Peace River Area Monitoring Program

JUNE 2019

- Monthly Ambient Air Quality Monitoring Report -

- Ambient Air Monthly Calibration Report -

- Certified Laboratory Analysis Report-

July 19, 2019

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Peace River Area Monitoring Program

JUNE 2019

Monthly Ambient Air Quality Monitoring Report

PRAMP-201906

Operation and Maintenance:
Maxxam Analytics

Data Validation and Report:
Peace River Area Monitoring Program

July 8, 2019

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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

Peace River Area Monitoring Program
Suite 91, 305 – 4625 Varity Drive NW
Calgary, AB, T3A 0Z9
Phone #: 780-226-7068 / 587-225-2248
E-mail: pramptech@prampairshed.ca
www.prampairshed.ca

Alberta Environment and Parks (AEP)
11th Floor, Oxbridge Place
9820 106 Street
Edmonton, AB, T5K 2J6
Emailed to: Air.Reporting@gov.ab.ca

July 8, 2019

RE: PRAMP – June 2019 Monthly Ambient Air Quality Monitoring Report

Enclosed is the June 2019 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
Suite 91, 305 – 4625 Varity Drive NW
Calgary, AB, T3A 0Z9
Phone #: 780-226-7068 / 587-225-2248
E-mail: pramptech@prampairshed.ca

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:

- 986b Station
- 842b Station
- Reno Station

Station ID	Station Name	Latitude	Longitude
1562	986b	56.376056	-116.940704
1561	842b	56.27406	-116.98129
1563	Reno	55.86936	-117.05739

Listing of Intermittent Monitoring Stations

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

Monitoring Notes during the Month of June 2019

986b 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.
- A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. June 4 hour 23 data was also invalided for all gas parameters as extra time was needed for the analyzers to recover from the power failure.
- SO2: A shut-down calibration was performed on June 3 in order to address the low-pressure alarm warning showing during the calibration. A post-repair calibration was performed following the maintenance on June 3.
- TRS: The TRS convertor failed on June 1 at 05:56. Troubleshooting was performed on June 2 during hour 19 by replacing the convertor and initiating a post-repair zero/span check. The zero/span check results were within the acceptable limits. Data collected between June 1 at 05:56 and June 2 at 19:59 were discarded. 38 hours of downtime were recorded due to this event.
- THC/CH4/NMHC: Due to the analyzer injection issue, CH4 minute data collected on June 13 at 07:22 and 07:23 were invalidated. The corresponding THC and NMHC data were also discarded. Hourly averages were recalculated.
- Station temperature (ST): High station temperature was recorded on June 27 (hourly max 28.9 °C). A portable AC unit was installed on June 28 to maintain a stable station temperature. A complete HVAC repair/maintenance has been scheduled and will be performed in July.

- A meteorological system check was performed on the RH, BP, Temperature, and anemometer sensors on June 3. The sensors passed the check requirements.

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.
- A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. TRS one-minute data collected on June 3 at 16:50 and THC/CH4/NMHC one-minute data collected on June 3 from 16:50 to 17:03 were also discarded as the analyzers were recovering from the power failure event. Hourly data were re-averaged. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. June 4 hour 23 data was also invalided for the THC/CH4/NMHC as extra time were needed for the HC analyzer to recover from the power failure.
- A meteorological system check was performed on the RH, BP, Temperature, and anemometer sensors on June 11. The sensors passed the check requirements.

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.
- TRS: The analyzer showed a high span drift after the monthly calibration was completed on June 12 due to high station temperatures. An additional zero/span check was initiated on June 13 at hour 9 to verify the span system response. The span result passed the span check requirements.
- All gas parameters: The June 13 automated zero/span check was interrupted prior to the completion of the span phase at 19:38. The additional zero/span check was initiated on June 14 during hour 9 to verify the span program's functionality. No issue was identified during the additional zero/span check period.
- THC/CH4/NMHC: The nitrogen gas bottle was replaced on June 24. No data were affected by this maintenance.
- Station temperature (ST): High station temperature was recorded during the time the monthly calibration was performed on June 12 (hourly max 30.8 °C). It was likely due to extra heat produced from the calibration gear. A station thermostat was adjusted on June 12 during hour 18 to maintain the station temperature range to around 23 °C.
- A meteorological system check was performed on the RH, BP, Temperature, and anemometer sensors on June 12. The sensors passed the check requirements.

VOCs Canister Sampling program:

- The canister sampling program collects a 1-hour sample of air when the continuously measured methane (CH4) and/or non-methane hydrocarbon (NMHC) concentration reaches a specified

trigger point. The current trigger points are 5.5 ppm for methane and 0.3 ppm for non-methane hydrocarbons and are in place at all stations in the PRAMP network. Both trigger points are based on real-time monitoring data that are averaged over a 5-minute period.

- One CH4-triggered event was recorded in June. The canister sample was collected at the 986 station.

Station	Parameter	Concentration (ppm)	Date	Time
986b	CH4	7.75	June 14	1:10

- Sample analysis and analytical results were prepared and provided by InnoTech Alberta.
- In this report, a value of zero (0) value is assigned if the laboratory analysis results in a concentration that is below Reported Detection Limits (RDL).

- 986b Station:
    - Methane-triggered sample was collected on June 14.

Sample Date/Time	2019-06-14					
Canister Sample	Methane					
Canister ID	32221					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading	2.6		Maximum Reading	3.4	Maximum Reading	17.3

    - Blank sample was collected on June 14.

Sample Date/Time	2019-06-14					
Canister Sample	Blank					
Canister ID	28916					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading	0		Maximum Reading	0	Maximum Reading	17.8

Note: It is a valid blank sample that shows evidence of contamination. The results are not indicative of ambient concentrations. PRAMP uses blank samples to support improvement of sample handling and standard operating procedures.

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.

At the 986 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

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

Hourly instantaneous maximum data included in this report have not gone through data validation/verification steps and are considered raw data. The intention of including this data set in the report is for reference purposes and should not be used in published documents.

Equipment calibration / maintenance records were provided by Maxxam Analytics.

Certification

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

Lily Lin, Environmental Monitoring Program Manager, PRAMP Airshed

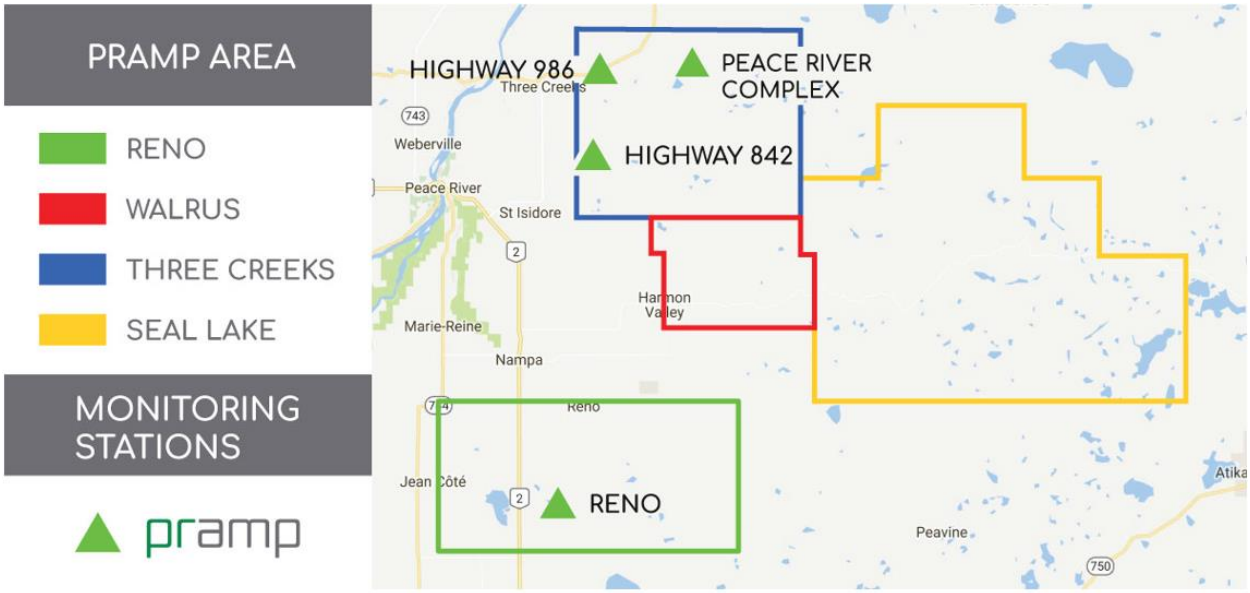
This report was reviewed by Mike Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

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, Environmental Monitoring Program Manager, PRAMP Airshed

July 8, 2019

Map of PRAMP Continuous Monitoring Network



CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

986b Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	**Thermo / 43C**	**43C-62339-335**	
• A shut-down calibration was performed on June 3 in order to address the low-pressure alarm warning showing during the calibration. A post-repair calibration was performed following the maintenance on June 3. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. June 4 hour 23 data was also invalided as extra time was needed to recover from the power failure.			
TRS	**Thermo / 43i-TLE**	**1152940011**	
• The TRS convertor failed on June 1 at 05:56. Troubleshooting was performed on June 2 during hour 19 by replacing the convertor and initiating a post-repair zero/span check. The zero/span check results were within the acceptable limits. Data collected between June 1 at 05:56 and June 2 at 19:59 were discarded. 38 hours of downtime were recorded due to this event. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. June 4 hour 23 data was also invalided as extra time was needed to recover from the power failure.			
THC/CH4/NMHC	**Thermo / 55i**	**1022143392**	
• A successful monthly calibration was performed on June 3. • Due to the analyzer injection issue, CH4 minute data collected on June 13 at 07:22 and 07:23 were invalidated. The corresponding THC and NMHC data were also discarded. Hourly averages were recalculated. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. June 4 hour 23 data was also invalided as extra time was needed to recover from the power failure.			
Relative Humidity (RH)	**RM Young / 43172VC & 431872VC**	**61012322 & 030978**	
• No issues were identified this month. • The RH sensor was checked on June 3. The sensor passed the check requirements. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded.			

Parameter	Make / Model	Serial Number	
Barometric Pressure (BP)	**MetOne / 090D**	**F3845**	
• No issues were identified this month. • The BP sensor was checked on June 3. The sensor passed the check requirements. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded.			
Ambient Temperature (AT)	**RM Young 43172VC & 431872VC**	**61012322 & 030978**	
• No issues were identified this month. • The AT sensor was checked on June 3. The sensor passed the check requirements. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded.			
Station Temperature (ST)	**Maxxam**	**N/A**	
• A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. • High station temperature was recorded on June 27 (hourly max 28.9 °C). A portable AC unit was installed on June 28 to maintain a stable station temperature. A complete HVAC repair/maintenance has been scheduled and will be performed in July.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young / 5305VK**	**129612**	
• No issues were identified this month. • Wind direction data contained in this report represents where the wind is coming from. • The anemometer sensors were checked on June 3. The sensor passed the check requirements. • A power failure occurred on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded.			

Monitored Data Summary

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	0.1	0	2	June 1 at hour 0	6.5	ESE	0.6	June 6	98.8	93.4
TRS (ppb)	10	3	-	-	-	-	0.6	0.01	2.97	June 14 at hour 3	1.1	SE	0.81	June 6	93.5	88.9
THC (ppm)	-	-	-	-	-	-	1.99	1.87	3.07	June 14 at hour 1	1.6	NNW	2.11	June 2	98.8	93.9
CH4 (ppm)	-	-	-	-	-	-	1.99	1.87	3.07	June 14 at hour 1	1.6	NNW	2.11	June 2	98.8	93.9
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.05	June 1 at hour 0	6.5	ESE	0.00	June 2	98.8	93.9
RH (%)	-	-	-	-	-	-	66.6	20	100	June 5 at hour 3	1	ESE	92.9	June 2	98.9	98.9
BP (millibar)	-	-	-	-	-	-	941	933	949	June 9 at hour 6	4.1	SSW	948	June 13	98.9	98.9
Ext. Temp. (°C)	-	-	-	-	-	-	13.9	-0.4	27.8	June 17 at hour 16	14.1	SSE	20.4	June 8	98.9	98.9
Stn. Temp. (°C)	-	-	-	-	-	-	23.0	20.3	28.9	June 27 at hour 17	6.9	ESE	25.7	June 1	98.9	98.9
WSV (km/hr)	-	-	-	-	-	-	1.7	0.0	22.9	June 2 at hour 2	22.9	WNW	9.6	June 26	98.9	98.9
WDV (sector)	-	-	-	-	-	-	285 (WNW)	-	-	-	-	-	-	-	98.9	98.9

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality for the 842b Station was within the AAAQOs for all monitored parameters.

842b Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	**Thermo / 43i**	**835033373**	
• A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. • A successful monthly calibration was performed on June 4.			
TRS	**Thermo / 43i-TLE**	**1162460023**	
• A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. One-minute data collected on June 3 at 16:50 was also discarded as the analyzer was recovering from the power failure event. Hourly data was re-averaged. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. • A successful monthly calibration was performed on June 4.			
THC/CH4/NMHC	**Thermo / 55i**	**1505664392**	
• A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. One-minute data collected on June 3 from 16:50 to 17:03 were also discarded as the analyzers were recovering from the power failure event. Hourly data was re-averaged. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. June 4 hour 23 data was also invalided as extra time were needed for the analyzer to recover from the power failure. • A successful monthly calibration was performed on June 4.			
Relative Humidity (RH)	**Campbell Scientific / HMP45C**	**C2608**	
• No issues were identified this month. • A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. • The RH sensor was checked on June 11. The sensor passed the check requirements.			
Barometric Pressure (BP)	**MetOne / 92**	**K12864**	
• No issues were identified this month. • A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded • The BP sensor was checked on June 11. The sensor passed the check requirements.			

Parameter	Make / Model	Serial Number	
Station Temperature (ST)	**Maxxam**	**N/A**	
• No issues were identified this month. • A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded.			
Ambient Temperature (AT)	**Campbell Scientific / HMP45C**	**C2608**	
• No issues were identified this month. • A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. • The temperature sensor was checked on June 11. The sensor passed the check requirements.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young / 5305VK**	**124638**	
• No issues were identified this month. • Wind direction data contained in this report represents where the wind is coming from. • A few power outages occurred this month: One was recorded on June 3 at 16:49 and the second power outage was recorded on June 3 at 17:46. Another major power failure event was recorded on June 4 between hour 15 and hour 22. 8 hours of downtime were recorded. • The anemometer sensors were checked on June 11. The sensor passed the check requirements.			

Monitored Data Summary

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	June 1 at hour 2	13.1	SE	0.3	June 2	98.9	93.9
TRS (ppb)	10	3	-	-	-	-	0.5	0.31	2.47	June 9 at hour 1	1.4	ENE	0.79	June 29	98.9	93.7
THC (ppm)	-	-	-	-	-	-	1.95	1.87	2.46	June 27 at hour 4	3.1	ENE	2.06	June 3	98.8	93.7
CH4 (ppm)	-	-	-	-	-	-	1.95	1.87	2.46	June 27 at hour 4	3.1	ENE	2.06	June 3	98.8	93.7
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.00	June 1 at hour 0	3.2	E	0.00	June 1	98.8	93.7
RH (%)	-	-	-	-	-	-	63.1	19	95	June 9 at hour 3	1.4	SE	87.9	June 2	98.9	98.9
BP (millibar)	-	-	-	-	-	-	942	933	950	June 9 at hour 5	1.6	ESE	949	June 3	98.9	98.9
Ext. Temp. (°C)	-	-	-	-	-	-	13.8	1.8	28.3	June 17 at hour 15	15.7	S	20.5	June 8	98.9	98.9
Stn. Temp. (°C)	-	-	-	-	-	-	23.2	21.6	24.2	June 17 at hour 16	17.1	SSE	23.6	June 7	98.9	98.9
WSV (km/hr)	-	-	-	-	-	-	3.3	0.1	32.2	June 4 at hour 14	32.2	SSW	17.8	June 26	98.9	100.0
WDV (sector)	-	-	-	-	-	-	260 (WSW)	-	-	-	-	-	-	-	98.9	98.9

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality for the 842b Station was within the AAAQOs for all monitored parameters.

Reno Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	**API / 100A**	**841**	
• A successful monthly calibration was performed on June 12. • The June 13 automated zero/span check was interrupted prior to the completion of the span phase at 19:38. The additional zero/span check was initiated on June 14 during hour 9 to verify the span program's functionality. No issues were identified during the additional zero/span check period.			
TRS	**Thermo / 43i-TLE**	**1162460022**	
• A successful monthly calibration was performed on June 12. • The analyzer showed a high span drift after the monthly calibration was completed due to high station temperatures. The analyzer passed the span check requirements on June 13 hour 6. • The June 13 automated zero/span check was interrupted prior to the completion of the span phase at 19:38. The additional zero/span check was initiated on June 14 during hour 9 to verify the span program's functionality. No issues were identified during the additional zero/span check period.			
THC/CH4/NMHC	**Thermo / 55i**	**1314057759**	
• A successful monthly calibration was performed on June 12. • The June 13 automated zero/span check was interrupted prior to the completion of the span phase at 19:38. The additional zero/span check was initiated on June 14 during hour 9 to verify the span program's functionality. No issue was identified during the additional zero/span check period. • The nitrogen gas bottle was replaced on June 24. No data were affected due to this maintenance.			
Relative Humidity (RH)	**RM Young / 43172VC**	**60837897**	
• No issues were identified this month. • The RH sensor was checked on June 12. The sensor passed the check requirements.			
Barometric Pressure (BP)	**MetOne / 92**	**R12877**	
• No issues were identified this month. • The RH sensor was checked on June 12. The sensor passed the check requirements.			
Ambient Temperature (AT)	**RM Young / 43172VC**	**60837897**	
• No issues were identified this month. • The RH sensor was checked on June 12. The sensor passed the check requirements.			

Parameter	Make / Model	Serial Number	
Station Temperature (ST)	**Maxxam**	**N/A**	
• High station temperature was recorded during the time the monthly calibration was performed on June 12 (hourly max 30.8 °C). It was likely due to extra heat produced from the calibration gear. A station thermostat was adjusted on June 12 during hour 18 to maintain the station temperature range to around 23 °C.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young / 5305VK**	**149769**	
• No issues were identified this month. • Wind direction data contained in this report represents where the wind is coming from. • The anemometer sensors were checked on June 12. The sensor passed the check requirements.			

Monitored Data Summary

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	June 1 at hour 0	1.9	S	0.3	June 2	99.9	94.7
TRS (ppb)	10	3	-	-	-	-	0.5	0.19	3.50	June 16 at hour 5	1.4	SSW	0.94	June 27	99.7	94.4
THC (ppm)	-	-	-	-	-	-	1.94	1.87	2.30	June 21 at hour 21	0.3	SW	1.99	June 13	99.9	94.6
CH4 (ppm)	-	-	-	-	-	-	1.94	1.87	2.30	June 21 at hour 21	0.3	SW	1.99	June 13	99.9	94.6
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.00	June 1 at hour 0	1.9	S	0.00	June 1	99.9	94.6
RH (%)	-	-	-	-	-	-	62.4	17	100	June 25 at hour 3	4	W	87.6	June 2	100.0	100.0
BP (millibar)	-	-	-	-	-	-	938	929	946	June 9 at hour 6	3.4	SW	945	June 13	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	14.0	3.6	29.3	June 17 at hour 15	4.5	SSW	20.5	June 6	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	23.3	21.2	30.8	June 12 at hour 17	10	W	26.2	June 21	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	2.1	0.0	18.1	June 18 at hour 16	18.1	WSW	12.5	June 22	100.0	100.0
WDV (sector)	-	-	-	-	-	-	293 (WNW)	-	-	-	-	-	-	-	100.0	100.0

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality for the 842b Station was within the AAAQOs for all monitored parameters.

TABLES, CHARTS, WIND ROSES AND EQUIPMENT CALIBRATION RECORDS

986b STATION

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

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 Exceedences: 0 Number of 24-Hour Exceedences: 0 30-Day Exceedence: 0

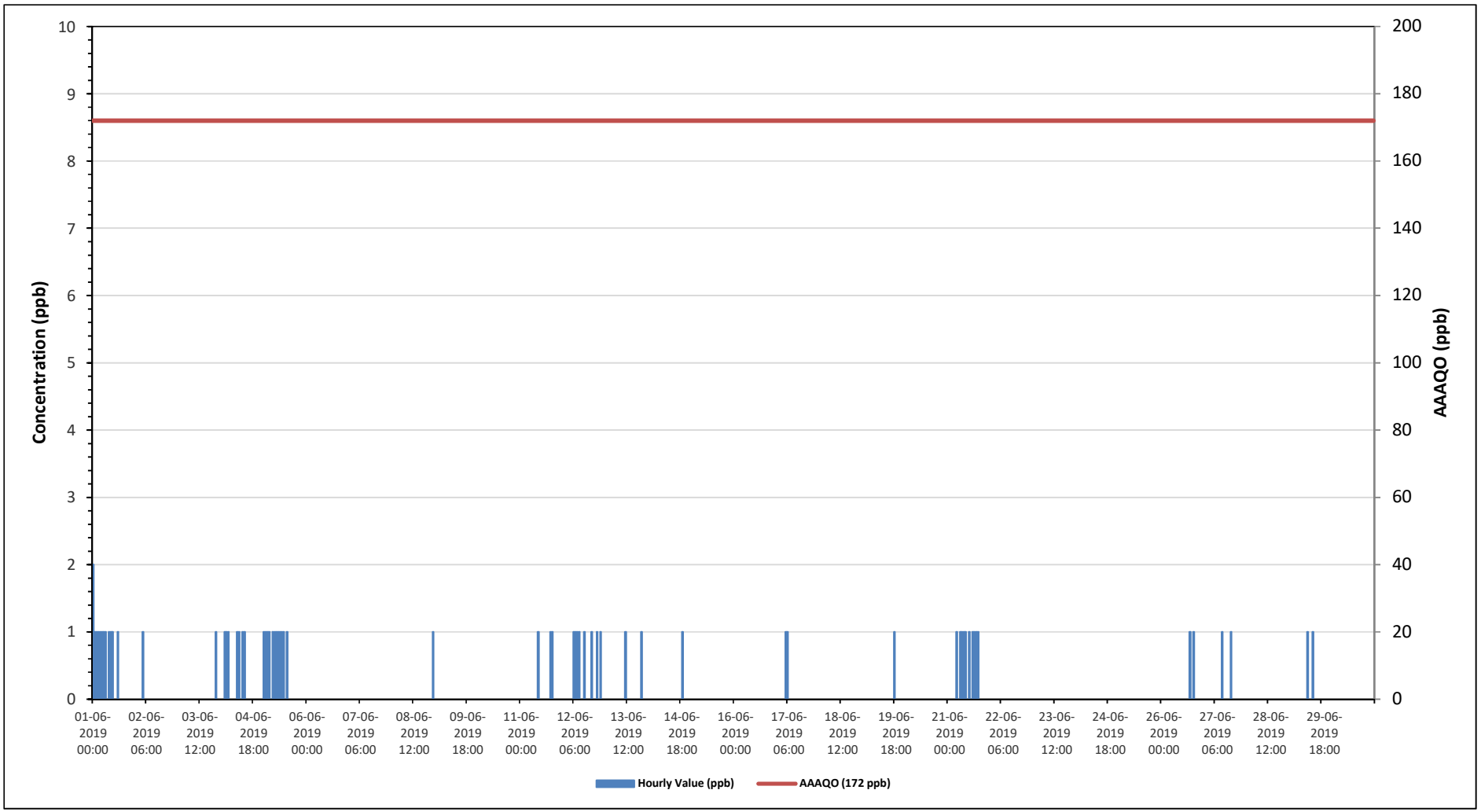
Maximum Hourly Value:	2	ppb	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.6	ppb	on June 1	Hours of Data:	673
Minimum Hourly Value:	0	ppb	on June 1 at hour 12	Hours of Missing Data:	9
Minimum Daily Value:	0.0	ppb	on June 6	Hours of Calibration:	38
Monthly Average:	0.1	ppb		Operational Uptime:	98.8

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			
Jun 1	2	1	1	1	1	1	1	1	S	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0.6
Jun 2	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jun 3	0	0	0	0	0	0	S	0	C	C	C	C	C	C	C	0	0	0	0	0	0	1	0	0	0	1	-
Jun 4	0	0	1	1	1	S	0	0	0	1	1	0	1	1	0	P	P	P	P	P	P	P	P	R	0	1	-
Jun 5	1	1	1	1	S	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5
Jun 6	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
Jun 7	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
Jun 8	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0
Jun 9	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
Jun 10	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
Jun 11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	S	0	0	0	1	0.1
Jun 12	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	1	0	0	1	S	1	0	0	0	1	0.3
Jun 13	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	S	1	0	0	0	0	1	0.1
Jun 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	1	0.0
Jun 15	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
Jun 16	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
Jun 17	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.1
Jun 18	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
Jun 19	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
Jun 20	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
Jun 21	0	0	0	0	0	1	0	1	1	1	1	S	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0.4
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0.1
Jun 27	0	0	0	0	0	S	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1
Jun 28	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
Jun 29	0	0	0	S	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Jun 30	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
Diurnal Maximum	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1			
Daiurnal Average	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0			

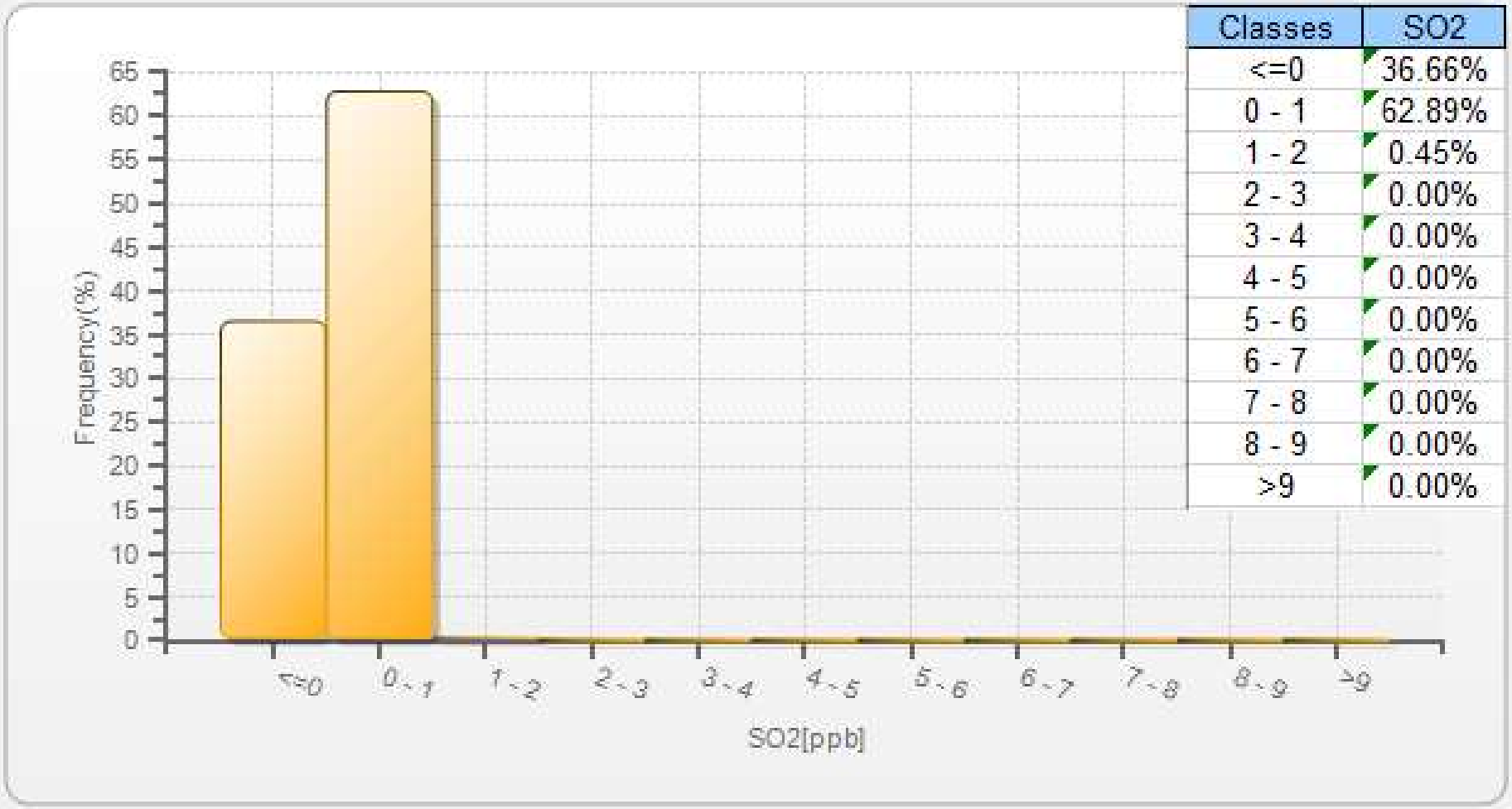
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986b Station



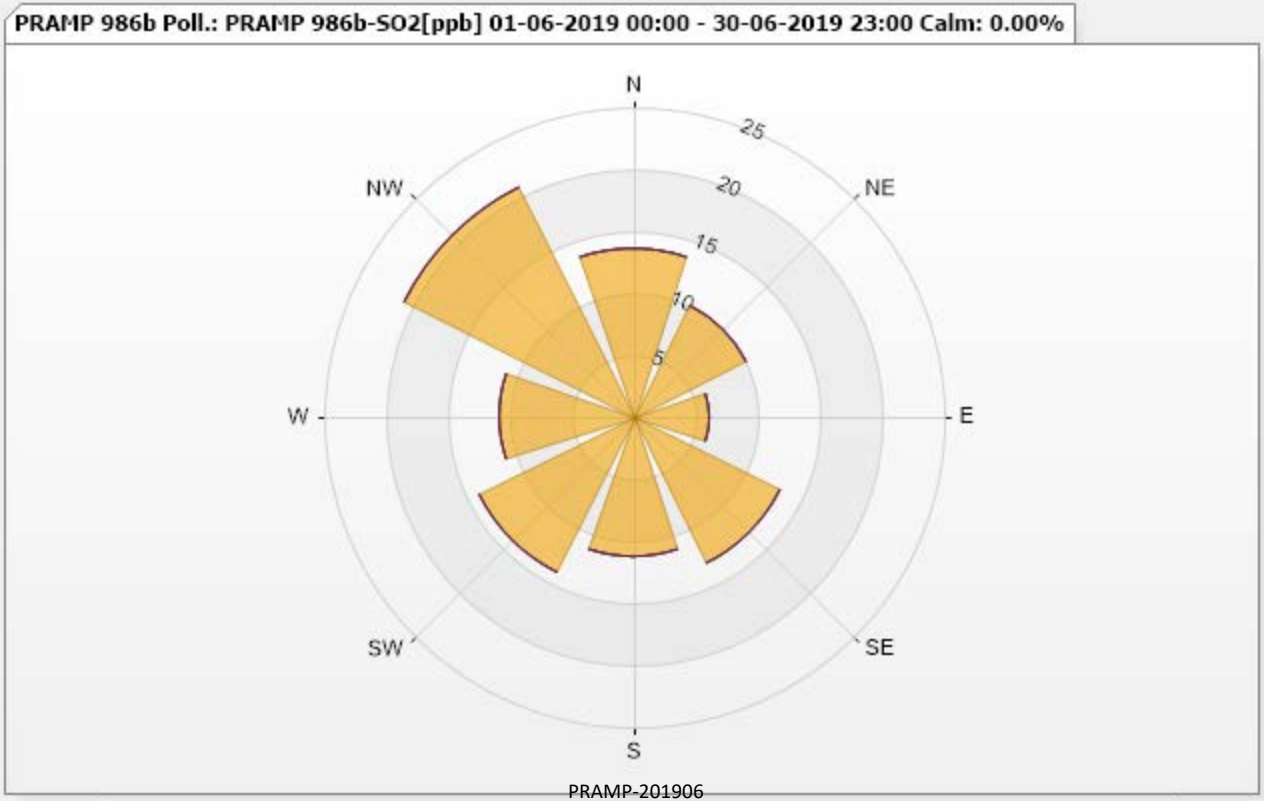
SO2[ppb] Histogram: PRAMP 986b Monthly: 06-2019 1 Hr.



Classes	SO2
<=0	36.66%
0 - 1	62.89%
1 - 2	0.45%
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 986b Poll.: PRAMP 986b-SO2[ppb] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.19% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	13.56	0	0	0	0	13.56
NE	10.13	0	0	0	0	10.13
E	6.11	0	0	0	0	6.11
SE	13.26	0	0	0	0	13.26
S	11.33	0	0	0	0	11.33
SW	14.01	0	0	0	0	14.01
W	10.88	0	0	0	0	10.88
NW	20.72	0	0	0	0	20.72
Summary	100	0	0	0	0	100


PRAMP 986b Poll.: PRAMP 986b-SO2[ppb] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
20
15
10
5
% Icon Classes (ppb)
100 0-10
0 10-20
0 20-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

TOTAL REDUCED SULPHUR (TRS) in ppb

Alberta Ambient Air Quality Objectives (AAAQO) for H2S: 1-Hour 10 ppb, 24-Hour 3 ppb

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

Maximum Hourly Value:	2.97	ppb	on June 14 at hour 3	Hours in Service:	720
Maximum Daily Value:	0.81	ppb	on June 14	Hours of Data:	640
Minimum Hourly Value:	0.01	ppb	on June 5 at hour 21	Hours of Missing Data:	47
Minimum Daily Value:	0.43	ppb	on June 6	Hours of Calibration:	33
Monthly Average:	0.58	ppb		Operational Uptime:	93.5

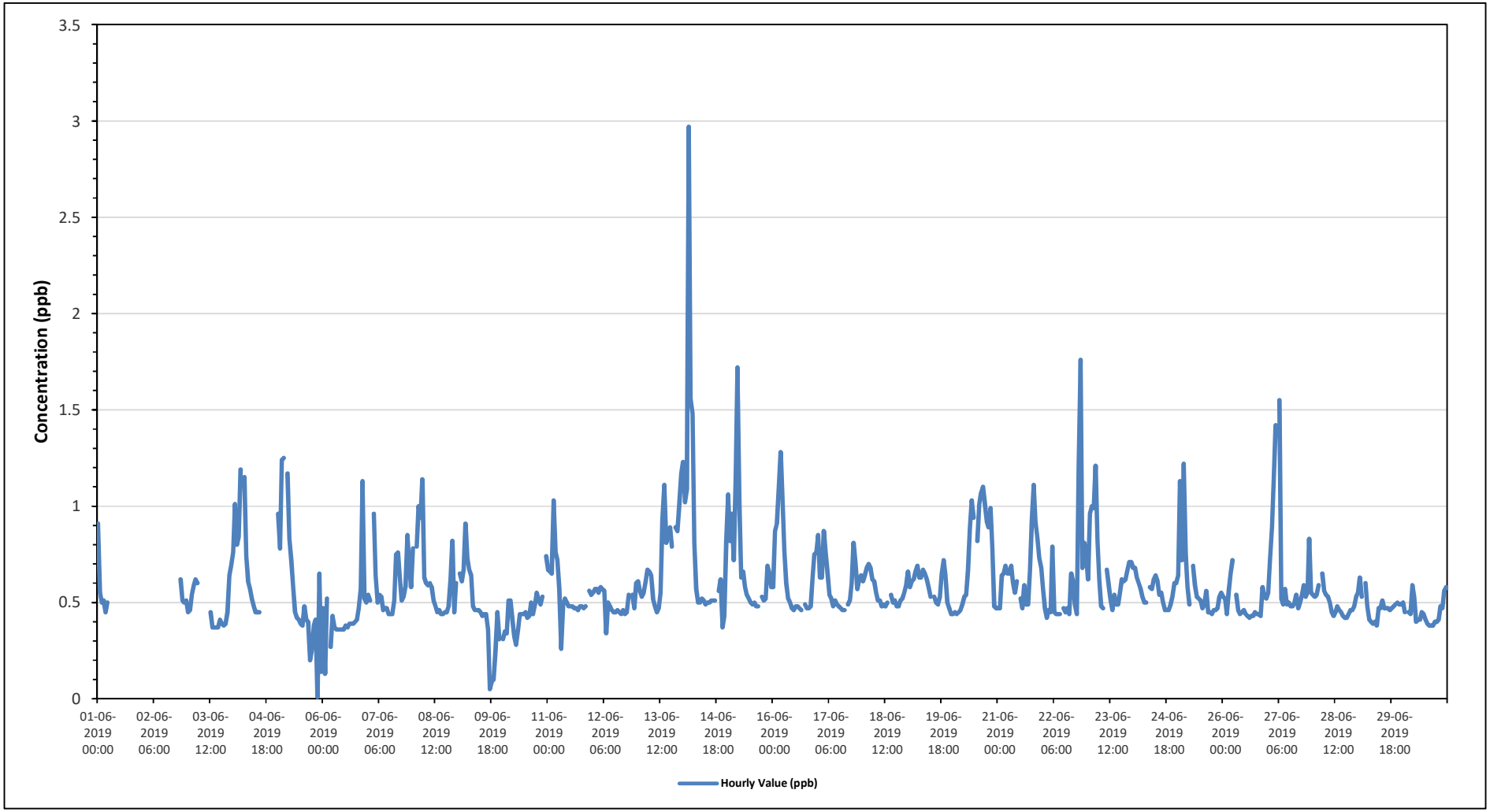
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jun 1	0.91	0.55	0.5	0.51	0.45	0.5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0.45	0.91	-
Jun 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Y	0.62	0.51	0.5	0.51	0.50	0.62	-
Jun 3	0.45	0.46	0.54	0.59	0.62	0.6	S	0.62	C	C	C	C	0.45	0.37	0.37	0.37	0.37	0.41	0.39	0.38	0.39	0.45	0.64	0.69	0.37	0.69	0.48
Jun 4	0.76	1.01	0.8	0.84	1.19	S	1.15	0.74	0.61	0.57	0.52	0.48	0.45	0.45	0.45	P	P	P	P	P	P	P	P	R	0.45	1.19	-
Jun 5	0.96	0.78	1.24	1.25	S	1.17	0.83	0.72	0.58	0.45	0.42	0.41	0.39	0.38	0.48	0.41	0.4	0.2	0.25	0.38	0.41	0.01	0.65	0.14	0.01	1.25	0.56
Jun 6	0.47	0.13	0.52	S	0.27	0.43	0.37	0.36	0.36	0.36	0.36	0.36	0.38	0.37	0.39	0.39	0.39	0.4	0.41	0.47	0.57	1.13	0.52	0.5	0.13	1.13	0.43
Jun 7	0.54	0.51	S	0.96	0.64	0.5	0.54	0.53	0.46	0.47	0.47	0.44	0.44	0.44	0.51	0.75	0.76	0.63	0.51	0.53	0.58	0.85	0.71	0.58	0.44	0.96	0.58
Jun 8	0.78	S	0.79	1	0.94	1.14	0.63	0.6	0.59	0.6	0.58	0.51	0.48	0.45	0.46	0.44	0.44	0.45	0.45	0.48	0.62	0.82	0.45	0.6	0.44	1.14	0.62
Jun 9	S	0.65	0.61	0.67	0.91	0.73	0.67	0.64	0.48	0.46	0.46	0.46	0.45	0.43	0.44	0.44	0.36	0.05	0.09	0.1	0.25	0.45	0.31	S	0.05	0.91	0.46
Jun 10	0.31	0.35	0.34	0.51	0.51	0.41	0.32	0.28	0.36	0.44	0.44	0.44	0.45	0.42	0.43	0.5	0.44	0.49	0.55	0.51	0.49	0.53	S	0.74	0.28	0.74	0.45
Jun 11	0.67	0.66	0.65	1.03	0.76	0.72	0.57	0.26	0.49	0.52	0.5	0.48	0.48	0.48	0.47	0.47	0.46	0.48	0.48	0.47	0.48	S	0.56	0.54	0.26	1.03	0.55
Jun 12	0.55	0.57	0.57	0.55	0.58	0.57	0.56	0.34	0.5	0.48	0.46	0.45	0.45	0.46	0.45	0.44	0.46	0.44	0.45	0.54	S	0.54	0.47	0.6	0.34	0.60	0.50
Jun 13	0.61	0.56	0.53	0.55	0.61	0.67	0.66	0.64	0.52	0.48	0.45	0.47	0.55	0.93	1.11	0.81	0.86	0.89	0.79	S	0.89	0.87	1.01	1.17	0.45	1.17	0.72
Jun 14	1.23	1.02	1.09	2.97	1.56	1.48	0.81	0.57	0.5	0.5	0.52	0.51	0.49	0.5	0.5	0.51	0.51	0.51	S	0.56	0.62	0.37	0.43	0.81	0.37	2.97	0.81
Jun 15	1.06	0.82	0.96	0.72	1.15	1.72	1.02	0.63	0.66	0.58	0.54	0.52	0.5	0.49	0.5	0.48	0.48	S	0.53	0.51	0.52	0.69	0.65	0.58	0.48	1.72	0.71
Jun 16	0.58	0.87	0.91	1.1	1.28	1.03	0.77	0.6	0.52	0.5	0.47	0.46	0.48	0.48	0.47	0.46	S	0.49	0.47	0.47	0.48	0.63	0.75	0.76	0.46	1.28	0.65
Jun 17	0.85	0.63	0.63	0.87	0.76	0.65	0.54	0.52	0.48	0.51	0.49	0.48	0.47	0.46	0.46	S	0.49	0.51	0.6	0.81	0.71	0.57	0.62	0.64	0.46	0.87	0.60
Jun 18	0.61	0.64	0.68	0.7	0.68	0.62	0.61	0.55	0.51	0.51	0.48	0.49	0.48	0.5	S	0.54	0.5	0.51	0.48	0.48	0.51	0.52	0.55	0.59	0.48	0.70	0.55
Jun 19	0.66	0.58	0.61	0.62	0.66	0.69	0.63	0.63	0.67	0.65	0.62	0.58	0.53	S	0.53	0.5	0.49	0.53	0.65	0.72	0.64	0.5	0.47	0.44	0.44	0.72	0.59
Jun 20	0.44	0.45	0.44	0.45	0.46	0.49	0.53	0.54	0.67	0.89	1.03	0.94	S	0.82	1.01	1.07	1.1	1.01	0.92	0.89	0.99	0.78	0.48	0.47	0.44	1.10	0.73
Jun 21	0.47	0.47	0.64	0.65	0.69	0.65	0.65	0.69	0.6	0.55	0.61	S	0.52	0.47	0.59	0.49	0.49	0.66	0.92	1.11	0.92	0.83	0.73	0.68	0.47	1.11	0.66
Jun 22	0.57	0.47	0.42	0.46	0.45	0.79	0.45	0.44	0.44	0.44	S	0.47	0.45	0.47	0.44	0.65	0.61	0.49	0.44	1.19	1.76	0.68	0.81	0.75	0.42	1.76	0.61
Jun 23	0.62	0.96	1	0.99	1.21	0.82	0.62	0.48	0.47	S	0.67	0.59	0.51	0.46	0.54	0.49	0.49	0.55	0.62	0.61	0.62	0.67	0.71	0.71	0.46	1.21	0.67
Jun 24	0.68	0.68	0.63	0.6	0.57	0.53	0.5	0.5	S	0.58	0.57	0.62	0.64	0.61	0.54	0.55	0.5	0.46	0.46	0.46	0.49	0.53	0.6	0.6	0.46	0.68	0.56
Jun 25	0.64	1.13	0.72	1.22	0.76	0.58	0.49	S	0.69	0.59	0.53	0.52	0.51	0.47	0.49	0.56	0.45	0.45	0.44	0.46	0.46	0.47	0.53	0.55	0.44	1.22	0.60
Jun 26	0.53	0.52	0.44	0.56	0.65	0.72	S	0.54	0.46	0.44	0.45	0.46	0.44	0.43	0.42	0.43	0.43	0.45	0.44	0.44	0.43	0.58	0.53	0.52	0.42	0.72	0.49
Jun 27	0.55	0.72	0.89	1.14	1.42	S	1.55	0.52	0.49	0.57	0.49	0.5	0.48	0.48	0.5	0.54	0.47	0.5	0.54	0.59	0.53	0.55	0.83	0.55	0.47	1.55	0.67
Jun 28	0.54	0.53	0.54	0.59	S	0.65	0.56	0.54	0.53	0.5	0.45	0.43	0.45	0.48	0.46	0.45	0.43	0.42	0.42	0.44	0.46	0.46	0.48	0.53	0.42	0.65	0.49
Jun 29	0.55	0.63	0.53	S	0.6	0.48	0.41	0.4	0.39	0.4	0.38	0.47	0.47	0.51	0.47	0.47	0.47	0.46	0.47	0.48	0.49	0.5	0.49	0.49	0.38	0.63	0.48
Jun 30	0.5	0.45	S	0.45	0.44	0.59	0.53	0.4	0.41	0.41	0.45	0.44	0.41	0.39	0.38	0.38	0.38	0.4	0.4	0.41	0.48	0.47	0.56	0.58	0.38	0.59	0.45
Diurnal Maximum	1.23	1.13	1.24	2.97	1.56	1.72	1.55	0.74	0.69	0.89	1.03	0.94	0.64	0.93	1.11	1.07	1.10	1.01	0.92	1.19	1.76	1.13	1.01	1.17			
Daiurnal Average	0.65	0.64	0.67	0.84	0.77	0.74	0.65	0.53	0.52	0.52	0.52	0.50	0.47	0.49	0.51	0.52	0.51	0.49	0.51	0.56	0.61	0.59	0.59	0.60			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

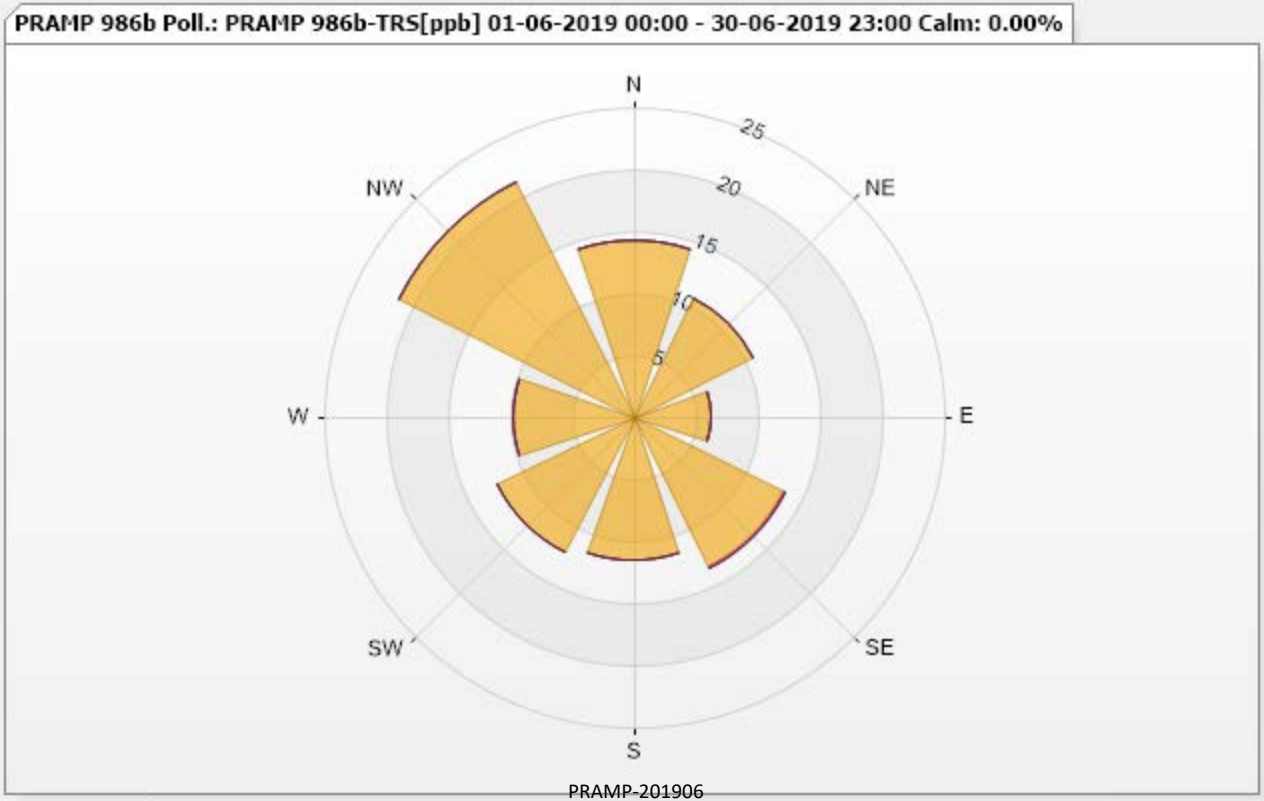
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for TRS - 986b Station



Wind: PRAMP 986b Poll.: PRAMP 986b-TRS[ppb] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 88.06% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	14.35	0	0	0	0	14.35
NE	10.73	0	0	0	0	10.73
E	6.31	0	0	0	0	6.31
SE	13.56	0.16	0	0	0	13.72
S	11.67	0	0	0	0	11.67
SW	12.3	0	0	0	0	12.3
W	9.78	0	0	0	0	9.78
NW	21.14	0	0	0	0	21.14
Summary	100	0.16	0	0	0	100


PRAMP 986b Poll.: PRAMP 986b-TRS[ppb] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
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

986b Station - June 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

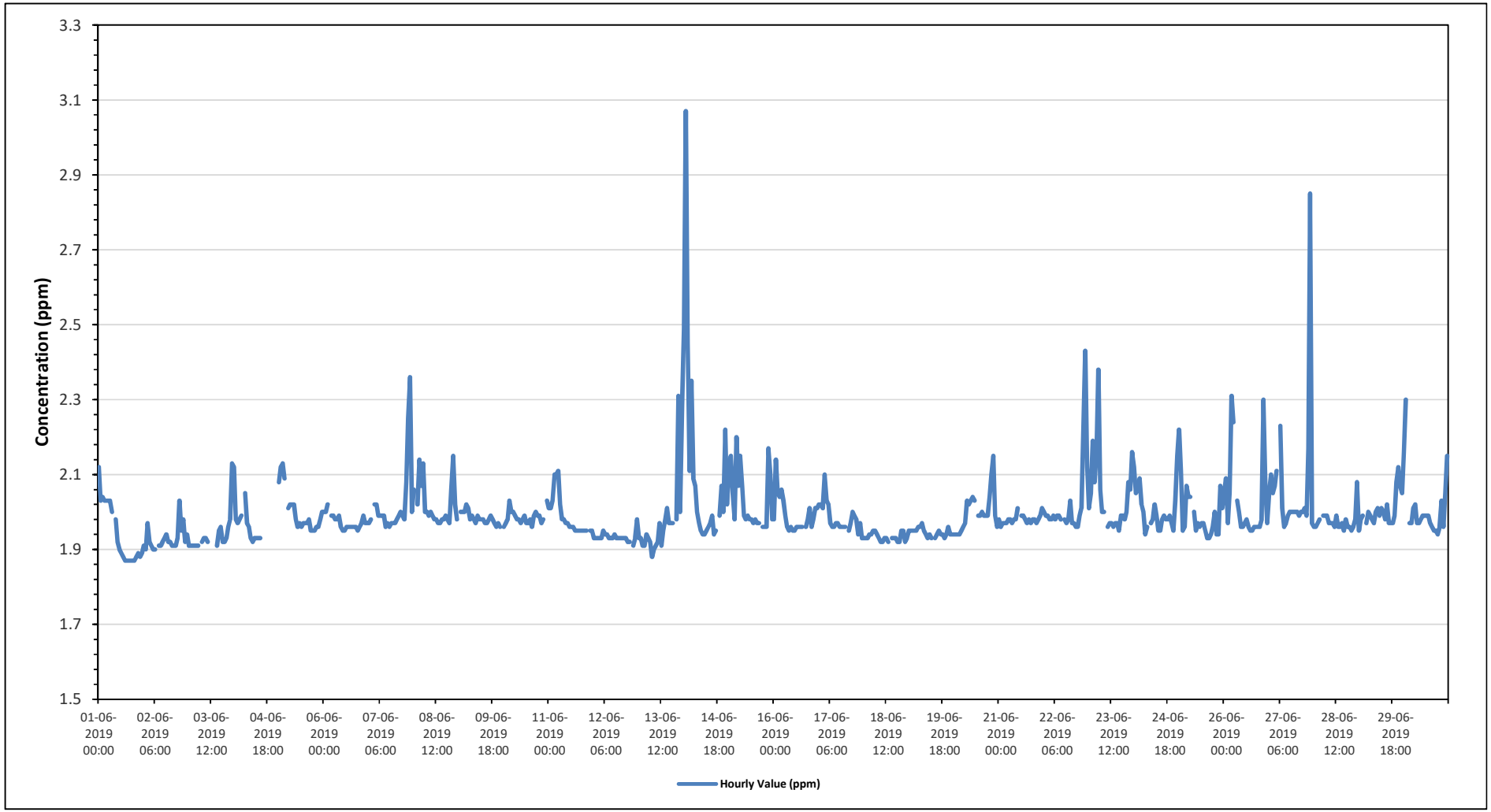
Maximum Hourly Value:	3.07	ppm	on June 14 at hour 1	Hours in Service:	720
Maximum Daily Value:	2.11	ppm	on June 14	Hours of Data:	676
Minimum Hourly Value:	1.87	ppm	on June 1 at hour 14	Hours of Missing Data:	9
Minimum Daily Value:	1.93	ppm	on June 2	Hours of Calibration:	35
Monthly Average:	1.99	ppm		Operational Uptime:	98.8

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			
Jun 1	2.12	2.03	2.04	2.03	2.03	2.03	2.03	2.00	S	1.98	1.92	1.90	1.89	1.88	**1.87**	1.87	1.87	1.87	1.87	1.87	1.88	1.89	1.88	1.89	**1.87**	2.12	1.94
Jun 2	1.91	1.90	1.97	1.92	1.91	1.90	1.90	S	1.91	1.91	1.92	1.93	1.94	1.92	1.92	1.91	1.91	1.91	1.93	2.03	1.95	1.98	1.92	1.94	1.90	2.03	**1.93**
Jun 3	1.91	1.91	1.91	1.91	1.91	1.91	S	1.92	1.93	1.93	1.92	C	C	C	C	1.91	1.95	1.96	1.92	1.92	1.93	1.96	1.98	2.13	1.91	2.13	1.94
Jun 4	2.12	1.98	1.97	1.98	1.99	S	2.05	1.97	1.96	1.93	1.92	1.93	1.93	1.93	1.93	P	P	P	P	P	P	P	P	R	1.92	2.12	-
Jun 5	2.08	2.12	2.13	2.09	S	2.01	2.02	2.02	2.02	1.98	1.96	1.97	1.96	1.97	1.97	1.97	1.98	1.95	1.95	1.95	1.96	1.96	1.98	2.00	1.95	2.13	2.00
Jun 6	2.00	2.00	2.02	S	1.99	1.99	1.98	1.98	1.99	1.96	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.96	1.97	1.99	1.97	1.97	1.95	2.02	1.97
Jun 7	1.97	1.98	S	2.02	2.02	1.99	1.99	1.99	1.99	1.96	1.97	1.96	1.97	1.97	1.97	1.98	1.99	2.00	1.99	1.98	2.08	2.25	2.36	2.00	1.96	2.36	2.02
Jun 8	2.06	S	2.02	2.14	2.07	2.13	2.00	2.00	1.99	2.00	1.99	1.98	1.98	1.97	1.97	1.98	1.98	1.99	1.98	1.97	2.06	2.15	2.02	1.98	1.97	2.15	2.02
Jun 9	S	2.00	2.00	2.00	2.02	2.01	1.98	1.99	1.98	1.97	1.99	1.98	1.98	1.98	1.97	1.97	1.98	1.99	1.98	1.97	1.96	1.97	1.96	S	1.96	2.02	1.98
Jun 10	1.96	1.97	1.98	2.03	2.00	2.00	1.99	1.98	1.98	1.97	1.98	1.99	1.97	1.97	1.98	1.96	1.99	2.00	1.99	1.99	1.97	1.98	S	2.03	1.96	2.03	1.99
Jun 11	2.01	2.01	2.03	2.10	2.10	2.11	2.02	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	2.11	1.99
Jun 12	1.93	1.93	1.93	1.93	1.93	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	S	1.91	1.93	1.98	1.91	1.98	1.93
Jun 13	1.93	1.93	1.91	1.91	1.94	1.93	1.92	1.88	1.90	1.91	1.92	1.97	1.91	1.95	1.98	2.01	1.97	1.97	1.97	S	1.98	2.31	2.00	2.28	1.88	2.31	1.97
Jun 14	2.49	**3.07**	2.45	2.11	2.35	2.09	2.07	2.00	1.97	1.95	1.94	1.94	1.95	**1.96**	1.97	1.99	1.94	1.95	S	1.99	2.07	2.00	2.22	2.02	**1.94**	**3.07**	**2.11**
Jun 15	2.12	2.15	2.05	1.98	2.20	2.07	2.15	2.07	1.99	1.98	1.99	1.98	1.98	1.97	1.98	1.97	1.97	S	1.96	1.96	1.96	2.17	2.10	1.98	1.96	2.20	2.03
Jun 16	1.98	2.14	2.05	2.04	2.06	2.03	1.99	1.96	1.95	1.96	1.95	1.95	1.96	1.96	1.96	1.96	S	1.96	1.98	2.01	1.96	1.98	2.01	2.01	1.95	2.14	1.99
Jun 17	2.02	2.02	2.01	2.10	2.03	2.02	1.97	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.96	S	1.95	1.97	2.00	1.99	1.98	1.94	1.97	1.93	1.93	2.10	1.98
Jun 18	1.93	1.93	1.93	1.94	1.94	1.95	1.95	1.94	1.93	1.92	1.92	1.93	1.93	1.92	S	1.93	1.93	1.93	1.92	1.92	1.95	1.95	1.92	1.93	1.92	1.95	1.93
Jun 19	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.97	1.95	1.94	1.93	1.94	1.93	S	1.93	1.94	1.95	1.94	1.94	1.93	1.94	1.96	1.94	1.94	1.93	1.97	1.95
Jun 20	1.94	1.94	1.94	1.94	1.95	1.96	1.97	2.03	2.02	2.03	2.04	2.03	S	1.99	1.99	2.00	1.99	1.99	1.99	2.04	2.10	2.15	1.99	1.96	1.94	2.15	2.00
Jun 21	1.98	1.96	1.97	1.97	1.97	1.98	1.98	1.97	1.98	1.98	2.01	S	1.99	1.99	1.98	1.97	1.98	1.97	1.98	1.98	1.97	1.98	1.99	2.01	1.96	2.01	1.98
Jun 22	2.00	1.99	1.99	1.98	1.98	1.99	1.98	1.99	1.99	1.98	S	1.98	1.97	1.98	2.03	1.97	1.97	1.96	1.96	1.99	2.01	2.23	2.43	2.12	1.96	2.43	2.02
Jun 23	2.01	2.05	2.19	2.08	2.16	2.38	2.06	2.00	2.00	S	1.96	1.97	1.97	1.96	1.97	1.97	1.95	1.99	1.99	1.98	2.00	2.08	2.06	2.16	1.95	2.38	2.04
Jun 24	2.12	2.05	2.06	2.09	2.02	2.00	1.94	1.96	S	1.97	1.98	2.02	1.99	1.95	1.95	1.98	1.99	1.98	1.98	1.99	1.97	1.95	2.03	2.15	1.94	2.15	2.01
Jun 25	2.22	2.11	1.95	1.96	2.07	2.04	2.04	S	2.00	1.95	1.97	1.96	1.97	1.97	1.95	1.93	1.93	1.94	1.96	2.00	1.94	1.94	2.07	2.01	1.93	2.22	1.99
Jun 26	2.05	2.09	1.97	2.05	2.31	2.24	S	2.03	2.00	1.96	1.96	1.97	1.98	1.96	1.95	1.95	1.96	1.96	1.96	1.96	1.98	2.30	2.07	1.97	1.95	2.31	2.03
Jun 27	2.05	2.10	2.05	2.07	2.11	S	2.23	2.01	1.96	1.97	1.99	2.00	2.00	2.00	2.00	2.00	1.99	2.00	2.00	2.01	1.99	2.17	2.85	1.97	1.96	2.85	2.07
Jun 28	1.96	1.96	1.97	1.98	S	1.99	1.99	1.99	1.97	1.97	1.97	1.96	1.99	1.96	1.96	1.97	1.95	1.98	1.96	1.96	1.95	1.96	1.98	2.08	1.95	2.08	1.97
Jun 29	1.95	1.98	1.99	S	1.97	2.00	1.99	1.98	1.97	2.00	2.01	1.99	2.01	2.00	1.98	2.02	1.97	1.97	1.97	1.99	2.08	2.12	2.07	2.05	1.95	2.12	2.00
Jun 30	2.16	2.30	S	1.97	1.97	2.01	2.02	1.97	1.97	1.98	1.99	1.99	1.99	1.99	1.97	1.96	1.95	1.95	1.94	1.96	2.03	1.96	2.05	2.15	1.94	2.30	2.01
Diurnal Maximum	2.49	3.07	2.45	2.14	2.35	2.38	2.23	2.07	2.02	2.03	2.04	2.03	2.01	2.00	2.03	2.02	1.99	2.00	2.00	2.04	2.10	2.31	2.85	2.28			
Daiurnal Average	2.03	2.05	2.02	2.01	2.03	2.02	2.00	1.98	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.04	2.06	2.02			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

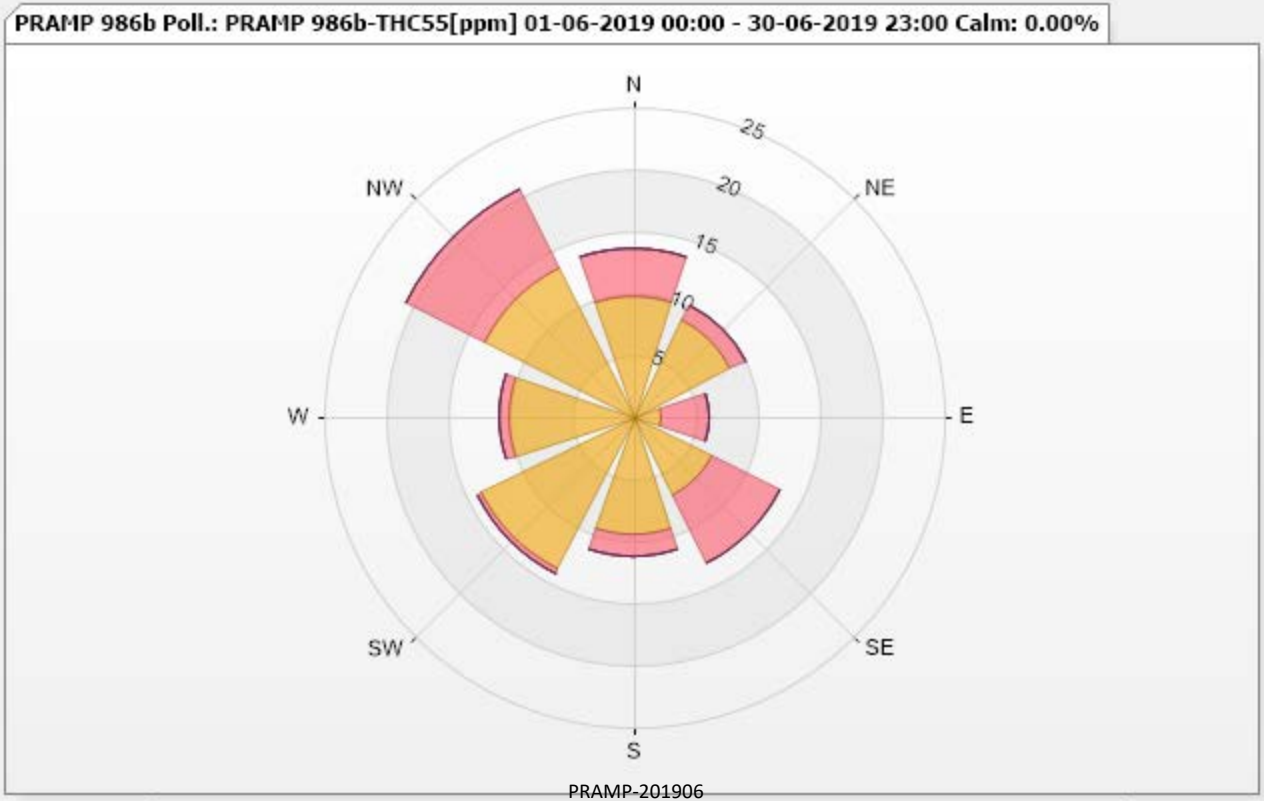
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for THC - 986b Station



Wind: PRAMP 986b Poll.: PRAMP 986b-THC55[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.19% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	9.69	3.87	0	0	0	13.56
NE	8.79	1.34	0	0	0	10.13
E	2.24	3.87	0	0	0	6.11
SE	7.15	6.11	0	0	0	13.26
S	9.54	1.79	0	0	0	11.33
SW	13.71	0.45	0	0	0	14.16
W	10.13	0.75	0	0	0	10.88
NW	13.41	7.15	0	0	0	20.56
Summary	74.66	25.33	0	0	0	100


PRAMP 986b Poll.: PRAMP 986b-THC55[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
20
15
10
5
% Icon Classes (ppm)
75 0-2
25 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

METHANE (CH4) in ppm

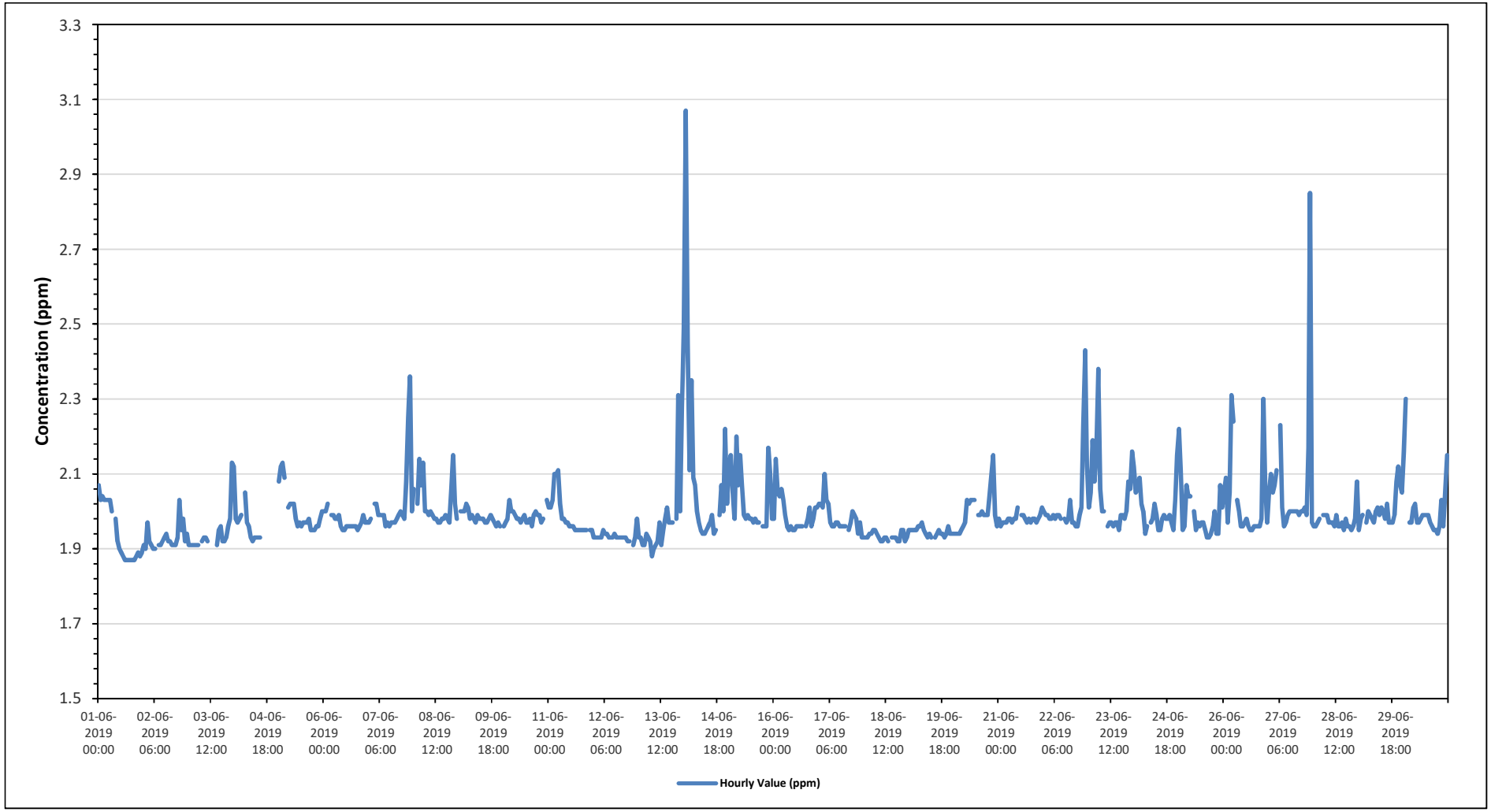
Maximum Hourly Value:	3.07	ppm	on June 14 at hour 1	Hours in Service:	720
Maximum Daily Value:	2.11	ppm	on June 14	Hours of Data:	676
Minimum Hourly Value:	1.87	ppm	on June 1 at hour 14	Hours of Missing Data:	9
Minimum Daily Value:	1.93	ppm	on June 2	Hours of Calibration:	35
Monthly Average:	1.99	ppm		Operational Uptime:	98.8

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			
Jun 1	2.07	2.03	2.04	2.03	2.03	2.03	2.03	2.00	S	1.98	1.92	1.90	1.89	1.88	**1.87**	1.87	1.87	1.87	1.87	1.87	1.88	1.89	1.88	1.89	**1.87**	2.07	1.94
Jun 2	1.91	1.90	1.97	1.92	1.91	1.90	1.90	S	1.91	1.91	1.92	1.93	1.94	1.92	1.92	1.91	1.91	1.91	1.93	2.03	1.95	1.98	1.92	1.94	1.90	2.03	**1.93**
Jun 3	1.91	1.91	1.91	1.91	1.91	1.91	S	1.92	1.93	1.93	1.92	C	C	C	C	1.91	1.95	1.96	1.92	1.92	1.93	1.96	1.98	2.13	1.91	2.13	1.94
Jun 4	2.12	1.98	1.97	1.98	1.99	S	2.05	1.97	1.96	1.93	1.92	1.93	1.93	1.93	1.93	P	P	P	P	P	P	P	P	R	1.92	2.12	-
Jun 5	2.08	2.12	2.13	2.09	S	2.01	2.02	2.02	2.02	1.98	1.96	1.97	1.96	1.97	1.97	1.97	1.98	1.95	1.95	1.95	1.96	1.96	1.98	2.00	1.95	2.13	2.00
Jun 6	2.00	2.00	2.02	S	1.99	1.99	1.98	1.98	1.99	1.96	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.96	1.97	1.99	1.97	1.97	1.95	2.02	1.97
Jun 7	1.97	1.98	S	2.02	2.02	1.99	1.99	1.99	1.99	1.96	1.97	1.96	1.97	1.97	1.97	1.98	1.99	2.00	1.99	1.98	2.08	2.25	2.36	2.00	1.96	2.36	2.02
Jun 8	2.06	S	2.02	2.14	2.07	2.13	2.00	2.00	1.99	2.00	1.99	1.98	1.98	1.97	1.97	1.98	1.98	1.99	1.98	1.97	2.06	2.15	2.02	1.98	1.97	2.15	2.02
Jun 9	S	2.00	2.00	2.00	2.02	2.01	1.98	1.99	1.98	1.97	1.99	1.98	1.98	1.98	1.97	1.97	1.98	1.99	1.98	1.97	1.96	1.97	1.96	S	1.96	2.02	1.98
Jun 10	1.96	1.97	1.98	2.03	2.00	2.00	1.99	1.98	1.98	1.97	1.98	1.99	1.97	1.97	1.98	1.96	1.99	2.00	1.99	1.99	1.97	1.98	S	2.03	1.96	2.03	1.99
Jun 11	2.01	2.01	2.03	2.10	2.10	2.11	2.02	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	2.11	1.99
Jun 12	1.93	1.93	1.93	1.93	1.93	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	S	1.91	1.93	1.98	1.91	1.98	1.93
Jun 13	1.93	1.93	1.91	1.91	1.94	1.93	1.92	1.88	1.90	1.91	1.92	1.97	1.91	1.95	1.98	2.01	1.97	1.97	1.97	S	1.98	2.31	2.00	2.28	1.88	2.31	1.97
Jun 14	2.49	**3.07**	2.45	2.11	2.35	2.09	2.07	2.00	1.97	1.95	1.94	1.94	1.95	**1.96**	1.97	1.99	1.94	1.95	S	1.99	2.07	2.00	2.22	2.02	**1.94**	**3.07**	**2.11**
Jun 15	2.12	2.15	2.05	1.98	2.20	2.07	2.15	2.07	1.99	1.98	1.99	1.98	1.98	1.97	1.98	1.97	1.97	S	1.96	1.96	1.96	2.17	2.10	1.98	1.96	2.20	2.03
Jun 16	1.98	2.14	2.05	2.04	2.06	2.03	1.99	1.96	1.95	1.96	1.95	1.95	1.96	1.96	1.96	1.96	S	1.96	1.98	2.01	1.96	1.98	2.01	2.01	1.95	2.14	1.99
Jun 17	2.02	2.02	2.01	2.10	2.03	2.02	1.97	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.96	S	1.95	1.97	2.00	1.99	1.98	1.94	1.97	1.93	1.93	2.10	1.98
Jun 18	1.93	1.93	1.93	1.94	1.94	1.95	1.95	1.94	1.93	1.92	1.92	1.93	1.93	1.92	S	1.93	1.93	1.93	1.92	1.92	1.95	1.95	1.92	1.93	1.92	1.95	1.93
Jun 19	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.97	1.95	1.94	1.93	1.94	1.93	S	1.93	1.94	1.95	1.94	1.94	1.93	1.94	1.96	1.94	1.94	1.93	1.97	1.95
Jun 20	1.94	1.94	1.94	1.94	1.95	1.96	1.97	2.03	2.02	2.03	2.03	2.03	S	1.99	1.99	2.00	1.99	1.99	1.99	2.04	2.10	2.15	1.99	1.96	1.94	2.15	2.00
Jun 21	1.98	1.96	1.97	1.97	1.97	1.98	1.98	1.97	1.98	1.98	2.01	S	1.99	1.99	1.98	1.97	1.98	1.97	1.98	1.98	1.97	1.98	1.99	2.01	1.96	2.01	1.98
Jun 22	2.00	1.99	1.99	1.98	1.98	1.99	1.98	1.99	1.99	1.98	S	1.98	1.97	1.98	2.03	1.97	1.97	1.96	1.96	1.99	2.01	2.23	2.43	2.12	1.96	2.43	2.02
Jun 23	2.01	2.05	2.19	2.08	2.16	2.38	2.06	2.00	2.00	S	1.96	1.97	1.97	1.96	1.97	1.97	1.95	1.99	1.99	1.98	2.00	2.08	2.06	2.16	1.95	2.38	2.04
Jun 24	2.12	2.05	2.06	2.09	2.02	2.00	1.94	1.96	S	1.97	1.98	2.02	1.99	1.95	1.95	1.98	1.99	1.98	1.98	1.99	1.97	1.95	2.03	2.15	1.94	2.15	2.01
Jun 25	2.22	2.11	1.95	1.96	2.07	2.04	2.04	S	2.00	1.95	1.97	1.96	1.97	1.97	1.95	1.93	1.93	1.94	1.96	2.00	1.94	1.94	2.07	2.01	1.93	2.22	1.99
Jun 26	2.05	2.09	1.97	2.05	2.31	2.24	S	2.03	2.00	1.96	1.96	1.97	1.98	1.96	1.95	1.95	1.96	1.96	1.96	1.96	1.98	2.30	2.07	1.97	1.95	2.31	2.03
Jun 27	2.05	2.10	2.05	2.07	2.11	S	2.23	2.01	1.96	1.97	1.99	2.00	2.00	2.00	2.00	2.00	1.99	2.00	2.00	2.01	1.99	2.17	2.85	1.97	1.96	2.85	2.07
Jun 28	1.96	1.96	1.97	1.98	S	1.99	1.99	1.99	1.97	1.97	1.97	1.96	1.99	1.96	1.96	1.97	1.95	1.98	1.96	1.96	1.95	1.96	1.98	2.08	1.95	2.08	1.97
Jun 29	1.95	1.98	1.99	S	1.97	2.00	1.99	1.98	1.97	2.00	2.01	1.99	2.01	2.00	1.98	2.02	1.97	1.97	1.97	1.99	2.08	2.12	2.07	2.05	1.95	2.12	2.00
Jun 30	2.16	2.30	S	1.97	1.97	2.01	2.02	1.97	1.97	1.98	1.99	1.99	1.99	1.99	1.97	1.96	1.95	1.95	1.94	1.96	2.03	1.96	2.05	2.15	1.94	2.30	2.01
Diurnal Maximum	2.49	3.07	2.45	2.14	2.35	2.38	2.23	2.07	2.02	2.03	2.03	2.03	2.01	2.00	2.03	2.02	1.99	2.00	2.00	2.04	2.10	2.31	2.85	2.28			
Daiurnal Average	2.03	2.05	2.02	2.01	2.03	2.02	2.00	1.98	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.04	2.06	2.02			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

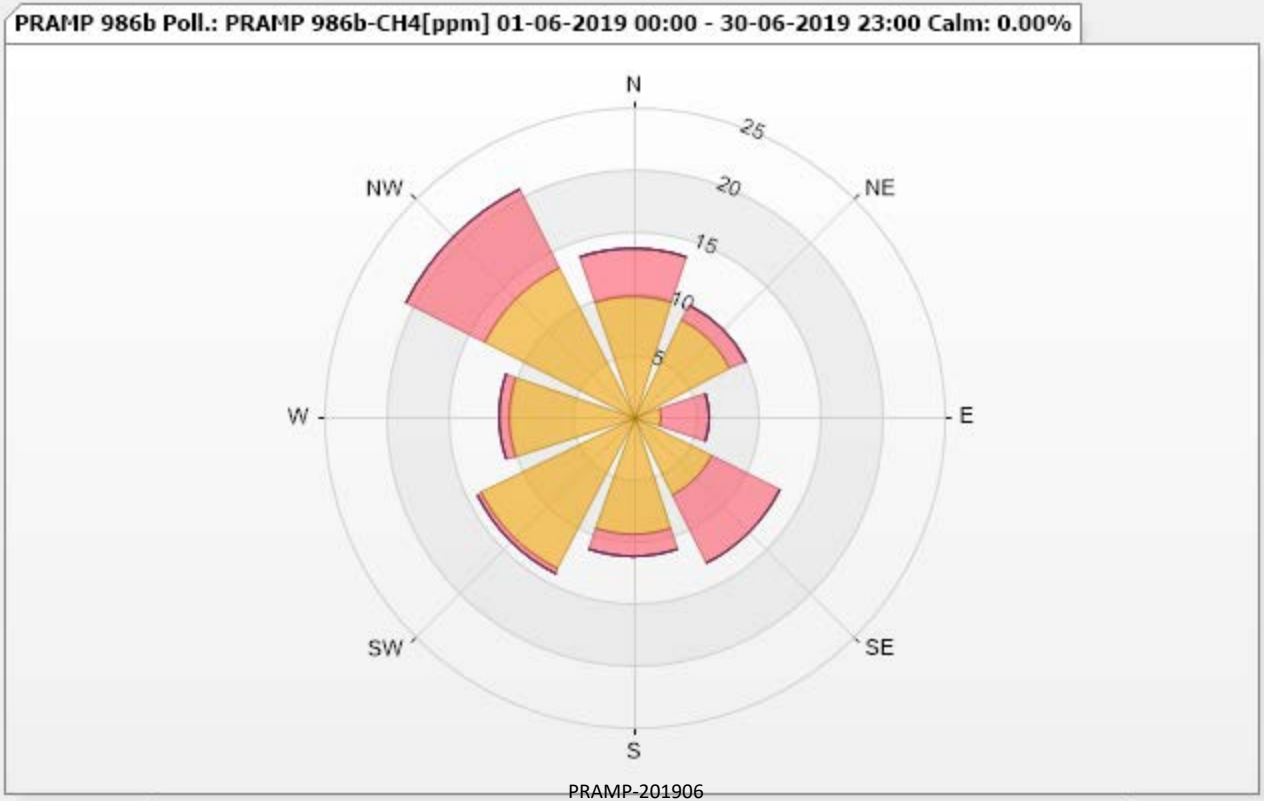
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for CH4 - 986b Station



Wind: PRAMP 986b Poll.: PRAMP 986b-CH4[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.19% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	9.69	3.87	0	0	0	13.56
NE	8.79	1.34	0	0	0	10.13
E	2.24	3.87	0	0	0	6.11
SE	7.15	6.11	0	0	0	13.26
S	9.54	1.79	0	0	0	11.33
SW	13.71	0.45	0	0	0	14.16
W	10.13	0.75	0	0	0	10.88
NW	13.41	7.15	0	0	0	20.56
Summary	74.66	25.33	0	0	0	100


PRAMP 986b Poll.: PRAMP 986b-CH4[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
20
15
10
5
% Icon Classes (ppm)
75 0-2
25 2-5
0 5-10
0 10-20
0 >20.0

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

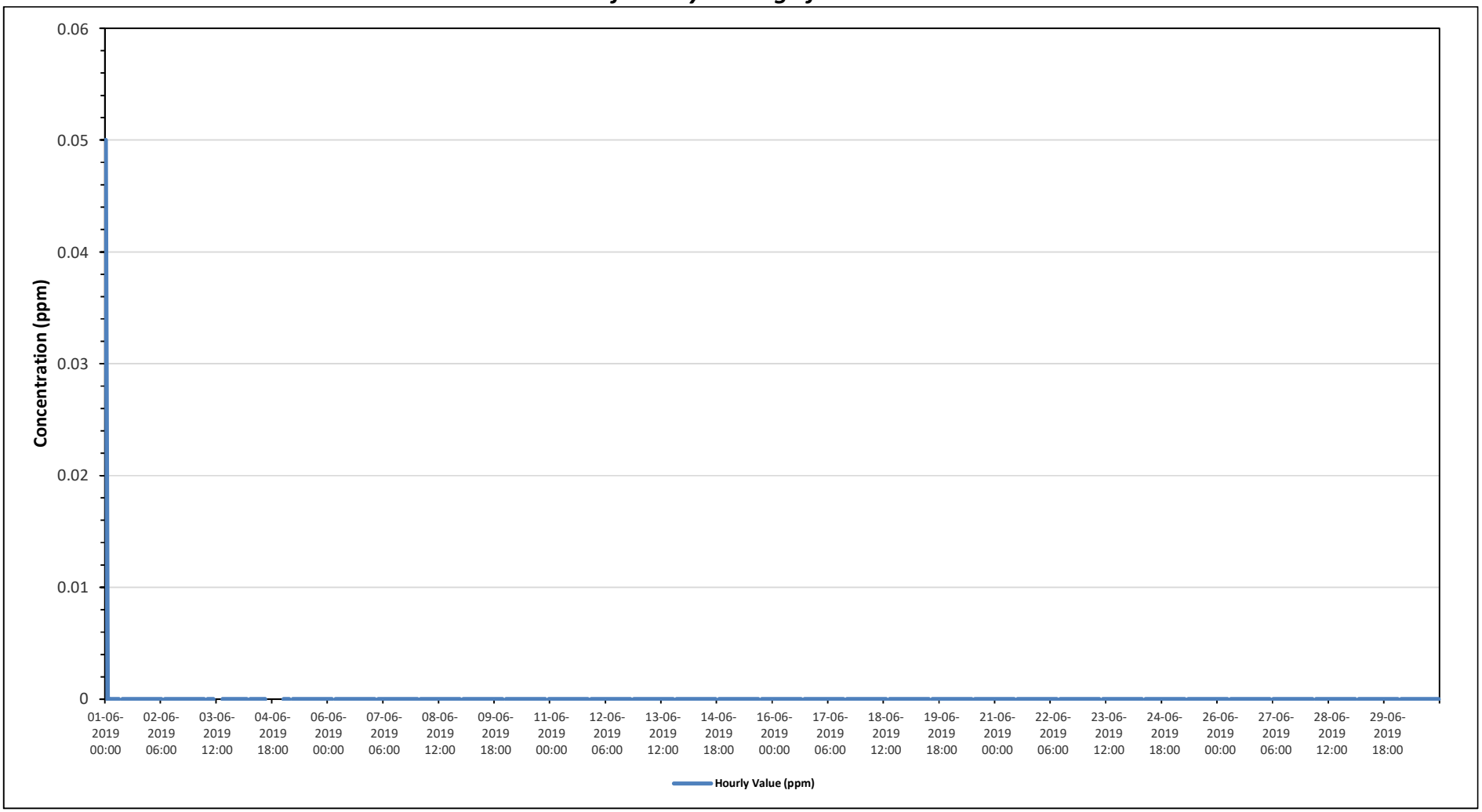
Maximum Hourly Value:	0.05	ppm	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on June 1	Hours of Data:	676
Minimum Hourly Value:	0.00	ppm	on June 1 at hour 1	Hours of Missing Data:	9
Minimum Daily Value:	0.00	ppm	on June 2	Hours of Calibration:	35
Monthly Average:	0.00	ppm		Operational Uptime:	98.8

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			
Jun 1	**0.05**	**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**	**0.05**	0.00
Jun 2	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**
Jun 3	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	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
Jun 4	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	P	P	P	P	P	P	P	P	R	0.00	0.00	-
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 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	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
Jun 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	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
Jun 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 14	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 15	0.00	0.00	0.00	0.00	0.00	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
Jun 16	0.00	0.00	0.00	0.00	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
Jun 17	0.00	0.00	0.00	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
Jun 18	0.00	0.00	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
Jun 19	0.00	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
Jun 20	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
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Daiurnal 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	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

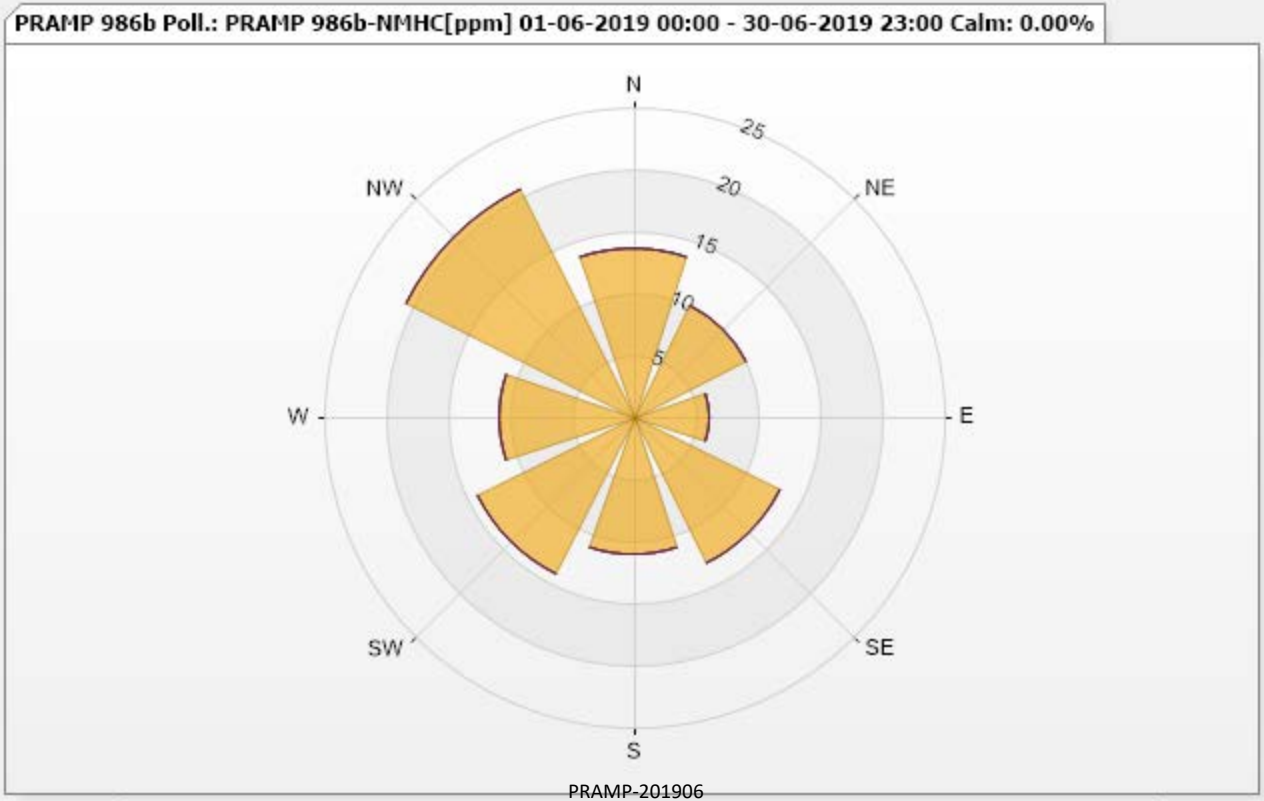
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for NMHC - 986b Station



Wind: PRAMP 986b Poll.: PRAMP 986b-NMHC[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.06% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	13.58	0	0	0	0	13.58
NE	10.15	0	0	0	0	10.15
E	6.12	0	0	0	0	6.12
SE	13.28	0	0	0	0	13.28
S	11.19	0	0	0	0	11.19
SW	14.18	0	0	0	0	14.18
W	10.9	0	0	0	0	10.9
NW	20.6	0	0	0	0	20.6
Summary	100	0	0	0	0	100


PRAMP 986b Poll.: PRAMP 986b-NMHC[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
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

986b Station - June 2019

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

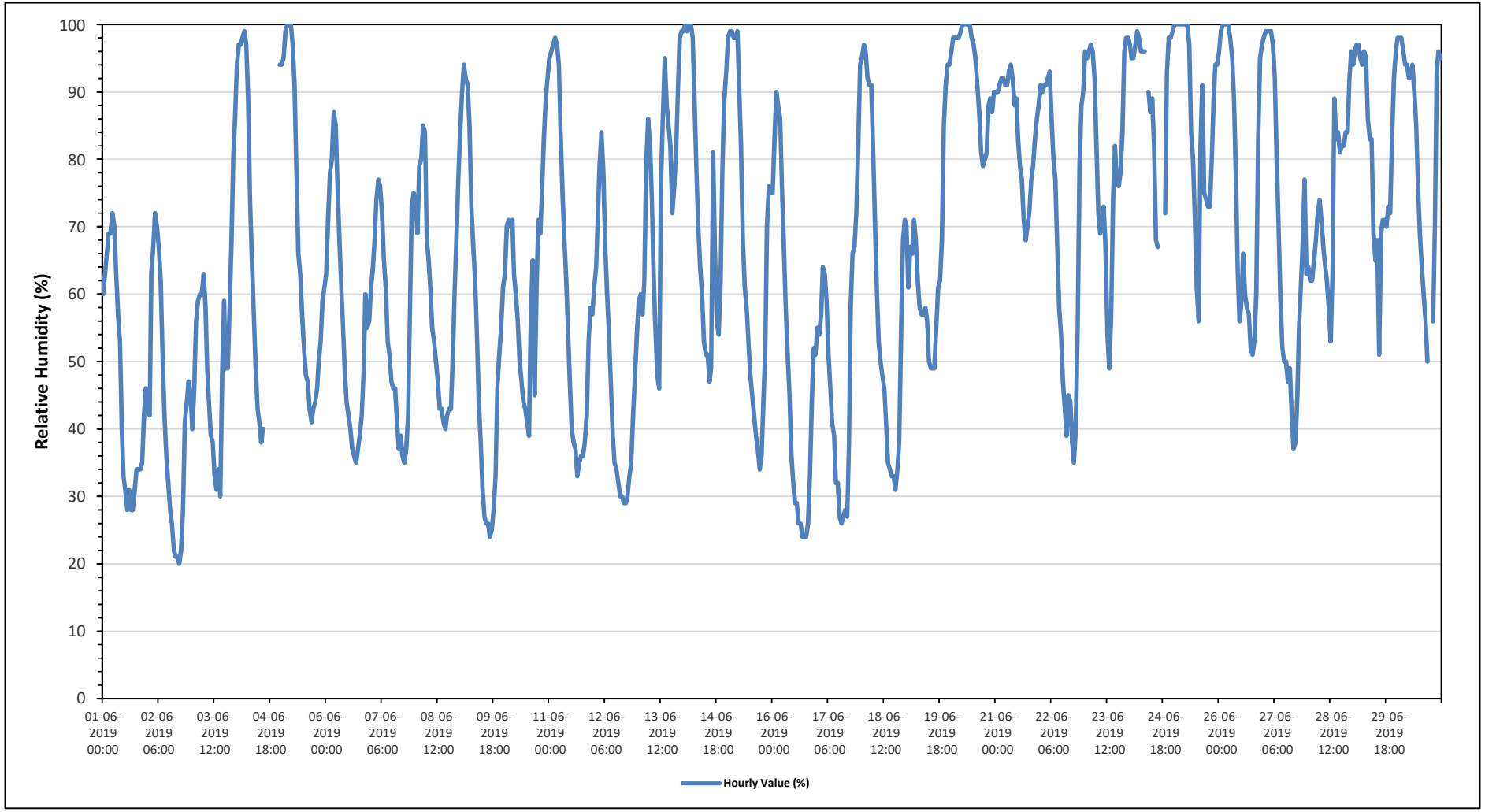
Maximum Hourly Value:	100	%	on June 5 at hour 3	Hours in Service:	720
Maximum Daily Value:	92.9	%	on June 20	Hours of Data:	712
Minimum Hourly Value:	20	%	on June 2 at hour 17	Hours of Missing Data:	8
Minimum Daily Value:	42.2	%	on June 2	Hours of Calibration:	0
Monthly Average:	66.6	%		Operational Uptime:	98.9

