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**AMBIENT AIR MONITORING MONTHLY DATA REPORT
PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
THREE CREEKS 986B STATION**

JOB #: 8449-2018-01-67-C

January 2018

Prepared for:

PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Attention: LILY LIN

DATE: February 21, 2018

Prepared by:

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SUMMARY

In January 2018, Maxxam Analytics was contracted to manage the ambient air quality monitoring and maintenance activities at the Three Creeks 986b Station, near Peace River Oil Sands Area 2, Alberta. The monitoring station provides continuous meteorological measurements and air quality data for compliance parameters, as requested by the PRAMP Committee.

All data collected this month was compliant with the requirements outlined in the Air Monitoring Directive (Alberta Environment and Parks, 2016).

The operational time for all continuous ambient air analyzers, meteorological systems and data acquisition systems were above the 90% requirement.

Data Logger: On January 16, an alternate data logger (Ultimate) was installed at the station. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger. One or two hours of downtime were recorded across all parameters as a result.

The summary of results is presented on the following pages.

Any deviations or modifications made to the sampling or analytical methods are outlined in Section 1.0, Discussion. On this basis, Maxxam Analytics is issuing this completed report to Peace River Area Monitoring Program Committee, Three Creeks 986b Station.

Should you have any questions concerning the results or if we can be of further assistance, please contact us at 403-219-3661 or toll-free at 1-800-386-7247.

Monthly Continuous Data Summary

Peace River Area Monitoring Program Committee						MAXIMUM VALUES							OPERATIONAL TIME (%)
Three Creeks 986b Station						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDANCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (kph)	WIND DIRECTION (sector)	READING	DAY	
	1-hr	24-hr	1-hr	24-hr									
SO ₂ (ppb)	172	48	0	0	0	2	29	12	9.1	ESE	1	6	99.7
TRS (ppb)	-	-	-	-	0.32	0.77	15	9	1.7	ENE	0.41	23	99.7
THC (ppm)	-	-	-	-	2.17	5.33	5	2	3.1	E	3.21	4	99.9
CH ₄ (ppm)	-	-	-	-	2.17	5.33	5	2	3.1	E	3.21	4	99.9
NMHC (ppm)	-	-	-	-	0.00	0.11	13	5	10.8	SSW	0.01	12	99.9
RELATIVE HUMIDITY (%)	-	-	-	-	78	97	18	23	1.0	NW	91	20	99.9
BAROMETRIC PRESSURE (millibar)	-	-	-	-	942	963	28	3	0.5	SSE	960	28	99.9
AMBIENT TEMPERATURE (°C)	-	-	-	-	-13.4	3.1	18	16	8.4	WSW	-0.3	18	99.9
STATION TEMPERATURE (°C)	-	-	-	-	23.2	24.4	19	15	3.2	NW	23.7	30	99.9
VECTOR WS (kph)	-	-	-	-	0.5	15.6	30	13	-	NW	8.7	30	99.9
VECTOR WD (sec)	-	-	-	-	176 (S)	-	-	-	-	-	-	-	99.9

**SOUR GAS PROCESSING INDUSTRY
MONTHLY REPORT SUMMARY**

Three Creeks 986b Station

Peace River Area Monitoring Program Committee

Plant Name / Location

Company

Licence Number	Report Date	
	YEAR	MONTH
N/A	2018	January

CONTINUOUS AMBIENT MONITORING						
PARAMETER	% TIME OPERATIONAL	ONE - HOUR AVERAGE			24 - HOUR AVERAGE	
		MAXIMUM VALUES	NO. READINGS > REGULATION	MAXIMUM VALUES	NO. READINGS > REGULATION	
SO ₂	99.7	0.002 ppm	0	0.001 ppm	0	
TRS	99.7	0.001 ppm	-	0.000 ppm	-	
THC	99.9	5.33 ppm	-	3.21 ppm	-	
CH ₄	99.9	5.33 ppm	-	3.21 ppm	-	
NMHC	99.9	0.11 ppm	-	0.01 ppm	-	
RH	99.9	97 %	-	91 %	-	
BP	99.9	963 mb	-	960 mb	-	
Ambient TPX	99.9	3.1 °C	-	-0.3 °C	-	
Station TPX	99.9	24.4 °C	-	23.7 °C	-	
Wind Speed	99.9	15.6 kph	-	8.7 kph	-	
Wind Direction	99.9	-	-	-	-	

SIGNATURE OF COMPANY REPRESENTATIVE

FOR ALBERTA ENVIRONMENT USE ONLY

Exceedance Summary Report

SO₂ 1-Hour Exceedances

Measured concentrations of sulphur dioxide were below the 1-hour AAAQO of 172 ppb.

SO₂ 24-Hour Exceedances

Measured concentrations of sulphur dioxide were below the 24-hour AAAQO of 48.0 ppb.

In accordance with EPEA and the Substance Release Regulation.

In accordance with A Guide to Release Reporting and the Alberta Ambient Air Quality Objectives and Guidelines Summary.

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1.0 Discussion

This monthly report consists of continuous monitoring results for the following parameters: Sulphur Dioxide (SO₂), Total Reduced Sulphur (TRS), Total Hydrocarbon (THC), Methane (CH₄), Non-Methane Hydrocarbon (NMHC), Relative Humidity (RH), Barometric Pressure (BP), Ambient Temperature (AmbTPX), Station Temperature (StnTPX), Wind Speed (WS) and Wind Direction (WD).

The sample inlet filter for all continuous air analyzers are replaced before the calibration begins. The sample manifold is cleaned during the site visit each month.

Control checks, consisting of a zero and span, are conducted daily on all continuous air monitors. In place of the air sample, zero air (from scrubbed air or gas cylinders) is used for zero checks, and a known concentration of the pollutant being analyzed is used for span checks. These checks are controlled by automatic timers and valves. The total zero span cycle is completed within an hour, the commencement of the zero span cycle is at the beginning of the hour.

Multipoint calibrations are done a minimum of once a month for each continuous air monitor. An additional calibration is required under the following conditions: 1) within three days after the initial start-up and stabilization of a newly installed instrument, 2) prior to shut-down or moving of an instrument which has been working to specification, and 3) when major repair has been done on the instrument.

Time during the first multi-point calibration is not considered downtime (Data is flagged as C). If more than one calibration is performed during the month, the time during the additional calibration is considered as downtime (Data is flagged as C1).

Only one zero/span check is run per day. Time during the zero/span check is not considered as downtime (Data is flagged as S). If an extra zero/span check is performed, the time during the additional check is considered as downtime (Data is flagged as S1).

The AMD requires each instrument and accompanying data recording system to be operational 90% of the time, at a minimum, for each monthly monitoring period.

All sampling, analysis, and QA/QC for this project was performed by Maxxam Analytics and complies with the Alberta Air Monitoring Directive.

Data contained in this monthly report has undergone the verification and validation based on the requirements of the AMD Chapter 6: Ambient Data Quality (December, 2016). The descriptions of the data verification and validation process can be found in Section 5 of this report. Instantaneous data, where applicable, is provided for reference purposes and has not undergone zero correction. The minimum and maximum statistics are highlighted in the data table and are for reference only. The highlighted cells are based on the software's interpretation of the exact position of the minimum or maximum value. The visual presentation of these statistics may not be the obvious choice in a data range due to rounding, truncating or analyzer specifications.

Hourly/minute data have been reviewed based on daily zero/span results and multi-point calibration results. Data may be considered invalid if a zero-corrected span check in excess of +/- 10% of the span concentration (established by the previous multi-point calibration) is encountered and/or significant differences in the calibration factor occurs (greater than 10%).

SULPHUR DIOXIDE (SO₂)

- Operational time, for the monitoring period was 99.7%, equivalent to two hours of downtime.
- The routine monthly calibration was performed on January 11.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. Two hours of downtime were recorded at hours 16:00 and 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.

TOTAL REDUCED SULPHUR (TRS)

- Operational time, for the monitoring period was 99.7%, equivalent to two hours of downtime.
- The routine monthly calibration was performed on January 11.
- On January 16, an alternate data logger (Ultimate) was installed and tested on the channel. Two hours of downtime were recorded at hours 17:00 and 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.

TOTAL HYDROCARBONS (THC), METHANE (CH₄) and NON-METHANE HYDROCARBONS (NMHC)

- Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime.
- The routine monthly calibration was performed on January 11.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. One hour of downtime was recorded at hour 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.
- The canister sampler is programmed to draw in a whole air sample when the 5-minute average concentration of NMHC is above 0.30 ppm. A representative sample of ambient air is collected over a one-hour period when the canister event is triggered. No canister event was recorded this month.

WIND SPEED (WS) and WIND DIRECTION (WD)

- Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. One hour of downtime was recorded at hour 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.
- Wind data is reported as vector wind speed and vector wind direction. Wind direction is defined as the direction from which the wind is blowing from and is measured in degrees from true north.

RELATIVE HUMIDITY (RH)

- Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. One hour of downtime was recorded at hour 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.

BAROMETRIC PRESSURE (BP)

- Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. One hour of downtime was recorded at hour 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.

AMBIENT TEMPERATURE (AmbTPX)

- Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. One hour of downtime was recorded at hour 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.

STATION TEMPERATURE (StnTPX)

- Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime.
- On January 16, an alternate datalogger (Ultimate) was installed and tested on the channel. One hour of downtime was recorded at hour 19:00 as a result. The Ultimate data logger is currently running in parallel with the resident (ESC) data logger for assessment, pending its transition to the primary data logger.

2.0 Project Personnel

Karla Reesor was the contact for Peace River Area Monitoring Program Committee and the Maxxam field technician was Limin Li.

3.0 Plant Monthly Required AMD Summary

All data collected this month was compliant with the requirements outlined in the Air Monitoring Directive (Alberta Environment and Parks, 2016).

The operational time for all continuous ambient air analyzers, meteorological systems and data acquisition systems were above the 90% requirement.

4.0 Calculations and Results

All calculations and reporting of results follow the methods described in the AMD, 2016.

5.0 Methods and Procedures

The following methods and procedures were used to complete the monitoring program:

Maxxam AIR SOP-00001: Methane, Non-Methane Hydrocarbon Analyzer Monitoring

Maxxam AIR SOP-00208: RM Young Wind Monitor Calibration

Maxxam AIR SOP-00209: Ambient Sulphur Monitoring

There were no deviations from the prescribed methods.

The following instruments were used to perform the test program:

Sulphur Dioxide - Thermo 43C UV Fluorescent Analyzer

Total Reduced Sulphur - Thermo 43i - TLE UV Fluorescent Analyzer

Methane, Non-Methane Hydrocarbon - Thermo 55i FID Analyzer

Wind System - RM Young Unit

Relative Humidity - RM Young Unit

Barometric Pressure - Met One Unit

Ambient Temperature - RM Young Unit

Datalogger - ESC 8832

The following steps were used to complete the data verification and validation process:

Level 0 Preliminary Verification

Level 0 data are raw data obtained directly from the data acquisition system (DAS). Under the step of Level 0, these data undergo a certain amount of manual or automated screening and flagging. It included a) identification of periods of missing data; b) verification of time stamps against reference time; c) verification that instrument diagnostics/datalogger flags indicate normal operation; d) comparison of data to upper and lower limits; e) rate of change flagging indicating that data changed too rapidly or not at all; and f) verification that zero, span and multipoint performance checks are within specifications. This level of verification is performed on a daily basis.

Level 1 Primary Validation

Validation actions under the step of Level 1 include a) review of all screening flags assigned during preliminary verification; b) review of all supporting site information and documentation; c) review of operational acceptance limits for each parameter/analyzer; d) review of daily zero/span and monthly calibration results for all gaseous parameters; and e) application of any necessary adjustments to data (e.g. baseline adjustments, below zero adjustments). This level of validation is performed on a monthly basis.

Level 2 Final Validation

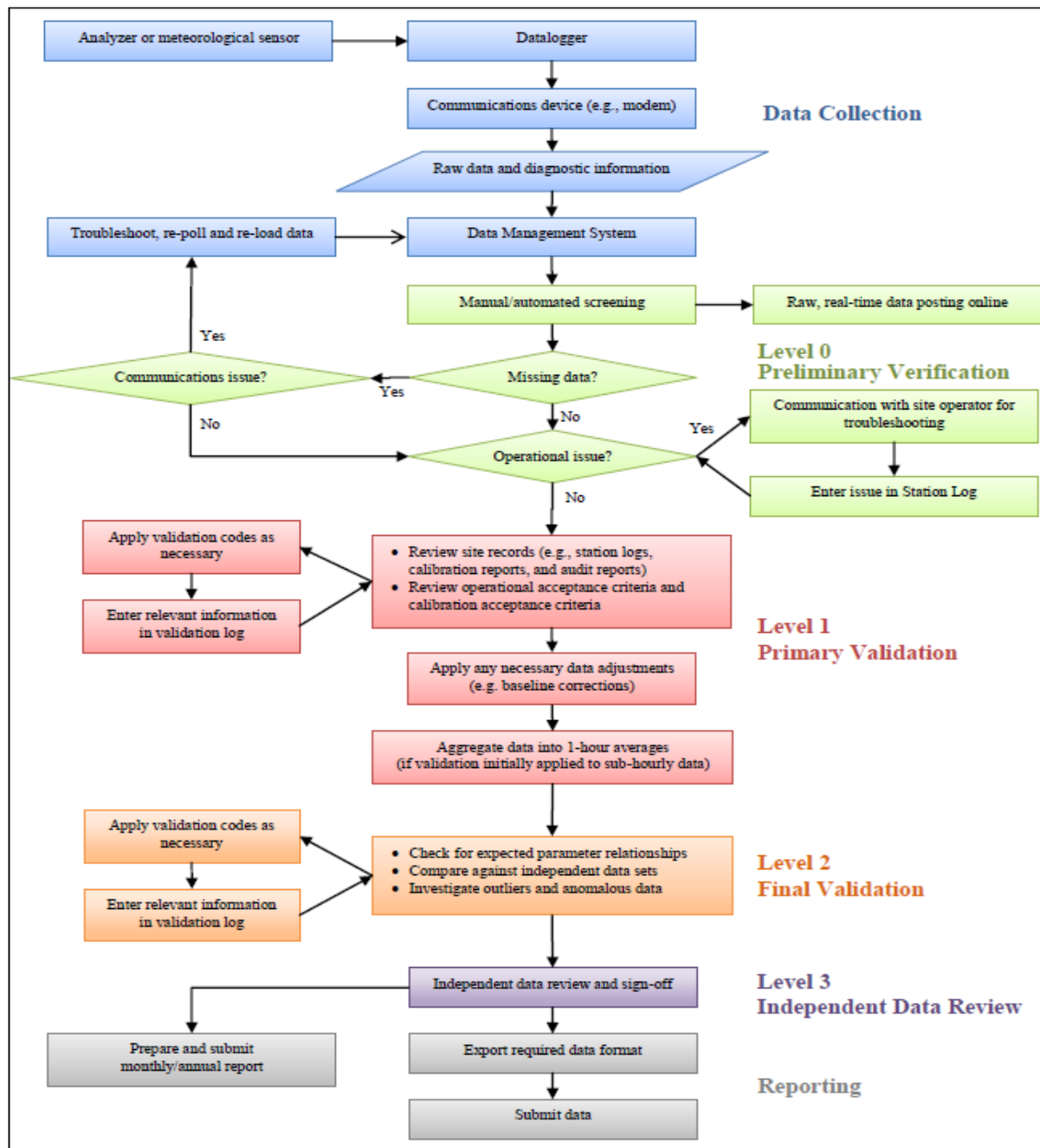
The purpose of Level 2 validation is to verify that there are no inconsistencies among related data, or among regional data measured at nearby sites.

Level 3 Independent Data Review

Level 3 validation is the last step of data review, and it is completed by an individual that is independent of both field operations and primary data validation. A final independent QA review and endorsement is performed during this step before data is submitted to Alberta Environment.

Post-Final Validation

The Post-Final Validation step serves to re-evaluate the data that errors or omissions are discovered and/or suspected after the initial submittal of data. Any data issues or patterns which were not clear on a monthly basis are highlighted during this step. This validation is performed on an annual basis.



Source: Air Monitoring Directive (December 2016), Chapter 6, Ambient Data Quality; Figure 1 Data Collection and Management Process Flow Chart

APPENDIX I
CONTINUOUS MONITORING DATA RESULTS

SULPHUR DIOXIDE



SULPHUR DIOXIDE Hourly Averages (SO₂ ppb)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	S	0	0	0	0	0	0	0	1	0	24
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	24
3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	S	0	0	0	0	0	1	1	0	0	1	0	24
4	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	S	0	0	0	1	0	0	0	0	0	0	1	0	24
5	0	0	0	1	0	0	0	1	0	0	0	0	0	1	S	1	1	1	1	0	0	1	0	1	0	1	0	24	
6	0	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	1	1	24
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	24
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	24
9	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	24
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	24
11	0	0	0	1	1	1	1	1	S	1	1	1	1	C	C	C	C	0	1	0	0	0	0	0	0	0	1	0	24
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	24
13	0	0	0	0	0	0	S	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	24
14	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	24
15	1	0	0	1	S	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	24
16	1	1	1	S	1	1	0	0	0	0	1	0	1	1	1	1	Y	0	1	Y	1	1	1	1	1	0	1	1	22
17	1	1	S	1	1	0	1	0	0	0	1	0	1	1	0	1	0	0	0	1	1	1	0	0	0	0	1	1	24
18	0	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	24
19	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	24
22	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	24
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	24
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	S	0	0	0	0	0	0	0	1	0	24
25	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	24
26	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	24
27	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	24
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	24
29	0	0	0	0	0	0	0	0	0	0	0	1	2	S	1	1	1	0	0	0	0	0	0	0	0	0	2	0	24
30	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	24
31	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	24
HOURLY MAX	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	24
HOURLY AVG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

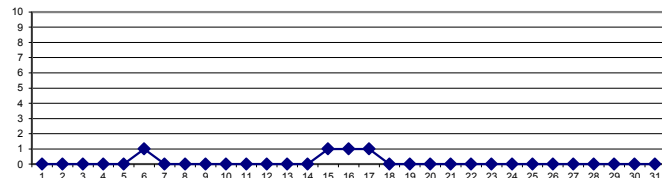
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	172	ppb	24-HR	48	ppb
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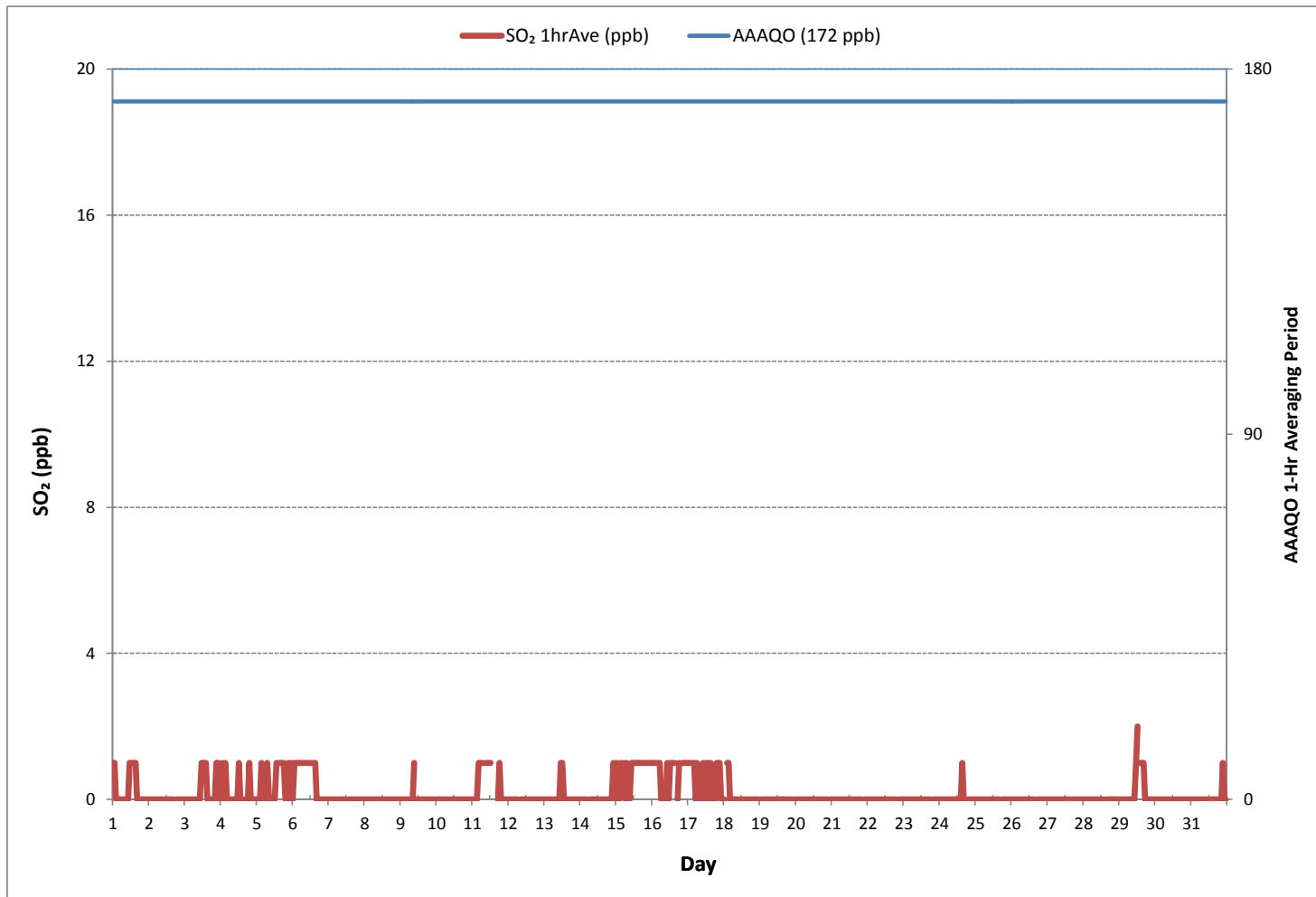
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDANCES:	0		
NUMBER OF 24-HR EXCEEDANCES:	0		
NUMBER OF NON-ZERO READINGS:	107		
MINIMUM 1-HR AVERAGE:	0 ppb @ HOUR	2 ON DAY	1
MAXIMUM 1-HR AVERAGE:	2 ppb @ HOUR	12 ON DAY	29
MAXIMUM 24-HR AVERAGE:	1 ppb	ON DAY	6
IZS CALIBRATION TIME:	32 hrs	OPERATIONAL TIME:	742 hrs
MONTHLY CALIBRATION TIME:	4 hrs	AMD OPERATION UPTIME:	99.7 %
STANDARD DEVIATION:	0	MONTHLY AVERAGE:	0 ppb

24 HR AVERAGES January 2018



SULPHUR DIOXIDE Hourly Averages (SO₂ ppb)



Wind: PRAMP_986
 Poll.: PRAMP_986-SO₂[ppb]
 Monthly: 18/01
 Type: PollutionRose
 Direction: Blowing From (Wind Frequency)
 Based On 1 Hr.

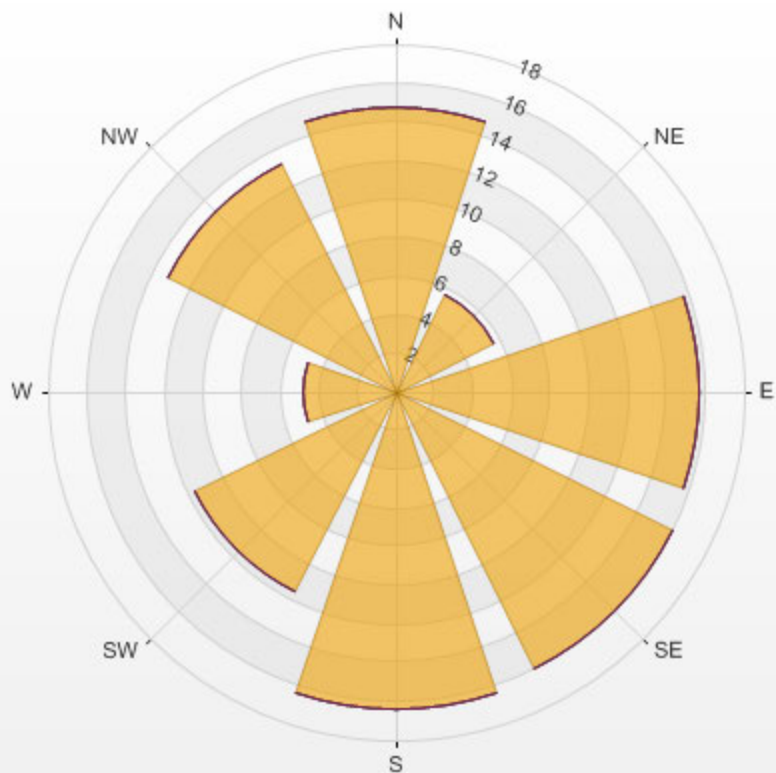
Calm: 1.84%

Calm Avg: 0.25 [ppb]

Direction	0-3	3-10	10-85	85-170	>170.0	Total
N	14.7	0.0	0.0	0.0	0.0	14.7
NE	5.7	0.0	0.0	0.0	0.0	5.7
E	15.7	0.0	0.0	0.0	0.0	15.7
SE	16.0	0.0	0.0	0.0	0.0	16.0
S	16.4	0.0	0.0	0.0	0.0	16.4
SW	11.6	0.0	0.0	0.0	0.0	11.6
W	4.8	0.0	0.0	0.0	0.0	4.8
NW	13.2	0.0	0.0	0.0	0.0	13.2
Summary	98.2	0.0	0.0	0.0	0.0	98.2

% Icon Classes (ppb) 98 0-3 0 3-10 0 10-85 0 85-170 0 >170.0

PRAMP_986 Poll.: PRAMP_986-SO2[ppb] 2018/01/01 00:00 - 2018/01/31 23:00 Calm: 1.84% Calm Poll Avg: 0.25[ppb]



SO2[ppb] Calibration: PRAMP_986 Monthly: 18/01 Type: Span

Span Meas Span Ref Span Low Span High



TOTAL REDUCED SULPHUR



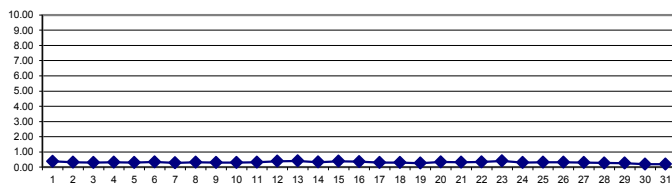
TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	0.39	0.38	0.36	0.38	0.40	0.40	0.38	0.41	0.38	0.38	0.37	0.37	0.36	0.39	0.37	0.36	0.37	0.36	S	0.46	0.37	0.35	0.34	0.33	0.33	0.33	0.46	0.38	24
2	0.33	0.32	0.32	0.31	0.30	0.29	0.29	0.30	0.30	0.33	0.32	0.34	0.31	0.30	0.30	0.31	0.30	S	0.36	0.30	0.31	0.30	0.32	0.30	0.29	0.36	0.31	24	
3	0.31	0.31	0.30	0.30	0.32	0.31	0.30	0.29	0.32	0.31	0.31	0.30	0.32	0.28	0.27	0.28	S	0.31	0.28	0.28	0.25	0.29	0.28	0.29	0.25	0.32	0.30	24	
4	0.28	0.28	0.28	0.28	0.27	0.26	0.28	0.31	0.31	0.39	0.38	0.39	0.41	0.35	0.34	S	0.36	0.31	0.32	0.32	0.30	0.29	0.28	0.32	0.26	0.41	0.32	24	
5	0.26	0.27	0.29	0.24	0.26	0.26	0.25	0.28	0.28	0.34	0.26	0.28	0.35	0.33	S	0.39	0.34	0.32	0.30	0.30	0.33	0.32	0.34	0.33	0.24	0.39	0.30	24	
6	0.34	0.38	0.37	0.37	0.35	0.35	0.35	0.32	0.31	0.31	0.32	0.32	0.31	S	0.36	0.33	0.32	0.34	0.33	0.32	0.31	0.31	0.30	0.31	0.30	0.38	0.33	24	
7	0.29	0.29	0.27	0.28	0.27	0.28	0.27	0.26	0.29	0.26	0.25	0.25	S	0.33	0.28	0.27	0.27	0.26	0.27	0.28	0.28	0.29	0.28	0.25	0.33	0.28	24		
8	0.26	0.27	0.28	0.37	0.38	0.28	0.28	0.30	0.30	0.29	0.30	S	0.45	0.36	0.33	0.32	0.32	0.29	0.31	0.31	0.30	0.30	0.30	0.26	0.45	0.31	24		
9	0.29	0.32	0.31	0.31	0.32	0.30	0.32	0.32	0.31	0.30	S	0.39	0.30	0.29	0.28	0.29	0.30	0.30	0.28	0.29	0.29	0.28	0.28	0.28	0.28	0.39	0.30	24	
10	0.32	0.30	0.28	0.27	0.28	0.27	0.29	0.26	0.29	S	0.41	0.30	0.30	0.32	0.32	0.29	0.28	0.29	0.32	0.35	0.33	0.32	0.33	0.32	0.26	0.41	0.31	24	
11	0.30	0.32	0.31	0.32	0.31	0.31	0.28	0.30	S	0.51	0.40	0.38	0.34	C	C	C	C	C	C	0.38	0.23	0.21	0.25	0.25	0.21	0.51	0.32	24	
12	0.28	0.39	0.36	0.41	0.50	0.48	0.52	S	0.61	0.49	0.46	0.44	0.37	0.35	0.31	0.32	0.31	0.33	0.32	0.31	0.35	0.38	0.40	0.38	0.28	0.61	0.39	24	
13	0.40	0.39	0.39	0.39	0.38	0.41	S	0.58	0.43	0.41	0.42	0.39	0.42	0.41	0.42	0.40	0.40	0.39	0.39	0.42	0.40	0.37	0.34	0.37	0.34	0.58	0.41	24	
14	0.41	0.41	0.38	0.36	0.33	S	0.42	0.35	0.35	0.35	0.32	0.29	0.29	0.31	0.31	0.31	0.31	0.29	0.29	0.27	0.29	0.31	0.30	0.30	0.27	0.42	0.33	24	
15	0.29	0.30	0.31	0.30	S	0.38	0.33	0.33	0.54	0.77	0.77	0.35	0.35	0.32	0.34	0.36	0.41	0.43	0.35	0.35	0.33	0.32	0.30	0.28	0.28	0.77	0.38	24	
16	0.29	0.31	0.29	S	0.38	0.32	0.33	0.32	0.33	0.34	0.35	0.38	0.36	0.40	0.44	0.44	0.43	Y	0.41	Y	0.38	0.38	0.33	0.32	0.29	0.44	0.36	22	
17	0.36	0.35	S	0.38	0.32	0.30	0.32	0.33	0.32	0.31	0.31	0.29	0.29	0.31	0.31	0.31	0.31	0.29	0.29	0.28	0.32	0.29	0.27	0.26	0.26	0.38	0.31	24	
18	0.28	S	0.31	0.28	0.28	0.29	0.27	0.26	0.28	0.33	0.31	0.29	0.27	0.26	0.27	0.29	0.26	0.27	0.34	0.34	0.31	0.42	0.35	0.29	0.26	0.42	0.30	24	
19	S	0.35	0.30	0.29	0.29	0.30	0.31	0.30	0.29	0.28	0.29	0.25	0.26	0.26	0.22	0.24	0.23	0.25	0.24	0.24	0.24	0.21	0.22	S	0.21	0.35	0.27	24	
20	0.29	0.24	0.31	0.30	0.31	0.31	0.33	0.34	0.37	0.37	0.35	0.33	0.32	0.35	0.35	0.36	0.36	0.39	0.39	0.37	0.36	0.35	S	0.37	0.24	0.39	0.34	24	
21	0.34	0.32	0.33	0.34	0.33	0.31	0.31	0.31	0.31	0.29	0.31	0.30	0.29	0.30	0.31	0.35	0.35	0.35	0.32	0.32	0.32	S	0.37	0.33	0.29	0.37	0.32	24	
22	0.31	0.31	0.34	0.33	0.32	0.30	0.32	0.31	0.33	0.38	0.39	0.36	0.35	0.34	0.35	0.37	0.35	0.35	0.34	0.33	S	0.41	0.36	0.36	0.30	0.41	0.34	24	
23	0.34	0.35	0.36	0.38	0.37	0.38	0.38	0.39	0.41	0.40	0.42	0.44	0.45	0.43	0.43	0.42	0.45	0.52	0.56	S	0.44	0.40	0.37	0.39	0.34	0.56	0.41	24	
24	0.35	0.33	0.33	0.31	0.31	0.29	0.28	0.29	0.30	0.29	0.29	0.32	0.30	0.29	0.30	0.30	0.30	0.28	S	0.34	0.33	0.30	0.31	0.29	0.28	0.35	0.31	24	
25	0.29	0.30	0.29	0.29	0.32	0.34	0.32	0.29	0.29	0.32	0.33	0.35	0.32	0.32	0.32	0.31	0.33	S	0.38	0.33	0.32	0.30	0.30	0.28	0.28	0.38	0.31	24	
26	0.28	0.28	0.29	0.28	0.26	0.30	0.32	0.31	0.33	0.33	0.34	0.32	0.34	0.34	0.34	S	0.44	0.44	0.36	0.33	0.33	0.33	0.32	0.31	0.26	0.44	0.32	24	
27	0.32	0.32	0.31	0.31	0.29	0.30	0.30	0.33	0.34	0.31	0.28	0.28	0.29	0.29	0.29	S	0.39	0.29	0.29	0.28	0.27	0.26	0.27	0.26	0.26	0.39	0.30	24	
28	0.26	0.26	0.26	0.26	0.24	0.28	0.27	0.25	0.24	0.24	0.26	0.29	0.27	0.25	S	0.36	0.29	0.29	0.27	0.31	0.26	0.27	0.28	0.26	0.24	0.36	0.27	24	
29	0.27	0.26	0.26	0.26	0.28	0.29	0.27	0.28	0.29	0.27	0.26	0.28	0.29	0.29	S	0.38	0.32	0.29	0.27	0.23	0.21	0.22	0.23	0.22	0.23	0.21	0.38	0.27	24
30	0.25	0.25	0.24	0.22	0.23	0.23	0.21	0.20	0.19	0.18	0.20	0.17	S	0.26	0.19	0.19	0.17	0.16	0.18	0.18	0.17	0.19	0.19	0.16	0.16	0.26	0.20	24	
31	0.19	0.19	0.19	0.18	0.18	0.19	0.17	0.19	0.22	0.20	0.18	S	0.30	0.20	0.18	0.19	0.18	0.18	0.17	0.18	0.15	0.16	0.15	0.16	0.15	0.15	0.30	0.19	24
HOURLY MAX	0.41	0.41	0.39	0.41	0.50	0.48	0.52	0.58	0.61	0.77	0.77	0.44	0.45	0.43	0.44	0.44	0.45	0.52	0.56	0.46	0.44	0.42	0.40	0.39					
HOURLY AVG	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.33	0.34	0.34	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.30	0.30	0.30	0.30					

