

Peace River Area Monitoring Program

NOVEMBER 2020

Monthly Ambient Air Quality Monitoring Report

PRAMP-202011

Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Peace River Area Monitoring Program

December 14, 2020

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LIST OF ACRONYMS

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

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

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

December 14, 2020

RE: PRAMP – November 2020 Monthly Ambient Air Quality Monitoring Report

Enclosed is the November 2020 Monthly Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Peace River Area Monitoring Program (PRAMP) regional air quality monitoring network.

The representative of the Person Responsible for this monitoring program is

PRAMP Airshed
Michael Bisaga / Lily Lin, Technical Program Managers
Suite 91, 305 – 4625 Varity Drive NW
Calgary, AB, T3A 0Z9
Phone #: 780-226-7068 / 587-225-2248
E-mail: pramptech@prampairshed.ca

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

NETWORK STATION SUMMARY

Listing of Continuous Monitoring Stations

The PRAMP continuous ambient air quality monitoring network stations are:

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

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

Listing of Intermittent Monitoring Stations

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

Monitoring Notes during the Month of November 2020

986c Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **TRS:**
  - The analyzer failed the daily span check on November 11. The span response was acceptable on November 12. As no further issues were identified, this issue was considered to be an isolated event. No further investigation/troubleshooting was undertaken.
  - Following a successful as found points check on November 18, the analyzer failed the adjusted high point check due to slow response. Background values and Co-efficient values were restored to original values, and a shut down calibration was attempted. A successful as found high point check could not be obtained. The analyzer was put offline while scrubber material was renewed. Time was given to the analyzer to stabilize overnight. A successful post-repair calibration was completed on November 19. Twenty-one hours of downtime were recorded due to this maintenance activity.

842b Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **All parameters:** Two hours of data were discarded due to a power outage event on November 3 at hour 11 and 12.

Reno Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All parameters met the 90% operational uptime requirement.
- Due to a datalogger error, no daily zero-span checks were completed between October 27 and November 1. The issue was corrected on November 2. **AEP reference #: 373328.**
- **TRS:**
    - The analyzer failed the scheduled span check on November 2 and the repeat span check on November 3. The drift issue was corrected during the monthly calibration on November 3. As the analyzer passed the multi-point calibration check, data collected between last valid zero-span check, which was October 26, and November 3 were considered valid. No data were discarded due to this event.
    - The analyzer failed the daily span check on November 5. During the site visit on November 6, it was found that a crack appeared in the glass part of the perm oven. The crack was fixed on November 6 hour 10. The perm oven was given time to stabilize. The expected span value was updated following the daily zero-span check on November 7. As the issue was isolated in the zero-span system, data quality was not affected. No data were discarded due to this event.
- **THC/CH4/NMHC:** The analyzer failed the daily zero check on November 27 due to a datalogger error. A successful repeat zero-span check was completed on November 28. One hour of downtime was recorded due to the additional quality check.
- **SO2:**
    - The analyzer failed the daily span check on November 20 due to the permeation tube depletion. An additional zero-span check was completed on November 20 hour 6 to assess span response. Following a successful as found points check on November 26, the permeation tube was replaced. The new permeation tube was allowed to stabilize, and the expected span value was updated on November 28. Three hours of downtime were recorded due to additional quality checks.
    - The analyzer showed 0 ppb to 4 ppb drift on the daily zero check throughout the month. No zero baseline correction was applied on the November's data as the averages of hourly data, 24-hour data, and monthly data would raise close to or above 4ppb; this would not be representative of the real ambient concentrations. The drift issue was corrected during the monthly calibration in December.

AQHI – Cadotte Lake Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable, except PM2.5. **AEP reference #: 373389.**
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.

- **PM2.5:** One exceedance of the 24-hour Objectives was recorded on November 3, at concentration of 30.7 ug/m3. Throughout the Peace River – Three Creeks region, brush piles are being burned due to land clearing activities and are creating wide-spread smoke. This smoke was the cause of the elevated particulate matter concentrations detected by PRAMP.
- **All parameters:** Windows update ran on November 5 between hour 9 and 10. Two hours of downtime were recorded.
- **TRS:** As the Teledyne T100U TRS analyzer, s/n: 132, continued having firmware issues, the analyzer was removed from the site for repair following a shut-down calibration on November 4. The Thermo 43i-TLE TRS analyzer, s/n: 1152940011, was installed on November 4, and a successful installation calibration on November 5. Twenty-one hours of downtime was recorded.
- **SO2:** The analyzer failed the daily span check on November 23. Following a successful shut-down calibration on November 25, an external sample pump was installed, and the internal pump was bypassed. A successful post-repair calibration was completed afterwards. As the analyzer passed the shut-down calibration, data collected between the last valid zero-span check, which was November 22, and November 25 were considered valid. No data were discarded. However, five hours of downtime were recorded due to additional checks.
- **Nox/NO/NO2:** The analyzer was put offline on November 5 between hour 11 and hour 13 to obtain reference concentrations for ozone calibration. Three hours of downtime were recorded.
- **THC:** 1-minute data that were recorded less than 1.80 ppm background concentration were considered invalid and were discarded. Hourly data collected between November 1 hour 14 and November 3 hour 9 were discarded because the requirement to have valid data for 75% of each hour was not met. Forty-two hours of downtime were recorded as a result.

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. 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 November, two methane-triggered events were recorded at the Reno station, and one NMHC-triggered event was recorded at the 986c station. The NMHC -triggered canister was replaced on November 17 at 19:30. Several NMHC canister trigger concentrations were recorded between November 16 and 17. More NMHC-triggered canisters could have been collected if the canister collected November 14 Sample was replaced before November 16.

Station	Parameter	Date	Time	Concentration (ppm)
Reno	Methane	11-Nov	2:20	6.33
Reno	Methane	13-Nov	16:55	7.79
986c	Non-methane HC	14-Nov	21:20	0.34

- Elevated ethanol concentrations were detected in recent Blank samples. The lab confirmed that ethanol, in the concentrations found in the blank samples, was not seen when the canisters were tested prior to shipping. A possible reason for this contamination is increased use of sanitizing spray/wipes in response to the COVID-19 pandemic. The PRAMP canister handling procedure has been reviewed and modified to reduce contamination that may be caused by sanitizing products.

- Methane-triggered sample was collected at the Reno station on November 11.

Sample Date/Time	2020-11-11 @02:20					
Canister Sample	Methane					
Canister ID	31820					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading (ppmv)	3.4	Methane	Maximum Reading (ppmv)	- -	Maximum Reading (ppmv)	12.6 Ethanol

- Blank sample was collected at the Reno station on November 11.

Sample Date/Time	2020-11-11 @02:20					
Canister Sample	Blank					
Canister ID	31823					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading (ppmv)	0.4	Methane	Maximum Reading (ppmv)	- -	Maximum Reading (ppmv)	0.9 Ethanol

- Methane-triggered sample was collected at the Reno station on November 13.

Sample Date/Time	2020-11-13 @16:55					
Canister Sample	Methane					
Canister ID	29002					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading (ppmv)	3.0	Methane	Maximum Reading (ppmv)	- -	Maximum Reading (ppmv)	2.5 Acetone

- Blank sample was collected at the Reno station on November 13.

Sample Date/Time	2020-11-13 @16:55					
Canister Sample	Blank					
Canister ID	28919					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading (ppmv)	0.8	Methane	Maximum Reading (ppmv)	- -	Maximum Reading (ppmv)	4.15 Cyclopentane

- Non-methane Hydrocarbon-triggered sample was collected at the 986c station on November 14.

Sample Date/Time	2020-11-14 @21:20					
Canister Sample	Non-methane Hydrocarbon					
Canister ID	32274					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading (ppmv)	2.5	Methane	Maximum Reading (ppmv)	- -	Maximum Reading (ppmv)	11.8 Cyclohexane

- Blank sample was collected at the 986c station on November 14.

Sample Date/Time	2020-11-14 @21:20					
Canister Sample	Blank					
Canister ID	32220					
Method	NA-025		Method	NA-024	Method	AC-058
Maximum Reading (ppmv)	0.4	Methane	Maximum Reading (ppmv)	2.0 Carbonyl sulp	Maximum Reading (ppmv)	11.5 Ethanol

Revisions to Alberta's Ambient Air Quality Data Warehouse

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

Deviations from Authorized Monitoring Methods

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

Disclaimer

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

Equipment calibration / maintenance records were provided by Bureau Veritas.

Certification

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



Lily Lin, Technical Program Manager, PRAMP Airshed

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

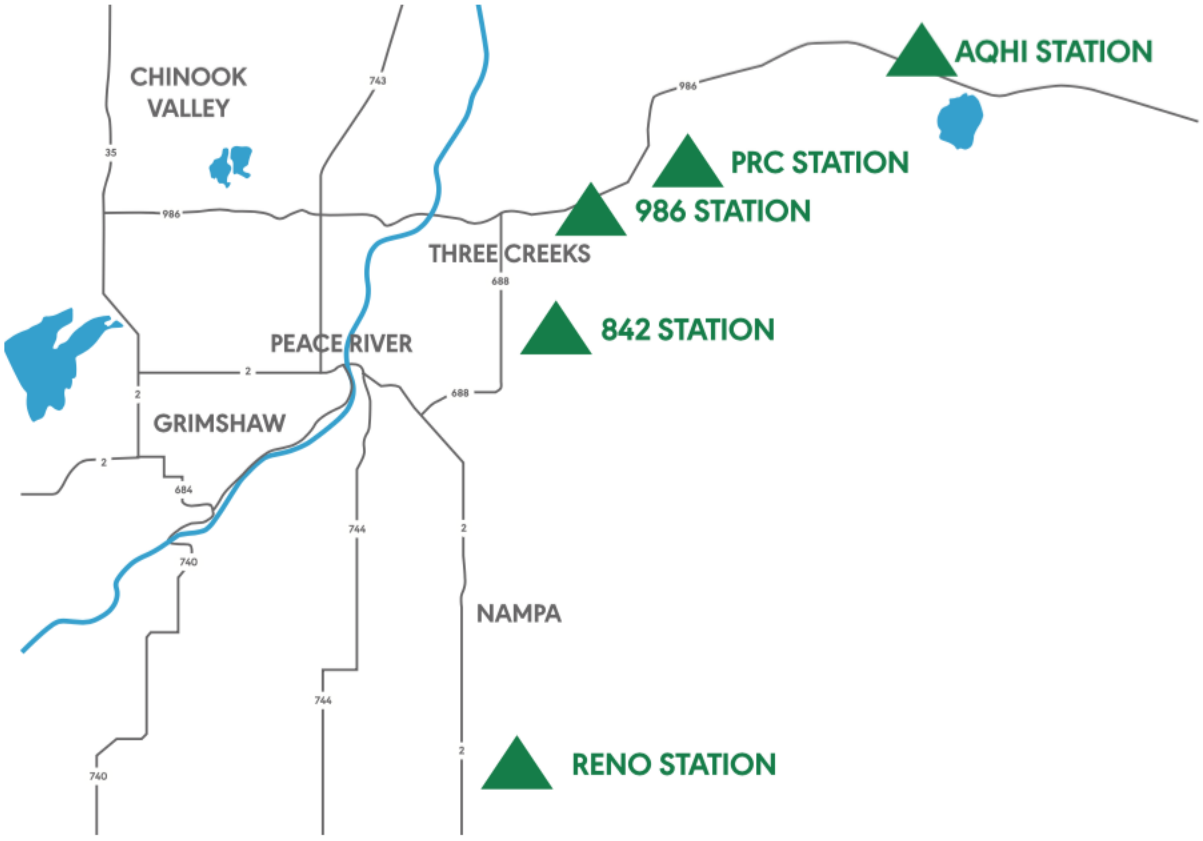
I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements. I also certify that at the time of this report's submission, all air data have been electronically uploaded to Alberta's Ambient Air Quality Data Warehouse as required by the AMD. Uploading of VOC data from the canister sampling program was not required at the time of completing this report.



Michael Bisaga, Technical Program Manager, PRAMP Airshed

December 14, 2020

Map of PRAMP Continuous Monitoring Network



CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

986c Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number
SO2	**Thermo 43iQTL**	**119358646**
• A successful monthly calibration was performed on November 18.		
TRS	**Thermo 43iQTL**	**1191833341**
• The analyzer failed the daily span check on November 11. The span response was acceptable on November 12. As no further issues were identified, this issue was considered to be an isolated event. No further investigation/troubleshooting was undertaken. • Following a successful as found points check on November 18, the analyzer failed the adjusted high point check due to slow response. Background values and Co-efficient values were restored to original values, and a shut down calibration was attempted. A successful as found high point check could not be obtained. The analyzer was put offline while scrubber material was renewed. Time was given to the analyzer to stabilize overnight. A successful post-repair calibration was completed on November 19. Twenty-one hours of downtime were recorded due to this maintenance activity.		
THC/CH4/NMHC	**Thermo 55i**	**119358652**
• The carrier gas bottle was replaced on November 5. • A successful monthly calibration was performed on November 18.		
Relative Humidity (RH)	**Rotronic HC2-S3**	**Y23358**
• The RH sensor was checked on November 18. The sensor passed the check requirements.		
Barometric Pressure (BP)	**MetOne 092**	**F3845**
• The BP sensor was checked on November 18. The sensor passed the check requirements.		

Parameter	Make / Model	Serial Number	
Ambient Temperature (AT)	**Rotronic HC2-S3**	**2057528**	
• The AT sensor was checked on November 18. The sensor passed the check requirements.			
Station Temperature (ST)	**Bureau Veritas Canada**	**N/A**	
• No issue was identified this month.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young 05305L**	**174795**	
• Wind direction data contained in this report represents where the wind is coming from. • The annual wind system calibration was completed on July 16, 2020. • The anemometer sensor was checked on November 18. The sensor passed the check requirements.			

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	November 1 at hour 20	16.7	SW	0.3	November 22	100.0	95.0
TRS (ppb)	10	3	-	-	-	-	0.09	0.00	0.53	November 3 at hour 18	7.1	N	0.24	November 26	97.1	92.2
THC (ppm)	-	-	-	-	-	-	1.99	1.87	2.42	November 17 at hour 2	8.7	ENE	2.08	November 16	100.0	95.0
CH4 (ppm)	-	-	-	-	-	-	1.99	1.87	2.21	November 7 at hour 2	4.4	SSE	2.07	November 8	100.0	95.0
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.36	November 17 at hour 2	8.7	ENE	0.04	November 16	100.0	95.0
RH (%)	-	-	-	-	-	-	82.7	38	100	November 3 at hour 20	7.3	NNE	97.0	November 23	100.0	100.0
BP (millibar)	-	-	-	-	-	-	936	915	953	November 8 at hour 5	5.1	S	949	November 8	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-6.0	-22.2	13.6	November 2 at hour 16	21.9	SW	11.5	November 2	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.0	20.9	23.4	November 2 at hour 15	14.3	SW	22.4	November 18	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	4.8	0.6	34.3	November 26 at hour 17	34.3	SW	23.9	November 29	100.0	100.0
WDV (sector)	-	-	-	-	-	-	216 (SW)	-	-	-	-	-	-	-	100.0	100.0

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

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances 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**	
• A successful monthly calibration was performed on November 19.			
TRS	**Thermo / 43i-TLE**	**1162460023**	
• A successful monthly calibration was performed on November 19.			
THC/CH4/NMHC	**Thermo / 55i**	**1314057759**	
• A successful monthly calibration was performed on November 19. • Bothe the fuel and span gas cylinders were replaced on November 19.			
Relative Humidity (RH)	**Campbell Scientific / HMP45C**	**C2608**	
• The RH sensor was checked on November 19. The sensor passed the check requirements.			
Barometric Pressure (BP)	**MetOne / 92**	**K12864**	
• The BP sensor was checked on November 19. The sensor passed the check requirements.			
Station Temperature (ST)	**Bureau Veritas Canada**	**N/A**	
• No issue was identified this month.			
Ambient Temperature (AT)	**Campbell Scientific / HMP45C**	**C2608**	
• The temperature sensor was checked on November 19. The sensor passed the check requirements.			

Parameter	Make / Model	Serial Number	
Precipitation (Precip)	**RM Young 5202**	**TB1877**	
• No issue was identified this month.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young / 5305VK**	**124638**	
• Wind direction data contained in this report represents where the wind is coming from. • The annual wind system calibration was completed on June 11, 2020. • The anemometer sensors were checked on November 19. The sensors 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	1	November 11 at hour 13	14.6	S	0.3	November 20	99.7	94.7
TRS (ppb)	10	3	-	-	-	-	0.39	0.00	0.66	November 23 at hour 0	6.6	NW	0.46	November 24	99.7	94.7
THC (ppm)	-	-	-	-	-	-	1.98	1.87	2.29	November 15 at hour 5	2.8	NE	2.05	November 21	99.7	94.7
CH4 (ppm)	-	-	-	-	-	-	1.98	1.87	2.29	November 15 at hour 5	2.8	NE	2.05	November 21	99.7	94.7
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.00	November 1 at hour 0	22.9	SSW	0.00	November 1	99.7	94.7
RH (%)	-	-	-	-	-	-	78.5	41	96	November 5 at hour 11	6.1	WSW	91.5	November 23	99.7	99.7
BP (millibar)	-	-	-	-	-	-	937	916	954	November 8 at hour 5	1.8	SE	950	November 8	99.7	99.7
Ext. Temp. (°C)	-	-	-	-	-	-	-6.2	-22.6	13.4	November 2 at hour 14	12	SSW	10.7	November 2	99.7	99.7
Stn. Temp. (°C)	-	-	-	-	-	-	22.1	21.7	23.2	November 1 at hour 18	15.4	SW	23.1	November 2	99.7	99.7
Precipitation (mm)*	-	-	-	-	-	-	7.1	0.0	1.6	November 5 at hour 5	3.5	S	2.3	November 5	99.7	99.7
WSV (km/hr)	-	-	-	-	-	-	4.2	0.1	30.5	November 29 at hour 6	30.5	SSW	19.0	November 1	99.7	99.7
WDV (sector)	-	-	-	-	-	-	211 (SSW)	-	-	-	-	-	-	-	99.7	99.7

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**	**1502**	
• A successful monthly calibration was performed on November 3. • The analyzer failed the daily span check on November 20 due to the permeation tube depletion. An additional zero-span check was completed on November 20 hour 6 to assess span response. Following a successful as found points check on November 26, the permeation tube was replaced. The new permeation tube was allowed to stabilize, and the expected span value was updated on November 28. Three hours of downtime were recorded due to additional quality checks. • The analyzer showed 0 ppb to 4 ppb drift on the daily zero check throughout the month. No zero baseline correction was applied on the November's data as the averages of hourly data, 24-hour data, and monthly data would raise close to or above 4ppb; this would not be representative of the real ambient concentrations. The drift issue was corrected during the monthly calibration in December.			
TRS	**Thermo 43i-TLE**	**1162460022**	
• The analyzer failed the scheduled span check on November 2 and the repeat span check on November 3. The drift issue was corrected during the monthly calibration on November 3. As the analyzer passed the multi-point calibration check, data collected between last valid zero-span check, which was October 26, and November 3 were considered valid. No data were discarded due to this event. • The analyzer failed the daily span check on November 5. During the site visit on November 6, it was found that a crack appeared in the glass part of the perm oven. The crack was fixed on November 6 hour 10. The perm oven was given time to stabilize. The expected span value was updated following the daily zero-span check on November 7. As the issue was isolated in the zero-span system, data quality was not affected. No data were discarded due to this event.			
THC/CH4/NMHC	**Thermo / 55i**	**1505664392**	
• A successful monthly calibration was performed on November 3. • The analyzer failed the daily zero check on November 27 due to a datalogger error. A successful repeat zero-span check was completed on November 28. One hour of downtime was recorded due to the additional quality check.			

Parameter	Make / Model	Serial Number	
Relative Humidity (RH)	**RM Young / 43172VC**	**60837897**	
• No issue was identified this month.			
Barometric Pressure (BP)	**MetOne / 92**	**R12877**	
• No issue was identified this month.			
Ambient Temperature (AT)	**RM Young / 43172VC**	**60837897**	
• No issue was identified this month.			
Station Temperature (ST)	**Bureau Veritas Canada**	**N/A**	
• No issue was identified this month.			
Precipitation (Precip)	**RM Young 5202**	**TB1588**	
• No issue was identified this month.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young / 5305VK**	**149769**	
• Wind direction data contained in this report represents where the wind is coming from. • The annual wind system calibration was completed on June 17, 2020.			

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	0.4	0	3	November 30 at hour 14	10.5	SW	1.9	November 2	99.6	94.8
TRS (ppb)	10	3	-	-	-	-	0.43	0.17	0.60	November 21 at hour 22	4.1	S	0.52	November 21	99.7	95.0
THC (ppm)	-	-	-	-	-	-	2.01	1.84	4.06	November 11 at hour 5	2.2	SSW	2.33	November 11	99.9	95.3
CH4 (ppm)	-	-	-	-	-	-	2.01	1.84	4.06	November 11 at hour 5	2.2	SSW	2.33	November 11	99.9	95.3
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.01	November 11 at hour 3	0.8	SW	0.00	November 11	99.9	95.3
RH (%)	-	-	-	-	-	-	76.2	42	100	November 3 at hour 23	1.3	S	92.8	November 23	100.0	100.0
BP (millibar)	-	-	-	-	-	-	932	912	949	November 8 at hour 7	3.7	SW	945	November 8	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-5.7	-23.1	12.5	November 2 at hour 15	8.5	SSW	9.2	November 2	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	21.9	20.2	23.9	November 2 at hour 15	8.5	SSW	22.8	November 2	100.0	100.0
Precipitation (mm)*	-	-	-	-	-	-	7.3	0.0	1.5	November 5 at hour 6	4.8	SE	2.7	November 5	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	2.3	0.2	19.4	November 4 at hour 20	19.4	E	9.8	November 1	100.0	100.0
WDV (sector)	-	-	-	-	-	-	215 (SSW)	-	-	-	-	-	-	-	100.0	100.0

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

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

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

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

AQHI – Cadotte Lake Station

Equipment Operation Summary

Parameter	Make / Model	Serial Number	
SO2	**Teledyne / T100**	**722**	
• A successful monthly calibration was performed on November 4. • The analyzer failed the daily span check on November 23. Following a successful shut-down calibration on November 25, an external sample pump was installed, and the internal pump was bypassed. A successful post-repair calibration was completed afterwards. As the analyzer passed the shut-down calibration, data collected between the last valid zero-span check, which was November 22, and November 25 were considered valid. No data were discarded. However, five hours of downtime were recorded due to additional checks.			
TRS	**Teledyne T100U / Thermo 43i-TLE**	**132 / 1152940011**	
• As the Teledyne T100U TRS analyzer continued having firmware issues, the analyzer was removed from the site for repair following a shut-down calibration on November 4. The Thermo 43i-TLE TRS analyzer was installed on November 4, and a successful installation calibration on November 5. Twenty-one hours of downtime was recorded due to this event.			
NOx/NO/NO2	**Teledyne / T200**	**837**	
• A successful monthly calibration was performed on November 4. • The analyzer was put offline on November 5 between hour 11 and hour 13 to obtain reference concentrations for ozone calibration. Three hours of downtime were recorded due to this event.			
O3	**Teledyne / T400**	**824**	
• A successful monthly calibration was performed on November 5.			
THC/CH4/NMHC	**Thermo / 55i**	**1191032505**	
• A successful monthly calibration was performed on November 4. • The span gas cylinder was replaced on November 4.			

Parameter	Make / Model	Serial Number	
PM2.5	**Teledyne / T640**	**318**	
• A successful monthly calibration/audit was performed on November 4.			
Relative Humidity (RH)	**Vaisala / HMP155**	**N2910506**	
• The sensor was checked on November 4. The sensor passed the check requirements.			
Ambient Temperature (AT)	**Vaisala / HMP155**	**N2910506**	
• The sensor was checked on November 4. The sensor passed the check requirements.			
Station Temperature (ST)	**Bureau Veritas Canada**	**N/A**	
• No issue was identified this month.			
Wind Speed/Wind Direction (WS/ WD)	**RM Young 05305AQ**	**174801**	
• Wind direction data contained in this report represents where the wind is coming from. • The annual wind system calibration was completed on June 18, 2020. • The anemometer sensors were checked on November 4. The sensors 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	0.1	0	2	November 5 at hour 11	5	ENE	0.8	November 24	99.0	94.4
TRS (ppb)	10	3	-	-	-	-	0.35	0.07	0.62	November 12 at hour 8	0.9	W	0.42	November 23	97.1	92.2
NOx (ppb)	-	-	-	-	-	-	1.6	0	18	November 13 at hour 19	0.9	WNW	5.7	November 13	99.3	94.4
NO (ppb)	-	-	-	-	-	-	0.3	0	12	November 13 at hour 19	0.9	WNW	2.0	November 13	99.3	94.4
NO2 (ppb)	159	-	-	0	-	-	1.3	0	8	November 13 at hour 18	0.9	WNW	3.7	November 13	99.3	94.4
O3 (ppb)	76	-	-	0	-	-	22.1	1	41	November 29 at hour 14	11	SW	35.0	November 29	99.7	94.8
THC (ppm)	-	-	-	-	-	-	1.92	1.81	2.19	November 14 at hour 2	0.2	W	2.00	November 14	93.9	89.1
CH4 (ppm)	-	-	-	-	-	-	1.92	1.81	2.05	November 21 at hour 0	0.3	NW	1.98	November 21	93.9	89.1
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.24	November 14 at hour 2	0.2	W	0.03	November 14	93.9	89.1
PM2.5 (µg/m3)	80	30	-	0	1	-	7.3	0.2	73.7	November 3 at hour 11	8.3	NW	30.7	November 3	99.7	99.6
RH (%)	-	-	-	-	-	-	79.7	37	97	November 4 at hour 0	5	ESE	90.8	November 17	99.7	99.7
Ext. Temp. (°C)	-	-	-	-	-	-	-7.5	-25.3	14.8	November 2 at hour 16	13.6	WSW	10.0	November 2	99.7	99.7
Stn. Temp. (°C)	-	-	-	-	-	-	22.4	18.1	24.1	November 9 at hour 18	7	WSW	23.4	November 27	99.7	99.7
WSV (km/hr)	-	-	-	-	-	-	1.6	0.0	24.7	November 2 at hour 23	24.7	WSW	12.3	November 1	99.7	99.7
WDV (sector)	-	-	-	-	-	-	258 (WSW)	-	-	-	-	-	-	-	99.7	99.7

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

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

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

Date	Time (MST)	Parameter	Average Period	AAAQOs	Concentration	Wind speed	Wind Direction	Reference #
November 3	-	PM2.5	24-Hour	29 µg/m3	30.7 µg/m3	5.0 km/hr	247° (WSW)	373389

Throughout the Peace River – Three Creeks region, there were wind rows that had been created due to land clearing activities. Brush piles associated with this land clearing were being burned and were creating wide-spread smoke. This smoke was the cause of the elevated particulate matter concentrations detected by PRAMP.

TABLES, CHARTS, WIND ROSES AND EQUIPMENT CALIBRATION RECORDS

986c STATION

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

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

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

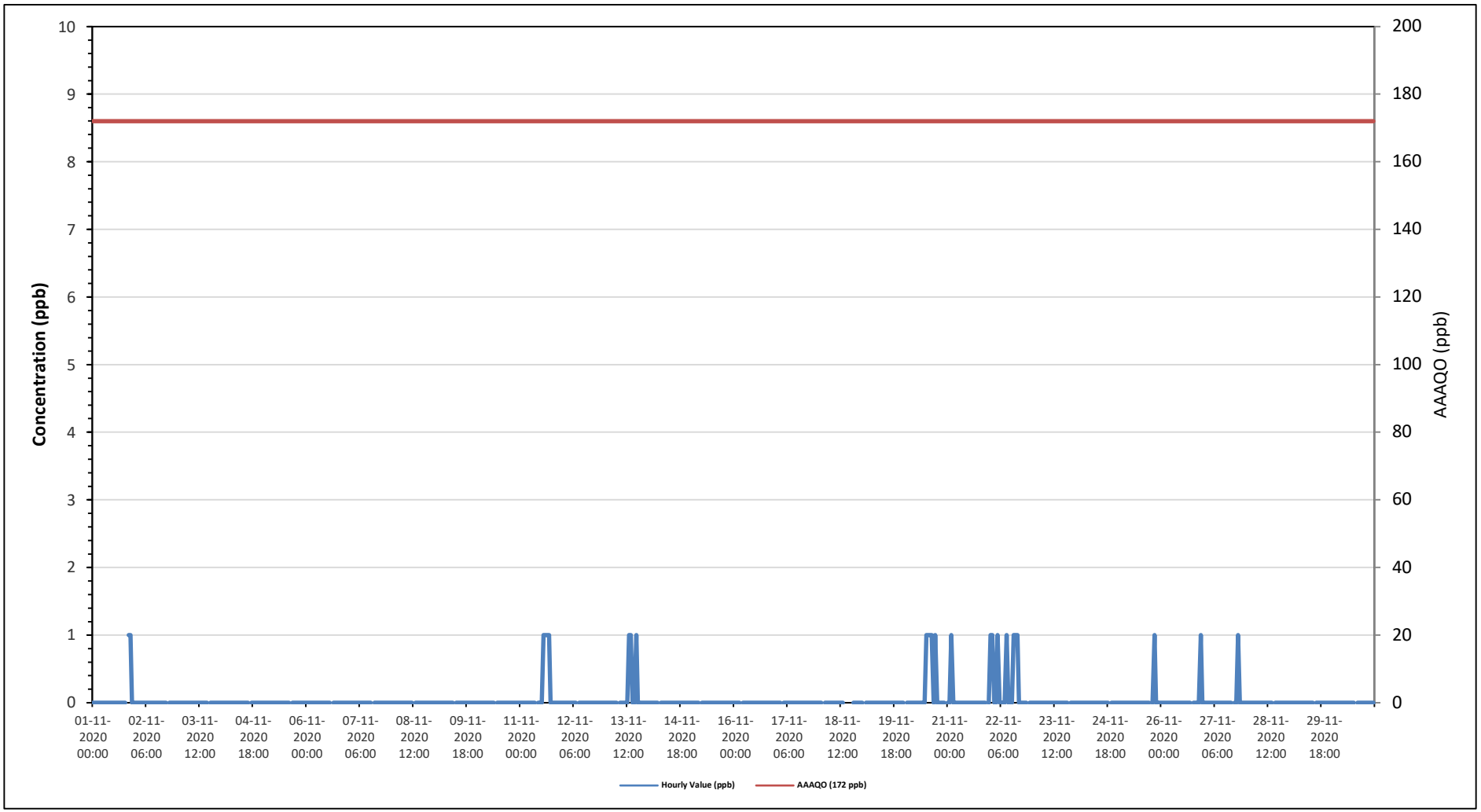
Maximum Hourly Value:	1	ppb	on November 1 at hour 20	Hours in Service:	720
Maximum Daily Value:	0.3	ppb	on November 22	Hours of Data:	684
Minimum Hourly Value:	0	ppb	on November 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.0	ppb	on November 2	Hours of Calibration:	36
Monthly Average:	0.0	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			
Nov 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	1	0	0	0	1	0.1
Nov 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Nov 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Nov 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Nov 5	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
Nov 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 7	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 8	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 9	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 10	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 11	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0.2
Nov 12	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 13	0	0	0	0	0	0	0	S	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	1	0.1
Nov 14	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 15	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 16	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 17	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 18	0	0	S	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0.0
Nov 19	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 20	S	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	S	0	1	0.2
Nov 21	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0
Nov 22	1	1	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	S	0	0	0	1	0.3
Nov 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0
Nov 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Nov 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0	0	0	0	1	0.0
Nov 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0	0	1	0.0
Nov 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0	0	0	0	0	1	0.0
Nov 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Nov 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 30	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	1	1	1	0	1	0	0	0	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	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	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0			

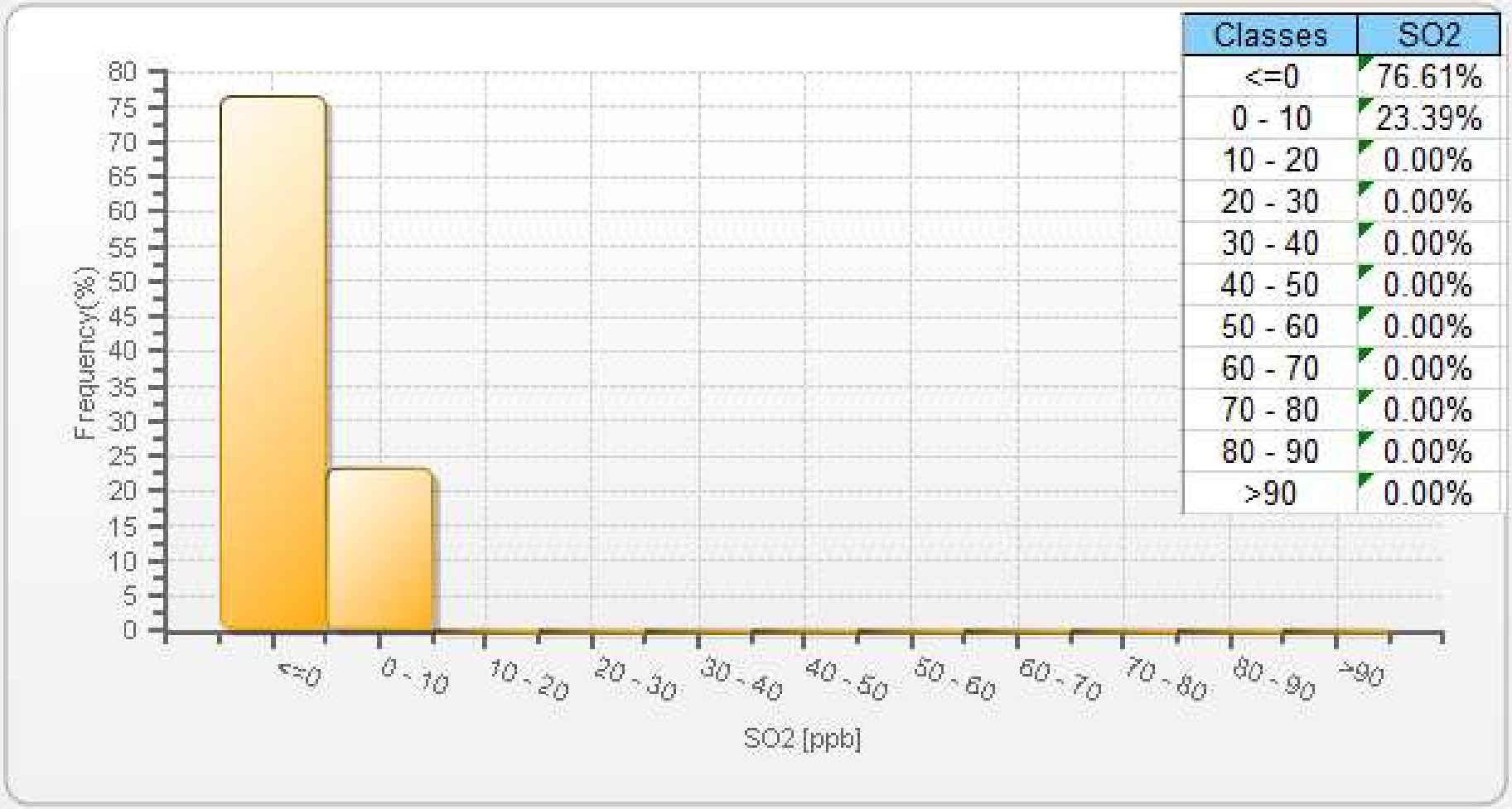
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for SO2 - 986c Station



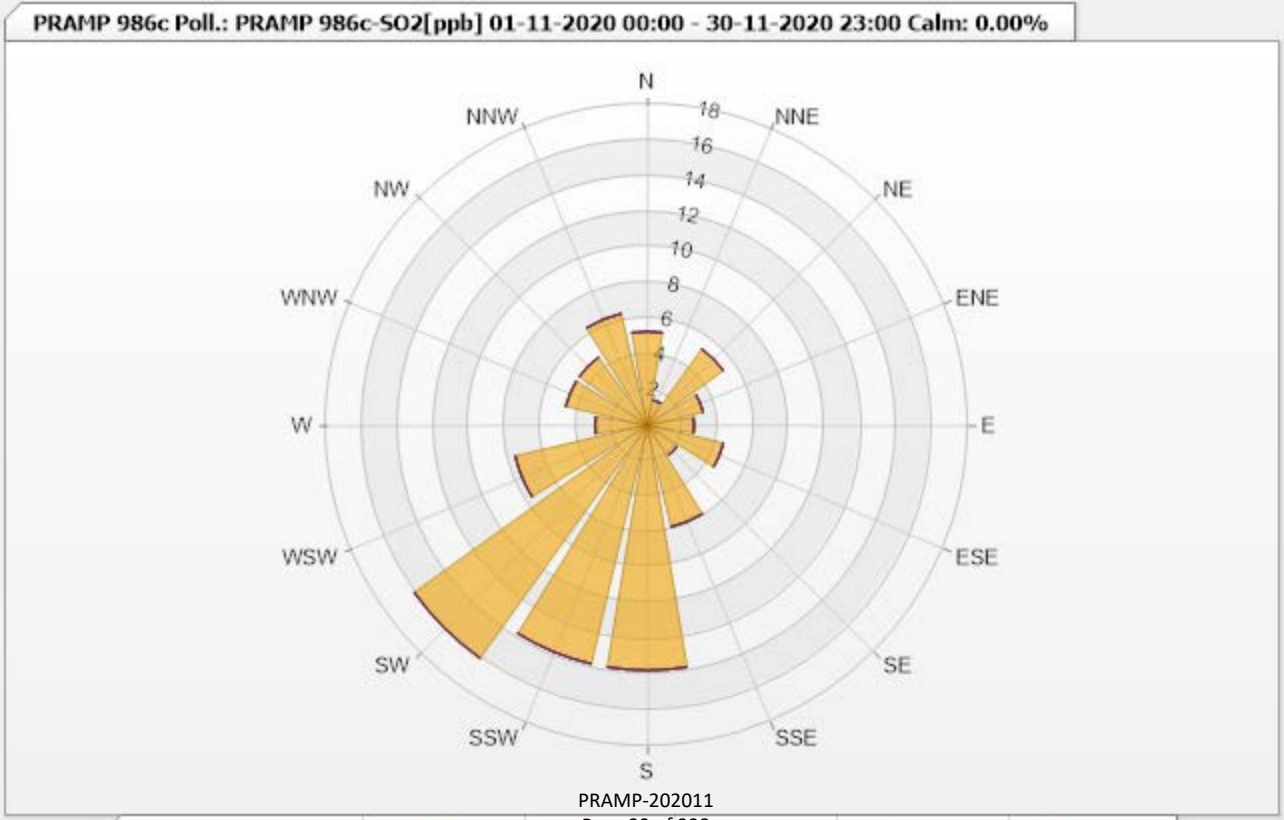
SO2[ppb] Histogram: PRAMP 986c Monthly: 11-2020 1 Hr.



Classes	SO2
<=0	76.61%
0 - 10	23.39%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	5.26	0	0	0	0	5.26
NNE	1.46	0	0	0	0	1.46
NE	5.26	0	0	0	0	5.26
ENE	3.22	0	0	0	0	3.22
E	2.63	0	0	0	0	2.63
ESE	4.39	0	0	0	0	4.39
SE	2.05	0	0	0	0	2.05
SSE	5.85	0	0	0	0	5.85
S	13.74	0	0	0	0	13.74
SSW	13.74	0	0	0	0	13.74
SW	16.08	0	0	0	0	16.08
WSW	7.6	0	0	0	0	7.6
W	2.92	0	0	0	0	2.92
WNW	4.68	0	0	0	0	4.68
NW	4.68	0	0	0	0	4.68
NNW	6.43	0	0	0	0	6.43
Summary	100	0	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-10
0 10-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

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:	0.53	ppb	on November 3 at hour 18	Hours in Service:	720
Maximum Daily Value:	0.24	ppb	on November 26	Hours of Data:	664
Minimum Hourly Value:	0.00	ppb	on November 5 at hour 14	Hours of Missing Data:	21
Minimum Daily Value:	0.02	ppb	on November 23	Hours of Calibration:	35
Monthly Average:	0.09	ppb		Operational Uptime:	97.1

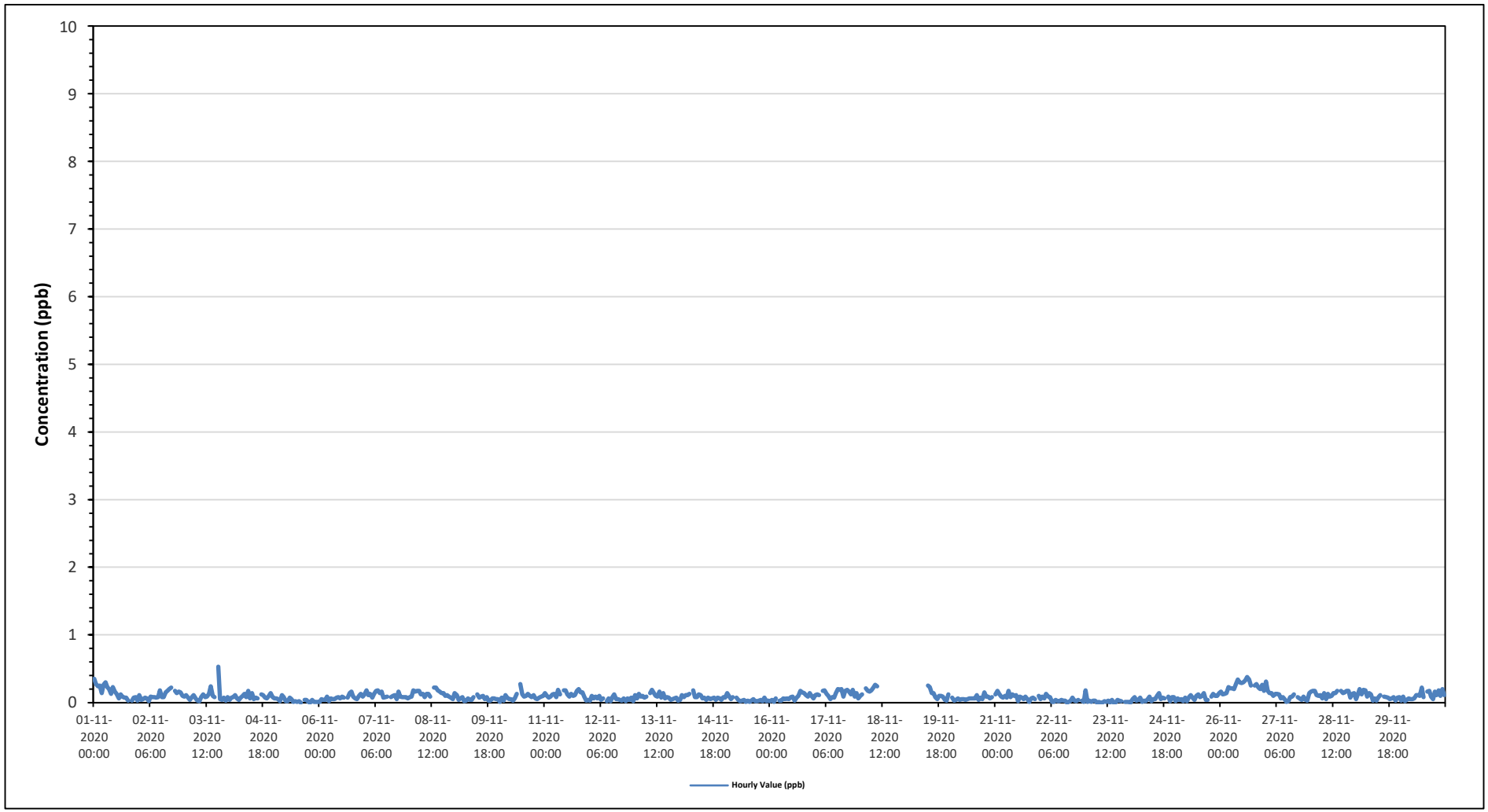
Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.35	0.27	0.24	0.25	0.14	0.26	0.3	0.23	0.2	0.13	0.23	0.16	0.13	0.06	0.12	0.09	0.07	0.07	0.03	S	0.03	0.07	0.08	0.03	0.03	0.35	0.15
Nov 2	0.11	0.04	0.05	0.07	0.06	0.02	0.09	0.08	0.08	0.07	0.08	0.18	0.08	0.08	0.15	0.17	0.2	0.22	S	0.17	0.14	0.16	0.15	0.1	0.02	0.22	0.11
Nov 3	0.09	0.11	0.07	0.04	0.08	0.11	0.06	0.03	0.02	0.08	0.12	0.08	0.09	0.13	0.24	0.1	0.08	S	**0.53**	0.05	0.04	0.07	0.03	0.08	0.02	**0.53**	0.10
Nov 4	0.04	0.07	0.08	0.11	0.06	0.04	0.07	0.1	0.13	0.08	0.17	0.06	0.14	0.05	0.07	0.06	S	0.12	0.11	0.07	0.06	0.1	0.14	0.08	0.04	0.17	0.09
Nov 5	0.06	0.06	0.05	0.02	0.11	0.08	0.02	0.02	0.07	0.05	0.01	0.02	0.01	0.02	0	S	0.04	0.04	0.01	0	0.04	0.01	0.01	0.01	0.00	0.11	0.03
Nov 6	0.01	0.05	0.04	0.04	0.09	0.02	0.06	0.05	0.05	0.07	0.08	0.06	0.09	0.07	S	0.07	0.14	0.16	0.09	0.06	0.05	0.1	0.13	0.09	0.01	0.16	0.07
Nov 7	0.12	0.18	0.11	0.13	0.07	0.13	0.17	0.18	0.14	0.16	0.07	0.08	0.09	S	0.08	0.1	0.11	0.05	0.16	0.09	0.08	0.08	0.08	0.06	0.05	0.18	0.11
Nov 8	0.08	0.09	0.18	0.16	0.17	0.17	0.12	0.13	0.08	0.13	0.13	0.09	S	0.22	0.22	0.18	0.16	0.14	0.14	0.1	0.11	0.09	0.07	0.05	0.05	0.22	0.13
Nov 9	0.14	0.11	0.04	0.06	0.08	0.02	0.03	0.06	0.04	0.04	0.08	S	0.12	0.07	0.09	0.1	0.05	0.08	0.03	0.03	0.06	0.06	0.05	0.05	0.02	0.14	0.06
Nov 10	0.01	0.07	0.03	0.11	0.07	0.05	0.05	0.03	0.06	0.13	S	0.27	0.12	0.09	0.1	0.13	0.1	0.08	0.11	0.06	0.05	0.07	0.09	0.1	0.01	0.27	0.09
Nov 11	0.14	0.1	0.07	0.09	0.12	0.13	0.08	0.19	0.12	S	0.18	0.18	0.12	0.09	0.13	0.1	0.11	0.17	0.2	0.15	0.15	0.09	0.03	0.04	0.03	0.20	0.12
Nov 12	0.03	0.1	0.06	0.09	0.06	0.1	0.04	0.06	S	0.02	0.06	0.02	0.08	0.12	0.05	0.05	0.04	0.03	0.06	0.02	0.06	0.04	0.07	0.02	0.02	0.12	0.06
Nov 13	0.11	0.06	0.13	0.09	0.1	0.07	0.09	S	0.14	0.19	0.14	0.1	0.09	0.16	0.07	0.14	0.06	0.08	0.07	0.04	0.05	0.06	0.07	0.03	0.03	0.19	0.09
Nov 14	0.04	0.11	0.08	0.11	0.11	0.13	S	0.18	0.08	0.08	0.12	0.11	0.06	0.07	0.04	0.07	0.05	0.06	0.07	0.04	0.07	0.06	0.04	0.08	0.04	0.18	0.08
Nov 15	0.07	0.14	0.1	0.05	0.08	S	0.07	0.04	0.02	0.03	0.04	0.01	0.03	0.01	0.03	0.05	0.02	0.02	0.03	0.04	0.02	0.07	0.02	0.03	0.01	0.14	0.04
Nov 16	0.02	0.04	0.01	0.06	S	0.03	0.03	0.06	0.05	0.06	0.05	0.08	0.09	0.03	0.07	0.1	0.17	0.15	0.14	0.11	0.09	0.14	0.1	0.06	0.01	0.17	0.08
Nov 17	0.11	0.12	0.11	S	0.17	0.18	0.13	0.1	0.05	0.08	0.07	0.14	0.2	0.19	0.2	0.09	0.17	0.19	0.16	0.12	0.19	0.09	0.14	0.06	0.05	0.20	0.13
Nov 18	0.1	0.12	S	0.21	0.17	0.16	0.18	0.22	0.26	0.24	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0.10	0.26	-
Nov 19	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	0.25	0.23	0.14	0.14	0.08	0.05	0.1	0.1	0.09	0.04	0.03	0.12	0.03	0.25	-
Nov 20	S	0.07	0.03	0.04	0.06	0.04	0.05	0.05	0.04	0.05	0.06	0.06	0.06	0.06	0.11	0.04	0.07	0.05	0.15	0.09	0.09	0.06	0.08	S	0.03	0.15	0.06
Nov 21	0.12	0.17	0.13	0.09	0.07	0.1	0.07	0.17	0.08	0.12	0.1	0.11	0.02	0.09	0.07	0.05	0.09	0.05	0.01	0.06	0.07	0.05	S	0.1	0.01	0.17	0.09
Nov 22	0.05	0.09	0.06	0.13	0.09	0.08	0.01	0.01	0.04	0.02	0.02	0.04	0.03	0.03	0	0.01	0.03	0.07	0.03	0.02	0.04	S	0.03	0.01	0.00	0.13	0.04
Nov 23	0.18	0.01	0.03	0.01	0.03	0.03	0	0.01	0	0	0.02	0.01	0.03	0	0.04	0	0	0.04	0.03	0.02	S	0.01	0.01	0.01	0.00	0.18	0.02
Nov 24	0	0.05	0.08	0.03	0.04	0.07	0.01	0.03	0.02	0.05	0.09	0.02	0.05	0.05	0.1	0.14	0.05	0.07	0.06	S	0.09	0.02	0.08	0.08	0.00	0.14	0.06
Nov 25	0.02	0.06	0.04	0.05	0.02	0.07	0.02	0.08	0.11	0.07	0.04	0.1	0.12	0.08	0.1	0.14	0.04	0.04	S	0.09	0.13	0.1	0.1	0.14	0.02	0.14	0.08
Nov 26	0.16	0.12	0.13	0.14	0.23	0.21	0.21	0.2	0.28	0.34	0.3	0.29	0.3	0.33	0.38	0.34	0.25	S	0.25	0.27	0.22	0.2	0.26	0.17	0.12	0.38	**0.24**
Nov 27	0.31	0.17	0.14	0.14	0.1	0.13	0.13	0.12	0.06	0.08	0.05	0.01	0.02	0.08	0.09	0.12	S	0.08	0.06	0.04	0.09	0.04	0.03	0.14	0.01	0.31	0.10
Nov 28	0.16	0.17	0.17	0.11	0.1	0.11	0.06	0.14	0.05	0.13	0.09	0.1	0.14	0.14	0.17	S	0.17	0.14	0.15	0.17	0.17	0.07	0.13	0.14	0.05	0.17	0.13
Nov 29	0.05	0.12	0.2	0.12	0.19	0.18	0.09	0.14	0.12	0.03	0.06	0.03	0.08	0.11	S	0.09	0.08	0.07	0.05	0.06	0.08	0.03	0.07	0.08	0.03	0.20	0.09
Nov 30	0.03	0.09	0.02	0.04	0.06	0.05	0.05	0.06	0.11	0.11	0.1	0.22	0.08	S	0.16	0.17	0.09	0.05	0.16	0.11	0.18	0.1	0.2	0.11	0.02	0.22	0.10
Diurnal Maximum	0.35	0.27	0.24	0.25	0.23	0.26	0.30	0.23	0.28	0.34	0.30	0.29	0.30	0.33	0.38	0.34	0.25	0.22	0.53	0.27	0.22	0.20	0.26	0.17			
Diurnal Average	0.10	0.10	0.09	0.09	0.10	0.10	0.08	0.10	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.09	0.09	0.11	0.08	0.09	0.07	0.08	0.07			

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

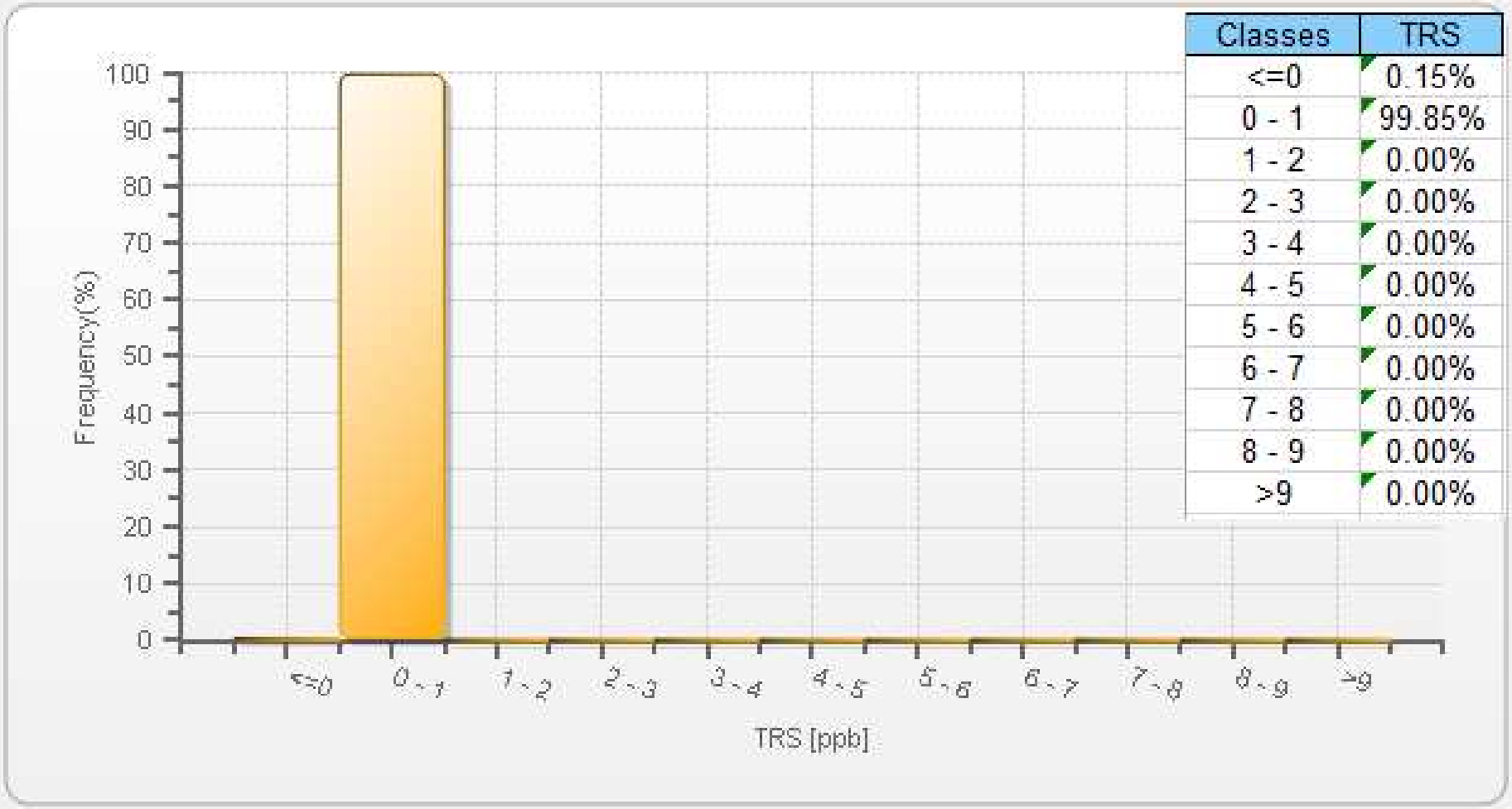
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

Timeseries Chart of Hourly Average for TRS - 986c Station



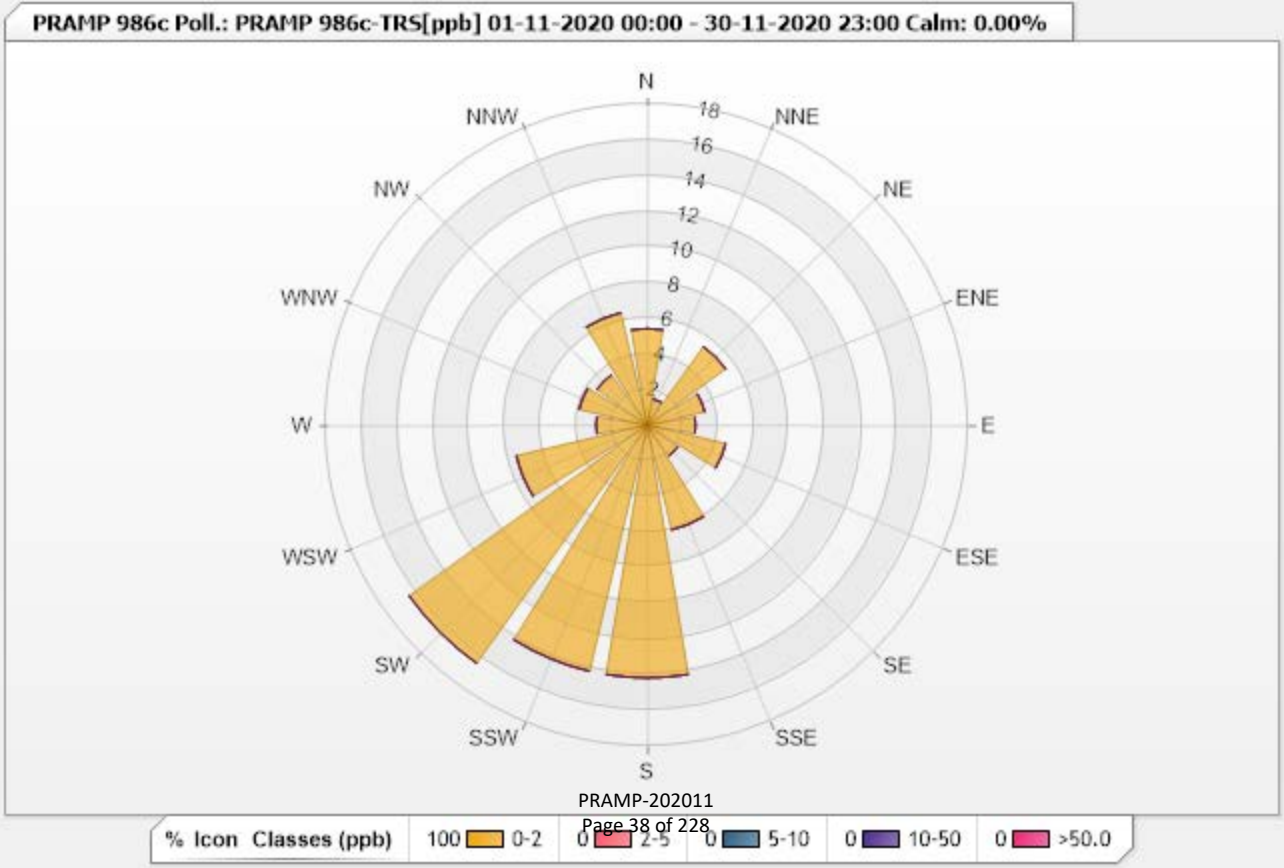
TRS[ppb] Histogram: PRAMP 986c Monthly: 11-2020 1 Hr.



Classes	TRS
<=0	0.15%
0 - 1	99.85%
1 - 2	0.00%
2 - 3	0.00%
3 - 4	0.00%
4 - 5	0.00%
5 - 6	0.00%
6 - 7	0.00%
7 - 8	0.00%
8 - 9	0.00%
>9	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 92.22% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.42	0	0	0	0	5.42
NNE	1.51	0	0	0	0	1.51
NE	5.42	0	0	0	0	5.42
ENE	3.31	0	0	0	0	3.31
E	2.71	0	0	0	0	2.71
ESE	4.52	0	0	0	0	4.52
SE	2.11	0	0	0	0	2.11
SSE	6.02	0	0	0	0	6.02
S	14.16	0	0	0	0	14.16
SSW	14.16	0	0	0	0	14.16
SW	16.42	0	0	0	0	16.42
WSW	7.53	0	0	0	0	7.53
W	2.86	0	0	0	0	2.86
WNW	3.92	0	0	0	0	3.92
NW	3.46	0	0	0	0	3.46
NNW	6.48	0	0	0	0	6.48
Summary	100	0	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

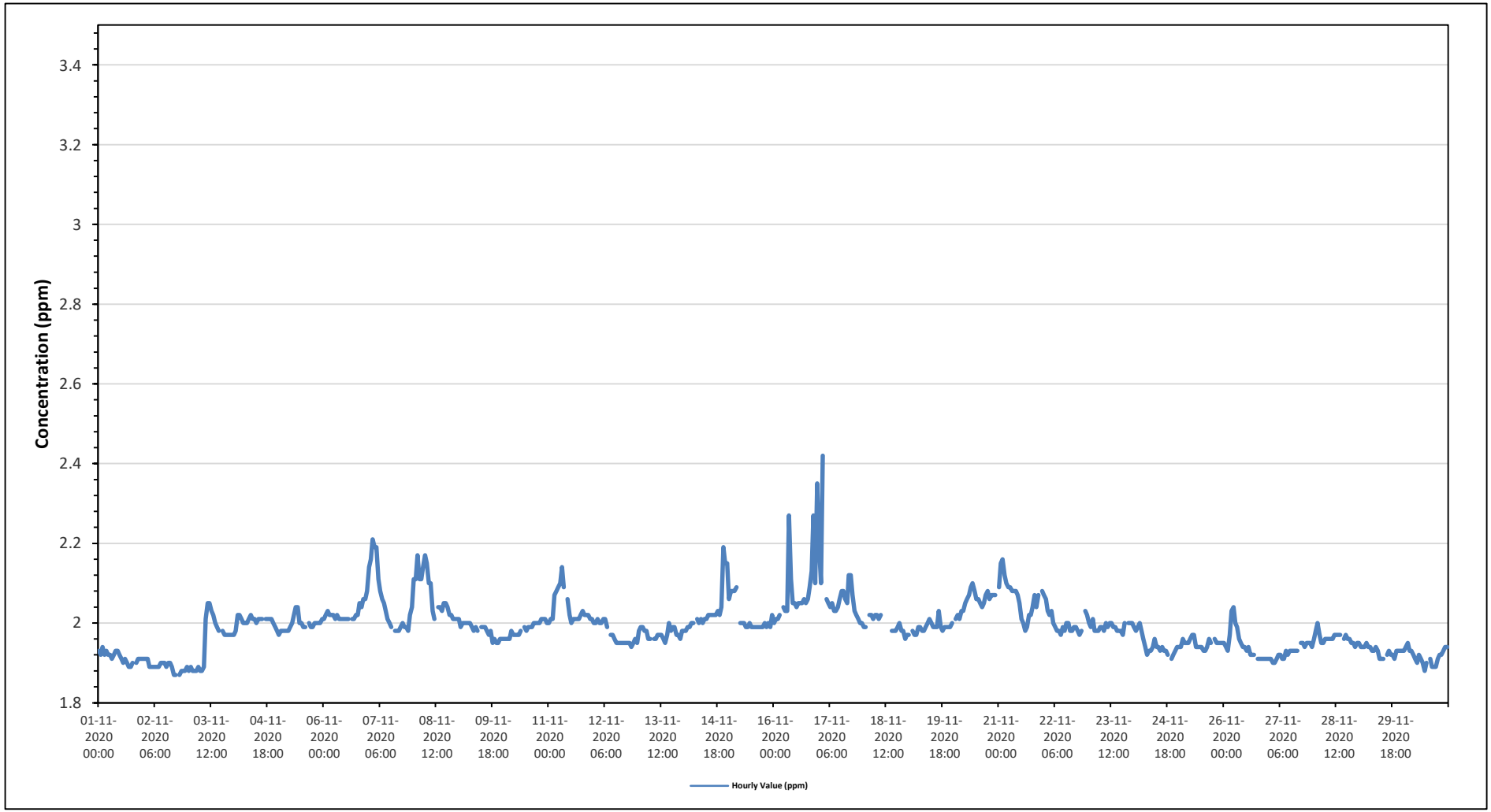
Maximum Hourly Value:	2.42	ppm	on November 17 at hour 2	Hours in Service:	720
Maximum Daily Value:	2.08	ppm	on November 16	Hours of Data:	684
Minimum Hourly Value:	1.87	ppm	on November 2 at hour 16	Hours of Missing Data:	0
Minimum Daily Value:	1.89	ppm	on November 2	Hours of Calibration:	36
Monthly Average:	1.99	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1.93	1.92	1.94	1.92	1.93	1.92	1.92	1.91	1.92	1.93	1.93	1.92	1.91	1.90	1.91	1.90	1.89	1.89	1.90	S	1.90	1.91	1.91	1.91	1.89	1.94	1.91
Nov 2	1.91	1.91	1.91	1.89	1.89	1.89	1.89	1.89	1.89	1.90	1.90	1.90	1.89	1.90	1.90	1.89	1.87	1.87	S	1.87	1.88	1.88	1.88	1.89	1.87	1.91	1.89
Nov 3	1.88	1.89	1.88	1.88	1.88	1.89	1.88	1.88	1.89	2.01	2.05	2.05	2.03	2.02	2.00	1.99	1.98	S	1.98	1.97	1.97	1.97	1.97	1.97	1.88	2.05	1.95
Nov 4	1.97	1.98	2.02	2.02	2.01	2.00	2.00	2.00	2.01	2.02	2.01	2.01	2.00	2.01	2.01	2.01	S	2.01	2.01	2.01	2.01	2.00	1.99	1.98	1.97	2.02	2.00
Nov 5	1.97	1.98	1.98	1.98	1.98	1.98	1.99	2.00	2.02	2.04	2.04	2.00	2.00	1.99	1.99	S	2.00	1.99	1.99	2.00	2.00	2.00	2.00	2.01	1.97	2.04	2.00
Nov 6	2.01	2.02	2.03	2.02	2.02	2.02	2.01	2.02	2.01	2.01	2.01	2.01	2.01	2.01	S	2.01	2.01	2.02	2.02	2.05	2.04	2.06	2.06	2.08	2.01	2.08	2.02
Nov 7	2.14	2.16	2.21	2.19	2.19	2.11	2.08	2.06	2.05	2.03	2.01	2.00	1.99	S	1.98	1.98	1.98	1.99	2.00	1.99	1.99	1.98	2.02	2.04	1.98	2.21	2.05
Nov 8	2.11	2.11	2.17	2.11	2.11	2.14	2.17	2.15	2.10	2.10	2.03	2.01	S	2.04	2.04	2.03	2.05	2.05	2.04	2.02	2.02	2.01	2.01	2.01	2.01	2.17	2.07
Nov 9	2.01	1.99	2.00	2.00	2.00	2.00	2.00	1.99	1.98	1.99	1.98	S	1.99	1.99	1.99	1.98	1.97	1.98	1.95	1.96	1.95	1.95	1.96	1.96	1.95	2.01	1.98
Nov 10	1.96	1.96	1.96	1.96	1.98	1.97	1.97	1.97	1.97	1.98	S	1.99	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	2.01	2.01	2.01	2.00	1.96	2.01	1.98
Nov 11	2.00	2.01	2.01	2.07	2.08	2.09	2.10	2.14	2.09	S	2.06	2.02	2.00	2.01	2.01	2.01	2.01	2.02	2.03	2.02	2.02	2.02	2.01	2.01	2.00	2.14	2.04
Nov 12	2.00	2.00	2.01	2.00	2.00	2.01	2.01	1.99	S	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.95	1.96	1.95	1.94	2.01	1.97
Nov 13	1.98	1.99	1.99	1.98	1.98	1.96	1.96	S	1.96	1.96	1.97	1.97	1.97	1.96	1.95	1.97	2.00	1.98	1.99	1.99	1.97	1.97	1.96	1.98	1.95	2.00	1.97
Nov 14	1.98	1.98	1.99	1.99	2.00	2.00	S	2.01	2.00	2.01	2.00	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.03	2.02	2.04	2.19	2.15	2.15	1.98	2.19	2.03
Nov 15	2.06	2.08	2.08	2.08	2.09	S	2.00	2.00	2.00	1.99	1.99	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.00	1.99	2.02	1.99	2.09	2.01
Nov 16	2.00	2.01	2.01	2.02	S	2.04	2.03	2.03	2.27	2.11	2.05	2.05	2.04	2.05	2.05	2.05	2.06	2.05	2.06	2.09	2.13	2.27	2.10	2.35	2.00	2.35	**2.08**
Nov 17	2.20	2.10	**2.42**	S	2.06	2.05	2.04	2.05	2.03	2.03	2.04	2.06	2.08	2.08	2.06	2.05	2.12	2.12	2.07	2.03	2.02	2.01	2.00	2.00	2.00	**2.42**	2.07
Nov 18	1.99	1.99	S	2.02	2.02	2.01	2.02	2.02	2.01	2.02	C	C	C	C	C	1.98	1.98	1.98	1.99	2.00	1.98	1.98	1.96	1.97	1.96	2.02	2.00
Nov 19	1.97	S	1.98	1.97	1.97	1.99	1.99	1.98	1.98	1.99	2.00	2.01	2.00	1.99	1.99	1.99	2.03	1.99	1.98	1.99	1.99	1.99	1.99	2.00	1.97	2.03	1.99
Nov 20	S	2.01	2.02	2.01	2.03	2.03	2.05	2.06	2.07	2.09	2.10	2.08	2.06	2.06	2.05	2.04	2.05	2.07	2.08	2.06	2.07	2.07	2.07	S	2.01	2.10	2.06
Nov 21	2.09	2.15	2.16	2.12	2.10	2.09	2.09	2.08	2.08	2.08	2.07	2.05	2.01	2.00	1.98	1.99	2.02	2.02	2.04	2.07	2.04	2.07	S	2.08	1.98	2.16	2.06
Nov 22	2.07	2.06	2.03	2.02	2.03	2.00	1.99	1.98	1.98	1.97	1.99	1.98	2.00	2.00	1.98	1.98	1.99	1.99	1.98	1.97	1.98	S	2.03	2.02	1.97	2.07	2.00
Nov 23	2.00	1.99	2.01	1.98	1.98	1.98	1.99	1.99	1.98	2.00	1.99	2.00	2.00	1.99	1.99	1.98	1.98	1.98	1.97	2.00	S	2.00	2.00	2.00	1.97	2.01	1.99
Nov 24	1.99	1.98	1.99	2.00	1.98	1.96	1.94	1.92	1.93	1.93	1.94	1.96	1.94	1.94	1.93	1.94	1.93	1.93	1.92	S	1.91	1.92	1.93	1.94	1.91	2.00	1.95
Nov 25	1.94	1.94	1.96	1.95	1.95	1.95	1.96	1.97	1.97	1.94	1.94	1.94	1.94	1.93	1.93	1.94	1.96	1.95	S	1.96	1.95	1.95	1.95	1.95	1.93	1.97	1.95
Nov 26	1.95	1.94	1.93	1.97	2.03	2.04	2.00	1.99	1.96	1.95	1.94	1.94	1.93	1.94	1.92	1.92	1.92	S	1.91	1.91	1.91	1.91	1.91	1.91	1.91	2.04	1.94
Nov 27	1.91	1.91	1.90	1.90	1.91	1.92	1.92	1.91	1.91	1.93	1.92	1.93	1.93	1.93	1.93	1.93	S	1.95	1.95	1.94	1.95	1.95	1.95	1.94	1.90	1.95	1.93
Nov 28	1.96	1.98	2.00	1.97	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	S	1.96	1.97	1.96	1.96	1.95	1.95	1.94	1.95	1.94	2.00	1.96
Nov 29	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.93	1.93	1.94	1.93	1.91	1.91	1.91	S	1.92	1.93	1.92	1.92	1.91	1.93	1.93	1.93	1.93	1.91	1.95	1.93
Nov 30	1.93	1.94	1.95	1.93	1.93	1.92	1.91	1.90	1.92	1.91	1.90	1.88	1.90	S	1.91	1.89	1.89	1.89	1.91	1.92	1.92	1.93	1.94	1.94	1.88	1.95	1.92
Diurnal Maximum	2.20	2.16	2.42	2.19	2.19	2.14	2.17	2.15	2.27	2.11	2.10	2.08	2.08	2.08	2.06	2.05	2.12	2.12	2.08	2.09	2.13	2.27	2.15	2.35			
Diurnal Average	2.00	2.00	2.02	2.00	2.00	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.98	1.99	1.99	2.00			

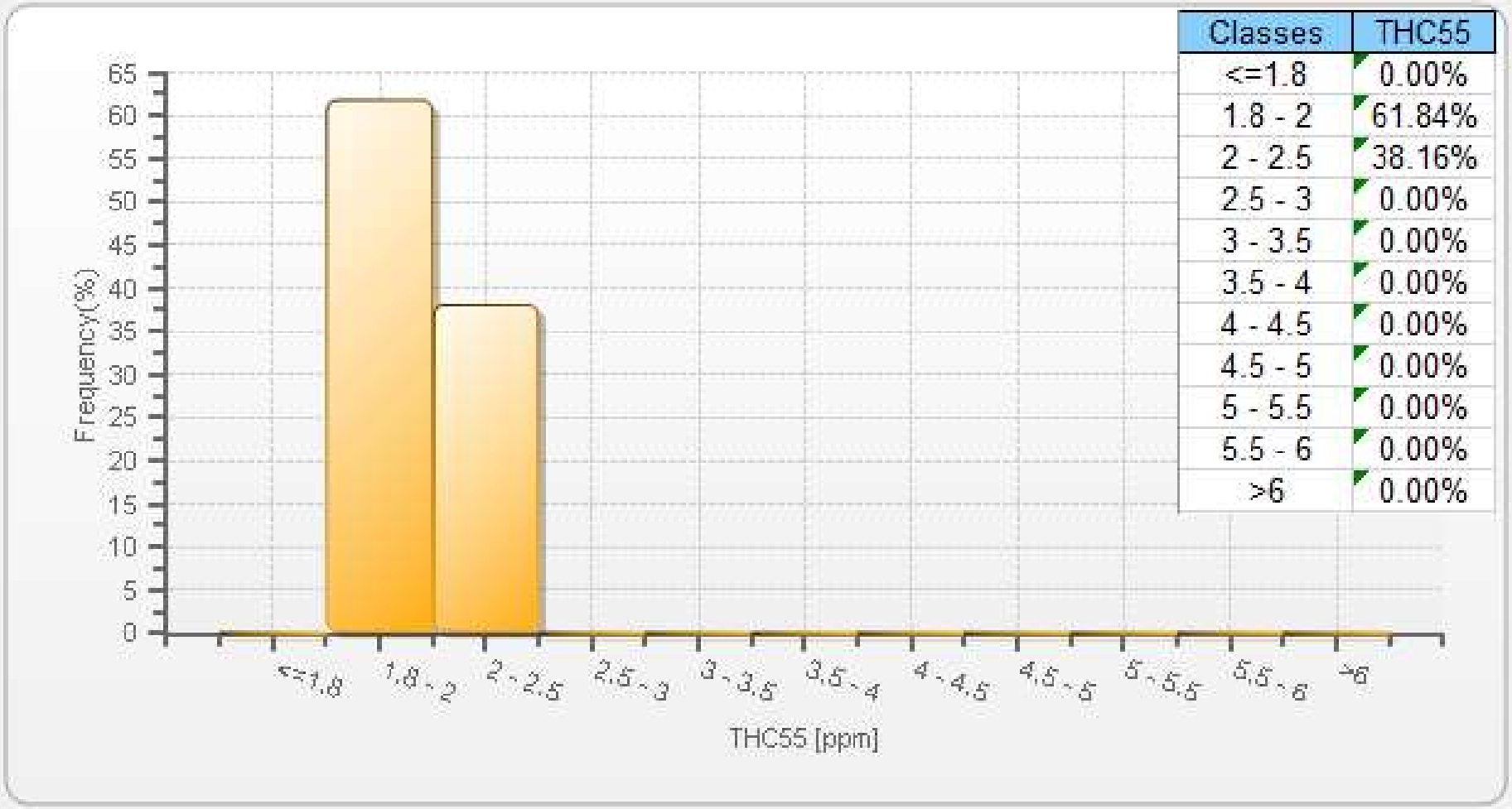
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for THC - 986c Station

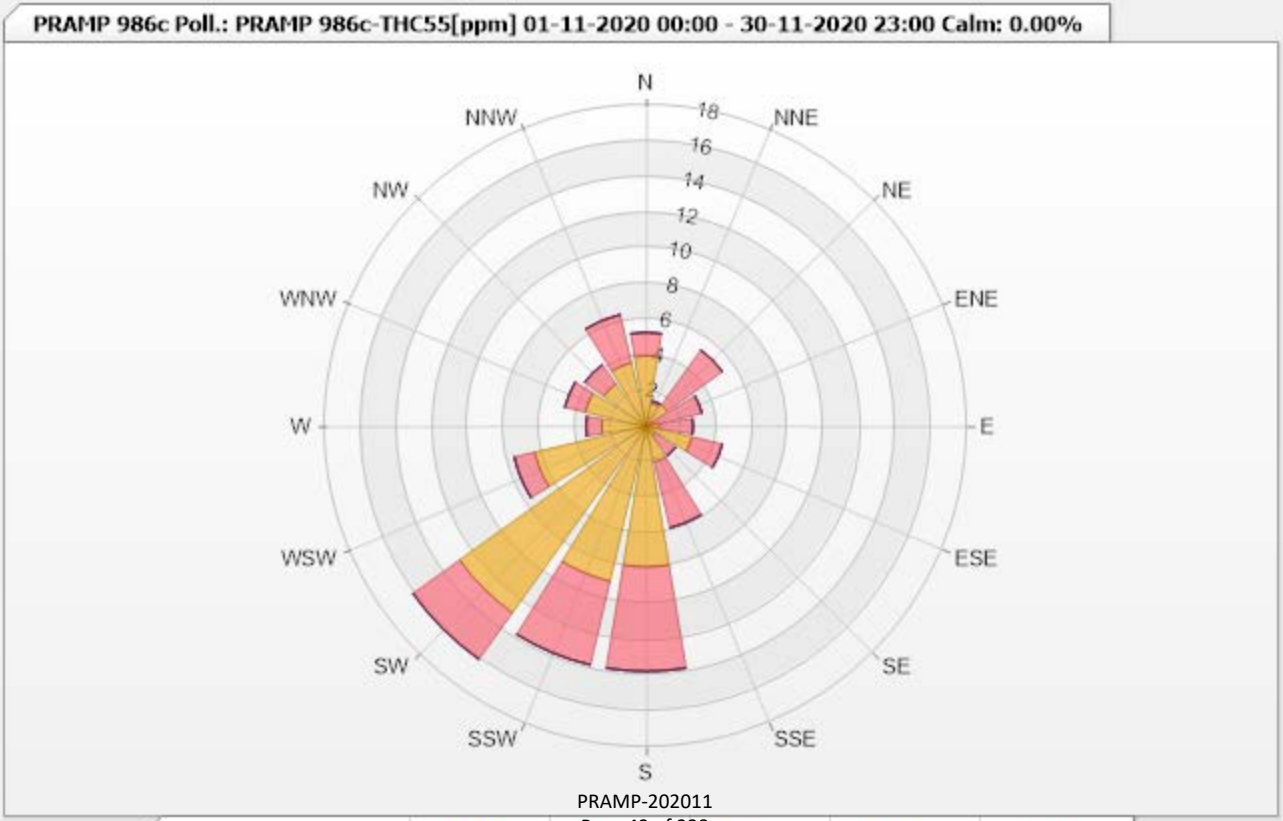


THC55[ppm] Histogram: PRAMP 986c Monthly: 11-2020 1 Hr.



Wind: PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	3.95	1.32	0	0	0	5.27
NNE	1.32	0.15	0	0	0	1.47
NE	1.46	3.8	0	0	0	5.26
ENE	0.29	2.92	0	0	0	3.21
E	0.73	1.9	0	0	0	2.63
ESE	2.63	1.75	0	0	0	4.38
SE	0.58	1.46	0	0	0	2.04
SSE	2.05	3.8	0	0	0	5.85
S	7.89	5.85	0	0	0	13.74
SSW	8.92	4.82	0	0	0	13.74
SW	12.87	3.22	0	0	0	16.09
WSW	6.43	1.17	0	0	0	7.6
W	2.49	0.88	0	0	0	3.37
WNW	3.51	1.17	0	0	0	4.68
NW	2.92	1.32	0	0	0	4.24
NNW	3.65	2.78	0	0	0	6.43
Summary	61.69	38.31	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
% Icon Classes (ppm)
62 0-2
38 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

METHANE (CH4) in ppm

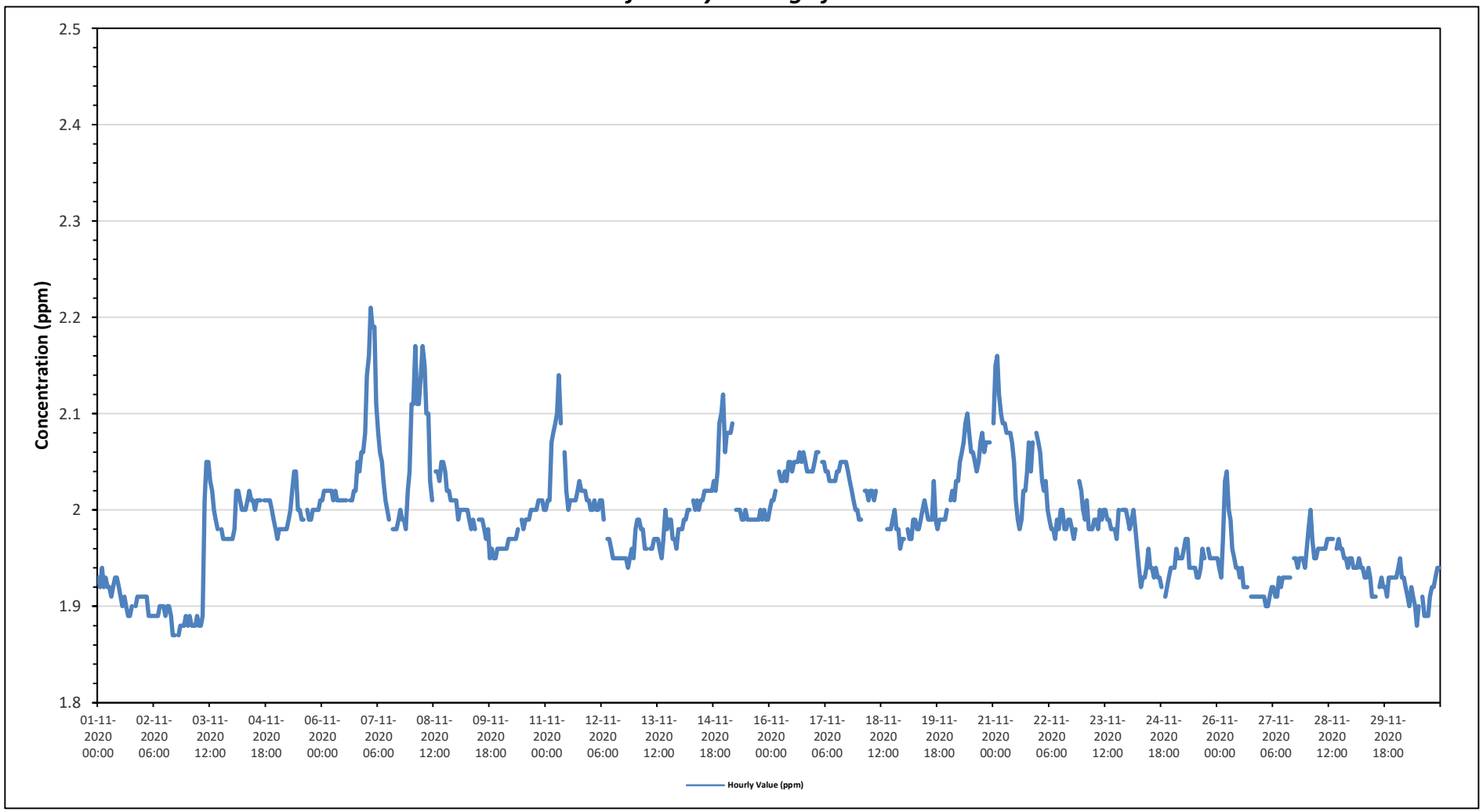
Maximum Hourly Value:	2.21	ppm	on November 7 at hour 2	Hours in Service:	720
Maximum Daily Value:	2.07	ppm	on November 8	Hours of Data:	684
Minimum Hourly Value:	1.87	ppm	on November 2 at hour 16	Hours of Missing Data:	0
Minimum Daily Value:	1.89	ppm	on November 2	Hours of Calibration:	36
Monthly Average:	1.99	ppm		Operational Uptime:	100.0

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

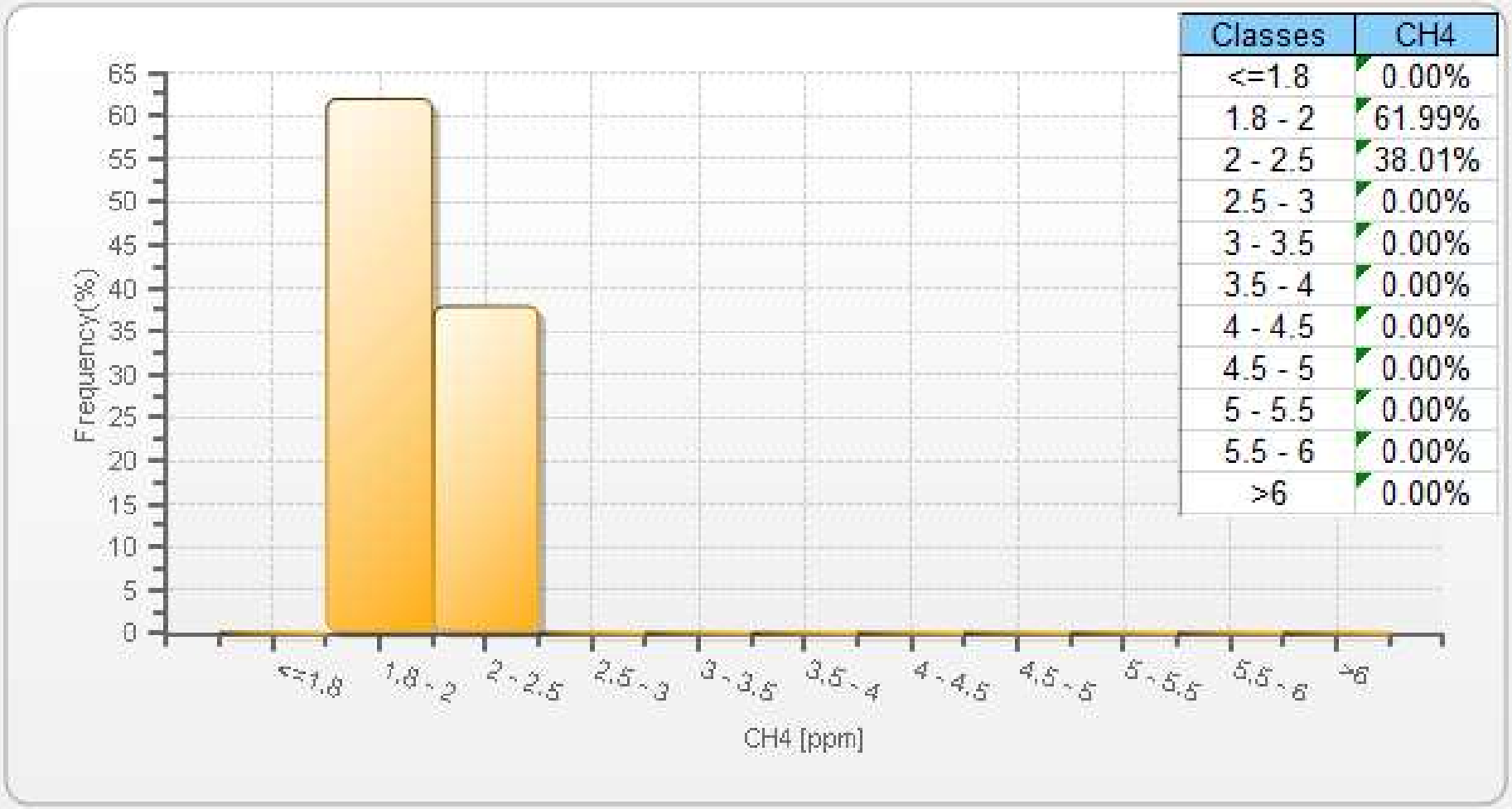
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for CH4 - 986c Station



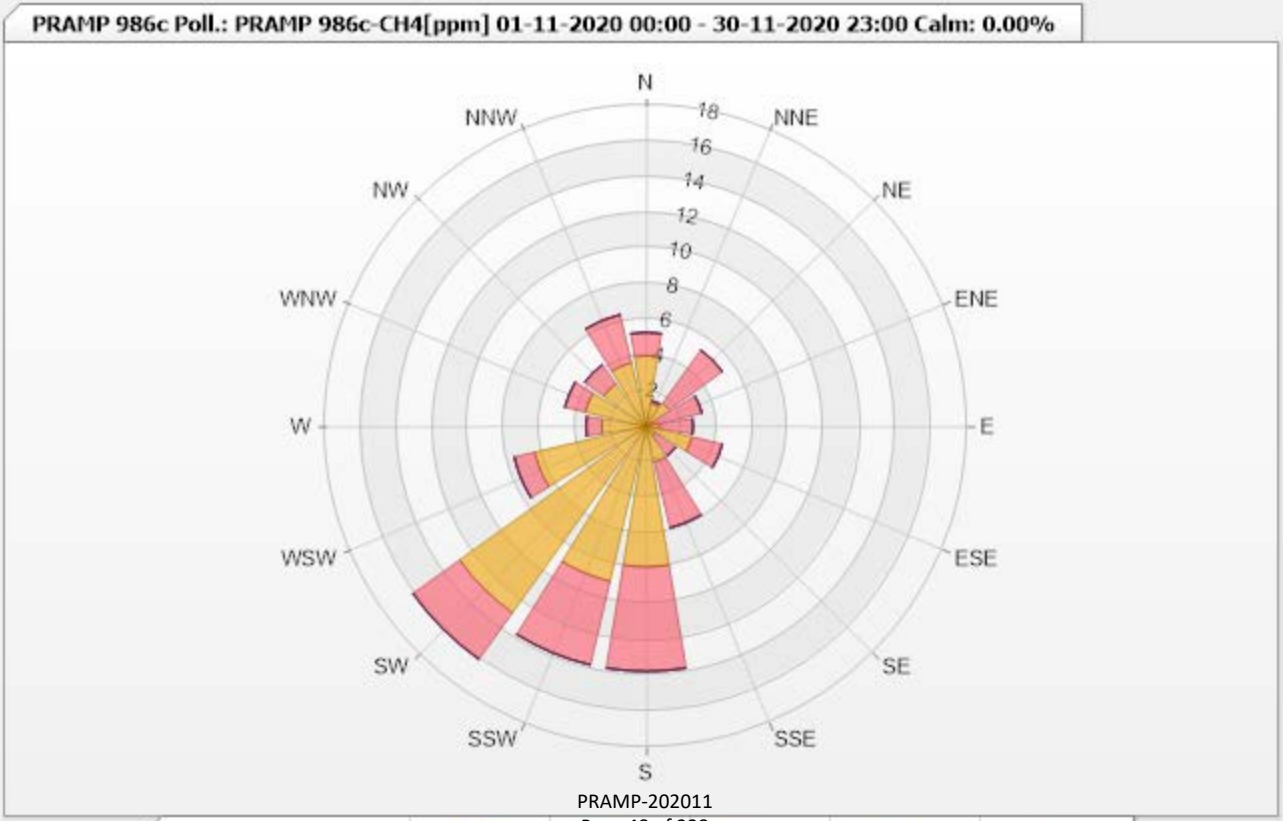
CH4[ppm] Histogram: PRAMP 986c Monthly: 11-2020 1 Hr.



Classes	CH4
<=1.8	0.00%
1.8 - 2	61.99%
2 - 2.5	38.01%
2.5 - 3	0.00%
3 - 3.5	0.00%
3.5 - 4	0.00%
4 - 4.5	0.00%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	3.95	1.32	0	0	0	5.27
NNE	1.32	0.15	0	0	0	1.47
NE	1.61	3.65	0	0	0	5.26
ENE	0.29	2.92	0	0	0	3.21
E	0.73	1.9	0	0	0	2.63
ESE	2.63	1.75	0	0	0	4.38
SE	0.58	1.46	0	0	0	2.04
SSE	2.05	3.8	0	0	0	5.85
S	7.89	5.85	0	0	0	13.74
SSW	8.92	4.82	0	0	0	13.74
SW	12.87	3.22	0	0	0	16.09
WSW	6.43	1.17	0	0	0	7.6
W	2.49	0.88	0	0	0	3.37
WNW	3.51	1.17	0	0	0	4.68
NW	2.92	1.32	0	0	0	4.24
NNW	3.65	2.78	0	0	0	6.43
Summary	61.84	38.16	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
% Icon Classes (ppm)
62 0-2
38 2-5
0 5-10
0 10-20
0 >20.0

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

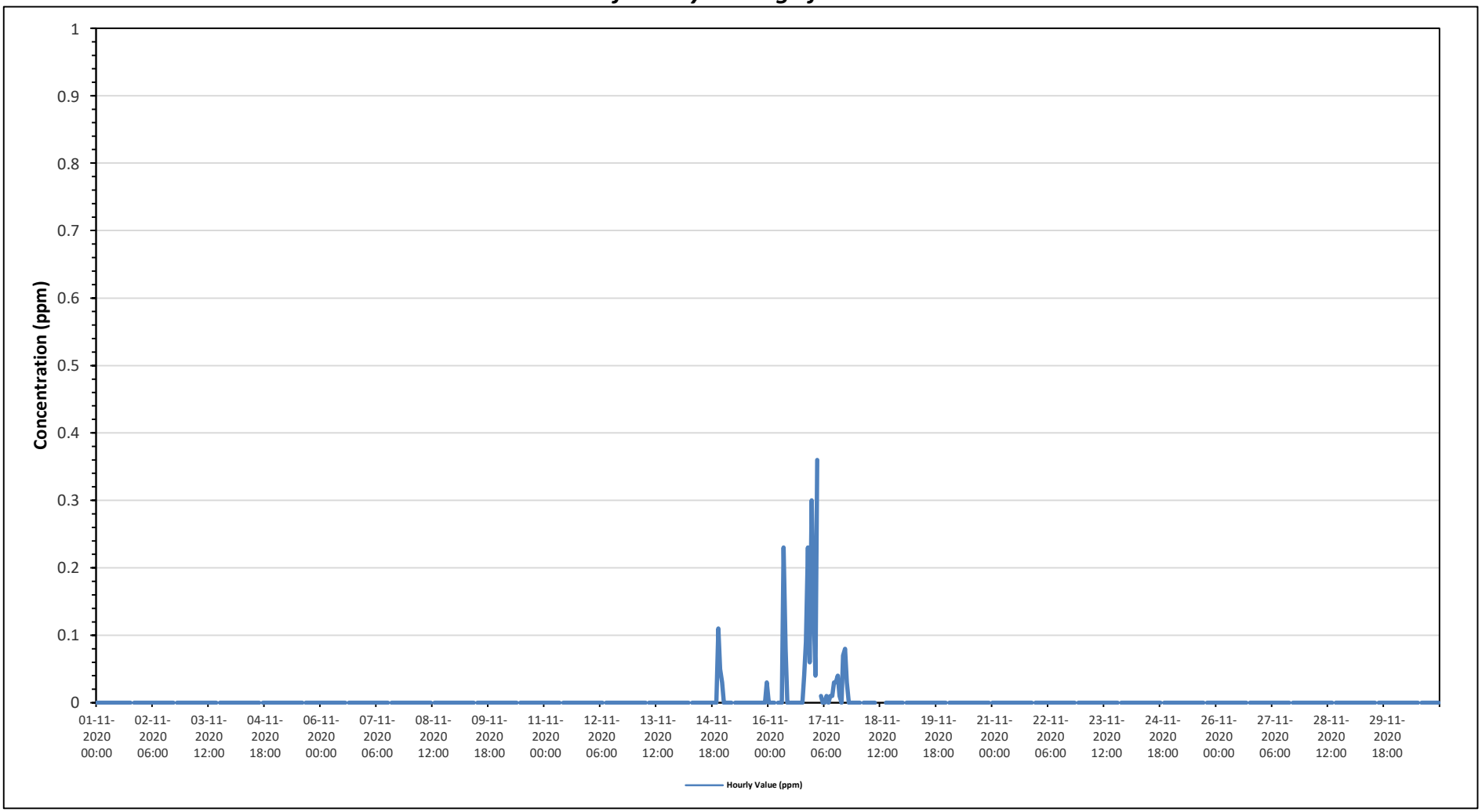
Maximum Hourly Value:	0.36	ppm	on November 17 at hour 2	Hours in Service:	720
Maximum Daily Value:	0.04	ppm	on November 16	Hours of Data:	684
Minimum Hourly Value:	0.00	ppm	on November 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.00	ppm	on November 1	Hours of Calibration:	36
Monthly Average:	0.00	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 2	0.00	0.00	0.00	0.00	0.00	0.00	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
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	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
Nov 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 14	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05	0.03	0.00	0.11	0.01
Nov 15	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00
Nov 16	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.23	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.09	0.23	0.06	0.30	0.00	0.30	**0.04**
Nov 17	0.15	0.04	**0.36**	S	0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.03	0.03	0.04	0.01	0.00	0.07	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	**0.36**	0.04
Nov 18	0.00	0.00	S	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	0.00	0.00	0.00
Nov 19	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 20	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Nov 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Nov 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Nov 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Nov 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.15	0.04	0.36	0.00	0.01	0.00	0.00	0.01	0.23	0.08	0.01	0.03	0.03	0.04	0.01	0.00	0.07	0.08	0.03	0.04	0.09	0.23	0.06	0.30			
Diurnal Average	0.01	0.00	0.01	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	0.01	0.00	0.01			

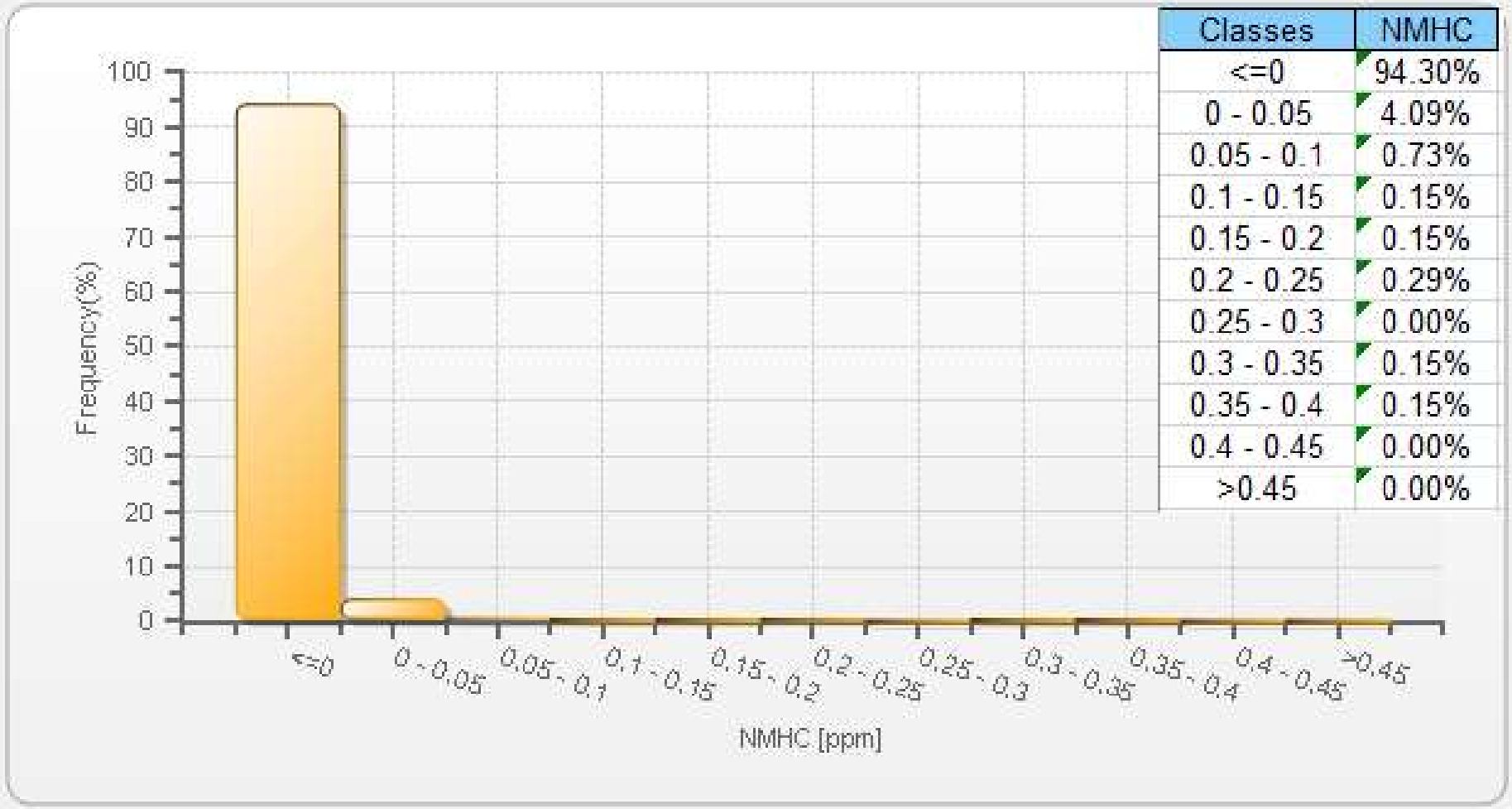
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for NMHC - 986c Station



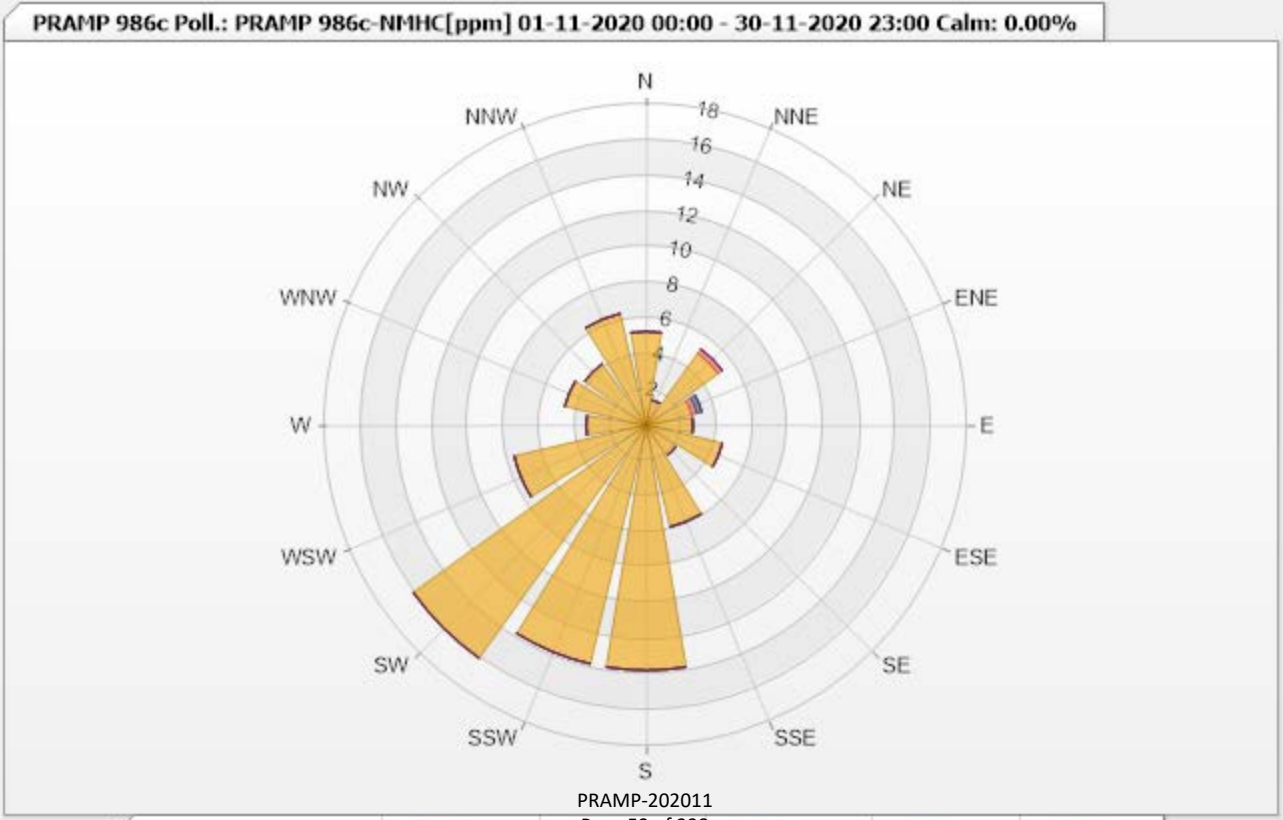
NMHC[ppm] Histogram: PRAMP 986c Monthly: 11-2020 1 Hr.



