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Octane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Pentane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Propylbenzene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Undecane | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 09-Aug-21 |
| 21080029-002 | Naphthalene | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | n-Nonane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | o-Ethyltoluene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | o-Xylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | p-Diethylbenzene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | p-Ethyltoluene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080029-002 | Styrene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |

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Date: September 15, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28887 | Ambient Air | 01-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080029 **REPORT CREATED:** 13-Aug-21 **REPORT REVISED:** 15-Sep-21 **VERSION:** Version 02

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080029-002 | Tetrachloroethylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Tetrahydrofuran | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Toluene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | trans-1,2-Dichloroethylene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080029-002 | trans-1,3-Dichloropropylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | trans-2-Butene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080029-002 | trans-2-Pentene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Trichloroethylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |
| 21080029-002 | Vinyl acetate | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 09-Aug-21 |
| 21080029-002 | Vinyl chloride | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: September 15, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

## Revision History

| Order ID | Ver | Date | Reason |
|---|---|---|---|
| 21080029 | 01 | 13-Aug-21 | Report created |
| 21080029 | 02 | 15-Sep-21 | 21080029-001Methane result revised |

# Methods

| Method | Description |
|---|---|
| AC-058 | Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry |
| NA-024 | Analysis for Reduced Sulfur Compounds in Air Samples |
| NA-025 | Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector |

# Qualifiers

| Data Qualifier | Translation |
|---|---|
| B | Blank contamination; Analyte detected above the method reporting limit in an associated blank |
| I | The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit |
| J1 | Reported value is estimated; Surrogate recoveries limits were exceeded |
| J2 | Reported value is estimated; No known QC criteria for this component |
| J3 | Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy |
| J4 | Reported value is estimated; The sample matrix interfered with the analysis |
| K | Off-scale low. Actual value is known to be less than the value given |
| L | Off-scale high. Actual value is known to be greater than value given |
| N | Non-target analyte; Tentatively identified compound (using mass spectroscopy) |
| Q | Sample held beyond the accepted holding time |
| R | Rejected data; Not suitable for the projects intended use |
| T | Value reported is less than the laboratory method detection limit |
| U | Compound was analyzed for but not detected |
| V | Analyte was detected in both the sample and the associated method blank |

## Order Comments

21080029

Invoice also to: Karla Reesor, pramptech@prampairshed.ca. Unknowns to be reported.

## Sample Comments

## Result Comments

*Note:*

*1. Results relate only to items tested and apply to the sample as received.*

*2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.*

InnoTech ALBERTA

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PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

**Sample ID** 21080076-001 **Priority** Normal

**Customer ID:** PRAMP
**Cust Samp ID:** PRAMP_986c-20210804

Date Received- Lab Use Only

RECEIVED
AUG 09 2021
JMP

**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842b Station □ 986c Station □ Reno Station
Address: □ 842b (Lat. 56.27406N, Long. 116.98129W)
□ 986c (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)** ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519
Email: Graham.Knox@innotechalberta.ca

| **Sample ID (PRAMP_station_yyyymmdd)** (Find Sample ID from BV's email) | **Canister ID** (Find canister ID from canister tag) | **Sample Description** | **Date/Time Canister Triggered** (Find Date/Time from BV's email) | | **Analysis Requested** |
|---|---|---|---|---|---|
| | | | **Date (yyyy/mm/dd)** | **Time (24 Hr) (MST)** | |
| PRAMP_842b- | | □ Methane Trigger | | | * C1C4 Air, VOC Full, RSC Air |
| PRAMP_986c- 20210804 | 29016 | ☑ NMHC Trigger | 2021/08/04 | 06:15 | * Unknowns to be reported |
| PRAMP_Reno- | | □ Methane Blank | | | * Carbon Isotopic Analysis (if sample is collected from Methane trigger) |
| | | □ NMHC Blank | | | |
| | | □ Expired Canister – No further analysis is required. | | | |

