



Peace River Area Monitoring Program

OCTOBER 2019
Monthly Ambient Air Quality Monitoring Report
PRAMP-201910

Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Peace River Area Monitoring Program

November 21, 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
CH ₄	Methane
EPEA	Environmental Protection and Enhancement Act
H ₂ S	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
SO ₂	Sulphur Dioxide
ST	Station Temperature
THC	Total Hydrocarbons
TRS	Total Reduced Sulphur
VWD	Vector Wind Direction
VWS	Vector Wind Speed
WD	Wind Direction
WS	Wind Speed
°C	Degrees Celsius



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November 21, 2019

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

Enclosed is the October 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
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This report has been prepared, reviewed and submitted by Michael Bisaga & Lily Lin of the PRAMP Airshed.

NETWORK STATION SUMMARY

Listing of Continuous Monitoring Stations

The PRAMP continuous ambient air quality monitoring network stations are:

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

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

Listing of Intermittent Monitoring Stations

- VOC Canister Sampling Station
 - 986c Station
 - 842b Station
 - Reno Station
 - AQHI – Cadotte Lake

Monitoring Notes during the Month of October 2019

986c Station:

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAQOs) 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 TRS convertor failed upon arrival on October 12. The convertor was replaced on October 12. Data was invalidated back to last valid calibration check, which was October 10 hour 16. Fifty-three hours of data were invalidated due to this event.
- **THC/CH4/NMHC:** Hourly data that were recorded on October 22 hour 16 were deemed invalid as less than 75% of valid data in the hour were recorded. One hour of downtime was recorded as a result.
- **Precipitation:** One hundred ninety-two hours of data collected in October were invalidated due to a sensor malfunction, which was caused by low ambient air temperature. The sensor operational uptime was 74.2%. The AMD 90% operational uptime requirement does not apply to this parameter.

842b Station:

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAQOs) 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 TRS convertor failed upon arrival on October 9. The thermocouple was replaced on October 9. Data was invalidated back to the last valid calibration check, which was October 8 hour 18. Seventeen hours of data were discarded due to this event.

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.
- **All parameters:** No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. Data collected on October 16 hour 8 and on October 25 hour 4 for all gas parameters were discarded as the analyzers were recovering from the power failures.
- **TRS/THC/CH4/NMHC:** A zero-span check was initiated after the power outage on October 25 hour 7 to confirm the analyzers' functionality. Both analyzers passed the check requirements. One hour of downtime was recorded as a result.
- **WS/WD/RH/BP/AT:** Invalid data were recorded following the power failure on October 16. Troubleshooting revealed an issue with analog software to datalogger communication. The issue was fixed on October 17. Twenty-six hours of data were discarded due to this event.
- **WS/WD:** Invalid data were recorded on October 23 between hour 0 and hour 10 due to wind system malfunction. The cause was due to freezing rain that impacted the wind system blade to function properly.

AQHI – Cadotte Lake 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, with an exception of NOx/NO/NO2 (67.9%). During the month of October, most analyzers and support systems were in a stabilizing period following the new station's deployment in the field; data completeness that did not meet the 90% operational uptime requirement was not considered a contravention and was not reported to AEP.
- The station was installed on October 1. An installation calibration was performed on October 2 and October 3.
- **SO2:**
 - A Teledyne T100 SO2 analyzer, s/n: 722, was installed on October 2. Valid data started being recorded on October 2 hour 14.
 - A repeat multi-point calibration was performed on October 4 after repairs were completed on the internal zero-span system. Nine hours of downtime were recorded due to this maintenance.
- **TRS:**
 - A Teledyne T100U TRS analyzer, s/n: 132, was installed on October 3. Valid data started being recorded on October 3 hour 16.

- The analyzer firmware failed on October 7 hour 10 and was fixed on October 8. Data was invalidated back to the last valid calibration check, which was October 6 hour 20. Forty-seven hours of data were invalidated due to this event.
- **NOX/NO/NO2:**
 - A Teledyne T200 NO2 analyzer, s/n: 837, was installed on October 2. Valid data started being recorded on October 2 hour 17.
 - The analyzer was put offline on October 8 during hours 12 and 13 in order to obtain reference concentrations for ozone analyzer calibration.
 - The analyzer failed a shut-down calibration on October 17 due to a blocked exhaust tubing which caused the pump cabinet to overheat. Exhaust tubing was replaced, and a successful post-repair calibration was performed on October 18. The point of failure was determined to be October 9 hour 4. Two hundred forty-eight hours of downtime were recorded due to this event.
- **O3:**
 - A Teledyne T400 O3 analyzer, s/n: 824, was installed on October 2. Valid data started being recorded on October 2 hour 19.
 - A repeat zero span check was performed on October 3 hour 9 in order to retrieve a reference daily span value. One hour of downtime was recorded as a result.
 - The analyzer failed the daily span check on October 5. A repeat zero span check was performed on October 6 hour 7, and the check results still did not pass the check requirements. A successful shut-down calibration was performed before the sample pump was replaced on October 8. As the analyzer passed the shut-down calibration requirement, no data were discarded. However, nine hours of downtime were recorded due to this maintenance activity.
 - No O3max data collected on October 8 between hour 20 and October 9 hour 6 due to operator error. The channel was accidentally left offline after post-repair calibration was completed. Eleven hours of data were missing due to this event.
- **THC/CH4/NMHC:**
 - A Thermo 55i HC analyzer, s/n: 1501663728, was installed on October 3. Valid data started being recorded on October 2 hour 16.
 - A repeat multi-point calibration was performed on October 8 in order to address drifts in daily zero-span responses. Four hours of downtime were recorded due to this maintenance.
 - The analyzer continued showing unstable zero-span check results after the calibration on October 8. A successful shut-down calibration was performed on October 17 before troubleshooting was performed. Analyzer was put offline overnight for column conditioning on October 17. A post-repair calibration was performed on October 18. Thirty-five hours of downtime were recorded due to this event.
 - As the analyzer showed unstable zero responses in daily zero checks between October 2 and October 18, the daily zero results were determined invalid. No baseline correction was performed on data collected between October 2 hour 16 and October 17 hour 17.
- **PM2.5:** A Teledyne T640PM2.5 instrument, s/n: 318, was installed on October 2. Valid data started being recorded on October 2 hour 19.
- **RH/TPX:** A Vaisala TPX/RH HMP155 sensor, s/n: N2910506, was installed on October 1. Valid data started being recorded on October 2 hour 2.

- **AT:**
 - A Vaisala TPX/RH HMP155 sensor, s/n: N2910506, was installed on October 1. Valid data started being recorded on October 2 hour 2.
 - The channel was put into maintenance mode on October 2 between hour 13 and 17 during the time the ambient station installation was performed.
- **WS/WD:** A MetOne 010C/020C wind system, s/n: W15277/WW16102, was installed on October 1. The wind system was calibrated at PRAMP’s contractor’s (Bureau Veritas Canada) shop in Edmonton on June 28, 2019. Valid data started being recorded on October 2 hour 2.

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.
- Canisters sample collection systems are in place at Station 986c, 842b, and the Reno Station; a canister sample collection system is not part of the suite of instruments currently deployed at the AQHI-Cadotte Lake Station.
- Sample analysis and analytical results were prepared and provided by InnoTech Alberta.
- 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).
- One NMHC canister was collected at Reno site on October 17 at 20:45, at concentration of 0.73ppm.

Sample Date/Time	2019-10-18							
Canister Sample	Non-Methane Hydrocarbons							
Canister ID	32240							
Method	NA-025	Method	NA-024	Method	AC-058			
Maximum Reading	2.2	Methane	Maximum Reading	1.5	Carbonyl sulphide	Maximum Reading	30.7	Acetone

Revisions to Alberta's Ambient Air Quality Data Warehouse

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

Deviations from Authorized Monitoring Methods

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

Disclaimer

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 1-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 Bureau Veritas.

Certification

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



Lily Lin, 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).

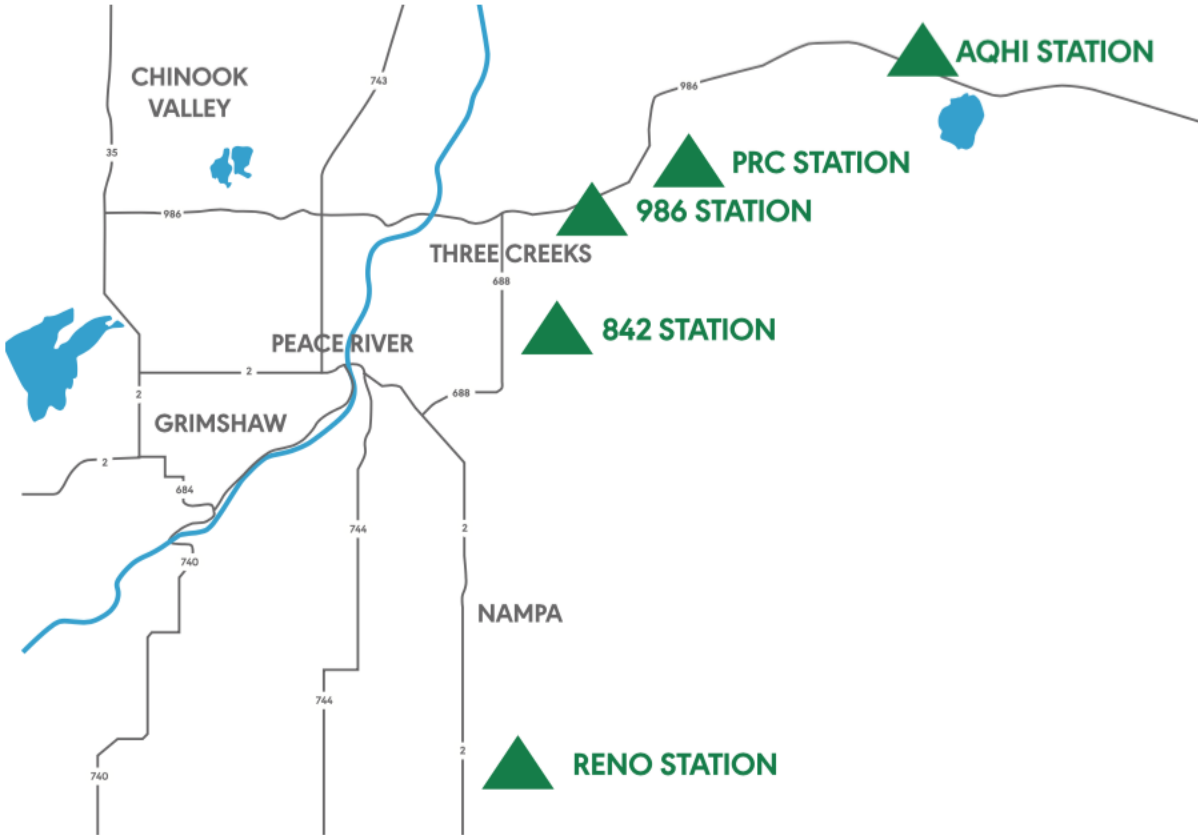
I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements. I also certify that at the time of this report's submission, all 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

November 21, 2019

Map of PRAMP Continuous Monitoring Network



CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

986c Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	API 100A	1298	
<ul style="list-style-type: none"> • A successful monthly calibration was performed on October 2. 			
TRS	Thermo / 43i-TLE	1152940011	
<ul style="list-style-type: none"> • A successful monthly calibration was performed on October 2. • The TRS convertor failed upon arrival on October 12. The convertor was replaced on October 12. A successful post-repair calibration was performed on October 12. Data was invalidated back to last valid calibration check, which was October 10 hour 16. Fifty-three hours of data were invalidated due to this event. 			
THC/CH4/NMHC	Thermo / 55i	1022043392	
<ul style="list-style-type: none"> • A successful monthly calibration was performed on October 2. • Hourly data that were recorded on October 22 hour 16 were deemed invalid as less than 75% of valid data in the hour were recorded. One hour of downtime was recorded as a result. 			
Relative Humidity (RH)	RM Young / 43182VC	030978	
<ul style="list-style-type: none"> • The RH sensor was checked on October 2. The sensor passed the check requirements. 			
Barometric Pressure (BP)	MetOne / 090D	F3845	
<ul style="list-style-type: none"> • The BP sensor was checked on October 2. The sensor passed the check requirements. 			
Ambient Temperature (AT)	RM Young 431872VC	030978	
<ul style="list-style-type: none"> • The temperature sensor was checked on October 2. The sensor passed the check requirements. 			

Parameter	Make / Model	Serial Number	
Station Temperature (ST)	Maxxam	N/A	
<ul style="list-style-type: none"> No issue was identified this month. 			
Wind Speed/Wind Direction (WS/ WD)	RM Young / 5305VK	129612	
<ul style="list-style-type: none"> Wind direction data contained in this report represents where the wind is coming from. The anemometer sensors were checked on October 2. The sensor passed the check requirements. 			
Precipitation	EML / ARG100	190114	
<ul style="list-style-type: none"> One hundred ninety-two hours of data collected in October were invalidated due to a sensor malfunction, which was caused by low ambient air temperature. The sensor operational uptime was 74.2%. The AMD 90% operational uptime requirement does not apply to this parameter. 			

Monitored Data Summary for 986c Station

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	1	October 1 at hour 0	14.3	S	0.0	October 3	100.0	94.7
TRS (ppb)	10	3	-	-	-	-	0.7	0.00	5.31	October 17 at hour 19	6.8	S	2.31	October 13	92.9	87.9
THC (ppm)	-	-	-	-	-	-	1.96	1.89	2.20	October 2 at hour 6	5.6	SE	2.05	October 25	99.9	94.7
CH4 (ppm)	-	-	-	-	-	-	1.96	1.89	2.20	October 2 at hour 6	5.6	SE	2.05	October 25	99.9	94.7
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.06	October 16 at hour 20	12	ENE	0.00	October 1	99.9	94.7
RH (%)	-	-	-	-	-	-	76.7	27	100	October 14 at hour 1	9.9	NNE	99.8	October 6	100.0	100.0
BP (millibar)	-	-	-	-	-	-	942	922	964	October 28 at hour 12	10.9	NNW	961	October 17	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	2.3	-14.5	17.6	October 3 at hour 15	4.9	WSW	9.0	October 28	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	21.9	20.5	26.9	October 2 at hour 16	9.9	S	23.4	October 29	100.0	100.0
Precipitation (mm)*	-	-	-	-	-	-	25.0	0.0	1.4	October 7 at hour 8	14.3	WNW	3.8	October 1	74.2	74.2
WSV (km/hr)	-	-	-	-	-	-	4.5	0.7	31.3	October 6 at hour 18	31.3	SW	21.3	October 21	100.0	100.0
WDV (sector)	-	-	-	-	-	-	231 (SW)	-	-	-	-	-	-	-	100.0	100.0

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

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances at 986c Station

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

842b Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	Thermo / 43i	835033373	
<ul style="list-style-type: none"> A successful monthly calibration was performed on October 9. 			
TRS	Thermo / 43i-TLE	1162460023	
<ul style="list-style-type: none"> The TRS convertor failed upon arrival on October 9. The thermocouple was replaced on October 9. A successful post-repair calibration was performed on October 9. Data was invalidated back to the last valid calibration check, which was October 8 hour 18. Seventeen hours of data were discarded due to this event. 			
THC/CH4/NMHC	Thermo / 55i	1505664392	
<ul style="list-style-type: none"> A successful monthly calibration was performed on October 9. Both H2 and N2 gas bottles were replaced during the time the monthly calibration was performed on October 9. 			
Relative Humidity (RH)	Campbell Scientific / HMP45C	C2608	
<ul style="list-style-type: none"> The RH sensor was checked on October 9. The sensor passed the check requirements. 			
Barometric Pressure (BP)	MetOne / 92	K12864	
<ul style="list-style-type: none"> The BP sensor was checked on October 9. The sensor passed the check requirements. 			
Station Temperature (ST)	Maxxam	N/A	
<ul style="list-style-type: none"> No issue was identified this month. 			
Ambient Temperature (AT)	Campbell Scientific / HMP45C	C2608	
<ul style="list-style-type: none"> The temperature sensor was checked on October 9. The sensor passed the check requirements. 			

Parameter	Make / Model	Serial Number	
Wind Speed/Wind Direction (WS/ WD)	RM Young / 5305VK	124638	
<ul style="list-style-type: none"> • Wind direction data contained in this report represents where the wind is coming from. • The anemometer sensors were checked on October 9. The sensor passed the check requirements. 			

Monitored Data Summary for 842b Station

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	2	October 2 at hour 10	11.1	S	0.3	October 1	100.0	94.9
TRS (ppb)	10	3	-	-	-	-	0.4	0.24	1.19	October 17 at hour 6	8.2	SW	0.61	October 2	97.7	92.6
THC (ppm)	-	-	-	-	-	-	1.99	1.91	2.18	October 3 at hour 7	3.8	ESE	2.05	October 5	100.0	94.9
CH4 (ppm)	-	-	-	-	-	-	1.99	1.91	2.18	October 3 at hour 7	3.8	ESE	2.05	October 5	100.0	94.9
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.00	October 1 at hour 0	11.8	SSE	0.00	October 1	100.0	94.9
RH (%)	-	-	-	-	-	-	71.6	27	96	October 20 at hour 7	3.3	SSW	93.8	October 6	100.0	100.0
BP (millibar)	-	-	-	-	-	-	941	921	963	October 28 at hour 11	8.5	N	961	October 17	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	2.1	-14.3	16.9	October 3 at hour 15	8.5	SW	8.8	October 28	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.3	21.8	23.4	October 2 at hour 12	9	S	23.0	October 26	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	4.2	0.1	29.4	October 6 at hour 18	29.4	SW	19.5	October 14	100.0	100.0
WDV (sector)	-	-	-	-	-	-	227 (SW)	-	-	-	-	-	-	-	100.0	100.0

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

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances at 842b Station

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

Reno Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	API / 100A	841	
<ul style="list-style-type: none"> • A successful monthly calibration was performed on October 3. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. Data collected on October 16 hour 8 and on October 25 hour 4 were also discarded as the analyzers were recovering from the power failures. 			
TRS	Thermo / 43i-TLE	1162460022	
<ul style="list-style-type: none"> • A successful monthly calibration was performed on October 3. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. Data collected on October 16 hour 8 and on October 25 hour 4 were also discarded as the analyzers were recovering from the power failures. • A zero-span check was initiated after the power outage on October 25 hour 7 to confirm the analyzers' functionality. The analyzer passed the check requirements. One hour of downtime was recorded as a result. 			
THC/CH4/NMHC	Thermo / 55i	1314057759	
<ul style="list-style-type: none"> • A successful monthly calibration was performed on October 3. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. Data collected on October 16 hour 8 and on October 25 hour 4 were also discarded as the analyzers were recovering from the power failures. • A zero-span check was initiated after the power outage on October 25 hour 7 to confirm the analyzers' functionality. The analyzer passed the check requirements. One hour of downtime was recorded as a result. 			

Parameter	Make / Model	Serial Number	
Relative Humidity (RH)	RM Young / 43172VC	60837897	
<ul style="list-style-type: none"> • The RH sensor was checked on October 3. The sensor passed the check requirements. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. • Invalid data were recorded following the power failure on October 16. Troubleshooting revealed an issue with analog software to datalogger communication. The issue was fixed on October 17. Twenty-six hours of data were discarded due to this event. 			
Barometric Pressure (BP)	MetOne / 92	R12877	
<ul style="list-style-type: none"> • The BP sensor was checked on October 3. The sensor passed the check requirements. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. • Invalid data were recorded following the power failure on October 16. Troubleshooting revealed an issue with analog software to datalogger communication. The issue was fixed on October 17. Twenty-six hours of data were discarded due to this event. 			
Ambient Temperature (AT)	RM Young / 43172VC	60837897	
<ul style="list-style-type: none"> • The temperature sensor was checked on October 3. The sensor passed the check requirements. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. • Invalid data were recorded following the power failure on October 16. Troubleshooting revealed an issue with analog software to datalogger communication. The issue was fixed on October 17. Twenty-six hours of data were discarded due to this event. 			
Station Temperature (ST)	Maxxam	N/A	
<ul style="list-style-type: none"> • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. 			

Parameter	Make / Model	Serial Number	
Wind Speed/Wind Direction (WS/ WD)	RM Young / 5305VK	149769	
<ul style="list-style-type: none"> • Wind direction data contained in this report represents where the wind is coming from. • The anemometer sensors were checked on October 3. The sensor passed the check requirements. • No data were recorded on October 16 during hours 1 and 7, and from October 24 hour 23 to October 25 hour 3 due to two power outages. Twelve hours of data were invalidated due to these two events. • Invalid data were recorded following the power failure on October 16. Troubleshooting revealed an issue with analog software to datalogger communication. The issue was fixed on October 17. Twenty-six hours of data were discarded due to this event. 			

Monitored Data Summary for Reno Station

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	1	October 3 at hour 6	4.9	SSE	0.1	October 1	98.1	93.0
TRS (ppb)	10	3	-	-	-	-	0.4	0.22	2.45	October 17 at hour 21	1.5	SSW	0.78	October 8	98.0	92.8
THC (ppm)	-	-	-	-	-	-	2.00	1.90	2.67	October 17 at hour 21	1.5	SSW	2.10	October 24	98.0	93.0
CH4 (ppm)	-	-	-	-	-	-	2.00	1.90	2.48	October 17 at hour 21	1.5	SSW	2.10	October 24	98.0	93.0
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.24	October 17 at hour 20	1	SSW	0.02	October 1	98.0	93.0
RH (%)	-	-	-	-	-	-	69.5	22	99	October 20 at hour 1	2.2	W	95.7	October 6	94.9	94.9
BP (millibar)	-	-	-	-	-	-	938	917	958	October 28 at hour 12	7.4	N	956	October 18	94.9	94.9
Ext. Temp. (°C)	-	-	-	-	-	-	2.0	-14.2	17.0	October 2 at hour 14	4.9	S	8.8	October 28	94.9	94.9
Stn. Temp. (°C)	-	-	-	-	-	-	23.0	19.7	24.0	October 22 at hour 1	9.7	SE	23.6	October 29	98.4	98.4
WSV (km/hr)	-	-	-	-	-	-	2.9	0.2	20.4	October 6 at hour 14	20.4	WSW	11.5	October 2	93.4	93.4
WDV (sector)	-	-	-	-	-	-	251 (WSW)	-	-	-	-	-	-	-	93.4	93.4

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

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances at Reno Station

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

AQHI – Cadotte Lake Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	Teledyne / T100	722	
<ul style="list-style-type: none"> • A successful installation calibration was performed on October 2. Valid data started being recorded on October 2 hour 14. • A significant leak in the internal zero-span system circuit was found on October 4. A repeat multi-point calibration was performed on October 4 after repairs was completed. The issue was limited to the zero-span system, and did not affect on sample path. Data quality was not affected. Nine hours of downtime, however, were recorded due to this maintenance. 			
TRS	Teledyne / T100U	132	
<ul style="list-style-type: none"> • A successful installation calibration was performed on October 3. Valid data started being recorded on October 3 hour 16. • The analyzer firmware failed on October 7 hour 10 and was fixed on October 8. A post-repair calibration was performed on October 8. Data was invalidated back to the last valid calibration check, which was October 6 hour 20. Forty-seven hours of data were invalidated due to this event. 			
NOx/NO/NO2	Teledyne / T200	837	
<ul style="list-style-type: none"> • A successful installation calibration was performed on October 2. Valid data started being recorded on October 2 hour 17. • The analyzer was put offline on October 8 during hours 12 and 13 in order to obtain reference concentrations for ozone analyzer calibration. • The analyzer failed a shut-down calibration on October 17 due to a blocked exhaust tubing which caused the pump cabinet to overheat. The exhaust tubing was replaced, and a successful post-repair calibration was performed on October 18. The point of failure was determined to be October 9 hour 4. Two hundred forty-eight hours of downtime were recorded due to this event. 			

Parameter	Make / Model	Serial Number	
O3	Teledyne / T400	824	
<ul style="list-style-type: none"> • A successful installation calibration was performed on October 2. Valid data started being recorded on October 2 hour 19. • A repeat zero span check was performed on October 3 hour 9 in order to retrieve a reference daily span value. One hour of downtime was recorded as a result. • The analyzer failed the daily span check on October 5. A repeat zero span check was performed on October 6 hour 7, and the check results still did not pass the check requirements. A successful shut-down calibration was performed before the sample pump was replaced on October 8. As the analyzer passed the shut-down calibration requirement, no data were discarded. However, nine hours of downtime were recorded due to this maintenance activity. • No O3max data collected on October 8 between hour 20 and October 9 hour 6 due to operator error. The channel was accidentally left offline after post-repair calibration was completed. Eleven hours of data were missing due to this event 			
THC/CH4/NMHC	Thermo / 55i	1501663728	
<ul style="list-style-type: none"> • A successful installation calibration was performed on October 3. Valid data started being recorded on October 2 hour 16. • A repeat multi-point calibration was performed on October 8 in order to address drifts in daily zero-span responses. Four hours of downtime were recorded due to this maintenance. • The analyzer continued showing unstable zero-span check results after the calibration on October 8. A successful shut-down calibration was performed on October 17 before troubleshooting was performed. Analyzer was put offline overnight for column conditioning on October 17. A post-repair calibration was performed on October 18. Thirty-five hours of downtime were recorded due to this event. 			
PM2.5	Teledyne / T640	318	
<ul style="list-style-type: none"> • A successful installation calibration was performed on October 3. Valid data started being recorded on October 2 hour 19. 			
Relative Humidity (RH)	Vaisala / HMP155	N2910506	
<ul style="list-style-type: none"> • The RH sensor was installed on October 1. Valid data started being recorded on October 2 hour 2. • The RH sensor was checked on October 2. The sensor passed the check requirements. 			

Parameter	Make / Model	Serial Number	
Ambient Temperature (AT)	Vaisala / HMP155	N2910506	
<ul style="list-style-type: none"> • The temperature sensor was installed on October 1. Valid data started being recorded on October 2 hour 2. • The temperature sensor was checked on October 2. The sensor passed the check requirements. • The channel was put into maintenance mode on October 2 between hour 13 and 17 during the time the ambient station installation was performed 			
Station Temperature (ST)	Maxxam	N/A	
<ul style="list-style-type: none"> • The temperature sensor was installed on October 1. Valid data started being recorded on October 2 hour 2. 			
Wind Speed/Wind Direction (WS/ WD)	MetOne / 010C/020C	W15277/WW16102	
<ul style="list-style-type: none"> • Wind direction data contained in this report represents where the wind is coming from. • The wind sensors were installed on October 1. Valid data started being recorded on October 2 hour 2. • The wind system was calibrated at PRAMP's contractor's (Bureau Veritas Canada) shop in Edmonton on June 28, 2019. • The anemometer sensors were checked on October 2. The sensor passed the check requirements. 			

Monitored Data Summary for AQHI - Cadotte Lake Station

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	0	October 2 at hour 14	7.6	SE	0.0	October 3	98.7	89.4
TRS (ppb)	10	3	-	-	-	-	0.3	0.00	0.71	October 4 at hour 12	11.6	WSW	0.43	October 29	93.1	81.3
Nox (ppb)	-	-	-	-	-	-	0.6	0	10	October 3 at hour 6	1.5	SE	2.1	October 5	67.9	61.0
NO (ppb)	-	-	-	-	-	-	0.1	0	8	October 3 at hour 7	0.6	S	1.1	October 5	67.9	61.0
NO2 (ppb)	159	-	-	0	-	-	0.4	0	5	October 24 at hour 17	3.1	SW	1.8	October 5	67.9	61.0
O3 (ppb)	76	-	-	0	-	-	18.8	0	38	October 3 at hour 17	7.6	ESE	30.3	October 21	98.7	88.7
THC (ppm)	-	-	-	-	-	-	1.90	1.82	2.02	October 17 at hour 7	0.5	WNW	1.93	October 7	94.3	82.4
CH4 (ppm)	-	-	-	-	-	-	1.90	1.82	1.99	October 17 at hour 6	3.2	SE	1.93	October 7	94.3	82.4
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.03	October 17 at hour 6	3.2	SE	0.00	October 4	94.3	82.4
PM2.5 (µg/m3)	80	30	-	0	0	-	3.1	0.2	18.4	October 4 at hour 8	6.1	WSW	7.5	October 8	100.0	94.2
RH (%)	-	-	-	-	-	-	74.8	28	98	October 16 at hour 0	6.5	E	96.1	October 6	100.0	96.5
Ext. Temp. (°C)	-	-	-	-	-	-	1.5	-20.1	17.5	October 2 at hour 12	5.2	SSE	9.4	October 28	99.3	95.8
Stn. Temp. (°C)	-	-	-	-	-	-	22.4	19.8	24.7	October 2 at hour 11	4	SE	22.9	October 28	100.0	96.5
WSV (km/hr)	-	-	-	-	-	-	2.0	0.3	27.8	October 6 at hour 20	27.8	SW	14.7	October 21	100.0	96.5
WDV (sector)	-	-	-	-	-	-	269 (W)	-	-	-	-	-	-	-	100.0	96.5

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

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances at AQHI - Cadotte Lake Station

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

TABLES, CHARTS, WIND ROSES AND EQUIPMENT CALIBRATION RECORDS

986c STATION



PEACE RIVER AREA MONITORING PROGRAM

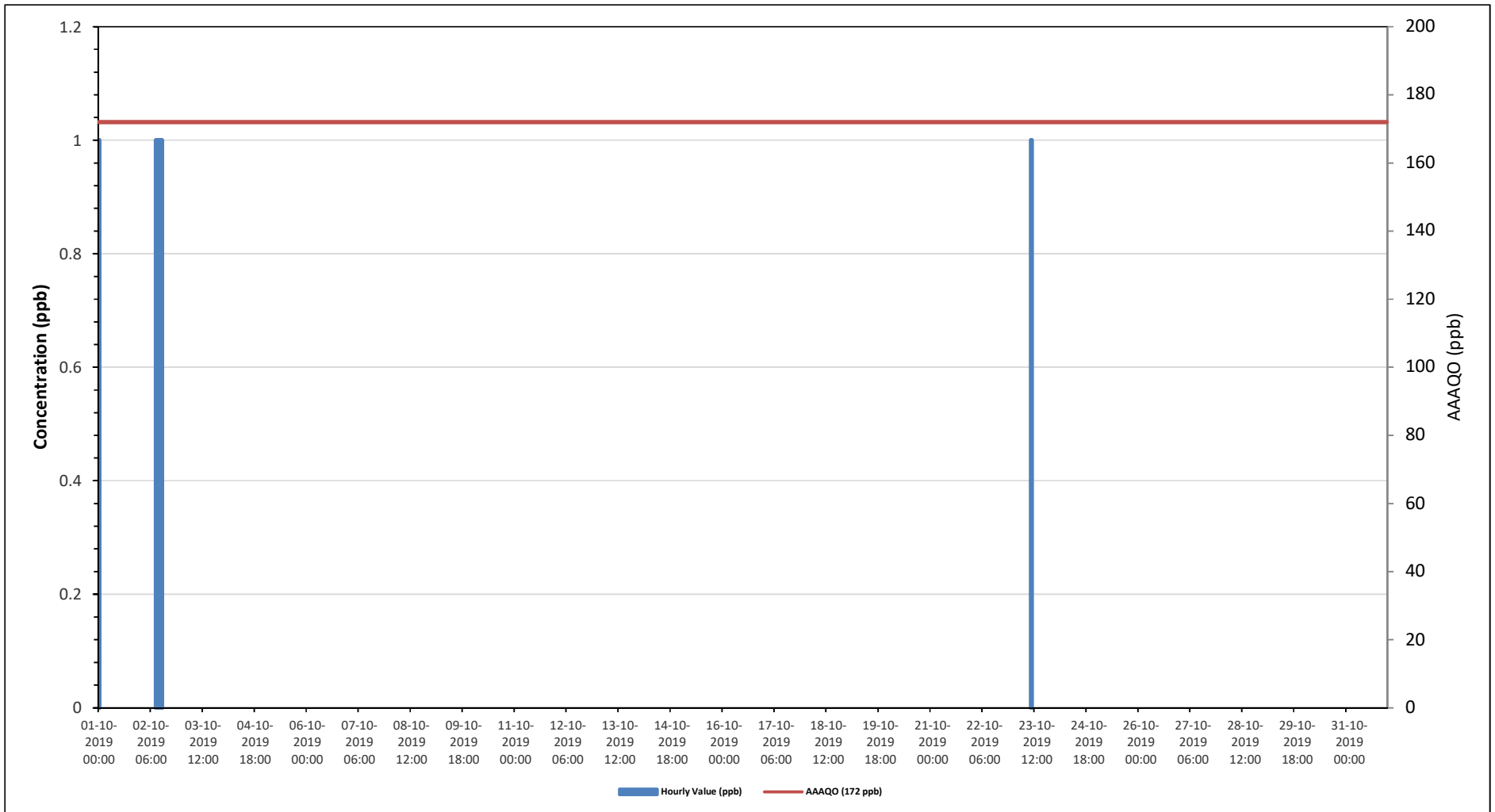
986c Station - October 2019

Summary of Hourly Averages

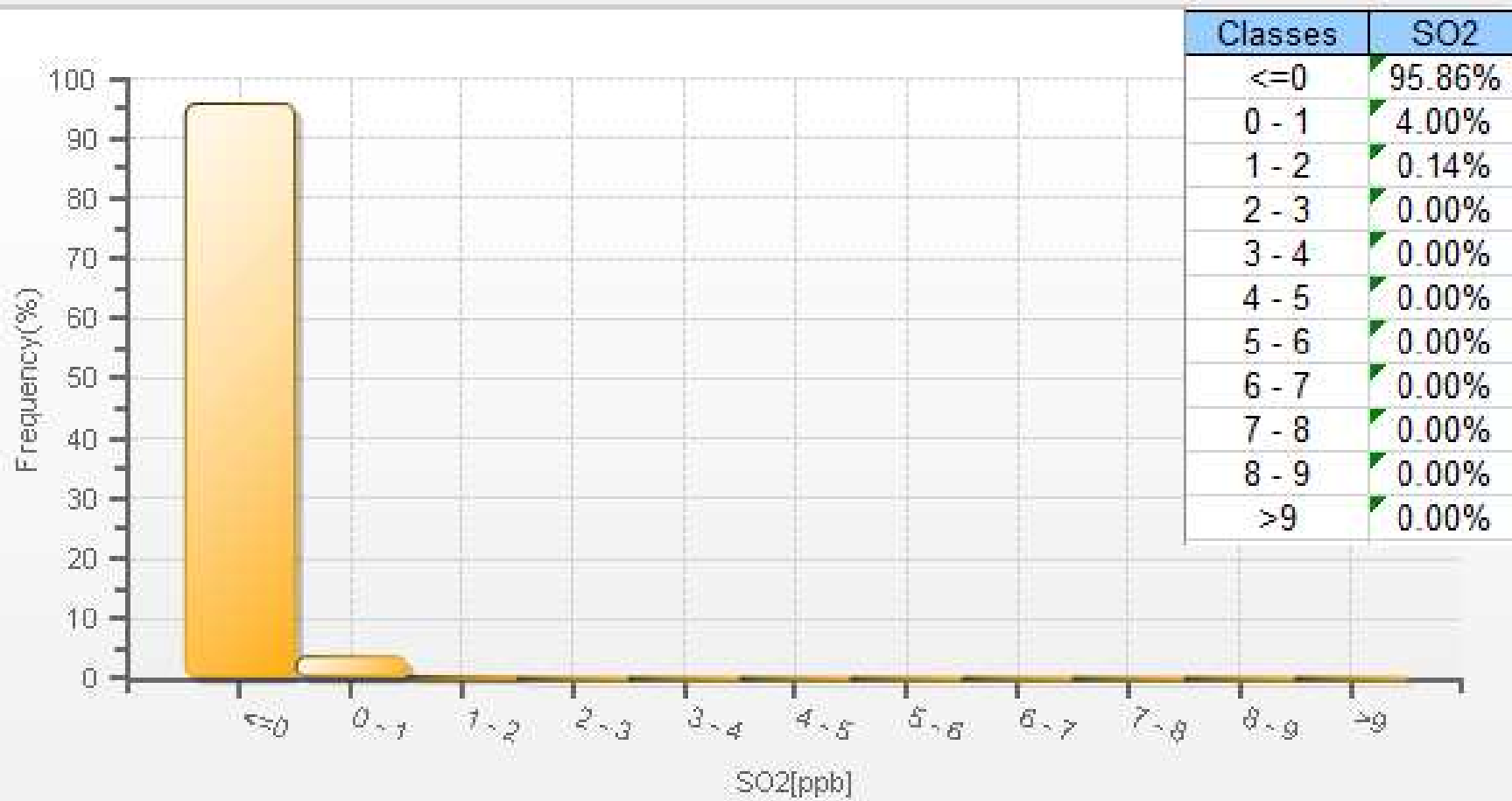
SULPHUR DIOXIDE (SO₂) in ppb

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 October 1 at hour 0										Hours in Service: 744																			
Maximum Daily Value: 0.0 ppb on										Hours of Data: 705																			
Minimum Hourly Value: 0 ppb on October 1 at hour 2										Hours of Missing Data: 0																			
Minimum Daily Value: 0.0 ppb on October 3										Hours of Calibration: 39																			
Monthly Average: 0.0 ppb										Operational Uptime: 100.0																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Oct 1	1	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	1	0.0
Oct 2	S	0	0	0	0	0	0	0	0	0	1	1	1	1	C	C	C	C	C	C	0	0	0	0	0	0	0	1	-
Oct 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	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	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 - 986c Station

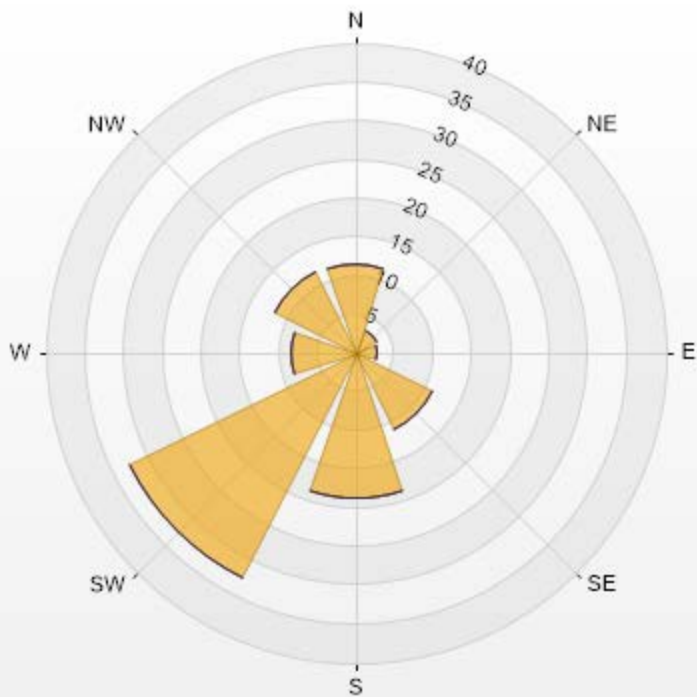


SO2[ppb] Histogram: PRAMP 986c Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.82% Calm Avg: 0.00 [ppb]

Direction	10-50	50-100	100-172	>172.0	Total
N	11.46	0	0	0	11.46
NE	3.15	0	0	0	3.15
E	2.87	0	0	0	2.87
SE	11.03	0	0	0	11.03
S	18.77	0	0	0	18.77
SW	32.52	0	0	0	32.52
W	8.45	0	0	0	8.45
NW	11.75	0	0	0	11.75
Summary	100	0	0	0	100



PRAMP-201910

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



PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

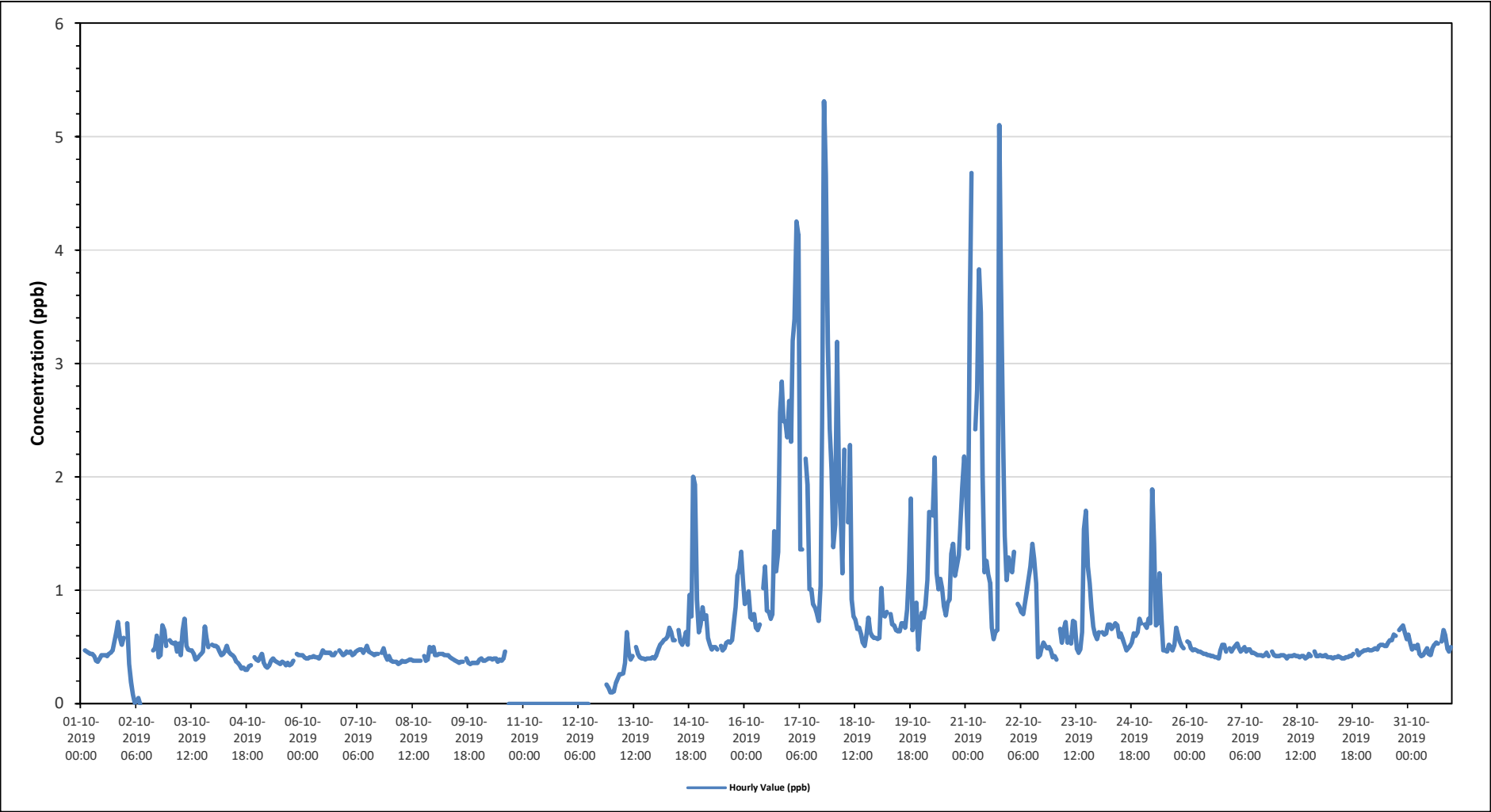
Summary of Hourly Averages

TOTAL REDUCED SULPHUR (TRS) in ppb

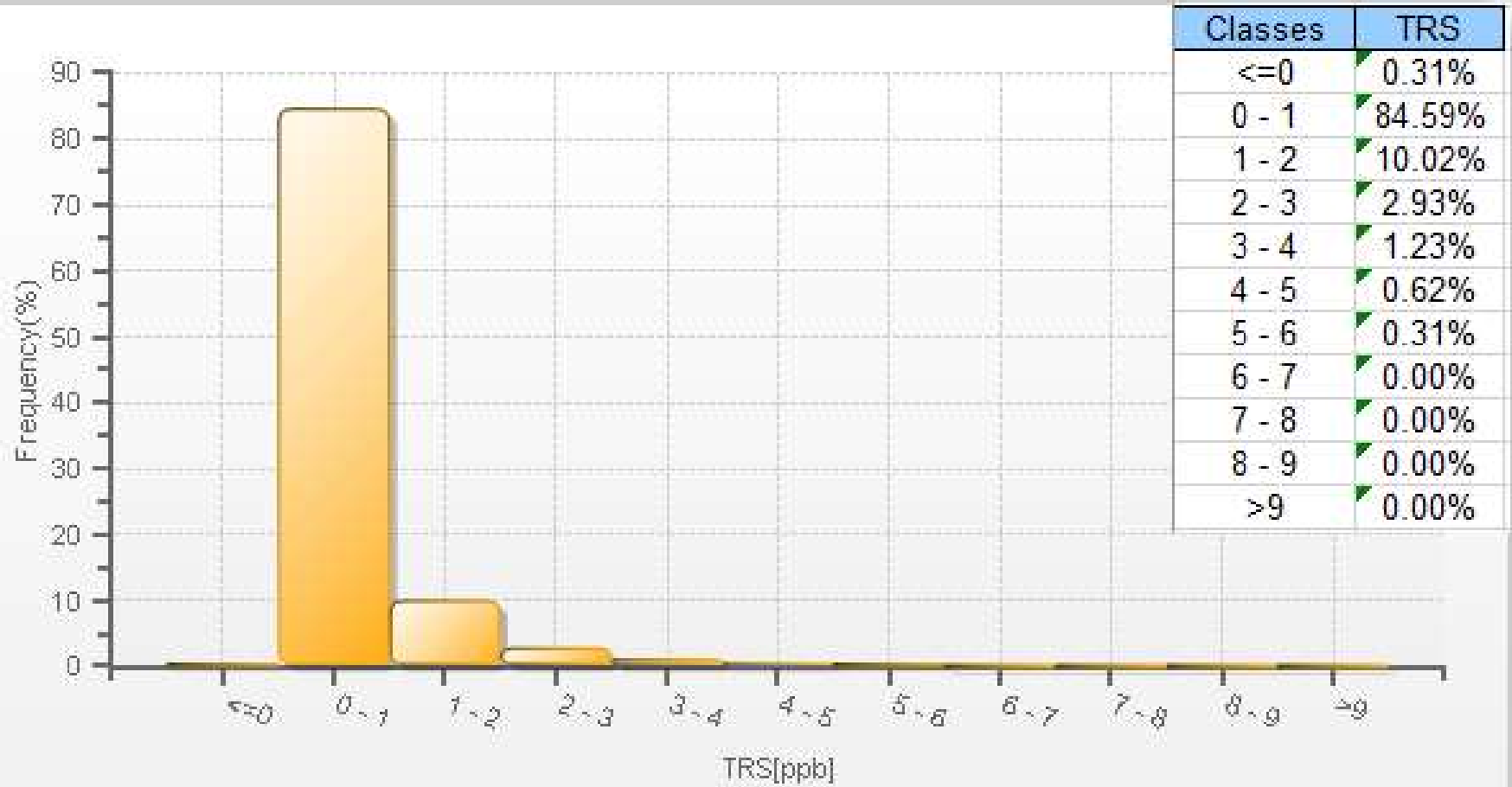
Alberta Ambient Air Quality Objectives (AAAQO) for H2S: 1-Hour 10 ppb, 24-Hour 3 ppb																												
Number of 1-Hour Exceedences: 0										Number of 24-Hour Exceedences: 0																		
Maximum Hourly Value:	5.31 ppb on October 17 at hour 19										Hours in Service:										744							
Maximum Daily Value:	2.31 ppb on										Hours of Data:										654							
Minimum Hourly Value:	0.00 ppb on October 1 at hour 0										Hours of Missing Data:										53							
Minimum Daily Value:	0.36 ppb on October 13										Hours of Calibration:										37							
Monthly Average:	0.71 ppb										Operational Uptime:										92.9							
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	
Oct 1	0	S	0.47	0.46	0.45	0.44	0.44	0.42	0.38	0.37	0.4	0.43	0.43	0.43	0.42	0.44	0.45	0.47	0.55	0.64	0.72	0.58	0.52	0.58	0.00	0.72	0.46	
Oct 2	S	0.71	0.35	0.19	0.08	0.01	0.02	0.05	0	C	C	C	C	C	C	0.47	0.49	0.6	0.41	0.43	0.69	0.65	0.51	S	0.00	0.71	-	
Oct 3	0.56	0.54	0.53	0.54	0.46	0.53	0.43	0.65	0.75	0.51	0.48	0.47	0.47	0.44	0.39	0.4	0.42	0.44	0.46	0.68	0.58	0.5	S	0.52	0.39	0.75	0.51	
Oct 4	0.51	0.51	0.5	0.46	0.43	0.44	0.47	0.51	0.46	0.44	0.43	0.41	0.37	0.36	0.34	0.31	0.32	0.3	0.3	0.33	0.34	S	0.41	0.39	0.30	0.51	0.41	
Oct 5	0.38	0.41	0.44	0.36	0.33	0.32	0.34	0.38	0.4	0.38	0.37	0.36	0.35	0.37	0.36	0.34	0.36	0.34	0.35	0.38	S	0.44	0.43	0.43	0.32	0.44	0.37	
Oct 6	0.43	0.41	0.4	0.4	0.41	0.41	0.42	0.41	0.41	0.4	0.43	0.47	0.45	0.45	0.45	0.45	0.43	0.43	0.45	S	0.47	0.45	0.43	0.44	0.40	0.47	0.43	
Oct 7	0.46	0.45	0.46	0.43	0.44	0.46	0.47	0.48	0.48	0.45	0.48	0.51	0.46	0.45	0.44	0.43	0.44	0.44	S	0.45	0.49	0.43	0.39	0.42	0.39	0.51	0.45	
Oct 8	0.38	0.37	0.37	0.37	0.35	0.36	0.38	0.37	0.37	0.38	0.39	0.39	0.38	0.38	0.38	0.38	0.38	0.38	S	0.42	0.38	0.39	0.5	0.46	0.5	0.35	0.50	0.39
Oct 9	0.43	0.43	0.44	0.44	0.44	0.43	0.43	0.43	0.41	0.4	0.39	0.38	0.37	0.36	0.37	0.37	S	0.4	0.36	0.35	0.36	0.36	0.36	0.36	0.35	0.44	0.39	
Oct 10	0.39	0.4	0.38	0.38	0.39	0.4	0.4	0.39	0.4	0.4	0.37	0.39	0.38	0.4	0.46	S	X	X	X	X	X	X	X	X	0.37	0.46	-	
Oct 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-
Oct 12	X	X	X	X	X	X	X	X	X	X	X	X	Y	Y	Y	Y	Y	Y	C1	C1	C1	C1	0.17	0.14	0.1	0.10	0.17	-
Oct 13	0.1	0.11	0.18	0.22	0.26	0.26	0.27	0.36	0.63	0.45	0.39	0.42	S	0.5	0.44	0.41	0.4	0.4	0.39	0.4	0.4	0.4	0.41	0.4	0.10	0.63	0.36	
Oct 14	0.43	0.48	0.52	0.54	0.56	0.57	0.59	0.67	0.63	0.56	0.56	S	0.65	0.55	0.52	0.56	0.63	0.52	0.96	0.77	2	1.93	0.92	0.63	0.43	2.00	0.73	
Oct 15	0.7	0.85	0.75	0.78	0.58	0.52	0.48	0.5	0.5	0.48	S	0.51	0.47	0.49	0.54	0.55	0.54	0.56	0.7	0.85	1.13	1.19	1.34	1.09	0.47	1.34	0.70	
Oct 16	0.88	0.91	0.99	0.76	0.74	0.79	0.67	0.65	0.7	S	1.02	1.21	0.82	0.81	0.75	0.79	1.52	1.17	1.34	2.57	2.84	2.49	2.49	2.35	0.65	2.84	1.27	
Oct 17	2.67	2.31	3.2	3.39	4.25	4.14	1.36	1.36	S	2.16	1.93	1.01	1.01	0.88	0.85	0.8	0.73	1.04	2.47	5.31	4.66	3.18	2.42	2.06	0.73	5.31	2.31	
Oct 18	1.38	1.58	3.19	1.94	1.61	1.15	2.24	S	1.6	2.28	0.92	0.77	0.74	0.66	0.67	0.61	0.54	0.51	0.61	0.76	0.63	0.6	0.58	0.58	0.51	3.19	1.14	
Oct 19	0.57	0.58	1.02	0.78	0.77	0.81	S	0.79	0.7	0.69	0.65	0.64	0.64	0.71	0.71	0.67	0.83	1.16	1.81	0.65	0.72	0.89	0.48	0.72	0.48	1.81	0.78	
Oct 20	0.8	0.76	0.87	1.09	1.69	S	1.66	2.17	1.15	1.01	1.1	1.02	0.86	0.78	0.89	0.92	1.32	1.41	1.13	1.21	1.31	1.62	1.9	2.18	0.76	2.18	1.25	
Oct 21	1.91	1.37	3.52	4.68	S	2.42	2.77	3.83	3.45	2.02	1.16	1.26	1.14	1.07	0.67	0.57	0.64	0.65	5.1	3.77	2.47	1.48	1.09	1.29	0.57	5.10	2.10	
Oct 22	1.2	1.16	1.34	S	0.88	0.85	0.81	0.79	0.89	1	1.12	1.21	1.41	1.28	1.06	0.41	0.43	0.49	0.54	0.51	0.49	0.5	0.47	0.41	0.41	1.41	0.84	
Oct 23	0.42	0.39	S	0.66	0.54	0.65	0.72	0.54	0.58	0.53	0.73	0.72	0.49	0.45	0.48	0.63	1.54	1.7	1.21	1.06	0.85	0.68	0.61	0.57	0.39	1.70	0.73	
Oct 24	0.63	S	0.63	0.61	0.62	0.7	0.7	0.66	0.68	0.71	0.69	0.59	0.62	0.57	0.52	0.47	0.49	0.51	0.54	0.62	0.6	0.63	0.75	0.71	0.47	0.75	0.62	
Oct 25	S	0.7	0.67	0.75	0.71	1.89	1.41	0.69	0.71	1.15	0.76	0.47	0.47	0.46	0.52	0.5	0.47	0.52	0.67	0.6	0.55	0.51	0.49	S	0.46	1.89	0.71	
Oct 26	0.55	0.54	0.49	0.47	0.48	0.47	0.46	0.46	0.45	0.44	0.44	0.43	0.43	0.42	0.42	0.41	0.41	0.4	0.47	0.52	0.52	0.46	S	0.49	0.40	0.55	0.46	
Oct 27	0.46	0.49	0.51	0.53	0.49	0.46	0.48	0.5	0.46	0.48	0.48	0.45	0.45	0.44	0.43	0.43	0.43	0.42	0.43	0.45	0.42	S	0.46	0.43	0.42	0.53	0.46	
Oct 28	0.42	0.42	0.42	0.43	0.43	0.42	0.4	0.42	0.42	0.42	0.43	0.42	0.42	0.41	0.42	0.42	0.4	0.41	0.44	0.42	S	0.46	0.42	0.42	0.40	0.46	0.42	
Oct 29	0.43	0.42	0.42	0.43	0.41	0.41	0.41	0.41	0.41	0.42	0.41	0.42	0.41	0.4	0.41	0.41	0.41	0.42	0.42	0.44	S	0.47	0.43	0.45	0.46	0.40	0.47	0.42
Oct 30	0.47	0.47	0.48	0.47	0.47	0.48	0.49	0.48	0.51	0.52	0.52	0.51	0.51	0.54	0.56	0.56	0.61	0.6	S	0.65	0.67	0.69	0.63	0.57	0.47	0.69	0.54	
Oct 31	0.61	0.53	0.48	0.51	0.49	0.52	0.44	0.42	0.43	0.46	0.49	0.44	0.43	0.49	0.52	0.54	0.53	S	0.55	0.65	0.6	0.49	0.46	0.5	0.42	0.65	0.50	
Diurnal Maximum	2.67	2.31	3.52	4.68	4.25	4.14	2.77	3.83	3.45	2.28	1.93	1.26	1.41	1.28	1.06	0.92	1.54	1.70	5.10	5.31	4.66	3.18	2.49	2.35				
Diurnal Average	0.67	0.68	0.86	0.82	0.71	0.76	0.72	0.71	0.68	0.72	0.65	0.60	0.58	0.56	0.54	0.51	0.60	0.63	0.89	0.98	0.98	0.84	0.74	0.73				
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 - 986c Station

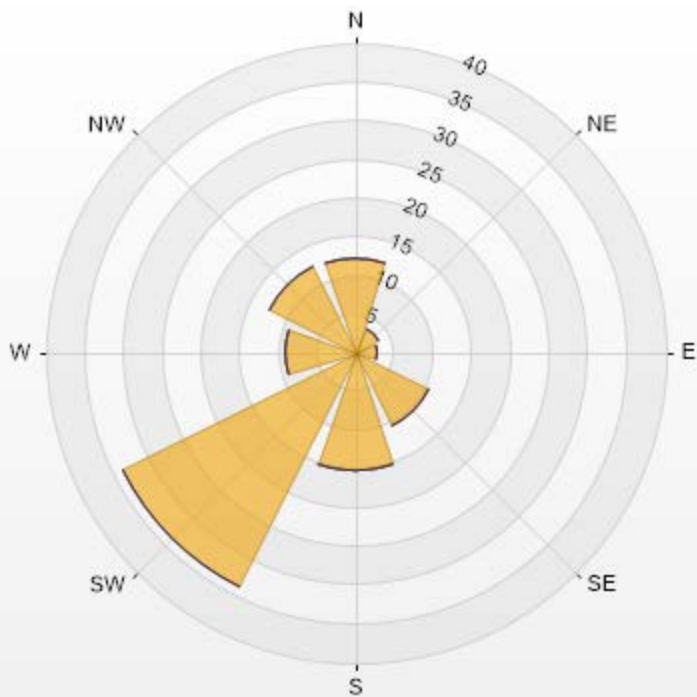


TRS[ppb] Histogram: PRAMP 986c Monthly: 10-2019 1 Hr.






Wind: PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 86.83% Calm Avg: 0.00 [ppb]

Direction	2-5	5-10	10-50	>50.0	Total
N	12.23	0	0	0	12.23
NE	3.41	0	0	0	3.41
E	2.94	0	0	0	2.94
SE	10.53	0.15	0	0	10.68
S	15.17	0.15	0	0	15.32
SW	33.75	0	0	0	33.75
W	9.13	0	0	0	9.13
NW	12.54	0	0	0	12.54
Summary	100	0.3	0	0	100



PRAMP-201910

% Icon Classes (ppb)	100	5-10	0	10-50	0	>50.0
						
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PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

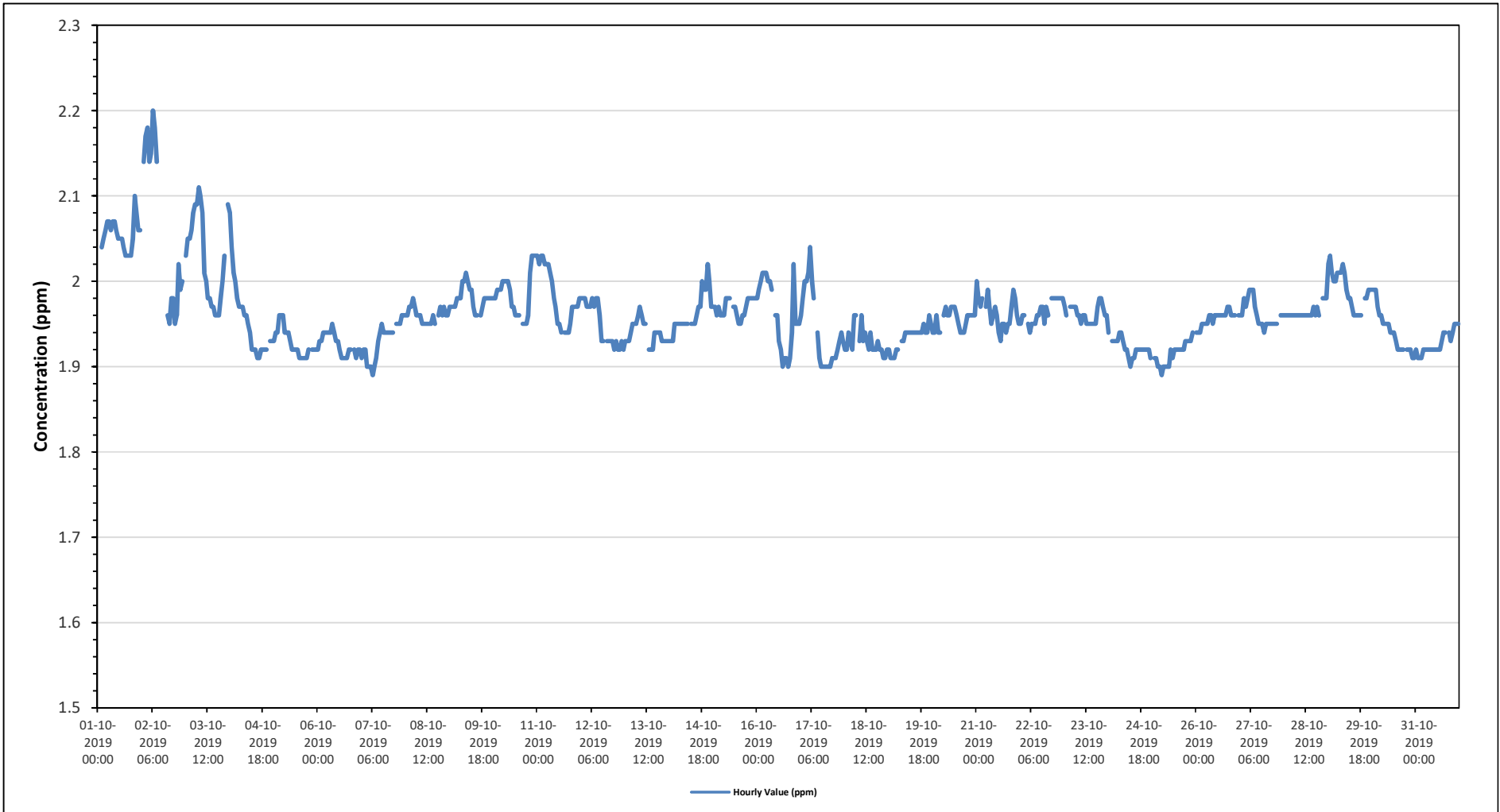
Maximum Hourly Value: 2.20 ppm on October 2 at hour 6	Hours in Service: 744
Maximum Daily Value: 2.05 ppm on	Hours of Data: 705
Minimum Hourly Value: 1.89 ppm on October 7 at hour 6	Hours of Missing Data: 1
Minimum Daily Value: 1.91 ppm on October 25	Hours of Calibration: 38
Monthly Average: 1.96 ppm	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	
Oct 1	2.04	S	2.04	2.05	2.06	2.07	2.07	2.06	2.07	2.07	2.06	2.05	2.05	2.05	2.04	2.03	2.03	2.03	2.03	2.05	2.10	2.08	2.06	2.06	2.03	2.10	2.05	
Oct 2	S	2.14	2.17	2.18	2.14	2.15	2.20	2.18	2.14	C	C	C	C	C	1.96	1.95	1.98	1.98	1.95	1.96	2.02	1.99	2.00	S	1.95	2.20	-	
Oct 3	2.03	2.05	2.05	2.06	2.08	2.09	2.09	2.11	2.10	2.08	2.01	2.00	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.98	2.00	2.03	S	S	1.96	2.11	2.03	
Oct 4	2.08	2.04	2.01	2.00	1.98	1.97	1.97	1.97	1.96	1.96	1.95	1.94	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	S	1.93	1.93	1.91	2.08	1.95	
Oct 5	1.93	1.94	1.94	1.96	1.96	1.96	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	S	S	1.92	1.92	1.91	1.96	1.93	
Oct 6	1.92	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.93	1.93	1.92	1.91	1.91	1.91	1.91	1.92	1.92	S	1.92	1.91	1.92	1.92	1.91	1.95	1.93	
Oct 7	1.91	1.92	1.92	1.90	1.90	1.90	1.89	1.90	1.91	1.93	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.94	S	1.95	1.95	1.95	1.96	1.96	1.89	1.96	1.93	
Oct 8	1.96	1.96	1.97	1.97	1.98	1.97	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.96	1.97	1.96	1.97	1.96	1.96	1.95	1.98	1.96	
Oct 9	1.97	1.97	1.97	1.97	1.98	1.98	1.98	2.00	2.00	2.01	2.00	1.99	1.99	1.97	1.96	1.96	S	S	1.96	1.97	1.98	1.98	1.98	1.98	1.96	2.01	1.98	
Oct 10	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.97	1.97	1.96	1.96	1.96	S	S	1.95	1.95	1.96	2.01	2.03	2.03	2.03	1.95	2.03	1.98	
Oct 11	2.03	2.02	2.03	2.03	2.02	2.02	2.02	2.01	2.00	1.98	1.97	1.95	1.95	1.94	S	1.94	1.94	1.94	1.95	1.97	1.97	1.97	1.97	1.98	1.94	2.03	1.98	
Oct 12	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.96	1.93	1.93	S	1.93	1.93	1.93	1.93	1.92	1.93	1.92	1.92	1.93	1.92	1.92	1.98	1.95	
Oct 13	1.93	1.93	1.93	1.94	1.95	1.95	1.95	1.96	1.97	1.96	1.95	1.95	S	S	1.92	1.92	1.94	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.92	1.97	1.94	
Oct 14	1.93	1.93	1.93	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	S	1.95	1.95	1.96	1.97	1.97	2.00	1.99	1.99	2.02	2.00	1.97	1.93	2.02	1.96	
Oct 15	1.97	1.97	1.96	1.97	1.96	1.96	1.96	1.98	1.98	1.98	S	S	1.97	1.97	1.96	1.95	1.95	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.95	1.98	1.97	
Oct 16	1.98	1.99	2.00	2.01	2.01	2.01	2.00	2.00	1.99	S	1.96	1.96	1.93	1.92	1.90	1.91	1.91	1.90	1.91	1.90	1.91	1.92	1.93	1.94	1.93	1.90	2.02	1.96
Oct 17	1.96	1.98	2.00	2.00	2.01	2.04	2.00	1.98	S	1.94	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.92	1.93	1.94	1.93	1.90	2.04	1.94
Oct 18	1.92	1.92	1.94	1.93	1.92	1.96	1.96	S	S	1.93	1.96	1.93	1.94	1.93	1.92	1.94	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.91	1.91	1.92	1.93	
Oct 19	1.92	1.91	1.91	1.91	1.92	1.92	S	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.96	1.95	1.91	1.96	1.93	
Oct 20	1.94	1.94	1.96	1.94	1.94	S	1.96	1.97	1.96	1.96	1.97	1.97	1.96	1.96	1.95	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.96	1.94	1.97	1.95	
Oct 21	2.00	1.98	1.97	1.98	S	1.97	1.99	1.97	1.95	1.96	1.97	1.96	1.94	1.93	1.95	1.95	1.94	1.95	1.95	1.97	1.99	1.98	1.96	1.95	1.93	2.00	1.96	
Oct 22	1.95	1.96	1.96	S	1.95	1.94	1.95	1.95	1.95	1.96	1.96	1.97	1.97	1.95	1.97	1.96	X	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.94	1.98	1.96	
Oct 23	1.97	1.96	S	1.97	1.97	1.97	1.97	1.96	1.96	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.97	1.98	1.98	1.97	1.96	1.96	1.95	1.98	1.96	
Oct 24	1.94	S	1.93	1.93	1.93	1.93	1.94	1.94	1.93	1.92	1.92	1.91	1.90	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.90	1.94	1.92	
Oct 25	S	1.91	1.91	1.90	1.90	1.89	1.90	1.90	1.90	1.90	1.92	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.94	S	1.89	1.94	1.91	
Oct 26	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.96	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.96	S	1.96	1.94	1.97	1.96	
Oct 27	1.96	1.96	1.98	1.97	1.98	1.99	1.99	1.99	1.97	1.96	1.95	1.95	1.95	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.96	1.96	1.94	1.99	1.96	
Oct 28	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.96	1.97	1.96	1.97	S	1.98	1.98	1.96	1.98	1.96	
Oct 29	2.02	2.03	2.01	2.00	2.00	2.01	2.01	2.01	2.02	2.01	1.99	1.98	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	S	1.98	1.98	1.99	1.99	1.96	2.03	1.99
Oct 30	1.99	1.99	1.99	1.97	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.92	1.92	S	1.92	1.92	1.92	1.91	1.91	1.91	1.99	1.94	
Oct 31	1.92	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	S	1.94	1.93	1.94	1.95	1.95	1.95	1.91	1.95	1.93	
Diurnal Maximum	2.08	2.14	2.17	2.18	2.14	2.15	2.20	2.18	2.14	2.08	2.06	2.05	2.05	2.05	2.04	2.03	2.03	2.03	2.05	2.10	2.08	2.06	2.09					
Diurnal Average	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.97	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.96	1.96	1.96					

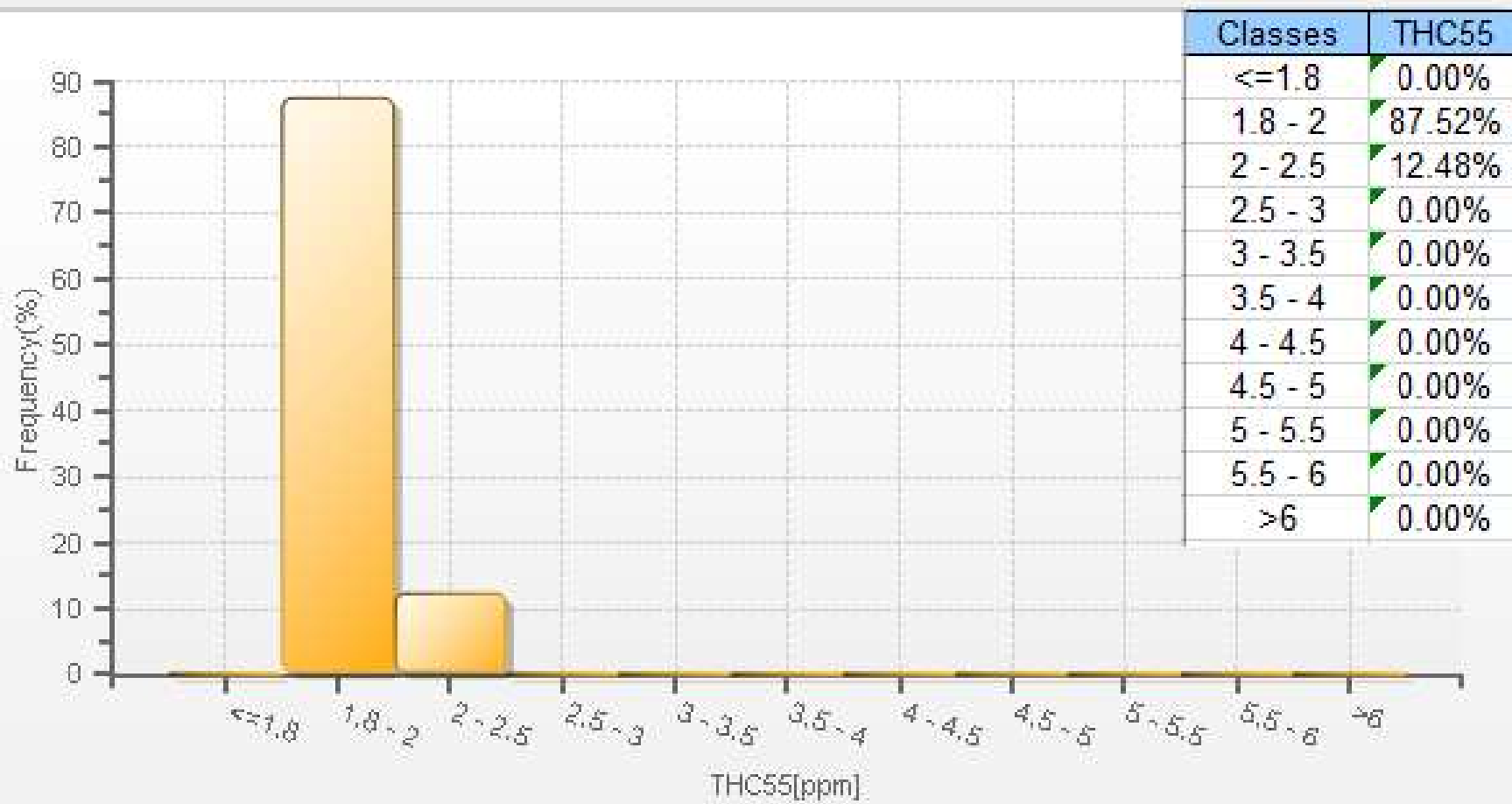
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986c Station

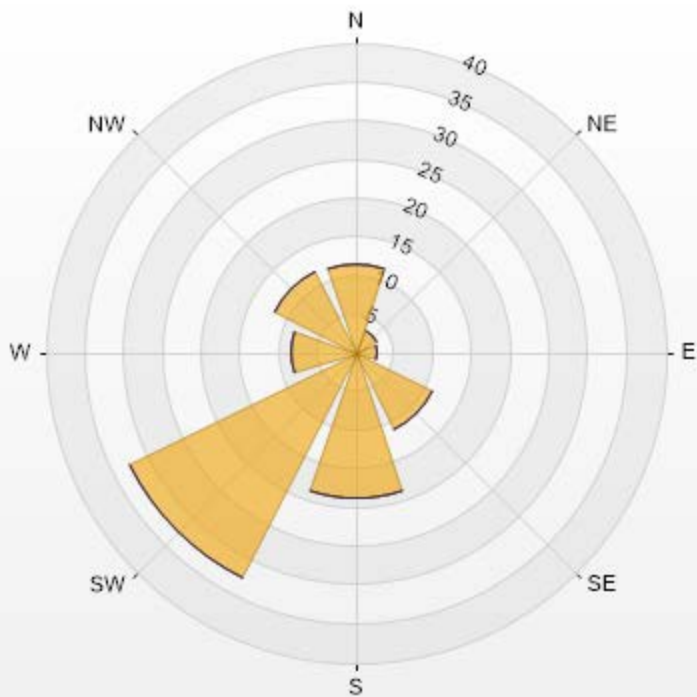


THC55[ppm] Histogram: PRAMP 986c Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.55% Calm Avg: 0.00 [ppm]

Direction	2-5	5-10	10-40	>40.0	Total
N	11.49	0	0	0	11.49
NE	3.16	0	0	0	3.16
E	2.87	0	0	0	2.87
SE	11.06	0	0	0	11.06
S	18.82	0	0	0	18.82
SW	32.61	0	0	0	32.61
W	8.33	0	0	0	8.33
NW	11.64	0	0	0	11.64
Summary	100	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	100	20	5-10	0	10-40	0	>40.0
	100	20	5-10	0	10-40	0	>40.0



PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019
Summary of Hourly Averages

METHANE (CH4) in ppm

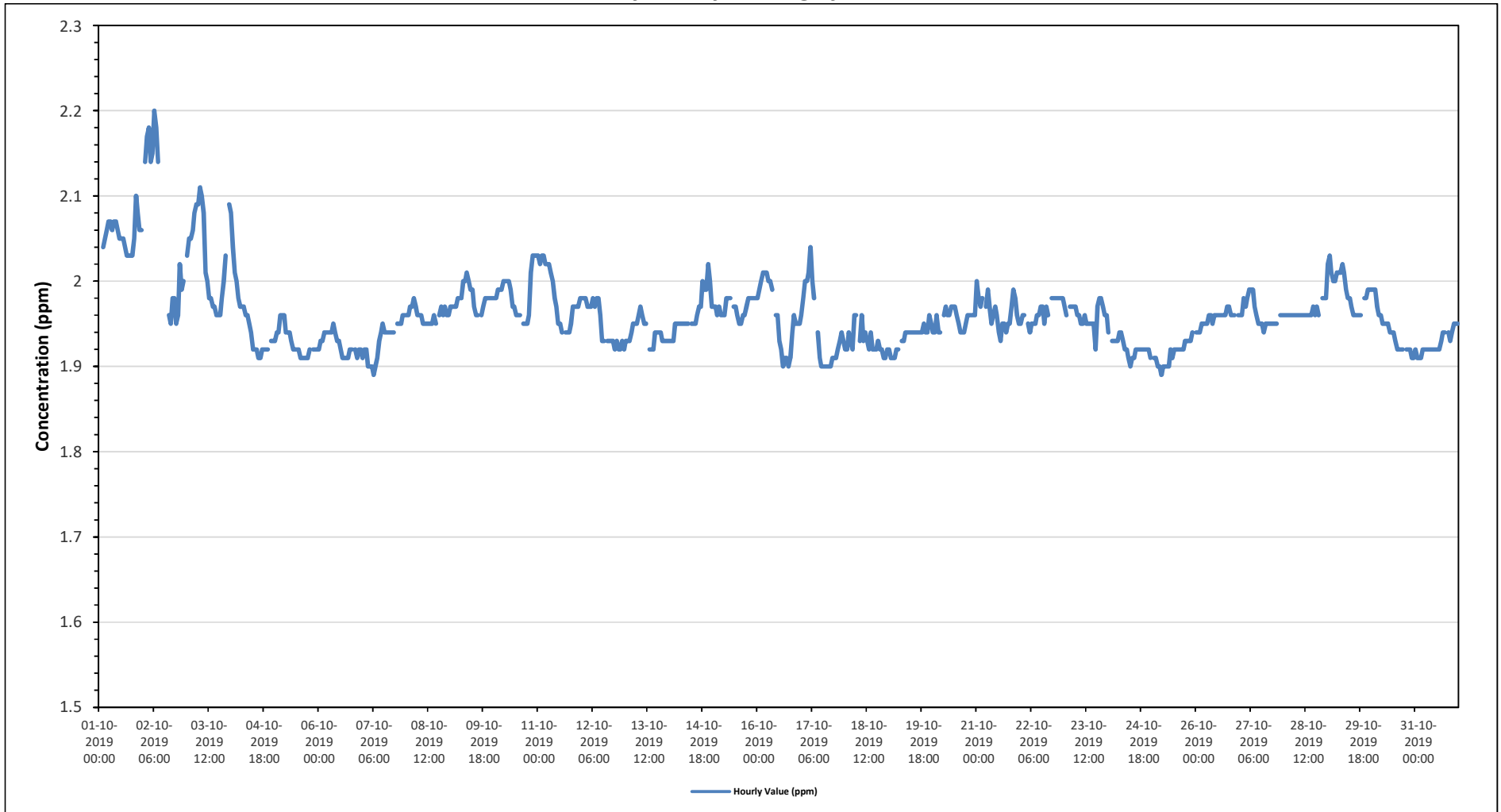
Maximum Hourly Value:	2.20 ppm on October 2 at hour 6	Hours in Service:	744
Maximum Daily Value:	2.05 ppm on	Hours of Data:	705
Minimum Hourly Value:	1.89 ppm on October 7 at hour 6	Hours of Missing Data:	1
Minimum Daily Value:	1.91 ppm on October 25	Hours of Calibration:	38
Monthly Average:	1.96 ppm	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	
Oct 1	2.04	S	2.04	2.05	2.06	2.07	2.07	2.06	2.07	2.07	2.06	2.05	2.05	2.05	2.04	2.03	2.03	2.03	2.03	2.05	2.10	2.08	2.06	2.06	2.03	2.10	2.05	
Oct 2	S	2.14	2.17	2.18	2.14	2.15	2.20	2.18	2.14	C	C	C	C	C	1.96	1.95	1.98	1.98	1.95	1.96	2.02	1.99	2.00	S	1.95	2.20	-	
Oct 3	2.03	2.05	2.05	2.06	2.08	2.09	2.09	2.11	2.10	2.08	2.01	2.00	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.98	2.00	2.03	S	2.09	1.96	2.11	2.03	
Oct 4	2.08	2.04	2.01	2.00	1.98	1.97	1.97	1.97	1.96	1.96	1.95	1.94	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	S	1.93	1.93	1.91	2.08	1.95	
Oct 5	1.93	1.94	1.94	1.96	1.96	1.96	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	S	1.92	1.92	1.92	1.91	1.96	1.93	
Oct 6	1.92	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.93	1.92	1.91	1.91	1.91	1.91	1.91	1.92	1.92	S	1.92	1.91	1.92	1.92	1.91	1.95	1.93	
Oct 7	1.91	1.92	1.92	1.90	1.90	1.90	1.89	1.90	1.91	1.93	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.94	S	1.95	1.95	1.95	1.96	1.96	1.89	1.96	1.93	
Oct 8	1.96	1.96	1.97	1.97	1.98	1.97	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.95	S	1.96	1.97	1.96	1.97	1.96	1.95	1.98	1.96	
Oct 9	1.97	1.97	1.97	1.97	1.98	1.98	1.98	2.00	2.00	2.01	2.00	1.99	1.99	1.97	1.96	S	1.96	1.96	S	1.96	1.97	1.98	1.98	1.98	1.96	2.01	1.98	
Oct 10	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.97	1.97	1.96	1.96	1.96	S	1.95	1.95	1.95	1.96	2.01	2.03	2.03	2.03	1.95	2.03	1.98	
Oct 11	2.03	2.02	2.03	2.03	2.02	2.02	2.02	2.01	2.00	1.98	1.97	1.95	1.95	1.94	S	1.94	1.94	1.94	1.95	1.97	1.97	1.97	1.97	1.98	1.94	2.03	1.98	
Oct 12	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.96	1.93	1.93	S	1.93	1.93	1.93	1.93	1.92	1.93	1.92	1.92	1.93	1.92	1.92	1.98	1.95	
Oct 13	1.93	1.93	1.93	1.94	1.95	1.95	1.95	1.96	1.97	1.96	1.95	1.95	S	1.92	1.92	1.92	1.94	1.94	1.94	1.94	1.93	1.93	1.93	1.93	1.92	1.97	1.94	
Oct 14	1.93	1.93	1.93	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	1.96	1.97	1.97	2.00	1.99	1.99	2.02	2.00	1.97	1.93	2.02	1.96	
Oct 15	1.97	1.97	1.96	1.97	1.96	1.96	1.96	1.98	1.98	1.98	S	1.97	1.97	1.96	1.95	1.95	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.98	1.95	1.98	1.97	
Oct 16	1.98	1.99	2.00	2.01	2.01	2.01	2.00	2.00	1.99	S	1.96	1.96	1.93	1.92	1.90	1.91	1.91	1.90	1.91	1.90	1.91	1.92	1.93	1.94	1.93	1.90	2.04	1.94
Oct 17	1.96	1.98	2.00	2.00	2.01	2.04	2.00	1.98	S	1.94	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.92	1.93	1.94	1.93	1.90	2.04	1.94
Oct 18	1.92	1.92	1.94	1.93	1.92	1.96	1.96	S	1.93	1.96	1.93	1.94	1.93	1.92	1.94	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.91	1.91	1.92	1.91	1.96	1.93
Oct 19	1.92	1.91	1.91	1.91	1.92	1.92	S	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.96	1.95	1.91	1.96	1.93	
Oct 20	1.94	1.94	1.96	1.94	1.94	S	1.96	1.97	1.96	1.96	1.97	1.97	1.96	1.97	1.96	1.95	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.94	1.97	1.95	
Oct 21	2.00	1.98	1.97	1.98	S	1.97	1.99	1.97	1.95	1.96	1.97	1.96	1.94	1.93	1.95	1.95	1.94	1.95	1.95	1.97	1.99	1.98	1.96	1.95	1.93	2.00	1.96	
Oct 22	1.95	1.96	1.96	S	1.95	1.94	1.95	1.95	1.95	1.96	1.96	1.97	1.97	1.95	1.97	1.96	X	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.94	1.98	1.96	
Oct 23	1.97	1.96	S	1.97	1.97	1.97	1.97	1.96	1.96	1.95	1.95	1.96	1.95	1.95	1.95	1.95	1.95	1.92	1.97	1.98	1.98	1.97	1.96	1.96	1.92	1.98	1.96	
Oct 24	1.94	S	1.93	1.93	1.93	1.93	1.94	1.94	1.93	1.92	1.92	1.91	1.90	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.90	1.94	1.92	
Oct 25	S	1.91	1.91	1.90	1.90	1.89	1.90	1.90	1.90	1.90	1.92	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.94	S	1.89	1.94	1.91	
Oct 26	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.96	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.96	S	1.96	1.94	1.97	1.96	
Oct 27	1.96	1.96	1.98	1.97	1.98	1.99	1.99	1.99	1.97	1.96	1.95	1.95	1.95	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.96	1.96	1.94	1.99	1.96	
Oct 28	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.96	1.97	1.96	1.97	S	1.98	1.98	1.96	1.98	1.96	
Oct 29	2.02	2.03	2.01	2.00	2.00	2.01	2.01	2.01	2.02	2.01	1.99	1.98	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	S	1.98	1.98	1.99	1.99	1.96	2.03	1.99
Oct 30	1.99	1.99	1.99	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.92	1.92	S	1.92	1.92	1.92	1.91	1.91	1.91	1.94	1.91
Oct 31	1.92	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	S	1.94	1.93	1.94	1.95	1.95	1.95	1.91	1.95	1.93	
Diurnal Maximum	2.08	2.14	2.17	2.18	2.14	2.15	2.20	2.18	2.14	2.08	2.06	2.05	2.05	2.05	2.04	2.03	2.03	2.03	2.05	2.10	2.08	2.06	2.09					
Diurnal Average	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.97	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.96	1.96	1.96					

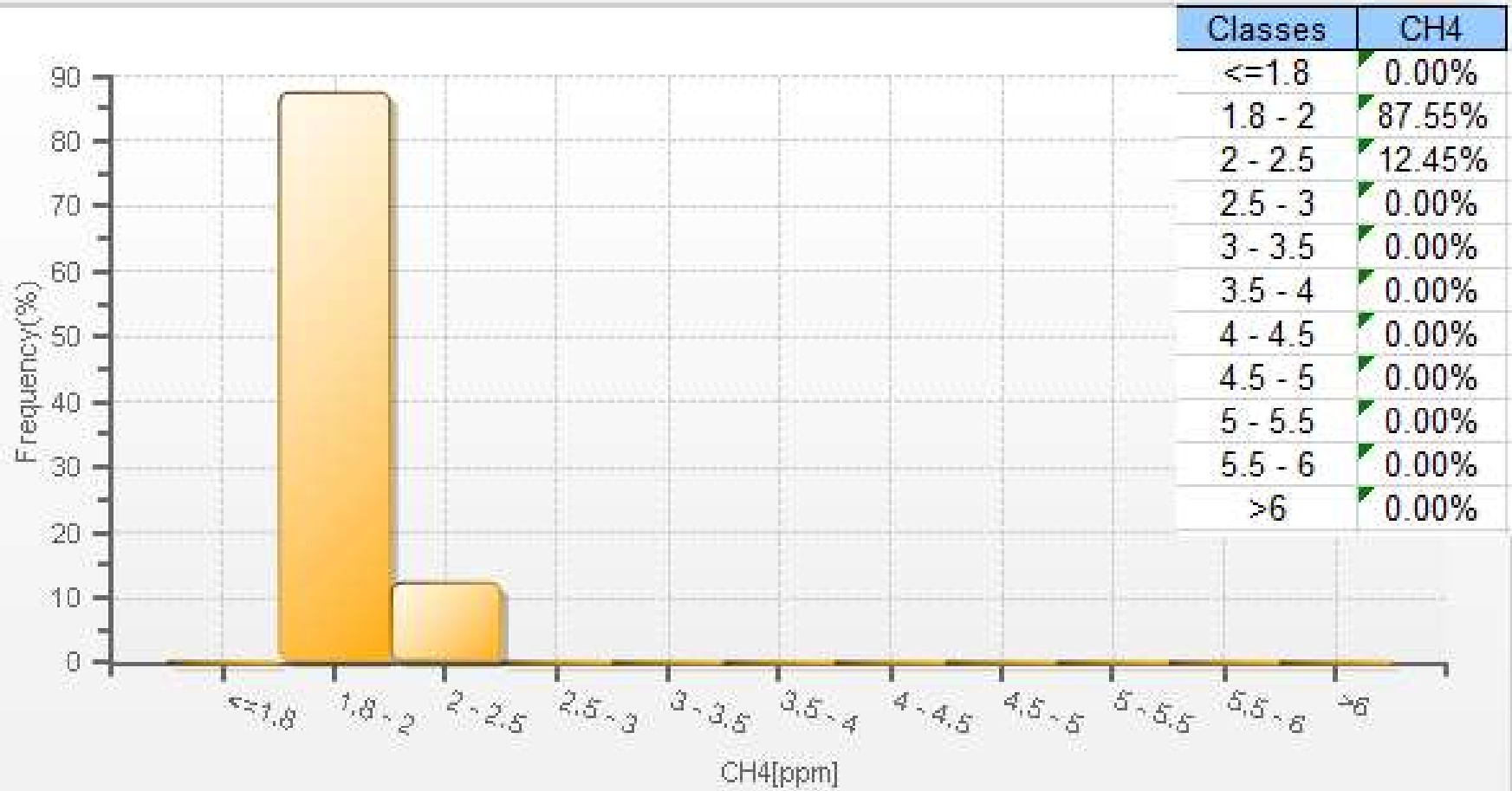
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986c Station

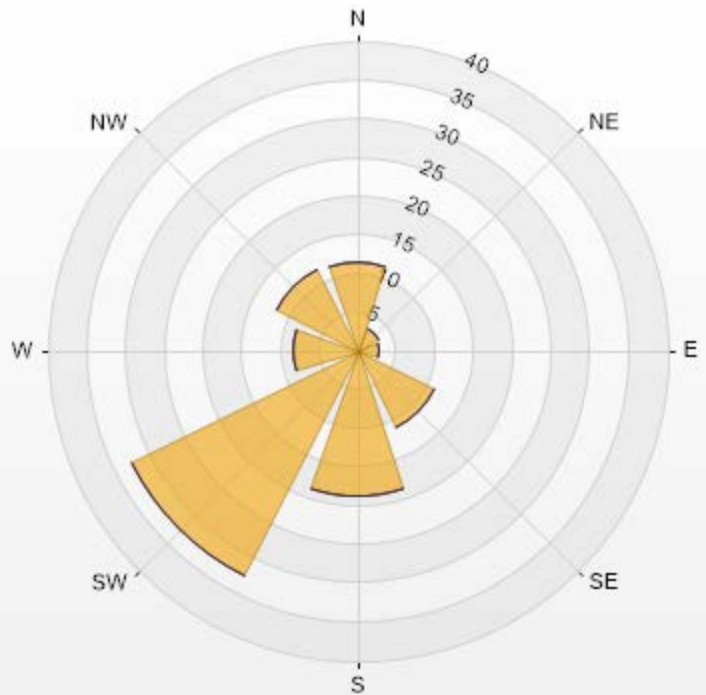


CH4[ppm] Histogram: PRAMP 986c Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.68% Calm Avg: 0.00 [ppm]

Direction	2-5	5-10	10-20	>20.0	Total
N	11.48	0	0	0	11.48
NE	3.16	0	0	0	3.16
E	2.87	0	0	0	2.87
SE	11.05	0	0	0	11.05
S	18.94	0	0	0	18.94
SW	32.57	0	0	0	32.57
W	8.32	0	0	0	8.32
NW	11.62	0	0	0	11.62
Summary	100	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	100	20	5-10	0	10-20	0	>20.0
	100	20	5-10	0	10-20	0	>20.0



PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

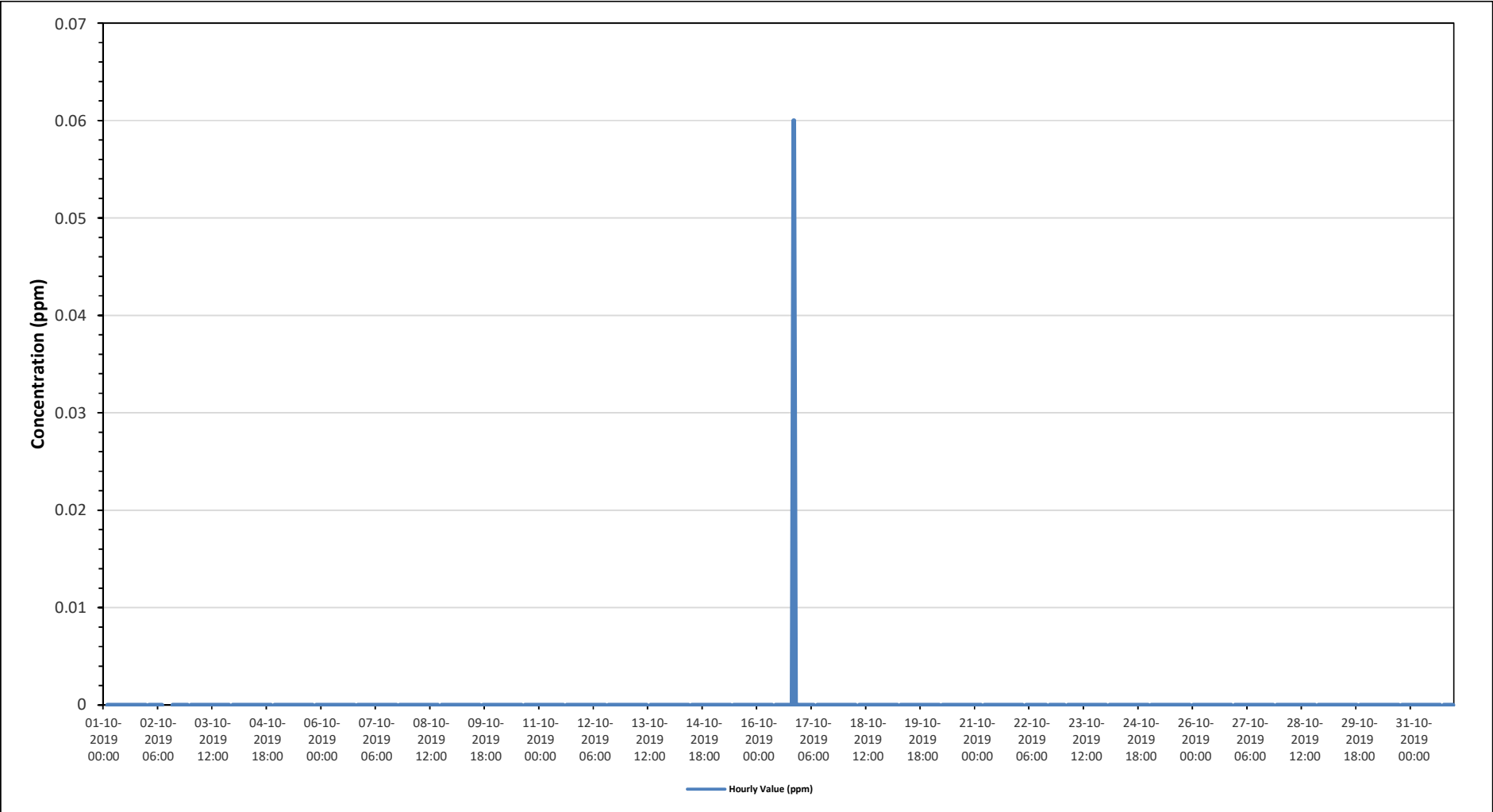
Maximum Hourly Value:	0.06 ppm on October 16 at hour 20	Hours in Service:	744
Maximum Daily Value:	0.00 ppm on	Hours of Data:	705
Minimum Hourly Value:	0.00 ppm on October 1 at hour 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00 ppm on October 1	Hours of Calibration:	38
Monthly Average:	0.00 ppm	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				
Oct 1	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	0.00
Oct 2	S	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	0.00	0.00	0.00	0.00	0.00	S	0.00	S	0.00	0.00
Oct 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Oct 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Oct 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	S	0.00	0.00	0.00	0.00	0.00
Oct 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Oct 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 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	S	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 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	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
Oct 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	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
Oct 13	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	0.00
Oct 14	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	0.00
Oct 15	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	0.00
Oct 16	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	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Oct 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	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
Oct 18	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	0.00
Oct 19	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	0.00
Oct 20	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	0.00
Oct 21	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	0.00
Oct 22	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	0.00
Oct 23	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	0.00
Oct 24	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	0.00
Oct 25	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	S	0.00	0.00
Oct 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Oct 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Oct 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	S	0.00	0.00	0.00	0.00	0.00
Oct 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
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	0.06	0.00	0.00	0.00	0.00	0.00
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

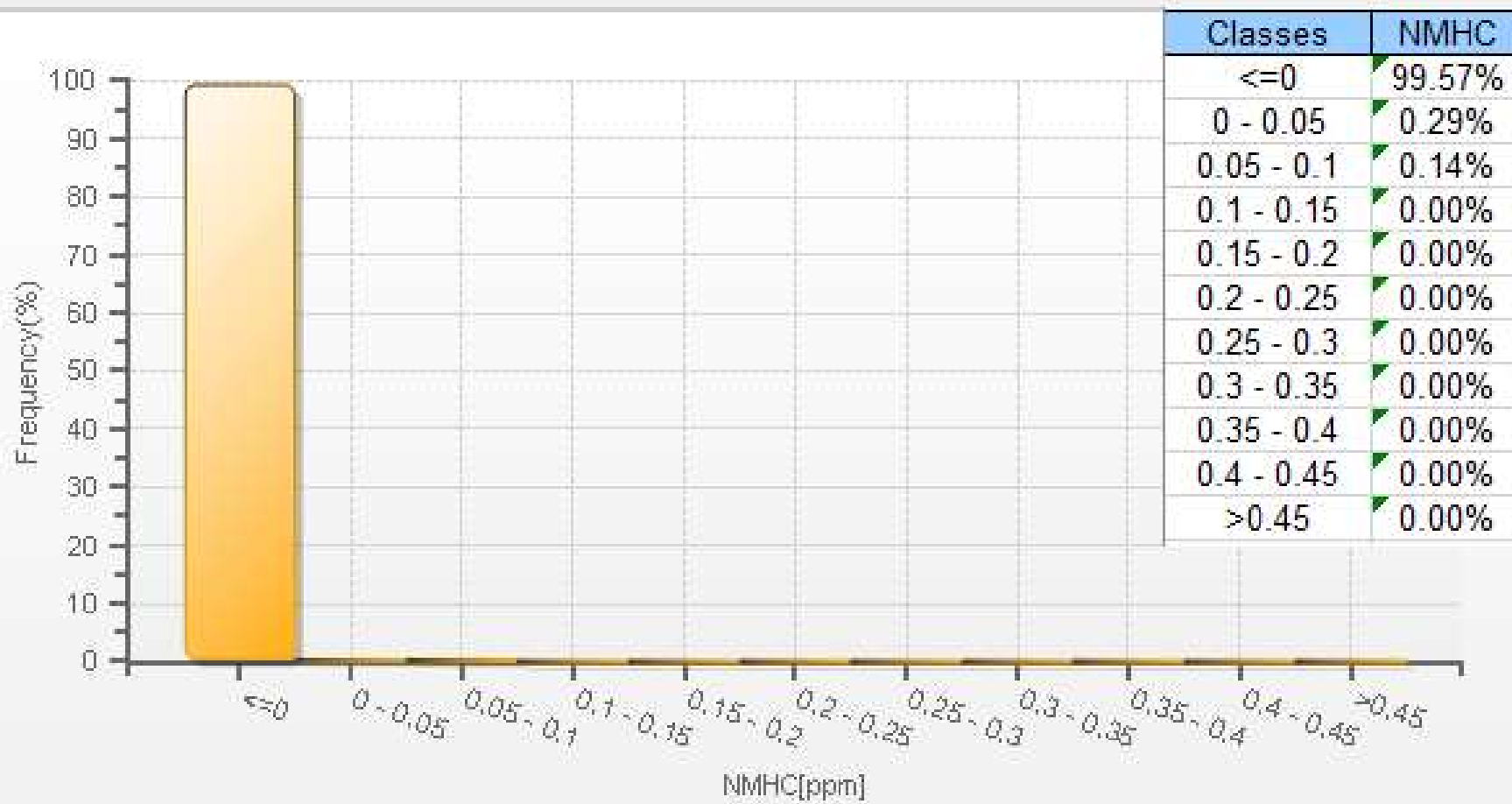
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986c Station

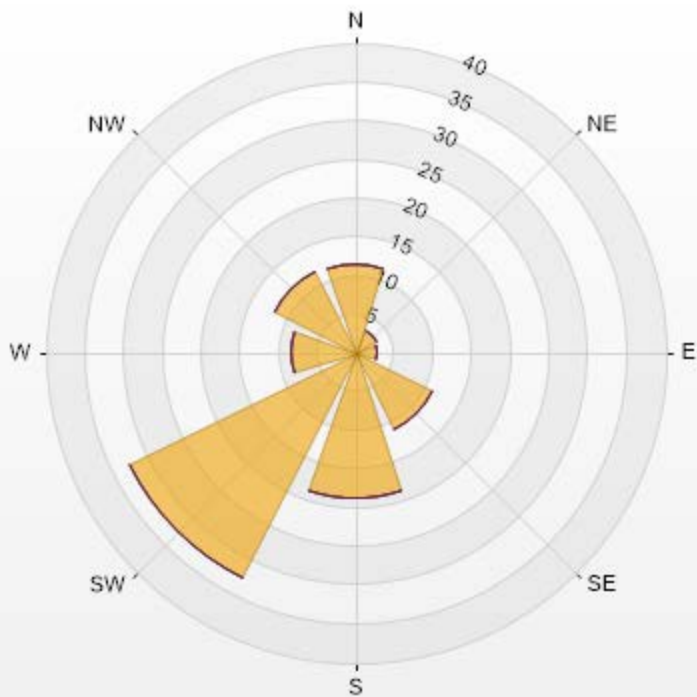


NMHC[ppm] Histogram: PRAMP 986c Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.68% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	11.48	0	0	0	0	11.48
NE	3.16	0	0	0	0	3.16
E	2.87	0	0	0	0	2.87
SE	11.05	0	0	0	0	11.05
S	18.94	0	0	0	0	18.94
SW	32.57	0	0	0	0	32.57
W	8.32	0	0	0	0	8.32
NW	11.62	0	0	0	0	11.62
Summary	100	0	0	0	0	100



PRAMP-201910



PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

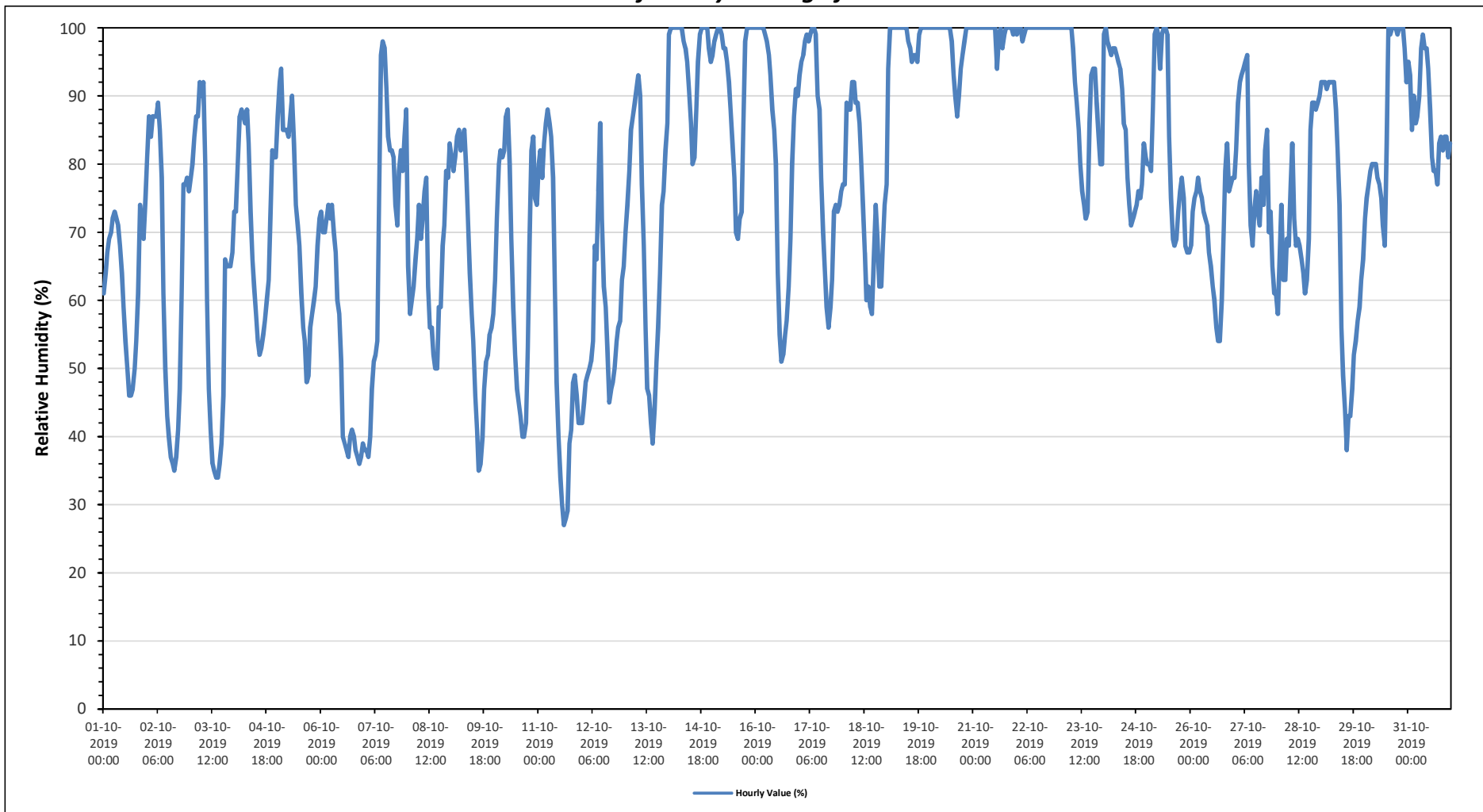
Maximum Hourly Value:	100 %	on October 14 at hour 1	Hours in Service:	744
Maximum Daily Value:	99.8 %	on	Hours of Data:	744
Minimum Hourly Value:	27 %	on October 11 at hour 14	Hours of Missing Data:	0
Minimum Daily Value:	53.0 %	on October 6	Hours of Calibration:	0
Monthly Average:	76.7 %		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	61	64	67	69	70	72	73	72	71	68	64	59	54	50	46	46	47	50	54	61	74	71	69	75	46	75	63	
Oct 2	81	87	84	87	87	87	89	85	78	61	50	43	40	37	36	35	37	41	47	61	77	77	78	76	35	89	65	
Oct 3	78	80	84	87	87	92	90	92	80	60	47	41	36	35	34	34	36	39	46	66	65	65	65	67	34	92	63	
Oct 4	73	73	80	87	88	87	86	88	83	73	66	62	58	54	52	53	55	57	60	63	72	82	81	81	52	88	71	
Oct 5	87	92	94	85	85	85	84	87	90	83	74	71	68	61	56	54	48	49	56	58	60	62	68	72	48	94	72	
Oct 6	73	70	70	72	74	72	74	70	67	60	58	51	40	39	38	37	40	41	40	38	37	36	37	39	36	74	53	
Oct 7	38	38	37	40	47	51	52	54	75	96	98	97	91	84	82	82	81	74	71	79	82	79	84	88	37	98	71	
Oct 8	65	58	60	62	66	69	74	69	72	76	78	62	56	56	52	50	50	59	59	68	71	79	78	83	50	83	66	
Oct 9	81	79	81	84	85	82	84	85	79	72	64	58	54	46	41	35	36	40	47	51	52	55	56	58	35	85	63	
Oct 10	63	72	80	82	81	82	87	88	80	69	59	52	47	45	43	40	40	42	53	68	82	84	75	74	40	88	66	
Oct 11	80	82	78	83	86	88	86	84	78	61	48	40	34	30	27	28	29	39	41	48	49	46	42	42	27	88	56	
Oct 12	42	45	48	49	50	51	54	68	66	76	86	72	62	59	53	45	47	48	50	54	56	57	63	65	42	86	57	
Oct 13	70	74	79	85	87	89	91	93	90	77	68	56	47	46	42	39	44	51	56	64	74	76	82	86	39	93	69	
Oct 14	99	100	100	100	100	100	100	100	98	97	95	91	86	80	81	88	95	99	100	100	100	100	97	95	80	100	96	
Oct 15	96	98	99	100	100	99	97	97	95	92	88	83	78	70	69	72	73	85	98	100	100	100	100	100	69	100	91	
Oct 16	100	100	100	100	100	99	98	99	96	93	88	85	80	64	55	51	52	55	57	62	69	80	87	91	51	100	81	
Oct 17	93	95	96	98	99	98	99	100	100	99	90	88	78	70	64	59	56	59	63	73	74	73	74	76	56	100	82	
Oct 18	77	77	89	88	88	92	92	89	89	86	81	74	67	60	62	59	58	66	74	69	62	62	68	74	58	92	75	
Oct 19	77	94	100	100	100	100	100	100	100	100	100	100	98	97	95	96	96	95	99	100	100	100	100	100	77	100	98	
Oct 20	100	100	100	100	100	100	100	100	100	100	100	100	100	98	93	90	87	90	94	96	98	100	100	100	87	100	98	
Oct 21	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94	99	100	97	99	100	100	100	99	100	94	100	100	
Oct 22	99	100	100	98	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	100	100	
Oct 23	100	100	100	100	100	100	100	97	92	89	85	80	76	74	72	73	86	93	94	94	89	84	80	80	72	100	89	
Oct 24	99	100	98	97	96	97	97	96	95	94	91	86	85	78	74	71	72	73	74	76	75	77	83	81	71	100	86	
Oct 25	80	80	79	88	99	100	99	94	99	100	100	99	84	75	69	68	69	73	76	78	75	68	67	67	67	100	83	
Oct 26	68	73	75	76	78	76	75	73	72	71	67	65	62	60	56	54	54	60	70	79	83	76	77	78	54	83	70	
Oct 27	78	82	89	92	93	94	95	96	80	71	68	73	76	73	71	78	74	82	85	70	73	65	61	61	61	96	78	
Oct 28	58	67	74	63	63	69	68	77	83	72	68	69	66	64	61	63	69	85	89	89	88	88	89	90	58	90	73	
Oct 29	92	92	92	91	92	92	92	92	88	82	74	56	49	44	38	43	43	47	52	54	57	59	63	66	38	92	69	
Oct 30	72	75	77	79	80	80	80	78	77	75	71	68	83	100	99	100	100	100	99	100	100	100	97	92	68	100	87	
Oct 31	95	93	85	90	86	87	90	97	99	97	97	94	88	81	79	79	77	83	84	82	84	84	81	83	77	99	87	
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diurnal Average	79.8	81.9	83.7	84.9	86.0	86.8	87.3	87.6	86.1	82.1	78.1	73.2	68.6	64.9	62.4	61.9	62.8	66.6	70.7	74.5	77.2	77.2	77.6	78.7				

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 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

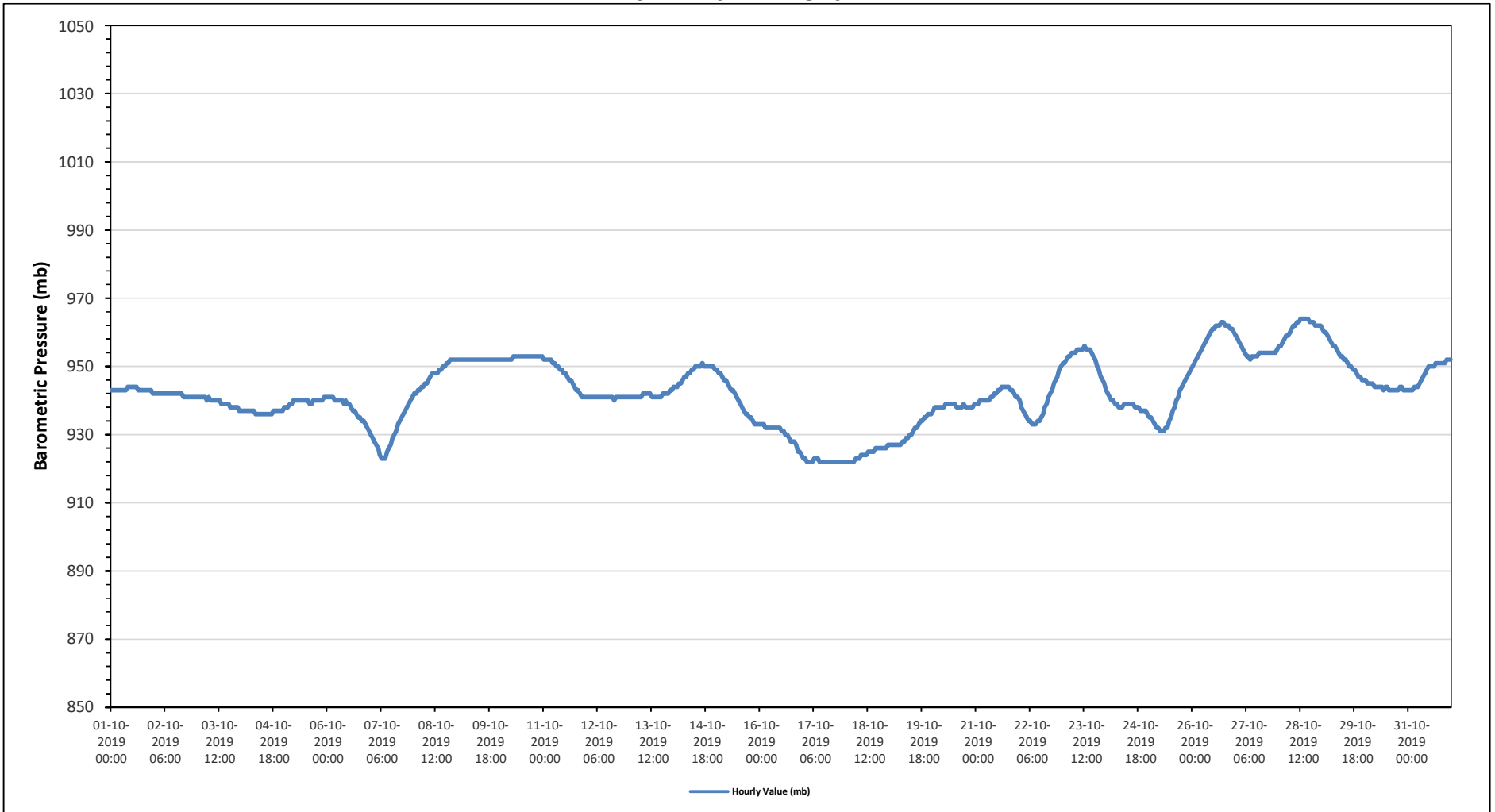
Maximum Hourly Value:	964 mb on October 28 at hour 12	Hours in Service:	744
Maximum Daily Value:	961 mb on	Hours of Data:	744
Minimum Hourly Value:	922 mb on October 17 at hour 2	Hours of Missing Data:	0
Minimum Daily Value:	922 mb on October 17	Hours of Calibration:	0
Monthly Average:	942 mb	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	943	943	943	943	943	943	943	943	943	944	944	944	944	944	944	943	943	943	943	943	943	943	942	942	944	944	943	
Oct 2	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	941	941	941	941	941	941	941	941	941	941	941	942
Oct 3	941	941	941	941	941	940	941	940	940	940	940	940	939	939	939	939	939	939	938	938	938	938	937	937	937	937	940	
Oct 4	937	937	937	937	937	937	937	937	936	936	936	936	936	936	936	936	936	936	936	937	937	937	937	937	937	937	937	
Oct 5	938	938	938	939	939	940	940	940	940	940	940	940	939	939	940	940	940	940	940	940	940	940	941	941	941	941	940	
Oct 6	941	941	941	941	940	940	940	940	940	940	939	940	939	939	938	937	937	936	935	935	934	934	933	932	931	931	941	
Oct 7	930	929	928	927	926	924	923	923	923	923	925	926	927	929	930	931	933	934	935	936	937	938	939	940	941	941	931	
Oct 8	942	942	943	943	944	944	945	945	946	947	948	948	948	948	949	949	950	950	951	951	952	952	952	952	952	952	948	
Oct 9	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	
Oct 10	952	952	952	952	952	952	952	952	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	
Oct 11	952	952	952	952	952	951	951	950	950	949	949	948	948	947	946	946	945	944	943	943	942	941	941	941	941	941	947	
Oct 12	941	941	941	941	941	941	941	941	941	941	941	941	941	941	941	940	941	941	941	941	941	941	941	941	941	941	941	
Oct 13	941	941	941	941	941	941	941	942	942	942	942	941	941	941	941	941	941	941	942	942	942	942	943	943	943	943	942	
Oct 14	944	944	944	945	945	946	947	947	948	948	949	949	950	950	950	950	951	950	950	950	950	950	950	949	949	949	948	
Oct 15	949	948	948	947	946	946	945	944	943	943	942	941	940	939	938	937	936	936	935	935	934	933	933	933	933	933	940	
Oct 16	933	933	933	932	932	932	932	932	932	932	932	932	931	931	930	930	929	928	928	928	927	925	925	924	924	930	930	
Oct 17	923	923	922	922	922	922	923	923	923	923	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	
Oct 18	922	922	922	922	922	923	923	923	924	924	924	924	925	925	925	925	926	926	926	926	926	926	926	927	927	927	924	
Oct 19	927	927	927	927	927	927	927	928	928	929	929	930	930	931	932	932	933	934	934	935	935	936	936	936	936	936	931	
Oct 20	937	938	938	938	938	938	938	939	939	939	939	939	939	938	938	938	938	939	938	938	938	938	938	939	939	939	938	
Oct 21	939	939	940	940	940	940	940	940	941	941	942	942	943	943	944	944	944	944	944	943	943	942	941	941	941	941	942	
Oct 22	940	938	937	936	935	934	934	933	933	933	933	934	934	935	936	938	939	941	942	943	945	946	947	949	950	949	942	
Oct 23	951	951	952	953	953	954	954	954	955	955	955	955	955	956	955	955	955	954	953	952	950	949	947	946	945	945	945	
Oct 24	943	942	941	940	940	939	939	938	938	938	939	939	939	939	939	939	938	938	938	938	937	937	937	936	936	936	939	
Oct 25	935	935	934	933	932	932	931	931	931	932	932	934	935	937	938	940	941	943	944	945	946	947	948	949	949	949	949	
Oct 26	950	951	952	953	954	955	956	957	958	959	960	961	961	962	962	962	963	963	962	962	962	962	961	961	960	960	959	
Oct 27	959	958	957	956	955	954	953	953	952	953	953	953	953	954	954	954	954	954	954	954	954	954	954	955	955	954	954	
Oct 28	956	956	957	958	959	959	960	961	962	963	963	964	964	964	964	964	963	963	963	963	962	962	962	962	962	962	961	
Oct 29	961	960	960	959	958	957	956	956	955	954	953	953	952	952	951	950	950	949	949	948	947	947	946	946	946	946	953	
Oct 30	946	945	945	945	945	944	944	944	944	944	943	944	944	943	943	943	943	943	943	944	944	943	943	943	943	943	944	
Oct 31	943	943	943	944	944	944	945	946	947	948	949	950	950	950	950	951	951	951	951	951	951	951	952	952	952	952	948	
Diurnal Maximum	961	960	960	959	959	959	960	961	962	962	963	963	964	964	964	964	964	963	963	963	963	962	962	962	962	962	962	
Diurnal Average	942	942	942	942	942	942	942	942	942	942	942	942	942	943	943	943	943	943	943	943	943	943	943	943	943	943	943	

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 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

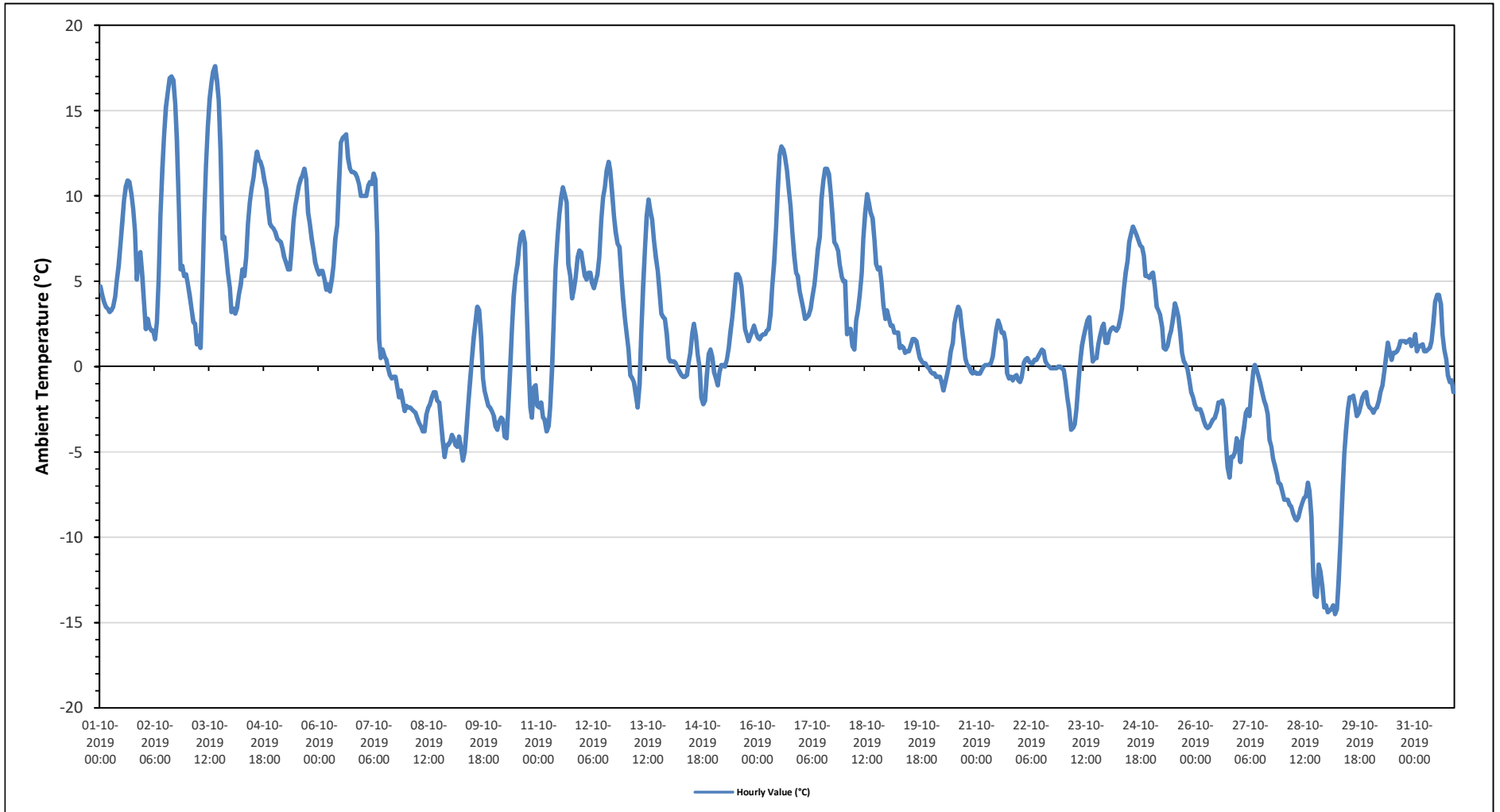
Maximum Hourly Value:	17.6 °C	on October 3 at hour 15	Hours in Service:	744
Maximum Daily Value:	9.0 °C	on	Hours of Data:	744
Minimum Hourly Value:	-14.5 °C	on October 29 at hour 6	Hours of Missing Data:	0
Minimum Daily Value:	-9.1 °C	on October 28	Hours of Calibration:	0
Monthly Average:	2.3 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	4.7	4.2	3.8	3.5	3.4	3.2	3.3	3.5	4.1	5.0	5.9	7.2	8.4	9.8	10.6	10.9	10.8	10.1	9.2	7.9	5.1	6.3	6.7	5.3	3.2	10.9	6.4
Oct 2	3.6	2.2	2.8	2.3	2.1	2.1	1.6	2.6	5.2	8.9	11.6	13.5	15.2	16.1	16.9	17.0	16.8	15.4	13.3	9.5	5.7	5.9	5.3	5.4	1.6	17.0	8.4
Oct 3	4.8	4.2	3.4	2.6	2.5	1.3	1.8	1.1	4.7	8.8	11.8	14.0	15.7	16.7	17.3	17.6	16.7	15.6	12.6	7.5	7.6	6.6	5.5	4.6	1.1	17.6	8.5
Oct 4	3.2	3.4	3.1	3.4	4.2	4.8	5.7	5.3	6.4	8.4	9.6	10.4	11.1	11.9	12.6	12.1	12.0	11.6	10.9	10.4	9.4	8.4	8.2	8.1	3.1	12.6	8.1
Oct 5	7.9	7.5	7.4	7.3	6.9	6.4	6.1	5.7	5.7	6.9	8.5	9.4	10.0	10.6	11.0	11.2	11.6	11.0	9.0	8.4	7.5	6.8	6.1	5.7	5.7	11.6	8.1
Oct 6	5.4	5.6	5.6	5.1	4.5	4.8	4.4	5.1	5.9	7.5	8.3	10.6	13.1	13.4	13.5	13.6	12.2	11.6	11.4	11.4	11.3	11.1	10.7	10.0	4.4	13.6	9.0
Oct 7	10.0	10.0	10.0	10.6	10.8	10.7	11.3	11.0	7.8	1.6	0.5	1.0	0.6	0.4	-0.1	-0.5	-0.7	-0.6	-0.6	-1.2	-1.8	-1.4	-2.0	-2.6	-2.6	11.3	3.5
Oct 8	-2.3	-2.4	-2.4	-2.5	-2.6	-2.7	-3.0	-3.3	-3.5	-3.8	-3.8	-2.8	-2.4	-2.2	-1.8	-1.5	-1.5	-2.0	-2.1	-3.1	-4.3	-5.3	-4.6	-4.6	-5.3	-1.5	-2.9
Oct 9	-4.4	-4.0	-4.2	-4.6	-4.7	-4.1	-4.7	-5.5	-5.0	-3.8	-2.2	-0.8	0.4	1.7	2.7	3.5	3.3	1.7	-0.7	-1.4	-1.9	-2.3	-2.4	-2.6	-5.5	3.5	-1.9
Oct 10	-2.9	-3.5	-3.7	-3.2	-3.0	-3.1	-4.1	-4.2	-2.5	-0.2	2.3	4.1	5.3	6.0	7.0	7.7	7.9	7.3	3.8	0.3	-2.4	-3.0	-1.2	-1.1	-4.2	7.9	0.6
Oct 11	-2.3	-2.4	-2.1	-3.0	-3.1	-3.8	-3.5	-2.4	-0.1	3.1	5.7	7.6	8.9	9.9	10.5	10.1	9.6	6.0	5.3	4.0	4.5	5.2	6.4	6.8	-3.8	10.5	3.4
Oct 12	6.7	6.0	5.3	5.1	5.5	5.5	4.9	4.6	5.0	5.4	6.4	8.6	9.9	10.5	11.5	12.0	11.5	10.2	8.8	7.9	7.2	7.0	5.3	4.0	4.0	12.0	7.3
Oct 13	2.8	1.9	1.0	-0.5	-0.7	-0.9	-1.6	-2.4	-1.0	1.9	4.7	7.0	8.8	9.8	9.1	8.6	7.4	6.4	5.6	4.5	3.1	2.9	2.8	1.9	-2.4	9.8	3.5
Oct 14	0.5	0.3	0.3	0.3	0.2	-0.1	-0.3	-0.5	-0.6	-0.6	-0.5	0.2	0.8	2.0	2.5	1.8	0.7	-0.1	-1.8	-2.2	-2.0	-0.6	0.7	1.0	-2.2	2.5	0.1
Oct 15	0.6	-0.3	-0.7	-1.1	-0.3	0.1	0.1	0.0	0.4	1.1	2.0	2.9	4.1	5.4	5.4	5.2	4.7	3.5	2.2	1.8	1.5	1.8	2.1	2.4	-1.1	5.4	1.9
Oct 16	2.0	1.7	1.6	1.8	1.9	1.9	2.1	2.2	3.1	4.7	6.1	8.1	10.6	12.4	12.9	12.7	12.3	11.5	10.4	9.4	7.9	6.5	5.5	5.3	1.6	12.9	6.4
Oct 17	4.4	3.9	3.4	2.8	2.9	3.0	3.4	4.1	4.8	5.7	6.9	7.6	9.8	10.9	11.6	11.3	10.2	8.9	7.3	7.1	6.8	6.0	5.3	2.8	2.8	11.6	6.7
Oct 18	5.0	5.0	1.9	2.2	2.2	1.2	1.0	2.7	3.3	4.2	5.5	7.5	9.0	10.1	9.6	9.0	8.7	7.4	6.0	5.7	5.8	4.9	3.6	2.8	1.0	10.1	5.2
Oct 19	3.3	2.8	2.4	2.4	2.0	2.0	2.0	1.1	1.2	1.1	0.8	0.9	0.9	1.2	1.6	1.6	1.5	1.0	0.5	0.3	0.2	0.2	0.0	-0.1	-0.1	3.3	1.3
Oct 20	-0.3	-0.4	-0.4	-0.6	-0.6	-0.6	-0.9	-1.4	-0.9	-0.5	0.1	0.9	1.4	2.5	3.1	3.5	3.3	2.3	1.4	0.5	0.1	0.0	-0.3	-0.4	-1.4	3.5	0.5
Oct 21	-0.3	-0.4	-0.4	-0.4	-0.2	0.0	0.1	0.1	0.1	0.2	0.6	1.4	2.2	2.7	2.4	2.0	2.0	1.5	-0.4	-0.7	-0.6	-0.8	-0.6	-0.5	-0.8	2.7	0.4
Oct 22	-0.8	-0.9	-0.6	0.2	0.4	0.5	0.3	0.2	0.2	0.4	0.4	0.6	0.8	1.0	0.9	0.3	0.1	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.9	1.0	0.2
Oct 23	-0.1	-0.2	-0.9	-1.8	-2.5	-3.7	-3.6	-3.4	-2.5	-1.0	0.2	1.2	1.8	2.2	2.7	2.9	1.3	0.3	0.5	0.5	1.3	1.8	2.3	2.5	-3.7	2.9	0.1
Oct 24	1.4	1.4	2.0	2.2	2.3	2.2	2.1	2.3	2.8	3.4	4.5	5.5	6.2	7.3	7.8	8.2	8.0	7.7	7.4	7.1	7.0	6.5	5.3	5.3	1.4	8.2	4.8
Oct 25	5.2	5.4	5.5	4.7	3.5	3.3	3.0	2.3	1.1	1.0	1.2	1.8	2.1	2.8	3.7	3.4	2.9	1.9	0.8	0.3	0.1	-0.2	-0.8	-1.5	-1.5	5.5	2.2
Oct 26	-1.8	-2.2	-2.5	-2.5	-2.5	-2.8	-3.2	-3.5	-3.6	-3.5	-3.3	-3.1	-3.0	-2.6	-2.1	-2.1	-2.0	-2.4	-4.3	-5.9	-6.5	-5.3	-5.3	-5.0	-6.5	-1.8	-3.4
Oct 27	-4.2	-4.5	-5.6	-4.3	-3.6	-2.7	-2.5	-2.9	-1.5	-0.3	0.1	-0.2	-0.6	-1.0	-1.5	-2.0	-2.3	-2.8	-4.3	-4.7	-5.4	-5.8	-6.3	-6.8	-6.8	0.1	-3.2
Oct 28	-6.9	-7.3	-7.8	-7.8	-7.8	-8.1	-8.2	-8.6	-8.9	-9.0	-8.8	-8.3	-8.0	-7.7	-7.6	-6.8	-7.3	-8.8	-12.3	-13.4	-13.5	-11.6	-12.0	-12.9	-13.5	-6.8	-9.1
Oct 29	-14.1	-14.0	-14.4	-14.3	-14.2	-14.0	-14.5	-14.2	-12.6	-10.2	-7.5	-5.1	-3.8	-2.5	-1.8	-1.8	-1.7	-2.3	-2.9	-2.7	-2.3	-1.8	-1.6	-1.5	-14.5	-1.5	-7.3
Oct 30	-2.2	-2.4	-2.5	-2.7	-2.5	-2.4	-2.0	-1.5	-1.1	-0.3	0.6	1.4	0.9	0.4	0.8	0.8	0.9	1.1	1.5	1.5	1.5	1.4	1.5	1.6	-2.7	1.6	-0.2
Oct 31	1.2	1.4	1.9	0.9	1.2	1.2	1.3	0.9	0.9	1.0	1.1	1.5	2.6	3.8	4.2	4.2	3.7	1.9	1.0	0.4	-0.5	-0.9	-0.8	-1.5	-1.5	4.2	1.4
Diurnal Maximum	10.0	10.0	10.0	10.6	10.8	10.7	11.3	11.0	7.8	8.9	11.8	14.0	15.7	16.7	17.3	17.6	16.8	15.6	13.3	11.4	11.3	11.1	10.7	10.0			
Diurnal Average	1.0	0.7	0.4	0.3	0.3	0.2	0.1	0.0	0.6	1.5	2.6	3.7	4.6	5.3	5.7	5.7	5.3	4.5	3.3	2.3	1.7	1.6	1.5	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 Average for AT - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

