



MAXXAM ANALYTICS
#1 2080 39 Ave. NE, Calgary, AB
T2E 6P7

maxxam.ca
Toll Free 800-386-7247
Fax 403-219-3673

AMBIENT AIR MONITORING MONTHLY DATA REPORT
PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
THREE CREEKS 842b STATION

JOB #: 8449-2017-01-80-C

January 2017

Prepared for:

PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
SUITE #91, 305 - 4625 VARSITY DR. N.W
CALGARY, ALBERTA
T3A 0Z9

Attention: KARLA REESOR

DATE: **February 22, 2017**

Prepared by:

A handwritten signature in blue ink, appearing to read "Wunmi Adekanmbi".

Wunmi Adekanmbi, M.Sc., EPt.
Project Manager, Customer Service, Air Services

Reviewed by:

A handwritten signature in blue ink, appearing to read "Cheri Sinclair".

Cheri Sinclair, B.Sc.
Supervisor, Customer Service, Air Services

SUMMARY

In January 2017, Maxxam Analytics was contracted to manage the ambient air quality monitoring and maintenance activities at the Three Creeks 842b 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.

- **Power Failure:** Four hours of downtime were recorded for all parameters on January 5 due to a power failure. One more hour of downtime was incurred for SO₂ and Station Temperature, and two more hours for THC/CH₄/NMHC, as the equipments were recovering from the power failure.

- **TRS:** A total of sixty-six hours of downtime were recorded this month. Sixty hours were attributed to a converter failure that occurred after the power failure on January 5 and the subsequent quality assurance activities performed to address the issue. Six hours were incurred as a result of maintenance and and additional quality checks.

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 842b Station.

Should you have any questions concerning the results or if we can be of further assistance, please contact us at 403-219-3677 or toll-free at 1-800-386-7247.

Monthly Continuous Data Summary

Peace River Area Monitoring Program Committee Three Creeks 842b Station						MAXIMUM VALUES							OPERATIONAL TIME (%)
PARAMETER	OBJECTIVES		EXCEEDANCES		MONTHLY AVERAGE	READING	DAY	1-HOUR			24-HOUR		
	1-hr	24-hr	1-hr	24-hr				HOUR	WIND SPEED (kph)	WIND DIRECTION (sector)	READING	DAY	
SO ₂ (ppb)	172	48	0	0	0.1	1.7	26	1	15.4	SW	0.5	26	99.3
TRS (ppb)	-	-	-	-	0.3	0.9	2, 2	11, 12	1.7 1.3	ENE NNE	0.6	2	91.1
THC (ppm)	-	-	-	-	1.94	2.30	8	4	2.2	E	2.10	2	99.1
CH ₄ (ppm)	-	-	-	-	1.94	2.30	8	4	2.2	E	2.10	2	99.1
NMHC (ppm)	-	-	-	-	0.00	0.04	2	10	1.7	E	0.00	ALL	99.1
RELATIVE HUMIDITY (%)	-	-	-	-	78	97	20	2	5.5	S	92	4	99.5
BAROMETRIC PRESSURE (inHg)	-	-	-	-	27.78	28.36	7	VAR	VAR	VAR	28.30	7	99.5
AMBIENT TEMPERATURE (°C)	-	-	-	-	-8.6	8.8	18	13	9.1	SSW	4.0	28	99.5
STATION TEMPERATURE (°C)	-	-	-	-	21.2	22.9	7	16	6.8	N	22.3	14	99.5
VECTOR WS (kph)	-	-	-	-	4.3	30.7	14	6	-	SW	20.3	14	99.5
VECTOR WD (deg)	-	-	-	-	218 (SW)	-	-	-	-	-	-	-	99.5

VAR-VARIOUS

**SOUR GAS PROCESSING INDUSTRY
MONTHLY REPORT SUMMARY**

Three Creeks 842b Station

Peace River Area Monitoring Program Committee

Plant Name / Location

Company

Licence Number	Report Date	
	YEAR	MONTH
N/A	2017	January

CONTINUOUS AMBIENT MONITORING								
PARAMETER	STN No.	% TIME OPERATIONAL	ONE - HOUR AVERAGE			24 - HOUR AVERAGE		
			MAXIMUM VALUES		NO. READINGS > REGULATION	MAXIMUM VALUES		NO. READINGS > REGULATION
SO ₂	1	99.3	0.0017	ppm	0	0.0005	ppm	0
TRS	1	91.1	0.0009	ppm	-	0.0006	ppm	-
THC	1	99.1	2.30	ppm	-	2.10	ppm	-
CH ₄	1	99.1	2.30	ppm	-	2.10	ppm	-
NMHC	1	99.1	0.04	ppm	-	0.00	ppm	-
RH	1	99.5	97	%	-	92	%	-
BP	1	99.5	28.36	inHg	-	28.30	inHg	-
Ambient TPX	1	99.5	8.8	°C	-	4.0	°C	-
Station TPX	1	99.5	22.9	°C	-	22.3	°C	-
Wind Speed	1	99.5	30.7	kph	-	20.3	kph	-
Wind Direction	1	99.5	-		-	-		-

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.

TABLE OF CONTENTS

<u>Title</u>	<u>Page</u>
SUMMARY	1
MONTHLY CONTINUOUS DATA SUMMARY REPORT	2
SOUR GAS SUMMARY REPORT	3
EXCEEDANCE SUMMARY REPORT	4
TABLE OF CONTENTS	5
1.0 Discussion	6
2.0 Project Personnel	9
3.0 Plant Monthly Required AMD Summary	9
4.0 Calculations and Results	9
5.0 Methods and Procedures	10
Appendix I	Continuous Monitoring Data Results 13
	Sulphur Dioxide 14
	Total Reduced Sulphur 22
	Total Hydrocarbon 30
	Methane 38
	Non-Methane Hydrocarbon 46
	Wind Speed 54
	Wind Direction 61
	Relative Humidity 64
	Barometric Pressure 67
	Ambient Temperature 70
	Station Temperature 73
Appendix II	Equipment Calibration Results 76
	Sulphur Dioxide 77
	Total Reduced Sulphur 80
	Total Hydrocarbon 88
	Wind System 92
	Calibrators 94
	Calibration Gases 98
Appendix III	Report Certification Form 103
Appendix IV	Data Validation Certification Form 105

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).

Sample filters for all continuous air monitors are changed 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 (August 3, 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.

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)

- The routine monthly calibration was performed on January 4.
- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure. Data collected at hour 13:00 was invalidated as the analyzer was recovering from the power failure.

TOTAL REDUCED SULPHUR (TRS)

- A shut-down calibration was performed on January 4 prior to a scheduled maintenance. Maintenance was conducted on the converter and the thermocouple; a successful post-repair calibration was subsequently completed. Two hours of downtime were incurred during this maintenance event.
- The analyzer did not span correctly after a power failure that occurred on January 5. It was determined that the converter had failed during the power failure. The converter was replaced on January 7, followed by a successful post-repair calibration. Data was invalidated back to just before the power failure occurred, which was on January 5 at hour 08:00. Sixty hours of downtime were incurred as a result.
- An additional zero/span check was triggered remotely on January 18 and a 3-point repeat calibration was performed onsite on January 20, as quality assurance measures. This is because the analyzer was showing biased low zero and biased high span trends, within acceptance limits. Four hours of downtime were recorded as a result of these additional quality checks.
- Maximum instantaneous data collected between the calibration on January 7 and the one on January 20 appear to be lower than hourly data collected at the same period. This is because for instantaneous data, negative readings were corrected to zero but baseline zero correction was not applied.

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

- The routine monthly calibration was performed on January 4.
- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure. Data collected at hours 13:00 and 14:00 were invalidated as the analyzer was recovering from the power failure.
- The span gas cylinder was replaced on January 20. An additional span check was triggered afterwards, one hour of downtime was incurred as a result.
- Slight, sporadic noise was noted for the NMHC parameter when sampling ambient air and this is reflected in the NMHC instantaneous maximum data. With the exception of two isolated instances (January 2 at hour 10:00 - 0.21 ppm; and January 7 at hour 18:00 - 0.25 ppm) this noise remained below the acceptable threshold for this parameter based on AMD requirements (0.2 ppm) and, at all times, remained below a level that might trigger a VOC canister (0.3 ppm). This noise had minimal effect on hourly average data and given the analyzer was demonstrated to be operating within accepted limits, this noise is considered not to be significant. That said, these data are monitored on a daily basis and, should the data quality begin to deteriorate, the analyzer will be replaced.
- 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)

- The wind system was working well throughout the month. 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.
- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure.

RELATIVE HUMIDITY (RH)

- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure.

BAROMETRIC PRESSURE (BP)

- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure.

AMBIENT TEMPERATURE (AmbTPX)

- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure.

STATION TEMPERATURE (StnTPX)

- Four hours of downtime were recorded from hour 09:00 to hour 12:00 on January 5, due to a power failure. Data collected at hour 13:00 was invalidated as the temperature sensor was recovering from the power failure.

2.0 Project Personnel

Karla Reesor was the contact for Peace River Area Monitoring Program Committee and the Maxxam field technicians were Raja Ashraf and Russel Kirchner.

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 - API 100A UV Fluorescent Analyzer
Total Reduced Sulphur - Thermo 43i 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

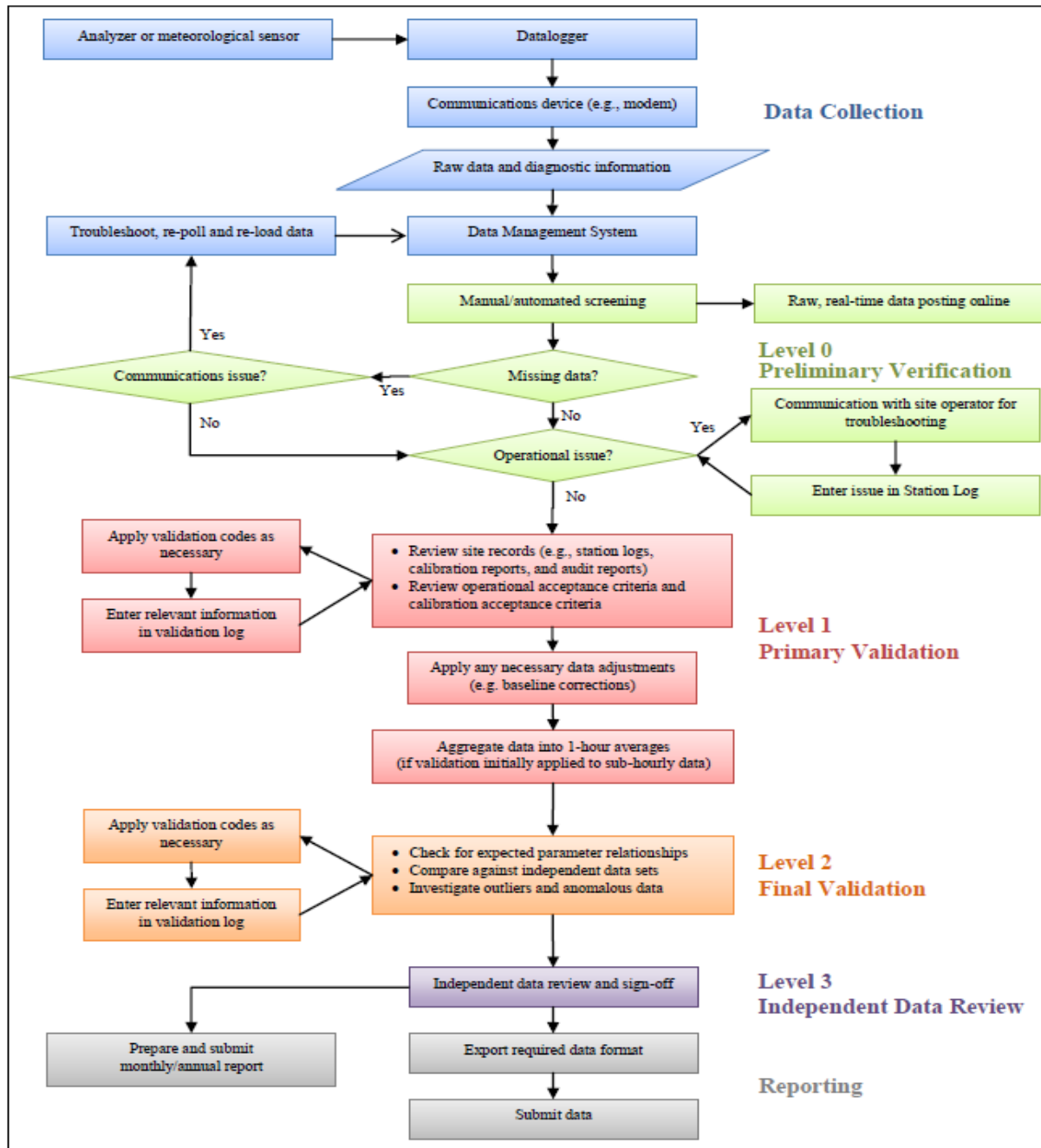
The purpose of Level 2 validation is to verify that there are no inconsistencies among related data, or among regional data measured at nearby sites.

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 (Aug 3, 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	0.1	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.4	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	24
2	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.4	0.3	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	24	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	S	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	24	
4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	P	P	P	P	R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	24	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
9	0.1	0.2	0.2	0.2	0.2	0.2	0.2	S	0.3	0.2	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.1	24	
10	0.1	0.2	0.4	0.3	0.0	0.0	S	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.0	0.4	0.1	24	
11	0.2	0.3	0.1	0.0	0.0	S	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	24	
12	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.3	0.1	24		
13	0.2	0.0	0.0	S	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
14	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.1	0.0	0.2	0.1	24	
15	0.1	S	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.3	0.1	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.0	0.3	0.2	24	
16	S	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	S	0.0	0.3	0.1	24	
17	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.1	0.0	0.1	0.0	24
18	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	S	0.0	0.0	0.2	0.0	0.0	24	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
20	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	S	0.1	0.0	0.0	0.0	0.0	0.3	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.2	0.1	0.0	0.1	0.0	0.0	S	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.3	0.1	24		
23	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.0	24	
24	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.7	0.7	0.9	0.9	S	1.0	0.6	0.3	0.2	0.2	0.1	0.0	0.0	0.0	1.0	0.3	24		
25	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.7	S	0.5	0.6	0.4	0.2	0.3	0.4	0.7	0.9	1.2	0.0	0.0	0.0	1.2	0.3	24		
26	1.5	1.7	1.5	0.8	0.6	0.3	0.3	0.2	0.1	0.2	0.1	0.0	0.3	S	0.2	0.0	0.0	0.6	0.5	0.4	0.7	0.5	0.3	0.1	0.0	1.7	0.5	24		
27	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.4	S	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.4	0.1	24		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	S	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24		
29	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.2	S	0.1	0.0	0.3	0.1	0.0	0.2	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.4	0.1	24		
30	0.3	0.4	0.2	0.2	0.3	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.1	24		
31	0.0	0.0	0.0	0.0	0.1	0.0	0.0	S	0.1	0.3	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	24	
HOURLY MAX	1.5	1.7	1.5	0.8	0.6	0.3	0.3	0.3	0.3	0.3	0.6	0.7	0.7	0.9	0.9	0.5	1.0	0.6	0.5	0.4	0.7	0.7	0.9	1.2	0.0	0.3	0.0	24		
HOURLY AVG	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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

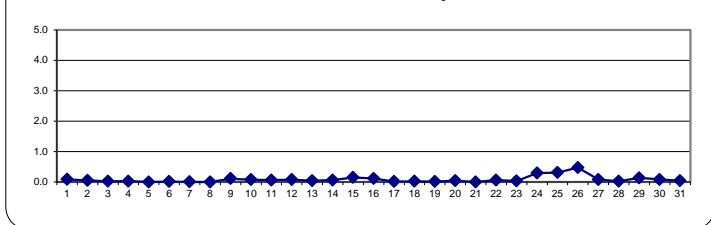
OBJECTIVE LIMIT:

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

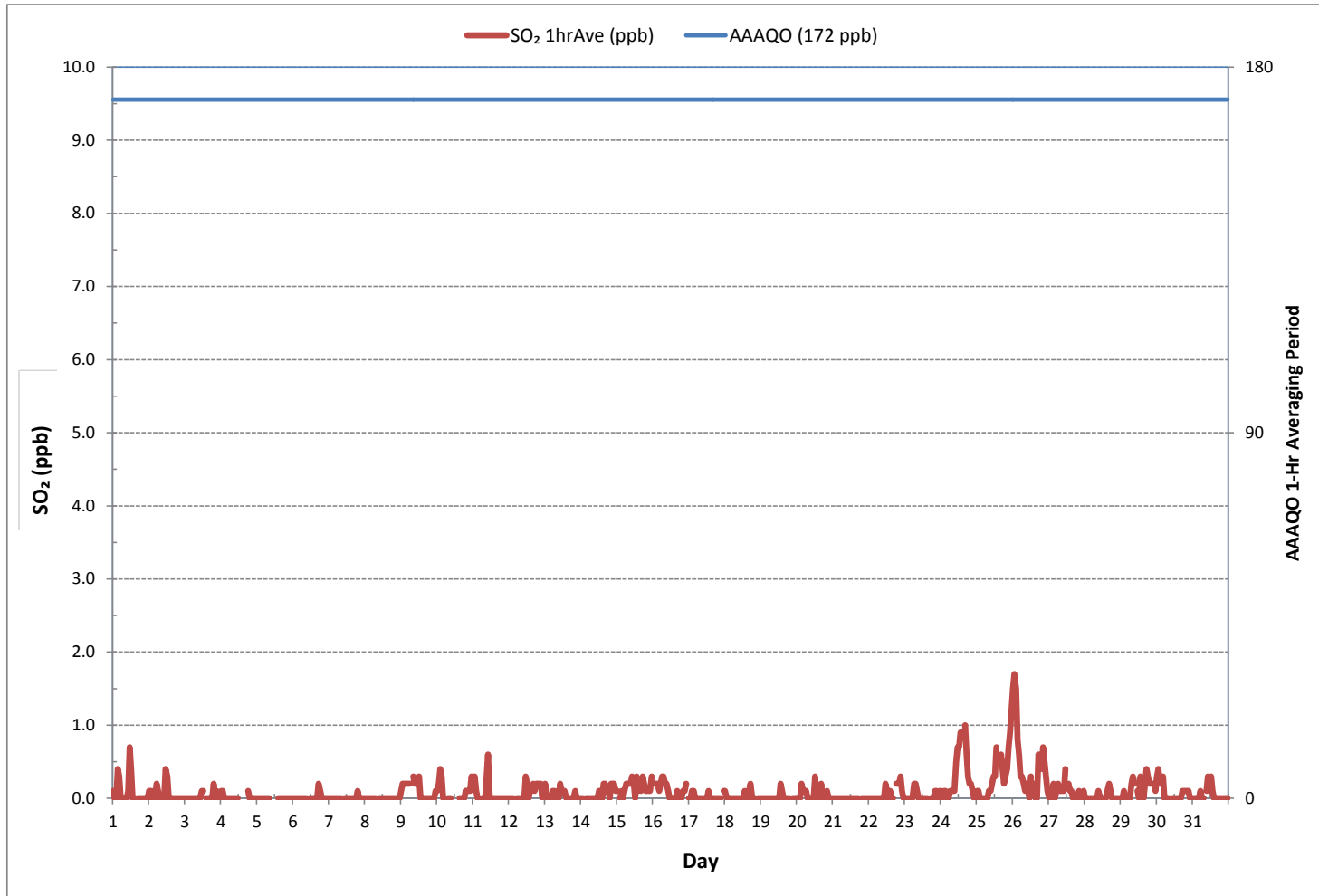
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDANCES:	0				
NUMBER OF 24-HR EXCEEDANCES:	0				
NUMBER OF NON-ZERO READINGS:	250				
MINIMUM 1-HR AVERAGE:	0.0 ppb @ HOUR(S)	VAR	ON DAY(S)	ALL	
MAXIMUM 1-HR AVERAGE:	1.7 ppb @ HOUR(S)	1	ON DAY(S)	26	
MAXIMUM 24-HR AVERAGE:	0.5 ppb		ON DAY(S)	26	
			VAR-VARIOUS		
IZS CALIBRATION TIME:	30	hrs	OPERATIONAL TIME:	739	hrs
MONTHLY CALIBRATION TIME:	4	hrs	AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	0.2		MONTHLY AVERAGE:	0.1	ppb