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

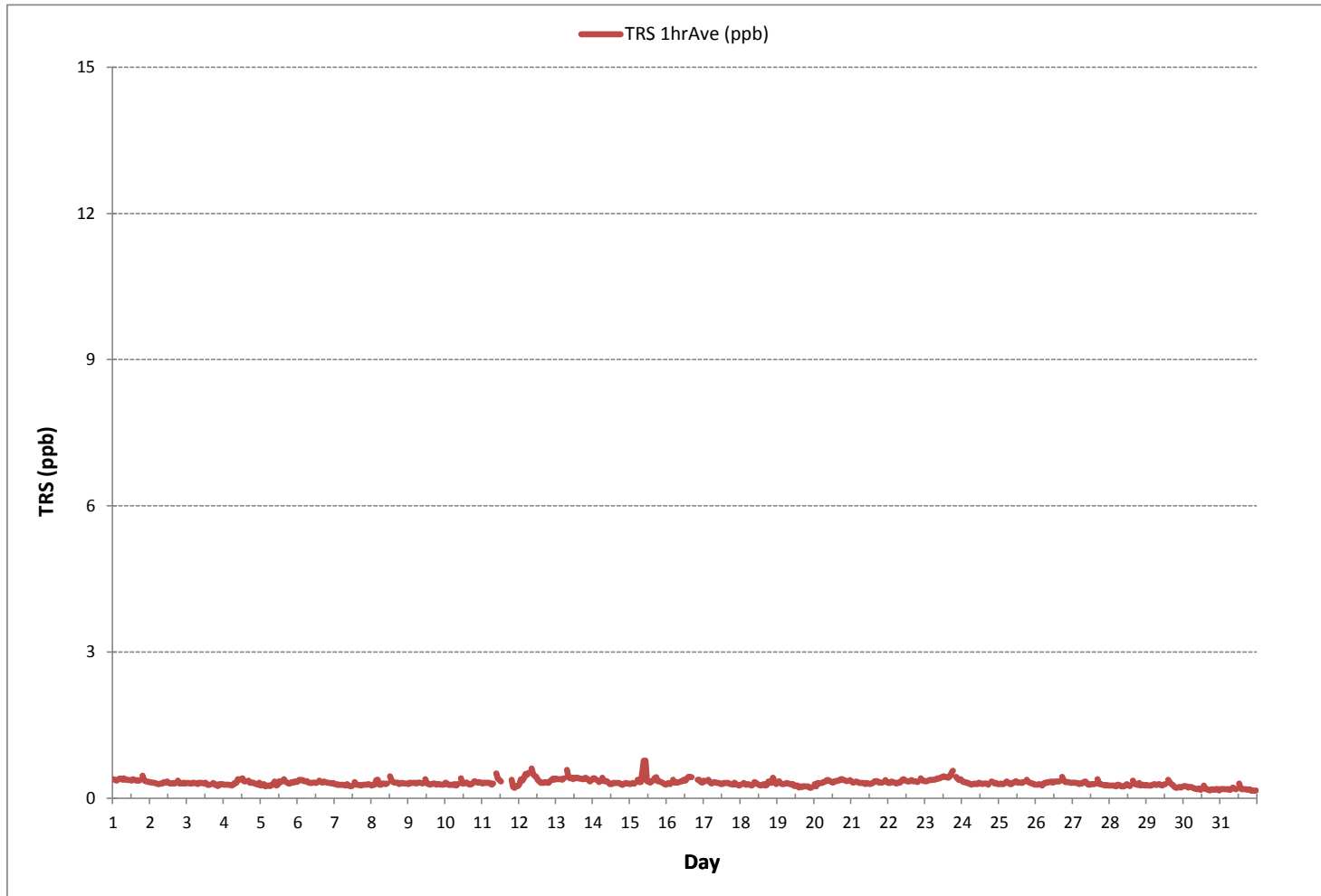
24 HR AVERAGES January 2018



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	704			
MINIMUM 1-HR AVERAGE:	0.15	ppb @ HOUR	20	ON DAY 31
MAXIMUM 1-HR AVERAGE:	0.77	ppb @ HOUR	9	ON DAY 15
MAXIMUM 24-HR AVERAGE:	0.41	ppb		ON DAY 23
IZS CALIBRATION TIME:	32	hrs	OPERATIONAL TIME:	742 hrs
MONTHLY CALIBRATION TIME:	6	hrs	AMD OPERATION UPTIME:	99.7 %
STANDARD DEVIATION:	0.07		MONTHLY AVERAGE:	0.32 ppb

TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)



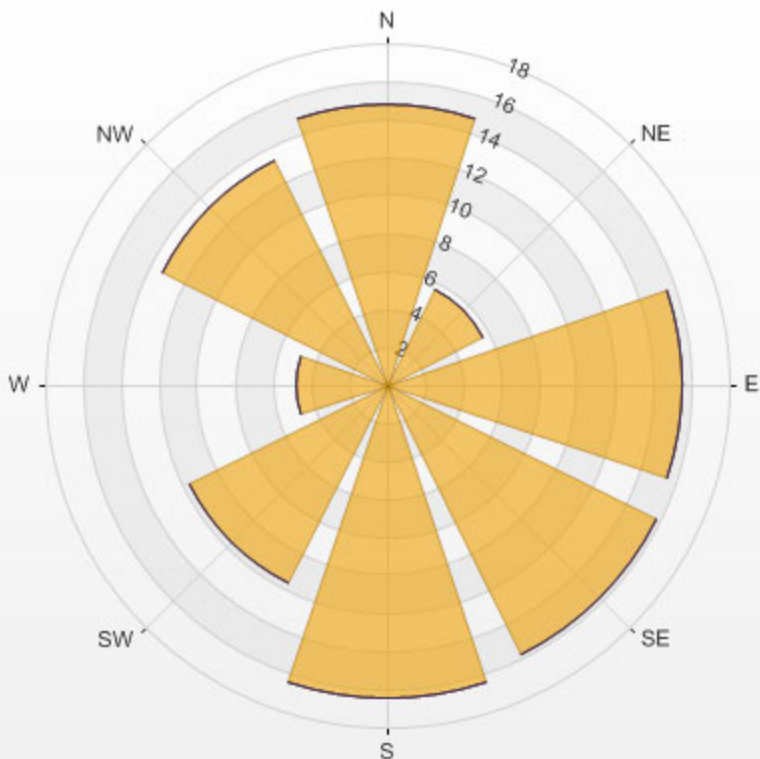
Wind: PRAMP_986
Poll.: PRAMP_986-TRS[ppb]
Monthly: 18/01
Type: PollutionRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

Calm: 1.85% Calm Avg: 0.30 [ppb]

Direction	0-1	1-3	3-10	>10.0	Total
N	14.8	0.0	0.0	0.0	14.8
NE	5.7	0.0	0.0	0.0	5.7
E	15.6	0.0	0.0	0.0	15.6
SE	15.9	0.0	0.0	0.0	15.9
S	16.5	0.0	0.0	0.0	16.5
SW	11.7	0.0	0.0	0.0	11.7
W	4.8	0.0	0.0	0.0	4.8
NW	13.2	0.0	0.0	0.0	13.2
Summary	98.2	0.0	0.0	0.0	98.2

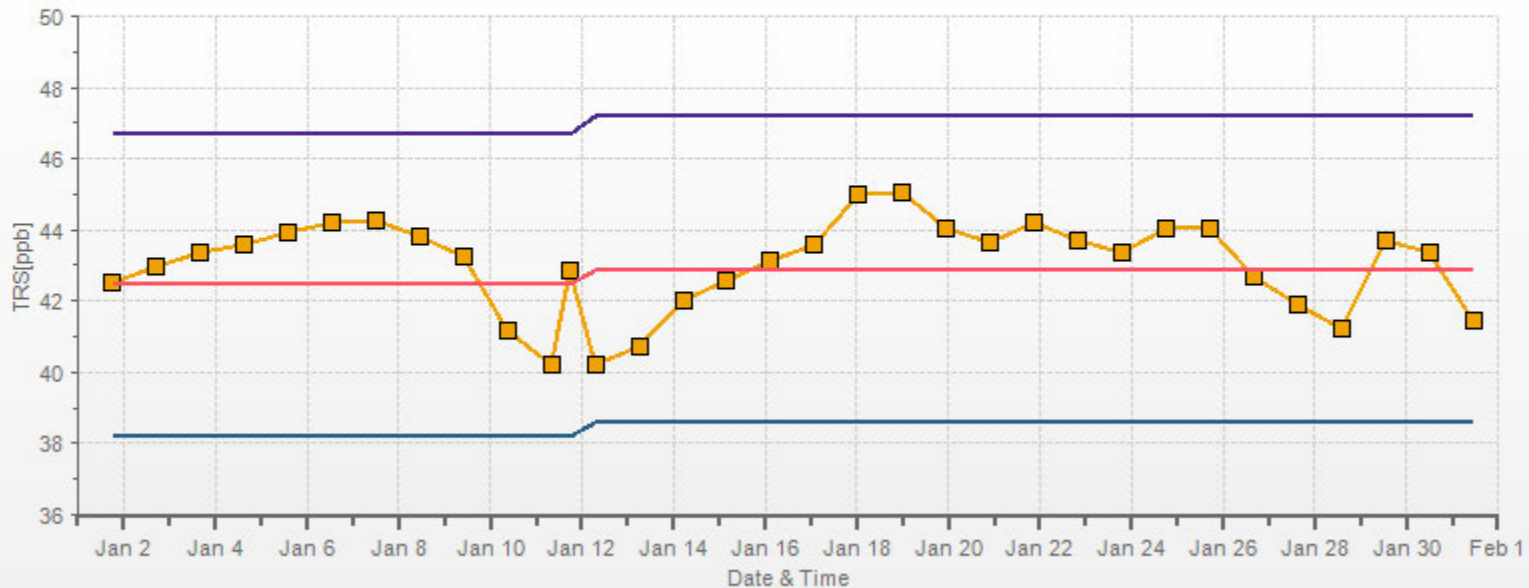
% Icon Classes (ppb) 98 0-1 0 1-3 0 3-10 0 >10.0

PRAMP_986 Poll.: PRAMP_986-TRS[ppb] 2018/01/01 00:00 - 2018/01/31 23:00 Calm: 1.85% Calm Poll Avg: 0.30[ppb]



TRS[ppb] Calibration: PRAMP_986 Monthly: 18/01 Type: Span

Span Meas Span Ref Span Low Span High



TOTAL HYDROCARBON

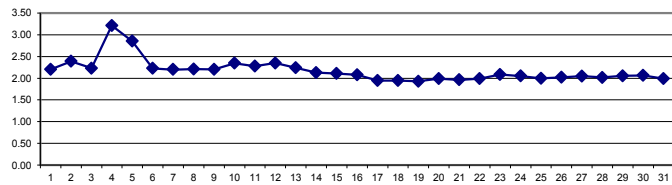
TOTAL HYDROCARBONS Hourly Averages (THC ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	2.19	2.16	2.57	2.23	2.30	2.32	2.35	2.20	2.23	2.19	2.14	2.12	2.13	2.14	2.12	2.11	2.19	2.14	S	2.09	2.21	2.16	2.21	2.10	2.09	2.57	2.20	2.4	
2	2.72	2.41	2.95	2.35	2.78	3.04	2.15	2.39	2.55	2.97	2.80	2.52	2.24	2.03	2.02	2.06	2.13	S	2.10	2.13	2.20	2.04	2.13	2.19	2.02	3.04	2.39	2.4	
3	2.10	2.18	2.46	2.72	2.49	2.37	2.17	2.34	2.63	2.27	2.03	2.03	2.02	2.00	2.09	2.03	S	2.02	2.03	2.17	2.03	2.46	2.46	2.16	2.00	2.72	2.23	2.4	
4	2.27	2.20	2.24	2.25	3.38	2.88	2.84	2.98	3.53	3.07	4.81	2.50	2.18	2.63	4.06	S	4.96	3.27	3.81	3.46	3.85	4.16	2.95	3.51	2.18	4.96	3.21	2.4	
5	2.18	2.34	5.33	2.52	2.13	3.57	3.74	2.57	3.03	4.43	3.62	2.14	2.31	2.42	S	2.18	2.20	2.23	3.17	2.36	2.26	2.25	2.89	3.72	2.13	5.33	2.85	2.4	
6	4.14	2.27	2.40	2.31	2.23	2.19	2.13	2.07	2.03	1.97	1.97	1.96	1.96	S	2.25	2.59	2.38	2.08	1.98	2.15	2.09	2.01	2.00	2.07	1.96	4.14	2.23	2.4	
7	2.11	2.19	2.40	2.48	2.21	2.35	2.28	2.00	2.04	2.10	2.01	1.99	S	2.33	1.99	2.01	2.08	2.16	2.50	2.62	2.09	2.35	2.16	2.13	1.99	2.62	2.20	2.4	
8	2.06	3.14	2.95	2.25	2.02	2.00	2.01	2.02	2.02	2.02	S	2.02	2.02	2.31	2.48	2.19	2.04	2.27	2.21	2.62	2.13	2.00	2.02	2.00	2.00	3.14	2.21	2.4	
9	2.00	2.00	2.09	2.14	2.04	2.07	2.15	2.19	2.71	2.67	S	2.85	2.02	2.02	2.02	2.02	2.04	2.24	2.25	2.33	2.54	2.14	2.03	2.03	2.00	2.85	2.20	2.4	
10	2.06	2.20	2.29	2.43	3.09	2.24	3.20	2.18	2.30	S	2.17	2.10	2.12	2.08	2.25	3.06	3.11	2.13	2.08	2.08	2.08	2.08	2.28	2.27	2.06	3.20	2.34	2.4	
11	2.09	2.08	2.08	2.08	2.15	2.09	2.13	2.10	S	2.11	3.49	2.46	2.22	2.16	2.11	C	C	C	C	2.24	2.54	2.50	2.33	2.35	2.08	3.49	2.28	2.4	
12	2.21	2.52	2.71	2.68	2.81	2.85	2.72	S	2.59	2.61	2.60	2.38	2.21	2.11	2.05	2.03	2.07	2.16	2.05	2.02	2.07	2.18	2.22	2.14	2.02	2.85	2.35	2.4	
13	2.13	2.22	2.25	2.28	2.22	2.34	S	2.44	2.16	2.14	2.13	2.09	2.10	2.11	2.12	2.28	2.29	2.59	2.48	2.25	2.39	2.24	2.07	2.14	2.07	2.59	2.24	2.4	
14	2.14	2.12	2.08	2.07	2.06	S	2.11	2.17	2.41	2.10	2.16	2.23	2.00	2.01	2.08	2.18	2.14	2.09	2.18	2.16	2.09	2.12	2.14	2.11	2.00	2.41	2.13	2.4	
15	2.18	2.04	2.09	2.15	S	2.00	1.99	2.08	2.26	2.54	2.13	2.00	2.00	2.07	2.24	2.15	2.13	2.15	2.00	2.06	2.15	2.00	2.02	2.02	1.99	2.54	2.11	2.4	
16	2.04	2.05	2.14	S	2.07	2.07	2.08	2.06	2.06	2.05	2.06	2.07	2.05	2.06	2.07	2.08	2.10	2.11	2.13	Y	2.11	2.10	2.08	2.06	2.04	2.14	2.08	2.3	
17	2.09	2.08	S	2.02	1.98	1.96	1.96	1.95	1.93	1.92	1.92	1.91	1.90	1.88	1.91	1.94	1.91	1.92	1.92	1.92	1.95	1.93	1.90	1.89	1.88	2.09	1.94	2.4	
18	1.90	S	1.94	1.91	1.93	1.93	1.93	1.95	1.95	1.94	1.93	1.91	1.90	1.90	1.91	1.89	1.89	1.89	2.06	2.22	1.94	1.93	2.08	1.94	1.89	2.22	1.95	2.4	
19	S	1.91	1.90	1.92	1.90	1.90	1.91	1.92	1.99	1.94	1.96	1.90	1.88	1.96	1.97	2.01	2.09	1.89	1.90	1.89	1.89	1.89	1.90	S	1.88	2.09	1.93	2.4	
20	2.03	1.94	1.92	1.96	1.94	1.98	1.97	1.95	1.97	1.96	1.97	1.95	1.96	1.99	2.09	2.00	2.02	2.12	2.06	2.01	1.99	1.99	S	1.97	1.92	2.12	1.99	2.4	
21	1.96	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.94	1.95	1.95	1.95	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	S	1.96	1.96	1.94	1.97	1.96	2.4
22	1.96	2.08	1.97	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	2.02	2.02	1.98	1.97	1.98	1.97	S	1.97	1.97	1.97	1.96	2.08	1.99	2.4	
23	1.98	2.02	2.03	2.05	2.04	2.07	2.08	2.08	2.10	2.07	2.03	2.12	2.10	2.07	2.13	2.37	2.30	2.04	2.04	S	2.00	1.98	2.20	1.98	1.98	2.37	2.08	2.4	
24	1.97	2.01	2.04	2.01	2.15	2.18	2.06	2.00	2.00	2.03	2.00	2.02	2.03	2.04	2.05	2.06	2.07	2.08	S	2.08	2.08	2.07	2.07	2.06	1.97	2.18	2.05	2.4	
25	2.05	2.03	2.05	2.00	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.97	1.97	2.00	2.05	2.04	S	2.01	1.98	1.98	1.97	1.97	1.97	1.97	2.05	2.00	2.4	
26	1.97	1.97	1.96	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	2.05	2.09	2.09	2.06	S	2.20	2.06	2.00	2.05	2.03	2.10	2.05	1.96	2.20	2.02	2.4	
27	2.00	2.01	2.02	1.99	2.05	2.01	2.37	2.01	1.99	1.98	2.00	2.01	2.00	2.00	2.02	S	2.04	2.15	2.06	2.02	2.06	2.07	2.07	2.14	1.98	2.37	2.05	2.4	
28	1.99	2.01	2.02	2.00	2.01	2.06	2.01	2.01	2.02	2.03	2.06	2.08	2.04	2.01	S	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	2.08	2.02	2.4	
29	2.00	2.00	2.00	2.00	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.05	2.08	S	2.13	2.14	2.15	2.11	2.06	2.04	2.07	2.11	2.12	2.07	2.00	2.15	2.05	2.4	
30	2.02	2.04	1.98	2.04	2.09	2.09	2.07	2.05	2.10	2.06	2.04	2.03	S	2.06	2.04	2.02	2.05	2.16	2.14	2.02	2.12	2.00	2.18	2.04	1.98	2.18	2.06	2.4	
31	1.97	1.99	2.00	2.07	2.02	2.04	1.98	1.97	1.98	1.97	1.97	S	1.97	1.99	1.97	1.98	1.98	1.97	1.98	1.96	1.96	1.96	1.98	2.06	1.96	2.07	1.99	2.4	
HOURLY MAX	4.14	3.14	5.33	2.72	3.38	3.57	3.74	2.98	3.53	4.43	4.81	2.85	2.31	2.63	4.06	3.06	4.96	3.27	3.81	3.46	3.85	4.16	2.95	3.72					
HOURLY AVG	2.15	2.14	2.29	2.16	2.20	2.22	2.21	2.12	2.22	2.23	2.26	2.11	2.05	2.07	2.14	2.13	2.23	2.14	2.19	2.15	2.18	2.16	2.15	2.17					

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

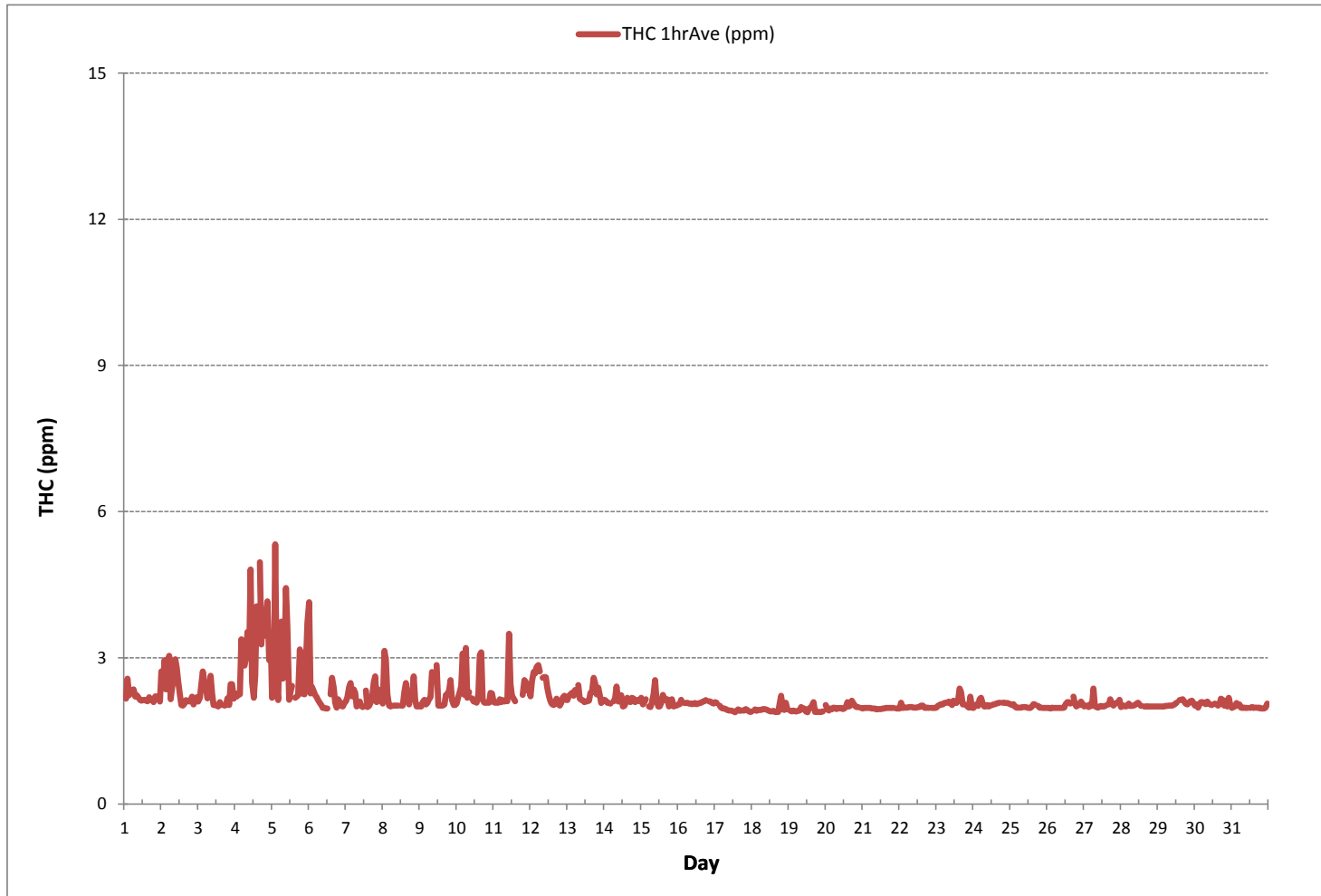
24 HR AVERAGES January 2018



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	707				
MINIMUM 1-HR AVERAGE:	1.88 ppm	@ HOUR	13	ON DAY	17
MAXIMUM 1-HR AVERAGE:	5.33 ppm	@ HOUR	2	ON DAY	5
MAXIMUM 24-HR AVERAGE:	3.21 ppm			ON DAY	4
IZS CALIBRATION TIME:	32 hrs	OPERATIONAL TIME:	743 hrs		
MONTHLY CALIBRATION TIME:	4 hrs	AMD OPERATION UPTIME:	99.9 %		
STANDARD DEVIATION:	0.38	MONTHLY AVERAGE:	2.17 ppm		

TOTAL HYDROCARBONS Hourly Averages (THC ppm)



Wind: PRAMP_986
 Poll.: PRAMP_986-THC55[ppm]
 Monthly: 18/01
 Type: PollutionRose
 Direction: Blowing From (Wind Frequency)
 Based On 1 Hr.

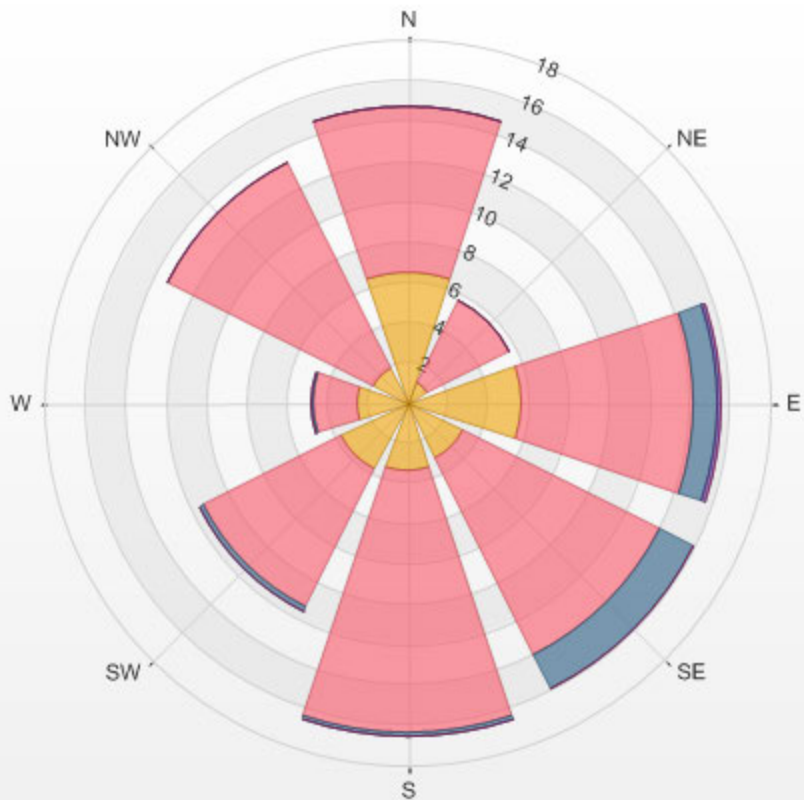
Calm: 1.98%

Calm Avg: 2.16 [ppm]

Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	6.5	8.2	0.0	0.0	0.0	14.7
NE	1.1	4.5	0.0	0.0	0.0	5.7
E	5.7	8.5	1.3	0.1	0.0	15.6
SE	3.1	10.9	1.8	0.0	0.0	15.8
S	3.4	13.0	0.1	0.0	0.0	16.5
SW	3.7	7.6	0.3	0.0	0.0	11.6
W	2.6	2.1	0.1	0.0	0.0	4.8
NW	2.0	11.3	0.0	0.0	0.0	13.3
Summary	28.0	66.2	3.7	0.1	0.0	98.0

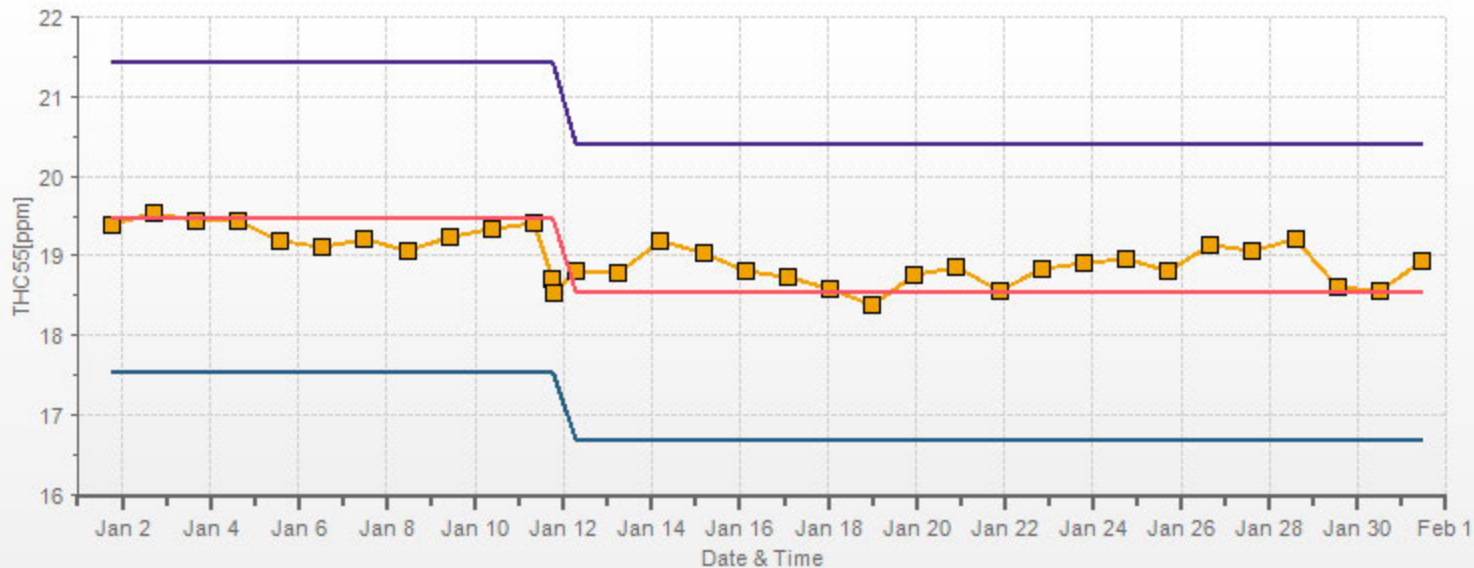
% Icon Classes (ppm) 28 0-2 66 2-3 4 3-5 0 5-10 0 >10.0

PRAMP_986 Poll.: PRAMP_986-THC55[ppm] 2018/01/01 00:00 - 2018/01/31 23:00 Calm: 1.98% Calm Poll Avg: 2.16[ppm]



THC55[ppm] Calibration: PRAMP_986 Monthly: 18/01 Type: Span

■ Span Meas
 — Span Ref
 — Span Low
 — Span High



METHANE



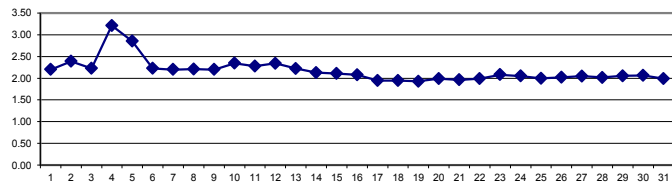
METHANE Hourly Averages (CH₄ ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	2.19	2.16	2.57	2.23	2.30	2.32	2.35	2.20	2.23	2.18	2.14	2.12	2.13	2.14	2.12	2.11	2.19	2.14	S	2.09	2.21	2.16	2.20	2.10	2.09	2.57	2.20	24	
2	2.72	2.41	2.95	2.35	2.78	3.04	2.15	2.39	2.55	2.97	2.80	2.52	2.23	2.03	2.02	2.06	2.13	S	2.10	2.13	2.20	2.04	2.13	2.19	2.02	3.04	2.39	24	
3	2.10	2.18	2.45	2.72	2.49	2.37	2.17	2.34	2.63	2.27	2.03	2.03	2.02	2.00	2.09	2.03	S	2.02	2.03	2.17	2.03	2.46	2.46	2.16	2.00	2.72	2.23	24	
4	2.27	2.20	2.24	2.25	3.38	2.88	2.84	2.98	3.53	3.07	4.81	2.50	2.18	2.63	4.06	S	4.96	3.27	3.81	3.46	3.85	4.16	2.95	3.51	2.18	4.96	3.21	24	
5	2.18	2.34	5.33	2.52	2.13	3.57	3.74	2.57	3.03	4.43	3.62	2.14	2.31	2.42	S	2.17	2.17	2.23	3.17	2.36	2.26	2.25	2.89	3.71	2.13	5.33	2.85	24	
6	4.14	2.26	2.39	2.30	2.23	2.19	2.13	2.07	2.03	1.97	1.97	1.96	1.96	S	2.25	2.59	2.38	2.08	1.98	2.15	2.09	2.01	2.00	2.07	1.96	4.14	2.23	24	
7	2.11	2.19	2.40	2.48	2.21	2.35	2.28	2.00	2.04	2.10	2.01	1.99	S	2.33	1.99	2.01	2.08	2.16	2.50	2.62	2.09	2.35	2.16	2.13	1.99	2.62	2.20	24	
8	2.06	3.14	2.95	2.25	2.02	2.00	2.01	2.02	2.02	2.02	S	2.02	2.02	2.31	2.48	2.19	2.04	2.27	2.21	2.62	2.13	2.00	2.02	2.00	2.00	3.14	2.21	24	
9	2.00	2.00	2.09	2.14	2.04	2.07	2.15	2.19	2.71	2.67	S	2.85	2.01	2.02	2.02	2.02	2.04	2.24	2.25	2.33	2.54	2.14	2.03	2.03	2.00	2.85	2.20	24	
10	2.06	2.20	2.29	2.43	3.09	2.24	3.20	2.18	2.30	S	2.17	2.10	2.12	2.08	2.25	3.06	3.11	2.13	2.08	2.08	2.08	2.08	2.28	2.27	2.06	3.20	2.34	24	
11	2.09	2.08	2.08	2.08	2.15	2.09	2.12	2.10	S	2.11	3.49	2.46	2.22	2.16	2.21	C	C	C	C	2.24	2.54	2.50	2.33	2.35	2.08	3.49	2.28	24	
12	2.21	2.52	2.71	2.68	2.80	2.84	2.71	S	2.59	2.60	2.59	2.37	2.21	2.11	2.05	2.03	2.07	2.16	2.05	2.02	2.07	2.16	2.18	2.12	2.02	2.84	2.34	24	
13	2.13	2.20	2.19	2.25	2.18	2.24	S	2.40	2.15	2.13	2.13	2.09	2.09	2.11	2.12	2.27	2.29	2.59	2.48	2.24	2.39	2.24	2.07	2.14	2.07	2.59	2.22	24	
14	2.14	2.12	2.08	2.07	2.06	S	2.11	2.17	2.41	2.10	2.16	2.23	2.00	2.01	2.08	2.18	2.14	2.09	2.18	2.16	2.09	2.12	2.14	2.11	2.00	2.41	2.13	24	
15	2.18	2.04	2.09	2.15	S	2.00	1.98	2.08	2.26	2.54	2.13	2.00	2.00	2.07	2.24	2.15	2.13	2.15	2.00	2.06	2.15	2.00	2.02	2.02	1.98	2.54	2.11	24	
16	2.04	2.05	2.14	S	2.07	2.07	2.08	2.06	2.06	2.05	2.06	2.07	2.05	2.06	2.08	2.08	2.09	2.11	2.12	Y	2.11	2.10	2.08	2.06	2.04	2.14	2.08	23	
17	2.08	2.07	S	2.02	1.98	1.96	1.96	1.95	1.93	1.92	1.92	1.91	1.90	1.88	1.91	1.94	1.91	1.92	1.92	1.92	1.95	1.93	1.90	1.89	1.88	2.08	1.94	24	
18	1.90	S	1.94	1.90	1.93	1.93	1.93	1.95	1.94	1.94	1.93	1.91	1.90	1.90	1.91	1.89	1.89	1.89	2.06	2.22	1.94	1.93	2.08	1.94	1.89	2.22	1.95	24	
19	S	1.91	1.90	1.91	1.90	1.90	1.91	1.92	1.99	1.94	1.96	1.90	1.88	1.96	1.97	2.01	2.09	1.89	1.90	1.89	1.89	1.89	1.90	S	1.88	2.09	1.93	24	
20	2.03	1.94	1.92	1.96	1.94	1.98	1.97	1.95	1.97	1.96	1.97	1.95	1.96	1.99	2.09	2.00	2.02	2.12	2.06	2.01	1.99	1.99	S	1.97	1.92	2.12	1.99	24	
21	1.96	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.96	1.94	1.95	1.95	1.95	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	S	1.96	1.96	1.94	1.97	1.96	24
22	1.96	2.08	1.97	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	2.02	2.02	1.98	1.97	1.98	1.97	S	1.97	1.97	1.97	1.96	2.08	1.99	24	
23	1.98	2.02	2.03	2.05	2.04	2.07	2.08	2.08	2.09	2.07	2.03	2.12	2.10	2.07	2.12	2.37	2.30	2.04	2.04	S	2.00	1.98	2.20	1.98	1.98	2.37	2.08	24	
24	1.97	2.01	2.04	2.01	2.15	2.18	2.06	2.00	2.00	2.03	2.00	2.02	2.03	2.04	2.05	2.06	2.07	2.08	S	2.08	2.08	2.07	2.07	2.06	1.97	2.18	2.05	24	
25	2.05	2.03	2.05	2.00	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.97	1.97	2.00	2.05	2.04	S	2.01	1.98	1.98	1.97	1.97	1.97	1.97	2.05	2.00	24	
26	1.97	1.97	1.96	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	2.05	2.09	2.09	2.06	S	2.20	2.06	2.00	2.05	2.03	2.10	2.05	1.96	2.20	2.02	24	
27	2.00	2.01	2.02	1.99	2.05	2.01	2.37	2.01	1.99	1.98	2.00	2.01	2.00	2.00	2.02	S	2.04	2.15	2.06	2.02	2.06	2.07	2.07	2.14	1.98	2.37	2.05	24	
28	1.99	2.01	2.02	2.00	2.01	2.06	2.01	2.01	2.02	2.03	2.06	2.08	2.04	2.01	S	2.13	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	2.08	2.02	24	
29	2.00	2.00	2.00	2.00	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.05	2.08	S	2.13	2.14	2.15	2.11	2.06	2.04	2.07	2.11	2.12	2.07	2.00	2.15	2.05	24	
30	2.02	2.04	1.98	2.04	2.09	2.09	2.07	2.05	2.10	2.06	2.04	2.03	S	2.06	2.04	2.02	2.05	2.16	2.14	2.02	2.12	2.00	2.18	2.04	1.98	2.18	2.06	24	
31	1.97	1.99	2.00	2.07	2.02	2.04	1.98	1.97	1.98	1.97	1.97	S	1.97	1.99	1.97	1.98	1.98	1.97	1.98	1.96	1.96	1.96	1.98	2.06	1.96	2.07	1.99	24	
HOURLY MAX	4.14	3.14	5.33	2.72	3.38	3.57	3.74	2.98	3.53	4.43	4.81	2.85	2.31	2.63	4.06	3.06	4.96	3.27	3.81	3.46	3.85	4.16	2.95	3.71					
HOURLY AVG	2.15	2.14	2.29	2.16	2.20	2.21	2.21	2.12	2.22	2.23	2.26	2.11	2.05	2.07	2.14	2.13	2.23	2.14	2.19	2.15	2.18	2.16	2.15	2.17					