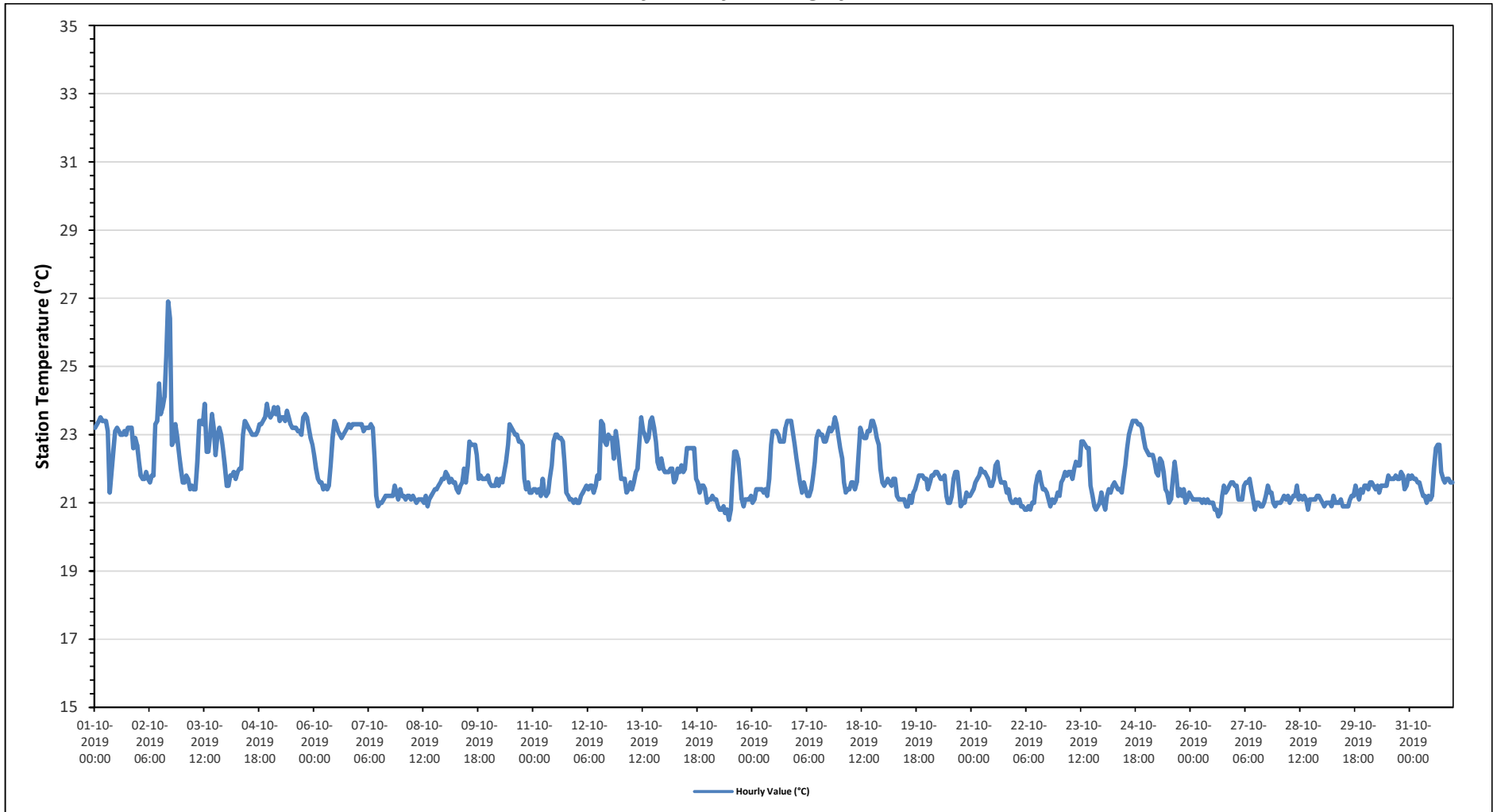
Maximum Hourly Value:	26.9 °C	on October 2 at hour 16	Hours in Service:	744
Maximum Daily Value:	23.4 °C	on	Hours of Data:	744
Minimum Hourly Value:	20.5 °C	on October 15 at hour 11	Hours of Missing Data:	0
Minimum Daily Value:	21.1 °C	on October 29	Hours of Calibration:	0
Monthly Average:	21.9 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	23.2	23.3	23.4	23.5	23.4	23.4	23.4	23.1	21.3	21.9	22.5	23.1	23.2	23.1	23.0	23.0	23.1	23.0	23.2	23.2	22.6	22.9	22.7	21.3	23.5	23.0	
Oct 2	22.2	21.8	21.7	21.7	21.9	21.7	21.6	21.8	21.8	23.3	23.4	24.5	23.6	23.8	24.1	25.3	26.9	26.4	22.7	22.8	23.3	22.9	22.4	22.0	21.6	26.9	23.1
Oct 3	21.6	21.6	21.8	21.7	21.4	21.5	21.4	21.4	22.2	23.4	23.4	23.3	23.9	22.5	22.5	23.0	23.6	23.2	22.4	23.0	23.2	23.0	22.6	22.1	21.4	23.9	22.5
Oct 4	21.5	21.5	21.8	21.8	21.9	21.7	21.9	22.0	22.0	23.0	23.4	23.3	23.2	23.1	23.0	23.0	23.0	23.1	23.3	23.3	23.4	23.5	23.9	23.6	21.5	23.9	22.7
Oct 5	23.5	23.6	23.8	23.6	23.8	23.4	23.5	23.5	23.4	23.7	23.5	23.3	23.2	23.2	23.2	23.1	23.0	23.5	23.6	23.5	23.2	22.9	22.7	22.7	23.8	23.4	
Oct 6	22.4	22.0	21.7	21.6	21.6	21.4	21.5	21.4	21.5	22.1	22.9	23.4	23.3	23.1	23.0	22.9	23.0	23.1	23.2	23.3	23.2	23.3	23.3	21.4	23.4	22.6	
Oct 7	23.3	23.3	23.3	23.1	23.2	23.2	23.2	23.3	23.2	22.3	21.2	20.9	21.0	21.0	21.1	21.2	20.9	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.7	23.3	22.0
Oct 8	21.2	21.2	21.1	21.2	21.2	21.1	21.2	21.1	21.0	21.1	21.1	21.1	21.0	21.2	20.9	21.1	21.2	21.3	21.4	21.4	21.5	21.6	21.7	21.7	20.9	21.7	21.2
Oct 9	21.9	21.8	21.6	21.7	21.6	21.6	21.4	21.3	21.5	21.6	22.0	21.6	22.1	22.8	22.7	22.7	22.4	21.7	21.8	21.7	21.7	21.7	21.8	21.3	22.8	21.9	
Oct 10	21.6	21.5	21.5	21.5	21.7	21.5	21.7	21.6	21.9	22.2	22.7	23.3	23.2	23.1	23.0	23.0	22.8	22.8	22.7	21.7	21.4	21.6	21.3	21.3	21.3	23.3	22.1
Oct 11	21.4	21.4	21.3	21.4	21.2	21.7	21.3	21.2	21.3	21.7	22.1	22.8	23.0	23.0	22.9	22.9	22.8	22.2	21.3	21.2	21.1	21.0	21.1	21.0	23.0	21.8	
Oct 12	21.0	21.0	21.2	21.3	21.4	21.5	21.4	21.5	21.5	21.3	21.5	21.8	21.7	23.4	23.3	22.8	22.7	23.0	22.9	22.9	22.3	23.1	22.8	22.2	21.0	23.4	22.1
Oct 13	21.7	21.7	21.7	21.3	21.4	21.6	21.4	21.6	21.9	22.0	22.8	23.5	23.1	23.0	22.8	22.9	23.4	23.5	23.2	22.8	22.2	22.0	22.3	22.0	21.3	23.5	22.3
Oct 14	21.9	21.9	21.9	22.0	22.0	21.6	21.7	22.0	21.9	22.1	21.9	22.0	22.6	22.6	22.6	22.6	22.6	21.7	21.6	21.3	21.5	21.5	21.4	21.0	21.0	22.6	21.9
Oct 15	21.1	21.1	21.2	21.1	21.1	20.9	20.8	20.8	20.9	20.7	20.8	20.5	20.8	21.7	22.5	22.5	22.3	21.8	21.1	20.9	21.1	21.1	21.2	20.5	22.5	21.2	
Oct 16	21.0	21.1	21.4	21.4	21.4	21.4	21.3	21.4	21.2	21.7	22.7	23.1	23.1	23.1	23.0	22.8	22.8	22.8	23.2	23.4	23.4	23.1	22.7	21.0	23.4	22.3	
Oct 17	22.3	21.9	21.6	21.3	21.6	21.4	21.2	21.4	21.7	22.2	22.9	23.1	23.0	23.0	22.8	22.8	23.0	23.2	23.1	23.2	23.5	23.3	22.9	21.2	23.5	22.4	
Oct 18	22.6	22.3	21.6	21.3	21.4	21.4	21.6	21.6	21.4	21.6	22.5	23.2	23.0	22.9	22.9	23.1	23.1	23.4	23.4	23.2	22.9	22.7	22.0	21.6	21.3	23.4	22.4
Oct 19	21.5	21.6	21.7	21.6	21.5	21.7	21.7	21.2	21.1	21.1	21.1	21.1	20.9	20.9	21.2	21.0	21.3	21.4	21.6	21.8	21.8	21.7	21.7	20.9	21.8	21.4	
Oct 20	21.4	21.6	21.8	21.8	21.9	21.9	21.8	21.7	21.7	21.8	21.2	21.0	21.2	21.0	21.2	21.7	21.9	21.9	21.4	20.9	21.0	21.3	21.2	21.2	20.9	21.9	21.5
Oct 21	21.3	21.4	21.6	21.7	21.8	22.0	21.9	21.9	21.8	21.7	21.5	21.5	21.7	22.1	22.2	21.8	21.6	21.6	21.6	21.3	21.4	21.1	21.0	21.0	21.0	22.2	21.6
Oct 22	21.1	21.0	21.1	20.9	20.9	20.8	20.8	20.9	20.8	21.0	21.0	21.5	21.8	21.9	21.6	21.4	21.4	21.3	21.1	20.9	21.1	21.0	21.1	21.3	20.8	21.9	21.2
Oct 23	21.2	21.6	21.7	21.9	21.8	21.9	21.9	21.7	22.0	22.2	22.1	22.1	22.8	22.8	22.7	22.6	22.6	21.5	21.2	20.9	20.8	20.9	21.0	21.3	20.8	22.8	21.8
Oct 24	21.0	20.8	21.2	21.4	21.3	21.5	21.6	21.5	21.4	21.3	21.7	22.1	22.6	23.0	23.2	23.4	23.4	23.4	23.3	23.2	22.9	22.6	22.6	20.8	23.4	22.2	
Oct 25	22.5	22.4	22.4	22.4	22.2	21.9	21.8	22.3	22.2	21.9	21.4	21.3	21.0	21.1	21.7	22.2	21.8	21.2	21.4	21.2	21.4	21.0	21.1	21.3	21.0	22.5	21.7
Oct 26	21.2	21.1	21.1	21.1	21.1	21.1	21.0	21.1	21.0	21.1	21.0	21.0	20.8	20.8	20.6	20.7	21.2	21.5	21.3	21.4	21.5	21.6	21.6	20.6	21.6	21.1	
Oct 27	21.5	21.5	21.1	21.1	21.1	21.5	21.6	21.6	21.7	21.4	21.1	20.8	21.0	21.0	20.9	20.9	21.0	21.2	21.5	21.3	21.3	21.0	20.9	21.0	20.8	21.7	21.2
Oct 28	21.0	21.0	21.1	21.2	21.1	21.2	21.0	21.1	21.2	21.2	21.5	21.1	21.2	21.1	21.2	21.1	20.8	21.1	21.1	21.1	21.2	21.2	21.1	20.8	21.5	21.1	
Oct 29	21.0	20.9	21.0	21.0	21.0	20.9	21.2	21.0	21.0	21.0	21.1	20.9	20.9	20.9	21.1	21.2	21.2	21.5	21.3	21.1	21.4	21.3	21.5	20.9	21.5	21.1	
Oct 30	21.5	21.4	21.6	21.6	21.5	21.4	21.5	21.3	21.5	21.5	21.5	21.5	21.8	21.7	21.7	21.7	21.8	21.7	21.7	21.9	21.8	21.4	21.5	21.8	21.3	21.9	21.6
Oct 31	21.7	21.8	21.7	21.7	21.6	21.6	21.4	21.2	21.2	21.0	21.2	21.1	21.2	22.0	22.6	22.7	22.7	21.9	21.7	21.6	21.7	21.6	21.6	21.0	22.7	21.7	
Diurnal Maximum	23.5	23.6	23.8	23.6	23.8	23.4	23.5	23.5	23.4	23.7	23.5	24.5	23.9	23.8	24.1	25.3	26.9	26.4	23.5	23.6	23.5	23.5	23.9	23.6			
Daiurnal Average	21.7	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.8	21.9	22.1	22.1	22.2	22.3	22.4	22.4	22.3	22.1	22.0	22.0	21.9	21.8				

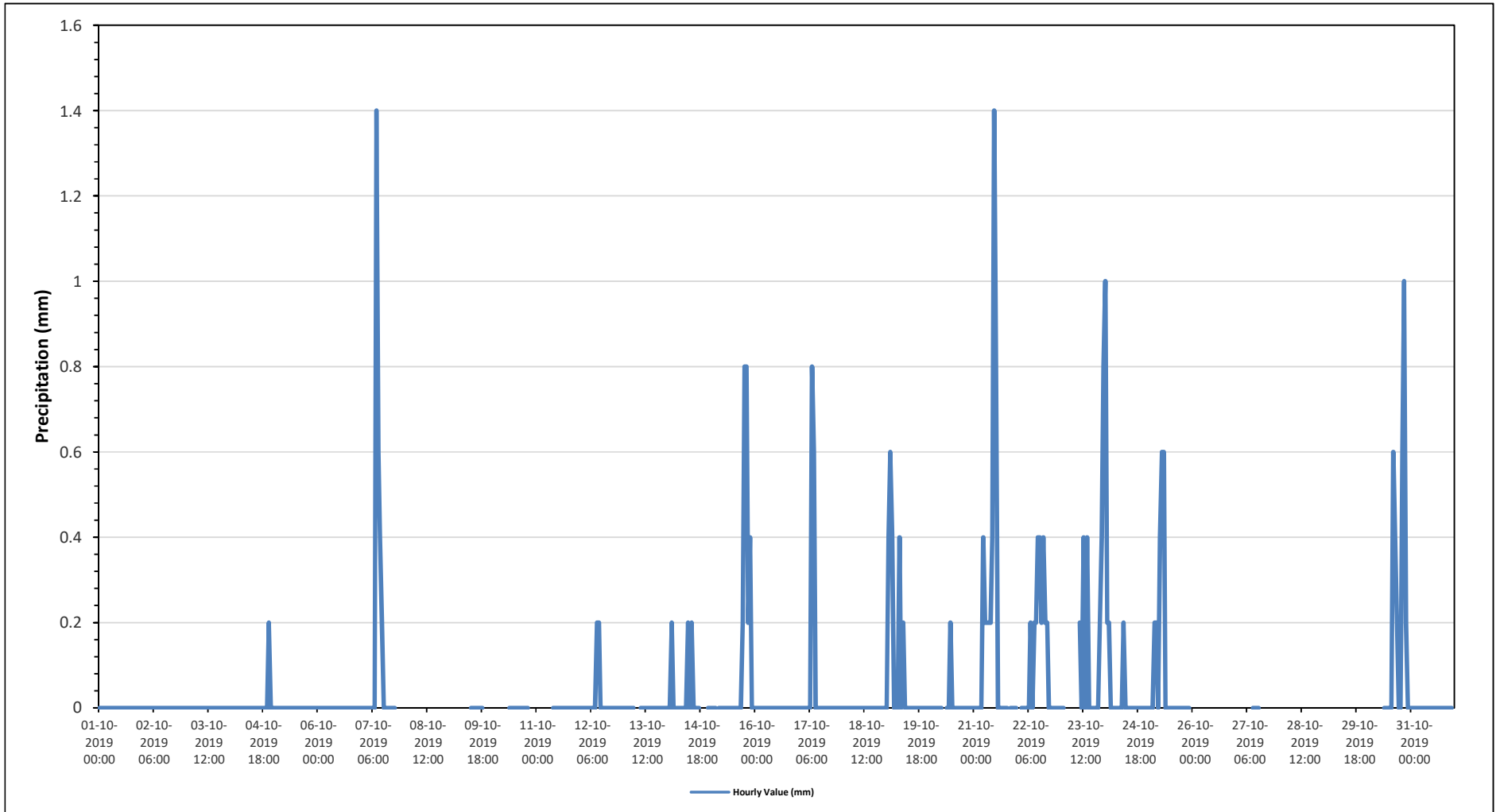
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - 986c Station



Timeseries Chart of Hourly Average for Precipitation - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

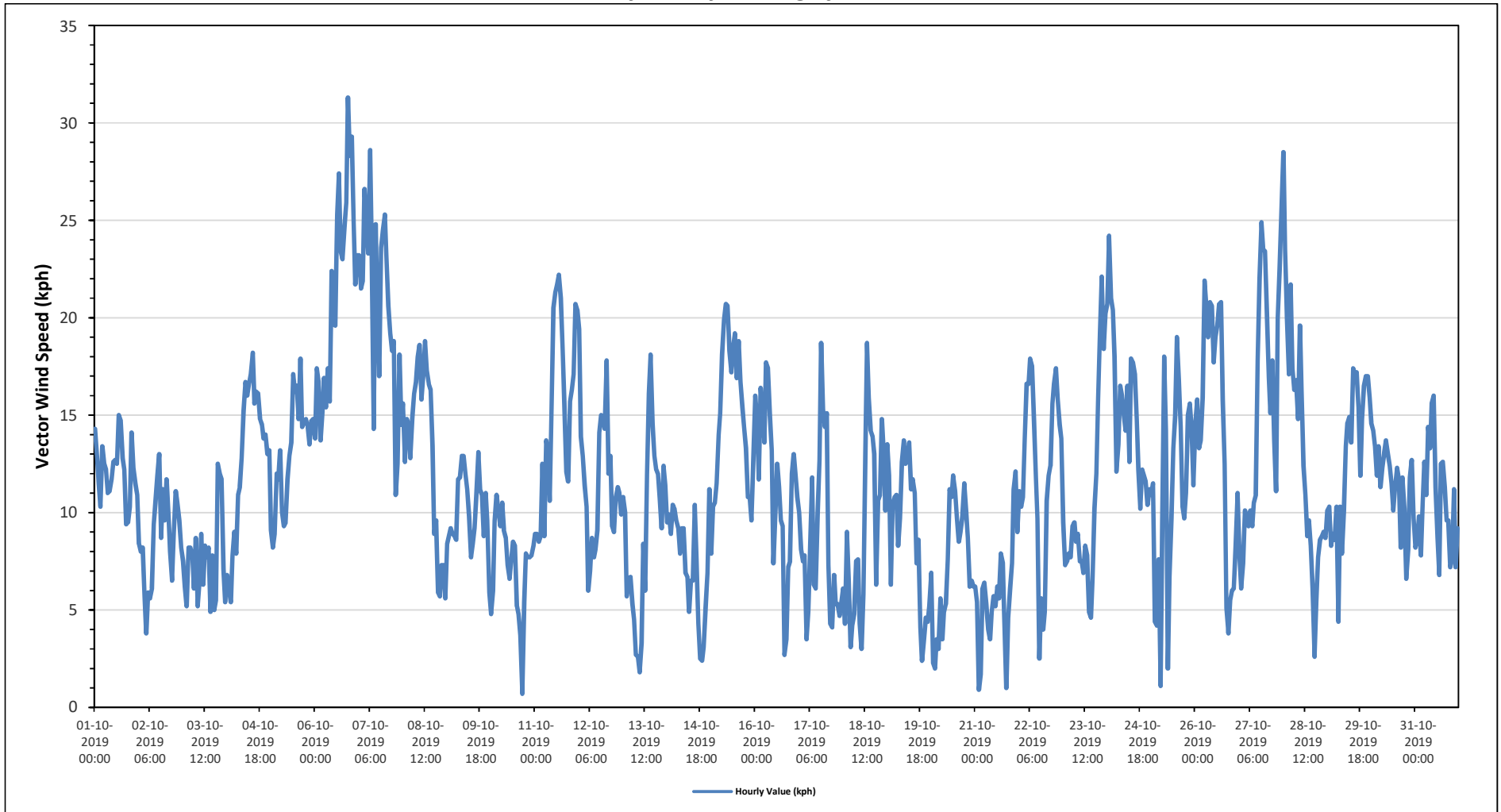
Maximum Hourly Value:	31.3 kph	on October 6 at hour 18	Hours in Service:	744
Maximum Daily Value:	21.3 kph	on	Hours of Data:	744
Minimum Hourly Value:	0.7 kph	on October 10 at hour 17	Hours of Missing Data:	0
Minimum Daily Value:	5.7 kph	on October 21	Hours of Calibration:	0
Monthly Average:	4.5 kph		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
Oct 1	14.3	13	11.5	10.3	13.4	12.5	12.2	11	11.1	11.7	12.6	12.7	12.5	15	14.7	12.8	12.2	9.4	9.5	10.3	14.1	12.3	11.5	10.9	9.4	15.0	12.1
Oct 2	8.4	8	8.2	5.6	3.8	5.9	5.6	6.1	9.4	10.5	11.9	13	8.7	11.2	9.6	11.7	9.9	8	6.5	9	11.1	10.5	9.6	8.2	3.8	13.0	8.8
Oct 3	7.5	6.2	5.2	8.2	8.2	7.8	6.1	8.7	5.2	6.6	8.9	6.3	8.3	7.7	8.2	4.9	7.8	5	5.5	12.5	12	11.7	7.1	5.4	4.9	12.5	7.5
Oct 4	6.8	6.1	5.4	7.8	9	7.9	10.9	11.3	12.8	15.2	16.7	16	16.6	17.1	18.2	15.6	16.2	16.1	14.8	14.5	13.8	14	13	13.2	5.4	18.2	12.9
Oct 5	9.1	8.2	8.9	12	11.7	13.2	10	9.3	9.5	11.7	12.9	13.6	17.1	16.2	16.5	14.8	17.9	14.4	14.6	14.8	14.4	13.5	14.7	14.8	8.2	17.9	13.1
Oct 6	13.8	17.4	16.7	13.7	15.1	16.9	15.4	17.4	15.7	22.4	19.7	19.6	25.3	27.4	23.4	23	24.6	25.9	31.3	28.3	29.3	24.9	21.7	23.2	13.7	31.3	21.3
Oct 7	23.2	21.5	21.9	26.6	25	23.3	28.6	23	14.3	24.8	20.1	17	23.6	24.5	25.3	23.1	20.6	19.2	18.3	18.8	10.9	12.5	18.1	14.5	10.9	28.6	20.8
Oct 8	15.6	12.6	14.8	14.5	12.8	14.8	16.1	16.7	18	18.6	15.8	17	18.8	17.3	16.6	16.3	13.4	8.9	9.6	5.9	5.7	7.3	7.3	5.6	5.6	18.8	13.3
Oct 9	8.4	8.8	9.2	8.9	8.8	8.6	11.7	11.8	12.9	12.9	12	11.2	9.8	7.7	8.4	9.2	11	13.1	11.2	10.9	8.8	11	9.6	5.9	5.9	13.1	10.1
Oct 10	4.8	6	9.6	10.9	10.1	9.3	10.5	9.1	8.7	7.3	6.6	7.5	8.5	8.3	5.2	4.8	3.7	0.7	5.4	7.9	7.7	7.7	7.8	8.3	0.7	10.9	7.4
Oct 11	8.9	8.9	8.5	8.8	12.5	8.8	13.7	13.1	10.6	15.3	20.5	21.3	21.7	22.2	21	18.3	15.6	12.1	11.6	15.7	16.3	17.1	20.7	20.4	8.5	22.2	15.2
Oct 12	19.4	13.9	12.9	11.4	10.3	6	7	8.7	7.7	8.1	9.1	14.1	15	14.8	14.3	17.8	12	12.9	9.3	9	10.8	11.3	11	9.9	6.0	19.4	11.5
Oct 13	10.8	10	5.7	6.6	6.7	5.3	4.5	2.7	2.6	1.8	3.3	8.4	6	12	16.1	18.1	14.6	12.9	12.2	12	10.7	9.2	12.4	11.4	1.8	18.1	9.0
Oct 14	9.5	9.9	8.9	10.4	10.2	9.6	9.2	7.9	9.2	9.2	6.9	6.7	4.9	6.5	6.5	10.4	7.6	4.3	2.5	2.4	3.1	5.1	6.9	11.2	2.4	11.2	7.5
Oct 15	7.9	10.3	10.5	11.5	14	15.1	18.1	19.9	20.7	20.6	18.3	17.2	18.5	19.2	16.9	18.8	16.7	15.4	14.4	13.3	10.8	10.8	9.6	12.7	7.9	20.7	15.1
Oct 16	16	14.7	11.7	16.4	15.1	13.6	17.7	17.4	15	13.2	7.4	9.8	12.5	11.3	9.6	9.3	2.7	3.5	7.2	7.5	12	13	11.9	10.8	2.7	17.7	11.6
Oct 17	10	8.1	7.5	7.8	3.5	4.9	8.3	11.8	6.3	6.1	9.9	12.7	18.7	15.3	14.4	15.1	7.3	4.3	4.1	6.8	5.3	5.3	4.7	5.4	3.5	18.7	8.5
Oct 18	6.1	4.3	9	6.6	3.1	4.2	4.8	7.5	7.6	4.3	3	5.8	12.9	18.7	15.9	14.2	13.9	13	6.3	10.6	10.9	14.8	13.3	10.1	3.0	18.7	9.2
Oct 19	13.5	11.9	6.3	10.4	10.8	10.9	8.3	9.7	12.6	13.7	12.5	12.7	13.6	11.2	11.7	11	7.4	8.6	4.1	2.4	3.4	4.6	4.4	5.2	2.4	13.7	9.2
Oct 20	6.9	2.3	2	3.5	3	5.6	3.5	4.9	5.3	7.6	11.2	10.8	11.9	11.1	9.7	8.5	9	9.8	11.5	10	8.7	6.2	6.5	6.2	2.0	11.9	7.3
Oct 21	6.2	5.4	0.9	1.7	6.1	6.4	5.3	4	3.5	4.9	5.7	5.2	6.2	5.6	7.9	7.4	3.8	1	4.6	6.1	7.4	11.2	12.1	9	0.9	12.1	5.7
Oct 22	11.1	10.3	10.8	13.8	16.6	16.6	17.9	17.5	14.7	11.8	9.7	2.5	5.6	4	4.9	10.6	11.9	12.4	15.6	16.6	17.4	15.8	14.5	13.8	2.5	17.9	12.4
Oct 23	9.5	7.3	7.5	7.9	7.7	9.3	9.5	8.5	8.9	7.5	7.5	6.9	8.3	7.8	4.9	4.6	6.6	10.2	12	15.9	19.2	22.1	18.4	20.2	4.6	22.1	10.3
Oct 24	20.7	24.2	21	20.4	18	12.1	13.5	16.5	16	15	14.2	16.5	12.6	17.9	17.7	17.1	14.8	12.2	10.2	12.2	11.9	11.6	10.4	11.2	10.2	24.2	15.3
Oct 25	10.9	11.5	4.4	4.2	7.6	1.1	9.5	18	14.2	2	6.7	9.7	13.3	15	19	16.8	14.4	10.3	9.7	11	15	15.6	14.2	11.4	1.1	19.0	11.1
Oct 26	14.5	15.8	13.3	13.7	15.9	21.9	20.6	19	20.8	20.6	17.7	19	19.6	20.7	20.8	15.8	12.5	5.1	3.8	5.5	6	6.1	8.3	11	3.8	21.9	14.5
Oct 27	8.1	6.1	7.4	10.1	9.8	9.3	10.1	9.3	10.5	10.9	17.8	22	24.9	23.5	23.4	20.2	16.9	15.1	17.8	13.7	11.1	20	22.5	25.7	6.1	25.7	15.3
Oct 28	28.5	23.5	20	17.1	21.7	17.4	16.3	16.8	14.8	19.6	16.2	12.4	10.9	8.8	9.6	8.3	6.1	2.6	5.4	7.7	8.6	8.8	9	8.7	2.6	28.5	13.3
Oct 29	10.1	10.3	8.3	8.9	8.6	10.3	4.4	10.3	7.9	10.1	13.4	14.6	14.9	13.6	17.4	17.1	17.2	15.4	11.9	14.8	16.5	17	17	15.9	4.4	17.4	12.7
Oct 30	14.6	14.2	13.4	11.9	13.4	11.3	12.3	13.1	13.7	13	12.4	11.5	10.1	11.3	12.3	11.7	8.2	11.8	10.2	6.6	8.1	11.8	12.7	9.7	6.6	14.6	11.6
Oct 31	8.2	8.6	9.8	7.8	10.6	12.6	10.9	14.4	13.3	15.6	16	11.3	8.7	6.8	12.5	12.6	11.3	9.6	9.6	7.2	7.6	11.2	7.2	9.2	6.8	16.0	10.5
Diurnal Maximum	29	24	22	27	25	23	29	23	21	25	21	22	25	27	25	23	25	26	31	28	29	25	23	26			
Diurnal Average	11.7	10.9	10.0	10.6	11.1	10.7	11.4	12.1	11.4	12.0	12.1	12.4	13.5	13.9	14.0	13.5	11.9	10.4	10.3	11.0	11.2	12.1	11.9	11.6			

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

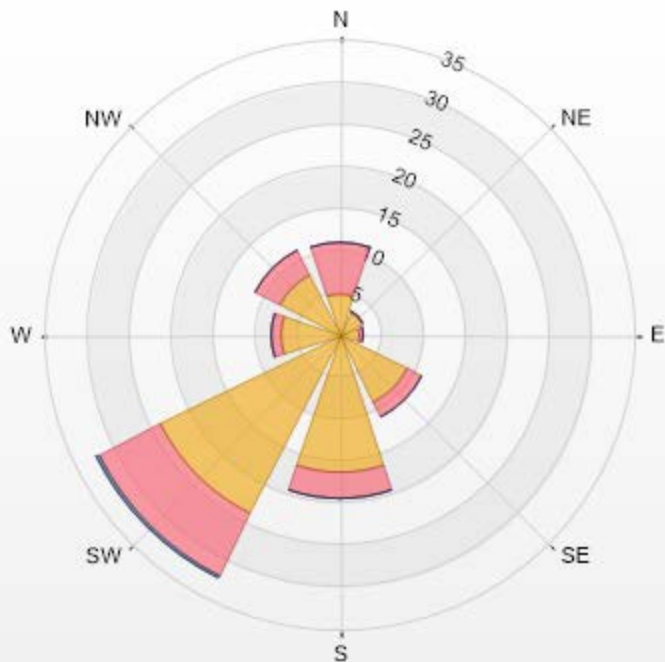
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for VWS - 986c Station



Wind: PRAMP 986c Poll.: PRAMP 986c-WDS[KPH] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.81% Valid Data: 99.06% Calm Avg: 1.20 [KPH]

Direction	6-15	15-29	29-39	>39.0	Total
N	4.88	6.24	0	0	11.12
NE	2.99	0.14	0	0	3.13
E	2.31	0.54	0	0	2.85
SE	9.09	1.76	0	0	10.85
S	16.28	3.12	0	0	19.4
SW	23.74	8.28	0.27	0	32.29
W	7.06	1.22	0	0	8.28
NW	7.87	3.39	0	0	11.26
Summary	74.22	24.69	0.27	0	99.18



PRAMP-201910

% Icon Classes (KPH) 74 6-15 23 15-29 0 29-39 0 >39.0



PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

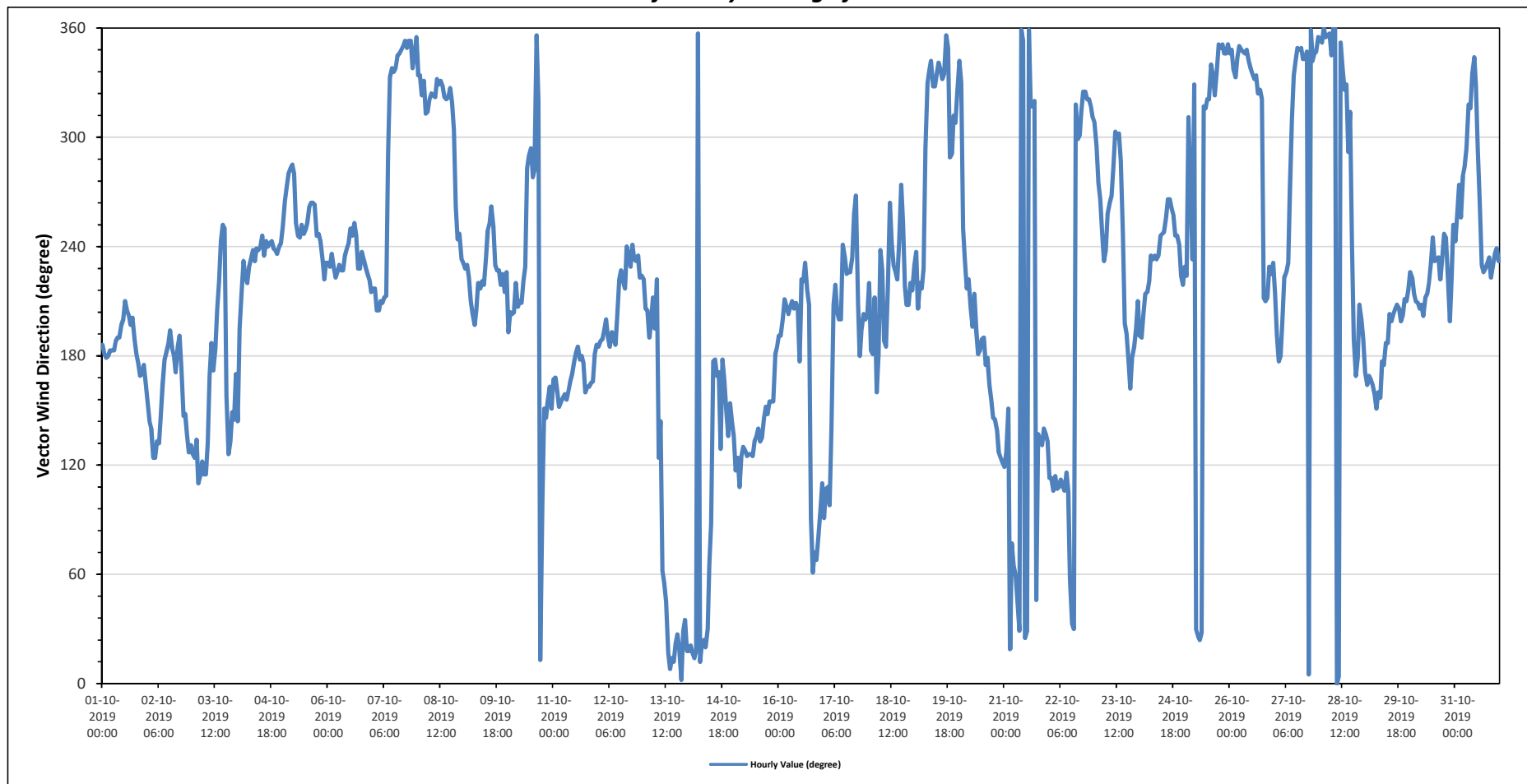
Monthly Average:	231 (SW) degree	Hours in Service:	744
		Hours of Data:	744
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Oct 1	S	S	S	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	SSE	SSE	S	SSE	187	S	
Oct 2	SSE	SE	SE	ESE	ESE	SE	SE	SE	SSE	S	S	SSW	S	S	S	S	S	S	SE	SE	SE	SE	SE	161	SSE	
Oct 3	SE	ESE	SE	ESE	ESE	ESE	ESE	ESE	SE	SSE	S	S	S	SSW	SW	WSW	WSW	WSW	SSE	SE	SE	SSE	SE	153	SSE	
Oct 4	SE	SSW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	SW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	235	SW
Oct 5	WSW	W	W	W	W	WNW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	WSW	WSW	WSW	SW	SW	255	WSW	
Oct 6	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SSW	233	SW
Oct 7	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	WNW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	NNW	N	N	NNW	NNW	N	302	WNW	
Oct 8	NNW	NNW	NW	NNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NW	NW	NW	NW	WNW	W	WSW	WSW	SW	320	NW	
Oct 9	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	WSW	WSW	W	WSW	WSW	SW	SW	SW	SW	SSW	SW	225	SW	
Oct 10	S	SSW	SSW	SSW	SW	SSW	SSW	SSW	SW	SW	W	WNW	WNW	W	W	N	NW	NNE	E	SSE	SE	SSE	SSE	212	SSW	
Oct 11	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	S	S	SSE	SSE	SSE	SSE	SSE	S	S	171	S	
Oct 12	S	S	S	SSW	SSW	S	S	S	S	S	SSW	SW	SW	SW	SW	WSW	SW	WSW	SW	SW	SW	SW	SW	213	SSW	
Oct 13	SW	SSW	SSW	S	SSW	SSW	SSW	SW	ESE	SE	ENE	NE	NE	NNE	N	NNE	NNE	NNE	NNE	NNE	N	NNE	NE	21	NNE	
Oct 14	NNE	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	ENE	E	S	SSE	S	SE	S	SSE	SSE	SE	SSE	SE	58	ENE	
Oct 15	SE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SSE	SSE	SSE	S	S	137	SE	
Oct 16	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	SW	SW	SW	SW	SSW	E	ENE	ENE	ENE	E	E	189	S	
Oct 17	E	ESE	ESE	E	SE	SSW	SW	SSW	SSW	SSW	WSW	SW	SW	SW	SW	WSW	W	SSW	S	SSW	SSW	SSW	SSW	208	SSW	
Oct 18	SW	S	S	SSW	SSE	S	SW	SW	S	S	SW	W	WSW	SW	SW	SW	WSW	W	WSW	SW	SSW	SSW	SW	222	SW	
Oct 19	SW	SW	SSW	SW	SW	SW	WNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	WNW	WNW	NW	NW	NW	307	NW	
Oct 20	NNW	NNW	WSW	SW	SW	SW	SSW	SSW	SSW	SSW	S	S	S	S	S	SSE	SSE	SE	SE	SE	SE	ESE	ESE	174	S	
Oct 21	ESE	SE	SSE	NNE	ENE	ENE	ENE	NE	NNE	N	N	NNE	NNE	N	NW	NW	NW	NE	SE	SE	SE	SE	SE	78	ENE	
Oct 22	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ENE	NNE	NNE	NW	WNW	WNW	NW	NW	NW	NW	NW	NW	47	NE	
Oct 23	NW	WNW	W	W	WSW	SW	SW	WSW	W	W	WNW	WNW	WNW	WNW	WSW	SSW	S	S	SSE	S	S	SSW	SSW	228	SW	
Oct 24	S	S	SSW	SSW	SSW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	W	W	W	WSW	WSW	WSW	WSW	SW	232	SW	
Oct 25	SW	SW	NW	W	SW	NNW	NNE	NNE	NNE	NNE	NW	NW	NW	NW	NNW	NNW	NW	NNW	N	NNW	N	NNW	NNW	337	NNW	
Oct 26	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	SSW	SSW	SSW	SW	SW	333	NNW	
Oct 27	SSW	S	S	S	SSW	SW	SW	SW	W	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	NNW	NNW	NNW	N	334	NNW	
Oct 28	N	N	N	N	N	N	NNW	N	N	N	N	N	NNW	NW	NNW	WNW	NW	WSW	S	SSE	S	SSW	SSW	346	NNW	
Oct 29	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	191	S	
Oct 30	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	WSW	SW	SW	SW	SW	WSW	WSW	SW	SSW	SW	222	SW	
Oct 31	WSW	WSW	W	WSW	W	WNW	WNW	NW	NW	NNW	NNW	NNW	WNW	W	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	271	W	

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 - 986c Station



842b STATION



PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

SULPHUR DIOXIDE (SO₂) 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 October 2 at hour 10 Hours in Service: 744

Maximum Daily Value: 0.3 ppb on Hours of Data: 706

Minimum Hourly Value: 0 ppb on October 1 at hour 0 Hours of Missing Data: 0

Minimum Daily Value: 0.0 ppb on October 1 Hours of Calibration: 38

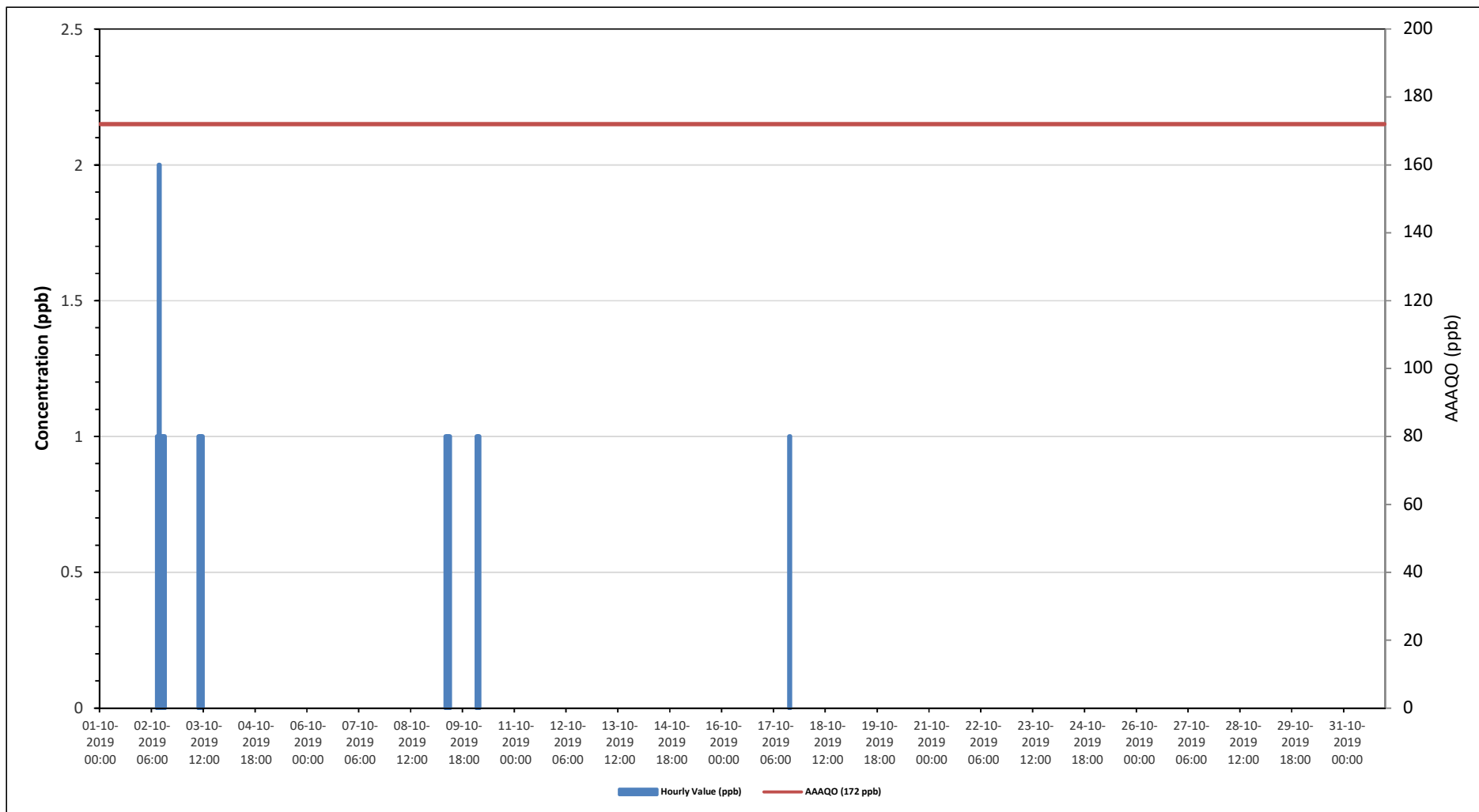
Monthly Average: 0.0 ppb Operational Uptime: 100.0

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

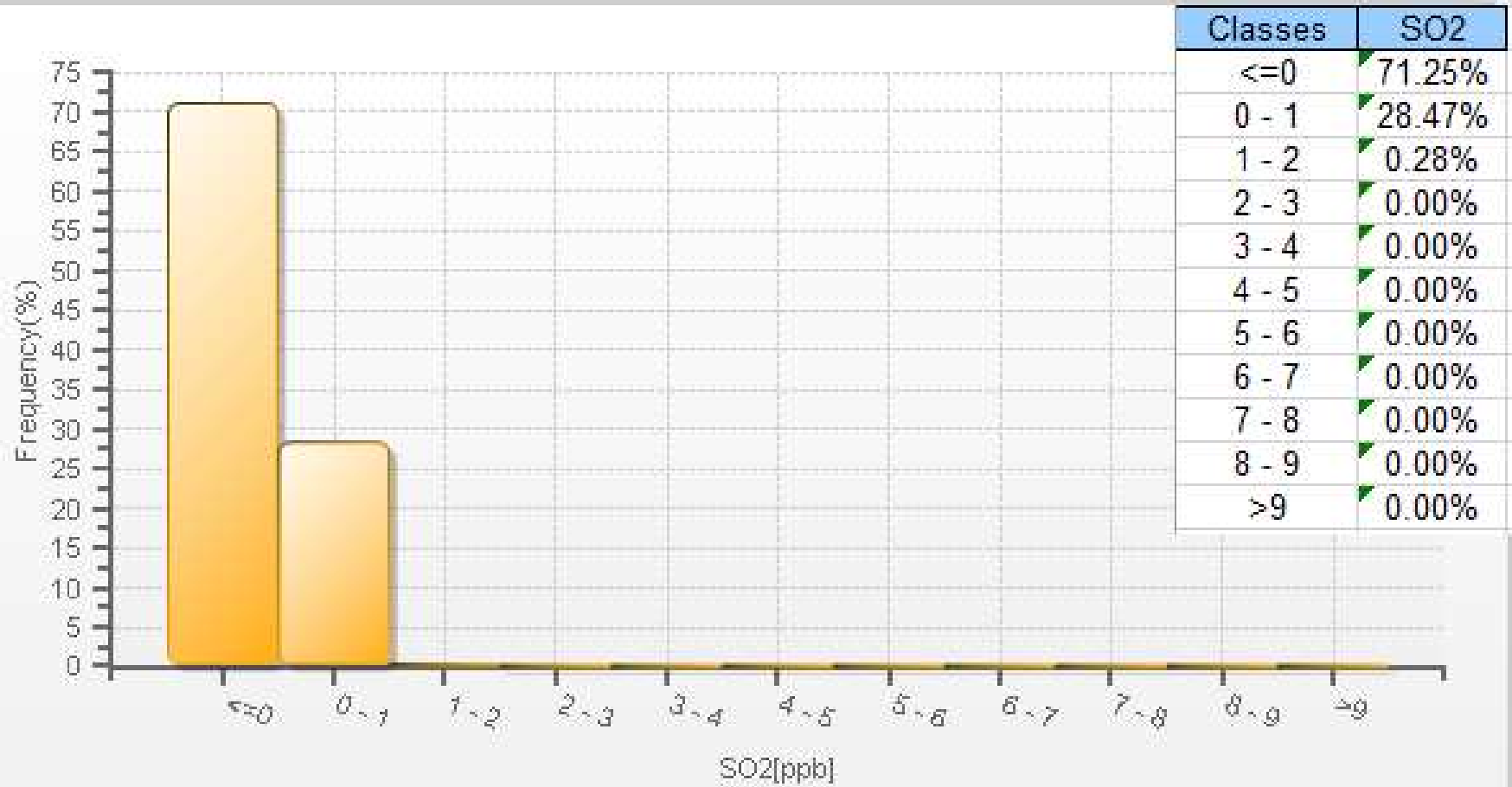
- C Calibration S Daily Zero/Span Q Quality Assurance C1 Repeat Calibration S1 Repeat Daily Zero/Span
- G Out for Repair K Collection Error N Not in Service O Operator Error P Power Failure
- R Recovery X Machine Malfunction Y Maintenance T Exceeds Temperature Limits N Not in Service

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 - 842b Station

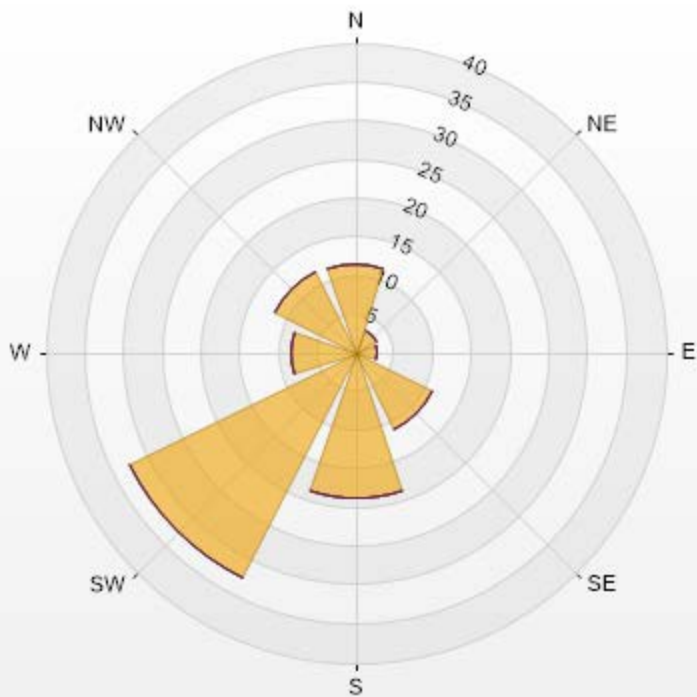


SO2[ppb] Histogram: PRAMP 842b Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.82% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	11.46	0	0	0	0	11.46
NE	3.15	0	0	0	0	3.15
E	2.87	0	0	0	0	2.87
SE	11.03	0	0	0	0	11.03
S	18.77	0	0	0	0	18.77
SW	32.52	0	0	0	0	32.52
W	8.45	0	0	0	0	8.45
NW	11.75	0	0	0	0	11.75
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)

100 0-10

0 10-50

0 50-100

0 100-172

0 >172.0



PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

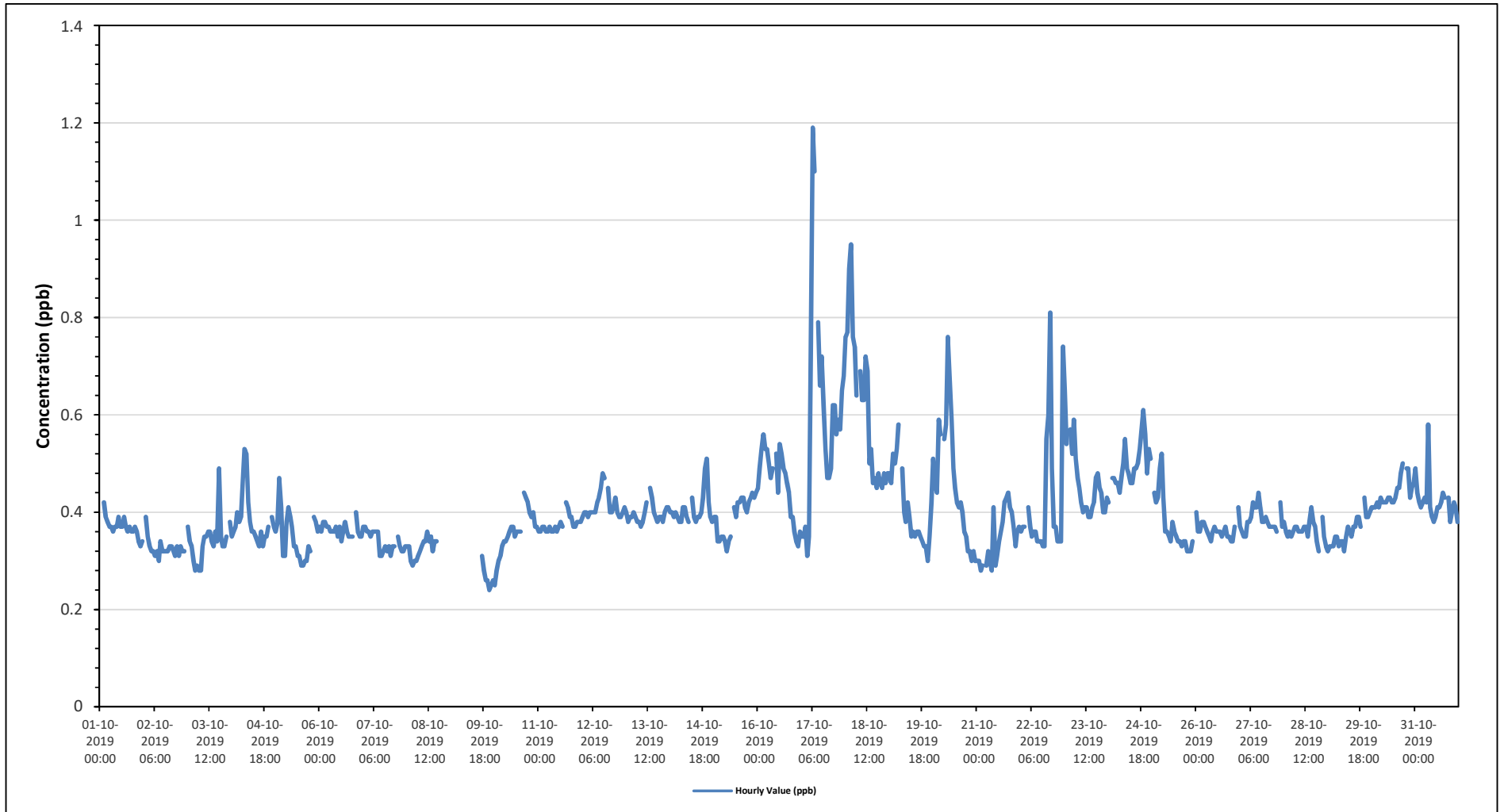
TOTAL REDUCED SULPHUR (TRS) in ppb

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: 1.19 ppb on October 17 at hour 6					Hours in Service: 744																							
Maximum Daily Value: 0.61 ppb on					Hours of Data: 689																							
Minimum Hourly Value: 0.24 ppb on October 9 at hour 21					Hours of Missing Data: 17																							
Minimum Daily Value: 0.33 ppb on October 2					Hours of Calibration: 38																							
Monthly Average: 0.40 ppb					Operational Uptime: 97.7																							
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	
Oct 1	0.51	S	0.42	0.39	0.38	0.37	0.37	0.36	0.37	0.37	0.39	0.37	0.37	0.39	0.37	0.36	0.37	0.36	0.36	0.37	0.36	0.34	0.33	0.34	0.33	0.51	0.37	
Oct 2	S	0.39	0.35	0.33	0.32	0.32	0.31	0.32	0.3	0.34	0.32	0.32	0.32	0.34	0.33	0.33	0.32	0.31	0.33	0.31	0.33	0.33	0.35	S	0.38	0.30	0.39	0.33
Oct 3	0.37	0.34	0.33	0.3	0.28	0.29	0.28	0.28	0.33	0.35	0.35	0.36	0.36	0.34	0.33	0.36	0.34	0.49	0.35	0.33	0.33	0.35	S	0.38	0.28	0.49	0.34	
Oct 4	0.35	0.36	0.37	0.4	0.38	0.39	0.47	0.53	0.52	0.42	0.38	0.36	0.36	0.35	0.34	0.33	0.36	0.33	0.35	0.35	0.37	S	0.39	0.37	0.33	0.53	0.38	
Oct 5	0.36	0.38	0.47	0.41	0.31	0.31	0.38	0.41	0.39	0.37	0.33	0.33	0.31	0.31	0.29	0.29	0.3	0.3	0.33	0.32	S	0.39	0.38	0.36	0.29	0.47	0.35	
Oct 6	0.37	0.36	0.38	0.38	0.37	0.37	0.36	0.36	0.36	0.37	0.35	0.37	0.34	0.36	0.38	0.36	0.35	0.35	0.35	S	0.4	0.36	0.35	0.35	0.34	0.40	0.36	
Oct 7	0.37	0.37	0.36	0.36	0.35	0.36	0.36	0.36	0.36	0.31	0.31	0.32	0.33	0.32	0.33	0.31	0.33	0.33	S	0.35	0.33	0.32	0.32	0.33	0.31	0.37	0.34	
Oct 8	0.33	0.33	0.3	0.29	0.3	0.3	0.31	0.32	0.33	0.34	0.34	0.36	0.34	0.35	0.32	0.34	0.34	S	X	X	X	X	X	X	0.29	0.36	-	
Oct 9	X	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	S	0.31	0.28	0.26	0.26	0.24	0.25	0.26	0.24	0.31	-	
Oct 10	0.25	0.28	0.3	0.31	0.33	0.34	0.34	0.35	0.36	0.37	0.37	0.35	0.36	0.36	0.36	S	0.44	0.43	0.42	0.4	0.39	0.4	0.37	0.37	0.25	0.44	0.36	
Oct 11	0.36	0.36	0.37	0.37	0.36	0.36	0.37	0.36	0.36	0.37	0.36	0.37	0.36	0.37	0.38	0.37	S	0.42	0.41	0.39	0.39	0.37	0.38	0.38	0.36	0.42	0.37	
Oct 12	0.39	0.4	0.4	0.39	0.4	0.4	0.4	0.4	0.42	0.43	0.45	0.48	0.47	S	0.45	0.4	0.4	0.41	0.43	0.4	0.39	0.39	0.4	0.41	0.39	0.48	0.41	
Oct 13	0.4	0.38	0.39	0.39	0.4	0.39	0.38	0.38	0.37	0.38	0.4	0.42	S	0.45	0.43	0.4	0.39	0.38	0.39	0.39	0.38	0.4	0.41	0.41	0.37	0.45	0.40	
Oct 14	0.4	0.4	0.39	0.4	0.39	0.38	0.38	0.41	0.41	0.39	0.38	S	0.43	0.39	0.38	0.39	0.39	0.4	0.43	0.49	0.51	0.42	0.39	0.38	0.38	0.51	0.41	
Oct 15	0.39	0.39	0.34	0.34	0.35	0.35	0.34	0.32	0.34	0.35	S	0.41	0.39	0.42	0.42	0.43	0.43	0.41	0.4	0.42	0.43	0.44	0.43	0.44	0.32	0.44	0.39	
Oct 16	0.45	0.49	0.53	0.56	0.53	0.53	0.5	0.47	0.49	S	0.52	0.44	0.54	0.52	0.49	0.48	0.46	0.44	0.39	0.39	0.36	0.34	0.33	0.36	0.33	0.56	0.46	
Oct 17	0.35	0.35	0.37	0.31	0.35	0.75	1.19	1.1	S	0.79	0.66	0.72	0.62	0.53	0.47	0.47	0.49	0.62	0.62	0.56	0.59	0.57	0.65	0.68	0.31	1.19	0.60	
Oct 18	0.76	0.77	0.9	0.95	0.76	0.74	0.64	S	0.69	0.63	0.63	0.72	0.69	0.5	0.53	0.46	0.47	0.45	0.48	0.46	0.45	0.48	0.46	0.48	0.45	0.95	0.61	
Oct 19	0.48	0.46	0.52	0.5	0.53	0.58	S	0.49	0.4	0.38	0.42	0.39	0.35	0.36	0.35	0.36	0.36	0.35	0.34	0.33	0.33	0.3	0.35	0.42	0.30	0.58	0.41	
Oct 20	0.51	0.46	0.44	0.59	0.56	S	0.55	0.58	0.76	0.68	0.59	0.49	0.45	0.42	0.41	0.42	0.4	0.36	0.35	0.32	0.32	0.3	0.32	0.3	0.30	0.76	0.46	
Oct 21	0.3	0.3	0.28	0.29	S	0.29	0.32	0.3	0.28	0.41	0.29	0.31	0.34	0.36	0.38	0.42	0.43	0.44	0.41	0.4	0.37	0.33	0.36	0.37	0.28	0.44	0.35	
Oct 22	0.36	0.37	0.37	S	0.41	0.37	0.35	0.36	0.36	0.34	0.34	0.34	0.33	0.33	0.55	0.6	0.81	0.49	0.37	0.37	0.34	0.34	0.34	0.74	0.33	0.81	0.42	
Oct 23	0.65	0.54	S	0.57	0.52	0.59	0.51	0.47	0.45	0.42	0.4	0.41	0.41	0.39	0.39	0.41	0.42	0.47	0.48	0.45	0.44	0.4	0.43	0.39	0.65	0.65	0.46	
Oct 24	0.42	S	0.47	0.47	0.46	0.44	0.47	0.5	0.55	0.49	0.48	0.46	0.46	0.49	0.49	0.5	0.53	0.57	0.61	0.56	0.48	0.53	0.51	0.42	0.61	0.50		
Oct 25	S	0.44	0.42	0.43	0.49	0.52	0.43	0.36	0.36	0.35	0.34	0.38	0.36	0.35	0.34	0.33	0.34	0.32	0.32	0.32	0.32	0.34	S	0.32	0.52	0.37		
Oct 26	0.4	0.36	0.36	0.38	0.38	0.37	0.36	0.35	0.34	0.36	0.37	0.36	0.36	0.36	0.35	0.36	0.37	0.35	0.35	0.34	0.34	0.37	S	0.41	0.34	0.41	0.36	
Oct 27	0.37	0.36	0.35	0.35	0.38	0.38	0.39	0.42	0.41	0.41	0.44	0.41	0.38	0.38	0.39	0.38	0.37	0.37	0.37	0.37	0.36	S	0.42	0.37	0.35	0.44	0.38	
Oct 28	0.38	0.36	0.35	0.36	0.35	0.36	0.37	0.37	0.36	0.36	0.37	0.37	0.35	0.38	0.41	0.38	0.37	0.34	0.32	S	0.39	0.35	0.33	0.32	0.41	0.36		
Oct 29	0.32	0.33	0.33	0.33	0.35	0.35	0.33	0.34	0.34	0.32	0.35	0.37	0.36	0.35	0.37	0.39	0.39	0.37	S	0.43	0.39	0.39	0.4	0.32	0.43	0.36		
Oct 30	0.41	0.41	0.41	0.42	0.41	0.43	0.42	0.42	0.42	0.43	0.43	0.42	0.42	0.43	0.45	0.45	0.48	0.5	S	0.49	0.49	0.43	0.45	0.46	0.41	0.50	0.44	
Oct 31	0.49	0.44	0.42	0.41	0.42	0.43	0.42	0.58	0.41	0.39	0.38	0.39	0.41	0.41	0.42	0.44	0.43	S	0.43	0.38	0.4	0.42	0.41	0.38	0.38	0.58	0.42	
Diurnal Maximum	0.76	0.77	0.90	0.95	0.76	0.75	1.19	1.10	0.76	0.79	0.66	0.72	0.69	0.53	0.55	0.60	0.81	0.62	0.62	0.61	0.59	0.57	0.65	0.74				
Daiurnal Average	0.41	0.40	0.40	0.41	0.41	0.42	0.42	0.42	0.41	0.41	0.40	0.41	0.40	0.39	0.40	0.40	0.41	0.40	0.39	0.39	0.39	0.38	0.39	0.41				
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							

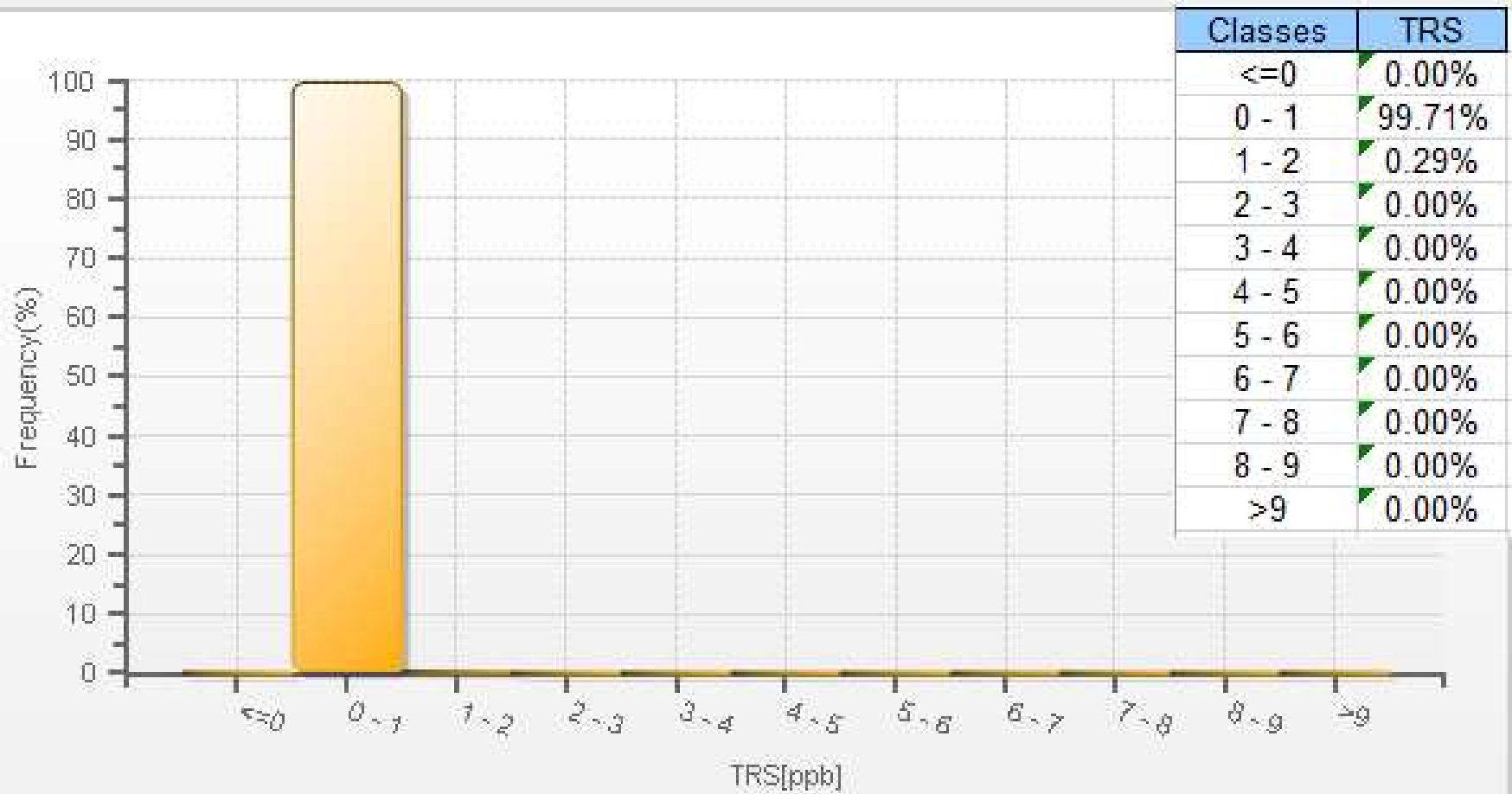
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

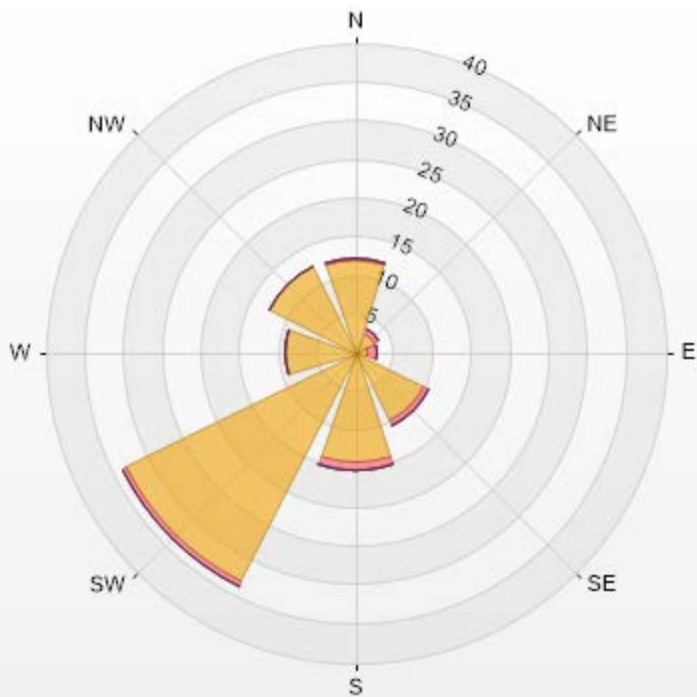


TRS[ppb] Histogram: PRAMP 842b Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 86.83% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	11.92	0.31	0	0	0	12.23
NE	2.79	0.62	0	0	0	3.41
E	1.55	1.39	0	0	0	2.94
SE	9.75	0.77	0.15	0	0	10.67
S	14.09	1.08	0.15	0	0	15.32
SW	33.13	0.62	0	0	0	33.75
W	9.13	0	0	0	0	9.13
NW	12.54	0	0	0	0	12.54
Summary	94.9	4.79	0.3	0	0	100



PRAMP-201910

% Icon Classes (ppb)	95	0-2	5	10-50	0	>50.0
	5	1	2	0	0	0



PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

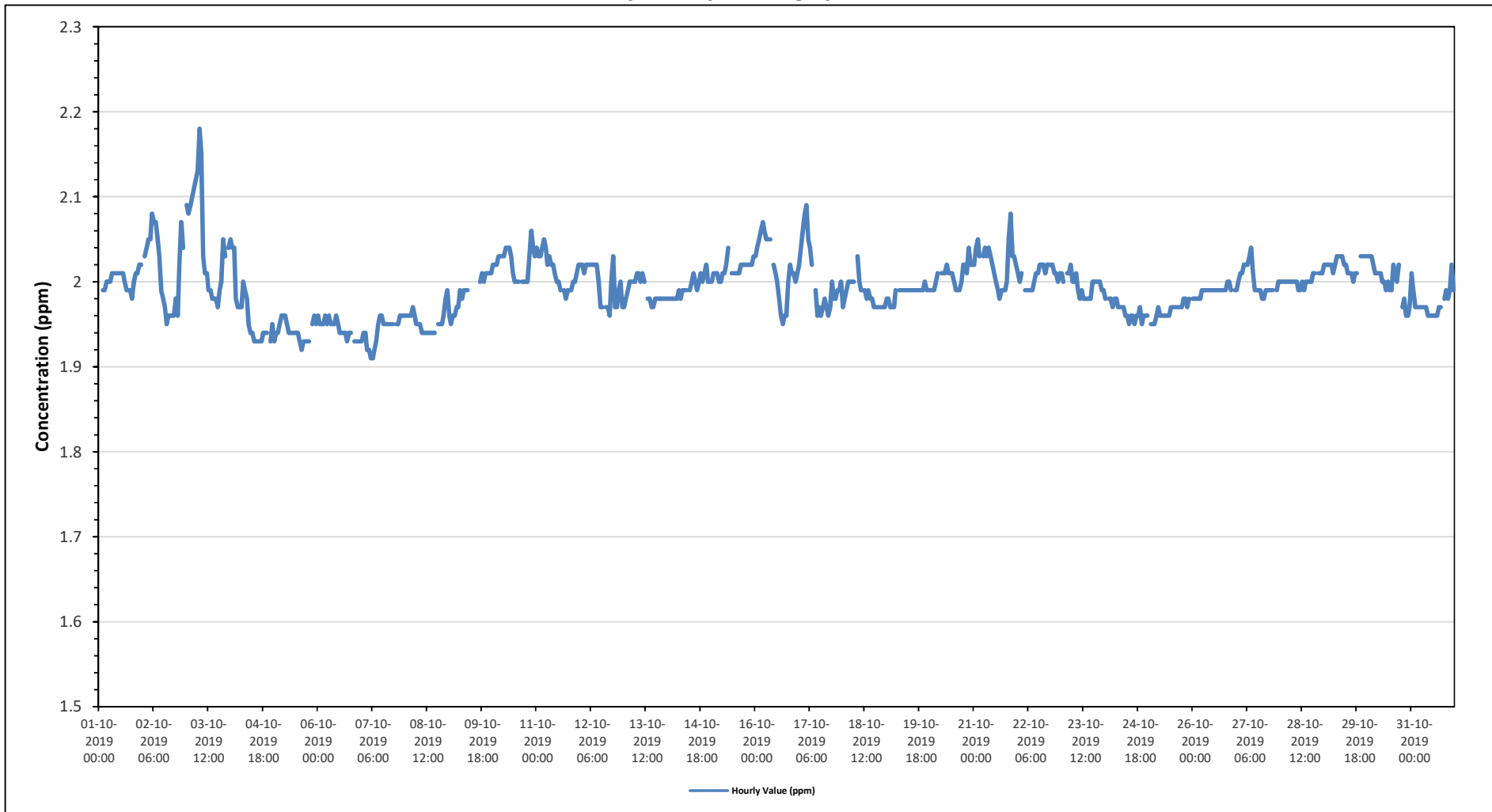
Maximum Hourly Value:	2.18 ppm on October 3 at hour 7	Hours in Service:	744
Maximum Daily Value:	2.05 ppm on	Hours of Data:	706
Minimum Hourly Value:	1.91 ppm on October 7 at hour 5	Hours of Missing Data:	0
Minimum Daily Value:	1.94 ppm on October 5	Hours of Calibration:	38
Monthly Average:	1.99 ppm	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	1.98	S	1.99	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.01	2.01	2.01	2.00	1.99	1.99	1.99	1.98	2.00	2.01	2.01	2.02	2.02	1.98	2.02	2.00	
Oct 2	S	2.03	2.04	2.05	2.05	2.08	2.07	2.07	2.05	2.03	1.99	1.98	1.97	1.95	1.96	1.96	1.96	1.98	1.96	2.02	2.07	2.04	S	1.95	2.08	2.01	
Oct 3	2.09	2.08	2.09	2.10	2.11	2.12	2.13	2.18	2.15	2.03	2.01	2.01	1.99	1.99	1.98	1.98	1.98	1.97	1.99	2.00	2.05	2.03	S	2.04	1.97	2.18	2.05
Oct 4	2.05	2.04	2.04	1.98	1.97	1.97	1.97	2.00	1.99	1.98	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	S	1.93	1.95	1.93	2.05	1.96
Oct 5	1.93	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	1.93	S	1.95	1.96	1.95	1.92	1.96	1.94
Oct 6	1.96	1.95	1.95	1.95	1.96	1.95	1.96	1.95	1.95	1.95	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	S	1.93	1.93	1.93	1.93	1.93	1.96	1.94
Oct 7	1.93	1.94	1.94	1.92	1.92	1.91	1.91	1.92	1.93	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.96	1.96	1.96	1.91	1.96	1.94
Oct 8	1.96	1.96	1.96	1.96	1.97	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	S	1.95	1.95	1.95	1.96	1.98	1.99	1.94	1.99	1.95
Oct 9	1.96	1.95	1.96	1.96	1.97	1.97	1.99	1.98	1.99	1.99	1.99	C	C	C	C	C	S	2.00	2.01	2.00	2.01	2.01	2.01	1.95	2.01	1.99	
Oct 10	2.02	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.03	2.01	2.00	2.00	2.00	S	2.00	2.00	2.00	2.00	2.03	2.06	2.04	2.03	2.00	2.06	2.02
Oct 11	2.04	2.03	2.03	2.04	2.05	2.04	2.02	2.03	2.02	2.02	2.01	2.00	2.00	1.99	S	1.99	1.98	1.99	1.99	1.99	2.00	2.00	2.01	2.02	1.98	2.05	2.01
Oct 12	2.02	2.02	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.00	1.97	1.97	S	1.97	1.97	1.96	2.00	2.03	1.97	1.97	1.99	2.00	1.97	1.96	2.03	2.00
Oct 13	1.97	1.98	1.99	2.00	2.00	2.00	2.00	2.01	2.01	2.00	2.01	2.00	S	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	2.01	1.99
Oct 14	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.99	1.99	S	1.99	2.00	2.01	2.00	1.99	2.00	2.01	2.00	2.01	2.02	2.00	2.00	1.98	2.02	1.99
Oct 15	2.00	2.01	2.01	2.01	2.00	2.00	2.01	2.01	2.02	2.04	S	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.00	2.04	2.01
Oct 16	2.03	2.04	2.05	2.06	2.07	2.06	2.05	2.05	2.05	S	2.02	2.01	2.00	1.98	1.96	1.95	1.96	1.96	2.00	2.02	2.01	2.01	2.00	2.01	1.95	2.07	2.02
Oct 17	2.02	2.04	2.06	2.08	2.09	2.05	2.04	2.02	S	2.03	1.99	1.96	1.97	1.96	1.97	1.98	1.97	1.96	1.97	2.00	1.98	1.98	1.99	2.00	1.96	2.09	2.00
Oct 18	1.97	1.98	1.99	2.00	2.00	2.00	2.00	S	2.03	2.00	1.99	1.99	1.99	1.99	1.98	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	2.03	1.99
Oct 19	1.98	1.98	1.97	1.97	1.97	1.99	S	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	1.97	2.00	1.99	
Oct 20	1.99	1.99	1.99	2.00	2.01	S	2.01	2.01	2.01	2.02	2.01	2.01	2.01	2.00	1.99	1.99	1.99	2.00	2.02	2.02	2.01	2.04	2.02	2.02	1.99	2.04	2.01
Oct 21	2.02	2.04	2.05	2.03	S	2.03	2.04	2.03	2.04	2.03	2.02	2.01	2.00	1.99	1.98	1.99	1.99	1.99	1.99	2.00	2.05	2.08	2.03	2.02	1.98	2.08	2.02
Oct 22	2.01	2.00	2.01	S	1.99	1.99	1.99	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.01	2.02	2.02	2.02	2.02	2.01	2.01	2.00	2.01	1.99	2.02	2.01
Oct 23	2.01	2.00	S	2.01	2.01	2.02	2.00	2.00	2.01	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.98	2.00	2.00	2.00	2.00	1.99	1.99	1.98	2.02	2.00	
Oct 24	1.98	S	1.98	1.98	1.97	1.98	1.98	1.97	1.97	1.97	1.97	1.96	1.96	1.95	1.96	1.95	1.96	1.96	1.97	1.95	1.96	1.96	1.96	1.95	1.98	1.97	
Oct 25	S	1.95	1.95	1.95	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.97	1.98	S	1.95	1.98	1.97
Oct 26	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	1.99	S	1.99	1.98	2.00	1.99
Oct 27	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.04	2.01	1.99	1.99	1.99	1.99	1.98	1.98	1.99	1.99	1.99	1.99	1.99	S	1.99	2.00	1.98	2.04	2.00
Oct 28	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	2.00	1.99	2.00	2.00	2.00	2.00	2.01	2.01	S	2.01	2.01	2.01	1.99	2.01	2.00
Oct 29	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.03	2.03	2.02	2.02	2.01	2.01	2.01	2.00	2.01	2.01	S	2.03	2.03	2.03	2.03	2.00	2.03	2.02
Oct 30	2.03	2.03	2.03	2.02	2.01	2.01	2.01	2.01	2.00	2.00	1.99	2.00	1.99	1.99	2.02	2.01	2.00	2.02	S	1.97	1.98	1.96	1.96	1.97	1.96	2.03	2.00
Oct 31	2.01	1.99	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	1.97	S	1.98	1.99	1.98	1.99	2.02	1.99	1.96	2.02	1.98
Diurnal Maximum	2.09	2.08	2.09	2.10	2.11	2.12	2.13	2.18	2.15	2.04	2.03	2.02	2.02	2.02	2.01	2.02	2.02	2.02	2.03	2.05	2.08	2.07	2.04	2.04			
Diurnal Average	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.01	2.00	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	2.00	1.99	1.99			

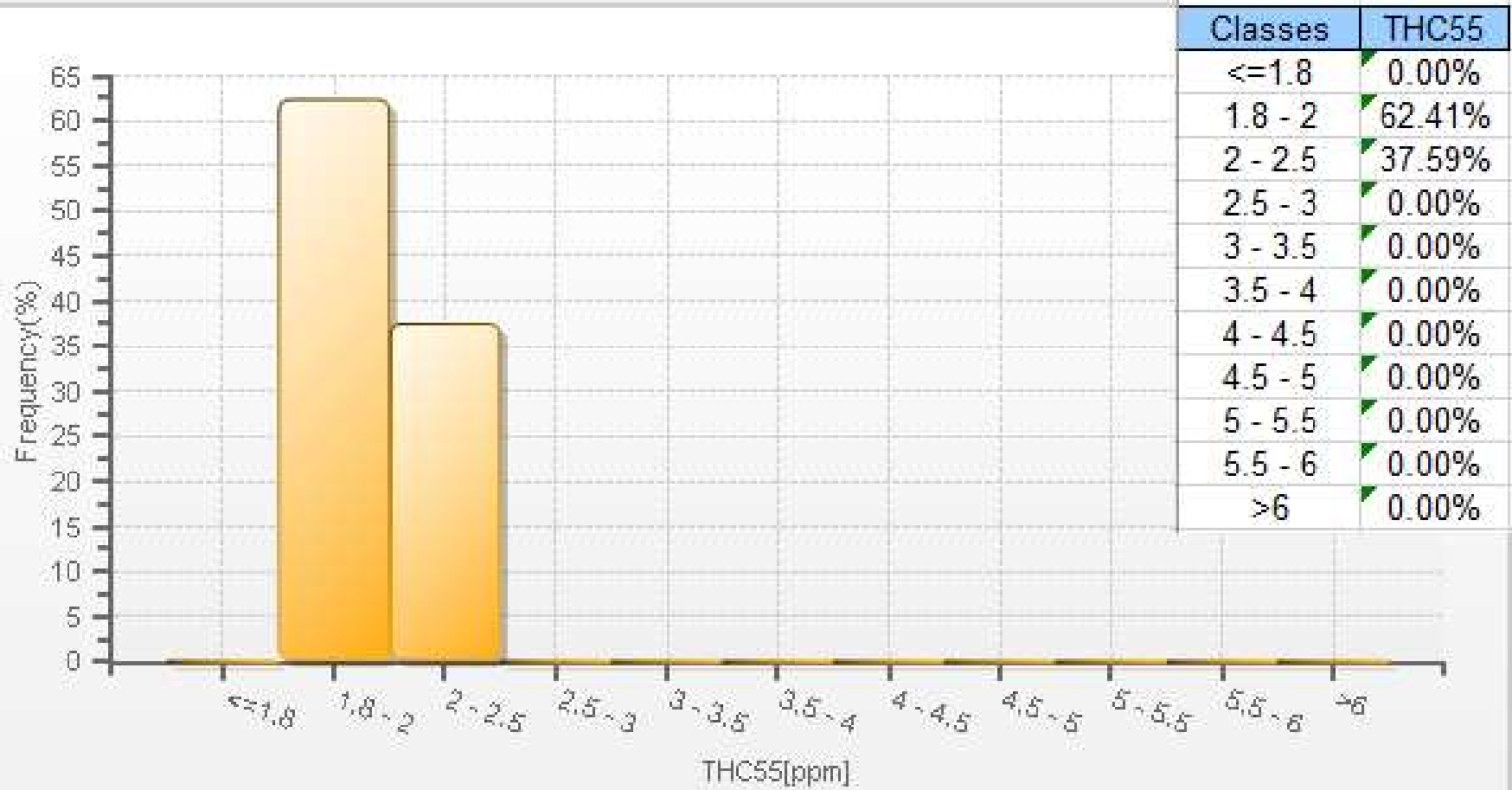
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

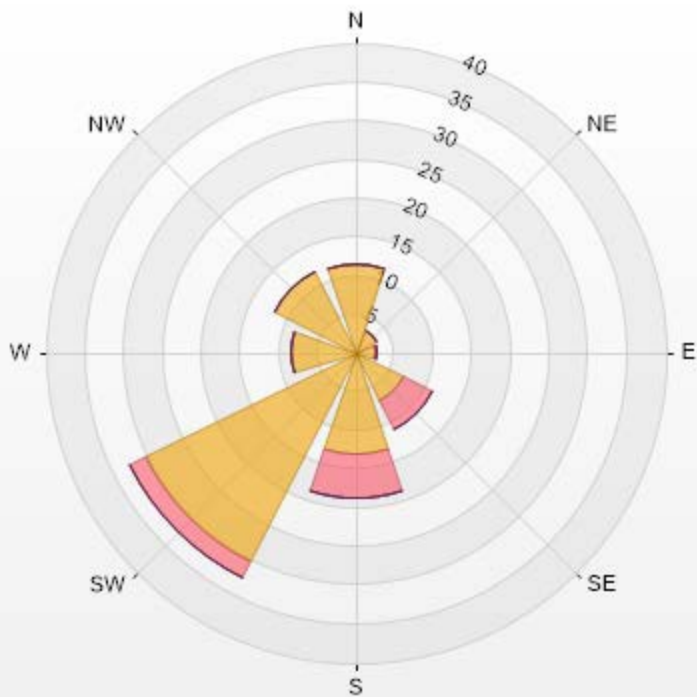


THC55[ppm] Histogram: PRAMP 842b Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.55% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	11.49	0	0	0	0	11.49
NE	3.16	0	0	0	0	3.16
E	2.59	0.29	0	0	0	2.88
SE	7.04	4.02	0	0	0	11.06
S	13.07	5.75	0	0	0	18.82
SW	30.32	2.3	0	0	0	32.62
W	8.33	0	0	0	0	8.33
NW	11.64	0	0	0	0	11.64
Summary	87.64	12.36	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	88	17	0	0	0
0-2	88	17	0	0	0
2-5	0	17	0	0	0
5-10	0	0	0	0	0
10-40	0	0	0	0	0
>40.0	0	17	0	0	0



PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

METHANE (CH4) in ppm

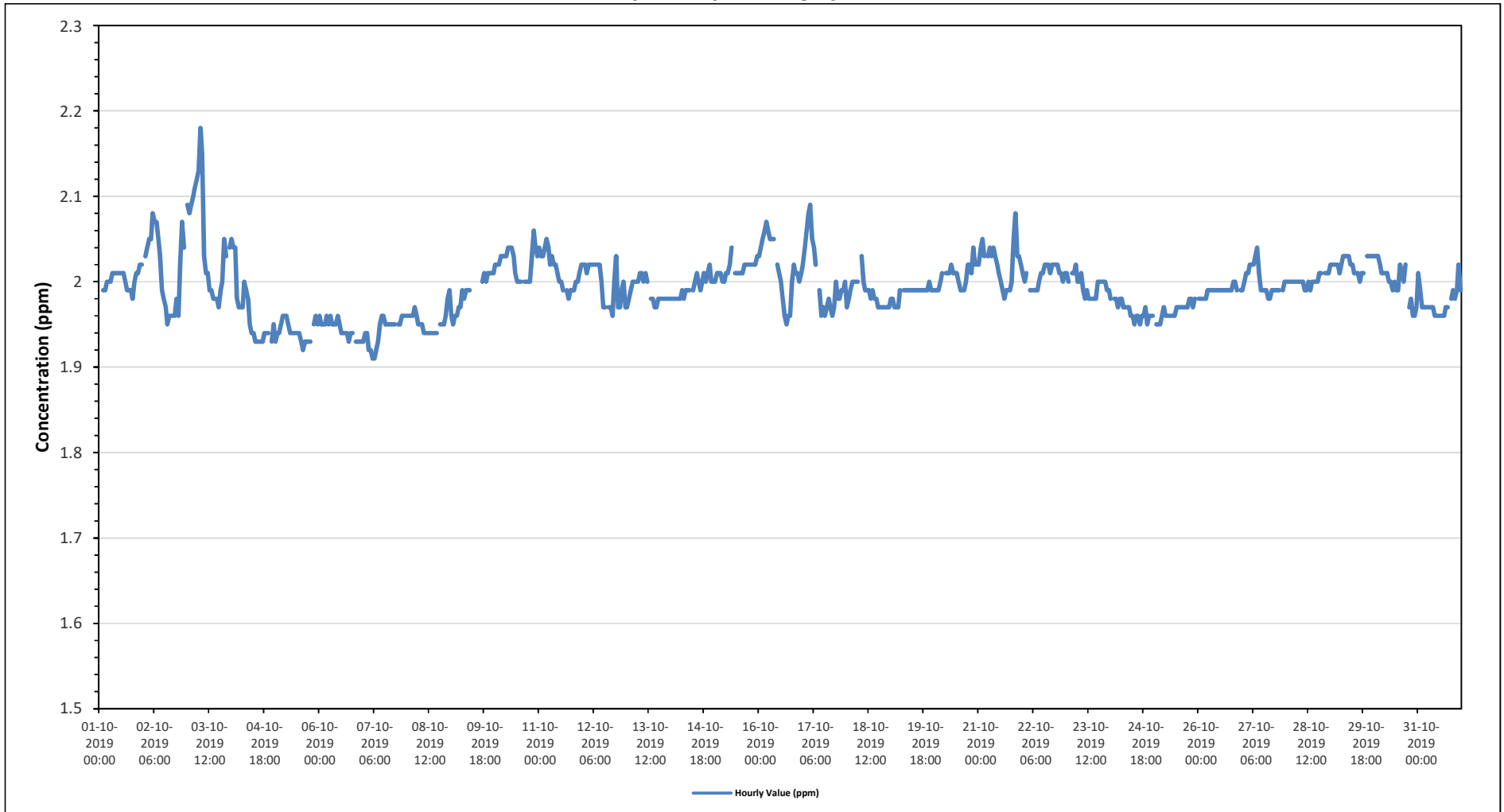
Maximum Hourly Value: 2.18 ppm on October 3 at hour 7	Hours in Service: 744
Maximum Daily Value: 2.05 ppm on	Hours of Data: 706
Minimum Hourly Value: 1.91 ppm on October 7 at hour 5	Hours of Missing Data: 0
Minimum Daily Value: 1.94 ppm on October 5	Hours of Calibration: 38
Monthly Average: 1.99 ppm	Operational Uptime: 100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	1.98	S	1.99	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.01	2.01	2.01	2.00	1.99	1.99	1.99	1.98	2.00	2.01	2.01	2.02	2.02	1.98	2.02	2.00	
Oct 2	S	2.03	2.04	2.05	2.05	2.08	2.07	2.07	2.05	2.03	1.99	1.98	1.97	1.95	1.96	1.96	1.96	1.98	1.96	2.02	2.07	2.04	S	1.95	2.08	2.01	
Oct 3	2.09	2.08	2.09	2.10	2.11	2.12	2.13	2.18	2.15	2.03	2.01	2.01	1.99	1.99	1.98	1.98	1.98	1.97	1.99	2.00	2.05	2.03	S	2.04	1.97	2.18	2.05
Oct 4	2.05	2.04	2.04	1.98	1.97	1.97	1.97	2.00	1.99	1.98	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	S	1.93	1.95	1.93	2.05	1.96
Oct 5	1.93	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	1.93	S	1.95	1.96	1.95	1.92	1.94	
Oct 6	1.96	1.95	1.95	1.95	1.96	1.95	1.96	1.95	1.95	1.95	1.96	1.95	1.94	1.94	1.94	1.93	1.94	1.94	1.94	S	1.93	1.93	1.93	1.93	1.93	1.96	1.94
Oct 7	1.93	1.94	1.94	1.92	1.92	1.91	1.91	1.92	1.93	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.96	1.96	1.96	1.91	1.96	1.94
Oct 8	1.96	1.96	1.96	1.96	1.97	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	S	1.95	1.95	1.95	1.96	1.98	1.99	1.94	1.99	1.95
Oct 9	1.96	1.95	1.96	1.96	1.97	1.97	1.99	1.98	1.99	1.99	1.99	C	C	C	C	C	S	2.00	2.01	2.00	2.01	2.01	2.01	1.95	2.01	1.99	
Oct 10	2.02	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.03	2.01	2.00	2.00	2.00	S	2.00	2.00	2.00	2.00	2.03	2.06	2.04	2.03	2.00	2.06	2.02
Oct 11	2.04	2.03	2.03	2.04	2.05	2.04	2.02	2.03	2.02	2.02	2.01	2.00	2.00	1.99	S	1.99	1.98	1.99	1.99	1.99	2.00	2.00	2.01	2.02	1.98	2.05	2.01
Oct 12	2.02	2.02	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.00	1.97	1.97	S	1.97	1.97	1.96	2.00	2.03	1.97	1.97	1.99	2.00	1.97	1.96	2.03	2.00
Oct 13	1.97	1.98	1.99	2.00	2.00	2.00	2.00	2.01	2.01	2.00	2.01	2.00	S	1.98	1.98	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	2.01	1.99
Oct 14	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.99	1.99	S	1.99	2.00	2.01	2.00	1.99	2.00	2.01	2.00	2.01	2.02	2.00	2.00	1.98	2.02	1.99
Oct 15	2.00	2.01	2.01	2.01	2.00	2.00	2.01	2.01	2.02	2.04	S	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.00	2.04	2.01
Oct 16	2.03	2.04	2.05	2.06	2.07	2.06	2.05	2.05	2.05	S	2.02	2.01	2.00	1.98	1.96	1.95	1.96	1.96	2.00	2.02	2.01	2.01	2.00	2.01	1.95	2.07	2.02
Oct 17	2.02	2.04	2.06	2.08	2.09	2.05	2.04	2.02	S	1.99	1.96	1.97	1.96	1.97	1.98	1.97	1.96	1.97	2.00	1.98	1.98	1.99	1.99	2.00	1.96	2.09	2.00
Oct 18	1.97	1.98	1.99	2.00	2.00	2.00	2.00	S	2.03	2.00	1.99	1.99	1.99	1.98	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	2.03	1.99
Oct 19	1.98	1.98	1.97	1.97	1.97	1.99	S	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	1.97	2.00	1.99	
Oct 20	1.99	1.99	1.99	2.00	2.01	S	2.01	2.01	2.01	2.02	2.01	2.01	2.01	2.00	1.99	1.99	1.99	2.00	2.02	2.02	2.01	2.04	2.02	2.02	1.99	2.04	2.01
Oct 21	2.02	2.04	2.05	2.03	S	2.03	2.04	2.03	2.04	2.03	2.02	2.01	2.00	1.99	1.98	1.99	1.99	1.99	2.00	2.05	2.08	2.03	2.03	2.02	1.98	2.08	2.02
Oct 22	2.01	2.00	2.01	S	1.99	1.99	1.99	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.01	2.02	2.02	2.02	2.02	2.01	2.01	2.00	2.01	1.99	2.02	2.01
Oct 23	2.01	2.00	S	2.01	2.01	2.02	2.00	2.00	2.01	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.98	2.00	2.00	2.00	2.00	1.99	1.99	1.98	2.02	2.00	
Oct 24	1.98	S	1.98	1.98	1.97	1.98	1.98	1.97	1.97	1.97	1.97	1.96	1.96	1.95	1.96	1.95	1.96	1.96	1.97	1.95	1.96	1.96	1.96	1.96	1.95	1.98	1.97
Oct 25	S	1.95	1.95	1.95	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.97	1.98	S	1.95	1.98	1.97
Oct 26	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	1.99	S	1.99	1.98	2.00	1.99
Oct 27	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.04	2.01	1.99	1.99	1.99	1.99	1.98	1.98	1.99	1.99	1.99	1.99	1.99	S	1.99	2.00	1.98	2.04	2.00
Oct 28	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	2.00	1.99	2.00	2.00	2.00	2.00	2.01	2.01	S	2.01	2.01	2.01	1.99	2.01	2.00
Oct 29	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.03	2.03	2.02	2.02	2.01	2.01	2.01	2.00	2.01	2.01	S	2.03	2.03	2.03	2.03	2.00	2.03	2.02
Oct 30	2.03	2.03	2.03	2.02	2.01	2.01	2.01	2.01	2.00	2.00	1.99	2.00	1.99	1.99	2.02	2.01	2.00	2.02	S	1.97	1.98	1.96	1.96	1.97	1.96	2.03	2.00
Oct 31	2.01	1.99	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	1.97	S	1.98	1.99	1.98	1.99	2.02	1.99	1.96	2.02	1.98
Diurnal Maximum	2.09	2.08	2.09	2.10	2.11	2.12	2.13	2.18	2.15	2.04	2.03	2.02	2.02	2.02	2.01	2.02	2.02	2.02	2.03	2.05	2.08	2.07	2.04	2.04			
Diurnal Average	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.01	2.00	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	2.00	1.99	1.99			

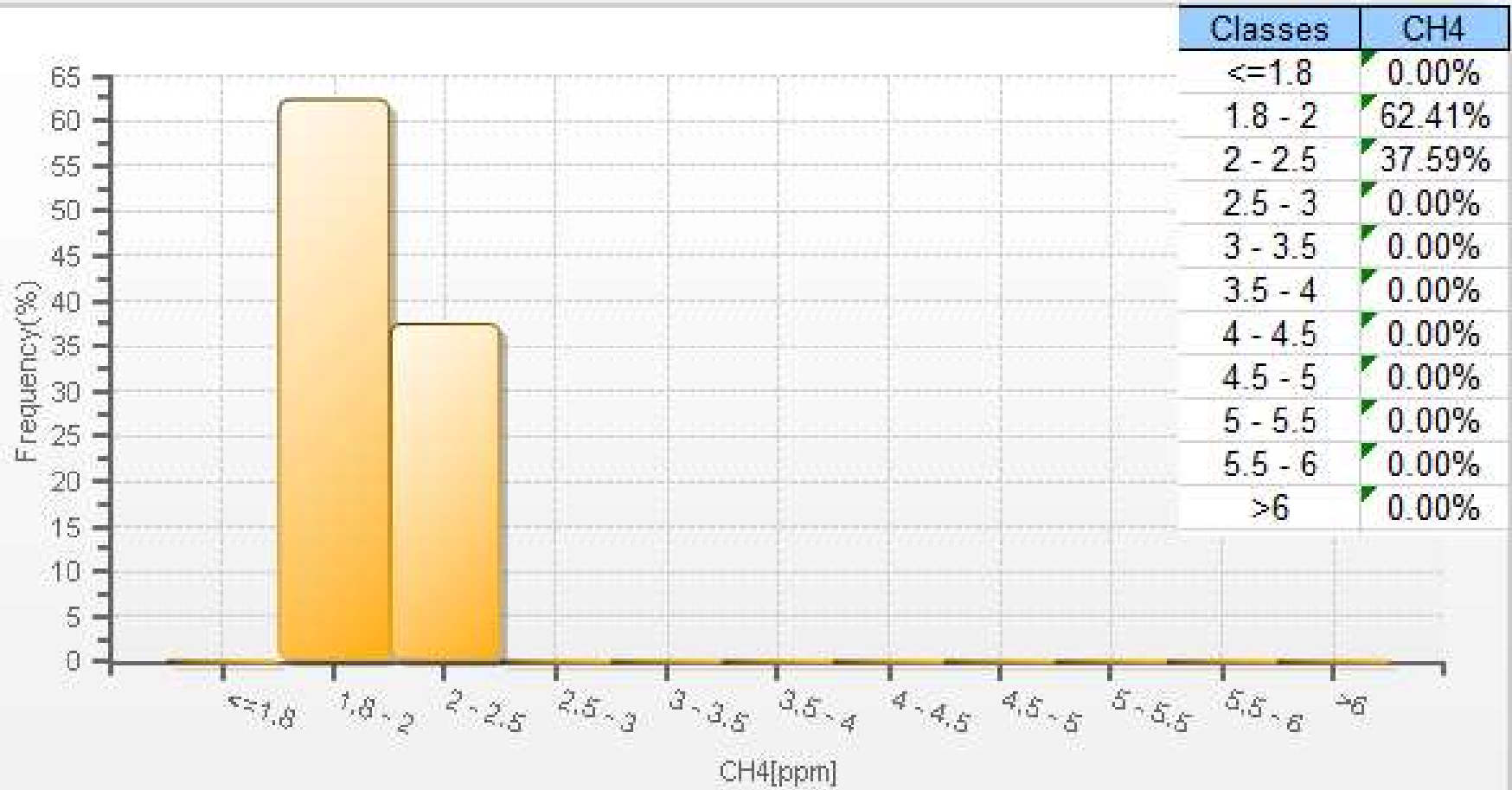
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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

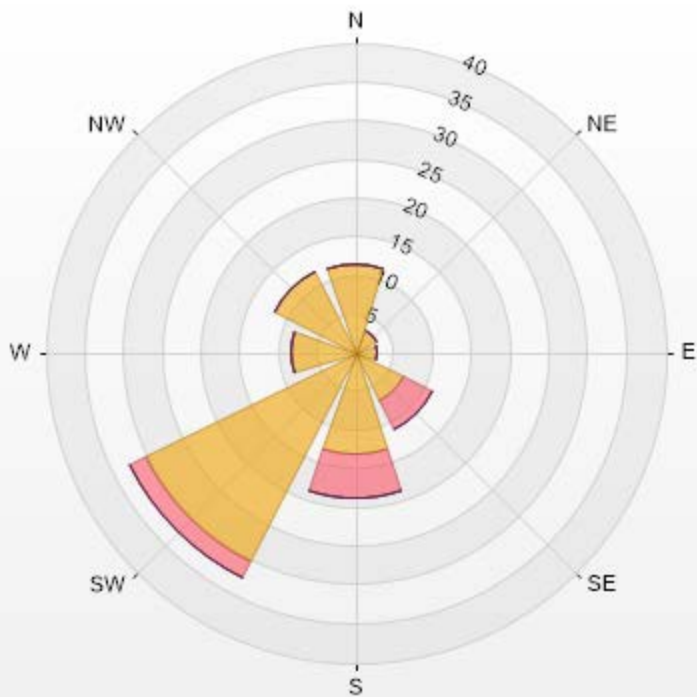


CH4[ppm] Histogram: PRAMP 842b Monthly: 10-2019 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 93.68% Calm Avg: 0.00 [ppm]

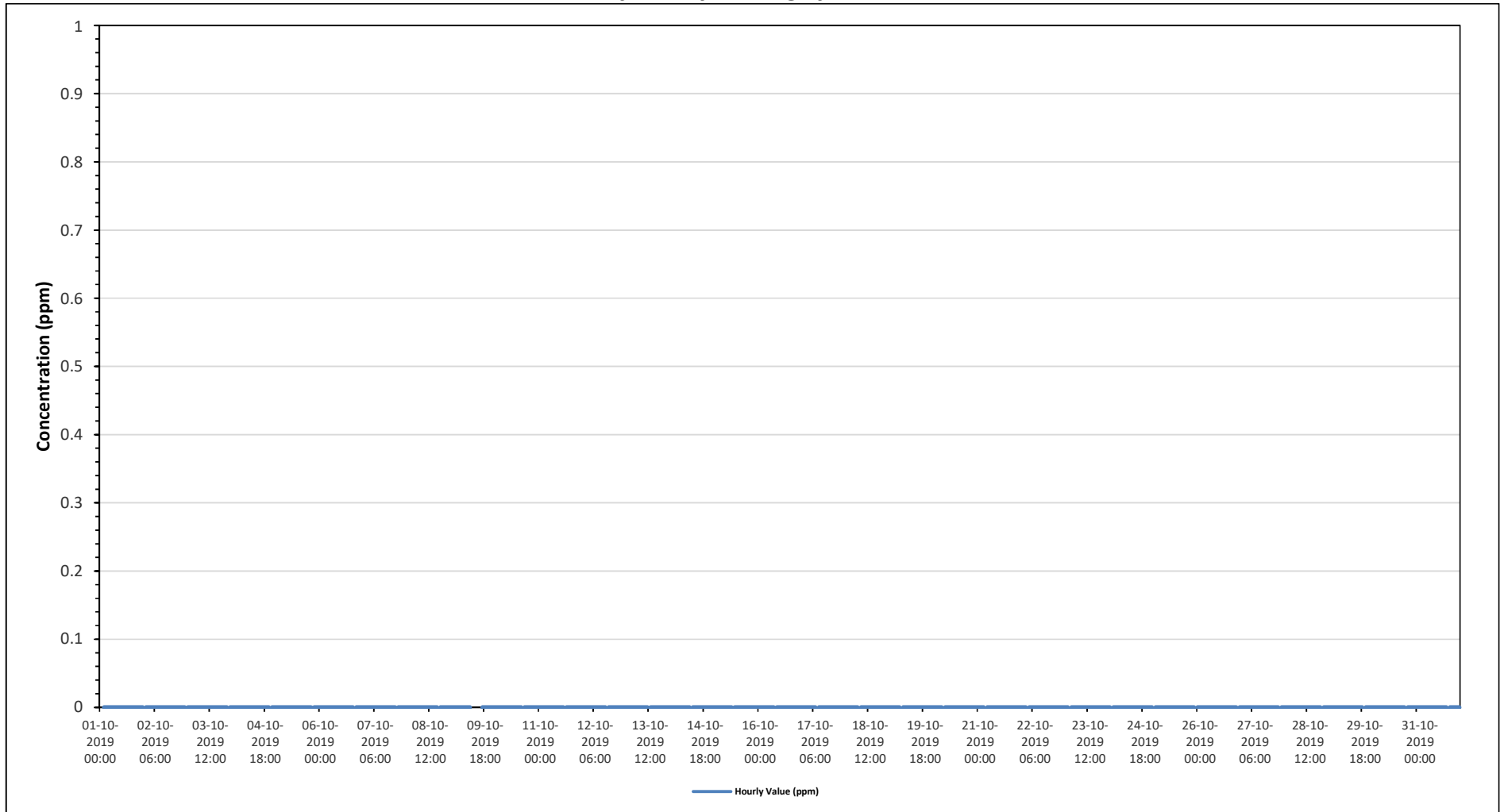
Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	11.48	0	0	0	0	11.48
NE	3.16	0	0	0	0	3.16
E	2.73	0.14	0	0	0	2.87
SE	7.03	4.02	0	0	0	11.05
S	13.2	5.74	0	0	0	18.94
SW	30.27	2.3	0	0	0	32.57
W	8.32	0	0	0	0	8.32
NW	11.62	0	0	0	0	11.62
Summary	87.81	12.2	0	0	0	100



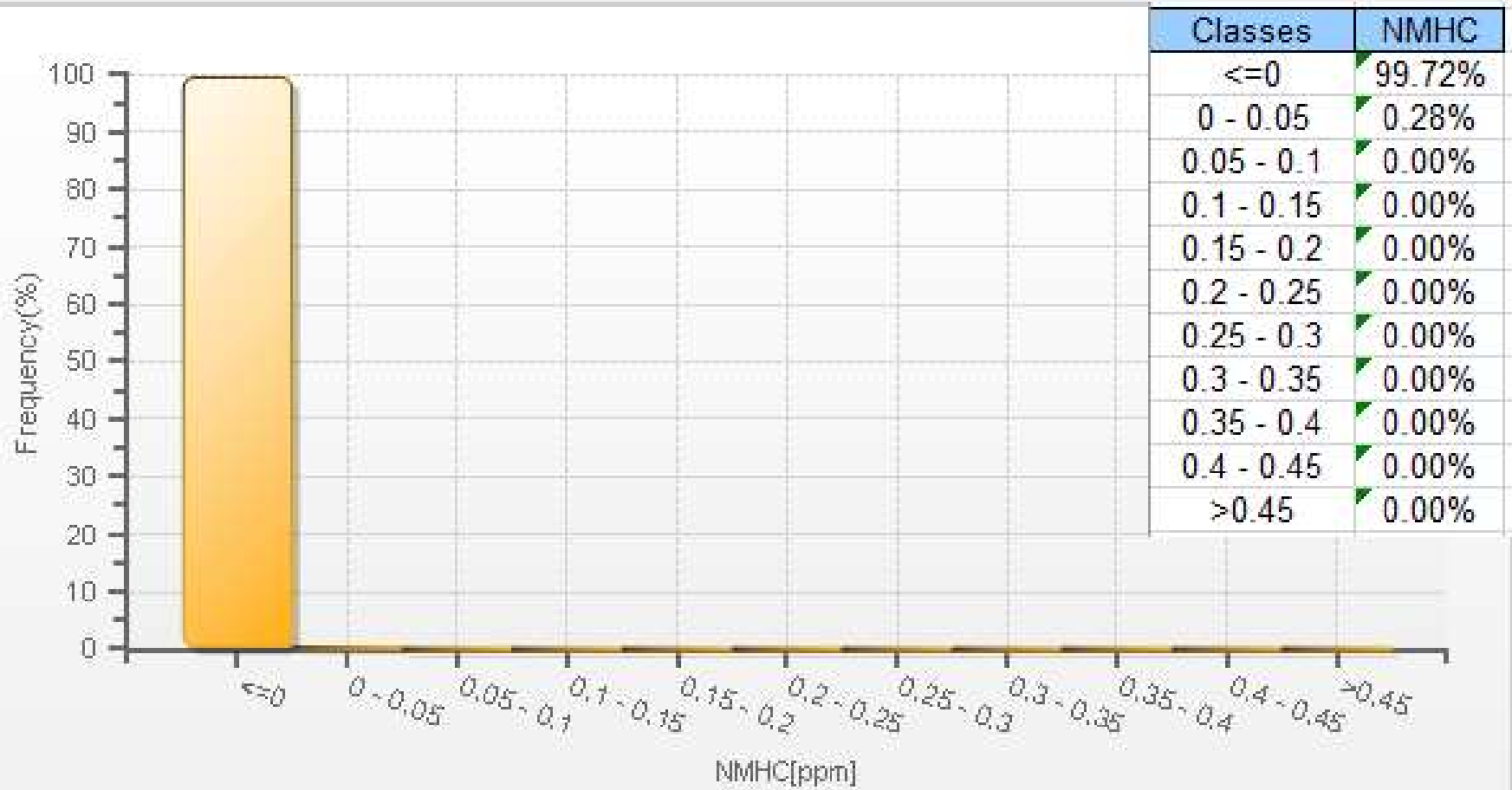
PRAMP-201910

% Icon Classes (ppm)	88	17	0	0	0
0-2	88	17	0	0	0
2-5	0	17	0	0	0
5-10	0	0	0	0	0
10-20	0	0	0	0	0
>20.0	0	0	0	0	0

Timeseries Chart of Hourly Average for NMHC - 842b Station

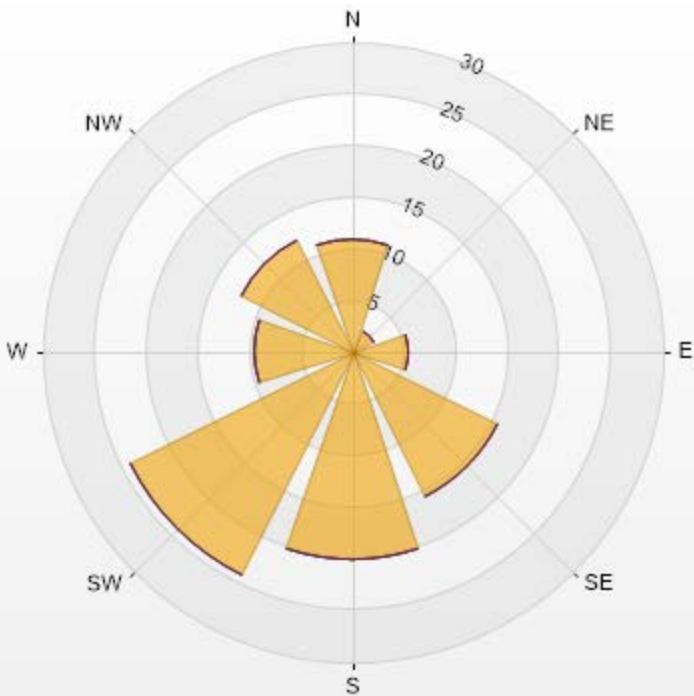


NMHC[ppm] Histogram: PRAMP 842b Monthly: 10-2019 1 Hr.