**Sample Collection:**

**Collected By** FERDINAND ROY **(Name) of** BUREAU VERITAS **(Company) on** 2021/08/04 - 14:32 **(Date/Time) (MST).**

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

**Sample ID** 21080076-002 **Priority** Normal

**Customer ID:** PRAMP
**Cust Samp ID:** PRAMP_986c-Blank

Date Received- Lab Use Only

RECEIVED
AUG 09 2021

**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842b Station □ 986c Station □ Reno Station
Address: □ 842b (Lat. 56.27406N, Long. 116.98129W)
□ 986c (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)** ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519
Email: Graham.Knox@innotechalberta.ca

| **Sample ID (PRAMP_station_yyyymmdd)** (Find Sample ID from BV's email) | **Canister ID** (Find canister ID from canister tag) | **Sample Description** | **Date/Time Canister Triggered** (Find Date/Time from BV's email) | | **Analysis Requested** |
|---|---|---|---|---|---|
| | | | **Date (yyyy/mm/dd)** | **Time (24 Hr) (MST)** | |
| PRAMP_842b- | | □ Methane Trigger<br>□ NMHC Trigger | | | * C1C4 Air, VOC Full, RSC Air<br>* Unknowns to be reported |
| PRAMP_986c- BLANK | 28951 | □ Methane Blank | n/a | n/a | * Carbon Isotopic Analysis (if sample is collected from Methane trigger) |
| PRAMP_Reno- | | ☑ NMHC Blank<br>□ Expired Canister – No further analysis is required. | | | |

**Sample Collection:**

**Collected By** FERDINAND ROY **(Name) of** BUREAU VERITAS **(Company) on** 2021/08/04 - 14:32 **(Date/Time) (MST).**

InnoTech ALBERTA

Canister ID: 29016

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 0054 on: APR 0 8 2021

Evacuated: APR 0 9 2021 Recertified: JUN 1 0 2021

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID 21080076-001 Priority Normal

Customer ID: PRAMP

Cust Samp ID: PRAMP_986c-20210804

Sample ID: PRAMP_986C-20210804

Sampled By: FERDINAND ROY

0 psi JMP

Starting Vacuum: -27.0 "Hg

End Vacuum: 0 "Hg/psig

InnoTech ALBERTA

Canister ID: 28951

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 0054 on: MAR 2 6 2021

Evacuated: MAR 3 1 2021 Recertified: JUN 1 0 2021

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_986C-BLANK

Sampled By: FERDINAND ROY

-27" Hg JMP

Starting Vacuum: -27.0 "Hg

End Vacuum: -27.0 "Hg/psig

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



**RESULTS:** Karla Reesor 403 807 2995
Peace River Area Monitoring Program Committee

**INVOICE:** Office Manager

**CLIENT SAMPLE ID**
PRAMP_986c-20210804

**Matrix**
Ambient Air

**CANISTER ID:** 29016
**PRIORITY:** Normal
**DESCRIPTION:** NMHC Trigger

**DATE SAMPLED:** 04-Aug-21 6:15
**DATE RECEIVED:** 09-Aug-21
**REPORT CREATED:** 30-Aug-21
**REPORT NUMBER:** 21080076
**VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-001 | 1-Butene | K, T, U | < 0.14 | ppmv | 0.14 | NA-025 | 09-Aug-21 |
| 21080076-001 | Acetylene | K, T, U | < 0.11 | ppmv | 0.11 | NA-025 | 09-Aug-21 |
| 21080076-001 | n-Butane | K, T, U | < 0.3 | ppmv | 0.3 | NA-025 | 09-Aug-21 |
| 21080076-001 | cis-2-Butene | K, T, U | < 0.06 | ppmv | 0.06 | NA-025 | 09-Aug-21 |
| 21080076-001 | Ethane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-001 | Ethylacetylene | K, T, U | < 0.08 | ppmv | 0.08 | NA-025 | 09-Aug-21 |
| 21080076-001 | Ethylene | K, T, U | < 0.10 | ppmv | 0.10 | NA-025 | 09-Aug-21 |
| 21080076-001 | Isobutane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-001 | Isobutylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-001 | Methane | | 2.5 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-001 | n-Propane | K, T, U | < 0.10 | ppmv | 0.10 | NA-025 | 09-Aug-21 |
| 21080076-001 | Propylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-001 | Propyne | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-001 | trans-2-Butene | K, T, U | < 0.13 | ppmv | 0.13 | NA-025 | 09-Aug-21 |
| 21080076-001 | 2,5-Dimethylthiophene | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | 2-Ethylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | 2-Methylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | 3-Methylthiophene | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210804 | 29016 | Ambient Air | 04-Aug-21 6:15 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-001 | Butyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Carbon disulphide | | 1.6 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | Carbonyl sulphide | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Dimethyl disulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | Dimethyl sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | Ethyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Ethyl sulphide | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Hydrogen sulphide | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Isobutyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Isopropyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Methyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | Pentyl mercaptan | K, T, U | < 0.6 | ppbv | 0.6 | NA-024 | 09-Aug-21 |
| 21080076-001 | Propyl mercaptan | K, T, U | < 0.6 | ppbv | 0.6 | NA-024 | 09-Aug-21 |
| 21080076-001 | tert-Butyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-001 | Thiophene/sec-Butyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-001 | 1,1,1-Trichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,1,2,2-Tetrachloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,1,2-Trichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,1-Dichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,1-Dichloroethylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,2,3-Trimethylbenzene | K, T, U | < 0.07 | ppbv | 0.07 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,2,4-Trichlorobenzene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,2,4-Trimethylbenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,2-Dibromoethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,2-Dichlorobenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021

Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210804 | 29016 | Ambient Air | 04-Aug-21 6:15 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-001 | 1,2-Dichloroethane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,2-Dichloropropane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,3,5-Trimethylbenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,3-Butadiene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,3-Dichlorobenzene | K, T, U | < 0.6 | ppbv | 0.6 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,4-Dichlorobenzene | K, T, U | < 0.6 | ppbv | 0.6 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1,4-Dioxane | K, T, U | < 0.7 | ppbv | 0.7 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1-Butene/Isobutylene | | 0.89 | ppbv | 0.08 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1-Hexene/2-Methyl-1-pentene | K, T, U | < 0.10 | ppbv | 0.10 | AC-058 | 09-Aug-21 |
| 21080076-001 | 1-Pentene | | 0.14 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2,2,4-Trimethylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2,2-Dimethylbutane | | 0.28 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2,3,4-Trimethylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2,3-Dimethylbutane | | 0.35 | ppbv | 0.13 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2,3-Dimethylpentane | | 0.20 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2,4-Dimethylpentane | I | 0.11 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2-Methylheptane | | 0.28 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2-Methylhexane | | 0.76 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 2-Methylpentane | | 1.32 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 3-Methylheptane | | 0.20 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | 3-Methylhexane | | 0.61 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | 3-Methylpentane | | 1.21 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Acetone | | 6.0 | ppbv | 0.6 | AC-058 | 09-Aug-21 |
| 21080076-001 | Acrolein | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Benzene | | 0.47 | ppbv | 0.04 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210804 | 29016 | Ambient Air | 04-Aug-21 6:15 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-001 | Benzyl chloride | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Bromodichloromethane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Bromoform | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Bromomethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Carbon disulfide | | 0.26 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Carbon tetrachloride | I | 0.05 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Chlorobenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Chloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Chloroform | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Chloromethane | | 0.52 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | cis-1,2-Dichloroethene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | cis-1,3-Dichloropropene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | cis-2-Butene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | cis-2-Pentene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Cyclohexane | | 0.72 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | Cyclopentane | | 0.24 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Dibromochloromethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Ethanol | | 4.4 | ppbv | 0.7 | AC-058 | 09-Aug-21 |
| 21080076-001 | Ethyl acetate | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Ethylbenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Freon-11 | | 0.19 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Freon-113 | I | 0.04 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Freon-114 | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Freon-12 | | 0.47 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Hexachloro-1,3-butadiene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210804 | 29016 | Ambient Air | 04-Aug-21 6:15 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-001 | Isobutane | | 1.08 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Isopentane | | 8.49 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | Isoprene | | 3.59 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Isopropyl alcohol | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Isopropylbenzene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | m,p-Xylene | I | 0.28 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | m-Diethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | m-Ethyltoluene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methyl butyl ketone | K, T, U | < 0.6 | ppbv | 0.6 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methyl ethyl ketone | I | 0.5 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methyl isobutyl ketone | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methyl methacrylate | | 0.35 | ppbv | 0.11 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methyl tert butyl ether | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methylcyclohexane | | 0.84 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methylcyclopentane | | 0.57 | ppbv | 0.07 | AC-058 | 09-Aug-21 |
| 21080076-001 | Methylene chloride | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Butane | | 3.08 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Decane | K, T, U | < 0.08 | ppbv | 0.08 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Dodecane | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Heptane | | 1.41 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Hexane | | 3.55 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Octane | | 0.32 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Pentane | | 8.58 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Propylbenzene | K, T, U | < 0.08 | ppbv | 0.08 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Undecane | K, T, U | < 0.7 | ppbv | 0.7 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021

Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-20210804 | 29016 | Ambient Air | 04-Aug-21 6:15 |