24 HR AVERAGES January 2017



SULPHUR DIOXIDE Hourly Averages (SO₂ ppb)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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	0.7	0.4	0.4	1.3	1.3	0.4	0.4	0.4	0.4	0.4	1.0	1.9	1.6	0.4	0.4	S	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.9	0.6	24
2	0.7	0.7	0.4	0.4	0.4	0.7	0.7	0.4	0.4	0.4	0.4	1.0	1.0	0.4	S	0.1	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1	1.0	0.5	24
3	0.4	0.4	0.4	0.4	0.4	0.1	0.4	0.4	0.1	0.4	0.4	0.4	0.4	S	0.4	0.4	0.4	0.4	1.0	1.0	0.7	0.7	0.7	0.4	0.1	1.0	0.5	24	
4	0.7	0.7	0.4	0.7	0.4	0.4	0.4	0.7	0.7	0.4	0.4	0.4	S	1.0	C	C	C	C	1.0	0.4	0.4	0.4	0.4	0.4	0.4	1.0	0.5	24	
5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	P	P	P	P	R	1.3	0.7	0.4	0.4	0.4	0.7	0.7	0.4	0.4	0.7	0.4	1.3	0.5	19	
6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	S	0.7	0.7	0.7	0.7	0.7	1.0	1.0	0.7	0.7	0.7	0.4	0.4	0.4	0.4	1.0	0.7	24	
7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	S	0.4	0.4	0.4	1.0	1.0	0.1	0.1	0.4	0.4	1.6	1.3	0.4	0.4	0.4	0.1	1.6	0.5	24	
8	0.4	0.4	0.7	0.4	0.4	0.7	0.7	0.4	S	0.4	0.4	0.4	0.4	0.4	0.7	0.4	0.4	0.4	0.4	0.7	0.7	0.4	0.7	0.7	0.4	0.7	0.5	24	
9	0.7	1.0	1.0	1.0	0.7	1.0	1.0	S	1.0	0.7	0.7	1.0	1.0	0.7	0.4	0.7	0.7	0.7	0.4	0.7	0.7	0.7	0.7	0.7	0.4	1.0	0.8	24	
10	0.7	1.0	1.0	1.0	0.7	0.7	S	0.7	0.4	0.4	0.4	1.0	0.7	0.7	0.7	0.4	0.7	0.7	0.7	1.0	0.7	1.0	1.0	1.3	0.4	1.3	0.8	24	
11	1.0	1.3	1.0	1.0	1.0	S	0.7	1.0	1.0	1.6	1.9	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.7	0.4	0.7	0.7	0.4	0.4	0.4	1.9	0.8	24	
12	0.4	0.7	0.7	0.7	S	0.4	0.4	0.7	0.7	0.7	0.7	1.0	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.0	0.7	0.7	0.4	1.0	0.8	24	
13	1.0	0.7	0.7	S	0.7	0.7	0.7	0.7	1.0	0.7	1.0	1.0	0.7	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	1.0	0.8	24	
14	0.7	0.7	S	0.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	0.7	0.7	1.0	1.0	1.0	1.0	1.0	0.7	1.0	1.0	0.7	0.4	1.0	0.8	24	
15	0.7	S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	1.0	0.7	1.0	0.8	24
16	S	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.7	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	S	0.7	1.3	1.0	24
17	1.0	1.0	1.0	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.0	1.0	1.0	1.0	1.0	0.7	S	1.0	0.7	1.3	1.0	24	
18	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.0	0.7	1.0	1.0	1.0	1.3	1.3	1.0	1.3	1.0	S	1.0	1.0	0.7	1.3	1.0	24		
19	0.7	1.0	0.7	0.7	0.7	0.7	0.7	1.0	0.7	0.7	0.7	0.7	1.0	1.0	1.0	0.7	0.7	0.7	0.7	0.7	S	0.7	0.7	0.7	0.7	1.0	0.8	24	
20	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.0	1.0	1.3	1.3	1.3	1.0	1.3	1.0	1.0	S	1.0	0.7	0.7	0.7	0.7	0.7	1.3	1.0	24	
21	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.7	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.4	0.7	S	0.4	0.4	0.4	0.4	0.4	0.7	0.4	0.7	0.6	24
22	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	S	0.7	0.7	1.0	1.0	0.7	0.7	0.4	1.0	0.6	24	
23	0.4	0.7	0.4	0.4	0.4	0.7	1.0	0.7	0.7	0.7	0.4	0.7	0.7	0.4	0.4	S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	1.0	0.6	24	
24	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3	1.3	1.6	1.9	S	1.6	1.3	1.0	0.7	0.7	0.7	0.7	0.7	0.7	1.9	0.9	24	
25	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.7	0.7	0.7	1.0	1.0	1.0	1.6	S	1.3	1.3	1.0	0.7	0.7	1.0	1.6	1.6	1.9	0.4	1.9	1.0	24	
26	2.2	2.2	2.2	1.6	1.3	1.0	0.7	0.7	0.7	0.7	0.7	1.0	1.0	S	1.0	0.7	0.7	1.3	1.0	1.3	1.3	1.3	1.0	0.7	0.7	2.2	1.1	24	
27	0.7	0.7	0.7	1.0	0.7	1.0	0.7	1.0	0.7	0.7	1.0	1.0	S	1.0	0.7	0.7	0.7	0.7	1.0	0.7	1.0	1.0	0.7	1.0	0.7	1.0	0.8	24	
28	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	S	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	1.0	1.0	0.7	0.7	1.0	0.9	24	
29	0.7	1.0	0.7	0.7	0.7	0.7	1.0	1.0	0.7	S	0.7	0.7	1.0	1.0	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	1.0	0.8	24
30	1.0	1.0	1.0	1.0	1.0	0.4	0.4	0.7	0.7	S	0.4	0.7	0.7	0.4	0.4	0.4	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.0	0.6	24
31	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	S	0.4	0.7	0.7	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.0	0.5	24
HOURLY MAX	2.2	2.2	2.2	1.6	1.3	1.0	1.0	1.0	1.0	1.6	1.9	1.9	1.6	1.6	1.9	1.3	1.6	1.3	1.0	1.6	1.3	1.6	1.6	1.9					
HOURLY AVG	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7					

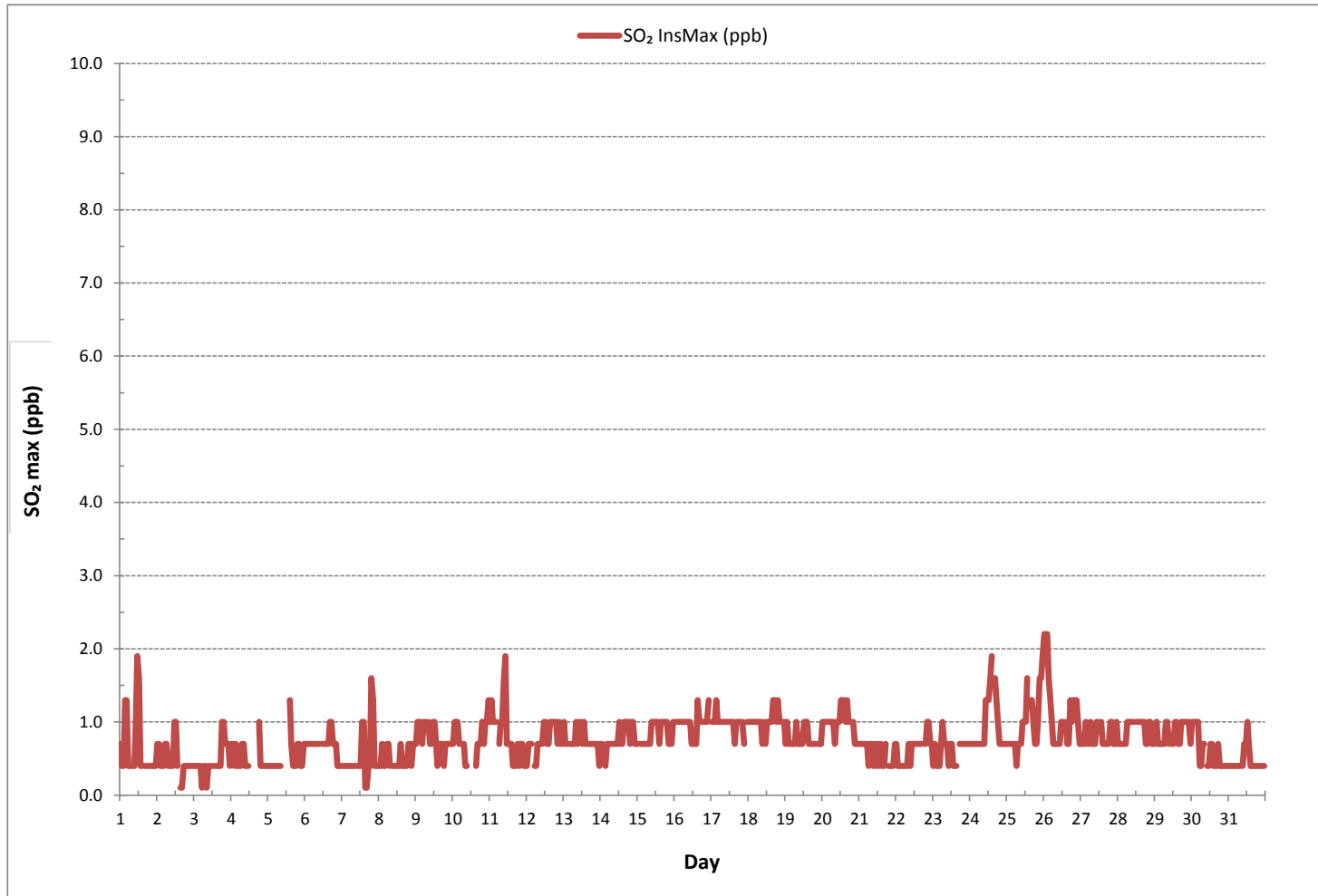
STATUS FLAG CODES

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:	2.2 ppb @ HOUR(S) VAR ON DAY(S) 26
	VAR-VARIOUS
IZS CALIBRATION TIME:	31 hrs
MONTHLY CALIBRATION TIME:	4 hrs
STANDARD DEVIATION:	0.3
OPERATIONAL TIME:	739 hrs

SULPHUR DIOXIDE Instantaneous Maximum (SO₂ ppb)

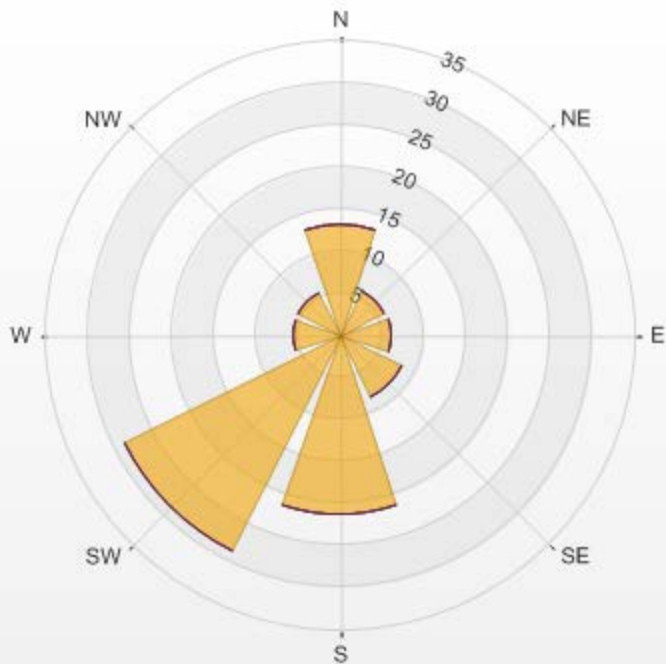


Wind: THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-SO2[ppb] Monthly: 01/2017 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 5.11% Valid Data: 94.88% Calm Avg: 0.03 [ppb]

Direction	0-3	3-10	10-85	85-170	>170.0	Total
N	13.21	0	0	0	0	13.21
NE	5.82	0	0	0	0	5.82
E	6.11	0	0	0	0	6.11
SE	8.38	0	0	0	0	8.38
S	21.45	0	0	0	0	21.45
SW	28.69	0	0	0	0	28.69
W	5.68	0	0	0	0	5.68
NW	5.54	0	0	0	0	5.54
Summary	94.88	0	0	0	0	94.88

% Icon Classes (ppb) 95 0-3 0 3-10 0 10-85 0 85-170 0 >170.0

THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-SO2[ppb] 01/01/2017 00:00 - 31/01/2017
23:00 Calm: 5.11% Calm Poll Avg: 0.03[ppb]



SO2[ppb] Calibration: THREE CREEKS #842 TRAILER Monthly: 2017/01 Type: Span



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

TOTAL REDUCED SULPHUR



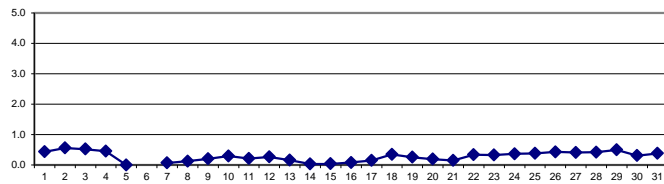
TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)

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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	S	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	24
2	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.9	0.9	0.6	S	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.9	0.6	0.4	24	
3	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	S	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.6	0.5	24	
4	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.6	C	C	C	Y	Y	C	C	C	C	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.7	0.5	22	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	0.0	0.0	0.0	9	
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0.0	0.0	0.0		
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Y	Y	Y	C1	C1	C1	C1	0.1	0.1	0.0	0.0	0.1	0.1	0.1		
8	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	S	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	
9	0.1	0.1	0.1	0.2	0.2	0.1	0.1	S	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.3	0.2	24	
10	0.3	0.3	0.3	0.3	0.3	0.3	S	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.4	0.3	24		
11	0.2	0.2	0.2	0.2	0.2	S	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.3	0.2	24		
12	0.4	0.3	0.3	0.3	S	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.3	24		
13	0.2	0.2	0.2	S	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	24	
14	0.1	0.1	S	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	24	
15	0.0	S	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	24	
16	S	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	S	0.0	0.1	0.1	24	
17	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	S	0.3	0.0	0.3	0.1	24	
18	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.4	S1	0.2	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	S	0.4	0.4	0.2	0.5	0.3	23	
19	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.5	0.6	0.2	0.2	0.2	0.2	0.3	S	0.1	0.0	0.0	0.0	0.6	0.3	24		
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C1	C1	C1	0.8	0.6	0.6	0.4	0.4	0.2	S	0.3	0.2	0.2	0.2	0.0	0.8	0.2	21		
21	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	S	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	24	
22	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	S	0.4	0.4	0.4	0.4	0.4	0.2	0.4	0.3	24	
23	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	S	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	24	
24	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	S	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	24	
25	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	S	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.5	0.4	24	
26	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	S	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	24	
27	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	S	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	24	
28	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	S	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.5	0.4	24		
29	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.6	S	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	24	
30	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	S	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	24	
31	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	S	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.4	24	
HOURLY MAX	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.9	0.9	0.8	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6		
HOURLY AVG	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		