Wind: PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	10.92	0	0	0	0	10.92
NE	2.27	0	0	0	0	2.27
E	5.39	0	0	0	0	5.39
SE	15.6	0	0	0	0	15.6
S	20.14	0	0	0	0	20.14
SW	24.11	0	0	0	0	24.11
W	9.5	0	0	0	0	9.5
NW	12.06	0	0	0	0	12.06
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	100	0-0.1	0	0.1-0.2	0	0.2-0.3	0	0.3-0.9	0	0.9-2	0	>2.0
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PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

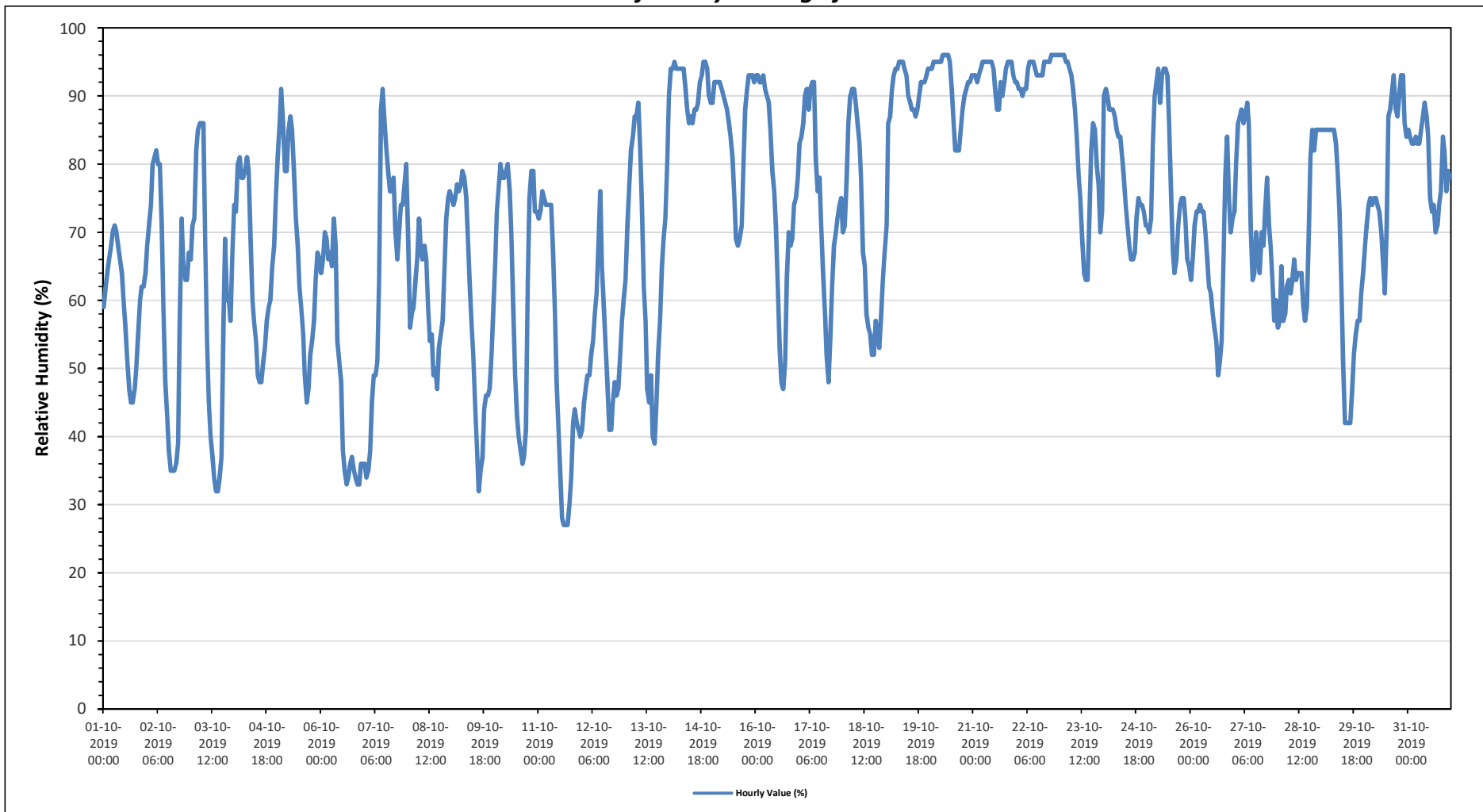
Maximum Hourly Value:	96	%	on October 20 at hour 7	Hours in Service:	744
Maximum Daily Value:	93.8	%	on	Hours of Data:	744
Minimum Hourly Value:	27	%	on October 11 at hour 14	Hours of Missing Data:	0
Minimum Daily Value:	49.2	%	on October 6	Hours of Calibration:	0
Monthly Average:	71.6	%		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	59	62	64	66	68	70	71	70	68	66	64	60	56	51	47	45	45	47	50	55	60	62	62	64	45	71	60	
Oct 2	68	71	74	80	81	82	80	80	71	59	48	43	38	35	35	35	36	39	57	72	65	63	63	67	35	82	60	
Oct 3	66	71	72	82	85	86	86	86	68	54	45	40	37	34	32	32	34	37	56	69	60	60	57	67	32	86	59	
Oct 4	74	73	80	81	78	78	79	81	79	69	60	57	54	49	48	48	51	53	57	59	60	65	68	75	48	81	66	
Oct 5	81	86	91	86	79	79	85	87	85	79	72	68	62	59	55	49	45	47	52	54	57	63	67	66	45	91	69	
Oct 6	64	66	70	69	66	67	65	72	68	54	51	48	38	35	33	34	36	37	35	34	33	33	36	36	33	72	49	
Oct 7	36	34	35	38	45	49	49	51	63	88	91	86	82	79	76	76	78	70	66	70	74	74	77	80	34	91	65	
Oct 8	69	56	58	59	63	66	72	67	66	68	66	59	54	55	49	50	47	53	55	57	64	72	75	76	47	76	62	
Oct 9	75	74	75	77	76	77	79	78	75	69	62	56	52	44	38	32	35	37	44	46	46	47	52	59	32	79	59	
Oct 10	65	73	77	80	78	78	79	80	76	70	59	49	43	40	38	36	37	41	63	75	79	79	73	73	36	80	64	
Oct 11	72	73	76	75	74	74	74	74	67	58	48	41	34	28	27	27	27	30	34	42	44	42	41	40	27	76	51	
Oct 12	41	45	47	49	49	52	54	58	61	68	76	65	59	53	48	41	41	45	48	46	47	52	57	60	41	76	53	
Oct 13	63	71	77	82	84	87	87	89	82	74	62	57	47	45	49	40	39	45	52	57	65	69	72	81	39	89	66	
Oct 14	90	94	94	95	94	94	94	94	94	91	88	86	87	86	88	88	89	92	93	95	95	94	90	89	86	95	91	
Oct 15	89	92	92	92	92	91	90	89	88	86	84	81	75	69	68	69	71	79	88	91	93	93	93	92	68	93	85	
Oct 16	93	93	92	92	93	91	90	89	85	79	76	71	62	53	48	47	51	63	70	68	69	74	75	78	47	93	75	
Oct 17	83	84	86	90	91	88	91	92	92	81	76	78	71	64	58	52	48	55	62	68	70	72	74	75	48	92	75	
Oct 18	70	71	78	86	90	91	91	89	86	83	78	67	65	58	56	55	52	52	57	55	53	58	63	67	52	91	70	
Oct 19	71	86	87	91	93	94	94	95	95	95	94	93	90	89	88	88	87	88	90	92	92	92	93	94	71	95	90	
Oct 20	94	94	95	95	95	95	95	96	96	96	96	95	91	86	82	82	82	85	88	90	91	92	92	93	82	96	92	
Oct 21	93	93	92	93	94	95	95	95	95	95	94	91	88	88	88	92	90	92	94	95	95	95	93	92	88	95	93	
Oct 22	92	91	91	90	91	91	94	95	95	95	95	94	93	93	93	95	95	95	95	96	96	96	96	96	90	96	94	
Oct 23	96	96	96	95	95	94	93	91	88	84	78	75	69	64	63	63	73	82	86	85	80	77	70	73	63	96	82	
Oct 24	90	91	90	88	88	88	87	85	84	84	81	78	74	71	68	66	66	67	72	75	74	74	73	71	66	91	79	
Oct 25	71	70	72	83	90	92	94	89	93	94	94	93	86	76	67	64	66	71	74	75	75	72	66	65	64	94	79	
Oct 26	63	66	71	73	73	74	73	73	70	66	62	61	58	56	54	49	51	54	67	78	84	75	70	72	49	84	66	
Oct 27	73	80	86	87	88	86	87	89	86	71	63	64	70	66	64	70	68	73	78	71	68	63	57	60	57	89	74	
Oct 28	56	57	65	57	58	62	63	61	63	66	63	64	64	64	59	57	59	70	81	85	82	85	85	85	56	85	67	
Oct 29	85	85	85	85	85	85	85	85	83	79	73	62	51	42	42	42	42	47	52	55	57	57	61	64	42	85	66	
Oct 30	68	71	74	75	74	75	74	73	70	66	61	71	87	88	91	93	88	87	90	93	93	86	84	61	93	79		
Oct 31	85	84	83	83	84	83	83	85	87	89	87	84	75	73	74	70	71	74	76	84	82	76	79	78	70	89	80	
Diurnal Maximum	96	96	96	95	95	95	95	96	96	96	96	95	93	93	93	95	95	95	95	96	96	96	96	96	96	96	96	96
Diurnal Average	74.0	75.9	78.2	79.8	80.5	81.1	81.7	81.9	80.1	76.8	72.6	68.7	64.5	61.0	58.8	57.6	58.2	61.5	67.1	70.5	71.1	71.6	71.5	73.3				

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 RH - 842b Station





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

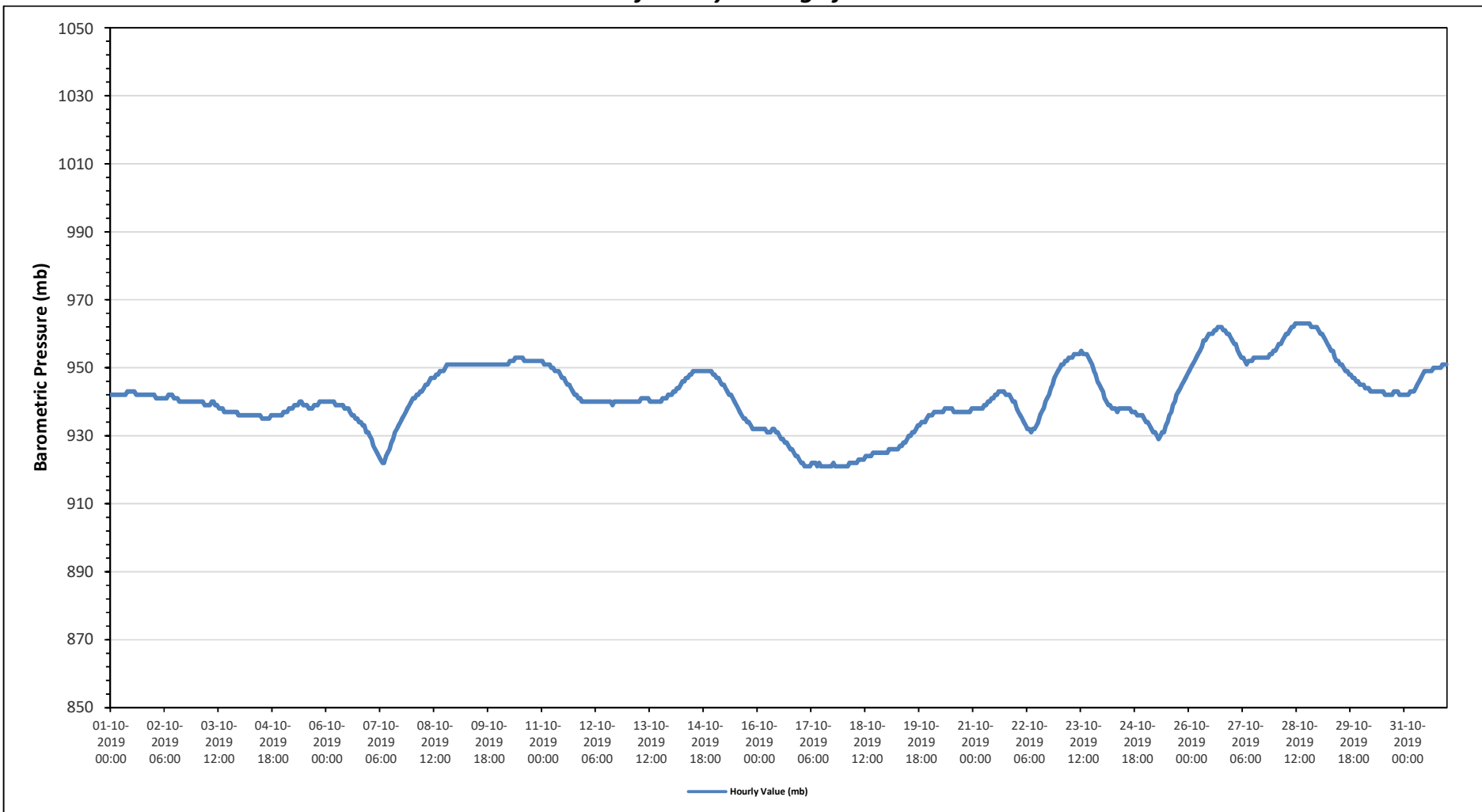
Maximum Hourly Value:	963 mb on October 28 at hour 11	Hours in Service:	744
Maximum Daily Value:	961 mb on	Hours of Data:	744
Minimum Hourly Value:	921 mb on October 17 at hour 2	Hours of Missing Data:	0
Minimum Daily Value:	921 mb on October 17	Hours of Calibration:	0
Monthly Average:	941 mb	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Oct 1	942	942	942	942	942	942	942	942	942	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942	942	943	942	
Oct 2	942	941	941	941	941	941	941	941	942	942	942	941	941	940	940	940	940	940	940	940	940	940	940	940	940	940	940	942	941
Oct 3	940	940	940	940	939	939	939	939	940	940	939	939	938	938	938	937	937	937	937	937	937	937	937	937	936	936	940	938	
Oct 4	936	936	936	936	936	936	936	936	936	936	936	936	935	935	935	935	935	936	936	936	936	936	936	936	935	936	936	936	
Oct 5	937	937	937	938	938	938	939	939	939	940	940	939	939	938	938	938	939	939	939	939	940	940	940	940	940	940	940	939	
Oct 6	940	940	940	940	940	939	939	939	939	939	938	938	937	936	936	935	935	934	934	933	933	931	931	931	931	940	937	937	
Oct 7	930	929	927	926	925	924	923	922	922	924	925	926	928	929	931	932	933	934	935	936	937	938	939	940	940	940	940	930	
Oct 8	941	941	942	942	943	943	944	945	945	946	947	947	948	948	949	949	949	950	951	951	951	951	951	951	951	951	951	947	
Oct 9	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	
Oct 10	951	951	951	951	951	951	952	952	952	952	953	953	953	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	
Oct 11	952	951	951	951	951	950	950	949	949	949	948	947	947	946	945	945	944	943	942	942	941	941	940	940	940	940	940	946	
Oct 12	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	939	940	940	940	940	940	940	940	940	940	940	940	940	
Oct 13	940	940	940	940	940	940	940	941	941	941	941	940	940	940	940	940	940	940	940	941	941	941	942	942	942	942	942	941	
Oct 14	942	943	943	944	944	945	946	946	947	947	948	948	949	949	949	949	949	949	949	949	949	949	949	949	948	948	949	947	
Oct 15	948	947	947	946	945	945	944	943	942	942	941	940	939	938	937	936	935	935	934	934	933	932	932	932	932	932	948	939	
Oct 16	932	932	932	932	932	931	931	931	932	932	931	931	930	929	929	928	928	927	926	926	925	924	924	923	923	932	929	929	
Oct 17	922	922	921	921	921	921	922	922	922	922	921	922	921	921	921	921	921	922	921	921	921	921	921	921	921	922	921	921	
Oct 18	921	921	921	922	922	922	922	922	923	923	923	923	924	924	924	925	925	925	925	925	925	925	925	925	925	921	925	923	
Oct 19	925	926	926	926	926	926	926	927	927	928	928	929	930	930	931	931	932	933	933	934	934	934	935	936	936	936	936	930	
Oct 20	936	936	937	937	937	937	937	937	938	938	938	938	938	937	937	937	937	937	937	937	937	937	937	937	938	938	938	937	
Oct 21	938	938	938	938	938	938	939	939	940	940	941	941	942	942	943	943	943	943	942	942	942	941	940	940	940	940	940	940	
Oct 22	938	937	936	935	934	933	932	932	931	932	932	932	933	934	936	937	938	940	941	942	944	945	947	948	949	949	949	938	
Oct 23	950	951	951	952	952	953	953	953	954	954	954	954	955	954	954	953	952	951	949	948	946	945	944	944	945	945	944	938	
Oct 24	943	941	940	939	939	938	938	938	937	938	938	938	938	938	938	937	937	937	936	936	936	936	935	935	935	935	935	938	
Oct 25	934	934	933	932	931	931	930	929	930	931	931	933	934	936	937	939	940	942	943	944	945	946	947	948	948	948	948	937	
Oct 26	949	950	951	952	953	954	955	956	958	958	959	960	960	960	961	961	962	962	962	962	961	961	960	960	959	949	958	958	
Oct 27	958	957	957	955	954	953	953	952	951	952	952	952	953	953	953	953	953	953	953	953	953	954	954	955	955	955	954	954	
Oct 28	955	956	957	957	958	959	960	960	961	962	962	963	963	963	963	963	963	963	963	963	962	962	962	962	962	962	962	962	
Oct 29	961	960	960	959	958	957	956	955	955	953	952	952	951	951	950	949	949	948	948	947	947	946	946	945	945	945	945	952	
Oct 30	945	945	944	944	944	943	943	943	943	943	943	943	943	943	942	942	942	942	943	943	943	942	942	942	942	942	942	943	
Oct 31	942	942	942	943	943	943	944	945	946	947	948	949	949	949	949	950	950	950	950	950	951	951	951	951	951	942	947	947	
Diurnal Maximum	961	960	960	959	958	959	960	960	961	962	962	963	963	963	963	963	963	963	963	963	963	962	962	962	962	962	962	962	
Diurnal Average	941	941	941	941	941	941	941	941	941	941	941	941	942	942	942	942	942	942	942	942	942	942	942	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 - October 2019

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

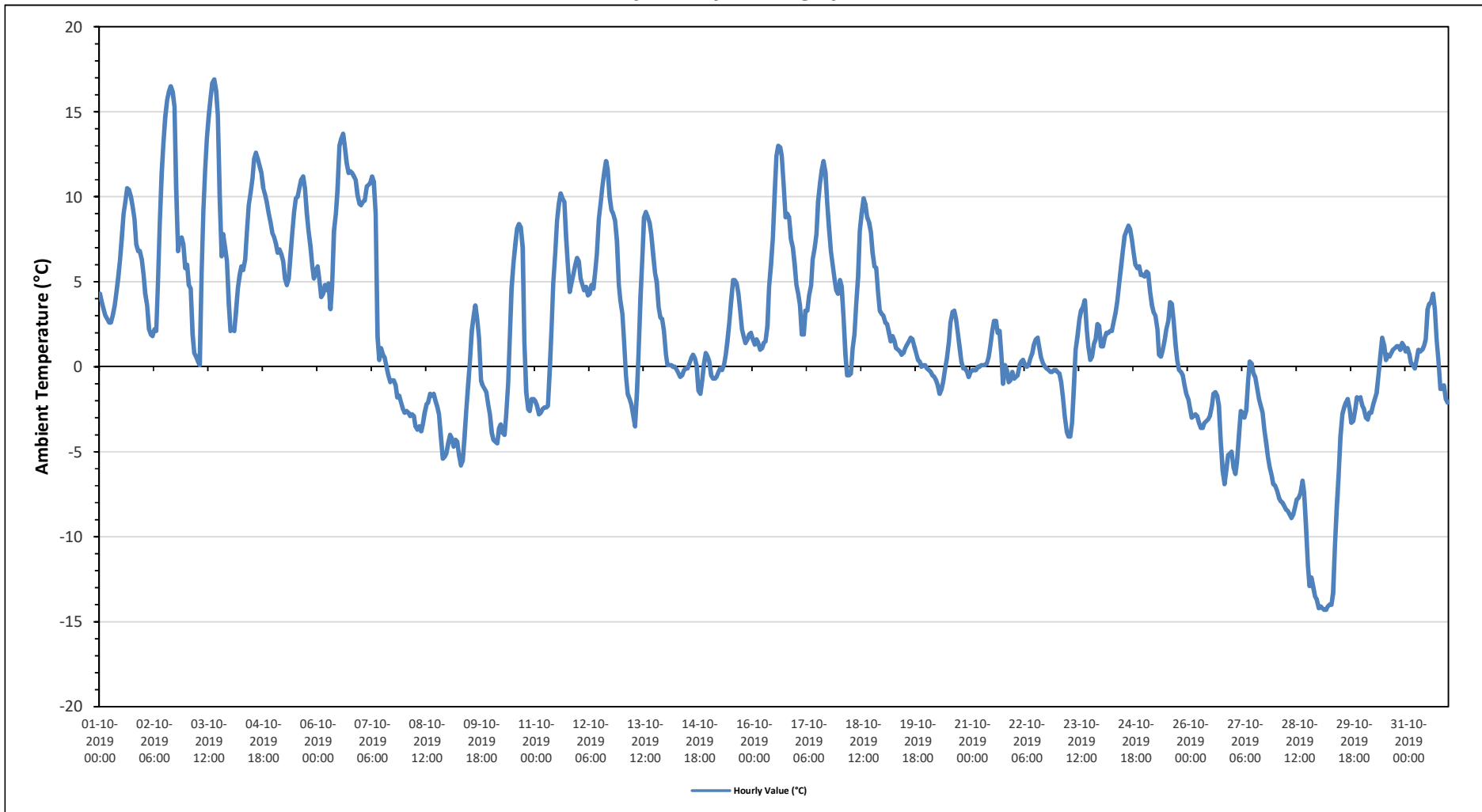
Maximum Hourly Value:	16.9 °C	on October 3 at hour 15	Hours in Service:	744
Maximum Daily Value:	8.8 °C	on	Hours of Data:	744
Minimum Hourly Value:	-14.3 °C	on October 29 at hour 3	Hours of Missing Data:	0
Minimum Daily Value:	-9.2 °C	on October 28	Hours of Calibration:	0
Monthly Average:	2.1 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	4.3	3.8	3.4	3.0	2.8	2.6	2.6	3.0	3.6	4.3	5.2	6.3	7.5	9.0	9.7	10.5	10.4	10.0	9.4	8.7	7.2	6.8	6.8	6.3	2.6	10.5	6.1
Oct 2	5.4	4.3	3.6	2.2	1.9	1.8	2.2	2.1	5.1	8.5	11.4	13.1	14.7	15.7	16.2	16.5	16.2	15.3	10.6	6.8	7.5	7.6	7.2	5.8	1.8	16.5	8.4
Oct 3	6.0	4.8	4.6	1.9	0.8	0.6	0.3	0.1	5.5	9.2	11.6	13.5	14.8	15.9	16.7	16.9	16.2	14.8	10.0	6.5	7.8	7.0	6.2	3.7	0.1	16.9	8.1
Oct 4	2.1	2.2	2.1	3.2	4.6	5.4	5.9	5.7	6.3	8.0	9.5	10.2	11.1	12.2	12.6	12.2	11.8	11.4	10.5	10.1	9.7	9.0	8.5	7.9	2.1	12.6	8.0
Oct 5	7.6	7.2	6.7	6.9	6.6	6.2	5.2	4.8	5.2	6.5	7.9	9.1	9.9	10.0	10.6	11.0	11.2	10.5	9.0	8.0	7.1	5.9	5.2	5.7	4.8	11.2	7.7
Oct 6	5.9	5.1	4.1	4.3	4.8	4.5	4.9	3.4	4.7	8.0	9.0	10.4	13.0	13.4	13.7	13.0	12.0	11.4	11.5	11.4	11.2	11.0	10.1	9.6	3.4	13.7	8.8
Oct 7	9.5	9.7	9.8	10.6	10.7	10.8	11.2	10.9	9.0	1.8	0.4	1.1	0.7	0.5	0.0	-0.5	-0.9	-0.8	-0.8	-1.1	-1.8	-1.7	-2.1	-2.5	-2.5	11.2	3.5
Oct 8	-2.7	-2.6	-2.7	-2.9	-2.8	-2.9	-3.5	-3.7	-3.5	-3.8	-3.4	-2.7	-2.2	-2.1	-1.6	-1.7	-1.6	-2.0	-2.4	-2.8	-4.1	-5.4	-5.3	-5.1	-5.4	-1.6	-3.1
Oct 9	-4.5	-4.0	-4.2	-4.7	-4.3	-4.4	-5.2	-5.8	-5.5	-4.2	-2.5	-1.0	0.3	2.1	3.0	3.6	2.8	1.7	-0.8	-1.1	-1.3	-1.5	-2.2	-2.8	-5.8	3.6	-1.9
Oct 10	-3.9	-4.3	-4.4	-4.5	-3.6	-3.4	-3.9	-4.0	-2.9	-1.0	1.9	4.6	6.1	7.2	8.1	8.4	8.2	7.0	1.5	-1.5	-2.5	-2.6	-1.9	-1.9	-4.5	8.4	0.3
Oct 11	-2.0	-2.3	-2.8	-2.7	-2.5	-2.4	-2.4	-2.3	-0.1	2.5	4.9	6.7	8.6	9.6	10.2	9.9	9.7	7.7	5.9	4.4	4.9	5.4	6.0	6.4	-2.8	10.2	3.5
Oct 12	6.2	5.2	4.8	4.5	4.7	4.2	4.3	4.8	4.6	5.5	6.6	8.7	9.6	10.6	11.4	12.1	11.6	10.0	9.2	9.0	8.6	7.4	4.8	3.9	3.9	12.1	7.2
Oct 13	3.1	1.4	-0.5	-1.6	-1.9	-2.2	-2.8	-3.5	-1.5	0.9	4.1	6.5	8.8	9.1	8.8	8.5	7.8	6.6	5.5	5.0	3.5	2.9	2.8	2.1	-3.5	9.1	3.1
Oct 14	0.7	0.1	0.1	0.1	0.0	0.0	-0.2	-0.4	-0.6	-0.5	-0.2	-0.1	-0.1	0.2	0.5	0.7	0.5	0.0	-1.4	-1.6	-0.8	0.1	0.8	0.6	-1.6	0.8	-0.1
Oct 15	0.3	-0.5	-0.7	-0.7	-0.6	-0.3	-0.1	-0.2	0.1	0.7	1.5	2.6	3.9	5.1	5.1	4.9	4.3	3.3	2.2	1.7	1.4	1.6	1.9	2.0	-0.7	5.1	1.6
Oct 16	1.6	1.3	1.6	1.4	1.0	1.1	1.4	1.5	2.4	4.7	6.0	7.6	10.3	12.4	13.0	12.9	12.4	10.6	8.8	9.0	8.8	7.5	7.0	6.1	1.0	13.0	6.3
Oct 17	4.8	4.3	3.6	1.9	1.9	3.3	3.3	4.2	4.8	6.3	7.0	7.8	9.7	10.8	11.6	12.1	11.4	9.5	8.2	6.8	6.0	5.1	4.5	4.3	1.9	12.1	6.4
Oct 18	5.1	4.7	2.9	0.7	-0.5	-0.5	-0.4	1.1	1.9	3.7	5.3	8.0	9.0	9.9	9.6	8.8	8.5	7.9	6.7	5.9	5.8	4.4	3.3	3.1	-0.5	9.9	4.8
Oct 19	3.0	2.6	2.5	2.0	1.5	1.8	1.5	1.1	1.0	0.9	0.7	0.8	1.1	1.3	1.5	1.7	1.6	1.2	0.8	0.4	0.3	0.0	0.1	0.1	0.0	3.0	1.2
Oct 20	-0.1	-0.2	-0.3	-0.5	-0.6	-0.8	-1.1	-1.6	-1.3	-0.9	-0.1	0.5	1.5	2.6	3.2	3.3	2.8	2.0	1.1	0.3	-0.1	-0.1	-0.3	-0.6	-1.6	3.3	0.4
Oct 21	-0.3	-0.2	-0.2	-0.2	0.0	0.0	0.1	0.1	0.1	0.2	0.6	1.3	2.1	2.7	2.7	2.0	2.1	0.7	-1.0	0.1	-0.2	-0.9	-0.8	-0.3	-1.0	2.7	0.4
Oct 22	-0.7	-0.6	-0.5	0.1	0.3	0.4	0.1	0.0	0.1	0.5	0.8	1.3	1.6	1.7	1.1	0.5	0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.7	1.7	0.2
Oct 23	-0.3	-0.4	-0.9	-1.8	-2.9	-3.8	-4.1	-4.1	-3.3	-1.1	1.0	1.8	2.8	3.3	3.5	3.9	2.2	1.2	0.4	0.6	1.3	1.6	2.5	2.4	-4.1	3.9	0.2
Oct 24	1.2	1.2	1.7	2.0	2.0	2.1	2.1	2.7	3.2	3.9	4.9	5.9	6.9	7.7	8.0	8.3	8.1	7.5	6.6	6.0	5.8	5.9	5.4	5.4	1.2	8.3	4.8
Oct 25	5.3	5.6	5.5	4.4	3.6	3.2	3.0	2.2	0.7	0.6	1.0	1.6	2.2	2.7	3.8	3.7	2.7	1.3	0.4	-0.2	-0.3	-0.5	-1.1	-1.6	-1.6	5.6	2.1
Oct 26	-1.9	-2.4	-3.0	-2.9	-2.8	-2.9	-3.3	-3.6	-3.6	-3.3	-3.2	-3.1	-2.9	-2.3	-1.6	-1.5	-1.7	-2.3	-4.4	-6.1	-6.9	-6.1	-5.2	-5.1	-6.9	-1.5	-3.4
Oct 27	-5.0	-5.9	-6.3	-5.6	-4.1	-2.6	-2.7	-3.0	-2.6	-0.8	0.3	0.2	-0.4	-0.6	-1.2	-1.9	-2.3	-2.7	-3.7	-4.5	-5.3	-5.9	-6.4	-6.9	-6.9	0.3	-3.3
Oct 28	-7.0	-7.3	-7.7	-7.9	-8.0	-8.2	-8.4	-8.5	-8.7	-8.9	-8.7	-8.2	-7.8	-7.4	-6.7	-7.4	-9.4	-11.7	-12.9	-12.4	-13.0	-13.5	-13.7	-13.7	-13.7	-6.7	-9.2
Oct 29	-14.2	-14.1	-14.2	-14.3	-14.3	-14.1	-14.0	-14.0	-13.3	-10.4	-8.1	-6.1	-4.1	-2.8	-2.4	-2.1	-1.9	-2.5	-3.3	-3.2	-2.6	-1.8	-1.9	-1.8	-14.3	-1.8	-7.6
Oct 30	-2.3	-2.5	-3.0	-3.1	-2.7	-2.7	-2.2	-1.9	-1.5	-0.4	0.7	1.7	1.3	0.4	0.7	0.6	0.8	1.0	1.1	1.2	1.2	1.0	1.4	1.2	-3.1	1.7	-0.3
Oct 31	0.9	1.1	0.7	0.2	0.1	-0.1	0.5	1.0	0.9	1.0	1.2	1.6	3.4	3.7	3.8	4.3	3.4	1.6	0.4	-1.3	-1.3	-1.1	-1.9	-2.1	-2.1	4.3	0.9
Diurnal Maximum	9.5	9.7	9.8	10.6	10.7	10.8	11.2	10.9	9.0	9.2	11.6	13.5	14.8	15.9	16.7	16.9	16.2	15.3	11.5	11.4	11.2	11.0	10.1	9.6			
Daily Average	0.9	0.6	0.2	-0.1	-0.1	-0.1	-0.2	-0.3	0.3	1.4	2.5	3.6	4.6	5.3	5.6	5.7	5.3	4.3	2.9	2.1	1.9	1.6	1.3	1.0			

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 AT - 842b Station





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

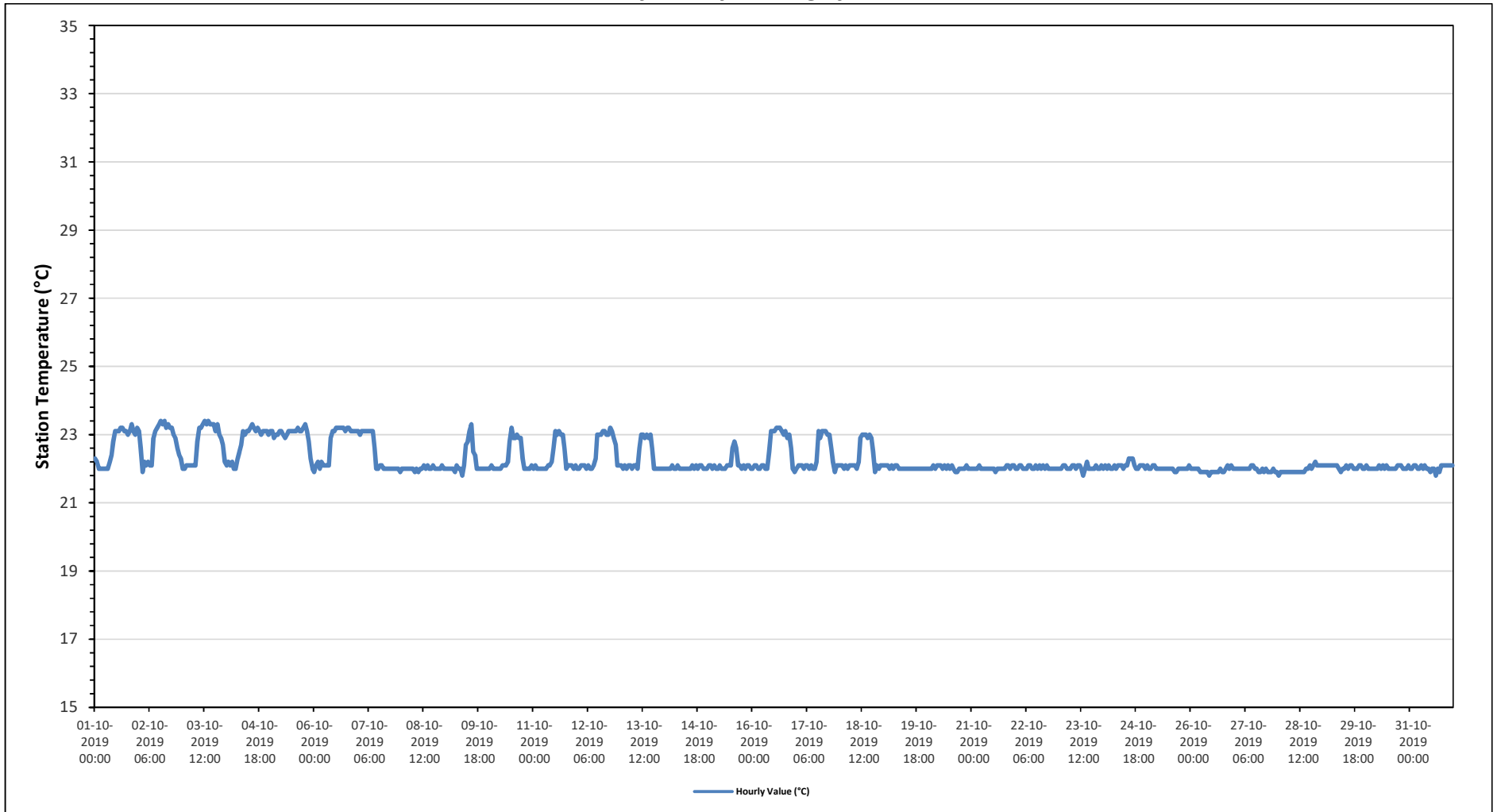
Maximum Hourly Value:	23.4 °C	on October 2 at hour 12	Hours in Service:	744
Maximum Daily Value:	23.0 °C	on	Hours of Data:	744
Minimum Hourly Value:	21.8 °C	on October 9 at hour 9	Hours of Missing Data:	0
Minimum Daily Value:	22.0 °C	on October 26	Hours of Calibration:	0
Monthly Average:	22.3 °C		Operational Uptime:	100.0

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

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 ST - 842b Station





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

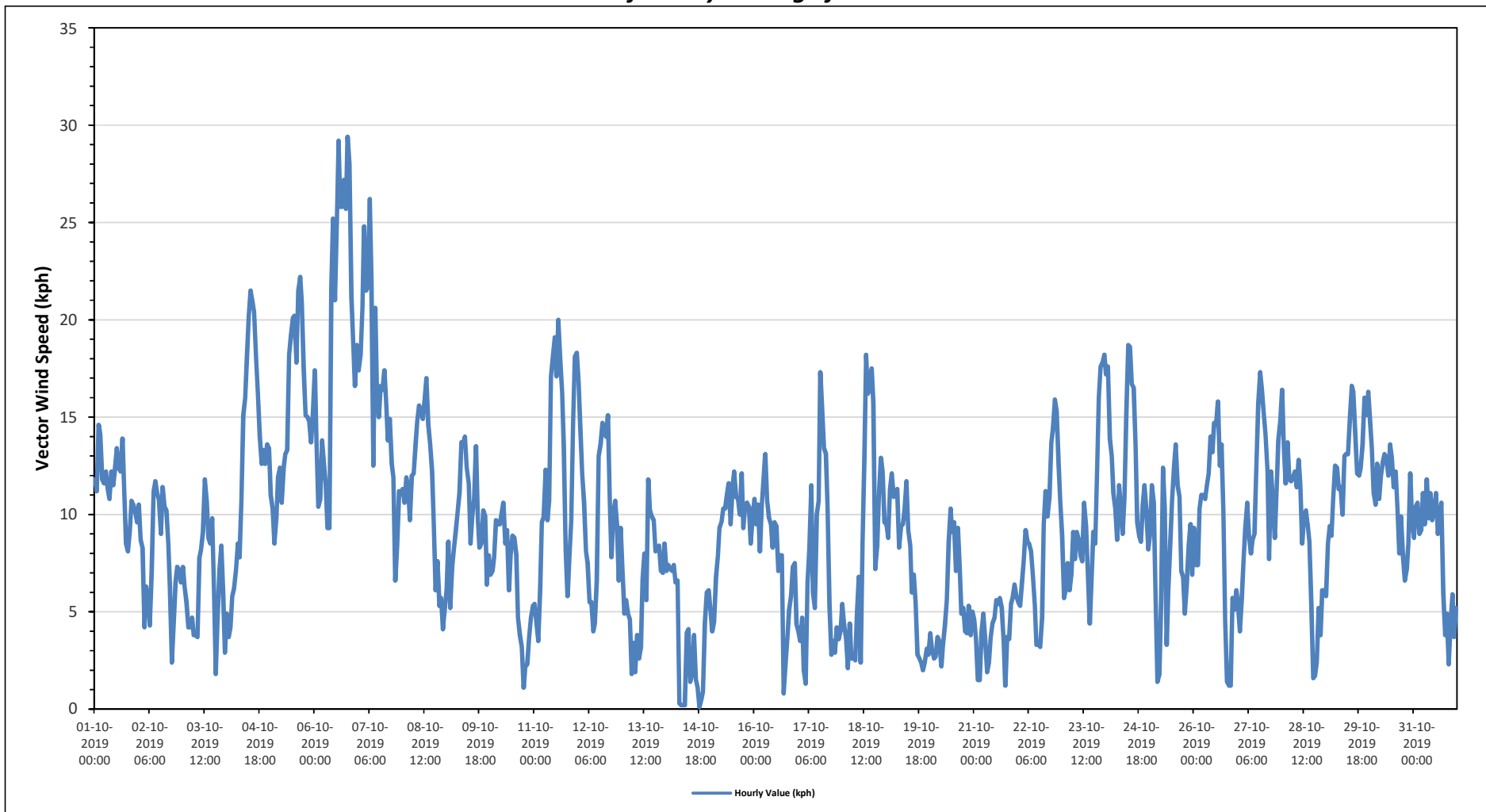
Maximum Hourly Value: 29.4 kph on October 6 at hour 18	Hours in Service: 744
Maximum Daily Value: 19.5 kph on	Hours of Data: 744
Minimum Hourly Value: 0.1 kph on October 14 at hour 18	Hours of Missing Data: 0
Minimum Daily Value: 3.6 kph on October 14	Hours of Calibration: 0
Monthly Average: 4.2 kph	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	
Oct 1	11.8	11.2	14.6	14.1	11.8	11.6	12.2	11.3	10.8	12.2	11.5	12.3	13.4	12.4	12.2	13.9	11.3	8.5	8.1	9.1	10.7	10.5	10.1	9.6	8.1	14.6	11.5	
Oct 2	10.5	8.7	8.3	4.2	6.3	5.8	4.3	7.1	11.2	11.7	11.1	10.7	9	11.4	10.4	10.2	8.5	6.2	2.4	4.3	6.5	7.3	7.1	6.5	2.4	11.7	7.9	
Oct 3	7.3	6.3	5.5	4.2	4.2	4.7	3.8	3.8	3.7	7.8	8.2	9.1	11.8	10.6	8.8	8.5	9.8	6.1	1.8	4.6	7.1	8.4	5.8	2.9	1.8	11.8	6.5	
Oct 4	4.9	3.7	4.2	5.8	6.2	7.2	8.5	7.8	10.7	15.1	16	18	20.2	21.5	20.9	20.4	18	16.2	14	12.6	13.3	12.6	13.6	13.4	3.7	21.5	12.7	
Oct 5	11	10.3	8.5	9.8	11.9	12.4	10.6	12.4	13.1	13.3	18.2	19.2	20.1	20.2	17.8	21.5	22.2	20.9	17.5	15.1	15	14.8	13.7	15.3	8.5	22.2	15.2	
Oct 6	17.4	13.7	10.4	10.8	13.8	12.7	11.6	9.3	9.3	21.6	25.2	21	24.9	29.2	25.8	27.2	25.7	29.4	28	21.2	18.7	16.6	18.7	9.3	29.4	19.5		
Oct 7	17.4	18.2	20.6	24.8	21.5	21.7	26.2	21.9	12.5	20.6	15.8	15	16.6	16.4	17.4	15.9	13.8	14.9	12.6	11.9	6.6	8.4	11.2	11.1	6.6	26.2	16.4	
Oct 8	11.3	10.6	11.9	11.4	9.7	12	12.1	13.6	14.8	15.6	15.2	14.9	15.9	17	14.6	13.6	12.2	9.6	6.1	7.6	5.3	5.7	4.1	5.2	4.1	17.0	11.3	
Oct 9	6.2	8.6	5.2	7.3	8.3	9.1	10.1	11.1	13.7	13.6	14	12.4	11.6	8.5	9.9	10.8	13.5	9.7	8.3	8.5	10.2	9.9	6.4	7.9	5.2	14.0	9.8	
Oct 10	6.9	7.1	7.8	9.7	9.5	9.5	10.1	10.6	8.5	9.2	6.1	7.9	8.9	8.8	7.9	4.7	3.8	3.2	1.1	2.2	2.3	3.7	4.7	5.3	1.1	10.6	6.6	
Oct 11	5.4	4.5	3.5	6.2	9.6	9.9	12.3	9.7	10.7	17.1	18.2	19.1	17.1	20	17.9	16.3	13.5	8.1	5.8	7.9	9.7	14.6	18.1	18.3	3.5	20.0	12.2	
Oct 12	16.8	14.5	12.1	10.6	8.1	7.5	5.5	5.5	4	4.4	6.6	13	13.6	14.7	14.4	14	15.1	10.6	7.8	10.1	10.7	9.4	6.6	9.3	4.0	16.8	10.2	
Oct 13	7.1	4.9	5.6	4.9	4.6	1.8	3.4	1.9	3.8	2.6	3.2	6.7	8	5.6	11.8	10.2	9.9	9.7	8.1	8.2	8.4	7.1	7	8.5	1.8	11.8	6.4	
Oct 14	7.1	7.4	7.2	7.1	7.4	6.5	6.6	0.3	0.2	0.2	0.2	3.9	4.1	1.4	1.9	3.8	1.6	1.1	0.1	0.5	0.9	4.4	6	6.1	0.1	7.4	3.6	
Oct 15	5	4	4.5	6.8	7.9	9.3	9.6	10.3	10.3	11	11.6	9.5	11.4	12.2	10.9	10.8	10	12.1	9.3	10.5	10.6	10.4	8.5	9.8	4.0	12.2	9.4	
Oct 16	10.8	9.5	10.5	8.1	10.5	11.9	13.1	10.7	9.8	9.5	8.3	9.6	9.4	7.1	7.9	7.9	0.8	2.4	3.7	5.1	5.8	7.3	7.5	4.4	0.8	13.1	8.0	
Oct 17	4	3.5	4.7	2	1.3	6.5	8.2	11.5	6	5.2	10	10.7	17.3	15.4	13.4	13.1	10.4	5.4	2.8	3.5	2.9	4.2	3.6	4	1.3	17.3	7.1	
Oct 18	5.4	4.4	3.6	2.1	4.4	2.6	2.8	2.5	5	6.8	2.4	8.6	13.1	18.2	16.2	16.5	17.5	15.7	7.2	8.4	11.2	12.9	12.2	9.6	2.1	18.2	8.7	
Oct 19	9.5	8.8	11.3	12.1	10.9	11	11.3	8.3	9.4	9.5	10.2	11.7	9.2	8.4	6	6.9	5.5	2.8	2.6	2.4	2	2.4	3.1	2.8	2.0	12.1	7.4	
Oct 20	3.9	3	2.6	2.7	3.7	3.5	2.2	3.3	4.3	5.6	8.6	10.3	9.1	9.6	7.1	9.3	7.6	4.9	5.2	4	3.9	5.3	3.8	5	2.2	10.3	5.4	
Oct 21	4.6	3.6	1.5	1.5	3.9	4.9	3.5	1.9	2.4	3.7	4.4	4.7	5.6	5.4	5.7	5.2	3.5	1.2	3.7	3.6	5.4	5.7	6.4	5.8	1.2	6.4	4.1	
Oct 22	5.5	5.3	6.4	7.6	9.2	8.6	8.5	8.1	6.9	5.3	3.3	3.3	3.2	4.7	9.5	11.2	9.9	10.9	13.7	14.4	15.9	15.3	12.6	10.7	3.2	15.9	8.8	
Oct 23	8.9	5.7	6.2	7.5	6.1	6.9	9.1	7.7	9.1	8.7	7.9	7.6	10.6	9.4	6.9	4.4	6.5	9.1	8.5	12.1	16	17.6	17.8	18.2	4.4	18.2	9.5	
Oct 24	17.2	17.6	13.9	13	11.1	10.3	8.7	11.5	10.4	9	10.8	15.2	18.7	18.6	16.7	16.5	13.5	9.6	8.9	8.6	10.5	11.5	10.2	8.2	8.2	18.7	12.5	
Oct 25	9.1	11.5	10.6	5.6	1.4	1.8	5.5	12.4	10.3	3.3	6.1	8.5	10.8	12.4	13.6	11.5	10.9	7.1	6.8	4.9	6.4	8.4	9.5	6.9	1.4	13.6	8.1	
Oct 26	9.3	7.4	7.4	10.3	11	11	10.8	11.5	12.1	14	13.2	14.7	14.6	15.8	12.5	13.6	10.1	4.5	1.4	1.2	1.2	5.7	5.1	6.1	1.2	15.8	9.4	
Oct 27	5.4	4	5.7	7.8	9.3	10.6	8.9	8	8.7	9	12.5	15.7	17.3	16.4	15.2	14.1	12.2	7.7	12.2	10.7	8.8	11	13.8	14.8	4.0	17.3	10.8	
Oct 28	16.4	13.5	11.6	13.7	11.8	11.7	11.9	12.2	11.4	12.8	11.6	8.5	9.9	10.2	9.5	8.6	5.4	1.6	1.7	2.4	5.2	3.8	6.1	6.1	1.6	16.4	9.1	
Oct 29	5.8	8.5	9.4	8.9	10.9	12.5	12.4	11.3	11.4	10	13	13.1	13.1	14.9	16.6	16.3	14.2	12.1	12	12.4	13.6	16	15.1	16.3	5.8	16.6	12.5	
Oct 30	14.9	13.4	11.1	10.5	12.6	10.8	12	12.7	13.1	12.9	12	13.6	12.9	11.4	12.2	10.3	8	9.9	7.9	6.6	7.2	8.5	12.1	9.5	6.6	14.9	11.1	
Oct 31	8.8	10.4	10.6	9	9.2	11.1	9.5	11.8	9.8	11.1	9.7	10.2	11.1	9	9.9	10.6	6	3.8	4.9	2.3	4.5	5.9	3.7	5.2	2.3	11.8	8.3	
Diurnal Maximum	17	18	21	25	22	22	26	22	15	22	25	21	25	29	26	26	27	26	29	28	21	19	18	19	19			
Diurnal Average	9.2	8.5	8.3	8.4	8.6	8.9	9.2	9.1	8.9	10.1	10.5	11.6	12.7	12.8	12.3	12.1	10.7	8.8	7.6	7.9	8.4	9.3	9.1	9.1				

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

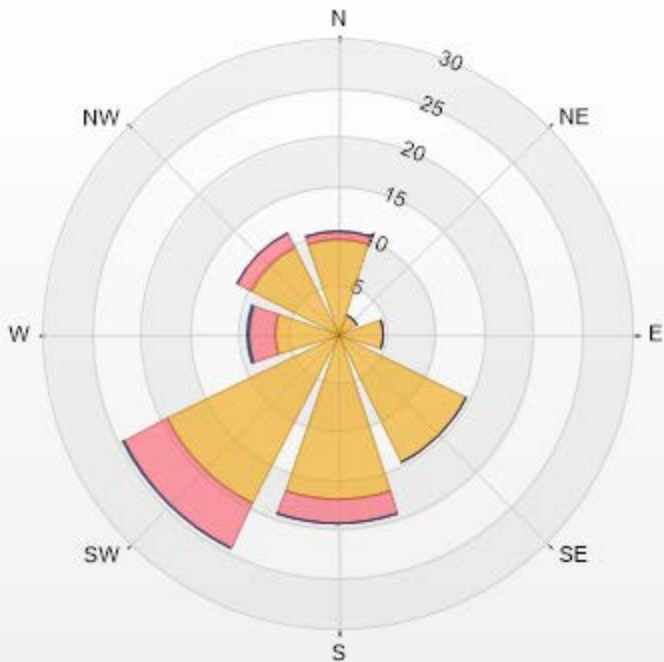
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Average for VWS - 842b Station



Wind: PRAMP 842b Poll.: PRAMP 842b-WDS[KPH] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 3.36% Valid Data: 99.87% Calm Avg: 1.10 [KPH]

Direction	6-15	15-29	29-39	>39.0	Total
N	9.69	0.81	0	0	10.5
NE	2.15	0	0	0	2.15
E	4.58	0	0	0	4.58
SE	14.67	0	0	0	14.67
S	16.82	2.56	0	0	19.38
SW	19.38	4.98	0.13	0	24.49
W	6.46	2.69	0.13	0	9.28
NW	9.96	1.62	0	0	11.58
Summary	83.71	12.66	0.26	0	96.63



PRAMP-201910



PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

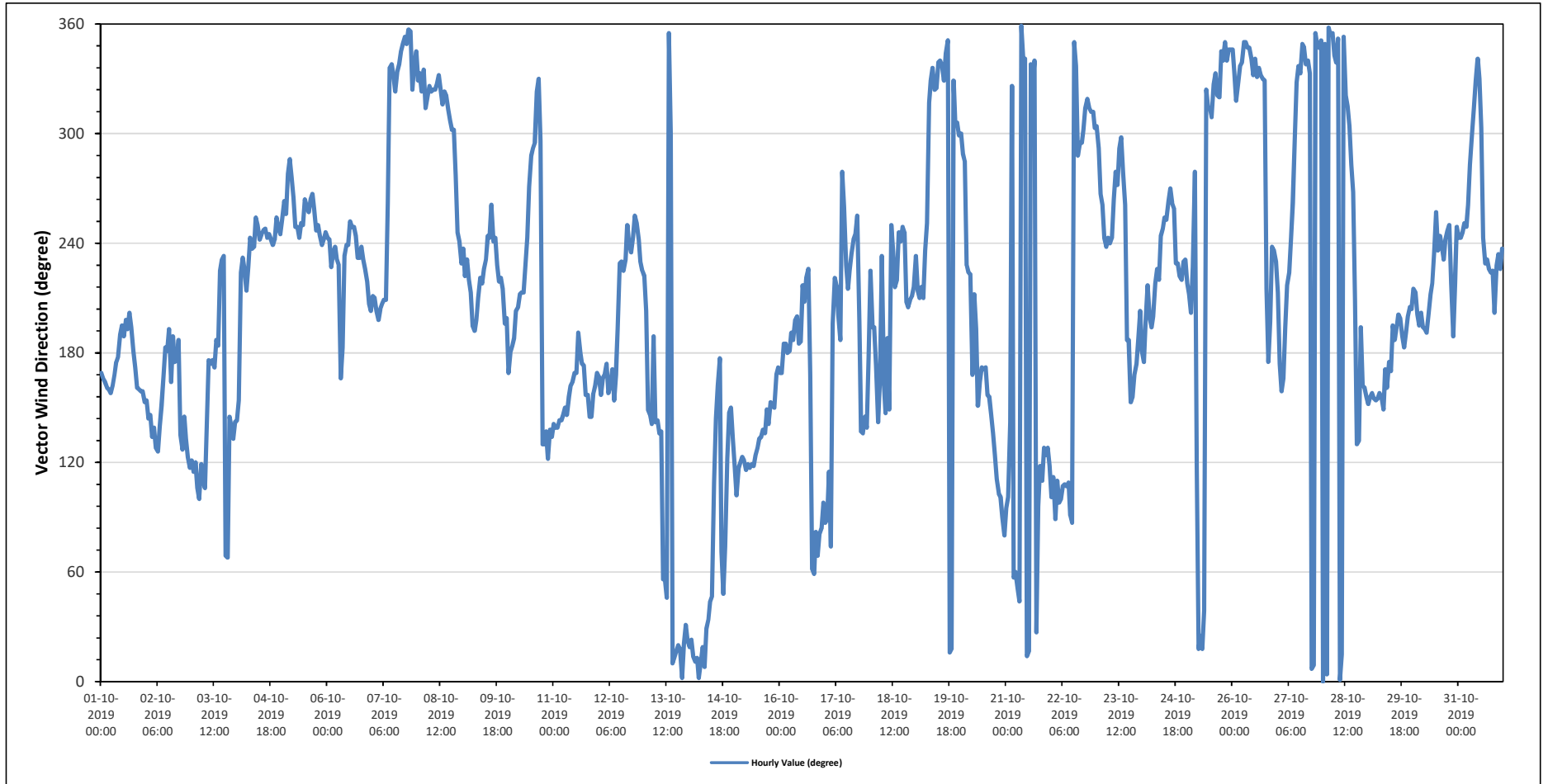
Monthly Average:	227 (SW) degree	Hours in Service:	744
		Hours of Data:	744
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Oct 1	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	SSW	S	SSW	S	SSW	SSW	S	S	SSE	SSE	SSE	SSE	SSE	174	S
Oct 2	SSE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	S	S	S	SSE	S	S	S	S	SE	SE	SE	SE	ESE	ESE	157	SSE
Oct 3	ESE	ESE	ESE	ESE	E	ESE	ESE	ESE	SE	S	S	S	S	S	S	SW	SW	SW	ENE	ENE	SE	SE	SE	SE	158	SSE
Oct 4	SE	SSE	SW	SW	SW	SSW	SW	WSW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	241	WSW
Oct 5	WSW	W	WSW	W	WNW	W	W	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	256	WSW
Oct 6	WSW	WSW	SW	SW	SW	SW	SW	SSE	S	SW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SSW	SSW	233	SW
Oct 7	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	W	NNW	NNW	NNW	NW	NNW	NNW	NNW	NNW	N	NNW	N	N	NW	NNW	NNW	283	W
Oct 8	NNW	NNW	NW	NNW	NW	NW	NW	NW	NW	NW	NNW	NW	NW	NW	NW	NW	NW	NNW	NNW	W	WSW	WSW	WSW	WSW	318	NW
Oct 9	SW	SW	SW	SW	SSW	SSW	S	SSW	SSW	SW	SW	SW	WSW	WSW	W	WSW	WSW	SW	SW	SW	SSW	SSW	SSW	SSW	222	SW
Oct 10	SSE	S	S	S	SSW	SSW	SSW	SSW	SSW	SW	WSW	W	WNW	WNW	WNW	NW	NNW	WNW	SE	SE	SE	ESE	SE	SE	219	SW
Oct 11	SE	SE	SE	SE	SE	SE	SSE	SE	SSE	SSE	SSE	SSE	S	S	S	S	SSE	SSE	SE	SE	SSE	SSE	SSE	SSE	162	SSE
Oct 12	SSE	SSE	SSE	SSE	S	SSE	SSE	S	SSE	SSE	S	SW	SW	SW	SW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	211	SSW
Oct 13	SW	SSW	SSE	SE	SE	S	SE	SE	SE	SE	NE	NE	NE	N	WNW	N	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	28	NNE
Oct 14	NNE	NNE	NNE	NNE	NNE	N	NNE	NNE	N	NNE	NE	NE	NE	ESE	SE	SSE	S	ENE	NE	ENE	ESE	SE	SSE	SE	45	NE
Oct 15	ESE	E	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	SSE	SE	SSE	SSE	SSE	SSE	S	133	SE
Oct 16	SSE	SSE	S	S	S	S	S	S	SSW	SSW	S	S	SW	SSW	SW	SW	SSE	ENE	ENE	E	ENE	E	E	E	178	S
Oct 17	E	E	ESE	ENE	SSW	SW	SW	SSW	S	W	WSW	SW	SSW	SW	SW	WSW	WSW	WSW	SSW	SE	SE	SE	SE	S	216	SW
Oct 18	SW	SSW	SSW	S	SE	SSE	SW	SSE	SE	S	SSE	WSW	SW	SW	SW	WSW	WSW	WSW	SSW	SSW	SSW	SSW	SSW	SSW	219	SW
Oct 19	SW	SSW	SSW	SW	SSW	SW	WSW	NW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	N	NNE	NNE	NNW	NW	NW	WNW	290	WNW
Oct 20	WNW	WNW	WNW	SW	SW	SW	SSE	SSW	S	SSE	SSE	S	S	S	SSE	SSE	SE	SE	ESE	ESE	ESE	E	E	E	160	SSE
Oct 21	E	E	SE	NW	ENE	ENE	NE	NE	N	NNW	NNW	NNE	NNW	NW	NNW	NNE	E	ESE	ESE	SE	ESE	SE	ESE	SE	55	NE
Oct 22	E	ESE	E	ESE	E	E	ESE	ESE	ESE	ESE	E	E	N	NNW	WNW	WNW	WNW	WNW	NW	NW	NW	NW	NW	WNW	339	NNW
Oct 23	WNW	WNW	W	W	WSW	SW	WSW	WSW	WSW	W	W	W	WNW	WNW	W	W	S	S	SSE	SSE	SSE	S	S	SSW	227	SW
Oct 24	S	S	SSW	SW	SSW	SSW	SSW	SW	SW	SW	WSW	WSW	WSW	WSW	W	W	W	WSW	SW	SW	SW	SW	SW	SW	228	SW
Oct 25	SW	SSW	SSW	SW	W	ESE	NNE	NNE	NNE	NE	NW	NW	NW	NW	NW	NNW	NW	NNW	NNW	N	NNW	NNW	NNW	325	NW	
Oct 26	NNW	NNW	NW	NNW	NNW	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	SSW	S	SSW	SW	SW	SW	332	NNW
Oct 27	SSW	S	SSE	SSE	SSW	SW	SW	WSW	W	WNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	N	NNW	NNW	N	N	327	NW
Oct 28	N	NNW	N	N	N	N	NNW	NNW	N	N	NNE	N	NW	NW	WNW	W	W	SSW	SE	SE	SSW	SSE	SSE	SSE	344	NNW
Oct 29	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	S	SSE	SSW	S	SSW	SSW	SSW	S	S	S	SSW	SSW	SSW	179	S
Oct 30	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	SSW	SSW	SW	SW	WSW	SW	WSW	SW	SW	WSW	WSW	SW	S	SW	WSW	219	SW
Oct 31	WSW	WSW	WSW	WSW	WSW	W	W	WNW	NW	NNW	NNW	NNW	WNW	WSW	SW	SW	SW	SW	SSW	SW	SW	SW	SW	SW	265	W

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 Station - October 2019

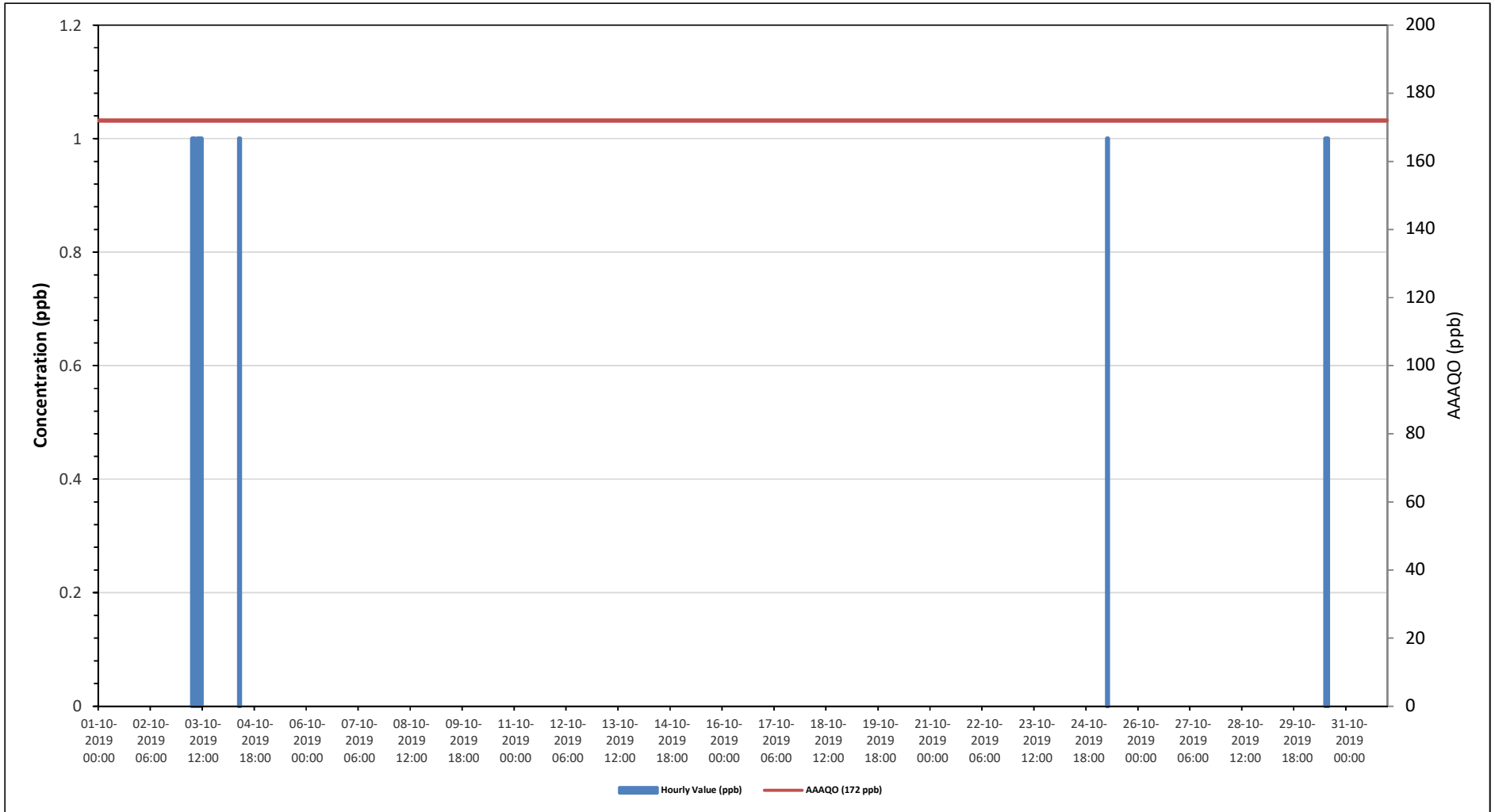
Summary of Hourly Averages

SULPHUR DIOXIDE (SO₂) in ppb

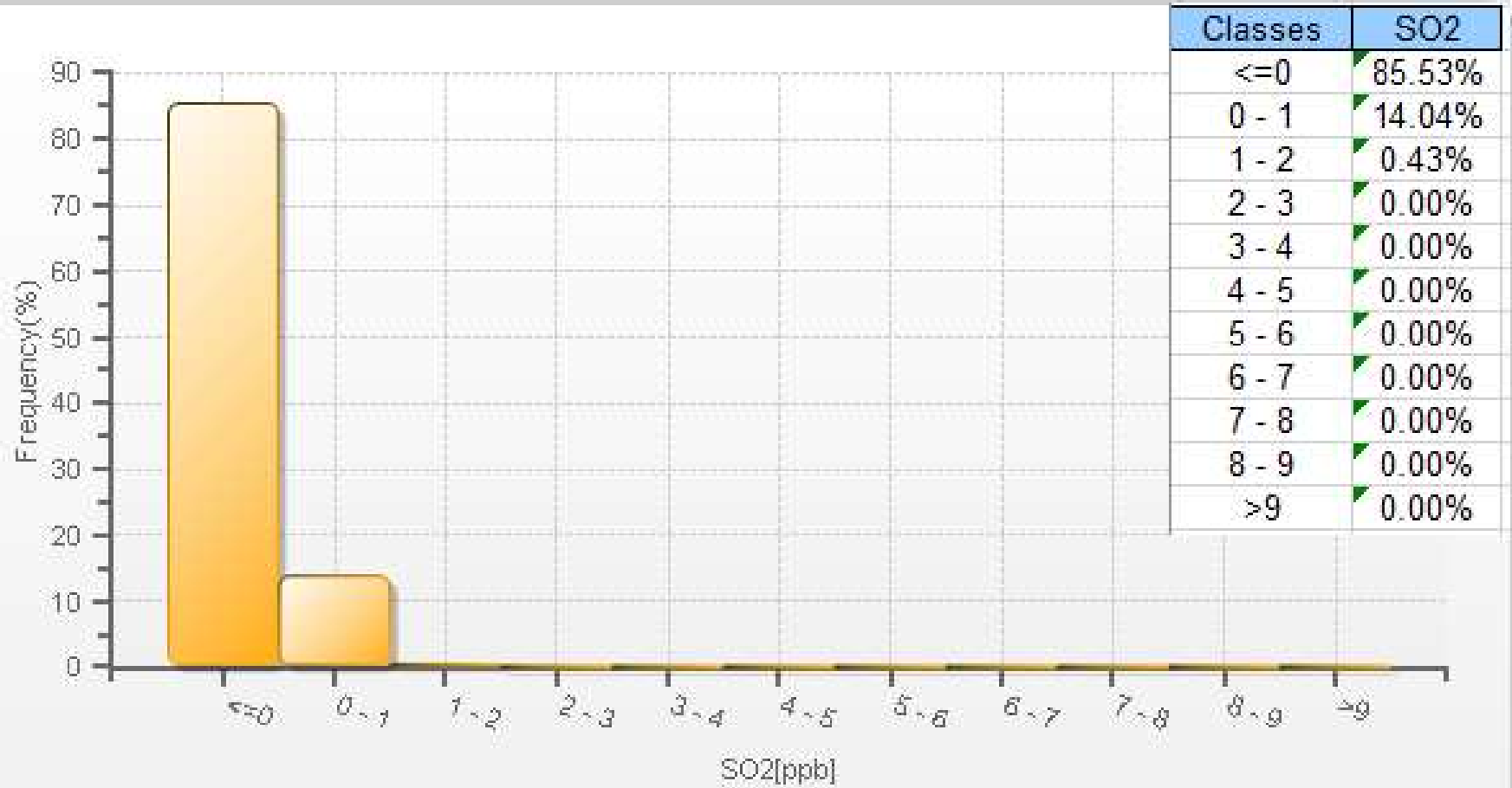
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																		
Number of 1-Hour Exceedances:		0	Number of 24-Hour Exceedances:					0	30-Day Exceedance:					0																				
Maximum Hourly Value:		1 ppb	on October 3 at hour 6					Hours in Service:		744																								
Maximum Daily Value:		0.1 ppb	on					Hours of Data:		692																								
Minimum Hourly Value:		0 ppb	on October 1 at hour 30					Hours of Missing Data:		14																								
Minimum Daily Value:		0.0 ppb	on October 1					Hours of Calibration:		38																								
Monthly Average:		0.0 ppb						Operational Uptime:		98.1																								
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23							
Oct 1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct 2	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oct 3	0	0	0	0	0	0	1	1	0	1	1	1	C	C	C	C	C	C	0	0	0	0	0	S	0	0	0	0	0	0	0	0		
Oct 4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	
Oct 5	0	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	0	0	0	0	
Oct 6	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	0	0	0	0	0	
Oct 7	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	0	0	0	0	0	
Oct 8	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	0	0	0	0	0	
Oct 9	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	0	0	0	0	0	
Oct 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oct 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oct 12	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	0	0	0	0	0	
Oct 13	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	0	0	0	0	0	
Oct 14	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	0	0	0	0	0	
Oct 15	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	0	0	0	0	0	
Oct 16	0	P	P	P	P	P	P	P	R	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oct 17	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	0	0	0	0	0	
Oct 18	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	0	0	0	0	0	
Oct 19	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	0	0	0	0	0	
Oct 20	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	0	0	0	0	0	
Oct 21	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	0	0	0	0	0	
Oct 22	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	0	0	0	0	0	
Oct 23	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oct 24	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oct 25	P	P	P	P	R	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	
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct 29	0	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	0	0	0	0	0
Oct 30	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0
Oct 31	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	0	0	0	0	0	0
Diurnal Maximum	0	0	0	0	0	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Station

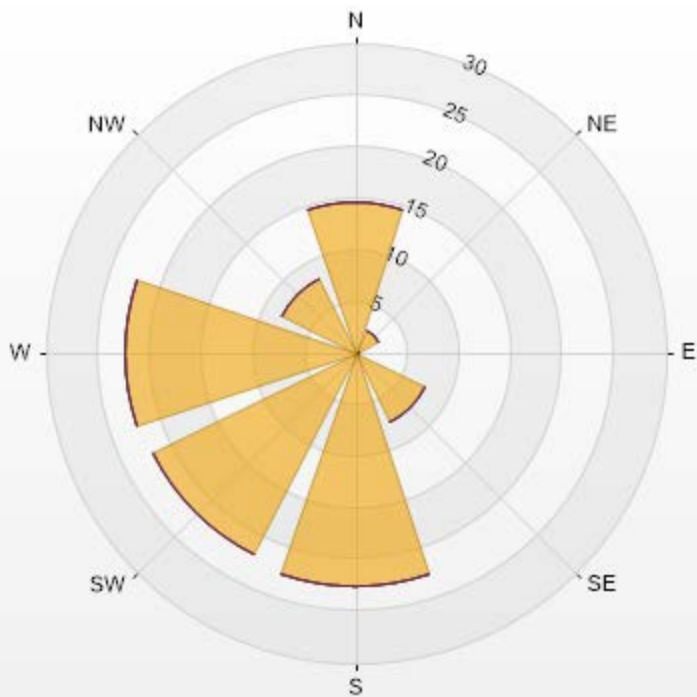


SO2[ppb] Histogram: PRAMP RENO Monthly: 10-2019 1 Hr.



Wind: PRAMP RENO Poll.: PRAMP RENO-SO2[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 89.39% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	14.61	0	0	0	0	14.61
NE	2.44	0	0	0	0	2.44
E	0.3	0	0	0	0	0.3
SE	7.61	0	0	0	0	7.61
S	22.68	0	0	0	0	22.68
SW	21.92	0	0	0	0	21.92
W	22.37	0	0	0	0	22.37
NW	8.07	0	0	0	0	8.07
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)

100 0-10

0 10-50

0 50-100

0 100-172

0 >172.0



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Averages

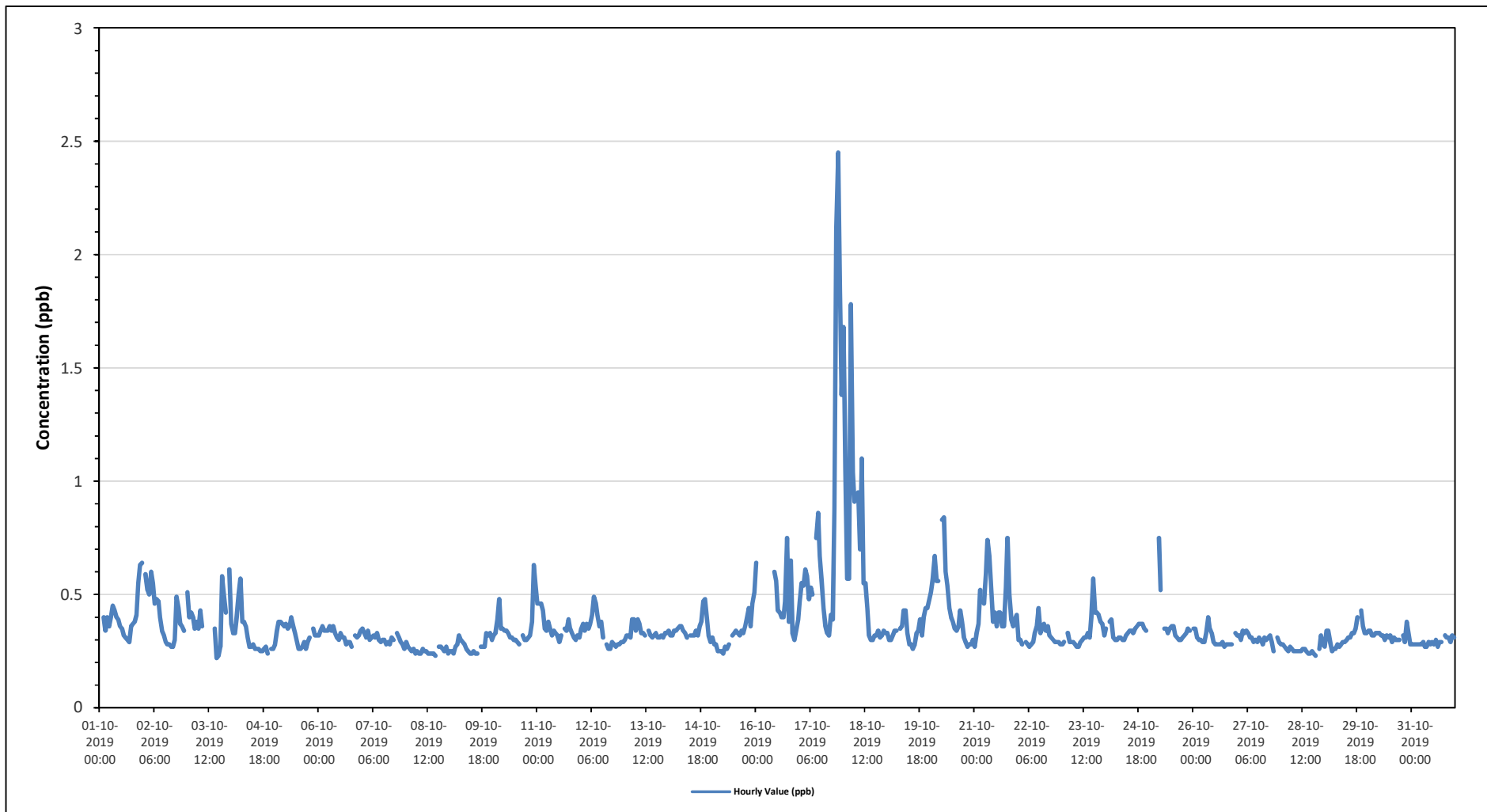
TOTAL REDUCED SULPHUR (TRS) in ppb

Alberta Ambient Air Quality Objectives (AAAQO) for H2S: 1-Hour 10 ppb, 24-Hour 3 ppb																												
Number of 1-Hour Exceedances: 0					Number of 24-Hour Exceedances: 0																							
Maximum Hourly Value: 2.45 ppb on October 17 at hour 21					Hours in Service: 744																							
Maximum Daily Value: 0.78 ppb on					Hours of Data: 691																							
Minimum Hourly Value: 0.22 ppb on October 3 at hour 16					Hours of Missing Data: 15																							
Minimum Daily Value: 0.25 ppb on October 8					Hours of Calibration: 38																							
Monthly Average: 0.37 ppb					Operational Uptime: 98.0																							
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	0.37	S	0.4	0.34	0.4	0.36	0.4	0.45	0.43	0.4	0.39	0.36	0.35	0.32	0.31	0.3	0.29	0.36	0.37	0.38	0.41	0.55	0.63	0.64	0.29	0.64	0.40	
Oct 2	S	0.59	0.52	0.5	0.6	0.55	0.46	0.48	0.47	0.4	0.34	0.32	0.29	0.28	0.28	0.27	0.27	0.3	0.49	0.44	0.37	0.36	0.34	S	0.27	0.60	0.41	
Oct 3	0.51	0.4	0.42	0.4	0.35	0.38	0.35	0.43	0.36	C	C	C	C	C	C	0.35	0.22	0.23	0.27	0.58	0.49	0.42	S	0.61	0.22	0.61	-	
Oct 4	0.37	0.33	0.33	0.4	0.5	0.57	0.38	0.38	0.36	0.31	0.27	0.27	0.28	0.26	0.26	0.26	0.25	0.25	0.26	0.27	0.24	S	0.26	0.26	0.24	0.57	0.32	
Oct 5	0.28	0.34	0.38	0.38	0.37	0.36	0.37	0.35	0.36	0.4	0.36	0.33	0.29	0.26	0.26	0.27	0.29	0.26	0.29	0.31	S	0.35	0.32	0.32	0.26	0.40	0.33	
Oct 6	0.32	0.34	0.36	0.34	0.34	0.34	0.36	0.34	0.36	0.33	0.31	0.3	0.33	0.31	0.31	0.28	0.29	0.29	0.27	S	0.32	0.31	0.32	0.34	0.27	0.36	0.32	
Oct 7	0.35	0.33	0.31	0.34	0.3	0.31	0.32	0.31	0.33	0.3	0.29	0.3	0.3	0.28	0.29	0.28	0.31	0.3	S	0.33	0.31	0.29	0.28	0.26	0.26	0.35	0.31	
Oct 8	0.29	0.27	0.26	0.25	0.26	0.24	0.25	0.24	0.24	0.26	0.25	0.25	0.24	0.24	0.24	0.24	0.23	S	0.27	0.27	0.26	0.25	0.27	0.24	0.23	0.29	0.25	
Oct 9	0.25	0.25	0.24	0.27	0.28	0.32	0.3	0.29	0.28	0.26	0.25	0.24	0.24	0.25	0.24	0.24	S	0.27	0.27	0.27	0.33	0.32	0.33	0.3	0.24	0.33	0.27	
Oct 10	0.32	0.33	0.39	0.48	0.35	0.35	0.34	0.34	0.33	0.31	0.31	0.3	0.3	0.29	0.28	S	0.32	0.3	0.3	0.31	0.32	0.38	0.63	0.54	0.28	0.63	0.35	
Oct 11	0.46	0.46	0.46	0.43	0.35	0.34	0.38	0.35	0.32	0.34	0.33	0.32	0.29	0.32	S	0.35	0.34	0.39	0.35	0.33	0.31	0.3	0.32	0.31	0.29	0.46	0.35	
Oct 12	0.35	0.37	0.34	0.37	0.35	0.37	0.41	0.49	0.46	0.41	0.36	0.38	0.31	S	0.28	0.26	0.26	0.29	0.28	0.27	0.28	0.28	0.29	0.29	0.26	0.49	0.34	
Oct 13	0.3	0.32	0.32	0.31	0.39	0.39	0.34	0.39	0.37	0.33	0.33	0.32	S	0.34	0.32	0.31	0.32	0.33	0.31	0.31	0.32	0.31	0.33	0.33	0.30	0.39	0.33	
Oct 14	0.34	0.32	0.32	0.34	0.34	0.35	0.36	0.36	0.34	0.33	0.31	S	0.32	0.32	0.32	0.34	0.32	0.36	0.38	0.47	0.48	0.39	0.32	0.29	0.29	0.48	0.35	
Oct 15	0.31	0.28	0.28	0.25	0.25	0.25	0.24	0.27	0.26	0.28	S	0.32	0.33	0.34	0.33	0.32	0.34	0.33	0.36	0.4	0.44	0.36	0.46	0.51	0.24	0.51	0.33	
Oct 16	0.64	P	P	P	P	P	P	P	R	S	0.6	0.56	0.43	0.42	0.4	0.4	0.47	0.75	0.38	0.65	0.33	0.3	0.34	0.39	0.30	0.75	-	
Oct 17	0.47	0.55	0.54	0.61	0.58	0.48	0.53	0.5	S	0.75	0.86	0.67	0.56	0.44	0.36	0.33	0.32	0.41	0.39	0.88	2.11	2.45	1.84	1.38	0.32	2.45	0.78	
Oct 18	1.68	1.05	0.57	0.57	1.78	1.04	0.91	S	0.95	0.7	1.1	0.55	0.55	0.44	0.32	0.3	0.3	0.32	0.32	0.34	0.31	0.32	0.34	0.33	0.30	1.78	0.66	
Oct 19	0.33	0.3	0.3	0.32	0.34	0.34	S	0.35	0.36	0.43	0.43	0.33	0.28	0.28	0.26	0.28	0.33	0.34	0.39	0.32	0.4	0.44	0.44	0.48	0.26	0.48	0.35	
Oct 20	0.51	0.57	0.67	0.56	0.56	S	0.83	0.84	0.6	0.54	0.44	0.4	0.38	0.35	0.34	0.36	0.43	0.38	0.31	0.29	0.27	0.28	0.28	0.3	0.27	0.84	0.46	
Oct 21	0.27	0.33	0.37	0.52	S	0.46	0.59	0.74	0.67	0.53	0.38	0.42	0.36	0.42	0.42	0.36	0.36	0.53	0.75	0.5	0.39	0.36	0.39	0.41	0.27	0.75	0.46	
Oct 22	0.3	0.3	0.28	S	0.29	0.28	0.27	0.28	0.29	0.33	0.36	0.44	0.33	0.35	0.37	0.34	0.36	0.32	0.31	0.3	0.29	0.29	0.29	0.28	0.27	0.44	0.32	
Oct 23	0.28	0.29	S	0.33	0.29	0.29	0.29	0.29	0.28	0.27	0.27	0.29	0.3	0.31	0.31	0.33	0.31	0.4	0.57	0.42	0.42	0.41	0.38	0.37	0.32	0.27	0.57	0.34
Oct 24	0.35	S	0.38	0.39	0.31	0.3	0.3	0.31	0.31	0.3	0.3	0.32	0.33	0.34	0.34	0.33	0.35	0.36	0.37	0.37	0.37	0.35	0.34	P	0.30	0.39	0.34	
Oct 25	P	P	P	P	R	0.75	0.52	S1	0.35	0.35	0.33	0.35	0.36	0.36	0.32	0.31	0.3	0.3	0.31	0.32	0.33	0.35	0.34	S	0.30	0.75	-	
Oct 26	0.35	0.35	0.31	0.3	0.3	0.29	0.29	0.33	0.4	0.35	0.33	0.29	0.28	0.28	0.28	0.28	0.29	0.27	0.28	0.28	0.28	0.28	S	0.33	0.27	0.40	0.31	
Oct 27	0.32	0.32	0.3	0.34	0.33	0.34	0.33	0.31	0.31	0.29	0.3	0.29	0.31	0.3	0.28	0.31	0.3	0.31	0.32	0.29	0.25	S	0.31	0.29	0.25	0.34	0.31	
Oct 28	0.28	0.28	0.27	0.26	0.25	0.27	0.26	0.25	0.25	0.25	0.25	0.26	0.26	0.25	0.24	0.24	0.25	0.24	0.25	0.24	0.23	S	0.26	0.32	0.28	0.23	0.32	0.26
Oct 29	0.27	0.34	0.34	0.29	0.25	0.26	0.26	0.28	0.27	0.28	0.29	0.29	0.3	0.31	0.31	0.33	0.33	0.35	0.4	S	0.43	0.36	0.33	0.33	0.25	0.43	0.31	
Oct 30	0.34	0.34	0.32	0.32	0.33	0.33	0.33	0.32	0.32	0.3	0.32	0.31	0.32	0.29	0.31	0.3	0.3	0.3	S	0.32	0.29	0.38	0.33	0.28	0.28	0.38	0.32	
Oct 31	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.27	0.27	0.29	0.28	0.29	0.28	0.3	0.27	0.29	0.29	S	0.32	0.31	0.31	0.29	0.32	0.31	0.27	0.32	0.29	
Diurnal Maximum	1.68	1.05	0.67	0.61	1.78	1.04	0.91	0.84	0.95	0.75	1.10	0.67	0.56	0.44	0.42	0.40	0.47	0.75	0.75	0.88	2.11	2.45	1.84	1.38				
Diurnal Average	0.40	0.38	0.37	0.37	0.40	0.39	0.39	0.38	0.38	0.37	0.38	0.35	0.33	0.32	0.31	0.30	0.31	0.35	0.34	0.37	0.40	0.41	0.40	0.39				
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							

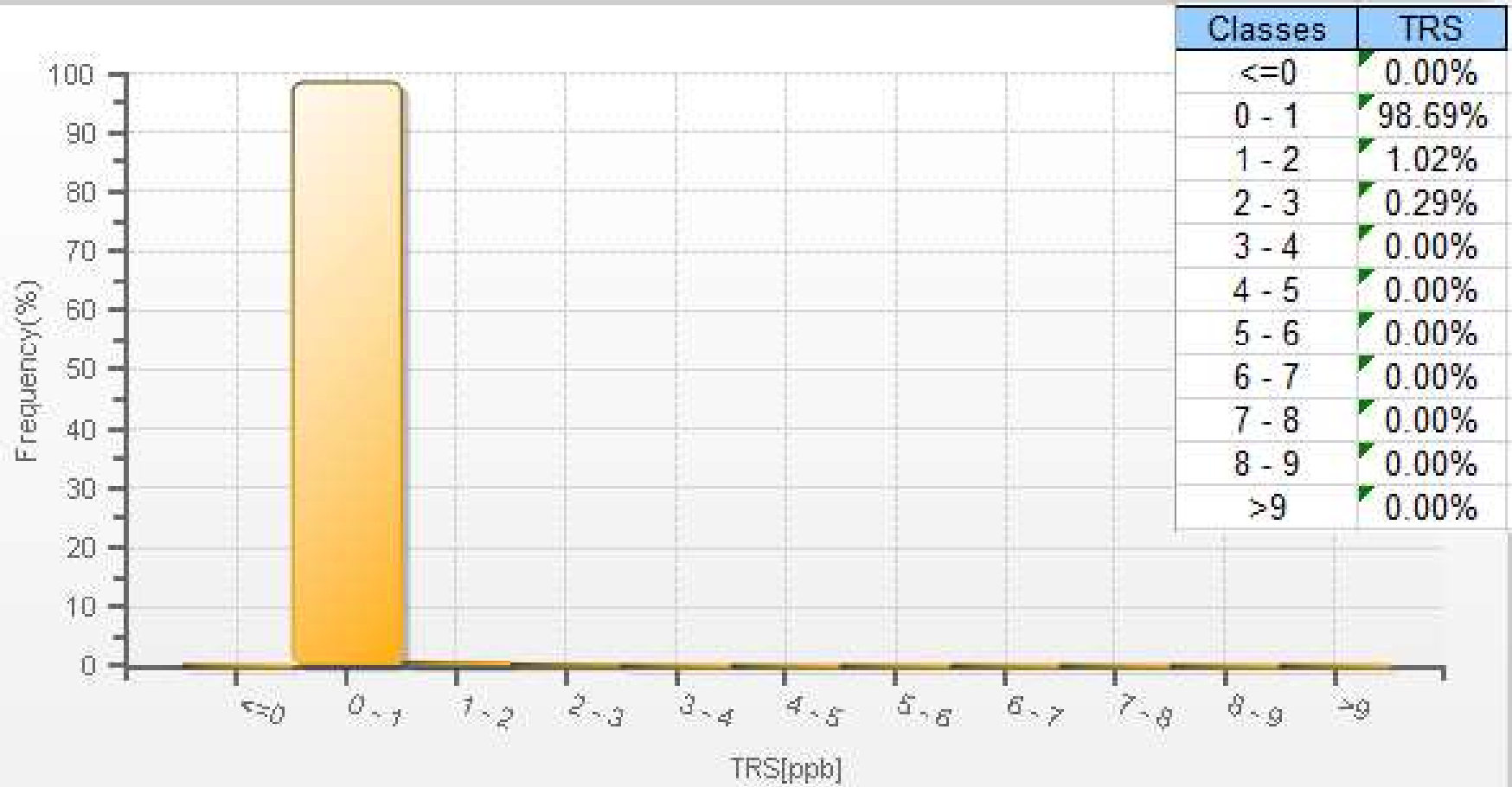
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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 Station

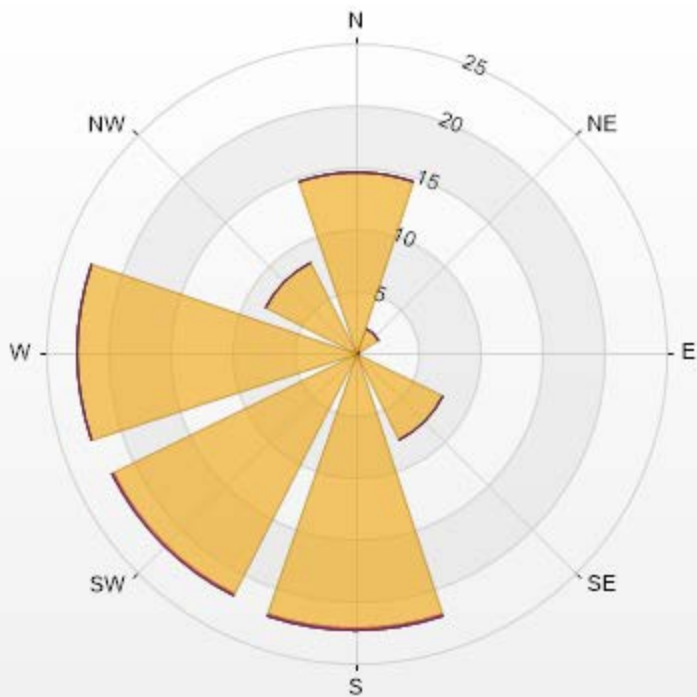


TRS[ppb] Histogram: PRAMP RENO Monthly: 10-2019 1 Hr.



Wind: PRAMP RENO Poll.: PRAMP RENO-TRS[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 89.12% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	14.66	0	0	0	0	14.66
NE	2.14	0	0	0	0	2.14
E	0.31	0	0	0	0	0.31
SE	7.94	0	0	0	0	7.94
S	22.29	0.15	0	0	0	22.44
SW	21.83	0.15	0	0	0	21.98
W	22.44	0	0	0	0	22.44
NW	8.09	0	0	0	0	8.09
Summary	100	0.3	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)	100	0-2	0-5	5-10	0	10-50	0	>50.0
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PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

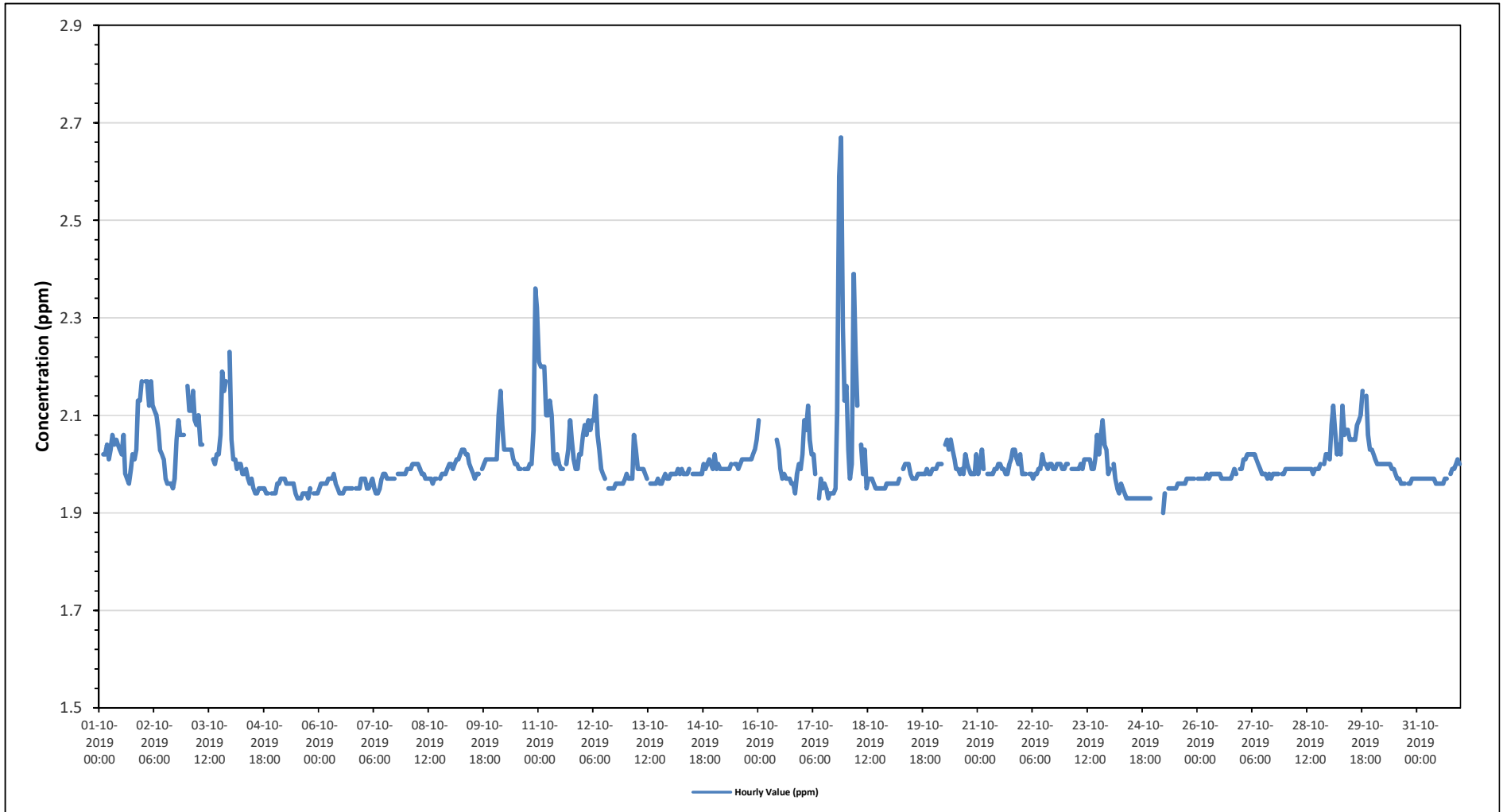
Maximum Hourly Value:	2.67 ppm on October 17 at hour 21	Hours in Service:	744
Maximum Daily Value:	2.10 ppm on	Hours of Data:	692
Minimum Hourly Value:	1.90 ppm on October 25 at hour 5	Hours of Missing Data:	15
Minimum Daily Value:	1.94 ppm on October 24	Hours of Calibration:	37
Monthly Average:	2.00 ppm	Operational Uptime:	98.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	2.00	S	2.02	2.02	2.04	2.01	2.03	2.06	2.04	2.05	2.04	2.03	2.02	2.06	1.98	1.97	1.96	1.99	2.02	2.01	2.03	2.13	2.13	2.17	1.96	2.17	2.04	
Oct 2	S	2.17	2.17	2.12	2.12	2.11	2.10	2.10	2.07	2.03	2.02	2.01	1.97	1.96	1.96	1.96	1.95	1.97	2.05	2.09	2.06	2.06	2.06	S	1.95	2.17	2.05	
Oct 3	2.16	2.11	2.11	2.15	2.09	2.08	2.10	2.04	2.04	C	C	C	C	C	2.01	2.00	2.02	2.02	2.06	2.19	2.15	2.17	S	2.23	2.00	2.23	2.10	
Oct 4	2.05	2.01	2.01	1.99	2.00	2.00	1.98	1.98	1.99	1.97	1.96	1.97	1.95	1.94	1.94	1.95	1.95	1.95	1.95	1.94	1.94	S	1.94	1.94	1.94	2.05	1.97	
Oct 5	1.94	1.96	1.96	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.94	1.93	1.93	1.93	1.94	1.94	1.94	1.93	1.95	S	1.94	1.94	1.94	1.93	1.97	1.95	
Oct 6	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.98	1.96	1.95	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	1.97	1.94	1.98	1.96	
Oct 7	1.97	1.97	1.95	1.95	1.96	1.97	1.95	1.94	1.94	1.95	1.97	1.98	1.98	1.97	1.97	1.97	1.97	1.97	S	1.98	1.98	1.98	1.98	1.98	1.94	1.98	1.97	
Oct 8	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.96	1.97	1.97	S	1.97	1.98	1.98	1.98	1.99	2.00	1.96	2.00	1.98	
Oct 9	2.00	1.99	2.00	2.01	2.01	2.02	2.03	2.03	2.02	2.02	2.00	1.99	1.98	1.97	1.98	1.98	S	1.99	2.00	2.01	2.01	2.01	2.01	2.01	1.97	2.03	2.00	
Oct 10	2.01	2.01	2.10	2.15	2.08	2.03	2.03	2.03	2.03	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.07	2.36	2.32	1.99	2.36	2.05		
Oct 11	2.21	2.20	2.20	2.20	2.10	2.10	2.13	2.10	2.01	2.00	2.02	2.00	1.99	1.99	S	2.00	2.03	2.09	2.05	2.01	1.99	1.99	2.02	2.02	1.99	2.21	2.06	
Oct 12	2.06	2.08	2.06	2.09	2.07	2.09	2.09	2.14	2.06	2.03	1.99	1.98	1.97	S	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.97	1.95	2.14	2.01		
Oct 13	1.98	1.97	1.97	1.97	2.06	2.03	1.99	1.99	1.99	1.99	1.98	1.97	S	1.96	1.96	1.96	1.96	1.97	1.96	1.96	1.97	1.98	1.97	1.97	1.96	2.06	1.98	
Oct 14	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.99	S	1.98	1.98	1.98	1.98	1.98	2.00	1.99	2.00	2.01	2.00	1.99	1.98	2.01	1.99	
Oct 15	2.02	1.99	2.00	1.99	1.99	1.99	1.99	1.99	1.99	2.00	S	2.00	2.00	1.99	2.00	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.03	2.05	1.99	2.00	
Oct 16	2.09	P	P	P	P	P	P	P	R	S	2.05	2.03	1.99	1.97	1.98	1.97	1.97	1.96	1.96	1.94	1.98	2.00	1.99	1.94	2.09	-		
Oct 17	2.02	2.09	2.07	2.12	2.05	2.02	2.02	1.98	S	1.93	1.97	1.95	1.96	1.95	1.93	1.94	1.94	1.94	1.95	2.11	2.59	2.67	2.28	2.13	1.93	2.67	2.07	
Oct 18	2.16	2.03	1.97	2.00	2.39	2.23	2.12	S	2.04	1.98	2.03	1.95	1.97	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.95	2.39	2.02	
Oct 19	1.96	1.96	1.96	1.96	1.96	1.97	S	1.99	2.00	2.00	2.00	1.98	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.98	1.99	1.96	2.00	1.98	
Oct 20	1.99	1.99	2.00	2.00	2.00	S	2.04	2.05	2.03	2.05	2.03	2.01	1.99	1.99	1.98	1.99	1.98	2.02	2.00	1.99	1.98	1.98	2.02	1.98	2.05	2.00		
Oct 21	1.98	2.00	2.03	1.99	S	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.00	1.99	1.99	1.98	1.98	2.00	2.01	2.03	2.03	2.01	2.00	2.02	1.98	2.03	2.00	
Oct 22	1.98	1.98	1.98	S	1.98	1.98	1.97	1.98	1.98	1.99	1.99	2.02	2.00	2.00	2.00	1.99	2.00	2.00	1.99	1.99	2.00	2.00	2.00	1.99	1.99	1.97	2.02	1.99
Oct 23	2.00	2.00	S	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.01	2.01	2.01	2.01	1.99	1.99	2.01	2.06	2.02	2.06	2.09	2.04	2.03	1.98	1.98	2.09	2.01	
Oct 24	1.99	S	2.00	1.97	1.95	1.94	1.96	1.95	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	2.00	1.94	
Oct 25	P	P	P	P	R	1.90	1.94	S1	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	S	1.90	1.97	-	
Oct 26	1.97	1.97	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.99	1.98	S	1.99	1.97	1.98	
Oct 27	1.99	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.01	2.00	1.99	1.98	1.98	1.98	1.97	1.98	1.97	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.97	2.02	1.99
Oct 28	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	S	2.00	2.02	2.02	1.98	2.02	1.99	
Oct 29	2.01	2.08	2.12	2.07	2.02	2.04	2.02	2.12	2.06	2.07	2.07	2.05	2.05	2.05	2.05	2.08	2.09	2.10	2.15	S	2.14	2.06	2.03	2.03	2.01	2.15	2.07	
Oct 30	2.02	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	1.98	1.97	1.97	1.96	1.96	1.96	S	1.96	1.96	1.97	1.97	1.97	1.96	2.02	1.98	
Oct 31	1.97	1.97	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	1.97	S	1.98	1.99	1.99	2.00	2.01	2.00	1.96	2.01	1.97	
Diurnal Maximum	2.21	2.20	2.20	2.20	2.39	2.23	2.13	2.14	2.07	2.07	2.07	2.05	2.05	2.06	2.05	2.08	2.09	2.10	2.15	2.19	2.59	2.67	2.36	2.32				
Diurnal Average	2.02	2.02	2.02	2.02	2.03	2.01	2.01	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.98	1.99	1.99	2.00	2.02	2.03	2.02	2.02				

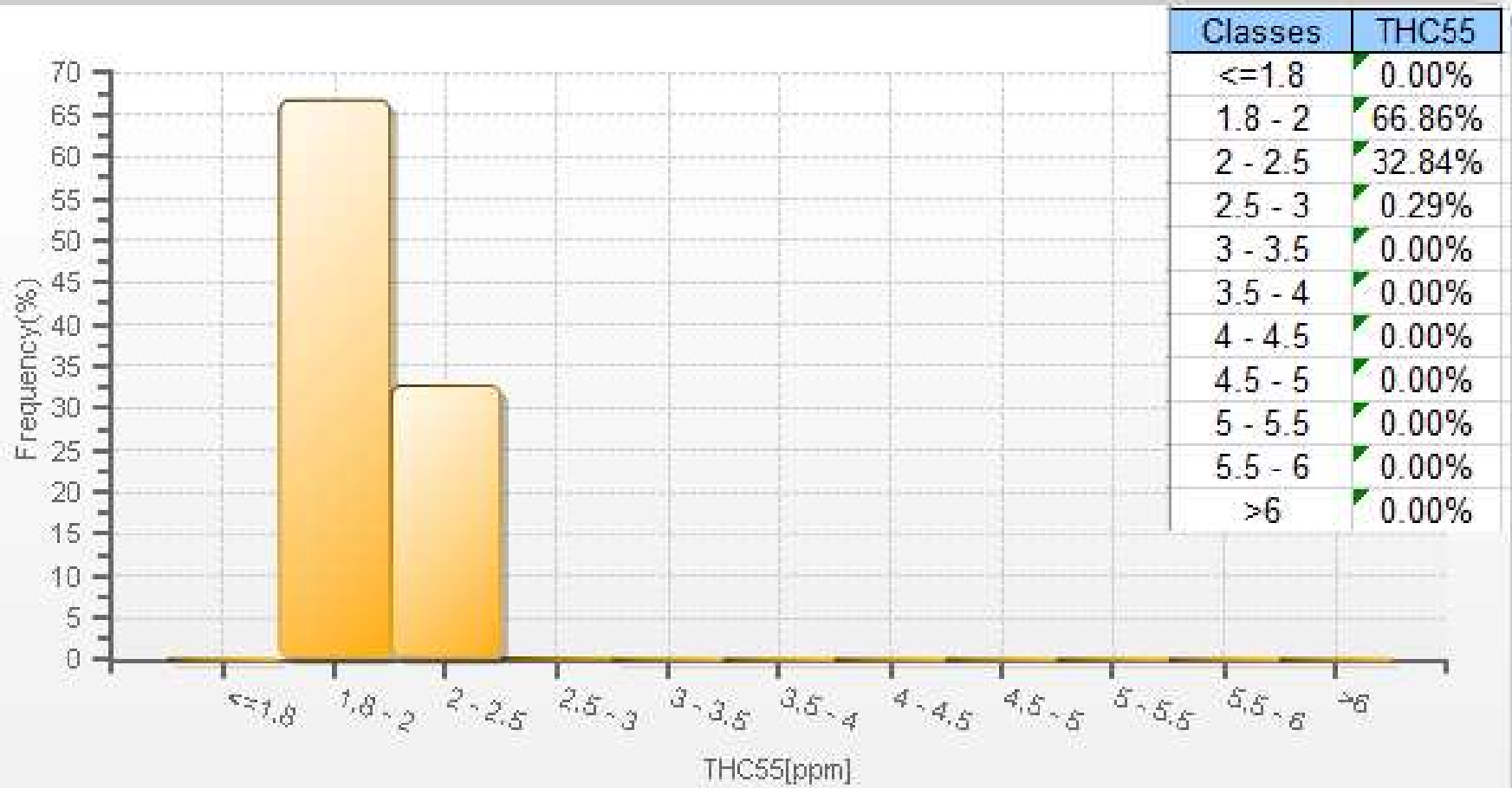
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - Reno Station

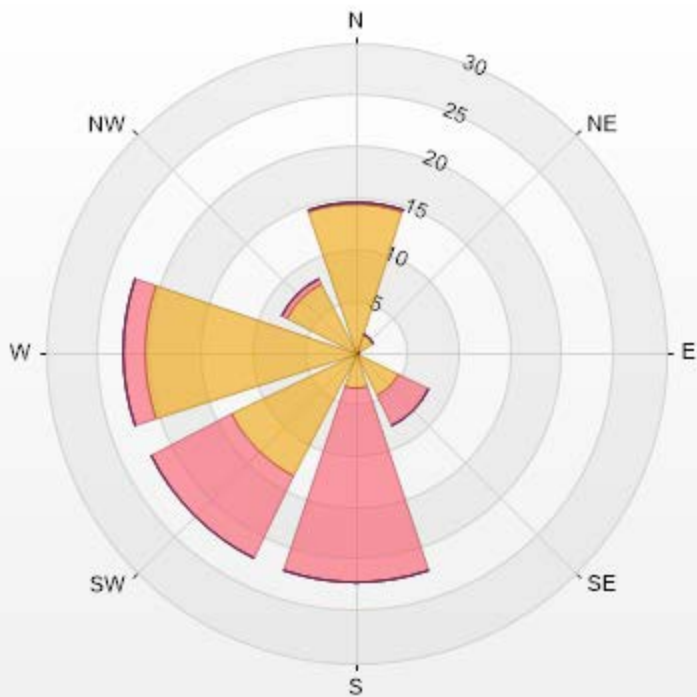


THC55[ppm] Histogram: PRAMP RENO Monthly: 10-2019 1 Hr.



Wind: PRAMP RENO Poll.: PRAMP RENO-THC55[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 88.16% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	14.35	0.31	0	0	0	14.66
NE	2.01	0	0	0	0	2.01
E	0.31	0	0	0	0	0.31
SE	4.63	3.4	0	0	0	8.03
S	3.4	18.83	0	0	0	22.23
SW	13.43	8.8	0	0	0	22.23
W	20.37	2.16	0	0	0	22.53
NW	7.41	0.62	0	0	0	8.03
Summary	65.91	34.12	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	66	34	0	0
0-2	66	34	0	0
3-4	0	34	0	0
5-10	0	0	0	0
10-40	0	0	0	0
>40.0	0	0	0	0



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019
Summary of Hourly Averages

METHANE (CH4) in ppm

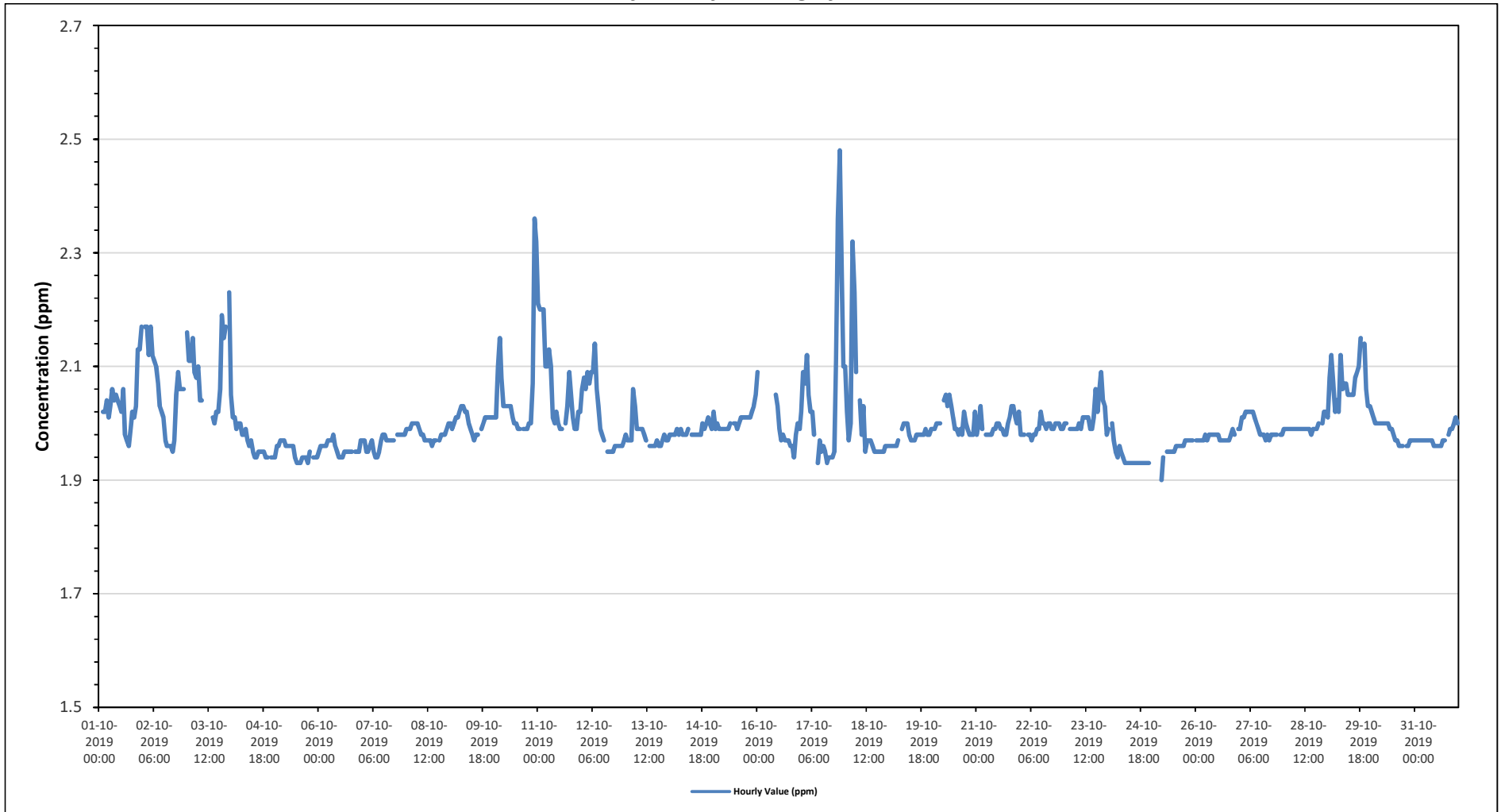
Maximum Hourly Value: 2.48 ppm on October 17 at hour 21	Hours in Service: 744
Maximum Daily Value: 2.10 ppm on	Hours of Data: 692
Minimum Hourly Value: 1.90 ppm on October 25 at hour 5	Hours of Missing Data: 15
Minimum Daily Value: 1.94 ppm on October 24	Hours of Calibration: 37
Monthly Average: 2.00 ppm	Operational Uptime: 98.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	2.00	S	2.02	2.02	2.04	2.01	2.03	2.06	2.04	2.05	2.04	2.03	2.02	2.06	1.98	1.97	1.96	1.99	2.02	2.01	2.03	2.13	2.13	2.17	1.96	2.17	2.04	
Oct 2	S	2.17	2.17	2.12	2.12	2.11	2.10	2.10	2.07	2.03	2.02	2.01	1.97	1.96	1.96	1.96	1.95	1.97	2.05	2.09	2.06	2.06	2.06	S	1.95	2.17	2.05	
Oct 3	2.16	2.11	2.11	2.15	2.09	2.08	2.10	2.04	2.04	C	C	C	C	C	2.01	2.00	2.02	2.02	2.06	2.19	2.15	2.17	S	2.23	2.00	2.23	2.10	
Oct 4	2.05	2.01	2.01	1.99	2.00	2.00	1.98	1.98	1.99	1.97	1.96	1.97	1.95	1.94	1.94	1.95	1.95	1.95	1.95	1.94	1.94	S	1.94	1.94	1.94	2.05	1.97	
Oct 5	1.94	1.96	1.96	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.94	1.93	1.93	1.93	1.94	1.94	1.94	1.93	1.95	S	1.94	1.94	1.94	1.93	1.97	1.95	
Oct 6	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.98	1.96	1.95	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	1.97	1.94	1.98	1.96	
Oct 7	1.97	1.97	1.95	1.95	1.96	1.97	1.95	1.94	1.94	1.95	1.97	1.98	1.98	1.97	1.97	1.97	1.97	1.97	S	1.98	1.98	1.98	1.98	1.98	1.94	1.98	1.97	
Oct 8	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.96	1.97	1.97	S	1.97	1.98	1.98	1.98	1.99	2.00	1.96	2.00	1.98	
Oct 9	2.00	1.99	2.00	2.01	2.01	2.02	2.03	2.03	2.02	2.02	2.00	1.99	1.98	1.97	1.98	1.98	S	1.99	2.00	2.01	2.01	2.01	2.01	2.01	1.97	2.03	2.00	
Oct 10	2.01	2.01	2.10	2.15	2.08	2.03	2.03	2.03	2.03	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.07	2.36	2.32	1.99	2.36	2.05		
Oct 11	2.21	2.20	2.20	2.20	2.10	2.10	2.13	2.10	2.01	2.00	2.02	2.00	1.99	1.99	S	2.00	2.03	2.09	2.05	2.01	1.99	1.99	2.02	2.02	1.99	2.21	2.06	
Oct 12	2.06	2.08	2.06	2.09	2.07	2.09	2.09	2.14	2.06	2.03	1.99	1.98	1.97	S	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.97	1.95	2.14	2.01		
Oct 13	1.98	1.97	1.97	1.97	2.06	2.03	1.99	1.99	1.99	1.99	1.98	1.97	S	1.96	1.96	1.96	1.96	1.97	1.96	1.96	1.97	1.98	1.97	1.97	1.96	2.06	1.98	
Oct 14	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.99	S	1.98	1.98	1.98	1.98	1.98	2.00	1.99	2.00	2.01	2.00	1.99	1.98	2.01	1.99	
Oct 15	2.02	1.99	2.00	1.99	1.99	1.99	1.99	1.99	1.99	2.00	S	2.00	2.00	1.99	2.00	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.03	2.05	1.99	2.05	2.00
Oct 16	2.09	P	P	P	P	P	P	P	R	S	2.05	2.03	1.99	1.97	1.98	1.97	1.97	1.96	1.96	1.94	1.98	2.00	1.99	1.94	2.09	-		
Oct 17	2.02	2.09	2.07	2.12	2.05	2.02	2.02	1.98	S	1.93	1.97	1.95	1.96	1.95	1.93	1.94	1.94	1.94	1.95	2.11	2.36	2.48	2.26	2.10	1.93	2.48	2.05	
Oct 18	2.10	2.02	1.97	2.00	2.32	2.23	2.09	S	2.04	1.98	2.03	1.95	1.97	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.95	2.32	2.01	
Oct 19	1.96	1.96	1.96	1.96	1.96	1.97	S	1.99	2.00	2.00	2.00	1.98	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.98	1.99	1.96	2.00	1.98	
Oct 20	1.99	1.99	2.00	2.00	2.00	S	2.04	2.05	2.03	2.05	2.03	2.01	1.99	1.99	1.98	1.99	1.98	2.02	2.00	1.99	1.98	1.98	2.02	1.98	2.05	2.00		
Oct 21	1.98	2.00	2.03	1.99	S	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.00	1.99	1.99	1.98	1.98	2.00	2.01	2.03	2.03	2.01	2.00	2.02	1.98	2.03	2.00	
Oct 22	1.98	1.98	1.98	S	1.98	1.98	1.97	1.98	1.98	1.99	1.99	2.02	2.00	2.00	2.00	1.99	2.00	2.00	1.99	1.99	2.00	2.00	2.00	1.99	1.99	1.97	2.02	1.99
Oct 23	2.00	2.00	S	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.01	2.01	2.01	2.01	1.99	1.99	2.01	2.06	2.02	2.06	2.09	2.04	2.03	1.98	1.98	2.09	2.01	
Oct 24	1.99	S	2.00	1.97	1.95	1.94	1.96	1.95	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	2.00	1.94	
Oct 25	P	P	P	P	R	1.90	1.94	S1	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	S	1.90	1.97	-	
Oct 26	1.97	1.97	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.99	1.98	S	1.99	1.97	1.99	1.98
Oct 27	1.99	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.01	2.00	1.99	1.98	1.98	1.98	1.97	1.98	1.97	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.97	2.02	1.99
Oct 28	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	S	2.00	2.02	2.02	1.98	2.02	1.99	
Oct 29	2.01	2.08	2.12	2.07	2.02	2.04	2.02	2.12	2.06	2.07	2.07	2.05	2.05	2.05	2.05	2.08	2.09	2.10	2.15	S	2.14	2.06	2.03	2.03	2.01	2.15	2.07	
Oct 30	2.02	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	1.98	1.97	1.97	1.96	1.96	1.96	S	1.96	1.96	1.97	1.97	1.97	1.96	2.02	1.98	
Oct 31	1.97	1.97	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	1.97	S	1.98	1.99	1.99	2.00	2.01	2.00	1.96	2.01	1.97	
Diurnal Maximum	2.21	2.20	2.20	2.20	2.32	2.23	2.13	2.14	2.07	2.07	2.07	2.05	2.05	2.06	2.05	2.08	2.09	2.10	2.15	2.19	2.36	2.48	2.36	2.32				
Diurnal Average	2.01	2.02	2.02	2.02	2.03	2.01	2.01	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.98	1.99	1.99	2.00	2.01	2.02	2.02	2.02				

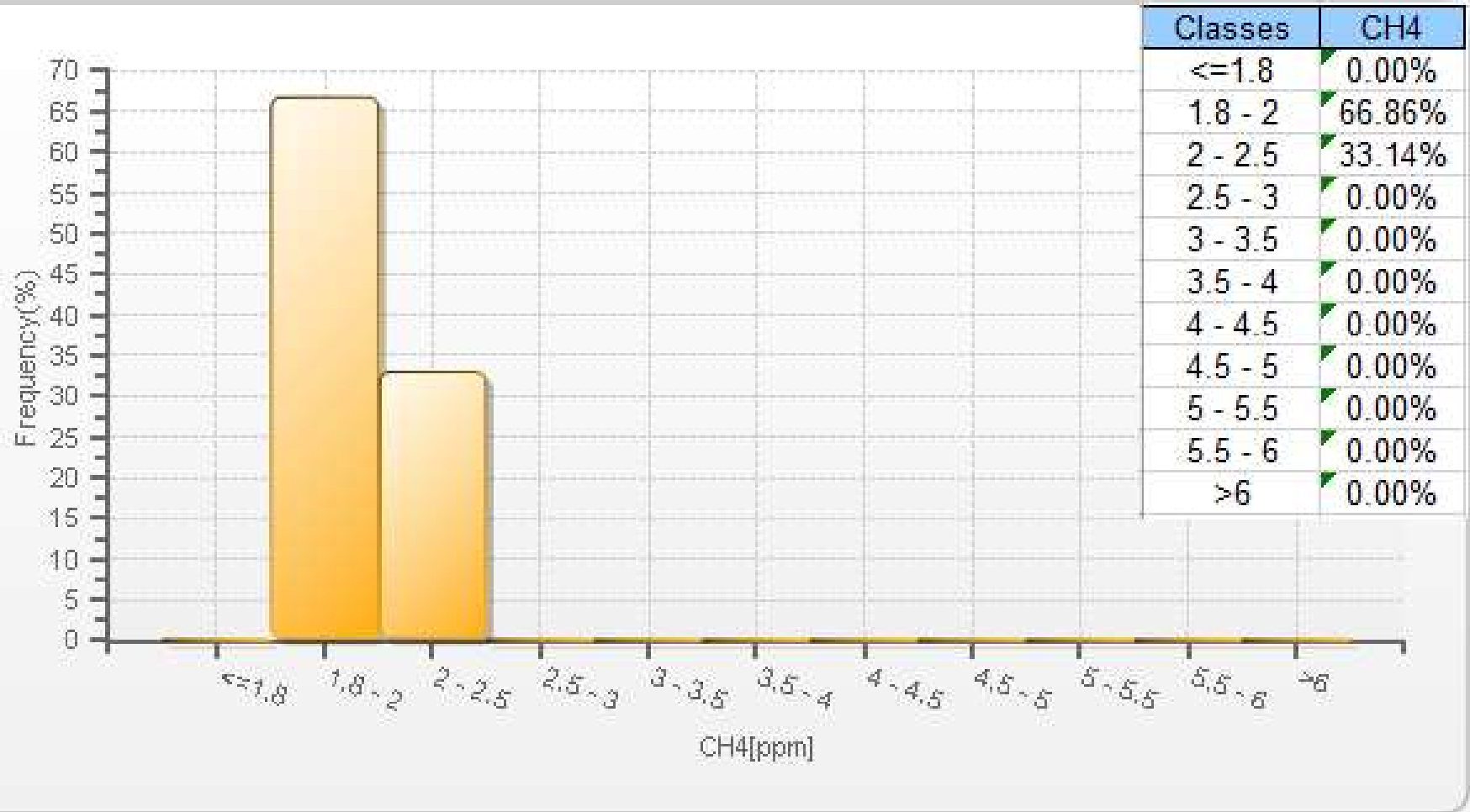
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - Reno Station

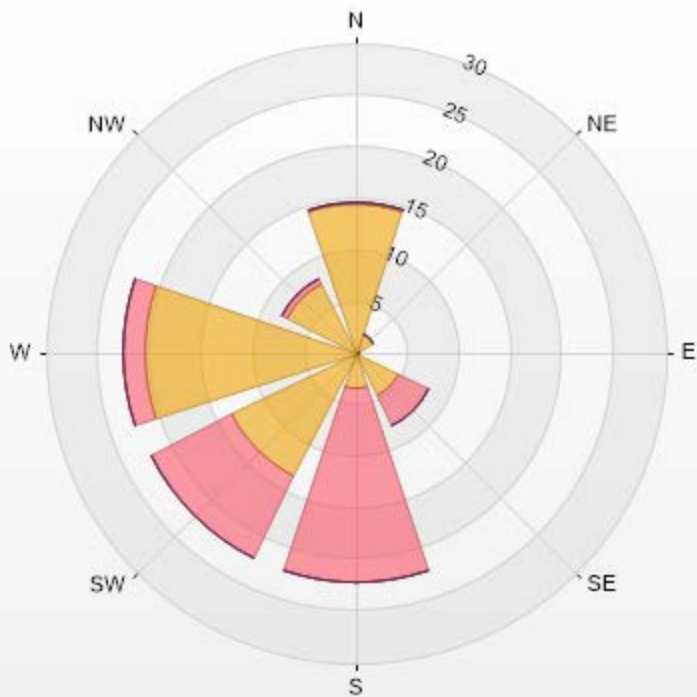


CH4[ppm] Histogram: PRAMP RENO Monthly: 10-2019 1 Hr.



Wind: PRAMP RENO Poll.: PRAMP RENO-CH4[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 88.16% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	14.35	0.31	0	0	0	14.66
NE	2.01	0	0	0	0	2.01
E	0.31	0	0	0	0	0.31
SE	4.63	3.4	0	0	0	8.03
S	3.4	18.83	0	0	0	22.23
SW	13.43	8.8	0	0	0	22.23
W	20.37	2.16	0	0	0	22.53
NW	7.41	0.62	0	0	0	8.03
Summary	65.91	34.12	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	66	34	0	0
0-2	66	34	0	0
2-5	0	0	0	0
5-10	0	0	0	0
10-20	0	0	0	0
>20.0	0	0	0	0



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019 Summary of Hourly Averages

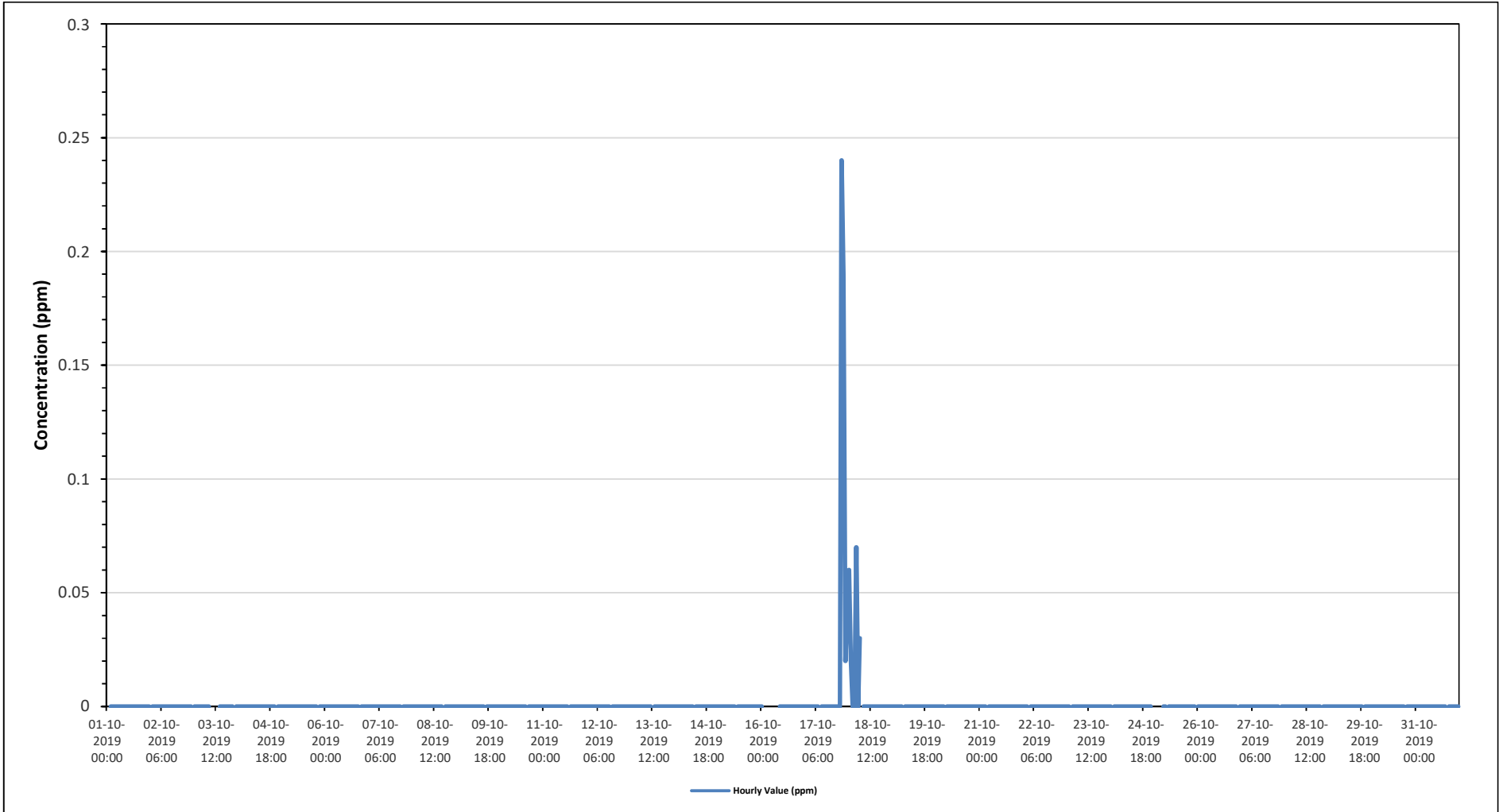
NON-METHANE HYDROCARBONS (NMHC) in ppm

Maximum Hourly Value: 0.24 ppm on October 17 at hour 20	Hours in Service: 744
Maximum Daily Value: 0.02 ppm on	Hours of Data: 692
Minimum Hourly Value: 0.00 ppm on October 1 at hour 0	Hours of Missing Data: 15
Minimum Daily Value: 0.00 ppm on October 1	Hours of Calibration: 37
Monthly Average: 0.00 ppm	Operational Uptime: 98.0

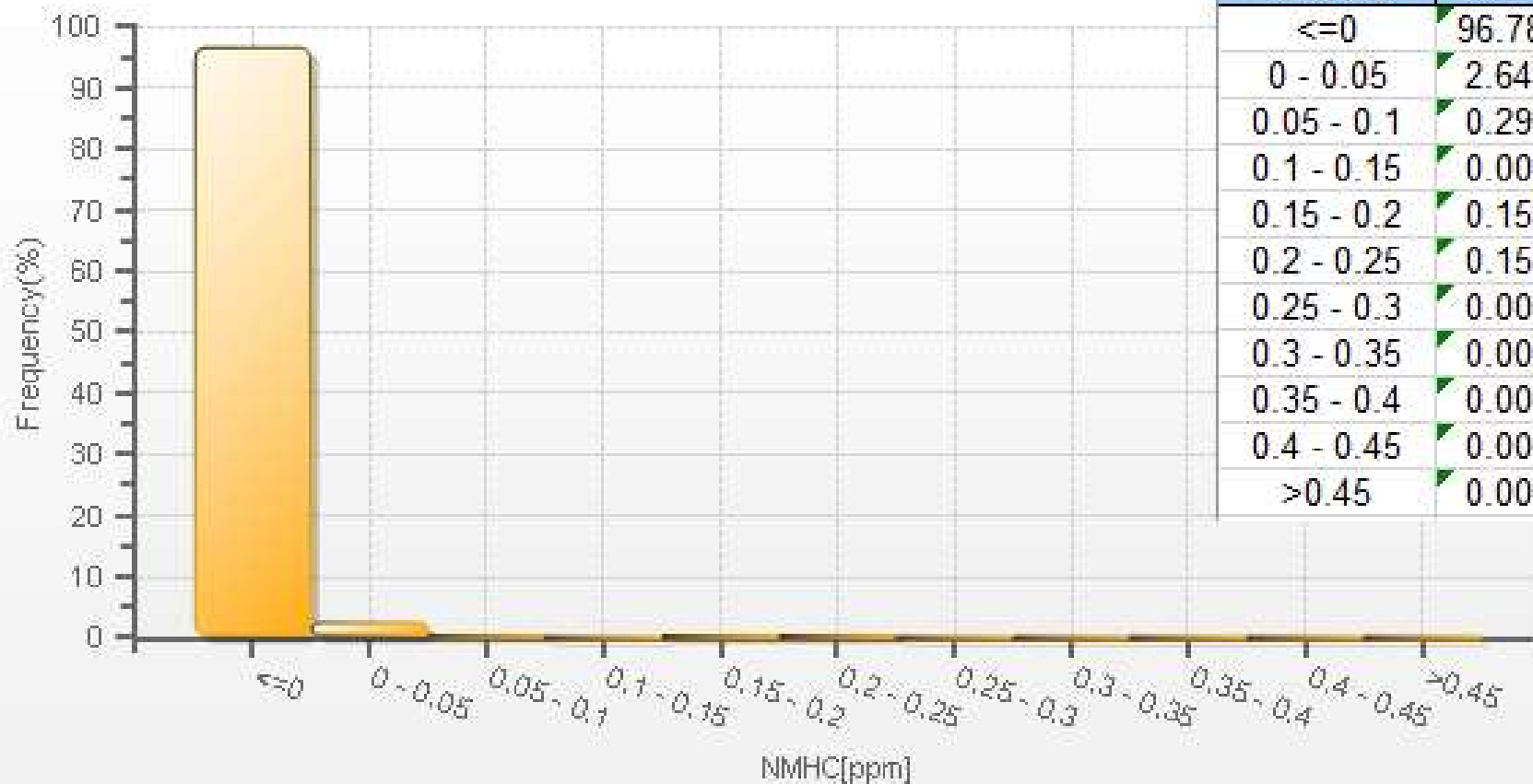
Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average				
Oct 1	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Oct 2	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	S	0.00	0.00	0.00	0.00		
Oct 3	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	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00		
Oct 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00		
Oct 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Oct 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Oct 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Oct 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Oct 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Oct 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	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		
Oct 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	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		
Oct 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	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		
Oct 13	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	0.00	0.00		
Oct 14	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	0.00	0.00		
Oct 15	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	0.00	0.00		
Oct 16	0.00	P	P	P	P	P	P	P	R	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		
Oct 17	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	0.24	0.19	0.02	0.04	0.00	0.24	0.02	
Oct 18	0.06	0.02	0.00	0.00	0.07	0.00	0.03	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		
Oct 19	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	0.00	0.00	0.00	
Oct 20	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	0.00	0.00	0.00	
Oct 21	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	0.00	0.00	0.00	
Oct 22	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	0.00	0.00	0.00	
Oct 23	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	0.00	0.00	0.00	
Oct 24	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	P	0.00	0.00	
Oct 25	P	P	P	P	R	0.00	0.00	S1	0.00	0.00	0.00	0.00	0.00	0.00	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	-	
Oct 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	
Oct 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	
Oct 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Oct 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Oct 31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.06	0.02	0.00	0.00	0.07	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.19	0.02	0.04	0.00	0.00	0.00	0.00
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

Timeseries Chart of Hourly Average for NMHC - Reno Station

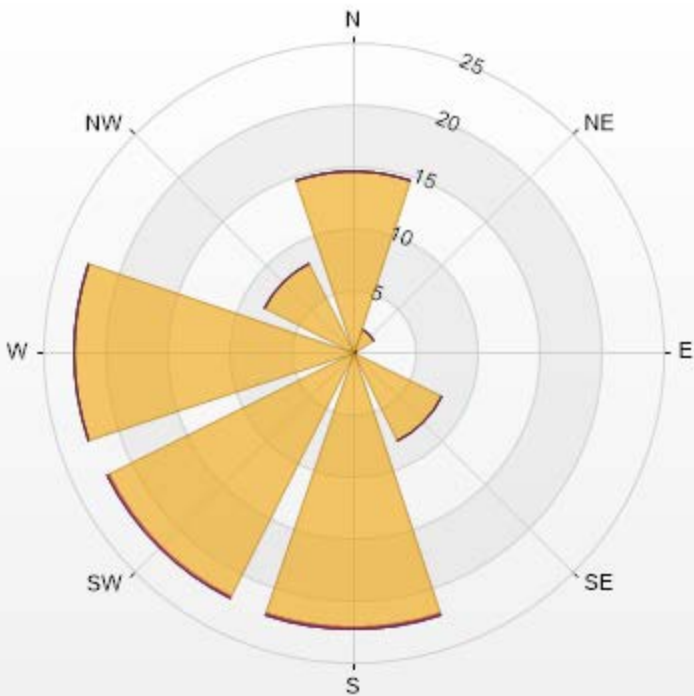


NMHC[ppm] Histogram: PRAMP RENO Monthly: 10-2019 1 Hr.