Classes	NMHC
<=0	94.30%
0 - 0.05	4.09%
0.05 - 0.1	0.73%
0.1 - 0.15	0.15%
0.15 - 0.2	0.15%
0.2 - 0.25	0.29%
0.25 - 0.3	0.00%
0.3 - 0.35	0.15%
0.35 - 0.4	0.15%
0.4 - 0.45	0.00%
>0.45	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	5.26	0	0	0	0	5.26
NNE	1.46	0	0	0	0	1.46
NE	4.97	0.29	0	0	0	5.26
ENE	2.63	0.29	0.29	0	0	3.21
E	2.63	0	0	0	0	2.63
ESE	4.39	0	0	0	0	4.39
SE	2.05	0	0	0	0	2.05
SSE	5.85	0	0	0	0	5.85
S	13.74	0	0	0	0	13.74
SSW	13.74	0	0	0	0	13.74
SW	16.08	0	0	0	0	16.08
WSW	7.6	0	0	0	0	7.6
W	3.36	0	0	0	0	3.36
WNW	4.68	0	0	0	0	4.68
NW	4.24	0	0	0	0	4.24
NNW	6.43	0	0	0	0	6.43
Summary	99.11	0.58	0.29	0	0	100


PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppm)
99 0-0.1
1 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

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PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

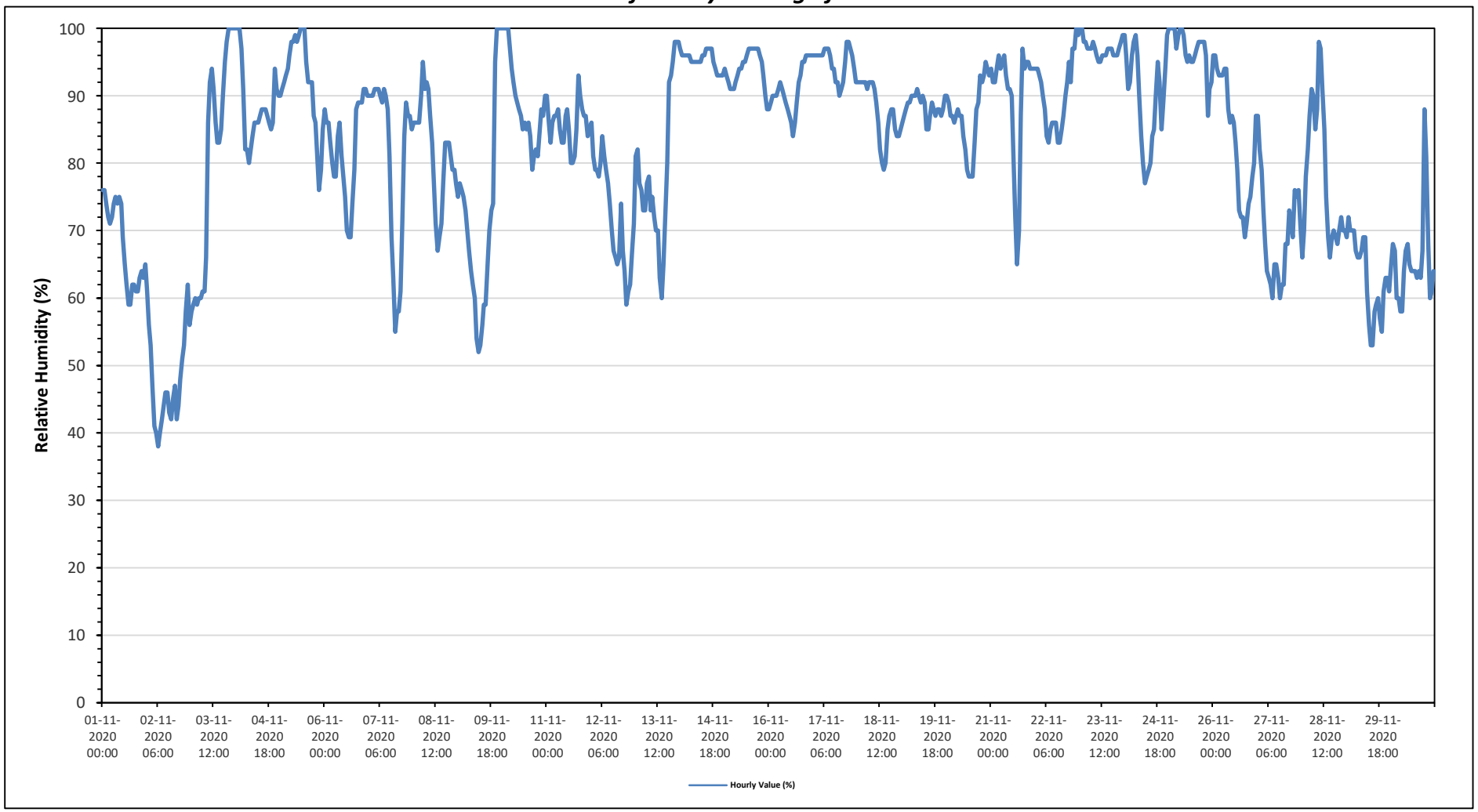
Maximum Hourly Value:	100	%	on November 3 at hour 20	Hours in Service:	720
Maximum Daily Value:	97.0	%	on November 23	Hours of Data:	720
Minimum Hourly Value:	38	%	on November 2 at hour 6	Hours of Missing Data:	0
Minimum Daily Value:	47.7	%	on November 2	Hours of Calibration:	0
Monthly Average:	82.7	%		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	76	76	74	72	71	72	74	75	74	75	74	69	65	62	59	59	62	62	61	61	63	64	63	65	59	76	67.8
Nov 2	61	56	53	47	41	40	**38**	40	42	44	46	46	43	42	45	47	42	44	48	51	53	58	62	56	**38**	62	47.7
Nov 3	58	59	60	59	60	60	61	61	66	86	92	94	91	86	83	83	85	90	95	98	**100**	**100**	**100**	**100**	58	**100**	80.3
Nov 4	**100**	**100**	**100**	97	91	82	82	80	82	84	86	86	86	87	88	88	88	87	86	85	86	94	91	90	80	**100**	88.6
Nov 5	90	91	92	93	94	96	98	98	99	98	99	**100**	**100**	**100**	95	92	92	92	87	86	81	76	79	85	76	**100**	92.2
Nov 6	88	86	86	83	80	78	78	84	86	81	78	75	70	69	69	74	79	88	89	89	89	91	91	90	69	91	82.1
Nov 7	90	90	90	91	91	91	90	89	91	90	88	81	69	63	55	58	58	61	71	84	89	87	87	85	55	91	80.8
Nov 8	86	86	86	86	90	95	91	92	91	87	83	77	71	67	69	71	77	83	83	83	81	79	79	77	67	95	82.1
Nov 9	75	77	76	75	73	70	67	64	62	60	54	52	53	56	59	59	65	70	73	74	95	**100**	**100**	**100**	52	**100**	71.2
Nov 10	**100**	**100**	**100**	**100**	97	94	92	90	89	88	87	85	86	85	86	84	79	81	82	81	84	88	87	90	79	**100**	89.0
Nov 11	90	86	83	86	87	87	88	85	83	83	87	88	85	80	80	81	85	93	90	88	87	87	84	85	80	93	85.8
Nov 12	86	81	79	79	78	80	84	81	79	77	74	70	67	66	65	66	74	67	64	59	61	62	67	71	59	86	72.4
Nov 13	81	82	77	76	73	73	77	78	73	75	72	70	70	63	60	65	73	80	92	93	95	98	98	98	60	98	78.8
Nov 14	97	96	96	96	96	96	95	95	95	95	95	95	96	96	97	97	97	97	95	94	93	93	93	93	93	97	95.3
Nov 15	94	93	92	91	91	91	92	93	94	94	95	95	96	97	97	97	97	97	97	96	95	93	90	88	88	97	94.0
Nov 16	88	89	90	90	90	91	92	91	90	89	88	87	86	84	86	89	92	93	95	95	96	96	96	96	84	96	90.8
Nov 17	96	96	96	96	96	96	97	97	97	96	94	94	92	92	90	91	92	95	98	98	97	96	94	92	90	98	94.9
Nov 18	92	92	92	92	92	91	92	92	92	91	89	86	82	80	79	80	85	87	88	88	85	84	84	85	79	92	87.5
Nov 19	86	87	88	89	89	90	90	90	91	90	89	90	89	85	85	87	89	88	87	88	88	87	88	90	85	91	88.3
Nov 20	90	89	87	87	86	87	88	87	87	84	82	79	78	78	78	83	88	89	93	92	93	95	94	93	78	95	87.0
Nov 21	94	92	92	94	96	94	95	96	93	91	91	90	82	72	65	70	87	97	94	95	95	94	94	94	65	97	89.9
Nov 22	94	94	93	92	90	88	84	83	85	86	86	86	83	83	85	87	90	92	95	92	97	97	**100**	99	83	**100**	90.0
Nov 23	**100**	**100**	98	98	97	97	97	98	97	96	95	95	96	96	96	97	97	97	96	96	96	97	98	99	95	**100**	**97.0**
Nov 24	99	96	91	92	96	98	99	96	90	84	80	77	78	79	80	84	85	90	95	92	85	89	94	99	77	99	89.5
Nov 25	**100**	**100**	**100**	**100**	97	99	**100**	**100**	99	96	95	96	95	95	96	97	98	98	98	98	96	87	91	92	87	**100**	96.8
Nov 26	96	96	94	93	93	93	94	94	88	86	87	86	83	79	73	72	72	69	71	74	75	78	80	87	69	96	83.9
Nov 27	87	82	79	73	68	64	63	62	60	65	65	63	60	62	62	68	68	73	71	69	76	75	76	71	60	87	69.3
Nov 28	66	70	78	82	87	91	90	85	88	98	97	91	85	75	69	66	69	70	69	68	70	72	70	70	66	98	78.2
Nov 29	69	72	70	70	70	67	66	66	67	69	69	61	56	53	53	58	59	60	57	55	61	63	63	61	53	72	63.1
Nov 30	65	68	67	60	60	58	58	64	67	68	65	64	64	64	63	64	63	67	88	81	68	60	61	64	58	88	65.5
Diurnal Maximum	100	100	100	100	97	99	100	100	99	98	99	100	100	100	97	97	98	98	98	98	100	100	100	100			
Diurnal Average	86.5	86.1	85.3	84.6	84.0	83.6	83.7	83.5	83.2	83.5	82.7	80.9	78.6	76.5	75.6	77.1	79.6	81.9	83.6	83.4	84.3	84.7	85.1	85.5			

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

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

Timeseries Chart of Hourly Average for RH - 986c Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

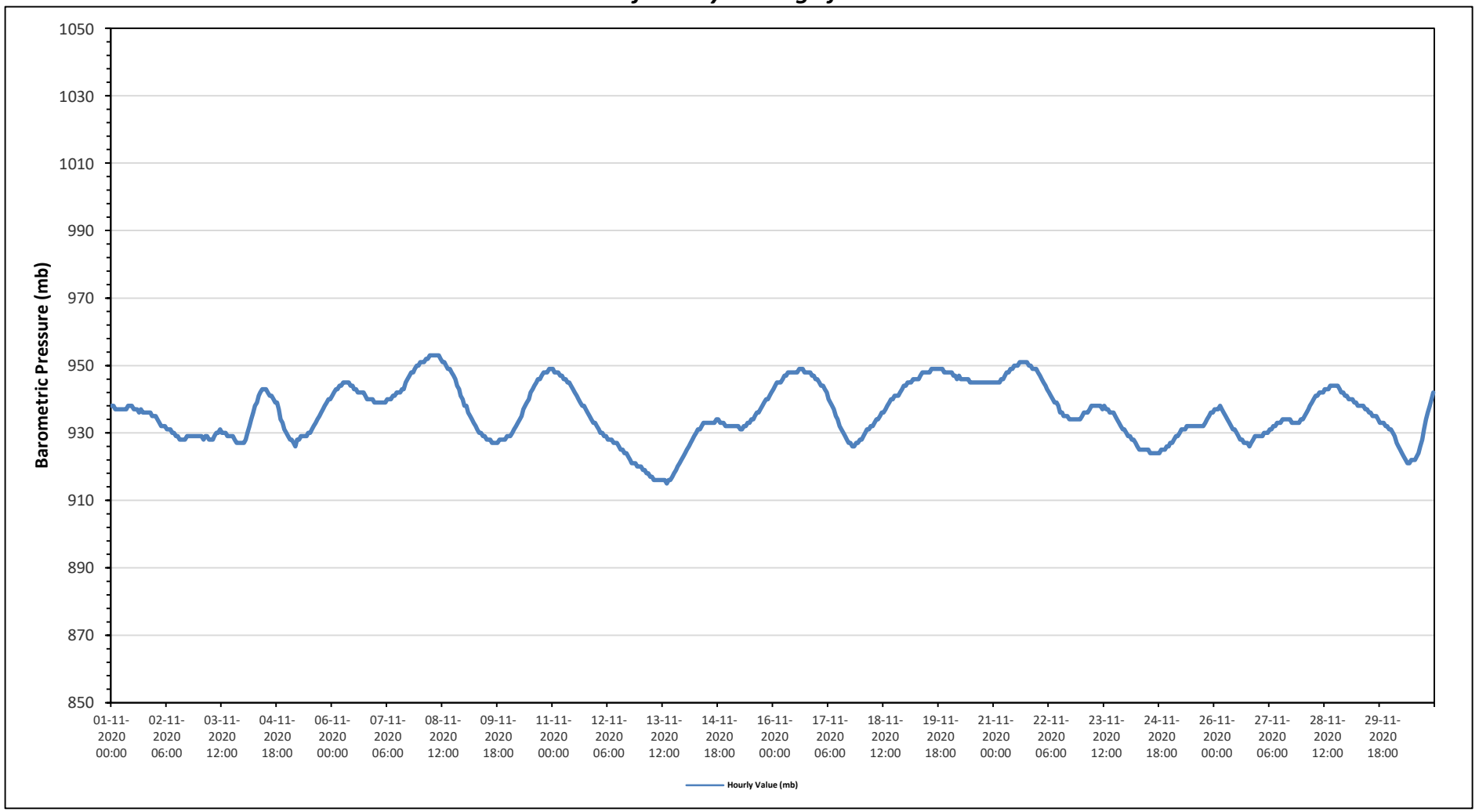
Maximum Hourly Value:	953	mb	on November 8 at hour 5	Hours in Service:	720
Maximum Daily Value:	949	mb	on November 8	Hours of Data:	720
Minimum Hourly Value:	915	mb	on November 13 at hour 14	Hours of Missing Data:	0
Minimum Daily Value:	918	mb	on November 13	Hours of Calibration:	0
Monthly Average:	936	mb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	938	938	937	937	937	937	937	937	937	938	938	938	937	937	937	936	937	936	936	936	936	936	935	935	935	938	937
Nov 2	935	934	933	932	932	932	931	931	931	930	930	929	929	928	928	928	928	929	929	929	929	929	929	929	928	935	930
Nov 3	929	929	928	929	929	928	928	928	929	930	930	931	930	930	930	929	929	929	929	928	927	927	927	927	927	931	929
Nov 4	927	928	930	932	934	936	938	939	941	942	943	943	943	942	941	941	940	939	939	937	934	933	931	930	927	943	937
Nov 5	929	928	928	927	926	928	928	929	929	929	929	930	930	931	932	933	934	935	936	937	938	939	940	940	926	940	932
Nov 6	941	942	943	943	944	944	945	945	945	945	944	944	943	943	942	942	942	942	941	940	940	940	940	939	939	945	942
Nov 7	939	939	939	939	939	939	940	940	940	941	941	942	942	942	943	943	945	946	947	948	948	949	950	950	939	950	943
Nov 8	951	951	951	952	952	**953**	**953**	**953**	**953**	**953**	**953**	952	951	951	950	949	949	948	947	946	944	943	941	940	940	**953**	**949**
Nov 9	938	938	936	935	934	933	932	931	930	930	929	929	928	928	928	927	927	927	927	928	928	928	928	929	927	938	930
Nov 10	929	929	930	931	932	933	934	935	937	938	939	940	942	943	944	945	946	946	947	948	948	948	949	949	929	949	940
Nov 11	949	948	948	948	947	947	946	946	945	945	944	943	942	941	940	939	938	938	937	936	935	934	933	933	933	949	942
Nov 12	932	931	930	930	929	929	928	928	928	927	927	927	926	925	925	924	924	923	922	921	921	921	920	920	920	932	926
Nov 13	920	919	919	918	918	917	917	916	916	916	916	916	916	916	**915**	916	916	917	918	919	920	921	922	923	**915**	923	918
Nov 14	924	925	926	927	928	929	930	931	931	932	933	933	933	933	933	933	933	934	934	933	933	933	932	932	924	934	931
Nov 15	932	932	932	932	932	932	931	931	932	932	933	933	934	934	935	936	936	937	938	939	940	940	941	942	931	942	935
Nov 16	943	944	945	945	945	946	947	947	948	948	948	948	948	948	949	949	949	948	948	948	948	947	947	946	943	949	947
Nov 17	946	945	944	944	943	942	940	939	938	937	935	934	932	931	930	929	928	927	927	926	926	927	927	928	926	946	934
Nov 18	928	929	930	931	931	932	932	933	934	934	935	936	936	937	938	939	940	940	941	941	941	942	943	944	928	944	936
Nov 19	944	945	945	945	946	946	946	946	947	948	948	948	948	948	949	949	949	949	949	949	949	948	948	948	944	949	947
Nov 20	948	948	947	947	946	947	946	946	946	946	946	945	945	945	945	945	945	945	945	945	945	945	945	945	945	948	946
Nov 21	945	945	945	945	946	946	947	948	948	949	949	950	950	950	951	951	951	951	951	950	950	949	949	949	945	951	949
Nov 22	948	947	946	945	944	943	942	941	940	939	939	938	936	936	935	935	935	934	934	934	934	934	934	934	934	948	939
Nov 23	935	936	936	936	937	938	938	938	938	938	938	937	938	937	937	936	936	936	935	934	933	932	931	931	931	938	936
Nov 24	930	929	929	928	928	927	926	925	925	925	925	925	925	924	924	924	924	924	924	925	925	925	926	926	924	930	926
Nov 25	927	927	928	929	929	930	931	931	931	932	932	932	932	932	932	932	932	932	932	933	934	935	936	936	927	936	932
Nov 26	937	937	937	938	937	936	935	934	933	932	931	931	930	929	928	928	927	927	927	926	927	928	929	929	926	938	931
Nov 27	929	929	929	930	930	930	931	931	932	932	933	933	933	934	934	934	934	934	933	933	933	933	933	934	929	934	932
Nov 28	934	935	936	937	938	939	940	941	941	942	942	942	943	943	943	944	944	944	944	944	943	942	942	941	934	944	941
Nov 29	941	940	940	940	939	939	938	938	938	938	937	937	936	936	935	935	935	934	933	933	933	932	932	931	931	941	936
Nov 30	931	930	929	927	926	925	924	923	922	921	921	922	922	922	923	924	926	928	931	934	936	938	940	942	921	942	928
Diurnal Maximum	951	951	951	952	952	953	953	953	953	953	953	952	951	951	951	951	951	951	951	950	950	949	950	950			
Diurnal Average	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936			

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

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

Timeseries Chart of Hourly Average for BP - 986c Station



peace river area monitoring program

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

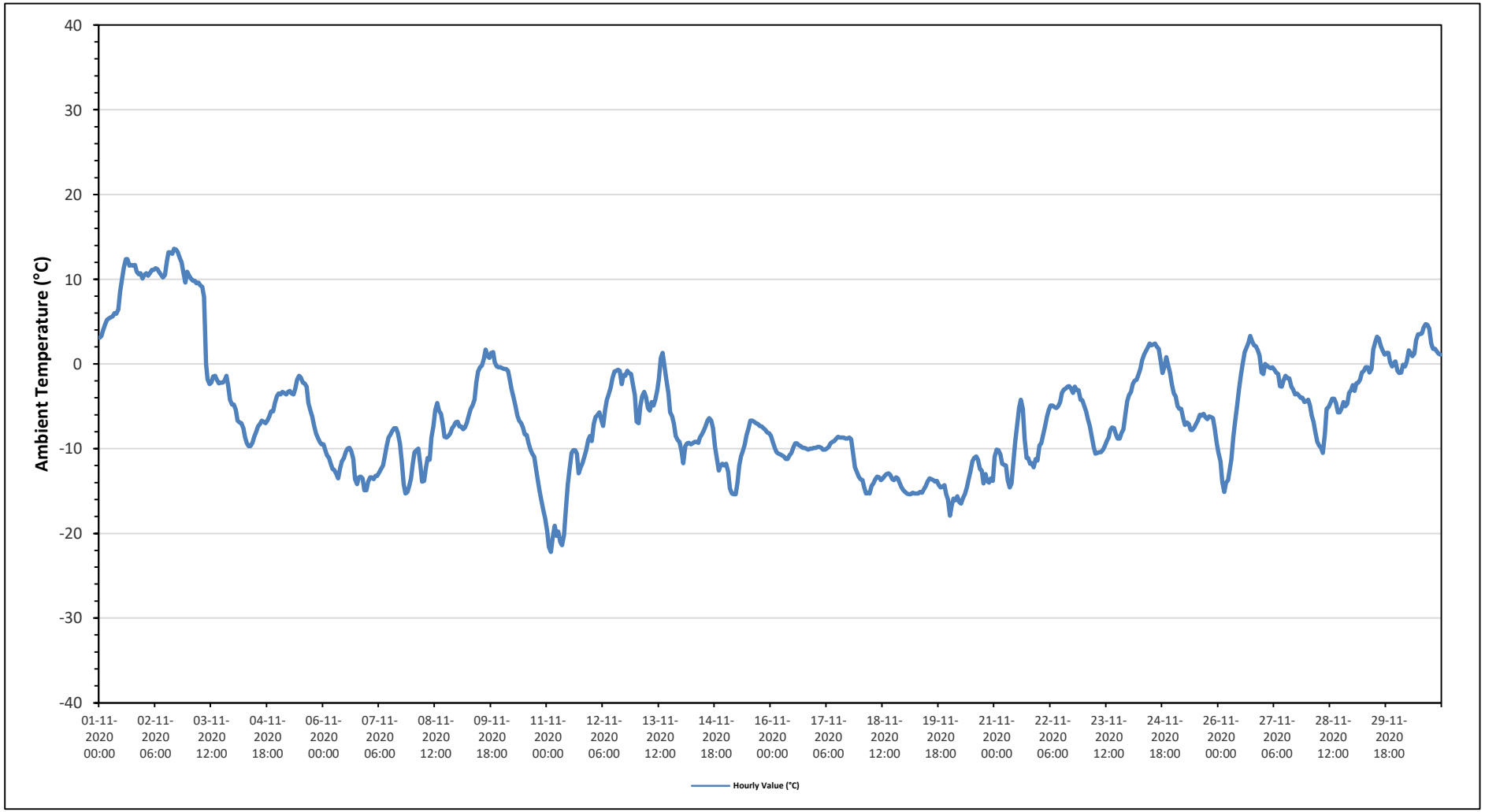
Maximum Hourly Value:	13.6	°C	on November 2 at hour 16	Hours in Service:	720
Maximum Daily Value:	11.5	°C	on November 2	Hours of Data:	720
Minimum Hourly Value:	-22.2	°C	on November 11 at hour 2	Hours of Missing Data:	0
Minimum Daily Value:	-15.3	°C	on November 11	Hours of Calibration:	0
Monthly Average:	-6.0	°C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	3.1	3.3	4	4.7	5.2	5.4	5.5	5.6	6	5.9	6.4	8.5	10.1	11.4	12.4	12.4	11.6	11.7	11.6	11.7	10.9	10.6	10.7	10.1	3.1	12.4	8.3
Nov 2	10.5	10.7	10.4	10.7	11.1	11.1	11.3	11.2	10.8	10.5	10.2	10.5	12	13.2	13.2	13	**13.6**	13.5	13.2	12.5	12	10.8	9.6	10.9	9.6	**13.6**	**11.5**
Nov 3	10.4	10.1	9.8	9.8	9.5	9.6	9.3	9.1	7.9	0	-1.8	-2.4	-2.2	-1.5	-1.4	-1.9	-2.3	-2.2	-2.2	-2	-1.4	-2.6	-4.2	-4.8	-4.8	10.4	2.2
Nov 4	-4.8	-5.4	-6.7	-6.9	-7	-7.6	-8.7	-9.4	-9.7	-9.7	-9.3	-8.6	-8	-7.4	-7.1	-6.7	-6.8	-7	-6.7	-6.2	-5.6	-5.6	-4.6	-3.8	-9.7	-3.8	-7.1
Nov 5	-3.5	-3.6	-3.3	-3.4	-3.6	-3.3	-3.2	-3.5	-3.6	-2.9	-1.9	-1.4	-1.6	-2.2	-2.3	-2.7	-4.6	-5.5	-6.2	-7.2	-8.2	-8.7	-9.2	-9.5	-9.5	-1.4	-4.4
Nov 6	-9.5	-10.2	-10.8	-11.1	-11.7	-12.4	-12.5	-13	-13.5	-12.3	-11.5	-11.1	-10.4	-10	-9.9	-10.3	-11.2	-13.6	-14.2	-13.4	-13.3	-13.5	-14.9	-14.9	-14.9	-9.5	-12.1
Nov 7	-13.9	-13.4	-13.4	-13.6	-13.2	-13.2	-12.8	-12.4	-12	-10.9	-9.6	-8.7	-8.3	-7.9	-7.6	-7.6	-8.2	-9.4	-11.4	-14.2	-15.3	-15.1	-14.4	-13.5	-15.3	-7.6	-11.7
Nov 8	-11.8	-10.4	-10.2	-10	-11.9	-13.9	-13.8	-12.3	-11.1	-11.3	-8.7	-7.3	-5.5	-4.6	-5.5	-5.9	-7.1	-8.6	-8.7	-8.5	-8.2	-7.6	-7.3	-6.9	-13.9	-4.6	-9.0
Nov 9	-6.8	-7.4	-7.4	-7.7	-7.5	-6.9	-6.1	-5.3	-4.9	-4.2	-2.2	-0.9	-0.4	-0.2	0.6	1.7	0.9	0.7	1.3	1.4	0.2	-0.3	-0.4	-0.4	-7.7	1.7	-2.6
Nov 10	-0.5	-0.6	-0.6	-0.8	-1.9	-3	-4	-4.9	-6.1	-6.7	-7	-7.5	-8.3	-8.4	-9.3	-10.1	-10.6	-11	-12.2	-13.7	-15	-16.1	-17.3	-18.2	-18.2	-0.5	-8.1
Nov 11	-19.7	-21.6	**-22.2**	-20.5	-19.1	-20.3	-19.8	-21	-21.4	-20.2	-17.3	-14.2	-12.4	-10.5	-10.2	-10.2	-10.6	-12.9	-12.2	-11.7	-10.9	-10.2	-9	-8.5	**-22.2**	-8.5	-15.3
Nov 12	-9.1	-7.1	-6.3	-6	-5.7	-6.6	-7.3	-5.4	-4.2	-3.6	-2.8	-1.7	-0.9	-0.8	-0.7	-0.8	-2.4	-1.3	-1.4	-0.8	-1.1	-1.2	-2.4	-3.7	-9.1	-0.7	-3.5
Nov 13	-6.8	-7	-4.9	-3.8	-3.3	-3.9	-5.2	-5.5	-4.5	-4.9	-4.2	-3.1	-1.8	0.7	1.3	-0.4	-1.9	-3.4	-5.7	-6.2	-7.1	-8.5	-9	-9.2	-9.2	1.3	-4.5
Nov 14	-10.3	-11.7	-9.7	-9.4	-9.3	-9.5	-9.4	-9.2	-9.2	-9.3	-8.7	-8.3	-7.9	-7.4	-6.7	-6.4	-6.7	-7.6	-9.8	-11.1	-12.6	-12	-11.8	-12	-12.6	-6.4	-9.4
Nov 15	-11.8	-12.7	-14.7	-15.3	-15.4	-15.4	-14	-12	-10.9	-10.3	-9.5	-8.4	-7.6	-6.7	-6.7	-6.8	-7	-7.1	-7.3	-7.4	-7.6	-7.8	-8.1	-8.2	-15.4	-6.7	-9.9
Nov 16	-8.5	-9.2	-9.9	-10.4	-10.6	-10.7	-10.8	-10.9	-11.2	-11.2	-10.8	-10.5	-9.9	-9.4	-9.4	-9.6	-9.7	-9.9	-9.9	-10	-10.1	-10	-10	-9.9	-11.2	-8.5	-10.1
Nov 17	-9.9	-9.8	-9.8	-9.9	-10.1	-10.1	-10	-9.8	-9.4	-9.2	-9.1	-8.8	-8.6	-8.7	-8.7	-8.7	-8.8	-8.8	-8.7	-8.9	-10.4	-12.2	-12.7	-13.3	-13.3	-8.6	-9.8
Nov 18	-13.6	-13.7	-14.5	-15.3	-15.2	-15.3	-14.4	-14.1	-13.6	-13.3	-13.4	-13.7	-13.5	-13.2	-13	-12.9	-13.1	-13.6	-13.7	-13.4	-13.5	-14.1	-14.6	-14.9	-15.3	-12.9	-13.9
Nov 19	-15.1	-15.3	-15.4	-15.4	-15.2	-15.3	-15.3	-15.3	-15.1	-15.2	-14.8	-14.4	-13.9	-13.5	-13.6	-13.7	-13.9	-13.8	-14.3	-14.6	-14.5	-14.3	-15.4	-16	-16.0	-13.5	-14.7
Nov 20	-17.9	-16.7	-15.9	-16.1	-15.6	-16.3	-16.5	-15.8	-15.4	-14.6	-13.6	-12.7	-11.5	-11.1	-10.9	-11.3	-12.4	-12.6	-14.1	-13	-13.8	-14	-13.5	-13.8	-17.9	-10.9	-14.1
Nov 21	-11	-10.1	-10.2	-10.7	-11.8	-11.9	-12	-13.7	-14.6	-14.1	-11.4	-9.1	-7.3	-5.2	-4.2	-5.3	-8.8	-11.1	-11.1	-11.8	-11.7	-12.2	-11.2	-11.4	-14.6	-4.2	-10.5
Nov 22	-9.6	-9.4	-8.3	-7.4	-6.2	-5.4	-4.9	-4.9	-5.1	-5.2	-5	-4.5	-3.4	-3	-2.9	-2.7	-2.6	-2.9	-3.4	-2.7	-3.1	-3.1	-4.2	-4.3	-9.6	-2.6	-4.8
Nov 23	-4.9	-5.6	-6.5	-7.4	-8.5	-9.8	-10.6	-10.5	-10.4	-10.4	-10.1	-9.7	-9.1	-8.7	-7.8	-7.5	-7.6	-8.3	-8.8	-8.8	-8.2	-7.7	-6.1	-4.4	-10.6	-4.4	-8.2
Nov 24	-3.7	-3.3	-2.4	-2	-1.9	-1.3	-0.6	0.4	1.1	1.5	1.9	2.4	2.2	2.3	2.4	2	1.8	0.3	-1.1	-0.3	0.8	-0.1	-1.1	-2.4	-3.7	2.4	0.0
Nov 25	-3.5	-3.8	-5	-5.3	-5.3	-6.4	-7.2	-6.9	-7.1	-7.8	-7.8	-7.5	-7.1	-6.7	-6	-6.1	-5.9	-6.3	-6.5	-6.2	-6.3	-6.4	-7.6	-9.3	-9.3	-3.5	-6.4
Nov 26	-10.5	-11.5	-13.9	-15.1	-14	-13.7	-12.4	-11.3	-8.6	-6.8	-4.9	-3.1	-1.3	0	1.4	1.9	2.4	3.3	2.7	2.2	2.1	1.6	1	-1	-15.1	3.3	-4.6
Nov 27	-1.2	0	-0.2	-0.4	-0.5	-0.4	-0.7	-1	-1.2	-2.6	-2.7	-1.9	-1.4	-1.7	-1.7	-2.7	-3	-3.6	-3.5	-3.7	-4	-4	-4.5	-4.4	-4.5	0.0	-2.1
Nov 28	-4.2	-4.9	-6.1	-6.8	-8	-9.2	-9.6	-9.9	-10.5	-8.3	-5.3	-5.1	-4.6	-4.1	-4.1	-4.6	-5.7	-5.7	-5.2	-4.5	-5	-4.7	-3.4	-3.1	-10.5	-3.1	-5.9
Nov 29	-2.5	-3.2	-2.3	-2.2	-1.8	-1	-0.8	-0.4	-0.4	-1	-0.6	1.7	2.6	3.2	3	2.1	1.6	1.1	1.3	1.3	0.2	-0.3	0.1	0.3	-3.2	3.2	0.1
Nov 30	-0.8	-1.1	-1	-0.1	-0.3	0.3	1.6	1.3	0.9	1.2	2.8	3.5	3.5	3.6	4.3	4.7	4.6	4.2	2.4	1.8	1.8	1.5	1.2	1.1	-1.1	4.7	1.8
Diurnal Maximum	10.5	10.7	10.4	10.7	11.1	11.1	11.3	11.2	10.8	10.5	10.2	10.5	12.0	13.2	13.2	13.0	13.6	13.5	13.2	12.5	12.0	10.8	10.7	10.9			
Diurnal Average	-6.7	-6.8	-6.9	-6.9	-7.0	-7.2	-7.2	-7.0	-6.9	-6.9	-6.1	-5.3	-4.6	-4.0	-3.7	-3.9	-4.5	-5.0	-5.5	-5.6	-6.0	-6.3	-6.5	-6.6			

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

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

Timeseries Chart of Hourly Average for AT - 986c Station



PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

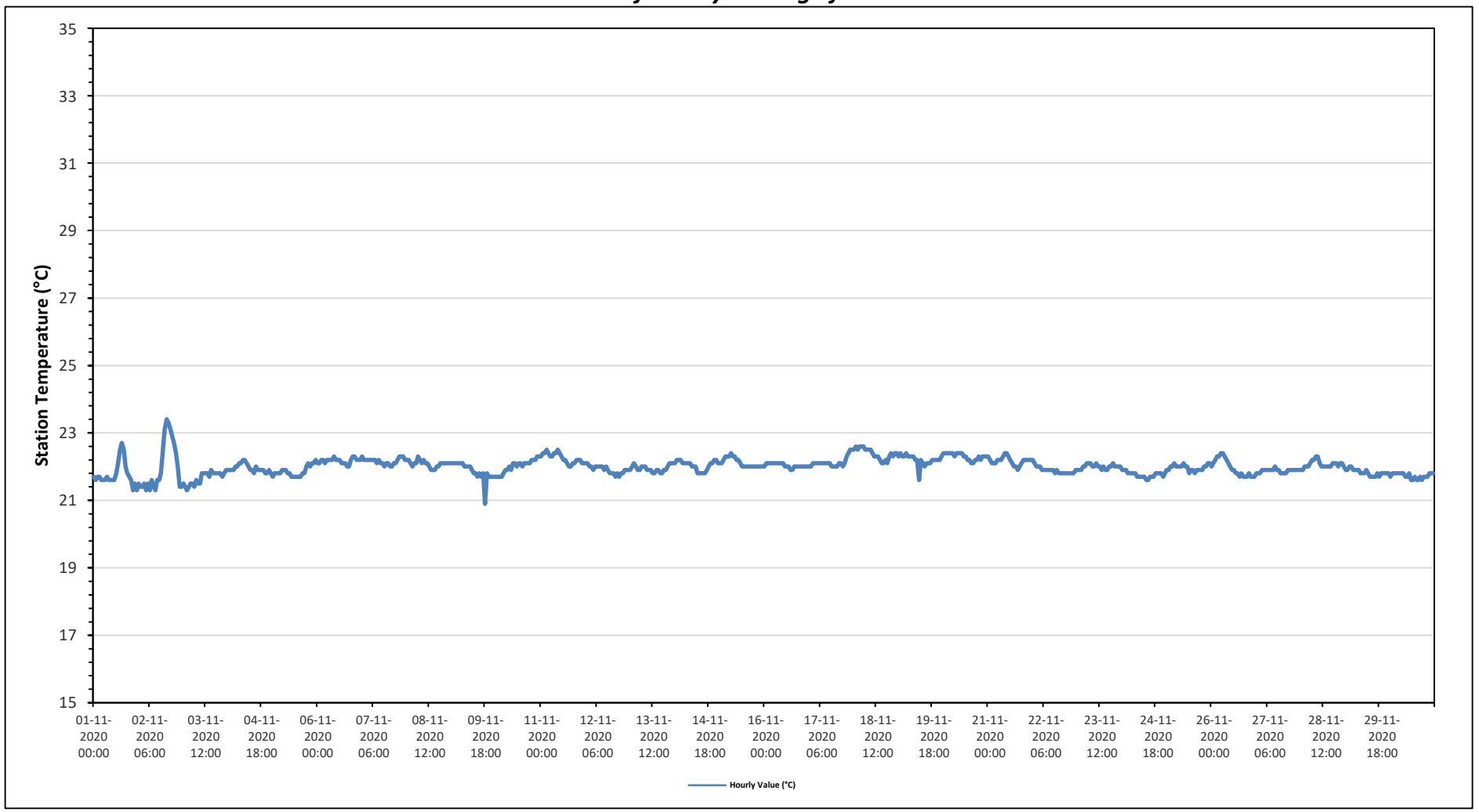
Maximum Hourly Value:	23.4	°C	on November 2 at hour 15	Hours in Service:	720
Maximum Daily Value:	22.4	°C	on November 18	Hours of Data:	720
Minimum Hourly Value:	20.9	°C	on November 9 at hour 18	Hours of Missing Data:	0
Minimum Daily Value:	21.7	°C	on November 3	Hours of Calibration:	0
Monthly Average:	22.0	°C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	21.7	21.6	21.7	21.7	21.6	21.6	21.6	21.7	21.6	21.6	21.6	21.6	21.8	22.1	22.5	22.7	22.5	22.0	21.8	21.7	21.6	21.3	21.5	21.3	21.3	22.7	21.8
Nov 2	21.5	21.4	21.4	21.5	21.3	21.5	21.3	21.6	21.4	21.3	21.6	21.6	21.8	22.5	23.1	**23.4**	23.3	23.1	22.9	22.7	22.4	22.0	21.4	21.4	21.3	**23.4**	22.0
Nov 3	21.5	21.4	21.3	21.4	21.5	21.5	21.4	21.6	21.5	21.5	21.8	21.8	21.8	21.8	21.7	21.9	21.8	21.8	21.8	21.8	21.8	21.7	21.8	21.9	21.3	21.9	21.7
Nov 4	21.9	21.9	21.9	21.9	22.0	22.0	22.1	22.1	22.2	22.2	22.1	22.0	21.9	21.9	21.8	22.0	21.9	21.9	21.9	21.9	21.8	21.8	21.9	21.8	21.8	22.2	22.0
Nov 5	21.7	21.8	21.8	21.8	21.8	21.9	21.9	21.9	21.8	21.8	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.8	22.0	22.1	22.0	22.1	22.1	22.2	21.7	22.2	21.9
Nov 6	22.1	22.1	22.2	22.2	22.1	22.2	22.2	22.2	22.2	22.3	22.2	22.2	22.2	22.1	22.1	22.1	22.0	22.0	22.2	22.3	22.3	22.2	22.2	22.2	22.0	22.3	22.2
Nov 7	22.3	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.1	22.2	22.1	22.1	22.0	22.1	22.1	22.0	22.0	22.1	22.1	22.2	22.3	22.3	22.3	22.2	22.0	22.3	22.2
Nov 8	22.2	22.2	22.1	22.0	22.1	22.1	22.3	22.2	22.1	22.2	22.1	22.1	22.0	21.9	21.9	21.9	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.1	21.9	22.3	22.1
Nov 9	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.0	22.0	21.9	21.8	21.8	21.7	21.8	21.7	21.8	**20.9**	21.8	21.7	21.7	21.7	21.7	**20.9**	22.1	21.9
Nov 10	21.7	21.7	21.7	21.7	21.8	21.9	21.9	22.0	21.9	22.1	22.1	22.0	22.1	22.1	22.0	22.1	22.1	22.1	22.1	22.2	22.2	22.2	22.3	22.3	21.7	22.3	22.0
Nov 11	22.3	22.4	22.4	22.5	22.4	22.3	22.3	22.4	22.4	22.5	22.4	22.3	22.2	22.2	22.1	22.0	22.0	22.1	22.1	22.2	22.2	22.2	22.1	22.1	22.0	22.5	22.3
Nov 12	22.1	22.1	22.0	22.0	21.9	22.0	22.0	22.0	22.0	22.0	21.9	22.0	21.9	21.8	21.8	21.8	21.7	21.8	21.7	21.8	21.8	21.9	21.9	21.9	21.7	22.1	21.9
Nov 13	21.9	22.0	22.1	22.0	21.9	21.9	22.0	22.0	22.0	21.9	21.9	21.9	21.8	21.8	21.9	21.9	21.8	21.8	21.9	21.9	22.0	22.1	22.1	22.1	21.8	22.1	21.9
Nov 14	22.1	22.2	22.2	22.2	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.0	21.8	21.8	21.8	21.8	21.8	21.9	22.0	22.1	22.1	22.2	22.2	22.1	21.8	22.2	22.0
Nov 15	22.1	22.1	22.2	22.3	22.3	22.3	22.4	22.3	22.3	22.2	22.2	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	22.4	22.1
Nov 16	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.0	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.9	22.1	22.0
Nov 17	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.0	22.0	22.1	22.1	22.0	22.1	22.3	22.4	22.5	22.5	22.0	22.5	22.1
Nov 18	22.5	22.6	22.5	22.6	22.6	22.6	22.5	22.5	22.5	22.5	22.4	22.3	22.3	22.3	22.2	22.1	22.1	22.2	22.1	22.3	22.4	22.3	22.4	22.4	22.1	22.6	**22.4**
Nov 19	22.3	22.4	22.3	22.3	22.4	22.3	22.3	22.3	22.3	22.2	22.2	21.6	22.2	22.1	22.0	22.1	22.1	22.1	22.2	22.2	22.2	22.2	22.2	22.3	21.6	22.4	22.2
Nov 20	22.4	22.4	22.4	22.4	22.4	22.4	22.3	22.4	22.4	22.4	22.4	22.3	22.3	22.2	22.2	22.1	22.1	22.2	22.2	22.3	22.2	22.3	22.3	22.3	22.1	22.4	22.3
Nov 21	22.3	22.2	22.1	22.1	22.1	22.2	22.2	22.2	22.3	22.4	22.4	22.3	22.2	22.1	22.0	22.0	21.9	22.0	22.1	22.2	22.2	22.2	22.2	22.2	21.9	22.4	22.2
Nov 22	22.2	22.1	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.8	21.9	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.9	21.8	22.2	21.9
Nov 23	21.9	21.9	21.9	22.0	22.0	22.1	22.1	22.1	22.0	22.0	22.1	22.0	22.0	21.9	22.0	21.9	21.9	22.0	22.0	22.1	22.0	22.0	22.0	22.0	21.9	22.1	22.0
Nov 24	21.9	21.9	21.9	21.8	21.8	21.8	21.8	21.8	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.7	21.7	21.7	21.8	21.8	21.8	21.8	21.7	21.8	21.6	21.9	21.8
Nov 25	21.9	21.9	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.1	22.0	22.0	21.8	21.9	21.9	21.8	21.9	21.9	21.9	21.9	22.0	22.0	22.1	22.1	21.8	22.1	22.0
Nov 26	22.0	22.1	22.2	22.3	22.3	22.4	22.4	22.3	22.2	22.1	22.0	21.9	21.9	21.8	21.8	21.7	21.8	21.7	21.7	21.7	21.8	21.7	21.7	21.7	21.7	22.4	22.0
Nov 27	21.8	21.8	21.8	21.9	21.9	21.9	21.9	21.9	21.9	21.9	22.0	21.9	21.9	21.8	21.8	21.8	21.8	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.8	22.0	21.9
Nov 28	21.9	21.9	22.0	22.0	22.0	22.1	22.2	22.2	22.3	22.3	22.1	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.1	22.1	22.0	22.1	22.1	22.0	21.9	22.3	22.1
Nov 29	21.9	21.9	22.0	22.0	21.9	21.9	21.9	21.9	21.8	21.8	21.8	21.9	21.8	21.7	21.7	21.7	21.7	21.8	21.7	21.8	21.8	21.8	21.8	21.8	21.7	22.0	21.8
Nov 30	21.7	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.7	21.7	21.8	21.6	21.6	21.7	21.6	21.6	21.7	21.6	21.7	21.7	21.7	21.8	21.8	21.8	21.6	21.8	21.7
Diurnal Maximum	22.5	22.6	22.5	22.6	22.6	22.6	22.5	22.5	22.5	22.5	22.4	22.3	22.3	22.5	23.1	23.4	23.3	23.1	22.9	22.7	22.4	22.4	22.5	22.5			
Diurnal Average	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.0	22.0	22.0	22.0	21.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0			

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

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

Timeseries Chart of Hourly Average for ST - 986c Station



PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

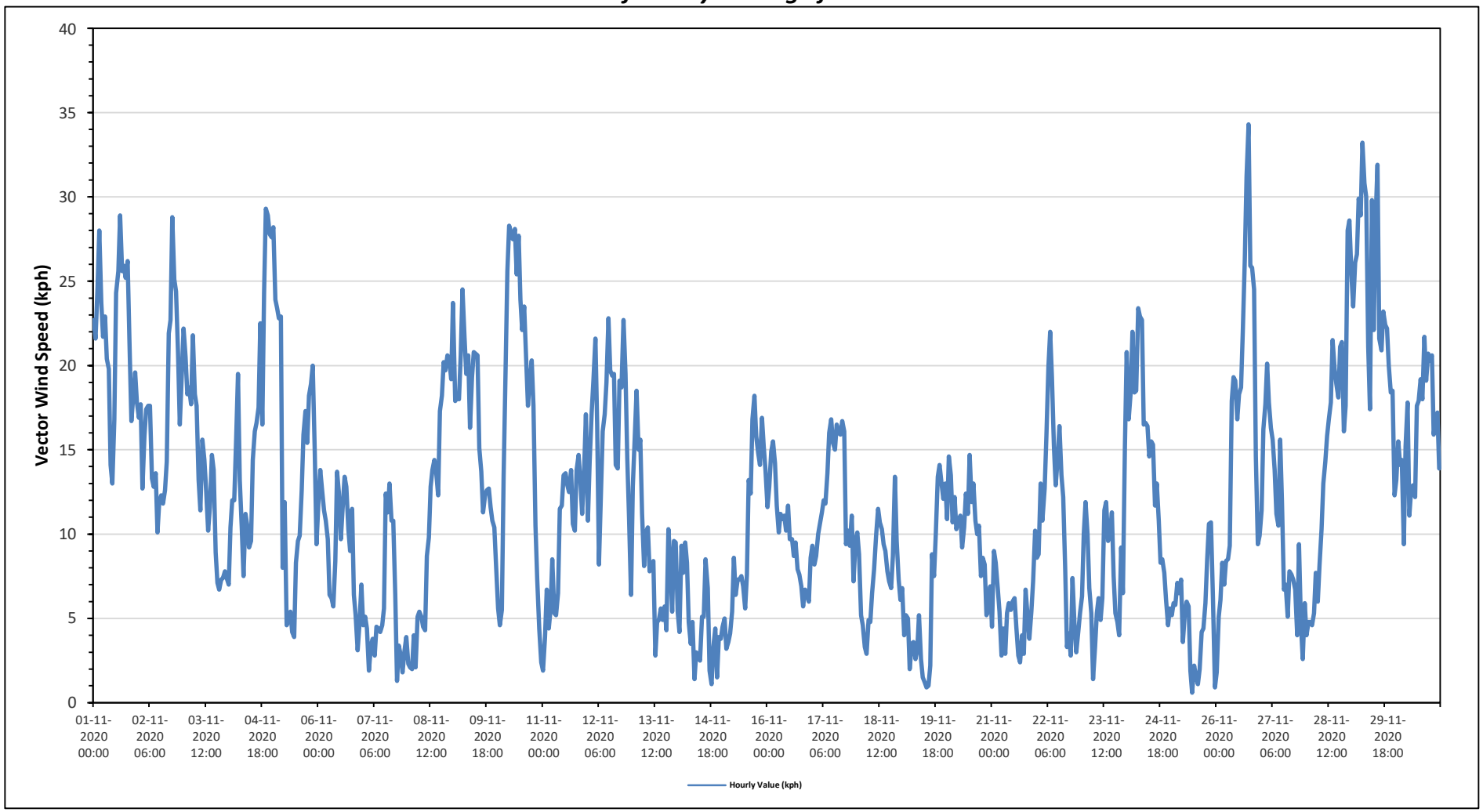
Maximum Hourly Value:	34.3	kph	on November 26 at hour 17	Hours in Service:	720
Maximum Daily Value:	23.9	kph	on November 29	Hours of Data:	720
Minimum Hourly Value:	0.6	kph	on November 25 at hour 11	Hours of Missing Data:	0
Minimum Daily Value:	1.0	kph	on November 14	Hours of Calibration:	0
Monthly Average:	4.8	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
Nov 1	22.7	21.6	24.6	28.0	23.7	21.7	22.9	20.4	19.8	14.1	13.0	16.8	24.3	25.6	28.9	25.6	25.9	25.2	26.2	21.6	16.7	18.1	19.6	17.8	13.0	28.9	21.3
Nov 2	16.9	17.7	12.7	15.8	17.4	17.6	17.6	13.3	12.8	13.6	10.1	11.9	12.3	11.8	12.6	14.3	21.9	22.7	28.8	25.1	24.4	20.7	16.5	19.5	10.1	28.8	16.2
Nov 3	22.2	20.5	18.3	18.7	17.7	21.8	18.3	17.6	13.2	11.4	15.6	14.4	12.6	10.2	11.6	14.7	13.8	8.9	7.1	6.7	7.3	7.4	7.8	7.4	6.7	22.2	6.0
Nov 4	7.0	10.4	12.0	12.0	15.3	19.5	13.2	10.4	7.5	11.2	10.5	9.2	9.6	14.4	16.1	16.6	17.5	22.5	16.5	24.3	29.3	28.9	27.8	27.6	7.0	29.3	9.3
Nov 5	28.2	23.9	23.4	22.8	22.9	8.0	11.9	4.6	4.9	5.4	4.2	3.9	8.3	9.6	9.9	12.6	15.9	17.3	15.4	18.2	18.9	20.0	14.9	9.4	3.9	28.2	5.6
Nov 6	12.0	13.8	12.5	11.4	10.8	9.7	6.4	6.2	5.7	8.4	13.7	12.5	9.7	11.5	13.4	12.8	10.3	9.0	11.5	6.4	5.2	3.1	4.6	7.0	3.1	13.8	5.7
Nov 7	4.6	5.1	4.4	1.9	3.4	3.8	2.8	4.5	4.4	4.2	4.6	5.6	12.4	11.3	13.0	10.8	10.8	6.4	1.3	3.4	2.8	1.8	3.1	3.9	1.3	13.0	2.4
Nov 8	2.3	2.1	2.0	4.0	2.1	5.1	5.4	5.1	4.5	4.3	8.7	9.8	12.8	13.8	14.4	13.7	12.3	17.3	18.2	20.2	19.7	20.6	20.4	19.2	2.0	20.6	10.4
Nov 9	23.7	17.9	18.1	18.0	20.6	24.5	21.7	19.5	20.6	16.3	19.3	20.8	20.7	20.6	15.1	13.7	11.3	12.3	12.6	12.7	11.6	10.8	10.4	8.1	8.1	24.5	15.4
Nov 10	5.6	4.6	5.5	13.4	19.9	25.6	28.3	27.9	27.5	28.1	25.4	27.7	23.9	22.1	23.5	20.7	17.6	19.1	20.3	17.6	10.5	7.3	4.4	2.4	2.4	28.3	17.2
Nov 11	1.9	3.9	6.7	4.4	5.5	8.5	5.3	5.2	6.5	11.5	11.7	13.5	13.6	12.9	12.5	13.8	10.6	10.2	13.8	14.7	13.2	11.2	13.8	17.1	1.9	17.1	9.7
Nov 12	10.8	14.3	17.2	19.1	21.6	16.5	8.2	12.4	16.1	17.1	19.0	22.8	19.7	19.4	19.5	14.1	13.9	19.1	18.7	22.7	19.5	14.5	11.0	6.4	6.4	22.8	16.0
Nov 13	12.8	15.8	18.5	15.0	15.6	11.2	8.1	10.1	10.4	7.8	8.1	8.4	2.8	4.8	4.9	5.6	4.9	5.7	4.3	10.3	8.5	5.4	9.6	9.5	2.8	18.5	3.9
Nov 14	5.4	4.2	9.3	7.7	9.5	8.3	4.8	3.5	4.8	1.4	3.0	2.7	2.5	5.1	5.1	8.5	6.8	1.9	1.1	3.3	4.4	1.5	3.9	3.8	1.1	9.5	**1.0**
Nov 15	4.5	5.0	3.2	3.6	4.1	5.4	8.6	6.4	7.3	7.3	7.5	6.9	5.6	7.6	13.2	12.4	16.8	18.2	15.8	14.8	14.1	16.9	15.2	13.8	3.2	18.2	9.2
Nov 16	11.6	12.8	14.9	15.5	14.2	11.7	10.1	11.2	10.9	11.1	10.2	11.7	9.7	9.7	8.7	9.5	7.9	7.6	6.9	5.7	6.7	6.4	6.0	8.6	5.7	15.5	9.6
Nov 17	9.3	8.2	8.7	10.0	10.6	11.3	12.0	11.8	13.6	16.0	16.8	15.4	15.0	16.5	16.0	15.9	16.7	16.1	9.4	10.2	9.3	11.1	7.2	9.6	7.2	16.8	11.1
Nov 18	10.1	8.8	5.2	4.6	3.3	2.9	4.9	4.8	6.5	7.9	9.9	11.5	10.7	10.3	9.4	9.0	7.8	7.2	6.8	8.7	13.4	9.6	7.3	6.1	2.9	13.4	7.2
Nov 19	6.8	4.0	5.2	5.0	2.0	3.5	3.6	2.6	3.1	5.2	2.6	1.5	1.2	0.9	1.0	2.2	8.8	7.5	10.0	13.4	14.1	13.0	12.1	13.0	0.9	14.1	3.6
Nov 20	10.9	14.6	13.5	10.7	12.2	10.3	10.8	11.1	9.2	10.4	12.4	11.2	14.7	11.9	13.0	10.8	10.0	10.5	7.5	8.6	8.2	5.2	5.5	6.9	5.2	14.7	10.0
Nov 21	4.5	9.0	8.3	6.8	5.4	2.8	4.4	2.9	5.3	5.9	5.5	6.0	6.2	4.5	2.8	2.4	4.0	2.9	6.7	5.1	3.8	5.4	7.2	10.2	2.4	10.2	3.9
Nov 22	8.6	8.8	13.0	10.8	12.7	15.8	19.9	22.0	19.3	15.2	12.9	14.5	16.4	13.5	12.2	7.9	3.3	4.1	2.8	7.4	4.6	3.0	4.2	5.3	2.8	22.0	9.4
Nov 23	6.3	10.0	11.9	10.0	6.8	5.3	1.4	3.3	5.3	6.2	4.9	6.2	11.4	11.9	9.6	10.0	11.3	7.5	5.3	4.8	4.0	9.2	6.5	15.2	1.4	15.2	3.6
Nov 24	20.8	16.8	18.4	22.0	18.4	18.5	23.4	22.9	22.7	16.5	16.6	16.4	14.6	15.5	15.3	11.7	13.0	10.8	8.3	8.5	7.7	6.1	4.6	5.6	4.6	23.4	12.9
Nov 25	5.2	5.9	5.8	7.1	6.5	7.3	3.6	5.3	6.0	5.7	1.9	**0.6**	2.2	1.6	1.1	2.0	4.2	4.4	5.9	8.5	10.6	10.7	6.2	0.9	**0.6**	10.7	3.4
Nov 26	1.8	5.1	6.1	8.3	7.0	8.4	8.5	9.3	17.9	19.3	19.1	16.8	18.3	18.7	22.0	26.3	31.2	**34.3**	25.9	25.8	24.5	14.6	9.4	9.9	1.8	**34.3**	14.0
Nov 27	11.4	16.2	17.7	20.1	17.8	16.3	15.6	13.8	11.2	10.5	15.6	12.0	6.7	7.0	5.1	7.8	7.6	7.3	6.7	4.0	9.4	4.6	2.6	5.9	2.6	20.1	9.9
Nov 28	4.0	4.8	4.8	4.6	5.3	7.7	6.0	8.2	10.3	13.0	14.3	15.8	16.8	17.8	21.5	19.8	18.9	18.1	21.1	21.4	16.1	17.6	28.0	28.6	4.0	28.6	13.6
Nov 29	25.4	23.5	26.1	26.6	29.9	28.9	33.2	30.8	30.0	21.1	17.4	29.8	22.1	28.4	31.9	21.6	20.9	23.2	22.4	22.2	20.0	18.4	18.5	12.3	12.3	33.2	**23.9**
Nov 30	13.2	15.5	14.1	14.4	9.4	15.2	17.8	11.1	12.8	12.9	12.2	17.6	17.9	19.2	18.0	21.7	19.1	20.7	20.3	20.6	15.9	16.8	17.2	13.9	9.4	21.7	10.7
Diurnal Maximum	28	24	26	28	30	29	33	31	30	28	25	30	24	28	32	26	31	34	29	26	29	29	28	29			
Diurnal Average	11.0	11.5	12.1	12.4	12.4	12.4	12.0	11.3	11.7	11.3	11.6	12.5	12.5	12.9	13.4	13.0	13.2	13.3	12.6	13.2	12.5	11.3	10.9	10.8			

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

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

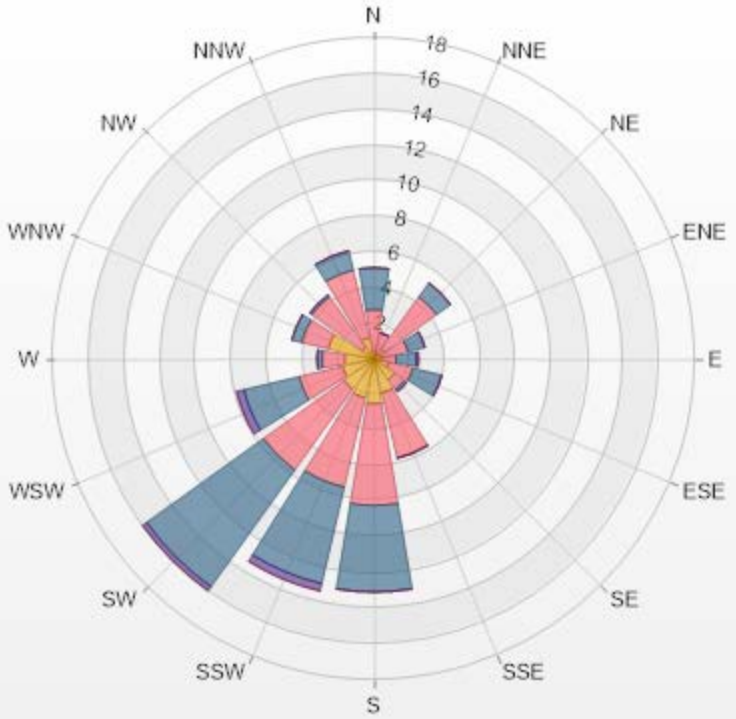
Timeseries Chart of Hourly Average for VWS - 986c Station



Wind: PRAMP 986c Monitor: WDS [KPH] Monthly: 11-2020 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 1.94% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.42	2.36	2.36	0	0	5.14
NNE	0.28	1.25	0	0	0	1.53
NE	0.69	3.61	0.97	0	0	5.27
ENE	0.42	1.53	0.97	0	0	2.92
E	0.42	0.83	1.11	0.14	0	2.5
ESE	0.83	1.39	1.67	0	0	3.89
SE	1.39	0.69	0.14	0	0	2.22
SSE	1.94	3.75	0	0	0	5.69
S	2.5	5.69	4.86	0	0	13.05
SSW	2.22	5.14	5.56	0.42	0	13.34
SW	2.08	5.56	8.06	0.28	0	15.98
WSW	1.81	2.5	3.19	0.42	0	7.92
W	1.67	1.25	0.28	0	0	3.2
WNW	2.64	1.53	0.56	0	0	4.73
NW	0.83	3.47	0.14	0	0	4.44
NNW	1.25	3.89	1.11	0	0	6.25
Summary	21.39	44.44	30.98	1.26	0	98.07

PRAMP 986c 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 1.94% Calm Wind Avg Speed: 1.22(KPH)



% Icon Classes (KPH)	21 1.8-6.0	44 6.0-15.0	31 15.0-29.0	1 29.0-39.0	0 >39.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986c Station - November 2020

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

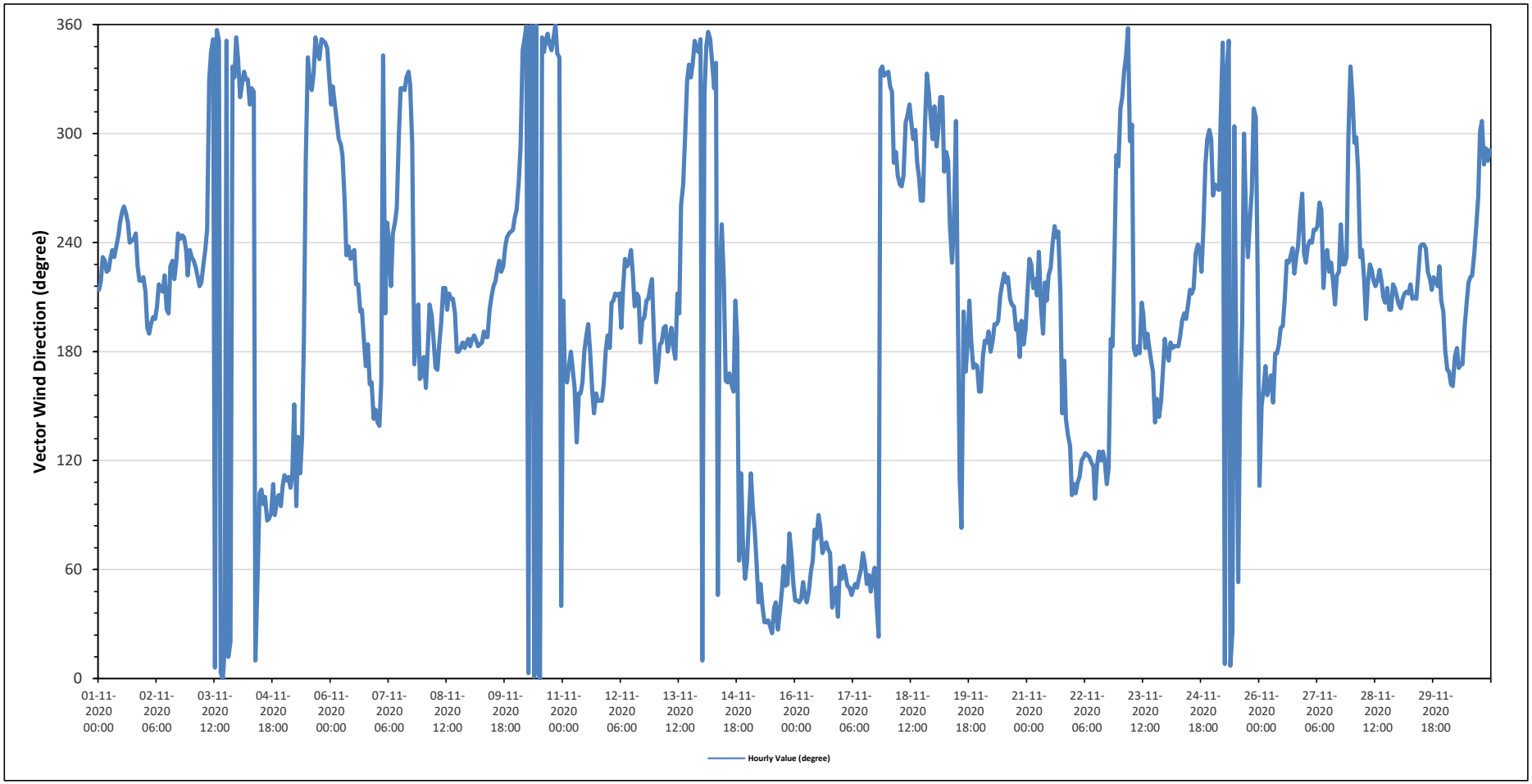
Monthly Average:	216 (SW)	degree	
Hours in Service:	720		
Hours of Data:	720		
Hours of Missing Data:	0		
Hours of Calibration:	0		
Operational Uptime:	100.0		

Day	Hourly Period Starting at (MST)																							Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Nov 1	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	236	SW
Nov 2	SSW	S	S	SSW	SSW	SSW	SSW	SW	SSW	SSW	SW	SSW	SSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SW	221	SW
Nov 3	SW	SW	SW	SW	SW	SW	SW	SW	WSW	NNW	NNW	N	N	N	N	N	N	NNE	N	NNE	NNE	NNW	NNW	N	286	WNW
Nov 4	NNW	NW	NW	NNW	NNW	NNW	NW	NW	NW	N	NE	E	ESE	E	E	E	E	E	ESE	E	E	E	E	ESE	70	ENE
Nov 5	ESE	ESE	ESE	ESE	ESE	SSE	E	SE	ESE	SE	S	WNW	NNW	NNW	NW	NNW	N	NNW	NNW	N	N	N	NNW	NNW	42	NE
Nov 6	NW	NW	NW	NW	WNW	WNW	WNW	W	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	S	S	S	SSE	SSE	SE	SE	240	WSW
Nov 7	SE	SE	SSE	NNW	SSW	WSW	SW	SW	WSW	WSW	WSW	WNW	NW	NW	NW	NNW	NNW	NW	WNW	S	S	SSW	SSE	SSE	290	WNW
Nov 8	S	SSE	S	SSW	SSW	S	S	SSE	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	S	S	S	S	192	S
Nov 9	S	S	S	S	S	S	S	S	S	S	SSW	SSW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	206	SSW
Nov 10	WSW	W	WNW	NNW	N	N	N	N	N	N	N	N	N	N	NNW	N	N	NNW	NNW	N	N	NNW	NNW	NE	354	N
Nov 11	SSW	SSE	SSE	S	S	SSE	SSE	SE	SSE	SSE	SSE	S	S	SSW	S	SSE	SE	SSE	SSE	SSE	SSE	SSE	S	S	168	SSE
Nov 12	S	SSW	SSW	SSW	SSW	SSW	S	SSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	SW	S	212	SSW
Nov 13	SSE	S	S	S	S	SSW	S	S	S	S	S	SSW	SSW	W	W	WNW	NNW	NNW	NNW	NNW	N	NNW	NNW	N	207	SSW
Nov 14	N	NW	NNW	N	N	NNW	NW	NNW	NE	SW	WSW	SW	SSE	SSE	SSE	SSE	SSE	SSW	S	ENE	ESE	ENE	NE	ENE	19	NNE
Nov 15	E	ESE	E	E	ENE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	NE	NE	NNE	NE	NE	ENE	NE	NE	E	ENE	NE	51	NE
Nov 16	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	E	ENE	E	E	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	ENE	58	ENE
Nov 17	NE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	NE	ENE	NE	NE	ENE	NE	NNE	NNW	NNW	NNW	NNW	46	NE
Nov 18	NNW	NW	NW	WNW	WNW	W	W	W	W	NW	NW	NW	NW	WNW	WNW	WNW	W	W	W	WNW	NNW	NW	NW	WNW	302	WNW
Nov 19	NW	WNW	WNW	NW	NW	W	WNW	WNW	WSW	SW	WSW	NW	SSW	ESE	E	SSW	SSE	S	SSW	S	S	S	S	SSE	201	SSW
Nov 20	SSE	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SW	SW	SW	SW	SSW	SSW	SSW	S	SSW	S	SSW	S	S	197	SSW
Nov 21	SSW	SW	SW	SSW	SW	SSW	SW	SSW	S	SW	SSW	SW	SW	WSW	WSW	WSW	WSW	SSW	SE	S	SE	SE	SE	E	200	SSW
Nov 22	ESE	E	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	ESE	SE	ESE	SE	ESE	ESE	ESE	S	S	SW	WNW	W	121	ESE
Nov 23	NW	NW	NNW	NNW	N	WNW	WNW	S	S	S	S	SSW	SSW	S	S	S	S	SSE	SE	SSE	SE	SSE	SSE	S	193	S
Nov 24	S	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	WSW	SW	SW	WSW	W	WNW	WNW	WNW	203	SSW
Nov 25	W	W	W	W	NW	N	N	NNW	N	N	NNE	WNW	SSE	NE	SSE	SSW	WNW	WSW	SW	WSW	W	NW	NW	SW	294	WNW
Nov 26	ESE	SSE	SSE	S	SSE	SSE	SSE	SSE	S	S	S	S	SSW	SSW	SW	SW	SW	SW	SW	SW	SW	WSW	W	SW	212	SSW
Nov 27	SW	SW	WSW	WSW	WSW	WSW	WSW	W	WSW	SSW	SW	SW	SW	SW	SW	SSW	SW	SW	WSW	SW	SW	SW	WNW	NNW	239	WSW
Nov 28	NW	WNW	WNW	W	SW	SW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	SW	SSW	SSW	218	SW
Nov 29	SSW	SSW	SSW	SSW	SSW	SSW	SW	SSW	SSW	SSW	SW	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	218	SW
Nov 30	S	SSE	SSE	SSE	SSE	S	S	S	S	S	S	SSW	SW	SW	SW	SW	WSW	W	WNW	NW	W	WNW	WNW	WNW	224	SW

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

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

Timeseries Chart of Hourly Average for VWD - 986c Station



842b STATION

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

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

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

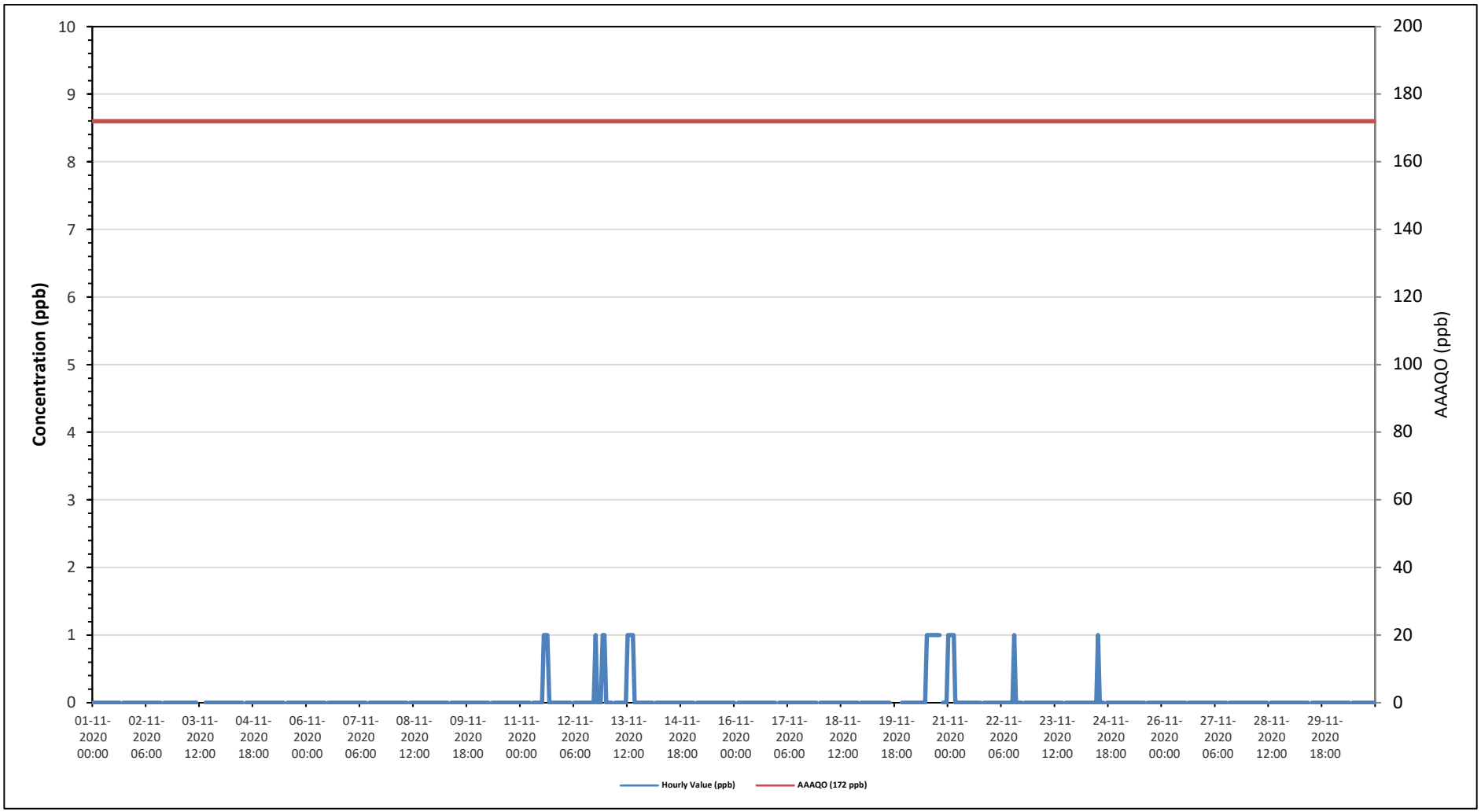
Maximum Hourly Value:	1	ppb	on November 11 at hour 13	Hours in Service:	720
Maximum Daily Value:	0.3	ppb	on November 20	Hours of Data:	682
Minimum Hourly Value:	0	ppb	on November 1 at hour 0	Hours of Missing Data:	2
Minimum Daily Value:	0.0	ppb	on November 1	Hours of Calibration:	36
Monthly Average:	0.0	ppb		Operational Uptime:	99.7

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

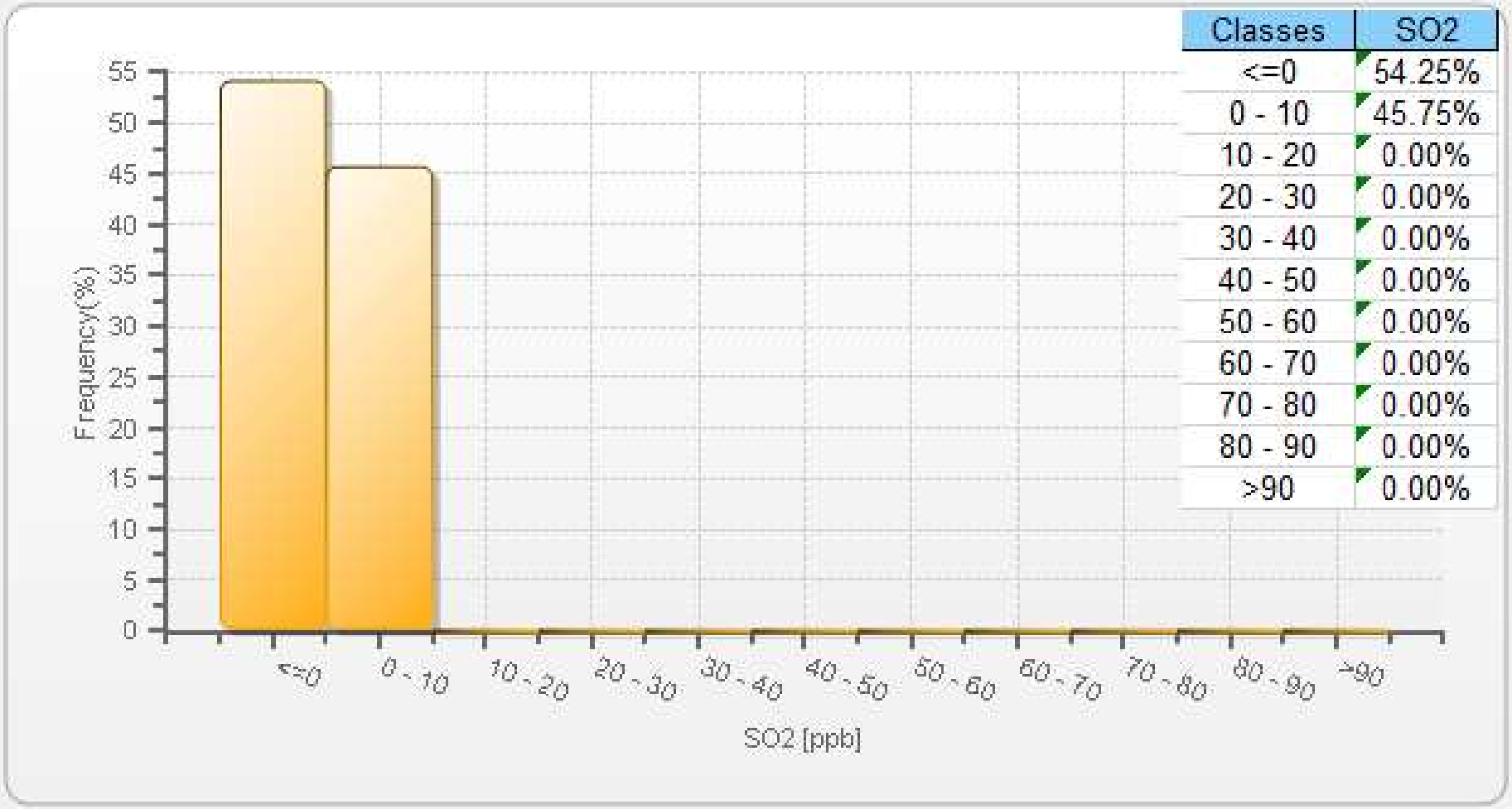
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for SO2 - 842b Station



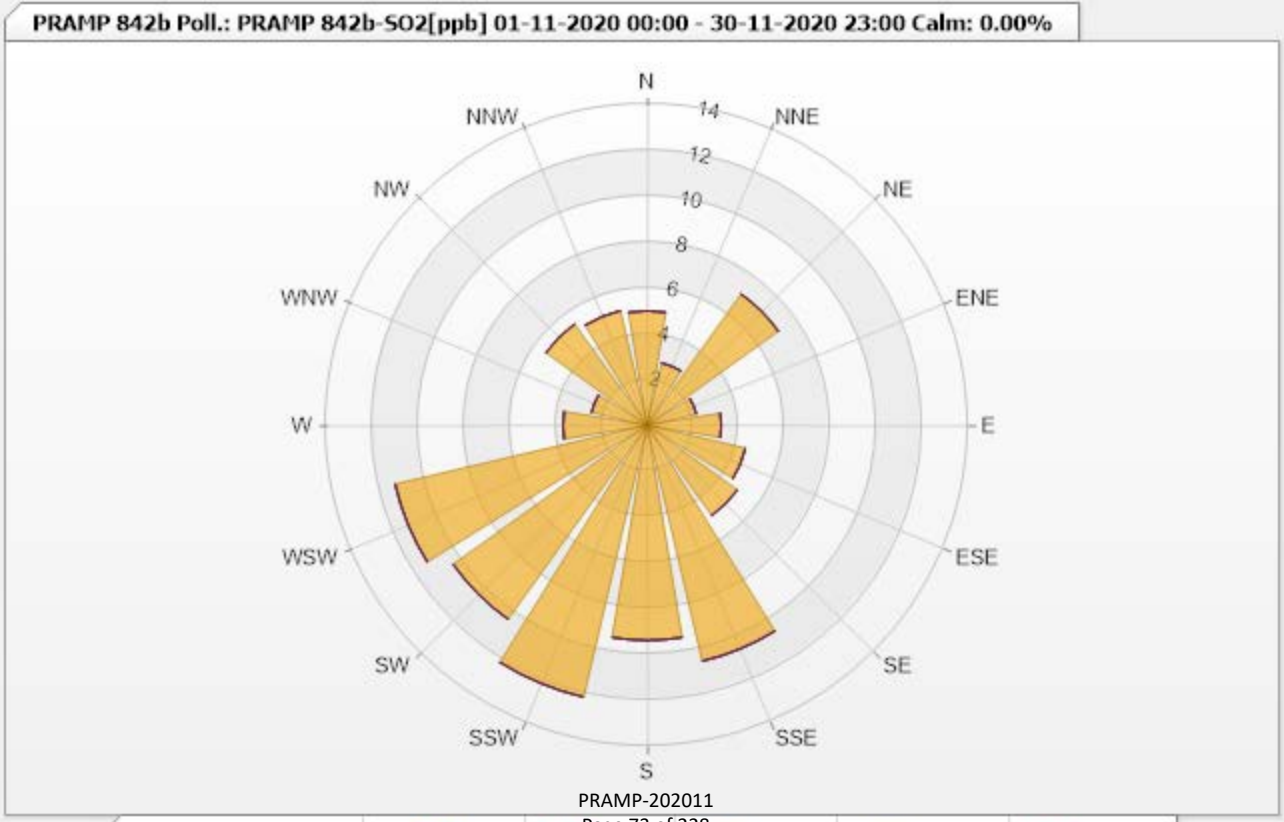
SO2[ppb] Histogram: PRAMP 842b Monthly: 11-2020 1 Hr.



Classes	SO2
<=0	54.25%
0 - 10	45.75%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: PRAMP 842b Poll.: PRAMP 842b-SO2[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.72% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	4.99	0	0	0	0	4.99
NNE	2.79	0	0	0	0	2.79
NE	7.04	0	0	0	0	7.04
ENE	2.2	0	0	0	0	2.2
E	3.23	0	0	0	0	3.23
ESE	4.4	0	0	0	0	4.4
SE	4.84	0	0	0	0	4.84
SSE	10.56	0	0	0	0	10.56
S	9.38	0	0	0	0	9.38
SSW	12.17	0	0	0	0	12.17
SW	10.41	0	0	0	0	10.41
WSW	11.29	0	0	0	0	11.29
W	3.67	0	0	0	0	3.67
WNW	2.49	0	0	0	0	2.49
NW	5.43	0	0	0	0	5.43
NNW	5.13	0	0	0	0	5.13
Summary	100	0	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-SO2[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
14
12
10
8
6
4
2
% 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 - November 2020

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:	0.66	ppb	on November 23 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.46	ppb	on November 24	Hours of Data:	682
Minimum Hourly Value:	0.00	ppb	on November 19 at hour 9	Hours of Missing Data:	2
Minimum Daily Value:	0.17	ppb	on November 19	Hours of Calibration:	36
Monthly Average:	0.39	ppb		Operational Uptime:	99.7

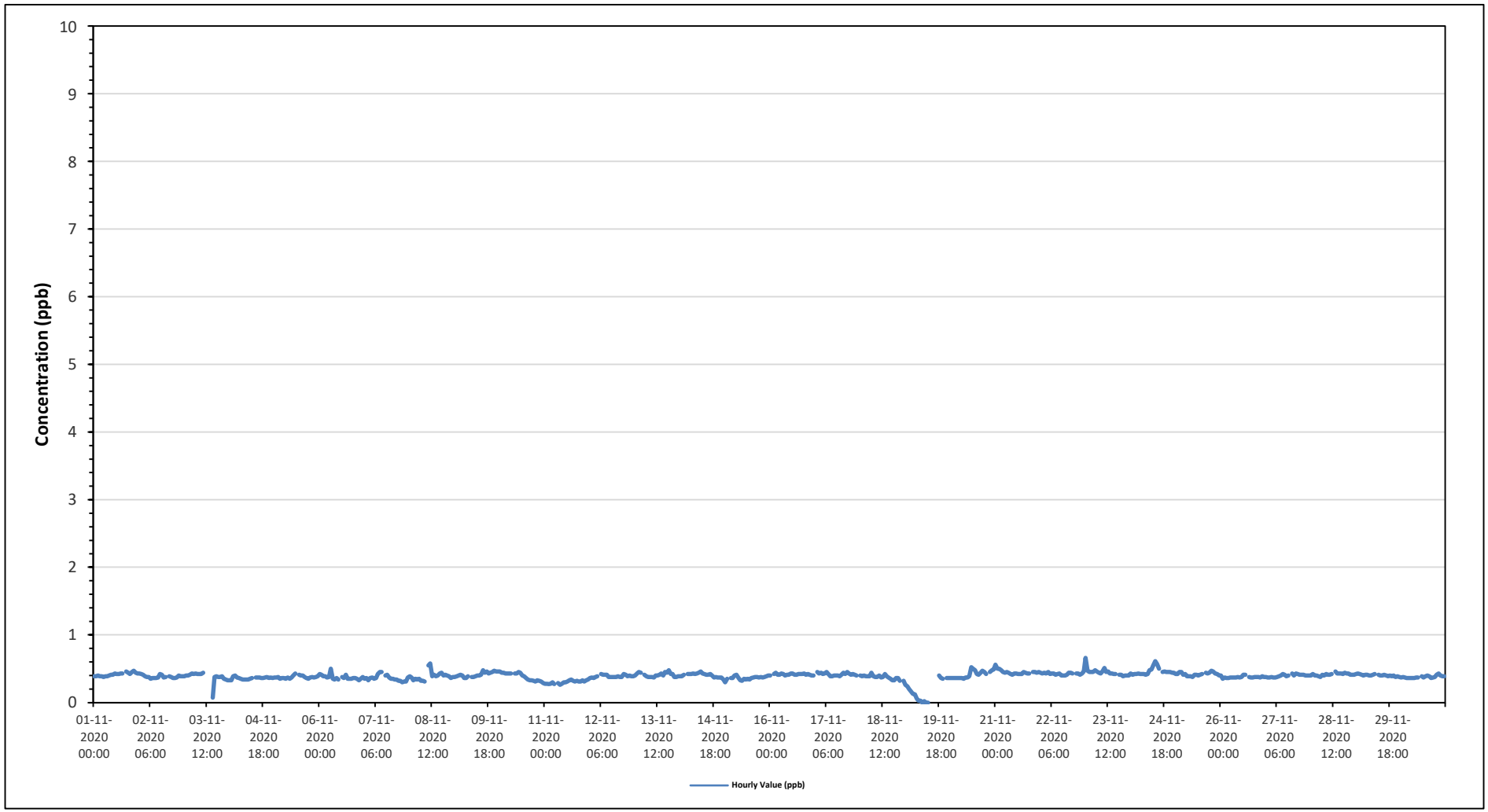
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Nov 1	0.39	0.39	0.4	0.39	0.39	0.38	0.39	0.39	0.4	0.41	0.41	0.43	0.42	0.42	0.43	0.43	S	0.46	0.44	0.42	0.45	0.47	0.44	0.43	0.38	0.47	0.42
Nov 2	0.43	0.42	0.41	0.39	0.38	0.38	0.35	0.36	0.36	0.36	0.37	0.42	0.41	0.37	0.38	S	0.39	0.38	0.36	0.36	0.37	0.4	0.39	0.39	0.35	0.43	0.38
Nov 3	0.39	0.4	0.4	0.41	0.43	0.42	0.43	0.42	0.42	0.42	0.44	P	P	0.44	S	0.07	0.38	0.39	0.38	0.38	0.39	0.35	0.34	0.33	0.07	0.44	0.38
Nov 4	0.33	0.33	0.39	0.4	0.37	0.36	0.35	0.34	0.34	0.34	0.34	0.35	0.36	S	0.37	0.37	0.37	0.36	0.36	0.37	0.38	0.36	0.37	0.36	0.33	0.40	0.36
Nov 5	0.37	0.37	0.38	0.35	0.36	0.36	0.35	0.37	0.35	0.37	0.4	0.43	S	0.41	0.4	0.4	0.38	0.36	0.35	0.37	0.38	0.37	0.38	0.39	0.35	0.43	0.38
Nov 6	0.42	0.41	0.39	0.39	0.37	0.38	0.5	0.35	0.34	0.36	0.34	S	0.38	0.36	0.41	0.35	0.35	0.35	0.36	0.36	0.35	0.33	0.35	0.38	0.33	0.50	0.37
Nov 7	0.35	0.36	0.33	0.36	0.37	0.35	0.36	0.42	0.45	0.45	S	0.4	0.41	0.37	0.35	0.35	0.34	0.34	0.32	0.32	0.3	0.31	0.31	0.37	0.30	0.45	0.36
Nov 8	0.39	0.37	0.33	0.35	0.34	0.35	0.32	0.32	0.31	S	0.55	0.58	0.39	0.41	0.39	0.4	0.43	0.44	0.4	0.41	0.4	0.39	0.36	0.38	0.31	0.58	0.39
Nov 9	0.38	0.39	0.4	0.41	0.4	0.36	0.36	0.39	S	0.38	0.38	0.39	0.4	0.4	0.41	0.48	0.44	0.46	0.43	0.44	0.45	0.47	0.46	0.46	0.36	0.48	0.41
Nov 10	0.46	0.44	0.44	0.43	0.43	0.43	0.43	S	0.43	0.43	0.45	0.44	0.4	0.39	0.36	0.34	0.33	0.33	0.32	0.31	0.33	0.32	0.31	0.29	0.29	0.46	0.38
Nov 11	0.28	0.28	0.27	0.28	0.3	0.27	S	0.29	0.26	0.28	0.3	0.3	0.31	0.33	0.34	0.32	0.31	0.32	0.31	0.31	0.33	0.31	0.33	0.34	0.26	0.34	0.30
Nov 12	0.36	0.37	0.36	0.38	0.39	S	0.42	0.41	0.41	0.41	0.38	0.38	0.38	0.38	0.38	0.39	0.38	0.38	0.42	0.41	0.39	0.4	0.39	0.39	0.36	0.42	0.39
Nov 13	0.4	0.43	0.45	0.44	S	0.41	0.39	0.38	0.38	0.38	0.37	0.4	0.4	0.41	0.43	0.4	0.45	0.44	0.48	0.42	0.42	0.38	0.38	0.39	0.37	0.48	0.41
Nov 14	0.39	0.39	0.41	S	0.42	0.42	0.42	0.43	0.42	0.43	0.44	0.46	0.43	0.42	0.41	0.41	0.42	0.4	0.37	0.38	0.37	0.37	0.37	0.34	0.34	0.46	0.41
Nov 15	0.3	0.35	S	0.36	0.36	0.4	0.41	0.37	0.33	0.32	0.35	0.34	0.35	0.34	0.36	0.37	0.38	0.38	0.37	0.38	0.37	0.38	0.39	0.4	0.30	0.41	0.36
Nov 16	0.4	S	0.42	0.44	0.41	0.41	0.43	0.42	0.4	0.41	0.41	0.43	0.43	0.41	0.41	0.42	0.42	0.42	0.43	0.41	0.42	0.41	0.4	0.4	0.40	0.44	0.42
Nov 17	S	0.45	0.43	0.44	0.42	0.43	0.45	0.42	0.39	0.39	0.4	0.4	0.4	0.39	0.41	0.44	0.42	0.45	0.43	0.41	0.42	0.41	0.4	S	0.39	0.45	0.42
Nov 18	0.4	0.39	0.4	0.39	0.39	0.39	0.44	0.39	0.38	0.38	0.4	0.37	0.38	0.42	0.39	0.37	0.35	0.33	0.33	0.36	0.36	0.32	S	0.32	0.32	0.44	0.38
Nov 19	0.26	0.24	0.2	0.16	0.13	0.12	0.06	0.03	0.03	0	0.02	0	0	C	C	C	C	C	0.4	0.36	0.35	S	0.36	0.36	0.00	0.40	0.17
Nov 20	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.35	0.37	0.37	0.39	0.52	0.5	0.48	0.42	0.41	0.44	0.47	0.45	0.42	S	0.45	0.48	0.49	0.35	0.52	0.41
Nov 21	0.56	0.5	0.5	0.48	0.45	0.44	0.45	0.44	0.42	0.41	0.43	0.43	0.42	0.42	0.42	0.45	0.44	0.43	0.43	S	0.45	0.45	0.44	0.45	0.41	0.56	0.45
Nov 22	0.44	0.43	0.44	0.43	0.45	0.42	0.43	0.43	0.41	0.42	0.43	0.4	0.4	0.4	0.41	0.44	0.44	0.43	S	0.43	0.43	0.41	0.43	0.46	0.40	0.46	0.43
Nov 23	**0.66**	0.47	0.45	0.45	0.45	0.48	0.46	0.44	0.43	0.46	0.51	0.45	0.46	0.43	0.43	0.42	0.42	S	0.41	0.41	0.39	0.4	0.4	0.4	0.39	**0.66**	0.45
Nov 24	0.43	0.41	0.42	0.42	0.43	0.42	0.42	0.42	0.41	0.42	0.48	0.49	0.55	0.61	0.57	0.5	S	0.45	0.46	0.45	0.45	0.45	0.44	0.44	0.41	0.61	**0.46**
Nov 25	0.42	0.42	0.45	0.45	0.41	0.42	0.39	0.39	0.39	0.38	0.41	0.41	0.4	0.41	0.42	S	0.44	0.43	0.44	0.47	0.46	0.43	0.42	0.4	0.38	0.47	0.42
Nov 26	0.4	0.35	0.37	0.36	0.36	0.37	0.37	0.37	0.37	0.38	0.37	0.38	0.41	0.41	S	0.38	0.37	0.37	0.38	0.38	0.38	0.37	0.39	0.38	0.35	0.41	0.38
Nov 27	0.38	0.37	0.37	0.38	0.37	0.37	0.38	0.39	0.4	0.42	0.41	0.39	0.4	S	0.43	0.4	0.43	0.42	0.41	0.41	0.41	0.4	0.4	0.4	0.37	0.43	0.40
Nov 28	0.4	0.42	0.4	0.4	0.39	0.38	0.41	0.4	0.42	0.41	0.41	0.42	S	0.46	0.43	0.43	0.43	0.42	0.44	0.43	0.43	0.41	0.41	0.41	0.38	0.46	0.42
Nov 29	0.42	0.43	0.42	0.41	0.4	0.41	0.41	0.4	0.4	0.41	0.42	S	0.41	0.4	0.4	0.41	0.4	0.39	0.4	0.39	0.4	0.38	0.39	0.38	0.38	0.43	0.40
Nov 30	0.37	0.38	0.37	0.36	0.36	0.36	0.36	0.36	0.37	0.37	S	0.39	0.37	0.39	0.4	0.39	0.36	0.37	0.38	0.41	0.43	0.4	0.39	0.39	0.36	0.43	0.38
Diurnal Maximum	0.66	0.50	0.50	0.48	0.45	0.48	0.50	0.44	0.45	0.46	0.55	0.58	0.55	0.61	0.57	0.50	0.45	0.47	0.48	0.47	0.46	0.47	0.48	0.49			
Diurnal Average	0.40	0.39	0.39	0.39	0.38	0.38	0.39	0.38	0.37	0.38	0.39	0.40	0.39	0.41	0.41	0.39	0.40	0.40	0.40	0.39	0.40	0.39	0.39	0.39			

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

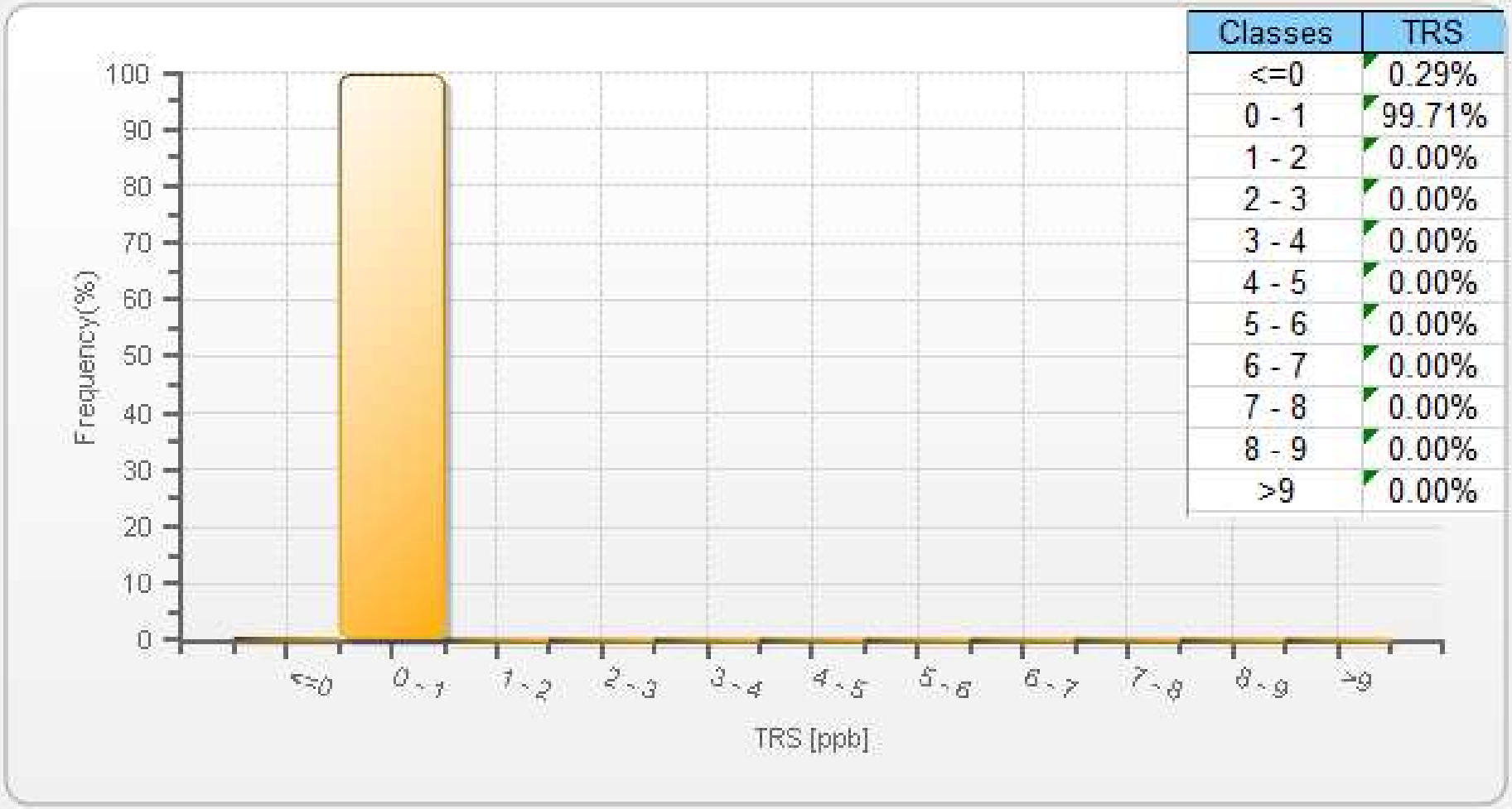
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

Timeseries Chart of Hourly Average for TRS - 842b Station



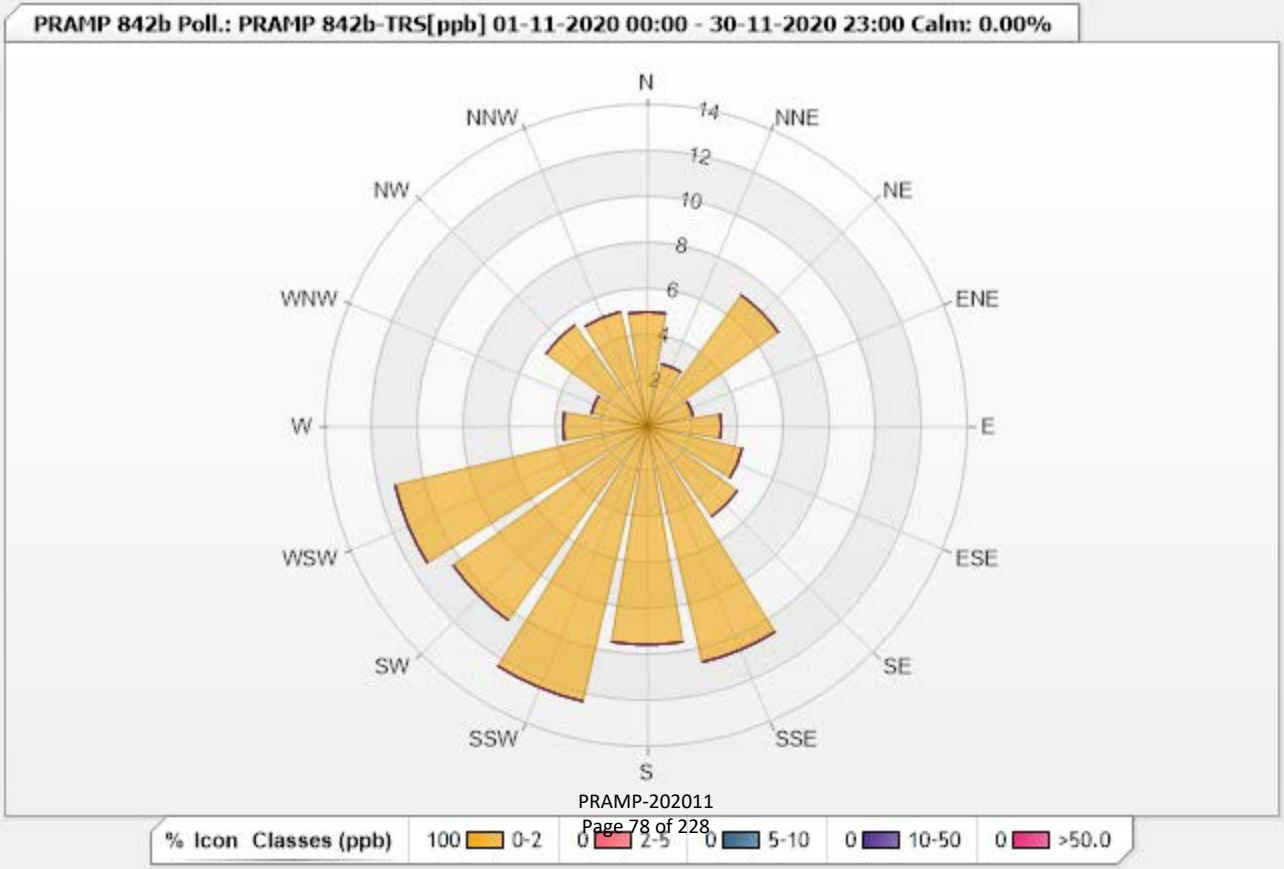
TRS[ppb] Histogram: PRAMP 842b Monthly: 11-2020 1 Hr.



Classes	TRS
<=0	0.29%
0 - 1	99.71%
1 - 2	0.00%
2 - 3	0.00%
3 - 4	0.00%
4 - 5	0.00%
5 - 6	0.00%
6 - 7	0.00%
7 - 8	0.00%
8 - 9	0.00%
>9	0.00%

Wind: PRAMP 842b Poll.: PRAMP 842b-TRS[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.72% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	4.99	0	0	0	0	4.99
NNE	2.79	0	0	0	0	2.79
NE	7.04	0	0	0	0	7.04
ENE	2.05	0	0	0	0	2.05
E	3.23	0	0	0	0	3.23
ESE	4.25	0	0	0	0	4.25
SE	4.84	0	0	0	0	4.84
SSE	10.56	0	0	0	0	10.56
S	9.53	0	0	0	0	9.53
SSW	12.32	0	0	0	0	12.32
SW	10.41	0	0	0	0	10.41
WSW	11.29	0	0	0	0	11.29
W	3.67	0	0	0	0	3.67
WNW	2.49	0	0	0	0	2.49
NW	5.43	0	0	0	0	5.43
NNW	5.13	0	0	0	0	5.13
Summary	100	0	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-TRS[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

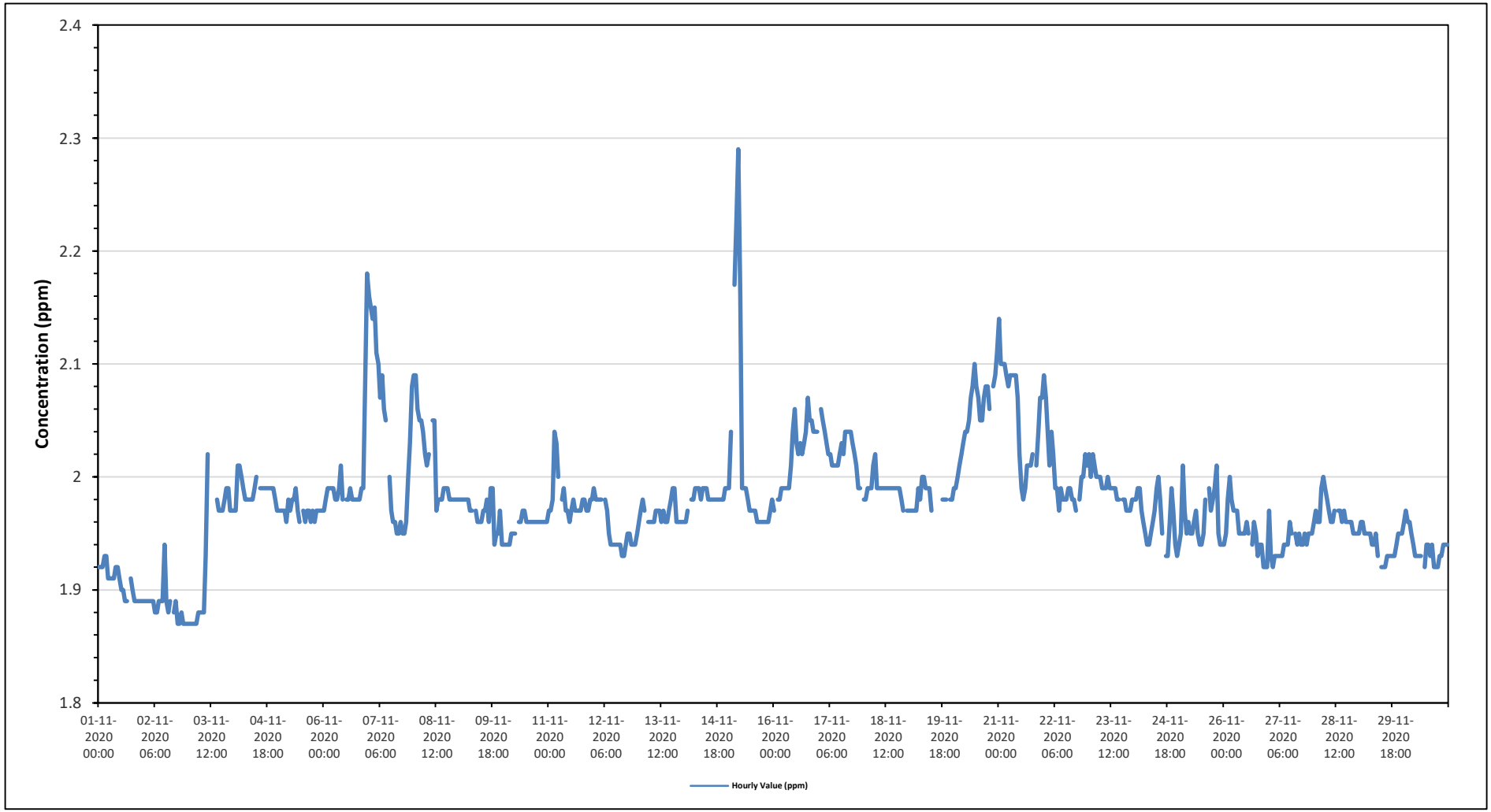
Maximum Hourly Value:	2.29	ppm	on November 15 at hour 5	Hours in Service:	720
Maximum Daily Value:	2.05	ppm	on November 21	Hours of Data:	682
Minimum Hourly Value:	1.87	ppm	on November 2 at hour 18	Hours of Missing Data:	2
Minimum Daily Value:	1.89	ppm	on November 2	Hours of Calibration:	36
Monthly Average:	1.98	ppm		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Nov 1	1.92	1.92	1.92	1.93	1.93	1.91	1.91	1.91	1.91	1.92	1.92	1.91	1.90	1.90	1.89	1.89	S	1.91	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.93	1.91
Nov 2	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.88	1.89	1.89	1.89	1.94	1.89	1.88	1.89	S	1.88	1.89	1.87	1.87	1.88	1.87	1.87	1.87	1.87	1.94	1.89
Nov 3	1.87	1.87	1.87	1.87	1.87	1.88	1.88	1.88	1.88	1.93	2.02	P	P	2.00	S	1.98	1.97	1.97	1.97	1.98	1.99	1.99	1.97	1.97	1.87	2.02	1.93
Nov 4	1.97	1.97	2.01	2.01	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.99	2.00	S	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.97	1.97	2.01	1.99
Nov 5	1.97	1.97	1.97	1.97	1.96	1.98	1.97	1.98	1.98	1.99	1.97	1.96	S	1.97	1.96	1.97	1.97	1.96	1.97	1.96	1.97	1.97	1.97	1.97	1.96	1.99	1.97
Nov 6	1.97	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.99	2.01	1.98	S	1.98	1.98	1.99	1.98	1.98	1.98	1.98	1.98	1.99	1.99	2.09	2.18	1.97	2.18	2.00
Nov 7	2.16	2.15	2.14	2.15	2.11	2.10	2.07	2.09	2.06	2.05	S	2.00	1.97	1.96	1.96	1.95	1.95	1.96	1.95	1.95	1.96	2.00	2.03	2.08	1.95	2.16	2.03
Nov 8	2.09	2.09	2.06	2.05	2.05	2.04	2.02	2.01	2.02	S	2.05	2.05	1.97	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.97	2.09	2.01
Nov 9	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	S	1.97	1.96	1.96	1.96	1.97	1.97	1.98	1.96	1.99	1.99	1.94	1.95	1.95	1.97	1.94	1.94	1.99	1.97
Nov 10	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.94	1.97	1.96
Nov 11	1.97	1.97	1.98	2.04	2.03	2.00	S	1.98	1.99	1.97	1.97	1.96	1.97	1.98	1.97	1.97	1.97	1.97	1.98	1.98	1.97	1.97	1.98	1.98	1.96	2.04	1.98
Nov 12	1.99	1.98	1.98	1.98	1.98	S	1.98	1.97	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.94	1.95	1.95	1.94	1.94	1.94	1.95	1.93	1.99	1.95
Nov 13	1.96	1.97	1.98	1.97	S	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.96	1.97	1.96	1.96	1.97	1.98	1.99	1.99	1.96	1.96	1.96	1.96	1.96	1.99	1.97
Nov 14	1.96	1.96	1.97	S	1.98	1.98	1.99	1.99	1.99	1.98	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.96	1.99	1.98
Nov 15	1.99	2.04	S	2.17	2.23	2.29	2.16	1.99	1.99	1.99	1.98	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	1.96	2.29	2.02
Nov 16	1.97	S	1.98	1.98	1.99	1.99	1.99	1.99	1.99	2.01	2.04	2.06	2.03	2.02	2.03	2.02	2.03	2.04	2.07	2.05	2.05	2.04	2.04	2.04	1.97	2.07	2.02
Nov 17	S	2.06	2.05	2.04	2.03	2.02	2.02	2.01	2.01	2.01	2.01	2.02	2.03	2.02	2.04	2.04	2.04	2.04	2.03	2.02	2.01	1.99	1.99	S	1.99	2.06	2.02
Nov 18	1.98	1.98	1.99	1.99	1.99	2.01	2.02	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	1.98	1.97	S	1.97	1.97	2.02	1.99
Nov 19	1.97	1.97	1.97	1.97	1.97	1.99	1.98	2.00	2.00	1.99	1.99	1.99	1.97	C	C	C	C	C	1.98	1.98	1.98	S	1.98	1.98	1.97	2.00	1.98
Nov 20	1.99	1.99	2.00	2.01	2.02	2.03	2.04	2.04	2.05	2.07	2.08	2.10	2.08	2.07	2.05	2.05	2.07	2.08	2.08	2.06	S	2.08	2.09	2.11	1.99	2.11	2.05
Nov 21	2.14	2.10	2.10	2.10	2.09	2.08	2.09	2.09	2.09	2.09	2.07	2.02	1.99	1.98	1.99	2.01	2.01	2.01	2.02	S	2.01	2.04	2.07	2.07	1.98	2.14	2.05
Nov 22	2.09	2.07	2.04	2.01	2.04	2.02	1.99	1.99	1.97	1.99	1.98	1.98	1.98	1.99	1.99	1.98	1.98	1.97	S	1.98	2.00	2.00	2.02	2.01	1.97	2.09	2.00
Nov 23	2.02	2.00	2.02	2.01	2.00	2.00	2.00	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	1.98	1.98	S	1.98	1.98	1.97	1.97	1.97	1.98	1.97	2.02	1.99
Nov 24	1.98	1.98	1.99	1.99	1.97	1.96	1.95	1.94	1.94	1.95	1.96	1.97	1.99	2.00	1.98	1.95	S	1.93	1.93	1.96	1.99	1.97	1.94	1.93	1.93	2.00	1.96
Nov 25	1.94	1.95	2.01	1.97	1.95	1.96	1.95	1.95	1.96	1.97	1.95	1.94	1.94	1.95	1.98	S	1.99	1.97	1.98	1.99	2.01	1.95	1.94	1.94	1.94	2.01	1.96
Nov 26	1.94	1.95	1.98	2.00	1.98	1.97	1.97	1.97	1.95	1.95	1.95	1.95	1.96	1.95	S	1.94	1.96	1.95	1.93	1.94	1.94	1.92	1.92	1.92	1.92	2.00	1.95
Nov 27	1.97	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.96	1.95	S	1.95	1.94	1.95	1.94	1.94	1.95	1.94	1.95	1.95	1.95	1.92	1.97	1.94
Nov 28	1.96	1.97	1.96	1.96	1.99	2.00	1.99	1.98	1.97	1.96	1.96	1.97	S	1.97	1.97	1.96	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	2.00	1.97
Nov 29	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.93	S	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.95	1.92	1.96	1.94
Nov 30	1.96	1.97	1.96	1.96	1.95	1.94	1.93	1.93	1.93	1.93	S	1.92	1.94	1.94	1.93	1.94	1.92	1.92	1.92	1.93	1.93	1.94	1.94	1.94	1.92	1.97	1.94
Diurnal Maximum	2.16	2.15	2.14	2.17	2.23	2.29	2.16	2.09	2.09	2.09	2.08	2.10	2.08	2.07	2.05	2.05	2.07	2.08	2.08	2.06	2.05	2.08	2.09	2.18			
Diurnal Average	1.98	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.97	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.98			

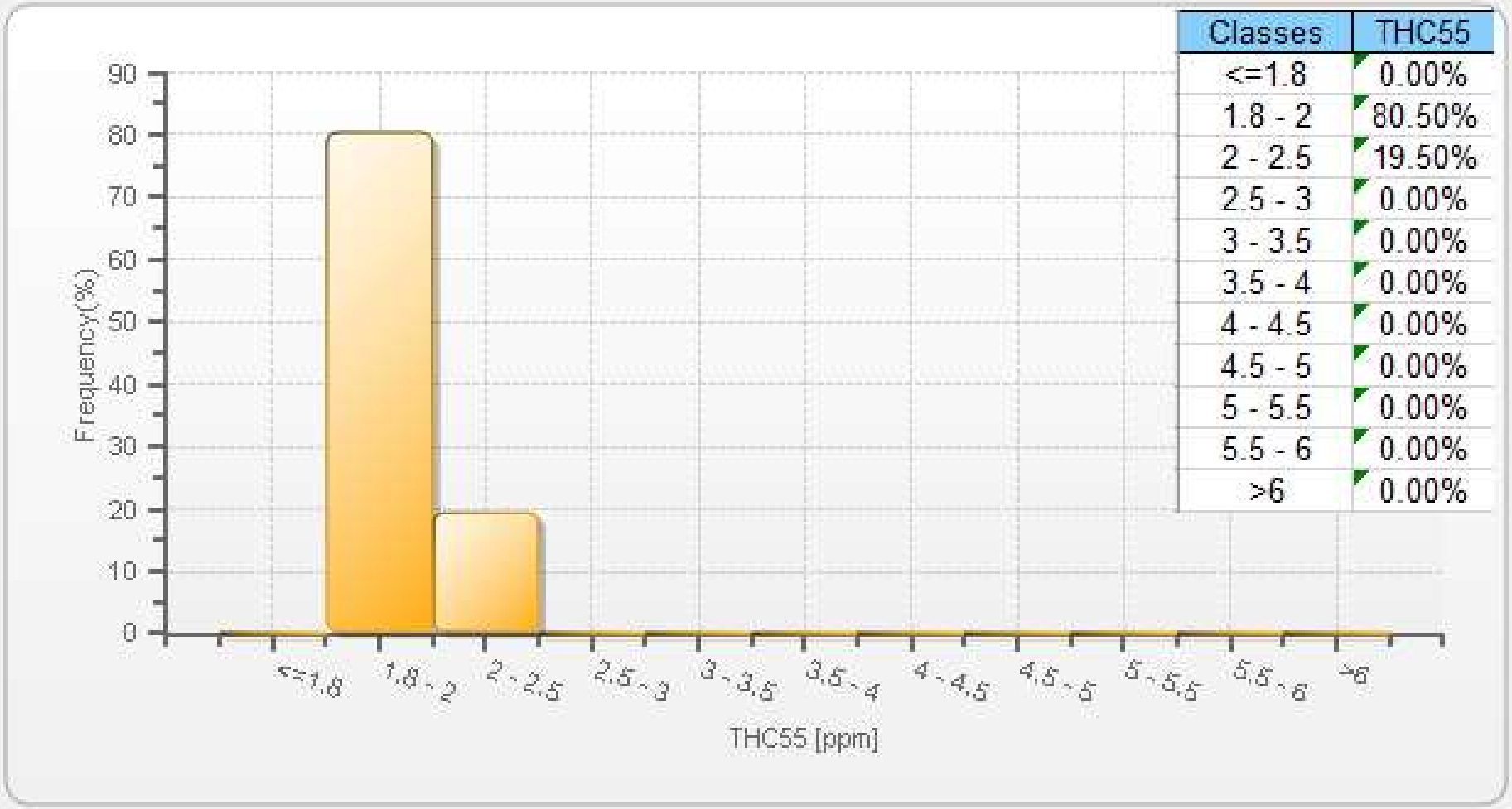
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for THC - 842b Station



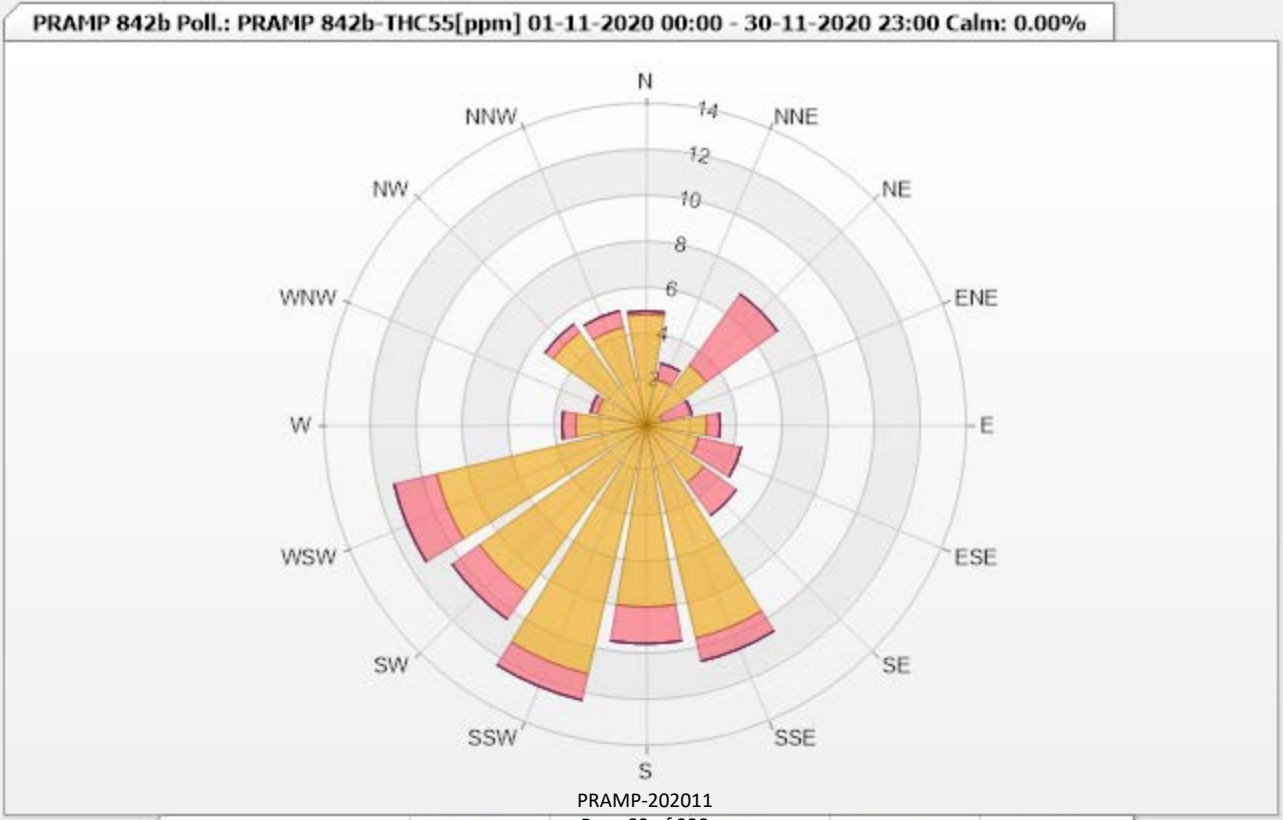
THC55[ppm] Histogram: PRAMP 842b Monthly: 11-2020 1 Hr.



Classes	THC55
<=1.8	0.00%
1.8 - 2	80.50%
2 - 2.5	19.50%
2.5 - 3	0.00%
3 - 3.5	0.00%
3.5 - 4	0.00%
4 - 4.5	0.00%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: PRAMP 842b Poll.: PRAMP 842b-THC55[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.72% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	4.84	0.15	0	0	0	4.99
NNE	2.05	0.73	0	0	0	2.78
NE	3.23	3.81	0	0	0	7.04
ENE	0.73	1.32	0	0	0	2.05
E	2.64	0.59	0	0	0	3.23
ESE	2.35	1.91	0	0	0	4.26
SE	3.08	1.76	0	0	0	4.84
SSE	9.53	1.03	0	0	0	10.56
S	7.92	1.61	0	0	0	9.53
SSW	11.14	1.17	0	0	0	12.31
SW	8.94	1.47	0	0	0	10.41
WSW	9.38	1.91	0	0	0	11.29
W	3.08	0.59	0	0	0	3.67
WNW	2.2	0.29	0	0	0	2.49
NW	4.99	0.44	0	0	0	5.43
NNW	4.4	0.73	0	0	0	5.13
Summary	80.5	19.51	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-THC55[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
14
12
10
8
6
4
2
% Icon Classes (ppm)
81 0-2
20 2-5
0 5-10
0 10-40
0 >40.0

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

METHANE (CH4) in ppm

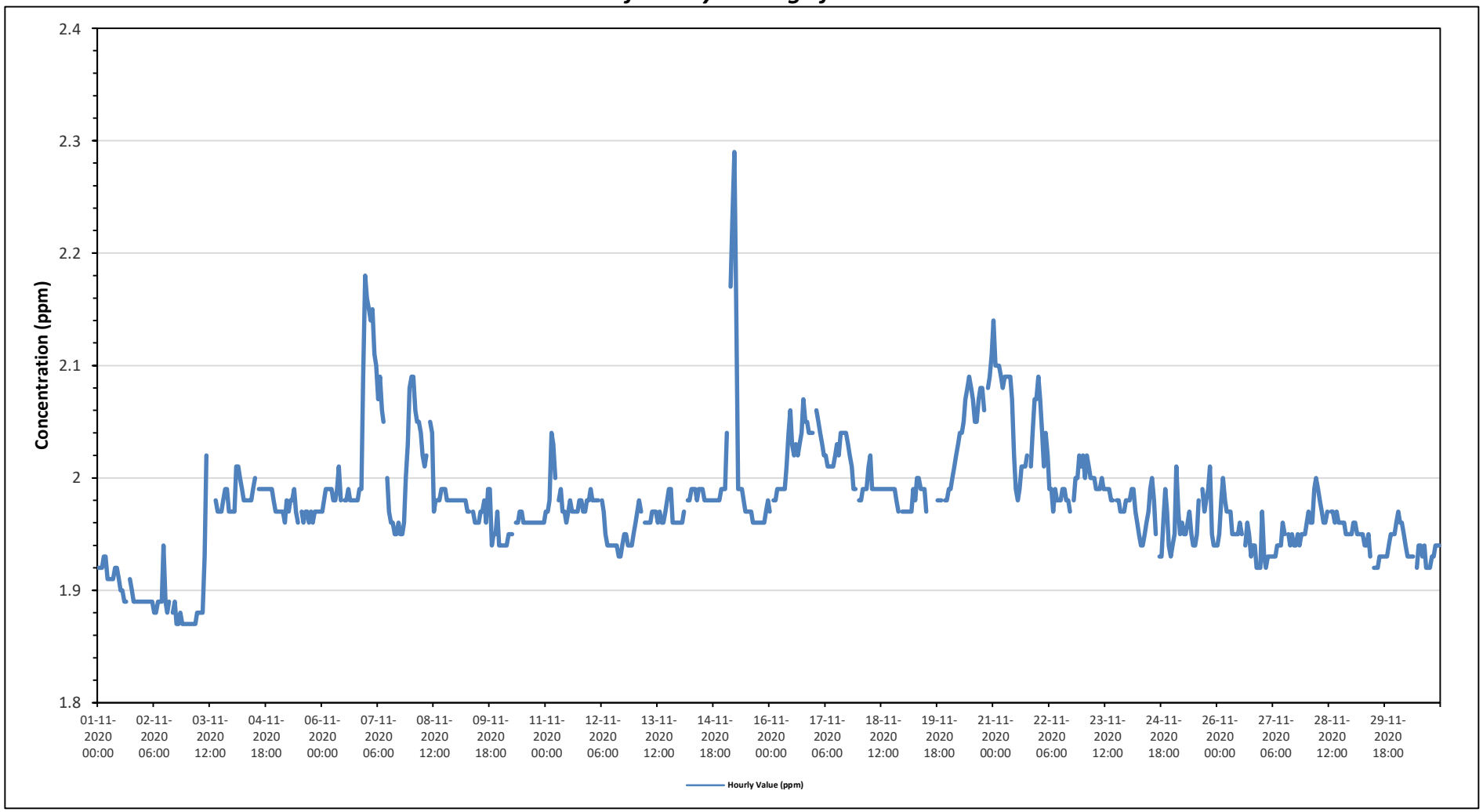
Maximum Hourly Value:	2.29	ppm	on November 15 at hour 5	Hours in Service:	720
Maximum Daily Value:	2.05	ppm	on November 21	Hours of Data:	682
Minimum Hourly Value:	1.87	ppm	on November 2 at hour 18	Hours of Missing Data:	2
Minimum Daily Value:	1.89	ppm	on November 2	Hours of Calibration:	36
Monthly Average:	1.98	ppm		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1.92	1.92	1.92	1.93	1.93	1.91	1.91	1.91	1.91	1.92	1.92	1.91	1.90	1.90	1.89	1.89	S	1.91	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.93	1.91
Nov 2	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.88	1.89	1.89	1.89	1.94	1.89	1.88	1.89	S	1.88	1.89	1.87	1.87	1.88	1.87	1.87	1.87	1.87	1.94	1.89
Nov 3	1.87	1.87	1.87	1.87	1.87	1.88	1.88	1.88	1.88	1.93	2.02	P	P	2.00	S	1.98	1.97	1.97	1.97	1.98	1.99	1.99	1.97	1.97	1.87	2.02	1.93
Nov 4	1.97	1.97	2.01	2.01	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.99	2.00	S	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.97	1.97	2.01	1.99
Nov 5	1.97	1.97	1.97	1.97	1.96	1.98	1.97	1.98	1.98	1.99	1.97	1.96	S	1.97	1.96	1.97	1.97	1.96	1.97	1.96	1.97	1.97	1.97	1.97	1.96	1.99	1.97
Nov 6	1.97	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.99	2.01	1.98	S	1.98	1.98	1.99	1.98	1.98	1.98	1.98	1.98	1.99	1.99	2.09	2.18	1.97	2.18	2.00
Nov 7	2.16	2.15	2.14	2.15	2.11	2.10	2.07	2.09	2.06	2.05	S	2.00	1.97	1.96	1.96	1.95	1.95	1.96	1.95	1.95	1.96	2.00	2.03	2.08	1.95	2.16	2.03
Nov 8	2.09	2.09	2.06	2.05	2.05	2.04	2.02	2.01	2.02	S	2.05	2.04	1.97	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.97	2.09	2.01
Nov 9	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	S	1.97	1.96	1.96	1.96	1.97	1.97	1.98	1.96	1.99	1.99	1.94	1.95	1.95	1.97	1.94	1.94	1.99	1.97
Nov 10	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.94	1.97	1.96
Nov 11	1.97	1.97	1.98	2.04	2.03	2.00	S	1.98	1.99	1.97	1.97	1.96	1.97	1.98	1.97	1.97	1.97	1.97	1.98	1.98	1.97	1.97	1.98	1.98	1.96	2.04	1.98
Nov 12	1.99	1.98	1.98	1.98	1.98	S	1.98	1.97	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.94	1.95	1.95	1.94	1.94	1.94	1.95	1.93	1.99	1.95
Nov 13	1.96	1.97	1.98	1.97	S	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.96	1.97	1.96	1.96	1.97	1.98	1.99	1.99	1.96	1.96	1.96	1.96	1.96	1.99	1.97
Nov 14	1.96	1.96	1.97	S	1.98	1.98	1.99	1.99	1.99	1.98	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.96	1.99	1.98
Nov 15	1.99	2.04	S	2.17	2.23	2.29	2.16	1.99	1.99	1.99	1.98	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	1.96	2.29	2.02
Nov 16	1.97	S	1.98	1.98	1.99	1.99	1.99	1.99	1.99	2.01	2.04	2.06	2.03	2.02	2.03	2.02	2.03	2.04	2.07	2.05	2.05	2.04	2.04	2.04	1.97	2.07	2.02
Nov 17	S	2.06	2.05	2.04	2.03	2.02	2.02	2.01	2.01	2.01	2.01	2.02	2.03	2.02	2.04	2.04	2.04	2.04	2.03	2.02	2.01	1.99	1.99	S	1.99	2.06	2.02
Nov 18	1.98	1.98	1.99	1.99	1.99	2.01	2.02	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	1.98	1.97	S	1.97	1.97	2.02	1.99
Nov 19	1.97	1.97	1.97	1.97	1.97	1.99	1.98	2.00	2.00	1.99	1.99	1.99	1.97	C	C	C	C	C	1.98	1.98	1.98	S	1.98	1.98	1.97	2.00	1.98
Nov 20	1.99	1.99	2.00	2.01	2.02	2.03	2.04	2.04	2.05	2.07	2.08	2.09	2.08	2.07	2.05	2.05	2.07	2.08	2.08	2.06	S	2.08	2.09	2.11	1.99	2.11	2.05
Nov 21	2.14	2.10	2.10	2.10	2.09	2.08	2.09	2.09	2.09	2.09	2.07	2.02	1.99	1.98	1.99	2.01	2.01	2.01	2.02	S	2.01	2.04	2.07	2.07	1.98	2.14	2.05
Nov 22	2.09	2.07	2.04	2.01	2.04	2.02	1.99	1.99	1.97	1.99	1.98	1.98	1.98	1.99	1.99	1.98	1.98	1.97	S	1.98	2.00	2.00	2.02	2.01	1.97	2.09	2.00
Nov 23	2.02	2.00	2.02	2.01	2.00	2.00	2.00	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	1.98	1.98	S	1.98	1.98	1.97	1.97	1.97	1.98	1.97	2.02	1.99
Nov 24	1.98	1.98	1.99	1.99	1.97	1.96	1.95	1.94	1.94	1.95	1.96	1.97	1.99	2.00	1.98	1.95	S	1.93	1.93	1.96	1.99	1.97	1.94	1.93	1.93	2.00	1.96
Nov 25	1.94	1.95	2.01	1.97	1.95	1.96	1.95	1.95	1.96	1.97	1.95	1.94	1.94	1.95	1.98	S	1.99	1.97	1.98	1.99	2.01	1.95	1.94	1.94	1.94	2.01	1.96
Nov 26	1.94	1.95	1.98	2.00	1.98	1.97	1.97	1.97	1.95	1.95	1.95	1.95	1.96	1.95	S	1.94	1.96	1.95	1.93	1.94	1.94	1.92	1.92	1.92	1.92	2.00	1.95
Nov 27	1.97	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.96	1.95	S	1.95	1.94	1.95	1.94	1.94	1.95	1.94	1.95	1.95	1.95	1.92	1.97	1.94
Nov 28	1.96	1.97	1.96	1.96	1.99	2.00	1.99	1.98	1.97	1.96	1.96	1.97	S	1.97	1.97	1.96	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	2.00	1.97
Nov 29	1.95	1.96	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.93	S	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.95	1.92	1.96	1.94
Nov 30	1.96	1.97	1.96	1.96	1.95	1.94	1.93	1.93	1.93	1.93	S	1.92	1.94	1.94	1.93	1.94	1.92	1.92	1.92	1.93	1.93	1.94	1.94	1.94	1.92	1.97	1.94
Diurnal Maximum	2.16	2.15	2.14	2.17	2.23	2.29	2.16	2.09	2.09	2.09	2.08	2.09	2.08	2.07	2.05	2.05	2.07	2.08	2.08	2.06	2.05	2.08	2.09	2.18			
Diurnal Average	1.98	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.97	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.98			

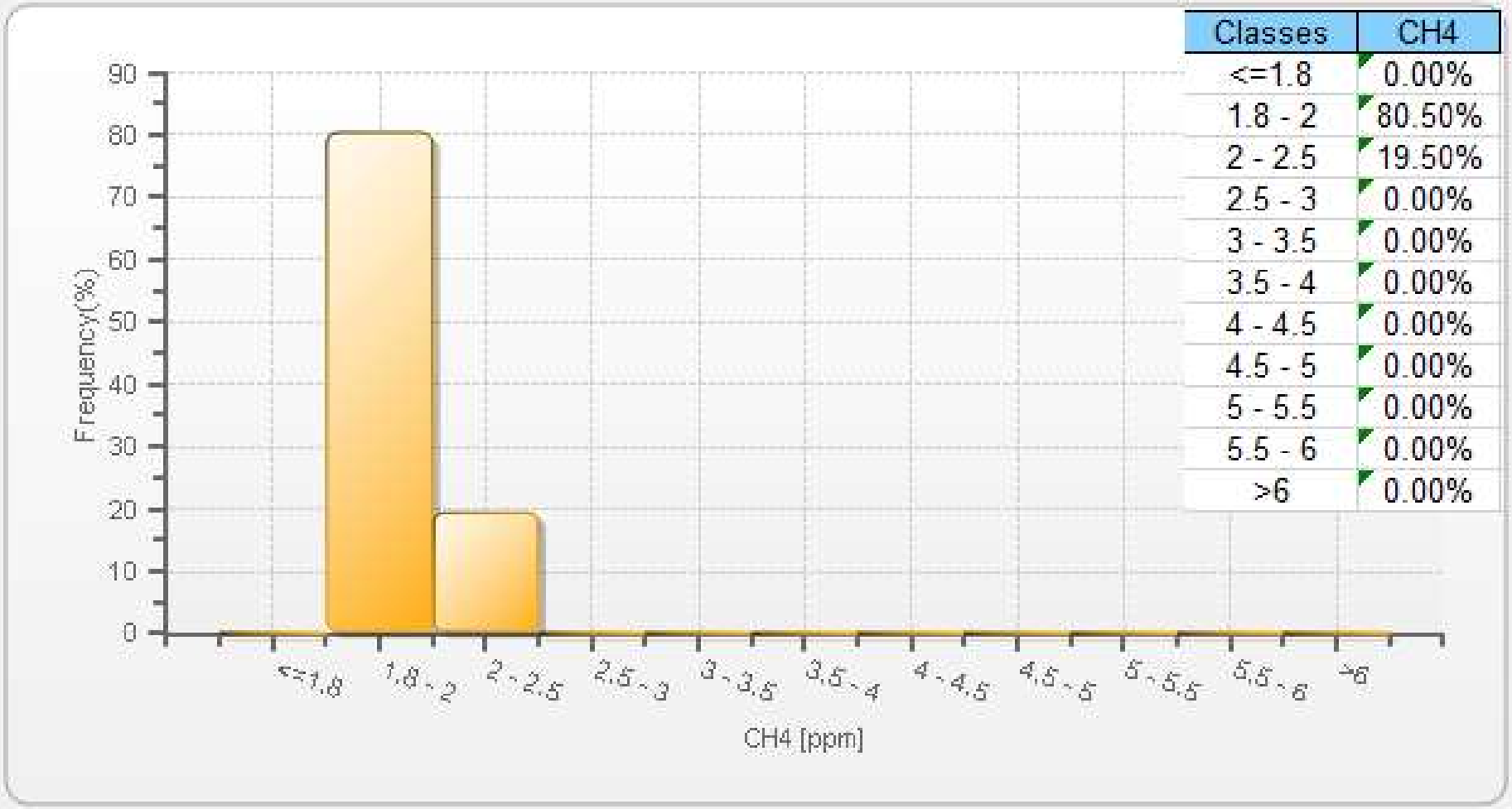
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for CH4 - 842b Station

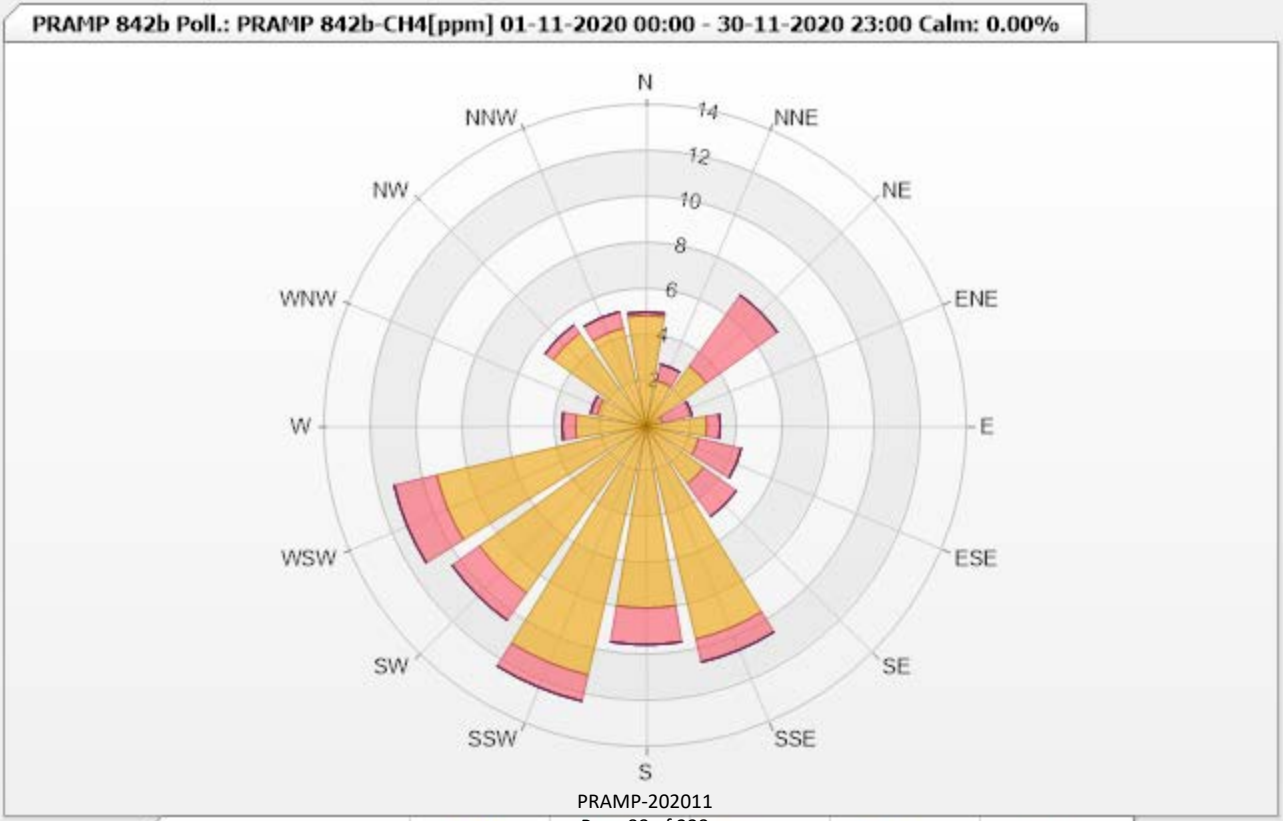


CH4[ppm] Histogram: PRAMP 842b Monthly: 11-2020 1 Hr.