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

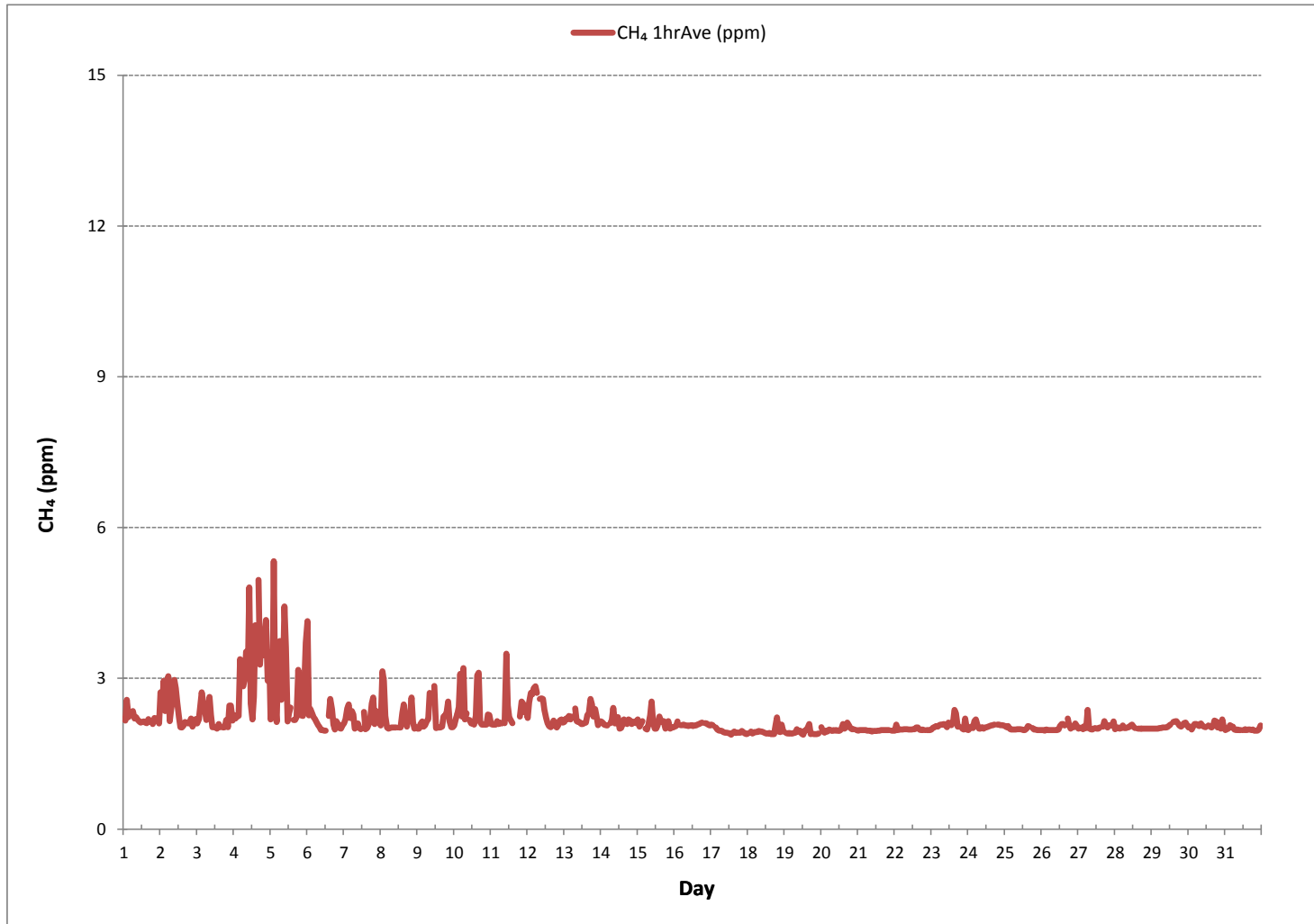
24 HR AVERAGES January 2018



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	707			
MINIMUM 1-HR AVERAGE:	1.88 ppm	@ HOUR	13	ON DAY 17
MAXIMUM 1-HR AVERAGE:	5.33 ppm	@ HOUR	2	ON DAY 5
MAXIMUM 24-HR AVERAGE:	3.21 ppm			ON DAY 4
IZS CALIBRATION TIME:	32 hrs	OPERATIONAL TIME:	743 hrs	
MONTHLY CALIBRATION TIME:	4 hrs	AMD OPERATION UPTIME:	99.9 %	
STANDARD DEVIATION:	0.38	MONTHLY AVERAGE:	2.17 ppm	

METHANE Hourly Averages (CH₄ ppm)



Wind: PRAMP_986
 Poll.: PRAMP_986-CH₄[ppm]
 Monthly: 18/01
 Type: PollutionRose
 Direction: Blowing From (Wind Frequency)
 Based On 1 Hr.

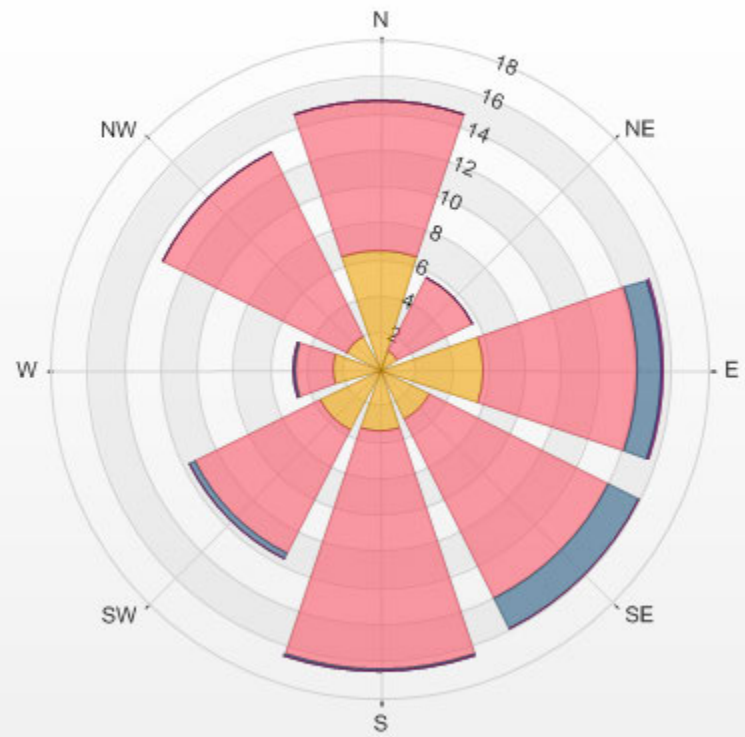
Calm: 1.98%

Calm Avg: 2.16 [ppm]

Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	6.5	8.2	0.0	0.0	0.0	14.7
NE	1.1	4.5	0.0	0.0	0.0	5.7
E	5.7	8.5	1.3	0.1	0.0	15.6
SE	3.1	10.9	1.8	0.0	0.0	15.8
S	3.4	13.0	0.1	0.0	0.0	16.5
SW	3.7	7.6	0.3	0.0	0.0	11.6
W	2.6	2.1	0.1	0.0	0.0	4.8
NW	2.0	11.3	0.0	0.0	0.0	13.3
Summary	28.0	66.2	3.7	0.1	0.0	98.0

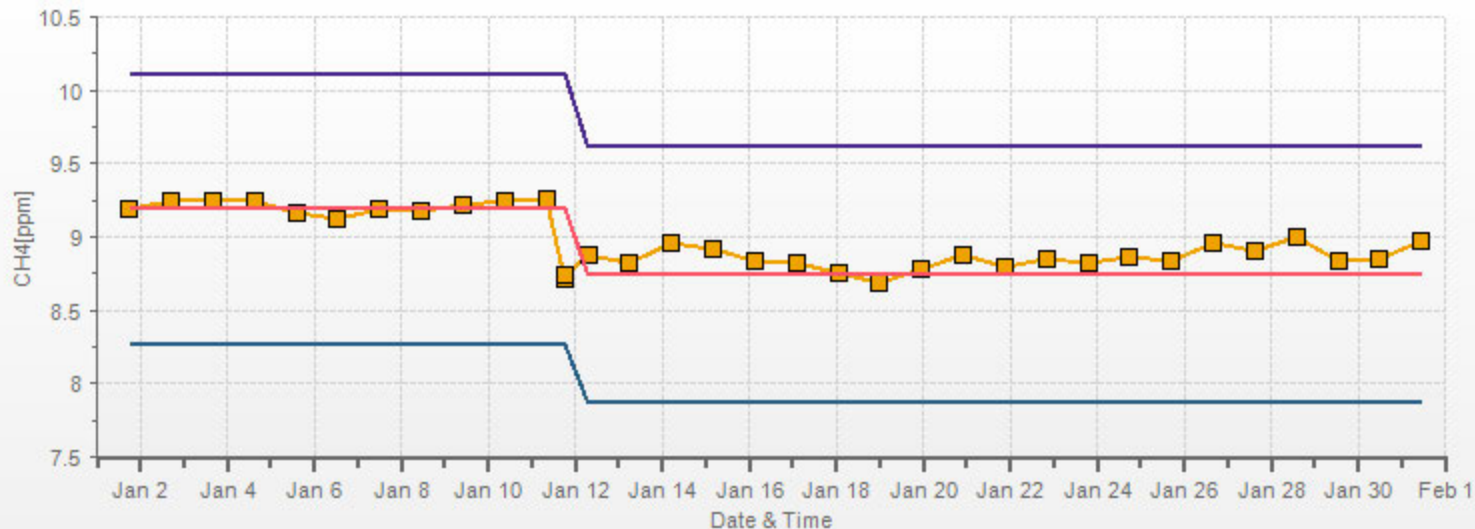
% Icon Classes (ppm) 28 0-2 66 2-3 4 3-5 0 5-10 0 >10.0

PRAMP_986 Poll.: PRAMP_986-CH4[ppm] 2018/01/01 00:00 - 2018/01/31 23:00 Calm: 1.98% Calm Poll Avg: 2.16[ppm]



CH4[ppm] Calibration: PRAMP_986 Monthly: 18/01 Type: Span

Span Meas Span Ref Span Low Span High



NON-METHANE HYDROCARBON



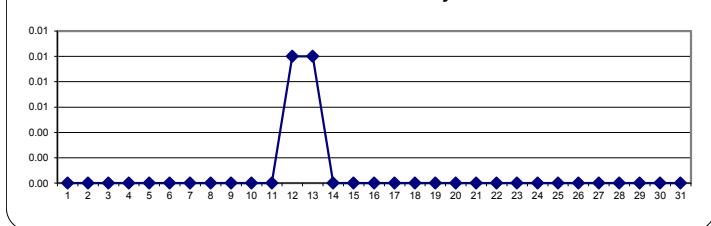
NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	24
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	0.00	24
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	24
6	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	S	0.00	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	24
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	0.00	24
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	0.00	24
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	0.00	24
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	0.00	24
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	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	24
12	0.00	0.00	0.00	0.00	0.01	0.01	0.01	S	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	0.02	0.04	0.02	0.00	0.00	0.04	0.01	24
13	0.01	0.02	0.06	0.03	0.04	0.11	S	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.01	24
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	0.00	24
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	0.00	24
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	0.01	0.01	Y	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	23
17	0.01	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	24
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	0.00	24
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	0.00	24
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	0.00	S	0.00	0.00	0.00	0.00	24
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	0.00	24
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	0.00	24
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	0.00	24
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	0.00	24
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	0.00	24
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	0.00	24
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	S	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	0.00	24
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	0.00	24
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
HOURLY MAX	0.01	0.02	0.06	0.03	0.04	0.11	0.01	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.02	0.04	0.02					
HOURLY AVG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

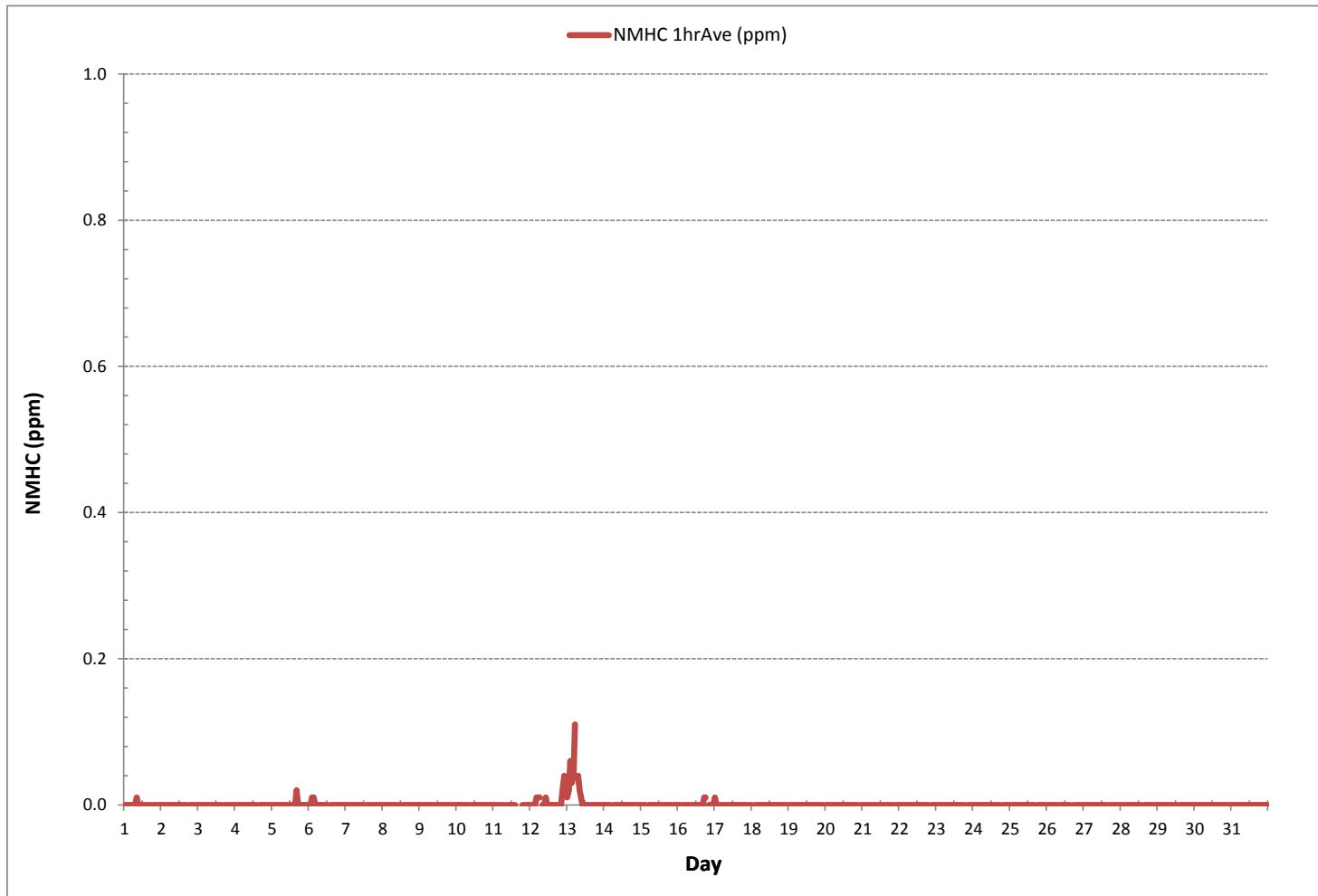
24 HR AVERAGES January 2018



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	23			
MINIMUM 1-HR AVERAGE:	0.00	ppm @ HOUR	0	ON DAY 1
MAXIMUM 1-HR AVERAGE:	0.11	ppm @ HOUR	5	ON DAY 13
MAXIMUM 24-HR AVERAGE:	0.01	ppm		ON DAY 12
IZS CALIBRATION TIME:	32	hrs	OPERATIONAL TIME:	743 hrs
MONTHLY CALIBRATION TIME:	4	hrs	AMD OPERATION UPTIME:	99.9 %
STANDARD DEVIATION:	0.01		MONTHLY AVERAGE:	0.00 ppm

NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)



Wind: PRAMP_986
 Poll.: PRAMP_986-NMHC[ppm]
 Monthly: 18/01
 Type: PollutionRose
 Direction: Blowing From (Wind Frequency)
 Based On 1 Hr.

Calm: 1.98%

Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	14.7	0.0	0.0	0.0	0.0	14.7
NE	5.7	0.0	0.0	0.0	0.0	5.7
E	15.6	0.0	0.0	0.0	0.0	15.6
SE	15.8	0.0	0.0	0.0	0.0	15.8
S	16.4	0.1	0.0	0.0	0.0	16.6
SW	11.6	0.0	0.0	0.0	0.0	11.6
W	4.8	0.0	0.0	0.0	0.0	4.8
NW	13.3	0.0	0.0	0.0	0.0	13.3
Summary	97.9	0.1	0.0	0.0	0.0	98.0

% Icon Classes (ppm)

98

0-0.1

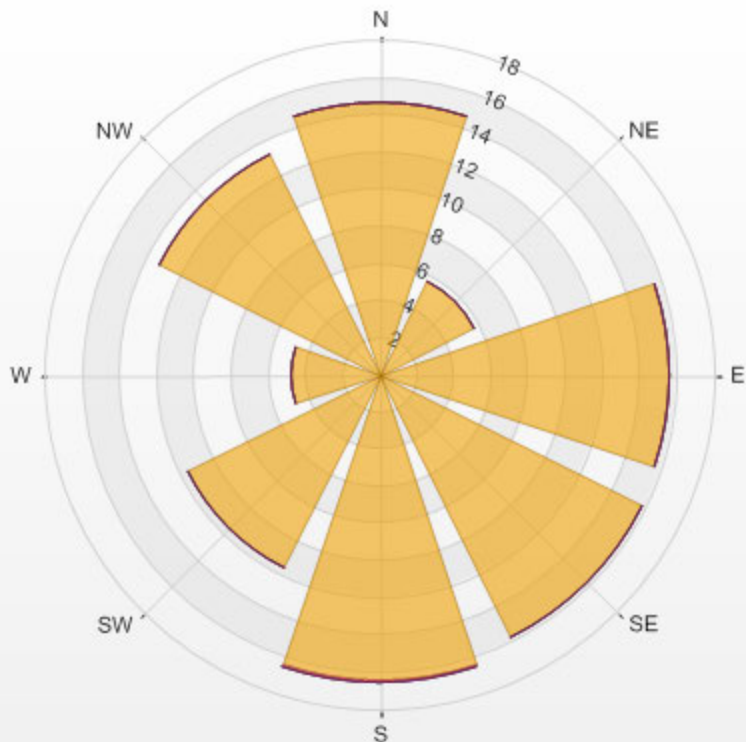
0 0.1-0.3

0 0.3-1

0 1-2

0 >2.0

PRAMP_986 Poll.: PRAMP_986-NMHC[ppm] 2018/01/01 00:00 - 2018/01/31 23:00 Calm: 1.98% Calm Poll Avg: 0.00[ppm]



NMHC[ppm] Calibration: PRAMP_986 Monthly: 18/01 Type: Span

Span Meas Span Ref Span Low Span High



WIND SPEED



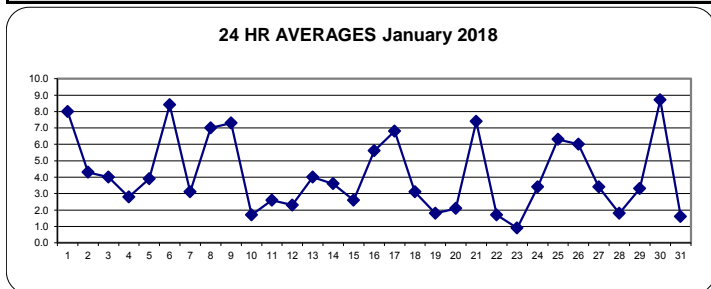
WIND SPEED Hourly Averages (WS kph)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59					
DAY 1	9.3	9.8	7.1	8.9	8.6	4.9	6.0	11.4	10.8	10.7	11.5	12.0	12.8	13.2	10.2	8.3	6.2	7.8	6.2	6.6	4.4	2.7	5.5	2.8	2.7	13.2	8.0	24	
2	5.0	5.1	5.0	3.7	3.6	3.8	2.9	4.5	2.7	5.5	4.7	3.8	5.1	6.5	7.8	6.3	6.4	5.3	6.3	8.7	5.7	5.9	4.8	4.7	2.7	8.7	4.3	24	
3	3.5	3.9	4.5	4.8	4.1	4.0	6.1	4.8	5.3	5.4	5.9	5.0	5.5	8.8	7.1	6.8	6.1	6.1	5.0	3.5	1.9	3.4	4.2	2.8	1.9	8.8	4.0	24	
4	2.3	3.2	2.8	2.2	3.0	2.4	3.4	2.6	3.5	3.9	4.5	3.2	1.9	2.7	3.2	2.4	5.7	2.0	2.4	3.6	2.1	2.1	3.3	4.2	1.9	5.7	2.8	24	
5	3.9	4.0	3.1	4.5	3.0	1.9	4.0	3.9	2.7	2.8	5.6	6.8	5.9	5.3	8.2	5.8	3.4	5.9	4.2	6.3	5.5	5.8	3.9	3.6	1.9	8.2	3.9	24	
6	4.1	5.6	7.3	8.2	8.3	7.3	8.2	10.8	10.1	8.8	7.9	9.3	11.1	12.0	10.0	7.9	7.5	10.2	10.3	7.9	8.9	10.5	10.6	10.2	4.1	12.0	8.4	24	
7	9.0	7.8	6.5	3.7	3.5	3.8	3.2	8.3	4.3	3.3	3.8	4.2	6.2	4.6	6.5	6.3	5.9	3.3	3.3	3.8	3.6	4.3	5.4	4.5	3.2	9.0	3.1	24	
8	2.0	2.4	1.5	3.0	9.0	8.9	8.5	8.7	8.8	9.8	11.1	10.4	10.3	11.0	9.0	8.3	8.5	7.7	7.6	8.2	8.1	6.4	8.9	7.2	1.5	11.1	7.0	24	
9	7.3	6.9	6.3	6.3	5.6	5.7	6.4	6.8	6.9	7.8	8.7	8.9	9.0	9.7	9.0	7.6	8.0	9.2	9.9	9.6	7.9	7.2	7.3	5.5	5.5	9.9	7.3	24	
10	3.1	3.4	1.6	0.0	0.2	0.5	1.1	0.2	0.6	1.6	2.7	3.7	4.9	5.6	3.9	3.9	3.7	4.3	4.8	4.4	4.9	4.4	3.4	4.6	0.0	5.6	1.7	24	
11	6.6	4.8	5.0	5.5	4.4	5.6	3.8	5.8	5.5	6.9	3.2	3.1	2.3	0.2	4.7	2.6	1.7	1.7	2.2	1.5	2.0	2.8	1.4	1.2	0.2	6.9	2.6	24	
12	1.7	1.5	2.2	2.0	1.5	2.3	3.5	3.8	3.1	1.9	1.5	0.5	2.1	3.1	3.9	3.2	2.8	2.8	5.0	5.6	6.1	8.6	8.3	8.7	0.5	5.5	8.7	2.3	24
13	8.5	7.6	7.8	7.7	9.6	10.8	8.9	6.1	6.5	7.5	6.6	6.2	5.0	5.3	3.6	4.4	2.5	2.2	1.6	2.8	1.6	3.4	5.3	4.1	1.6	10.8	4.0	24	
14	4.4	2.6	2.5	3.8	3.5	2.8	3.4	1.7	1.2	3.3	3.3	3.1	4.3	5.1	4.5	4.6	5.8	7.8	9.1	9.8	10.3	10.5	10.0	7.6	1.2	10.5	3.6	24	
15	7.3	7.2	8.3	6.9	7.1	6.1	5.3	5.0	2.9	1.7	2.1	3.5	2.7	1.4	3.3	3.8	1.4	0.5	1.5	1.4	0.6	1.3	0.2	1.3	0.2	8.3	2.6	24	
16	1.2	1.0	1.5	1.6	1.5	1.3	2.5	4.9	5.5	6.1	8.8	9.1	8.2	7.6	7.2	8.3	6.9	7.2	8.0	Y	8.4	10.2	8.1	9.4	1.0	10.2	5.6	23	
17	9.9	7.7	10.3	8.7	8.9	8.9	8.4	8.3	7.9	8.1	7.9	7.8	6.8	7.6	10.4	10.5	9.9	8.5	7.5	6.0	4.8	5.2	6.3	10.1	4.8	10.5	6.8	24	
18	5.9	4.6	2.3	4.2	3.2	1.7	2.7	4.8	5.0	8.5	10.1	5.7	9.6	9.6	10.1	8.0	8.4	7.4	4.7	3.6	2.4	3.4	7.4	1.0	1.0	10.1	3.1	24	
19	1.5	4.7	2.1	2.1	1.8	3.2	2.3	2.2	3.3	4.6	6.2	8.2	6.8	8.1	5.5	3.2	2.3	0.6	1.0	1.0	1.4	1.8	1.1	0.7	0.6	8.2	1.8	24	
20	1.2	0.3	3.2	0.7	1.6	2.4	1.8	0.6	1.2	2.3	1.4	3.7	4.0	4.0	4.4	4.6	4.3	4.0	3.7	2.8	3.6	3.8	4.0	4.6	0.3	4.6	2.1	24	
21	3.4	4.2	3.6	5.9	6.0	5.4	7.2	7.0	9.6	9.6	8.2	10.8	9.2	7.6	8.8	9.2	9.0	8.6	8.6	7.8	8.6	8.2	7.2	6.4	3.4	10.8	7.4	24	
22	6.1	1.7	2.8	0.8	1.6	2.0	1.4	2.0	2.4	1.1	2.1	0.7	0.3	1.1	4.2	2.1	2.1	2.5	4.5	4.7	4.2	3.0	4.3	4.3	0.3	6.1	1.7	24	
23	2.7	3.0	5.1	5.0	3.5	3.9	1.2	3.8	0.5	2.6	3.3	1.5	2.9	3.7	3.1	2.4	1.8	1.9	1.2	2.1	2.4	3.0	1.6	4.6	0.5	5.1	0.9	24	
24	3.8	3.3	3.2	3.5	2.2	1.6	1.2	0.8	1.5	2.2	4.4	4.3	4.2	3.2	3.0	4.4	5.5	5.2	4.7	5.2	5.1	6.0	5.4	5.3	0.8	6.0	3.4	24	
25	3.6	3.5	3.4	4.0	4.5	4.0	4.3	4.2	5.2	6.1	6.4	6.6	6.4	7.3	8.4	9.3	9.9	10.2	8.4	8.3	7.7	8.2	8.3	8.7	3.4	10.2	6.3	24	
26	10.1	7.6	6.6	7.4	7.3	5.6	6.9	8.5	7.7	7.0	6.9	6.5	6.4	8.5	7.3	7.2	6.9	6.5	3.5	2.6	2.4	2.0	3.5	2.8	2.0	10.1	6.0	24	
27	2.6	3.3	3.4	3.5	2.7	2.5	3.6	1.7	0.4	0.1	2.1	2.7	3.1	5.5	7.9	5.7	5.9	5.0	4.1	3.5	4.1	3.6	3.9	4.4	0.1	7.9	3.4	24	
28	2.5	1.5	0.7	0.5	2.1	1.1	1.1	1.1	3.4	1.4	1.1	1.0	3.2	4.7	2.7	2.9	2.1	2.5	3.8	3.2	4.7	6.2	4.6	4.2	4.9	0.5	6.2	1.8	24
29	4.9	5.7	5.2	6.7	7.3	6.6	6.3	5.8	5.3	6.1	6.4	5.4	9.1	9.6	7.2	3.4	2.6	4.5	8.1	6.6	10.7	8.7	12.8	11.5	2.6	12.8	3.3	24	
30	9.3	8.3	6.3	4.1	9.3	8.3	8.9	6.9	7.0	8.9	12.7	14.4	13.3	15.6	14.6	11.1	8.5	9.2	7.0	6.1	5.5	5.0	3.9	5.1	3.9	15.6	8.7	24	
31	4.5	4.2	3.8	3.4	2.1	1.6	0.8	0.1	0.4	1.7	0.8	2.8	1.9	2.8	1.4	2.4	2.9	2.6	3.0	2.7	2.8	2.5	2.4	3.5	0.1	4.5	1.6	24	
HOURLY MAX	10.1	9.8	10.3	8.9	9.6	10.8	8.9	11.4	10.8	10.7	12.7	14.4	13.3	15.6	14.6	11.1	9.9	10.2	10.3	9.8	10.7	10.5	12.8	11.5					
HOURLY AVG	1.2	0.9	0.9	0.9	0.7	0.5	0.5	0.8	0.7	0.9	0.7	0.8	1.4	1.9	1.7	1.2	0.5	0.2	0.2	0.4	0.6	0.9	0.6	0.8					

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

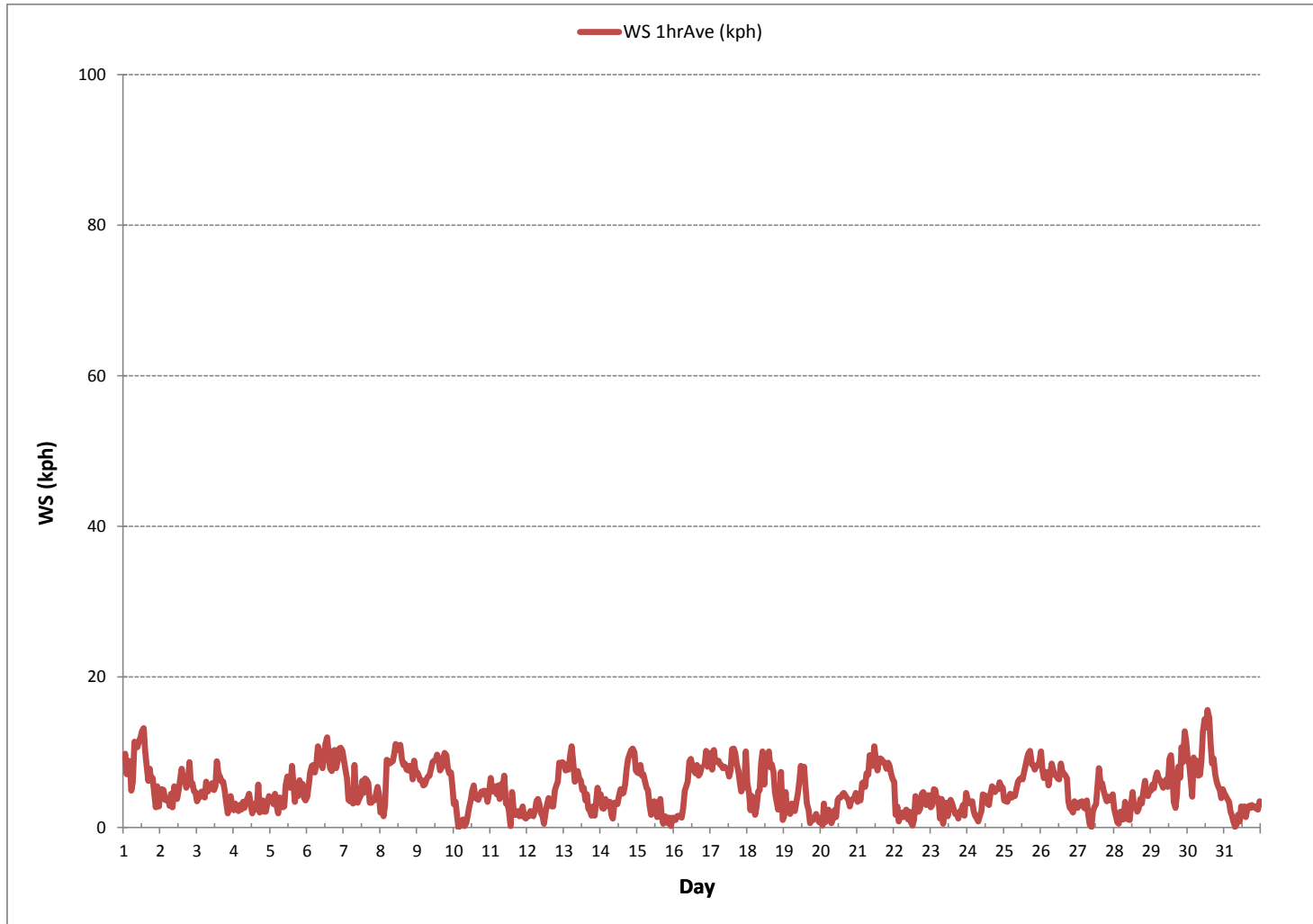
LAST CALIBRATION:	April 5, 2017
DECLINATION:	MAGNETIC DECLINATION 15 DEGREE EAST



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	742
MINIMUM 1-HR AVERAGE:	0.0 kph @ HOUR 3 ON DAY 10
MAXIMUM 1-HR AVERAGE:	15.6 kph @ HOUR 13 ON DAY 30
MAXIMUM 24-HR AVERAGE:	8.7 kph ON DAY 30
MONTHLY CALIBRATION TIME:	0 hrs
OPERATIONAL TIME:	743 hrs
AMD OPERATION UPTIME:	99.9 %
STANDARD DEVIATION:	2.9
MONTHLY AVERAGE:	0.5 kph

WIND SPEED Hourly Averages (WS kph)



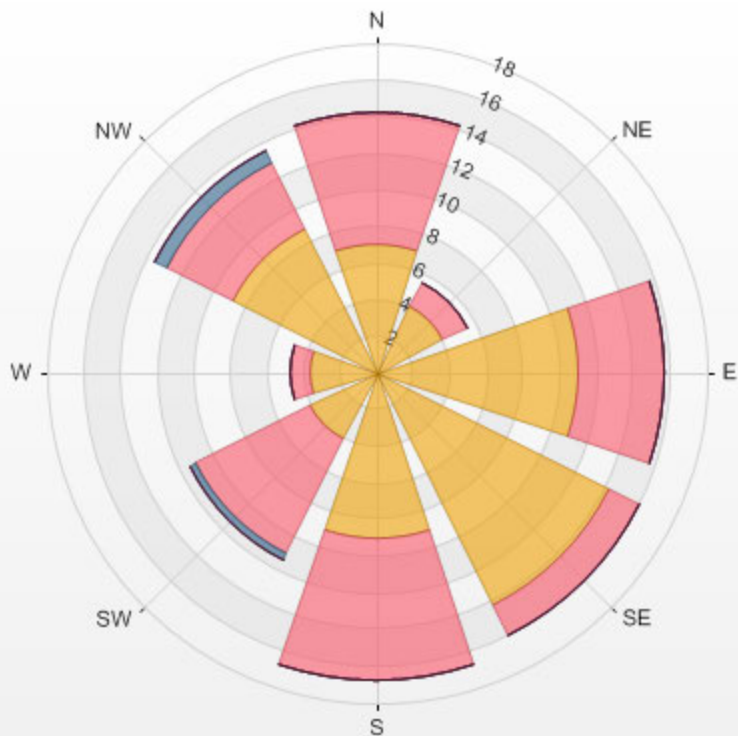
Wind: PRAMP_986
 Monitor: WSP [kph]
 Monthly: 18/01
 Type: WindRose
 Direction: Blowing From (Wind Frequency)
 Based On 1 Hr.