Wind: PRAMP RENO Poll.: PRAMP RENO-NMHC[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 88.30% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	14.64	0	0	0	0	14.64
NE	2	0	0	0	0	2
E	0.31	0	0	0	0	0.31
SE	8.01	0	0	0	0	8.01
S	22.19	0.15	0	0	0	22.34
SW	22.03	0.15	0	0	0	22.18
W	22.5	0	0	0	0	22.5
NW	8.01	0	0	0	0	8.01
Summary	100	0.3	0	0	0	100



PRAMP-201910

% Icon Classes (ppm)	100	0-0.1	0-1.0	0-2.3	0-3.9	0-5.6	0-7.3	0-9.0	0-10.7
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019 Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

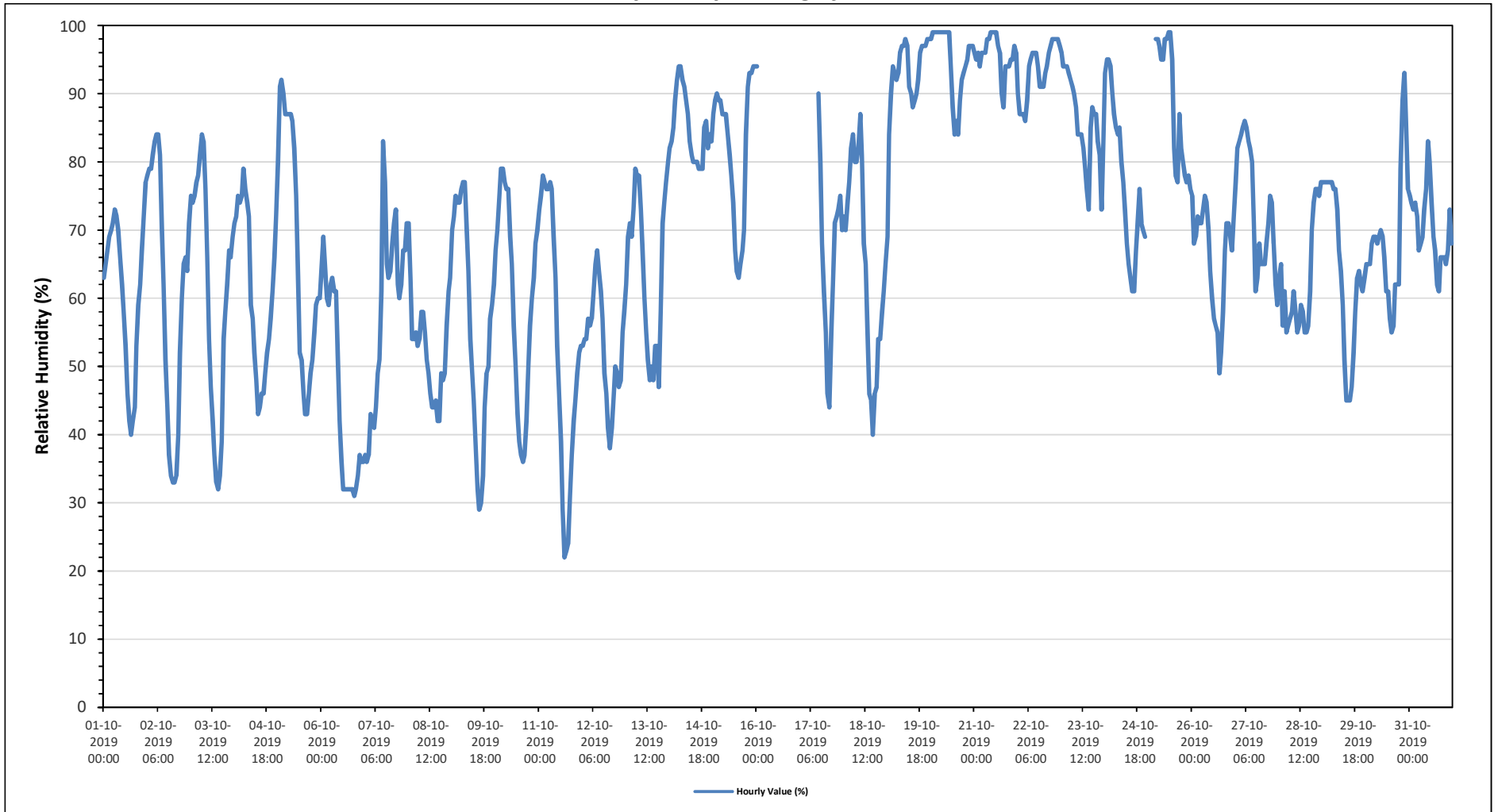
Maximum Hourly Value:	99 %	on October 20 at hour 1	Hours in Service:	744
Maximum Daily Value:	95.7 %	on	Hours of Data:	706
Minimum Hourly Value:	22 %	on October 11 at hour 14	Hours of Missing Data:	38
Minimum Daily Value:	45.5 %	on October 6	Hours of Calibration:	0
Monthly Average:	69.5 %		Operational Uptime:	94.9

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	
Oct 1	63	65	67	69	70	71	73	72	70	66	62	58	53	46	42	40	42	44	53	59	62	67	72	77	40	77	61	
Oct 2	78	79	79	81	83	84	84	81	70	62	51	44	37	34	33	33	34	40	52	60	65	66	64	71	33	84	61	
Oct 3	75	74	75	77	78	81	84	83	76	66	54	47	42	37	33	32	34	39	54	58	62	67	66	69	32	84	61	
Oct 4	71	72	75	74	75	79	76	74	72	59	57	52	48	43	44	46	46	49	52	54	57	61	66	72	43	79	61	
Oct 5	80	91	92	90	87	87	87	87	86	82	75	63	52	51	46	43	43	46	49	51	55	59	60	60	43	92	68	
Oct 6	64	69	64	60	59	62	63	61	61	52	42	36	32	32	32	32	32	31	32	34	37	36	36	36	31	69	45	
Oct 7	37	36	37	43	42	41	44	49	51	61	83	77	65	63	64	68	71	73	62	60	62	67	67	71	36	83	58	
Oct 8	71	63	54	54	55	53	54	58	58	55	51	49	46	44	44	45	42	42	49	48	49	56	61	63	42	71	53	
Oct 9	70	72	75	74	74	76	77	77	70	64	54	49	45	38	32	29	30	34	44	49	50	57	59	62	29	77	57	
Oct 10	67	70	75	79	79	77	76	76	69	65	56	50	43	39	37	36	37	42	50	56	60	63	68	70	36	79	60	
Oct 11	73	75	78	77	76	76	77	76	69	63	53	46	39	29	22	23	24	31	37	42	45	49	52	53	22	78	54	
Oct 12	53	54	54	57	56	57	61	65	67	64	61	57	49	46	41	38	41	45	50	49	47	48	55	58	38	67	53	
Oct 13	62	69	71	69	73	79	78	78	73	67	60	55	51	48	50	48	53	53	47	58	71	74	77	80	47	80	64	
Oct 14	82	83	85	89	92	94	94	92	91	89	87	83	81	80	80	80	79	79	79	85	86	82	84	83	79	94	85	
Oct 15	87	89	90	89	89	87	87	87	84	81	78	74	67	64	63	65	67	70	84	91	93	93	94	94	63	94	82	
Oct 16	94	P	P	P	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	94	94	-	
Oct 17	X	X	X	X	X	X	X	X	X	X	X	X	X	90	80	68	61	55	46	44	55	62	71	72	73	75	70	
Oct 18	72	70	74	77	82	84	80	80	82	87	81	68	65	56	46	45	40	46	47	54	54	58	61	65	40	87	66	
Oct 19	69	84	90	94	93	92	93	96	97	97	98	97	91	90	88	89	90	92	96	97	97	97	98	98	69	98	93	
Oct 20	98	99	99	99	99	99	99	99	99	99	99	99	94	88	84	86	84	89	92	93	94	95	97	97	84	99	95	
Oct 21	96	95	96	94	96	96	96	98	98	99	99	99	99	97	96	90	88	94	94	94	95	95	97	96	88	99	96	
Oct 22	90	87	87	87	86	89	94	95	96	96	96	94	91	91	91	93	94	96	97	98	98	98	98	97	86	98	93	
Oct 23	96	94	94	94	93	92	91	90	88	84	84	84	82	79	76	73	85	88	87	87	83	81	73	82	73	96	86	
Oct 24	93	95	95	94	90	87	85	84	85	80	77	73	68	65	63	61	61	67	71	76	71	70	69	P	61	95	77	
Oct 25	P	P	P	P	98	98	97	95	95	98	98	99	99	95	82	78	77	87	82	80	78	77	78	76	76	99	88	
Oct 26	75	68	69	72	71	71	73	75	74	70	64	60	57	56	55	49	52	58	67	71	71	69	67	72	49	75	66	
Oct 27	77	82	83	84	85	86	85	83	82	80	71	61	63	68	65	65	65	68	71	75	74	68	62	59	59	86	73	
Oct 28	63	65	56	61	55	56	57	58	61	58	55	56	59	58	55	55	56	61	70	74	76	76	75	77	55	77	62	
Oct 29	77	77	77	77	77	77	76	76	73	67	64	59	51	45	45	45	47	52	58	63	64	62	61	63	45	77	64	
Oct 30	65	65	65	68	69	69	68	69	70	69	66	61	61	57	55	56	62	62	62	79	89	93	86	76	55	93	68	
Oct 31	75	74	73	74	72	67	68	69	73	76	83	80	74	69	67	62	61	66	66	66	65	67	73	68	61	83	70	
Diurnal Maximum	98	99	99	99	99	99	99	99	99	99	99	99	99	97	96	93	94	96	97	98	98	98	98	98	98			
Diurnal Average	74.9	75.6	76.0	77.0	77.7	78.2	78.5	78.7	77.2	74.3	71.6	66.8	62.2	58.8	56.3	55.0	56.2	60.1	63.9	67.7	69.3	70.9	71.7	72.9				

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 RH - Reno Station





PEACE RIVER AREA MONITORING PROGRAM

**Reno Station - October 2019
Summary of Hourly Averages**

BAROMETRIC PRESSURE (BP) in millibar

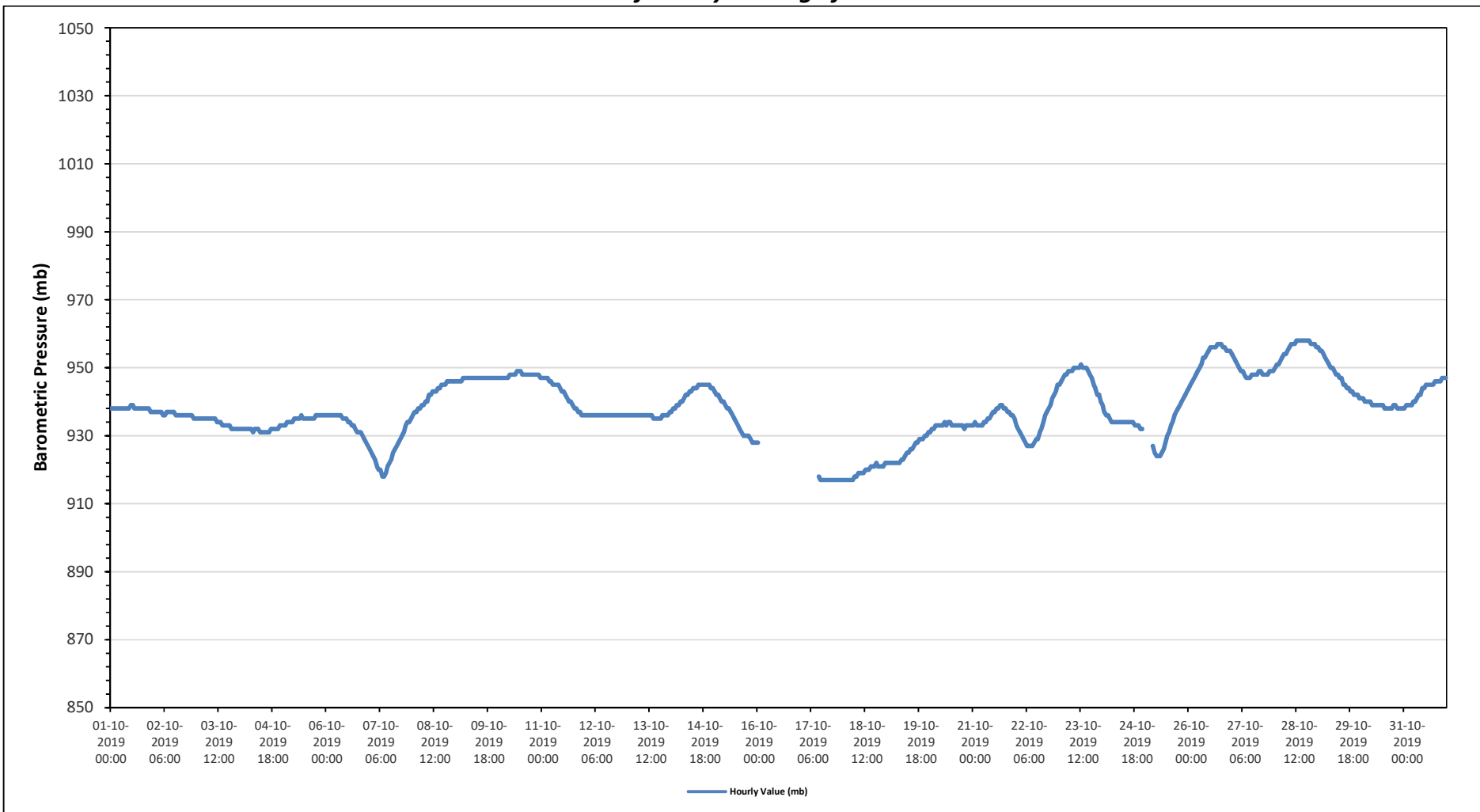
Maximum Hourly Value:	958 mb	on October 28 at hour 12	Hours in Service:	744
Maximum Daily Value:	956 mb	on	Hours of Data:	706
Minimum Hourly Value:	917 mb	on October 17 at hour 11	Hours of Missing Data:	38
Minimum Daily Value:	919 mb	on October 18	Hours of Calibration:	0
Monthly Average:	938 mb		Operational Uptime:	94.9

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
Oct 1	938	938	938	938	938	938	938	938	938	938	938	939	939	938	938	938	938	938	938	938	938	937	937	937	937	937	
Oct 2	937	937	937	937	937	936	936	937	937	937	937	937	936	936	936	936	936	936	936	936	936	936	935	935	935	935	935
Oct 3	935	935	935	935	935	935	935	935	935	935	935	934	934	934	933	933	933	933	933	932	932	932	932	932	932	932	932
Oct 4	932	932	932	932	932	932	932	931	932	932	932	931	931	931	931	931	931	932	932	932	932	932	933	933	933	933	933
Oct 5	933	933	934	934	934	934	935	935	935	935	936	935	935	935	935	935	935	935	936	936	936	936	936	936	936	936	936
Oct 6	936	936	936	936	936	936	936	936	936	936	935	935	935	934	933	933	932	931	931	931	930	929	928	927	927	927	927
Oct 7	926	925	924	923	921	920	920	918	918	919	921	922	923	925	926	927	928	929	930	931	933	934	934	935	935	935	935
Oct 8	936	937	937	938	938	939	939	940	940	942	942	943	943	943	944	944	945	945	945	946	946	946	946	946	946	946	946
Oct 9	946	946	946	946	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947
Oct 10	947	947	947	947	947	947	948	948	948	948	949	949	949	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Oct 11	947	947	947	947	946	946	945	945	945	945	944	943	943	942	941	940	940	939	938	938	937	937	936	936	936	936	936
Oct 12	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Oct 13	936	936	936	936	936	936	936	936	936	936	936	936	936	936	935	935	935	935	935	935	936	936	936	936	937	937	937
Oct 14	937	938	938	939	939	940	940	941	942	942	943	943	944	944	944	945	945	945	945	945	945	945	944	944	944	944	944
Oct 15	943	942	942	941	940	940	939	938	938	937	936	935	934	933	932	931	930	930	930	930	929	928	928	928	928	928	928
Oct 16	928	P	P	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 17	X	X	X	X	X	X	X	X	X	X	918	917	917	917	917	917	917	917	917	917	917	917	917	917	917	917	917
Oct 18	917	917	917	917	917	917	918	918	919	919	919	919	920	920	920	921	921	921	922	921	921	921	921	921	922	922	922
Oct 19	922	922	922	922	922	922	922	922	923	923	924	925	925	926	926	927	928	928	929	929	929	930	930	931	931	931	931
Oct 20	931	932	932	933	933	933	933	933	934	934	933	934	933	933	933	933	933	933	933	932	933	933	933	933	933	933	933
Oct 21	933	934	933	933	933	933	934	934	935	935	936	937	937	938	938	939	939	938	938	937	937	936	936	935	935	935	935
Oct 22	933	932	931	930	929	928	927	927	927	927	928	929	929	931	932	934	936	937	938	939	941	942	943	945	945	945	945
Oct 23	945	946	947	948	948	949	949	949	950	950	950	950	951	950	950	950	949	948	947	945	944	942	942	940	940	940	940
Oct 24	939	937	936	936	935	934	934	934	934	934	934	934	934	934	934	934	934	933	933	933	933	932	932	P	932	932	932
Oct 25	P	P	P	P	927	925	924	924	924	925	926	928	930	931	933	934	936	937	938	939	940	941	942	943	944	944	944
Oct 26	944	945	946	947	948	949	950	951	953	953	954	955	956	956	956	956	957	957	957	956	956	955	955	955	955	955	955
Oct 27	954	953	952	951	950	949	949	948	947	947	948	948	948	948	949	949	948	948	948	948	948	948	949	949	949	949	949
Oct 28	950	951	951	952	953	954	954	955	956	957	957	957	958	958	958	958	958	958	958	958	957	957	957	956	956	956	956
Oct 29	956	955	955	954	953	952	951	950	950	949	948	948	947	947	945	945	944	944	943	943	942	942	942	941	941	941	941
Oct 30	941	941	940	940	940	940	939	939	939	939	939	939	939	939	938	938	938	938	938	939	939	938	938	938	938	938	938
Oct 31	938	939	939	939	939	940	940	941	942	942	944	944	945	945	945	945	946	946	946	946	947	947	947	947	947	947	947
Diurnal Maximum	956	955	955	954	953	954	954	955	956	957	957	957	958	958	958	958	958	958	958	958	957	957	957	956	956	956	956
Diurnal Average	938	938	938	938	938	937	937	937	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	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 Station





PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019
Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

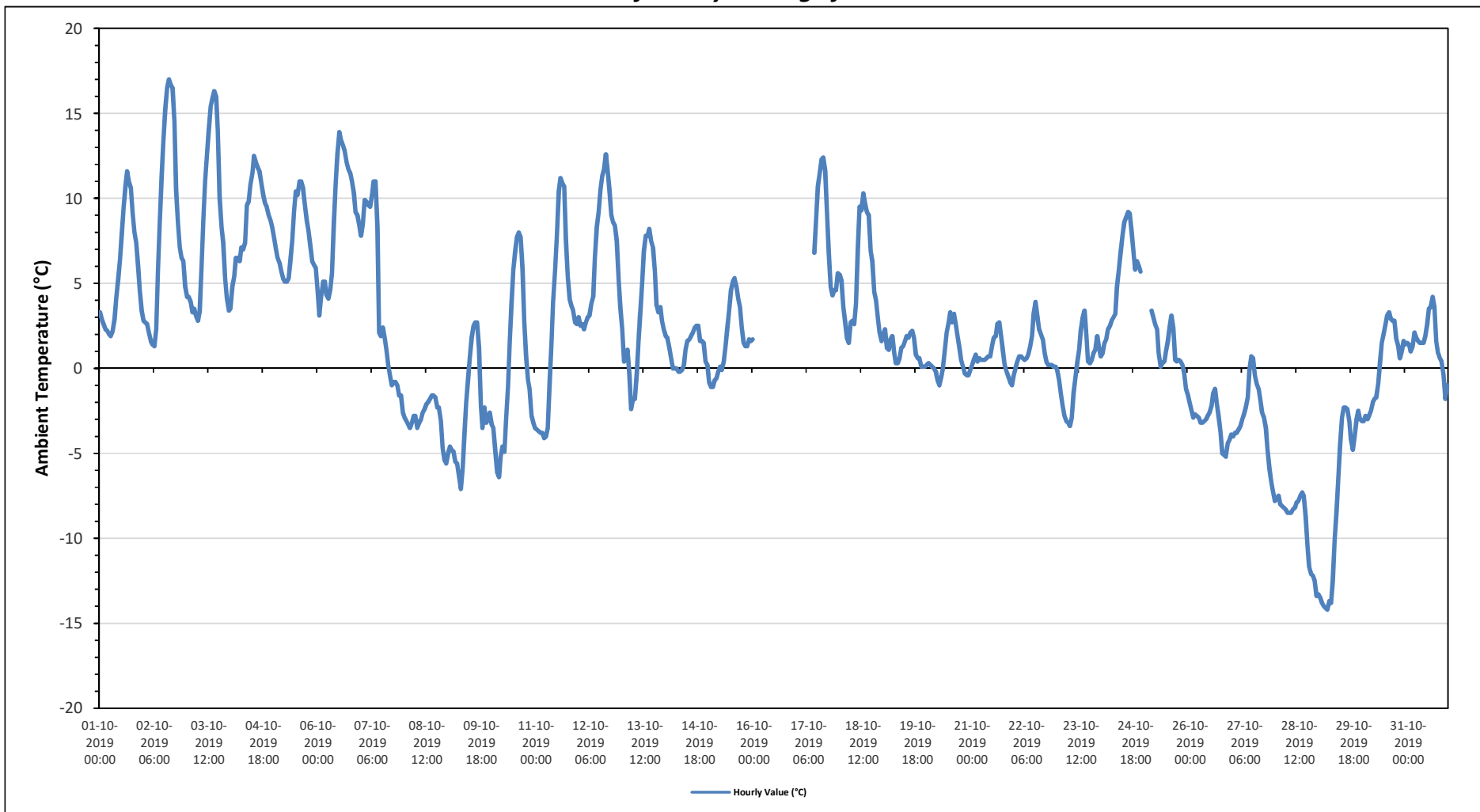
Maximum Hourly Value:	17.0 °C on October 2 at hour 14	Hours in Service:	744
Maximum Daily Value:	8.8 °C on	Hours of Data:	706
Minimum Hourly Value:	-14.2 °C on October 29 at hour 5	Hours of Missing Data:	38
Minimum Daily Value:	-9.0 °C on October 28	Hours of Calibration:	0
Monthly Average:	2.0 °C	Operational Uptime:	94.9

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
Oct 1	3.3	2.9	2.6	2.3	2.2	2.0	1.9	2.2	2.9	4.1	5.2	6.4	7.8	9.4	10.7	11.6	11.0	10.6	9.1	8.0	7.4	6.0	4.6	3.4	1.9	11.6	5.7
Oct 2	2.8	2.7	2.6	2.1	1.6	1.4	1.3	2.3	5.8	8.6	11.3	13.3	15.2	16.5	17.0	16.7	16.5	14.5	10.5	8.5	7.1	6.5	6.3	4.8	1.3	17.0	8.2
Oct 3	4.2	4.2	3.9	3.3	3.5	3.1	2.8	3.3	6.0	8.7	11.0	12.5	14.0	15.4	15.9	16.3	16.0	14.0	10.0	8.3	7.4	5.3	4.1	3.4	2.8	16.3	8.2
Oct 4	3.5	4.8	5.4	6.5	6.5	6.3	7.1	7.0	7.4	9.6	9.8	10.8	11.5	12.5	12.1	11.8	11.6	10.9	10.2	9.7	9.5	9.0	8.7	8.3	3.5	12.5	8.8
Oct 5	7.7	7.0	6.5	6.2	5.7	5.3	5.1	5.1	5.3	6.3	7.5	9.2	10.4	10.2	11.0	11.0	10.6	9.6	8.7	8.1	7.2	6.3	6.1	5.9	5.1	11.0	7.6
Oct 6	4.6	3.1	4.2	5.1	5.1	4.3	4.1	4.6	5.6	8.6	11.0	12.6	13.9	13.4	13.1	12.8	12.1	11.7	11.5	11.0	10.3	9.2	9.0	8.4	3.1	13.9	8.7
Oct 7	7.8	8.5	9.9	9.8	9.6	9.5	10.2	11.0	11.0	8.3	2.1	1.9	2.4	1.8	1.1	0.2	-0.5	-1.0	-0.8	-0.8	-1.0	-1.6	-1.6	-2.6	-2.6	11.0	4.0
Oct 8	-2.9	-3.1	-3.3	-3.5	-3.2	-2.8	-2.8	-3.5	-3.2	-3.0	-2.6	-2.4	-2.1	-2.0	-1.8	-1.6	-1.6	-1.7	-2.3	-2.3	-3.1	-4.7	-5.4	-5.6	-5.6	-1.6	-2.9
Oct 9	-5.0	-4.6	-4.8	-4.9	-5.5	-5.6	-6.3	-7.1	-5.9	-4.0	-2.0	-0.6	0.6	1.8	2.5	2.7	2.7	1.2	-2.2	-3.5	-2.3	-3.2	-3.0	-2.6	-7.1	2.7	-2.6
Oct 10	-3.3	-3.5	-4.8	-6.1	-6.4	-5.2	-4.6	-4.9	-3.1	-1.1	1.6	3.7	5.8	6.9	7.7	8.0	7.7	5.8	2.8	0.7	-0.7	-1.2	-2.8	-3.2	-6.4	8.0	0.0
Oct 11	-3.5	-3.6	-3.7	-3.8	-3.8	-4.1	-4.0	-3.5	-0.8	1.6	3.9	5.8	7.8	10.4	11.2	10.9	10.7	7.6	5.4	4.1	3.7	3.4	2.7	2.6	-4.1	11.2	2.5
Oct 12	3.0	2.5	2.6	2.3	2.7	3.0	3.1	3.8	4.2	6.5	8.3	9.2	10.5	11.3	11.7	12.6	11.7	10.5	9.0	8.6	8.4	7.5	5.2	3.6	2.3	12.6	6.7
Oct 13	2.3	0.4	0.7	1.1	-0.4	-2.4	-1.8	-1.8	-0.3	1.5	3.3	5.1	6.9	7.8	7.8	8.2	7.5	7.1	5.7	3.7	3.3	3.6	2.8	2.3	-2.4	8.2	3.1
Oct 14	1.9	1.8	1.2	0.6	0.0	0.0	0.0	-0.2	-0.2	-0.1	0.2	1.1	1.6	1.7	1.9	2.1	2.4	2.5	2.5	1.6	1.6	1.5	0.4	0.2	-0.2	2.5	1.1
Oct 15	-0.8	-1.1	-1.1	-0.7	-0.6	-0.2	0.1	-0.1	0.4	1.3	2.3	3.4	4.6	5.1	5.3	4.8	4.1	3.6	2.4	1.5	1.3	1.3	1.7	1.6	-1.1	5.3	1.7
Oct 16	1.7	P	P	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1.7	1.7	-
Oct 17	X	X	X	X	X	X	X	X	X	X	6.8	8.9	10.7	11.5	12.3	12.4	11.6	9.0	6.8	4.8	4.3	4.6	4.6	5.6	4.3	12.4	-
Oct 18	5.5	5.2	3.6	2.7	1.8	1.5	2.7	2.8	2.6	3.8	7.1	9.5	9.3	10.3	9.7	9.2	9.0	6.9	6.3	4.5	4.0	3.0	2.1	1.6	1.5	10.3	5.2
Oct 19	2.0	2.3	1.2	1.1	1.7	1.9	0.9	0.3	0.3	0.6	1.2	1.3	1.6	1.9	1.8	2.1	2.2	1.8	0.8	0.6	0.6	0.1	0.1	0.1	0.1	2.3	1.2
Oct 20	0.2	0.3	0.2	0.1	0.0	-0.2	-0.7	-1.0	-0.5	0.0	1.1	2.1	2.7	3.3	2.7	3.2	2.6	1.9	1.2	0.5	0.1	-0.3	-0.4	-0.4	-1.0	3.3	0.8
Oct 21	-0.1	0.2	0.5	0.8	0.4	0.6	0.5	0.5	0.5	0.6	0.7	0.7	1.3	1.8	1.9	2.6	2.7	1.9	1.1	0.2	-0.2	-0.5	-0.8	-1.0	-1.0	2.7	0.7
Oct 22	-0.4	0.0	0.4	0.7	0.7	0.6	0.5	0.6	0.8	1.3	1.9	3.2	3.9	3.0	2.3	2.0	1.7	0.9	0.4	0.2	0.2	0.2	0.1	0.1	-0.4	3.9	1.1
Oct 23	-0.1	-0.7	-1.5	-2.2	-2.8	-3.1	-3.2	-3.4	-2.9	-1.4	-0.6	0.3	1.1	2.2	3.0	3.4	1.9	0.4	0.3	0.5	0.9	1.1	1.9	1.3	-3.4	3.4	-0.2
Oct 24	0.7	0.9	1.5	1.7	2.3	2.5	2.8	3.0	3.2	4.8	5.8	6.9	7.9	8.6	8.9	9.2	9.1	8.0	6.8	5.8	6.3	6.0	5.7	P	0.7	9.2	5.1
Oct 25	P	P	P	P	3.4	3.0	2.6	2.3	0.9	0.1	0.3	0.4	1.0	1.6	2.5	3.1	2.4	0.5	0.4	0.5	0.4	0.2	-0.3	-1.2	-1.2	3.4	1.2
Oct 26	-1.6	-2.0	-2.5	-2.9	-2.7	-2.8	-2.9	-3.2	-3.2	-3.1	-3.0	-2.8	-2.6	-2.2	-1.5	-1.2	-2.1	-2.8	-3.7	-5.0	-5.1	-5.2	-4.4	-4.2	-5.2	-1.2	-3.0
Oct 27	-3.9	-4.0	-3.8	-3.8	-3.6	-3.4	-3.0	-2.7	-2.3	-1.7	-0.1	0.7	0.6	-0.4	-0.9	-1.2	-1.9	-2.6	-2.9	-3.5	-4.8	-5.9	-6.7	-7.2	-7.2	0.7	-2.9
Oct 28	-7.8	-7.7	-7.5	-8.0	-8.1	-8.2	-8.3	-8.5	-8.5	-8.5	-8.3	-8.2	-7.9	-7.8	-7.5	-7.3	-7.5	-8.7	-10.5	-11.7	-12.1	-12.2	-12.5	-13.4	-13.4	-7.3	-9.0
Oct 29	-13.3	-13.5	-13.8	-14.0	-14.1	-14.2	-13.7	-13.8	-12.5	-10.1	-8.4	-6.3	-4.5	-2.9	-2.3	-2.4	-3.1	-4.2	-4.8	-4.0	-3.0	-2.5	-3.0	-3.0	-14.2	-2.3	-7.8
Oct 30	-3.1	-3.1	-2.8	-3.0	-2.8	-2.5	-2.0	-1.8	-1.7	-0.9	0.4	1.5	2.0	2.6	3.1	3.3	2.9	2.8	2.8	1.7	1.3	0.6	1.0	1.6	-3.1	3.3	0.2
Oct 31	1.4	1.5	1.4	1.0	1.3	2.1	1.8	1.6	1.5	1.5	1.5	1.9	2.6	3.5	3.6	4.2	3.6	1.6	0.9	0.6	0.4	-0.4	-1.8	-1.0	-1.8	4.2	1.5
Diurnal Maximum	7.8	8.5	9.9	9.8	9.6	9.5	10.2	11.0	11.0	9.6	11.3	13.3	15.2	16.5	17.0	16.7	16.5	14.5	11.5	11.0	10.3	9.2	9.0	8.4			
Diurnal Average	0.2	0.0	0.0	-0.2	-0.2	-0.3	-0.2	-0.2	0.5	1.5	2.6	3.7	4.7	5.3	5.6	5.7	5.3	4.2	3.0	2.1	1.7	1.2	0.8	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 Average for AT - Reno Station





PEACE RIVER AREA MONITORING PROGRAM

**Reno Station - October 2019
Summary of Hourly Averages**

STATION TEMPERATURE (ST) in Degree Celsius

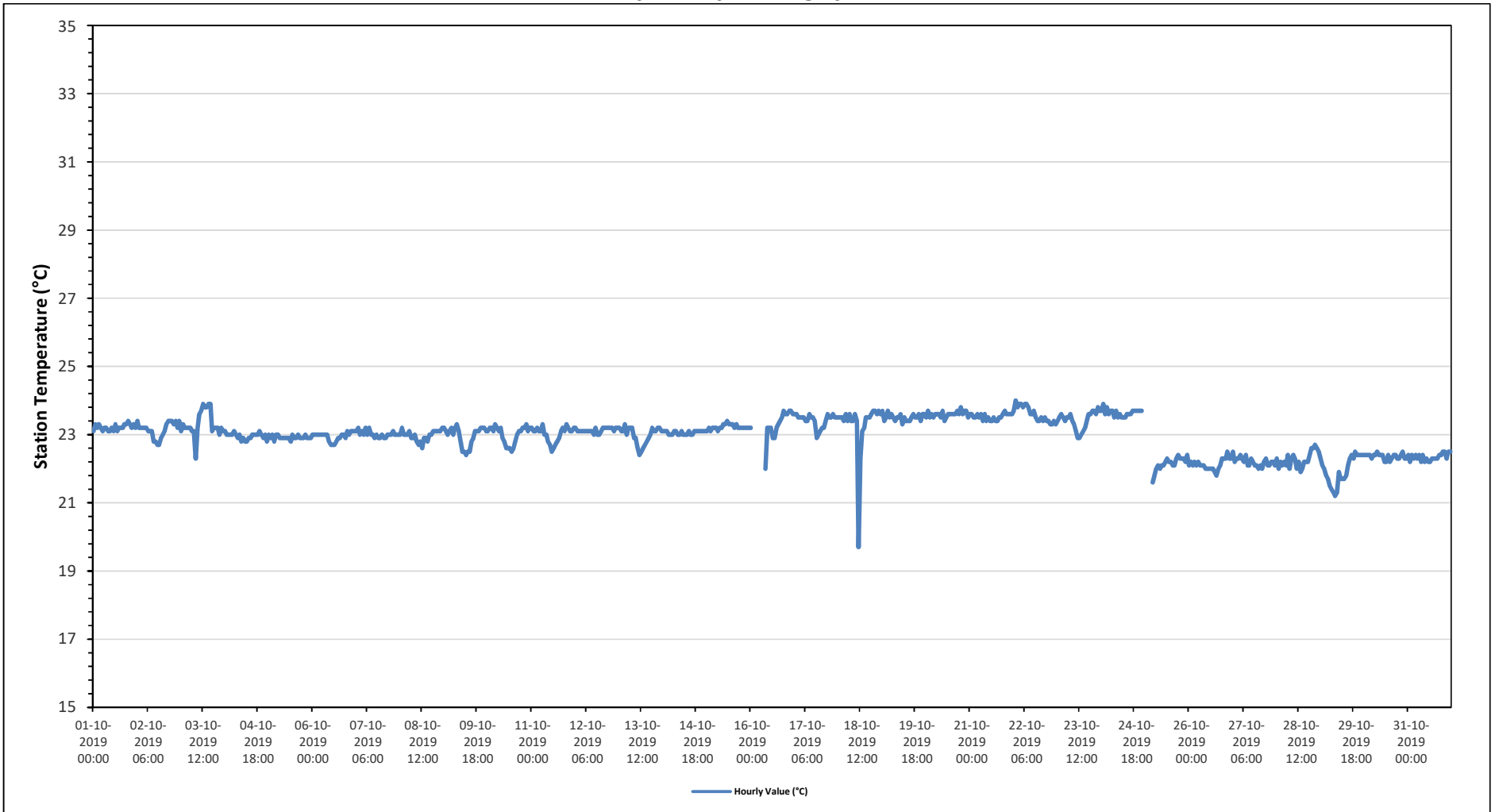
Maximum Hourly Value:	24.0 °C	on October 22 at hour 1	Hours in Service:	744
Maximum Daily Value:	23.6 °C	on	Hours of Data:	732
Minimum Hourly Value:	19.7 °C	on October 18 at hour 11	Hours of Missing Data:	12
Minimum Daily Value:	21.9 °C	on October 29	Hours of Calibration:	0
Monthly Average:	23.0 °C		Operational Uptime:	98.4

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
Oct 1	23.1	23.3	23.2	23.3	23.2	23.1	23.2	23.2	23.1	23.1	23.2	23.1	23.3	23.1	23.2	23.2	23.2	23.3	23.3	23.4	23.3	23.2	23.3	23.2	23.1	23.4	23.2
Oct 2	23.4	23.2	23.2	23.2	23.2	23.2	23.1	23.1	23.1	22.8	22.8	22.7	22.7	22.9	23.0	23.1	23.3	23.4	23.4	23.3	23.4	23.2	23.4	22.7	23.4	23.1	
Oct 3	23.1	23.3	23.2	23.2	23.2	23.2	23.1	23.1	22.3	23.2	23.6	23.7	23.9	23.8	23.8	23.9	23.9	23.1	23.2	23.2	23.0	23.2	23.1	22.3	23.9	23.3	
Oct 4	23.1	23.0	23.0	23.0	23.0	23.1	23.0	22.9	23.0	22.8	22.9	22.8	22.8	22.9	22.9	23.0	23.0	23.0	23.0	23.1	23.0	22.9	23.0	22.8	22.8	23.1	23.0
Oct 5	23.0	22.9	23.0	22.8	23.0	23.0	22.9	22.9	22.9	22.9	22.9	22.9	22.8	23.0	22.9	22.9	23.0	22.9	22.9	23.0	22.9	22.9	22.9	22.8	23.0	22.9	22.9
Oct 6	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.8	22.7	22.7	22.7	22.8	22.9	22.9	23.0	23.0	23.0	23.1	23.0	23.1	23.1	23.1	22.7	23.1	23.0
Oct 7	23.1	23.2	23.0	23.1	23.0	23.2	23.0	23.2	23.0	23.0	22.9	23.0	22.9	22.9	23.0	22.9	22.9	23.0	23.0	23.0	23.1	23.0	23.0	22.9	23.2	23.0	23.0
Oct 8	23.0	23.2	23.0	23.0	23.0	23.1	22.9	22.9	23.0	22.8	22.7	22.8	22.6	22.9	22.9	22.8	23.0	23.0	23.1	23.1	23.1	23.1	23.1	23.2	22.6	23.2	23.0
Oct 9	23.2	23.1	23.0	23.1	23.2	23.0	23.2	23.3	23.1	22.8	22.5	22.5	22.4	22.5	22.8	22.9	23.1	23.1	23.1	23.1	23.2	23.2	23.2	23.1	22.4	23.3	23.0
Oct 10	23.1	23.2	23.2	23.1	23.3	23.2	23.1	23.2	22.9	22.8	22.6	22.6	22.6	22.5	22.6	22.8	23.0	23.1	23.1	23.2	23.2	23.3	23.1	23.2	22.5	23.3	23.0
Oct 11	23.2	23.1	23.1	23.2	23.1	23.1	23.3	23.0	23.0	22.8	22.7	22.5	22.6	22.7	22.8	22.9	23.1	23.2	23.1	23.3	23.2	23.1	23.1	23.2	22.5	23.3	23.0
Oct 12	23.2	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.0	23.2	23.0	23.0	23.1	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.0	23.2	23.1	23.1
Oct 13	23.2	23.1	23.1	23.3	23.0	23.2	23.2	23.2	22.9	22.9	22.6	22.4	22.5	22.6	22.7	22.8	22.9	23.0	23.2	23.1	23.1	23.2	23.2	23.1	22.4	23.3	23.0
Oct 14	23.1	23.1	23.1	23.0	23.0	23.0	23.1	23.1	23.0	23.0	23.1	23.0	23.0	23.1	23.0	23.0	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.0	23.0	23.1	23.1
Oct 15	23.1	23.2	23.1	23.2	23.2	23.2	23.1	23.2	23.2	23.3	23.3	23.4	23.3	23.3	23.3	23.2	23.3	23.2	23.2	23.2	23.2	23.2	23.2	23.1	23.4	23.2	23.2
Oct 16	23.2	P	P	P	P	P	P	P	22.0	23.2	23.2	23.2	22.9	22.9	23.2	23.3	23.4	23.5	23.7	23.6	23.6	23.7	23.6	22.0	23.7	-	
Oct 17	23.6	23.6	23.5	23.5	23.5	23.5	23.4	23.4	23.6	23.5	23.5	23.4	22.9	23.0	23.1	23.2	23.2	23.4	23.6	23.5	23.5	23.6	23.5	22.9	23.6	23.4	
Oct 18	23.5	23.5	23.5	23.4	23.6	23.4	23.6	23.4	23.4	23.6	23.4	19.7	22.3	23.1	23.2	23.5	23.5	23.5	23.6	23.7	23.7	23.6	23.7	19.7	23.7	23.3	
Oct 19	23.7	23.4	23.5	23.7	23.5	23.6	23.5	23.4	23.5	23.5	23.6	23.3	23.5	23.4	23.4	23.4	23.5	23.6	23.5	23.5	23.6	23.4	23.6	23.3	23.7	23.5	
Oct 20	23.5	23.7	23.5	23.6	23.5	23.6	23.6	23.6	23.5	23.7	23.4	23.5	23.6	23.6	23.6	23.6	23.6	23.7	23.6	23.8	23.6	23.7	23.7	23.4	23.8	23.6	
Oct 21	23.6	23.6	23.5	23.5	23.6	23.5	23.6	23.4	23.6	23.4	23.5	23.4	23.4	23.5	23.4	23.4	23.5	23.5	23.6	23.7	23.6	23.6	23.6	23.4	23.7	23.5	
Oct 22	23.7	24.0	23.8	23.9	23.9	23.8	23.9	23.9	23.8	23.6	23.6	23.7	23.5	23.4	23.4	23.5	23.4	23.5	23.4	23.4	23.3	23.3	23.4	23.3	24.0	23.6	
Oct 23	23.4	23.5	23.6	23.5	23.4	23.5	23.5	23.6	23.4	23.3	23.1	22.9	22.9	23.0	23.1	23.2	23.4	23.6	23.6	23.7	23.7	23.7	23.7	22.9	23.8	23.4	
Oct 24	23.7	23.9	23.6	23.8	23.6	23.7	23.7	23.5	23.7	23.5	23.6	23.5	23.5	23.5	23.6	23.6	23.6	23.7	23.7	23.7	23.7	23.7	23.7	23.5	23.9	23.6	
Oct 25	P	P	P	P	21.6	21.8	22.0	22.1	22.0	22.1	22.1	22.2	22.3	22.2	22.2	22.1	22.1	22.3	22.4	22.3	22.3	22.3	22.2	22.4	21.6	22.4	22.2
Oct 26	22.1	22.2	22.1	22.2	22.1	22.2	22.1	22.1	22.1	22.0	22.0	22.0	22.0	22.0	21.9	21.8	22.0	22.1	22.3	22.3	22.3	22.3	22.3	21.8	22.5	22.1	
Oct 27	22.5	22.2	22.3	22.3	22.4	22.3	22.2	22.4	22.1	22.1	22.3	22.2	22.1	22.1	22.0	22.1	22.0	22.2	22.3	22.1	22.1	22.2	22.2	22.0	22.5	22.2	
Oct 28	22.3	22.0	22.2	22.1	22.2	22.1	22.4	22.0	22.3	22.4	22.3	22.0	22.2	21.9	22.0	22.2	22.2	22.4	22.6	22.6	22.7	22.6	22.5	21.9	22.7	22.3	
Oct 29	22.3	22.1	22.0	21.8	21.7	21.5	21.4	21.3	21.2	21.3	21.9	21.7	21.7	21.8	22.1	22.3	22.4	22.3	22.5	22.4	22.4	22.4	22.4	21.2	22.5	21.9	
Oct 30	22.4	22.4	22.4	22.4	22.3	22.4	22.4	22.5	22.4	22.4	22.4	22.2	22.4	22.2	22.4	22.3	22.3	22.4	22.4	22.3	22.3	22.3	22.2	22.2	22.5	22.4	
Oct 31	22.4	22.2	22.4	22.3	22.4	22.3	22.4	22.2	22.4	22.2	22.3	22.2	22.2	22.3	22.3	22.3	22.3	22.4	22.4	22.5	22.5	22.5	22.2	22.2	22.5	22.3	
Diurnal Maximum	23.7	24.0	23.8	23.9	23.9	23.8	23.9	23.9	23.8	23.7	23.6	23.7	23.9	23.8	23.8	23.9	23.9	23.7	23.7	23.8	23.7	23.8	23.7	23.8	23.7	23.7	
Diurnal Average	23.1	23.1	23.0	23.1	23.0	23.0	23.0	23.0	22.9	22.9	22.9	22.7	22.8	22.8	22.9	22.9	23.0	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	

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 ST - Reno Station





PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

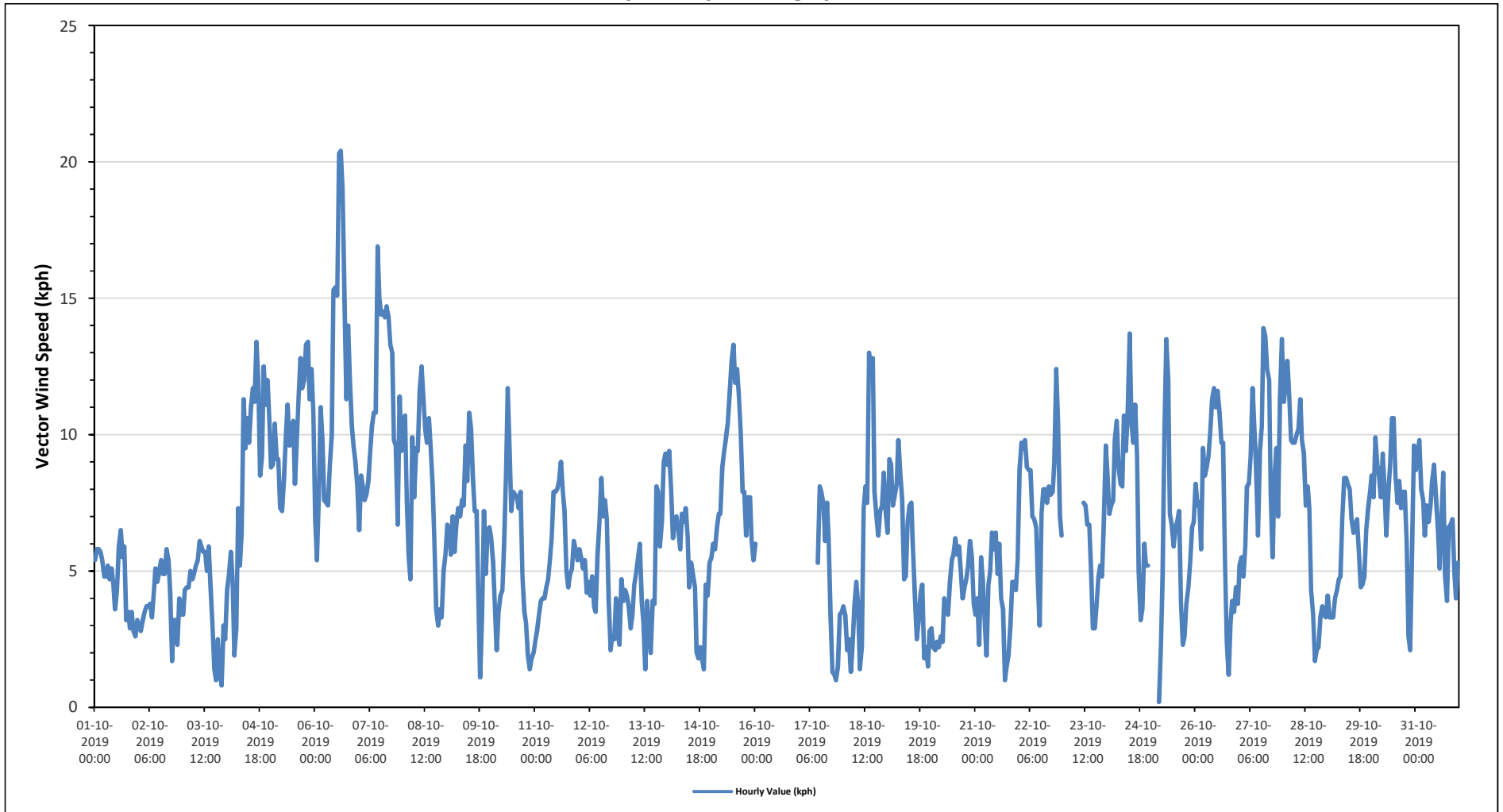
Maximum Hourly Value: 20.4 kph on October 6 at hour 14	Hours in Service: 744
Maximum Daily Value: 11.5 kph on	Hours of Data: 695
Minimum Hourly Value: 0.2 kph on October 25 at hour 4	Hours of Missing Data: 49
Minimum Daily Value: 3.9 kph on October 2	Hours of Calibration: 0
Monthly Average: 2.9 kph	Operational Uptime: 93.4

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
Oct 1	5.4	5.8	5.8	5.7	5.4	4.8	4.8	5.2	4.7	5.1	4.5	3.6	4.3	5.9	6.5	5.5	5.9	3.2	3.5	2.9	3.5	2.8	2.6	3.2	2.6	6.5	4.6
Oct 2	3	2.8	3.2	3.5	3.7	3.7	3.8	3.3	4.2	5.1	4.6	5	5.4	4.9	4.9	5.8	5.4	4.2	1.7	3.2	3.2	2.3	4	3.4	1.7	5.8	3.9
Oct 3	3.4	4.3	4.4	4.4	5	4.7	4.9	5.2	5.4	6.1	5.9	5.7	5.7	5	5.9	4.4	3	1.4	1	2.5	1.2	0.8	3	2.5	0.8	6.1	4.0
Oct 4	4.3	4.9	5.7	4.7	1.9	2.9	7.3	5.2	6.4	11.3	9.5	10.6	9.7	11	11.7	11.2	13.4	12.1	8.5	9.2	12.5	11.1	12	10.5	1.9	13.4	8.7
Oct 5	8.8	8.9	10.4	9.1	9.1	7.3	7.2	8.4	9.8	11.1	9.6	9.7	10.5	8.2	9.8	11.4	12.8	11.7	12	13.3	13.4	11.3	12.4	10.8	7.2	13.4	10.3
Oct 6	6.9	5.4	7.5	11	9.8	7.6	7.5	7.4	8.9	10	15.3	15.4	15.1	20.3	20.4	19	15	11.3	14	12	10.3	9.5	9	8.1	5.4	20.4	11.5
Oct 7	6.5	8.5	8.1	7.6	7.8	8.3	9.4	10.3	10.8	10.8	16.9	15	14.4	14.5	14.3	14.7	14.3	13.3	13	9.8	9.6	6.7	11.4	9.4	6.5	16.9	11.1
Oct 8	9.9	10.7	7.5	5.5	4.7	9.9	7.7	9.5	9.4	11.6	12.5	11.4	10.2	9.7	10.6	9.5	8.1	6.2	3.6	3	3.6	3.3	5	5.6	3.0	12.5	7.9
Oct 9	6.7	6.6	5.6	7	5.7	6.7	7.3	7	7.6	7.4	9.6	8.3	10.8	10.2	8.5	7.2	7.2	3.7	1.1	3.3	7.2	4.9	6.5	6.6	1.1	10.8	6.8
Oct 10	6.2	5.3	3.8	2.1	3.5	4.1	4.3	5.9	8.5	11.7	9.3	7.2	7.9	7.8	7.7	7.3	7.9	4.8	3.5	3.1	1.9	1.4	1.8	2	1.4	11.7	5.4
Oct 11	2.4	2.8	3.4	3.9	4	4	4.4	4.7	5.4	6.2	7.9	7.9	8	8.3	9	7.9	7.2	5	4.4	4.9	5.1	6.1	5.8	5.4	2.4	9.0	5.6
Oct 12	5.8	5.5	5.1	5.4	4.2	4.6	4.1	4.8	3.7	3.5	5.6	6.8	8.4	7	7.6	6.9	3.9	2.1	2.6	2.5	4	2.6	2.3	4.7	2.1	8.4	4.7
Oct 13	3.9	4.3	4.1	3.7	2.9	3.4	4.5	4.9	5.5	6	3.9	3.1	1.4	3.9	2.6	2	3.9	3.8	8.1	7.9	5.9	6.8	9	9.3	1.4	9.3	4.8
Oct 14	8.9	9.4	8	6.2	6.9	7	6.4	5.8	7.1	6.8	7.3	6.3	4.4	5.3	4.9	4.4	2	1.8	2.2	1.7	1.4	4.5	4.1	5.3	1.4	9.4	5.3
Oct 15	5.5	6	5.8	6.6	7.1	7.1	8.8	9.4	9.9	10.4	11.5	12.7	13.3	11.9	12.4	11.4	10.1	7.9	7.9	6.3	7.7	7.7	6.1	5.4	5.4	13.3	8.7
Oct 16	6	P	P	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6.0	6.0	-
Oct 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1.0	8.1	-
Oct 18	3.7	3.4	2.1	2.5	1.3	2.2	3.7	4.6	3.7	1.4	2.2	7.3	8.1	7.5	13	12.3	12.8	7.9	7	6.3	7.2	7.4	8.6	7.2	1.3	13.0	6.0
Oct 19	6.4	9.1	8.9	7.4	7.8	8.2	9.8	8.6	7.6	4.7	4.8	6.8	7.4	7.5	5.8	4.1	2.5	3.2	4.2	4.5	1.8	2.2	1.5	2.8	1.5	9.8	5.7
Oct 20	2.9	2.2	2.1	2.4	2.2	2.6	2.4	4	3.7	3.4	4.6	5.4	5.6	6.2	5.6	5.9	5	4	4.4	4.7	5.2	6.1	5.5	3.8	2.1	6.2	4.2
Oct 21	3.4	4	2.3	3.5	4.7	3.2	1.9	4.5	5	6.4	5.8	6.4	4.9	6	4	3.6	1	1.5	1.9	3	4.6	4.6	4.3	5.4	1.0	6.4	4.1
Oct 22	8.7	9.7	9.5	9.8	8.8	8.7	8.7	7	6.9	6.6	4.7	3	7.1	8	8	7.5	8.1	7.8	7.9	9	12.4	10.5	7	6.3	3.0	12.4	8.0
Oct 23	X	X	X	X	X	X	X	X	X	X	X	7.5	7.4	6.7	6.7	4.9	2.9	2.9	3.8	4.8	5.2	4.8	6.9	9.6	2.9	9.6	-
Oct 24	8.5	7.1	7.4	7.6	9.8	10.5	8.8	8.2	8.1	10.7	9.4	10.9	13.7	10.5	9.7	11.1	9.2	5	3.2	3.6	6	5.2	5.2	P	3.2	13.7	8.2
Oct 25	P	P	P	P	0.2	2.3	4.8	10.3	13.5	12	7.1	6.7	5.9	6.6	6.8	7.2	3.8	2.3	2.6	3.8	4.4	5.3	6.6	6.8	0.2	13.5	6.0
Oct 26	8.2	7.4	7.5	5.8	9.5	8.5	8.8	9.2	10.1	11.3	11.7	11	11.6	10.8	9.7	9.7	5.4	2.4	1.2	3.1	3.9	3.5	4.4	3.8	1.2	11.7	7.4
Oct 27	5.2	5.5	4.8	5.9	8.1	8.2	9.2	11.7	10.4	8.8	6.3	9.4	10.3	13.9	13.6	12.4	12	7.8	5.5	8.5	9.5	7	11.3	13.5	4.8	13.9	9.1
Oct 28	11.2	11.8	12.7	11.4	9.8	9.7	9.7	10	10.2	11.3	9.8	9.3	7.4	8.1	7.3	4.3	3.4	1.7	2.1	2.2	3.3	3.7	3.4	3.3	1.7	12.7	7.4
Oct 29	4.1	3.3	3.3	3.3	4	4.3	4.7	4.8	7	8.4	8.4	8.2	8	6.9	6.4	6.7	6.9	5.7	4.4	4.5	4.8	6.5	7.3	7.9	3.3	8.4	5.8
Oct 30	8.5	7.7	9.9	8.9	8.5	7.7	9.3	7.9	6.3	7.8	8.9	10.6	10.6	8.5	7.5	8.3	7.3	7.9	7.9	6.1	2.6	2.1	5.9	9.6	2.1	10.6	7.8
Oct 31	8.7	9.3	9.8	8	7.6	6.3	7.4	6.8	7.4	8.3	8.9	7.7	6.5	5.1	6.8	8.6	4.8	3.9	6.6	6.7	6.9	4.9	4	5.3	3.9	9.8	6.9
Diurnal Maximum	11	12	13	11	10	11	10	12	14	12	17	15	15	20	20	19	15	13	14	13	13	11	12	14			
Diurnal Average	6.2	6.4	6.2	6.1	5.9	6.0	6.5	7.0	7.4	8.0	8.0	8.2	8.4	8.5	8.5	8.1	7.0	5.3	5.0	5.3	5.6	5.2	6.0	6.2			

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.

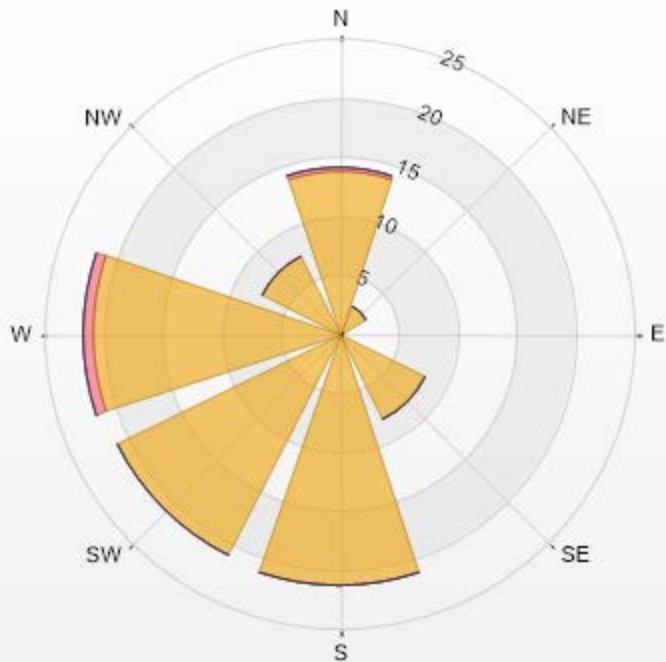
Timeseries Chart of Hourly Average for VWS - Reno Station



Wind: PRAMP RENO Poll.: PRAMP RENO-WDS[KPH] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 3.32% Valid Data: 94.29% Calm Avg: 1.32 [KPH]

Direction	6-15	15-29	29-39	>39.0	Total
N	13.85	0.29	0	0	14.14
NE	2.6	0	0	0	2.6
E	0.29	0	0	0	0.29
SE	8.08	0	0	0	8.08
S	21.36	0	0	0	21.36
SW	21.07	0	0	0	21.07
W	20.92	0.87	0	0	21.79
NW	7.36	0	0	0	7.36
Summary	95.53	1.16	0	0	96.69

PRAMP RENO Poll.: PRAMP RENO-WDS[KPH] 01-10-2019 00:00 - 31-10-2019 23:00 Calm: 3.32% Calm Poll
 Avg: 1.32[KPH]



PRAMP-201910

% Icon Classes (KPH)	96	6	2	0	0
	6-15	15-29	29-39	>39.0	



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

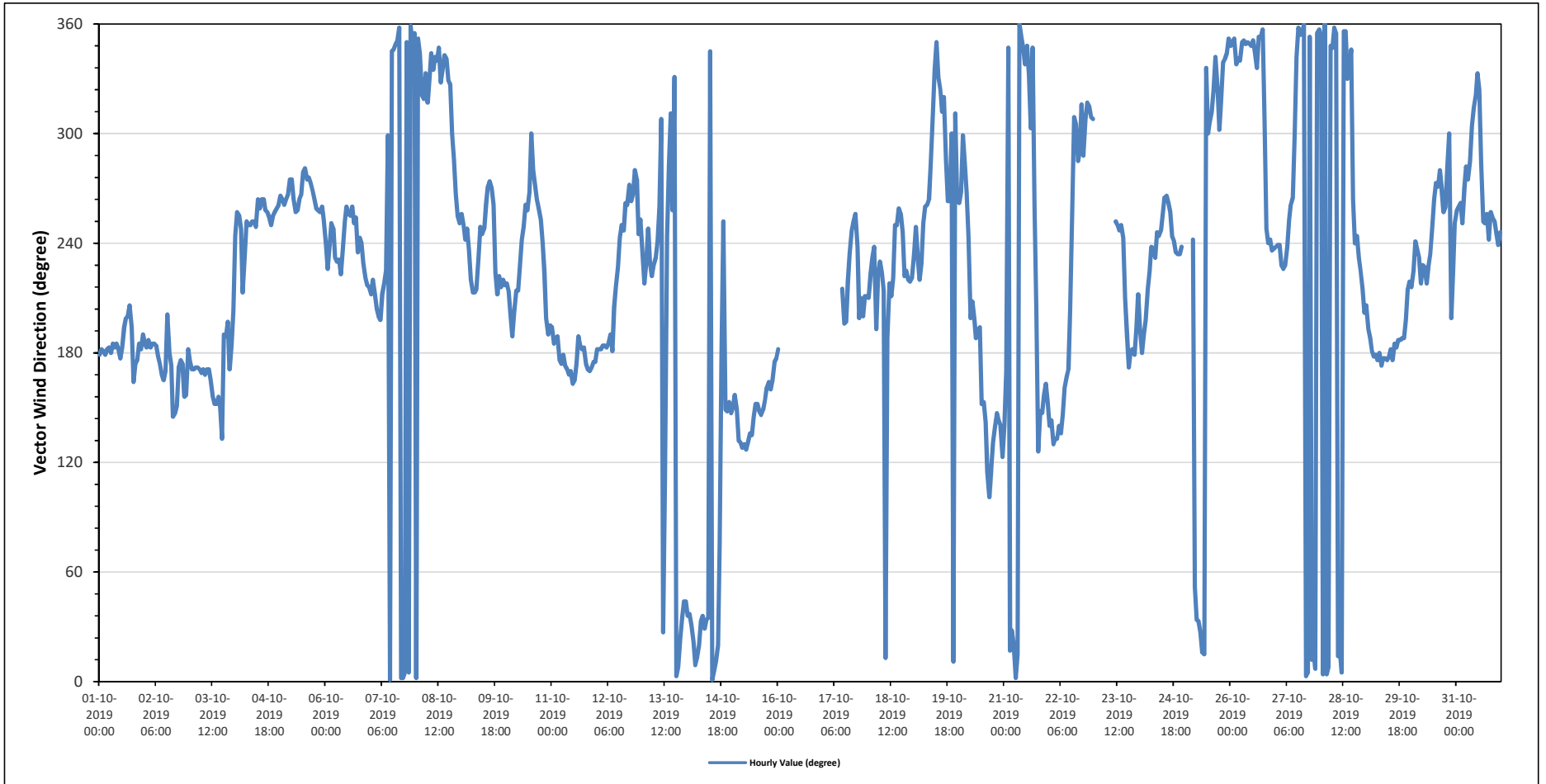
Monthly Average:	251 (WSW) degree	Hours in Service:	744
		Hours of Data:	695
		Hours of Missing Data:	49
		Hours of Calibration:	0
		Operational Uptime:	93.4

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	
Oct 1	S	S	S	S	S	S	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSE	S	S	S	S	S	185	S	
Oct 2	S	S	S	S	S	S	S	S	S	SSE	SSE	SSE	SSW	S	S	SE	SE	SSE	S	S	S	SSE	SSE	S	172	S	
Oct 3	S	S	S	S	S	S	SSE	S	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	SSW	S	S	SSW	168	SSE	
Oct 4	WSW	WSW	WSW	WSW	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	255	WSW
Oct 5	W	W	W	W	W	W	W	W	WSW	WSW	W	W	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	266	W
Oct 6	WSW	SW	SW	WSW	WSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	SW	SW	SW	SW	SW	243	WSW
Oct 7	SSW	SW	SSW	SSW	SSW	SSW	SSW	SW	SW	NNW	N	NNW	NNW	NNW	N	N	N	N	N	N	N	N	NNW	N	331	NNW	
Oct 8	N	N	NNW	NW	NW	NNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	W	WSW	WSW	332	NNW	
Oct 9	WSW	WSW	WSW	WSW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	240	WSW
Oct 10	SW	SSW	SSW	S	SSW	SSW	SSW	SW	WSW	WSW	W	WSW	W	NNW	W	W	W	WSW	WSW	WSW	SW	SSW	S	SSW	247	WSW	
Oct 11	SSW	S	S	S	S	S	S	S	S	SSE	SSE	SSE	SSE	S	S	S	S	S	S	S	SSE	S	S	S	176	S	
Oct 12	S	S	S	S	S	S	S	S	S	S	SSW	SW	SW	WSW	WSW	WSW	W	W	W	W	W	W	W	WSW	WSW	223	SW
Oct 13	SW	SW	SW	WSW	SW	SW	SW	SW	WSW	WSW	NW	NNE	ESE	WSW	W	NW	WSW	NNW	N	N	NNE	NE	NE	NE	311	NW	
Oct 14	NE	NE	NNE	NNE	N	NNE	NNE	NNE	NE	NNE	NE	NE	NNW	N	N	NNE	NNE	ENE	S	WSW	SSE	SE	SSE	SE	32	NNE	
Oct 15	SSE	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	147	SE
Oct 16	S	P	P	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	S	
Oct 17	X	X	X	X	X	X	X	X	X	X	SSW	SSW	SSW	SW	SW	WSW	WSW	WSW	WSW	SW	SSW	SSW	SSW	SSW	SSW	-	SW
Oct 18	SSW	SW	SW	SW	S	SW	SW	SW	SSW	NNE	S	SW	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	232	SW
Oct 19	SW	WSW	SW	SW	SW	WSW	WSW	W	W	W	NW	NNW	N	NNW	NW	NW	NW	WNW	W	W	WNW	NNE	NW	W	274	W	
Oct 20	W	W	WNW	WNW	W	WSW	SSW	SSW	SSW	S	S	SSW	SSE	SE	ESE	E	ESE	SE	SE	SE	SE	SE	SE	SE	161	SSE	
Oct 21	SE	SSE	NNW	NNE	NNE	NNE	N	NNE	N	NNW	NNW	NNW	NNW	NNW	W	SSW	SE	SE	SE	SE	SSE	SSE	SSE	SSE	10	N	
Oct 22	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	S	SSW	WSW	NW	WNW	WNW	WNW	NW	WNW	NW	NW	NW	NW	NW	235	SW	
Oct 23	X	X	X	X	X	X	X	X	X	X	X	WSW	WSW	WSW	WSW	WSW	SSW	S	S	S	S	S	SSW	SSW	-	SW	
Oct 24	SSW	S	S	SSW	SSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	W	W	W	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	236	SW
Oct 25	P	P	P	P	WSW	NE	NE	NNE	NNE	NNE	NNE	NNW	WNW	NW	NW	NW	NNW	NW	WNW	NW	NNW	NNW	NNW	NNW	N	352	N
Oct 26	NNW	N	N	NNW	NNW	NNW	N	N	NNW	N	NNW	NNW	N	NNW	NNW	N	N	N	NW	WSW	WSW	WSW	SW	SW	341	NNW	
Oct 27	SW	WSW	WSW	SW	SW	SW	SW	WSW	W	W	WNW	NNW	N	N	N	N	N	N	NNE	NNE	N	N	N	N	324	NW	
Oct 28	N	N	N	N	N	NNW	NNW	N	N	NNE	NNE	N	N	N	NNW	NNW	NNW	W	WSW	WSW	SW	SW	SSW	SSW	353	N	
Oct 29	SSW	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	186	S	
Oct 30	SW	SW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	W	W	W	W	WSW	WSW	W	WNW	SSW	SW	WSW	245	WSW
Oct 31	WSW	WSW	W	WSW	W	W	W	WNW	WNW	NW	NW	NNW	NW	WNW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	273	W	

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 - Reno Station



AQHI CADOTTE LAKE STATION



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

SULPHUR DIOXIDE (SO2) in ppb

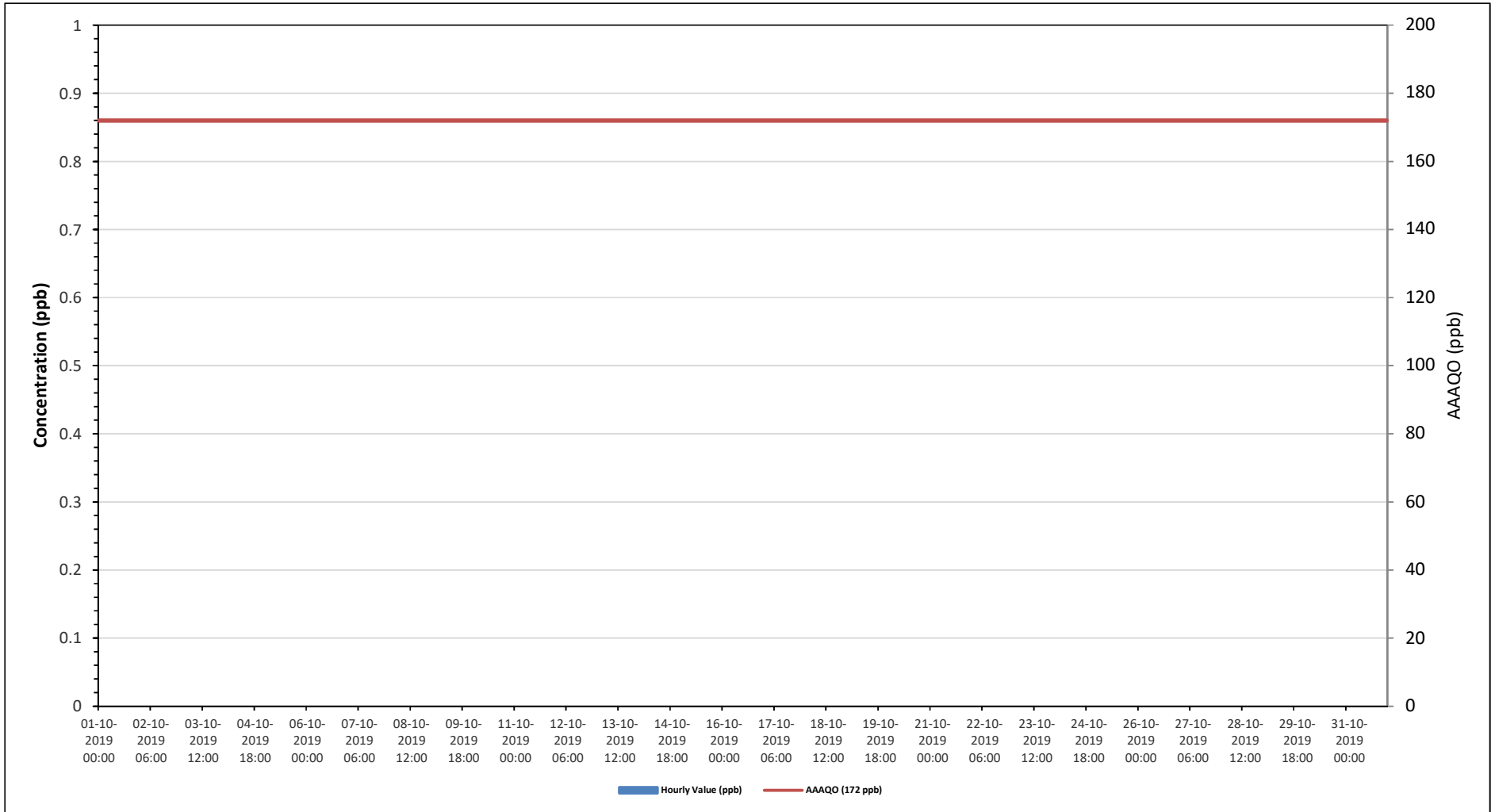
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb						
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedance:	0	
Maximum Hourly Value:	0 ppb	on October 2 at hour 14	Hours in Service:	710		
Maximum Daily Value:	0.0 ppb	on	Hours of Data:	665		
Minimum Hourly Value:	0 ppb	on October 2 at hour 14	Hours of Missing Data:	9		
Minimum Daily Value:	0.0 ppb	on October 3	Hours of Calibration:	36		
Monthly Average:	0.0 ppb		Operational Uptime:	98.7		

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23			
Oct 1	0																									0	0	-		
Oct 2											C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0.0
Oct 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	-	
Oct 4	0	0	0	0	0	0	0	0	Y	Y	Y	Y	Y	C1	C1	C1	C1	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Oct 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Oct 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Oct 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Oct 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Oct 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Oct 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Oct 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Oct 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Oct 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Oct 14	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	0	0.0
Oct 15	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	0	0.0
Oct 16	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	0	0.0
Oct 17	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	0	0.0
Oct 18	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	0	0.0
Oct 19	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	0	0.0
Oct 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	0	0.0
Oct 21	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	0	0.0
Oct 22	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	0	0.0
Oct 23	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	0	0.0
Oct 24	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	0	0.0
Oct 25	S	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Oct 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0.0
Oct 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Oct 29	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	0	0.0
Oct 30	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	0	0.0
Oct 31	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	0	0.0
Diurnal Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

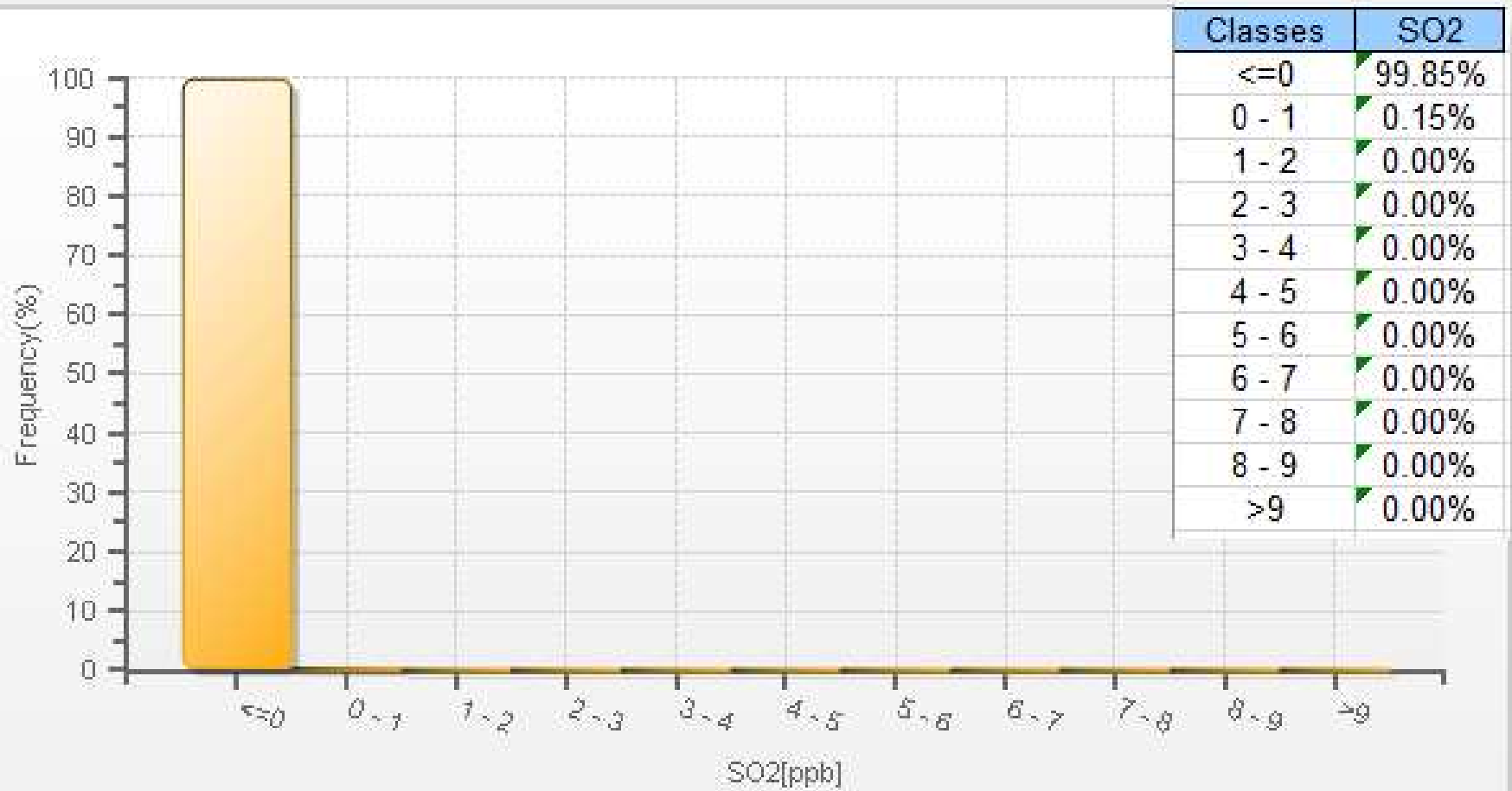
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - AQHI - Cadotte Lake Station

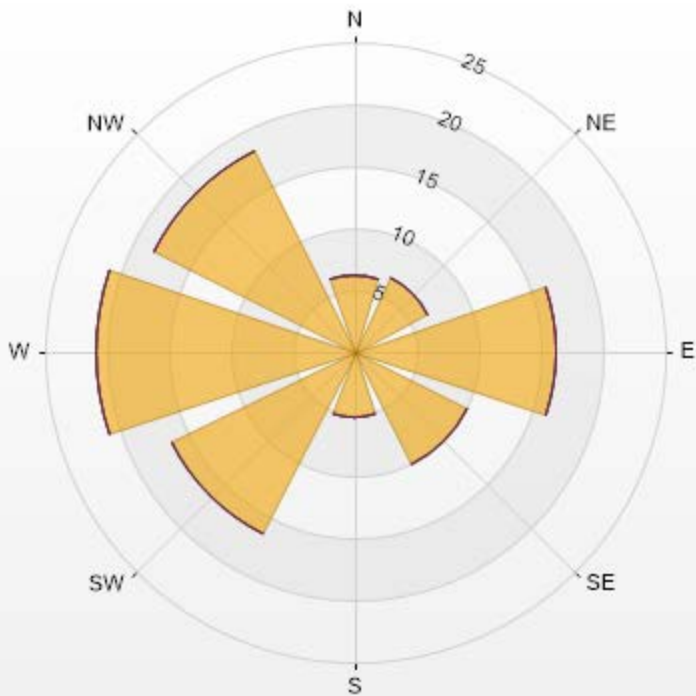


SO2[ppb] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-SO2[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 89.04% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	6.15	0	0	0	0	6.15
NE	6.62	0	0	0	0	6.62
E	16.31	0	0	0	0	16.31
SE	10	0	0	0	0	10
S	5.38	0	0	0	0	5.38
SW	16.46	0	0	0	0	16.46
W	20.92	0	0	0	0	20.92
NW	18.15	0	0	0	0	18.15
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)

100

0-10

0

10-50

50-100

0

100-172

0

>172.0



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

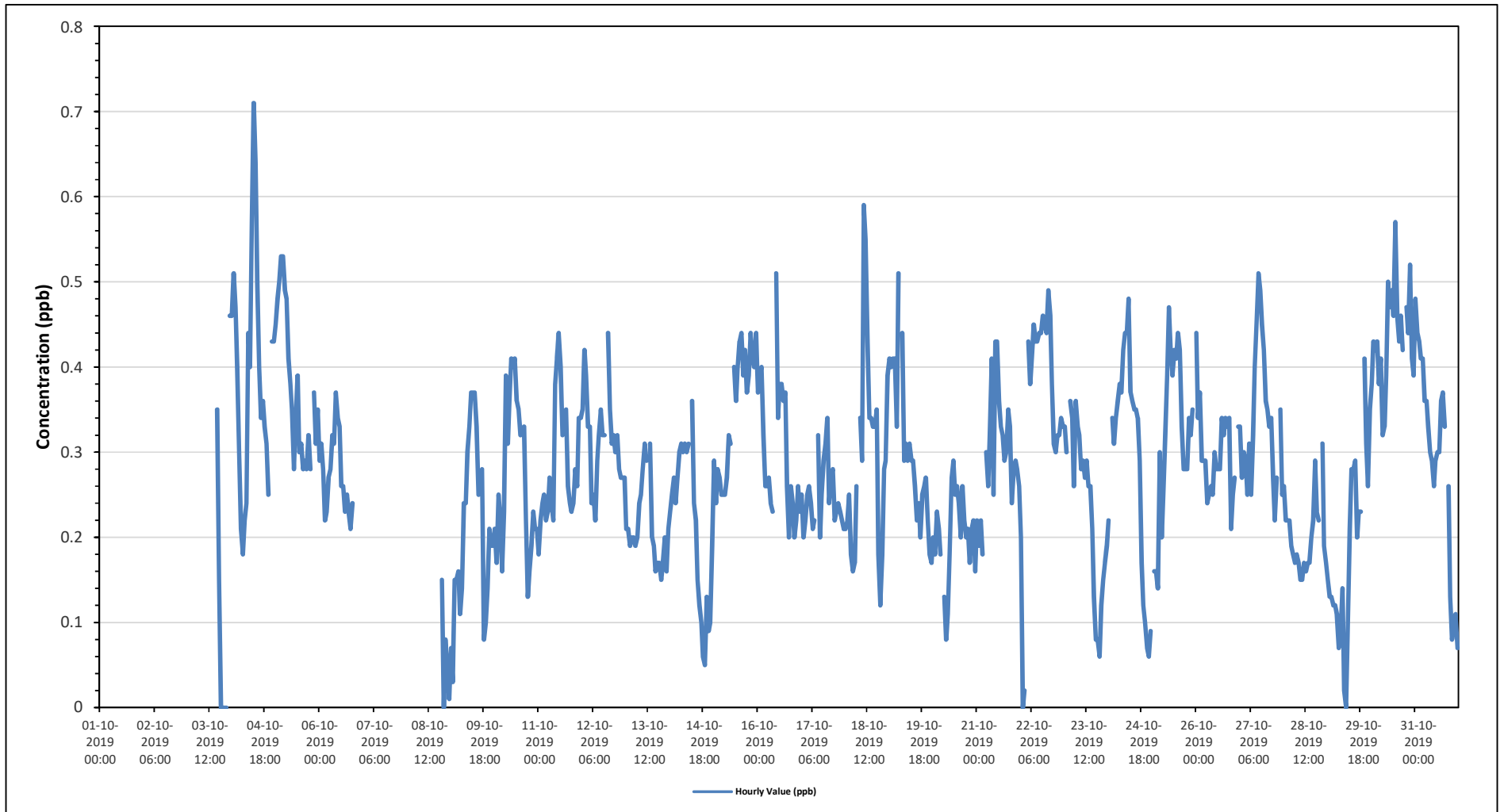
Summary of Hourly Averages

TOTAL REDUCED SULPHUR (TRS) in ppb

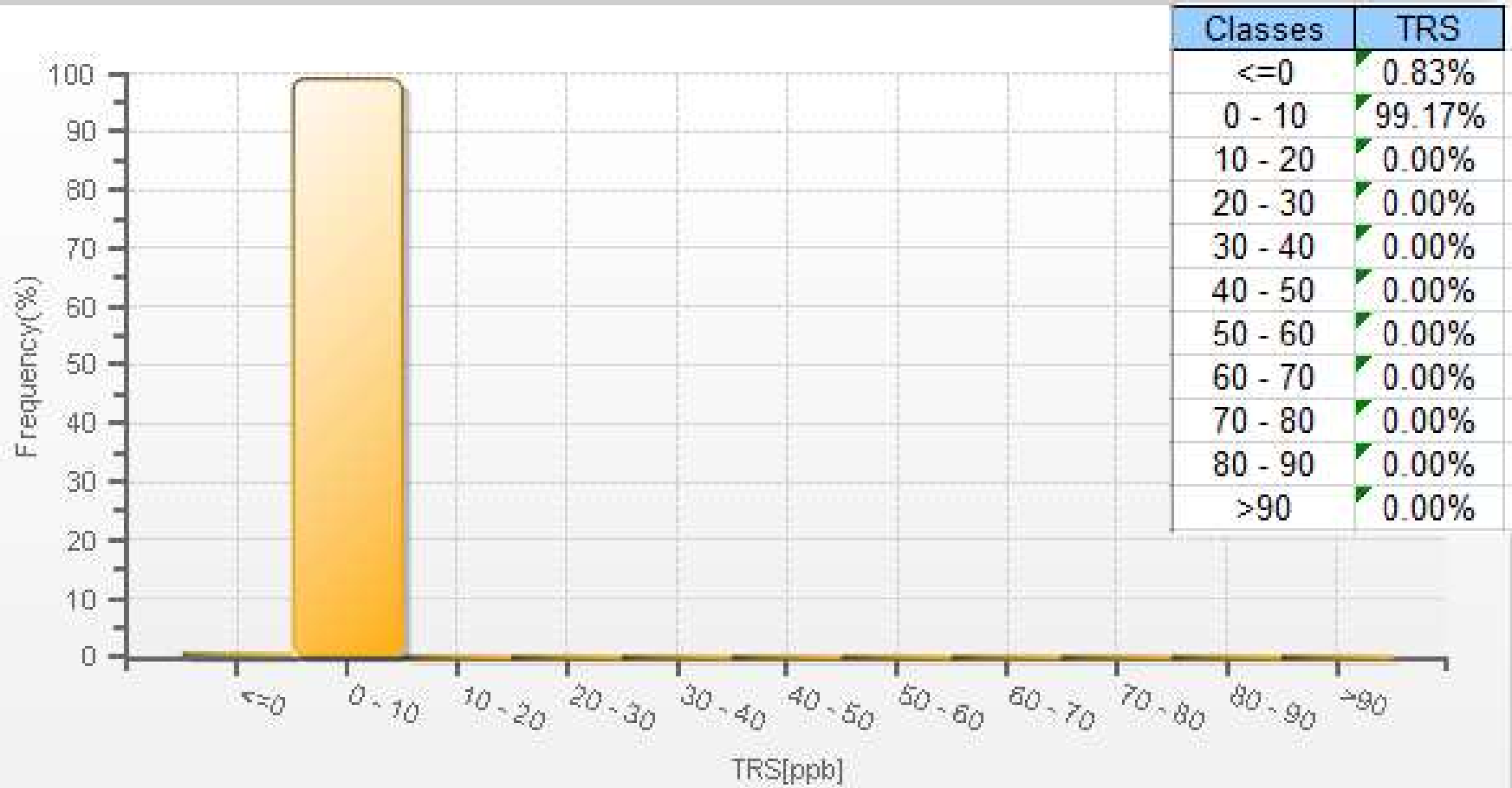
Alberta Ambient Air Quality Objectives (AAAQO) for H2S: 1-Hour 10 ppb, 24-Hour 3 ppb																												
Number of 1-Hour Exceedances: 0											Number of 24-Hour Exceedances: 0																	
Maximum Hourly Value: 0.71 ppb on October 4 at hour 12											Hours in Service: 685																	
Maximum Daily Value: 0.43 ppb on											Hours of Data: 605																	
Minimum Hourly Value: 0.00 ppb on October 3 at hour 18											Hours of Missing Data: 47																	
Minimum Daily Value: 0.18 ppb on October 29											Hours of Calibration: 33																	
Monthly Average: 0.29 ppb											Operational Uptime: 93.1																	
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1																												
Oct 2																												
Oct 3													C	C	C	C	C	0.35	0.15	0	0	0	0	S	0.46	0.00	0.46	-
Oct 4	0.46	0.51	0.47	0.4	0.3	0.21	0.18	0.22	0.24	0.44	0.4	0.57	0.71	0.64	0.5	0.4	0.34	0.36	0.33	0.31	0.25	S	0.43	0.43	0.18	0.71	0.40	
Oct 5	0.45	0.48	0.5	0.53	0.53	0.49	0.48	0.41	0.38	0.35	0.28	0.34	0.39	0.3	0.31	0.28	0.29	0.28	0.32	0.28	S	0.37	0.31	0.35	0.28	0.53	0.38	
Oct 6	0.29	0.31	0.28	0.22	0.23	0.27	0.28	0.32	0.31	0.37	0.34	0.33	0.26	0.26	0.23	0.25	0.23	0.21	0.24	S	X	X	X	X	0.21	0.37	0.28	
Oct 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C1	C1	C1	C1	0.15	0	0.08	0.05	0.01	0.00	0.15	-	
Oct 9	0.07	0.03	0.15	0.15	0.16	0.11	0.14	0.24	0.24	0.3	0.33	0.37	0.37	0.37	0.33	0.25	S	0.28	0.08	0.1	0.14	0.21	0.19	0.19	0.03	0.37	0.21	
Oct 10	0.21	0.17	0.25	0.22	0.16	0.23	0.39	0.31	0.36	0.41	0.4	0.41	0.36	0.35	0.32	S	0.33	0.22	0.13	0.16	0.19	0.23	0.21	0.21	0.13	0.41	0.27	
Oct 11	0.18	0.22	0.24	0.25	0.22	0.23	0.27	0.24	0.22	0.38	0.41	0.44	0.4	0.32	S	0.35	0.26	0.24	0.23	0.24	0.28	0.26	0.34	0.34	0.18	0.44	0.29	
Oct 12	0.35	0.42	0.39	0.33	0.33	0.24	0.25	0.22	0.29	0.32	0.35	0.32	0.32	S	0.44	0.35	0.31	0.32	0.3	0.32	0.28	0.27	0.27	0.27	0.22	0.44	0.32	
Oct 13	0.21	0.21	0.19	0.2	0.2	0.19	0.2	0.24	0.25	0.28	0.31	0.29	S	0.31	0.2	0.19	0.16	0.17	0.17	0.15	0.17	0.2	0.16	0.21	0.15	0.31	0.21	
Oct 14	0.23	0.25	0.27	0.24	0.27	0.3	0.31	0.3	0.31	0.3	0.31	S	0.36	0.24	0.22	0.15	0.12	0.1	0.06	0.05	0.13	0.09	0.1	0.19	0.05	0.36	0.21	
Oct 15	0.29	0.24	0.28	0.27	0.25	0.25	0.25	0.27	0.32	0.31	S	0.4	0.36	0.4	0.43	0.44	0.39	0.42	0.37	0.39	0.44	0.41	0.4	0.44	0.24	0.44	0.35	
Oct 16	0.37	0.39	0.4	0.32	0.26	0.26	0.27	0.24	0.23	S	0.51	0.34	0.38	0.38	0.36	0.37	0.26	0.2	0.26	0.24	0.2	0.22	0.26	0.23	0.20	0.51	0.30	
Oct 17	0.25	0.2	0.22	0.25	0.26	0.24	0.21	0.22	S	0.32	0.2	0.25	0.29	0.31	0.34	0.24	0.27	0.28	0.22	0.23	0.24	0.23	0.22	0.21	0.20	0.34	0.25	
Oct 18	0.21	0.22	0.25	0.18	0.16	0.17	0.26	S	0.34	0.29	0.59	0.55	0.43	0.34	0.34	0.33	0.33	0.35	0.18	0.12	0.18	0.28	0.29	0.39	0.12	0.59	0.29	
Oct 19	0.41	0.4	0.41	0.41	0.33	0.51	S	0.44	0.29	0.31	0.29	0.31	0.29	0.29	0.26	0.22	0.24	0.2	0.25	0.26	0.27	0.22	0.18	0.17	0.17	0.51	0.30	
Oct 20	0.2	0.18	0.23	0.21	0.18	S	0.13	0.08	0.11	0.18	0.27	0.29	0.25	0.26	0.24	0.2	0.26	0.22	0.2	0.21	0.17	0.21	0.22	0.16	0.08	0.29	0.20	
Oct 21	0.22	0.19	0.22	0.18	S	0.3	0.26	0.32	0.41	0.25	0.43	0.43	0.36	0.33	0.32	0.29	0.3	0.35	0.33	0.24	0.28	0.29	0.28	0.26	0.18	0.43	0.30	
Oct 22	0.2	0	0.02	S	0.43	0.38	0.41	0.45	0.43	0.43	0.44	0.44	0.46	0.45	0.44	0.49	0.46	0.38	0.31	0.3	0.32	0.32	0.34	0.33	0.00	0.49	0.36	
Oct 23	0.33	0.3	S	0.36	0.34	0.26	0.36	0.33	0.32	0.28	0.29	0.27	0.29	0.26	0.26	0.21	0.13	0.08	0.08	0.06	0.12	0.15	0.17	0.19	0.06	0.36	0.24	
Oct 24	0.22	S	0.34	0.31	0.34	0.36	0.38	0.37	0.42	0.44	0.44	0.48	0.37	0.36	0.35	0.34	0.29	0.17	0.12	0.1	0.07	0.06	0.09	0.06	0.48	0.29		
Oct 25	S	0.16	0.16	0.14	0.3	0.2	0.25	0.32	0.39	0.47	0.42	0.39	0.42	0.41	0.44	0.42	0.33	0.28	0.28	0.28	0.34	0.32	0.35	S	0.14	0.47	0.32	
Oct 26	0.44	0.34	0.37	0.29	0.29	0.29	0.24	0.25	0.26	0.25	0.3	0.28	0.28	0.28	0.34	0.32	0.34	0.33	0.34	0.21	0.25	0.27	S	0.33	0.21	0.44	0.30	
Oct 27	0.33	0.27	0.3	0.29	0.25	0.31	0.25	0.32	0.4	0.45	0.51	0.49	0.45	0.42	0.36	0.35	0.33	0.34	0.27	0.22	0.27	S	0.35	0.25	0.22	0.51	0.34	
Oct 28	0.26	0.22	0.22	0.22	0.19	0.18	0.17	0.18	0.17	0.15	0.15	0.17	0.16	0.17	0.17	0.2	0.22	0.29	0.23	0.22	S	0.31	0.19	0.17	0.15	0.31	0.20	
Oct 29	0.15	0.13	0.13	0.12	0.12	0.11	0.07	0.09	0.14	0.02	0	0.1	0.21	0.28	0.28	0.29	0.2	0.23	0.23	S	0.41	0.31	0.26	0.35	0.00	0.41	0.18	
Oct 30	0.38	0.43	0.42	0.43	0.38	0.41	0.32	0.33	0.39	0.5	0.47	0.49	0.46	0.57	0.46	0.43	0.46	0.42	S	0.47	0.44	0.52	0.41	0.39	0.32	0.57	0.43	
Oct 31	0.48	0.44	0.43	0.41	0.41	0.36	0.36	0.33	0.3	0.29	0.26	0.29	0.3	0.3	0.36	0.37	0.33	S	0.26	0.13	0.08	0.1	0.11	0.07	0.07	0.48	0.29	
Diurnal Maximum	0.48	0.51	0.50	0.53	0.53	0.51	0.48	0.45	0.43	0.50	0.59	0.57	0.71	0.64	0.50	0.49	0.46	0.42	0.37	0.47	0.44	0.52	0.43	0.46				
Diurnal Average	0.29	0.27	0.29	0.28	0.28	0.27	0.27	0.28	0.30	0.32	0.35	0.36	0.36	0.34	0.33	0.31	0.29	0.27	0.22	0.21	0.22	0.24	0.25	0.26				
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 - AQHI - Cadotte Lake Station

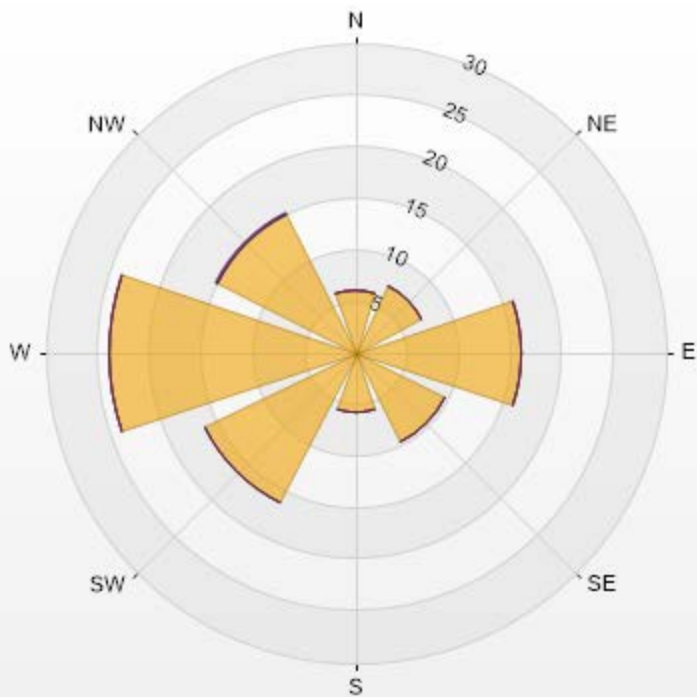


TRS[ppb] Histogram: PRAMP.AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-TRS[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 81.37% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	6.06	0	0	0	0	6.06
NE	7.24	0	0	0	0	7.24
E	15.99	0	0	0	0	15.99
SE	9.6	0	0	0	0	9.6
S	5.72	0	0	0	0	5.72
SW	16.33	0	0	0	0	16.33
W	23.91	0	0	0	0	23.91
NW	14.98	0	0	0.17	0	15.15
Summary	100	0	0	0.17	0	100



PRAMP-201910

% Icon Classes (ppb)	100	0-2	0	5-10	0	10-50	0	>50.0



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

OXIDES OF NITROGEN (NOx) in ppb

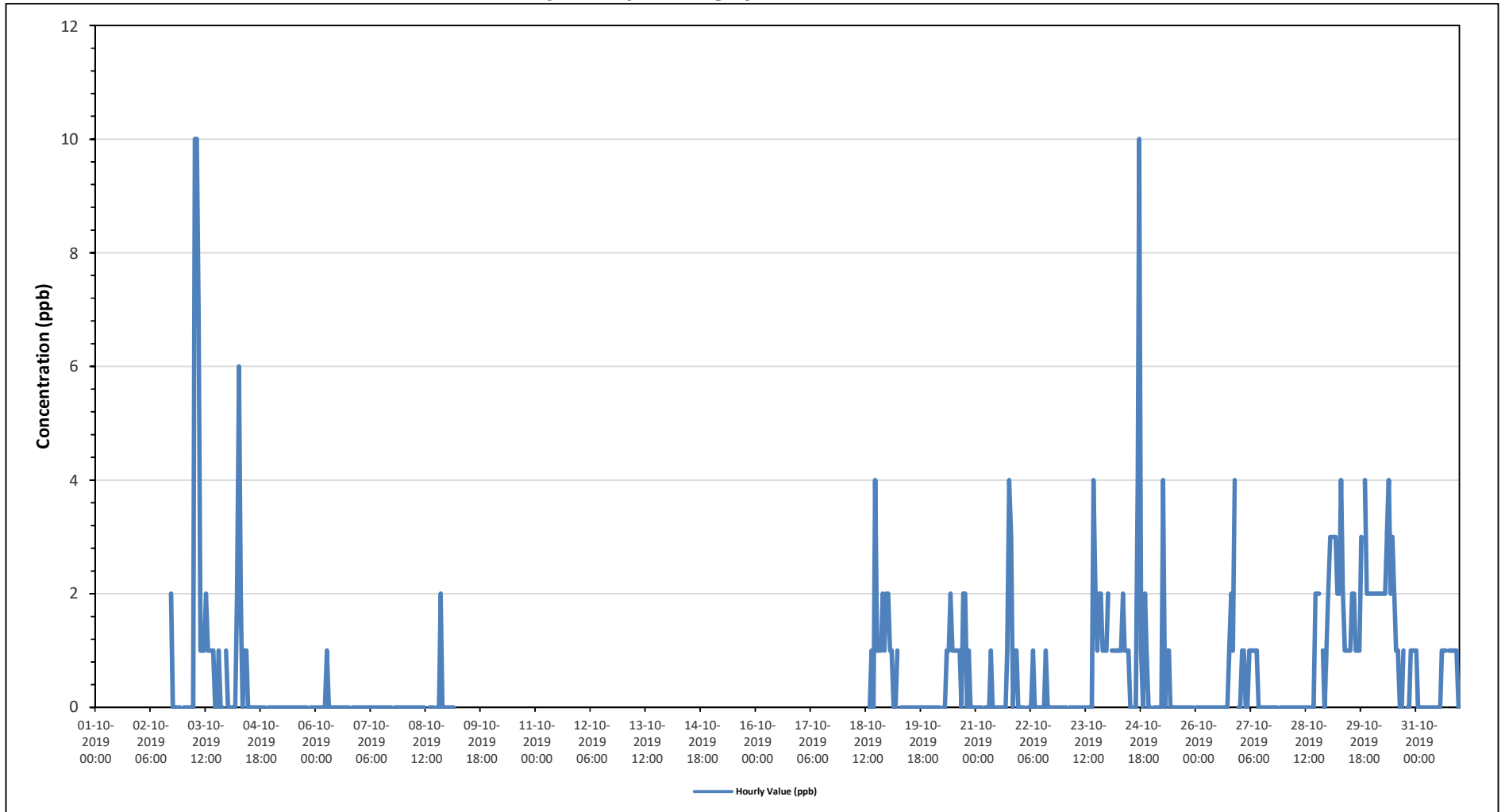
Maximum Hourly Value:	10 ppb on October 3 at hour 6	Hours in Service:	710
Maximum Daily Value:	2.1 ppb on	Hours of Data:	454
Minimum Hourly Value:	0 ppb on October 2 at hour 18	Hours of Missing Data:	248
Minimum Daily Value:	0.0 ppb on October 4	Hours of Calibration:	27
Monthly Average:	0.6 ppb	Operational Uptime:	67.7

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		
Oct 1																									0	2	-		
Oct 2											C	C	C	C	C	C	C	C	2	0	0	0	0	0	S	0	10	1.7	
Oct 3	0	0	0	0	0	0	10	10	7	1	1	1	2	1	1	1	1	0	0	1	0	0	S	1	0	10	1.7		
Oct 4	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0.0		
Oct 5	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		
Oct 6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0		
Oct 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0		
Oct 8	0	0	0	0	0	0	0	0	0	0	0	0	Y	Y	0	0	0	S	0	0	2	0	0	0	0	2	0.1		
Oct 9	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	-		
Oct 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Oct 18	X	X	X	X	X	X	X	X	X	C1	C1	C1	C1	C1	0	1	0	4	1	1	1	2	1	2	0	4	-		
Oct 19	2	1	1	0	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2		
Oct 20	0	0	0	0	0	S	0	0	1	1	2	1	1	1	1	1	0	2	2	0	1	0	0	0	0	2	0.6		
Oct 21	0	0	0	0	S	0	0	0	1	0	0	0	0	0	0	0	0	1	4	3	0	1	1	0	0	0	4	0.5	
Oct 22	0	0	0	S	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Oct 23	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	1	2	2	1	1	1	0	0	4	0.6	
Oct 24	2	S	1	1	1	1	1	1	2	1	1	1	0	0	0	0	4	10	1	0	2	1	0	0	0	0	10	1.3	
Oct 25	S	0	0	0	0	0	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	4	0.3	
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4	S	0	0	0	4	0.3	
Oct 27	0	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0.3	
Oct 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	S	1	0	1	0	0	2	0.3
Oct 29	2	3	3	3	3	2	2	4	2	1	1	1	1	2	2	1	1	1	3	S	4	2	2	2	1	4	1	4	2.1
Oct 30	2	2	2	2	2	2	2	2	3	4	2	3	2	1	1	0	0	1	S	0	0	1	1	1	0	4	0	4	1.6
Oct 31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	S	1	1	1	1	1	0	0	1	0	1	0.4
Diurnal Maximum	2	3	3	3	3	2	10	10	7	4	2	3	2	2	2	1	4	10	4	3	4	4	2	2	2				
Diurnal Average	0.5	0.4	0.4	0.3	0.4	0.4	1.2	1.1	1.0	0.6	0.4	0.4	0.4	0.3	0.4	0.3	0.6	1.4	0.9	0.7	0.8	0.7	0.4	0.4					

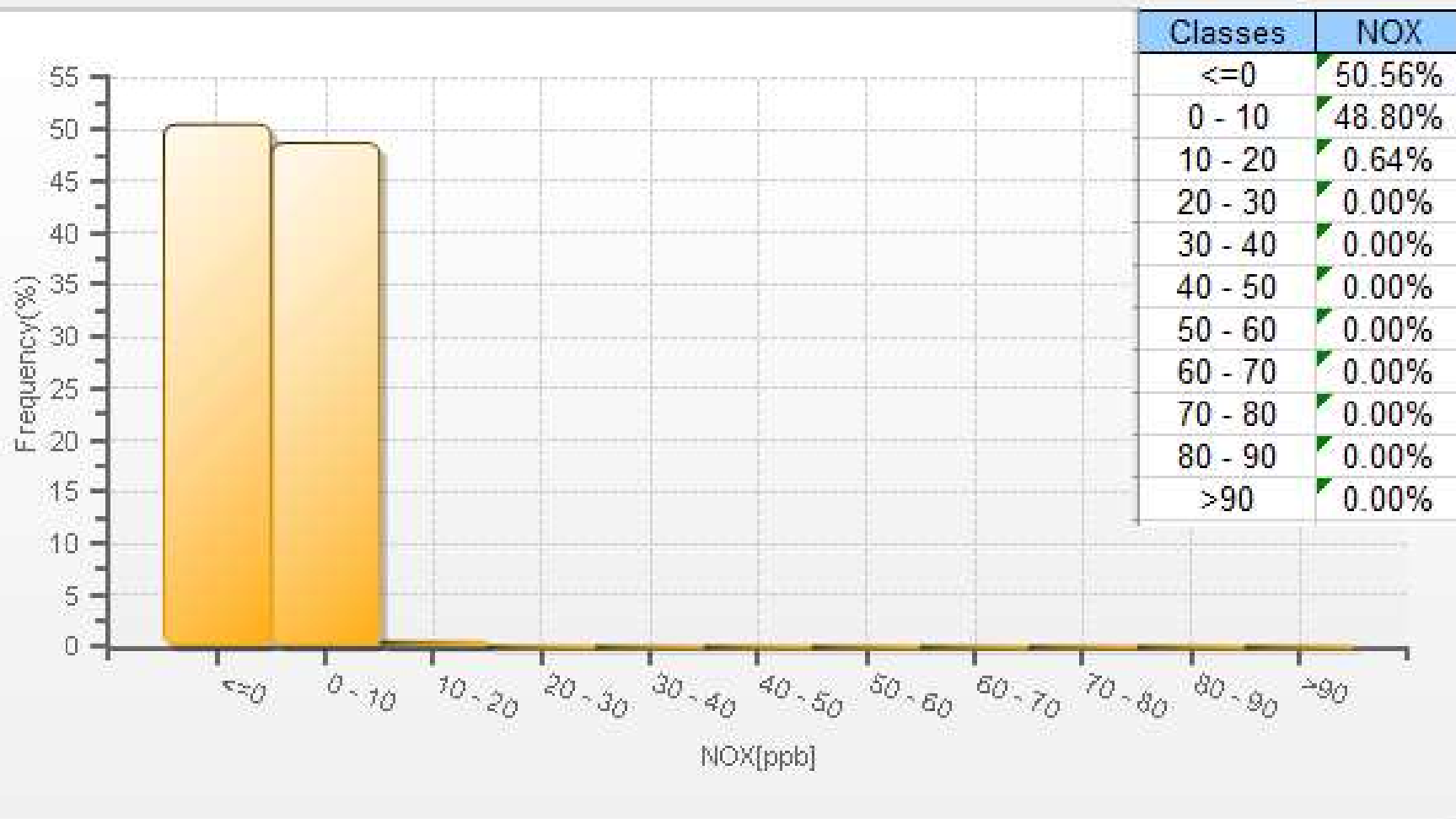
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 NOx - AQHI - Cadotte Lake Station

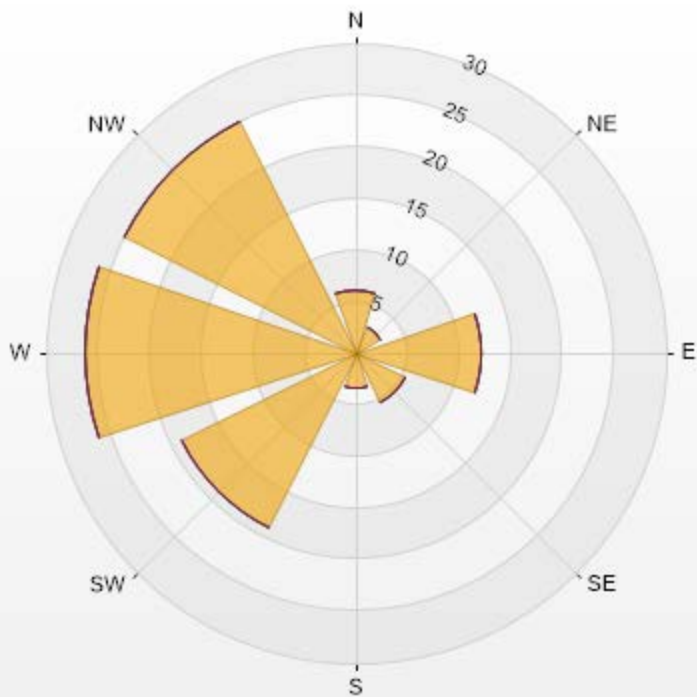


NOX[ppb] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-NOX[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 60.68% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-82	82-159	>159.0	Total
N	6.09	0	0	0	0	6.09
NE	2.71	0	0	0	0	2.71
E	12.19	0	0	0	0	12.19
SE	5.42	0	0	0	0	5.42
S	3.39	0	0	0	0	3.39
SW	18.96	0	0	0	0	18.96
W	26.19	0	0	0	0	26.19
NW	25.06	0	0	0	0	25.06
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)	100	0-30	0	30-50	50-82	0	82-159	0	>159.0



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

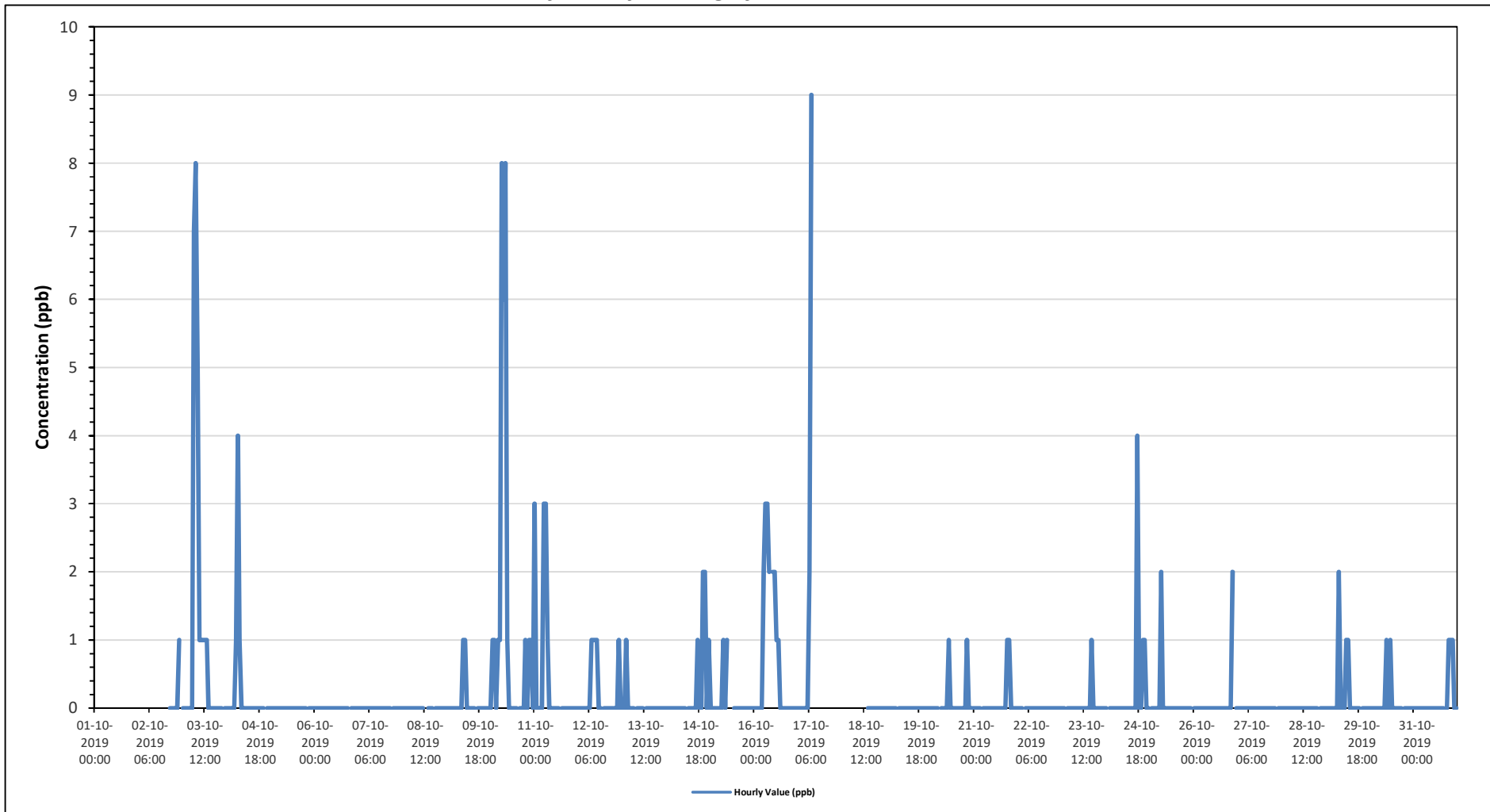
NITRIC OXIDE (NO) in ppb

Maximum Hourly Value:	9 ppb on October 17 at hour 7	Hours in Service:	710
Maximum Daily Value:	1.3 ppb on	Hours of Data:	640
Minimum Hourly Value:	0 ppb on October 2 at hour 17	Hours of Missing Data:	33
Minimum Daily Value:	0.0 ppb on October 5	Hours of Calibration:	37
Monthly Average:	0.2 ppb	Operational Uptime:	95.4

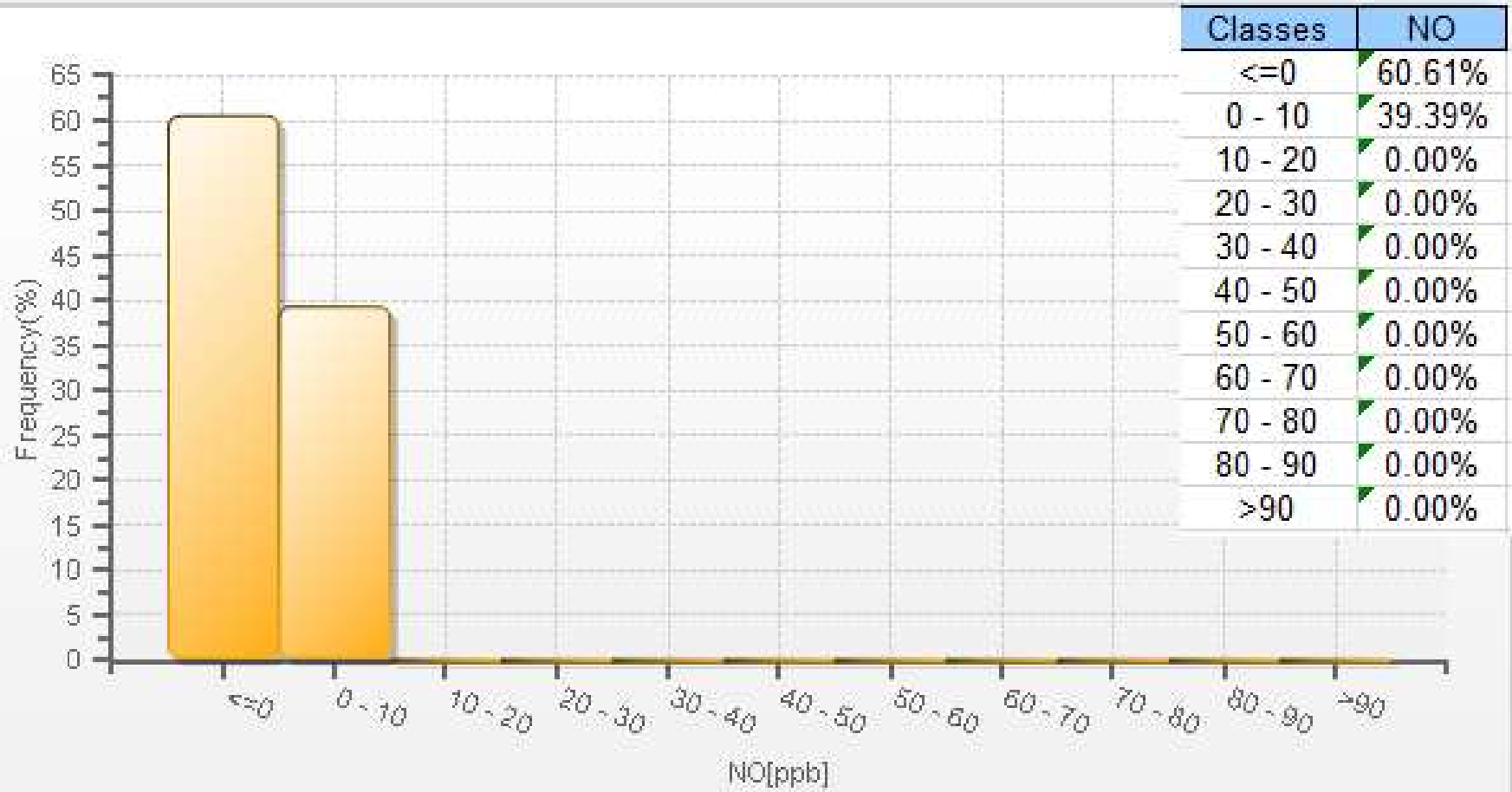
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
Oct 1																										
Oct 2											C	C	C	C	C	C	C	C		0	0	0	0	0	S	
Oct 3	0	0	0	0	0	0	7	8	5	1	1	1	1	1	0	0	0	0	0	0	0	0	0	S	0	
Oct 4	0	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0		
Oct 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0		
Oct 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0		
Oct 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0		
Oct 8	0	0	0	0	0	0	0	0	0	0	0	0	Y	Y	0	0	0	0	0	0	0	S	0	0		
Oct 9	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	S	S	0	0	0	0	0	0		
Oct 10	0	1	1	0	1	1	8	6	8	1	0	0	0	0	0	S	0	0	0	1	0	1	1	0		
Oct 11	3	0	0	0	0	3	3	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0		
Oct 12	0	0	0	0	0	0	0	1	1	1	1	1	0	0	S	0	0	0	0	0	0	0	1	0		
Oct 13	0	0	1	0	0	0	0	0	0	0	0	0	S	S	0	0	0	0	0	0	0	0	0	0		
Oct 14	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0	0	2	2	0	0		
Oct 15	0	0	0	0	0	0	0	0	1	S	0	S1	0	0	0	0	0	0	0	0	0	0	0	0		
Oct 16	0	0	0	0	0	2	3	3	2	S	2	2	1	1	0	0	0	0	0	0	0	0	0	0		
Oct 17	0	0	0	0	0	2	9	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Oct 18	X	X	X	X	X	X	X	X	X	C1	C1	C1	C1	C1												
Oct 19	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Oct 20	0	0	0	0	0	S	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
Oct 21	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0		
Oct 22	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Oct 23	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
Oct 24	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	1	0	0	0		
Oct 25	S	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0		
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	S	0	0		
Oct 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0		
Oct 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0		
Oct 29	0	0	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	S	0	0	0	0		
Oct 30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	S	0	0	0	0		
Oct 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	1	0	0		
Diurnal Maximum	3	1	1	0	1	3	8	9	8	1	2	2	1	1	0	0	1	4	1	1	2	2	1	0		
Diurnal Average	0.1	0.0	0.1	0.0	0.0	0.3	1.1	1.1	0.6	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.3	0.1	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 NO - AQHI - Cadotte Lake Station

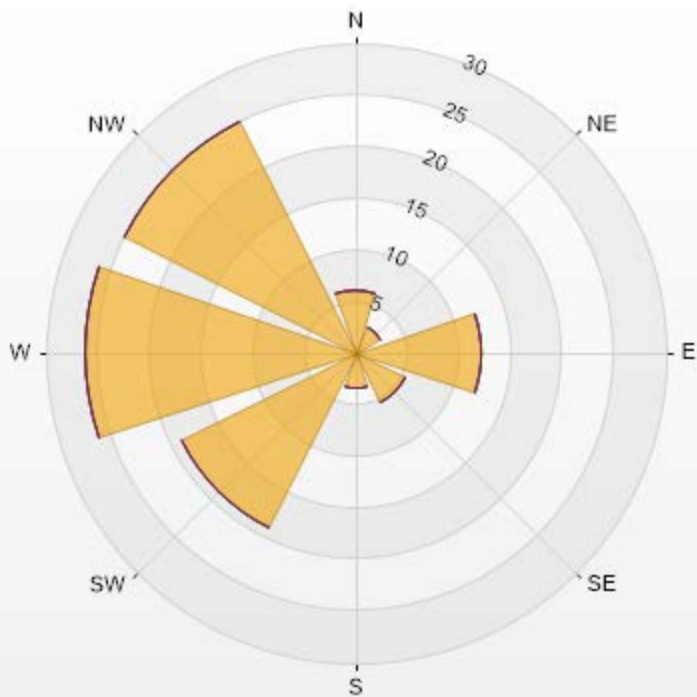


NO[ppb] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-NO[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 60.68% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-82	82-159	>159.0	Total
N	6.09	0	0	0	0	6.09
NE	2.71	0	0	0	0	2.71
E	12.19	0	0	0	0	12.19
SE	5.42	0	0	0	0	5.42
S	3.39	0	0	0	0	3.39
SW	18.96	0	0	0	0	18.96
W	26.19	0	0	0	0	26.19
NW	25.06	0	0	0	0	25.06
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)	100	0-30	0	30-50	50-82	0	82-159	0	>159.0



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

NITROGEN DIOXIDE (NO₂) in ppb

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

Number of 1-Hour Exceedances: 0

Maximum Hourly Value: 5 ppb on October 24 at hour 17

Hours in Service: 710

Maximum Daily Value: 1.8 ppb on

Hours of Data: 454

Minimum Hourly Value: 0 ppb on October 2 at hour 18

Hours of Missing Data: 228

Minimum Daily Value: 0.0 ppb on October 5

Hours of Calibration: 28

Monthly Average: 0.4 ppb

Operational Uptime: 67.9

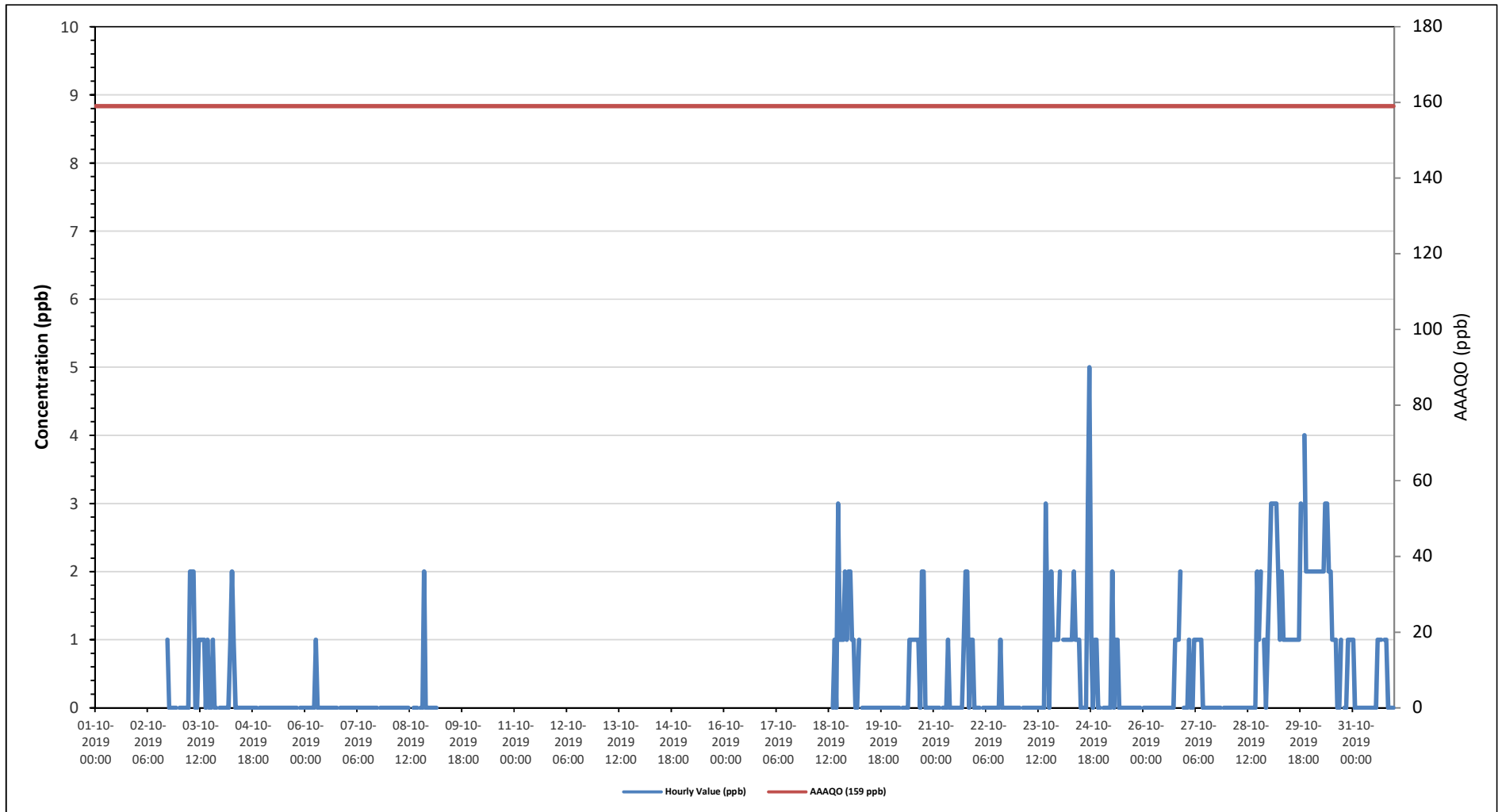
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1																										0	1	-
Oct 2											C	C	C	C	C	C	C	1	0	0	0	0	0	S	S	0	2	0.5
Oct 3	0	0	0	0	0	0	2	2	2	0	0	1	1	1	1	0	1	0	0	1	0	0	S	0	0	0	2	0.2
Oct 4	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0
Oct 5	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	0.0
Oct 6	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0	0	1	0.0	
Oct 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0	
Oct 8	0	0	0	0	0	0	0	0	0	0	0	0	Y	Y	0	0	0	S	0	0	2	0	0	0	0	2	0.1	
Oct 9	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	-
Oct 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oct 18	X	X	X	X	X	X	X	X	X	C1	C1	C1	C1	C1	0	1	0	3	1	1	1	2	1	2	1	2	0	3
Oct 19	2	1	1	0	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2
Oct 20	0	0	0	0	0	S	0	0	0	0	1	1	1	1	1	1	0	2	2	0	0	0	0	0	0	0	2	0.4
Oct 21	0	0	0	0	S	0	0	0	1	0	0	0	0	0	0	0	1	2	2	0	1	1	1	0	0	2	0.3	
Oct 22	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.0	
Oct 23	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	2	1	1	1	1	1	0	3	0.4
Oct 24	2	S	1	1	1	1	1	1	2	1	1	1	1	0	0	3	S	5	1	0	1	1	0	0	0	5	1.0	
Oct 25	S	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	S	0	0	2	0.2	
Oct 27	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.3	
Oct 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	S	S	1	0	1	0	1	2	0.3	
Oct 29	2	3	3	3	3	2	1	2	1	1	1	1	1	1	1	1	1	3	S	4	2	2	2	2	1	4	1.8	
Oct 30	2	2	2	2	2	2	2	2	3	3	2	2	1	1	1	0	0	1	S	0	0	1	1	1	1	3	1.4	
Oct 31	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	S	1	1	0	0	0	0	0	0	1	0.3	
Diurnal Maximum	2	3	3	3	3	2	2	2	3	3	2	2	1	1	1	1	3	5	3	2	4	2	2	2	2	2	2	2
Diurnal Average	0.5	0.3	0.4	0.3	0.3	0.4	0.7	0.5	0.6	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.5	0.9	0.6	0.5	0.5	0.6	0.3	0.4	0.4	0.4	0.4	