Wind: PRAMP 842b Poll.: PRAMP 842b-CH4[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.72% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	4.84	0.15	0	0	0	4.99
NNE	2.05	0.73	0	0	0	2.78
NE	3.23	3.81	0	0	0	7.04
ENE	0.73	1.32	0	0	0	2.05
E	2.64	0.59	0	0	0	3.23
ESE	2.35	1.91	0	0	0	4.26
SE	3.08	1.76	0	0	0	4.84
SSE	9.53	1.03	0	0	0	10.56
S	7.92	1.61	0	0	0	9.53
SSW	11.14	1.17	0	0	0	12.31
SW	8.94	1.47	0	0	0	10.41
WSW	9.38	1.91	0	0	0	11.29
W	3.08	0.59	0	0	0	3.67
WNW	2.2	0.29	0	0	0	2.49
NW	4.99	0.44	0	0	0	5.43
NNW	4.4	0.73	0	0	0	5.13
Summary	80.5	19.51	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-CH4[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
14
12
10
8
6
4
2
% Icon Classes (ppm)
81 0-2
20 2-5
0 5-10
0 10-20
0 >20.0

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

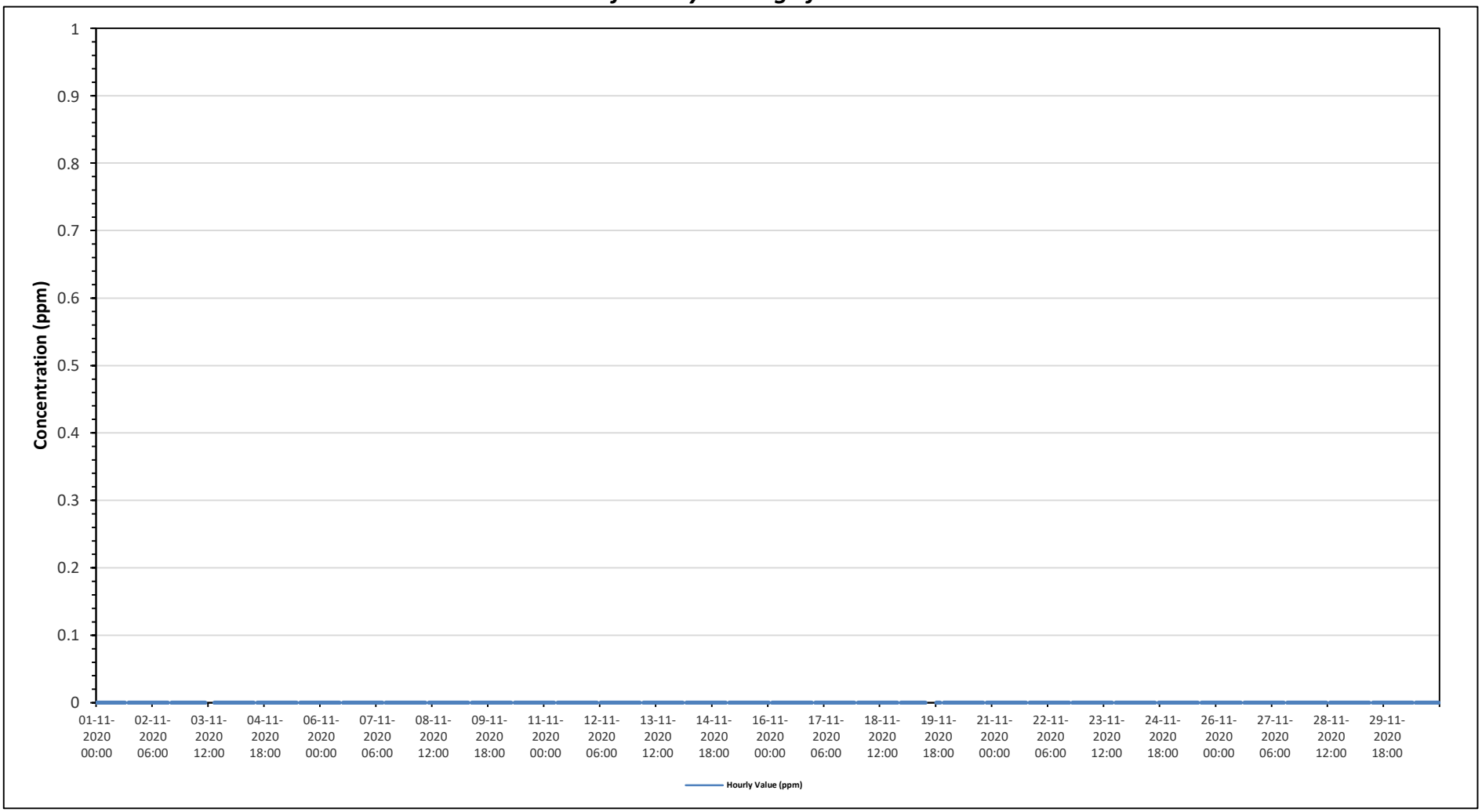
Maximum Hourly Value:	0.00	ppm	on November 1 at hour 0	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on November 1	Hours of Data:	682
Minimum Hourly Value:	0.00	ppm	on November 1 at hour 0	Hours of Missing Data:	2
Minimum Daily Value:	0.00	ppm	on November 1	Hours of Calibration:	36
Monthly Average:	0.00	ppm		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 2	0.00	0.00	0.00	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
Nov 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	P	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
Nov 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	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
Nov 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	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
Nov 6	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
Nov 7	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
Nov 8	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
Nov 9	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
Nov 10	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
Nov 11	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
Nov 12	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
Nov 13	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
Nov 14	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
Nov 15	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
Nov 16	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
Nov 17	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Nov 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Nov 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Nov 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Nov 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	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
Nov 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	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
Nov 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	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
Nov 29	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
Nov 30	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

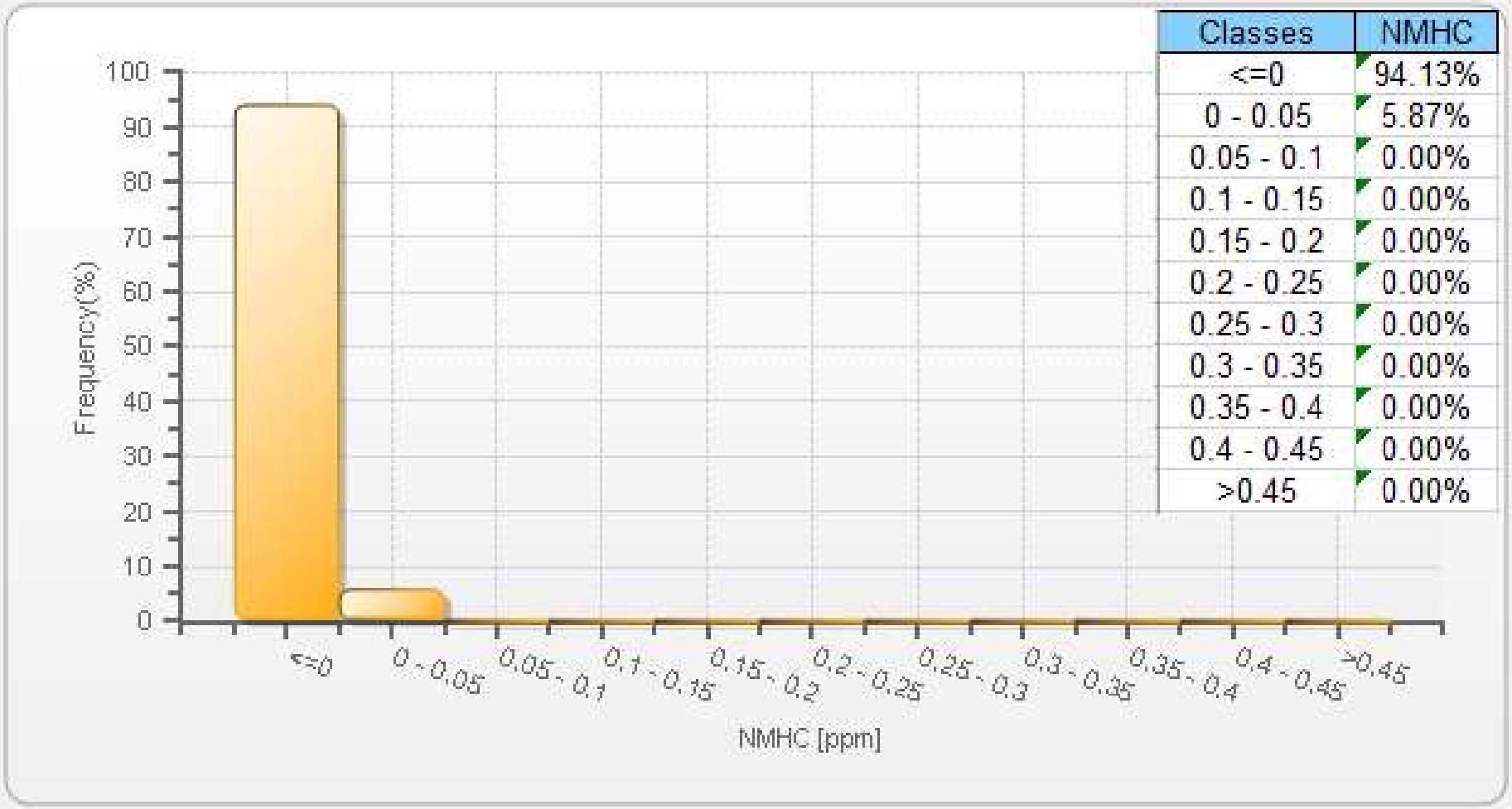
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for NMHC - 842b Station



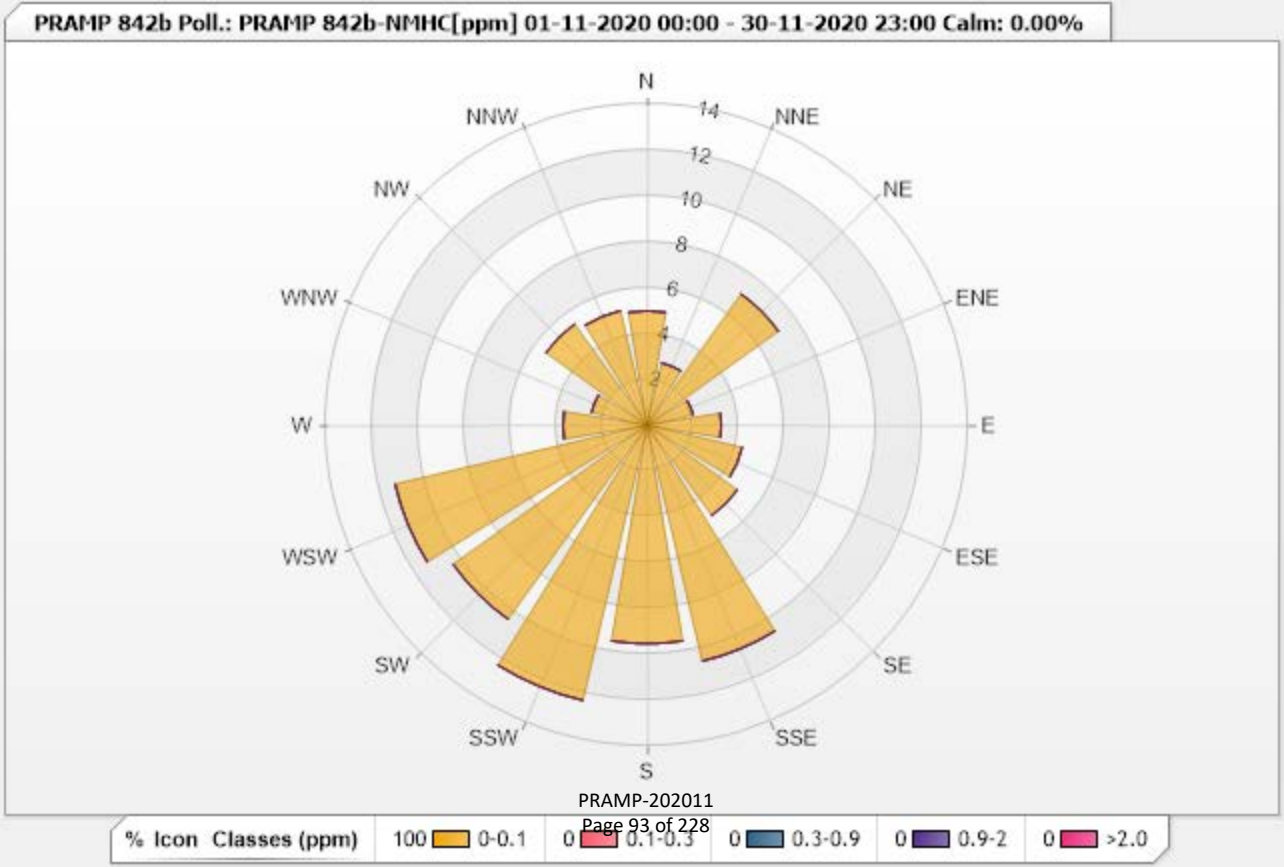
NMHC[ppm] Histogram: PRAMP 842b Monthly: 11-2020 1 Hr.



Classes	NMHC
<=0	94.13%
0 - 0.05	5.87%
0.05 - 0.1	0.00%
0.1 - 0.15	0.00%
0.15 - 0.2	0.00%
0.2 - 0.25	0.00%
0.25 - 0.3	0.00%
0.3 - 0.35	0.00%
0.35 - 0.4	0.00%
0.4 - 0.45	0.00%
>0.45	0.00%

Wind: PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.72% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	4.99	0	0	0	0	4.99
NNE	2.79	0	0	0	0	2.79
NE	7.04	0	0	0	0	7.04
ENE	2.05	0	0	0	0	2.05
E	3.23	0	0	0	0	3.23
ESE	4.25	0	0	0	0	4.25
SE	4.84	0	0	0	0	4.84
SSE	10.56	0	0	0	0	10.56
S	9.53	0	0	0	0	9.53
SSW	12.32	0	0	0	0	12.32
SW	10.41	0	0	0	0	10.41
WSW	11.29	0	0	0	0	11.29
W	3.67	0	0	0	0	3.67
WNW	2.49	0	0	0	0	2.49
NW	5.43	0	0	0	0	5.43
NNW	5.13	0	0	0	0	5.13
Summary	100	0	0	0	0	100


PRAMP 842b Poll.: PRAMP 842b-NMHC[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
14
12
10
8
6
4
2
% Icon Classes (ppm)
100 0-0.1
0 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

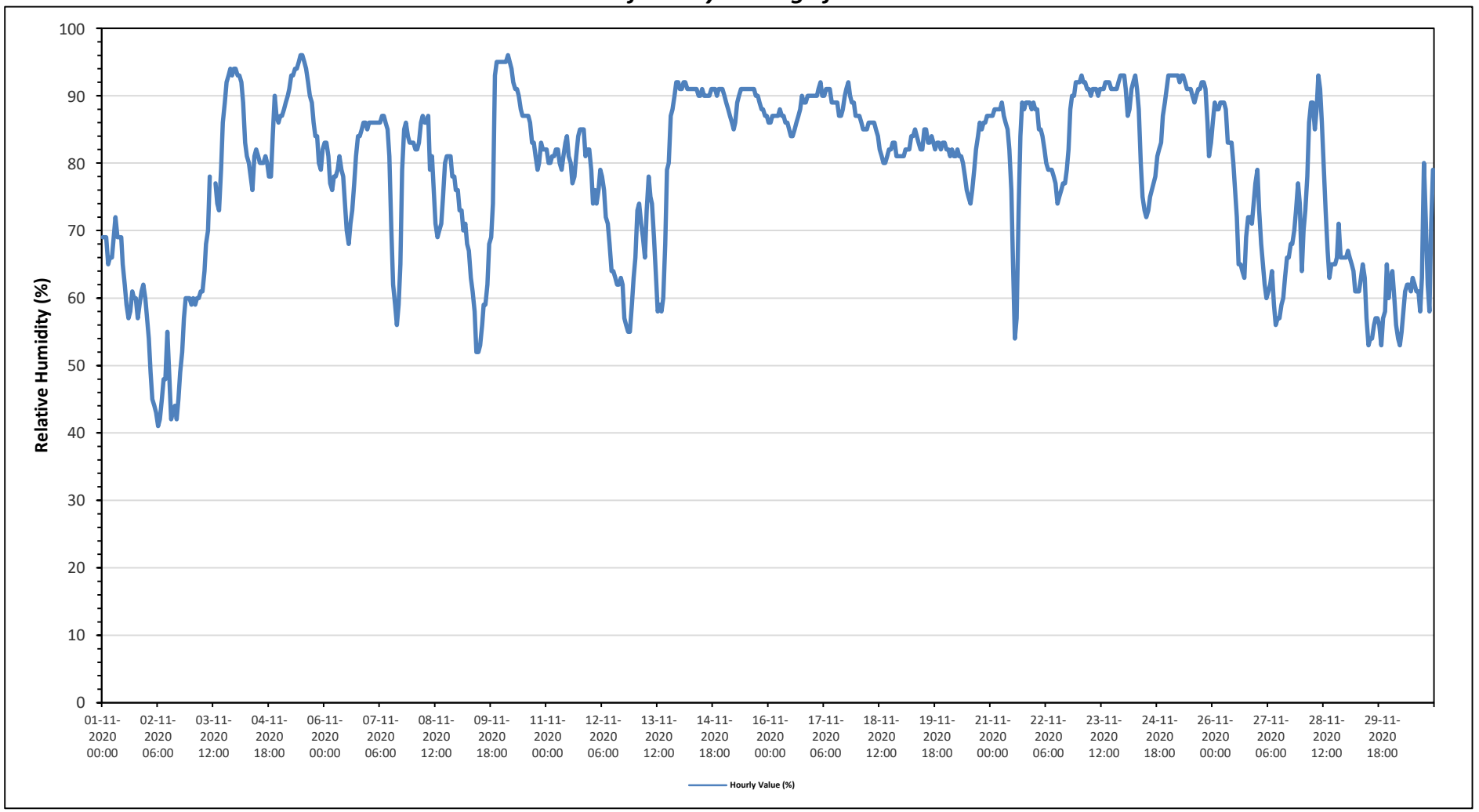
Maximum Hourly Value:	96	%	on November 5 at hour 11	Hours in Service:	720
Maximum Daily Value:	91.5	%	on November 23	Hours of Data:	718
Minimum Hourly Value:	41	%	on November 2 at hour 6	Hours of Missing Data:	2
Minimum Daily Value:	48.9	%	on November 2	Hours of Calibration:	0
Monthly Average:	78.5	%		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	69	69	69	65	66	66	69	72	69	69	69	65	62	59	57	58	61	60	60	57	59	61	62	60	57	72	63.9
Nov 2	57	54	49	45	44	43	**41**	42	45	48	48	55	49	42	43	44	42	45	49	52	57	60	60	60	**41**	60	48.9
Nov 3	59	60	59	60	60	61	61	64	68	70	78	**P**	**P**	77	74	73	79	86	89	92	93	94	93	94	59	94	74.7
Nov 4	94	93	93	92	89	83	81	80	78	76	81	82	81	80	80	80	81	80	78	78	84	90	87	86	76	94	83.6
Nov 5	87	87	88	89	90	91	93	93	94	94	95	**96**	**96**	95	94	92	90	89	86	84	84	80	79	82	79	**96**	89.5
Nov 6	83	83	81	77	76	78	78	79	81	79	78	74	70	68	71	73	77	81	84	84	85	86	86	85	68	86	79.0
Nov 7	86	86	86	86	86	86	86	87	87	86	85	81	70	62	59	56	59	65	79	85	86	84	83	83	56	87	79.1
Nov 8	83	82	82	83	86	87	86	86	87	79	81	76	71	69	70	71	75	80	81	81	81	78	78	76	69	87	79.5
Nov 9	76	73	73	70	71	68	67	63	61	58	52	52	53	56	59	59	62	68	69	74	93	95	95	95	52	95	69.3
Nov 10	95	95	95	**96**	95	94	92	91	91	90	88	87	87	87	87	86	83	83	81	79	80	83	82	82	79	**96**	87.9
Nov 11	82	80	80	81	81	82	82	80	79	81	83	84	81	80	77	78	81	84	85	85	85	81	82	82	77	85	81.5
Nov 12	79	74	76	74	76	79	78	76	72	71	68	64	64	63	62	62	63	62	57	56	55	55	59	63	55	79	67.0
Nov 13	66	73	74	71	69	66	73	78	75	74	69	64	58	59	58	60	68	79	80	87	88	90	92	92	58	92	73.5
Nov 14	91	91	92	92	91	91	91	91	91	91	90	90	91	90	90	90	90	91	91	91	90	91	91	91	90	92	90.8
Nov 15	90	89	88	87	86	85	86	89	90	91	91	91	91	91	91	91	91	90	90	89	88	88	87	87	85	91	89.0
Nov 16	86	86	87	87	87	87	88	87	87	86	86	85	84	84	85	86	87	88	90	89	89	90	90	90	84	90	87.1
Nov 17	90	90	90	91	92	90	90	91	91	91	89	89	89	89	87	87	88	90	91	92	90	89	89	87	87	92	89.7
Nov 18	87	87	86	85	85	85	86	86	86	86	85	84	82	81	80	80	81	82	82	83	83	81	81	81	80	87	83.5
Nov 19	81	81	82	82	82	84	84	85	84	83	82	82	85	85	83	83	84	83	82	83	83	82	83	83	81	85	83.0
Nov 20	82	82	81	82	81	81	82	81	81	80	78	76	75	74	76	79	82	84	86	85	86	86	87	87	74	87	81.4
Nov 21	87	87	88	88	88	88	89	87	86	85	82	76	66	54	57	73	84	89	88	89	89	89	88	89	54	89	82.8
Nov 22	88	88	85	85	84	82	80	79	79	79	78	77	74	75	76	77	77	79	82	88	90	90	92	92	74	92	82.3
Nov 23	92	93	92	92	91	91	90	91	91	91	90	91	91	91	92	92	92	91	91	91	91	92	93	93	90	93	**91.5**
Nov 24	93	91	87	88	91	92	93	91	88	80	75	73	72	73	75	76	77	78	81	82	83	87	89	91	72	93	83.6
Nov 25	93	93	93	93	93	93	92	93	93	92	91	91	91	90	89	90	91	91	92	92	91	86	81	83	81	93	90.7
Nov 26	86	89	88	88	89	89	89	88	83	83	83	80	76	72	65	65	64	63	69	72	72	71	74	77	63	89	78.1
Nov 27	79	73	68	65	62	60	61	62	64	59	56	57	57	59	60	63	66	66	68	68	70	73	77	74	56	79	65.3
Nov 28	64	70	73	78	86	89	89	85	88	93	91	86	79	73	67	63	65	65	65	66	71	66	66	66	63	93	75.2
Nov 29	66	67	66	65	64	61	61	61	63	65	63	57	53	54	54	56	57	57	56	53	57	58	65	60	53	67	60.0
Nov 30	63	64	60	56	54	53	55	58	61	62	62	61	63	62	61	61	58	63	80	72	62	58	71	79	53	80	62.5
Diurnal Maximum	95	95	95	96	95	94	93	93	94	94	95	96	96	95	94	92	92	91	92	92	93	95	95	95			
Diurnal Average	81.1	81.0	80.4	79.8	79.8	79.5	79.8	79.9	79.8	79.1	78.2	76.8	74.5	73.1	72.6	73.5	75.2	77.1	78.7	79.3	80.5	80.5	81.4	81.7			

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

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

Timeseries Chart of Hourly Average for RH - 842b Station



PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

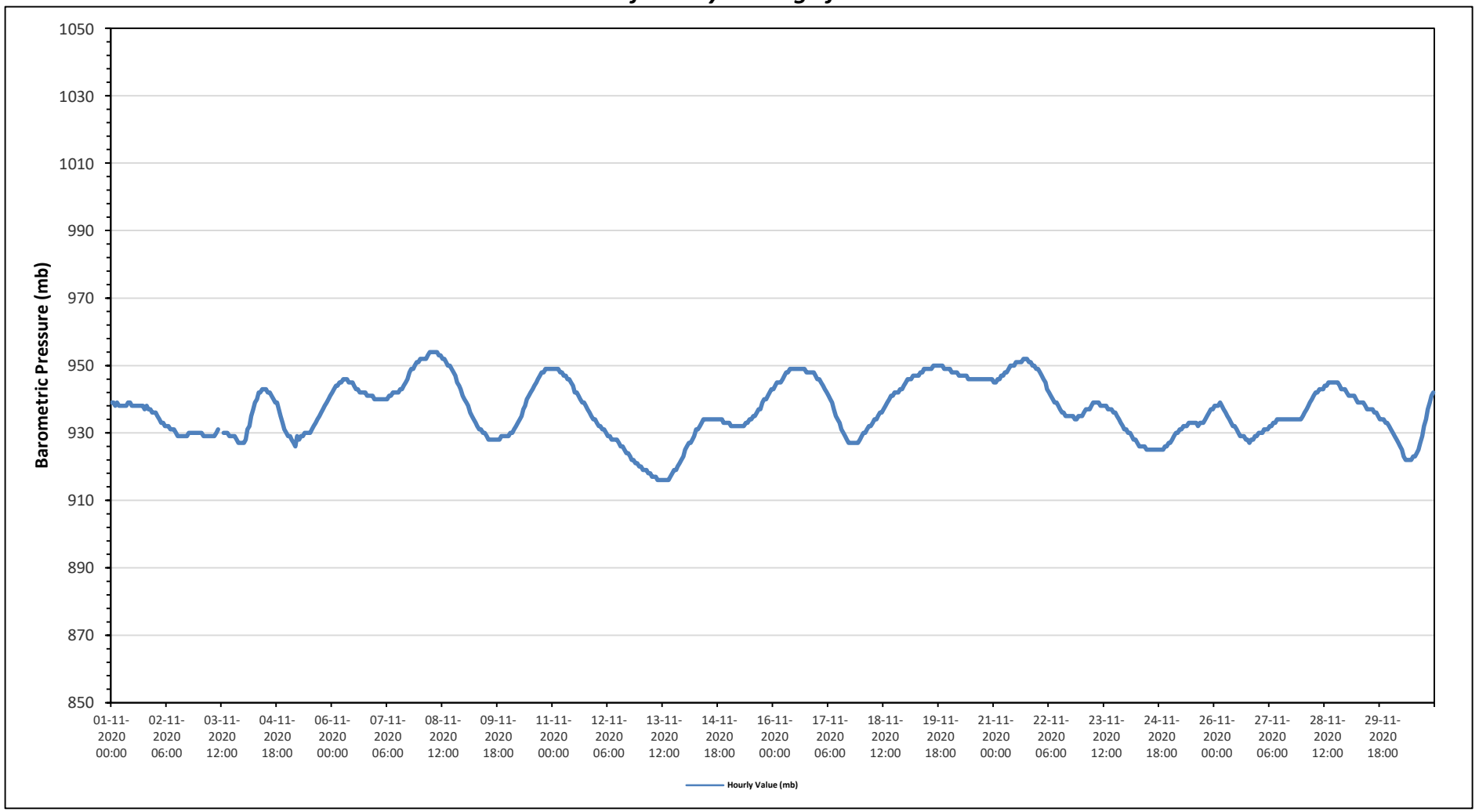
Maximum Hourly Value:	954	mb	on November 8 at hour 5	Hours in Service:	720
Maximum Daily Value:	950	mb	on November 8	Hours of Data:	718
Minimum Hourly Value:	916	mb	on November 13 at hour 9	Hours of Missing Data:	2
Minimum Daily Value:	918	mb	on November 13	Hours of Calibration:	0
Monthly Average:	937	mb		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	939	939	938	939	938	938	938	938	938	939	939	938	938	938	938	938	938	938	937	938	937	937	936	936	936	939	938
Nov 2	936	935	934	933	933	932	932	932	931	931	931	930	929	929	929	929	929	929	930	930	930	930	930	930	929	936	931
Nov 3	930	930	929	929	929	929	929	929	929	930	931	P	P	930	930	930	929	929	929	929	928	927	927	927	927	931	929
Nov 4	927	928	931	932	935	937	939	940	942	942	943	943	943	942	942	941	940	939	939	937	935	933	931	930	927	943	937
Nov 5	929	929	928	927	926	929	928	929	929	930	930	930	930	931	932	933	934	935	936	937	938	939	940	941	926	941	932
Nov 6	942	943	944	944	945	945	946	946	946	945	945	945	944	943	943	942	942	942	942	941	941	941	941	940	940	946	943
Nov 7	940	940	940	940	940	940	940	941	941	942	942	942	942	943	943	944	945	946	948	949	949	950	951	951	940	951	944
Nov 8	952	952	952	952	953	**954**	**954**	**954**	**954**	**954**	953	953	952	952	951	950	950	949	948	947	945	944	943	941	941	**954**	**950**
Nov 9	940	939	938	936	935	934	933	932	931	931	930	930	929	928	928	928	928	928	928	928	929	929	929	929	928	940	931
Nov 10	929	930	930	931	932	933	934	935	937	938	940	941	942	943	944	945	946	947	948	948	949	949	949	949	929	949	940
Nov 11	949	949	949	949	948	948	947	947	946	946	945	944	942	942	941	940	939	939	938	937	936	935	934	934	934	949	943
Nov 12	933	932	932	931	931	930	929	929	928	928	928	928	927	926	926	925	924	924	923	922	922	921	921	920	920	933	927
Nov 13	920	919	919	919	918	918	917	917	917	**916**	**916**	**916**	**916**	**916**	**916**	**916**	917	918	919	919	920	921	922	923	**916**	923	918
Nov 14	925	926	927	927	928	929	931	931	932	933	934	934	934	934	934	934	934	934	934	934	934	933	933	933	925	934	932
Nov 15	933	932	932	932	932	932	932	932	932	933	933	934	934	935	935	936	937	937	939	940	940	941	942	943	932	943	935
Nov 16	943	944	945	945	945	946	947	948	948	949	949	949	949	949	949	949	949	949	948	948	948	948	948	947	943	949	947
Nov 17	946	946	945	944	943	942	941	940	939	937	935	934	933	931	930	929	928	927	927	927	927	927	927	928	927	946	935
Nov 18	929	930	930	931	932	932	933	934	934	935	936	936	937	938	939	940	941	941	942	942	942	943	943	944	929	944	937
Nov 19	945	946	946	946	947	947	947	947	948	948	949	949	949	949	949	950	950	950	950	950	950	949	949	949	945	950	948
Nov 20	949	948	948	948	948	947	947	947	947	947	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	949	947
Nov 21	945	945	946	946	947	947	948	948	949	950	950	950	951	951	951	951	952	952	952	951	951	950	950	949	945	952	949
Nov 22	949	948	947	946	945	943	942	941	940	939	939	938	937	936	936	935	935	935	935	935	934	934	935	935	934	949	939
Nov 23	935	936	937	937	937	938	939	939	939	939	938	938	938	938	937	937	937	936	936	935	934	933	932	931	931	939	937
Nov 24	931	930	930	929	928	928	927	926	926	926	926	925	925	925	925	925	925	925	925	925	925	926	926	927	925	931	927
Nov 25	927	928	929	930	930	931	931	932	932	932	933	933	933	933	933	932	933	933	933	934	935	936	937	937	927	937	932
Nov 26	938	938	938	939	938	937	936	935	934	933	932	932	931	930	929	929	929	928	928	927	928	928	929	929	927	939	932
Nov 27	930	930	930	931	931	931	932	932	933	933	934	934	934	934	934	934	934	934	934	934	934	934	934	934	930	934	933
Nov 28	935	936	937	938	939	940	941	942	942	943	943	943	944	944	945	945	945	945	945	945	944	943	943	943	935	945	942
Nov 29	942	941	941	941	941	940	939	939	939	939	938	937	937	937	937	936	936	935	934	934	934	933	933	932	932	942	937
Nov 30	931	930	929	928	927	926	925	923	922	922	922	922	923	923	924	925	927	929	932	934	937	939	941	942	922	942	928
Diurnal Maximum	952	952	952	952	953	954	954	954	954	954	953	953	952	952	951	951	952	952	952	951	951	950	951	951			
Diurnal Average	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	936	937	937	937	937	937	937	937	937			

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

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

Timeseries Chart of Hourly Average for BP - 842b Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

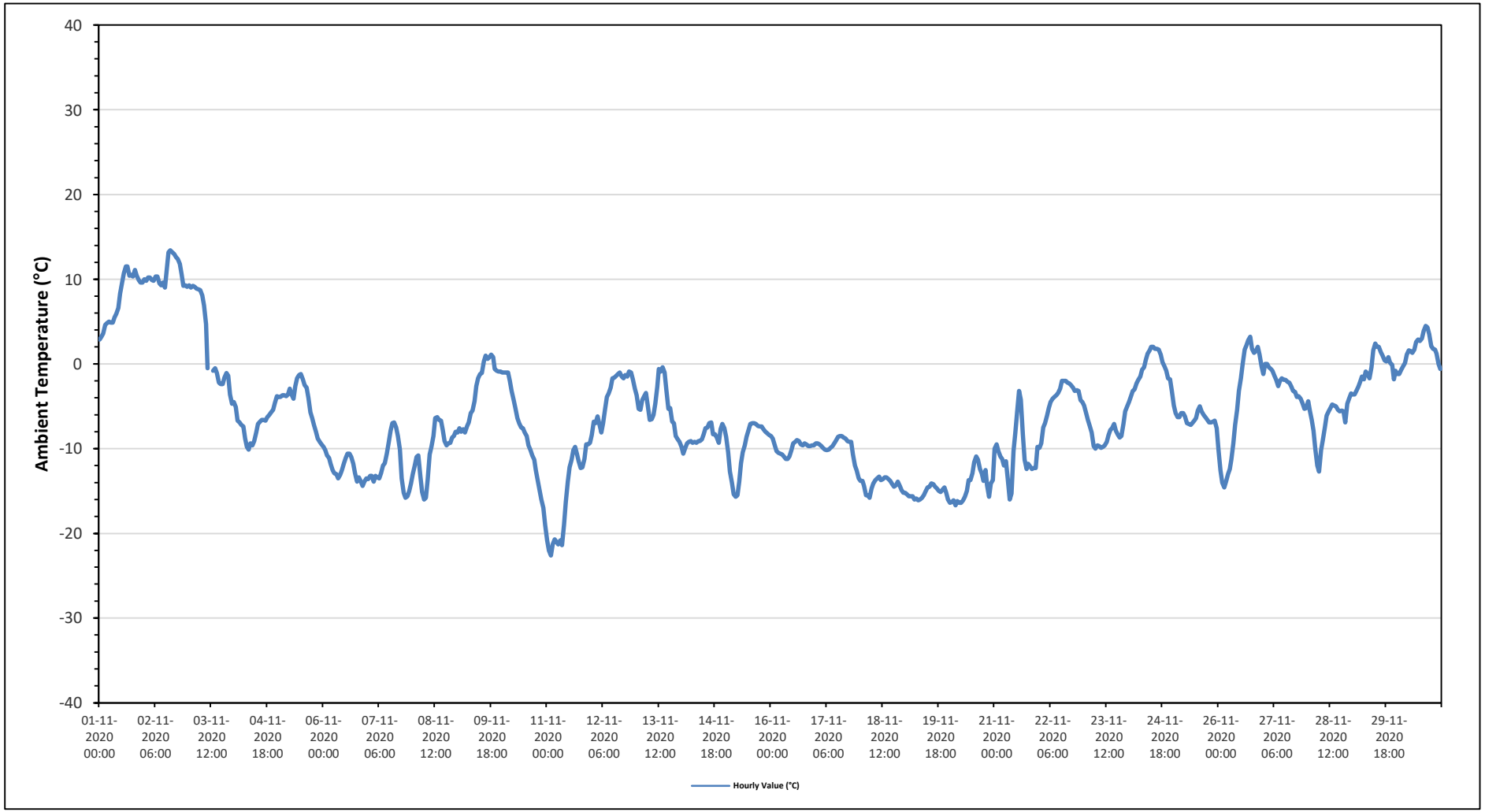
Maximum Hourly Value:	13.4	°C	on November 2 at hour 14	Hours in Service:	720
Maximum Daily Value:	10.7	°C	on November 2	Hours of Data:	718
Minimum Hourly Value:	-22.6	°C	on November 11 at hour 2	Hours of Missing Data:	2
Minimum Daily Value:	-15.4	°C	on November 11	Hours of Calibration:	0
Monthly Average:	-6.2	°C		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	2.9	3.2	3.6	4.6	4.8	5	4.9	4.9	5.5	5.9	6.6	8.3	9.6	10.7	11.5	11.5	10.4	10.5	10.3	11.1	10.4	9.9	9.6	9.6	2.9	11.5	7.7
Nov 2	10	9.8	10.2	10.2	9.9	9.8	10.3	10.3	9.5	9.3	9.6	9	11.1	13.2	**13.4**	13.2	13	12.6	12.4	11.8	10.6	9.2	9.3	9.1	9.0	**13.4**	**10.7**
Nov 3	9.3	9	9.2	9.1	8.9	8.8	8.7	8.1	6.9	4.7	-0.5	P	P	-0.8	-0.5	-1.1	-2.2	-2.4	-2.4	-1.6	-1.1	-1.4	-3.6	-4.7	-4.7	9.3	2.7
Nov 4	-4.5	-5.1	-6.7	-6.9	-7.2	-7.4	-8.8	-9.8	-10.1	-9.4	-9.6	-9.1	-8.1	-7.1	-6.8	-6.6	-6.6	-6.7	-6.3	-6	-5.7	-5.4	-4.6	-3.8	-10.1	-3.8	-7.0
Nov 5	-3.9	-3.9	-3.7	-3.7	-3.8	-3.6	-2.9	-3.6	-4.1	-2.6	-1.7	-1.3	-1.2	-1.8	-2.5	-2.8	-4	-5.7	-6.4	-7.2	-8	-8.8	-9.2	-9.5	-9.5	-1.2	-4.4
Nov 6	-9.8	-10.2	-10.8	-11.1	-11.8	-12.5	-12.9	-13	-13.5	-13.1	-12.5	-11.7	-11.1	-10.6	-10.6	-11	-11.8	-12.9	-13.9	-13.4	-13.8	-14.4	-13.9	-13.5	-14.4	-9.8	-12.2
Nov 7	-13.6	-13.2	-13.2	-13.9	-13.2	-13.4	-13.5	-12.9	-12	-11.7	-10.6	-9.4	-7.9	-7	-6.9	-7.5	-8.5	-10.1	-13.5	-15.2	-15.8	-15.6	-15	-14.1	-15.8	-6.9	-12.0
Nov 8	-13	-12.1	-11	-10.8	-13.2	-15.1	-16	-15.8	-13.7	-10.7	-9.8	-8.5	-6.4	-6.3	-6.6	-6.7	-7.8	-9.1	-9.6	-9.4	-9.3	-8.7	-8.5	-8	-16.0	-6.3	-10.3
Nov 9	-8.1	-7.6	-8	-7.7	-8.1	-7.4	-6.9	-5.8	-5.5	-4.4	-2.6	-1.7	-1.2	-1.1	0.3	1	0.6	0.8	1.1	0.8	-0.6	-0.8	-0.9	-0.9	-8.1	1.1	-3.1
Nov 10	-1	-1	-1	-1	-2	-3.2	-4.2	-5.2	-6.4	-7	-7.5	-7.6	-8.1	-8.5	-9.6	-10.2	-10.8	-11.3	-12.5	-13.8	-14.9	-16	-17	-19	-19.0	-1.0	-8.3
Nov 11	-20.8	-22	**-22.6**	-21.3	-20.7	-21	-21.3	-20.8	-21.4	-19	-16.3	-13.9	-12.2	-11.3	-10.2	-9.8	-10.6	-11.5	-12.3	-12.2	-11.2	-9.5	-9.5	-9.3	**-22.6**	-9.3	-15.4
Nov 12	-8.4	-6.8	-7	-6.2	-7.1	-8.1	-7	-5.3	-3.9	-3.5	-2.8	-1.7	-1.6	-1.4	-1.2	-1	-1.5	-1.7	-1.3	-1.5	-0.9	-1	-1.8	-2.9	-8.4	-0.9	-3.6
Nov 13	-3.7	-5.3	-5.4	-4.3	-3.8	-3.4	-5.1	-6.6	-6.5	-6	-4.7	-2.7	-0.6	-0.9	-0.4	-1	-3.1	-5.3	-5.2	-6.8	-7	-8.5	-8.9	-9.2	-9.2	-0.4	-4.8
Nov 14	-9.8	-10.6	-9.9	-9.4	-9.2	-9.1	-9.3	-9.2	-9.3	-9.1	-9.1	-8.9	-8.3	-7.6	-7.5	-7	-6.9	-8.3	-8.3	-8.7	-9.3	-7.7	-7.1	-7.6	-10.6	-6.9	-8.6
Nov 15	-8.6	-10.4	-12.7	-14	-15.4	-15.7	-15.5	-13.9	-11.7	-10.4	-9.6	-8.6	-7.8	-7.1	-7	-7	-7.1	-7.3	-7.4	-7.4	-7.7	-8	-8.2	-8.4	-15.7	-7.0	-9.9
Nov 16	-8.5	-8.8	-9.6	-10.3	-10.5	-10.6	-10.7	-10.9	-11.2	-11.2	-10.9	-10.2	-9.4	-9.2	-9	-9.1	-9.5	-9.6	-9.4	-9.5	-9.7	-9.7	-9.6	-9.6	-11.2	-8.5	-9.9
Nov 17	-9.4	-9.4	-9.5	-9.7	-9.9	-10.1	-10.2	-10.1	-9.9	-9.7	-9.4	-9	-8.6	-8.5	-8.5	-8.7	-8.8	-9.1	-9.2	-9.2	-10.7	-12	-12.6	-13.5	-13.5	-8.5	-9.8
Nov 18	-13.8	-13.8	-14.4	-15.5	-15.5	-15.8	-14.7	-14.1	-13.7	-13.5	-13.3	-13.7	-13.6	-13.4	-13.4	-13.6	-13.8	-14.2	-14.5	-14.3	-13.9	-14.4	-14.9	-15.2	-15.8	-13.3	-14.2
Nov 19	-15.2	-15.4	-15.6	-15.6	-15.6	-16	-15.9	-16.1	-16	-15.8	-15.5	-15	-14.6	-14.5	-14.1	-14.2	-14.5	-14.7	-15	-15.1	-14.8	-14.6	-15.2	-16	-16.1	-14.1	-15.2
Nov 20	-16.4	-16.3	-16.1	-16.7	-16.2	-16.4	-16.4	-16.1	-15.7	-15	-13.7	-13.7	-12.9	-11.6	-10.9	-11.3	-12.4	-12.9	-13.8	-12.5	-14.3	-15.7	-14.1	-13.7	-16.7	-10.9	-14.4
Nov 21	-10	-9.5	-10.3	-10.9	-11.2	-12	-11.5	-13.5	-16	-15.3	-10.3	-8.2	-5.8	-3.2	-4.2	-8.3	-11.3	-12.4	-11.8	-12.1	-12.4	-12.3	-12.3	-9.8	-16.0	-3.2	-10.6
Nov 22	-9.9	-9.4	-7.5	-7	-6.1	-5.2	-4.5	-4.1	-3.9	-3.7	-3.4	-2.9	-2	-2	-2	-2.2	-2.3	-2.5	-2.8	-3.2	-3.1	-3.2	-4.3	-4.5	-9.9	-2.0	-4.2
Nov 23	-4.9	-5.8	-6.6	-7.4	-8.1	-9.7	-10	-9.6	-9.7	-9.9	-9.8	-9.6	-9.2	-8.4	-7.8	-7.6	-7.1	-7.9	-8.3	-8.7	-8.5	-7.1	-5.6	-5	-10.0	-4.9	-8.0
Nov 24	-4.5	-3.8	-3.2	-3	-2.3	-1.9	-1.5	-0.7	-0.4	0.5	1.2	1.6	2	2	1.8	1.8	1.7	1.1	0.2	-0.3	-0.8	-1.7	-1.8	-3.2	-4.5	2.0	-0.6
Nov 25	-4.9	-5.8	-6.3	-6.3	-5.8	-5.8	-6.2	-7	-7.1	-7.2	-7	-6.7	-6.4	-5.5	-5	-5.6	-6	-6.3	-6.6	-6.9	-6.9	-6.8	-6.7	-7.6	-7.6	-4.9	-6.4
Nov 26	-10.1	-12.6	-14	-14.6	-13.9	-13	-12.4	-11.3	-9.4	-7.2	-5.4	-3.2	-1.7	0	1.7	2.2	2.8	3.2	1.8	1.3	1.5	2	1.1	-0.3	-14.6	3.2	-4.6
Nov 27	-1.2	0	0	-0.4	-0.6	-0.8	-1.4	-1.9	-2.6	-2	-1.7	-1.9	-1.9	-2.1	-2.2	-2.7	-3.2	-3.3	-3.9	-3.8	-4.1	-4.6	-5.3	-5.2	-5.3	0.0	-2.4
Nov 28	-4.4	-5.6	-6.6	-7.9	-10	-12	-12.7	-10.2	-9	-7.5	-6.1	-5.6	-5.2	-4.8	-4.9	-5	-5.4	-5.6	-5.5	-5.6	-6.9	-4.7	-4.1	-3.5	-12.7	-3.5	-6.6
Nov 29	-3.6	-3.6	-3.2	-2.7	-2.1	-1.5	-1.8	-0.9	-1.2	-1.7	-0.4	1.6	2.4	2	2	1.4	1	0.4	0.3	0.8	0.1	-0.1	-1.8	-0.8	-3.6	2.4	-0.6
Nov 30	-1.2	-1.2	-0.7	-0.3	0.1	1.1	1.6	1.5	1.3	1.7	2.6	2.9	2.7	3	3.9	4.5	4.3	3.5	2.1	1.8	1.7	1.2	0	-0.6	-1.2	4.5	1.6
Diurnal Maximum	10.0	9.8	10.2	10.2	9.9	9.8	10.3	10.3	9.5	9.3	9.6	9.0	11.1	13.2	13.4	13.2	13.0	12.6	12.4	11.8	10.6	9.9	9.6	9.6			
Diurnal Average	-6.7	-6.9	-7.1	-7.2	-7.3	-7.5	-7.6	-7.5	-7.4	-6.8	-6.1	-5.6	-4.8	-4.1	-3.9	-4.1	-4.7	-5.3	-5.7	-5.9	-6.2	-6.3	-6.6	-6.7			

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

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

Timeseries Chart of Hourly Average for AT - 842b Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

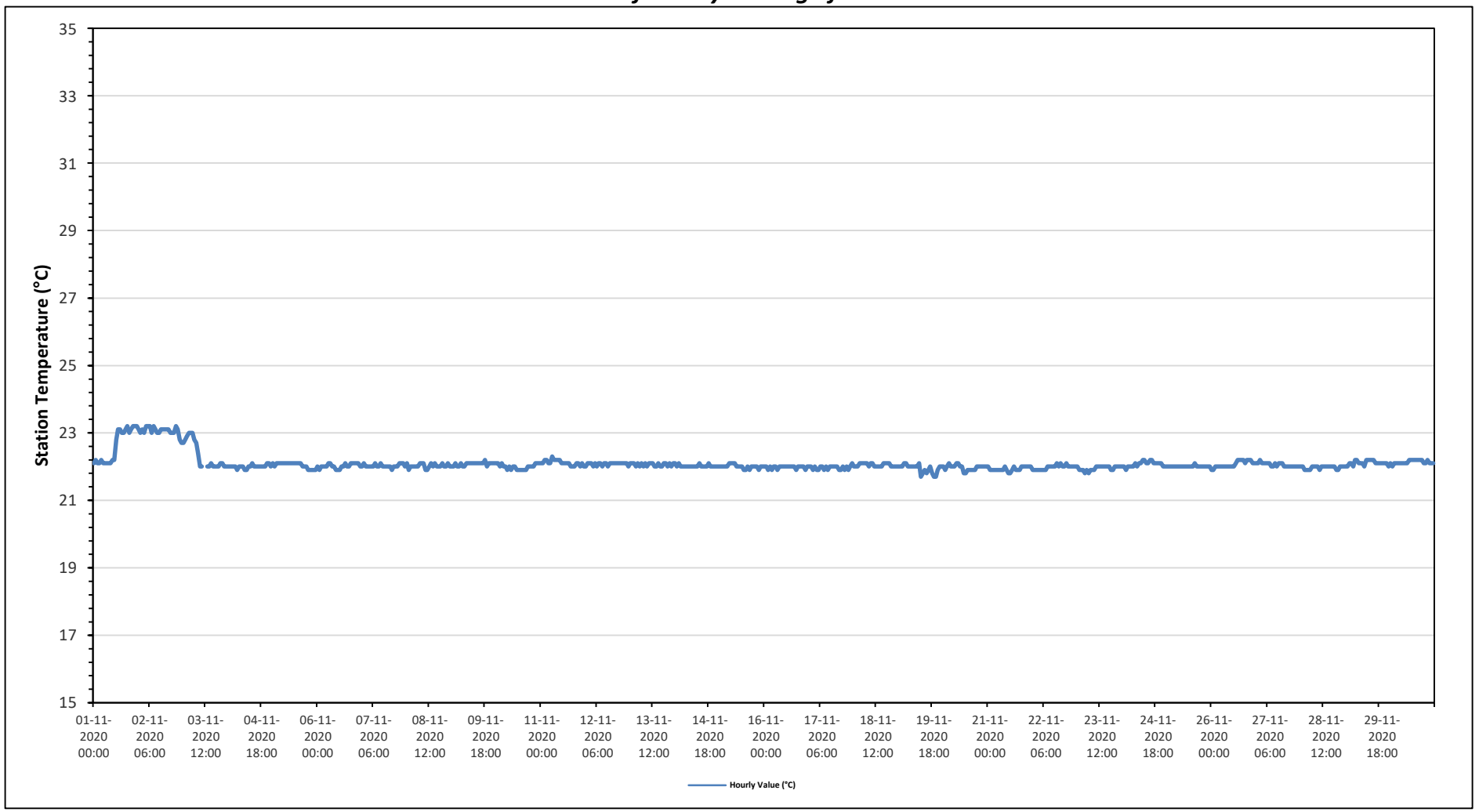
Maximum Hourly Value:	23.2	°C	on November 1 at hour 18	Hours in Service:	720
Maximum Daily Value:	23.1	°C	on November 2	Hours of Data:	718
Minimum Hourly Value:	21.7	°C	on November 19 at hour 12	Hours of Missing Data:	2
Minimum Daily Value:	21.9	°C	on November 21	Hours of Calibration:	0
Monthly Average:	22.1	°C		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	22.1	22.2	22.1	22.1	22.2	22.1	22.1	22.1	22.1	22.1	22.2	22.2	22.8	23.1	23.1	23.0	23.0	23.1	**23.2**	23.0	23.1	**23.2**	**23.2**	**23.2**	22.1	**23.2**	22.6
Nov 2	23.1	23.0	23.1	23.0	**23.2**	**23.2**	**23.2**	23.0	**23.2**	23.1	23.0	23.0	23.1	23.1	23.1	23.1	23.1	23.0	23.0	23.0	**23.2**	23.1	22.8	22.7	22.7	**23.2**	**23.1**
Nov 3	22.7	22.8	22.9	23.0	23.0	23.0	22.8	22.7	22.4	22.0	22.0	P	P	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.1	22.1	22.0	22.0	22.0	23.0	22.3
Nov 4	22.0	22.0	22.0	22.0	22.0	21.9	22.0	22.0	22.0	21.9	21.9	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.1	22.0	21.9	22.1	22.0
Nov 5	22.1	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.9	22.1	22.0
Nov 6	22.0	21.9	22.0	22.0	22.0	22.0	22.1	22.1	22.0	22.0	21.9	21.9	21.9	22.0	22.0	22.1	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.0	21.9	22.1	22.0
Nov 7	22.0	22.1	22.0	22.0	22.0	22.0	22.0	22.1	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.0	21.9	22.0	22.0	22.0	22.1	22.1	22.1	22.0	21.9	22.1	22.0
Nov 8	22.1	21.9	22.0	22.0	22.0	22.0	22.0	22.1	22.1	22.1	21.9	21.9	22.0	22.1	22.0	22.1	22.0	22.0	22.0	22.1	22.0	22.0	22.1	22.0	21.9	22.1	22.0
Nov 9	22.0	22.0	22.1	22.0	22.0	22.1	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.2	22.0	22.1	22.1	22.1	22.1	22.0	22.2	22.1
Nov 10	22.1	22.1	22.0	22.1	22.0	22.0	21.9	22.0	21.9	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.1	22.1	22.1	21.9	22.1	22.0
Nov 11	22.1	22.1	22.2	22.2	22.1	22.1	22.3	22.2	22.2	22.2	22.2	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.0	22.1	22.1	22.0	22.1	22.0	22.0	22.3	22.1
Nov 12	22.0	22.1	22.1	22.1	22.0	22.1	22.0	22.1	22.1	22.0	22.1	22.1	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.1	22.1
Nov 13	22.1	22.1	22.1	22.0	22.1	22.0	22.1	22.0	22.1	22.0	22.1	22.1	22.1	22.0	22.0	22.1	22.0	22.0	22.1	22.1	22.0	22.1	22.0	22.1	22.0	22.1	22.1
Nov 14	22.1	22.0	22.1	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.0
Nov 15	22.0	22.0	22.0	22.0	22.0	22.1	22.1	22.1	22.1	22.0	22.0	22.0	22.0	21.9	21.9	22.0	21.9	22.0	22.0	22.0	22.0	21.9	22.0	22.0	21.9	22.1	22.0
Nov 16	22.0	22.0	21.9	22.0	21.9	22.0	22.0	21.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.9	22.0	22.0	22.0	22.0	21.9	22.0	21.9	22.0	22.0
Nov 17	22.0	22.0	21.9	22.0	21.9	21.9	22.0	22.0	21.9	22.0	21.9	22.0	22.0	22.0	22.0	22.0	21.9	21.9	22.0	21.9	22.0	21.9	22.0	22.1	21.9	22.1	22.0
Nov 18	22.0	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.0	22.1	22.1	22.0	22.0	22.0	22.0	22.0	22.1	22.1	22.1	22.1	22.0	22.0	22.0	22.0	22.0	22.1	22.0
Nov 19	22.0	22.0	22.0	22.1	22.1	22.0	22.0	22.0	22.0	22.0	22.0	22.1	**21.7**	21.8	21.9	21.8	21.9	22.0	21.8	**21.7**	**21.7**	21.9	22.0	22.0	**21.7**	22.1	21.9
Nov 20	22.0	21.9	22.0	22.1	22.0	22.0	22.0	22.1	22.1	22.0	22.0	21.8	21.8	21.9	21.9	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.0	21.8	22.1	22.0
Nov 21	22.0	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	22.0	21.9	21.8	21.8	21.9	22.0	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.0	21.8	22.0	21.9
Nov 22	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.1	22.0	22.1	22.0	22.0	22.1	22.0	22.0	22.0	22.0	22.0	21.9	22.1	22.0
Nov 23	22.0	21.9	21.9	21.9	21.8	21.9	21.8	21.9	21.9	21.9	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	21.8	22.0	21.9
Nov 24	22.0	22.0	21.9	22.0	22.0	22.0	22.0	22.1	22.0	22.1	22.1	22.2	22.2	22.1	22.1	22.2	22.2	22.1	22.1	22.1	22.1	22.1	22.0	22.0	21.9	22.2	22.1
Nov 25	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	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.0
Nov 26	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.2	22.2	22.2	22.2	22.1	22.2	22.2	22.2	22.1	22.1	21.9	22.2	22.1
Nov 27	22.1	22.1	22.2	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.1	22.0	22.1	22.1	22.1	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.2	22.1
Nov 28	22.0	22.0	21.9	21.9	21.9	21.9	22.0	22.0	22.0	22.0	21.9	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	21.9	22.0	22.0
Nov 29	22.0	22.0	22.1	22.1	22.0	22.2	22.2	22.1	22.1	22.1	22.0	22.2	22.2	22.2	22.2	22.2	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.0	22.0	22.2	22.1
Nov 30	22.1	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.1	22.1	22.2	22.1	22.1	22.1	22.0	22.2	22.1
Diurnal Maximum	23.1	23.0	23.1	23.0	23.2	23.2	23.2	23.0	23.2	23.1	23.0	23.0	23.1	23.1	23.1	23.1	23.1	23.1	23.2	23.0	23.2	23.2	23.2	23.2			
Diurnal Average	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1			

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

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

Timeseries Chart of Hourly Average for ST - 842b Station



PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

PRECIPITATION in mm

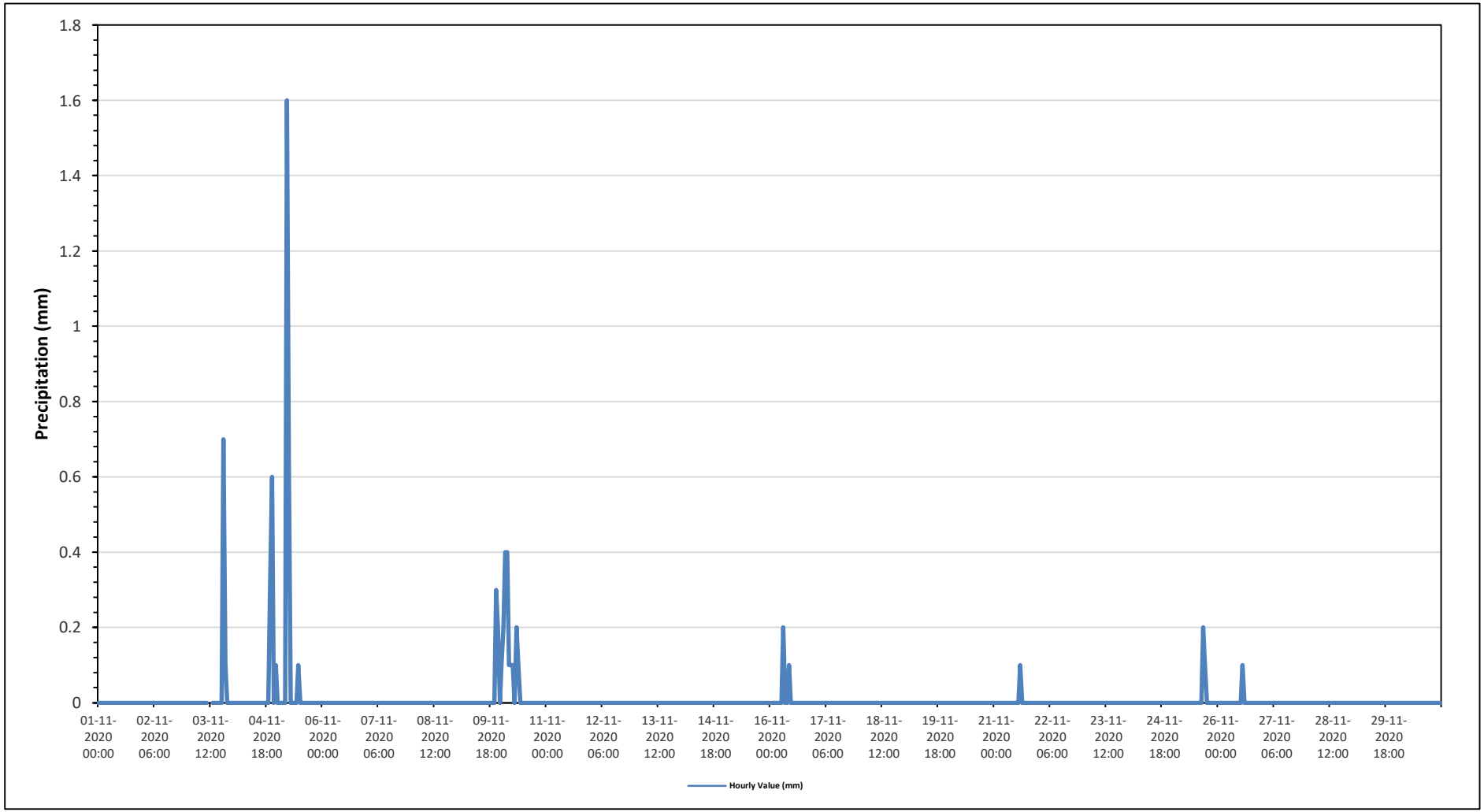
Maximum Hourly Value:	1.6	mm	on November 5 at hour 5	Hours in Service:	720
Maximum Daily Value:	2.3	mm	on November 5	Hours of Data:	718
Minimum Hourly Value:	0.0	mm	on November 1 at hour 0	Hours of Missing Data:	2
Minimum Daily Value:	0.0	mm	on November 1	Hours of Calibration:	0
Monthly Total:	7.1	mm		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Total
Nov 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
Nov 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Nov 3	0	0	0	0	0	0	0	0	0	0	0	P	P	0	0	0	0	0	0	0.7	0.1	0	0	0	0.0	0.7	0.8
Nov 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	0	0.1	0.0	0.6	1.0
Nov 5	0	0	0	0	0	**1.6**	0.6	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	**1.6**	**2.3**
Nov 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
Nov 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
Nov 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
Nov 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.2	0	0.0	0.3	0.5
Nov 10	0.1	0.2	0.4	0.4	0.1	0.1	0.1	0	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4	1.7
Nov 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
Nov 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
Nov 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
Nov 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
Nov 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
Nov 16	0	0	0	0	0	0	0	0.2	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.3
Nov 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
Nov 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
Nov 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
Nov 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
Nov 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Nov 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
Nov 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
Nov 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
Nov 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.1	0	0	0	0	0	0	0.0	0.2	0.3
Nov 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Nov 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
Nov 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
Nov 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
Nov 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
Diurnal Maximum	0.1	0.2	0.4	0.4	0.1	1.6	0.6	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.7	0.3	0.6	0.2	0.1			
Diurnal Average	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	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for Precipitation - 842b Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

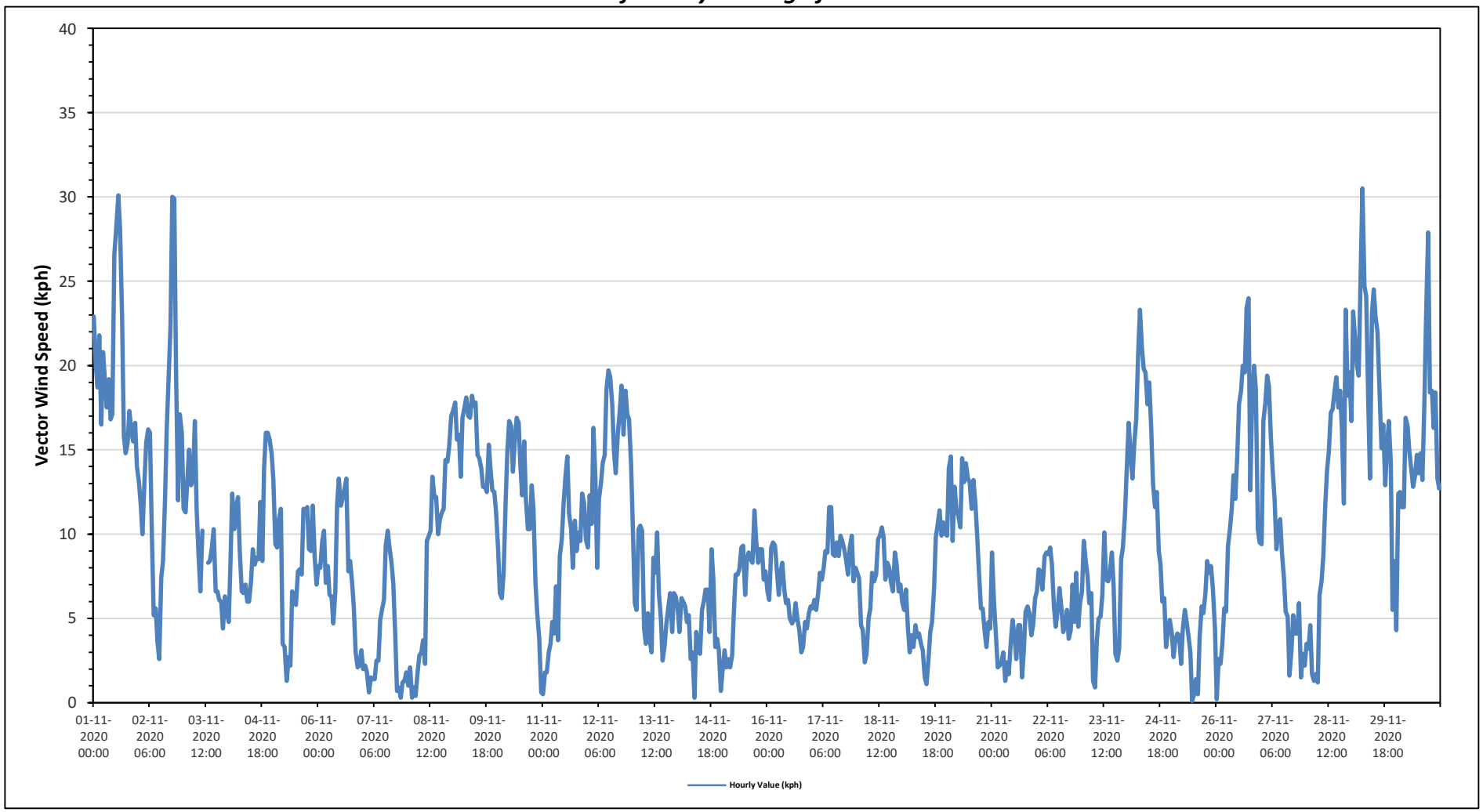
Maximum Hourly Value:	30.5	kph	on November 29 at hour 6	Hours in Service:	720
Maximum Daily Value:	19.0	kph	on November 1	Hours of Data:	718
Minimum Hourly Value:	0.1	kph	on November 25 at hour 11	Hours of Missing Data:	2
Minimum Daily Value:	0.9	kph	on November 14	Hours of Calibration:	0
Monthly Average:	4.2	kph		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	22.9	20.3	18.7	21.8	16.5	20.8	19.0	17.5	19.2	16.8	17.1	26.6	28.0	30.1	28.0	22.8	15.8	14.8	15.4	17.3	16.1	15.5	16.6	14.0	14.0	30.1	**19.0**
Nov 2	13.1	11.8	10.0	13.1	15.4	16.2	16.0	9.7	5.2	5.6	3.6	2.6	7.4	8.4	12.0	16.3	19.5	22.3	30.0	29.9	19.7	12.0	17.1	16.0	2.6	30.0	12.9
Nov 3	11.5	11.3	13.2	15.0	12.9	13.2	16.7	11.5	8.7	6.6	10.2	**P**	**P**	8.3	8.4	9.2	10.3	6.6	6.6	6.1	6.0	4.4	6.3	5.4	4.4	16.7	2.6
Nov 4	4.8	8.3	12.4	10.3	11.5	12.2	9.0	6.6	6.5	7.0	6.0	6.0	7.2	9.1	8.2	8.6	8.5	11.9	8.4	13.9	16.0	16.0	15.6	14.8	4.8	16.0	5.7
Nov 5	13.2	9.4	9.2	10.9	11.5	3.5	3.3	1.3	2.7	2.2	6.6	6.1	5.8	7.8	7.9	7.6	11.5	11.4	11.6	9.1	9.0	11.7	8.6	7.0	1.3	13.2	3.4
Nov 6	8.1	8.0	9.6	10.2	7.1	8.1	6.4	6.3	4.7	6.6	11.7	13.3	11.7	12.1	12.7	13.3	7.8	8.4	7.1	5.6	3.0	2.1	2.2	3.1	2.1	13.3	4.8
Nov 7	2.0	2.2	1.8	0.6	1.5	1.4	1.4	2.5	2.5	4.9	5.6	6.1	9.3	10.2	9.2	8.3	7.1	4.0	0.7	0.9	0.3	1.2	1.3	1.8	0.3	10.2	2.0
Nov 8	1.0	2.1	0.3	0.9	0.4	1.8	2.8	3.0	3.7	2.3	9.6	9.9	10.2	13.4	12.2	12.2	10.0	10.9	11.3	11.5	14.4	14.3	15.2	17.0	0.3	17.0	7.2
Nov 9	17.3	17.8	15.6	15.9	13.4	16.9	17.5	18.1	17.0	16.9	18.2	17.6	17.8	14.7	14.5	13.9	12.8	12.8	12.5	15.3	13.8	12.6	12.5	11.3	11.3	18.2	13.4
Nov 10	9.1	6.5	6.2	7.7	11.9	14.9	16.7	16.4	13.7	15.6	16.9	16.6	14.0	12.3	15.5	12.0	10.3	10.3	12.9	11.5	7.1	5.3	3.8	0.6	0.6	16.9	10.1
Nov 11	0.5	1.8	1.8	3.0	3.5	4.8	4.1	6.9	3.7	8.7	9.7	11.8	13.5	14.6	11.2	10.3	8.0	10.8	9.0	10.1	9.6	12.4	11.8	9.7	0.5	14.6	7.5
Nov 12	9.2	12.3	10.6	16.3	13.3	8.0	12.1	13.0	14.2	14.7	18.6	19.7	19.3	17.7	14.9	13.6	15.9	17.1	18.8	15.9	18.5	17.1	16.8	14.2	8.0	19.7	14.6
Nov 13	10.5	5.9	5.5	10.3	10.5	10.2	4.4	3.5	5.3	3.7	3.0	8.6	7.7	10.1	6.5	5.0	2.5	3.4	4.7	5.7	6.5	4.2	6.5	6.3	2.5	10.5	2.3
Nov 14	5.6	4.2	6.2	6.0	5.7	4.8	5.2	2.6	3.0	0.3	4.2	3.2	2.9	5.5	6.0	6.7	6.7	4.2	9.1	7.4	3.3	3.8	3.1	0.7	0.3	9.1	**0.9**
Nov 15	1.9	3.1	2.1	2.6	2.1	2.8	5.4	7.6	7.6	7.9	9.2	9.3	6.4	8.5	8.9	8.5	8.3	11.4	9.6	8.3	9.1	9.1	7.3	7.8	1.9	11.4	6.7
Nov 16	6.6	6.1	9.2	9.5	9.3	7.9	6.4	7.7	8.3	6.7	5.9	6.1	5.0	4.7	4.9	5.9	4.9	4.3	3.0	3.3	4.8	4.4	5.3	5.7	3.0	9.5	5.9
Nov 17	5.6	6.1	5.5	6.5	7.7	7.3	8.0	9.0	8.9	11.6	11.6	8.8	8.7	9.5	8.7	9.9	9.6	9.1	8.5	7.6	9.2	9.9	7.2	8.0	5.5	11.6	7.7
Nov 18	7.7	7.4	4.6	4.3	2.4	2.9	5.0	5.6	7.7	7.2	7.6	9.7	9.9	10.4	9.8	7.3	8.3	8.0	7.1	6.6	8.9	8.2	6.6	7.0	2.4	10.4	6.5
Nov 19	6.0	5.5	6.7	4.4	3.0	4.0	3.3	4.6	3.9	4.1	3.5	3.1	1.5	1.1	2.6	4.2	4.8	6.7	9.8	10.6	11.4	9.9	10.7	10.0	1.1	11.4	3.2
Nov 20	9.9	13.9	14.6	9.6	12.8	11.5	11.1	10.4	14.5	13.1	14.2	13.3	13.1	11.5	13.2	11.8	9.9	7.8	5.6	5.6	4.2	3.3	4.8	4.4	3.3	14.6	9.5
Nov 21	8.9	6.0	4.2	2.1	2.2	2.4	3.0	1.3	2.4	1.7	3.6	4.9	3.9	2.6	4.6	4.6	1.5	3.1	5.4	5.7	5.3	4.0	4.6	6.2	1.3	8.9	2.4
Nov 22	6.6	7.9	7.8	6.7	8.7	8.9	8.8	9.2	8.2	5.7	4.5	5.5	6.8	5.6	4.2	4.6	5.5	3.8	4.3	7.0	4.8	7.7	4.5	5.9	3.8	9.2	4.5
Nov 23	6.6	9.6	8.5	7.5	5.9	6.5	1.3	0.9	3.7	5.0	5.1	6.4	10.1	7.3	7.2	7.7	8.9	6.9	2.9	2.5	3.2	8.5	9.2	11.1	0.9	11.1	2.8
Nov 24	13.7	16.6	14.6	13.3	15.5	16.8	20.8	23.3	21.0	19.8	19.6	17.7	19.0	16.2	13.0	11.6	12.5	9.0	8.2	6.0	6.2	3.3	4.3	4.9	3.3	23.3	11.5
Nov 25	4.1	2.7	3.7	4.1	4.0	2.3	4.4	5.5	4.8	3.9	3.0	**0.1**	0.5	1.4	0.5	3.9	5.7	5.3	6.5	8.4	7.7	8.1	6.7	4.4	**0.1**	8.4	2.8
Nov 26	0.2	2.6	2.3	3.4	5.6	5.4	9.3	10.2	11.5	13.5	12.1	14.7	17.7	18.5	20.0	19.6	23.4	24.0	12.6	17.8	20.0	18.6	10.3	9.5	0.2	24.0	9.9
Nov 27	9.4	16.7	17.8	19.4	18.8	15.7	13.8	12.0	9.1	10.2	10.9	8.9	7.4	5.4	5.1	1.6	3.1	5.2	4.1	4.1	5.9	1.5	2.9	2.2	1.5	19.4	8.4
Nov 28	3.5	3.2	4.6	1.7	1.3	1.7	1.2	6.4	7.2	8.7	11.8	13.8	14.9	17.2	17.4	18.5	19.3	17.5	18.5	16.3	11.8	23.3	18.2	19.6	1.2	23.3	10.6
Nov 29	16.7	23.2	21.5	20.0	19.4	25.5	**30.5**	24.7	24.1	18.0	13.3	23.1	24.5	22.9	22.0	19.0	15.1	16.5	12.9	15.1	16.7	14.3	5.5	8.4	5.5	**30.5**	18.4
Nov 30	4.3	12.4	12.5	11.6	11.6	16.9	16.4	14.9	13.8	12.8	13.5	14.7	13.6	14.8	13.2	17.8	23.1	27.9	18.4	18.5	16.3	18.4	13.3	12.7	4.3	27.9	9.0
Diurnal Maximum	23	23	22	22	19	26	31	25	24	20	20	27	28	30	28	23	23	28	30	30	20	23	18	20			
Diurnal Average	8.0	8.8	8.7	9.0	8.8	9.2	9.4	9.1	8.9	8.7	9.7	10.6	11.0	11.1	10.8	10.5	10.4	10.5	9.9	10.1	9.6	9.5	8.6	8.3			

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

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

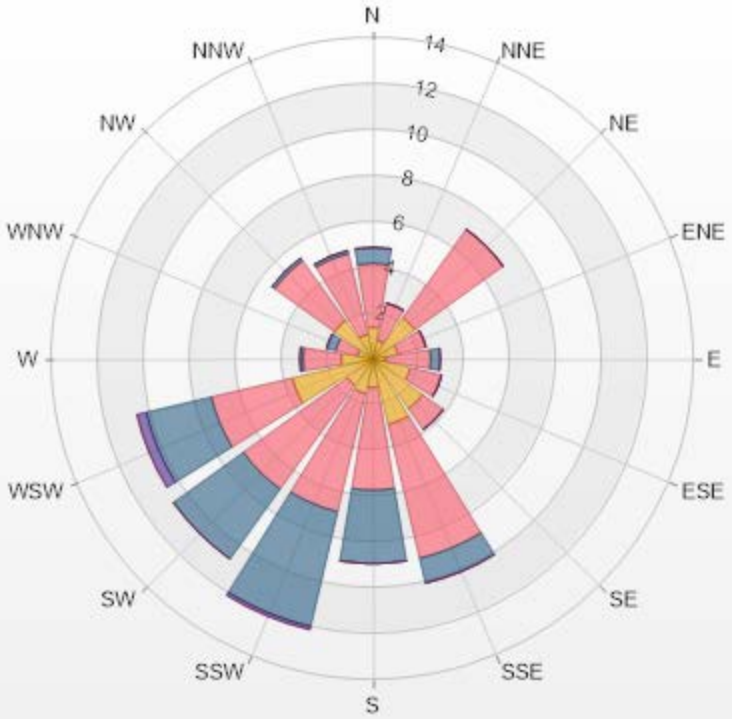
Timeseries Chart of Hourly Average for VWS - 842b Station



Wind: PRAMP 842b Monitor: WDS [KPH] Monthly: 11-2020 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 5.57% Valid Data: 99.72%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.39	2.79	0.7	0	0	4.88
NNE	0.84	1.67	0	0	0	2.51
NE	2.23	4.74	0	0	0	6.97
ENE	1.11	1.25	0	0	0	2.36
E	0.56	1.95	0.42	0	0	2.93
ESE	1.67	1.39	0	0	0	3.06
SE	2.65	1.11	0	0	0	3.76
SSE	2.92	5.99	1.11	0	0	10.02
S	1.25	4.46	3.2	0	0	8.91
SSW	1.53	5.29	5.15	0.14	0	12.11
SW	1.39	5.57	3.76	0	0	10.72
WSW	3.62	3.62	2.92	0.42	0	10.58
W	1.39	1.67	0.14	0	0	3.2
WNW	0.7	0.97	0.42	0	0	2.09
NW	2.09	3.2	0.14	0	0	5.43
NNW	1.11	3.62	0.14	0	0	4.87
Summary	26.45	49.29	18.1	0.56	0	94.4

PRAMP 842b 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 5.57% Calm Wind Avg Speed: 1.08(KPH)



% Icon Classes (KPH)	26 1.8-6.0	49 6.0-15.0	18 15.0-29.0	1 29.0-39.0	0 >39.0

PEACE RIVER AREA MONITORING PROGRAM

842b Station - November 2020

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

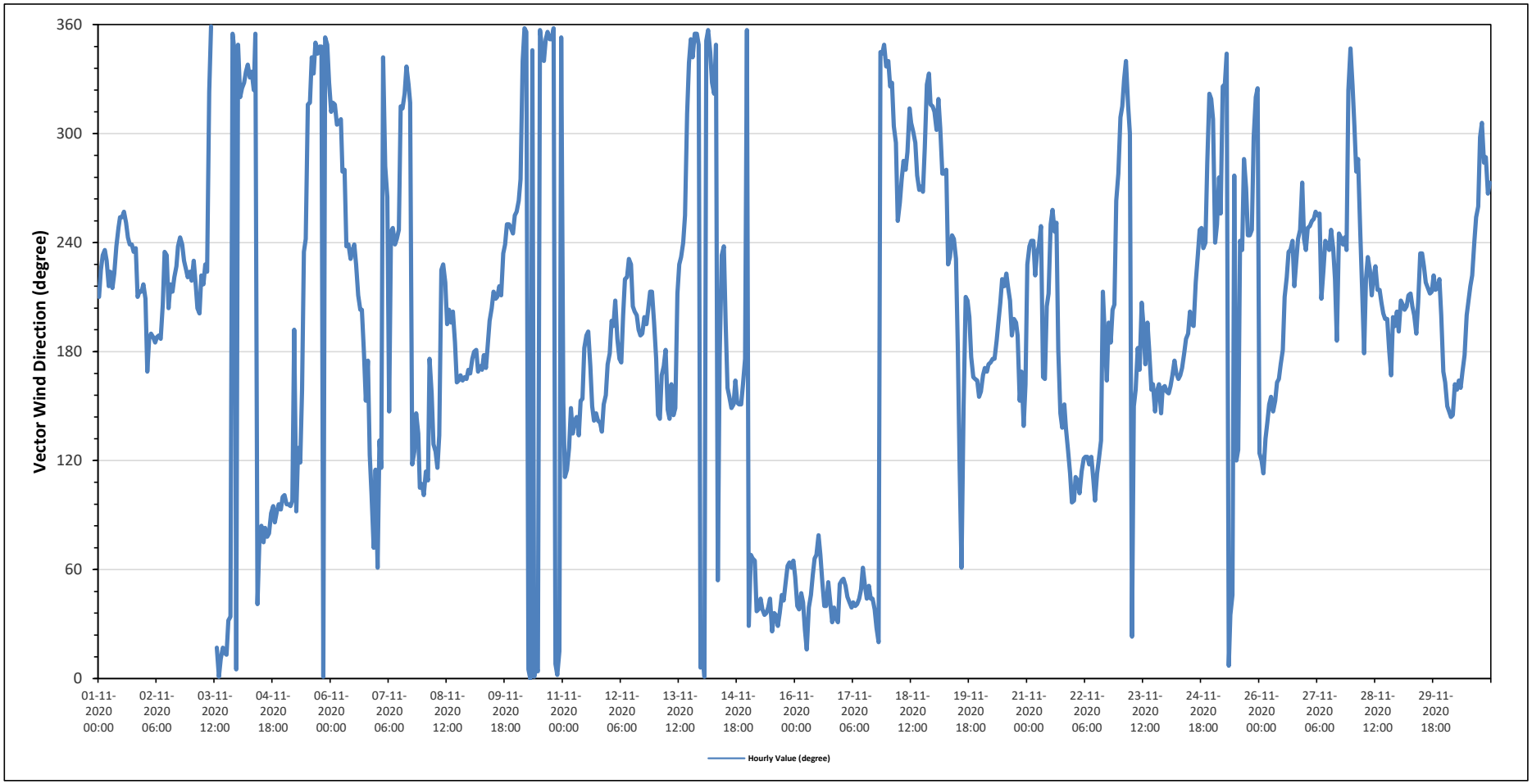
Monthly Average:	211 (SSW) degree	Hours in Service:	720
		Hours of Data:	718
		Hours of Missing Data:	2
		Hours of Calibration:	0
		Operational Uptime:	99.7

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
Nov 1	SSW	SW	SW	SW	SW	SW	SW	SSW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SSW	SSW	SSW	SW	234	SW
Nov 2	SSW	SSE	S	S	S	S	S	S	S	SSW	SW	SW	SSW	SW	SSW	SW	SW	SW	WSW	WSW	SW	SW	SW	SW	215	SSW
Nov 3	SW	SW	SW	SSW	SSW	SW	SW	SW	SW	NW	N	P	P	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	N	NNW	N	270	W
Nov 4	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NW	N	NE	ENE	E	ENE	E	ENE	E	E	E	E	E	E	E	E	52	NE
Nov 5	E	E	E	E	E	S	E	SE	ESE	SSE	SW	WSW	NW	NW	NNW	NNW	N	NNW	NNW	NNW	N	N	NNW	NNW	13	NNE
Nov 6	NW	NW	NW	WNW	NW	NW	W	W	SW	WSW	SW	SW	WSW	SW	SSW	SSW	SSW	S	SSE	S	ESE	E	ENE	ESE	242	WSW
Nov 7	ENE	SE	ESE	NNW	W	W	SE	WSW	WSW	WSW	WSW	WSW	NW	NW	NW	NNW	NW	NW	ESE	SE	SE	SE	ESE	ESE	300	WNW
Nov 8	E	ESE	ESE	S	SSE	SE	SE	ESE	SE	SW	SW	SW	SSW	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	179	S
Nov 9	SSE	S	S	S	SSE	S	SSE	S	S	S	SSW	SSW	SSW	SSW	SSW	SW	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	202	SSW
Nov 10	WSW	W	W	NNW	N	N	N	N	NNW	N	N	N	N	NNW	NNW	N	N	N	N	N	N	N	NNE	N	351	N
Nov 11	SSE	ESE	ESE	SE	SSE	SE	SE	SE	SE	SSE	SSE	S	S	S	S	SSE	SE	SE	SE	SE	SE	SSE	SSE	S	157	SSE
Nov 12	S	SSW	SSW	SSW	S	S	S	SSW	SW	SW	SW	SW	SSW	SSW	SSW	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	203	SSW
Nov 13	S	SE	SE	SSE	S	S	SE	SE	SSE	SE	SSE	SSW	SW	SW	WSW	WSW	NW	NNW	N	NNW	N	N	NNW	N	196	SSW
Nov 14	NNE	N	N	N	NNW	NNW	NW	NNW	NE	S	SW	SW	SSW	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	N	147	SE
Nov 15	NNE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NE	NE	NNE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	45	NE
Nov 16	NE	NE	NE	NE	NE	NNE	NNE	NE	NE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NNE	NE	NNE	NNE	NE	45	NE
Nov 17	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNW	NNW	NNW	NNW	35	NE
Nov 18	NNW	NW	NNW	WNW	WNW	WSW	W	W	WNW	W	WNW	NW	NW	WNW	WNW	W	W	W	W	WNW	NW	NNW	NW	NW	299	WNW
Nov 19	NW	WNW	NW	WNW	W	W	W	SW	SW	WSW	WSW	SW	S	ESE	ENE	SSE	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	206	SSW
Nov 20	SSE	SSE	S	SSE	S	S	S	S	S	SSW	SSW	SW	SW	SW	SW	SSW	S	SSW	SSW	S	SSE	SSE	SE	SSE	188	S
Nov 21	SW	SW	WSW	WSW	SW	SW	SW	WSW	SSE	SSE	SSW	SSW	WSW	WSW	WSW	WSW	S	SE	SE	SSE	SE	SE	ESE	E	197	SSW
Nov 22	E	ESE	ESE	E	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	ESE	ESE	SE	SSW	S	SSE	SSW	S	SSW	SSW	W	W	136	SE
Nov 23	NW	NW	NNW	NNW	NW	WNW	NNE	SSE	SSE	S	SSE	SSW	SSW	S	SSW	S	SSE	SSE	SE	SSE	SSE	SE	SSE	SSE	190	S
Nov 24	SSE	SSE	SSE	SSE	S	SSE	SSE	SSE	S	S	S	S	SSW	SSW	SSW	SW	SW	WSW	WSW	SW	WSW	WNW	NW	NW	187	S
Nov 25	NW	WSW	WSW	W	WSW	NW	NW	NNW	N	NE	NE	W	ESE	SE	WSW	SW	WNW	W	WSW	WSW	WSW	WNW	NW	NW	288	WNW
Nov 26	ESE	ESE	ESE	SE	SE	SSE	SSE	SE	SSE	SSE	SSE	S	S	SSW	SW	SW	SW	WSW	SW	SW	WSW	WSW	W	WSW	209	SSW
Nov 27	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SSW	SW	WSW	WSW	SW	WSW	SW	SW	S	WSW	WSW	WSW	WSW	SW	NW	NNW	246	WSW
Nov 28	NW	WNW	W	WNW	WSW	SW	S	SW	SW	SW	SSW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	S	SSE	SSW	SSW	SSW	207	SSW
Nov 29	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	SW	SW	SW	SW	SSW	SSW	SSW	SW	SSW	SSW	SW	SSW	SSE	211	SSW
Nov 30	SSE	SSE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	S	SSW	SSW	SW	SW	WSW	WSW	WSW	WNW	NW	WNW	WNW	W	W	219	SW

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

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

Timeseries Chart of Hourly Average for VWD - 842b Station



RENO STATION

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

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

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

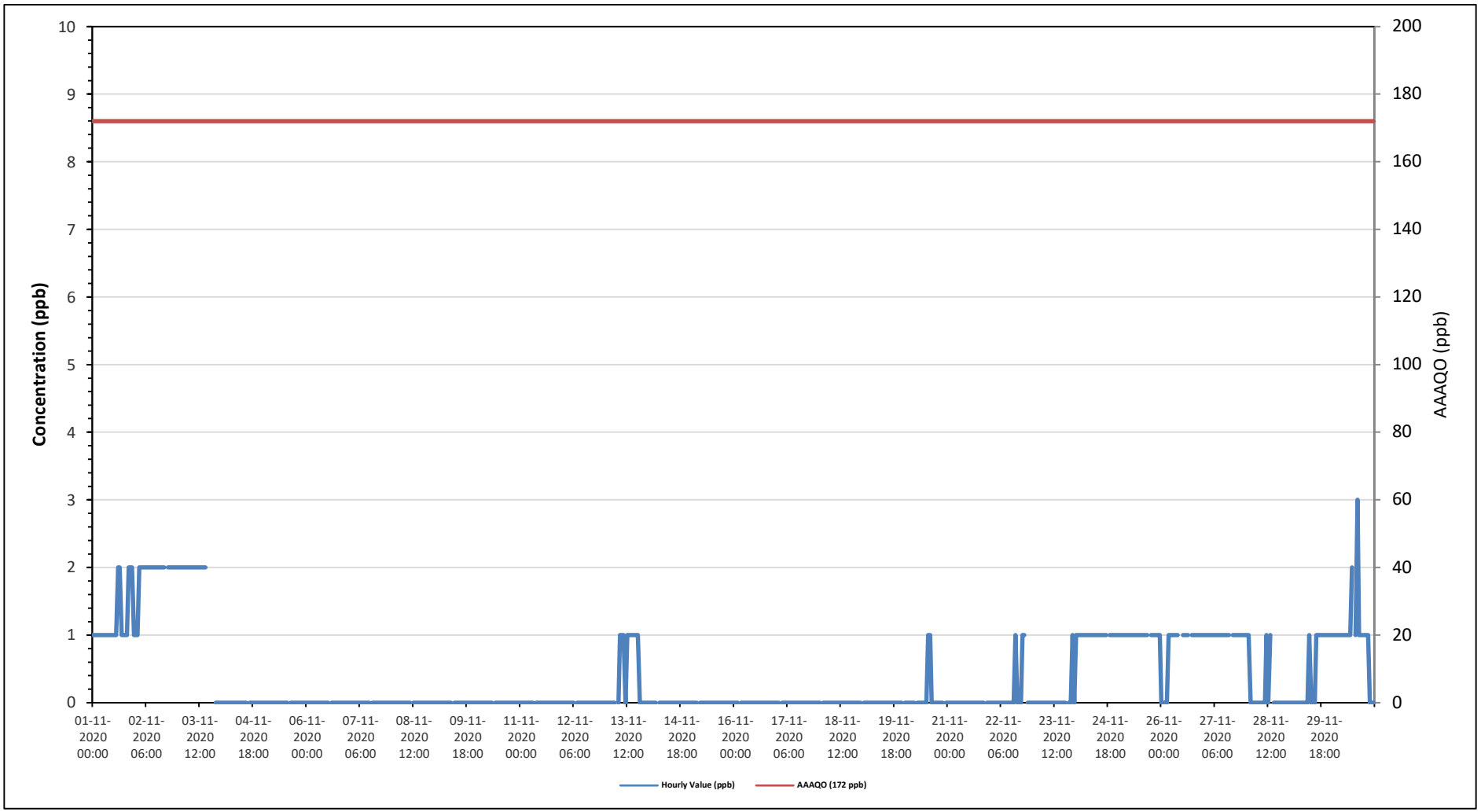
Maximum Hourly Value:	3	ppb	on November 30 at hour 14	Hours in Service:	720
Maximum Daily Value:	1.9	ppb	on November 2	Hours of Data:	683
Minimum Hourly Value:	0	ppb	on November 3 at hour 21	Hours of Missing Data:	3
Minimum Daily Value:	0.0	ppb	on November 4	Hours of Calibration:	34
Monthly Average:	0.4	ppb		Operational Uptime:	99.6

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			
Nov 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	2	2	1	1	2	1.2
Nov 2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2	1	2	1.9
Nov 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	C	C	C	C	C	0	0	0	0	2	1.7
Nov 4	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
Nov 5	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
Nov 6	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
Nov 7	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
Nov 8	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
Nov 9	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
Nov 10	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
Nov 11	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
Nov 12	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
Nov 13	0	0	0	0	0	0	S	0	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.4
Nov 14	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
Nov 15	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
Nov 16	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
Nov 17	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 18	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
Nov 19	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Nov 20	0	0	0	0	0	0	NRM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	S	0	0	1	0.1
Nov 21	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
Nov 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	S	0	0	0	0	1	0.1
Nov 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0	0	1	0.0
Nov 24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1.0
Nov 25	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	1.0
Nov 26	0	0	0	0	1	1	1	1	1	1	NRM	NRM	1	1	1	1	S	1	1	1	1	1	1	1	0	1	0.8
Nov 27	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
Nov 28	1	1	0	0	0	0	0	0	0	0	0	1	0	1	S	0	0	0	0	0	0	0	0	0	0	1	0.2
Nov 29	0	0	0	0	0	0	0	0	0	0	0	1	0	S	0	1	1	1	1	1	1	1	1	1	0	1	0.4
Nov 30	1	1	1	1	1	1	1	1	1	1	1	2	S	1	3	1	1	1	1	1	1	0	0	0	0	3	1.0
Diurnal Maximum	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	1	2	2	2	2	2	2			
Diurnal Average	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3			

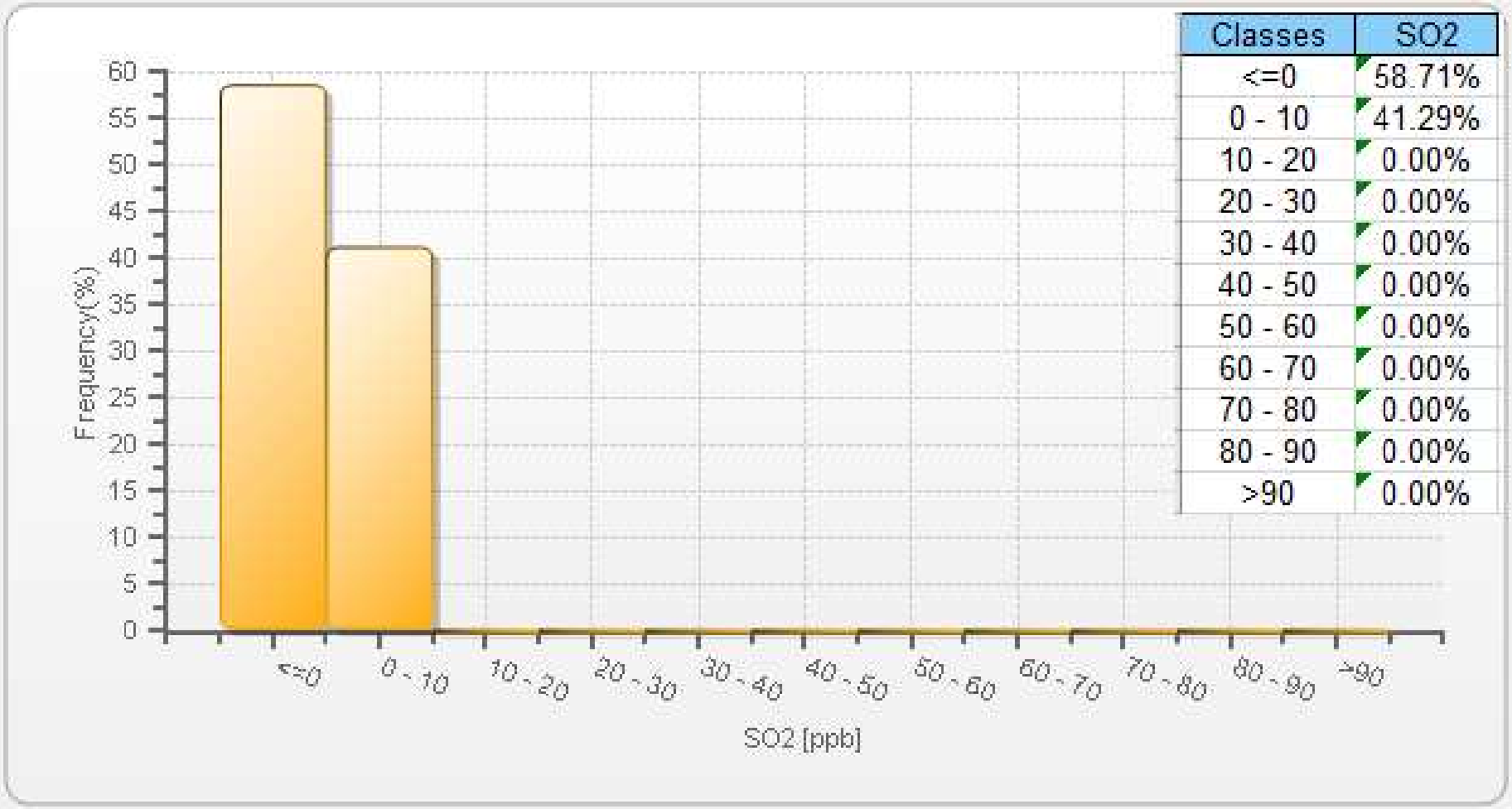
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

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

Timeseries Chart of Hourly Average for SO2 - Reno Station



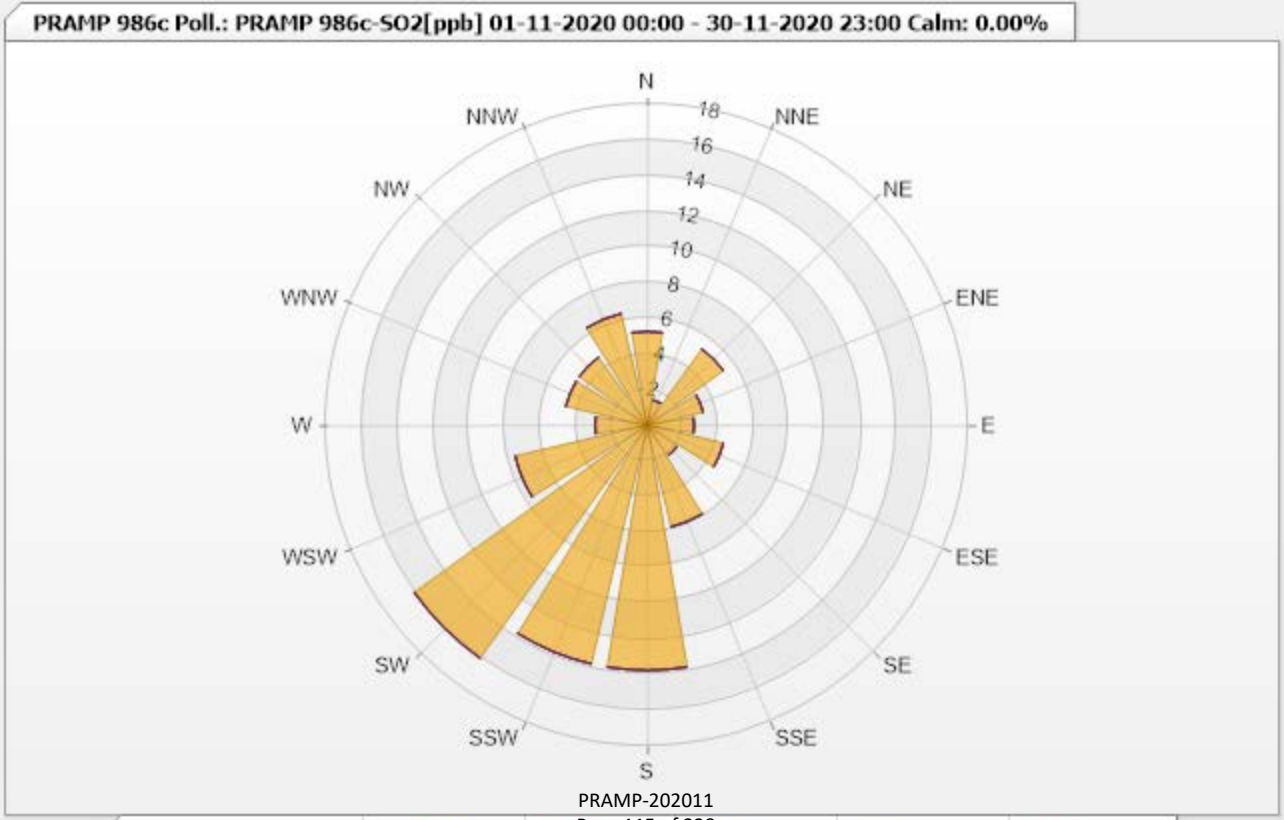
SO2[ppb] Histogram: PRAMP RENO Monthly: 11-2020 1 Hr.



Classes	SO2
<=0	58.71%
0 - 10	41.29%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	5.26	0	0	0	0	5.26
NNE	1.46	0	0	0	0	1.46
NE	5.26	0	0	0	0	5.26
ENE	3.22	0	0	0	0	3.22
E	2.63	0	0	0	0	2.63
ESE	4.39	0	0	0	0	4.39
SE	2.05	0	0	0	0	2.05
SSE	5.85	0	0	0	0	5.85
S	13.74	0	0	0	0	13.74
SSW	13.74	0	0	0	0	13.74
SW	16.08	0	0	0	0	16.08
WSW	7.6	0	0	0	0	7.6
W	2.92	0	0	0	0	2.92
WNW	4.68	0	0	0	0	4.68
NW	4.68	0	0	0	0	4.68
NNW	6.43	0	0	0	0	6.43
Summary	100	0	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-SO2[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-10
0 10-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

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:	0.60	ppb	on November 21 at hour 22	Hours in Service:	720
Maximum Daily Value:	0.52	ppb	on November 21	Hours of Data:	684
Minimum Hourly Value:	0.17	ppb	on November 1 at hour 3	Hours of Missing Data:	2
Minimum Daily Value:	0.22	ppb	on November 1	Hours of Calibration:	34
Monthly Average:	0.43	ppb		Operational Uptime:	99.7

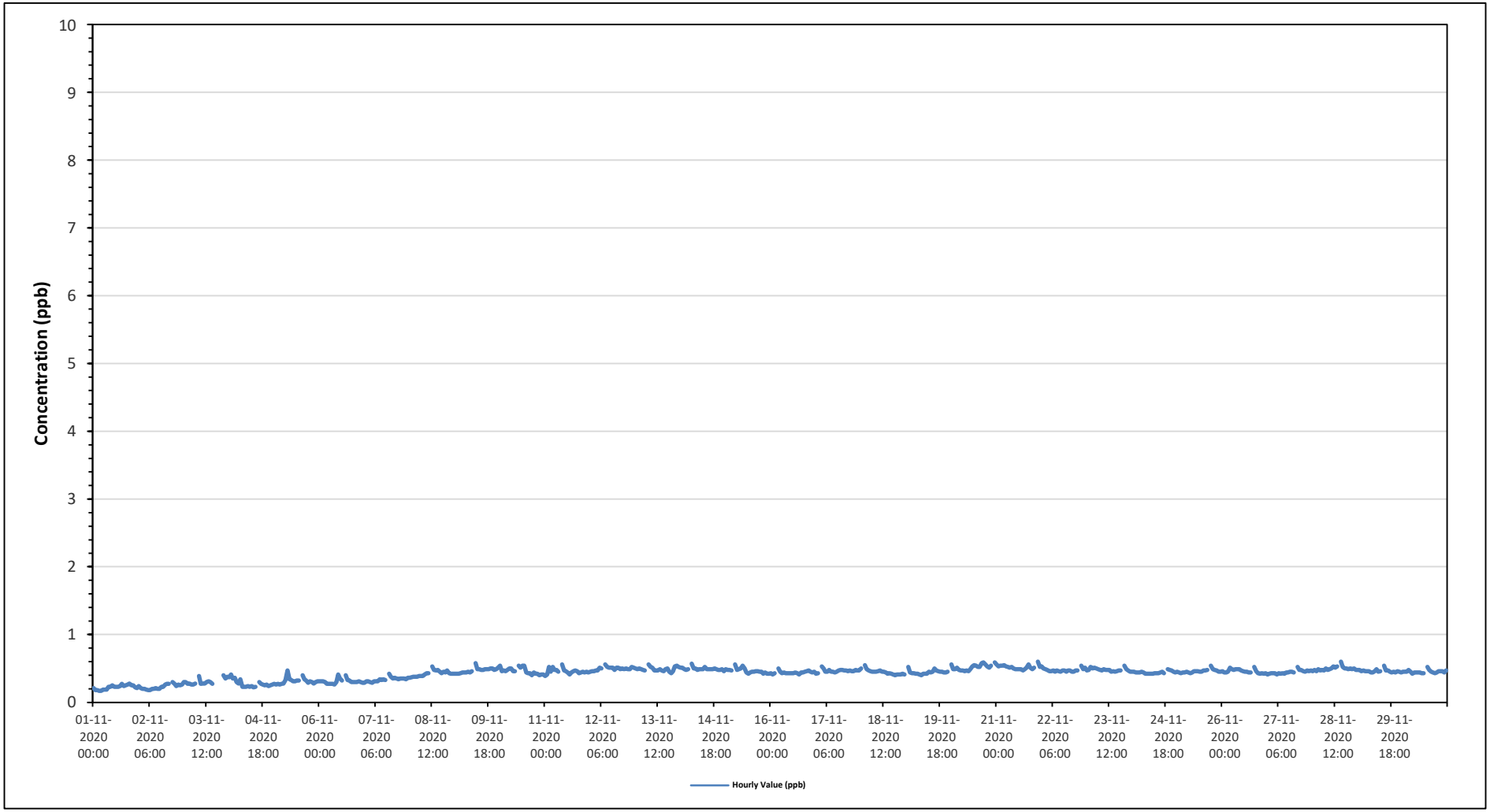
Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.21	0.18	0.18	0.17	0.17	0.19	0.19	0.19	0.23	0.23	0.25	0.23	0.23	0.23	0.24	0.27	0.24	0.25	0.26	0.28	0.25	0.25	0.22	0.21	0.17	0.28	0.22
Nov 2	0.24	0.21	0.2	0.2	0.19	0.18	0.18	0.2	0.2	0.21	0.2	0.2	0.23	0.23	0.26	0.27	0.27	S	0.3	0.27	0.24	0.26	0.25	0.26	0.18	0.30	0.23
Nov 3	0.3	0.3	0.27	0.28	0.26	0.26	0.28	NRM	0.39	0.27	0.28	0.28	0.3	0.31	0.3	0.27	C	C	C	C	C	0.4	0.35	0.38	0.26	0.40	0.30
Nov 4	0.37	0.41	0.35	0.36	0.3	0.28	0.34	0.23	0.23	0.23	0.24	0.23	0.24	0.22	0.23	S	0.3	0.27	0.26	0.25	0.26	0.24	0.25	0.26	0.22	0.41	0.28
Nov 5	0.27	0.26	0.27	0.26	0.27	0.28	0.33	0.47	0.34	0.33	0.31	0.31	0.32	0.32	S	0.4	0.34	0.32	0.29	0.31	0.3	0.28	0.3	0.31	0.26	0.47	0.31
Nov 6	0.31	0.31	0.31	0.3	0.27	0.27	0.27	0.27	0.26	0.3	NRM	0.35	0.32	S	0.4	0.33	0.32	0.3	0.3	0.3	0.3	0.31	0.3	0.29	0.26	0.40	0.30
Nov 7	0.29	0.31	0.31	0.3	0.29	0.31	0.31	0.31	0.34	0.33	0.34	0.33	S	0.42	0.38	0.35	0.36	0.35	0.34	0.35	0.35	0.35	0.34	0.36	0.29	0.42	0.34
Nov 8	0.36	0.37	0.38	0.38	0.38	0.39	0.39	0.39	0.41	0.43	0.43	S	0.53	0.48	0.47	0.48	0.45	0.43	0.45	0.44	0.47	0.43	0.42	0.42	0.36	0.53	0.43
Nov 9	0.42	0.42	0.42	0.43	0.44	0.44	0.44	0.45	0.44	0.46	S	0.58	0.49	0.49	0.48	0.48	0.49	0.49	0.49	0.5	0.5	0.48	0.49	0.51	0.42	0.58	0.47
Nov 10	0.54	0.46	0.47	0.46	0.48	0.5	0.5	0.46	0.46	S	0.54	0.51	0.54	0.54	0.44	0.43	0.43	0.4	0.44	0.42	0.42	0.4	0.41	0.41	0.40	0.54	0.46
Nov 11	0.39	0.41	0.52	0.45	0.52	0.48	0.48	0.45	S	0.56	0.47	0.46	0.44	0.41	0.44	0.46	0.47	0.46	0.43	0.44	0.45	0.44	0.45	0.44	0.39	0.56	0.46
Nov 12	0.45	0.46	0.46	0.47	0.47	0.51	0.5	S	0.56	0.52	0.51	0.51	0.51	0.48	0.51	0.51	0.49	0.5	0.49	0.5	0.49	0.49	0.52	0.51	0.45	0.56	0.50
Nov 13	0.5	0.49	0.5	0.49	0.48	0.47	S	0.56	0.52	0.51	0.47	0.47	0.47	0.49	0.47	0.46	0.49	0.5	0.45	0.43	0.46	0.53	0.54	0.52	0.43	0.56	0.49
Nov 14	0.51	0.51	0.49	0.48	0.49	S	0.57	0.5	0.5	0.48	0.49	0.49	0.49	0.52	0.49	0.49	0.49	0.49	0.5	0.49	0.48	0.48	0.49	0.46	0.46	0.57	0.49
Nov 15	0.49	0.48	0.48	0.47	S	0.56	0.48	0.49	0.5	0.54	0.5	0.44	0.42	0.44	0.45	0.45	0.46	0.46	0.45	0.45	0.42	0.44	0.42	0.42	0.42	0.56	0.47
Nov 16	0.43	0.41	0.43	S	0.5	0.45	0.43	0.44	0.43	0.43	0.43	0.43	0.43	0.44	0.43	0.41	0.44	0.44	0.45	0.46	0.47	0.45	0.44	0.45	0.41	0.50	0.44
Nov 17	0.42	0.43	S	0.53	0.5	0.45	0.45	0.48	0.45	0.45	0.44	0.45	0.47	0.48	0.48	0.47	0.47	0.46	0.47	0.46	0.46	0.48	0.47	0.47	0.42	0.53	0.46
Nov 18	0.5	S	0.55	0.49	0.47	0.46	0.45	0.45	0.45	0.46	0.47	0.45	0.45	0.44	0.42	0.43	0.42	0.41	0.4	0.41	0.41	0.41	0.42	0.41	0.40	0.55	0.44
Nov 19	S	0.52	0.44	0.43	0.43	0.42	0.42	0.41	0.4	0.42	0.42	0.42	0.45	0.44	0.45	0.5	0.47	0.46	0.45	0.45	0.44	0.44	0.45	S	0.40	0.52	0.44
Nov 20	0.56	0.49	0.49	0.51	0.48	0.47	0.47	0.46	0.47	0.46	0.49	0.53	0.55	0.54	0.52	0.52	0.58	0.59	0.56	0.53	0.51	0.54	S	0.59	0.46	0.59	0.52
Nov 21	0.56	0.53	0.54	0.54	0.55	0.53	0.52	0.51	0.52	0.5	0.49	0.49	0.49	0.49	0.47	0.49	0.51	0.56	0.51	0.49	0.51	S	0.6	0.52	0.47	**0.60**	**0.52**
Nov 22	0.53	0.5	0.49	0.48	0.46	0.46	0.47	0.45	0.47	0.46	0.45	0.47	0.47	0.45	0.47	0.47	0.45	0.45	0.47	0.47	S	0.54	0.49	0.51	0.45	0.54	0.48
Nov 23	0.47	0.48	0.52	0.5	0.51	0.5	0.49	0.48	0.47	0.49	0.48	0.48	0.48	0.45	0.46	0.45	0.46	0.47	0.47	S	0.54	0.49	0.47	0.45	0.45	0.54	0.48
Nov 24	0.45	0.45	0.44	0.44	0.44	0.45	0.44	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.44	0.45	0.43	S	0.49	0.48	0.47	0.45	0.44	0.42	0.49	0.44
Nov 25	0.45	0.44	0.43	0.44	0.44	0.45	0.44	0.43	0.44	0.46	0.46	0.46	0.45	0.45	0.47	0.47	0.48	S	0.54	0.49	0.48	0.47	0.45	0.45	0.43	0.54	0.46
Nov 26	0.46	0.44	0.44	0.45	0.51	0.49	0.48	0.49	0.49	0.49	0.47	0.46	0.45	0.45	0.44	0.44	S	0.52	0.46	0.43	0.42	0.43	0.42	0.43	0.42	0.52	0.46
Nov 27	0.41	0.42	0.43	0.43	0.43	0.41	0.43	0.42	0.43	0.42	0.44	0.44	0.45	0.45	0.44	S	0.52	0.48	0.48	0.46	0.45	0.47	0.46	0.47	0.41	0.52	0.45
Nov 28	0.46	0.48	0.46	0.49	0.47	0.48	0.47	0.5	0.48	0.49	0.5	0.53	0.51	0.53	S	**0.6**	0.52	0.5	0.5	0.49	0.5	0.49	0.5	0.48	0.46	**0.60**	0.50
Nov 29	0.48	0.48	0.46	0.47	0.46	0.46	0.46	0.44	0.44	0.46	0.49	0.45	0.46	S	0.54	0.47	0.47	0.45	0.44	0.45	0.44	0.46	0.45	0.44	0.44	0.54	0.46
Nov 30	0.45	0.45	0.45	0.48	0.45	0.42	0.44	0.44	0.44	0.44	0.43	0.43	S	0.52	0.48	0.45	0.44	0.43	0.44	0.46	0.46	0.46	0.44	0.47	0.42	0.52	0.45
Diurnal Maximum	0.56	0.53	0.55	0.54	0.55	0.56	0.57	0.56	0.56	0.56	0.54	0.58	0.55	0.54	0.54	0.60	0.58	0.59	0.56	0.53	0.54	0.54	0.60	0.59			
Diurnal Average	0.42	0.42	0.42	0.42	0.42	0.41	0.42	0.42	0.42	0.42	0.43	0.42	0.43	0.43	0.43	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.42	0.43			

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

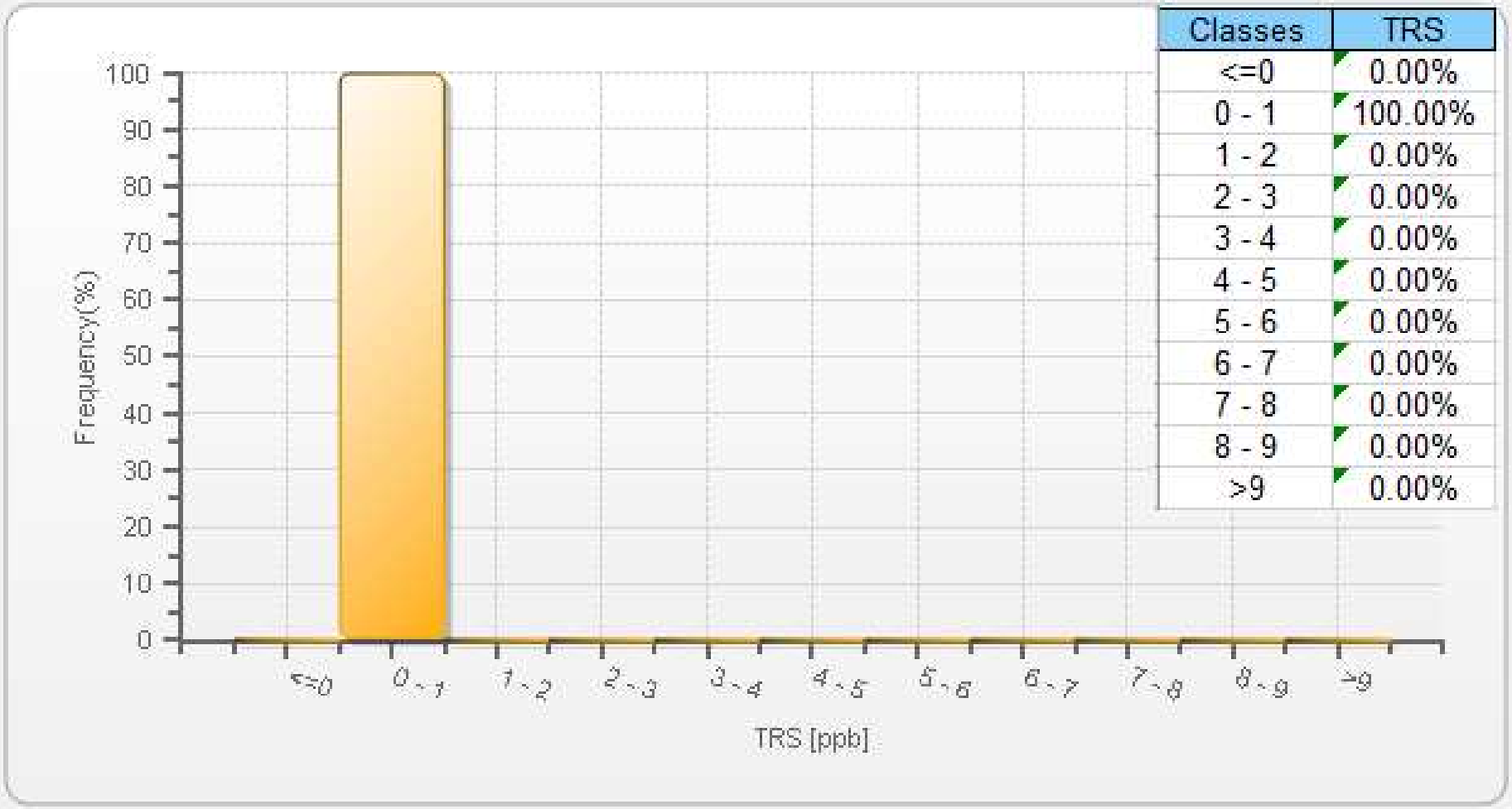
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

Timeseries Chart of Hourly Average for TRS - Reno Station



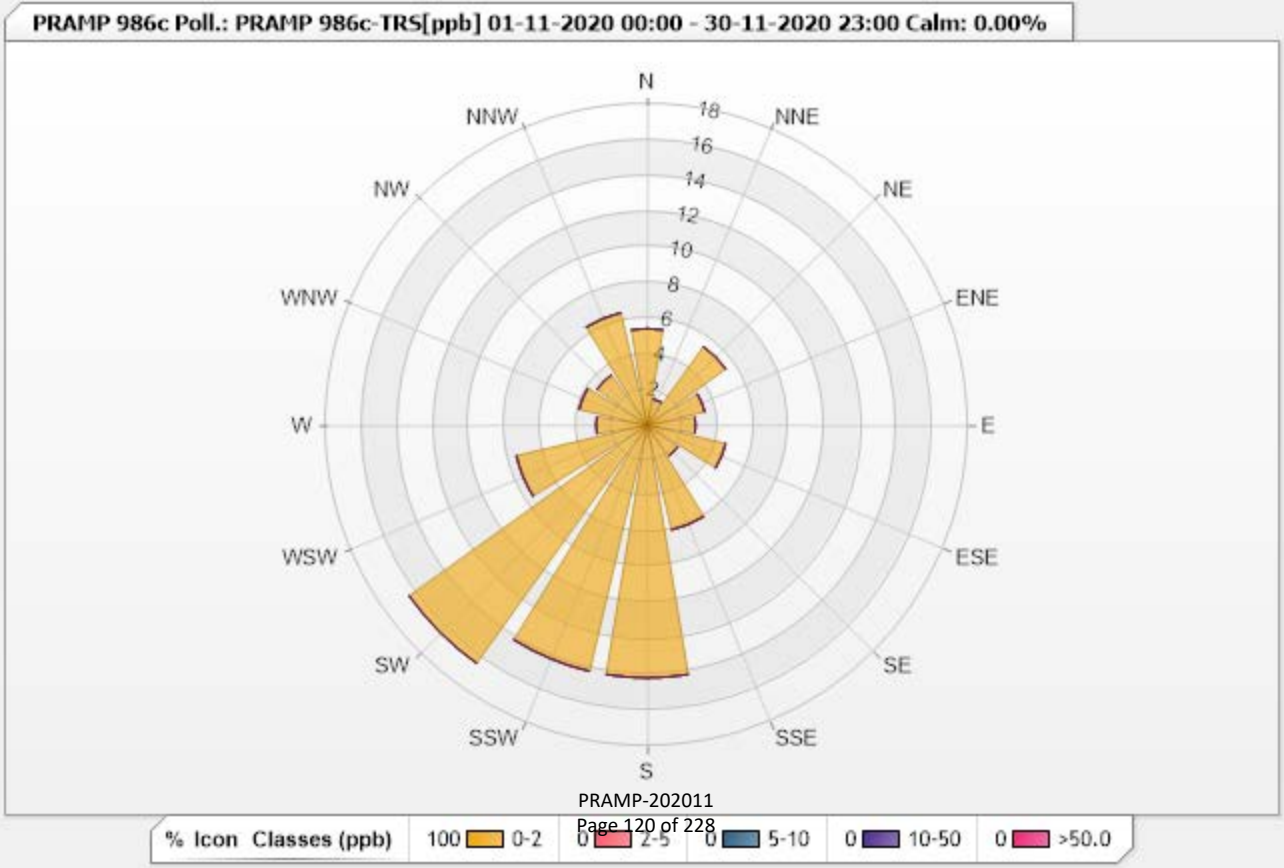
TRS[ppb] Histogram: PRAMP RENO Monthly: 11-2020 1 Hr.