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

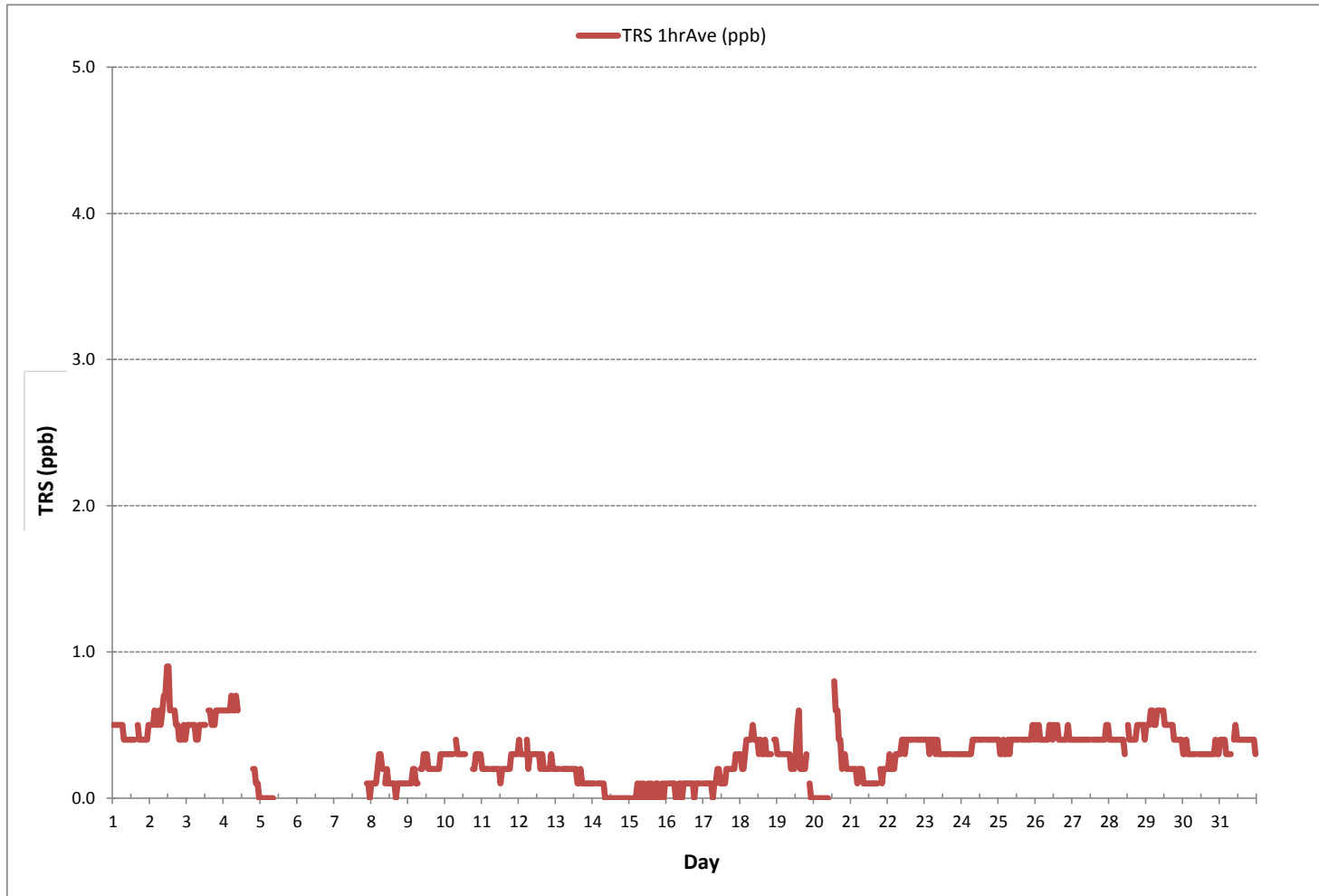
24 HR AVERAGES January 2017



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	584			
MINIMUM 1-HR AVERAGE:	0.0 ppb	@ HOUR(S)	VAR	ON DAY(S) VAR
MAXIMUM 1-HR AVERAGE:	0.9 ppb	@ HOUR(S)	11, 12	ON DAY(S) 2, 2
MAXIMUM 24-HR AVERAGE:	0.6 ppb			ON DAY(S) 2
				VAR-VARIOUS
IZS CALIBRATION TIME:	28 hrs	OPERATIONAL TIME:	678 hrs	
MONTHLY CALIBRATION TIME:	7 hrs	AMD OPERATION UPTIME:	91.1 %	
STANDARD DEVIATION:	0.2	MONTHLY AVERAGE:	0.3 ppb	

TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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	0.8	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.8	S	0.8	0.7	0.6	0.6	0.7	0.7	0.9	0.7	0.6	0.9	0.7	24		
2	0.8	0.8	0.8	1.0	0.8	0.8	1.0	0.8	1.1	1.0	1.1	1.5	1.3	0.9	S	1.0	0.9	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.7	1.5	0.9	24		
3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.9	0.8	0.9	1.0	0.8	S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.9	0.8	0.7	1.0	0.8	24		
4	0.8	0.8	0.8	0.9	0.7	0.9	0.7	0.8	0.9	C	C	C	C	Y	Y	C	C	C	C	0.4	0.3	0.2	0.2	0.1	0.1	0.9	0.6	22		
5	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.0	P	P	P	P	X	X	X	X	X	X	X	X	X	X	X	X	0.0	0.2	0.1	9	
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Y	Y	Y	C1	C1	C1	C1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24	
10	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
11	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
12	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
13	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24	
14	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
15	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
16	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	24	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	23	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	24	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C1	C1	C1	C1	0.7	0.6	0.6	0.6	0.5	S	0.6	0.5	0.6	0.6	0.0	0.7	0.3	20		
21	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.6	S	0.7	0.6	0.7	0.8	0.6	0.5	0.8	0.6	24		
22	0.6	0.7	0.6	0.6	0.6	0.8	0.7	0.6	0.7	0.7	0.8	0.6	0.7	0.7	0.6	0.7	0.6	S	0.7	0.7	0.7	0.7	0.6	0.8	0.6	0.8	0.7	24		
23	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.6	0.7	0.7	0.7	0.8	0.7	0.6	S	0.7	0.7	0.6	0.7	0.6	0.7	0.6	0.6	0.8	0.7	24		
24	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.6	S	0.8	0.6	0.6	0.8	0.8	0.8	0.8	0.7	0.8	0.6	0.8	0.7	24	
25	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.9	0.7	0.8	S	0.6	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.8	0.7	0.6	0.9	0.7	24	
26	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.6	S	0.6	0.7	0.5	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.7	0.6	0.6	24	
27	0.5	0.6	0.6	0.6	0.5	0.7	0.5	0.6	0.6	0.5	0.6	0.7	S	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7	0.6	0.5	0.7	0.6	0.6	24	
28	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.6	S	0.9	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.9	0.6	24	
29	0.5	0.6	0.7	0.6	0.8	0.5	0.6	0.6	0.6	0.6	S	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.5	0.8	0.6	24
30	0.6	0.5	0.6	0.6	0.6	0.6	0.8	0.8	0.6	S	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.5	0.8	0.6	24	
31	0.6	0.7	0.6	0.7	0.7	0.6	0.7	0.6	S	0.8	0.7	0.9	0.8	0.8	0.7	0.7	0.6	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.6	0.9	0.7	24	
HOURLY MAX	0.8	0.8	0.8	1.0	0.8	0.9	1.0	0.8	1.1	1.0	1.1	1.5	1.3	0.9	0.8	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.8						
HOURLY AVG	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4						

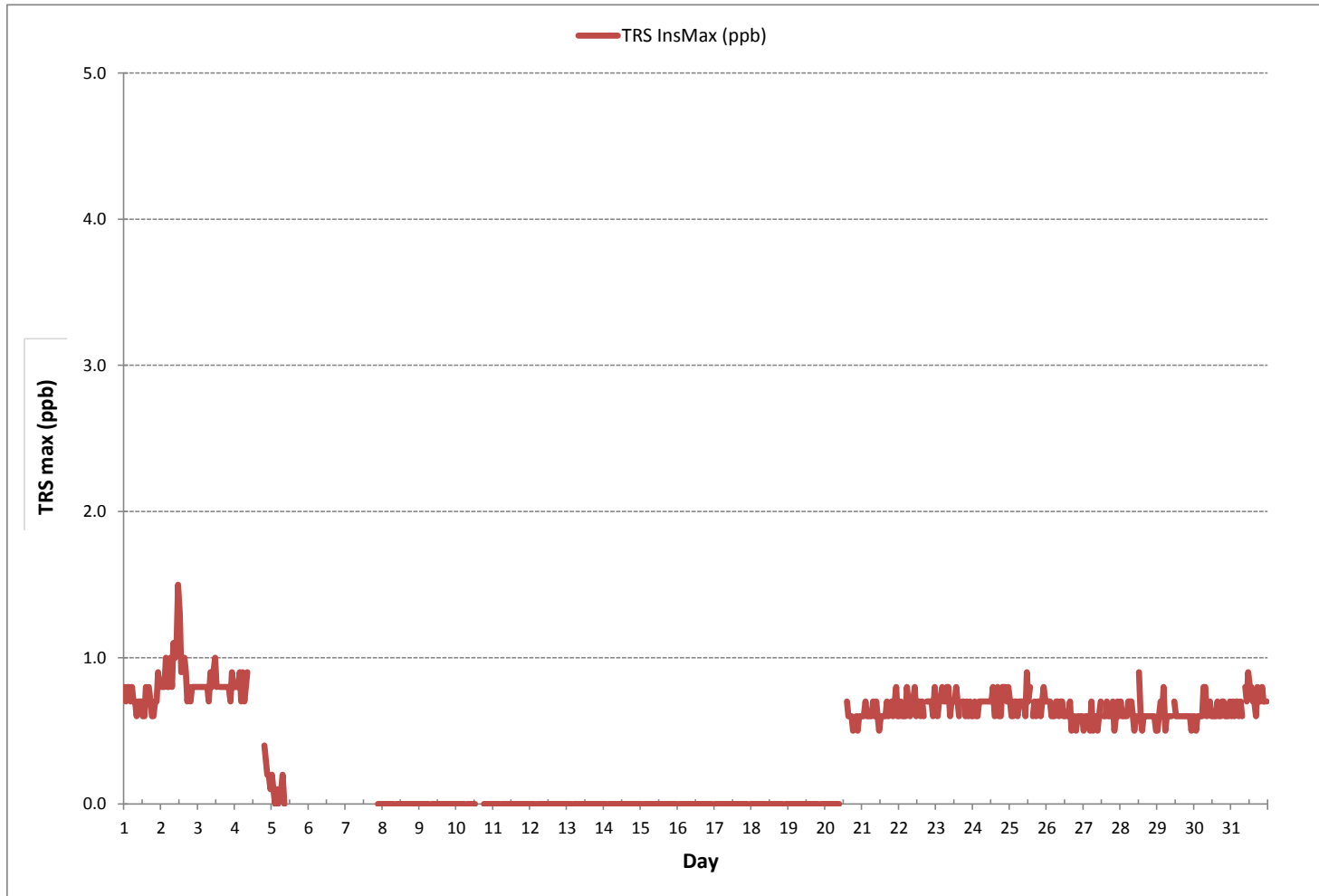
STATUS FLAG CODES

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:	351
MAXIMUM INSTANTANEOUS VALUE:	1.5 ppb @ HOUR(S) 11 ON DAY(S) 2
	VAR-VARIOUS
IZS CALIBRATION TIME:	28 hrs
MONTHLY CALIBRATION TIME:	8 hrs
OPERATIONAL TIME:	677 hrs
STANDARD DEVIATION:	0.4

TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)



Wind: THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-TRS[ppb] Monthly: 01/2017 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 5.46% Valid Data: 86.39% Calm Avg: 0.35 [ppb]

Direction	0-1	1-3	3-10	>10.0	Total
N	10.92	0	0	0	10.92
NE	4.99	0	0	0	4.99
E	3.59	0	0	0	3.59
SE	9.05	0	0	0	9.05
S	22.46	0	0	0	22.46
SW	31.36	0	0	0	31.36
W	6.24	0	0	0	6.24
NW	5.93	0	0	0	5.93
Summary	94.54	0	0	0	94.54

% Icon Classes (ppb)

95



0-1

0



1-3

0



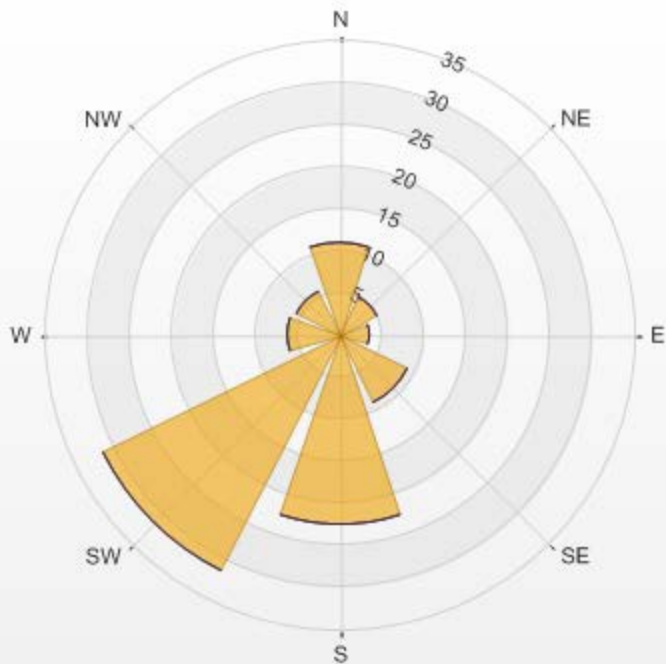
3-10

0



>10.0

THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-TRS[ppb] 01/01/2017 00:00 - 31/01/2017 23:00
Calm: 5.46% Calm Poll Avg: 0.35[ppb]



TRS[ppb] Calibration: THREE CREEKS #842 TRAILER Monthly: 2017/01 Type: Span



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

TOTAL HYDROCARBON

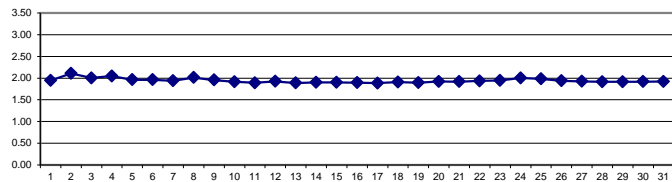
TOTAL HYDROCARBONS Hourly Averages (THC ppm)

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	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.95	1.94	1.95	1.94	1.94	1.93	1.94	S	1.94	1.94	1.93	1.93	1.94	1.97	1.96	1.95	1.93	1.97	1.94	24	
2	2.23	2.20	2.18	2.27	2.17	2.21	2.19	2.16	2.15	2.13	2.26	2.26	2.13	1.99	S	2.00	2.00	2.00	1.98	1.98	1.99	1.99	1.97	1.97	1.97	2.27	2.10	24	
3	1.96	1.96	1.96	1.97	1.98	1.99	1.99	1.99	2.01	2.00	2.00	2.00	1.99	S	2.00	2.00	2.00	2.01	2.00	2.03	2.04	2.05	2.05	2.05	1.96	2.05	2.00	24	
4	2.04	2.05	2.06	2.06	2.06	2.07	2.06	2.06	2.04	2.02	C	C	C	C	C	C	2.04	2.05	2.05	2.04	2.02	2.03	2.05	2.10	2.00	2.00	2.10	2.05	24
5	1.97	1.97	1.98	1.99	2.00	1.98	1.96	1.94	1.95	P	P	P	P	R	R	1.94	1.93	1.94	1.95	1.99	1.98	1.95	1.95	1.95	1.93	2.00	1.96	18	
6	1.97	1.96	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	S	1.96	1.96	1.96	1.96	1.97	1.98	1.99	1.98	1.96	1.96	1.96	1.96	1.94	1.94	1.99	1.96	24	
7	1.93	1.93	1.94	1.94	1.94	1.93	1.93	1.94	1.94	S	1.95	1.94	1.94	1.93	1.94	1.93	1.95	1.96	1.95	1.94	1.94	1.93	1.92	1.93	1.92	1.96	1.94	24	
8	1.93	1.93	2.02	2.23	2.30	2.29	2.24	2.15	S	2.03	1.99	1.94	1.92	1.92	1.92	1.92	1.92	1.93	1.95	1.94	1.94	1.95	1.95	1.96	1.92	2.30	2.01	24	
9	1.96	1.96	1.96	1.96	1.97	1.97	1.97	S	1.98	1.98	1.98	1.98	1.96	1.92	1.91	2.01	1.98	1.94	1.93	1.93	1.93	1.92	1.93	1.93	1.91	2.01	1.95	24	
10	1.94	1.93	1.91	1.93	1.94	1.91	S	1.90	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.90	1.89	1.89	1.89	1.94	1.91	24	
11	1.89	1.89	1.89	1.88	1.90	S	1.86	1.85	1.85	1.85	1.85	1.85	1.86	1.87	1.88	1.88	1.89	1.89	1.90	1.90	1.92	1.94	2.00	2.00	1.85	2.00	1.89	24	
12	2.06	2.00	1.96	1.96	S	1.91	1.90	1.90	1.91	1.90	1.91	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.90	1.89	1.89	1.88	1.88	2.06	1.93	24	
13	1.87	1.89	1.89	S	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.89	1.90	1.90	1.89	1.89	1.89	1.87	1.90	1.89	24	
14	1.89	1.89	S	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.91	1.90	1.90	1.91	1.90	1.91	1.91	1.91	1.89	1.91	1.90	24	
15	1.89	S	1.90	1.91	1.90	1.91	1.90	1.90	1.90	1.92	1.91	1.90	1.90	1.90	1.91	1.90	1.91	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.89	1.92	1.90	24	
16	S	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.89	1.89	1.89	1.89	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.90	S	1.89	1.90	1.90	24	
17	1.91	1.90	1.89	1.89	1.89	1.88	1.87	1.87	1.87	1.87	1.88	1.88	1.88	1.88	1.87	1.89	1.89	1.89	1.89	1.89	1.88	1.88	S	1.90	1.87	1.91	1.88	24	
18	1.90	1.90	1.92	1.94	1.93	1.92	1.91	1.92	1.92	1.90	1.90	1.91	1.88	1.88	1.88	1.88	1.90	1.89	1.90	1.97	1.90	S	1.89	1.92	1.88	1.97	1.91	24	
19	1.92	1.90	1.90	1.90	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.89	1.91	1.88	1.88	1.88	1.88	1.89	1.91	S	1.92	1.91	1.91	1.88	1.92	1.90	24
20	1.90	1.91	1.92	1.94	1.92	1.92	1.92	1.91	1.89	1.89	1.90	1.92	1.92	1.92	S1	1.95	1.95	1.95	1.95	S	1.95	1.93	1.92	1.91	1.89	1.95	1.92	23	
21	1.92	1.93	1.92	1.93	1.93	1.94	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	S	1.92	1.91	1.91	1.91	1.90	1.94	1.92	24	
22	1.92	1.92	1.91	1.91	1.92	1.91	1.92	1.92	1.91	1.91	1.93	1.95	1.96	1.95	1.95	1.95	S	1.95	1.94	1.94	1.95	1.95	1.95	1.97	1.91	1.97	1.93	24	
23	1.94	1.93	1.93	1.94	1.94	1.99	1.95	1.95	1.97	1.94	1.93	1.94	1.94	1.93	1.93	1.94	S	1.97	1.95	1.98	1.95	1.95	1.96	1.95	1.93	1.99	1.95	24	
24	1.96	1.97	1.97	1.96	1.96	1.97	1.98	1.99	1.99	2.01	2.02	2.03	2.03	2.03	2.02	S	2.01	2.04	2.06	2.05	2.03	2.03	2.00	1.99	1.96	2.06	2.00	24	
25	1.98	1.98	1.97	1.95	1.96	1.96	1.97	1.97	1.98	1.98	1.99	1.99	1.99	1.99	S	1.98	1.99	2.01	2.01	2.00	2.00	1.99	2.00	2.00	1.95	2.01	1.98	24	
26	1.99	1.97	1.96	1.95	1.95	1.94	1.93	1.92	1.92	1.92	1.93	1.93	S	1.94	1.95	1.94	1.95	1.94	1.93	1.93	1.93	1.92	1.92	1.92	1.92	1.99	1.94	24	
27	1.92	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.93	1.94	1.92	1.92	S	1.93	1.93	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.94	1.93	24
28	1.92	1.93	1.92	1.92	1.92	1.91	1.91	1.91	1.92	1.92	1.91	S	1.90	1.90	1.91	1.91	1.91	1.92	1.90	1.91	1.91	1.91	1.91	1.91	1.90	1.93	1.91	24	
29	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.91	1.90	1.91	S	1.91	1.91	1.91	1.90	1.91	1.90	1.90	1.92	1.96	1.94	1.94	1.91	1.91	1.90	1.96	1.91	24	
30	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	S	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.90	1.90	1.92	1.92	24	
31	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.92	S	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.93	1.93	1.92	1.94	1.94	1.95	1.91	1.95	1.92	24	
HOURLY MAX	2.23	2.20	2.18	2.27	2.30	2.29	2.24	2.16	2.15	2.13	2.26	2.26	2.13	2.03	2.02	2.04	2.05	2.05	2.06	2.05	2.04	2.05	2.10	2.05					
HOURLY AVG	1.95	1.94	1.94	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.93	1.92	1.92	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94					