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

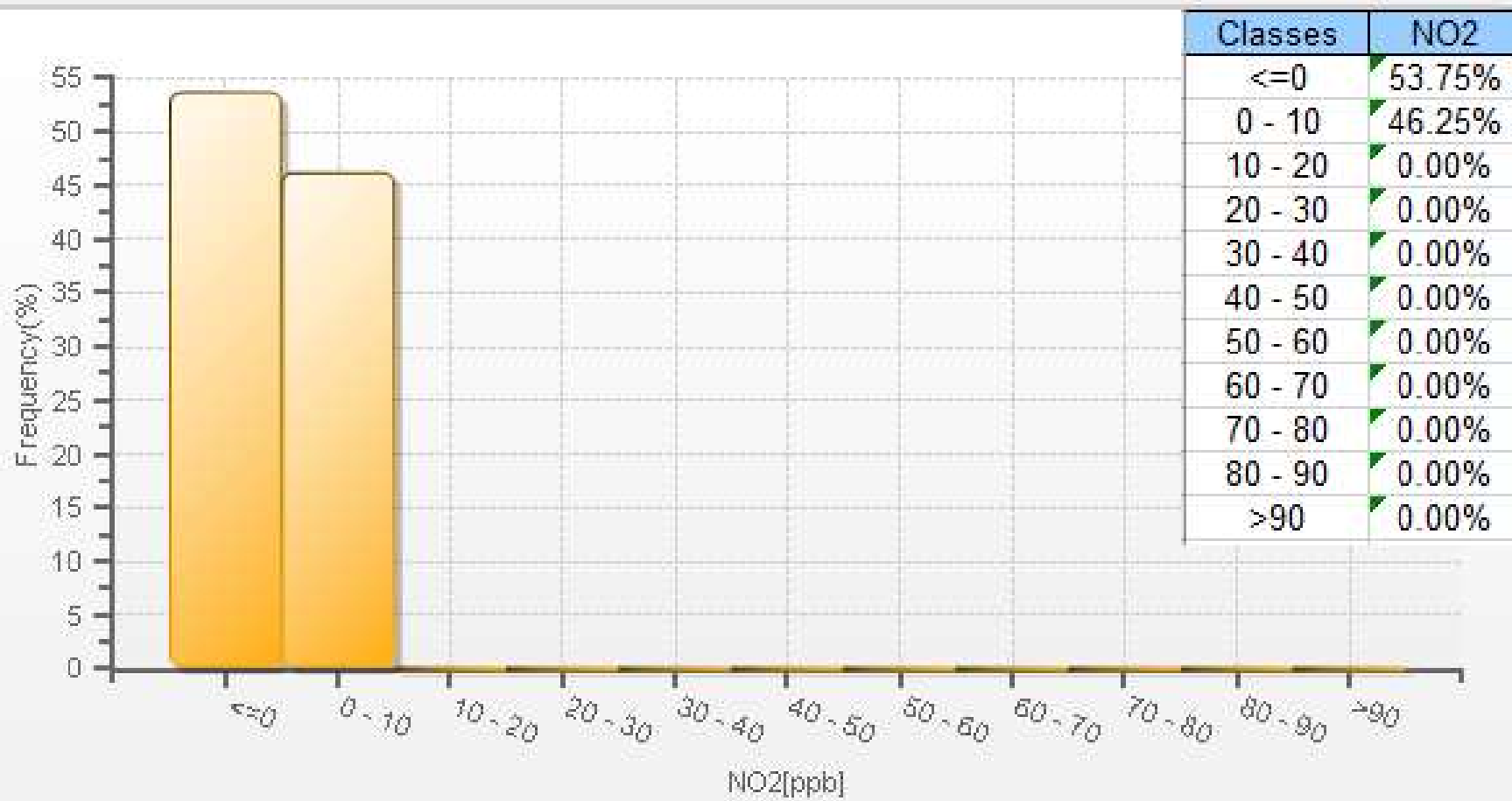
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

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

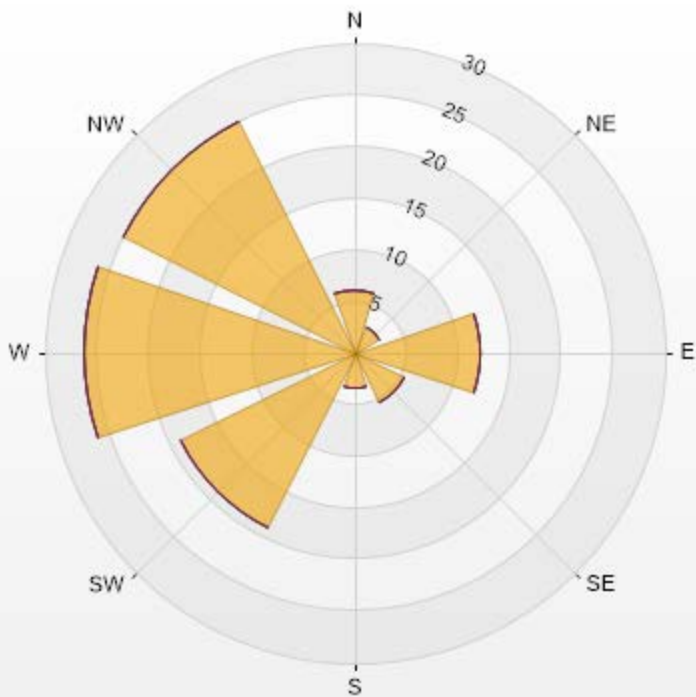


NO2[ppb] Histogram: PRAMP.AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-NO2[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 60.68% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-82	82-159	>159.0	Total
N	6.09	0	0	0	0	6.09
NE	2.71	0	0	0	0	2.71
E	12.19	0	0	0	0	12.19
SE	5.42	0	0	0	0	5.42
S	3.39	0	0	0	0	3.39
SW	18.96	0	0	0	0	18.96
W	26.19	0	0	0	0	26.19
NW	25.06	0	0	0	0	25.06
Summary	100	0	0	0	0	100



PRAMP-201910

% Icon Classes (ppb)	100	0-30	0	30-50	50-82	0	82-159	0	>159.0



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

OZONE (O₃) in ppb

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

Number of 1-Hour Exceedances: 0

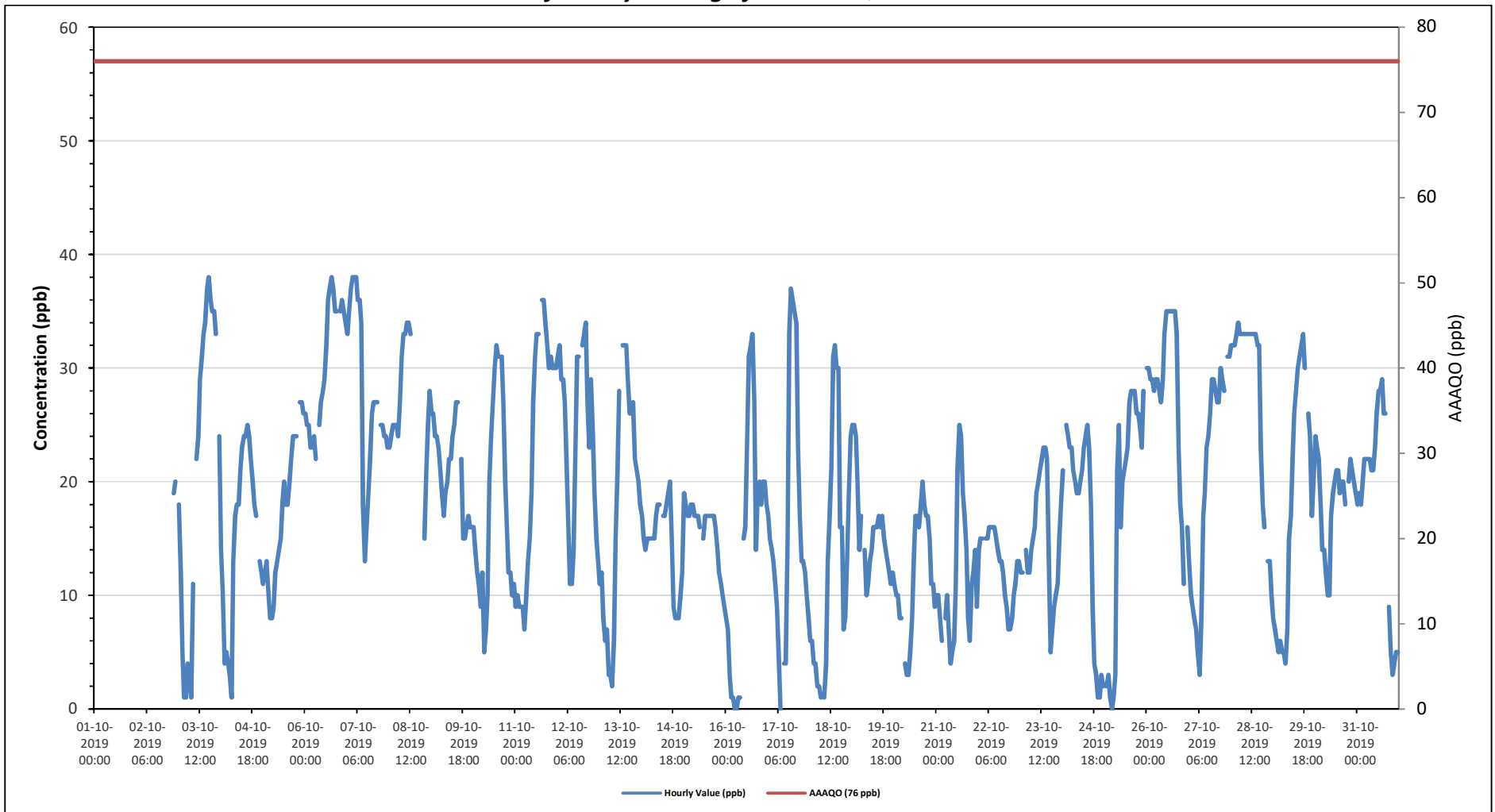
Maximum Hourly Value:	38 ppb on October 3 at hour 17	Hours in Service:	703
Maximum Daily Value:	30.3 ppb on	Hours of Data:	660
Minimum Hourly Value:	0 ppb on October 16 at hour 5	Hours of Missing Data:	9
Minimum Daily Value:	11.5 ppb on October 21	Hours of Calibration:	34
Monthly Average:	18.8 ppb	Operational Uptime:	98.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1																		C	C	C	C	19	20	S	19	20	-	
Oct 2																												
Oct 3	18	12	5	1	1	4	3	1	11	S1	22	24	29	31	33	34	37	38	36	35	35	33	S	24	1	38	21.2	
Oct 4	14	10	4	5	4	3	1	13	17	18	18	21	23	24	24	25	24	22	20	18	17	S	13	12	1	25	15.2	
Oct 5	11	12	13	10	8	8	9	12	13	14	15	18	20	18	18	20	22	24	24	S	27	27	26	8	27	17.1		
Oct 6	26	25	25	23	23	24	22	S1	25	27	28	29	32	36	37	38	37	35	35	S	35	36	35	34	22	38	30.3	
Oct 7	33	35	37	38	38	38	36	36	34	18	13	16	19	22	26	27	27	S	25	25	24	24	23	13	22	38	27.9	
Oct 8	23	24	25	25	25	24	27	31	33	33	34	34	33	C1	C1	C1	Y	C1	C1	C1	15	21	25	28	15	34	-	
Oct 9	26	26	24	24	23	21	19	17	19	20	22	22	24	25	27	27	S	S	22	15	15	16	17	16	16	15	27	21.0
Oct 10	16	14	12	11	9	12	5	7	10	20	24	27	30	32	31	S	31	27	20	16	12	12	10	11	5	32	17.3	
Oct 11	9	10	9	9	9	7	10	13	15	19	27	31	33	33	S	36	36	34	32	30	31	30	30	30	7	36	22.7	
Oct 12	31	32	29	29	27	22	16	11	11	14	23	31	31	S	32	33	34	27	23	29	24	19	15	13	11	34	24.2	
Oct 13	11	12	8	6	7	3	3	2	6	15	21	28	S	32	32	32	29	26	26	27	22	21	20	18	2	32	17.7	
Oct 14	17	15	14	15	15	15	15	15	17	18	18	S	17	17	18	19	20	15	9	8	8	10	12	8	20	32	14.6	
Oct 15	19	18	17	17	18	18	17	17	17	16	S	15	17	17	17	17	17	16	14	12	11	10	9	9	19	19	15.8	
Oct 16	8	7	3	1	1	0	0	1	1	S	15	16	24	31	32	33	27	14	19	20	18	20	20	18	0	33	14.3	
Oct 17	17	15	14	13	11	9	5	0	S	4	4	15	33	37	36	35	34	23	17	13	13	12	10	8	0	37	16.4	
Oct 18	6	6	4	4	2	2	1	S	1	4	13	17	21	31	32	30	30	16	16	7	8	13	19	24	1	32	13.3	
Oct 19	25	25	24	20	14	17	S	14	10	11	13	14	16	16	16	17	16	17	15	14	13	12	11	12	10	25	15.7	
Oct 20	11	10	10	8	8	S	4	3	3	5	8	13	17	17	16	18	20	18	17	17	15	11	11	9	3	20	11.7	
Oct 21	10	10	8	6	S	8	10	7	4	5	6	11	21	25	24	19	17	14	8	6	11	12	14	9	4	25	11.5	
Oct 22	14	15	15	S	15	15	16	16	16	16	15	14	13	13	12	10	9	7	7	8	10	11	13	13	7	16	12.7	
Oct 23	12	12	S	14	12	12	14	15	16	19	20	21	22	23	23	22	14	5	7	9	10	11	15	18	5	23	15.0	
Oct 24	21	S	25	24	23	23	21	20	19	20	21	23	24	25	23	18	9	4	3	1	1	3	2	1	25	16.2		
Oct 25	S	2	3	1	0	1	3	21	25	16	20	21	22	23	27	28	28	28	26	25	23	28	S	0	28	18.0		
Oct 26	30	30	29	29	28	29	29	29	28	27	29	33	35	35	35	35	35	35	33	23	18	16	11	S	16	11	35	28.2
Oct 27	13	10	9	8	7	5	3	8	17	19	23	24	26	29	29	28	27	27	30	29	28	S	31	31	3	31	20.0	
Oct 28	32	32	32	33	34	33	33	33	33	33	33	33	33	33	32	32	32	32	18	16	S	13	13	10	10	34	28.3	
Oct 29	8	7	6	5	6	5	5	4	7	15	17	22	26	28	30	31	32	33	30	S	26	24	17	20	4	33	17.6	
Oct 30	24	23	22	18	14	14	12	10	10	17	19	20	21	21	19	20	20	18	S	20	22	21	20	19	10	24	18.4	
Oct 31	18	19	18	20	22	22	22	22	21	21	23	26	28	28	29	26	26	S	9	5	3	4	5	5	3	29	18.3	
Diurnal Maximum	33	35	37	38	38	38	36	36	34	33	34	35	35	37	37	38	37	38	36	35	36	35	34	34	34			
Diurnal Average	18.0	16.7	15.9	14.9	14.4	14.1	12.9	14.0	15.6	17.2	19.5	22.1	24.6	26.0	26.4	26.5	25.9	22.2	19.3	17.4	17.4	17.0	17.3	16.8				

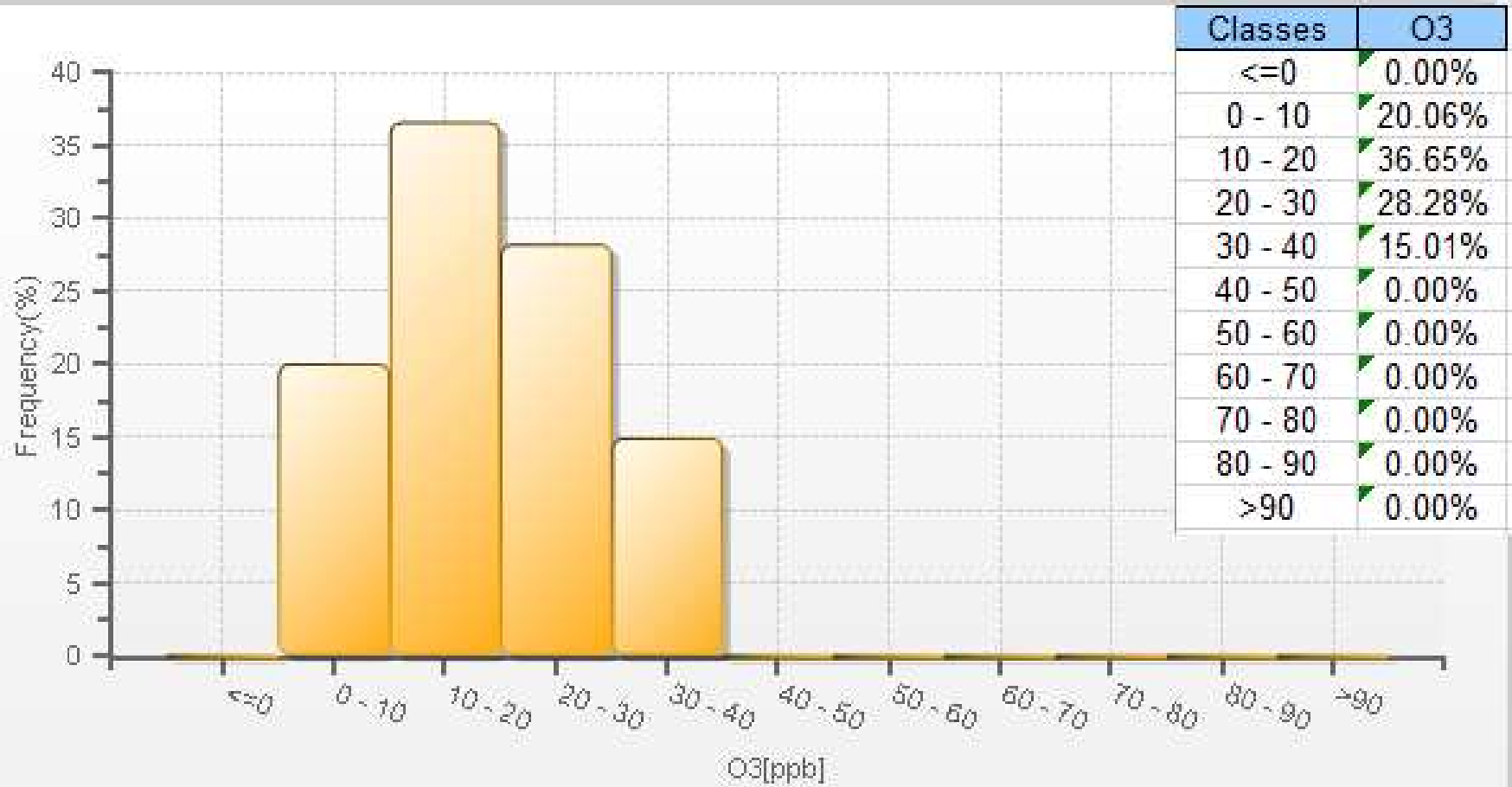
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 O3 - AQHI - Cadotte Lake Station

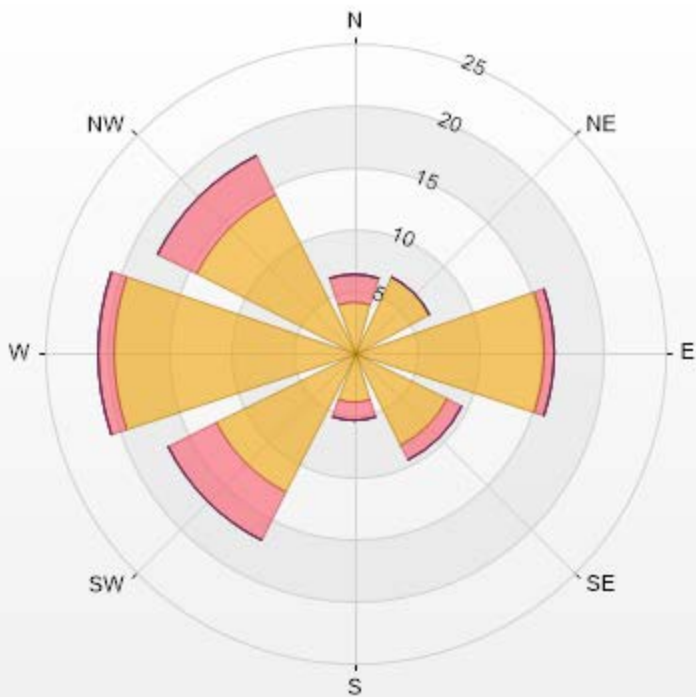


O3[ppb] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-O3[ppb] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 86.58% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-82	82-159	>159.0	Total
N	4.11	2.22	0	0	0	6.33
NE	6.8	0	0	0	0	6.8
E	15.35	0.79	0	0	0	16.14
SE	8.39	1.27	0	0	0	9.66
S	4.11	1.42	0	0	0	5.53
SW	12.5	4.43	0	0	0	16.93
W	19.46	1.27	0	0	0	20.73
NW	14.24	3.64	0	0	0	17.88
Summary	84.96	15.04	0	0	0	100



PRAMP-201910

%	Icon	Classes (ppb)
85		0-30
15		30-50
0		50-82
0		82-159
0		>159.0



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

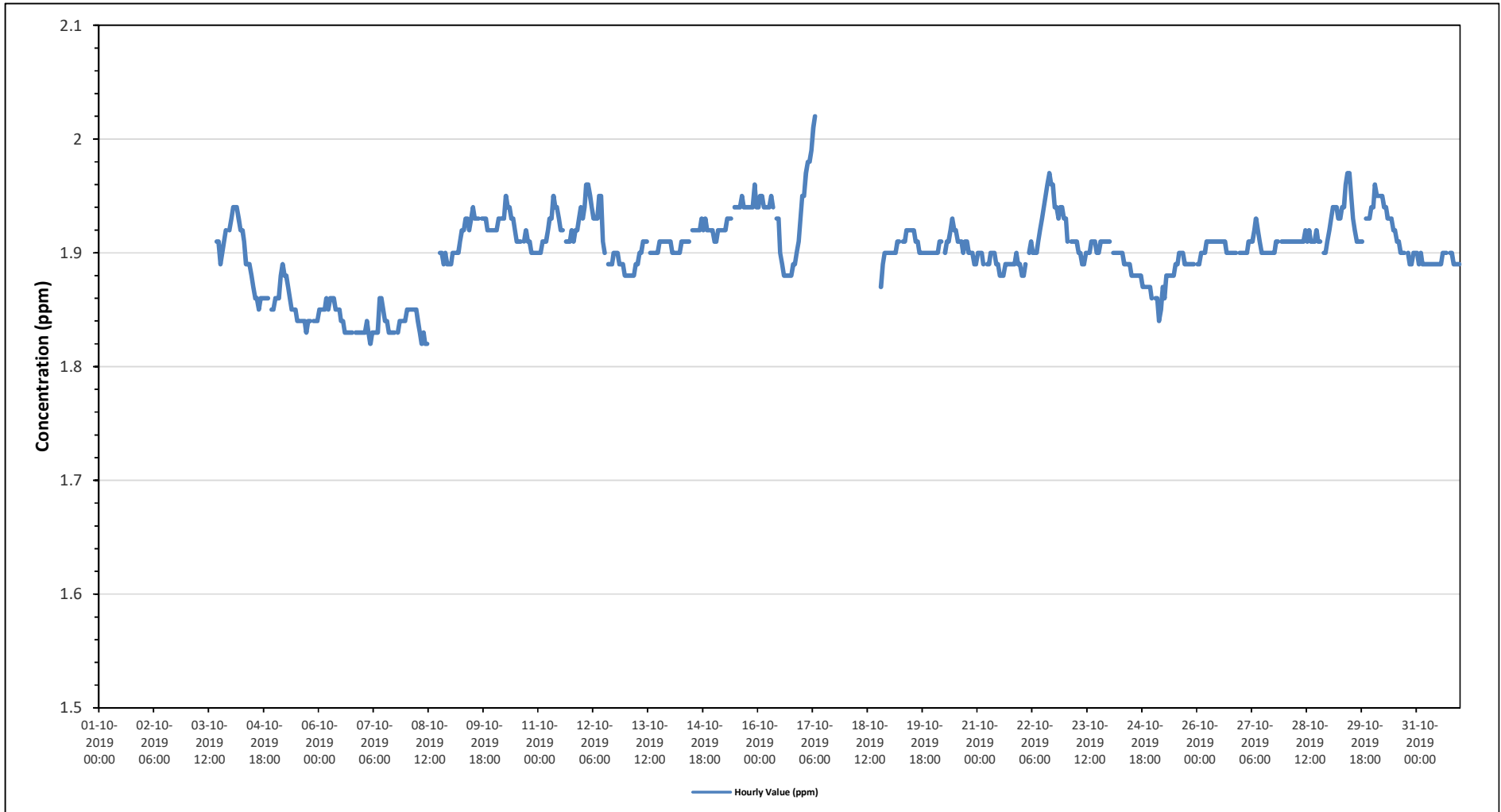
Maximum Hourly Value: 2.02 ppm on October 17 at hour 7	Hours in Service: 683
Maximum Daily Value: 1.93 ppm on	Hours of Data: 613
Minimum Hourly Value: 1.82 ppm on October 7 at hour 4	Hours of Missing Data: 39
Minimum Daily Value: 1.84 ppm on October 7	Hours of Calibration: 31
Monthly Average: 1.90 ppm	Operational Uptime: 94.3

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Oct 1																													
Oct 2																													
Oct 3														C	C	C	1.91	1.91	1.89	1.90	1.91	1.92	S	1.92	1.89	1.92	-		
Oct 4	1.93	1.94	1.94	1.94	1.93	1.92	1.92	1.91	1.89	1.89	1.89	1.88	1.87	1.86	1.86	1.85	1.86	1.86	1.86	1.86	1.86	S	1.85	1.85	1.85	1.89	1.85	1.94	1.89
Oct 5	1.86	1.86	1.86	1.88	1.89	1.88	1.88	1.87	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.83	1.84	1.84	S	1.84	1.84	1.84	1.83	1.83	1.89	1.85	
Oct 6	1.85	1.85	1.85	1.85	1.86	1.85	1.86	1.86	1.86	1.85	1.85	1.85	1.84	1.84	1.83	1.83	1.83	1.83	1.83	1.83	S	1.83	1.83	1.83	1.83	1.83	1.86	1.84	
Oct 7	1.83	1.83	1.84	1.83	1.82	1.83	1.83	1.83	1.83	1.86	1.86	1.85	1.84	1.84	1.83	1.83	1.83	1.83	S	1.83	1.84	1.84	1.84	1.84	1.84	1.82	1.86	1.84	
Oct 8	1.85	1.85	1.85	1.85	1.85	1.85	1.84	1.83	1.82	1.83	1.82	1.82	C1	C1	C1	C1	1.91	S	1.90	1.90	1.89	1.90	1.89	1.89	1.82	1.91	1.86		
Oct 9	1.89	1.90	1.90	1.90	1.90	1.91	1.92	1.92	1.93	1.93	1.92	1.93	1.94	1.93	1.93	1.93	S	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.89	1.94	1.92		
Oct 10	1.92	1.92	1.93	1.93	1.93	1.93	1.95	1.94	1.94	1.93	1.93	1.92	1.91	1.91	1.91	S	1.91	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.95	1.92	
Oct 11	1.90	1.90	1.91	1.91	1.91	1.92	1.93	1.93	1.95	1.94	1.94	1.93	1.92	1.92	S	1.91	1.91	1.91	1.92	1.91	1.92	1.92	1.92	1.93	1.94	1.90	1.95	1.92	
Oct 12	1.93	1.94	1.96	1.96	1.95	1.94	1.93	1.93	1.93	1.95	1.95	1.91	1.90	S	1.89	1.89	1.89	1.90	1.90	1.90	1.89	1.89	1.89	1.88	1.88	1.96	1.92	1.92	
Oct 13	1.88	1.88	1.88	1.88	1.88	1.89	1.89	1.90	1.90	1.91	1.91	S	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.88	1.91	1.90	
Oct 14	1.91	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.91	S	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.90	1.93	1.91	
Oct 15	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	S	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.91	1.96	1.93	
Oct 16	1.94	1.95	1.95	1.94	1.94	1.94	1.94	1.95	1.94	S	1.93	1.93	1.90	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.89	1.89	1.90	1.91	1.93	1.88	1.95	1.92	
Oct 17	1.95	1.95	1.97	1.98	1.98	1.99	2.01	2.02	C1	C1	C1	C1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	2.02	1.95	-		
Oct 18	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	C1	C1	C1	1.87	1.89	1.90	1.90	1.90	1.87	1.90	-		
Oct 19	1.90	1.90	1.90	1.90	1.91	1.91	S	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.92	1.91	
Oct 20	1.90	1.90	1.90	1.91	1.91	S	1.90	1.91	1.91	1.92	1.93	1.92	1.92	1.91	1.91	1.91	1.90	1.91	1.91	1.91	1.90	1.90	1.89	1.89	1.89	1.89	1.93	1.91	
Oct 21	1.90	1.90	1.90	1.89	S	1.89	1.89	1.90	1.90	1.90	1.89	1.89	1.88	1.88	1.88	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.90	1.89	1.89	
Oct 22	1.88	1.88	1.89	S	1.90	1.91	1.90	1.90	1.90	1.91	1.92	1.93	1.94	1.95	1.96	1.97	1.96	1.96	1.94	1.94	1.93	1.94	1.94	1.93	1.88	1.97	1.93		
Oct 23	1.93	1.91	S	1.91	1.91	1.91	1.91	1.90	1.90	1.89	1.89	1.89	1.90	1.90	1.91	1.91	1.91	1.90	1.90	1.91	1.91	1.91	1.91	1.91	1.89	1.93	1.91	1.91	
Oct 24	1.91	S	1.90	1.90	1.90	1.90	1.90	1.89	1.89	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.87	1.87	1.87	1.87	1.87	1.86	1.86	1.86	1.91	1.89		
Oct 25	S	1.86	1.86	1.84	1.85	1.87	1.86	1.88	1.88	1.88	1.88	1.88	1.89	1.89	1.90	1.90	1.90	1.89	1.89	1.89	1.89	1.89	S	1.84	1.90	1.88	1.88		
Oct 26	1.89	1.89	1.90	1.90	1.90	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	1.90	1.90	1.90	S	1.90	1.89	1.91	1.90		
Oct 27	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.92	1.93	1.92	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	S	1.91	1.91	1.90	1.93	1.91		
Oct 28	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	1.91	1.91	1.91	1.92	1.91	1.91	1.92	1.91	S	1.90	1.91	1.90	1.92	1.91	
Oct 29	1.92	1.93	1.94	1.94	1.94	1.93	1.93	1.94	1.94	1.96	1.97	1.97	1.95	1.93	1.92	1.91	1.91	1.91	1.91	1.91	1.91	S	1.93	1.93	1.94	1.91	1.97	1.93	
Oct 30	1.94	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.93	1.93	1.92	1.92	1.91	1.91	1.90	1.90	1.90	S	1.90	1.89	1.89	1.90	1.90	1.89	1.96	1.92		
Oct 31	1.90	1.89	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.90	1.90	1.90	S	1.90	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.90	1.89	
Diurnal Maximum	1.95	1.96	1.97	1.98	1.98	1.99	2.01	2.02	1.95	1.96	1.97	1.97	1.95	1.95	1.96	1.97	1.96	1.96	1.94	1.94	1.94	1.94	1.96	1.94	1.94	1.96	1.94		
Diurnal Average	1.90	1.90	1.90	1.90	1.91	1.91	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	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.89	

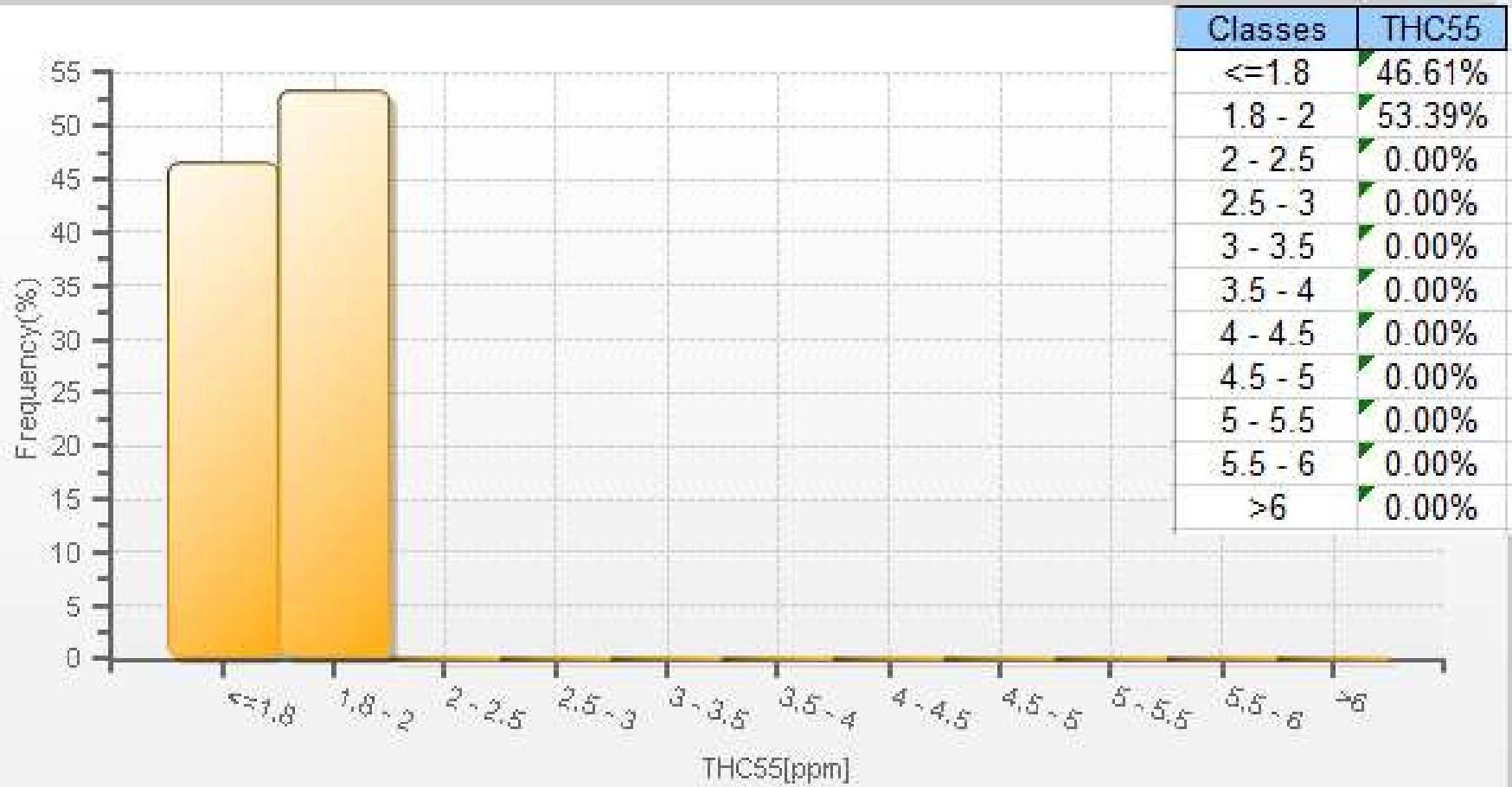
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 - AQHI - Cadotte Lake Station

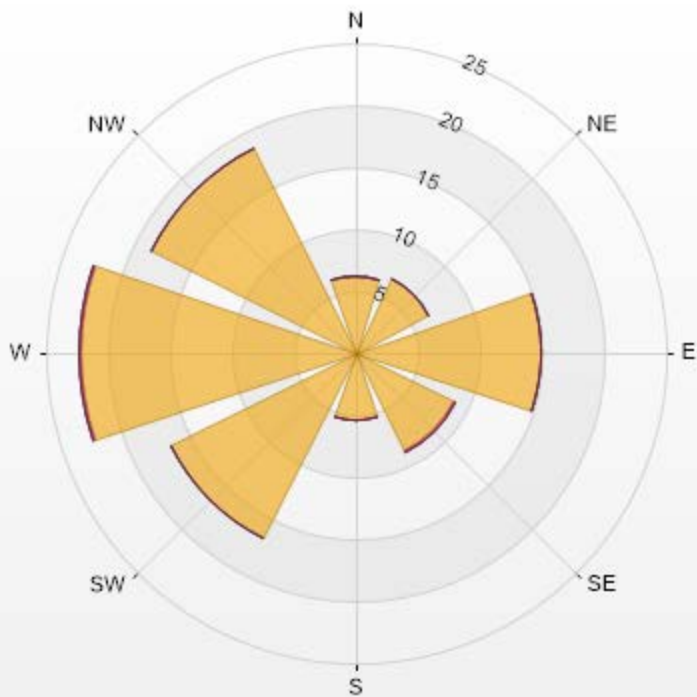


THC55[ppm] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



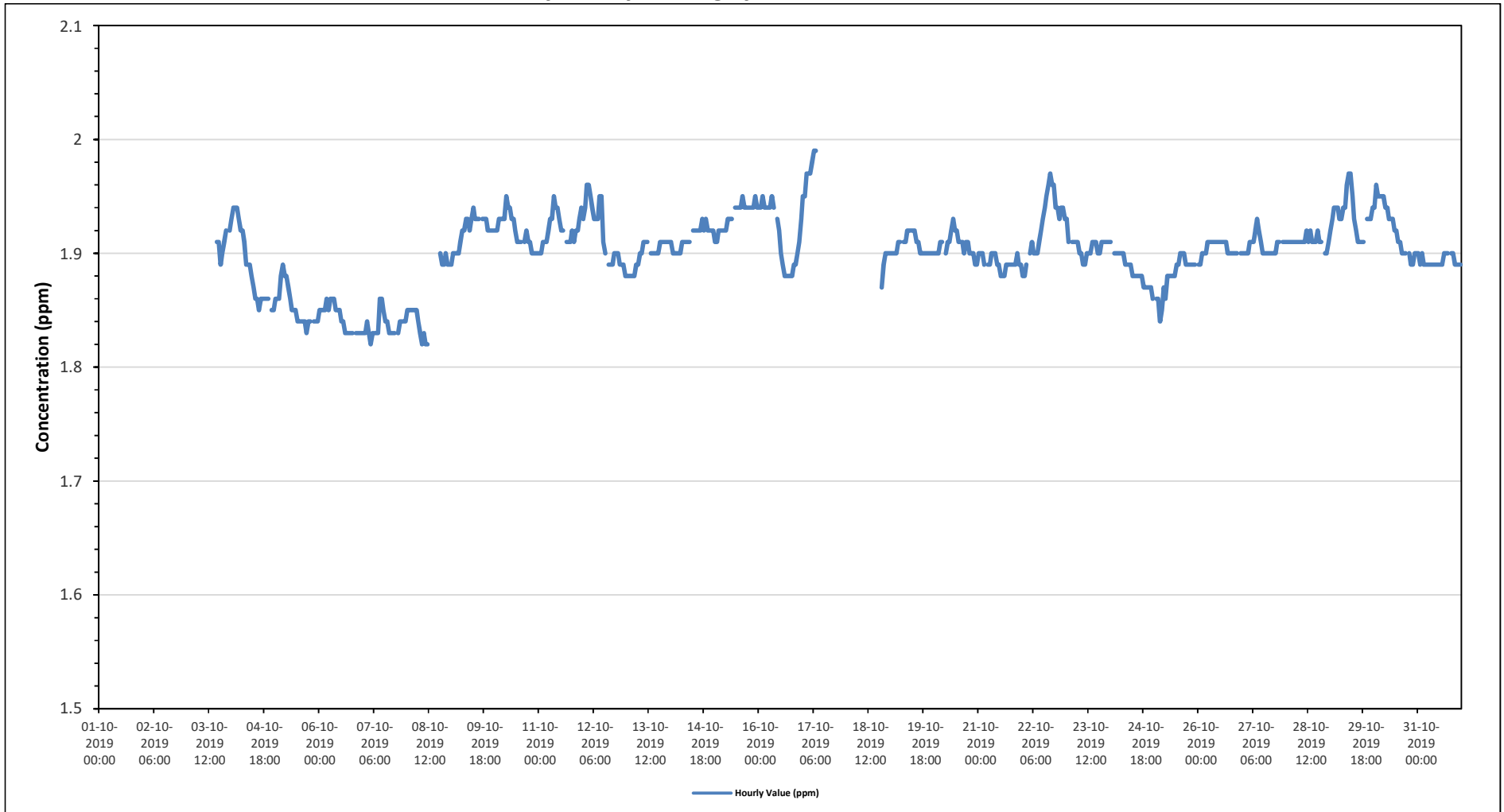
Wind: PRAMP AQHI Poll.: PRAMP AQHI-THC55[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 82.74% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	6.13	0	0	0	0	6.13
NE	6.62	0	0	0	0	6.62
E	15.07	0	0	0	0	15.07
SE	8.94	0.17	0	0	0	9.11
S	5.46	0	0	0	0	5.46
SW	16.72	0	0	0	0	16.72
W	22.19	0.17	0	0	0	22.36
NW	18.54	0	0	0	0	18.54
Summary	100	0.34	0	0	0	100

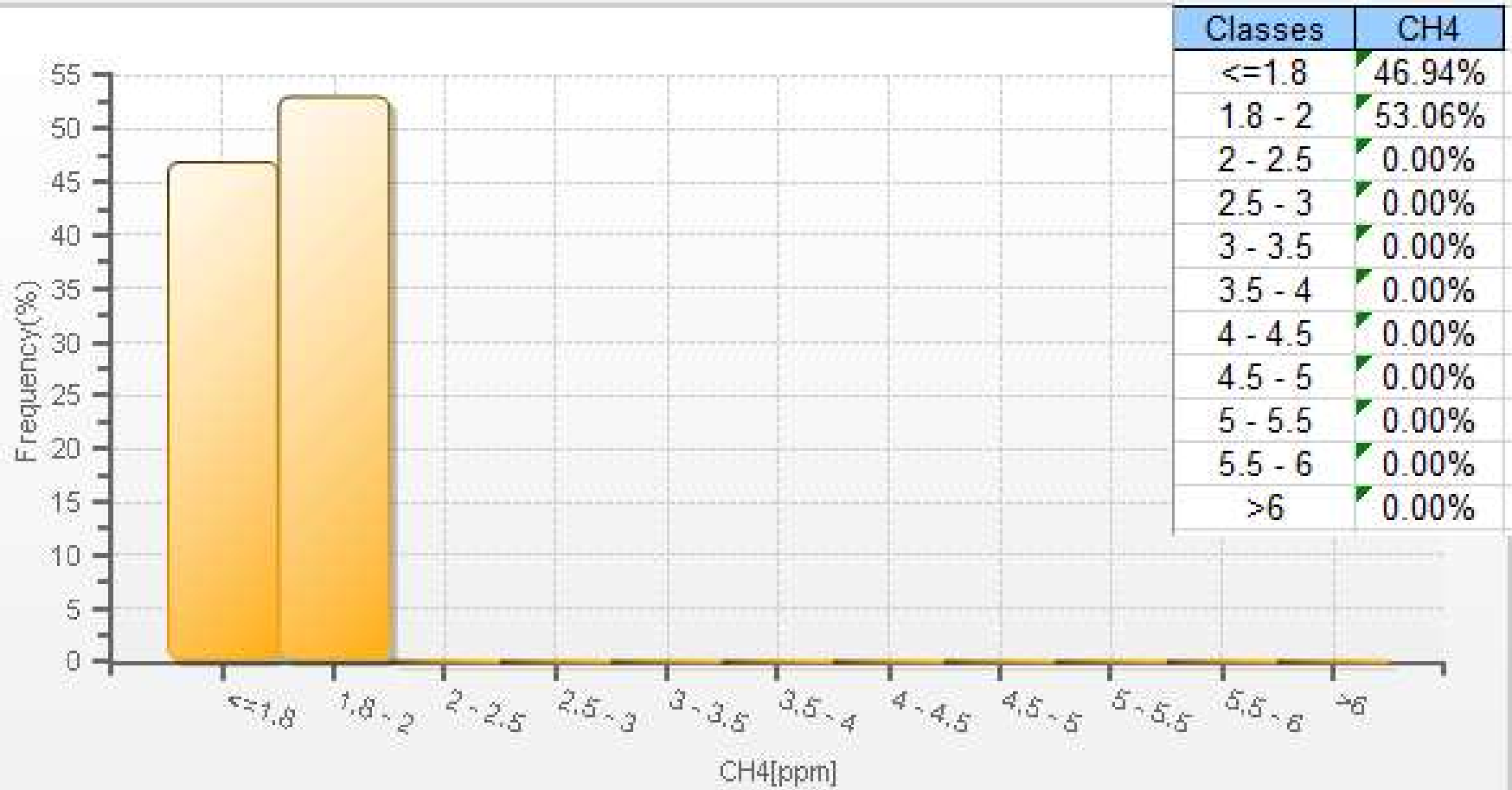


PRAMP-201910

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

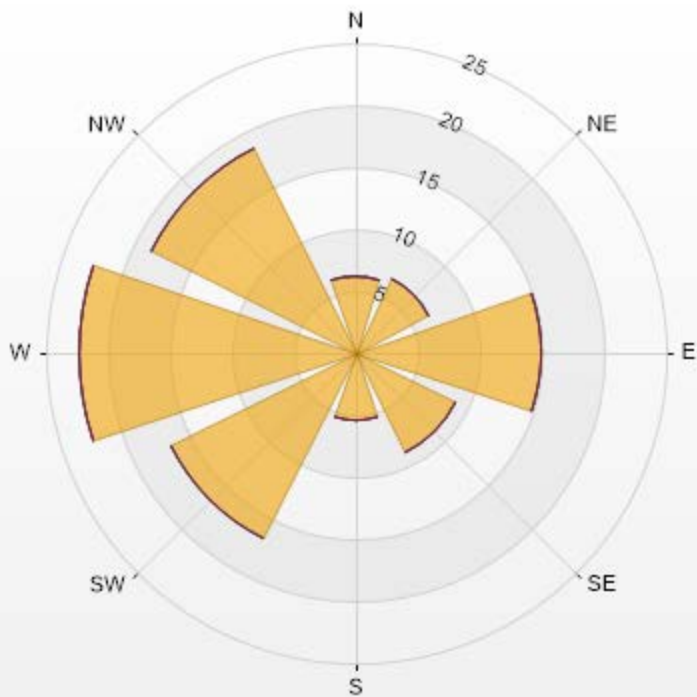


CH4[ppm] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



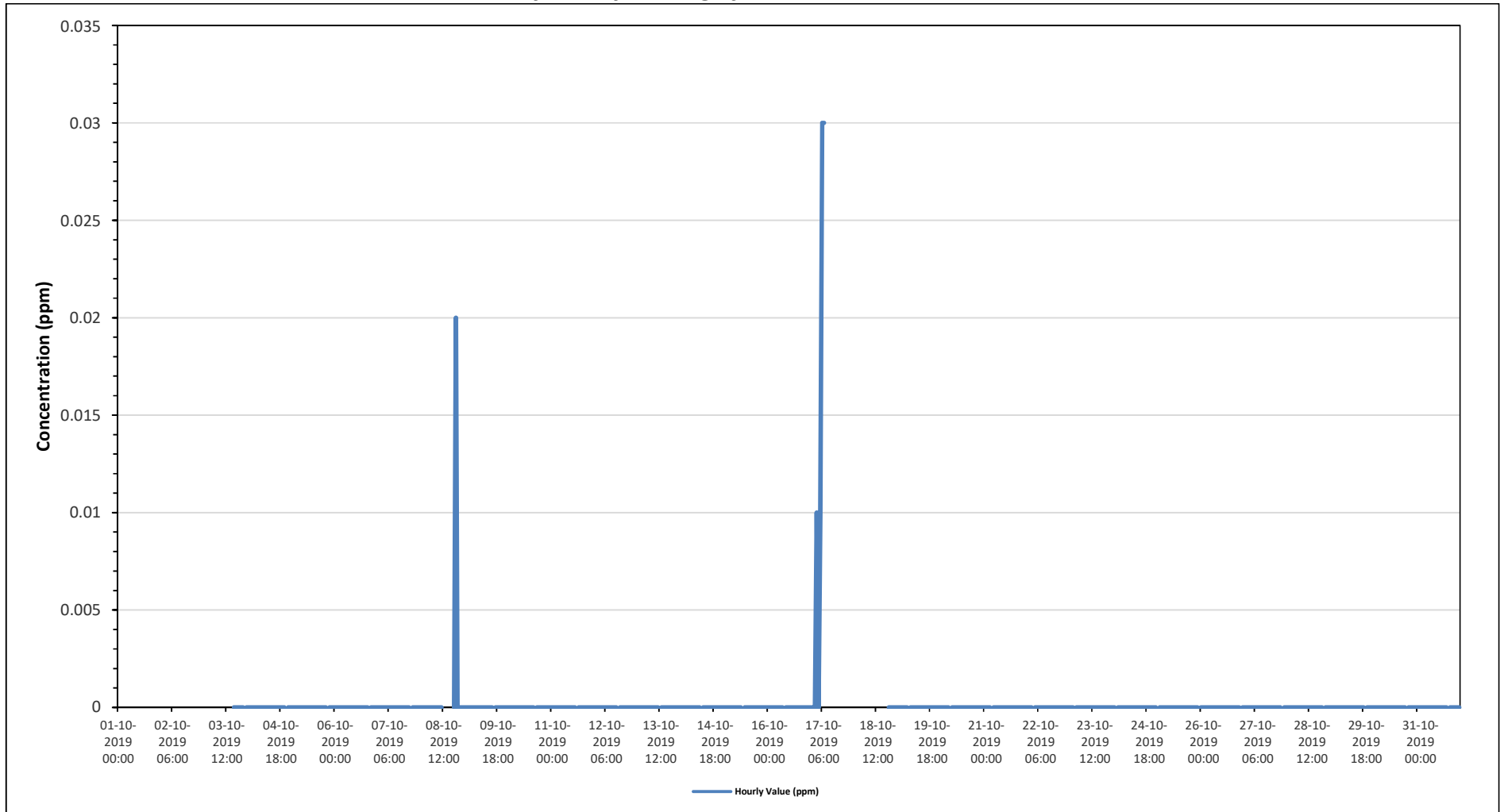
Wind: PRAMP AQHI Poll.: PRAMP AQHI-CH4[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 82.74% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	6.13	0	0	0	0	6.13
NE	6.62	0	0	0	0	6.62
E	15.07	0	0	0	0	15.07
SE	9.11	0	0	0	0	9.11
S	5.46	0	0	0	0	5.46
SW	16.72	0	0	0	0	16.72
W	22.35	0	0	0	0	22.35
NW	18.54	0	0	0	0	18.54
Summary	100	0	0	0	0	100

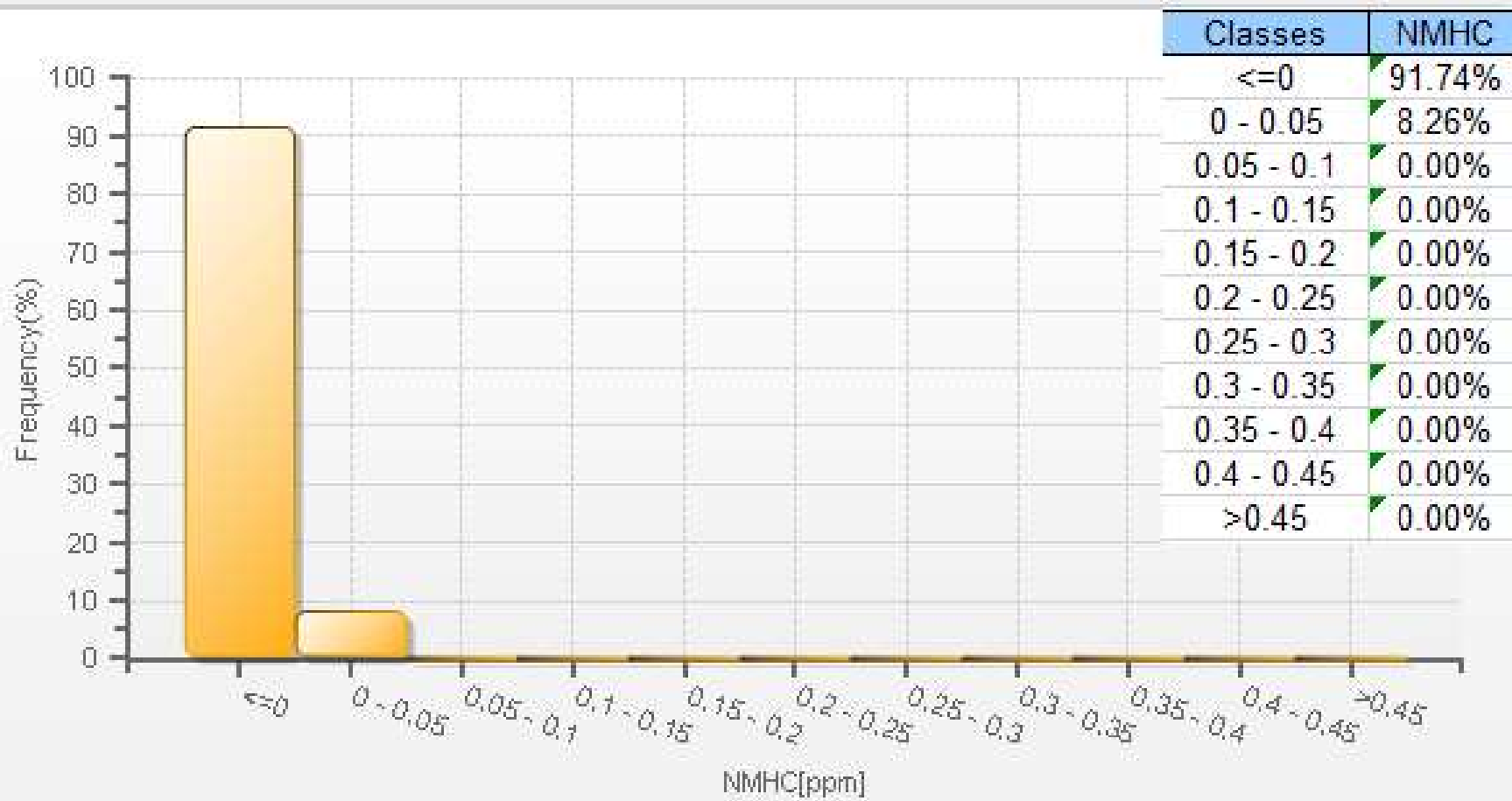


PRAMP-201910

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

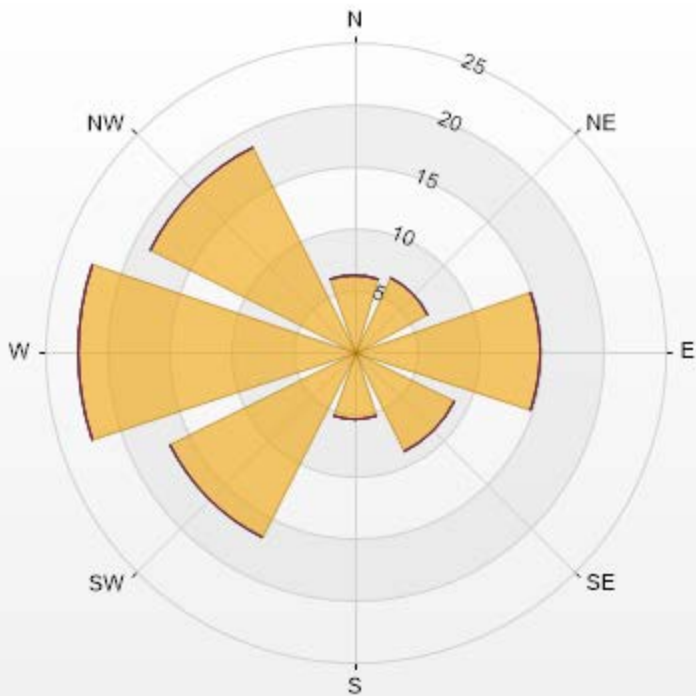


NMHC[ppm] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-NMHC[ppm] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 82.74% Calm Avg: 0.00 [ppm]

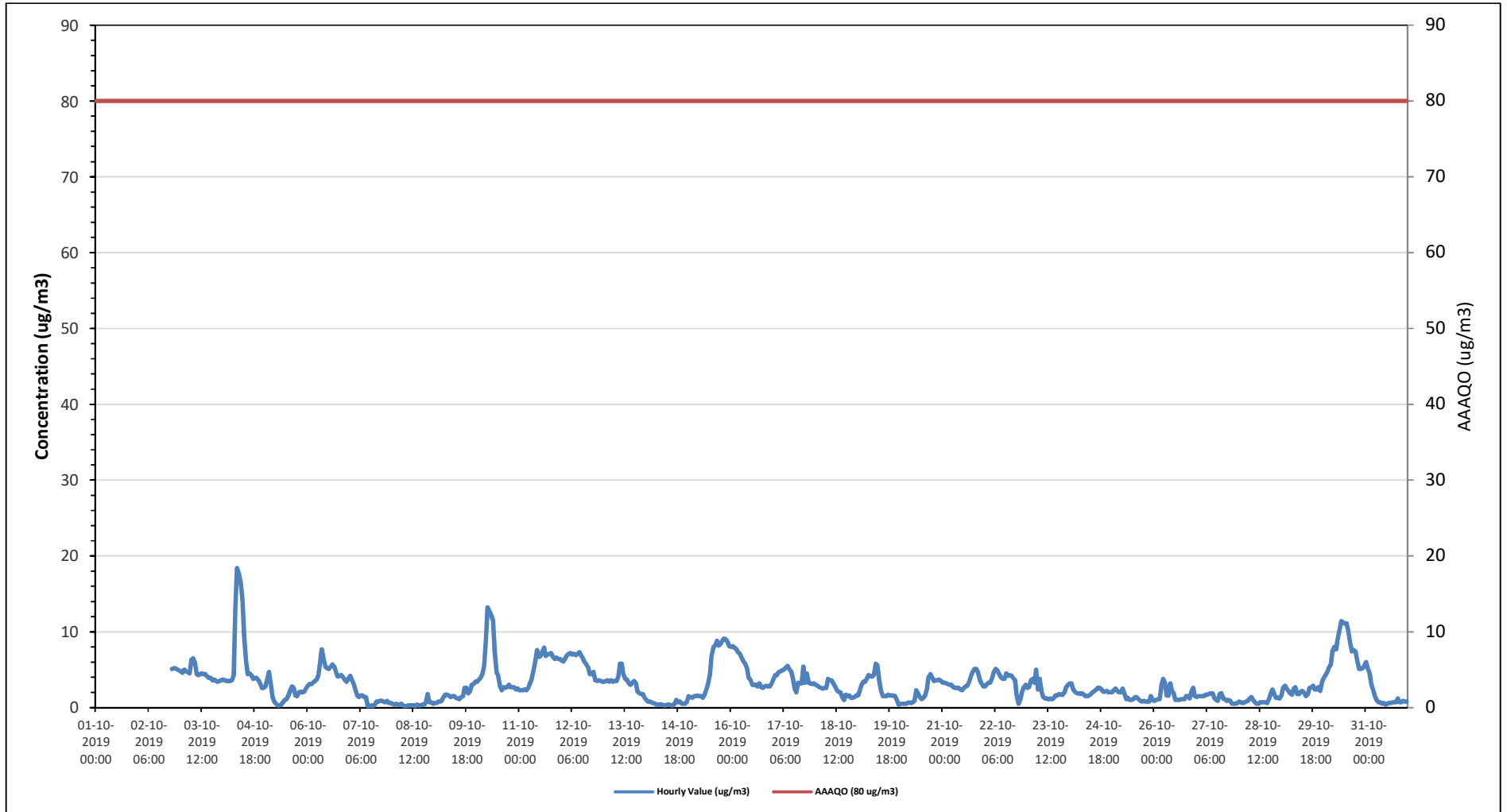
Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	6.13	0	0	0	0	6.13
NE	6.62	0	0	0	0	6.62
E	15.07	0	0	0	0	15.07
SE	9.11	0	0	0	0	9.11
S	5.46	0	0	0	0	5.46
SW	16.72	0	0	0	0	16.72
W	22.35	0	0	0	0	22.35
NW	18.54	0	0	0	0	18.54
Summary	100	0	0	0	0	100



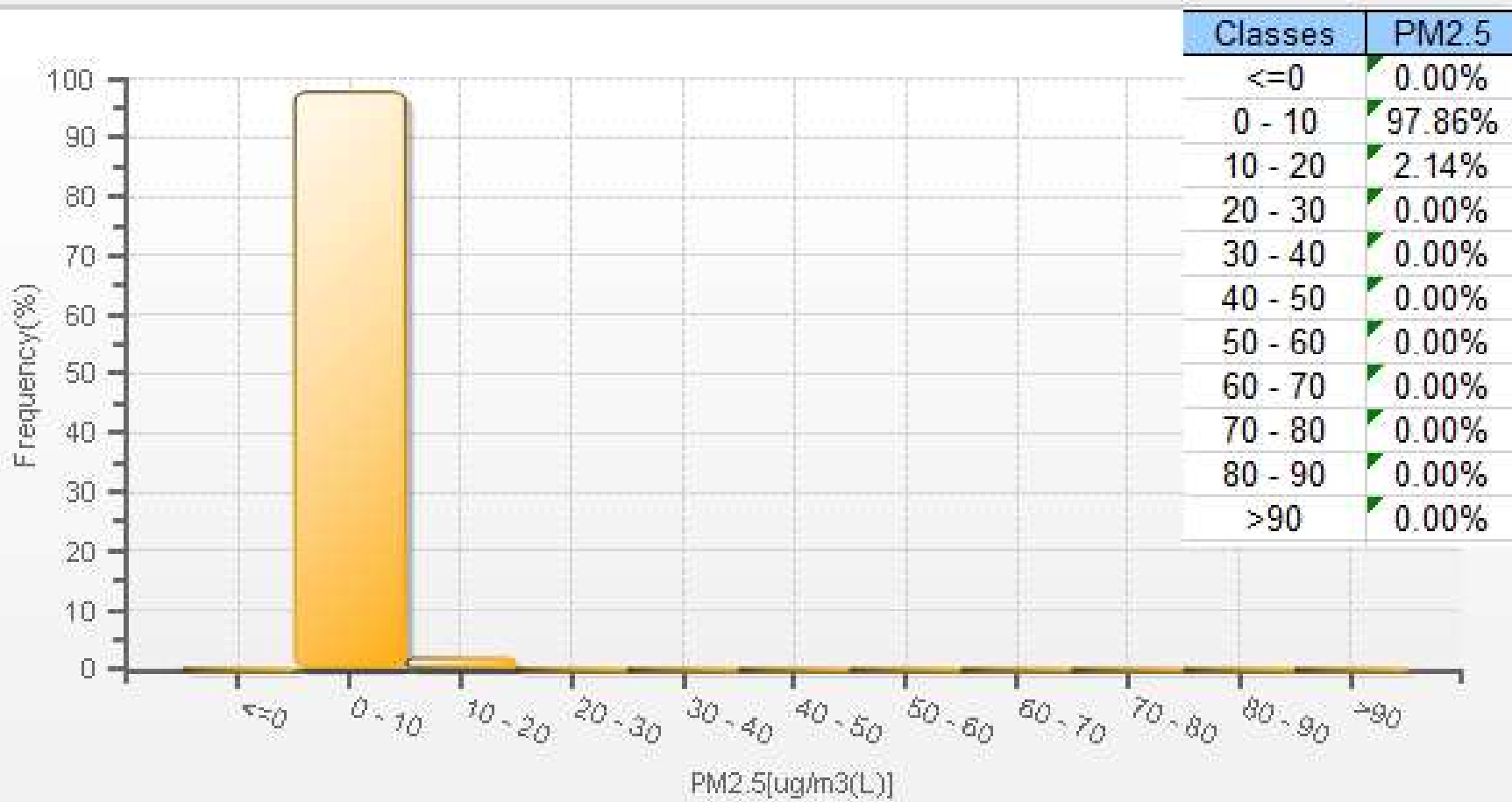
PRAMP-201910

% Icon Classes (ppm)	100	0-0.1	0-1.0	0-2.79	0	0.3-0.9	0	0.9-2	0	>2.0

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

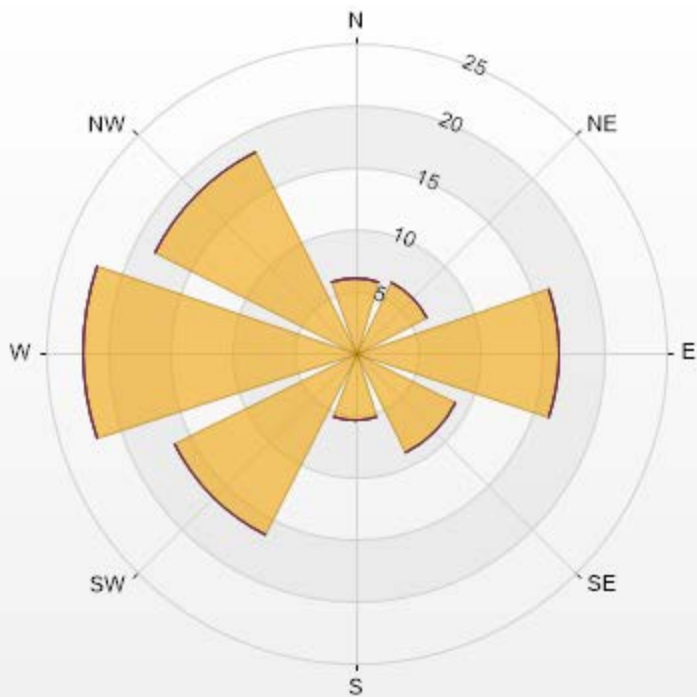


PM2.5[ug/m3(L)] Histogram: PRAMP AQHI Monthly: 10-2019 1 Hr.



Wind: PRAMP AQHI Poll.: PRAMP AQHI-PM2.5[ug/m3(L)] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	5.97	0	0	0	0	5.97
NE	6.4	0	0	0	0	6.4
E	16.45	0	0	0	0	16.45
SE	9.02	0	0	0	0	9.02
S	5.53	0	0	0	0	5.53
SW	16.45	0	0	0	0	16.45
W	21.98	0	0	0	0	21.98
NW	18.2	0	0	0	0	18.2
Summary	100	0	0	0	0	100



PRAMP-201910



PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

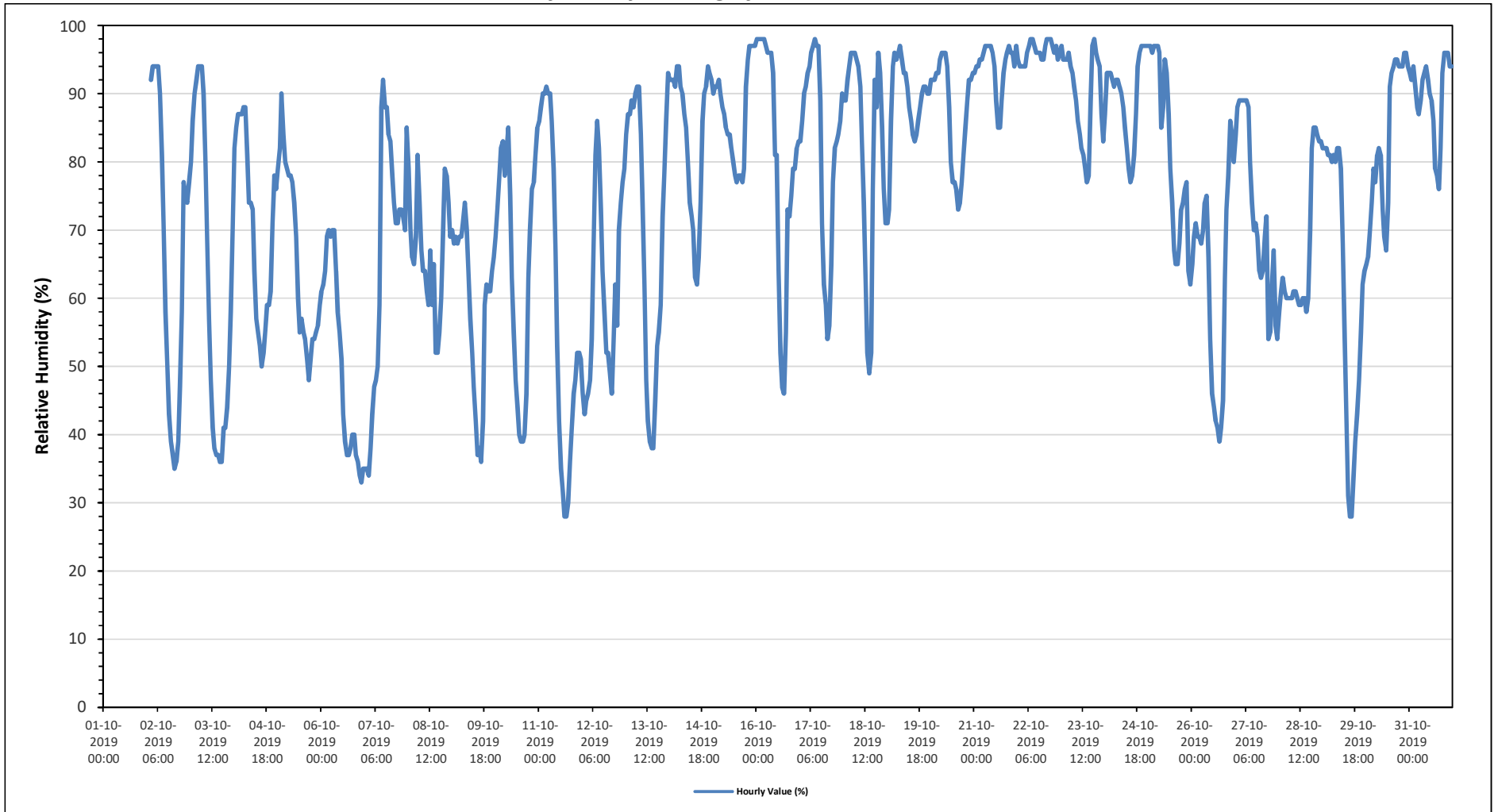
Maximum Hourly Value:	98 %	on October 16 at hour 0	Hours in Service:	718
Maximum Daily Value:	96.1 %	on	Hours of Data:	718
Minimum Hourly Value:	28 %	on October 11 at hour 14	Hours of Missing Data:	0
Minimum Daily Value:	50.5 %	on October 6	Hours of Calibration:	0
Monthly Average:	74.8 %		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1			92	94	94	94	94	90	81	71	58	50	43	39	37	35	36	39	47	58	77	75	74	77	35	94	66	
Oct 2	80	86	90	92	94	94	94	90	80	68	57	48	41	38	37	37	36	36	41	41	44	50	58	70	36	94	63	
Oct 3	82	85	87	87	87	88	88	81	74	74	73	64	57	55	53	50	52	55	59	59	61	71	78	76	50	88	71	
Oct 4	79	82	90	84	80	79	78	78	77	74	69	60	55	57	55	54	51	48	51	54	54	55	56	59	48	90	66	
Oct 5	61	62	64	69	70	69	70	70	64	58	55	51	43	39	37	37	38	40	40	37	36	34	33	35	33	70	51	
Oct 6	35	35	34	38	43	47	48	50	59	88	92	88	88	84	83	78	74	71	71	73	73	72	70	85	34	92	66	
Oct 7	79	70	66	65	69	81	74	67	64	64	61	59	67	59	65	52	52	55	60	70	79	78	74	69	52	81	67	
Oct 8	70	68	69	68	69	69	71	74	70	64	57	52	47	42	37	38	36	42	59	62	61	61	64	66	36	74	59	
Oct 9	69	73	78	82	83	78	81	85	75	63	55	48	44	40	39	39	40	46	63	70	76	77	81	85	39	85	65	
Oct 10	86	88	90	90	91	90	90	86	79	67	53	42	35	32	28	28	30	36	41	46	48	52	52	51	28	91	60	
Oct 11	46	43	45	46	48	54	68	81	86	82	73	64	58	52	52	49	46	53	62	56	70	74	77	79	43	86	61	
Oct 12	84	87	87	89	88	90	91	91	84	74	62	48	42	39	38	38	45	53	55	59	72	78	86	93	38	93	70	
Oct 13	92	92	92	91	94	94	91	90	87	85	80	74	72	70	63	62	66	74	86	90	91	94	93	92	62	94	84	
Oct 14	90	91	91	92	90	88	87	85	84	84	82	80	78	77	78	78	77	79	91	95	97	97	97	97	77	97	87	
Oct 15	98	98	98	98	98	97	96	96	96	96	93	81	81	64	52	47	46	55	73	72	75	79	82	83	46	98	81	
Oct 16	83	86	90	91	93	94	96	97	98	97	97	89	71	62	59	54	56	65	77	82	83	84	86	90	54	98	83	
Oct 17	89	89	92	94	96	96	96	95	94	91	83	74	62	52	49	52	76	92	88	96	93	85	76	71	49	96	83	
Oct 18	71	73	86	94	96	95	96	97	95	93	93	91	88	86	84	83	84	86	88	90	91	91	90	90	71	97	89	
Oct 19	92	92	92	93	93	95	96	96	96	94	88	80	77	77	76	73	74	77	81	85	89	92	92	93	73	96	87	
Oct 20	93	94	94	95	95	96	97	97	97	97	96	94	89	85	85	89	93	95	96	97	96	96	94	97	85	97	94	
Oct 21	95	94	94	94	94	96	97	98	98	97	96	96	96	95	95	97	98	98	98	97	96	97	95	96	94	98	96	
Oct 22	97	95	95	95	96	94	93	91	89	86	84	82	81	79	77	78	89	97	98	96	95	94	87	83	77	98	90	
Oct 23	87	93	93	93	92	91	92	92	91	90	88	85	82	79	77	78	81	87	94	96	97	97	97	97	77	97	90	
Oct 24	97	97	96	97	97	96	85	88	95	93	87	79	74	67	65	65	68	73	74	76	77	64	62	62	62	97	82	
Oct 25	65	69	71	69	69	68	70	74	75	66	54	46	44	42	41	39	41	45	63	73	78	86	84	80	39	86	63	
Oct 26	84	88	89	89	89	89	88	80	74	70	71	69	64	63	64	69	72	54	55	62	67	56	54	54	54	89	73	
Oct 27	58	61	63	61	60	60	60	60	61	61	60	59	60	60	58	60	70	82	85	85	84	83	83	54	58	85	66	
Oct 28	82	82	82	81	81	80	81	80	82	82	79	68	56	43	31	28	28	34	39	43	48	55	62	64	28	82	62	
Oct 29	65	66	70	74	79	77	81	82	81	73	69	67	74	91	93	94	95	95	94	94	94	96	96	94	65	96	83	
Oct 30	93	92	94	91	88	87	89	92	93	94	92	90	89	86	79	78	76	82	93	96	96	96	94	94	76	96	90	
Oct 31	98	98	98	98	98	97	97	98	98	97	97	96	96	95	95	97	98	98	98	97	97	97	97	97	97	97	97	97
Diurnal Maximum	98	98	98	98	98	97	97	98	98	97	97	96	96	95	95	97	98	98	98	97	97	97	97	97	97	97	97	97
Diurnal Average	79.4	80.4	82.5	83.2	83.9	84.2	85.0	84.6	82.6	80.0	75.0	69.6	65.0	61.7	59.5	58.4	60.6	65.4	70.5	73.5	76.6	78.1	77.7	78.8	78.8	78.8	78.8	

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 - AQHI - Cadotte Lake Station





PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

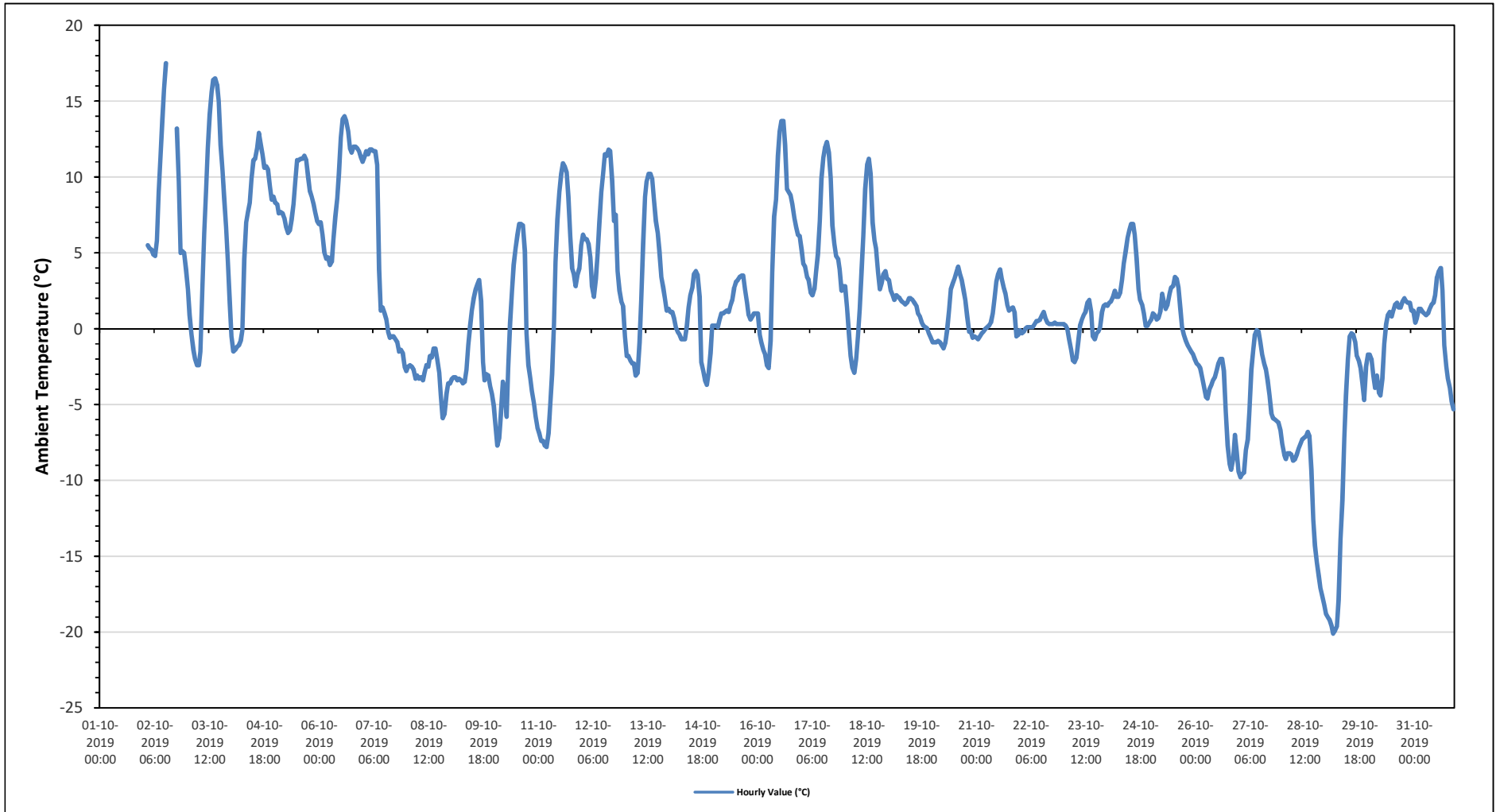
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	17.5 °C on October 2 at hour 12	Hours in Service:	718
Maximum Daily Value:	9.4 °C on	Hours of Data:	713
Minimum Hourly Value:	-20.1 °C on October 29 at hour 5	Hours of Missing Data:	5
Minimum Daily Value:	-9.8 °C on October 28	Hours of Calibration:	0
Monthly Average:	1.5 °C	Operational Uptime:	99.3

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23														
Oct 1																																									
Oct 2			5.5	5.3	5.2	4.9	4.8	5.8	9.0	11.3	13.8	15.8	17.5	Y	Y	Y	Y	Y	13.2	9.7	5.0	5.1	5.0	3.9	3.9	17.5	-														
Oct 3	2.6	0.9	-0.4	-1.4	-2.0	-2.4	-2.4	-1.5	2.8	6.3	9.0	11.9	14.1	15.6	16.4	16.5	16.1	15.0	12.1	10.4	8.6	6.7	4.4	1.7	-2.4	16.5	6.7														
Oct 4	-0.5	-1.5	-1.4	-1.2	-1.1	-0.8	-0.1	4.6	7.0	7.7	8.3	9.9	11.1	11.2	11.9	12.9	12.2	11.5	10.6	10.7	10.5	9.4	8.5	8.7	-1.5	12.9	6.7														
Oct 5	8.3	8.2	7.6	7.7	7.6	7.3	6.7	6.3	6.5	7.2	8.2	9.7	11.1	11.1	11.2	11.2	11.4	11.1	10.0	9.1	8.7	8.2	7.7	7.1	6.3	11.4	8.7														
Oct 6	6.9	7.0	6.2	5.0	4.6	4.7	4.2	4.4	5.9	7.4	8.6	10.2	12.6	13.8	14.0	13.7	13.0	11.9	11.6	12.0	12.0	11.9	11.7	11.3	4.2	14.0	9.4														
Oct 7	11.0	11.3	11.7	11.5	11.8	11.8	11.7	11.7	10.8	3.9	1.2	1.4	1.0	0.6	-0.2	-0.6	-0.5	-0.5	-0.7	-0.9	-1.5	-1.4	-1.6	-2.5	-2.5	11.8	4.2														
Oct 8	-2.8	-2.5	-2.4	-2.5	-2.7	-3.3	-3.1	-3.3	-3.2	-3.4	-2.9	-2.4	-2.5	-1.8	-1.9	-1.3	-1.3	-2.0	-2.9	-4.4	-5.9	-5.6	-4.3	-3.6	-5.9	-1.3	-3.0														
Oct 9	-3.6	-3.3	-3.2	-3.2	-3.4	-3.3	-3.4	-3.6	-3.5	-2.7	-1.1	0.2	1.2	2.0	2.6	2.9	3.2	1.8	-2.2	-3.4	-3.0	-3.1	-3.8	-4.3	-4.3	3.2	-1.7														
Oct 10	-5.1	-6.4	-7.7	-7.2	-5.3	-3.5	-4.2	-5.8	-2.6	0.4	2.5	4.2	5.3	6.2	6.9	6.9	6.8	5.1	-0.3	-2.4	-3.3	-4.1	-4.9	-5.8	-7.7	6.9	-1.0														
Oct 11	-6.5	-6.9	-7.4	-7.4	-7.7	-7.8	-6.9	-5.1	-3.0	0.3	4.4	7.2	9.0	10.2	10.9	10.7	10.3	8.7	6.1	4.0	3.6	2.8	3.6	4.0	-7.8	10.9	1.5														
Oct 12	5.5	6.2	5.9	5.9	5.6	4.7	2.8	2.1	3.3	4.8	7.0	9.0	10.2	11.5	11.4	11.8	11.7	9.8	7.1	7.5	3.8	2.5	1.8	1.5	1.5	11.8	6.4														
Oct 13	-0.5	-1.8	-1.8	-2.1	-2.3	-2.3	-3.1	-2.9	-0.9	1.9	5.6	8.7	9.7	10.2	10.2	9.9	8.5	7.1	6.3	5.1	3.4	2.7	2.0	1.2	-3.1	10.2	3.1														
Oct 14	1.3	1.1	1.1	0.7	0.1	-0.2	-0.4	-0.7	-0.7	-0.7	0.2	1.4	2.2	2.7	3.6	3.8	3.5	2.1	-2.2	-2.8	-3.4	-3.7	-2.9	-1.6	-3.7	3.8	0.2														
Oct 15	0.2	0.2	0.2	0.1	0.6	1.0	1.0	1.1	1.2	1.1	1.5	1.9	2.7	3.1	3.2	3.4	3.5	3.5	2.6	1.7	0.9	0.6	0.8	1.0	0.1	3.5	1.5														
Oct 16	1.0	1.0	-0.4	-0.9	-1.4	-1.7	-2.4	-2.6	-0.8	3.7	7.4	8.5	11.4	13.0	13.7	13.7	12.1	9.2	9.0	8.8	8.2	7.3	6.7	6.2	-2.6	13.7	5.4														
Oct 17	6.1	5.2	4.3	4.1	3.4	3.2	2.4	2.2	2.6	3.7	4.9	7.1	9.9	11.3	12.0	12.3	11.6	9.9	6.8	5.6	4.8	4.6	3.9	2.5	2.2	12.3	6.0														
Oct 18	2.8	2.8	1.4	-0.3	-1.8	-2.6	-2.9	-2.0	-0.5	1.3	3.9	6.1	9.2	10.8	11.2	10.2	7.0	5.8	5.3	3.7	2.6	3.0	3.6	3.8	-2.9	11.2	3.5														
Oct 19	3.3	3.2	2.5	2.2	1.9	2.2	2.1	2.0	1.8	1.7	1.6	1.7	2.0	2.0	1.9	1.7	1.5	1.0	0.8	0.4	0.2	0.1	0.0	-0.3	-0.3	3.3	1.6														
Oct 20	-0.6	-0.9	-0.9	-0.9	-0.8	-0.9	-1.1	-1.3	-0.9	-0.1	1.2	2.6	3.0	3.3	3.7	4.1	3.6	3.2	2.5	1.9	0.8	-0.2	-0.2	-0.6	-1.3	4.1	0.9														
Oct 21	-0.5	-0.6	-0.7	-0.5	-0.3	-0.2	0.0	0.1	0.2	0.4	1.0	2.0	3.1	3.6	3.9	3.3	2.7	2.3	1.6	1.2	1.3	1.4	1.1	-0.5	-0.7	3.9	1.1														
Oct 22	-0.4	-0.1	-0.3	-0.2	0.0	0.1	0.1	0.1	0.1	0.3	0.5	0.5	0.6	0.9	1.1	0.7	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	-0.4	1.1	0.3														
Oct 23	0.3	0.3	0.2	0.0	-0.7	-1.4	-2.1	-2.2	-1.9	-0.8	0.2	0.6	0.9	1.1	1.7	1.9	1.1	-0.5	-0.7	-0.3	-0.2	0.1	1.1	1.5	-2.2	1.9	0.0														
Oct 24	1.6	1.5	1.7	1.8	2.1	2.5	2.1	2.1	2.4	3.2	4.3	5.1	6.0	6.5	6.9	6.9	6.2	4.6	2.6	1.9	1.6	1.0	0.2	0.2	0.2	6.9	3.1														
Oct 25	0.4	0.6	1.0	0.9	0.6	0.7	1.1	2.3	1.8	1.3	1.6	2.3	2.7	2.8	3.4	3.3	2.7	1.3	0.1	-0.4	-0.8	-1.1	-1.3	-1.5	-1.5	3.4	1.1														
Oct 26	-1.7	-2.0	-2.3	-2.4	-2.6	-3.2	-3.8	-4.5	-4.6	-4.0	-3.7	-3.4	-3.2	-2.7	-2.3	-2.0	-2.0	-2.8	-5.5	-7.7	-8.9	-9.3	-8.6	-7.0	-9.3	-1.7	-4.2														
Oct 27	-8.1	-9.4	-9.8	-9.6	-9.5	-8.0	-7.3	-5.4	-2.7	-1.4	-0.4	-0.1	-0.2	-0.9	-1.7	-2.3	-2.7	-3.4	-4.4	-5.6	-5.9	-6.0	-6.1	-6.2	-9.8	-0.1	-4.9														
Oct 28	-6.7	-7.6	-8.3	-8.6	-8.2	-8.2	-8.3	-8.7	-8.6	-8.3	-7.9	-7.6	-7.3	-7.2	-7.1	-6.8	-7.1	-9.3	-12.6	-14.3	-15.4	-16.3	-17.1	-17.6	-17.6	-6.7	-9.8														
Oct 29	-18.2	-18.8	-19.0	-19.2	-19.6	-20.1	-19.9	-19.6	-17.9	-13.9	-11.3	-7.2	-4.4	-2.0	-0.5	-0.3	-0.4	-0.9	-1.8	-2.1	-2.6	-3.6	-4.7	-2.5	-20.1	-0.3	-9.6														
Oct 30	-1.7	-1.7	-2.0	-3.1	-3.9	-3.1	-4.2	-4.4	-3.3	-1.0	0.3	0.9	1.1	0.8	1.2	1.6	1.7	1.4	1.4	1.8	2.0	1.8	1.7	1.7	-4.4	2.0	-0.4														
Oct 31	1.2	1.2	0.4	0.7	1.3	1.3	1.1	1.0	0.9	1.0	1.3	1.6	1.7	2.2	3.4	3.8	4.0	2.5	-1.1	-2.5	-3.3	-3.9	-4.8	-5.3	-5.3	4.0	0.4														
Diurnal Maximum	11.0	11.3	11.7	11.5	11.8	11.8	11.7	11.7	10.8	11.3	13.8	15.8	17.5	15.6	16.4	16.5	16.1	15.0	13.2	12.0	12.0	11.9	11.7	11.3																	
Diurnal Average	-0.2	-0.4	-0.6	-0.8	-1.0	-1.0	-1.2	-0.9	0.0	1.1	2.4	3.7	4.7	4.9	5.3	5.3	4.9	3.8	2.5	1.6	0.8	0.4	0.1	-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 AT - AQHI - Cadotte Lake Station





PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

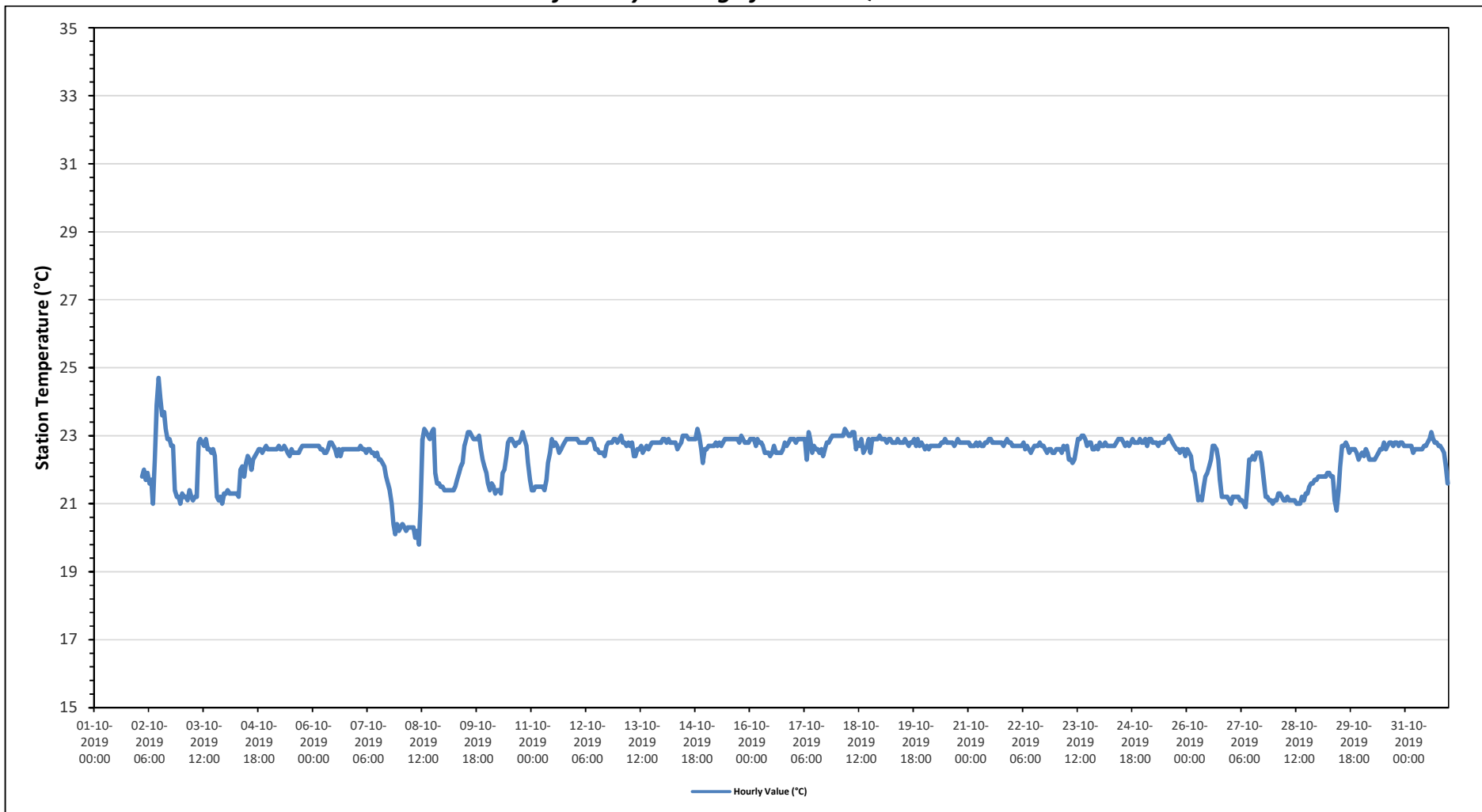
Maximum Hourly Value:	24.7 °C	on October 2 at hour 11	Hours in Service:	718
Maximum Daily Value:	22.9 °C	on	Hours of Data:	718
Minimum Hourly Value:	19.8 °C	on October 8 at hour 10	Hours of Missing Data:	0
Minimum Daily Value:	21.2 °C	on October 28	Hours of Calibration:	0
Monthly Average:	22.4 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1			21.8	22.0	21.7	21.9	21.6	21.7	21.0	22.3	23.9	24.7	24.1	23.6	23.7	23.2	22.9	22.9	22.7	22.7	21.4	21.2	21.2	21.0	21.0	24.7	22.4
Oct 2																											
Oct 3	21.3	21.2	21.2	21.1	21.4	21.2	21.1	21.2	21.2	22.8	22.9	22.8	22.7	22.9	22.6	22.6	22.5	22.6	22.4	21.2	21.1	21.2	21.0	21.3	21.0	22.9	21.8
Oct 4	21.3	21.4	21.3	21.3	21.3	21.3	21.3	21.2	22.0	22.1	21.8	22.2	22.4	22.3	22.0	22.3	22.4	22.5	22.6	22.6	22.5	22.6	22.7	22.6	21.2	22.7	22.0
Oct 5	22.6	22.6	22.6	22.6	22.6	22.7	22.6	22.6	22.7	22.6	22.5	22.4	22.6	22.5	22.5	22.5	22.5	22.6	22.7	22.7	22.7	22.7	22.7	22.4	22.7	22.6	
Oct 6	22.7	22.7	22.7	22.7	22.6	22.6	22.5	22.5	22.6	22.8	22.8	22.7	22.6	22.4	22.6	22.4	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.4	22.4	22.8	22.6
Oct 7	22.6	22.6	22.7	22.6	22.6	22.5	22.6	22.6	22.5	22.5	22.4	22.5	22.3	22.3	22.2	22.1	21.8	21.6	21.4	21.0	20.4	20.1	20.4	20.2	20.1	22.7	21.9
Oct 8	20.3	20.4	20.3	20.2	20.3	20.3	20.3	20.3	20.0	20.2	19.8	20.9	20.9	22.9	23.2	23.1	23.0	22.9	23.1	23.2	21.9	21.6	21.5	21.5	19.8	23.2	21.4
Oct 9	21.4	21.4	21.4	21.4	21.4	21.4	21.5	21.7	21.9	22.1	22.2	22.7	22.9	23.1	23.1	23.0	22.9	22.9	22.9	23.0	22.6	22.3	22.1	21.9	21.4	23.1	22.2
Oct 10	21.6	21.4	21.6	21.5	21.3	21.4	21.4	21.3	21.9	22.0	22.4	22.8	22.9	22.9	22.8	22.7	22.8	22.8	22.9	23.1	22.9	22.7	22.2	21.7	21.3	23.1	22.2
Oct 11	21.4	21.4	21.5	21.5	21.5	21.5	21.5	21.4	21.7	22.2	22.5	22.9	22.7	22.8	22.7	22.5	22.6	22.7	22.8	22.9	22.9	22.9	22.9	22.9	21.4	22.9	22.3
Oct 12	22.9	22.9	22.8	22.8	22.8	22.8	22.8	22.9	22.9	22.9	22.8	22.6	22.6	22.5	22.5	22.5	22.4	22.7	22.8	22.8	22.8	22.8	22.9	22.8	22.4	22.9	22.8
Oct 13	22.9	23.0	22.8	22.8	22.7	22.8	22.7	22.8	22.4	22.4	22.6	22.6	22.7	22.5	22.6	22.7	22.6	22.7	22.8	22.8	22.8	22.8	22.8	22.8	22.4	23.0	22.7
Oct 14	22.9	22.9	22.8	22.9	22.8	22.8	22.8	22.8	22.6	22.7	22.8	23.0	23.0	22.9	22.9	22.9	22.9	22.9	22.9	23.2	23.0	22.6	22.2	22.6	22.2	23.2	22.8
Oct 15	22.6	22.7	22.7	22.7	22.7	22.8	22.7	22.8	22.7	22.8	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.8	23.0	22.9	22.8	22.8	22.8	22.6	23.0	22.8
Oct 16	22.9	22.9	22.9	22.7	22.9	22.8	22.8	22.7	22.5	22.5	22.5	22.4	22.5	22.7	22.5	22.5	22.5	22.5	22.6	22.8	22.7	22.8	22.9	22.4	22.9	22.7	22.7
Oct 17	22.9	22.8	22.9	22.9	22.9	22.9	22.9	22.3	23.1	22.9	22.5	22.7	22.6	22.6	22.5	22.6	22.4	22.6	22.8	22.8	22.9	23.0	23.0	23.0	22.3	23.1	22.8
Oct 18	23.0	23.0	23.0	23.0	23.2	23.1	23.0	23.0	23.1	23.1	22.6	22.8	22.7	22.9	22.5	22.6	22.7	22.9	22.5	22.9	22.9	22.9	23.0	22.5	22.5	23.2	22.9
Oct 19	22.9	22.9	22.9	22.8	22.9	22.9	22.8	22.8	22.8	22.9	22.8	22.8	22.8	22.9	22.8	22.7	22.8	22.8	22.9	22.7	22.9	22.7	22.8	22.7	22.7	22.9	22.8
Oct 20	22.6	22.7	22.6	22.7	22.7	22.7	22.7	22.7	22.8	22.8	22.8	22.9	22.8	22.8	22.8	22.8	22.7	22.8	22.8	22.9	22.8	22.8	22.8	22.8	22.6	22.9	22.8
Oct 21	22.8	22.7	22.7	22.7	22.8	22.7	22.8	22.7	22.7	22.8	22.8	22.9	22.9	22.8	22.8	22.8	22.8	22.8	22.8	22.7	22.8	22.9	22.8	22.8	22.7	22.9	22.8
Oct 22	22.7	22.7	22.7	22.7	22.7	22.7	22.8	22.6	22.7	22.6	22.5	22.6	22.7	22.7	22.7	22.8	22.7	22.7	22.6	22.5	22.6	22.6	22.5	22.5	22.5	22.8	22.7
Oct 23	22.6	22.6	22.6	22.5	22.7	22.6	22.7	22.3	22.3	22.2	22.3	22.6	22.9	22.9	23.0	23.0	22.9	22.7	22.8	22.8	22.6	22.6	22.7	22.6	22.2	23.0	22.6
Oct 24	22.8	22.7	22.7	22.8	22.7	22.7	22.7	22.7	22.7	22.8	22.9	22.9	22.8	22.7	22.8	22.7	22.8	22.9	22.8	22.8	22.8	22.8	22.9	22.8	22.7	22.9	22.8
Oct 25	22.8	22.9	22.7	22.9	22.9	22.8	22.8	22.8	22.7	22.8	22.8	22.8	22.9	22.9	23.0	22.9	22.8	22.7	22.6	22.6	22.5	22.6	22.6	22.4	22.4	23.0	22.8
Oct 26	22.6	22.5	22.4	22.0	21.9	21.5	21.1	21.2	21.1	21.5	21.8	21.9	22.1	22.3	22.7	22.7	22.6	22.3	21.7	21.2	21.2	21.2	21.1	21.1	21.1	22.7	21.8
Oct 27	21.0	21.2	21.2	21.2	21.1	21.1	21.1	21.0	20.9	21.5	22.3	22.3	22.4	22.3	22.5	22.5	22.5	22.2	21.7	21.2	21.2	21.1	21.0	20.9	20.9	22.5	21.6
Oct 28	21.1	21.1	21.3	21.3	21.2	21.1	21.1	21.2	21.1	21.1	21.1	21.1	21.0	21.0	21.0	21.2	21.1	21.3	21.5	21.6	21.6	21.7	21.7	21.0	21.0	21.7	21.2
Oct 29	21.8	21.8	21.8	21.8	21.8	21.9	21.9	21.8	21.8	21.1	20.8	21.4	22.1	22.7	22.7	22.8	22.7	22.5	22.6	22.6	22.6	22.5	22.3	22.4	20.8	22.8	22.1
Oct 30	22.5	22.4	22.6	22.5	22.3	22.3	22.3	22.3	22.4	22.5	22.6	22.6	22.8	22.6	22.7	22.8	22.8	22.7	22.8	22.8	22.7	22.8	22.8	22.7	22.3	22.8	22.6
Oct 31	22.7	22.7	22.7	22.7	22.5	22.6	22.6	22.6	22.6	22.6	22.7	22.7	22.8	22.9	23.1	22.9	22.8	22.8	22.7	22.7	22.6	22.5	22.1	21.6	21.6	23.1	22.6
Diurnal Maximum	23.0	23.0	23.0	23.2	23.1	23.0	23.0	23.1	23.1	23.9	24.7	24.1	23.6	23.7	23.2	22.9	23.1	23.2	23.2	23.0	23.0	23.0	23.0				
Diurnal Average	22.3	22.3	22.3	22.2	22.2	22.2	22.2	22.2	22.2	22.3	22.4	22.6	22.7	22.7	22.7	22.7	22.6	22.6	22.6	22.5	22.4	22.3	22.3	22.2			

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 Average for ST - AQHI - Cadotte Lake Station





PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

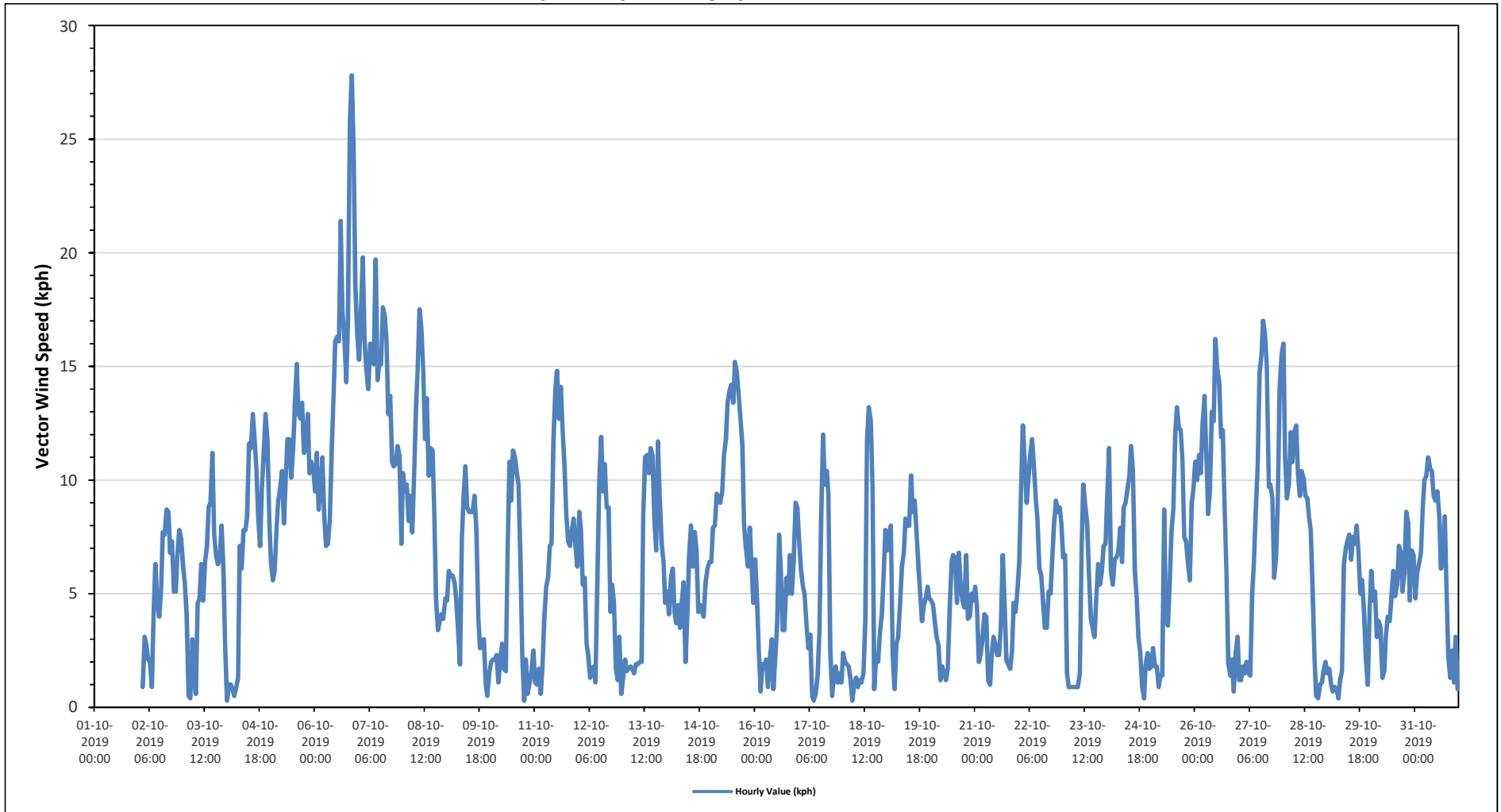
Maximum Hourly Value:	27.8 kph	on October 6 at hour 20	Hours in Service:	718
Maximum Daily Value:	14.7 kph	on	Hours of Data:	718
Minimum Hourly Value:	0.3 kph	on October 4 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	3.2 kph	on October 21	Hours of Calibration:	0
Monthly Average:	2.0 kph		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1			0.9	3.1	2.8	2.1	2	0.9	4.4	6.3	4.5	4	5.2	7.7	7.6	8.7	8.6	6.8	7.3	5.1	5.1	6.7	7.8	7.4	0.9	8.7	5.2
Oct 2																									0.4	11.2	5.4
Oct 3	6.2	5.5	4.1	0.5	0.4	3	1.5	0.6	4.6	4.8	6.3	4.7	6.4	7.1	8.8	9	11.2	7.6	6.7	6.3	6.5	8	6	2.7	0.3	12.9	7.1
Oct 4	0.3	1	1	0.8	0.5	0.9	1.3	7.1	6.1	7.8	7.8	8.4	11.6	11.4	12.9	12	10.5	8.4	7.1	9.7	11.1	12.9	11.7	8.2	0.3	12.9	7.1
Oct 5	6.4	5.6	6	8	9.1	9.7	10.4	8.1	9.9	11.8	11.8	10.1	11.4	13.3	15.1	12.9	12.7	13.4	11.2	11.4	12.9	10.3	10.8	10.5	5.6	15.1	10.5
Oct 6	9.5	11.2	8.7	9.7	11	8.6	7.1	7.2	8.2	11.3	13.4	16.1	16.3	16.1	21.4	17.4	16.3	14.3	17.1	25.7	27.8	24.5	18.6	16.4	7.1	27.8	14.7
Oct 7	15.3	17.6	19.8	16.2	14.8	14	16	15.4	15.1	19.7	14.4	15.1	15.1	17.6	17.2	16.2	12.9	13.7	10.8	10.6	10.7	11.5	11.1	7.2	7.2	19.8	14.5
Oct 8	10.3	9.5	9.8	8.2	9.3	7.7	10.2	13.2	14.9	17.5	16.6	14.8	11.8	13.6	10.2	11.4	11.3	8.8	4.7	3.4	3.8	4.1	3.9	4.8	3.4	17.5	9.7
Oct 9	4.7	6	5.8	5.8	5.5	4.8	3.4	1.9	7.4	9.2	10.6	8.8	8.6	8.6	8.6	9.3	7.7	3.9	2.6	2.9	3	1	0.5	1.5	0.5	10.6	5.5
Oct 10	2	2.1	2.1	2.3	1.1	2.2	2.8	1.7	1.6	6.8	10.8	9.1	11.3	11	10.3	9.8	6.6	2.2	0.3	2.1	0.6	1.1	1.6	2.5	0.3	11.3	4.3
Oct 11	1.1	1	1.7	0.6	1.7	3.9	5.3	5.7	7.1	7.2	11.7	14	14.8	12.7	14.1	12.1	10.8	8.5	7.3	7.1	7.8	8.3	7.1	6.2	0.6	14.8	7.4
Oct 12	8.6	7.8	5.4	5.7	2.8	2.3	1.3	1.7	1.8	1.1	5.6	10	11.9	9.5	10.7	8.8	8.8	4.2	5.4	4.6	1.7	1.2	3.1	0.6	0.6	11.9	5.2
Oct 13	1.3	2.1	1.6	1.7	1.8	1.7	1.5	1.9	1.9	2	2	8.4	11	11.1	10.3	11.4	11.1	8.2	6.9	11.7	9.3	7.2	6.4	4.6	1.3	11.7	5.7
Oct 14	5.1	4.1	5.7	6.1	4.2	3.7	4.5	3.5	4.6	5.5	2	4.1	6.6	8	6.2	7.7	6.9	4.2	4.5	4.2	4	5.5	6.1	6.4	2.0	8.0	5.1
Oct 15	6.4	7.9	8	9.4	9.2	9	9.5	11.1	11.8	13.4	13.9	14.2	13.4	15.2	14.8	13.7	12.7	11.5	8	7	6.2	7.9	6.4	4.6	4.6	15.2	10.2
Oct 16	6.5	4.6	2.5	0.7	1.9	1.8	2.1	0.9	2.1	3	0.8	2.2	3.7	7.6	6	3.4	3.4	5.7	5	6.7	5	6.5	9	8.8	0.7	9.0	4.2
Oct 17	7.3	6	5.3	5	3.6	2.6	3.2	0.5	0.3	0.6	1.4	3.4	8.3	12	9.8	10.4	9.4	2.5	0.5	1.5	1.8	1.1	1.5	1.1	0.3	12.0	4.1
Oct 18	2.4	2	1.9	1.8	1.2	0.3	1	1.3	0.9	1.2	1.1	1.5	3.8	11.8	13.2	12.6	9.6	0.8	2.3	2	3.3	4.1	5.7	7.8	0.3	13.2	3.9
Oct 19	6.9	7.7	8	2.3	0.8	2.8	3.1	4.5	6.2	6.8	8.3	8	8	10.2	8.6	9.1	7.7	6.2	4.9	3.8	4.5	4.8	5.3	4.8	0.8	10.2	6.0
Oct 20	4.7	4.5	3.7	3.1	2.7	1.2	1.8	1.5	1.2	1.7	4.3	6.4	6.7	6.6	4.6	6.8	5.5	4.7	4.4	6.7	3.9	4	5	4.7	1.2	6.8	4.2
Oct 21	5.3	4.4	2	2.4	3	4.1	4	1.2	1	2.3	3.1	2.7	2.3	2.3	3.6	6.7	4.5	2.1	1.9	1.7	2.5	4.6	4.2	5.1	1.0	6.7	3.2
Oct 22	6.4	9.8	12.4	10.8	9	10.1	11.1	11.8	10.5	9.1	8.3	6.1	5.8	4.6	3.5	3.5	5.1	5	6.7	8.1	9.1	8.6	8.8	8.1	3.5	12.4	8.0
Oct 23	6.6	6.7	1.5	0.9	0.9	0.9	0.9	0.9	0.9	1.5	7	9.8	8.9	8.1	5.8	3.9	3.5	3.1	4.9	6.3	5.4	5.9	7.1	7.2	0.9	9.8	4.5
Oct 24	9.1	11.4	6	5.4	6.5	6.6	6.8	7.9	6.4	8.8	9	9.6	10.2	11.5	10.4	6	4.8	3.1	2.4	0.9	0.4	1.9	2.4	1.7	0.4	11.5	6.2
Oct 25	1.8	2.6	1.8	1.8	0.9	1.4	1.4	8.7	3.9	3.6	5.2	7.7	8.7	12	13.2	12.3	12.2	10.9	7.5	7.3	6.4	5.6	9	9.6	0.9	13.2	6.5
Oct 26	10.8	10	11.1	10.3	12.5	13.7	11.1	8.5	9.5	13	12.6	16.2	14.9	14.3	11.9	12.2	8.8	6	1.9	1.4	2.1	0.7	2.4	3.1	0.7	16.2	9.1
Oct 27	1.2	1.2	1.8	1.5	2	1.5	1.4	5	6.3	8.6	10.6	14.7	15.5	17	16.4	15	9.7	9.8	9.2	5.7	6.7	8.9	14	15.5	1.2	17.0	8.3
Oct 28	16	11	9.2	9.8	12.1	10.8	12.1	12.4	10.2	9.3	10.4	10.1	9.3	9.2	8.4	7.8	5.1	2.1	0.5	0.4	1	1.1	1.6	2	0.4	16.0	7.6
Oct 29	1.5	1.7	1	0.7	0.9	0.8	0.4	1.2	1.6	6.3	7	7.3	7.6	6.5	7.5	7.2	8	6.8	5	5.6	4.3	2.1	1	4.4	0.4	8.0	4.0
Oct 30	6	4.7	5.1	3.1	3.8	3.5	1.3	1.6	3.2	4	3.8	5	6	4.9	5.4	7.1	6.8	5.1	5.9	8.6	8.1	4.7	6.9	6.7	1.3	8.6	5.1
Oct 31	4.8	5.9	6.3	6.8	8.8	10	10.2	11	10.5	10.4	9.3	9.1	9.5	8.4	6.1	6.5	8.4	5	2.3	1.3	2.5	1.1	3.1	0.8	0.8	11.0	6.6
Diurnal Maximum	16	18	20	16	15	14	16	15	15	20	17	16	16	18	21	17	16	14	17	26	28	25	19	16			
Diurnal Average	6.0	6.1	5.3	4.8	4.8	4.9	5.0	5.3	5.8	7.2	7.8	8.7	9.5	10.3	10.1	9.7	8.7	6.5	5.5	6.0	5.9	5.9	6.3	5.8			

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.