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

Wind: PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 92.22% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.42	0	0	0	0	5.42
NNE	1.51	0	0	0	0	1.51
NE	5.42	0	0	0	0	5.42
ENE	3.31	0	0	0	0	3.31
E	2.71	0	0	0	0	2.71
ESE	4.52	0	0	0	0	4.52
SE	2.11	0	0	0	0	2.11
SSE	6.02	0	0	0	0	6.02
S	14.16	0	0	0	0	14.16
SSW	14.16	0	0	0	0	14.16
SW	16.42	0	0	0	0	16.42
WSW	7.53	0	0	0	0	7.53
W	2.86	0	0	0	0	2.86
WNW	3.92	0	0	0	0	3.92
NW	3.46	0	0	0	0	3.46
NNW	6.48	0	0	0	0	6.48
Summary	100	0	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-TRS[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

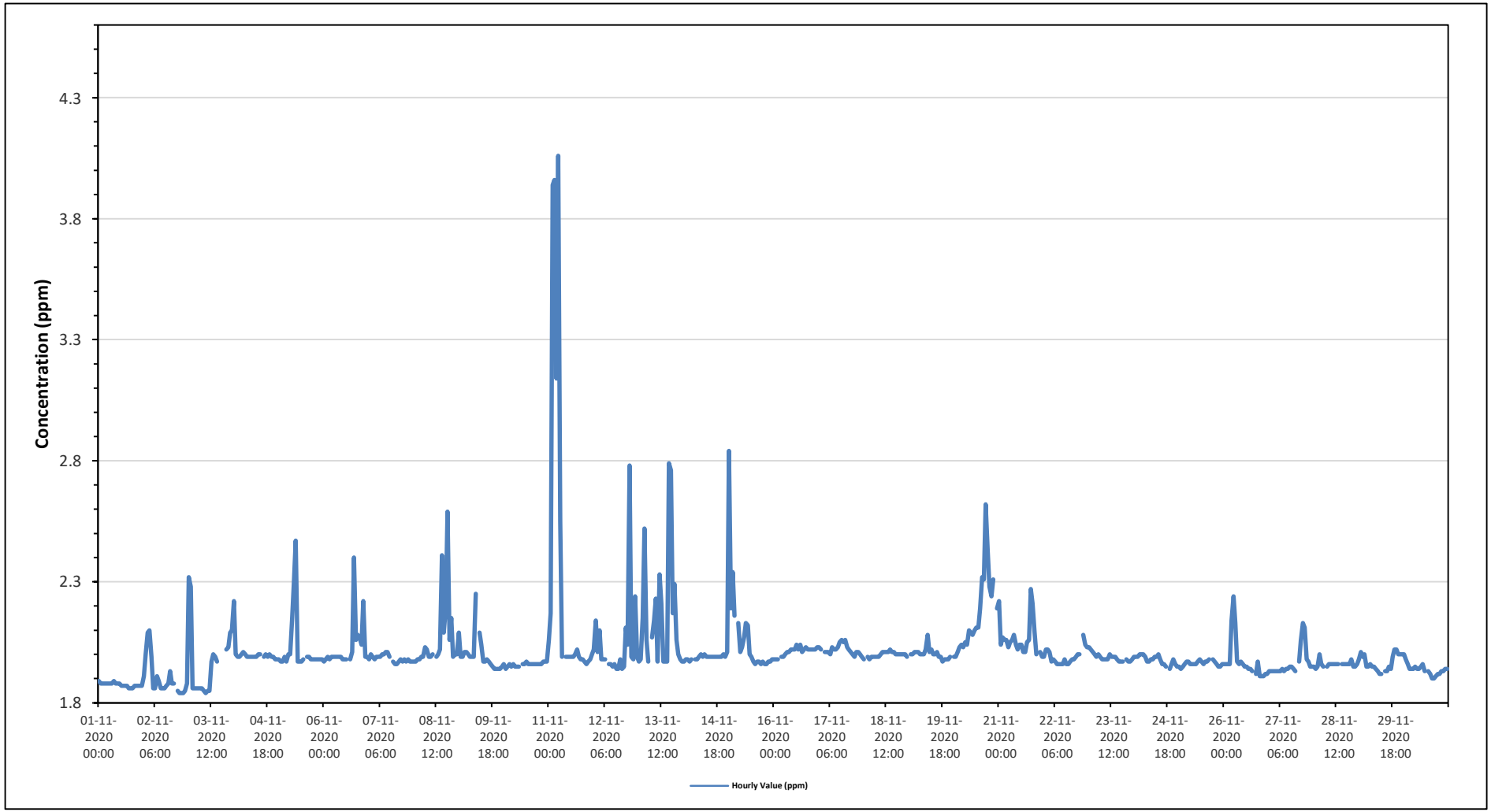
Maximum Hourly Value:	4.06	ppm	on November 11 at hour 5	Hours in Service:	720
Maximum Daily Value:	2.33	ppm	on November 11	Hours of Data:	686
Minimum Hourly Value:	1.84	ppm	on November 2 at hour 19	Hours of Missing Data:	1
Minimum Daily Value:	1.87	ppm	on November 1	Hours of Calibration:	33
Monthly Average:	2.01	ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.89	1.88	1.88	1.88	1.87	1.87	1.87	1.87	1.86	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.86	1.89	1.87
Nov 2	1.91	2.00	2.09	2.10	1.99	1.86	1.86	1.91	1.89	1.86	1.86	1.86	1.87	1.88	1.93	1.88	1.88	S	1.85	1.84	1.84	1.84	1.85	1.88	1.84	2.10	1.90
Nov 3	2.32	2.28	1.86	1.86	1.86	1.86	1.86	1.86	1.85	1.84	1.85	1.85	1.97	2.00	1.99	1.97	C	C	C	C	2.02	2.03	2.09	2.10	1.84	2.32	1.97
Nov 4	2.22	2.00	1.99	1.99	2.00	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	S	1.99	2.00	1.99	2.00	1.99	1.99	1.98	1.98	1.98	2.22	2.00
Nov 5	1.98	1.97	1.97	1.99	1.97	2.00	2.00	2.15	2.30	2.47	1.97	1.97	1.97	1.98	S	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	2.47	2.02
Nov 6	1.97	1.98	1.99	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.98	1.98	S	1.98	2.01	2.40	2.06	2.08	2.07	2.04	2.22	1.99	1.99	1.97	2.40	2.03
Nov 7	1.98	2.00	1.99	1.98	1.99	1.99	1.99	2.00	2.00	2.01	2.01	1.99	S	1.97	1.96	1.96	1.97	1.98	1.97	1.98	1.97	1.98	1.97	1.97	1.96	2.01	1.98
Nov 8	1.97	1.97	1.98	1.98	1.99	1.99	2.03	2.02	1.99	1.99	2.00	S	1.99	2.00	2.02	2.41	2.09	2.19	2.59	2.06	2.15	1.99	2.00	2.00	1.97	2.59	2.06
Nov 9	2.09	1.99	1.99	2.01	2.01	2.00	1.99	1.99	1.99	2.25	S	2.09	2.04	1.97	1.97	1.98	1.97	1.96	1.95	1.94	1.94	1.94	1.94	1.95	1.94	2.25	2.00
Nov 10	1.96	1.94	1.95	1.96	1.95	1.96	1.95	1.95	1.95	S	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	1.94	1.97	1.96
Nov 11	2.06	2.17	3.94	3.96	3.14	**4.06**	2.55	1.99	S	1.99	1.99	1.99	1.99	1.99	2.00	2.02	1.99	1.98	1.98	1.97	1.96	1.97	1.98	2.00	1.96	**4.06**	**2.33**
Nov 12	2.02	2.14	2.01	2.10	1.98	1.98	1.98	S	1.96	1.96	1.95	1.96	1.94	1.94	1.98	1.94	1.95	2.11	2.04	2.78	1.99	1.98	2.24	1.99	1.94	2.78	2.04
Nov 13	1.97	1.98	2.15	2.52	2.06	1.97	S	2.07	2.14	2.23	1.97	2.33	2.21	1.97	1.97	1.97	2.79	2.76	2.17	2.29	2.06	2.00	1.98	1.97	1.97	2.79	2.15
Nov 14	1.97	1.98	1.98	1.97	1.98	S	1.98	1.98	1.99	2.00	1.99	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.01	1.97	2.01	1.99
Nov 15	2.84	2.19	2.34	2.16	S	2.13	2.01	2.03	2.07	2.13	2.12	2.00	1.99	1.97	1.96	1.97	1.97	1.96	1.97	1.96	1.96	1.97	1.97	1.98	1.96	2.84	2.07
Nov 16	1.98	1.98	1.98	S	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.04	2.02	2.04	2.01	2.02	2.03	2.02	2.02	2.02	2.02	2.02	2.03	1.98	2.04	2.01
Nov 17	2.03	2.02	S	2.01	2.01	2.01	2.00	2.03	2.02	2.02	2.03	2.05	2.06	2.05	2.06	2.03	2.02	2.01	2.00	1.99	2.01	2.01	2.00	1.99	1.99	2.06	2.02
Nov 18	1.98	S	1.99	1.98	1.99	1.99	1.99	1.99	1.99	2.00	2.01	2.01	2.01	2.01	2.02	2.01	2.01	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.98	2.02	2.00
Nov 19	S	2.00	2.00	2.01	2.01	2.01	2.00	2.00	2.00	2.02	2.08	2.01	2.02	2.00	2.00	2.01	1.99	1.99	1.97	1.98	1.98	1.98	1.99	S	1.97	2.08	2.00
Nov 20	1.99	1.99	2.01	2.03	2.04	2.03	2.05	2.04	2.10	2.09	2.08	2.10	2.11	2.11	2.19	2.32	2.31	2.62	2.43	2.28	2.24	2.31	S	2.19	1.99	2.62	2.16
Nov 21	2.22	2.04	2.07	2.06	2.06	2.03	2.05	2.06	2.08	2.04	2.02	2.04	2.04	2.01	2.01	2.05	2.06	2.27	2.21	2.09	2.00	S	2.01	1.99	1.99	2.27	2.07
Nov 22	1.99	2.02	2.02	2.01	1.97	1.98	1.97	1.96	1.96	1.96	1.96	1.98	1.96	1.96	1.97	1.98	1.98	1.99	2.00	2.00	S	2.08	2.04	2.03	1.96	2.08	1.99
Nov 23	2.03	2.02	2.01	2.00	1.99	2.00	1.99	1.98	1.98	1.98	1.98	2.00	1.99	1.99	1.99	1.98	1.97	1.97	1.97	S	1.98	1.97	1.97	1.98	1.97	2.03	1.99
Nov 24	1.99	1.99	1.99	2.00	2.00	2.00	1.99	1.97	1.97	1.98	1.98	1.99	1.99	2.00	1.98	1.96	1.96	1.95	S	1.94	1.96	1.98	1.96	1.95	1.94	2.00	1.98
Nov 25	1.95	1.94	1.95	1.96	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.98	1.97	1.96	1.97	1.97	1.98	S	1.98	1.97	1.96	1.95	1.95	1.96	1.94	1.98	1.96
Nov 26	1.96	1.96	1.96	1.96	2.14	2.24	2.13	1.97	1.96	1.97	1.96	1.95	1.95	1.94	1.94	1.93	S	1.92	1.97	1.91	1.91	1.91	1.92	1.92	1.91	2.24	1.97
Nov 27	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.94	1.95	1.95	1.94	1.93	S	1.97	2.06	2.13	2.11	1.98	1.97	1.95	1.95	1.93	2.13	1.96
Nov 28	1.95	1.94	1.95	2.00	1.96	1.95	NRM	1.95	1.96	1.96	1.96	1.96	1.96	1.96	S	1.96	1.96	1.96	1.96	1.96	1.98	1.95	1.95	1.96	1.94	2.00	1.96
Nov 29	1.98	2.01	1.99	2.00	1.95	1.95	1.96	1.95	1.95	1.94	1.93	1.92	1.92	S	1.93	1.93	1.95	1.94	1.99	2.02	2.02	2.00	2.00	2.00	1.92	2.02	1.97
Nov 30	2.00	1.98	1.96	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.96	1.93	S	1.93	1.92	1.90	1.90	1.91	1.92	1.92	1.93	1.93	1.94	1.94	1.90	2.00	1.94
Diurnal Maximum	2.84	2.28	3.94	3.96	3.14	4.06	2.55	2.15	2.30	2.47	2.12	2.33	2.21	2.11	2.19	2.41	2.79	2.76	2.59	2.78	2.24	2.31	2.24	2.19			
Diurnal Average	2.04	2.01	2.07	2.08	2.03	2.06	2.00	1.98	1.99	2.01	1.98	1.99	1.99	1.98	1.98	2.00	2.03	2.05	2.03	2.03	1.99	1.99	1.98	1.98			

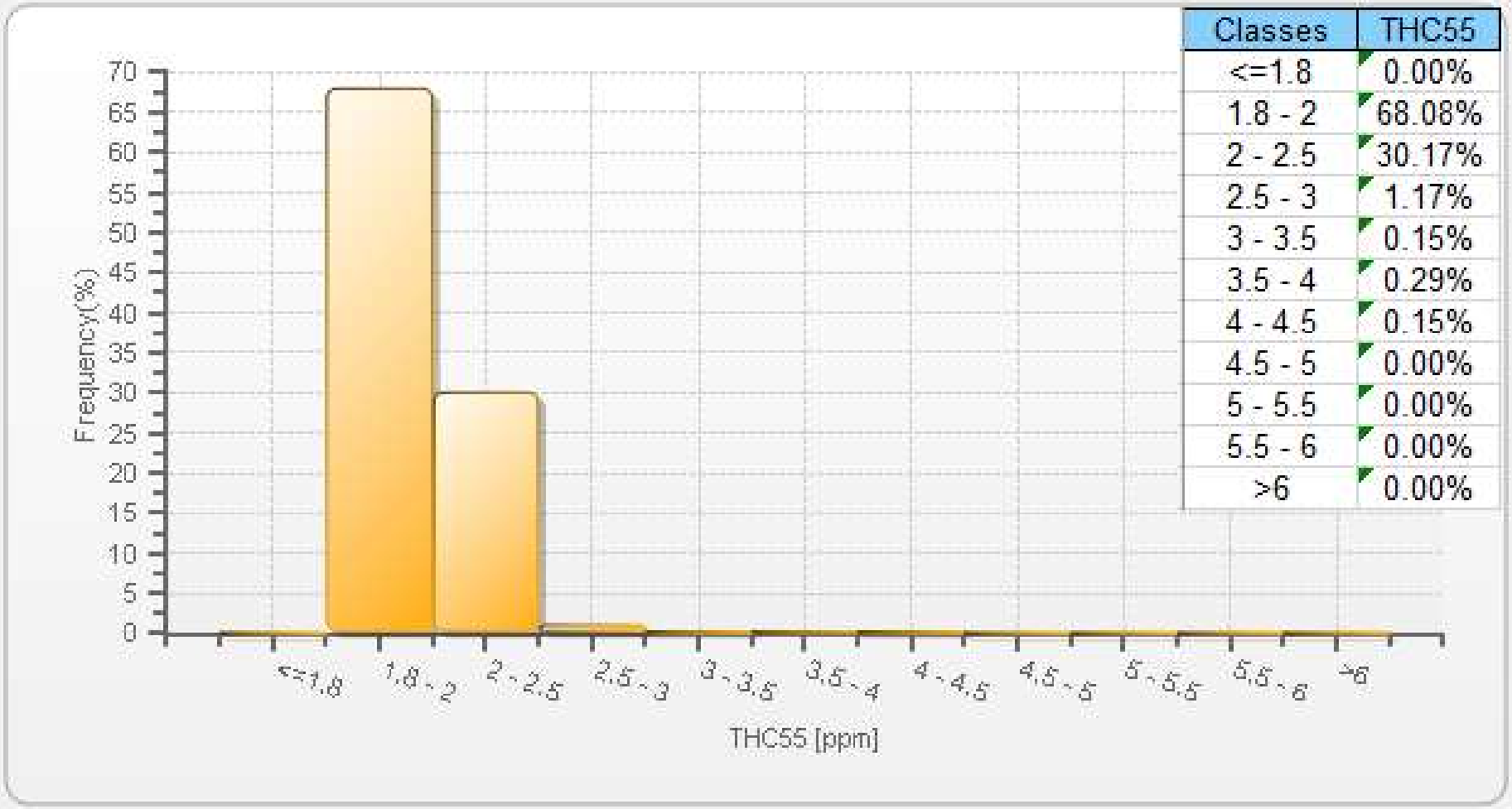
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for THC - Reno Station



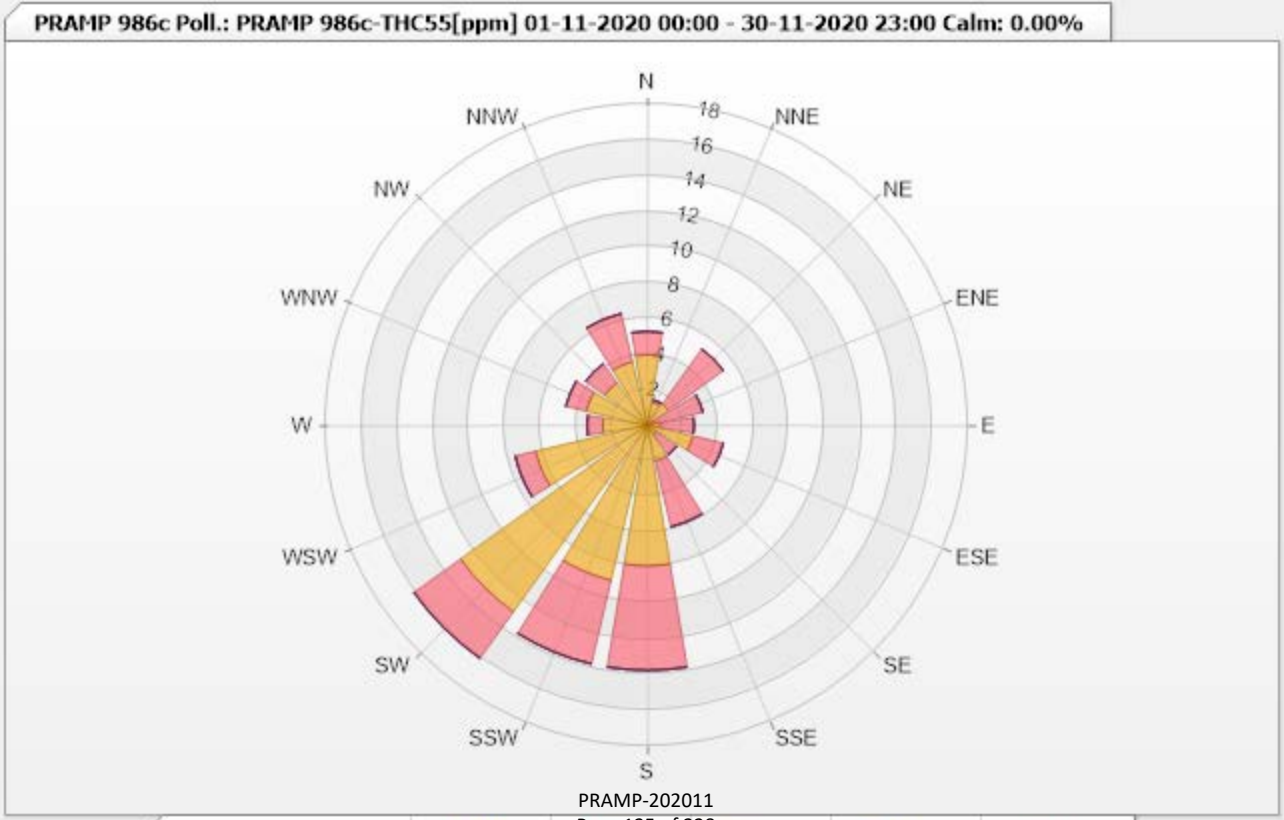
THC55[ppm] Histogram: PRAMP RENO Monthly: 11-2020 1 Hr.



Classes	THC55
<=1.8	0.00%
1.8 - 2	68.08%
2 - 2.5	30.17%
2.5 - 3	1.17%
3 - 3.5	0.15%
3.5 - 4	0.29%
4 - 4.5	0.15%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	3.95	1.32	0	0	0	5.27
NNE	1.32	0.15	0	0	0	1.47
NE	1.46	3.8	0	0	0	5.26
ENE	0.29	2.92	0	0	0	3.21
E	0.73	1.9	0	0	0	2.63
ESE	2.63	1.75	0	0	0	4.38
SE	0.58	1.46	0	0	0	2.04
SSE	2.05	3.8	0	0	0	5.85
S	7.89	5.85	0	0	0	13.74
SSW	8.92	4.82	0	0	0	13.74
SW	12.87	3.22	0	0	0	16.09
WSW	6.43	1.17	0	0	0	7.6
W	2.49	0.88	0	0	0	3.37
WNW	3.51	1.17	0	0	0	4.68
NW	2.92	1.32	0	0	0	4.24
NNW	3.65	2.78	0	0	0	6.43
Summary	61.69	38.31	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-THC55[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
% Icon Classes (ppm)
62 0-2
38 2-5
0 5-10
0 10-40
0 >40.0

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PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

METHANE (CH4) in ppm

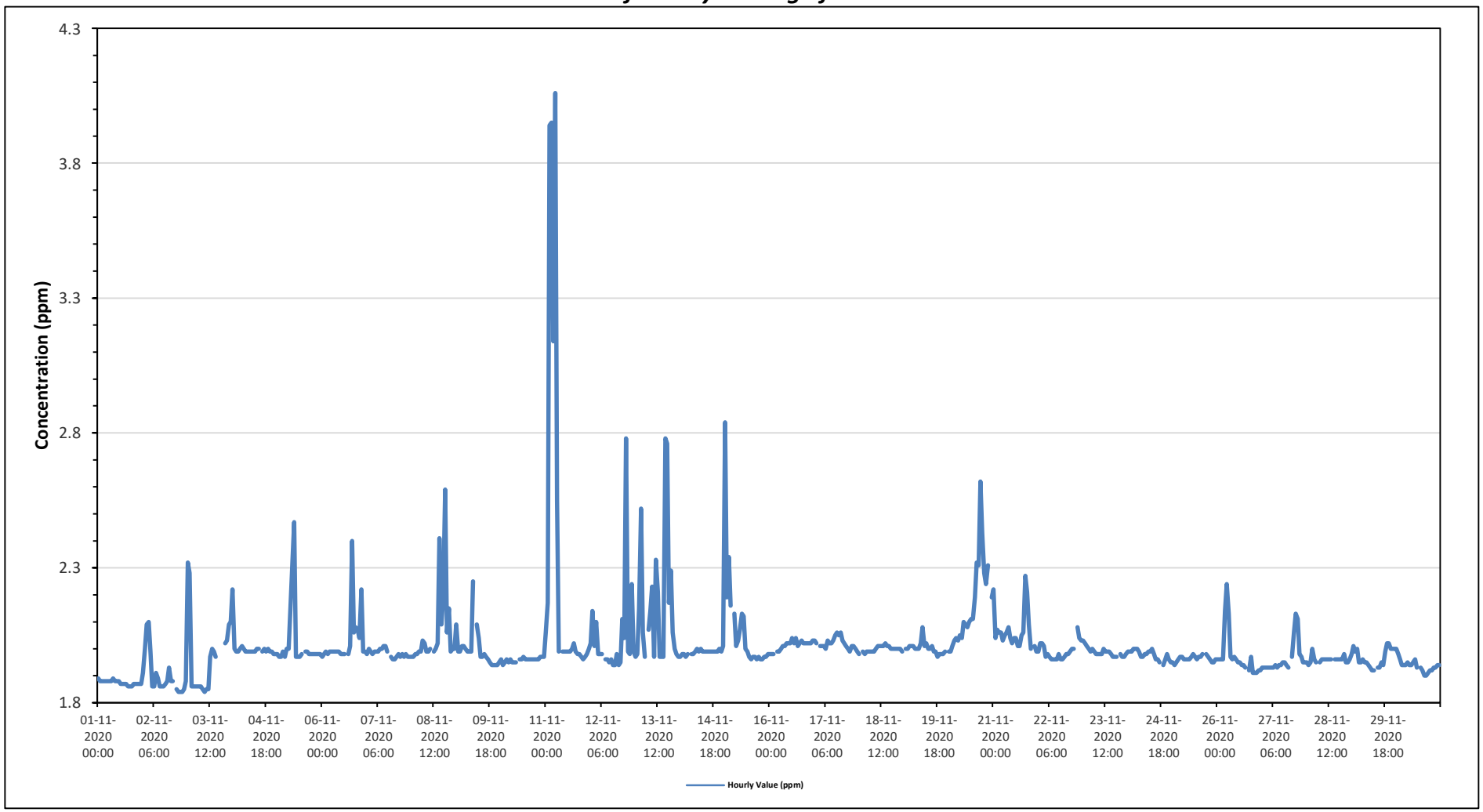
Maximum Hourly Value:	4.06	ppm	on November 11 at hour 5	Hours in Service:	720
Maximum Daily Value:	2.33	ppm	on November 11	Hours of Data:	686
Minimum Hourly Value:	1.84	ppm	on November 2 at hour 19	Hours of Missing Data:	1
Minimum Daily Value:	1.87	ppm	on November 1	Hours of Calibration:	33
Monthly Average:	2.01	ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.89	1.88	1.88	1.88	1.87	1.87	1.87	1.87	1.86	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.86	1.89	1.87
Nov 2	1.91	2.00	2.09	2.10	1.99	1.86	1.86	1.91	1.89	1.86	1.86	1.86	1.87	1.88	1.93	1.88	1.88	S	1.85	1.84	1.84	1.84	1.85	1.88	1.84	2.10	1.90
Nov 3	2.32	2.28	1.86	1.86	1.86	1.86	1.86	1.86	1.85	1.84	1.85	1.85	1.97	2.00	1.99	1.97	C	C	C	C	2.02	2.03	2.09	2.10	1.84	2.32	1.97
Nov 4	2.22	2.00	1.99	1.99	2.00	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	S	1.99	2.00	1.99	2.00	1.99	1.99	1.98	1.98	1.98	2.22	2.00
Nov 5	1.98	1.97	1.97	1.99	1.97	2.00	2.00	2.15	2.30	2.47	1.97	1.97	1.97	1.98	S	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	2.47	2.02
Nov 6	1.97	1.98	1.99	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.98	1.98	S	1.98	2.01	2.40	2.06	2.08	2.07	2.04	2.22	1.99	1.99	1.97	2.40	2.03
Nov 7	1.98	2.00	1.99	1.98	1.99	1.99	1.99	2.00	2.00	2.01	2.01	1.99	S	1.97	1.96	1.96	1.97	1.98	1.97	1.98	1.97	1.98	1.97	1.97	1.96	2.01	1.98
Nov 8	1.97	1.97	1.98	1.98	1.99	1.99	2.03	2.02	1.99	1.99	2.00	S	1.99	2.00	2.02	2.41	2.09	2.19	2.59	2.06	2.15	1.99	2.00	2.00	1.97	2.59	2.06
Nov 9	2.09	1.99	1.99	2.01	2.01	2.00	1.99	1.99	1.99	2.25	S	2.09	2.04	1.97	1.97	1.98	1.97	1.96	1.95	1.94	1.94	1.94	1.94	1.95	1.94	2.25	2.00
Nov 10	1.96	1.94	1.95	1.96	1.95	1.96	1.95	1.95	1.95	S	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	1.94	1.97	1.96
Nov 11	2.06	2.17	3.94	3.95	3.14	**4.06**	2.55	1.99	S	1.99	1.99	1.99	1.99	1.99	2.00	2.02	1.99	1.98	1.98	1.97	1.96	1.97	1.98	2.00	1.96	**4.06**	**2.33**
Nov 12	2.02	2.14	2.01	2.10	1.98	1.98	1.98	S	1.96	1.96	1.95	1.96	1.94	1.94	1.98	1.94	1.95	2.11	2.04	2.78	1.99	1.98	2.24	1.99	1.94	2.78	2.04
Nov 13	1.97	1.98	2.15	2.52	2.06	1.97	S	2.07	2.14	2.23	1.97	2.33	2.21	1.97	1.97	1.97	2.78	2.76	2.17	2.29	2.06	2.00	1.98	1.97	1.97	2.78	2.15
Nov 14	1.97	1.98	1.98	1.97	1.98	S	1.98	1.98	1.99	2.00	1.99	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.01	1.97	2.01	1.99
Nov 15	2.84	2.19	2.34	2.16	S	2.13	2.01	2.03	2.07	2.13	2.12	2.00	1.99	1.97	1.96	1.97	1.97	1.96	1.97	1.96	1.96	1.97	1.97	1.98	1.96	2.84	2.07
Nov 16	1.98	1.98	1.98	S	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.04	2.02	2.04	2.01	2.02	2.03	2.02	2.02	2.02	2.02	2.02	2.03	1.98	2.04	2.01
Nov 17	2.03	2.02	S	2.01	2.01	2.01	2.00	2.03	2.02	2.02	2.03	2.05	2.06	2.05	2.06	2.03	2.02	2.01	2.00	1.99	2.01	2.01	2.00	1.99	1.99	2.06	2.02
Nov 18	1.98	S	1.99	1.98	1.99	1.99	1.99	1.99	1.99	2.00	2.01	2.01	2.01	2.01	2.02	2.01	2.01	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.98	2.02	2.00
Nov 19	S	2.00	2.00	2.01	2.01	2.01	2.00	2.00	2.00	2.02	2.08	2.01	2.02	2.00	2.00	2.01	1.99	1.99	1.97	1.98	1.98	1.98	1.99	S	1.97	2.08	2.00
Nov 20	1.99	1.99	2.01	2.03	2.04	2.03	2.05	2.04	2.10	2.09	2.08	2.10	2.11	2.11	2.19	2.32	2.31	2.62	2.43	2.28	2.24	2.31	S	2.19	1.99	2.62	2.16
Nov 21	2.22	2.04	2.07	2.06	2.06	2.03	2.05	2.06	2.08	2.04	2.02	2.04	2.04	2.01	2.01	2.05	2.06	2.27	2.21	2.09	2.00	S	2.01	1.99	1.99	2.27	2.07
Nov 22	1.99	2.02	2.02	2.01	1.97	1.98	1.97	1.96	1.96	1.96	1.96	1.98	1.96	1.96	1.97	1.98	1.98	1.99	2.00	2.00	S	2.08	2.04	2.03	1.96	2.08	1.99
Nov 23	2.03	2.02	2.01	2.00	1.99	2.00	1.99	1.98	1.98	1.98	1.98	2.00	1.99	1.99	1.99	1.98	1.97	1.97	1.97	S	1.98	1.97	1.97	1.98	1.97	2.03	1.99
Nov 24	1.99	1.99	1.99	2.00	2.00	2.00	1.99	1.97	1.97	1.98	1.98	1.99	1.99	2.00	1.98	1.96	1.96	1.95	S	1.94	1.96	1.98	1.96	1.95	1.94	2.00	1.98
Nov 25	1.95	1.94	1.95	1.96	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.98	1.97	1.96	1.97	1.97	1.98	S	1.98	1.97	1.96	1.95	1.95	1.96	1.94	1.98	1.96
Nov 26	1.96	1.96	1.96	1.96	2.14	2.24	2.13	1.97	1.96	1.97	1.96	1.95	1.95	1.94	1.94	1.93	S	1.92	1.97	1.91	1.91	1.91	1.92	1.92	1.91	2.24	1.97
Nov 27	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.94	1.95	1.95	1.94	1.93	S	1.97	2.06	2.13	2.11	1.98	1.97	1.95	1.95	1.93	2.13	1.96
Nov 28	1.95	1.94	1.95	2.00	1.96	1.95	NRM	1.95	1.96	1.96	1.96	1.96	1.96	1.96	S	1.96	1.96	1.96	1.96	1.96	1.98	1.95	1.95	1.96	1.94	2.00	1.96
Nov 29	1.98	2.01	1.99	2.00	1.95	1.95	1.96	1.95	1.95	1.94	1.93	1.92	1.92	S	1.93	1.93	1.95	1.94	1.99	2.02	2.02	2.00	2.00	2.00	1.92	2.02	1.97
Nov 30	2.00	1.98	1.96	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.96	1.93	S	1.93	1.92	1.90	1.90	1.91	1.92	1.92	1.93	1.93	1.94	1.94	1.90	2.00	1.94
Diurnal Maximum	2.84	2.28	3.94	3.95	3.14	4.06	2.55	2.15	2.30	2.47	2.12	2.33	2.21	2.11	2.19	2.41	2.78	2.76	2.59	2.78	2.24	2.31	2.24	2.19			
Diurnal Average	2.04	2.01	2.07	2.08	2.03	2.06	2.00	1.98	1.99	2.01	1.98	1.99	1.99	1.98	1.98	2.00	2.03	2.05	2.03	2.03	1.99	1.99	1.98	1.98			

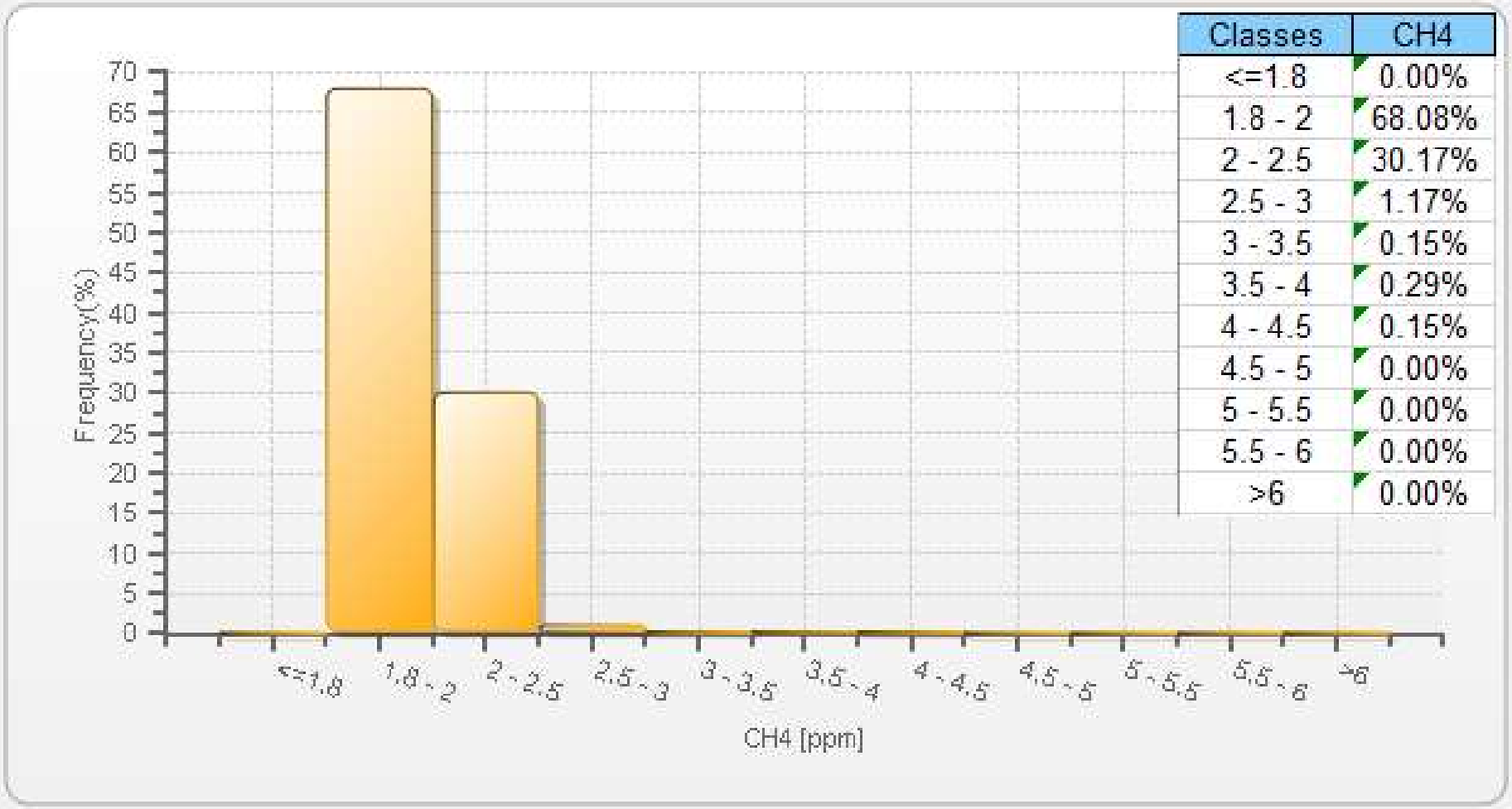
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for CH4 - Reno Station



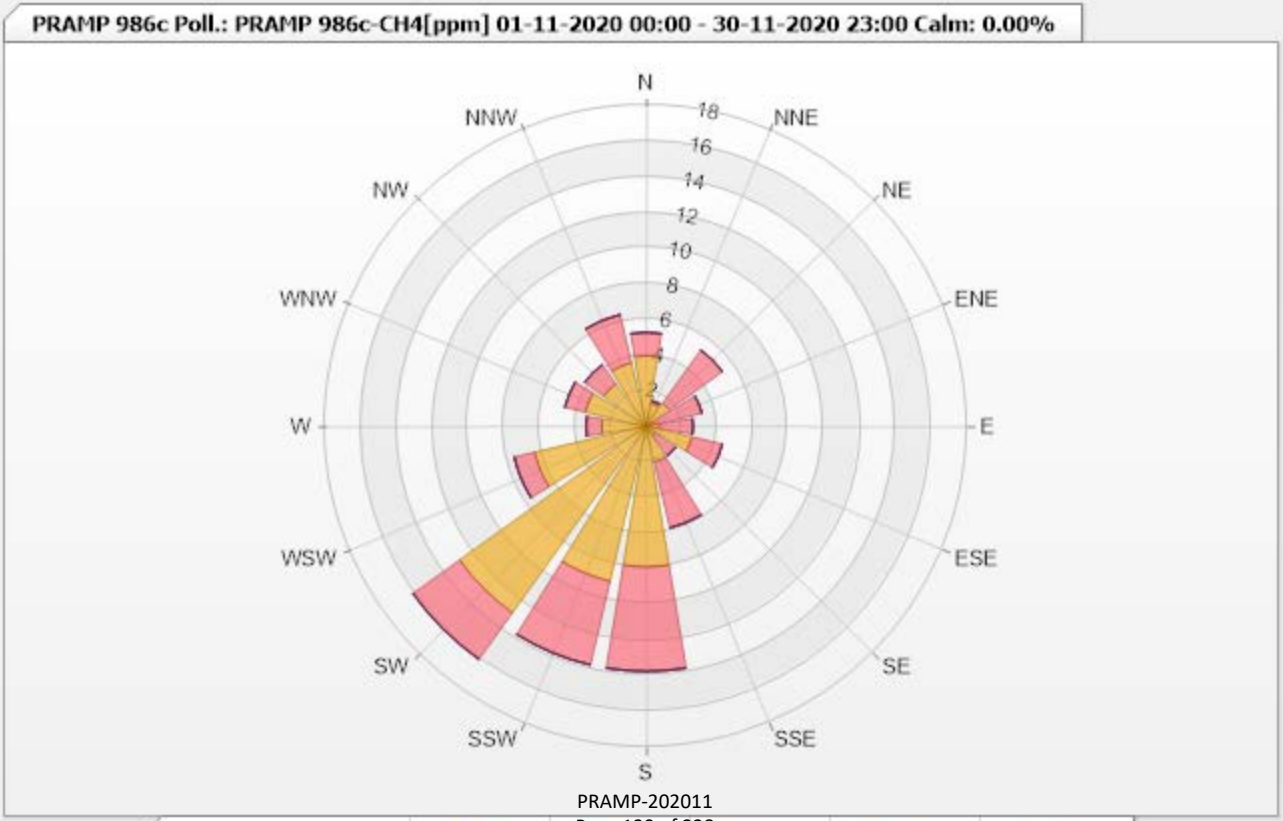
CH4[ppm] Histogram: PRAMP RENO Monthly: 11-2020 1 Hr.



Classes	CH4
<=1.8	0.00%
1.8 - 2	68.08%
2 - 2.5	30.17%
2.5 - 3	1.17%
3 - 3.5	0.15%
3.5 - 4	0.29%
4 - 4.5	0.15%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	3.95	1.32	0	0	0	5.27
NNE	1.32	0.15	0	0	0	1.47
NE	1.61	3.65	0	0	0	5.26
ENE	0.29	2.92	0	0	0	3.21
E	0.73	1.9	0	0	0	2.63
ESE	2.63	1.75	0	0	0	4.38
SE	0.58	1.46	0	0	0	2.04
SSE	2.05	3.8	0	0	0	5.85
S	7.89	5.85	0	0	0	13.74
SSW	8.92	4.82	0	0	0	13.74
SW	12.87	3.22	0	0	0	16.09
WSW	6.43	1.17	0	0	0	7.6
W	2.49	0.88	0	0	0	3.37
WNW	3.51	1.17	0	0	0	4.68
NW	2.92	1.32	0	0	0	4.24
NNW	3.65	2.78	0	0	0	6.43
Summary	61.84	38.16	0	0	0	100


PRAMP 986c Poll.: PRAMP 986c-CH4[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
% Icon Classes (ppm)
62 0-2
38 2-5
0 5-10
0 10-20
0 >20.0

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

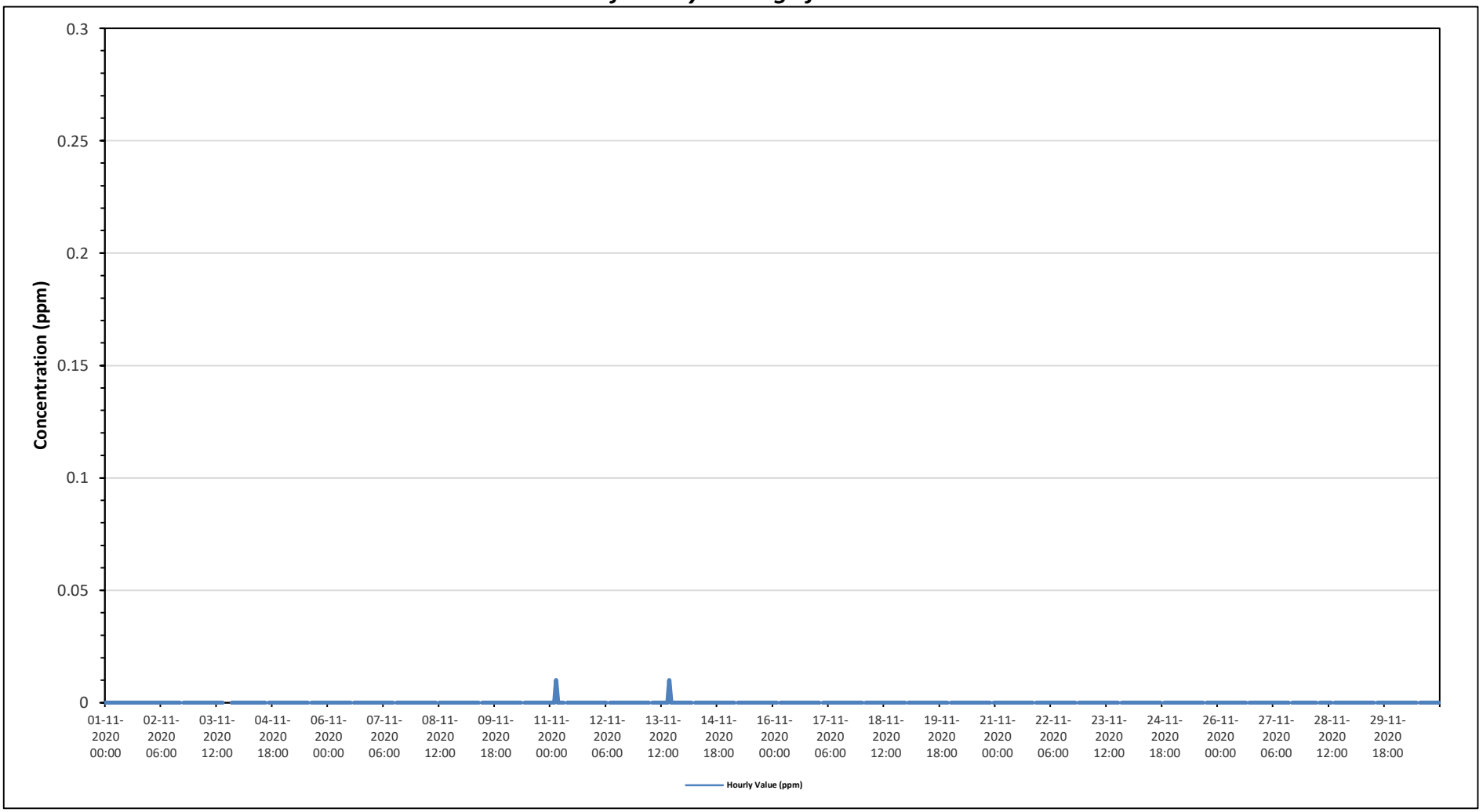
Maximum Hourly Value:	0.01	ppm	on November 11 at hour 3	Hours in Service:	720
Maximum Daily Value:	0.00	ppm	on November 11	Hours of Data:	686
Minimum Hourly Value:	0.00	ppm	on November 1 at hour 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00	ppm	on November 1	Hours of Calibration:	33
Monthly Average:	0.00	ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 2	0.00	0.00	0.00	0.00	0.00	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
Nov 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	C	C	C	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	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
Nov 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	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
Nov 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	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
Nov 8	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
Nov 9	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
Nov 10	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
Nov 11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Nov 12	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
Nov 13	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Nov 14	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
Nov 15	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
Nov 16	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
Nov 17	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
Nov 18	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
Nov 19	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Nov 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Nov 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Nov 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Nov 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 28	0.00	0.00	0.00	0.00	0.00	0.00	NRM	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
Nov 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	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
Nov 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.00	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	0.01	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			

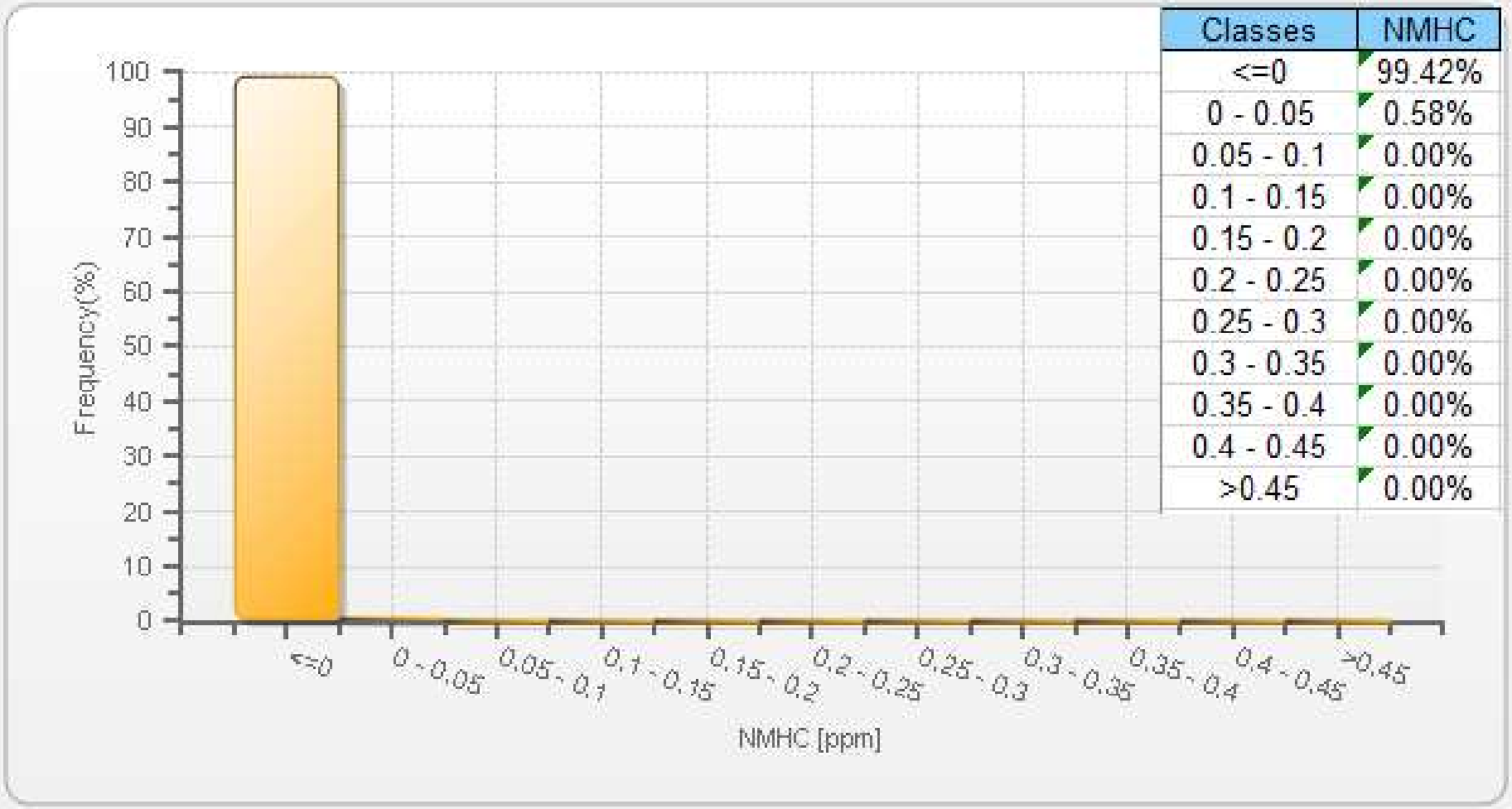
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

Timeseries Chart of Hourly Average for NMHC - Reno Station



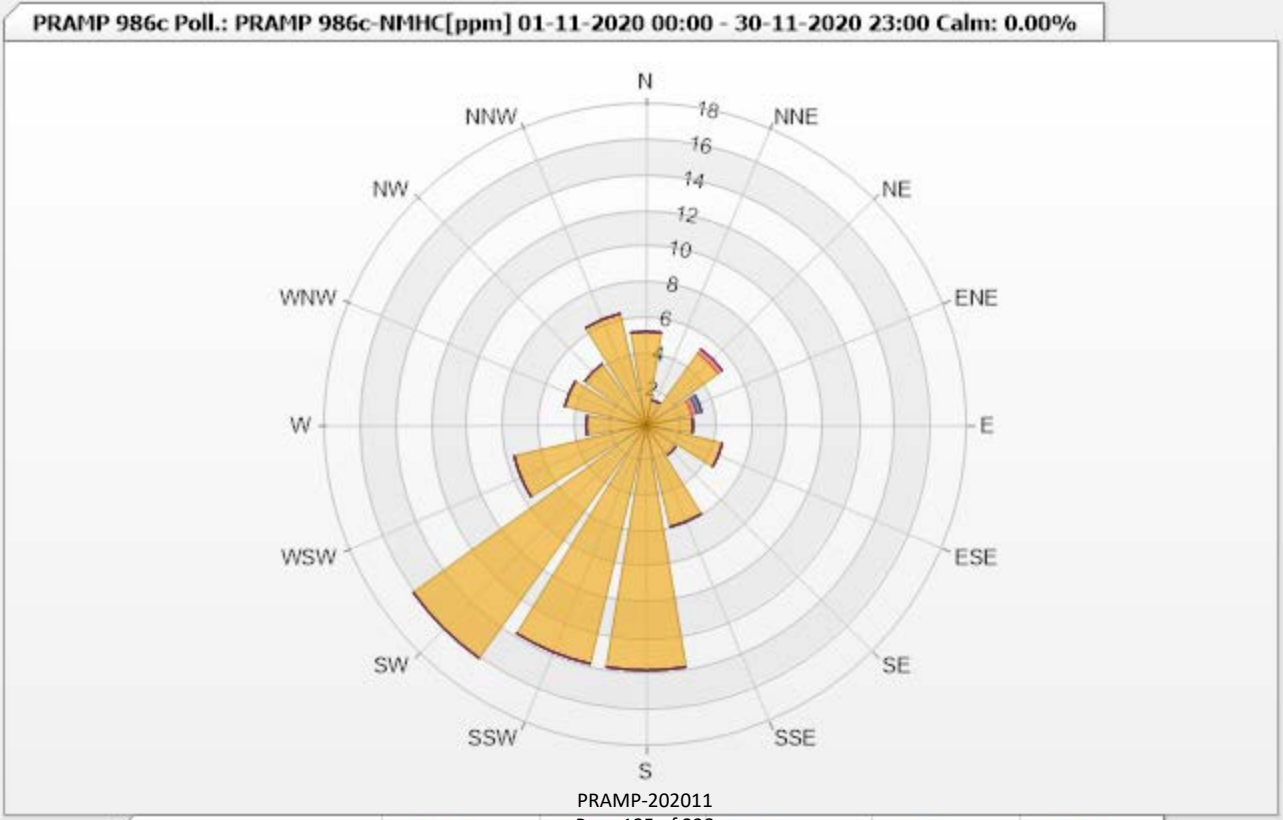
NMHC[ppm] Histogram: PRAMP RENO Monthly: 11-2020 1 Hr.



Classes	NMHC
<=0	99.42%
0 - 0.05	0.58%
0.05 - 0.1	0.00%
0.1 - 0.15	0.00%
0.15 - 0.2	0.00%
0.2 - 0.25	0.00%
0.25 - 0.3	0.00%
0.3 - 0.35	0.00%
0.35 - 0.4	0.00%
0.4 - 0.45	0.00%
>0.45	0.00%

Wind: PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 95.00% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	5.26	0	0	0	0	5.26
NNE	1.46	0	0	0	0	1.46
NE	4.97	0.29	0	0	0	5.26
ENE	2.63	0.29	0.29	0	0	3.21
E	2.63	0	0	0	0	2.63
ESE	4.39	0	0	0	0	4.39
SE	2.05	0	0	0	0	2.05
SSE	5.85	0	0	0	0	5.85
S	13.74	0	0	0	0	13.74
SSW	13.74	0	0	0	0	13.74
SW	16.08	0	0	0	0	16.08
WSW	7.6	0	0	0	0	7.6
W	3.36	0	0	0	0	3.36
WNW	4.68	0	0	0	0	4.68
NW	4.24	0	0	0	0	4.24
NNW	6.43	0	0	0	0	6.43
Summary	99.11	0.58	0.29	0	0	100


PRAMP 986c Poll.: PRAMP 986c-NMHC[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppm)
99 0-0.1
1 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

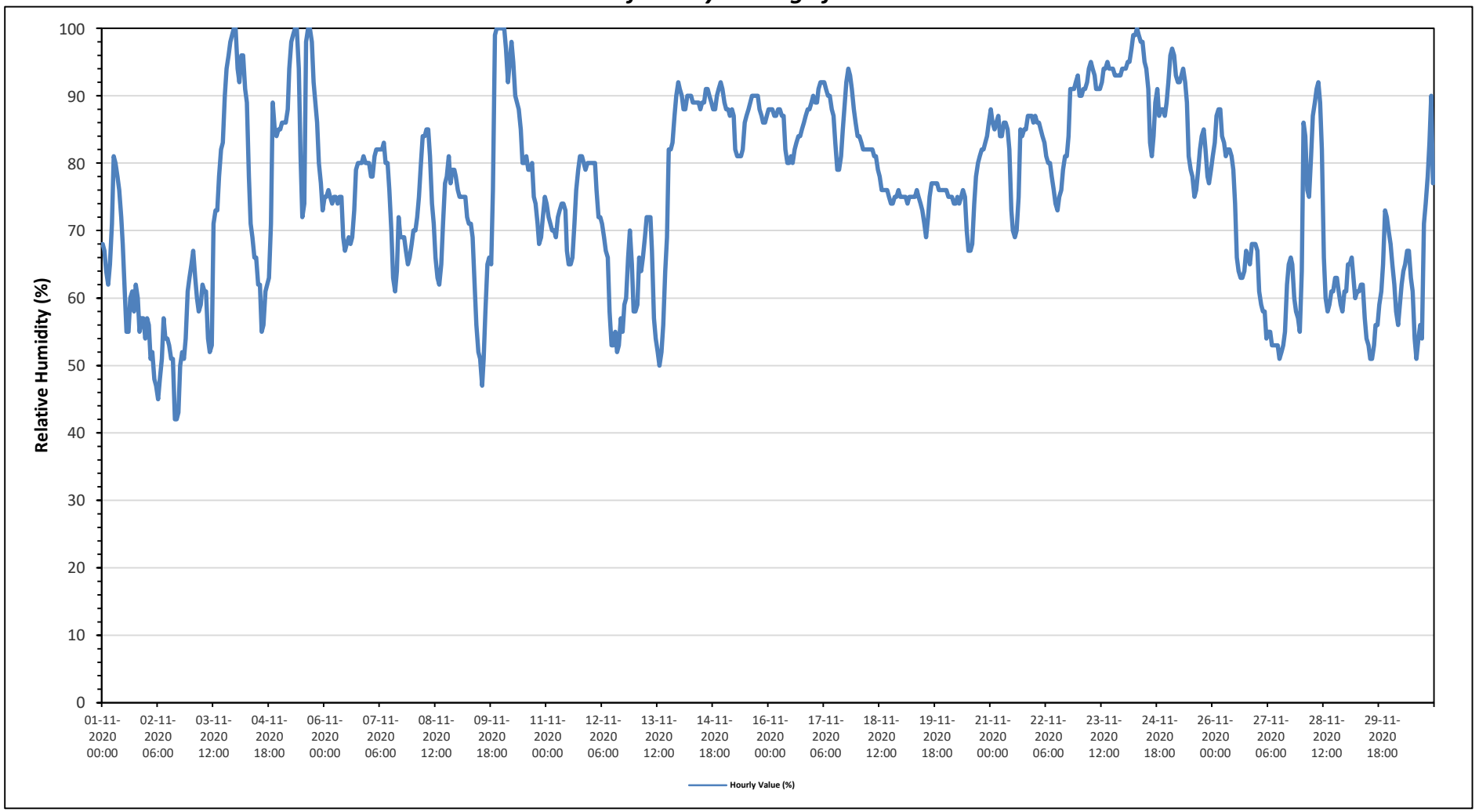
Maximum Hourly Value:	100	%	on November 3 at hour 23	Hours in Service:	720
Maximum Daily Value:	92.8	%	on November 23	Hours of Data:	720
Minimum Hourly Value:	42	%	on November 2 at hour 15	Hours of Missing Data:	0
Minimum Daily Value:	51.4	%	on November 2	Hours of Calibration:	0
Monthly Average:	76.2	%		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
Nov 1	68	67	64	62	65	71	81	80	78	76	72	68	61	55	55	60	61	58	62	60	55	57	57	54	54	81	64.5
Nov 2	57	56	51	52	48	47	45	48	51	57	54	54	53	51	51	**42**	**42**	43	50	52	51	54	61	63	**42**	63	51.4
Nov 3	65	67	63	60	58	59	62	61	61	54	52	53	71	73	73	78	82	83	90	94	96	98	99	**100**	52	**100**	73.0
Nov 4	**100**	94	92	96	96	91	89	78	71	69	66	66	62	62	55	56	61	62	63	71	89	85	84	85	55	**100**	76.8
Nov 5	85	86	86	86	88	94	98	99	**100**	**100**	94	81	72	74	98	**100**	**100**	98	92	89	86	80	77	73	72	**100**	89.0
Nov 6	75	75	76	75	74	75	75	74	75	75	69	67	68	69	68	69	73	79	80	80	80	81	80	80	67	81	74.7
Nov 7	80	78	78	81	82	82	82	82	83	80	80	76	70	63	61	64	72	69	69	69	67	65	66	68	61	83	73.6
Nov 8	70	70	72	75	80	84	84	85	85	81	74	71	66	63	62	65	71	77	78	81	77	79	79	78	62	85	75.3
Nov 9	76	75	75	75	75	72	71	71	69	62	56	52	51	47	51	58	65	66	65	76	99	**100**	**100**	**100**	47	**100**	71.1
Nov 10	**100**	**100**	97	92	95	98	95	90	89	88	85	80	80	81	79	79	80	75	74	71	68	69	72	75	68	**100**	83.8
Nov 11	74	72	71	70	70	69	72	73	74	74	73	67	65	65	66	71	76	79	81	81	80	79	80	80	65	81	73.4
Nov 12	80	80	80	76	72	72	71	69	67	66	58	53	53	55	52	53	57	55	59	60	66	70	65	58	52	80	64.5
Nov 13	58	59	66	64	66	69	72	72	72	67	57	54	52	50	52	56	64	69	82	82	83	87	90	92	50	92	68.1
Nov 14	91	90	88	88	90	90	90	89	89	89	89	88	89	89	91	91	90	89	88	88	90	91	92	91	88	92	89.6
Nov 15	89	88	88	87	88	87	82	81	81	81	82	86	87	88	89	90	90	90	90	88	87	86	86	87	81	90	86.6
Nov 16	88	88	88	87	87	88	88	87	87	82	80	80	81	80	82	83	84	84	85	86	87	88	88	89	80	89	85.3
Nov 17	90	89	89	91	92	92	92	91	90	90	88	87	83	79	79	81	85	89	92	94	93	91	88	86	79	94	88.4
Nov 18	84	84	83	82	82	82	82	82	82	81	81	79	78	76	76	76	76	75	74	74	75	75	76	75	74	84	78.8
Nov 19	75	75	75	74	75	75	75	75	76	75	74	73	71	69	72	75	77	77	77	77	76	76	76	76	69	77	74.8
Nov 20	76	75	75	75	74	74	75	74	75	76	75	70	67	67	68	74	78	80	81	82	82	83	84	86	67	86	76.1
Nov 21	88	86	85	86	87	84	84	86	86	85	82	73	70	69	70	75	85	84	85	85	87	87	87	86	69	88	82.6
Nov 22	87	86	86	85	84	83	81	80	80	78	76	74	73	75	76	79	81	81	84	91	91	91	92	93	73	93	82.8
Nov 23	90	90	91	91	92	94	95	94	93	91	91	91	92	94	94	95	94	94	94	93	93	93	93	94	90	95	**92.8**
Nov 24	94	94	95	95	97	99	99	**100**	99	98	98	95	94	91	83	81	84	89	91	87	88	88	87	89	81	**100**	92.3
Nov 25	92	96	97	96	93	92	92	93	94	92	89	81	79	78	75	76	79	82	84	85	82	78	77	79	75	97	85.9
Nov 26	81	83	87	88	88	84	83	81	82	82	81	79	74	66	64	63	63	64	67	66	65	68	68	68	63	88	74.8
Nov 27	67	61	59	58	58	54	55	55	53	53	53	53	51	52	53	55	62	65	66	65	60	58	57	55	51	67	57.4
Nov 28	64	86	84	76	75	81	87	89	91	92	89	82	66	60	58	59	61	61	63	63	61	59	58	61	58	92	71.9
Nov 29	61	65	65	66	63	60	61	61	62	62	57	54	53	51	51	53	56	56	59	61	65	73	72	70	51	73	60.7
Nov 30	68	65	62	58	56	59	62	64	65	67	67	63	61	54	51	54	56	54	71	74	78	83	90	77	51	90	65.0
Diurnal Maximum	100	100	97	96	97	99	99	100	100	100	98	95	94	94	98	100	100	98	94	94	99	100	100	100			
Diurnal Average	79.1	79.3	78.9	78.2	78.3	78.7	79.3	78.8	78.7	77.4	74.7	71.7	69.8	68.2	68.5	70.4	73.5	74.2	76.5	77.5	78.6	79.1	79.4	78.9			

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

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

Timeseries Chart of Hourly Average for RH - Reno Station



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

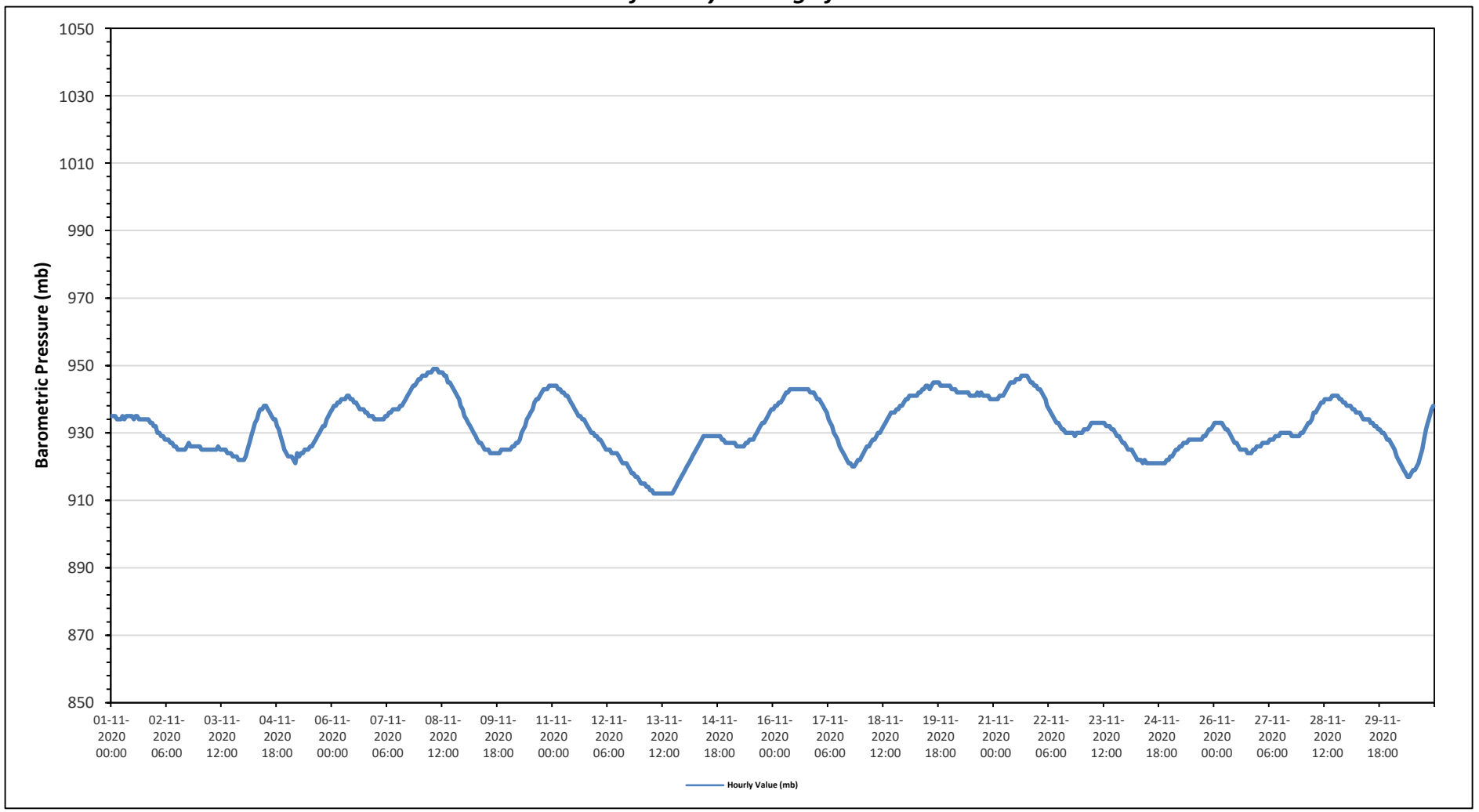
Maximum Hourly Value:	949	mb	on November 8 at hour 7	Hours in Service:	720
Maximum Daily Value:	945	mb	on November 8	Hours of Data:	720
Minimum Hourly Value:	912	mb	on November 13 at hour 7	Hours of Missing Data:	0
Minimum Daily Value:	914	mb	on November 13	Hours of Calibration:	0
Monthly Average:	932	mb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	935	935	935	934	934	934	935	934	935	935	935	935	934	935	935	934	934	934	934	934	934	933	933	932	932	935	934
Nov 2	932	930	930	929	929	928	928	928	927	927	926	926	925	925	925	925	925	926	927	926	926	926	926	926	925	932	927
Nov 3	926	925	925	925	925	925	925	925	925	925	926	925	925	925	925	924	924	924	923	923	923	922	922	922	922	926	924
Nov 4	922	923	925	927	929	931	933	934	936	937	937	938	938	937	936	935	934	934	932	931	929	927	925	924	922	938	931
Nov 5	923	923	923	922	921	924	923	924	924	925	925	925	926	926	927	928	929	930	931	932	932	934	935	936	921	936	927
Nov 6	937	938	938	939	939	940	940	940	941	941	940	940	939	939	938	937	937	937	936	936	935	935	935	934	934	941	938
Nov 7	934	934	934	934	934	935	935	936	936	937	937	937	937	938	938	939	940	941	942	943	944	944	945	946	934	946	938
Nov 8	946	947	947	947	948	948	948	**949**	**949**	**949**	948	948	948	947	947	945	945	944	943	942	941	940	938	937	937	**949**	**945**
Nov 9	935	934	933	932	931	930	929	928	927	927	926	925	925	925	924	924	924	924	924	924	925	925	925	925	924	935	927
Nov 10	925	925	926	926	927	927	928	930	931	932	934	935	936	937	939	940	940	941	942	943	943	943	944	944	925	944	935
Nov 11	944	944	944	943	943	942	942	941	941	940	939	938	937	936	935	935	934	934	933	932	931	930	930	929	929	944	937
Nov 12	929	928	928	927	926	925	925	925	924	924	924	924	923	922	921	921	921	920	919	918	918	917	917	916	916	929	923
Nov 13	915	915	915	914	914	913	913	**912**	**912**	**912**	**912**	**912**	**912**	**912**	**912**	**912**	**912**	**912**	913	914	915	916	917	918	**912**	918	914
Nov 14	919	920	921	922	923	924	925	926	927	928	929	929	929	929	929	929	929	929	929	929	928	928	927	927	919	929	926
Nov 15	927	927	927	927	926	926	926	926	926	927	927	928	928	928	929	930	931	932	933	933	934	935	936	937	926	937	929
Nov 16	937	938	938	939	939	940	941	942	942	943	943	943	943	943	943	943	943	943	943	943	942	942	942	941	937	943	942
Nov 17	940	940	939	938	937	936	934	933	932	930	929	928	926	925	924	923	922	921	921	920	920	921	922	922	920	940	928
Nov 18	923	924	925	926	926	927	928	928	929	930	930	931	932	933	934	935	936	936	936	937	937	938	938	939	923	939	932
Nov 19	940	940	941	941	941	941	941	942	942	943	943	944	944	943	944	945	945	945	945	944	944	944	944	944	940	945	943
Nov 20	944	943	943	943	942	942	942	942	942	942	942	941	941	941	941	942	941	942	941	941	941	941	940	940	940	944	942
Nov 21	940	940	940	941	941	941	942	943	944	945	945	945	946	946	946	947	947	947	947	946	945	945	944	944	940	947	944
Nov 22	943	943	942	941	940	938	937	936	935	934	933	933	932	931	931	930	930	930	930	930	929	930	930	930	929	943	934
Nov 23	930	931	931	931	932	933	933	933	933	933	933	933	933	932	932	932	931	931	930	929	929	928	927	927	927	933	931
Nov 24	926	925	925	925	924	923	922	922	922	921	922	921	921	921	921	921	921	921	921	921	921	921	922	922	921	926	922
Nov 25	923	923	924	925	925	926	926	927	927	927	928	928	928	928	928	928	928	928	929	929	930	931	931	932	923	932	927
Nov 26	933	933	933	933	933	932	931	931	930	929	928	927	927	926	925	925	925	925	924	924	924	925	925	926	924	933	928
Nov 27	926	926	927	927	927	927	928	928	928	929	929	929	930	930	930	930	930	930	929	929	929	929	929	930	926	930	929
Nov 28	930	931	932	933	933	934	936	936	937	938	939	939	940	940	940	940	941	941	941	941	940	940	939	939	930	941	938
Nov 29	938	938	938	937	937	936	936	936	935	934	934	934	934	933	933	932	932	931	931	930	930	929	928	928	928	938	934
Nov 30	927	926	925	923	922	921	920	919	918	917	917	918	919	919	920	921	923	925	928	931	933	935	937	938	917	938	924
Diurnal Maximum	946	947	947	947	948	948	948	949	949	949	948	948	948	947	947	947	947	947	947	946	945	945	945	946			
Diurnal Average	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932	932			

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

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

Timeseries Chart of Hourly Average for BP - Reno Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

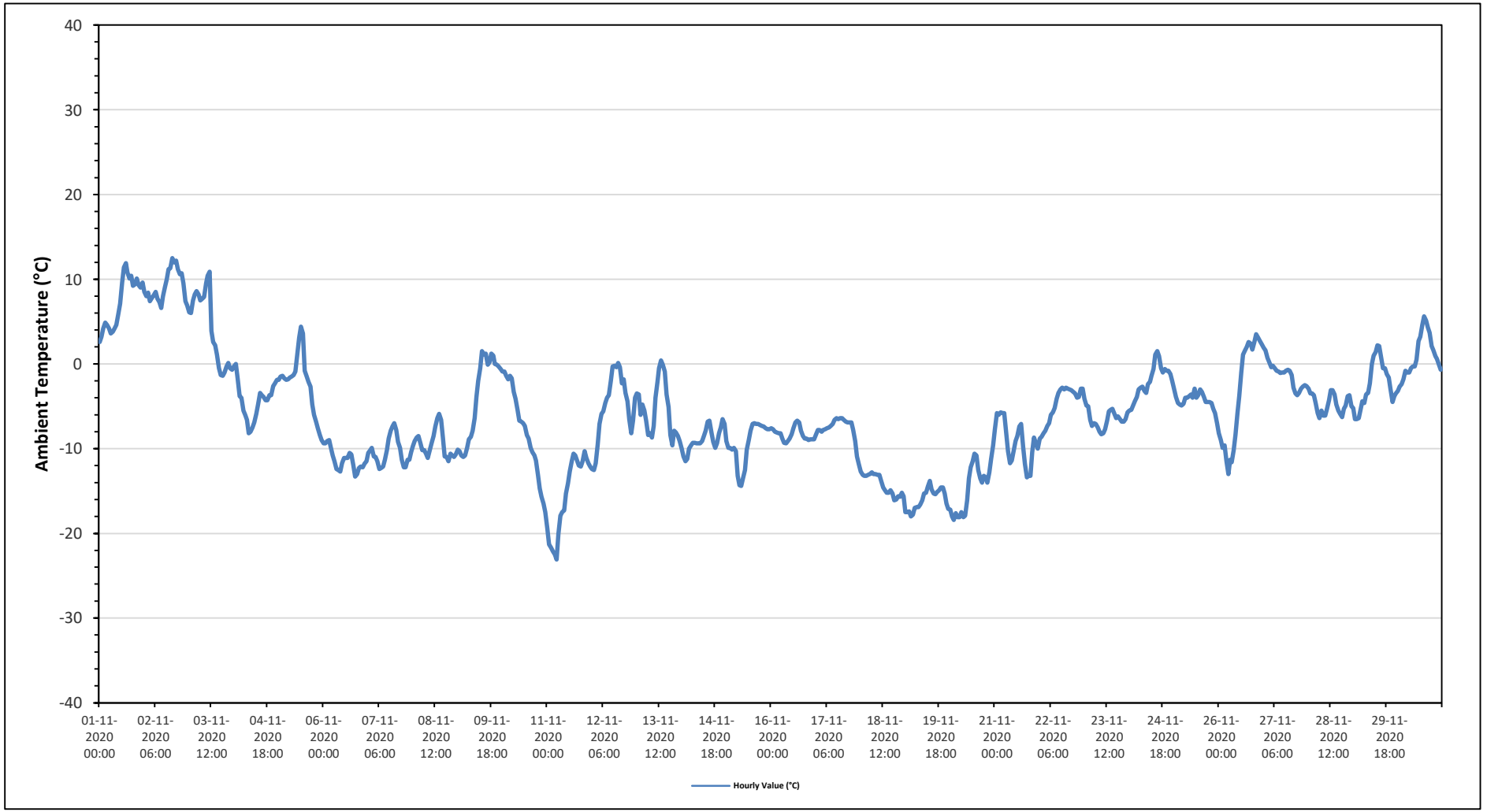
Maximum Hourly Value:	12.5	°C	on November 2 at hour 15	Hours in Service:	720
Maximum Daily Value:	9.2	°C	on November 2	Hours of Data:	720
Minimum Hourly Value:	-23.1	°C	on November 11 at hour 5	Hours of Missing Data:	0
Minimum Daily Value:	-16.0	°C	on November 19	Hours of Calibration:	0
Monthly Average:	-5.7	°C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	2.6	3.2	4.2	4.9	4.6	4.2	3.6	3.8	4.2	4.6	5.9	7.1	9.6	11.4	11.9	10.8	10.1	10.4	9.2	9.4	10.1	9.3	9	9.6	2.6	11.9	7.2
Nov 2	8.5	8	8.4	7.4	7.8	8.1	8.5	7.7	7.3	6.6	8	9.1	10	11.2	11.3	**12.5**	12	12.2	11.2	10.6	10.7	9.5	7.4	6.9	6.6	**12.5**	**9.2**
Nov 3	6.1	6	7.5	8.2	8.6	8.2	7.5	7.7	7.9	9.5	10.4	10.9	3.9	2.6	2.2	1.1	-0.5	-1.3	-1.4	-1	-0.3	0.1	-0.5	-0.7	-1.4	10.9	4.3
Nov 4	-0.3	0	-1.7	-3.8	-4	-5.5	-6	-6.6	-8.2	-8	-7.5	-6.9	-5.9	-4.8	-3.4	-3.7	-3.9	-4.3	-4.3	-3.7	-3.7	-2.6	-2.3	-1.9	-8.2	0.0	-4.3
Nov 5	-1.9	-1.5	-1.4	-1.7	-1.9	-1.8	-1.6	-1.5	-1.3	-0.9	1	3.1	4.4	3.6	-0.8	-1.5	-2.1	-2.7	-4.8	-6	-6.8	-7.6	-8.4	-9	-9.0	4.4	-2.2
Nov 6	-9.4	-9.4	-9.1	-9	-9.8	-10.8	-11.5	-12.4	-12.5	-12.7	-11.7	-11.1	-11.1	-11.1	-10.5	-10.7	-12	-13.3	-13	-12.3	-12.1	-12.2	-11.8	-11.5	-13.3	-9.0	-11.3
Nov 7	-10.5	-10.2	-9.9	-10.9	-11	-11.5	-12.4	-12.3	-12.1	-11.3	-10.2	-8.8	-7.9	-7.4	-7	-7.8	-9.2	-9.9	-11.3	-12.2	-12.2	-11.3	-11.3	-10.4	-12.4	-7.0	-10.4
Nov 8	-9.7	-9.1	-8.7	-8.5	-9.4	-10.2	-10.2	-10.6	-11.1	-10.2	-9.4	-8.5	-7.4	-6.4	-5.9	-6.6	-8.7	-10.9	-11	-11.5	-10.6	-10.8	-11	-10.7	-11.5	-5.9	-9.5
Nov 9	-10.1	-10.3	-10.8	-11	-10.8	-9.9	-8.9	-8.6	-7.9	-6.4	-3.9	-2	-0.5	1.5	1.1	1.2	-0.1	0.2	1.2	1	0	-0.1	-0.3	-0.6	-11.0	1.5	-4.0
Nov 10	-0.9	-0.9	-1.4	-1.8	-1.4	-1.7	-3.3	-4.1	-5.4	-6.7	-6.8	-7	-7.3	-8.4	-8.8	-9.9	-10.4	-10.8	-11.4	-13.1	-14.7	-15.7	-16.5	-17.5	-17.5	-0.9	-7.7
Nov 11	-19.4	-21.3	-21.7	-22.1	-22.5	**-23.1**	-20.1	-17.9	-17.5	-17.3	-15.3	-14.1	-12.7	-11.5	-10.6	-10.8	-11.4	-12	-12.1	-11.5	-10.3	-11.1	-11.7	-12.1	**-23.1**	-10.3	-15.4
Nov 12	-12.4	-12.5	-11.7	-9.5	-7.1	-5.9	-5.6	-4.6	-4	-3.7	-2	-0.3	-0.2	-0.4	0.1	-0.4	-2.3	-1.8	-3.4	-4.4	-6.5	-8.2	-6.7	-4	-12.5	0.1	-4.9
Nov 13	-3.5	-3.6	-6	-4.8	-5.5	-6.7	-8.4	-8.2	-8.7	-7.3	-4	-2.1	-0.5	0.4	-0.1	-0.9	-3.6	-5.1	-8.4	-9.6	-7.9	-8.1	-8.5	-9.1	-9.6	0.4	-5.4
Nov 14	-10	-10.9	-11.5	-11.2	-10	-9.6	-9.3	-9.3	-9.4	-9.4	-9.4	-9.1	-8.5	-7.9	-6.8	-6.7	-8.1	-9.2	-9.9	-9.4	-8.2	-7.5	-6.5	-7.1	-11.5	-6.5	-9.0
Nov 15	-9.1	-9.9	-9.9	-10.1	-9.9	-10.3	-13.2	-14.3	-14.4	-13.5	-12.5	-10.1	-9	-7.9	-7.1	-7	-7.1	-7.1	-7.2	-7.3	-7.4	-7.6	-7.7	-7.7	-14.4	-7.0	-9.5
Nov 16	-7.6	-7.7	-8	-8.1	-8.2	-8.2	-8.8	-9.3	-9.4	-9.1	-8.8	-8.3	-7.6	-6.9	-6.7	-6.9	-7.9	-8.5	-8.8	-8.8	-9	-8.9	-8.9	-8.9	-9.4	-6.7	-8.3
Nov 17	-8.3	-7.8	-7.8	-8	-7.8	-7.7	-7.6	-7.5	-7.3	-7.1	-6.6	-6.4	-6.5	-6.4	-6.4	-6.6	-6.8	-6.9	-6.9	-6.9	-7.8	-9.1	-10.9	-11.9	-11.9	-6.4	-7.6
Nov 18	-12.7	-13.1	-13.2	-13.2	-13.1	-13	-12.8	-13	-13	-13.1	-13.1	-13.8	-14.6	-14.9	-15.2	-15.2	-14.9	-15.3	-16.1	-16	-15.6	-15.7	-15.2	-15.6	-16.1	-12.7	-14.2
Nov 19	-17.5	-17.5	-17.4	-18	-17.8	-17	-16.9	-16.9	-16.6	-16.1	-15.3	-15.2	-14.5	-13.8	-14.8	-15.3	-15.4	-15.1	-14.9	-14.6	-14.6	-15.3	-16.5	-17.1	-18.0	-13.8	-16.0
Nov 20	-17.2	-18	-18.4	-17.6	-18.1	-18.1	-17.5	-18.1	-17.9	-16.1	-13.5	-12.2	-11.5	-10.6	-10.8	-12.5	-13.5	-14	-13.2	-13.4	-14	-12.8	-11.2	-9.6	-18.4	-9.6	-14.6
Nov 21	-7.7	-5.8	-6	-5.7	-5.8	-5.8	-8.2	-10.3	-11.7	-11.4	-10.2	-9.1	-8.5	-7.4	-7.1	-9.8	-11.8	-13.4	-13.2	-13.2	-10.4	-8.7	-9.4	-10	-13.4	-5.7	-9.2
Nov 22	-8.8	-8.6	-8.2	-7.9	-7.3	-7	-6	-5.7	-5.2	-4.1	-3.4	-3	-2.8	-3	-2.8	-2.9	-3	-3.1	-3.3	-3.5	-4	-3.9	-2.9	-2.9	-8.8	-2.8	-4.7
Nov 23	-4.1	-4.9	-5	-6.6	-7.3	-7	-7.1	-7.5	-8	-8.3	-8.2	-7.7	-6.7	-5.6	-5.4	-5.3	-5.9	-6.4	-6.2	-6.5	-6.8	-6.8	-6.5	-5.7	-8.3	-4.1	-6.5
Nov 24	-5.5	-5.4	-4.9	-4.4	-3.9	-3	-2.8	-2.7	-3.2	-3.4	-2.4	-2.1	-1.4	-0.6	1.1	1.5	0.9	-0.5	-1	-0.6	-0.8	-0.8	-1.2	-2	-5.5	1.5	-2.0
Nov 25	-3	-3.9	-4.6	-4.8	-4.9	-4.7	-4	-4	-3.8	-3.6	-4	-2.9	-4	-3.7	-3	-3.3	-3.9	-4.5	-4.5	-4.5	-4.6	-5.3	-5.8	-7	-7.0	-2.9	-4.3
Nov 26	-8.2	-9	-9.9	-9.6	-11.4	-13	-11.3	-11.6	-10.2	-8.4	-5.8	-3.8	-1	1.1	1.6	2	2.6	2.4	1.7	2.6	3.5	3.1	2.7	2.3	-13.0	3.5	-3.7
Nov 27	1.9	1.6	0.7	0.2	-0.4	-0.2	-0.5	-0.8	-0.9	-1.1	-1	-1	-0.8	-0.7	-0.8	-1.3	-2.8	-3.5	-3.7	-3.4	-2.9	-2.7	-2.5	-2.6	-3.7	1.9	-1.2
Nov 28	-2.9	-3.5	-3.5	-3.7	-4.6	-5.8	-6.4	-5.5	-6.1	-6.1	-5.3	-4.3	-3.1	-3.1	-3.6	-4.8	-5.5	-5.9	-6.3	-5.3	-4.9	-3.8	-3.7	-5	-6.4	-2.9	-4.7
Nov 29	-5.2	-6.5	-6.5	-6.4	-5.4	-4.4	-4.6	-3.6	-3.4	-2.3	0	1	1.4	2.2	2.1	0.7	-0.5	-0.5	-1.2	-1.6	-3	-4.5	-3.8	-3.5	-6.5	2.2	-2.5
Nov 30	-3.2	-2.7	-2.4	-1.8	-0.8	-1	-1	-0.5	-0.3	-0.3	0.5	2.7	3.2	4.6	5.6	5.1	4.3	3.7	2.1	1.6	0.9	0.6	-0.1	-0.7	-3.2	5.6	0.8
Diurnal Maximum	8.5	8.0	8.4	8.2	8.6	8.2	8.5	7.7	7.9	9.5	10.4	10.9	10.0	11.4	11.9	12.5	12.0	12.2	11.2	10.6	10.7	9.5	9.0	9.6			
Diurnal Average	-6.3	-6.5	-6.6	-6.7	-6.6	-6.7	-6.9	-6.9	-7.0	-6.6	-5.5	-4.5	-4.1	-3.5	-3.4	-3.8	-4.7	-5.2	-5.7	-5.8	-5.8	-6.0	-6.1	-6.2			

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

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

Timeseries Chart of Hourly Average for AT - Reno Station



peace river area monitoring program
pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

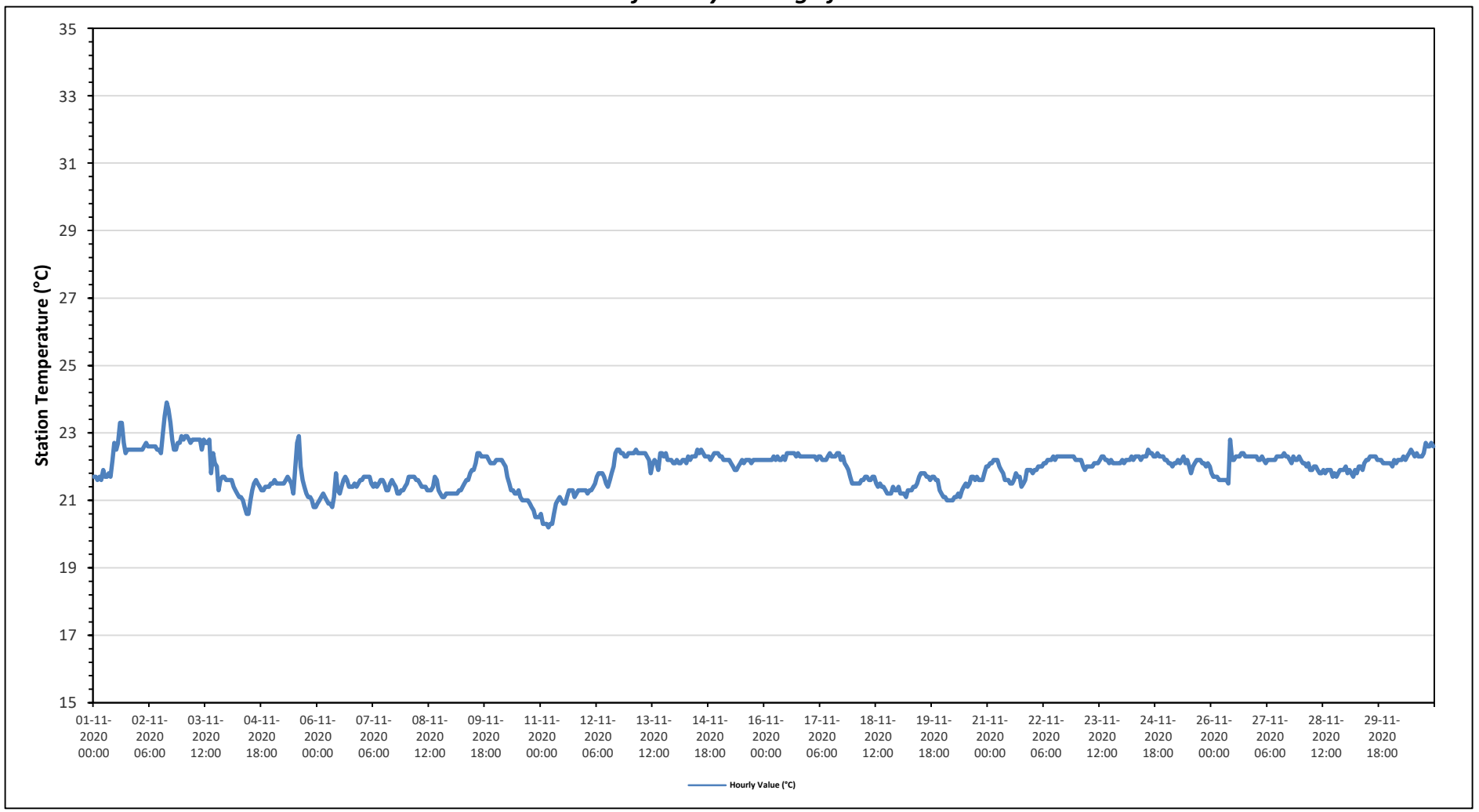
Maximum Hourly Value:	23.9	°C	on November 2 at hour 15	Hours in Service:	720
Maximum Daily Value:	22.8	°C	on November 2	Hours of Data:	720
Minimum Hourly Value:	20.2	°C	on November 11 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	20.9	°C	on November 11	Hours of Calibration:	0
Monthly Average:	21.9	°C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	21.7	21.7	21.6	21.7	21.6	21.9	21.7	21.7	21.8	21.7	22.2	22.7	22.5	22.7	23.3	23.3	22.7	22.4	22.5	22.5	22.5	22.5	22.5	22.5	21.6	23.3	22.2
Nov 2	22.5	22.5	22.5	22.6	22.7	22.6	22.6	22.6	22.6	22.6	22.5	22.5	22.4	23.0	23.5	**23.9**	23.7	23.3	22.8	22.5	22.5	22.7	22.7	22.9	22.4	**23.9**	**22.8**
Nov 3	22.8	22.9	22.9	22.8	22.7	22.8	22.8	22.8	22.8	22.8	22.5	22.8	22.7	22.7	22.8	21.8	22.4	22.1	22.0	21.3	21.6	21.7	21.7	21.6	21.3	22.9	22.4
Nov 4	21.6	21.6	21.6	21.4	21.3	21.2	21.1	21.1	21.0	20.8	20.6	20.6	21.0	21.3	21.5	21.6	21.5	21.4	21.3	21.3	21.4	21.4	21.4	21.5	20.6	21.6	21.3
Nov 5	21.5	21.6	21.5	21.5	21.5	21.5	21.5	21.6	21.7	21.6	21.5	21.2	21.9	22.7	22.9	22.0	21.6	21.4	21.2	21.1	21.1	21.0	20.8	20.8	20.8	22.9	21.5
Nov 6	20.9	21.0	21.1	21.2	21.1	21.0	20.9	20.9	20.8	21.1	21.8	21.3	21.2	21.4	21.6	21.7	21.6	21.4	21.4	21.4	21.5	21.4	21.5	21.6	20.8	21.8	21.3
Nov 7	21.6	21.7	21.7	21.7	21.7	21.5	21.4	21.5	21.4	21.5	21.6	21.6	21.5	21.3	21.3	21.5	21.6	21.5	21.4	21.2	21.2	21.3	21.3	21.4	21.2	21.7	21.5
Nov 8	21.5	21.7	21.7	21.7	21.7	21.6	21.6	21.5	21.4	21.4	21.4	21.3	21.3	21.3	21.4	21.7	21.6	21.3	21.2	21.1	21.1	21.2	21.2	21.2	21.1	21.7	21.4
Nov 9	21.2	21.2	21.2	21.2	21.3	21.3	21.4	21.5	21.6	21.6	21.8	21.9	21.9	22.1	22.4	22.4	22.3	22.3	22.3	22.3	22.2	22.1	22.1	22.1	21.2	22.4	21.8
Nov 10	22.2	22.2	22.2	22.2	22.1	22.0	21.7	21.5	21.3	21.3	21.2	21.2	21.3	21.1	21.0	21.0	21.0	21.0	20.9	20.8	20.7	20.5	20.5	20.5	20.5	22.2	21.3
Nov 11	20.6	20.3	20.3	20.3	**20.2**	20.3	20.3	20.6	20.9	21.0	21.1	21.0	20.9	20.9	21.1	21.3	21.3	21.3	21.1	21.2	21.3	21.3	21.3	21.3	**20.2**	21.3	20.9
Nov 12	21.3	21.2	21.3	21.3	21.4	21.5	21.7	21.8	21.8	21.8	21.7	21.5	21.4	21.6	21.8	22.0	22.4	22.5	22.5	22.4	22.4	22.3	22.3	22.4	21.2	22.5	21.8
Nov 13	22.4	22.4	22.4	22.5	22.4	22.4	22.4	22.4	22.4	22.3	22.2	21.8	22.1	22.2	22.1	21.9	22.4	22.4	22.3	22.4	22.2	22.2	22.2	22.1	21.8	22.5	22.3
Nov 14	22.1	22.2	22.1	22.1	22.2	22.2	22.1	22.3	22.2	22.3	22.3	22.3	22.5	22.4	22.5	22.4	22.3	22.3	22.3	22.2	22.3	22.4	22.4	22.4	22.1	22.5	22.3
Nov 15	22.3	22.3	22.2	22.2	22.2	22.2	22.1	22.0	21.9	21.9	22.0	22.1	22.2	22.1	22.2	22.2	22.2	22.1	22.2	22.2	22.2	22.2	22.2	22.2	21.9	22.3	22.2
Nov 16	22.2	22.2	22.2	22.2	22.2	22.3	22.2	22.3	22.2	22.2	22.3	22.2	22.4	22.4	22.4	22.4	22.4	22.3	22.4	22.3	22.3	22.3	22.3	22.3	22.2	22.4	22.3
Nov 17	22.3	22.3	22.3	22.3	22.2	22.3	22.3	22.2	22.2	22.2	22.3	22.4	22.3	22.3	22.3	22.4	22.4	22.2	22.3	22.1	22.0	21.9	21.7	21.5	21.5	22.4	22.2
Nov 18	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6	21.7	21.7	21.5	21.4	21.5	21.4	21.4	21.3	21.2	21.2	21.2	21.4	21.3	21.3	21.2	21.7	21.5
Nov 19	21.4	21.2	21.2	21.2	21.1	21.3	21.3	21.3	21.4	21.4	21.5	21.7	21.8	21.8	21.8	21.7	21.7	21.6	21.7	21.7	21.6	21.6	21.3	21.2	21.1	21.8	21.5
Nov 20	21.1	21.1	21.0	21.0	21.0	21.0	21.1	21.1	21.2	21.1	21.3	21.4	21.5	21.4	21.5	21.7	21.7	21.6	21.7	21.6	21.6	21.6	21.8	22.0	21.0	22.0	21.4
Nov 21	22.0	22.1	22.1	22.2	22.2	22.2	22.0	21.9	21.8	21.6	21.6	21.6	21.5	21.5	21.6	21.8	21.7	21.7	21.4	21.5	21.6	21.9	21.9	21.9	21.4	22.2	21.8
Nov 22	21.8	21.9	21.9	22.0	22.0	22.0	22.1	22.1	22.2	22.2	22.2	22.3	22.2	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.2	21.8	22.3	22.2
Nov 23	22.2	22.2	22.2	22.0	21.9	22.0	22.0	22.0	22.0	22.1	22.1	22.1	22.2	22.3	22.3	22.2	22.2	22.1	22.2	22.1	22.1	22.1	22.1	22.1	21.9	22.3	22.1
Nov 24	22.2	22.1	22.2	22.2	22.2	22.3	22.2	22.3	22.3	22.3	22.2	22.3	22.3	22.3	22.5	22.4	22.4	22.3	22.3	22.4	22.3	22.3	22.3	22.2	22.1	22.5	22.3
Nov 25	22.2	22.1	22.1	22.0	22.1	22.1	22.2	22.1	22.2	22.3	22.1	22.2	22.0	21.8	22.0	22.1	22.2	22.2	22.2	22.1	22.1	22.0	22.1	22.0	21.8	22.3	22.1
Nov 26	21.8	21.7	21.7	21.7	21.6	21.6	21.6	21.6	21.6	21.5	22.8	22.2	22.2	22.3	22.3	22.3	22.4	22.4	22.3	22.3	22.3	22.3	22.3	22.3	21.5	22.8	22.0
Nov 27	22.3	22.2	22.2	22.3	22.2	22.1	22.2	22.2	22.2	22.2	22.2	22.3	22.3	22.3	22.3	22.4	22.3	22.3	22.2	22.1	22.3	22.2	22.2	22.3	22.1	22.4	22.2
Nov 28	22.2	22.1	22.1	22.0	22.1	21.9	21.9	22.0	22.0	21.9	21.8	21.8	21.9	21.8	21.9	21.9	21.9	21.7	21.8	21.7	21.8	21.9	21.9	21.9	21.7	22.2	21.9
Nov 29	22.0	21.8	21.9	21.8	21.7	21.9	21.8	22.0	22.0	21.9	22.1	22.2	22.2	22.3	22.3	22.3	22.3	22.2	22.2	22.2	22.1	22.1	22.1	22.1	21.7	22.3	22.1
Nov 30	22.1	22.0	22.2	22.1	22.2	22.2	22.2	22.3	22.2	22.3	22.4	22.5	22.4	22.3	22.4	22.3	22.3	22.3	22.4	22.7	22.6	22.6	22.7	22.6	22.0	22.7	22.3
Diurnal Maximum	22.8	22.9	22.9	22.8	22.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.7	23.0	23.5	23.9	23.7	23.3	22.8	22.7	22.6	22.7	22.7	22.9			
Diurnal Average	21.9	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.9	21.9	21.9	22.0	22.1	22.1	22.1	22.0	21.9	21.9	21.9	21.9	21.9	21.9			

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

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

Timeseries Chart of Hourly Average for ST - Reno Station



PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

PRECIPITATION in mm

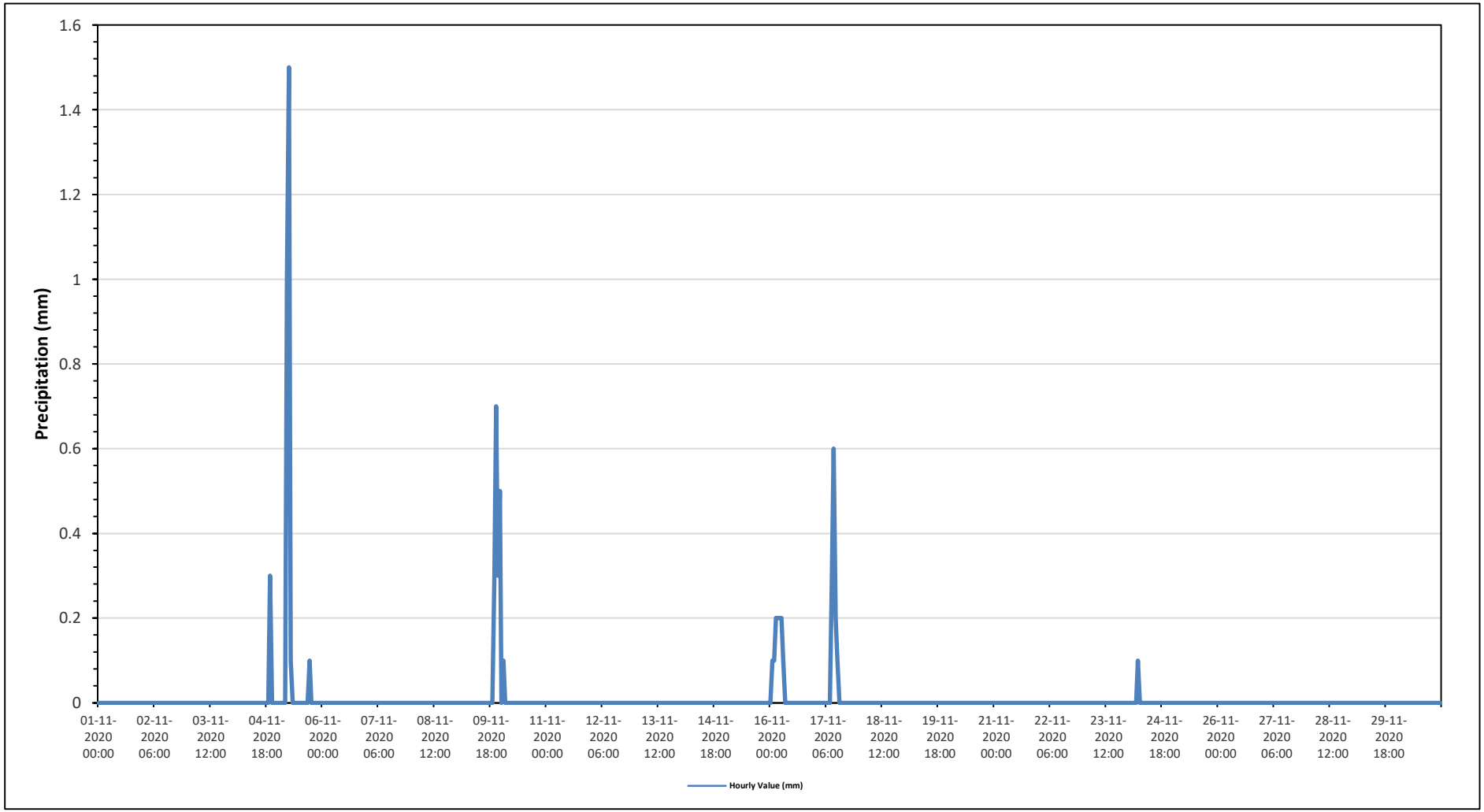
Maximum Hourly Value:	1.5	mm	on November 5 at hour 6	Hours in Service:	720
Maximum Daily Value:	2.7	mm	on November 5	Hours of Data:	720
Minimum Hourly Value:	0.0	mm	on November 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.0	mm	on November 1	Hours of Calibration:	0
Monthly Total:	7.3	mm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Total
Nov 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
Nov 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Nov 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
Nov 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0.0	0.3	0.3
Nov 5	0	0	0	0	0	1	**1.5**	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0.0	**1.5**	**2.7**
Nov 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
Nov 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
Nov 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
Nov 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	0.3	0.5	0.0	0.7	1.8
Nov 10	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Nov 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
Nov 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
Nov 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
Nov 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
Nov 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
Nov 16	0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	1.1
Nov 17	0	0	0	0	0	0	0	0	0	0.3	0.6	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	1.2
Nov 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
Nov 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
Nov 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
Nov 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
Nov 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
Nov 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
Nov 24	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	0.1	0.1
Nov 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
Nov 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
Nov 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
Nov 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
Nov 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
Nov 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
Diurnal Maximum	0.0	0.1	0.1	0.2	0.2	1.0	1.5	0.1	0.0	0.3	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.7	0.3	0.5			
Diurnal Average	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			

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

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

Timeseries Chart of Hourly Average for Precipitation - Reno Station



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

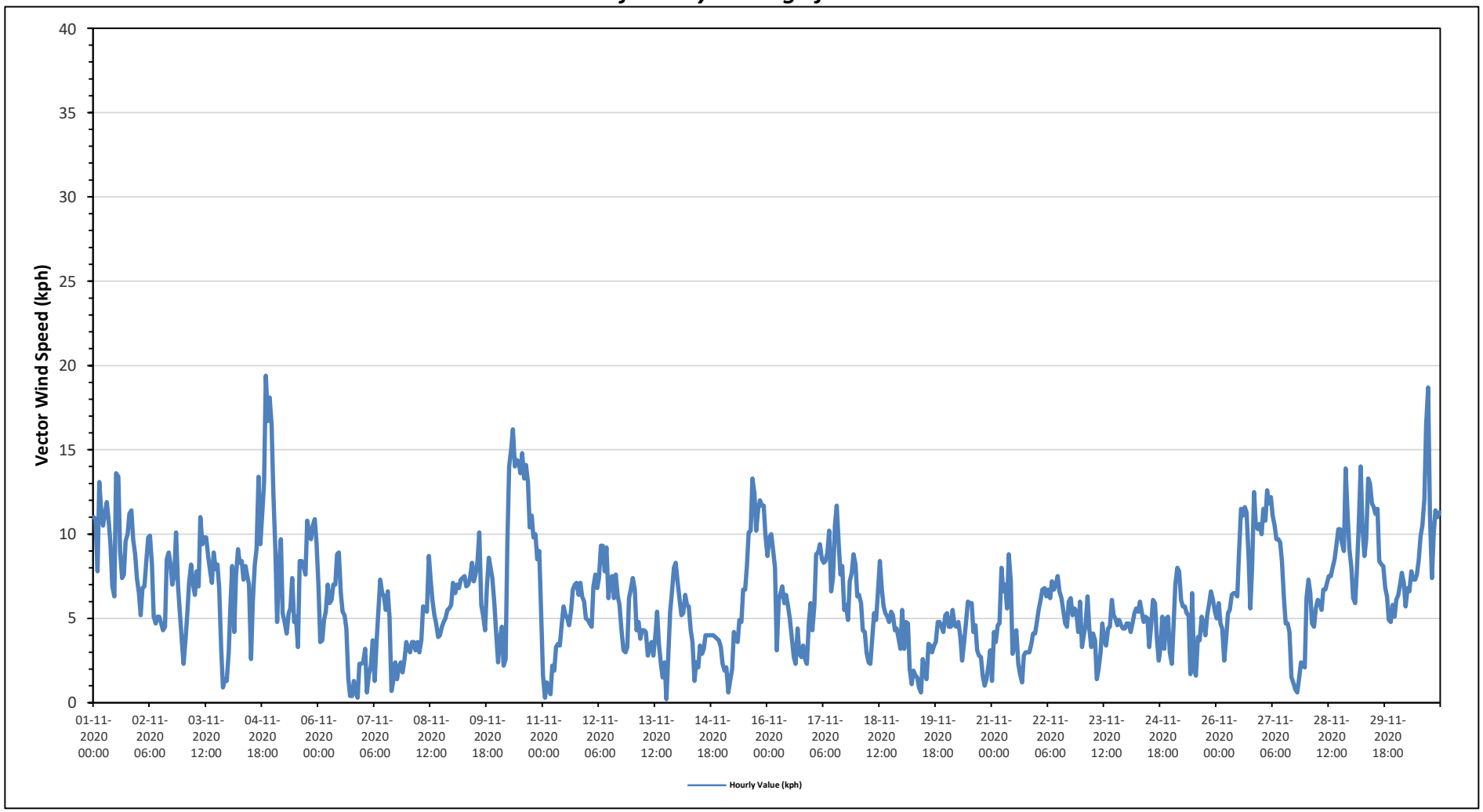
Maximum Hourly Value:	19.4	kph	on November 4 at hour 20	Hours in Service:	720
Maximum Daily Value:	9.8	kph	on November 1	Hours of Data:	720
Minimum Hourly Value:	0.2	kph	on November 13 at hour 18	Hours of Missing Data:	0
Minimum Daily Value:	0.4	kph	on November 14	Hours of Calibration:	0
Monthly Average:	2.3	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
Nov 1	11.0	10.9	7.8	13.1	11.3	10.5	11.3	11.9	10.7	9.3	6.9	6.3	13.6	13.4	9.0	7.4	7.6	9.6	10.0	11.2	11.4	9.7	8.8	7.4	6.3	13.6	**9.8**
Nov 2	6.5	5.2	6.8	6.9	8.3	9.8	9.9	8.2	5.1	4.7	5.1	5.1	4.7	4.3	4.5	8.5	8.9	8.2	7.0	7.6	10.1	6.9	5.4	3.7	3.7	10.1	6.1
Nov 3	2.3	3.8	5.3	7.1	8.2	7.1	6.4	7.8	6.9	11.0	9.4	9.8	9.8	8.7	7.9	7.1	8.9	7.9	8.2	6.8	3.2	0.9	1.4	1.3	0.9	11.0	2.1
Nov 4	3.0	5.8	8.1	4.2	7.5	9.1	8.3	8.4	7.3	8.1	7.5	7.0	2.6	6.0	8.2	9.1	13.4	9.4	11.3	13.1	**19.4**	16.7	18.1	16.5	2.6	**19.4**	5.2
Nov 5	12.4	9.1	4.8	7.9	9.7	5.3	4.8	4.1	5.3	5.6	7.4	4.8	5.1	3.3	8.4	8.4	8.1	7.6	10.8	10.1	9.7	10.5	10.9	9.5	3.3	12.4	1.5
Nov 6	6.9	3.6	3.7	4.9	5.4	7.0	5.9	6.1	7.0	7.0	8.8	8.9	6.5	5.4	5.2	4.4	1.4	0.4	0.4	1.3	0.6	0.3	2.3	2.3	0.3	8.9	3.3
Nov 7	2.4	3.2	0.6	1.7	2.2	3.7	1.3	3.5	5.5	7.3	6.5	6.3	5.5	6.6	5.1	0.7	1.3	2.4	1.4	2.1	2.4	1.8	2.6	3.6	0.6	7.3	2.3
Nov 8	3.2	3.0	3.6	3.6	3.1	3.6	3.0	3.7	5.7	5.5	5.4	8.7	7.3	6.1	5.2	4.7	3.9	4.0	4.5	4.8	5.0	5.5	5.6	5.8	3.0	8.7	4.0
Nov 9	7.1	6.5	7.0	6.8	7.3	7.4	7.5	6.9	7.0	7.4	8.3	7.2	7.6	8.4	10.1	5.8	5.2	4.3	6.8	8.6	8.0	7.4	5.9	4.2	4.2	10.1	6.0
Nov 10	2.4	3.8	4.5	2.2	2.6	9.5	14.0	15.0	16.2	14.0	14.4	14.3	13.6	14.8	13.3	14.1	13.1	10.4	11.1	9.8	10.0	8.5	9.0	5.1	2.2	16.2	9.6
Nov 11	1.6	0.3	1.2	0.8	0.5	2.2	1.9	3.3	3.5	3.4	4.7	5.7	5.2	5.0	4.6	5.5	6.7	7.0	7.1	6.4	7.1	6.3	6.0	5.0	0.3	7.1	4.0
Nov 12	4.9	4.7	4.5	6.9	7.6	6.8	7.4	9.3	9.3	7.8	9.2	6.2	7.4	7.5	6.2	7.6	6.3	5.8	4.3	3.1	3.0	3.3	6.2	6.8	3.0	9.3	6.2
Nov 13	7.4	6.7	4.3	4.8	3.8	4.3	4.3	4.2	2.8	3.3	3.6	2.8	4.0	5.4	3.5	2.3	1.5	2.4	**0.2**	3.0	5.4	6.7	8.0	8.3	**0.2**	8.3	1.8
Nov 14	7.1	6.2	5.2	5.3	6.4	5.8	5.7	4.3	3.6	1.3	2.4	2.1	3.4	2.9	3.2	4.0	4.0	4.0	4.0	4.0	3.9	3.8	3.7	3.3	1.3	7.1	**0.4**
Nov 15	2.3	1.9	2.1	0.6	1.3	2.0	4.2	3.8	3.6	4.9	4.8	6.7	6.7	8.1	10.1	10.2	13.3	12.4	10.2	11.5	12.0	11.7	11.7	9.9	0.6	13.3	5.8
Nov 16	8.7	9.8	10.0	9.1	8.0	3.1	6.1	6.5	6.9	5.9	6.4	5.7	5.0	3.7	2.7	2.3	4.4	2.9	2.7	3.4	2.6	2.3	4.8	5.9	2.3	10.0	4.1
Nov 17	4.3	5.8	8.8	8.9	9.4	8.5	8.3	8.4	8.9	10.2	6.6	7.4	10.5	11.7	9.4	7.6	8.1	5.5	5.8	4.9	7.2	7.7	8.8	8.2	4.3	11.7	6.4
Nov 18	6.3	6.4	5.9	4.3	4.2	3.0	2.4	2.3	3.7	5.3	4.9	6.7	8.4	6.7	5.7	5.3	5.1	4.8	5.4	5.2	4.3	4.4	3.8	3.2	2.3	8.4	4.1
Nov 19	5.5	3.2	4.8	4.7	2.0	1.1	1.9	1.6	1.5	0.9	0.6	2.6	1.8	1.4	3.5	3.4	3.0	3.4	3.6	4.8	4.8	4.5	4.2	5.2	0.6	5.5	2.3
Nov 20	5.3	4.5	4.5	5.5	4.6	4.5	4.8	3.9	2.5	3.6	4.7	6.0	5.9	5.9	4.2	4.6	3.1	2.8	2.7	1.6	1.0	1.4	2.2	3.1	1.0	6.0	3.8
Nov 21	1.3	4.2	3.6	4.6	4.7	8.0	6.6	7.0	5.6	8.8	7.2	2.9	3.4	4.3	2.3	1.7	1.2	2.8	3.0	3.0	3.0	3.5	4.1	4.1	1.2	8.8	3.7
Nov 22	4.8	5.5	6.1	6.7	6.8	6.3	6.7	6.2	7.2	6.7	7.0	7.5	6.6	6.2	5.5	4.7	4.5	6.0	6.2	5.2	5.6	5.4	4.2	6.0	4.2	7.5	5.6
Nov 23	3.3	4.0	4.6	6.3	4.4	3.3	4.1	3.7	1.4	2.0	3.0	4.7	3.7	3.4	4.4	4.5	6.1	5.2	5.0	4.6	4.9	4.6	4.4	4.4	1.4	6.3	1.5
Nov 24	4.7	4.7	4.2	4.7	5.3	5.6	5.4	6.0	5.3	4.8	5.1	5.0	3.3	4.7	6.1	5.9	3.9	2.5	3.3	5.1	3.2	5.0	5.1	3.0	2.5	6.1	4.0
Nov 25	2.3	4.6	7.0	8.0	7.8	6.1	5.7	5.7	5.3	5.2	1.7	6.5	2.0	1.6	3.9	3.7	5.1	4.7	4.0	5.2	5.8	6.6	6.1	5.4	1.6	8.0	4.8
Nov 26	5.0	5.9	4.7	4.4	2.5	3.7	5.3	5.5	6.4	6.5	6.5	6.3	8.9	11.5	11.1	11.6	11.3	8.7	5.6	8.0	12.5	10.5	10.3	10.6	2.5	12.5	6.8
Nov 27	10.0	11.5	10.8	12.6	11.8	12.2	11.1	10.5	9.7	9.7	9.5	8.4	6.2	4.7	4.7	4.2	1.5	1.2	0.8	0.6	1.4	2.4	2.2	2.1	0.6	12.6	6.5
Nov 28	6.2	7.3	6.5	4.7	4.5	5.6	6.1	6.0	5.5	6.7	6.7	7.1	7.5	7.5	8.0	8.5	9.3	10.3	10.3	9.5	9.0	13.9	11.1	9.1	4.5	13.9	7.2
Nov 29	8.0	6.2	5.9	7.9	10.4	14.0	10.4	8.7	9.7	13.3	13.0	11.8	11.6	11.2	11.5	8.4	8.2	8.1	6.8	6.3	4.9	4.8	5.8	5.1	4.8	14.0	8.6
Nov 30	6.1	6.4	7.0	7.7	7.1	5.7	6.8	6.6	7.8	7.3	7.3	7.6	8.4	9.9	10.5	12.1	16.5	18.7	11.2	7.4	10.0	11.4	11.0	11.3	5.7	18.7	7.1
Diurnal Maximum	12	12	11	13	12	14	14	15	16	14	14	14	14	15	13	14	17	19	11	13	19	17	18	17			
Diurnal Average	5.4	5.5	5.5	5.9	6.0	6.2	6.3	6.3	6.2	6.6	6.5	6.6	6.5	6.7	6.6	6.3	6.5	6.1	5.8	5.9	6.4	6.3	6.5	6.0			

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

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

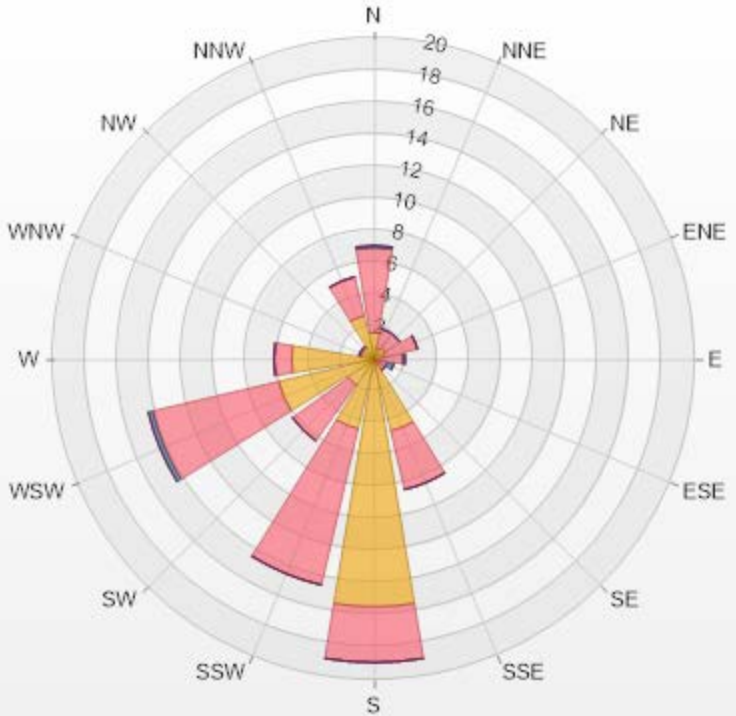
Timeseries Chart of Hourly Average for VWS - Reno Station



Wind: PRAMP RENO Monitor: WDS [KPH] Monthly: 11-2020 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 6.39% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.67	5.28	0.14	0	0	7.09
NNE	0.69	1.25	0	0	0	1.94
NE	0.83	1.11	0	0	0	1.94
ENE	0.69	2.08	0	0	0	2.77
E	0.42	1.39	0.14	0	0	1.95
ESE	0.28	0.56	0.42	0	0	1.26
SE	0.14	0.69	0	0	0	0.83
SSE	4.58	3.75	0	0	0	8.33
S	15.42	3.47	0	0	0	18.89
SSW	4.44	10	0	0	0	14.44
SW	1.94	4.31	0	0	0	6.25
WSW	6.11	8.06	0.28	0	0	14.45
W	5.14	1.11	0	0	0	6.25
WNW	0.83	0.14	0	0	0	0.97
NW	0.83	0.14	0	0	0	0.97
NNW	2.78	2.5	0	0	0	5.28
Summary	46.79	45.84	0.98	0	0	93.61

PRAMP RENO 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 6.39% Calm Wind Avg Speed: 1.12(KPH)



% Icon Classes (KPH)	47 1.8-6.0	46 6.0-15.0	1 15.0-29.0	0 29.0-39.0	0 >39.0

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PEACE RIVER AREA MONITORING PROGRAM

Reno Station - November 2020

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

Monthly Average: 215 (SSW) degree

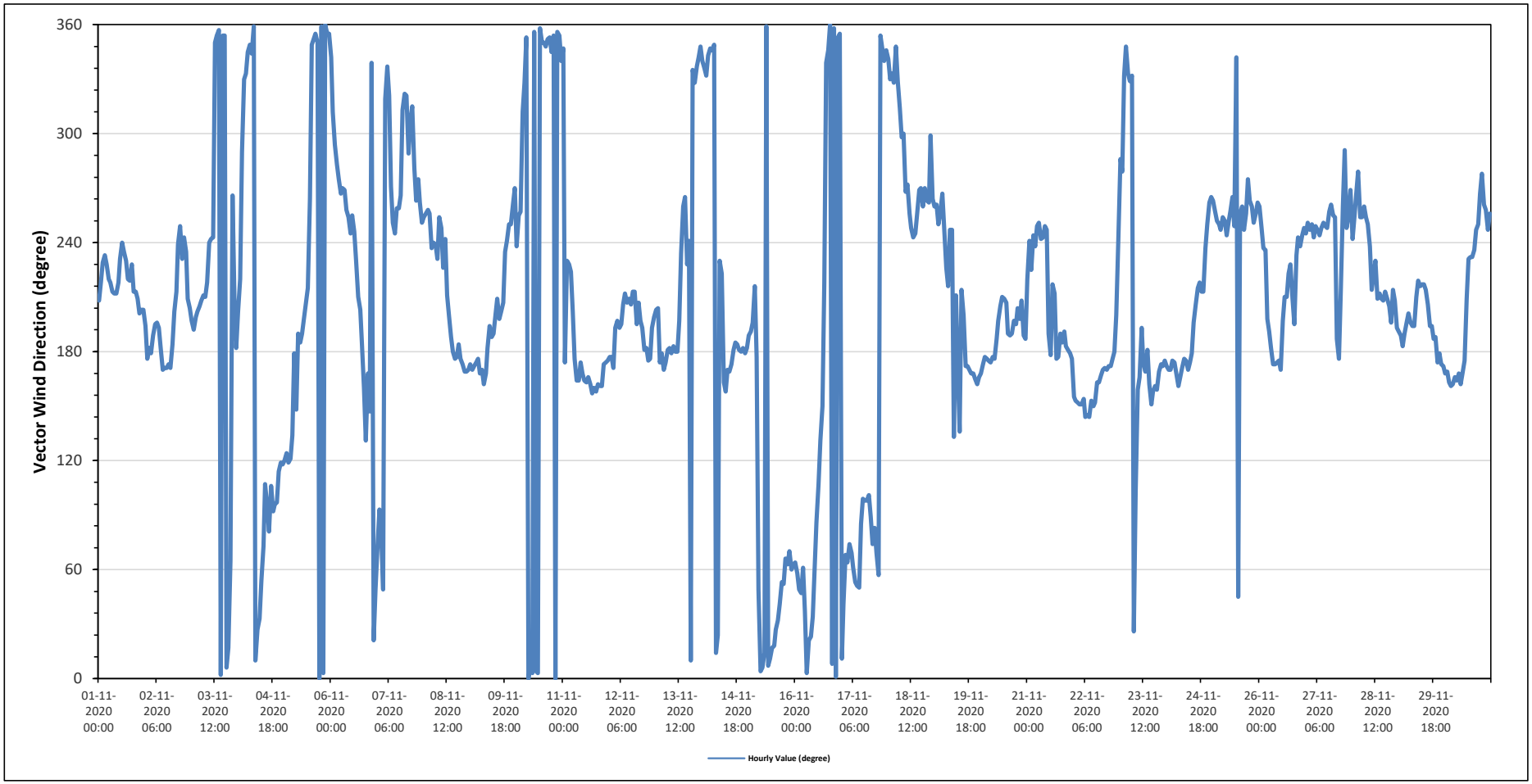
Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Nov 1	SSW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SW	SW	WSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	219	SW
Nov 2	SSW	S	S	S	S	SSW	SSW	S	S	SSE	S	S	S	S	S	SSW	SSW	WSW	WSW	SW	WSW	SW	SSW	SSW	201	SSW
Nov 3	SSW	S	SSW	SSW	SSW	SSW	SSW	SSW	SW	WSW	WSW	WSW	N	N	N	N	N	N	N	NNE	ENE	W	SSW	S	270	W
Nov 4	SSW	SW	WNW	NNW	NNW	NNW	NNW	NNW	N	N	NNE	NNE	NE	ENE	ESE	E	E	ESE	E	E	E	ESE	ESE	ESE	76	ENE
Nov 5	ESE	ESE	ESE	ESE	SE	S	SE	S	S	S	SSW	SSW	SSW	W	NNW	N	N	N	N	N	N	N	N	N	35	NE
Nov 6	NNW	NW	WNW	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	SW	SSW	SSW	S	SSE	SE	SSE	SE	NNW	NNE	NE	261	W
Nov 7	ENE	E	ENE	NE	NW	NNW	NW	W	WSW	WSW	WSW	WSW	W	NW	NW	NW	WNW	NW	NW	W	W	W	W	WSW	281	W
Nov 8	WSW	WSW	WSW	WSW	SW	WSW	WSW	SW	WSW	WSW	SW	WSW	SSW	SSW	S	S	S	S	S	S	S	SSE	SSE	SSE	210	SSW
Nov 9	S	SSE	S	S	S	SSE	SSE	SSE	SSE	S	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SW	WSW	WSW	WSW	W	W	198	SSW
Nov 10	SW	WSW	WSW	NW	NNW	N	N	N	N	N	N	N	N	N	N	NNW	N	N	NNW	N	N	N	N	NNW	353	N
Nov 11	NNW	S	SW	SW	SW	SSW	S	SSE	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	167	SSE
Nov 12	S	S	S	S	SSW	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	S	S	S	SSW	198	SSW
Nov 13	SSW	SSW	S	S	SSE	S	S	S	S	S	S	S	SSW	SW	WSW	W	SW	WSW	N	NNW	NNW	NNW	NNW	NNW	223	SW
Nov 14	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNE	NNE	SW	SW	SSE	SSE	SSE	SSE	S	S	S	S	S	S	S	S	S	262	W
Nov 15	S	S	SSW	SW	S	NE	N	N	NNE	N	N	NNE	NNE	NNE	NNE	NNE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	44	NE
Nov 16	ENE	ENE	NE	NE	ENE	NE	N	NNE	NNE	NE	ENE	E	ESE	SE	SSE	SW	NNW	NNW	N	N	N	N	N	N	40	NE
Nov 17	NNE	NE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	E	E	E	E	E	E	ENE	E	ENE	ENE	N	NNW	NNW	NNW	61	ENE
Nov 18	NNW	NNW	NNW	NNW	NNW	NNW	NW	WNW	WNW	W	W	WSW	WSW	WSW	WSW	WSW	W	W	WSW	W	W	W	WNW	W	281	W
Nov 19	WSW	W	WSW	WSW	W	WSW	SW	SW	WSW	WSW	SE	SSW	SSE	SE	SSW	SSW	S	S	SSE	SSE	SSE	SSE	SSE	SSE	202	SSW
Nov 20	SSE	S	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	S	S	S	SSW	SSW	SSW	SSW	SSW	S	S	189	S
Nov 21	SW	WSW	SW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	S	S	SW	SSW	S	S	S	S	S	S	S	S	S	223	SW
Nov 22	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	S	S	S	S	SSW	WSW	162	SSE
Nov 23	WNW	W	NNW	NNW	NNW	NNW	NNW	NNE	ESE	SSE	SSE	S	S	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	180	S
Nov 24	S	SSE	SSE	S	S	SSE	SSE	SSE	S	S	S	SSE	S	S	SSW	SSW	SSW	SW	SSW	SSW	SW	WSW	W	W	191	S
Nov 25	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	NNW	NE	WSW	WSW	WSW	WSW	W	W	WSW	WSW	WSW	W	256	WSW
Nov 26	WSW	WSW	SW	SW	SSW	S	S	S	S	S	S	SSE	SSW	SSW	SSW	SW	SW	SSW	SSW	SW	WSW	SW	WSW	WSW	216	SW
Nov 27	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	S	S	SSW	WSW	WNW	WSW	WSW	W	249	WSW
Nov 28	WSW	WSW	W	W	WSW	WSW	WSW	WSW	WSW	SW	SSW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	223	SW
Nov 29	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	S	S	S	S	S	S	200	SSW
Nov 30	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSW	SW	SW	SW	SW	WSW	WSW	W	W	W	WSW	WSW	WSW	221	SW