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

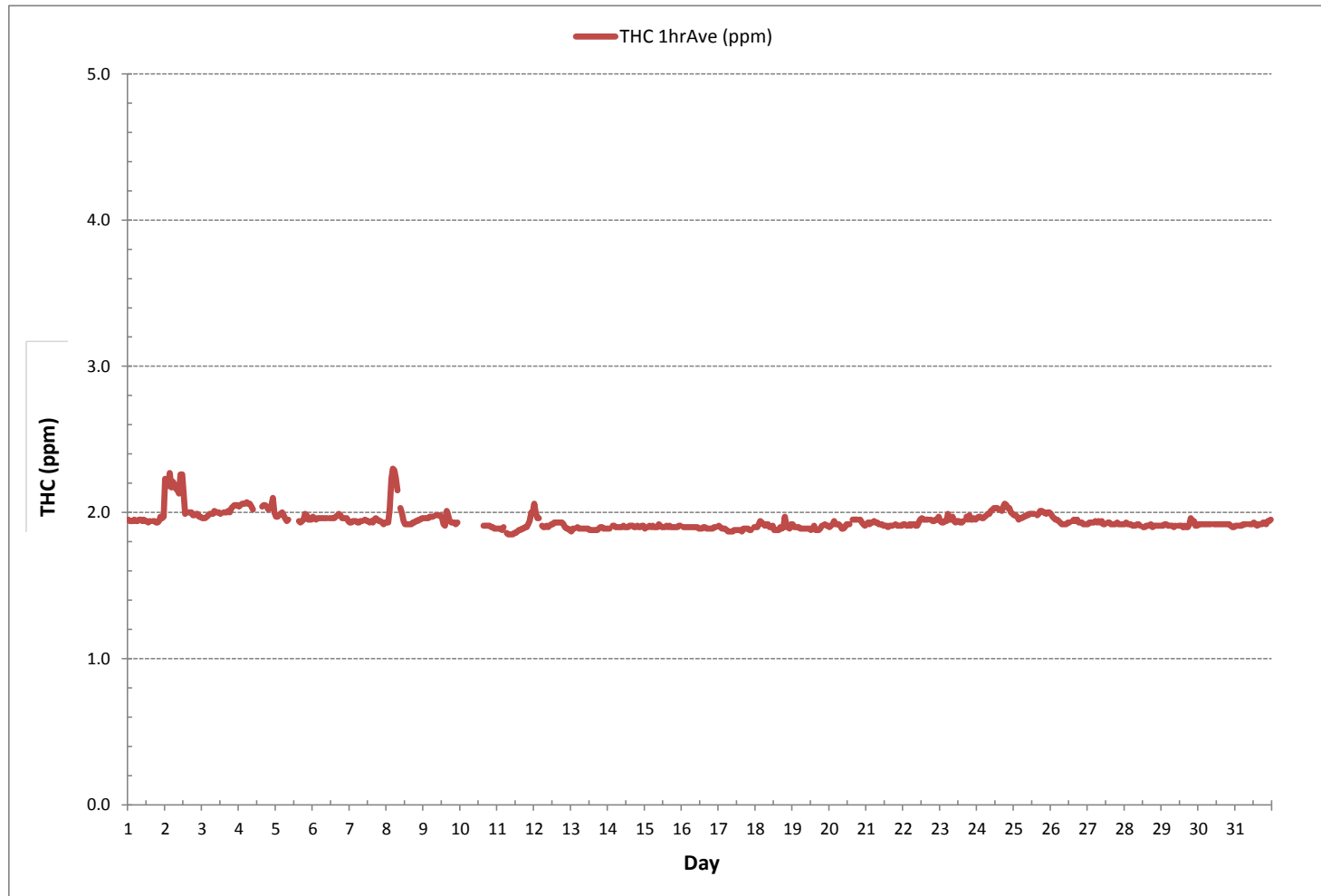
24 HR AVERAGES January 2017



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	702				
MINIMUM 1-HR AVERAGE:	1.85 ppm	@ HOUR(S)	VAR	ON DAY(S)	11
MAXIMUM 1-HR AVERAGE:	2.30 ppm	@ HOUR(S)	4	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	2.10 ppm			ON DAY(S)	2
				VAR-VARIOUS	
IZS CALIBRATION TIME:	30 hrs	OPERATIONAL TIME:	737 hrs		
MONTHLY CALIBRATION TIME:	5 hrs	AMD OPERATION UPTIME:	99.1 %		
STANDARD DEVIATION:	0.06	MONTHLY AVERAGE:	1.94 ppm		

TOTAL HYDROCARBONS Hourly Averages (THC ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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	1.99	1.98	1.96	2.00	1.96	1.97	1.96	1.96	1.96	1.95	1.98	1.97	1.98	1.95	1.99	S	2.00	1.95	1.97	1.95	2.02	2.02	2.01	1.97	1.95	2.02	1.98	24	
2	2.44	2.45	2.41	2.48	2.20	2.29	2.24	2.21	2.20	2.23	2.42	2.42	2.29	2.03	S	2.01	2.03	2.01	1.99	2.01	2.07	2.03	2.00	2.16	1.99	2.48	2.20	24	
3	2.00	1.99	1.98	2.00	2.01	2.06	2.04	2.04	2.03	2.04	2.02	2.01	2.02	S	2.01	2.03	2.02	2.09	2.04	2.12	2.06	2.10	2.09	2.12	1.98	2.12	2.04	24	
4	2.08	2.08	2.08	2.12	2.09	2.12	2.11	2.09	2.09	C	C	C	C	C	C	2.07	2.12	2.07	2.19	2.10	2.04	2.12	2.24	2.09	2.04	2.24	2.11	24	
5	2.00	2.01	2.10	2.05	2.03	2.00	1.98	1.97	1.98	P	P	P	P	R	R	1.98	1.99	1.95	1.96	2.05	2.03	1.96	1.96	1.98	1.95	2.10	2.00	18	
6	2.04	1.99	1.99	2.08	1.97	2.02	1.97	1.97	1.97	1.98	S	1.99	1.98	1.98	1.99	2.01	2.00	2.07	2.02	1.98	1.98	1.98	1.97	1.96	1.96	2.08	2.00	24	
7	1.97	1.96	1.95	1.96	1.95	1.94	1.96	2.01	1.98	S	1.97	1.95	1.98	1.96	1.98	1.95	1.97	2.06	2.22	1.98	2.01	1.96	1.93	1.96	1.93	2.22	1.98	24	
8	2.07	1.96	2.21	2.37	2.42	2.36	2.35	2.25	S	2.10	2.05	1.97	1.96	1.97	1.95	1.93	1.92	1.97	1.97	1.96	1.99	2.01	1.97	1.97	1.92	2.42	2.07	24	
9	2.00	1.99	2.00	2.05	2.03	2.00	2.00	S	2.01	2.06	2.00	2.04	2.02	1.96	1.92	2.12	2.00	1.98	2.03	1.97	1.97	1.98	1.94	2.00	1.92	2.12	2.00	24	
10	1.99	1.93	1.99	1.94	2.01	1.92	S	1.96	1.92	1.98	1.95	1.92	1.99	1.93	2.09	1.93	1.93	1.99	1.92	1.95	2.06	1.92	1.99	1.92	1.92	2.09	1.96	24	
11	1.92	1.98	1.93	1.91	2.01	S	1.91	1.89	1.86	1.89	1.87	1.89	1.89	1.91	1.91	1.91	1.96	1.97	1.98	1.93	1.97	1.98	2.09	2.09	1.86	2.09	1.94	24	
12	2.15	2.07	2.00	1.98	S	1.93	1.95	1.93	2.00	1.93	1.95	2.06	1.95	2.06	1.97	2.01	1.98	1.99	1.98	1.99	1.97	1.94	1.91	1.96	1.91	2.15	1.99	24	
13	1.91	1.94	1.92	S	2.11	1.95	1.91	1.92	1.95	1.92	2.02	1.91	1.91	1.91	1.90	1.96	1.91	1.91	1.90	1.92	1.98	1.97	1.90	1.90	1.90	2.11	1.94	24	
14	1.93	1.91	S	1.96	1.91	1.91	1.91	1.91	1.93	1.93	1.92	2.00	1.92	1.91	1.92	1.93	1.92	1.90	1.91	1.94	1.97	1.91	2.00	1.93	1.90	2.00	1.93	24	
15	1.91	S	1.94	1.97	1.91	1.91	1.96	1.95	1.90	1.95	1.94	1.90	1.93	1.91	1.95	1.93	1.96	1.92	1.92	1.91	1.94	1.91	1.98	1.92	1.90	1.98	1.93	24	
16	S	2.02	1.91	1.91	1.91	1.95	1.99	1.91	2.07	1.91	1.96	1.91	1.90	1.90	1.99	2.06	1.89	1.90	1.90	1.90	2.06	1.90	S	1.89	1.89	2.07	1.94	24	
17	1.91	1.93	1.97	2.00	1.98	1.88	1.89	1.88	1.88	1.88	1.89	1.89	1.88	1.88	1.88	1.99	1.96	1.91	1.90	2.00	2.00	1.97	S	1.92	1.88	2.00	1.93	24	
18	1.99	1.97	1.97	2.01	1.98	1.93	1.92	1.94	1.97	1.91	1.95	2.08	1.89	1.89	1.89	1.92	2.03	1.90	2.03	2.13	1.92	S	1.92	1.99	1.89	2.13	1.96	24	
19	1.93	1.92	1.92	1.91	1.92	1.92	1.92	1.91	1.91	1.90	1.92	1.98	1.91	1.91	1.93	1.91	1.91	1.92	1.93	S	1.95	1.93	1.95	1.90	1.98	1.92	24		
20	1.92	1.93	1.97	1.95	1.93	1.93	1.95	1.93	1.92	1.96	1.99	1.96	1.99	2.01	S1	2.08	2.15	2.11	2.02	S	1.97	1.95	2.00	2.02	1.92	2.15	1.98	23	
21	1.93	1.94	1.99	2.03	1.95	1.95	1.95	1.93	1.93	1.96	1.92	1.93	1.91	1.92	1.91	2.01	1.92	1.98	S	1.97	1.92	1.92	1.92	2.07	1.91	2.07	1.95	24	
22	1.92	1.97	2.01	1.95	1.96	1.96	1.92	1.95	1.96	1.93	1.97	2.17	1.97	1.96	1.97	1.99	1.97	S	1.97	1.98	1.98	1.98	1.97	2.12	1.92	2.17	1.98	24	
23	1.97	1.96	1.97	1.99	2.00	2.06	1.98	1.99	2.10	1.98	1.97	2.06	2.11	2.02	1.97	1.96	S	2.07	1.99	2.03	2.00	1.98	2.02	1.98	1.96	2.11	2.01	24	
24	1.99	2.15	1.99	1.98	1.98	1.99	2.01	2.08	2.01	2.10	2.08	2.19	2.13	2.10	2.03	S	2.06	2.13	2.24	2.17	2.15	2.21	2.02	2.01	1.98	2.24	2.08	24	
25	2.13	2.10	1.98	1.97	1.97	2.11	1.98	2.02	1.99	2.00	2.09	2.00	2.02	2.07	S	2.04	2.00	2.03	2.12	2.01	2.09	2.07	2.01	2.02	1.97	2.13	2.04	24	
26	2.03	1.99	2.05	2.04	1.98	1.97	2.01	1.93	1.94	1.95	1.92	2.01	1.95	S	1.95	1.96	1.97	2.10	2.00	1.95	1.97	1.92	2.02	1.98	1.92	2.10	1.98	24	
27	1.93	1.95	1.93	2.06	1.95	1.97	1.98	2.01	2.08	2.10	1.93	1.94	S	2.00	1.95	2.03	1.92	1.95	1.93	1.96	1.94	1.93	1.96	1.92	1.92	2.10	1.97	24	
28	1.93	1.94	1.92	1.98	1.95	1.93	2.03	1.92	1.97	2.00	1.92	S	1.91	1.91	2.00	1.93	1.99	1.96	1.91	1.92	1.91	1.92	1.99	1.92	1.91	2.03	1.95	24	
29	1.92	1.92	1.99	1.94	1.95	1.97	1.92	1.96	1.91	1.91	S	1.92	2.01	1.91	1.92	2.01	1.91	1.91	1.96	1.99	2.06	1.98	2.07	1.97	1.91	2.07	1.96	24	
30	1.95	1.92	1.92	2.00	1.92	1.92	1.93	1.93	1.93	S	2.03	1.93	1.97	1.96	1.93	1.99	1.93	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	2.03	1.94	24
31	2.03	1.93	1.93	1.95	1.92	2.01	1.95	1.96	S	1.93	1.93	1.94	1.97	1.93	1.95	1.99	1.98	1.99	1.96	1.95	1.96	1.96	1.99	1.97	1.92	2.03	1.96	24	
HOURLY MAX	2.44	2.45	2.41	2.48	2.42	2.36	2.35	2.25	2.20	2.23	2.42	2.42	2.29	2.10	2.03	2.12	2.15	2.13	2.24	2.17	2.15	2.21	2.24	2.16					
HOURLY AVG	2.00	1.99	2.00	2.02	2.00	1.99	1.99	1.98	1.98	1.97	1.99	2.00	1.97	1.96	1.95	1.99	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.99					

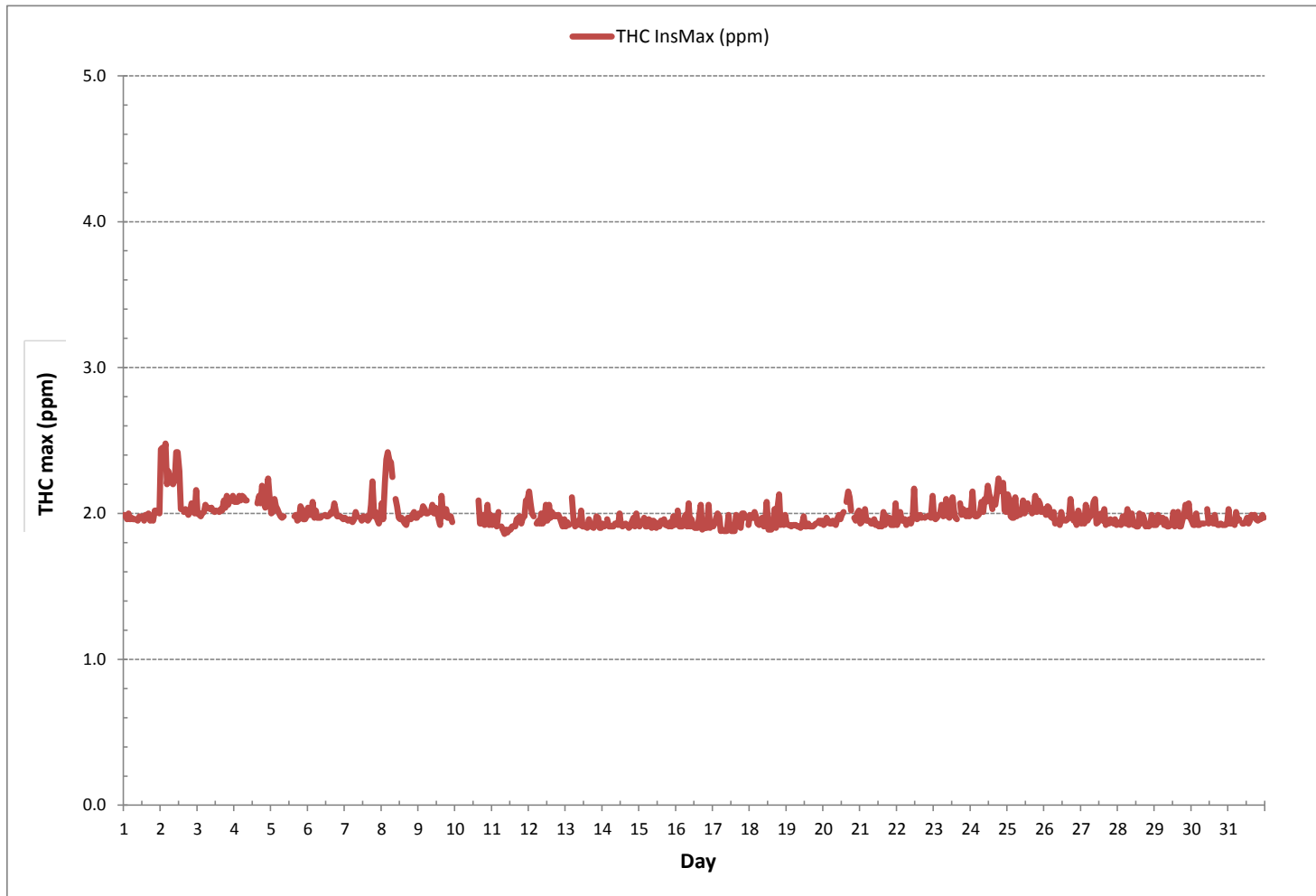
STATUS FLAG CODES

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:	701
MAXIMUM INSTANTANEOUS VALUE:	2.48 ppm @ HOUR(S) 3 ON DAY(S) 2
	VAR-VARIOUS
IZS CALIBRATION TIME:	30 hrs
MONTHLY CALIBRATION TIME:	6 hrs
OPERATIONAL TIME:	737 hrs
STANDARD DEVIATION:	0.09

TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)