Calm: 1.88%

Direction	0.5-6.0	6.0-12.0	12.0-20.0	20.0-29.0	29.0-39.0	>39.0	Total
N	7.0	7.3	0.0	0.0	0.0	0.0	14.3
NE	4.0	1.5	0.0	0.0	0.0	0.0	5.5
E	11.0	4.7	0.0	0.0	0.0	0.0	15.8
SE	14.1	1.9	0.0	0.0	0.0	0.0	16.0
S	9.0	7.8	0.0	0.0	0.0	0.0	16.8
SW	4.0	7.0	0.4	0.0	0.0	0.0	11.4
W	3.6	1.1	0.0	0.0	0.0	0.0	4.7
NW	8.8	4.0	0.8	0.0	0.0	0.0	13.6
Summary	61.7	35.3	1.2	0.0	0.0	0.0	98.1

% Icon Classes (kph)	62	 0.5-6.0	35	 6.0-12.0	1	 12.0-20.0	0	 20.0-29.0	0	 29.0-39.0	0	 >39.0
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PRAMP_986 2018/01/01 00:00 - 2018/01/31 23:00 Calm: 1.88% Calm Wind Avg Speed: 0.28(kph)



WIND DIRECTION



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 986b Station - January 2018

WIND DIRECTION Hourly Averages (WD)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR AVG	24-HR	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	QUADRANT	RDGS.	
DAY																											
1	S	S	S	S	S	S	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSE	S	SE	SSW	24	
2	SE	SE	SE	SSE	SE	ESE	SE	SE	ESE	ESE	SE	SE	SSE	SSW	SSW	S	S	S	SSW	SSW	SSW	SSW	SSW	S	S	24	
3	SSW	S	SSE	SE	SE	SE	SE	SE	SE	S	SSW	SSW	SW	SW	SW	SSW	SSW	SSW	SSW	S	S	S	SW	SW	S	24	
4	S	S	S	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	SSE	SE	SE	ESE	ESE	E	E	ESE	ESE	SE	24	
5	ESE	SE	E	ESE	SE	E	ESE	ESE	SE	ESE	SE	SSE	S	S	S	SSW	S	S	S	SSW	S	S	SE	SE	SSE	24	
6	SE	S	SSW	SSW	SSW	SW	SW	SW	SW	WSW	SW	SW	SW	WSW	SW	SW	WSW	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	SW	24
7	WSW	SW	WSW	WSW	SW	WSW	WSW	WNW	WNW	SSW	S	S	SW	SSW	SSE	SSW	SSE	ESE	SE	ESE	ESE	ESE	SE	SSE	SSW	24	
8	SE	ESE	E	NNW	NNW	N	N	N	N	N	N	N	N	N	N	N	N	NE	NE	NE	NNE	NE	NE	NE	N	24	
9	NE	NE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	N	N	N	NNW	NNW	NNW	NNW	N	N	NNW	N	N	24	
10	NNW	NNW	NW	SW	SSW	S	W	W	WSW	W	W	W	W	W	WSW	SW	SSW	SSW	SSW	S	S	S	SE	SE	SW	24	
11	SE	SSE	SE	SSE	SSE	S	SE	SE	SE	SE	SE	SSE	ESE	ESE	WNW	WNW	NW	ENE	ESE	ESE	E	SE	E	ESE	SE	24	
12	ESE	SE	E	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ENE	NW	WNW	W	SW	SSW	SSW	S	SSW	SSW	SSW	S	S	S	24	
13	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SSE	S	SE	NNE	NNW	NE	N	NNE	NNW	SSW	24	
14	NNW	NNW	N	N	NNE	NNW	NW	NNW	NNE	E	ESE	E	E	E	E	E	E	ESE	ESE	ESE	ESE	ESE	ESE	SE	E	24	
15	ESE	ESE	ESE	ESE	ESE	E	E	E	ENE	ENE	E	ESE	ENE	E	ESE	ENE	WNW	W	ENE	ESE	E	ESE	SE	SSE	E	24	
16	ESE	SE	SE	ESE	S	SE	SSE	SSE	SSE	S	S	S	S	SSW	SSW	SSW	S	S	S	Y	S	S	S	S	S	S	23
17	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	S	SSE	SE	SE	ESE	E	E	ESE	S	24	
18	ESE	ESE	E	ESE	ESE	ESE	SE	SSE	S	SSW	SSE	SSW	SSW	SSW	SSW	SSW	WSW	WSW	NW	NW	W	W	NW	NW	SSW	24	
19	SSW	SSW	SW	SW	SW	SSW	SSW	WSW	W	W	WNW	WNW	W	NW	NNW	NW	NW	SW	ESE	ESE	SE	ESE	SE	ESE	W	24	
20	SSE	WSW	WNW	NW	WSW	NW	WNW	W	WNW	W	WNW	WNW	NNW	NNW	NW	NW	NNW	NNW	NNW	N	N	NNE	NNE	ENE	NNW	24	
21	ENE	NE	E	ENE	E	E	E	E	E	E	E	E	ESE	E	E	E	E	E	E	E	E	ESE	E	E	E	24	
22	SE	ENE	E	ESE	SE	SSW	S	ESE	S	S	SSE	SE	NW	NW	WNW	NW	ESE	SE	SSE	S	SSE	S	S	SSW	SSE	24	
23	SSW	SSW	S	SSW	SSE	SE	E	SE	E	SSE	SSW	WNW	WNW	WNW	WNW	NW	NNE	NE	ESE	ESE	E	ESE	ENE	NE	SSE	24	
24	NE	NNE	NNE	NNE	NNE	NNW	NW	NE	ENE	NE	ENE	ENE	E	E	E	NE	ENE	ENE	ENE	ENE	E	ENE	NE	NE	ENE	24	
25	ENE	NNE	N	NNW	N	NNW	N	N	NNW	NNW	NNW	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	24
26	N	N	N	NNW	NNW	N	NNW	NNW	N	NNW	N	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	24
27	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	SW	NNW	NW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	24
28	W	NNW	NNW	SSE	W	WNW	SSW	SE	ESE	SSE	E	ESE	SSE	SE	SE	E	NE	NE	ENE	E	ESE	ESE	E	E	ESE	24	
29	E	E	E	E	E	E	ESE	E	E	E	E	ESE	ESE	ESE	ESE	E	ENE	NNE	NNW	NNW	NW	NW	NW	NNW	ENE	24	
30	NNW	NNW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	24
31	NNW	NNW	NNW	NNW	NNW	NNW	NNE	ESE	WSW	SE	S	SE	SSE	NW	W	WNW	NNW	NNW	NNW	N	N	N	NNW	NNW	NNW	24	

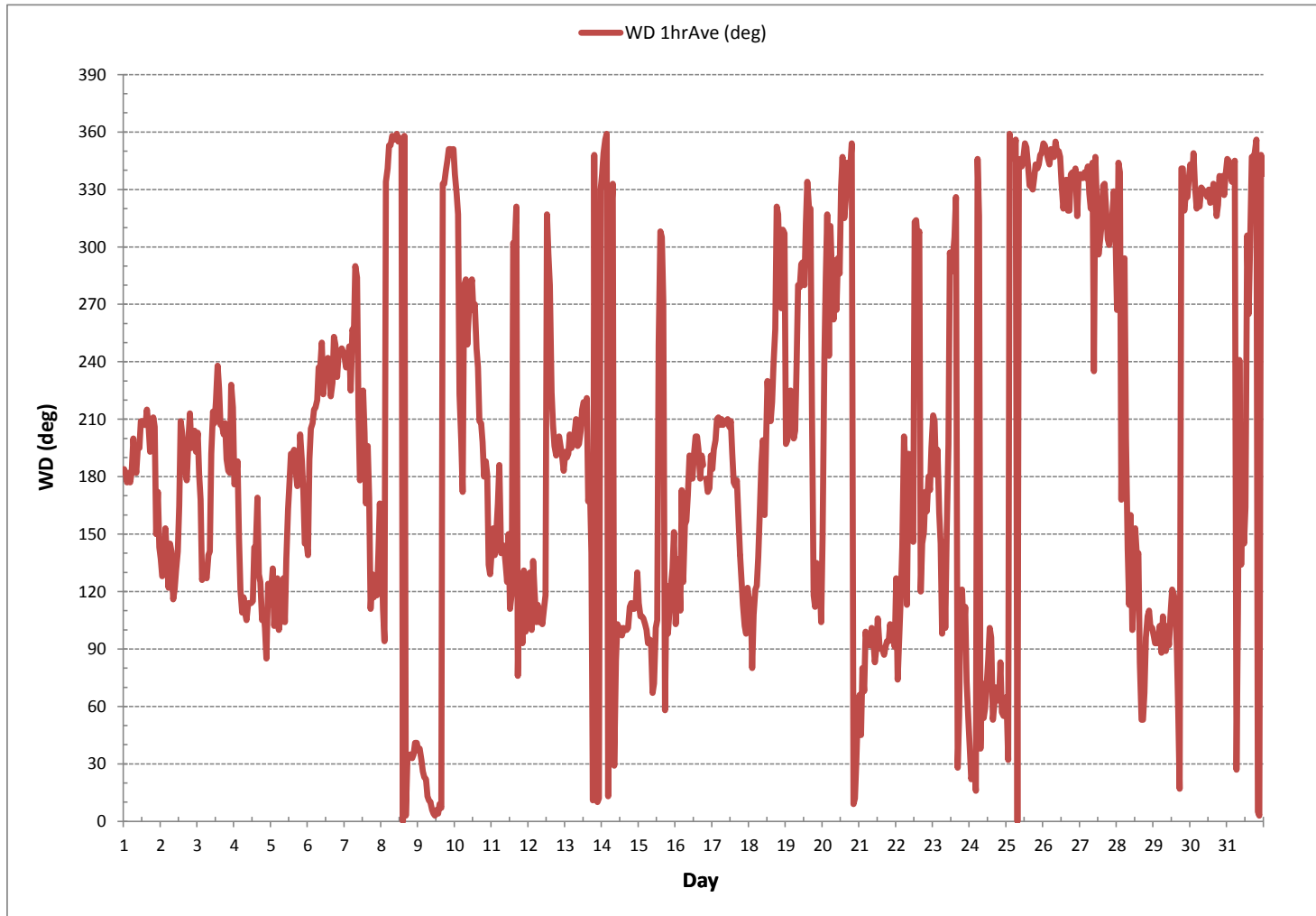
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

LAST CALIBRATION:	April 5, 2017
DECLINATION :	MAGNETIC DECLINATION 15 DEGREE EAST

MONTHLY CALIBRATION TIME:	0	hrs	OPERATIONAL TIME:	743	hrs
STANDARD DEVIATION:	99		AMD OPERATION UPTIME:	99.9	%
			MONTHLY AVERAGE:	176 (S)	

WIND DIRECTION Hourly Averages (WD)



RELATIVE HUMIDITY



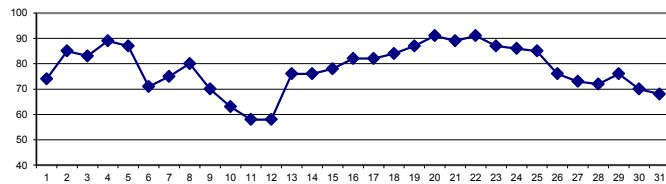
RELATIVE HUMIDITY Hourly Averages (RH %)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	64	65	66	66	67	68	69	69	70	71	71	71	70	72	75	75	78	81	82	82	82	84	86	85	64	86	74	24
2	84	84	84	85	86	87	87	89	88	86	88	88	85	79	79	81	84	86	88	84	82	87	87	88	79	89	85	24
3	87	88	90	90	90	88	89	90	90	91	86	77	71	65	68	74	79	81	81	83	86	89	84	85	65	91	83	24
4	90	91	93	90	88	87	86	86	86	87	88	89	90	88	86	86	89	92	91	91	89	88	88	90	86	93	89	24
5	91	92	89	91	92	91	91	91	89	89	91	93	87	80	76	80	84	85	84	82	81	84	85	88	76	93	87	24
6	89	86	83	83	81	81	81	77	75	72	74	71	67	66	62	65	64	59	59	62	61	61	61	62	59	89	71	24
7	64	66	67	71	75	74	72	68	67	73	74	71	66	67	74	78	78	83	85	85	86	88	89	89	64	89	75	24
8	89	88	88	89	91	89	85	84	82	78	77	77	75	76	77	78	77	74	76	74	74	73	74	73	91	80	24	
9	73	73	73	73	73	73	73	73	73	73	72	70	68	67	67	67	69	70	68	67	67	66	66	65	65	73	70	24
10	66	66	66	64	62	62	61	62	63	65	66	66	66	66	65	65	65	65	65	64	62	61	60	57	56	66	63	24
11	57	58	57	59	57	59	57	57	58	58	61	64	65	65	66	62	58	57	55	54	54	53	53	53	66	58	24	
12	52	52	52	52	51	52	51	53	53	52	54	58	62	63	63	64	64	63	64	65	65	65	64	66	51	66	58	24
13	66	67	68	69	70	71	73	75	77	78	78	77	77	77	78	79	80	82	82	83	82	81	79	80	66	83	76	24
14	79	79	78	78	77	77	77	78	79	79	78	77	72	70	71	71	75	75	75	74	75	78	79	80	70	80	76	24
15	81	82	82	82	82	81	80	80	78	78	76	73	72	72	73	74	77	79	81	81	81	79	78	77	72	82	78	24
16	76	77	76	75	75	77	78	81	82	83	82	83	84	86	84	83	83	85	86	Y	86	86	88	90	75	90	82	23
17	89	90	89	88	86	86	88	89	91	91	85	77	71	69	72	76	80	82	83	85	86	82	73	69	69	91	82	24
18	71	72	74	78	83	87	88	88	86	81	83	82	76	79	81	82	78	82	89	94	95	92	92	97	71	97	84	24
19	97	96	93	92	96	96	95	96	95	93	85	77	75	74	72	75	76	80	83	84	85	87	89	90	72	97	87	24
20	90	90	90	89	90	90	93	94	94	93	93	94	92	88	86	85	86	89	89	91	92	92	93	92	85	94	91	24
21	91	91	91	90	90	91	91	90	90	89	89	90	88	87	86	87	87	88	88	88	89	88	88	88	86	91	89	24
22	88	90	90	88	85	85	90	90	90	90	89	89	91	91	93	94	94	94	94	94	93	93	93	93	85	94	91	24
23	93	94	93	93	92	91	86	81	80	81	88	89	88	87	87	88	88	84	83	83	86	88	87	88	80	94	87	24
24	89	88	86	84	86	81	78	78	79	84	88	87	86	85	84	87	89	90	90	90	91	91	91	91	78	91	86	24
25	91	91	90	89	89	89	89	88	87	86	85	83	82	82	83	84	83	83	81	80	80	80	80	80	80	91	85	24
26	79	78	77	76	76	76	75	75	74	74	73	73	73	73	74	75	76	77	77	77	77	77	77	77	73	79	76	24
27	77	77	77	76	76	76	75	70	66	65	67	72	73	72	73	73	75	75	75	75	75	75	74	75	65	77	73	24
28	74	74	73	73	73	73	71	70	66	65	67	69	68	68	69	72	73	75	75	75	74	74	74	74	65	75	72	24
29	74	74	74	74	74	74	75	76	77	76	75	74	72	74	73	74	78	83	81	81	80	81	81	80	72	83	76	24
30	80	79	77	77	77	77	76	74	72	71	68	65	63	63	63	61	63	65	67	67	67	68	69	69	61	80	70	24
31	69	70	70	70	70	70	69	67	66	65	64	60	64	65	64	66	69	70	71	72	72	72	72	72	60	72	68	24
HOURLY MAX	97	96	93	93	96	96	95	96	95	93	93	94	92	91	93	94	94	94	94	94	94	95	93	93	97			
HOURLY AVG	79	80	79	79	79	79	79	79	78	78	78	77	75	75	75	76	77	79	79	79	79	79	79	79	79			

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

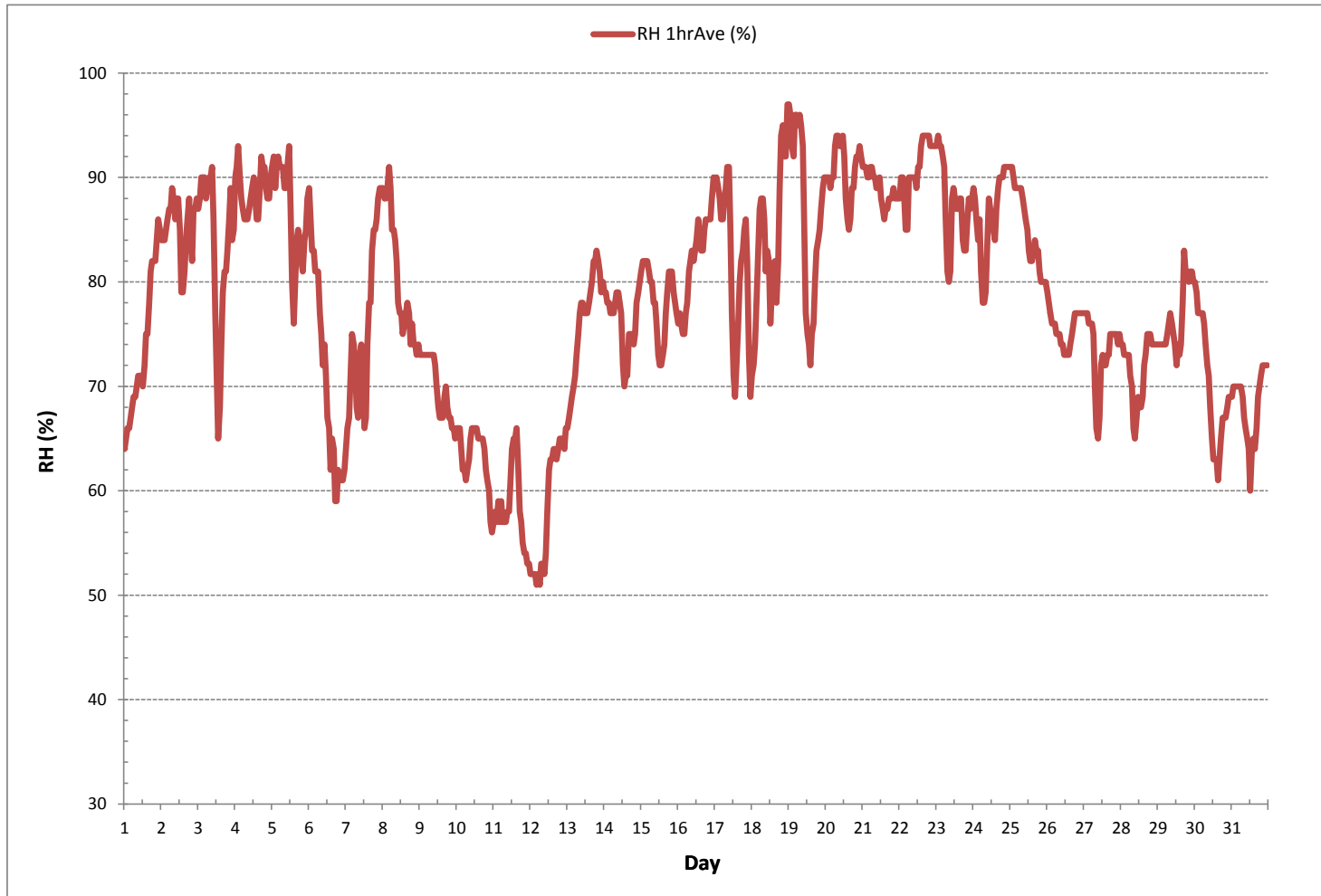
24 HR AVERAGES January 2018



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	51	%	@ HOUR	4	ON DAY	12
MAXIMUM 1-HR AVERAGE:	97	%	@ HOUR	23	ON DAY	18
MAXIMUM 24-HR AVERAGE:	91	%			ON DAY	20
OPERATIONAL TIME:						743 hrs
AMD OPERATION UPTIME:						99.9 %
STANDARD DEVIATION:	10					MONTHLY AVERAGE: 78 %

RELATIVE HUMIDITY Hourly Averages (RH %)



BAROMETRIC PRESSURE



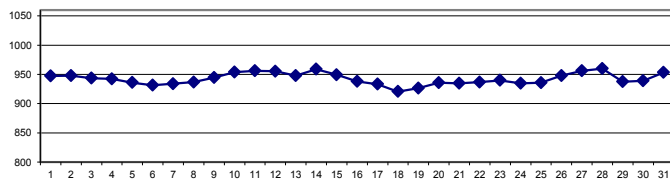
BAROMETRIC PRESSURE Hourly Averages (BP mbar)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	954	953	953	952	951	950	950	949	948	947	946	945	944	943	943	944	945	945	945	945	945	945	945	946	943	954	947	24	
2	946	947	948	949	949	949	949	949	949	949	949	949	949	948	948	948	948	947	947	946	945	945	945	945	945	945	949	948	24
3	945	944	945	945	945	945	945	944	944	944	944	944	944	943	943	943	943	943	942	942	942	942	942	942	942	942	945	944	24
4	942	942	943	943	943	943	943	943	943	943	943	943	943	942	942	942	942	942	941	941	941	941	941	940	940	940	943	942	24
5	940	939	939	939	939	938	938	937	937	937	937	937	936	936	935	935	934	934	934	933	933	932	932	931	931	931	940	936	24
6	931	931	931	930	930	930	930	930	930	931	931	932	932	932	932	932	932	932	932	932	932	932	932	932	932	930	932	931	24
7	932	933	934	934	934	935	935	935	935	936	936	935	935	935	934	934	933	933	933	933	933	933	932	932	932	932	936	934	24
8	932	932	932	932	933	933	934	934	934	935	935	936	937	937	938	938	939	939	940	940	941	941	941	941	941	932	941	937	24
9	941	941	941	941	941	941	941	942	942	942	943	943	944	944	945	945	946	947	948	948	949	949	949	950	941	950	944	24	
10	950	950	950	951	952	952	952	952	953	953	953	953	953	953	952	952	952	952	951	950	950	949	949	948	948	950	959	954	24
11	958	958	958	958	958	957	957	957	957	957	956	955	955	953	952	952	952	953	955	956	957	957	958	958	959	950	959	956	24
12	959	960	960	960	961	961	961	960	960	959	958	956	954	953	952	952	952	952	951	950	950	949	949	948	948	961	955	24	
13	948	947	947	946	945	945	944	944	944	944	945	945	945	946	947	948	949	950	951	952	952	953	954	955	944	955	948	24	
14	956	957	957	958	958	959	959	959	960	961	960	960	960	960	960	960	960	960	959	958	958	957	957	956	961	955	959	24	
15	957	956	955	955	954	953	953	952	951	951	950	949	948	948	947	947	946	946	945	945	944	943	943	943	943	957	949	24	
16	942	941	941	941	941	940	940	939	938	938	938	938	937	937	936	936	936	936	936	Y	936	936	936	936	936	942	938	23	
17	936	936	936	936	936	936	936	936	935	936	936	936	935	934	934	933	932	931	929	928	927	925	924	924	924	936	933	24	
18	924	923	922	922	921	921	920	920	920	920	920	919	919	919	919	920	920	921	921	921	921	921	922	922	919	924	921	24	
19	922	922	923	923	923	924	924	924	924	925	926	926	927	927	927	928	929	929	930	930	931	931	931	932	922	932	927	24	
20	932	932	933	933	933	933	934	934	934	935	935	936	936	936	936	937	937	938	938	938	939	939	939	939	932	939	936	24	
21	939	940	940	939	939	938	938	938	937	937	936	935	934	933	932	932	932	931	931	931	931	930	931	931	930	940	935	24	
22	931	932	932	933	933	934	935	935	936	936	937	937	937	938	938	939	939	940	940	940	940	940	940	940	931	940	937	24	
23	941	941	941	942	941	941	941	941	942	942	941	941	940	940	940	940	939	938	938	937	937	936	936	936	936	942	940	24	
24	936	935	935	936	935	935	935	936	935	935	935	935	935	935	934	934	934	934	934	934	934	934	933	933	933	936	935	24	
25	934	934	934	933	933	934	933	933	934	933	933	935	935	935	935	936	936	937	938	938	939	939	940	941	933	941	936	24	
26	941	942	942	943	944	944	945	945	946	947	947	948	948	949	949	950	951	951	951	952	952	953	953	941	953	948	24		
27	954	954	954	954	954	954	954	955	956	956	956	955	955	955	955	955	956	957	958	958	959	960	960	961	954	961	956	24	
28	962	962	962	963	963	963	963	963	963	963	963	962	961	960	959	958	958	957	957	956	955	954	953	952	952	963	960	24	
29	952	951	950	949	948	946	945	943	942	941	939	937	935	933	932	931	930	929	928	928	928	929	929	928	928	952	938	24	
30	930	931	932	933	934	934	935	935	936	936	937	938	938	939	940	941	942	943	944	945	946	947	948	948	930	948	939	24	
31	949	949	950	951	952	952	953	953	954	954	954	954	954	954	954	955	955	955	955	955	955	954	954	955	949	955	953	24	
HOURLY MAX	962	962	962	963	963	963	963	963	963	963	963	962	961	960	960	960	960	960	959	959	959	960	960	961					
HOURLY AVG	942	942	943	943	943	943	943	942	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942	942					

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

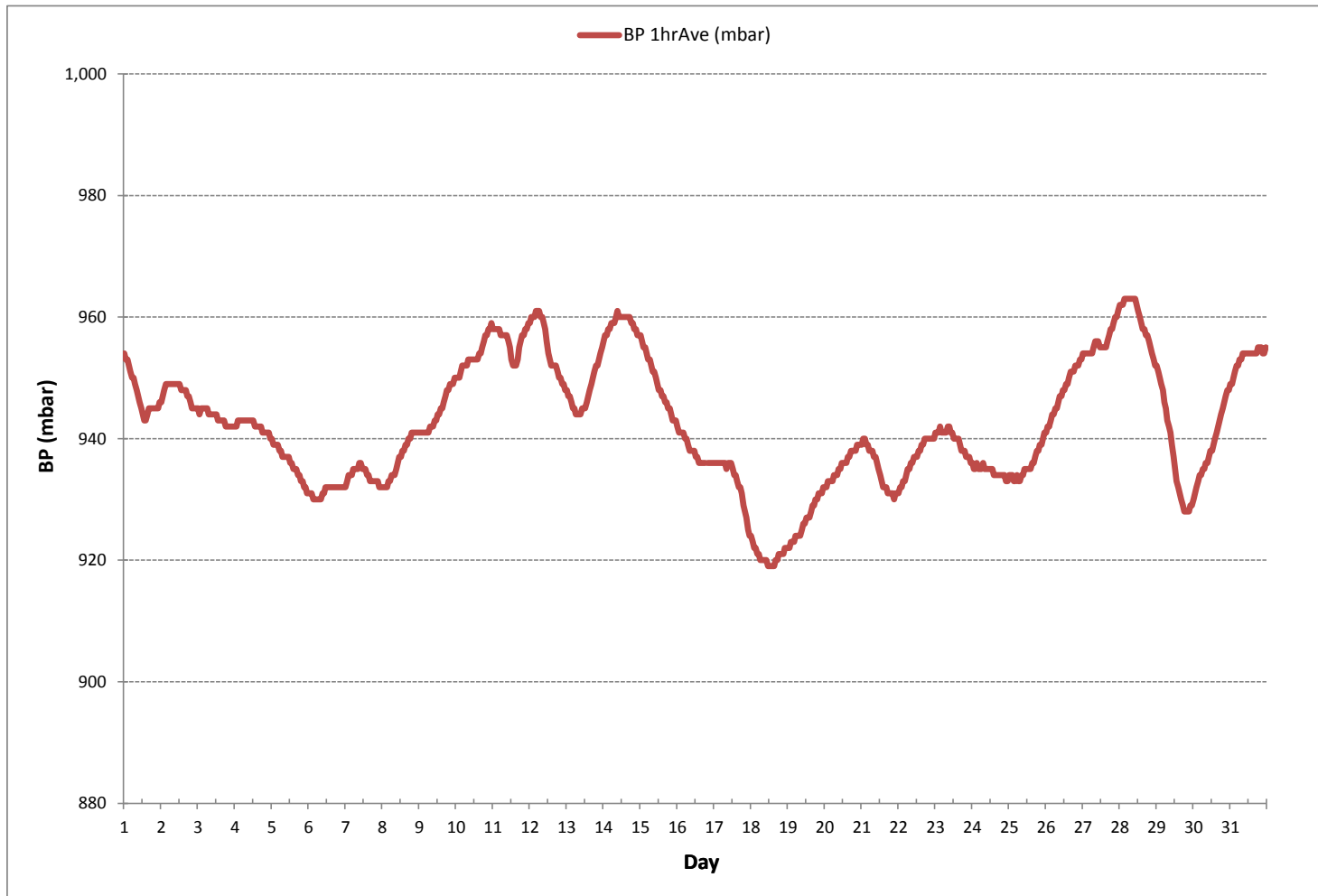
24 HR AVERAGES January 2018



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	919 mbar	@ HOUR	11	ON DAY	18
MAXIMUM 1-HR AVERAGE:	963 mbar	@ HOUR	3	ON DAY	28
MAXIMUM 24-HR AVERAGE:	960 mbar			ON DAY	28
OPERATIONAL TIME:					743 hrs
AMD OPERATION UPTIME:					99.9 %
STANDARD DEVIATION:	10	MONTHLY AVERAGE:			942 mbar

BAROMETRIC PRESSURE Hourly Averages (BP mbar)