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

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

Timeseries Chart of Hourly Average for VWD - Reno Station



AQHI CADOTTE LAKE STATION

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

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

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

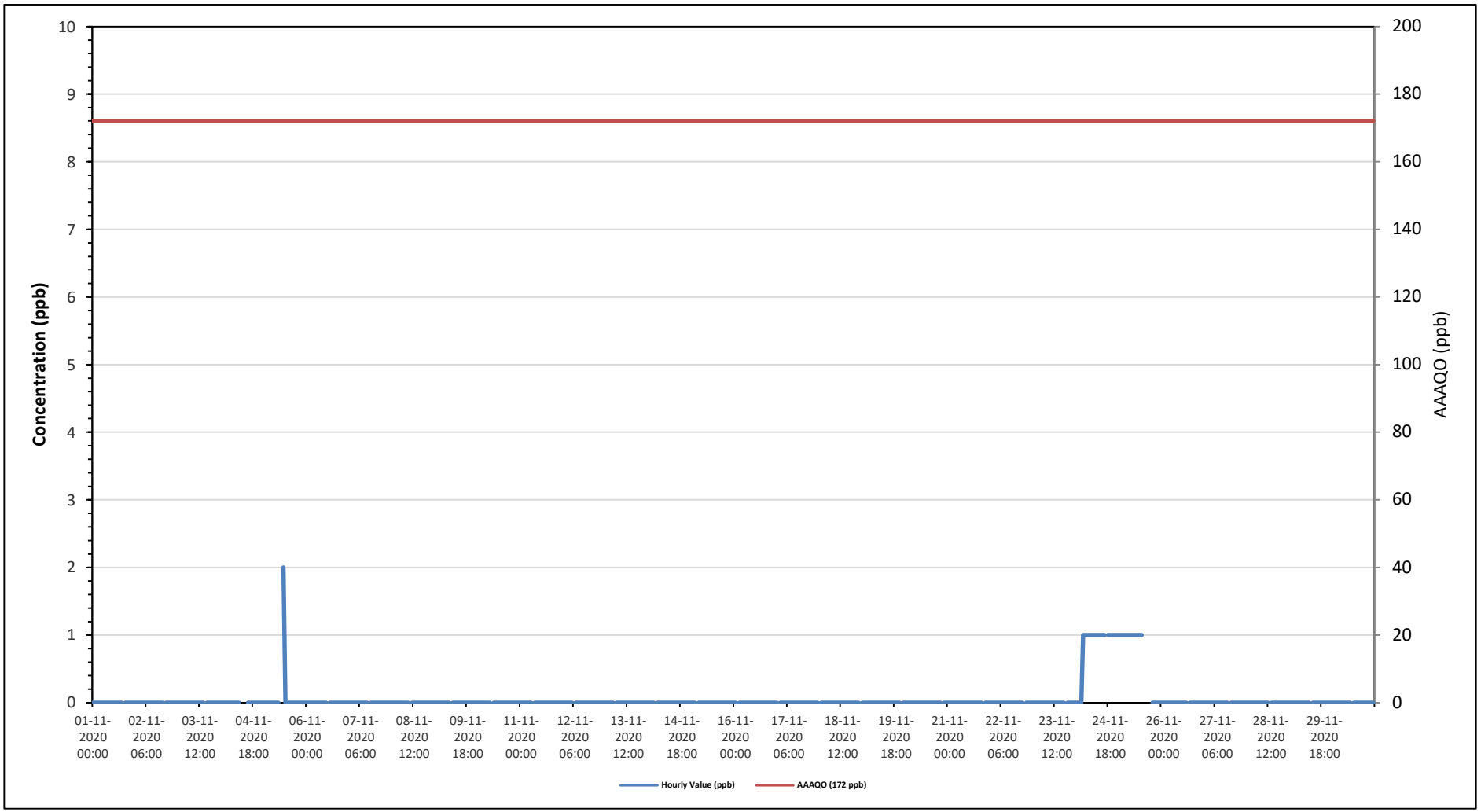
Maximum Hourly Value:	2	ppb	on November 5 at hour 11	Hours in Service:	720
Maximum Daily Value:	0.8	ppb	on November 24	Hours of Data:	680
Minimum Hourly Value:	0	ppb	on November 1 at hour 0	Hours of Missing Data:	7
Minimum Daily Value:	0.0	ppb	on November 1	Hours of Calibration:	33
Monthly Average:	0.1	ppb		Operational Uptime:	99.0

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			
Nov 1	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
Nov 2	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
Nov 3	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
Nov 4	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0
Nov 5	0	0	0	0	0	0	0	0	0	Y	Y	2	0	S	0	0	0	0	0	0	0	0	0	0	0	2	0.1
Nov 6	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
Nov 7	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
Nov 8	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
Nov 9	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
Nov 10	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
Nov 11	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
Nov 12	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
Nov 13	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
Nov 14	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
Nov 15	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
Nov 16	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
Nov 17	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
Nov 18	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Nov 19	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
Nov 20	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
Nov 21	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
Nov 22	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
Nov 23	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
Nov 24	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	0	1	0.8
Nov 25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	NRM	NRM	NRM	NRM	NRM	0	0	0	0	0	0	1	0.7
Nov 26	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
Nov 27	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
Nov 28	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
Nov 29	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
Nov 30	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
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	1	1	1	1			
Diurnal Average	0.0	0.0	0.0	0.0	0.1	0.1	0.1	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			

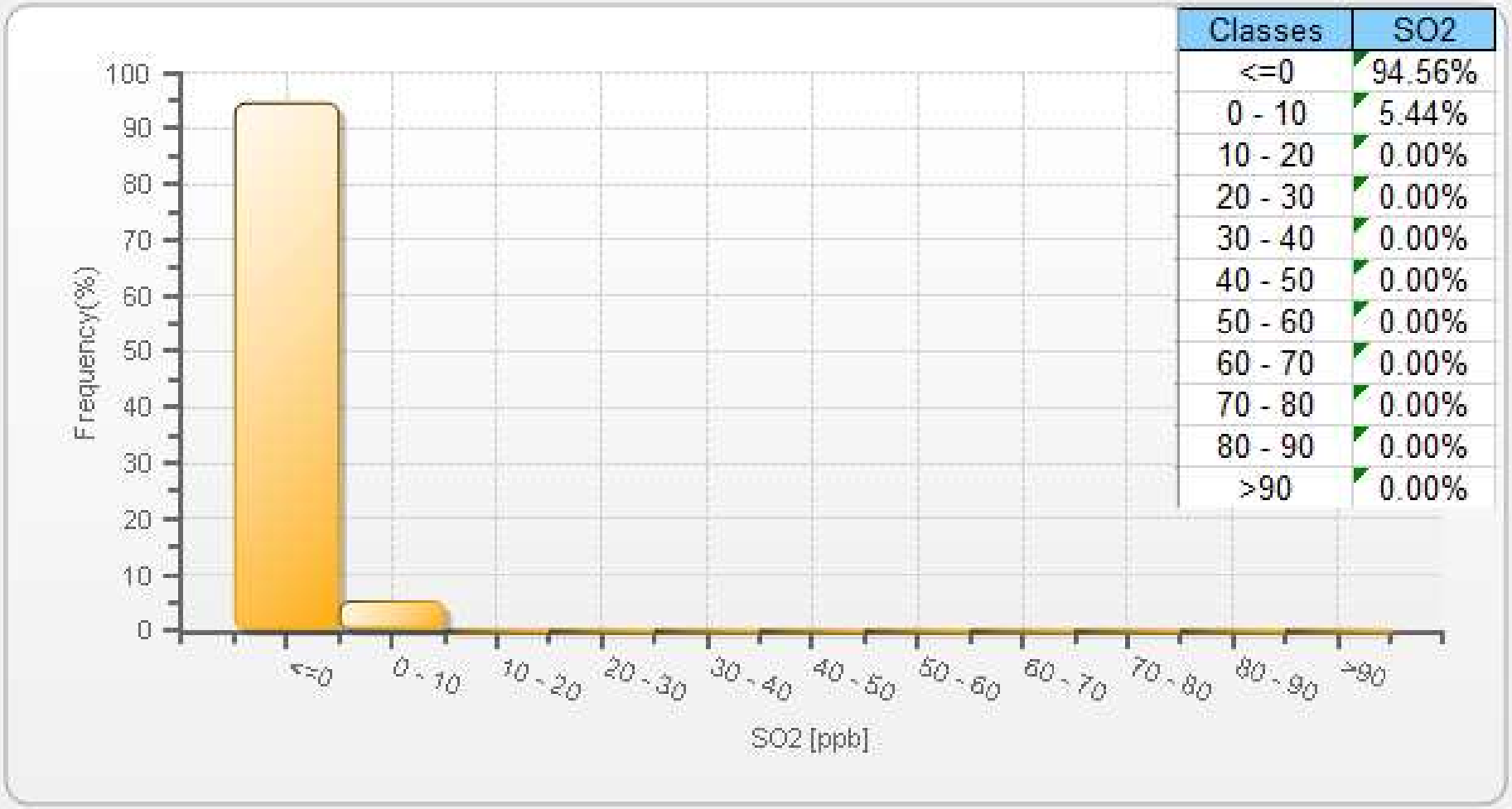
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



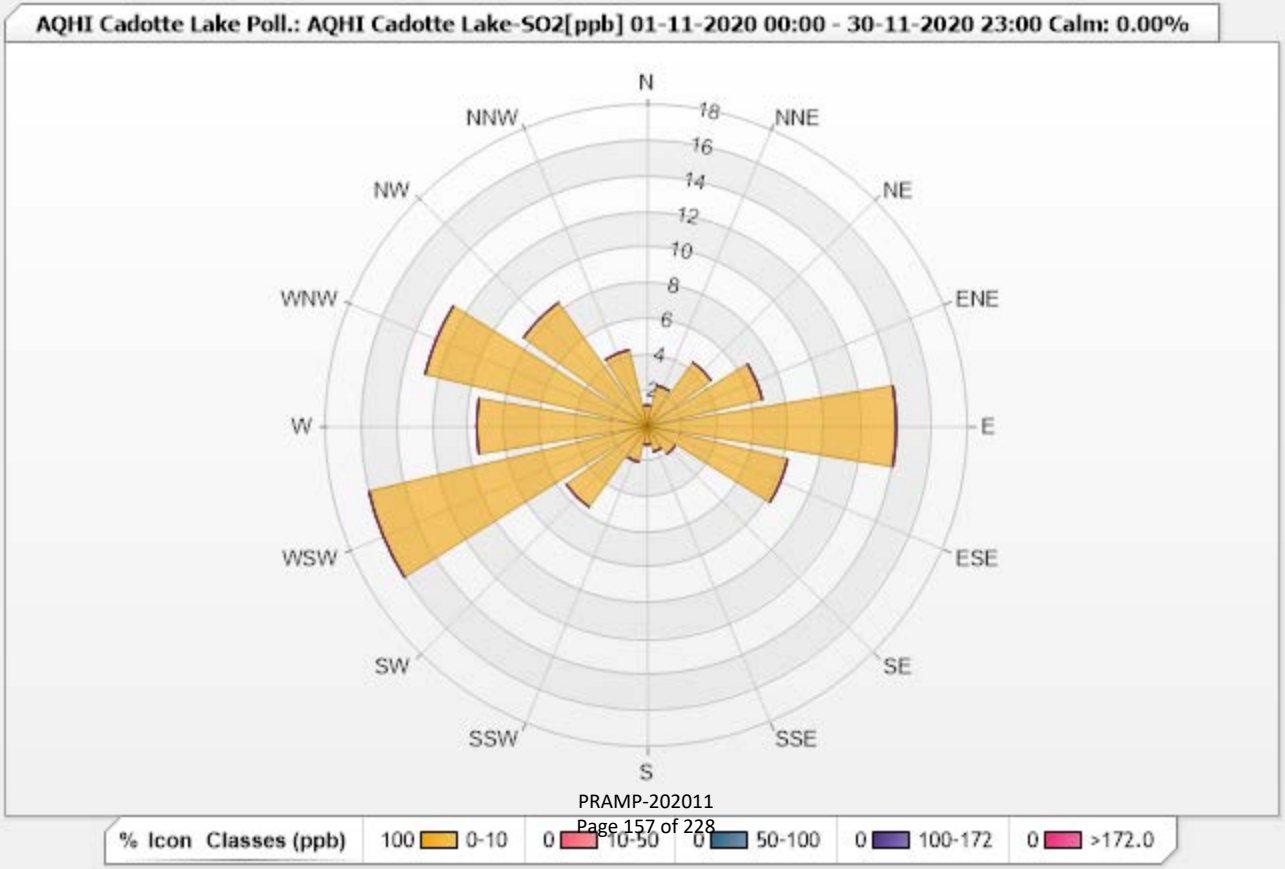
SO2[ppb] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	SO2
<=0	94.56%
0 - 10	5.44%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-SO2[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.44% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	1.18	0	0	0	0	1.18
NNE	2.35	0	0	0	0	2.35
NE	4.41	0	0	0	0	4.41
ENE	6.62	0	0	0	0	6.62
E	13.97	0	0	0	0	13.97
ESE	8.09	0	0	0	0	8.09
SE	1.91	0	0	0	0	1.91
SSE	1.47	0	0	0	0	1.47
S	1.03	0	0	0	0	1.03
SSW	2.06	0	0	0	0	2.06
SW	5.59	0	0	0	0	5.59
WSW	16.03	0	0	0	0	16.03
W	9.56	0	0	0	0	9.56
WNW	12.79	0	0	0	0	12.79
NW	8.53	0	0	0	0	8.53
NNW	4.41	0	0	0	0	4.41
Summary	100	0	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-SO2[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-10
0 10-50
0 50-100
0 100-172
0 >172.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

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:	0.62	ppb	on November 12 at hour 8	Hours in Service:	720
Maximum Daily Value:	0.42	ppb	on November 23	Hours of Data:	664
Minimum Hourly Value:	0.07	ppb	on November 2 at hour 8	Hours of Missing Data:	21
Minimum Daily Value:	0.19	ppb	on November 2	Hours of Calibration:	35
Monthly Average:	0.35	ppb		Operational Uptime:	97.1

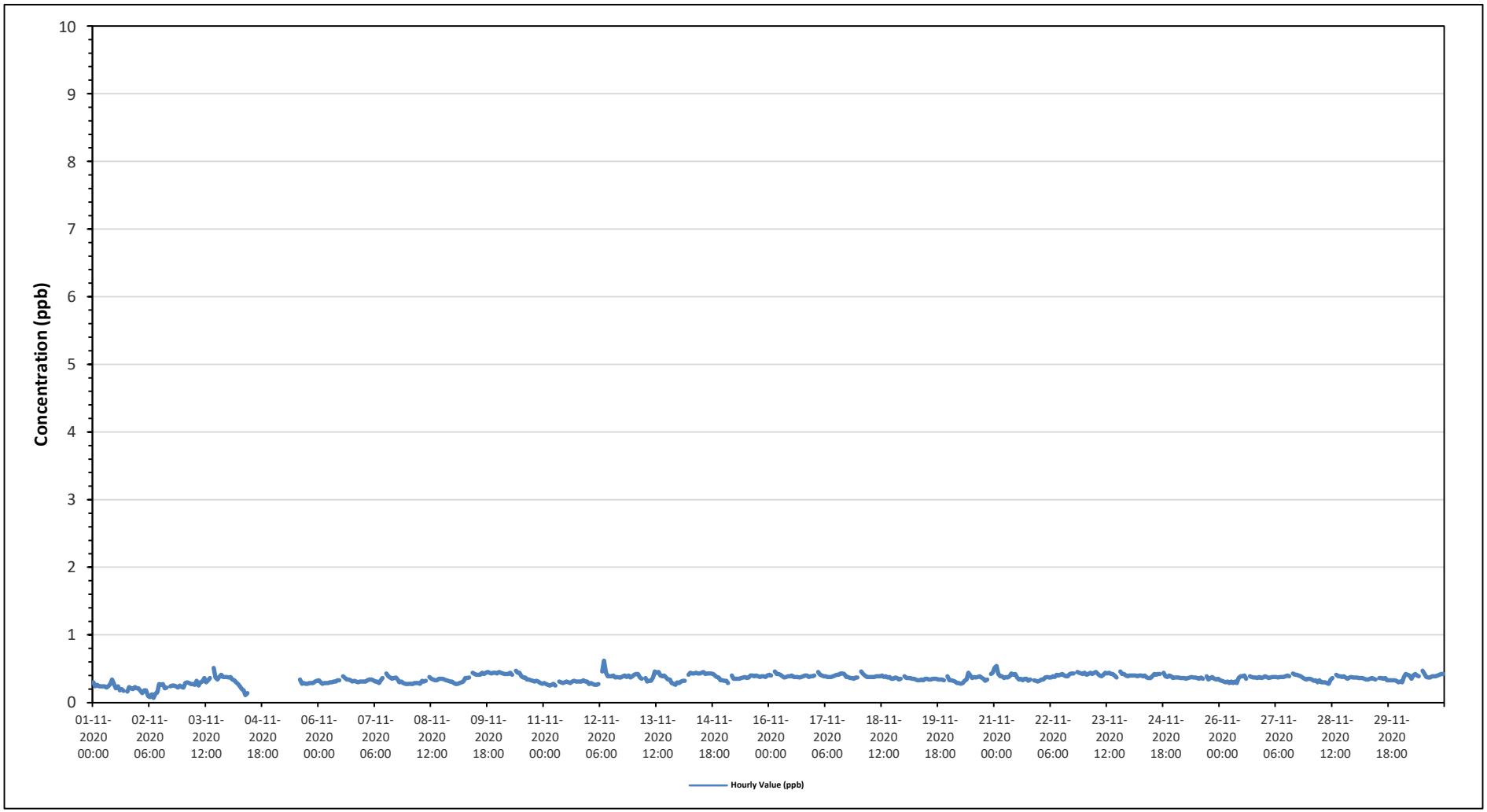
Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.3	0.24	0.26	0.24	0.24	0.24	0.24	0.22	0.24	0.27	0.34	0.27	0.21	0.24	0.18	0.2	0.17	S	0.16	0.23	0.21	0.2	0.23	0.21	0.16	0.34	0.23
Nov 2	0.21	0.17	0.14	0.18	0.18	0.1	0.08	0.12	0.07	0.13	0.15	0.27	0.26	0.27	0.21	0.22	S	0.24	0.25	0.25	0.24	0.22	0.25	0.23	0.07	0.27	0.19
Nov 3	0.22	0.29	0.3	0.29	0.27	0.27	0.26	0.32	0.25	0.3	0.31	0.36	0.3	0.33	0.36	S	0.51	0.37	0.34	0.38	0.41	0.38	0.38	0.38	0.22	0.51	0.33
Nov 4	0.37	0.38	0.34	0.33	0.3	0.27	0.24	0.2	0.18	0.11	0.14	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0.11	0.38	-
Nov 5	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	0.34	0.28	0.29	0.28	0.28	0.29	0.29	0.29	0.31	0.32	0.28	0.34	-
Nov 6	0.33	0.3	0.28	0.29	0.29	0.29	0.3	0.3	0.31	0.31	0.33	0.33	S	0.39	0.36	0.34	0.34	0.33	0.31	0.32	0.31	0.3	0.31	0.31	0.28	0.39	0.32
Nov 7	0.31	0.31	0.33	0.34	0.34	0.33	0.31	0.31	0.29	0.33	0.36	S	0.43	0.39	0.37	0.35	0.36	0.37	0.34	0.3	0.31	0.29	0.28	0.27	0.27	0.43	0.33
Nov 8	0.28	0.28	0.27	0.29	0.29	0.29	0.28	0.32	0.31	0.32	S	0.38	0.35	0.34	0.33	0.33	0.35	0.35	0.35	0.34	0.33	0.32	0.31	0.31	0.27	0.38	0.32
Nov 9	0.29	0.27	0.28	0.29	0.3	0.31	0.36	0.36	0.37	S	0.44	0.42	0.41	0.41	0.41	0.44	0.42	0.44	0.45	0.44	0.43	0.44	0.44	0.43	0.27	0.45	0.38
Nov 10	0.45	0.44	0.43	0.42	0.42	0.42	0.44	0.41	S	0.47	0.44	0.44	0.39	0.37	0.37	0.34	0.34	0.33	0.32	0.31	0.32	0.31	0.29	0.28	0.28	0.47	0.38
Nov 11	0.29	0.27	0.26	0.25	0.26	0.28	0.25	S	0.31	0.3	0.29	0.3	0.31	0.3	0.29	0.31	0.32	0.31	0.31	0.31	0.31	0.33	0.31	0.31	0.25	0.33	0.29
Nov 12	0.27	0.29	0.27	0.26	0.26	0.27	S	0.46	**0.62**	0.44	0.39	0.39	0.39	0.4	0.37	0.38	0.37	0.37	0.39	0.4	0.38	0.4	0.37	0.39	0.26	**0.62**	0.37
Nov 13	0.41	0.42	0.42	0.37	0.35	S	0.36	0.31	0.32	0.32	0.37	0.46	0.44	0.45	0.4	0.39	0.4	0.37	0.34	0.34	0.29	0.28	0.26	0.3	0.26	0.46	0.36
Nov 14	0.29	0.31	0.32	0.32	S	0.41	0.44	0.43	0.43	0.44	0.43	0.43	0.44	0.45	0.42	0.43	0.43	0.43	0.42	0.4	0.38	0.37	0.33	0.33	0.29	0.45	0.39
Nov 15	0.32	0.32	0.29	S	0.4	0.35	0.35	0.35	0.35	0.36	0.37	0.38	0.36	0.37	0.4	0.4	0.39	0.4	0.39	0.38	0.39	0.39	0.38	0.4	0.29	0.40	0.37
Nov 16	0.41	0.4	S	0.46	0.42	0.42	0.41	0.39	0.37	0.38	0.39	0.39	0.4	0.38	0.38	0.38	0.37	0.38	0.39	0.4	0.4	0.38	0.39	0.39	0.37	0.46	0.39
Nov 17	0.4	S	0.45	0.41	0.4	0.39	0.39	0.38	0.38	0.38	0.39	0.4	0.41	0.41	0.43	0.43	0.42	0.38	0.38	0.36	0.36	0.35	0.37	0.37	0.35	0.45	0.39
Nov 18	S	0.46	0.42	0.4	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.4	0.38	0.39	0.37	0.38	0.35	0.35	0.37	0.36	0.34	0.35	S	0.34	0.46	0.38
Nov 19	0.39	0.36	0.36	0.36	0.35	0.35	0.34	0.33	0.33	0.34	0.33	0.35	0.35	0.34	0.34	0.35	0.35	0.35	0.34	0.34	0.34	0.33	S	0.39	0.33	0.39	0.35
Nov 20	0.33	0.33	0.32	0.31	0.29	0.29	0.28	0.29	0.32	0.34	0.44	0.4	0.36	0.38	0.37	0.38	0.39	0.37	0.35	0.32	0.34	S	0.42	0.44	0.28	0.44	0.35
Nov 21	0.51	0.54	0.42	0.39	0.39	0.36	0.38	0.37	0.39	0.43	0.41	0.42	0.37	0.34	0.35	0.33	0.35	0.35	0.32	0.34	S	0.33	0.32	0.31	0.31	0.54	0.38
Nov 22	0.32	0.34	0.34	0.37	0.38	0.37	0.37	0.39	0.38	0.41	0.4	0.41	0.42	0.4	0.39	0.39	0.42	0.43	0.43	S	0.45	0.44	0.43	0.42	0.32	0.45	0.40
Nov 23	0.44	0.41	0.42	0.44	0.42	0.44	0.45	0.42	0.4	0.39	0.41	0.44	0.43	0.44	0.42	0.42	0.4	0.37	S	0.46	0.42	0.42	0.4	0.39	0.37	0.46	**0.42**
Nov 24	0.4	0.4	0.4	0.4	0.39	0.4	0.4	0.39	0.4	0.37	0.36	0.36	0.39	0.42	0.41	0.42	0.42	S	0.44	0.39	0.38	0.4	0.39	0.36	0.36	0.44	0.40
Nov 25	0.37	0.37	0.37	0.36	0.36	0.36	0.35	0.36	0.37	0.38	0.37	0.37	0.36	0.35	0.37	0.35	S	0.39	0.34	0.36	0.38	0.35	0.34	0.35	0.34	0.39	0.36
Nov 26	0.33	0.32	0.31	0.3	0.31	0.29	0.31	0.29	0.31	0.29	0.36	0.39	0.39	0.4	0.35	S	0.39	0.38	0.37	0.37	0.36	0.38	0.36	0.37	0.29	0.40	0.34
Nov 27	0.39	0.38	0.36	0.37	0.38	0.38	0.38	0.37	0.38	0.38	0.38	0.39	0.4	0.39	S	0.43	0.41	0.41	0.4	0.39	0.37	0.35	0.34	0.35	0.34	0.43	0.38
Nov 28	0.35	0.34	0.32	0.33	0.3	0.33	0.3	0.3	0.3	0.29	0.28	0.34	0.36	S	0.41	0.39	0.39	0.38	0.39	0.37	0.35	0.37	0.38	0.37	0.28	0.41	0.35
Nov 29	0.37	0.37	0.36	0.36	0.36	0.35	0.34	0.34	0.35	0.36	0.35	0.34	S	0.36	0.36	0.35	0.36	0.33	0.33	0.33	0.33	0.33	0.32	0.3	0.30	0.37	0.35
Nov 30	0.31	0.3	0.38	0.42	0.41	0.4	0.35	0.4	0.42	0.4	0.39	S	0.47	0.42	0.38	0.37	0.37	0.39	0.39	0.39	0.4	0.41	0.42	0.42	0.30	0.47	0.39
Diurnal Maximum	0.51	0.54	0.45	0.46	0.42	0.44	0.45	0.46	0.62	0.47	0.44	0.46	0.47	0.45	0.43	0.44	0.51	0.44	0.45	0.46	0.45	0.44	0.44	0.44			
Diurnal Average	0.35	0.34	0.34	0.34	0.34	0.33	0.33	0.34	0.34	0.34	0.36	0.38	0.38	0.37	0.36	0.36	0.37	0.36	0.35	0.35	0.35	0.35	0.35	0.35			

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

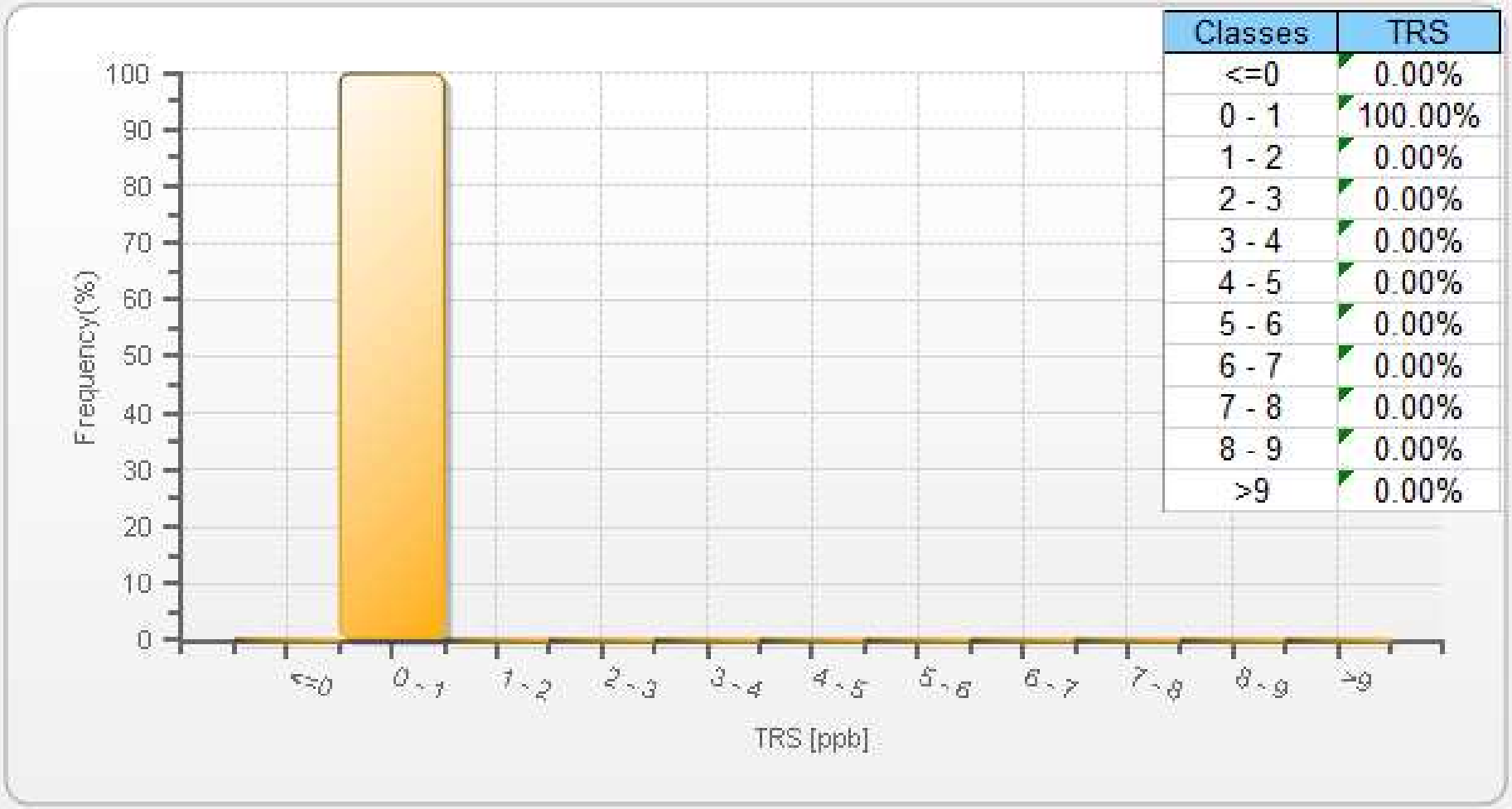
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

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



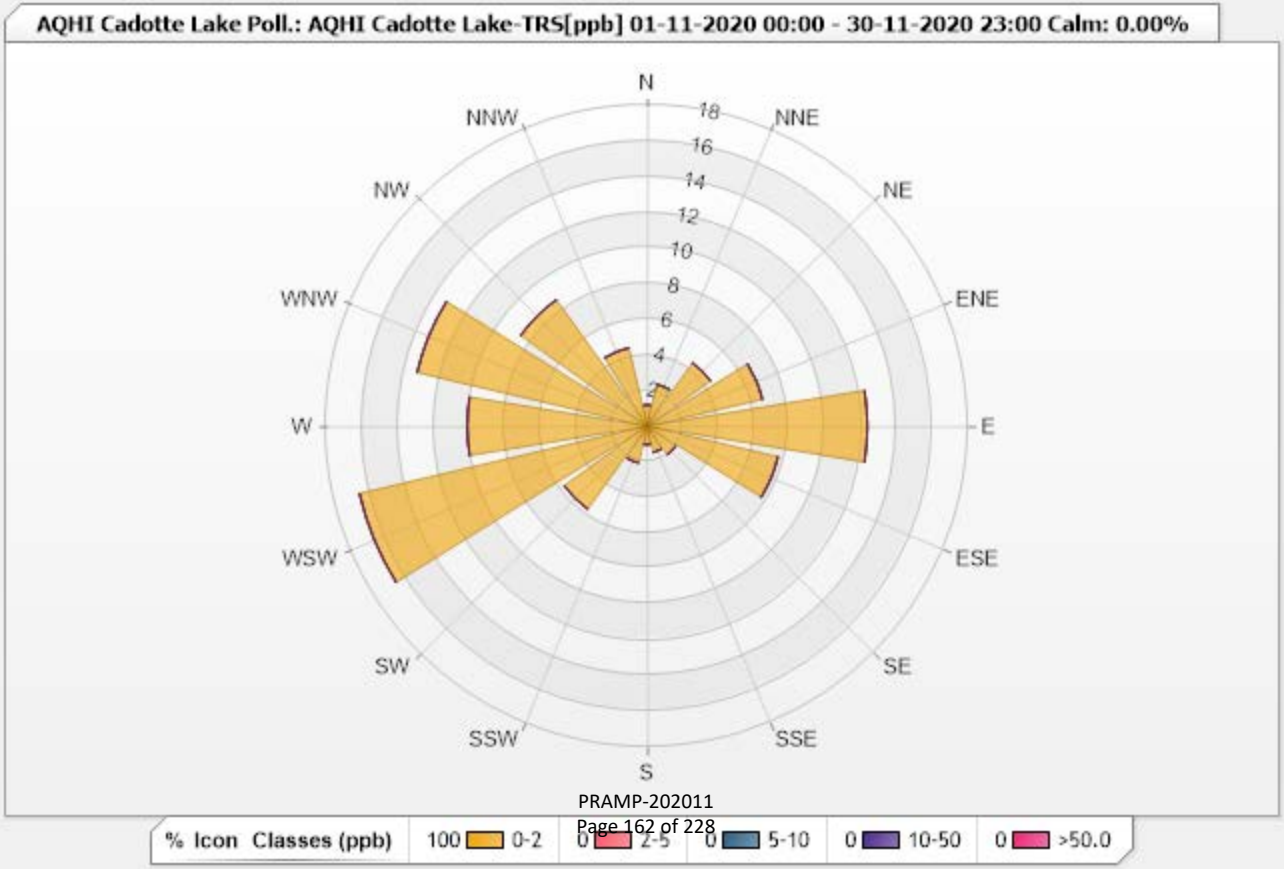
TRS[ppb] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



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

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-TRS[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 92.22% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	1.2	0	0	0	0	1.2
NNE	2.41	0	0	0	0	2.41
NE	4.37	0	0	0	0	4.37
ENE	6.63	0	0	0	0	6.63
E	12.35	0	0	0	0	12.35
ESE	7.53	0	0	0	0	7.53
SE	1.96	0	0	0	0	1.96
SSE	1.51	0	0	0	0	1.51
S	1.05	0	0	0	0	1.05
SSW	2.11	0	0	0	0	2.11
SW	5.72	0	0	0	0	5.72
WSW	16.57	0	0	0	0	16.57
W	10.09	0	0	0	0	10.09
WNW	13.25	0	0	0	0	13.25
NW	8.73	0	0	0	0	8.73
NNW	4.52	0	0	0	0	4.52
Summary	100	0	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-TRS[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
% Icon Classes (ppb)
100 0-2
0 2-5
0 5-10
0 10-50
0 >50.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

OXIDES OF NITROGEN (NOx) in ppb

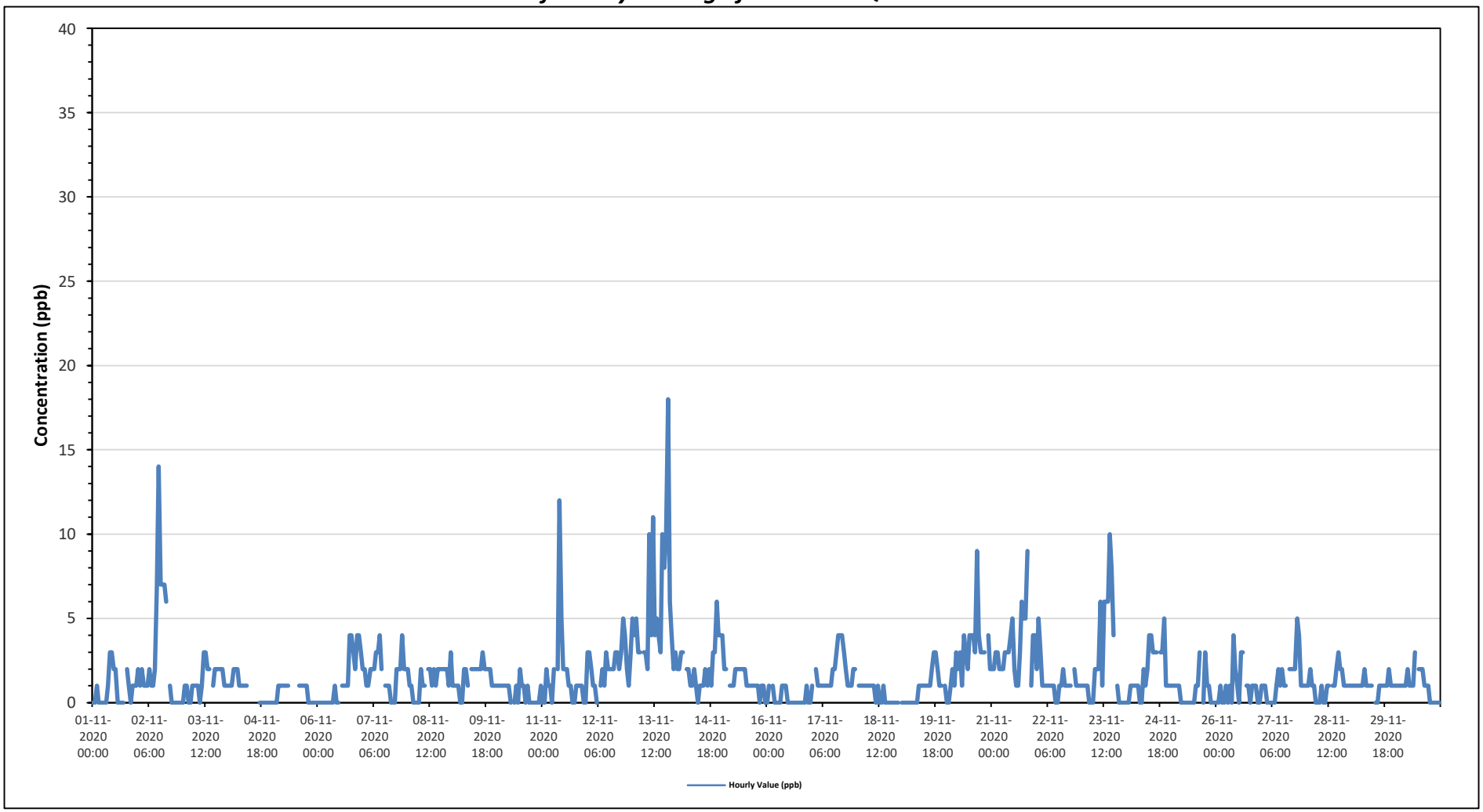
Maximum Hourly Value:	18	ppb	on November 13 at hour 19	Hours in Service:	720
Maximum Daily Value:	5.7	ppb	on November 13	Hours of Data:	680
Minimum Hourly Value:	0	ppb	on November 1 at hour 0	Hours of Missing Data:	5
Minimum Daily Value:	0.3	ppb	on November 16	Hours of Calibration:	35
Monthly Average:	1.6	ppb		Operational Uptime:	99.3

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
Nov 1	0	0	1	0	0	0	0	0	1	3	3	2	2	0	0	0	0	S	2	1	0	1	1	1	0	3	0.8
Nov 2	2	1	2	1	1	1	2	1	1	2	7	14	7	7	7	6	S	1	0	0	0	0	0	0	0	14	2.7
Nov 3	0	1	1	0	0	1	1	1	1	0	1	3	3	2	2	S	1	2	2	2	2	2	1	1	0	3	1.3
Nov 4	1	1	1	2	2	2	1	1	1	1	1	C	C	C	C	C	C	0	0	0	0	0	0	0	0	2	0.8
Nov 5	0	0	0	1	1	1	1	1	1	Y	Y	Y	Y	Y	1	1	1	1	1	0	0	0	0	0	0	1	0.6
Nov 6	0	0	0	0	0	0	0	0	0	1	0	0	S	1	1	1	1	4	4	3	2	4	4	3	0	4	1.3
Nov 7	2	2	1	1	2	2	2	3	3	4	2	S	1	1	1	0	0	0	2	2	2	4	2	2	0	4	1.8
Nov 8	2	1	1	0	0	0	0	2	1	1	S	2	2	1	2	1	2	2	2	2	2	2	1	3	0	3	1.4
Nov 9	1	1	1	1	0	0	2	2	1	S	2	2	2	2	2	2	3	2	2	2	2	1	1	1	0	3	1.5
Nov 10	1	1	1	1	1	1	1	0	S	0	1	0	2	1	1	0	1	0	0	0	0	0	0	1	0	2	0.6
Nov 11	0	0	2	1	1	0	2	S	2	12	5	2	2	2	1	1	0	0	1	1	1	1	0	0	0	12	1.6
Nov 12	3	3	2	1	1	0	S	1	2	1	3	2	2	2	2	3	3	2	3	5	4	2	1	3	0	5	2.2
Nov 13	5	4	5	3	3	S	3	3	2	10	4	11	4	5	4	3	10	8	10	**18**	6	4	2	3	2	**18**	**5.7**
Nov 14	2	2	3	3	S	2	2	1	1	2	1	0	1	1	1	2	1	2	1	3	3	6	4	4	0	6	2.1
Nov 15	4	2	2	S	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	0	1	1	0	0	4	1.4
Nov 16	0	1	S	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.3
Nov 17	1	S	2	1	1	1	1	1	1	1	1	2	2	3	4	4	4	3	2	1	1	1	2	2	1	4	1.8
Nov 18	S	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	S	0	1	0.5
Nov 19	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	3	3	2	1	1	S	1	0	3	0.9
Nov 20	0	0	1	2	1	3	2	3	1	4	3	2	4	4	4	3	9	4	3	3	3	S	4	2	0	9	2.8
Nov 21	2	2	3	3	2	2	2	3	3	3	4	5	2	1	1	3	6	5	5	9	S	1	4	4	1	9	3.3
Nov 22	2	5	3	1	1	1	1	1	1	1	0	0	1	1	2	1	1	1	1	S	2	1	1	1	0	5	1.3
Nov 23	1	1	1	1	0	0	0	2	2	2	6	1	6	6	6	10	8	4	S	1	0	0	0	0	0	10	2.5
Nov 24	0	0	1	1	1	1	1	0	0	2	1	2	4	4	3	3	3	S	3	3	5	1	1	1	0	5	1.8
Nov 25	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	3	S	0	3	1	1	0	0	0	0	3	0.7
Nov 26	0	0	1	0	0	1	0	1	0	4	2	1	0	3	3	S	1	1	0	1	1	1	0	0	0	4	0.9
Nov 27	1	1	1	0	0	0	0	0	1	2	1	2	1	1	S	2	2	2	2	5	4	1	1	1	0	5	1.3
Nov 28	1	1	2	1	1	0	0	0	1	0	0	1	1	S	1	1	2	3	2	2	1	1	1	1	0	3	1.0
Nov 29	1	1	1	1	1	1	1	2	1	1	1	1	S	0	0	1	1	1	1	1	2	1	1	1	0	2	1.0
Nov 30	1	1	1	1	1	1	2	1	1	1	3	S	2	2	2	1	1	1	0	0	0	0	0	0	0	3	1.0
Diurnal Maximum	5	5	5	3	3	3	3	3	3	12	7	14	7	7	7	10	10	8	10	18	6	6	4	4			
Diurnal Average	1.2	1.2	1.4	1.0	0.8	0.8	1.0	1.1	1.1	2.3	2.0	2.3	2.1	2.0	2.0	2.0	2.4	1.9	1.9	2.4	1.6	1.3	1.1	1.2			

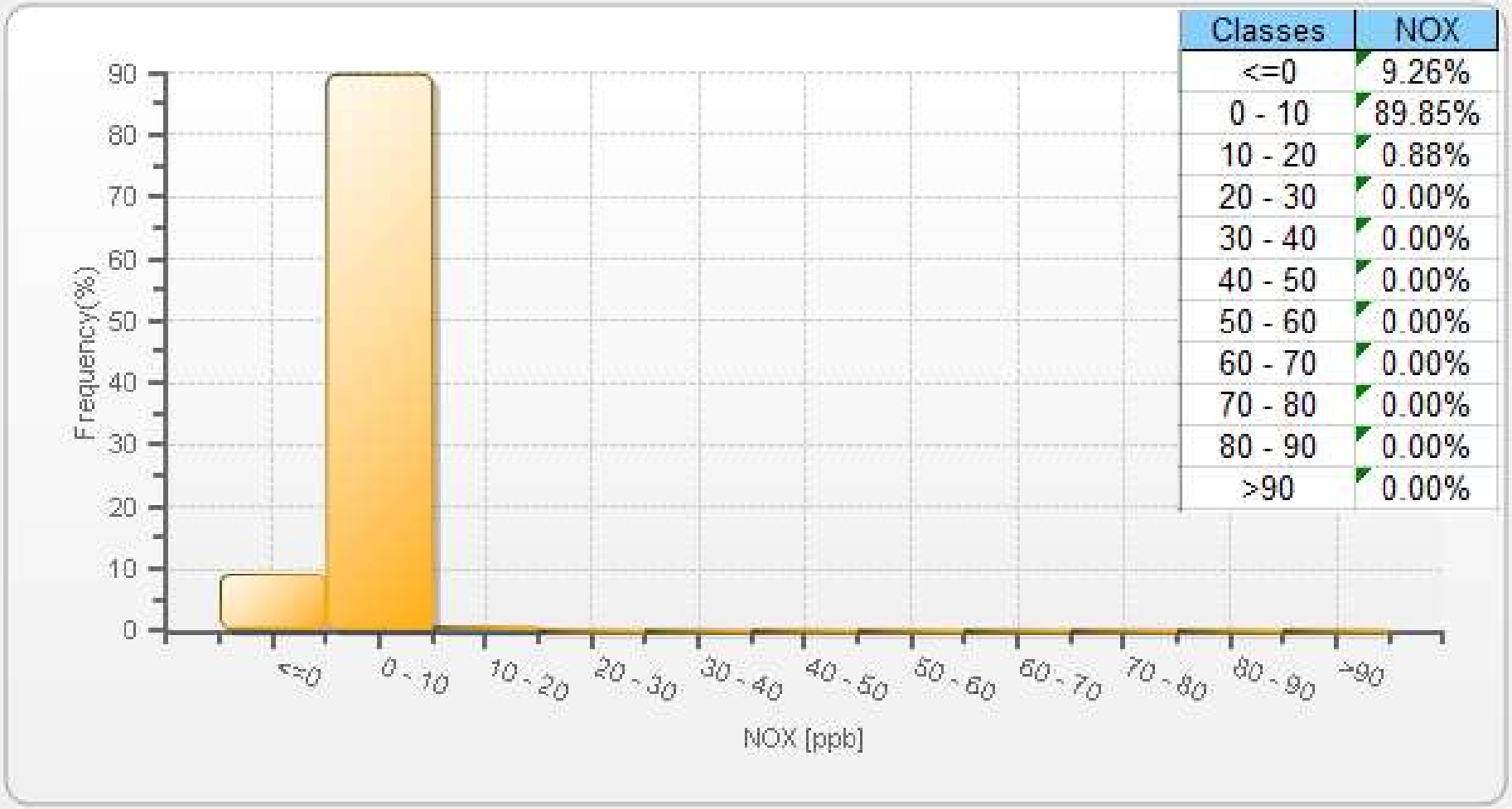
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



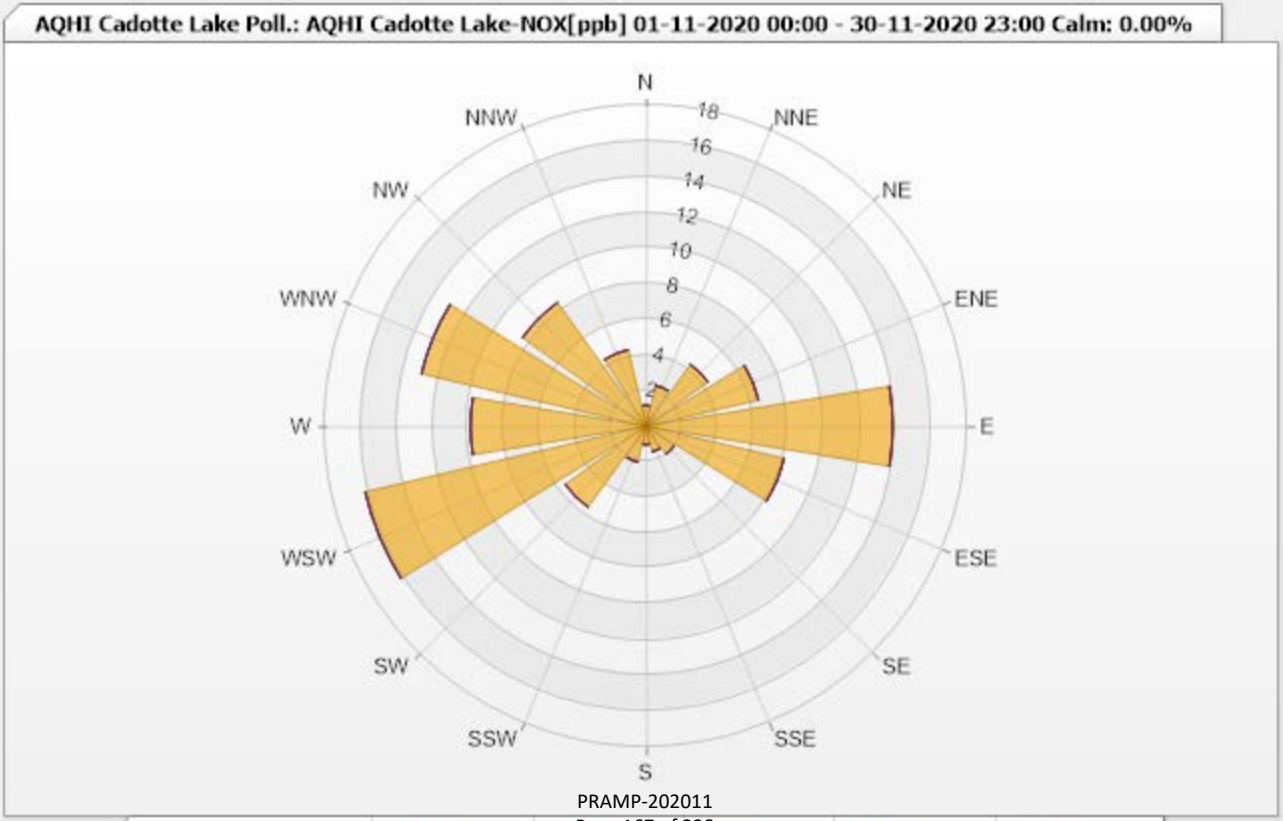
NOX[ppb] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	NOX
<=0	9.26%
0 - 10	89.85%
10 - 20	0.88%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NOX[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.44% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.18	0	0	0	0	1.18
NNE	2.35	0	0	0	0	2.35
NE	4.26	0	0	0	0	4.26
ENE	6.47	0	0	0	0	6.47
E	13.82	0	0	0	0	13.82
ESE	7.94	0	0	0	0	7.94
SE	1.91	0	0	0	0	1.91
SSE	1.47	0	0	0	0	1.47
S	1.03	0	0	0	0	1.03
SSW	2.06	0	0	0	0	2.06
SW	5.59	0	0	0	0	5.59
WSW	16.18	0	0	0	0	16.18
W	9.85	0	0	0	0	9.85
WNW	12.94	0	0	0	0	12.94
NW	8.53	0	0	0	0	8.53
NNW	4.41	0	0	0	0	4.41
Summary	100	0	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NOX[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-30
0 30-50
0 50-76
0 76-159
0 >159.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

NITRIC OXIDE (NO) in ppb

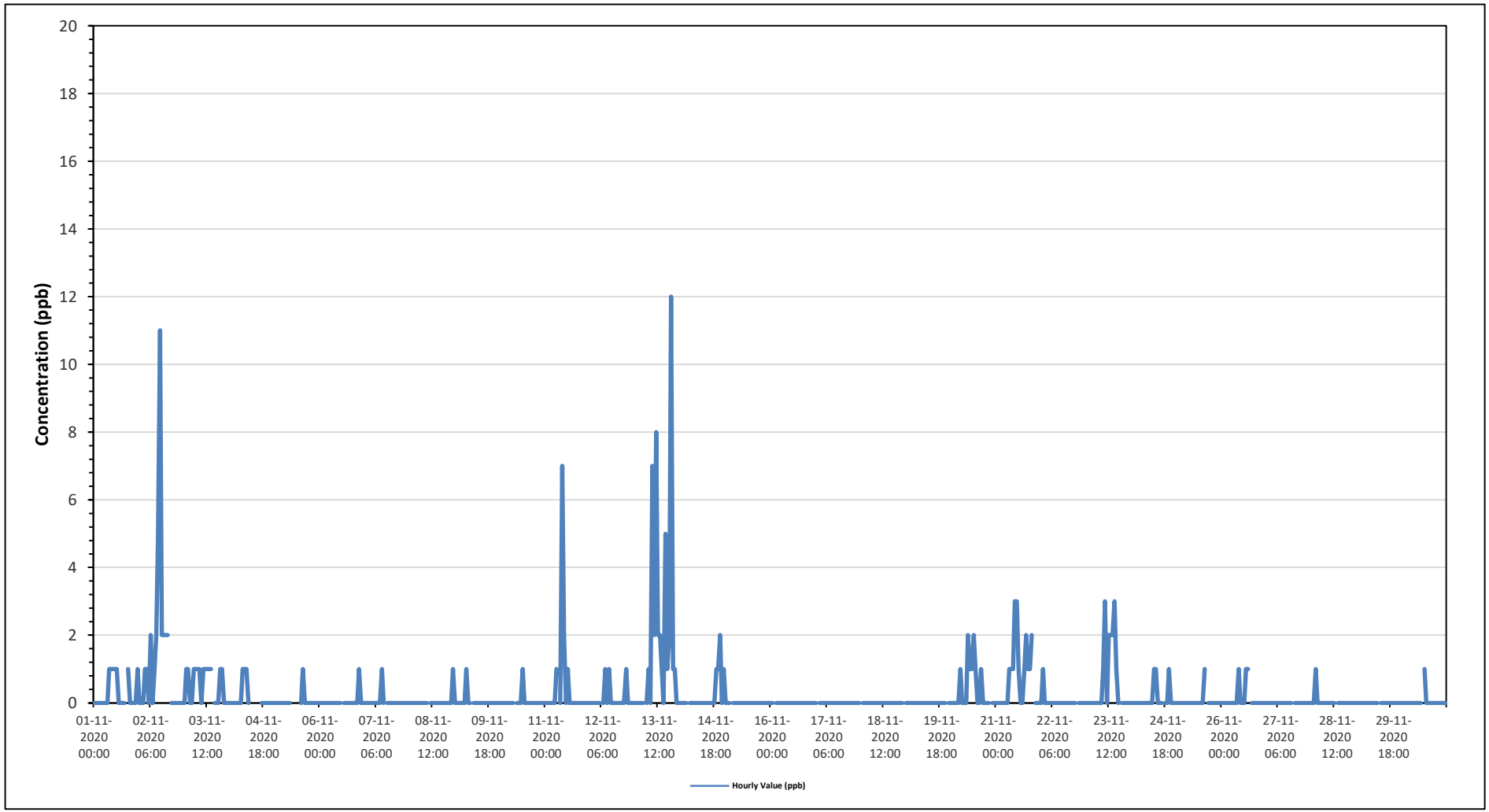
Maximum Hourly Value:	12	ppb	on November 13 at hour 19	Hours in Service:	720
Maximum Daily Value:	2.0	ppb	on November 13	Hours of Data:	680
Minimum Hourly Value:	0	ppb	on November 1 at hour 0	Hours of Missing Data:	5
Minimum Daily Value:	0.0	ppb	on November 15	Hours of Calibration:	35
Monthly Average:	0.3	ppb		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			
Nov 1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	S	1	0	0	0	0	1	0	1	0.3
Nov 2	0	0	0	1	1	0	2	0	1	2	5	11	2	2	2	2	S	0	0	0	0	0	0	0	0	11	1.3
Nov 3	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	S	0	0	0	1	1	0	0	0	0	1	0.6
Nov 4	0	0	0	0	0	0	0	1	1	1	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	1	0.2
Nov 5	0	0	0	0	0	0	0	0	0	Y	Y	Y	Y	Y	0	1	0	0	0	0	0	0	0	0	0	1	0.1
Nov 6	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0
Nov 7	0	0	0	0	0	0	0	0	0	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Nov 8	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0
Nov 9	0	0	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Nov 10	0	0	0	0	0	0	0	0	S	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Nov 11	0	0	0	0	0	0	1	S	0	7	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0.5
Nov 12	0	0	0	0	0	0	S	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1
Nov 13	0	0	0	0	0	S	0	1	0	7	2	8	2	2	1	0	5	1	2	12	1	1	0	0	0	12	2.0
Nov 14	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	2	0.2
Nov 15	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
Nov 16	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
Nov 17	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
Nov 18	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Nov 19	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
Nov 20	0	0	0	0	0	1	0	0	0	2	1	1	2	1	0	0	1	0	0	0	0	S	0	0	0	2	0.4
Nov 21	0	0	0	0	0	0	0	1	1	1	3	3	1	0	0	1	2	1	1	2	S	0	0	0	0	3	0.7
Nov 22	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0
Nov 23	0	0	0	0	0	0	0	0	0	1	3	0	2	2	2	3	1	0	S	0	0	0	0	0	0	3	0.6
Nov 24	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	S	0	0	1	0	0	0	0	1	0.1
Nov 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	1	0.0
Nov 26	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	1	0.1
Nov 27	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
Nov 28	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
Nov 29	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
Nov 30	0	0	0	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Diurnal Maximum	0	1	1	1	1	1	2	1	1	7	5	11	2	2	2	3	5	1	2	12	1	2	0	1			
Diurnal Average	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.9	0.7	1.0	0.6	0.4	0.3	0.3	0.3	0.1	0.1	0.6	0.1	0.1	0.0	0.1			

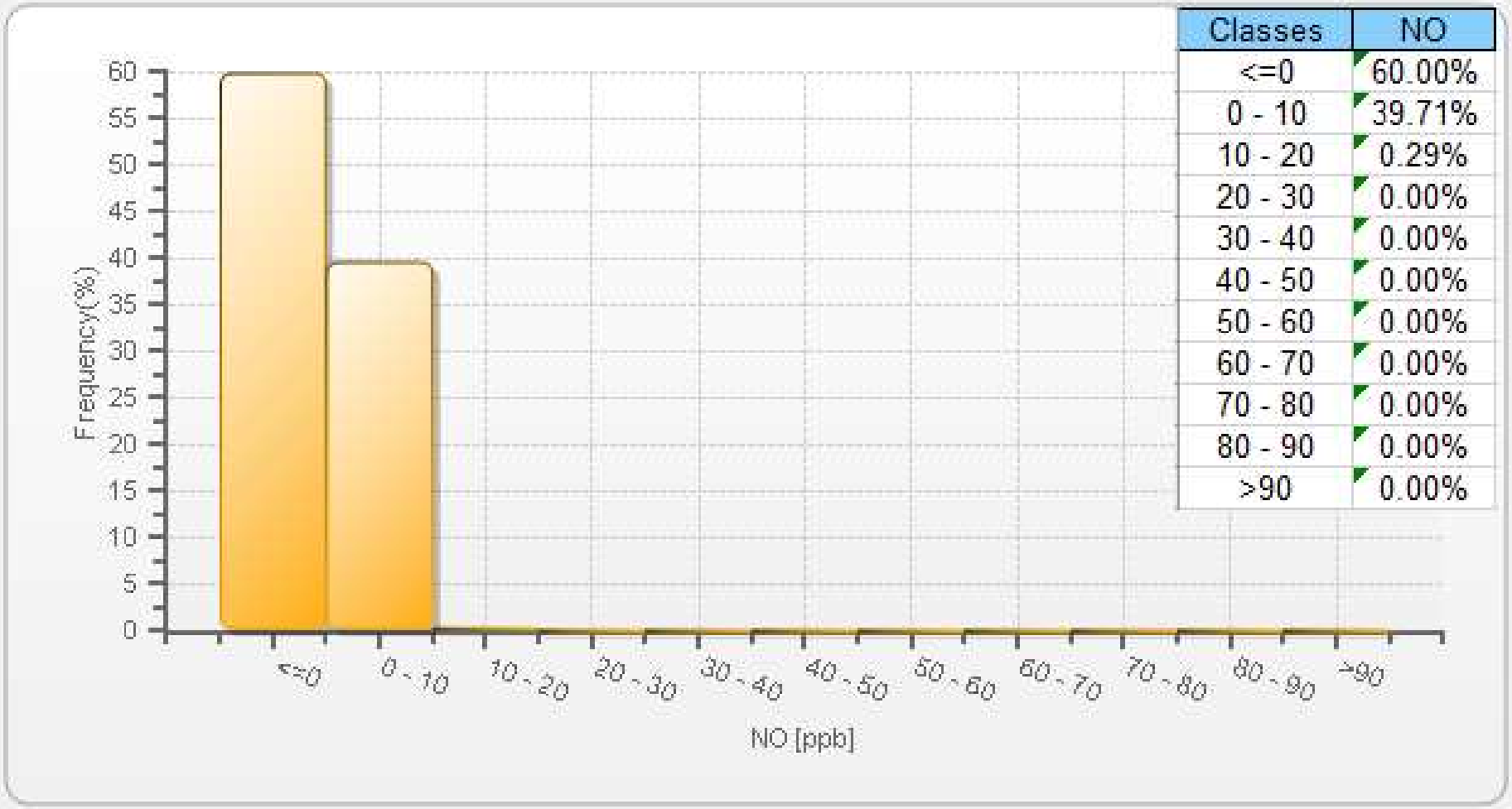
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



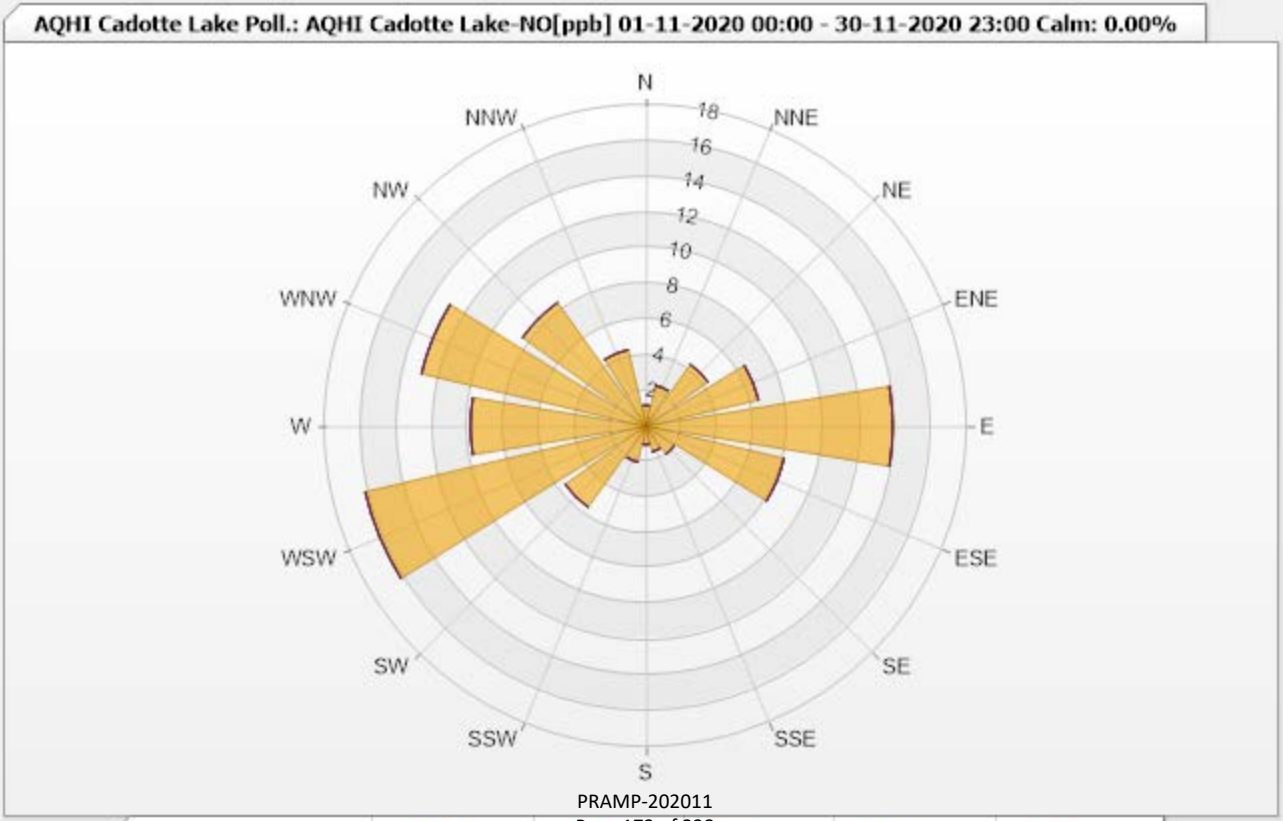
NO[ppb] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	NO
<=0	60.00%
0 - 10	39.71%
10 - 20	0.29%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.44% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.18	0	0	0	0	1.18
NNE	2.35	0	0	0	0	2.35
NE	4.26	0	0	0	0	4.26
ENE	6.47	0	0	0	0	6.47
E	13.82	0	0	0	0	13.82
ESE	7.94	0	0	0	0	7.94
SE	1.91	0	0	0	0	1.91
SSE	1.47	0	0	0	0	1.47
S	1.03	0	0	0	0	1.03
SSW	2.06	0	0	0	0	2.06
SW	5.59	0	0	0	0	5.59
WSW	16.18	0	0	0	0	16.18
W	9.85	0	0	0	0	9.85
WNW	12.94	0	0	0	0	12.94
NW	8.53	0	0	0	0	8.53
NNW	4.41	0	0	0	0	4.41
Summary	100	0	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-30
0 30-50
0 50-76
0 76-159
0 >159.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

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

Number of 1-Hour Exceedances: 0

Maximum Hourly Value:	8	ppb	on November 13 at hour 18	Hours in Service:	720
Maximum Daily Value:	3.7	ppb	on November 13	Hours of Data:	680
Minimum Hourly Value:	0	ppb	on November 1 at hour 0	Hours of Missing Data:	5
Minimum Daily Value:	0.3	ppb	on November 16	Hours of Calibration:	35
Monthly Average:	1.3	ppb		Operational Uptime:	99.3

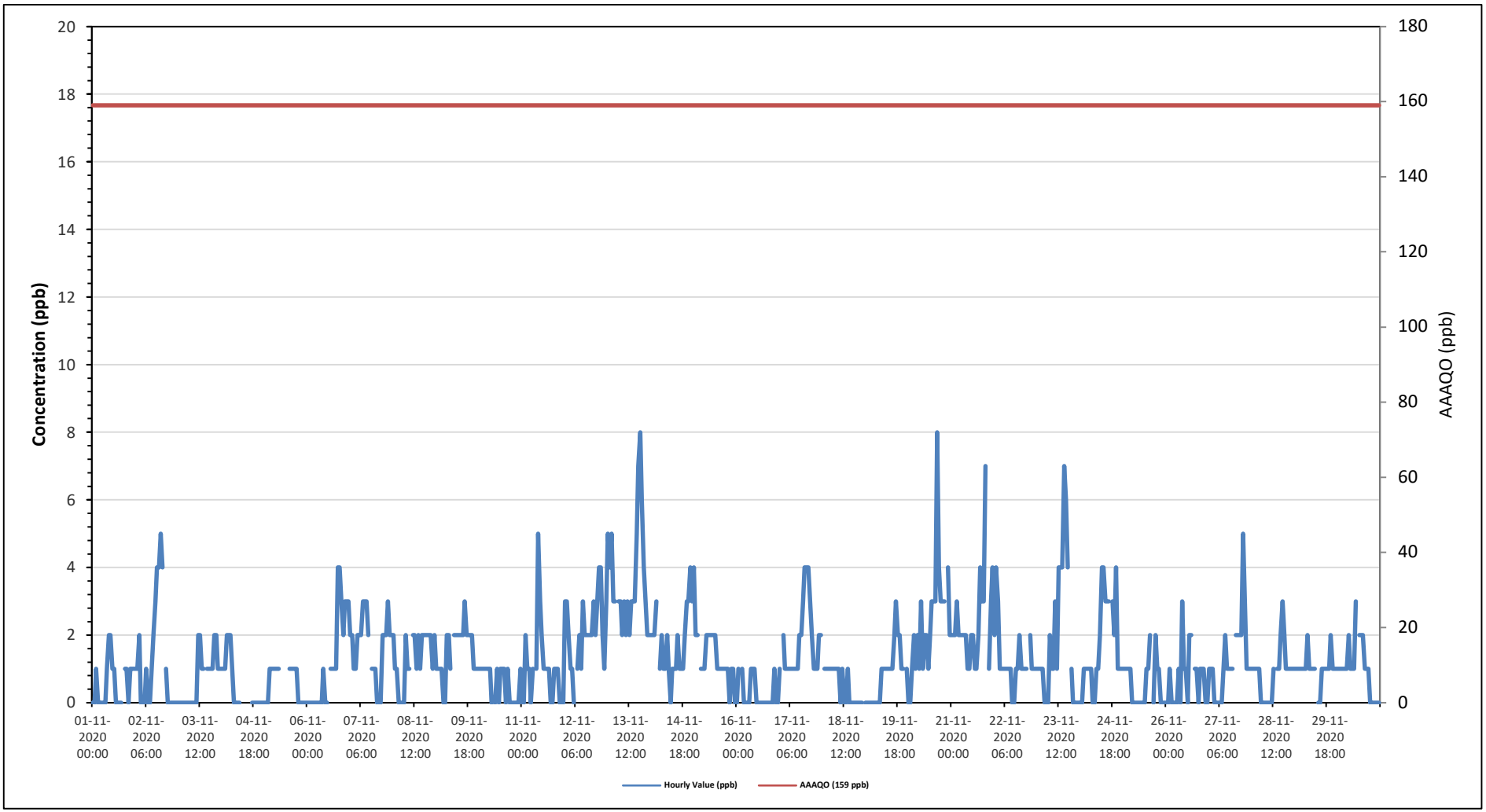
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Nov 1	0	0	1	0	0	0	0	0	1	2	2	1	1	0	0	0	0	S	1	1	0	1	1	1	0	2	0.6
Nov 2	1	1	2	0	0	0	1	0	0	1	2	3	4	4	5	4	S	1	0	0	0	0	0	0	0	5	1.3
Nov 3	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1	S	1	1	1	1	2	2	1	1	0	2	0.7
Nov 4	1	1	1	2	2	2	1	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	2	0.6
Nov 5	0	0	0	1	1	1	1	1	1	Y	Y	Y	Y	Y	1	1	1	1	1	0	0	0	0	0	0	1	0.6
Nov 6	0	0	0	0	0	0	0	0	0	1	0	0	S	1	1	1	1	4	4	3	2	3	3	3	0	4	1.2
Nov 7	2	2	1	1	2	2	2	3	3	3	2	S	1	1	1	0	0	0	2	2	2	3	2	2	0	3	1.7
Nov 8	2	1	1	0	0	0	0	2	1	1	S	2	2	1	2	1	2	2	2	2	2	2	1	2	0	2	1.3
Nov 9	1	1	1	1	0	0	2	2	1	S	2	2	2	2	2	2	3	2	2	2	2	1	1	1	0	3	1.5
Nov 10	1	1	1	1	1	1	1	0	S	0	1	0	1	1	1	0	1	0	0	0	0	0	0	1	0	1	0.6
Nov 11	0	0	2	1	1	0	1	S	1	5	3	2	1	1	1	1	0	0	1	1	1	0	0	0	0	5	1.0
Nov 12	3	3	2	1	1	0	S	1	2	1	3	2	2	2	2	2	3	2	3	4	4	2	1	3	0	4	2.1
Nov 13	5	4	5	3	3	S	3	3	2	3	2	3	2	3	3	3	5	7	8	6	4	3	2	2	2	8	3.7
Nov 14	2	2	2	3	S	1	2	1	1	2	1	0	1	1	1	2	1	1	1	2	3	3	4	3	0	4	1.7
Nov 15	4	2	2	S	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	0	1	1	0	0	4	1.4
Nov 16	0	1	S	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.3
Nov 17	1	S	2	1	1	1	1	1	1	1	1	2	2	3	4	4	4	3	2	1	1	1	2	2	1	4	1.8
Nov 18	S	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	S	0	1	0.5
Nov 19	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	3	2	2	1	1	S	1	0	3	0.8
Nov 20	0	0	1	2	1	2	1	3	1	2	2	1	2	3	3	3	8	4	3	3	3	S	4	2	0	8	2.3
Nov 21	2	2	2	3	2	2	2	2	2	1	1	2	2	1	1	2	4	3	3	7	S	1	3	4	1	7	2.3
Nov 22	2	4	3	1	1	1	1	1	1	1	0	0	1	1	2	1	1	1	1	S	2	1	1	1	0	4	1.3
Nov 23	1	1	1	1	0	0	0	2	1	1	3	1	4	4	4	7	6	4	S	1	0	0	0	0	0	7	1.8
Nov 24	0	0	1	1	1	1	1	0	0	1	1	2	4	4	3	3	3	S	3	2	4	1	1	1	0	4	1.7
Nov 25	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	2	S	0	2	1	1	0	0	0	0	2	0.6
Nov 26	0	0	1	0	0	0	0	1	0	3	1	1	0	2	2	S	1	1	0	1	1	1	0	0	0	3	0.7
Nov 27	1	1	1	0	0	0	0	0	1	2	1	1	1	1	S	2	2	2	2	5	3	1	1	1	0	5	1.3
Nov 28	1	1	1	1	1	0	0	0	0	0	0	0	1	S	1	1	2	3	2	1	1	1	1	1	0	3	0.9
Nov 29	1	1	1	1	1	1	1	2	1	1	1	1	S	0	0	1	1	1	1	1	2	1	1	1	0	2	1.0
Nov 30	1	1	1	1	1	1	2	1	1	1	3	S	2	2	2	1	1	1	0	0	0	0	0	0	0	3	1.0
Diurnal Maximum	5	4	5	3	3	2	3	3	3	5	3	3	4	4	5	7	8	7	8	7	4	3	4	4			
Diurnal Average	1.1	1.1	1.3	1.0	0.8	0.6	0.9	1.0	0.9	1.4	1.3	1.2	1.6	1.6	1.7	1.7	2.0	1.7	1.7	1.7	1.4	1.1	1.1	1.1			

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

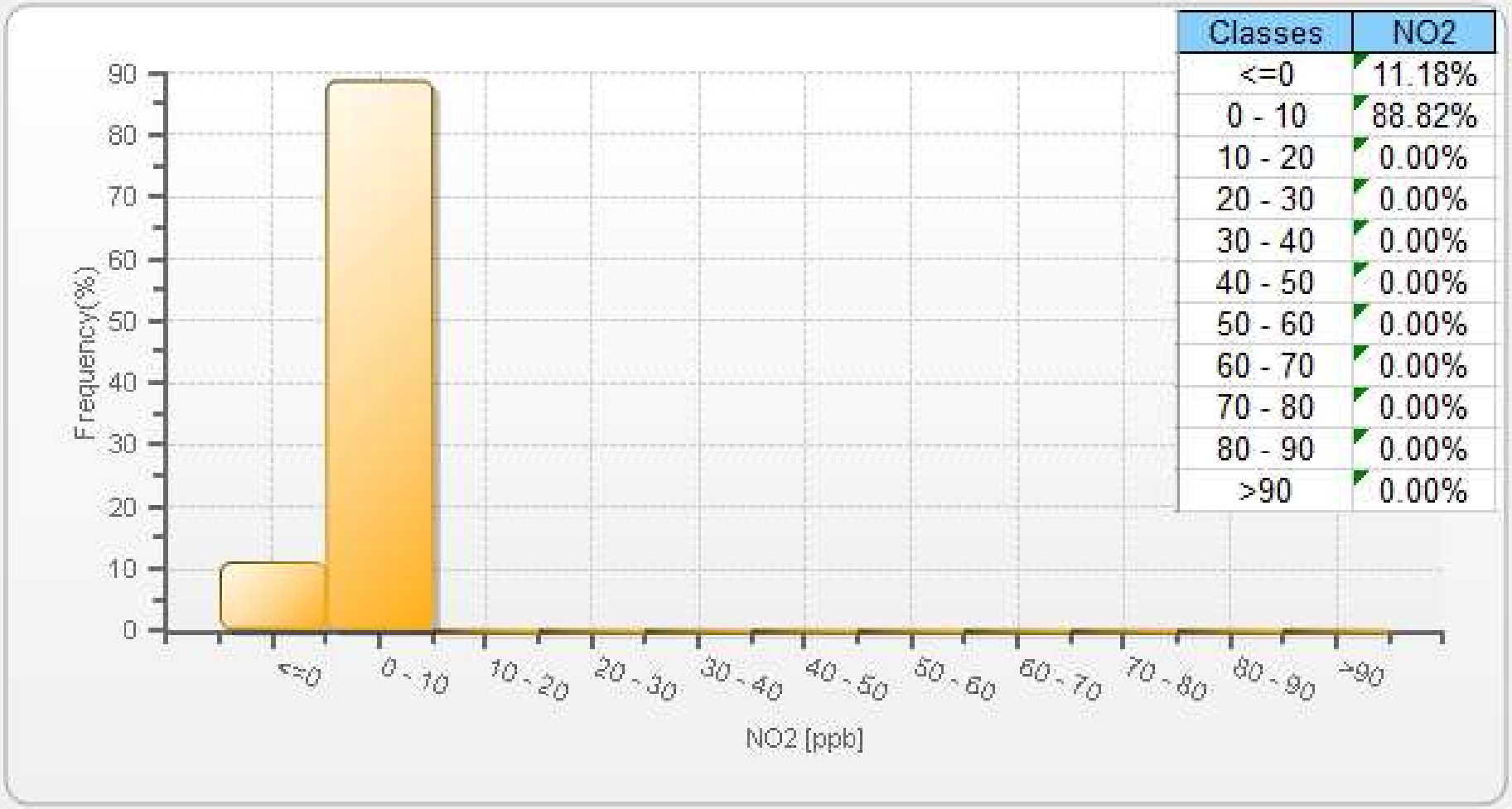
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

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



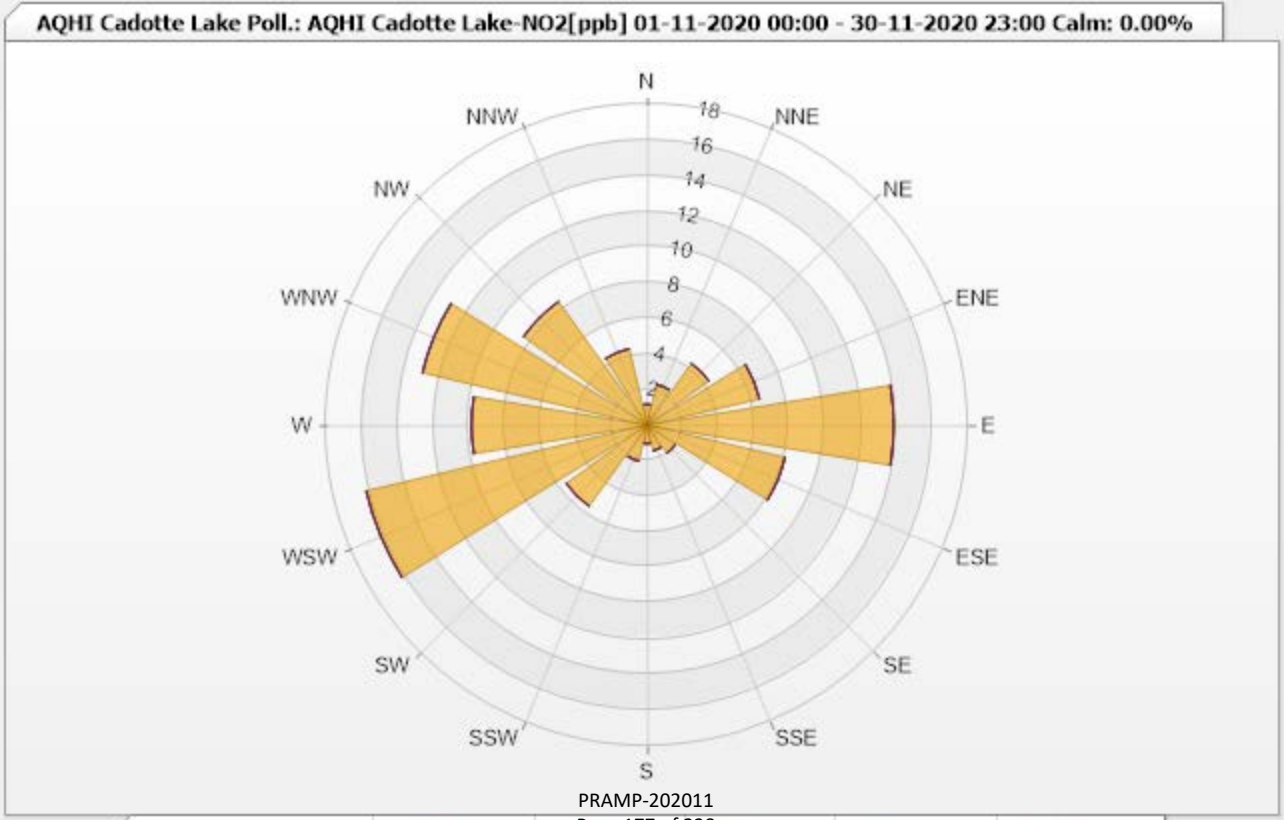
NO2[ppb] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	NO2
<=0	11.18%
0 - 10	88.82%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO2[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.44% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.18	0	0	0	0	1.18
NNE	2.35	0	0	0	0	2.35
NE	4.26	0	0	0	0	4.26
ENE	6.47	0	0	0	0	6.47
E	13.82	0	0	0	0	13.82
ESE	7.94	0	0	0	0	7.94
SE	1.91	0	0	0	0	1.91
SSE	1.47	0	0	0	0	1.47
S	1.03	0	0	0	0	1.03
SSW	2.06	0	0	0	0	2.06
SW	5.59	0	0	0	0	5.59
WSW	16.18	0	0	0	0	16.18
W	9.85	0	0	0	0	9.85
WNW	12.94	0	0	0	0	12.94
NW	8.53	0	0	0	0	8.53
NNW	4.41	0	0	0	0	4.41
Summary	100	0	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NO2[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
100 0-30
0 30-50
0 50-76
0 76-159
0 >159.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

OZONE (O_3) in ppb

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

Number of 1-Hour Exceedances: 0

Maximum Hourly Value:	41	ppb	on November 29 at hour 14	Hours in Service:	720
Maximum Daily Value:	35.0	ppb	on November 29	Hours of Data:	683
Minimum Hourly Value:	1	ppb	on November 13 at hour 18	Hours of Missing Data:	2
Minimum Daily Value:	10.3	ppb	on November 13	Hours of Calibration:	35
Monthly Average:	22.1	ppb		Operational Uptime:	99.7

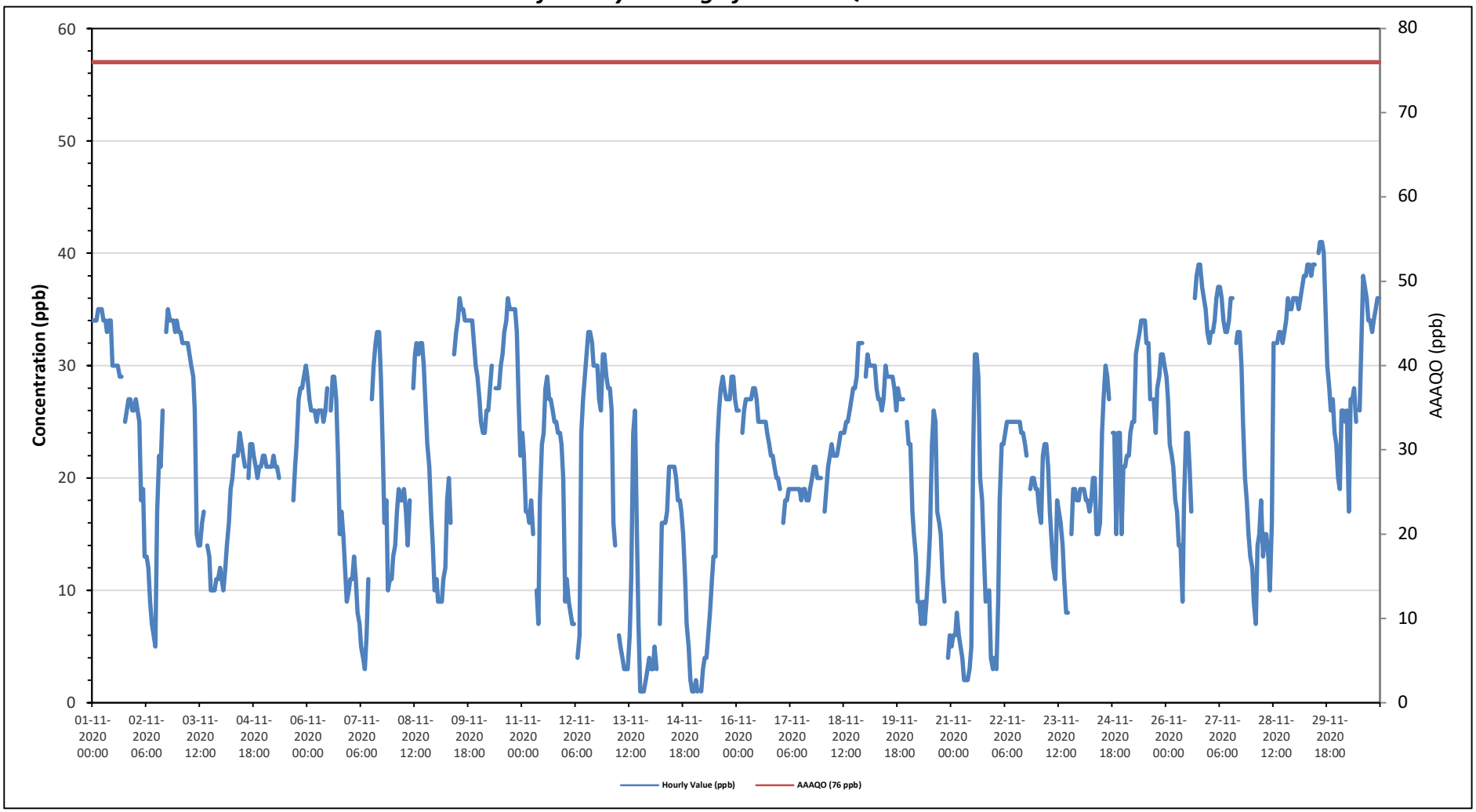
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Nov 1	34	34	34	35	35	35	34	34	33	34	34	30	30	30	30	29	29	S	25	26	27	27	26	26	25	35	30.9
Nov 2	27	26	25	18	19	13	13	12	9	7	6	5	17	22	21	26	S	33	35	34	34	34	33	34	5	35	21.9
Nov 3	33	33	32	32	32	32	31	30	29	26	15	14	14	16	17	S	14	13	10	10	10	11	11	12	10	33	20.7
Nov 4	11	10	12	14	16	19	20	22	22	22	24	23	22	21	S	20	23	23	22	21	20	21	21	22	10	24	19.6
Nov 5	22	21	21	21	21	22	21	21	20	Y	Y	C	C	C	C	C	18	21	23	27	28	28	29	30	18	30	-
Nov 6	29	27	26	26	26	25	26	26	26	25	26	28	S	26	29	29	27	22	15	17	15	12	9	10	9	29	22.9
Nov 7	11	11	13	11	8	7	5	4	3	6	11	S	27	30	32	33	33	29	23	16	18	10	11	11	3	33	15.8
Nov 8	13	14	17	19	18	18	19	17	14	18	S	28	31	32	31	32	32	30	26	23	21	17	14	10	10	32	21.5
Nov 9	11	9	9	9	11	12	18	20	16	S	31	33	34	36	35	35	34	34	34	34	34	32	30	29	9	36	25.2
Nov 10	27	25	24	24	26	26	28	30	S	28	28	28	30	31	33	34	36	35	35	35	35	33	27	22	22	36	29.6
Nov 11	24	22	17	17	16	18	15	S	10	7	18	23	24	28	29	27	27	26	25	25	24	24	23	20	7	29	21.3
Nov 12	9	11	9	8	7	7	S	4	6	24	27	29	31	33	33	32	30	30	30	27	26	31	31	29	4	33	21.9
Nov 13	28	28	26	16	14	S	6	5	4	3	3	3	6	11	24	26	16	7	1	1	1	2	3	4	1	28	10.3
Nov 14	3	3	5	3	S	7	16	16	16	17	21	21	21	21	20	18	18	17	15	11	7	5	2	1	1	21	12.3
Nov 15	1	2	1	S	1	3	4	4	6	8	11	13	13	23	26	28	29	28	27	27	27	29	29	27	1	29	16.0
Nov 16	26	26	S	24	26	27	27	27	27	28	28	27	25	25	25	25	25	24	23	22	22	21	20	20	20	28	24.8
Nov 17	19	S	16	18	18	19	19	19	19	19	19	19	18	19	19	18	18	19	20	21	21	20	20	20	16	21	19.0
Nov 18	S	17	19	21	22	23	22	22	22	23	24	24	24	25	25	26	27	28	28	29	32	32	32	S	17	32	24.9
Nov 19	29	31	30	30	30	30	28	27	27	26	27	30	29	29	29	29	28	26	28	27	27	27	S	25	25	31	28.2
Nov 20	23	23	17	15	13	9	9	7	9	7	9	12	15	23	26	25	17	16	15	11	9	S	4	6	4	26	13.9
Nov 21	5	6	6	8	6	5	4	2	2	2	3	5	22	31	31	29	20	18	14	9	S	10	4	3	2	31	10.7
Nov 22	4	3	9	18	23	23	24	25	25	25	25	25	25	25	25	24	24	23	22	S	19	20	20	19	3	25	20.7
Nov 23	19	17	16	22	23	23	21	17	14	12	11	18	17	16	14	11	8	8	S	15	19	19	18	18	8	23	16.3
Nov 24	19	19	19	18	18	17	18	20	20	15	15	16	24	27	30	29	27	S	24	24	15	24	24	15	15	30	20.7
Nov 25	21	21	22	22	24	25	25	31	32	33	34	34	34	32	32	27	S	27	24	28	29	31	31	30	21	34	28.2
Nov 26	29	27	23	22	21	18	17	14	14	9	18	24	24	21	17	S	36	38	39	39	37	36	35	33	9	39	25.7
Nov 27	32	33	33	34	36	37	37	36	34	33	33	34	36	36	S	32	33	33	33	30	25	20	18	15	13	37	30.6
Nov 28	12	9	7	14	15	18	13	15	15	13	10	16	32	S	32	33	33	32	33	34	36	35	35	36	7	36	23.0
Nov 29	36	36	35	36	37	38	38	39	39	38	39	39	S	40	41	41	40	35	30	28	26	27	24	23	23	41	35.0
Nov 30	20	19	26	26	25	26	17	27	27	28	25	S	26	32	38	37	36	34	34	33	34	35	36	36	17	38	29.4
Diurnal Maximum	36	36	35	36	37	38	38	39	39	38	39	39	36	40	41	41	40	38	39	39	37	36	36	36			
Diurnal Average	19.9	19.4	18.9	20.0	20.2	20.1	19.8	19.8	18.6	19.1	20.5	22.3	24.1	26.5	27.6	28.0	26.4	25.3	24.5	23.4	23.2	23.1	21.3	20.1			

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

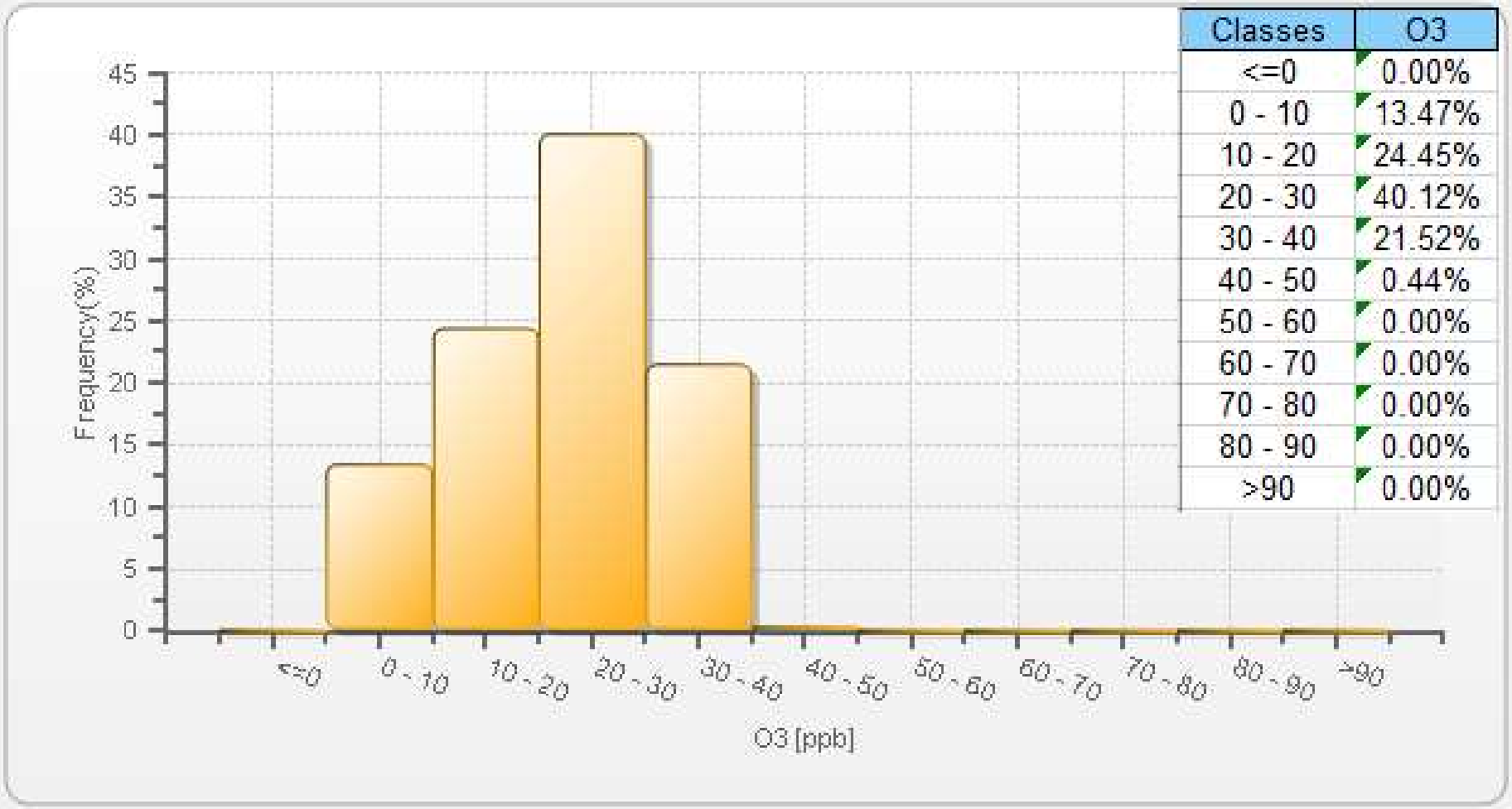
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

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

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



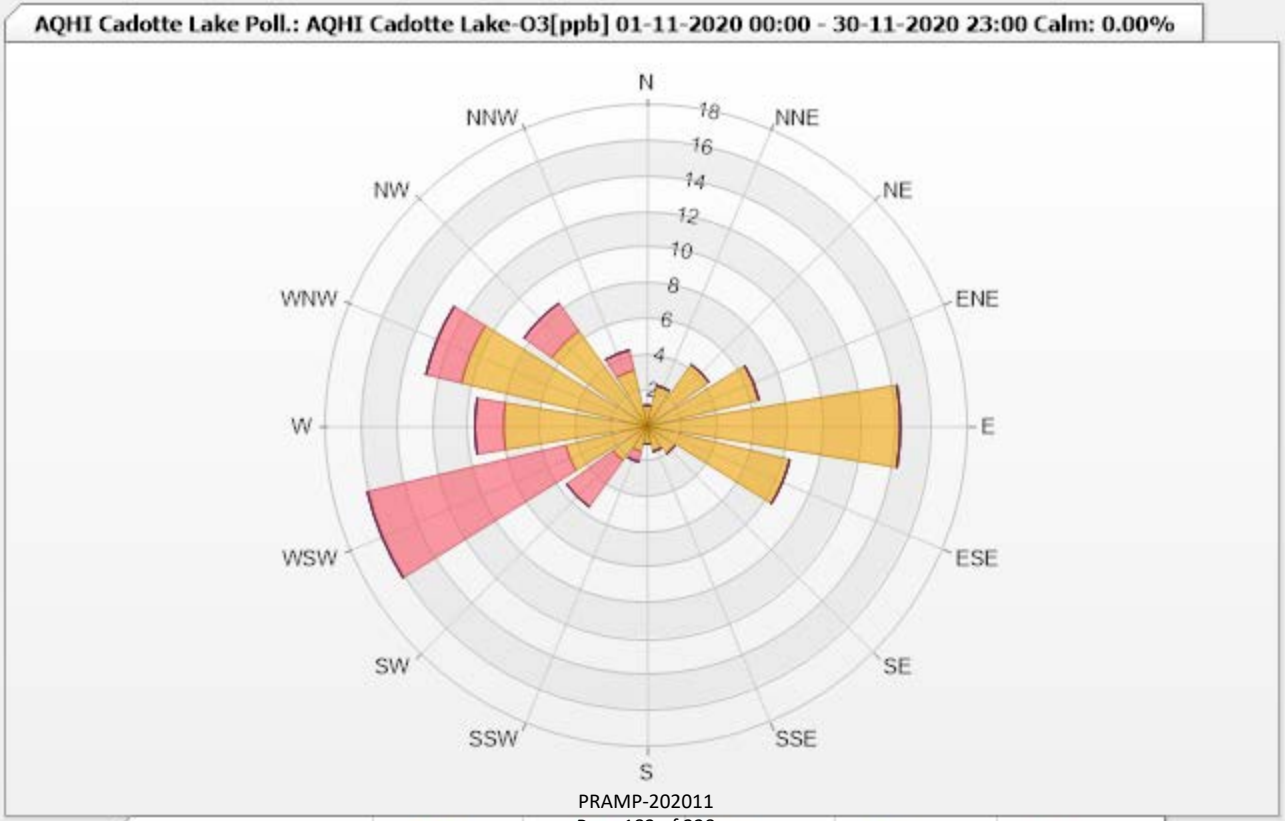
O3[ppb] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	O3
<=0	0.00%
0 - 10	13.47%
10 - 20	24.45%
20 - 30	40.12%
30 - 40	21.52%
40 - 50	0.44%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-O3[ppb] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 94.86% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.17	0	0	0	0	1.17
NNE	2.34	0	0	0	0	2.34
NE	4.25	0	0	0	0	4.25
ENE	6.44	0	0	0	0	6.44
E	14.2	0	0	0	0	14.2
ESE	8.2	0	0	0	0	8.2
SE	1.9	0	0	0	0	1.9
SSE	1.46	0	0	0	0	1.46
S	1.02	0	0	0	0	1.02
SSW	1.46	0.59	0	0	0	2.05
SW	2.34	3.22	0	0	0	5.56
WSW	4.69	11.42	0	0	0	16.11
W	8.05	1.61	0	0	0	9.66
WNW	10.69	2.05	0	0	0	12.74
NW	6.59	1.9	0	0	0	8.49
NNW	3.22	1.17	0	0	0	4.39
Summary	78.02	21.96	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-O3[ppb] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
2
% Icon Classes (ppb)
78 0-30
22 30-50
0 50-76
0 76-159
0 >159.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

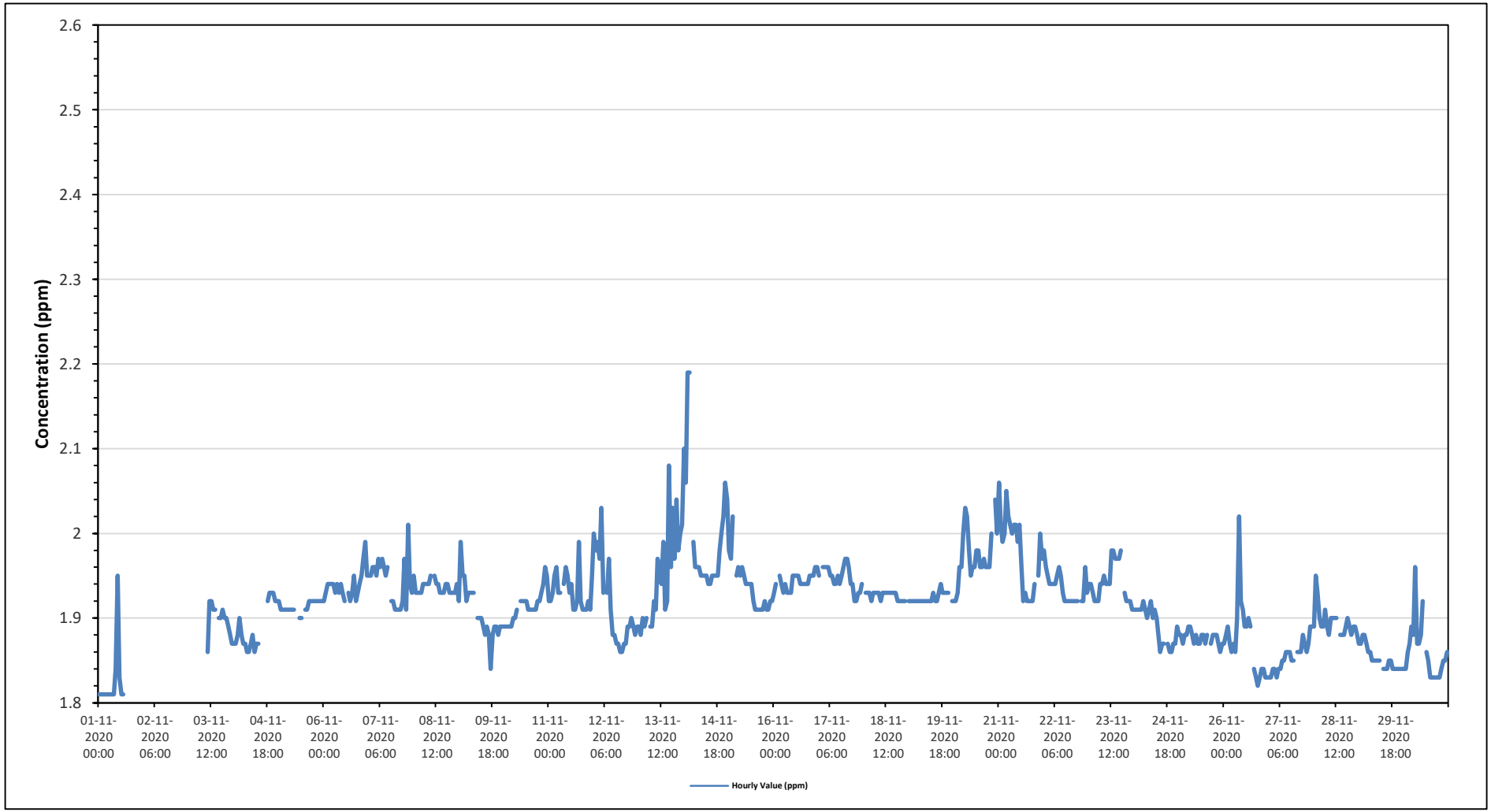
Maximum Hourly Value:	2.19	ppm	on November 14 at hour 2	Hours in Service:	720
Maximum Daily Value:	2.00	ppm	on November 14	Hours of Data:	642
Minimum Hourly Value:	1.81	ppm	on November 1 at hour 0	Hours of Missing Data:	44
Minimum Daily Value:	1.85	ppm	on November 29	Hours of Calibration:	34
Monthly Average:	1.92	ppm		Operational Uptime:	93.9

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.84	1.95	1.83	1.81	1.81	X	X	X	S	X	X	X	X	X	X	1.81	1.95	-
Nov 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	S	X	X	X	X	X	X	X			
Nov 3	X	X	X	X	X	X	X	X	X	X	1.86	1.92	1.92	1.91	1.91	S	1.90	1.90	1.91	1.90	1.90	1.89	1.88	1.87	1.86	1.92	-
Nov 4	1.87	1.87	1.88	1.90	1.88	1.87	1.87	1.86	1.86	1.87	1.88	1.86	1.87	1.87	C	C	C	C	1.92	1.93	1.93	1.93	1.92	1.92	1.86	1.93	1.89
Nov 5	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	Y	Y	1.90	1.90	S	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.90	1.92	1.91
Nov 6	1.92	1.93	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.93	1.92	S	1.93	1.92	1.93	1.95	1.92	1.93	1.94	1.95	1.97	1.99	1.95	1.92	1.99	1.94
Nov 7	1.95	1.95	1.96	1.96	1.95	1.97	1.96	1.97	1.96	1.95	1.96	S	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.97	1.91	2.01	1.94	1.93	1.91	2.01	1.94
Nov 8	1.95	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.95	S	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.94	1.93	1.93	1.93	1.93	1.94	1.93	1.95	1.94
Nov 9	1.92	1.99	1.95	1.95	1.92	1.93	1.93	1.93	1.93	S	1.90	1.90	1.90	1.89	1.88	1.89	1.88	1.84	1.88	1.89	1.89	1.88	1.89	1.89	1.84	1.99	1.91
Nov 10	1.89	1.89	1.89	1.89	1.89	1.90	1.90	1.91	S	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.93	1.94	1.96	1.95	1.89	1.96	1.91
Nov 11	1.92	1.92	1.93	1.95	1.96	1.93	1.93	S	1.94	1.96	1.95	1.93	1.94	1.91	1.91	1.92	1.99	1.92	1.91	1.91	1.91	1.92	1.91	1.95	1.91	1.99	1.93
Nov 12	2.00	1.98	1.99	1.97	2.03	1.93	S	1.93	1.97	1.91	1.88	1.88	1.87	1.87	1.86	1.86	1.87	1.87	1.89	1.89	1.90	1.89	1.88	1.89	1.86	2.03	1.91
Nov 13	1.89	1.88	1.90	1.89	1.90	S	1.89	1.89	1.92	1.91	1.97	1.96	1.94	1.99	1.91	1.92	2.08	1.96	2.03	1.97	2.04	1.98	2.00	2.01	1.88	2.08	1.95
Nov 14	2.10	2.06	2.19	2.19	S	1.99	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.95	1.95	1.95	1.98	2.00	2.02	2.06	2.04	1.94	2.19	2.00
Nov 15	1.98	1.97	2.02	S	1.95	1.96	1.95	1.96	1.95	1.94	1.94	1.94	1.94	1.92	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.91	1.92	1.92	1.91	2.02	1.94
Nov 16	1.93	1.94	S	1.95	1.94	1.93	1.94	1.93	1.93	1.93	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.96	1.96	1.93	1.96	1.94
Nov 17	1.95	S	1.96	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.94	1.95	1.96	1.97	1.97	1.96	1.94	1.94	1.92	1.92	1.93	1.93	1.94	1.92	1.97	1.95
Nov 18	S	1.93	1.93	1.93	1.92	1.93	1.93	1.93	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	S	1.92	1.93	1.93
Nov 19	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	1.92	1.92	1.93	1.94	1.93	1.93	1.93	1.93	S	1.92	1.92	1.94	1.92
Nov 20	1.92	1.92	1.93	1.96	1.96	2.00	2.03	2.02	1.98	1.95	1.96	1.96	1.98	1.98	1.96	1.96	1.97	1.96	1.96	1.96	2.00	S	2.04	2.00	1.92	2.04	1.97
Nov 21	2.06	2.01	1.99	2.00	2.05	2.02	2.01	2.00	2.01	2.01	1.99	2.01	1.96	1.92	1.93	1.92	1.92	1.92	1.92	1.94	S	1.95	2.00	1.97	1.92	2.06	1.98
Nov 22	1.98	1.96	1.95	1.94	1.94	1.94	1.94	1.95	1.96	1.95	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	S	1.92	1.92	1.96	1.93	1.92	1.98	1.94
Nov 23	1.94	1.94	1.93	1.92	1.92	1.92	1.94	1.94	1.95	1.94	1.94	1.94	1.98	1.98	1.97	1.97	1.97	1.98	S	1.93	1.92	1.92	1.92	1.91	1.91	1.98	1.94
Nov 24	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.90	1.91	1.92	1.90	1.91	1.90	1.88	1.86	1.87	1.87	S	1.87	1.86	1.86	1.87	1.87	1.89	1.86	1.92	1.89
Nov 25	1.88	1.88	1.87	1.88	1.88	1.89	1.89	1.88	1.87	1.88	1.87	1.87	1.88	1.88	1.87	1.88	S	1.87	1.88	1.88	1.88	1.87	1.86	1.87	1.86	1.89	1.88
Nov 26	1.87	1.88	1.89	1.87	1.86	1.87	1.86	1.90	2.02	1.92	1.91	1.89	1.89	1.90	1.89	S	1.84	1.83	1.82	1.83	1.84	1.84	1.83	1.83	1.82	2.02	1.87
Nov 27	1.83	1.83	1.84	1.84	1.83	1.84	1.84	1.85	1.85	1.86	1.86	1.86	1.85	1.85	S	1.86	1.86	1.86	1.88	1.87	1.86	1.87	1.89	1.89	1.83	1.89	1.86
Nov 28	1.89	1.95	1.93	1.90	1.89	1.89	1.91	1.89	1.88	1.90	1.90	1.90	1.90	S	1.88	1.88	1.88	1.89	1.90	1.89	1.88	1.89	1.89	1.88	1.88	1.95	1.90
Nov 29	1.87	1.87	1.88	1.88	1.87	1.86	1.86	1.85	1.85	1.85	1.85	1.85	S	1.84	1.84	1.84	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.88	1.85
Nov 30	1.84	1.84	1.86	1.87	1.89	1.88	1.96	1.87	1.87	1.88	1.92	S	1.86	1.85	1.83	1.83	1.83	1.83	1.83	1.83	1.84	1.85	1.85	1.86	1.83	1.96	1.86
Diurnal Maximum	2.10	2.06	2.19	2.19	2.05	2.02	2.03	2.02	2.02	2.01	1.99	2.01	1.98	1.99	1.97	1.97	2.08	1.98	2.03	1.98	2.04	2.02	2.06	2.04			
Diurnal Average	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.91	1.91	1.91	1.91	1.92	1.92	1.92			

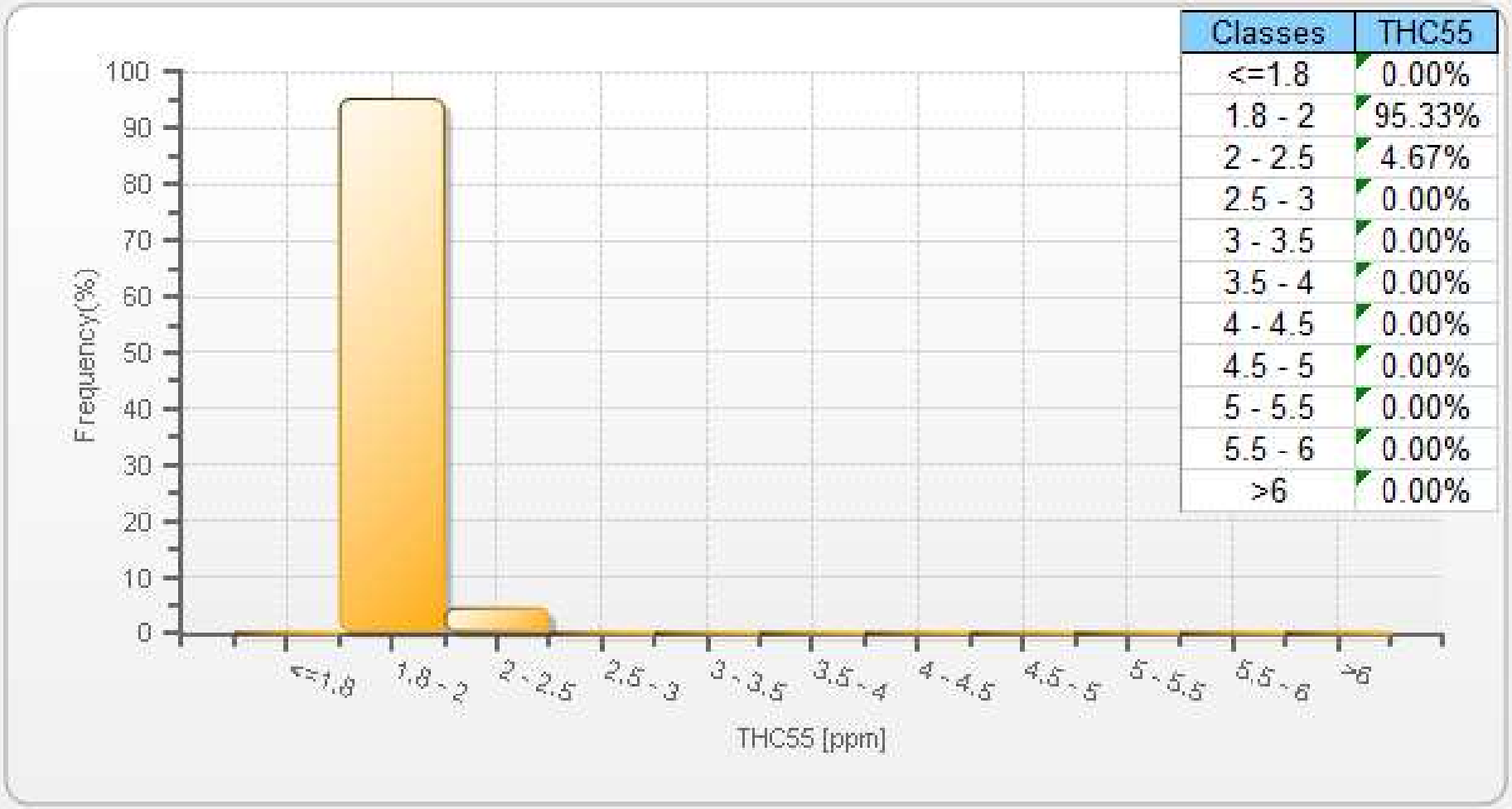
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



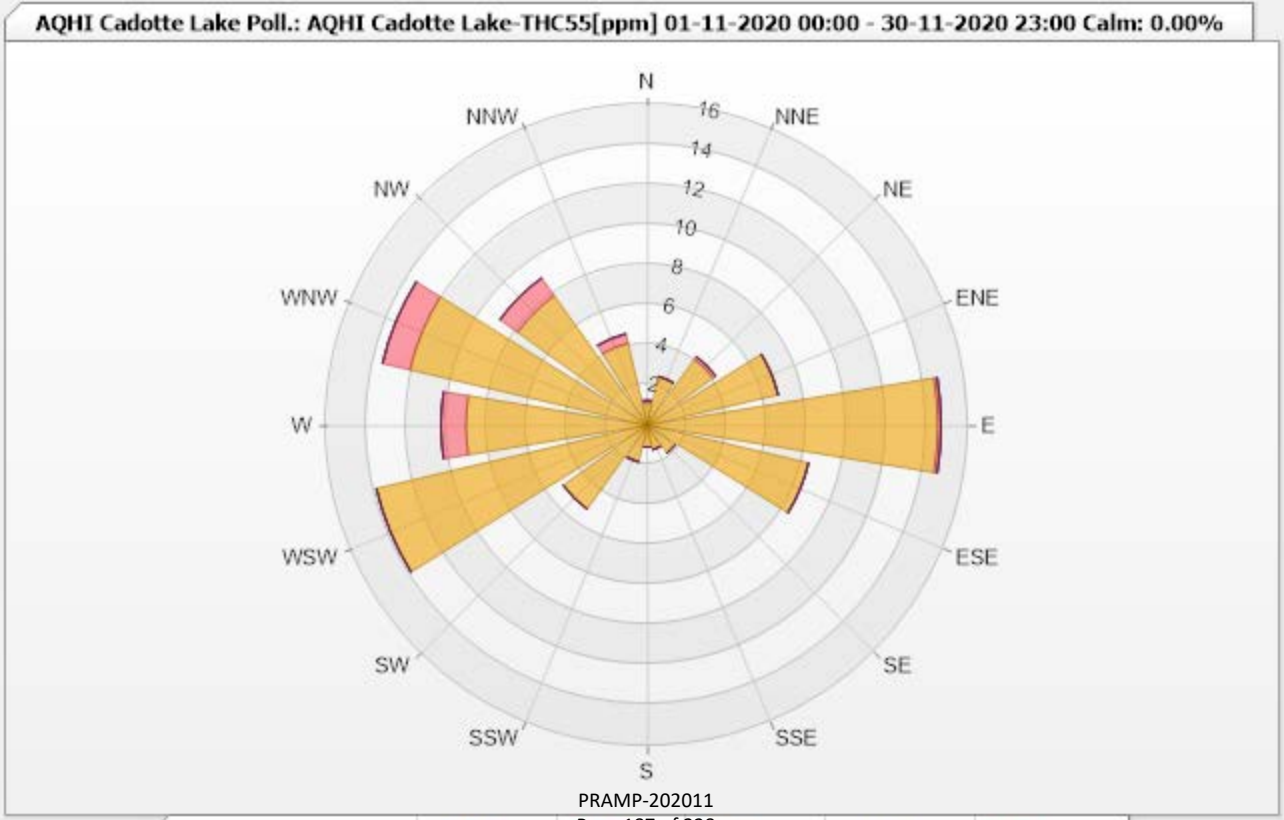
THC55[ppm] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	THC55
<=1.8	0.00%
1.8 - 2	95.33%
2 - 2.5	4.67%
2.5 - 3	0.00%
3 - 3.5	0.00%
3.5 - 4	0.00%
4 - 4.5	0.00%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-THC55[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 89.17% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	1.09	0.16	0	0	0	1.25
NNE	2.49	0	0	0	0	2.49
NE	4.05	0.16	0	0	0	4.21
ENE	6.7	0	0	0	0	6.7
E	14.49	0.16	0	0	0	14.65
ESE	8.26	0	0	0	0	8.26
SE	1.71	0	0	0	0	1.71
SSE	1.25	0	0	0	0	1.25
S	1.09	0	0	0	0	1.09
SSW	1.87	0	0	0	0	1.87
SW	5.14	0	0	0	0	5.14
WSW	13.86	0	0	0	0	13.86
W	9.03	1.25	0	0	0	10.28
WNW	12.15	1.4	0	0	0	13.55
NW	7.94	1.09	0	0	0	9.03
NNW	4.21	0.47	0	0	0	4.68
Summary	95.33	4.69	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-THC55[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
16
14
12
10
8
6
4
% Icon Classes (ppm)
95 0-2
5 2-5
0 5-10
0 10-40
0 >40.0

peace river area monitoring program
pramp

PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

METHANE (CH4) in ppm

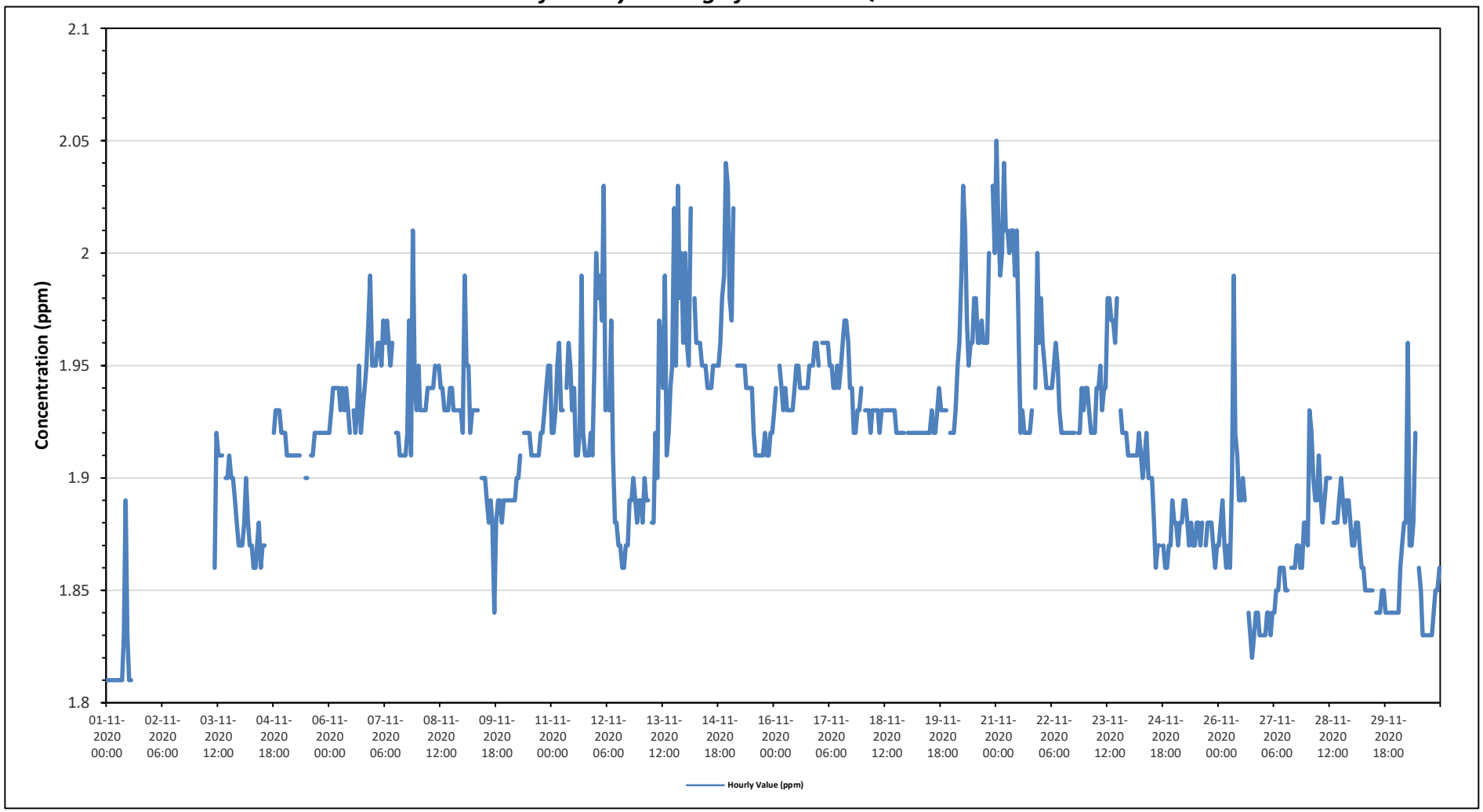
Maximum Hourly Value:	2.05	ppm	on November 21 at hour 0	Hours in Service:	720
Maximum Daily Value:	1.98	ppm	on November 21	Hours of Data:	642
Minimum Hourly Value:	1.81	ppm	on November 1 at hour 0	Hours of Missing Data:	44
Minimum Daily Value:	1.85	ppm	on November 29	Hours of Calibration:	34
Monthly Average:	1.92	ppm		Operational Uptime:	93.9