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	Average
Jun 1	60	63	66	69	69	72	70	63	57	53	40	33	31	28	31	28	28	31	34	34	34	35	42	46	28	72	47
Jun 2	43	42	63	67	72	70	67	62	51	42	36	32	28	26	22	21	21	**20**	22	28	41	44	47	45	**20**	72	**42**
Jun 3	40	46	56	59	60	60	63	58	49	44	39	38	33	31	34	30	48	59	49	49	58	68	81	86	30	86	52
Jun 4	94	97	97	98	99	97	89	74	65	57	49	43	41	38	40	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	94	38	99	-
Jun 5	94	95	99	**100**	**100**	**100**	97	91	78	66	63	57	52	48	47	43	41	43	44	46	50	53	59	61	41	**100**	68
Jun 6	63	71	78	80	87	85	76	68	61	55	48	44	42	40	37	36	35	37	39	42	48	60	55	56	35	87	56
Jun 7	61	64	68	74	77	76	72	65	61	53	51	47	46	46	41	37	39	36	35	37	42	57	73	75	35	77	56
Jun 8	74	69	79	80	85	84	68	65	61	55	53	50	47	43	43	41	40	42	43	43	51	61	69	77	40	85	59
Jun 9	84	90	94	92	91	85	73	67	62	54	44	38	31	27	26	26	24	25	28	33	46	51	55	61	24	94	54
Jun 10	63	70	71	70	71	63	60	56	50	47	44	43	41	39	57	65	45	61	71	69	75	83	89	92	39	92	62
Jun 11	95	96	97	98	97	94	84	75	68	62	54	47	40	38	37	33	35	36	36	38	42	53	58	57	33	98	61
Jun 12	61	64	72	79	84	78	67	60	54	47	39	35	34	32	30	30	29	29	30	33	35	42	48	54	29	84	49
Jun 13	59	60	57	62	79	86	82	74	62	55	48	46	77	87	95	88	85	82	72	76	81	90	98	99	46	99	75
Jun 14	99	**100**	99	**100**	**100**	98	88	78	70	64	60	53	51	51	47	49	81	67	56	54	62	79	89	93	47	**100**	75
Jun 15	98	99	99	98	98	99	91	82	68	61	58	53	48	45	42	39	37	34	36	44	52	70	76	75	34	99	67
Jun 16	75	83	90	88	86	76	67	58	51	45	36	32	29	29	26	26	24	24	24	26	33	44	52	51	24	90	49
Jun 17	55	54	57	64	63	59	51	46	41	39	32	32	27	26	27	28	27	38	58	66	67	72	82	94	26	94	50
Jun 18	95	97	96	92	91	91	81	70	60	53	50	48	46	41	35	34	33	33	31	34	38	54	68	71	31	97	60
Jun 19	70	61	67	66	71	68	62	58	57	57	58	56	50	49	49	49	55	61	62	68	85	91	94	94	49	94	65
Jun 20	96	98	98	98	98	99	**100**	**100**	**100**	**100**	**100**	98	97	95	91	87	81	79	80	81	88	89	87	90	79	**100**	**93**
Jun 21	90	90	91	92	92	91	91	93	94	92	88	89	83	79	77	71	68	70	72	77	79	83	86	88	68	94	84
Jun 22	91	90	91	91	92	93	86	80	77	67	58	54	47	43	39	45	44	38	35	40	55	79	88	90	35	93	67
Jun 23	96	95	96	97	96	92	82	72	69	70	73	67	54	49	57	74	82	77	76	78	84	96	98	98	49	98	80
Jun 24	97	95	95	97	99	98	96	96	96	92	90	87	89	82	68	67	67	70	69	72	93	98	98	99	67	99	88
Jun 25	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	97	84	80	71	61	56	82	91	75	74	73	73	80	89	94	94	56	**100**	86
Jun 26	96	99	**100**	**100**	**100**	**100**	98	95	89	78	63	56	59	66	60	58	57	52	51	53	60	83	95	97	51	**100**	78
Jun 27	98	99	99	99	99	97	92	80	70	59	52	50	50	47	49	42	37	38	45	55	61	67	77	63	37	99	68
Jun 28	64	62	62	65	68	72	74	71	67	64	62	58	53	63	89	83	84	81	82	82	84	84	92	96	53	96	73
Jun 29	94	96	97	97	95	94	96	95	86	83	83	69	65	68	51	69	71	71	70	73	72	83	92	96	51	97	82
Jun 30	98	98	98	96	94	94	92	92	94	90	85	76	69	64	60	56	50	52	49	56	70	93	96	95	49	98	80
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	98	97	95	95	91	85	82	82	82	93	98	98	99			
Daiurnal Average	80.1	81.4	84.4	85.6	87.1	85.7	80.5	74.8	68.8	62.9	57.9	53.4	50.7	49.2	49.6	49.9	49.8	50.3	50.8	53.8	60.9	70.7	77.2	79.6			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986b Station



PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

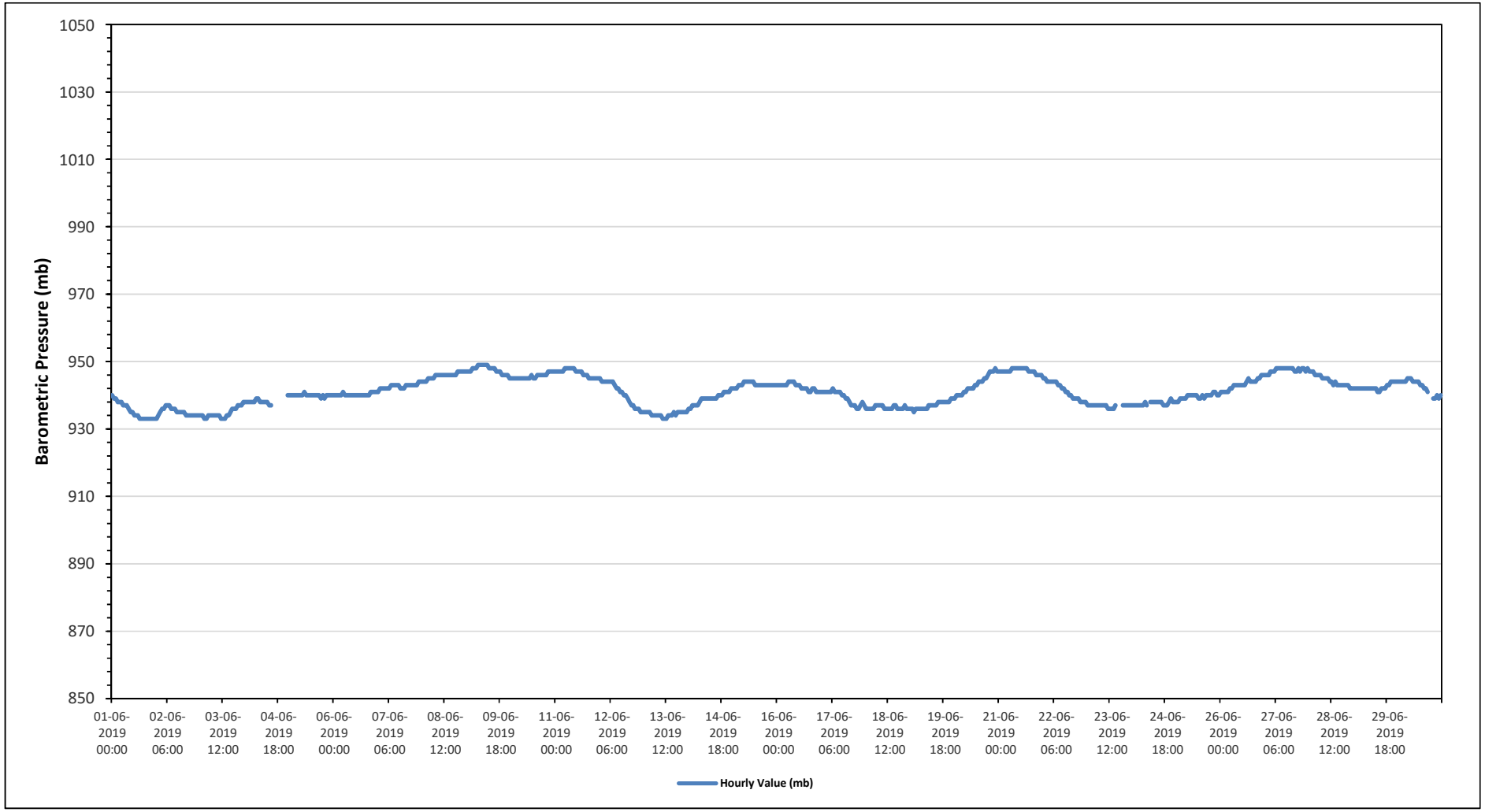
Maximum Hourly Value:	949	mb	on June 9 at hour 6	Hours in Service:	720
Maximum Daily Value:	948	mb	on June 9	Hours of Data:	712
Minimum Hourly Value:	933	mb	on June 1 at hour 15	Hours of Missing Data:	8
Minimum Daily Value:	934	mb	on June 13	Hours of Calibration:	0
Monthly Average:	941	mb		Operational Uptime:	98.9

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	Average
Jun 1	940	939	939	938	938	938	937	937	937	936	935	935	934	934	934	**933**	**933**	**933**	**933**	**933**	**933**	**933**	**933**	**933**	**933**	940	935
Jun 2	**933**	934	935	936	936	937	937	937	936	936	936	935	935	935	935	935	934	934	934	934	934	934	934	934	**933**	937	935
Jun 3	934	934	**933**	**933**	934	934	934	934	934	934	934	**933**	**933**	**933**	934	934	935	936	936	936	937	937	937	938	**933**	938	935
Jun 4	938	938	938	938	938	938	939	939	938	938	938	938	938	937	937	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	940	937	940	-
Jun 5	940	940	940	940	940	940	940	940	941	940	940	940	940	940	940	940	940	939	940	939	940	940	940	940	939	941	940
Jun 6	940	940	940	940	940	941	940	940	940	940	940	940	940	940	940	940	940	940	940	940	941	941	941	941	940	941	940
Jun 7	941	942	942	942	942	942	942	943	943	943	943	943	942	942	942	943	943	943	943	943	943	943	944	944	941	944	943
Jun 8	944	944	944	945	945	945	945	946	946	946	946	946	946	946	946	946	946	946	946	947	947	947	947	947	944	947	946
Jun 9	947	947	947	948	948	948	**949**	**949**	**949**	**949**	**949**	**949**	948	948	948	948	947	947	947	946	946	946	946	945	945	**949**	**948**
Jun 10	945	945	945	945	945	945	945	945	945	945	945	946	945	945	946	946	946	946	946	946	947	947	947	947	945	947	946
Jun 11	947	947	947	947	947	948	948	948	948	948	948	947	947	947	947	946	946	946	945	945	945	945	945	945	945	948	947
Jun 12	945	944	944	944	944	944	944	944	943	942	942	941	941	940	940	939	938	937	937	936	936	936	935	935	935	945	940
Jun 13	935	935	935	935	934	934	934	934	934	934	**933**	**933**	**933**	934	934	934	935	934	935	935	935	935	935	935	**933**	935	**934**
Jun 14	936	936	937	937	937	937	938	939	939	939	939	939	939	939	939	939	940	940	940	941	941	941	941	942	936	942	939
Jun 15	942	942	942	943	943	943	944	944	944	944	944	944	943	943	943	943	943	943	943	943	943	943	943	943	942	944	943
Jun 16	943	943	943	943	943	943	944	944	944	944	943	943	943	942	942	942	942	941	941	942	942	941	941	941	941	944	943
Jun 17	941	941	941	941	941	941	942	941	941	941	941	940	940	939	939	938	937	937	937	936	936	937	938	937	936	942	939
Jun 18	936	936	936	936	936	937	937	937	937	937	936	936	936	936	936	937	937	936	936	936	936	937	936	936	936	937	936
Jun 19	936	936	935	936	936	936	936	936	936	936	937	937	937	937	937	938	938	938	938	938	938	938	939	939	935	939	937
Jun 20	939	940	940	940	940	941	941	942	942	942	942	943	943	944	944	944	945	945	946	947	947	947	948	947	939	948	943
Jun 21	947	947	947	947	947	947	947	948	948	948	948	948	948	948	948	948	947	947	947	947	946	946	946	946	946	948	947
Jun 22	945	945	944	944	944	944	944	944	943	943	942	942	941	941	940	940	939	939	939	939	938	938	938	938	938	945	941
Jun 23	937	937	937	937	937	937	937	937	937	937	937	936	936	936	936	937	937	937	937	937	937	937	937	937	936	937	937
Jun 24	937	937	937	937	937	937	937	938	937	938	938	938	938	938	938	938	938	937	937	937	938	939	938	938	937	939	938
Jun 25	938	938	939	939	939	939	940	940	940	940	940	940	939	939	940	939	940	940	940	940	941	941	940	940	938	941	940
Jun 26	941	941	941	941	941	942	942	943	943	943	943	943	943	943	944	945	944	944	944	944	945	945	946	946	941	946	943
Jun 27	946	946	946	947	947	947	948	948	948	948	948	948	948	948	948	948	947	947	948	947	948	948	947	948	946	948	947
Jun 28	947	947	947	946	946	946	946	945	945	945	945	944	944	943	944	943	943	943	943	943	943	943	942	942	942	947	944
Jun 29	942	942	942	942	942	942	942	942	942	942	942	942	942	941	941	942	942	942	943	943	944	944	944	944	941	944	942
Jun 30	944	944	944	944	944	945	945	945	944	944	944	944	943	943	942	942	941	940	939	939	939	940	939	940	939	945	942
Diurnal Maximum	947	947	947	948	948	948	949	949	949	949	949	949	948	948	948	948	947	947	948	947	948	948	948	948			
Daiurnal Average	941	941	941	941	941	941	941	942	941	941	941	941	941	941	941	941	941	941	941	941	941	941	941	941			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span			
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure			
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service			

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 - 986b Station



PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

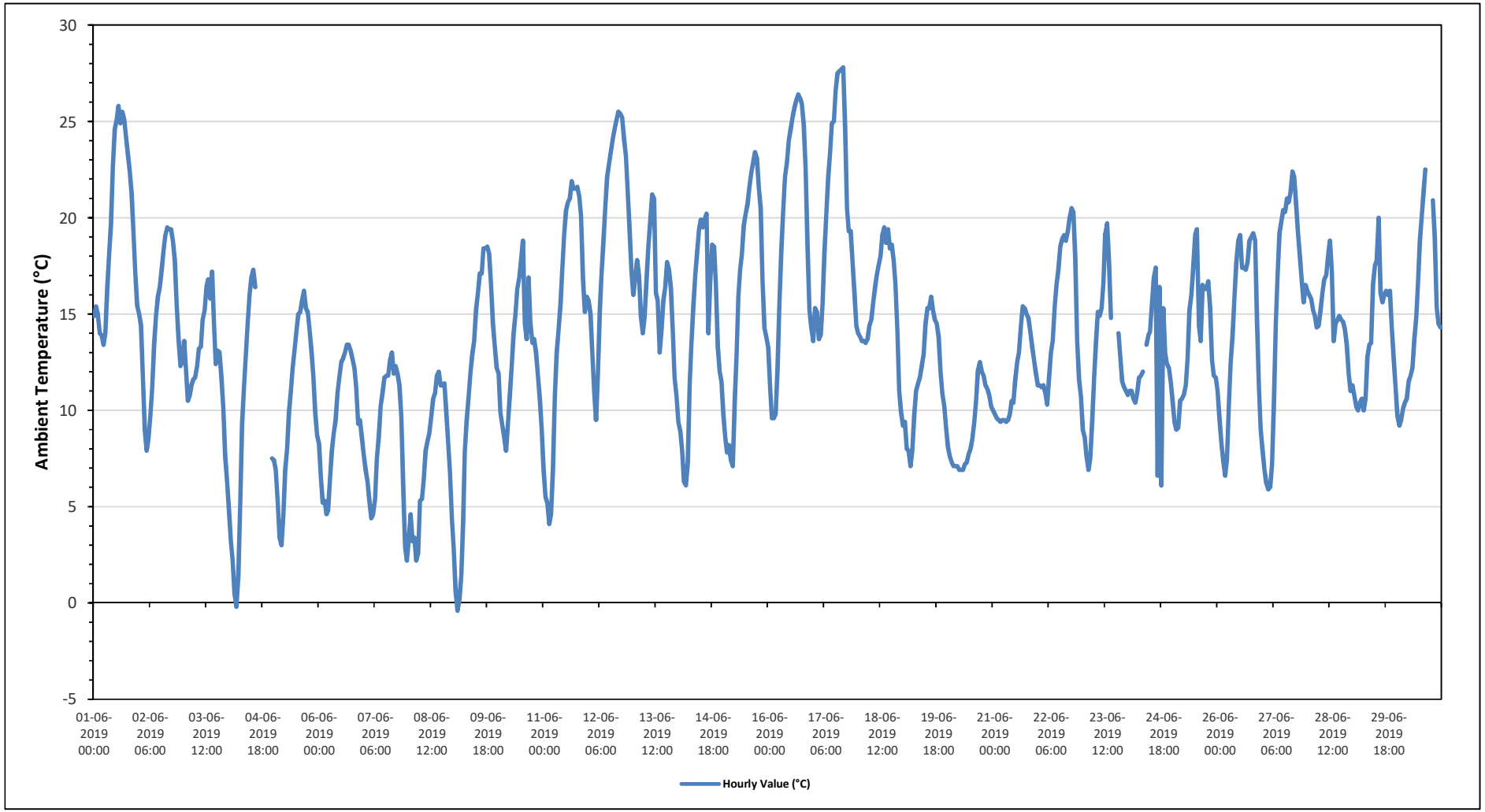
Maximum Hourly Value:	27.8	°C	on June 17 at hour 16	Hours in Service:	720
Maximum Daily Value:	20.4	°C	on June 17	Hours of Data:	712
Minimum Hourly Value:	-0.4	°C	on June 9 at hour 2	Hours of Missing Data:	8
Minimum Daily Value:	7.5	°C	on June 8	Hours of Calibration:	0
Monthly Average:	13.9	°C		Operational Uptime:	98.9

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	Average
Jun 1	14.9	15.4	15.0	14.0	13.9	13.4	14.0	16.3	18.1	19.7	22.7	24.6	25.1	25.8	24.9	25.5	25.1	24.2	23.3	22.4	21.2	19.1	17.1	15.4	13.4	25.8	19.6
Jun 2	15.0	14.4	11.7	9.0	7.9	8.5	9.8	11.2	13.4	14.9	15.9	16.4	17.3	18.3	19.1	19.5	19.4	19.4	18.8	17.8	15.5	13.7	12.3	12.5	7.9	19.5	14.7
Jun 3	13.6	12.1	10.5	10.8	11.3	11.6	11.7	12.3	13.2	13.3	14.7	15.2	16.4	16.8	15.8	17.2	14.5	12.4	13.1	13.0	11.7	10.1	7.6	6.3	6.3	17.2	12.7
Jun 4	4.8	3.2	2.2	0.5	-0.2	1.4	5.1	9.3	11.2	12.8	14.6	16.0	16.9	17.3	16.4	P	P	P	P	P	P	P	P	7.5	-0.2	17.3	-
Jun 5	7.4	6.9	5.2	3.4	3.0	4.5	6.9	8.0	9.9	11.0	12.2	13.2	14.1	15.0	15.1	15.7	16.2	15.3	15.1	14.2	13.1	11.8	9.9	8.7	3.0	16.2	10.7
Jun 6	8.3	6.5	5.2	5.3	4.6	4.8	6.4	7.9	8.8	9.5	10.9	11.7	12.5	12.7	13.0	13.4	13.4	13.1	12.7	12.2	11.2	9.3	9.5	8.6	4.6	13.4	9.6
Jun 7	7.7	6.9	6.3	5.3	4.4	4.6	5.4	7.5	8.6	10.2	10.9	11.7	11.8	11.8	12.6	13.0	11.9	12.3	11.9	11.3	9.7	6.1	2.9	2.2	2.2	13.0	8.6
Jun 8	3.3	4.6	3.2	3.4	2.2	2.6	5.3	5.4	6.4	7.9	8.4	8.8	9.7	10.6	10.9	11.8	12.0	11.3	11.3	11.4	9.9	8.3	6.8	4.3	2.2	12.0	**7.5**
Jun 9	2.8	0.6	**-0.4**	0.2	1.4	4.3	7.9	9.5	10.7	11.9	12.9	13.6	15.2	16.1	17.1	17.1	18.4	18.4	18.5	18.1	16.5	14.5	13.3	12.2	**-0.4**	18.5	11.3
Jun 10	11.9	9.9	9.2	8.6	7.9	9.3	10.8	12.3	14.0	15.0	16.3	16.9	17.8	18.8	14.5	13.7	16.9	14.6	13.5	13.7	13.0	11.8	10.6	9.0	7.9	18.8	12.9
Jun 11	6.9	5.5	5.2	4.1	4.6	6.9	10.7	13.0	14.2	15.5	17.4	19.1	20.4	20.8	21.0	21.9	21.5	21.5	21.6	21.1	20.1	16.9	15.1	15.9	4.1	21.9	15.0
Jun 12	15.7	15.0	12.9	11.0	9.5	11.9	15.2	17.0	18.7	20.5	22.1	22.8	23.4	24.1	24.6	25.1	25.5	25.4	25.2	24.1	23.2	21.4	19.4	17.2	9.5	25.5	19.6
Jun 13	16.0	16.9	17.8	17.0	14.9	14.0	14.8	16.7	18.5	19.8	21.2	21.0	16.1	15.7	13.0	14.1	15.7	16.4	17.7	17.3	16.3	14.1	11.7	10.7	10.7	21.2	16.1
Jun 14	9.4	8.9	7.9	6.3	6.1	7.3	11.4	13.5	15.4	17.0	18.2	19.4	19.9	19.5	19.9	20.2	14.0	16.8	18.6	18.5	16.5	13.3	12.0	11.5	6.1	20.2	14.2
Jun 15	9.8	8.6	7.8	8.2	7.4	7.1	10.4	12.9	15.9	17.3	18.1	19.6	20.2	20.7	21.6	22.3	22.9	23.4	23.1	21.6	20.5	16.7	14.3	13.8	7.1	23.4	16.0
Jun 16	13.3	11.2	9.6	9.6	9.8	12.2	15.6	18.3	20.4	22.1	22.9	24.0	24.6	25.2	25.7	26.1	26.4	26.2	25.9	24.8	22.5	18.5	15.2	14.3	9.6	26.4	19.4
Jun 17	13.6	15.3	15.1	13.7	13.9	15.5	18.2	20.2	22.1	23.4	24.9	25.0	26.6	27.5	27.6	27.7	**27.8**	24.7	20.5	19.3	19.3	17.7	16.1	14.4	13.6	**27.8**	**20.4**
Jun 18	14.0	13.8	13.6	13.6	13.5	13.7	14.4	14.7	15.6	16.4	17.0	17.5	18.0	19.1	19.5	18.7	19.4	18.4	18.6	17.8	16.6	14.1	11.0	9.9	9.9	19.5	15.8
Jun 19	9.2	9.4	8.0	7.9	7.1	7.9	9.7	11.0	11.4	11.7	12.3	12.9	14.5	15.3	15.3	15.9	15.2	14.7	14.5	13.8	12.0	10.9	10.2	9.1	7.1	15.9	11.7
Jun 20	8.1	7.6	7.3	7.1	7.1	7.1	6.9	6.9	6.9	7.2	7.3	7.7	8.0	8.5	9.4	10.5	12.1	12.5	12.0	11.8	11.3	11.1	10.8	10.2	6.9	12.5	9.0
Jun 21	10.0	9.8	9.6	9.5	9.4	9.5	9.5	9.4	9.5	9.8	10.5	10.4	11.6	12.5	13.0	14.4	15.4	15.3	15.0	14.8	14.1	13.3	12.6	11.9	9.4	15.4	11.7
Jun 22	11.3	11.3	11.2	11.3	10.9	10.3	11.7	13.0	13.6	15.4	16.5	17.3	18.5	18.9	19.1	18.8	19.3	20.0	20.5	20.3	17.9	13.6	11.6	10.7	10.3	20.5	15.1
Jun 23	9.0	8.6	7.6	6.9	7.5	9.4	11.6	13.5	15.1	14.9	15.3	16.6	19.2	19.7	17.6	14.8	13.9	14.9	14.8	14.0	12.8	11.5	11.2	11.0	6.9	19.7	13.0
Jun 24	10.8	11.0	11.0	10.6	10.4	10.9	11.7	11.8	12.0	13.0	13.4	13.9	14.1	15.6	16.9	17.4	16.7	16.4	16.2	15.3	13.0	12.4	12.2	11.5	10.4	17.4	13.3
Jun 25	10.5	9.4	9.0	9.1	10.5	10.6	10.8	11.3	12.7	15.2	16.0	17.4	19.1	19.4	14.4	13.6	16.5	16.3	16.3	16.7	15.3	12.6	11.8	11.7	9.0	19.4	13.6
Jun 26	11.0	9.6	8.3	7.4	6.6	7.4	10.4	12.5	13.9	15.9	17.7	18.8	19.1	17.4	17.4	17.3	17.7	18.8	19.0	19.2	18.8	14.6	11.2	9.0	6.6	19.2	14.1
Jun 27	7.9	6.9	6.2	5.9	6.0	7.2	10.4	14.5	17.0	19.2	19.8	20.4	20.3	21.0	20.8	21.3	22.4	22.1	20.7	19.2	18.0	16.7	15.6	16.5	5.9	22.4	15.7
Jun 28	16.2	16.0	15.8	15.2	14.9	14.3	14.4	15.2	16.1	16.8	17.0	18.0	18.8	17.3	13.6	14.5	14.7	14.9	14.7	14.6	14.2	13.4	11.9	11.0	11.0	18.8	15.1
Jun 29	11.3	10.8	10.2	10.0	10.4	10.6	10.0	10.6	12.8	13.4	13.5	16.5	17.5	17.8	20.0	16.1	15.6	16.0	16.2	16.0	16.2	14.3	12.7	11.2	10.0	20.0	13.7
Jun 30	9.7	9.2	9.5	10.1	10.4	10.6	11.5	11.8	12.2	13.7	14.8	16.6	18.8	20.1	21.4	22.5	23.2	23.4	22.7	20.9	19.0	15.4	14.5	14.3	9.2	23.4	15.7
Diurnal Maximum	16.2	16.9	17.8	17.0	14.9	15.5	18.2	20.2	22.1	23.4	24.9	25.0	26.6	27.5	27.6	27.7	27.8	26.2	25.9	24.8	23.2	21.4	19.4	17.2			
Daiurnal Average	10.4	9.8	9.1	8.5	8.2	9.0	10.8	12.3	13.6	14.8	15.8	16.8	17.5	18.0	17.7	17.9	18.1	17.9	17.7	17.1	15.8	13.7	12.1	11.1			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986b Station



PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

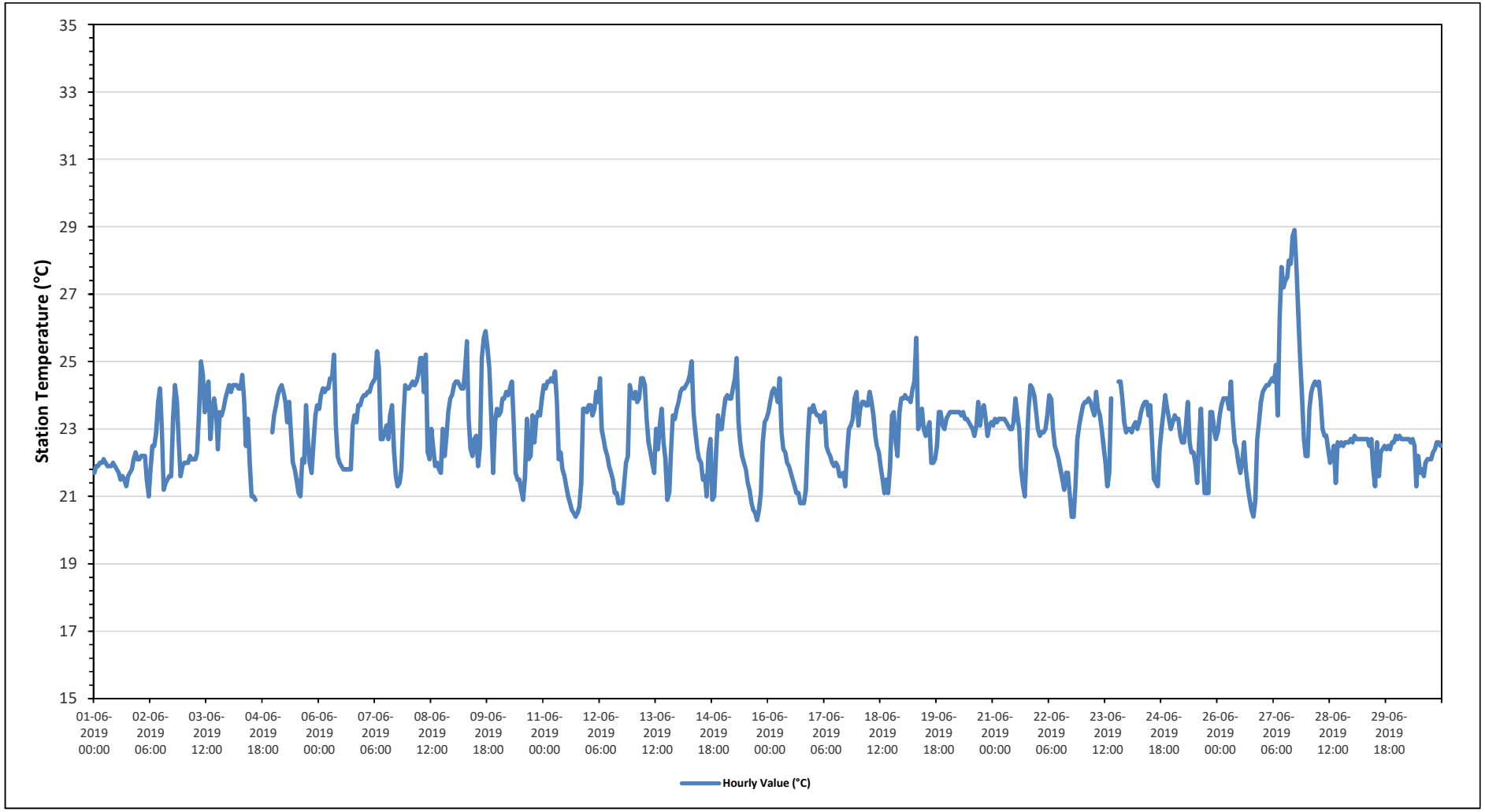
Maximum Hourly Value:	28.9	°C	on June 27 at hour 17	Hours in Service:	720
Maximum Daily Value:	25.7	°C	on June 27	Hours of Data:	712
Minimum Hourly Value:	20.3	°C	on June 15 at hour 18	Hours of Missing Data:	8
Minimum Daily Value:	21.8	°C	on June 1	Hours of Calibration:	0
Monthly Average:	23.0	°C		Operational Uptime:	98.9

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	Average
Jun 1	21.7	21.9	21.9	22.0	22.0	22.1	22.0	21.9	21.9	21.9	22.0	21.9	21.8	21.7	21.5	21.6	21.5	21.3	21.6	21.7	21.8	22.1	22.3	22.1	21.3	22.3	**21.8**
Jun 2	22.1	22.2	22.2	22.2	21.5	21.0	21.8	22.5	22.5	22.9	23.8	24.2	23.0	21.2	21.4	21.5	21.6	21.6	23.3	24.3	23.8	22.6	21.6	21.9	21.0	24.3	22.4
Jun 3	22.0	22.0	22.0	22.2	22.1	22.1	22.1	22.3	23.5	25.0	24.6	23.5	24.2	24.4	22.7	23.5	23.9	23.5	22.4	23.5	23.4	23.6	23.9	24.1	22.0	25.0	23.2
Jun 4	24.3	24.1	24.3	24.3	24.3	24.2	24.2	24.6	23.9	22.5	23.3	22.0	21.0	21.0	20.9	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	22.9	20.9	24.6	-
Jun 5	23.4	23.7	24.0	24.2	24.3	24.1	23.8	23.2	23.8	22.9	22.0	21.8	21.5	21.1	21.0	22.1	22.0	23.7	22.7	22.0	21.7	22.6	23.4	23.7	21.0	24.3	22.9
Jun 6	23.6	24.0	24.2	24.1	24.2	24.2	24.5	24.5	25.2	23.1	22.2	22.0	21.9	21.8	21.8	21.8	21.8	21.8	23.1	23.4	23.2	23.7	23.7	23.9	21.8	25.2	23.2
Jun 7	24.0	24.0	24.1	24.1	24.3	24.4	24.5	25.3	24.8	22.7	22.7	22.9	23.1	22.7	23.4	23.7	22.4	21.6	21.3	21.4	21.8	23.3	24.3	24.2	21.3	25.3	23.4
Jun 8	24.2	24.3	24.4	24.3	24.4	24.6	25.1	25.1	24.1	25.2	22.3	22.1	23.0	22.4	21.9	22.0	21.8	21.7	23.0	22.2	22.8	23.5	23.9	24.0	21.7	25.2	23.4
Jun 9	24.3	24.4	24.4	24.3	24.2	24.2	24.7	25.6	23.3	22.4	22.2	22.7	22.8	21.9	22.5	25.1	25.7	25.9	25.4	24.8	23.4	21.7	23.2	23.6	21.7	25.9	23.9
Jun 10	23.4	23.5	23.9	23.9	24.1	24.0	24.2	24.4	23.1	21.7	21.5	21.5	21.2	20.9	21.6	23.3	22.1	22.2	23.4	22.6	23.3	23.5	23.4	23.9	20.9	24.4	22.9
Jun 11	24.3	24.2	24.4	24.4	24.5	24.4	24.7	23.8	22.1	22.3	21.8	21.6	21.3	21.0	20.8	20.6	20.5	20.4	20.5	20.7	21.4	23.6	23.6	23.5	20.4	24.7	22.5
Jun 12	23.7	23.7	23.4	23.6	24.1	23.8	24.5	23.0	22.7	22.4	22.2	21.9	21.7	21.5	21.1	21.1	20.8	20.8	20.8	21.4	22.0	22.2	24.3	24.0	20.8	24.5	22.5
Jun 13	23.9	24.1	23.8	23.9	24.5	24.5	24.3	23.3	22.6	22.3	22.0	21.7	23.0	22.4	23.1	23.6	22.6	22.1	20.9	21.1	22.4	23.4	23.3	23.6	20.9	24.5	23.0
Jun 14	23.8	24.1	24.2	24.2	24.3	24.4	24.6	25.0	23.5	22.9	22.4	22.1	22.0	21.5	21.6	21.0	22.3	22.7	20.9	21.0	22.3	23.4	23.0	23.0	20.9	25.0	22.9
Jun 15	23.5	23.9	24.0	23.9	23.9	24.2	24.5	25.1	23.2	22.6	22.2	22.0	21.8	21.4	21.2	20.8	20.6	20.5	**20.3**	20.6	21.1	22.6	23.2	23.3	**20.3**	25.1	22.5
Jun 16	23.5	23.8	24.1	24.2	24.1	23.8	24.5	22.9	22.4	22.3	22.0	21.9	21.7	21.5	21.3	21.1	21.1	20.8	20.8	20.8	21.2	22.7	23.6	23.5	20.8	24.5	22.5
Jun 17	23.7	23.5	23.4	23.4	23.2	23.4	23.5	22.5	22.3	22.2	22.0	21.9	22.0	21.9	21.6	21.6	21.7	21.3	22.3	23.0	23.1	23.3	23.9	24.1	21.3	24.1	22.7
Jun 18	23.1	23.6	23.8	23.8	23.7	23.7	24.1	23.8	23.4	22.8	22.5	22.3	21.9	21.5	21.1	21.5	21.1	21.9	23.4	23.5	22.6	22.2	23.5	23.9	21.1	24.1	22.9
Jun 19	23.9	24.0	23.9	23.9	23.8	24.2	24.4	25.7	23.0	23.2	23.6	23.0	22.8	23.0	23.2	22.0	22.0	22.1	22.5	23.5	23.5	23.1	23.0	23.3	22.0	25.7	23.4
Jun 20	23.4	23.5	23.5	23.5	23.5	23.5	23.5	23.4	23.5	23.3	23.3	23.2	23.1	23.0	22.8	23.1	23.8	23.1	23.6	23.7	23.3	22.8	23.1	23.2	22.8	23.8	23.3
Jun 21	23.1	23.3	23.2	23.3	23.3	23.3	23.3	23.2	23.1	23.0	23.0	23.2	23.9	23.4	23.0	21.8	21.3	21.0	22.4	23.6	24.3	24.2	24.0	23.5	21.0	24.3	23.1
Jun 22	23.0	22.8	22.9	22.9	23.0	23.4	24.0	23.9	23.0	22.5	22.3	22.1	21.8	21.5	21.2	21.7	21.7	21.0	20.4	20.4	21.3	22.7	23.1	23.4	20.4	24.0	22.3
Jun 23	23.7	23.8	23.8	23.9	23.8	23.6	23.4	24.1	23.6	23.4	23.0	22.5	22.0	21.3	21.7	23.9	23.9	22.7	23.5	24.4	24.4	23.9	23.2	22.9	21.3	24.4	23.4
Jun 24	23.0	23.0	22.9	23.1	23.2	23.0	23.2	23.5	23.7	23.8	23.8	23.4	23.7	22.6	21.5	21.4	21.3	22.4	23.0	23.5	24.0	23.6	23.3	23.0	21.3	24.0	23.0
Jun 25	23.2	23.4	23.3	23.3	22.8	22.6	22.6	23.1	23.8	22.6	22.3	22.3	22.0	21.4	22.6	23.6	22.3	21.1	21.1	21.1	23.5	23.5	23.0	22.7	21.1	23.8	22.6
Jun 26	22.9	23.4	23.7	23.9	23.9	23.9	23.6	24.4	23.3	22.6	22.4	22.0	21.7	22.0	22.6	21.8	21.3	20.9	20.6	20.4	20.9	22.7	23.2	23.8	20.4	24.4	22.6
Jun 27	24.1	24.2	24.3	24.3	24.4	24.5	24.4	24.9	23.4	26.3	27.8	27.2	27.4	27.5	28.0	27.9	28.7	**28.9**	27.9	26.5	25.1	24.0	22.7	22.2	22.2	**28.9**	**25.7**
Jun 28	22.2	23.6	24.1	24.3	24.4	24.3	24.4	23.8	23.0	22.8	22.8	22.4	22.0	22.2	22.5	21.4	22.6	22.5	22.6	22.5	22.6	22.6	22.6	22.7	21.4	24.4	23.0
Jun 29	22.6	22.8	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.5	22.7	21.8	21.3	22.6	21.6	22.3	22.4	22.5	22.4	22.5	22.4	22.6	22.6	22.8	21.3	22.8	22.5
Jun 30	22.7	22.8	22.7	22.7	22.7	22.7	22.7	22.6	22.7	22.5	21.3	22.2	21.7	21.8	21.6	22.0	22.1	22.1	22.1	22.3	22.4	22.6	22.6	22.5	21.3	22.8	22.3
Diurnal Maximum	24.3	24.4	24.4	24.4	24.5	24.6	25.1	25.7	25.2	26.3	27.8	27.2	27.4	27.5	28.0	27.9	28.7	28.9	27.9	26.5	25.1	24.2	24.3	24.2			
Daiurnal Average	23.3	23.5	23.6	23.6	23.6	23.6	23.8	23.8	23.2	23.0	22.7	22.5	22.4	22.1	22.1	22.4	22.3	22.2	22.4	22.5	22.7	23.0	23.3	23.3			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986b Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

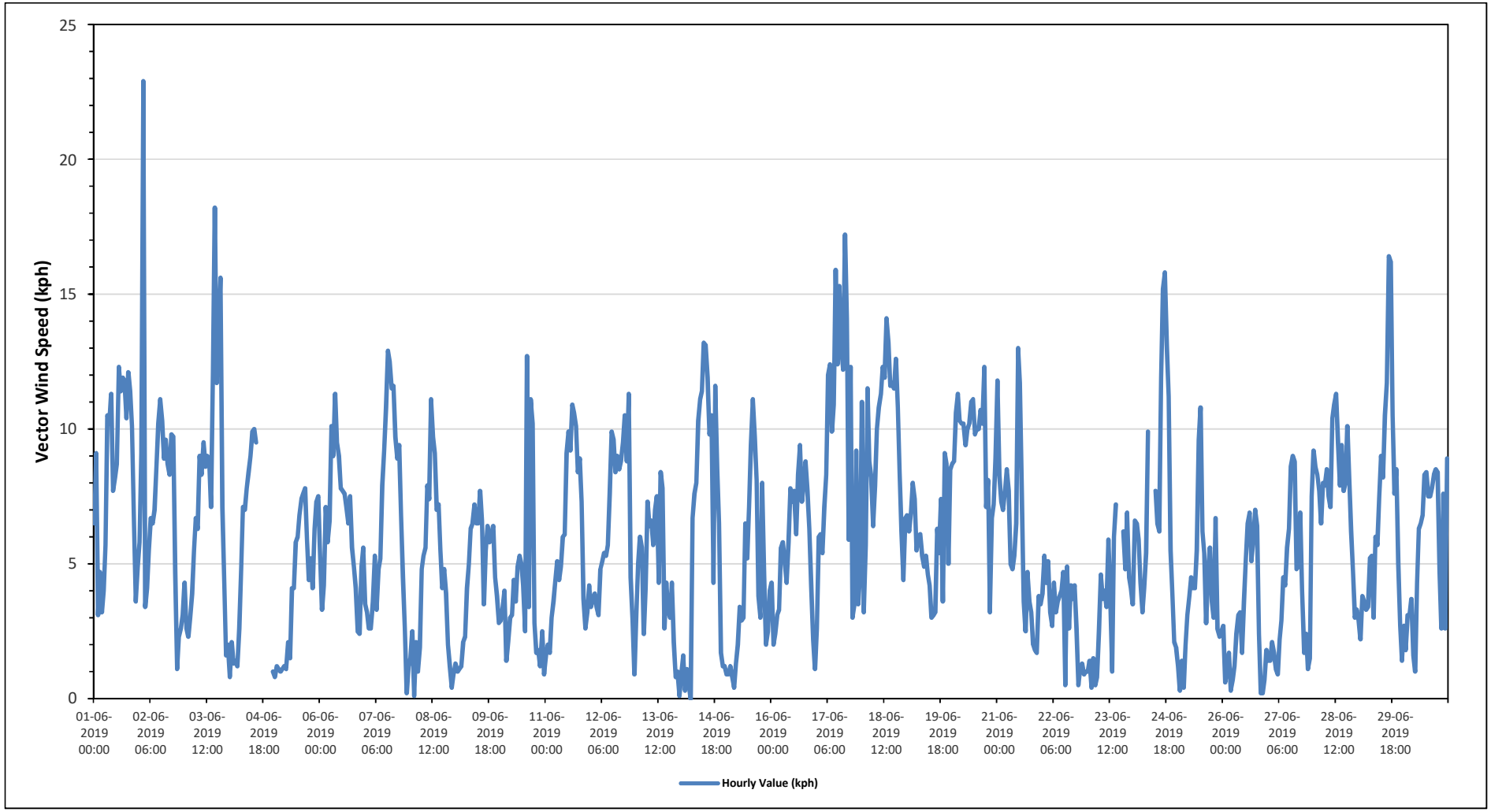
Maximum Hourly Value:	22.9	kph	on June 2 at hour 2	Hours in Service:	720
Maximum Daily Value:	9.6	kph	on June 18	Hours of Data:	712
Minimum Hourly Value:	0.0	kph	on June 14 at hour 5	Hours of Missing Data:	8
Minimum Daily Value:	2.9	kph	on June 26	Hours of Calibration:	0
Monthly Average:	1.7	kph		Operational Uptime:	98.9

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	Average
Jun 1	6.5	9.1	3.1	4.7	3.2	4	5.7	10.5	10.2	11.3	7.7	8.2	8.7	12.3	11.4	11.9	11.8	10.4	12.1	11.4	10.1	6.5	3.6	4.9	3.1	12.3	8.3
Jun 2	5.8	9.1	**22.9**	3.4	4.1	5.5	6.7	6.5	7	8.6	10.2	11.1	10.3	8.9	9.6	8.7	8.3	9.8	9.7	4.7	1.1	2.3	2.6	3.1	1.1	**22.9**	7.5
Jun 3	4.3	2.6	2.3	3	3.9	5.5	6.7	6.3	9	8.3	9.5	8.6	9	8.9	7.1	12.1	18.2	11.7	13.6	15.6	7.1	4.3	1.6	2	1.6	18.2	7.6
Jun 4	0.8	2.1	1.3	1.4	1.2	2.6	4.8	7.1	7	7.8	8.4	9	9.9	10	9.5	P	P	P	P	P	P	P	P	1	0.8	10.0	-
Jun 5	0.8	1.2	1.1	1	1.1	1.2	1.1	2.1	1.5	4.1	4.1	5.8	6	6.8	7.4	7.6	7.8	5.9	4.4	5.2	4.1	6.3	7.3	7.5	0.8	7.8	4.2
Jun 6	5.3	3.3	4.2	7.1	5.8	6.6	10.1	9	11.3	9.5	9	7.8	7.7	7.6	7.1	6.5	7.5	5.6	4.9	4.1	2.5	2.4	4.9	5.6	2.4	11.3	6.5
Jun 7	3.5	3.2	2.6	2.6	3.6	5.3	3.3	4.8	5.2	7.9	9.2	10.8	12.9	12.5	11.5	11.6	9.7	8.9	9.4	6.8	4.5	2.6	0.2	1.2	0.2	12.9	6.4
Jun 8	1.5	2.5	0.1	2.1	1	1.9	4.8	5.3	5.6	7.9	7.4	11.1	9.7	9.1	7	7.2	5.5	4.1	4.8	3.9	2	1.2	0.4	0.9	0.1	11.1	4.5
Jun 9	1.3	1	1.1	1.2	2.1	2.3	4.1	5	6.3	6.5	7.2	6.5	6.5	7.7	6.6	3.5	5.5	6.4	5.8	6.1	6.4	4.5	3.8	2.8	1.0	7.7	4.6
Jun 10	2.9	3.4	4	1.4	2.1	3	3.1	4.4	3.6	4.9	5.3	5	4.2	2.5	12.7	3.4	11.1	10.2	2.8	1.7	1.8	1.2	2.5	0.9	0.9	12.7	4.1
Jun 11	1.6	2	1.7	3	3.6	4.4	5.1	4.4	4.9	6	6.1	9.1	9.9	9.2	10.9	10.6	10.1	8.4	8.9	7.3	3.7	2.6	3.2	4.2	1.6	10.9	5.9
Jun 12	3.4	3.7	3.9	3.4	3.1	4.8	5.1	5.4	5.3	5.7	7.6	9.9	9.6	8.4	9	8.5	8.8	9.5	10.5	8.8	11.3	4.5	2.9	0.9	0.9	11.3	6.4
Jun 13	3.1	5	6	5.6	2.4	4.1	7.3	6.4	6.6	5.7	7	7.5	4.3	8.4	7.8	2.6	4.3	3.3	3	4.3	2.1	0.8	1	0.1	0.1	8.4	4.5
Jun 14	0.9	1.6	0.3	1.1	0.5	**0**	6.7	7.6	8	10.3	11.1	11.4	13.2	13.1	11.9	9.8	10.5	4.3	11.6	8.5	6.5	1.7	1.2	1.2	**0.0**	13.2	6.4
Jun 15	0.9	0.9	1.2	0.8	0.4	1.3	2	3.4	2.9	3	6.5	5.2	7.1	9.4	11.1	9.7	8.1	3.8	3	8	4.6	2	2.5	4	0.4	11.1	4.2
Jun 16	4.3	2	2.4	3.1	3.3	5.6	5.8	5.1	4.3	5.8	7.8	7.3	7.7	6.1	8.3	9.4	7.3	8	8.8	7.7	6.3	4.2	2.2	1.1	1.1	9.4	5.6
Jun 17	2.6	6	6.1	5.4	7.1	8.3	12	12.4	9.9	10.9	15.9	12.4	15.3	13.1	12.2	17.2	14.1	5.9	12.3	3	3.5	9.2	3.5	4.6	2.6	17.2	9.3
Jun 18	11	3.2	5.7	11.5	8.8	8.2	6.4	7.9	10	10.8	11.3	12.3	11.9	14.1	13.2	11.6	11.7	11.5	12.6	10.8	8.4	6.2	4.4	6.7	3.2	14.1	**9.6**
Jun 19	6.8	6.2	6.9	8	7.4	5.5	6	6.1	5.3	4.9	5.3	4.6	4.2	3	3.1	3.2	6.3	5.4	7.4	3.6	9.1	8.7	5	8.5	3.0	9.1	5.9
Jun 20	8.7	8.8	10.6	11.3	10.3	10.2	10.2	9.4	10	10.2	11	11.1	9.8	10	10	10.7	10.2	12.3	7.1	8.1	3.2	6.7	7.2	8.9	3.2	12.3	9.4
Jun 21	11.8	8.3	7.3	7	7.7	8.5	7.7	5	4.8	5.3	6.5	13	11.7	7.6	3.6	2.5	4.7	3.6	3.2	2	1.8	1.7	3.8	3.5	1.7	13.0	5.9
Jun 22	3.9	5.3	4.3	5.1	3.2	2.7	4.3	3.2	3.6	3.8	4	4.7	0.5	4.9	2.6	4.2	3.7	4.2	2.6	0.5	1.1	1.3	0.9	1	0.5	5.3	3.2
Jun 23	1	1.4	0.4	1.5	0.5	0.8	2.5	4.6	3.7	4	3.4	5.9	3.8	1	6	7.2	1.6	10.6	11	6.2	4.8	6.9	4.5	4.1	0.4	11.0	4.1
Jun 24	3.5	6.6	6.5	5.9	4.3	3.2	4.1	5.4	9.9	5.9	7.6	9.5	7.7	6.5	6.2	11.9	15.2	15.8	13.1	11.2	5.5	3.8	2.1	1.9	1.9	15.8	7.2
Jun 25	1.2	0.3	1.4	0.4	2	3.1	3.8	4.5	4.1	4.1	5.5	9.6	10.8	6.2	5.4	2.8	4.7	5.6	3.6	3	6.7	2.6	2.3	2.5	0.3	10.8	4.0
Jun 26	2.7	0.6	1.1	1.7	0.3	0.7	1.2	2.4	3.1	3.2	1.7	3.6	5.2	6.5	6.9	5.1	5.9	7	6.4	2.4	0.2	0.2	0.7	1.8	0.2	7.0	**2.9**
Jun 27	1.4	1.4	2.1	1.7	1.1	0.9	2.2	2.9	4.5	4.2	5.6	6.3	8.6	9	8.8	4.8	4.9	6.9	4	1.7	2.4	1.1	1.5	7.5	0.9	9.0	4.0
Jun 28	9.2	8.6	8.3	7.7	6.5	8	7.9	8.5	7.5	7.1	10.4	10.9	11.3	9.5	7.9	9.4	7.7	8	10.1	8.2	6.2	4.7	3	3.3	3.0	11.3	7.9
Jun 29	2.9	2.2	3.8	3.6	3.3	3.4	5.2	5.3	3	6	5.7	7.5	9	8.2	10.5	11.7	16.4	16.2	10.5	7.6	8.5	5	2.7	1.4	1.4	16.4	6.7
Jun 30	2.7	1.8	3.1	3.1	3.7	1.6	1	4.3	6.3	6.5	6.8	8.3	8.4	7.5	7.5	7.8	8.3	8.5	8.4	4.7	2.6	7.6	2.6	8.9	1.0	8.9	5.5
Diurnal Maximum	12	9	23	12	10	10	12	12	11	11	16	13	15	14	13	17	18	16	14	16	11	9	7	9			
Daiurnal Average	3.9	3.8	4.2	4.0	3.6	4.1	5.2	5.8	6.1	6.7	7.5	8.5	8.5	8.3	8.4	8.0	8.6	8.0	7.8	6.1	4.8	3.9	2.9	3.5			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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.

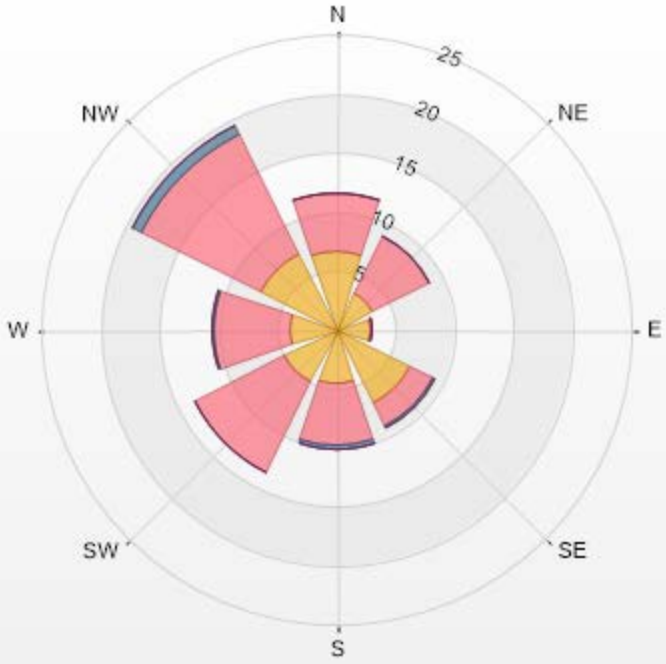
Timeseries Chart of Hourly Average for VWS - 986b Station



Wind: PRAMP 986b Poll.: PRAMP 986b-WDS[KPH] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 13.40% Valid Data: 98.47% Calm Avg: 1.05 [KPH]

Direction	1.8-6	6-15	15-29	29-39	>39.0	Total
N	6.63	4.94	0	0	0	11.57
NE	3.39	5.5	0	0	0	8.89
E	2.82	0.28	0	0	0	3.1
SE	6.91	2.26	0.14	0	0	9.31
S	4.65	5.22	0.28	0	0	10.15
SW	4.94	8.6	0	0	0	13.54
W	3.95	6.49	0.14	0	0	10.58
NW	7.19	11.42	0.85	0	0	19.46
Summary	40.48	44.71	1.41	0	0	86.6

PRAMP 986b Poll.: PRAMP 986b-WDS[KPH] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 13.40% Calm Poll Avg: 1.05[KPH]



% Icon Classes (KPH)	40	1.8-6	45	6-15	1	15-29	0	29-39	0	>39.0

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

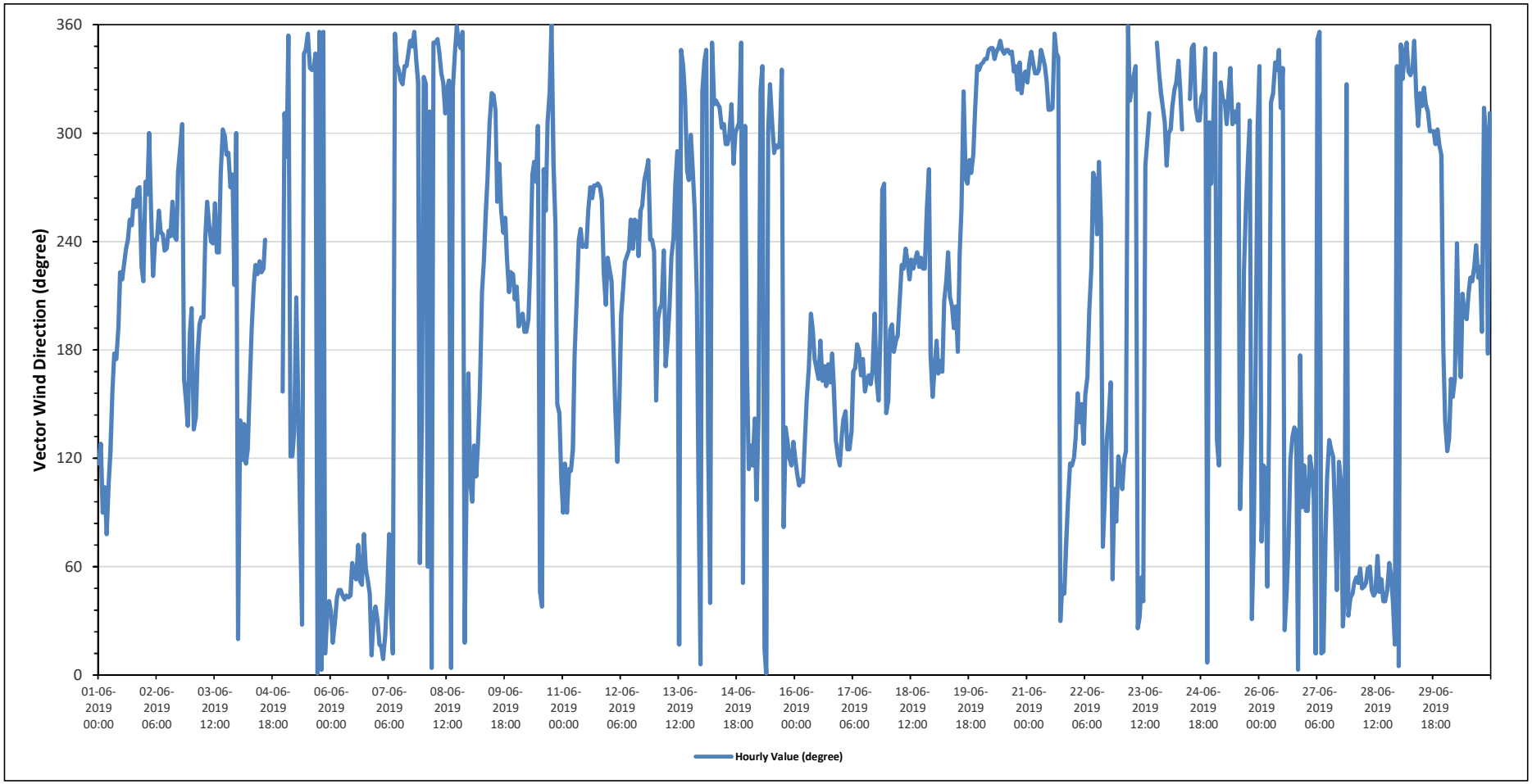
Monthly Average:	285 (WNW) degree	Hours in Service:	720
		Hours of Data:	712
		Hours of Missing Data:	8
		Hours of Calibration:	0
		Operational Uptime:	98.9

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
Jun 1	ESE	SE	E	ESE	ENE	ESE	ESE	SSE	S	S	S	SW	SW	SW	SW	WSW	WSW	WSW	W	WSW	W	W	SW	SW	214	SSW
Jun 2	W	W	WNW	WSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	W	WSW	WSW	W	WNW	WNW	SSE	SSE	SE	S	256	WSW
Jun 3	SSW	SE	SE	S	SSW	SSW	SSW	WSW	W	WSW	WSW	WSW	W	SW	SW	W	WNW	WNW	WNW	WNW	W	W	SW	WNW	259	WSW
Jun 4	NNE	SE	ESE	SE	ESE	SE	SSE	S	SW	SW	SW	SW	SW	SW	WSW	P	P	P	P	P	P	P	P	SSE	-	-
Jun 5	NW	WNW	N	ESE	ESE	SE	SSW	SSE	E	NNE	NNW	NNW	N	NNW	NNW	NNW	NNW	N	N	N	N	NNE	NNE	NE	0	N
Jun 6	NE	NNE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	NE	NE	ENE	NE	NE	ENE	ENE	NE	NE	NNE	NNE	NE	47	NE
Jun 7	NNE	NNE	NNE	N	NNE	NE	ENE	NE	NNE	N	NNW	NNW	NNW	NW	NNW	NNW	NNW	N	NNW	N	NNW	NNW	ENE	SE	350	N
Jun 8	NNW	NW	ENE	NW	N	N	N	N	NNW	NNW	NNW	NW	NW	NNW	N	NW	NNW	N	N	NNW	N	NNE	ESE	SSE	337	NNW
Jun 9	ESE	E	SE	ESE	SE	SSE	SSW	SW	WSW	W	NW	NW	NW	NW	W	W	WSW	WSW	WSW	SW	SSW	SW	SW	SSW	257	WSW
Jun 10	SSW	S	SSW	SSW	S	S	SSW	SW	W	WNW	W	WNW	NE	NE	W	WSW	NW	NW	N	W	WSW	SSE	SE	ESE	273	W
Jun 11	E	ESE	E	ESE	ESE	SE	S	SSW	WSW	WSW	SW	SW	SW	WSW	W	W	W	W	W	W	W	SW	SSW	SW	245	WSW
Jun 12	SW	SW	S	SE	ESE	SSE	SSW	SSW	SW	SW	SW	WSW	SW	WSW	WSW	SW	WSW	WSW	W	W	WNW	WSW	WSW	SW	242	WSW
Jun 13	SSE	SSW	SSW	SSW	SW	S	S	SSW	SW	WSW	W	WNW	NNE	NNW	NNW	NW	W	W	WNW	W	WSW	SSW	ESE	N	252	WSW
Jun 14	NW	NNW	NNW	SE	NE	N	NW	NW	NW	NW	WNW	WNW	WNW	WNW	WNW	NW	W	WNW	WNW	NW	N	NE	WNW	S	307	NW
Jun 15	ESE	SE	ESE	SE	E	SE	NW	NNW	NNE	N	WNW	NW	NW	WNW	WNW	WNW	WNW	NNW	E	SE	SE	ESE	ESE	SE	309	NW
Jun 16	ESE	ESE	ESE	ESE	ESE	SE	SSE	SSE	SSW	S	S	SSE	SSE	S	SSE	S	SSE	S	SSE	S	SSE	SE	ESE	ESE	160	SSE
Jun 17	SE	SE	SE	SE	SE	SE	SSE	SSE	S	S	SSE	S	SSE	SSE	SSE	SSE	SSE	SSW	SSE	SSE	S	W	W	SE	166	SSE
Jun 18	SSE	S	SSW	S	S	S	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	W	S	SSE	217	SW
Jun 19	SSE	S	SSE	S	SSE	SSW	SW	SW	SSW	SSW	S	SSW	S	SW	WSW	NW	W	W	WNW	W	WNW	NW	NNW	NNW	234	SW
Jun 20	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NW	NW	NNW	NNW	341	NNW
Jun 21	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NW	NW	N	NNW	NNW	NNE	NE	NE	ENE	E	ESE	ESE	338	NNW
Jun 22	ESE	SE	SSE	SE	SSE	SE	SSE	SSE	SSW	SW	W	W	WSW	WNW	WSW	ENE	E	SE	SE	SSE	NE	ESE	E	ESE	156	SSE
Jun 23	ESE	ESE	ESE	ESE	N	NW	NW	NNW	NNW	NNE	NNE	NE	NE	W	WNW	NW	W	NW	WNW	N	NNW	NW	NW	NW	331	NNW
Jun 24	W	WNW	WNW	NW	NW	NNW	NNW	NW	WNW	NNW	NW	NW	NW	NNW	NNW	NW	NW	NW	NW	NW	NNW	N	NW	W	318	NW
Jun 25	WNW	NNW	SE	ESE	NNW	NW	NW	WNW	NW	NNW	WNW	NW	NW	NW	E	SE	SW	W	WNW	NW	NNE	ENE	S	WNW	313	NW
Jun 26	NNW	ENE	ESE	ESE	NE	SE	NW	NW	NNW	NNW	NNW	NW	NNW	NNE	NE	ENE	ESE	SE	SE	SE	N	S	E	ESE	57	ENE
Jun 27	E	E	ESE	ESE	E	NNE	N	N	NNE	NNE	ENE	ESE	SE	SE	ESE	E	NE	ESE	ESE	NNE	NE	NW	NNE	NE	85	E
Jun 28	NE	NE	NE	NE	ENE	NE	NE	NE	ENE	ENE	NE	NE	NE	ENE	NE	NE	NE	NE	NE	ENE	NE	NE	NNE	NNW	49	NE
Jun 29	N	NNW	NNW	NNW	N	NNW	NNW	NNW	N	NW	WNW	NW	NW	NW	NW	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	S	314	NW
Jun 30	SE	ESE	SE	SSE	SSE	SSE	WSW	S	SSE	SSW	SSW	SSW	SSW	SW	SW	SW	SW	SW	SW	S	NW	WNW	S	NW	213	SSW

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986b Station



842b STATION

PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

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 Exceedences: 0 Number of 24-Hour Exceedences: 0 30-Day Exceedence: 0

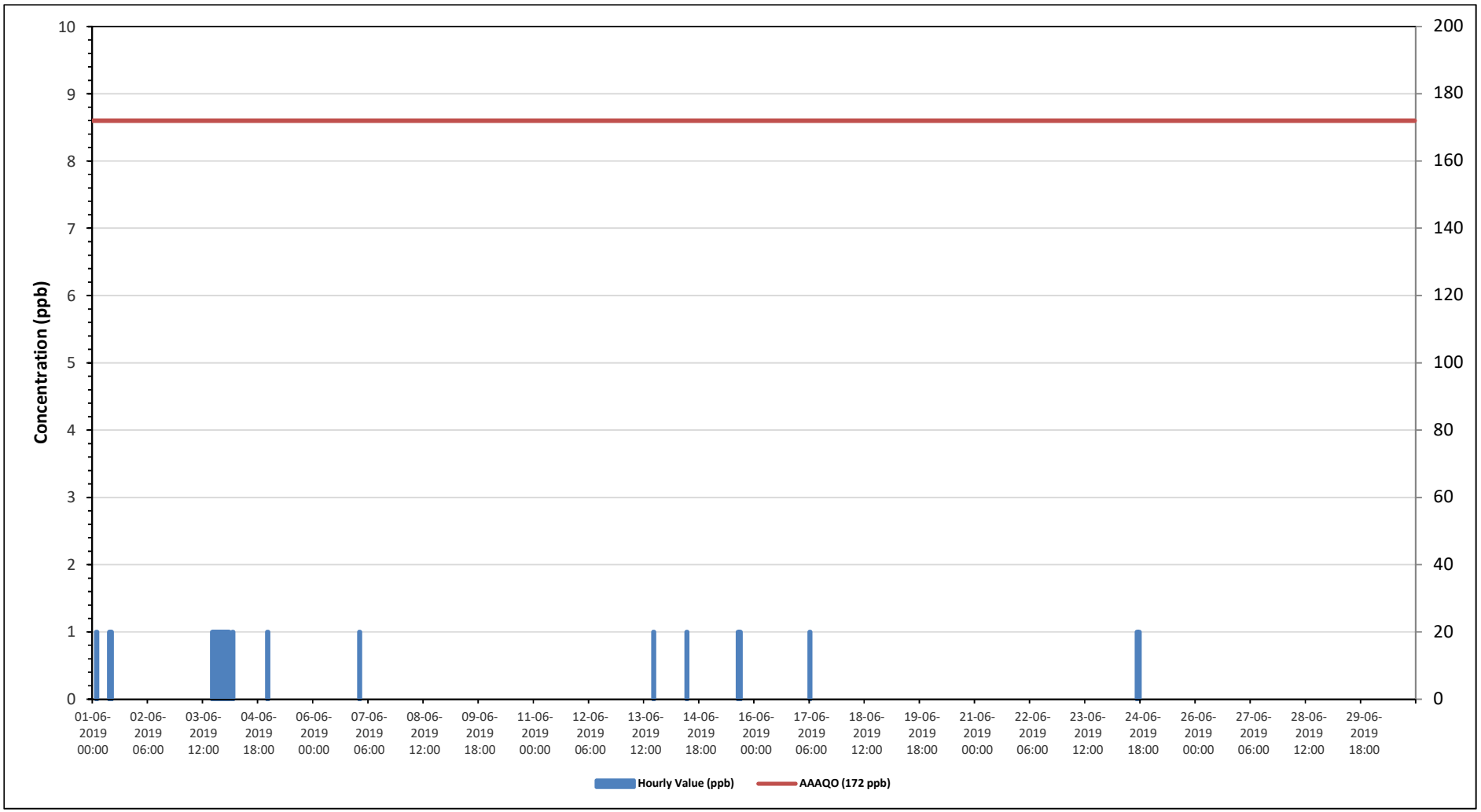
Maximum Hourly Value:	1	ppb	on June 1 at hour 2	Hours in Service:	720
Maximum Daily Value:	0.3	ppb	on June 3	Hours of Data:	676
Minimum Hourly Value:	0	ppb	on June 1 at hour 1	Hours of Missing Data:	8
Minimum Daily Value:	0.0	ppb	on June 2	Hours of Calibration:	36
Monthly Average:	0.0	ppb		Operational Uptime:	98.9

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			
Jun 1	0	0	1	0	0	0	0	0	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Jun 2	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
Jun 3	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0.3
Jun 4	1	1	1	0	1	S	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	1	0	1	-
Jun 5	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
Jun 6	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
Jun 7	0	1	S	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
Jun 8	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
Jun 9	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
Jun 10	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
Jun 11	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Jun 12	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
Jun 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	S	0	0	0	0	0	1	0.0
Jun 14	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.0
Jun 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	1	0.1
Jun 16	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
Jun 17	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.0
Jun 18	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
Jun 19	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
Jun 20	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
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0.1
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	1	1	1	0	1	0	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1			
Daiurnal Average	0.0	0.1	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1			

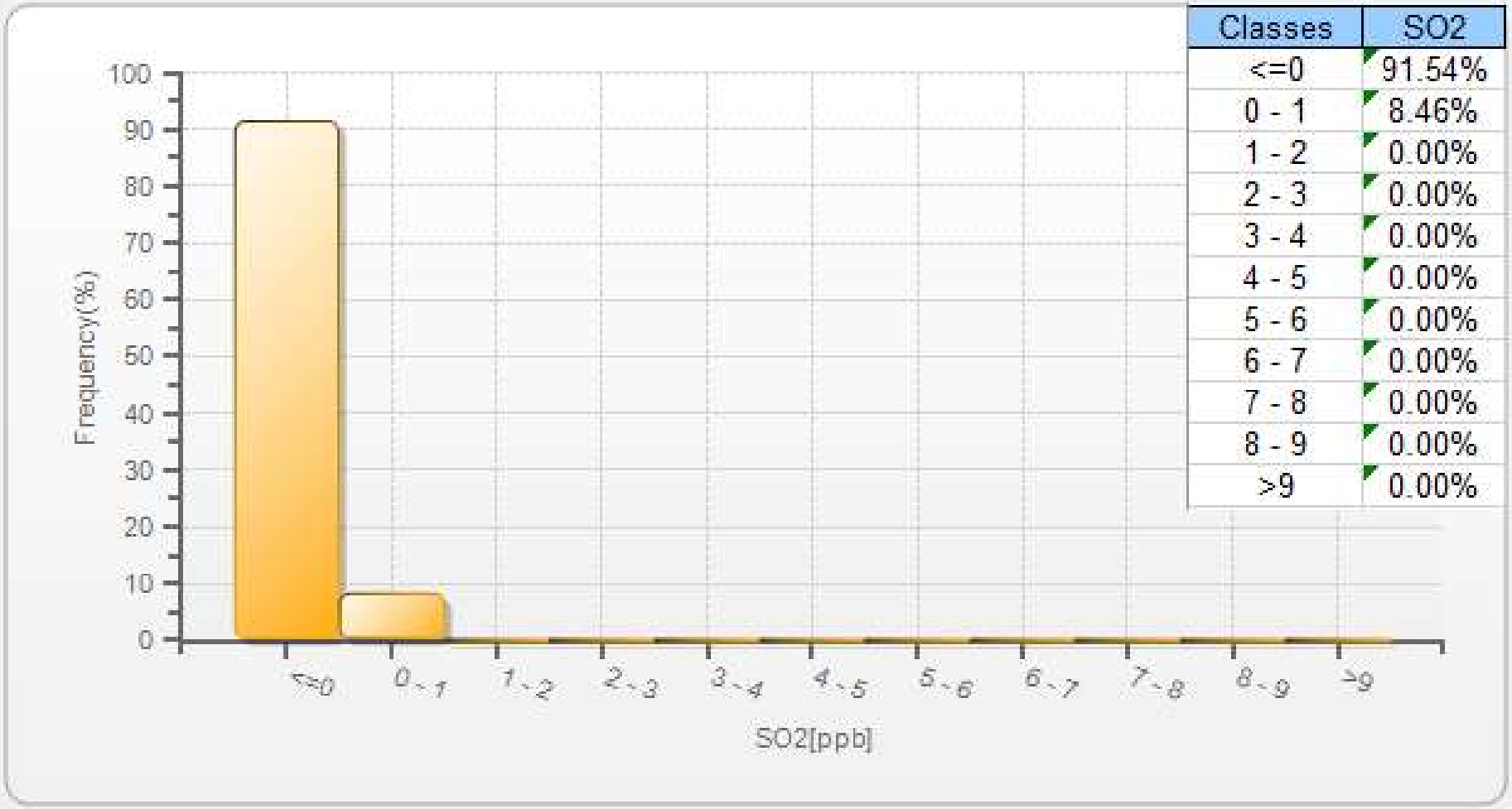
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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



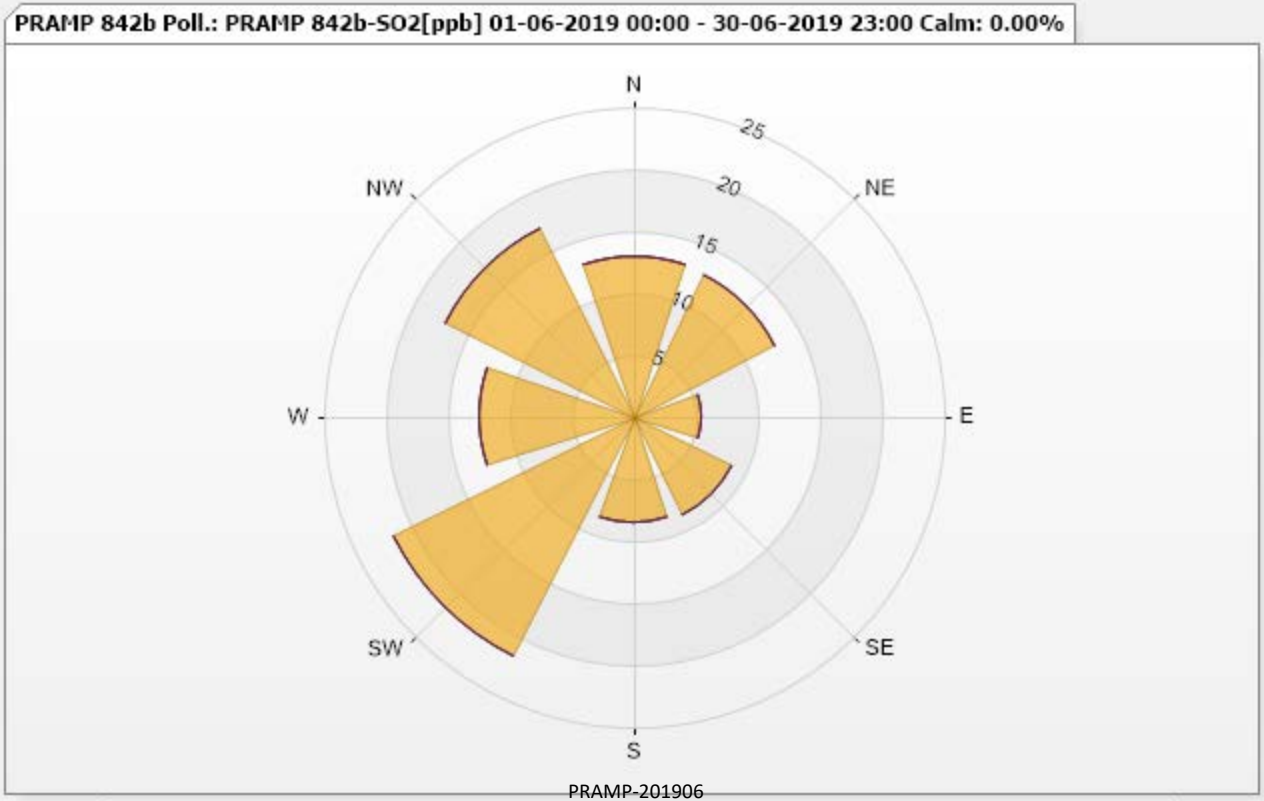
SO2[ppb] Histogram: PRAMP 842b Monthly: 06-2019 1 Hr.



Classes	SO2
<=0	91.54%
0 - 1	8.46%
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 842b Poll.: PRAMP 842b-SO2[ppb] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.40% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	13.06	0	0	0	0	13.06
NE	12.76	0	0	0	0	12.76
E	5.49	0	0	0	0	5.49
SE	8.9	0	0	0	0	8.9
S	8.61	0	0	0	0	8.61
SW	21.66	0	0	0	0	21.66
W	12.46	0	0	0	0	12.46
NW	17.06	0	0	0	0	17.06
Summary	100	0	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-SO2[ppb] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
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 - June 2019

Summary of Hourly Averages

TOTAL REDUCED SULPHUR (TRS) in ppb

Alberta Ambient Air Quality Objectives (AAAQO) for H2S: 1-Hour 10 ppb, 24-Hour 3 ppb

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

Maximum Hourly Value:	2.47	ppb	on June 9 at hour 1	Hours in Service:	720
Maximum Daily Value:	0.79	ppb	on June 9	Hours of Data:	675
Minimum Hourly Value:	0.31	ppb	on June 29 at hour 8	Hours of Missing Data:	8
Minimum Daily Value:	0.39	ppb	on June 29	Hours of Calibration:	37
Monthly Average:	0.53	ppb		Operational Uptime:	98.9

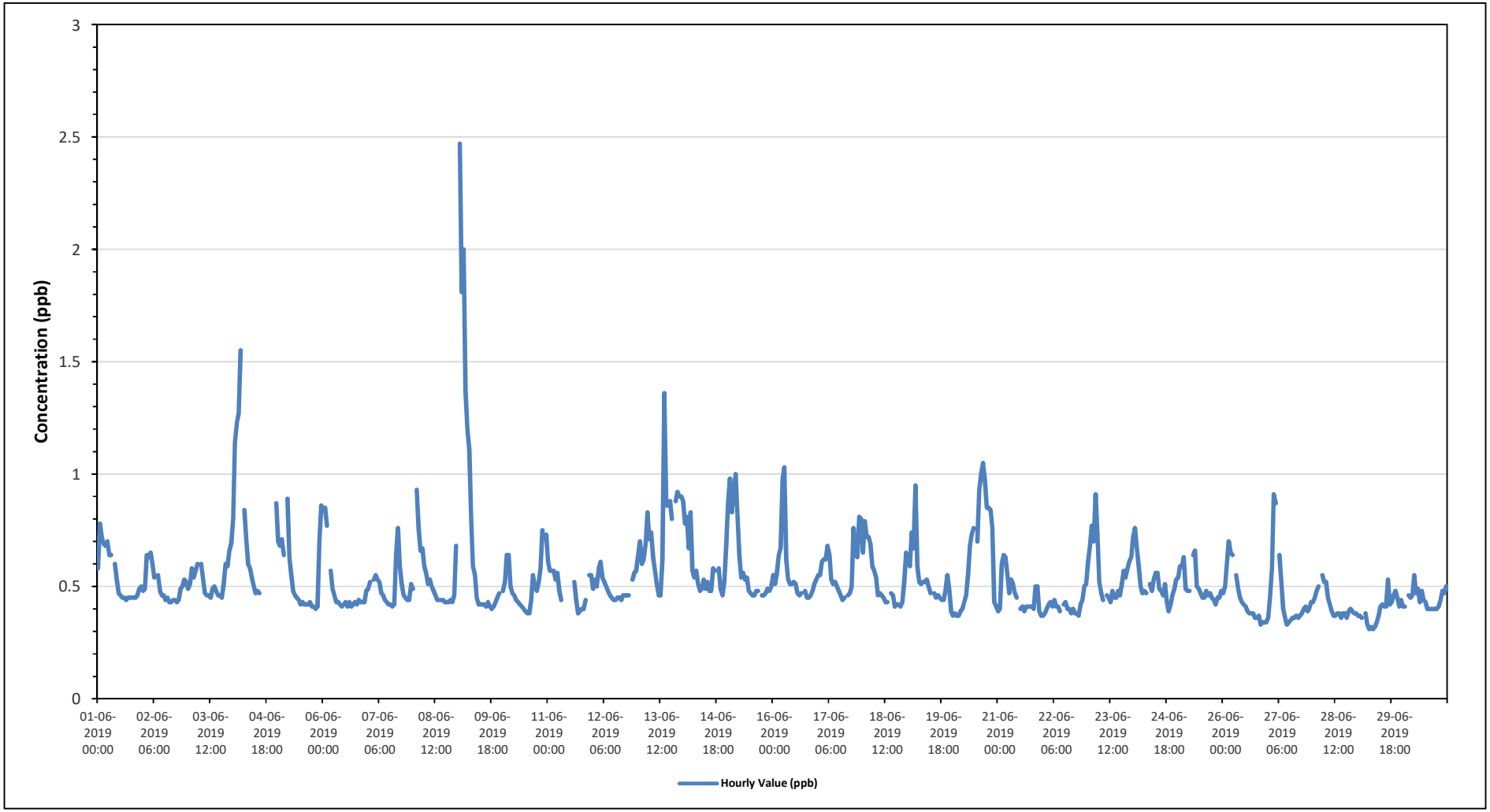
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jun 1	0.58	0.78	0.72	0.69	0.68	0.7	0.64	0.64	S	0.6	0.53	0.47	0.46	0.45	0.45	0.44	0.45	0.45	0.45	0.45	0.45	0.46	0.49	0.5	0.44	0.78	0.54
Jun 2	0.48	0.49	0.64	0.63	0.65	0.6	0.54	S	0.55	0.48	0.46	0.46	0.44	0.45	0.43	0.43	0.44	0.44	0.43	0.44	0.49	0.5	0.53	0.52	0.43	0.65	0.50
Jun 3	0.49	0.51	0.58	0.54	0.57	0.6	S	0.6	0.53	0.47	0.46	0.46	0.45	0.49	0.5	0.48	0.46	0.46	0.45	0.51	0.6	0.59	0.66	0.69	**0.45**	0.69	0.53
Jun 4	0.8	1.14	1.23	1.27	1.55	S	0.84	0.71	0.6	0.58	0.54	0.5	0.47	0.48	0.47	P	P	P	P	P	P	P	P	0.87	0.47	1.55	-
Jun 5	0.7	0.68	0.71	0.64	S	0.89	0.63	0.55	0.48	0.46	0.45	0.44	0.42	0.43	0.42	0.42	0.42	0.43	0.41	0.41	0.4	0.41	0.7	0.86	0.40	0.89	0.54
Jun 6	0.84	0.85	0.77	S	0.57	0.49	0.46	0.43	0.43	0.42	0.41	0.42	0.43	0.41	0.43	0.41	0.42	0.43	0.42	0.44	0.43	0.43	0.43	0.48	0.41	0.85	0.49
Jun 7	0.49	0.52	S	0.53	0.55	0.53	0.52	0.47	0.46	0.44	0.43	0.42	0.42	0.41	0.42	0.64	0.76	0.59	0.51	0.46	0.45	0.44	0.44	0.51	0.41	0.76	0.50
Jun 8	0.49	S	0.93	0.76	0.66	0.67	0.59	0.56	0.51	0.53	0.5	0.48	0.46	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.44	0.43	0.46	0.68	0.43	0.93	0.53
Jun 9	S	**2.47**	1.81	2	1.37	1.2	1.11	0.8	0.59	0.55	0.45	0.42	0.42	0.42	0.42	0.41	0.43	0.41	0.4	0.41	0.43	0.45	0.47	S	0.40	**2.47**	**0.79**
Jun 10	0.48	0.52	0.64	0.64	0.5	0.47	0.46	0.44	0.43	0.42	0.41	0.4	0.39	0.38	0.38	0.44	0.55	0.5	0.48	0.52	0.58	0.75	S	0.73	0.38	0.75	0.50
Jun 11	0.61	0.57	0.57	0.57	0.53	0.56	0.48	0.44	C	C	C	C	C	C	0.52	0.44	0.38	0.39	0.4	0.4	0.44	S	0.55	0.55	0.38	0.61	-
Jun 12	0.49	0.53	0.5	0.58	0.61	0.54	0.52	0.5	0.48	0.46	0.45	0.44	0.44	0.45	0.45	0.44	0.46	0.46	0.46	0.46	S	0.53	0.56	0.57	0.44	0.61	0.49
Jun 13	0.64	0.7	0.6	0.62	0.69	0.83	0.71	0.74	0.63	0.57	0.51	0.46	0.46	0.62	1.36	0.86	0.86	0.88	0.8	S	0.88	0.92	0.9	0.9	0.46	1.36	0.75
Jun 14	0.88	0.78	0.81	0.67	0.83	0.57	0.54	0.57	0.51	0.48	0.49	0.53	0.49	0.52	0.48	0.48	0.58	0.57	S	0.58	0.49	0.46	0.52	0.68	0.46	0.88	0.59
Jun 15	0.88	0.98	0.83	0.92	1	0.82	0.64	0.54	0.56	0.53	0.54	0.48	0.47	0.46	0.46	0.48	0.48	S	0.46	0.46	0.47	0.49	0.48	0.5	0.46	1.00	0.61
Jun 16	0.55	0.51	0.56	0.64	0.67	0.98	1.03	0.62	0.53	0.51	0.51	0.52	0.51	0.47	0.46	0.47	S	0.48	0.45	0.45	0.46	0.48	0.51	0.53	0.45	1.03	0.56
Jun 17	0.55	0.55	0.61	0.62	0.62	0.68	0.64	0.53	0.51	0.52	0.5	0.48	0.46	0.44	0.45	S	0.46	0.47	0.5	0.76	0.64	0.63	0.81	0.8	0.44	0.81	0.58
Jun 18	0.65	0.79	0.72	0.72	0.69	0.59	0.57	0.54	0.46	0.47	0.46	0.45	0.43	0.43	S	0.47	0.46	0.41	0.42	0.42	0.41	0.43	0.52	0.65	0.41	0.79	0.53
Jun 19	0.63	0.59	0.74	0.67	0.95	0.59	0.52	0.51	0.52	0.52	0.53	0.5	0.47	S	0.47	0.45	0.46	0.45	0.44	0.44	0.48	0.55	0.49	0.39	0.39	0.95	0.54
Jun 20	0.37	0.38	0.37	0.37	0.39	0.4	0.43	0.46	0.55	0.68	0.73	0.76	S	0.7	0.93	1	1.05	0.97	0.85	0.85	0.84	0.76	0.43	0.41	0.37	1.05	0.64
Jun 21	0.39	0.4	0.6	0.64	0.63	0.55	0.47	0.53	0.51	0.47	0.45	S	0.4	0.41	0.39	0.41	0.41	0.41	0.41	0.4	0.5	0.5	0.39	0.37	0.37	0.64	0.46
Jun 22	0.37	0.38	0.4	0.42	0.43	0.41	0.44	0.41	0.41	0.39	S	0.42	0.43	0.4	0.4	0.38	0.4	0.38	0.38	0.37	0.42	0.44	0.5	0.51	0.37	0.51	0.41
Jun 23	0.61	0.68	0.77	0.7	0.91	0.73	0.52	0.47	0.44	S	0.46	0.45	0.43	0.48	0.45	0.45	0.48	0.46	0.51	0.57	0.54	0.58	0.61	0.63	0.43	0.91	0.56
Jun 24	0.72	0.76	0.67	0.59	0.5	0.47	0.48	0.47	S	0.51	0.48	0.53	0.56	0.56	0.49	0.48	0.46	0.51	0.43	0.39	0.42	0.46	0.49	0.53	0.39	0.76	0.52
Jun 25	0.54	0.59	0.59	0.63	0.49	0.48	0.48	S	0.64	0.66	0.5	0.49	0.47	0.45	0.45	0.48	0.46	0.47	0.45	0.44	0.42	0.45	0.45	0.48	0.42	0.66	0.50
Jun 26	0.47	0.5	0.6	0.7	0.65	0.64	S	0.55	0.49	0.45	0.43	0.42	0.41	0.39	0.38	0.38	0.38	0.36	0.36	0.37	0.33	0.34	0.34	0.34	0.33	0.70	0.45
Jun 27	0.36	0.45	0.58	0.91	0.87	S	0.64	0.52	0.4	0.36	0.33	0.34	0.35	0.36	0.36	0.37	0.36	0.37	0.38	0.4	0.41	0.39	0.4	0.43	0.33	0.91	0.45
Jun 28	0.43	0.45	0.48	0.5	S	0.55	0.52	0.52	0.45	0.42	0.39	0.37	0.37	0.38	0.38	0.36	0.38	0.38	0.36	0.39	0.4	0.39	0.38	0.38	0.36	0.55	0.42
Jun 29	0.37	0.37	0.36	S	0.38	0.33	0.31	0.32	**0.31**	0.32	0.34	0.37	0.41	0.42	0.41	0.41	0.53	0.42	0.43	0.46	0.48	0.45	0.41	0.44	**0.31**	0.53	**0.39**
Jun 30	0.41	0.41	S	0.46	0.45	0.46	0.55	0.47	0.49	0.43	0.48	0.44	0.43	0.4	0.4	0.4	0.4	0.4	0.4	0.41	0.44	0.48	0.47	0.5	0.40	0.55	0.44
Diurnal Maximum	0.88	2.47	1.81	2.00	1.55	1.20	1.11	0.80	0.64	0.68	0.73	0.76	0.56	0.70	1.36	1.00	1.05	0.97	0.85	0.85	0.88	0.92	0.90	0.90			
Daiurnal Average	0.56	0.67	0.69	0.70	0.69	0.62	0.58	0.53	0.50	0.49	0.47	0.46	0.44	0.45	0.48	0.48	0.49	0.48	0.46	0.47	0.49	0.51	0.51	0.57			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

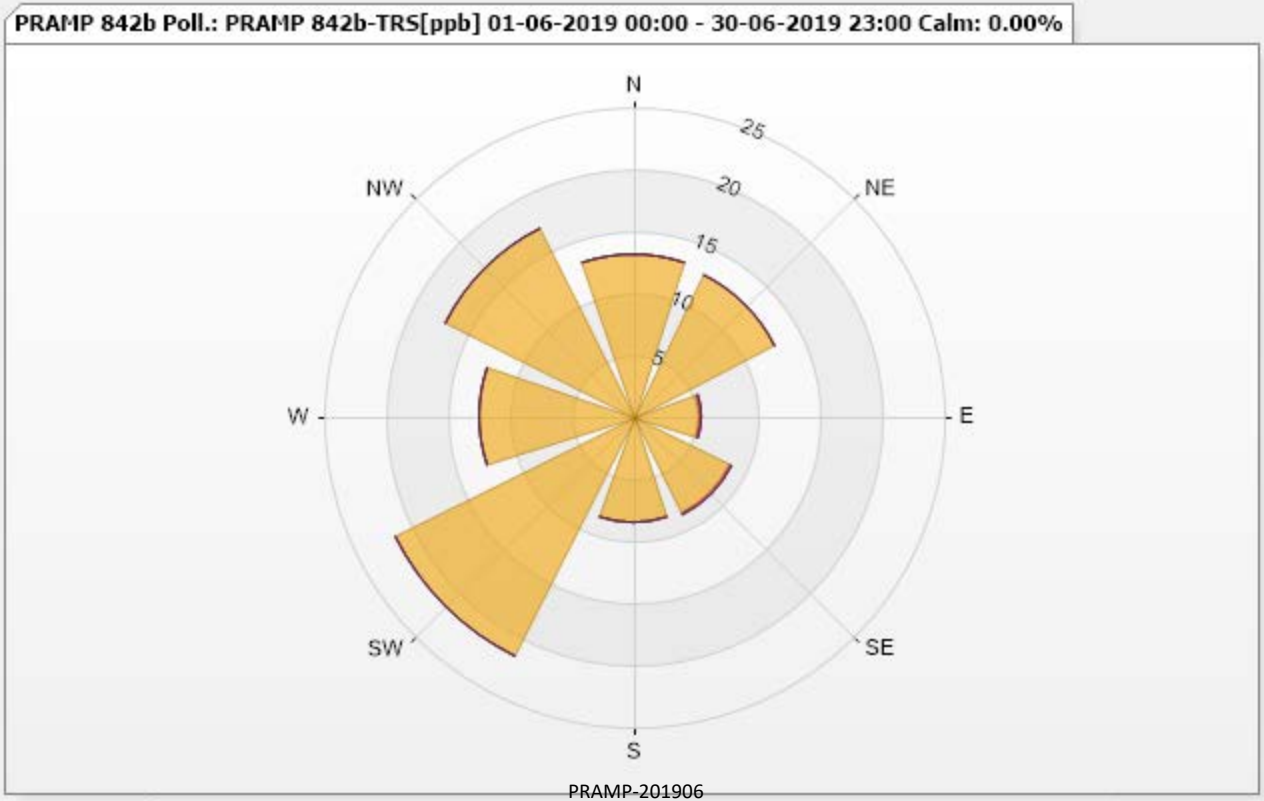
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for TRS - 842b Station



Wind: PRAMP 842b Poll.: PRAMP 842b-TRS[ppb] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.26% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	13.08	0	0	0	0	13.08
NE	12.78	0	0	0	0	12.78
E	5.35	0.15	0	0	0	5.5
SE	8.77	0.15	0	0	0	8.92
S	8.62	0	0	0	0	8.62
SW	21.55	0	0	0	0	21.55
W	12.48	0	0	0	0	12.48
NW	17.09	0	0	0	0	17.09
Summary	100	0.3	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-TRS[ppb] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
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 - June 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

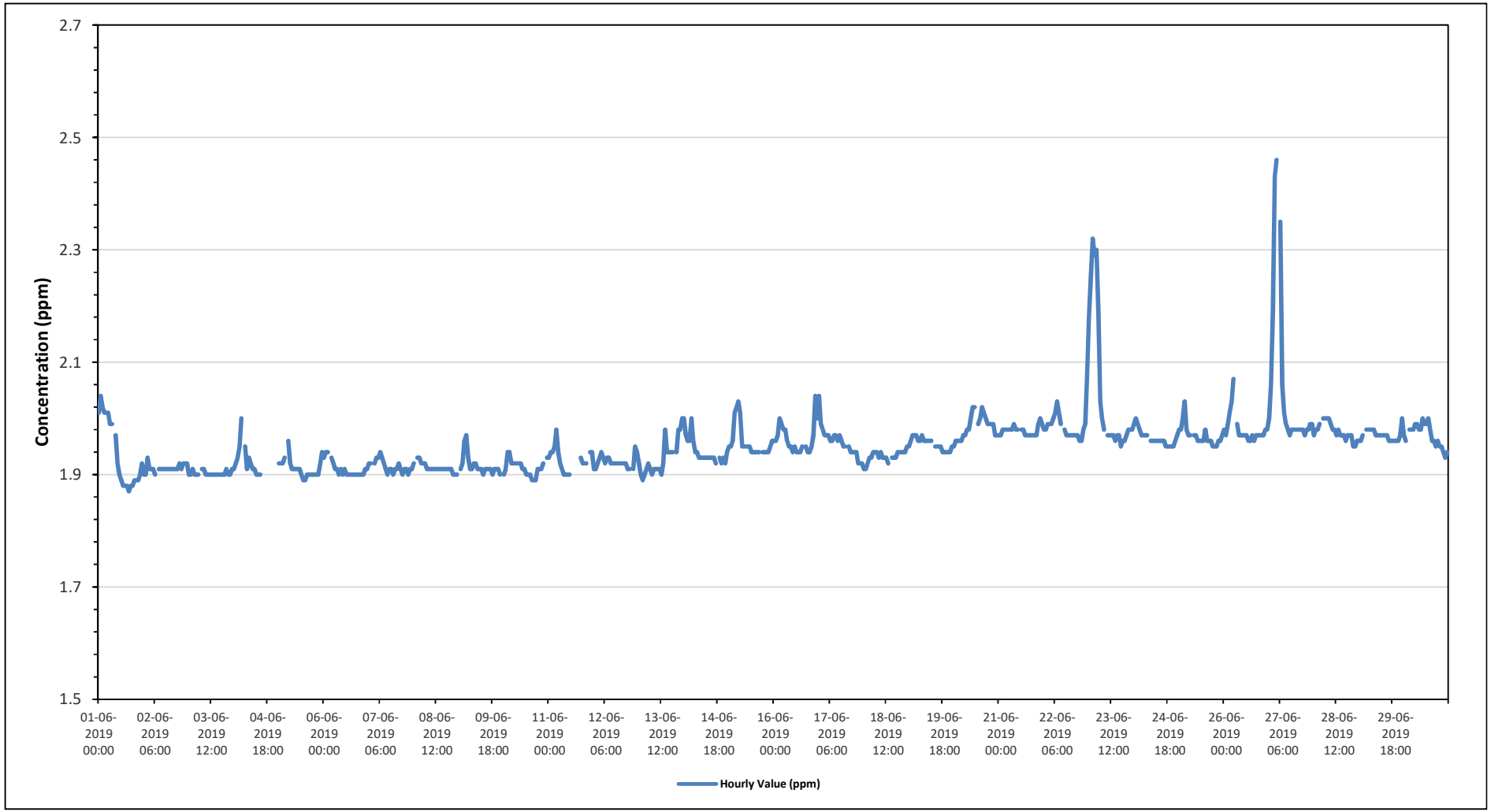
Maximum Hourly Value:	2.46	ppm	on June 27 at hour 4	Hours in Service:	720
Maximum Daily Value:	2.06	ppm	on June 27	Hours of Data:	675
Minimum Hourly Value:	1.87	ppm	on June 1 at hour 16	Hours of Missing Data:	9
Minimum Daily Value:	1.90	ppm	on June 3	Hours of Calibration:	36
Monthly Average:	1.95	ppm		Operational Uptime:	98.8

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			
Jun 1	2.01	2.04	2.02	2.01	2.01	2.01	1.99	1.99	S	1.97	1.92	1.90	1.89	1.88	1.88	1.88	**1.87**	1.88	1.88	1.89	1.89	1.89	1.90	1.92	**1.87**	2.04	1.94
Jun 2	1.90	1.90	1.93	1.91	1.91	1.91	1.90	S	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.92	1.92	1.92	1.90	1.93	1.91
Jun 3	1.90	1.90	1.91	1.90	1.90	1.90	S	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.90	1.90	1.91	1.90	1.91	**1.90**
Jun 4	1.91	1.92	1.93	1.95	2.00	S	1.95	1.91	1.93	1.92	1.91	1.91	1.90	1.90	1.90	P	P	P	P	P	P	P	P	R	1.90	2.00	-
Jun 5	1.92	1.92	1.92	1.93	S	1.96	1.92	1.91	1.91	1.91	1.91	1.91	1.90	1.89	1.89	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.92	1.94	1.89	1.96	1.91
Jun 6	1.93	1.94	1.94	S	1.93	1.92	1.91	1.91	1.90	1.91	1.90	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.90	1.94	1.91
Jun 7	1.92	1.92	S	1.92	1.93	1.93	1.94	1.93	1.92	1.91	1.90	1.91	1.91	1.90	1.91	1.91	1.92	1.91	1.90	1.91	1.91	1.90	1.91	1.91	1.90	1.94	1.91
Jun 8	1.92	S	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.90	1.90	1.90	1.90	1.93	1.91
Jun 9	S	1.91	1.92	1.96	1.97	1.93	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.90	1.91	1.91	1.91	1.91	1.90	1.91	1.91	1.91	1.90	S	1.90	1.97	1.92
Jun 10	1.90	1.91	1.94	1.94	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.89	1.89	1.89	1.91	1.91	1.91	1.92	S	1.93	1.89	1.94	1.91
Jun 11	1.93	1.94	1.94	1.95	1.98	1.94	1.92	1.91	1.90	1.90	1.90	1.90	C	C	C	C	C	1.93	1.92	1.92	1.92	S	1.94	1.94	1.90	1.98	1.93
Jun 12	1.91	1.91	1.92	1.93	1.94	1.93	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	S	1.91	1.95	1.94	1.91	1.95	1.92
Jun 13	1.92	1.90	1.89	1.90	1.91	1.92	1.91	1.90	1.91	1.91	1.91	1.91	1.90	1.92	1.98	1.94	1.94	1.94	1.94	S	1.94	1.98	1.98	2.00	1.89	2.00	1.93
Jun 14	2.00	1.97	1.96	1.96	2.00	1.96	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	S	1.93	1.92	1.93	1.92	1.94	1.92	2.00	1.94
Jun 15	1.95	1.95	1.96	2.01	2.02	2.03	2.01	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	S	1.94	1.94	1.94	1.94	1.95	1.96	1.94	2.03	1.96
Jun 16	1.96	1.96	1.97	2.00	1.99	1.98	1.98	1.96	1.95	1.95	1.94	1.95	1.94	1.94	1.94	1.95	S	1.95	1.94	1.94	1.95	1.97	2.04	2.00	1.94	2.04	1.96
Jun 17	2.04	1.99	1.98	1.97	1.97	1.97	1.96	1.96	1.97	1.97	1.96	1.97	1.96	1.95	1.95	S	1.95	1.94	1.94	1.94	1.94	1.92	1.92	1.92	1.92	2.04	1.96
Jun 18	1.91	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	S	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	1.91	1.95	1.93
Jun 19	1.95	1.96	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	S	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.97	1.95
Jun 20	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.98	1.98	2.00	2.02	2.02	S	1.99	2.00	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.97	1.97	1.95	2.02	1.98
Jun 21	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.98	S	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.99	2.00	1.99	1.97	2.00	1.98
Jun 22	1.98	1.98	1.99	1.99	1.99	2.00	2.01	2.03	2.01	1.99	S	1.98	1.97	1.97	**1.97**	1.97	1.97	1.97	1.97	1.96	1.96	1.98	1.99	2.08	**1.96**	2.08	1.99
Jun 23	2.18	2.25	2.32	2.29	2.30	2.19	2.03	2.00	1.98	S	1.97	1.97	1.97	1.97	1.96	1.97	1.97	1.95	1.96	1.96	1.97	1.98	1.98	1.98	1.95	2.32	2.05
Jun 24	1.99	2.00	1.99	1.98	1.97	1.97	1.97	1.97	S	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.95	2.00	1.97
Jun 25	1.98	1.98	2.00	2.03	1.98	1.97	1.97	S	1.97	1.97	1.96	1.96	1.96	1.96	1.98	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.96	1.97	1.95	2.03	1.97
Jun 26	1.98	1.97	1.99	2.01	2.03	2.07	S	1.99	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.96	2.07	1.98
Jun 27	2.00	2.06	2.19	2.43	**2.46**	S	2.35	2.06	2.01	1.99	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.99	1.99	1.97	**2.46**	**2.06**
Jun 28	1.97	1.98	1.98	1.99	S	2.00	2.00	2.00	2.00	1.99	1.98	1.98	1.97	1.98	1.97	1.97	1.97	1.96	1.97	1.97	1.97	1.95	1.95	1.96	1.95	2.00	1.98
Jun 29	1.96	1.96	1.97	S	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	2.00	1.96	2.00	1.97
Jun 30	1.97	1.96	S	1.98	1.98	1.98	1.99	1.99	1.98	1.98	2.00	1.99	1.99	2.00	1.98	1.96	1.96	1.95	1.96	1.95	1.95	1.94	1.93	1.94	1.93	2.00	1.97
Diurnal Maximum	2.18	2.25	2.32	2.43	2.46	2.19	2.35	2.06	2.01	2.00	2.02	2.02	1.99	2.00	2.00	2.02	2.01	2.00	1.99	1.99	1.99	1.99	2.04	2.08			
Daiurnal Average	1.96	1.96	1.98	1.99	1.99	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.96			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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.