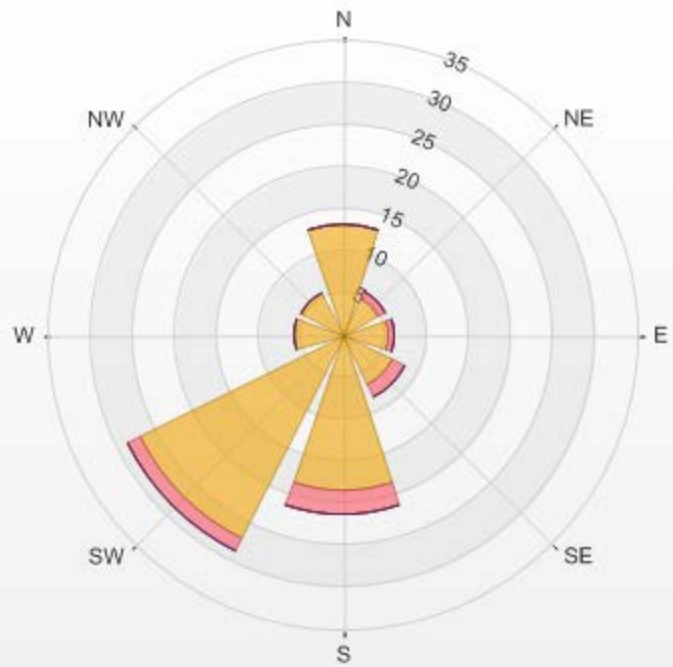


Wind: THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-THC[ppm] Monthly: 01/2017 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 5.14% Valid Data: 94.47% Calm Avg: 2.00 [ppm]

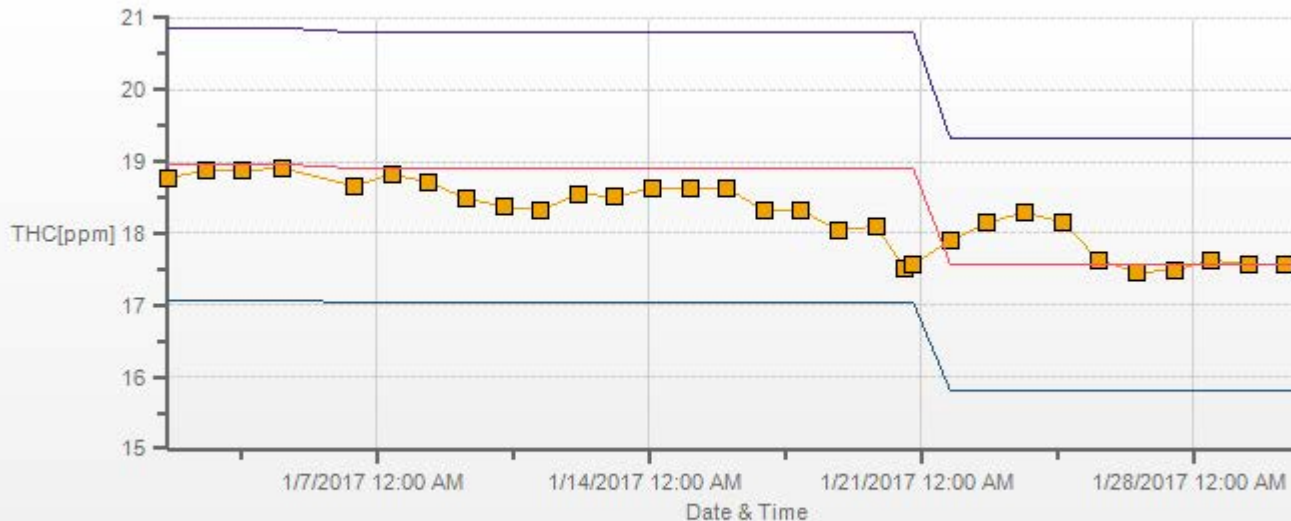
Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	13.27	0	0	0	0	13.27
NE	4.85	0.86	0	0	0	5.71
E	5.42	0.71	0	0	0	6.13
SE	6.7	1.71	0	0	0	8.41
S	18.4	3	0	0	0	21.4
SW	26.96	1.71	0	0	0	28.67
W	5.71	0	0	0	0	5.71
NW	5.56	0	0	0	0	5.56
Summary	86.87	7.99	0	0	0	94.86

% Icon Classes (ppm) 87 0-2 8 2-3 0 3-5 0 5-10 0 >10.0

THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-THC[ppm] 01/01/2017 00:00 - 31/01/2017 23:00 Calm: 5.14% Calm Poll Avg: 2.00[ppm]



THC[ppm] Calibration: THREE CREEKS #842 TRAILER Monthly: 2017/01 Type: Span



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

METHANE



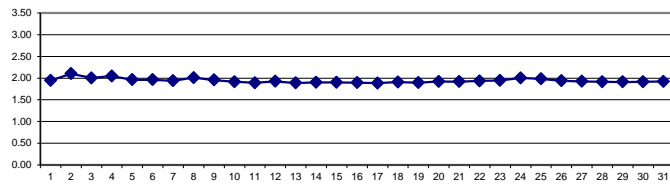
METHANE Hourly Averages (CH₄ ppm)

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	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.93	1.93	S	1.94	1.94	1.93	1.93	1.94	1.97	1.96	1.95	1.93	1.97	1.94	24	
2	2.23	2.19	2.18	2.26	2.17	2.21	2.18	2.16	2.15	2.13	2.22	2.26	2.13	1.99	S	2.00	2.00	2.00	1.98	1.98	1.99	1.99	1.97	1.97	1.97	2.26	2.10	24	
3	1.96	1.96	1.96	1.97	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	1.99	S	2.00	2.00	2.00	2.00	2.00	2.03	2.04	2.05	2.05	2.05	1.96	2.05	2.00	24	
4	2.04	2.05	2.06	2.06	2.06	2.07	2.06	2.06	2.04	2.02	C	C	C	C	C	C	2.04	2.05	2.05	2.03	2.02	2.03	2.05	2.10	1.99	1.99	2.10	2.05	24
5	1.97	1.97	1.98	1.99	2.00	1.98	1.96	1.94	1.95	P	P	P	P	R	R	1.94	1.93	1.94	1.95	1.99	1.98	1.95	1.95	1.95	1.93	2.00	1.96	18	
6	1.97	1.96	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	S	1.96	1.95	1.96	1.96	1.97	1.98	1.99	1.98	1.96	1.96	1.96	1.95	1.94	1.94	1.99	1.96	24	
7	1.93	1.93	1.94	1.94	1.94	1.93	1.93	1.94	1.94	S	1.95	1.94	1.94	1.93	1.93	1.93	1.95	1.96	1.95	1.94	1.94	1.93	1.92	1.93	1.92	1.96	1.94	24	
8	1.93	1.93	2.02	2.23	2.30	2.29	2.24	2.14	S	2.03	1.99	1.94	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.94	1.94	1.95	1.95	1.96	1.92	2.30	2.01	24	
9	1.96	1.96	1.96	1.96	1.97	1.97	1.97	S	1.98	1.98	1.98	1.98	1.96	1.92	1.91	2.01	1.98	1.94	1.93	1.93	1.93	1.92	1.93	1.93	1.91	2.01	1.95	24	
10	1.94	1.93	1.91	1.93	1.94	1.91	S	1.90	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.90	1.89	1.89	1.89	1.94	1.91	24	
11	1.89	1.89	1.89	1.88	1.90	S	1.86	1.85	1.85	1.85	1.85	1.86	1.86	1.87	1.88	1.88	1.89	1.89	1.89	1.89	1.90	1.92	1.94	2.00	2.00	1.85	2.00	1.89	24
12	2.06	2.00	1.96	1.96	S	1.91	1.90	1.90	1.91	1.90	1.91	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.90	1.89	1.89	1.88	1.88	2.06	1.93	24	
13	1.87	1.89	1.89	S	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.89	1.89	1.89	1.89	1.89	1.87	1.90	1.89	24	
14	1.89	1.89	S	1.90	1.91	1.90	1.90	1.90	1.90	1.90	1.91	1.90	1.90	1.90	1.91	1.91	1.91	1.90	1.90	1.91	1.90	1.91	1.91	1.91	1.89	1.91	1.90	24	
15	1.89	S	1.90	1.91	1.90	1.91	1.90	1.90	1.90	1.92	1.91	1.90	1.90	1.90	1.91	1.90	1.91	1.90	1.90	1.90	1.90	1.90	1.91	1.91	1.89	1.92	1.90	24	
16	S	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.89	1.89	1.89	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.90	S	1.89	1.90	1.90	24	
17	1.91	1.89	1.89	1.89	1.89	1.88	1.87	1.87	1.87	1.87	1.88	1.88	1.88	1.87	1.88	1.87	1.89	1.89	1.89	1.89	1.88	1.88	S	1.90	1.87	1.91	1.88	24	
18	1.90	1.90	1.92	1.94	1.93	1.92	1.91	1.92	1.92	1.90	1.90	1.90	1.88	1.88	1.88	1.88	1.90	1.89	1.90	1.97	1.90	S	1.89	1.92	1.88	1.97	1.91	24	
19	1.92	1.90	1.90	1.90	1.90	1.89	1.89	1.89	1.89	1.89	1.88	1.88	1.88	1.89	1.91	1.88	1.88	1.88	1.88	1.89	1.91	S	1.92	1.91	1.91	1.88	1.92	1.90	24
20	1.90	1.91	1.92	1.94	1.92	1.92	1.92	1.91	1.89	1.89	1.90	1.92	1.92	S1	1.95	1.95	1.95	1.95	S	1.95	1.93	1.92	1.91	1.89	1.89	1.95	1.92	23	
21	1.92	1.93	1.92	1.93	1.93	1.94	1.93	1.93	1.92	1.92	1.92	1.91	1.91	1.91	1.90	1.91	1.91	1.90	S	1.92	1.91	1.91	1.91	1.91	1.90	1.94	1.92	24	
22	1.92	1.92	1.91	1.91	1.92	1.91	1.92	1.92	1.91	1.91	1.93	1.95	1.96	1.95	1.95	1.95	S	1.95	1.95	1.94	1.94	1.95	1.95	1.97	1.91	1.97	1.93	24	
23	1.94	1.93	1.93	1.94	1.94	1.99	1.95	1.95	1.97	1.94	1.93	1.94	1.94	1.93	1.93	1.94	S	1.97	1.95	1.98	1.95	1.95	1.96	1.95	1.93	1.99	1.95	24	
24	1.96	1.96	1.97	1.96	1.96	1.97	1.98	1.99	1.99	2.00	2.02	2.03	2.03	2.03	2.02	S	2.00	2.04	2.06	2.04	2.03	2.02	2.00	1.99	1.96	2.06	2.00	24	
25	1.98	1.98	1.97	1.95	1.96	1.96	1.97	1.97	1.98	1.98	1.99	1.99	1.99	1.98	S	1.98	1.99	2.01	2.01	2.00	2.00	1.99	2.00	2.00	1.95	2.01	1.98	24	
26	1.98	1.97	1.96	1.95	1.95	1.94	1.93	1.92	1.92	1.92	1.92	1.93	1.93	S	1.94	1.95	1.94	1.95	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.98	1.94	24	
27	1.92	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.93	1.94	1.92	1.92	S	1.93	1.93	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.94	1.93	24
28	1.92	1.93	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.91	S	1.90	1.90	1.91	1.91	1.91	1.91	1.92	1.90	1.91	1.91	1.91	1.91	1.91	1.91	1.90	1.93	1.91	24
29	1.91	1.91	1.91	1.92	1.91	1.90	1.91	1.90	1.90	1.90	S	1.90	1.91	1.91	1.90	1.90	1.90	1.90	1.92	1.96	1.94	1.94	1.91	1.91	1.90	1.96	1.91	24	
30	1.91	1.91	1.92	1.91	1.92	1.92	1.92	1.92	1.92	S	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.90	1.90	1.92	1.92	24	
31	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.92	S	1.92	1.92	1.92	1.93	1.92	1.91	1.91	1.92	1.92	1.93	1.92	1.92	1.94	1.94	1.95	1.91	1.95	1.92	24	
HOURLY MAX	2.23	2.19	2.18	2.26	2.30	2.29	2.24	2.16	2.15	2.13	2.22	2.26	2.13	2.03	2.02	2.04	2.05	2.05	2.06	2.04	2.04	2.05	2.10	2.05					
HOURLY AVG	1.95	1.94	1.94	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.93	1.92	1.92	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94					

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

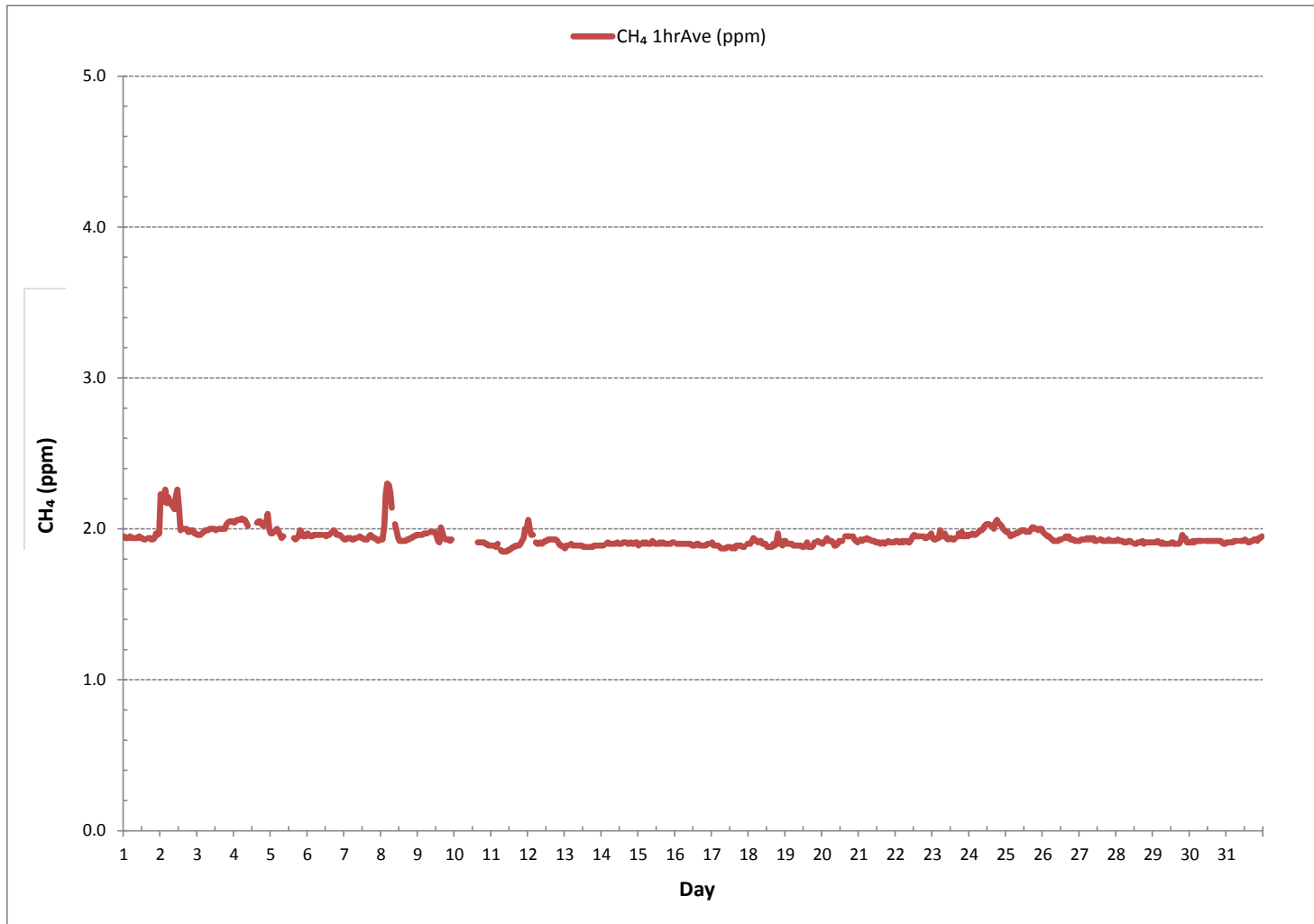
24 HR AVERAGES January 2017



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	702				
MINIMUM 1-HR AVERAGE:	1.85 ppm	@ HOUR(S)	VAR	ON DAY(S)	11
MAXIMUM 1-HR AVERAGE:	2.30 ppm	@ HOUR(S)	4	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	2.10 ppm			ON DAY(S)	2
				VAR-VARIOUS	
IZS CALIBRATION TIME:	30 hrs	OPERATIONAL TIME:	737 hrs		
MONTHLY CALIBRATION TIME:	5 hrs	AMD OPERATION UPTIME:	99.1 %		
STANDARD DEVIATION:	0.06	MONTHLY AVERAGE:	1.94 ppm		