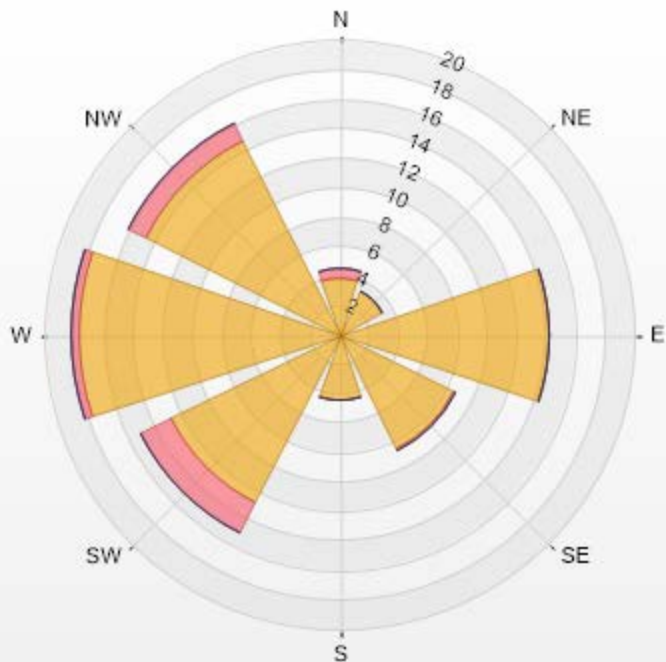
Timeseries Chart of Hourly Average for VWS - AQHI - Cadotte Lake Station



Wind: PRAMP AQHI Poll.: PRAMP AQHI-WDS[KPH] Monthly: 10-2019 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 15.36% Valid Data: 96.30% Calm Avg: 1.12 [KPH]

Direction	6-15	15-29	29-39	>39.0	Total
N	3.84	0.71	0	0	4.55
NE	3.27	0	0	0	3.27
E	14.22	0	0	0	14.22
SE	8.68	0.14	0	0	8.82
S	4.41	0	0	0	4.41
SW	12.8	2.28	0	0	15.08
W	17.64	0.57	0	0	18.21
NW	14.65	1.42	0	0	16.07
Summary	79.51	5.12	0	0	84.63

PRAMP AQHI Poll.: PRAMP AQHI-WDS[KPH] 01-10-2019 00:00 - 31-10-2019 23:00 Calm: 15.36% Calm Poll
Avg: 1.12[KPH]



PRAMP-201910

% Icon Classes (KPH) 80 6 15 5 15-29 0 29-39 0 >39.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

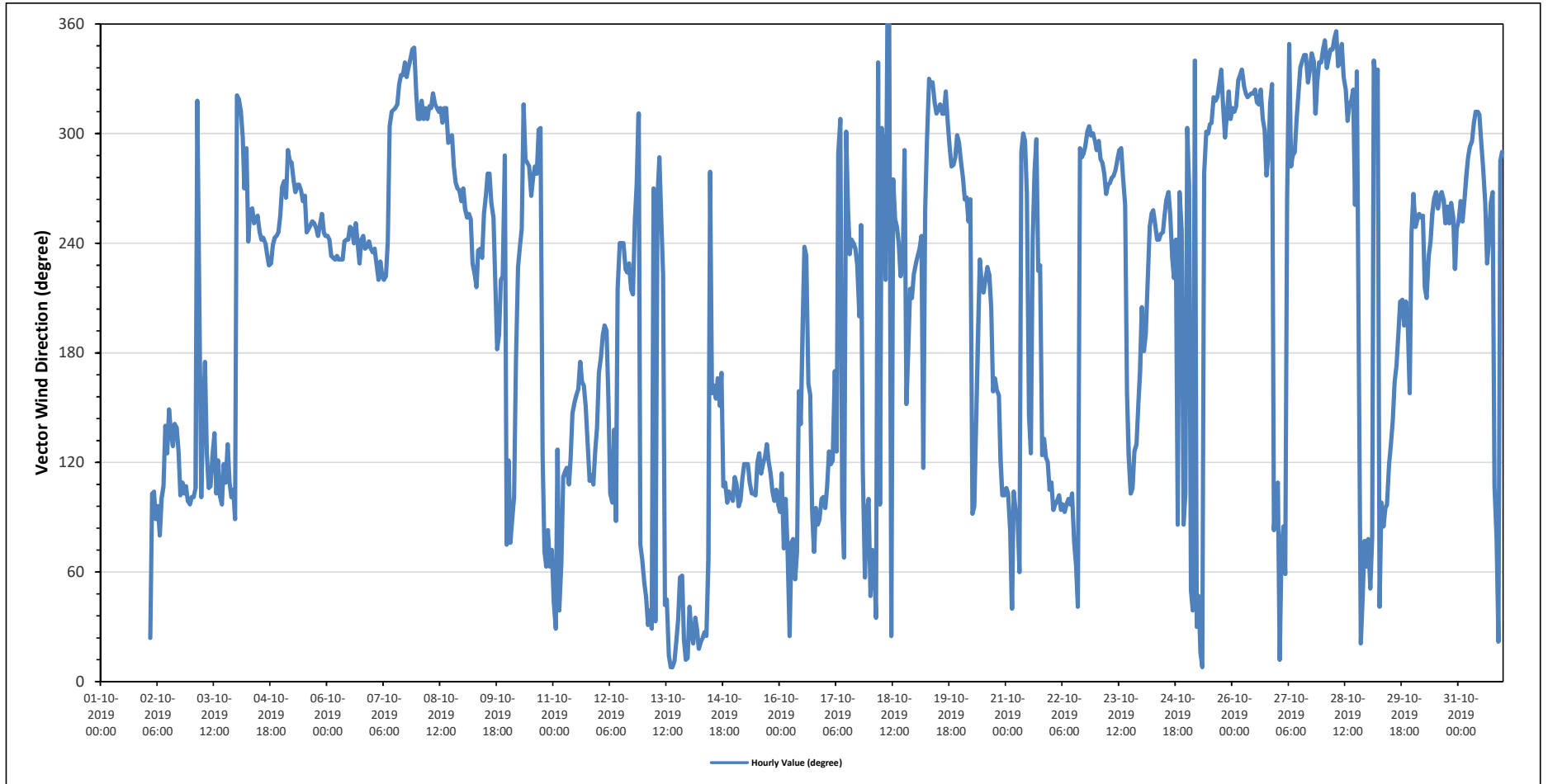
Monthly Average:	269 (W) degree	Hours in Service:	718
		Hours of Data:	718
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

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
Oct 1																									117	ESE
Oct 2																									110	ESE
Oct 3	E	E	NNE	ESE	ESE	E	E	E	E	ESE	SE	SE	SSE	SE	SE	SE	E	ESE	ESE	ESE	ESE	E	E	E	117	ESE
Oct 4	NW	NW	NW	WNW	W	WNW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	246	WSW
Oct 5	W	W	W	WNW	WNW	WNW	W	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	260	WSW
Oct 6	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	SW	SW	WSW	SW	SW	240	WSW
Oct 7	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	287	WNW
Oct 8	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	WNW	WNW	W	W	W	W	W	308	NW
Oct 9	W	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	WSW	W	W	W	W	WSW	SW	S	S	SW	SW	WNW	ENE	249	WSW	
Oct 10	ESE	ENE	E	E	S	SW	SW	WSW	NW	WNW	WNW	W	W	W	W	WNW	WNW	ESE	ENE	ENE	E	ENE	ENE	281	W	
Oct 11	NE	NNE	SE	NE	ENE	ESE	ESE	ESE	ESE	ESE	SE	SSE	SSE	SSE	S	SSE	SSE	SE	ESE	ESE	ESE	SE	SE	140	SE	
Oct 12	SSE	S	S	SSW	S	SSE	ESE	E	SE	E	SSW	WSW	WSW	WSW	SW	SW	SSW	SSW	SSW	WSW	W	NW	ENE	214	SSW	
Oct 13	NE	NE	NNE	NE	NNE	W	NNE	W	WNW	WSW	SW	NE	NE	NNE	N	N	NNE	NNE	NE	ENE	ENE	NNE	NNE	NNE	25	NNE
Oct 14	NE	NNE	NNE	NE	NNE	NNE	NNE	NNE	NNE	ENE	W	SSE	SSE	SSE	SSE	SSE	SSE	ESE	ESE	E	ESE	E	E	91	E	
Oct 15	ESE	ESE	E	E	ESE	ESE	ESE	ESE	ESE	ESE	E	ESE	SE	ESE	ESE	ESE	SE	ESE	ESE	ESE	ESE	E	ESE	E	112	ESE
Oct 16	E	ESE	ENE	E	ENE	NNE	ENE	ENE	NE	ENE	SSE	SE	SSW	SW	SW	SSE	SSE	E	ENE	E	E	E	E	107	ESE	
Oct 17	E	ESE	SE	ESE	ESE	SSE	SE	WNW	NW	E	ENE	WNW	WSW	SW	WSW	WSW	SW	SW	SSW	WSW	ESE	ENE	E	202	SSW	
Oct 18	NE	ENE	ENE	NE	NNW	E	WNW	WNW	SW	N	NNE	W	WSW	WSW	WSW	SW	SW	WNW	SSE	S	SSW	SSW	SW	240	WSW	
Oct 19	SW	SW	SW	WSW	ESE	WSW	WNW	NNW	NW	NNW	NW	NW	NW	NW	NW	NW	WNW	WNW	W	W	WNW	WNW	WNW	297	WNW	
Oct 20	WNW	W	W	W	WSW	W	E	E	SE	S	SW	SW	SSW	SW	SW	SSW	SSE	SSE	SSE	SSE	ESE	E	E	201	SSW	
Oct 21	ESE	ESE	E	NE	ESE	E	E	ENE	WNW	WNW	W	SE	SE	WSW	W	WNW	SW	SW	ESE	SE	ESE	ESE	ESE	121	ESE	
Oct 22	ESE	E	E	E	E	E	E	E	E	E	ESE	ENE	ENE	NE	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	75	ENE	
Oct 23	WNW	WNW	WNW	WNW	W	W	W	W	W	W	W	WNW	WNW	WNW	W	W	SSE	ESE	ESE	ESE	SE	SE	SSE	251	WSW	
Oct 24	SSW	S	S	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	WSW	SW	SW	WSW	E	W	WSW	E	ESE	239	WSW
Oct 25	WNW	W	NE	NE	NNW	NNE	NE	NNE	N	W	WNW	WNW	WNW	NW	NW	NW	NNW	NNW	NW	WNW	NW	NW	NW	320	NW	
Oct 26	NW	NW	NW	NNW	NNW	NNW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	WNW	W	WNW	NW	NW	E	E	322	NW	
Oct 27	ESE	NNE	ENE	E	ENE	W	NNW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	331	NNW	
Oct 28	NNW	N	NNW	NNW	NNW	NNW	N	N	NNW	NNW	NNW	NW	NW	NW	NW	W	NNW	SSE	NNE	NE	ENE	ENE	340	NNW		
Oct 29	ENE	NE	ENE	NNW	NNW	NNW	NE	E	E	ESE	SE	SE	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSE	WSW	158	SSE	
Oct 30	W	WSW	WSW	WSW	WSW	WSW	SW	SSW	SW	WSW	WSW	W	W	WSW	W	W	WSW	WSW	WSW	W	WSW	SW	WSW	254	WSW	
Oct 31	WSW	W	WSW	W	W	WNW	WNW	WNW	NW	NW	NW	NW	WNW	W	W	SW	WSW	W	W	ESE	ENE	NNE	WNW	283	W	

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 - AQHI - Cadotte Lake Station



VOC CANISTER SAMPLING RESULTS



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - October 2019

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	2019-10-18							
Canister Sample	Non-Methane Hydrocarbons							
Canister ID	32240							
Method	NA-025	Method	NA-024	Method	AC-058			
Maximum Reading	2.2	Maximum Reading	1.5	Maximum Reading	30.7			
Parameter	Result (ppmv)	RDL (ppmv)	Parameter	Result (ppbv)	RDL (ppbv)	Parameter	Result (ppbv)	RDL (ppbv)
1-Butene	< 0.17	0.2	2,5-Dimethylthiophene	< 0.5	0.5	1,1,1-Trichloroethane	< 0.03	0.03
Acetylene	< 0.13	0.1	2-Ethylthiophene	< 0.3	0.3	1,1,2,2-Tetrachloroethane	< 0.03	0.03
cis-2-Butene	< 0.07	0.1	2-Methylthiophene	< 0.3	0.3	1,1,2-Trichloroethane	< 0.03	0.03
Ethane	< 0.2	0.2	3-Methylthiophene	< 0.5	0.5	1,1-Dichloroethane	< 0.03	0.03
Ethylacetylene	< 0.10	0.1	Butyl mercaptan	< 0.5	0.5	1,1-Dichloroethylene	< 0.07	0.07
Ethylene	< 0.12	0.1	Carbon disulphide	< 0.3	0.3	1,2,3-Trimethylbenzene	< 0.08	0.08
Isobutane	< 0.2	0.2	Carbonyl sulphide	0.5	0.5	1,2,4-Trichlorobenzene	< 1.3	1.3
Isobutylene	< 0.2	0.2	Dimethyl disulphide	0.5	0.3	1,2,4-Trimethylbenzene	0.29	0.08
Methane	2.2	0.2	Dimethyl sulphide	1.2	0.3	1,2-Dibromoethane	< 0.03	0.03
n-Butane	< 0.3	0.3	Ethyl mercaptan	< 0.5	0.5	1,2-Dichlorobenzene	< 0.05	0.05
n-Propane	< 0.12	0.1	Ethyl sulphide	< 0.5	0.5	1,2-Dichloroethane	< 0.02	0.02
Propylene	< 0.2	0.2	Hydrogen sulphide	1.5	0.2	1,2-Dichloropropane	< 0.02	0.02
Propyne	< 0.2	0.2	Isobutyl mercaptan	< 0.5	0.5	1,3,5-Trimethylbenzene	< 0.03	0.03
trans-2-Butene	< 0.15	0.1	Isopropyl mercaptan	< 0.5	0.5	1,3-Butadiene	1.19	0.03
			Methyl mercaptan	< 0.3	0.3	1,3-Dichlorobenzene	< 0.5	0.5
			Pentyl mercaptan	< 0.7	0.7	1,4-Dichlorobenzene	< 0.7	0.7
			Propyl mercaptan	< 0.7	0.7	1,4-Dioxane	< 0.7	0.7
			tert-Butyl mercaptan	< 0.5	0.5	1-Butene/Isobutylene	5.7	0.03
			Thiophene	< 0.3	0.3	1-Hexene/2-Methyl-1-pentene	0.48	0.03
						1-Pentene	< 0.02	0.02
						2,2,4-Trimethylpentane	< 0.02	0.02
						2,2-Dimethylbutane	< 0.02	0.02
						2,3,4-Trimethylpentane	< 0.02	0.02
						2,3-Dimethylbutane	0.29	0.03
						2,3-Dimethylpentane	0.09	0.03
						2,4-Dimethylpentane	< 0.02	0.02
						2-Methylheptane	0.1	0.02
						2-Methylhexane	0.07	0.02
						2-Methylpentane	0.21	0.02
						3-Methylheptane	< 0.03	0.03
						3-Methylhexane	0.1	0.03
						3-Methylpentane	0.14	0.02
						Acetone	30.7	2.0
						Acrolein	5.5	0.5
						Benzene	6.99	0.02
						Benzyl chloride	< 0.7	0.7
						Bromodichloromethane	< 0.03	0.03
						Bromoform	< 0.03	0.03
						Bromomethane	< 0.02	0.02
						Carbon disulfide	< 0.02	0.02
						Carbon tetrachloride	0.14	0.02
						Chlorobenzene	< 0.03	0.03
						Chloroethane	< 0.03	0.03
						Chloroform	< 0.03	0.03
						Chloromethane	0.91	0.03
						cis-1,2-Dichloroethene	< 0.02	0.02
						cis-1,3-Dichloropropene	< 0.07	0.07
						cis-2-Butene	0.72	0.03
						cis-2-Pentene	0.48	0.03
						Cyclohexane	0.23	0.03
						Cyclopentane	1.06	0.02
						Dibromochloromethane	< 0.02	0.02
						Ethanol	8.1	0.5
						Ethyl acetate	< 0.7	0.7
						Ethylbenzene	0.52	0.02
						Freon-11	0.55	0.03
						Freon-113	< 0.02	0.02
						Freon-114	< 0.03	0.03



PEACE RIVER AREA MONITORING PROGRAM

Reno Site - October 2019

Volatile Organic Compounds (VOCs) Results

Sample Date/Time			2019-10-18					
Canister Sample			Non-Methane Hydrocarbons					
Canister ID			32240					
Method		NA-025	Method		NA-024	Method		AC-058
Maximum Reading		2.2	Maximum Reading		1.5	Maximum Reading		30.7
		Methane			Carbonyl sulphide			Acetone
Parameter	Result (ppmv)	RDL (ppmv)	Parameter	Result (ppbv)	RDL (ppbv)	Parameter	Result (ppbv)	RDL (ppbv)
						Freon-12	0.76	0.03
						Hexachloro-1,3-butadiene	< 0.83	0.83
						Isobutane	2.57	0.03
						Isopentane	1.53	0.05
						Isoprene	0.57	0.02
						Isopropyl alcohol	0.8	0.7
						Isopropylbenzene	0.03	0.02
						m,p-Xylene	0.79	0.05
						m-Diethylbenzene	< 0.07	0.07
						m-Ethyltoluene	0.26	0.13
						Methyl butyl ketone	< 0.83	0.83
						Methyl ethyl ketone	2.8	0.5
						Methyl isobutyl ketone	< 0.7	0.7
						Methyl methacrylate	< 0.12	0.12
						Methyl tert butyl ether	< 0.05	0.05
						Methylcyclohexane	0.14	0.02
						Methylcyclopentane	0.17	0.03
						Methylene chloride	< 0.5	0.5
						n-Butane	2.88	0.05
						n-Decane	0.22	0.10
						n-Dodecane	< 0.7	0.7
						n-Heptane	0.36	0.02
						n-Hexane	0.47	0.02
						n-Nonane	0.22	0.02
						n-Octane	0.25	0.03
						n-Pentane	1.7	0.2
						n-Propylbenzene	0.23	0.08
						n-Undecane	< 0.8	0.8
						Naphthalene	< 0.8	0.8
						o-Ethyltoluene	0.15	0.02
						o-Xylene	0.38	0.02
						p-Diethylbenzene	< 0.07	0.07
						p-Ethyltoluene	< 0.12	0.12
						Styrene	0.63	0.07
						Tetrachloroethylene	< 0.07	0.07
						Tetrahydrofuran	< 0.7	0.7
						Toluene	3.46	0.02
						trans-1,2-Dichloroethylene	< 0.02	0.02
						trans-1,3-Dichloropropylene	< 0.07	0.07
						trans-2-Butene	0.94	0.02
						trans-2-Pentene	0.47	0.03
						Trichloroethylene	< 0.07	0.07
						Vinyl acetate	< 0.7	0.7
						Vinyl chloride	< 0.03	0.03

REFERENCE DOCUMENTS

HOURLY INSTANTANEOUS DATA

986c STATION



PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Instantaneous Maximums

SULPHUR DIOXIDE (SO₂) in ppb

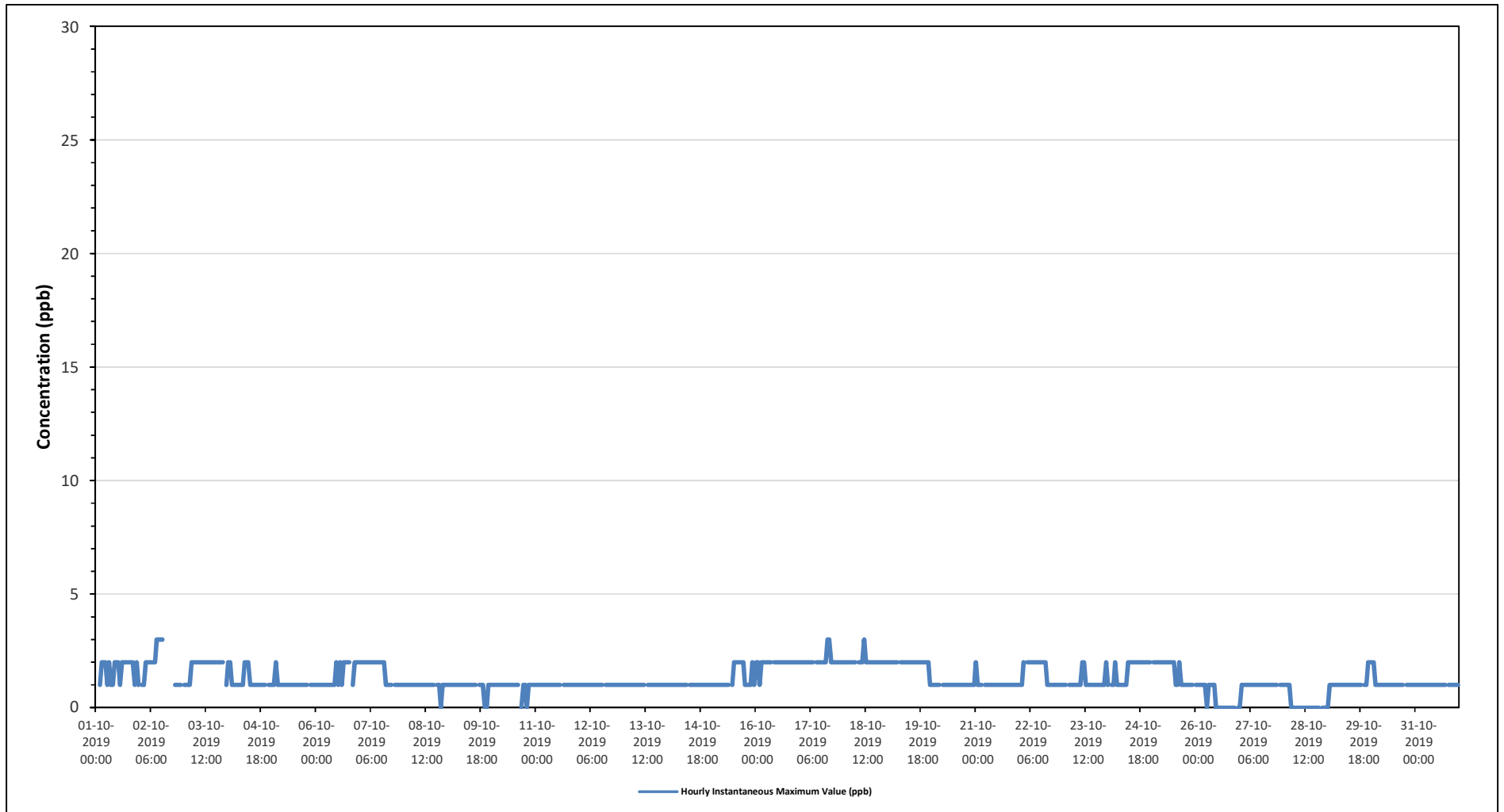
Maximum Hourly Value:	3 ppb on October 2 at hour 9	Hours in Service:	744
Maximum Daily Value:	2.1 ppb on October 17	Hours of Data:	705
Minimum Hourly Value:	0 ppb on October 8 at hour 20	Hours of Missing Data:	0
Minimum Daily Value:	0.2 ppb on October 28	Hours of Calibration:	39
Monthly Average:	1.3 ppb	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23						
Oct 1	1	S	1	2	2	2	1	2	1	1	2	2	2	1	2	2	2	2	2	2	2	1	2	1	1	2	1	1	2	1	1	2	1.7
Oct 2	S	1	1	2	2	2	2	2	2	3	3	3	3	C	C	C	C	C	C	1	1	1	1	1	S	S	1	3	2	-			
Oct 3	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	1	1	2	1.8		
Oct 4	2	2	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	2	2	1.2			
Oct 5	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	2	2	1.0			
Oct 6	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	2	2	2	2	2	S	1	2	2	2	2	2	2	2	1.4		
Oct 7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	S	1	1	1	1	1	1	1	1	2	1.6			
Oct 8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	0	1	1	1	1	1	0	1	1.0			
Oct 9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	0	0	1	1	1	1	0	1	0.9			
Oct 10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	0	1	1	0	1	1	1	1	1	1	0	1	0.9			
Oct 11	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	1	1	1	1	1.0			
Oct 12	1	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	1	1.0			
Oct 13	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	1	1	1.0			
Oct 14	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	1	1	1	1.0			
Oct 15	1	1	1	1	1	1	1	1	1	1	S	1	2	2	2	2	2	2	2	2	2	1	1	1	1	2	1	1	2	1.3			
Oct 16	2	2	1	2	2	2	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0			
Oct 17	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2.1			
Oct 18	2	2	2	2	2	2	2	S	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0			
Oct 19	2	2	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0			
Oct 20	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	1	1	1.0			
Oct 21	2	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	1	1.0			
Oct 22	1	1	2	S	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5			
Oct 23	1	1	S	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1.1			
Oct 24	1	S	1	1	2	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.6			
Oct 25	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	S	1	2	1.6			
Oct 26	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.4			
Oct 27	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	0	1	1	1.0			
Oct 28	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0	0	0	0.2			
Oct 29	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	2	2	0	2	1.0				
Oct 30	2	2	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	2	1.1			
Oct 31	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	1	1	1.0			
Diurnal Maximum	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2			
Diurnal Average	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.3	1.2	1.3	1.4	1.5	1.4	1.3	1.2	1.3	1.2	1.3	1.2	1.3	1.2	1.1	1.1	1.1	1.3	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 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Instantaneous Maximums

TOTAL REDUCED SULPHUR (TRS) in ppb

Maximum Hourly Value:	5.12 ppb	on October 21 at hour 18	Hours in Service:	744
Maximum Daily Value:	2.05 ppb	on October 17	Hours of Data:	654
Minimum Hourly Value:	-0.91 ppb	on October 1 at hour 9	Hours of Missing Data:	53
Minimum Daily Value:	-0.81 ppb	on October 1	Hours of Calibration:	37
Monthly Average:	0.41 ppb		Operational Uptime:	92.9

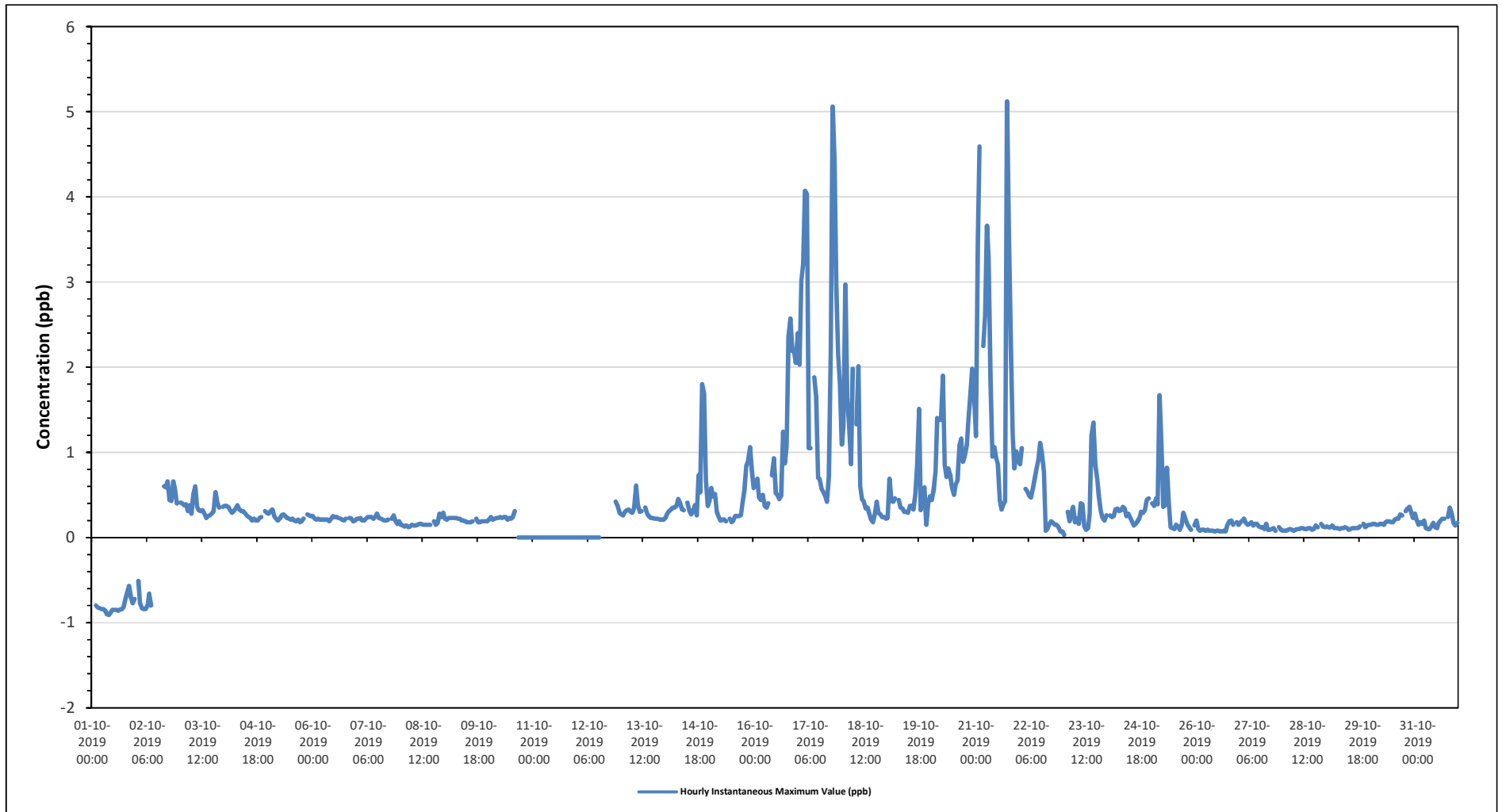
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	-0.87	S	-0.8	-0.82	-0.83	-0.84	-0.84	-0.86	-0.9	-0.91	-0.88	-0.85	-0.85	-0.85	-0.86	-0.85	-0.84	-0.82	-0.73	-0.64	-0.57	-0.71	-0.77	-0.72	-0.91	-0.57	-0.81	
Oct 2	S	-0.51	-0.77	-0.83	-0.84	-0.84	-0.8	-0.66	-0.8	C	C	C	C	C	C	0.6	0.59	0.66	0.44	0.43	0.66	0.58	0.4	S	-0.84	0.66	-	
Oct 3	0.41	0.4	0.38	0.39	0.31	0.38	0.28	0.51	0.6	0.36	0.32	0.31	0.32	0.28	0.23	0.25	0.26	0.28	0.31	0.53	0.42	0.35	S	S	0.23	0.60	0.36	
Oct 4	0.37	0.37	0.36	0.32	0.29	0.31	0.34	0.38	0.33	0.31	0.31	0.29	0.26	0.24	0.23	0.2	0.22	0.2	0.2	0.23	0.24	S	0.31	0.29	0.20	0.38	0.29	
Oct 5	0.28	0.31	0.33	0.25	0.22	0.2	0.22	0.26	0.27	0.25	0.23	0.22	0.21	0.22	0.2	0.19	0.21	0.18	0.19	0.22	S	0.27	0.26	0.25	0.18	0.33	0.24	
Oct 6	0.25	0.22	0.21	0.22	0.21	0.21	0.21	0.21	0.21	0.19	0.22	0.25	0.24	0.24	0.23	0.22	0.21	0.2	0.22	S	0.23	0.22	0.19	0.2	0.19	0.25	0.22	
Oct 7	0.22	0.22	0.23	0.2	0.2	0.22	0.24	0.24	0.24	0.22	0.24	0.28	0.23	0.22	0.21	0.2	0.2	0.21	S	0.22	0.26	0.2	0.16	0.19	0.16	0.28	0.22	
Oct 8	0.15	0.14	0.13	0.14	0.12	0.13	0.15	0.14	0.14	0.15	0.16	0.16	0.15	0.15	0.15	0.15	0.15	S	0.19	0.15	0.17	0.28	0.24	0.29	0.12	0.29	0.16	
Oct 9	0.22	0.21	0.23	0.23	0.23	0.23	0.23	0.22	0.22	0.2	0.2	0.19	0.18	0.18	0.18	0.19	S	0.22	0.18	0.18	0.19	0.19	0.19	0.19	0.18	0.23	0.20	
Oct 10	0.21	0.24	0.21	0.22	0.23	0.23	0.24	0.23	0.24	0.24	0.21	0.23	0.22	0.24	0.31	S	X	X	X	X	X	X	X	X	X	0.21	0.31	-
Oct 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0.21	0.31	-
Oct 12	X	X	X	X	X	X	X	X	X	X	X	X	Y	Y	Y	Y	Y	Y	C1	C1	C1	C1	0.42	0.37	0.29	0.29	0.42	-
Oct 13	0.27	0.26	0.3	0.32	0.33	0.3	0.29	0.35	0.61	0.38	0.3	0.31	S	0.35	0.28	0.25	0.23	0.23	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.61	0.29
Oct 14	0.23	0.28	0.31	0.33	0.35	0.35	0.37	0.45	0.4	0.33	0.32	S	0.41	0.31	0.27	0.31	0.38	0.26	0.73	0.53	1.8	1.69	0.67	0.37	0.23	1.80	0.50	
Oct 15	0.43	0.58	0.48	0.51	0.3	0.24	0.2	0.21	0.21	0.19	S	0.22	0.18	0.2	0.25	0.25	0.25	0.26	0.4	0.55	0.84	0.9	1.06	0.8	0.18	1.06	0.41	
Oct 16	0.58	0.62	0.69	0.47	0.44	0.5	0.37	0.35	0.4	S	0.73	0.93	0.52	0.5	0.45	0.49	1.24	0.87	1.07	2.36	2.57	2.19	2.19	2.05	0.35	2.57	0.98	
Oct 17	2.4	2.03	3.01	3.21	4.07	4.03	1.05	1.05	S	1.88	1.65	0.7	0.69	0.57	0.53	0.48	0.42	0.72	2.21	5.06	4.42	2.97	2.15	1.8	0.42	5.06	2.05	
Oct 18	1.09	1.3	2.97	1.64	1.32	0.86	1.98	S	1.33	2.01	0.6	0.45	0.42	0.34	0.35	0.28	0.21	0.18	0.28	0.42	0.29	0.27	0.24	0.24	0.18	2.97	0.83	
Oct 19	0.22	0.23	0.69	0.43	0.42	0.46	S	0.44	0.35	0.34	0.3	0.3	0.29	0.37	0.37	0.33	0.5	0.84	1.51	0.32	0.41	0.59	0.15	0.4	0.15	1.51	0.45	
Oct 20	0.48	0.44	0.56	0.78	1.4	S	1.38	1.9	0.85	0.71	0.81	0.74	0.58	0.5	0.62	0.67	1.08	1.16	0.89	0.96	1.08	1.41	1.68	1.98	0.44	1.98	0.99	
Oct 21	1.71	1.19	3.45	4.59	S	2.25	2.6	3.66	3.28	1.85	0.95	1.06	0.93	0.86	0.44	0.33	0.39	0.43	S	5.12	3.6	2.26	1.2	0.81	1.01	0.33	5.12	1.91
Oct 22	0.91	0.86	1.05	S	0.57	0.54	0.49	0.47	0.57	0.69	0.81	0.91	1.11	0.99	0.77	0.08	0.1	0.16	0.19	0.17	0.15	0.15	0.12	0.07	0.07	1.11	0.52	
Oct 23	0.07	0.03	S	0.3	0.19	0.3	0.36	0.18	0.22	0.16	0.4	0.39	0.13	0.09	0.11	0.27	1.2	1.35	0.85	0.69	0.48	0.31	0.23	0.2	0.03	1.35	0.37	
Oct 24	0.26	S	0.26	0.24	0.25	0.33	0.34	0.31	0.32	0.36	0.34	0.25	0.28	0.23	0.19	0.14	0.16	0.19	0.23	0.3	0.29	0.32	0.44	0.46	0.14	0.46	0.28	
Oct 25	S	0.4	0.37	0.46	0.39	1.67	1.1	0.36	0.38	0.82	0.41	0.12	0.11	0.1	0.15	0.13	0.09	0.15	0.29	0.22	0.16	0.12	0.09	S	0.09	1.67	0.37	
Oct 26	0.14	0.2	0.1	0.08	0.09	0.09	0.08	0.09	0.08	0.08	0.08	0.07	0.08	0.08	0.07	0.07	0.08	0.07	0.15	0.19	0.2	0.15	S	0.18	0.07	0.20	0.11	
Oct 27	0.15	0.18	0.2	0.22	0.17	0.15	0.16	0.18	0.14	0.16	0.16	0.13	0.12	0.12	0.1	0.16	0.09	0.09	0.1	0.11	0.08	S	0.12	0.09	0.08	0.22	0.14	
Oct 28	0.08	0.08	0.08	0.09	0.1	0.09	0.08	0.09	0.1	0.1	0.11	0.11	0.1	0.1	0.11	0.11	0.09	0.1	0.14	0.12	S	0.16	0.13	0.12	0.08	0.16	0.10	
Oct 29	0.13	0.12	0.12	0.14	0.11	0.11	0.11	0.1	0.11	0.11	0.12	0.11	0.09	0.1	0.11	0.11	0.11	0.11	0.13	S	0.16	0.12	0.14	0.15	0.09	0.16	0.12	
Oct 30	0.15	0.16	0.16	0.15	0.15	0.16	0.16	0.15	0.18	0.19	0.19	0.18	0.18	0.21	0.22	0.22	0.27	0.26	S	0.31	0.34	0.36	0.29	0.23	0.15	0.36	0.21	
Oct 31	0.28	0.2	0.15	0.18	0.16	0.2	0.11	0.1	0.1	0.13	0.17	0.12	0.11	0.17	0.2	0.22	0.22	S	0.24	0.35	0.28	0.17	0.14	0.17	0.10	0.35	0.18	
Diurnal Maximum	2.40	2.03	3.45	4.59	4.07	4.03	2.60	3.66	3.28	2.01	1.65	1.06	1.11	0.99	0.77	0.67	1.24	1.35	5.12	5.06	4.42	2.97	2.19	2.05				
Diurnal Average	0.40	0.40	0.55	0.52	0.39	0.46	0.41	0.40	0.36	0.43	0.35	0.30	0.27	0.25	0.23	0.22	0.30	0.33	0.61	0.68	0.68	0.56	0.45	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 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Instantaneous Maximums

TOTAL HYDROCARBONS (THC) in ppm

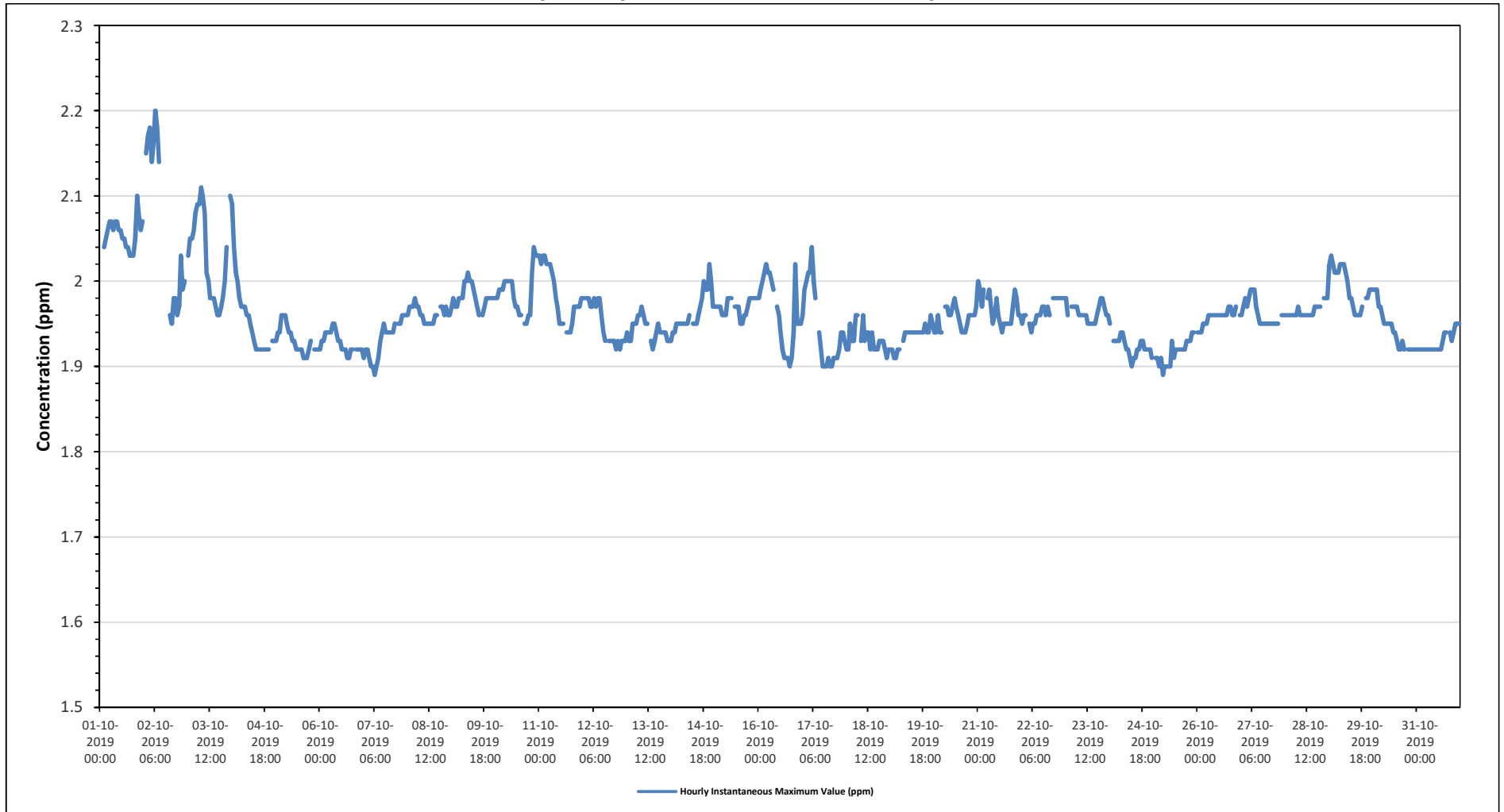
Maximum Hourly Value:	2.20 ppm on October 2 at hour 6	Hours in Service:	744
Maximum Daily Value:	2.06 ppm on October 1	Hours of Data:	705
Minimum Hourly Value:	1.89 ppm on October 7 at hour 6	Hours of Missing Data:	1
Minimum Daily Value:	1.92 ppm on October 25	Hours of Calibration:	38
Monthly Average:	1.96 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	
Oct 1	2.04	S	2.04	2.05	2.06	2.07	2.07	2.06	2.07	2.07	2.06	2.06	2.05	2.05	2.04	2.04	2.03	2.03	2.03	2.05	2.10	2.08	2.06	2.07	2.03	2.10	2.06	
Oct 2	S	2.15	2.17	2.18	2.14	2.16	2.20	2.18	2.14	C	C	C	C	C	1.96	1.95	1.98	1.98	1.96	1.97	2.03	1.99	2.00	S	2.10	1.95	2.20	-
Oct 3	2.03	2.05	2.05	2.06	2.08	2.09	2.09	2.11	2.10	2.08	2.01	2.00	1.98	1.98	1.98	1.97	1.96	1.96	1.97	1.98	2.00	2.04	S	2.10	1.96	2.11	2.03	
Oct 4	2.09	2.04	2.01	2.00	1.98	1.97	1.97	1.97	1.96	1.96	1.95	1.94	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	S	1.93	1.93	1.92	2.09	1.96	
Oct 5	1.93	1.94	1.94	1.96	1.96	1.96	1.95	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.93	S	1.92	1.92	1.92	1.91	1.96	1.93	
Oct 6	1.92	1.93	1.93	1.94	1.94	1.94	1.94	1.95	1.95	1.94	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.92	1.92	S	1.92	1.92	1.92	1.92	1.91	1.95	1.93	
Oct 7	1.91	1.92	1.92	1.91	1.90	1.90	1.89	1.90	1.91	1.93	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.95	S	1.95	1.95	1.96	1.96	1.96	1.89	1.96	1.93	
Oct 8	1.96	1.97	1.97	1.97	1.98	1.97	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	S	1.97	1.97	1.96	1.97	1.96	1.96	1.95	1.98	1.96	
Oct 9	1.97	1.98	1.97	1.97	1.98	1.98	1.98	2.00	2.00	2.01	2.00	2.00	1.99	1.98	1.97	S	1.96	S	1.96	1.97	1.98	1.98	1.98	1.98	1.96	2.01	1.98	
Oct 10	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	2.00	1.98	1.97	1.97	1.96	1.96	S	1.95	1.95	1.96	1.96	2.01	2.04	2.03	2.03	1.95	2.04	1.99	
Oct 11	2.03	2.02	2.03	2.03	2.02	2.02	2.02	2.01	2.00	1.98	1.97	1.95	1.95	1.95	S	1.94	1.94	1.94	1.95	1.97	1.97	1.97	1.97	1.98	1.94	2.03	1.98	
Oct 12	1.98	1.98	1.98	1.98	1.97	1.97	1.98	1.97	1.98	1.98	1.96	1.94	1.93	S	1.93	1.93	1.93	1.93	1.92	1.93	1.92	1.93	1.93	1.93	1.92	1.98	1.95	
Oct 13	1.94	1.93	1.93	1.95	1.95	1.95	1.96	1.96	1.97	1.96	1.95	1.95	S	1.93	1.92	1.93	1.94	1.95	1.94	1.94	1.94	1.93	1.93	1.93	1.92	1.97	1.94	
Oct 14	1.93	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	S	1.95	1.95	1.95	1.96	1.97	1.98	2.00	1.99	1.99	2.02	2.00	1.97	1.93	2.02	1.96	
Oct 15	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.98	1.98	1.98	S	1.97	1.97	1.97	1.95	1.95	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.98	1.95	1.98	1.97	
Oct 16	1.98	1.99	2.00	2.01	2.02	2.01	2.01	2.00	1.99	S	1.97	1.96	1.94	1.92	1.91	1.91	1.91	1.90	1.91	1.91	1.94	2.02	1.95	1.95	1.90	2.02	1.96	
Oct 17	1.96	1.99	2.00	2.01	2.01	2.04	2.00	1.98	S	1.94	1.92	1.90	1.90	1.90	1.91	1.90	1.90	1.91	1.91	1.91	1.91	1.92	1.94	1.94	1.93	1.90	2.04	1.94
Oct 18	1.92	1.92	1.95	1.93	1.93	1.96	1.96	S	1.93	1.96	1.93	1.94	1.94	1.92	1.94	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.92	1.91	1.92	1.91	1.96	1.93
Oct 19	1.92	1.92	1.91	1.91	1.92	1.92	S	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	1.94	1.94	1.96	1.95	1.91	1.96	1.94	
Oct 20	1.94	1.94	1.96	1.94	1.94	S	1.97	1.97	1.96	1.96	1.97	1.98	1.97	1.96	1.95	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.97	1.94	1.98	1.96	
Oct 21	2.00	1.99	1.97	1.99	S	1.98	1.99	1.97	1.95	1.96	1.98	1.96	1.95	1.94	1.95	1.95	1.95	1.95	1.95	1.97	1.99	1.98	1.96	1.96	1.94	2.00	1.97	
Oct 22	1.95	1.96	1.96	S	1.95	1.94	1.95	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.97	1.96	X	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.94	1.98	1.97
Oct 23	1.98	1.96	S	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.98	1.98	1.97	1.96	1.96	1.95	1.98	1.96	
Oct 24	1.95	S	1.93	1.93	1.93	1.93	1.94	1.94	1.93	1.92	1.92	1.91	1.90	1.91	1.91	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.91	1.90	1.95	1.92	
Oct 25	S	1.91	1.91	1.90	1.91	1.89	1.90	1.90	1.90	1.90	1.93	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.94	1.94	S	1.89	1.94	1.92	
Oct 26	1.94	1.94	1.94	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.97	S	1.96	1.94	1.96	
Oct 27	1.96	1.97	1.98	1.97	1.98	1.99	1.99	1.99	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.96	1.96	1.95	1.99	1.96	
Oct 28	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	S	1.98	1.98	1.98	1.96	1.98	1.96	
Oct 29	2.02	2.03	2.02	2.01	2.01	2.01	2.02	2.02	2.02	2.01	2.00	1.98	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	S	1.98	1.98	1.99	1.99	1.96	2.03	1.99
Oct 30	1.99	1.99	1.99	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.93	1.92	1.92	1.93	1.92	S	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.94	
Oct 31	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	S	1.94	1.93	1.94	1.95	1.95	1.95	1.92	1.95	1.93	
Diurnal Maximum	2.09	2.15	2.17	2.18	2.14	2.16	2.20	2.18	2.14	2.08	2.06	2.06	2.05	2.05	2.04	2.04	2.03	2.03	2.05	2.10	2.08	2.06	2.10	2.06	2.03	2.10	2.06	
Diurnal Average	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.97	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.95	1.95	1.96	1.97	1.97	1.96	1.96	1.92	1.95	1.93	

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 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Instantaneous Maximums

METHANE (CH4) in ppm

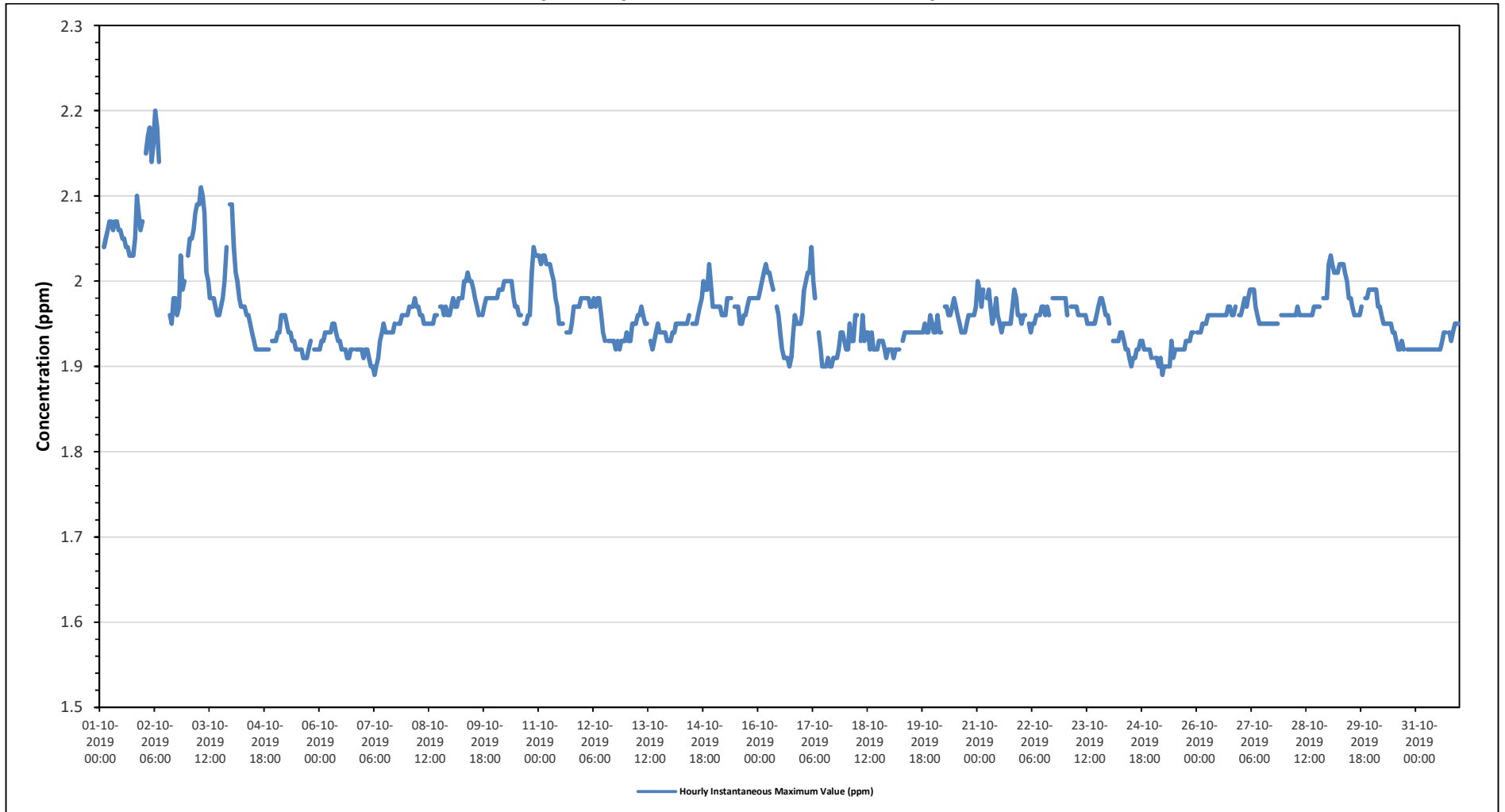
Maximum Hourly Value:	2.20 ppm on October 2 at hour 6	Hours in Service:	744
Maximum Daily Value:	2.06 ppm on October 1	Hours of Data:	705
Minimum Hourly Value:	1.89 ppm on October 7 at hour 6	Hours of Missing Data:	1
Minimum Daily Value:	1.92 ppm on October 25	Hours of Calibration:	38
Monthly Average:	1.96 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
Oct 1	2.04	S	2.04	2.05	2.06	2.07	2.07	2.06	2.07	2.07	2.06	2.06	2.05	2.05	2.04	2.04	2.03	2.03	2.03	2.05	2.10	2.08	2.06	2.07	2.03	2.10	2.06
Oct 2	S	2.15	2.17	2.18	2.14	2.16	2.20	2.18	2.14	C	C	C	C	C	1.96	1.95	1.98	1.98	1.96	1.97	2.03	1.99	2.00	S	1.95	2.20	-
Oct 3	2.03	2.05	2.05	2.06	2.08	2.09	2.09	2.11	2.10	2.08	2.01	2.00	1.98	1.98	1.98	1.97	1.96	1.96	1.97	1.98	2.00	2.04	S	2.09	1.96	2.11	2.03
Oct 4	2.09	2.04	2.01	2.00	1.98	1.97	1.97	1.97	1.96	1.96	1.95	1.94	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	S	1.93	1.93	1.92	2.09	1.96
Oct 5	1.93	1.94	1.94	1.96	1.96	1.96	1.95	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.93	S	1.92	1.92	1.92	1.91	1.96	1.93
Oct 6	1.92	1.93	1.93	1.94	1.94	1.94	1.94	1.95	1.95	1.94	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.92	1.92	S	1.92	1.92	1.92	1.92	1.91	1.95	1.93
Oct 7	1.91	1.92	1.92	1.91	1.90	1.90	1.89	1.90	1.91	1.93	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.95	S	1.95	1.95	1.96	1.96	1.96	1.89	1.96	1.93
Oct 8	1.96	1.97	1.97	1.97	1.98	1.97	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	S	1.97	1.97	1.96	1.97	1.96	1.96	1.95	1.98	1.96
Oct 9	1.97	1.98	1.97	1.97	1.98	1.98	1.98	2.00	2.00	2.01	2.00	2.00	1.99	1.98	1.97	S	S	1.96	1.97	1.98	1.98	1.98	1.98	1.98	1.96	2.01	1.98
Oct 10	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	2.00	1.98	1.97	1.97	1.96	1.96	S	S	1.95	1.95	1.96	2.01	2.04	2.03	2.03	1.95	2.04	1.99
Oct 11	2.03	2.02	2.03	2.03	2.02	2.02	2.02	2.01	2.00	1.98	1.97	1.95	1.95	1.95	S	1.94	1.94	1.94	1.95	1.97	1.97	1.97	1.97	1.98	1.94	2.03	1.98
Oct 12	1.98	1.98	1.98	1.98	1.97	1.97	1.98	1.97	1.98	1.98	1.96	1.94	1.93	S	1.93	1.93	1.93	1.93	1.92	1.93	1.92	1.93	1.93	1.93	1.92	1.98	1.95
Oct 13	1.94	1.93	1.93	1.95	1.95	1.95	1.96	1.96	1.97	1.96	1.95	1.95	S	S	1.93	1.92	1.93	1.94	1.95	1.94	1.94	1.94	1.93	1.93	1.92	1.97	1.94
Oct 14	1.93	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	S	S	1.95	1.95	1.95	1.96	1.97	1.98	2.00	1.99	1.99	2.02	2.00	1.97	1.93	2.02
Oct 15	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.98	1.98	1.98	S	S	1.97	1.97	1.97	1.95	1.95	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.95	1.98	1.97
Oct 16	1.98	1.99	2.00	2.01	2.02	2.01	2.01	2.00	1.99	S	S	1.97	1.96	1.94	1.92	1.91	1.91	1.91	1.90	1.91	1.94	1.96	1.95	1.95	1.90	2.02	1.96
Oct 17	1.96	1.99	2.00	2.01	2.01	2.04	2.00	1.98	S	S	1.94	1.92	1.90	1.90	1.90	1.91	1.90	1.90	1.91	1.91	1.91	1.92	1.94	1.94	1.93	1.90	2.04
Oct 18	1.92	1.92	1.95	1.93	1.93	1.96	1.96	S	S	1.93	1.96	1.93	1.94	1.94	1.92	1.94	1.92	1.92	1.92	1.93	1.93	1.93	1.92	1.91	1.92	1.91	1.96
Oct 19	1.92	1.92	1.91	1.92	1.92	1.92	S	S	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.96	1.95	1.91	1.96	1.94
Oct 20	1.94	1.94	1.96	1.94	1.94	S	S	1.97	1.97	1.96	1.96	1.97	1.98	1.97	1.96	1.95	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.97	1.94	1.98	1.96
Oct 21	2.00	1.99	1.97	1.99	S	S	1.98	1.99	1.97	1.95	1.96	1.98	1.96	1.95	1.94	1.95	1.95	1.95	1.95	1.95	1.97	1.99	1.98	1.96	1.96	1.94	2.00
Oct 22	1.95	1.96	1.96	S	S	1.95	1.94	1.95	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.97	1.96	X	1.98	1.98	1.98	1.98	1.98	1.98	1.94	1.98
Oct 23	1.98	1.96	S	S	1.97	1.97	1.97	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	1.98	1.98	1.97	1.96	1.96	1.95	1.98
Oct 24	1.95	S	S	1.93	1.93	1.93	1.94	1.94	1.93	1.92	1.92	1.91	1.90	1.91	1.91	1.91	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.91	1.90	1.95	1.92
Oct 25	S	1.91	1.91	1.90	1.91	1.89	1.90	1.90	1.90	1.90	1.93	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.94	1.94	S	1.89	1.94	1.92
Oct 26	1.94	1.94	1.94	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.97	S	1.96	1.94	1.96
Oct 27	1.96	1.97	1.98	1.97	1.98	1.99	1.99	1.99	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.96	1.95	1.99	1.96
Oct 28	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	S	1.98	1.98	1.98	1.96	1.98
Oct 29	2.02	2.03	2.02	2.01	2.01	2.01	2.02	2.02	2.02	2.01	2.00	1.98	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	S	1.98	1.98	1.99	1.96	2.03
Oct 30	1.99	1.99	1.99	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.93	1.92	1.92	1.93	1.92	S	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.94
Oct 31	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	S	1.94	1.93	1.94	1.95	1.95	1.95	1.92	1.95	1.93
Diurnal Maximum	2.09	2.15	2.17	2.18	2.14	2.16	2.20	2.18	2.14	2.08	2.06	2.06	2.05	2.05	2.04	2.04	2.03	2.03	2.05	2.10	2.08	2.06	2.09				
Diurnal Average	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.97	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.95	1.95	1.96	1.96	1.97	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 Instantaneous Maximum for CH4 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Instantaneous Maximums

NON-METHANE HYDROCARBONS (NMHC) in ppm

Maximum Hourly Value:	0.06 ppm on October 16 at hour 20	Hours in Service:	744
Maximum Daily Value:	0.00 ppm on October 16	Hours of Data:	705
Minimum Hourly Value:	0.00 ppm on October 1 at hour 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00 ppm on October 1	Hours of Calibration:	38
Monthly Average:	0.00 ppm	Operational Uptime:	99.9

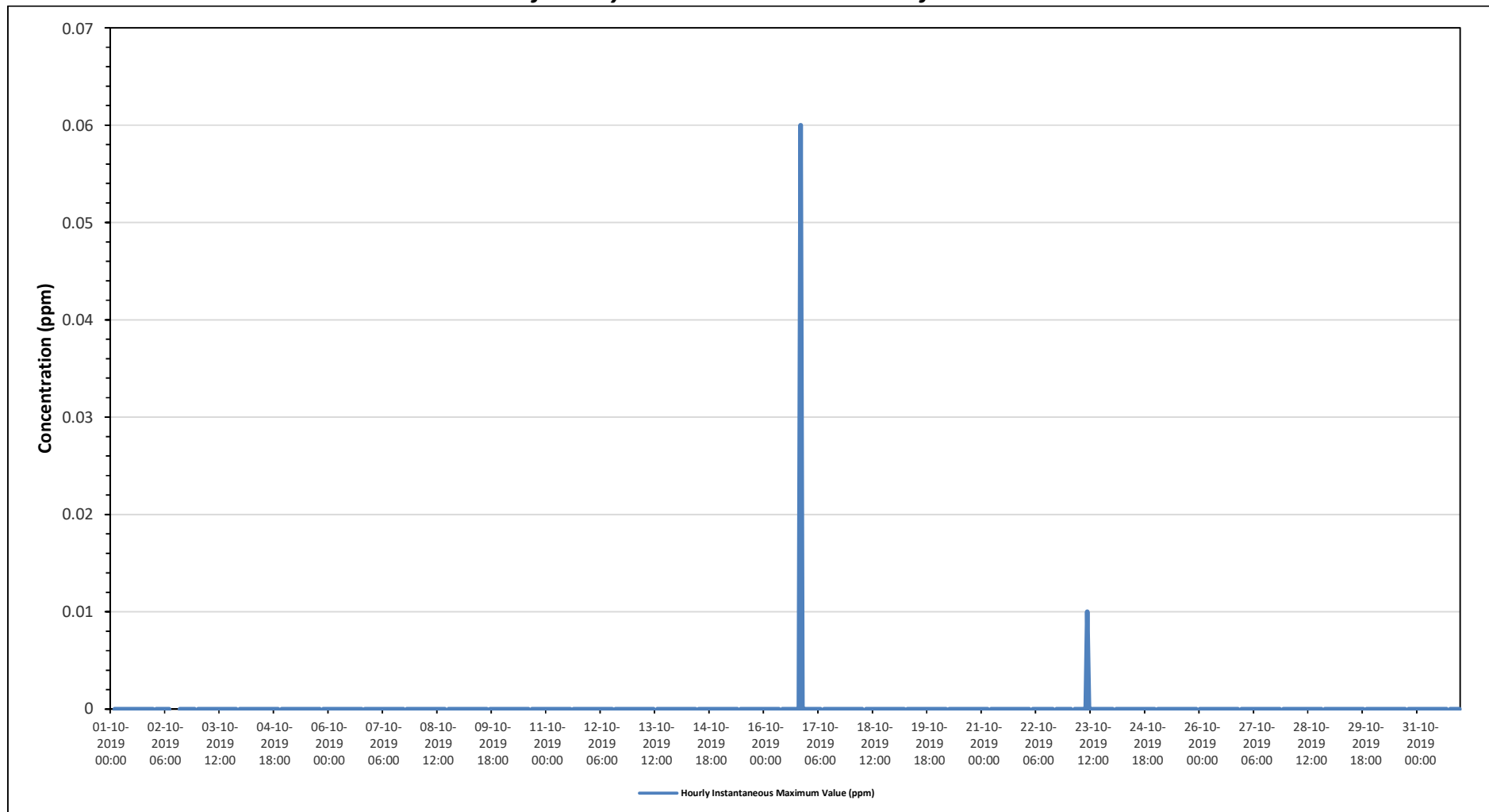
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23							
Oct 1	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 2	S	0.00	0.00	0.00	0.00	0.00	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	S	0.00	S	0.00	0.00	0.00	0.00		
Oct 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	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	
Oct 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	S	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	
Oct 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	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	
Oct 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	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	
Oct 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	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	
Oct 14	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 15	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 16	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	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	
Oct 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	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	
Oct 18	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 19	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 20	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 21	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 22	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	X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 23	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 24	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	0.00	0.00	0.00	0.00	0.00	0.00	
Oct 25	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	0.00	0.00	S	0.00	0.00	0.00	0.00	
Oct 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	
Oct 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Oct 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Oct 31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Diurnal Maximum	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	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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 - 986c Station





PEACE RIVER AREA MONITORING PROGRAM

986c Station - October 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/hr

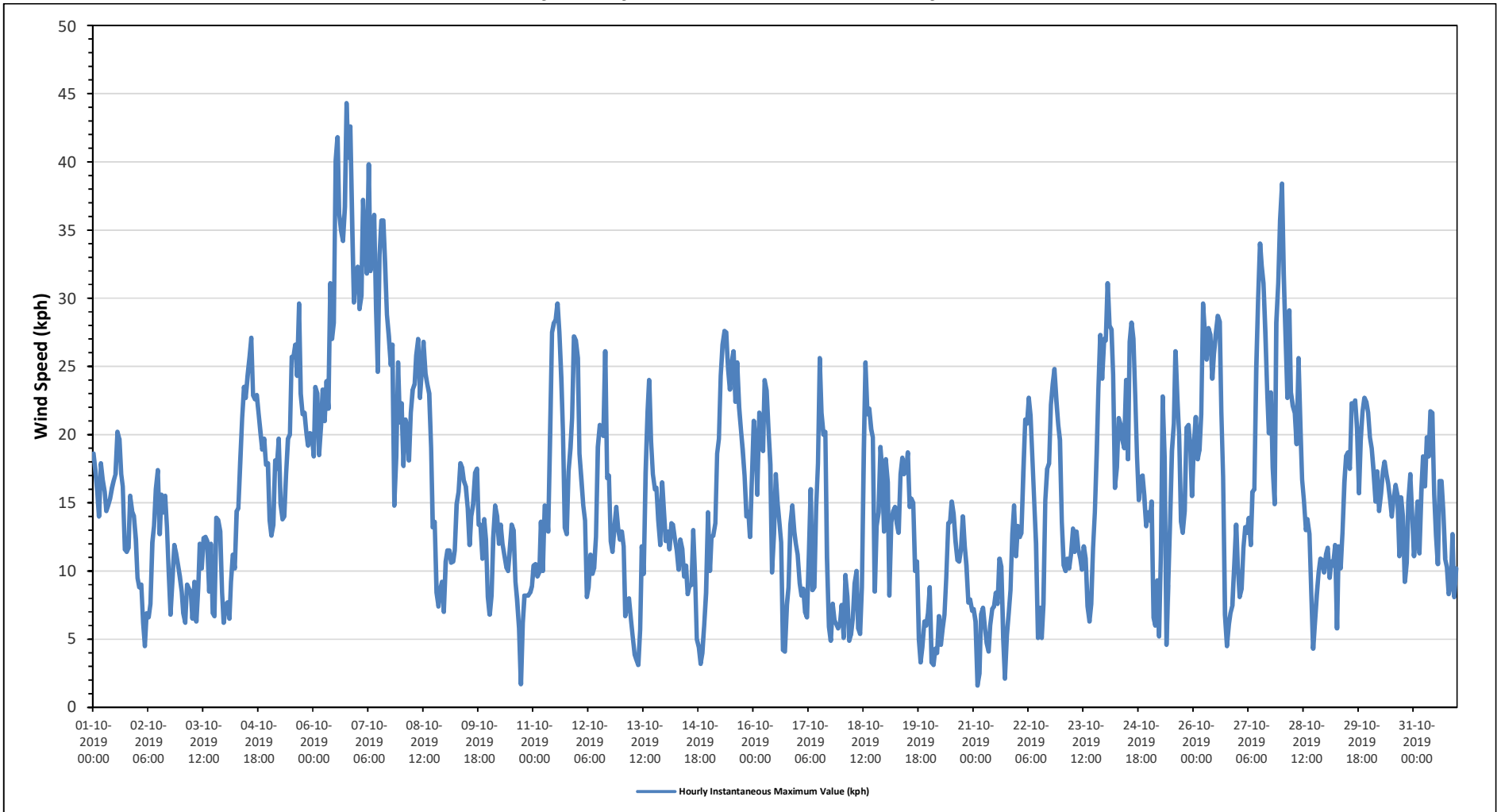
Maximum Hourly Value:	44.3 kph	on October 6 at hour 18	Hours in Service:	744
Maximum Daily Value:	30.3 kph	on October 6	Hours of Data:	744
Minimum Hourly Value:	1.6 kph	on October 21 at hour 2	Hours of Missing Data:	0
Minimum Daily Value:	7.1 kph	on October 21	Hours of Calibration:	0
Monthly Average:	15.7 kph		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	18.6	17.3	15.7	14.0	17.9	16.7	15.8	14.4	14.8	15.3	16.1	16.6	17.1	20.2	19.7	17.1	16.2	11.6	11.4	11.7	15.5	14.4	14.0	12.3	11.4	20.2	15.6
Oct 2	9.5	8.8	9.0	6.2	4.5	6.9	6.6	7.6	12.1	13.3	16.0	17.4	12.7	15.6	14.3	15.5	13.2	9.8	6.8	9.4	11.9	11.3	10.5	9.6	4.5	17.4	10.8
Oct 3	8.5	6.9	6.2	9.0	8.7	8.4	6.5	9.2	6.3	8.7	12.0	10.2	12.4	12.5	12.2	8.5	12.0	6.9	6.7	13.9	13.7	12.9	8.4	6.2	6.2	13.9	9.5
Oct 4	7.5	7.7	6.5	9.2	11.2	10.2	14.4	14.6	18.0	21.2	23.5	22.7	24.3	25.7	27.1	22.9	22.6	22.9	21.5	20.1	18.9	19.7	17.8	17.9	6.5	27.1	17.8
Oct 5	13.7	12.6	13.4	18.1	17.5	19.7	14.9	13.8	14.0	17.1	19.7	20.0	25.7	26.6	24.3	29.6	23.0	21.5	21.6	20.1	19.2	20.1	20.0	12.6	29.6	19.7	
Oct 6	18.4	23.5	23.0	18.5	20.7	23.3	21.0	23.9	21.9	31.1	27.0	28.2	40.1	41.8	36.2	35.0	34.2	36.7	44.3	40.3	42.6	35.2	29.7	31.7	18.4	44.3	30.3
Oct 7	32.3	29.2	30.2	37.2	34.0	31.8	39.8	32.0	33.1	36.1	29.2	24.6	33.2	35.7	35.7	32.6	28.8	27.2	25.1	26.6	14.8	18.4	25.3	20.9	14.8	39.8	29.7
Oct 8	22.3	17.7	21.1	20.5	18.1	21.6	23.3	23.7	25.8	27.0	22.7	24.8	26.8	24.5	23.7	23.0	19.0	13.2	13.6	8.4	7.4	8.6	9.2	7.0	7.0	27.0	18.9
Oct 9	10.7	11.5	11.5	10.6	10.7	11.5	14.9	15.8	17.9	17.6	16.6	16.2	14.6	11.9	14.0	14.9	17.2	17.5	13.4	13.4	10.9	13.8	12.3	8.1	8.1	17.9	13.6
Oct 10	6.8	8.2	12.4	14.8	14.0	12.0	13.4	12.0	11.2	10.3	10.0	11.5	13.4	13.0	9.2	7.9	5.8	1.7	6.2	8.2	8.2	8.4	8.9	1.7	14.8	9.8	
Oct 11	10.4	10.5	9.6	9.9	13.6	10.0	14.8	14.7	12.9	20.1	27.5	28.2	28.4	29.6	27.5	24.1	20.2	13.2	12.7	17.3	19.0	21.2	27.2	26.9	9.6	29.6	18.7
Oct 12	25.6	18.6	16.7	14.8	13.7	8.1	8.8	11.2	9.8	10.2	12.5	19.1	20.7	20.1	19.9	26.1	16.8	17.0	12.2	11.4	13.2	14.7	13.2	12.3	8.1	26.1	15.3
Oct 13	12.9	11.8	6.7	7.4	8.0	6.4	5.3	3.9	3.5	3.1	5.7	11.8	9.8	17.2	21.7	24.0	19.5	17.1	16.0	16.1	13.7	11.9	16.5	14.6	3.1	24.0	11.9
Oct 14	12.2	12.9	11.6	13.5	13.4	12.3	11.5	10.1	12.3	11.6	9.6	10.4	8.3	8.9	9.0	13.0	9.7	5.0	4.4	3.2	4.0	6.0	8.4	14.3	3.2	14.3	9.8
Oct 15	10.0	12.5	12.6	13.5	18.6	19.7	24.3	26.6	27.6	27.5	24.8	23.3	25.4	26.1	22.4	25.3	22.0	20.3	18.9	17.0	14.0	14.3	12.5	16.9	10.0	27.6	19.8
Oct 16	21.0	19.2	15.6	21.6	21.0	18.8	24.0	23.2	20.5	17.8	9.9	12.7	17.1	15.0	13.4	12.1	4.2	4.1	7.5	8.8	13.4	14.8	12.9	12.0	4.1	24.0	15.0
Oct 17	11.2	9.1	8.2	8.7	7.0	6.6	11.2	16.0	8.6	8.8	14.7	17.9	25.6	21.6	20.0	11.0	5.9	4.9	7.6	6.4	6.1	5.8	6.2	4.9	25.6	11.2	
Oct 18	7.5	5.1	9.7	8.1	4.9	5.3	6.5	9.1	10.0	5.8	5.4	8.8	18.8	25.3	21.5	21.9	20.4	19.8	8.5	13.3	14.3	19.1	17.4	12.9	4.9	25.3	12.5
Oct 19	18.2	16.5	8.2	13.6	14.4	14.7	13.5	12.8	17.1	18.3	17.1	17.3	18.7	14.7	15.3	15.0	10.0	10.7	5.0	3.3	4.4	6.3	6.0	6.9	3.3	18.7	12.4
Oct 20	8.8	3.3	3.1	4.3	4.0	6.7	4.6	5.8	6.8	9.5	13.5	13.6	15.1	14.2	12.2	10.8	10.7	11.6	14.0	11.8	10.4	7.7	7.9	7.1	3.1	15.1	9.1
Oct 21	7.2	6.3	1.6	2.5	6.8	7.3	5.9	4.7	4.1	6.0	7.2	7.4	8.4	7.6	10.9	10.3	5.1	2.1	5.3	6.9	8.6	12.7	14.8	11.1	1.6	14.8	7.1
Oct 22	13.3	12.5	12.8	17.2	21.1	20.8	22.7	21.4	17.9	14.8	12.0	5.1	7.3	5.1	7.6	15.2	17.5	17.9	22.2	23.7	24.8	22.5	20.7	19.6	5.1	24.8	16.5
Oct 23	13.6	10.4	10.0	10.9	10.2	11.2	13.1	11.4	12.9	11.6	10.9	10.1	11.8	10.9	7.4	6.3	7.6	11.7	14.3	18.7	23.4	27.3	24.1	27.0	6.3	27.3	13.6
Oct 24	26.9	31.1	28.0	27.7	24.4	16.1	17.6	21.2	20.7	19.6	19.0	24.0	18.2	26.8	28.2	27.0	22.9	18.4	15.2	16.9	17.0	15.5	13.3	14.3	13.3	31.1	21.3
Oct 25	13.7	15.1	6.6	6.0	9.3	5.2	11.3	22.8	18.3	4.6	9.0	13.4	18.8	20.8	26.1	22.7	19.9	13.6	12.8	14.4	20.5	20.7	19.0	15.5	4.6	26.1	15.0
Oct 26	19.4	21.3	18.2	18.8	21.5	29.6	27.3	25.5	27.8	27.3	24.1	25.9	27.4	28.7	28.3	21.7	16.9	6.8	4.5	6.1	6.9	7.5	10.5	13.4	4.5	29.6	19.4
Oct 27	10.3	8.1	8.7	11.7	13.2	12.8	13.9	11.9	15.8	16.0	24.8	30.1	34.0	32.4	31.1	27.4	22.9	20.1	23.1	17.6	14.9	28.2	31.1	35.7	8.1	35.7	20.7
Oct 28	38.4	31.8	27.0	22.7	29.1	23.1	22.1	21.6	19.3	25.6	21.0	16.7	15.2	13.0	13.8	12.7	8.4	4.3	6.0	8.2	9.9	10.9	10.8	9.9	4.3	38.4	17.6
Oct 29	11.2	11.7	9.5	10.7	10.4	11.9	5.8	11.8	10.2	12.8	16.5	18.4	18.7	17.5	22.3	22.0	22.5	20.4	15.7	19.6	21.7	22.7	22.4	21.6	5.8	22.7	16.2
Oct 30	19.8	19.0	17.3	15.1	17.3	14.4	15.7	17.3	18.0	17.1	16.4	15.1	14.0	15.4	16.3	15.5	11.1	15.4	14.0	9.2	10.6	15.1	17.1	14.3	9.2	19.8	15.4
Oct 31	11.1	12.4	15.1	11.3	15.8	18.4	16.2	19.8	18.4	21.7	21.6	15.6	12.6	10.5	16.6	16.6	14.4	10.9	10.3	8.3	8.9	12.7	8.1	10.2	8.1	21.7	14.1
Diurnal Maximum	38.4	31.8	30.2	37.2	34.0	31.8	39.8	32.0	33.1	36.1	29.2	30.1	40.1	41.8	36.2	35.0	34.2	36.7	44.3	40.3	42.6	35.2	31.1	35.7			
Diurnal Average	15.2	14.3	13.1	13.8	14.7	14.2	15.1	15.8	15.7	16.4	16.6	17.3	19.2	19.6	19.7	19.1	16.5	14.1	13.5	14.0	14.3	15.5	15.3	15.0			

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 - 986c Station



842b STATION



PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Instantaneous Maximums

SULPHUR DIOXIDE (SO₂) in ppb

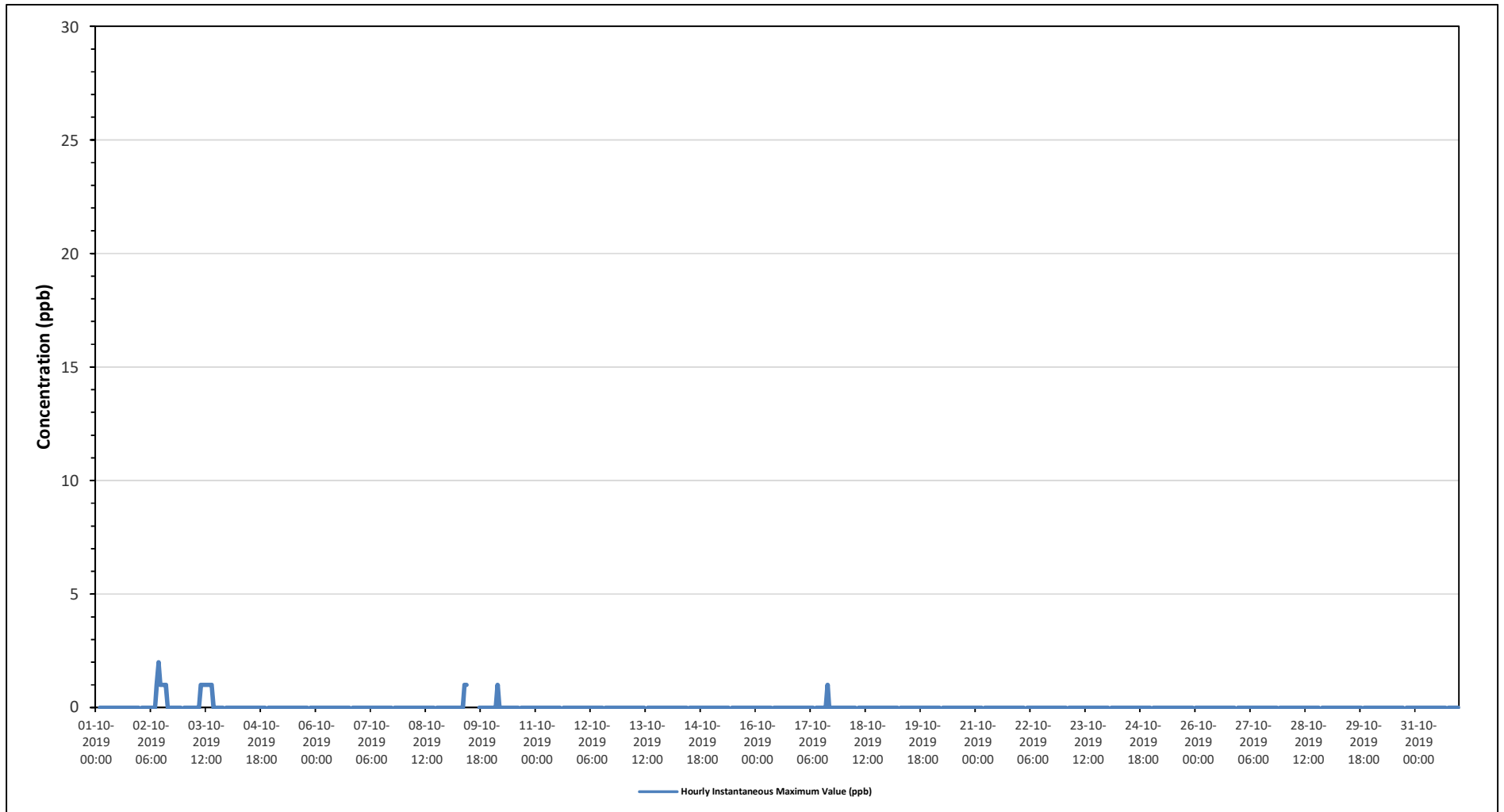
Maximum Hourly Value:	2 ppb on October 2 at hour 10	Hours in Service:	744
Maximum Daily Value:	0.3 ppb on October 2	Hours of Data:	706
Minimum Hourly Value:	0 ppb on October 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.0 ppb on October 1	Hours of Calibration:	38
Monthly Average:	0.0 ppb	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average	
Oct 1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 2	S	0	0	0	0	0	0	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	S	S	0	2	0.3
Oct 3	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	S	0	0	1	0.3
Oct 4	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	0.0
Oct 5	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	0.0
Oct 6	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	0.0
Oct 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Oct 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Oct 9	0	0	0	0	0	0	0	0	0	1	1	C	C	C	C	S	0	0	0	0	0	0	0	0	0	0	1	0.1
Oct 10	0	0	0	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Oct 11	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	0.0
Oct 12	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	0.0
Oct 13	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	0.0
Oct 14	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	0.0
Oct 15	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	0.0
Oct 16	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	0.0
Oct 17	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.0
Oct 18	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	0.0
Oct 19	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	0.0
Oct 20	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	0.0
Oct 21	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	0.0
Oct 22	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	0.0
Oct 23	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 24	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oct 25	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	S	0	0.0
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0.0
Oct 27	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	0.0
Oct 28	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	0.0
Oct 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Oct 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Oct 31	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	0.0
Diurnal Maximum	0	0	0	1	0	0	0	0	0	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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 Instantaneous Maximum for SO2 - 842b Station





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Instantaneous Maximums

TOTAL REDUCED SULPHUR (TRS) in ppb

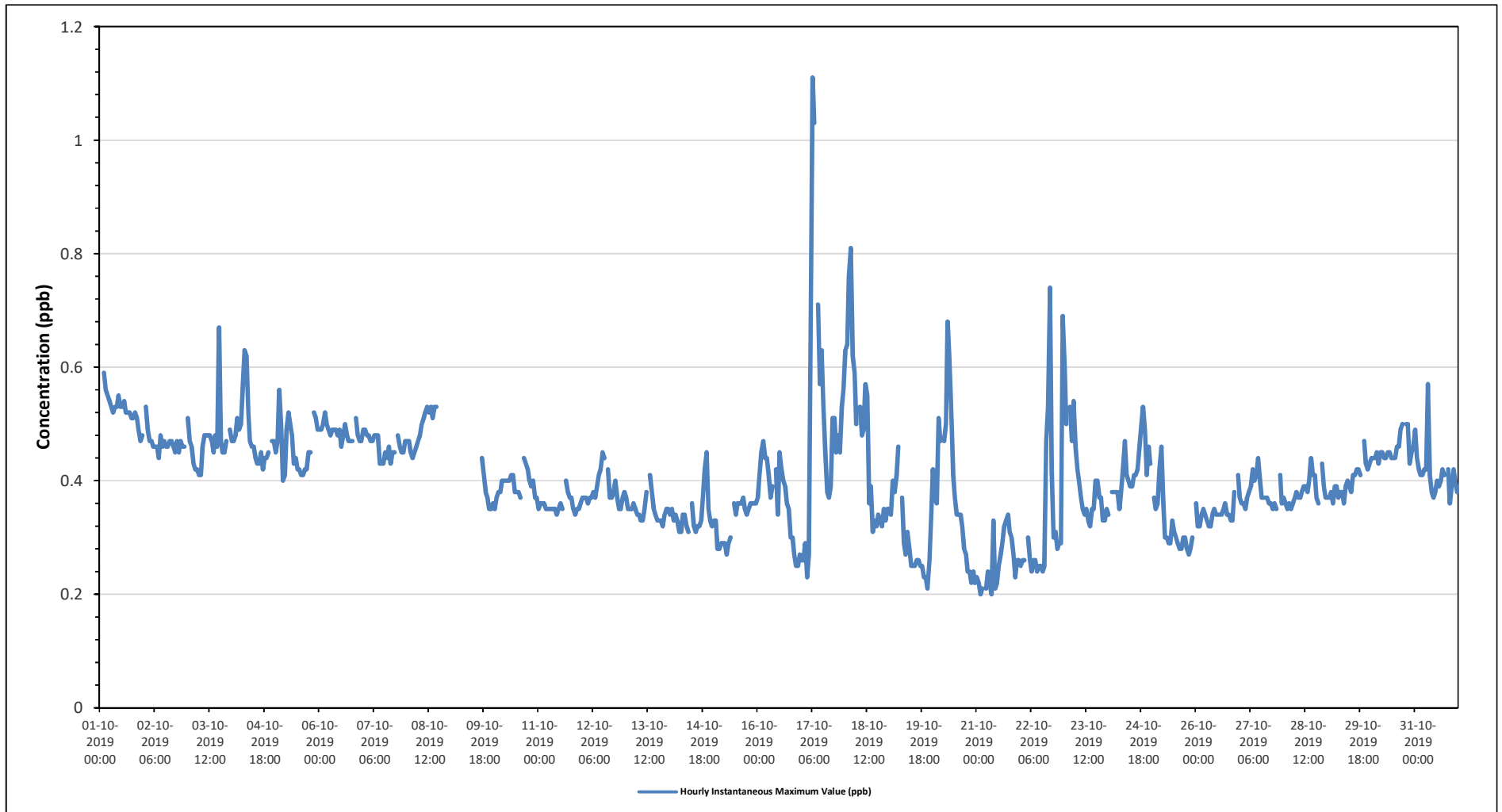
Maximum Hourly Value:	1.11 ppb	on October 17 at hour 6	Hours in Service:	744
Maximum Daily Value:	0.53 ppb	on October 1	Hours of Data:	689
Minimum Hourly Value:	0.20 ppb	on October 21 at hour 2	Hours of Missing Data:	17
Minimum Daily Value:	0.26 ppb	on October 21	Hours of Calibration:	38
Monthly Average:	0.40 ppb		Operational Uptime:	97.7

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
Oct 1	0.53	S	0.59	0.56	0.55	0.54	0.53	0.52	0.53	0.53	0.55	0.53	0.53	0.54	0.52	0.52	0.52	0.51	0.51	0.52	0.51	0.49	0.47	0.48	0.47	0.59	0.53
Oct 2	S	0.53	0.49	0.47	0.47	0.46	0.46	0.46	0.44	0.48	0.46	0.47	0.46	0.46	0.47	0.47	0.46	0.45	0.47	0.45	0.47	0.46	0.46	S	0.44	0.53	0.47
Oct 3	0.51	0.47	0.46	0.43	0.42	0.42	0.41	0.41	0.46	0.48	0.48	0.48	0.48	0.47	0.45	0.48	0.46	0.67	0.47	0.45	0.45	0.47	S	0.49	0.41	0.67	0.47
Oct 4	0.47	0.47	0.48	0.51	0.49	0.5	0.57	0.63	0.62	0.52	0.47	0.46	0.46	0.44	0.43	0.43	0.45	0.42	0.44	0.44	0.45	S	0.47	0.47	0.42	0.63	0.48
Oct 5	0.45	0.47	0.56	0.5	0.4	0.41	0.49	0.52	0.5	0.48	0.43	0.44	0.42	0.42	0.41	0.41	0.42	0.42	0.45	0.45	S	0.52	0.51	0.49	0.40	0.56	0.46
Oct 6	0.49	0.49	0.5	0.52	0.5	0.49	0.48	0.49	0.49	0.49	0.48	0.49	0.46	0.48	0.5	0.48	0.47	0.47	0.47	S	0.51	0.48	0.47	0.47	0.46	0.52	0.49
Oct 7	0.49	0.49	0.48	0.48	0.47	0.47	0.48	0.48	0.48	0.43	0.43	0.43	0.45	0.44	0.46	0.43	0.45	0.45	S	0.48	0.46	0.45	0.45	0.47	0.43	0.49	0.46
Oct 8	0.47	0.47	0.45	0.44	0.45	0.46	0.47	0.48	0.5	0.51	0.52	0.53	0.52	0.53	0.51	0.53	0.53	S	X	X	X	X	X	X	0.44	0.53	-
Oct 9	X	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	S	0.44	0.41	0.38	0.37	0.35	0.35	0.36	0.35	0.44	-
Oct 10	0.35	0.37	0.38	0.38	0.4	0.4	0.4	0.4	0.41	0.41	0.38	0.38	0.38	0.37	C	S	0.44	0.43	0.42	0.4	0.39	0.4	0.37	0.37	0.35	0.44	0.39
Oct 11	0.35	0.36	0.36	0.36	0.35	0.35	0.35	0.35	0.35	0.35	0.34	0.35	0.36	0.35	S	0.4	0.38	0.37	0.37	0.35	0.34	0.35	0.35	0.36	0.34	0.40	0.36
Oct 12	0.37	0.37	0.37	0.36	0.37	0.37	0.38	0.37	0.39	0.41	0.42	0.45	0.44	S	0.42	0.37	0.37	0.38	0.4	0.37	0.35	0.35	0.37	0.38	0.35	0.45	0.38
Oct 13	0.37	0.35	0.35	0.35	0.36	0.35	0.34	0.34	0.33	0.33	0.35	0.38	S	0.41	0.38	0.35	0.34	0.33	0.33	0.33	0.32	0.34	0.35	0.35	0.32	0.41	0.35
Oct 14	0.34	0.35	0.33	0.34	0.33	0.31	0.31	0.34	0.34	0.32	0.31	S	0.36	0.32	0.31	0.32	0.32	0.33	0.37	0.42	0.45	0.35	0.33	0.32	0.31	0.45	0.34
Oct 15	0.33	0.33	0.28	0.28	0.29	0.29	0.29	0.27	0.29	0.3	S	0.36	0.34	0.36	0.36	0.36	0.37	0.35	0.34	0.35	0.36	0.36	0.36	0.36	0.27	0.37	0.33
Oct 16	0.37	0.41	0.45	0.47	0.44	0.44	0.41	0.37	0.39	S	0.42	0.34	0.45	0.42	0.4	0.39	0.36	0.35	0.3	0.3	0.27	0.25	0.25	0.27	0.25	0.47	0.37
Oct 17	0.26	0.26	0.29	0.23	0.27	0.68	1.11	1.03	S	0.71	0.57	0.63	0.53	0.45	0.38	0.37	0.39	0.51	0.51	0.45	0.48	0.45	0.53	0.56	0.23	1.11	0.51
Oct 18	0.63	0.64	0.76	0.81	0.62	0.59	0.5	S	0.53	0.48	0.49	0.57	0.55	0.36	0.39	0.31	0.33	0.32	0.34	0.33	0.32	0.35	0.33	0.35	0.31	0.81	0.47
Oct 19	0.35	0.34	0.4	0.38	0.41	0.46	S	0.37	0.29	0.27	0.31	0.28	0.25	0.25	0.25	0.26	0.26	0.25	0.25	0.23	0.23	0.21	0.26	0.34	0.21	0.46	0.30
Oct 20	0.42	0.37	0.36	0.51	0.47	S	0.47	0.5	0.68	0.61	0.52	0.41	0.37	0.34	0.34	0.34	0.32	0.28	0.27	0.24	0.24	0.22	0.24	0.22	0.22	0.68	0.38
Oct 21	0.23	0.22	0.2	0.21	S	0.21	0.24	0.22	0.2	0.33	0.21	0.22	0.25	0.27	0.29	0.32	0.33	0.34	0.31	0.3	0.27	0.23	0.26	0.26	0.20	0.34	0.26
Oct 22	0.25	0.26	0.26	S	0.3	0.26	0.24	0.26	0.26	0.24	0.25	0.25	0.24	0.25	0.47	0.53	0.74	0.42	0.3	0.31	0.28	0.29	0.29	0.69	0.24	0.74	0.33
Oct 23	0.6	0.5	S	0.53	0.47	0.54	0.46	0.42	0.4	0.37	0.35	0.34	0.35	0.33	0.32	0.35	0.35	0.4	0.4	0.37	0.37	0.33	0.33	0.35	0.32	0.60	0.40
Oct 24	0.34	S	0.38	0.38	0.38	0.38	0.35	0.38	0.42	0.47	0.41	0.4	0.39	0.39	0.41	0.41	0.42	0.46	0.5	0.53	0.49	0.41	0.46	0.43	0.34	0.53	0.42
Oct 25	S	0.37	0.35	0.36	0.42	0.46	0.37	0.3	0.3	0.29	0.29	0.33	0.31	0.3	0.29	0.28	0.28	0.3	0.3	0.28	0.27	0.28	0.3	S	0.27	0.46	0.32
Oct 26	0.36	0.32	0.32	0.34	0.35	0.34	0.33	0.32	0.32	0.34	0.35	0.34	0.34	0.34	0.34	0.35	0.36	0.34	0.34	0.33	0.33	0.38	S	0.41	0.32	0.41	0.34
Oct 27	0.37	0.36	0.36	0.35	0.37	0.38	0.39	0.42	0.4	0.41	0.44	0.4	0.37	0.37	0.37	0.37	0.36	0.36	0.35	0.36	0.35	S	0.41	0.36	0.35	0.44	0.38
Oct 28	0.37	0.36	0.35	0.36	0.35	0.36	0.37	0.38	0.37	0.37	0.38	0.39	0.39	0.38	0.4	0.44	0.41	0.41	0.37	0.36	S	0.43	0.39	0.37	0.35	0.44	0.38
Oct 29	0.37	0.37	0.38	0.36	0.39	0.39	0.37	0.38	0.38	0.36	0.39	0.4	0.39	0.38	0.41	0.41	0.42	0.42	0.41	S	0.47	0.43	0.42	0.43	0.36	0.47	0.40
Oct 30	0.44	0.44	0.44	0.45	0.43	0.45	0.45	0.44	0.44	0.45	0.44	0.44	0.44	0.44	0.46	0.46	0.49	0.5	S	0.5	0.5	0.43	0.45	0.46	0.43	0.50	0.45
Oct 31	0.49	0.44	0.42	0.41	0.41	0.42	0.42	0.57	0.41	0.38	0.37	0.38	0.4	0.39	0.4	0.42	0.41	S	0.42	0.36	0.39	0.42	0.4	0.38	0.36	0.57	0.41
Diurnal Maximum	0.63	0.64	0.76	0.81	0.62	0.68	1.11	1.03	0.68	0.71	0.57	0.63	0.55	0.54	0.52	0.53	0.74	0.67	0.51	0.53	0.51	0.52	0.53	0.69			
Diurnal Average	0.41	0.40	0.41	0.42	0.41	0.42	0.43	0.43	0.41	0.42	0.41	0.41	0.40	0.39	0.40	0.40	0.41	0.40	0.39	0.38	0.38	0.37	0.38	0.40			

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





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Instantaneous Maximums

TOTAL HYDROCARBONS (THC) in ppm

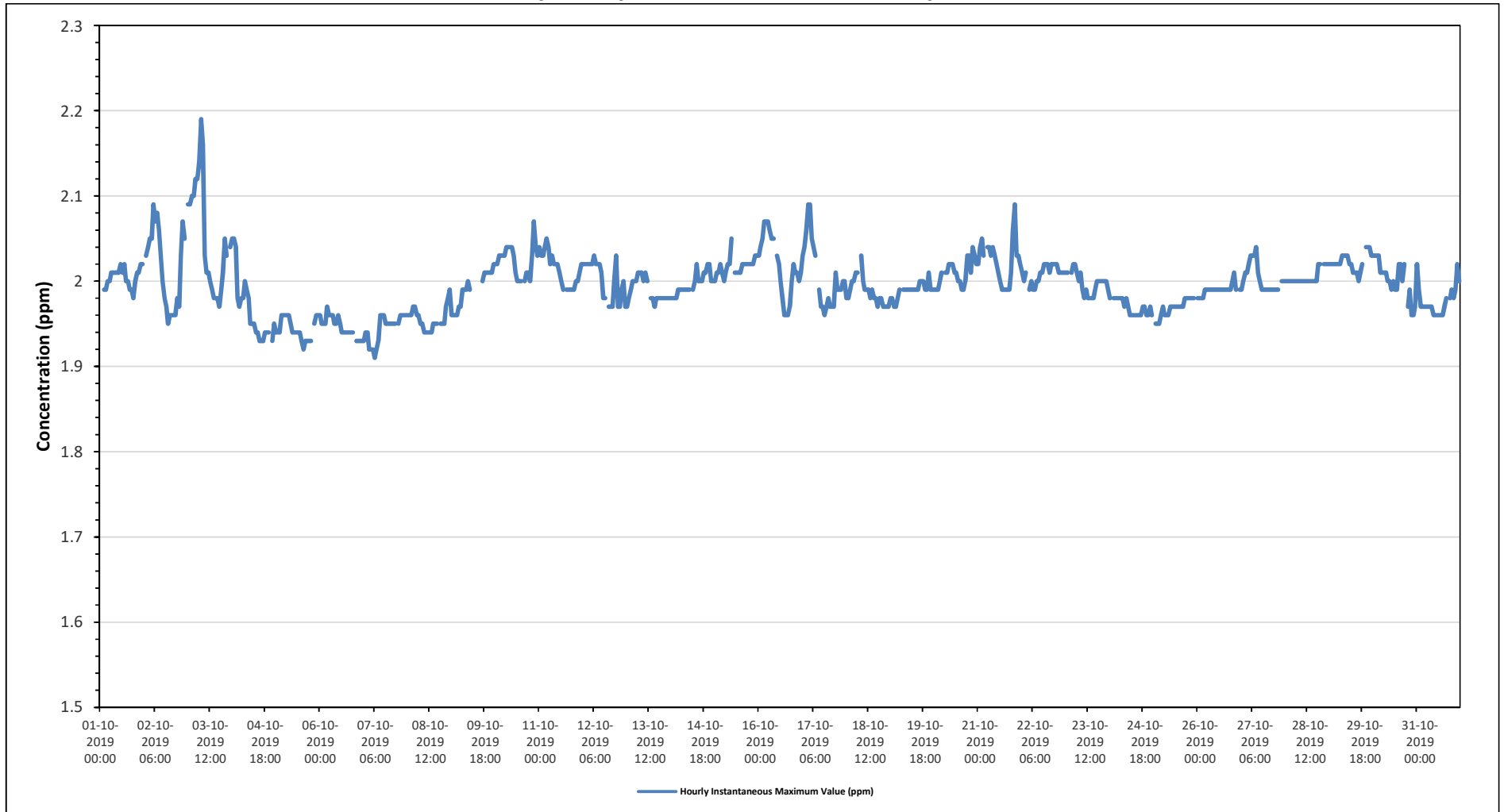
Maximum Hourly Value:	2.19 ppm on October 3 at hour 7	Hours in Service:	744
Maximum Daily Value:	2.05 ppm on October 3	Hours of Data:	706
Minimum Hourly Value:	1.91 ppm on October 7 at hour 6	Hours of Missing Data:	0
Minimum Daily Value:	1.94 ppm on October 7	Hours of Calibration:	38
Monthly Average:	1.99 ppm	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	1.98	S	1.99	1.99	2.00	2.00	2.01	2.01	2.01	2.01	2.01	2.02	2.01	2.02	2.00	2.00	1.99	1.99	1.98	2.00	2.01	2.01	2.02	2.02	1.98	2.02	2.00	
Oct 2	S	2.03	2.04	2.05	2.05	2.09	2.07	2.08	2.06	2.03	2.00	1.98	1.97	1.95	1.96	1.96	1.98	1.98	1.97	1.99	2.01	2.05	2.03	S	2.04	1.97	2.19	2.05
Oct 3	2.09	2.09	2.10	2.10	2.12	2.12	2.14	2.19	2.16	2.03	2.01	2.01	2.00	1.99	1.98	1.98	1.98	1.97	1.99	2.01	2.05	2.03	S	2.04	1.97	2.19	2.05	
Oct 4	2.05	2.05	2.04	1.98	1.97	1.98	1.98	2.00	1.99	1.98	1.95	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.94	1.94	S	1.93	1.95	1.93	2.05	1.97	
Oct 5	1.94	1.94	1.94	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	S	1.95	1.96	1.96	1.92	1.96	1.94	
Oct 6	1.96	1.95	1.95	1.95	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.94	S	1.93	1.93	1.93	1.93	1.93	1.97	1.95
Oct 7	1.93	1.94	1.94	1.92	1.92	1.92	1.91	1.92	1.93	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.96	1.96	1.96	1.96	1.91	1.96	1.94
Oct 8	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.95	1.95	1.95	1.97	1.98	1.99	1.94	1.99	1.96	1.96
Oct 9	1.96	1.96	1.96	1.96	1.97	1.97	1.99	1.99	1.99	2.00	1.99	C	C	C	C	C	S	2.00	2.01	2.01	2.01	2.01	2.01	2.02	1.96	2.02	1.99	
Oct 10	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.03	2.01	2.00	2.00	2.00	S	2.00	2.01	2.01	2.00	2.03	2.07	2.04	2.03	2.00	2.00	2.07	2.02
Oct 11	2.04	2.03	2.03	2.04	2.05	2.04	2.02	2.03	2.02	2.02	2.02	2.01	2.00	1.99	S	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	2.01	2.02	1.99	2.05	2.01
Oct 12	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.02	2.02	2.02	2.01	1.98	1.98	S	1.97	1.97	1.97	2.00	2.03	1.97	1.97	1.99	2.00	1.97	1.97	2.03	2.00	
Oct 13	1.97	1.98	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.00	2.01	2.00	S	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	2.01	1.99
Oct 14	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	S	1.99	2.00	2.02	2.00	2.00	2.00	2.01	2.01	2.02	2.02	2.00	2.00	1.98	2.02	2.00	
Oct 15	2.00	2.01	2.01	2.02	2.01	2.00	2.01	2.02	2.02	2.05	S	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.00	2.05	2.02
Oct 16	2.03	2.04	2.05	2.07	2.07	2.07	2.06	2.05	2.05	S	2.03	2.02	2.00	1.98	1.96	1.96	1.96	1.97	2.00	2.02	2.01	2.01	2.00	2.01	1.96	2.07	2.02	
Oct 17	2.03	2.04	2.06	2.09	2.09	2.05	2.04	2.03	S	1.99	1.97	1.97	1.97	1.96	1.97	1.98	1.97	1.97	2.01	1.99	1.99	1.99	2.00	2.00	1.96	2.09	2.01	
Oct 18	1.98	1.98	1.99	2.00	2.00	2.01	2.01	S	2.03	2.00	1.99	1.99	1.99	1.99	1.98	1.99	1.98	1.98	1.97	1.98	1.98	1.97	1.97	1.97	1.97	2.03	1.99	
Oct 19	1.98	1.98	1.97	1.97	1.98	1.99	S	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	2.00	1.99	1.99	2.01	1.99	1.99	1.97	2.01	1.99	
Oct 20	1.99	1.99	1.99	2.00	2.01	S	2.01	2.01	2.02	2.02	2.02	2.01	2.01	2.00	2.00	1.99	1.99	2.00	2.03	2.03	2.01	2.04	2.03	2.02	1.99	2.04	2.01	
Oct 21	2.02	2.04	2.05	2.03	S	2.04	2.04	2.03	2.04	2.03	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.99	2.01	2.06	2.09	2.03	2.03	2.02	1.99	2.09	2.02	
Oct 22	2.01	2.00	2.01	S	1.99	2.00	1.99	1.99	2.00	2.00	2.01	2.01	2.02	2.02	2.02	2.01	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.01	1.99	2.02	2.01	
Oct 23	2.01	2.01	S	2.01	2.02	2.02	2.01	2.00	2.01	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.00	2.00	2.00	1.99	1.98	2.02	2.00	2.00	
Oct 24	1.98	S	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.98	1.97	
Oct 25	S	1.95	1.95	1.95	1.96	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	S	1.95	1.98	1.97	
Oct 26	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.01	1.99	S	1.99	1.98	2.01	1.99	
Oct 27	1.99	2.00	2.01	2.01	2.02	2.03	2.03	2.03	2.04	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	S	2.00	2.00	1.99	2.00	
Oct 28	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.02	2.02	S	2.02	2.02	2.02	2.00	2.02	2.00	
Oct 29	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.03	2.03	2.02	2.02	2.01	2.01	2.01	2.00	2.01	2.02	S	2.04	2.04	2.04	2.03	2.00	2.04	2.02	
Oct 30	2.03	2.03	2.03	2.03	2.01	2.01	2.01	2.01	2.00	2.00	1.99	2.00	1.99	1.99	2.02	2.02	2.00	2.02	S	1.97	1.99	1.96	1.96	1.97	1.96	2.03	2.00	
Oct 31	2.02	1.99	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	1.98	S	1.98	1.99	1.98	1.99	2.02	2.00	1.96	2.02	1.98	
Diurnal Maximum	2.09	2.09	2.10	2.10	2.12	2.12	2.14	2.19	2.16	2.05	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.06	2.09	2.07	2.05	2.04			
Diurnal Average	2.00	2.00	2.00	2.00	2.00	2.01	2.01	2.01	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.00	2.00	2.00				

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 THC - 842b Station





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Instantaneous Maximums

METHANE (CH4) in ppm

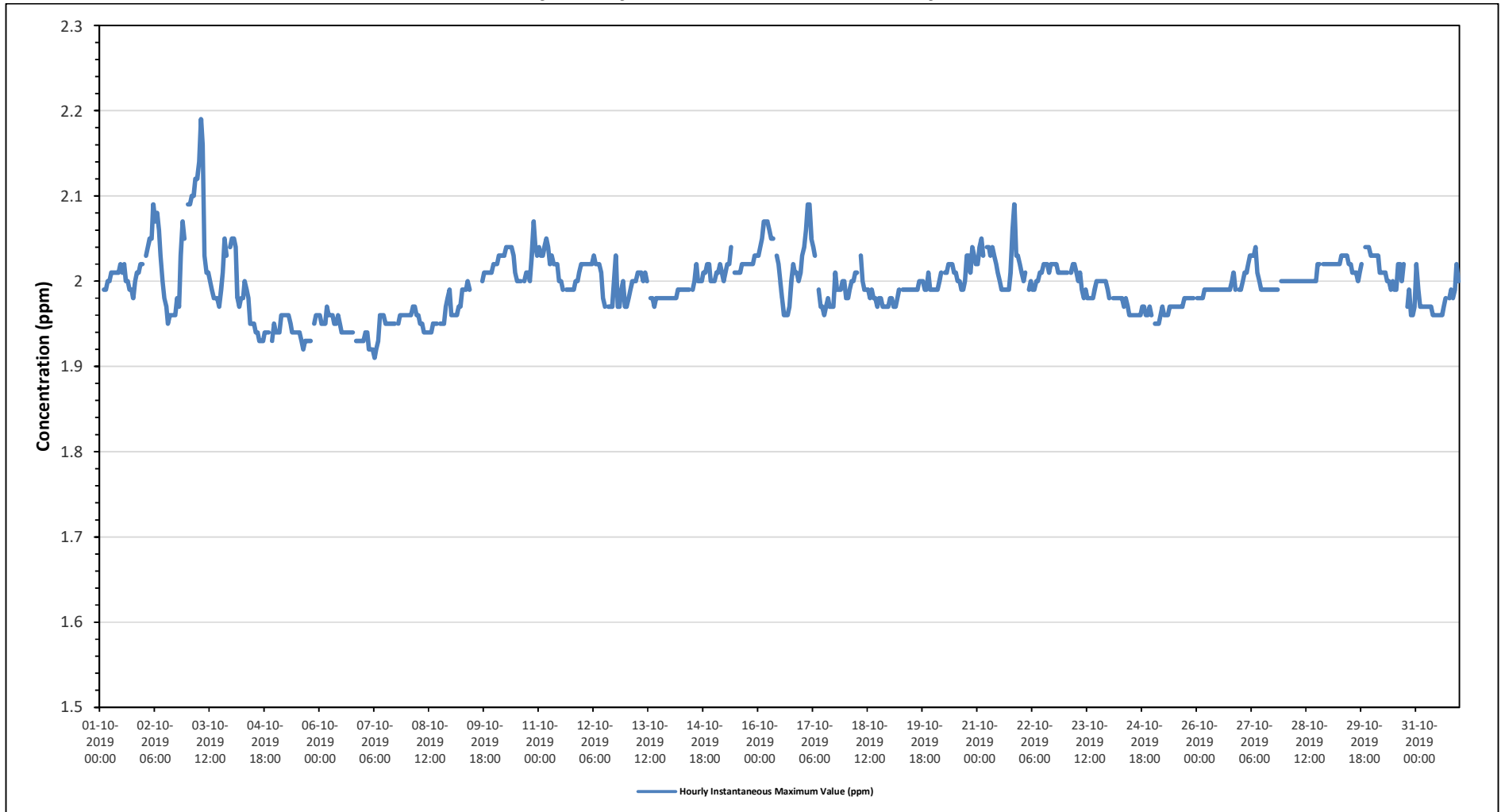
Maximum Hourly Value: 2.19 ppm on October 3 at hour 7	Hours in Service: 744
Maximum Daily Value: 2.05 ppm on October 3	Hours of Data: 706
Minimum Hourly Value: 1.91 ppm on October 7 at hour 6	Hours of Missing Data: 0
Minimum Daily Value: 1.94 ppm on October 7	Hours of Calibration: 38
Monthly Average: 1.99 ppm	Operational Uptime: 100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	1.98	S	1.99	1.99	2.00	2.00	2.01	2.01	2.01	2.01	2.01	2.02	2.01	2.02	2.00	2.00	1.99	1.99	1.98	2.00	2.01	2.01	2.02	2.02	1.98	2.02	2.00	
Oct 2	S	2.03	2.04	2.05	2.05	2.09	2.07	2.08	2.06	2.03	2.00	1.98	1.97	1.95	1.96	1.96	1.98	1.98	1.97	1.99	2.01	2.05	2.03	S	2.04	1.97	2.19	2.05
Oct 3	2.09	2.09	2.10	2.10	2.12	2.12	2.14	2.19	2.16	2.03	2.01	2.01	2.00	1.99	1.98	1.98	1.98	1.97	1.99	2.01	2.05	2.03	S	2.04	1.97	2.19	2.05	
Oct 4	2.05	2.05	2.04	1.98	1.97	1.98	1.98	2.00	1.99	1.98	1.95	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.94	1.94	S	1.93	1.95	1.93	2.05	1.97	
Oct 5	1.94	1.94	1.94	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	S	1.95	1.96	1.96	1.92	1.96	1.94	
Oct 6	1.96	1.95	1.95	1.95	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.94	S	1.93	1.93	1.93	1.93	1.93	1.97	1.95
Oct 7	1.93	1.94	1.94	1.92	1.92	1.92	1.91	1.92	1.93	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	S	1.95	1.96	1.96	1.96	1.96	1.91	1.96	1.94	
Oct 8	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.95	1.95	1.95	1.97	1.98	1.99	1.94	1.99	1.96	
Oct 9	1.96	1.96	1.96	1.96	1.97	1.97	1.99	1.99	1.99	2.00	1.99	C	C	C	C	C	S	2.00	2.01	2.01	2.01	2.01	2.01	2.02	1.96	2.02	1.99	
Oct 10	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.03	2.01	2.00	2.00	2.00	S	2.00	2.01	2.01	2.00	2.03	2.07	2.04	2.03	2.00	2.07	2.02	
Oct 11	2.04	2.03	2.03	2.04	2.05	2.04	2.02	2.03	2.02	2.02	2.02	2.00	2.00	1.99	S	1.99	1.99	1.99	1.99	1.99	2.00	2.00	2.01	2.02	1.99	2.05	2.01	
Oct 12	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.02	2.02	2.02	2.01	1.98	1.97	S	1.97	1.97	1.97	2.00	2.03	1.97	1.97	1.99	2.00	1.97	1.97	2.03	2.00	
Oct 13	1.97	1.98	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.00	2.01	2.00	S	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	2.01	1.99	
Oct 14	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	S	1.99	2.00	2.02	2.00	2.00	2.00	2.01	2.01	2.02	2.02	2.00	2.00	1.98	2.02	2.00	
Oct 15	2.00	2.01	2.01	2.02	2.01	2.00	2.01	2.02	2.02	2.04	S	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.00	2.04	2.02	
Oct 16	2.03	2.04	2.05	2.07	2.07	2.07	2.06	2.05	2.05	S	2.03	2.02	2.00	1.98	1.96	1.96	1.96	1.97	2.00	2.02	2.01	2.01	2.00	2.01	1.96	2.07	2.02	
Oct 17	2.03	2.04	2.06	2.09	2.09	2.05	2.04	2.03	S	1.99	1.97	1.97	1.96	1.97	1.98	1.97	1.97	1.97	2.01	1.99	1.99	1.99	2.00	2.00	1.96	2.09	2.01	
Oct 18	1.98	1.98	1.99	2.00	2.00	2.01	2.01	S	2.03	2.00	1.99	1.99	1.99	1.99	1.98	1.99	1.98	1.98	1.97	1.98	1.98	1.97	1.97	1.97	1.97	2.03	1.99	
Oct 19	1.98	1.98	1.97	1.97	1.98	1.99	S	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	2.00	1.99	1.99	2.01	1.99	1.99	1.97	2.01	1.99		
Oct 20	1.99	1.99	1.99	2.00	2.01	S	2.01	2.01	2.02	2.02	2.02	2.01	2.01	2.00	2.00	1.99	1.99	2.00	2.03	2.03	2.01	2.04	2.03	2.02	1.99	2.04	2.01	
Oct 21	2.02	2.04	2.05	2.03	S	2.04	2.04	2.03	2.04	2.03	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.99	2.01	2.06	2.09	2.03	2.03	2.02	1.99	2.09	2.02	
Oct 22	2.01	2.00	2.01	S	1.99	2.00	1.99	1.99	2.00	2.00	2.01	2.01	2.02	2.02	2.02	2.01	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.01	1.99	2.02	2.01	
Oct 23	2.01	2.01	S	2.01	2.02	2.02	2.01	2.00	2.01	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.00	2.00	2.00	1.99	1.98	2.02	2.00		
Oct 24	1.98	S	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.97	1.96	1.96	1.98	1.97		
Oct 25	S	1.95	1.95	1.95	1.96	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	S	1.95	1.98	1.97	
Oct 26	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.01	1.99	S	1.99	1.98	2.01	1.99	
Oct 27	1.99	2.00	2.01	2.01	2.02	2.03	2.03	2.03	2.04	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	S	2.00	2.00	1.99	2.04	2.00	
Oct 28	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.02	2.02	S	2.02	2.02	2.02	2.00	2.02	2.00	
Oct 29	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.03	2.03	2.02	2.02	2.01	2.01	2.01	2.00	2.01	2.02	S	2.04	2.04	2.04	2.03	2.00	2.04	2.02	
Oct 30	2.03	2.03	2.03	2.03	2.01	2.01	2.01	2.01	2.00	2.00	1.99	2.00	1.99	1.99	2.02	2.02	2.00	2.02	S	1.97	1.99	1.96	1.96	1.97	1.96	2.03	2.00	
Oct 31	2.02	1.99	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	S	1.98	1.99	1.98	1.99	2.02	2.00	1.96	2.02	1.98	
Diurnal Maximum	2.09	2.09	2.10	2.10	2.12	2.12	2.14	2.19	2.16	2.04	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.06	2.09	2.07	2.05	2.04			
Diurnal Average	2.00	2.00	2.00	2.00	2.00	2.01	2.01	2.01	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.00	2.00	2.00				

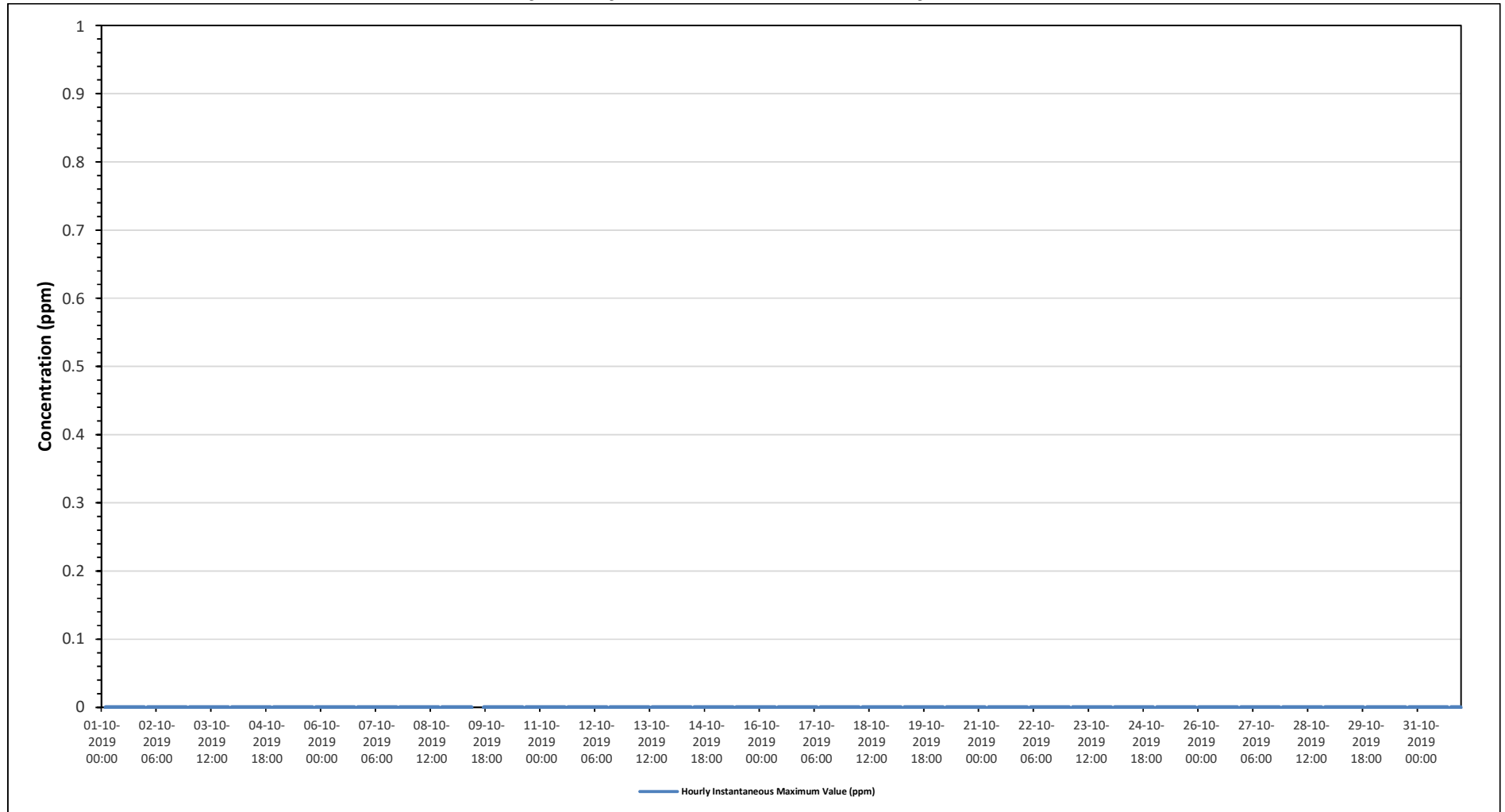
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 CH4 - 842b Station



Timeseries Chart of Hourly Instantaneous Maximum for NMHC - 842b Station





PEACE RIVER AREA MONITORING PROGRAM

842b Station - October 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/hr

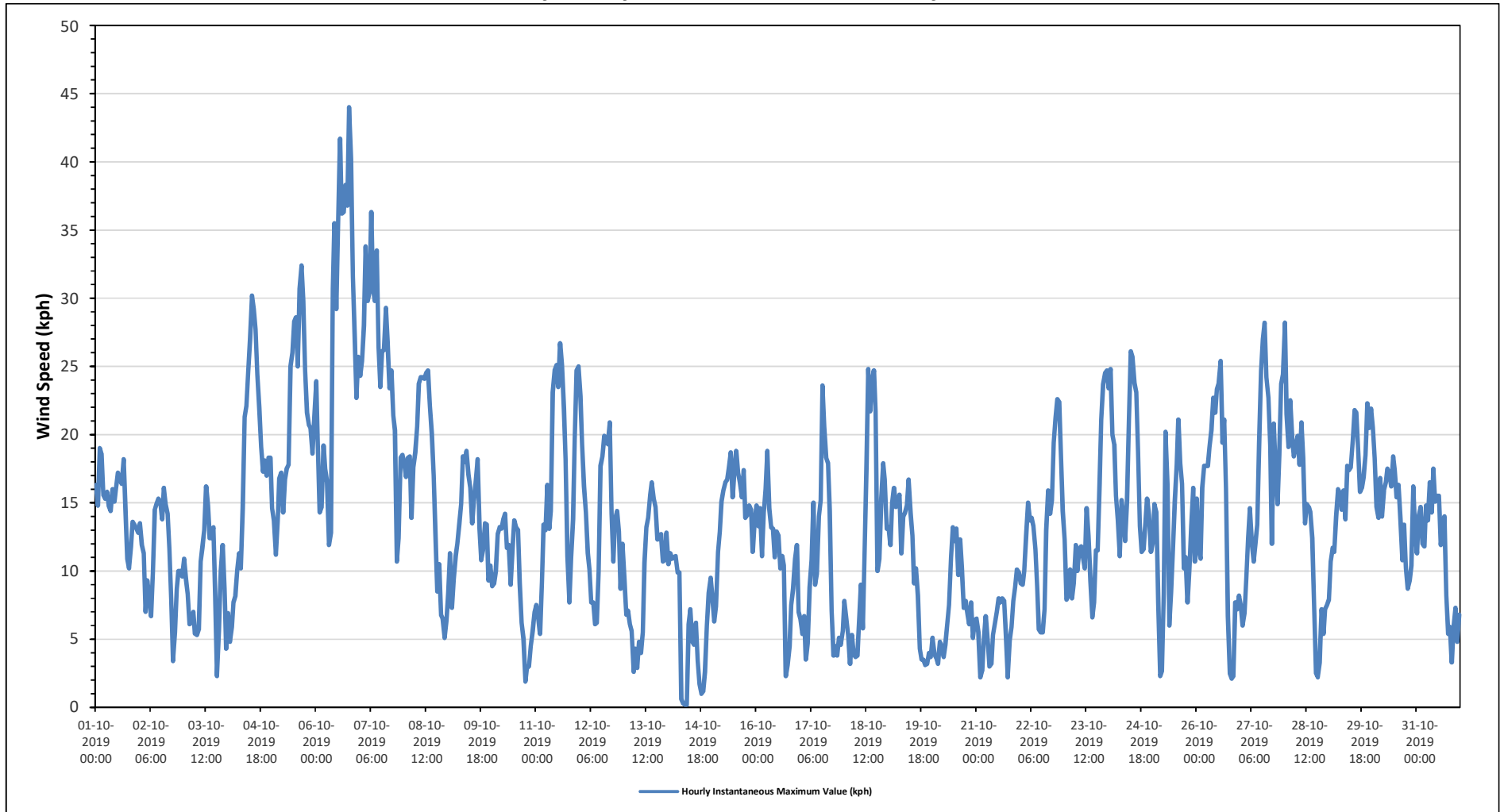
Maximum Hourly Value:	44.0 kph	on October 6 at hour 18	Hours in Service:	744
Maximum Daily Value:	27.6 kph	on October 6	Hours of Data:	744
Minimum Hourly Value:	0.2 kph	on October 14 at hour 9	Hours of Missing Data:	0
Minimum Daily Value:	5.8 kph	on October 14	Hours of Calibration:	0
Monthly Average:	13.8 kph		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Oct 1	16.3	14.8	19.0	18.6	15.6	15.3	15.8	14.8	14.4	16.0	15.1	16.1	17.2	16.7	16.4	18.2	14.8	10.9	10.2	11.8	13.6	13.4	13.1	12.8	10.2	19.0	15.0
Oct 2	13.5	11.9	11.3	7.0	9.3	8.2	6.7	9.9	14.5	14.9	15.3	15.1	13.8	16.1	14.9	14.2	11.6	7.9	3.4	5.5	8.7	10.0	10.0	9.6	3.4	16.1	11.0
Oct 3	10.9	9.5	8.3	6.1	6.2	7.0	5.4	5.3	5.7	10.7	11.7	13.0	16.2	14.8	12.4	12.4	13.2	8.1	2.3	5.6	10.0	11.9	8.7	4.3	2.3	16.2	9.2
Oct 4	6.9	4.8	5.9	7.7	8.2	10.1	11.3	10.2	14.6	21.3	22.1	24.6	27.0	30.2	29.2	27.7	24.4	22.0	19.1	17.3	18.1	17.0	18.3	18.3	4.8	30.2	17.3
Oct 5	14.6	13.7	11.2	13.6	16.8	17.2	14.3	16.7	17.5	17.8	25.0	26.0	28.3	28.6	25.0	30.7	32.4	29.8	24.7	21.6	20.7	20.5	18.6	21.3	11.2	32.4	21.1
Oct 6	23.9	19.2	14.3	14.7	19.2	17.5	16.5	11.9	12.8	30.7	35.5	29.2	35.6	41.7	36.2	36.3	38.3	36.8	44.0	40.2	31.6	27.0	22.7	25.7	11.9	44.0	27.6
Oct 7	24.3	25.4	28.0	33.8	29.8	30.4	36.3	30.8	29.8	33.5	26.4	23.5	26.1	26.2	29.3	26.8	23.4	24.7	21.4	20.3	10.7	12.4	18.3	18.5	10.7	36.3	25.4
Oct 8	17.9	16.9	18.3	18.4	13.9	17.6	18.7	20.6	23.7	24.2	24.2	24.1	24.5	24.7	22.1	20.1	17.0	13.0	8.5	10.5	6.8	6.5	5.1	6.3	5.1	24.7	16.8
Oct 9	8.4	11.3	7.3	9.4	11.1	12.0	13.4	14.9	18.4	18.0	18.8	17.1	16.1	13.5	15.1	16.5	18.2	13.1	10.8	11.5	13.5	13.4	9.3	10.4	7.3	18.8	13.4
Oct 10	8.9	9.1	10.0	12.7	13.2	13.1	13.8	14.2	11.7	11.9	9.0	11.4	13.7	13.2	13.0	9.1	6.2	5.0	1.9	2.9	3.0	4.5	5.6	7.0	1.9	14.2	9.3
Oct 11	7.5	6.6	5.4	9.2	13.4	13.0	16.3	13.1	14.4	23.1	24.7	25.1	23.5	26.7	25.1	21.9	18.2	11.1	7.7	11.0	13.8	19.7	24.7	25.0	5.4	26.7	16.7
Oct 12	22.8	19.3	16.2	14.3	11.3	10.1	7.7	7.7	6.1	6.2	9.9	17.7	18.4	19.9	19.5	19.3	20.9	14.2	10.7	13.8	14.4	12.9	8.7	12.0	6.1	22.8	13.9
Oct 13	9.4	6.8	7.1	6.1	5.6	2.6	4.3	2.9	4.8	4.0	5.5	10.6	13.2	13.9	15.6	16.5	15.3	14.7	12.3	12.5	12.7	10.7	10.8	12.8	2.6	16.5	9.6
Oct 14	10.5	11.3	10.9	11.0	11.1	9.9	9.9	0.6	0.3	0.2	0.2	6.1	7.2	4.8	4.6	6.2	3.4	1.7	1.0	1.2	2.6	6.0	8.4	9.5	0.2	11.3	5.8
Oct 15	7.9	6.3	7.4	11.4	12.9	15.1	15.9	16.5	16.7	17.5	18.7	15.4	17.5	18.8	17.2	16.5	15.4	17.4	13.9	14.1	14.8	14.5	11.4	13.6	6.3	18.8	14.5
Oct 16	14.8	13.3	14.6	11.1	14.3	16.0	18.8	14.6	13.2	13.1	11.0	12.9	12.6	10.2	11.1	10.4	2.3	3.1	4.5	7.5	8.7	10.9	11.9	7.0	2.3	18.8	11.2
Oct 17	6.5	5.4	6.7	3.5	4.7	8.8	10.8	15.0	9.0	9.8	14.0	15.2	23.6	20.6	18.3	17.9	14.4	7.1	3.8	4.5	3.8	5.1	4.6	5.6	3.5	23.6	9.9
Oct 18	7.8	6.5	5.3	3.2	5.3	3.9	3.7	3.8	6.7	9.0	5.8	11.6	17.9	24.8	21.7	24.0	24.7	21.7	10.0	10.9	15.3	17.9	16.7	13.1	3.2	24.8	12.1
Oct 19	13.2	11.9	15.0	16.1	14.7	15.1	15.6	11.3	14.0	14.3	14.8	16.7	14.3	12.6	9.1	10.2	8.2	4.3	3.5	3.5	3.1	3.2	4.0	3.7	3.1	16.7	10.5
Oct 20	5.1	3.9	3.6	3.2	4.8	4.5	3.7	4.6	6.1	7.5	11.0	13.2	12.2	13.1	9.7	12.3	10.2	7.3	7.8	6.8	6.1	7.7	5.1	6.4	3.2	13.2	7.3
Oct 21	6.5	5.5	2.2	2.7	5.0	6.7	5.0	3.0	3.2	5.3	6.2	7.0	8.0	7.7	8.0	7.8	5.1	2.2	4.9	5.9	7.8	8.8	10.1	9.9	2.2	10.1	6.0
Oct 22	9.1	9.0	10.0	12.6	15.0	13.7	13.9	13.3	11.6	8.8	5.7	5.5	5.5	7.2	13.0	15.9	14.2	15.2	19.4	21.2	22.6	22.4	18.2	14.4	5.5	22.6	13.2
Oct 23	12.3	7.9	8.2	10.1	8.0	9.1	11.9	10.0	11.6	11.8	11.0	10.2	14.6	12.6	9.3	6.6	7.7	11.5	11.5	16.4	21.1	23.7	24.5	24.7	6.6	24.7	12.8
Oct 24	23.4	24.8	20.0	19.3	15.5	13.8	11.1	15.2	13.9	12.2	15.2	21.1	26.1	25.7	23.8	23.1	18.7	13.3	11.4	11.6	13.6	15.3	14.1	11.4	11.1	26.1	17.2
Oct 25	12.1	14.9	14.3	7.7	2.3	2.7	8.3	20.2	16.3	6.0	8.4	11.5	15.1	17.8	21.1	17.9	16.4	10.2	11.0	7.7	10.1	13.3	16.1	10.7	2.3	21.1	12.2
Oct 26	15.3	11.6	10.9	16.1	17.7	17.7	17.7	19.1	20.3	22.7	21.6	23.3	23.8	25.4	19.4	21.1	16.0	6.7	2.5	2.1	2.3	7.7	7.2	8.2	2.1	25.4	14.9
Oct 27	7.5	6.0	6.9	9.5	12.4	14.6	12.1	10.7	12.0	13.4	19.4	24.7	27.0	28.2	24.2	22.7	19.2	12.0	20.8	17.2	14.9	18.5	23.7	24.4	6.0	28.2	16.8
Oct 28	28.2	21.5	19.1	22.5	19.7	18.4	19.2	19.9	17.8	20.9	18.3	13.5	14.9	14.7	14.3	12.4	7.3	2.5	2.2	3.3	7.2	5.4	7.2	7.5	2.2	28.2	14.1
Oct 29	7.9	10.7	11.7	11.4	14.0	16.0	15.7	14.5	15.9	13.8	17.7	17.4	17.6	19.6	21.8	21.6	18.9	15.8	16.1	16.9	18.5	22.3	20.5	21.9	7.9	22.3	16.6
Oct 30	20.5	18.3	14.7	13.9	16.8	14.0	15.9	16.5	17.5	17.1	16.2	18.4	17.4	15.4	16.3	13.8	10.8	13.4	10.2	8.7	9.3	10.4	16.2	13.1	8.7	20.5	14.8
Oct 31	11.3	14.0	14.7	12.0	11.8	14.8	13.7	16.5	14.3	17.5	15.1	15.5	15.5	11.9	13.0	14.0	8.2	5.4	5.9	3.3	6.0	7.3	4.8	6.8	3.3	17.5	11.4
Diurnal Maximum	28.2	25.4	28.0	33.8	29.8	30.4	36.3	30.8	29.8	33.5	35.5	29.2	35.6	41.7	36.2	36.3	38.3	36.8	44.0	40.2	31.6	27.0	24.7	25.7			
Diurnal Average	13.1	12.0	11.6	11.9	12.2	12.5	13.0	12.8	13.2	14.6	15.3	16.5	18.2	18.6	17.7	17.6	15.3	12.3	10.9	11.2	11.8	12.9	12.9	12.8			

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 Station - October 2019

Summary of Hourly Instantaneous Maximums

SULPHUR DIOXIDE (SO₂) in ppb

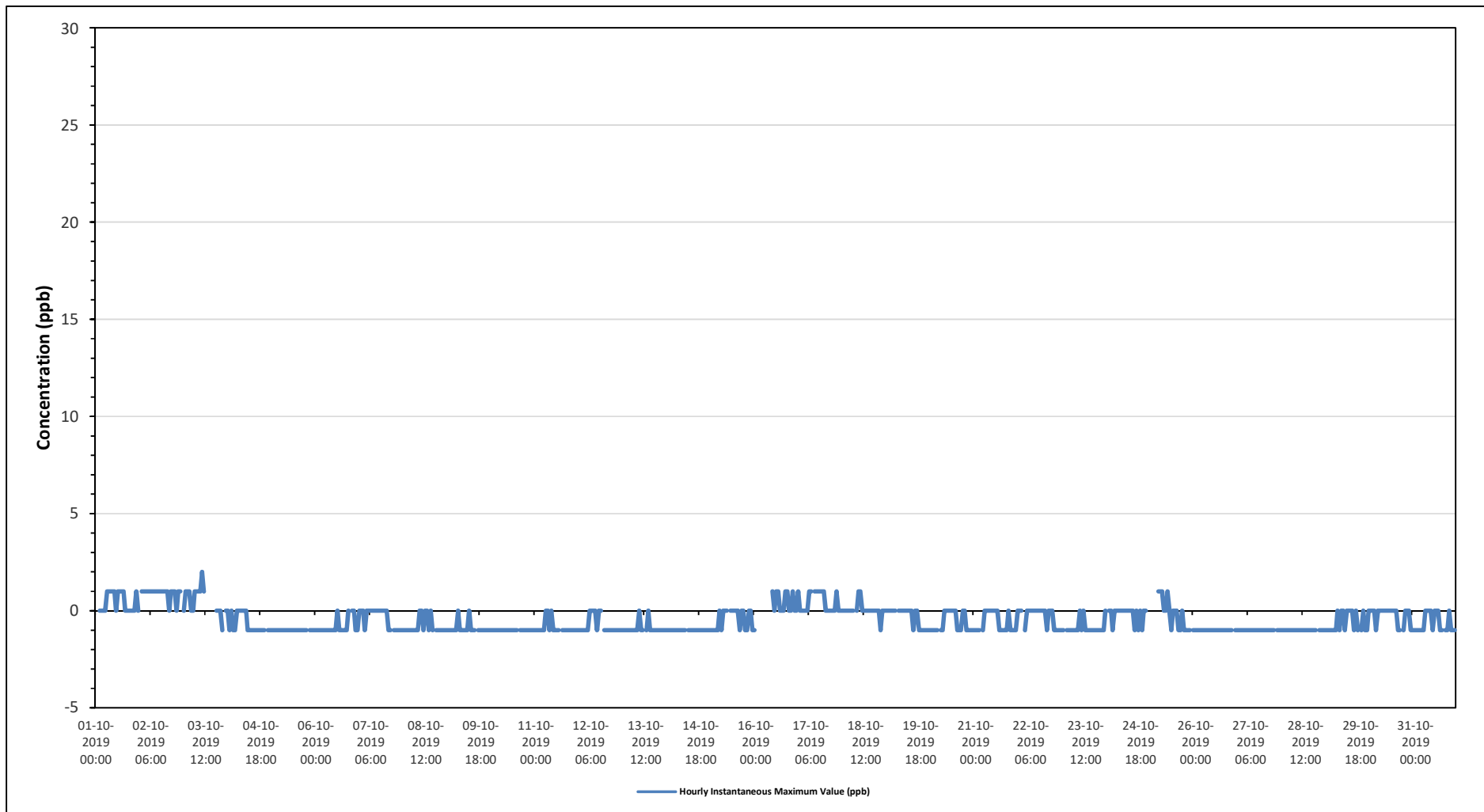
Maximum Hourly Value:	2 ppb on October 3 at hour 10	Hours in Service:	744
Maximum Daily Value:	0.9 ppb on October 2	Hours of Data:	692
Minimum Hourly Value:	-1 ppb on October 3 at hour 21	Hours of Missing Data:	14
Minimum Daily Value:	-1.0 ppb on October 5	Hours of Calibration:	38
Monthly Average:	-0.5 ppb	Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Oct 1	0	S	0	0	0	0	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	1	0	0	1	0	0	1	0.4
Oct 2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	S	S	0	0.9	
Oct 3	0	1	1	1	0	0	1	1	1	1	2	1	C	C	C	C	C	C	0	0	0	-1	S	S	0	-1	2	-	
Oct 4	0	-1	0	-1	-1	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1	-1	0	-0.7	
Oct 5	-1	-1	-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	-1.0	
Oct 6	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	-1	-1	-1	0	S	0	0	-1	-1	-1	-1	0	-0.8	
Oct 7	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	0	-0.3	
Oct 8	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	-1	0	0	-1	0	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.8
Oct 9	-1	-1	-1	-1	-1	-1	0	-1	-1	-1	-1	-1	0	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.9
Oct 10	-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	-1	-1	-1.0
Oct 11	-1	-1	-1	-1	-1	-1	0	0	-1	0	-1	-1	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.9
Oct 12	-1	-1	-1	-1	-1	-1	0	0	0	0	-1	0	0	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.7
Oct 13	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.9
Oct 14	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.0
Oct 15	-1	-1	-1	-1	-1	0	-1	0	0	0	S	0	0	0	0	0	-1	0	0	-1	-1	0	0	-1	-1	0	0	-0.4	
Oct 16	-1	P	P	P	P	P	P	P	R	S	1	0	1	1	1	0	0	0	1	1	0	0	1	0	0	0	-1	1	-
Oct 17	1	0	0	0	0	0	1	1	S	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0.4
Oct 18	0	0	0	0	0	0	0	S	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	-1	1	0.0
Oct 19	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	-1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.3
Oct 20	-1	-1	-1	-1	-1	S	-1	-1	0	0	0	0	0	0	0	-1	-1	-1	-1	0	0	-1	-1	-1	-1	-1	-1	0	-0.6
Oct 21	-1	-1	-1	-1	S	-1	0	0	0	0	0	0	0	0	-1	-1	-1	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	0	-0.6
Oct 22	0	0	0	S	-1	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	0	-0.3
Oct 23	-1	-1	S	-1	-1	-1	-1	-1	-1	-1	0	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-0.9
Oct 24	0	S	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	-1	0	-1	0	-1	0	-1	0	0	0	P	-0.2	
Oct 25	P	P	P	P	R	1	1	1	0	0	1	0	-1	0	0	0	0	-1	-1	0	-1	-1	-1	-1	-1	-1	S	-1	-0.2
Oct 26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1.0
Oct 27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	-1	-1	-1.0
Oct 28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	S	-1	-1	-1	-1	-1	-1.0
Oct 29	-1	-1	-1	-1	-1	-1	-1	0	-1	0	0	0	0	0	0	0	-1	0	-1	0	-1	S	-1	0	-1	-1	-1	0	-0.6
Oct 30	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	S	-1	0	0	0	0	-1	-1	-1	0	-0.2
Oct 31	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	-1	0	0	0	-1	S	-1	-1	0	-1	0	-1	-1	-1	-1	-1	0	-0.7
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Diurnal Average	-0.6	-0.6	-0.5	-0.6	-0.7	-0.5	-0.3	-0.2	-0.3	-0.1	-0.1	-0.4	-0.2	-0.3	-0.3	-0.5	-0.8	-0.6	-0.6	-0.6	-0.6	-0.7	-0.6	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8