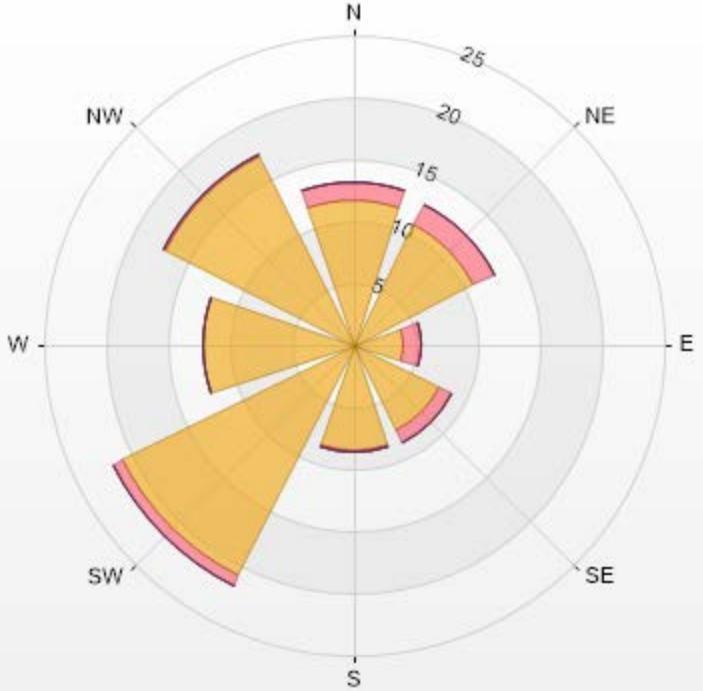
Timeseries Chart of Hourly Average for THC - 842b Station



Wind: PRAMP 842b Poll.: PRAMP 842b-THC55[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.98% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	11.62	1.49	0	0	0	13.11
NE	10.88	1.79	0	0	0	12.67
E	4.02	1.49	0	0	0	5.51
SE	7.75	1.19	0	0	0	8.94
S	8.49	0.15	0	0	0	8.64
SW	20.86	0.89	0	0	0	21.75
W	12.22	0	0	0	0	12.22
NW	16.99	0.15	0	0	0	17.14
Summary	92.83	7.15	0	0	0	100

PRAMP 842b Poll.: PRAMP 842b-THC55[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%



%	Icon	Classes (ppm)											
93		0-2	7		2-5	0		5-10	0		10-40	0	>40.0

PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Averages

METHANE (CH4) in ppm

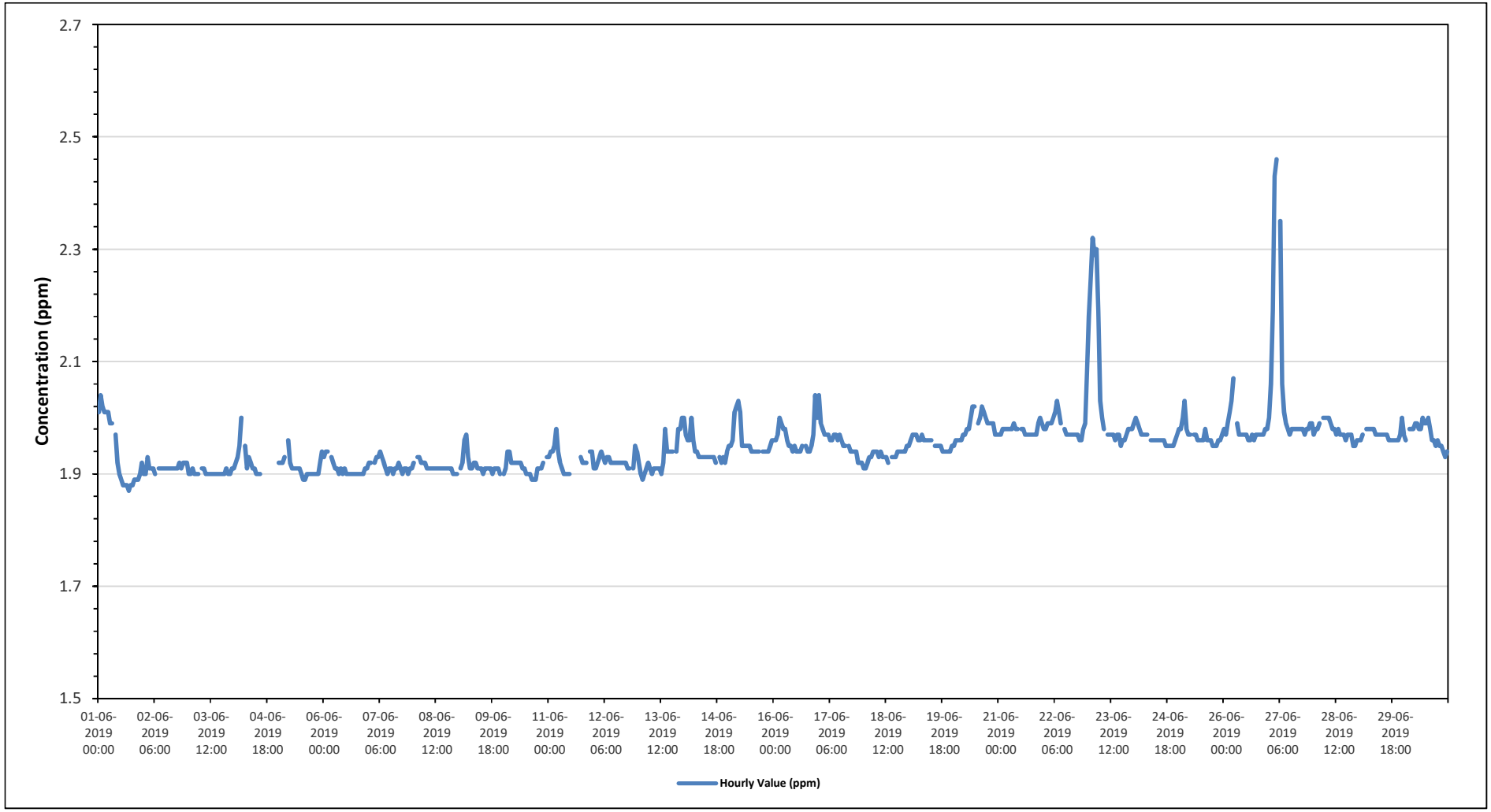
Maximum Hourly Value:	2.46	ppm	on June 27 at hour 4	Hours in Service:	720
Maximum Daily Value:	2.06	ppm	on June 27	Hours of Data:	675
Minimum Hourly Value:	1.87	ppm	on June 1 at hour 16	Hours of Missing Data:	9
Minimum Daily Value:	1.90	ppm	on June 3	Hours of Calibration:	36
Monthly Average:	1.95	ppm		Operational Uptime:	98.8

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			
Jun 1	2.01	2.04	2.02	2.01	2.01	2.01	1.99	1.99	S	1.97	1.92	1.90	1.89	1.88	1.88	1.88	1.87	1.88	1.88	1.89	1.89	1.89	1.90	1.92	1.87	2.04	1.94
Jun 2	1.90	1.90	1.93	1.91	1.91	1.91	1.90	S	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.92	1.92	1.92	1.90	1.93	1.91
Jun 3	1.90	1.90	1.91	1.90	1.90	1.90	S	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.90	1.90	1.91	1.90	1.91	1.90
Jun 4	1.91	1.92	1.93	1.95	2.00	S	1.95	1.91	1.93	1.92	1.91	1.91	1.90	1.90	1.90	P	P	P	P	P	P	P	P	R	1.90	2.00	-
Jun 5	1.92	1.92	1.92	1.93	S	1.96	1.92	1.91	1.91	1.91	1.91	1.91	1.90	1.89	1.89	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.92	1.94	1.89	1.96	1.91
Jun 6	1.93	1.94	1.94	S	1.93	1.92	1.91	1.91	1.90	1.91	1.90	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.90	1.94	1.91
Jun 7	1.92	1.92	S	1.92	1.93	1.93	1.94	1.93	1.92	1.91	1.90	1.91	1.91	1.90	1.91	1.91	1.92	1.91	1.90	1.91	1.91	1.90	1.91	1.91	1.90	1.94	1.91
Jun 8	1.92	S	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.90	1.90	1.90	1.90	1.93	1.91
Jun 9	S	1.91	1.92	1.96	1.97	1.93	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.90	1.91	1.91	1.91	1.91	1.90	1.91	1.91	1.91	1.90	S	1.90	1.97	1.92
Jun 10	1.90	1.91	1.94	1.94	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.89	1.89	1.89	1.91	1.91	1.91	1.92	S	1.93	1.89	1.94	1.91
Jun 11	1.93	1.94	1.94	1.95	1.98	1.94	1.92	1.91	1.90	1.90	1.90	1.90	C	C	C	C	C	1.93	1.92	1.92	1.92	S	1.94	1.94	1.90	1.98	1.93
Jun 12	1.91	1.91	1.92	1.93	1.94	1.93	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	S	1.91	1.95	1.94	1.91	1.95	1.92
Jun 13	1.92	1.90	1.89	1.90	1.91	1.92	1.91	1.90	1.91	1.91	1.91	1.91	1.90	1.92	1.98	1.94	1.94	1.94	1.94	S	1.94	1.98	1.98	2.00	1.89	2.00	1.93
Jun 14	2.00	1.97	1.96	1.96	2.00	1.96	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	S	1.93	1.92	1.93	1.92	1.94	1.92	2.00	1.94
Jun 15	1.95	1.95	1.96	2.01	2.02	2.03	2.01	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	S	1.94	1.94	1.94	1.94	1.95	1.96	1.94	2.03	1.96
Jun 16	1.96	1.96	1.97	2.00	1.99	1.98	1.98	1.96	1.95	1.95	1.94	1.95	1.94	1.94	1.94	1.95	S	1.95	1.94	1.94	1.95	1.97	2.04	2.00	1.94	2.04	1.96
Jun 17	2.04	1.99	1.98	1.97	1.97	1.97	1.96	1.96	1.97	1.97	1.96	1.97	1.96	1.95	1.95	S	1.95	1.94	1.94	1.94	1.94	1.92	1.92	1.92	1.92	2.04	1.96
Jun 18	1.91	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	S	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	1.91	1.95	1.93
Jun 19	1.95	1.96	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	S	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.97	1.95
Jun 20	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.98	1.98	2.00	2.02	2.02	S	1.99	2.00	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.97	1.97	1.95	2.02	1.98
Jun 21	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.98	S	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.99	2.00	1.99	1.97	2.00	1.98
Jun 22	1.98	1.98	1.99	1.99	1.99	2.00	2.01	2.03	2.01	1.99	S	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.98	1.99	2.08	1.96	2.08	1.99
Jun 23	2.18	2.25	2.32	2.29	2.30	2.19	2.03	2.00	1.98	S	1.97	1.97	1.97	1.97	1.96	1.97	1.97	1.95	1.96	1.96	1.97	1.98	1.98	1.98	1.95	2.32	2.05
Jun 24	1.99	2.00	1.99	1.98	1.97	1.97	1.97	1.97	S	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.95	2.00	1.97
Jun 25	1.98	1.98	2.00	2.03	1.98	1.97	1.97	S	1.97	1.97	1.96	1.96	1.96	1.96	1.98	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.96	1.97	1.95	2.03	1.97
Jun 26	1.98	1.97	1.99	2.01	2.03	2.07	S	1.99	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.96	2.07	1.98
Jun 27	2.00	2.06	2.19	2.43	2.46	S	2.35	2.06	2.01	1.99	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.99	1.99	1.97	2.46	2.06
Jun 28	1.97	1.98	1.98	1.99	S	2.00	2.00	2.00	2.00	1.99	1.98	1.98	1.97	1.98	1.97	1.97	1.97	1.96	1.97	1.97	1.97	1.95	1.95	1.96	1.95	2.00	1.98
Jun 29	1.96	1.96	1.97	S	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	2.00	1.96	2.00	1.97
Jun 30	1.97	1.96	S	1.98	1.98	1.98	1.99	1.99	1.98	1.98	2.00	1.99	1.99	2.00	1.98	1.96	1.96	1.95	1.96	1.95	1.95	1.94	1.93	1.94	1.93	2.00	1.97
Diurnal Maximum	2.18	2.25	2.32	2.43	2.46	2.19	2.35	2.06	2.01	2.00	2.02	2.02	1.99	2.00	2.00	2.02	2.01	2.00	1.99	1.99	1.99	1.99	2.04	2.08			
Daiurnal Average	1.96	1.96	1.98	1.99	1.99	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.96			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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.

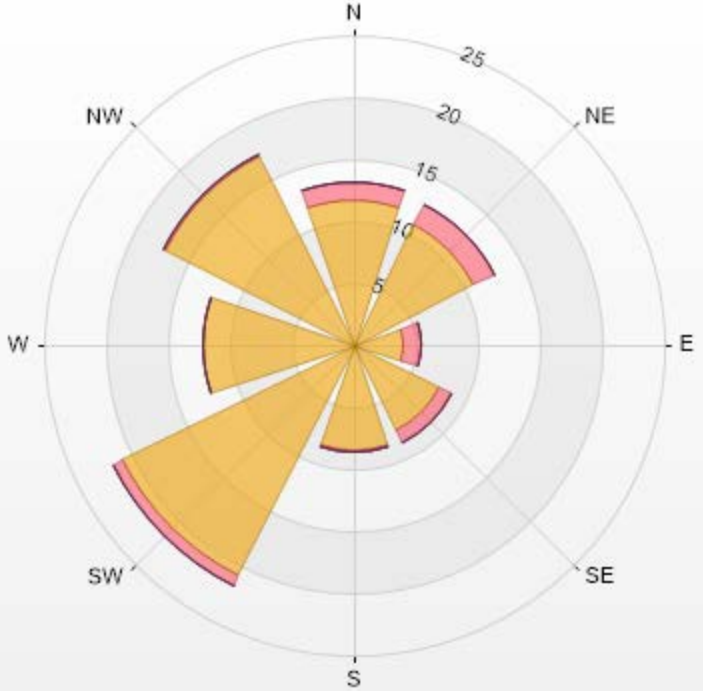
Timeseries Chart of Hourly Average for CH4 - 842b Station



Wind: PRAMP 842b Poll.: PRAMP 842b-CH4[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.98% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	11.62	1.49	0	0	0	13.11
NE	10.88	1.79	0	0	0	12.67
E	4.02	1.49	0	0	0	5.51
SE	7.75	1.19	0	0	0	8.94
S	8.49	0.15	0	0	0	8.64
SW	20.86	0.89	0	0	0	21.75
W	12.22	0	0	0	0	12.22
NW	16.99	0.15	0	0	0	17.14
Summary	92.83	7.15	0	0	0	100

PRAMP 842b Poll.: PRAMP 842b-CH4[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%



%	Icon	Classes (ppm)									
93		0-2	7		0	5-10	0	10-20	0	>20.0	

PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

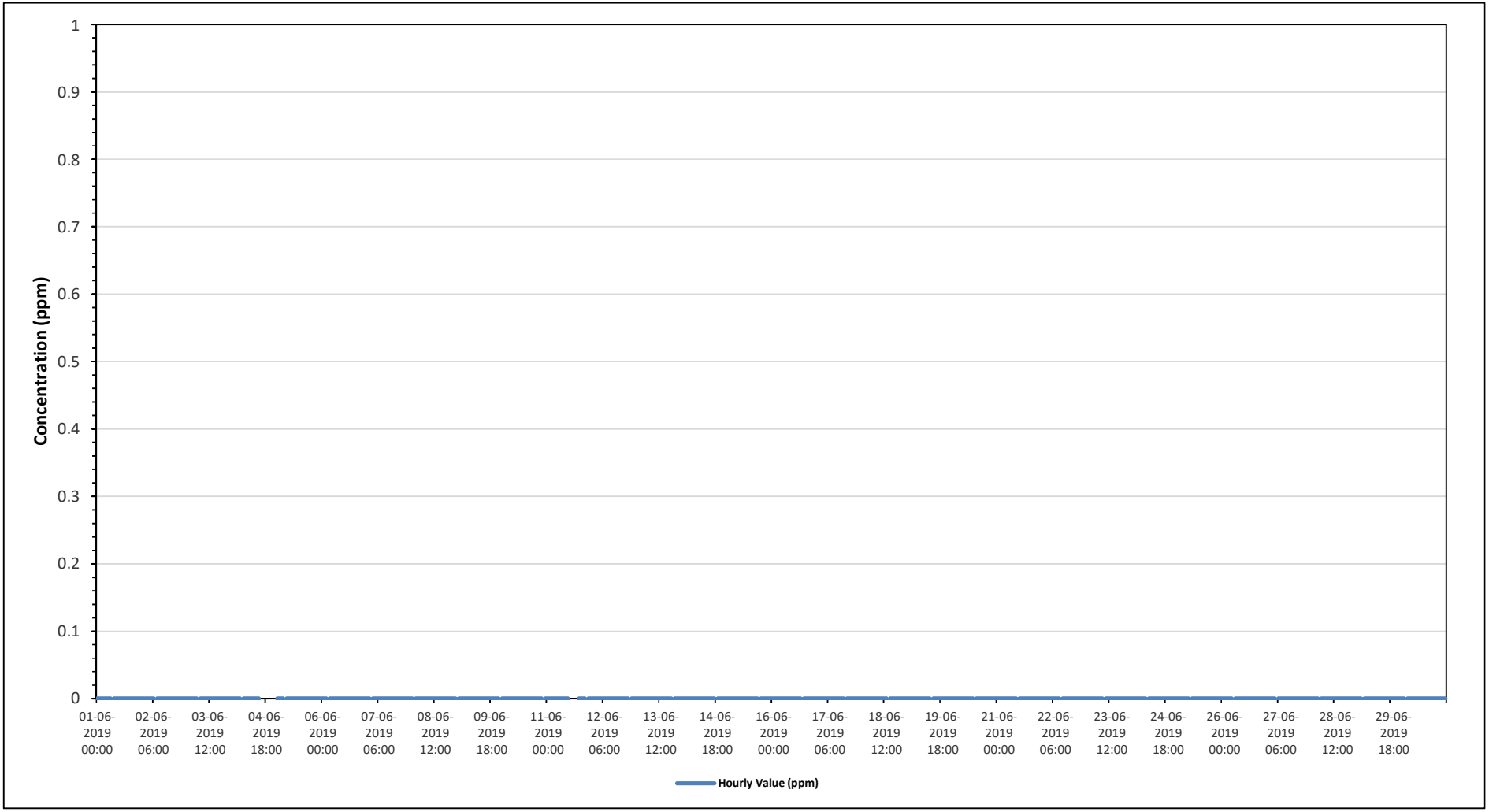
Maximum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on June 1	Hours of Data:	675
Minimum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours of Missing Data:	9
Minimum Daily Value:	0.00	ppm	on June 1	Hours of Calibration:	36
Monthly Average:	0.00	ppm		Operational Uptime:	98.8

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
Jun 1	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
Jun 2	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
Jun 3	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
Jun 4	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	P	P	P	P	P	P	P	P	R	0.00	0.00	-
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 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	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
Jun 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	C	C	C	C	C	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Jun 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 14	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 15	0.00	0.00	0.00	0.00	0.00	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
Jun 16	0.00	0.00	0.00	0.00	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
Jun 17	0.00	0.00	0.00	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
Jun 18	0.00	0.00	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
Jun 19	0.00	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
Jun 20	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
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Daiurnal 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	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

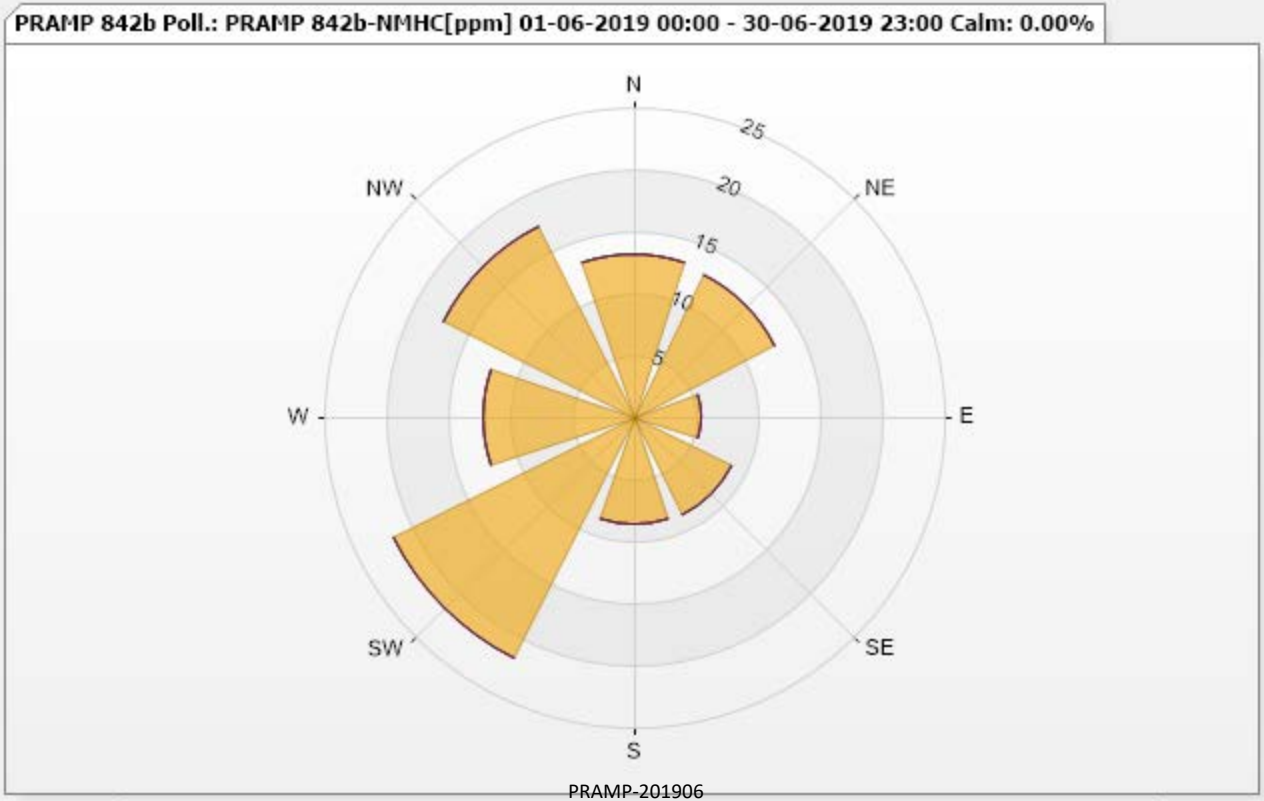
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for NMHC - 842b Station



Wind: PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.12% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	13.1	0	0	0	0	13.1
NE	12.8	0	0	0	0	12.8
E	5.51	0	0	0	0	5.51
SE	8.93	0	0	0	0	8.93
S	8.63	0	0	0	0	8.63
SW	21.73	0	0	0	0	21.73
W	12.2	0	0	0	0	12.2
NW	17.11	0	0	0	0	17.11
Summary	100	0	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
25
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

842b Station - June 2019

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

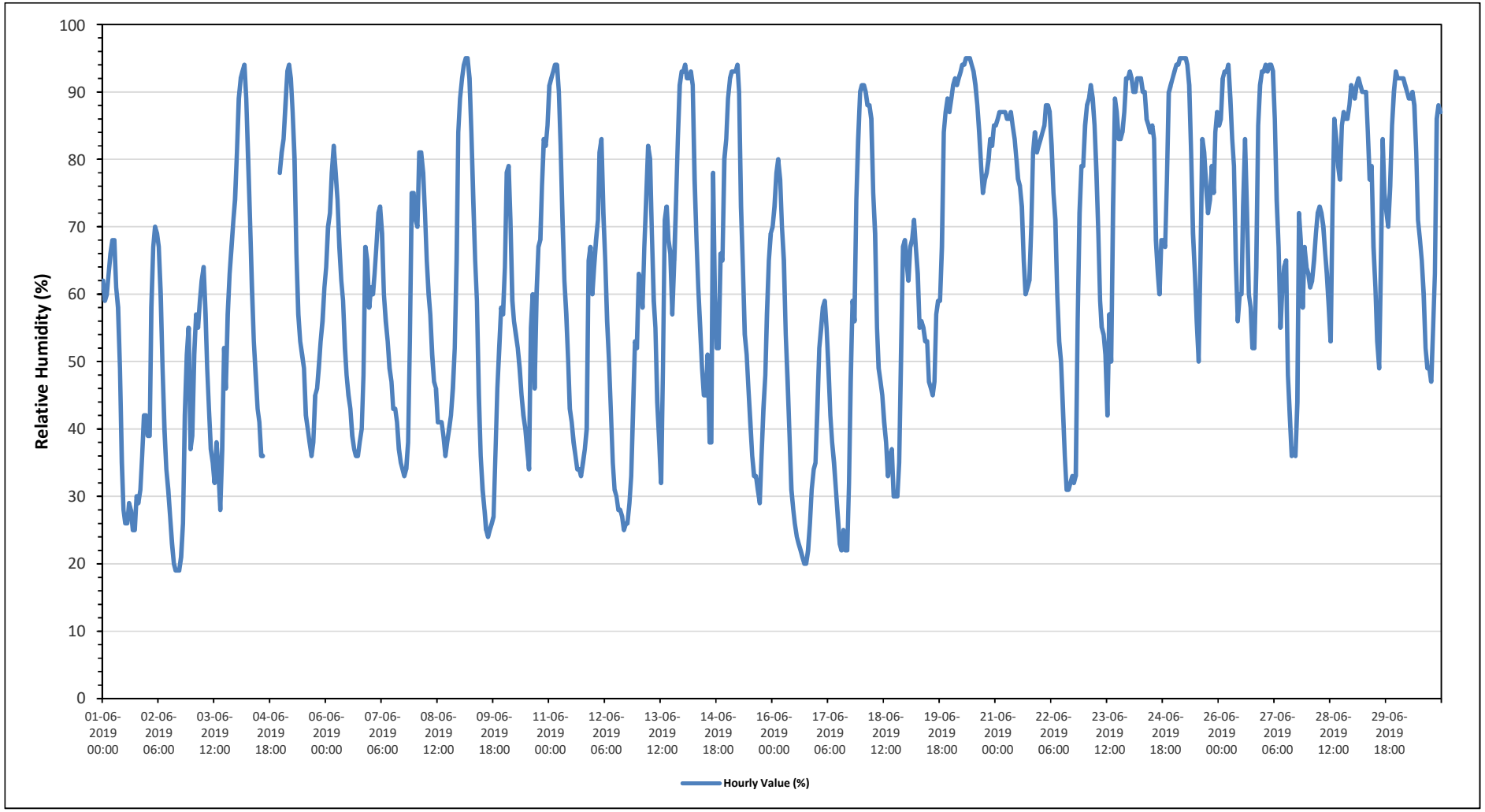
Maximum Hourly Value:	95	%	on June 9 at hour 3	Hours in Service:	720
Maximum Daily Value:	87.9	%	on June 20	Hours of Data:	712
Minimum Hourly Value:	19	%	on June 2 at hour 15	Hours of Missing Data:	8
Minimum Daily Value:	40.9	%	on June 2	Hours of Calibration:	0
Monthly Average:	63.1	%		Operational Uptime:	98.9

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	Average
Jun 1	62	59	60	63	66	68	68	61	58	49	35	28	26	26	29	28	25	25	30	29	31	36	42	42	25	68	44
Jun 2	39	39	58	67	70	69	67	60	49	40	34	31	27	23	20	**19**	**19**	**19**	21	26	42	51	55	37	**19**	70	**41**
Jun 3	39	51	57	55	59	62	64	57	49	43	37	35	32	38	34	28	37	52	46	57	63	67	71	74	28	74	50
Jun 4	81	89	92	93	94	89	80	71	61	53	48	43	41	36	36	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	78	36	94	-
Jun 5	81	83	88	93	94	92	87	80	66	57	53	51	49	42	40	38	36	38	45	46	49	53	56	61	36	94	62
Jun 6	64	70	72	78	82	78	74	67	62	59	52	48	45	43	39	37	36	36	38	40	48	67	65	58	36	82	57
Jun 7	61	60	63	67	72	73	69	60	56	53	49	47	43	43	41	37	35	34	33	34	38	53	75	75	33	75	53
Jun 8	71	70	81	81	78	72	65	60	57	51	47	46	41	41	41	39	36	38	40	42	46	52	65	84	36	84	56
Jun 9	89	92	94	**95**	**95**	92	84	74	65	59	45	36	31	28	25	24	25	26	27	37	46	52	58	57	24	**95**	57
Jun 10	64	78	79	71	59	56	54	52	49	45	42	40	37	34	55	60	46	60	67	68	76	83	82	85	34	85	60
Jun 11	91	92	93	94	94	90	82	71	62	57	50	43	41	38	36	34	34	33	35	37	40	65	67	60	33	94	60
Jun 12	64	68	71	81	83	72	65	56	50	43	35	31	30	28	28	27	25	26	26	29	33	43	53	52	25	83	47
Jun 13	63	62	58	67	74	82	80	69	59	55	44	38	32	49	71	73	68	66	57	65	74	83	91	93	32	93	66
Jun 14	93	94	92	92	93	91	77	68	61	55	49	45	45	51	38	38	78	60	52	52	66	65	80	83	38	94	67
Jun 15	89	92	93	93	93	94	90	73	64	54	51	46	41	36	33	33	31	29	36	43	48	57	65	69	29	94	61
Jun 16	70	73	78	80	77	70	65	54	47	39	31	28	26	24	23	22	21	20	20	22	26	31	34	35	20	80	42
Jun 17	43	52	55	58	59	55	49	42	38	35	31	27	23	22	25	22	22	32	47	59	56	74	83	90	22	90	46
Jun 18	91	91	90	88	88	86	75	69	55	49	47	45	41	38	33	36	37	30	30	30	35	51	67	68	30	91	57
Jun 19	65	62	67	68	71	67	63	55	56	55	53	53	47	46	45	47	57	59	59	67	84	87	89	87	45	89	63
Jun 20	89	91	92	91	92	93	94	94	**95**	**95**	**95**	94	93	91	88	84	79	75	77	78	80	83	82	85	75	**95**	**88**
Jun 21	85	86	87	87	87	87	86	86	87	85	83	80	77	76	73	65	60	61	62	70	81	84	81	82	60	87	79
Jun 22	83	84	85	88	88	87	82	75	71	60	53	50	43	36	31	31	32	33	32	33	56	72	79	79	31	88	61
Jun 23	85	88	89	91	89	85	78	69	59	55	54	51	42	57	50	73	89	87	83	83	84	87	92	92	42	92	76
Jun 24	93	92	90	90	92	92	92	90	90	86	85	84	85	83	68	63	60	68	68	67	77	90	91	92	60	93	83
Jun 25	93	94	94	**95**	**95**	**95**	**95**	94	91	81	69	63	56	50	65	83	81	76	72	74	79	75	84	87	50	**95**	81
Jun 26	85	86	92	93	93	94	89	83	79	65	56	60	60	73	83	72	60	58	52	52	64	85	91	93	52	94	76
Jun 27	93	94	93	94	94	93	86	74	67	55	61	64	65	48	42	36	37	36	44	72	68	58	67	64	36	94	67
Jun 28	63	61	62	65	69	72	73	72	70	66	63	58	53	73	86	83	79	77	85	87	86	86	88	91	53	91	74
Jun 29	90	89	91	92	91	90	90	90	84	77	79	67	61	53	49	66	83	75	72	70	76	85	90	93	49	93	79
Jun 30	92	92	92	92	91	90	89	89	90	88	81	71	68	65	60	52	49	49	47	55	63	86	88	87	47	92	76
Diurnal Maximum	93	94	94	95	95	95	95	94	95	95	95	94	93	91	88	84	89	87	85	87	86	90	92	93			
Daiurnal Average	75.7	77.8	80.3	82.1	82.7	81.2	77.1	70.5	64.9	58.8	53.7	50.1	46.7	46.4	46.2	46.6	47.5	47.5	48.4	52.6	59.1	67.6	73.5	74.4			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

842b Station - June 2019

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

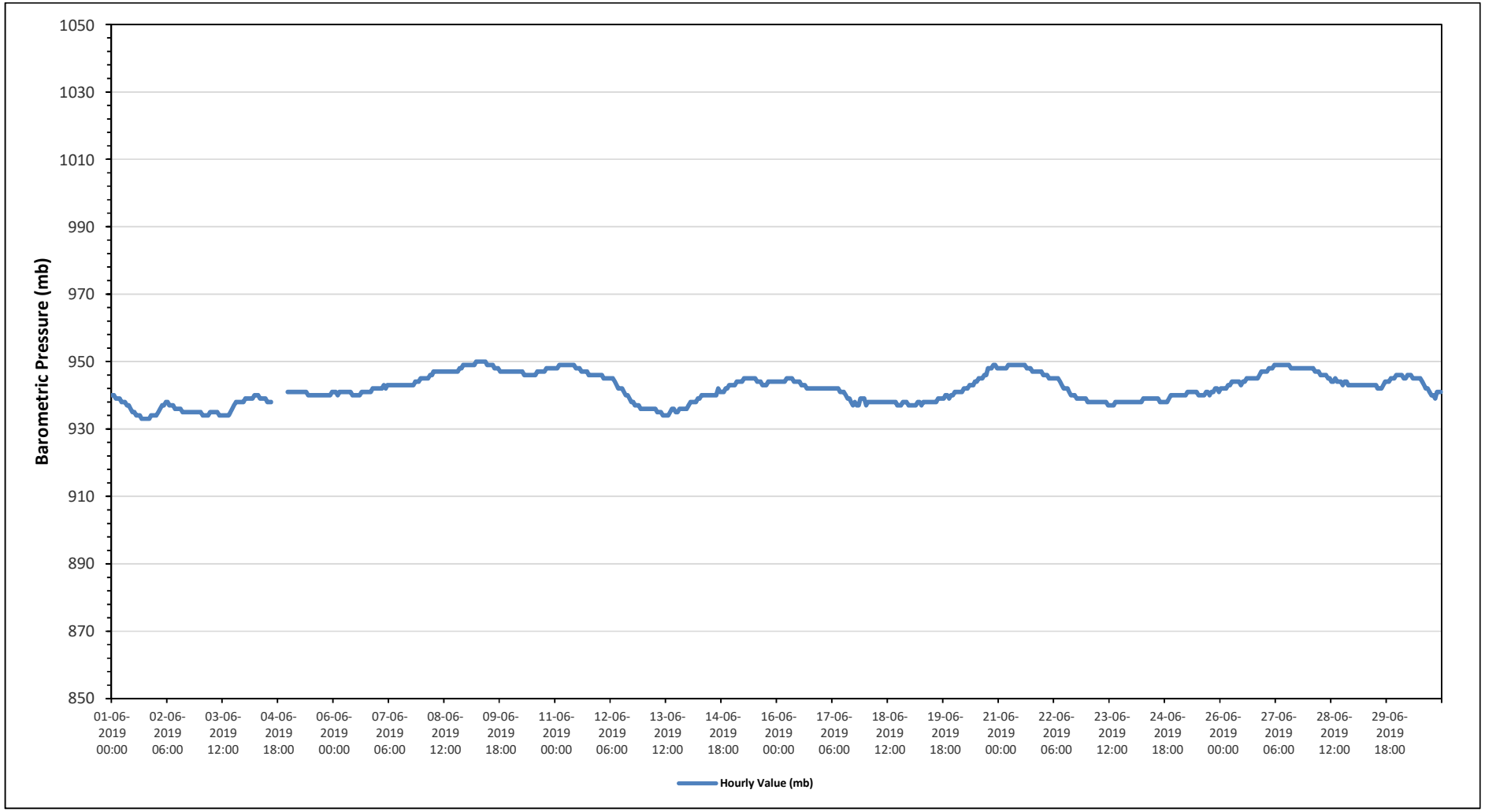
Maximum Hourly Value:	950	mb	on June 9 at hour 5	Hours in Service:	720
Maximum Daily Value:	949	mb	on June 9	Hours of Data:	712
Minimum Hourly Value:	933	mb	on June 1 at hour 16	Hours of Missing Data:	8
Minimum Daily Value:	935	mb	on June 3	Hours of Calibration:	0
Monthly Average:	942	mb		Operational Uptime:	98.9

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	Average
Jun 1	940	940	939	939	939	938	938	938	937	937	936	935	935	934	934	934	**933**	**933**	**933**	**933**	**933**	934	934	934	**933**	940	936
Jun 2	934	935	936	937	937	938	938	937	937	937	936	936	936	936	935	935	935	935	935	935	935	935	935	935	934	938	936
Jun 3	935	934	934	934	934	935	935	935	935	935	934	934	934	934	934	934	935	936	937	938	938	938	938	938	934	938	**935**
Jun 4	939	939	939	939	939	940	940	940	939	939	939	939	938	938	938	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	941	938	941	-
Jun 5	941	941	941	941	941	941	941	941	941	941	940	940	940	940	940	940	940	940	940	940	940	940	940	941	940	941	940
Jun 6	941	941	940	941	941	941	941	941	941	941	940	940	940	940	940	941	941	941	941	941	941	942	942	942	940	942	941
Jun 7	942	942	942	943	942	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	944	944	944	945	942	945	943
Jun 8	945	945	945	945	946	946	947	947	947	947	947	947	947	947	947	947	947	947	947	947	948	948	949	949	945	949	947
Jun 9	949	949	949	949	949	**950**	**950**	**950**	**950**	**950**	**950**	949	949	949	949	948	948	948	947	947	947	947	947	947	947	**950**	**949**
Jun 10	947	947	947	947	947	947	947	946	946	946	946	946	946	946	947	947	947	947	947	948	948	948	948	948	946	948	947
Jun 11	948	948	949	949	949	949	949	949	949	949	949	948	948	948	947	947	947	947	946	946	946	946	946	946	946	949	948
Jun 12	946	946	945	945	945	945	945	945	944	943	942	942	942	941	940	940	939	938	938	937	937	937	936	936	936	946	941
Jun 13	936	936	936	936	936	936	936	935	935	935	934	934	934	934	935	936	936	935	935	936	936	936	936	936	934	936	935
Jun 14	937	938	938	938	938	939	939	940	940	940	940	940	940	940	940	940	942	941	941	941	942	942	943	943	937	943	940
Jun 15	943	943	944	944	944	944	945	945	945	945	945	945	945	944	944	944	943	943	943	944	944	944	944	944	943	945	944
Jun 16	944	944	944	944	944	945	945	945	945	944	944	944	944	943	943	943	942	942	942	942	942	942	942	942	942	945	943
Jun 17	942	942	942	942	942	942	942	942	942	942	941	941	941	940	939	939	938	937	938	937	937	939	939	939	937	942	940
Jun 18	937	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	937	937	937	938	938	938	937	937	938	938
Jun 19	937	937	937	937	938	938	937	938	938	938	938	938	938	938	938	939	939	939	939	940	940	939	940	940	937	940	938
Jun 20	941	941	941	941	941	942	942	942	943	943	943	944	944	945	945	945	946	946	948	948	948	949	949	948	941	949	944
Jun 21	948	948	948	948	948	949	949	949	949	949	949	949	949	949	949	948	948	948	947	947	947	947	947	947	947	949	948
Jun 22	946	946	946	945	945	945	945	945	945	944	943	942	942	942	941	940	940	940	939	939	939	939	939	939	939	946	942
Jun 23	938	938	938	938	938	938	938	938	938	938	938	937	937	937	937	938	938	938	938	938	938	938	938	938	937	938	938
Jun 24	938	938	938	938	938	938	939	939	939	939	939	939	939	939	939	938	938	938	938	938	939	940	940	940	938	940	939
Jun 25	940	940	940	940	940	940	941	941	941	941	941	941	940	940	940	940	941	941	940	941	941	942	942	941	940	942	941
Jun 26	942	942	942	942	943	943	944	944	944	944	944	943	944	944	945	945	945	945	945	945	945	946	947	947	942	947	944
Jun 27	947	947	948	948	948	949	949	949	949	949	949	949	949	949	948	948	948	948	948	948	948	948	948	948	947	949	948
Jun 28	948	948	948	947	947	947	946	946	946	946	945	945	944	944	945	944	944	944	943	944	944	943	943	943	943	948	945
Jun 29	943	943	943	943	943	943	943	943	943	943	943	943	943	942	942	942	943	944	944	944	945	945	945	946	942	946	943
Jun 30	946	946	946	945	945	946	946	946	945	945	945	945	945	944	943	942	942	941	940	940	939	941	941	941	939	946	944
Diurnal Maximum	949	949	949	949	949	950	950	950	950	950	950	949	949	949	949	948	948	948	948	948	948	949	949	949			
Daiurnal Average	942	942	942	942	942	943	943	943	942	942	942	942	942	942	942	942	942	941	941	942	942	942	942	942			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

842b Station - June 2019

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

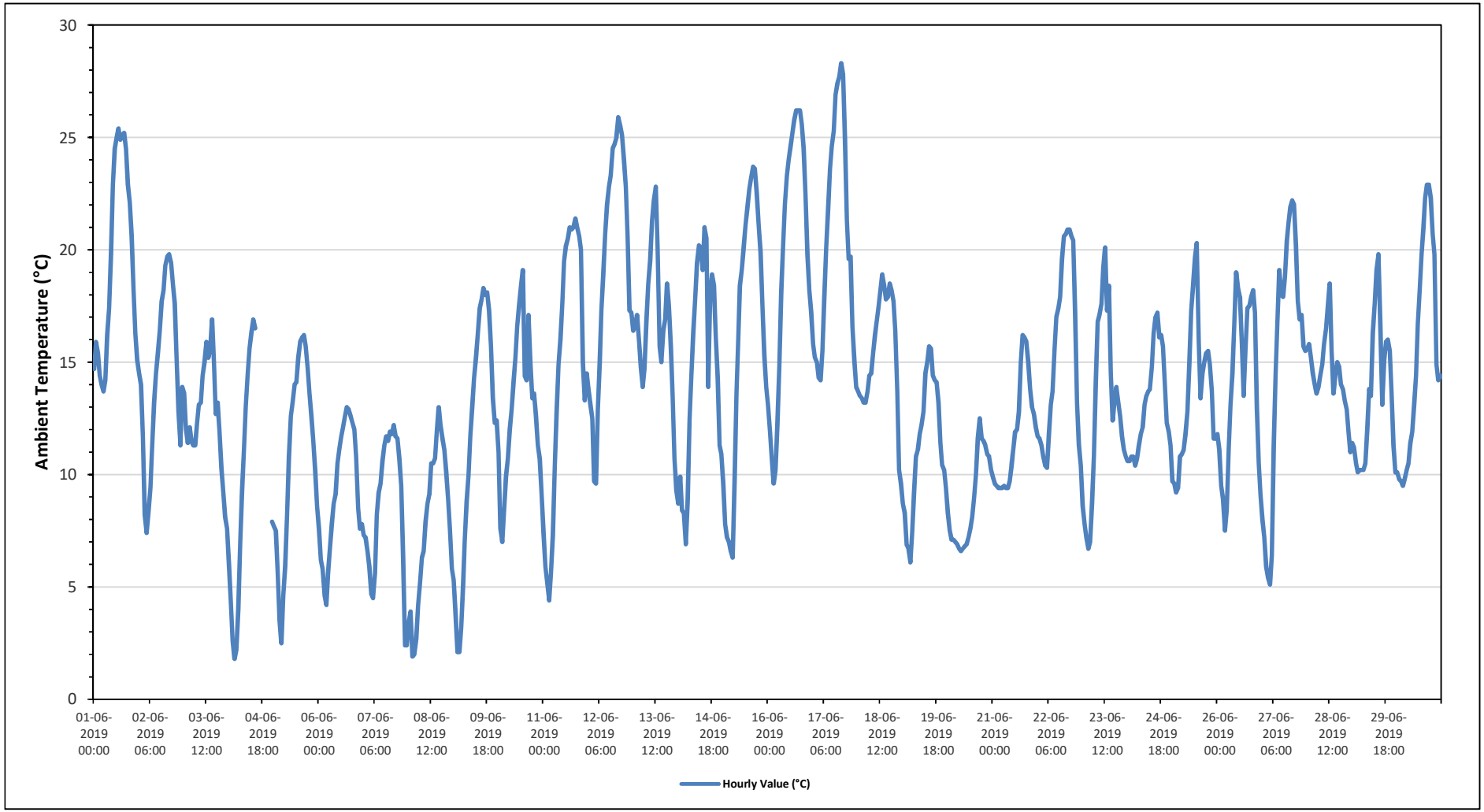
Maximum Hourly Value:	28.3	°C	on June 17 at hour 15	Hours in Service:	720
Maximum Daily Value:	20.5	°C	on June 17	Hours of Data:	712
Minimum Hourly Value:	1.8	°C	on June 4 at hour 3	Hours of Missing Data:	8
Minimum Daily Value:	7.7	°C	on June 8	Hours of Calibration:	0
Monthly Average:	13.8	°C		Operational Uptime:	98.9

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	Average
Jun 1	14.7	15.9	15.4	14.4	14.0	13.7	14.2	16.2	17.4	19.8	22.9	24.5	25.0	25.4	24.9	25.1	25.2	24.5	22.9	22.1	20.6	18.2	16.3	15.1	13.7	25.4	19.5
Jun 2	14.5	14.0	11.7	8.2	7.4	8.4	9.4	11.3	13.2	14.5	15.4	16.4	17.7	18.2	19.3	19.7	19.8	19.4	18.5	17.6	15.1	12.8	11.3	13.9	7.4	19.8	14.5
Jun 3	13.6	12.0	11.4	12.1	11.5	11.3	11.3	12.3	13.1	13.2	14.4	15.0	15.9	15.2	15.6	16.9	15.0	12.7	13.2	11.9	10.3	9.2	8.1	7.6	7.6	16.9	12.6
Jun 4	6.0	4.3	2.6	**1.8**	2.2	4.0	6.9	9.3	11.1	13.0	14.5	15.6	16.3	16.9	16.5	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	7.9	**1.8**	16.9	-
Jun 5	7.7	7.5	5.6	3.5	2.5	4.6	5.9	8.2	10.8	12.6	13.2	14.0	14.1	15.2	15.9	16.1	16.2	15.7	14.7	13.6	12.6	11.5	10.2	8.6	2.5	16.2	10.9
Jun 6	7.6	6.2	5.8	4.6	4.2	5.6	6.7	7.8	8.7	9.1	10.5	11.1	11.7	12.1	12.6	13.0	12.9	12.6	12.3	12.0	10.8	8.5	7.6	7.8	4.2	13.0	9.2
Jun 7	7.3	7.2	6.6	5.9	4.7	4.5	5.6	8.2	9.2	9.6	10.6	11.3	11.7	11.5	11.9	11.8	12.2	11.7	11.6	10.7	9.5	6.3	2.4	2.4	2.4	12.2	8.5
Jun 8	3.4	3.9	1.9	2.0	2.7	4.2	5.1	6.3	6.6	7.9	8.7	9.1	10.5	10.5	10.7	11.9	13.0	12.2	11.6	11.1	10.1	8.9	7.6	5.8	1.9	13.0	**7.7**
Jun 9	5.3	3.8	2.1	2.1	3.2	5.1	7.1	8.8	10.0	11.7	13.0	14.3	15.2	16.3	17.4	17.8	18.3	18.0	18.1	17.3	15.7	13.4	12.3	12.4	2.1	18.3	11.6
Jun 10	11.0	7.6	7.0	8.4	9.9	10.7	12.0	12.9	14.1	15.2	16.6	17.5	18.4	19.1	14.4	14.2	17.1	14.9	13.4	13.6	12.6	11.3	10.7	9.1	7.0	19.1	13.0
Jun 11	7.4	5.9	5.2	4.4	5.6	7.3	10.3	12.8	14.9	16.0	17.6	19.5	20.2	20.5	21.0	20.9	21.0	21.4	21.0	20.6	20.0	15.0	13.3	14.5	4.4	21.4	14.8
Jun 12	13.8	13.1	12.5	9.7	9.6	12.9	15.0	17.3	18.9	20.7	22.0	22.8	23.3	24.5	24.7	25.0	25.9	25.5	25.1	24.0	22.8	20.6	17.3	17.2	9.6	25.9	19.3
Jun 13	16.4	16.6	17.1	16.0	14.8	13.9	14.7	16.8	18.5	19.5	21.3	22.2	22.8	20.1	15.7	15.0	16.4	16.9	18.5	17.5	15.7	13.4	10.7	9.3	9.3	22.8	16.7
Jun 14	8.7	9.9	8.4	8.3	6.9	8.9	12.5	14.4	16.3	17.8	19.4	20.2	20.1	19.1	21.0	20.5	13.9	18.1	18.9	18.4	16.1	14.3	11.3	10.9	6.9	21.0	14.8
Jun 15	9.6	7.8	7.2	7.0	6.6	6.3	9.7	13.6	16.0	18.4	19.1	20.1	21.1	21.9	22.7	23.2	23.7	23.6	22.5	21.1	19.9	17.5	15.3	13.9	6.3	23.7	16.2
Jun 16	13.1	11.9	10.7	9.6	10.2	12.3	14.8	18.1	20.2	22.0	23.3	24.0	24.6	25.2	25.8	26.2	26.2	26.2	25.6	24.5	22.4	19.8	18.2	17.2	9.6	26.2	19.7
Jun 17	15.8	15.2	15.0	14.3	14.2	15.5	17.9	20.1	21.8	23.6	24.6	25.3	26.9	27.4	27.7	**28.3**	27.8	24.9	21.3	19.6	19.7	16.6	15.1	13.9	13.9	**28.3**	**20.5**
Jun 18	13.7	13.5	13.4	13.2	13.2	13.7	14.4	14.5	15.4	16.2	16.8	17.4	18.2	18.9	18.4	17.8	17.9	18.5	18.2	17.7	16.4	13.7	10.2	9.6	9.6	18.9	15.5
Jun 19	8.7	8.3	6.9	6.7	6.1	7.4	9.2	10.8	11.1	11.8	12.2	12.8	14.5	15.0	15.7	15.6	14.4	14.2	14.1	13.2	11.4	10.4	10.2	9.4	6.1	15.7	11.3
Jun 20	8.3	7.5	7.1	7.1	7.0	6.9	6.7	6.6	6.7	6.8	6.9	7.2	7.6	8.1	9.0	10.0	11.6	12.5	11.6	11.5	11.3	10.9	10.8	10.2	6.6	12.5	8.7
Jun 21	9.9	9.6	9.5	9.4	9.4	9.4	9.5	9.4	9.4	9.7	10.4	11.1	11.9	12.0	12.8	15.0	16.2	16.1	15.9	15.0	13.8	13.0	12.7	12.1	9.4	16.2	11.8
Jun 22	11.7	11.6	11.3	10.8	10.4	10.3	11.8	13.1	13.7	15.6	17.0	17.4	17.9	19.6	20.6	20.7	20.9	20.9	20.6	20.4	17.2	13.2	11.3	10.4	10.3	20.9	15.4
Jun 23	8.6	7.8	7.2	6.7	7.0	8.7	10.8	14.1	16.8	17.1	17.6	19.2	20.1	17.3	18.4	14.5	12.4	13.3	13.9	13.2	12.6	11.7	11.1	10.8	6.7	20.1	13.0
Jun 24	10.6	10.6	10.8	10.8	10.4	10.7	11.3	11.8	12.1	13.1	13.5	13.7	13.8	14.8	16.3	17.0	17.2	16.1	16.2	15.7	13.9	12.3	11.9	11.3	10.4	17.2	13.2
Jun 25	9.7	9.6	9.2	9.4	10.8	10.9	11.1	11.8	12.8	14.9	17.3	18.4	19.7	20.3	15.9	13.4	14.5	15.0	15.4	15.5	14.9	13.7	11.6	11.6	9.2	20.3	13.6
Jun 26	11.8	11.1	9.5	8.9	7.5	8.4	11.2	13.1	14.5	16.7	19.0	18.3	17.9	15.8	13.5	15.7	17.4	17.5	17.9	18.2	17.2	13.0	10.5	9.1	7.5	19.0	13.9
Jun 27	8.0	7.2	5.9	5.4	5.1	6.4	11.3	14.5	16.8	19.1	18.0	17.9	18.8	20.4	21.2	21.9	22.2	22.0	20.2	17.7	16.9	17.1	15.7	15.5	5.1	22.2	15.2
Jun 28	15.6	15.8	15.2	14.5	14.0	13.6	13.9	14.4	14.9	15.8	16.5	17.5	18.5	15.5	13.6	14.4	15.0	14.8	14.0	13.8	13.3	12.9	11.9	11.0	11.0	18.5	14.6
Jun 29	11.4	11.2	10.5	10.1	10.2	10.2	10.2	10.5	12.0	13.8	13.5	16.3	17.6	19.1	19.8	16.6	13.1	15.1	15.9	16.0	15.5	13.6	11.3	10.1	10.1	19.8	13.5
Jun 30	10.1	9.8	9.7	9.5	9.8	10.2	10.5	11.4	11.9	13.1	14.4	16.7	18.3	19.8	21.0	22.3	22.9	22.9	22.3	20.7	19.8	14.9	14.2	14.4	9.5	22.9	15.4
Diurnal Maximum	16.4	16.6	17.1	16.0	14.8	15.5	17.9	20.1	21.8	23.6	24.6	25.3	26.9	27.4	27.7	28.3	27.8	26.2	25.6	24.5	22.8	20.6	18.2	17.2			
Daiurnal Average	10.5	9.9	9.1	8.5	8.4	9.2	10.7	12.3	13.6	14.9	16.0	16.9	17.7	17.9	17.8	17.9	17.9	17.8	17.4	16.7	15.5	13.4	11.8	11.1			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

842b Station - June 2019

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

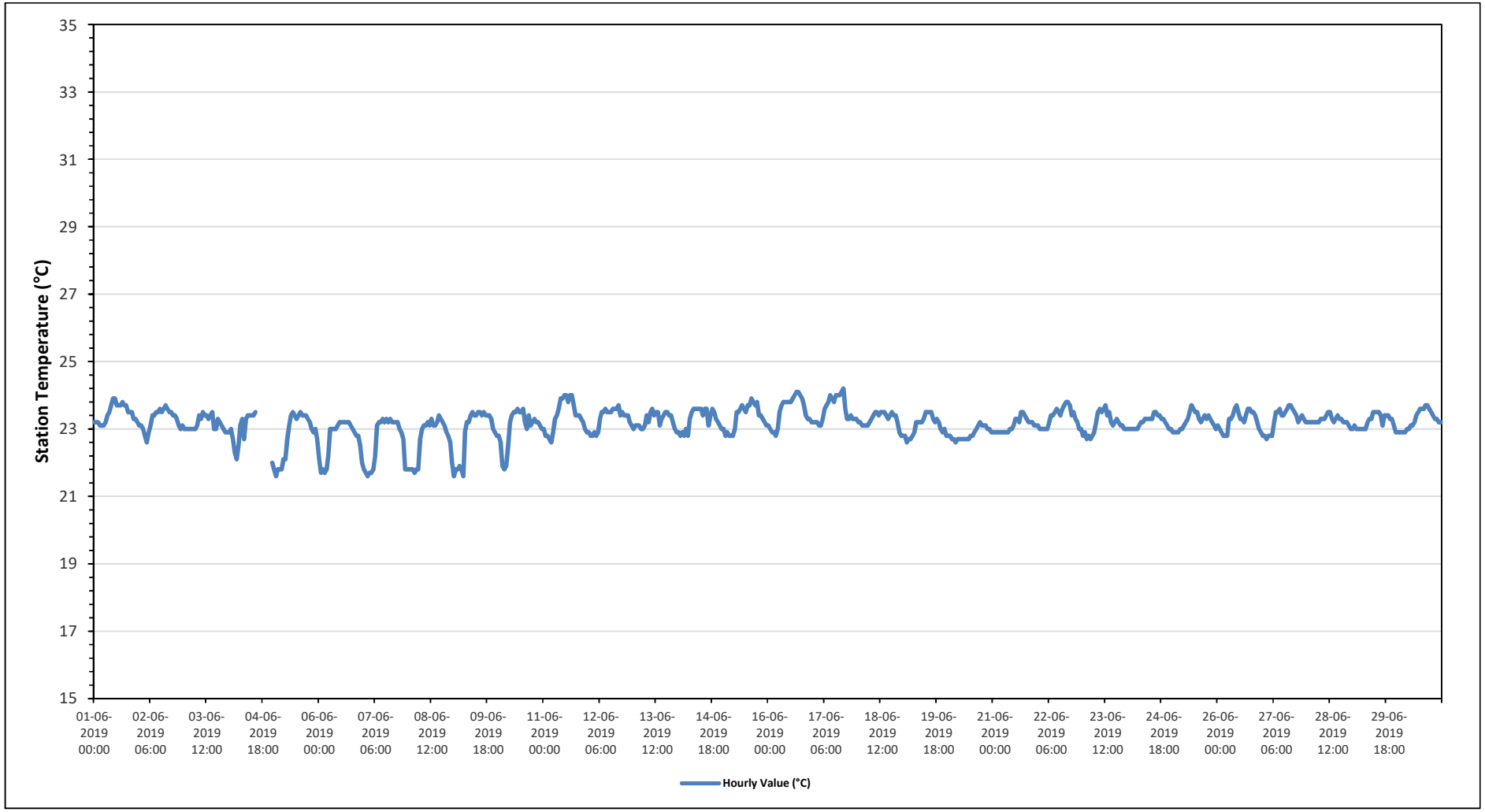
Maximum Hourly Value:	24.2	°C	on June 17 at hour 16	Hours in Service:	720
Maximum Daily Value:	23.6	°C	on June 17	Hours of Data:	712
Minimum Hourly Value:	21.6	°C	on June 5 at hour 1	Hours of Missing Data:	8
Minimum Daily Value:	22.6	°C	on June 7	Hours of Calibration:	0
Monthly Average:	23.2	°C		Operational Uptime:	98.9

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	Average
Jun 1	23.2	23.2	23.2	23.1	23.1	23.1	23.2	23.4	23.5	23.7	23.9	23.9	23.7	23.7	23.7	23.8	23.7	23.7	23.5	23.5	23.5	23.3	23.3	23.2	23.1	23.9	23.5
Jun 2	23.1	23.1	23.0	22.8	22.6	22.9	23.1	23.4	23.4	23.5	23.5	23.6	23.5	23.6	23.7	23.6	23.5	23.5	23.4	23.4	23.3	23.1	23.0	23.1	22.6	23.7	23.3
Jun 3	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.4	23.3	23.5	23.4	23.4	23.3	23.4	23.5	23.0	23.0	23.3	23.2	23.1	23.0	22.9	22.9	22.9	23.5	23.2
Jun 4	22.9	23.0	22.7	22.3	22.1	22.5	23.1	23.3	22.7	23.3	23.4	23.4	23.4	23.4	23.5	P	P	P	P	P	P	P	P	22.0	22.0	23.5	-
Jun 5	21.8	**21.6**	21.8	21.8	21.8	22.1	22.1	22.7	23.1	23.4	23.5	23.4	23.3	23.4	23.5	23.4	23.4	23.4	23.3	23.2	23.0	22.9	23.0	22.7	**21.6**	23.5	22.8
Jun 6	22.1	21.7	21.8	21.7	21.8	22.2	23.0	23.0	23.0	23.0	23.1	23.2	23.2	23.2	23.2	23.2	23.2	23.1	23.0	22.9	22.8	22.8	22.5	22.0	21.7	23.2	22.7
Jun 7	21.8	21.7	**21.6**	21.7	21.7	21.8	22.2	23.1	23.2	23.2	23.3	23.2	23.3	23.2	23.3	23.2	23.2	23.2	23.2	23.0	22.9	22.7	21.8	21.8	**21.6**	23.3	**22.6**
Jun 8	21.8	21.8	21.8	21.7	21.8	21.8	22.7	23.0	23.1	23.1	23.2	23.1	23.3	23.1	23.1	23.2	23.4	23.3	23.2	23.1	22.9	22.8	22.6	22.0	21.7	23.4	22.7
Jun 9	**21.6**	21.8	21.8	21.9	21.8	**21.6**	22.9	23.2	23.2	23.4	23.5	23.4	23.4	23.5	23.5	23.4	23.5	23.4	23.4	23.4	23.3	23.0	22.9	22.8	**21.6**	23.5	22.9
Jun 10	22.8	22.6	21.9	21.8	21.9	22.5	23.2	23.4	23.5	23.5	23.6	23.5	23.5	23.6	23.2	23.0	23.4	23.1	23.2	23.3	23.2	23.2	23.1	23.0	21.8	23.6	23.0
Jun 11	23.0	22.8	22.8	22.7	22.6	22.9	23.3	23.4	23.6	23.9	23.9	24.0	24.0	23.8	24.0	24.0	23.7	23.4	23.4	23.4	23.3	23.2	23.0	22.9	22.6	24.0	23.4
Jun 12	22.9	22.8	22.8	22.9	22.8	22.9	23.3	23.5	23.5	23.6	23.5	23.5	23.5	23.6	23.6	23.6	23.7	23.4	23.5	23.4	23.4	23.4	23.2	23.1	22.8	23.7	23.3
Jun 13	23.0	23.1	23.1	23.1	23.0	23.0	23.1	23.4	23.2	23.5	23.6	23.4	23.5	23.5	23.1	23.3	23.4	23.5	23.5	23.4	23.4	23.2	23.0	22.9	22.9	23.6	23.3
Jun 14	22.9	22.8	22.9	22.8	23.0	22.8	23.3	23.5	23.6	23.6	23.6	23.6	23.6	23.4	23.6	23.6	23.1	23.4	23.6	23.5	23.3	23.2	23.1	23.0	22.8	23.6	23.3
Jun 15	23.0	22.8	22.9	22.8	22.8	22.8	23.0	23.5	23.5	23.6	23.7	23.6	23.5	23.7	23.7	23.9	23.8	23.7	23.8	23.4	23.4	23.3	23.2	23.1	22.8	23.9	23.4
Jun 16	23.1	23.0	22.9	22.9	22.8	23.0	23.5	23.7	23.8	23.8	23.8	23.8	23.8	23.9	24.0	24.1	24.1	24.0	23.9	23.7	23.4	23.3	23.3	23.2	22.8	24.1	23.5
Jun 17	23.2	23.2	23.2	23.1	23.1	23.3	23.6	23.7	23.8	24.0	23.9	23.8	24.0	24.0	24.0	24.1	**24.2**	23.6	23.3	23.3	23.4	23.3	23.3	23.3	23.1	**24.2**	**23.6**
Jun 18	23.2	23.2	23.1	23.1	23.1	23.1	23.2	23.3	23.4	23.5	23.5	23.4	23.5	23.5	23.5	23.4	23.3	23.4	23.5	23.4	23.4	23.2	22.9	22.8	22.8	23.5	23.3
Jun 19	22.8	22.8	22.6	22.7	22.7	22.8	22.9	23.2	23.2	23.2	23.2	23.3	23.5	23.5	23.5	23.5	23.3	23.2	23.3	23.2	23.0	22.9	23.0	22.8	22.6	23.5	23.1
Jun 20	22.8	22.8	22.7	22.7	22.6	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.8	22.8	22.9	23.0	23.1	23.2	23.1	23.1	23.1	23.0	23.0	22.9	22.6	23.2	22.9
Jun 21	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	23.0	23.0	23.1	23.3	23.3	23.2	23.5	23.5	23.4	23.3	23.2	23.2	23.2	23.1	23.1	22.9	23.5	23.1
Jun 22	23.1	23.0	23.0	23.0	23.0	23.0	23.2	23.4	23.4	23.5	23.6	23.5	23.4	23.6	23.7	23.8	23.8	23.7	23.4	23.5	23.3	23.2	23.0	23.0	23.0	23.8	23.3
Jun 23	22.8	22.9	22.7	22.8	22.7	22.8	22.9	23.2	23.5	23.6	23.5	23.6	23.7	23.4	23.5	23.2	23.1	23.2	23.3	23.2	23.1	23.1	23.0	23.0	22.7	23.7	23.2
Jun 24	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.2	23.2	23.3	23.3	23.3	23.3	23.3	23.5	23.5	23.4	23.4	23.3	23.3	23.2	23.1	23.0	23.0	23.0	23.5	23.2
Jun 25	22.9	22.9	22.9	22.9	23.0	23.0	23.1	23.2	23.3	23.5	23.7	23.6	23.5	23.5	23.3	23.2	23.3	23.4	23.3	23.4	23.3	23.2	23.1	23.0	22.9	23.7	23.2
Jun 26	23.1	23.0	22.9	22.8	22.8	22.8	23.3	23.3	23.4	23.6	23.7	23.5	23.3	23.3	23.2	23.4	23.6	23.6	23.5	23.5	23.4	23.2	23.0	22.9	22.8	23.7	23.3
Jun 27	22.8	22.8	22.7	22.8	22.8	22.8	23.2	23.5	23.5	23.6	23.4	23.4	23.5	23.6	23.7	23.7	23.6	23.5	23.4	23.2	23.3	23.4	23.3	23.2	22.7	23.7	23.3
Jun 28	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.3	23.3	23.3	23.4	23.5	23.5	23.3	23.2	23.3	23.4	23.3	23.3	23.2	23.2	23.2	23.1	23.0	23.0	23.5	23.3
Jun 29	23.0	23.1	23.0	23.0	23.0	23.0	23.0	23.0	23.2	23.3	23.3	23.5	23.5	23.5	23.5	23.4	23.1	23.4	23.4	23.4	23.3	23.3	23.1	22.9	22.9	23.5	23.2
Jun 30	22.9	22.9	22.9	22.9	22.9	23.0	23.0	23.1	23.1	23.2	23.4	23.5	23.6	23.6	23.6	23.7	23.7	23.6	23.5	23.4	23.3	23.3	23.2	23.2	22.9	23.7	23.3
Diurnal Maximum	23.2	23.2	23.2	23.2	23.2	23.3	23.6	23.7	23.8	24.0	23.9	24.0	24.0	24.0	24.0	24.1	24.2	24.0	23.9	23.7	23.5	23.4	23.3	23.3			
Daiurnal Average	22.8	22.8	22.7	22.7	22.6	22.7	23.0	23.3	23.3	23.4	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.4	23.4	23.3	23.2	23.1	23.0	22.9			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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



PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

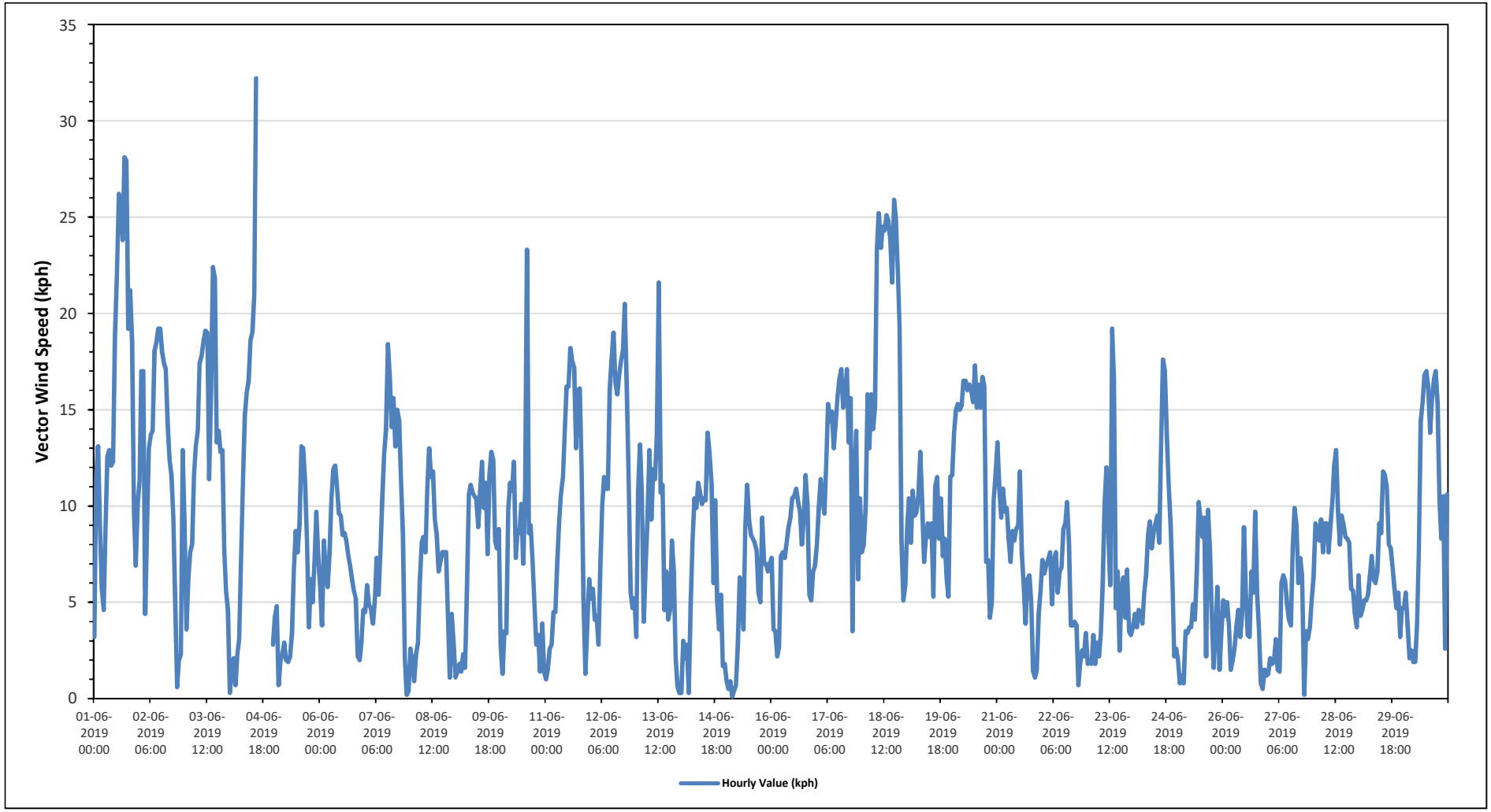
Maximum Hourly Value:	32.2	kph	on June 4 at hour 14	Hours in Service:	720
Maximum Daily Value:	17.8	kph	on June 18	Hours of Data:	712
Minimum Hourly Value:	0.1	kph	on June 15 at hour 3	Hours of Missing Data:	8
Minimum Daily Value:	4.0	kph	on June 26	Hours of Calibration:	0
Monthly Average:	3.3	kph		Operational Uptime:	98.9

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	Average
Jun 1	3.2	11.5	13.1	9	5.7	4.6	8.8	12.6	12.9	12.1	12.3	18.8	21.9	26.2	25.4	23.8	28.1	27.9	19.2	21.2	18.5	9.6	6.9	10.1	3.2	28.1	15.1
Jun 2	11.3	17	17	4.4	9	13	13.7	13.9	18.1	18.5	19.2	19.2	18	17.4	17.1	14.3	12.4	11.6	9.4	5	0.6	2	2.3	12.9	0.6	19.2	12.4
Jun 3	8.9	3.6	6.3	7.6	8	11.6	13.1	13.9	17.4	17.8	18.6	19.1	19	11.4	16	22.4	21.8	13.3	13.9	12.8	12.9	7.7	5.6	4.6	3.6	22.4	12.8
Jun 4	0.3	1.5	2.1	0.7	2.3	3.1	7.5	11.2	14.7	15.9	16.5	18.6	19	21	**32.2**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	2.8	0.3	**32.2**	-
Jun 5	4.2	4.8	0.7	2	2.3	2.9	2	1.9	2.2	3.4	6.7	8.7	7.6	9.1	13.1	13	11.2	8.2	3.7	6.2	5	7.2	9.7	7.4	0.7	13.1	6.0
Jun 6	5.8	3.8	8.2	6.5	5.8	7.6	10.4	11.9	12.1	11	9.6	9.5	8.5	8.6	8.2	7.4	6.9	6.2	5.6	5.2	2.2	2	2.9	4.6	2.0	12.1	7.1
Jun 7	4.5	5.9	4.9	4.7	3.9	5.1	7.3	5.4	7.5	10.4	12.7	14	18.4	16.6	14.1	15.6	13.1	15	14.4	11.3	8.5	2.1	0.2	0.4	0.2	18.4	9.0
Jun 8	2.6	1.9	0.9	2.3	2.9	6.1	8.1	8.4	7.6	10.9	13	11.5	11.8	9.3	8.5	6.6	7.1	7.6	7.6	7.6	4.2	1.1	4.4	2.8	0.9	13.0	6.5
Jun 9	1.1	1.4	1.8	1.4	2.3	1.6	5.8	10.6	11.1	10.7	10.5	10.4	8.9	10.7	12.3	9.9	11.2	7.5	11.6	12.8	12.4	8.2	7.8	8.8	1.1	12.8	8.0
Jun 10	2.7	1.3	3.5	3.4	9.8	11.2	10.8	12.3	7.3	8.7	8.6	10.1	7	10.9	23.3	8.6	9	7	4.9	2.8	3.3	1.4	3.9	1.4	1.3	23.3	7.2
Jun 11	1	1.5	2.6	2.8	4.5	4.5	7.1	9.2	10.6	11.5	13.8	16.2	16.2	18.2	17.5	17.2	13	16	16.1	11.9	5.2	1.3	3.9	6.2	1.0	18.2	9.5
Jun 12	5.2	5.7	4.1	4.3	2.8	7	10.1	11.5	10.9	10.9	16	17.7	19	16.4	15.8	16.8	17.5	18.1	20.5	15.9	11.1	5.5	4.7	5.2	2.8	20.5	11.4
Jun 13	3.2	10.8	13.2	10.6	4	6.9	9.4	12.9	9.3	11.9	11.4	13.7	21.6	10.7	11.1	4.6	6.6	4.1	4.6	8.2	6.6	2.1	0.6	0.3	0.3	21.6	8.3
Jun 14	0.3	3	2.1	2.8	0.3	4.9	8.2	10.4	9.9	11.2	10.7	10.1	10.4	10.3	13.8	12.8	11.1	6	10.3	5.1	3.6	5.4	1.7	1.8	0.3	13.8	6.9
Jun 15	0.9	0.5	0.9	**0.1**	0.4	0.7	2.8	6.3	5.1	3.6	8.9	11.1	9.3	8.5	8.3	8.1	7.7	5.5	5	9.4	7	7	6.6	7	**0.1**	11.1	5.4
Jun 16	7.3	3.6	3.5	2.2	2.7	7.4	7.6	7.3	8.1	8.9	9.4	10.4	10.5	10.9	10.2	9.7	8	9.4	11.6	10.1	5.4	5.1	6.6	6.9	2.2	11.6	7.6
Jun 17	8	9.9	11.4	10.3	9.6	12.2	15.3	14.4	14.9	13	14.2	15.7	16.6	17.1	15.1	15.7	17.1	13.3	15.6	3.5	11.5	13.9	6.2	10.4	3.5	17.1	12.7
Jun 18	7.6	8	10	15.8	13	15.8	14	15.2	23.4	25.2	23.4	24.5	24.3	25.1	24.8	23.8	21.6	25.9	25	22.2	19.2	8.2	5.1	5.9	5.1	25.9	**17.8**
Jun 19	8.9	10.4	8.1	10.8	9.5	9.7	10.5	12.8	10.1	7.1	8.4	9.1	8.4	9.1	5.3	11	11.5	8.3	10.4	7.4	8.3	6.3	5.3	11.5	5.3	12.8	9.1
Jun 20	11.6	13.8	15	15.3	15	15.2	16.5	16.5	16	16.3	16	15.4	17.3	15.1	16.3	15.1	16.7	16.2	7.1	7.2	4.2	5	10.3	11.6	4.2	17.3	13.5
Jun 21	13.3	10.9	9.4	10.9	9.7	9.9	8.3	7.1	8.7	8.2	8.8	9	11.8	7.6	5.9	3.9	6.2	6.4	5	1.4	1.1	1.5	4.4	5.6	1.1	13.3	7.3
Jun 22	7.2	6.5	6.9	7.2	7.6	4.9	7.2	7.6	5.5	6.6	6.8	8.8	9.1	10.2	8.1	3.8	3.8	4	3.8	0.7	1.8	2.5	2.2	3.4	0.7	10.2	5.7
Jun 23	1.8	2	1.8	3.3	1.8	2.9	2.2	3.4	6	10.2	12	8.4	5.9	19.2	16.6	4.7	6.6	2.5	5.8	6.3	4.2	6.7	3.5	3.3	1.8	19.2	5.9
Jun 24	3.7	4.4	3.7	4.6	4.3	3.9	5.5	6.4	8.5	9.2	7.8	8.7	9.1	9.5	8.1	13.2	17.6	17	13.7	11.1	9.1	6.1	2.2	2.6	2.2	17.6	7.9
Jun 25	2	0.8	1.2	0.8	3.5	3.4	3.7	3.7	4.9	4.1	6.6	10.2	9.3	8.4	9.4	2.2	9.8	7.7	4.3	1.6	3.8	5.8	1.5	3.4	0.8	10.2	4.7
Jun 26	5.1	4.3	5	3.8	1.5	2	2.6	3.7	4.6	3.2	4.3	8.9	5.6	3.3	3.2	6.6	5.5	9.7	5.5	3.6	0.8	0.5	1.5	1.2	0.5	9.7	**4.0**
Jun 27	1.3	2.1	1.8	1.9	3.1	1.5	1.4	6	6.4	6.1	4.9	4.1	3.8	7.9	9.9	9	6	7.3	6.4	0.2	3.5	3.1	3.7	5.1	0.2	9.9	4.4
Jun 28	6.3	9.1	8.9	8.2	9.3	7.6	9.1	9.1	7.6	9	10.2	12.1	12.9	9.7	8	9.5	9	8.4	8.3	8.1	5.7	5.6	4.4	3.7	3.7	12.9	8.3
Jun 29	6.4	4.3	4.6	5.1	5.1	5.4	6.4	7.4	6.2	6	6.6	9.1	8.6	11.8	11.6	11	8	7.8	6.8	5.7	4.7	5.5	3.2	4.7	3.2	11.8	6.8
Jun 30	4.7	5.5	3.8	2.1	2.5	1.9	1.9	3.9	7.7	14.4	15.4	16.8	17	16.1	13.8	15.5	16.6	17	15.3	10.2	8.3	10.5	2.6	10.6	1.9	17.0	9.8
Diurnal Maximum	13	17	17	16	15	16	17	17	23	25	23	25	24	26	32	24	28	28	25	22	19	14	10	13			
Daiurnal Average	5.0	5.7	5.9	5.5	5.4	6.5	7.9	9.2	9.8	10.5	11.4	12.7	12.9	12.9	13.4	11.6	11.7	10.9	10.0	8.1	6.6	5.1	4.3	5.5			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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.