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.83	1.89	1.83	1.81	1.81	X	X	X	S	X	X	X	X	X	X	1.81	1.89	-
Nov 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	S	X	X	X	X	X	X	X			
Nov 3	X	X	X	X	X	X	X	X	X	X	1.86	1.92	1.91	1.91	1.91	S	1.90	1.90	1.91	1.90	1.90	1.89	1.88	1.87	1.86	1.92	-
Nov 4	1.87	1.87	1.88	1.90	1.88	1.87	1.87	1.86	1.86	1.87	1.88	1.86	1.87	1.87	C	C	C	C	1.92	1.93	1.93	1.93	1.92	1.92	1.86	1.93	1.89
Nov 5	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	Y	Y	1.90	1.90	S	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.90	1.92	1.91
Nov 6	1.92	1.93	1.94	1.94	1.94	1.94	1.93	1.94	1.93	1.94	1.93	1.92	S	1.93	1.92	1.93	1.95	1.92	1.93	1.94	1.95	1.97	1.99	1.95	1.92	1.99	1.94
Nov 7	1.95	1.95	1.96	1.96	1.95	1.97	1.96	1.97	1.96	1.95	1.96	S	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.97	1.91	2.01	1.94	1.93	1.91	2.01	1.94
Nov 8	1.95	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.95	S	1.95	1.94	1.94	1.93	1.93	1.93	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.95	1.94
Nov 9	1.92	1.99	1.95	1.95	1.92	1.93	1.93	1.93	1.93	S	1.90	1.90	1.90	1.89	1.88	1.89	1.88	1.84	1.88	1.89	1.89	1.88	1.89	1.89	1.84	1.99	1.91
Nov 10	1.89	1.89	1.89	1.89	1.89	1.90	1.90	1.91	S	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.93	1.94	1.95	1.95	1.89	1.95	1.91
Nov 11	1.92	1.92	1.93	1.95	1.96	1.93	1.93	S	1.94	1.96	1.95	1.93	1.94	1.91	1.91	1.92	1.99	1.92	1.91	1.91	1.91	1.92	1.91	1.95	1.91	1.99	1.93
Nov 12	2.00	1.98	1.99	1.97	2.03	1.93	S	1.93	1.97	1.91	1.88	1.88	1.87	1.87	1.86	1.86	1.87	1.87	1.89	1.89	1.90	1.89	1.88	1.89	1.86	2.03	1.91
Nov 13	1.89	1.88	1.90	1.89	1.89	S	1.88	1.88	1.92	1.90	1.97	1.96	1.94	1.99	1.91	1.92	1.94	1.95	2.02	1.95	2.03	1.98	2.00	1.96	1.88	2.03	1.94
Nov 14	2.00	1.96	1.95	2.02	S	1.98	1.96	1.96	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.98	1.99	2.04	2.03	1.94	2.04	1.97
Nov 15	1.98	1.97	2.02	S	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.92	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.91	1.92	1.92	1.91	2.02	1.94
Nov 16	1.93	1.94	S	1.95	1.94	1.93	1.94	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.96	1.96	1.93	1.96	1.94
Nov 17	1.95	S	1.96	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.94	1.95	1.96	1.97	1.97	1.96	1.94	1.94	1.92	1.92	1.93	1.93	1.94	1.92	1.97	1.95
Nov 18	S	1.93	1.93	1.93	1.92	1.93	1.93	1.93	1.93	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.92	S	1.92	1.93	1.93
Nov 19	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	1.92	1.92	1.93	1.94	1.93	1.93	1.93	1.93	S	1.92	1.92	1.94	1.92
Nov 20	1.92	1.92	1.93	1.95	1.96	1.99	2.03	2.01	1.97	1.95	1.96	1.96	1.98	1.98	1.96	1.96	1.97	1.96	1.96	1.96	2.00	S	2.03	2.00	1.92	2.03	1.97
Nov 21	2.05	2.01	1.99	2.00	2.04	2.01	2.01	2.00	2.01	2.01	1.99	2.01	1.96	1.92	1.93	1.92	1.92	1.92	1.92	1.93	S	1.94	2.00	1.96	1.92	2.05	1.98
Nov 22	1.98	1.96	1.95	1.94	1.94	1.94	1.94	1.95	1.96	1.95	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	S	1.92	1.92	1.94	1.93	1.92	1.98	1.94
Nov 23	1.94	1.94	1.93	1.92	1.92	1.92	1.94	1.94	1.95	1.93	1.94	1.94	1.98	1.98	1.97	1.97	1.96	1.98	S	1.93	1.92	1.92	1.92	1.91	1.91	1.98	1.94
Nov 24	1.91	1.91	1.91	1.91	1.91	1.92	1.91	1.90	1.91	1.92	1.90	1.90	1.90	1.88	1.86	1.87	1.87	S	1.87	1.86	1.86	1.87	1.87	1.89	1.86	1.92	1.89
Nov 25	1.88	1.88	1.87	1.88	1.88	1.89	1.89	1.88	1.87	1.88	1.87	1.87	1.88	1.88	1.87	1.88	S	1.87	1.88	1.88	1.88	1.87	1.86	1.87	1.86	1.89	1.88
Nov 26	1.87	1.88	1.89	1.87	1.86	1.87	1.86	1.90	1.99	1.92	1.91	1.89	1.89	1.90	1.89	S	1.84	1.83	1.82	1.83	1.84	1.84	1.83	1.83	1.82	1.99	1.87
Nov 27	1.83	1.83	1.84	1.84	1.83	1.84	1.84	1.85	1.85	1.86	1.86	1.86	1.85	1.85	S	1.86	1.86	1.86	1.87	1.87	1.86	1.86	1.88	1.88	1.83	1.88	1.85
Nov 28	1.87	1.93	1.92	1.90	1.89	1.89	1.91	1.89	1.88	1.89	1.90	1.90	1.90	S	1.88	1.88	1.88	1.89	1.90	1.89	1.88	1.89	1.89	1.88	1.87	1.93	1.89
Nov 29	1.87	1.87	1.88	1.88	1.87	1.86	1.86	1.85	1.85	1.85	1.85	1.85	S	1.84	1.84	1.84	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.88	1.85
Nov 30	1.84	1.84	1.86	1.87	1.88	1.88	1.96	1.87	1.87	1.88	1.92	S	1.86	1.85	1.83	1.83	1.83	1.83	1.83	1.83	1.84	1.85	1.85	1.86	1.83	1.96	1.86
Diurnal Maximum	2.05	2.01	2.02	2.02	2.04	2.01	2.03	2.01	2.01	2.01	1.99	2.01	1.98	1.99	1.97	1.97	1.99	1.98	2.02	1.97	2.03	2.01	2.04	2.03			
Diurnal Average	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.92			

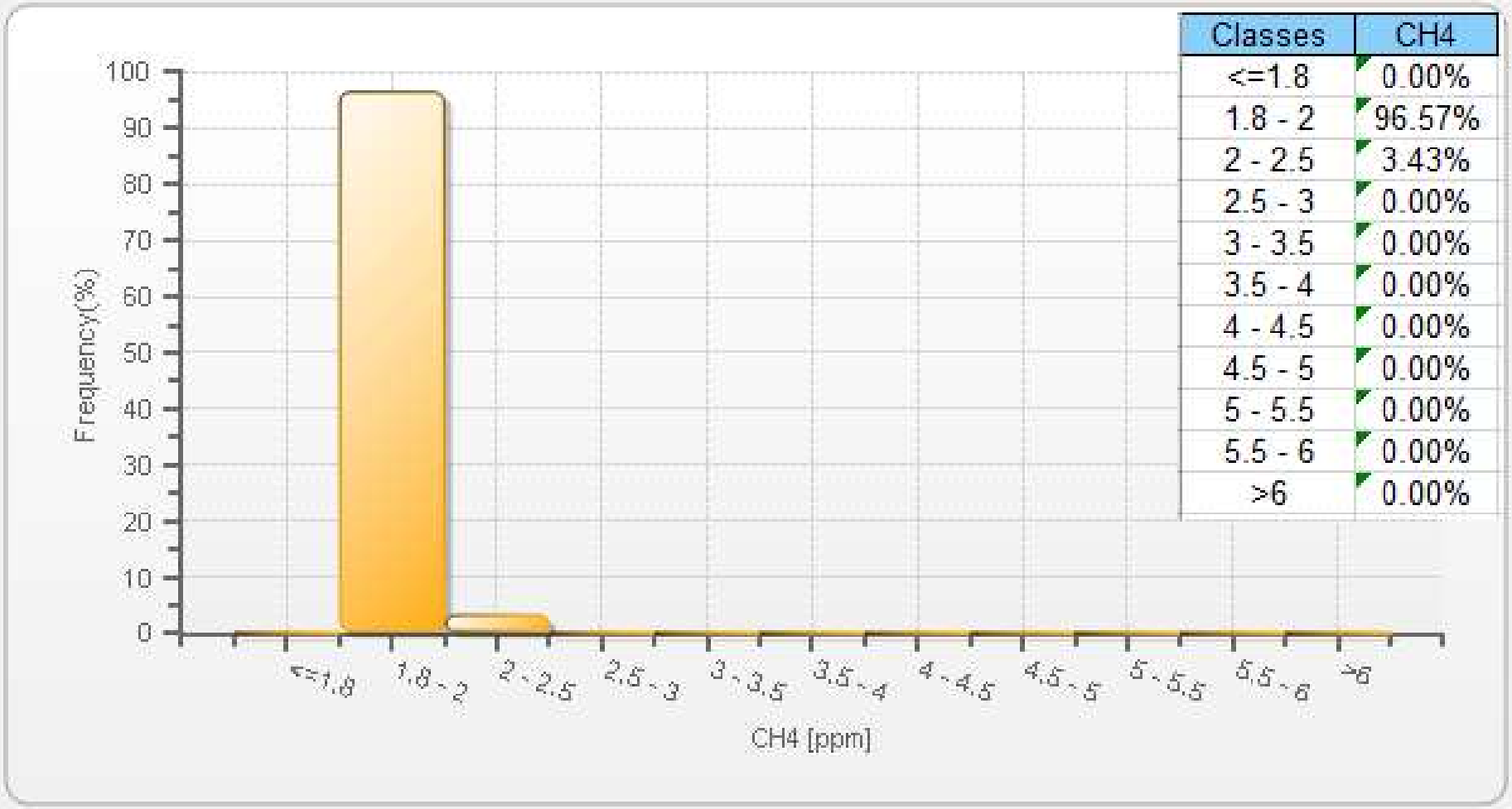
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



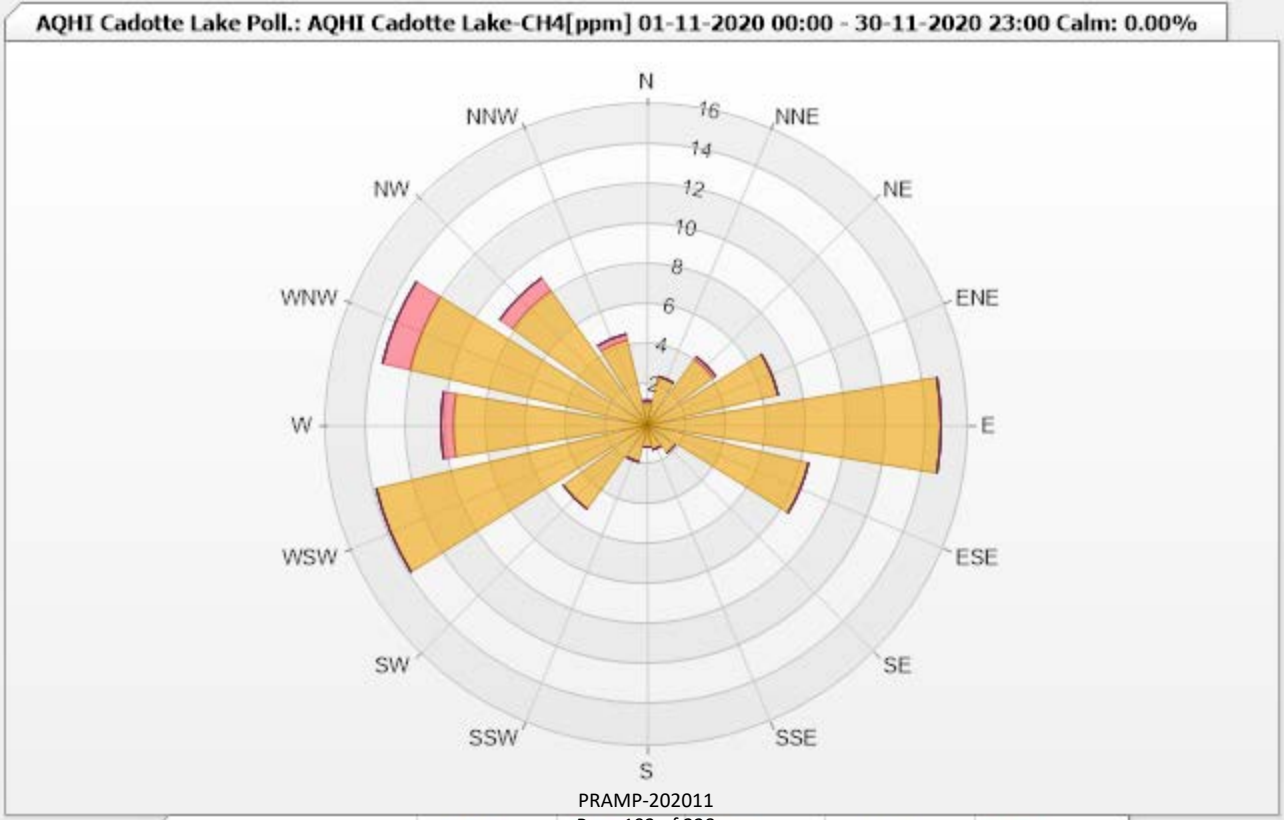
CH4[ppm] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	CH4
<=1.8	0.00%
1.8 - 2	96.57%
2 - 2.5	3.43%
2.5 - 3	0.00%
3 - 3.5	0.00%
3.5 - 4	0.00%
4 - 4.5	0.00%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-CH4[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 89.17% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	1.09	0.16	0	0	0	1.25
NNE	2.49	0	0	0	0	2.49
NE	4.05	0.16	0	0	0	4.21
ENE	6.7	0	0	0	0	6.7
E	14.64	0	0	0	0	14.64
ESE	8.26	0	0	0	0	8.26
SE	1.71	0	0	0	0	1.71
SSE	1.25	0	0	0	0	1.25
S	1.09	0	0	0	0	1.09
SSW	1.87	0	0	0	0	1.87
SW	5.14	0	0	0	0	5.14
WSW	13.86	0	0	0	0	13.86
W	9.66	0.62	0	0	0	10.28
WNW	12.15	1.4	0	0	0	13.55
NW	8.26	0.78	0	0	0	9.04
NNW	4.36	0.31	0	0	0	4.67
Summary	96.58	3.43	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-CH4[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
16
14
12
10
8
6
4
% Icon Classes (ppm)
97 0-2
3 2-5
0 5-10
0 10-20
0 >20.0

PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

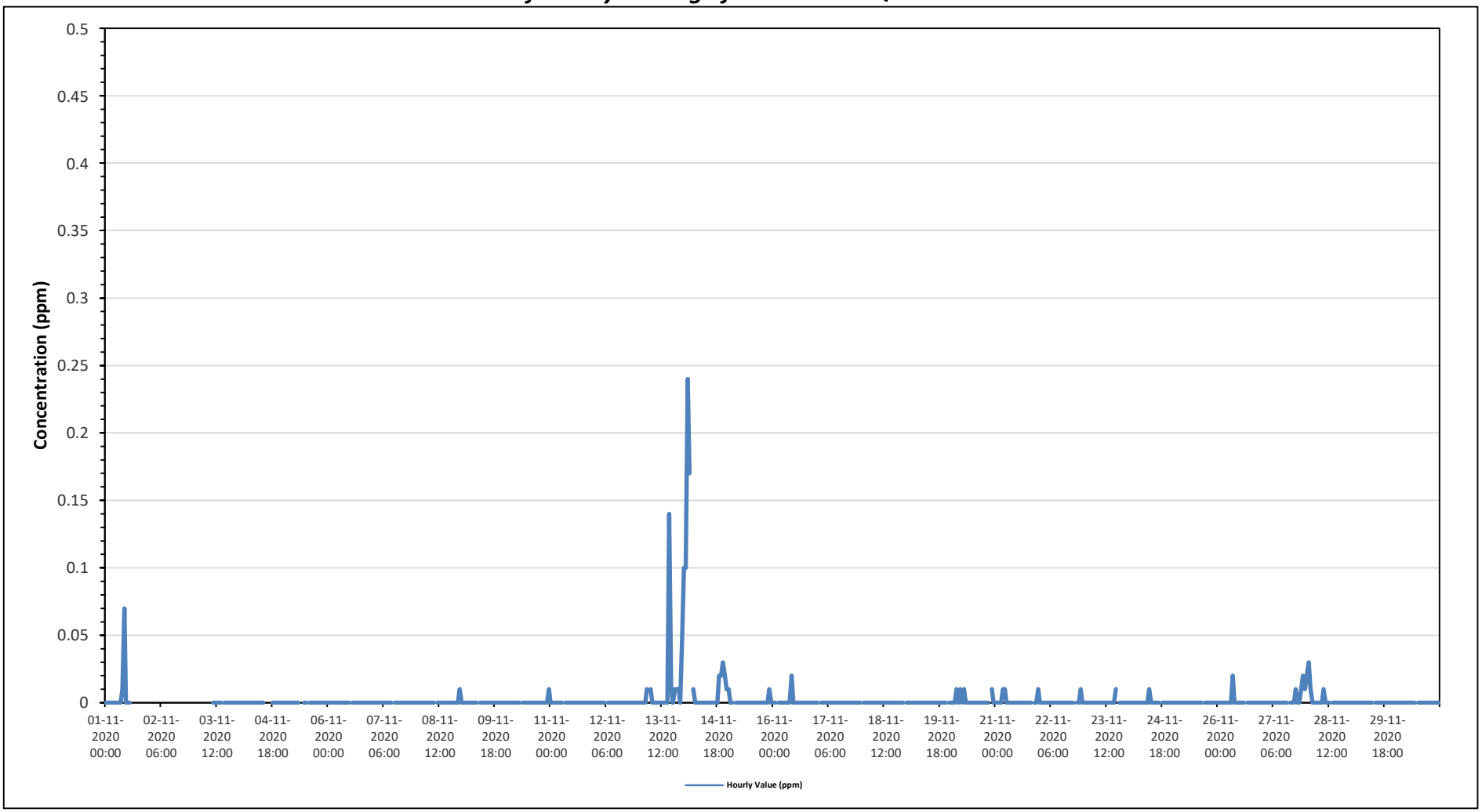
Maximum Hourly Value:	0.24	ppm	on November 14 at hour 2	Hours in Service:	720
Maximum Daily Value:	0.03	ppm	on November 14	Hours of Data:	642
Minimum Hourly Value:	0.00	ppm	on November 1 at hour 0	Hours of Missing Data:	44
Minimum Daily Value:	0.00	ppm	on November 4	Hours of Calibration:	34
Monthly Average:	0.00	ppm		Operational Uptime:	93.9

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00	X	X	X	S	X	X	X	X	X	X	0.00	0.07	-
Nov 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	S	X	X	X	X	X	X	X			
Nov 3	X	X	X	X	X	X	X	X	X	X	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	-
Nov 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	C	C	C	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Y	Y	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
Nov 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	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
Nov 7	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
Nov 8	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	0.01	0.00	0.01	0.00
Nov 9	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
Nov 10	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	0.01	0.00	0.01	0.00
Nov 11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 12	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
Nov 13	0.00	0.00	0.00	0.00	0.01	S	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.01	0.00	0.01	0.01	0.01	0.00	0.05	0.00	0.14	0.01
Nov 14	0.10	0.10	**0.24**	0.17	S	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	0.02	0.02	0.03	0.02	0.01	0.00	**0.24**	**0.03**
Nov 15	0.01	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	0.01	0.00	0.00	0.01	0.00
Nov 16	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Nov 17	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
Nov 18	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Nov 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Nov 20	0.00	0.00	0.00	0.01	0.00	0.01	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	S	0.01	0.00	0.00	0.01	0.00
Nov 21	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.01	0.00	0.01	0.00
Nov 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.01	0.00	0.00	0.01	0.00
Nov 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	S	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Nov 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Nov 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Nov 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	S	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.02	0.00
Nov 28	0.02	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	0.03	0.00
Nov 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	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
Nov 30	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	0.10	0.10	0.24	0.17	0.01	0.01	0.01	0.01	0.02	0.01	0.07	0.01	0.00	0.00	0.00	0.00	0.14	0.01	0.01	0.02	0.02	0.03	0.02	0.05			
Diurnal Average	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

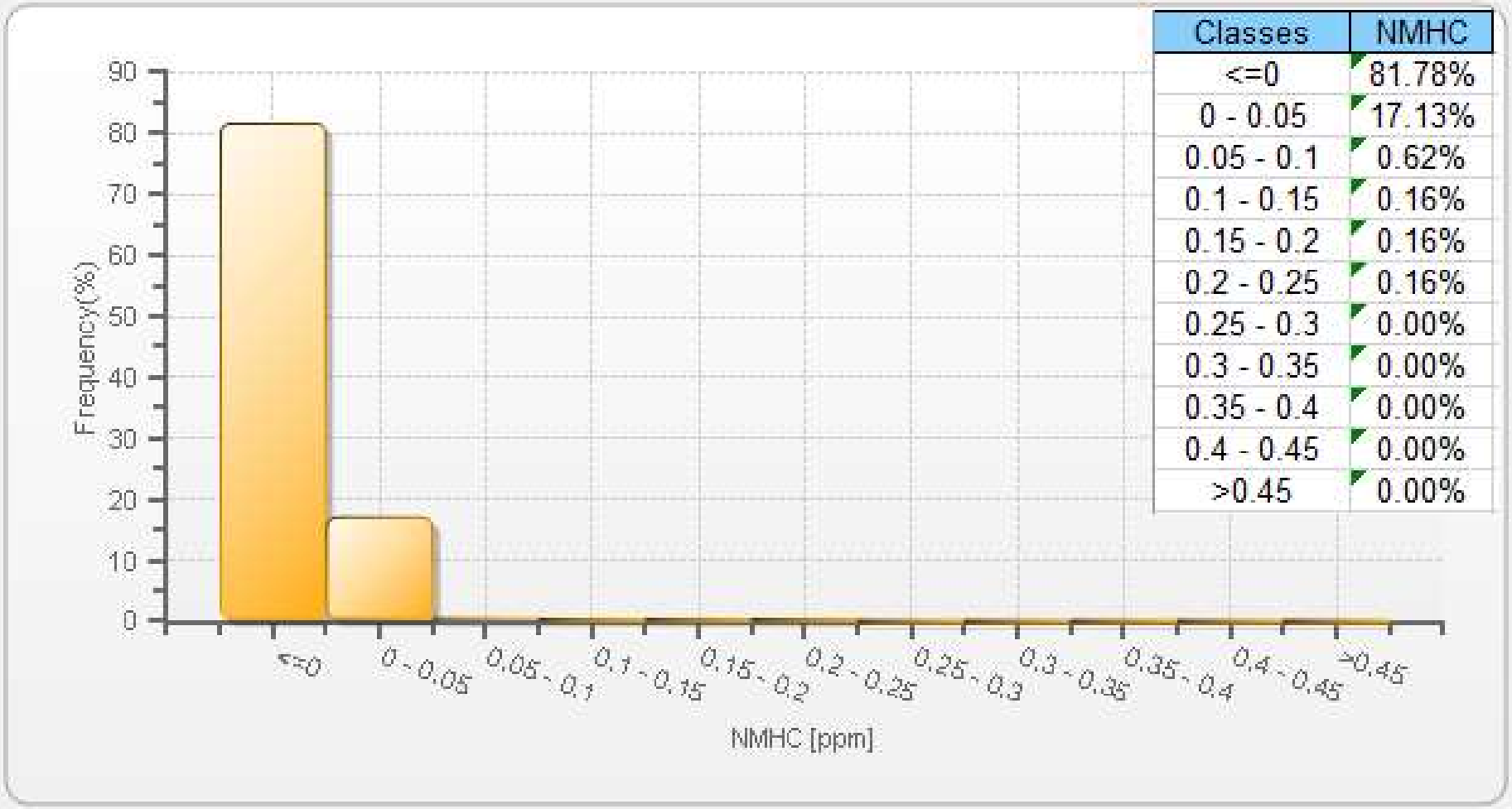
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



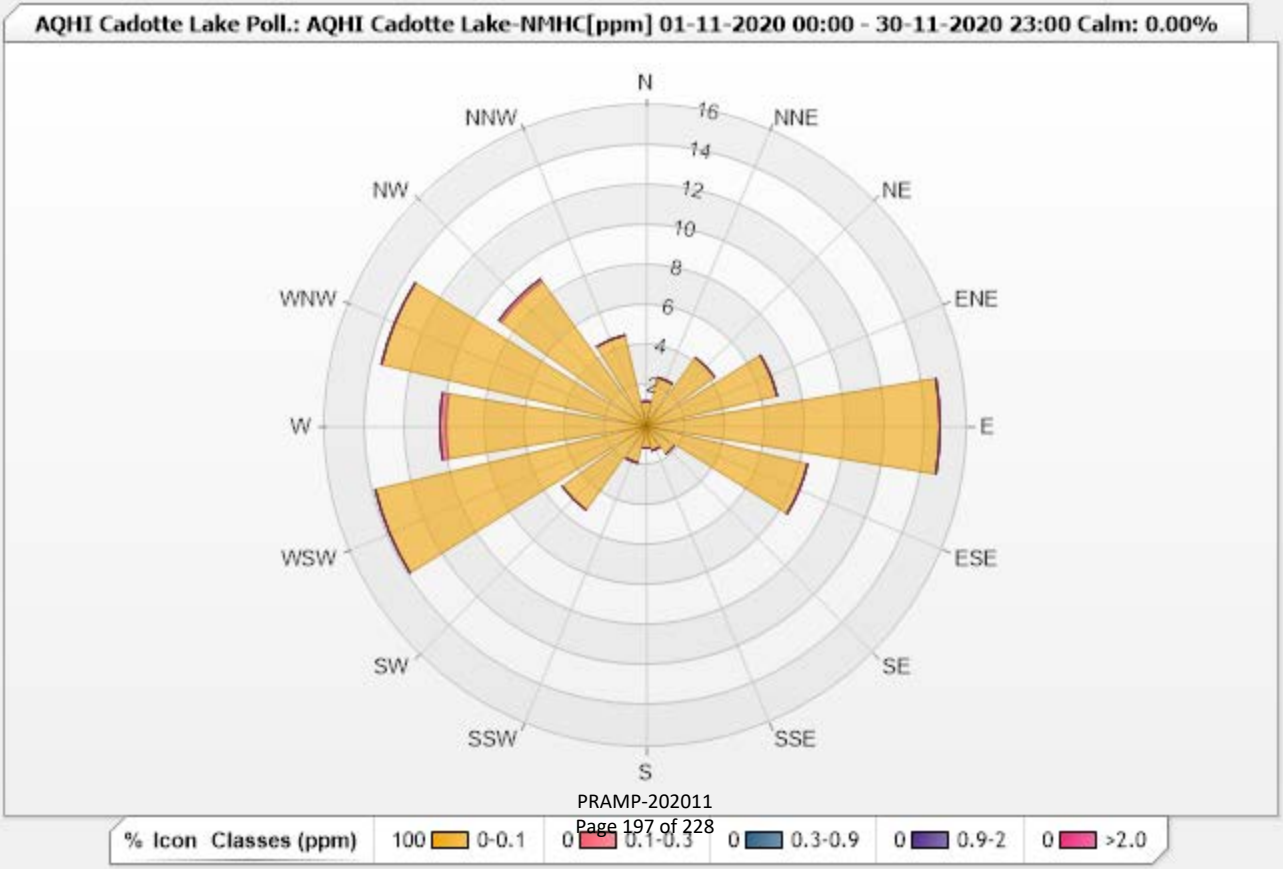
NMHC[ppm] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	NMHC
<=0	81.78%
0 - 0.05	17.13%
0.05 - 0.1	0.62%
0.1 - 0.15	0.16%
0.15 - 0.2	0.16%
0.2 - 0.25	0.16%
0.25 - 0.3	0.00%
0.3 - 0.35	0.00%
0.35 - 0.4	0.00%
0.4 - 0.45	0.00%
>0.45	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NMHC[ppm] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 89.17% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-0.9	0.9-2	>2.0	Total
N	1.25	0	0	0	0	1.25
NNE	2.49	0	0	0	0	2.49
NE	4.21	0	0	0	0	4.21
ENE	6.7	0	0	0	0	6.7
E	14.64	0	0	0	0	14.64
ESE	8.26	0	0	0	0	8.26
SE	1.71	0	0	0	0	1.71
SSE	1.25	0	0	0	0	1.25
S	1.09	0	0	0	0	1.09
SSW	1.87	0	0	0	0	1.87
SW	5.14	0	0	0	0	5.14
WSW	13.86	0	0	0	0	13.86
W	9.97	0.31	0	0	0	10.28
WNW	13.55	0	0	0	0	13.55
NW	8.88	0.16	0	0	0	9.04
NNW	4.67	0	0	0	0	4.67
Summary	100	0.47	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-NMHC[ppm] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
16
14
12
10
8
6
4
% Icon Classes (ppm)
100 0-0.1
0 0.1-0.3
0 0.3-0.9
0 0.9-2
0 >2.0

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

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

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 80 µg/m3, 24-Hour 29 µg/m3

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

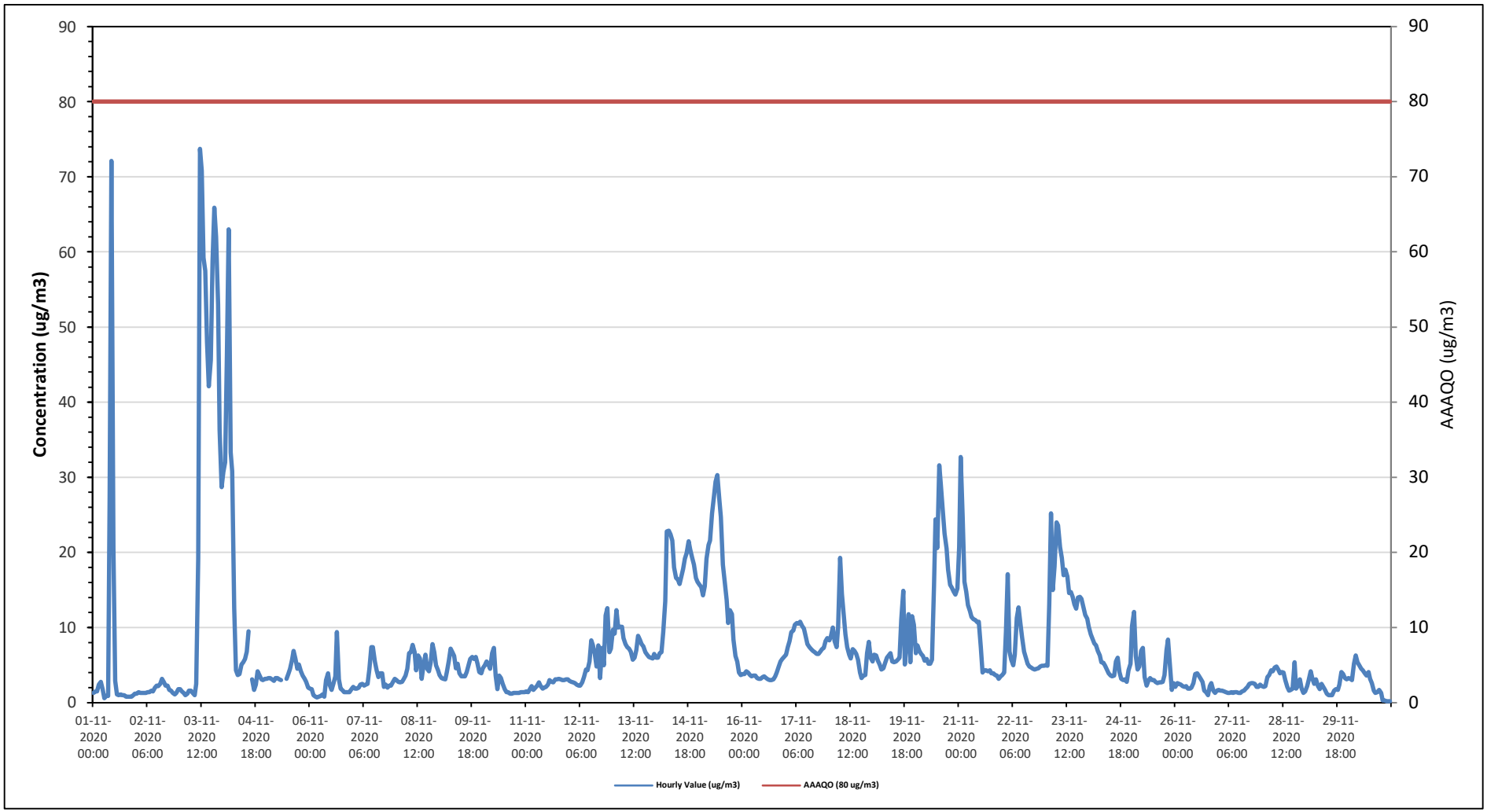
Maximum Hourly Value:	73.7 $\mu g/m^3$ on November 3 at hour 11	Hours in Service:	720
Maximum Daily Value:	30.7 $\mu g/m^3$ on November 3	Hours of Data:	717
Minimum Hourly Value:	0.2 $\mu g/m^3$ on November 30 at hour 21	Hours of Missing Data:	2
Minimum Daily Value:	1.8 $\mu g/m^3$ on November 2	Hours of Calibration:	1
Monthly Average:	7.3 $\mu g/m^3$	Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	1	2	2	2	3	2	1	1	1	27	72	21	3	1	1	1	1	1	1	1	1	1	1	1	0.6	72.1	6.1
Nov 2	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	2	2	2	2	1	1	1	2	1.1	3.2	1.8
Nov 3	2	2	1	1	1	2	2	1	1	3	19	74	71	59	58	48	42	46	59	66	62	53	36	29	1.0	73.7	30.7
Nov 4	31	32	46	63	33	31	13	4	4	4	5	5	6	7	10	C	3	2	2	4	4	3	3	3	1.7	63.0	13.8
Nov 5	3	3	3	3	3	3	3	3	3	Y	Y	3	4	5	6	7	6	5	5	4	4	3	3	2	2.0	6.9	3.8
Nov 6	2	2	1	1	1	1	1	1	1	3	4	2	2	3	4	9	3	2	2	1	1	1	1	2	0.7	9.4	2.1
Nov 7	2	2	2	2	2	3	2	2	3	4	7	7	6	4	3	4	4	2	2	2	2	2	3	3	1.9	7.4	3.2
Nov 8	3	3	3	3	3	4	5	7	7	8	7	4	6	6	3	5	6	5	4	5	8	7	5	4	2.7	7.8	5.0
Nov 9	4	3	3	3	4	6	7	7	6	5	5	4	4	4	4	4	5	6	6	6	6	5	4	4	3.1	7.2	4.7
Nov 10	5	5	6	5	5	7	7	4	2	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1.2	7.3	2.9
Nov 11	2	1	2	2	2	2	2	3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	1.4	3.2	2.5
Nov 12	3	3	3	3	2	2	2	3	3	4	4	6	8	8	7	5	8	3	7	5	12	13	7	7	2.3	12.6	5.3
Nov 13	10	9	12	10	10	10	9	8	7	7	7	6	6	7	9	8	8	8	7	6	6	6	6	7	5.7	12.3	7.8
Nov 14	6	6	7	7	9	14	23	23	22	22	18	17	16	16	17	18	19	20	22	20	19	18	17	16	6.0	22.9	16.3
Nov 15	16	15	14	16	19	21	22	25	27	29	30	27	25	18	16	14	11	12	12	8	6	6	4	4	3.7	30.3	16.6
Nov 16	4	4	4	4	4	4	4	4	3	3	3	3	4	3	3	3	3	3	4	4	5	6	6	6	3.0	6.1	3.8
Nov 17	6	7	8	9	10	10	11	11	11	10	10	9	8	7	7	7	7	7	7	7	7	7	8	9	6.4	10.8	8.3
Nov 18	8	9	10	8	7	10	19	15	12	9	7	6	6	7	7	7	6	4	3	4	4	7	8	6	3.3	19.3	7.9
Nov 19	6	6	6	6	5	4	5	5	6	6	7	6	5	6	6	6	11	15	5	9	12	5	12	10	4.4	14.9	7.0
Nov 20	7	8	7	7	6	6	6	5	5	6	16	24	21	32	29	26	23	21	18	16	15	15	14	15	5.2	31.6	14.3
Nov 21	21	33	25	16	15	13	12	11	11	11	11	11	7	4	4	4	4	4	4	4	4	4	3	4	3.2	32.7	10.0
Nov 22	4	4	10	17	7	6	5	6	11	13	10	9	7	6	5	5	5	5	4	5	5	5	5	5	3.7	17.1	6.7
Nov 23	5	5	13	25	15	18	24	24	21	19	17	18	17	15	15	14	13	13	14	14	14	13	12	11	4.9	25.2	15.3
Nov 24	10	9	9	8	8	7	6	5	5	5	4	4	4	4	4	6	6	4	3	3	3	3	4	5	2.8	10.1	5.3
Nov 25	10	12	6	4	5	7	7	3	2	3	3	3	3	3	3	3	3	3	4	7	8	5	2	3	1.7	12.1	4.7
Nov 26	2	3	3	2	2	2	2	2	2	2	3	4	4	4	3	3	2	1	1	2	3	2	1	2	1.0	3.9	2.3
Nov 27	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	2	2	2	1.3	2.6	1.8
Nov 28	2	2	2	3	4	4	4	5	5	4	4	4	4	3	2	2	2	2	5	2	2	3	2	1	1.3	5.4	3.1
Nov 29	2	2	3	4	3	3	3	2	2	3	2	2	1	1	1	1	2	2	2	2	4	4	3	3	1.0	4.2	2.3
Nov 30	3	3	3	5	6	5	5	5	4	4	4	4	3	3	2	1	1	2	1	0	0	0	0	0	0.2	6.3	2.8
Diurnal Maximum	31	33	46	63	33	31	24	25	27	29	72	74	71	59	58	48	42	46	59	66	62	53	36	29			
Diurnal Average	6.0	6.6	7.2	8.1	6.6	6.9	7.1	6.6	6.4	7.7	9.9	9.7	8.6	8.0	7.8	7.5	7.0	6.8	7.1	7.2	7.5	6.8	5.9	5.7			

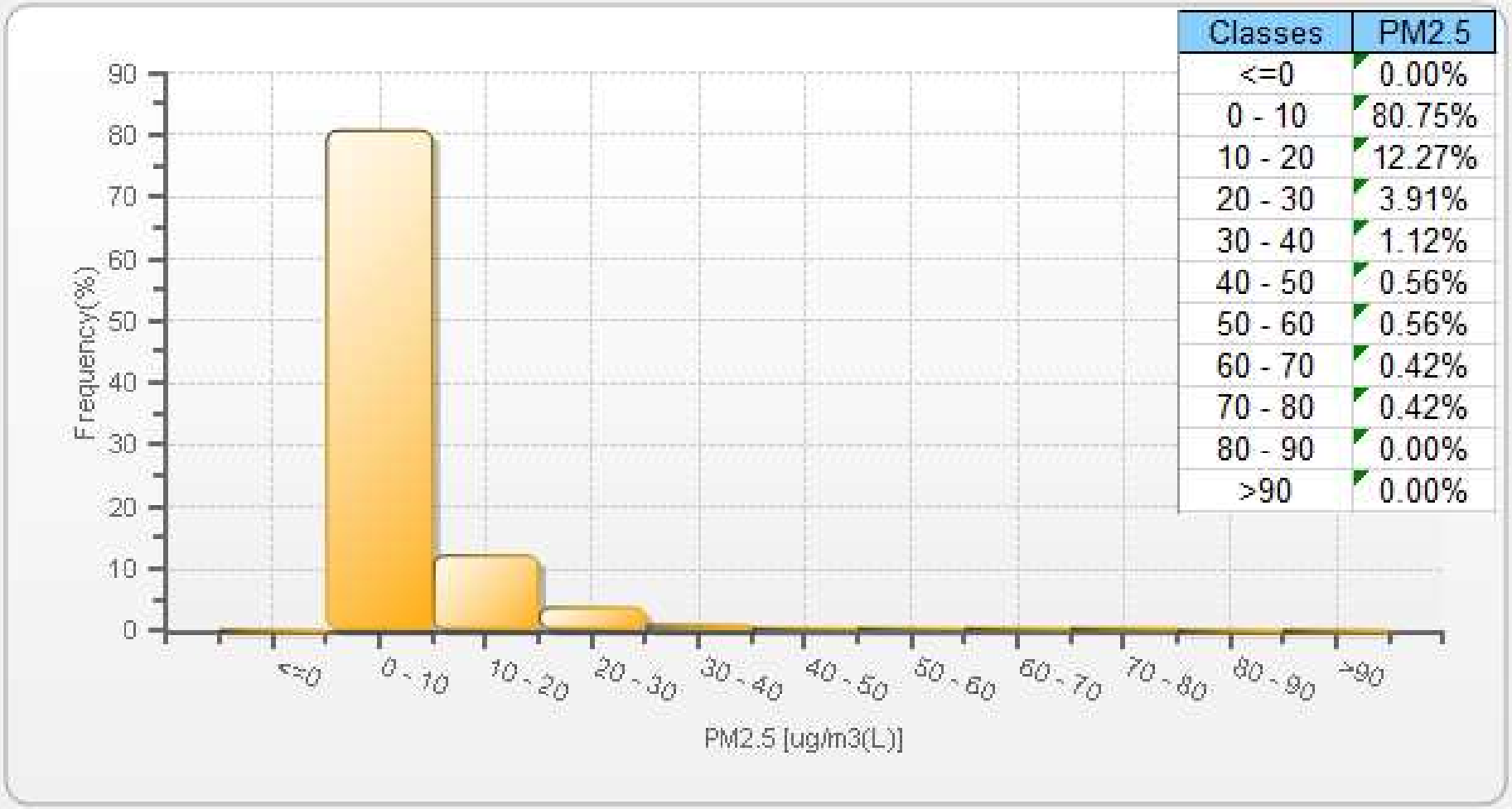
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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

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



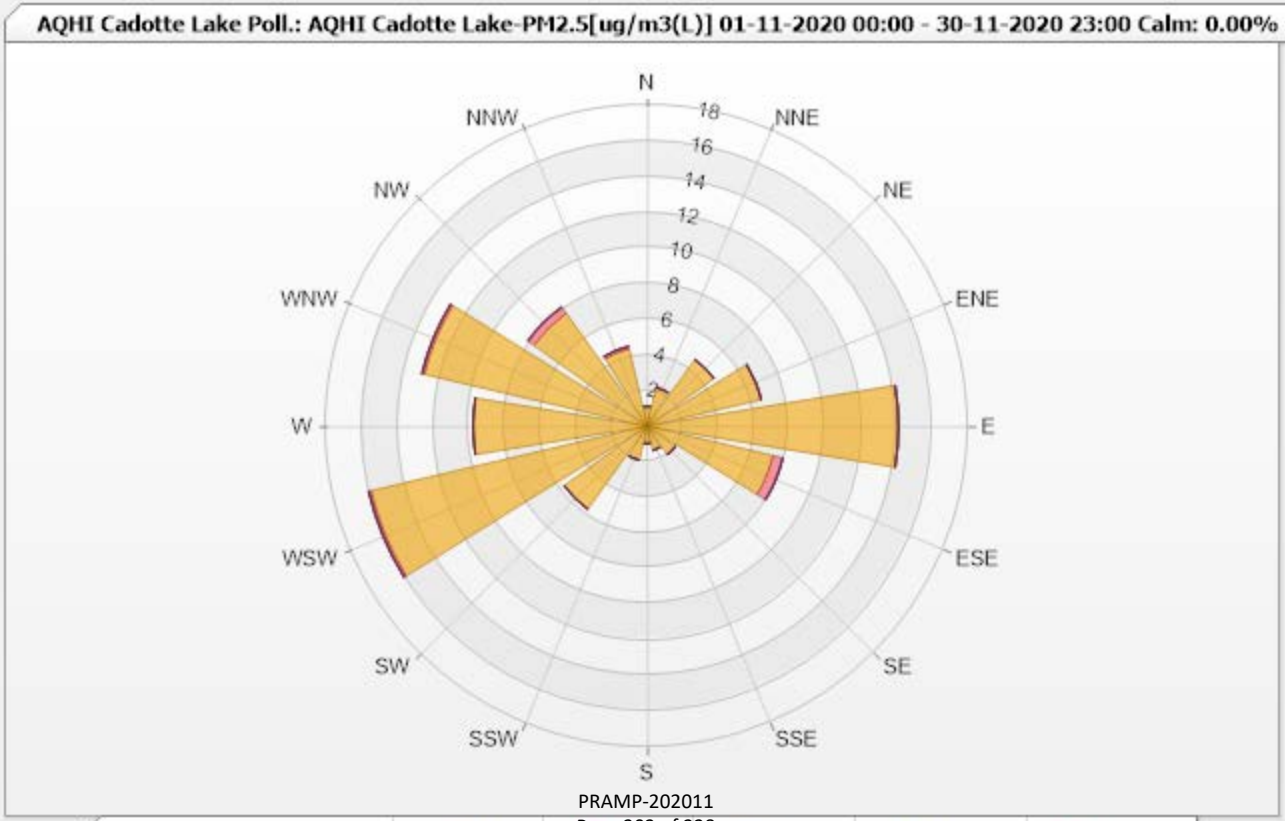
PM2.5[ug/m3(L)] Histogram: AQHI Cadotte Lake Monthly: 11-2020 1 Hr.



Classes	PM2.5
<=0	0.00%
0 - 10	80.75%
10 - 20	12.27%
20 - 30	3.91%
30 - 40	1.12%
40 - 50	0.56%
50 - 60	0.56%
60 - 70	0.42%
70 - 80	0.42%
80 - 90	0.00%
>90	0.00%

Wind: AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-PM2.5[ug/m3(L)] Monthly: 11-2020 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 0.00% Valid Data: 99.58% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	1.12	0	0	0	0	1.12
NNE	2.23	0	0	0	0	2.23
NE	4.6	0	0	0	0	4.6
ENE	6.56	0	0	0	0	6.56
E	14.09	0	0	0	0	14.09
ESE	7.25	0.56	0	0	0	7.81
SE	1.95	0	0	0	0	1.95
SSE	1.39	0	0	0	0	1.39
S	0.98	0	0	0	0	0.98
SSW	1.95	0	0	0	0	1.95
SW	5.72	0	0	0	0	5.72
WSW	15.9	0.14	0	0	0	16.04
W	9.76	0	0	0	0	9.76
WNW	12.83	0.14	0	0	0	12.97
NW	7.81	0.42	0	0	0	8.23
NNW	4.46	0.14	0	0	0	4.6
Summary	98.6	1.4	0	0	0	100


AQHI Cadotte Lake Poll.: AQHI Cadotte Lake-PM2.5[ug/m3(L)] 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 0.00%
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
18
16
14
12
10
8
6
4
% Icon Classes (ug/m3(L))
99 0-50
1 50-80
0 80-120
0 120-240
0 >240.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

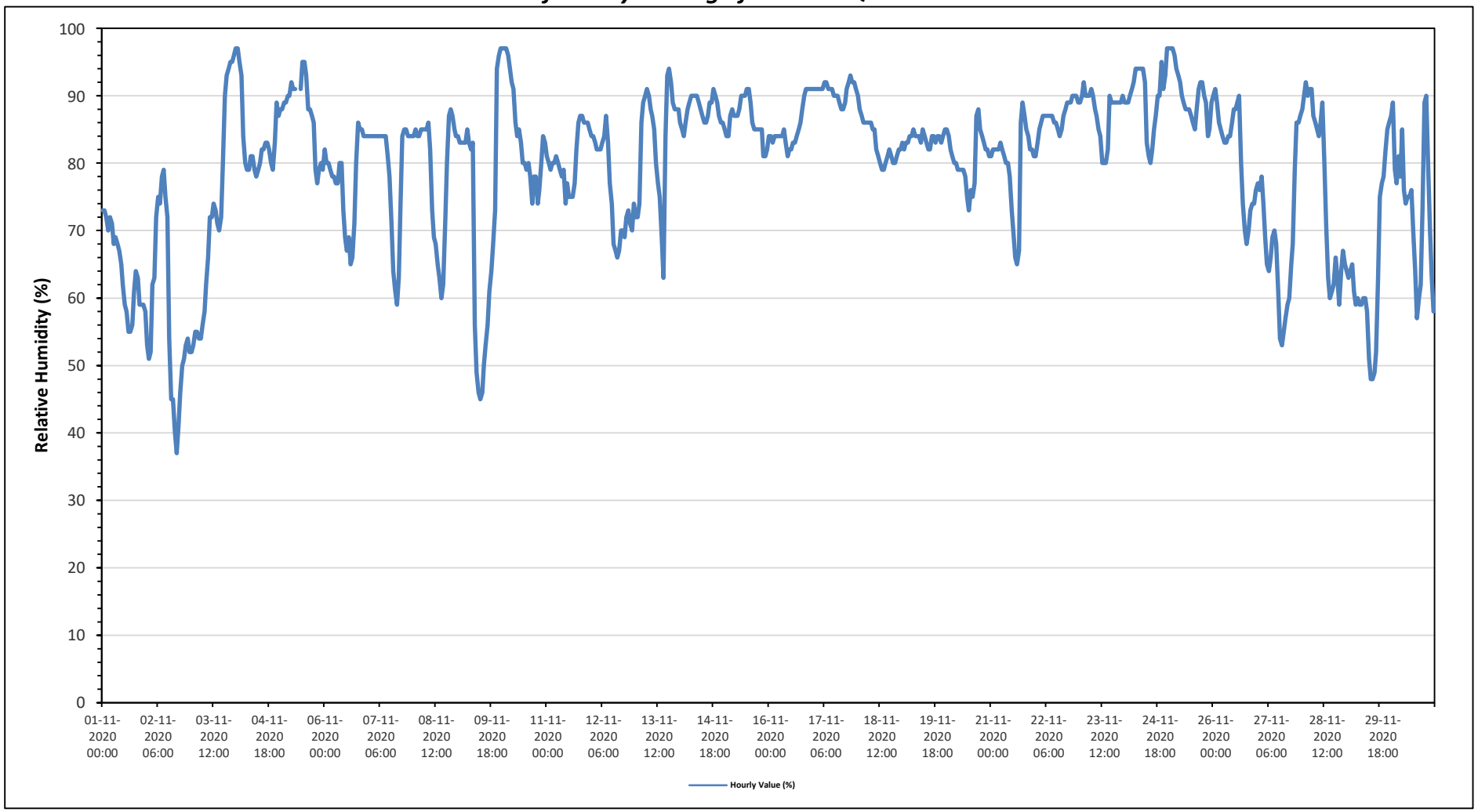
Maximum Hourly Value:	97	%	on November 4 at hour 0	Hours in Service:	720
Maximum Daily Value:	90.8	%	on November 17	Hours of Data:	718
Minimum Hourly Value:	37	%	on November 2 at hour 16	Hours of Missing Data:	2
Minimum Daily Value:	57.3	%	on November 2	Hours of Calibration:	0
Monthly Average:	79.7	%		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	73	73	72	70	72	71	68	69	68	67	65	62	59	58	55	55	56	61	64	63	59	59	59	58	55	73	64.0
Nov 2	53	51	52	62	63	72	75	74	78	79	75	72	54	45	45	40	**37**	41	46	50	51	53	54	52	**37**	79	57.3
Nov 3	52	53	55	55	54	54	56	58	62	66	72	72	74	73	71	70	72	80	90	93	94	95	95	96	52	96	71.3
Nov 4	**97**	**97**	95	93	84	80	79	79	81	81	79	78	79	80	82	82	83	83	82	80	79	83	89	87	78	**97**	83.8
Nov 5	88	88	89	89	90	90	92	91	91	**Y**	**Y**	91	95	95	93	88	88	87	86	79	77	79	80	79	77	95	87.5
Nov 6	82	80	80	79	78	78	77	77	80	80	73	69	67	69	65	66	71	80	86	85	85	84	84	84	65	86	77.5
Nov 7	84	84	84	84	84	84	84	84	84	84	81	78	71	64	61	59	63	74	84	85	85	84	84	84	59	85	79.0
Nov 8	84	85	84	84	85	85	85	85	86	82	73	69	68	65	63	60	62	71	80	87	88	87	85	84	60	88	78.6
Nov 9	84	83	83	83	83	85	83	82	83	56	49	46	45	46	50	53	56	61	64	68	73	94	96	**97**	45	**97**	71.0
Nov 10	**97**	**97**	**97**	96	94	92	91	86	84	85	83	80	80	79	80	78	74	78	78	74	76	80	84	83	74	**97**	84.4
Nov 11	81	80	79	80	80	81	80	79	78	79	74	77	75	75	75	77	82	86	87	87	86	86	86	85	74	87	80.6
Nov 12	84	84	83	82	82	82	83	84	87	83	77	74	68	67	66	67	70	70	69	72	73	71	70	74	66	87	75.9
Nov 13	72	72	74	86	89	90	91	90	88	87	85	80	77	75	69	63	84	93	94	92	89	88	88	88	63	94	83.5
Nov 14	86	85	84	86	88	89	90	90	90	90	89	88	87	86	86	87	89	89	91	90	89	87	86	86	84	91	87.8
Nov 15	85	84	84	87	88	87	87	87	88	90	90	90	91	91	89	86	85	85	85	85	85	81	81	82	81	91	86.4
Nov 16	84	84	83	84	84	84	84	84	85	83	81	82	82	83	83	84	85	86	88	90	91	91	91	91	81	91	85.3
Nov 17	91	91	91	91	91	91	92	92	91	91	91	90	90	90	89	88	88	89	91	92	93	92	92	91	88	93	**90.8**
Nov 18	90	88	87	86	86	86	86	86	85	85	82	81	80	79	79	80	81	82	81	80	80	81	82	82	79	90	83.1
Nov 19	83	82	83	83	84	84	85	84	84	84	83	85	84	83	82	82	84	84	83	84	84	83	84	85	82	85	83.6
Nov 20	85	84	82	81	80	80	79	79	79	79	78	75	73	76	75	77	87	88	85	84	83	82	82	81	73	88	80.6
Nov 21	81	82	82	82	82	83	82	81	80	80	78	73	70	66	65	67	86	89	87	85	84	82	82	81	65	89	79.6
Nov 22	81	83	85	86	87	87	87	87	87	87	86	86	85	84	85	87	88	89	89	89	90	90	90	89	81	90	86.8
Nov 23	89	90	92	90	90	90	91	90	88	87	85	84	80	80	80	82	90	89	89	89	89	89	89	90	80	92	87.6
Nov 24	89	89	89	90	91	92	94	94	94	94	94	92	83	81	80	82	85	87	90	90	95	91	93	**97**	80	**97**	89.8
Nov 25	**97**	**97**	**97**	96	94	93	92	90	89	88	88	88	87	86	85	88	91	92	92	90	89	84	85	89	84	**97**	90.3
Nov 26	90	91	89	86	85	84	83	83	84	84	86	88	88	89	90	80	74	70	68	70	73	74	74	76	68	91	81.6
Nov 27	77	76	78	74	69	65	64	66	69	70	68	61	54	53	55	57	59	60	65	68	79	86	86	87	53	87	68.6
Nov 28	88	90	92	90	91	91	87	86	85	84	86	89	80	71	63	60	61	62	66	63	59	64	67	65	59	92	76.7
Nov 29	64	63	64	65	61	59	60	59	59	60	60	58	51	48	48	49	52	63	75	77	78	82	85	86	48	86	63.6
Nov 30	87	89	79	77	81	78	85	76	74	75	75	76	70	64	57	60	62	73	89	90	79	70	63	58	57	90	74.5
Diurnal Maximum	97	97	97	96	94	93	94	94	94	94	94	92	95	95	93	88	91	93	94	93	95	95	96	97			
Diurnal Average	82.6	82.5	82.3	82.6	82.3	82.2	82.4	81.7	82.0	80.7	78.8	77.8	74.9	73.4	72.2	71.8	74.8	78.1	80.8	81.0	81.2	81.7	82.2	82.2			

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

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

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



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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

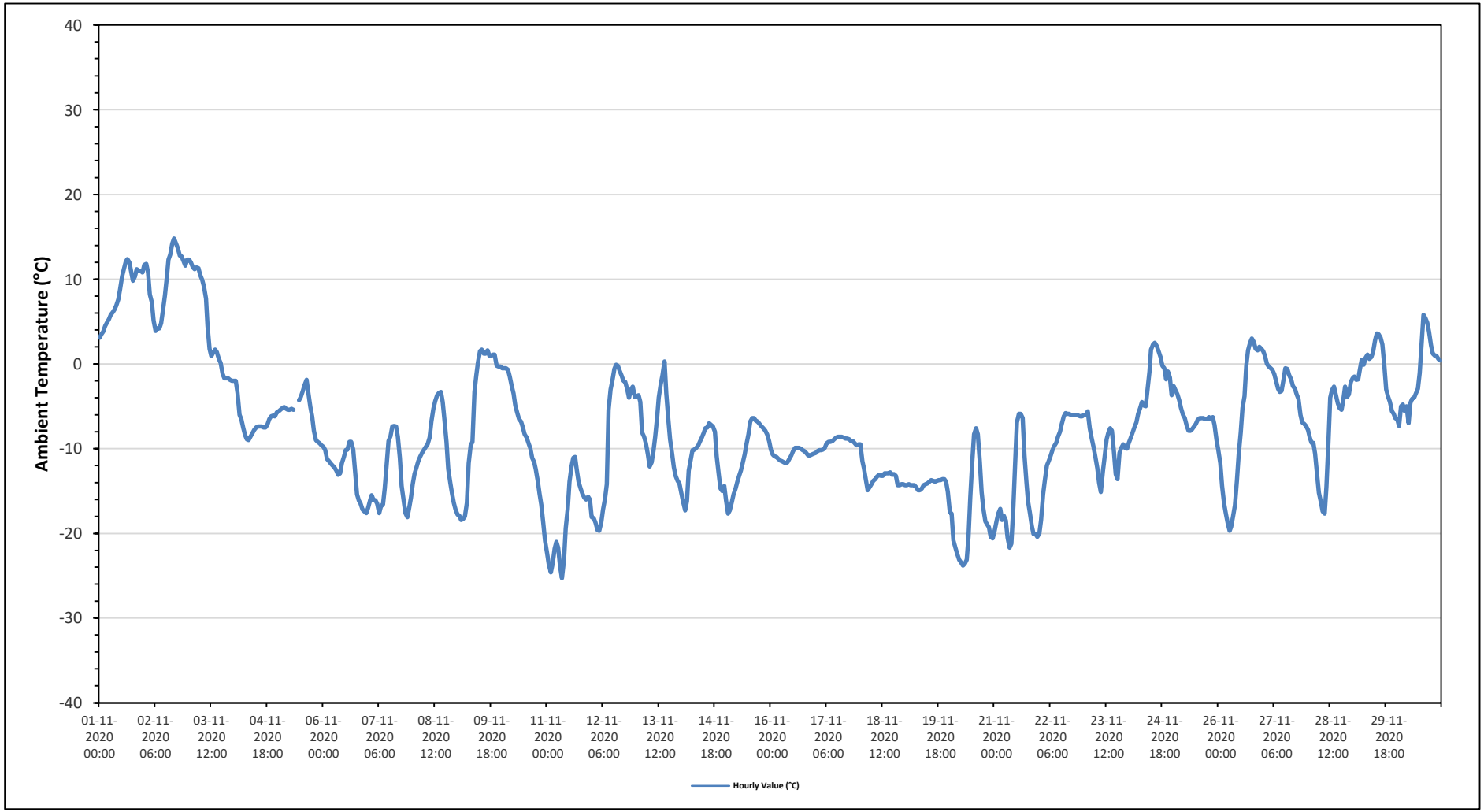
Maximum Hourly Value:	14.8	°C	on November 2 at hour 16	Hours in Service:	720
Maximum Daily Value:	10.0	°C	on November 2	Hours of Data:	718
Minimum Hourly Value:	-25.3	°C	on November 11 at hour 8	Hours of Missing Data:	2
Minimum Daily Value:	-18.2	°C	on November 11	Hours of Calibration:	0
Monthly Average:	-7.5	°C		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	3.1	3.5	3.8	4.5	4.9	5.3	5.8	6.1	6.4	6.9	7.6	8.8	10.3	11.2	12.1	12.4	12	10.9	9.8	10.3	11.2	11	11	10.8	3.1	12.4	8.3
Nov 2	11.7	11.8	10.8	8.2	7.3	5.1	3.9	4.2	4.2	4.8	6.3	8.1	10.1	12.3	12.9	14.2	**14.8**	14.2	13.7	12.8	12.7	12.2	11.6	12.3	3.9	**14.8**	**10.0**
Nov 3	12.3	12	11.4	11.2	11.4	11.3	10.5	9.9	9.1	7.7	4.5	1.8	0.9	1.3	1.7	1.4	0.6	0.1	-1.2	-1.7	-1.7	-1.7	-1.9	-2	-2.0	12.3	4.5
Nov 4	-2	-2	-3.4	-6	-6.5	-7.6	-8.4	-8.9	-9	-8.6	-8.2	-7.8	-7.5	-7.4	-7.4	-7.4	-7.5	-7.5	-7.2	-6.5	-6.2	-6.1	-6.2	-5.7	-9.0	-2.0	-6.7
Nov 5	-5.6	-5.4	-5.2	-5.1	-5.3	-5.4	-5.4	-5.3	-5.4	Y	Y	-4.3	-3.9	-3.2	-2.5	-1.9	-3.4	-5.1	-6.2	-7.9	-9	-9.2	-9.4	-9.6	-9.6	-1.9	-5.6
Nov 6	-9.8	-10.2	-11.2	-11.5	-11.7	-12	-12.2	-12.6	-13.1	-12.9	-11.7	-11	-10.2	-10.1	-9.2	-9.2	-10.1	-12.5	-15.4	-16.1	-16.5	-17.2	-17.4	-17.6	-17.6	-9.2	-12.6
Nov 7	-17	-16.1	-15.5	-16.1	-16.1	-16.5	-17.6	-16.8	-16.6	-14.7	-11.7	-9.1	-8.5	-7.4	-7.3	-7.4	-8.6	-11.1	-14.4	-16.1	-17.6	-18.1	-17	-15.8	-18.1	-7.3	-13.9
Nov 8	-14.2	-13	-12.2	-11.5	-10.9	-10.5	-10.1	-9.8	-9.5	-8.7	-6.8	-5.3	-4.4	-3.7	-3.4	-3.3	-4.5	-6.6	-9.2	-12.4	-14	-15.3	-16.4	-17.2	-17.2	-3.3	-9.7
Nov 9	-17.8	-17.9	-18.4	-18.3	-18	-16.4	-11.7	-9.6	-9.2	-3.3	-1.4	0.2	1.5	1.7	1.2	1.2	1.6	1	1	1.1	1.1	-0.2	-0.3	-0.3	-18.4	1.7	-5.5
Nov 10	-0.5	-0.5	-0.5	-0.7	-1.5	-2.5	-3.5	-4.9	-5.8	-6.5	-6.8	-7.5	-8.3	-8.7	-9.3	-10	-11.1	-11.6	-12.4	-13.8	-15.3	-16.6	-18.8	-20.9	-20.9	-0.5	-8.3
Nov 11	-22.3	-23.7	-24.6	-23.6	-21.8	-21	-21.7	-24	**-25.3**	-23.2	-19.4	-17.1	-13.9	-12.1	-11.1	-11	-12.5	-13.9	-14.7	-15.3	-15.8	-16	-15.7	-16	**-25.3**	-11.0	-18.2
Nov 12	-18.1	-18.2	-18.7	-19.6	-19.7	-18.7	-17.2	-15.9	-14.2	-5.4	-3	-2	-0.6	-0.1	-0.2	-0.8	-1.4	-2	-2.1	-3	-4	-3	-2.7	-3.9	-19.7	-0.1	-8.1
Nov 13	-3.8	-3.7	-4.5	-8.1	-8.6	-9.4	-10.7	-12.1	-11.6	-10.3	-8.6	-6.2	-4	-2.4	-1.3	0.3	-3.5	-6.5	-8.9	-10.6	-12.2	-13.2	-13.8	-14.1	-14.1	0.3	-7.8
Nov 14	-15.3	-16.3	-17.3	-16.2	-12.6	-11.3	-10.2	-10.1	-9.9	-9.6	-9.2	-8.7	-8.2	-7.6	-7.5	-7	-7.2	-7.4	-8	-10.9	-13	-14.7	-15	-14.4	-17.3	-7.0	-11.2
Nov 15	-16.1	-17.7	-17.3	-16.3	-15.4	-14.7	-13.9	-13.2	-12.6	-11.7	-10.7	-9.5	-8.3	-6.8	-6.4	-6.4	-6.7	-6.8	-7.1	-7.4	-7.6	-7.9	-8.3	-9.1	-17.7	-6.4	-10.7
Nov 16	-10.1	-10.7	-10.9	-11	-11.2	-11.4	-11.5	-11.6	-11.7	-11.6	-11.2	-10.8	-10.3	-9.9	-9.9	-9.9	-10	-10.2	-10.3	-10.5	-10.8	-10.8	-10.7	-10.6	-11.7	-9.9	-10.7
Nov 17	-10.5	-10.3	-10.2	-10.2	-10.1	-9.9	-9.4	-9.2	-9.2	-9.1	-8.9	-8.7	-8.6	-8.6	-8.6	-8.7	-8.8	-8.8	-8.9	-9.1	-9.1	-9.4	-9.6	-9.5	-10.5	-8.6	-9.3
Nov 18	-9.5	-11.5	-12.3	-13.7	-14.9	-14.6	-14.2	-13.8	-13.6	-13.3	-13.1	-13.2	-13.2	-12.9	-12.9	-12.9	-12.8	-13.1	-13	-13.2	-14.3	-14.3	-14.2	-14.2	-14.9	-9.5	-13.3
Nov 19	-14.3	-14.3	-14.2	-14.3	-14.3	-14.3	-14.6	-14.9	-14.9	-14.7	-14.3	-14.2	-14.1	-13.9	-13.7	-13.8	-13.9	-13.8	-13.7	-13.7	-13.6	-13.6	-13.9	-15.1	-15.1	-13.6	-14.2
Nov 20	-17.5	-17.7	-20.8	-21.7	-22.4	-23.1	-23.4	-23.8	-23.6	-23.1	-20.4	-15.8	-11.5	-8.3	-7.6	-8.3	-11.6	-15.1	-17.1	-18.6	-18.9	-19.3	-20.4	-20.6	-23.8	-7.6	-17.9
Nov 21	-19.8	-18.6	-17.7	-17.1	-18.4	-17.9	-18.5	-20.5	-21.7	-21.2	-16.8	-11.8	-6.9	-5.9	-5.9	-6.4	-10.8	-14	-16.2	-17.7	-19.1	-20.1	-20.1	-20.4	-21.7	-5.9	-16.0
Nov 22	-20	-18.4	-15.4	-13.7	-12	-11.5	-10.9	-10.2	-9.7	-9.3	-8.6	-8	-7.1	-6.2	-5.8	-5.9	-5.9	-6	-6	-6	-6	-6.1	-6.2	-6.2	-20.0	-5.8	-9.2
Nov 23	-6	-6	-5.6	-7.6	-8.7	-9.8	-10.9	-12.3	-14	-15.1	-12.7	-11	-8.9	-8.1	-7.6	-7.9	-10.4	-13	-13.6	-10.5	-9.9	-9.5	-9.9	-10	-15.1	-5.6	-10.0
Nov 24	-9.3	-8.7	-8.1	-7.5	-6.9	-5.9	-5.2	-4.5	-4.9	-5	-3.1	-0.9	1.7	2.3	2.5	2.1	1.5	0.8	-0.2	-0.5	-1.8	-0.9	-1.6	-3.7	-9.3	2.5	-2.8
Nov 25	-2.6	-3.1	-3.6	-4.3	-5.2	-6	-6.4	-7.3	-7.9	-7.9	-7.7	-7.4	-7.1	-6.6	-6.4	-6.4	-6.4	-6.5	-6.5	-6.3	-6.5	-6.3	-7.2	-9	-9.0	-2.6	-6.3
Nov 26	-10.2	-11.7	-14.4	-16.5	-17.7	-18.9	-19.7	-19.2	-17.9	-16.7	-13.7	-10.7	-8.1	-5.2	-3.8	-0.2	1.6	2.5	3	2.6	1.8	1.6	2	1.8	-19.7	3.0	-7.8
Nov 27	1.5	1	0	-0.3	-0.5	-0.7	-1.2	-2	-2.9	-3.3	-3.2	-1.8	-0.5	-0.6	-1.3	-1.8	-2.6	-2.9	-3.6	-4.1	-6	-6.9	-7.1	-7.3	-7.3	1.5	-2.4
Nov 28	-7.8	-8.7	-9.3	-9.3	-10.6	-13.1	-15.2	-16.3	-17.4	-17.7	-14.5	-9.2	-4	-3.1	-2.7	-3.6	-4.6	-5.2	-5.4	-4.2	-2.7	-3.9	-3.6	-2.1	-17.7	-2.1	-8.1
Nov 29	-1.7	-1.5	-1.9	-1.8	-0.6	0.5	-0.1	0.7	1.1	0.6	0.8	1.4	2.8	3.6	3.5	3.1	2.3	-0.3	-3	-3.9	-4.5	-5.6	-5.9	-6.4	-6.4	3.6	-0.7
Nov 30	-6.5	-7.3	-5	-4.8	-5.6	-5	-7	-4.6	-4.1	-4	-3.5	-2.9	-1.1	2.6	5.8	5.4	4.9	3.8	2.2	1.2	1	1	0.6	0.4	-7.3	5.8	-1.4
Diurnal Maximum	12.3	12.0	11.4	11.2	11.4	11.3	10.5	9.9	9.1	7.7	7.6	8.8	10.3	12.3	12.9	14.2	14.8	14.2	13.7	12.8	12.7	12.2	11.6	12.3			
Diurnal Average	-8.7	-8.8	-9.1	-9.4	-9.5	-9.5	-9.7	-9.8	-9.8	-9.2	-7.9	-6.5	-5.1	-4.1	-3.7	-3.7	-4.5	-5.6	-6.5	-7.1	-7.6	-8.0	-8.3	-8.5			

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

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

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



peace river area monitoring program
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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

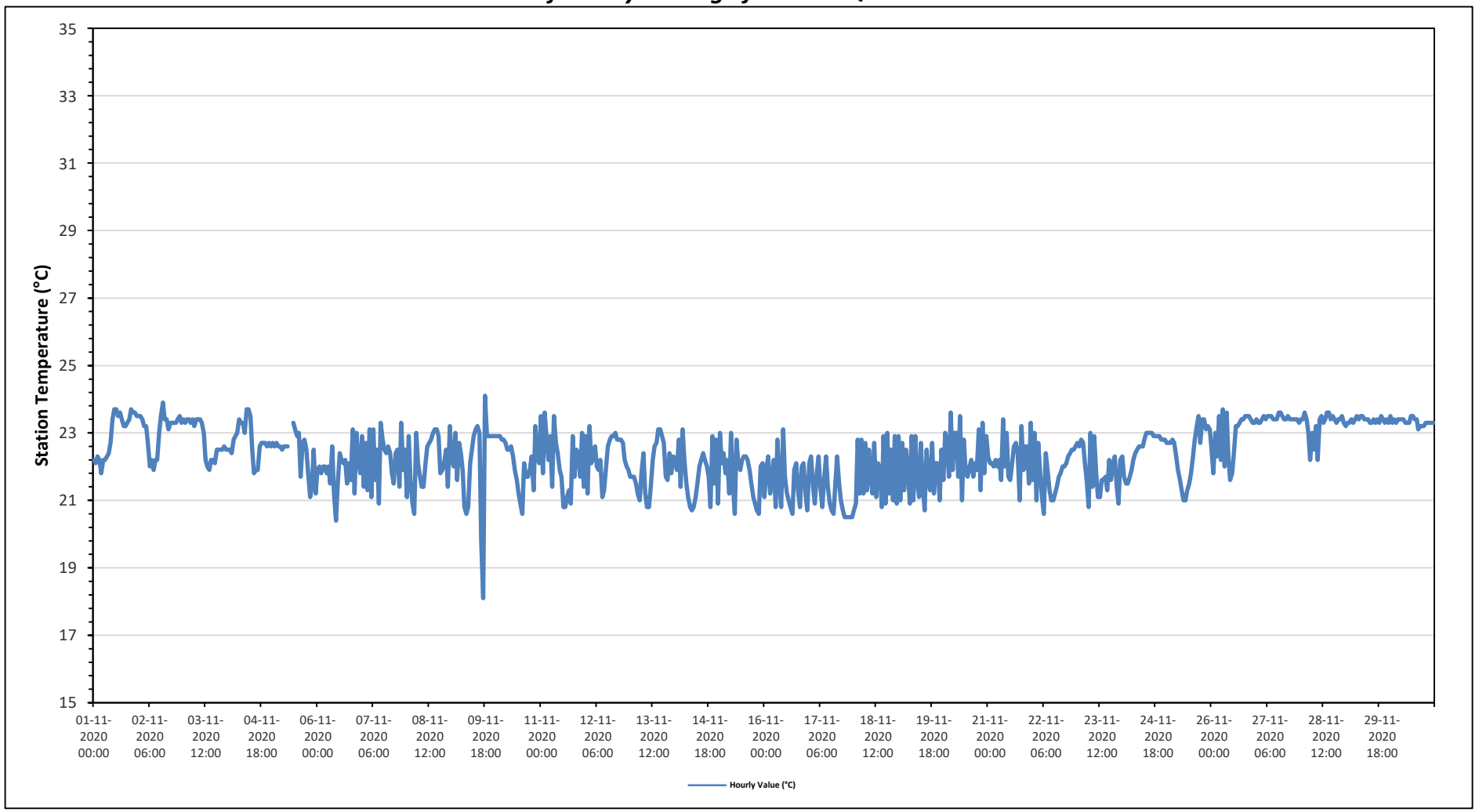
Maximum Hourly Value:	24.1	°C	on November 9 at hour 18	Hours in Service:	720
Maximum Daily Value:	23.4	°C	on November 27	Hours of Data:	718
Minimum Hourly Value:	18.1	°C	on November 9 at hour 17	Hours of Missing Data:	2
Minimum Daily Value:	21.3	°C	on November 17	Hours of Calibration:	0
Monthly Average:	22.4	°C		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	22.2	22.1	22.3	22.2	21.8	22.2	22.2	22.3	22.4	22.7	23.4	23.7	23.7	23.5	23.6	23.4	23.2	23.2	23.3	23.4	23.7	23.6	23.6	23.5	21.8	23.7	23.0
Nov 2	23.5	23.5	23.4	23.2	23.2	22.7	22.0	22.2	21.9	22.2	22.2	23.0	23.5	23.9	23.4	23.4	23.1	23.3	23.3	23.3	23.3	23.4	23.5	23.3	21.9	23.9	23.1
Nov 3	23.4	23.3	23.4	23.4	23.3	23.4	23.2	23.4	23.4	23.4	23.3	23.0	22.2	22.0	21.9	22.2	22.2	22.1	22.5	22.5	22.5	22.5	22.6	22.5	21.9	23.4	22.8
Nov 4	22.5	22.5	22.4	22.8	22.9	23.0	23.4	23.3	23.3	23.0	23.7	23.7	23.5	22.5	21.8	21.9	21.9	22.6	22.7	22.7	22.7	22.6	22.7	22.6	21.8	23.7	22.8
Nov 5	22.7	22.6	22.7	22.6	22.6	22.5	22.6	22.6	22.6	Y	Y	23.3	23.1	22.9	23.0	21.7	22.7	22.8	22.5	21.8	21.1	21.4	22.5	21.2	21.1	23.3	22.4
Nov 6	21.9	22.0	21.8	22.0	22.0	21.8	22.0	21.5	22.6	21.2	20.4	21.5	22.4	22.2	22.1	22.2	21.5	22.1	21.6	23.1	21.2	23.0	22.2	21.8	20.4	23.1	21.9
Nov 7	22.9	21.4	22.7	21.3	23.1	21.1	23.1	21.6	22.5	20.9	23.3	22.8	22.5	22.4	22.6	22.4	21.8	21.5	22.4	22.5	21.4	23.3	21.9	22.5	20.9	23.3	22.2
Nov 8	21.1	22.9	21.6	20.9	20.6	23.0	22.1	21.7	21.4	21.4	22.1	22.6	22.7	22.8	23.0	23.1	23.1	22.9	21.8	21.9	22.1	22.5	21.4	23.2	20.6	23.2	22.2
Nov 9	22.2	22.0	23.0	21.6	22.7	22.4	21.9	20.8	20.6	20.8	22.1	22.5	22.9	23.1	23.2	23.0	19.8	**18.1**	**24.1**	22.9	22.9	22.9	22.9	22.9	**18.1**	**24.1**	22.1
Nov 10	22.9	22.9	22.9	22.8	22.8	22.7	22.5	22.5	22.6	22.3	21.9	21.6	21.2	20.9	20.6	22.1	21.7	21.7	21.9	22.3	21.3	23.2	22.3	22.1	20.6	23.2	22.2
Nov 11	23.5	21.8	23.6	22.8	22.2	22.9	21.4	23.5	22.7	22.4	21.9	21.7	20.8	20.8	21.1	21.3	20.9	22.9	21.7	22.5	22.3	21.7	23.0	21.4	20.8	23.6	22.1
Nov 12	22.9	21.2	23.2	22.1	22.3	22.6	22.0	21.9	22.2	21.1	21.3	22.0	22.6	22.8	22.9	22.9	23.0	22.8	22.8	22.8	22.7	22.2	22.0	21.9	21.1	23.2	22.3
Nov 13	21.7	21.7	21.7	21.5	21.2	21.0	21.8	22.4	21.2	20.8	20.8	21.4	22.2	22.6	22.7	23.1	23.1	22.9	22.7	21.7	21.6	22.4	21.8	22.3	20.8	23.1	21.9
Nov 14	22.2	21.9	22.8	21.4	23.1	22.2	21.5	21.1	20.8	20.7	20.8	21.1	21.5	22.0	22.2	22.4	22.2	22.0	21.7	20.8	22.9	21.5	22.8	20.9	20.7	23.1	21.8
Nov 15	23.0	22.1	22.4	21.8	22.2	21.2	23.0	21.4	20.6	22.8	22.1	21.9	22.2	22.3	22.3	22.2	21.9	21.5	21.1	20.9	20.7	20.6	22.0	22.1	20.6	23.0	21.8
Nov 16	21.1	21.9	22.3	21.2	21.7	22.2	20.8	22.8	21.5	20.8	23.1	21.7	21.2	21.0	20.8	20.6	21.9	22.1	21.3	20.8	22.0	22.1	21.2	20.7	20.6	23.1	21.5
Nov 17	22.1	22.3	21.4	20.9	21.8	22.3	21.4	20.8	21.6	22.3	21.4	20.9	20.7	20.6	21.5	22.3	21.5	21.0	20.7	20.5	20.5	20.5	20.5	20.5	20.5	22.3	21.3
Nov 18	20.7	20.9	22.8	21.2	22.8	21.2	22.7	21.3	22.5	21.7	21.2	22.7	21.1	22.1	21.9	20.8	22.9	20.9	23.0	21.2	22.5	21.0	22.9	20.9	20.7	23.0	21.8
Nov 19	22.9	21.0	22.7	21.3	22.5	21.9	20.9	22.9	21.0	22.9	21.6	21.1	22.7	21.4	20.7	22.5	21.6	21.3	22.7	21.2	22.1	22.1	21.0	22.5	20.7	22.9	21.9
Nov 20	21.6	23.0	22.7	21.7	23.6	21.9	23.0	23.0	21.7	23.5	21.0	22.8	21.8	21.7	22.0	22.2	21.7	22.1	21.9	23.1	21.3	23.3	21.8	22.9	21.0	23.6	22.3
Nov 21	22.3	22.1	22.1	22.0	22.2	22.0	22.2	21.6	23.4	22.0	23.0	21.7	21.6	22.1	22.6	22.7	22.4	21.0	23.2	21.9	22.6	22.6	21.5	23.3	21.0	23.4	22.3
Nov 22	21.6	23.0	21.0	22.7	21.9	21.1	20.6	22.4	21.9	21.3	21.0	21.0	21.2	21.4	21.7	21.8	22.0	22.0	22.1	22.3	22.4	22.5	22.5	22.6	20.6	23.0	21.8
Nov 23	22.7	22.6	22.8	22.7	22.1	21.6	20.8	23.0	21.4	22.9	21.8	21.1	21.1	21.6	21.6	21.7	21.3	22.2	21.6	22.1	22.3	21.4	20.9	22.2	20.8	23.0	21.9
Nov 24	22.3	21.7	21.5	21.5	21.7	21.9	22.2	22.4	22.5	22.6	22.6	22.6	22.8	23.0	23.0	23.0	23.0	22.9	22.9	22.9	22.9	22.8	22.8	22.8	21.5	23.0	22.5
Nov 25	22.7	22.7	22.7	22.8	22.7	22.3	21.9	21.6	21.3	21.0	21.0	21.3	21.5	21.8	22.3	22.8	23.2	23.5	22.7	23.4	23.4	23.1	23.2	23.1	21.0	23.5	22.4
Nov 26	22.5	21.8	23.0	22.3	23.5	22.2	23.7	22.0	23.6	22.3	21.6	21.8	22.4	23.2	23.2	23.3	23.4	23.4	23.5	23.5	23.5	23.4	23.3	23.3	21.6	23.7	22.9
Nov 27	23.4	23.3	23.3	23.4	23.5	23.4	23.5	23.5	23.5	23.4	23.4	23.4	23.6	23.6	23.5	23.4	23.4	23.5	23.4	23.4	23.4	23.4	23.4	23.3	23.3	23.6	**23.4**
Nov 28	23.4	23.4	23.6	23.4	23.0	22.2	23.0	22.5	23.2	22.2	23.4	23.5	23.3	23.4	23.6	23.6	23.4	23.5	23.4	23.3	23.4	23.4	23.5	23.3	22.2	23.6	23.2
Nov 29	23.2	23.3	23.3	23.4	23.3	23.4	23.5	23.4	23.5	23.5	23.4	23.4	23.4	23.3	23.3	23.4	23.3	23.4	23.3	23.5	23.4	23.3	23.4	23.3	23.2	23.5	23.4
Nov 30	23.5	23.3	23.4	23.3	23.4	23.4	23.4	23.4	23.3	23.3	23.3	23.5	23.5	23.4	23.4	23.1	23.2	23.2	23.2	23.3	23.3	23.3	23.3	23.3	23.1	23.5	23.3
Diurnal Maximum	23.5	23.5	23.6	23.4	23.6	23.4	23.7	23.5	23.6	23.5	23.7	23.7	23.7	23.9	23.6	23.6	23.4	23.5	24.1	23.5	23.7	23.6	23.6	23.5			
Diurnal Average	22.5	22.3	22.6	22.2	22.5	22.3	22.3	22.3	22.2	22.1	22.1	22.3	22.3	22.3	22.4	22.5	22.3	22.3	22.5	22.4	22.4	22.5	22.4	22.4			

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

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

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



peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

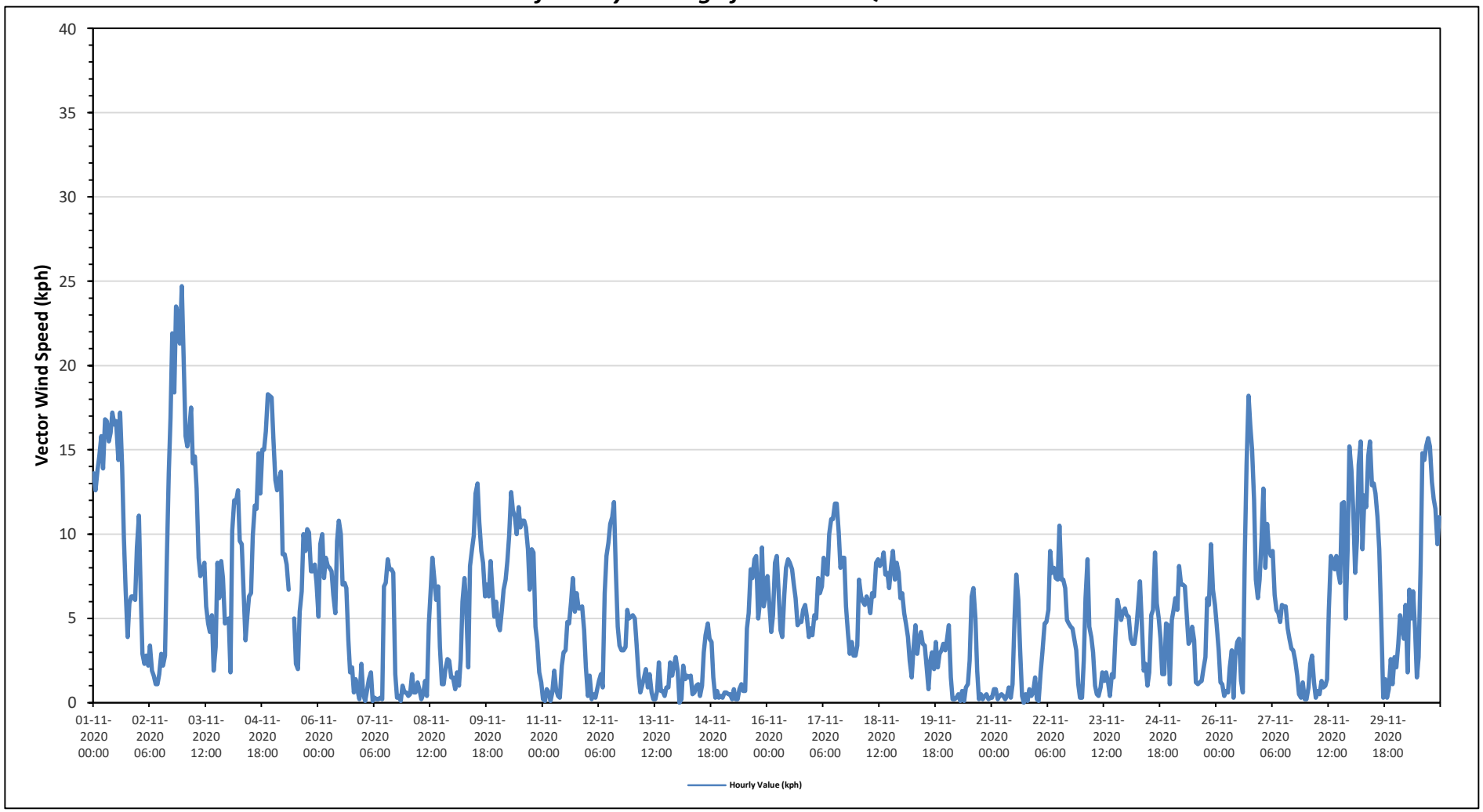
Maximum Hourly Value:	24.7	kph	on November 2 at hour 23	Hours in Service:	720
Maximum Daily Value:	12.3	kph	on November 1	Hours of Data:	718
Minimum Hourly Value:	0.0	kph	on November 14 at hour 1	Hours of Missing Data:	2
Minimum Daily Value:	0.3	kph	on November 14	Hours of Calibration:	0
Monthly Average:	1.6	kph		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Nov 1	13.6	12.6	13.8	14.6	15.8	13.9	16.8	16.7	15.5	16.0	17.2	16.5	16.7	14.4	17.2	14.0	9.8	6.7	3.9	5.9	6.3	6.3	6.1	9.2	3.9	17.2	**12.3**
Nov 2	11.1	6.6	2.9	2.3	2.8	2.2	3.4	1.9	1.6	1.1	1.1	1.7	2.9	2.2	2.8	8.3	13.6	16.9	21.9	18.4	23.5	23.0	21.3	**24.7**	1.1	**24.7**	7.3
Nov 3	20.6	15.8	15.2	16.1	17.5	14.2	14.6	12.7	8.6	7.5	7.8	8.3	5.7	4.7	4.2	5.2	1.9	3.3	8.3	6.2	8.4	7.4	4.7	4.9	1.9	20.6	5.0
Nov 4	5.0	1.8	10.2	12.0	11.9	12.6	9.6	9.4	6.7	3.7	5.1	6.3	6.5	9.9	11.7	11.5	14.8	12.4	15.0	15.0	16.1	18.3	18.2	18.1	1.8	18.3	4.9
Nov 5	15.7	13.2	12.6	13.2	13.7	8.8	8.8	8.2	6.7	**Y**	**Y**	5.0	2.3	2.0	5.4	6.6	10.0	9.0	10.3	10.1	7.8	7.8	8.2	7.1	2.0	15.7	2.6
Nov 6	5.1	9.4	10.0	7.4	8.6	8.1	8.0	7.8	6.4	5.3	9.6	10.8	10.0	7.0	7.1	6.8	3.7	1.8	2.1	0.6	1.4	0.7	0.2	2.3	0.2	10.8	5.0
Nov 7	0.5	0.1	0.7	1.4	1.8	0.1	0.3	0.2	0.2	0.3	0.2	6.9	7.1	8.5	7.9	7.9	7.7	1.7	0.3	0.4	0.1	1.0	0.6	0.6	0.1	8.5	2.2
Nov 8	0.4	0.5	1.7	0.6	0.6	1.2	0.8	0.2	0.5	1.3	0.4	4.7	6.6	8.6	7.3	6.1	6.9	3.3	1.1	1.1	2.0	2.6	2.5	1.5	0.2	8.6	1.4
Nov 9	1.5	0.8	1.8	1.0	2.6	6.0	7.4	5.6	2.1	8.1	9.1	9.9	12.4	13.0	10.7	9.0	8.3	6.3	7.0	6.3	8.4	6.7	5.1	6.0	0.8	13.0	4.1
Nov 10	4.6	4.3	5.5	6.7	7.3	8.4	9.9	12.5	11.4	11.0	10.0	11.6	10.4	10.8	10.8	10.4	9.1	6.7	9.1	8.9	4.5	3.6	1.8	1.2	1.2	12.5	7.7
Nov 11	0.2	0.1	0.8	0.6	0.1	0.6	1.9	0.8	0.4	0.3	2.2	3.0	3.1	4.8	4.7	6.0	7.4	5.4	6.5	5.6	5.6	5.7	4.3	2.1	0.1	7.4	2.9
Nov 12	0.4	1.6	0.2	0.5	0.3	0.8	1.3	1.7	0.9	6.5	8.7	9.5	10.6	11.0	11.9	8.0	4.5	3.4	3.1	3.1	3.3	5.5	5.0	5.1	0.2	11.9	3.8
Nov 13	5.2	5.0	3.5	1.6	0.6	1.0	1.5	2.0	0.9	1.7	0.6	0.2	0.2	0.7	2.4	0.7	0.7	0.4	0.9	0.9	2.4	1.6	2.2	2.7	0.2	5.2	0.5
Nov 14	1.9	**0.0**	0.2	2.2	1.4	1.6	1.5	1.6	0.5	0.6	1.0	1.1	0.4	1.0	3.0	4.0	4.7	3.8	3.6	1.5	0.3	0.7	0.3	0.4	**0.0**	4.7	**0.3**
Nov 15	0.3	0.6	0.6	0.5	0.5	0.2	0.8	0.2	0.2	0.8	1.1	0.7	0.7	4.4	5.3	7.9	7.4	8.5	8.7	5.0	6.0	9.2	5.7	6.4	0.2	9.2	2.9
Nov 16	7.5	5.9	4.2	5.2	8.3	8.7	6.4	4.3	3.9	6.4	8.0	8.5	8.3	7.9	7.0	6.2	4.6	4.8	4.8	5.5	5.8	5.1	3.9	4.4	3.9	8.7	5.8
Nov 17	4.0	5.2	5.0	7.4	6.5	6.9	8.6	7.7	7.6	10.0	10.9	10.9	11.8	11.8	10.1	8.0	8.6	8.6	5.7	4.1	2.9	3.6	2.8	2.8	2.8	11.8	6.6
Nov 18	3.4	7.3	6.3	6.0	5.8	6.3	6.0	5.3	6.5	6.3	8.3	8.5	8.1	8.3	8.9	7.6	7.7	6.8	8.1	9.0	7.3	8.3	7.7	6.2	3.4	9.0	6.9
Nov 19	6.5	5.3	4.7	3.9	2.5	1.5	3.2	4.6	2.9	3.8	4.2	3.5	3.4	2.2	0.8	2.5	3.0	2.0	3.6	2.1	2.9	3.1	3.5	3.1	0.8	6.5	1.2
Nov 20	3.8	4.6	1.5	0.2	0.2	0.3	0.5	0.1	0.7	0.1	0.9	1.1	2.5	6.3	6.8	5.0	1.9	0.2	0.5	0.2	0.4	0.5	0.2	0.3	0.1	6.8	0.7
Nov 21	0.3	0.8	0.8	0.2	0.4	0.5	0.4	0.2	0.4	0.9	0.3	1.1	5.0	7.6	6.1	3.2	0.4	**0.0**	0.5	0.1	0.8	0.4	0.6	1.5	**0.0**	7.6	1.1
Nov 22	0.2	0.1	1.8	3.0	4.7	4.8	5.5	9.0	7.7	8.0	7.4	7.3	10.5	7.3	7.3	6.8	4.9	4.7	4.5	4.4	3.7	3.1	1.1	0.3	0.1	10.5	4.8
Nov 23	0.3	2.5	6.2	8.5	4.5	3.9	3.0	1.0	0.5	0.4	0.9	1.8	1.3	1.8	1.2	0.4	1.7	1.5	3.9	6.1	5.6	4.9	5.4	5.6	0.3	8.5	1.0
Nov 24	5.2	5.1	3.8	3.5	3.5	4.3	5.8	7.2	4.5	1.9	2.3	1.0	1.8	5.2	5.5	8.9	5.9	5.0	3.8	1.7	1.7	4.7	4.6	1.1	1.0	8.9	0.5
Nov 25	4.9	5.5	6.2	5.5	8.1	7.0	7.0	6.9	5.3	3.5	3.7	4.5	3.7	1.2	1.1	1.2	1.3	2.0	2.7	6.2	5.8	9.4	6.7	5.8	1.1	9.4	4.7
Nov 26	4.6	3.1	1.2	1.1	0.4	0.7	0.6	2.1	3.1	0.3	2.8	3.6	3.8	1.3	0.6	8.8	14.1	18.2	16.4	15.0	12.0	7.3	6.2	7.3	0.3	18.2	3.9
Nov 27	9.8	12.7	8.0	10.6	9.1	8.7	9.0	6.4	5.5	5.3	4.8	5.8	5.7	5.7	4.4	3.8	3.2	3.1	2.5	1.6	0.5	0.3	1.2	0.2	0.2	12.7	5.2
Nov 28	0.2	0.9	2.3	2.8	1.2	0.3	0.7	0.5	1.3	0.9	1.0	1.4	5.5	8.7	8.5	7.9	8.7	7.7	7.1	11.8	11.9	5.0	9.1	15.2	0.2	15.2	4.6
Nov 29	13.8	11.5	7.7	9.6	14.1	15.5	9.1	12.3	11.6	14.6	15.5	12.9	13.0	12.4	11.0	9.1	4.3	0.3	1.4	0.3	0.8	2.6	1.1	2.7	0.3	15.5	7.8
Nov 30	2.1	3.5	5.2	4.6	3.8	5.8	1.8	6.7	5.0	6.6	4.3	1.5	2.7	8.1	14.8	14.4	15.2	15.7	15.2	13.1	12.1	11.5	9.4	11.0	1.5	15.7	3.4
Diurnal Maximum	21	16	15	16	18	16	17	17	16	16	17	17	17	14	17	14	15	18	22	18	24	23	21	25			
Diurnal Average	5.1	4.9	4.8	5.1	5.3	5.2	5.1	5.2	4.3	4.6	5.2	5.7	6.1	6.6	6.9	6.9	6.5	5.7	6.1	5.7	5.7	5.7	5.0	5.3			

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

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

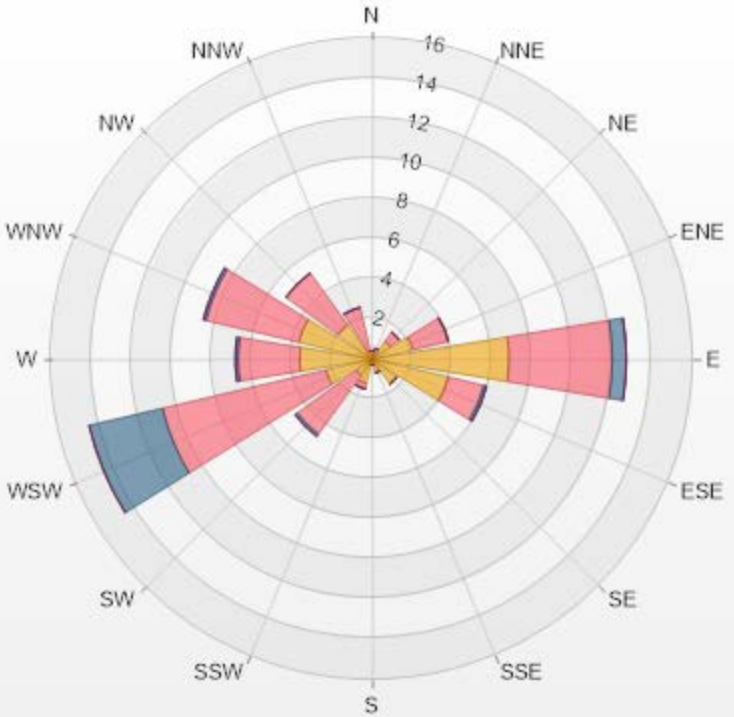
Timeseries Chart of Hourly Average for VWS - AQHI - Cadotte Lake Station



Wind: AQHI Cadotte Lake Monitor: WDS [KPH] Monthly: 11-2020 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
Calm: 28.27% Valid Data: 99.72%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.42	0	0	0	0	0.42
NNE	0.28	0.28	0	0	0	0.56
NE	1.11	0.56	0	0	0	1.67
ENE	2.09	1.81	0	0	0	3.9
E	6.82	5.15	0.7	0	0	12.67
ESE	3.9	1.81	0.14	0	0	5.85
SE	1.53	0	0	0	0	1.53
SSE	0.7	0	0	0	0	0.7
S	0.28	0	0	0	0	0.28
SSW	1.25	0.28	0	0	0	1.53
SW	0.97	3.62	0.14	0	0	4.73
WSW	2.37	8.36	3.76	0	0	14.49
W	3.62	3.06	0.14	0	0	6.82
WNW	3.76	4.74	0.14	0	0	8.64
NW	2.09	3.2	0	0	0	5.29
NNW	0.42	2.23	0	0	0	2.65
Summary	31.61	35.1	5.02	0	0	71.73

AQHI Cadotte Lake 01-11-2020 00:00 - 30-11-2020 23:00 Calm: 28.27% Calm Wind Avg Speed: 0.77(KPH)



% Icon Classes (KPH)	32 1.8-6.0	35 6.0-15.0	5 15.0-29.0	0 29.0-39.0	0 >39.0

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PEACE RIVER AREA MONITORING PROGRAM

AQHI - Cadotte Lake Station - November 2020

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

Monthly Average: 258 (WSW) degree

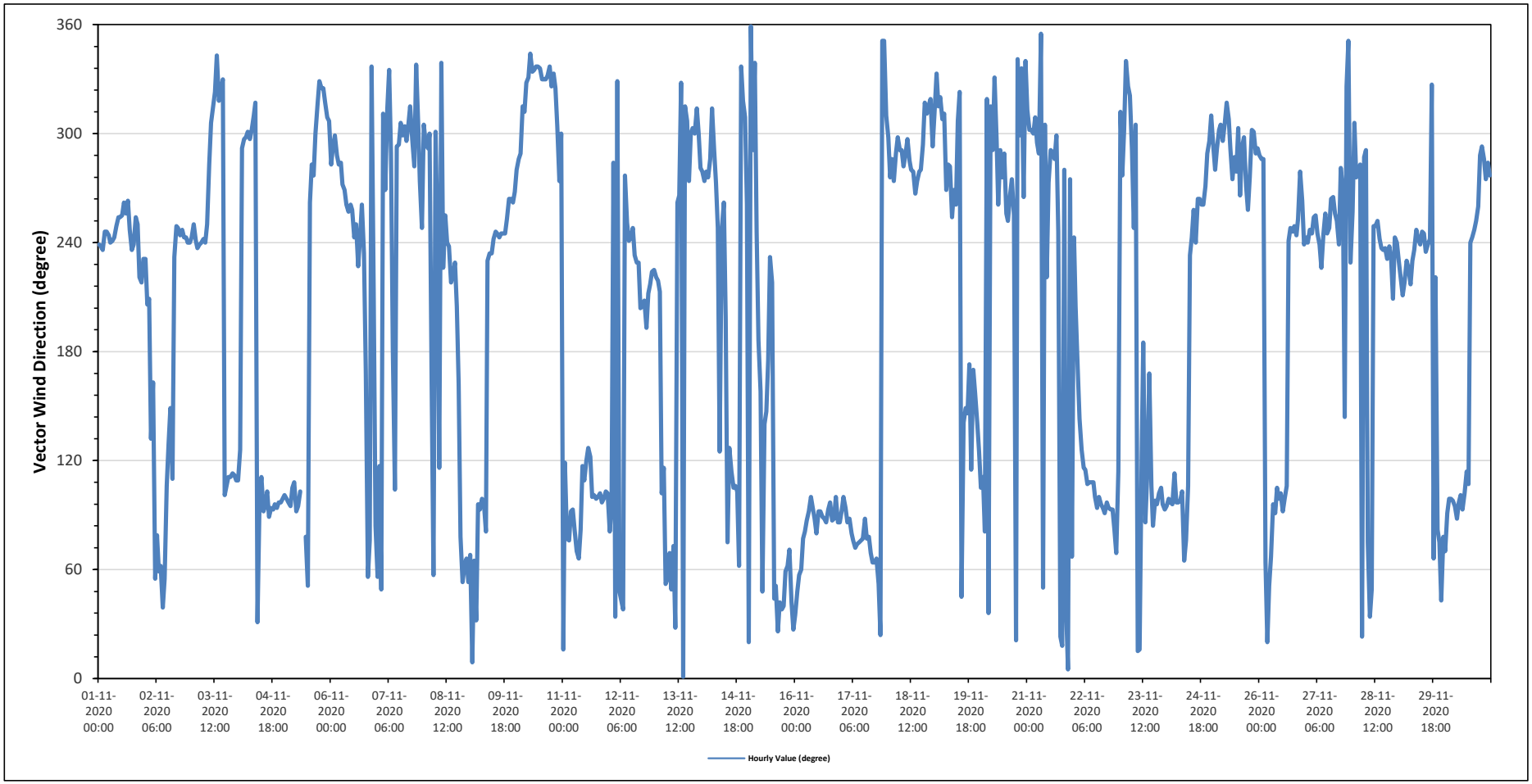
Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	0
Operational Uptime:	99.7

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
Nov 1	WSW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	W	WSW	SW	WSW	WSW	WSW	SW	SW	SW	246	WSW
Nov 2	SW	SSW	SSW	SE	SSE	NE	ENE	ENE	ENE	NE	NE	ESE	SE	SSE	ESE	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	236	SW
Nov 3	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	W	NW	NW	NW	NNW	NW	NW	NNW	E	ESE	ESE	ESE	ESE	ESE	ESE	247	WSW
Nov 4	ESE	SE	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	NNE	E	ESE	E	E	ESE	E	E	E	E	E	E	E	E	80	E
Nov 5	E	E	E	E	ESE	ESE	E	E	ESE	Y	Y	ENE	NE	W	W	W	WNW	NW	NNW	NW	NW	NW	NW	NW	50	NE
Nov 6	W	WNW	WNW	WNW	W	WNW	W	W	W	WSW	W	WSW	WSW	WSW	SW	WSW	W	SW	SSE	NE	ENE	NNW	SSW	E	267	W
Nov 7	NE	ESE	NE	NW	W	NW	NNW	WNW	S	ESE	WNW	WNW	NW	WNW	WNW	WNW	NW	NW	WNW	W	NNW	WNW	W	WSW	301	WNW
Nov 8	WNW	WNW	WNW	WNW	SSE	ENE	WNW	WSW	ESE	NNW	SW	WSW	WSW	SW	SW	SW	SW	SSW	SSE	ENE	NE	ENE	ENE	NE	232	SW
Nov 9	ENE	N	ENE	NNE	E	E	E	E	E	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	241	WSW
Nov 10	W	WNW	WNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NW	WNW	W	WNW	327	NW
Nov 11	NNE	ESE	ENE	ENE	E	E	E	ENE	ENE	E	ESE	ESE	ESE	SE	ESE	E	E	E	E	E	E	E	ESE	E	103	ESE
Nov 12	E	E	WNW	NE	NNW	NE	NE	NE	W	WSW	WSW	WSW	WSW	SW	SW	SW	SSW	SSW	SSW	S	SSW	SW	SW	SW	230	SW
Nov 13	SW	SW	SSW	E	ESE	NE	NE	ENE	NE	ENE	NNE	W	W	NNW	N	NW	NW	W	WNW	WNW	WNW	NW	WNW	W	276	W
Nov 14	W	W	W	W	WNW	NW	WNW	W	WSW	SE	WSW	W	SSW	ENE	SE	ESE	ESE	ESE	ESE	ENE	NNW	NW	NW	W	117	ESE
Nov 15	NNE	N	WNW	NNW	WSW	S	SSE	NE	SE	SE	S	SW	SW	NE	NE	NNE	NE	NE	NE	ENE	ENE	ENE	NE	NNE	46	NE
Nov 16	NE	NE	ENE	ENE	ENE	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	82	E
Nov 17	E	E	E	E	E	E	ENE	ENE	ENE	ENE	ENE	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	NE	NNE	N	N	NW	73	ENE
Nov 18	WNW	W	WNW	W	WNW	WNW	WNW	WNW	W	WNW	WNW	WNW	W	W	W	W	W	W	WNW	NW	NW	NW	NW	WNW	290	WNW
Nov 19	NW	NNW	NW	NW	NW	NW	W	W	W	WSW	W	W	NW	NW	NE	SE	SSE	SE	S	ESE	SSE	SSE	SE	SE	272	W
Nov 20	ESE	ESE	E	NW	NE	NW	WNW	NNW	WNW	W	WNW	W	WNW	WSW	WSW	W	W	WSW	NNE	NNW	WNW	NNW	W	NNW	261	W
Nov 21	NW	WNW	WNW	WNW	NW	WNW	WNW	N	NE	WNW	SW	W	WNW	WNW	WNW	WNW	WSW	NNE	NNE	W	NE	N	W	ENE	297	WNW
Nov 22	WSW	SSW	S	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	E	E	E	E	E	E	E	E	E	ENE	ESE	103	ESE
Nov 23	NW	W	WNW	NNW	NW	NW	WNW	WSW	WNW	NNE	NNE	ESE	S	E	ESE	SSE	ESE	E	E	E	E	ESE	E	E	55	NE
Nov 24	E	E	E	E	ESE	E	E	E	ESE	ENE	ENE	ESE	SW	WSW	WSW	WSW	W	W	W	W	W	WNW	WNW	NW	178	S
Nov 25	WNW	W	WNW	WNW	WNW	WNW	NW	NW	NW	WNW	W	WNW	W	WNW	W	WNW	WNW	W	WSW	W	WNW	WNW	WNW	WNW	294	WNW
Nov 26	WNW	WNW	WNW	ENE	NNE	NE	ENE	E	E	ESE	E	E	E	E	ESE	WSW	WSW	WSW	WSW	WSW	WSW	W	W	WSW	248	WSW
Nov 27	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	W	W	WSW	WSW	WSW	W	W	SE	NW	N	SW	249	WSW
Nov 28	WSW	NW	W	W	W	NNE	WNW	WNW	ENE	NE	NE	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SSW	WSW	WSW	241	WSW
Nov 29	SW	SW	SSW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	NW	ENE	SW	E	ENE	NE	ENE	233	SW
Nov 30	ENE	E	E	E	E	E	E	E	E	E	E	ESE	ESE	WSW	WSW	WSW	WSW	WSW	WNW	WNW	WNW	W	WNW	W	261	W

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

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

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



VOC CANISTER SAMPLING RESULTS

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-11 @02:20**
Canister Sample	**Methane**
Canister ID	**31820**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**3.4**	**Methane**	**Maximum Reading (ppmv)**	**-**	**-**	**Maximum Reading (ppmv)**	**12.6**	**Ethanol**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.14	2,5-Dimethylthiophene	0	0.4	1,1,1-Trichloroethane	0	0.03
Acetylene	0	0.12	2-Ethylthiophene	0	0.3	1,1,2,2-Tetrachloroethane	0	0.03
cis-2-Butene	0	0.06	2-Methylthiophene	0	0.3	1,1,2-Trichloroethane	0	0.03
Ethane	0	0.1	3-Methylthiophene	0	0.4	1,1-Dichloroethane	0	0.03
Ethylacetylene	0	0.09	Butyl mercaptan	0	0.4	1,1-Dichloroethylene	0	0.06
Ethylene	0	0.10	Carbon disulphide	0	0.3	1,2,3-Trimethylbenzene	0	0.07
Isobutane	0	0.1	Carbonyl sulphide	0	0.4	1,2,4-Trichlorobenzene	0	1.2
Isobutylene	0	0.1	Dimethyl disulphide	0	0.3	1,2,4-Trimethylbenzene	0	0.07
Methane	3.4	0.1	Dimethyl sulphide	0	0.3	1,2-Dibromoethane	0	0.03
n-Butane	0	0.3	Ethyl mercaptan	0	0.4	1,2-Dichlorobenzene	0	0.04
n-Propane	0	0.10	Ethyl sulphide	0	0.4	1,2-Dichloroethane	0	0.01
Propylene	0	0.1	Hydrogen sulphide	0	0.4	1,2-Dichloropropane	0	0.01
Propyne	0	0.1	Isobutyl mercaptan	0	0.4	1,3,5-Trimethylbenzene	0	0.03
trans-2-Butene	0	0.13	Isopropyl mercaptan	0	0.4	1,3-Butadiene	0	0.03
			Methyl mercaptan	0	0.3	1,3-Dichlorobenzene	0	0.4
			Pentyl mercaptan	0	0.6	1,4-Dichlorobenzene	0	0.6
			Propyl mercaptan	0	0.6	1,4-Dioxane	0	0.6
			tert-Butyl mercaptan	0	0.4	1-Butene/Isobutylene	0.58	0.03
			Thiophene	0	0.3	1-Hexene/2-Methyl-1-pentene	0.16	0.03
						1-Pentene	0.34	0.01
						2,2,4-Trimethylpentane	0	0.01
						2,2-Dimethylbutane	0.14	0.01
						2,3,4-Trimethylpentane	0	0.01
						2,3-Dimethylbutane	0	0.03
						2,3-Dimethylpentane	0	0.03
						2,4-Dimethylpentane	0.09	0.01
						2-Methylheptane	0	0.01
						2-Methylhexane	0	0.01
						2-Methylpentane	0.2	0.01
						3-Methylheptane	0	0.03
						3-Methylhexane	0.14	0.03
						3-Methylpentane	0.17	0.01
						Acetone	3.8	0.6
						Acrolein	0	0.4
						Benzene	0.28	0.01
						Benzyl chloride	0	0.6
						Bromodichloromethane	0	0.03
						Bromoform	0	0.03
						Bromomethane	0	0.01
						Carbon disulfide	0	0.01
						Carbon tetrachloride	0.11	0.01
						Chlorobenzene	0	0.03
						Chloroethane	0	0.03
						Chloroform	0	0.03
						Chloromethane	0	0.03
						cis-1,2-Dichloroethene	0	0.01
						cis-1,3-Dichloropropene	0	0.06
						cis-2-Butene	0	0.03
						cis-2-Pentene	0	0.03
						Cyclohexane	0.36	0.03
						Cyclopentane	0.23	0.01
						Dibromochloromethane	0	0.01
						Ethanol	12.6	0.4
						Ethyl acetate	0	0.6
						Ethylbenzene	0	0.01
						Freon-11	0.33	0.03
						Freon-113	0.15	0.01
						Freon-114	0	0.03

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-11 @02:20**
Canister Sample	**Methane**
Canister ID	**31820**

Method	**NA-025**	**Method**	**NA-024**	**Method**	**AC-058**
Maximum Reading (ppmv)	**3.4 Methane**	**Maximum Reading (ppmv)**	**- -**	**Maximum Reading (ppmv)**	**12.6 Ethanol**

Parameter	**Result (ppmv)**	**RDL (ppmv)**

Parameter	**Result (ppbv)**	**RDL (ppbv)**

Parameter	**Result (ppbv)**	**RDL (ppbv)**
Freon-12	0.53	0.03
Hexachloro-1,3-butadiene	0	0.72
Isobutane	0.85	0.03
Isopentane	0.91	0.04
Isoprene	0	0.01
Isopropyl alcohol	4.1	0.6
Isopropylbenzene	0	0.01
m,p-Xylene	0	0.04
m-Diethylbenzene	0	0.06
m-Ethyltoluene	0	0.12
Methyl butyl ketone	0	0.72
Methyl ethyl ketone	0	0.4
Methyl isobutyl ketone	0	0.6
Methyl methacrylate	0	0.10
Methyl tert butyl ether	0	0.04
Methylcyclohexane	0	0.01
Methylcyclopentane	0.24	0.03
Methylene chloride	0	0.4
n-Butane	0.38	0.04
n-Decane	0	0.09
n-Dodecane	0	0.6
n-Heptane	0	0.01
n-Hexane	0.28	0.01
n-Nonane	0	0.01
n-Octane	0	0.03
n-Pentane	0.4	0.1
n-Propylbenzene	0	0.07
n-Undecane	0	0.7
Naphthalene	0	0.7
o-Ethyltoluene	0	0.01
o-Xylene	0	0.01
p-Diethylbenzene	0	0.06
p-Ethyltoluene	0	0.10
Styrene	0	0.06
Tetrachloroethylene	0	0.06
Tetrahydrofuran	0	0.6
Toluene	0.32	0.01
trans-1,2-Dichloroethylene	9.88	0.01
trans-1,3-Dichloropropylene	0	0.06
trans-2-Butene	0	0.01
trans-2-Pentene	0	0.03
Trichloroethylene	0	0.06
Vinyl acetate	0	0.6
Vinyl chloride	0	0.03

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-11 @02:20**
Canister Sample	**Blank**
Canister ID	**31823**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**0.4**	**Methane**	**Maximum Reading (ppmv)**	**-**		**Maximum Reading (ppmv)**	**0.9**	**Ethanol**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.10	2,5-Dimethylthiophene	0	0.3	1,1,1-Trichloroethane	0	0.02
Acetylene	0	0.08	2-Ethylthiophene	0	0.2	1,1,2,2-Tetrachloroethane	0	0.02
cis-2-Butene	0	0.04	2-Methylthiophene	0	0.2	1,1,2-Trichloroethane	0	0.02
Ethane	0	0.1	3-Methylthiophene	0	0.3	1,1-Dichloroethane	0	0.02
Ethylacetylene	0	0.06	Butyl mercaptan	0	0.3	1,1-Dichloroethylene	0	0.04
Ethylene	0	0.07	Carbon disulphide	0	0.2	1,2,3-Trimethylbenzene	0	0.05
Isobutane	0	0.1	Carbonyl sulphide	0	0.3	1,2,4-Trichlorobenzene	0	0.8
Isobutylene	0	0.1	Dimethyl disulphide	0	0.2	1,2,4-Trimethylbenzene	0	0.05
Methane	0.4	0.1	Dimethyl sulphide	0	0.2	1,2-Dibromoethane	0	0.02
n-Butane	0	0.2	Ethyl mercaptan	0	0.3	1,2-Dichlorobenzene	0	0.03
n-Propane	0	0.07	Ethyl sulphide	0	0.3	1,2-Dichloroethane	0	0.01
Propylene	0	0.1	Hydrogen sulphide	0	0.3	1,2-Dichloropropane	0	0.01
Propyne	0	0.1	Isobutyl mercaptan	0	0.3	1,3,5-Trimethylbenzene	0	0.02
trans-2-Butene	0	0.09	Isopropyl mercaptan	0	0.3	1,3-Butadiene	0	0.02
			Methyl mercaptan	0	0.2	1,3-Dichlorobenzene	0	0.3
			Pentyl mercaptan	0	0.4	1,4-Dichlorobenzene	0	0.4
			Propyl mercaptan	0	0.4	1,4-Dioxane	0	0.4
			tert-Butyl mercaptan	0	0.3	1-Butene/Isobutylene	0.34	0.02
			Thiophene	0	0.2	1-Hexene/2-Methyl-1-pentene	0.11	0.02
						1-Pentene	0.07	0.01
						2,2,4-Trimethylpentane	0	0.01
						2,2-Dimethylbutane	0	0.01
						2,3,4-Trimethylpentane	0	0.01
						2,3-Dimethylbutane	0	0.02
						2,3-Dimethylpentane	0	0.02
						2,4-Dimethylpentane	0	0.01
						2-Methylheptane	0	0.01
						2-Methylhexane	0	0.01
						2-Methylpentane	0	0.01
						3-Methylheptane	0	0.02
						3-Methylhexane	0	0.02
						3-Methylpentane	0	0.01
						Acetone	0.5	0.4
						Acrolein	0	0.3
						Benzene	0.11	0.01
						Benzyl chloride	0	0.4
						Bromodichloromethane	0	0.02
						Bromoform	0	0.02
						Bromomethane	0	0.01
						Carbon disulfide	0	0.01
						Carbon tetrachloride	0	0.01
						Chlorobenzene	0	0.02
						Chloroethane	0	0.02
						Chloroform	0	0.02
						Chloromethane	0	0.02
						cis-1,2-Dichloroethene	0	0.01
						cis-1,3-Dichloropropene	0	0.04
						cis-2-Butene	0	0.02
						cis-2-Pentene	0	0.02
						Cyclohexane	0	0.02
						Cyclopentane	0	0.01
						Dibromochloromethane	0	0.01
						Ethanol	0.9	0.3
						Ethyl acetate	0	0.4
						Ethylbenzene	0	0.01
						Freon-11	0	0.02
						Freon-113	0	0.01
						Freon-114	0	0.02
						Freon-12	0	0.02
						Hexachloro-1,3-butadiene	0	0.5
						Isobutane	0.24	0.02
						Isopentane	0.07	0.03

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-11 @02:20**
Canister Sample	**Blank**
Canister ID	**31823**

Method	**NA-025**	**Method**	**NA-024**	**Method**	**AC-058**
Maximum Reading (ppmv)	**0.4 Methane**	**Maximum Reading (ppmv)**	**-**	**Maximum Reading (ppmv)**	**0.9 Ethanol**

Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
						Isoprene	0	0.01
						Isopropyl alcohol	0	0.4
						Isopropylbenzene	0	0.01
						m,p-Xylene	0	0.03
						m-Diethylbenzene	0	0.04
						m-Ethyltoluene	0	0.08
						Methyl butyl ketone	0	0.5
						Methyl ethyl ketone	0	0.3
						Methyl isobutyl ketone	0	0.4
						Methyl methacrylate	0	0.07
						Methyl tert butyl ether	0	0.03
						Methylcyclohexane	0	0.01
						Methylcyclopentane	0	0.02
						Methylene chloride	0	0.3
						n-Butane	0.04	0.03
						n-Decane	0	0.06
						n-Dodecane	0	0.4
						n-Heptane	0	0.01
						n-Hexane	0.17	0.01
						n-Nonane	0	0.01
						n-Octane	0	0.02
						n-Pentane	0.1	0.1
						n-Propylbenzene	0	0.05
						n-Undecane	0	0.5
						Naphthalene	0	0.5
						o-Ethyltoluene	0	0.01
						o-Xylene	0	0.01
						p-Diethylbenzene	0	0.04
						p-Ethyltoluene	0	0.07
						Styrene	0	0.04
						Tetrachloroethylene	0	0.04
						Tetrahydrofuran	0	0.4
						Toluene	0.13	0.01
						trans-1,2-Dichloroethylene	0.06	0.01
						trans-1,3-Dichloropropylene	0	0.04
						trans-2-Butene	0	0.01
						trans-2-Pentene	0	0.02
						Trichloroethylene	0	0.04
						Vinyl acetate	0	0.4
						Vinyl chloride	0	0.02

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-13 @16:55**
Canister Sample	**Methane**
Canister ID	**29002**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**3.0**	**Methane**	**Maximum Reading (ppmv)**	**-**	**-**	**Maximum Reading (ppmv)**	**2.5**	**Acetone**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.16	2,5-Dimethylthiophene	0	0.5	1,1,1-Trichloroethane	0	0.03
Acetylene	0	0.13	2-Ethylthiophene	0	0.3	1,1,2,2-Tetrachloroethane	0	0.03
cis-2-Butene	0	0.06	2-Methylthiophene	0	0.3	1,1,2-Trichloroethane	0	0.03
Ethane	0	0.2	3-Methylthiophene	0	0.5	1,1-Dichloroethane	0	0.03
Ethylacetylene	0	0.09	Butyl mercaptan	0	0.5	1,1-Dichloroethylene	0	0.06
Ethylene	0	0.11	Carbon disulphide	0	0.3	1,2,3-Trimethylbenzene	0	0.08
Isobutane	0	0.2	Carbonyl sulphide	0	0.5	1,2,4-Trichlorobenzene	0	1.3
Isobutylene	0	0.2	Dimethyl disulphide	0	0.3	1,2,4-Trimethylbenzene	0	0.08
Methane	3.0	0.2	Dimethyl sulphide	0	0.3	1,2-Dibromoethane	0	0.03
n-Butane	0	0.3	Ethyl mercaptan	0	0.5	1,2-Dichlorobenzene	0	0.05
n-Propane	0	0.11	Ethyl sulphide	0	0.5	1,2-Dichloroethane	0	0.02
Propylene	0	0.2	Hydrogen sulphide	0	0.5	1,2-Dichloropropane	0	0.02
Propyne	0	0.2	Isobutyl mercaptan	0	0.5	1,3,5-Trimethylbenzene	0	0.03
trans-2-Butene	0	0.14	Isopropyl mercaptan	0	0.5	1,3-Butadiene	0	0.03
			Methyl mercaptan	0	0.3	1,3-Dichlorobenzene	0	0.5
			Pentyl mercaptan	0	0.6	1,4-Dichlorobenzene	0	0.6
			Propyl mercaptan	0	0.6	1,4-Dioxane	0	0.6
			tert-Butyl mercaptan	0	0.5	1-Butene/Isobutylene	0.45	0.03
			Thiophene	0	0.3	1-Hexene/2-Methyl-1-pentene	0	0.03
						1-Pentene	0.3	0.02
						2,2,4-Trimethylpentane	0	0.02
						2,2-Dimethylbutane	0.14	0.02
						2,3,4-Trimethylpentane	0	0.02
						2,3-Dimethylbutane	0	0.03
						2,3-Dimethylpentane	0	0.03
						2,4-Dimethylpentane	0	0.02
						2-Methylheptane	0	0.02
						2-Methylhexane	0	0.02
						2-Methylpentane	0.19	0.02
						3-Methylheptane	0	0.03
						3-Methylhexane	0	0.03
						3-Methylpentane	0.15	0.02
						Acetone	2.5	0.6
						Acrolein	0	0.5
						Benzene	0.28	0.02
						Benzyl chloride	0	0.6
						Bromodichloromethane	0	0.03
						Bromoform	0	0.03
						Bromomethane	0	0.02
						Carbon disulfide	0	0.02
						Carbon tetrachloride	0.15	0.02
						Chlorobenzene	0	0.03
						Chloroethane	0	0.03
						Chloroform	0	0.03
						Chloromethane	0.85	0.03
						cis-1,2-Dichloroethene	0	0.02
						cis-1,3-Dichloropropene	0	0.06
						cis-2-Butene	0	0.03
						cis-2-Pentene	0	0.03
						Cyclohexane	0	0.03
						Cyclopentane	2.13	0.02
						Dibromochloromethane	0	0.02
						Ethanol	1.6	0.5
						Ethyl acetate	0	0.6
						Ethylbenzene	0	0.02
						Freon-11	0.47	0.03
						Freon-113	0.19	0.02
						Freon-114	0	0.03
						Freon-12	0.74	0.03

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-13 @16:55**
Canister Sample	**Methane**
Canister ID	**29002**

Method	**NA-025**	**Method**	**NA-024**	**Method**	**AC-058**
Maximum Reading (ppmv)	**3.0 Methane**	**Maximum Reading (ppmv)**	**- -**	**Maximum Reading (ppmv)**	**2.5 Acetone**
Parameter	**Result (ppmv) RDL (ppmv)**	**Parameter**	**Result (ppbv) RDL (ppbv)**	**Parameter**	**Result (ppbv) RDL (ppbv)**
				Hexachloro-1,3-butadiene	0 0.79
				Isobutane	1.25 0.03
				Isopentane	1.34 0.05
				Isoprene	0 0.02
				Isopropyl alcohol	2.2 0.6
				Isopropylbenzene	0 0.02
				m,p-Xylene	0 0.05
				m-Diethylbenzene	0 0.06
				m-Ethyltoluene	0 0.13
				Methyl butyl ketone	0 0.79
				Methyl ethyl ketone	0 0.5
				Methyl isobutyl ketone	0 0.6
				Methyl methacrylate	0 0.11
				Methyl tert butyl ether	0 0.05
				Methylcyclohexane	0 0.02
				Methylcyclopentane	0.19 0.03
				Methylene chloride	0 0.5
				n-Butane	1.38 0.05
				n-Decane	0 0.09
				n-Dodecane	0 0.6
				n-Heptane	0 0.02
				n-Hexane	0.31 0.02
				n-Nonane	0 0.02
				n-Octane	0 0.03
				n-Pentane	0.8 0.2
				n-Propylbenzene	0 0.08
				n-Undecane	0 0.8
				Naphthalene	0 0.8
				o-Ethyltoluene	0 0.02
				o-Xylene	0 0.02
				p-Diethylbenzene	0 0.06
				p-Ethyltoluene	0 0.11
				Styrene	0 0.06
				Tetrachloroethylene	0 0.06
				Tetrahydrofuran	0 0.6
				Toluene	0.24 0.02
				trans-1,2-Dichloroethylene	1.69 0.02
				trans-1,3-Dichloropropylene	0 0.06
				trans-2-Butene	0 0.02
				trans-2-Pentene	0 0.03
				Trichloroethylene	0 0.06
				Vinyl acetate	0 0.6
				Vinyl chloride	0 0.03

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	2020-11-13 @16:55
Canister Sample	Blank
Canister ID	28919

Method	NA-025		Method	NA-024		Method	AC-058	
Maximum Reading (ppmv)	0.8	Methane	Maximum Reading (ppmv)	-	-	Maximum Reading (ppmv)	4.15	Cyclopentane

Parameter	Result (ppmv)	RDL (ppmv)
1-Butene	0	0.10
Acetylene	0	0.08
cis-2-Butene	0	0.04
Ethane	0	0.1
Ethylacetylene	0	0.06
Ethylene	0	0.07
Isobutane	0	0.1
Isobutylene	0	0.1
Methane	0.8	0.1
n-Butane	0	0.2
n-Propane	0	0.07
Propylene	0	0.1
Propyne	0	0.1
trans-2-Butene	0	0.09

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

Parameter	Result (ppbv)	RDL (ppbv)
1,1,1-Trichloroethane	0	0.02
1,1,2,2-Tetrachloroethane	0	0.02
1,1,2-Trichloroethane	0	0.02
1,1-Dichloroethane	0	0.02
1,1-Dichloroethylene	0	0.04
1,2,3-Trimethylbenzene	0	0.05
1,2,4-Trichlorobenzene	0	0.8
1,2,4-Trimethylbenzene	0	0.05
1,2-Dibromoethane	0	0.02
1,2-Dichlorobenzene	0	0.03
1,2-Dichloroethane	0	0.01
1,2-Dichloropropane	0	0.01
1,3,5-Trimethylbenzene	0	0.02
1,3-Butadiene	0	0.02
1,3-Dichlorobenzene	0	0.3
1,4-Dichlorobenzene	0	0.4
1,4-Dioxane	0	0.4
1-Butene/Isobutylene	0.46	0.02
1-Hexene/2-Methyl-1-pentene	0	0.02
1-Pentene	0	0.01
2,2,4-Trimethylpentane	0	0.01
2,2-Dimethylbutane	0	0.01
2,3,4-Trimethylpentane	0	0.01
2,3-Dimethylbutane	0	0.02
2,3-Dimethylpentane	0	0.02
2,4-Dimethylpentane	0	0.01
2-Methylheptane	0	0.01
2-Methylhexane	0	0.01
2-Methylpentane	0	0.01
3-Methylheptane	0	0.02
3-Methylhexane	0	0.02
3-Methylpentane	0	0.01
Acetone	0	0.4
Acrolein	0	0.3
Benzene	0.09	0.01
Benzyl chloride	0	0.4
Bromodichloromethane	0	0.02
Bromoform	0	0.02
Bromomethane	0	0.01
Carbon disulfide	0	0.01
Carbon tetrachloride	0	0.01
Chlorobenzene	0	0.02
Chloroethane	0	0.02
Chloroform	0	0.02
Chloromethane	0	0.02
cis-1,2-Dichloroethene	0	0.01
cis-1,3-Dichloropropene	0	0.04
cis-2-Butene	0	0.02
cis-2-Pentene	0	0.02
Cyclohexane	0	0.02
Cyclopentane	4.15	0.01
Dibromochloromethane	0	0.01
Ethanol	0	0.3
Ethyl acetate	0	0.4
Ethylbenzene	0	0.01
Freon-11	0	0.02
Freon-113	0.03	0.01
Freon-114	0	0.02
Freon-12	0	0.02
Hexachloro-1,3-butadiene	0	0.5
Isobutane	0.3	0.02
Isopentane	0.31	0.03

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PEACE RIVER AREA MONITORING PROGRAM

Reno Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-13 @16:55**
Canister Sample	**Blank**
Canister ID	**28919**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**0.8**	**Methane**	**Maximum Reading (ppmv)**	**-**	**-**	**Maximum Reading (ppmv)**	**4.15**	**Cyclopentane**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
						Isoprene	0	0.01
						Isopropyl alcohol	0	0.4
						Isopropylbenzene	0	0.01
						m,p-Xylene	0	0.03
						m-Diethylbenzene	0	0.04
						m-Ethyltoluene	0	0.08
						Methyl butyl ketone	0	0.5
						Methyl ethyl ketone	0	0.3
						Methyl isobutyl ketone	0	0.4
						Methyl methacrylate	0	0.07
						Methyl tert butyl ether	0	0.03
						Methylcyclohexane	0	0.01
						Methylcyclopentane	0	0.02
						Methylene chloride	0	0.3
						n-Butane	0.04	0.03
						n-Decane	0	0.06
						n-Dodecane	0	0.4
						n-Heptane	0	0.01
						n-Hexane	0.17	0.01
						n-Nonane	0	0.01
						n-Octane	0	0.02
						n-Pentane	0.1	0.1
						n-Propylbenzene	0	0.05
						n-Undecane	0	0.5
						Naphthalene	0	0.5
						o-Ethyltoluene	0	0.01
						o-Xylene	0	0.01
						p-Diethylbenzene	0	0.04
						p-Ethyltoluene	0	0.07
						Styrene	0	0.04
						Tetrachloroethylene	0	0.04
						Tetrahydrofuran	0	0.4
						Toluene	0	0.01
						trans-1,2-Dichloroethylene	0	0.01
						trans-1,3-Dichloropropylene	0	0.04
						trans-2-Butene	0	0.01
						trans-2-Pentene	0	0.02
						Trichloroethylene	0	0.04
						Vinyl acetate	0	0.4
						Vinyl chloride	0	0.02

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PEACE RIVER AREA MONITORING PROGRAM

986c Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	2020-11-14 @21:20
Canister Sample	Non-methane Hydrocarbon
Canister ID	32274

Method	NA-025		Method	NA-024		Method	AC-058	
Maximum Reading (ppmv)	2.5	Methane	Maximum Reading (ppmv)	-	-	Maximum Reading (ppmv)	11.8	Cyclohexane
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.14	2,5-Dimethylthiophene	0	0.4	1,1,1-Trichloroethane	0	0.03
Acetylene	0	0.11	2-Ethylthiophene	0	0.3	1,1,2,2-Tetrachloroethane	0	0.03
cis-2-Butene	0	0.06	2-Methylthiophene	0	0.3	1,1,2-Trichloroethane	0	0.03
Ethane	0	0.1	3-Methylthiophene	0	0.4	1,1-Dichloroethane	0	0.03
Ethylacetylene	0	0.08	Butyl mercaptan	0	0.4	1,1-Dichloroethylene	0	0.06
Ethylene	0	0.10	Carbon disulphide	0	0.3	1,2,3-Trimethylbenzene	0	0.07
Isobutane	0	0.1	Carbonyl sulphide	0	0.4	1,2,4-Trichlorobenzene	0	1.1
Isobutylene	0	0.1	Dimethyl disulphide	0	0.3	1,2,4-Trimethylbenzene	0	0.07
Methane	2.5	0.1	Dimethyl sulphide	0	0.3	1,2-Dibromoethane	0	0.03
n-Butane	0	0.3	Ethyl mercaptan	0	0.4	1,2-Dichlorobenzene	0	0.04
n-Propane	0	0.10	Ethyl sulphide	0	0.4	1,2-Dichloroethane	0	0.01
Propylene	0	0.1	Hydrogen sulphide	0	0.4	1,2-Dichloropropane	0	0.01
Propyne	0	0.1	Isobutyl mercaptan	0	0.4	1,3,5-Trimethylbenzene	0	0.03
trans-2-Butene	0	0.13	Isopropyl mercaptan	0	0.4	1,3-Butadiene	0	0.03
			Methyl mercaptan	0	0.3	1,3-Dichlorobenzene	0	0.4
			Pentyl mercaptan	0	0.6	1,4-Dichlorobenzene	0	0.6
			Propyl mercaptan	0	0.6	1,4-Dioxane	0	0.6
			tert-Butyl mercaptan	0	0.4	1-Butene/Isobutylene	2.1	0.03
			Thiophene	0	0.3	1-Hexene/2-Methyl-1-pentene	0.28	0.03
						1-Pentene	1.35	0.01
						2,2,4-Trimethylpentane	0	0.01
						2,2-Dimethylbutane	0.33	0.01
						2,3,4-Trimethylpentane	0	0.01
						2,3-Dimethylbutane	0.52	0.03
						2,3-Dimethylpentane	0.77	0.03
						2,4-Dimethylpentane	0.26	0.01
						2-Methylheptane	1.62	0.01
						2-Methylhexane	1.62	0.01
						2-Methylpentane	1.35	0.01
						3-Methylheptane	0.53	0.03
						3-Methylhexane	2.63	0.03
						3-Methylpentane	1.17	0.01
						Acetone	6.9	0.6
						Acrolein	0.8	0.4
						Benzene	1.25	0.01
						Benzyl chloride	0	0.6
						Bromodichloromethane	0	0.03
						Bromoform	0	0.03
						Bromomethane	0	0.01
						Carbon disulfide	0.35	0.01
						Carbon tetrachloride	0.13	0.01
						Chlorobenzene	0	0.03
						Chloroethane	0.3	0.03
						Chloroform	0	0.03
						Chloromethane	1.09	0.03
						cis-1,2-Dichloroethene	0	0.01
						cis-1,3-Dichloropropene	0	0.06
						cis-2-Butene	0	0.03
						cis-2-Pentene	0.26	0.03
						Cyclohexane	11.8	0.03
						Cyclopentane	0.6	0.01
						Dibromochloromethane	0	0.01
						Ethanol	9.5	0.4
						Ethyl acetate	0.7	0.6
						Ethylbenzene	0.29	0.01
						Freon-11	0.36	0.03
						Freon-113	0.17	0.01
						Freon-114	0	0.03
						Freon-12	0.5	0.03

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PEACE RIVER AREA MONITORING PROGRAM

986c Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-14 @21:20**							
Canister Sample	**Non-methane Hydrocarbon**							
Canister ID	**32274**							
Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**2.5**	**Methane**	**Maximum Reading (ppmv)**	**-**	**-**	**Maximum Reading (ppmv)**	**11.8**	**Cyclohexane**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
						Hexachloro-1,3-butadiene	0	0.71
						Isobutane	1.85	0.03
						Isopentane	4.94	0.04
						Isoprene	0	0.01
						Isopropyl alcohol	1.3	0.6
						Isopropylbenzene	0	0.01
						m,p-Xylene	0.62	0.04
						m-Diethylbenzene	0	0.06
						m-Ethyltoluene	0	0.11
						Methyl butyl ketone	0	0.71
						Methyl ethyl ketone	0	0.4
						Methyl isobutyl ketone	0	0.6
						Methyl methacrylate	0	0.10
						Methyl tert butyl ether	0	0.04
						Methylcyclohexane	6.73	0.01
						Methylcyclopentane	2.46	0.03
						Methylene chloride	0	0.4
						n-Butane	1.61	0.04
						n-Decane	0	0.08
						n-Dodecane	0	0.6
						n-Heptane	6.1	0.01
						n-Hexane	3.71	0.01
						n-Nonane	0.21	0.01
						n-Octane	1.42	0.03
						n-Pentane	5.2	0.1
						n-Propylbenzene	0	0.07
						n-Undecane	0	0.7
						Naphthalene	0	0.7
						o-Ethyltoluene	0	0.01
						o-Xylene	0.34	0.01
						p-Diethylbenzene	0	0.06
						p-Ethyltoluene	0	0.10
						Styrene	0	0.06
						Tetrachloroethylene	0	0.06
						Tetrahydrofuran	0	0.6
						Toluene	3.15	0.01
						trans-1,2-Dichloroethylene	2.8	0.01
						trans-1,3-Dichloropropylene	0	0.06
						trans-2-Butene	0	0.01
						trans-2-Pentene	0	0.03
						Trichloroethylene	0	0.06
						Vinyl acetate	0	0.6
						Vinyl chloride	0	0.03

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986c Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-14 @21:20**
Canister Sample	**Blank**
Canister ID	**32220**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**0.4**	**Methane**	**Maximum Reading (ppmv)**	**2.0**	**Carbonyl sulph**	**Maximum Reading (ppmv)**	**11.5**	**Ethanol**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
1-Butene	0	0.10	2,5-Dimethylthiophene	0	0.3	1,1,1-Trichloroethane	0	0.02
Acetylene	0	0.08	2-Ethylthiophene	0	0.2	1,1,2,2-Tetrachloroethane	0	0.02
cis-2-Butene	0	0.04	2-Methylthiophene	0	0.2	1,1,2-Trichloroethane	0	0.02
Ethane	0	0.1	3-Methylthiophene	0	0.3	1,1-Dichloroethane	0	0.02
Ethylacetylene	0	0.06	Butyl mercaptan	0	0.3	1,1-Dichloroethylene	0	0.04
Ethylene	0	0.07	Carbon disulphide	0	0.2	1,2,3-Trimethylbenzene	0	0.05
Isobutane	0	0.1	Carbonyl sulphide	2.0	0.3	1,2,4-Trichlorobenzene	0	0.8
Isobutylene	0	0.1	Dimethyl disulphide	0	0.2	1,2,4-Trimethylbenzene	0	0.05
Methane	0.4	0.1	Dimethyl sulphide	0	0.2	1,2-Dibromoethane	0	0.02
n-Butane	0	0.2	Ethyl mercaptan	0	0.3	1,2-Dichlorobenzene	0	0.03
n-Propane	0	0.07	Ethyl sulphide	0	0.3	1,2-Dichloroethane	0	0.01
Propylene	0	0.1	Hydrogen sulphide	0	0.3	1,2-Dichloropropane	0	0.01
Propyne	0	0.1	Isobutyl mercaptan	0	0.3	1,3,5-Trimethylbenzene	0	0.02
trans-2-Butene	0	0.09	Isopropyl mercaptan	0	0.3	1,3-Butadiene	0	0.02
			Methyl mercaptan	0	0.2	1,3-Dichlorobenzene	0	0.3
			Pentyl mercaptan	0	0.4	1,4-Dichlorobenzene	0	0.4
			Propyl mercaptan	0	0.4	1,4-Dioxane	0	0.4
			tert-Butyl mercaptan	0	0.3	1-Butene/Isobutylene	1.06	0.02
			Thiophene	0	0.2	1-Hexene/2-Methyl-1-pentene	0	0.02
						1-Pentene	0.17	0.01
						2,2,4-Trimethylpentane	0	0.01
						2,2-Dimethylbutane	0	0.01
						2,3,4-Trimethylpentane	0	0.01
						2,3-Dimethylbutane	0	0.02
						2,3-Dimethylpentane	0	0.02
						2,4-Dimethylpentane	0	0.01
						2-Methylheptane	0	0.01
						2-Methylhexane	0	0.01
						2-Methylpentane	0	0.01
						3-Methylheptane	0	0.02
						3-Methylhexane	0	0.02
						3-Methylpentane	0	0.01
						Acetone	6	0.4
						Acrolein	0	0.3
						Benzene	0.13	0.01
						Benzyl chloride	0	0.4
						Bromodichloromethane	0	0.02
						Bromoform	0	0.02
						Bromomethane	0	0.01
						Carbon disulfide	0.11	0.01
						Carbon tetrachloride	0.06	0.01
						Chlorobenzene	0	0.02
						Chloroethane	0	0.02
						Chloroform	0	0.02
						Chloromethane	0	0.02
						cis-1,2-Dichloroethene	0	0.01
						cis-1,3-Dichloropropene	0	0.04
						cis-2-Butene	0	0.02
						cis-2-Pentene	0.31	0.02
						Cyclohexane	0	0.02
						Cyclopentane	0.37	0.01
						Dibromochloromethane	0	0.01
						Ethanol	11.5	0.3
						Ethyl acetate	0	0.4
						Ethylbenzene	0	0.01
						Freon-11	0.13	0.02
						Freon-113	0.07	0.01
						Freon-114	0	0.02
						Freon-12	0.04	0.02
						Hexachloro-1,3-butadiene	0	0.5
						Isobutane	0.95	0.02
						Isopentane	0	0.03

peace river area monitoring program pramp

PEACE RIVER AREA MONITORING PROGRAM

986c Site - November 2020

Volatile Organic Compounds (VOCs) Results

Sample Date/Time	**2020-11-14 @21:20**
Canister Sample	**Blank**
Canister ID	**32220**

Method	**NA-025**		**Method**	**NA-024**		**Method**	**AC-058**	
Maximum Reading (ppmv)	**0.4**	**Methane**	**Maximum Reading (ppmv)**	**2.0**	**Carbonyl sulph**	**Maximum Reading (ppmv)**	**11.5**	**Ethanol**
Parameter	**Result (ppmv)**	**RDL (ppmv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**	**Parameter**	**Result (ppbv)**	**RDL (ppbv)**
						Isoprene	0	0.01
						Isopropyl alcohol	0.8	0.4
						Isopropylbenzene	0	0.01
						m,p-Xylene	0	0.03
						m-Diethylbenzene	0	0.04
						m-Ethyltoluene	0	0.08
						Methyl butyl ketone	0	0.5
						Methyl ethyl ketone	0	0.3
						Methyl isobutyl ketone	0	0.4
						Methyl methacrylate	0	0.07
						Methyl tert butyl ether	0	0.03
						Methylcyclohexane	0	0.01
						Methylcyclopentane	0	0.02
						Methylene chloride	0	0.3
						n-Butane	0.12	0.03
						n-Decane	0	0.06
						n-Dodecane	0	0.4
						n-Heptane	0	0.01
						n-Hexane	0.18	0.01
						n-Nonane	0	0.01
						n-Octane	0	0.02
						n-Pentane	0.3	0.1
						n-Propylbenzene	0	0.05
						n-Undecane	0	0.5
						Naphthalene	0	0.5
						o-Ethyltoluene	0	0.01
						o-Xylene	0	0.01
						p-Diethylbenzene	0	0.04
						p-Ethyltoluene	0	0.07
						Styrene	0	0.04
						Tetrachloroethylene	0	0.04
						Tetrahydrofuran	0	0.4
						Toluene	0.15	0.01
						trans-1,2-Dichloroethylene	3.93	0.01
						trans-1,3-Dichloropropylene	0	0.04
						trans-2-Butene	0	0.01
						trans-2-Pentene	0	0.02
						Trichloroethylene	0	0.04
						Vinyl acetate	0	0.4
						Vinyl chloride	0	0.02

END OF REPORT

This page, 228 of 228, ends the November 2020 Monthly Ambient Air Quality Monitoring Report.

Peace River Area Monitoring Program

NOVEMBER 2020

Ambient Air Monitoring Calibration Report

- 842b STATION-

CAL-PRAMP-202011-01561

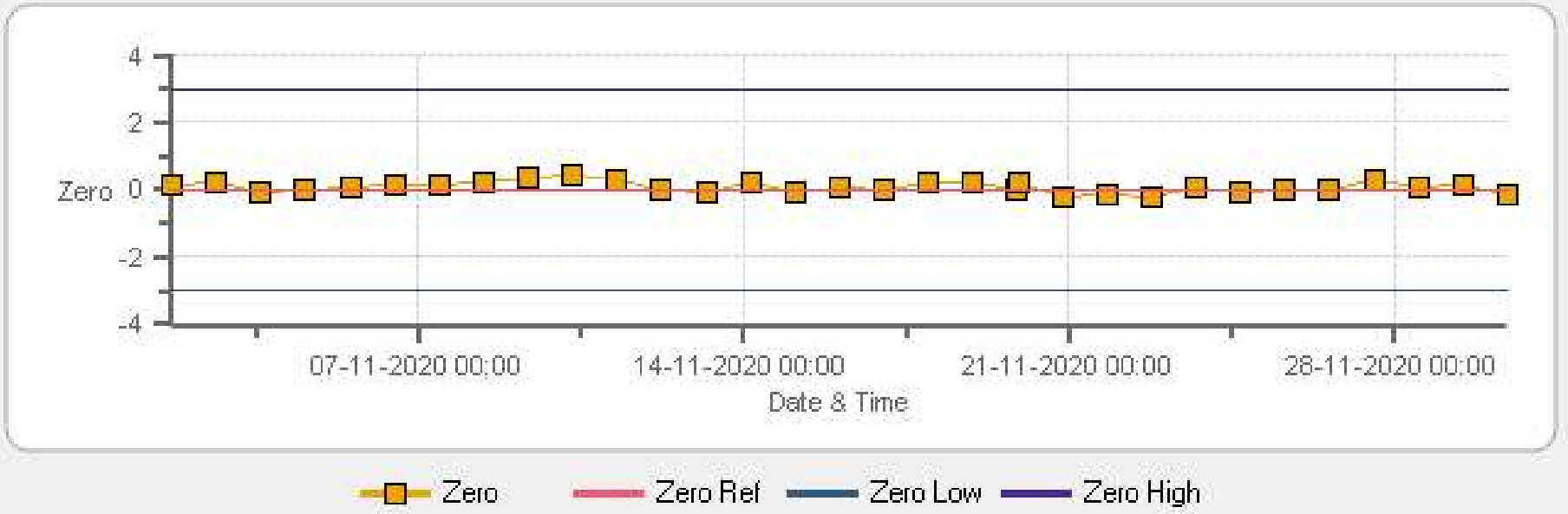
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

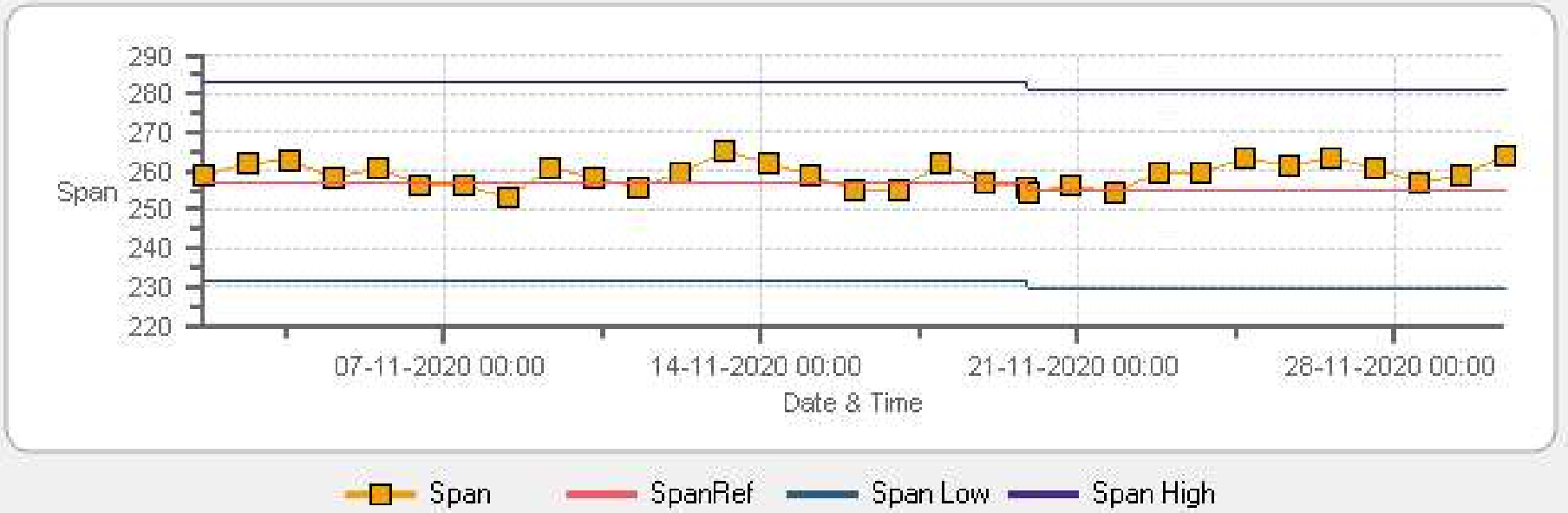
December 14, 2020

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

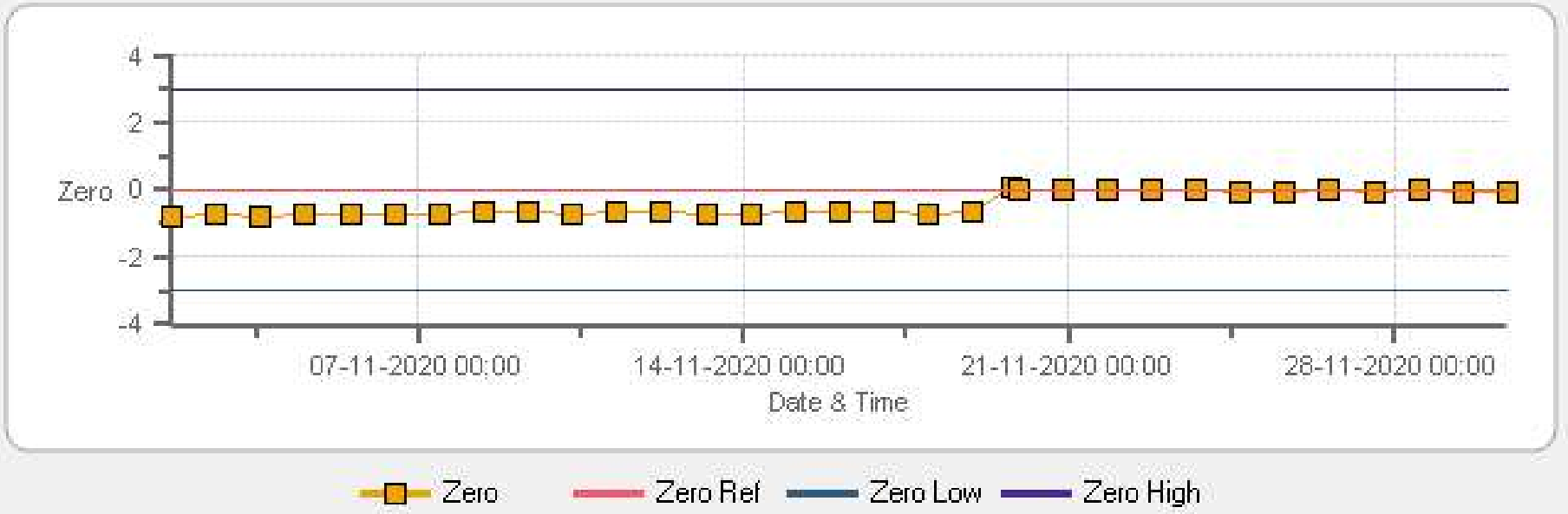
SO2[ppb] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Zero



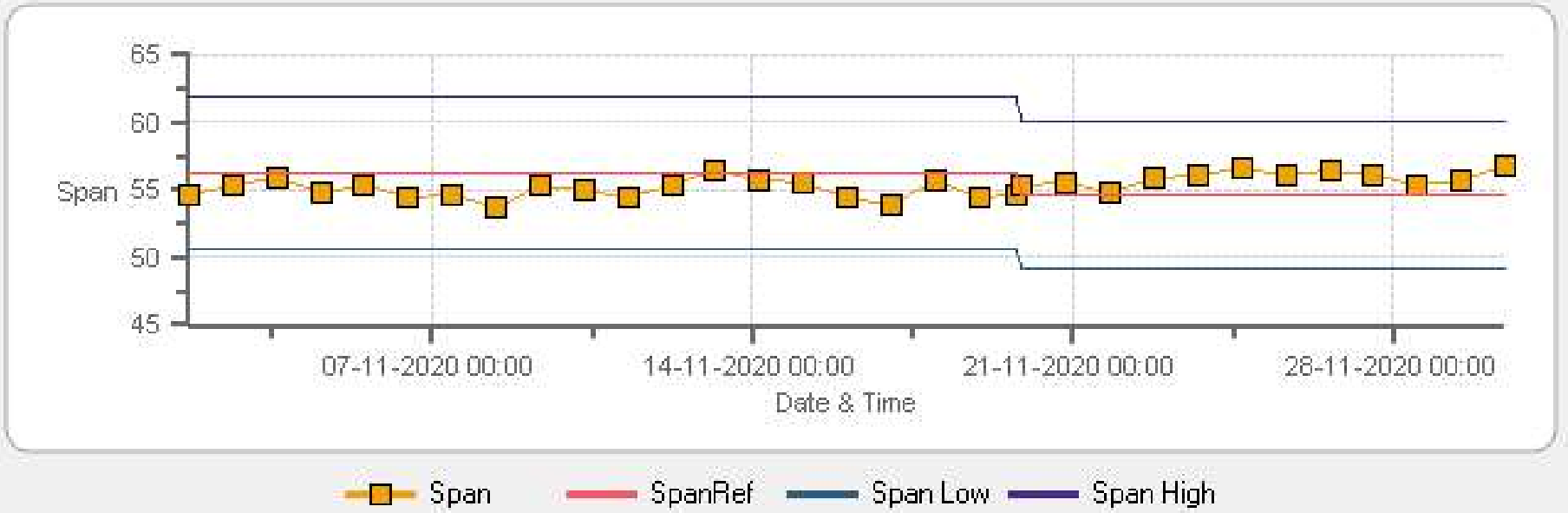
SO2[ppb] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Span



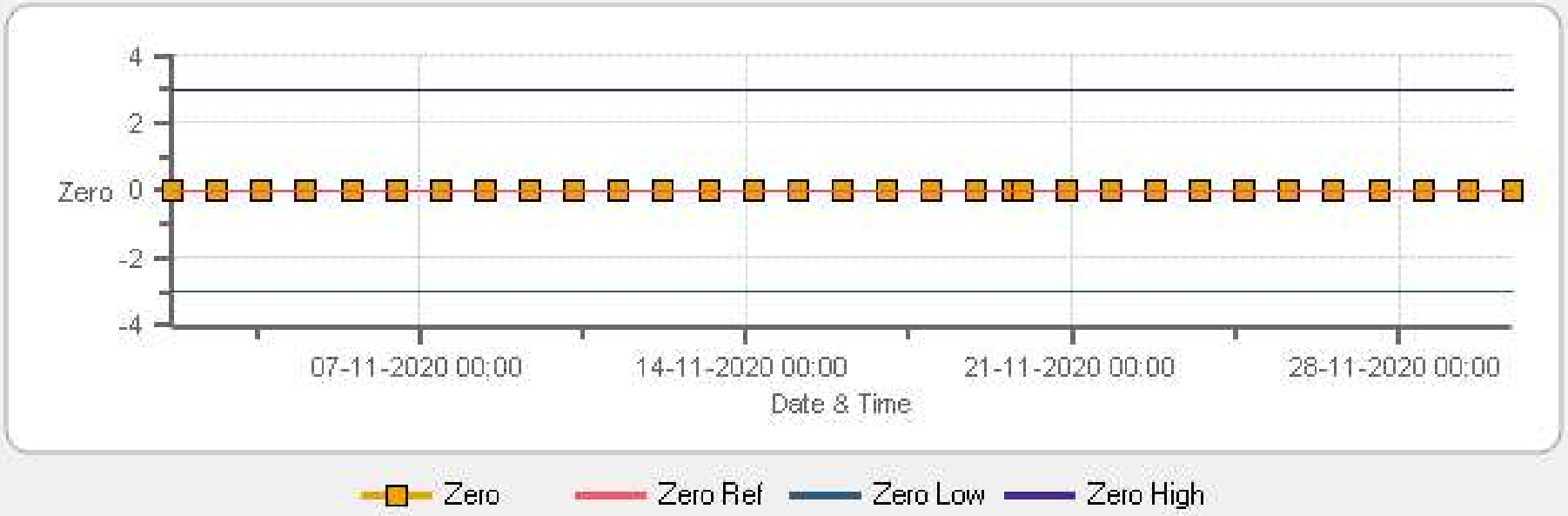
TRS[ppb] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Zero



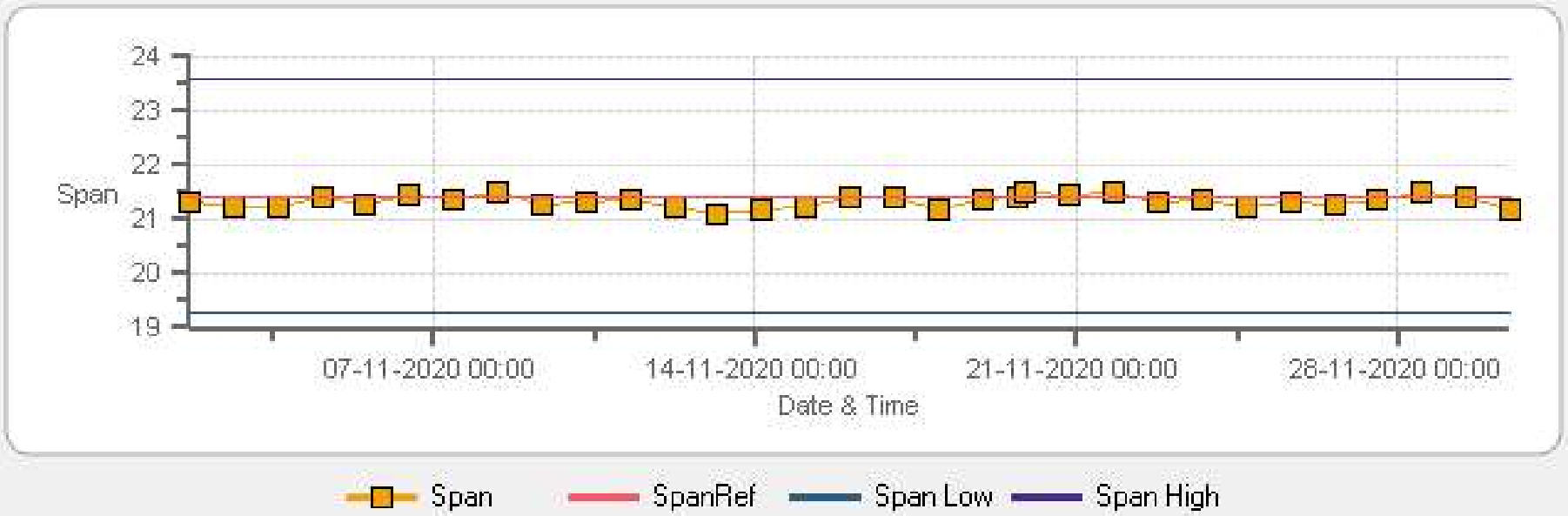
TRS[ppb] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Span



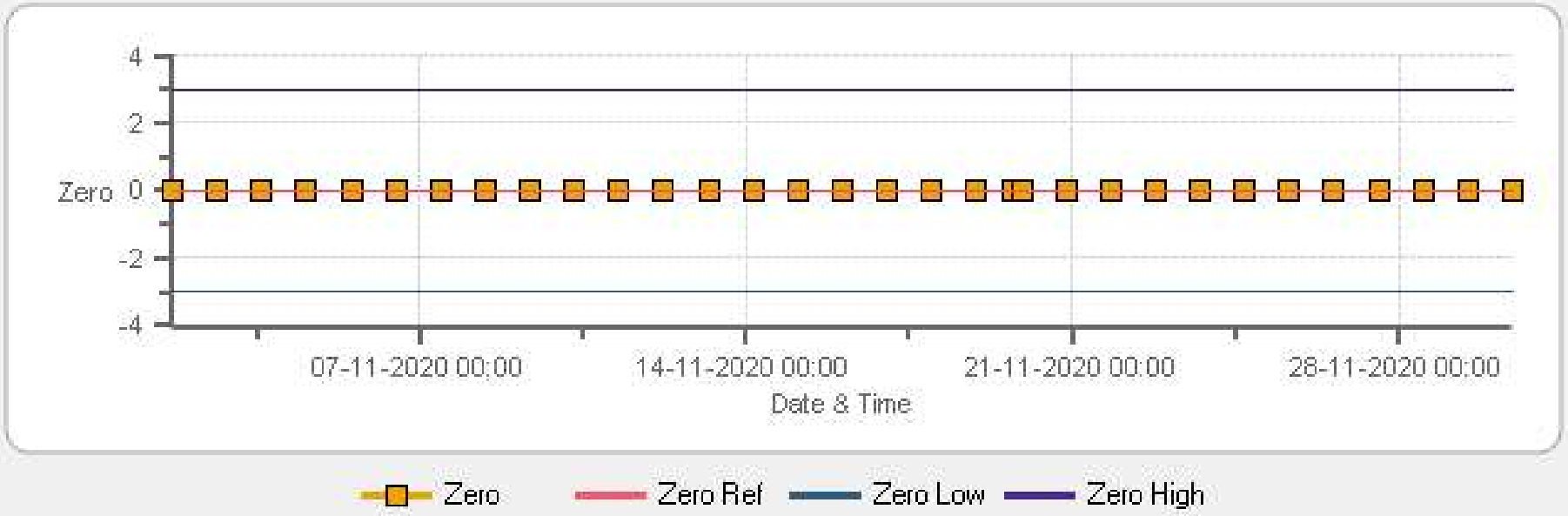
THC55[ppm] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Zero



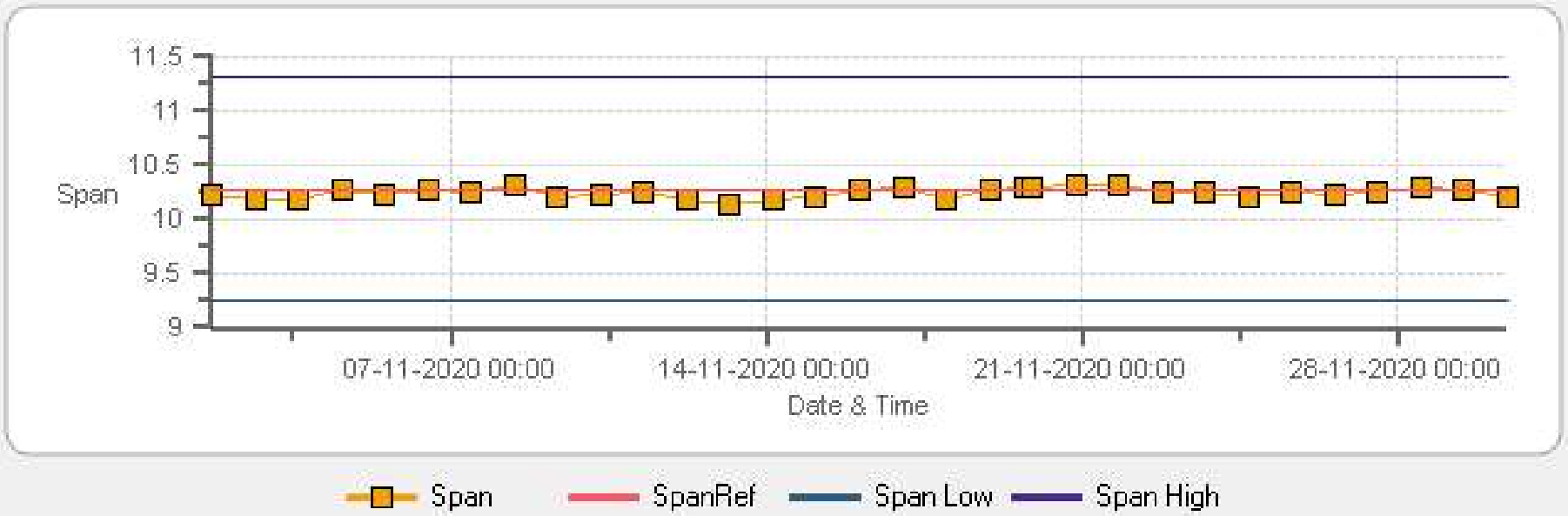
THC55[ppm] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Span



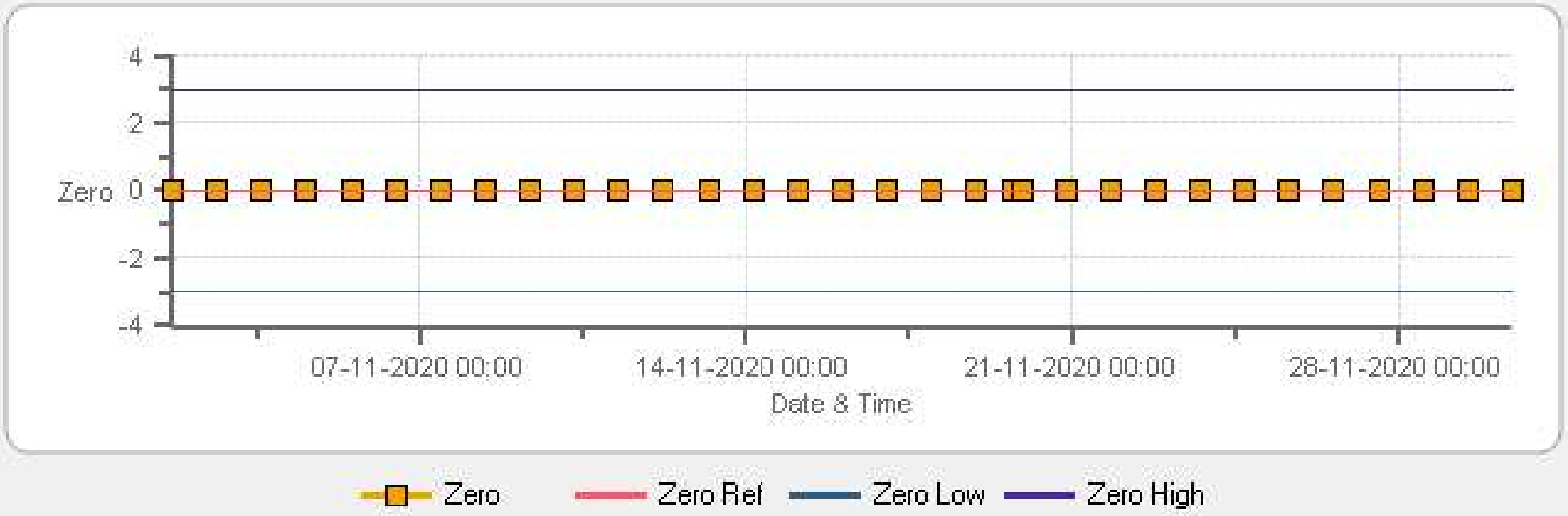
CH4[ppm] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Zero



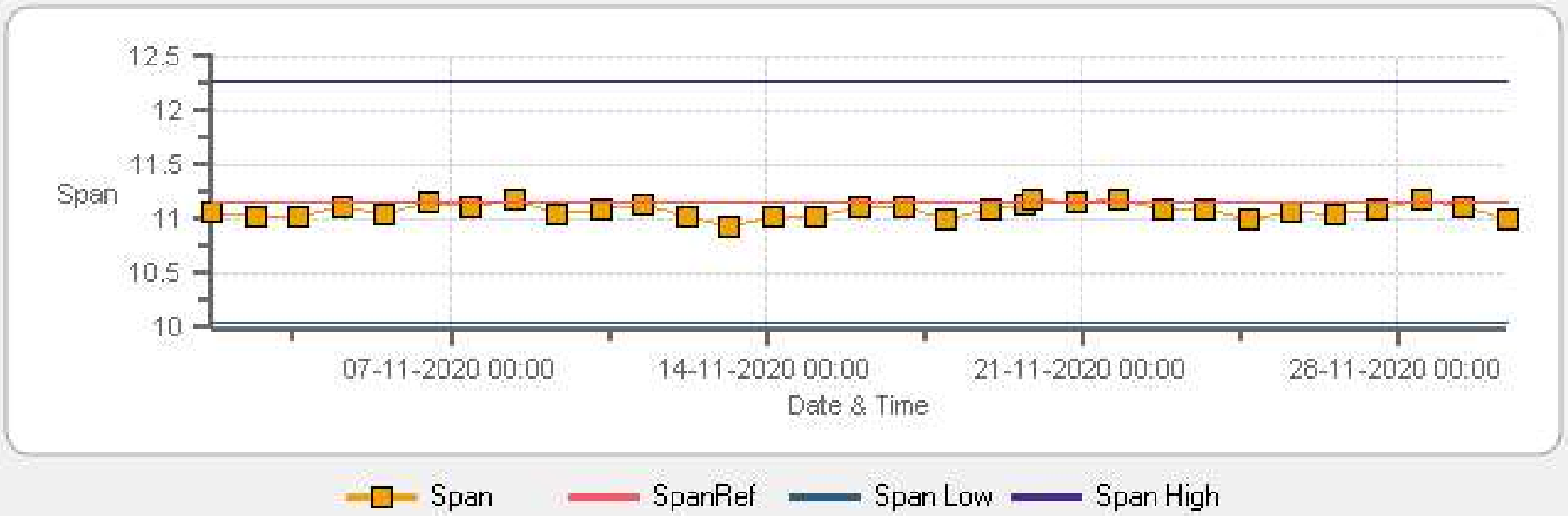
CH4[ppm] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Span



NMHC[ppm] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Zero



NMHC[ppm] Calibration: PRAMP 842b Monthly: 11-2020 Type: SpanAndZero - Span



MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	19-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	21.4
LOCATION:	842b	BAROMETRIC (mBar):	947
PURPOSE	Routine	START TIME (MST):	16:40
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	20:45

ANALYZER:

MAKE/MODEL	Thermo 43i	RANGE	500 ppb
SERIAL #	835033373	FLOW (mL/min)	426
INITIAL		FINAL	
BKG/OFFSET	16.2	BKG/OFFSET	16.5
COEF/SLOPE	1.065	COEF/SLOPE	1.074
Expected (reference) Value	257.2	Expected (reference) Value	257.2

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	133
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	BAL3157	HIGH ID	n/a
CONC (ppm):	49.30	EXPIRY DATE	n/a
CYLINDER (psi):	450	LOW ID	n/a
EXPIRY DATE	01-Jul-2027	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5999		5999	0.00	0.1	0		
5953	46.20	5999	379.67	374.9	380	1.013	0.999
5979	21.90	6001	179.92	n/a	179.5	n/a	1.002
5991	10.90	6002	89.53	n/a	89.9	n/a	0.996

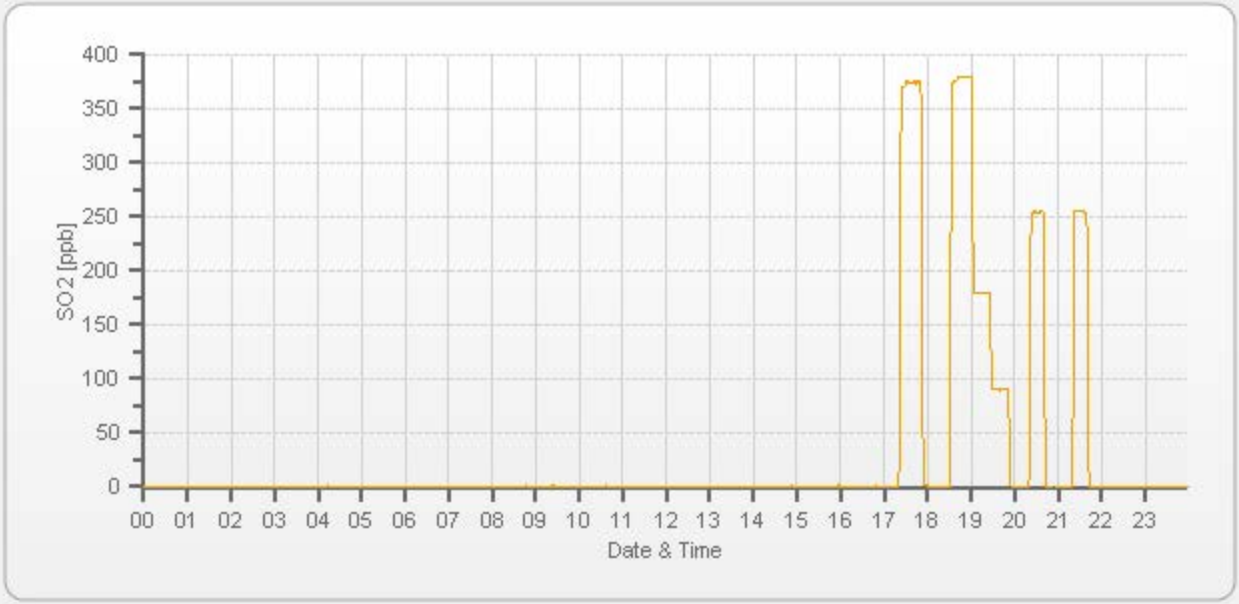
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Reset analyzer power at 16:41 due to no display. Monthly calibration and filter change - no issues.

SO2[ppb] Station: PRAMP 842b Daily: 19-11-2020 Type: AVG 1 Min. [1 Min.]



TRS Analyzer Calibration by Dilution

DATE:	19-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	21.2
LOCATION:	842b	BAROMETRIC (mBar):	947
PURPOSE	Routine	START TIME (MST):	13:09
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	17:58

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1162460023	FLOW (mL/min)	399
INITIAL		FINAL	
BKG/OFFSET	3.71	BKG/OFFSET	3.11
COEF/SLOPE	0.862	COEF/SLOPE	0.881
Expected (reference) Value	56.31	Expected (reference) Value	54.66

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26701218	ID:	133
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0000695	HIGH ID	n/a
CONC (ppm):	10.00	EXPIRY DATE	n/a
CYLINDER (psi):	750	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:	13:43	SO2 Conc (ppb)	380
END TIME:	14:01	Analyzer Response (ppb)	0.0

CALIBRATION:

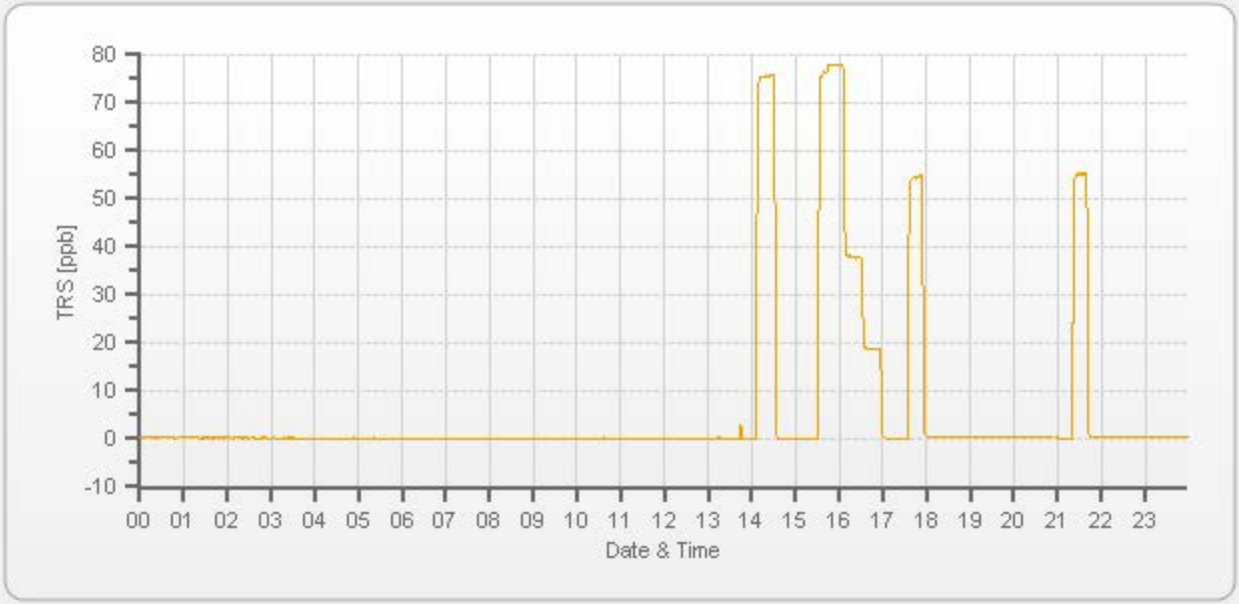
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4000		4000	0.00	-0.67	0		
3969	31.20	4000	78.00	75.65	77.98	1.022	1.000
3985	15.20	4000	38.00	n/a	37.85	n/a	1.004
3991	7.60	3999	19.00	n/a	18.69	n/a	1.017

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.2%

COMMENTS:

Sample filter changed. Monthly calibration - no issues.


TRS[ppb] Station: PRAMP 842b Daily: 19-11-2020 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	19-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
CLIENT:	PRAMP	TEMPERATURE (°C):	21.2
LOCATION:	842b	BAROMETRIC (mBar):	947
PURPOSE	Routine	START TIME (MST):	13:09
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	17:24

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1314057759	1246.63
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	0.996	0.998

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL84567		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	591.0	200.0	HIGH EXPIRY:	n/a
ID:	17100415	ID:	133	CYLINDER (psi):	1490		LOW ID:	n/a
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	Internal	EXPIRY DATE	17-Jul-2027		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

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

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.28	11.15	21.43		10.28	11.15	21.43

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3198		3198	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3122	78.50	3200	14.50	13.49	27.99	14.49	13.52	28.01	14.50	13.52	28.03	1.001	0.998	0.999	1.000	0.998	0.999
3160	39.30	3199	7.26	6.76	14.02	n/a	n/a	n/a	7.25	6.74	13.99	n/a	n/a	n/a	1.001	1.002	1.002
3180	19.60	3200	3.62	3.37	6.99	n/a	n/a	n/a	3.62	3.37	6.99	n/a	n/a	n/a	1.000	1.000	1.000

LINEAR REGRESSION ANALYSIS:

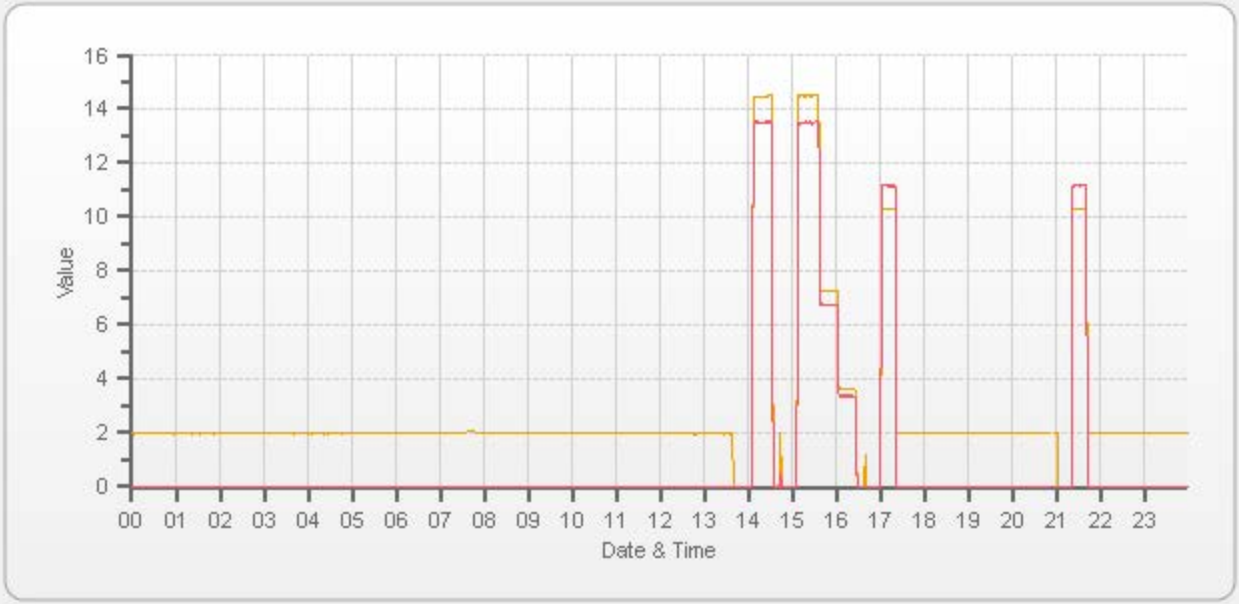
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.000	0.0%
NMHC	1.000	1.002	0.0%
THC	1.000	1.001	0.0%

Comments:

Sample filter changed. Monthly calibration - no issues.

Use Zero Chrom? **No**

Station: PRAMP 842b Daily: 19-11-2020 Type: AVG 1 Min. [1 Min.]



Meteorological System Checklist

Date:	November 19, 2020		
Technician:	Ferdinand Roy		
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:	October 7, 2020		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	F.S. 160348895 expires Sep 4, 2022		
Reference Temperature (^{o}C):	-14.0		
Station - Ambient Temperature (^{o}C):	-14.0		
Temperature Difference (^{o}C):	0.0		
BAROMETRIC PRESSURE SENSOR CHECK			
Previous check date:	October 7, 2020		
Reference Barometer ID:	Reference Barometer ID: F.S. 10528 expires February 26, 2021		
Reference Pressure - Units/Reading:	millibar	947	
Station Pressure - Units/Reading:	millibar	949.4	
Pressure Tolerance +/- 15% of error:	805 - 1089	-0.25%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	October 7, 2020		
Reference Hygrometer ID:	F.S. 160348895 expires Sep 4, 2022		
Reference Hygrometer % RH- Reading:	75.22		
Station Hygrometer % RH- Reading:	82.70		
RH Tolerance +/- 15% of difference:	63.94 - 86.50	-9.9%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	October 7, 2020	Previous check date:	October 7, 2020
Wind Speed Observed (kph):	2-5	Wind Direction Observed:	NE
Wind speed on Data Logger (kph):	2.8	Wind Direction on Data Logger:	NE
		Wind Direction Pass/Fail?:	Pass

Comments

No issues

Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	**Performed By:**	Ferdinand Roy
Audit Location:	842b	**Reviewed By:**	Chris Wesson
Audit Date:	June 11, 2020	**Start/End Time (mst):**	14:36 / 16:59
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:**	0-1
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200
Serial #:	124638	**Direction Voltage Output Range:**	0-1
Previous Cal/Audit Date:	August 7, 2019	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires November 20, 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	0.2	0.2	-
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	129.0	129.0	1.000
8000	147.4	147.4	147.4	1.000
9000	165.9	166.0	166.0	0.999
10000	184.3	184.2	184.6	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	355	1.0	0.0	0.5
30	330	29	330	1.0	0.0	0.5
60	300	60	300	0.0	0.0	0.0
90	270	90	270	0.0	0.0	0.0
120	240	120	240	0.0	0.0	0.0
150	210	150	210	0.0	0.0	0.0
180	180	180	180	0.0	0.0	0.0
210	150	210	150	0.0	0.0	0.0
240	120	240	120	0.0	0.0	0.0
270	90	270	90	0.0	0.0	0.0
300	60	300	60	0.0	0.0	0.0
330	30	330	29	0.0	1.0	0.5
355	0	355	1	0.0	1.0	0.5
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**0.2**

Comments:

Physical inspection completed - no issues.

Peace River Area Monitoring Program

NOVEMBER 2020

Ambient Air Monitoring Calibration Report

- 986c STATION-

CAL-PRAMP-202011-01562

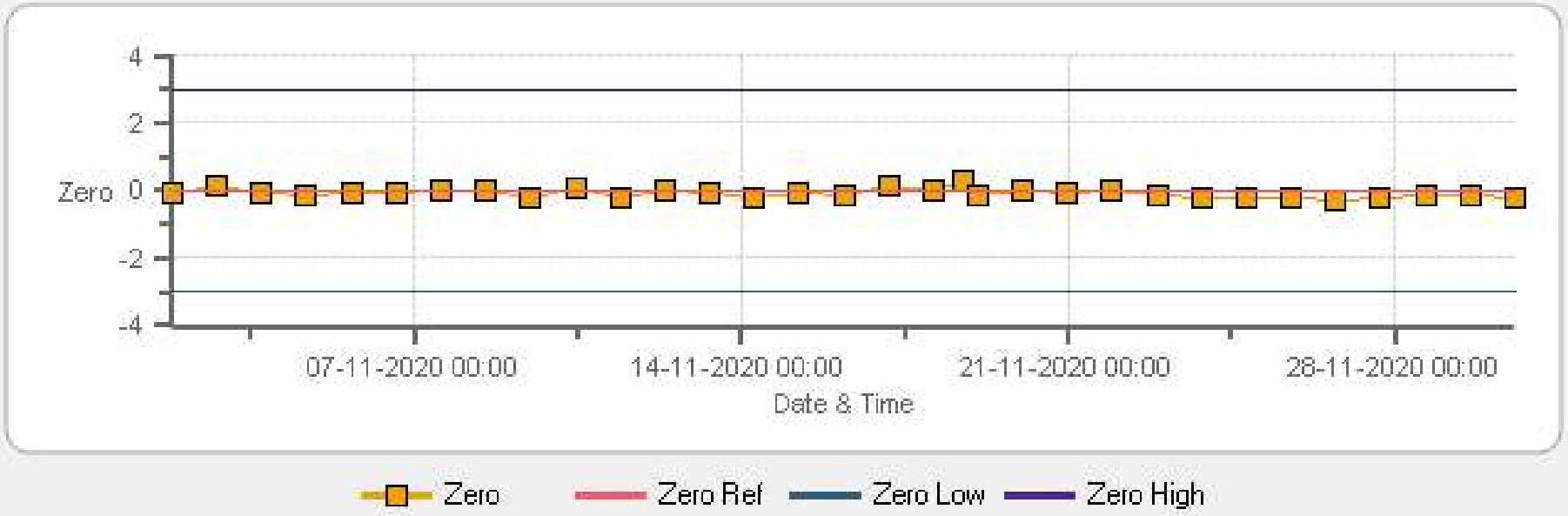
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

December 14, 2020

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

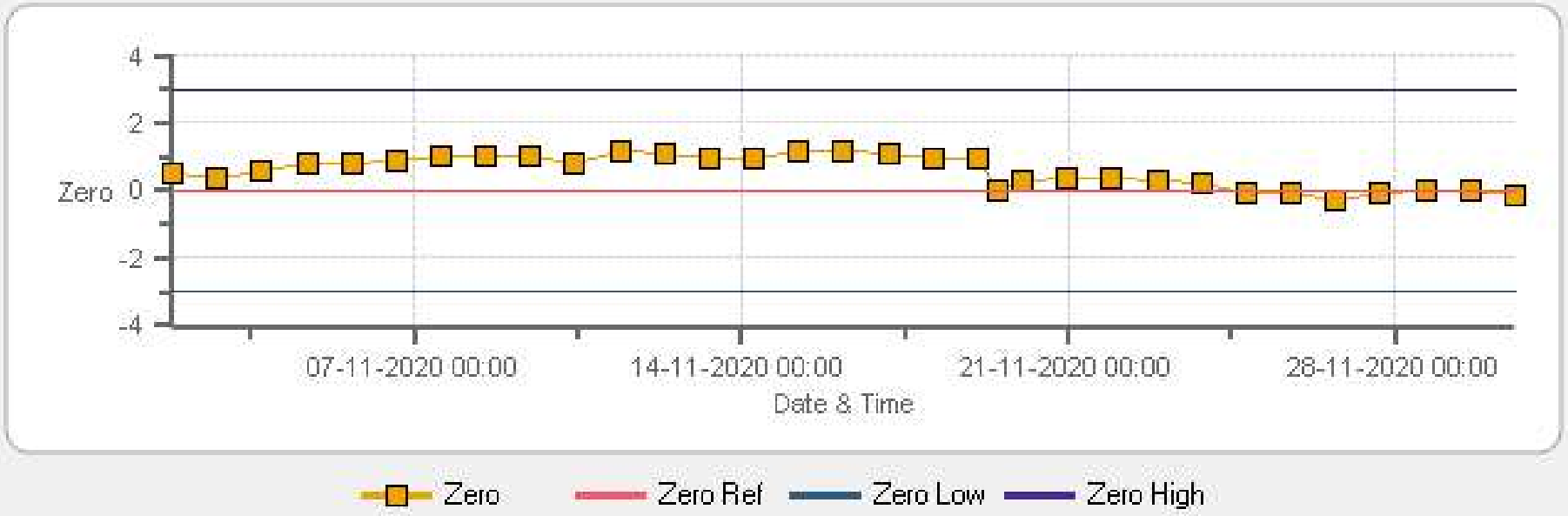
SO2[ppb] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Zero



SO2[ppb] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Span



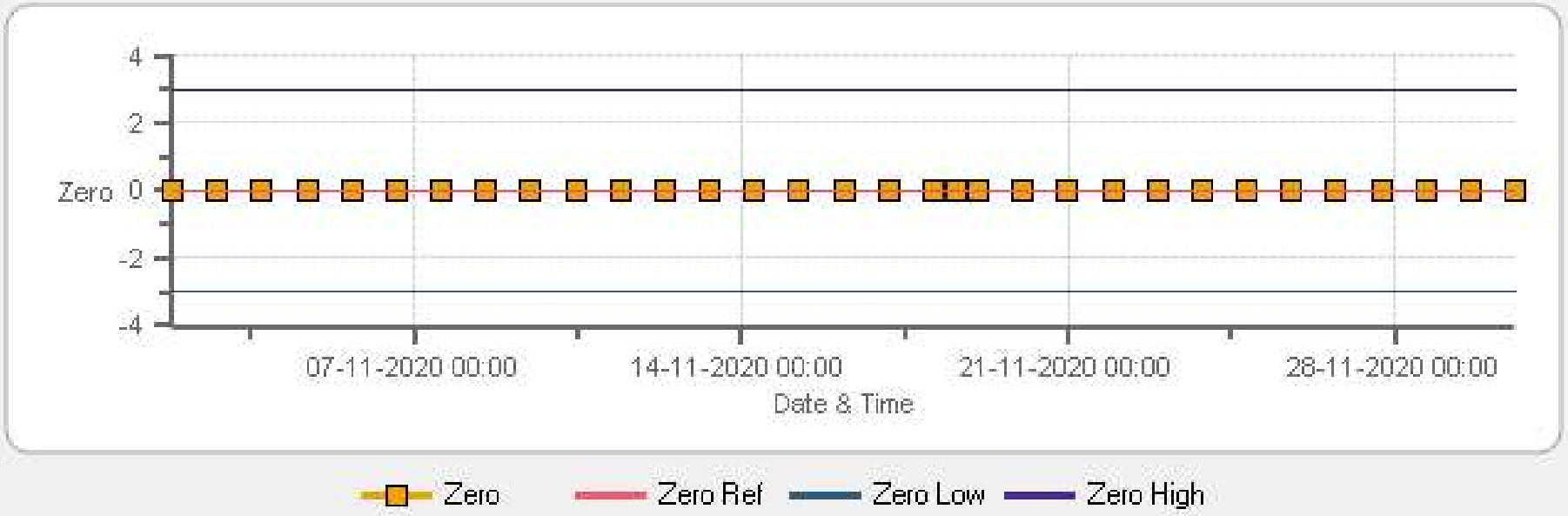
TRS[ppb] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Zero



TRS[ppb] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Span



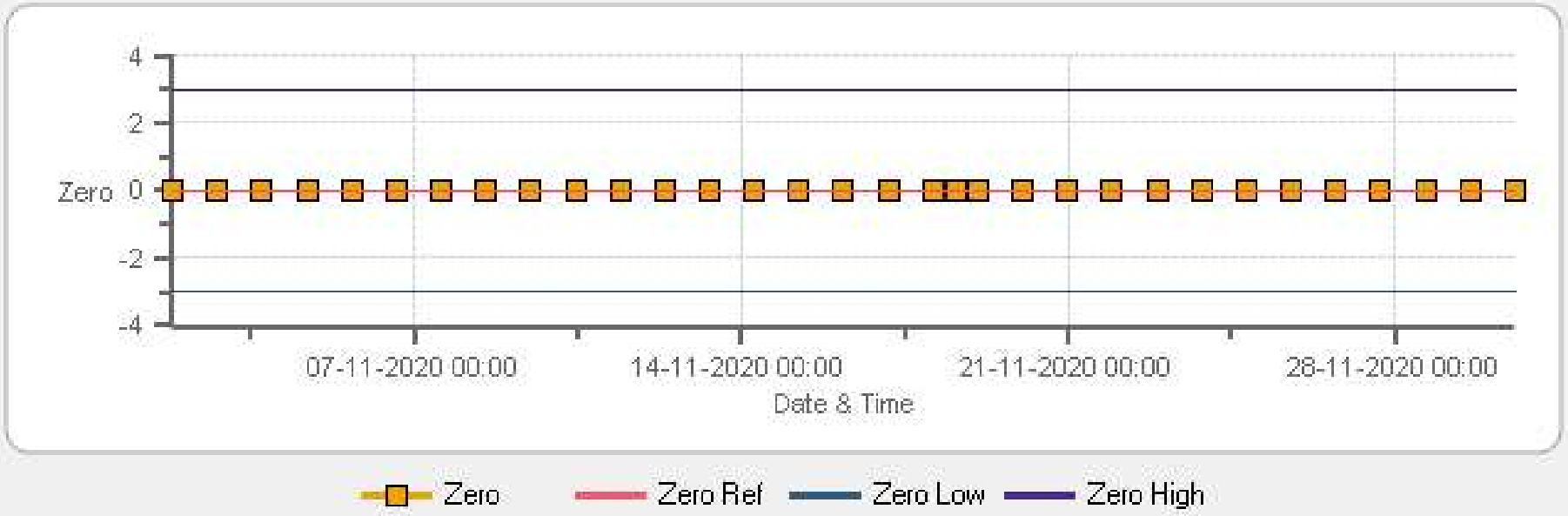
THC55[ppm] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Zero



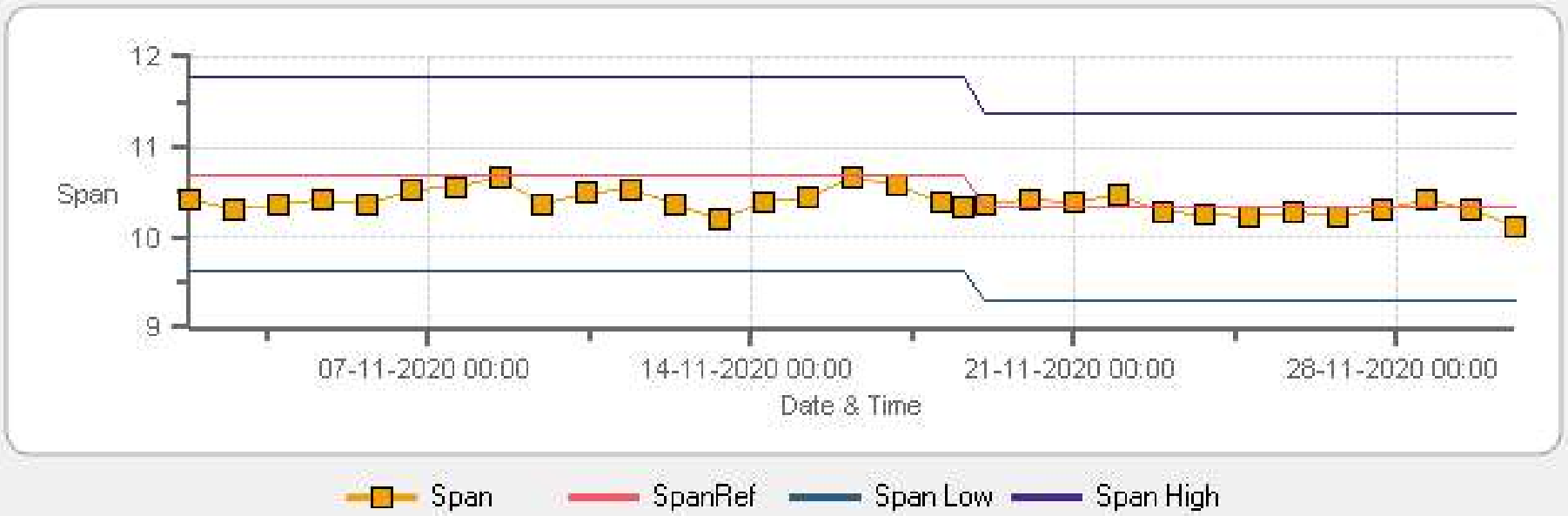
THC55[ppm] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Span



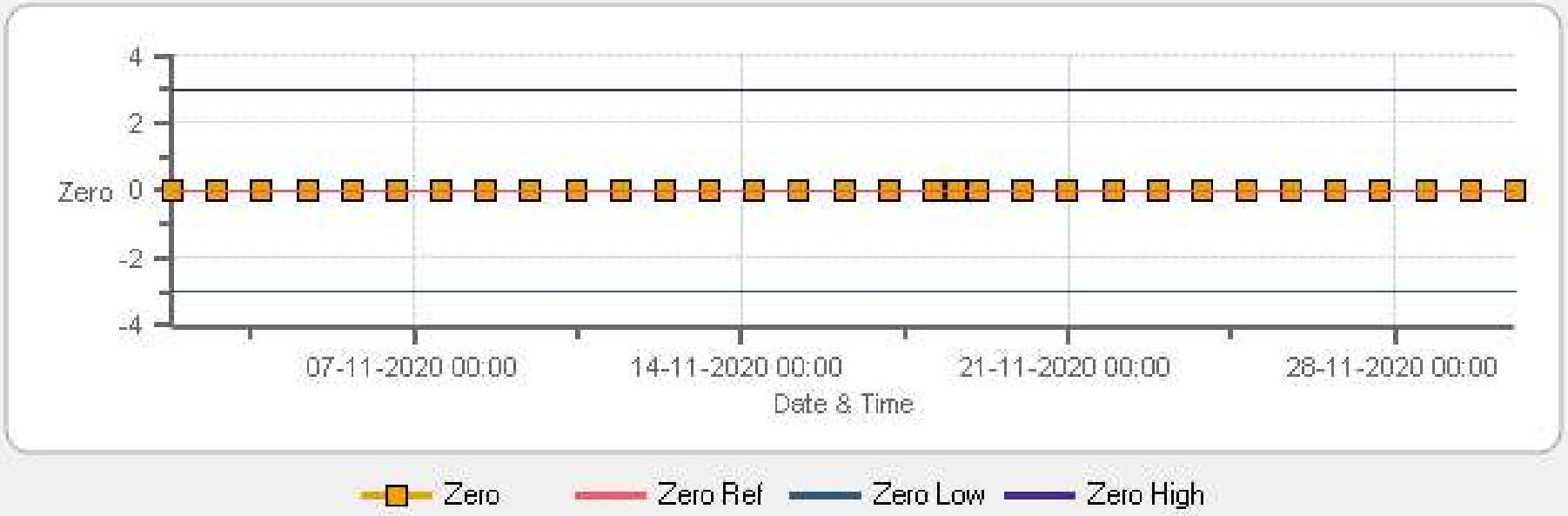
CH4[ppm] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Zero



CH4[ppm] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Span



NMHC[ppm] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Zero



NMHC[ppm] Calibration: PRAMP 986c Monthly: 11-2020 Type: SpanAndZero - Span



MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	18-Nov-2020	PREVIOUS CALIBRATION DATE:	08-Oct-2020
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	986C	BAROMETRIC (mBar):	937
PURPOSE	Routine	START TIME (MST):	13:56
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	18:18

ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	500 ppb
SERIAL #	1193585646	FLOW (mL/min)	425
INITIAL		FINAL	
BKG/OFFSET	11.9	BKG/OFFSET	12
COEF/SLOPE	1.048	COEF/SLOPE	1.059
Expected (reference) Value	260	Expected (reference) Value	250

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	133
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	BAL3157	HIGH ID	n/a
CONC (ppm):	49.30	EXPIRY DATE	n/a
CYLINDER (psi):	400	LOW ID	n/a
EXPIRY DATE	01-Jul-2027	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5999		5999	0.00	-0.1	0		
5954	46.20	6000	379.61	374.3	379.8	1.014	0.999
5979	21.90	6001	179.92	n/a	180.1	n/a	0.999
5991	10.90	6002	89.53	n/a	90.1	n/a	0.994

LINEAR REGRESSION ANALYSIS:

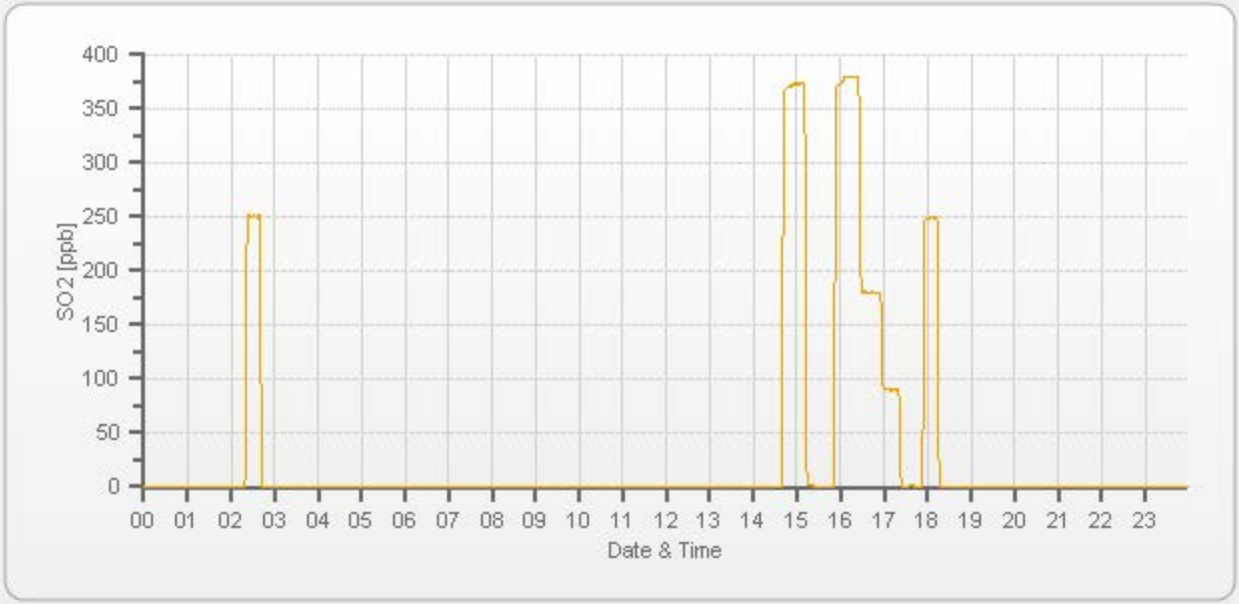
	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Sample filter changed. Monthly calibration - no issues.

Shaping a world of trust

SO2[ppb] Station: PRAMP 986c Daily: 18-11-2020 Type: AVG 1 Min. [1 Min.]



TRS Analyzer Calibration by Dilution

DATE:	18-Nov-2020	PREVIOUS CALIBRATION DATE:	08-Oct-2020
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.6
LOCATION:	986C	BAROMETRIC (mBar):	933
PURPOSE	Routine	START TIME (MST):	10:20
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	n/a

ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	100 ppb
SERIAL #	1191833341	FLOW (mL/min)	425
INITIAL		FINAL	
BKG/OFFSET	12.4	BKG/OFFSET	n/a
COEF/SLOPE	0.926	COEF/SLOPE	n/a
Expected (reference) Value	53.42	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26701218	ID:	133
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0000695	HIGH ID	n/a
CONC (ppm):	10.00	EXPIRY DATE	n/a
CYLINDER (psi):	780	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:	11:06	SO2 Conc (ppb)	380
END TIME:	11:24	Analyzer Response (ppb)	0.1

CALIBRATION:

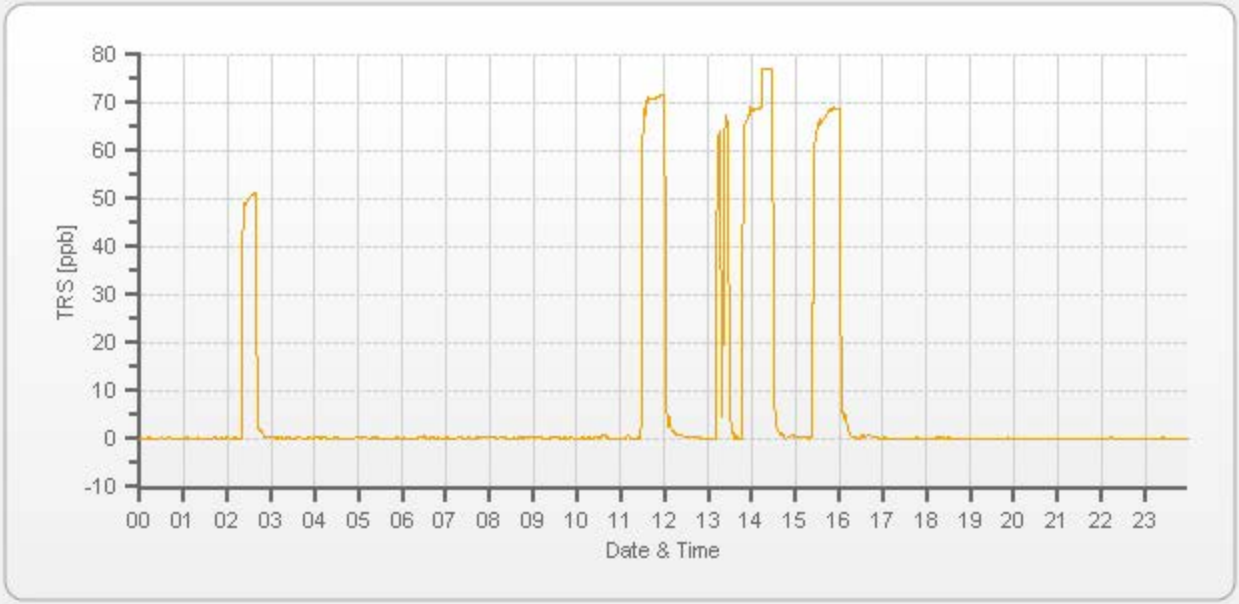
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
3999		3999	0.00	0.91	0		
3969	31.20	4000	78.00	72.55	n/a	1.089	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	#DIV/0!	#DIV/0!	#DIV/0!

COMMENTS:

Sample filter changed. Stopped high adjust point at 13:16 due to slow response. Repeat high adjust point at 13:20 after flushing regulator. Stopped high adjust point at 13:27 due to poor response. Repeat high adjust point at 13:46. Response still not good. Output became stable at 69 ppb only. Tried to recalibrate. Stopped at 14:28 to do a shutdown. Slope and Background readjusted to values before adjust.


TRS[ppb] Station: PRAMP 986c Daily: 18-11-2020 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

TRS Analyzer Calibration by Dilution

DATE:	19-Nov-2020	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	22.2
LOCATION:	986C	BAROMETRIC (mBar):	946
PURPOSE	Install/Post-Repair	START TIME (MST):	08:26
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	11:46

ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	100 ppb
SERIAL #	1191833341	FLOW (mL/min)	428
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	14.3
COEF/SLOPE	n/a	COEF/SLOPE	0.999
Expected (reference) Value	n/a	Expected (reference) Value	TBD

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26701218	ID:	133
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0000695	HIGH ID	n/a
CONC (ppm):	10.00	EXPIRY DATE	n/a
CYLINDER (psi):	750	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:	08:50	SO2 Conc (ppb)	380
END TIME:	09:08	Analyzer Response (ppb)	0.3

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
3999		3999	0.00	n/a	0		
3969	31.20	4000	78.00	n/a	78	n/a	1.000
3985	15.20	4000	38.00	n/a	37.85	n/a	1.004
3991	7.60	3999	19.00	n/a	18.41	n/a	1.032

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.3%

COMMENTS:

TRS Converter SO2 Scrubber beads changed. Post-Repair calibration - no issues.


TRS[ppb] Station: PRAMP 986c Daily: 19-11-2020 Type: AVG 1 Min. [1 Min.]
80
70
60
50
40
30
20
10
0
-10
TRS [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	18-Nov-2020	PREVIOUS CALIBRATION DATE:	08-Oct-2020
CLIENT:	PRAMP	TEMPERATURE (°C):	22.6
LOCATION:	986C	BAROMETRIC (mBar):	933
PURPOSE	Routine	START TIME (MST):	10:20
PERFORMED BY:	Ferdinand Roy	END TIME (MST):	14:36

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1193585652	1266.69
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	1.001	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL84567		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	591.0	200.0	HIGH EXPIRY:	n/a
ID:	17100415	ID:	133	CYLINDER (psi):	1480		LOW ID:	n/a
MFC CALIBRATION DATE:	08-Jun-2020	OXIDIZER ID:	Internal	EXPIRY DATE	17-Jul-2027		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

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

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.70	11.49	22.19		10.34	11.23	21.57

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3197		3197	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3122	78.50	3200	14.50	13.49	27.99	14.72	13.33	28.06	14.51	13.49	28.00	0.985	1.012	0.998	0.999	1.000	1.000
3160	39.30	3199	7.26	6.76	14.02	n/a	n/a	n/a	7.21	6.76	13.97	n/a	n/a	n/a	1.007	1.000	1.003
3180	19.60	3200	3.62	3.37	6.99	n/a	n/a	n/a	3.59	3.41	7.00	n/a	n/a	n/a	1.008	0.988	0.998

LINEAR REGRESSION ANALYSIS:

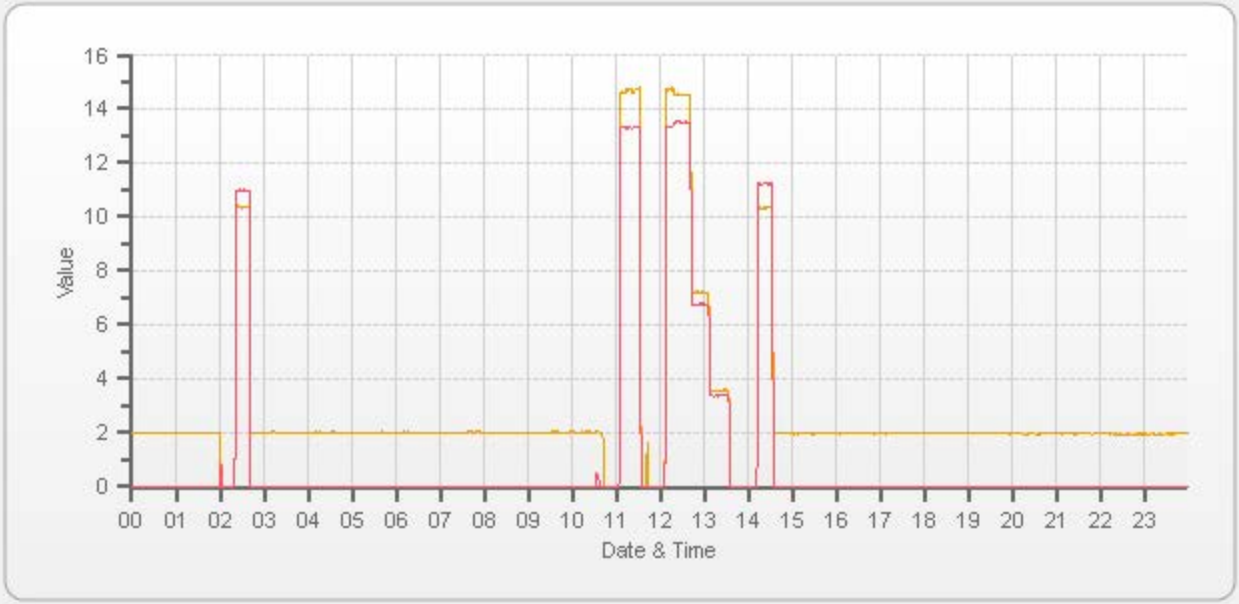
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.001	-0.1%
NMHC	1.000	0.999	0.1%
THC	1.000	1.000	0.0%

Comments:

Sample filter changed. Monthly calibration - no issues.

Use Zero Chrom? **No**

Station: PRAMP 986c Daily: 18-11-2020 Type: AVG 1 Min. [1 Min.]



Meteorological System Checklist

Date:	November 18, 2020		
Technician:	Ferdinand Roy		
Station:	PRAMP 986c		
Unit:	**Make:**	**Model:**	**Serial #:**
Precipitation Sampler:	EML	ARG100	190114
Temperature Sensor:	Rotronic	HC2-S3	20357528
Barometric Pressure Sensor:	MetOne	092	Y23358
Relative Humidity Sensor:	Rotronic	HC2-S3	20357528
Anemometer:	RM Young	05305L	174795

AMBIENT TEMPERATURE SENSOR CHECK

Previous check date:	October 8, 2020
Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	F.S. 160348895 expires Sep 4, 2022
Reference Temperature (°C):	-14.1
Station - Ambient Temperature (°C):	-13.8
Temperature Difference (°C):	-0.3

BAROMETRIC PRESSURE SENSOR CHECK

Previous check date:	October 8, 2020	
Reference Barometer ID:	Reference Barometer ID: F.S. 10528 expires February 26, 2021	
Reference Pressure - Units/Reading:	millibar	934
Station Pressure - Units/Reading:	millibar	935.4
Pressure Tolerance +/- 15% of error:	794 - 1074	-0.15%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Previous check date:	October 8, 2020	
Reference Hygrometer ID:	F.S. 160348895 expires Sep 4, 2022	
Reference Hygrometer % RH- Reading:	77.27	
Station Hygrometer % RH- Reading:	85.40	
RH Tolerance +/- 15% of difference:	65.68 - 88.86	-10.5%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	October 8, 2020	Previous check date:	October 8, 2020
Wind Speed Observed (kph):	5-10	Wind Direction Observed:	NW
Wind speed on Data Logger (kph):	8.3	Wind Direction on Data Logger:	NW
		Wind Direction Pass/Fail?:	Pass

Comments

No issues.

Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	**Performed By:**	Chris Wesson
Audit Location:	986C	**Reviewed By:**	Ferdinand Roy
Audit Date:	July 16, 2020	**Start/End Time (mst):**	15:07 / 16:17
Calibration Purpose:	installation	**Weather Conditions:**	Mix of sun and clouds with rain showers

Wind Sensor Information

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

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires November 20, 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	-
1000	18.4	18.3	18.3	1.007
2000	36.9	36.7	36.7	1.004
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
		The audit meets AMD requirements.	**Average Correction Factor=**	**1.002**

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

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	354	0.0	1.0	0.5
30	330	30	330	0.0	0.0	0.0
60	300	59	299	1.0	1.0	1.0
90	270	90	270	0.0	0.0	0.0
120	240	119	240	1.0	0.0	0.5
150	210	150	210	0.0	0.0	0.0
180	180	181	180	-1.0	0.0	0.5
210	150	211	150	-1.0	0.0	0.5
240	120	241	120	-1.0	0.0	0.5
270	90	270	89	0.0	1.0	0.5
300	60	300	59	0.0	1.0	0.5
330	30	330	30	0.0	0.0	0.0
355	0	354	0	1.0	0.0	0.5
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**0.4**

Comments:

Magnetic declination = 15Deg(E)

Peace River Area Monitoring Program

NOVEMBER 2020

Ambient Air Monitoring Calibration Report

- RENO STATION-

CAL-PRAMP-202011-01563

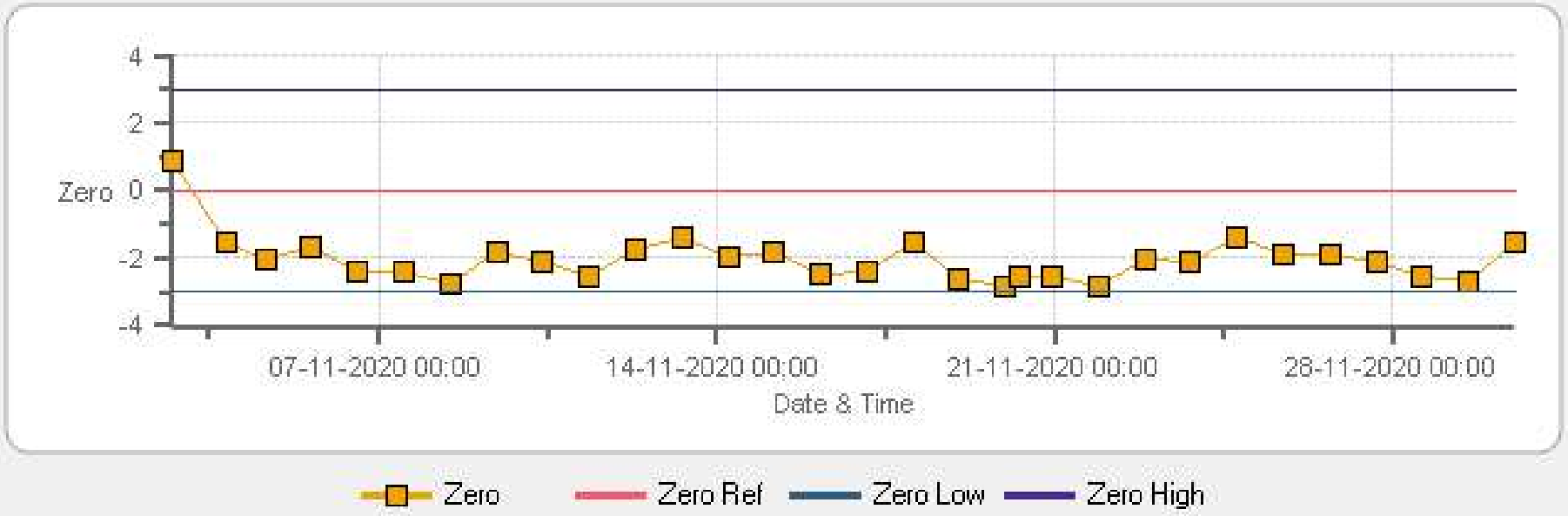
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

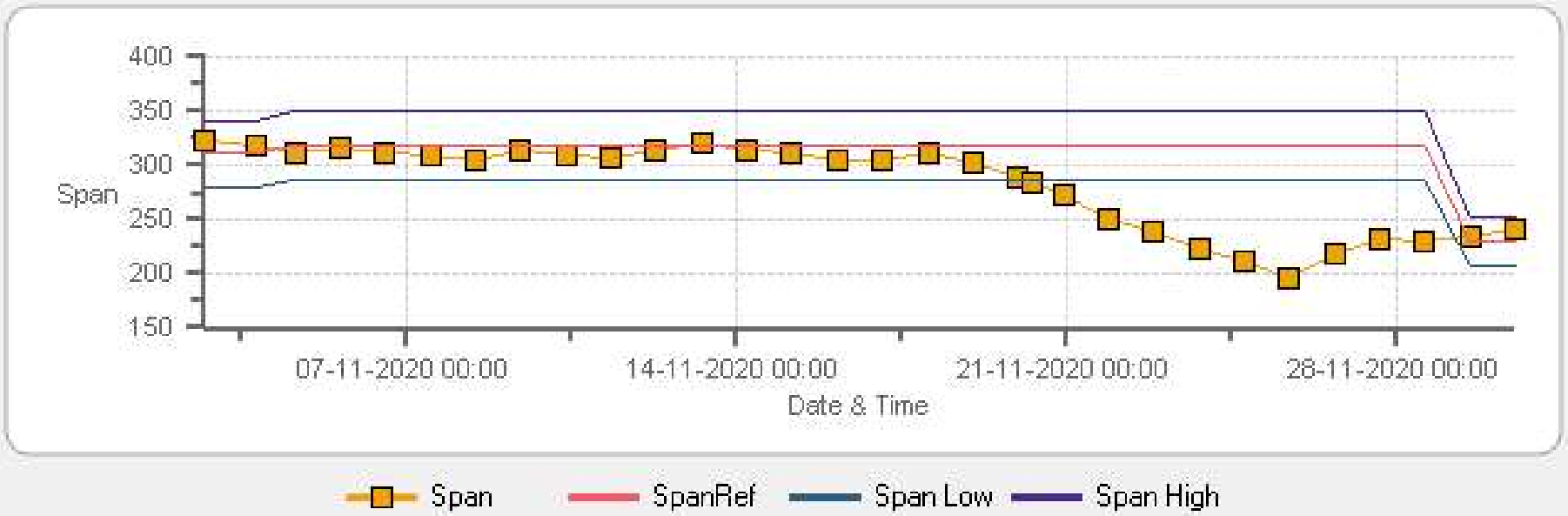
December 14, 2020

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

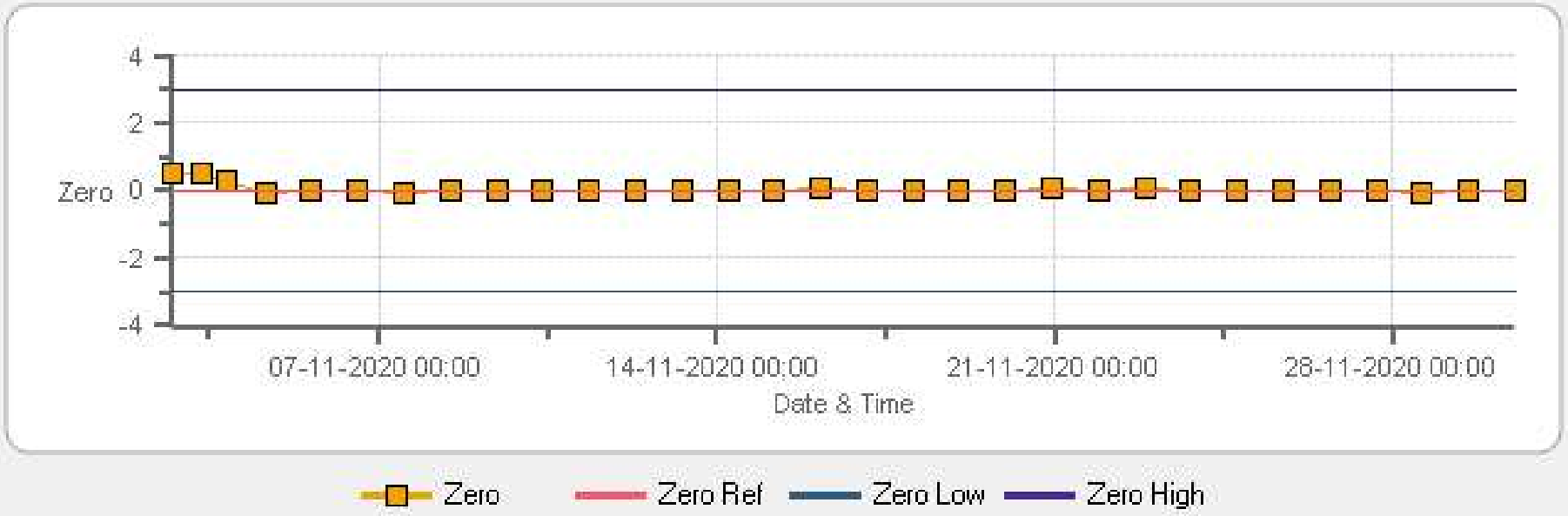
SO2[ppb] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Zero



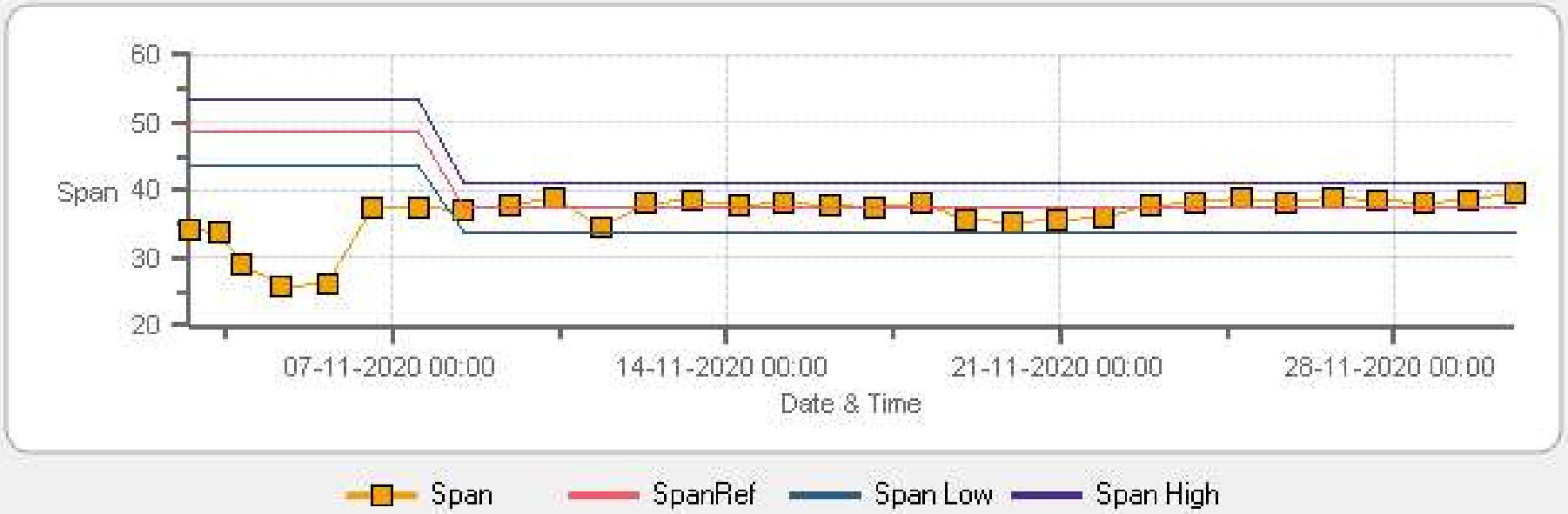
SO2[ppb] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Span



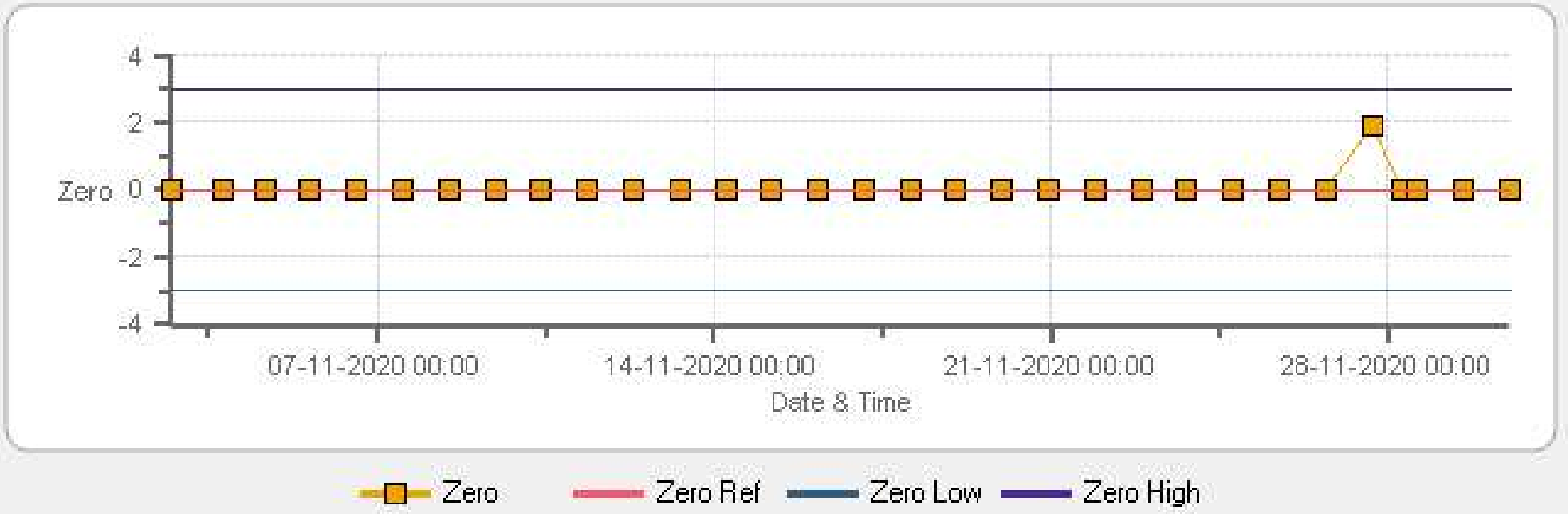
TRS[ppb] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Zero



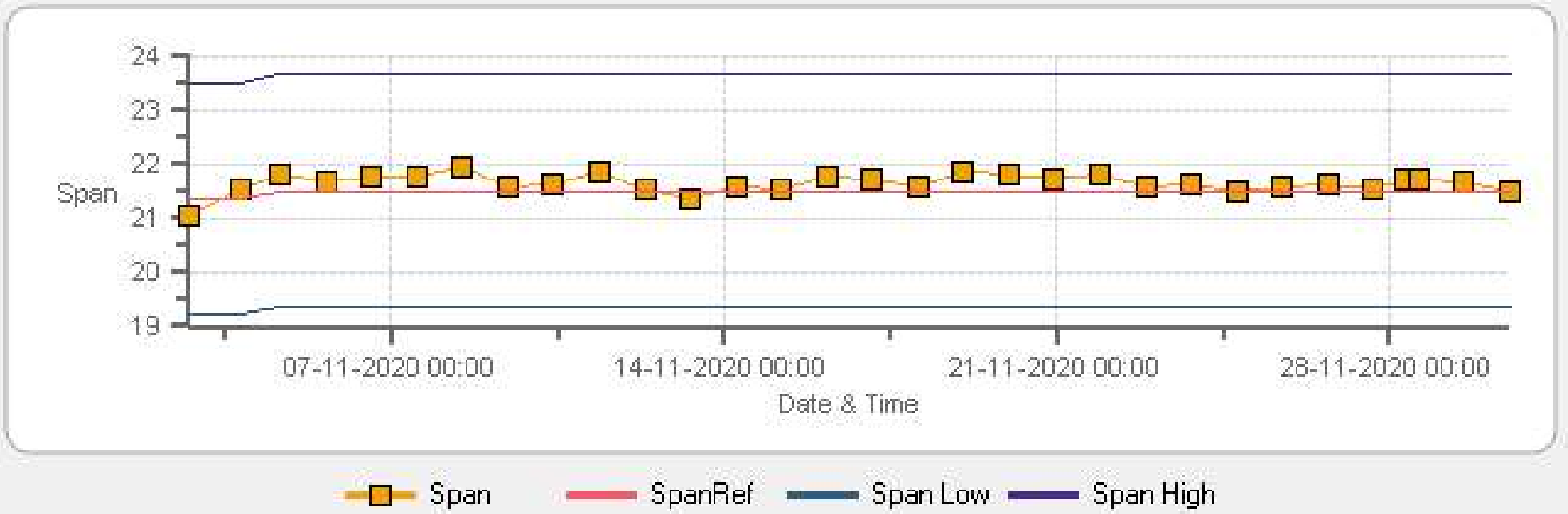
TRS[ppb] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Span



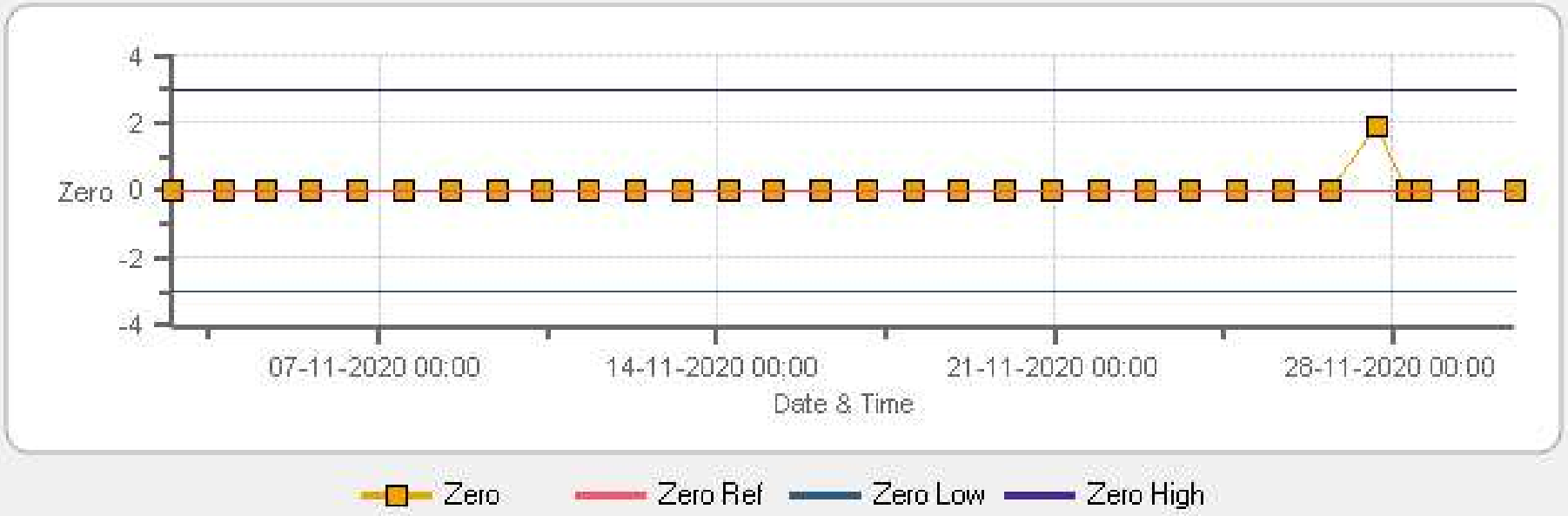
THC55[ppm] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Zero



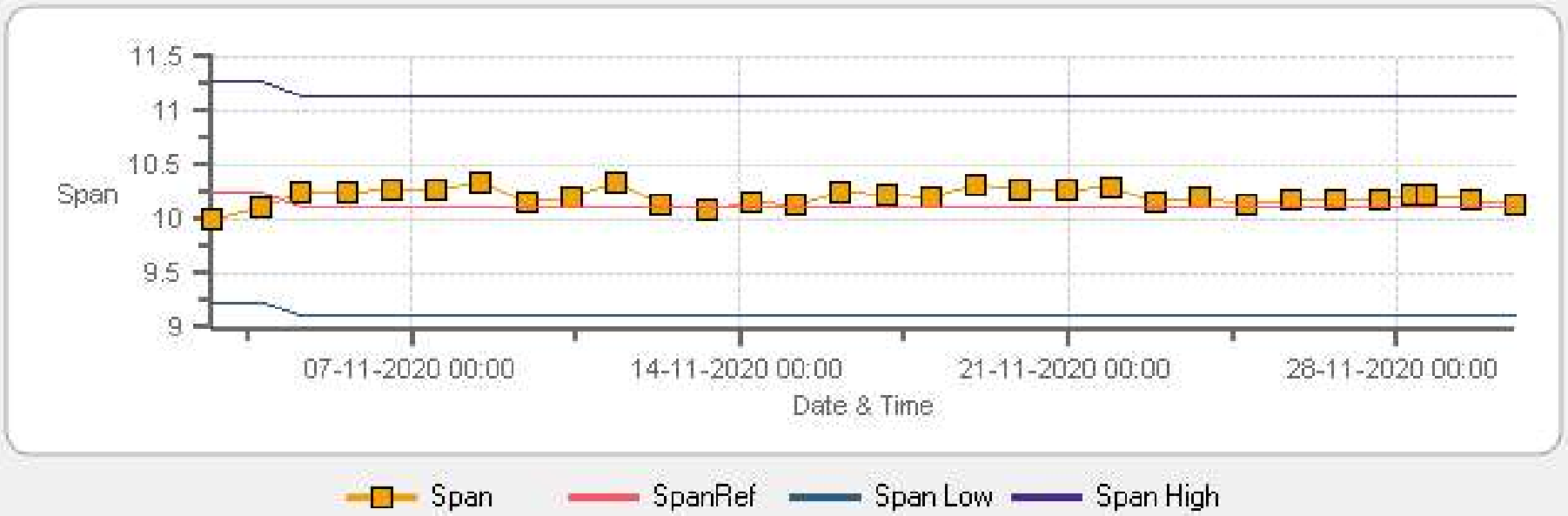
THC55[ppm] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Span



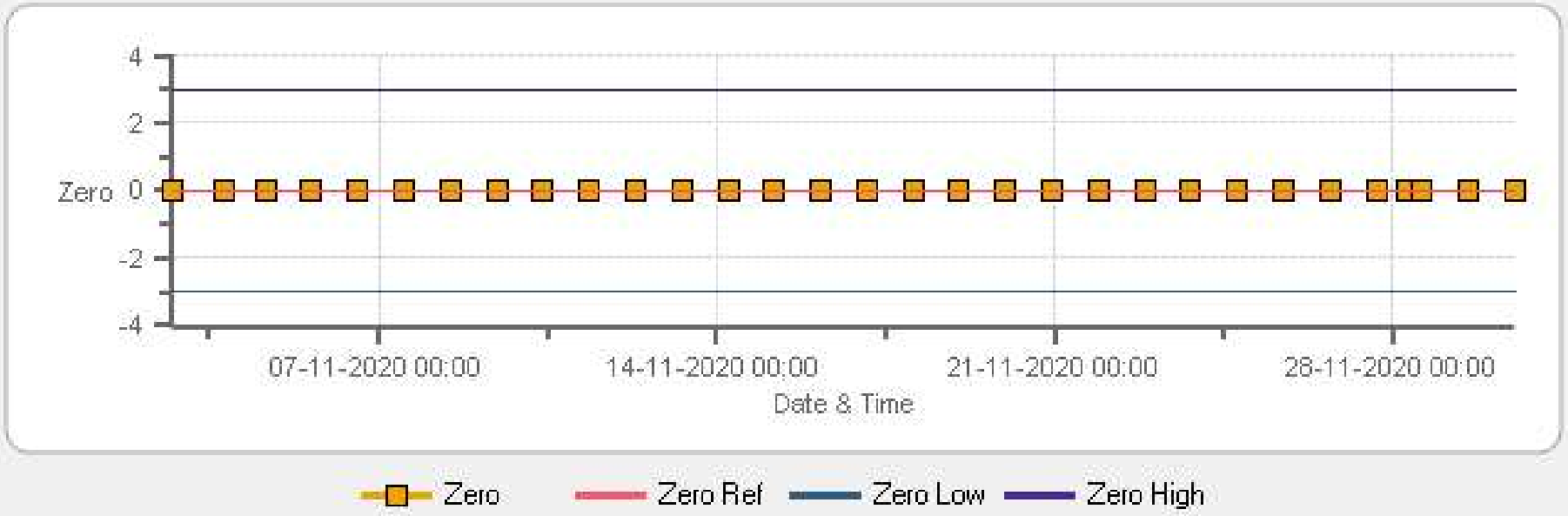
CH4[ppm] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Zero



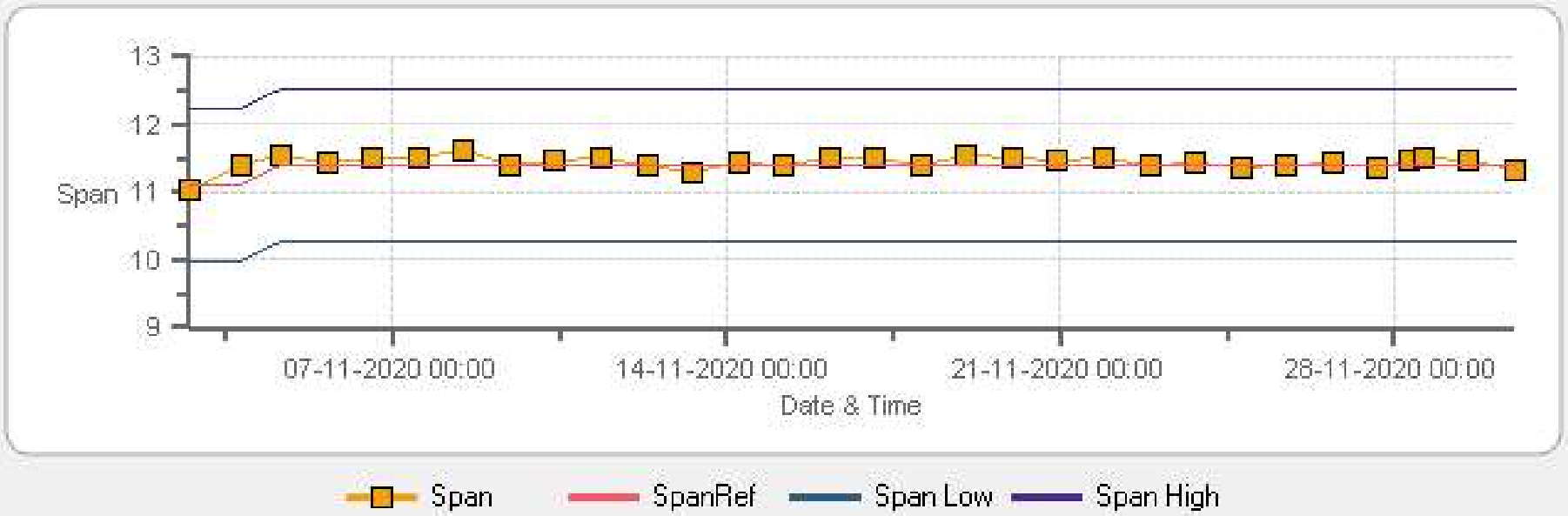
CH4[ppm] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Span



NMHC[ppm] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Zero



NMHC[ppm] Calibration: PRAMP RENO Monthly: 11-2020 Type: SpanAndZero - Span



MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	03-Nov-2020	PREVIOUS CALIBRATION DATE:	21-Oct-2020
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.0
LOCATION:	Reno	BAROMETRIC (mBar):	924
PURPOSE	Routine	START TIME (MST):	15:51
PERFORMED BY:	Chris Wesson	END TIME (MST):	20:16

ANALYZER:

MAKE/MODEL	API 100A	RANGE	500 ppb
SERIAL #	1502	FLOW (mL/min)	638
INITIAL		FINAL	
BKG/OFFSET	89.8	BKG/OFFSET	95.1
COEF/SLOPE	0.968	COEF/SLOPE	0.96
Expected (reference) Value	310.9	Expected (reference) Value	318.4

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	2000	MODEL:	701
ID:	1991	ID:	1104
MFC CALIBRATION DATE:	14-Oct-2020	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):	1200	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	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4003		4003	0.00	2.1	0		
3941	62.84	4004	379.78	384.4	379.9	0.993	1.000
3973	29.75	4003	179.85	n/a	180	n/a	0.999
3988	14.86	4003	89.81	n/a	90.5	n/a	0.992

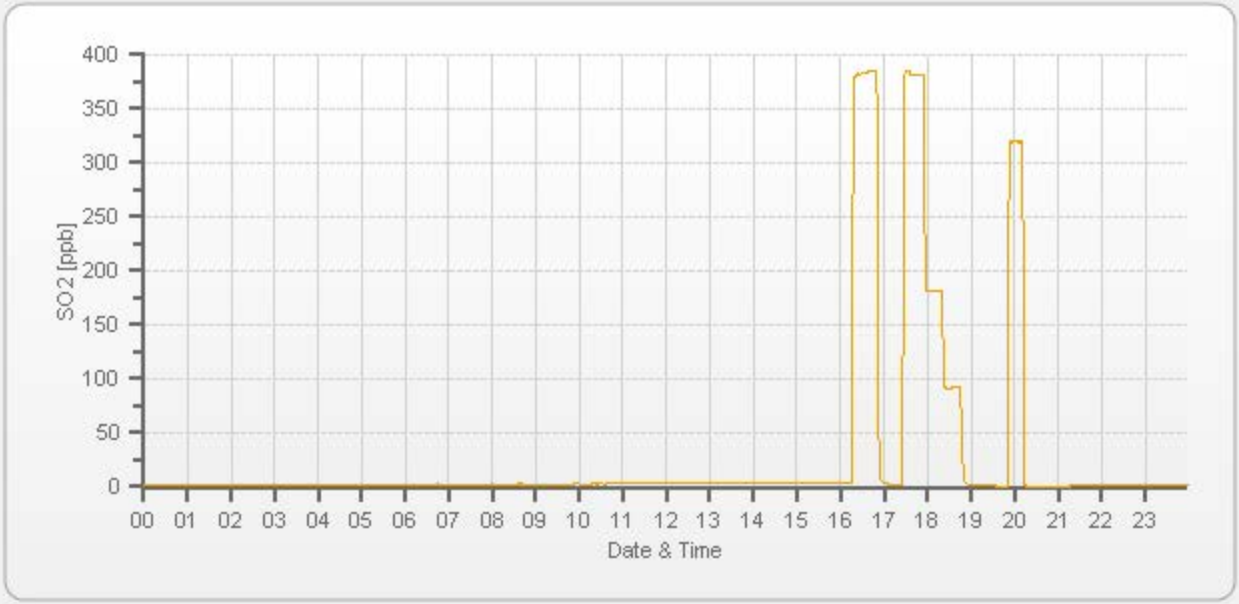
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.1%

COMMENTS:

No issues

SO2[ppb] Station: PRAMP RENO Daily: 03-11-2020 Type: AVG 1 Min. [1 Min.]