AMBIENT TEMPERATURE



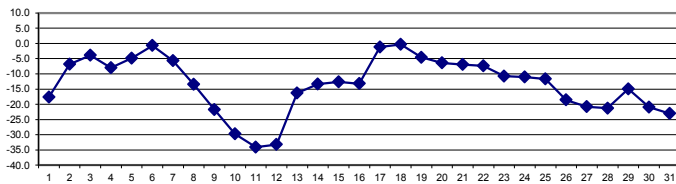
AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	-24.8	-24.7	-25.6	-24.8	-24.7	-24.8	-25.0	-24.2	-23.2	-21.2	-19.0	-16.9	-16.0	-14.8	-13.5	-12.2	-11.8	-11.5	-10.9	-10.1	-10.1	-11.8	-10.8	-11.9	-25.6	-10.1	-17.7	24	
2	-13.4	-13.0	-13.7	-12.1	-11.1	-10.4	-10.2	-8.9	-8.7	-11.1	-8.5	-6.5	-5.4	-1.8	-1.8	-2.1	-2.8	-3.5	-4.0	-1.9	-1.8	-3.5	-3.1	-4.4	-13.7	-1.8	-6.8	24	
3	-3.4	-5.7	-7.9	-9.4	-8.9	-10.0	-9.4	-8.2	-8.5	-6.5	-3.3	-1.4	0.5	2.6	2.2	0.5	-0.7	-0.9	-0.9	-2.3	-4.5	-4.2	-1.3	-2.7	-10.0	2.6	-3.9	24	
4	-4.9	-6.9	-6.4	-8.8	-10.7	-11.3	-11.7	-11.7	-12.1	-11.1	-9.5	-7.2	-4.1	-3.0	-1.7	-2.0	-5.2	-6.6	-8.4	-8.7	-9.6	-10.3	-10.2	-9.3	-12.1	-1.7	-8.0	24	
5	-8.0	-7.3	-9.2	-8.3	-7.6	-8.0	-7.5	-8.1	-9.1	-8.8	-7.2	-3.5	-1.6	-0.7	0.3	-1.2	-1.9	-1.7	-1.6	-1.3	-2.0	-3.2	-4.5	-5.1	-9.2	0.3	-4.9	24	
6	-3.4	-2.0	-2.0	-1.5	-0.4	-0.2	-0.4	-0.2	-0.7	-0.1	-0.3	0.6	1.3	1.5	2.0	0.4	-0.7	-0.7	-1.1	-1.8	-1.8	-1.8	-1.7	-2.0	-3.4	2.0	-0.7	24	
7	-2.7	-3.1	-3.6	-4.5	-5.3	-5.1	-4.2	-2.6	-2.6	-4.1	-4.1	-3.3	-1.3	-1.8	-4.6	-4.9	-5.2	-9.3	-11.7	-12.5	-12.3	-10.7	-8.7	-7.7	-12.5	-1.3	-5.7	24	
8	-8.7	-9.7	-8.7	-8.3	-8.1	-9.8	-10.8	-11.1	-11.4	-12.1	-13.1	-13.7	-14.2	-14.7	-15.2	-15.5	-15.8	-15.8	-16.3	-17.1	-17.6	-18.0	-18.6	-18.8	-18.8	-8.1	-13.5	24	
9	-19.0	-19.2	-19.4	-19.7	-19.9	-20.1	-20.2	-20.4	-20.3	-20.4	-20.5	-21.1	-21.5	-21.4	-21.6	-21.9	-22.7	-23.4	-23.8	-24.5	-24.9	-25.1	-25.7	-26.4	-26.4	-19.0	-21.8	24	
10	-27.1	-27.4	-28.0	-29.8	-31.0	-31.4	-32.2	-31.1	-30.2	-28.4	-27.2	-26.7	-26.1	-25.8	-25.4	-25.7	-27.3	-29.3	-30.7	-32.0	-33.4	-34.6	-36.4	-37.0	-37.0	-25.4	-29.8	24	
11	-36.1	-35.6	-36.1	-34.8	-35.6	-34.7	-36.1	-36.2	-35.8	-35.5	-34.1	-31.2	-27.8	-26.0	-26.1	-26.2	-29.9	-34.0	-36.1	-36.9	-37.9	-38.1	-38.7	-39.5	-39.5	-26.0	-34.1	24	
12	-39.7	-40.2	-40.2	-40.0	-40.7	-40.2	-40.7	-39.2	-39.3	-39.5	-37.0	-32.9	-30.0	-27.7	-26.5	-26.0	-26.6	-28.7	-28.8	-28.5	-27.7	-26.5	-26.2	-25.5	-40.7	-25.5	-33.3	24	
13	-24.8	-24.6	-23.2	-22.7	-22.3	-20.6	-18.7	-18.2	-17.5	-16.5	-14.4	-11.9	-11.3	-11.2	-11.3	-11.6	-13.2	-13.5	-13.8	-13.7	-13.8	-13.8	-14.0	-15.1	-24.8	-11.2	-16.3	24	
14	-15.7	-16.0	-15.4	-15.2	-15.2	-14.9	-15.3	-16.2	-16.6	-15.2	-13.3	-12.5	-10.5	-10.0	-10.5	-10.6	-11.7	-12.3	-12.3	-12.3	-12.3	-12.2	-12.3	-12.4	-12.3	-16.6	-10.0	-13.4	24
15	-13.4	-13.3	-13.0	-12.7	-12.9	-13.2	-14.0	-14.0	-15.3	-17.2	-15.4	-11.6	-6.9	-5.3	-6.4	-5.9	-8.0	-11.0	-13.2	-14.5	-15.5	-16.2	-16.8	-17.4	-17.4	-5.3	-12.6	24	
16	-18.0	-18.3	-18.7	-19.0	-19.0	-18.8	-18.2	-16.1	-14.5	-13.4	-12.3	-11.3	-9.8	-9.7	-9.4	-10.6	-11.5	-11.9	-11.2	Y	-10.2	-9.5	-8.1	-4.7	-19.0	-4.7	-13.2	23	
17	-3.8	-2.8	-1.7	-0.5	0.1	0.0	-0.7	-1.7	-2.0	-1.7	-0.5	0.9	1.9	2.1	1.1	-0.3	-2.4	-3.0	-3.9	-4.8	-4.0	-2.1	-0.1	0.8	-4.8	2.1	-1.2	24	
18	0.2	0.3	0.0	-0.8	-2.4	-5.1	-6.2	-6.7	-4.5	-2.4	-1.6	1.0	2.6	2.8	2.9	2.7	3.1	2.5	1.6	1.0	0.7	0.9	0.5	0.0	-6.7	3.1	-0.3	24	
19	-0.2	-0.4	-0.2	-0.1	-0.4	-0.9	-3.4	-4.9	-5.3	-4.9	-3.2	-2.7	-2.1	-1.8	-1.6	-3.2	-3.3	-6.4	-11.0	-13.5	-13.7	-10.8	-8.5	-7.6	-13.7	-0.1	-4.6	24	
20	-7.2	-6.6	-6.2	-6.3	-6.2	-6.3	-6.6	-6.6	-6.5	-6.4	-6.1	-5.7	-5.5	-5.4	-5.5	-5.7	-6.1	-6.4	-6.6	-6.8	-7.1	-7.8	-8.4	-8.4	-8.4	-5.4	-6.4	24	
21	-8.1	-8.2	-8.2	-8.5	-8.7	-8.3	-7.9	-7.9	-8.0	-8.1	-7.6	-7.1	-6.6	-5.8	-5.4	-5.5	-5.8	-6.1	-6.1	-5.9	-5.9	-5.8	-5.8	-6.0	-8.7	-5.4	-7.0	24	
22	-6.2	-7.3	-7.5	-10.2	-13.4	-13.0	-9.5	-8.7	-8.2	-7.8	-6.9	-6.2	-5.9	-5.9	-6.3	-6.2	-5.9	-6.0	-6.0	-6.0	-6.1	-6.2	-6.2	-6.2	-13.4	-5.9	-7.4	24	
23	-6.3	-6.5	-6.9	-7.6	-8.4	-9.4	-12.3	-16.1	-17.0	-16.2	-10.3	-8.2	-8.0	-8.2	-8.3	-8.5	-9.9	-13.6	-15.1	-15.0	-13.2	-11.0	-11.7	-10.5	-17.0	-6.3	-10.8	24	
24	-10.0	-10.9	-13.1	-14.3	-13.2	-16.1	-18.2	-18.1	-17.5	-13.4	-9.9	-9.6	-9.0	-8.3	-8.1	-8.4	-8.7	-8.6	-8.4	-8.2	-8.1	-8.2	-8.3	-8.3	-18.2	-8.1	-11.0	24	
25	-8.3	-8.3	-8.9	-9.3	-9.5	-9.5	-9.4	-9.2	-9.8	-10.5	-10.8	-11.1	-11.0	-10.9	-11.2	-12.2	-13.0	-13.8	-14.2	-14.8	-15.5	-16.0	-16.6	-17.1	-17.1	-8.3	-11.7	24	
26	-17.7	-18.0	-18.3	-18.7	-18.9	-19.1	-19.3	-19.4	-19.4	-19.4	-19.3	-18.8	-18.5	-18.5	-18.4	-18.3	-18.4	-18.4	-18.4	-18.3	-18.2	-18.1	-18.1	-18.1	-18.1	-19.4	-17.7	-18.6	24
27	-18.3	-18.3	-18.3	-18.5	-18.7	-18.9	-20.7	-24.1	-27.6	-28.7	-25.7	-21.2	-19.2	-18.4	-18.6	-18.7	-19.5	-20.4	-20.5	-20.7	-21.0	-21.1	-21.3	-21.3	-28.7	-18.3	-20.8	24	
28	-21.4	-21.5	-21.7	-22.0	-22.6	-22.8	-23.1	-24.2	-27.2	-28.2	-25.4	-21.4	-19.4	-18.5	-18.6	-18.7	-19.6	-20.1	-20.3	-19.4	-18.9	-18.8	-18.8	-18.6	-28.2	-18.5	-21.3	24	
29	-18.6	-18.7	-18.8	-18.6	-18.3	-18.1	-17.5	-17.3	-16.8	-16.0	-15.1	-13.3	-11.3	-10.5	-9.4	-9.6	-10.6	-11.4	-13.5	-14.9	-15.3	-15.0	-14.9	-15.6	-18.8	-9.4	-15.0	24	
30	-16.4	-17.4	-18.5	-18.8	-18.7	-18.9	-19.0	-19.2	-20.3	-20.7	-20.5	-20.8	-20.7	-20.6	-20.9	-21.2	-22.0	-22.8	-23.6	-23.7	-24.3	-25.1	-24.9	-24.3	-25.1	-16.4	-21.0	24	
31	-23.9	-24.0	-24.0	-23.9	-24.3	-24.6	-24.4	-25.4	-26.5	-26.6	-25.3	-22.0	-20.8	-21.7	-20.9	-21.0	-21.4	-21.7	-21.6	-21.6	-21.5	-21.7	-21.7	-21.8	-26.6	-20.8	-23.0	24	
HOURLY MAX	0.2	0.3	0.0	-0.1	0.1	0.0	-0.4	-0.2	-0.7	-0.1	-0.3	1.0	2.6	2.8	2.9	2.7	3.1	2.5	1.6	1.0	0.7	0.9	0.5	0.8					
HOURLY AVG	-13.8	-14.1	-14.3	-14.5	-14.7	-15.0	-15.3	-15.4	-15.6	-15.2	-13.8	-12.2	-10.9	-10.3	-10.3	-10.6	-11.6	-12.6	-13.3	-13.7	-13.8	-13.7	-13.6	-13.6					

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

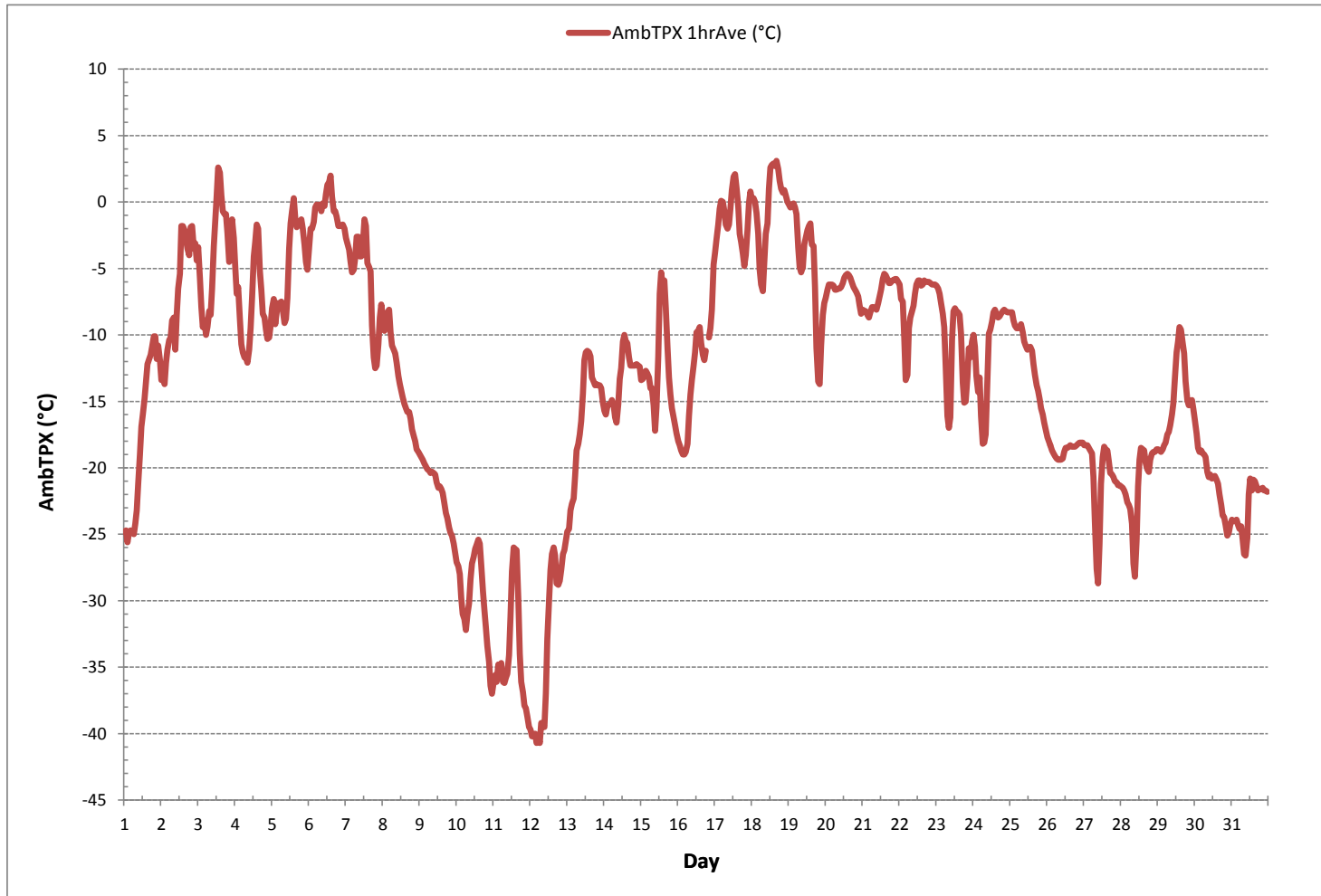
24 HR AVERAGES January 2018



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-40.7 °C	@ HOUR	4	ON DAY	12
MAXIMUM 1-HR AVERAGE:	3.1 °C	@ HOUR	16	ON DAY	18
MAXIMUM 24-HR AVERAGE:	-0.3 °C			ON DAY	18
OPERATIONAL TIME:					743 hrs
AMD OPERATION UPTIME:					99.9 %
STANDARD DEVIATION:	9.5	MONTHLY AVERAGE:			-13.4 °C

AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)



STATION TEMPERATURE



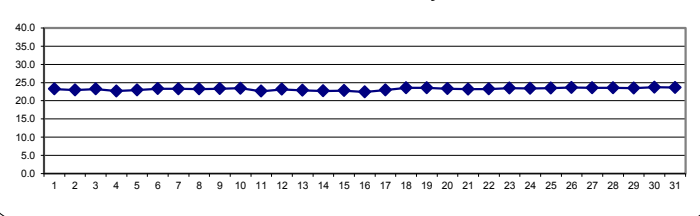
STATION TEMPERATURE Hourly Averages (StnTPX °C)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	23.4	23.3	23.4	23.4	23.4	23.3	23.3	23.4	23.3	23.3	23.2	23.2	23.2	23.2	23.1	23.1	23.0	23.2	23.2	23.1	23.1	23.1	23.1	22.9	22.9	22.9	23.4	23.2	24
2	23.1	23.0	22.9	23.0	23.1	23.1	22.9	22.8	23.1	22.8	22.9	23.1	23.1	23.0	23.0	23.1	23.1	23.1	23.0	22.8	22.7	22.7	22.6	22.9	22.6	23.1	23.0	24	
3	23.0	22.6	23.1	22.9	22.9	22.9	23.1	23.0	22.9	22.9	23.1	23.3	23.2	23.4	23.8	23.3	23.7	23.8	23.8	23.7	23.6	23.3	23.2	23.0	22.6	23.8	23.2	24	
4	22.8	22.5	22.4	22.4	22.5	22.5	22.7	22.6	22.5	22.7	22.5	22.7	22.7	22.9	23.3	23.4	23.2	22.9	22.5	22.4	22.3	22.5	22.7	22.3	23.4	22.7	24		
5	22.6	22.7	22.5	22.5	22.5	22.6	22.4	22.6	22.6	22.6	22.4	22.7	22.8	23.2	23.5	23.4	23.4	23.5	23.5	23.5	23.4	23.3	23.2	22.4	23.5	22.9	24		
6	23.0	23.0	23.0	23.0	23.0	23.1	23.2	23.2	23.2	23.1	23.2	23.2	23.4	23.6	23.8	24.1	24.1	23.9	23.7	23.6	23.4	23.1	22.9	23.1	22.9	24.1	23.3	24	
7	23.1	23.3	23.1	23.4	23.3	23.2	23.3	23.1	23.0	23.4	23.1	22.9	23.2	23.4	23.6	23.5	23.3	23.2	23.3	23.2	23.5	23.2	23.6	23.4	22.9	23.6	23.3	24	
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10	23.5	23.4	23.4	23.5	23.4	23.4	23.4	23.6	23.5	23.5	23.4	23.5	23.5	23.4	23.5	23.5	23.4	23.3	23.4	23.4	23.4	23.4	23.3	23.4	23.4	23.3	23.6	23.4	24
11	23.3	23.1	22.8	22.9	22.9	23.0	23.0	23.0	23.0	22.9	22.9	23.0	21.6	21.5	23.0	23.6	22.4	21.5	20.2	22.2	22.7	22.8	22.9	23.0	20.2	23.6	22.6	24	
12	23.0	23.1	23.1	23.1	23.2	23.1	23.1	23.2	23.2	23.2	23.2	23.3	23.4	23.3	23.4	23.2	23.1	23.1	23.0	23.1	23.2	23.1	23.1	23.1	23.0	23.4	23.2	24	
13	23.2	23.0	23.3	23.1	23.2	23.0	23.1	23.0	23.0	23.0	22.9	22.9	22.8	22.9	22.6	22.8	22.7	22.6	22.7	22.7	22.5	22.8	22.6	22.6	22.5	23.3	22.9	24	
14	22.8	22.7	22.7	22.5	22.8	22.8	22.6	22.6	22.7	22.7	22.6	22.7	22.6	23.0	22.7	22.7	22.8	22.6	22.8	22.7	22.7	22.6	22.6	22.9	22.5	23.0	22.7	24	
15	22.7	22.6	22.8	22.8	22.8	22.8	22.6	22.9	22.8	22.8	22.7	23.0	22.9	22.8	22.7	22.7	22.7	22.7	22.6	22.8	22.8	22.8	22.7	22.9	22.6	23.0	22.8	24	
16	22.8	22.8	22.9	22.9	22.8	22.8	22.8	23.0	23.0	23.0	23.0	22.9	22.8	20.7	21.4	21.4	22.0	22.0	22.2	Y	21.3	22.3	22.6	22.6	20.7	23.0	22.4	23	
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18	23.9	23.1	23.8	24.1	23.0	23.5	23.7	23.6	23.5	23.5	23.5	23.6	24.1	23.3	23.4	24.0	22.8	23.8	23.9	22.8	23.8	22.9	23.9	23.7	22.8	24.1	23.6	24	
19	23.1	24.0	23.7	23.1	23.9	23.4	23.2	23.6	23.6	23.4	23.4	23.5	23.8	24.0	24.2	24.4	23.9	22.9	23.2	23.1	23.4	23.5	23.4	23.4	22.9	24.4	23.5	24	
20	23.6	23.2	23.4	23.5	23.3	23.2	23.1	23.0	23.0	23.7	23.3	23.2	23.2	23.3	23.4	23.5	23.5	23.4	23.3	23.3	23.2	23.1	23.4	23.0	23.7	23.3	24		
21	23.2	23.4	23.1	23.4	23.3	23.3	23.2	23.5	23.3	23.1	22.9	23.3	23.3	23.1	23.1	23.2	22.8	23.4	22.8	23.5	22.9	23.5	23.1	23.1	22.8	23.5	23.2	24	
22	23.5	23.1	23.0	23.5	23.4	23.4	23.5	23.2	23.6	23.2	23.4	23.1	23.0	23.0	23.0	23.1	23.1	23.1	23.0	23.0	23.0	23.2	23.6	23.3	23.0	23.6	23.2	24	
23	23.1	23.0	22.9	23.6	23.0	23.6	23.3	23.5	23.3	23.6	23.5	23.5	23.2	24.0	24.0	24.1	24.0	23.6	23.3	23.4	23.5	23.5	23.5	22.9	24.1	23.5	24		
24	23.5	23.5	23.3	23.6	23.5	23.5	23.6	23.6	23.6	23.5	23.6	23.5	23.4	23.2	23.6	23.2	23.3	23.1	23.6	23.1	23.3	23.3	23.0	23.6	23.0	23.6	23.4	24	
25	23.0	23.5	23.4	23.3	23.4	23.3	23.5	23.2	23.5	23.4	23.3	23.6	23.6	23.5	23.4	23.6	23.6	23.6	23.6	23.7	23.7	23.7	23.5	23.7	23.0	23.7	23.5	24	
26	23.7	23.7	23.6	23.6	23.8	23.7	23.7	23.6	23.7	23.7	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.7	23.6	23.6	23.6	23.6	23.5	23.5	23.8	23.6	24
27	23.6	23.6	23.6	23.6	23.5	23.5	23.5	23.6	23.4	23.5	23.6	23.6	23.8	23.7	23.6	23.5	23.8	23.5	23.5	23.6	23.6	23.5	23.5	23.6	23.4	23.8	23.6	24	
28	23.5	23.5	23.6	23.5	23.5	23.6	23.5	23.6	23.6	23.5	23.5	23.5	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.5	23.6	23.4	23.7	23.5	24	
29	23.5	23.5	23.5	23.5	23.6	23.4	23.4	23.5	23.5	23.5	23.6	23.6	23.5	23.5	23.3	23.1	23.6	23.3	23.4	23.5	23.4	23.7	23.5	23.5	23.1	23.7	23.5	24	
30	23.8	23.7	23.7	23.6	23.6	23.6	23.5	23.6	23.8	23.6	23.6	23.6	23.9	23.9	23.9	23.8	23.8	23.7	23.7	23.9	23.7	23.7	23.7	23.8	23.5	23.9	23.7	24	
31	23.7	23.8	23.7	23.7	23.7	23.6	23.7	23.7	23.6	23.6	23.7	23.6	23.8	23.6	23.7	23.6	23.6	23.5	23.6	23.6	23.6	23.5	23.7	23.6	23.5	23.8	23.6	24	
HOURLY MAX	23.9	24.0	23.8	24.1	23.9	23.7	23.7	23.7	23.8	23.7	23.7	23.7	24.1	24.0	24.2	24.4	24.1	23.9	23.9	23.9	23.8	23.7	23.9	23.9	23.9	23.9	23.9	24	
HOURLY AVG	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.3	23.2	23.3	23.2	23.2	23.2	23.1	23.3	23.4	23.3	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.3	23.5	23.8	23.6	24

STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

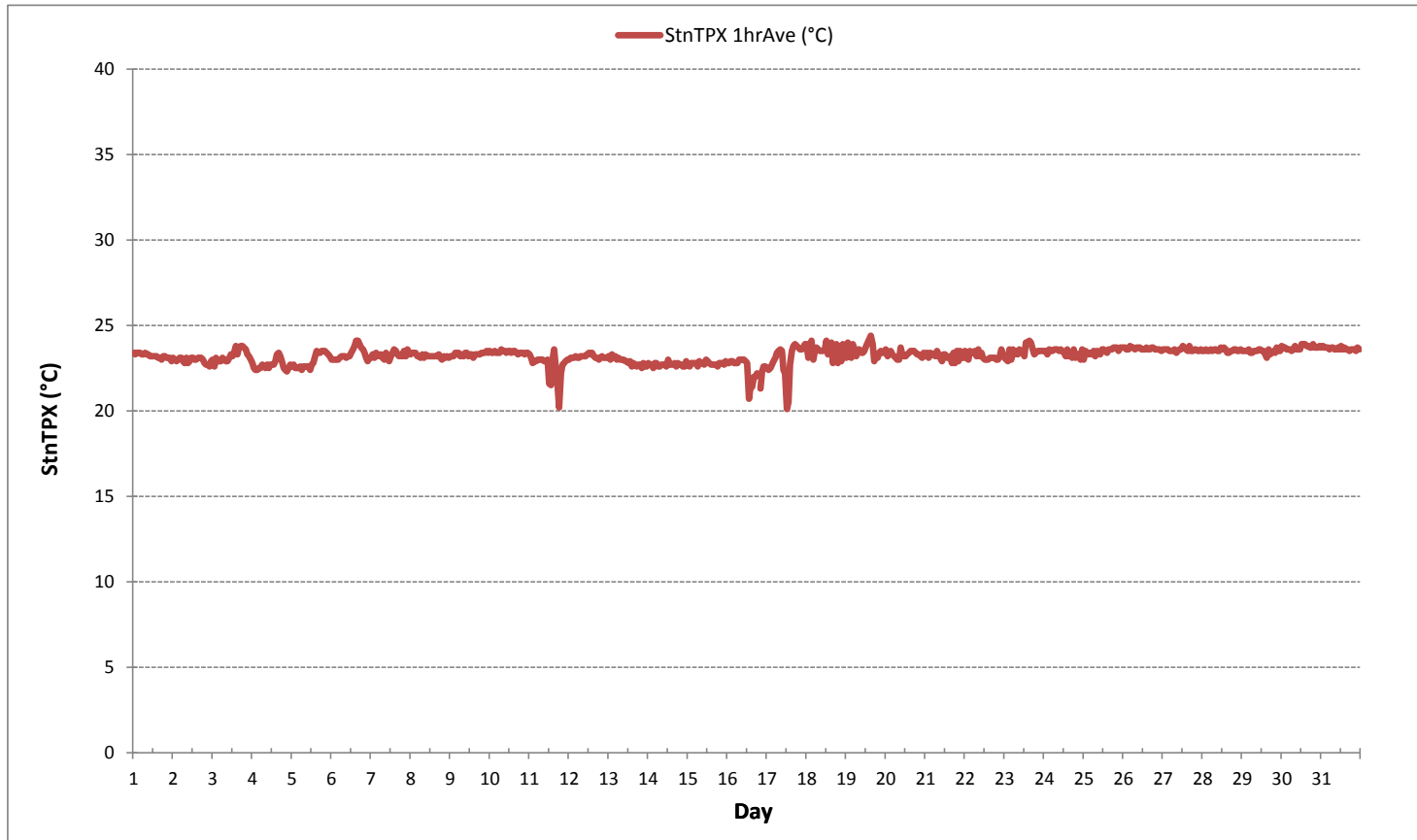
24 HR AVERAGES January 2018



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	20.1	°C	@ HOUR	12	ON DAY	17
MAXIMUM 1-HR AVERAGE:	24.4	°C	@ HOUR	15	ON DAY	19
MAXIMUM 24-HR AVERAGE:	23.7	°C			ON DAY	30
OPERATIONAL TIME:						743 hrs
AMD OPERATION UPTIME:						99.9 %
STANDARD DEVIATION:	0.5					MONTHLY AVERAGE: 23.2 °C

STATION TEMPERATURE Hourly Averages (StnTPX °C)



APPENDIX II
EQUIPMENT CALIBRATION RESULTS

SULPHUR DIOXIDE



Thermo 43C Sulphur Dioxide Analyzer Calibration

Date: January 11, 2018	Barometer/B.P./units: Brunton 05535 expires December 15, 2018	28.15	inHg
Company/Airshed: PRAMP	Thermometer/Station Temp: F.S. 160348895 expires April 8, 2018	20.6	°C
Location/Station Name: 986b	Weather Conditions: Mainly sunny		
Parameter: Sulphur Dioxide	Calibration Purpose: routine monthly		
Start Time 24 hr. (mst): 13:00	Performed By/Reviewer: Limin Li / Rob Fisher		
End Time 24 hr. (mst): 16:25	Cal Gas Expiry Date: October 24, 2020		
Calibration Method: Gas Dilution	Converter Model & s/n (if applicable): n/a		

Analyzer:	
ID# or Serial Number: 43C-62339-335	Range ppb: 500
Last Calibration Date: December 15, 2017	As Found C.F.: 1.030
Previous C.F.: 0.999	New C.F.: 1.001

Calibration Standards:	Standard Calibration Points for Ranges								
Low Flow Meter ID/Expiry Date: Defender Low 152019 expires December 13, 2018	<table border="1" style="margin: auto;"> <tr><th>Point</th><th>ppb</th></tr> <tr><td>High</td><td>380</td></tr> <tr><td>Mid</td><td>180</td></tr> <tr><td>Low</td><td>90</td></tr> </table>	Point	ppb	High	380	Mid	180	Low	90
Point	ppb								
High	380								
Mid	180								
Low	90								
High Flow Meter ID/Expiry Date: Defender High 148944 expires December 13, 2018									
Calibrator ID/Expiry Date: Sabio id# 17200415 expires May 16, 2018									
Cal Gas Cylinder I.D. #: LL104225									
Cal Gas Conc. (ppm): 49.2									

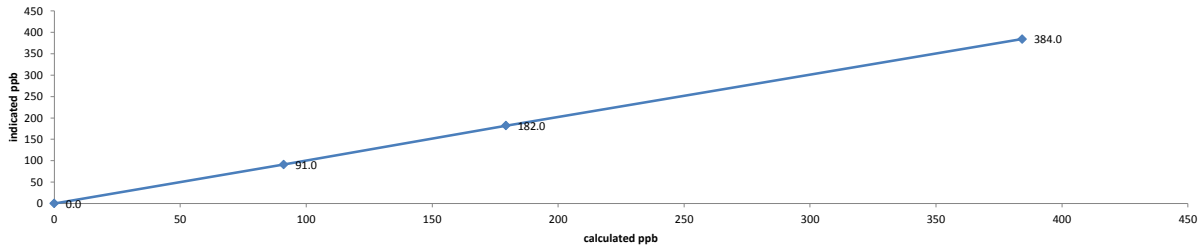
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration (ppb):	Indicated Concentration (ppb):	Correction Factors (C.F.):
Point	Diluent	Cal Gas	Total			
as found zero	5877	0.00	5877	0.0	0.0	n/a
as found high	5825	45.85	5871	384.2	373.0	1.030
adjusted zero	5877	0.00	5877	0.0	0.0	n/a
adjusted high	5825	45.85	5871	384.2	384.0	1.001
mid	5962	21.81	5984	179.3	182.0	0.985
low	5976	11.08	5987	91.1	91.0	1.001
calibrator zero	5877	0.00	5877	0.0	0.7	n/a
Average C.F. =						0.995

Linear Regression/Calibration Results:

Correlation Coefficient = 1.000	LIMITS
Slope = 1.000	> or = 0.995
b (Intercept as % of full scale) = -0.12%	0.95-1.05
% change in C.F. from last cal = -3.11%	± 3% F.S.
	± 10%

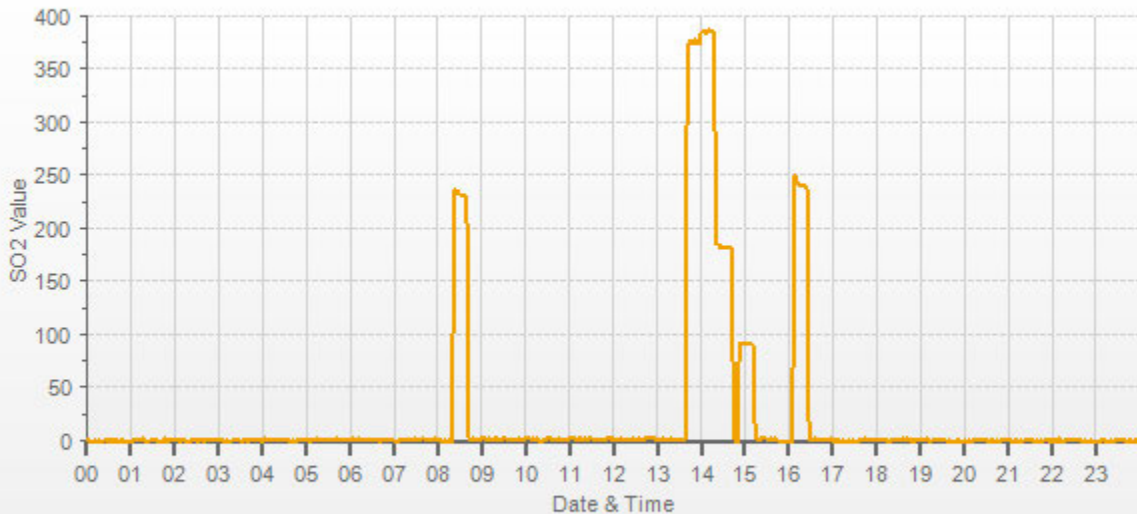
Thermo 43C Sulphur Dioxide Analyzer Calibration



As found:	As left:
Bkg: 77.7	Bkg: 79.6
Coef: 0.884	Coef: 0.905
Pmt: -654 V	Pmt: -654 V
0 LAMP: 842 V	0 LAMP: 842 V
Battery: 3.3 V	Battery: 3.3 V
Internal: 27.4 °C	Internal: 28.2 °C
Chamber: 45.3 °C	Chamber: 45.3 °C
Pressure: 429.5 mmHg	Pressure: 429.5 mmHg
Flow: 0.754 LPM	Flow: 0.753 LPM
Intensity: 37666	Intensity: 38181
Averaging Time: 120 sec	Averaging Time: 120 sec
Expected Value: 220.3	Expected Value: 239.4

Comments:
 The analyzer sample inlet filter was changed. The analyzer cooling fan filter(s) were cleaned. The manifold blower was found to be working normally.
 No zero adjustment was required/made. The "as found" zero value was copied to the adjusted zero value field for linearity calculation purposes.

SO2[ppb] Station: PRAMP_986 Daily: 18/01/11 Type: AVG 1 Min. [1 Min.]