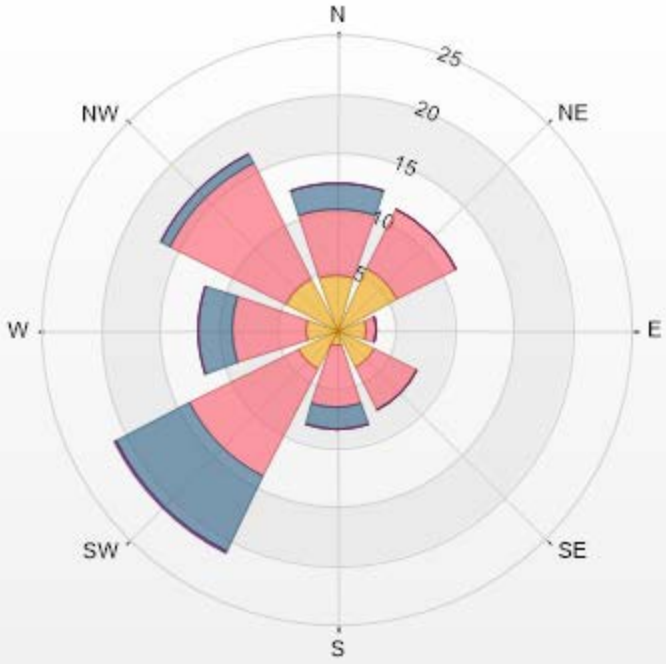
Timeseries Chart of Hourly Average for VWS - 842b Station



Wind: PRAMP 842b Poll.: PRAMP 842b-WDS[KPH] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 7.04% Valid Data: 99.44% Calm Avg: 1.01 [KPH]

Direction	1.8-6	6-15	15-29	29-39	>39.0	Total
N	4.65	5.63	2.25	0	0	12.53
NE	5.77	5.63	0	0	0	11.4
E	2.54	0.85	0	0	0	3.39
SE	3.52	4.08	0	0	0	7.6
S	1.41	5.21	1.83	0	0	8.45
SW	3.66	10.28	7.04	0.14	0	21.12
W	2.68	6.2	2.96	0	0	11.84
NW	4.79	11.13	0.7	0	0	16.62
Summary	29.02	49.01	14.78	0.14	0	92.95

PRAMP 842b Poll.: PRAMP 842b-WDS[KPH] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 7.04% Calm Poll Avg: 1.01[KPH]



%	Icon	Classes (KPH)									
29		1.8-6	49		6-15	15		15-29	0		29-39	0		>39.0

PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

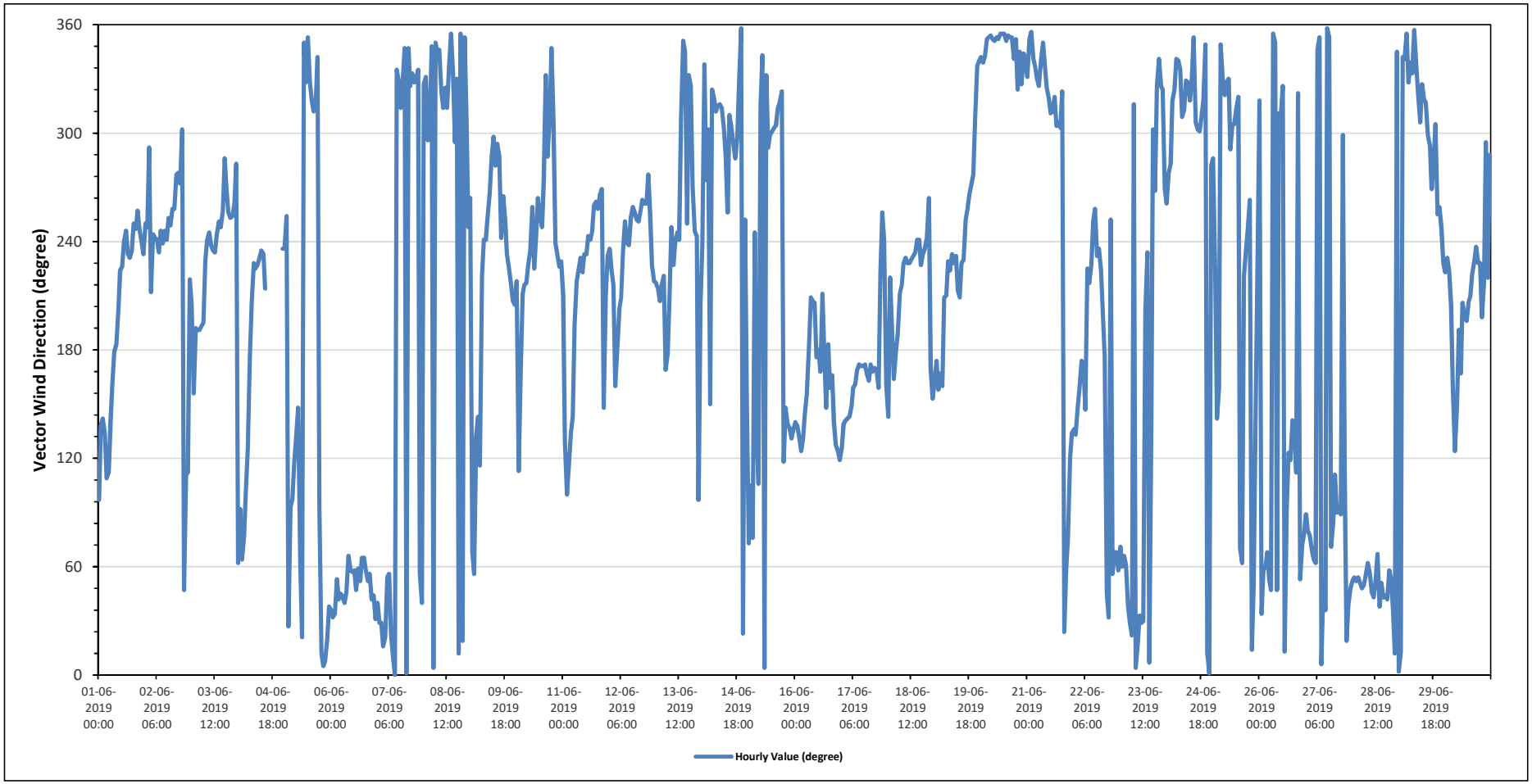
Monthly Average:	260 (WSW) degree	Hours in Service:	720
		Hours of Data:	712
		Hours of Missing Data:	8
		Hours of Calibration:	0
		Operational Uptime:	98.9

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
Jun 1	E	SE	SE	SE	ESE	ESE	SE	SSE	S	S	SSW	SW	SW	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	SW	219	SW
Jun 2	WSW	WSW	WNW	SSW	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	WNW	NE	ESE	ESE	SW	251	WSW
Jun 3	SSW	SSE	S	S	S	S	SSW	SW	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	WNW	W	WSW	WSW	WSW	W	W	239	WSW
Jun 4	ENE	E	ENE	ENE	ESE	SE	S	SSW	SW	SW	SW	SW	SW	SW	SSW	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	SW	-	SW
Jun 5	SW	WSW	NNE	E	E	ESE	SE	SE	ENE	NNE	N	NNW	N	NNW	NW	NW	NW	NNW	E	NNE	N	N	NNE	NE	347	NNW
Jun 6	NE	NNE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	NE	ENE	NE	ENE	ENE	ENE	NE	NE	NE	NE	NNE	50	NE
Jun 7	NE	NNE	NNE	NNE	NNE	NE	NE	NNE	NNE	N	NNW	NNW	NW	NW	NNW	N	NNW	NW	NNW	NNW	NNW	NNW	NE	NE	347	NNW
Jun 8	NW	NNW	WNW	WNW	NNW	N	N	NNW	NNW	NW	NW	NW	NW	NNW	N	NNW	WNW	NNW	NNE	N	NNE	N	NW	WSW	334	NNW
Jun 9	W	ENE	NE	SE	SE	ESE	SW	WSW	WSW	WSW	W	WNW	WNW	W	WNW	WNW	WSW	W	WSW	SW	SW	SW	SSW	SSW	251	WSW
Jun 10	SW	ESE	SSE	SSW	SW	SW	SW	SW	WSW	SW	WSW	W	WSW	WSW	W	NNW	WNW	NW	NNW	WNW	WSW	SW	SW	SW	252	WSW
Jun 11	SSW	SE	E	ESE	SE	SE	SSW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	W	WSW	W	W	SE	SSW	SW	236	SW
Jun 12	SW	SW	SW	SSE	S	SSW	SSW	SW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	WSW	SW	SW	247	WSW
Jun 13	SW	SSW	SSW	SW	SW	SSE	S	SSW	WSW	SW	WSW	WSW	WSW	NW	N	NNW	WSW	NNW	NW	W	WSW	WSW	E	SSW	240	WSW
Jun 14	SW	NNW	W	WNW	SSE	NW	NW	NW	NW	NW	NW	WNW	WNW	WSW	NW	WNW	WNW	WNW	WNW	NNW	N	NNE	WSW	SSE	306	NW
Jun 15	ENE	ESE	ENE	WSW	SE	ESE	NW	NNW	N	NNW	WNW	WNW	WNW	WNW	WNW	NW	NW	NW	ESE	SE	SE	SE	SE	SE	312	NW
Jun 16	SE	SE	SE	ESE	SE	SE	SSE	S	SSW	SSW	SSW	S	S	SSE	SSW	S	SE	S	SSE	SSE	SE	SE	ESE	ESE	167	SSE
Jun 17	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	S	S	S	S	SSE	SSE	S	SSE	SSE	SSE	SSE	SW	WSW	WSW	SSE	168	SSE
Jun 18	SE	SW	S	SSE	S	S	SSW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	SW	SW	SW	WSW	W	SSE	SSE	223	SW
Jun 19	SSE	S	SSE	SSE	SSE	SSW	SSW	SW	SW	SW	SW	SW	SSW	SSW	SW	SW	WSW	WSW	W	W	W	NW	NNW	NNW	226	SW
Jun 20	NNW	NNW	NNW	N	N	N	N	N	N	N	N	N	N	N	N	N	N	NNW	N	NW	NNW	NW	NNW	NNW	349	NNW
Jun 21	NNW	N	N	NNW	NNW	NNW	NW	NNW	N	NNW	NW	NW	NW	NW	NW	WNW	NW	WNW	NW	NNE	ENE	ENE	ESE	SE	332	NNW
Jun 22	SE	SE	SE	SSE	S	S	SE	SW	SW	SW	WSW	WSW	SW	SW	SW	SSW	S	NE	NNE	WSW	NE	ENE	ENE	ENE	193	S
Jun 23	ENE	ENE	ENE	ENE	NE	NNE	NNE	NW	N	NNE	NNE	NNE	NNE	SSW	SW	N	SE	WNW	W	NW	NNW	NW	NW	W	344	NNW
Jun 24	W	W	W	NW	NW	NNW	NNW	NNW	NW	NW	NNW	NNW	NW	NNW	N	NW	WNW	WNW	NW	NW	NNW	NNE	N	W	318	NW
Jun 25	WNW	SW	SE	SSE	NNW	NNW	NW	NNW	NNW	WNW	WNW	WNW	NW	NW	ENE	ENE	SW	SW	WSW	W	NNE	NE	SSE	SW	307	NW
Jun 26	NW	NE	ENE	ENE	ENE	NE	NE	N	N	NE	NW	NW	NW	NNE	E	ESE	ESE	SE	SE	ESE	NW	NE	ENE	ENE	50	NE
Jun 27	E	E	ENE	ENE	ENE	ENE	NNW	N	N	NE	NE	N	N	ENE	E	ESE	E	E	E	WNW	ESE	NNE	NE	NE	61	ENE
Jun 28	NE	NE	NE	NE	NE	NE	NE	NE	ENE	NE	NE	NE	NE	ENE	NE	NE	NE	NE	NE	ENE	NE	NE	NNE	NNW	49	NE
Jun 29	N	NNE	NNW	NNW	N	NNW	NNW	NNW	N	NNW	NW	NW	NW	NW	NW	WNW	WNW	W	WNW	WNW	WSW	WSW	WSW	SW	314	NW
Jun 30	SW	SW	SW	SSW	SSE	ESE	SE	S	SSE	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	SW	SSW	SW	WNW	SW	WNW	218	SW

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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



RENO STATION

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

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 Exceedences: 0 Number of 24-Hour Exceedences: 0 30-Day Exceedence: 0

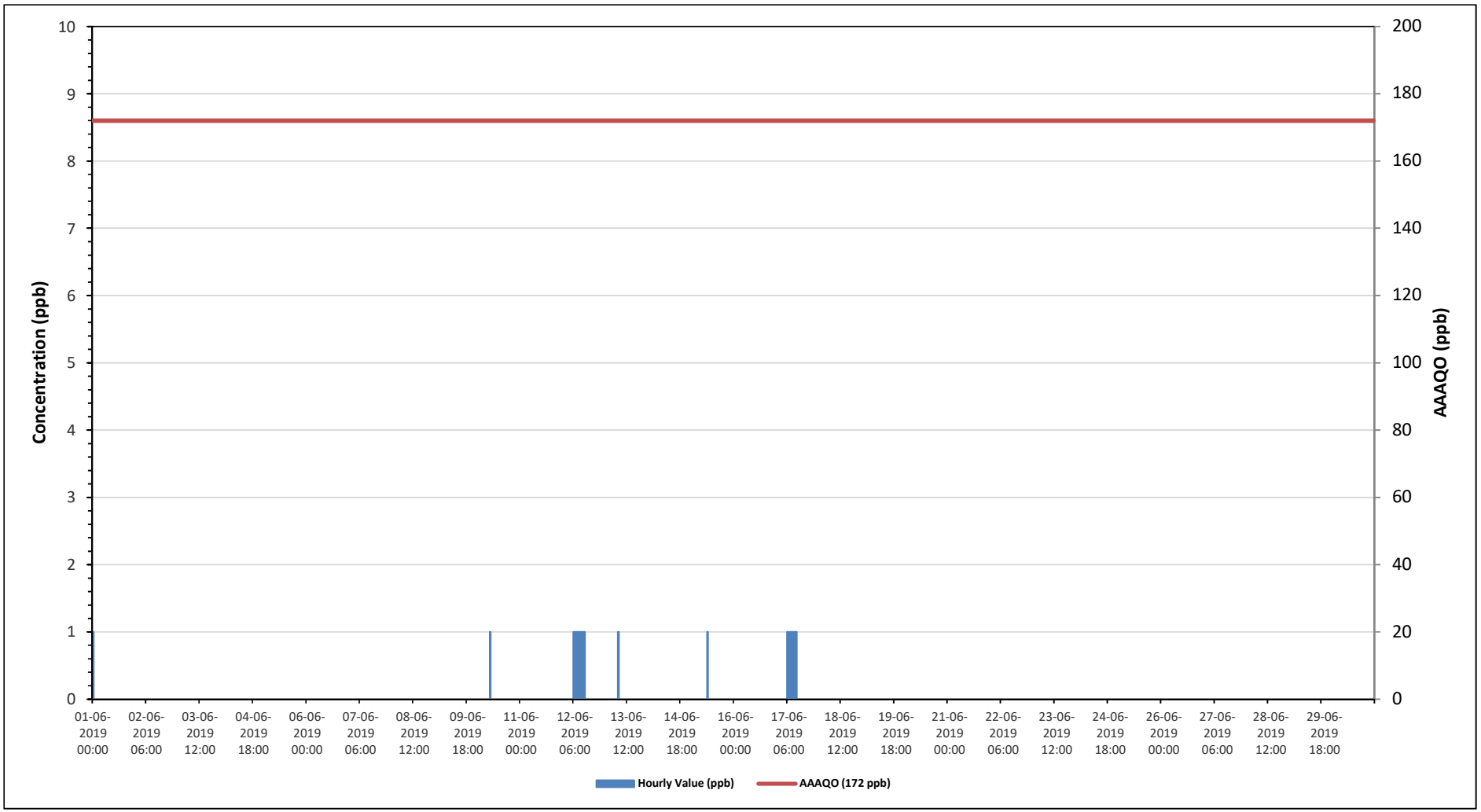
Maximum Hourly Value:	1	ppb	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.3	ppb	on June 17	Hours of Data:	682
Minimum Hourly Value:	0	ppb	on June 1 at hour 1	Hours of Missing Data:	1
Minimum Daily Value:	0.0	ppb	on June 2	Hours of Calibration:	37
Monthly Average:	0.0	ppb		Operational 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	Average
Jun 1	1	0	0	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
Jun 2	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
Jun 3	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
Jun 4	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
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0
Jun 11	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
Jun 12	0	0	0	0	0	0	1	1	1	1	1	1	1	C	C	C	C	C	C	0	S	0	0	0	0	1	-
Jun 13	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0
Jun 14	0	0	0	0	0	0	0	0	0	S1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Jun 15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0.0
Jun 16	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
Jun 17	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.3
Jun 18	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
Jun 19	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
Jun 20	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
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	1	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0			
Daiurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	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			

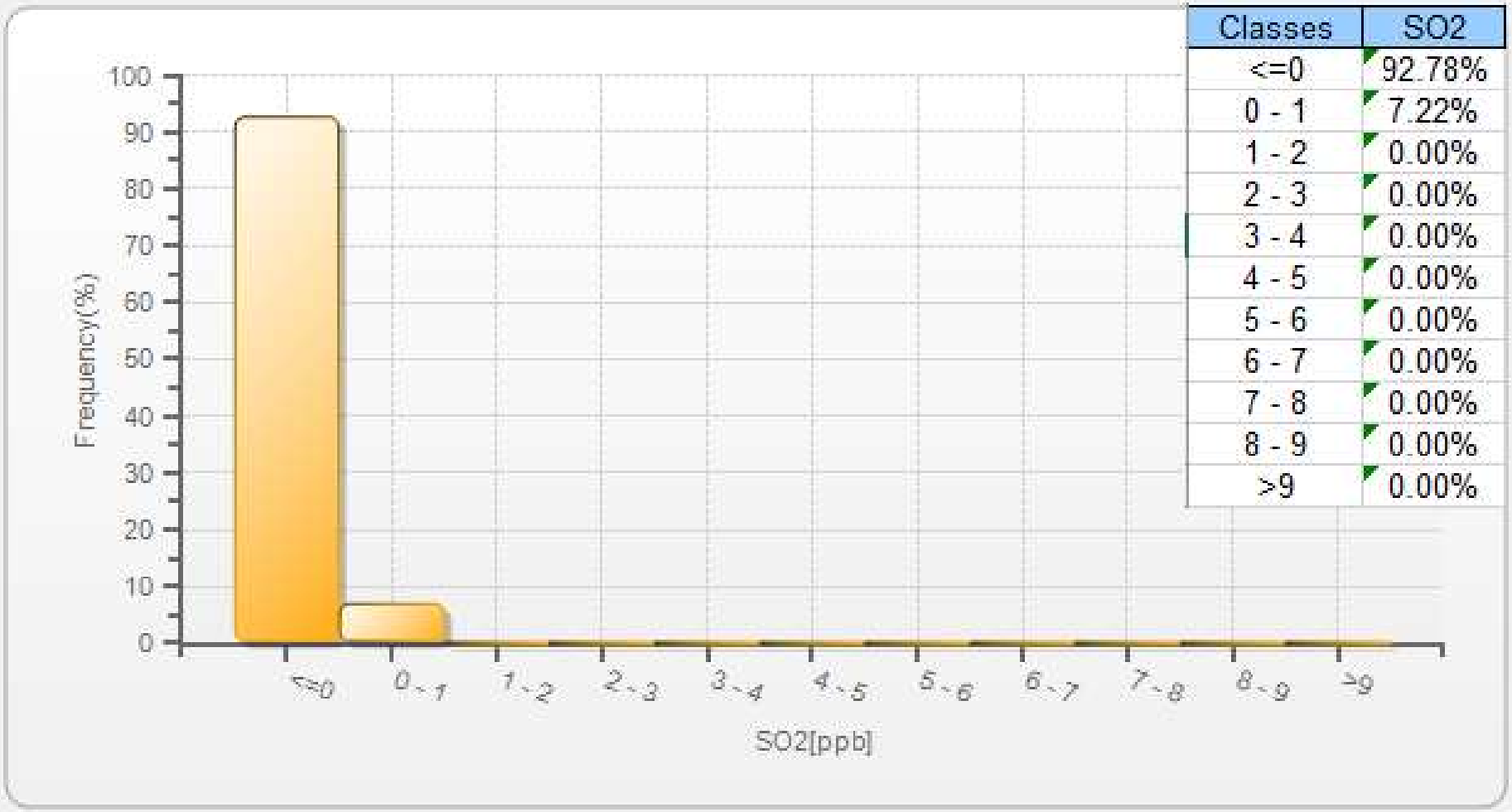
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Site



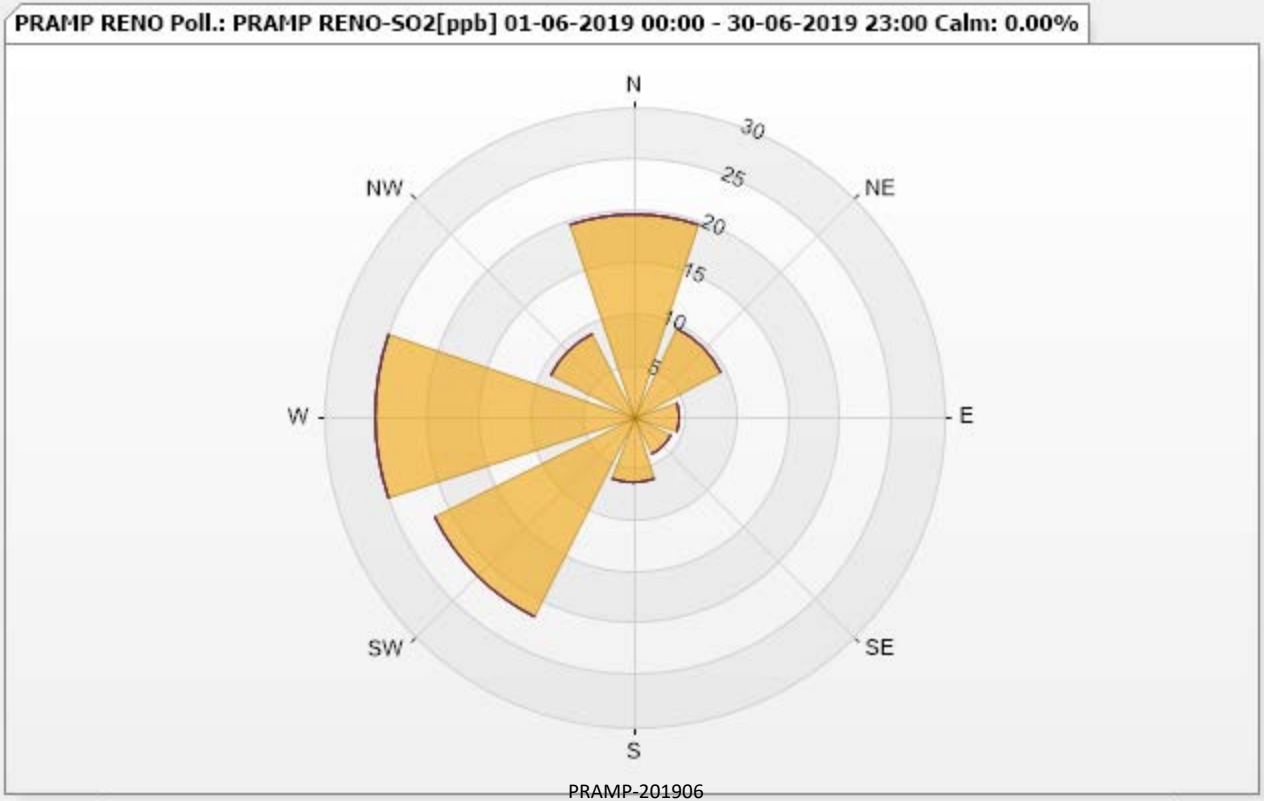
SO2[ppb] Histogram: PRAMP RENO Monthly: 06-2019 1 Hr.



Classes	SO2
<=0	92.78%
0 - 1	7.22%
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 RENO Poll.: PRAMP RENO-SO2[ppb] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.31% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	19.73	0	0	0	0	19.73
NE	9.57	0	0	0	0	9.57
E	4.42	0	0	0	0	4.42
SE	4.12	0	0	0	0	4.12
S	6.48	0	0	0	0	6.48
SW	21.65	0	0	0	0	21.65
W	25.04	0	0	0	0	25.04
NW	8.98	0	0	0	0	8.98
Summary	100	0	0	0	0	100


PRAMP RENO Poll.: PRAMP RENO-SO2[ppb] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
30
25
20
15
10
5
% Icon Classes (ppb)
100 0-10
0 10-30
0 30-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

TOTAL REDUCED SULPHUR (TRS) in ppb

Alberta Ambient Air Quality Objectives (AAAQO) for H2S: 1-Hour 10 ppb, 24-Hour 3 ppb

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

Maximum Hourly Value:	3.50	ppb	on June 16 at hour 5	Hours in Service:	720
Maximum Daily Value:	0.94	ppb	on June 17	Hours of Data:	680
Minimum Hourly Value:	0.19	ppb	on June 27 at hour 3	Hours of Missing Data:	2
Minimum Daily Value:	0.32	ppb	on June 27	Hours of Calibration:	38
Monthly Average:	0.46	ppb		Operational Uptime:	99.7

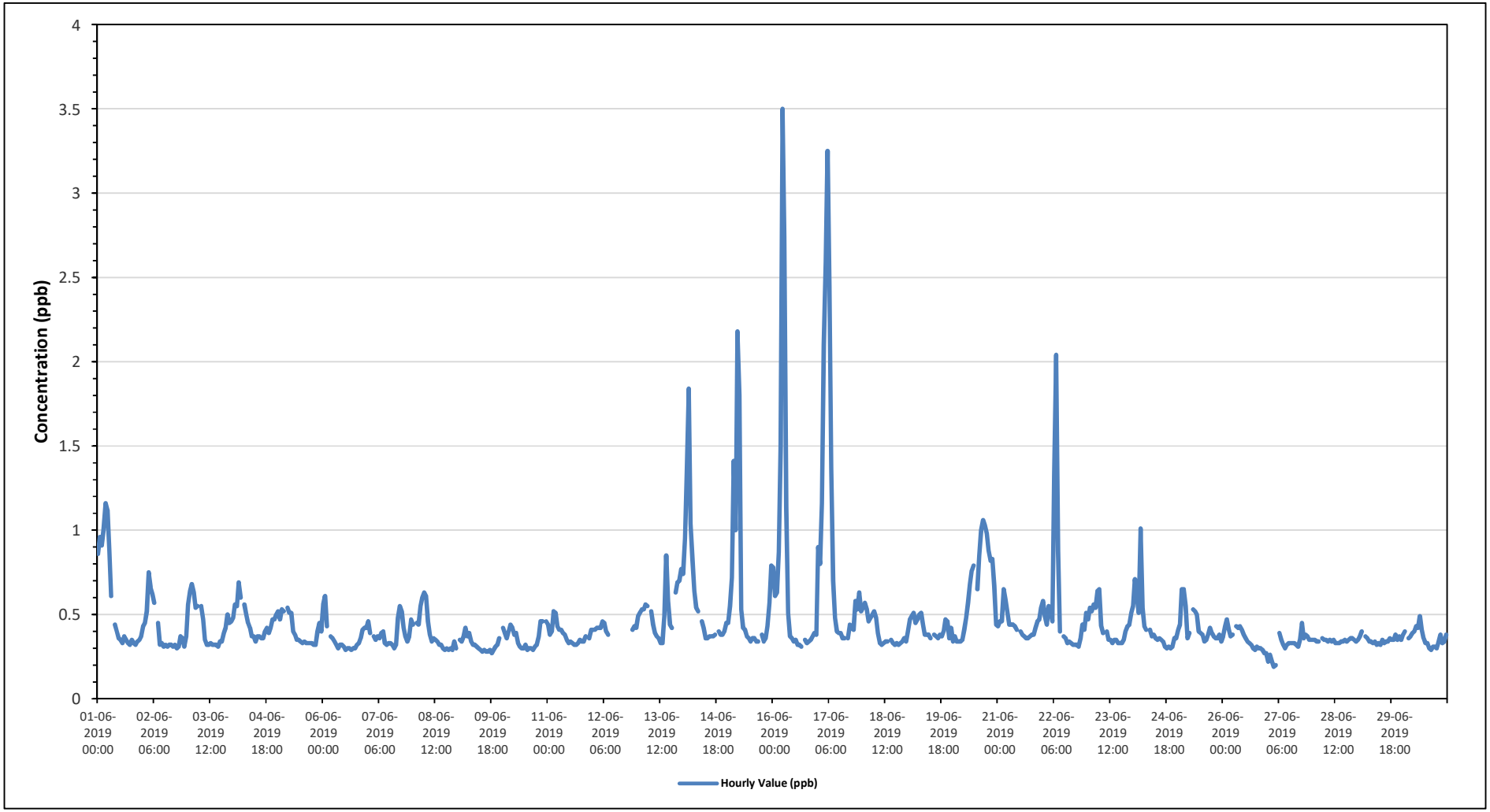
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jun 1	0.86	0.96	0.91	1.01	1.16	1.12	0.88	0.61	S	0.44	0.4	0.36	0.35	0.33	0.37	0.35	0.33	0.32	0.35	0.33	0.32	0.34	0.35	0.37	0.32	1.16	0.56
Jun 2	0.43	0.45	0.52	0.75	0.66	0.62	0.57	S	0.45	0.32	0.33	0.31	0.32	0.31	0.32	0.32	0.31	0.32	0.3	0.31	0.37	0.36	0.31	0.37	0.30	0.75	0.41
Jun 3	0.56	0.64	0.68	0.63	0.54	0.55	S	0.55	0.47	0.35	0.32	0.32	0.33	0.32	0.32	0.32	0.31	0.34	0.34	0.39	0.42	0.5	0.45	0.46	0.31	0.68	0.44
Jun 4	0.48	0.56	0.55	0.69	0.6	S	0.56	0.5	0.45	0.42	0.37	0.37	0.34	0.37	0.37	0.36	0.36	0.4	0.42	0.39	0.42	0.47	0.47	0.5	0.34	0.69	0.45
Jun 5	0.52	0.47	0.53	0.52	S	0.54	0.51	0.51	0.4	0.38	0.35	0.35	0.34	0.33	0.34	0.33	0.33	0.33	0.33	0.32	0.32	0.4	0.45	0.4	0.32	0.54	0.40
Jun 6	0.56	0.61	0.43	S	0.37	0.36	0.34	0.32	0.3	0.32	0.32	0.31	0.29	0.3	0.3	0.29	0.3	0.3	0.32	0.33	0.36	0.41	0.42	0.42	0.29	0.61	0.36
Jun 7	0.46	0.39	S	0.37	0.35	0.37	0.36	0.39	0.4	0.33	0.32	0.33	0.33	0.32	0.3	0.32	0.48	0.55	0.52	0.42	0.37	0.34	0.37	0.47	0.30	0.55	0.39
Jun 8	0.44	S	0.45	0.44	0.55	0.6	0.63	0.61	0.46	0.38	0.34	0.36	0.35	0.34	0.32	0.32	0.3	0.29	0.3	0.29	0.3	0.29	0.34	0.3	0.29	0.63	0.39
Jun 9	S	0.35	0.34	0.37	0.42	0.37	0.39	0.34	0.32	0.32	0.31	0.3	0.29	0.28	0.29	0.28	0.28	0.29	0.27	0.29	0.31	0.32	0.36	S	0.27	0.42	0.32
Jun 10	0.42	0.39	0.36	0.4	0.44	0.42	0.38	0.39	0.33	0.31	0.3	0.3	0.32	0.29	0.3	0.3	0.29	0.31	0.32	0.37	0.46	0.46	S	0.46	0.29	0.46	0.36
Jun 11	0.44	0.38	0.4	0.52	0.51	0.43	0.41	0.41	0.39	0.38	0.35	0.33	0.34	0.33	0.32	0.32	0.33	0.35	0.34	0.34	0.37	S	0.36	0.41	0.32	0.52	0.38
Jun 12	0.41	0.41	0.42	0.42	0.42	0.46	0.45	0.4	0.38	C	C	C	C	C	C	C	0.45	0.43	0.39	0.35	S	0.41	0.43	0.42	0.35	0.46	-
Jun 13	0.49	0.51	0.53	0.53	0.56	0.55	S1	0.52	0.44	0.39	0.37	0.36	0.33	0.33	0.49	0.85	0.58	0.44	0.42	S	0.63	0.69	0.7	0.77	0.33	0.85	0.52
Jun 14	0.74	0.95	1.35	1.84	1.04	0.83	0.64	0.54	0.52	S1	0.46	0.42	0.36	0.36	0.37	0.37	0.37	0.38	S	0.4	0.38	0.38	0.4	0.45	0.36	1.84	0.62
Jun 15	0.45	0.55	0.72	1.41	1	2.18	1.8	0.53	0.42	0.41	0.37	0.36	0.34	0.36	0.36	0.34	0.34	S	0.38	0.34	0.36	0.43	0.57	0.79	0.34	2.18	0.64
Jun 16	0.78	0.61	0.63	0.87	1.5	**3.5**	2.74	1.14	0.51	0.37	0.36	0.34	0.35	0.32	0.32	0.31	S	0.35	0.33	0.34	0.35	0.37	0.39	0.38	0.31	**3.50**	0.75
Jun 17	0.9	0.8	1.16	2.1	2.59	3.25	2.45	1.37	0.7	0.48	0.4	0.39	0.39	0.36	0.36	S	0.36	0.44	0.42	0.41	**0.58**	0.53	0.63	0.52	**0.36**	3.25	**0.94**
Jun 18	0.54	0.57	0.53	0.46	0.48	0.5	0.52	0.48	0.39	0.33	0.32	0.33	0.34	0.34	S	0.35	0.33	0.32	0.33	0.32	0.33	0.34	0.36	0.34	0.32	0.57	0.40
Jun 19	0.4	0.47	0.49	0.51	0.45	0.47	0.5	0.51	0.44	0.38	0.38	0.38	0.36	S	0.38	0.37	0.36	0.38	0.37	0.4	0.47	0.46	0.36	0.42	0.36	0.51	0.42
Jun 20	0.34	0.37	0.34	0.34	0.34	0.35	0.41	0.48	0.57	0.68	0.76	0.79	S	0.65	0.85	1	1.06	1.03	0.98	0.88	0.82	0.83	0.67	0.44	0.34	1.06	0.65
Jun 21	0.43	0.46	0.46	0.65	0.59	0.51	0.44	0.44	0.44	0.43	0.41	S	0.4	0.38	0.37	0.36	0.36	0.37	0.38	0.38	0.42	0.46	0.47	0.54	0.36	0.65	0.44
Jun 22	0.58	0.49	0.44	0.55	0.53	0.46	1.33	2.04	0.88	0.4	S	0.37	0.36	0.33	0.34	0.33	0.32	0.32	0.32	0.31	0.36	0.44	0.41	0.51	0.31	2.04	0.54
Jun 23	0.47	0.54	0.52	0.56	0.54	0.64	0.65	0.43	0.39	S	0.4	0.35	0.35	0.33	0.35	0.35	0.33	0.33	0.33	0.35	0.4	0.43	0.44	0.51	0.33	0.65	0.43
Jun 24	0.55	0.71	0.61	0.51	1.01	0.54	0.43	0.41	S	0.41	0.37	0.38	0.36	0.35	0.36	0.35	0.34	0.31	0.3	0.31	0.3	0.31	0.36	0.36	0.30	1.01	0.43
Jun 25	0.41	0.44	0.65	0.65	0.55	0.36	0.39	S	0.53	0.52	0.5	0.4	0.39	0.38	0.34	0.35	0.38	0.42	0.39	0.37	0.36	0.36	0.38	0.34	0.34	0.65	0.43
Jun 26	0.37	0.43	0.47	0.41	0.37	0.38	S	0.43	0.42	0.43	0.41	0.38	0.36	0.34	0.33	0.32	0.3	0.29	0.31	0.3	0.3	0.29	0.27	0.27	0.27	0.47	0.36
Jun 27	0.22	0.26	0.22	**0.19**	0.2	S	0.39	0.35	0.32	0.3	0.32	0.33	0.33	0.33	0.33	0.32	0.31	0.35	0.45	0.36	0.38	0.37	0.35	0.35	**0.19**	0.45	**0.32**
Jun 28	0.35	0.35	0.34	0.34	S	0.36	0.35	0.35	0.34	0.35	0.34	0.35	0.33	0.33	0.33	0.34	0.34	0.35	0.34	0.35	0.36	0.36	0.35	0.34	0.33	0.36	0.35
Jun 29	0.35	0.37	0.4	S	0.37	0.36	0.34	0.34	0.33	0.34	0.32	0.33	0.32	0.35	0.33	0.34	0.34	0.36	0.35	0.35	0.38	0.35	0.37	0.35	0.32	0.40	0.35
Jun 30	0.38	0.4	S	0.36	0.37	0.39	0.4	0.43	0.42	0.49	0.41	0.36	0.33	0.33	0.3	0.29	0.31	0.31	0.3	0.34	0.38	0.33	0.34	0.38	0.29	0.49	0.36
Diurnal Maximum	0.90	0.96	1.35	2.10	2.59	3.50	2.74	2.04	0.88	0.68	0.76	0.79	0.40	0.65	0.85	1.00	1.06	1.03	0.98	0.88	0.82	0.83	0.70	0.79			
Daiurnal Average	0.49	0.51	0.55	0.66	0.66	0.77	0.71	0.57	0.44	0.39	0.38	0.37	0.34	0.35	0.36	0.37	0.37	0.38	0.38	0.37	0.40	0.41	0.42	0.44			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

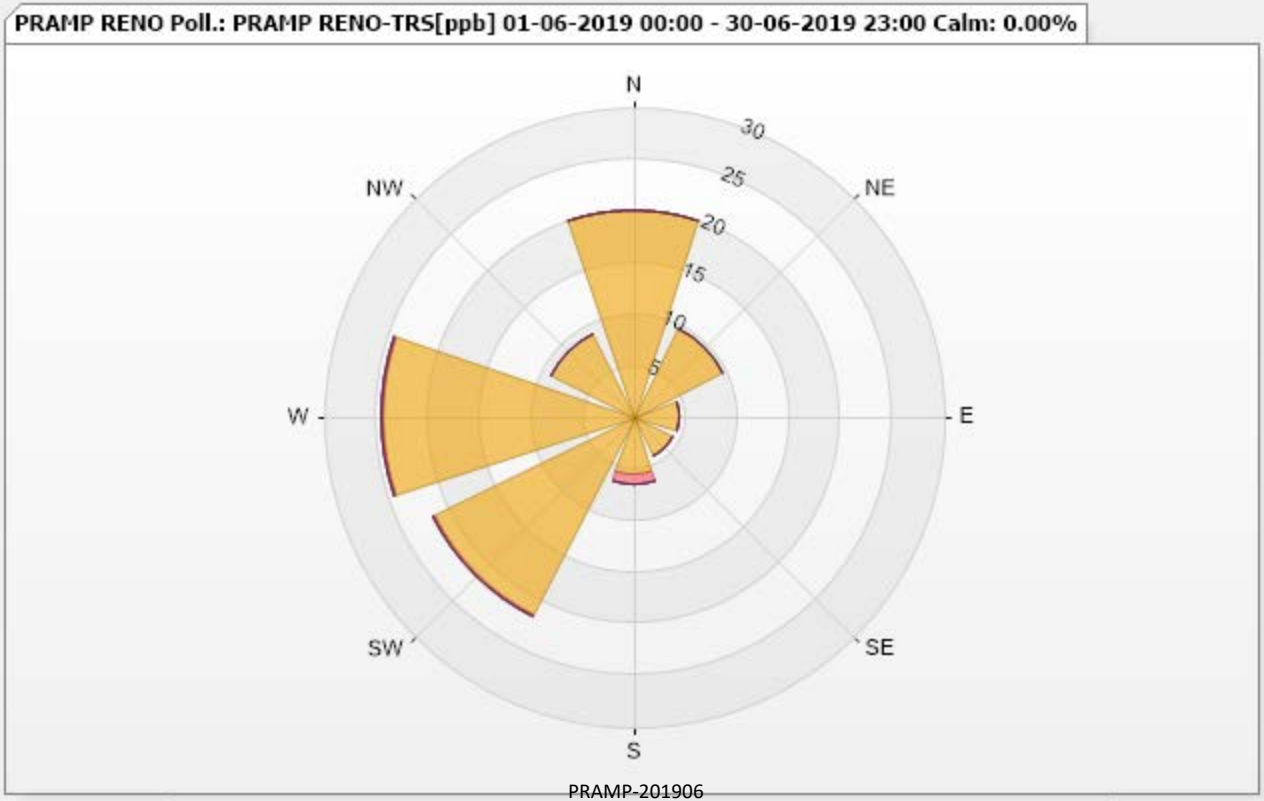
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for TRS - Reno Site



Wind: PRAMP RENO Poll.: PRAMP RENO-TRS[ppb] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.33% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	19.94	0	0	0	0	19.94
NE	9.67	0	0	0	0	9.67
E	4.46	0	0	0	0	4.46
SE	4.17	0	0	0	0	4.17
S	5.65	0.89	0	0	0	6.54
SW	21.58	0.15	0	0	0	21.73
W	24.26	0.15	0	0	0	24.41
NW	9.08	0	0	0	0	9.08
Summary	98.81	1.19	0	0	0	100


PRAMP RENO Poll.: PRAMP RENO-TRS[ppb] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
30
25
20
15
10
5
% Icon Classes (ppb)
99 0-2
1 2-5
0 5-10
0 10-50
0 >50.0

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

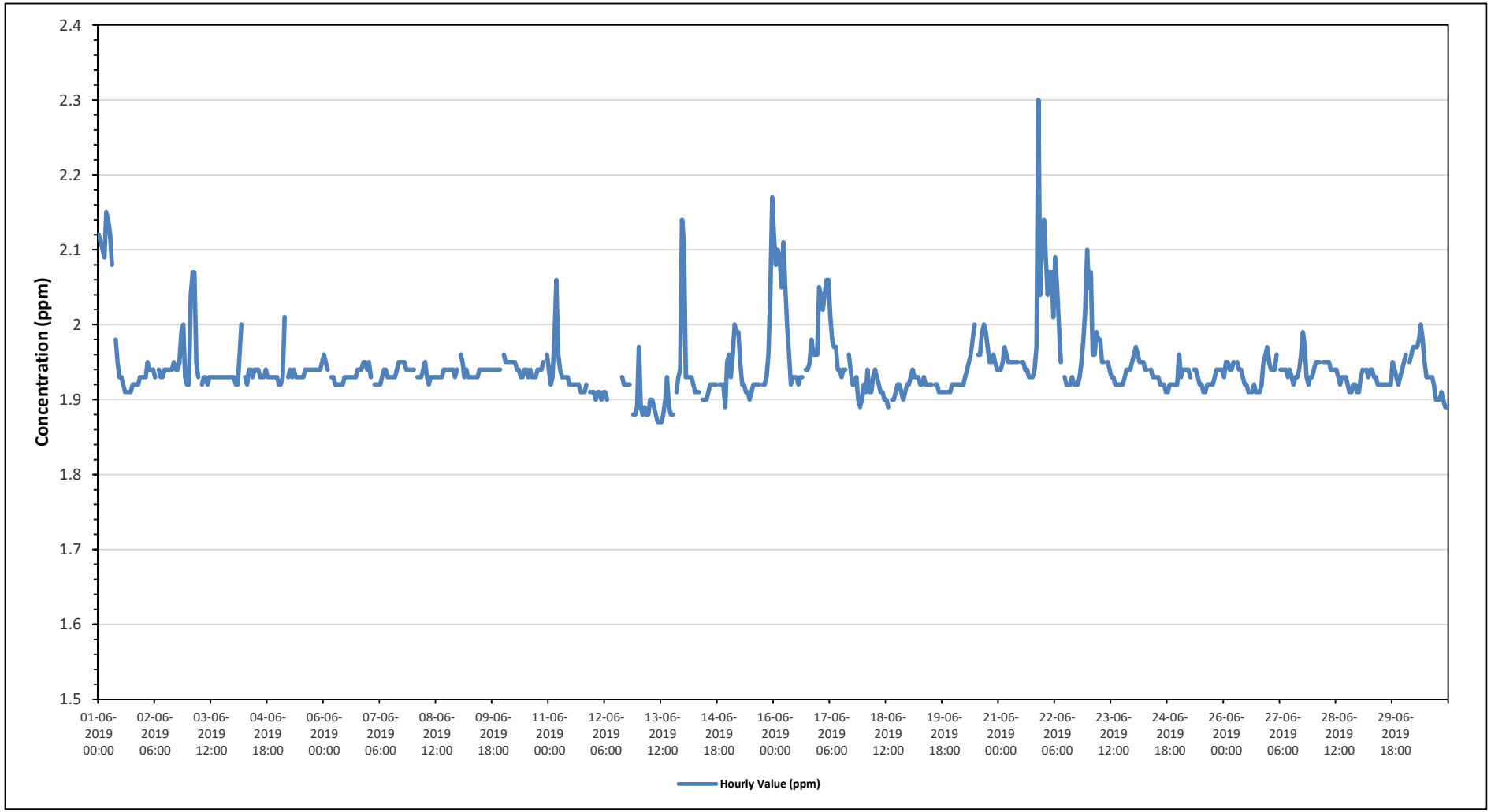
Maximum Hourly Value:	2.30	ppm	on June 21 at hour 21	Hours in Service:	720
Maximum Daily Value:	1.99	ppm	on June 22	Hours of Data:	681
Minimum Hourly Value:	1.87	ppm	on June 13 at hour 10	Hours of Missing Data:	1
Minimum Daily Value:	1.91	ppm	on June 13	Hours of Calibration:	38
Monthly Average:	1.94	ppm		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	Average
Jun 1	2.12	2.11	2.10	2.09	2.15	2.14	2.12	2.08	S	1.98	1.95	1.93	1.93	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.93	1.93	1.91	2.15	1.99
Jun 2	1.93	1.93	1.95	1.94	1.94	1.94	1.93	S	1.94	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.99	2.00	1.93	1.92	1.92	2.00	1.94
Jun 3	1.92	2.04	2.07	2.07	1.95	1.93	S	1.92	1.93	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	2.07	1.95
Jun 4	1.93	1.92	1.92	1.96	2.00	S	1.93	1.92	1.94	1.94	1.93	1.94	1.94	1.94	1.93	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	2.00	1.94
Jun 5	1.92	1.92	1.93	2.01	S	1.93	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.92	2.01	1.94
Jun 6	1.96	1.95	1.94	S	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.94	1.92	1.96	1.93
Jun 7	1.95	1.93	S	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.92	1.95	1.94
Jun 8	1.94	S	1.93	1.93	1.93	1.94	1.95	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.92	1.95	1.93
Jun 9	S	1.96	1.95	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	S	1.93	1.96	1.94
Jun 10	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.93	1.93	1.94	1.94	1.93	1.94	1.93	1.93	1.93	1.94	1.94	1.94	1.95	S	1.96	1.93	1.96	1.94
Jun 11	1.94	1.92	1.93	1.99	2.06	1.96	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.92	S	1.91	1.91	1.91	2.06	1.93
Jun 12	1.91	1.90	1.91	1.91	1.90	1.91	1.91	1.90	C	C	C	C	C	C	C	1.93	1.92	1.92	1.92	1.92	S	1.88	1.88	1.89	1.88	1.93	-
Jun 13	1.97	1.89	1.88	1.89	1.88	1.88	1.90	1.90	1.89	1.88	**1.87**	1.87	1.87	1.88	1.90	1.93	1.89	1.88	1.88	S	1.91	1.93	1.94	2.14	**1.87**	2.14	**1.91**
Jun 14	2.11	1.93	1.93	1.93	1.93	1.92	1.91	1.91	1.91	S1	1.90	1.90	1.90	1.91	1.92	1.92	1.92	1.92	S	1.92	1.92	1.92	1.89	1.95	1.89	2.11	1.93
Jun 15	1.96	**1.93**	1.96	2.00	1.99	1.99	1.95	1.92	1.92	1.91	1.91	1.90	1.91	1.92	1.92	1.92	1.92	S	1.92	1.92	1.93	1.96	2.04	2.17	**1.90**	2.17	1.95
Jun 16	2.12	2.08	2.10	2.09	2.05	2.11	2.05	2.00	1.96	1.92	1.93	1.93	1.93	1.92	1.93	1.93	S	1.94	1.94	1.95	1.98	1.96	1.96	1.96	1.92	2.12	1.99
Jun 17	2.05	2.04	2.02	2.04	2.06	2.06	2.01	1.98	1.97	1.97	1.94	1.94	1.93	1.94	1.94	S	1.96	1.94	1.92	1.92	1.93	1.90	1.89	1.90	1.89	2.06	1.97
Jun 18	1.92	1.91	1.94	1.91	1.91	1.93	1.94	1.93	1.92	1.91	1.91	1.90	1.90	1.89	S	1.90	1.90	1.91	1.92	1.92	1.91	1.90	1.91	1.92	1.89	1.94	1.91
Jun 19	1.92	1.93	1.94	1.93	1.93	1.93	1.92	1.92	1.93	1.92	1.92	1.92	1.92	S	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.94	1.92
Jun 20	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.95	1.96	1.98	2.00	S	1.96	1.96	1.99	2.00	1.99	1.97	1.95	1.95	1.96	1.95	1.94	1.92	2.00	1.95
Jun 21	1.94	1.94	1.95	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.97	**2.30**	2.04	2.11	1.93	**2.30**	1.97
Jun 22	2.14	2.09	2.04	2.07	2.07	2.01	2.09	2.05	2.00	1.95	S	1.93	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.93	1.95	1.98	2.02	2.10	1.92	2.14	**1.99**
Jun 23	2.05	2.07	1.96	1.96	1.99	1.98	1.98	1.95	1.95	S	1.95	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.94	1.95	1.92	2.07	1.95
Jun 24	1.96	1.97	1.96	1.95	1.95	1.95	1.94	1.94	S	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.91	1.97	1.93
Jun 25	1.96	1.93	1.94	1.94	1.94	1.94	1.93	S	1.94	1.94	1.93	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.94	1.94	1.91	1.96	1.93
Jun 26	1.93	1.95	1.95	1.94	1.94	1.95	S	1.95	1.94	1.94	1.93	1.92	1.92	1.91	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.95	1.96	1.97	1.91	1.97	1.93
Jun 27	1.95	1.94	1.94	1.94	1.96	S	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.92	1.93	1.93	1.94	1.96	1.99	1.97	1.93	1.92	1.93	1.93	1.92	1.99	1.94
Jun 28	1.94	1.95	1.95	1.95	S	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.92	1.91	1.91	1.92	1.92	1.91	1.91	1.95	1.93
Jun 29	1.91	1.93	1.94	S	1.94	1.93	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.95	1.94	1.93	1.92	1.93	1.94	1.91	1.95	1.93
Jun 30	1.95	1.96	S	1.95	1.96	1.97	1.97	1.97	1.98	2.00	1.98	1.95	1.93	1.93	1.93	1.93	1.92	1.90	1.90	1.90	1.91	1.90	1.89	1.89	1.89	2.00	1.94
Diurnal Maximum	2.14	2.11	2.10	2.09	2.15	2.14	2.12	2.08	2.00	2.00	1.98	2.00	1.95	1.96	1.96	1.99	2.00	1.99	1.99	1.97	1.99	2.30	2.04	2.17			
Daiurnal Average	1.97	1.96	1.96	1.97	1.97	1.96	1.96	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.95	1.94	1.96			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

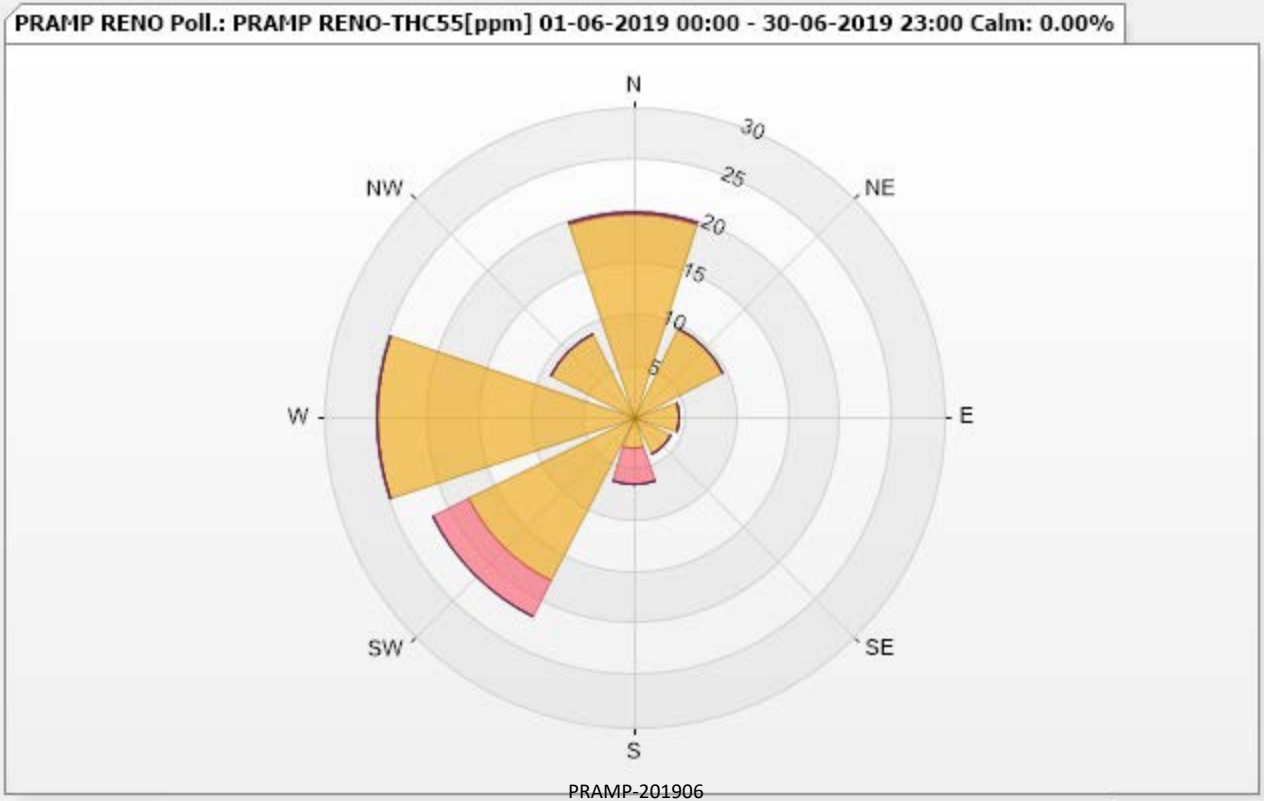
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for THC - Reno Site



Wind: PRAMP RENO Poll.: PRAMP RENO-THC55[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.17% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	19.62	0.15	0	0	0	19.77
NE	9.59	0	0	0	0	9.59
E	4.42	0	0	0	0	4.42
SE	4.13	0	0	0	0	4.13
S	3.1	3.39	0	0	0	6.49
SW	17.85	3.83	0	0	0	21.68
W	24.93	0	0	0	0	24.93
NW	9	0	0	0	0	9
Summary	92.64	7.37	0	0	0	100


PRAMP RENO Poll.: PRAMP RENO-THC55[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
30
25
20
15
10
5
% Icon Classes (ppm)
93 0-2
7 2-5
0 5-10
0 10-40
0 >40.0

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

METHANE (CH4) in ppm

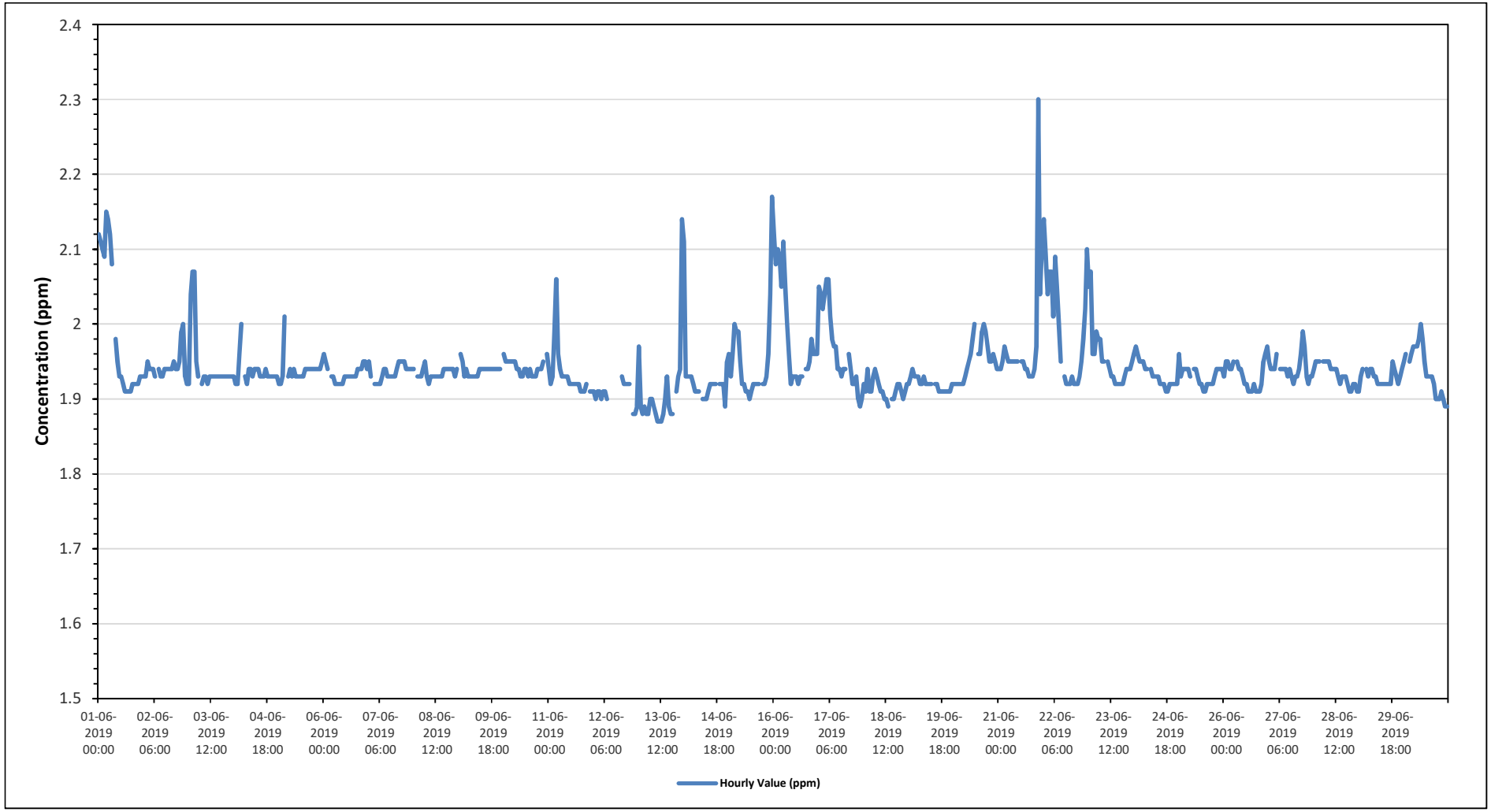
Maximum Hourly Value:	2.30	ppm	on June 21 at hour 21	Hours in Service:	720
Maximum Daily Value:	1.99	ppm	on June 22	Hours of Data:	681
Minimum Hourly Value:	1.87	ppm	on June 13 at hour 10	Hours of Missing Data:	1
Minimum Daily Value:	1.91	ppm	on June 13	Hours of Calibration:	38
Monthly Average:	1.94	ppm		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	Average
Jun 1	2.12	2.11	2.10	2.09	2.15	2.14	2.12	2.08	S	1.98	1.95	1.93	1.93	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.93	1.93	1.91	2.15	1.99
Jun 2	1.93	1.93	1.95	1.94	1.94	1.94	1.93	S	1.94	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.99	2.00	1.93	1.92	1.92	2.00	1.94
Jun 3	1.92	2.04	2.07	2.07	1.95	1.93	S	1.92	1.93	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	2.07	1.95
Jun 4	1.93	1.92	1.92	1.96	2.00	S	1.93	1.92	1.94	1.94	1.93	1.94	1.94	1.94	1.93	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	2.00	1.94
Jun 5	1.92	1.92	1.93	2.01	S	1.93	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.92	2.01	1.94
Jun 6	1.96	1.95	1.94	S	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.94	1.92	1.96	1.93
Jun 7	1.95	1.93	S	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.92	1.95	1.94
Jun 8	1.94	S	1.93	1.93	1.93	1.94	1.95	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.92	1.95	1.93
Jun 9	S	1.96	1.95	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	S	1.93	1.96	1.94
Jun 10	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.93	1.93	1.94	1.94	1.93	1.94	1.93	1.93	1.93	1.94	1.94	1.94	1.95	S	1.96	1.93	1.96	1.94
Jun 11	1.94	1.92	1.93	1.99	2.06	1.96	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.92	S	1.91	1.91	1.91	2.06	1.93
Jun 12	1.91	1.90	1.91	1.91	1.90	1.91	1.91	1.90	C	C	C	C	C	C	C	1.93	1.92	1.92	1.92	1.92	S	1.88	1.88	1.89	1.88	1.93	-
Jun 13	1.97	1.89	1.88	1.89	1.88	1.88	1.90	1.90	1.89	1.88	**1.87**	1.87	1.87	1.88	1.90	1.93	1.89	1.88	1.88	S	1.91	1.93	1.94	2.14	**1.87**	2.14	**1.91**
Jun 14	2.11	1.93	1.93	1.93	1.93	1.92	1.91	1.91	1.91	S1	1.90	1.90	1.90	1.91	1.92	1.92	1.92	1.92	S	1.92	1.92	1.92	1.89	1.95	1.89	2.11	1.93
Jun 15	1.96	**1.93**	1.96	2.00	1.99	1.99	1.95	1.92	1.92	1.91	1.91	1.90	1.91	1.92	1.92	1.92	1.92	S	1.92	1.92	1.93	1.96	2.04	2.17	**1.90**	2.17	1.95
Jun 16	2.12	2.08	2.10	2.09	2.05	2.11	2.05	2.00	1.96	1.92	1.93	1.93	1.93	1.92	1.93	1.93	S	1.94	1.94	1.95	1.98	1.96	1.96	1.96	1.92	2.12	1.99
Jun 17	2.05	2.04	2.02	2.04	2.06	2.06	2.01	1.98	1.97	1.97	1.94	1.94	1.93	1.94	1.94	S	1.96	1.94	1.92	1.92	1.93	1.90	1.89	1.90	1.89	2.06	1.97
Jun 18	1.92	1.91	1.94	1.91	1.91	1.93	1.94	1.93	1.92	1.91	1.91	1.90	1.90	1.89	S	1.90	1.90	1.91	1.92	1.92	1.91	1.90	1.91	1.92	1.89	1.94	1.91
Jun 19	1.92	1.93	1.94	1.93	1.93	1.93	1.92	1.92	1.93	1.92	1.92	1.92	1.92	S	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.94	1.92
Jun 20	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.95	1.96	1.98	2.00	S	1.96	1.96	1.99	2.00	1.99	1.97	1.95	1.95	1.96	1.95	1.94	1.92	2.00	1.95
Jun 21	1.94	1.94	1.95	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.97	**2.30**	2.04	2.11	1.93	**2.30**	1.97
Jun 22	2.14	2.09	2.04	2.07	2.07	2.01	2.09	2.05	2.00	1.95	S	1.93	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.93	1.95	1.98	2.02	2.10	1.92	2.14	**1.99**
Jun 23	2.05	2.07	1.96	1.96	1.99	1.98	1.98	1.95	1.95	S	1.95	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.94	1.95	1.92	2.07	1.95
Jun 24	1.96	1.97	1.96	1.95	1.95	1.95	1.94	1.94	S	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.91	1.97	1.93
Jun 25	1.96	1.93	1.94	1.94	1.94	1.94	1.93	S	1.94	1.94	1.93	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.94	1.94	1.91	1.96	1.93
Jun 26	1.93	1.95	1.95	1.94	1.94	1.95	S	1.95	1.94	1.94	1.93	1.92	1.92	1.91	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.95	1.96	1.97	1.91	1.97	1.93
Jun 27	1.95	1.94	1.94	1.94	1.96	S	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.92	1.93	1.93	1.94	1.96	1.99	1.97	1.93	1.92	1.93	1.93	1.92	1.99	1.94
Jun 28	1.94	1.95	1.95	1.95	S	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.92	1.91	1.91	1.92	1.92	1.91	1.91	1.95	1.93
Jun 29	1.91	1.93	1.94	S	1.94	1.93	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.95	1.94	1.93	1.92	1.93	1.94	1.91	1.95	1.93
Jun 30	1.95	1.96	S	1.95	1.96	1.97	1.97	1.97	1.98	2.00	1.98	1.95	1.93	1.93	1.93	1.93	1.92	1.90	1.90	1.90	1.91	1.90	1.89	1.89	1.89	2.00	1.94
Diurnal Maximum	2.14	2.11	2.10	2.09	2.15	2.14	2.12	2.08	2.00	2.00	1.98	2.00	1.95	1.96	1.96	1.99	2.00	1.99	1.99	1.97	1.99	2.30	2.04	2.17			
Daiurnal Average	1.97	1.96	1.96	1.97	1.97	1.96	1.96	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.95	1.94	1.96			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

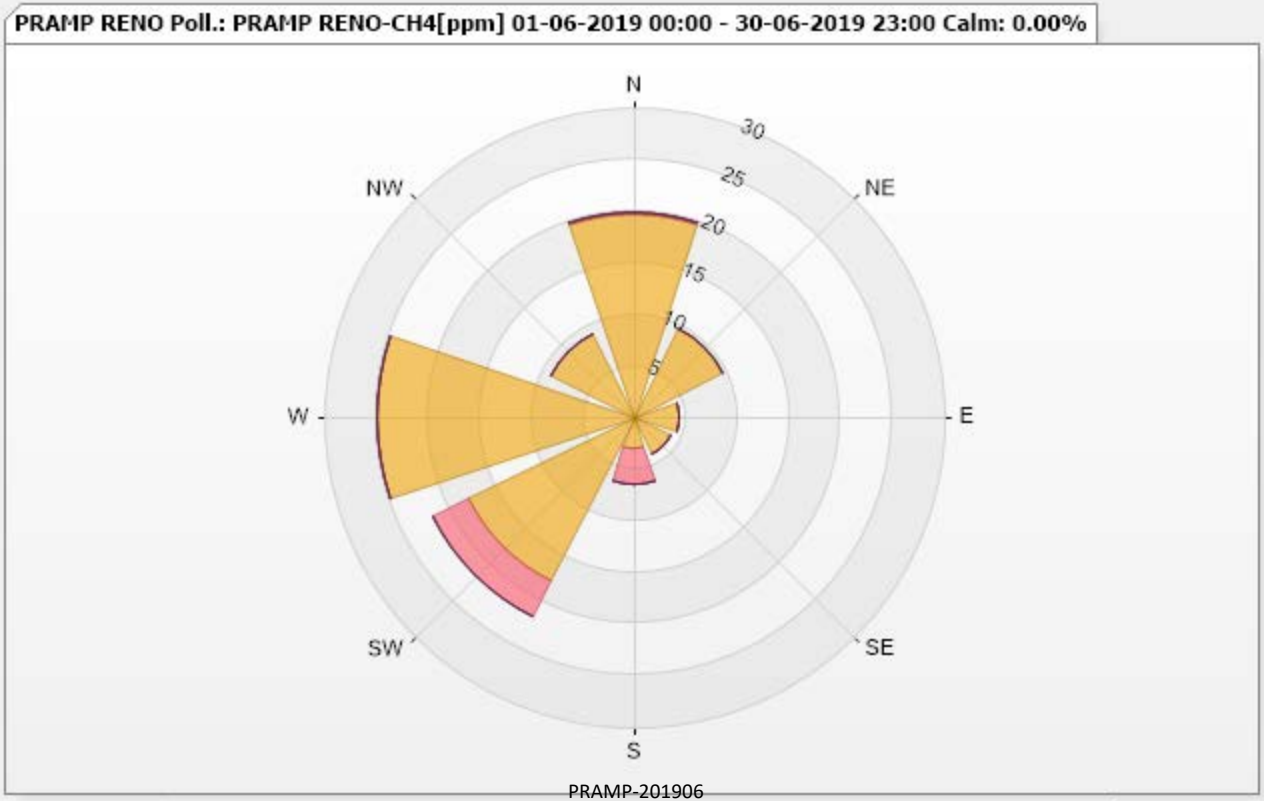
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for CH4 - Reno Site



Wind: PRAMP RENO Poll.: PRAMP RENO-CH4[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.17% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	19.62	0.15	0	0	0	19.77
NE	9.59	0	0	0	0	9.59
E	4.42	0	0	0	0	4.42
SE	4.13	0	0	0	0	4.13
S	3.1	3.39	0	0	0	6.49
SW	17.85	3.83	0	0	0	21.68
W	24.93	0	0	0	0	24.93
NW	9	0	0	0	0	9
Summary	92.64	7.37	0	0	0	100


PRAMP RENO Poll.: PRAMP RENO-CH4[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
30
25
20
15
10
5
% Icon Classes (ppm)
93 0-2
7 2-5
0 5-10
0 10-20
0 >20.0

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

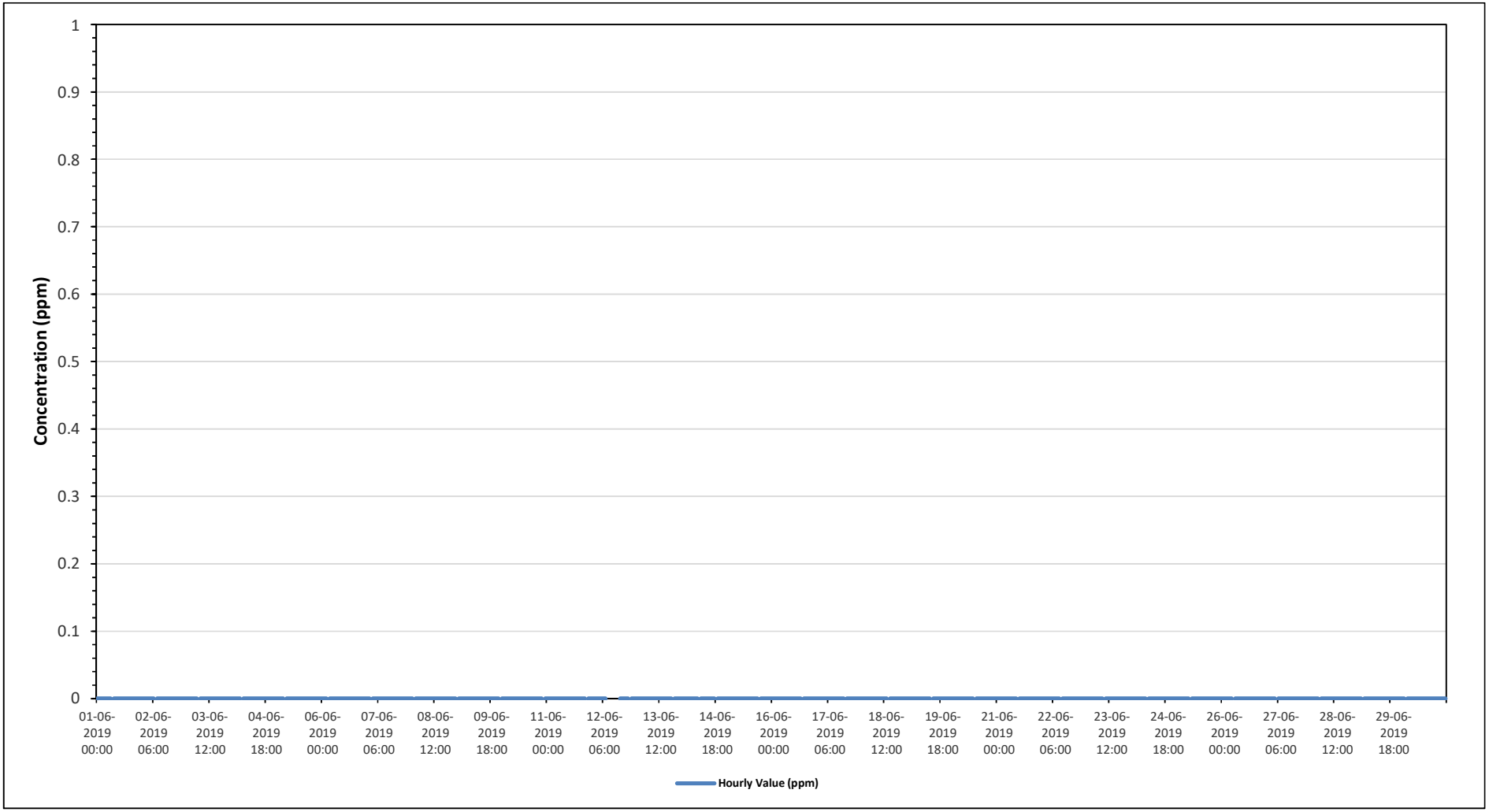
Maximum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on June 1	Hours of Data:	681
Minimum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00	ppm	on June 1	Hours of Calibration:	38
Monthly Average:	0.00	ppm		Operational Uptime:	99.9

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			
Jun 1	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**
Jun 2	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
Jun 3	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
Jun 4	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
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 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	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
Jun 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	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
Jun 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	C	C	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	-
Jun 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S1	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
Jun 15	0.00	0.00	0.00	0.00	0.00	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
Jun 16	0.00	0.00	0.00	0.00	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
Jun 17	0.00	0.00	0.00	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
Jun 18	0.00	0.00	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
Jun 19	0.00	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
Jun 20	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
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Daiurnal 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	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

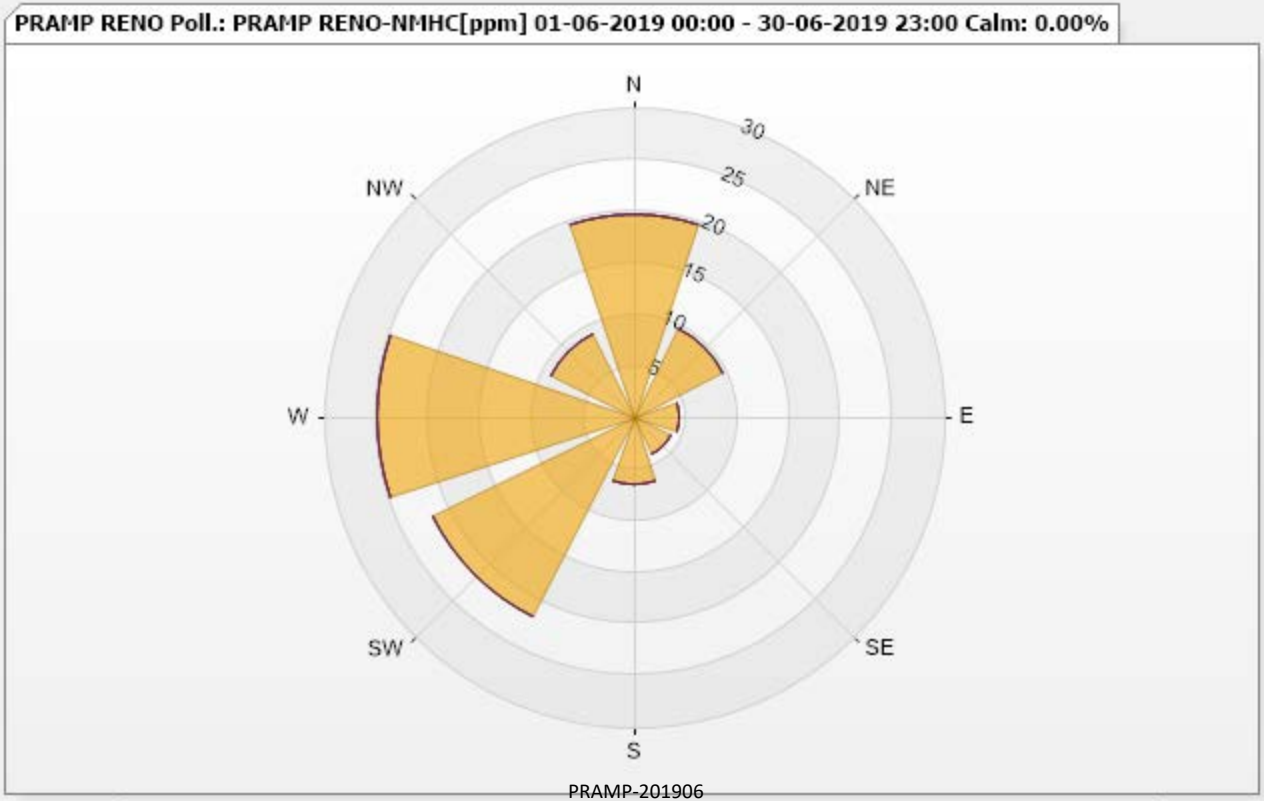
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for NMHC - Reno Site



Wind: PRAMP RENO Poll.: PRAMP RENO-NMHC[ppm] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 93.89% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	19.67	0	0	0	0	19.67
NE	9.62	0	0	0	0	9.62
E	4.44	0	0	0	0	4.44
SE	4.14	0	0	0	0	4.14
S	6.51	0	0	0	0	6.51
SW	21.75	0	0	0	0	21.75
W	24.85	0	0	0	0	24.85
NW	9.02	0	0	0	0	9.02
Summary	100	0	0	0	0	100


PRAMP RENO Poll.: PRAMP RENO-NMHC[ppm] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 0.00%
N
NE
E
SE
S
SW
W
NW
30
25
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 Site - June 2019

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

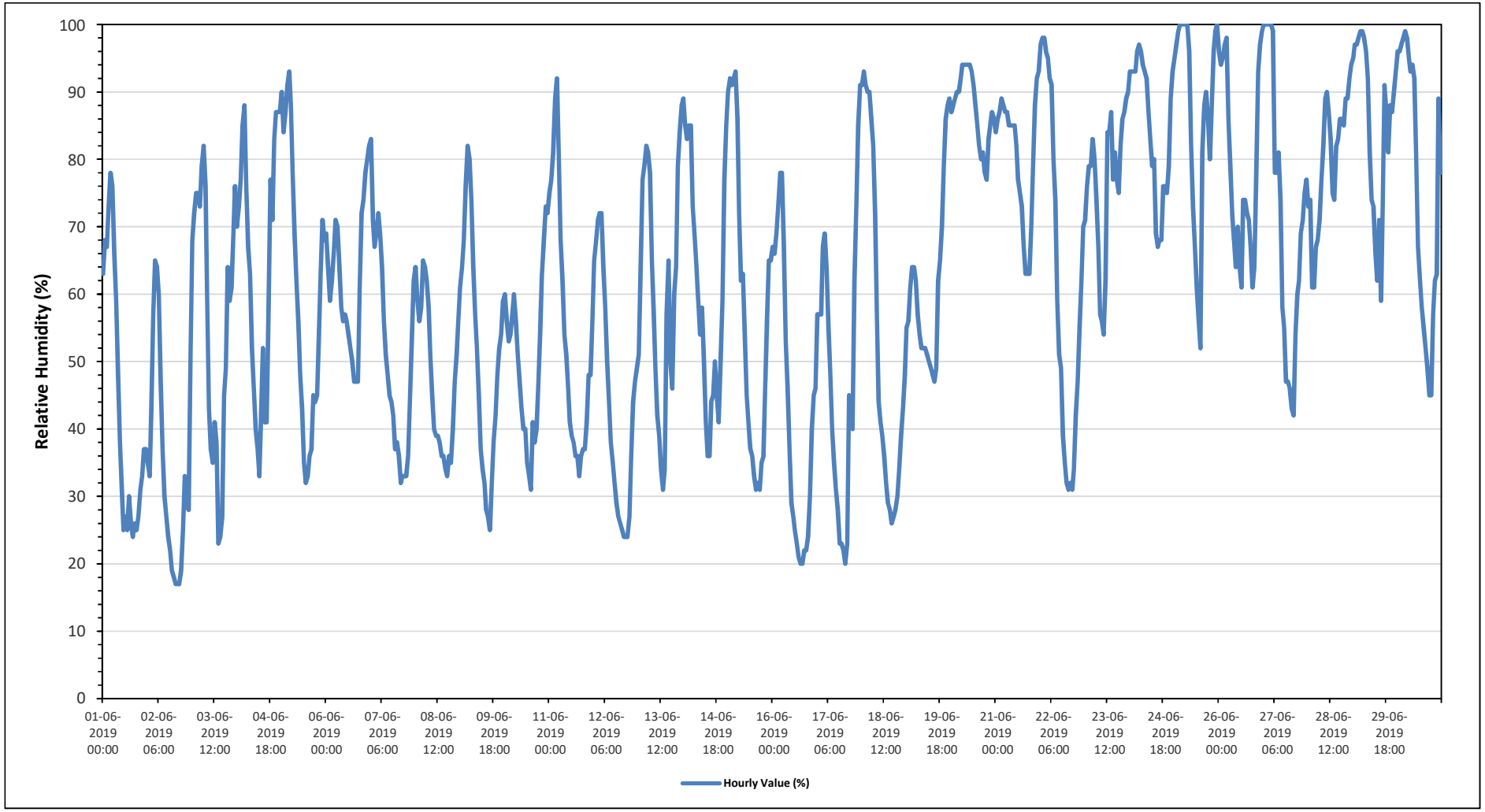
Maximum Hourly Value:	100	%	on June 25 at hour 3	Hours in Service:	720
Maximum Daily Value:	87.6	%	on June 20	Hours of Data:	720
Minimum Hourly Value:	17	%	on June 2 at hour 15	Hours of Missing Data:	0
Minimum Daily Value:	34.1	%	on June 2	Hours of Calibration:	0
Monthly Average:	62.4	%		Operational 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
Jun 1	63	68	67	73	78	76	66	59	48	38	31	25	27	25	30	26	24	26	25	27	31	33	37	37	24	78	43
Jun 2	35	33	43	57	65	64	60	47	37	30	27	24	22	19	18	**17**	**17**	**17**	19	25	33	30	28	51	**17**	65	**34**
Jun 3	68	72	75	75	73	79	82	76	59	43	37	35	41	38	23	24	27	45	49	64	59	61	69	76	23	82	56
Jun 4	70	73	77	85	88	76	67	63	52	46	40	37	33	43	52	41	41	58	77	71	83	87	87	87	33	88	64
Jun 5	90	84	87	91	93	88	78	69	62	56	48	43	35	32	33	36	37	45	44	45	53	63	71	68	32	93	60
Jun 6	69	64	59	62	66	71	70	64	58	56	57	56	54	52	50	47	47	47	61	72	74	78	80	82	47	82	62
Jun 7	83	71	67	69	72	69	64	56	51	48	45	44	42	37	38	36	32	33	33	33	36	44	53	62	32	83	51
Jun 8	64	59	56	58	65	64	62	58	51	45	40	39	39	38	36	36	34	33	36	35	40	47	51	56	33	65	48
Jun 9	61	64	68	76	82	80	74	64	57	52	45	37	34	32	28	27	25	32	38	42	48	52	54	59	25	82	51
Jun 10	60	56	53	54	57	60	56	51	47	43	40	40	35	33	31	41	38	40	47	55	63	68	73	72	31	73	51
Jun 11	75	77	81	89	92	80	68	62	54	51	46	41	39	38	36	36	33	36	37	37	41	48	48	56	33	92	54
Jun 12	65	68	71	72	72	64	58	50	44	38	35	32	29	27	26	25	24	24	24	27	36	44	47	49	24	72	44
Jun 13	51	64	77	79	82	81	78	65	57	49	42	39	34	31	34	57	65	50	46	60	64	79	84	88	31	88	61
Jun 14	89	85	83	85	85	73	69	64	59	54	58	50	41	36	36	44	45	50	45	41	50	59	77	85	36	89	61
Jun 15	90	92	91	92	93	86	72	62	63	54	45	41	37	36	33	31	32	31	35	36	47	56	65	65	31	93	58
Jun 16	67	66	69	73	78	78	67	53	46	37	29	27	25	23	21	20	20	22	22	24	30	40	45	46	20	78	43
Jun 17	57	57	57	67	69	64	55	48	40	35	31	28	23	23	22	20	23	45	44	40	62	73	85	91	20	91	48
Jun 18	91	93	91	90	90	86	82	72	56	44	41	39	36	32	29	28	26	27	28	30	34	39	43	48	26	93	53
Jun 19	55	56	61	64	64	62	57	54	52	52	52	51	50	49	48	47	49	62	65	70	79	86	88	89	47	89	61
Jun 20	87	88	89	90	90	92	94	94	94	94	94	93	91	88	85	82	80	81	78	77	83	85	87	86	77	94	**88**
Jun 21	84	86	87	89	88	87	87	85	85	85	85	82	77	75	73	67	63	63	63	70	79	88	92	93	63	93	81
Jun 22	97	98	98	96	95	92	91	80	74	59	51	49	39	35	32	31	32	31	34	42	47	55	62	70	31	98	62
Jun 23	71	76	79	79	83	80	74	67	57	56	54	62	84	84	87	77	81	77	75	82	86	87	89	90	54	90	77
Jun 24	93	93	93	93	96	97	96	94	93	92	87	83	79	80	69	67	68	68	76	76	75	79	89	93	67	97	85
Jun 25	95	97	99	**100**	**100**	**100**	**100**	**100**	96	82	73	67	61	56	52	81	88	90	86	80	88	96	99	**100**	52	**100**	87
Jun 26	96	94	95	97	98	86	79	72	68	64	70	64	61	74	74	72	71	67	61	64	78	93	97	99	61	99	79
Jun 27	**100**	**100**	**100**	**100**	**100**	99	78	78	81	74	58	55	47	47	46	43	42	54	60	62	69	71	75	77	42	**100**	72
Jun 28	73	74	61	61	67	68	71	77	82	89	90	87	83	75	74	82	83	86	86	85	89	89	92	94	61	94	80
Jun 29	95	97	97	98	99	99	98	96	92	81	74	73	66	62	71	59	73	91	87	81	88	87	90	93	59	99	85
Jun 30	96	96	97	98	99	98	95	93	94	92	80	67	62	58	55	52	49	45	45	57	62	63	89	78	45	99	76
Diurnal Maximum	100	100	100	100	100	100	100	100	96	94	94	93	91	88	87	82	88	91	87	85	89	96	99	100			
Daiurnal Average	76.3	76.7	77.6	80.4	82.6	80.0	74.9	69.1	63.6	58.0	53.5	50.3	47.5	45.9	44.7	45.1	45.6	49.2	50.9	53.7	60.2	66.0	71.5	74.7			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

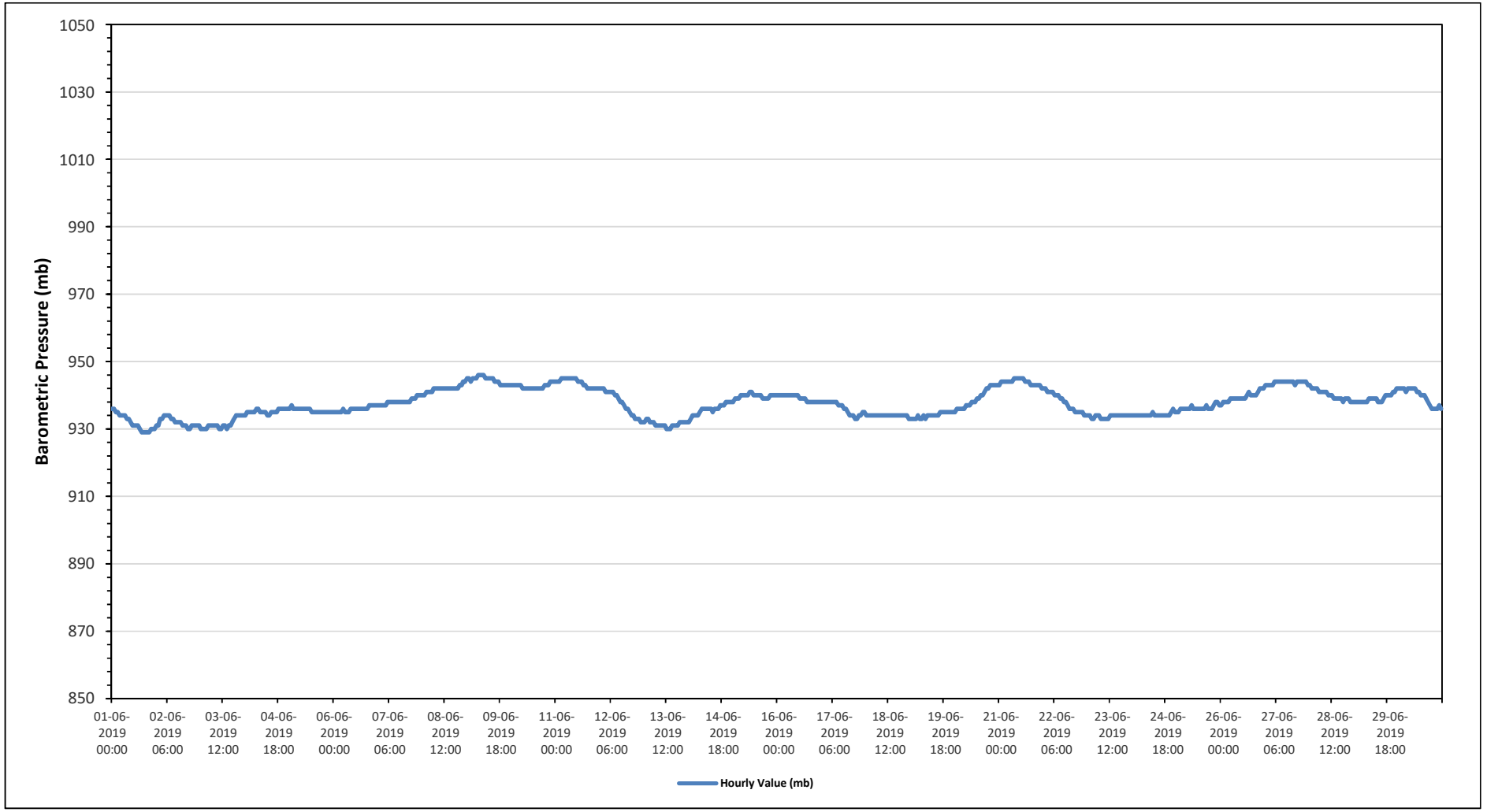
Maximum Hourly Value:	946	mb	on June 9 at hour 6	Hours in Service:	720
Maximum Daily Value:	945	mb	on June 9	Hours of Data:	720
Minimum Hourly Value:	929	mb	on June 1 at hour 16	Hours of Missing Data:	0
Minimum Daily Value:	931	mb	on June 13	Hours of Calibration:	0
Monthly Average:	938	mb		Operational 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
Jun 1	936	936	935	935	934	934	934	934	933	933	932	931	931	931	931	930	**929**	**929**	**929**	**929**	**929**	930	930	930	**929**	936	932
Jun 2	931	931	933	933	934	934	934	934	933	933	932	932	932	932	931	931	931	930	930	929	931	931	931	931	930	934	932
Jun 3	930	930	930	930	931	931	931	931	931	931	930	930	931	931	930	931	931	932	933	934	934	934	934	934	930	934	931
Jun 4	934	935	935	935	935	935	936	936	935	935	935	935	934	934	935	935	935	935	936	936	936	936	936	936	934	936	935
Jun 5	936	937	936	936	936	936	936	936	936	936	936	936	935	935	935	935	935	935	935	935	935	935	935	935	935	937	936
Jun 6	935	935	935	935	935	936	935	935	935	936	936	936	936	936	936	936	936	936	936	937	937	937	937	937	935	937	936
Jun 7	937	937	937	937	937	938	938	938	938	938	938	938	938	938	938	938	938	938	939	939	939	940	940	940	937	940	938
Jun 8	940	940	941	941	941	941	942	942	942	942	942	942	942	942	942	942	942	942	942	942	943	943	944	944	940	944	942
Jun 9	945	945	944	945	945	945	**946**	**946**	**946**	**946**	945	945	945	945	945	944	944	944	943	943	943	943	943	943	943	**946**	**945**
Jun 10	943	943	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942	943	943	943	944	944	944	942	944	943
Jun 11	944	944	944	945	945	945	945	945	945	945	945	945	944	944	944	943	943	942	942	942	942	942	942	942	942	945	944
Jun 12	942	942	942	941	941	941	941	941	940	940	939	938	938	937	936	936	935	934	934	933	933	933	932	932	932	942	938
Jun 13	932	933	933	932	932	932	931	931	931	931	931	931	930	930	930	931	931	931	931	932	932	932	932	932	930	933	**931**
Jun 14	932	933	934	934	934	934	935	936	936	936	936	936	936	935	936	936	936	937	937	937	938	938	938	938	932	938	936
Jun 15	938	939	939	939	940	940	940	940	940	941	941	940	940	940	940	940	939	939	939	939	940	940	940	940	938	941	940
Jun 16	940	940	940	940	940	940	940	940	940	940	940	940	939	939	939	939	938	938	938	938	938	938	938	938	938	940	939
Jun 17	938	938	938	938	938	938	938	938	938	937	937	937	936	936	935	934	934	934	933	933	934	934	935	935	933	938	936
Jun 18	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	933	933	934	934
Jun 19	933	933	933	933	934	933	933	934	933	934	934	934	934	934	934	934	935	935	935	935	935	935	935	935	933	935	934
Jun 20	935	936	936	936	936	936	937	937	937	938	938	938	939	939	940	940	941	942	942	943	943	943	943	943	935	943	939
Jun 21	943	944	944	944	944	944	944	944	945	945	945	945	945	945	944	944	944	943	943	943	943	943	943	942	942	945	944
Jun 22	942	942	941	941	941	941	940	940	940	939	939	938	938	937	936	936	936	935	935	935	935	935	934	934	934	942	938
Jun 23	934	934	933	933	934	934	934	933	933	933	933	933	934	934	934	934	934	934	934	934	934	934	934	934	933	934	934
Jun 24	934	934	934	934	934	934	934	934	934	934	934	935	934	934	934	934	934	934	934	934	934	935	936	935	934	936	934
Jun 25	935	935	936	936	936	936	936	936	937	936	936	936	936	936	936	936	937	936	936	936	937	938	938	937	935	938	936
Jun 26	937	938	938	938	938	939	939	939	939	939	939	939	939	939	940	941	940	940	940	940	941	942	942	942	937	942	940
Jun 27	943	943	943	943	943	944	944	944	944	944	944	944	944	944	944	944	943	944	944	944	944	944	944	943	943	944	944
Jun 28	943	942	942	942	942	941	941	941	941	941	940	940	940	939	939	939	939	939	938	939	939	939	938	938	938	943	940
Jun 29	938	938	938	938	938	938	938	938	939	939	939	939	939	938	938	938	939	940	940	940	940	941	941	942	938	942	939
Jun 30	942	942	942	942	941	942	942	942	942	942	941	941	940	940	940	939	938	937	936	936	936	936	937	936	936	942	940
Diurnal Maximum	945	945	944	945	945	945	946	946	946	946	945	945	945	945	945	944	944	944	944	944	944	944	944	944			
Daiurnal Average	938	938	938	938	938	938	938	938	938	938	938	938	938	937	937	937	937	937	937	937	937	938	938	938			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