**DESCRIPTION:** NMHC Trigger

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-001 | Naphthalene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | n-Nonane | | 0.16 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | o-Ethyltoluene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | o-Xylene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | p-Diethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | p-Ethyltoluene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | Styrene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 09-Aug-21 |
| 21080076-001 | Tetrachloroethylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Tetrahydrofuran | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Toluene | | 0.59 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | trans-1,2-Dichloroethylene | | 0.20 | ppbv | 0.08 | AC-058 | 09-Aug-21 |
| 21080076-001 | trans-1,3-Dichloropropylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | trans-2-Butene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 09-Aug-21 |
| 21080076-001 | trans-2-Pentene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Trichloroethylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |
| 21080076-001 | Vinyl acetate | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 09-Aug-21 |
| 21080076-001 | Vinyl chloride | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28951 | Ambient Air | 04-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-002 | 1-Butene | K, T, U | < 0.10 | ppmv | 0.10 | NA-025 | 09-Aug-21 |
| 21080076-002 | Acetylene | K, T, U | < 0.08 | ppmv | 0.08 | NA-025 | 09-Aug-21 |
| 21080076-002 | n-Butane | K, T, U | < 0.2 | ppmv | 0.2 | NA-025 | 09-Aug-21 |
| 21080076-002 | cis-2-Butene | K, T, U | < 0.04 | ppmv | 0.04 | NA-025 | 09-Aug-21 |
| 21080076-002 | Ethane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-002 | Ethylacetylene | K, T, U | < 0.06 | ppmv | 0.06 | NA-025 | 09-Aug-21 |
| 21080076-002 | Ethylene | K, T, U | < 0.07 | ppmv | 0.07 | NA-025 | 09-Aug-21 |
| 21080076-002 | Isobutane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-002 | Isobutylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-002 | Methane | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-002 | n-Propane | K, T, U | < 0.07 | ppmv | 0.07 | NA-025 | 09-Aug-21 |
| 21080076-002 | Propylene | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-002 | Propyne | K, T, U | < 0.1 | ppmv | 0.1 | NA-025 | 09-Aug-21 |
| 21080076-002 | trans-2-Butene | K, T, U | < 0.09 | ppmv | 0.09 | NA-025 | 09-Aug-21 |
| 21080076-002 | 2,5-Dimethylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | 2-Ethylthiophene | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | 2-Methylthiophene | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | 3-Methylthiophene | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Butyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Carbon disulphide | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | Carbonyl sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Dimethyl disulphide | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | Dimethyl sulphide | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | Ethyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Ethyl sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28951 | Ambient Air | 04-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-002 | Hydrogen sulphide | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Isobutyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Isopropyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Methyl mercaptan | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | Pentyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-002 | Propyl mercaptan | K, T, U | < 0.4 | ppbv | 0.4 | NA-024 | 09-Aug-21 |
| 21080076-002 | tert-Butyl mercaptan | K, T, U | < 0.3 | ppbv | 0.3 | NA-024 | 09-Aug-21 |
| 21080076-002 | Thiophene/sec-Butyl mercaptan | K, T, U | < 0.2 | ppbv | 0.2 | NA-024 | 09-Aug-21 |
| 21080076-002 | 1,1,1-Trichloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,1,2,2-Tetrachloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,1,2-Trichloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,1-Dichloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,1-Dichloroethylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2,3-Trimethylbenzene | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2,4-Trichlorobenzene | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2,4-Trimethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2-Dibromoethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2-Dichlorobenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2-Dichloroethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,2-Dichloropropane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,3,5-Trimethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,3-Butadiene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,3-Dichlorobenzene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,4-Dichlorobenzene | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1,4-Dioxane | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 10-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28951 | Ambient Air | 04-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-002 | 1-Butene/Isobutylene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1-Hexene/2-Methyl-1-pentene | K, T, U | < 0.07 | ppbv | 0.07 | AC-058 | 10-Aug-21 |
| 21080076-002 | 1-Pentene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2,2,4-Trimethylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2,2-Dimethylbutane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2,3,4-Trimethylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2,3-Dimethylbutane | K, T, U | < 0.09 | ppbv | 0.09 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2,3-Dimethylpentane | I | 0.04 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2,4-Dimethylpentane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2-Methylheptane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2-Methylhexane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 2-Methylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 3-Methylheptane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | 3-Methylhexane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | 3-Methylpentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Acetone | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080076-002 | Acrolein | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Benzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Benzyl chloride | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Bromodichloromethane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Bromoform | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Bromomethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Carbon disulfide | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Carbon tetrachloride | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Chlorobenzene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28951 | Ambient Air | 04-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-002 | Chloroethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Chloroform | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Chloromethane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | cis-1,2-Dichloroethene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | cis-1,3-Dichloropropene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | cis-2-Butene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | cis-2-Pentene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Cyclohexane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | Cyclopentane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Dibromochloromethane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Ethanol | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 10-Aug-21 |
| 21080076-002 | Ethyl acetate | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Ethylbenzene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Freon-11 | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Freon-113 | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Freon-114 | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Freon-12 | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Hexachloro-1,3-butadiene | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Isobutane | | 0.17 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Isopentane | | 0.11 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | Isoprene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Isopropyl alcohol | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Isopropylbenzene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | m,p-Xylene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | m-Diethylbenzene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |

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Date: August 30, 2021

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28951 | Ambient Air | 04-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-002 | m-Ethyltoluene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methyl butyl ketone | K, T, U | < 0.4 | ppbv | 0.4 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methyl ethyl ketone | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methyl isobutyl ketone | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methyl methacrylate | K, T, U | < 0.08 | ppbv | 0.08 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methyl tert butyl ether | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methylcyclohexane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methylcyclopentane | K, T, U | < 0.05 | ppbv | 0.05 | AC-058 | 10-Aug-21 |
| 21080076-002 | Methylene chloride | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Butane | | 0.17 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Decane | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Dodecane | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Heptane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Hexane | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Octane | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Pentane | I | 0.07 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Propylbenzene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Undecane | K, T, U | < 0.5 | ppbv | 0.5 | AC-058 | 10-Aug-21 |
| 21080076-002 | Naphthalene | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | n-Nonane | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | o-Ethyltoluene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | o-Xylene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | p-Diethylbenzene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | p-Ethyltoluene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |
| 21080076-002 | Styrene | K, T, U | < 0.04 | ppbv | 0.04 | AC-058 | 10-Aug-21 |

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# ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT



| CLIENT SAMPLE ID | CANISTER ID | Matrix | DATE SAMPLED |
|---|---|---|---|
| PRAMP_986c-Blank | 28951 | Ambient Air | 04-Aug-21 |

**DESCRIPTION:** NMHC Blank

**REPORT NUMBER:** 21080076 **REPORT CREATED:** 30-Aug-21 **VERSION:** Version 01

| Lab ID | Parameter | Qualifier | Result | Units | RDL | Method | Analysis Date |
|---|---|---|---|---|---|---|---|
| 21080076-002 | Tetrachloroethylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Tetrahydrofuran | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Toluene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | trans-1,2-Dichloroethylene | K, T, U | < 0.06 | ppbv | 0.06 | AC-058 | 10-Aug-21 |
| 21080076-002 | trans-1,3-Dichloropropylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | trans-2-Butene | K, T, U | < 0.03 | ppbv | 0.03 | AC-058 | 10-Aug-21 |
| 21080076-002 | trans-2-Pentene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Trichloroethylene | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |
| 21080076-002 | Vinyl acetate | K, T, U | < 0.3 | ppbv | 0.3 | AC-058 | 10-Aug-21 |
| 21080076-002 | Vinyl chloride | K, T, U | < 0.02 | ppbv | 0.02 | AC-058 | 10-Aug-21 |

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: August 30, 2021 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

## Revision History

| Order ID | Ver | Date | Reason |
|---|---|---|---|
| 21080076 | 01 | 30-Aug-21 | Report created |

# Methods

| Method | Description |
|---|---|
| AC-058 | Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry |
| NA-024 | Analysis for Reduced Sulfur Compounds in Air Samples |
| NA-025 | Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector |

# Qualifiers

| Data Qualifier | Translation |
|---|---|
| B | Blank contamination; Analyte detected above the method reporting limit in an associated blank |
| I | The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit |
| J1 | Reported value is estimated; Surrogate recoveries limits were exceeded |
| J2 | Reported value is estimated; No known QC criteria for this component |
| J3 | Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy |
| J4 | Reported value is estimated; The sample matrix interfered with the analysis |
| K | Off-scale low. Actual value is known to be less than the value given |
| L | Off-scale high. Actual value is known to be greater than value given |
| N | Non-target analyte; Tentatively identified compound (using mass spectroscopy) |
| Q | Sample held beyond the accepted holding time |
| R | Rejected data; Not suitable for the projects intended use |
| T | Value reported is less than the laboratory method detection limit |
| U | Compound was analyzed for but not detected |
| V | Analyte was detected in both the sample and the associated method blank |

## Order Comments

## Sample Comments

## Result Comments

*Note:*

*1. Results relate only to items tested and apply to the sample as received.*

*2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.*

# End of Report