— SO2[ppb]

TOTAL REDUCED SULPHUR



Thermo 431-TLE Total Reduced Sulphur Analyzer Calibration

Date: January 11, 2018	Barometer/B.P./units: Brunton 05535 expires December 15, 2018	28.15	inHg
Company/Airshed: PRAMP	Thermometer/Station Temp: F.S. 160348895 expires April 8, 2018	20.6	°C
Location/Station Name: 986b	Weather Conditions: Mainly sunny		
Parameter: Total Reduced Sulphur	Calibration Purpose: routine monthly		
Start Time 24 hr. (mst): 13:00	Performed By/Reviewer: Limin Li	Rob Fisher	
End Time 24 hr. (mst): 18:30	Cal Gas Expiry Date: August 23, 2020		
Calibration Method: Gas Dilution	Converter Model & s/n (if applicable): CD NOVA-CDN 101#534		

Analyzer: ID# or Serial Number: 1152940011 Last Calibration Date: December 27, 2017 Previous C.F.: 1.003	Range ppb: 100 As Found C.F.: 1.004 New C.F.: 1.000
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Calibration Standards: Low Flow Meter ID/Expiry Date: Defender Low 152019 expires December 13, 2018 High Flow Meter ID/Expiry Date: Defender High 148944 expires December 13, 2018 Calibrator ID/Expiry Date: API id# 690 expires March 17, 2018 Cal Gas Cylinder I.D. #: LL119500 Cal Gas Conc. (ppm): 9.8	Standard Calibration Points for Ranges <table border="1" style="margin: auto;"> <tr><th>Point</th><th>ppb</th></tr> <tr><td>High</td><td>78</td></tr> <tr><td>Mid</td><td>38</td></tr> <tr><td>Low</td><td>19</td></tr> </table>	Point	ppb	High	78	Mid	38	Low	19	SO2 Scrubber Check (10 minutes): Start/End Time 24 hr.: 17:30/17:40 SO2 Analyzer Range: 500 Target Concentration (ppb): 380 As Found Zero: 0.3 Analyzer Response: 0.5 Zero Corrected Result (ppb): 0.2
Point	ppb									
High	78									
Mid	38									
Low	19									

ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

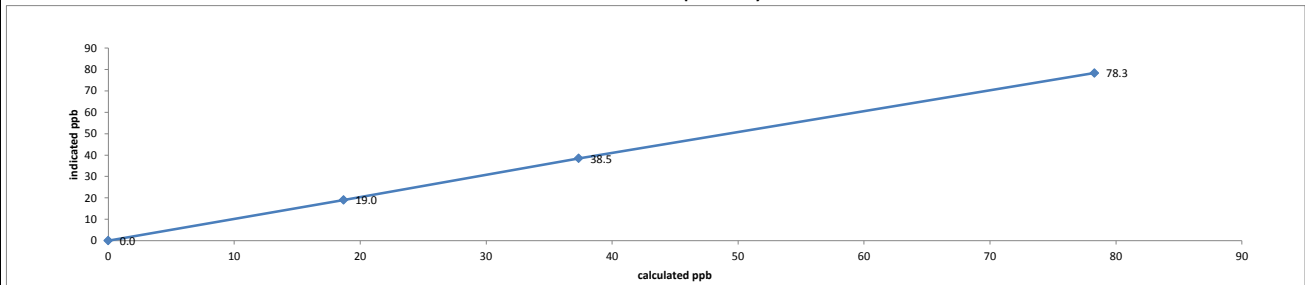
Point	Calibrator Flow Rates (cc/min)			Calculated Concentration (ppb):	Indicated Concentration (ppb):	Correction Factors (C.F.):
	Diluent	Cal Gas	Total			
as found zero	7477	0.00	7477	0.0	0.3	n/a
as found high	7420	59.76	7480	78.3	78.3	1.004
adjusted zero	7477	0.00	7477	0.0	0.0	n/a
adjusted high	7420	59.76	7480	78.3	78.3	1.000
mid	7568	28.95	7597	37.3	38.5	0.970
low	7574	14.47	7588	18.7	19.0	0.984
calibrator zero	7477	0.00	7477	0.0	0.5	n/a

Average C.F.= 0.985

Linear Regression/Calibration Results:

Correlation Coefficient = 1.000	LIMITS > or = 0.995
Slope = 1.000	0.95-1.05
b (Intercept as % of full scale) = -0.36%	± 3% F.S.
% change in C.F. from last cal = -0.08%	± 10%

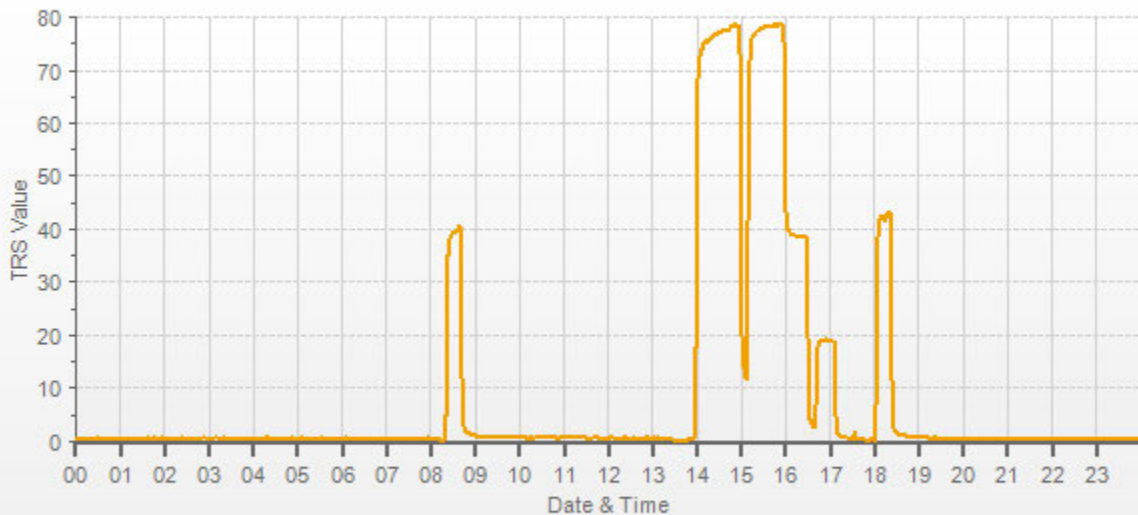
Thermo 431-TLE Total Reduced Sulphur Analyzer Calibration



As found: Bkg: 1.95 Coef: 1.046 Pmt: -687.1 V Flash: 971 V Internal: 30.0 °C Chamber: 45.3 °C Perm Oven Gas: 44.98 °C Perm Oven Heater: 44.23 °C Pressure: 660.4 mmHg Sample Flow: 0.470 L/Min Lamp Intensity: 92 % Converter: 820 °C Converter Set: 820 °C Averaging Time: 120 Sec Expected Value: 42.4	As left: Bkg: 2.20 Coef: 1.046 Pmt: -687.1 V Flash: 971 V Internal: 30.0 °C Chamber: 45.3 °C Perm Oven Gas: 44.98 °C Perm Oven Heater: 44.23 °C Pressure: 660.4 mmHg Sample Flow: 0.470 L/Min Lamp Intensity: 92 % Converter: 820 °C Converter Set: 820 °C Averaging Time: 120 Sec Expected Value: 42.4
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Comments:
 The analyzer sample inlet filter was changed. The analyzer cooling fan filter(s) were cleaned. The manifold blower was found to be working normally.
 No high point adjustment was required/made. The "as found" high value was copied to the "adjusted high" value field for linearity calculation purposes.

Calibration gas was repurged during "As Found High Point".



— TRS[ppb]

TOTAL HYDROCARBON



Thermo 55i Methane/Non-Methane Analyzer Calibration

Date: January 11, 2018
Company/Airshed: PRAMP
Location/Station Name: 986b
Parameter: CH4 / NMHC / THC
Start/End Time 24 hr. (mst): 15:33/19:10
Calibration Method: Gas Dilution
Barometer/B.P./units: Brunton 05535 expires December 15, 2018
Thermometer/Station Temp: F.S. 160348895 expires April 8, 2018
Weather Conditions: Mainly sunny
Calibration Purpose: routine monthly
Performed By/Reviewer: Limin Li / Rob Fisher
Cal Gas Expiry Date: October 28, 2025

Analyzer: ID# or Serial Number: 1022143392
Measured Flow: 1010 sccm
Last Calibration Date: December 14, 2017
Range ppm: 20 CH4/20 NMHC/40 THC
Correction Factors: CH4 = 1.000, As Found C.F.: 0.958, New C.F.: 1.000
NMHC = 1.000, 0.996, 1.000
THC = 1.000, 0.976, 1.000

Calibration Standards: Low Flow Meter ID/Expiry Date: Defender Low 152019 expires December 13, 2018
High Flow Meter ID/Expiry Date: Defender High 148944 expires December 13, 2018
Calibrator ID/Expiry Date: Sabio id# 17200415 expires May 16, 2018
Cal Gas Cylinder I.D. #: LL119471
CH4 Cylinder Conc.: 599.0, 207.0 =C2H6 Cylinder Conc.
CH2 expressed as C2H6: 569.3, 1168.3 =total CH4 equivalent
Standard Calibration Points for Analyzer Range of 20/20/40 ppm

ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015
Table with columns: Point, Diluent, Cal Gas, Total Flow, Calculated CH4 (ppm), Calculated NMHC (ppm), Calculated THC (ppm), Indicated CH4 (ppm), Indicated NMHC (ppm), Indicated THC (ppm), Correction Factors: CH4, NMHC, THC

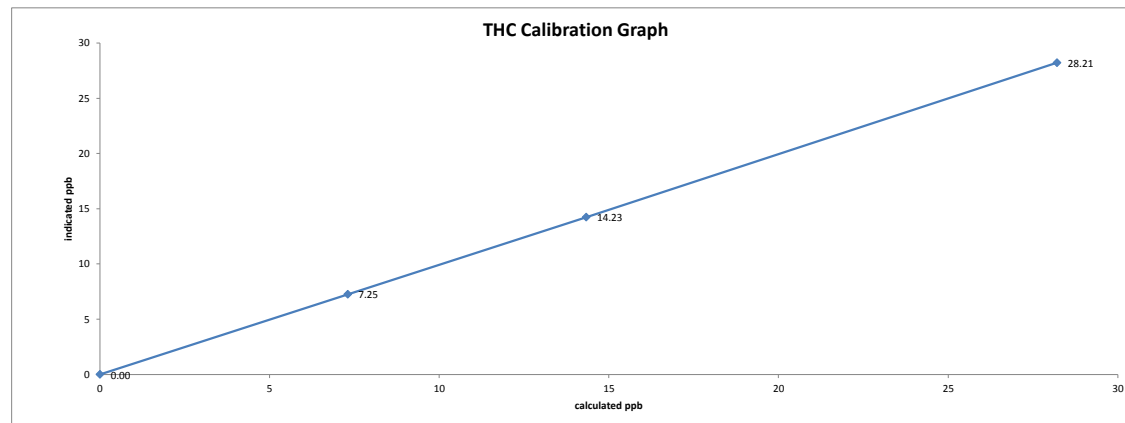
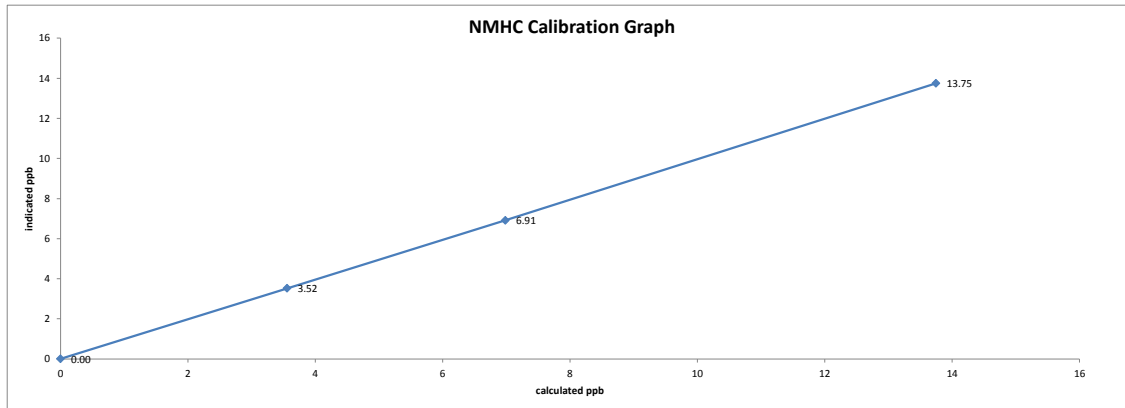
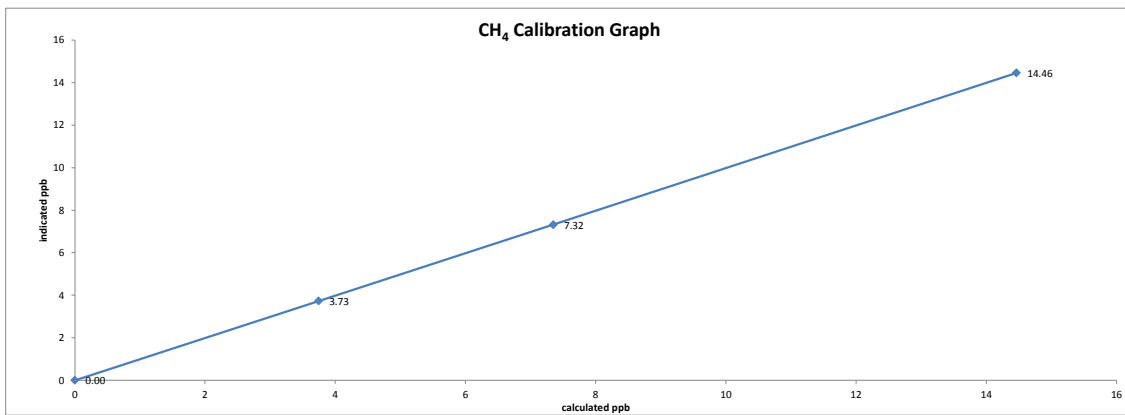
Linear Regression/Calibration Results:
Correlation Coefficient = 1.000, 1.000, 1.000
Slope = 1.000, 1.001, 1.000
b (Intercept as % of full scale) = -0.05%, -0.15%, -0.10%
% change in C.F. from last cal = 4.21%, 0.39%, 2.38%
LIMITS > or = 0.995, 0.95-1.05, ± 3% F.S., ± 10%

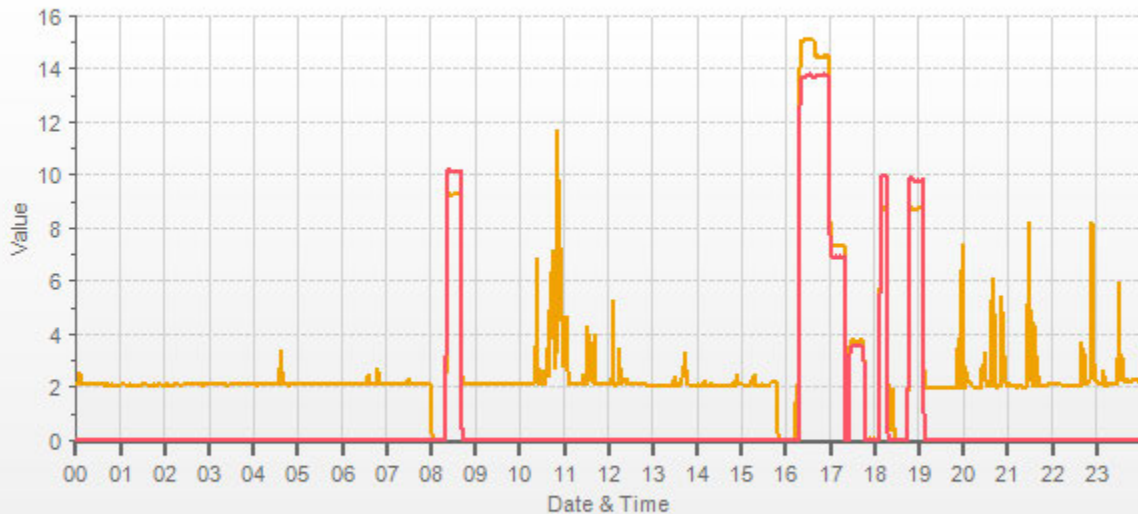
As Left Instrument Diagnostics:
Interface Board Voltages: Bias Supply: -310.9 v
Temperatures: Detector Oven: 175.0 °C, Filter: 175.0 °C, Column Oven: 75.2 °C, Internal: 33.4 °C
Cylinder Pressures/reg.: Carrier: 200, 50; Fuel: 800, 50; Span Gas: 1650, 28
Internal Pressures: Carrier: 31.1 psi, Fuel: 40.5 psi, Air: 32.4 psi
FID Status: Status: LIT, Counts: 20213, Flame: 320.6 °C, Det Base: 175.0 °C
Flame and Power Stats: Last Power On: 07OCT2017 02:39:08, Flameouts: 4, Det Oven at Start: 37.4, Col Oven at Start: 34.9
Calibration History: Time: 15DEC17 11:53, Type: SPAN, Status: GOOD, Check/Adjust: ADJUSTED, CH4 Span Conc: 14.69, CH4 SP Ratio: 0.000777, CH4 RT: 12.4, CH4 PK IDX: 22, CH4 PK HT: 18915, NM Span Conc: 14.23, NM SP Ratio: 0.000189
Calibration History cnt'd: NM Peak Area: 75144, Methane Start: n/a, Methane End: n/a, Backflush: n/a, NMHV Start: n/a, NMHC End: n/a, Date: 11JAN18, Time: 14:29, CH4 PK HT: 2661, CH4 RT: 12.4, CH4 Baseline: 1604, CH4 LOD: 11, CH4 SD: 3, CH4 CONC: 2.07, NM PK HT: 0, NM Peak Area: 0, NM CONC: 0, NM Base Start: 1630, NM Base End: 1628, NM LOD: 10, NM Start IDX: 4, NM End IDX: 59, NM Max Slope: 3.8E-01, NM Min Slope: -5.9E-01, NM PT Count: 0, Expected Values: Previous CH4: 9.187, Previous NMHC: 10.29, Previous THC: 19.47, New CH4: 8.74, New NMHC: 9.80, New THC: 18.53

Comments: The analyzer sample inlet filter was changed. A new nitrogen cylinder was installed. No zero adjustment was required/made. As found zero values were copied to adjusted zero values for linearity calculation purposes. The analyzer cooling fan filter(s) were cleaned. The manifold blower was found to be working normally.

Date: January 11, 2018
Company/Airshed: PRAMP
Location/Station Name: 986b

Start/End Time 24 hr. (mst): 15:33/19:10
Calibration Purpose: routine monthly
Calibration Method: Gas Dilution





— CH4[ppm] — NMHC[ppm]

WIND SYSTEM



Meteorological Sensor Audit/Calibration

Location Information

Company: PRAMP
 Audit Location: 986b
 Audit Date: April 5, 2017

Performed By: Limin Li
 Reviewed By: Trina Whitsitt
 Start /EndTime (mst): 13:30/15:30

Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	0-1 V
Sensor Model:	05305VK	Velocity Unit Output Range:	0-200 km/h
Serial #:	129612	Direction Voltage Output Range:	0-1 V
Previous Cal/Audit Date:	February 15, 2017	Direction Unit Output Range:	0-360 degrees

Wind Calibrator Information

Calibrator Make/ Model: RM Young 18802 Serial #: CA 0309
 Maxxam Unit ID #: 13-3357 Certification Date: October 6, 2016

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.1	0.1	-
1000	18.4	18.4	18.4	0.999
2000	36.9	36.8	36.8	1.003
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	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.4	147.4	1.000
9000	165.9	165.9	165.9	1.000
10000	184.3	184.5	184.5	0.999
The audit meets AMD requirements.			Average Correction Factor=	1.001

Wind Direction Audit Data ****+/- 5° 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	0.4	2.5	1.5
30	330	29	329	1.4	1.3	1.3
60	300	60	300	0.4	0.3	0.3
90	270	89	271	0.8	-1.2	1.0
120	240	120	242	0.5	-1.6	1.1
150	210	150	212	0.1	-1.8	1.0
180	180	181	181	-0.9	-1.1	1.0
210	150	212	151	-1.5	-0.8	1.2
240	120	241	120	-1.3	-0.2	0.8
270	90	271	90	-0.5	-0.1	0.3
300	60	300	60	0.2	0.5	0.3
330	30	329	29	1.4	0.7	1.1
355	0	353	0	2.5	0.3	1.4
The audit meets AMD requirements.			Average Absolute Degrees Difference=		0.9	

Comments: Adjust wind speed gain before calibration.

CALIBRATORS

Company <u>Maxxam</u>		Operator: <u>Micheal Espiritu</u>	
Calibrator:		Flow Measurement Device:	
Make/Model	<u>Sabio 2010</u>	Make/Model	<u>Mesa Defender 530</u>
Serial Number	<u>17200415</u>	Serial Number	<u>L-152019 H-148944</u>
Last Verification Date	<u>May 2016</u>	Temperature (°C)	<u>25.0 C</u>
NO Cylinder S/N	<u>EY0000597</u>	Barometric Pressure	<u>697 mmhg</u>
NO [PPM]	<u>49.0</u>	NOx [PPM]	<u>49.0</u>
Expiry Date	<u>December 2019</u>		

Dilution Flow (sccm)		
Pt. #1 <u>5000</u>	Pt. #2 <u>5000</u>	Pt. #3 <u>5000</u>
Gas Flow (sccm)		
Pt. #1 <u>80</u>	Pt. #2 <u>40</u>	Pt. #3 <u>20</u>

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO ₂	NOx	NO	NOx
5028	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
4930	78.7	0.783	0.783	0.809	-0.012	0.797	3%	2%
4936	38.6	0.383	0.383	0.396	-0.006	0.390	3%	2%
4935	19.4	0.193	0.193	0.199	-0.003	0.196	3%	2%
Absolute Average Percent Difference							3%	2%

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

NO	LIMITS	NOx
Correlation= 1.0000	≥ 0.990	Correlation= 1.0000
m (Slope)= 1.0334	0.90-1.10	m (Slope)= 1.0181
b (Intercept % of FS)= -0.0105	± 3% F.S.	b (Intercept % of FS)= -0.0148

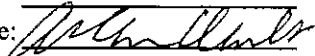
Flow	O ₂ Conc (LC)	NO Decrease	NO	NO ₂	NOX	% Diff. Vs Audit gas	
4930	0.000	0.000	0.806	-0.013	0.795	NO ₂	% Diff. Limit
4930	1.425	0.523	0.283	0.511	0.794	0%	± 10%
4930	0.825	0.278	0.528	0.266	0.795	0%	± 10%
4930	0.386	0.095	0.711	0.085	0.796	3%	± 10%
Absolute Average Percent Difference						1%	± 10%

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

NO ₂	LIMITS
Correlation= 1.0000	≥ 0.995
m (Slope)= 0.9998	0.90-1.10
b (Intercept % of FS)= -1.1702	± 3% F.S.

AENV Standards Audit Calibrator		NO _x Analyzer	
Make/Model	<u>Teco 146i</u>	Make/Model	<u>Teco 42i</u>
Serial/AMU Number	<u>AMU 1809</u>	Serial/AMU Number	<u>AMU 1868</u>
SRM Gas Cylinder No.	<u>CAL018101</u>	Last Calibration Date	<u>May 16, 2017</u>
Cylinder Conc. (ppm)	<u>48.79</u>	Full Scale (ppm)	<u>1.0</u>
		Cylinder Gas Expiry Date	<u>March 2019</u>

COMMENTS: Contains 50.4 ppm SO₂.

Auditor: Al Clark
Operator Signature: 

Date: May 16, 2017
Location: McIntyre Center Edmonton

Company Maxxam **Operator:** Mike

Calibrator:		Flow Measurement Device:	
Make/Model	<u>API 700</u>	Make/Model	<u>Bios Defender 530</u>
Serial Number	<u>690</u>	Serial Number	<u>HI148944 Lo 152019</u>
Last Verification Date	<u>March 30, 2016\</u>	Temperature (°C)	<u>23.3</u>
NO Cylinder S/N	<u>EY0000597</u>	Barometric Pressure	<u>704.3mmHg</u>
NO [PPM]	<u>49.0 NOx [PPM]</u>		<u>49.0</u>
Expiry Date	<u>December 8, 2019</u>		

Dilution Flow (sccm)			
Pt. #1	<u>4898</u>	Pt. #2	<u>4942</u>
		Pt. #3	<u>4953</u>
Gas Flow (sccm)			
Pt. #1	<u>79.2</u>	Pt. #2	<u>38.6</u>
		Pt. #3	<u>19.3</u>

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO ₂	NOx	NO	NOx
4977	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	Limit ± 10%	
4977	79.2	0.7792	0.7792	0.7841	0.0012	0.7854	1%	1%
4981	38.6	0.3797	0.3797	0.3813	0.0006	0.3819	0%	1%
492	19.3	0.1902	0.1902	0.1927	0.0002	0.1929	1%	1%
Absolute Average Percent Difference							1%	1%

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

NO		LIMITS		NOx	
Correlation=	1.0000	≥ 0.990		Correlation=	1.0000
m (Slope)=	1.0056	0.90-1.10		m (Slope)=	1.0073
b (Intercept % of FS)=	0.0357	± 3% F.S.		b (Intercept % of FS)=	0.0304

Flow	O ₃ Conc	NO Decrease	NO	NO ₂	NOX	% Diff. Vs Audit gas	
4977	0.000	0.0000	0.7928	0.0014	0.7941	NO ₂	% Diff. Limit
4977	0.500	0.5448	0.2480	0.5391	0.7871	-1%	± 10%
4977	0.250	0.2862	0.5066	0.2861	0.7926	-1%	± 10%
4977	0.100	0.1221	0.6707	0.1193	0.7914	-3%	± 10%
Absolute Average Percent Difference						2%	± 10%

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

NO₂		LIMITS
Correlation=	1.0000	≥ 0.995
m (Slope)=	0.9894	0.90-1.10
b (Intercept % of FS)=	0.0719	± 3% F.S.

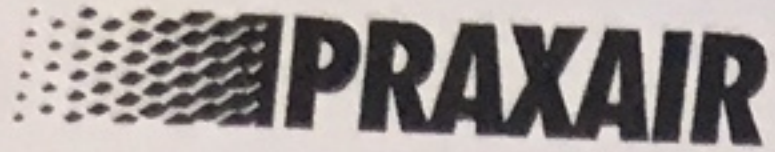
AENV Standards		NO_x Analyzer	
Audit Calibrator		Make/Model	<u>Thermo 42i</u>
Make/Model	<u>Thermo 146i</u>	Serial/AMU Number	<u>1868</u>
Serial/AMU Number	<u>1809</u>	Last Calibration Date	<u>March 15, 2017</u>
SRM Gas Cylinder No.	<u>CAL018140</u>	Full Scale (ppm)	<u>1.0</u>
Cylinder Conc. (ppm)	<u>48.79</u>	Cylinder Gas Expiry Date	<u>March 28, 2019</u>

COMMENTS: Gas has ~50ppm SO2

Auditor: Shea Beaton
Operator Signature: [Signature]

Date: March 17, 2017
Location: McIntyre Center Edmonton

CALIBRATION GASES



Praxair
 5700 South Alameda Street
 Los Angeles, CA 90058
 Tel: (323) 585-2154 Fax: (714) 542-6689
 PGVPID: F22017

DocNumber: 000116115

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

Customer & Order Information:

PRAXAIR PKG EDMONTON PLT 8
 9501 34TH ST
 EDMONTON AB T6B 2X

Praxair Order Number: 45314542
 Customer P. O. Number: 582-277
 Customer Reference Number:

Fill Date: 10/12/2017
 Part Number: NI NO50MS2E-AQ
 Lot Number: 70086728507
 Cylinder Style & Outlet: AQ CGA 660
 Cylinder Pressure & Volume: 2000 psig 82 cu. ft.

Certified Concentration:

Expiration Date:	10/24/2020	NIST Traceable
Cylinder Number:	LL104225	Analytical Uncertainty:
51.5 ppm	NITRIC OXIDE	± 0.7 %
49.2 ppm	SULFUR DIOXIDE	± 1 %
Balance	NITROGEN	

NOx = 51.6 ppm

NOx for Reference Only

Certification Information: Certification Date: 10/24/2017 Term: 36 Months Expiration Date: 10/24/2020

This cylinder was certified according to the 2012 EPA Traceability Protocol, Document #EPA-600/R-12/531, using Procedure G1. Do Not Use this Standard if Pressure is less than 100 PSIG.

Analytical Data:

(R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

1. Component: NITRIC OXIDE

Requested Concentration: 50 ppm
 Certified Concentration: 51.5 ppm
 Instrument Used: Thermo Electron 42i-LS S/N 1030645077
 Analytical Method: Chemiluminescence
 Last Multipoint Calibration: 10/14/2017

Reference Standard Type: GMIS
 Ref. Std. Cylinder #: CC363145
 Ref. Std. Conc: 50.79 ppm
 Ref. Std. Traceable to SRM #: vs. 1683b
 SRM Sample #: 45.-V-42
 SRM Cylinder #: CAL017897

First Analysis Data:				Date: 10/17/2017
Z: 0	R: 50.8	C: 51.5	Conc: 51.49	
R: 50.8	Z: 0	C: 51.6	Conc: 51.59	
Z: 0	C: 51.6	R: 50.8	Conc: 51.59	
UOM: ppm			Mean Test Assay: 51.557 ppm	

Second Analysis Data:				Date: 10/24/2017
Z: 0	R: 50.8	C: 51.4	Conc: 51.39	
R: 50.8	Z: 0	C: 51.5	Conc: 51.49	
Z: 0	C: 51.4	R: 50.8	Conc: 51.39	
UOM: ppm			Mean Test Assay: 51.423 ppm	

2. Component: SULFUR DIOXIDE

Requested Concentration: 50 ppm
 Certified Concentration: 49.2 ppm
 Instrument Used: Ametek 921CE S/N AW-921-S321
 Analytical Method: Ultraviolet Absorption
 Last Multipoint Calibration: 10/13/2017

Reference Standard Type: NTRM
 Ref. Std. Cylinder #: CC72593
 Ref. Std. Conc: 48.58 ppm
 Ref. Std. Traceable to SRM #: n/a
 SRM Sample #: 12070103
 SRM Cylinder #: N/A

First Analysis Data:				Date: 10/17/2017
Z: 0	R: 48.2	C: 48.8	Conc: 49.151	
R: 48.2	Z: 0	C: 48.8	Conc: 49.151	
Z: 0	C: 48.9	R: 48.3	Conc: 49.251	
UOM: ppm			Mean Test Assay: 49.184 ppm	

Second Analysis Data:				Date: 10/24/2017
Z: 0	R: 48.2	C: 48.7	Conc: 49.084	
R: 48.2	Z: 0	C: 48.8	Conc: 49.185	
Z: 0	C: 48.8	R: 48.2	Conc: 49.185	
UOM: ppm			Mean Test Assay: 49.151 ppm	

Analyzed by:

Henry Koung

Certified by:

Amalia Real

Information contained herein has been prepared at your request by qualified experts within Praxair Distribution, Inc. While we believe that the information is accurate within the limits of the analytical methods employed and is complete to the extent of the specific analyses performed, we make no warranty or representation as to the suitability of the use of the information for any purpose. The information is offered with the understanding that any use of the information is at the sole discretion and risk of the user. In no event shall the liability of Praxair Distribution, Inc., arising out of the use of the information contained herein exceed the fee established for providing such information.



Calibration Gas Audit

Single Component Cylinder Gas

File No. 2017-213CGA

Company: Maxxam **Operator's Name:** C. Wesson

Cylinder #: LL119500 Concentration PPM: 9.8 Tolerance(%): 2 Certified By: Praxair

Expiry Date: August 2020

Reference Calibrator and Gas:	Flow Measurement Device:
Make/Model: <u>R&R MFC 201</u>	Make/Model: <u>Mesa Definer 220</u>
Serial Number: <u>AMU 1690</u>	Serial Number: <u>H-133034 L-132702</u>
Last Verification Date: <u>September 22, 2017</u>	Temp. °C: <u>23.5 C</u>
Gas Type: <u>H2S</u> Conc. <u>20.43</u>	B.P. <u>705 mmhg</u>
Cylinder Number: <u>CAL015272</u>	
Expiry Date: <u>January 2019</u>	

Reference Analyzer:

Make/Model: Teco 450i Serial/AMU Number: 1980

Instrument Settings: Zero: 22.4 Span: 1.091 Range: 0.1

Last Calibration: Date: Sep 22/17 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5000	0.0	0.0000	0.0000	0.0000	0.0000
5114	39.5	0.0734	0.00772	129.468	9.5
5096	18.5	0.0345	0.00363	275.459	9.5
5089	9.5	0.0178	0.00187	535.684	9.5
Average Cylinder Concentration:					9.5

Previous Stated Concentration PPM: 9.8

Percent variance from Stated: 3

Meets Manufacturer Tolerance. Use manufacturers stated concentration COMMENTS: _____

<=5% Outside Manufacturer Tolerance. Use manufacturers concentration _____

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

Auditor: Al Clark

Operator Signature: *Al Clark*

Date: September 22, 2017

Location: McIntyre Center Edmonton



Praxair
 5700 South Alameda Street
 Los Angeles, CA 90058
 Tel: (323) 585-2154 Fax: (714) 542-6689
 PGVPID: F22017

DocNumber: 000116089

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

Customer & Order Information:

MAXXAM ANALYTICS INC
 500 1919 MINNESOTA CRT
 MISSISSAUGA ON L5N 0C

Praxair Order Number: 44723832
 Customer P. O. Number: PO0000001677
 Customer Reference Number:

Fill Date: 10/13/2017
 Part Number: NI ME600P2E-AQ
 Lot Number: 70086728604
 Cylinder Style & Outlet: AQ CGA 350
 Cylinder Pressure & Volume: 2200 psig 82 cu. ft.

Certified Concentration:

Expiration Date:	10/18/2025	NIST Traceable
Cylinder Number:	LL119471	Analytical Uncertainty:
207 ppm	PROPANE	± 0.6 %
599 ppm	METHANE	± 0.3 %
Balance	NITROGEN	

Certification Information: Certification Date: 10/18/2017 Term: 96 Months Expiration Date: 10/18/2025

This cylinder was certified according to the 2012 EPA Traceability Protocol, Document #EPA-600/R-12/531, using Procedure G1. Do Not Use this Standard if Pressure is less than 100 PSIG.