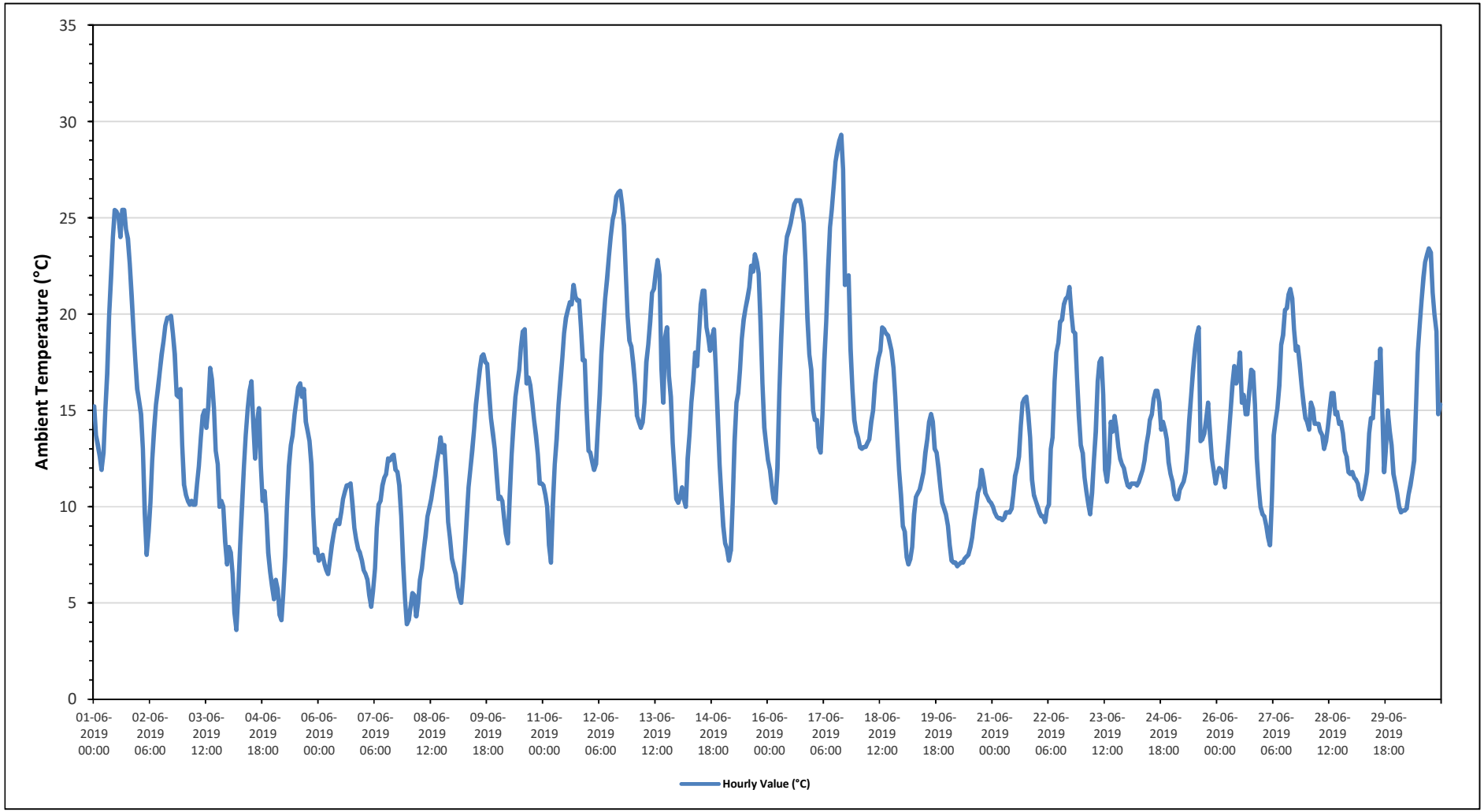
Maximum Hourly Value:	29.3	°C	on June 17 at hour 15	Hours in Service:	720
Maximum Daily Value:	20.5	°C	on June 17	Hours of Data:	720
Minimum Hourly Value:	3.6	°C	on June 4 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	8.7	°C	on June 6	Hours of Calibration:	0
Monthly Average:	14.0	°C		Operational 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
Jun 1	15.2	13.7	13.2	12.6	11.9	12.8	15.0	16.9	19.9	21.9	24.0	25.4	25.3	25.1	24.0	25.4	25.4	24.4	23.9	22.6	20.9	19.1	17.6	16.1	11.9	25.4	19.7
Jun 2	15.5	14.8	13.0	9.7	7.5	8.7	10.2	12.4	14.0	15.3	16.1	17.0	17.9	18.6	19.4	19.8	19.8	19.9	19.0	17.9	15.8	15.7	16.1	13.2	7.5	19.9	15.3
Jun 3	11.1	10.6	10.3	10.1	10.3	10.1	10.1	11.2	12.1	13.6	14.7	15.0	14.1	15.2	17.2	16.6	15.1	12.9	12.2	10.0	10.3	10.0	8.2	7.0	7.0	17.2	12.0
Jun 4	7.9	7.6	6.5	4.5	**3.6**	5.6	8.0	10.1	12.1	13.7	15.1	16.0	16.5	14.3	12.5	14.4	15.1	12.1	10.3	10.8	9.6	7.6	6.6	5.9	**3.6**	16.5	10.3
Jun 5	5.2	6.2	5.7	4.4	4.1	5.5	7.4	10.1	12.1	13.2	13.7	14.8	15.5	16.2	16.4	15.7	16.1	14.4	13.9	13.4	12.2	9.6	7.6	7.8	4.1	16.4	10.9
Jun 6	7.2	7.4	7.5	7.0	6.7	6.5	7.2	8.0	8.6	9.1	9.3	9.1	9.7	10.4	10.8	11.1	11.1	11.2	10.1	8.9	8.3	7.8	7.6	7.2	6.5	11.2	**8.7**
Jun 7	6.7	6.5	6.2	5.4	4.8	5.6	6.8	8.9	10.1	10.3	11.1	11.5	11.7	12.5	12.4	12.6	12.7	11.9	11.8	11.1	9.5	7.1	5.2	3.9	3.9	12.7	9.0
Jun 8	4.1	4.8	5.5	5.4	4.3	5.0	6.2	6.8	7.7	8.5	9.5	9.9	10.4	11.0	11.6	12.3	12.9	13.6	12.8	13.2	11.5	9.2	8.4	7.3	4.1	13.6	8.8
Jun 9	6.9	6.5	5.8	5.3	5.0	6.3	7.6	9.3	11.0	11.9	12.9	14.0	15.3	16.2	17.1	17.8	17.9	17.5	17.4	15.9	14.6	13.8	13.0	11.7	5.0	17.9	12.1
Jun 10	10.4	10.5	10.3	9.4	8.6	8.1	10.6	12.7	14.3	15.7	16.4	17.1	18.3	19.1	19.2	16.4	16.7	16.3	15.4	14.5	13.7	12.7	11.2	11.2	8.1	19.2	13.7
Jun 11	11.1	10.6	10.0	8.0	7.1	10.1	12.2	13.5	15.3	16.5	17.7	19.0	19.8	20.2	20.6	20.5	21.5	20.9	20.7	20.7	19.3	17.6	17.6	15.0	7.1	21.5	16.1
Jun 12	12.9	12.8	12.3	11.9	12.2	14.1	15.8	17.9	19.4	20.8	21.8	23.0	24.0	24.9	25.3	26.1	26.3	26.4	25.7	24.6	22.1	19.9	18.6	18.3	11.9	26.4	19.9
Jun 13	17.4	16.3	14.7	14.4	14.1	14.4	15.4	17.5	18.4	19.6	21.1	21.3	22.2	22.8	22.0	17.2	15.4	18.8	19.3	16.8	15.7	13.3	11.9	10.4	10.4	22.8	17.1
Jun 14	10.2	10.5	11.0	10.4	10.0	12.5	13.8	15.4	16.5	18.0	17.3	18.9	20.5	21.2	21.2	19.3	18.8	18.1	18.8	19.2	17.2	14.7	12.2	10.6	10.0	21.2	15.7
Jun 15	9.0	8.1	7.8	7.2	7.7	10.2	13.4	15.4	15.9	17.1	18.7	19.7	20.3	20.8	21.4	22.5	22.2	23.1	22.7	22.1	19.6	16.4	14.1	13.2	7.2	23.1	16.2
Jun 16	12.4	11.9	11.1	10.4	10.2	12.0	15.9	18.8	21.0	23.0	24.0	24.3	24.7	25.2	25.7	25.9	25.9	25.9	25.5	24.7	22.7	19.8	17.9	17.1	10.2	25.9	19.8
Jun 17	15.0	14.5	14.5	13.1	12.8	14.8	17.6	19.6	22.3	24.5	25.4	26.7	27.9	28.5	29.0	**29.3**	27.5	21.5	21.7	22.0	18.2	16.1	14.5	13.9	12.8	**29.3**	**20.5**
Jun 18	13.6	13.1	13.0	13.1	13.1	13.3	13.5	14.4	15.0	16.4	17.1	17.7	18.1	19.3	19.2	19.0	18.9	18.5	18.1	17.2	15.7	13.6	11.9	10.6	10.6	19.3	15.6
Jun 19	9.0	8.7	7.4	7.0	7.3	7.9	9.6	10.5	10.7	10.9	11.3	11.8	12.8	13.5	14.4	14.8	14.4	13.0	12.8	12.0	11.0	10.2	9.9	9.6	7.0	14.8	10.9
Jun 20	9.0	8.0	7.2	7.1	7.1	6.9	7.0	7.1	7.1	7.3	7.4	7.5	7.9	8.4	9.3	9.9	10.7	11.0	11.9	11.4	10.7	10.5	10.3	10.2	6.9	11.9	8.8
Jun 21	10.0	9.7	9.5	9.4	9.4	9.3	9.4	9.7	9.7	9.7	9.9	10.6	11.6	12.0	12.6	14.2	15.4	15.6	15.7	14.8	13.6	11.4	10.6	10.3	9.3	15.7	11.4
Jun 22	10.0	9.7	9.5	9.5	9.2	9.9	10.1	13.0	13.6	16.5	18.0	18.5	19.6	19.7	20.5	20.8	20.9	21.4	20.0	19.1	19.0	16.7	14.7	13.2	9.2	21.4	15.5
Jun 23	12.8	11.5	10.8	10.1	9.6	10.7	12.4	13.9	16.5	17.5	17.7	15.8	11.9	11.3	12.3	14.4	13.9	14.7	14.1	13.1	12.5	12.2	12.0	11.5	9.6	17.7	13.1
Jun 24	11.1	11.0	11.2	11.2	11.2	11.1	11.3	11.6	11.9	12.4	13.2	13.8	14.5	14.8	15.6	16.0	16.0	15.4	14.0	14.4	14.0	13.5	12.3	11.7	11.0	16.0	13.1
Jun 25	11.3	10.6	10.4	10.4	10.9	11.1	11.3	11.8	12.9	14.5	15.8	17.1	18.2	18.9	19.3	13.4	13.5	13.8	14.5	15.4	13.8	12.5	11.9	11.2	10.4	19.3	13.5
Jun 26	11.7	12.0	11.9	11.6	11.0	12.5	13.7	14.9	16.3	17.3	16.4	16.9	18.0	15.4	15.8	14.8	14.8	16.0	17.1	17.0	15.3	12.5	11.0	10.0	10.0	18.0	14.3
Jun 27	9.6	9.5	9.0	8.4	8.0	10.3	13.7	14.5	15.1	16.3	18.4	18.9	20.2	20.3	21.0	21.3	20.8	19.2	18.1	18.3	17.4	16.3	15.4	14.6	8.0	21.3	15.6
Jun 28	14.4	14.0	15.4	15.1	14.3	14.3	14.3	13.9	13.7	13.0	13.4	14.1	15.0	15.9	15.9	14.8	14.9	14.3	14.4	13.8	12.9	12.6	11.8	11.7	11.7	15.9	14.1
Jun 29	11.8	11.5	11.4	11.2	10.6	10.4	10.7	11.2	11.8	13.8	14.6	14.6	16.1	17.5	15.9	18.2	15.1	11.8	13.1	15.0	13.9	13.2	11.7	11.2	10.4	18.2	13.2
Jun 30	10.7	10.0	9.7	9.8	9.8	9.9	10.6	11.1	11.7	12.4	15.2	18.0	19.5	20.7	21.9	22.7	23.1	23.4	23.2	21.1	20.0	19.1	14.8	15.3	9.7	23.4	16.0
Diurnal Maximum	17.4	16.3	15.4	15.1	14.3	14.8	17.6	19.6	22.3	24.5	25.4	26.7	27.9	28.5	29.0	29.3	27.5	26.4	25.7	24.7	22.7	19.9	18.6	18.3			
Daiurnal Average	10.8	10.4	10.1	9.4	9.1	10.0	11.4	12.7	13.9	15.0	15.9	16.6	17.3	17.7	18.0	17.9	17.8	17.2	16.9	16.4	15.0	13.5	12.2	11.4			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

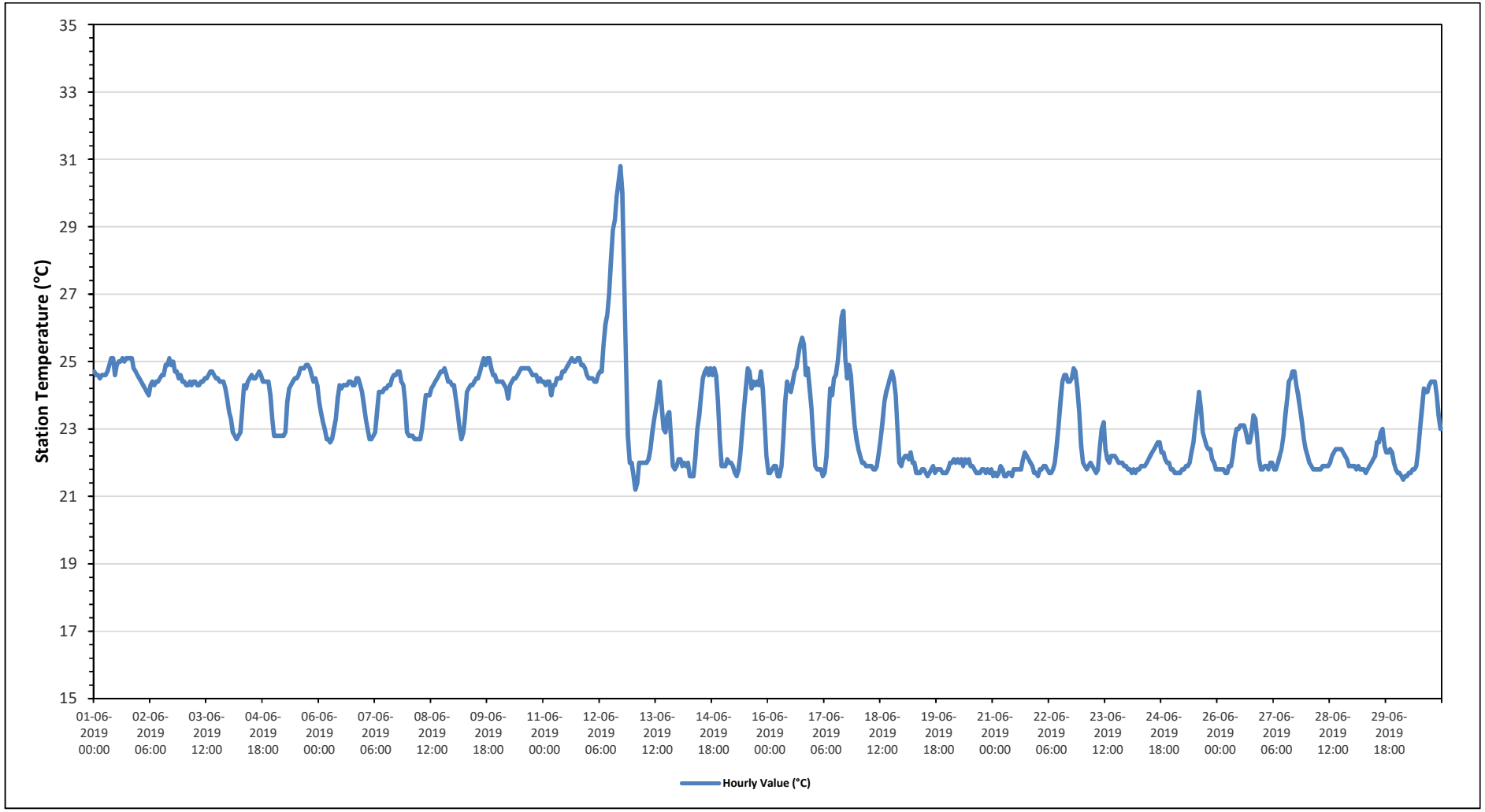
Maximum Hourly Value:	30.8	°C	on June 12 at hour 17	Hours in Service:	720
Maximum Daily Value:	26.2	°C	on June 12	Hours of Data:	720
Minimum Hourly Value:	21.2	°C	on June 13 at hour 1	Hours of Missing Data:	0
Minimum Daily Value:	21.8	°C	on June 21	Hours of Calibration:	0
Monthly Average:	23.3	°C		Operational 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
Jun 1	24.7	24.6	24.6	24.5	24.6	24.6	24.6	24.7	24.9	25.1	25.1	24.6	24.9	25.0	25.0	25.1	25.0	25.1	25.1	25.1	25.1	24.8	24.7	24.6	24.5	25.1	24.8
Jun 2	24.5	24.4	24.3	24.2	24.1	24.0	24.3	24.4	24.3	24.4	24.4	24.5	24.6	24.6	24.9	24.9	25.1	24.9	25.0	24.7	24.7	24.5	24.6	24.4	24.0	25.1	24.5
Jun 3	24.4	24.3	24.3	24.4	24.3	24.4	24.4	24.3	24.3	24.4	24.4	24.5	24.5	24.6	24.7	24.7	24.6	24.5	24.5	24.4	24.4	24.4	24.2	23.9	23.9	24.7	24.4
Jun 4	23.5	23.3	22.9	22.8	22.7	22.8	22.9	23.6	24.3	24.2	24.4	24.5	24.6	24.5	24.5	24.6	24.7	24.6	24.4	24.4	24.4	24.4	24.0	23.3	22.7	24.7	23.9
Jun 5	22.8	22.8	22.8	22.8	22.8	22.8	22.9	23.8	24.2	24.3	24.4	24.5	24.5	24.6	24.8	24.8	24.8	24.9	24.9	24.8	24.6	24.4	24.5	24.3	22.8	24.9	24.0
Jun 6	23.8	23.5	23.2	23.0	22.7	22.7	22.6	22.7	23.0	23.3	23.9	24.3	24.2	24.3	24.3	24.3	24.4	24.4	24.3	24.3	24.5	24.5	24.3	24.1	22.6	24.5	23.8
Jun 7	23.7	23.3	23.0	22.7	22.7	22.8	22.9	23.5	24.1	24.1	24.1	24.2	24.2	24.3	24.3	24.5	24.6	24.6	24.7	24.7	24.4	24.3	23.8	22.9	22.7	24.7	23.9
Jun 8	22.8	22.8	22.8	22.7	22.7	22.7	22.7	23.0	23.5	24.0	24.0	24.0	24.2	24.3	24.4	24.5	24.6	24.7	24.7	24.8	24.6	24.4	24.4	24.3	22.7	24.8	23.8
Jun 9	24.3	23.9	23.5	23.0	22.7	22.9	23.3	24.1	24.2	24.3	24.3	24.4	24.5	24.5	24.7	24.9	25.1	24.9	25.1	25.1	24.8	24.6	24.6	24.4	22.7	25.1	24.3
Jun 10	24.4	24.4	24.4	24.3	24.2	23.9	24.3	24.4	24.5	24.5	24.6	24.7	24.8	24.8	24.8	24.8	24.8	24.7	24.6	24.6	24.6	24.4	24.5	24.4	23.9	24.8	24.5
Jun 11	24.4	24.3	24.4	24.4	24.0	24.3	24.3	24.5	24.5	24.5	24.7	24.7	24.8	24.9	25.0	25.1	25.0	25.0	25.1	25.1	24.9	24.9	24.8	24.6	24.0	25.1	24.7
Jun 12	24.5	24.5	24.5	24.4	24.4	24.6	24.7	24.7	25.5	26.1	26.4	27.0	28.0	28.9	29.2	29.9	30.3	**30.8**	30.0	27.4	25.0	22.8	22.0	22.0	22.0	**30.8**	**26.2**
Jun 13	21.6	**21.2**	21.4	22.0	22.0	22.0	22.0	22.0	22.1	22.4	22.9	23.3	23.6	24.0	24.4	23.7	23.0	22.9	23.4	23.5	22.7	21.9	21.8	21.9	**21.2**	24.4	22.6
Jun 14	22.1	22.1	21.9	22.0	21.9	22.0	21.6	21.6	21.6	22.2	23.0	23.4	24.0	24.5	24.7	24.8	24.6	24.8	24.6	24.8	24.6	23.8	22.7	21.9	21.6	24.8	23.1
Jun 15	21.9	21.9	22.1	22.0	22.0	21.9	21.7	21.6	21.8	22.2	22.9	23.6	24.2	24.8	24.7	24.2	24.4	24.3	24.4	24.3	24.7	24.2	23.2	22.2	21.6	24.8	23.1
Jun 16	21.7	21.7	21.8	21.9	21.9	21.6	21.6	21.9	22.7	23.8	24.4	24.2	24.1	24.4	24.7	24.8	25.2	25.5	25.7	25.5	24.6	24.8	24.2	23.6	21.6	25.7	23.6
Jun 17	22.7	21.9	21.8	21.8	21.8	21.6	21.7	22.2	23.3	24.2	24.0	24.5	24.6	25.0	25.6	26.3	26.5	25.1	24.5	24.9	24.6	23.8	23.1	22.7	21.6	26.5	23.7
Jun 18	22.4	22.2	22.0	22.0	21.9	21.9	21.9	21.9	21.8	21.8	21.9	22.3	22.7	23.2	23.8	24.1	24.3	24.5	24.7	24.5	24.0	23.0	22.0	21.9	21.8	24.7	22.8
Jun 19	22.1	22.2	22.2	22.1	22.3	22.0	22.0	21.7	21.7	21.7	21.8	21.8	21.7	21.6	21.7	21.8	21.9	21.7	21.8	21.8	21.8	21.7	21.7	21.7	21.6	22.3	21.9
Jun 20	21.8	22.0	22.0	22.1	22.0	22.1	22.0	22.1	21.9	22.1	22.0	22.1	21.9	21.9	21.8	21.7	21.7	21.7	21.8	21.8	21.7	21.8	21.7	21.8	21.7	22.1	21.9
Jun 21	21.6	21.7	21.6	21.7	21.9	21.8	21.6	21.6	21.7	21.7	21.6	21.8	21.8	21.8	21.8	21.8	22.1	22.3	22.2	22.1	22.0	21.9	21.7	21.7	21.6	22.3	**21.8**
Jun 22	21.6	21.8	21.8	21.9	21.9	21.8	21.7	21.7	21.8	22.0	22.5	23.1	23.8	24.4	24.6	24.6	24.4	24.4	24.5	24.8	24.7	24.2	23.5	22.5	21.6	24.8	23.1
Jun 23	22.0	21.9	21.8	21.9	22.0	21.9	21.8	21.7	21.8	22.5	23.0	23.2	22.4	22.1	22.0	22.2	22.2	22.2	22.1	22.0	22.0	22.0	21.9	21.9	21.7	23.2	22.1
Jun 24	21.8	21.8	21.7	21.8	21.7	21.8	21.8	21.9	21.9	21.9	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.6	22.3	22.3	22.1	22.0	22.0	21.8	21.7	22.6	22.1
Jun 25	21.8	21.7	21.7	21.7	21.7	21.8	21.8	21.9	21.9	22.0	22.3	22.6	23.1	23.6	24.1	23.6	22.9	22.7	22.5	22.4	22.4	22.1	22.0	21.8	21.7	24.1	22.3
Jun 26	21.8	21.8	21.8	21.8	21.7	21.7	21.9	21.9	22.2	22.7	23.0	23.0	23.1	23.1	23.1	22.9	22.6	22.6	22.9	23.4	23.3	22.7	22.1	21.8	21.7	23.4	22.5
Jun 27	21.8	21.9	21.9	21.8	22.0	22.0	21.8	21.8	22.0	22.2	22.4	22.8	23.4	23.9	24.4	24.5	24.7	24.7	24.3	24.0	23.6	23.2	22.7	22.4	21.8	24.7	22.9
Jun 28	22.2	22.0	21.9	21.8	21.8	21.8	21.8	21.8	21.9	21.9	21.9	21.9	22.0	22.2	22.3	22.4	22.4	22.4	22.4	22.3	22.2	22.1	21.9	21.9	21.8	22.4	22.1
Jun 29	21.9	21.9	21.8	21.9	21.8	21.8	21.8	21.7	21.8	21.9	22.0	22.1	22.2	22.6	22.6	22.9	23.0	22.5	22.3	22.3	22.4	22.3	22.0	21.8	21.7	23.0	22.1
Jun 30	21.7	21.7	21.6	21.5	21.6	21.6	21.7	21.7	21.8	21.8	21.9	22.4	23.0	23.6	24.2	24.1	24.1	24.3	24.4	24.4	24.4	24.0	23.4	23.0	21.5	24.4	22.8
Diurnal Maximum	24.7	24.6	24.6	24.5	24.6	24.6	24.7	24.7	25.5	26.1	26.4	27.0	28.0	28.9	29.2	29.9	30.3	30.8	30.0	27.4	25.1	24.9	24.8	24.6			
Daiurnal Average	22.7	22.7	22.6	22.6	22.5	22.5	22.5	22.7	22.9	23.1	23.3	23.5	23.7	23.9	24.1	24.2	24.2	24.1	24.1	24.0	23.8	23.5	23.1	22.9			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	18.1	kph	on June 18 at hour 16	Hours in Service:	720
Maximum Daily Value:	12.5	kph	on June 20	Hours of Data:	720
Minimum Hourly Value:	0.0	kph	on June 22 at hour 22	Hours of Missing Data:	0
Minimum Daily Value:	1.6	kph	on June 22	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
Jun 1	1.9	1.8	3.2	2.8	2.2	2.9	4.4	3.8	4.1	5.6	5.6	10.7	12.3	13	13.8	13.6	15.6	15.7	14.4	13.1	6	4.8	4.6	7.1	1.8	15.7	7.6
Jun 2	9.8	12.3	9.4	2.2	3.4	6.3	6.7	9.2	10	11	13.4	11.6	11	10.5	8.9	7.9	5.9	7.1	4.3	0.8	1.3	4.4	8.2	7.4	0.8	13.4	7.6
Jun 3	0.8	1.4	2.5	2.1	3.9	5	4.5	5.1	8.9	10.4	8.9	9.6	5.7	7	14.3	15	11.4	7.5	6.5	8.7	7.6	6.6	4.8	6.5	0.8	15.0	6.9
Jun 4	6.1	4	1.6	1.3	1.6	4.3	7.6	8.4	12.6	11	11.1	11.4	13.1	15.7	12.9	13.9	9	8.3	1	1.4	1.9	2.7	3.2	2.6	1.0	15.7	6.9
Jun 5	2.8	2.8	2.4	2.5	3.1	3.7	4.1	1.9	2.2	1.8	2.5	4.8	3.9	4.3	3.5	4.2	9.7	10.6	10.2	6.8	4.9	4.6	4.4	8.4	1.8	10.6	4.6
Jun 6	6.6	7.7	12	13.2	11.2	11	11.3	12.7	13.9	12.9	11	11.5	9.9	8.6	7.7	6.8	5.6	3.2	4.1	4.3	5.6	4	2.7	0.7	0.7	13.9	8.3
Jun 7	2.4	4.9	4.7	5.9	4.9	4.4	6.1	5.4	5	8.8	8.7	10.4	10	12.9	11.8	12.1	10.4	10	10	8.4	5.2	2.3	1.3	1.1	1.1	12.9	7.0
Jun 8	1.5	3	2.5	3.7	2.3	4	7.6	8.5	7.7	6.4	8.9	7	7.7	5.9	5.5	5	5	5	4.6	4.1	5.2	3.7	3.8	4.1	1.5	8.9	5.1
Jun 9	0.3	1.1	1.1	2.9	3.1	2	3.4	2.7	3.5	5.7	5.1	6.3	7.6	7.7	9.2	8.9	5.7	9.5	11	9.7	4.5	5.1	5.3	5.3	0.3	11.0	5.3
Jun 10	4.7	4.8	4.8	6	4.6	2.6	4.5	8.7	9.8	8.2	10.9	9.4	7.7	8.2	8	9.8	6.5	5.1	2.7	3.4	2.6	1.6	1.9	3.9	1.6	10.9	5.9
Jun 11	6.2	4.2	3.3	0.3	1.9	3.8	5.5	7.5	8.8	7.7	9.6	9.8	9.7	9.8	9.4	9.6	9.6	9.9	9.9	6.6	1.8	3.5	6	1.5	0.3	9.9	6.5
Jun 12	3	3.3	3.3	3	4.2	5.7	7.6	8.1	8.7	7.6	9.4	10.4	9.9	11.2	11.3	10	10.6	10	7.6	3.3	3.5	1.7	1.8	2.2	1.7	11.3	6.6
Jun 13	2.4	5.6	3.8	3.6	4.1	4.8	4.9	9	10.9	10.7	9.4	7	11.9	11.9	7.7	12.1	6.5	4.4	5.3	5.2	2.5	0.3	0.5	1.3	0.3	12.1	6.1
Jun 14	3.2	3.9	2	1.4	2.1	2.8	3.3	5.4	5.4	6.2	6.3	6.9	6.5	7.4	6.5	7.7	13.4	10.4	7	5.6	1.2	3.5	1.4	1.5	1.2	13.4	5.0
Jun 15	0.4	1.5	1.3	0.6	0.5	1.4	1	2.2	5.2	4.4	4.2	5.3	6.6	6.2	5.6	5	3.5	3.1	4.3	3.8	4.2	2	0.8	1.4	0.4	6.6	3.1
Jun 16	1.5	1.7	1.6	1.7	2.4	1.4	1.3	1.6	2.4	3	3.5	5.6	5.9	4.4	5	5.1	5.1	5.2	5.9	4.4	4.9	4	3	3.6	1.3	5.9	3.5
Jun 17	1.2	1	1.1	0.9	1.2	1.3	2.7	3.4	3.4	4.1	4.2	4.4	4.9	5.2	5	4.5	3.1	7.2	3.1	4.7	12.7	7.6	3.6	2.9	0.9	12.7	3.9
Jun 18	1.2	4.1	3.3	4.8	5.3	5.1	5.1	8	11.5	15.7	15.9	15	15.1	16.3	17.4	16.5	**18.1**	15.4	15.1	15.5	10.3	8.1	6.7	4.8	1.2	**18.1**	10.6
Jun 19	4.7	5.4	3.7	4.8	4.6	6.1	8	7.6	8.6	4.1	5.8	6.4	6.8	8	7.3	6.3	5.4	2.7	5.6	4.1	2.5	4.9	6.1	8.4	2.5	8.6	5.7
Jun 20	11.4	11.7	13.8	13.2	11.9	12.4	13.9	15.6	15.5	15.2	15	13.3	13	15.7	16	15	14.4	8.9	9.2	11.2	8.9	7.7	7.5	8.5	7.5	16.0	**12.5**
Jun 21	9.6	8.3	6.6	6.6	7.1	6	6.8	6	6	6.3	6.3	5.6	5.2	4.9	3.9	2.2	2	2.1	1	2	0.5	0.3	0.8	0.6	0.3	9.6	4.4
Jun 22	0.7	0.8	1.8	0.7	1.4	1.1	0.6	1.2	1.6	2.1	3.5	2.8	2.7	2.6	1.9	3.9	1.3	0.5	3.6	1.1	0.5	0.4	**0**	0.5	**0.0**	3.9	**1.6**
Jun 23	1	1.3	0.9	1.5	0.2	1.5	3	1.7	2.6	6.8	9.2	5.5	3.7	6.1	3.4	3.4	2.8	4	2.8	2.1	2.9	3.4	3.9	2.2	0.2	9.2	3.2
Jun 24	3.3	3.9	3.9	3.5	2.9	3.5	4	5.3	4.1	4.8	5.1	6.6	7.5	7.3	7.6	7.4	9.8	9.8	7.9	6.1	4	5.2	5	1.5	1.5	9.8	5.4
Jun 25	2	2.2	2.5	4	1.2	2.9	3.6	3.8	3.2	3.7	4.6	4.6	4.9	4.8	6.4	5.1	3.4	3.5	0.7	1.1	1.4	0.9	2.1	3.1	0.7	6.4	3.2
Jun 26	3.6	1.4	3.2	3.5	2.8	0.8	1.2	2.9	2.7	1.1	3.6	1.5	3.5	1.6	5.1	10.2	8.2	3.7	5.3	4	0.7	0.2	0.3	0.1	0.1	10.2	3.0
Jun 27	1.5	1.8	0.6	0.8	0.3	0.9	2.1	4.6	4.8	4.3	7.5	9.3	11	11.9	9.9	9.8	9	4.1	1	1.8	3	3.8	2.2	2.9	0.3	11.9	4.5
Jun 28	3.9	4.2	8.1	8.1	7.5	8	7	7.1	7.7	9	9.1	12.2	11.3	12.9	12.8	13.2	9.5	6.8	6.1	8	7.2	5.1	3.8	5.2	3.8	13.2	8.1
Jun 29	4.8	5.3	5.3	4.5	5.6	5.4	6.4	6.8	7.3	8.1	7.2	6.2	6	4.7	7.5	7.5	6.5	2.9	0.8	1.3	3.4	3.3	4.9	5.3	0.8	8.1	5.3
Jun 30	5.5	5.7	6	7.7	6.8	4.2	4.1	4.7	3	4.8	6.1	5.7	8.3	10.1	9.2	11.3	10	9.7	7.5	5.1	6.9	6.4	2.8	4.1	2.8	11.3	6.5
Diurnal Maximum	11	12	14	13	12	12	14	16	16	16	16	15	15	16	17	17	18	16	15	16	13	8	8	9			
Daiurnal Average	3.6	4.0	4.0	3.9	3.8	4.2	5.1	6.0	6.7	7.1	7.7	7.9	8.1	8.6	8.5	8.8	7.9	6.9	6.0	5.3	4.3	3.7	3.4	3.6			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
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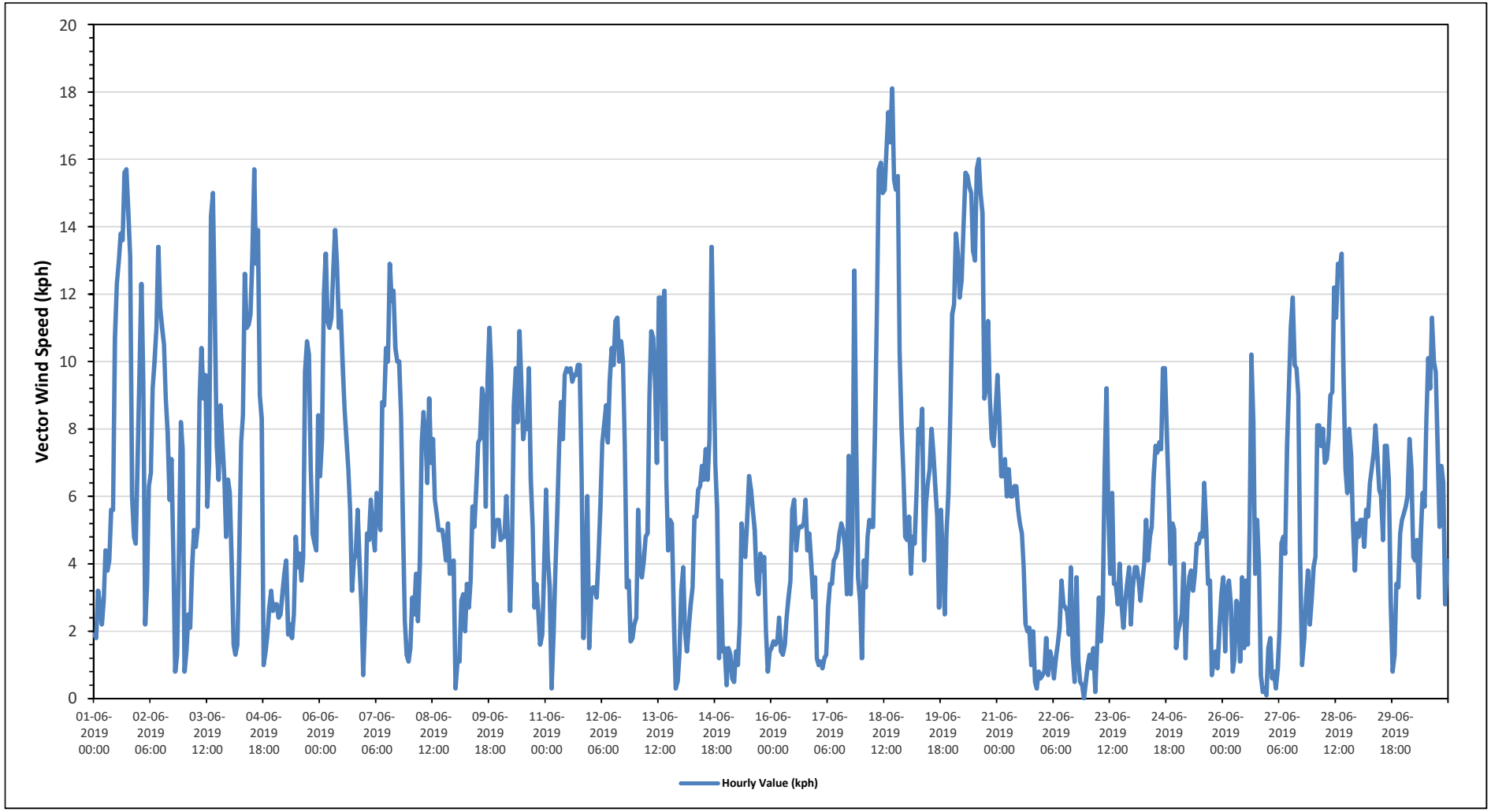
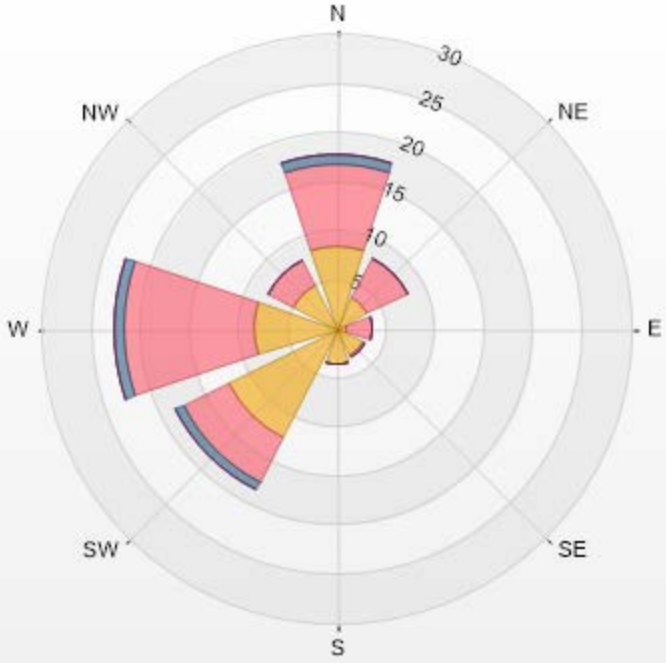
Timeseries Chart of Hourly Average for VWS - Reno Site



Wind: PRAMP RENO Poll.: PRAMP RENO-WDS[KPH] Monthly: 06-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 14.76% Valid Data: 99.72% Calm Avg: 1.08 [KPH]

Direction	1.8-6	6-15	15-29	29-39	>39.0	Total
N	8.5	8.36	0.84	0	0	17.7
NE	3.48	4.6	0	0	0	8.08
E	0.97	2.79	0	0	0	3.76
SE	3.06	0.14	0	0	0	3.2
S	3.62	0	0	0	0	3.62
SW	12.4	5.01	0.97	0	0	18.38
W	8.36	13.23	1.11	0	0	22.7
NW	5.01	2.79	0	0	0	7.8
Summary	45.4	36.92	2.92	0	0	85.24

PRAMP RENO Poll.: PRAMP RENO-WDS[KPH] 01-06-2019 00:00 - 30-06-2019 23:00 Calm: 14.76% Calm Poll Avg: 1.08[KPH]



% Icon Classes (KPH)	45	1.8-6	3	6-15	3	15-29	0	29-39	0	>39.0

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

Monthly Average:	293 (WNW) degree	Hours in Service:	720
		Hours of Data:	720
		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
Jun 1	S	SSE	S	S	S	S	S	S	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	WNW	W	W	248	WSW
Jun 2	W	W	WNW	WNW	SW	WSW	WSW	W	W	W	WSW	WSW	W	W	W	WSW	W	W	WSW	WNW	SSW	SW	WSW	SW	260	WSW
Jun 3	ENE	SW	SSW	SSW	SSW	SW	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	WSW	WNW	W	W	W	WSW	SW	249	WSW
Jun 4	WSW	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	NNE	WNW	NNW	SW	SW	SW	WSW	251	WSW
Jun 5	SW	WSW	WSW	SW	SW	SW	WSW	SW	S	SW	WSW	SW	W	NW	N	NNW	NE	NNE	NE	NE	NNE	NNE	NE	NE	360	N
Jun 6	NE	NE	ENE	ENE	ENE	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	E	WSW	WSW	WSW	W	W	W	59	ENE
Jun 7	NNW	N	N	N	N	NNE	ENE	E	NE	NE	N	N	N	N	NNW	N	N	N	N	N	N	N	NW	W	5	N
Jun 8	NNW	NNW	NNW	N	NNE	NNE	NE	NE	NNE	N	NNW	N	NNW	NNW	N	NNW	NNW	NW	N	N	NE	NE	NE	NNE	4	N
Jun 9	NW	SSW	SW	WSW	SW	SW	SW	WSW	W	W	WNW	W	W	WNW	W	W	WNW	WSW	WSW	WSW	SW	SW	SW	SW	259	WSW
Jun 10	SW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	WSW	W	W	W	N	N	NNW	NNW	NNE	N	WNW	W	SW	269	W
Jun 11	WSW	SW	SW	SSE	SW	SW	WSW	WSW	WSW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	SW	WSW	SW	254	WSW
Jun 12	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	W	WSW	WSW	W	W	WSW	W	W	W	WNW	WNW	NW	NW	WSW	WSW	261	W
Jun 13	SW	W	WNW	WSW	SW	SW	SW	WSW	WSW	WSW	W	W	W	W	NW	NNE	N	WNW	NW	NW	NW	NNW	N	SW	275	W
Jun 14	WSW	WSW	W	W	W	NNW	NW	NW	WNW	NW	WNW	WNW	WNW	WNW	NW	NNW	NNW	N	N	NNW	NNW	N	E	SW	318	NW
Jun 15	W	SW	W	NNW	NNW	WNW	NNW	N	N	NNW	NNW	N	NNW	NNW	NNW	NNW	N	NE	SE	SE	SE	SE	S	SSW	356	N
Jun 16	SSW	SSW	SSW	SW	SW	SSW	SSW	S	S	S	S	SE	SE	SE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SE	148	SE
Jun 17	SSW	SSW	SSW	S	S	S	SSE	SSE	S	S	S	SSE	S	SSE	SSE	SSW	SSW	SSW	S	SW	WSW	W	W	SW	204	SSW
Jun 18	SE	SSW	SSW	SSW	SSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	241	WSW
Jun 19	SSW	SW	SW	SW	SW	SW	WSW	WSW	WSW	W	WSW	WSW	WSW	WSW	SW	WSW	W	WSW	W	W	NW	NW	NNW	N	256	WSW
Jun 20	N	NNE	NNE	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	N	N	NNE	NNE	NNE	N	14	NNE
Jun 21	N	NNE	NNE	N	NNW	NNW	N	N	N	N	N	NNW	NW	NW	NW	WNW	N	N	SSE	ESE	SE	SW	SSE	SSW	354	N
Jun 22	SW	WSW	SW	SW	WSW	SW	SW	S	S	SSE	SSE	S	S	WSW	SSW	WNW	NW	WNW	NE	NE	SE	SSE	SW	SSW	203	SSW
Jun 23	SW	WSW	WSW	SW	W	NNE	NNE	NNE	W	WSW	W	WNW	NNW	W	WSW	W	W	N	NW	NW	NW	WNW	N	N	295	WNW
Jun 24	W	W	W	W	WNW	NW	NW	NNW	N	NW	NW	NW	NW	NNW	N	NNW	NW	NW	NW	NW	NNW	N	NE	NNW	325	NW
Jun 25	WNW	W	W	W	N	NNE	NNE	NNE	N	N	NW	N	NNW	NW	NE	SE	SW	WSW	W	N	WNW	WSW	WSW	WSW	328	NNW
Jun 26	SW	NNW	NNE	NNE	NNE	NE	S	ENE	ENE	ESE	W	NNW	N	NE	E	ENE	ESE	ENE	ENE	E	ESE	WNW	NW	N	64	ENE
Jun 27	NNE	NE	NNE	NNE	NE	NE	NE	NE	NNE	NE	E	E	ESE	E	E	E	ESE	SE	SE	NNE	N	N	NNE	NNE	77	ENE
Jun 28	NNE	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	NE	ENE	ENE	ENE	ENE	ENE	E	E	ENE	NE	NE	ENE	ENE	NNE	NNE	64	ENE
Jun 29	NNE	N	NNE	N	N	N	N	N	N	N	N	N	NNE	N	W	WNW	NNW	WNW	W	WNW	W	W	WSW	WSW	342	NNW
Jun 30	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	W	NNE	WNW	242	WSW

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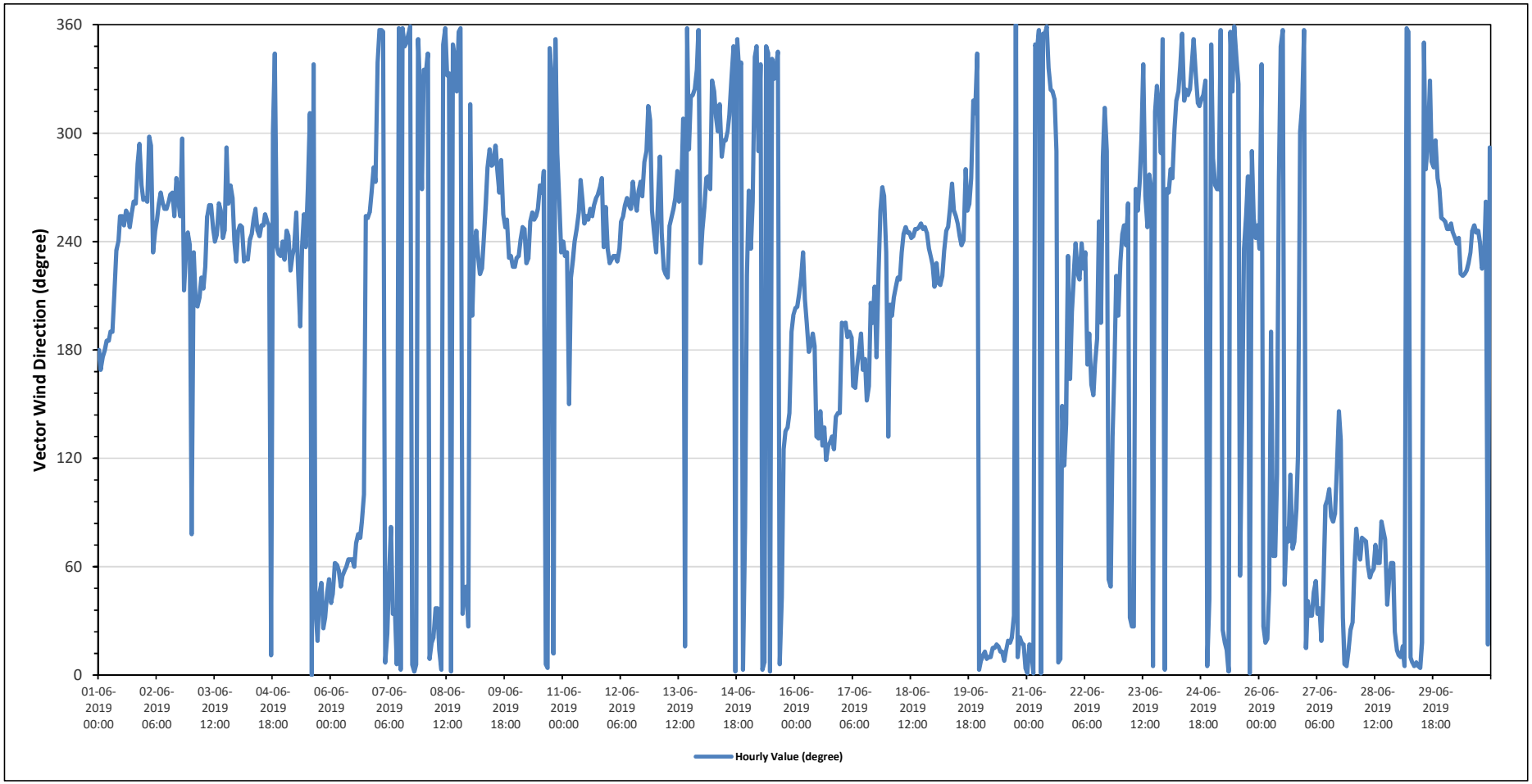

VOC CANISTER SAMPLING RESULTS

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	2019-06-14
Canister Sample	Methane
Canister ID	32221

Method	NA-025		Method	NA-024		Method	AC-058	
Maximum Reading	2.6		Maximum Reading	3.4		Maximum Reading	17.3	
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.2	2,5-Dimethylthiophene	0	0.5	1,1,1-Trichloroethane	0	0.03
Acetylene	0	0.1	2-Ethylthiophene	0	0.3	1,1,2,2-Tetrachloroethane	0	0.03
cis-2-Butene	0	0.1	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	0.1	Butyl mercaptan	0	0.5	1,1-Dichloroethylene	0	0.07
Ethylene	0	0.1	Carbon disulphide	0	0.3	1,2,3-Trimethylbenzene	0	0.08
Isobutane	0	0.2	Carbonyl sulphide	1	0.5	1,2,4-Trichlorobenzene	0	1.3
Isobutylene	0	0.2	Dimethyl disulphide	0	0.3	1,2,4-Trimethylbenzene	0	0.08
Methane	2.6	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	0.1	Ethyl sulphide	0	0.5	1,2-Dichloroethane	0	0.02
Propylene	0	0.2	Hydrogen sulphide	3.4	0.2	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	0.1	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	0.7	1,4-Dichlorobenzene	0	0.7
			Propyl mercaptan	0	0.7	1,4-Dioxane	0	0.7
			tert-Butyl mercaptan	0	0.5	1-Butene/Isobutylene	4.15	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	17.3	0.7
						Acrolein	0	0.5
						Benzene	0.8	0.02
						Benzyl chloride	0	0.7
						Bromodichloromethane	0	0.03
						Bromoform	0.05	0.03
						Bromomethane	0	0.02
						Carbon disulfide	0.22	0.02
						Carbon tetrachloride	0.05	0.02
						Chlorobenzene	0	0.03
						Chloroethane	0.06	0.03
						Chloroform	0	0.03
						Chloromethane	0.78	0.03
						cis-1,2-Dichloroethene	0	0.02
						cis-1,3-Dichloropropene	0	0.07
						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	6.2	0.5
						Ethyl acetate	0	0.7
						Ethylbenzene	0	0.02
						Freon-11	0.16	0.03
						Freon-113	0	0.02
						Freon-114	0	0.03

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PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2019-06-14**				
Canister Sample	**Methane**				
Canister ID	**32221**				
Method	**NA-025**	**Method**	**NA-024**	**Method**	**AC-058**
Maximum Reading	**2.6**	**Maximum Reading**	**3.4**	**Maximum Reading**	**17.3**
Parameter	**Result (ppmv) RDL (ppmv)**	**Parameter**	**Result (ppbv) RDL (ppbv)**	**Parameter**	**Result (ppbv) RDL (ppbv)**
				Freon-12	0.36 0.03
				Hexachloro-1,3-butadiene	0 0.83
				Isobutane	2.81 0.03
				Isopentane	0.19 0.05
				Isoprene	1.25 0.02
				Isopropyl alcohol	0.8 0.7
				Isopropylbenzene	0 0.02
				m,p-Xylene	0 0.05
				m-Diethylbenzene	0 0.07
				m-Ethyltoluene	0 0.13
				Methyl butyl ketone	0 0.83
				Methyl ethyl ketone	0 0.5
				Methyl isobutyl ketone	0 0.7
				Methyl methacrylate	0 0.12
				Methyl tert butyl ether	0 0.05
				Methylcyclohexane	0 0.02
				Methylcyclopentane	0 0.03
				Methylene chloride	0 0.5
				n-Butane	0.52 0.05
				n-Decane	0 0.10
				n-Dodecane	0 0.7
				n-Heptane	0 0.02
				n-Hexane	0 0.02
				n-Nonane	0.16 0.02
				n-Octane	0.11 0.03
				n-Pentane	0.2 0.2
				n-Propylbenzene	0 0.08
				n-Undecane	0 0.8
				Naphthalene	0 0.8
				o-Ethyltoluene	0.02 0.02
				o-Xylene	0 0.02
				p-Diethylbenzene	0.12 0.07
				p-Ethyltoluene	0 0.12
				Styrene	0.45 0.07
				Tetrachloroethylene	0 0.07
				Tetrahydrofuran	0 0.7
				Toluene	0.75 0.02
				trans-1,2-Dichloroethylene	0.97 0.02
				trans-1,3-Dichloropropylene	0.07 0.07
				trans-2-Butene	0 0.02
				trans-2-Pentene	0 0.03
				Trichloroethylene	0 0.07
				Vinyl acetate	0 0.7
				Vinyl chloride	0 0.03

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PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2019-06-14**
Canister Sample	**Blank**
Canister ID	**28916**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading	**0**		**Maximum Reading**	**0**		**Maximum Reading**	**17.8**	
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.1	2,5-Dimethylthiophene	0	0.3	1,1,1-Trichloroethane	0	0.02
Acetylene	0	0.1	2-Ethylthiophene	0	0.2	1,1,2,2-Tetrachloroethane	0	0.02
cis-2-Butene	0	0.0	2-Methylthiophene	0	0.2	1,1,2-Trichloroethane	0	0.02
Ethane	0	0.1	3-Methylthiophene	0	0.3	1,1-Dichloroethane	0	0.02
Ethylacetylene	0	0.1	Butyl mercaptan	0	0.3	1,1-Dichloroethylene	0	0.04
Ethylene	0	0.1	Carbon disulphide	0	0.2	1,2,3-Trimethylbenzene	0	0.05
Isobutane	0	0.1	Carbonyl sulphide	0	0.3	1,2,4-Trichlorobenzene	0	0.8
Isobutylene	0	0.1	Dimethyl disulphide	0	0.2	1,2,4-Trimethylbenzene	0	0.05
Methane	0	0.1	Dimethyl sulphide	0	0.2	1,2-Dibromoethane	0	0.02
n-Butane	0	0.2	Ethyl mercaptan	0	0.3	1,2-Dichlorobenzene	0	0.03
n-Propane	0	0.1	Ethyl sulphide	0	0.3	1,2-Dichloroethane	0	0.01
Propylene	0	0.1	Hydrogen sulphide	0	0.1	1,2-Dichloropropane	0	0.01
Propyne	0	0.1	Isobutyl mercaptan	0	0.3	1,3,5-Trimethylbenzene	0	0.02
trans-2-Butene	0	0.1	Isopropyl mercaptan	0	0.3	1,3-Butadiene	0	0.02
			Methyl mercaptan	0	0.2	1,3-Dichlorobenzene	0	0.3
			Pentyl mercaptan	0	0.4	1,4-Dichlorobenzene	0	0.4
			Propyl mercaptan	0	0.4	1,4-Dioxane	0	0.4
			tert-Butyl mercaptan	0	0.3	1-Butene/Isobutylene	7.22	0.02
			Thiophene	0	0.2	1-Hexene/2-Methyl-1-pentene	0	0.02
						1-Pentene	0	0.01
						2,2,4-Trimethylpentane	0	0.01
						2,2-Dimethylbutane	0.02	0.01
						2,3,4-Trimethylpentane	0	0.01
						2,3-Dimethylbutane	0	0.02
						2,3-Dimethylpentane	0	0.02
						2,4-Dimethylpentane	0	0.01
						2-Methylheptane	0	0.01
						2-Methylhexane	0	0.01
						2-Methylpentane	0.02	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	**17.8**	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

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PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2019-06-14**
Canister Sample	**Blank**
Canister ID	**28916**

Method	**NA-025**	**Method**	**NA-024**	**Method**	**AC-058**
Maximum Reading	**0**	**Maximum Reading**	**0**	**Maximum Reading**	**17.8**

Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
						Freon-12	0	0.02
						Hexachloro-1,3-butadiene	0	0.50
						Isobutane	7.16	0.02
						Isopentane	1.7	0.03
						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	0.4	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	0.3	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	1.49	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

Note: Analytical results show potential contaminations on the blank sample. It is a valid blank sample that shows evidence of contamination. The results are not indicative of ambient concentrations.

REFERENCE DOCUMENTS

HOURLY INSTANTANEOUS DATA

986b STATION

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Instantaneous Maximums

SULPHUR DIOXIDE (SO_2) in ppb

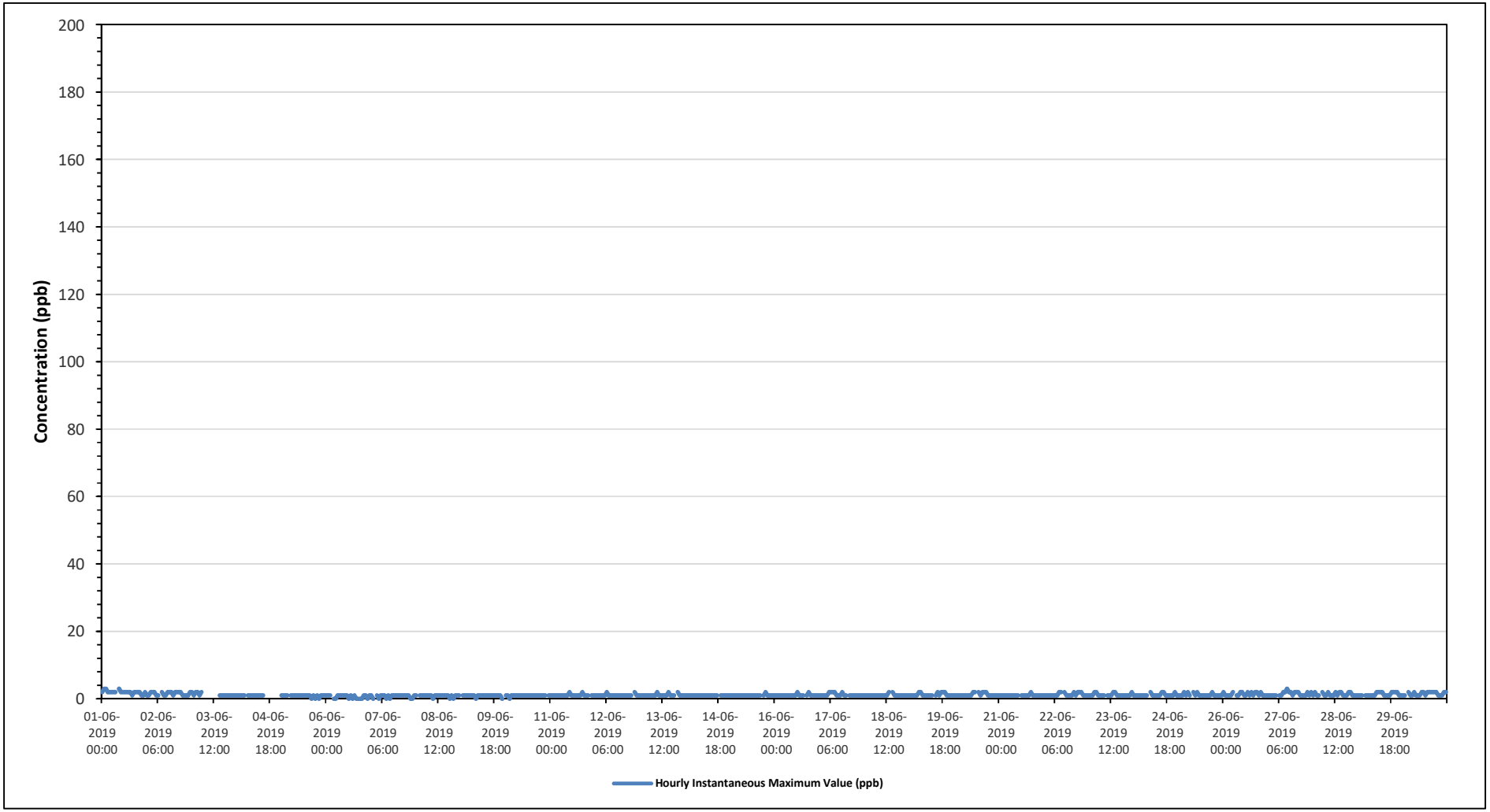
Maximum Hourly Value:	3	ppb	on June 1 at hour 1	Hours in Service:	720
Maximum Daily Value:	2.0	ppb	on June 1	Hours of Data:	673
Minimum Hourly Value:	0	ppb	on June 5 at hour 16	Hours of Missing Data:	9
Minimum Daily Value:	0.6	ppb	on June 6	Hours of Calibration:	38
Monthly Average:	1.2	ppb		Operational Uptime:	98.8

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			
Jun 1	2	3	3	2	2	2	2	2	S	3	2	2	2	2	2	2	1	2	2	2	2	1	1	2	1	3	2.0
Jun 2	1	1	2	2	2	1	1	S	2	1	1	2	2	2	1	2	2	2	2	1	1	1	1	2	1	2	1.5
Jun 3	2	1	2	2	1	2	S	2	C	C	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	2	-
Jun 4	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	P	P	P	P	P	P	P	P	R	1	1	-
Jun 5	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	0	1	0.9
Jun 6	1	1	1	S	0	0	1	1	1	1	1	1	0	1	0	1	0	0	0	0	1	1	0	1	0	1	0.6
Jun 7	1	0	S	1	0	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0.7
Jun 8	1	S	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0	1	0.9
Jun 9	S	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	S	0	1	0.9
Jun 10	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	0	1	1.0
Jun 11	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	S	1	1	1	2	1.1
Jun 12	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1	1	1	2	1.1
Jun 13	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	S	2	1	1	1	1	2	1.1
Jun 14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1.0
Jun 15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	2	1	1	1	1	1	2	1.0
Jun 16	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	S	1	2	1	1	1	1	1	1	2	1.1
Jun 17	1	1	1	1	1	2	2	2	2	1	1	1	2	1	1	S	1	1	1	1	1	1	1	1	1	2	1.2
Jun 18	1	1	1	1	1	1	1	1	1	1	1	1	1	2	S	2	1	1	1	1	1	1	1	1	1	2	1.1
Jun 19	1	1	1	1	1	2	2	1	1	1	1	1	1	S	1	2	1	2	2	2	1	1	1	1	1	2	1.3
Jun 20	1	1	1	1	1	1	1	1	1	1	2	2	S	2	1	2	2	2	1	1	1	1	1	1	1	2	1.3
Jun 21	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1.0
Jun 22	1	1	1	1	1	1	1	1	2	2	S	2	1	1	1	1	2	1	2	2	2	1	1	1	1	2	1.3
Jun 23	1	1	1	2	2	1	1	1	1	S	1	1	1	2	2	1	1	1	1	1	1	1	1	2	1	2	1.2
Jun 24	1	1	1	1	1	1	1	1	S	2	1	1	1	1	1	2	2	1	1	1	1	1	2	1	1	2	1.2
Jun 25	1	1	1	2	1	2	1	S	2	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1.2
Jun 26	2	1	1	1	1	2	S	1	1	2	2	1	1	2	1	2	1	2	2	1	2	1	1	1	1	2	1.4
Jun 27	1	1	1	1	1	S	1	1	2	2	3	2	2	1	2	2	2	1	1	1	1	2	1	2	1	3	1.5
Jun 28	1	2	1	1	S	2	1	1	2	1	1	1	2	1	2	2	1	1	1	2	2	1	1	1	1	2	1.3
Jun 29	1	1	1	S	1	1	1	1	1	1	2	2	2	2	1	1	1	1	2	2	2	2	1	1	1	2	1.3
Jun 30	1	1	S	2	1	1	2	1	1	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	1	2	1.5
Diurnal Maximum	2	3	3	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2			
Daiurnal Average	1.1	1.1	1.1	1.2	1.0	1.2	1.2	1.1	1.1	1.2	1.3	1.3	1.2	1.3	1.1	1.4	1.1	1.3	1.2	1.2	1.1	1.1	1.0	1.2			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for SO2 - 986b Station



PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Instantaneous Maximums

TOTAL REDUCED SULPHUR (TRS) in ppb

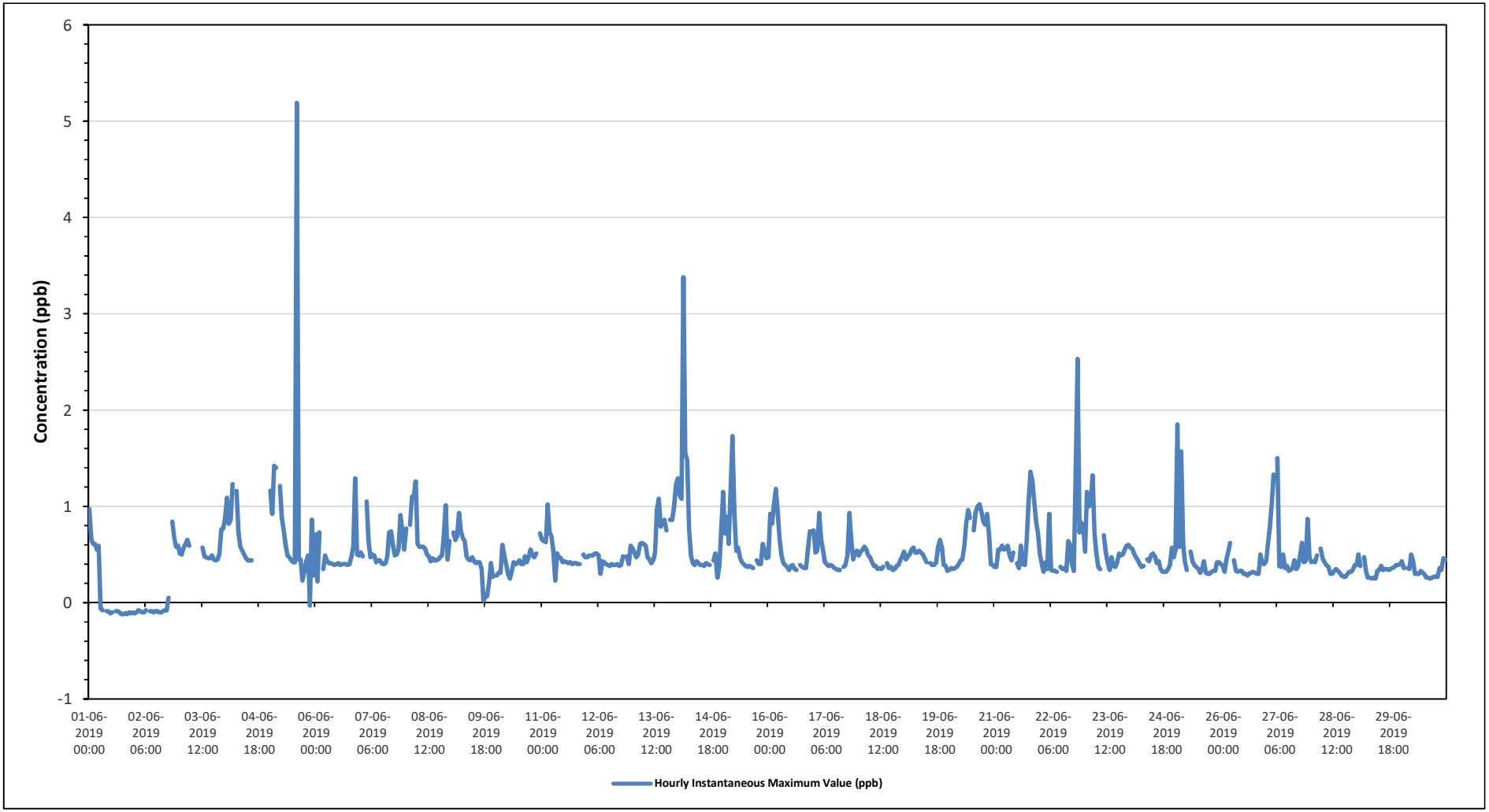
Maximum Hourly Value:	5.19	ppb	on June 5 at hour 14	Hours in Service:	720
Maximum Daily Value:	0.84	ppb	on June 5	Hours of Data:	674
Minimum Hourly Value:	-0.03	ppb	on June 5 at hour 21	Hours of Missing Data:	47
Minimum Daily Value:	0.34	ppb	on June 30	Hours of Calibration:	33
Monthly Average:	0.54	ppb		Operational Uptime:	98.2

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
Jun 1	0.97	0.66	0.61	0.61	0.55	0.59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0.55	0.97	0.67
Jun 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Y	0.84	0.67	0.58	0.59	0.58	0.84	0.67
Jun 3	0.51	0.5	0.57	0.61	0.65	0.59	S	0.63	C	C	C	C	0.57	0.48	0.47	0.46	0.46	0.49	0.45	0.44	0.45	0.51	0.76	0.77	0.44	0.77	0.55
Jun 4	0.87	1.09	0.82	0.86	1.23	S	1.16	0.73	0.58	0.54	0.5	0.46	0.44	0.44	0.44	P	P	P	P	P	P	P	P	R	0.44	1.23	-
Jun 5	1.16	0.92	1.42	1.4	S	1.21	0.88	0.75	0.6	0.49	0.47	0.44	0.42	0.42	**5.19**	0.45	0.45	0.23	0.32	0.43	0.49	**-0.03**	0.86	0.28	**-0.03**	**5.19**	**0.84**
Jun 6	0.71	0.22	0.73	S	0.35	0.49	0.43	0.41	0.41	0.4	0.39	0.4	0.41	0.39	0.4	0.4	0.4	0.39	0.4	0.48	0.59	1.29	0.5	0.49	0.22	1.29	0.48
Jun 7	0.52	0.48	S	1.05	0.64	0.47	0.5	0.49	0.42	0.44	0.44	0.41	0.4	0.41	**0.48**	0.73	0.74	0.59	0.49	0.5	0.56	0.91	0.75	0.55	**0.40**	1.05	0.56
Jun 8	0.77	S	0.81	1.1	1.1	1.26	0.61	0.58	0.58	0.58	0.56	0.5	0.48	0.43	0.46	0.44	0.44	0.45	0.47	0.49	0.7	1.01	0.45	0.64	0.43	1.26	0.65
Jun 9	S	0.73	0.65	0.69	0.93	0.74	0.67	0.64	0.48	0.45	0.44	0.47	0.43	0.41	0.42	0.42	0.35	0.02	0.06	0.07	0.22	0.41	0.27	S	0.02	0.93	0.45
Jun 10	0.28	0.31	0.31	0.6	0.49	0.39	0.29	0.25	0.33	0.42	0.4	0.41	0.44	0.4	0.4	0.48	0.42	0.47	0.55	0.49	0.47	0.51	S	0.72	0.25	0.72	0.43
Jun 11	0.65	0.64	0.63	1.02	0.73	0.69	0.54	0.23	0.51	0.47	0.46	0.42	0.43	0.42	0.41	0.42	0.4	0.41	0.41	0.4	0.4	S	0.5	0.47	0.23	1.02	0.51
Jun 12	0.47	0.49	0.49	0.49	0.51	0.51	0.49	0.3	0.43	0.42	0.4	0.39	0.38	0.4	0.39	0.39	0.4	0.38	0.39	0.48	S	0.48	0.4	0.59	0.30	0.59	0.44
Jun 13	0.56	0.52	0.47	0.5	0.61	0.62	0.61	0.59	0.47	0.45	0.41	0.44	0.52	0.97	1.08	0.79	0.84	0.86	0.75	S	0.86	0.86	1	1.23	0.41	1.23	0.70
Jun 14	1.29	1.11	1.08	3.38	1.55	1.48	0.76	0.49	0.41	0.39	0.43	0.41	0.39	0.39	0.38	0.41	0.4	0.39	S	0.44	0.51	0.26	0.38	0.75	0.26	3.38	0.76
Jun 15	1.15	0.72	0.89	0.61	1.14	1.73	0.93	0.54	0.57	0.47	0.42	0.4	0.38	0.37	0.38	0.37	0.36	S	0.44	0.4	0.4	0.61	0.55	0.46	0.36	1.73	0.62
Jun 16	0.47	0.92	0.82	1.01	1.18	0.94	0.66	0.49	0.41	0.39	0.37	0.34	0.38	0.39	0.35	0.34	S	0.39	0.37	0.36	0.36	0.55	0.74	0.73	0.34	1.18	0.56
Jun 17	0.75	0.52	0.54	0.93	0.66	0.55	0.42	0.4	0.38	0.39	0.38	0.36	0.35	0.34	0.34	S	0.37	0.39	0.5	0.93	0.64	0.45	0.51	0.54	0.34	0.93	0.51
Jun 18	0.49	0.53	0.55	0.58	0.55	0.49	0.47	0.42	0.38	0.38	0.35	0.36	0.35	0.37	S	0.41	0.36	0.37	0.34	0.35	0.38	0.39	0.44	0.48	0.34	0.58	0.43
Jun 19	0.53	0.45	0.48	0.5	0.55	0.57	0.52	0.52	0.54	0.52	0.5	0.46	0.42	S	0.41	0.39	0.39	0.42	0.58	0.65	0.58	0.39	0.38	0.33	0.33	0.65	0.48
Jun 20	0.34	0.36	0.35	0.36	0.37	0.4	0.44	0.45	0.59	0.82	0.96	0.88	S	0.75	0.94	1	1.02	0.94	0.84	0.81	0.92	0.71	0.4	0.39	0.34	1.02	0.65
Jun 21	0.37	0.37	0.55	0.55	0.59	0.55	0.56	0.59	0.49	0.44	0.52	S	0.41	0.36	0.59	0.4	0.39	0.64	1.04	1.36	1.26	1.05	0.84	0.72	0.36	1.36	0.64
Jun 22	0.51	0.4	0.32	0.42	0.35	0.92	0.34	0.33	0.33	0.32	S	0.37	0.35	0.36	0.33	0.64	0.6	0.4	0.33	1.33	2.53	0.73	0.83	0.79	0.32	2.53	0.60
Jun 23	0.53	1.15	1	1.02	1.32	0.73	0.51	0.37	0.35	S	0.7	0.53	0.42	0.34	0.47	0.38	0.37	0.42	0.51	0.49	0.5	0.55	0.59	0.6	0.34	1.32	0.60
Jun 24	0.57	0.56	0.51	0.47	0.44	0.4	0.37	0.38	S	0.45	0.43	0.49	0.51	0.48	0.41	0.43	0.35	0.32	0.32	0.32	0.35	0.39	0.57	0.47	0.32	0.57	0.43
Jun 25	0.55	1.85	0.58	1.57	0.61	0.42	0.34	S	0.53	0.43	0.39	0.37	0.35	0.31	0.35	0.43	0.31	0.3	0.3	0.32	0.33	0.33	0.42	0.42	0.30	1.85	0.51
Jun 26	0.4	0.38	0.32	0.45	0.53	0.62	S	0.44	0.33	0.32	0.33	0.33	0.3	0.3	0.28	0.3	0.31	0.32	0.31	0.3	0.3	0.5	0.41	0.4	0.28	0.62	0.37
Jun 27	0.43	0.61	0.78	1.02	1.33	S	1.5	0.38	0.37	0.5	0.36	0.38	0.33	0.34	0.36	0.44	0.35	0.38	0.48	0.62	0.42	0.43	0.87	0.47	0.33	1.50	0.57
Jun 28	0.42	0.43	0.42	0.49	S	0.56	0.46	0.42	0.39	0.37	0.3	0.3	0.33	0.35	0.33	0.31	0.28	0.27	0.27	0.29	0.32	0.32	0.34	0.39	0.27	0.56	0.36
Jun 29	0.39	0.5	0.38	S	0.47	0.33	0.26	0.26	0.25	0.26	0.25	0.33	0.34	0.38	0.34	0.35	0.35	0.34	0.35	0.36	0.37	0.39	0.39	0.4	0.25	0.50	0.35
Jun 30	0.43	0.36	S	0.36	0.35	0.5	0.43	0.3	0.3	0.3	0.33	0.31	0.29	0.26	0.26	0.25	0.26	0.27	0.27	0.27	0.36	0.34	0.46	0.45	0.25	0.50	0.34
Diurnal Maximum	1.29	1.85	1.42	3.38	1.55	1.73	1.50	0.75	0.60	0.82	0.96	0.88	0.57	0.97	5.19	1.00	1.02	0.94	1.04	1.36	2.53	1.29	1.00	1.23			
Daiurnal Average	0.61	0.64	0.63	0.84	0.73	0.69	0.58	0.46	0.44	0.44	0.44	0.42	0.40	0.42	0.62	0.46	0.44	0.42	0.44	0.51	0.60	0.56	0.56	0.56			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for TRS - 986b Station



PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Instantaneous Maximums

TOTAL HYDROCARBONS (THC) in ppm

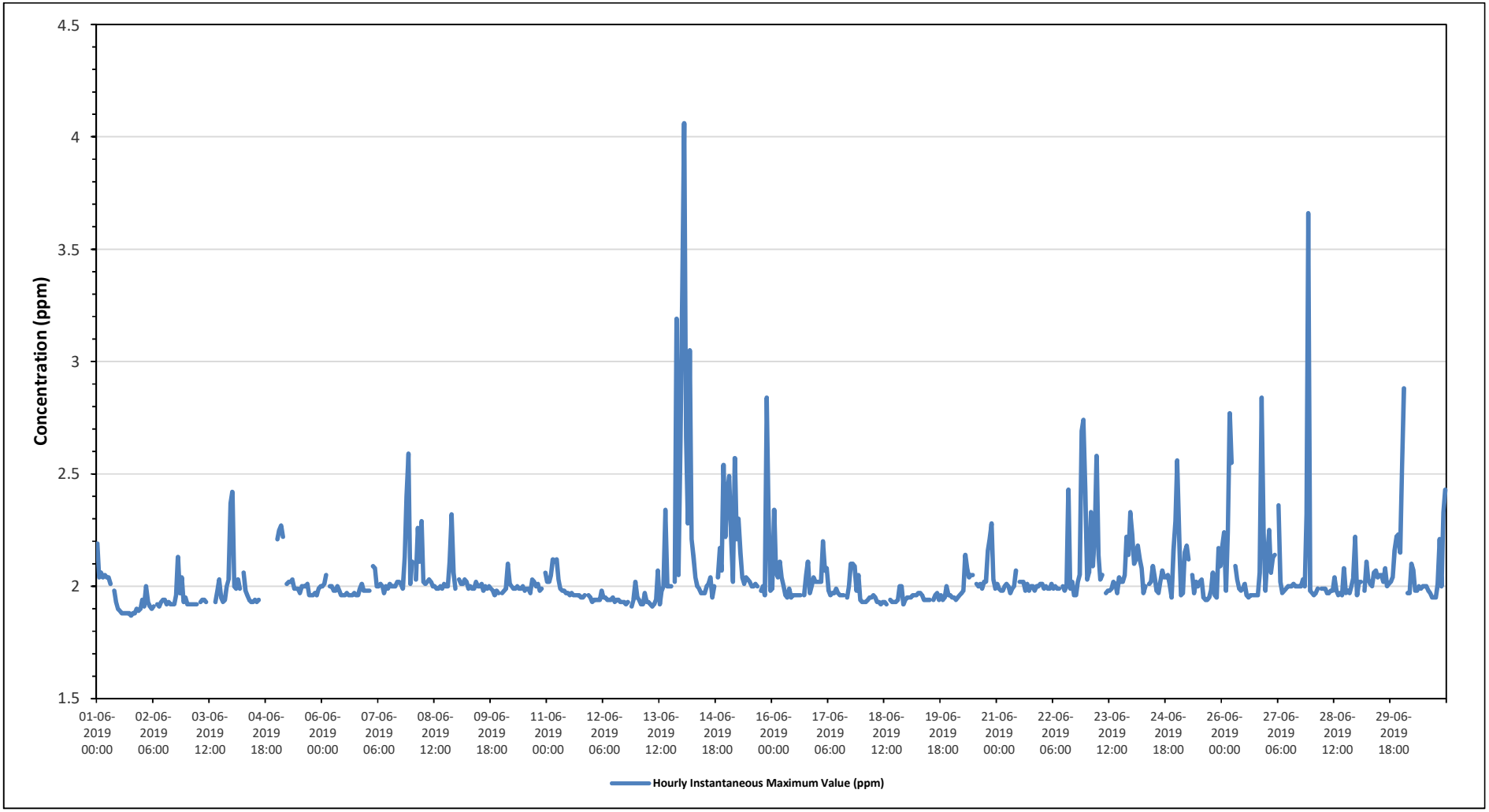
Maximum Hourly Value:	4.06	ppm	on June 14 at hour 1	Hours in Service:	720
Maximum Daily Value:	2.29	ppm	on June 14	Hours of Data:	676
Minimum Hourly Value:	1.87	ppm	on June 1 at hour 18	Hours of Missing Data:	9
Minimum Daily Value:	1.94	ppm	on June 18	Hours of Calibration:	35
Monthly Average:	2.04	ppm		Operational Uptime:	98.8

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			
Jun 1	2.19	2.04	2.06	2.04	2.05	2.04	2.04	2.01	S	1.98	1.93	1.90	1.89	1.88	1.88	1.88	1.88	1.88	**1.87**	1.88	1.88	1.90	1.89	1.90	**1.87**	2.19	1.95
Jun 2	1.94	1.91	2.00	1.93	1.91	1.90	1.91	S	1.92	1.91	1.93	1.94	1.94	1.92	1.93	1.92	1.92	1.92	1.96	2.13	1.97	2.04	1.93	1.95	1.90	2.13	1.94
Jun 3	1.92	1.92	1.92	1.92	1.92	1.92	S	1.93	1.94	1.94	1.93	C	C	C	C	1.93	1.98	2.03	1.95	1.93	1.94	2.00	2.03	2.37	1.92	2.37	1.97
Jun 4	2.42	2.00	1.99	2.03	1.99	S	2.06	1.98	1.96	1.94	1.93	1.93	1.94	1.93	1.94	P	P	P	P	P	P	P	P	R	1.93	2.42	-
Jun 5	2.21	2.25	2.27	2.22	S	2.01	2.02	2.02	2.03	1.99	1.99	1.99	1.97	2.00	2.00	2.00	2.01	1.96	1.96	1.96	1.97	1.96	1.99	2.00	1.96	2.27	2.03
Jun 6	2.00	2.01	2.05	S	2.00	2.00	1.98	1.98	2.00	1.98	1.96	1.96	1.96	1.97	1.96	1.96	1.96	1.97	1.96	1.96	1.99	2.01	1.98	1.98	1.96	2.05	1.98
Jun 7	1.98	1.98	S	2.09	2.08	2.00	2.00	2.01	2.00	1.97	2.00	1.99	2.01	2.00	2.00	2.00	2.02	2.02	2.01	1.99	2.13	2.40	2.59	2.01	1.97	2.59	2.06
Jun 8	2.11	S	2.03	2.26	2.11	2.29	2.02	2.01	2.02	2.03	2.02	2.00	2.00	1.99	1.99	2.00	1.99	2.01	2.00	2.00	2.11	2.32	2.06	1.99	1.99	2.32	2.06
Jun 9	S	2.03	2.01	2.01	2.03	2.02	1.99	2.00	1.99	1.99	2.02	2.00	2.00	2.01	1.98	2.00	1.99	2.00	1.99	1.98	1.96	1.98	1.97	S	1.96	2.03	2.00
Jun 10	1.97	1.98	1.99	2.10	2.01	2.00	1.99	1.99	2.00	1.99	1.99	2.00	1.98	1.99	1.99	1.97	2.03	2.02	2.00	2.01	1.98	1.99	S	2.06	1.97	2.10	2.00
Jun 11	2.02	2.02	2.05	2.12	2.11	2.12	2.03	1.99	1.98	1.98	1.97	1.97	1.96	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.96	S	1.96	1.95	1.95	2.12	2.00
Jun 12	1.93	1.94	1.94	1.94	1.94	1.98	1.95	1.95	1.94	1.94	1.94	1.95	1.93	1.94	1.94	1.93	1.93	1.93	1.92	1.93	S	1.91	1.94	2.02	1.91	2.02	1.94
Jun 13	1.95	1.94	1.92	1.92	1.97	1.93	1.93	1.92	1.91	1.92	1.94	2.07	1.92	1.98	**2.00**	2.34	2.00	2.00	2.00	S	2.02	3.19	2.05	2.64	**1.91**	3.19	2.06
Jun 14	3.33	**4.06**	2.66	2.28	3.05	2.21	2.13	2.04	2.00	1.99	1.97	1.97	1.97	2.00	2.01	2.04	1.95	2.00	S	2.04	2.17	2.07	2.54	2.22	1.95	**4.06**	**2.29**
Jun 15	2.42	2.49	2.23	2.02	2.57	2.21	2.30	2.15	2.04	2.01	2.04	2.03	2.02	2.00	2.00	2.01	2.00	S	1.98	2.00	1.96	2.84	2.34	1.98	1.96	2.84	2.16
Jun 16	1.99	2.34	2.06	2.04	2.11	2.04	2.00	1.96	1.95	1.99	1.95	1.96	1.96	1.96	1.96	1.96	S	1.96	2.05	2.11	1.97	2.00	2.04	2.02	1.95	2.34	2.02
Jun 17	2.02	2.02	2.02	2.20	2.07	2.08	1.98	1.96	1.97	1.97	1.99	1.97	1.96	1.96	1.96	S	1.95	2.00	2.10	2.10	2.09	1.98	2.05	1.94	1.94	2.20	2.01
Jun 18	1.93	1.93	1.93	1.94	1.95	1.95	1.96	1.95	1.93	1.93	1.92	1.93	1.93	1.92	S	1.94	1.93	1.93	1.93	1.94	2.00	2.00	1.92	1.94	1.92	2.00	**1.94**
Jun 19	1.95	1.95	1.95	1.96	1.96	1.96	1.97	1.97	1.96	1.94	1.94	1.94	1.94	S	1.94	1.96	1.97	1.94	1.96	1.94	1.95	2.00	1.96	1.96	1.94	2.00	1.96
Jun 20	1.95	1.95	1.94	1.95	1.96	1.97	1.98	2.14	2.08	2.04	2.05	2.05	S	2.01	2.00	2.01	1.99	2.02	2.02	2.16	2.21	2.28	2.03	1.99	1.94	2.28	2.03
Jun 21	2.01	1.99	1.98	1.98	2.00	2.01	2.00	1.97	1.99	2.00	2.07	S	2.02	2.02	2.02	1.98	2.01	1.98	2.00	2.00	1.98	2.00	2.00	2.01	1.97	2.07	2.00
Jun 22	2.01	1.99	2.00	1.99	1.99	2.01	1.99	2.00	1.99	1.99	S	2.00	1.98	2.00	2.43	1.99	2.02	1.96	1.96	2.02	2.05	2.69	2.74	2.42	1.96	2.74	2.10
Jun 23	2.03	2.06	2.33	2.09	2.23	2.58	2.14	2.03	2.05	S	1.97	1.98	1.98	1.99	2.02	2.01	1.97	2.04	2.02	2.02	2.05	2.22	2.14	2.33	1.97	2.58	2.10
Jun 24	2.23	2.10	2.12	2.18	2.12	2.08	1.97	2.00	S	2.01	2.02	2.09	2.04	1.98	1.97	2.02	2.07	2.04	2.04	2.05	2.01	1.95	2.16	2.29	1.95	2.29	2.07
Jun 25	2.56	2.24	1.96	1.97	2.15	2.18	2.12	S	2.05	1.97	2.02	2.00	2.02	2.03	1.95	1.94	1.94	1.95	1.98	2.06	1.96	1.95	2.17	2.09	1.94	2.56	2.05
Jun 26	2.18	2.24	1.98	2.24	2.77	2.55	S	2.09	2.03	1.99	1.98	1.99	2.01	1.96	1.95	1.96	1.96	1.96	1.96	1.96	2.06	2.84	2.24	1.98	1.95	2.84	2.13
Jun 27	2.13	2.25	2.06	2.13	2.14	S	2.36	2.02	1.97	1.98	1.99	2.00	2.00	2.00	2.01	2.00	2.00	2.00	2.00	2.03	2.00	2.32	3.66	1.98	1.97	3.66	2.13
Jun 28	1.97	1.96	1.97	1.99	S	1.99	1.99	1.99	1.97	1.97	1.98	1.98	2.04	1.98	1.96	1.97	1.96	2.08	1.97	1.98	1.97	2.00	2.04	2.22	1.96	2.22	2.00
Jun 29	1.96	2.02	2.02	S	1.98	2.11	2.03	2.01	2.00	2.06	2.07	2.04	2.05	2.05	2.02	2.08	2.00	2.01	2.02	2.04	2.16	2.22	2.23	2.15	1.96	2.23	2.06
Jun 30	2.53	2.88	S	1.97	1.97	2.10	2.07	1.98	1.98	2.00	1.99	2.00	2.00	2.00	1.98	1.97	1.95	1.95	1.95	2.01	2.21	2.00	2.33	2.43	1.95	2.88	2.10
Diurnal Maximum	3.33	4.06	2.66	2.28	3.05	2.58	2.36	2.15	2.08	2.06	2.07	2.09	2.05	2.05	2.43	2.34	2.07	2.08	2.10	2.16	2.21	3.19	3.66	2.64			
Daiurnal Average	2.13	2.15	2.05	2.05	2.11	2.08	2.03	2.00	1.99	1.98	1.98	1.99	1.98	1.98	1.99	1.99	1.98	1.98	1.98	2.01	2.03	2.18	2.18	2.10			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for THC - 986b Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Instantaneous Maximums

METHANE (CH4) in ppm

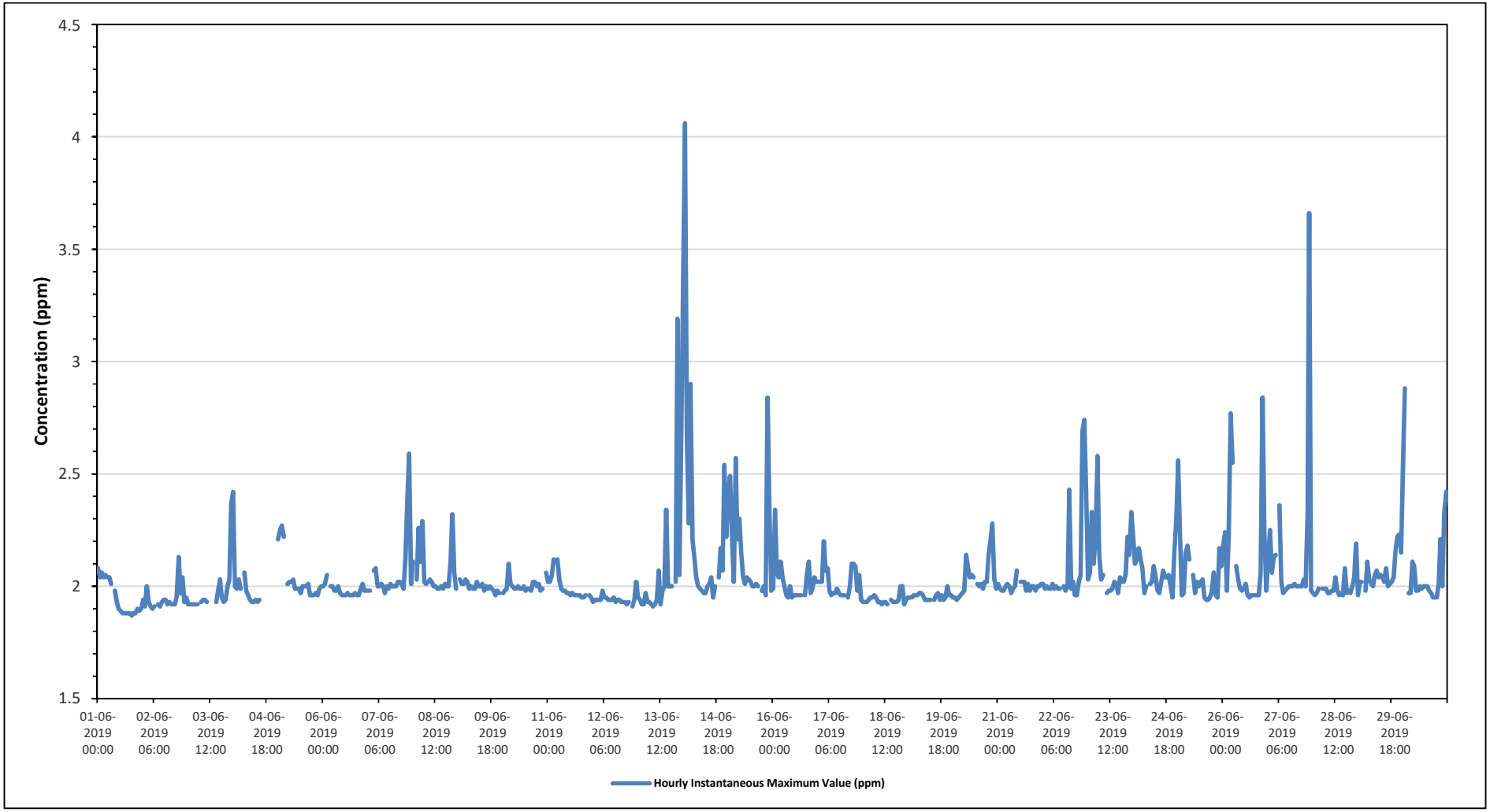
Maximum Hourly Value:	4.06	ppm	on June 14 at hour 1	Hours in Service:	720
Maximum Daily Value:	2.29	ppm	on June 14	Hours of Data:	676
Minimum Hourly Value:	1.87	ppm	on June 1 at hour 18	Hours of Missing Data:	9
Minimum Daily Value:	1.94	ppm	on June 18	Hours of Calibration:	35
Monthly Average:	2.04	ppm		Operational Uptime:	98.8

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			
Jun 1	2.08	2.04	2.06	2.04	2.05	2.04	2.04	2.01	S	1.98	1.93	1.90	1.89	1.88	1.88	1.88	1.88	1.88	1.87	1.88	1.88	1.90	1.89	1.90	1.87	2.08	1.95
Jun 2	1.94	1.91	2.00	1.93	1.91	1.90	1.91	S	1.92	1.91	1.93	1.94	1.94	1.92	1.93	1.92	1.92	1.92	1.96	2.13	1.97	2.04	1.93	1.95	1.90	2.13	1.94
Jun 3	1.92	1.92	1.92	1.92	1.92	1.92	S	1.93	1.94	1.94	1.93	C	C	C	C	1.93	1.98	2.03	1.95	1.93	1.94	2.00	2.03	2.37	1.92	2.37	1.97
Jun 4	2.42	2.00	1.99	2.03	1.99	S	2.06	1.98	1.96	1.94	1.93	1.93	1.94	1.93	1.94	P	P	P	P	P	P	P	P	R	1.93	2.42	-
Jun 5	2.21	2.25	2.27	2.22	S	2.01	2.02	2.02	2.03	1.99	1.99	1.99	1.97	2.00	2.00	2.00	2.01	1.96	1.96	1.96	1.97	1.96	1.99	2.00	1.96	2.27	2.03
Jun 6	2.00	2.01	2.05	S	2.00	2.00	1.98	1.98	2.00	1.97	1.96	1.96	1.96	1.97	1.96	1.96	1.96	1.97	1.96	1.96	1.99	2.01	1.98	1.98	1.96	2.05	1.98
Jun 7	1.98	1.98	S	2.07	2.08	2.00	2.00	2.01	2.00	1.97	2.00	1.99	2.01	2.00	2.00	2.00	2.02	2.02	2.01	1.99	2.13	2.40	2.59	2.01	1.97	2.59	2.05
Jun 8	2.11	S	2.03	2.26	2.11	2.29	2.02	2.01	2.02	2.03	2.02	2.00	2.00	1.99	1.99	2.00	1.99	2.01	2.00	2.00	2.11	2.32	2.06	1.99	1.99	2.32	2.06
Jun 9	S	2.03	2.01	2.01	2.03	2.02	1.99	2.00	1.99	1.99	2.02	2.00	2.00	2.01	1.98	2.00	1.99	2.00	1.99	1.98	1.96	1.98	1.97	S	1.96	2.03	2.00
Jun 10	1.97	1.98	1.99	2.10	2.01	2.00	1.99	1.99	2.00	1.99	1.99	2.00	1.98	1.99	1.99	1.98	2.02	2.02	2.00	2.01	1.98	1.99	S	2.06	1.97	2.10	2.00
Jun 11	2.02	2.02	2.05	2.12	2.11	2.12	2.03	1.99	1.98	1.98	1.97	1.97	1.96	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.96	S	1.96	1.95	1.95	2.12	2.00
Jun 12	1.93	1.94	1.94	1.94	1.94	1.98	1.95	1.95	1.94	1.94	1.94	1.95	1.93	1.94	1.94	1.93	1.93	1.93	1.92	1.93	S	1.91	1.94	2.02	1.91	2.02	**1.94**
Jun 13	1.95	1.94	1.92	1.92	1.97	1.93	1.93	1.92	1.91	1.92	1.94	2.07	1.92	1.98	**2.00**	2.34	2.00	2.00	2.00	S	2.02	3.19	2.05	2.64	**1.91**	3.19	2.06
Jun 14	3.33	**4.06**	2.66	2.28	2.90	2.21	2.13	2.04	2.00	1.99	1.98	1.97	1.97	2.00	2.01	2.04	1.95	2.00	S	2.04	2.17	2.07	2.54	2.22	1.95	**4.06**	**2.29**
Jun 15	2.42	2.49	2.23	2.02	2.57	2.21	2.30	2.15	2.04	2.01	2.04	2.03	2.02	2.00	2.00	2.01	2.00	S	1.98	2.00	1.96	2.84	2.34	1.98	1.96	2.84	2.16
Jun 16	1.99	2.34	2.06	2.04	2.11	2.04	2.00	1.96	1.95	2.00	1.95	1.96	1.96	1.96	1.96	1.96	S	1.96	2.05	2.11	1.97	1.99	2.04	2.02	1.95	2.34	2.02
Jun 17	2.02	2.02	2.02	2.20	2.07	2.08	1.98	1.96	1.97	1.97	1.99	1.97	1.96	1.96	1.96	S	1.95	2.00	2.10	2.10	2.09	1.98	2.05	1.94	1.94	2.20	2.01
Jun 18	1.93	1.93	1.93	1.94	1.95	1.95	1.96	1.95	1.93	1.93	1.92	1.93	1.93	1.92	S	1.94	1.93	1.93	1.93	1.94	2.00	2.00	1.92	1.94	1.92	2.00	1.94
Jun 19	1.95	1.95	1.95	1.96	1.96	1.96	1.97	1.97	1.96	1.94	1.94	1.94	1.94	S	1.94	1.96	1.97	1.94	1.96	1.94	1.95	2.00	1.96	1.96	1.94	2.00	1.96
Jun 20	1.95	1.95	1.94	1.95	1.96	1.97	1.98	2.14	2.08	2.04	2.05	2.04	S	2.01	2.00	2.01	1.99	2.02	2.02	2.14	2.21	2.28	2.03	1.99	1.94	2.28	2.03
Jun 21	2.01	1.99	1.98	1.98	2.00	2.01	2.00	1.97	1.99	2.00	2.07	S	2.02	2.02	2.02	1.98	2.01	1.98	2.00	2.00	1.98	2.00	2.00	2.01	1.97	2.07	2.00
Jun 22	2.01	1.99	2.00	1.99	1.99	2.01	1.99	2.00	1.99	1.99	S	2.00	1.98	2.00	2.43	1.99	2.02	1.96	1.96	2.02	2.05	2.69	2.74	2.42	1.96	2.74	2.10
Jun 23	2.03	2.06	2.33	2.10	2.23	2.58	2.14	2.03	2.05	S	1.97	1.98	1.98	1.99	2.02	2.01	1.97	2.04	2.02	2.02	2.05	2.22	2.14	2.33	1.97	2.58	2.10
Jun 24	2.23	2.10	2.12	2.17	2.12	2.08	1.97	2.00	S	2.01	2.02	2.09	2.04	1.98	1.97	2.02	2.07	2.04	2.04	2.05	2.00	1.95	2.16	2.29	1.95	2.29	2.07
Jun 25	2.56	2.24	1.96	1.97	2.15	2.18	2.12	S	2.05	1.97	2.02	2.00	2.02	2.03	1.95	1.94	1.94	1.95	1.98	2.06	1.96	1.95	2.17	2.09	1.94	2.56	2.05
Jun 26	2.18	2.24	1.98	2.24	2.77	2.55	S	2.09	2.03	1.99	1.98	1.99	2.01	1.96	1.95	1.96	1.96	1.96	1.96	1.96	2.06	2.84	2.24	1.98	1.95	2.84	2.13
Jun 27	2.13	2.25	2.06	2.13	2.14	S	2.36	2.02	1.97	1.98	1.99	2.00	2.00	2.00	2.01	2.00	2.00	2.00	2.00	2.03	2.00	2.32	3.66	1.98	1.97	3.66	2.13
Jun 28	1.97	1.96	1.97	1.99	S	1.99	1.99	1.99	1.97	1.97	1.98	1.98	2.04	1.98	1.96	1.97	1.96	2.08	1.97	1.98	1.97	2.00	2.04	2.19	1.96	2.19	2.00
Jun 29	1.96	2.02	2.02	S	1.98	2.11	2.03	2.01	2.00	2.05	2.07	2.04	2.05	2.04	2.02	2.08	2.00	2.01	2.02	2.04	2.16	2.22	2.23	2.15	1.96	2.23	2.06
Jun 30	2.53	2.88	S	1.97	1.97	2.11	2.09	1.98	1.98	2.00	1.99	2.00	2.00	2.00	1.98	1.97	1.95	1.95	1.95	2.01	2.21	2.00	2.33	2.42	1.95	2.88	2.10
Diurnal Maximum	3.33	4.06	2.66	2.28	2.90	2.58	2.36	2.15	2.08	2.05	2.07	2.09	2.05	2.04	2.43	2.34	2.07	2.08	2.10	2.14	2.21	3.19	3.66	2.64			
Daiurnal Average	2.13	2.15	2.05	2.05	2.11	2.08	2.03	2.00	1.99	1.98	1.98	1.99	1.98	1.98	1.99	1.99	1.98	1.98	1.98	2.01	2.03	2.18	2.18	2.10			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for CH4 - 986b Station



PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Instantaneous Maximums

NON-METHANE HYDROCARBONS (NMHC) in ppm

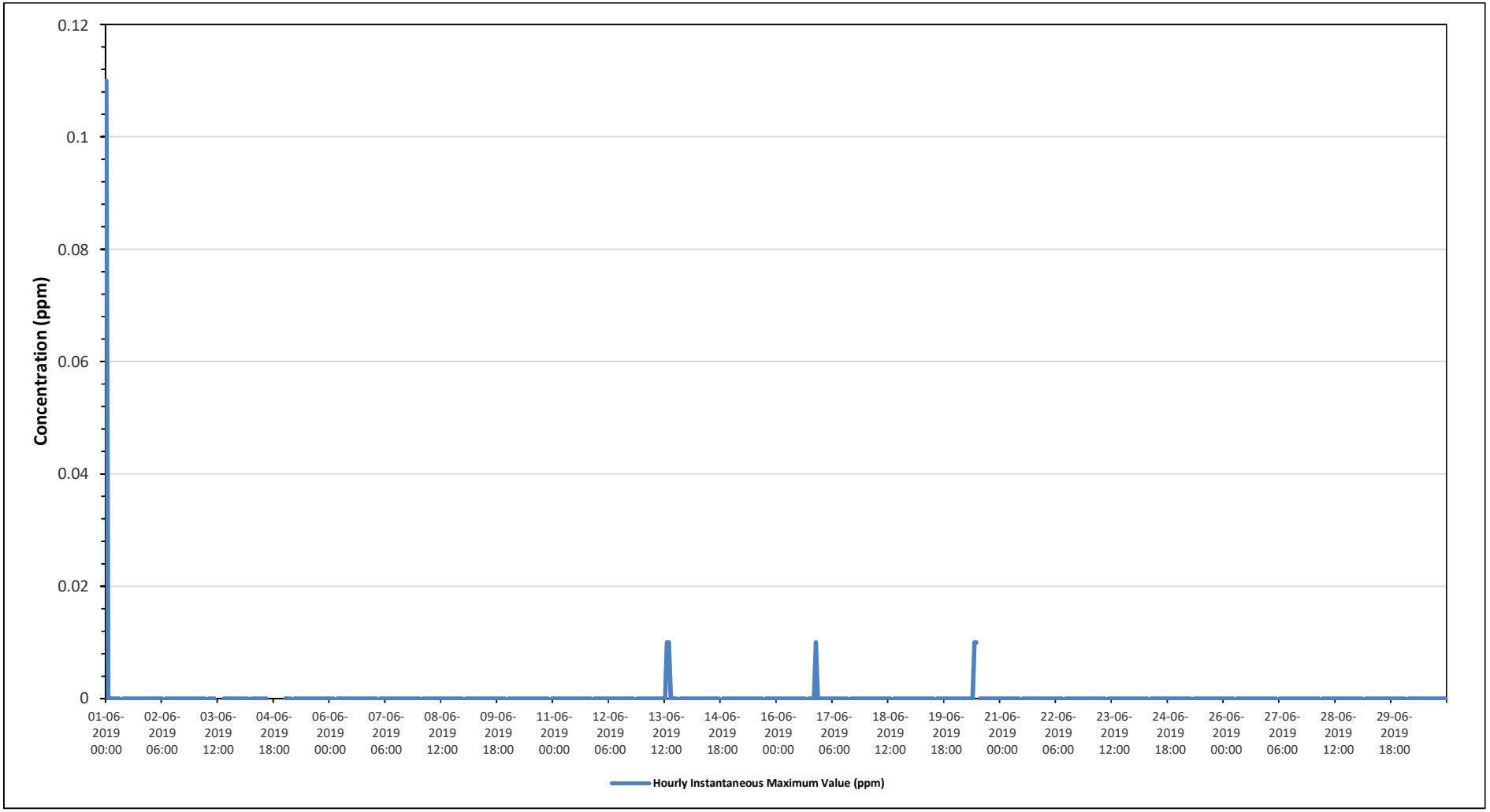
Maximum Hourly Value:	0.11	ppm	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on June 1	Hours of Data:	676
Minimum Hourly Value:	0.00	ppm	on June 1 at hour 1	Hours of Missing Data:	9
Minimum Daily Value:	0.00	ppm	on June 2	Hours of Calibration:	35
Monthly Average:	0.00	ppm		Operational Uptime:	98.8

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
Jun 1	**0.11**	**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**	**0.11**	0.00
Jun 2	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**
Jun 3	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	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
Jun 4	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	P	P	P	P	P	P	P	P	R	0.00	0.00	-
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 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	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
Jun 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	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
Jun 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 13	0.00	0.00	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	0.00	0.00	0.00	0.00	S	0.00	**0.00**	0.00	0.00	0.00	**0.01**	0.00
Jun 14	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 15	0.00	0.00	0.00	0.00	0.00	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
Jun 16	0.00	0.00	0.00	0.00	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	0.01	0.00	0.00	0.00	0.01	0.00
Jun 17	0.00	0.00	0.00	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
Jun 18	0.00	0.00	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
Jun 19	0.00	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
Jun 20	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00			
Daiurnal 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	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for NMHC - 986b Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986b Station - June 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/h

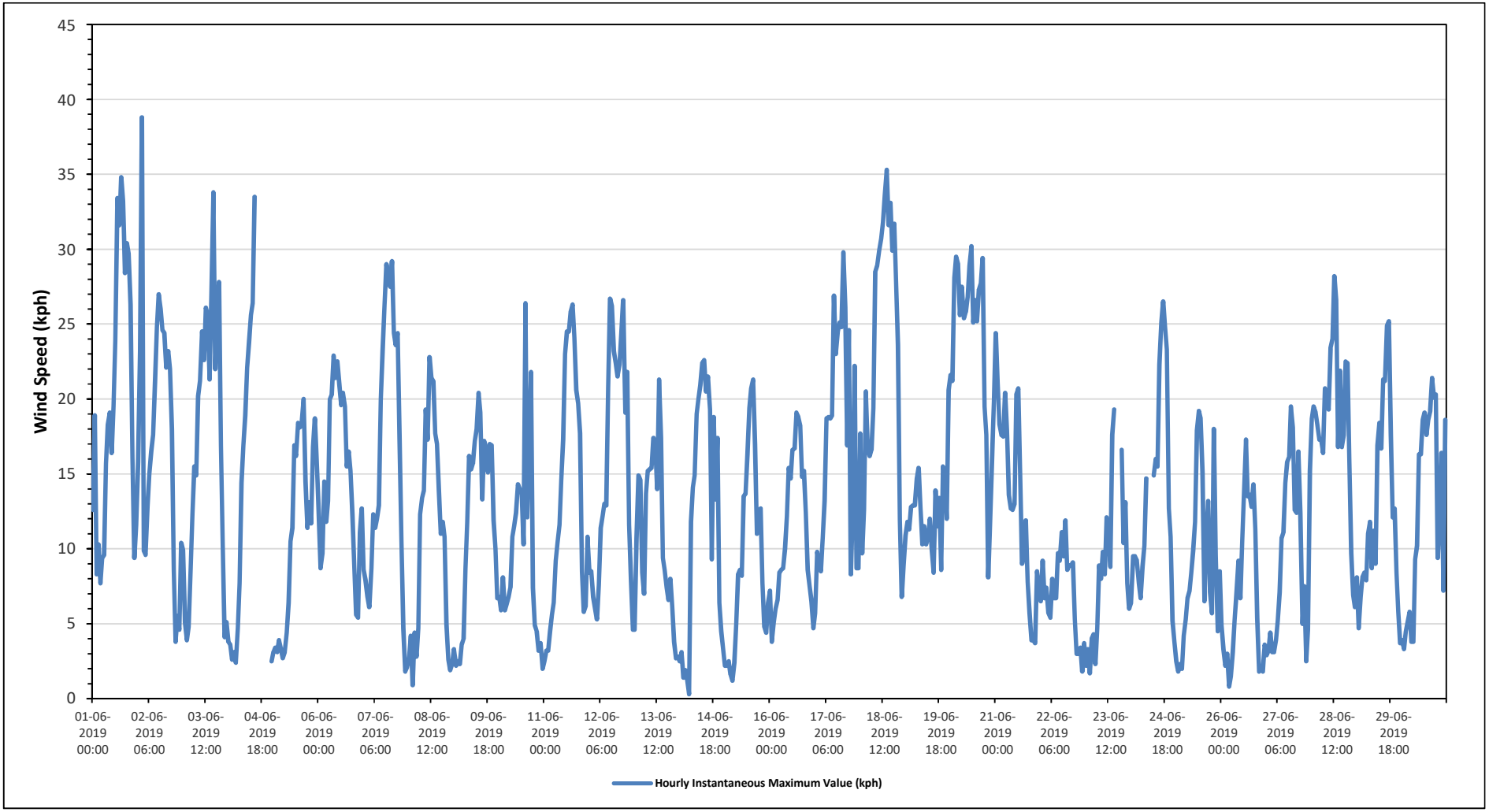
Maximum Hourly Value:	38.8	kph	on June 2 at hour 2	Hours in Service:	720
Maximum Daily Value:	23.9	kph	on June 20	Hours of Data:	712
Minimum Hourly Value:	0.3	kph	on June 14 at hour 5	Hours of Missing Data:	8
Minimum Daily Value:	7.0	kph	on June 26	Hours of Calibration:	0
Monthly Average:	13.5	kph		Operational Uptime:	98.9

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	Average
Jun 1	12.6	18.9	8.3	10.3	7.7	9.4	9.6	15.7	18.3	19.1	16.4	19.5	23.9	33.4	31.6	34.8	33.2	28.4	30.4	29.7	26.3	16.1	9.4	11.6	7.7	34.8	19.8
Jun 2	15.8	23.2	**38.8**	9.9	9.6	12.8	15.0	16.5	17.6	21.1	24.8	27.0	26.0	24.6	24.4	22.1	23.2	22.0	18.0	8.6	3.8	5.5	4.6	10.4	3.8	**38.8**	17.7
Jun 3	9.9	5.1	3.9	4.8	8.7	12.3	15.5	14.9	20.2	21.2	24.5	22.6	26.1	25.6	21.3	27.0	33.8	22.0	25.7	27.8	16.9	10.4	4.1	5.1	3.9	33.8	17.1
Jun 4	3.8	3.6	2.6	3.1	2.4	4.7	7.7	14.4	16.9	18.9	22.1	23.8	25.6	26.4	33.5	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	2.5	2.4	33.5	-
Jun 5	3.1	3.4	3.1	3.9	3.3	2.7	3.1	4.4	6.4	10.5	11.4	16.9	16.2	18.4	18.1	18.4	20.0	14.5	11.4	13.1	11.7	16.8	18.7	15.9	2.7	20.0	11.1
Jun 6	12.6	8.7	9.7	14.5	11.8	13.2	20.0	20.3	22.9	21.4	22.5	21.0	19.6	20.4	19.5	15.5	16.5	15.2	12.3	8.8	5.6	5.4	11.1	12.7	5.4	22.9	15.1
Jun 7	8.6	7.9	6.8	6.1	8.7	12.3	11.4	12.0	12.9	19.9	23.3	26.3	29.0	27.8	27.5	29.2	24.4	23.6	24.4	17.4	10.5	4.7	1.8	2.1	1.8	29.2	15.8
Jun 8	2.7	4.2	0.9	4.4	2.8	4.7	12.3	13.4	13.9	19.3	17.3	22.8	21.4	21.2	17.7	17.0	13.9	11.0	11.8	10.8	5.0	2.6	1.9	2.3	0.9	22.8	10.6
Jun 9	3.3	2.2	2.5	2.3	3.6	4.0	8.7	11.8	16.2	15.3	15.7	17.2	18.0	20.4	19.1	13.3	17.2	16.7	15.1	17.0	16.9	11.9	10.0	6.7	2.2	20.4	11.9
Jun 10	6.8	5.9	8.1	5.9	6.3	6.8	7.4	10.8	11.5	12.4	14.3	14.0	13.7	10.3	26.4	12.1	17.0	21.8	7.4	4.9	4.5	3.2	3.7	2.0	2.0	26.4	9.9
Jun 11	2.5	3.2	3.2	4.5	5.6	6.4	9.2	10.4	11.6	14.6	17.3	23.0	24.5	24.5	25.8	26.3	24.1	20.6	19.7	17.7	8.5	5.8	6.2	10.8	2.5	26.3	13.6
Jun 12	8.4	8.5	6.8	6.0	5.3	7.6	11.4	12.2	13.0	12.9	20.8	26.7	26.2	23.2	22.4	21.5	22.3	24.4	26.6	19.1	21.8	11.6	8.0	4.6	4.6	26.7	15.5
Jun 13	4.6	10.7	14.9	14.6	8.4	7.0	13.7	15.2	15.3	15.4	17.4	16.9	14.0	21.3	17.4	9.4	8.6	7.4	6.6	8.0	6.2	3.8	2.7	2.8	2.7	21.3	10.9
Jun 14	2.5	3.1	1.4	1.9	1.3	**0.3**	11.8	14.1	14.9	19.0	20.0	20.9	22.4	22.6	20.5	21.5	19.3	9.3	18.8	13.3	17.4	6.4	4.5	3.3	**0.3**	22.6	12.1
Jun 15	2.2	2.2	2.5	1.6	1.2	2.4	5.0	8.3	8.6	8.2	13.5	13.7	16.3	19.4	20.7	21.3	17.0	11.0	12.4	12.7	7.7	4.8	4.4	6.4	1.2	21.3	9.3
Jun 16	7.2	3.8	5.1	6.0	6.6	8.4	8.6	8.7	10.0	12.2	15.4	14.7	16.6	16.7	19.1	18.8	18.2	14.8	15.2	12.4	8.6	7.5	6.5	4.7	3.8	19.1	11.1
Jun 17	5.7	9.8	9.0	8.5	10.7	13.2	18.7	18.8	18.7	18.9	26.9	23.0	24.5	25.1	24.8	29.8	26.1	16.9	24.6	8.3	12.5	22.2	8.7	8.7	5.7	29.8	17.3
Jun 18	17.7	9.7	12.6	20.5	16.7	16.2	16.6	19.4	28.5	28.9	29.9	30.7	31.8	33.6	35.3	31.6	33.1	29.9	31.7	27.8	23.6	11.9	6.8	8.9	6.8	35.3	23.1
Jun 19	10.9	11.8	11.3	12.8	12.9	12.9	14.7	15.4	12.7	10.3	11.5	10.3	10.8	12.0	10.0	8.4	13.9	11.5	13.4	8.6	15.5	14.8	12.0	20.6	8.4	20.6	12.5
Jun 20	21.6	21.2	28.1	29.5	29.0	25.6	27.5	25.4	25.8	26.8	28.9	30.2	25.1	26.6	25.2	27.3	27.7	29.4	19.5	17.6	8.1	11.7	15.9	19.8	8.1	30.2	**23.9**
Jun 21	24.4	21.1	18.3	17.6	17.5	20.4	17.9	13.6	12.7	12.6	13.0	20.3	20.7	15.2	9.0	9.5	11.9	7.8	5.7	3.9	3.9	3.7	8.5	7.4	3.7	24.4	13.2
Jun 22	6.5	9.2	6.7	7.4	5.7	5.4	8.0	6.7	6.7	9.7	9.2	11.1	9.5	11.9	8.6	8.9	8.9	9.1	5.3	3.0	3.0	3.4	1.8	3.7	1.8	11.9	7.1
Jun 23	2.2	3.3	1.7	4.0	4.3	2.3	4.7	8.9	8.0	9.8	8.3	12.1	11.0	8.8	17.6	19.3	6.3	18.1	18.2	16.6	10.4	13.1	7.7	6.0	1.7	19.3	9.3
Jun 24	6.4	9.5	9.5	9.2	7.7	6.7	8.8	10.2	14.7	12.3	13.9	16.6	14.9	16.0	15.5	22.3	25.1	26.5	24.8	23.3	12.7	10.8	5.2	3.8	3.8	26.5	13.6
Jun 25	2.5	1.8	2.3	2.0	4.2	5.3	6.7	7.2	8.4	9.9	11.8	17.9	19.2	18.7	15.1	6.5	10.9	13.2	7.1	5.7	18.0	9.6	4.5	8.5	1.8	19.2	9.0
Jun 26	4.9	3.3	2.2	3.0	0.8	1.5	3.1	5.3	7.1	9.2	6.7	10.5	13.7	17.3	13.5	13.6	12.8	14.3	11.3	5.4	1.8	2.0	1.8	3.6	0.8	17.3	**7.0**
Jun 27	2.9	3.2	4.4	3.1	3.1	3.9	5.2	7.1	10.7	11.1	14.4	15.8	16.1	19.5	18.1	12.6	12.4	16.5	12.4	5.0	7.5	2.5	4.6	15.2	2.5	19.5	9.5
Jun 28	18.7	19.5	19.1	18.3	17.3	17.3	16.4	20.7	19.9	19.3	23.4	24.0	28.2	26.6	16.8	21.9	16.8	17.6	22.5	22.4	15.8	9.7	6.9	6.1	6.1	28.2	18.6
Jun 29	8.1	4.7	6.8	8.1	8.4	7.9	11.0	11.8	8.7	11.2	9.0	16.9	18.4	16.7	21.3	21.2	24.9	25.2	17.6	12.1	12.7	8.4	5.8	3.7	3.7	25.2	12.5
Jun 30	3.9	3.3	4.5	5.1	5.8	3.8	3.8	9.3	10.2	16.3	16.3	18.6	19.1	17.6	18.6	19.2	21.4	20.1	20.3	9.4	12.1	16.4	7.2	18.6	3.3	21.4	12.5
Diurnal Maximum	24.4	23.2	38.8	29.5	29.0	25.6	27.5	25.4	28.5	28.9	29.9	30.7	31.8	33.6	35.3	34.8	33.8	29.9	31.7	29.7	26.3	22.2	18.7	20.6			
Daiurnal Average	8.1	8.2	8.5	8.3	7.9	8.6	11.1	12.8	14.1	15.6	17.3	19.5	20.1	20.7	20.5	19.3	19.3	17.9	16.9	13.5	11.3	8.9	6.7	8.0			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for WS - 986b Station



842b STATION

PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Instantaneous Maximums

SULPHUR DIOXIDE (SO_2) in ppb

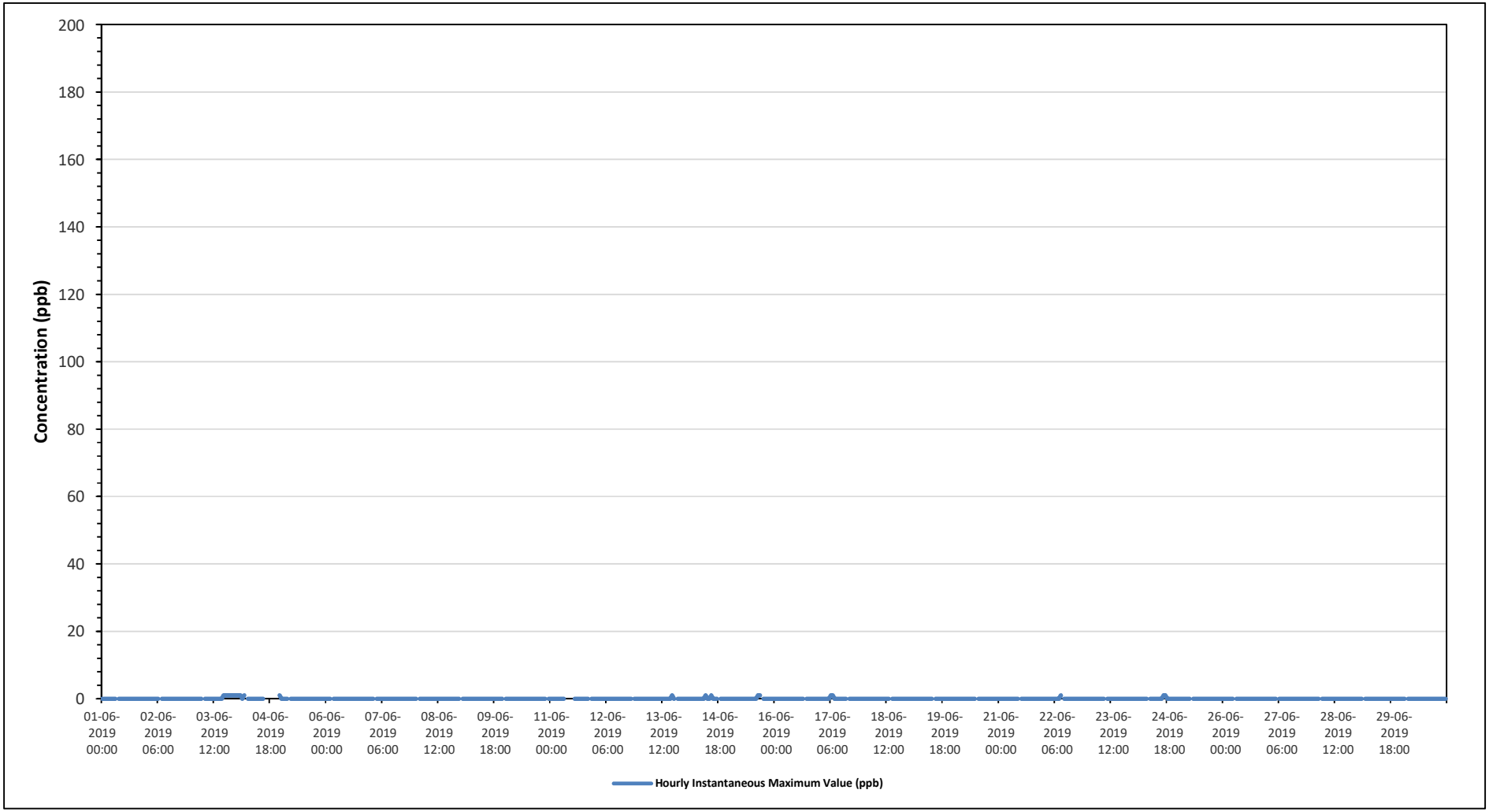
Maximum Hourly Value:	1	ppb	on June 3 at hour 17	Hours in Service:	720
Maximum Daily Value:	0.3	ppb	on June 3	Hours of Data:	676
Minimum Hourly Value:	0	ppb	on June 1 at hour 0	Hours of Missing Data:	8
Minimum Daily Value:	0.0	ppb	on June 1	Hours of Calibration:	36
Monthly Average:	0.0	ppb		Operational Uptime:	98.9

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			
Jun 1	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
Jun 2	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
Jun 3	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0.3
Jun 4	1	1	1	0	1	S	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	1	0	1	-
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 10	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
Jun 11	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Jun 12	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
Jun 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	S	0	0	0	0	0	1	0.0
Jun 14	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	S	0	0	0	0	0	0	1	0.1
Jun 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	1	0.1
Jun 16	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
Jun 17	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.1
Jun 18	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
Jun 19	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
Jun 20	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
Jun 21	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
Jun 22	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jun 23	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
Jun 24	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0.1
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	1	1	1	0	1	0	1	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1			
Daiurnal 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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for SO2 - 842b Station



PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Instantaneous Maximums

TOTAL REDUCED SULPHUR (TRS) in ppb

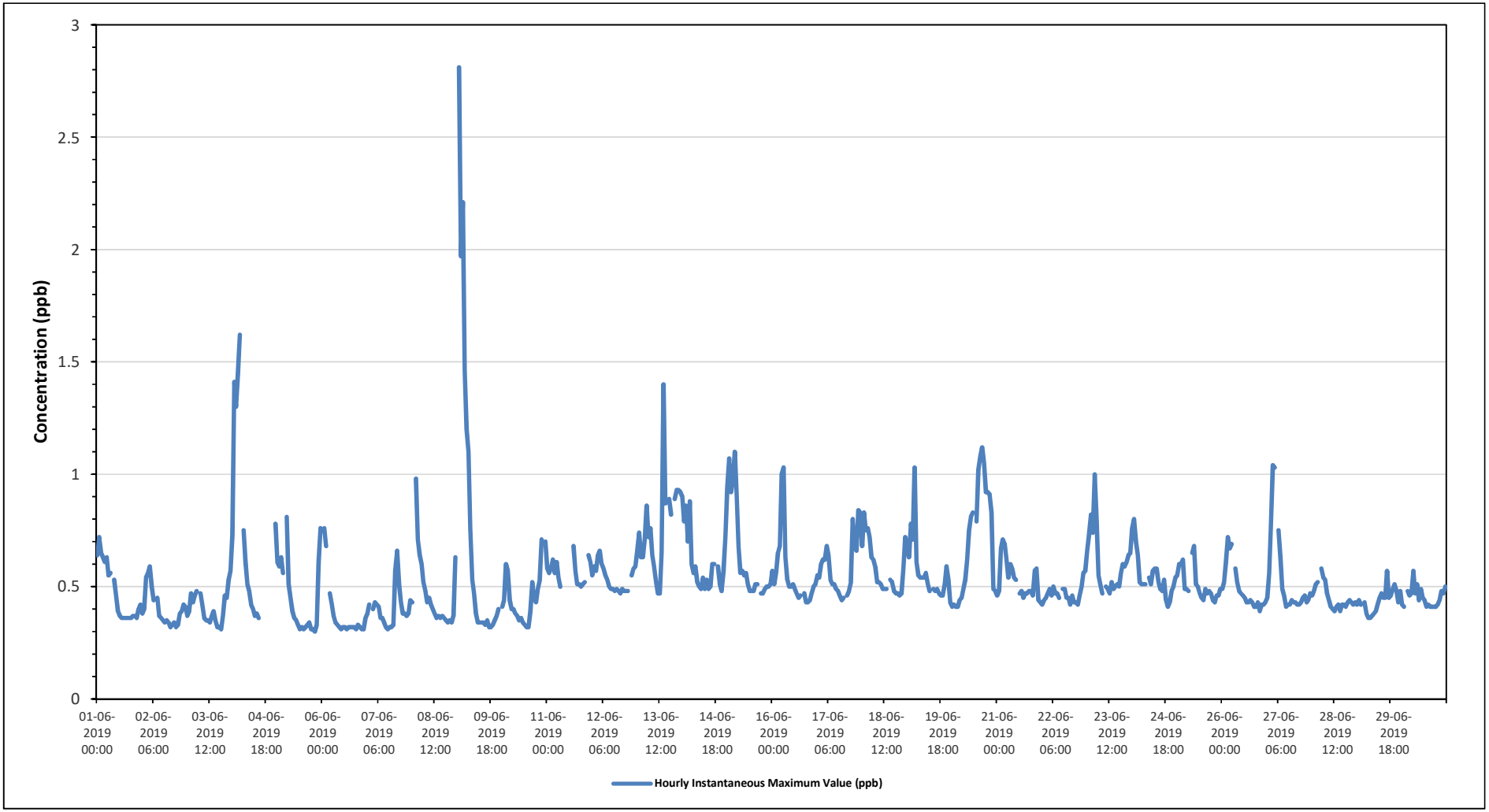
Maximum Hourly Value:	2.81	ppb	on June 9 at hour 1	Hours in Service:	720
Maximum Daily Value:	0.77	ppb	on June 9	Hours of Data:	675
Minimum Hourly Value:	0.30	ppb	on June 5 at hour 20	Hours of Missing Data:	8
Minimum Daily Value:	0.39	ppb	on June 6	Hours of Calibration:	37
Monthly Average:	0.53	ppb		Operational Uptime:	98.9

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	Average
Jun 1	0.64	0.72	0.65	0.63	0.61	0.63	0.55	0.56	S	0.53	0.46	0.39	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.36	0.4	0.42	0.36	0.72	0.47
Jun 2	0.38	0.4	0.54	0.56	0.59	0.5	0.44	S	0.45	0.37	0.36	0.35	0.34	0.35	0.34	0.32	0.33	0.34	0.32	0.33	0.38	0.39	0.42	0.41	0.32	0.59	0.40
Jun 3	0.37	0.39	0.47	0.43	0.46	0.48	S	0.47	0.42	0.36	0.35	0.35	0.34	0.37	0.39	0.35	0.32	0.32	0.31	0.37	0.46	0.45	0.53	0.57	0.31	0.57	0.41
Jun 4	0.73	1.41	1.3	1.45	1.62	S	0.75	0.61	0.51	0.48	0.42	0.4	0.37	0.38	0.36	P	P	P	P	P	P	P	P	0.78	0.36	1.62	-
Jun 5	0.61	0.59	0.63	0.56	S	0.81	0.51	0.45	0.39	0.36	0.35	0.33	0.31	0.32	0.31	0.32	0.33	0.34	0.31	0.31	0.3	0.33	0.61	0.76	0.30	0.81	0.44
Jun 6	0.75	0.76	0.68	S	0.47	0.42	0.37	0.34	0.33	0.32	0.31	0.32	0.32	0.31	0.32	0.32	0.32	0.32	0.31	0.33	0.32	0.31	0.31	0.36	0.31	0.76	0.39
Jun 7	0.38	0.42	S	0.4	0.43	0.42	0.41	0.36	0.36	0.34	0.32	0.31	0.32	0.32	0.33	0.57	0.66	0.51	0.43	0.38	0.38	0.37	0.38	0.44	0.31	0.66	0.40
Jun 8	0.43	S	0.98	0.71	0.64	0.6	0.52	0.48	0.43	0.45	0.42	0.4	0.38	0.36	0.37	0.36	0.37	0.36	0.35	0.34	0.35	0.34	0.37	0.63	0.34	0.98	0.46
Jun 9	S	2.81	1.97	2.21	1.46	1.2	1.1	0.76	0.53	0.47	0.38	0.34	0.34	0.34	0.34	0.33	0.35	0.32	0.32	0.33	0.35	0.37	0.4	S	0.32	2.81	0.77
Jun 10	0.41	0.44	0.6	0.57	0.44	0.4	0.4	0.38	0.37	0.35	0.36	0.34	0.33	0.32	0.32	0.39	0.52	0.45	0.43	0.49	0.53	0.71	S	0.7	0.32	0.71	0.45
Jun 11	0.58	0.56	0.58	0.62	0.56	0.61	0.54	0.5	C	C	C	C	C	C	0.68	0.57	0.51	0.51	0.5	0.51	0.52	S	0.64	0.61	0.50	0.68	-
Jun 12	0.55	0.59	0.57	0.64	0.66	0.6	0.58	0.55	0.53	0.5	0.49	0.49	0.48	0.49	0.48	0.47	0.49	0.48	0.48	0.48	S	0.55	0.58	0.59	0.47	0.66	0.54
Jun 13	0.66	0.74	0.63	0.63	0.71	0.86	0.72	0.76	0.64	0.59	0.52	0.47	0.47	0.65	1.4	0.87	0.88	0.89	0.82	S	0.89	0.93	0.93	0.92	0.47	1.40	0.76
Jun 14	0.9	0.79	0.86	0.7	0.88	0.6	0.56	0.59	0.52	0.5	0.49	0.54	0.49	0.53	0.49	0.5	0.6	0.6	S	0.59	0.51	0.48	0.57	0.72	0.48	0.90	0.61
Jun 15	0.94	1.07	0.92	0.98	1.1	0.9	0.68	0.56	0.57	0.55	0.56	0.51	0.48	0.48	0.48	0.51	0.51	S	0.47	0.47	0.49	0.5	0.5	0.51	0.47	1.10	0.64
Jun 16	0.57	0.51	0.56	0.65	0.68	1	1.03	0.63	0.53	0.5	0.5	0.51	0.49	0.47	0.45	0.46	S	0.47	0.43	0.43	0.44	0.47	0.5	0.51	0.43	1.03	0.56
Jun 17	0.55	0.54	0.6	0.62	0.62	0.68	0.64	0.53	0.51	0.51	0.49	0.48	0.46	0.44	0.45	S	0.46	0.48	0.52	0.8	0.68	0.66	0.84	0.83	0.44	0.84	0.58
Jun 18	0.68	0.83	0.75	0.76	0.72	0.63	0.62	0.59	0.52	0.52	0.51	0.49	0.49	0.49	S	0.53	0.52	0.48	0.47	0.47	0.46	0.47	0.58	0.72	0.46	0.83	0.58
Jun 19	0.67	0.63	0.78	0.71	1.03	0.61	0.55	0.54	0.54	0.54	0.56	0.51	0.48	S	0.49	0.48	0.49	0.47	0.46	0.46	0.51	0.59	0.53	0.43	0.43	1.03	0.57
Jun 20	0.41	0.42	0.41	0.41	0.44	0.45	0.49	0.53	0.62	0.75	0.81	0.83	S	0.79	1.02	1.08	1.12	1.05	0.92	0.92	0.91	0.83	0.49	0.48	0.41	1.12	0.70
Jun 21	0.46	0.48	0.67	0.71	0.69	0.62	0.54	0.6	0.58	0.54	0.53	S	0.47	0.48	0.45	0.47	0.47	0.48	0.48	0.46	0.57	0.58	0.44	0.43	0.43	0.71	0.53
Jun 22	0.42	0.44	0.45	0.47	0.49	0.46	0.5	0.47	0.47	0.45	S	0.49	0.49	0.45	0.45	0.42	0.46	0.43	0.43	0.42	0.46	0.5	0.56	0.57	0.42	0.57	0.47
Jun 23	0.66	0.73	0.82	0.74	1	0.79	0.55	0.51	0.47	S	0.5	0.49	0.47	0.52	0.49	0.5	0.51	0.5	0.56	0.6	0.59	0.61	0.64	0.65	0.47	1.00	0.60
Jun 24	0.76	0.8	0.7	0.64	0.52	0.51	0.51	0.51	S	0.54	0.51	0.57	0.58	0.58	0.52	0.49	0.48	0.53	0.44	0.41	0.43	0.48	0.5	0.54	0.41	0.80	0.55
Jun 25	0.55	0.6	0.6	0.62	0.49	0.49	0.48	S	0.65	0.68	0.51	0.5	0.47	0.45	0.44	0.49	0.47	0.48	0.47	0.44	0.43	0.46	0.46	0.49	0.43	0.68	0.51
Jun 26	0.49	0.52	0.61	0.72	0.67	0.69	S	0.58	0.52	0.48	0.47	0.46	0.45	0.43	0.43	0.44	0.43	0.41	0.41	0.43	0.39	0.42	0.42	0.43	0.39	0.72	0.49
Jun 27	0.45	0.56	0.78	1.04	1.03	S	0.75	0.63	0.49	0.46	0.41	0.42	0.42	0.44	0.43	0.43	0.42	0.42	0.43	0.45	0.46	0.43	0.44	0.47	0.41	1.04	0.53
Jun 28	0.46	0.48	0.51	0.52	S	0.58	0.54	0.53	0.47	0.44	0.41	0.4	0.39	0.41	0.42	0.39	0.42	0.42	0.41	0.43	0.44	0.43	0.42	0.43	0.39	0.58	0.45
Jun 29	0.42	0.44	0.42	S	0.43	0.38	0.36	0.36	0.37	0.38	0.39	0.42	0.45	0.47	0.45	0.45	0.57	0.45	0.46	0.49	0.51	0.48	0.43	0.48	0.36	0.57	0.44
Jun 30	0.42	0.41	S	0.48	0.46	0.47	0.57	0.47	0.51	0.44	0.49	0.45	0.44	0.41	0.42	0.41	0.41	0.41	0.41	0.42	0.44	0.48	0.47	0.5	0.41	0.57	0.45
Diurnal Maximum	0.94	2.81	1.97	2.21	1.62	1.20	1.10	0.76	0.65	0.75	0.81	0.83	0.58	0.79	1.40	1.08	1.12	1.05	0.92	0.92	0.91	0.93	0.93	0.92			
Daiurnal Average	0.56	0.69	0.72	0.72	0.71	0.62	0.58	0.53	0.49	0.48	0.46	0.45	0.42	0.44	0.48	0.47	0.49	0.47	0.45	0.46	0.48	0.50	0.51	0.56			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for TRS - 842b Station



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PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Instantaneous Maximums

TOTAL HYDROCARBONS (THC) in ppm

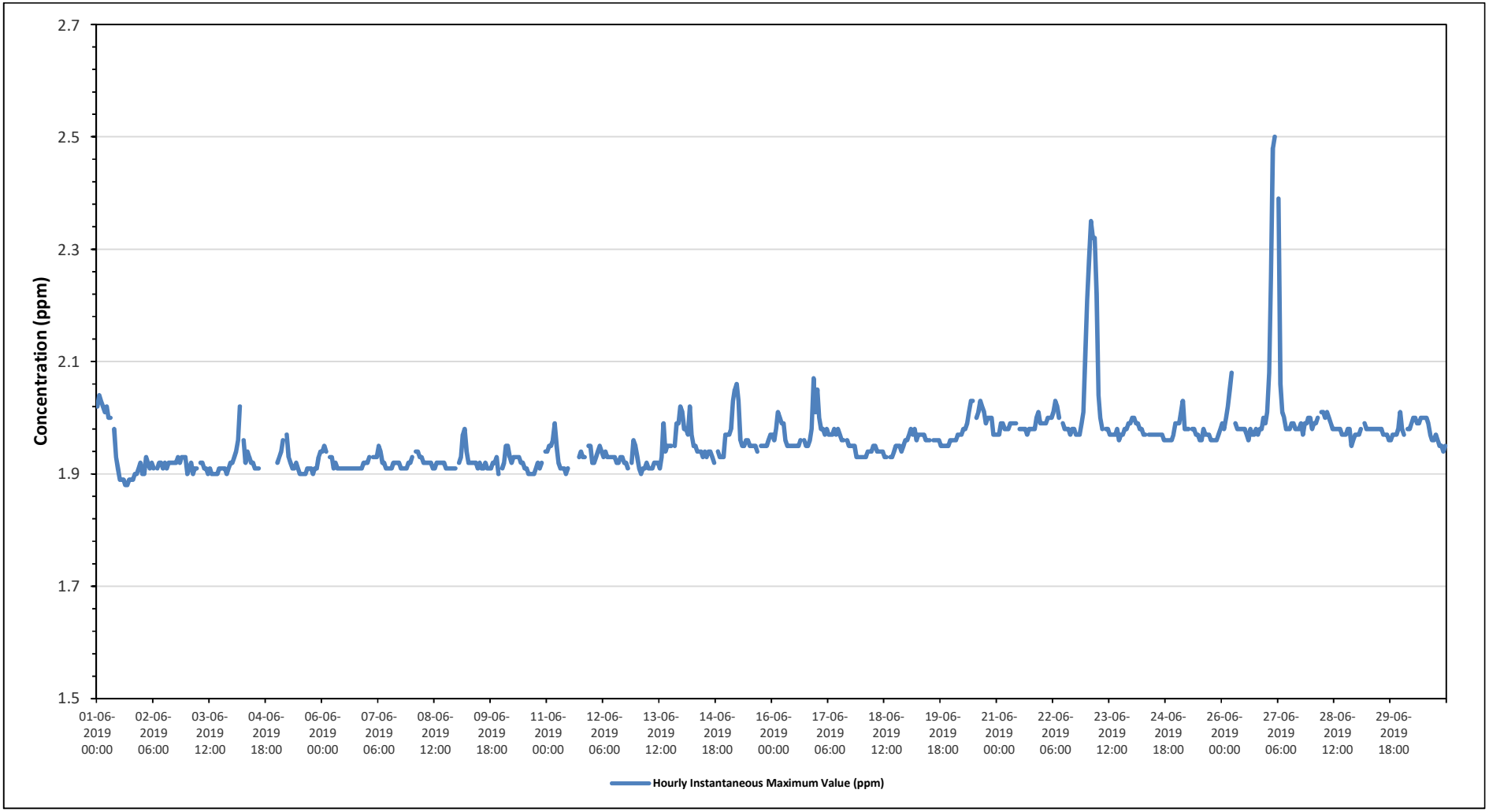
Maximum Hourly Value:	2.50	ppm	on June 27 at hour 4	Hours in Service:	720
Maximum Daily Value:	2.07	ppm	on June 27	Hours of Data:	675
Minimum Hourly Value:	1.88	ppm	on June 1 at hour 15	Hours of Missing Data:	9
Minimum Daily Value:	1.91	ppm	on June 3	Hours of Calibration:	36
Monthly Average:	1.96	ppm		Operational Uptime:	98.8

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			
Jun 1	2.02	2.04	2.03	2.02	2.01	2.02	2.00	2.00	S	1.98	1.93	1.91	1.89	1.89	1.89	**1.88**	1.88	1.89	1.89	1.89	1.90	1.90	1.91	1.92	**1.88**	2.04	1.94
Jun 2	1.90	1.90	1.93	1.92	1.91	1.92	1.91	S	1.91	1.92	1.92	1.91	1.92	1.91	1.92	1.92	1.92	1.92	1.92	1.93	1.92	1.93	1.93	1.93	1.90	1.93	1.92
Jun 3	1.90	1.91	1.92	1.90	1.91	1.91	S	1.92	1.92	1.91	1.91	1.90	1.91	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.90	1.91	1.92	1.90	1.92	**1.91**
Jun 4	1.92	1.93	1.94	1.96	2.02	S	1.96	1.92	1.94	1.93	1.92	1.92	1.91	1.91	1.91	P	P	P	P	P	P	P	P	R	1.91	2.02	-
Jun 5	1.92	1.93	1.94	1.96	S	1.97	1.93	1.92	1.91	1.91	1.92	1.91	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.90	1.91	1.91	1.93	1.94	1.90	1.97	1.92
Jun 6	1.94	1.95	1.94	S	1.93	1.93	1.91	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.91	1.95	1.92
Jun 7	1.92	1.93	S	1.93	1.93	1.93	1.95	1.94	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.91	1.95	1.92
Jun 8	1.93	S	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.94	1.92
Jun 9	S	1.92	1.93	1.97	1.98	1.94	1.92	1.92	1.92	1.92	1.92	1.91	1.92	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.92	1.93	1.90	S	1.90	1.98	1.92
Jun 10	1.91	1.92	1.95	1.95	1.93	1.92	1.93	1.93	1.93	1.93	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.91	1.92	1.91	1.92	S	1.94	1.90	1.95	1.92
Jun 11	1.94	1.95	1.95	1.96	1.99	1.95	1.92	1.91	1.91	1.91	1.90	1.91	C	C	C	C	C	1.93	1.94	1.93	1.93	S	1.95	1.95	1.90	1.99	1.94
Jun 12	1.92	1.92	1.93	1.94	1.95	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.93	1.93	1.92	1.92	1.91	S	1.92	1.96	1.95	1.91	1.96	1.93
Jun 13	1.93	1.91	1.90	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.92	1.92	1.91	1.93	1.99	1.94	1.95	1.95	1.95	S	1.95	1.99	1.99	2.02	1.90	2.02	1.94
Jun 14	2.01	1.98	1.98	1.97	2.02	1.97	1.95	1.95	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.94	1.93	1.92	S	1.94	1.93	1.93	1.93	1.97	1.92	2.02	1.95
Jun 15	1.97	1.97	1.98	2.03	2.05	2.06	2.03	1.96	1.95	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.94	S	1.95	1.95	1.95	1.95	1.96	1.97	1.94	2.06	1.97
Jun 16	1.97	1.96	1.98	2.01	2.00	1.99	1.99	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	S	1.96	1.95	1.95	1.96	1.98	2.07	2.01	1.95	2.07	1.97
Jun 17	2.05	2.00	1.98	1.98	1.97	1.98	1.97	1.97	1.97	1.98	1.97	1.98	1.97	1.96	1.96	S	1.96	1.95	1.95	1.95	1.95	1.93	1.93	1.93	1.93	2.05	1.97
Jun 18	1.93	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.94	1.94	1.94	1.94	1.93	1.93	S	1.93	1.93	1.94	1.95	1.95	1.95	1.94	1.95	1.96	1.93	1.96	1.94
Jun 19	1.96	1.97	1.98	1.97	1.98	1.96	1.97	1.97	1.97	1.97	1.96	1.96	1.96	S	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.95	1.98	1.96
Jun 20	1.96	1.96	1.96	1.97	1.97	1.97	1.98	1.98	1.99	2.01	2.03	2.03	S	2.00	2.01	2.03	2.02	2.01	1.99	2.00	2.00	2.00	1.97	1.97	1.96	2.03	1.99
Jun 21	1.97	1.97	1.99	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.99	S	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	2.00	2.01	1.99	1.97	2.01	1.98
Jun 22	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.03	2.02	2.00	S	1.99	1.98	1.98	1.98	1.97	**1.98**	1.98	1.97	1.97	1.97	1.99	2.01	2.11	**1.97**	2.11	2.00
Jun 23	2.21	2.28	2.35	2.32	2.32	2.22	2.04	2.00	1.98	S	1.98	1.98	1.97	1.97	1.97	1.97	1.98	1.96	1.97	1.97	1.98	1.98	1.99	1.99	1.96	2.35	2.06
Jun 24	2.00	2.00	1.99	1.99	1.98	1.98	1.97	1.97	S	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.97	1.99	1.96	2.00	1.97
Jun 25	1.99	1.99	2.01	2.03	1.98	1.98	1.98	S	1.98	1.98	1.97	1.97	1.96	1.96	1.98	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.98	1.96	2.03	1.98
Jun 26	1.99	1.98	2.00	2.02	2.05	2.08	S	1.99	1.98	1.98	1.98	1.98	1.98	1.97	1.96	1.98	1.97	1.97	1.98	1.97	1.98	1.98	2.00	1.99	1.96	2.08	1.99
Jun 27	2.01	2.08	2.25	2.48	**2.50**	S	2.39	2.06	2.01	2.00	1.98	1.98	1.98	1.99	1.99	1.98	1.98	1.98	1.99	1.97	1.99	1.99	2.00	2.00	1.97	**2.50**	**2.07**
Jun 28	1.98	1.99	1.99	2.00	S	2.01	2.01	2.00	2.01	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.98	1.95	1.96	1.97	1.95	2.01	1.98
Jun 29	1.97	1.97	1.98	S	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.96	1.96	1.97	1.97	1.97	1.98	2.01	1.96	2.01	1.98
Jun 30	1.98	1.97	S	1.98	1.98	1.99	2.00	2.00	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.97	1.96	1.96	1.97	1.96	1.95	1.95	1.94	1.95	1.94	2.00	1.98
Diurnal Maximum	2.21	2.28	2.35	2.48	2.50	2.22	2.39	2.06	2.02	2.01	2.03	2.03	2.00	2.00	2.01	2.03	2.02	2.01	1.99	2.00	2.00	2.00	2.07	2.11			
Daiurnal Average	1.97	1.97	1.99	2.00	2.00	1.98	1.98	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.95	1.94	1.94	1.94	1.94	1.95	1.95	1.96	1.97			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for THC - 842b Station



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PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Instantaneous Maximums

METHANE (CH4) in ppm

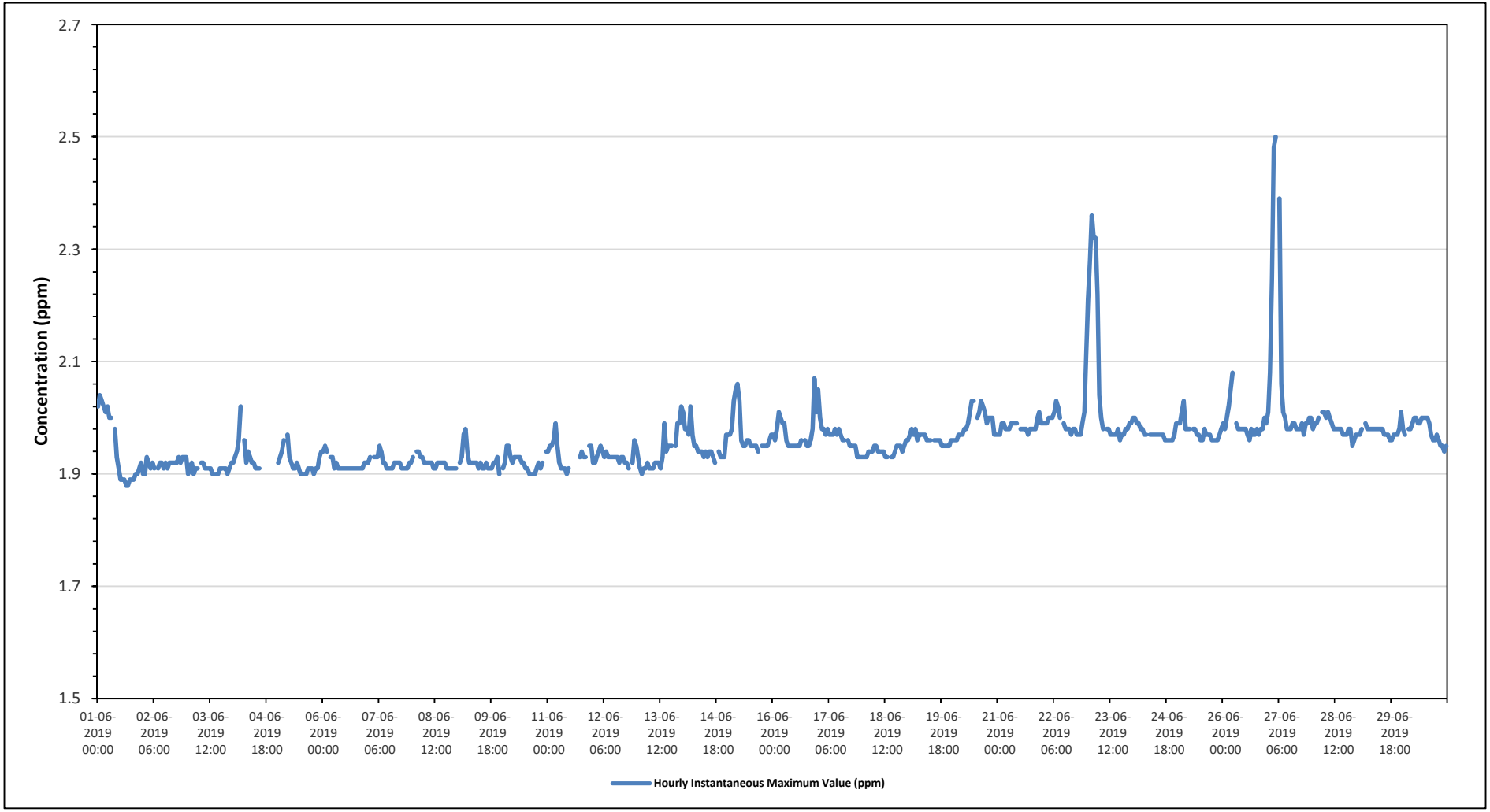
Maximum Hourly Value:	2.50	ppm	on June 27 at hour 4	Hours in Service:	720
Maximum Daily Value:	2.07	ppm	on June 27	Hours of Data:	675
Minimum Hourly Value:	1.88	ppm	on June 1 at hour 15	Hours of Missing Data:	9
Minimum Daily Value:	1.91	ppm	on June 3	Hours of Calibration:	36
Monthly Average:	1.96	ppm		Operational Uptime:	98.8

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
Jun 1	2.02	2.04	2.03	2.02	2.01	2.02	2.00	2.00	S	1.98	1.93	1.91	1.89	1.89	1.89	**1.88**	1.88	1.89	1.89	1.89	1.90	1.90	1.91	1.92	**1.88**	2.04	1.94
Jun 2	1.90	1.90	1.93	1.92	1.91	1.92	1.91	S	1.91	1.92	1.92	1.91	1.92	1.91	1.92	1.92	1.92	1.92	1.92	1.93	1.92	1.93	1.93	1.93	1.90	1.93	1.92
Jun 3	1.90	1.91	1.92	1.90	1.91	1.91	S	1.92	1.92	1.91	1.91	1.91	1.91	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.90	1.91	1.92	1.90	1.92	**1.91**
Jun 4	1.92	1.93	1.94	1.96	2.02	S	1.96	1.92	1.94	1.93	1.92	1.92	1.91	1.91	1.91	P	P	P	P	P	P	P	P	R	1.91	2.02	-
Jun 5	1.92	1.93	1.94	1.96	S	1.97	1.93	1.92	1.91	1.91	1.92	1.91	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.90	1.91	1.91	1.93	1.94	1.90	1.97	1.92
Jun 6	1.94	1.95	1.94	S	1.93	1.93	1.91	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.91	1.95	1.92
Jun 7	1.92	1.93	S	1.93	1.93	1.93	1.95	1.94	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.91	1.95	1.92
Jun 8	1.93	S	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.94	1.92
Jun 9	S	1.92	1.93	1.97	1.98	1.94	1.92	1.92	1.92	1.92	1.92	1.91	1.92	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.92	1.93	1.90	S	1.90	1.98	1.92
Jun 10	1.91	1.92	1.95	1.95	1.93	1.92	1.93	1.93	1.93	1.93	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.91	1.92	1.91	1.92	S	1.94	1.90	1.95	1.92
Jun 11	1.94	1.95	1.95	1.96	1.99	1.95	1.92	1.91	1.91	1.91	1.90	1.91	C	C	C	C	C	1.93	1.94	1.93	1.93	S	1.95	1.95	1.90	1.99	1.94
Jun 12	1.92	1.92	1.93	1.94	1.95	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.93	1.93	1.92	1.92	1.91	S	1.92	1.96	1.95	1.91	1.96	1.93
Jun 13	1.93	1.91	1.90	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.92	1.92	1.91	1.93	1.99	1.94	1.95	1.95	1.95	S	1.95	1.99	1.99	2.02	1.90	2.02	1.94
Jun 14	2.01	1.98	1.98	1.97	2.02	1.97	1.95	1.95	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.94	1.93	1.92	S	1.94	1.93	1.93	1.93	1.97	1.92	2.02	1.95
Jun 15	1.97	1.97	1.98	2.03	2.05	2.06	2.03	1.96	1.95	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.94	S	1.95	1.95	1.95	1.95	1.96	1.97	1.94	2.06	1.97
Jun 16	1.97	1.96	1.98	2.01	2.00	1.99	1.99	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	S	1.96	1.95	1.95	1.96	1.98	2.07	2.01	1.95	2.07	1.97
Jun 17	2.05	2.00	1.98	1.98	1.97	1.98	1.97	1.97	1.97	1.98	1.97	1.98	1.97	1.96	1.96	S	1.96	1.95	1.95	1.95	1.95	1.93	1.93	1.93	1.93	2.05	1.97
Jun 18	1.93	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.94	1.94	1.94	1.94	1.93	1.93	S	1.93	1.93	1.94	1.95	1.95	1.95	1.94	1.95	1.96	1.93	1.96	1.94
Jun 19	1.96	1.97	1.98	1.97	1.98	1.96	1.97	1.97	1.97	1.97	1.96	1.96	1.96	S	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.95	1.98	1.96
Jun 20	1.96	1.96	1.96	1.97	1.97	1.97	1.98	1.98	1.99	2.01	2.03	2.03	S	2.00	2.01	2.03	2.02	2.01	1.99	2.00	2.00	2.00	1.97	1.97	1.96	2.03	1.99
Jun 21	1.97	1.97	1.99	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.99	S	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	2.00	2.01	1.99	1.97	2.01	1.98
Jun 22	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.03	2.02	2.00	S	1.99	1.98	1.98	**1.98**	1.97	1.98	1.98	1.97	1.97	1.97	1.99	2.01	2.11	**1.97**	2.11	2.00
Jun 23	2.21	2.28	2.36	2.32	2.32	2.22	2.04	2.00	1.98	S	1.98	1.98	1.97	1.97	1.97	1.97	1.98	1.96	1.97	1.97	1.98	1.98	1.99	1.99	1.96	2.36	2.06
Jun 24	2.00	2.00	1.99	1.99	1.98	1.98	1.97	1.97	S	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.97	1.99	1.96	2.00	1.97
Jun 25	1.99	1.99	2.01	2.03	1.98	1.98	1.98	S	1.98	1.98	1.97	1.97	1.96	1.96	1.98	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.98	1.96	2.03	1.98
Jun 26	1.99	1.98	2.00	2.02	2.05	2.08	S	1.99	1.98	1.98	1.98	1.98	1.98	1.97	1.96	1.98	1.97	1.97	1.98	1.97	1.98	1.98	2.00	1.99	1.96	2.08	1.99
Jun 27	2.01	2.08	2.25	2.48	**2.50**	S	2.39	2.06	2.01	2.00	1.98	1.98	1.98	1.99	1.99	1.98	1.98	1.98	1.99	1.97	1.99	1.99	2.00	2.00	1.97	**2.50**	**2.07**
Jun 28	1.98	1.99	1.99	2.00	S	2.01	2.01	2.00	2.01	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.98	1.95	1.96	1.97	1.95	2.01	1.98
Jun 29	1.97	1.97	1.98	S	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.96	1.96	1.97	1.97	1.97	1.98	2.01	1.96	2.01	1.98
Jun 30	1.98	1.97	S	1.98	1.98	1.99	2.00	2.00	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.97	1.96	1.96	1.97	1.96	1.95	1.95	1.94	1.95	1.94	2.00	1.98
Diurnal Maximum	2.21	2.28	2.36	2.48	2.50	2.22	2.39	2.06	2.02	2.01	2.03	2.03	2.00	2.00	2.01	2.03	2.02	2.01	1.99	2.00	2.00	2.00	2.07	2.11			
Daiurnal Average	1.97	1.97	1.99	2.00	2.00	1.98	1.98	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.95	1.94	1.94	1.94	1.94	1.95	1.95	1.96	1.97			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for CH4 - 842b Station



PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Instantaneous Maximums

NON-METHANE HYDROCARBONS (NMHC) in ppm

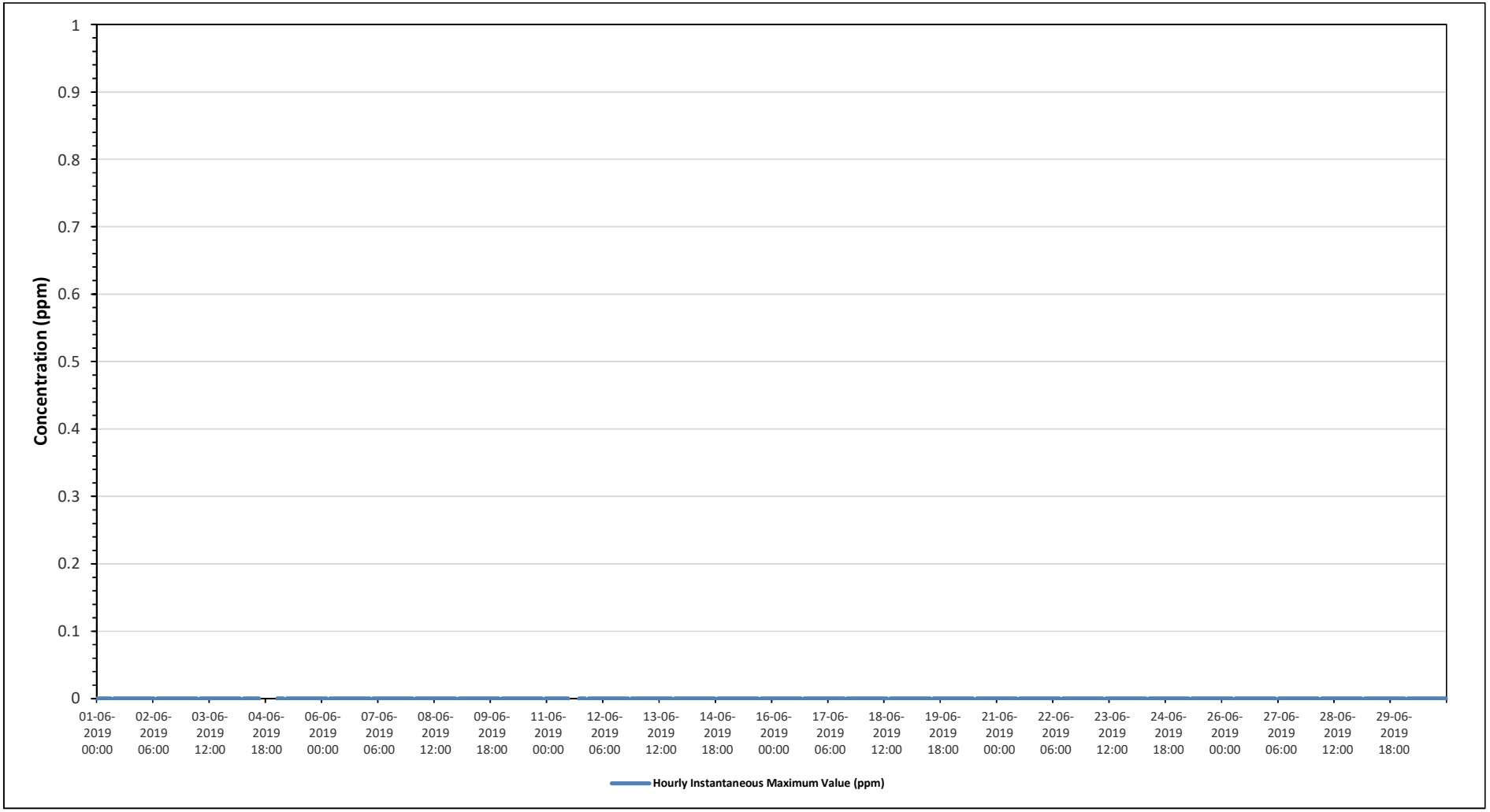
Maximum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on June 1	Hours of Data:	675
Minimum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours of Missing Data:	9
Minimum Daily Value:	0.00	ppm	on June 1	Hours of Calibration:	36
Monthly Average:	0.00	ppm		Operational Uptime:	98.8

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
Jun 1	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
Jun 2	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
Jun 3	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
Jun 4	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	P	P	P	P	P	P	P	P	R	0.00	0.00	-
Jun 5	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
Jun 6	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
Jun 7	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
Jun 8	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
Jun 9	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
Jun 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	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
Jun 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	C	C	C	C	C	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Jun 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 14	0.00	0.00	0.00	0.00	0.00	0.00	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
Jun 15	0.00	0.00	0.00	0.00	0.00	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
Jun 16	0.00	0.00	0.00	0.00	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
Jun 17	0.00	0.00	0.00	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
Jun 18	0.00	0.00	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
Jun 19	0.00	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
Jun 20	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
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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
Jun 27	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
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Daiurnal 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	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for NMHC - 842b Station



PEACE RIVER AREA MONITORING PROGRAM

842b Station - June 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/h

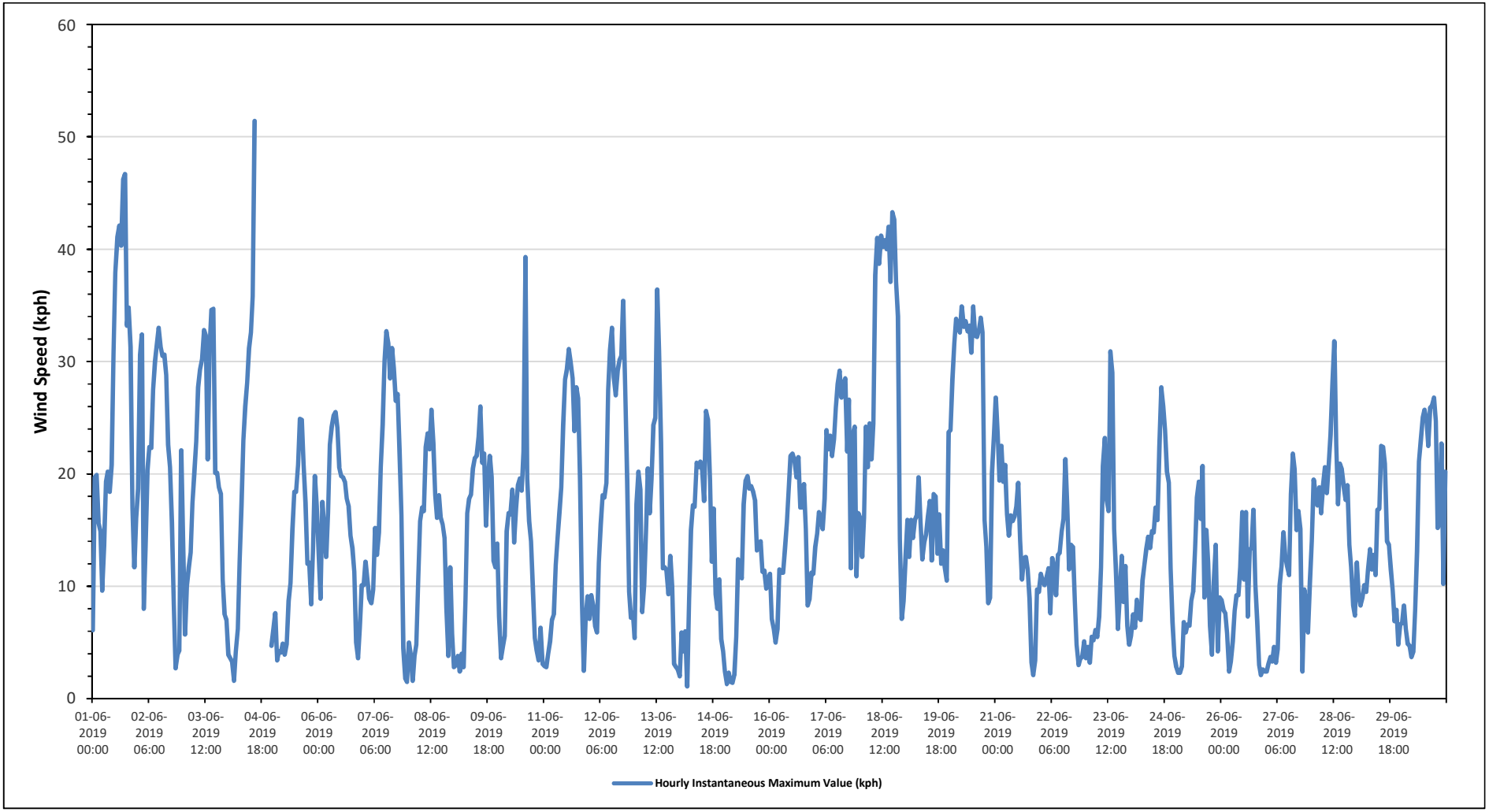
Maximum Hourly Value:	51.4	kph	on June 4 at hour 14	Hours in Service:	720
Maximum Daily Value:	29.4	kph	on June 18	Hours of Data:	712
Minimum Hourly Value:	1.1	kph	on June 14 at hour 4	Hours of Missing Data:	8
Minimum Daily Value:	8.4	kph	on June 26	Hours of Calibration:	0
Monthly Average:	16.0	kph		Operational Uptime:	98.9

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	Average
Jun 1	6.1	19.7	19.9	15.7	14.9	9.6	13.6	19.3	20.2	18.4	20.8	30.8	37.9	41.1	42.1	40.3	46.2	46.7	33.2	34.8	31.3	17.0	11.7	16.1	6.1	46.7	25.3
Jun 2	18.7	30.6	32.4	8.0	13.3	20.3	22.4	22.3	27.5	30.0	31.6	33.0	31.3	30.5	30.6	28.8	22.6	20.6	15.7	8.4	2.7	3.9	4.3	22.1	2.7	33.0	21.3
Jun 3	14.2	5.7	10.0	11.7	13.0	17.4	20.1	22.9	27.7	29.3	30.2	32.8	32.3	21.3	31.2	34.6	34.7	20.1	20.1	18.8	18.2	10.6	7.5	7.0	5.7	34.7	20.5
Jun 4	3.9	3.6	3.3	1.6	4.2	6.2	12.1	17.2	23.0	26.0	28.1	31.2	32.6	35.8	**51.4**	P	P	P	P	P	P	P	P	4.7	1.6	**51.4**	-
Jun 5	6.2	7.6	3.4	4.2	4.1	4.9	3.9	4.9	8.7	10.3	15.0	18.4	18.4	20.8	24.9	24.8	20.8	17.4	12.0	12.1	8.4	13.1	19.8	17.2	3.4	24.9	12.6
Jun 6	13.2	8.9	17.5	15.0	12.6	16.6	22.6	24.2	25.2	25.5	24.1	20.6	19.8	19.7	19.3	17.8	17.1	14.5	13.4	11.3	5.0	3.6	6.3	10.1	3.6	25.5	16.0
Jun 7	10.1	12.2	10.6	8.9	8.5	9.7	15.2	12.8	14.8	20.6	24.4	30.1	32.7	31.6	28.5	31.2	29.4	26.5	27.1	22.0	16.3	4.5	1.8	1.5	1.5	32.7	18.0
Jun 8	5.0	3.9	1.6	3.8	4.8	10.9	15.8	17.0	16.7	22.4	23.6	22.2	25.7	22.7	18.1	16.1	18.1	16.1	15.5	14.3	8.1	3.8	11.7	5.8	1.6	25.7	13.5
Jun 9	2.8	3.0	3.8	2.4	4.0	2.8	8.8	16.5	17.8	18.2	20.5	21.4	21.6	23.3	26.0	21.0	21.8	15.4	19.6	21.6	19.7	12.3	11.7	13.8	2.4	26.0	14.6
Jun 10	7.3	3.6	4.7	5.6	14.9	16.5	16.4	18.6	13.9	17.0	19.0	19.6	18.5	22.0	39.3	19.6	15.8	14.0	9.7	5.4	4.3	3.4	6.3	3.1	3.1	39.3	13.3
Jun 11	2.9	2.8	4.0	5.1	7.0	7.5	11.9	14.2	16.5	18.8	24.3	28.4	29.3	31.1	30.0	28.5	23.8	27.7	26.7	19.6	8.6	2.5	7.3	9.1	2.5	31.1	16.2
Jun 12	7.1	9.2	8.3	6.5	5.9	12.1	15.5	18.1	17.9	19.2	27.5	31.0	33.0	28.6	27.0	29.2	30.1	30.5	35.4	27.2	19.4	9.5	7.2	7.6	5.9	35.4	19.3
Jun 13	5.4	17.3	20.2	18.6	7.7	10.1	14.8	20.5	16.5	19.5	24.4	25.0	36.4	30.9	22.8	11.6	11.7	11.4	9.3	12.7	10.0	3.1	2.8	2.6	2.6	36.4	15.2
Jun 14	2.0	5.9	4.2	6.0	**1.1**	8.8	15.0	17.2	17.1	21.0	20.6	21.1	20.3	17.6	25.6	24.9	19.5	12.2	16.9	9.3	8.0	10.6	5.3	4.2	**1.1**	25.6	13.1
Jun 15	2.4	1.3	2.3	1.5	1.4	2.1	5.5	12.4	11.7	10.7	17.3	19.4	19.8	18.7	18.9	18.4	17.7	13.2	13.4	14.0	11.3	11.4	9.8	10.6	1.3	19.8	11.1
Jun 16	11.1	7.1	6.2	5.0	6.2	11.5	11.2	11.2	13.4	15.7	18.6	21.6	21.8	21.2	19.7	21.5	17.0	17.0	19.1	15.1	8.3	8.9	11.2	11.1	5.0	21.8	13.8
Jun 17	13.5	14.7	16.6	15.9	15.1	17.8	23.9	22.2	23.4	21.6	23.1	25.9	28.0	29.2	26.8	28.0	28.5	22.0	26.6	11.6	23.5	24.2	10.9	16.5	10.9	29.2	21.2
Jun 18	16.1	12.6	16.1	24.2	20.6	24.5	21.3	24.5	37.7	41.0	38.7	41.2	40.2	40.8	40.0	42.0	37.1	43.3	42.6	37.1	34.0	14.2	7.1	8.7	7.1	43.3	**29.4**
Jun 19	12.5	15.9	12.6	15.9	14.3	15.9	16.3	19.7	15.7	12.4	13.9	14.6	16.2	17.6	12.3	18.2	18.0	12.9	16.4	12.0	13.2	11.7	10.5	23.7	10.5	23.7	15.1
Jun 20	23.9	28.4	31.6	33.8	33.2	32.6	34.9	33.1	33.6	32.7	33.2	30.8	34.9	32.3	32.2	32.8	33.9	32.6	15.9	13.5	8.5	9.0	20.1	23.4	8.5	34.9	28.0
Jun 21	26.8	23.6	19.4	22.5	19.3	20.8	16.4	14.5	16.3	15.8	16.2	17.1	19.2	14.1	10.6	12.5	12.6	11.5	8.9	3.2	2.1	3.4	9.7	9.5	2.1	26.8	14.4
Jun 22	11.1	10.5	10.1	10.7	11.6	7.6	12.5	11.7	9.2	12.8	13.0	14.9	16.0	21.3	17.2	11.5	13.7	13.5	8.7	4.8	3.0	3.6	3.7	5.1	3.0	21.3	10.7
Jun 23	3.6	4.6	3.2	5.5	5.2	6.1	5.5	7.3	11.7	20.7	23.2	17.7	16.7	30.9	29.0	15.1	11.2	6.2	9.3	12.7	8.6	11.8	6.5	4.8	3.2	30.9	11.5
Jun 24	5.6	7.5	6.3	8.8	7.2	7.0	10.5	11.9	13.3	14.4	13.4	14.9	14.8	17.0	15.9	22.4	27.7	26.0	23.9	20.2	19.2	11.6	6.8	3.8	3.8	27.7	13.8
Jun 25	2.8	2.3	2.3	2.9	6.8	5.9	6.6	6.5	8.7	9.5	13.3	17.9	19.3	16.0	20.7	9.0	15.0	12.1	6.5	3.9	10.4	13.7	4.2	9.0	2.3	20.7	9.4
Jun 26	8.8	7.9	7.6	5.8	2.4	3.3	5.1	7.8	9.2	9.2	11.7	16.6	10.6	16.6	7.3	13.3	13.4	16.8	10.2	6.9	3.0	2.1	2.6	2.4	2.1	16.8	**8.4**
Jun 27	2.4	3.1	3.7	3.3	4.6	3.2	4.4	10.1	11.8	14.8	12.6	11.8	11.0	18.2	21.8	20.4	15.0	16.7	15.1	2.4	9.7	8.6	5.9	10.4	2.4	21.8	10.0
Jun 28	14.0	19.5	18.3	17.2	18.8	16.5	18.9	20.6	18.3	20.8	23.5	28.2	31.8	22.6	17.3	20.9	20.4	18.9	17.7	19.0	13.7	11.7	8.3	7.4	7.4	31.8	18.5
Jun 29	12.1	9.3	8.3	9.0	10.1	9.5	11.5	13.3	11.5	12.8	11.0	16.8	16.9	22.5	22.4	20.9	14.0	13.7	11.5	9.6	6.9	7.9	4.8	6.6	4.8	22.5	12.2
Jun 30	6.7	8.3	6.2	4.9	4.7	3.7	4.2	7.9	13.1	21.1	23.0	25.0	25.7	24.8	22.5	25.9	26.1	26.8	24.7	15.2	15.6	22.7	10.2	20.2	3.7	26.8	16.2
Diurnal Maximum	26.8	30.6	32.4	33.8	33.2	32.6	34.9	33.1	37.7	41.0	38.7	41.2	40.2	41.1	51.4	42.0	46.2	46.7	42.6	37.1	34.0	24.2	20.1	23.7			
Daiurnal Average	9.3	10.4	10.5	10.0	9.9	11.4	13.9	16.0	17.4	19.4	21.3	23.3	24.4	24.7	25.0	22.8	21.8	19.9	18.1	14.4	12.1	9.5	8.1	9.9			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for WS - 842b Station



RENO STATION

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Instantaneous Maximums

SULPHUR DIOXIDE (SO_2) in ppb

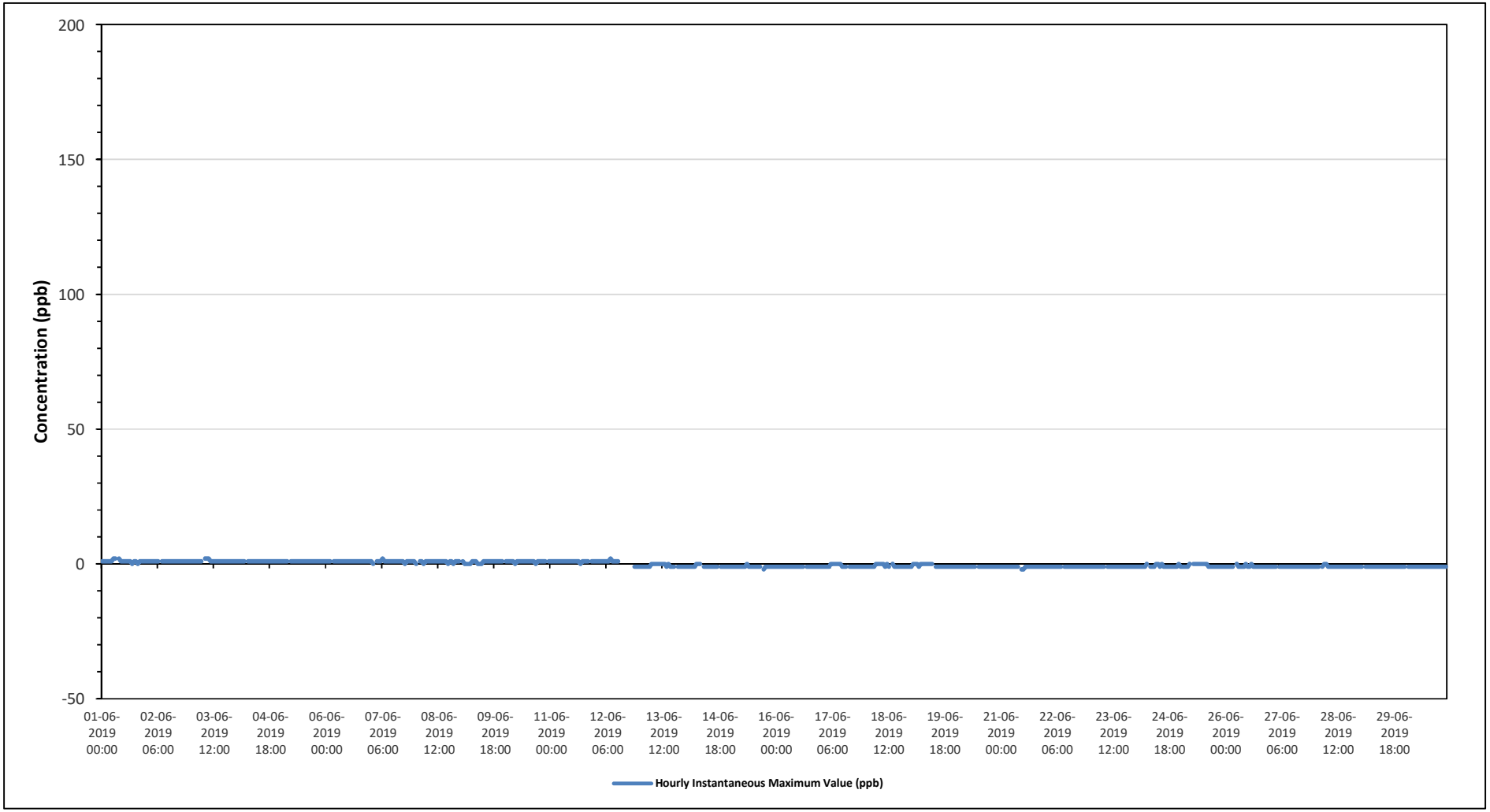
Maximum Hourly Value:	2	ppb	on June 1 at hour 6	Hours in Service:	720
Maximum Daily Value:	1.1	ppb	on June 3	Hours of Data:	682
Minimum Hourly Value:	-2	ppb	on June 15 at hour 18	Hours of Missing Data:	1
Minimum Daily Value:	-1.1	ppb	on June 21	Hours of Calibration:	37
Monthly Average:	-0.2	ppb		Operational 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	Average
Jun 1	1	1	1	1	1	1	2	2	S	2	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0	2	1.0
Jun 2	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Jun 3	1	1	1	1	1	1	S	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1
Jun 4	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Jun 5	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Jun 6	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Jun 7	1	0	S	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	2	1.0
Jun 8	0	S	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0	1	0.8
Jun 9	S	1	0	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	S	0	1	0.7
Jun 10	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	S	1	0	1	0.9
Jun 11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	S	1	1	0	1	1.0
Jun 12	1	1	1	1	1	1	1	1	2	1	1	1	1	C	C	C	C	C	C	-1	S	-1	-1	-1	-1	2	-
Jun 13	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	-1	0	-1	-1	-1	S	-1	-1	-1	-1	-1	0	-0.6
Jun 14	-1	-1	-1	-1	-1	-1	0	0	0	S1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	0	-0.9
Jun 15	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	S	-2	-1	-1	-1	-1	-1	-2	0	-1.0
Jun 16	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Jun 17	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.7
Jun 18	-1	-1	-1	-1	-1	-1	0	0	0	0	0	-1	0	-1	S	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.7
Jun 19	-1	-1	0	0	0	-1	0	0	0	0	0	0	0	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.6
Jun 20	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Jun 21	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-1	-1.1
Jun 22	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Jun 23	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Jun 24	-1	-1	-1	-1	-1	-1	-1	0	S	-1	-1	-1	0	0	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.8
Jun 25	0	-1	-1	-1	-1	-1	0	S	0	0	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.6
Jun 26	-1	-1	-1	-1	-1	-1	S	0	-1	-1	-1	-1	0	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.9
Jun 27	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Jun 28	-1	-1	-1	-1	S	-1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.9
Jun 29	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Jun 30	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Diurnal Maximum	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Daiurnal Average	-0.2	-0.3	-0.2	-0.2	-0.3	-0.3	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	-0.1	-0.2	0.0	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for SO2 - Reno Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Instantaneous Maximums

TOTAL REDUCED SULPHUR (TRS) in ppb

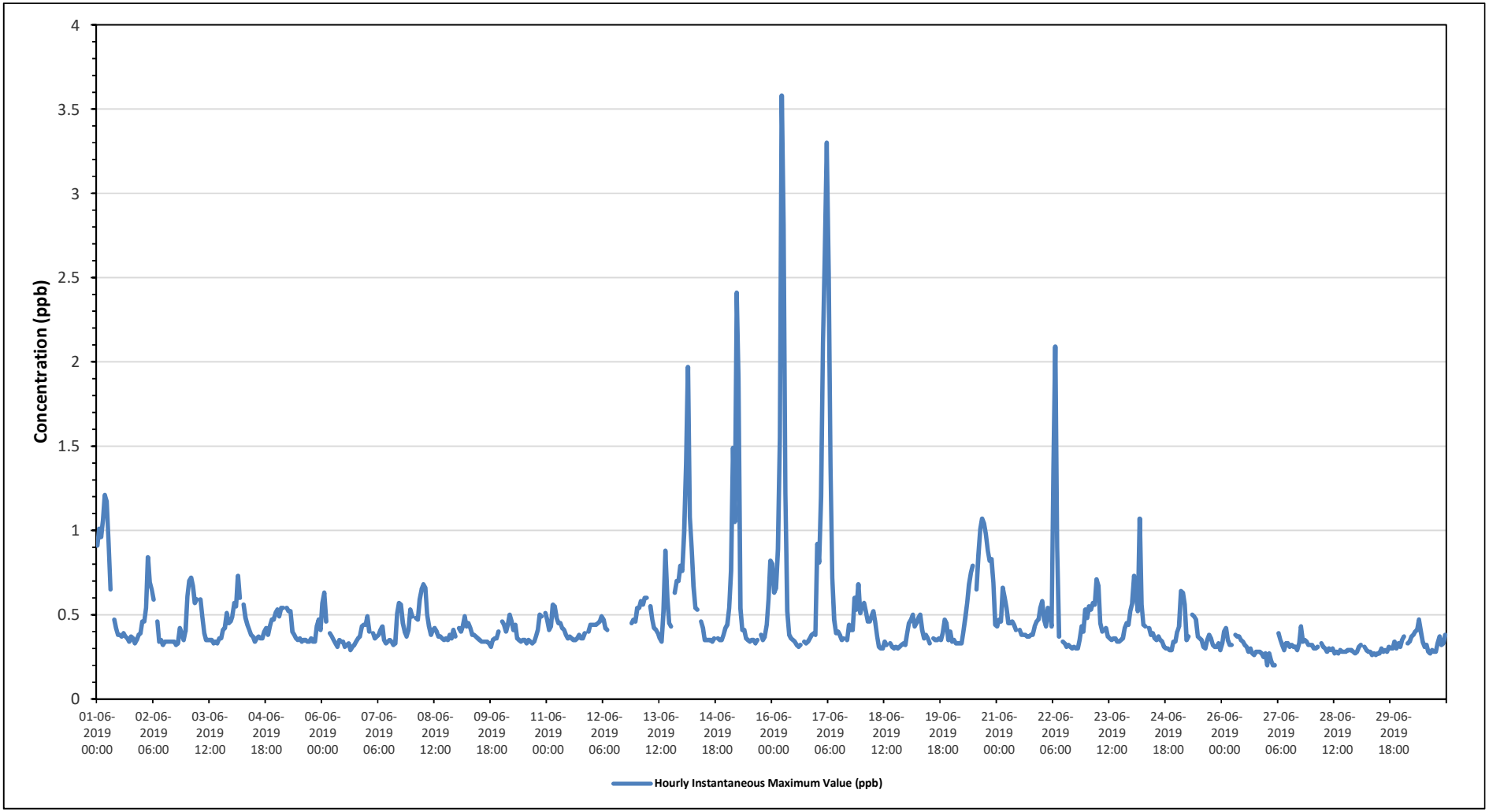
Maximum Hourly Value:	3.58	ppb	on June 16 at hour 5	Hours in Service:	720
Maximum Daily Value:	0.95	ppb	on June 17	Hours of Data:	680
Minimum Hourly Value:	0.20	ppb	on June 27 at hour 0	Hours of Missing Data:	2
Minimum Daily Value:	0.29	ppb	on June 28	Hours of Calibration:	38
Monthly Average:	0.47	ppb		Operational Uptime:	99.7

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	Average
Jun 1	0.91	1.01	0.96	1.06	1.21	1.17	0.94	0.65	S	0.47	0.42	0.38	0.38	0.37	0.39	0.37	0.36	0.34	0.37	0.36	0.33	0.35	0.38	0.39	0.33	1.21	0.59
Jun 2	0.46	0.46	0.54	0.84	0.69	0.65	0.59	S	0.46	0.34	0.35	0.32	0.34	0.34	0.34	0.34	0.34	0.34	0.32	0.33	0.42	0.39	0.35	0.4	0.32	0.84	0.43
Jun 3	0.61	0.7	0.72	0.67	0.57	0.59	S	0.59	0.49	0.39	0.35	0.35	0.35	0.35	0.33	0.34	0.33	0.36	0.36	0.41	0.42	0.51	0.45	0.46	0.33	0.72	0.47
Jun 4	0.49	0.57	0.55	0.73	0.6	S	0.56	0.48	0.44	0.41	0.38	0.37	0.34	0.36	0.37	0.36	0.36	0.4	0.42	0.38	0.43	0.47	0.47	0.51	0.34	0.73	0.45
Jun 5	0.53	0.49	0.54	0.54	S	0.54	0.52	0.52	0.4	0.38	0.36	0.35	0.36	0.34	0.35	0.35	0.34	0.34	0.36	0.34	0.34	0.43	0.47	0.41	0.34	0.54	0.42
Jun 6	0.57	0.63	0.46	S	0.39	0.37	0.35	0.33	0.31	0.35	0.34	0.34	0.31	0.32	0.33	0.29	0.31	0.32	0.34	0.36	0.37	0.43	0.44	0.44	0.29	0.63	0.38
Jun 7	0.49	0.4	S	0.39	0.36	0.37	0.38	0.41	0.43	0.35	0.33	0.34	0.35	0.34	0.32	0.33	0.51	0.57	0.56	0.45	0.4	0.37	0.41	0.53	0.32	0.57	0.41
Jun 8	0.49	S	0.48	0.47	0.59	0.65	0.68	0.66	0.5	0.43	0.38	0.41	0.42	0.4	0.37	0.37	0.36	0.35	0.36	0.35	0.38	0.36	0.41	0.37	0.35	0.68	0.45
Jun 9	S	0.42	0.4	0.43	0.49	0.43	0.45	0.42	0.38	0.38	0.37	0.36	0.35	0.34	0.34	0.34	0.34	0.33	0.31	0.35	0.36	0.36	0.4	S	0.31	0.49	0.38
Jun 10	0.46	0.44	0.4	0.44	0.5	0.46	0.41	0.44	0.36	0.35	0.34	0.35	0.35	0.33	0.35	0.34	0.33	0.34	0.37	0.41	0.5	0.49	S	0.51	0.33	0.51	0.40
Jun 11	0.47	0.41	0.43	0.56	0.55	0.48	0.45	0.45	0.42	0.41	0.38	0.36	0.37	0.36	0.35	0.35	0.36	0.38	0.36	0.36	0.39	S	0.4	0.44	0.35	0.56	0.41
Jun 12	0.44	0.44	0.44	0.45	0.46	0.49	0.47	0.42	0.41	C	C	C	C	C	C	C	0.47	0.46	0.41	0.37	S	0.45	0.47	0.46	0.37	0.49	-
Jun 13	0.54	0.54	0.58	0.56	0.6	0.6	S1	0.55	0.47	0.42	0.41	0.39	0.36	0.34	0.52	0.88	0.6	0.45	0.43	S	0.63	0.7	0.7	0.79	0.34	0.88	0.55
Jun 14	0.76	0.99	1.4	1.97	1.08	0.9	0.67	0.54	0.53	S1	0.46	0.42	0.35	0.35	0.35	0.35	0.34	0.36	S	0.36	0.35	0.35	0.38	0.42	0.34	1.97	0.62
Jun 15	0.44	0.54	0.76	1.49	1.05	2.41	1.9	0.54	0.41	0.41	0.36	0.35	0.34	0.35	0.35	0.33	0.35	S	0.38	0.35	0.37	0.44	0.59	0.82	0.33	2.41	0.67
Jun 16	0.8	0.63	0.66	0.89	1.55	**3.58**	2.81	1.22	0.52	0.38	0.36	0.35	0.34	0.32	0.31	0.32	S	0.34	0.33	0.34	0.36	0.38	0.39	0.38	0.31	**3.58**	0.76
Jun 17	0.92	0.81	1.2	2.11	2.63	3.3	2.52	1.38	0.72	0.47	0.39	0.4	0.38	0.35	0.36	S	0.35	0.44	0.41	0.41	0.6	0.53	0.68	0.51	0.35	3.30	**0.95**
Jun 18	0.55	0.57	0.52	0.46	0.46	0.49	0.52	0.46	0.37	0.31	0.3	0.3	0.34	0.32	S	0.33	0.31	0.3	0.31	0.3	0.31	0.32	0.33	0.32	0.30	0.57	0.38
Jun 19	0.39	0.45	0.47	0.5	0.43	0.45	0.48	0.5	0.41	0.36	0.38	0.36	0.33	S	0.36	0.35	0.35	0.36	0.35	0.39	0.47	0.45	0.35	0.4	0.33	0.50	0.41
Jun 20	0.34	0.35	0.33	0.33	0.33	0.33	0.4	0.48	0.57	0.68	0.75	0.79	S	0.65	0.85	1.01	1.07	1.04	0.98	0.88	0.82	0.83	0.69	0.44	0.33	1.07	0.65
Jun 21	0.43	0.47	0.46	0.66	0.6	0.54	0.45	0.45	0.46	0.44	0.41	S	0.41	0.38	0.38	0.38	0.37	0.37	0.38	0.38	0.43	0.46	0.47	0.54	0.37	0.66	0.45
Jun 22	0.58	0.47	0.43	0.54	0.52	0.43	1.36	2.09	0.9	0.37	S	0.34	0.33	0.31	0.32	0.31	0.3	0.31	0.3	0.3	0.35	0.43	0.4	0.53	0.30	2.09	0.53
Jun 23	0.48	0.55	0.53	0.57	0.56	0.71	0.67	0.45	0.4	S	0.42	0.37	0.36	0.35	0.36	0.36	0.34	0.34	**0.35**	0.36	0.42	0.45	0.44	0.52	**0.34**	0.71	0.45
Jun 24	0.57	0.73	0.62	0.52	1.07	0.56	0.44	0.43	S	0.42	0.38	0.39	0.36	0.35	0.37	0.35	0.34	0.31	0.3	0.3	0.29	0.29	0.34	0.34	0.29	1.07	0.44
Jun 25	0.4	0.43	0.64	0.63	0.56	0.35	0.37	S	0.5	0.49	0.47	0.37	0.36	0.35	0.31	0.3	0.35	0.38	0.36	0.32	0.31	0.31	0.33	0.29	0.29	0.64	0.40
Jun 26	0.33	0.4	0.42	0.35	0.32	0.32	S	0.38	0.37	0.37	0.35	0.34	0.32	0.31	0.28	0.3	0.27	0.26	0.28	0.28	0.28	0.27	0.25	0.27	0.25	0.42	0.32
Jun 27	**0.2**	0.27	0.23	0.2	0.2	S	0.39	0.35	0.32	0.29	0.33	0.33	0.31	0.32	0.31	0.31	0.29	0.33	0.43	0.34	0.35	0.34	0.32	0.32	**0.20**	0.43	0.31
Jun 28	0.32	0.3	0.3	0.31	S	0.33	0.31	0.3	0.28	0.3	0.29	0.3	0.27	0.28	0.27	0.29	0.28	0.28	0.28	0.29	0.29	0.29	0.28	0.27	0.27	0.33	**0.29**
Jun 29	0.28	0.31	0.32	S	0.31	0.29	0.28	0.28	0.26	0.27	0.26	0.27	0.27	0.3	0.28	0.29	0.28	0.31	0.3	0.3	0.34	0.3	0.33	0.31	0.26	0.34	0.29
Jun 30	0.35	0.37	S	0.33	0.34	0.37	0.38	0.4	0.41	0.47	0.4	0.34	0.31	0.32	0.28	0.27	0.29	0.28	0.28	0.33	0.37	0.32	0.33	0.38	0.27	0.47	0.34
Diurnal Maximum	0.92	1.01	1.40	2.11	2.63	3.58	2.81	2.09	0.90	0.68	0.75	0.79	0.42	0.65	0.85	1.01	1.07	1.04	0.98	0.88	0.82	0.83	0.70	0.82			
Daiurnal Average	0.50	0.52	0.56	0.68	0.68	0.79	0.73	0.58	0.45	0.40	0.38	0.37	0.35	0.35	0.36	0.38	0.38	0.38	0.38	0.37	0.40	0.42	0.42	0.44			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for TRS - Reno Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Instantaneous Maximums