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 Station





PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Instantaneous Maximums

TOTAL REDUCED SULPHUR (TRS) in ppb

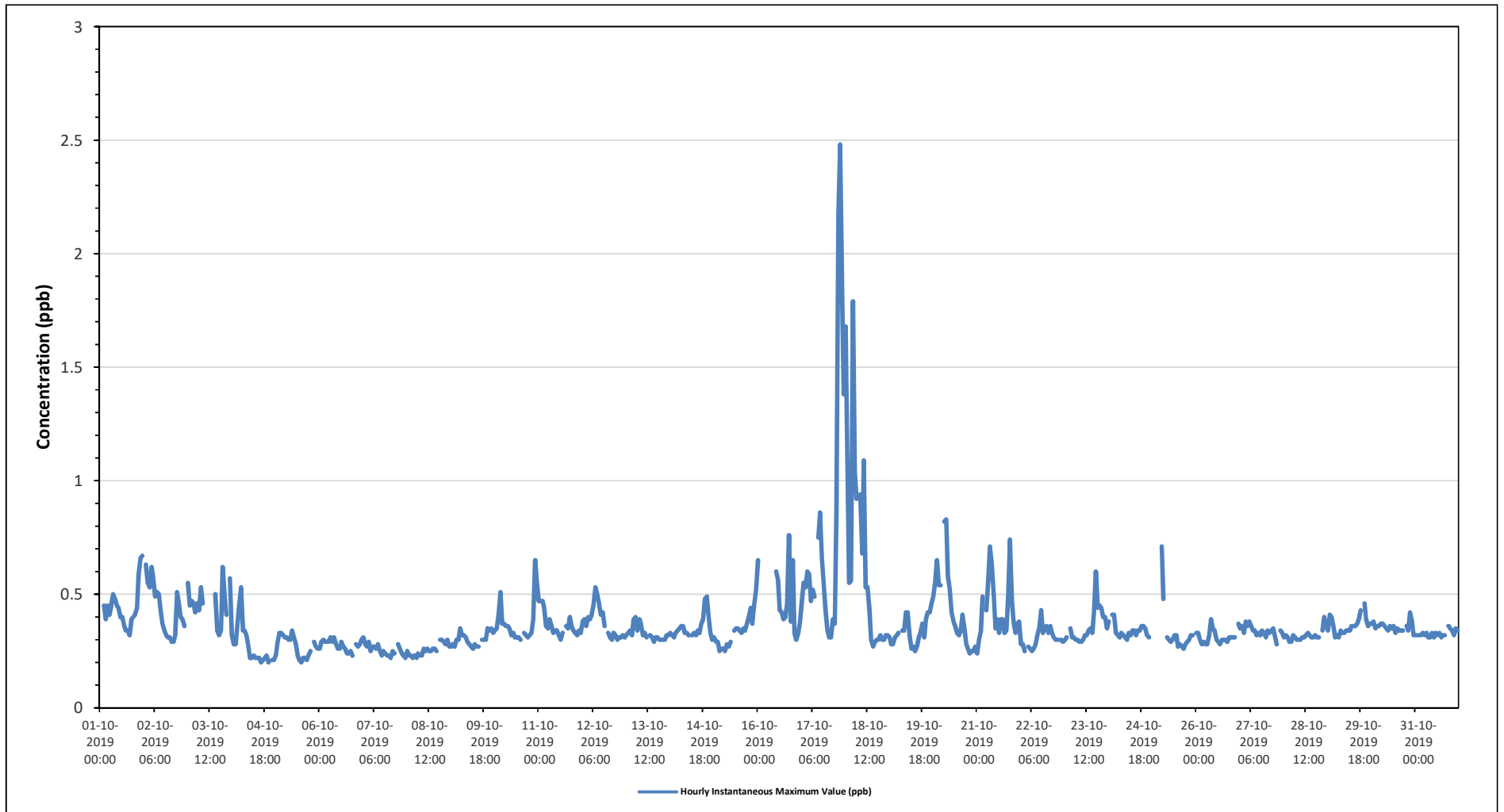
Maximum Hourly Value:	2.48 ppb on October 17 at hour 21	Hours in Service:	744
Maximum Daily Value:	0.78 ppb on October 17	Hours of Data:	691
Minimum Hourly Value:	0.20 ppb on October 4 at hour 16	Hours of Missing Data:	15
Minimum Daily Value:	0.25 ppb on October 7	Hours of Calibration:	38
Monthly Average:	0.37 ppb	Operational Uptime:	98.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	0.39	S	0.45	0.39	0.45	0.41	0.45	0.5	0.48	0.45	0.44	0.4	0.4	0.36	0.34	0.34	0.32	0.39	0.4	0.41	0.44	0.59	0.66	0.67	0.32	0.67	0.44	
Oct 2	S	0.63	0.55	0.53	0.62	0.57	0.49	0.51	0.5	0.43	0.37	0.34	0.32	0.31	0.31	0.29	0.32	0.32	0.51	0.46	0.4	0.39	0.36	S	0.29	0.63	0.43	
Oct 3	0.55	0.45	0.47	0.46	0.42	0.46	0.43	0.53	0.46	C	C	C	C	C	C	0.5	0.34	0.32	0.34	0.62	0.5	0.41	S	0.57	0.32	0.62	-	
Oct 4	0.32	0.28	0.28	0.36	0.45	0.53	0.34	0.34	0.32	0.27	0.22	0.22	0.23	0.22	0.22	0.22	0.2	0.21	0.22	0.23	0.2	S	0.21	0.21	0.20	0.53	0.27	
Oct 5	0.23	0.29	0.33	0.33	0.32	0.31	0.31	0.3	0.3	0.34	0.31	0.28	0.23	0.21	0.2	0.22	0.22	0.21	0.23	0.25	S	0.29	0.27	0.26	0.20	0.34	0.27	
Oct 6	0.26	0.29	0.3	0.29	0.29	0.29	0.31	0.29	0.31	0.28	0.26	0.26	0.29	0.27	0.26	0.24	0.24	0.25	0.23	S	0.28	0.27	0.28	0.3	0.23	0.31	0.28	
Oct 7	0.31	0.28	0.27	0.29	0.25	0.27	0.27	0.26	0.28	0.25	0.23	0.25	0.24	0.23	0.23	0.22	0.25	0.24	S	0.28	0.26	0.24	0.23	0.22	0.22	0.31	0.25	
Oct 8	0.25	0.23	0.23	0.22	0.23	0.22	0.24	0.23	0.23	0.26	0.25	0.26	0.25	0.25	0.26	0.26	0.25	S	0.3	0.3	0.29	0.28	0.3	0.27	0.22	0.30	0.25	
Oct 9	0.27	0.28	0.27	0.3	0.3	0.35	0.32	0.32	0.31	0.29	0.28	0.27	0.26	0.28	0.27	0.27	S	0.3	0.3	0.3	0.35	0.34	0.35	0.33	0.26	0.35	0.30	
Oct 10	0.34	0.35	0.41	0.51	0.37	0.37	0.36	0.36	0.35	0.32	0.33	0.31	0.31	0.31	0.3	S	0.33	0.32	0.31	0.32	0.33	0.39	0.65	0.56	0.30	0.65	0.37	
Oct 11	0.47	0.47	0.47	0.44	0.36	0.35	0.39	0.36	0.33	0.34	0.34	0.32	0.3	0.33	S	0.36	0.35	0.4	0.36	0.34	0.33	0.32	0.34	0.33	0.30	0.47	0.37	
Oct 12	0.38	0.39	0.36	0.4	0.39	0.41	0.45	0.53	0.5	0.46	0.41	0.42	0.36	S	0.33	0.31	0.3	0.33	0.32	0.3	0.31	0.31	0.32	0.31	0.30	0.53	0.37	
Oct 13	0.32	0.33	0.34	0.32	0.39	0.4	0.34	0.39	0.37	0.32	0.33	0.31	S	0.32	0.31	0.29	0.31	0.31	0.3	0.3	0.3	0.3	0.32	0.32	0.29	0.40	0.33	
Oct 14	0.33	0.32	0.31	0.33	0.34	0.35	0.36	0.36	0.33	0.33	0.32	S	0.32	0.33	0.32	0.34	0.33	0.37	0.39	0.48	0.49	0.4	0.33	0.3	0.30	0.49	0.35	
Oct 15	0.31	0.29	0.29	0.25	0.26	0.26	0.25	0.28	0.27	0.29	S	0.34	0.35	0.35	0.34	0.33	0.35	0.34	0.37	0.4	0.44	0.37	0.46	0.52	0.25	0.52	0.34	
Oct 16	0.65	P	P	P	P	P	P	P	R	S	0.6	0.56	0.43	0.42	0.39	0.4	0.46	0.76	0.38	0.65	0.33	0.3	0.33	0.38	0.30	0.76	-	
Oct 17	0.46	0.55	0.53	0.6	0.59	0.47	0.52	0.49	S	0.75	0.86	0.66	0.55	0.43	0.34	0.31	0.31	0.39	0.37	0.87	2.18	2.48	1.85	1.38	0.31	2.48	0.78	
Oct 18	1.68	1.04	0.55	0.56	1.79	1.04	0.92	S	0.94	0.68	1.09	0.53	0.53	0.43	0.3	0.27	0.29	0.3	0.3	0.32	0.3	0.3	0.32	0.32	0.27	1.79	0.64	
Oct 19	0.31	0.28	0.28	0.31	0.32	0.33	S	0.34	0.34	0.42	0.42	0.32	0.26	0.27	0.25	0.27	0.31	0.33	0.37	0.31	0.39	0.42	0.42	0.46	0.25	0.46	0.34	
Oct 20	0.49	0.55	0.65	0.54	0.54	S	0.82	0.83	0.58	0.52	0.42	0.38	0.36	0.33	0.32	0.34	0.41	0.35	0.28	0.26	0.24	0.25	0.25	0.27	0.24	0.83	0.43	
Oct 21	0.24	0.3	0.34	0.49	S	0.43	0.56	0.71	0.64	0.5	0.35	0.39	0.33	0.39	0.33	0.34	0.5	0.74	0.47	0.37	0.33	0.37	0.38	0.24	0.74	0.43		
Oct 22	0.28	0.28	0.25	S	0.27	0.26	0.25	0.26	0.28	0.32	0.35	0.43	0.33	0.35	0.36	0.33	0.36	0.33	0.31	0.3	0.3	0.3	0.3	0.29	0.25	0.43	0.31	
Oct 23	0.3	0.31	S	0.35	0.31	0.31	0.3	0.3	0.29	0.29	0.3	0.32	0.32	0.34	0.35	0.33	0.42	0.6	0.44	0.45	0.44	0.4	0.4	0.35	0.29	0.60	0.36	
Oct 24	0.38	S	0.41	0.41	0.33	0.32	0.31	0.33	0.32	0.31	0.3	0.33	0.32	0.34	0.34	0.32	0.34	0.36	0.35	0.32	0.31	0.31	0.31	P	0.30	0.41	0.34	
Oct 25	P	P	P	P	R	0.71	0.48	S1	0.31	0.3	0.29	0.3	0.32	0.32	0.27	0.28	0.27	0.26	0.28	0.29	0.3	0.32	0.32	S	0.26	0.71	-	
Oct 26	0.33	0.33	0.3	0.28	0.29	0.28	0.28	0.32	0.39	0.35	0.34	0.3	0.29	0.28	0.3	0.3	0.3	0.29	0.31	0.31	0.31	0.31	0.31	S	0.37	0.28	0.31	
Oct 27	0.35	0.36	0.33	0.38	0.36	0.38	0.36	0.34	0.34	0.32	0.33	0.32	0.34	0.33	0.31	0.34	0.33	0.34	0.35	0.32	0.28	S	0.34	0.33	0.28	0.38	0.34	
Oct 28	0.31	0.32	0.31	0.29	0.29	0.32	0.31	0.3	0.3	0.3	0.31	0.31	0.32	0.33	0.32	0.31	0.31	0.32	0.31	0.31	0.31	0.31	0.34	0.4	0.36	0.29	0.40	0.32
Oct 29	0.34	0.41	0.4	0.36	0.31	0.32	0.31	0.34	0.33	0.33	0.34	0.34	0.36	0.36	0.36	0.37	0.39	0.43	S	0.46	0.39	0.36	0.37	0.31	0.46	0.36	0.36	
Oct 30	0.37	0.38	0.35	0.36	0.36	0.37	0.37	0.36	0.35	0.34	0.36	0.35	0.36	0.33	0.35	0.34	0.34	0.34	S	0.36	0.34	0.42	0.38	0.32	0.32	0.42	0.36	
Oct 31	0.32	0.32	0.32	0.32	0.33	0.32	0.33	0.31	0.31	0.33	0.31	0.33	0.32	0.33	0.31	0.32	0.32	S	0.36	0.35	0.34	0.32	0.35	0.34	0.31	0.36	0.33	
Diurnal Maximum	1.68	1.04	0.65	0.60	1.79	1.04	0.92	0.83	0.94	0.75	1.09	0.66	0.55	0.43	0.39	0.50	0.46	0.76	0.74	0.87	2.18	2.48	1.85	1.38				
Diurnal Average	0.40	0.38	0.37	0.38	0.41	0.39	0.39	0.39	0.38	0.37	0.38	0.35	0.33	0.32	0.31	0.31	0.32	0.35	0.35	0.38	0.41	0.42	0.41	0.40				

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 Station





PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Instantaneous Maximums

TOTAL HYDROCARBONS (THC) in ppm

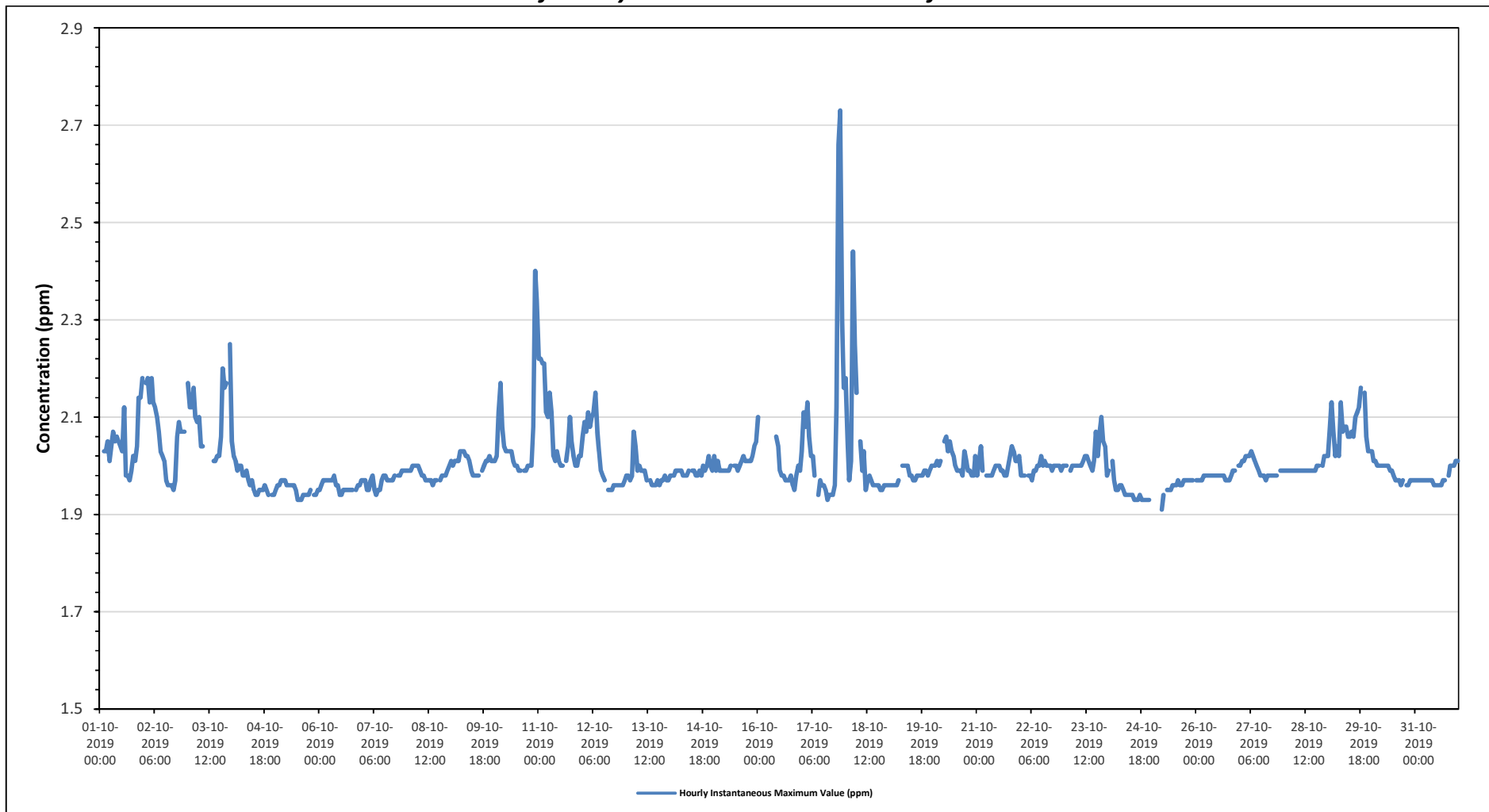
Maximum Hourly Value: 2.73 ppm on October 17 at hour 21	Hours in Service: 744
Maximum Daily Value: 2.10 ppm on October 3	Hours of Data: 692
Minimum Hourly Value: 1.91 ppm on October 25 at hour 5	Hours of Missing Data: 15
Minimum Daily Value: 1.95 ppm on October 24	Hours of Calibration: 37
Monthly Average: 2.01 ppm	Operational Uptime: 98.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	2.00	S	2.03	2.03	2.05	2.01	2.04	2.07	2.05	2.06	2.05	2.04	2.03	2.12	1.98	1.98	1.97	1.99	2.02	2.01	2.04	2.14	2.14	2.18	1.97	2.18	2.04	
Oct 2	S	2.17	2.18	2.13	2.18	2.13	2.12	2.10	2.07	2.03	2.02	2.01	1.97	1.96	1.96	1.96	1.95	1.97	2.06	2.09	2.07	2.07	2.07	S	1.95	2.18	2.06	
Oct 3	2.17	2.12	2.12	2.16	2.10	2.09	2.10	2.04	2.04	C	C	C	C	C	2.01	2.01	2.02	2.02	2.06	2.20	2.16	2.17	S	2.25	2.01	2.25	2.10	
Oct 4	2.05	2.02	2.01	1.99	2.00	2.00	1.98	1.98	1.99	1.97	1.96	1.97	1.95	1.94	1.94	1.95	1.95	1.95	1.96	1.95	1.94	S	1.94	1.94	1.94	2.05	1.97	
Oct 5	1.95	1.96	1.96	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.93	1.93	1.93	1.94	1.94	1.94	1.94	S	S	1.94	1.94	1.95	1.93	1.97	1.95	
Oct 6	1.95	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.96	1.96	1.94	1.94	1.95	1.95	1.95	1.95	1.95	S	1.95	1.96	1.96	1.97	1.94	1.98	1.96	
Oct 7	1.97	1.97	1.95	1.95	1.97	1.98	1.95	1.94	1.95	1.95	1.97	1.98	1.98	1.97	1.97	1.97	1.97	1.98	S	1.98	1.98	1.99	1.99	1.99	1.94	1.99	1.97	
Oct 8	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.96	1.97	1.97	S	1.97	1.98	1.98	1.98	1.99	2.00	1.96	2.00	1.98	
Oct 9	2.01	2.00	2.01	2.01	2.01	2.03	2.03	2.03	2.02	2.02	2.01	1.99	1.98	1.98	1.98	1.98	S	S	1.99	2.00	2.01	2.01	2.02	2.01	2.01	1.98	2.03	2.01
Oct 10	2.01	2.02	2.11	2.17	2.08	2.04	2.03	2.03	2.03	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.00	2.08	2.40	2.34	1.99	2.40	2.06	
Oct 11	2.22	2.22	2.21	2.21	2.11	2.10	2.15	2.11	2.02	2.01	2.03	2.01	2.00	2.00	S	2.01	2.04	2.10	2.05	2.02	2.00	2.00	2.02	2.02	2.00	2.22	2.07	
Oct 12	2.06	2.09	2.07	2.11	2.08	2.10	2.11	2.15	2.07	2.03	1.99	1.98	1.97	S	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.95	2.15	2.02	
Oct 13	1.98	1.98	1.97	1.98	2.07	2.04	1.99	2.00	1.99	1.99	1.99	1.97	S	1.97	1.96	1.96	1.96	1.97	1.96	1.97	1.97	1.98	1.97	1.97	1.96	2.07	1.98	
Oct 14	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.99	S	1.99	1.98	1.98	1.99	1.98	2.00	1.99	2.00	2.02	2.00	1.99	1.98	2.02	1.99	
Oct 15	2.02	1.99	2.01	1.99	1.99	1.99	1.99	1.99	1.99	2.00	S	2.00	2.00	1.99	2.00	2.01	2.02	2.01	2.01	2.01	2.01	2.02	2.04	2.05	1.99	2.05	2.01	
Oct 16	2.10	P	P	P	P	P	P	P	R	S	2.06	2.04	1.99	1.98	1.98	1.97	1.97	1.98	1.96	1.95	1.98	2.00	1.99	1.95	2.10	-		
Oct 17	2.03	2.11	2.08	2.13	2.06	2.02	2.02	1.98	S	1.94	1.97	1.96	1.96	1.95	1.93	1.94	1.94	1.94	1.96	2.12	2.66	2.73	2.30	2.16	1.93	2.73	2.08	
Oct 18	2.18	2.05	1.97	2.01	2.44	2.25	2.15	S	2.05	1.99	2.03	1.95	1.97	1.98	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.96	1.96	1.96	1.95	2.44	2.03	
Oct 19	1.96	1.96	1.96	1.96	1.96	1.97	S	2.00	2.00	2.00	2.00	1.98	1.98	1.97	1.97	1.98	1.98	1.98	1.98	1.99	1.99	1.98	1.99	2.00	1.96	2.00	1.98	
Oct 20	2.00	2.00	2.01	2.00	2.01	S	2.05	2.06	2.03	2.05	2.03	2.02	2.00	1.99	1.99	1.99	1.98	2.03	2.01	1.99	1.99	1.98	1.98	2.02	1.98	2.06	2.01	
Oct 21	1.98	2.01	2.04	1.99	S	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.00	1.99	1.99	1.98	1.98	2.00	2.02	2.04	2.03	2.01	2.01	2.02	1.98	2.04	2.00	
Oct 22	1.98	1.98	1.98	S	1.98	1.98	1.97	1.99	1.99	2.00	2.00	2.02	2.00	2.01	2.00	2.00	2.00	1.99	2.00	2.00	2.00	2.00	1.99	2.00	1.97	2.02	1.99	
Oct 23	2.00	2.00	S	1.99	2.00	2.00	2.00	2.00	2.00	2.01	2.02	2.02	2.01	2.00	1.99	2.01	2.07	2.02	2.07	2.10	2.05	2.04	1.98	1.98	2.10	2.02	2.02	
Oct 24	1.99	S	2.01	1.97	1.95	1.95	1.96	1.96	1.95	1.94	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	P	1.93	2.01	1.95	
Oct 25	P	P	P	P	R	1.91	1.94	S1	1.95	1.95	1.95	1.96	1.96	1.96	1.97	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	S	1.91	1.97	-	
Oct 26	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.99	1.99	S	2.00	1.97	2.00	1.98	
Oct 27	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.02	2.01	2.00	1.99	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	S	1.99	1.97	2.03	2.00	
Oct 28	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	S	2.00	2.02	2.02	1.99	2.02	1.99	
Oct 29	2.02	2.08	2.13	2.07	2.02	2.04	2.02	2.13	2.07	2.08	2.08	2.06	2.06	2.07	2.06	2.10	2.11	2.12	2.16	S	2.15	2.06	2.03	2.03	2.02	2.16	2.08	
Oct 30	2.03	2.01	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	1.98	1.97	1.97	1.97	1.96	1.97	S	1.96	1.96	1.97	1.97	1.97	1.96	2.03	1.99	
Oct 31	1.97	1.97	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	1.97	S	1.98	2.00	2.00	2.00	2.01	2.01	1.96	2.01	1.98	
Diurnal Maximum	2.22	2.22	2.21	2.21	2.44	2.25	2.15	2.15	2.07	2.08	2.08	2.06	2.06	2.12	2.06	2.10	2.11	2.12	2.16	2.20	2.66	2.73	2.40	2.34				
Diurnal Average	2.02	2.02	2.03	2.03	2.03	2.02	2.02	2.01	2.00	1.99	2.00	1.99	1.98	1.98	1.97	1.98	1.98	1.99	2.00	2.00	2.02	2.03	2.02	2.03				

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 Station





PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Instantaneous Maximums

METHANE (CH4) in ppm

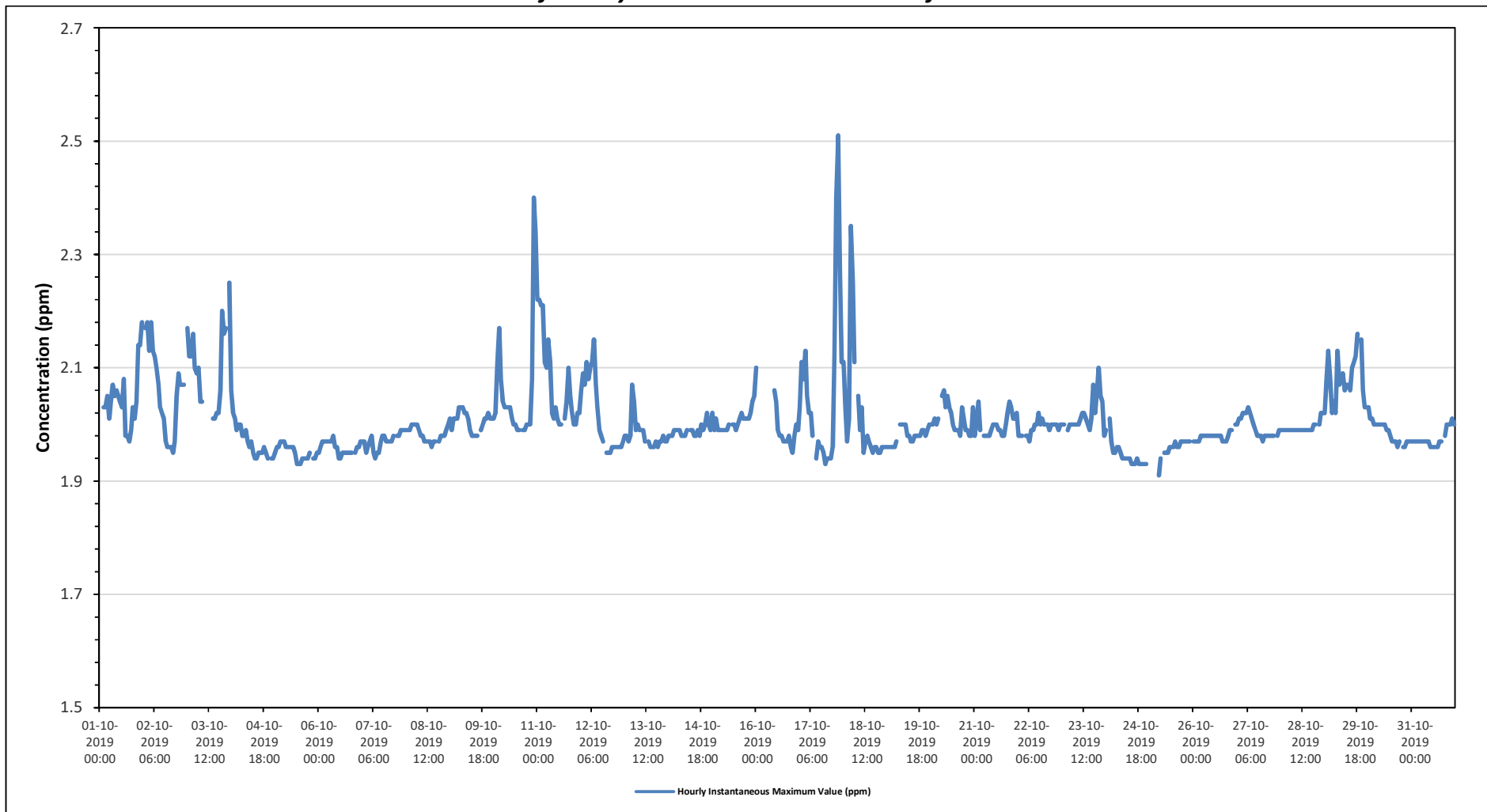
Maximum Hourly Value: 2.51 ppm on October 17 at hour 21	Hours in Service: 744
Maximum Daily Value: 2.10 ppm on October 3	Hours of Data: 692
Minimum Hourly Value: 1.91 ppm on October 25 at hour 5	Hours of Missing Data: 15
Minimum Daily Value: 1.95 ppm on October 24	Hours of Calibration: 37
Monthly Average: 2.00 ppm	Operational Uptime: 98.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1	2.01	S	2.03	2.03	2.05	2.01	2.04	2.07	2.05	2.06	2.05	2.04	2.03	2.08	1.98	1.98	1.97	1.99	2.03	2.01	2.04	2.14	2.14	2.18	1.97	2.18	2.04	
Oct 2	S	2.17	2.18	2.13	2.18	2.13	2.12	2.10	2.07	2.03	2.02	2.01	1.97	1.96	1.96	1.96	1.95	1.97	2.05	2.09	2.07	2.07	S	S	1.95	2.18	2.06	
Oct 3	2.17	2.12	2.12	2.16	2.10	2.09	2.10	2.04	2.04	C	C	C	C	C	2.01	2.01	2.02	2.02	2.06	2.20	2.16	2.17	S	2.25	2.01	2.25	2.10	
Oct 4	2.06	2.02	2.01	1.99	2.00	2.00	1.98	1.98	1.99	1.97	1.96	1.97	1.95	1.94	1.94	1.95	1.95	1.95	1.96	1.95	1.94	S	1.94	1.94	1.94	2.06	1.97	
Oct 5	1.95	1.96	1.96	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.93	1.93	1.93	1.94	1.94	1.94	1.94	S	S	1.94	1.94	1.95	1.93	1.97	1.95	
Oct 6	1.95	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.96	1.96	1.94	1.94	1.95	1.95	1.95	1.95	1.95	S	1.95	1.96	1.96	1.97	1.94	1.98	1.96	
Oct 7	1.97	1.97	1.95	1.96	1.97	1.98	1.95	1.94	1.95	1.95	1.97	1.98	1.98	1.97	1.97	1.97	1.97	1.97	S	1.98	1.98	1.99	1.99	1.99	1.94	1.99	1.97	
Oct 8	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.96	1.97	1.97	S	1.97	1.98	1.98	1.98	1.99	2.00	1.96	2.00	1.98	
Oct 9	2.01	1.99	2.01	2.01	2.01	2.03	2.03	2.03	2.02	2.02	2.01	1.99	1.98	1.98	1.98	1.98	S	S	1.99	2.00	2.01	2.01	2.02	2.01	2.01	1.98	2.03	2.01
Oct 10	2.01	2.02	2.11	2.17	2.08	2.04	2.03	2.03	2.03	2.03	2.01	2.00	2.00	1.99	1.99	S	S	1.99	1.99	2.00	2.00	2.08	2.40	2.34	1.99	2.40	2.06	
Oct 11	2.22	2.22	2.21	2.21	2.11	2.10	2.15	2.11	2.02	2.01	2.03	2.01	2.00	2.00	S	2.01	2.04	2.10	2.05	2.02	2.00	2.00	2.02	2.02	2.00	2.22	2.07	
Oct 12	2.06	2.09	2.07	2.11	2.08	2.10	2.11	2.15	2.07	2.03	1.99	1.98	1.97	S	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.95	2.15	2.02	
Oct 13	1.98	1.98	1.97	1.98	2.07	2.04	1.99	2.00	1.99	1.99	1.99	1.97	S	1.97	1.96	1.96	1.96	1.97	1.96	1.97	1.97	1.98	1.97	1.97	1.96	2.07	1.98	
Oct 14	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.99	S	1.99	1.98	1.98	1.99	1.98	2.00	1.99	2.00	2.02	2.00	1.99	1.98	2.02	1.99	
Oct 15	2.02	1.99	2.01	1.99	1.99	1.99	1.99	1.99	1.99	2.00	S	2.00	2.00	1.99	2.00	2.01	2.02	2.01	2.01	2.01	2.01	2.02	2.04	2.05	1.99	2.05	2.01	
Oct 16	2.10	P	P	P	P	P	P	P	R	S	2.06	2.04	1.99	1.98	1.98	1.97	1.97	1.98	1.96	1.95	1.98	2.00	1.99	1.95	2.10	-		
Oct 17	2.03	2.11	2.08	2.13	2.05	2.02	2.02	1.98	S	1.94	1.97	1.96	1.96	1.95	1.93	1.94	1.94	1.94	1.96	2.12	2.40	2.51	2.27	2.11	1.93	2.51	2.06	
Oct 18	2.11	2.03	1.97	2.01	2.35	2.25	2.11	S	2.05	1.99	2.03	1.95	1.97	1.98	1.97	1.96	1.95	1.96	1.96	1.95	1.95	1.96	1.96	1.96	1.95	2.35	2.02	
Oct 19	1.96	1.96	1.96	1.96	1.96	1.97	S	2.00	2.00	2.00	2.00	1.98	1.98	1.97	1.97	1.98	1.98	1.98	1.98	1.99	1.99	1.98	1.99	2.00	1.96	2.00	1.98	
Oct 20	2.00	2.00	2.01	2.00	2.01	S	2.05	2.06	2.03	2.05	2.03	2.02	2.00	1.99	1.99	1.99	1.98	2.03	2.01	1.99	1.99	1.98	2.03	1.98	2.06	2.01	2.02	
Oct 21	1.98	2.01	2.04	1.99	S	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.00	1.99	1.99	1.98	1.98	2.00	2.02	2.04	2.03	2.01	2.01	2.02	1.98	2.04	2.00	
Oct 22	1.98	1.98	1.98	S	1.98	1.98	1.97	1.99	1.99	2.00	2.00	2.02	2.00	2.01	2.00	2.00	2.00	1.99	2.00	2.00	2.00	2.00	1.99	2.00	1.97	2.02	1.99	
Oct 23	2.00	2.00	S	1.99	2.00	2.00	2.00	2.00	2.00	2.01	2.02	2.02	2.01	2.00	1.99	2.01	2.07	2.02	2.06	2.10	2.05	2.04	1.98	1.98	2.10	2.02	2.02	
Oct 24	1.99	S	2.01	1.97	1.95	1.95	1.96	1.96	1.95	1.94	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	P	1.93	2.01	1.95	
Oct 25	P	P	P	P	R	1.91	1.94	S1	1.95	1.95	1.95	1.96	1.96	1.96	1.97	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	S	1.91	1.97	-	
Oct 26	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.99	1.99	S	2.00	1.97	2.00	1.98	
Oct 27	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.02	2.01	2.00	1.99	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	S	1.98	1.97	2.03	2.00	
Oct 28	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	S	2.00	2.02	2.02	1.99	2.02	1.99	
Oct 29	2.02	2.08	2.13	2.08	2.02	2.04	2.02	2.13	2.07	2.08	2.09	2.06	2.07	2.07	2.06	2.10	2.11	2.12	2.16	S	2.15	2.06	2.03	2.03	2.02	2.16	2.08	
Oct 30	2.03	2.01	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	1.98	1.97	1.97	1.97	1.96	1.97	S	1.96	1.96	1.97	1.97	1.97	1.96	2.03	1.99	
Oct 31	1.97	1.97	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	1.97	S	1.98	2.00	2.00	2.01	2.00	1.96	2.01	1.98		
Diurnal Maximum	2.22	2.22	2.21	2.21	2.35	2.25	2.15	2.15	2.07	2.08	2.09	2.06	2.07	2.08	2.06	2.10	2.11	2.12	2.16	2.20	2.40	2.51	2.40	2.34				
Diurnal Average	2.02	2.02	2.03	2.03	2.03	2.02	2.01	2.01	2.00	1.99	2.00	1.99	1.98	1.98	1.97	1.98	1.98	1.99	2.00	2.00	2.02	2.02	2.02	2.03				

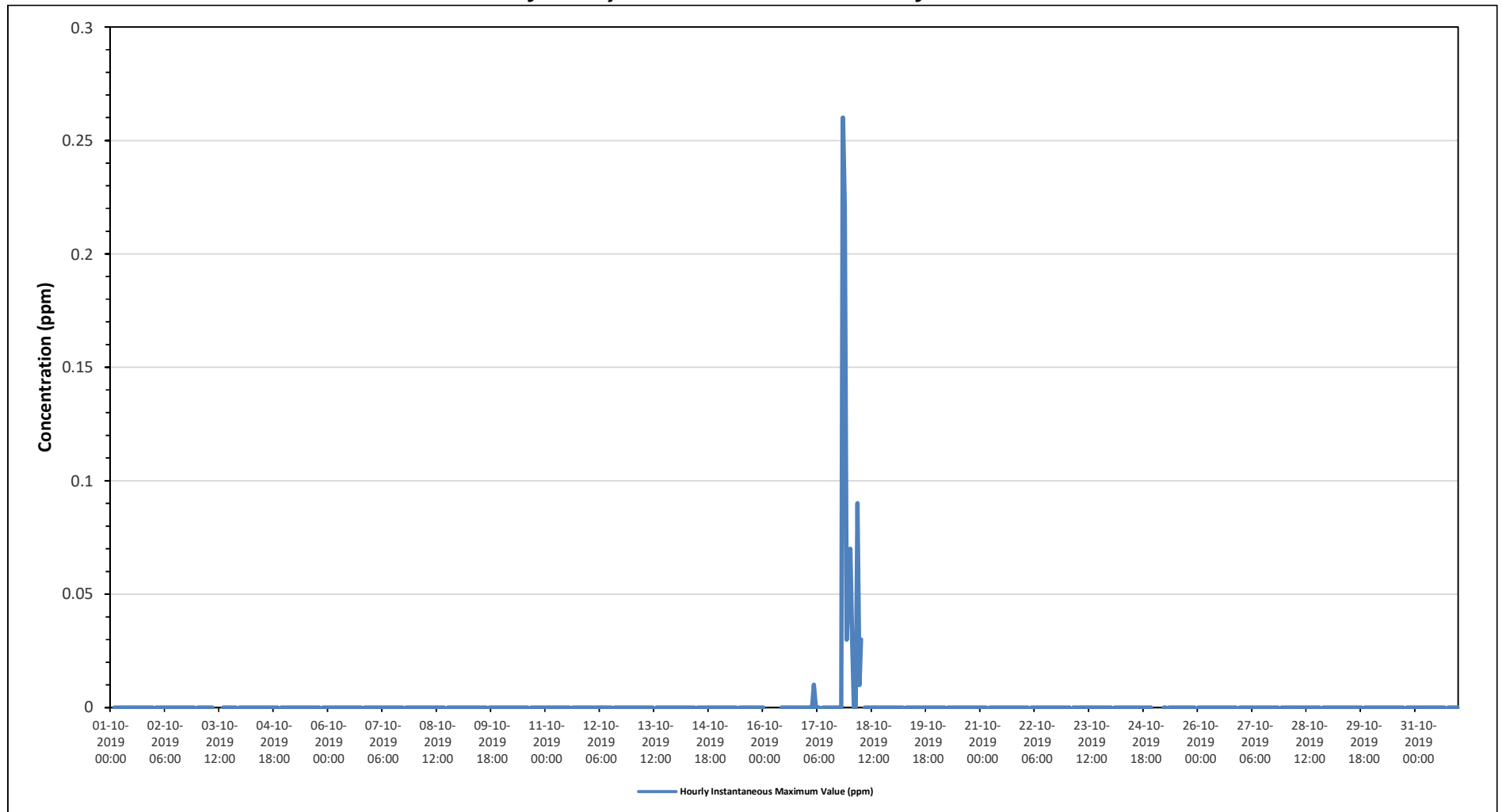
C	Calibration	S	Daily Zero/Span	Q	Quality Assurance	C1	Repeat Calibration	S1	Repeat Daily Zero/Span
G	Out for Repair	K	Collection Error	N	Not in Service	O	Operator Error	P	Power Failure
R	Recovery	X	Machine Malfunction	Y	Maintenance	T	Exceeds Temperature Limits	N	Not in Service

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 Station



Timeseries Chart of Hourly Instantaneous Maximum for NMHC - Reno Station





PEACE RIVER AREA MONITORING PROGRAM

Reno Station - October 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/hr

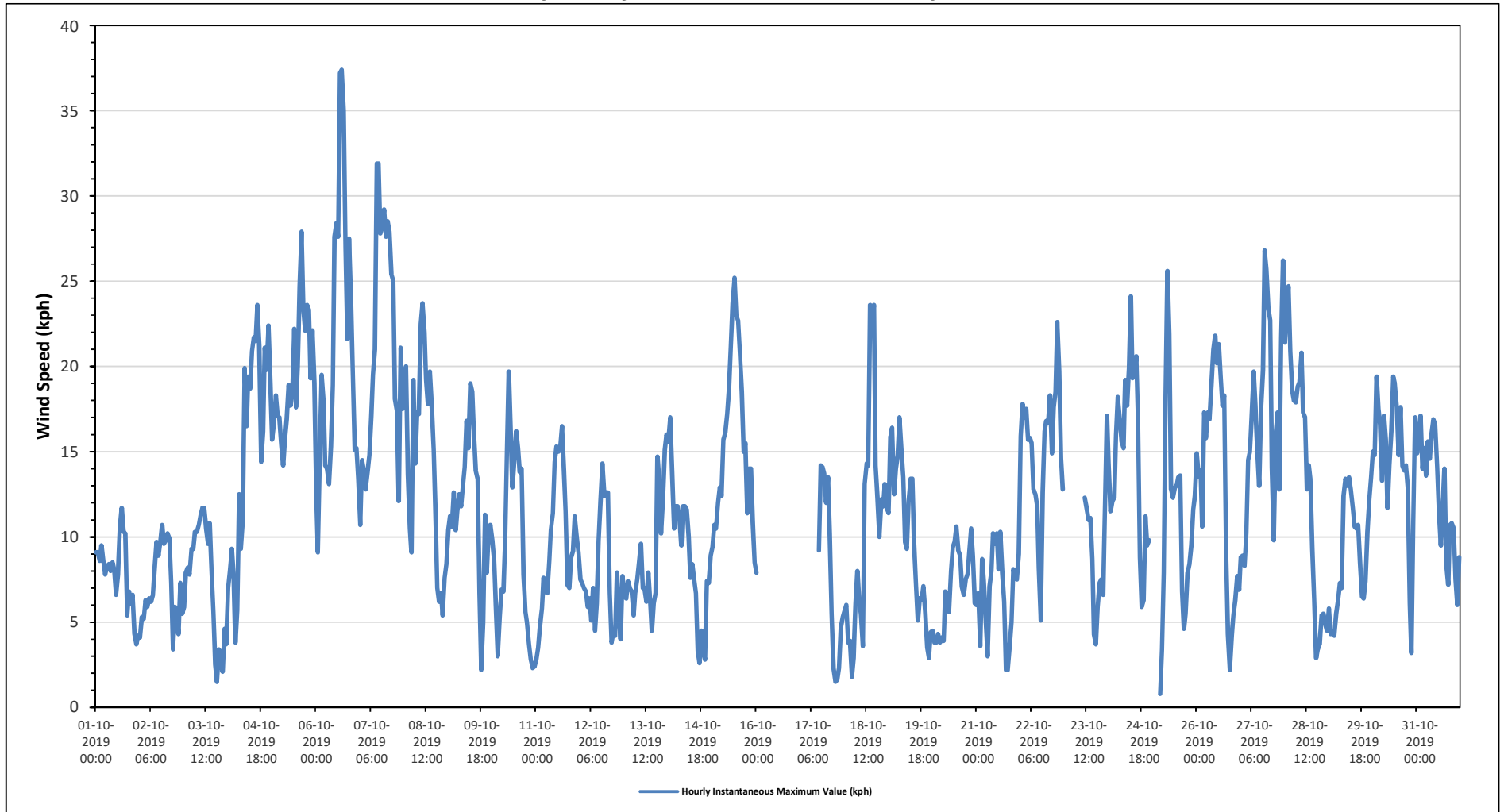
Maximum Hourly Value:	37.4 kph	on October 6 at hour 14	Hours in Service:	744
Maximum Daily Value:	21.2 kph	on October 7	Hours of Data:	695
Minimum Hourly Value:	0.8 kph	on October 25 at hour 4	Hours of Missing Data:	49
Minimum Daily Value:	6.8 kph	on October 21	Hours of Calibration:	0
Monthly Average:	12.1 kph		Operational Uptime:	93.4

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	
Oct 1	9.1	9.1	8.6	9.5	8.6	7.8	8.3	8.4	8.0	8.5	8.0	6.6	7.8	10.6	11.7	10.3	10.2	5.4	6.8	6.1	6.6	4.3	3.7	4.2	3.7	11.7	7.8	
Oct 2	4.1	5.3	5.2	6.3	5.9	6.4	6.2	6.6	6.3	9.7	8.9	9.7	10.7	9.6	9.8	10.2	9.9	7.3	3.4	5.9	5.6	4.3	7.3	5.5	3.4	10.7	7.2	
Oct 3	5.9	7.9	8.2	7.8	9.3	9.3	10.3	10.3	10.7	11.3	11.7	11.7	10.5	9.6	10.8	7.9	5.6	2.5	1.5	3.4	2.6	2.1	4.6	3.7	1.5	11.7	7.5	
Oct 4	7.0	8.0	9.3	7.9	3.8	5.7	12.5	9.3	11.0	19.9	16.5	19.4	18.7	20.9	21.7	21.5	23.6	21.2	14.4	16.2	21.1	19.8	22.4	18.9	3.8	23.6	15.4	
Oct 5	15.7	16.6	18.3	17.1	17.0	15.4	14.2	15.8	16.9	18.9	17.7	18.6	22.2	17.6	20.0	24.7	27.9	23.5	22.1	23.6	23.3	19.3	22.1	19.0	14.2	27.9	19.5	
Oct 6	12.3	9.1	14.8	19.5	17.9	14.2	14.0	13.1	15.3	18.9	27.6	28.4	27.6	37.2	37.4	35.0	26.9	21.6	27.5	23.8	19.4	15.1	15.2	13.4	9.1	37.4	21.1	
Oct 7	10.7	14.5	13.8	12.8	13.8	14.8	17.1	19.5	21.0	31.9	31.9	27.8	28.2	29.2	27.6	28.5	27.9	25.4	25.0	18.1	17.4	12.1	21.1	17.5	10.7	31.9	21.2	
Oct 8	18.7	20.0	13.7	10.5	9.1	19.2	14.3	17.3	17.2	22.5	23.7	22.0	19.2	17.8	19.7	17.6	15.1	11.7	7.0	6.2	6.7	5.4	7.6	8.4	5.4	23.7	14.6	
Oct 9	10.4	11.2	10.6	12.6	10.4	11.5	12.5	11.8	13.0	14.1	16.8	15.2	19.0	18.5	16.2	13.9	13.4	6.7	2.2	5.0	11.3	7.9	10.2	10.7	2.2	19.0	11.9	
Oct 10	9.8	8.6	6.0	3.0	5.3	6.9	6.8	9.7	14.9	19.7	16.3	12.9	14.4	16.2	15.2	13.8	14.0	7.8	5.6	5.0	3.7	2.8	2.3	2.4	2.3	19.7	9.3	
Oct 11	2.8	3.5	4.8	5.8	7.6	6.8	6.7	8.6	10.4	11.4	14.4	15.3	15.0	15.1	16.5	13.9	11.5	7.2	7.0	8.8	9.2	11.2	10.0	9.1	2.8	16.5	9.7	
Oct 12	7.5	7.3	7.0	6.8	5.9	6.4	5.1	7.0	4.5	6.1	9.8	12.1	14.3	12.4	12.6	12.6	6.7	3.8	4.4	4.2	7.9	5.4	4.0	7.7	3.8	14.3	7.6	
Oct 13	6.5	6.4	7.4	7.0	6.8	5.4	6.7	7.5	8.5	9.6	7.0	7.0	6.2	7.9	6.2	4.5	6.1	6.7	14.7	13.5	10.2	12.1	15.1	16.0	4.5	16.0	8.5	
Oct 14	15.6	17.0	13.7	10.5	11.8	11.8	11.1	9.5	11.8	11.8	11.6	10.0	7.6	8.4	7.5	6.7	3.3	2.6	4.5	3.2	2.8	7.4	7.3	8.9	2.6	17.0	9.0	
Oct 15	9.4	10.7	10.5	12.0	12.9	12.4	15.7	16.1	17.2	18.5	21.1	23.7	25.2	23.0	22.7	20.8	18.5	15.0	15.5	11.4	14.0	14.0	10.9	8.5	8.5	25.2	15.8	
Oct 16	7.9	P	P	P	P	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7.9	7.9	-	
Oct 17	X	X	X	X	X	X	X	X	X	X	X	9.2	14.2	14.1	13.7	12.0	13.5	10.2	5.5	2.3	1.5	1.6	2.3	4.7	5.3	1.5	14.2	-
Oct 18	5.6	6.0	3.8	3.9	1.8	2.9	6.1	8.0	6.2	5.5	3.6	13.1	14.3	14.2	23.6	22.8	23.6	14.2	12.3	10.0	12.2	11.8	13.1	11.7	1.8	23.6	10.4	
Oct 19	11.4	15.9	16.4	12.5	14.0	14.8	17.0	15.1	13.5	9.7	9.3	12.1	13.4	13.4	9.6	7.2	5.1	6.4	6.3	7.1	5.6	3.5	2.9	4.4	2.9	17.0	10.3	
Oct 20	4.5	3.8	3.8	4.3	3.8	4.1	3.9	6.8	6.1	5.6	8.0	9.4	9.7	10.6	9.2	8.9	7.1	6.6	7.5	7.8	9.0	10.5	8.9	6.1	3.8	10.6	6.9	
Oct 21	6.0	6.7	3.6	8.7	7.4	5.2	3.0	7.1	8.0	10.2	9.6	10.2	8.1	10.3	7.9	6.2	2.2	2.2	3.6	5.0	8.1	7.6	7.5	9.0	2.2	10.3	6.8	
Oct 22	15.9	17.8	17.0	17.5	15.7	15.8	15.5	12.8	12.5	11.8	8.2	5.1	12.6	16.2	16.8	16.7	18.3	14.9	17.6	18.5	22.6	19.7	14.6	12.8	5.1	22.6	15.3	
Oct 23	X	X	X	X	X	X	X	X	X	X	X	12.3	11.7	11.0	11.1	8.7	4.3	3.7	5.9	7.3	7.5	6.6	12.0	17.1	3.7	17.1	-	
Oct 24	14.3	11.5	12.1	12.3	16.0	18.2	16.9	15.6	15.2	19.2	17.7	19.9	24.1	19.3	19.5	20.6	16.6	8.8	5.9	6.3	11.2	9.5	9.8	P	5.9	24.1	14.8	
Oct 25	P	P	P	P	0.8	3.4	7.9	18.3	25.6	21.9	12.8	12.3	12.9	13.0	13.5	13.6	6.8	4.6	5.5	7.9	8.4	9.5	11.6	12.4	0.8	25.6	11.1	
Oct 26	14.9	13.5	13.9	10.6	17.3	15.8	17.3	16.9	18.9	21.0	21.8	20.2	21.3	19.4	17.7	18.3	9.4	4.3	2.2	4.2	5.4	6.3	7.7	6.9	2.2	21.8	13.6	
Oct 27	8.8	8.9	8.3	10.2	14.5	15.0	17.2	19.7	17.7	15.0	13.0	17.5	19.8	26.8	25.7	23.4	22.7	14.1	9.8	16.0	17.3	12.8	21.7	26.2	8.3	26.8	16.8	
Oct 28	21.4	23.4	24.7	20.9	18.6	18.0	17.9	18.8	19.1	20.8	17.3	17.0	12.8	14.2	13.4	9.3	6.3	2.9	3.4	3.7	5.4	5.5	4.9	4.5	2.9	24.7	13.5	
Oct 29	5.8	4.3	4.4	4.2	5.5	6.3	7.3	7.0	12.4	13.4	13.0	13.5	12.8	11.7	10.6	10.5	10.7	8.5	6.5	6.4	7.4	10.3	12.2	13.5	4.2	13.5	9.1	
Oct 30	15.0	14.8	19.4	17.5	16.6	13.3	17.1	15.7	11.7	14.2	16.2	19.4	19.0	17.6	14.8	17.6	14.2	13.9	14.2	12.9	6.1	3.2	11.0	17.0	3.2	19.4	14.7	
Oct 31	14.9	16.1	17.1	14.0	15.2	13.6	15.6	14.6	16.1	16.9	16.6	14.1	11.4	9.5	11.6	14.0	8.3	7.2	10.7	10.8	10.5	7.5	6.0	8.8	6.0	17.1	12.5	
Diurnal Maximum	21.4	23.4	24.7	20.9	18.6	19.2	17.9	19.7	25.6	31.9	31.9	28.4	28.2	37.2	37.4	35.0	27.9	25.4	27.5	23.8	23.3	19.8	22.4	26.2				
Diurnal Average	10.4	11.0	11.0	10.6	10.5	10.7	11.6	12.4	13.3	14.9	14.5	15.0	15.5	15.8	15.8	15.1	12.9	9.5	9.2	9.3	10.0	9.0	10.4	10.7				

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

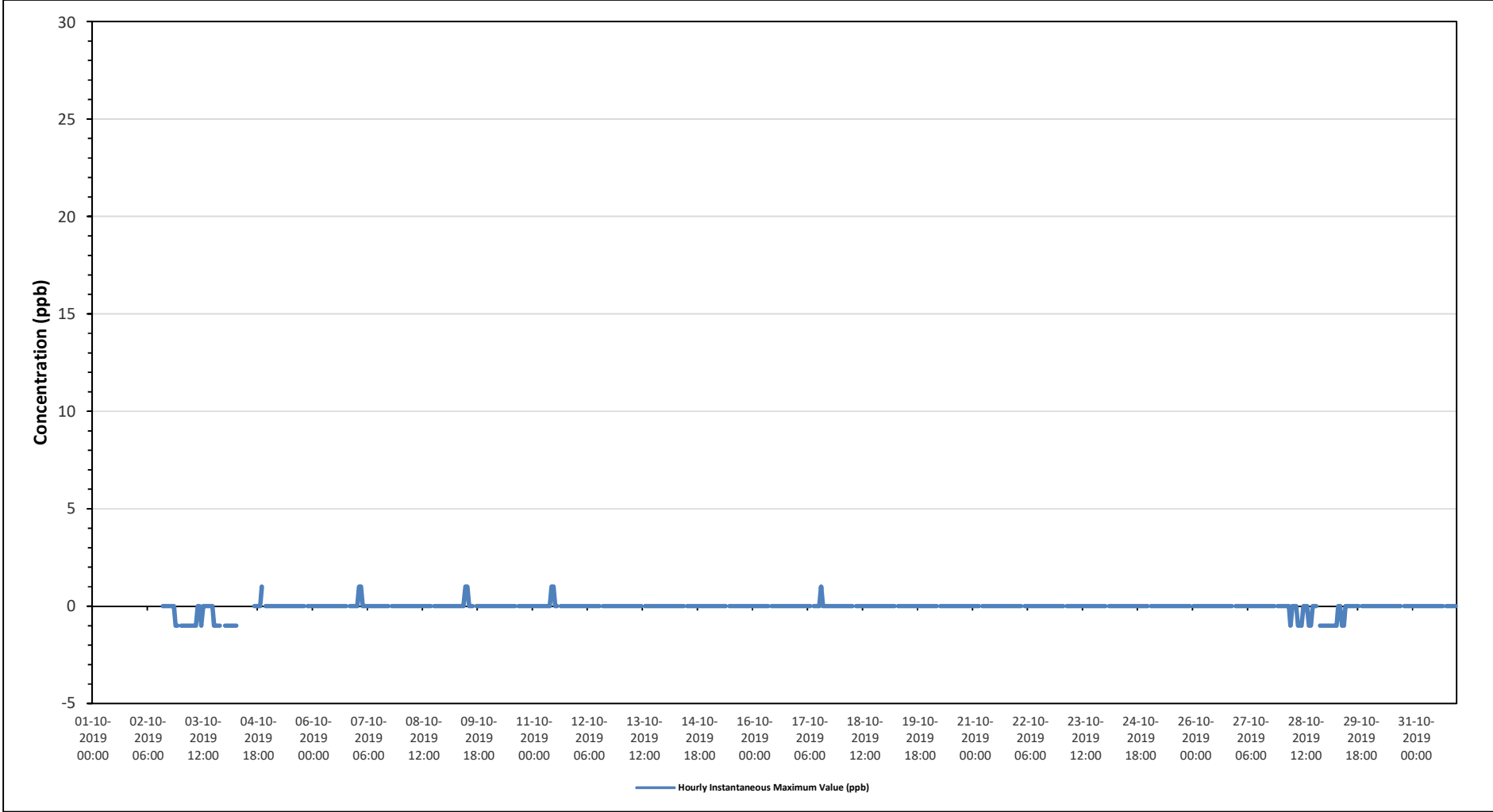
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Timeseries Chart of Hourly Instantaneous Maximum for WS - Reno Station

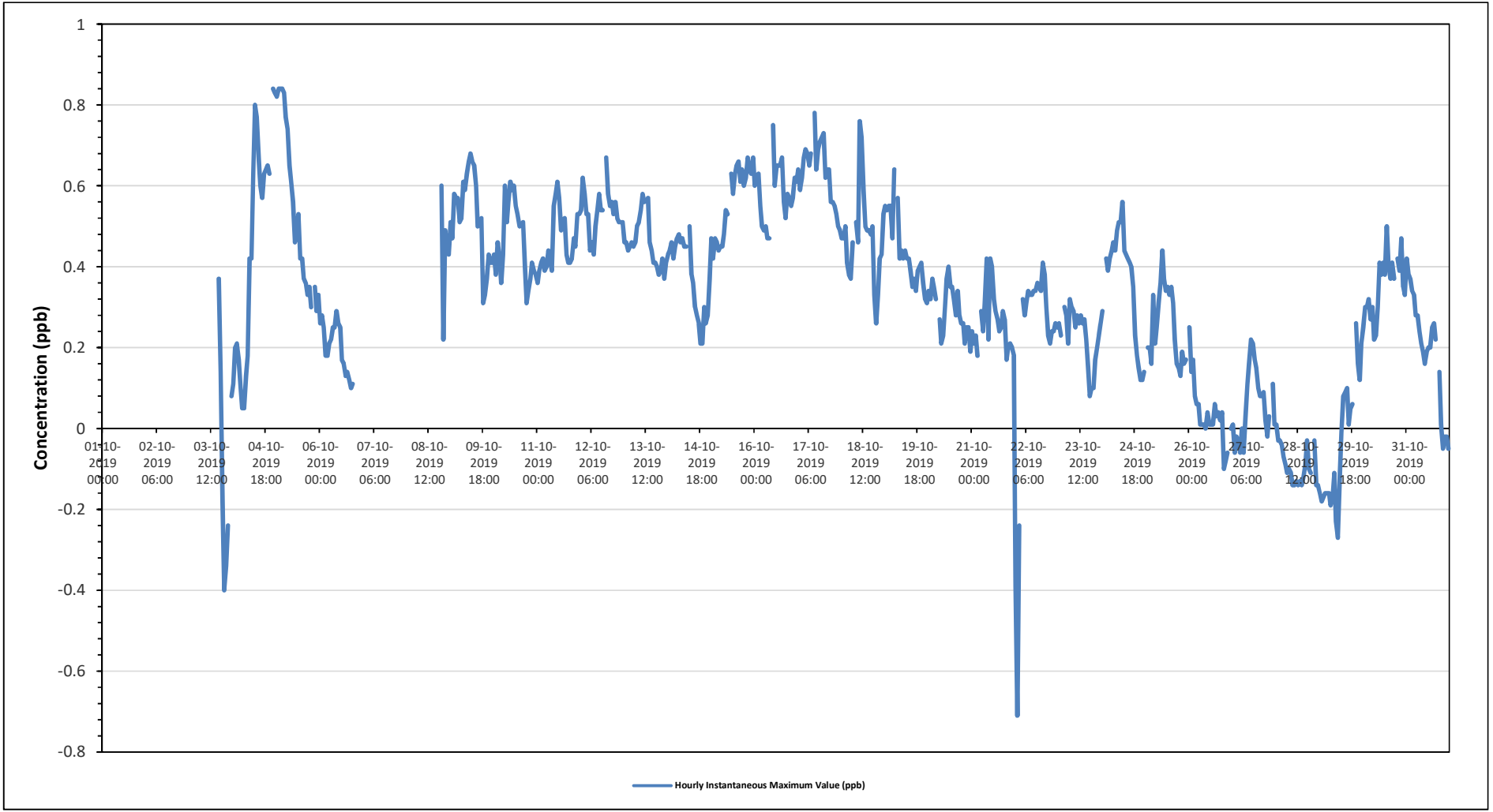


AQHI CADOTTE LAKE STATION

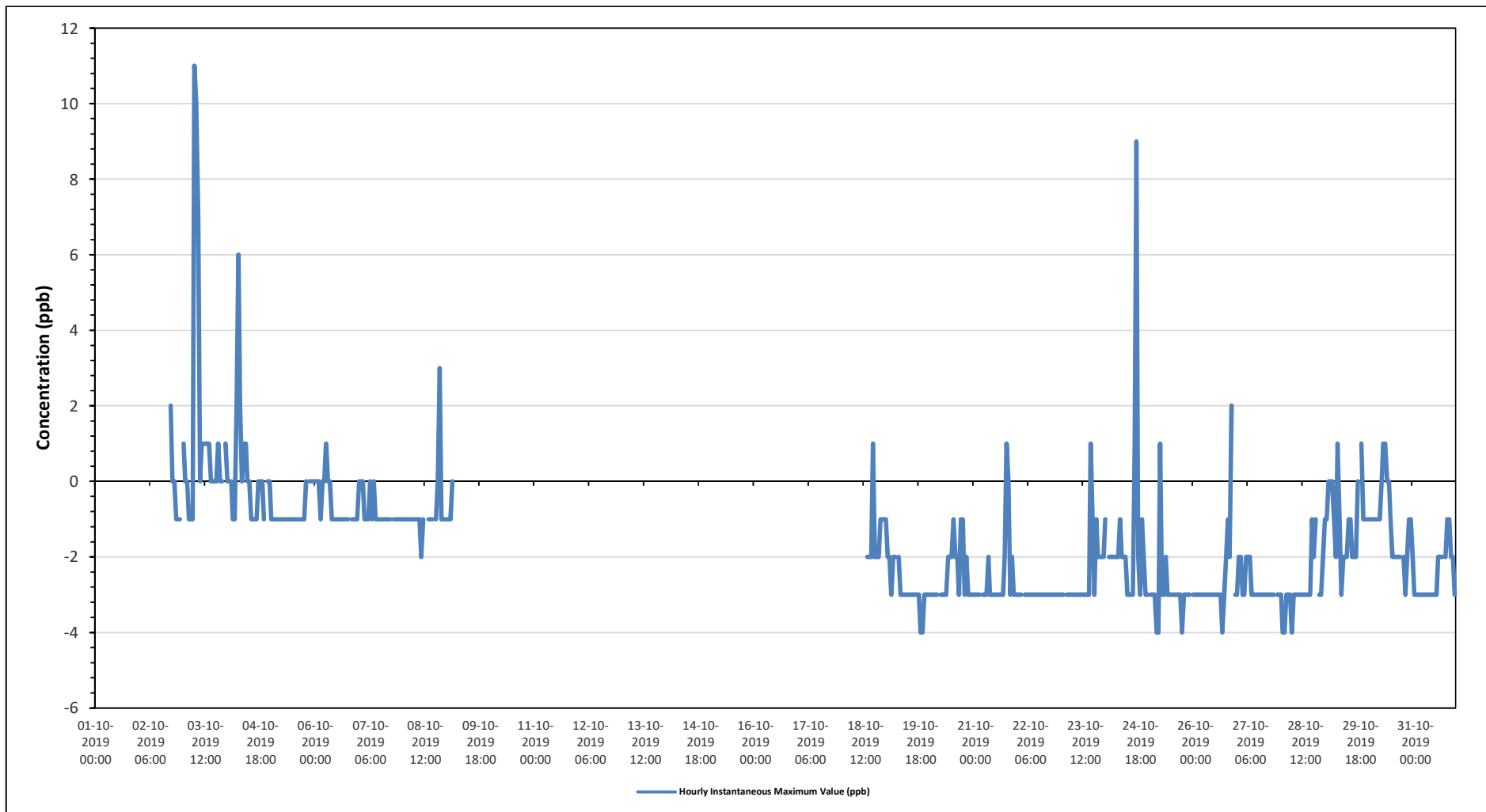
Timeseries Chart of Hourly Instantaneous Maximum for SO2 - AQHI - Cadotte Lake Station



Timeseries Chart of Hourly Instantaneous Maximum for TRS - AQHI - Cadotte Lake Station



Timeseries Chart of Hourly Instantaneous Maximum for NOx - AQHI - Cadotte Lake Station





PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019 Summary of Hourly Instantaneous Maximums

NITRIC OXIDE (NO) in ppb

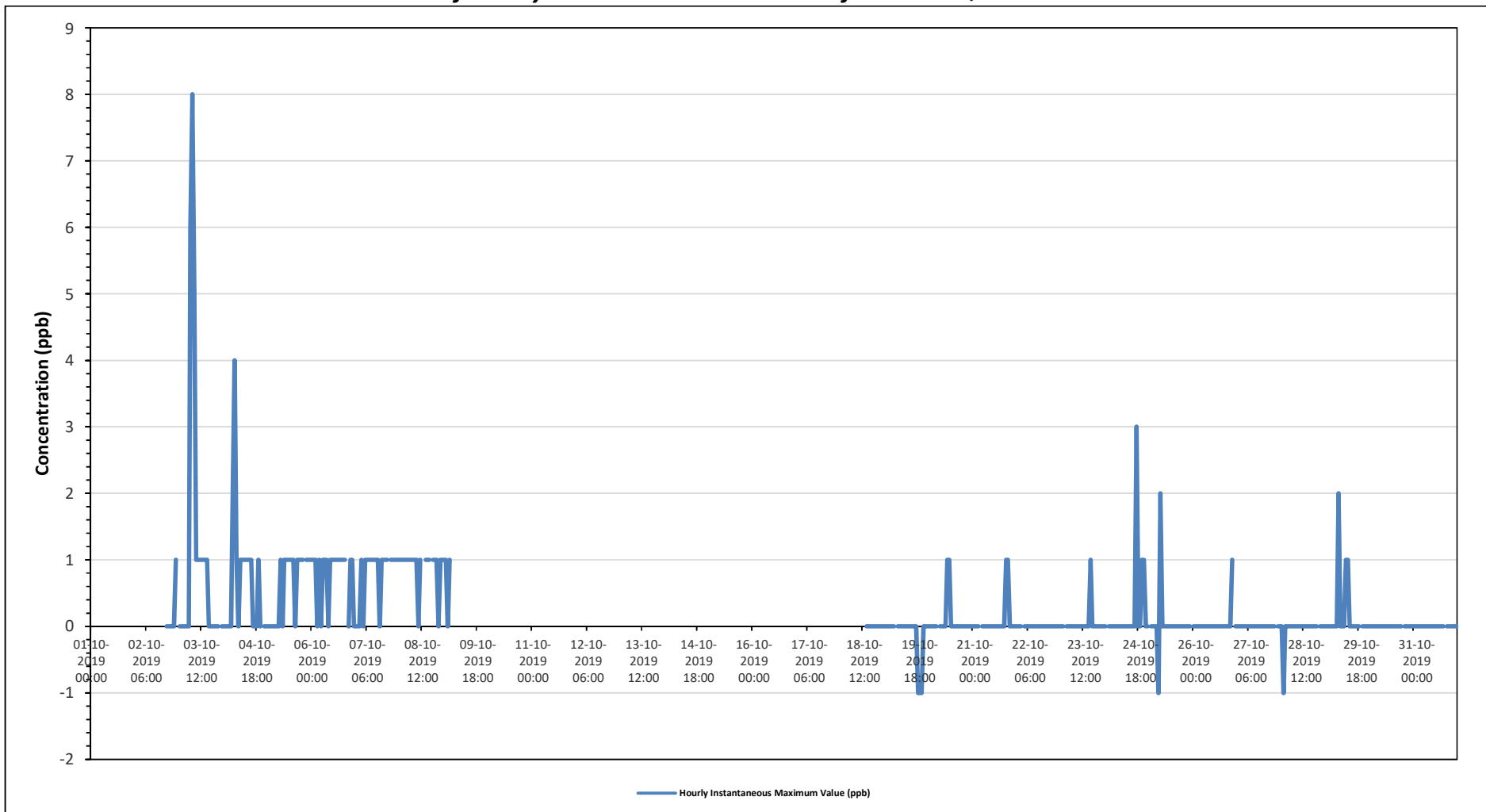
Maximum Hourly Value: 8 ppb on October 3 at hour 7	Hours in Service: 710
Maximum Daily Value: 1.1 ppb on October 3	Hours of Data: 454
Minimum Hourly Value: -1 ppb on October 19 at hour 18	Hours of Missing Data: 228
Minimum Daily Value: -0.1 ppb on October 19	Hours of Calibration: 28
Monthly Average: 0.3 ppb	Operational Uptime: 67.9

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			
Oct 1																									0	1	-			
Oct 2											C	C	C	C	C	C	C	C	0	0	0	0	0	1	S	0	0	8	1.1	
Oct 3	0	0	0	0	0	0	6	8	5	1	1	1	1	1	1	1	0	0	0	0	0	0	0	S	0	0	4	0.7		
Oct 4	0	0	0	0	0	0	2	4	1	0	1	1	1	1	1	1	0	0	0	1	0	S	0	0	0	0	1	0.6		
Oct 5	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	S	1	1	1	0	1	0.8		
Oct 6	1	1	1	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	S	0	1	1	0	0	1	0.8	
Oct 7	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	S	1	1	1	1	1	1	0	1	0.9		
Oct 8	1	1	1	1	1	1	1	1	1	1	0	1	Y	Y	1	1	1	S	1	1	1	0	1	1	0	0	1	-		
Oct 9	1	1	0	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	1	-	
Oct 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Oct 18	X	X	X	X	X	X	X	X	X	X	C1	C1	C1	C1	C1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Oct 19	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	-1	0	-0.1		
Oct 20	0	0	0	0	0	S	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Oct 21	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0.1	
Oct 22	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	0.0	
Oct 23	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.0	
Oct 24	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	1	0	0	3	0.2		
Oct 25	S	0	0	0	0	-1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	-1	0.0	
Oct 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	0	1	0.0	
Oct 27	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	0.0	
Oct 28	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0	-1	0	0.0	
Oct 29	0	0	0	0	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	2	0.2	
Oct 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0	
Oct 31	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	0.0	
Diurnal Maximum	1	1	1	1	1	2	6	8	5	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1			
Diurnal Average	0.2	0.1	0.1	0.2	0.1	0.2	0.8	0.8	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.3	0.3	0.2					

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 NO - AQHI - Cadotte Lake Station





PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019
Summary of Hourly Instantaneous Maximums

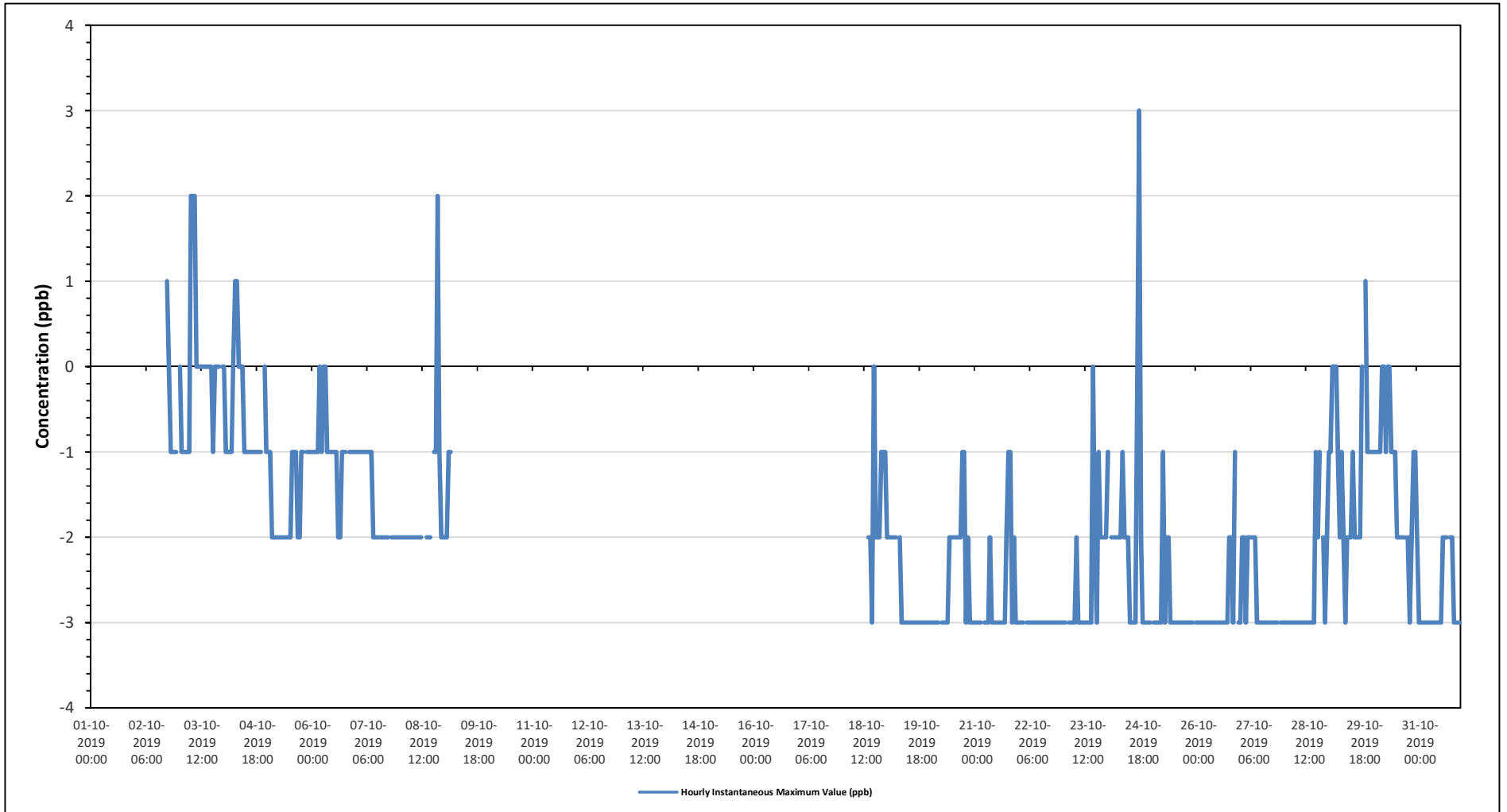
NITROGEN DIOXIDE (NO₂) in ppb

Maximum Hourly Value:	3 ppb on October 24 at hour 17	Hours in Service:	710
Maximum Daily Value:	0.0 ppb on October 3	Hours of Data:	454
Minimum Hourly Value:	-3 ppb on October 18 at hour 16	Hours of Missing Data:	228
Minimum Daily Value:	-3.0 ppb on October 22	Hours of Calibration:	28
Monthly Average:	-2.0 ppb	Operational Uptime:	67.9

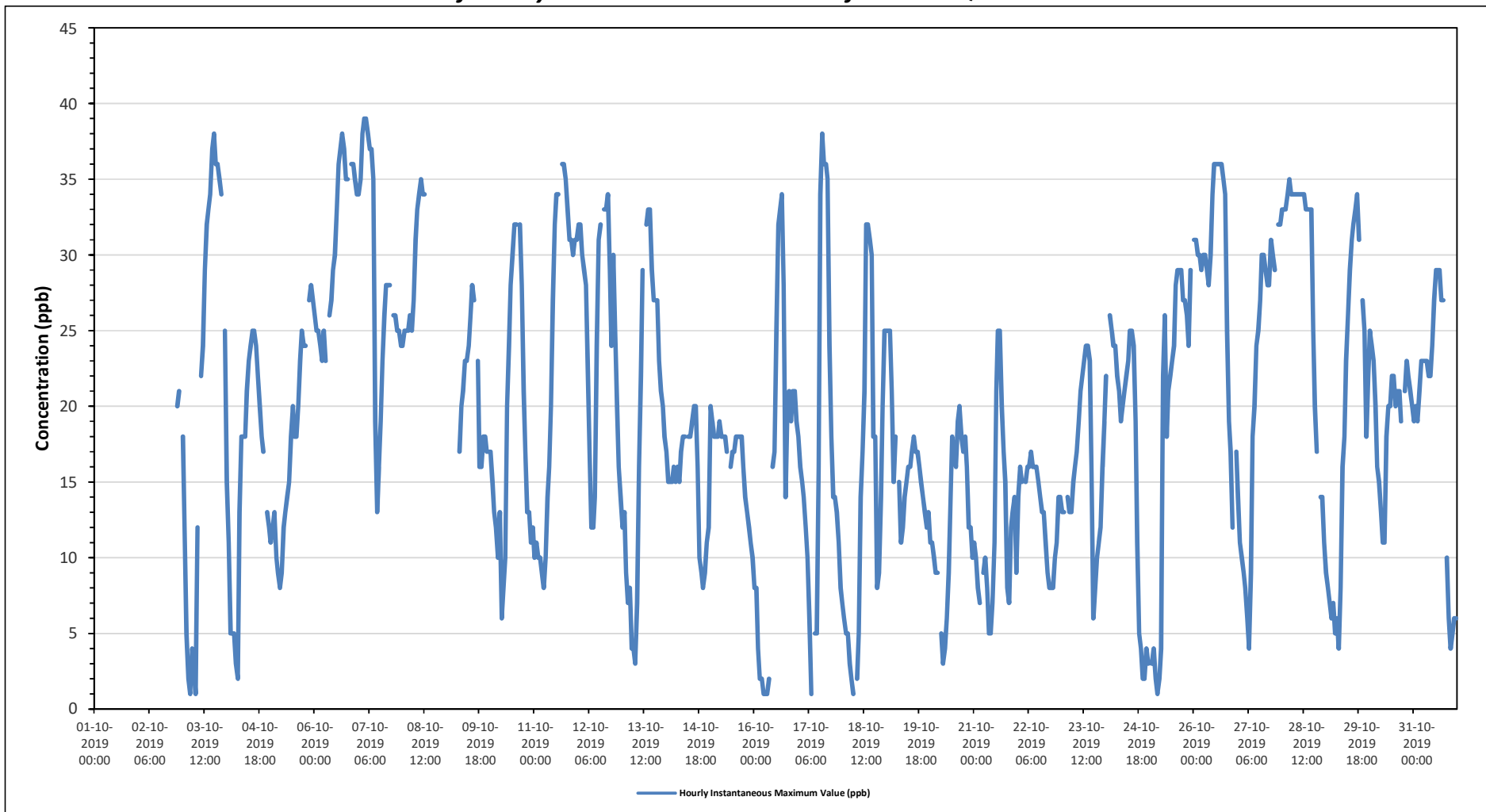
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Oct 1																									-1	1	-	
Oct 2											C	C	C	C	C	C	C	1	0	-1	-1	-1	-1	S	-1	2	0.0	
Oct 3	0	-1	-1	-1	-1	-1	2	2	2	0	0	0	0	0	0	0	0	0	-1	0	0	0	S	0	-1	1	-0.6	
Oct 4	0	-1	-1	-1	-1	0	1	1	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	S	0	-1	-2	-1	-1.6	
Oct 5	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	-1	-2	-2	-1	-1	S	-1	-1	-1	-2	0	-1.0	
Oct 6	-1	-1	-1	-1	0	-1	0	0	-1	-1	-1	-1	-1	-1	-2	-2	-1	-1	-1	S	-1	-1	-1	-1	-2	-1	-1.6	
Oct 7	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	S	-2	-2	-2	-2	-2	-2	-1	-1.7	
Oct 8	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	Y	Y	-2	-2	-2	S	-1	-1	2	-1	-2	-2	-2	-1	-	
Oct 9	-2	-2	-1	-1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-2	-1	-	
Oct 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	0	-	
Oct 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	-2	-2.7	
Oct 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	-1	-2.5	
Oct 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	-1	-2.7	
Oct 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	-3	-3.0	
Oct 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	0	-2.5	
Oct 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	3	-2.0	
Oct 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-3	-1	-2.8	
Oct 18	X	X	X	X	X	X	X	X	X	C1	C1	C1	C1	C1	-2	-2	-3	0	-2	-2	-2	-1	-1	-1	-3	-1	-2.8	
Oct 19	-2	-2	-2	-2	-2	-2	S	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-2.7	
Oct 20	-3	-3	-3	-3	-3	S	-3	-3	-3	-3	-2	-2	-2	-2	-2	-2	-1	-1	-3	-2	-3	-3	-3	-3	-3	-1	-2.5	
Oct 21	-3	-3	-3	-3	S	-3	-3	-3	-2	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	-1	-3	-2	-3	-3	-3	-3	-3.0	
Oct 22	-3	-3	-3	S	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	0	-2	-3	-1	-2	-2	-2	-3	0	-2.5	
Oct 23	-3	-3	-3	-3	-3	-3	-3	-3	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3.0	
Oct 24	-1	S	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	0	3	-2	-3	-3	-3	-3	-3	3	-2.0	
Oct 25	S	-3	-3	-3	-3	-3	-3	-1	-3	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	S	-3	-1	-2.8	
Oct 26	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-2	-3	-1	S	-3	-3	-1	-2.8
Oct 27	-3	-2	-2	-3	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	S	-3	-3	-3	-2	-2.7	
Oct 28	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-1	-2	-1	S	-2	-3	-2	-3	-1	-2.7	
Oct 29	-1	-1	0	0	0	-1	-2	-1	-2	-3	-2	-2	-2	-1	-2	-2	-2	-2	0	S	1	-1	-1	-1	-3	1	-1.2	
Oct 30	-1	-1	-1	-1	-1	0	0	-1	0	0	-1	-1	-1	-1	-2	-2	-2	-2	-2	S	-2	-3	-2	-1	-1	-3	0	-1.2
Oct 31	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-2	-2	-2	S	-2	-2	-3	-3	-3	-3	-3	-2	-2.7
Diurnal Maximum	0	-1	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.8	-2.1	-1.9	
Diurnal Average	-1.8	-2.1	-1.9	-2.0	-1.9	-1.9	-1.7	-1.7	-1.8	-2.2	-2.2	-2.2	-2.3	-2.2	-2.3	-2.3	-2.3	-2.0	-1.4	-1.7	-1.8	-1.8	-1.8	-2.1	-2.0	-1.8	-2.1	-1.9

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.

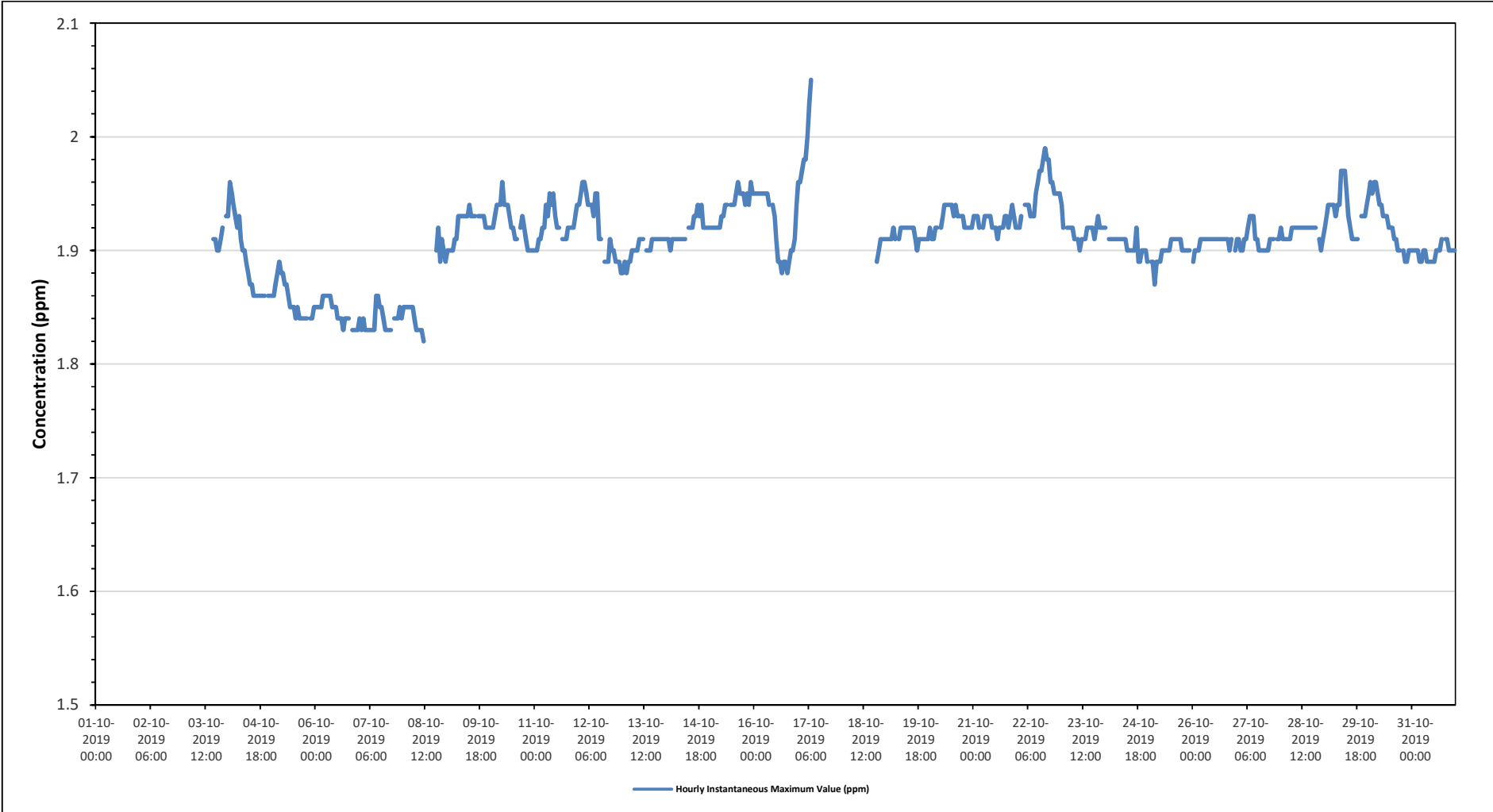
Timeseries Chart of Hourly Instantaneous Maximum for NO2 - AQHI - Cadotte Lake Station



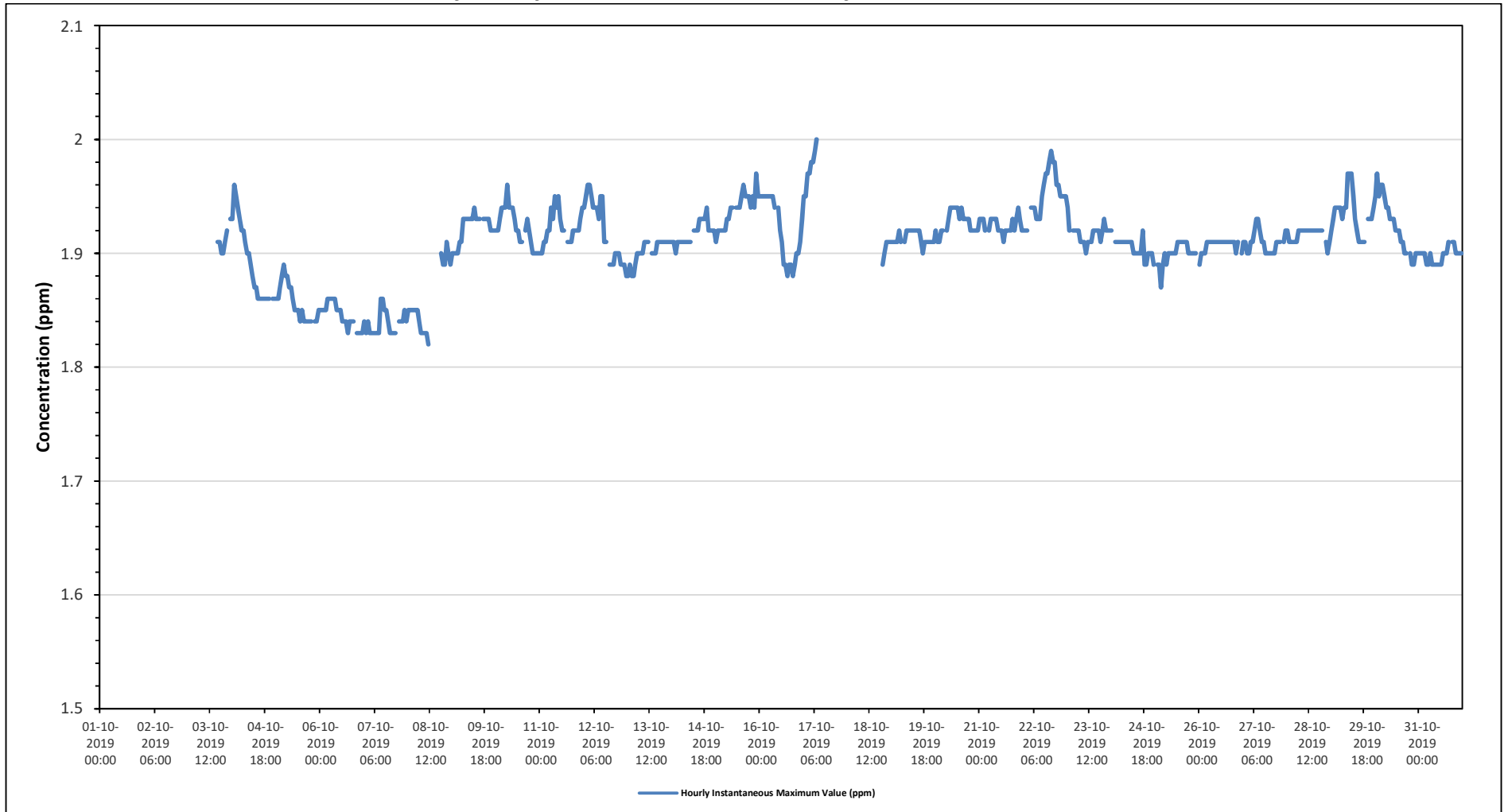
Timeseries Chart of Hourly Instantaneous Maximum for O3 - AQHI - Cadotte Lake Station



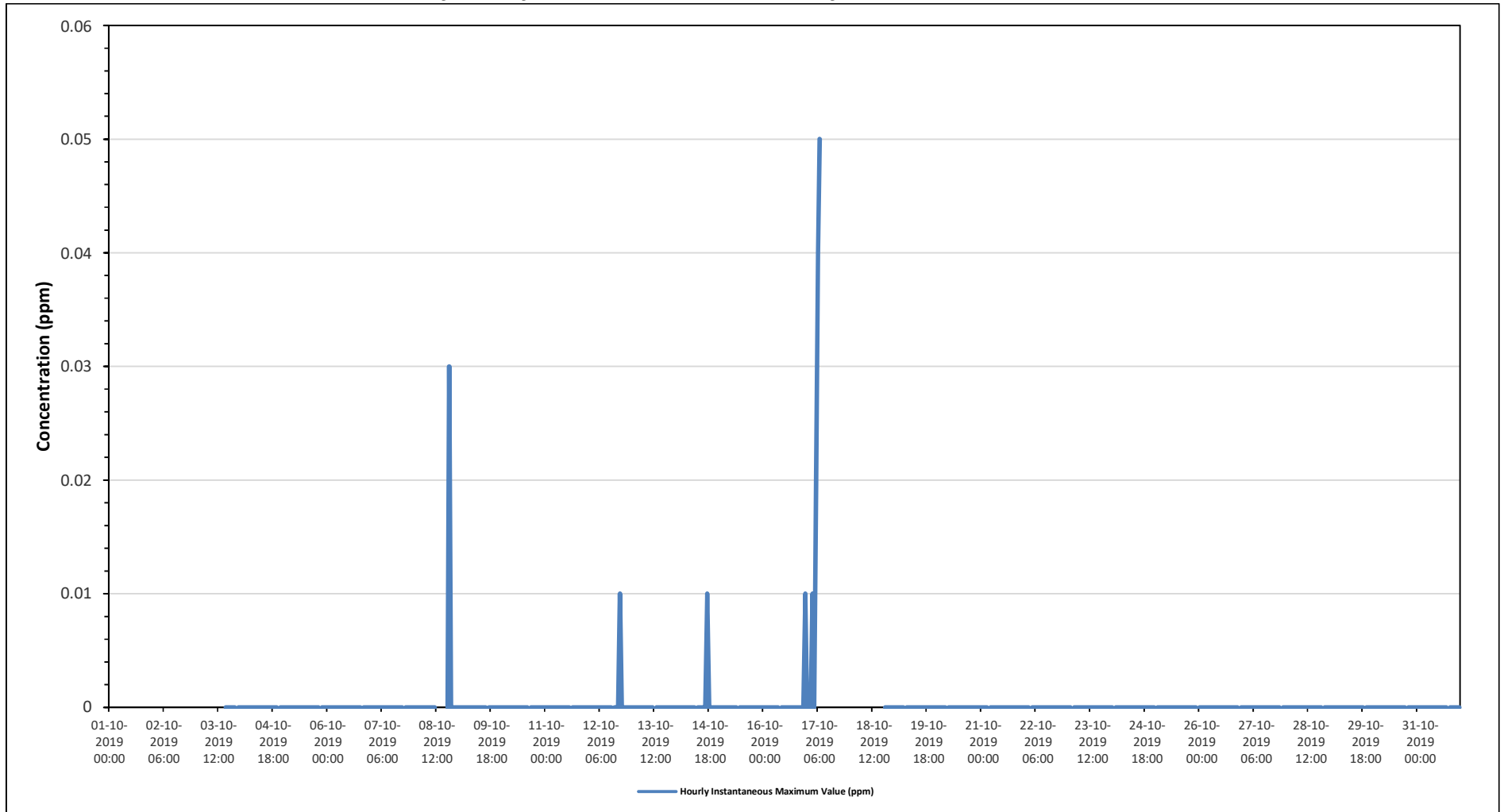
Timeseries Chart of Hourly Instantaneous Maximum for THC - AQHI - Cadotte Lake Station



Timeseries Chart of Hourly Instantaneous Maximum for CH4 - AQHI - Cadotte Lake Station



Timeseries Chart of Hourly Instantaneous Maximum for NMHC - AQHI - Cadotte Lake Station





PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - October 2019

Summary of Hourly Instantaneous Maximums

WIND SPEED (WS) in km/hr

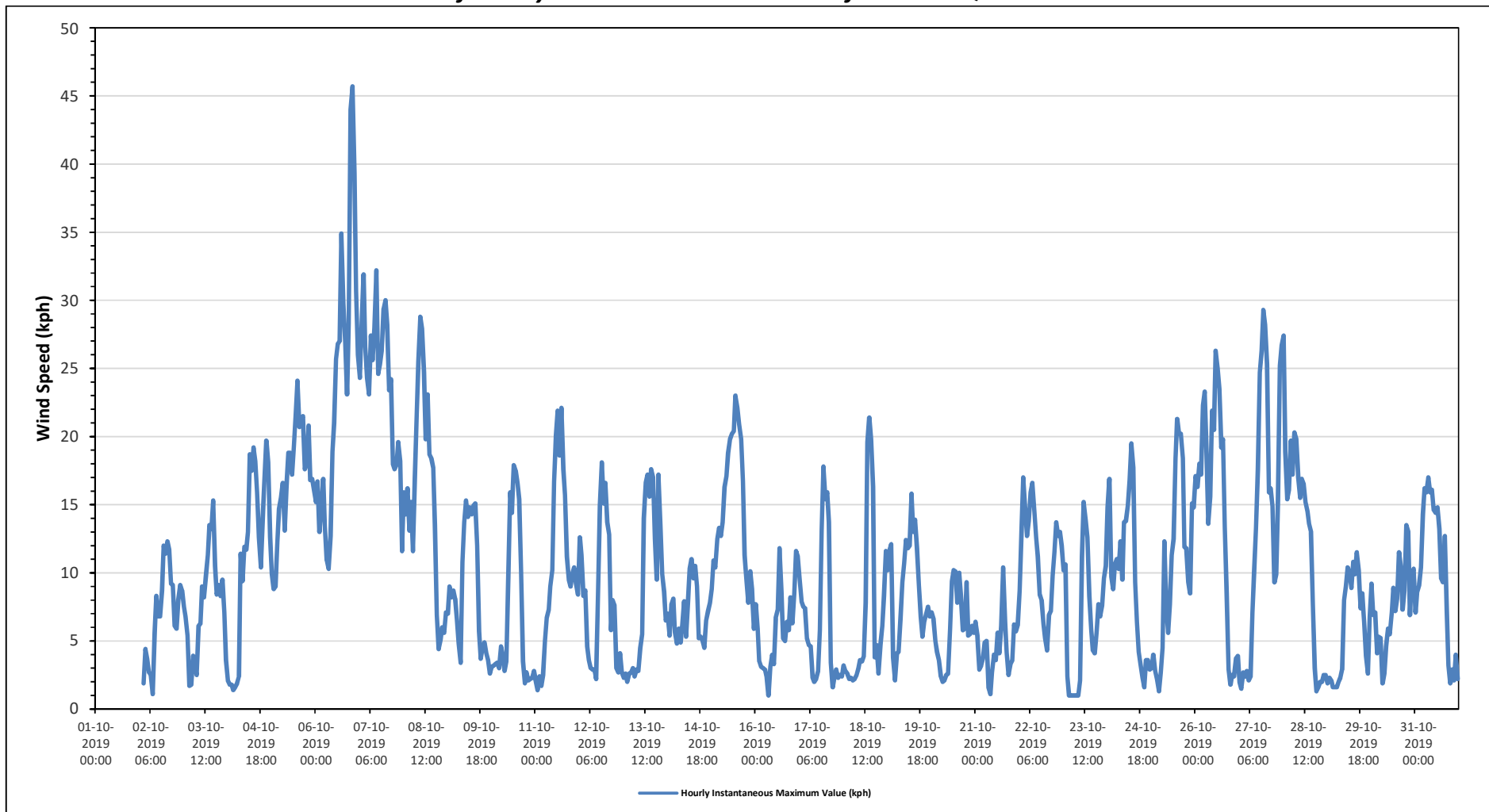
Maximum Hourly Value:	45.7 kph	on October 6 at hour 20	Hours in Service:	718
Maximum Daily Value:	24.4 kph	on October 7	Hours of Data:	718
Minimum Hourly Value:	1.0 kph	on October 16 at hour 7	Hours of Missing Data:	0
Minimum Daily Value:	4.5 kph	on October 21	Hours of Calibration:	0
Monthly Average:	10.4 kph		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Oct 1			1.9	4.4	3.7	2.7	2.5	1.1	5.6	8.3	6.8	6.8	8.7	12.0	11.4	12.3	11.7	9.2	9.1	6.1	5.9	8.0	9.1	8.7	1.1	12.3	7.1
Oct 2																									1.7	15.3	7.6
Oct 3	7.5	6.8	5.4	1.7	1.8	3.9	3.1	2.5	6.1	6.3	9.0	8.2	9.8	11.3	13.5	13.2	15.3	10.5	8.4	9.1	8.3	9.5	7.1	3.6	1.4	19.7	11.0
Oct 4	2.1	1.8	1.8	1.4	1.6	1.9	2.4	11.4	9.4	11.9	11.7	13.0	18.7	17.5	19.2	18.2	15.9	12.6	10.4	14.1	16.9	19.7	18.1	12.6	8.8	24.1	16.9
Oct 5	9.9	8.8	9.0	12.3	14.7	15.5	16.6	13.1	16.2	18.8	18.8	17.2	19.3	21.6	24.1	20.7	21.3	21.5	17.6	18.0	20.8	16.8	16.9	16.1	10.3	45.7	23.8
Oct 6	15.2	16.7	13.0	14.8	16.9	13.4	10.9	10.3	12.7	18.9	21.0	25.7	26.8	27.0	34.9	29.8	27.0	23.1	28.3	44.0	45.7	39.3	30.7	26.0	11.6	32.2	24.4
Oct 7	24.3	28.4	31.9	26.6	24.3	23.1	27.4	25.6	28.0	32.2	24.6	25.3	26.3	29.4	30.0	28.2	23.4	24.2	18.0	17.6	17.9	19.6	18.2	11.6	4.4	28.8	15.8
Oct 8	15.9	14.3	16.2	13.1	15.2	11.6	17.0	21.7	25.5	28.8	27.9	24.7	19.8	23.1	18.7	18.4	17.7	13.5	6.9	4.4	5.1	6.0	5.6	7.1	2.6	15.3	8.7
Oct 9	7.0	9.0	8.2	8.7	8.1	6.6	4.8	3.4	10.8	13.7	15.3	14.1	14.8	14.3	14.9	15.1	12.0	5.7	3.7	4.5	4.9	4.1	3.6	2.6	1.9	17.9	6.9
Oct 10	3.1	3.2	3.3	3.4	3.0	4.6	3.9	2.8	3.5	9.6	15.9	14.4	17.9	17.5	16.6	15.4	10.1	3.5	1.9	2.7	2.1	2.2	2.3	2.8	1.4	22.1	10.4
Oct 11	2.1	1.4	2.4	1.7	2.5	5.0	6.7	7.3	9.0	10.2	16.7	20.1	21.9	18.6	22.1	17.6	15.7	11.2	9.5	9.0	10.0	10.4	9.2	8.4	2.2	18.1	8.1
Oct 12	12.6	11.3	8.3	8.7	4.6	3.6	3.0	2.9	2.9	2.2	8.4	14.9	18.1	15.1	16.6	13.7	12.8	5.8	8.0	7.6	3.0	2.7	4.1	2.7	2.0	17.6	8.7
Oct 13	2.3	2.6	2.0	2.6	2.7	3.0	2.4	2.9	2.8	4.5	5.5	14.0	16.6	17.2	15.6	17.6	17.0	12.5	9.5	17.2	13.5	9.9	8.6	6.5	4.5	11.0	7.0
Oct 14	7.0	5.4	7.7	8.1	5.6	4.8	5.9	4.9	6.2	7.9	5.3	7.9	10.3	11.0	9.6	10.5	9.0	5.2	5.3	5.0	4.5	6.5	7.2	7.8	5.9	23.0	14.6
Oct 15	8.8	10.9	10.4	12.5	13.3	12.7	13.7	16.3	17.1	18.8	19.8	20.2	20.4	23.0	22.1	20.9	19.8	16.7	11.3	9.4	7.8	10.1	8.8	5.9	1.0	11.8	5.9
Oct 16	7.7	5.9	3.5	3.1	3.0	2.9	2.4	1.0	3.1	4.0	3.3	6.7	7.3	11.8	8.6	5.2	5.0	6.4	5.8	8.2	6.3	8.4	11.6	11.2	2.0	10.2	6.0
Oct 17	9.6	7.9	7.5	7.4	5.2	4.7	4.6	2.3	2.0	2.2	2.8	5.8	13.1	17.8	15.4	15.9	13.7	3.4	1.6	2.4	2.9	2.3	2.5	2.4	1.6	17.8	6.5
Oct 18	3.2	2.8	2.6	2.2	2.3	2.1	2.2	2.5	3.0	3.6	3.5	3.9	7.8	19.6	21.4	19.8	16.3	3.8	4.7	2.6	4.7	6.1	8.3	11.6	2.1	21.4	6.7
Oct 19	10.2	11.7	12.1	3.8	2.1	4.1	4.2	6.6	9.3	10.7	12.4	11.8	12.0	15.8	13.0	13.9	11.8	9.1	6.8	5.3	6.4	7.0	7.5	6.8	2.1	15.8	8.9
Oct 20	7.1	6.6	5.0	4.2	3.6	2.4	2.0	2.1	2.5	2.6	5.9	9.4	10.2	10.1	7.8	10.0	8.3	5.8	5.9	9.3	5.4	5.5	6.1	5.6	2.0	10.2	6.0
Oct 21	6.4	5.4	2.9	3.2	3.7	4.9	5.0	1.6	1.1	2.7	4.0	3.6	5.6	4.1	6.1	10.4	6.4	4.1	2.5	3.3	3.6	6.2	5.7	6.2	1.1	10.4	4.5
Oct 22	8.7	13.1	17.0	14.7	12.7	13.8	15.9	16.6	14.5	12.6	11.2	8.4	8.0	6.2	5.2	4.3	6.9	7.2	9.8	11.5	13.7	12.7	13.0	12.0	4.3	17.0	11.2
Oct 23	10.2	10.6	2.4	1.0	1.0	1.0	1.0	1.0	1.0	2.1	11.2	15.2	13.9	12.6	8.3	5.8	4.3	4.1	5.6	7.7	6.8	7.6	9.6	10.5	1.0	15.2	6.4
Oct 24	14.8	16.9	9.7	8.8	10.6	11.0	10.3	12.3	9.5	13.7	13.8	14.9	16.8	19.5	17.7	9.3	6.4	4.2	3.3	2.3	1.6	3.6	3.6	2.9	1.6	19.5	9.9
Oct 25	3.0	4.0	2.8	2.2	1.3	2.7	4.5	12.3	7.5	5.6	7.7	11.3	12.5	18.4	21.3	20.2	20.2	18.4	11.9	11.8	9.3	8.5	15.1	14.8	1.3	21.3	10.3
Oct 26	17.1	16.3	18.0	17.2	22.3	23.3	18.6	13.6	15.6	21.9	20.5	26.3	25.0	23.5	19.2	19.8	13.4	8.5	2.9	1.8	2.5	2.4	3.7	3.9	1.8	26.3	14.9
Oct 27	2.0	1.5	2.7	2.4	2.8	2.1	2.4	7.1	10.0	13.3	17.6	24.7	26.3	29.3	28.2	25.3	15.9	16.2	14.9	9.3	9.9	15.3	25.2	26.7	1.5	29.3	13.8
Oct 28	27.4	18.9	15.4	16.1	19.7	17.2	20.3	19.8	17.0	15.5	16.9	16.5	15.2	14.5	13.6	13.0	7.7	3.0	1.3	1.6	2.0	2.0	2.5	2.5	1.3	27.4	12.5
Oct 29	1.9	2.3	2.1	1.6	1.6	1.6	2.0	2.3	2.9	8.0	9.0	10.4	10.0	8.9	10.8	9.9	11.5	10.2	7.4	8.5	6.4	3.9	2.6	6.8	1.6	11.5	5.9
Oct 30	9.2	6.9	7.1	4.1	5.3	5.2	1.9	2.6	4.6	5.9	5.5	7.1	8.9	7.2	8.1	11.5	10.4	7.3	8.7	13.5	13.0	6.9	10.0	10.3	1.9	13.5	7.6
Oct 31	7.1	8.6	9.1	10.4	14.3	16.2	15.9	17.0	15.9	16.1	14.6	14.4	14.8	13.2	9.6	9.3	12.7	7.3	3.2	1.9	2.9	2.1	4.0	2.2	1.9	17.0	10.1
Diurnal Maximum	27.4	28.4	31.9	26.6	24.3	23.3	27.4	25.6	28.0	32.2	27.9	26.3	26.8	29.4	34.9	29.8	27.0	24.2	28.3	44.0	45.7	39.3	30.7	26.7			
Diurnal Average	9.1	9.0	8.0	7.4	7.7	7.6	7.8	8.2	9.2	11.1	12.2	13.9	15.2	16.4	16.1	15.2	13.3	9.8	8.1	9.0	8.8	8.8	9.4	8.6			

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 Instantaneous Maximum for WS - AQHI - Cadotte Lake Station



END OF REPORT

This report, 279 of 279 ends the October 2019 Monthly Ambient Air Quality Monitoring Report.



Peace River Area Monitoring Program

OCTOBER 2019
Ambient Air Monitoring Calibration Report
- 842b STATION-
CAL-PRAMP-201910-01561

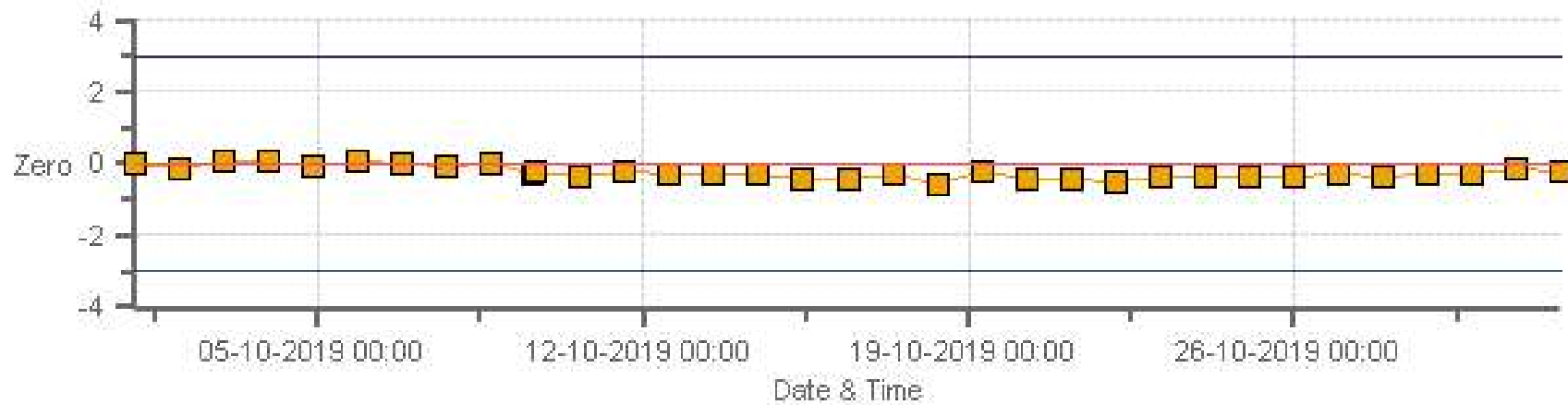
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

November 15, 2019

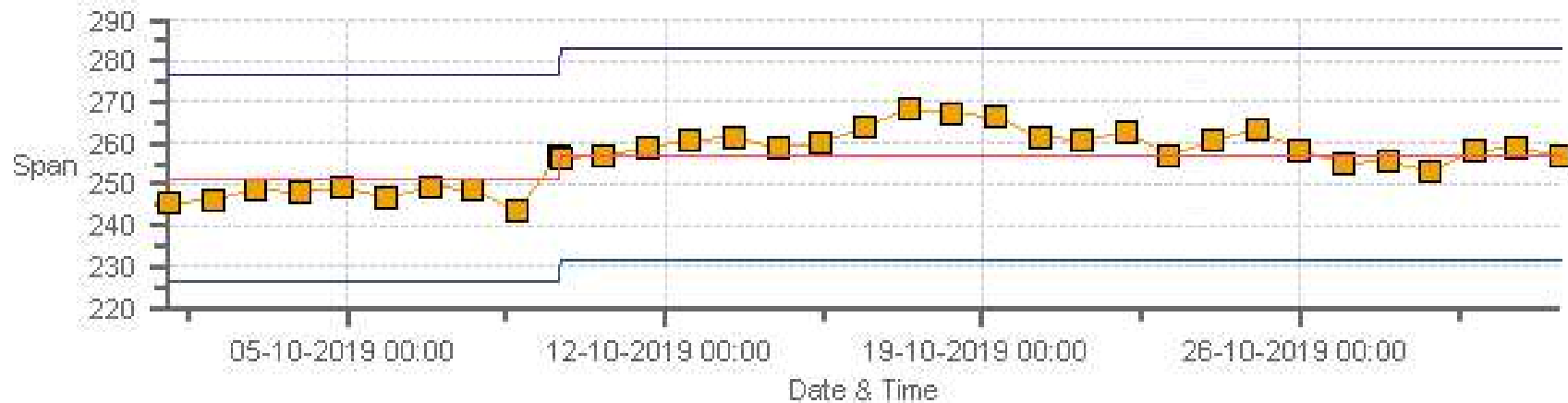
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2 [ppb] Calibration: PRAMP 842b Monthly: 10-2019 Type: Zero



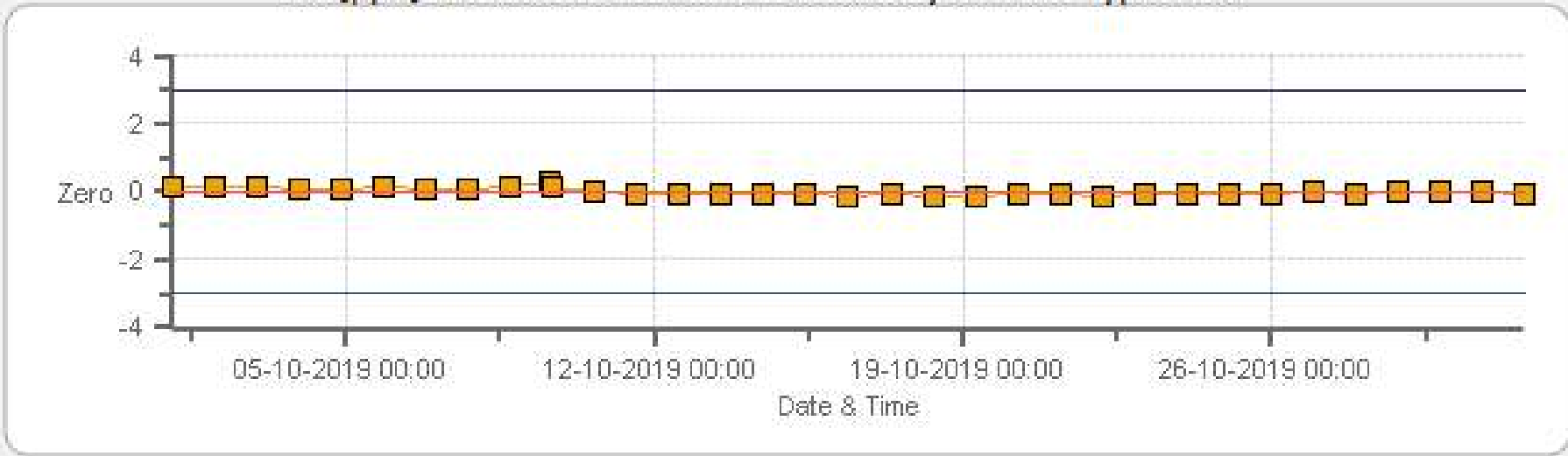
Zero Zero Ref Zero Low Zero High

SO2 [ppb] Calibration: PRAMP 842b Monthly: 10-2019 Type: Span



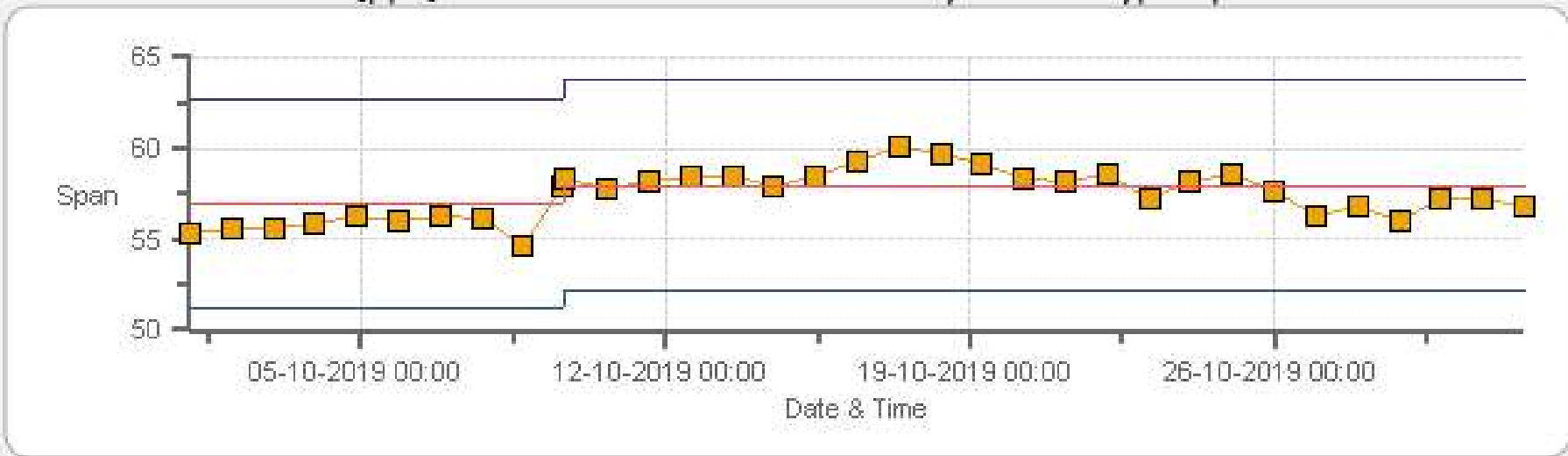
Span SpanRef Span Low Span High

TRS [ppb] Calibration: PRAMP 842b Monthly: 10-2019 Type: Zero



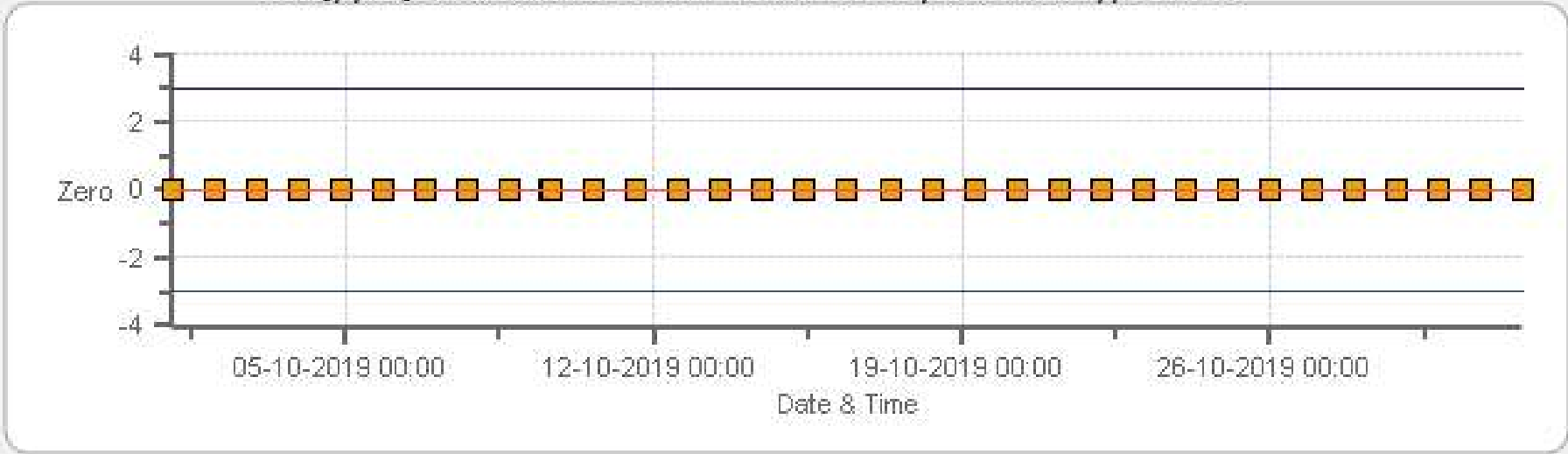
Zero Zero Ref Zero Low Zero High

TRS [ppb] Calibration: PRAMP 842b Monthly: 10-2019 Type: Span



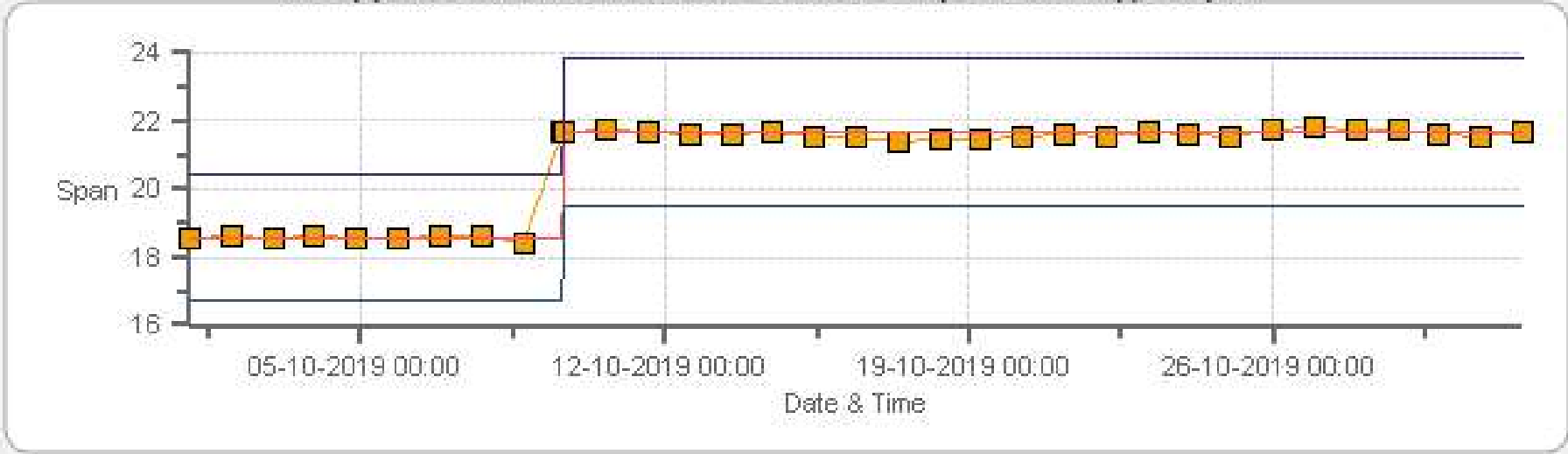
Span Span Ref Span Low Span High

THC [ppm] Calibration: PRAMP 842b Monthly: 10-2019 Type: Zero



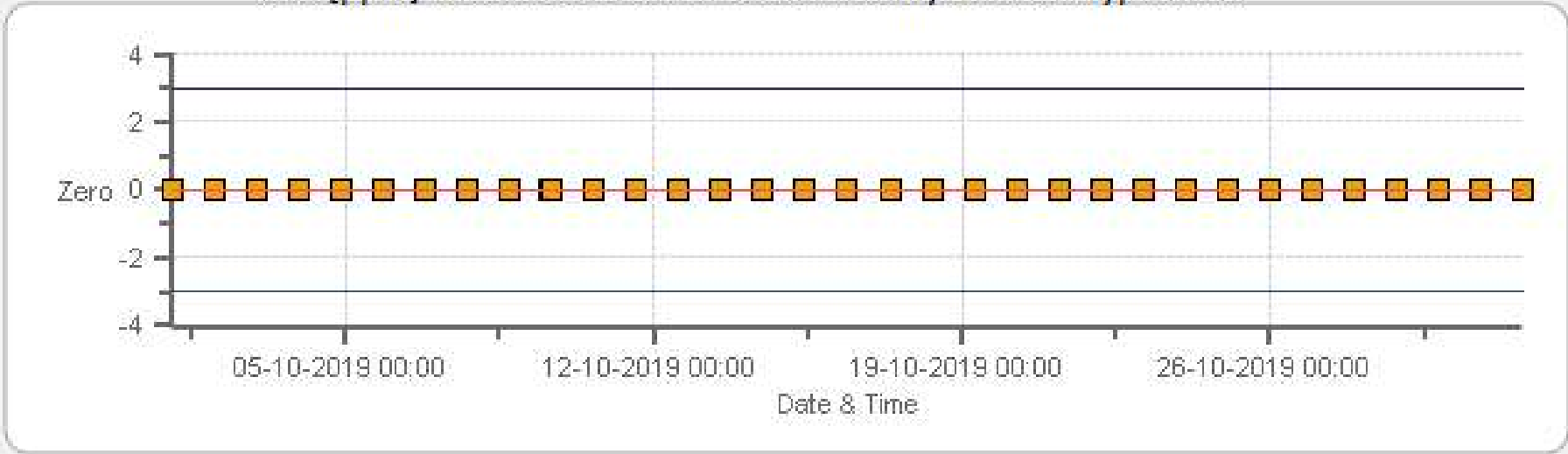
Zero Zero Ref Zero Low Zero High

THC [ppm] Calibration: PRAMP 842b Monthly: 10-2019 Type: Span



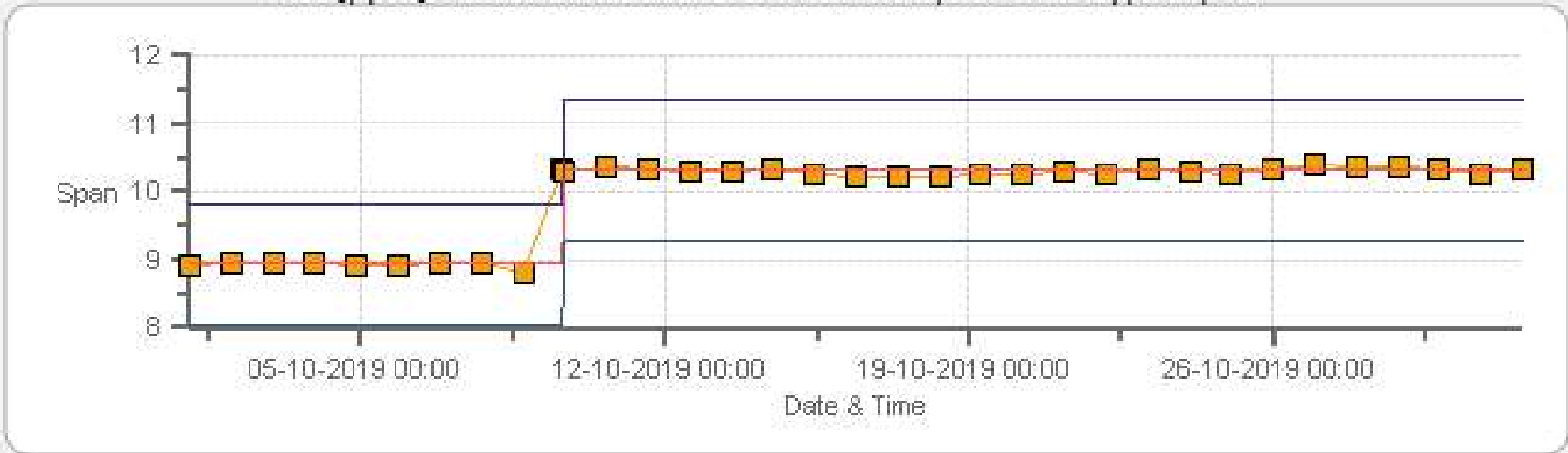
Span Span Ref Span Low Span High

CH4 [ppm] Calibration: PRAMP 842b Monthly: 10-2019 Type: Zero



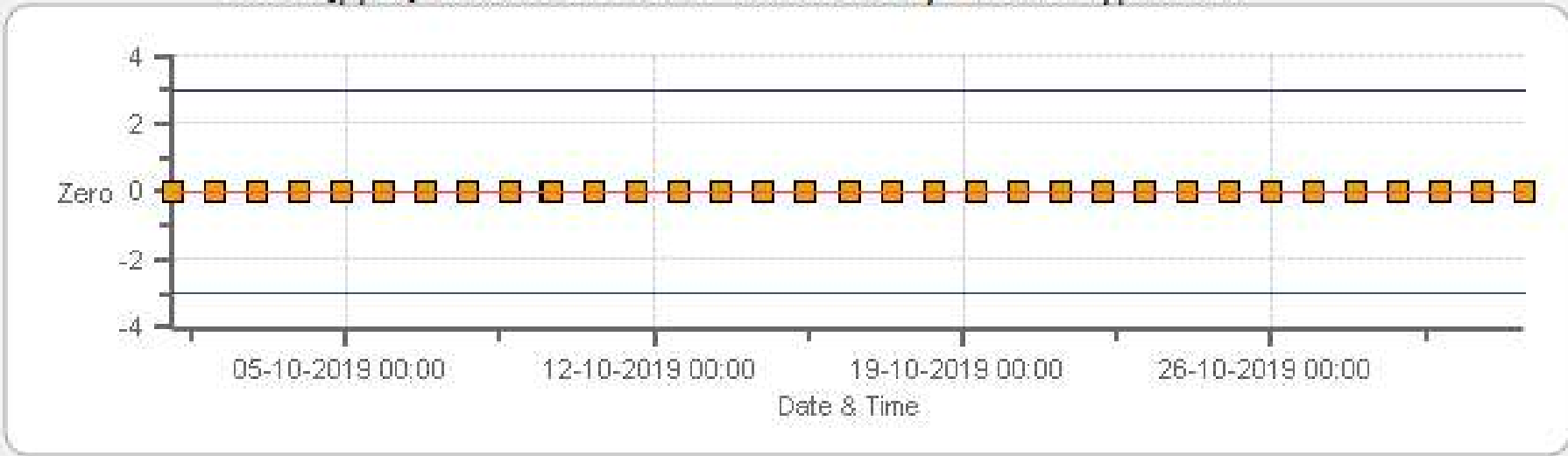
Zero Zero Ref Zero Low Zero High

CH4 [ppm] Calibration: PRAMP 842b Monthly: 10-2019 Type: Span



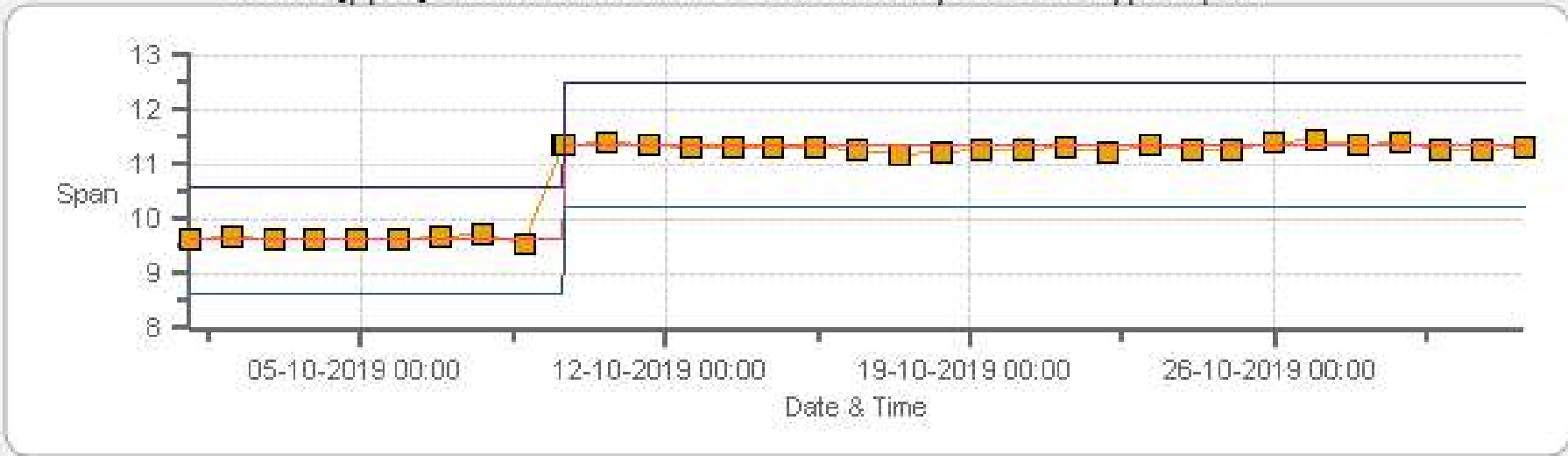
Span SpanRef Span Low Span High

NMHC [ppm] Calibration: PRAMP 842b Monthly: 10-2019 Type: Zero



Zero Zero Ref Zero Low Zero High

NMHC [ppm] Calibration: PRAMP 842b Monthly: 10-2019 Type: Span



Span SpanRef Span Low Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution



DATE:	09-Oct-2019	PREVIOUS CALIBRATION DATE:	12-Sep-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	842b	BAROMETRIC (mBar):	950
PURPOSE:	Routine	START TIME (MST):	11:13
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:29

ANALYZER:

MAKE/MODEL	Thermo 43i	RANGE	500 ppb
SERIAL #	835033373	FLOW (mL/min)	424
INITIAL		FINAL	
BKG/OFFSET	14.5	BKG/OFFSET	15.7
COEF/SLOPE	1.004	COEF/SLOPE	1.066
Expected (reference) Value	251.5	Expected (reference) Value	257

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:	LL19664	HIGH ID	n/a
CONC (ppm):	24.20	EXPIRY DATE	n/a
CYLINDER (psi):	1800	LOW ID	n/a
EXPIRY DATE	03-Jul-2023	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	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4001	62.80	4001	0.00	0.1	0	1.057	0.999
3940	62.80	4003	379.67	359.4	380	1.057	0.999
3971	29.73	4001	179.80	n/a	179	n/a	1.004
3986	14.83	4001	89.68	n/a	89.6	n/a	1.001

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.1%

COMMENTS:

Sample filter changed

TRS Analyzer Calibration by Dilution



DATE:	09-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	842b	BAROMETRIC (mBar):	950
PURPOSE:	Install/Post-Repair	START TIME (MST):	11:13
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:29

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1162460023	FLOW (mL/min)	408
INITIAL		FINAL	
BKG/OFFSET	2.77	BKG/OFFSET	2.99
COEF/SLOPE	0.892	COEF/SLOPE	0.915
Expected (reference) Value	n/a	Expected (reference) Value	57.92

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:	EY0000644	HIGH ID	n/a
CONC (ppm):	10.00	EXPIRY DATE	n/a
CYLINDER (psi):	1850	LOW ID	n/a
EXPIRY DATE	16-Jul-2022	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4001	31.20	4001	0.00	n/a	0	n/a	1.000
3972	31.20	4003	77.94	n/a	77.9	n/a	1.000
3986	15.20	4001	37.99	n/a	37.67	n/a	1.008
3993	7.61	4001	19.02	n/a	18.48	n/a	1.029

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.3%

COMMENTS:

Sample filter changed. Post-repair calibration after replacing/peaking thermocouple.