Analytical Data: (R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

1. Component: PROPANE

Requested Concentration: 200 ppm
 Certified Concentration: 207 ppm
 Instrument Used: MKS Multigas 2031 FTIR
 Analytical Method: Fourier Transform Infrared
 Last Multipoint Calibration: 10/15/2017

Reference Standard Type: GMIS
 Ref. Std. Cylinder #: CC119142
 Ref. Std. Conc: 255.6 ppm
 Ref. Std. Traceable to SRM #: 2644a
 SRM Sample #: 101-C-45
 SRM Cylinder #: XF003829B

First Analysis Data:				Date:			
Z:	0	R:	246.85	C:	199.66	Conc:	206.7
R:	246.89	Z:	0	C:	199.69	Conc:	206.72
Z:	0	C:	199.66	R:	246.96	Conc:	206.7
UOM:	ppm	Mean Test Assay:	206.71 ppm				

Second Analysis Data:				Date:			
Z:	0	R:	0	C:	0	Conc:	0
R:	0	Z:	0	C:	0	Conc:	0
Z:	0	C:	0	R:	0	Conc:	0
UOM:	ppm	Mean Test Assay:	0 ppm				

2. Component: METHANE

Requested Concentration: 600 ppm
 Certified Concentration: 599 ppm
 Instrument Used: MKS Multigas 2031 FTIR
 Analytical Method: Fourier Transform Infrared
 Last Multipoint Calibration: 9/27/2017

Reference Standard Type: GMIS
 Ref. Std. Cylinder #: DT0010335
 Ref. Std. Conc: 990 ppm
 Ref. Std. Traceable to SRM #: RGM#DT00
 SRM Sample #: N/A
 SRM Cylinder #: DT0007710

First Analysis Data:				Date:			
Z:	0	R:	934.60	C:	566.69	Conc:	600.97
R:	934.66	Z:	0	C:	563.95	Conc:	598.06
Z:	0	C:	564.19	R:	931.33	Conc:	598.32
UOM:	ppm	Mean Test Assay:	599.12 ppm				

Second Analysis Data:				Date:			
Z:	0	R:	0	C:	0	Conc:	0
R:	0	Z:	0	C:	0	Conc:	0
Z:	0	C:	0	R:	0	Conc:	0
UOM:	ppm	Mean Test Assay:	0 ppm				

Analyzed by:

Jenna Lockman

Certified by:

Jose Vasquez

Information contained herein has been prepared at your request by qualified experts within Praxair Distribution, Inc. While we believe that the information is accurate within the limits of the analytical methods employed and is complete to the extent of the specific analyses performed, we make no warranty or representation as to the suitability of the use of the information for any purpose. The information is offered with the understanding that any use of the information is at the sole discretion and risk of the user. In no event shall the liability of Praxair Distribution, Inc., arising out of the use of the information contained herein exceed the fee established for providing such information.

***IAPPENDIX III
MAXIMUM INSTANTANEOUS DATA***



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 986b Station - January 2018

SULPHUR DIOXIDE Instantaneous Maximum (SO₂ ppb)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.		
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.			
DAY 1	2	2	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	1	S	1	1	1	1	1	1	1	2	2	24	
2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	S	1	1	2	1	2	1	1	1	2	1	24	
3	1	1	1	1	2	1	1	1	1	1	1	2	2	2	2	2	S	1	1	1	1	2	2	1	1	1	2	1	24	
4	1	1	2	1	1	1	1	1	2	1	1	2	2	1	2	S	1	1	1	2	1	1	2	1	1	1	2	1	24	
5	2	2	1	2	2	2	2	2	2	1	1	1	1	3	S	2	2	2	2	1	1	1	1	2	1	1	3	2	24	
6	1	2	2	2	2	2	2	2	2	1	2	2	2	S	2	1	1	1	2	1	1	2	1	2	1	2	2	2	24	
7	1	1	2	1	1	1	1	1	2	2	2	2	S	1	2	1	1	2	1	1	1	1	2	1	1	2	1	2	24	
8	2	2	1	1	1	2	2	2	2	2	1	S	1	1	1	1	2	1	2	1	1	2	1	1	1	2	1	2	24	
9	1	2	2	1	1	2	1	1	2	2	S	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	24	
10	1	1	1	1	1	1	1	1	1	S	1	1	1	1	2	2	1	1	1	1	1	2	1	2	1	1	2	1	24	
11	1	1	1	1	2	2	2	2	S	2	2	2	2	C	C	C	C	2	2	1	2	1	1	1	1	2	2	2	24	
12	1	1	1	2	2	1	1	S	2	2	2	2	1	1	2	2	1	2	1	1	1	3	2	2	1	3	2	2	24	
13	2	2	2	1	2	2	S	1	2	2	2	2	2	2	2	2	1	2	1	1	1	2	2	1	1	2	2	2	24	
14	1	1	1	1	1	S	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	1	2	24	
15	1	2	1	1	S	1	1	2	1	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	2	24
16	1	1	1	S	2	1	1	2	1	1	2	1	1	2	2	Y	Y	2	1	Y	3	2	2	2	2	1	3	2	21	
17	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	1	2	2	24	
18	2	S	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	24	
19	S	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	1	2	2	24	
20	1	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	1	3	2	2	24	
21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	S	2	2	2	3	2	24	
22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2	2	24
23	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	S	2	2	2	2	2	3	2	2	24
24	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	S	2	2	2	2	2	2	2	3	2	2	24
25	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	S	2	2	2	2	2	2	1	1	2	2	2	24
26	2	2	2	2	1	1	2	2	1	1	2	2	2	2	2	2	S	2	2	1	2	2	2	2	2	1	2	2	2	24
27	2	2	2	1	2	1	1	2	2	2	1	2	2	2	1	S	2	2	2	2	2	2	2	2	1	2	2	2	2	24
28	1	2	2	1	2	2	2	2	2	2	1	2	2	2	S	2	2	2	2	2	2	1	2	2	2	1	2	2	2	24
29	1	1	2	2	2	2	2	2	2	2	3	3	S	4	3	2	2	2	2	2	2	2	2	2	2	1	4	2	2	24
30	2	2	1	1	1	1	1	1	1	2	2	2	S	2	2	2	1	2	2	2	2	2	2	2	1	2	2	2	2	24
31	2	2	2	2	1	1	2	2	1	1	1	S	2	1	1	1	1	1	1	2	2	1	2	1	1	2	2	1	2	24
HOURLY MAX	2	2	2	3	3	2	2	2	3	2	2	3	3	3	4	3	2	2	2	2	2	3	3	2	2	2	2	2	2	24
HOURLY AVG	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	24

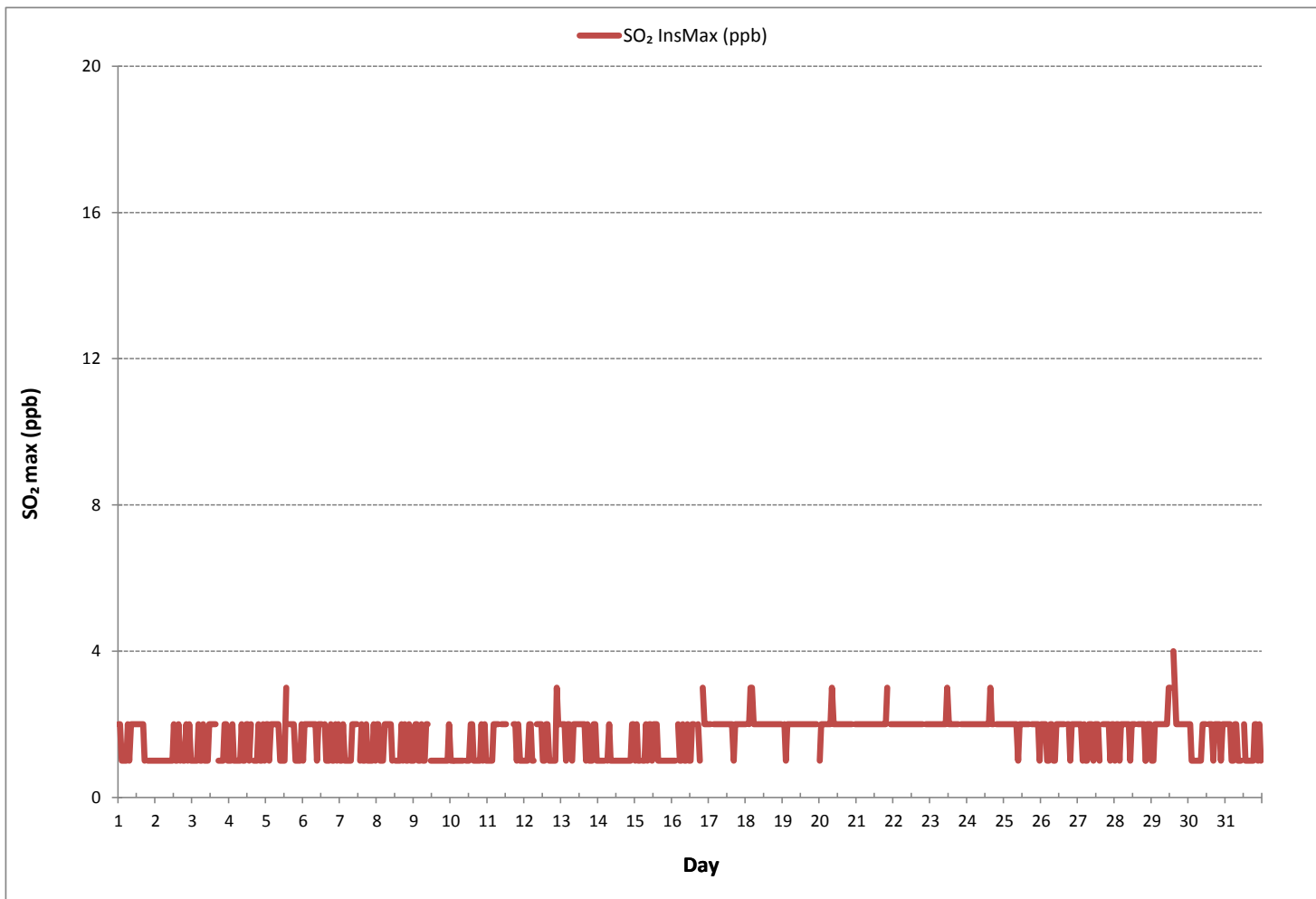
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	705
MAXIMUM INSTANTANEOUS VALUE:	4 ppb @ HOUR 14 ON DAY 29
IZS CALIBRATION TIME:	32 hrs
MONTHLY CALIBRATION TIME:	4 hrs
OPERATIONAL TIME:	741 hrs
STANDARD DEVIATION:	1

SULPHUR DIOXIDE Instantaneous Maximum (SO₂ ppb)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 986b Station - January 2018

TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY 1	0.74	0.74	0.71	0.74	0.77	0.74	0.77	0.79	0.74	0.74	0.71	0.71	0.69	0.74	0.74	0.69	0.77	0.74	S	0.95	0.71	0.69	0.69	0.69	0.69	0.69	0.95	0.74	24
2	0.71	0.66	0.82	0.66	0.66	0.66	0.66	0.69	0.66	0.74	0.71	0.92	0.69	0.66	0.69	0.69	0.69	S	0.79	0.68	0.69	0.66	0.69	0.64	0.64	0.64	0.92	0.70	24
3	0.64	0.74	0.66	0.66	0.82	0.69	0.66	0.61	0.69	0.64	0.64	0.66	0.66	0.61	0.61	0.58	S	0.67	0.61	0.79	0.66	0.64	0.64	0.61	0.58	0.82	0.66	24	
4	0.58	0.58	0.58	0.61	0.58	0.53	0.74	0.66	0.66	0.77	0.74	0.77	0.90	0.66	0.92	S	0.74	0.71	0.66	0.69	0.61	0.61	0.69	0.74	0.53	0.92	0.68	24	
5	0.58	0.64	0.74	0.53	0.56	0.58	0.56	0.61	0.69	0.79	0.56	0.64	0.66	0.64	S	0.71	0.64	0.64	0.58	0.61	0.61	0.61	0.61	0.64	0.53	0.79	0.63	24	
6	0.64	0.64	0.64	0.61	0.61	0.59	0.66	0.58	0.53	0.53	0.71	0.58	0.51	S	0.61	0.53	0.56	0.59	0.56	0.58	0.56	0.56	0.58	0.58	0.51	0.71	0.59	24	
7	0.53	0.56	0.53	0.56	0.53	0.56	0.55	0.56	0.56	0.53	0.53	0.56	S	0.66	0.56	0.53	0.53	0.53	0.53	0.56	0.67	0.58	0.58	0.53	0.53	0.67	0.56	24	
8	0.48	0.51	0.51	0.82	0.64	0.53	0.56	0.51	0.53	0.51	0.51	S	0.82	0.61	0.56	0.56	0.56	0.53	0.56	0.53	0.56	0.53	0.56	0.53	0.48	0.82	0.57	24	
9	0.51	0.58	0.56	0.56	0.56	0.53	0.56	0.56	0.53	0.53	S	0.79	0.53	0.53	0.53	0.53	0.58	0.53	0.56	0.56	0.55	0.53	0.56	0.51	0.79	0.56	24		
10	0.59	0.56	0.58	0.53	0.55	0.56	0.61	0.56	0.61	S	0.85	0.61	0.61	0.71	0.66	0.58	0.56	0.58	0.61	0.71	0.69	0.74	0.71	0.66	0.53	0.85	0.63	24	
11	0.61	0.64	0.66	0.64	0.66	0.66	0.64	0.64	S	1.06	0.74	0.82	0.70	C	C	C	C	C	C	C	0.94	0.50	0.43	0.48	0.48	0.43	1.06	0.66	24
12	0.51	0.77	0.56	0.69	0.66	0.69	0.69	S	0.95	0.64	0.56	0.61	0.51	0.48	0.42	0.37	0.40	0.50	0.40	0.40	0.40	0.42	0.45	0.48	0.37	0.95	0.55	24	
13	0.48	0.45	0.48	0.48	0.48	0.48	S	0.90	0.58	0.53	0.53	0.48	0.51	0.51	0.48	0.53	0.53	0.53	0.50	0.53	0.51	0.51	0.45	0.48	0.45	0.90	0.52	24	
14	0.51	0.53	0.48	0.45	0.45	S	0.58	0.45	0.48	0.45	0.43	0.40	0.38	0.40	0.37	0.40	0.43	0.40	0.40	0.35	0.37	0.37	0.38	0.38	0.35	0.58	0.43	24	
15	0.37	0.40	0.38	0.38	S	0.48	0.40	0.40	1.11	1.37	1.08	0.45	0.43	0.40	0.40	0.45	0.58	0.61	0.40	0.45	0.45	0.45	0.38	0.38	0.37	1.37	0.53	24	
16	0.45	0.35	0.34	S	0.56	0.40	0.51	0.40	0.38	0.43	0.42	0.43	0.42	0.44	0.50	0.50	0.52	Y	0.44	Y	0.44	0.42	0.37	0.34	0.34	0.56	0.43	22	
17	0.42	0.37	S	0.47	0.34	0.32	0.32	0.37	0.34	0.29	0.33	0.28	0.28	0.28	0.29	0.32	0.35	0.24	0.24	0.24	0.32	0.27	0.27	0.22	0.22	0.47	0.31	24	
18	0.22	S	0.29	0.24	0.24	0.24	0.22	0.22	0.24	0.27	0.36	0.22	0.22	0.22	0.22	0.22	0.24	0.22	0.32	0.33	0.24	0.47	0.32	0.27	0.22	0.56	0.27	24	
19	S	0.34	0.27	0.25	0.24	0.25	0.45	0.37	0.27	0.24	0.24	0.24	0.22	0.22	0.19	0.19	0.19	0.27	0.27	0.34	0.34	0.19	0.19	S	0.19	0.45	0.26	24	
20	0.32	0.24	0.27	0.29	0.30	0.29	0.32	0.30	0.33	0.32	0.32	0.30	0.29	0.32	0.33	0.32	0.35	0.43	0.38	0.32	0.34	0.32	S	0.40	0.24	0.43	0.32	24	
21	0.32	0.30	0.30	0.32	0.27	0.32	0.27	0.25	0.27	0.27	0.32	0.27	0.24	0.24	0.27	0.32	0.32	0.35	0.32	0.35	0.27	0.27	S	0.42	0.27	0.24	0.42	0.29	24
22	0.27	0.27	0.32	0.29	0.45	0.32	0.29	0.27	0.30	0.30	0.34	0.32	0.32	0.32	0.29	0.32	0.29	0.29	0.29	S	0.40	0.30	0.29	0.27	0.45	0.31	24		
23	0.27	0.30	0.35	0.35	0.32	0.35	0.32	0.48	0.43	0.38	0.37	0.45	0.38	0.35	0.35	0.37	0.40	0.56	0.74	S	0.42	0.40	0.33	0.33	0.27	0.74	0.39	24	
24	0.30	0.27	0.27	0.27	0.30	0.29	0.24	0.29	0.34	0.27	0.29	0.33	0.29	0.32	0.29	0.35	0.33	0.32	S	0.40	0.34	0.30	0.32	0.29	0.24	0.40	0.30	24	
25	0.29	0.32	0.27	0.27	0.30	0.35	0.30	0.27	0.29	0.32	0.32	0.32	0.32	0.29	0.32	0.27	0.32	S	0.37	0.32	0.29	0.25	0.32	0.25	0.25	0.37	0.30	24	
26	0.25	0.27	0.29	0.27	0.27	0.32	0.32	0.30	0.33	0.37	0.35	0.35	0.35	0.35	0.35	0.32	S	0.64	0.40	0.38	0.37	0.35	0.35	0.33	0.25	0.64	0.34	24	
27	0.37	0.37	0.33	0.33	0.32	0.32	0.33	0.38	0.56	0.35	0.30	0.35	0.35	0.32	0.32	S	0.58	0.35	0.35	0.32	0.37	0.32	0.32	0.32	0.30	0.58	0.36	24	
28	0.32	0.32	0.32	0.35	0.35	0.33	0.35	0.32	0.32	0.32	0.34	0.38	0.37	0.35	S	0.53	0.40	0.40	0.40	0.38	0.35	0.35	0.37	0.35	0.32	0.53	0.36	24	
29	0.38	0.35	0.35	0.33	0.40	0.40	0.34	0.37	0.35	0.37	0.32	0.37	0.35	S	0.56	0.43	0.38	0.35	0.34	0.29	0.29	0.32	0.32	0.37	0.29	0.56	0.36	24	
30	0.37	0.37	0.37	0.32	0.35	0.34	0.32	0.32	0.32	0.29	0.35	0.32	S	0.53	0.35	0.33	0.35	0.30	0.33	0.30	0.33	0.33	0.32	0.29	0.29	0.53	0.34	24	
31	0.35	0.32	0.35	0.35	0.34	0.37	0.35	0.37	0.53	0.48	0.40	S	0.61	0.37	0.35	0.35	0.35	0.35	0.35	0.37	0.32	0.37	0.38	0.37	0.32	0.61	0.38	24	
HOURLY MAX	0.74	0.77	0.82	0.82	0.82	0.74	0.77	0.90	1.11	1.37	1.08	0.92	0.90	0.74	0.92	0.71	0.77	0.74	0.79	0.95	0.71	0.74	0.71	0.74					
HOURLY AVG	0.45	0.46	0.45	0.45	0.46	0.45	0.46	0.46	0.50	0.50	0.50	0.48	0.47	0.45	0.45	0.44	0.46	0.47	0.45	0.48	0.45	0.45	0.44	0.44					

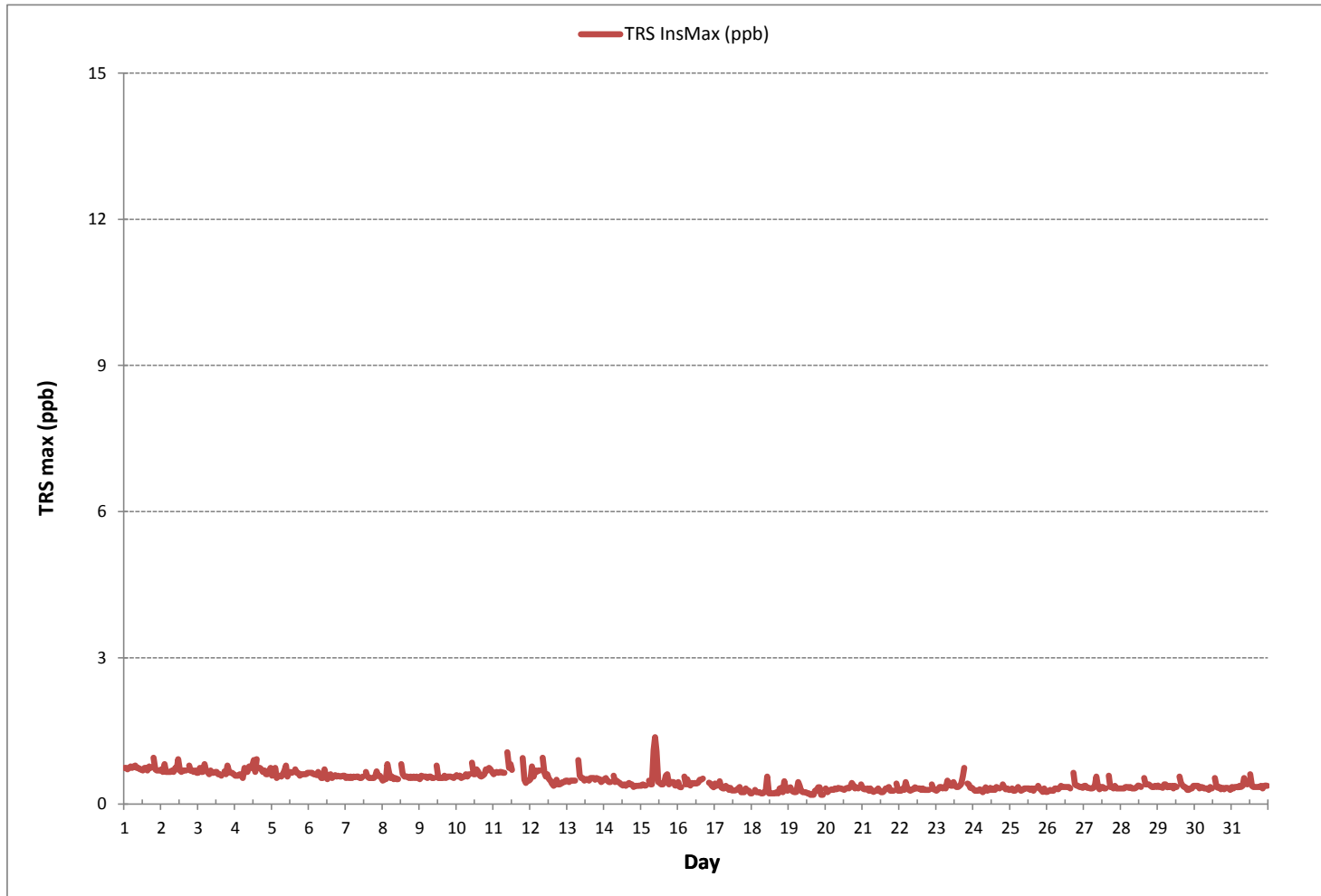
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	704
MAXIMUM INSTANTANEOUS VALUE:	1.37 ppb @ HOUR 9 ON DAY 15
IZS CALIBRATION TIME:	32 hrs
MONTHLY CALIBRATION TIME:	6 hrs
OPERATIONAL TIME:	742 hrs
STANDARD DEVIATION:	0.17

TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 986b Station - January 2018

TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59					
DAY 1	2.56	2.64	6.87	4.96	5.19	4.78	4.28	2.26	2.69	2.30	2.20	2.13	2.14	2.16	2.16	2.20	3.27	4.58	S	2.40	6.33	3.86	3.93	2.94	2.13	6.87	3.43	24	
2	13.91	9.42	10.09	4.92	13.00	12.65	3.79	7.90	9.20	9.47	5.78	7.02	4.09	2.36	2.06	2.90	5.89	S	2.68	3.17	6.97	3.16	2.96	3.54	2.06	13.91	6.39	24	
3	4.43	7.24	7.28	12.25	6.20	12.60	4.43	5.48	6.09	5.23	2.03	2.03	2.27	2.06	4.26	2.03	S	2.49	2.50	6.46	2.29	9.91	5.25	4.06	2.03	12.60	5.17	24	
4	5.67	4.17	6.10	7.25	15.39	16.29	16.40	12.13	11.95	12.19	16.56	5.16	2.78	6.68	19.84	S	29.82	15.78	30.02	21.56	22.30	14.97	24.46	18.23	2.78	30.02	14.60	24	
5	5.49	7.99	30.04	8.09	3.33	13.48	13.34	8.87	8.52	12.48	11.19	3.36	5.50	12.05	S	3.54	2.66	5.26	11.62	4.95	3.85	3.85	9.37	10.48	2.66	30.04	8.67	24	
6	11.93	3.10	4.20	2.76	2.93	2.54	2.57	2.16	2.32	2.00	1.99	1.98	1.96	S	4.85	5.53	6.38	6.29	2.23	3.91	4.47	2.76	2.40	3.15	1.96	11.93	3.67	24	
7	3.38	3.46	4.88	7.51	10.49	4.80	5.10	2.08	2.88	4.94	2.51	1.99	S	5.38	2.05	2.81	3.06	8.09	8.46	16.38	5.10	7.45	4.78	4.12	1.99	16.38	5.29	24	
8	3.60	8.37	4.97	5.15	2.04	2.01	2.01	2.02	2.04	2.03	2.32	S	2.02	2.57	3.66	5.72	3.52	2.73	3.96	4.54	11.89	3.68	2.04	2.59	2.01	11.89	3.72	24	
9	2.00	2.06	2.67	3.27	2.36	2.84	2.88	2.87	6.65	7.36	S	10.22	2.02	2.02	2.02	2.02	2.21	7.05	9.31	5.24	8.26	4.84	2.12	2.03	2.00	10.22	4.10	24	
10	2.35	2.81	3.54	9.18	12.09	6.47	11.26	5.61	5.95	S	5.71	2.91	3.60	2.65	8.05	10.06	10.01	3.82	2.10	2.18	2.08	2.08	13.71	7.34	2.08	13.71	5.89	24	
11	2.80	2.10	2.08	2.08	3.79	2.09	2.98	2.39	S	2.12	15.04	5.26	5.43	3.65	2.50	C	C	C	C	C	C	7.31	10.69	9.13	7.37	2.08	15.04	4.93	24
12	3.69	5.24	25.89	25.89	4.81	6.49	6.10	S	4.83	4.98	5.65	2.63	2.68	2.57	2.16	2.11	2.61	3.08	3.51	2.05	2.30	2.31	2.47	2.29	2.05	25.89	5.49	24	
13	2.26	3.65	2.37	4.47	2.32	2.40	S	6.50	2.35	2.25	2.20	2.12	2.20	2.11	2.34	3.66	3.66	7.67	5.51	2.63	4.07	2.84	2.19	2.76	2.11	7.67	3.24	24	
14	2.35	2.15	2.32	2.12	2.13	S	2.28	5.04	5.32	2.34	3.31	3.93	2.14	2.12	3.11	3.52	2.72	3.14	3.25	2.87	2.46	2.94	3.14	3.81	2.12	5.32	2.98	24	
15	3.48	2.22	2.55	3.64	S	2.61	2.07	3.04	6.90	9.41	2.62	2.02	2.00	2.65	3.10	3.10	2.39	2.72	2.02	2.99	3.26	2.04	2.04	2.04	2.00	9.41	3.08	24	
16	2.06	2.06	4.69	S	2.10	2.07	2.12	2.09	2.07	2.06	2.06	2.10	2.07	2.10	2.11	2.12	2.16	2.20	2.20	Y	2.19	2.16	2.16	2.12	2.06	4.69	2.23	23	
17	2.17	2.15	S	2.03	2.00	1.97	1.96	1.95	1.94	1.93	1.93	1.92	1.91	1.90	1.94	1.97	1.93	1.94	1.93	1.93	1.98	1.95	1.92	1.91	1.90	2.17	1.96	24	
18	1.92	S	2.36	1.92	2.04	2.04	1.95	1.98	1.96	1.95	1.94	1.94	1.91	1.91	1.92	1.91	1.89	2.00	2.97	2.86	2.32	2.06	2.78	2.43	1.89	2.97	2.13	24	
19	S	1.92	1.93	2.09	1.97	1.92	1.91	2.21	2.25	2.12	2.35	2.20	1.90	2.22	2.34	2.62	3.25	1.90	1.91	1.90	1.91	1.93	1.92	S	1.90	3.25	2.12	24	
20	3.14	2.06	1.95	2.11	2.25	2.33	2.32	2.01	2.27	2.35	2.16	2.07	2.05	2.11	2.51	2.19	2.31	2.54	2.52	2.14	2.00	2.31	S	1.98	1.95	3.14	2.25	24	
21	1.97	1.97	1.98	1.98	1.98	1.98	1.97	1.97	1.96	1.95	1.96	1.96	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.98	1.98	S	1.96	1.96	1.95	1.98	1.97	24	
22	1.97	2.87	1.97	1.98	1.98	1.99	1.99	2.00	1.99	1.99	1.99	2.00	2.09	2.13	2.21	2.24	2.05	1.99	1.99	1.98	S	1.98	1.98	1.98	1.97	2.87	2.06	24	
23	2.00	2.05	2.04	2.06	2.06	2.08	2.13	2.14	2.45	2.08	2.05	2.66	2.57	2.35	2.60	3.19	3.73	2.17	2.05	S	2.01	2.02	3.17	2.08	2.00	3.73	2.34	24	
24	1.99	2.93	2.34	2.83	3.45	5.22	2.46	2.02	2.35	2.29	2.01	2.02	2.03	2.05	2.05	2.06	2.07	2.08	S	2.08	2.08	2.08	2.07	2.06	1.99	5.22	2.37	24	
25	2.05	2.04	2.29	2.29	1.99	2.08	1.98	1.99	2.10	2.10	2.22	2.02	1.98	1.98	2.33	2.37	2.39	S	2.19	2.05	2.21	2.03	2.11	1.98	1.98	2.39	2.12	24	
26	1.98	1.97	1.98	2.48	2.02	2.04	1.98	2.00	1.97	1.98	1.98	2.06	2.32	2.37	2.32	2.41	S	2.56	2.44	2.11	2.41	2.24	2.34	2.27	1.97	2.56	2.18	24	
27	2.20	2.39	2.22	2.26	2.33	2.82	3.62	2.32	2.01	1.99	2.13	2.20	2.36	2.18	2.47	S	2.31	2.68	2.53	2.31	2.40	2.47	2.46	2.56	1.99	3.62	2.40	24	
28	2.00	2.12	2.23	2.05	2.08	2.54	2.02	2.02	2.03	2.03	2.12	2.12	2.07	2.01	S	2.00	2.00	2.00	2.00	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.54	2.06	24
29	2.00	2.00	2.00	2.00	2.01	2.02	2.02	2.03	2.02	2.02	2.03	2.08	2.09	S	2.14	2.15	2.35	2.12	2.23	2.30	2.18	2.29	2.27	2.24	2.00	2.35	2.11	24	
30	2.13	2.21	2.02	2.26	2.26	2.32	2.26	2.26	2.53	2.23	2.26	2.20	S	2.31	2.30	2.51	2.43	2.74	2.54	2.36	2.75	2.53	2.76	2.35	2.02	2.76	2.37	24	
31	2.17	2.39	2.24	2.41	2.56	2.47	2.03	2.00	1.99	1.99	1.98	S	1.97	2.10	2.03	2.07	2.34	2.00	2.31	1.97	1.97	2.27	2.48	1.97	2.56	2.16	2.16	24	
HOURLY MAX	13.91	9.42	30.04	25.89	15.39	16.29	16.40	12.13	11.95	12.48	16.56	10.22	5.50	12.05	19.84	10.06	29.82	15.78	30.02	21.56	22.30	14.97	24.46	18.23					
HOURLY AVG	3.39	3.33	5.00	4.54	4.04	4.33	3.81	3.38	3.72	3.74	3.74	2.91	2.49	2.85	3.29	2.96	4.05	3.77	4.32	3.98	4.18	3.65	4.14	3.64					

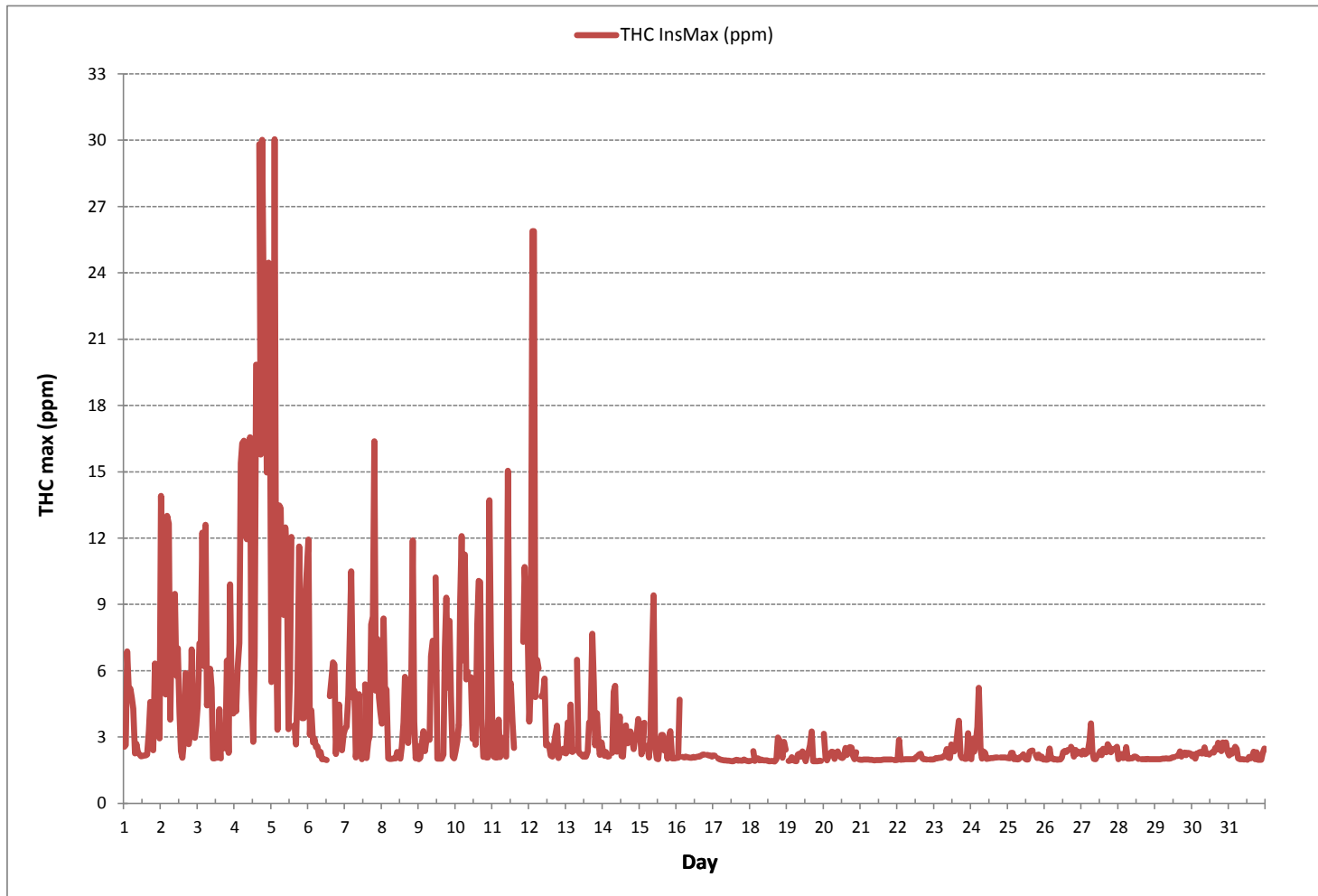
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	706
MAXIMUM INSTANTANEOUS VALUE:	30.04 ppm @ HOUR 2 ON DAY 5
DAYS CALIBRATION TIME:	32 hrs
MONTHLY CALIBRATION TIME:	5 hrs
OPERATIONAL TIME:	743 hrs
STANDARD DEVIATION:	3.69

TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - January 2018

METHANE MAX Instantaneous Maximum (CH₄ ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY 1	2.57	2.65	6.89	4.97	5.20	4.79	4.29	2.27	2.70	2.31	2.21	2.14	2.15	2.17	2.17	2.22	3.29	4.59	S	2.41	6.34	3.87	3.94	2.95	2.14	6.89	3.44	24	
2	13.90	9.42	10.09	4.93	12.99	12.64	3.81	7.90	9.19	9.48	5.78	7.03	4.11	2.37	2.07	2.92	5.90	S	2.69	3.19	6.99	3.17	2.97	3.55	2.07	13.90	6.40	24	
3	4.44	7.26	7.21	12.23	6.21	12.58	4.44	5.49	6.09	5.23	2.04	2.04	2.28	2.07	4.27	2.04	S	2.49	2.51	6.47	2.29	9.92	5.26	4.08	2.04	12.58	5.17	24	
4	5.68	4.18	6.11	7.27	15.38	16.29	16.40	12.11	11.93	12.17	16.57	5.16	2.79	6.69	19.83	S	20.40	15.76	20.40	20.40	20.40	14.97	20.40	18.24	2.79	20.40	13.46	24	
5	5.49	8.00	20.40	8.09	3.35	13.47	13.32	8.87	8.52	12.46	11.16	3.38	5.51	12.04	S	3.56	2.67	5.27	11.60	4.95	3.87	3.87	9.37	10.48	2.67	20.40	8.25	24	
6	11.91	3.12	4.21	2.77	2.95	2.55	2.58	2.17	2.32	2.01	2.00	1.98	1.97	S	4.86	5.52	6.39	6.30	2.25	3.92	4.48	2.78	2.41	3.17	1.97	11.91	3.68	24	
7	3.40	3.49	4.89	7.51	10.49	4.81	5.11	2.09	2.89	4.95	2.51	2.00	S	5.39	2.06	2.83	3.07	8.09	8.46	16.37	5.10	7.47	4.79	4.14	2.00	16.37	5.30	24	
8	3.62	8.38	4.98	5.16	2.05	2.02	2.02	2.03	2.05	2.04	2.33	S	2.03	2.58	3.68	5.72	3.53	2.74	3.98	4.56	11.87	3.71	2.04	2.60	2.02	11.87	3.73	24	
9	2.01	2.06	2.68	3.28	2.37	2.85	2.89	2.89	6.66	7.37	S	10.20	2.03	2.02	2.03	2.03	2.22	7.07	9.32	5.25	8.26	4.85	2.13	2.04	2.01	10.20	4.11	24	
10	2.36	2.83	3.55	9.17	12.06	6.48	11.24	5.61	5.95	S	5.71	2.93	3.61	2.66	8.06	10.06	10.01	3.83	2.10	2.19	2.09	2.09	13.70	7.34	2.09	13.70	5.90	24	
11	2.82	2.11	2.09	2.09	3.81	2.09	2.99	2.40	S	2.14	15.03	5.27	5.43	3.67	2.51	C	C	C	C	C	C	7.32	10.68	9.14	7.38	2.09	15.03	4.94	24
12	3.71	5.25	20.40	20.40	4.82	6.50	6.10	S	4.85	4.98	5.66	2.64	2.70	2.58	2.18	2.12	2.62	3.09	3.52	2.06	2.31	2.32	2.37	2.18	2.06	20.40	5.02	24	
13	2.20	3.58	2.23	4.40	2.21	2.27	S	6.51	2.36	2.17	2.18	2.10	2.11	2.11	2.35	3.68	3.68	7.67	5.51	2.64	4.08	2.86	2.21	2.77	2.10	7.67	3.21	24	
14	2.37	2.16	2.33	2.08	2.14	S	2.28	5.05	5.31	2.36	3.32	3.94	2.15	2.13	3.13	3.53	2.74	3.15	3.26	2.89	2.47	2.96	3.16	3.83	2.08	5.31	2.99	24	
15	3.51	2.24	2.56	3.66	S	2.62	2.08	3.06	6.92	9.40	2.64	2.03	2.01	2.66	3.12	3.12	2.41	2.74	2.03	2.99	3.29	2.05	2.06	2.05	2.01	9.40	3.10	24	
16	2.07	2.07	4.71	S	2.11	2.08	2.13	2.10	2.07	2.07	2.07	2.08	2.08	2.07	2.08	2.10	2.11	2.13	2.13	Y	2.12	2.11	2.10	2.07	2.07	4.71	2.21	23	
17	2.11	2.10	S	2.04	2.00	1.98	1.97	1.96	1.95	1.93	1.93	1.93	1.92	1.91	1.95	1.98	1.93	1.94	1.93	1.93	1.99	1.95	1.93	1.91	1.91	2.11	1.96	24	
18	1.93	S	2.37	1.93	2.05	2.05	1.95	1.99	1.96	1.95	1.95	1.94	1.92	1.91	1.92	1.91	1.90	2.00	2.98	2.88	2.33	2.07	2.79	2.44	1.90	2.98	2.14	24	
19	S	1.92	1.93	2.09	1.97	1.92	1.92	2.23	2.26	2.13	2.36	2.21	1.91	2.24	2.35	2.63	3.27	1.90	1.92	1.91	1.91	1.94	1.93	S	1.90	3.27	2.13	24	
20	3.16	2.07	1.95	2.11	2.25	2.34	2.33	2.02	2.27	2.36	2.17	2.08	2.06	2.12	2.51	2.20	2.32	2.55	2.53	2.15	2.01	2.32	S	1.98	1.95	3.16	2.25	24	
21	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.95	1.96	1.96	1.96	1.96	1.98	1.99	1.99	1.99	1.99	1.99	1.98	S	1.97	1.96	1.95	1.99	1.98	24	
22	1.97	2.88	1.98	1.99	1.99	2.00	2.00	2.00	2.00	1.99	1.99	2.01	2.10	2.14	2.23	2.24	2.05	1.99	1.99	1.98	S	1.99	1.98	1.99	1.97	2.88	2.06	24	
23	2.00	2.04	2.06	2.07	2.07	2.09	2.10	2.45	2.09	2.06	2.67	2.58	2.36	2.61	3.21	3.75	2.18	2.06	S	2.02	2.02	3.19	2.08	2.00	3.75	2.34	24		
24	2.00	2.95	2.35	2.84	3.47	5.23	2.47	2.03	2.36	2.30	2.02	2.03	2.04	2.06	2.06	2.07	2.08	2.09	S	2.08	2.08	2.08	2.08	2.07	2.00	5.23	2.38	24	
25	2.06	2.05	2.30	2.29	1.99	2.09	1.99	1.99	2.11	2.12	2.24	2.03	1.98	1.98	2.35	2.38	2.40	S	2.20	2.06	2.22	2.04	2.13	1.98	1.98	2.40	2.13	24	
26	1.98	1.98	1.99	2.48	2.03	2.04	1.98	2.01	1.98	1.99	1.99	2.07	2.33	2.38	2.33	2.43	S	2.57	2.45	2.12	2.43	2.25	2.35	2.27	1.98	2.57	2.19	24	
27	2.21	2.40	2.24	2.26	2.34	2.84	3.64	2.33	2.02	2.00	2.15	2.21	2.37	2.19	2.47	S	2.32	2.70	2.54	2.32	2.41	2.47	2.47	2.57	2.00	3.64	2.41	24	
28	2.01	2.13	2.24	2.06	2.08	2.55	2.03	2.03	2.03	2.04	2.13	2.13	2.08	2.02	S	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.00	2.55	2.07	24	
29	2.01	2.00	2.01	2.01	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.09	2.10	S	2.15	2.16	2.36	2.13	2.25	2.31	2.20	2.30	2.27	2.24	2.00	2.36	2.12	24	
30	2.14	2.22	2.03	2.27	2.27	2.32	2.28	2.28	2.54	2.25	2.26	2.21	S	2.32	2.31	2.51	2.44	2.75	2.55	2.37	2.76	2.54	2.77	2.36	2.03	2.77	2.38	24	
31	2.18	2.41	2.24	2.42	2.57	2.48	2.04	2.00	1.99	1.99	1.98	S	1.98	2.11	2.04	2.07	2.35	2.01	2.32	1.98	1.97	1.98	2.28	2.49	1.97	2.57	2.17	24	
HOURLY MAX	13.90	9.42	20.40	20.40	15.38	16.29	16.40	12.11	11.93	12.46	16.57	10.20	5.51	12.04	19.83	10.06	20.40	15.76	20.40	20.40	20.40	14.97	20.40	18.24					
HOURLY AVG	3.39	3.33	4.50	4.36	4.04	4.33	3.81	3.38	3.72	3.74	3.75	2.91	2.49	2.86	3.30	2.97	3.72	3.78	3.98	3.94	4.12	3.65	4.01	3.64					

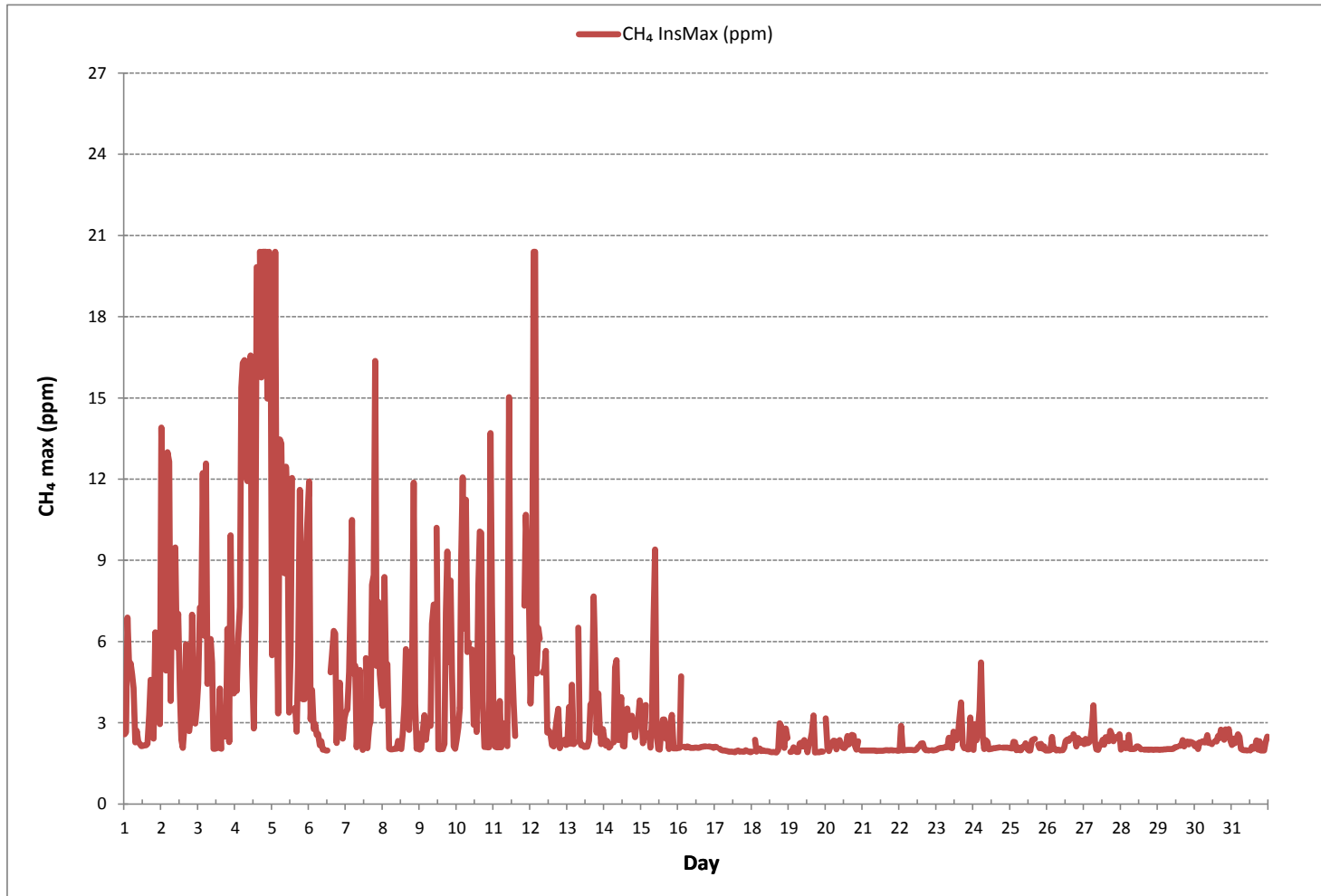
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	706
MAXIMUM INSTANTANEOUS VALUE:	20.40 ppm @ HOUR 16 ON DAY 4
IZS CALIBRATION TIME:	32 hrs
MONTHLY CALIBRATION TIME:	5 hrs
OPERATIONAL TIME:	743 hrs
STANDARD DEVIATION:	3.30

METHANE MAX Instantaneous Maximum (CH₄ ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - January 2018

NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY 1	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	24
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	0.19	0.00	0.00	0.10	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.01	24
3	0.00	0.00	0.08	0.08	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	0.08	0.01	24
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	24
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.06	0.06	S	0.08	0.28	0.08	0.08	0.08	0.08	0.08	0.07	0.10	0.06	0.00	0.28	0.05	24
6	0.08	0.08	0.10	0.10	0.07	0.05	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	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.02	24
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	0.00	24
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	0.00	24
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	0.00	24
10	0.00	0.00	0.00	0.00	0.10	0.02	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01	24
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	C	C	C	C	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
12	0.00	0.01	0.00	0.09	0.11	0.14	0.11	S	0.07	0.10	0.12	0.07	0.00	0.00	0.00	0.00	C	C	0.00	0.00	0.00	0.00	0.10	0.11	0.12	0.00	0.14	0.05	24
13	0.10	0.11	0.16	0.13	0.13	0.17	S	0.16	0.11	0.13	0.08	0.03	0.11	0.00	0.07	0.07	0.00	0.04	0.00	0.08	0.08	0.08	0.08	0.02	0.00	0.00	0.17	0.08	24
14	0.07	0.00	0.00	0.06	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01	24
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	0.16	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.01	24
16	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.06	0.06	0.05	0.07	0.09	0.08	Y	0.10	0.07	0.08	0.08	0.00	0.10	0.04	0.00	23
17	0.08	0.08	S	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	24
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	0.00	24
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	0.00	S	0.00	0.00	0.00	24
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	0.00	24
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	0.01	0.00	0.00	0.00	S	0.00	0.00	0.00	0.01	0.00	0.00	24
22	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.01	0.00	0.00	24
23	0.00	0.02	0.00	0.00	0.00	0.00	0.07	0.06	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01	24
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	0.00	24
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	0.00	24
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	0.01	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	0.01	0.00	24
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	0.00	24
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	0.00	24
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
HOURLY MAX	0.10	0.11	0.16	0.13	0.13	0.17	0.11	0.16	0.11	0.13	0.12	0.07	0.19	0.06	0.07	0.16	0.28	0.09	0.08	0.08	0.10	0.10	0.11	0.12					
HOURLY AVG	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01					

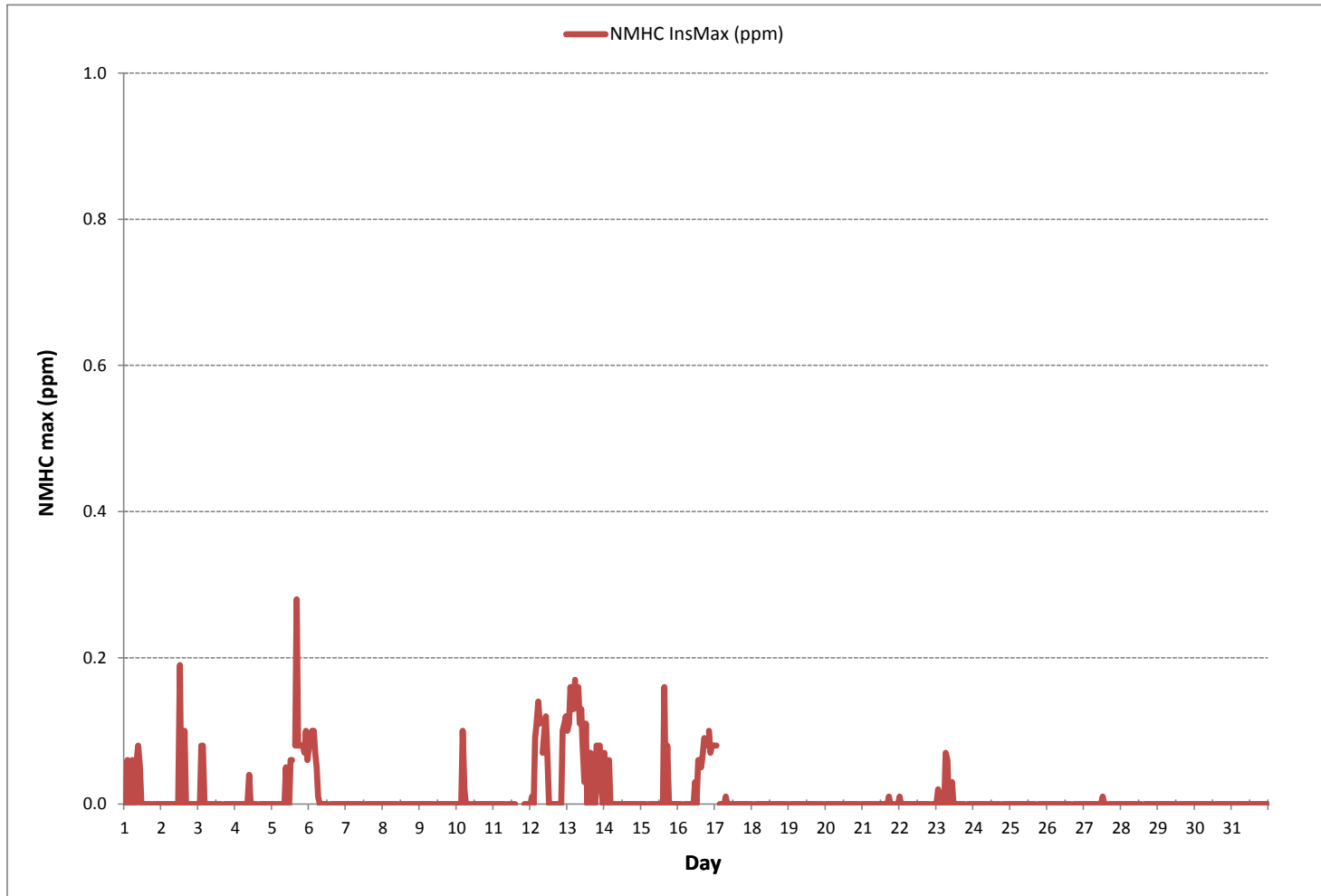
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	87
MAXIMUM INSTANTANEOUS VALUE:	0.28 ppm @ HOUR 16 ON DAY 5
IZS CALIBRATION TIME:	32 hrs
MONTHLY CALIBRATION TIME:	5 hrs
OPERATIONAL TIME:	743 hrs
STANDARD DEVIATION:	0.03

NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 986b Station - January 2018

WIND SPEED Instantaneous Maximum (WS kph)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.	
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.		
DAY																													
1	19.3	17.5	16.6	17.7	19.6	19.5	17.9	23.9	22.8	26.4	24.4	26.3	29.6	29.5	25.2	26.1	17.0	15.2	15.7	16.3	11.0	7.7	9.7	6.2	6.2	29.6	19.2	24	
2	8.6	10.0	8.5	8.5	6.1	6.8	6.2	8.7	6.3	10.2	9.2	6.7	9.5	16.3	18.9	13.4	12.8	10.3	14.3	24.7	18.2	11.1	13.5	12.6	6.1	24.7	11.3	24	
3	12.7	7.3	7.9	9.2	8.4	7.3	11.4	9.1	9.8	15.8	20.7	18.0	19.0	23.1	19.5	16.0	15.1	11.5	13.0	10.2	5.2	9.4	11.7	11.4	5.2	23.1	12.6	24	
4	5.4	6.9	7.5	5.7	4.8	5.8	6.6	5.9	7.8	7.9	8.1	8.0	4.5	4.8	7.6	7.3	10.2	9.4	5.0	7.9	5.7	6.9	8.5	9.3	4.5	10.2	7.0	24	
5	7.2	9.4	8.5	10.5	8.9	6.5	8.6	8.9	7.3	5.6	9.6	11.8	14.6	15.4	20.0	15.8	7.4	12.4	13.8	14.6	12.5	9.2	10.2	6.5	5.6	20.0	10.6	24	
6	7.5	12.9	18.5	18.5	22.9	20.1	25.7	28.4	28.9	25.9	25.7	25.1	28.9	32.3	28.4	23.7	27.3	29.7	30.8	24.9	25.5	27.5	28.6	24.1	7.5	32.3	24.7	24	
7	20.7	18.2	14.9	10.4	10.1	10.9	10.1	15.2	15.1	8.2	7.6	10.1	17.3	16.5	10.6	13.1	16.2	8.7	7.2	7.2	7.2	8.6	10.2	9.5	7.2	20.7	11.8	24	
8	5.1	4.3	4.2	17.5	22.3	24.4	22.3	24.4	25.0	26.0	32.5	33.9	30.7	30.1	26.8	23.9	22.7	21.6	21.5	25.6	24.2	18.3	23.3	20.6	4.2	33.9	22.1	24	
9	19.1	19.1	21.1	19.0	17.4	17.8	18.9	20.4	22.1	22.2	23.7	23.5	25.5	29.7	27.7	24.3	17.6	21.3	22.6	21.4	21.1	19.4	22.9	16.1	16.1	29.7	21.4	24	
10	9.4	6.2	4.3	3.4	2.1	2.5	3.3	2.9	4.2	5.6	7.6	8.3	12.0	11.5	11.0	10.1	11.0	10.7	11.0	9.1	8.2	7.1	6.2	7.2	2.1	12.0	7.3	24	
11	9.1	8.4	8.3	9.0	11.0	10.7	6.0	9.0	8.7	11.5	7.5	6.8	5.5	5.6	7.3	5.4	5.1	6.6	4.6	4.7	6.7	7.1	4.1	2.7	2.7	11.5	7.1	24	
12	3.3	4.2	4.0	4.9	4.2	5.4	6.6	7.8	6.3	5.0	3.6	3.3	4.7	7.2	8.5	9.9	6.2	8.9	9.9	11.7	16.9	19.4	17.1	16.6	3.3	19.4	8.2	24	
13	17.7	17.7	21.1	16.2	20.4	21.3	22.2	19.3	14.2	18.8	15.2	17.1	15.2	14.0	10.7	9.4	6.3	5.2	8.9	6.2	8.0	11.3	16.7	8.3	5.2	22.2	14.2	24	
14	11.8	9.2	7.2	9.1	11.8	7.0	6.6	4.8	6.4	11.8	9.7	14.0	15.1	17.2	11.3	12.7	16.0	18.0	22.6	19.9	21.7	21.8	21.3	16.4	4.8	22.6	13.5	24	
15	14.7	16.8	19.3	16.0	15.6	14.5	11.1	11.6	9.9	6.1	8.3	10.3	8.8	7.6	6.3	5.8	4.3	4.2	3.6	4.7	3.7	3.3	2.3	4.5	2.3	19.3	8.9	24	
16	3.4	3.9	4.2	3.7	4.6	3.6	6.1	9.5	11.2	13.7	18.5	18.3	19.7	17.6	16.1	17.3	12.5	16.5	16.9	Y	14.9	18.1	14.4	17.4	3.4	19.7	12.3	23	
17	20.0	19.9	23.3	21.8	22.6	20.1	20.8	20.3	17.3	18.8	21.0	20.8	17.3	17.9	15.0	16.7	13.8	13.9	11.3	12.7	13.9	12.8	23.0	26.5	11.3	26.5	18.4	24	
18	18.8	14.0	26.0	10.9	10.8	5.0	10.6	12.5	14.6	21.5	17.0	16.7	22.1	30.7	24.7	20.1	25.0	18.6	11.9	8.0	6.4	11.6	15.3	9.1	5.0	30.7	15.9	24	
19	6.7	10.5	8.4	11.3	6.6	7.0	6.3	9.5	10.4	11.8	11.8	16.0	16.8	18.3	16.2	10.3	7.7	5.1	3.2	3.1	3.4	6.0	3.0	2.9	2.9	18.3	8.8	24	
20	5.1	10.7	12.4	2.7	6.2	7.5	4.4	3.2	6.6	7.3	3.3	6.7	11.3	10.9	9.3	11.2	11.9	9.9	8.9	8.4	10.7	10.3	11.1	14.1	2.7	14.1	8.5	24	
21	9.2	9.7	11.7	20.7	20.2	17.1	25.1	22.9	28.1	29.0	28.7	32.4	33.2	23.9	25.4	25.5	28.5	24.5	23.8	25.9	26.5	23.1	22.2	20.6	9.2	33.2	23.2	24	
22	16.9	8.0	8.9	3.3	5.2	5.3	6.3	5.4	5.7	5.0	4.6	3.2	4.3	6.3	8.5	4.9	5.0	5.8	6.8	7.8	6.9	7.2	8.6	8.9	3.2	16.9	6.6	24	
23	8.5	7.6	10.2	12.0	6.7	6.9	4.3	6.5	2.8	5.2	9.4	7.4	9.0	6.6	6.5	5.2	5.8	8.2	5.9	7.9	9.6	9.3	7.1	11.2	2.8	12.0	7.5	24	
24	12.7	9.1	8.6	9.1	8.1	5.3	5.4	5.1	7.5	11.3	11.7	15.2	15.0	9.4	11.9	12.5	18.0	17.7	15.4	15.8	16.5	16.0	15.6	15.9	5.1	18.0	12.0	24	
25	12.4	11.9	13.2	10.6	11.4	9.1	11.7	9.7	12.9	17.1	18.3	18.0	18.2	18.4	21.2	21.9	26.5	22.2	20.3	21.7	19.9	19.4	22.0	26.2	9.1	26.5	17.3	24	
26	28.8	19.9	21.3	20.4	17.6	17.5	20.6	22.8	23.4	20.4	18.5	15.4	19.0	15.7	14.4	16.5	12.7	11.8	7.5	8.0	6.3	5.8	6.2	6.4	5.8	28.8	15.7	24	
27	5.7	6.9	7.3	8.8	7.3	6.3	7.0	3.6	3.6	3.1	5.8	6.2	5.6	11.1	11.9	14.2	13.3	9.9	8.7	8.8	8.0	9.1	8.7	9.1	3.1	14.2	7.9	24	
28	5.3	5.1	4.5	4.6	5.5	3.7	3.8	7.3	4.1	4.8	4.2	7.2	9.8	7.5	8.9	6.8	7.7	10.9	10.2	14.2	14.0	16.0	12.6	12.0	3.7	16.0	7.9	24	
29	14.5	17.2	15.1	19.5	18.7	20.8	18.6	16.1	17.7	16.7	16.9	17.4	22.3	23.1	18.7	12.6	15.8	13.9	22.3	15.9	21.2	22.9	28.4	31.2	12.6	31.2	19.1	24	
30	27.5	22.7	22.2	10.1	18.1	17.7	17.5	17.0	18.1	21.4	31.9	30.4	31.1	29.3	31.7	26.4	21.1	16.9	14.9	13.8	14.3	10.3	8.2	15.5	8.2	31.9	20.3	24	
31	12.7	13.1	10.1	7.6	5.8	6.1	4.0	2.6	2.4	3.9	2.6	5.4	4.5	6.8	4.9	5.8	9.6	6.5	8.2	8.0	7.6	6.7	5.8	8.4	2.4	13.1	6.6	24	
HOURLY MAX	28.8	22.7	26.0	21.8	22.9	24.4	25.7	28.4	28.9	29.0	32.5	33.9	33.2	32.3	31.7	26.4	28.5	29.7	30.8	25.9	26.5	27.5	28.6	31.2					
HOURLY AVG	12.3	11.6	12.2	11.4	11.6	11.0	11.5	12.1	12.3	13.5	14.1	14.8	16.1	16.6	15.6	14.3	13.9	13.1	12.9	13.0	12.8	12.7	13.5	13.1					

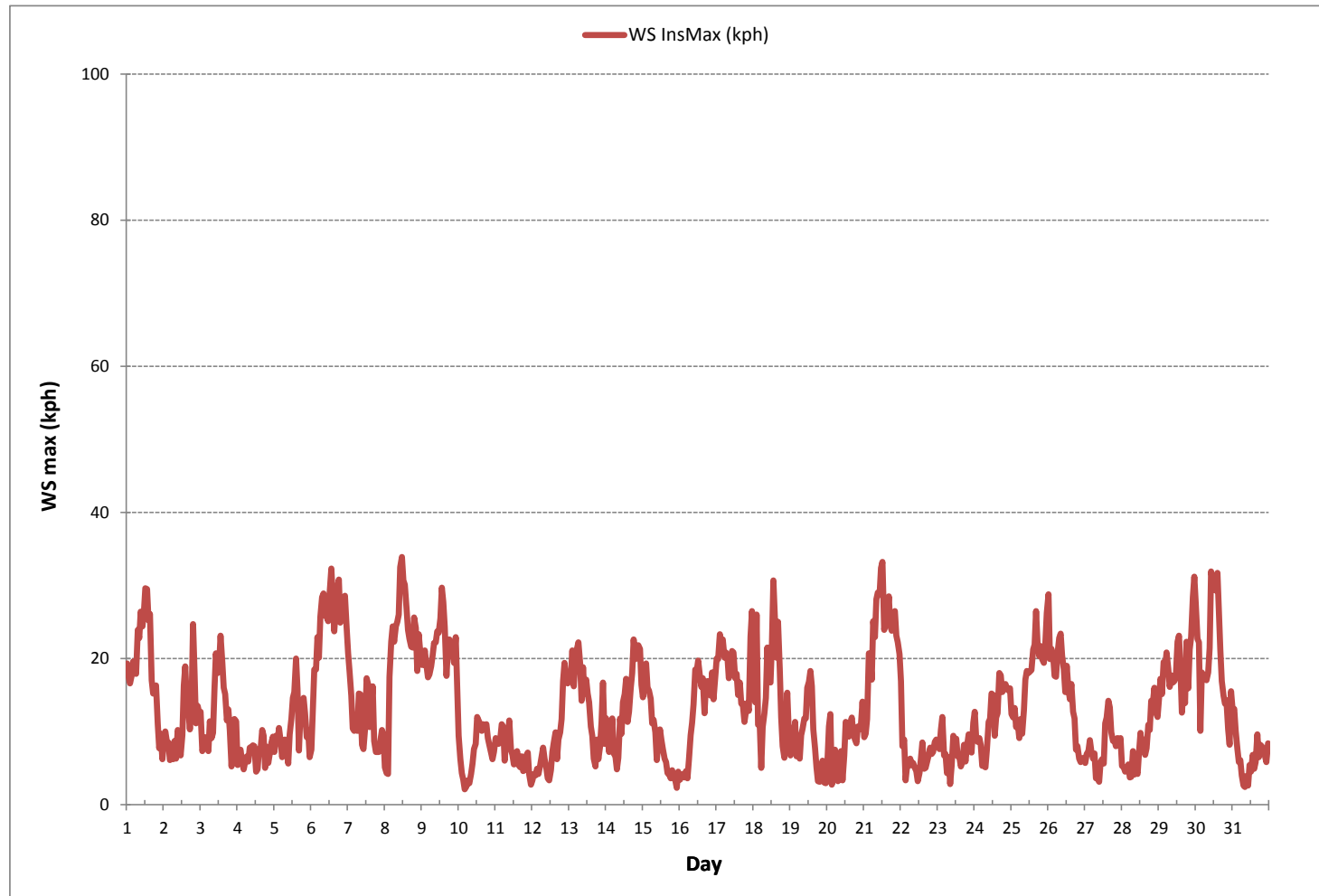
STATUS FLAG CODES

C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS VALUE:	33.9	kph	@ HOUR	11	ON DAY	8	
OPERATIONAL TIME:						743	hrs

WIND SPEED Instantaneous Maximum (WS kph)



***APPENDIX IV
REPORT CERTIFICATION FORM***

Report Certification Form

Alberta Airshed (if applicable)	EPA Approval or Code of Practice Registration # (if applicable)
YES	NA
Company Name (if applicable)	Industrial Operation Name (if applicable)
Peace River Area Monitoring Program Committee	Three Creeks 986b Station
Name of the Representative of the Person Responsible (Last, First, Middle)	Position / Title of the Representative of the Person Responsible
Wunmi Adekanmbi	Project Manager, Customer Service, Air Services
Is an External Party Certifying the Report? (If 'Yes', fill in the fields below for the external person.)	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Name of External Person Certifying the Report (Last, First, Middle)	Position / Title of External Person Certifying the Report
NA	NA
Company Name for the External Person Certifying the Report	Identification of Qualifications / Professional Designations of the External Person Certifying the Report
NA	NA

I certify that I have reviewed and verified the submitted report. I also certify that the report presented with this certification form is complete, accurate and representative of the monitoring results and timeframe.



Signature of the Representative of the Person Responsible / External Person Certifying the Report

February 21, 2018





Report Issued Date (dd-mm-yyyy)

APPENDIX V
DATA VALIDATION CERTIFICATION FORM



Validation Certificate Form

Client: <u>Peace River Area Monitoring Program Committee</u>	Project #: <u>8449-2018-01-67-C</u>
Site: <u>Three Creeks 986b Station</u>	Contact: <u>Karla Reesor</u>

Level 0 Preliminary Verification	<u></u>	Date <u>February 12, 2018</u>
Level 1 Primary Validation	<u></u>	Date <u>February 12, 2018</u>
Level 2 Final Validation	<u></u>	Date <u>February 21, 2018</u>
Level 3 Independent Data Review	<u></u>	Date <u>February 21, 2018</u>
Post-Final Validation	<u>NA</u>	Date <u>NA</u>

Notes
The Post-Final Validation step serves to re-evaluate the data that errors or omissions are discovered and/or suspected after the initial submittal of data. This validation is performed on an annual basis.