TOTAL HYDROCARBONS (THC) in ppm

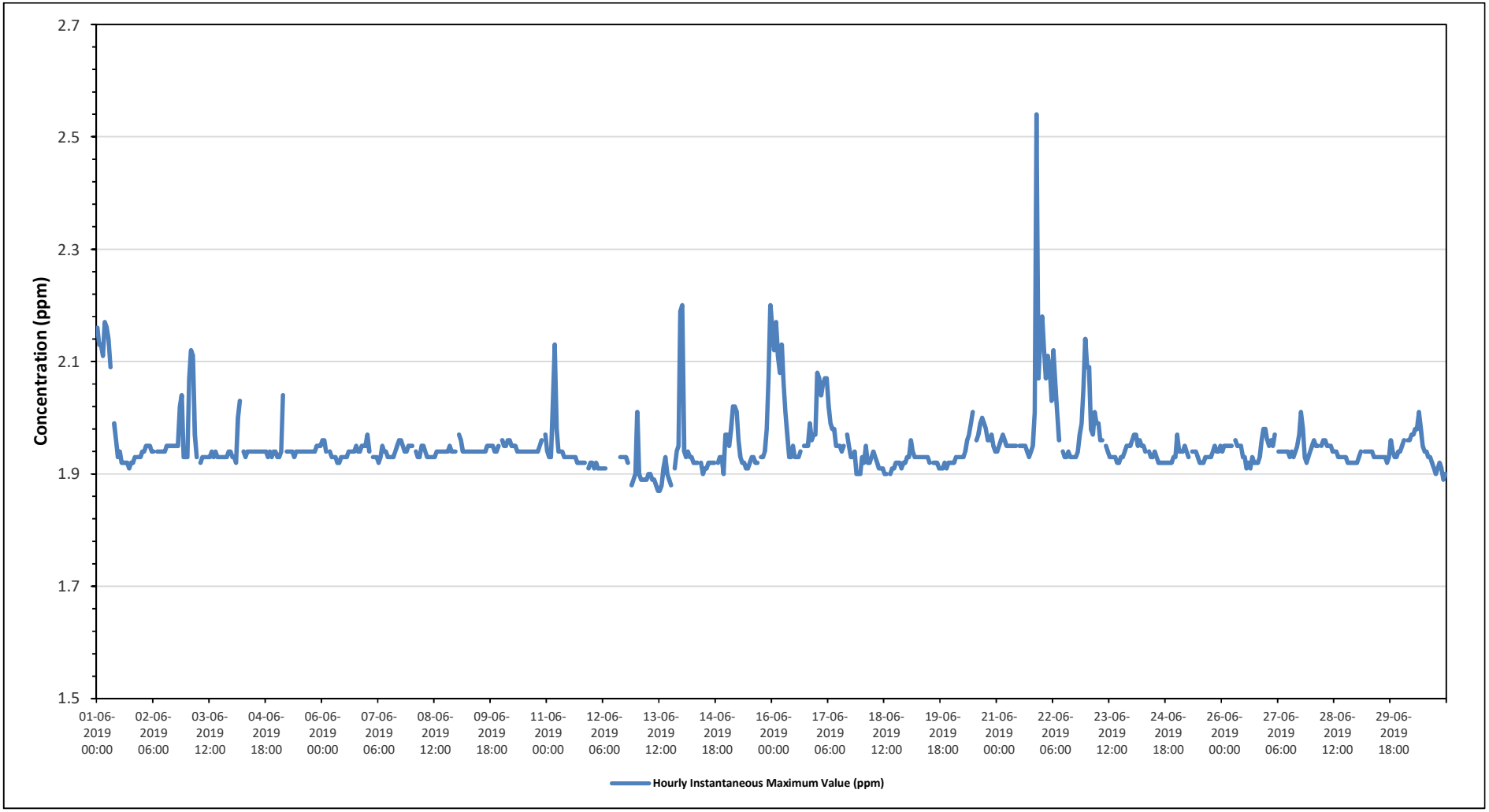
Maximum Hourly Value:	2.54	ppm	on June 21 at hour 21	Hours in Service:	720
Maximum Daily Value:	2.01	ppm	on June 22	Hours of Data:	681
Minimum Hourly Value:	1.87	ppm	on June 13 at hour 11	Hours of Missing Data:	1
Minimum Daily Value:	1.92	ppm	on June 13	Hours of Calibration:	38
Monthly Average:	1.95	ppm		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	Average
Jun 1	2.16	2.13	2.13	2.11	2.17	2.16	2.14	2.09	S	1.99	1.96	1.93	1.94	1.92	1.92	1.92	1.92	1.91	1.92	1.92	1.93	1.93	1.93	1.93	1.91	2.17	2.00
Jun 2	1.94	1.94	1.95	1.95	1.95	1.94	1.94	S	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.95	2.02	2.04	1.93	1.93	1.93	2.04	1.95
Jun 3	1.93	2.07	2.12	2.11	1.97	1.93	S	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.92	2.12	1.96
Jun 4	1.93	1.93	1.92	2.00	2.03	S	1.94	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.94	1.92	2.03	1.94
Jun 5	1.93	1.93	1.94	2.04	S	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.93	2.04	1.94
Jun 6	1.96	1.96	1.94	S	1.94	1.93	1.93	1.93	1.92	1.92	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.95	1.95	1.92	1.96	1.94
Jun 7	1.97	1.94	S	1.93	1.93	1.93	1.92	1.93	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.94	1.95	1.96	1.96	1.95	1.94	1.94	1.95	1.95	1.92	1.97	1.94
Jun 8	1.95	S	1.94	1.93	1.93	1.95	1.95	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.93	1.95	1.94
Jun 9	S	1.97	1.96	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.94	1.94	1.95	S	1.94	1.97	1.94
Jun 10	1.96	1.95	1.95	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.96	S	1.97	1.94	1.97	1.95
Jun 11	1.94	1.93	1.93	2.02	2.13	1.98	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	S	1.91	1.92	1.91	2.13	1.94
Jun 12	1.92	1.91	1.92	1.91	1.91	1.91	1.91	1.91	C	C	C	C	C	C	C	1.93	1.93	1.93	1.93	1.92	S	1.88	1.89	1.90	1.88	1.93	-
Jun 13	2.01	1.90	1.89	1.89	1.89	1.89	1.90	1.90	1.89	1.89	1.88	**1.87**	1.87	1.88	1.91	1.93	1.90	1.89	1.88	S	1.91	1.94	1.95	2.19	**1.87**	2.19	**1.92**
Jun 14	2.20	1.94	1.93	1.94	1.93	1.93	1.92	1.92	1.92	S1	1.92	1.90	1.91	1.91	1.92	1.92	1.92	1.92	S	1.92	1.93	1.93	1.90	1.97	1.90	2.20	1.94
Jun 15	1.97	**1.95**	1.98	2.02	2.02	2.01	1.96	1.93	1.92	1.92	1.91	1.91	1.92	1.93	1.93	1.92	1.92	S	1.93	1.93	1.94	1.98	2.07	2.20	**1.91**	2.20	1.96
Jun 16	2.16	2.12	2.17	2.11	2.08	2.13	2.06	2.01	1.97	1.93	1.93	1.95	1.93	1.93	1.93	1.94	S	1.95	1.95	1.95	1.99	1.96	1.97	1.97	1.93	2.17	2.00
Jun 17	2.08	2.07	2.04	2.06	2.07	2.07	2.02	1.99	1.98	1.98	1.95	1.95	1.95	1.94	1.95	S	1.97	1.95	1.93	1.93	1.94	1.90	1.90	1.90	1.90	2.08	1.98
Jun 18	1.93	1.92	1.95	1.92	1.92	1.93	1.94	1.93	1.92	1.91	1.91	1.91	1.90	1.90	S	1.90	1.91	1.91	1.92	1.92	1.92	1.91	1.92	1.92	1.90	1.95	1.92
Jun 19	1.93	1.93	1.96	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	S	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.91	1.92	1.92	1.91	1.96	1.93
Jun 20	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.96	1.97	1.99	2.01	S	1.96	1.97	1.99	2.00	1.99	1.98	1.96	1.96	1.97	1.95	1.94	1.92	2.01	1.96
Jun 21	1.94	1.95	1.96	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	1.95	1.94	1.93	1.94	1.95	2.01	**2.54**	2.07	2.14	1.93	**2.54**	1.99
Jun 22	2.18	2.12	2.07	2.11	2.09	2.03	2.12	2.06	2.01	1.96	S	1.94	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.94	1.97	1.99	2.05	2.14	1.93	2.18	**2.01**
Jun 23	2.09	2.09	1.98	1.97	2.01	1.99	1.99	1.96	1.96	S	1.95	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.93	1.93	1.94	1.95	1.95	1.95	1.92	2.09	1.96
Jun 24	1.96	1.97	1.97	1.95	1.96	1.95	1.95	1.94	S	1.94	1.93	1.93	1.94	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.92	1.97	1.94
Jun 25	1.97	1.94	1.94	1.94	1.95	1.94	1.93	S	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.94	1.95	1.94	1.94	1.95	1.92	1.97	1.94
Jun 26	1.94	1.95	1.95	1.95	1.95	1.95	S	1.96	1.95	1.95	1.95	1.93	1.93	1.91	1.92	1.91	1.93	1.92	1.92	1.92	1.93	1.96	1.98	1.98	1.91	1.98	1.94
Jun 27	1.96	1.95	1.96	1.95	1.97	S	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.95	1.97	2.01	1.98	1.93	1.92	1.93	1.94	1.92	2.01	1.95
Jun 28	1.95	1.96	1.95	1.95	S	1.95	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.96	1.94
Jun 29	1.92	1.93	1.94	S	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.93	1.96	1.94	1.93	1.93	1.94	1.94	1.92	1.96	1.93
Jun 30	1.95	1.96	S	1.96	1.96	1.97	1.97	1.98	1.98	2.01	1.98	1.95	1.94	1.94	1.93	1.93	1.92	1.91	1.90	1.91	1.92	1.91	1.89	1.90	1.89	2.01	1.94
Diurnal Maximum	2.20	2.13	2.17	2.11	2.17	2.16	2.14	2.09	2.01	2.01	1.99	2.01	1.95	1.96	1.97	1.99	2.00	1.99	2.01	1.98	2.02	2.54	2.07	2.20			
Daiurnal Average	1.99	1.97	1.97	1.98	1.98	1.97	1.96	1.95	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.96	1.95	1.97			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for THC - Reno Site



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Instantaneous Maximums

METHANE (CH4) in ppm

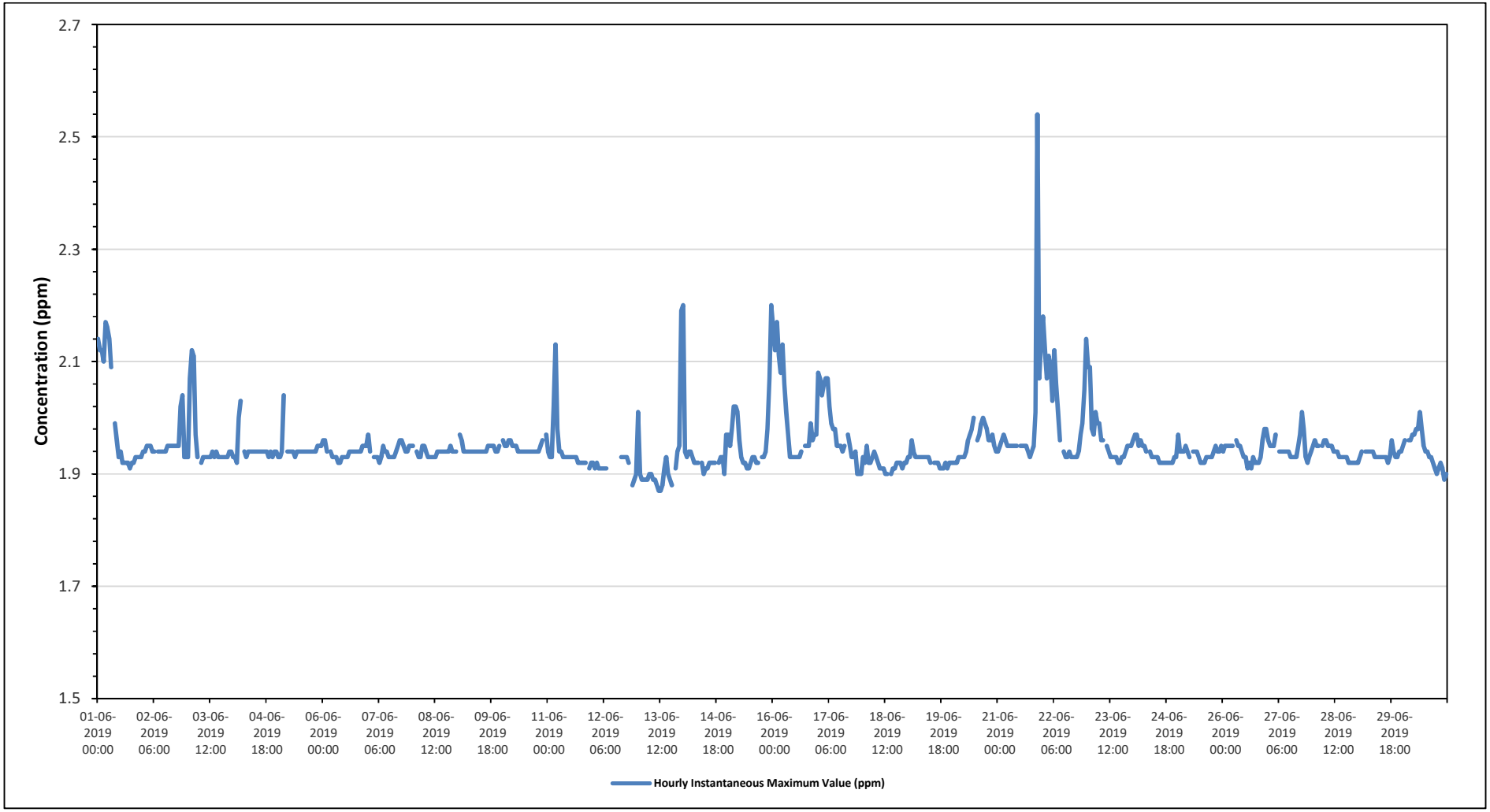
Maximum Hourly Value:	2.54	ppm	on June 21 at hour 21	Hours in Service:	720
Maximum Daily Value:	2.01	ppm	on June 22	Hours of Data:	681
Minimum Hourly Value:	1.87	ppm	on June 13 at hour 11	Hours of Missing Data:	1
Minimum Daily Value:	1.92	ppm	on June 13	Hours of Calibration:	38
Monthly Average:	1.95	ppm		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	Average
Jun 1	2.14	2.12	2.12	2.10	2.17	2.16	2.14	2.09	S	1.99	1.96	1.93	1.94	1.92	1.92	1.92	1.92	1.91	1.92	1.92	1.93	1.93	1.93	1.93	1.91	2.17	2.00
Jun 2	1.94	1.94	1.95	1.95	1.95	1.94	1.94	S	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.95	2.02	2.04	1.93	1.93	1.93	2.04	1.95
Jun 3	1.93	2.07	2.12	2.11	1.97	1.93	S	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.92	2.12	1.96
Jun 4	1.93	1.93	1.92	2.00	2.03	S	1.94	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.94	1.92	2.03	1.94
Jun 5	1.93	1.93	1.94	2.04	S	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.93	2.04	1.94
Jun 6	1.96	1.96	1.94	S	1.94	1.93	1.93	1.93	1.92	1.92	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.92	1.96	1.94
Jun 7	1.97	1.94	S	1.93	1.93	1.93	1.92	1.93	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.94	1.95	1.96	1.96	1.95	1.94	1.94	1.95	1.95	1.92	1.97	1.94
Jun 8	1.95	S	1.94	1.93	1.93	1.95	1.95	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.93	1.95	1.94
Jun 9	S	1.97	1.96	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.94	1.94	1.95	S	1.94	1.97	1.94
Jun 10	1.96	1.95	1.95	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.96	S	1.97	1.94	1.97	1.95
Jun 11	1.94	1.93	1.93	2.02	2.13	1.98	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	S	1.91	1.92	1.91	2.13	1.94
Jun 12	1.92	1.91	1.92	1.91	1.91	1.91	1.91	1.91	C	C	C	C	C	C	C	1.93	1.93	1.93	1.93	1.92	S	1.88	1.89	1.90	1.88	1.93	-
Jun 13	2.01	1.90	1.89	1.89	1.89	1.89	1.90	1.90	1.89	1.89	1.88	**1.87**	1.87	1.88	1.91	1.93	1.90	1.89	1.88	S	1.91	1.94	1.95	2.19	**1.87**	2.19	**1.92**
Jun 14	2.20	1.94	1.93	1.94	1.94	1.93	1.92	1.92	1.92	S1	1.92	1.90	1.91	1.91	1.92	1.92	1.92	1.92	S	1.92	1.93	1.93	1.90	1.97	1.90	2.20	1.94
Jun 15	1.97	**1.95**	1.98	2.02	2.02	2.01	1.96	1.93	1.92	1.92	1.91	1.91	1.92	1.93	1.93	1.92	1.92	S	1.93	1.93	1.94	1.98	2.07	2.20	**1.91**	2.20	1.96
Jun 16	2.16	2.12	2.17	2.11	2.08	2.13	2.06	2.01	1.97	1.93	1.93	1.93	1.93	1.93	1.93	1.94	S	1.95	1.95	1.95	1.99	1.96	1.97	1.97	1.93	2.17	2.00
Jun 17	2.08	2.07	2.04	2.06	2.07	2.07	2.02	1.99	1.98	1.98	1.95	1.95	1.95	1.94	1.95	S	1.97	1.95	1.93	1.93	1.94	1.90	1.90	1.90	1.90	2.08	1.98
Jun 18	1.93	1.92	1.95	1.92	1.92	1.93	1.94	1.93	1.92	1.91	1.91	1.91	1.90	1.90	S	1.90	1.91	1.91	1.92	1.92	1.92	1.91	1.92	1.92	1.90	1.95	1.92
Jun 19	1.93	1.93	1.96	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	S	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.91	1.92	1.92	1.91	1.96	1.93
Jun 20	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.94	1.96	1.97	1.98	2.00	S	1.96	1.97	1.99	2.00	1.99	1.98	1.96	1.96	1.97	1.95	1.94	1.92	2.00	1.96
Jun 21	1.94	1.95	1.96	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	1.95	1.94	1.93	1.94	1.95	2.01	**2.54**	2.07	2.14	1.93	**2.54**	1.99
Jun 22	2.18	2.12	2.07	2.11	2.09	2.03	2.12	2.06	2.01	1.96	S	1.94	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.94	1.97	1.99	2.05	2.14	1.93	2.18	**2.01**
Jun 23	2.09	2.09	1.98	1.97	2.01	1.99	1.99	1.96	1.96	S	1.95	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.93	1.93	1.94	1.95	1.95	1.95	1.92	2.09	1.96
Jun 24	1.96	1.97	1.97	1.95	1.96	1.95	1.95	1.94	S	1.94	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.92	1.97	1.94
Jun 25	1.97	1.94	1.94	1.94	1.95	1.94	1.93	S	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.94	1.95	1.94	1.94	1.95	1.92	1.97	1.94
Jun 26	1.94	1.95	1.95	1.95	1.95	1.95	S	1.96	1.95	1.95	1.94	1.93	1.93	1.91	1.92	1.91	1.93	1.92	1.92	1.92	1.93	1.96	1.98	1.98	1.91	1.98	1.94
Jun 27	1.96	1.95	1.95	1.95	1.97	S	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.95	1.97	2.01	1.98	1.93	1.92	1.93	1.94	1.92	2.01	1.95
Jun 28	1.95	1.96	1.95	1.95	S	1.95	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.96	1.94
Jun 29	1.92	1.93	1.94	S	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.93	1.96	1.94	1.93	1.93	1.94	1.94	1.92	1.96	1.93
Jun 30	1.95	1.96	S	1.96	1.96	1.97	1.97	1.98	1.98	2.01	1.98	1.95	1.94	1.94	1.93	1.93	1.92	1.91	1.90	1.91	1.92	1.91	1.89	1.90	1.89	2.01	1.94
Diurnal Maximum	2.20	2.12	2.17	2.11	2.17	2.16	2.14	2.09	2.01	2.01	1.98	2.00	1.95	1.96	1.97	1.99	2.00	1.99	2.01	1.98	2.02	2.54	2.07	2.20			
Daiurnal Average	1.99	1.97	1.97	1.98	1.98	1.97	1.96	1.95	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.96	1.95	1.97			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for CH4 - Reno Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Instantaneous Maximums

NON-METHANE HYDROCARBONS (NMHC) in ppm

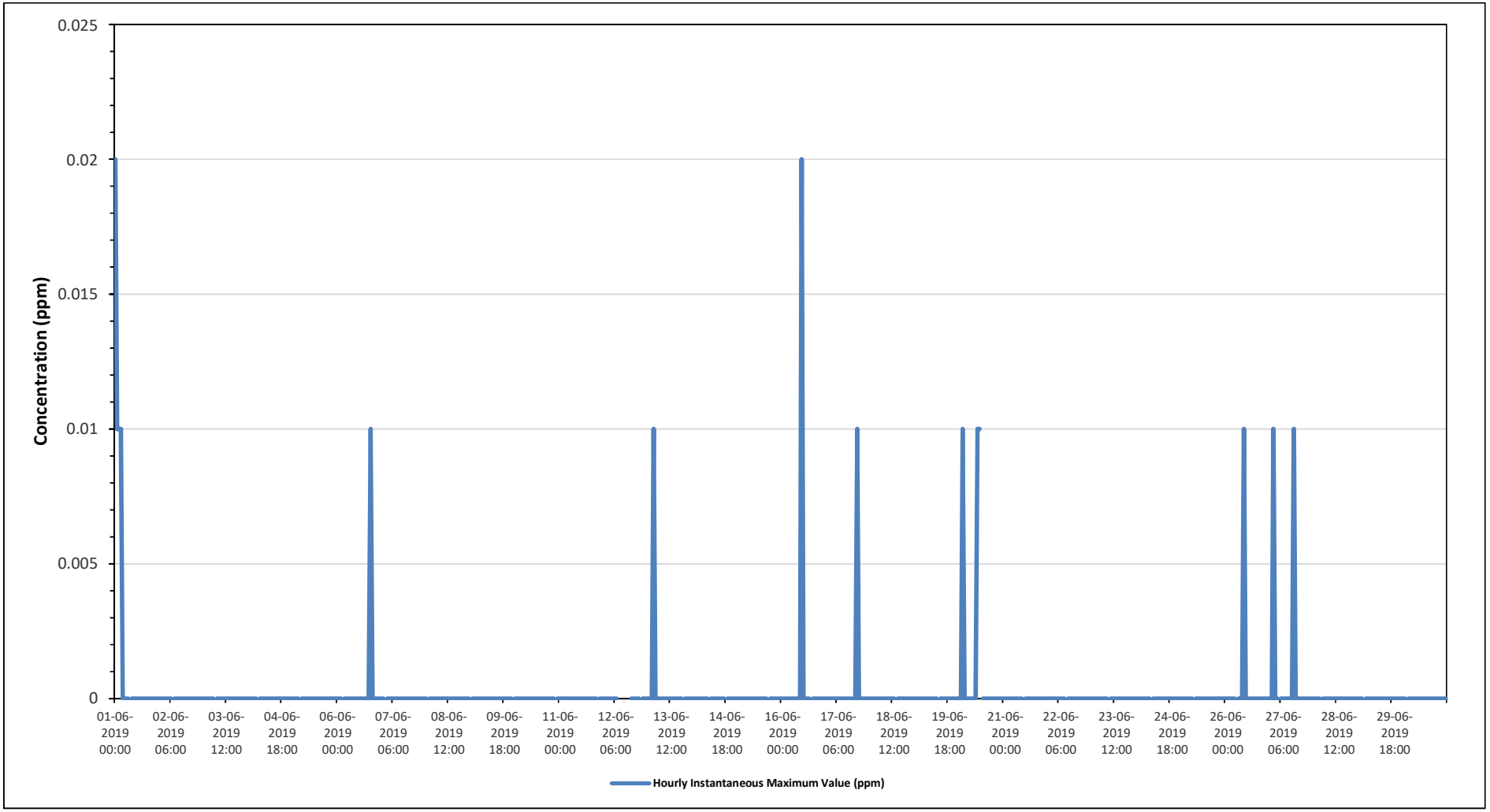
Maximum Hourly Value:	0.02	ppm	on June 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on June 1	Hours of Data:	681
Minimum Hourly Value:	0.00	ppm	on June 1 at hour 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00	ppm	on June 2	Hours of Calibration:	38
Monthly Average:	0.00	ppm		Operational 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	Average
Jun 1	**0.02**	0.01	0.01	0.01	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	**0.02**	0.00
Jun 2	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**
Jun 3	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
Jun 4	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
Jun 5	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
Jun 6	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Jun 7	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
Jun 8	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
Jun 9	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
Jun 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	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
Jun 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	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
Jun 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	C	C	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	-
Jun 13	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	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Jun 14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S1	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
Jun 15	0.00	0.00	0.00	0.00	0.00	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
Jun 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Jun 17	0.00	0.00	0.00	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Jun 18	0.00	0.00	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
Jun 19	0.00	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
Jun 20	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	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	0.01	0.00
Jun 21	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
Jun 22	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
Jun 23	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
Jun 24	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
Jun 25	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
Jun 26	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Jun 27	0.00	0.00	0.01	0.00	0.00	S	0.00	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	0.00	0.00	0.00	0.00	0.01	0.00
Jun 28	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
Jun 29	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
Jun 30	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
Diurnal Maximum	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00			
Daiurnal 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	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for NMHC - Reno Site



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - June 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/h

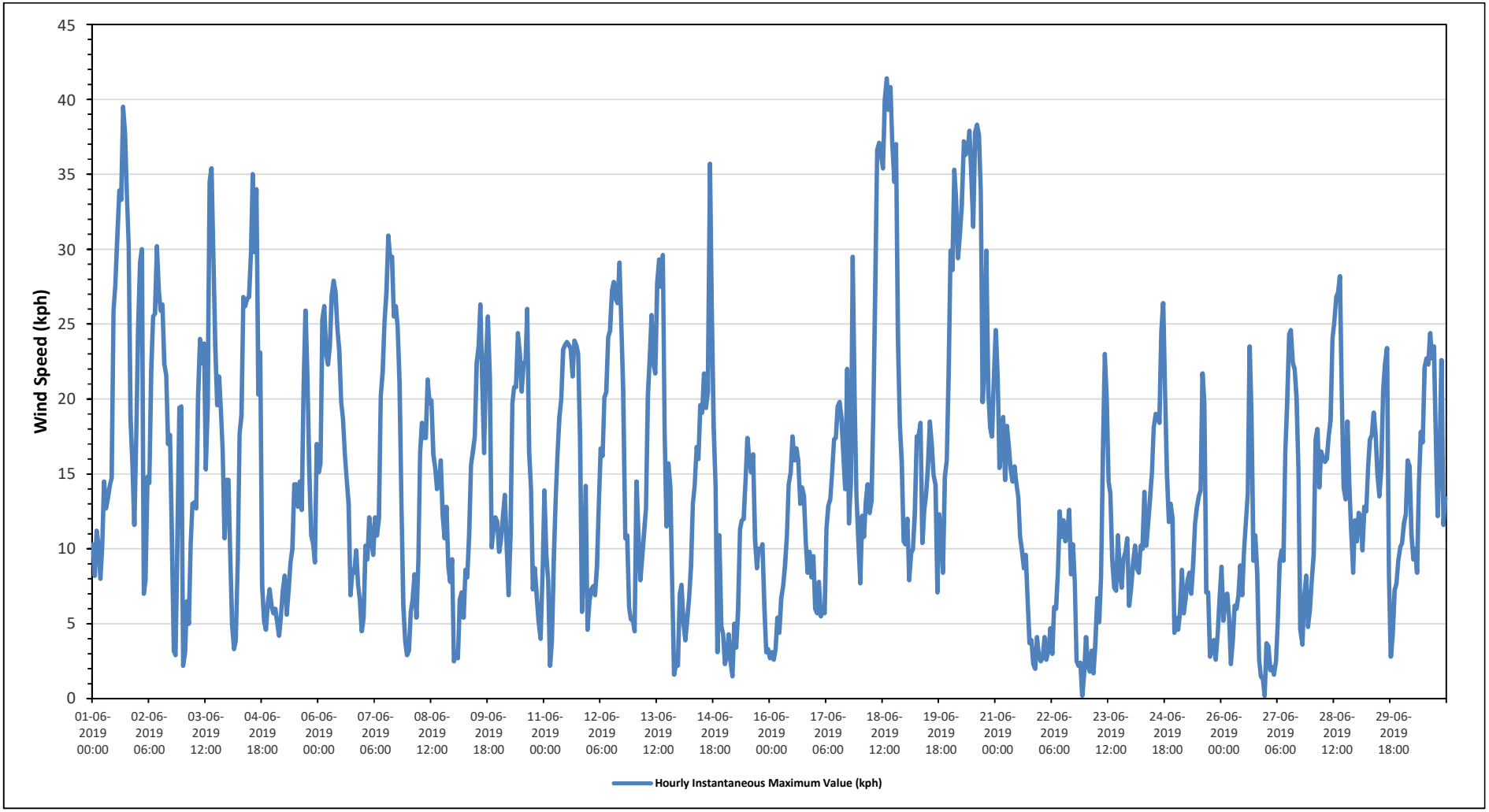
Maximum Hourly Value:	41.4	kph	on June 18 at hour 14	Hours in Service:	720
Maximum Daily Value:	30.5	kph	on June 20	Hours of Data:	720
Minimum Hourly Value:	0.2	kph	on June 22 at hour 22	Hours of Missing Data:	0
Minimum Daily Value:	6.2	kph	on June 22	Hours of Calibration:	0
Monthly Average:	14.5	kph		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
Jun 1	10.3	8.2	11.2	10.3	8.0	10.1	14.5	12.7	13.4	14.2	14.7	25.9	27.6	31.0	33.9	33.3	39.5	37.7	33.6	30.3	18.7	15.6	11.6	17.4	8.0	39.5	20.2
Jun 2	24.6	29.1	30.0	7.0	7.9	14.8	14.4	21.9	25.5	25.7	30.2	27.2	25.9	26.3	22.3	21.6	17.0	17.6	10.8	3.2	2.9	10.7	19.4	19.5	2.9	30.2	19.0
Jun 3	2.2	3.1	6.5	5.0	10.3	13.0	13.1	12.7	20.2	24.0	22.4	23.7	15.3	19.6	34.5	35.4	29.6	23.6	19.6	21.5	19.2	16.5	10.7	14.6	2.2	35.4	17.3
Jun 4	14.6	9.5	4.9	3.3	3.9	9.4	17.7	18.9	26.8	26.2	26.7	26.8	29.7	35.0	29.8	34.0	20.3	23.1	7.6	5.2	4.6	6.4	7.3	6.2	3.3	35.0	16.6
Jun 5	5.7	6.0	5.1	4.2	5.5	7.2	8.2	5.6	7.3	9.1	10.0	14.3	14.3	12.8	14.5	12.6	20.9	25.9	21.6	15.2	10.9	10.4	9.1	17.0	4.2	25.9	11.4
Jun 6	15.1	15.7	25.3	26.2	23.0	22.3	23.5	26.9	27.9	27.1	24.7	23.2	19.8	18.7	16.2	14.6	13.0	6.9	8.6	8.4	9.9	7.6	6.6	4.5	4.5	27.9	17.3
Jun 7	5.4	10.2	9.3	12.1	10.5	9.6	12.1	10.9	12.0	20.2	21.8	25.2	27.1	30.9	29.5	29.5	25.5	26.2	24.8	21.1	13.0	6.2	3.8	2.9	2.9	30.9	16.7
Jun 8	3.2	5.8	6.6	8.3	5.4	9.1	16.4	18.4	17.4	17.4	21.3	19.7	19.9	16.3	15.4	14.0	14.2	15.9	12.3	10.7	12.8	8.8	7.8	9.3	3.2	21.3	12.8
Jun 9	2.5	3.1	2.7	6.6	7.1	5.4	8.6	8.1	10.9	15.6	16.5	17.5	22.4	23.5	26.3	21.3	16.4	22.6	25.5	21.4	10.1	11.4	12.1	11.8	2.5	26.3	13.7
Jun 10	9.8	10.6	12.1	13.6	10.3	6.9	10.9	19.7	20.8	20.8	24.4	23.0	20.5	22.4	22.5	26.0	16.5	14.0	7.3	8.7	6.9	5.1	4.0	8.5	4.0	26.0	14.4
Jun 11	13.9	9.6	7.9	2.2	3.9	9.4	13.4	16.3	18.8	20.0	23.3	23.6	23.8	23.6	23.4	21.5	23.9	23.6	23.0	17.5	5.8	9.0	14.2	4.6	2.2	23.9	15.7
Jun 12	6.5	7.3	7.5	6.9	8.8	13.0	16.7	16.2	20.1	20.5	24.1	24.6	27.2	27.8	26.7	26.4	29.1	25.1	20.6	10.7	10.9	6.1	5.3	5.2	5.2	29.1	16.4
Jun 13	4.5	14.5	11.0	7.9	9.4	11.1	12.7	20.2	22.8	25.6	22.3	21.7	27.7	29.3	27.5	29.6	17.8	11.5	15.7	14.1	7.6	1.6	2.3	2.2	1.6	29.6	15.4
Jun 14	7.0	7.6	5.1	3.9	5.3	6.7	8.8	13.0	14.2	16.8	16.0	19.6	19.1	21.7	19.4	20.5	35.7	26.1	18.1	14.2	3.1	10.9	4.9	4.3	3.1	35.7	13.4
Jun 15	2.3	2.9	4.3	2.5	1.5	5.0	3.4	6.0	11.3	11.9	12.0	14.6	17.4	15.9	15.1	16.3	10.7	8.7	10.0	9.9	10.3	6.2	3.1	3.3	1.5	17.4	8.5
Jun 16	2.7	3.1	2.6	3.3	5.4	4.4	6.7	7.5	8.9	10.9	14.3	15.1	17.5	15.9	16.7	15.9	13.0	14.1	13.5	10.4	8.4	9.8	8.1	9.5	2.6	17.5	9.9
Jun 17	6.0	5.7	7.8	5.5	6.1	5.7	11.4	12.9	13.3	15.0	17.3	17.4	19.5	19.8	18.7	16.2	14.0	22.0	11.7	14.4	29.5	19.8	13.5	10.6	5.5	29.5	13.9
Jun 18	7.7	12.2	10.8	13.2	14.3	12.4	13.2	19.3	27.5	36.6	37.1	36.2	35.4	40.0	**41.4**	39.3	40.8	37.0	34.5	37.0	24.1	18.3	15.8	10.5	7.7	**41.4**	25.6
Jun 19	10.3	12.0	7.9	9.7	10.0	12.4	17.5	17.5	18.4	10.4	12.6	13.6	15.5	18.5	16.9	14.9	14.3	7.1	12.3	10.8	8.4	14.8	15.9	21.6	7.1	21.6	13.5
Jun 20	29.9	28.6	35.3	33.4	29.4	30.9	32.9	37.2	36.3	36.7	37.9	35.0	31.5	37.8	38.3	37.6	33.9	19.8	22.8	29.9	20.7	18.1	17.5	21.5	17.5	38.3	**30.5**
Jun 21	24.6	21.5	15.4	16.7	18.8	14.6	18.2	16.7	15.2	14.5	15.5	14.4	13.4	10.8	9.9	8.7	9.6	6.5	3.7	3.9	2.3	2.0	4.1	2.8	2.0	24.6	11.8
Jun 22	2.5	2.7	4.1	2.6	3.3	4.7	3.0	6.1	6.0	8.5	12.5	10.8	11.9	10.5	10.9	12.6	8.3	10.3	7.7	2.5	2.2	2.4	**0.2**	1.6	**0.2**	12.6	**6.2**
Jun 23	4.1	2.2	1.8	3.2	1.7	3.7	6.7	5.1	8.1	16.3	23.0	19.9	14.5	13.7	9.3	7.4	7.2	10.9	8.4	7.4	9.3	9.8	10.7	6.2	1.7	23.0	8.8
Jun 24	7.3	9.1	10.2	8.7	8.4	10.2	10.0	13.8	10.2	11.7	13.4	15.1	18.1	19.0	18.9	18.4	24.5	26.4	20.5	15.0	11.8	13.0	12.0	4.4	4.4	26.4	13.8
Jun 25	5.4	4.6	5.8	8.6	5.7	6.7	7.9	8.4	7.0	9.0	11.7	12.8	13.5	13.9	21.7	19.7	7.1	7.1	2.8	3.2	3.9	2.6	4.4	6.7	2.6	21.7	8.3
Jun 26	8.8	5.2	6.8	7.0	5.4	2.3	3.9	6.2	6.0	6.9	8.9	6.9	9.8	11.9	13.7	23.5	18.9	9.2	10.9	8.4	2.6	1.5	1.3	**0.2**	**0.2**	23.5	7.8
Jun 27	3.7	3.5	1.9	2.1	1.6	2.5	5.1	9.1	9.9	9.2	16.5	19.8	24.3	24.6	22.4	22.0	20.1	15.3	4.6	3.6	6.9	8.2	4.8	6.0	1.6	24.6	10.3
Jun 28	7.9	9.6	17.3	18.0	14.1	16.5	16.1	15.8	16.0	17.5	18.6	24.0	25.1	26.8	27.1	28.2	20.2	14.1	13.3	18.5	14.3	11.2	8.4	11.9	7.9	28.2	17.1
Jun 29	10.5	12.4	12.2	9.9	12.8	12.5	15.3	17.3	17.6	19.1	17.7	15.0	13.5	15.4	20.6	22.3	23.4	8.2	2.8	4.2	7.2	7.7	9.2	10.1	2.8	23.4	13.2
Jun 30	10.4	11.7	12.3	15.9	15.5	10.9	9.3	10.0	8.4	14.4	17.8	17.1	22.1	22.7	22.3	24.4	22.7	23.5	17.3	12.2	16.5	22.6	11.6	13.4	8.4	24.4	16.0
Diurnal Maximum	29.9	29.1	35.3	33.4	29.4	30.9	32.9	37.2	36.3	36.7	37.9	36.2	35.4	40.0	41.4	39.3	40.8	37.7	34.5	37.0	29.5	22.6	19.4	21.6			
Daiurnal Average	9.0	9.6	10.1	9.3	9.1	10.1	12.4	14.3	15.9	17.7	19.5	20.1	20.8	21.9	22.2	22.3	20.3	18.0	14.9	13.1	10.5	9.8	8.7	8.9			

C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Instantaneous Maximum for WS - Reno Site



END OF REPORT

This report, 176 of 176, ends the June 2019 Monthly Ambient Air Quality Monitoring Report.

Peace River Area Monitoring Program

JUNE 2019

Ambient Air Monitoring Calibration Report

- 842b STATION-

CAL-PRAMP-201906-01561

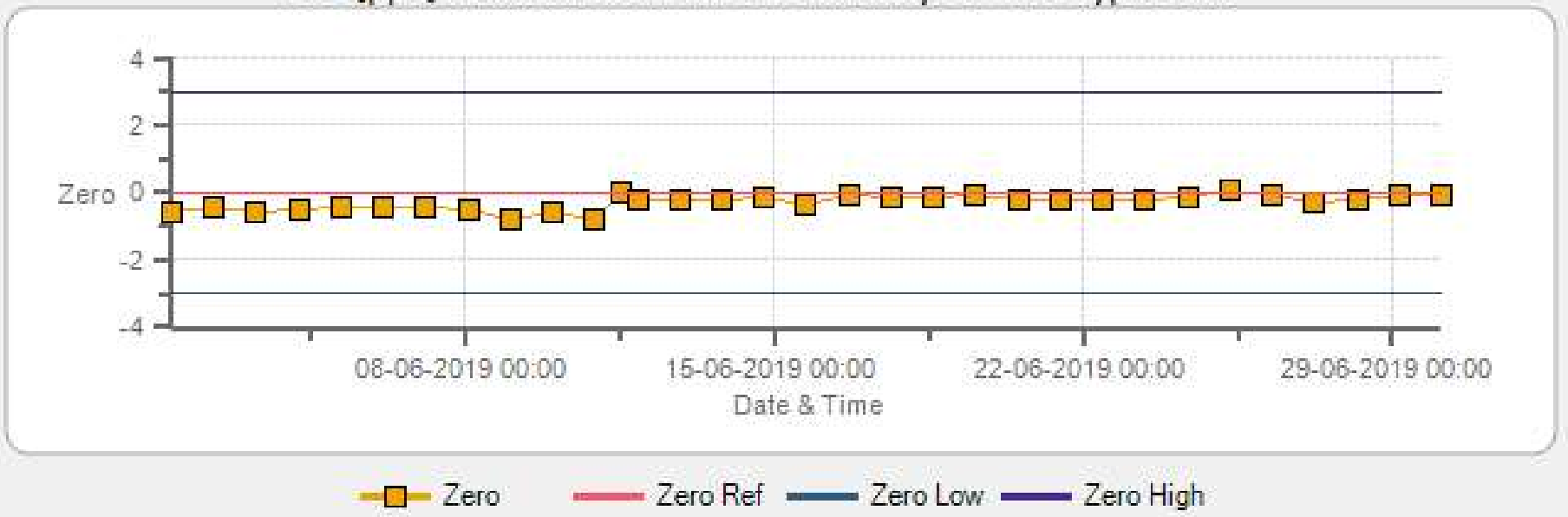
Operation and Maintenance:
Maxxam Analytics

Data Validation and Report:
Maxxam Analytics

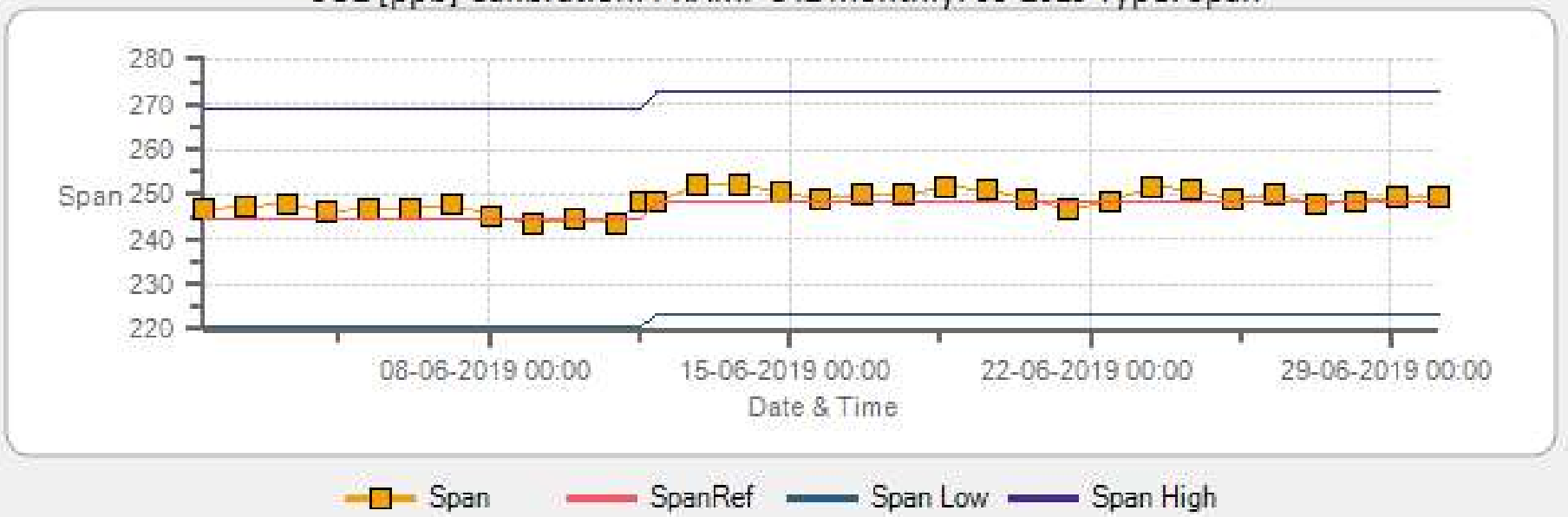
July 8, 2019

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

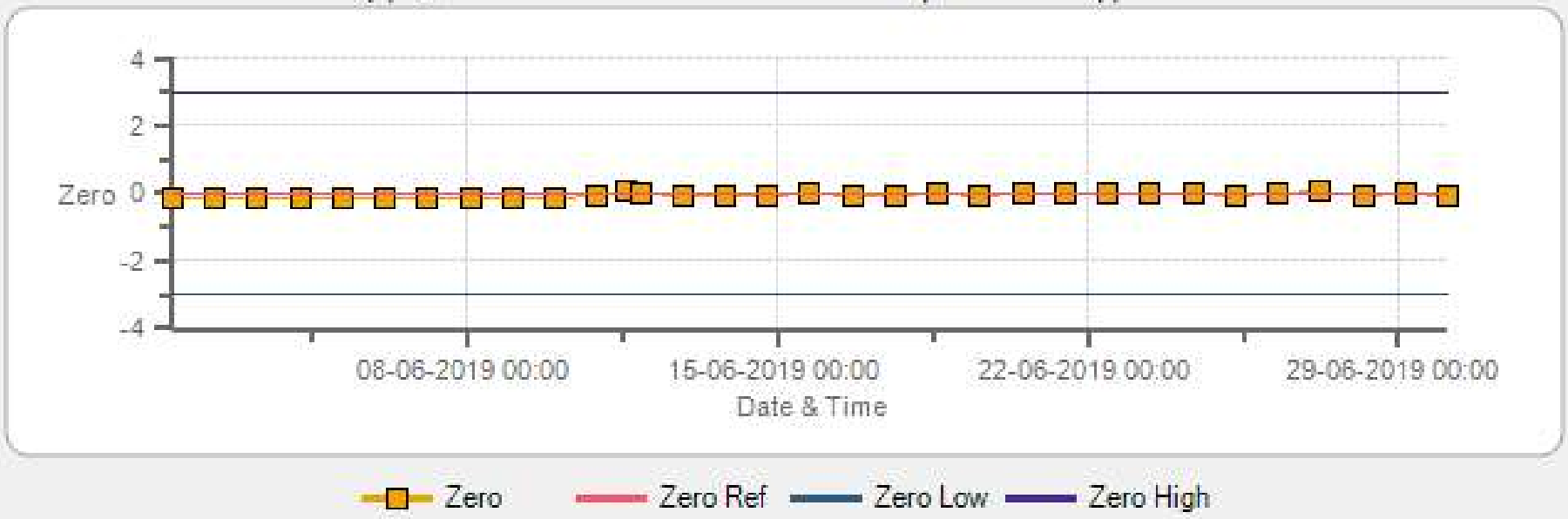
SO2 [ppb] Calibration: PRAMP 842 Monthly: 06-2019 Type: Zero



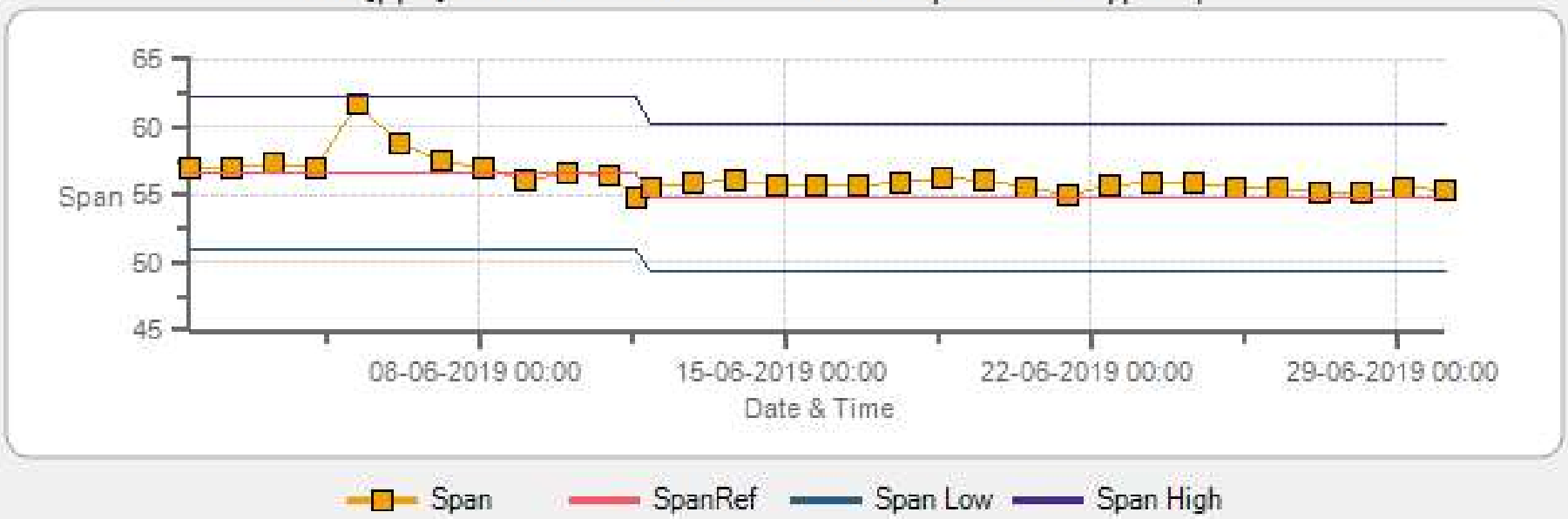
SO2 [ppb] Calibration: PRAMP 842 Monthly: 06-2019 Type: Span

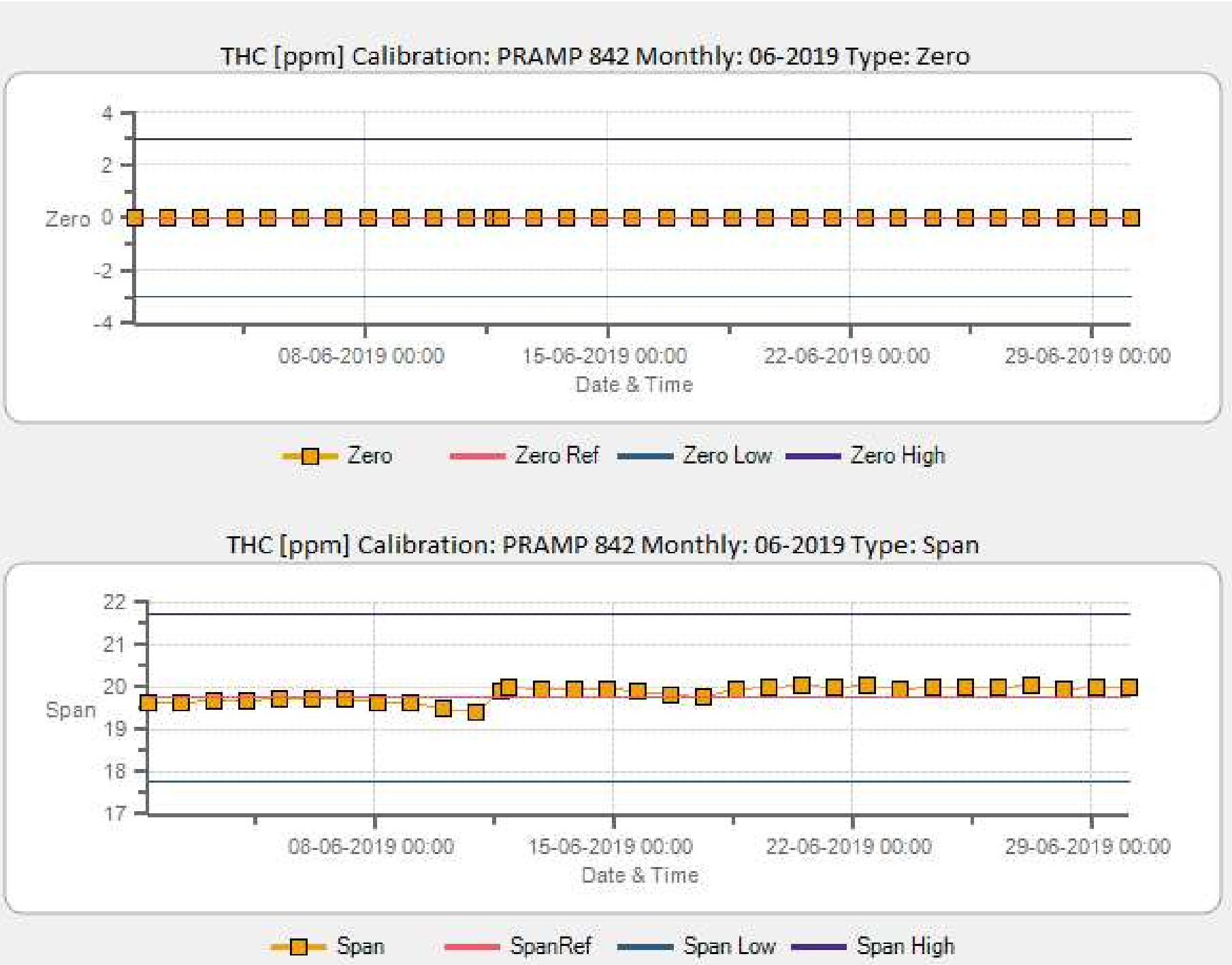


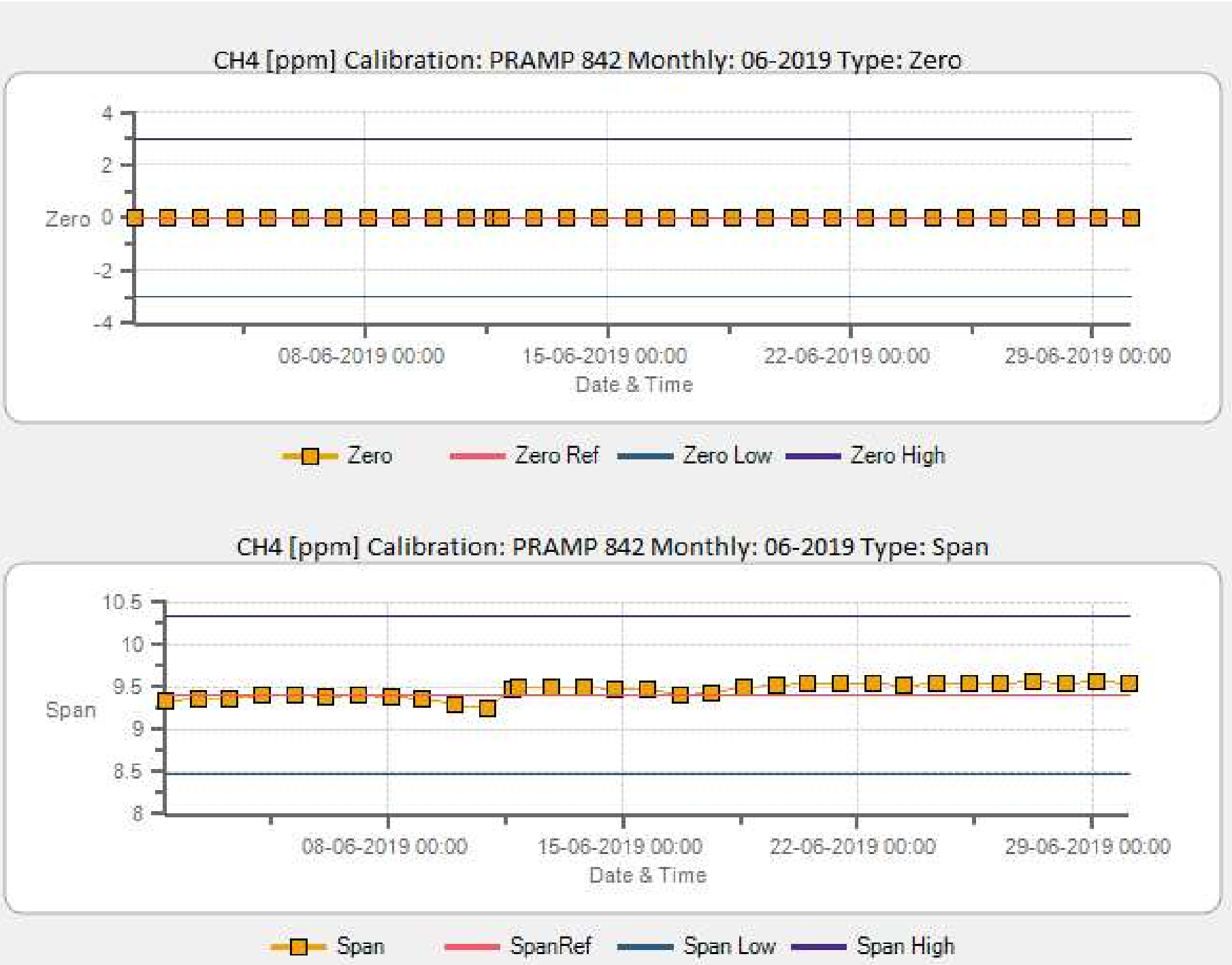
TRS [ppb] Calibration: PRAMP 842 Monthly: 06-2019 Type: Zero

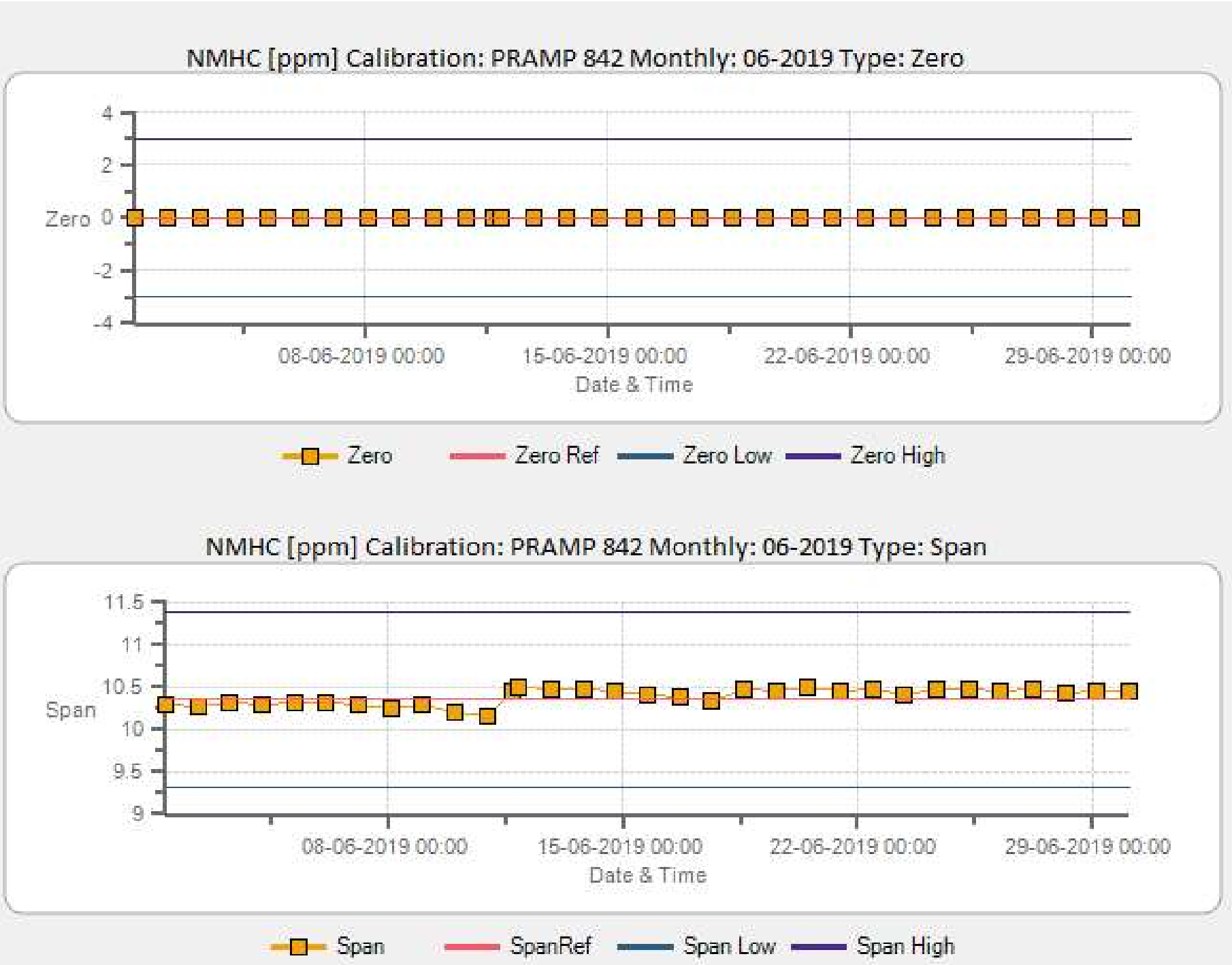


TRS [ppb] Calibration: PRAMP 842 Monthly: 06-2019 Type: Span




THC [ppm] Calibration: PRAMP 842 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC [ppm] Calibration: PRAMP 842 Monthly: 06-2019 Type: Span
22
21
20
Span
19
18
17
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4 [ppm] Calibration: PRAMP 842 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4 [ppm] Calibration: PRAMP 842 Monthly: 06-2019 Type: Span
10.5
10
9.5
Span
9
8.5
8
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC [ppm] Calibration: PRAMP 842 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC [ppm] Calibration: PRAMP 842 Monthly: 06-2019 Type: Span
11.5
11
10.5
Span
10
9.5
9
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	11-Jun-2019	PREVIOUS CALIBRATION DATE:	02-May-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	23.0
LOCATION:	842b	BAROMETRIC (mBar):	947
PURPOSE	Routine	START TIME (MST):	08:00
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	12:50

ANALYZER:

MAKE/MODEL	Thermo 43i	RANGE	500 ppb
SERIAL #	835033373	FLOW (mL/min)	421
INITIAL		FINAL	
BKG/OFFSET	15	BKG/OFFSET	14.7
COEF/SLOPE	1.004	COEF/SLOPE	1.018
Expected (reference) Value	244.8	Expected (reference) Value	248.3

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	5212	ID:	74
MFC CALIBRATION DATE:	07-Feb-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0000597	HIGH ID	n/a
CONC (ppm):	50.40	EXPIRY DATE	n/a
CYLINDER (psi):	550	LOW ID	n/a
EXPIRY DATE	08-Dec-2019	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		
5995		5995	0.00	-0.6	0		
5952	45.20	5997	379.84	371.7	379.9	1.020	1.000
5976	21.40	5997	179.87	n/a	178.3	n/a	1.009
5985	10.69	5996	89.89	n/a	89	n/a	1.010

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.1%

COMMENTS:

Monthly calibration passed.

SO2[ppb] Station: PRAMP 842b Daily: 11-06-2019 Type: AVG 1 Min. [1 Min.]

TRS Analyzer Calibration by Dilution

DATE:	11-Jun-2019	PREVIOUS CALIBRATION DATE:	02-May-2019
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	23.0
LOCATION:	842b	BAROMETRIC (mBar):	947
PURPOSE	Routine	START TIME (MST):	08:00
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	13:42

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1162460023	FLOW (mL/min)	406
INITIAL		FINAL	
BKG/OFFSET	2.99	BKG/OFFSET	2.76
COEF/SLOPE	0.901	COEF/SLOPE	0.878
Expected (reference) Value	56.67	Expected (reference) Value	54.86

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	4760	ID:	74
MFC CALIBRATION DATE:	07-Feb-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL119420	HIGH ID	n/a
CONC (ppm):	10.20	EXPIRY DATE	n/a
CYLINDER (psi):	500	LOW ID	n/a
EXPIRY DATE	16-May-2020	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:	08:35	SO2 Conc (ppb)	380
END TIME:	08:50	Analyzer Response (ppb)	0.1

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7486		7486	0.00	-0.12	0		
7430	57.20	7487	77.92	80.44	77.92	0.967	1.000
7459	27.85	7487	37.94	n/a	37.63	n/a	1.008
7473	13.94	7487	18.99	n/a	18.36	n/a	1.034

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.3%

COMMENTS:

Monthly calibration passed.


TRS[ppb] Station: PRAMP 842b Daily: 11-06-2019 Type: AVG 1 Min. [1 Min.]
TRS Value
90
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:	11-Jun-2019	PREVIOUS CALIBRATION DATE:	02-May-2019
CLIENT:	PRAMP	TEMPERATURE (°C):	23.6
LOCATION:	842b	BAROMETRIC (mBar):	946
PURPOSE	Routine	START TIME (MST):	11:49
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	16:49

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1505664392	1253.3
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	1.002	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Environics	MAKE:	API	CYLINDER ID:	LL43221		HIGH ID:	n/a
MODEL:	6100	MODEL:	T701	CH_4/C_3H_8 (ppm):	595.0	206.0	HIGH EXPIRY:	n/a
ID:	5212	ID:	74	CYLINDER (psi):	1500		LOW ID:	n/a
MFC CALIBRATION DATE:	07-Feb-2019	OXIDIZER ID:	Internal	EXPIRY DATE	18-Oct-2025		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	566.5
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1161.5

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	9.41	10.36	19.77		9.41	10.36	19.77

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
3146		3146	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3076	70.48	3146	13.33	12.69	26.02	13.01	12.34	25.35	13.32	12.69	26.02	1.025	1.028	1.026	1.001	1.000	1.000
3111	37.93	3149	7.17	6.82	13.99	n/a	n/a	n/a	7.17	6.91	14.08	n/a	n/a	n/a	1.000	0.988	0.994
3130	16.25	3146	3.07	2.92	6.00	n/a	n/a	n/a	3.08	3.04	6.12	n/a	n/a	n/a	0.997	0.962	0.980

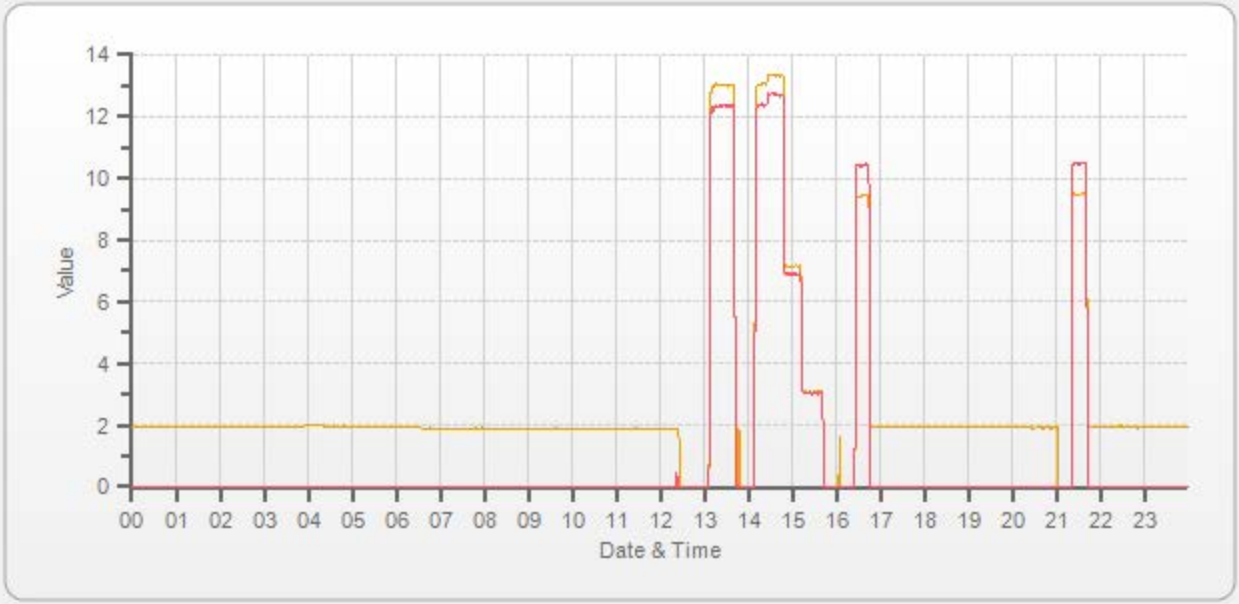
LINEAR REGRESSION ANALYSIS:

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

COMMENTS:

Monthly calibration passed.

Station: PRAMP 842b Daily: 11-06-2019 Type: AVG 1 Min. [1 Min.]



Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2019-426A

Company: Maxxam **Operator:** C. Wesson

Calibrator:				**Flow Measurement Device:**	
Make/Model	Evironics 6100			Make/Model	N/A
Serial Number	5212			Serial Number	N/A
Last Verification Date	March 2018			Temperature (°C)	N/A
NO Cylinder S/N	LL107918			Barometric Pressure	N/A
NO [PPM]	50.1	NOx [PPM]	50.2		
Expiry Date	August 2026				

Dilution Flow (sccm)

Pt. #1 5000 Pt. #2 5000 Pt. #3 5000

Gas Flow (sccm)

Pt. #1 80 Pt. #2 40 Pt. #3 20

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
5000	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
4997	77.8	0.780	0.782	0.768	-0.003	0.766	-2%	-2%
4997	37.9	0.380	0.381	0.372	-0.002	0.370	-2%	-3%
4996	18.9	0.190	0.190	0.186	-0.001	0.185	-2%	-3%
					Absolute Average Percent Difference		2%	2%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO		**LIMITS**	**NOx**	
Correlation=	1.0000	**≥ 0.990**	Correlation=	1.0000
m (Slope)=	0.9846	**0.90-1.10**	m (Slope)=	0.9802
b (Intercept % of FS)=	-0.0683	**± 3% F.S.**	b (Intercept % of FS)=	-0.1101

Flow	O_3 Conc	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
						NO_2	% Diff. Limit
4997	0.000	0.000	0.765	-0.002	0.764		
4997	0.500	0.491	0.274	0.486	0.760	-1%	± 10%
4997	0.275	0.274	0.491	0.271	0.762	0%	± 10%
4997	0.090	0.091	0.674	0.089	0.762	0%	± 10%
				Absolute Average Percent Difference		0%	± 10%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9937	**0.90-1.10**
b (Intercept % of FS)=	-0.1650	**± 3% F.S.**

AENV Standards		**NO_X Analyzer**	
Audit Calibrator			
Make/Model	Sabio 2010	Make/Model	Teco 42i
Serial/AMU Number	AMU 2092	Serial/AMU Number	AMU 1868
SRM Gas Cylinder No.	APEX1236645	Last Calibration Date	February 12, 2019
Cylinder Conc. (ppm)	50.05	Full Scale (ppm)	1.0
		Cylinder Gas Expiry Date	June 2021

COMMENTS: Contains 49.5 ppm SO2.

Auditor: Al Clark Date: February 13, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2019-427A

Company: Maxxam **Operator:** C. Wesson

Calibrator:				**Flow Measurement Device:**	
Make/Model	Evironics 6100			Make/Model	N/A
Serial Number	4760			Serial Number	N/A
Last Verification Date	March 2018			Temperature (°C)	N/A
NO Cylinder S/N	LL107918			Barometric Pressure	N/A
NO [PPM]	50.1	NOx [PPM]	50.2		
Expiry Date	August 2026				

Dilution Flow (sccm)

Pt. #1 5000 Pt. #2 5000 Pt. #3 5000

Gas Flow (sccm)

Pt. #1 80 Pt. #2 40 Pt. #3 20

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
5000	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
4994	77.7	0.779	0.781	0.798	0.000	0.798	2%	2%
4993	37.8	0.379	0.380	0.388	-0.001	0.387	2%	2%
4993	18.9	0.190	0.190	0.193	0.000	0.193	2%	2%
					Absolute Average Percent Difference		2%	2%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO		**LIMITS**	**NOx**	
Correlation=	1.0000	**≥ 0.990**	Correlation=	1.0000
m (Slope)=	1.0242	**0.90-1.10**	m (Slope)=	1.0221
b (Intercept % of FS)=	-0.0519	**± 3% F.S.**	b (Intercept % of FS)=	-0.0726

Flow	O_3 Conc	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
4994	0.000	0.000	0.796	0.000	0.796	NO_2	% Diff. Limit
4994	0.550	0.502	0.294	0.499	0.792	-1%	± 10%
4994	0.300	0.275	0.521	0.274	0.795	0%	± 10%
4994	0.100	0.062	0.734	0.061	0.796	-2%	± 10%
			Absolute Average Percent Difference			1%	± 10%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9949	**0.90-1.10**
b (Intercept % of FS)=	-0.0179	**± 3% F.S.**

AENV Standards		**NO_X Analyzer**	
Audit Calibrator			
Make/Model	Sabio 2010	Make/Model	Teco 42i
Serial/AMU Number	AMU 2092	Serial/AMU Number	AMU 1868
SRM Gas Cylinder No.	APEX1236645	Last Calibration Date	February 14, 2019
Cylinder Conc. (ppm)	50.05	Full Scale (ppm)	1.0
		Cylinder Gas Expiry Date	June 2021

COMMENTS: Contains 49.5 ppm SO2.

Auditor: Al Clark Date: February 14, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2016-438CGA

Company: Maxxam **Operator's Name:** Chris

Cylinder #: EY0000597 Concentration PPM: 50.4 Tolerance(%) 1.0 Certified By: Praxair

Expiry Date: December 8, 2019

Reference Calibrator and Gas:

Make/Model: Thermo 146i
Serial Number: AMU 1809
Last Verification Date: January 26, 2017
Gas Type: SO2 Conc. 98.07
Cylinder Number: CAL016625
Expiry Date: January 5, 2019

Flow Measurement Device:

Make/Model: Bios Befiner 220
Serial Number: AMU1941
Temp.°C: 24.4
B.P. 704.7

Reference Analyzer:

Make/Model: Themro 43C Serial/AMU Number: AMU 1623

Instrument Settings: Zero: 9.5 Span: 1.023 Range: 1.0

Last Calibration: Date: 25-Jan-17 C.F. 1.000 Done By: SB

Calibrator Flows (sccm)		Indicated	Gas Flow/	Concentration	Cylinder
Dilution	Gas	Concentration (PPM)	Dilution Flow	Factor	Concentration
4923	0.0	0.000			
4916	80.7	0.834	0.01642	60.917	50.8
4902	40.3	0.416	0.00822	121.638	50.6
4916	19.9	0.206	0.00405	247.035	50.9
				Average Cylinder Concentration:	**50.7**

Previous Stated Concentration PPM: 50.4

Percent variance from Stated: **0.7**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Shea Beaton Date: January 26, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2017-135CGA

Company: Maxxam **Operator's Name:** Raja Abid Ashraf

Cylinder #: LL119420 Concentration PPM: 10.2 Tolerance(%) 2 Certified By: Praxair

Expiry Date: May 16, 2020

Reference Calibrator and Gas:

Make/Model: R&R MFC 201
Serial Number: AMU 1690
Last Verification Date: July 27, 2017
Gas Type: H2S Conc. 20.43
Cylinder Number: CAL015272
Expiry Date: Janaury 2019

Flow Measurement Device:

Make/Model: Mesa Definer 220
Serial Number: H-133034 L-132702
Temp.°C: 22.0 C
B.P. 700 mmhg

Reference Analyzer:

Make/Model: Teco 450i Serial/AMU Number: 1980
Instrument Settings: Zero: 21.9 Span: 1.069 Range: 0.1
Last Calibration: Date: July 27, 2017 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5000	0.0	0.0020			
5117	38.9	0.0781	0.00760	131.542	10.0
5103	18.4	0.0379	0.00361	277.337	10.5
5097	9.4	0.0198	0.00184	542.234	10.7
				Average Cylinder Concentration:	**10.4**

Previous Stated Concentration PPM: 10.2

Percent variance from Stated: **2**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [ ] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [X]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Al Clark Date: July 27, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

CH4 / C3H8 Cylinder Gas

File No. 2017-492CGA

Company: Maxxam **Operators name:** Mike

Cylinder #: LL43221 Conc CH4 (PPM) 595/206 Tolerance (%) 2 Certified By: Praxair

Expiry Date: October 2025

Reference Calibrator and Gas:

Make/Model	R&R MFC 201		
Serial Number	AMU 1690		
Last Verification Date	December 13, 2017		
Gas Type	CH4	Conc.	990.4
Cylinder Number	5604875	Expiry Date	July 2021
Gas Type	C3H8	Conc.	246.5
Cylinder Number	XF003845B	Expiry Date	July 2022

Flow Measurement Device:

Make/Model	Mesa Definer 220
Serial Number	H-133034 / L-132702
Temp.°C	23.1 C
B.P.	707 mmHg

Reference Analyzer:

Make/Model	Teco 55i			Serial/AMU Number:	2108
Instrument Settings	Zero: N/A		Span: N/A	Range:	20.0
Last Calibration:	Date: Dec 12/17		C.F. 1.000	Done By:	Al Clark

Calibrator Flows (sccm)		Indicated Conc. (ppm)		Gas Flow/	Concentration	Cylinder Concentration	
Dilution	Gas	CH4	C3H8	Dilution Flow	Factor	CH4	C3H8
3500	0.0	0.00	0.00				
3618	80.4	13.23	12.70	0.02	45.00	595	208
3547	39.8	6.65	6.44	0.01	89.12	593	209
3560	19.8	3.33	3.23	0.01	179.80	599	211
					Average Cylinder Concentration:	**596**	**209**

	CH4	C3H8
Previous Stated Concentration PPM:	595	206
Percent variance from Stated:	**0**	**2**

Cylinder gas tolerances based on CH4 only

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Al Clark Date: December 13, 2017

Operator Signature: Location: McIntyre Center Edmonton

Peace River Area Monitoring Program

JUNE 2019

Ambient Air Monitoring Calibration Report

- 986b STATION-

CAL-PRAMP-201906-01562

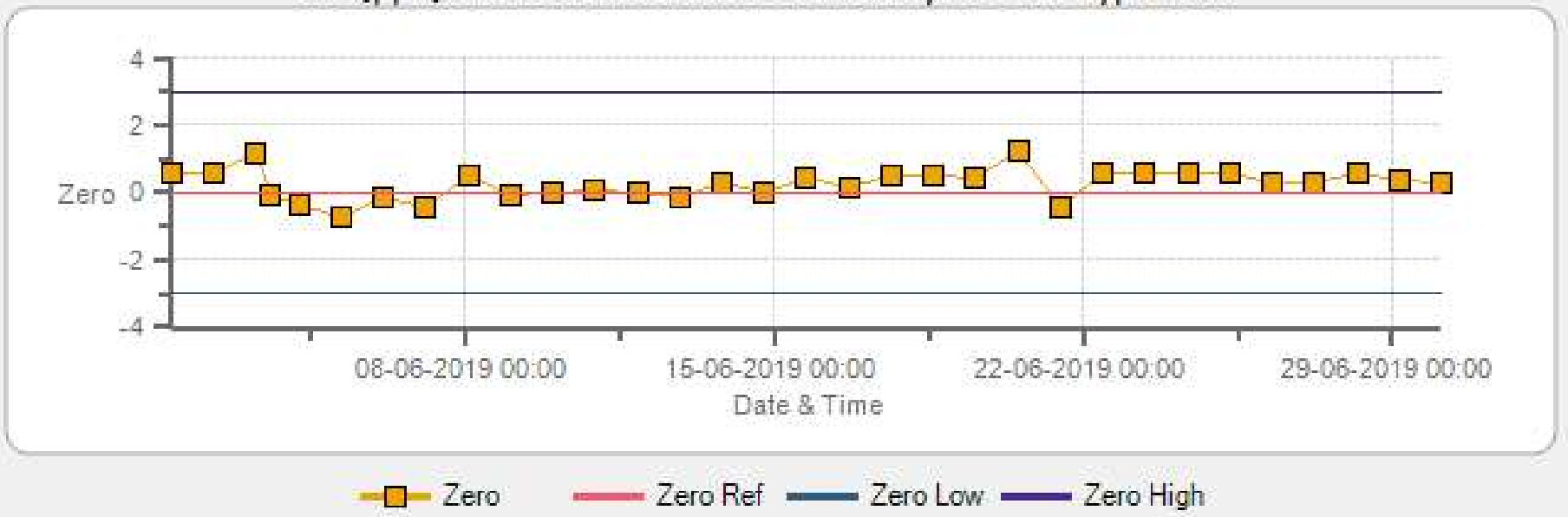
Operation and Maintenance:
Maxxam Analytics

Data Validation and Report:
Maxxam Analytics

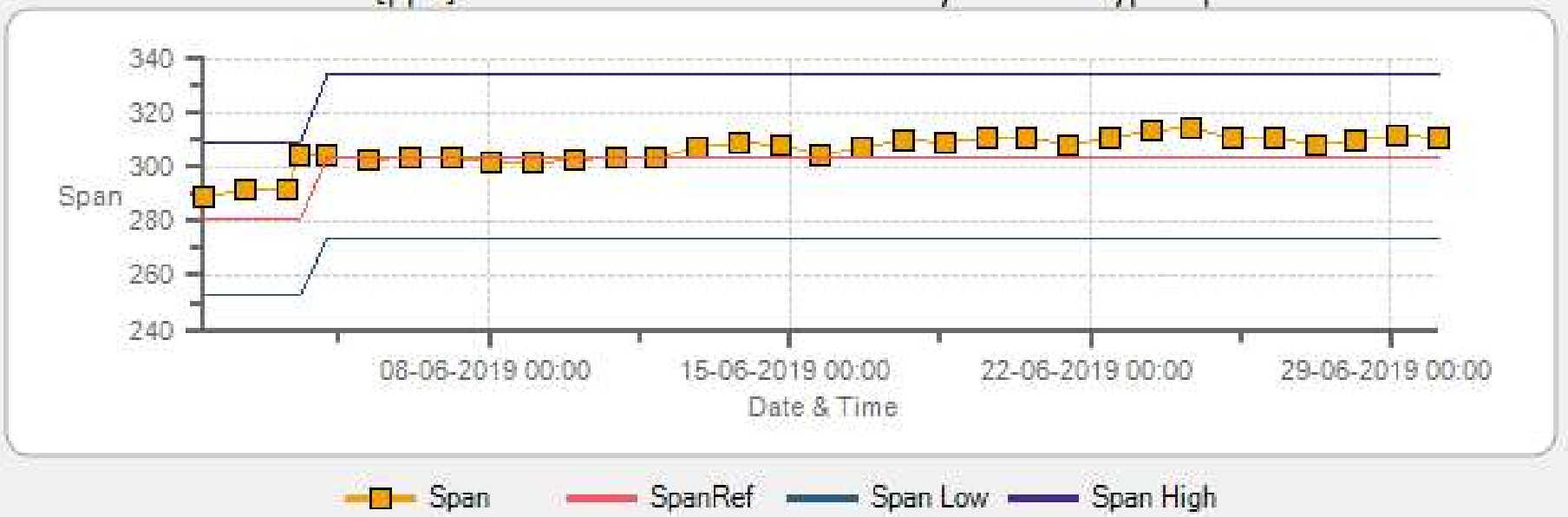
July 8, 2019

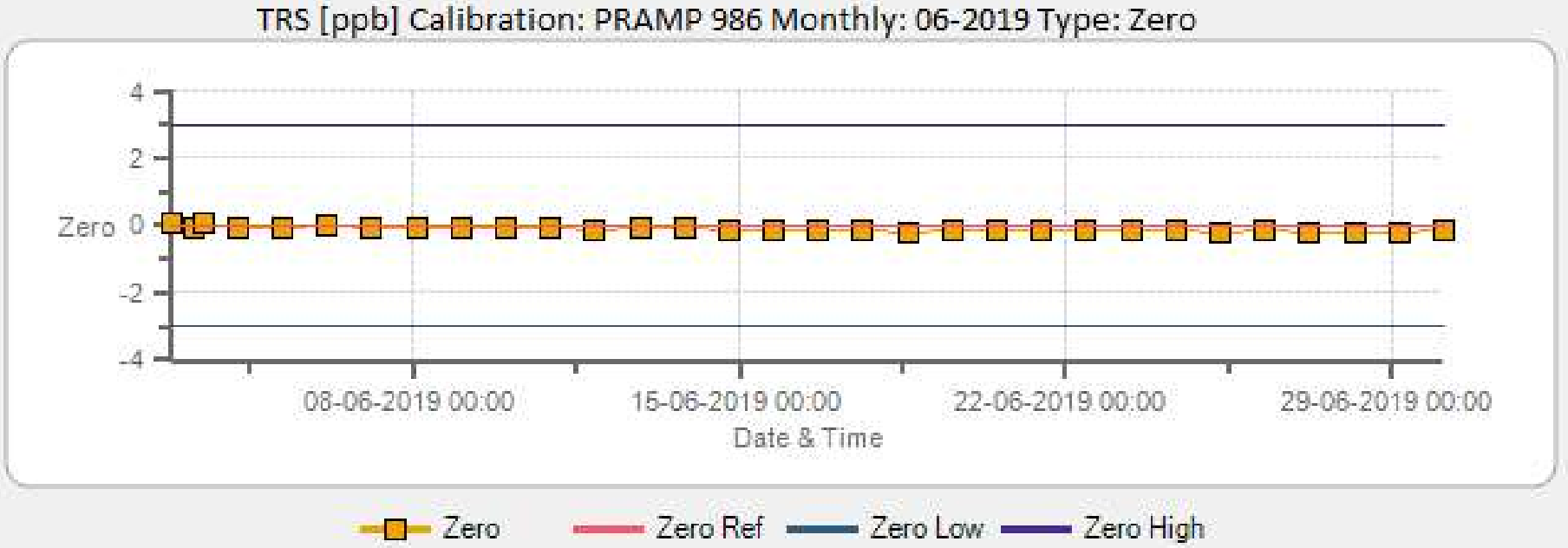
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

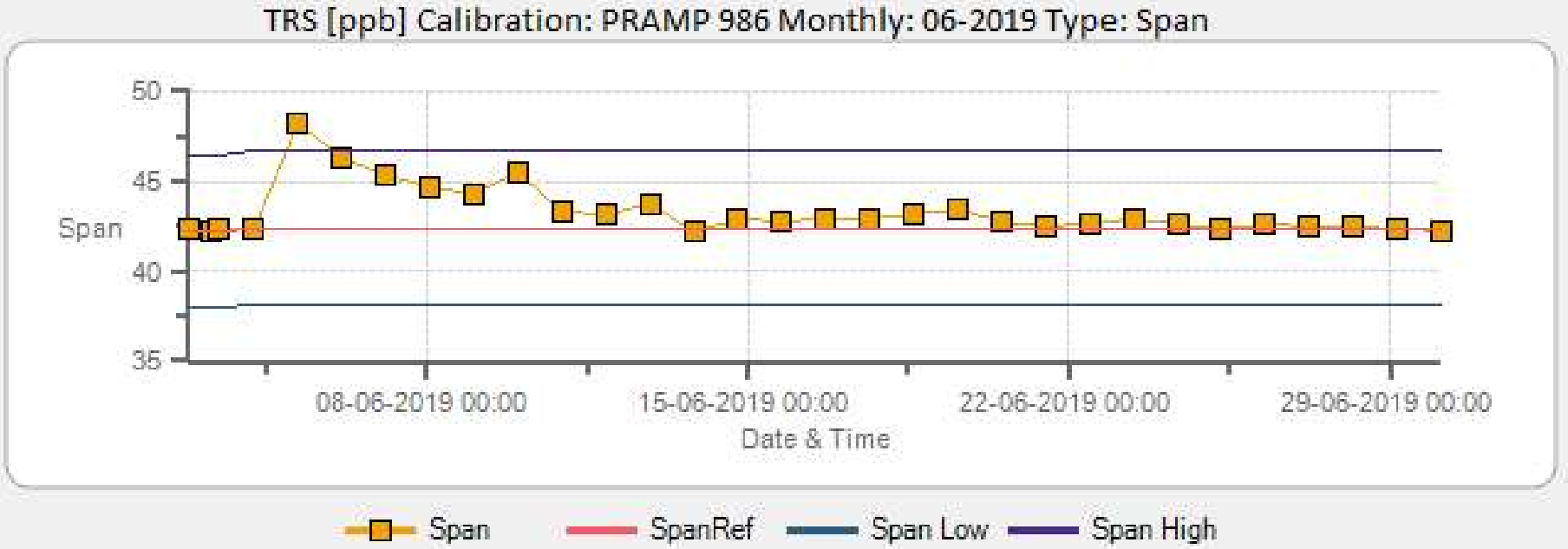
SO2 [ppb] Calibration: PRAMP 986 Monthly: 06-2019 Type: Zero

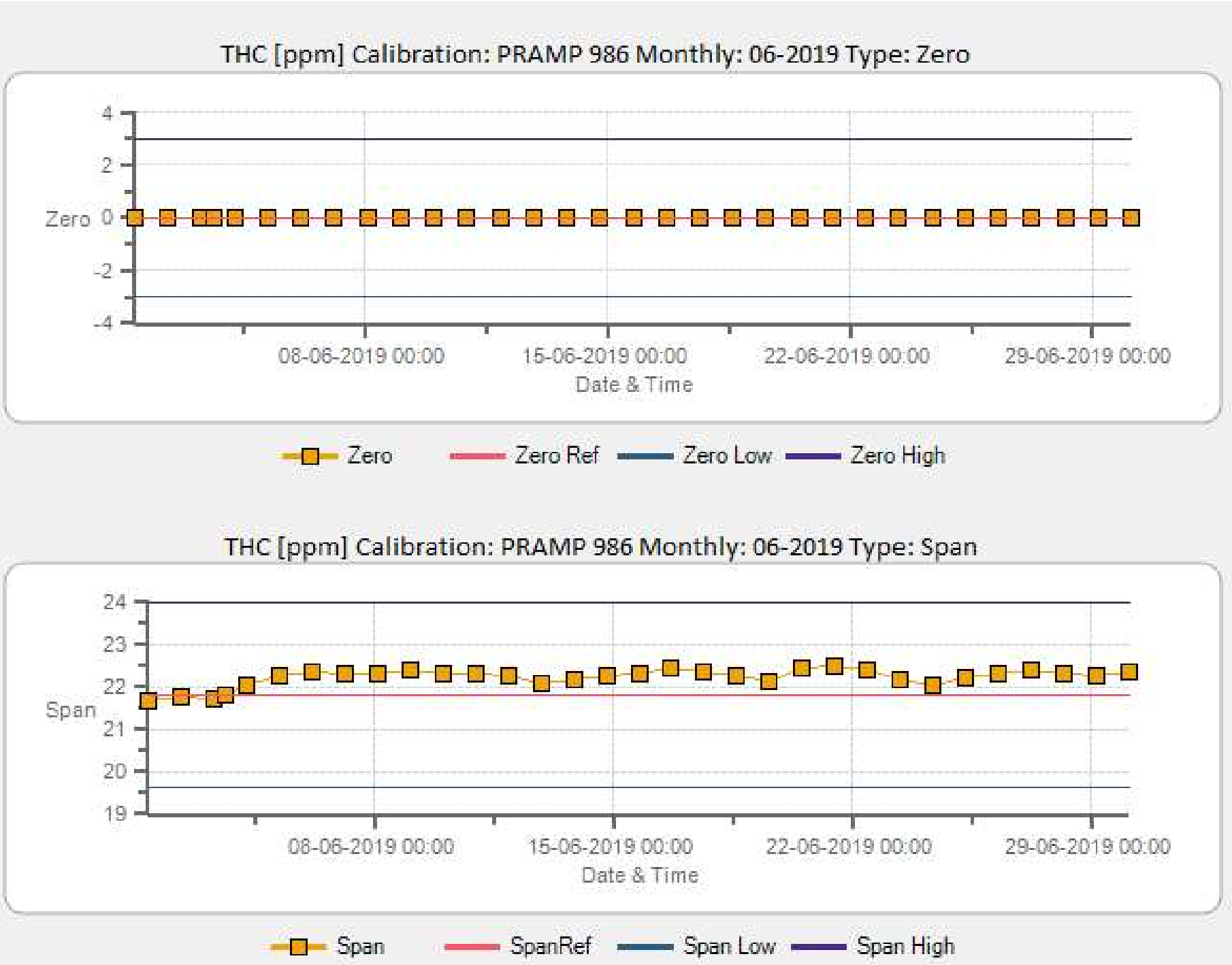


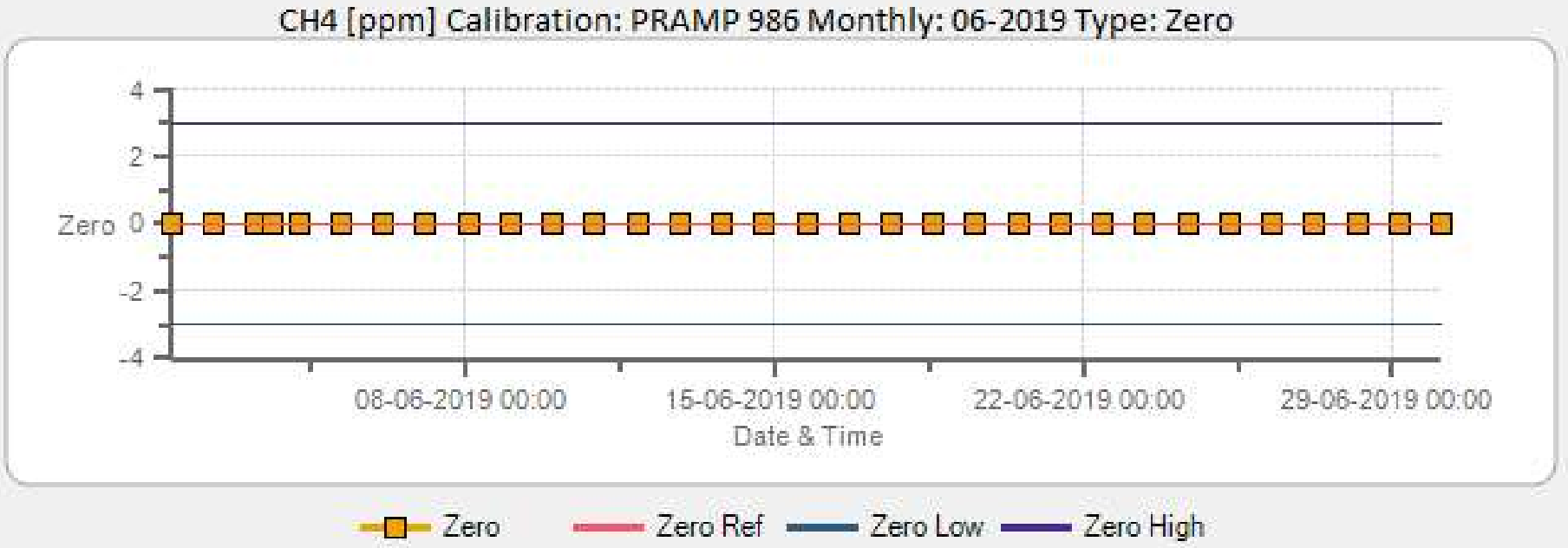
SO2 [ppb] Calibration: PRAMP 986 Monthly: 06-2019 Type: Span

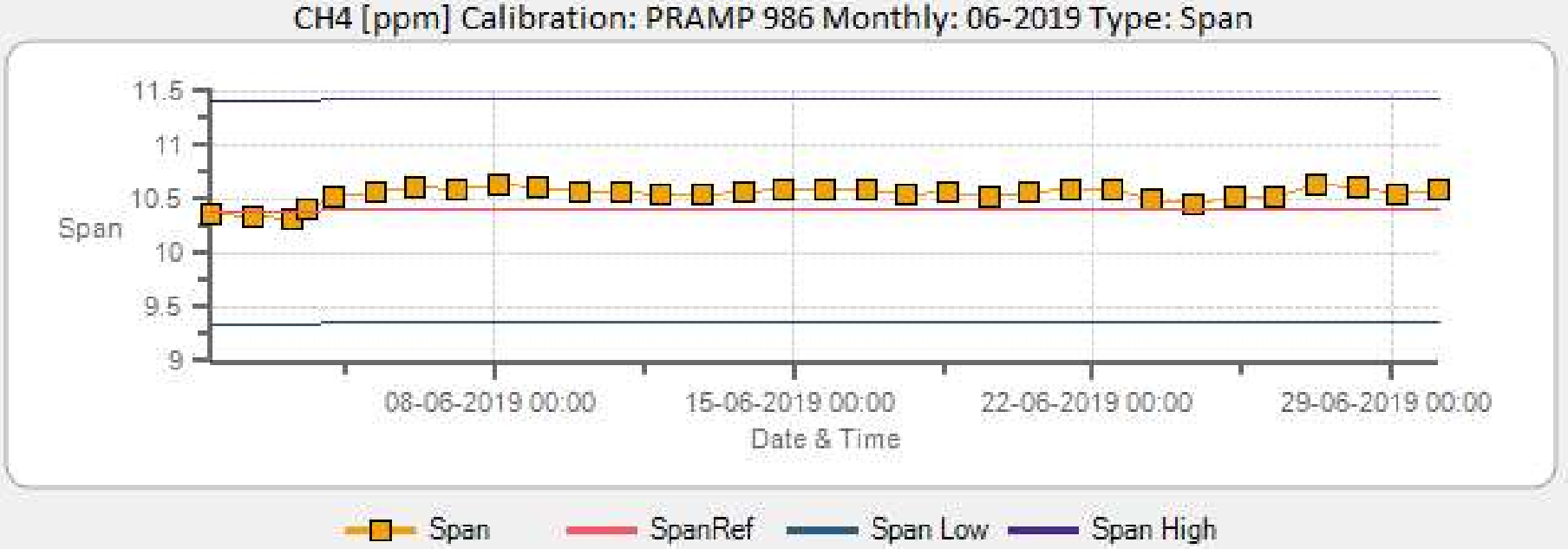


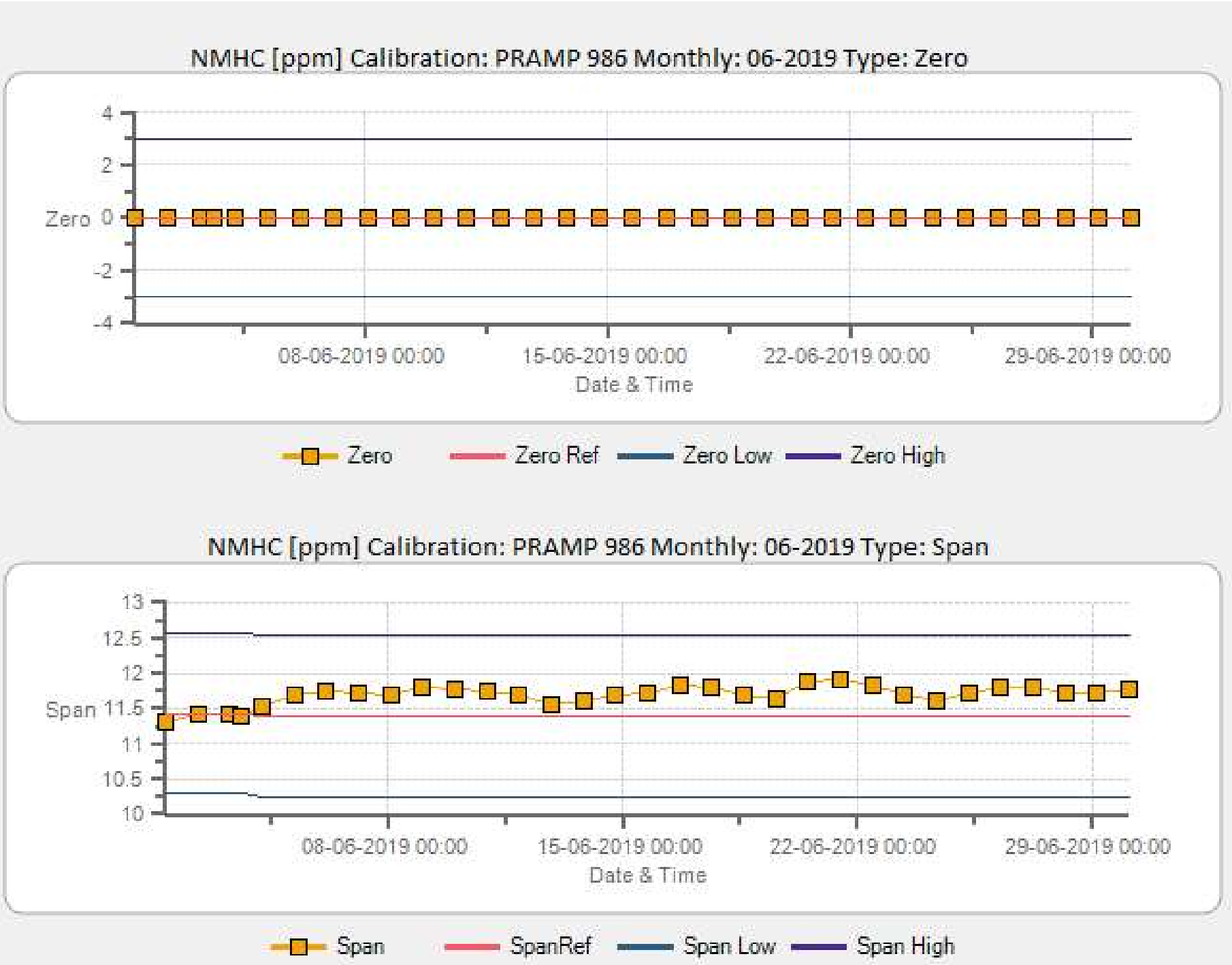

TRS [ppb] Calibration: PRAMP 986 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High


TRS [ppb] Calibration: PRAMP 986 Monthly: 06-2019 Type: Span
50
45
Span
40
35
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC [ppm] Calibration: PRAMP 986 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC [ppm] Calibration: PRAMP 986 Monthly: 06-2019 Type: Span
24
23
22
Span
21
20
19
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4 [ppm] Calibration: PRAMP 986 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High


CH4 [ppm] Calibration: PRAMP 986 Monthly: 06-2019 Type: Span
11.5
11
10.5
Span
10
9.5
9
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC [ppm] Calibration: PRAMP 986 Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC [ppm] Calibration: PRAMP 986 Monthly: 06-2019 Type: Span
13
12.5
12
Span 11.5
11
10.5
10
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	03-Jun-2019	PREVIOUS CALIBRATION DATE:	14-May-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4
LOCATION:	986b	BAROMETRIC (mBar):	933
PURPOSE	Removal/Shut-down	START TIME (MST):	08:28
PERFORMED BY:	Chris Wesson	END TIME (MST):	10:28

ANALYZER:

MAKE/MODEL	Thermo 43C	RANGE	500 ppb
SERIAL #	43C-62339-335	FLOW (mL/min)	648
INITIAL		FINAL	
BKG/OFFSET	92.5	BKG/OFFSET	n/a
COEF/SLOPE	0.92	COEF/SLOPE	n/a
Expected (reference) Value	281	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	Teledyne
MODEL:	2000	MODEL:	T701
ID:	1991	ID:	134
MFC CALIBRATION DATE:	17-May-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL48147	HIGH ID	n/a
CONC (ppm):	49.50	EXPIRY DATE	n/a
CYLINDER (psi):	1750	LOW ID	n/a
EXPIRY DATE	20-Aug-2026	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		
6000		6000	0.00	0.8	n/a		
5956	47.24	6004	389.47	381	n/a	1.024	n/a
5979	23.03	6002	189.90	184.4	n/a	1.034	n/a
5992	11.49	6004	94.75	91.3	n/a	1.047	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.978	-0.1%

COMMENTS:

A Shut-down was performed due to low pressure alarm.