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	09-Oct-2019	PREVIOUS CALIBRATION DATE:	12-Sep-2019	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5		Thermo 55i	1505664392	1242
LOCATION:	842b	BAROMETRIC (mBar):	950	PARAMETER:	CH4	NMHC	THC
PURPOSE	Routine	START TIME (MST):	11:13	RANGE (ppm):	20	20	40
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:17	PREVIOUS CF:	0.999	1.002	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Terledyne	CYLINDER ID:	LL107207	HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH ₄ /C ₃ H ₈ (ppm):	600.0 207.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	134	CYLINDER (psi):	900	LOW ID:	n/a
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	Internal	EXPIRY DATE	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE		
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄		569.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄		1169.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	8.94	9.62	18.56		10.32	11.35	21.67

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3111	X	3111	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	X	X	X	X	X	X
3037	74.20	3111	14.31	13.58	27.89	14.04	13.51	27.48	14.32	13.58	27.90	1.019	1.005	1.015	0.999	1.000	1.000
3076	37.10	3113	7.15	6.78	13.93	n/a	n/a	n/a	7.13	6.77	13.90	n/a	n/a	n/a	1.003	1.002	1.003
3092	18.60	3111	3.59	3.40	6.99	n/a	n/a	n/a	3.53	3.41	6.94	n/a	n/a	n/a	1.016	0.998	1.007

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	1.002	-0.1%
NMHC	1.000	1.000	0.0%
THC	1.000	1.001	-0.1%

COMMENTS:

Sample filter changed

Meteorological System Checklist



Date:	October 9, 2019		
Technician:	Chris Wesson		
Reviewer:	Wunmi Adekanmbi		
Station:	PRAMP 842b		
Unit:	Make:	Model:	Serial #:
Temperature Sensor:	Campbell Scientific	HMP45C	C2608
Barometric Pressure Sensor:	MetOne	92	K12864
Relative Humidity Sensor:	Campbell Scientific	HMP45C	C2608
Anemometer:	RM Young	05305VK	124638
AMBIENT TEMPERATURE SENSOR CHECK			
Previous check date:	September 12, 2019		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	FS 181341226		
Reference Temperature (°C):	3.4		
Station - Ambient Temperature (°C):	3.5		
Temperature Difference (°C):	-0.1		
BAROMETRIC PRESSURE SENSOR CHECK			
Previous check date:	n/a		
Reference Barometer ID:	Brunton 05490		
Reference Pressure - Units/Reading:	millibar	951.6	
Station Pressure - Units/Reading:	millibar	950.7	
Pressure Tolerance +/- 15% of error:	809 - 1094	0.09%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	n/a		
Reference Hygrometer ID:	FS 181341226		
Reference Hygrometer % RH- Reading:	37.40		
Station Hygrometer % RH- Reading:	39.30		
RH Tolerance +/- 15% of difference:	31.79 - 43.01	-5.1%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	n/a - install	Previous check date:	September 12, 2019
Wind Speed Observed (kph):	10-20	Wind Direction Observed:	SW
Wind speed on Data Logger (kph):	18.3	Wind Direction on Data Logger:	SW
		Wind Direction Pass/Fail?:	Pass
Comments			



Meteorological Sensor Audit/Calibration

Location Information

Company: PRAMP
Audit Location: 842b
Audit Date: August 7, 2019
Calibration Purpose: routine annual
Performed By: Chris Wesson
Reviewed By: Wunmi Adekanmbi
Start/End Time (mst): 14:31 / 16:08
Weather Conditions: Mainly sunny

Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	0 - 1 V
Sensor Model:	05305VK	Velocity Unit Output Range:	0-200 KPH
Serial #:	124638	Direction Voltage Output Range:	0 - 1 V
Previous Cal/Audit Date:	August 22, 2018	Direction Unit Output Range:	0-360 °

Wind Calibrator Information

Calibrator I.D. and Expiry Date: _____

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.2	0.4	-
1000	18.4	18.4	18.4	1.002
2000	36.9	36.8	36.8	1.002
3000	55.3	55.2	55.2	1.002
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.4	110.4	1.002
7000	129.0	128.8	128.8	1.002
8000	147.4	147.4	147.4	1.000
9000	165.9	165.8	165.8	1.000
10000	184.3	184.4	184.4	0.999
The audit meets AMD requirements.			Average Correction Factor=	1.001

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

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	1	354	1.0	1.0	1.0
30	330	30	329	0.0	1.0	0.5
60	300	61	299	-1.0	1.0	1.0
90	270	91	269	-1.0	1.0	1.0
120	240	121	239	-1.0	1.0	1.0
150	210	151	211	-1.0	-1.0	1.0
180	180	180	179	0.0	1.0	0.5
210	150	210	150	0.0	0.0	0.0
240	120	241	120	-1.0	0.0	0.5
270	90	270	90	0.0	0.0	0.0
300	60	300	59	0.0	1.0	0.5
330	30	329	28	1.0	2.0	1.5
355	0	354	1	1.0	1.0	1.0
The audit meets AMD requirements.				Average Absolute Degrees Difference=		0.7

Comments:

Calibrator: RM Young 18802 #CA03309 Expires: Oct03, 2019
 Physical inspection completed, bearings replaced. Tower extended +1.25m. Alignment checked: declination +15Deg



Peace River Area Monitoring Program

OCTOBER 2019
Ambient Air Monitoring Calibration Report
- 986c STATION-
CAL-PRAMP-201910-01562

Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

November 15, 2019

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2 [ppb] Calibration: PRAMP 986c Monthly: 10-2019 Type: Zero



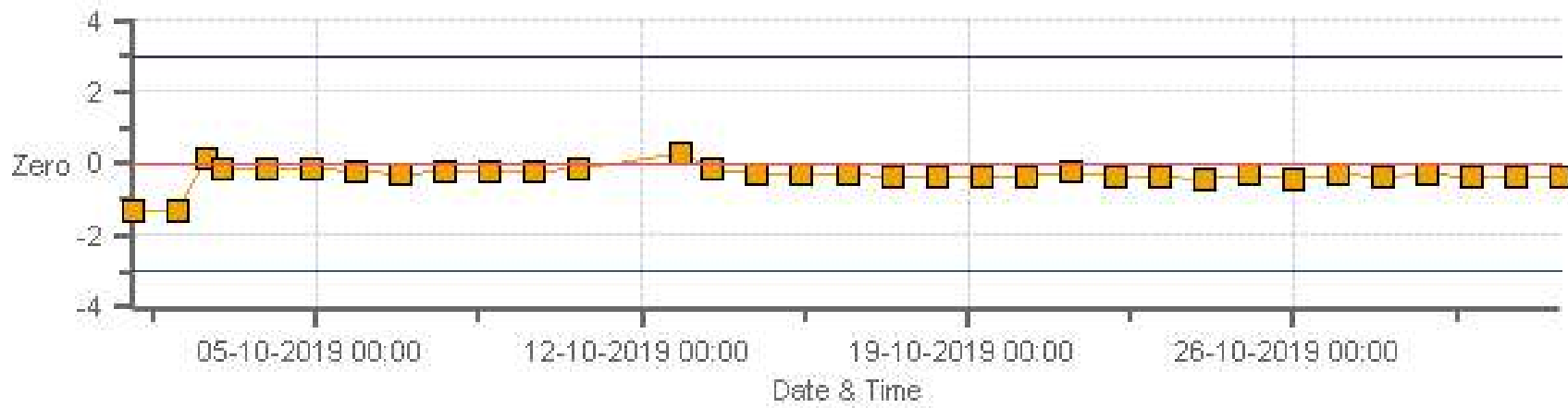
Zero Zero Ref Zero Low Zero High

SO2 [ppb] Calibration: PRAMP 986c Monthly: 10-2019 Type: Span



Span SpanRef Span Low Span High

TRS [ppb] Calibration: PRAMP Reno Monthly: 10-2019 Type: Zero



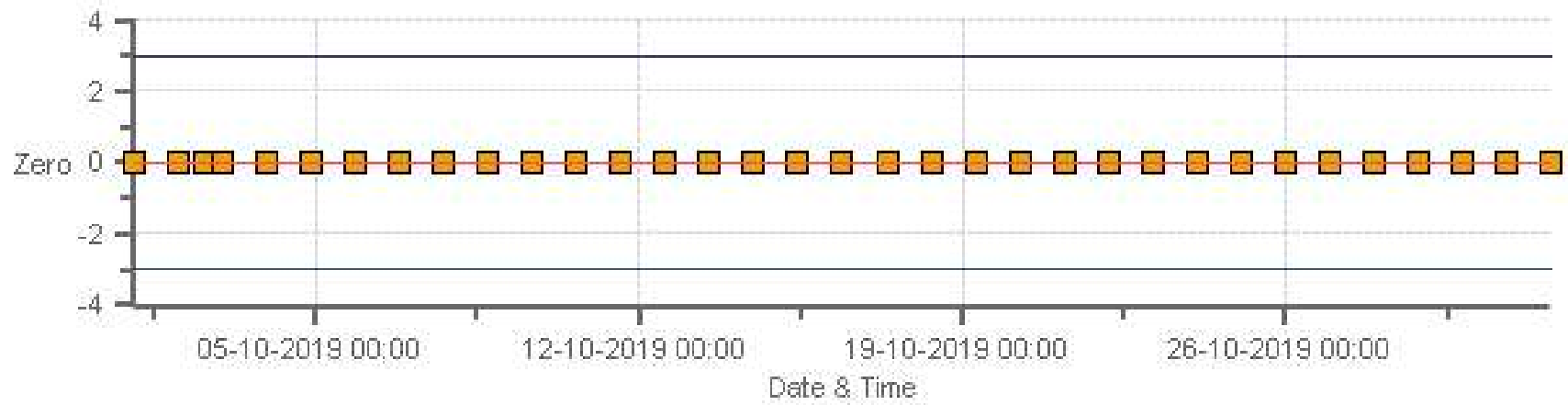
■ Zero
 — Zero Ref
 — Zero Low
 — Zero High

TRS [ppb] Calibration: PRAMP Reno Monthly: 10-2019 Type: Span



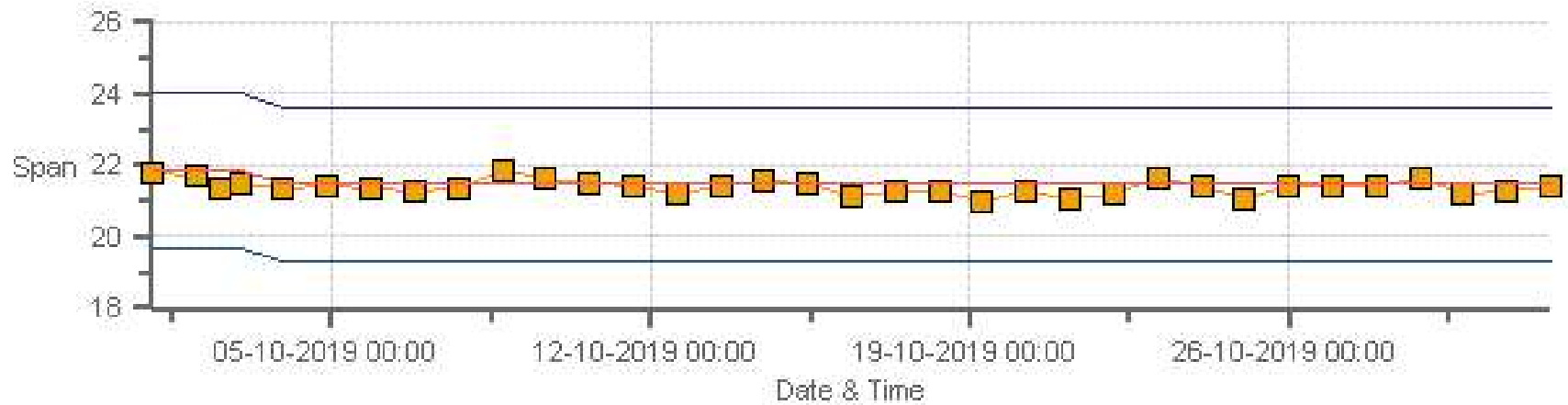
■ Span
 — SpanRef
 — Span Low
 — Span High

THC [ppm] Calibration: PRAMP 986c Monthly: 10-2019 Type: Zero



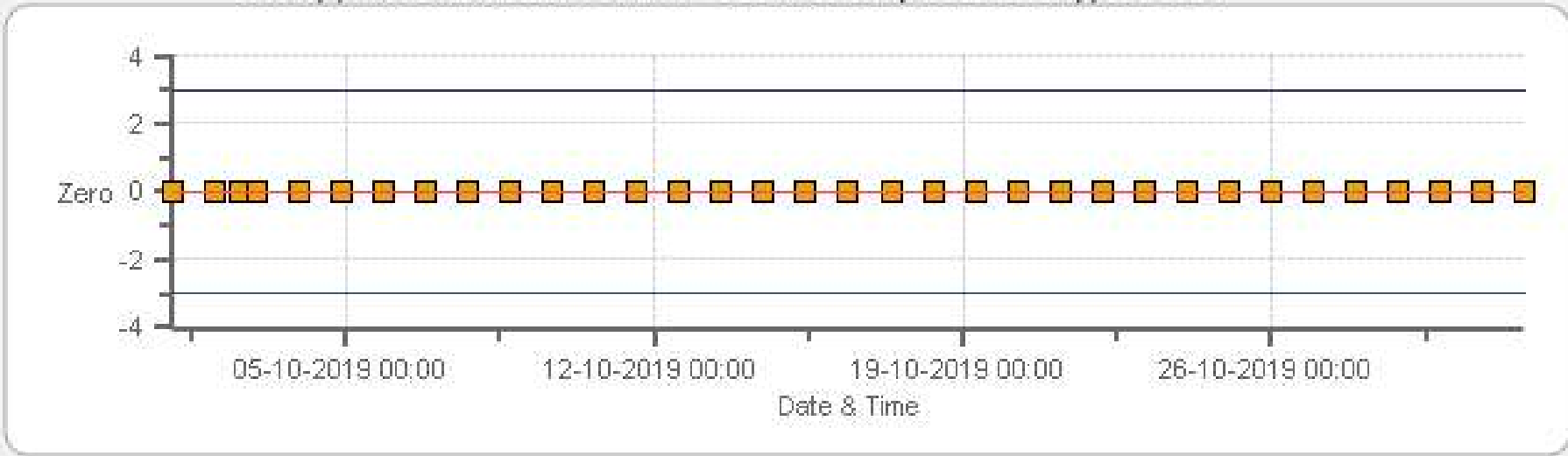
Zero Zero Ref Zero Low Zero High

THC [ppm] Calibration: PRAMP 986c Monthly: 10-2019 Type: Span



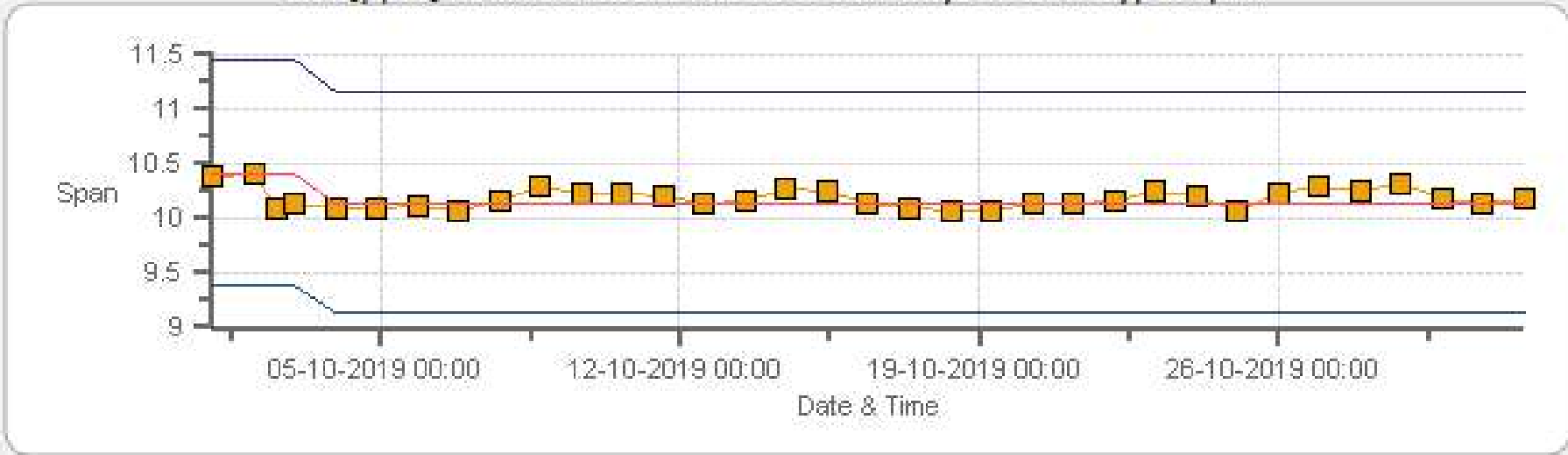
Span SpanRef Span Low Span High

CH4 [ppm] Calibration: PRAMP 986c Monthly: 10-2019 Type: Zero



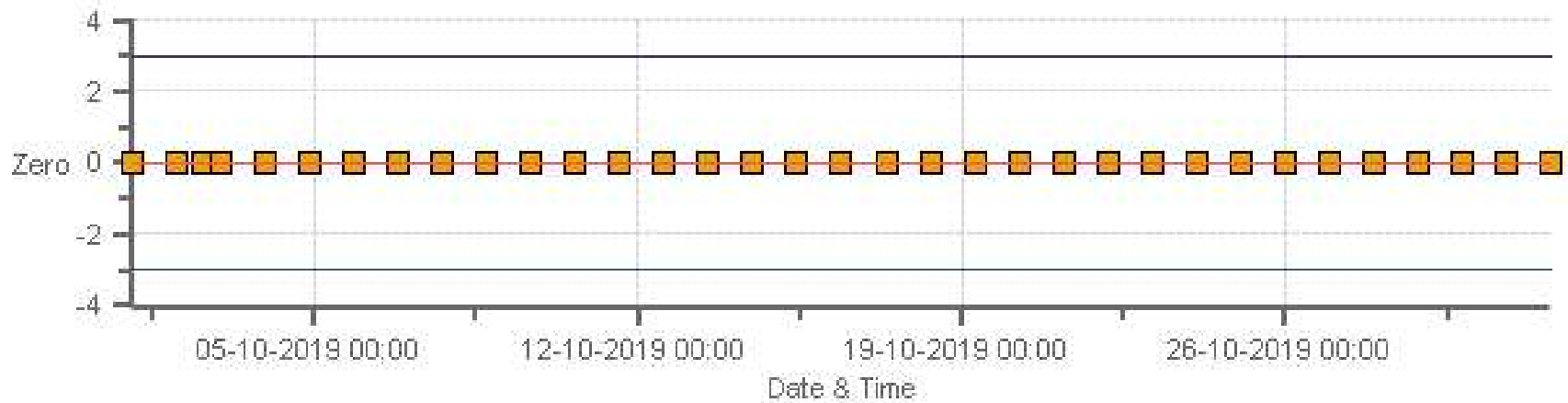
Zero Zero Ref Zero Low Zero High

CH4 [ppm] Calibration: PRAMP 986c Monthly: 10-2019 Type: Span



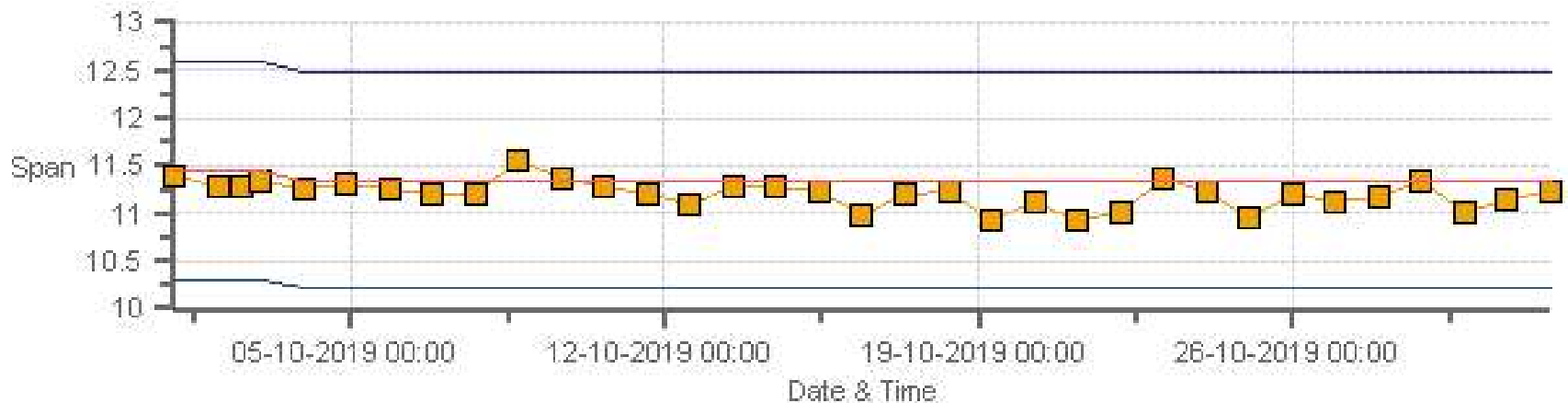
Span SpanRef Span Low Span High

NMHC [ppm] Calibration: PRAMP 986c Monthly: 10-2019 Type: Zero



Zero Zero Ref Zero Low Zero High

NMHC [ppm] Calibration: PRAMP 986c Monthly: 10-2019 Type: Span



Span Span Ref Span Low Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution



DATE:	02-Oct-2019	PREVIOUS CALIBRATION DATE:	04-Sep-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	986c	BAROMETRIC (mBar):	940
PURPOSE:	Routine	START TIME (MST):	13:04
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	18:26

ANALYZER:

MAKE/MODEL	API 100A	RANGE	500 ppb
SERIAL #	1298	FLOW (mL/min)	616
INITIAL		FINAL	
BKG/OFFSET	92.7	BKG/OFFSET	93.5
COEF/SLOPE	0.88	COEF/SLOPE	0.852
Expected (reference) Value	295	Expected (reference) Value	288

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	EnviroNics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	5212	ID:	74
MFC CALIBRATION DATE:	19-Jul-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL104183	HIGH ID	n/a
CONC (ppm):	49.50	EXPIRY DATE	n/a
CYLINDER (psi):	700	LOW ID	n/a
EXPIRY DATE	24-Oct-2020	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	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5996	46.02	5996	0.00	0.9	0	0.975	1.000
5950	46.02	5996	379.87	390.6	379.8	0.975	1.000
5977	21.81	5999	179.92	n/a	179.7	n/a	1.001
5986	10.88	5997	89.83	n/a	90.8	n/a	0.989

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	0.1%

COMMENTS:

Sample filter changed. Stopped "as found high" point at 14:01 due to slow analyzer response. Restarted at 14:06.

TRS Analyzer Calibration by Dilution



DATE:	02-Oct-2019	PREVIOUS CALIBRATION DATE:	19-Sep-2019
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	23.5
LOCATION:	986c	BAROMETRIC (mBar):	940
PURPOSE:	Routine	START TIME (MST):	09:25
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	15:11

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1152940011	FLOW (mL/min)	480
INITIAL		FINAL	
BKG/OFFSET	3.55	BKG/OFFSET	2.32
COEF/SLOPE	0.929	COEF/SLOPE	0.917
Expected (reference) Value	44.62	Expected (reference) Value	41.83

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	EnviroNics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	4760	ID:	74
MFC CALIBRATION DATE:	18-Jul-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):	300	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:	10:05	SO2 Conc (ppb)	380
END TIME:	10:23	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
7485	57.19	7485	0.00	-1.25	0	0.975	1.000
7429	57.19	7486	77.92	78.7	77.9	0.975	1.000
7460	27.86	7488	37.95	n/a	37.51	n/a	1.012
7474	13.93	7488	18.98	n/a	18.54	n/a	1.024

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.3%

COMMENTS:

Sample filter changed.

TRS Analyzer Calibration by Dilution



DATE:	12-Oct-2019	PREVIOUS CALIBRATION DATE:	02-Oct-2019
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	23.2
LOCATION:	986c	BAROMETRIC (mBar):	938
PURPOSE:	Install/Post-Repair	START TIME (MST):	12:26
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	20:26

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1152940011	FLOW (mL/min)	479
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	2.47
COEF/SLOPE	n/a	COEF/SLOPE	0.942
Expected (reference) Value	n/a	Expected (reference) Value	41.83

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	EnviroNics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	4760	ID:	74
MFC CALIBRATION DATE:	18-Jul-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):	270	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:	17:42	SO2 Conc (ppb)	380
END TIME:	18:00	Analyzer Response (ppb)	0.1

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
7487	57.19	7487	0.00	n/a	0	n/a	1.000
7429	57.19	7486	77.92	n/a	77.9	n/a	1.000
7459	27.86	7487	37.96	n/a	37.43	n/a	1.014
7472	13.94	7486	19.00	n/a	18.55	n/a	1.024

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.3%

COMMENTS:

Replaced Thermal Oxidizer due to unstable temperature.

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	02-Oct-2019	PREVIOUS CALIBRATION DATE:	04-Sep-2019	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.5		Thermo 55i	1022143392	974.44
LOCATION:	986c	BAROMETRIC (mBar):	940	PARAMETER:	CH4	NMHC	THC
PURPOSE	Routine	START TIME (MST):	09:25	RANGE (ppm):	20	20	40
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	13:46	PREVIOUS CF:	0.998	1.000	0.999

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 ₃ H ₈ (ppm):	595.0 206.0	HIGH EXPIRY:	n/a
ID:	5212	ID:	74	CYLINDER (psi):	1400	LOW ID:	n/a
MFC CALIBRATION DATE:	19-Jul-2019	OXIDIZER ID:	n/a	EXPIRY DATE	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE		
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄		566.5
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄		1161.5

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	10.42	11.44	21.86		10.14	11.34	21.47

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3145	X	3145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	X	X	X	X	X	X
3077	70.47	3147	13.32	12.69	26.01	13.57	12.68	26.26	13.33	12.67	26.00	0.982	1.000	0.990	1.000	1.001	1.000
3110	37.91	3148	7.16	6.82	13.99	n/a	n/a	n/a	7.22	6.85	14.08	n/a	n/a	n/a	0.992	0.996	0.993
3132	16.22	3149	3.07	2.92	5.98	n/a	n/a	n/a	3.11	2.93	6.05	n/a	n/a	n/a	0.986	0.996	0.989

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	1.000	0.1%
NMHC	1.000	1.000	0.1%
THC	1.000	0.999	0.1%

COMMENTS:

Sample filter changed.

Meteorological System Checklist



Date:	October 2, 2019		
Technician:	Ferdinand Roy		
Reviewer:	Wunmi Adekanmbi		
Station:	PRAMP 986c		
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:	September 4, 2019		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	F.S. 160459244 expires Jun 19, 2020		
Reference Temperature (°C):	10.7		
Station - Ambient Temperature (°C):	11.1		
Temperature Difference (°C):	-0.4		
BAROMETRIC PRESSURE SENSOR CHECK			
Previous check date:	September 4, 2019		
Reference Barometer ID:	Reference Barometer ID: F.S. 10528 expires January 23, 2020		
Reference Pressure - Units/Reading:	millibar	940	
Station Pressure - Units/Reading:	millibar	942.2	
Pressure Tolerance +/- 15% of error:	799 - 1081	-0.23%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	September 4, 2019		
Reference Hygrometer ID:	F.S. 160459244 expires Jun 19, 2020		
Reference Hygrometer % RH- Reading:	51.35		
Station Hygrometer % RH- Reading:	51.80		
RH Tolerance +/- 15% of difference:	43.65 - 59.05	-0.9%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	September 4, 2019	Previous check date:	September 4, 2019
Wind Speed Observed (kph):	5-10	Wind Direction Observed:	SW
Wind speed on Data Logger (kph):	6.1	Wind Direction on Data Logger:	SW
		Wind Direction Pass/Fail?:	Pass
Comments			



Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	Performed By:	Chris Wesson
Audit Location:	986b	Reviewed By:	Rob Fisher
Audit Date:	April 24, 2019	Start/End Time (mst):	09:58/11:59
Calibration Purpose:	routine annual	Weather Conditions:	Mix of sun and clouds

Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	0-1V
Sensor Model:	05305VK	Velocity Unit Output Range:	0-200 kph
Serial #:	129612	Direction Voltage Output Range:	0-1V
Previous Cal/Audit Date:	April 4, 2018	Direction Unit Output Range:	0-360 DEG

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires October 3, 2019

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.1	0.1	-
1000	18.4	18.5	18.5	0.996
2000	36.9	36.9	36.8	1.000
3000	55.3	55.3	55.3	1.000
4000	73.7	73.7	73.7	1.000
5000	92.2	92.2	92.2	0.999
6000	110.6	110.7	110.7	0.999
7000	129.0	129.2	129.2	0.999
8000	147.4	147.7	147.7	0.998
9000	165.9	166.2	166.2	0.998
10000	184.3	184.9	184.8	0.997
The audit meets AMD requirements.			Average Correction Factor=	0.999

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

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	353	0.0	2.0	1.0
30	330	29	330	1.0	0.0	0.5
60	300	60	301	0.0	-1.0	0.5
90	270	91	272	-1.0	-2.0	1.5
120	240	121	242	-1.0	-2.0	1.5
150	210	152	212	-2.0	-2.0	2.0
180	180	182	181	-2.0	-1.0	1.5
210	150	214	150	-4.0	0.0	2.0
240	120	244	121	-4.0	-1.0	2.5
270	90	273	90	-3.0	0.0	1.5
300	60	302	60	-2.0	0.0	1.0
330	30	330	29	0.0	1.0	0.5
355	0	353	0	2.0	0.0	1.0
The audit meets AMD requirements.				Average Absolute Degrees Difference=		1.3

Comments:

Physical inspection completed. No issues.



Peace River Area Monitoring Program

OCTOBER 2019
Ambient Air Monitoring Calibration Report
- RENO STATION-
CAL-PRAMP-201910-01563

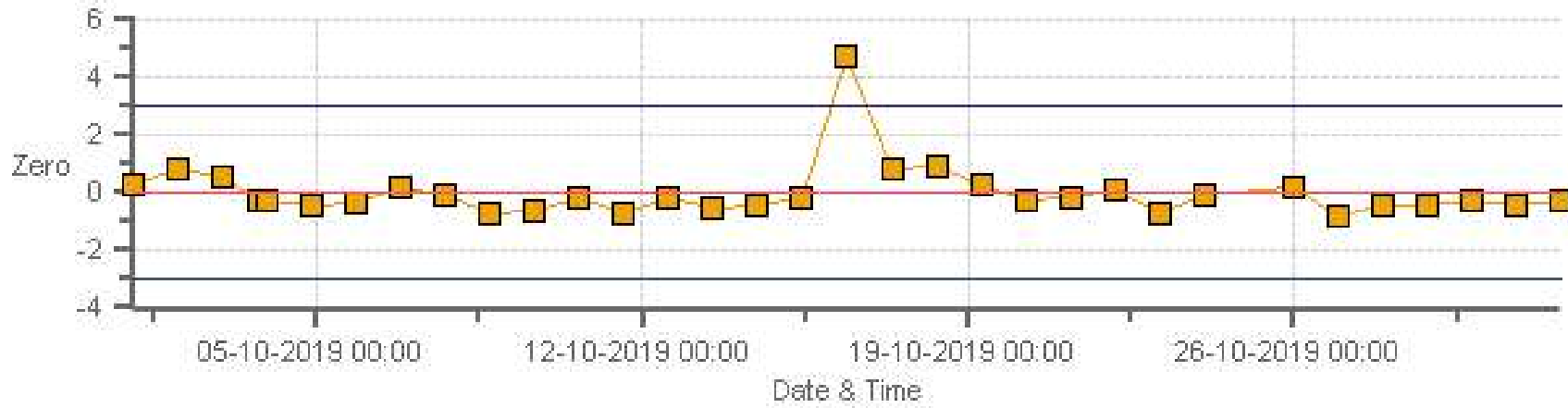
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

November 15, 2019

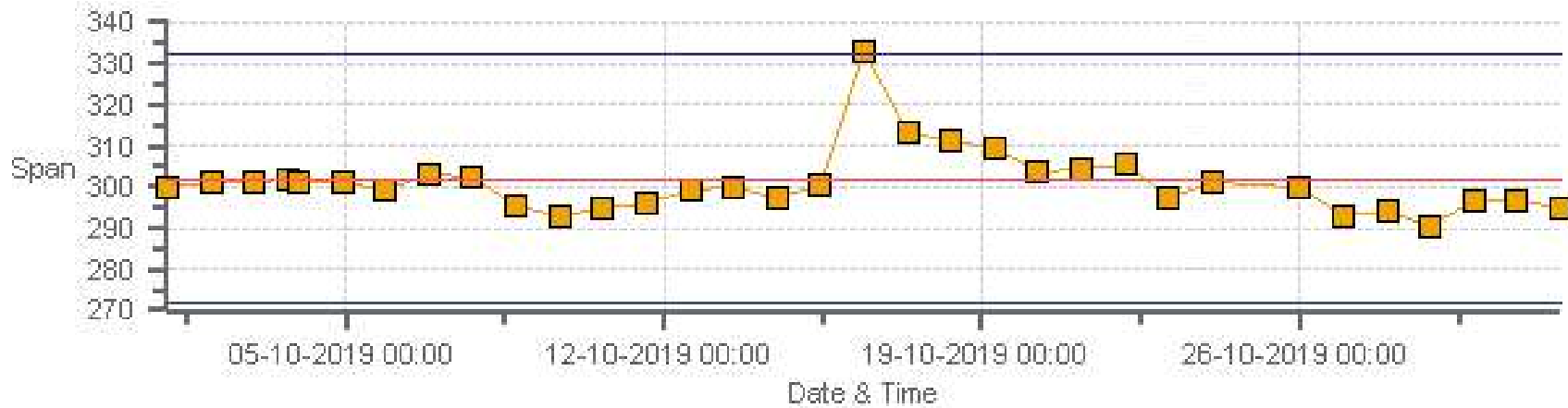
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2 [ppb] Calibration: PRAMP Reno Monthly: 10-2019 Type: Zero



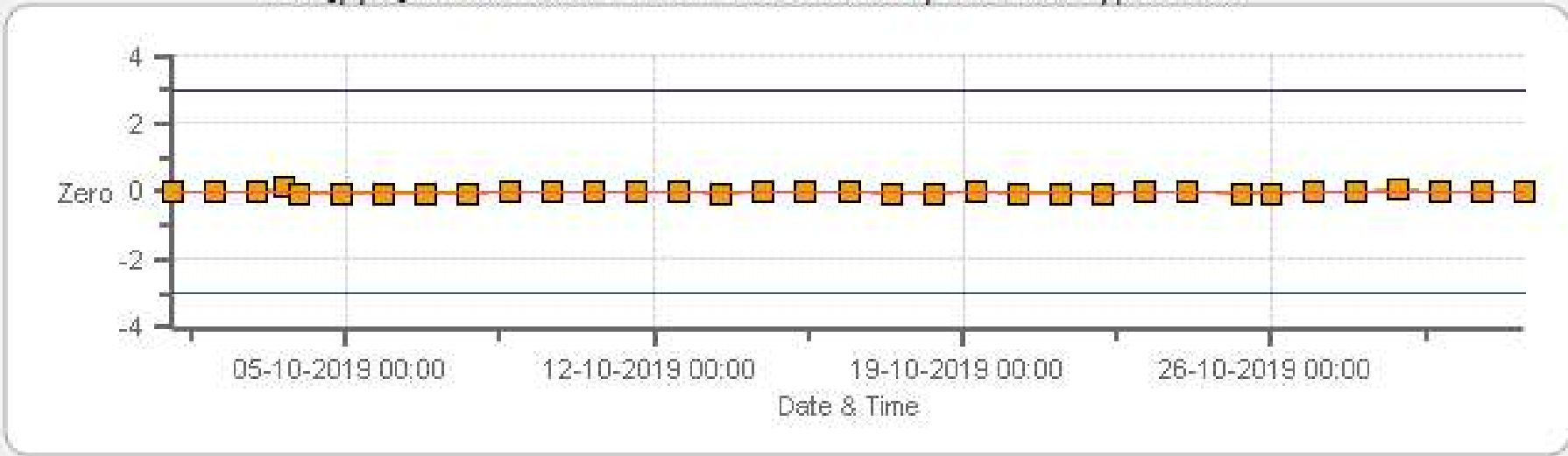
Zero Zero Ref Zero Low Zero High

SO2 [ppb] Calibration: PRAMP Reno Monthly: 10-2019 Type: Span



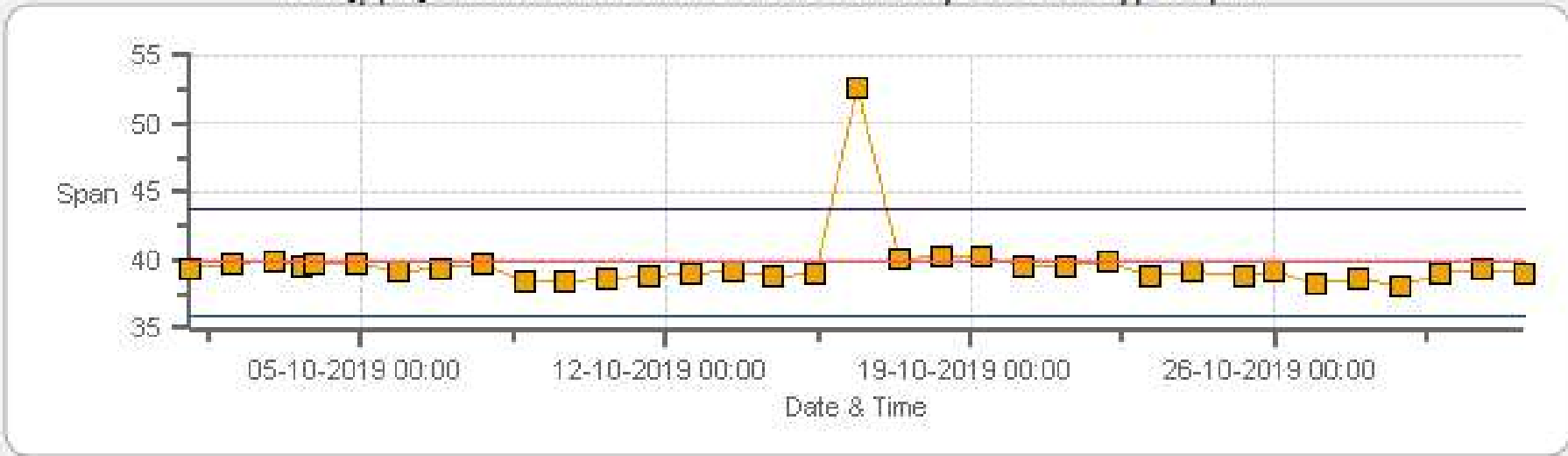
Span SpanRef Span Low Span High

TRS [ppb] Calibration: PRAMP Reno Monthly: 10-2019 Type: Zero



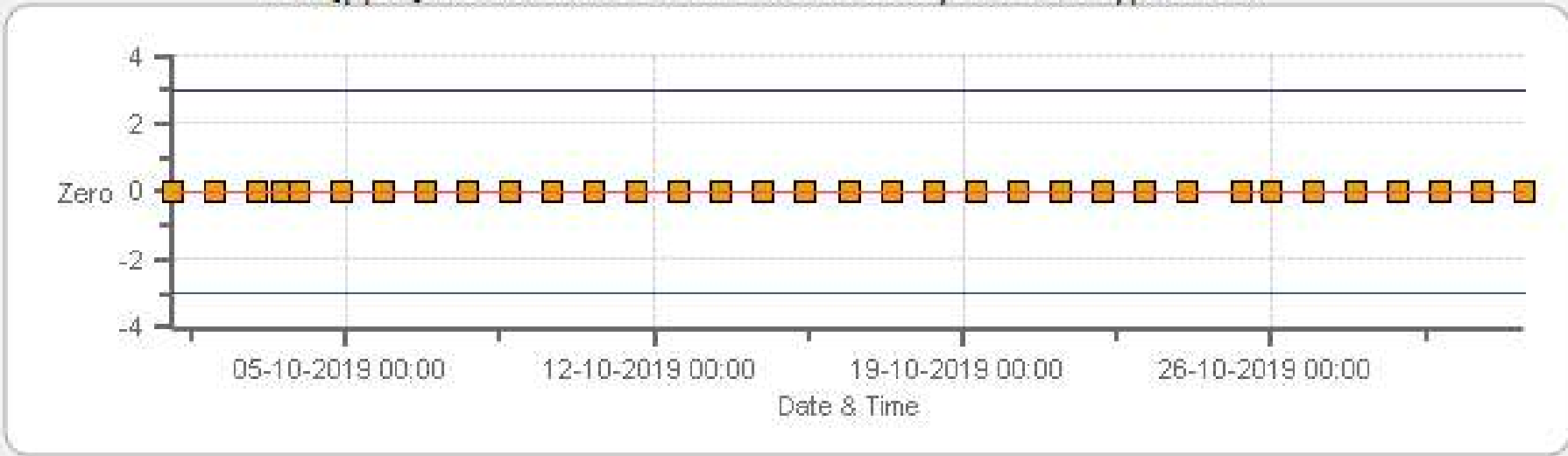
Zero Zero Ref Zero Low Zero High

TRS [ppb] Calibration: PRAMP Reno Monthly: 10-2019 Type: Span



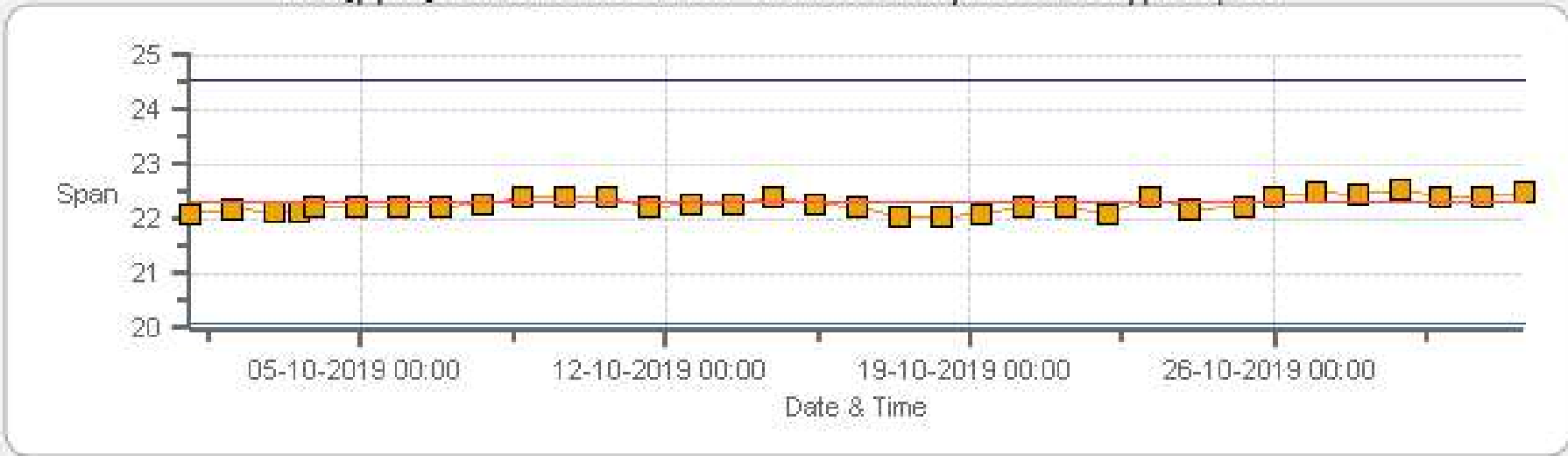
Span SpanRef Span Low Span High

THC [ppm] Calibration: PRAMP Reno Monthly: 10-2019 Type: Zero



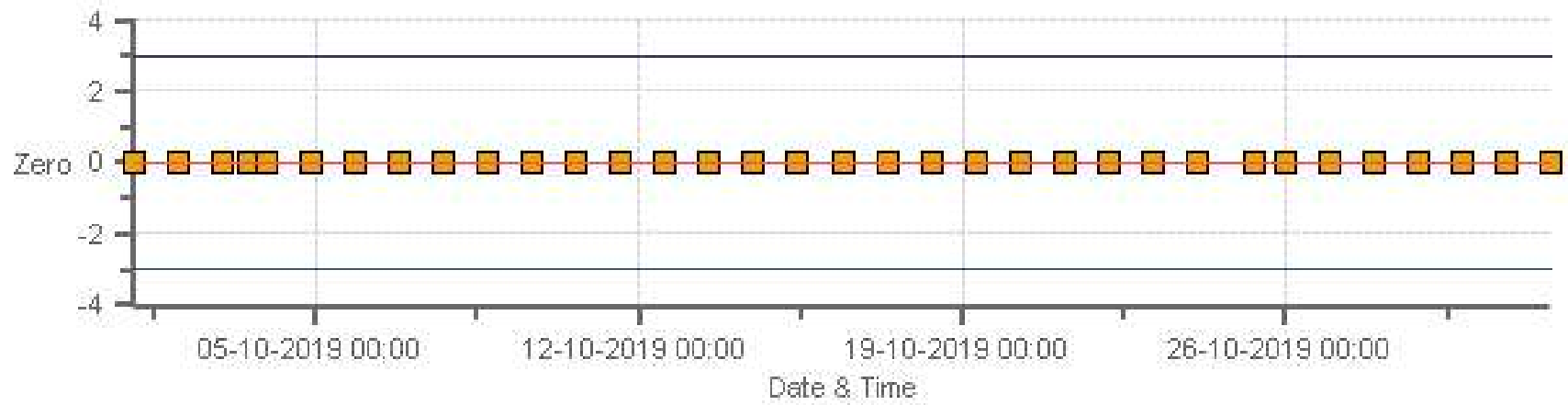
Zero Zero Ref Zero Low Zero High

THC [ppm] Calibration: PRAMP Reno Monthly: 10-2019 Type: Span



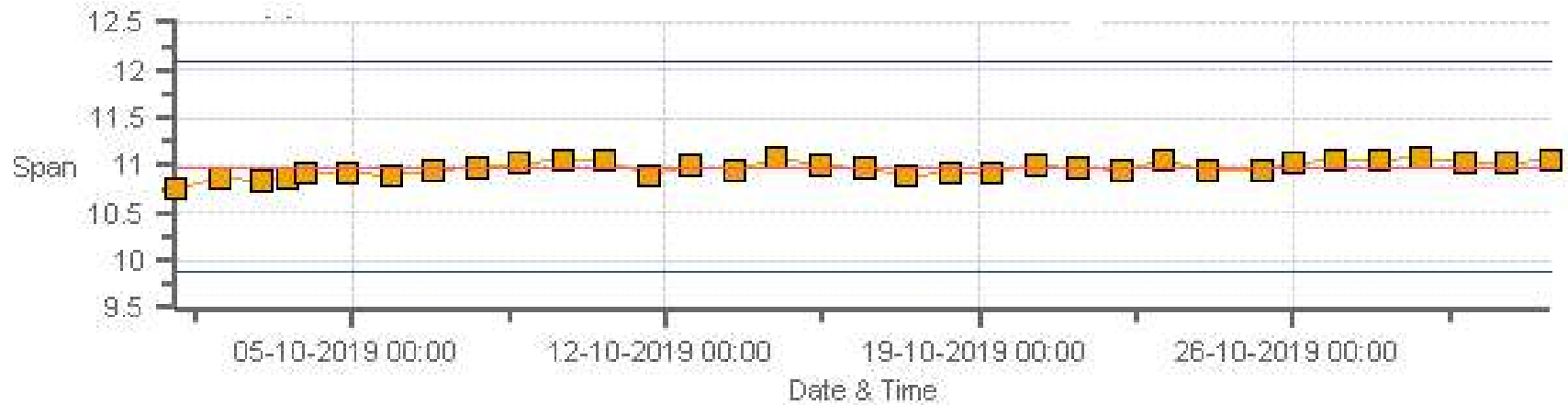
Span Span Ref Span Low Span High

CH4 [ppm] Calibration: PRAMP Reno Monthly: 10-2019 Type: Zero



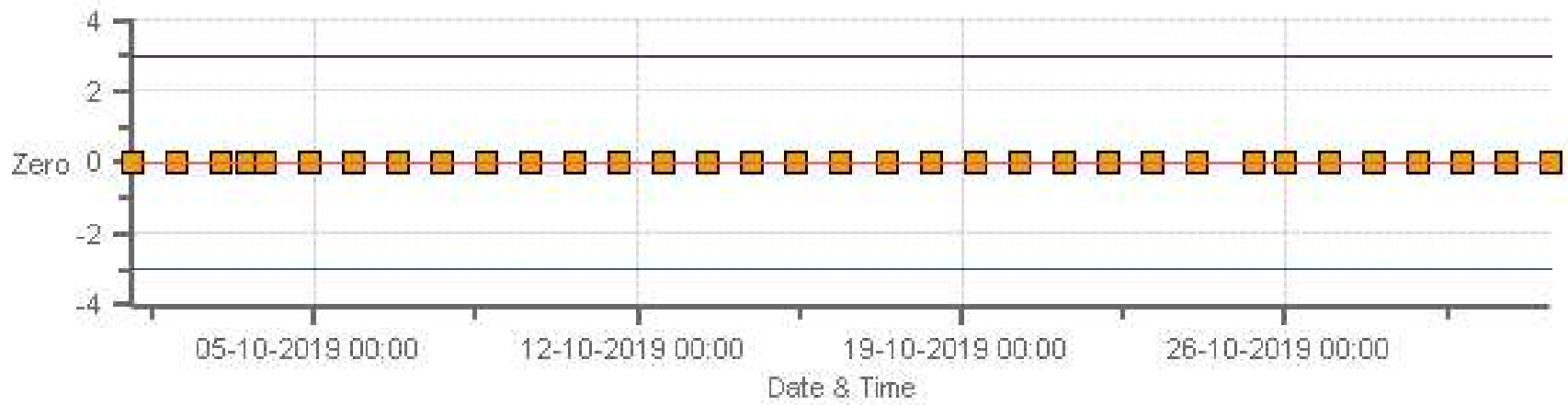
Zero Zero Ref Zero Low Zero High

CH4 [ppm] Calibration: PRAMP Reno Monthly: 10-2019 Type: Span



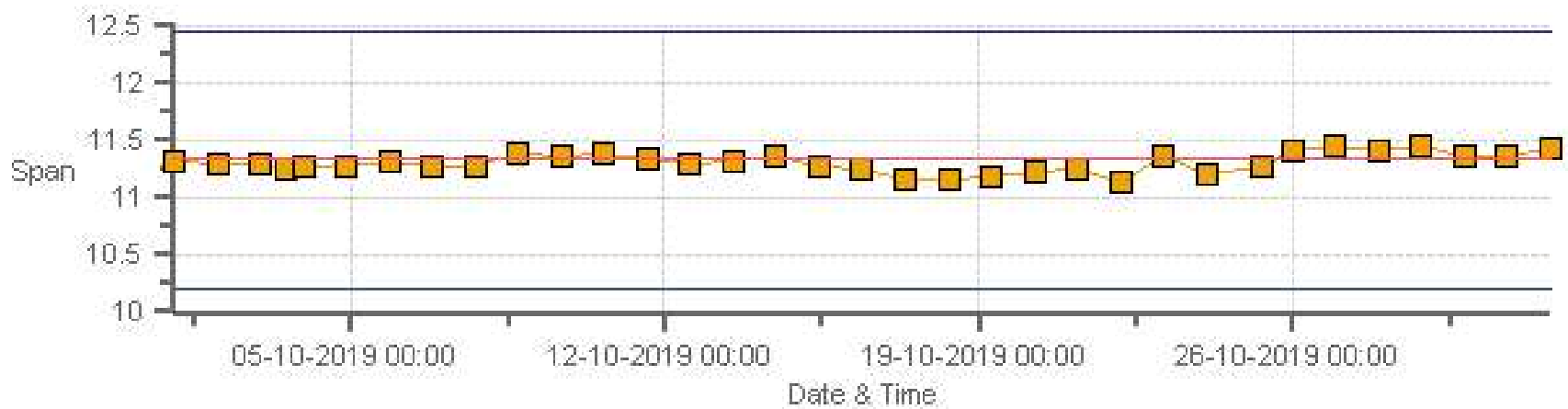
Span SpanRef Span Low Span High

NMHC [ppm] Calibration: PRAMP Reno Monthly: 10-2019 Type: Zero



Zero Zero Ref Zero Low Zero High

NMHC [ppm] Calibration: PRAMP Reno Monthly: 10-2019 Type: Span



Span SpanRef Span Low Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution



DATE:	03-Oct-2019	PREVIOUS CALIBRATION DATE:	18-Sep-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	24.8
LOCATION:	Reno	BAROMETRIC (mBar):	933
PURPOSE:	Routine	START TIME (MST):	12:40
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	17:34

ANALYZER:

MAKE/MODEL	API 100A	RANGE	500 ppb
SERIAL #	841	FLOW (mL/min)	644
INITIAL		FINAL	
BKG/OFFSET	54.3	BKG/OFFSET	56.5
COEF/SLOPE	1.068	COEF/SLOPE	1.065
Expected (reference) Value	302	Expected (reference) Value	302

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	EnviroNics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	5212	ID:	74
MFC CALIBRATION DATE:	19-Jul-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL104183	HIGH ID	n/a
CONC (ppm):	49.50	EXPIRY DATE	n/a
CYLINDER (psi):	700	LOW ID	n/a
EXPIRY DATE	24-Oct-2020	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	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5995	46.05	5995	0.00	1.3	0	1.001	1.000
5951	46.05	5997	380.13	381.1	380.1	1.001	1.000
5976	21.80	5998	179.93	n/a	178.9	n/a	1.006
5986	10.88	5997	89.80	n/a	89.9	n/a	0.999

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Sample filter changed.

TRS Analyzer Calibration by Dilution



DATE:	03-Oct-2019	PREVIOUS CALIBRATION DATE:	11-Sep-2019
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.001
CLIENT:	PRAMP	TEMPERATURE (°C):	23.1
LOCATION:	Reno	BAROMETRIC (mBar):	933
PURPOSE:	Routine	START TIME (MST):	09:09
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	14:59

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1162460022	FLOW (mL/min)	405
INITIAL		FINAL	
BKG/OFFSET	2.29	BKG/OFFSET	2.3
COEF/SLOPE	0.967	COEF/SLOPE	0.956
Expected (reference) Value	39.82	Expected (reference) Value	39.82

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	EnviroNics	MAKE:	API
MODEL:	6100	MODEL:	T701
ID:	4760	ID:	74
MFC CALIBRATION DATE:	18-Jul-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):	300	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:	09:46	SO2 Conc (ppb)	380
END TIME:	10:04	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
7487	57.21	7487	0.00	-0.03	0	0.976	1.000
7430	57.21	7487	77.94	79.84	77.91	0.976	1.000
7460	27.86	7488	37.95	n/a	37.6	n/a	1.009
7473	13.94	7487	18.99	n/a	18.53	n/a	1.025

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.3%

COMMENTS:

Operator error - Started calibrator at 11:49 for "adjusted high" point with cal gas valve closed. Restarted at 11:53. Sample filter changed.

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	03-Oct-2019	PREVIOUS CALIBRATION DATE:	11-Sep-2019	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.1		Thermo 55i	1314057759	1254
LOCATION:	Reno	BAROMETRIC (mBar):	933	PARAMETER:	CH4	NMHC	THC
PURPOSE	Routine	START TIME (MST):	09:09	RANGE (ppm):	20	20	40
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	13:23	PREVIOUS CF:	1.001	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 ₃ H ₈ (ppm):	595.0 206.0	HIGH EXPIRY:	n/a
ID:	5212	ID:	74	CYLINDER (psi):	1400	LOW ID:	n/a
MFC CALIBRATION DATE:	19-Jul-2019	OXIDIZER ID:	n/a	EXPIRY DATE	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE		
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄		566.5
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄		1161.5

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	10.98	11.33	22.31		10.98	11.33	22.31

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3145	X	3145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	X	X	X	X	X	X
3077	70.48	3148	13.32	12.68	26.01	13.27	12.68	25.94	13.36	12.68	26.04	1.004	1.000	1.003	0.997	1.000	0.999
3111	37.92	3149	7.17	6.82	13.99	n/a	n/a	n/a	7.16	6.82	13.98	n/a	n/a	n/a	1.001	1.000	1.001
3131	16.25	3148	3.07	2.92	5.99	n/a	n/a	n/a	3.06	2.92	5.99	n/a	n/a	n/a	1.004	1.001	1.001

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	1.003	-0.1%
NMHC	1.000	1.000	0.0%
THC	1.000	1.001	0.0%

COMMENTS:

Sample filter changed.

Meteorological System Checklist



Date:	October 3, 2019		
Technician:	Ferdinand Roy		
Reviewer:	Wunmi Adekanmbi		
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:	September 11, 2019		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	F.S. 160459244 expires Jun 19, 2020		
Reference Temperature (°C):	11.4		
Station - Ambient Temperature (°C):	11.0		
Temperature Difference (°C):	0.4		
BAROMETRIC PRESSURE SENSOR CHECK			
Previous check date:	September 11, 2019		
Reference Barometer ID:	F.S. 10528 expires January 23, 2020		
Reference Pressure - Units/Reading:	millibar	934	
Station Pressure - Units/Reading:	millibar	934.7	
Pressure Tolerance +/- 15% of error:	794 - 1074	-0.07%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	September 11, 2019		
Reference Hygrometer ID:	F.S. 160459244 expires Jun 19, 2020		
Reference Hygrometer % RH- Reading:	57.00		
Station Hygrometer % RH- Reading:	54.00		
RH Tolerance +/- 15% of difference:	48.45 - 65.55	5.3%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	September 11, 2019	Previous check date:	September 11, 2019
Wind Speed Observed (kph):	5-10	Wind Direction Observed:	SE
Wind speed on Data Logger (kph):	8	Wind Direction on Data Logger:	SE
		Wind Direction Pass/Fail?:	Pass
Comments			



Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	Performed By:	Chris Wesson
Audit Location:	Reno	Reviewed By:	Rob Fisher
Audit Date:	April 24, 2019	Start/End Time (mst):	15:13 / 16:06
Calibration Purpose:	routine annual	Weather Conditions:	Mix of sun and clouds

Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	0-1V
Sensor Model:	05305VK	Velocity Unit Output Range:	0-200 kph
Serial #:	149769	Direction Voltage Output Range:	0-1V
Previous Cal/Audit Date:	April 5, 2018	Direction Unit Output Range:	0-360 DEG

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires October 3, 2019

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.4	18.4	1.002
2000	36.9	36.8	36.8	1.002
3000	55.3	55.2	55.2	1.002
4000	73.7	73.6	73.6	1.002
5000	92.2	92.2	92.2	0.999
6000	110.6	110.6	110.6	1.000
7000	129.0	129.2	129.2	0.999
8000	147.4	147.8	147.6	0.998
9000	165.9	166.2	166.2	0.998
10000	184.3	184.8	184.8	0.997
The audit meets AMD requirements.			Average Correction Factor=	1.000

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

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	354	0.0	1.0	0.5
30	330	29	329	1.0	1.0	1.0
60	300	60	299	0.0	1.0	0.5
90	270	90	269	0.0	1.0	0.5
120	240	120	239	0.0	1.0	0.5
150	210	150	210	0.0	0.0	0.0
180	180	179	179	1.0	1.0	1.0
210	150	209	150	1.0	0.0	0.5
240	120	239	120	1.0	0.0	0.5
270	90	269	90	1.0	0.0	0.5
300	60	300	60	0.0	0.0	0.0
330	30	329	30	1.0	0.0	0.5
355	0	354	0	1.0	0.0	0.5
The audit meets AMD requirements.				Average Absolute Degrees Difference=		0.5

Comments:

Physical inspection completed. No issues.



Peace River Area Monitoring Program

OCTOBER 2019
Ambient Air Monitoring Calibration Report
- AQHI - CADOTTE LAKE STATION-
CAL-PRAMP-201910-01651

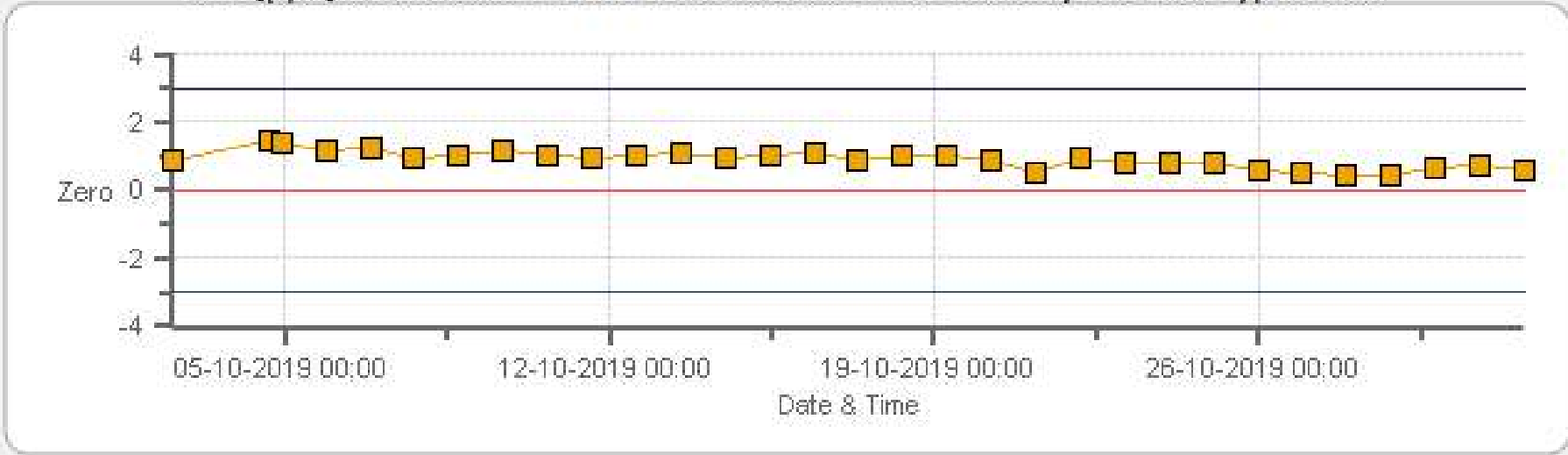
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

November 28, 2019

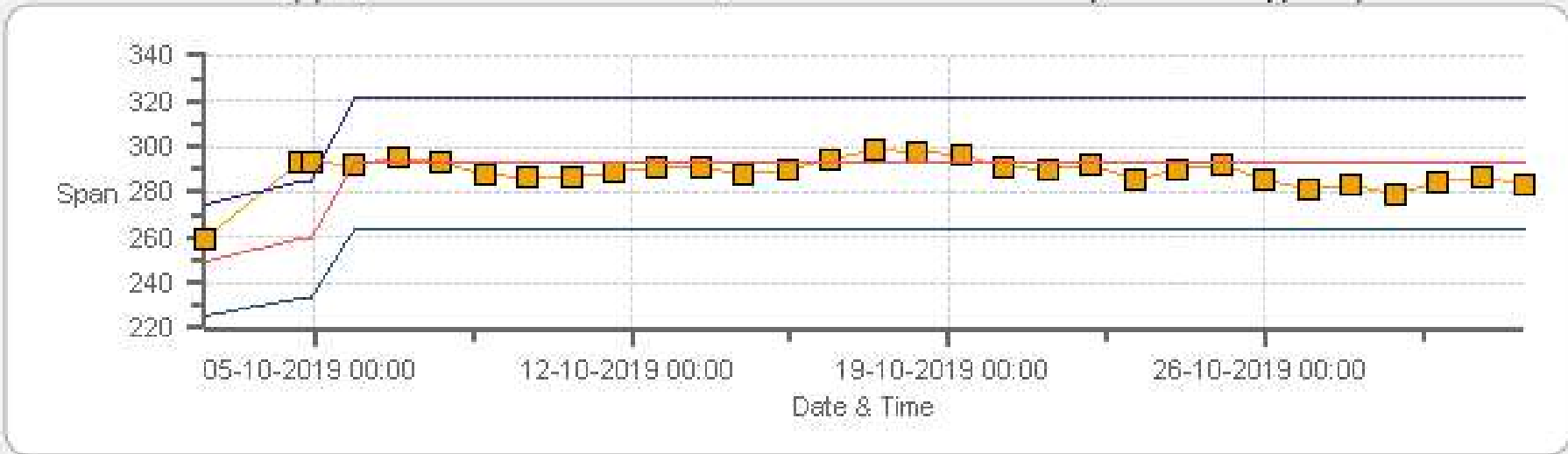
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2 [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



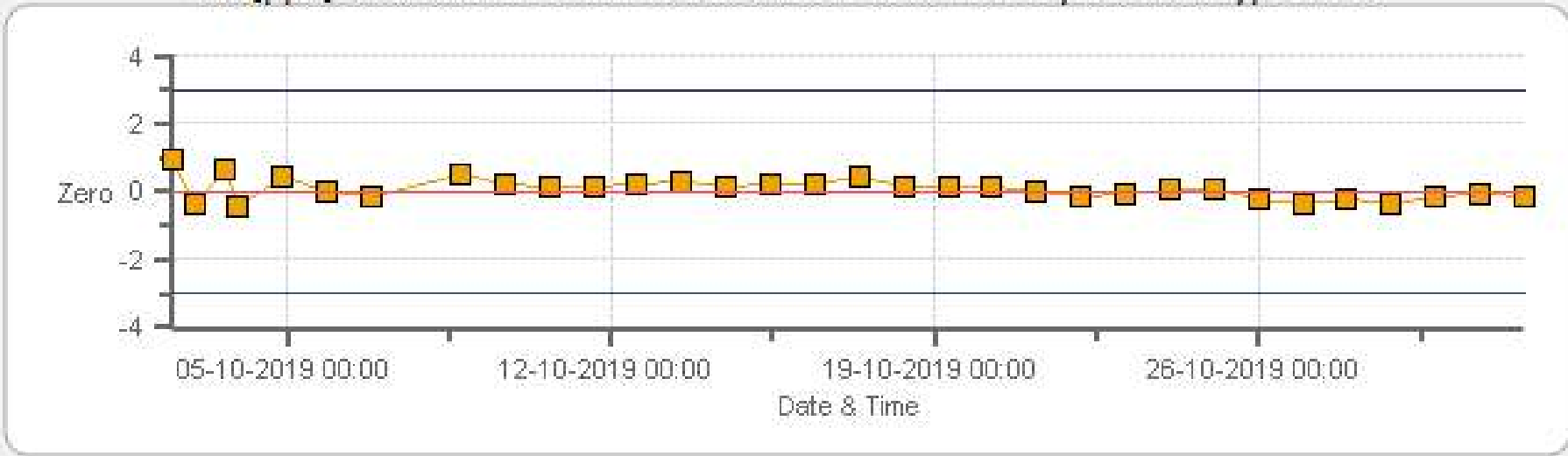
Zero Zero Ref Zero Low Zero High

SO2 [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



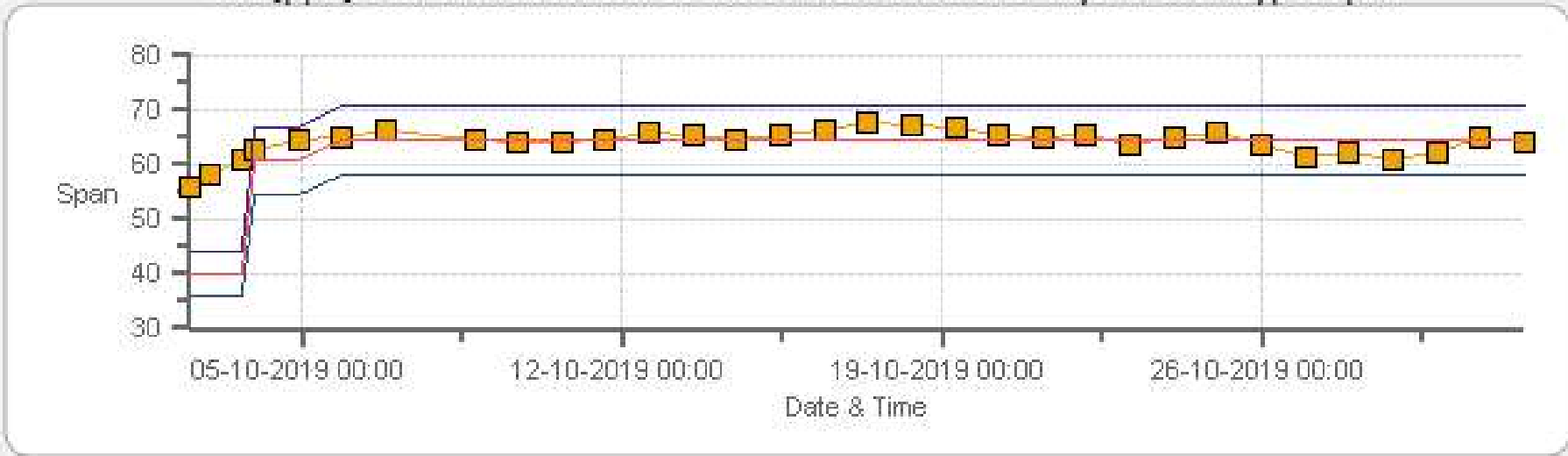
Span SpanRef Span Low Span High

TRS [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



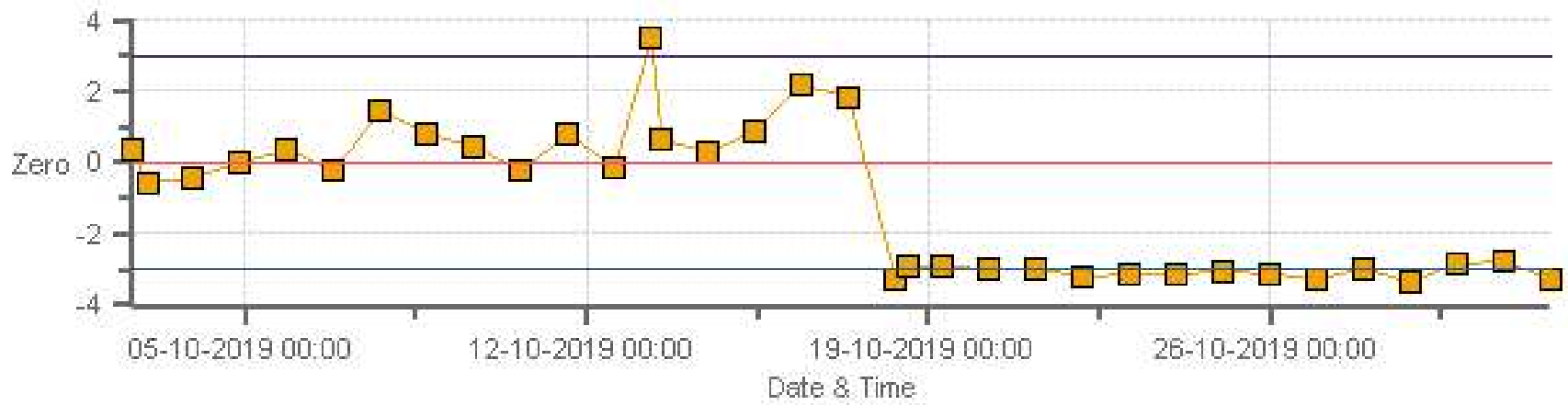
■ Zero
 — Zero Ref
 — Zero Low
 — Zero High

TRS [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



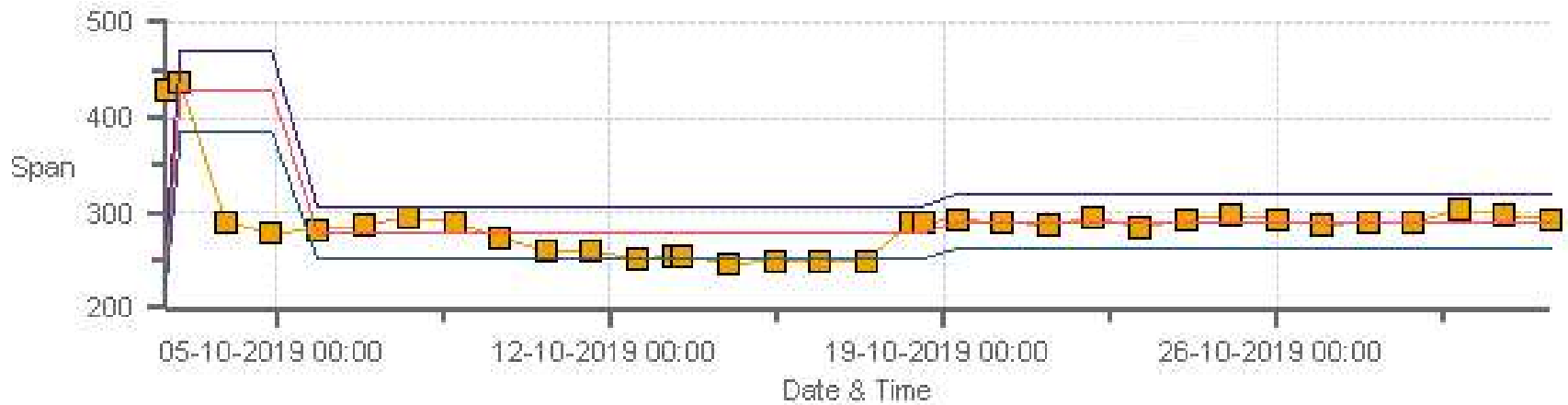
■ Span
 — SpanRef
 — Span Low
 — Span High

NOx [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



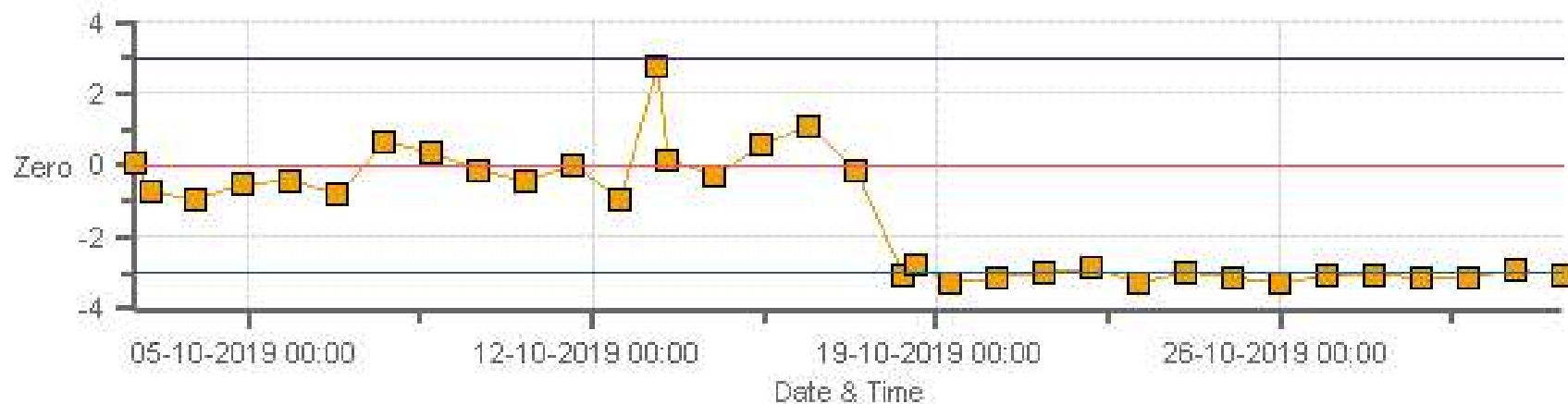
Zero Zero Ref Zero Low Zero High

NOx [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



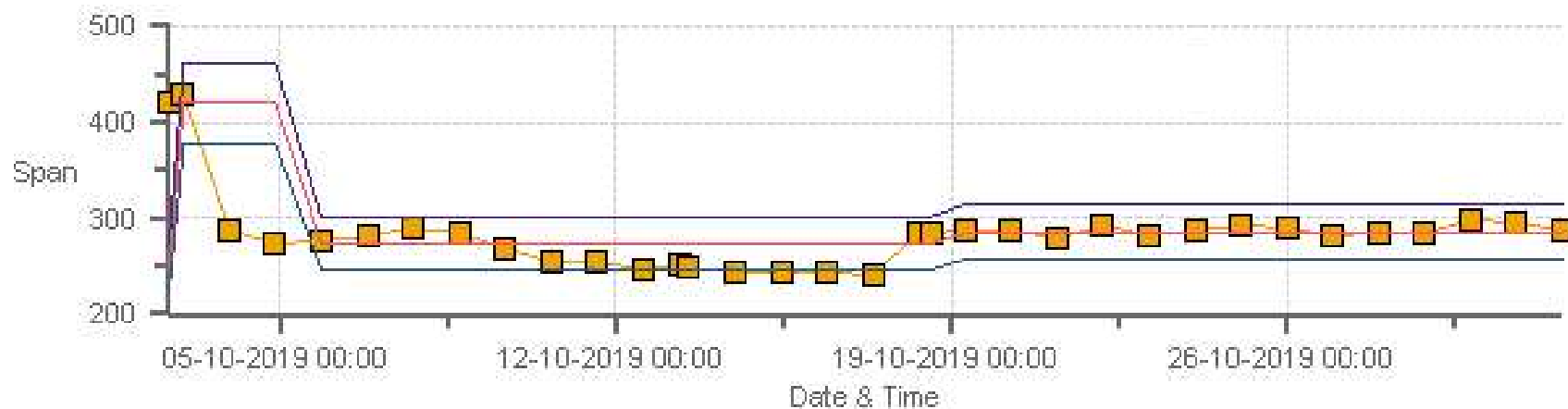
Span Span Ref Span Low Span High

NO2 [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



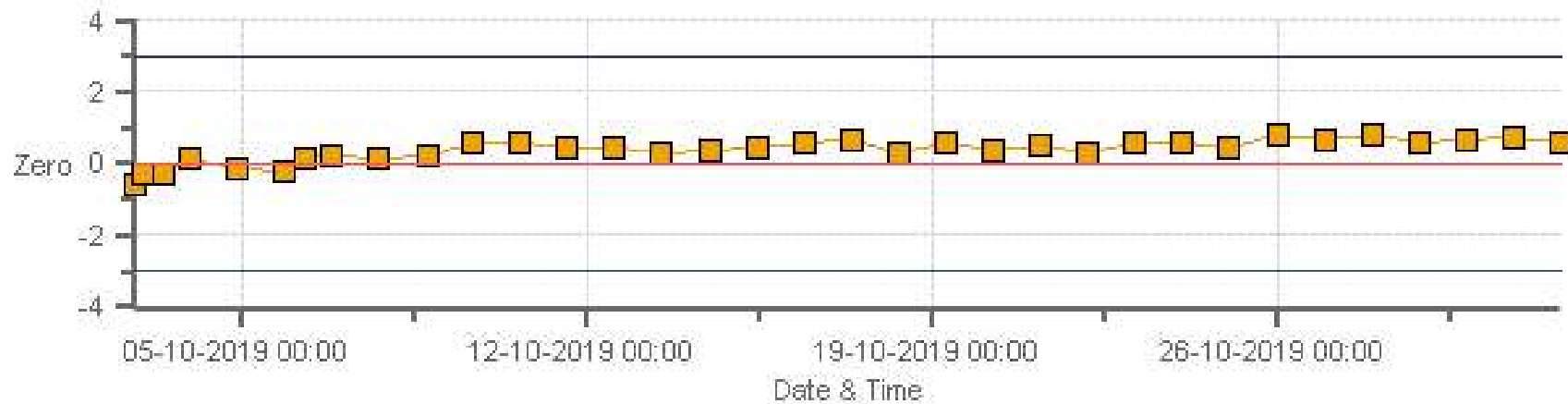
Zero Zero Ref Zero Low Zero High

NO2 [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



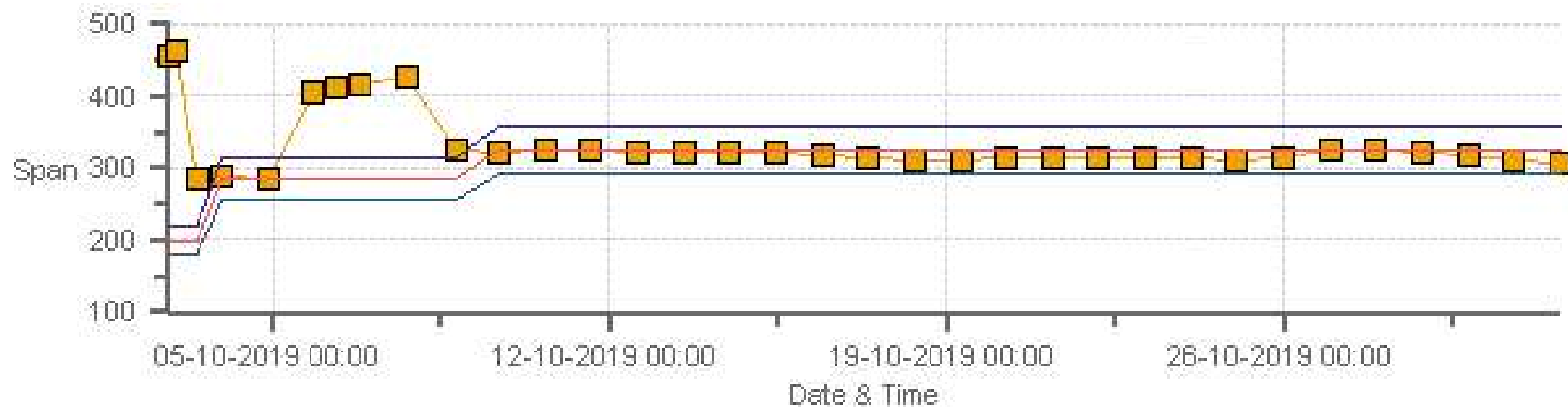
Span Span Ref Span Low Span High

O3 [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



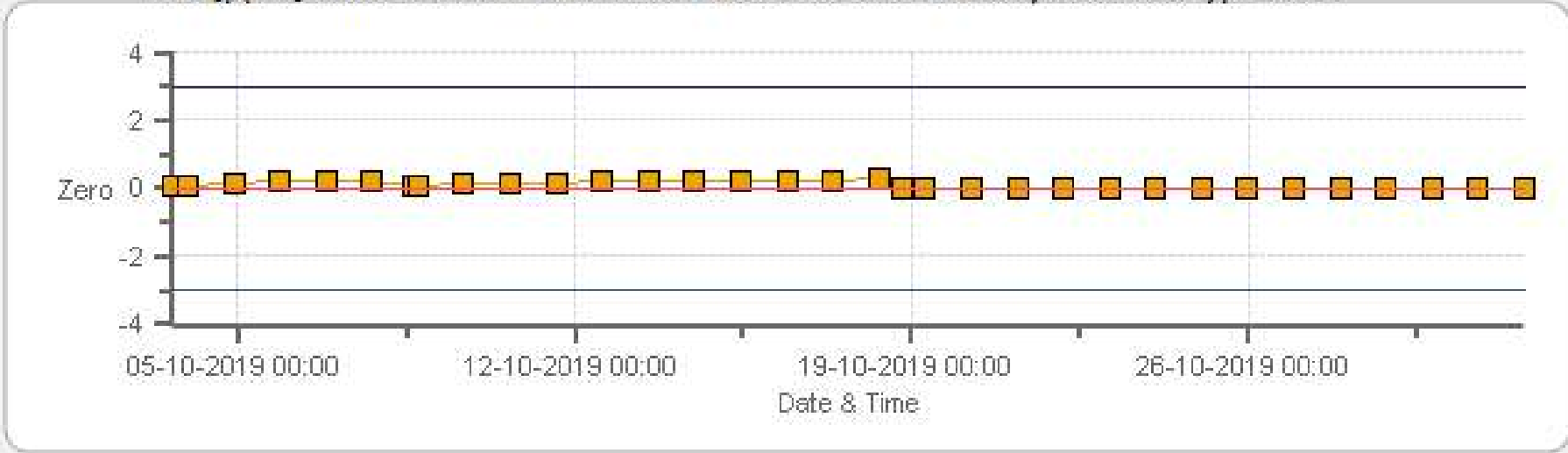
■ Zero
 — Zero Ref
 — Zero Low
 — Zero High

O3 [ppb] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



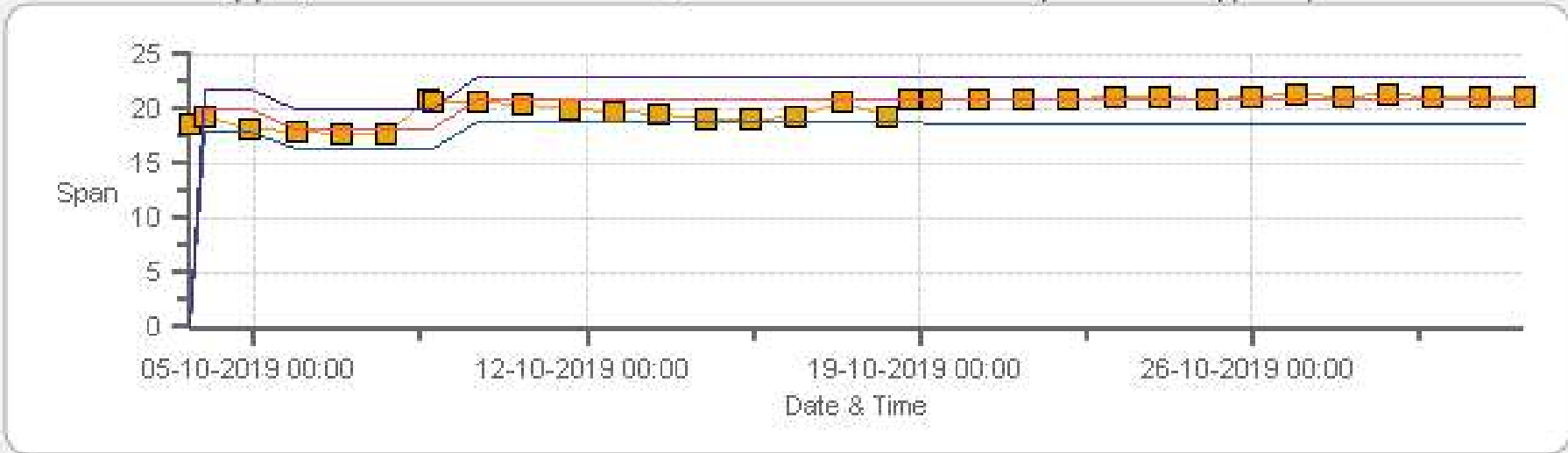
■ Span
 — SpanRef
 — Span Low
 — Span High

THC [ppm] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



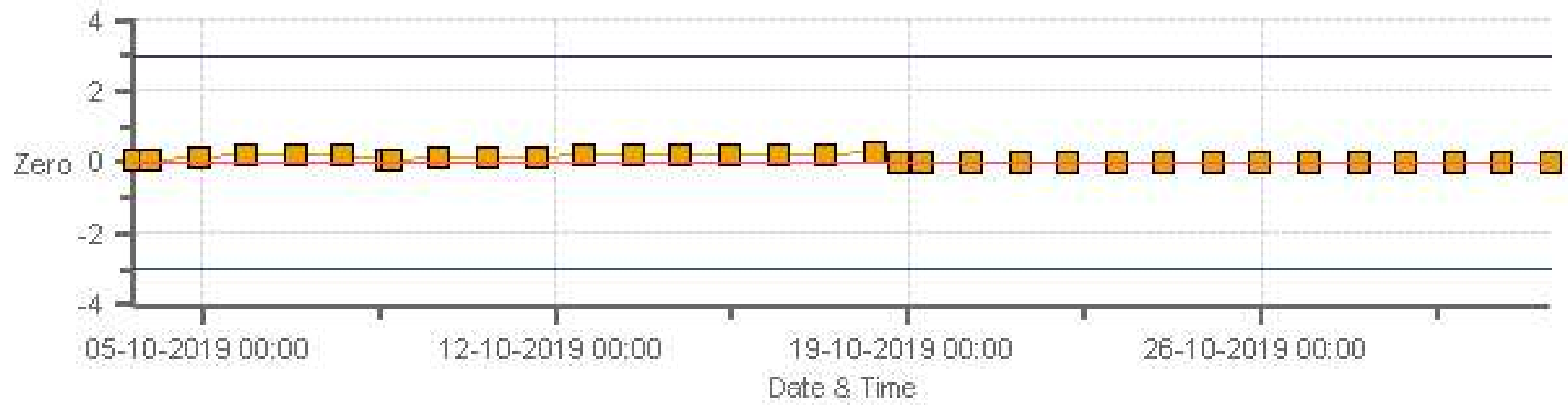
Zero Zero Ref Zero Low Zero High

THC [ppm] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



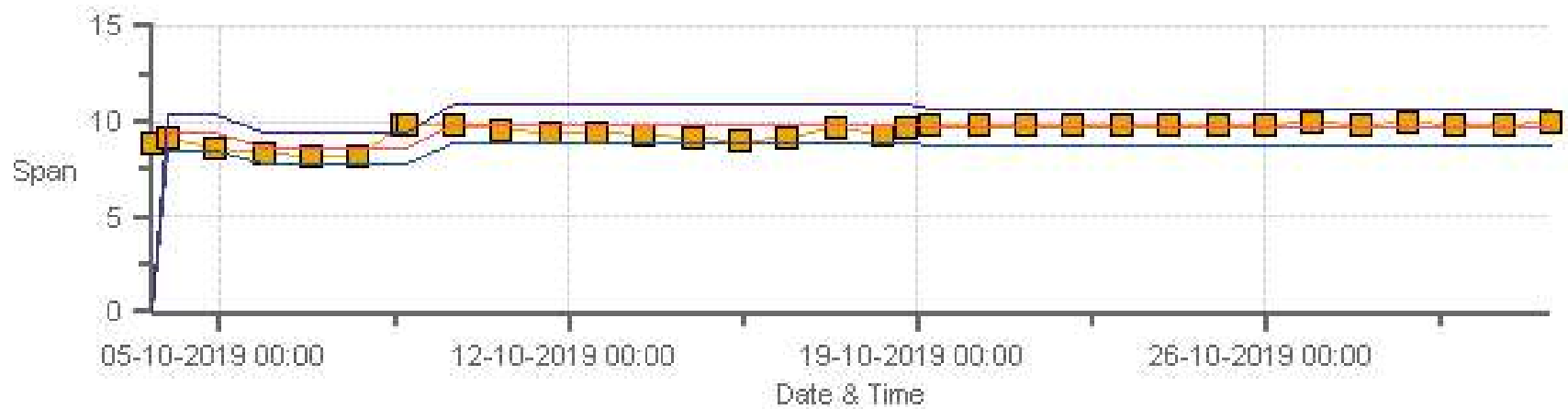
Span Span Ref Span Low Span High

CH4 [ppm] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



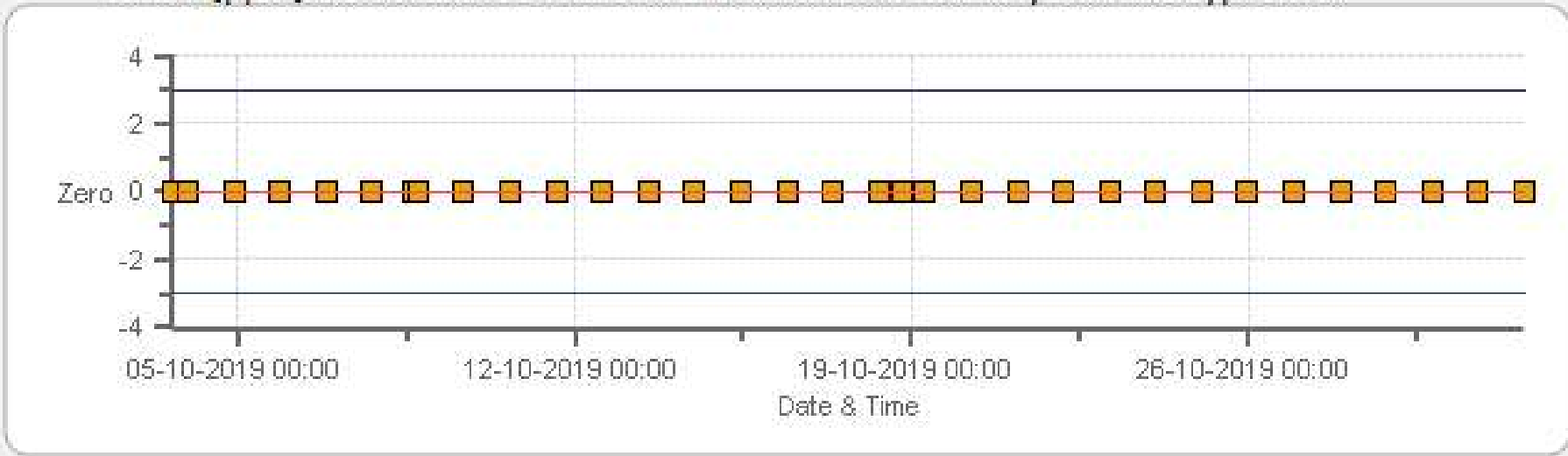
Zero Zero Ref Zero Low Zero High

CH4 [ppm] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



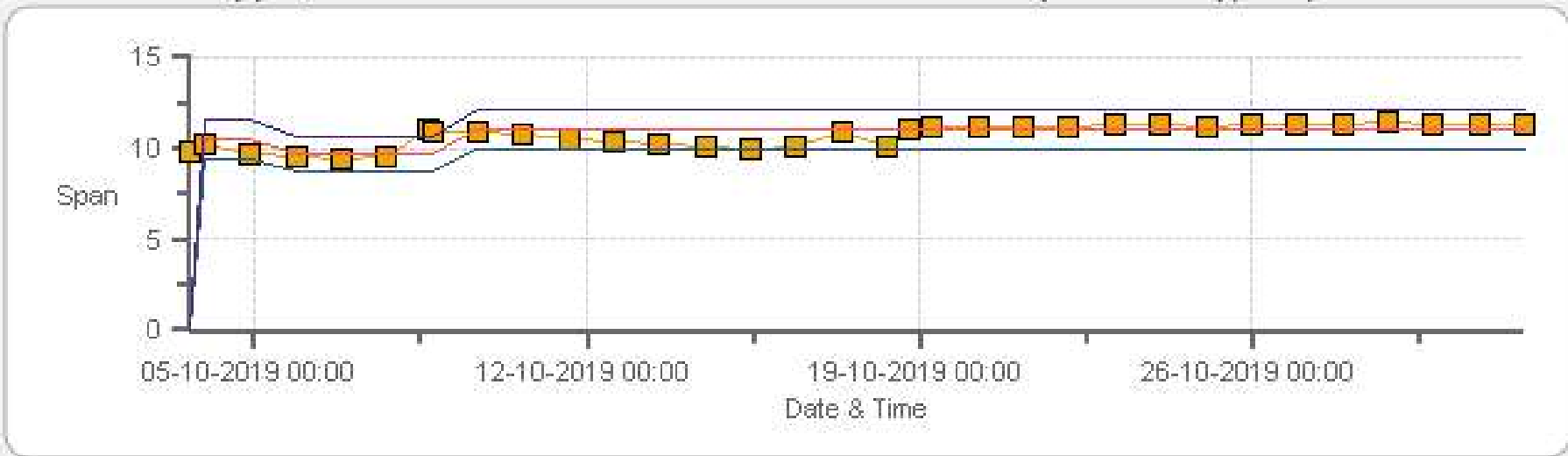
Span Span Ref Span Low Span High

NMHC [ppm] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Zero



Zero Zero Ref Zero Low Zero High

NMHC [ppm] Calibration: PRAMP AQHI-Cadotte Lake Monthly: 10-2019 Type: Span



Span SpanRef Span Low Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution



DATE:	02-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	21.8
LOCATION:	AQHI	BAROMETRIC (mBar):	944
PURPOSE:	Install/Post-Repair	START TIME (MST):	10:42
PERFORMED BY:	Chris Wesson	END TIME (MST):	13:34

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	500 ppb
SERIAL #	722	FLOW (mL/min)	543
INITIAL		FINAL	
BKG/OFFSET	30.1	BKG/OFFSET	20.7
COEF/SLOPE	1.044	COEF/SLOPE	0.922
Expected (reference) Value	n/a	Expected (reference) Value	258.9

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26801218	ID:	134
MFC CALIBRATION DATE:	19-Jun-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):	1700	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	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5016	39.10	5016	0.00	n/a	0	n/a	1.000
4978	39.10	5017	385.78	n/a	385.7	n/a	1.000
5000	17.80	5018	175.59	n/a	176	n/a	0.998
5008	8.90	5017	87.81	n/a	87.8	n/a	1.000

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

n/a

SO2 Analyzer Calibration by Dilution



DATE:	04-Oct-2019	PREVIOUS CALIBRATION DATE:	02-Oct-2019
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.2
LOCATION:	AQHI	BAROMETRIC (mBar):	937
PURPOSE:	Repeat	START TIME (MST):	11:45
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:20

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	500 ppb
SERIAL #	722	FLOW (mL/min)	539
INITIAL		FINAL	
BKG/OFFSET	20.7	BKG/OFFSET	18.8
COEF/SLOPE	0.922	COEF/SLOPE	0.953
Expected (reference) Value	258.9	Expected (reference) Value	293

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	4010	MODEL:	T701
ID:	8400311	ID:	134
MFC CALIBRATION DATE:	05-Apr-2019	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL19664	HIGH ID	n/a
CONC (ppm):	24.20	EXPIRY DATE	n/a
CYLINDER (psi):	1800	LOW ID	n/a
EXPIRY DATE	03-Jul-2023	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	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4000	62.80	4000	0.00	-0.4	0	1.044	1.000
3937	62.80	4000	379.94	363.5	379.9	1.044	1.000
3970	29.70	4000	179.69	n/a	179.1	n/a	1.003
3985	14.90	4000	90.15	n/a	89.2	n/a	1.011

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.1%

COMMENTS:

Repeat calibration following repairs to the IZS system (no effect on sample path).
 Found significant leak in IZS circuit. Problem limited to zero/span system only - normal sample unaffected.
 As-found showed analyzer not affected by repair. Completed repeat calibration to reset EV.

TRS Analyzer Calibration by Dilution



DATE:	03-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	21.5
LOCATION:	AQHI	BAROMETRIC (mBar):	943
PURPOSE:	Install/Post-Repair	START TIME (MST):	11:52
PERFORMED BY:	Chris Wesson	END TIME (MST):	16:49

ANALYZER:

MAKE/MODEL	Teledyne T100U	RANGE	100 ppb
SERIAL #	132	FLOW (mL/min)	519
INITIAL		FINAL	
BKG/OFFSET	18.4	BKG/OFFSET	18.1
COEF/SLOPE	1.062	COEF/SLOPE	1.072
Expected (reference) Value	n/a	Expected (reference) Value	64.49

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:	EY0000644	HIGH ID	n/a
CONC (ppm):	10.00	EXPIRY DATE	n/a
CYLINDER (psi):	1800	LOW ID	n/a
EXPIRY DATE	16-Jul-2022	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:	12:35	SO2 Conc (ppb)	380
END TIME:	12:50	Analyzer Response (ppb)	0.3

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4000	31.16	4000	0.00	n/a	0	n/a	1.000
3972	31.16	4003	77.82	n/a	77.82	n/a	1.000
3987	15.59	4003	38.94	n/a	39.4	n/a	0.988
3995	7.80	4002	19.48	n/a	19.5	n/a	0.999

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.1%

COMMENTS:

Converter: CDNova CDN-101 #530

TRS Analyzer Calibration by Dilution



DATE:	08-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	22.4
LOCATION:	AQHI	BAROMETRIC (mBar):	951
PURPOSE:	Install/Post-Repair	START TIME (MST):	15:17
PERFORMED BY:	Chris Wesson	END TIME (MST):	18:28

ANALYZER:

MAKE/MODEL	Teledyne T100U	RANGE	100 ppb
SERIAL #	132	FLOW (mL/min)	522
INITIAL		FINAL	
BKG/OFFSET	-30.8	BKG/OFFSET	16.6
COEF/SLOPE	0.802	COEF/SLOPE	1.062
Expected (reference) Value	64.49	Expected (reference) Value	64.66

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:	EY0000644	HIGH ID	n/a
CONC (ppm):	10.00	EXPIRY DATE	n/a
CYLINDER (psi):	1800	LOW ID	n/a
EXPIRY DATE	16-Jul-2022	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4001	31.21	4001	0.00	n/a	0	n/a	1.000
3970	31.21	4002	77.99	n/a	77.99	n/a	1.000
3985	15.22	4001	38.05	n/a	38.07	n/a	1.000
3993	7.62	4000	19.05	n/a	18.95	n/a	1.005

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Post-repair following analyzer reset

NOx Calibration by Dilution/Gas-Phase Titration



CALIBRATION:				ANALYZER:			
DATE:	02-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a	MAKE/MODEL:	Teledyne T200	PREVIOUS CF.	
CLIENT:	PRAMP	TEMPERATURE (°C):	22.1	SERIAL #:	837	NOx	n/a
LOCATION:	AQHI	BAROMETRIC (mBar):	944.00	FLOW (mL/min)	500	NO	n/a
PURPOSE:	Install/Post-Repair	START TIME (MST):	10:42	RANGE (ppb)	500	NO2	n/a
PERFORMED BY:	Chris Wesson	END TIME (MST):	16:43	GPT FOR O3?	Yes		

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL48147	HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	50.5 50.6	HIGH EXPIRY:	n/a
ID:	26801218	ID:	134	CYLINDER (psi):	1700	LOW ID:	n/a
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	n/a	EXPIRY DATE	20-Aug-2026	LOW EXPIRY:	n/a

CALIBRATION SETTINGS:							
INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	3.5	-4.1	n/a	BKG/OFFSET:	2.6	-1.5	n/a
SLOPE/COEF/CE:	1.006	0.999	1	SLOPE/COEF/CE:	0.981	0.978	0.985

EXPECTED (REFERENCE) VALUE:							
INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		428	8	420.1

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

FLOW RATE			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5016	5016	5016	0.0	0.0	0.0	n/a	n/a	n/a	0.0	0.0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
4978	39.10	5017	393.6	394.4	0.8	n/a	n/a	n/a	393.5	394.6	1.1	n/a	n/a	n/a	1.000	0.999	n/a
5000	17.80	5018	179.1	179.5	0.4	n/a	n/a	n/a	180.0	181.0	-1.0	n/a	n/a	n/a	0.995	0.992	n/a
5008	8.90	5017	89.6	89.8	0.2	n/a	n/a	n/a	89.8	90.1	0.3	n/a	n/a	n/a	0.998	0.996	n/a

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	39.10	5018	0	395.3	395.8	0.6	n/a	n/a	n/a	n/a
AS-FOUND HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ADJUSTED HIGH	39.10	5018	250	131.5	396.5	265.0	263.8	264.4	0.998	100.23%
MID	39.10	5018	145	242.4	396.4	154.0	152.9	153.4	0.997	100.33%
LOW	39.10	5018	54	339.9	395.4	55.5	55.4	54.9	1.009	99.10%
NO2 COEF/CONVERTER EFFICIENCY ADJUSTED									AVERAGE:	99.88%

LINEAR REGRESSION ANALYSIS:				COMMENTS:
	CORRELATION	SLOPE	INTERCEPT	
NO	1.000	1.000	0.06%	
NOx	1.000	1.000	0.08%	
NO2	1.000	1.005	-0.12%	

Additional GPT point for O3 (high): O3 setpoint 320 = O3 conc of 342ppb
Perm oven temp adjusted: 48-72hrs needed for stability

NOx Calibration by Dilution/Gas-Phase Titration



CALIBRATION:				ANALYZER:			
DATE:	18-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a	MAKE/MODEL:	Teledyne T200	PREVIOUS CF.	
CLIENT:	PRAMP	TEMPERATURE (°C):	23.0	SERIAL #:	837	NOx	n/a
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	925.00	FLOW (mL/min)	437	NO	n/a
PURPOSE:	Install/Post-Repair	START TIME (MST):	08:47	RANGE (ppb)	500	NO2	n/a
PERFORMED BY:	Chris Wesson	END TIME (MST):	13:38	GPT FOR O3?		No	

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL48147	HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	50.5 50.6	HIGH EXPIRY:	n/a
ID:	26801218	ID:	134	CYLINDER (psi):	1700	LOW ID:	n/a
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	n/a	EXPIRY DATE	20-Aug-2026	LOW EXPIRY:	n/a

CALIBRATION SETTINGS:							
INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	2.6	-1.5	n/a	BKG/OFFSET:	6.7	0	n/a
SLOPE/COEF/CE:	0.981	0.978	0.985	SLOPE/COEF/CE:	1.005	1.002	0.991

EXPECTED (REFERENCE) VALUE:							
INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		291	5	285.4

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

FLOW RATE		CONCENTRATION (ppb)										CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5015	5015	5015	0.0	0.0	0.0	n/a	n/a	n/a	0.0	0.0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
4978	39.10	5017	393.6	394.4	0.8	n/a	n/a	n/a	393.6	394.4	0.8	n/a	n/a	n/a	1.000	1.000	n/a
5000	17.80	5018	179.1	179.5	0.4	n/a	n/a	n/a	179.6	177.7	-1.9	n/a	n/a	n/a	0.997	1.010	n/a
5007	8.90	5016	89.6	89.8	0.2	n/a	n/a	n/a	89.7	89.1	-0.6	n/a	n/a	n/a	0.999	1.008	n/a

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	39.10	5017	0	394.2	393.7	-0.5	n/a	n/a	n/a	n/a
AS-FOUND HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ADJUSTED HIGH	39.10	5017	250	137.1	394.0	256.9	257.1	257.4	0.999	100.12%
MID	39.10	5017	125	266.5	394.0	127.5	127.7	128	0.998	100.23%
LOW	39.10	5017	45	349.8	393.5	43.8	44.4	44.3	1.002	99.77%
NO2 COEF/CONVERTER EFFICIENCY ADJUSTED									AVERAGE:	100.04%

LINEAR REGRESSION ANALYSIS:				COMMENTS:
	CORRELATION	SLOPE	INTERCEPT	
NO	1.000	1.000	0.03%	
NOx	1.000	1.000	-0.14%	
NO2	1.000	1.002	-0.02%	

Post-repair following changes to exhaust tubing.

Ozone Calibration by Direct GPT



DATE:	02-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	24.3
LOCATION:	AQHI	BAROMETRIC (mBar):	944
PURPOSE:	Install/Post-Repair	START TIME (MST):	17:48
PERFORMED BY:	Chris Wesson	END TIME (MST):	20:28

ANALYZER:

MAKE/MODEL	Teledyne T400	RANGE	500 ppb
SERIAL #	824	FLOW (mL/min)	832
INITIAL		FINAL	
BKG/OFFSET	-1.2	BKG/OFFSET	-0.9
COEF/SLOPE	1.02	COEF/SLOPE	1.037
Expected (reference) Value	n/a	Expected (reference) Value	285.5

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26801218	ID:	134
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Direct GPT	
GPT DATE:	02-Oct-2019	GPT END TIME:	16:43

CALIBRATION PARAMETERS:

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5016	 	5016	0.0	n/a	0.0	 	
5016	 	5016	342.0	n/a	342.0	n/a	1.000
5016	 	5016	152.9	n/a	151.4	n/a	1.010
5016	 	5016	55.4	n/a	54.7	n/a	1.013

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.1%

COMMENTS:

n/a

Ozone Calibration by Direct GPT



DATE:	08-Oct-2019	PREVIOUS CALIBRATION DATE:	02-Oct-2019
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	23.3
LOCATION:	AQHI	BAROMETRIC (mBar):	950
PURPOSE	Removal/Shut-down	START TIME (MST):	13:23
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:13

ANALYZER:

MAKE/MODEL	Teledyne T400	RANGE	500 ppb
SERIAL #	824	FLOW (mL/min)	487
INITIAL		FINAL	
BKG/OFFSET	-0.9	BKG/OFFSET	n/a
COEF/SLOPE	1.037	COEF/SLOPE	n/a
Expected (reference) Value	285.5	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26801218	ID:	134
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Direct GPT	
GPT DATE:	08-Oct-2019	GPT END TIME:	13:24

CALIBRATION PARAMETERS:

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5017	5017	5017	0.0	0.1	n/a	0.950	n/a
5017	5017	5017	353.4	372.0	n/a	0.950	n/a
5017	5017	5017	176.6	189.7	n/a	0.931	n/a
5017	5017	5017	86.6	94.6	n/a	0.916	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.050	0.4%

COMMENTS:

Shut-down due to sample flow warning

Ozone Calibration by Direct GPT



DATE:	08-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	23.0
LOCATION:	AQHI	BAROMETRIC (mBar):	952
PURPOSE:	Install/Post-Repair	START TIME (MST):	16:45
PERFORMED BY:	Chris Wesson	END TIME (MST):	19:32

ANALYZER:

MAKE/MODEL	Teledyne T400	RANGE	500 ppb
SERIAL #	824	FLOW (mL/min)	840
INITIAL		FINAL	
BKG/OFFSET	-0.9	BKG/OFFSET	-1.3
COEF/SLOPE	1.037	COEF/SLOPE	0.954
Expected (reference) Value	n/a	Expected (reference) Value	326

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26801218	ID:	134
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Direct GPT	
GPT DATE:	08-Oct-2019	GPT END TIME:	13:24

CALIBRATION PARAMETERS:

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5017	 	5017	0.0	n/a	0.0	 	
5017	 	5017	353.4	n/a	353.4	n/a	1.000
5017	 	5017	176.6	n/a	176.4	n/a	1.001
5017	 	5017	86.6	n/a	90.0	n/a	0.962

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.997	0.3%

COMMENTS:

Post-repair following pump replacement.

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	03-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.7		Thermo 55i	1501663728	1152
LOCATION:	AQHI	BAROMETRIC (mBar):	943	PARAMETER:	CH4	NMHC	THC
PURPOSE:	Install/Post-Repair	START TIME (MST):	12:58	RANGE (ppm):	20	20	40
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:25	PREVIOUS CF:	n/a	n/a	n/a

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 ₃ H ₈ (ppm):	600.0 207.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	.134	CYLINDER (psi):	900	LOW ID:	n/a
MFC CALIBRATION DATE:	19-Jun-2019	OXIDIZER ID:	Internal	EXPIRY DATE:	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE		
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄		569.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄		1169.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	n/a	n/a	n/a		n/a	8.57	9.72

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3111	X	3111	0.00	0.00	0.00	n/a	n/a	n/a	0.00	0.00	0.00	X	X	X	X	X	X
3037	74.20	3111	14.31	13.58	27.89	n/a	n/a	n/a	14.32	13.58	27.90	n/a	n/a	n/a	0.999	1.000	1.000
3076	37.10	3113	7.15	6.78	13.93	n/a	n/a	n/a	6.98	6.69	13.67	n/a	n/a	n/a	1.024	1.014	1.019
3093	18.50	3111	3.57	3.39	6.95	n/a	n/a	n/a	3.41	3.29	6.70	n/a	n/a	n/a	1.046	1.029	1.038

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	1.003	-0.5%
NMHC	1.000	1.000	-0.3%
THC	1.000	1.002	-0.4%

COMMENTS:

n/a

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	08-Oct-2019	PREVIOUS CALIBRATION DATE:	03-Oct-2019	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	21.6		Thermo 55i	1501663728	1170
LOCATION:	AQHI	BAROMETRIC (mBar):	950	PARAMETER:	CH4	NMHC	THC
PURPOSE	Repeat	START TIME (MST):	12:01	RANGE (ppm):	20	20	40
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:57	PREVIOUS CF:	0.999	1.000	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	EnviroNics	MAKE:	Teledyne	CYLINDER ID:	LL107207	HIGH ID:	n/a
MODEL:	2000	MODEL:	T701	CH ₄ /C ₃ H ₈ (ppm):	600.0 207.0	HIGH EXPIRY:	n/a
ID:	1991	ID:	.134	CYLINDER (psi):	900	LOW ID:	n/a
MFC CALIBRATION DATE:	17-May-2019	OXIDIZER ID:	Internal	EXPIRY DATE	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE	
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄	569.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄	1169.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	8.57	9.72	18.20		9.87	11.04	20.91

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3002	X	3002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	X	X	X	X	X	X
2932	71.84	3004	14.35	13.61	27.96	13.74	13.96	27.70	14.36	13.59	27.94	1.044	0.975	1.010	0.999	1.002	1.001
2966	35.90	3002	7.17	6.81	13.98	n/a	n/a	n/a	7.07	6.70	13.76	n/a	n/a	n/a	1.015	1.016	1.016
2984	17.94	3002	3.59	3.40	6.99	n/a	n/a	n/a	3.48	3.31	6.79	n/a	n/a	n/a	1.030	1.028	1.029

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	1.002	-0.3%
NMHC	1.000	1.000	-0.3%
THC	1.000	1.001	-0.3%

COMMENTS:

Repeat calibration due to zero drift. Adjusted IZS pressures.

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	17-Oct-2019	PREVIOUS CALIBRATION DATE:	03-Oct-2019	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.0		Thermo 55i	1501663728	1115
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	924	PARAMETER:	CH4	NMHC	THC
PURPOSE:	Removal/Shut-down	START TIME (MST):	09:36	RANGE (ppm):	20	20	40
PERFORMED BY:	Chris Wesson	END TIME (MST):	11:15	PREVIOUS CF:	0.999	1.002	1.001

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	EnviroNics	MAKE:	Teledyne	CYLINDER ID:	LL107207	HIGH ID:	n/a
MODEL:	2000	MODEL:	T701	CH ₄ /C ₃ H ₈ (ppm):	600.0 207.0	HIGH EXPIRY:	n/a
ID:	1991	ID:	.134	CYLINDER (psi):	900	LOW ID:	n/a
MFC CALIBRATION DATE:	17-May-2019	OXIDIZER ID:	Internal	EXPIRY DATE:	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE		
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄		569.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄		1169.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	9.87	11.04	20.91		n/a	n/a	n/a

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3000	X	3000	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a	X	X	X	X	X	X
2931	71.81	3003	14.35	13.61	27.96	14.16	13.47	27.63	n/a	n/a	n/a	1.013	1.010	1.012	n/a	n/a	n/a
2966	35.90	3002	7.17	6.81	13.98	6.95	6.62	13.57	n/a	n/a	n/a	1.032	1.028	1.030	n/a	n/a	n/a
2986	17.91	3004	3.58	3.39	6.97	3.43	3.27	6.69	n/a	n/a	n/a	1.043	1.038	1.042	n/a	n/a	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	0.988	-0.3%
NMHC	1.000	1.000	-0.3%
THC	1.000	0.990	-0.3%

COMMENTS:

08:46 - 09:36 Chromatograms recorded prior to calibration.
Shut-down due to drifting span

Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	18-Oct-2019	PREVIOUS CALIBRATION DATE:	n/a	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.5		Thermo 55i	1501663728	1154
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	927	PARAMETER:	CH4	NMHC	THC
PURPOSE:	Install/Post-Repair	START TIME (MST):	16:41	RANGE (ppm):	20	20	40
PERFORMED BY:	Chris Wesson	END TIME (MST):	19:00	PREVIOUS CF:	n/a	n/a	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	EnviroNics	MAKE:	Teledyne	CYLINDER ID:	LL107207	HIGH ID:	n/a
MODEL:	2000	MODEL:	T701	CH ₄ /C ₃ H ₈ (ppm):	600.0 207.0	HIGH EXPIRY:	n/a
ID:	1991	ID:	.134	CYLINDER (psi):	900	LOW ID:	n/a
MFC CALIBRATION DATE:	17-May-2019	OXIDIZER ID:	Internal	EXPIRY DATE:	18-Oct-2025	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH ₄ /NMHC)	HIGH	MID	LOW	CH ₄ EQUIVILANCE		
TARGET	14	7	3.5	C ₃ H ₈ as CH ₄		569.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH ₄		1169.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH ₄	NMHC	THC	FINAL	CH ₄	NMHC	THC
	n/a	n/a	n/a		n/a	9.75	11.16

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC	CH ₄	NMHC	THC
3000	X	3000	0.00	0.00	0.00	n/a	n/a	n/a	0.00	0.00	0.00	X	X	X	X	X	X
2928	71.82	3000	14.36	13.63	27.99	n/a	n/a	n/a	14.35	13.62	27.97	n/a	n/a	n/a	1.001	1.001	1.001
2966	35.89	3002	7.17	6.81	13.98	n/a	n/a	n/a	7.05	6.70	13.75	n/a	n/a	n/a	1.018	1.016	1.017
2983	17.96	3001	3.59	3.41	7.00	n/a	n/a	n/a	3.47	3.27	6.74	n/a	n/a	n/a	1.035	1.042	1.038

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH ₄	1.000	1.001	-0.4%
NMHC	1.000	1.000	-0.4%
THC	1.000	1.001	-0.4%

COMMENTS:

n/a



Teledyne T640 Audit/Calibration

Date/Previous Audit Date:	October 2, 2019	n/a	Weather Conditions:	Mix of sun and clouds
Company:	PRAMP		Start Time (mst):	18:10
Station:	AQHI		End Time (mst):	18:48
Parameter:	PM 2.5		Performed By/Reviewer:	Chris Wesson Wunmi Adekanmbi

Instrument Data:				
Make/Model:	Teledyne T640		Serial Number:	318
Owner:	PRAMP		Alarms (detail in comments):	No

Reference Standards/I.D./Expiry Date:				
Flow Standard: Maxxam ID #3 expires May 23, 2020		Temperature: F.S. 181341226 expires June 07, 2020		
Digital Manometer: Dwyer 475 Mark III id# 1 expires Jan 17, 2020		Pressure: Brunton 05490 expires Jan 16, 2020		

DIAGNOSTICS:					
Ambient Pressure (mmHg)	705.7	Ambient Temp (°C)	12.5	ASC Heater Duty (%)	0.0
Box Temp (°C)	27.5	Current PMT HV (V)	1543	LED Temp (°C)	35.70
P3 Value	47	PMT Setting (V)	1548	Pump PWM (%)	42
Sample Flow (L/min)	5.00	Sample RH (%RH)	22.9	Sample Temp (°C)	25.5

Monthly Audit/Calibration:					
Item:	As-found		As-left		Tolerance
	Reference	T640x	Reference	T640x	
Zero Test (Leak Check)	PM10	0.0	PM10	0.0	0.0 to 0.2
	PM2.5	0.0	PM2.5	0.0	
Ambient Pressure (mmHg)	706.9	705.7	706.9	707.7	+/- 10 mm Hg
Ambient Temperature (°C)	12.50	12.2	n/a		+/- 2°C
Sample Flow (L/min)	4.69	4.96	14.94	5.01	+/-5% of T640x (e.g., 4.75 – 5.25 lpm)

Additional Monthly Maintenance :				Completed
			Inlet cleaned?	Yes
			Sample tubing inspected (inner and outer)?	Yes

Quarterly Audit/Calibration:					
SpanDust™ Standard	Peak at Channel		Lot No:		Expiry:
	11.3		1001028-050-011		12-2019
Item:	Verification:		Calibration (if needed):		Tolerance
	Reference	T640x	Reference	T640x	
Peak Channel	11.3	11.1	11.3	11.1	± 0.5
PMT Setting (V)	n/a	1548	n/a	1549	n/a
Peak Channel Counts:	n/a	2935	n/a	2701	n/a

Additional Checks and Maintenance:				Completed
Every 6 Months	1. Clean Optical Chamber			No
	2. Clean RH Sensor			No
	3. Clean Temp Sensor			No
Every 12 months <small>(or if valve or pump PWM value approaches 80%)</small>	1. New internal Disposable Filter Unit (DFU) [inside front panel]			No

Comments:



Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	Performed By:	Chris Wesson
Audit Location:	BV Edmonton Lab	Reviewed By:	Wunmi Adekanmbi
Audit Date:	June 28, 2019	Start/End Time (mst):	13:03 / 13:22
Calibration Purpose:	installation	Weather Conditions:	n/a - in shop

Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	MetOne	Velocity Voltage Output Range:	n/a (frequency)
Sensor Model:	Speed: 010C / Direction: 020C	Velocity Unit Output Range:	0-160 kph
Serial #:	Speed: W15277 / Direction: W16102	Direction Voltage Output Range:	0-5 v
Previous Cal/Audit Date:	n/a or unknown	Direction Unit Output Range:	0-360 deg

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18811 #R9133 Expires: Jun 07, 2020

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
50	5.8	5.6	5.8	1.012
100	10.6	10.5	10.5	1.006
200	20.1	20.2	20.2	0.997
300	29.7	29.6	29.8	1.001
400	39.3	39.3	39.3	1.000
500	48.9	48.7	48.7	1.004
600	58.5	58.2	58.4	1.003
700	68.1	67.9	68.0	1.002
800	77.7	77.3	77.8	1.002
900	87.3	86.7	87.3	1.003
The audit meets AMD requirements.			Average Correction Factor=	1.003

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

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	354	0.0	1.3	0.7
30	330	32	329	-1.7	0.9	1.3
60	300	62	299	-1.9	1.1	1.5
90	270	91	269	-1.1	1.5	1.3
120	240	121	239	-1.0	0.9	1.0
150	210	151	210	-0.8	0.4	0.6
180	180	180	180	0.1	-0.3	0.2
210	150	210	151	0.5	-0.8	0.7
240	120	239	122	0.6	-1.9	1.3
270	90	269	92	1.0	-1.7	1.4
300	60	299	62	0.8	-1.8	1.3
330	30	329	32	0.7	-1.6	1.2
355	0	354	1	1.3	1.1	1.2
The audit meets AMD requirements.				Average Absolute Degrees Difference=		1.0

Comments:

Meteorological System Checklist



Date:	October 2, 2019		
Technician:	Chris Wesson		
Reviewer:	Wunmi Adekanmbi		
Station:	PRAMP AQHI		
Unit:	Make:	Model:	Serial #:
Temperature Sensor:	Vaisala	HMP155	N2910506
Relative Humidity Sensor:	Vaisala	HMP155	N2910506
Anemometer:	MetOne	010C / 020C	W15277 / WW16102
AMBIENT TEMPERATURE SENSOR CHECK			
Previous check date:	n/a		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	FS 181341226		
Reference Temperature (°C):	14.9		
Station - Ambient Temperature (°C):	15.1		
Temperature Difference (°C):	-0.3		
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	n/a		
Reference Hygrometer ID:	FS 181341226		
Reference Hygrometer % RH- Reading:	41.92		
Station Hygrometer % RH- Reading:	42.20		
RH Tolerance +/- 15% of difference:	35.63 - 48.21	-0.7%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	n/a	Previous check date:	n/a
Wind Speed Observed (kph):	5-10	Wind Direction Observed:	SE
Wind speed on Data Logger (kph):	6.9	Wind Direction on Data Logger:	SE
		Wind Direction Pass/Fail?:	Pass
Comments			