METHANE Hourly Averages (CH₄ ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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	1.97	1.95	1.96	1.95	1.96	1.97	1.95	1.96	1.96	1.95	1.98	1.97	1.98	1.95	1.95	S	1.96	1.95	1.97	1.95	2.02	2.02	2.02	1.97	1.95	2.02	1.97	24
2	2.44	2.35	2.41	2.38	2.20	2.28	2.24	2.21	2.20	2.18	2.30	2.31	2.29	2.03	S	2.01	2.03	2.01	2.00	2.01	2.06	2.03	2.00	2.16	2.00	2.44	2.18	24
3	2.00	1.99	1.98	2.00	2.01	2.05	2.03	2.03	2.02	2.02	2.02	2.01	2.02	S	2.01	2.03	2.02	2.03	2.03	2.05	2.05	2.09	2.08	2.08	1.98	2.09	2.03	24
4	2.06	2.07	2.07	2.11	2.08	2.09	2.10	2.08	2.07	C	C	C	C	C	C	2.06	2.07	2.06	2.06	2.04	2.05	2.11	2.15	2.09	2.04	2.15	2.08	24
5	2.01	1.98	2.09	2.04	2.03	2.00	1.98	1.95	1.96	P	P	P	P	R	R	1.97	1.95	1.95	1.96	2.04	2.03	1.96	1.96	1.97	1.95	2.09	1.99	18
6	1.99	2.00	1.97	1.97	1.97	1.98	1.97	1.97	1.97	1.98	S	1.98	1.98	1.97	1.99	1.99	2.00	2.06	2.02	1.98	1.99	1.98	1.97	1.96	1.96	2.06	1.98	24
7	1.95	1.96	1.95	1.95	1.95	1.95	1.96	1.96	1.96	S	1.97	1.95	1.98	1.94	1.95	1.95	1.97	2.06	1.97	1.98	2.01	1.95	1.94	1.96	1.94	2.06	1.96	24
8	1.94	1.96	2.22	2.37	2.42	2.36	2.35	2.26	S	2.10	2.04	1.97	1.96	1.93	1.95	1.94	1.93	1.96	1.96	1.96	1.95	1.98	1.97	1.97	1.93	2.42	2.06	24
9	2.00	2.00	2.00	2.05	2.04	2.00	S	2.01	1.99	2.01	2.04	2.02	1.94	1.93	2.12	2.01	1.98	2.03	1.97	1.98	1.94	1.95	1.95	1.93	2.12	2.00	24	
10	1.96	1.94	1.93	1.95	2.02	1.93	S	1.92	1.92	1.93	1.98	1.94	1.93	1.93	1.94	2.08	1.94	1.93	2.00	1.93	1.93	2.06	1.92	1.99	1.92	2.08	1.96	24
11	1.93	1.91	1.94	1.92	1.98	S	1.91	1.89	1.86	1.89	1.88	1.89	1.88	1.92	1.91	1.91	1.92	1.97	1.92	1.94	1.97	1.98	2.09	2.08	1.86	2.09	1.93	24
12	2.14	2.06	2.00	1.97	S	1.94	1.94	1.94	2.00	1.94	1.95	1.94	1.96	2.05	1.97	2.01	1.97	1.96	1.99	1.97	1.96	1.94	1.92	1.96	1.92	2.14	1.98	24
13	1.92	1.94	1.93	S	2.11	1.94	1.92	1.93	1.93	1.92	2.02	1.91	1.92	1.92	1.91	1.95	1.92	1.92	1.91	1.92	1.98	1.92	1.90	1.91	1.90	2.11	1.94	24
14	1.91	1.91	S	1.92	1.92	1.92	1.92	1.92	1.91	1.93	1.93	1.94	1.93	1.92	1.93	1.94	1.93	1.91	1.92	1.95	1.92	1.91	1.93	1.94	1.91	1.95	1.92	24
15	1.91	S	1.93	1.96	1.92	1.92	1.96	1.95	1.91	1.95	1.94	1.92	1.94	1.92	1.95	1.94	1.96	1.92	1.92	1.91	1.93	1.92	1.92	1.92	1.91	1.96	1.93	24
16	S	1.91	1.92	1.91	1.92	1.92	1.91	1.91	1.92	1.91	1.92	1.91	1.91	1.91	1.91	1.99	1.90	1.90	1.90	1.91	1.91	1.92	1.91	S	1.90	1.99	1.92	24
17	1.92	1.94	1.91	1.90	1.92	1.89	1.90	1.88	1.88	1.89	1.89	1.90	1.89	1.89	1.89	1.89	1.91	1.90	1.91	1.95	1.91	1.97	S	1.93	1.88	1.97	1.91	24
18	1.92	1.94	1.97	2.01	1.97	1.94	1.93	1.95	1.94	1.92	1.95	1.95	1.89	1.90	1.90	1.93	1.92	1.90	2.03	2.13	1.93	S	1.91	1.95	1.89	2.13	1.95	24
19	1.94	1.92	1.91	1.91	1.91	1.92	1.92	1.90	1.91	1.90	1.92	1.91	1.91	1.91	1.93	1.91	1.90	1.91	1.92	1.93	S	1.95	1.93	1.94	1.90	1.95	1.92	24
20	1.93	1.93	1.96	1.95	1.94	1.94	1.95	1.93	1.91	1.92	1.99	1.93	1.94	1.95	S1	1.96	1.96	1.97	1.96	S	1.97	1.94	1.93	1.94	1.91	1.99	1.95	23
21	1.94	1.95	1.93	2.04	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.93	1.92	1.93	1.92	2.01	1.93	1.98	S	1.96	1.92	1.93	1.93	1.94	1.92	2.04	1.95	24
22	1.93	1.97	1.96	1.96	1.95	1.95	1.93	1.95	1.93	1.94	1.96	2.17	1.97	1.96	1.96	1.99	1.97	S	1.97	1.96	1.98	1.98	1.97	2.00	1.93	2.17	1.97	24
23	1.97	1.95	1.95	1.97	2.01	2.03	1.97	1.99	2.00	1.98	1.97	1.97	1.97	1.95	1.96	1.96	S	2.01	1.99	2.03	1.99	1.98	1.99	1.98	1.95	2.03	1.98	24
24	1.99	2.00	2.00	1.98	1.99	2.00	2.00	2.01	2.01	2.03	2.04	2.05	2.05	2.04	2.03	S	2.03	2.07	2.24	2.06	2.05	2.05	2.02	2.01	1.98	2.24	2.03	24
25	1.99	1.99	1.98	1.97	1.96	1.97	1.98	1.99	1.99	2.00	2.00	2.00	2.03	2.00	S	2.00	2.01	2.02	2.02	2.02	2.01	2.01	2.02	2.02	1.96	2.03	2.00	24
26	2.03	1.99	2.04	1.96	1.98	1.96	2.01	1.94	1.94	1.93	1.93	2.01	1.95	S	1.95	1.96	1.96	1.96	1.98	1.95	1.97	1.93	1.93	1.93	1.93	2.04	1.96	24
27	1.94	1.95	1.94	1.95	1.95	1.97	1.98	1.96	1.94	2.09	1.94	1.95	S	1.95	1.95	1.96	1.93	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.93	2.09	1.95	24
28	1.94	1.94	1.93	1.95	1.95	1.93	1.93	1.92	1.94	1.98	1.93	S	1.92	1.91	2.00	1.94	1.92	1.95	1.92	1.93	1.92	1.93	1.92	1.92	1.91	2.00	1.94	24
29	1.92	1.93	1.96	1.94	1.92	1.93	1.92	1.92	1.92	S	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	2.00	2.05	1.98	1.92	1.96	1.92	2.05	1.94	24
30	1.96	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	S	1.94	1.94	1.94	1.94	1.94	1.99	1.93	1.93	1.93	1.94	1.93	1.92	1.92	1.94	1.92	1.99	1.94	24
31	1.92	1.93	1.92	1.95	1.93	1.93	1.95	1.93	S	1.94	1.94	1.94	1.97	1.94	1.95	1.94	1.94	1.95	1.95	1.95	1.94	1.95	1.96	1.97	1.92	1.97	1.94	24
HOURLY MAX	2.44	2.35	2.41	2.38	2.42	2.36	2.35	2.26	2.20	2.18	2.30	2.31	2.29	2.05	2.03	2.12	2.07	2.07	2.24	2.13	2.06	2.11	2.15	2.16				
HOURLY AVG	1.98	1.97	1.99	1.99	1.99	1.98	1.98	1.97	1.96	1.97	1.97	1.97	1.96	1.95	1.95	1.97	1.96	1.97	1.98	1.98	1.98	1.97	1.96	1.98				

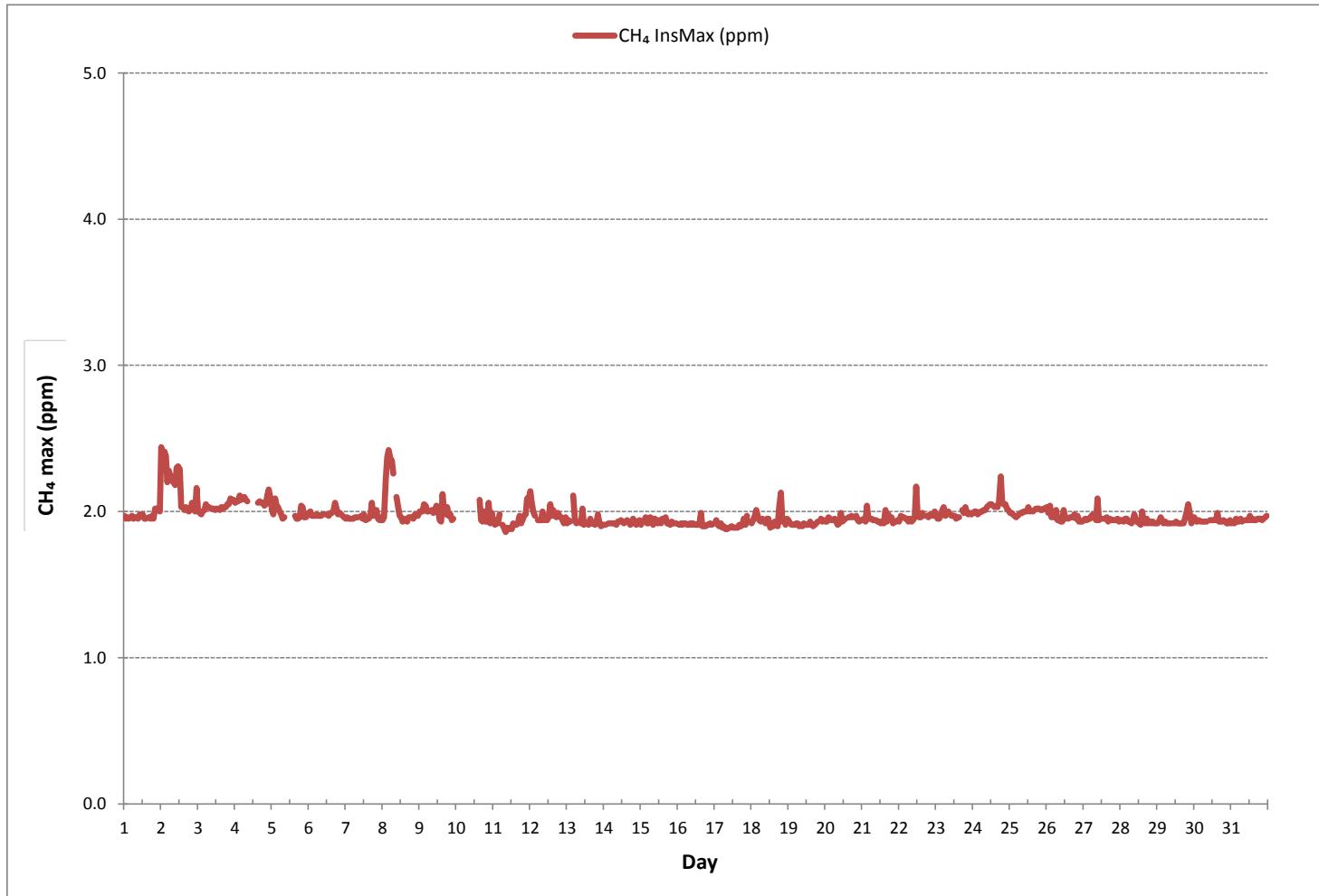
STATUS FLAG CODES

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:	701
MAXIMUM INSTANTANEOUS VALUE:	2.44 ppm @ HOUR(S) 0 ON DAY(S) 2
	VAR-VARIOUS
IZS CALIBRATION TIME:	30 hrs
MONTHLY CALIBRATION TIME:	6 hrs
OPERATIONAL TIME:	737 hrs
STANDARD DEVIATION:	0.07

METHANE MAX Instantaneous Maximum (CH₄ ppm)



Wind: THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-CH4[ppm] Monthly: 01/2017 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 5.14% Valid Data: 94.47% Calm Avg: 2.00 [ppm]

Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	13.27	0	0	0	0	13.27
NE	4.85	0.86	0	0	0	5.71
E	5.42	0.71	0	0	0	6.13
SE	6.7	1.71	0	0	0	8.41
S	18.4	3	0	0	0	21.4
SW	26.96	1.71	0	0	0	28.67
W	5.71	0	0	0	0	5.71
NW	5.56	0	0	0	0	5.56
Summary	86.87	7.99	0	0	0	94.86

% Icon Classes (ppm)

87



0-2

8



2-3

0



3-5

0



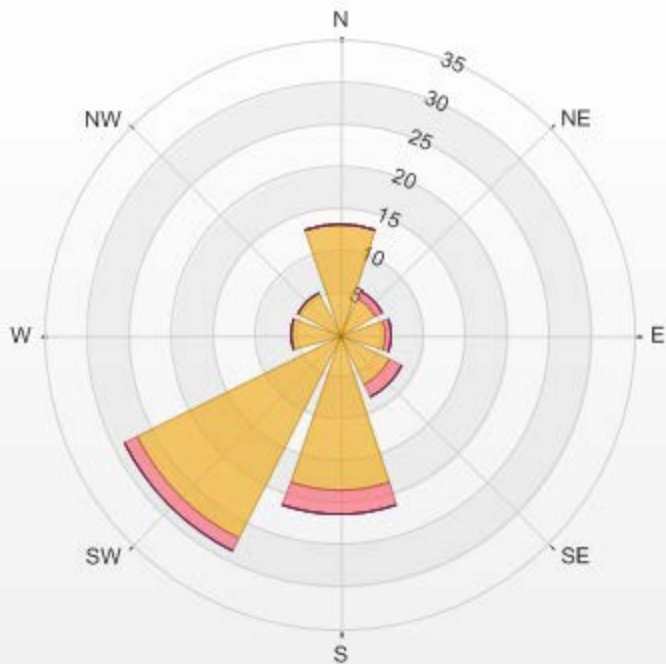
5-10

0

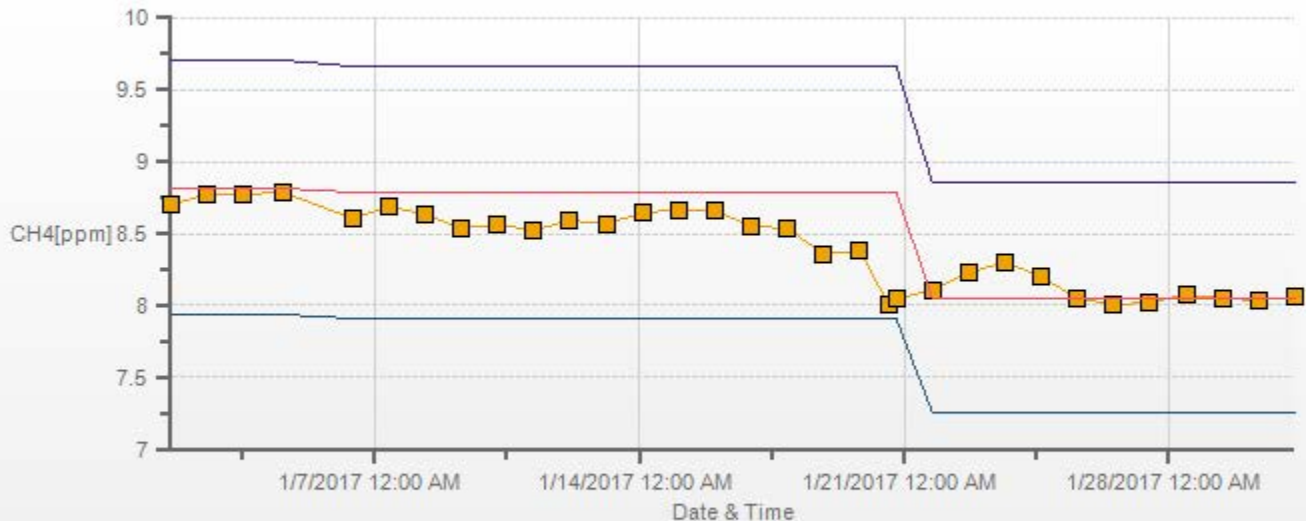


>10.0

THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-CH4[ppm] 01/01/2017 00:00 - 31/01/2017 23:00 Calm: 5.14% Calm Poll Avg: 2.00[ppm]



CH4[ppm] Calibration: THREE CREEKS #842 TRAILER Monthly: 2017/01 Type: Span



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

NON-METHANE HYDROCARBON



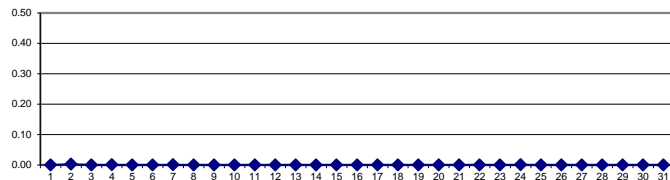
NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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																						
2	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	S	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																						
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	0.00	0.00	0.00	0.01	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	P	P	P	P	R	R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18																						
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	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																							
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	24																							
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24																							
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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																							
12	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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																							
13	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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																							
14	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	24																							
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	24																							
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	24																							
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	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	S1	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	23																							
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	S	0.00	0.00	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	S	0.00	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	S	0.00	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	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	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	S	0.00	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	S	0.00	0.00	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	S	0.00	0.00	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	S	0.00	0.00	0.00	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	S	0.00	0.00	0.00	0.00	0.00	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	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00																							
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	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 2017

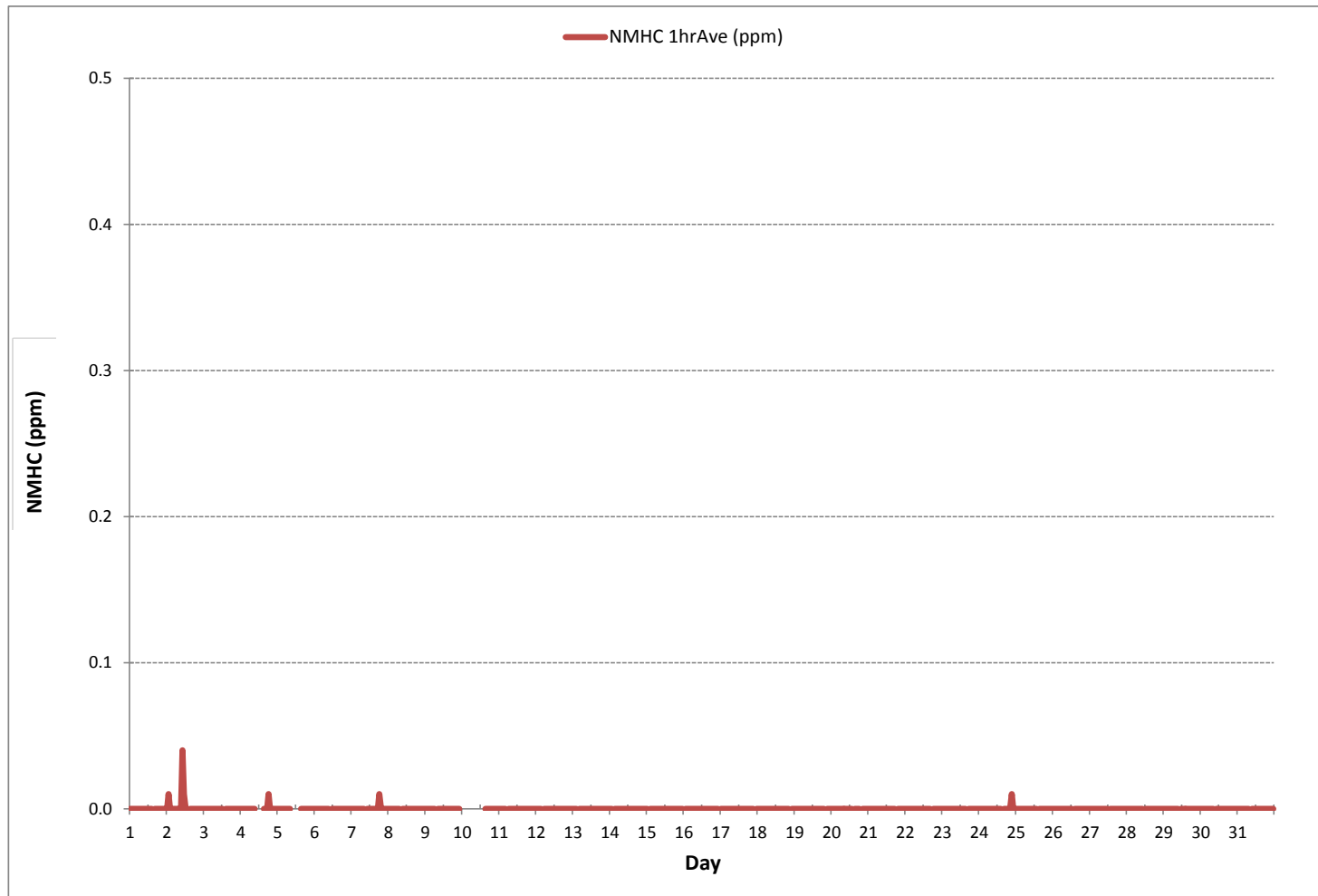


MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	6				
MINIMUM 1-HR AVERAGE:	0.00	ppm	@ HOUR(S)	VAR	ON DAY(S)
MAXIMUM 1-HR AVERAGE:	0.04	ppm	@ HOUR(S)	10	2
MAXIMUM 24-HR AVERAGE:	0.00	ppm			ALL
					VAR-VARIOUS
IZS CALIBRATION TIME:	30	hrs	OPERATIONAL TIME:	737	hrs
MONTHLY CALIBRATION TIME:	5	hrs	AMD OPERATION UPTIME:	99.1	%
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:	0.00	ppm



NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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 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	0.05	0.04	0.00	0.06	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.06	S	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.01	24
2	0.02	0.12	0.00	0.16	0.00	0.05	0.06	0.04	0.00	0.07	0.21	0.18	0.08	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.21	0.04	24
3	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.02	0.02	0.03	0.01	0.01	0.01	S	0.00	0.00	0.00	0.09	0.01	0.09	0.00	0.03	0.00	0.06	0.00	0.09	0.02	24
4	0.05	0.02	0.02	0.01	0.00	0.05	0.03	0.00	0.04	C	C	C	C	C	C	0.00	0.06	0.00	0.15	0.07	0.01	0.00	0.14	0.06	0.00	0.15	0.04	24
5	0.02	0.04	0.00	0.00	0.00	0.00	0.03	0.04	P	P	P	P	R	R	0.00	0.05	0.00	0.01	0.00	0.03	0.00	0.00	0.03	0.00	0.05	0.01	18	
6	0.06	0.01	0.05	0.13	0.00	0.07	0.01	0.00	0.01	0.00	S	0.01	0.00	0.00	0.01	0.04	0.02	0.00	0.02	0.00	0.00	0.01	0.03	0.00	0.00	0.13	0.02	24
7	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.03	S	0.01	0.00	0.00	0.04	0.05	0.01	0.00	0.01	0.25	0.05	0.05	0.05	0.00	0.00	0.00	0.25	0.03	24
8	0.13	0.01	0.00	0.00	0.08	0.01	0.01	0.00	S	0.02	0.00	0.01	0.02	0.06	0.00	0.00	0.00	0.01	0.04	0.00	0.06	0.05	0.01	0.01	0.00	0.13	0.02	24
9	0.04	0.00	0.02	0.04	0.00	0.01	0.01	S	0.00	0.09	0.01	0.01	0.00	0.04	0.00	0.00	0.03	0.01	0.07	0.00	0.00	0.07	0.00	0.06	0.00	0.09	0.02	24
10	0.07	0.00	0.07	0.01	0.04	0.02	S	0.04	0.00	0.00	0.06	0.02	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.02	24
11	0.01	0.08	0.01	0.00	0.04	S	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.08	0.00	0.00	0.00	0.05	0.00	0.00	0.08	0.02	24	
12	0.03	0.00	0.00	0.00	S	0.01	0.05	0.00	0.00	0.00	0.03	0.14	0.04	0.00	0.00	0.06	0.06	0.05	0.04	0.02	0.00	0.01	0.00	0.00	0.00	0.14	0.02	24
13	0.00	0.03	0.02	S	0.01	0.01	0.00	0.02	0.06	0.00	0.04	0.00	0.00	0.00	0.03	0.01	0.01	0.02	0.04	0.01	0.07	0.00	0.01	0.00	0.07	0.02	24	
14	0.04	0.02	S	0.04	0.01	0.01	0.00	0.00	0.04	0.00	0.00	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.00	0.09	0.00	0.00	0.10	0.02	24
15	0.01	S	0.05	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.05	0.00	0.09	0.00	0.00	0.00	0.09	0.01	24
16	S	0.12	0.00	0.00	0.02	0.06	0.08	0.01	0.17	0.00	0.06	0.02	0.01	0.01	0.00	0.05	0.16	0.00	0.02	0.00	0.00	0.16	0.00	S	0.00	0.17	0.04	24
17	0.00	0.00	0.08	0.11	0.09	0.00	0.01	0.00	0.00	0.01	0.12	0.00	0.00	0.00	0.11	0.05	0.02	0.00	0.12	0.12	0.00	S	0.00	0.00	0.12	0.04	24	
18	0.09	0.05	0.01	0.01	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.18	0.01	0.00	0.00	0.05	0.13	0.01	0.01	0.15	0.03	S	0.02	0.08	0.00	0.18	0.04	24
19	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.11	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	S	0.05	0.00	0.00	0.00	0.11	0.01	24
20	0.00	0.03	0.00	0.00	0.00	0.00	0.02	0.00	0.09	0.06	0.04	0.08	0.11	S1	0.12	0.18	0.14	0.08	S	0.00	0.01	0.09	0.12	0.00	0.18	0.05	23	
21	0.00	0.00	0.06	0.05	0.01	0.00	0.02	0.00	0.01	0.04	0.01	0.02	0.00	0.00	0.00	0.00	0.01	S	0.01	0.00	0.00	0.00	0.16	0.00	0.16	0.02	24	
22	0.00	0.00	0.09	0.00	0.00	0.05	0.00	0.00	0.04	0.00	0.05	0.02	0.04	0.00	0.03	0.00	0.01	S	0.01	0.03	0.00	0.01	0.00	0.15	0.00	0.15	0.02	24
23	0.00	0.03	0.04	0.03	0.01	0.04	0.02	0.03	0.12	0.00	0.01	0.11	0.16	0.09	0.01	0.00	S	0.11	0.02	0.00	0.04	0.00	0.05	0.01	0.00	0.16	0.04	24
24	0.01	0.18	0.01	0.02	0.00	0.00	0.03	0.09	0.00	0.08	0.06	0.15	0.11	0.07	0.01	S	0.05	0.07	0.09	0.11	0.13	0.18	0.03	0.00	0.00	0.18	0.06	24
25	0.15	0.13	0.00	0.01	0.01	0.15	0.00	0.06	0.00	0.02	0.09	0.00	0.00	0.08	S	0.06	0.02	0.02	0.10	0.00	0.10	0.09	0.01	0.01	0.00	0.15	0.05	24
26	0.02	0.00	0.00	0.09	0.00	0.04	0.00	0.00	0.02	0.02	0.00	0.04	0.01	S	0.00	0.00	0.02	0.16	0.07	0.00	0.00	0.01	0.09	0.06	0.00	0.16	0.03	24
27	0.00	0.01	0.00	0.13	0.02	0.00	0.00	0.08	0.15	0.00	0.00	0.00	S	0.06	0.00	0.08	0.00	0.00	0.00	0.03	0.01	0.00	0.05	0.00	0.00	0.15	0.03	24
28	0.00	0.01	0.00	0.06	0.03	0.02	0.12	0.01	0.05	0.09	0.00	S	0.00	0.00	0.02	0.01	0.08	0.02	0.01	0.02	0.00	0.01	0.09	0.00	0.00	0.12	0.03	24
29	0.02	0.00	0.03	0.00	0.05	0.07	0.00	0.06	0.02	0.02	S	0.03	0.11	0.00	0.01	0.12	0.00	0.00	0.03	0.00	0.01	0.00	0.16	0.00	0.00	0.16	0.03	24
30	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.02	S	0.11	0.01	0.05	0.04	0.00	0.00	0.02	0.01	0.00	0.03	0.00	0.01	0.00	0.04	0.00	0.11	0.02	24
31	0.12	0.01	0.02	0.00	0.00	0.08	0.00	0.05	S	0.00	0.01	0.01	0.00	0.00	0.00	0.08	0.05	0.08	0.00	0.00	0.04	0.00	0.07	0.00	0.00	0.12	0.03	24
HOURLY MAX	0.15	0.18	0.09	0.16	0.09	0.15	0.12	0.09	0.17	0.09	0.21	0.18	0.16	0.11	0.06	0.12	0.18	0.16	0.25	0.15	0.13	0.18	0.16	0.16				
HOURLY AVG	0.03	0.03	0.02	0.04	0.01	0.03	0.02	0.02	0.03	0.02	0.04	0.04	0.03	0.03	0.01	0.03	0.04	0.03	0.04	0.03	0.03	0.03	0.04	0.03				

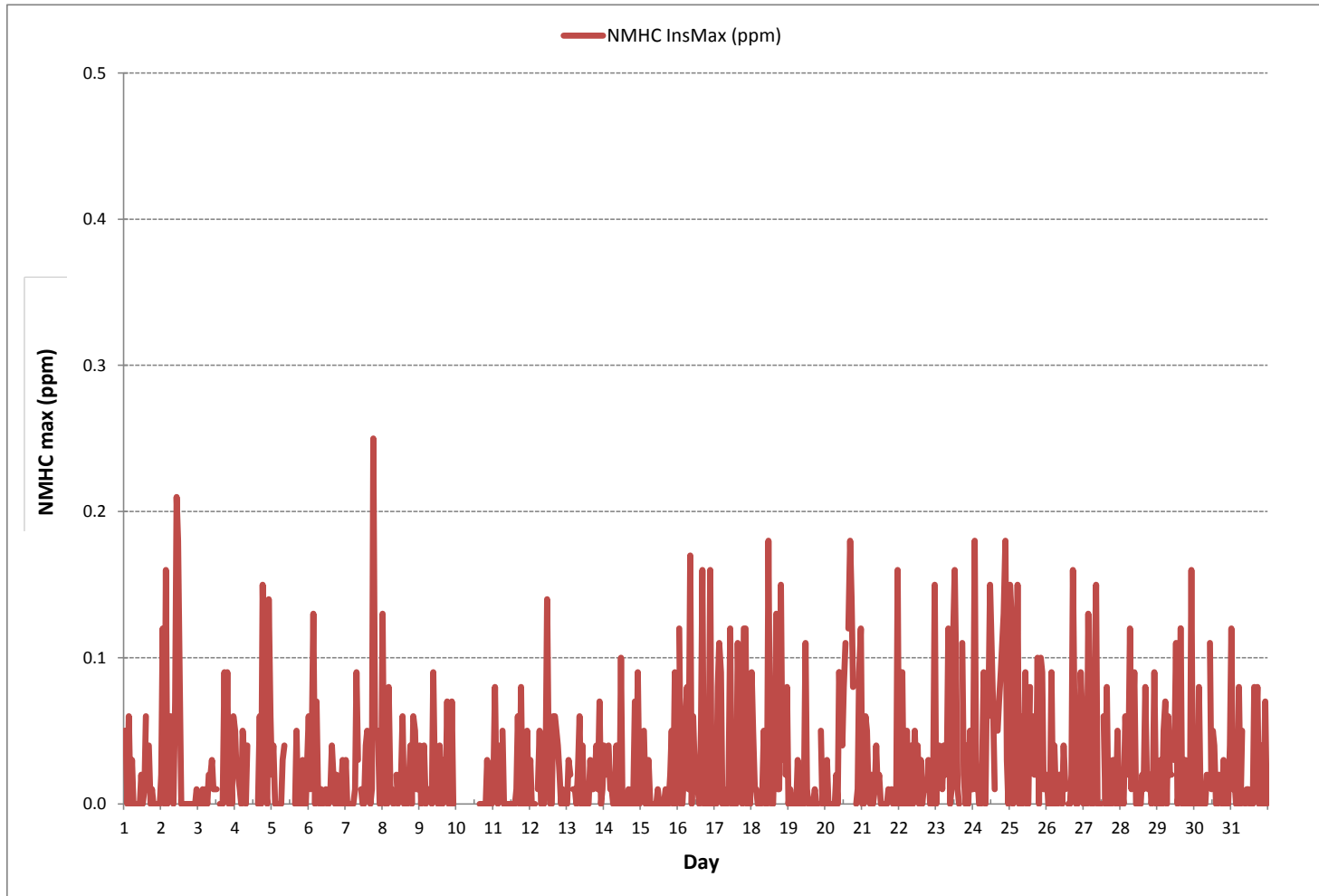
STATUS FLAG CODES

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:	391
MAXIMUM INSTANTANEOUS VALUE:	0.25 ppm @ HOUR(S) 18 ON DAY(S) 7
	VAR-VARIOUS
IZS CALIBRATION TIME:	30 hrs
MONTHLY CALIBRATION TIME:	6 hrs
OPERATIONAL TIME:	737 hrs
STANDARD DEVIATION:	0.04

NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)



Wind: THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-NMHC[ppm] Monthly: 01/2017 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 5.14% Valid Data: 94.47% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	13.27	0	0	0	0	13.27
NE	5.71	0	0	0	0	5.71
E	6.13	0	0	0	0	6.13
SE	8.42	0	0	0	0	8.42
S	21.4	0	0	0	0	21.4
SW	28.67	0	0	0	0	28.67
W	5.71	0	0	0	0	5.71
NW	5.56	0	0	0	0	5.56
Summary	94.87	0	0	0	0	94.87

% Icon Classes (ppm)

95

0-0.1

0

0.1-0.3

0

0.3-1

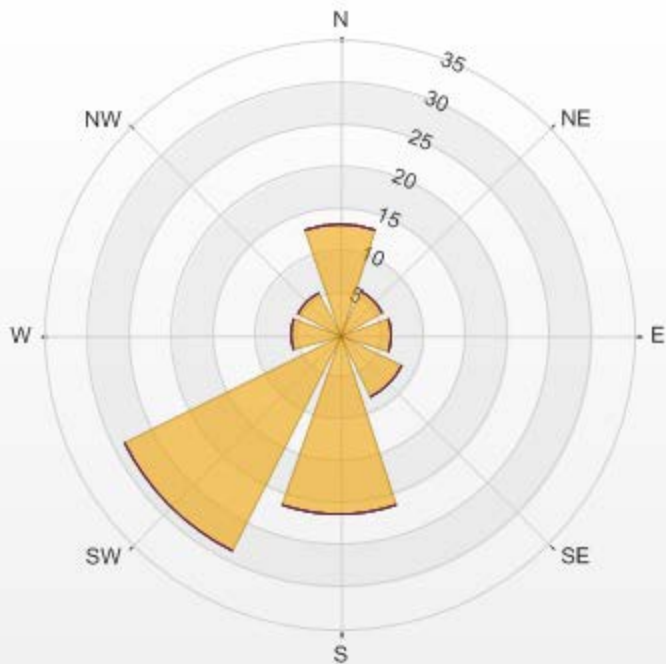
0

1-2

0

>2.0

THREE CREEKS #842 TRAILER Poll.: THREE CREEKS #842 TRAILER-NMHC[ppm] 01/01/2017 00:00 - 31/01/2017 23:00 Calm: 5.14% Calm Poll Avg: 0.00[ppm]





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

WIND SPEED



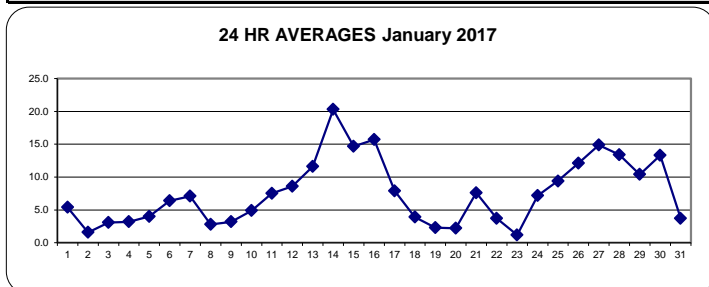
WIND SPEED Hourly Averages (WS kph)