SO2 Analyzer Calibration by Dilution

DATE:	03-Jun-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	23.1
LOCATION:	986b	BAROMETRIC (mBar):	933
PURPOSE	Install/Post-Repair	START TIME (MST):	11:51
PERFORMED BY:	Chris Wesson	END TIME (MST):	14:36

ANALYZER:

MAKE/MODEL	Thermo 43C	RANGE	500 ppb
SERIAL #	43C-62339-335	FLOW (mL/min)	621
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	97.6
COEF/SLOPE	n/a	COEF/SLOPE	0.961
Expected (reference) Value	n/a	Expected (reference) Value	304

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	Teledyne
MODEL:	2000	MODEL:	T701
ID:	1991	ID:	134
MFC CALIBRATION DATE:	17-May-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL48147	HIGH ID	n/a
CONC (ppm):	49.50	EXPIRY DATE	n/a
CYLINDER (psi):	1750	LOW ID	n/a
EXPIRY DATE	20-Aug-2026	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:

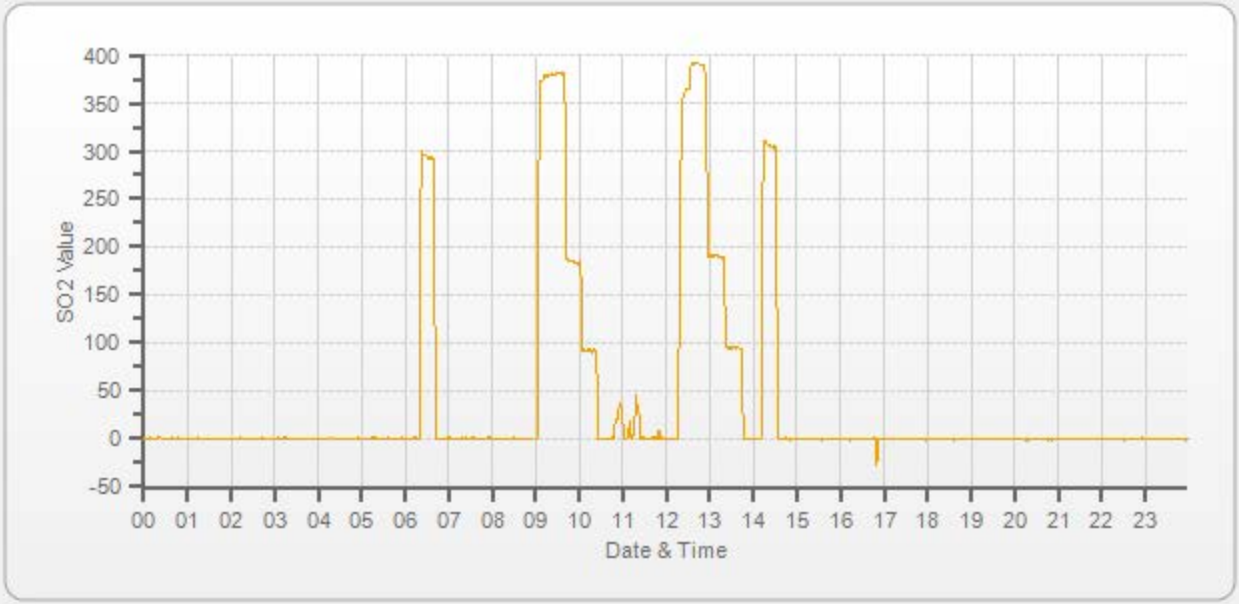
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4003		4003	0.00	n/a	0		
3970	31.49	4002	389.51	n/a	390	n/a	0.999
3985	15.37	4001	190.12	n/a	190.5	n/a	0.998
3995	7.69	4003	95.11	n/a	95.2	n/a	0.999

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.0%

COMMENTS:

Post-repair following general maintenance.


SO2[ppb] Station: PRAMP 986b Daily: 03-06-2019 Type: AVG 1 Min. [1 Min.]
SO2 Value
400
350
300
250
200
150
100
50
0
-50
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:	03-Jun-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4
LOCATION:	986b	BAROMETRIC (mBar):	933
PURPOSE	Install/Post-Repair	START TIME (MST):	08:28
PERFORMED BY:	Chris Wesson	END TIME (MST):	11:45

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1152940011	FLOW (mL/min)	475
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	2.04
COEF/SLOPE	n/a	COEF/SLOPE	0.951
Expected (reference) Value	n/a	Expected (reference) Value	42.43

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26801218	ID:	134
MFC CALIBRATION DATE:	31-Jan-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL119432	HIGH ID	n/a
CONC (ppm):	10.28	EXPIRY DATE	n/a
CYLINDER (psi):	400	LOW ID	n/a
EXPIRY DATE	07-Nov-2020	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:	09:00	SO2 Conc (ppb)	380
END TIME:	09:16	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5016		5016	0.00	n/a	0		
4979	38.00	5017	77.86	n/a	77.9	n/a	1.000
4997	18.60	5016	38.12	n/a	38.27	n/a	0.996
5007	9.30	5016	19.06	n/a	19.16	n/a	0.995

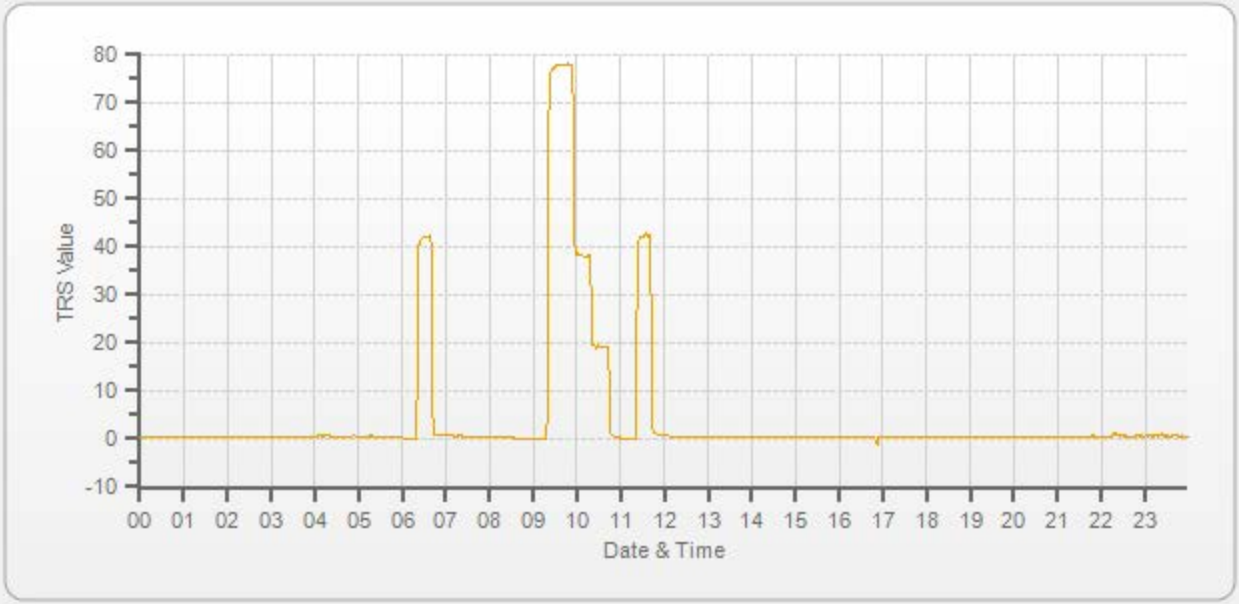
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.1%

COMMENTS:

A Post-Repair was performed following a TRS converter exchange.

TRS[ppb] Station: PRAMP 986b Daily: 03-06-2019 Type: AVG 1 Min. [1 Min.]



Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	03-Jun-2019	PREVIOUS CALIBRATION DATE:	14-May-2019
CLIENT:	PRAMP	TEMPERATURE (°C):	23.2
LOCATION:	986b	BAROMETRIC (mBar):	933
PURPOSE	Routine	START TIME (MST):	11:34
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:01

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1022143392	954
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	1.000	0.999

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL107207		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	600.0	207.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	134	CYLINDER (psi):	1100		LOW ID:	n/a
MFC CALIBRATION DATE:	31-Jan-2019	OXIDIZER ID:	Internal	EXPIRY DATE	18-Oct-2025		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	569.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1169.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.38	11.43	21.81		10.40	11.39	21.80

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
3011		3011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
2938	71.80	3010	14.31	13.58	27.89	14.22	13.50	27.74	14.30	13.58	27.88	1.006	1.006	1.005	1.001	1.000	1.000
2975	35.90	3011	7.15	6.79	13.94	n/a	n/a	n/a	7.21	6.77	13.99	n/a	n/a	n/a	0.992	1.003	0.996
2992	18.00	3010	3.59	3.40	6.99	n/a	n/a	n/a	3.63	3.39	7.03	n/a	n/a	n/a	0.988	1.004	0.995

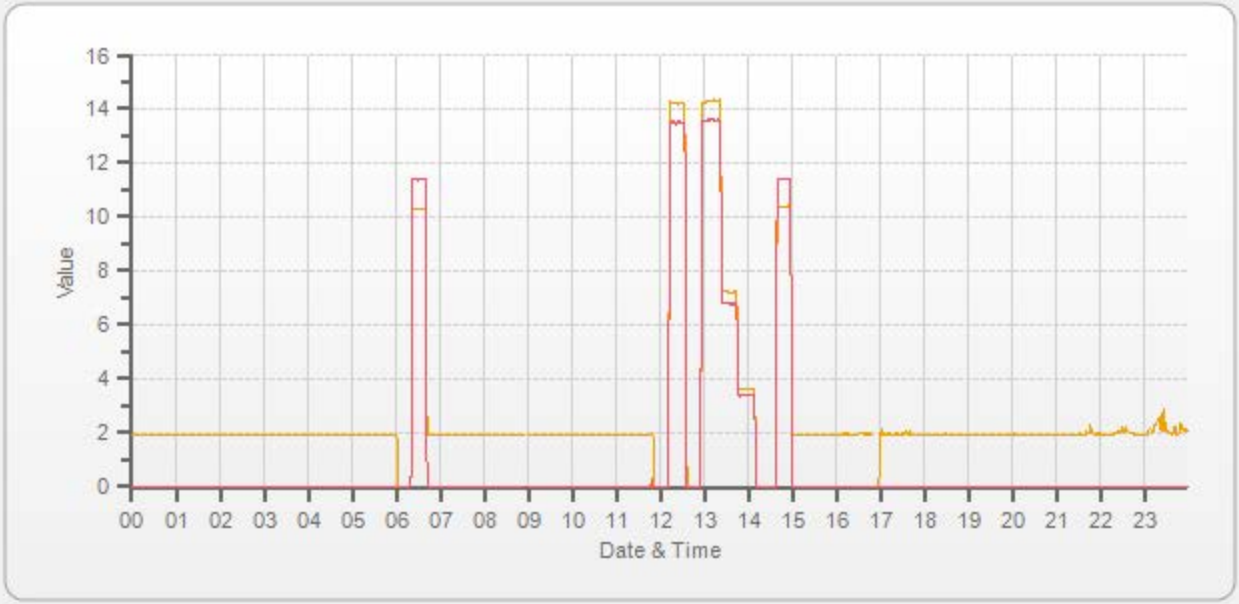
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	0.999	0.2%
NMHC	1.000	1.000	0.0%
THC	1.000	0.999	0.1%

COMMENTS:

n/a

Station: PRAMP 986b Daily: 03-06-2019 Type: AVG 1 Min. [1 Min.]



Meteorological System Checklist

Date:	June 3, 2019		
Technician:	Chris Wesson		
Reviewer:	Rob Fisher		
Station:	PRAMP 986b		
Unit:	**Make:**	**Model:**	**Serial #:**
Temperature Sensor:	RM Young	43182VC	030978
Barometric Pressure Sensor:	MetOne	090D	F3845
Relative Humidity Sensor:	RM Young	43182VC	030978
Anemometer:	RM Young	05305VK	129612
AMBIENT TEMPERATURE SENSOR CHECK			
Previous check date:	April 10, 2019		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	FS 181341226 expires June 7, 2020		
Reference Temperature (^{o}C):	17.4		
Station - Ambient Temperature (^{o}C):	16.5		
Temperature Difference (^{o}C):	0.9		
BAROMETRIC PRESSURE SENSOR CHECK			
Previous check date:	April 10, 2019		
Reference Barometer ID:	Brunton 05490 expries January 17, 2020		
Reference Pressure - Units/Reading:	millibar	934.3	
Station Pressure - Units/Reading:	millibar	933.2	
Pressure Tolerance +/- 15% of error:	794 - 1074	0.12%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	April 10, 2019		
Reference Hygrometer ID:	FS 181341226 expires June 7, 2020		
Reference Hygrometer % RH- Reading:	31.40		
Station Hygrometer % RH- Reading:	33.70		
RH Tolerance +/- 15% of difference:	26.69 - 36.11	-7.3%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	April 24, 2019	Previous check date:	April 24, 2019
Wind Speed Observed (kph):	0-10	Wind Direction Observed:	SW
Wind speed on Data Logger (kph):	6	Wind Direction on Data Logger:	SW
		Wind Direction Pass/Fail?:	Pass
Comments			

Alberta Government

Calibrator Performance Audit

Sulphur Dioxide (by Cylinder Dilution)

File No. 2019-424A

Company: Maxxam **Operator:** C. Wesson

Calibrator:		**Flow Measurement Device:**	
Make/Model	Environics 2000	Make/Model	N/A
Serial Number	1991	Serial Number	N/A
Last Verification Date	March 1, 2018	Temperature (°C)	N/A
SO_2 Cylinder Conc.	49.5	Barometric Pressure	N/A
SO_2 Cylinder S/N	LL48147		
Expiry Date	August 2026		

Flow Measurements

Pt. No. 1 78.8 **Pt. No. 2** 38.4 **Pt. No. 3** 19.2

Calibrator Flow (sccm)	Calculated Concentration (ppm)	Indicated Concentration (ppm)	% Difference vs Audit Gas	% Difference Limit
Zero Air	0.000	0.000		
5000	0.780	0.763	-2%	± 10%
4999	0.380	0.371	-2%	± 10%
5000	0.190	0.183	-4%	± 10%
		Absolute Average Percent Difference	3%	± 10%

LINEAR REGRESSION ANALYSIS

y=mx+b (where x=calculated concentration, y=indicated concentration)

SO_2		LIMITS
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9792	**0.90-1.10**
b (Intercept % of FS)=	-0.1346	**± 3% F.S.**

AENV Standards

Audit Calibrator

Make/Model	Sabio 2010
Serial/AMU Number	AMU 2092
SO_2 SRM Gas Cylinder No.	FF28071
Cylinder Conc. (ppm)	50.3

SO_2 Analyzer

Make/Model	Teco 43i
Serial/AMU Number	AMU 2195
Last Calibration Date	February 8, 2019
Full Scale (ppm)	1.0
Expiry Date	March 2020

COMMENTS:

Auditor: Al Clark Date: February 13, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2019-396A

Company Maxxam **Operator:** Alex

Calibrator:				**Flow Measurement Device:**	
Make/Model	Sabio 2010			Make/Model	N/A
Serial Number	26801218			Serial Number	N/A
Last Verification Date	New			Temperature (°C)	N/A
NO Cylinder S/N	LL48147			Barometric Pressure	N/A
NO [PPM]	50.5	NOx [PPM]	50.6		
Expiry Date	August 2026				

Dilution Flow (sccm)

Pt. #1 5000 Pt. #2 5000 Pt. #3 5000

Gas Flow (sccm)

Pt. #1 80 Pt. #2 40 Pt. #3 20

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
5000	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
5015	79.1	0.797	0.798	0.793	0.001	0.794	0%	-1%
5015	39.6	0.399	0.400	0.395	0.001	0.396	-1%	-1%
5017	19.8	0.199	0.200	0.197	0.000	0.197	-1%	-1%
				Absolute Average Percent Difference			1%	1%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO		**LIMITS**	**NOx**	
Correlation=	1.0000	**≥ 0.990**	Correlation=	1.0000
m (Slope)=	0.9959	**0.90-1.10**	m (Slope)=	0.9954
b (Intercept % of FS)=	-0.0968	**± 3% F.S.**	b (Intercept % of FS)=	-0.0969

Flow	O_3 Conc	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
5015	0.000	0.000	0.792	0.001	0.793	NO_2	% Diff. Limit
5015	0.500	0.496	0.296	0.493	0.791	-1%	± 10%
5015	0.250	0.246	0.546	0.245	0.793	-1%	± 10%
5015	0.100	0.098	0.694	0.098	0.793	-1%	± 10%
			Absolute Average Percent Difference			1%	± 10%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9921	**0.90-1.10**
b (Intercept % of FS)=	0.0909	**± 3% F.S.**

AENV Standards		**NO_X Analyzer**	
Audit Calibrator		Make/Model	Teco 42i
Make/Model	Teco 146i	Serial/AMU Number	AMU 1868
Serial/AMU Number	AMU 1809	Last Calibration Date	January 14, 2019
SRM Gas Cylinder No.	APEX1236645	Full Scale (ppm)	1.0
Cylinder Conc. (ppm)	50.05	Cylinder Gas Expiry Date	June 2021

COMMENTS:

Auditor: Al Clark Date: Janaury 15, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2019-390CGA

Company: Maxxam **Operator's Name:** Alex

Cylinder #: LL48147 Concentration PPM: 49.5 Tolerance(%) 1 Certified By: Praxair

Expiry Date: August 2026

Reference Calibrator and Gas:

Make/Model: Sabio 2010
Serial Number: AMU 2092
Last Verification Date: January 14, 2019
Gas Type: SO2 Conc. 50.26
Cylinder Number: FF28071
Expiry Date: March 2020

Flow Measurement Device:

Make/Model: Mesa Definer 220
Serial Number: H-133034 / L-132702
Temp.°C: 22.7 C
B.P. 707 mmHg

Reference Analyzer:

Make/Model: Teco 43i Serial/AMU Number: 2195
Instrument Settings: Zero: 11.8 Span: 0.980 Range: 1.0
Last Calibration: Date: Jan 14/19 C.F. 1.000 Done By: Shea Beaton

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5000	0.0	0.000			
4898	78.1	0.789	0.01595	62.714	49.5
4893	38.7	0.391	0.00791	126.434	49.4
4894	19.3	0.192	0.00394	253.575	48.7
				Average Cylinder Concentration:	**49.2**

Previous Stated Concentration PPM: 49.5

Percent variance from Stated: **1**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Al Clark Date: January 15, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2017-137CGA

Company: Maxxam **Operator's Name:** Raja Abid Ashraf

Cylinder #: LL119432 Concentration PPM: 10.3 Tolerance(%) 2 Certified By: Praxair

Expiry Date: May 16, 2020

Reference Calibrator and Gas:

Make/Model: R&R MFC 201
Serial Number: AMU 1690
Last Verification Date: July 27, 2017
Gas Type: H2S Conc. 20.43
Cylinder Number: CAL015272
Expiry Date: Janaury 2019

Flow Measurement Device:

Make/Model: Mesa Definer 220
Serial Number: H-133034 L-132702
Temp.°C: 22.0 C
B.P. 700 mmhg

Reference Analyzer:

Make/Model: Teco 450i Serial/AMU Number: 1980
Instrument Settings: Zero: 21.9 Span: 1.069 Range: 0.1
Last Calibration: Date: July 27, 2017 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5000	0.0	0.0000			
5117	38.9	0.0595	0.00760	131.542	7.8
5103	18.4		0.00361	277.337	0.0
5097	9.4		0.00184	542.234	0.0
				Average Cylinder Concentration:	**2.6**

Previous Stated Concentration PPM: 10.3

Percent variance from Stated: **75**

Meets Manufacturer Tolerance. Use manufacturers stated concentration ☐ **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration ☐ Do not use.

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder ☒ X

Auditor: Al Clark Date: July 27, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

CH4 / C3H8 Cylinder Gas

File No. 2017-484CGA

Company: Maxxam **Operators name:** Mike

Cylinder #: LL107207 Conc CH4 (PPM) 600/207 Tolerance (%) 2 Certified By: Praxair

Expiry Date: October 2025

Reference Calibrator and Gas:

Make/Model	R&R MFC 201		
Serial Number	AMU 1690		
Last Verification Date	December 13, 2017		
Gas Type	CH4	Conc.	990.4
Cylinder Number	5604875	Expiry Date	July 2021
Gas Type	C3H8	Conc.	246.5
Cylinder Number	XF003845B	Expiry Date	July 2022

Flow Measurement Device:

Make/Model	Mesa Definer 220
Serial Number	H-133034 / L-132702
Temp.°C	23.1 C
B.P.	707 mmHg

Reference Analyzer:

Make/Model Teco 55i Serial/AMU Number: 2108

Instrument Settings Zero: N/A Span: N/A Range: 20.0

Last Calibration: Date: Dec 12/17 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated Conc. (ppm)		Gas Flow/	Concentration	Cylinder Concentration	
Dilution	Gas	CH4	C3H8	Dilution Flow	Factor	CH4	C3H8
3500	0.0	0.00	0.00				
3618	80.4	13.28	12.77	0.02	45.00	598	209
3547	39.8	6.71	6.47	0.01	89.12	598	210
3560	19.8	3.35	3.26	0.01	179.80	602	213
					Average Cylinder Concentration:	**599**	**211**

	CH4	C3H8
Previous Stated Concentration PPM:	600	207
Percent variance from Stated:	**0**	**2**

Cylinder gas tolerances based on CH4 only

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Al Clark Date: December 13, 2017

Operator Signature: Location: McIntyre Center Edmonton

Peace River Area Monitoring Program

JUNE 2019

Ambient Air Monitoring Calibration Report

- RENO STATION-

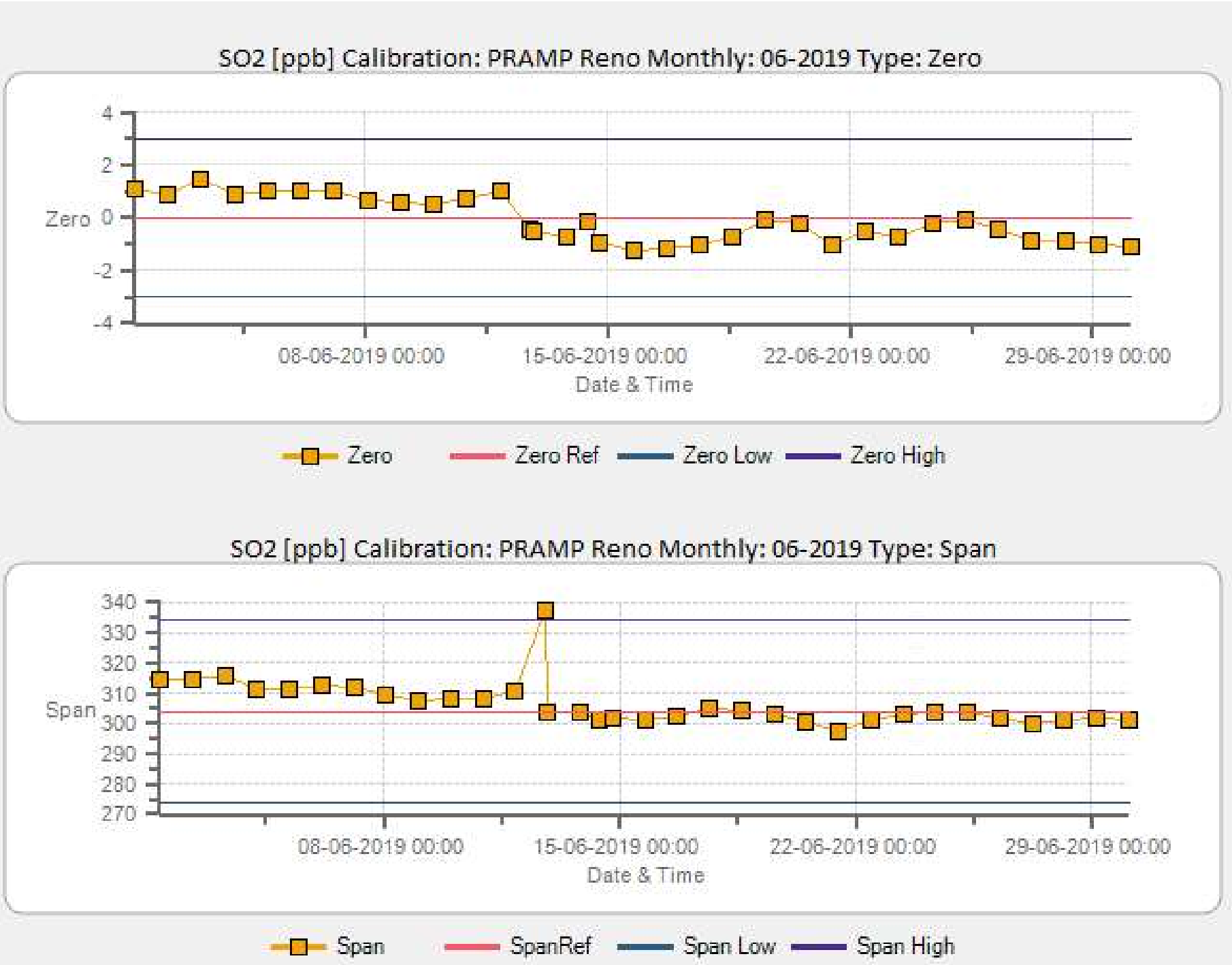
CAL-PRAMP-201906-01563

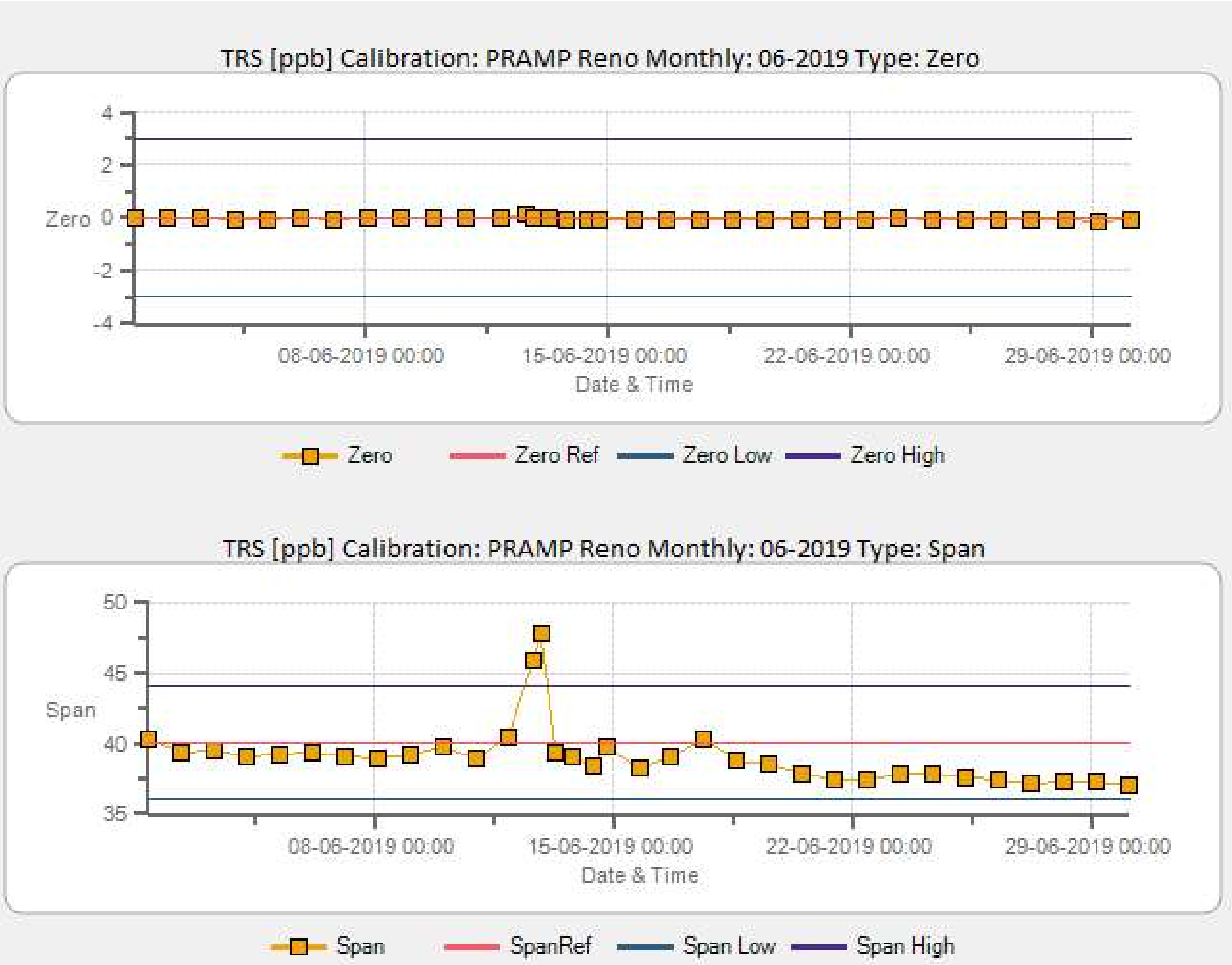
Operation and Maintenance:
Maxxam Analytics

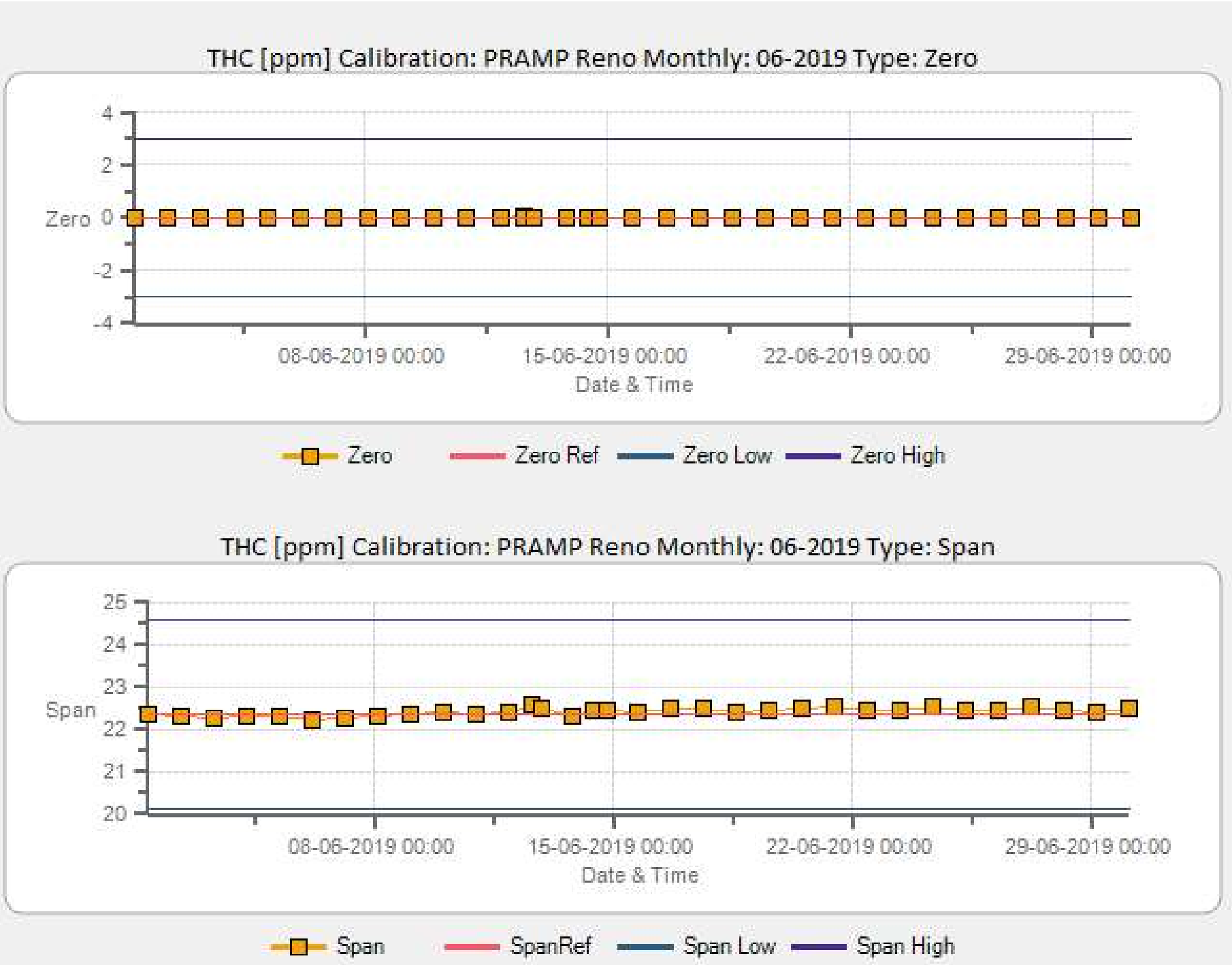
Data Validation and Report:
Maxxam Analytics

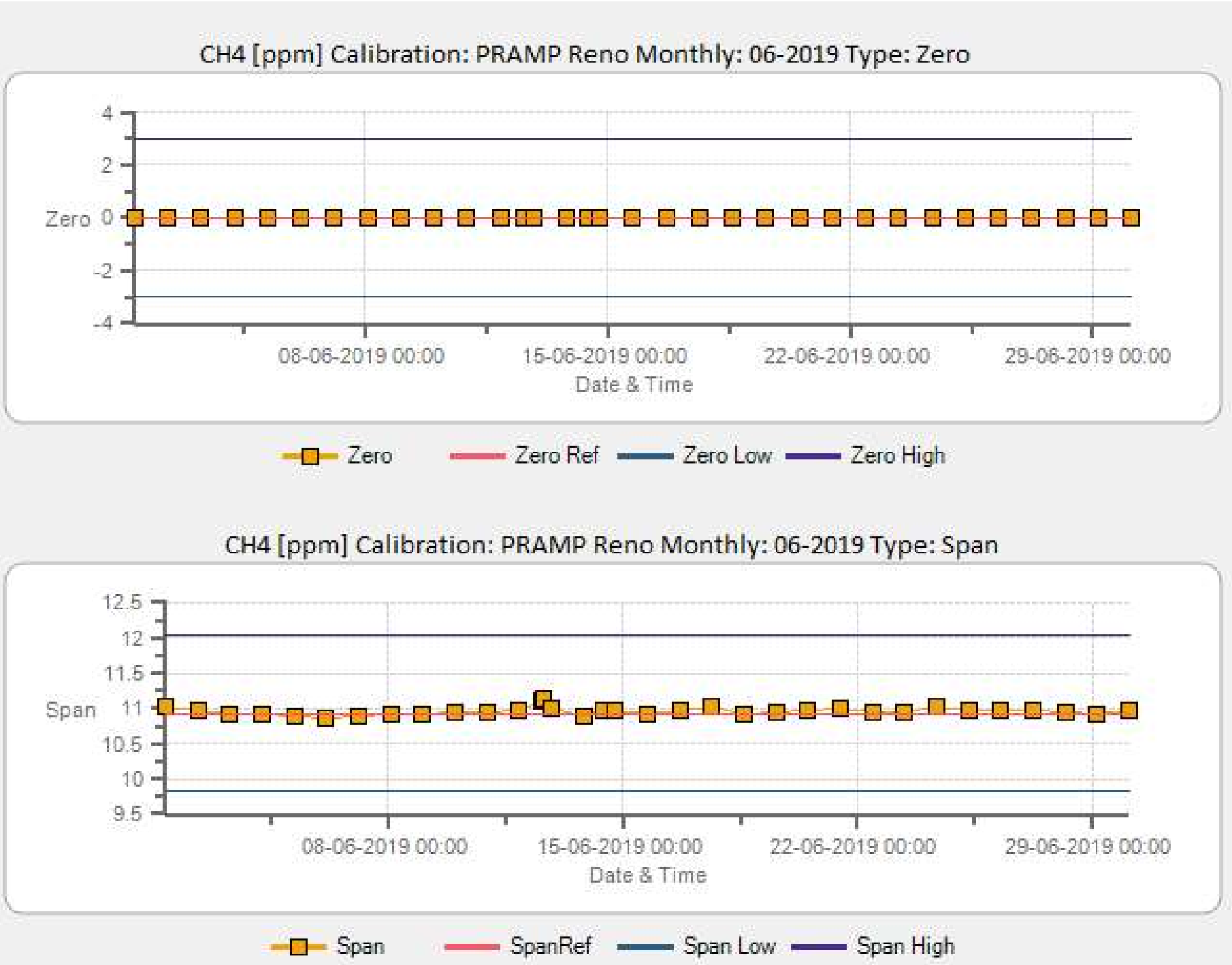
July 8, 2019

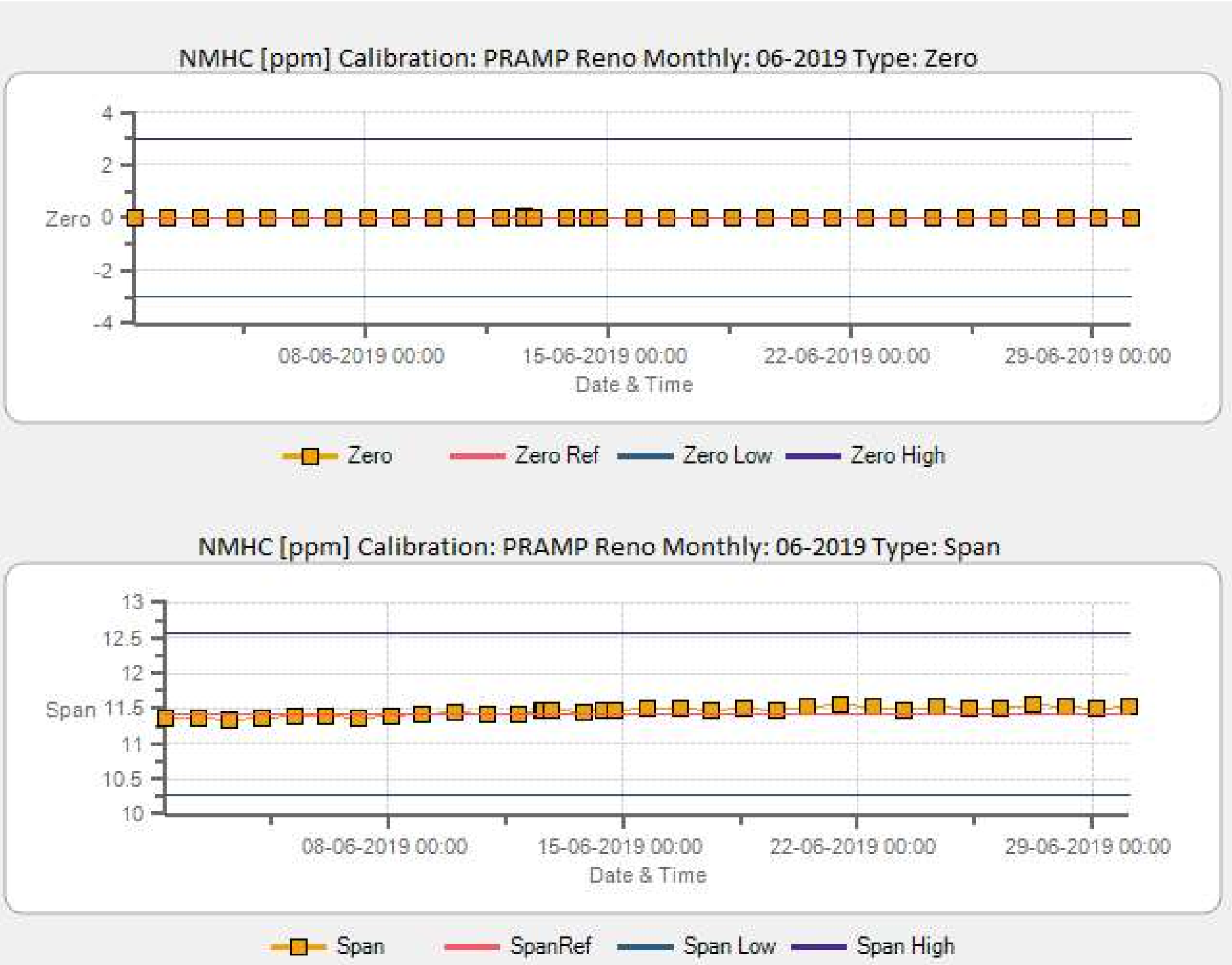
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS


SO2 [ppb] Calibration: PRAMP Reno Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
SO2 [ppb] Calibration: PRAMP Reno Monthly: 06-2019 Type: Span
340
330
320
310
Span 300
290
280
270
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


TRS [ppb] Calibration: PRAMP Reno Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
TRS [ppb] Calibration: PRAMP Reno Monthly: 06-2019 Type: Span
50
45
Span
40
35
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC [ppm] Calibration: PRAMP Reno Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC [ppm] Calibration: PRAMP Reno Monthly: 06-2019 Type: Span
25
24
23
Span
22
21
20
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4 [ppm] Calibration: PRAMP Reno Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4 [ppm] Calibration: PRAMP Reno Monthly: 06-2019 Type: Span
12.5
12
11.5
Span 11
10.5
10
9.5
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC [ppm] Calibration: PRAMP Reno Monthly: 06-2019 Type: Zero
4
2
Zero 0
-2
-4
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC [ppm] Calibration: PRAMP Reno Monthly: 06-2019 Type: Span
13
12.5
12
Span 11.5
11
10.5
10
08-06-2019 00:00
15-06-2019 00:00
22-06-2019 00:00
29-06-2019 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	12-Jun-2019	PREVIOUS CALIBRATION DATE:	15-May-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	28.8
LOCATION:	Reno	BAROMETRIC (mBar):	937
PURPOSE	Routine	START TIME (MST):	13:03
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	18:45

ANALYZER:

MAKE/MODEL	API 100A	RANGE	500 ppb
SERIAL #	841	FLOW (mL/min)	609
INITIAL		FINAL	
BKG/OFFSET	52.2	BKG/OFFSET	53.9
COEF/SLOPE	1.077	COEF/SLOPE	1.076
Expected (reference) Value	304	Expected (reference) Value	304

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	5212	ID:	74
MFC CALIBRATION DATE:	07-Feb-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0000597	HIGH ID	n/a
CONC (ppm):	50.40	EXPIRY DATE	n/a
CYLINDER (psi):	510	LOW ID	n/a
EXPIRY DATE	08-Dec-2019	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		
5999		5999	0.00	1.1	0		
5952	45.21	5998	379.88	382.7	379.9	0.996	1.000
5977	21.42	5998	179.98	n/a	178.7	n/a	1.007
5986	10.69	5996	89.86	n/a	89.7	n/a	1.002

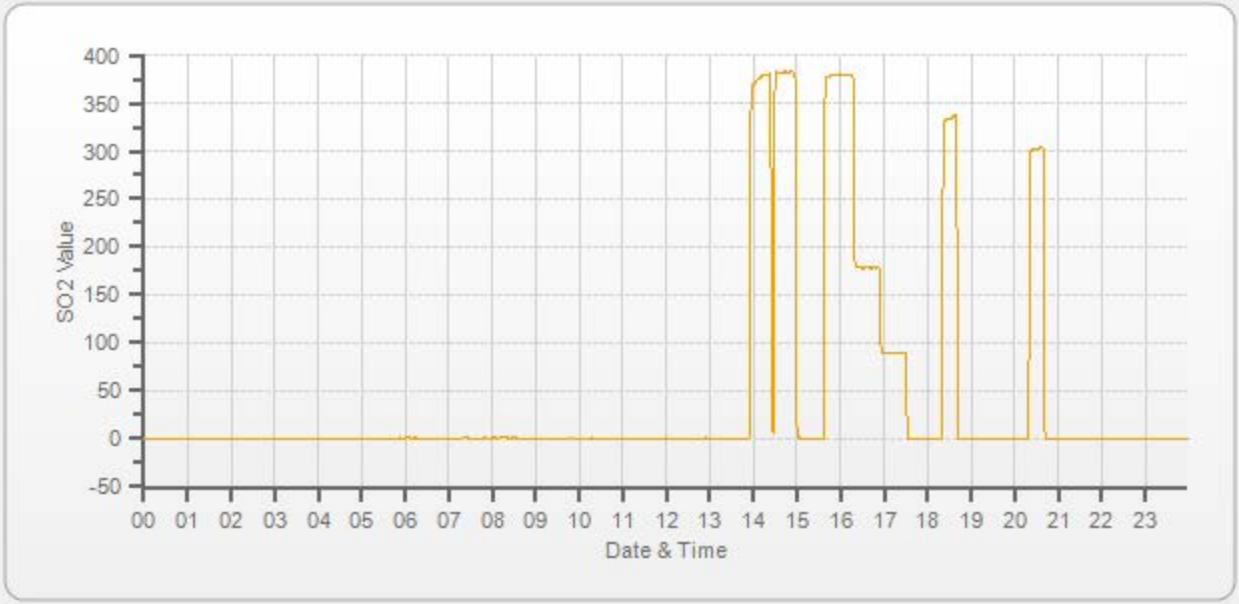
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	-0.1%

COMMENTS:

The As Found High stopped at 14:23 due to a slow analyzer response. The As Found High was restarted at 14:27 after flushing regulator.

SO2[ppb] Station: PRAMP RENO Daily: 12-06-2019 Type: AVG 1 Min. [1 Min.]



TRS Analyzer Calibration by Dilution

DATE:	12-Jun-2019	PREVIOUS CALIBRATION DATE:	15-May-2019
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.001
CLIENT:	PRAMP	TEMPERATURE (°C):	25.6
LOCATION:	Reno	BAROMETRIC (mBar):	938
PURPOSE	Routine	START TIME (MST):	09:29
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	15:16

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1162460022	FLOW (mL/min)	410
INITIAL		FINAL	
BKG/OFFSET	2.22	BKG/OFFSET	2.19
COEF/SLOPE	0.939	COEF/SLOPE	0.944
Expected (reference) Value	40.11	Expected (reference) Value	45.92

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	4760	ID:	74
MFC CALIBRATION DATE:	07-Feb-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL119420	HIGH ID	n/a
CONC (ppm):	10.20	EXPIRY DATE	n/a
CYLINDER (psi):	500	LOW ID	n/a
EXPIRY DATE	16-May-2020	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:	10:03	SO2 Conc (ppb)	380
END TIME:	10:18	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7487		7487	0.00	-0.05	0		
7429	57.19	7487	77.92	77.65	77.95	1.003	1.000
7457	27.83	7485	37.93	n/a	37.47	n/a	1.012
7471	13.94	7485	19.00	n/a	18.3	n/a	1.038

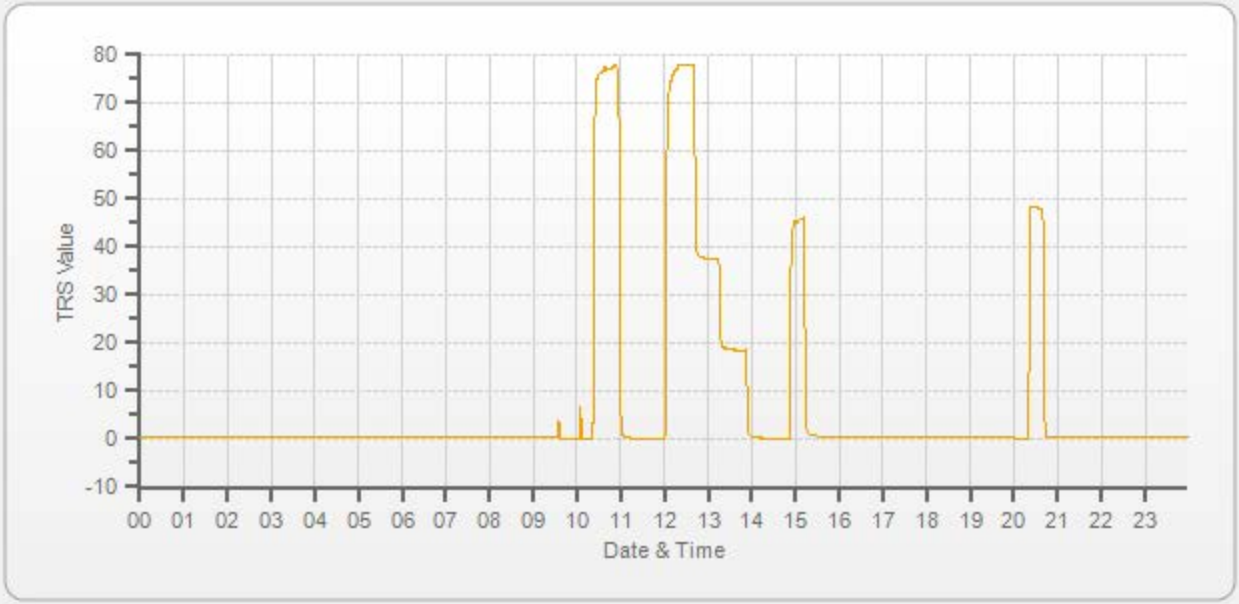
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.003	-0.4%

COMMENTS:

Monthly calibration passed.

TRS[ppb] Station: PRAMP RENO Daily: 12-06-2019 Type: AVG 1 Min. [1 Min.]



Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	12-Jun-2019	PREVIOUS CALIBRATION DATE:	15-May-2019
CLIENT:	PRAMP	TEMPERATURE (°C):	25.6
LOCATION:	Reno	BAROMETRIC (mBar):	938
PURPOSE	Routine	START TIME (MST):	08:42
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	14:44:00 PM

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1314057759	1205.8
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.999	1.000	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Environics	MAKE:	API	CYLINDER ID:	LL43221		HIGH ID:	n/a
MODEL:	6100	MODEL:	T701	CH_4/C_3H_8 (ppm):	595.0	206.0	HIGH EXPIRY:	n/a
ID:	5212	ID:	74	CYLINDER (psi):	1500		LOW ID:	n/a
MFC CALIBRATION DATE:	07-Feb-2019	OXIDIZER ID:	Internal	EXPIRY DATE	18-Oct-2025		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	566.5
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1161.5

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.93	11.42	22.35		11.13	11.46	22.59

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
3145		3145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3075	70.47	3146	13.33	12.69	26.02	13.25	12.53	25.79	13.35	12.66	26.00	1.006	1.013	1.009	0.998	1.002	1.001
3112	37.91	3150	7.16	6.82	13.98	n/a	n/a	n/a	7.19	6.80	13.99	n/a	n/a	n/a	0.996	1.003	0.999
3130	16.23	3146	3.07	2.92	5.99	n/a	n/a	n/a	3.09	2.94	6.02	n/a	n/a	n/a	0.993	0.994	0.995

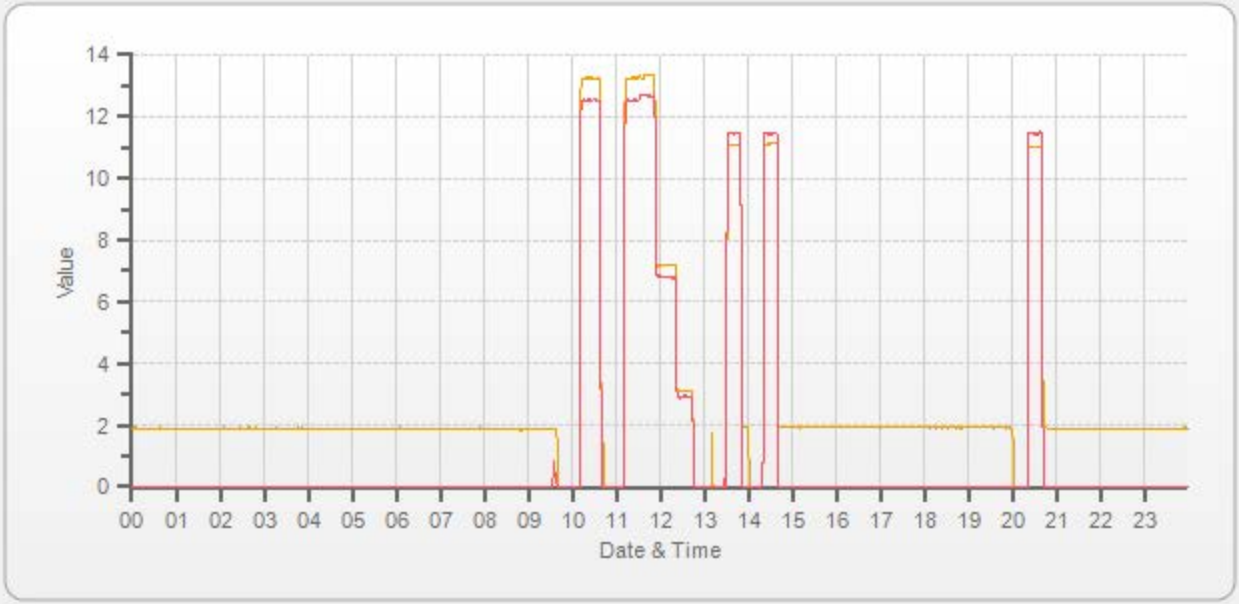
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.001	0.1%
NMHC	1.000	1.000	0.1%
THC	1.000	0.999	0.0%

COMMENTS:

Monthly calibration passed. IZS check repeated at 13:59 due to a short response in NMHC output while runnning zero. IZS result was good after 2nd IZS check.

Station: PRAMP RENO Daily: 12-06-2019 Type: AVG 1 Min. [1 Min.]



Meteorological System Checklist

Date:	June 12, 2019		
Technician:	Ferdinand Roy		
Reviewer:	Rob Fisher		
Station:	PRAMP Reno		
Unit:	**Make:**	**Model:**	**Serial #:**
Temperature Sensor:	RM Young	43172VC	60837897
Barometric Pressure Sensor:	MetOne	92	R12877
Relative Humidity Sensor:	RM Young	43172VC	60837897
Anemometer:	RM Young	05305VK	149769
AMBIENT TEMPERATURE SENSOR CHECK			
Previous check date:	April 17, 2020		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	F.S. 160459244 expires Jun 19, 2020		
Reference Temperature (°C):	21.2		
Station - Ambient Temperature (°C):	21.8		
Temperature Difference (°C):	-0.6		
BAROMETRIC PRESSURE SENSOR CHECK			
Previous check date:	April 17, 2019		
Reference Barometer ID:	F.S. 10528 expires January 23, 2020		
Reference Pressure - Units/Reading:	millibar	938	
Station Pressure - Units/Reading:	millibar	938.8	
Pressure Tolerance +/- 15% of error:	797 - 1079	-0.09%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	April 17, 2019		
Reference Hygrometer ID:	F.S. 160459244 expires Jun 19, 2020		
Reference Hygrometer % RH- Reading:	33.03		
Station Hygrometer % RH- Reading:	34.00		
RH Tolerance +/- 15% of difference:	28.08 - 37.98	-2.9%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	April 17, 2019	Previous check date:	April 17, 2019
Wind Speed Observed (kph):	5-15	Wind Direction Observed:	SW
Wind speed on Data Logger (kph):	10.6	Wind Direction on Data Logger:	SW
		Wind Direction Pass/Fail?:	Pass

Comments

Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2019-426A

Company: Maxxam **Operator:** C. Wesson

Calibrator:				**Flow Measurement Device:**	
Make/Model	Evironics 6100			Make/Model	N/A
Serial Number	5212			Serial Number	N/A
Last Verification Date	March 2018			Temperature (°C)	N/A
NO Cylinder S/N	LL107918			Barometric Pressure	N/A
NO [PPM]	50.1	NOx [PPM]	50.2		
Expiry Date	August 2026				

Dilution Flow (sccm)

Pt. #1 5000 Pt. #2 5000 Pt. #3 5000

Gas Flow (sccm)

Pt. #1 80 Pt. #2 40 Pt. #3 20

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
5000	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
4997	77.8	0.780	0.782	0.768	-0.003	0.766	-2%	-2%
4997	37.9	0.380	0.381	0.372	-0.002	0.370	-2%	-3%
4996	18.9	0.190	0.190	0.186	-0.001	0.185	-2%	-3%
					Absolute Average Percent Difference		2%	2%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO		**LIMITS**	**NOx**	
Correlation=	1.0000	**≥ 0.990**	Correlation=	1.0000
m (Slope)=	0.9846	**0.90-1.10**	m (Slope)=	0.9802
b (Intercept % of FS)=	-0.0683	**± 3% F.S.**	b (Intercept % of FS)=	-0.1101

Flow	O_3 Conc	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
						NO_2	% Diff. Limit
4997	0.000	0.000	0.765	-0.002	0.764		
4997	0.500	0.491	0.274	0.486	0.760	-1%	± 10%
4997	0.275	0.274	0.491	0.271	0.762	0%	± 10%
4997	0.090	0.091	0.674	0.089	0.762	0%	± 10%
				Absolute Average Percent Difference		0%	± 10%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9937	**0.90-1.10**
b (Intercept % of FS)=	-0.1650	**± 3% F.S.**

AENV Standards		**NO_X Analyzer**	
Audit Calibrator			
Make/Model	Sabio 2010	Make/Model	Teco 42i
Serial/AMU Number	AMU 2092	Serial/AMU Number	AMU 1868
SRM Gas Cylinder No.	APEX1236645	Last Calibration Date	February 12, 2019
Cylinder Conc. (ppm)	50.05	Full Scale (ppm)	1.0
		Cylinder Gas Expiry Date	June 2021

COMMENTS: Contains 49.5 ppm SO2.

Auditor: Al Clark Date: February 13, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2019-427A

Company: Maxxam **Operator:** C. Wesson

Calibrator:				**Flow Measurement Device:**	
Make/Model	Evironics 6100			Make/Model	N/A
Serial Number	4760			Serial Number	N/A
Last Verification Date	March 2018			Temperature (°C)	N/A
NO Cylinder S/N	LL107918			Barometric Pressure	N/A
NO [PPM]	50.1	NOx [PPM]	50.2		
Expiry Date	August 2026				

Dilution Flow (sccm)

Pt. #1 5000 Pt. #2 5000 Pt. #3 5000

Gas Flow (sccm)

Pt. #1 80 Pt. #2 40 Pt. #3 20

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
5000	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
4994	77.7	0.779	0.781	0.798	0.000	0.798	2%	2%
4993	37.8	0.379	0.380	0.388	-0.001	0.387	2%	2%
4993	18.9	0.190	0.190	0.193	0.000	0.193	2%	2%
					Absolute Average Percent Difference		2%	2%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO		**LIMITS**	**NOx**	
Correlation=	1.0000	**≥ 0.990**	Correlation=	1.0000
m (Slope)=	1.0242	**0.90-1.10**	m (Slope)=	1.0221
b (Intercept % of FS)=	-0.0519	**± 3% F.S.**	b (Intercept % of FS)=	-0.0726

Flow	O_3 Conc	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
4994	0.000	0.000	0.796	0.000	0.796	NO_2	% Diff. Limit
4994	0.550	0.502	0.294	0.499	0.792	-1%	± 10%
4994	0.300	0.275	0.521	0.274	0.795	0%	± 10%
4994	0.100	0.062	0.734	0.061	0.796	-2%	± 10%
			Absolute Average Percent Difference			1%	± 10%

LINEAR REGRESSION ANALYSIS *y=mx+b (where x=calculated concentration, y=indicated concentration)*

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9949	**0.90-1.10**
b (Intercept % of FS)=	-0.0179	**± 3% F.S.**

AENV Standards		**NO_X Analyzer**	
Audit Calibrator			
Make/Model	Sabio 2010	Make/Model	Teco 42i
Serial/AMU Number	AMU 2092	Serial/AMU Number	AMU 1868
SRM Gas Cylinder No.	APEX1236645	Last Calibration Date	February 14, 2019
Cylinder Conc. (ppm)	50.05	Full Scale (ppm)	1.0
		Cylinder Gas Expiry Date	June 2021

COMMENTS: Contains 49.5 ppm SO2.

Auditor: Al Clark Date: February 14, 2019

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2016-438CGA

Company: Maxxam **Operator's Name:** Chris

Cylinder #: EY0000597 Concentration PPM: 50.4 Tolerance(%) 1.0 Certified By: Praxair

Expiry Date: December 8, 2019

Reference Calibrator and Gas:

Make/Model: Thermo 146i
Serial Number: AMU 1809
Last Verification Date: January 26, 2017
Gas Type: SO2 Conc. 98.07
Cylinder Number: CAL016625
Expiry Date: January 5, 2019

Flow Measurement Device:

Make/Model: Bios Befiner 220
Serial Number: AMU1941
Temp.°C: 24.4
B.P. 704.7

Reference Analyzer:

Make/Model: Themro 43C Serial/AMU Number: AMU 1623

Instrument Settings: Zero: 9.5 Span: 1.023 Range: 1.0

Last Calibration: Date: 25-Jan-17 C.F. 1.000 Done By: SB

Calibrator Flows (sccm)		Indicated	Gas Flow/	Concentration	Cylinder
Dilution	Gas	Concentration (PPM)	Dilution Flow	Factor	Concentration
4923	0.0	0.000			
4916	80.7	0.834	0.01642	60.917	50.8
4902	40.3	0.416	0.00822	121.638	50.6
4916	19.9	0.206	0.00405	247.035	50.9
				Average Cylinder Concentration:	**50.7**

Previous Stated Concentration PPM: 50.4

Percent variance from Stated: **0.7**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Shea Beaton Date: January 26, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2017-135CGA

Company: Maxxam **Operator's Name:** Raja Abid Ashraf

Cylinder #: LL119420 Concentration PPM: 10.2 Tolerance(%) 2 Certified By: Praxair

Expiry Date: May 16, 2020

Reference Calibrator and Gas:

Make/Model: R&R MFC 201
Serial Number: AMU 1690
Last Verification Date: July 27, 2017
Gas Type: H2S Conc. 20.43
Cylinder Number: CAL015272
Expiry Date: Janaury 2019

Flow Measurement Device:

Make/Model: Mesa Definer 220
Serial Number: H-133034 L-132702
Temp.°C: 22.0 C
B.P. 700 mmhg

Reference Analyzer:

Make/Model: Teco 450i Serial/AMU Number: 1980
Instrument Settings: Zero: 21.9 Span: 1.069 Range: 0.1
Last Calibration: Date: July 27, 2017 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5000	0.0	0.0020			
5117	38.9	0.0781	0.00760	131.542	10.0
5103	18.4	0.0379	0.00361	277.337	10.5
5097	9.4	0.0198	0.00184	542.234	10.7
				Average Cylinder Concentration:	**10.4**

Previous Stated Concentration PPM: 10.2

Percent variance from Stated: **2**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [ ] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [X]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Al Clark Date: July 27, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

CH4 / C3H8 Cylinder Gas

File No. 2017-492CGA

Company: Maxxam **Operators name:** Mike

Cylinder #: LL43221 Conc CH4 (PPM) 595/206 Tolerance (%) 2 Certified By: Praxair

Expiry Date: October 2025

Reference Calibrator and Gas:

Make/Model	R&R MFC 201		
Serial Number	AMU 1690		
Last Verification Date	December 13, 2017		
Gas Type	CH4	Conc.	990.4
Cylinder Number	5604875	Expiry Date	July 2021
Gas Type	C3H8	Conc.	246.5
Cylinder Number	XF003845B	Expiry Date	July 2022

Flow Measurement Device:

Make/Model	Mesa Definer 220
Serial Number	H-133034 / L-132702
Temp.°C	23.1 C
B.P.	707 mmHg

Reference Analyzer:

Make/Model	Teco 55i			Serial/AMU Number:	2108
Instrument Settings	Zero: N/A		Span: N/A	Range:	20.0
Last Calibration:	Date: Dec 12/17		C.F. 1.000	Done By:	Al Clark

Calibrator Flows (sccm)		Indicated Conc. (ppm)		Gas Flow/	Concentration	Cylinder Concentration	
Dilution	Gas	CH4	C3H8	Dilution Flow	Factor	CH4	C3H8
3500	0.0	0.00	0.00				
3618	80.4	13.23	12.70	0.02	45.00	595	208
3547	39.8	6.65	6.44	0.01	89.12	593	209
3560	19.8	3.33	3.23	0.01	179.80	599	211
					Average Cylinder Concentration:	**596**	**209**

	CH4	C3H8
Previous Stated Concentration PPM:	595	206
Percent variance from Stated:	**0**	**2**

Cylinder gas tolerances based on CH4 only

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

> 5% Outside Manufacturer Tolerance. **DO NOT USE** this cylinder [ ]

Auditor: Al Clark Date: December 13, 2017

Operator Signature: Location: McIntyre Center Edmonton

Peace River Area Monitoring Program

JUNE 2019

Ambient Air Monitoring

Certified Laboratory Analysis Report

LAB-PRAMP-201906

Operation and Maintenance:
Maxxam Analytics

Data Validation and Report:
InnoTech Alberta

July 8, 2019

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: 19060212-001
Customer ID: PRAMP
Cust Samp ID: PRAMP_986-20190614 (CH4)

Date Received- Lab Use Only
RECEIVED
JUN 18 2019

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: ☐ 842 Station ☐ 986 Station ☐ Reno Station
Address: ☐ 842 (Lat. 56.27406N, Long. 116.98129W)
☐ 986 (Lat. 56.376056N, Long. 116.940704W)
☐ 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: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- (Sample date: yyyymmdd)		☆ Methane Trigger			* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)
PRAMP_986- 2019 06 14 (CH4) (Sample date: yyyymmdd)	32221	☐ NMHC Trigger	14/06/19	01:15	
PRAMP_Reno- (Sample date: yyyymmdd)					

Sample Collection:

Collect By Tye Barrett **(Name) of** CNRL **(Company) on** June 14 @ 14:18 **(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: 19060212-002

Customer ID: PRAMP

Cust Samp ID: PRAMP_986-20190614 Blank

Date Received: Lab Use Only
RECEIVED
JUN 18 2019

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842 Station □ 986 Station □ Reno Station
Address: □ 842 (Lat. 56.27406N, Long. 116.98129W)
□ 986 (Lat. 56.376056N, Long. 116.940704W)
□ 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: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_station_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- (Sample date: yyyymmdd)		□ Methane Trigger			* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)
PRAMP_986- 20190614 BLANK (Sample date: yyyymmdd)	28916	□ NMHC Trigger	14/06/19	14:26	
PRAMP_Reno- (Sample date: yyyymmdd)		BLANK			

Sample Collection:

Collect By Tye Barrett **(Name) of** CNRL **(Company) on** June 14 @ 14:26 **(Date/Time (MST).**

InnoTech ALBERTA

Canister ID: 32221

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: VOSY on MAY 2 2 2019

Evacuated on: APR 0 4 2019

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_986b_20190614 (CH4)

Sampled By: Tye Barnett

Starting Vacuum:	End Vacuum:
-27.4 "Hg	-5 "Hg/psig

KG -4

InnoTech ALBERTA

Canister ID: 28916

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: DOSY on APR 0 5 2019

Evacuated on: APR 0 3 2019

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_986b_20190619 BLANK

Sampled By: Tye Barnett

Starting Vacuum:	End Vacuum:
-27.6 "Hg	-28.5 "Hg/psig

KG -30

Sample ID: 19060212-001

Customer ID: PRAMP

Cust Samp ID: PRAMP_986-20190614 (CH4)

InnoTech ALBERTA
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	CANISTER ID	Matrix	Priority
PRAMP_986-20190614 (CH4)	32221	Ambient Air	Normal

DESCRIPTION: Methane Trigger

DATE SAMPLED: 14-Jun-19 1:15
DATE RECEIVED: 18-Jun-19
REPORT CREATED: 05-Jul-19
REPORT NUMBER: 19060212
VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-001	1-Butene	K, T, U	< 0.16	ppmv	0.16	NA-025	19-Jun-19
19060212-001	Acetylene	K, T, U	< 0.13	ppmv	0.13	NA-025	19-Jun-19
19060212-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	19-Jun-19
19060212-001	cis-2-Butene	K, T, U	< 0.07	ppmv	0.07	NA-025	19-Jun-19
19060212-001	Ethane	K, T, U	< 0.2	ppmv	0.2	NA-025	19-Jun-19
19060212-001	Ethylacetylene	K, T, U	< 0.10	ppmv	0.10	NA-025	19-Jun-19
19060212-001	Ethylene	K, T, U	< 0.12	ppmv	0.12	NA-025	19-Jun-19
19060212-001	Isobutane	K, T, U	< 0.2	ppmv	0.2	NA-025	19-Jun-19
19060212-001	Isobutylene	K, T, U	< 0.2	ppmv	0.2	NA-025	19-Jun-19
19060212-001	Methane		2.6	ppmv	0.2	NA-025	19-Jun-19
19060212-001	n-Propane	K, T, U	< 0.12	ppmv	0.12	NA-025	19-Jun-19
19060212-001	Propylene	K, T, U	< 0.2	ppmv	0.2	NA-025	19-Jun-19
19060212-001	Propyne	K, T, U	< 0.2	ppmv	0.2	NA-025	19-Jun-19
19060212-001	trans-2-Butene	K, T, U	< 0.15	ppmv	0.15	NA-025	19-Jun-19
19060212-001	2,5-Dimethylthiophene	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	3-Methylthiophene	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: July 5, 2019

Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986-20190614 (CH4)	32221	Ambient Air	14-Jun-19 1:15

DESCRIPTION: Methane Trigger

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-001	Butyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	Carbonyl sulphide		1.0	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Dimethyl disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	Dimethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	Ethyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Ethyl sulphide	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Hydrogen sulphide		3.4	ppbv	0.2	NA-024	19-Jun-19
19060212-001	Isobutyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Isopropyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	Pentyl mercaptan	K, T, U	< 0.7	ppbv	0.7	NA-024	19-Jun-19
19060212-001	Propyl mercaptan	K, T, U	< 0.7	ppbv	0.7	NA-024	19-Jun-19
19060212-001	tert-Butyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	19-Jun-19
19060212-001	Thiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,1-Dichloroethylene	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-001	1,2,3-Trimethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	20-Jun-19
19060212-001	1,2,4-Trichlorobenzene	K, T, U	< 1.3	ppbv	1.3	AC-058	20-Jun-19
19060212-001	1,2,4-Trimethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	20-Jun-19
19060212-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,2-Dichlorobenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	20-Jun-19

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: July 5, 2019

Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 (CH4)	32221	Ambient Air	14-Jun-19	1:15

DESCRIPTION: Methane Trigger

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-001	1,2-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	1,2-Dichloropropane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1,3-Dichlorobenzene	K, T, U	< 0.5	ppbv	0.5	AC-058	20-Jun-19
19060212-001	1,4-Dichlorobenzene	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	1,4-Dioxane	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	1-Butene/Isobutylene		4.15	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	1-Pentene		0.54	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2,2-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2,3-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	2,3-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	2,4-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	2-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	3-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	3-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Acetone		17.3	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Acrolein	K, T, U	< 0.5	ppbv	0.5	AC-058	20-Jun-19
19060212-001	Benzene		0.80	ppbv	0.02	AC-058	20-Jun-19

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PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 (CH4)	32221	Ambient Air	14-Jun-19	1:15

DESCRIPTION: Methane Trigger

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-001	Benzyl chloride	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Bromoform	I	0.05	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Carbon disulfide	I	0.22	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Carbon tetrachloride	I	0.05	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Chloroethane	I	0.06	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Chloromethane		0.78	ppbv	0.03	AC-058	20-Jun-19
19060212-001	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	cis-1,3-Dichloropropene	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-001	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	cis-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Cyclohexane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Cyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Ethanol		6.2	ppbv	0.5	AC-058	20-Jun-19
19060212-001	Ethyl acetate	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Ethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Freon-11	I	0.16	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Freon-113	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Freon-12	I	0.36	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Hexachloro-1,3-butadiene	K, T, U	< 0.82	ppbv	0.82	AC-058	20-Jun-19

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PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 (CH4)	32221	Ambient Air	14-Jun-19	1:15

DESCRIPTION: Methane Trigger

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-001	Isobutane		2.81	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Isopentane		0.19	ppbv	0.05	AC-058	20-Jun-19
19060212-001	Isoprene		1.25	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Isopropyl alcohol		0.8	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Isopropylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	m,p-Xylene	K, T, U	< 0.05	ppbv	0.05	AC-058	20-Jun-19
19060212-001	m-Diethylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-001	m-Ethyltoluene	K, T, U	< 0.13	ppbv	0.13	AC-058	20-Jun-19
19060212-001	Methyl butyl ketone	K, T, U	< 0.82	ppbv	0.82	AC-058	20-Jun-19
19060212-001	Methyl ethyl ketone	K, T, U	< 0.5	ppbv	0.5	AC-058	20-Jun-19
19060212-001	Methyl isobutyl ketone	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Methyl methacrylate	K, T, U	< 0.12	ppbv	0.12	AC-058	20-Jun-19
19060212-001	Methyl tert butyl ether	K, T, U	< 0.05	ppbv	0.05	AC-058	20-Jun-19
19060212-001	Methylcyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	Methylcyclopentane	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Methylene chloride	K, T, U	< 0.5	ppbv	0.5	AC-058	20-Jun-19
19060212-001	n-Butane		0.52	ppbv	0.05	AC-058	20-Jun-19
19060212-001	n-Decane	K, T, U	< 0.10	ppbv	0.10	AC-058	20-Jun-19
19060212-001	n-Dodecane	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	n-Heptane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	n-Hexane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	n-Octane		0.11	ppbv	0.03	AC-058	20-Jun-19
19060212-001	n-Pentane		0.2	ppbv	0.2	AC-058	20-Jun-19
19060212-001	n-Propylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	20-Jun-19
19060212-001	n-Undecane	K, T, U	< 0.8	ppbv	0.8	AC-058	20-Jun-19

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PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 (CH4)	32221	Ambient Air	14-Jun-19	1:15

DESCRIPTION: Methane Trigger

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-001	Naphthalene	K, T, U	< 0.8	ppbv	0.8	AC-058	20-Jun-19
19060212-001	n-Nonane		0.16	ppbv	0.02	AC-058	20-Jun-19
19060212-001	o-Ethyltoluene	I	0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	o-Xylene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	p-Diethylbenzene	I	0.12	ppbv	0.07	AC-058	20-Jun-19
19060212-001	p-Ethyltoluene	K, T, U	< 0.12	ppbv	0.12	AC-058	20-Jun-19
19060212-001	Styrene	I	0.45	ppbv	0.07	AC-058	20-Jun-19
19060212-001	Tetrachloroethylene	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-001	Tetrahydrofuran	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Toluene		0.75	ppbv	0.02	AC-058	20-Jun-19
19060212-001	trans-1,2-Dichloroethylene		0.97	ppbv	0.02	AC-058	20-Jun-19
19060212-001	trans-1,3-Dichloropropylene	I	0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-001	trans-2-Butene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-001	trans-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-001	Trichloroethylene	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-001	Vinyl acetate	K, T, U	< 0.7	ppbv	0.7	AC-058	20-Jun-19
19060212-001	Vinyl chloride	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19

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InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 Blank	28916	Ambient Air	14-Jun-19	14:26

DESCRIPTION: Methane Trigger (Blank)

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	19-Jun-19
19060212-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	19-Jun-19
19060212-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	19-Jun-19
19060212-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	19-Jun-19
19060212-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	19-Jun-19
19060212-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	19-Jun-19
19060212-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	19-Jun-19
19060212-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	19-Jun-19
19060212-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	19-Jun-19
19060212-002	Methane	K, T, U	< 0.1	ppmv	0.1	NA-025	19-Jun-19
19060212-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	19-Jun-19
19060212-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	19-Jun-19
19060212-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	19-Jun-19
19060212-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	19-Jun-19
19060212-002	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	Carbonyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19

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InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 Blank	28916	Ambient Air	14-Jun-19	14:26

DESCRIPTION: Methane Trigger (Blank)

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-002	Hydrogen sulphide	K, T, U	< 0.1	ppbv	0.1	NA-024	19-Jun-19
19060212-002	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Isopropyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	19-Jun-19
19060212-002	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	19-Jun-19
19060212-002	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	19-Jun-19
19060212-002	Thiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	19-Jun-19
19060212-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,1-Dichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19
19060212-002	1,2,3-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	20-Jun-19
19060212-002	1,2,4-Trichlorobenzene	K, T, U	< 0.8	ppbv	0.8	AC-058	20-Jun-19
19060212-002	1,2,4-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	20-Jun-19
19060212-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,2-Dichlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-002	1,2-Dichloroethane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	1,2-Dichloropropane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	1,3,5-Trimethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,3-Butadiene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1,3-Dichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	20-Jun-19
19060212-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	1,4-Dioxane	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19

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Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED	
PRAMP_986-20190614 Blank	28916	Ambient Air	14-Jun-19	14:26

DESCRIPTION: Methane Trigger (Blank)

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-002	1-Butene/Isobutylene		7.22	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	1-Pentene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2,2,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2,2-Dimethylbutane		0.02	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2,3,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2,3-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	2,4-Dimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2-Methylheptane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2-Methylhexane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	2-Methylpentane		0.02	ppbv	0.01	AC-058	20-Jun-19
19060212-002	3-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	3-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Acetone	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	20-Jun-19
19060212-002	Benzene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Benzyl chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Bromodichloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Bromomethane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Carbon disulfide	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Carbon tetrachloride	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19

Report certified by: Rebecca Holgate, Account Coordinator On behalf of: PJ Pretorius, Manager, Analysis and Testing Services

Date: July 5, 2019

Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

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DESCRIPTION: Methane Trigger (Blank)

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Chloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	cis-1,2-Dichloroethene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	cis-1,3-Dichloropropene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19
19060212-002	cis-2-Butene		0.05	ppbv	0.02	AC-058	20-Jun-19
19060212-002	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Cyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Cyclopentane		17.8	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Dibromochloromethane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Ethanol	K, T, U	< 0.3	ppbv	0.3	AC-058	20-Jun-19
19060212-002	Ethyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Ethylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Freon-113	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Freon-114	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Freon-12	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Hexachloro-1,3-butadiene	K, T, U	< 0.50	ppbv	0.50	AC-058	20-Jun-19
19060212-002	Isobutane		7.16	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Isopentane		1.70	ppbv	0.03	AC-058	20-Jun-19
19060212-002	Isoprene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Isopropyl alcohol	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Isopropylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	m,p-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-002	m-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19

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PRAMP_986-20190614 Blank	28916	Ambient Air	14-Jun-19	14:26

DESCRIPTION: Methane Trigger (Blank)

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-002	m-Ethyltoluene	K, T, U	< 0.08	ppbv	0.08	AC-058	20-Jun-19
19060212-002	Methyl butyl ketone	K, T, U	< 0.50	ppbv	0.50	AC-058	20-Jun-19
19060212-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	20-Jun-19
19060212-002	Methyl isobutyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Methyl methacrylate	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	20-Jun-19
19060212-002	Methylcyclohexane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	Methylcyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	20-Jun-19
19060212-002	n-Butane		0.40	ppbv	0.03	AC-058	20-Jun-19
19060212-002	n-Decane	K, T, U	< 0.06	ppbv	0.06	AC-058	20-Jun-19
19060212-002	n-Dodecane	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	n-Heptane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	n-Hexane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	n-Octane	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	n-Pentane		0.3	ppbv	0.1	AC-058	20-Jun-19
19060212-002	n-Propylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	20-Jun-19
19060212-002	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	20-Jun-19
19060212-002	Naphthalene	K, T, U	< 0.5	ppbv	0.5	AC-058	20-Jun-19
19060212-002	n-Nonane	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	o-Ethyltoluene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	o-Xylene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	p-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19
19060212-002	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	20-Jun-19
19060212-002	Styrene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19

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DESCRIPTION: Methane Trigger (Blank)

REPORT NUMBER: 19060212 **REPORT CREATED:** 05-Jul-19 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
19060212-002	Tetrachloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19
19060212-002	Tetrahydrofuran	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Toluene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	trans-1,2-Dichloroethylene		1.49	ppbv	0.01	AC-058	20-Jun-19
19060212-002	trans-1,3-Dichloropropylene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19
19060212-002	trans-2-Butene	K, T, U	< 0.01	ppbv	0.01	AC-058	20-Jun-19
19060212-002	trans-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19
19060212-002	Trichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	20-Jun-19
19060212-002	Vinyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	20-Jun-19
19060212-002	Vinyl chloride	K, T, U	< 0.02	ppbv	0.02	AC-058	20-Jun-19

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Revision History

Order ID	Ver	Date	Reason
19060212	01	05-Jul-19	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

19060212

Send results to pramptech@prampairshed.ca. Unknowns to be reported. Return sample to reception for isotope analysis.

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.

19060212-002 VOC FULL

Method blank in the sequence is clean. Pre-see sample has lower concentration (2.81 ppbv) for this parameter, which means no npossibility of carryover. Reanalysis for this sample confirms this result.

19060212-002 VOC FULL

Method blank in the sequence is clean. Pre-see sample has no detectable result for this parameter. Reanalysis for this sample confirmed the result.

19060212-002 VOC FULL

Method blank in the sequence is clean. Pre-sequence sample has lower concentration (4.15 ppbv) for this parameter elimianting a carryover issue. Reanalysis for this sample confirmed this result.

End of Report