SO2 Analyzer Calibration by Dilution

DATE:	26-Nov-2020	PREVIOUS CALIBRATION DATE:	03-Nov-2020
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.6
LOCATION:	Reno	BAROMETRIC (mBar):	928
PURPOSE	As-Found	START TIME (MST):	09:54
PERFORMED BY:	Chris Wesson	END TIME (MST):	11:56

ANALYZER:

MAKE/MODEL	API 100A	RANGE	500 ppb
SERIAL #	1502	FLOW (mL/min)	621
INITIAL		FINAL	
BKG/OFFSET	95.1	BKG/OFFSET	95.1
COEF/SLOPE	0.96	COEF/SLOPE	0.96
Expected (reference) Value	318.4	Expected (reference) Value	318.4

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	2000	MODEL:	701
ID:	1991	ID:	1104
MFC CALIBRATION DATE:	14-Oct-2020	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):	1000	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	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4003		4003	0.00	0.8	n/a		
3943	62.90	4006	379.99	378.1	n/a	1.007	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

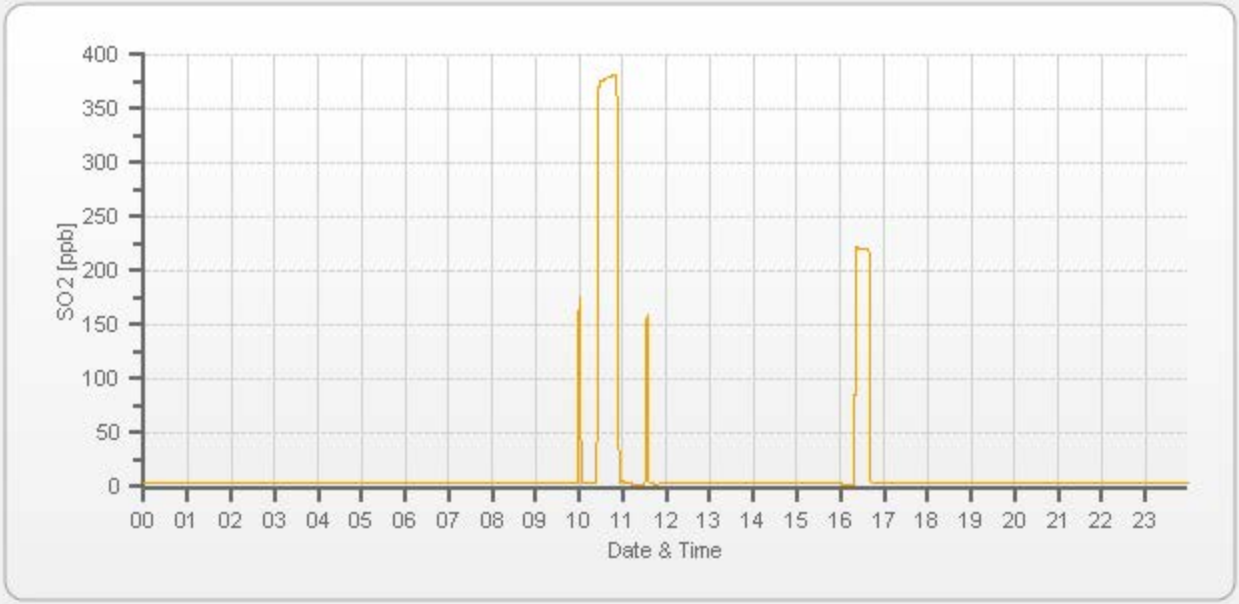
LINEAR REGRESSION ANALYSIS:

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

COMMENTS:

New perm installed

SO2[ppb] Station: PRAMP RENO Daily: 26-11-2020 Type: AVG 1 Min. [1 Min.]



TRS Analyzer Calibration by Dilution

DATE:	03-Nov-2020	PREVIOUS CALIBRATION DATE:	21-Oct-2020
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.0
LOCATION:	Reno	BAROMETRIC (mBar):	924
PURPOSE	Routine	START TIME (MST):	15:51
PERFORMED BY:	Chris Wesson	END TIME (MST):	20:16

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1162460022	FLOW (mL/min)	404
INITIAL		FINAL	
BKG/OFFSET	2.83	BKG/OFFSET	2.63
COEF/SLOPE	1.211	COEF/SLOPE	1.126
Expected (reference) Value	48.6	Expected (reference) Value	48.6

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	2000	MODEL:	701
ID:	1991	ID:	1104
MFC CALIBRATION DATE:	14-Oct-2020	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):	1200	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	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4003		4003	0.00	0	0		
3973	31.24	4004	78.02	83.28	77.98	0.937	1.001
3987	15.24	4003	38.06	n/a	38.21	n/a	0.996
3995	7.62	4003	19.03	n/a	19.08	n/a	0.997

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	0.1%

COMMENTS:

Perm tube depleted?

Shaping a world of trust


TRS[ppb] Station: PRAMP RENO Daily: 03-11-2020 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
90
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	03-Nov-2020	PREVIOUS CALIBRATION DATE:	21-Oct-2020
CLIENT:	PRAMP	TEMPERATURE (°C):	22.3
LOCATION:	Reno	BAROMETRIC (mBar):	924
PURPOSE	Routine	START TIME (MST):	15:51
PERFORMED BY:	Chris Wesson	END TIME (MST):	19:22

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1505664392	1078
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	1.000	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	API	CYLINDER ID:	LL168375		HIGH ID:	n/a
MODEL:	2010	MODEL:	701	CH_4/C_3H_8 (ppm):	914.0	307.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	1104	CYLINDER (psi):	1600		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2020	OXIDIZER ID:	Internal	EXPIRY DATE	21-Jan-2028		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH4/NMHC)	HIGH	MID	LOW	CH4 EQUIVILANCE	
TARGET	14	7	3.5	C_3H_8 as CH_4	844.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1758.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.24	11.11	21.35		10.12	11.40	21.52

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3099		3099	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3050	49.40	3099	14.57	13.46	28.03	14.41	12.93	27.34	14.54	13.48	28.01	1.011	1.041	1.025	1.002	0.998	1.001
3076	24.70	3101	7.28	6.72	14.00	n/a	n/a	n/a	7.32	6.82	14.14	n/a	n/a	n/a	0.995	0.986	0.990
3088	12.40	3100	3.66	3.38	7.03	n/a	n/a	n/a	3.69	3.50	7.19	n/a	n/a	n/a	0.991	0.965	0.978

LINEAR REGRESSION ANALYSIS:

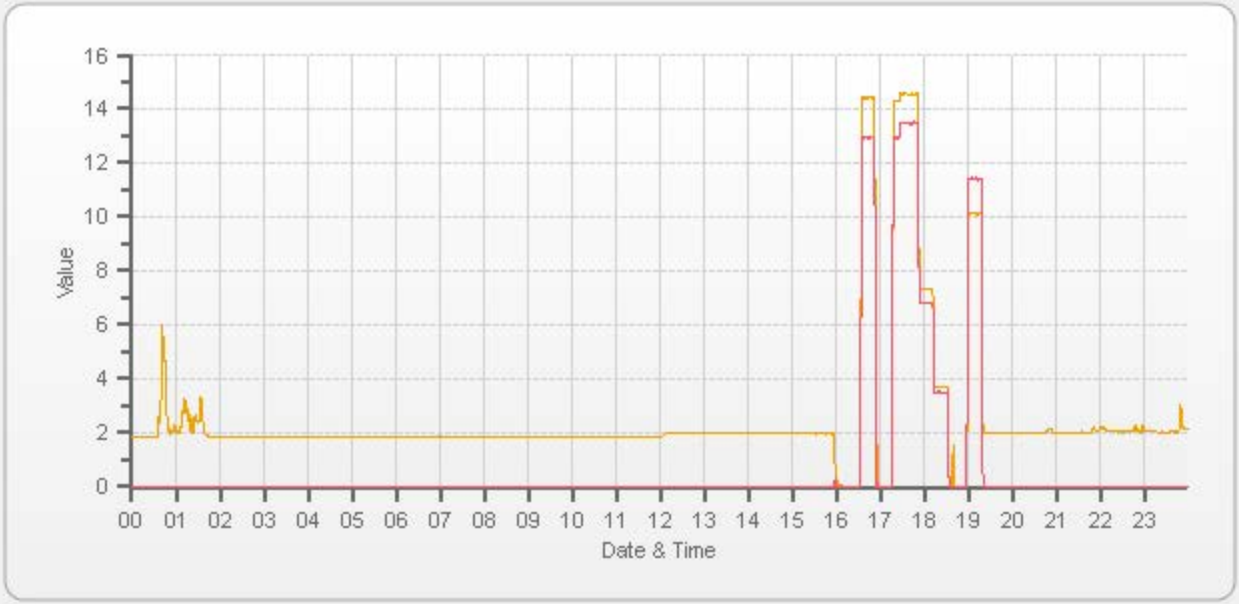
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	0.997	0.1%
NMHC	1.000	0.999	0.3%
THC	1.000	0.998	0.2%

Comments:

No issues

Use Zero Chrom? **No**

Station: PRAMP RENO Daily: 03-11-2020 Type: AVG 1 Min. [1 Min.]



Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	**Performed By:**	Chris Wesson
Audit Location:	Reno	**Reviewed By:**	Ferdinand Roy
Audit Date:	June 17, 2020	**Start/End Time (mst):**	16:12 / 17:13
Calibration Purpose:	routine annual	**Weather Conditions:**	Light rain/scattered showers

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200
Serial #:	149769	**Direction Voltage Output Range:**	0-1
Previous Cal/Audit Date:	April 24, 2019	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires November 20, 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	-
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	147.8	0.998
9000	165.9	166.2	166.2	0.998
10000	184.3	184.8	185.0	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	31	328	-1.0	2.0	1.5
60	300	61	298	-1.0	2.0	1.5
90	270	91	269	-1.0	1.0	1.0
120	240	121	239	-1.0	1.0	1.0
150	210	151	209	-1.0	1.0	1.0
180	180	180	180	0.0	0.0	0.0
210	150	210	150	0.0	0.0	0.0
240	120	240	121	0.0	-1.0	0.5
270	90	269	90	1.0	0.0	0.5
300	60	299	61	1.0	-1.0	1.0
330	30	328	30	2.0	0.0	1.0
355	0	354	0	1.0	0.0	0.5
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**0.8**

Comments:

Bearings replaced. Declination = 15deg East

Peace River Area Monitoring Program

NOVEMBER 2020

Ambient Air Monitoring Calibration Report

- AQHI - CADOTTE LAKE STATION-

CAL-PRAMP-202011-01651

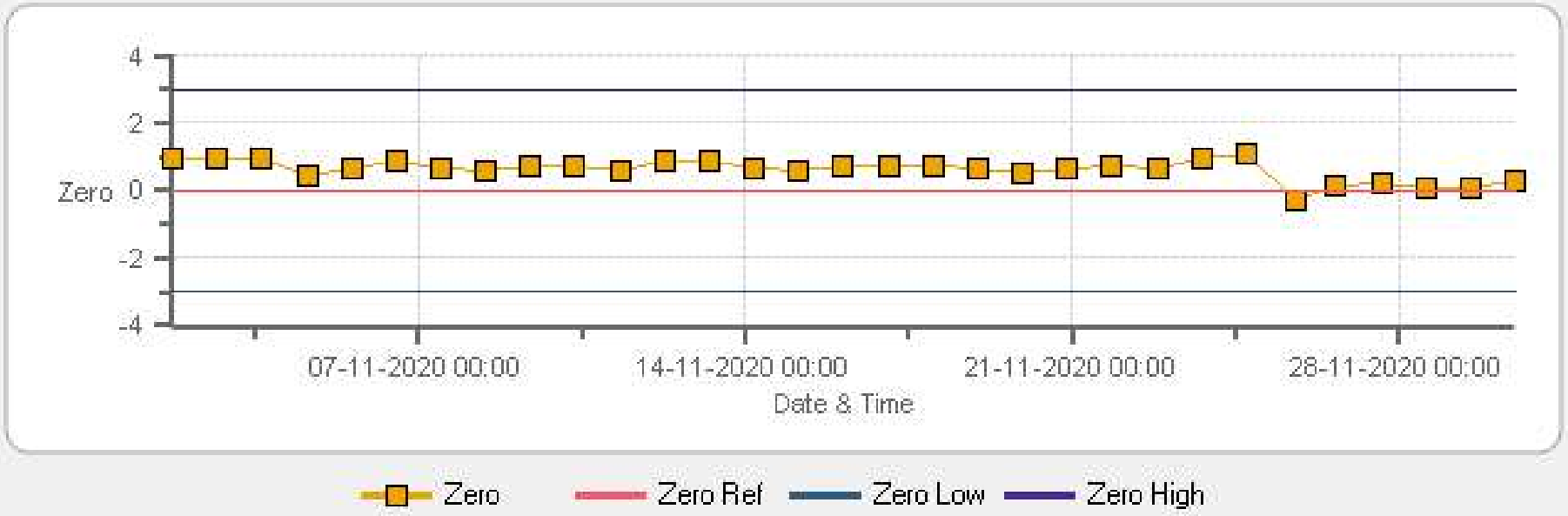
Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Bureau Veritas Canada

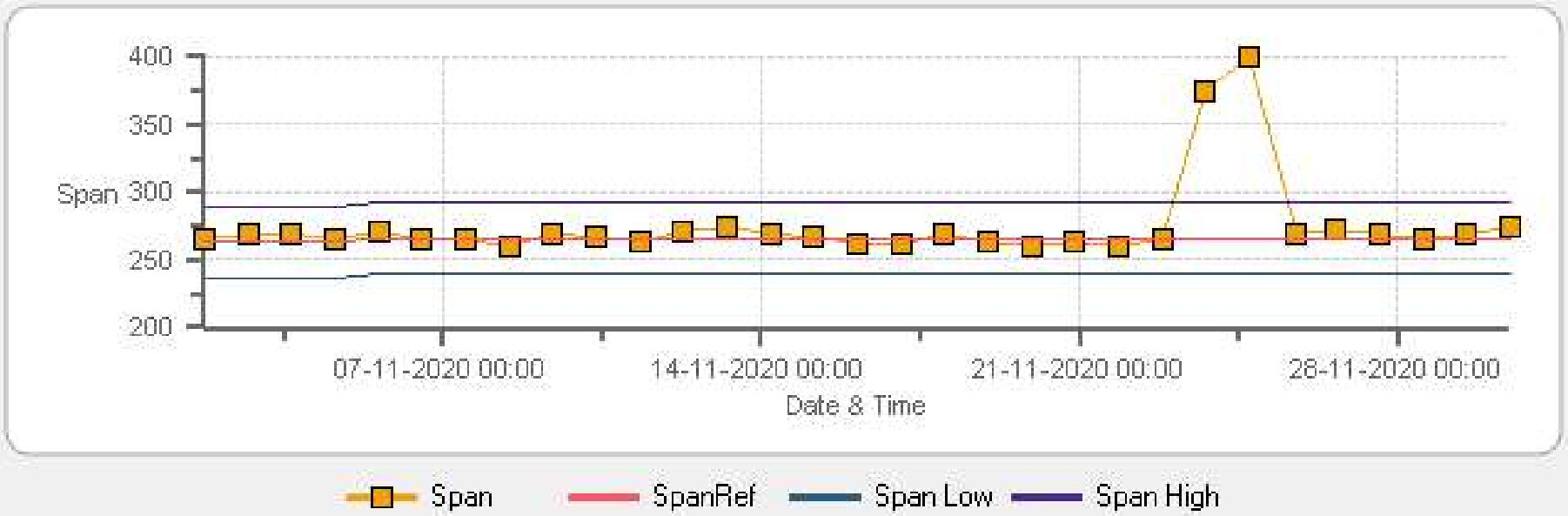
December 14, 2020

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

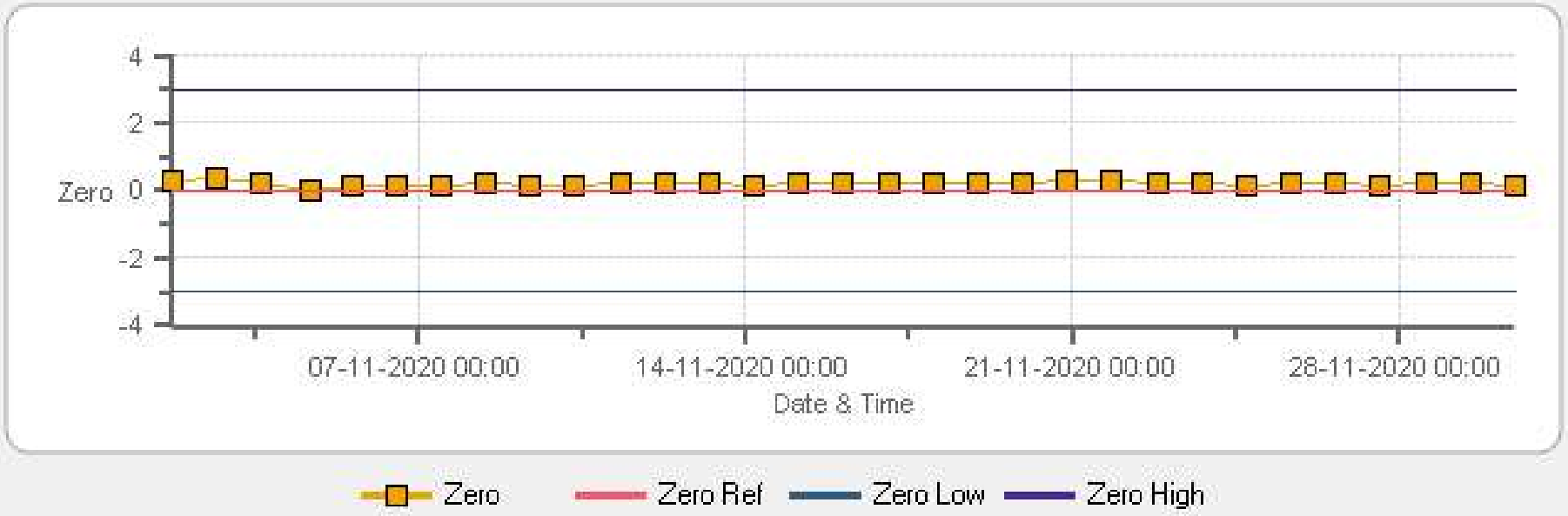
SO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero



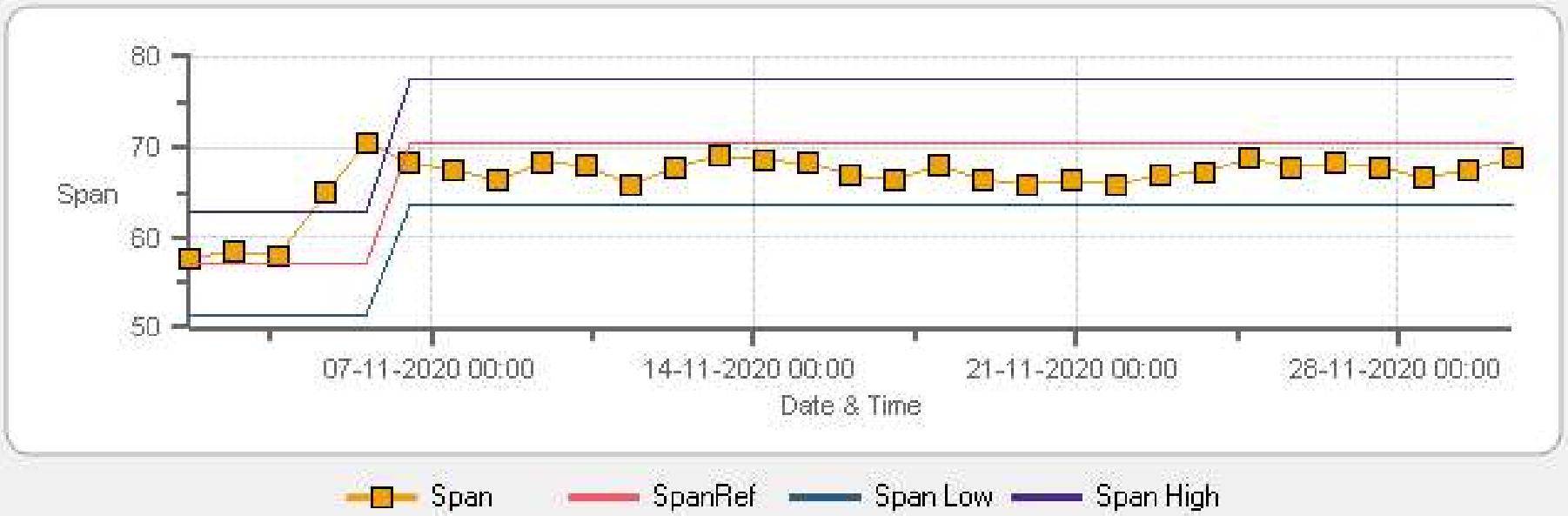
SO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span



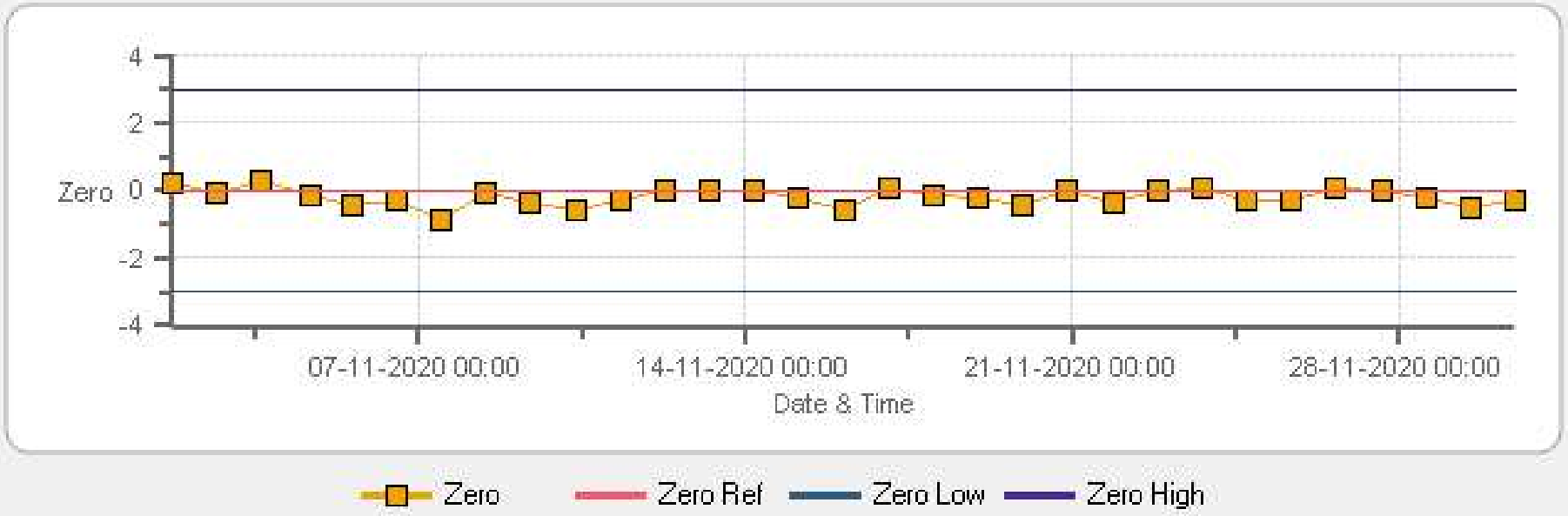
TRS[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero



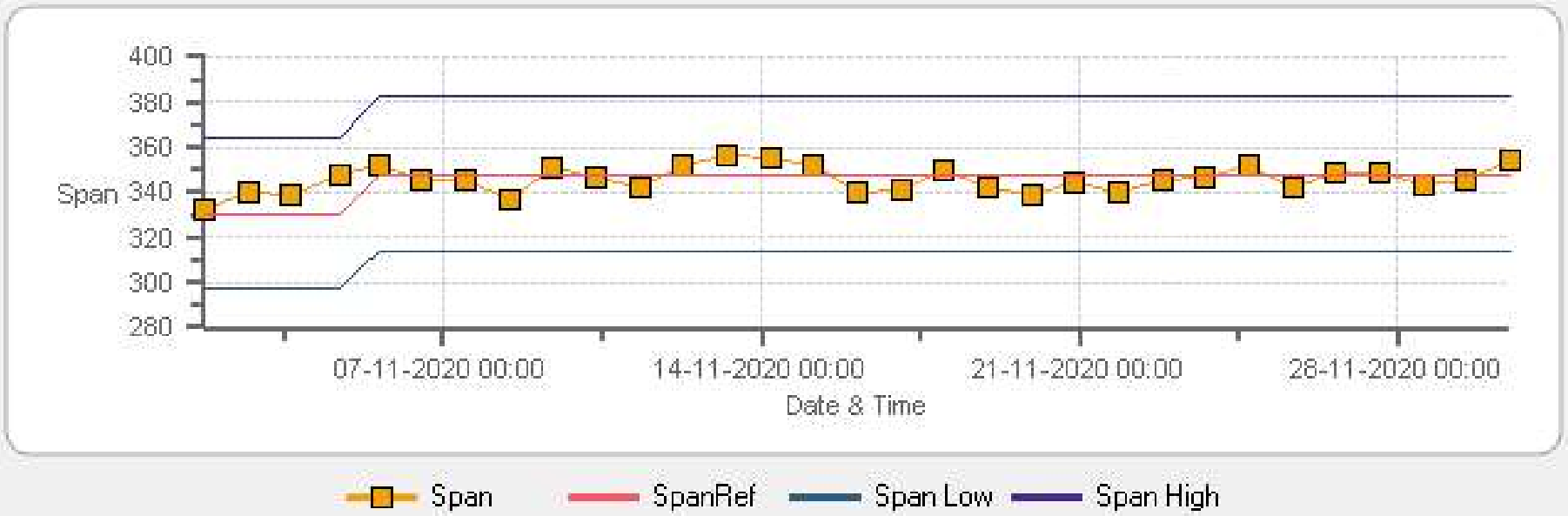
TRS[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span



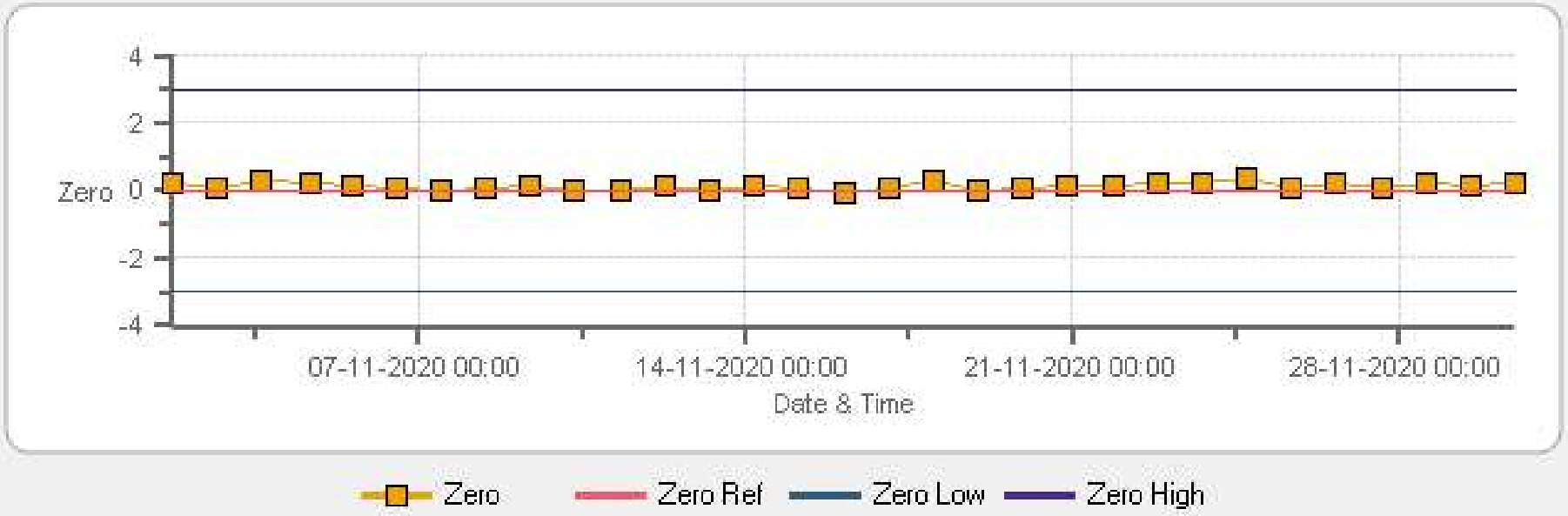
NOX[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero



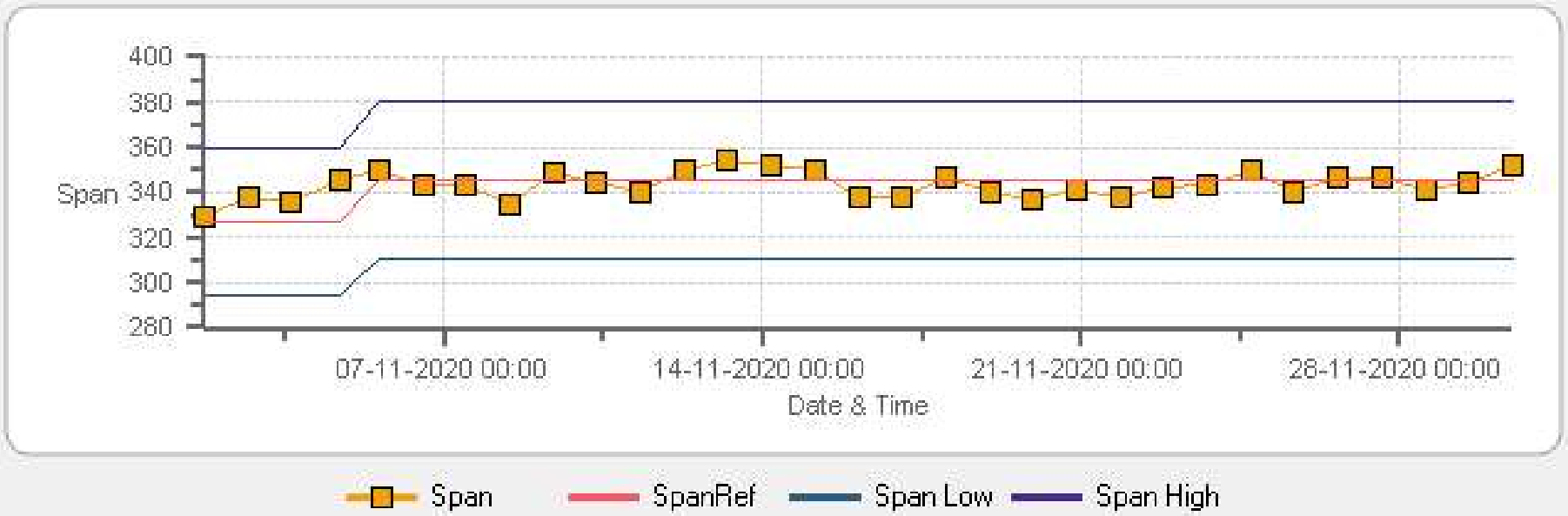
NOX[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span

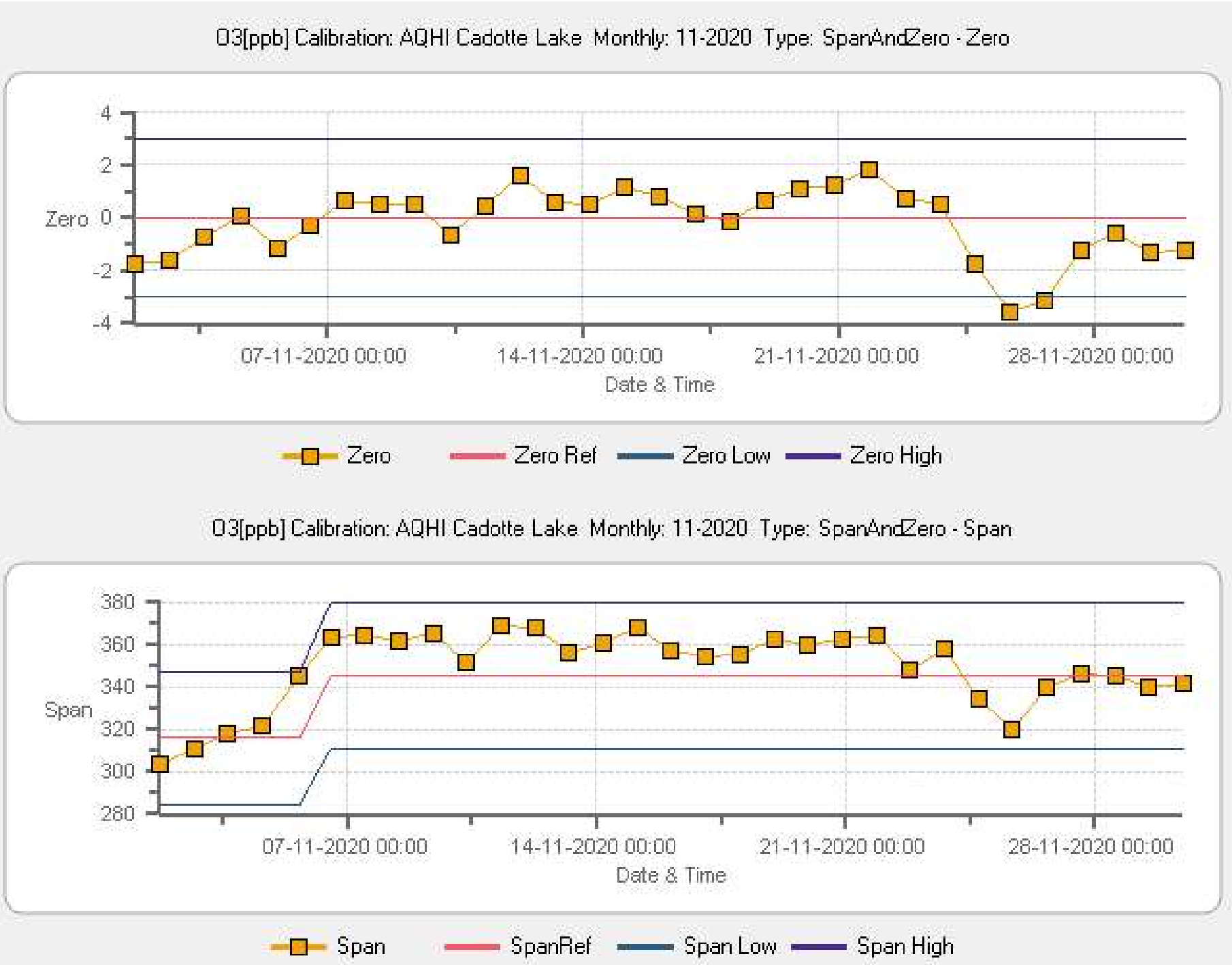


NO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero

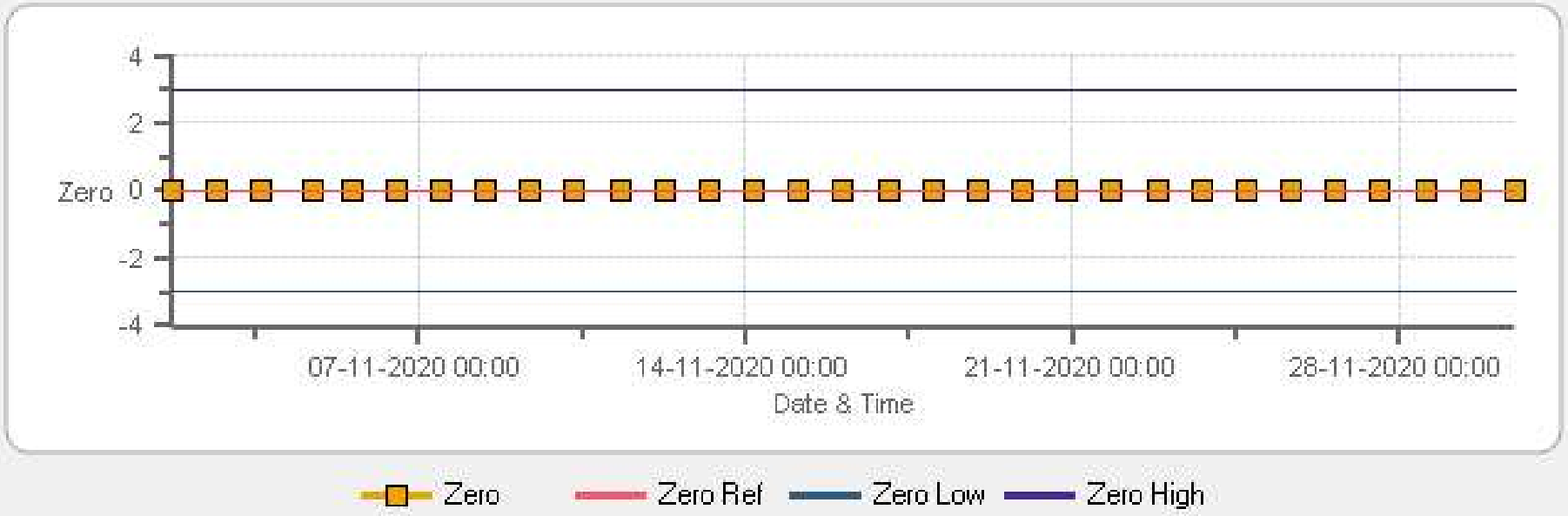


NO2[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span

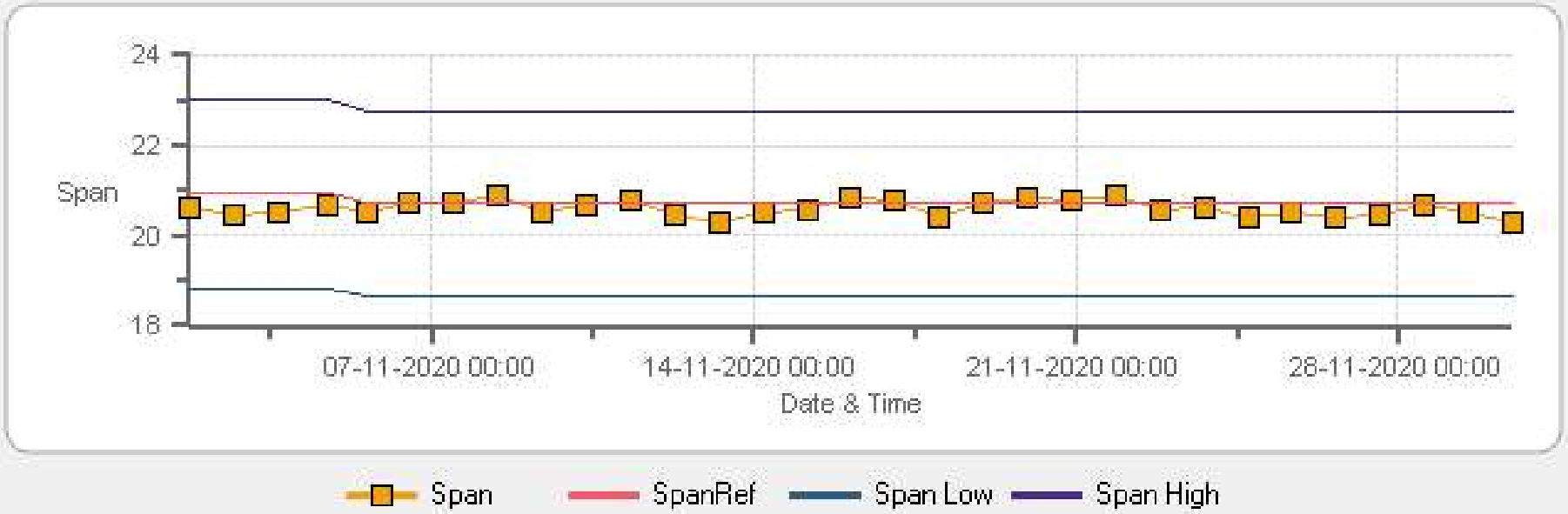



O3[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
07-11-2020 00:00
14-11-2020 00:00
21-11-2020 00:00
28-11-2020 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span
380
360
340
Span
320
300
280
07-11-2020 00:00
14-11-2020 00:00
21-11-2020 00:00
28-11-2020 00:00
Date & Time
Span
SpanRef
Span Low
Span High

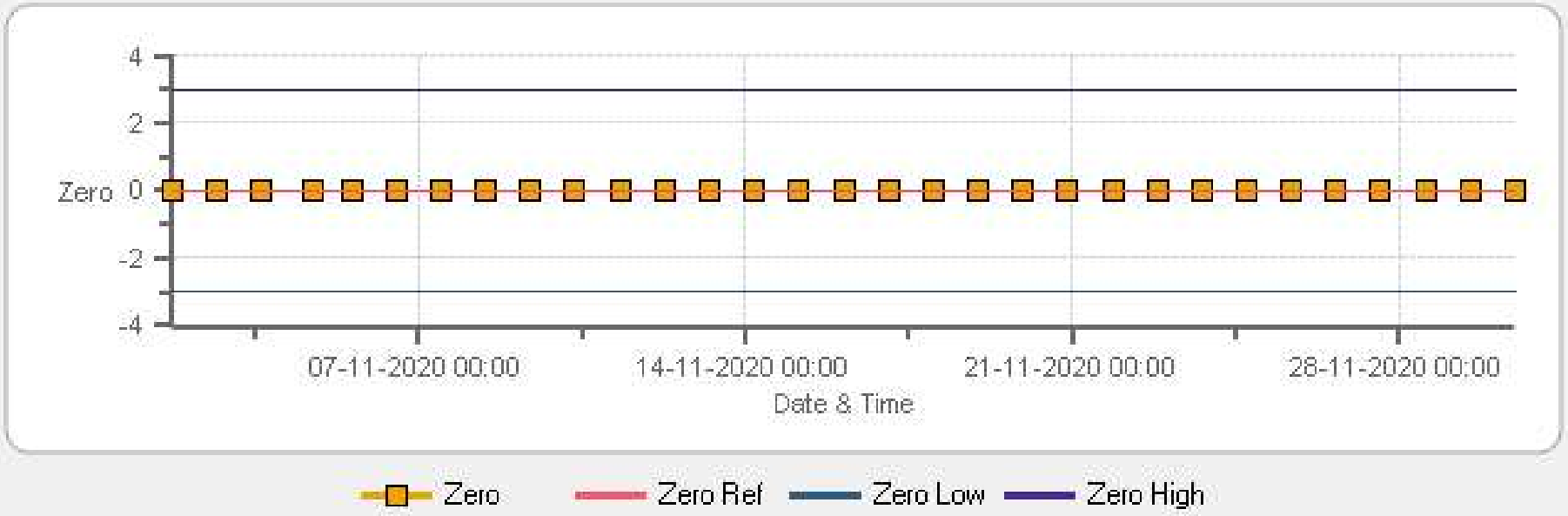
THC55[ppm] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero



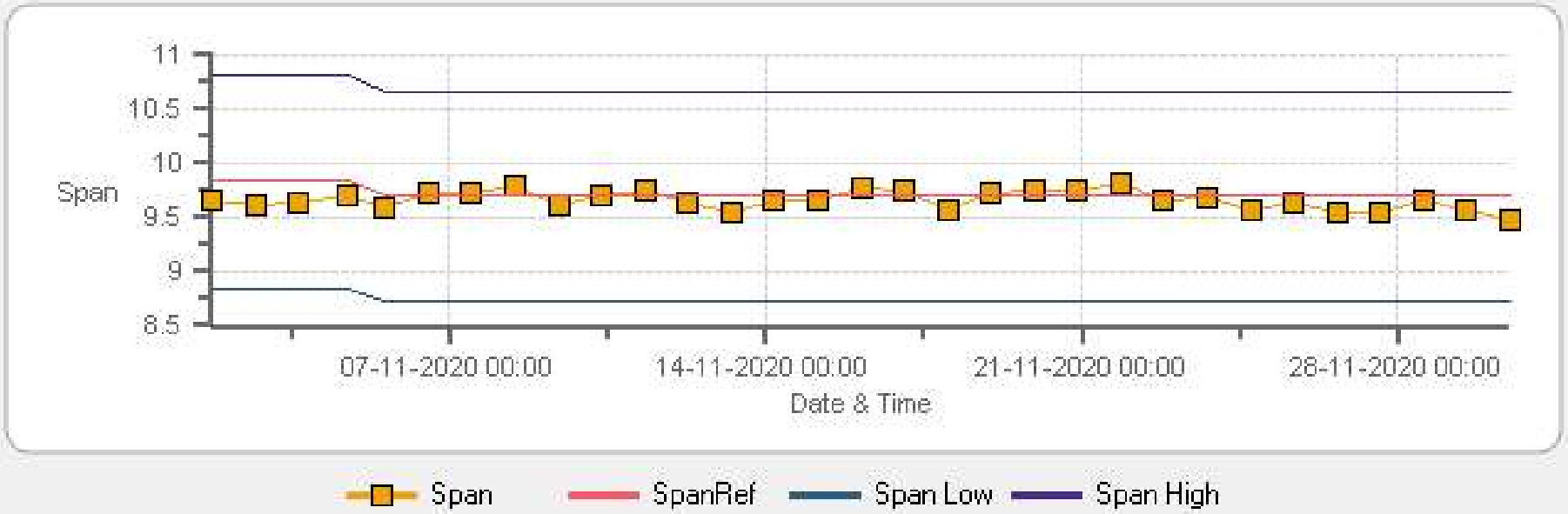
THC55[ppm] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span



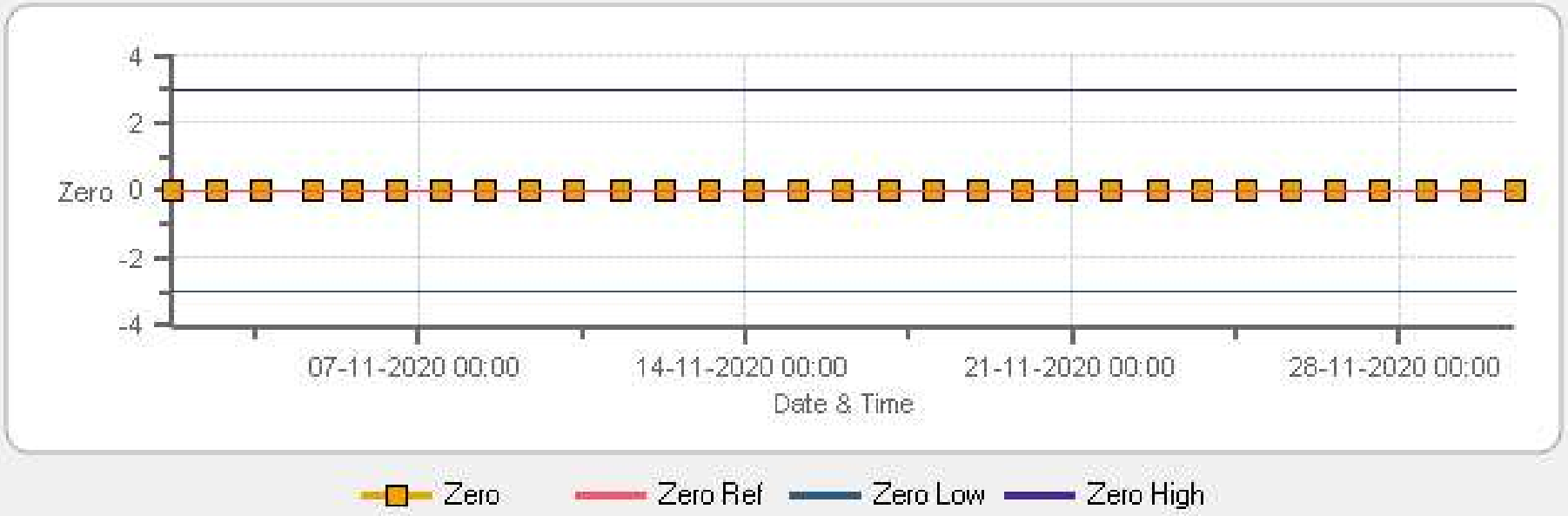
CH4[ppm] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero



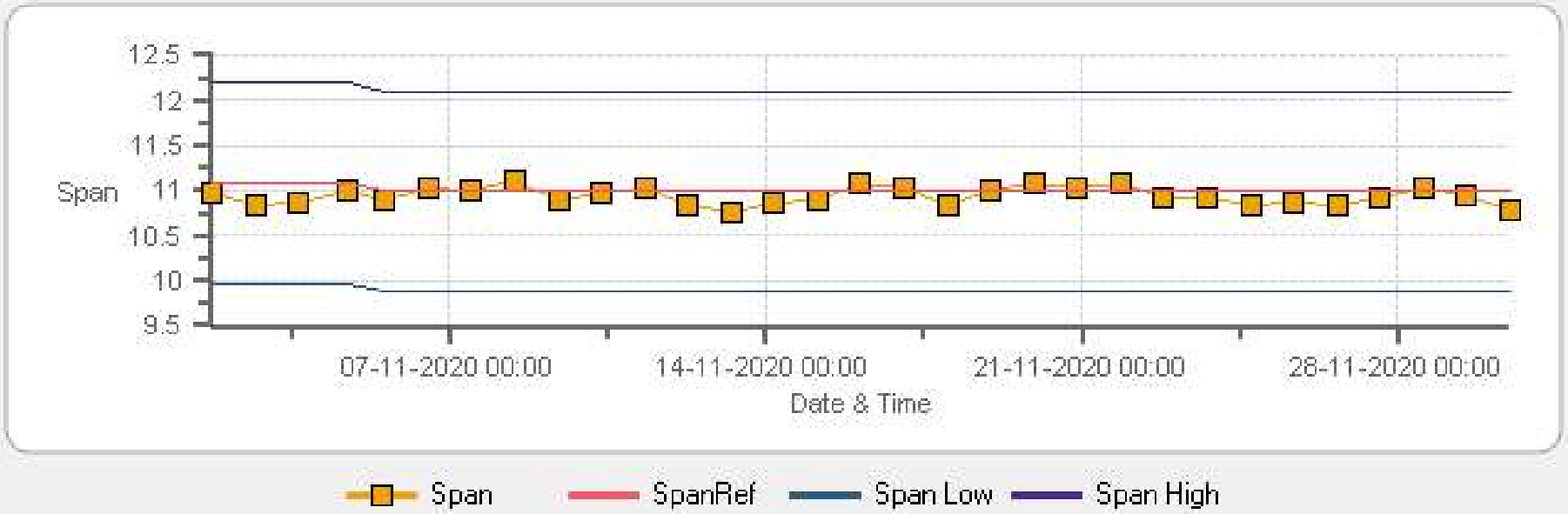
CH4[ppm] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span



NMHC[ppm] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Zero



NMHC[ppm] Calibration: AQHI Cadotte Lake Monthly: 11-2020 Type: SpanAndZero - Span



MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	04-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	946
PURPOSE	Routine	START TIME (MST):	11:12
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:00

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	500 ppb
SERIAL #	722	FLOW (mL/min)	529
INITIAL		FINAL	
BKG/OFFSET	17.7	BKG/OFFSET	18
COEF/SLOPE	0.912	COEF/SLOPE	0.919
Expected (reference) Value	262.8	Expected (reference) Value	265.7

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	API
MODEL:	2010	MODEL:	701
ID:	26801218	ID:	1104
MFC CALIBRATION DATE:	13-Oct-2020	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):	1000	LOW ID	n/a
EXPIRY DATE	20-Aug-2026	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4999		4999	0.00	0.3	0		
4959	39.10	4998	387.24	382.2	387.2	1.014	1.000
4980	17.80	4998	176.29	n/a	175.9	n/a	1.002
4990	8.90	4999	88.13	n/a	87.6	n/a	1.006

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	-0.1%

COMMENTS:

No issues


SO2[ppb] Station: AQHI Cadotte Lake Daily: 04-11-2020 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
SO2 [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
SO2 [ppb]

SO2 Analyzer Calibration by Dilution

DATE:	25-Nov-2020	PREVIOUS CALIBRATION DATE:	04-Nov-2020
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	946
PURPOSE	Removal/Shut-down	START TIME (MST):	14:36
PERFORMED BY:	Chris Wesson	END TIME (MST):	16:29

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	500 ppb
SERIAL #	722	FLOW (mL/min)	332
INITIAL		FINAL	
BKG/OFFSET	18	BKG/OFFSET	n/a
COEF/SLOPE	0.919	COEF/SLOPE	n/a
Expected (reference) Value	265.7	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	API
MODEL:	2010	MODEL:	701
ID:	26801218	ID:	1104
MFC CALIBRATION DATE:	13-Oct-2020	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):	1000	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	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4003		4003	0.00	0.6	n/a		
3941	62.85	4003	379.90	370.4	n/a	1.027	n/a
3971	29.75	4000	179.96	176.2	n/a	1.025	n/a
3988	14.88	4003	89.95	89.1	n/a	1.016	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.973	0.2%

COMMENTS:

Shut down due to low flow
16:00 = daily ZS - low point restarted

Shaping a world of trust

SO2 Analyzer Calibration by Dilution

DATE:	25-Nov-2020	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	24.3
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	946
PURPOSE	Install/Post-Repair	START TIME (MST):	16:37
PERFORMED BY:	Chris Wesson	END TIME (MST):	19:02

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	500 ppb
SERIAL #	722	FLOW (mL/min)	524
INITIAL		FINAL	
BKG/OFFSET	18	BKG/OFFSET	19.2
COEF/SLOPE	0.919	COEF/SLOPE	0.942
Expected (reference) Value	265.7	Expected (reference) Value	265.7

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	API
MODEL:	2010	MODEL:	701
ID:	26801218	ID:	1104
MFC CALIBRATION DATE:	13-Oct-2020	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):	1000	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	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4003		4003	0.00	n/a	0		
3943	62.87	4006	379.83	n/a	380	n/a	1.000
3976	29.47	4006	178.07	n/a	179.5	n/a	0.992
3991	14.88	4006	89.90	n/a	90	n/a	0.999

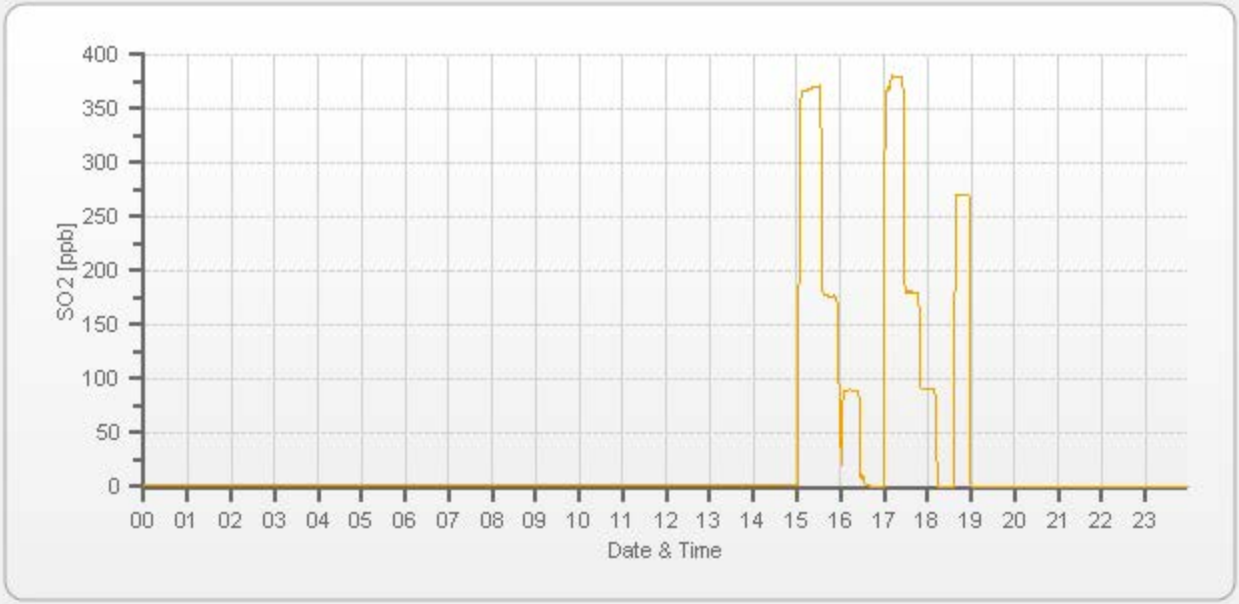
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.1%

COMMENTS:

Post-repair following sample pump exchange

Shaping a world of trust


SO2[ppb] Station: AQHI Cadotte Lake Daily: 25-11-2020 Type: AVG 1 Min. [1 Min.]
SO2 [ppb]
400
350
300
250
200
150
100
50
0
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
SO2 [ppb]

TRS Analyzer Calibration by Dilution

DATE:	04-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	946
PURPOSE	Removal/Shut-down	START TIME (MST):	11:12
PERFORMED BY:	Chris Wesson	END TIME (MST):	13:35

ANALYZER:

MAKE/MODEL	Teledyne T100U	RANGE	100 ppb
SERIAL #	132	FLOW (mL/min)	526
INITIAL		FINAL	
BKG/OFFSET	18.8	BKG/OFFSET	n/a
COEF/SLOPE	1.12	COEF/SLOPE	n/a
Expected (reference) Value	57.16	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	2000	MODEL:	701
ID:	1991	ID:	1104
MFC CALIBRATION DATE:	14-Oct-2020	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):	1200	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:	11:47	SO2 Conc (ppb)	380
END TIME:	12:02	Analyzer Response (ppb)	0.2

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4000		4000	0.00	0.02	n/a		
3970	31.23	4001	78.04	75.65	n/a	1.032	n/a
3985	15.22	4000	38.05	37.1	n/a	1.026	n/a
3993	7.63	4000	19.08	18.35	n/a	1.041	n/a

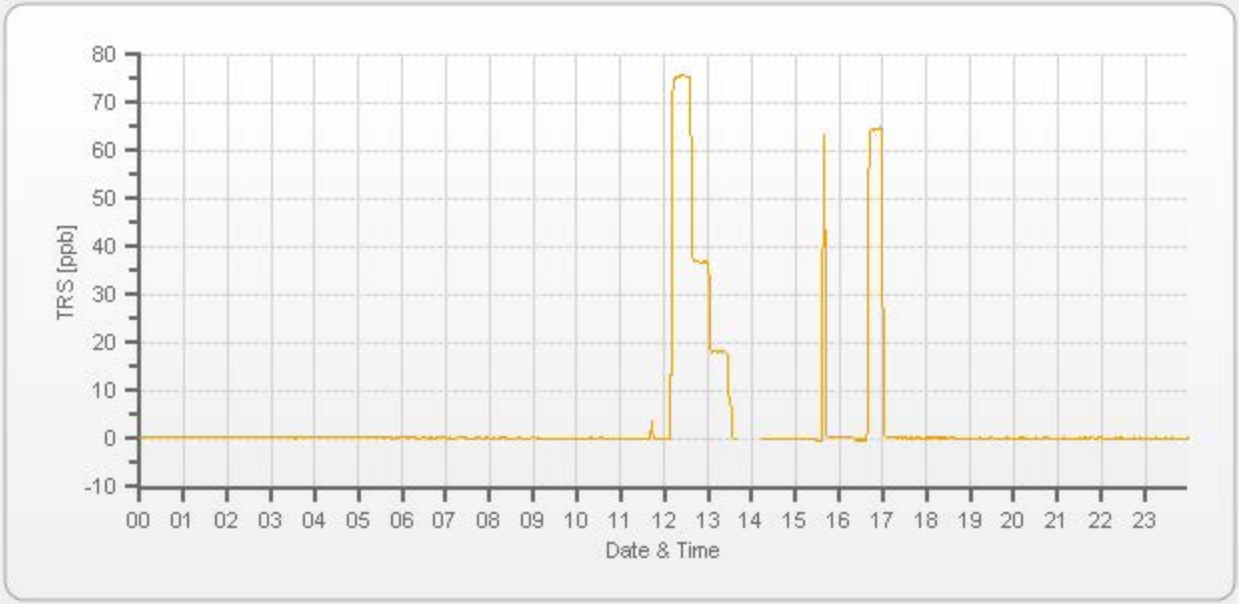
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.970	0.0%

COMMENTS:

Shut-down to remove for testing (intermittent firmware crash)

Shaping a world of trust


TRS[ppb] Station: AQHI Cadotte Lake Daily: 04-11-2020 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

TRS Analyzer Calibration by Dilution

DATE:	05-Nov-2020	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	2.2
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	943
PURPOSE	Install/Post-Repair	START TIME (MST):	10:48
PERFORMED BY:	Chris Wesson	END TIME (MST):	13:53

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	100 ppb
SERIAL #	1152940011	FLOW (mL/min)	466
INITIAL		FINAL	
BKG/OFFSET	1.71	BKG/OFFSET	1.91
COEF/SLOPE	0.981	COEF/SLOPE	1.063
Expected (reference) Value	n/a	Expected (reference) Value	70.56

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Environics	MAKE:	API
MODEL:	2000	MODEL:	701
ID:	1991	ID:	1104
MFC CALIBRATION DATE:	14-Oct-2020	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):	1200	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:	11:08	SO2 Conc (ppb)	380
END TIME:	11:28	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4000		4000	0.00	n/a	0		
3969	31.20	4000	77.99	n/a	77.99	n/a	1.000
3985	15.21	4001	38.02	n/a	38.2	n/a	0.995
3993	7.62	4001	19.06	n/a	18.94	n/a	1.006

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.0%

COMMENTS:

No issues


TRS[ppb] Station: AQHI Cadotte Lake Daily: 05-11-2020 Type: AVG 1 Min. [1 Min.]
TRS [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
TRS [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	04-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020	MAKE/MODEL:	Teledyne T200	PREVIOUS CF.	
CLIENT:	PRAMP	TEMPERATURE (°C):	23.5	SERIAL #:	837	NOx	1.008
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	946	FLOW (mL/min)	447	NO	1.010
PURPOSE	Routine	START TIME (MST):	11:12	RANGE (ppb)	500	NO2	1.000
PERFORMED BY:	Chris Wesson	END TIME (MST):	17:07	GPT FOR O3?		Yes	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	API	CYLINDER ID:	LL48147		HIGH ID:	n/a
MODEL:	2010	MODEL:	701	NO/NOx (PPM):	50.5	50.6	HIGH EXPIRY:	n/a
ID:	26801218	ID:	1104	CYLINDER (psi):	1000		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2020	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:	0.1	0	n/a	BKG/OFFSET:	0.6	0.6	n/a
SLOPE/COEF/CE:	1.065	1.058	1	SLOPE/COEF/CE:	1.106	1.095	1

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	330.6	3.2	327.4		348.1	2.7	345.5

CALIBRATION PARAMETERS:

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

NO/NOx CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
4999		4999	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0						
4959	39.10	4998	395.1	395.9	0.8	377.6	381.8	4.1	395.5	396.0	0.5	1.047	1.037		0.999	1.000	
4980	17.80	4998	179.9	180.2	0.4	n/a	n/a	n/a	178.6	181.1	2.4	n/a	n/a		1.007	0.995	
4990	8.90	4999	89.9	90.1	0.2	n/a	n/a	n/a	89.3	90.3	1.0	n/a	n/a		1.007	0.998	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	39.10	4998	0	395.7	398.3	2.6				
AS-FOUND HIGH	39.10	4998	260	134.0	398.1	264.2	261.7	261.6	1.000	99.96%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	39.10	4998	150	242.6	398.3	155.7	153.1	153.1	1.000	100.00%
LOW	39.10	4998	53	343.8	398.4	54.6	51.9	52	0.998	100.19%
NO2 adjustment not required.									AVERAGE:	100.05%

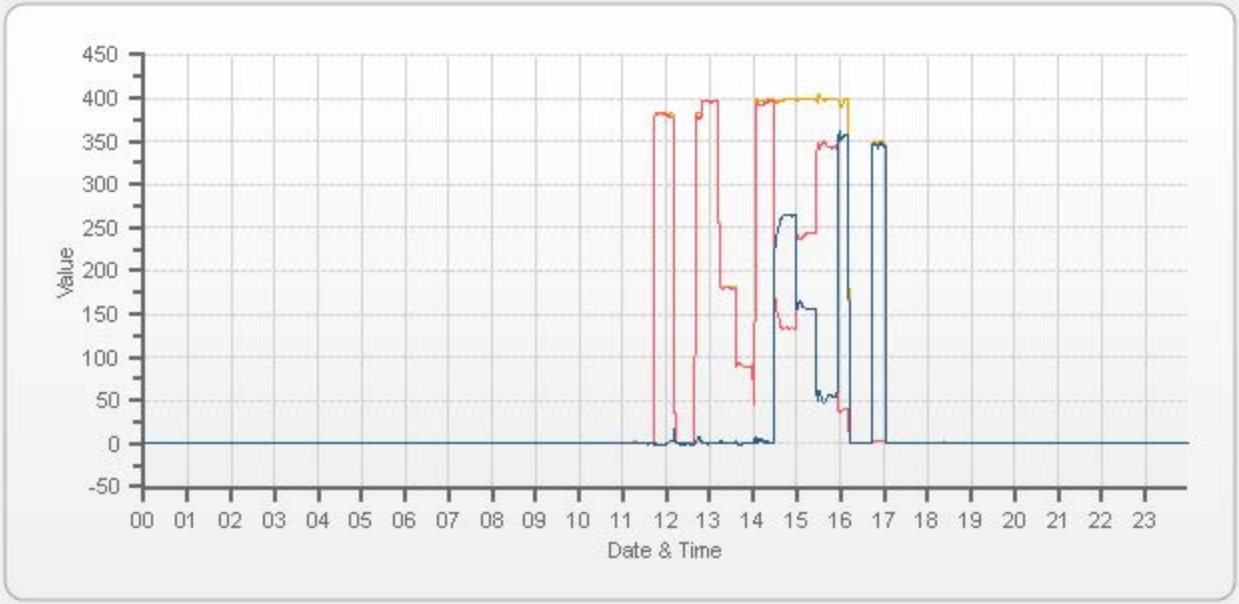
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	1.001	-0.12%
NOx	1.000	1.000	0.05%
NO2	1.000	0.999	0.03%

COMMENTS:

Additional GPT point for O3: Setpoint= 350, O3 conc= 355.8

Station: AQHI Cadotte Lake Daily: 04-11-2020 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Direct GPT

DATE:	05-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	23.3
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	943
PURPOSE	Routine	START TIME (MST):	10:48
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:57

ANALYZER:

MAKE/MODEL	Teledyne T400	RANGE	500 ppb
SERIAL #	824	FLOW (mL/min)	739
INITIAL		FINAL	
BKG/OFFSET	-1.2	BKG/OFFSET	0.2
COEF/SLOPE	0.995	COEF/SLOPE	1.095
Expected (reference) Value	316.1	Expected (reference) Value	345.4

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	API
MODEL:	2010	MODEL:	701
ID:	26801218	ID:	1104
MFC CALIBRATION DATE:	13-Oct-2020	OXIDIZER ID:	n/a
	CALIBRATION METHOD:	Direct GPT	
GPT DATE:	04-Nov-2020	GPT END TIME:	17:07

CALIBRATION PARAMETERS:

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5004		5004	0.0	0.3	0.0		
5004		5004	382.1	349.8	382.2	1.093	1.000
5004		5004	177.5	n/a	180.3	n/a	0.984
5004		5004	87.4	n/a	90.4	n/a	0.967

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.998	0.4%

COMMENTS:

1st AF high fails (320/355.8). Stop calibration at 11:29 to redo GPT. Leak test/check analyzer during GPT. No problems found. Flush calibrator at 12:25 and restart calibration from AF zero at 12:32.
12:53 Incorrect target at start of AF high
13:00 Daily IZS. AF High restarts at 13:04


O3[ppb] Station: AQHI Cadotte Lake Daily: 05-11-2020 Type: AVG 1 Min. [1 Min.]
O3 [ppb]
450
400
350
300
250
200
150
100
50
0
-50
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	04-Nov-2020	PREVIOUS CALIBRATION DATE:	07-Oct-2020
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	Cadotte Lake	BAROMETRIC (mBar):	945
PURPOSE	Routine	START TIME (MST):	13:59
PERFORMED BY:	Chris Wesson	END TIME (MST):	18:01

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1191032505	1212
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.998	0.999	0.999

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	Environics	MAKE:	API	CYLINDER ID:	LL168375		HIGH ID:	n/a
MODEL:	2000	MODEL:	701	CH_4/C_3H_8 (ppm):	914.0	307.0	HIGH EXPIRY:	n/a
ID:	1991	ID:	1104	CYLINDER (psi):	1600		LOW ID:	n/a
MFC CALIBRATION DATE:	14-Oct-2020	OXIDIZER ID:	Internal	EXPIRY DATE	21-Jan-2028		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH4/NMHC)	HIGH	MID	LOW	CH4 EQUIVILANCE	
TARGET	14	7	3.5	C_3H_8 as CH_4	844.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1758.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	9.83	11.08	20.92		9.70	10.99	20.70

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3050		3050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3001	48.55	3050	14.55	13.44	27.99	14.24	13.20	27.44	14.57	13.45	28.02	1.022	1.018	1.020	0.999	0.999	0.999
3028	24.27	3053	7.27	6.71	13.98	n/a	n/a	n/a	7.28	6.72	14.00	n/a	n/a	n/a	0.998	0.999	0.999
3041	12.13	3053	3.63	3.35	6.98	n/a	n/a	n/a	3.65	3.32	6.98	n/a	n/a	n/a	0.995	1.010	1.000

LINEAR REGRESSION ANALYSIS:

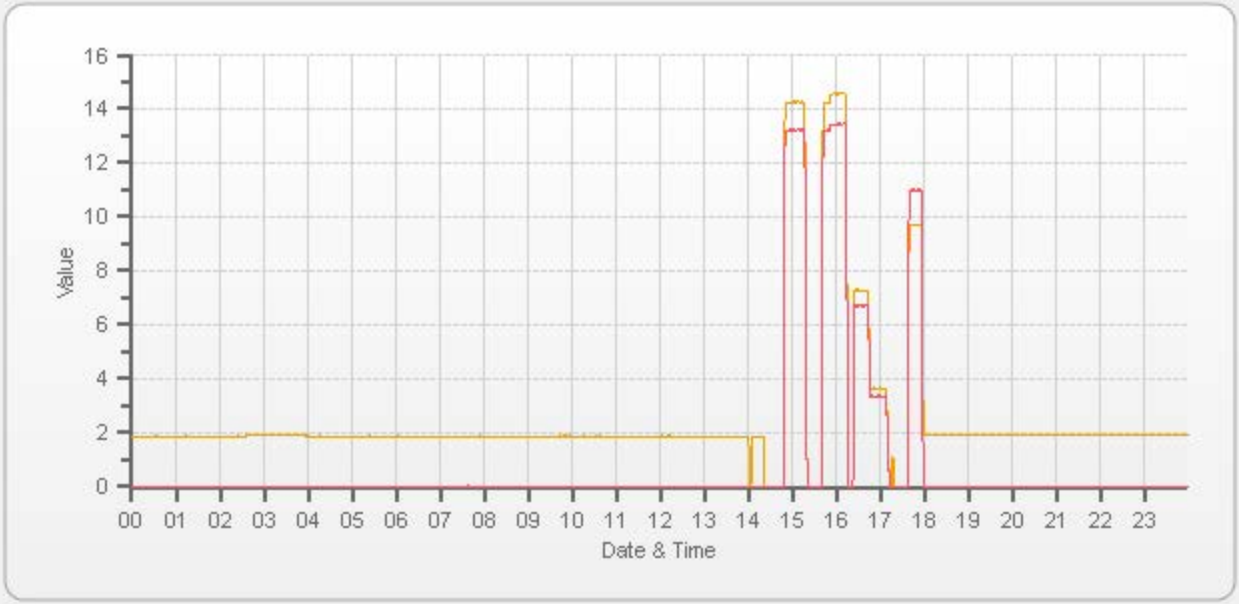
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.001	0.0%
NMHC	1.000	1.002	-0.1%
THC	1.000	1.001	0.0%

Comments:

16:16-16:24 = user error. Mid-point restarted.
New span gas installed

Use Zero Chrom? Yes

Station: AQHI Cadotte Lake Daily: 04-11-2020 Type: AVG 1 Min. [1 Min.]



Teledyne T640 Audit/Calibration

Date/Previous Audit Date:	November 4, 2020	October 23, 2020	**Weather Conditions:**	Mainly cloudy with light snow	
Company:	PRAMP		**Start Time (mst):**	14:59	
Station:	Cadotte Lake		**End Time (mst):**	15:23	
Parameter:	PM 2.5		**Performed By/Reviewer:**	Chris Wesson	Ferdinand Roy

Instrument Data:

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

Reference Standards/I.D./Expiry Date:

Flow Standard: Maxxam ID #3 expires June 11, 2021 **Temperature:** FS 170286131 expires June 05, 2021

Digital Manometer: Dwyer 475 Mark III id# 2 expires Feb 11, 2021 **Pressure:** Brunton 05535 expires Jan 07, 2021

DIAGNOSTICS:

Ambient Pressure (mmHg)	708.8	Ambient Temp (°C)	-6.9	ASC Heater Duty (%)	0.0
Box Temp (°C)	26.1	Current PMT HV (V)	1541	LED Temp (°C)	34.44
P3 Value	45	PMT Setting (V)	1547	Pump PWM (%)	42
Sample Flow (L/min)	5.02	Sample RH (%RH)	9.8	Sample Temp (°C)	23.9

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)	708.7	708.7	708.7	708.7	+/- 10 mm Hg
Ambient Temperature (°C)	-6.54	-6.9	n/a		+/- 2°C
Sample Flow (L/min)	5.01	5.01	5.01	5.01	+/-5% of T640x (e.g., 4.75 – 5.25 lpm)

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

Comments:

No issues.

Meteorological System Checklist

Date:	November 4, 2020		
Technician:	Chris Wesson		
Station:	PRAMP Cadotte Lake		
Unit:	**Make:**	**Model:**	**Serial #:**
Temperature Sensor:	Vaisala	HMP155	N2910506
Relative Humidity Sensor:	Vaisala	HMP155	N2910506
Anemometer:	RM Young	05305AQ	174801
AMBIENT TEMPERATURE SENSOR CHECK			
Previous check date:	October 7, 2020		
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	FS 170286131 expires June 05, 2021		
Reference Temperature (^{o}C):	-6.5		
Station - Ambient Temperature (^{o}C):	-7.3		
Temperature Difference (^{o}C):	0.8		
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Previous check date:	October 7, 2020		
Reference Hygrometer ID:	FS 170286131 expires June 05, 2021		
Reference Hygrometer % RH- Reading:	84.00		
Station Hygrometer % RH- Reading:	83.30		
RH Tolerance +/- 15% of difference:	71.40 - 96.60	0.8%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	October 7, 2020	Previous check date:	October 7, 2020
Wind Speed Observed (kph):	10-20	Wind Direction Observed:	E
Wind speed on Data Logger (kph):	13	Wind Direction on Data Logger:	E
		Wind Direction Pass/Fail?:	Pass

Comments

No issues. Temp/RH @15:10; WS/Wd @ 15:23

Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	**Performed By:**	Chris Wesson
Audit Location:	Cadotte Lake	**Reviewed By:**	Ferdinand Roy
Audit Date:	June 18, 2020	**Start/End Time (mst):**	14:28 / 15:15
Calibration Purpose:	installation	**Weather Conditions:**	Mix of sun and clouds

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	n/a
Sensor Model:	05305AQ	**Velocity Unit Output Range:**	0-180
Serial #:	174801	**Direction Voltage Output Range:**	n/a
Previous Cal/Audit Date:	n/a	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires November 20, 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	-
1000	18.4	18.3	18.3	1.007
2000	36.9	36.7	36.7	1.004
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
		The audit meets AMD requirements.	**Average Correction Factor=**	**1.002**

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

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	353	0.1	2.0	1.1
30	330	28	329	2.0	1.0	1.5
60	300	58	299	2.0	1.0	1.5
90	270	88	268	2.0	2.0	2.0
120	240	119	239	1.0	1.0	1.0
150	210	149	209	1.0	1.0	1.0
180	180	179	179	1.0	1.0	1.0
210	150	209	149	1.0	1.0	1.0
240	120	239	119	1.0	1.0	1.0
270	90	270	89	0.0	1.0	0.5
300	60	299	58	1.0	2.0	1.5
330	30	329	29	1.0	1.0	1.0
355	0	354	1	1.0	0.6	0.8
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**1.1**

Comments:

Declination = 15deg East

Peace River Area Monitoring Program

NOVEMBER 2020

Ambient Air Monitoring

Certified Laboratory Analysis Report

LAB-PRAMP-202011

Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
Peace River Area Monitoring Program

November 20, 2020

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

EAS CANISTER

Sample ID: 20110112-001 **Priority:** Normal

Customer ID: PRAMP
Cust Samp ID: Pramp_Reno-20201111

Date Received- Lab Use Only

RECEIVED
NOV 17 2020

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842 Station □ 986 Station □ Reno Station
Address: □ 842 (Lat. 56.27406N, Long. 116.98129W)
□ 986 (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge) ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- _____ **(Sample date: yyyymmdd)** PRAMP_986- _____ **(Sample date: yyyymmdd)** PRAMP_Reno- 20201111 **(Sample date: yyyymmdd)**	31820	☑ Methane Trigger □ NMHC Trigger □ Methane Blank □ NMHC Blank □ Expired Canister – No further analysis is required.	11/11/20	0225	* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:

Collect By Ferdinand Roy **(Name) of** Bureau Veritas **(Company) on** Nov 12, 2020/15:52 **(Date/Time (MST).**

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

EAS CANISTER

Sample ID: 20110112-002 **Priority:** Normal

Customer ID: PRAMP
Cust Samp ID: Pramp_Reno_Blank

Date Received- Lab Use Only

RECEIVED
NOV 17 2020

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842 Station □ 986 Station □ Reno Station
Address: □ 842 (Lat. 56.27406N, Long. 116.98129W)
□ 986 (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge) ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- —————— **(Sample date: yyyymmdd)** PRAMP_986- —————— **(Sample date: yyyymmdd)** PRAMP_Reno—————— **(Sample date: yyyymmdd)**	31823	□ Methane Trigger □ NMHC Trigger ☑ Methane Blank □ NMHC Blank □ Expired Canister – No further analysis is required.			* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:

Collect By Ferdinand Roy **(Name) of** Bureau Veritas **(Company) on** Nov 12, 2020 / 15:52 **(Date/Time (MST).**

InnoTech ALBERTA

Canister ID: 31820

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: DO54 on: JUL 2 0 2020

Evacuated: SEP 1 0 2020 Recertified: SEP 1 0 2020

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP Reno - 20201111 ~~Reno~~

Sampled By: Ferdinand Roy

Starting Vacuum: -27.2 "Hg

End Vacuum: KG -2 -3 "Hg/psig

InnoTech ALBERTA

Canister ID: 31823

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: DO54 on: JAN 2 0 2020

Evacuated: APR 2 2 2020 Recertified: OCT 0 9 2020

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID:

Sampled By: Blank

Starting Vacuum: -26.9 "Hg KG

End Vacuum: -26 "Hg/psig

Sample ID: 20110112-001 **Priority:** Normal

Customer ID: PRAMP

Cust Samp ID: Pramp_Reno-20201111

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Office Manager
Peace River Area Monitoring Program Committee

INVOICE: Karla Reesor 403 807 2995

CLIENT SAMPLE ID: Pramp_Reno_Blank

Matrix: Ambient Air

CANISTER ID: 31823

PRIORITY: Normal

DESCRIPTION: Methane Blank

DATE SAMPLED: 11-Nov-20

DATE RECEIVED: 17-Nov-20

REPORT CREATED: 24-Nov-20

REPORT NUMBER: 20110112

VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Nov-20
20110112-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	17-Nov-20
20110112-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Nov-20
20110112-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	17-Nov-20
20110112-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	17-Nov-20
20110112-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Nov-20
20110112-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-002	Methane		0.4	ppmv	0.1	NA-025	17-Nov-20
20110112-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Nov-20
20110112-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	17-Nov-20
20110112-002	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20

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

Date: November 24, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno_Blank	31823	Ambient Air	11-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-002	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	Carbonyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Hydrogen sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Isopropyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-002	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-002	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-002	Thiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	17-Nov-20
20110112-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,1-Dichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	1,2,3-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Nov-20
20110112-002	1,2,4-Trichlorobenzene	K, T, U	< 0.8	ppbv	0.8	AC-058	18-Nov-20
20110112-002	1,2,4-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Nov-20
20110112-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,2-Dichlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20

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

Date: November 24, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno_Blank	31823	Ambient Air	11-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-002	1,2-Dichloroethane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	1,2-Dichloropropane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	1,3,5-Trimethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,3-Butadiene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1,3-Dichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Nov-20
20110112-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	1,4-Dioxane	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	1-Butene/Isobutylene		0.34	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1-Hexene/2-Methyl-1-pentene	I	0.11	ppbv	0.02	AC-058	18-Nov-20
20110112-002	1-Pentene		0.07	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2,2,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2,2-Dimethylbutane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2,3,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2,3-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	2,4-Dimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2-Methylheptane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2-Methylhexane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	2-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	3-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	3-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Acetone		0.5	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Nov-20
20110112-002	Benzene		0.11	ppbv	0.01	AC-058	18-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno_Blank	31823	Ambient Air	11-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-002	Benzyl chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Bromodichloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Bromomethane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Carbon disulfide	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Carbon tetrachloride	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Chloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	cis-1,2-Dichloroethene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	cis-1,3-Dichloropropene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	cis-2-Butene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Cyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Cyclopentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Dibromochloromethane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Ethanol		0.9	ppbv	0.3	AC-058	18-Nov-20
20110112-002	Ethyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Ethylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Freon-113	I	0.03	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Freon-114	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Freon-12	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Hexachloro-1,3-butadiene	K, T, U	< 0.50	ppbv	0.50	AC-058	18-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno_Blank	31823	Ambient Air	11-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-002	Isobutane		0.24	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Isopentane		0.07	ppbv	0.03	AC-058	18-Nov-20
20110112-002	Isoprene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Isopropyl alcohol	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Isopropylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	m,p-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-002	m-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	m-Ethyltoluene	K, T, U	< 0.08	ppbv	0.08	AC-058	18-Nov-20
20110112-002	Methyl butyl ketone	K, T, U	< 0.50	ppbv	0.50	AC-058	18-Nov-20
20110112-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Nov-20
20110112-002	Methyl isobutyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Methyl methacrylate	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Nov-20
20110112-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-002	Methylcyclohexane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	Methylcyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Nov-20
20110112-002	n-Butane		0.04	ppbv	0.03	AC-058	18-Nov-20
20110112-002	n-Decane	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-002	n-Dodecane	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	n-Heptane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	n-Hexane		0.17	ppbv	0.01	AC-058	18-Nov-20
20110112-002	n-Octane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	n-Pentane		0.1	ppbv	0.1	AC-058	18-Nov-20
20110112-002	n-Propylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Nov-20
20110112-002	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Nov-20

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

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno_Blank	31823	Ambient Air	11-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-002	Naphthalene	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Nov-20
20110112-002	n-Nonane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	o-Ethyltoluene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	o-Xylene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	p-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Nov-20
20110112-002	Styrene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	Tetrachloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	Tetrahydrofuran	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Toluene		0.13	ppbv	0.01	AC-058	18-Nov-20
20110112-002	trans-1,2-Dichloroethylene	I	0.06	ppbv	0.01	AC-058	18-Nov-20
20110112-002	trans-1,3-Dichloropropylene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	trans-2-Butene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-002	trans-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20
20110112-002	Trichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-002	Vinyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-002	Vinyl chloride	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno-20201111	31820	Ambient Air	11-Nov-20 2:25

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-001	1-Butene	K, T, U	< 0.14	ppmv	0.14	NA-025	17-Nov-20
20110112-001	Acetylene	K, T, U	< 0.12	ppmv	0.12	NA-025	17-Nov-20
20110112-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	17-Nov-20
20110112-001	cis-2-Butene	K, T, U	< 0.06	ppmv	0.06	NA-025	17-Nov-20
20110112-001	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-001	Ethylacetylene	K, T, U	< 0.09	ppmv	0.09	NA-025	17-Nov-20
20110112-001	Ethylene	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Nov-20
20110112-001	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-001	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-001	Methane		3.4	ppmv	0.1	NA-025	17-Nov-20
20110112-001	n-Propane	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Nov-20
20110112-001	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-001	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Nov-20
20110112-001	trans-2-Butene	K, T, U	< 0.13	ppmv	0.13	NA-025	17-Nov-20
20110112-001	2,5-Dimethylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	3-Methylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	Carbonyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Dimethyl disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	Dimethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	Ethyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Ethyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno-20201111	31820	Ambient Air	11-Nov-20 2:25

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-001	Hydrogen sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Isobutyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Isopropyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	Pentyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	17-Nov-20
20110112-001	Propyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	17-Nov-20
20110112-001	tert-Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	17-Nov-20
20110112-001	Thiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	17-Nov-20
20110112-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,1-Dichloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-001	1,2,3-Trimethylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Nov-20
20110112-001	1,2,4-Trichlorobenzene	K, T, U	< 1.2	ppbv	1.2	AC-058	18-Nov-20
20110112-001	1,2,4-Trimethylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Nov-20
20110112-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,2-Dichlorobenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-001	1,2-Dichloroethane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	1,2-Dichloropropane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1,3-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-001	1,4-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	1,4-Dioxane	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20

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

Date: November 24, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno-20201111	31820	Ambient Air	11-Nov-20 2:25

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-001	1-Butene/Isobutylene		0.58	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1-Hexene/2-Methyl-1-pentene	I	0.16	ppbv	0.03	AC-058	18-Nov-20
20110112-001	1-Pentene		0.34	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2,2,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2,2-Dimethylbutane		0.14	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2,3,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2,3-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	2,3-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	2,4-Dimethylpentane		0.09	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2-Methylheptane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2-Methylhexane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	2-Methylpentane		0.20	ppbv	0.01	AC-058	18-Nov-20
20110112-001	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	3-Methylhexane		0.14	ppbv	0.03	AC-058	18-Nov-20
20110112-001	3-Methylpentane		0.17	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Acetone		3.8	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Acrolein	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-001	Benzene		0.28	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Benzyl chloride	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Bromomethane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Carbon disulfide	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Carbon tetrachloride	I	0.11	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20

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

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno-20201111	31820	Ambient Air	11-Nov-20 2:25

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-001	Chloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Chloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	cis-1,2-Dichloroethene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	cis-1,3-Dichloropropene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-001	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	cis-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Cyclohexane		0.36	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Cyclopentane		0.23	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Dibromochloromethane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Ethanol		12.6	ppbv	0.4	AC-058	18-Nov-20
20110112-001	Ethyl acetate	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Ethylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Freon-11	I	0.33	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Freon-113	I	0.15	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Freon-12		0.53	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Hexachloro-1,3-butadiene	K, T, U	< 0.72	ppbv	0.72	AC-058	18-Nov-20
20110112-001	Isobutane		0.85	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Isopentane		0.91	ppbv	0.04	AC-058	18-Nov-20
20110112-001	Isoprene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Isopropyl alcohol		4.1	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Isopropylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	m,p-Xylene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-001	m-Diethylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20

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

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno-20201111	31820	Ambient Air	11-Nov-20 2:25

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-001	m-Ethyltoluene	K, T, U	< 0.12	ppbv	0.12	AC-058	18-Nov-20
20110112-001	Methyl butyl ketone	K, T, U	< 0.72	ppbv	0.72	AC-058	18-Nov-20
20110112-001	Methyl ethyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-001	Methyl isobutyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Methyl methacrylate	K, T, U	< 0.10	ppbv	0.10	AC-058	18-Nov-20
20110112-001	Methyl tert butyl ether	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Nov-20
20110112-001	Methylcyclohexane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	Methylcyclopentane		0.24	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Methylene chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Nov-20
20110112-001	n-Butane		0.38	ppbv	0.04	AC-058	18-Nov-20
20110112-001	n-Decane	K, T, U	< 0.09	ppbv	0.09	AC-058	18-Nov-20
20110112-001	n-Dodecane	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	n-Heptane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	n-Hexane		0.28	ppbv	0.01	AC-058	18-Nov-20
20110112-001	n-Octane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	n-Pentane		0.4	ppbv	0.1	AC-058	18-Nov-20
20110112-001	n-Propylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Nov-20
20110112-001	n-Undecane	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Nov-20
20110112-001	Naphthalene	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Nov-20
20110112-001	n-Nonane	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	o-Ethyltoluene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	o-Xylene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	p-Diethylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-001	p-Ethyltoluene	K, T, U	< 0.10	ppbv	0.10	AC-058	18-Nov-20
20110112-001	Styrene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20

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Date: November 24, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Pramp_Reno-20201111	31820	Ambient Air	11-Nov-20 2:25

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110112 **REPORT CREATED:** 24-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110112-001	Tetrachloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-001	Tetrahydrofuran	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Toluene		0.32	ppbv	0.01	AC-058	18-Nov-20
20110112-001	trans-1,2-Dichloroethylene		9.88	ppbv	0.01	AC-058	18-Nov-20
20110112-001	trans-1,3-Dichloropropylene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-001	trans-2-Butene	K, T, U	< 0.01	ppbv	0.01	AC-058	18-Nov-20
20110112-001	trans-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20
20110112-001	Trichloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Nov-20
20110112-001	Vinyl acetate	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Nov-20
20110112-001	Vinyl chloride	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Nov-20

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

Date: November 24, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

Revision History

Order ID	Ver	Date	Reason
20110112	01	24-Nov-20	Report created

Methods

Method	Description
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

Order Comments

20110112

Return canister back to EAS when analysis is complete. Carbon Isotopic Analysis required.

Sample Comments

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

EAS CANISTER

Sample ID: 20110154-001 **Priority:** Normal

Customer ID: PRAMP
Cust Samp ID: Pramp_Reno-20201113

Date Received- Lab Use Only

RECEIVED
NOV 19 2020

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842 Station □ 986 Station □ Reno Station
Address: □ 842 (Lat. 56.27406N, Long. 116.98129W)
□ 986 (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge) ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- _____ **(Sample date: yyyymmdd)** PRAMP_986- _____ **(Sample date: yyyymmdd)** PRAMP_Reno-20201113 **(Sample date: yyyymmdd)**	29002	☐ ~~Methane~~ Trigger ☐ NMHC Trigger ☐ Methane Blank ☐ NMHC Blank ☐ Expired Canister – No further analysis is required.	13/11/20	17:00	* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:

Collect By Ferdinand Roy **(Name) of** Bureau Veritas **(Company) on** 17NOV20/17:28 **(Date/Time (MST).**

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

Sample ID: 20110154-002 **Priority:** Normal

Customer ID: PRAMP
Cust Samp ID: Pramp_Reno_Blank

Date Received- Lab Use Only

RECEIV
NOV 19 2020
MW

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: ☐ 842 Station ☐ 986 Station ☐ Reno Station
Address: ☐ 842 (Lat. 56.27406N, Long. 116.98129W)
☐ 986 (Lat. 56.36988N, Long. 116.925636W)
☐ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge) ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- _____ (Sample date: yyyymmdd) PRAMP_986- _____ (Sample date: yyyymmdd) PRAMP_Reno- _____ (Sample date: yyyymmdd)	28919	☐ Methane Trigger ☐ NMHC Trigger ☑ Methane Blank ☐ NMHC Blank ☐ Expired Canister – No further analysis is required.	n/a	n/a	* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:

Collect By Ferdinand Roy **(Name) of** Bureau Veritas **(Company) on** 17 NOV 20 / 17:28 **(Date/Time (MST).**

InnoTech ALBERTA

Canister ID: 29002

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 0054 on: JUL 2 0 2020

Evacuated: SEP 1 0 2020 Recertified: OCT 0 9 2020

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_Reno-20201113

Sampled By: Ferdinand Roy

Starting Vacuum: -27.4 "Hg

End Vacuum: -6 "Hg -2.7 "Hg/ psig MW

InnoTech ALBERTA

Canister ID: 28919

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 0054 on: JUL 2 0 2020

Evacuated: SEP 1 0 2020 Recertified: OCT 0 9 2020

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: BLANK

Sampled By:

Starting Vacuum: -27.2 "Hg

End Vacuum: -27 "Hg/psig MW

Sample ID: 20110154-001 **Priority:** Normal

Customer ID: PRAMP

Cust Samp ID: Pramp_Reno-20201113

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Office Manager
Peace River Area Monitoring Program Committee

INVOICE: Karla Reesor 403 807 2995

CLIENT SAMPLE ID: PRAMP_Reno_Blank

Matrix: Ambient Air

CANISTER ID: 28919

PRIORITY: Normal

DESCRIPTION: Methane Blank

DATE SAMPLED: 13-Nov-20

DATE RECEIVED: 19-Nov-20

REPORT CREATED: 26-Nov-20

REPORT NUMBER: 20110154

VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	20-Nov-20
20110154-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	20-Nov-20
20110154-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110154-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	20-Nov-20
20110154-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110154-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	20-Nov-20
20110154-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	20-Nov-20
20110154-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110154-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110154-002	Methane		0.8	ppmv	0.1	NA-025	20-Nov-20
20110154-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	20-Nov-20
20110154-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110154-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110154-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	20-Nov-20
20110154-002	2,5-Dimethylthiophene	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	2-Ethylthiophene	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	2-Methylthiophene	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	3-Methylthiophene	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20

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

Date: November 26, 2020

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

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno_Blank	28919	Ambient Air	13-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-002	Butyl mercaptan	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Carbon disulphide	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	Carbonyl sulphide	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Dimethyl disulphide	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	Dimethyl sulphide	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	Ethyl mercaptan	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Ethyl sulphide	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Hydrogen sulphide	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Isobutyl mercaptan	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Isopropyl mercaptan	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Methyl mercaptan	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	Pentyl mercaptan	K, Q, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110154-002	Propyl mercaptan	K, Q, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110154-002	tert-Butyl mercaptan	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-002	Thiophene	K, Q, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110154-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,1-Dichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	1,2,3-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110154-002	1,2,4-Trichlorobenzene	K, T, U	< 0.8	ppbv	0.8	AC-058	19-Nov-20
20110154-002	1,2,4-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110154-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,2-Dichlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20

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

Date: November 26, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno_Blank	28919	Ambient Air	13-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-002	1,2-Dichloroethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	1,2-Dichloropropane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	1,3,5-Trimethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,3-Butadiene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1,3-Dichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110154-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	1,4-Dioxane	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	1-Butene/Isobutylene		0.46	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	1-Pentene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2,2,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2,2-Dimethylbutane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2,3,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2,3-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	2,4-Dimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2-Methylheptane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2-Methylhexane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	2-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	3-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	3-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Acetone	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110154-002	Benzene		0.09	ppbv	0.01	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno_Blank	28919	Ambient Air	13-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-002	Benzyl chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Bromodichloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Bromomethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Carbon disulfide	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Carbon tetrachloride	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Chloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	cis-1,2-Dichloroethene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	cis-1,3-Dichloropropene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	cis-2-Butene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Cyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Cyclopentane		4.15	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Dibromochloromethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Ethanol	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110154-002	Ethyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Ethylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Freon-113	I	0.03	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Freon-114	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Freon-12	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Hexachloro-1,3-butadiene	K, T, U	< 0.50	ppbv	0.50	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno_Blank	28919	Ambient Air	13-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-002	Isobutane		0.30	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Isopentane		0.31	ppbv	0.03	AC-058	19-Nov-20
20110154-002	Isoprene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Isopropyl alcohol	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Isopropylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	m,p-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-002	m-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	m-Ethyltoluene	K, T, U	< 0.08	ppbv	0.08	AC-058	19-Nov-20
20110154-002	Methyl butyl ketone	K, T, U	< 0.50	ppbv	0.50	AC-058	19-Nov-20
20110154-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110154-002	Methyl isobutyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Methyl methacrylate	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110154-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-002	Methylcyclohexane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	Methylcyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110154-002	n-Butane		0.04	ppbv	0.03	AC-058	19-Nov-20
20110154-002	n-Decane	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-002	n-Dodecane	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	n-Heptane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	n-Hexane		0.17	ppbv	0.01	AC-058	19-Nov-20
20110154-002	n-Octane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	n-Pentane		0.1	ppbv	0.1	AC-058	19-Nov-20
20110154-002	n-Propylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110154-002	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno_Blank	28919	Ambient Air	13-Nov-20

DESCRIPTION: Methane Blank

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-002	Naphthalene	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20
20110154-002	n-Nonane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	o-Ethyltoluene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	o-Xylene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	p-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110154-002	Styrene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	Tetrachloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	Tetrahydrofuran	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Toluene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	trans-1,2-Dichloroethylene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	trans-1,3-Dichloropropylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	trans-2-Butene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110154-002	trans-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-002	Trichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110154-002	Vinyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110154-002	Vinyl chloride	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno-20201113	29002	Ambient Air	13-Nov-20 17:00

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-001	1-Butene	K, T, U	< 0.16	ppmv	0.16	NA-025	20-Nov-20
20110154-001	Acetylene	K, T, U	< 0.13	ppmv	0.13	NA-025	20-Nov-20
20110154-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	20-Nov-20
20110154-001	cis-2-Butene	K, T, U	< 0.06	ppmv	0.06	NA-025	20-Nov-20
20110154-001	Ethane	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110154-001	Ethylacetylene	K, T, U	< 0.09	ppmv	0.09	NA-025	20-Nov-20
20110154-001	Ethylene	K, T, U	< 0.11	ppmv	0.11	NA-025	20-Nov-20
20110154-001	Isobutane	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110154-001	Isobutylene	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110154-001	Methane		3.0	ppmv	0.2	NA-025	20-Nov-20
20110154-001	n-Propane	K, T, U	< 0.11	ppmv	0.11	NA-025	20-Nov-20
20110154-001	Propylene	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110154-001	Propyne	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110154-001	trans-2-Butene	K, T, U	< 0.14	ppmv	0.14	NA-025	20-Nov-20
20110154-001	2,5-Dimethylthiophene	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	2-Ethylthiophene	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	2-Methylthiophene	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	3-Methylthiophene	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Butyl mercaptan	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Carbon disulphide	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	Carbonyl sulphide	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Dimethyl disulphide	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	Dimethyl sulphide	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	Ethyl mercaptan	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Ethyl sulphide	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno-20201113	29002	Ambient Air	13-Nov-20 17:00

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-001	Hydrogen sulphide	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Isobutyl mercaptan	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Isopropyl mercaptan	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Methyl mercaptan	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	Pentyl mercaptan	K, Q, T, U	< 0.6	ppbv	0.6	NA-024	20-Nov-20
20110154-001	Propyl mercaptan	K, Q, T, U	< 0.6	ppbv	0.6	NA-024	20-Nov-20
20110154-001	tert-Butyl mercaptan	K, Q, T, U	< 0.5	ppbv	0.5	NA-024	20-Nov-20
20110154-001	Thiophene	K, Q, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110154-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,1-Dichloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-001	1,2,3-Trimethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	19-Nov-20
20110154-001	1,2,4-Trichlorobenzene	K, T, U	< 1.3	ppbv	1.3	AC-058	19-Nov-20
20110154-001	1,2,4-Trimethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	19-Nov-20
20110154-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,2-Dichlorobenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110154-001	1,2-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	1,2-Dichloropropane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1,3-Dichlorobenzene	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20
20110154-001	1,4-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	1,4-Dioxane	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20

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

Date: November 26, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno-20201113	29002	Ambient Air	13-Nov-20 17:00

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-001	1-Butene/Isobutylene		0.45	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	1-Pentene		0.30	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2,2-Dimethylbutane		0.14	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2,3-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	2,3-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	2,4-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	2-Methylpentane		0.19	ppbv	0.02	AC-058	19-Nov-20
20110154-001	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	3-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	3-Methylpentane		0.15	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Acetone		2.5	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Acrolein	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20
20110154-001	Benzene		0.28	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Benzyl chloride	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Carbon disulfide	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Carbon tetrachloride	I	0.15	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno-20201113	29002	Ambient Air	13-Nov-20 17:00

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-001	Chloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Chloromethane		0.85	ppbv	0.03	AC-058	19-Nov-20
20110154-001	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	cis-1,3-Dichloropropene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-001	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	cis-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Cyclohexane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Cyclopentane		2.13	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Ethanol		1.6	ppbv	0.5	AC-058	19-Nov-20
20110154-001	Ethyl acetate	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Ethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Freon-11	I	0.47	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Freon-113	I	0.19	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Freon-12		0.74	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Hexachloro-1,3-butadiene	K, T, U	< 0.78	ppbv	0.78	AC-058	19-Nov-20
20110154-001	Isobutane		1.25	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Isopentane		1.34	ppbv	0.05	AC-058	19-Nov-20
20110154-001	Isoprene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Isopropyl alcohol		2.2	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Isopropylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	m,p-Xylene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110154-001	m-Diethylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno-20201113	29002	Ambient Air	13-Nov-20 17:00

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-001	m-Ethyltoluene	K, T, U	< 0.13	ppbv	0.13	AC-058	19-Nov-20
20110154-001	Methyl butyl ketone	K, T, U	< 0.78	ppbv	0.78	AC-058	19-Nov-20
20110154-001	Methyl ethyl ketone	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20
20110154-001	Methyl isobutyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Methyl methacrylate	K, T, U	< 0.11	ppbv	0.11	AC-058	19-Nov-20
20110154-001	Methyl tert butyl ether	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110154-001	Methylcyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	Methylcyclopentane		0.19	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Methylene chloride	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20
20110154-001	n-Butane		1.38	ppbv	0.05	AC-058	19-Nov-20
20110154-001	n-Decane	K, T, U	< 0.09	ppbv	0.09	AC-058	19-Nov-20
20110154-001	n-Dodecane	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	n-Heptane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	n-Hexane		0.31	ppbv	0.02	AC-058	19-Nov-20
20110154-001	n-Octane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	n-Pentane		0.8	ppbv	0.2	AC-058	19-Nov-20
20110154-001	n-Propylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	19-Nov-20
20110154-001	n-Undecane	K, T, U	< 0.8	ppbv	0.8	AC-058	19-Nov-20
20110154-001	Naphthalene	K, T, U	< 0.8	ppbv	0.8	AC-058	19-Nov-20
20110154-001	n-Nonane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	o-Ethyltoluene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	o-Xylene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	p-Diethylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-001	p-Ethyltoluene	K, T, U	< 0.11	ppbv	0.11	AC-058	19-Nov-20
20110154-001	Styrene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_Reno-20201113	29002	Ambient Air	13-Nov-20 17:00

DESCRIPTION: Methane Trigger

REPORT NUMBER: 20110154 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110154-001	Tetrachloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-001	Tetrahydrofuran	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Toluene		0.24	ppbv	0.02	AC-058	19-Nov-20
20110154-001	trans-1,2-Dichloroethylene		1.69	ppbv	0.02	AC-058	19-Nov-20
20110154-001	trans-1,3-Dichloropropylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-001	trans-2-Butene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110154-001	trans-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110154-001	Trichloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110154-001	Vinyl acetate	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110154-001	Vinyl chloride	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20

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

Date: November 26, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

Revision History

Order ID	Ver	Date	Reason
20110154	01	26-Nov-20	Report created

Methods

Method	Description
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

Sample Comments

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

Sample ID: 20110156-001 **Priority:** Normal

Customer ID: PRAMP
Cust Samp ID: Pramp_986-20201114

Date Received- Lab Use Only

RECEIVED
NOV 19 2020

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842 Station □ 986 Station □ Reno Station
Address: □ 842 (Lat. 56.27406N, Long. 116.98129W)
□ 986 (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge) ☐

Invoice Instructions:
Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca Attention: PRAMP Office Manager
Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- _____ (Sample date: yyyymmdd) PRAMP_986- 20201114 (Sample date: yyyymmdd) PRAMP_Reno- _____ (Sample date: yyyymmdd)	32274	□ Methane Trigger ☑ NMHC Trigger □ Methane Blank □ NMHC Blank □ Expired Canister – No further analysis is required.	14/11/20	21:25	* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:

Collect By Ferdinand Roy **(Name) of** Bureau Veritas **(Company) on** 17 NOV 20/19:52 **(Date/Time (MST).**

InnoTech ALBERTA

Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

Sample ID: 20110156-002 **Priority:** Normal

Customer ID: PRAMP
Cust Samp ID: Pramp 986 Blank

Date Received- Lab Use Only

RECEIVED
NOV 19 2020

Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin
Company: PRAMP Airshed
PO#: □ 842 Station □ 986 Station □ Reno Station
Address: □ 842 (Lat. 56.27406N, Long. 116.98129W)
□ 986 (Lat. 56.36988N, Long. 116.925636W)
□ Reno (Lat. 55.86936N, Long. 117.05739W)
Telephone: 403-8072995, 780-2667068/587-2252248
Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge) ☐

Invoice Instructions:
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Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519
Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_statiom_yyyymmdd)	Canister Number	Sample Description	Date/Time Sampled From/To		Analysis Requested
			Date (dd/mm/yy)	Time (24 Hr) (MST)	
PRAMP_842- (Sample date: yyyymmdd) PRAMP_986- (Sample date: yyyymmdd) PRAMP_Reno- (Sample date: yyyymmdd)	32220	□ Methane Trigger □ NMHC Trigger □ Methane Blank ☑ NMHC Blank □ Expired Canister – No further analysis is required.	n/a	n/a	* AIR C1C4, AIR VOC, AIR RSC * Unknown to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:

Collect By Ferdinand Roy **(Name) of** Bureau Veritas **(Company) on** 17NOV20/19:52 **(Date/Time (MST).**

InnoTech ALBERTA

Canister ID: 32274

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ on: FEB 24 2020

Evacuated: JUN 14 2020 Recertified: AUG 20 2020

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: PRAMP_986C-20201114

Sampled By: Ferdinand Roy

Starting Vacuum: -27.1 "Hg

End Vacuum: -2 Hg MW -0.1 "Hg/psig

InnoTech ALBERTA

Canister ID: 32220

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 0053 on: MAR 06 2020

Evacuated: APR 07 2020 Recertified: ~~JUL 24 2020~~ AUG 20 2020 JMP

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: BLANK

Sampled By: FERDINAND ROY

Starting Vacuum: -27.2 "Hg

End Vacuum: MW -25 ~~"Hg~~/psig

Sample ID: 20110156-001 Priority: Normal

Customer ID: PRAMP

Cust Samp ID: Pramp 986-20201114

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Office Manager
Peace River Area Monitoring Program Committee

INVOICE: Karla Reesor 403 807 2995

CLIENT SAMPLE ID: PRAMP_986_Blank

Matrix: Ambient Air

CANISTER ID: 32220

PRIORITY: Normal

DESCRIPTION: NMHC Blank

DATE SAMPLED: 14-Nov-20

DATE RECEIVED: 19-Nov-20

REPORT CREATED: 26-Nov-20

REPORT NUMBER: 20110156

VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	20-Nov-20
20110156-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	20-Nov-20
20110156-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	20-Nov-20
20110156-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	20-Nov-20
20110156-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	20-Nov-20
20110156-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	20-Nov-20
20110156-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-002	Methane		0.4	ppmv	0.1	NA-025	20-Nov-20
20110156-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	20-Nov-20
20110156-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	20-Nov-20
20110156-002	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20

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

Date: November 26, 2020

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

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986_Blank	32220	Ambient Air	14-Nov-20

DESCRIPTION: NMHC Blank

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-002	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	Carbonyl sulphide		2.0	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Hydrogen sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Isopropyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-002	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-002	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-002	Thiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	20-Nov-20
20110156-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,1-Dichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	1,2,3-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110156-002	1,2,4-Trichlorobenzene	K, T, U	< 0.8	ppbv	0.8	AC-058	19-Nov-20
20110156-002	1,2,4-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110156-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,2-Dichlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20

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

Date: November 26, 2020

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

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986_Blank	32220	Ambient Air	14-Nov-20

DESCRIPTION: NMHC Blank

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-002	1,2-Dichloroethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	1,2-Dichloropropane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	1,3,5-Trimethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,3-Butadiene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1,3-Dichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110156-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	1,4-Dioxane	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	1-Butene/Isobutylene		1.06	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	1-Pentene		0.17	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2,2,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2,2-Dimethylbutane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2,3,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2,3-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	2,4-Dimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2-Methylheptane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2-Methylhexane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	2-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	3-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	3-Methylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Acetone		6.0	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110156-002	Benzene		0.13	ppbv	0.01	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986_Blank	32220	Ambient Air	14-Nov-20

DESCRIPTION: NMHC Blank

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-002	Benzyl chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Bromodichloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Bromomethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Carbon disulfide	I	0.11	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Carbon tetrachloride	I	0.06	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Chloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	cis-1,2-Dichloroethene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	cis-1,3-Dichloropropene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	cis-2-Butene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	cis-2-Pentene		0.31	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Cyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Cyclopentane		0.37	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Dibromochloromethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Ethanol		11.5	ppbv	0.3	AC-058	19-Nov-20
20110156-002	Ethyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Ethylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Freon-11	I	0.13	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Freon-113	I	0.07	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Freon-114	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Freon-12	I	0.04	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Hexachloro-1,3-butadiene	K, T, U	< 0.50	ppbv	0.50	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

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PRAMP_986_Blank	32220	Ambient Air	14-Nov-20

DESCRIPTION: NMHC Blank

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-002	Isobutane		0.95	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Isopentane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-002	Isoprene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Isopropyl alcohol		0.8	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Isopropylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	m,p-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-002	m-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	m-Ethyltoluene	K, T, U	< 0.08	ppbv	0.08	AC-058	19-Nov-20
20110156-002	Methyl butyl ketone	K, T, U	< 0.50	ppbv	0.50	AC-058	19-Nov-20
20110156-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110156-002	Methyl isobutyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Methyl methacrylate	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110156-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-002	Methylcyclohexane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	Methylcyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	19-Nov-20
20110156-002	n-Butane		0.12	ppbv	0.03	AC-058	19-Nov-20
20110156-002	n-Decane	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-002	n-Dodecane	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	n-Heptane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	n-Hexane		0.18	ppbv	0.01	AC-058	19-Nov-20
20110156-002	n-Octane	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	n-Pentane		0.3	ppbv	0.1	AC-058	19-Nov-20
20110156-002	n-Propylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	19-Nov-20
20110156-002	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986_Blank	32220	Ambient Air	14-Nov-20

DESCRIPTION: NMHC Blank

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-002	Naphthalene	K, T, U	< 0.5	ppbv	0.5	AC-058	19-Nov-20
20110156-002	n-Nonane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	o-Ethyltoluene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	o-Xylene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	p-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110156-002	Styrene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	Tetrachloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	Tetrahydrofuran	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Toluene		0.15	ppbv	0.01	AC-058	19-Nov-20
20110156-002	trans-1,2-Dichloroethylene		3.93	ppbv	0.01	AC-058	19-Nov-20
20110156-002	trans-1,3-Dichloropropylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	trans-2-Butene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-002	trans-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20
20110156-002	Trichloroethylene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-002	Vinyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-002	Vinyl chloride	K, T, U	< 0.02	ppbv	0.02	AC-058	19-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986-20201114	32274	Ambient Air	14-Nov-20 21:25

DESCRIPTION: NMHC Trigger

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-001	1-Butene	K, T, U	< 0.14	ppmv	0.14	NA-025	20-Nov-20
20110156-001	Acetylene	K, T, U	< 0.11	ppmv	0.11	NA-025	20-Nov-20
20110156-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	20-Nov-20
20110156-001	cis-2-Butene	K, T, U	< 0.06	ppmv	0.06	NA-025	20-Nov-20
20110156-001	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-001	Ethylacetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	20-Nov-20
20110156-001	Ethylene	K, T, U	< 0.10	ppmv	0.10	NA-025	20-Nov-20
20110156-001	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-001	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-001	Methane		2.5	ppmv	0.1	NA-025	20-Nov-20
20110156-001	n-Propane	K, T, U	< 0.10	ppmv	0.10	NA-025	20-Nov-20
20110156-001	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-001	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	20-Nov-20
20110156-001	trans-2-Butene	K, T, U	< 0.13	ppmv	0.13	NA-025	20-Nov-20
20110156-001	2,5-Dimethylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	3-Methylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	Carbonyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Dimethyl disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	Dimethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	Ethyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Ethyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986-20201114	32274	Ambient Air	14-Nov-20 21:25

DESCRIPTION: NMHC Trigger

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-001	Hydrogen sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Isobutyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Isopropyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	Pentyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	20-Nov-20
20110156-001	Propyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	20-Nov-20
20110156-001	tert-Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	20-Nov-20
20110156-001	Thiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	20-Nov-20
20110156-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,1-Dichloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-001	1,2,3-Trimethylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110156-001	1,2,4-Trichlorobenzene	K, T, U	< 1.1	ppbv	1.1	AC-058	19-Nov-20
20110156-001	1,2,4-Trimethylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110156-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,2-Dichlorobenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-001	1,2-Dichloroethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	1,2-Dichloropropane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1,3-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-001	1,4-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110156-001	1,4-Dioxane	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

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PRAMP_986-20201114	32274	Ambient Air	14-Nov-20 21:25

DESCRIPTION: NMHC Trigger

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-001	1-Butene/Isobutylene		2.10	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1-Hexene/2-Methyl-1-pentene	I	0.28	ppbv	0.03	AC-058	19-Nov-20
20110156-001	1-Pentene		1.35	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2,2,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2,2-Dimethylbutane		0.33	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2,3,4-Trimethylpentane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2,3-Dimethylbutane		0.52	ppbv	0.03	AC-058	19-Nov-20
20110156-001	2,3-Dimethylpentane		0.77	ppbv	0.03	AC-058	19-Nov-20
20110156-001	2,4-Dimethylpentane		0.26	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2-Methylheptane		1.62	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2-Methylhexane		1.62	ppbv	0.01	AC-058	19-Nov-20
20110156-001	2-Methylpentane		1.35	ppbv	0.01	AC-058	19-Nov-20
20110156-001	3-Methylheptane		0.53	ppbv	0.03	AC-058	19-Nov-20
20110156-001	3-Methylhexane		2.63	ppbv	0.03	AC-058	19-Nov-20
20110156-001	3-Methylpentane		1.17	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Acetone		6.9	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Acrolein		0.8	ppbv	0.4	AC-058	19-Nov-20
20110156-001	Benzene		1.25	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Benzyl chloride	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Bromomethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Carbon disulfide	I	0.35	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Carbon tetrachloride	I	0.13	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20

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

Date: November 26, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

Order Comments

20110154

Return canister back to EAS when analysis is complete. Carbon Isotopic Analysis required.

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

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PRAMP_986-20201114	32274	Ambient Air	14-Nov-20 21:25

DESCRIPTION: NMHC Trigger

REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-001	Chloroethane	I	0.30	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Chloromethane		1.09	ppbv	0.03	AC-058	19-Nov-20
20110156-001	cis-1,2-Dichloroethene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	cis-1,3-Dichloropropene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-001	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	cis-2-Pentene		0.26	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Cyclohexane		11.8	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Cyclopentane		0.60	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Dibromochloromethane	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Ethanol		9.5	ppbv	0.4	AC-058	19-Nov-20
20110156-001	Ethyl acetate		0.7	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Ethylbenzene		0.29	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Freon-11	I	0.36	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Freon-113	I	0.17	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Freon-12		0.50	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Hexachloro-1,3-butadiene	K, T, U	< 0.70	ppbv	0.70	AC-058	19-Nov-20
20110156-001	Isobutane		1.85	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Isopentane		4.94	ppbv	0.04	AC-058	19-Nov-20
20110156-001	Isoprene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Isopropyl alcohol		1.3	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Isopropylbenzene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	m,p-Xylene		0.62	ppbv	0.04	AC-058	19-Nov-20
20110156-001	m-Diethylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20

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ENVIRONMENTAL ANALYTICAL SERVICES

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Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
20110156-001	m-Ethyltoluene	K, T, U	< 0.11	ppbv	0.11	AC-058	19-Nov-20
20110156-001	Methyl butyl ketone	K, T, U	< 0.70	ppbv	0.70	AC-058	19-Nov-20
20110156-001	Methyl ethyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-001	Methyl isobutyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Methyl methacrylate	K, T, U	< 0.10	ppbv	0.10	AC-058	19-Nov-20
20110156-001	Methyl tert butyl ether	K, T, U	< 0.04	ppbv	0.04	AC-058	19-Nov-20
20110156-001	Methylcyclohexane		6.73	ppbv	0.01	AC-058	19-Nov-20
20110156-001	Methylcyclopentane		2.46	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Methylene chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	19-Nov-20
20110156-001	n-Butane		1.61	ppbv	0.04	AC-058	19-Nov-20
20110156-001	n-Decane	K, T, U	< 0.08	ppbv	0.08	AC-058	19-Nov-20
20110156-001	n-Dodecane	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110156-001	n-Heptane		6.10	ppbv	0.01	AC-058	19-Nov-20
20110156-001	n-Hexane		3.71	ppbv	0.01	AC-058	19-Nov-20
20110156-001	n-Octane		1.42	ppbv	0.03	AC-058	19-Nov-20
20110156-001	n-Pentane		5.2	ppbv	0.1	AC-058	19-Nov-20
20110156-001	n-Propylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	19-Nov-20
20110156-001	n-Undecane	K, T, U	< 0.7	ppbv	0.7	AC-058	19-Nov-20
20110156-001	Naphthalene	K, T, U	< 0.7	ppbv	0.7	AC-058	19-Nov-20
20110156-001	n-Nonane		0.21	ppbv	0.01	AC-058	19-Nov-20
20110156-001	o-Ethyltoluene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	o-Xylene		0.34	ppbv	0.01	AC-058	19-Nov-20
20110156-001	p-Diethylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-001	p-Ethyltoluene	K, T, U	< 0.10	ppbv	0.10	AC-058	19-Nov-20
20110156-001	Styrene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20

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REPORT NUMBER: 20110156 **REPORT CREATED:** 26-Nov-20 **VERSION:** Version 01

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20110156-001	Tetrachloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-001	Tetrahydrofuran	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Toluene		3.15	ppbv	0.01	AC-058	19-Nov-20
20110156-001	trans-1,2-Dichloroethylene		2.80	ppbv	0.01	AC-058	19-Nov-20
20110156-001	trans-1,3-Dichloropropylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-001	trans-2-Butene	K, T, U	< 0.01	ppbv	0.01	AC-058	19-Nov-20
20110156-001	trans-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20
20110156-001	Trichloroethylene	K, T, U	< 0.06	ppbv	0.06	AC-058	19-Nov-20
20110156-001	Vinyl acetate	K, T, U	< 0.6	ppbv	0.6	AC-058	19-Nov-20
20110156-001	Vinyl chloride	K, T, U	< 0.03	ppbv	0.03	AC-058	19-Nov-20

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Date: November 26, 2020 Inquiries: (780) 632 8455 E-mail: EAS.Results@innotechalberta.ca

Revision History

Order ID	Ver	Date	Reason
20110156	01	26-Nov-20	Report created

Methods

Method	Description
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

Order Comments

Sample Comments

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

End of Report