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	9.7	8.9	8.6	11.5	9.6	10.7	8.2	11.0	10.5	7.1	5.6	9.5	13.0	9.9	5.0	2.8	2.0	1.1	0.9	0.8	1.1	3.8	2.3	2.2	0.8	13.0	5.4	24
2	4.7	3.2	2.2	3.8	3.0	1.9	2.7	3.5	1.6	0.8	1.7	1.7	1.3	0.9	4.0	2.4	1.1	1.6	4.4	5.2	4.9	4.1	2.4	3.3	0.8	5.2	1.6	24
3	2.7	3.7	3.3	3.2	4.3	3.8	2.9	2.6	3.0	2.3	1.5	0.9	4.1	4.7	4.7	2.8	3.2	4.4	5.1	5.6	5.4	5.2	4.8	4.0	0.9	5.6	3.1	24
4	4.2	5.4	3.9	3.2	3.5	4.7	4.5	5.7	3.9	5.8	4.3	5.5	6.4	8.1	5.9	4.9	2.8	2.3	0.9	1.3	0.9	1.1	1.4	2.2	0.9	8.1	3.2	24
5	1.9	0.8	2.0	3.1	2.3	3.2	4.3	4.5	4.1	P	P	P	P	7.5	7.6	7.8	5.0	3.5	4.4	4.8	8.5	8.9	7.5	8.8	0.8	8.9	4.0	20
6	9.3	11.0	8.7	9.3	8.6	7.3	5.6	8.4	7.5	6.4	8.3	6.7	7.0	9.5	6.6	7.9	6.5	6.8	5.3	5.7	7.2	8.1	5.1	8.6	5.1	11.0	6.4	24
7	9.6	7.0	7.4	9.4	8.6	7.7	7.3	8.8	9.8	10.9	8.9	8.6	9.1	8.4	7.8	8.0	6.8	6.6	5.1	5.7	4.9	3.3	2.1	0.5	0.5	10.9	7.1	24
8	1.7	1.7	1.7	2.0	2.2	3.1	3.5	2.8	2.9	3.0	3.0	5.6	4.2	6.2	6.5	7.8	6.4	4.0	7.6	6.5	6.7	3.1	2.0	1.9	1.7	7.8	2.8	24
9	4.4	7.1	5.4	4.4	4.5	1.3	3.6	3.3	5.0	3.6	2.3	2.5	4.6	3.8	3.0	3.5	2.1	4.3	5.1	2.7	6.7	4.5	4.4	5.3	1.3	7.1	3.2	24
10	10.6	12.1	7.0	9.3	12.4	10.9	10.0	9.1	5.9	1.4	2.2	4.6	5.3	10.0	10.7	11.2	9.9	9.5	8.6	9.8	8.0	8.3	11.1	12.7	1.4	12.7	4.9	24
11	13.7	14.1	14.0	15.6	16.0	12.1	11.3	14.3	20.1	20.9	20.0	21.1	20.0	19.9	16.3	12.4	6.0	4.5	4.8	1.9	2.8	1.2	1.2	3.6	1.2	21.1	7.5	24
12	5.3	3.5	7.5	8.0	9.1	10.0	10.7	10.8	10.4	15.3	17.8	14.7	11.8	14.8	12.8	12.1	10.5	11.6	8.9	6.9	6.8	7.6	7.8	3.5	17.8	8.6	24	
13	8.2	6.0	8.0	9.6	10.3	13.3	12.3	12.2	13.8	14.6	13.4	10.6	14.2	13.3	15.0	14.3	12.2	11.8	11.1	13.3	14.9	14.3	14.6	13.1	6.0	15.0	11.6	24
14	13.7	23.7	24.3	22.3	28.1	24.1	30.7	26.8	23.1	19.2	16.6	16.7	15.1	16.5	24.3	20.5	29.8	14.9	10.9	16.2	19.2	19.2	23.8	22.0	10.9	30.7	20.3	24
15	24.8	15.8	12.1	11.7	11.0	15.8	20.6	16.6	13.1	14.8	13.0	10.7	12.9	13.2	16.7	19.3	15.5	16.0	14.8	12.8	15.6	16.5	15.3	16.5	10.7	24.8	14.7	24
16	18.4	20.6	18.7	12.5	15.0	17.7	22.1	20.0	21.6	17.4	12.3	16.3	20.2	19.9	16.3	13.1	15.6	17.7	14.5	13.3	12.3	11.7	10.8	9.3	9.3	22.1	15.7	24
17	10.6	12.2	15.5	10.8	7.1	12.6	9.8	7.7	15.1	12.8	9.7	7.7	8.6	7.9	5.7	7.7	6.7	7.1	5.6	2.5	6.7	6.3	4.6	5.2	2.5	15.5	7.9	24
18	5.0	4.5	5.3	4.5	4.8	5.5	5.0	3.2	5.2	7.6	6.0	9.6	7.7	9.1	9.0	8.4	7.2	3.3	3.1	8.2	6.1	3.1	4.8	6.0	3.1	9.6	3.9	24
19	6.1	8.4	6.4	5.6	6.3	6.2	5.3	5.8	3.5	3.3	3.7	5.5	4.8	3.8	1.8	4.9	2.9	0.6	3.8	0.9	5.9	2.0	3.4	6.7	0.6	8.4	2.3	24
20	5.0	5.0	5.5	7.1	7.9	7.4	8.7	5.4	5.9	4.7	5.3	5.6	7.9	6.8	4.8	5.7	2.6	0.8	1.7	8.8	9.3	8.3	9.7	11.0	0.8	11.0	2.2	24
21	9.8	11.0	10.3	10.6	10.4	9.8	9.6	8.6	8.5	7.9	6.8	7.1	8.5	7.5	8.7	7.2	6.2	6.4	5.0	5.1	4.8	5.4	4.6	4.1	4.1	11.0	7.6	24
22	3.9	3.6	3.1	2.9	2.8	2.8	2.9	3.2	3.1	3.1	3.5	3.3	3.5	4.9	5.3	5.5	4.6	5.1	4.9	5.0	5.7	5.0	5.3	4.3	2.8	5.7	3.7	24
23	5.1	4.8	4.8	3.6	3.5	3.1	3.9	3.4	3.1	2.0	2.2	0.9	0.7	4.0	5.0	4.5	2.7	3.4	5.1	5.1	4.1	3.6	4.3	3.9	0.7	5.1	1.2	24
24	5.6	6.0	5.1	5.8	6.6	6.9	6.9	7.9	7.4	7.6	9.9	9.5	12.8	9.3	9.8	9.4	7.4	6.8	7.0	6.8	4.3	5.4	7.1	8.7	4.3	12.8	7.2	24
25	4.7	9.1	5.7	6.2	10.3	8.3	7.5	8.1	8.6	10.1	10.6	10.8	11.2	13.2	13.3	15.1	13.8	13.8	10.7	10.0	11.0	9.1	10.2	12.6	4.7	15.1	9.4	24
26	15.3	15.4	12.8	11.2	10.9	14.1	13.3	11.6	11.3	9.8	12.5	13.3	14.6	13.3	12.2	10.9	7.7	5.7	10.5	8.4	17.1	17.2	18.3	16.1	5.7	18.3	12.1	24
27	13.1	9.1	11.8	11.3	12.4	10.5	11.4	12.5	14.4	15.8	22.3	20.4	21.5	18.1	17.5	18.2	18.4	17.4	16.5	15.0	14.1	15.3	14.4	12.6	9.1	22.3	14.9	24
28	11.2	11.3	13.7	14.5	14.0	12.2	13.3	14.6	13.4	15.5	18.0	13.0	17.3	17.1	17.4	15.2	15.8	10.0	15.0	14.0	11.5	11.4	13.7	14.4	10.0	18.0	13.4	24
29	11.9	10.0	9.1	8.0	9.6	12.4	8.4	11.5	12.1	14.5	15.6	14.5	14.2	14.0	12.3	10.7	11.4	10.3	11.4	8.0	6.8	7.8	10.0	9.9	6.8	15.6	10.4	24
30	11.3	7.5	5.3	10.7	12.7	13.9	11.8	14.3	15.3	15.8	17.4	18.2	19.9	21.8	18.5	21.0	17.6	16.8	13.6	13.5	12.0	10.9	14.6	10.6	5.3	21.8	13.3	24
31	8.3	7.4	9.3	8.8	5.3	2.8	3.3	3.6	3.7	3.9	5.6	6.1	6.0	8.1	10.2	7.9	3.4	4.2	3.0	0.7	4.3	5.5	3.4	1.6	0.7	10.2	3.7	24
HOURLY MAX	24.8	23.7	24.3	22.3	28.1	24.1	30.7	26.8	23.1	20.9	22.3	21.1	21.5	21.8	24.3	21.0	29.8	17.7	16.5	16.2	19.2	19.2	23.8	22.0				
HOURLY AVG	3.6	4.0	3.9	2.8	3.3	3.9	4.3	4.0	4.4	4.9	5.1	5.1	5.8	5.3	5.9	5.6	5.2	4.3	3.9	3.5	4.0	3.9	3.9	3.8				

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

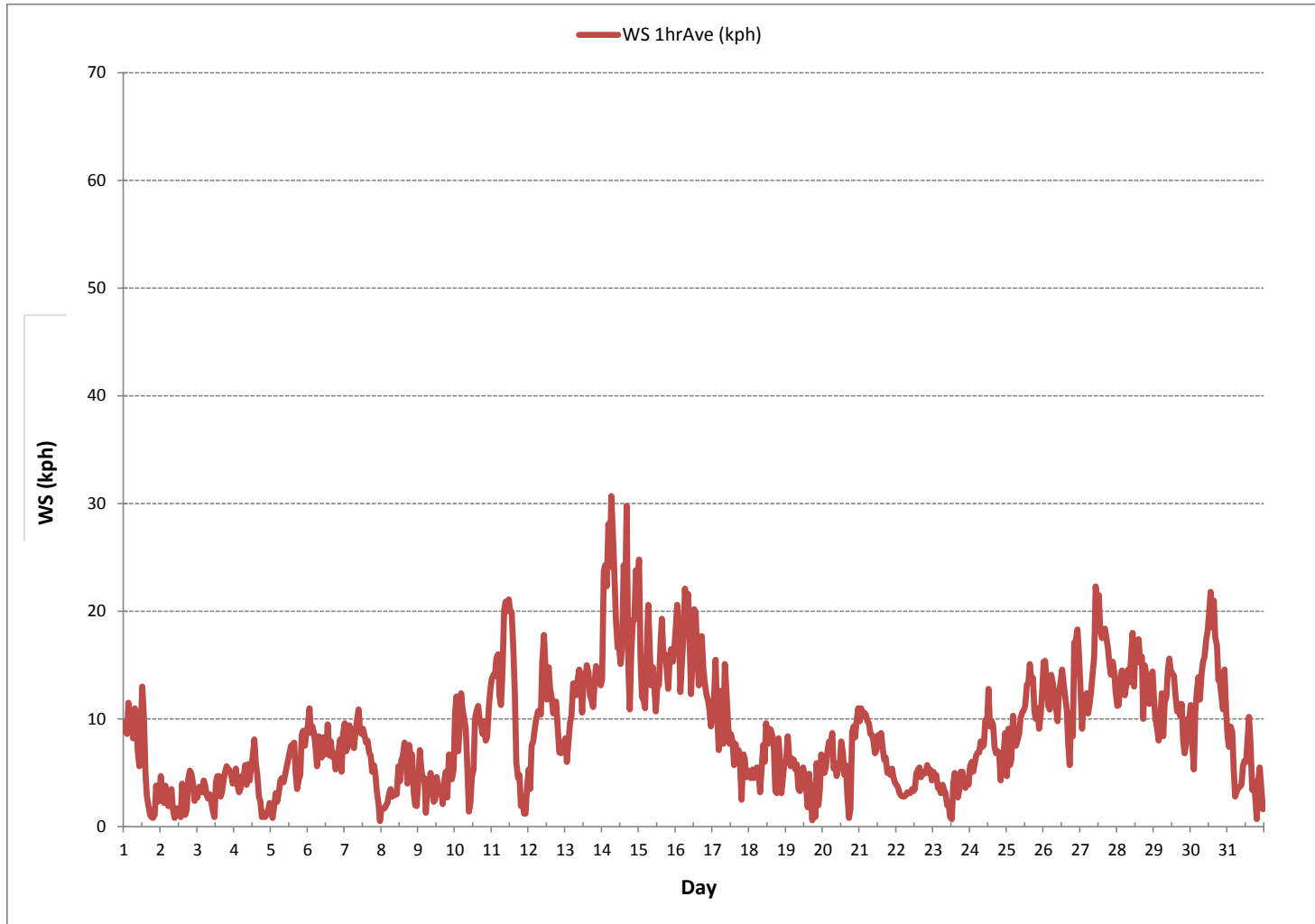
LAST CALIBRATION:	October 12, 2016
DECLINATION :	MAGNETIC DECLINATION 15 DEGREE EAST



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	740
MINIMUM 1-HR AVERAGE:	0.5 kph @ HOUR(S) 23 ON DAY(S) 7
MAXIMUM 1-HR AVERAGE:	30.7 kph @ HOUR(S) 6 ON DAY(S) 14
MAXIMUM 24-HR AVERAGE:	20.3 kph ON DAY(S) 14
	VAR-VARIOUS
MONTHLY CALIBRATION TIME:	0 hrs
OPERATIONAL TIME:	740 hrs
AMD OPERATION UPTIME:	99.5 %
STANDARD DEVIATION:	5.4
MONTHLY AVERAGE:	4.3 kph

WIND SPEED Hourly Averages (WS kph)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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	18.7	19.6	19.0	22.1	22.9	24.8	17.6	27.9	28.3	15.5	16.1	25.4	25.0	25.5	13.4	7.4	7.5	4.4	5.3	3.0	4.2	11.0	7.8	7.3	3.0	28.3	15.8	24	
2	8.0	7.2	6.4	7.2	5.9	5.0	5.9	6.0	5.8	8.8	4.0	6.0	11.4	4.2	11.5	5.6	3.3	4.3	7.2	11.8	9.5	9.5	5.0	6.2	3.3	11.8	6.9	24	
3	7.1	6.7	6.2	5.5	6.4	5.8	4.8	5.4	6.1	5.7	4.3	3.3	8.0	7.4	8.5	5.9	5.9	8.5	7.7	9.9	9.6	10.2	9.4	6.9	3.3	10.2	6.9	24	
4	8.0	8.5	6.9	6.4	6.9	8.0	8.2	10.8	9.6	11.1	10.2	9.9	12.0	13.9	11.6	8.7	4.7	4.2	2.7	5.0	3.6	5.4	7.4	9.6	2.7	13.9	8.1	24	
5	5.8	3.1	4.4	5.6	5.5	8.3	9.5	10.7	9.1	P	P	P	P	P	P	20.2	17.6	13.7	8.2	10.5	13.0	19.1	22.3	21.6	21.1	3.1	22.3	12.1	19
6	22.7	26.4	20.4	20.6	21.6	16.7	13.6	18.8	21.2	16.6	20.8	17.4	20.7	23.9	15.9	19.9	19.4	15.8	12.4	11.5	18.1	16.9	14.4	19.0	11.5	26.4	18.5	24	
7	21.6	19.9	16.2	22.6	22.7	20.2	17.8	23.6	27.7	28.0	18.2	21.9	21.3	19.3	18.4	18.5	16.1	14.7	11.0	12.9	10.5	8.2	5.0	2.4	2.4	28.0	17.4	24	
8	3.9	3.4	3.8	3.8	3.5	5.4	6.5	7.4	6.7	6.4	10.2	9.2	8.0	11.4	11.0	14.5	12.2	8.1	15.8	13.8	13.1	8.5	4.8	5.0	3.4	15.8	8.2	24	
9	11.6	14.0	9.1	8.0	9.0	5.8	7.9	7.7	8.1	8.1	5.3	7.0	16.9	12.8	5.8	6.5	5.2	8.1	8.7	9.6	11.9	11.0	7.5	10.2	5.2	16.9	9.0	24	
10	20.7	20.0	21.0	27.9	31.0	26.2	24.8	23.2	17.2	4.6	5.6	9.4	11.1	19.2	18.3	18.7	17.2	17.9	15.7	16.7	15.4	18.5	20.9	22.5	4.6	31.0	18.5	24	
11	22.9	24.0	23.0	27.2	27.5	22.6	23.4	29.9	44.6	41.5	36.4	49.7	50.6	49.3	40.1	35.0	17.9	11.8	10.3	6.7	6.8	3.9	5.6	7.3	3.9	50.6	25.8	24	
12	9.8	9.9	15.1	15.4	17.6	18.8	18.4	18.1	21.3	28.9	33.9	33.6	22.8	25.0	29.1	21.9	20.9	18.9	22.9	16.8	13.5	12.1	15.0	16.4	9.8	33.9	19.8	24	
13	13.1	9.6	13.5	16.8	16.5	26.0	21.9	18.1	21.9	22.4	22.8	21.7	27.9	24.4	26.7	24.1	22.2	25.5	22.9	21.0	23.0	23.5	24.5	21.1	9.6	27.9	21.3	24	
14	32.7	42.5	44.4	40.1	43.8	42.6	53.4	47.6	40.4	39.0	31.8	34.6	35.7	36.2	40.0	55.9	59.2	31.3	21.2	30.4	34.1	34.9	44.0	40.4	21.2	59.2	39.8	24	
15	48.3	33.2	25.4	22.3	20.9	36.8	40.2	30.1	23.3	24.7	22.5	19.5	22.9	25.0	35.2	35.4	28.6	29.0	26.6	24.6	33.9	29.6	25.8	35.6	19.5	48.3	29.1	24	
16	32.2	37.1	35.5	31.4	28.4	30.6	40.1	34.9	42.9	37.3	26.7	33.0	34.0	36.6	26.9	23.3	27.6	33.5	25.3	21.0	22.0	20.4	20.8	15.5	15.5	42.9	29.9	24	
17	19.2	19.1	28.3	23.0	16.6	21.6	17.5	21.0	25.5	21.5	16.7	15.3	14.7	14.7	13.8	13.4	11.4	13.2	13.0	6.7	14.3	18.0	10.3	11.7	6.7	28.3	16.7	24	
18	10.2	11.6	11.5	11.8	9.8	11.9	16.2	11.0	13.2	13.2	13.4	19.0	21.5	17.5	16.9	16.3	13.9	9.0	7.2	15.3	12.6	6.6	12.7	14.8	6.6	21.5	13.2	24	
19	14.8	22.0	15.1	14.9	13.2	14.3	11.9	13.5	10.9	7.5	8.8	14.5	12.8	8.9	8.0	11.9	6.0	3.3	8.8	10.9	12.0	6.1	6.8	11.3	3.3	22.0	11.2	24	
20	10.0	11.6	12.8	10.5	12.5	13.1	17.1	12.8	14.2	9.0	11.7	15.8	15.2	13.3	10.3	12.1	7.2	4.2	5.9	20.9	23.6	19.3	22.5	23.0	4.2	23.6	13.7	24	
21	25.1	24.5	25.4	25.0	24.4	22.3	24.4	20.1	22.6	19.4	15.4	15.7	20.4	18.6	17.9	16.8	14.8	15.3	10.9	11.5	10.2	11.6	8.8	9.1	8.8	25.4	17.9	24	
22	7.8	7.6	7.1	5.8	6.4	6.1	6.7	7.1	5.9	7.4	8.6	10.2	7.8	11.0	12.9	13.1	10.0	12.6	12.0	12.0	12.7	11.2	11.8	11.1	5.8	13.1	9.4	24	
23	11.6	12.3	11.6	10.3	9.6	7.5	8.1	6.8	6.3	4.6	5.6	4.9	3.5	8.1	8.6	7.3	6.4	10.8	11.2	8.9	7.9	7.4	7.3	9.1	3.5	12.3	8.2	24	
24	9.7	9.3	9.6	10.1	12.2	12.4	11.9	15.6	13.0	12.1	17.3	18.1	23.7	18.2	19.6	16.3	13.7	12.1	13.4	11.5	10.4	9.7	12.7	15.7	9.3	23.7	13.7	24	
25	13.2	17.9	18.3	13.8	15.2	14.6	13.7	14.6	14.5	16.8	21.0	20.5	19.4	22.8	22.5	26.2	23.1	23.1	23.8	17.9	22.1	18.7	20.6	22.8	13.2	26.2	19.0	24	
26	27.7	29.3	22.9	22.1	22.9	21.8	21.2	20.9	20.9	20.2	22.8	22.6	24.0	22.7	19.4	20.0	13.5	18.1	21.3	18.8	33.9	31.6	35.5	30.8	13.5	35.5	23.5	24	
27	31.5	16.6	20.1	17.4	23.0	21.0	25.6	27.8	25.2	35.3	38.4	36.7	37.3	31.9	32.4	34.3	31.4	29.0	29.0	26.9	25.1	28.7	26.7	23.2	16.6	38.4	28.1	24	
28	19.2	18.0	24.8	26.5	22.6	21.0	22.6	24.4	25.6	26.9	32.2	26.2	34.8	34.1	33.8	30.2	27.6	29.2	45.2	32.9	28.0	25.1	28.0	24.8	18.0	45.2	27.7	24	
29	21.0	17.0	16.5	13.1	19.5	23.3	21.1	18.7	20.7	25.5	25.8	25.3	24.5	24.3	20.4	19.8	18.3	18.9	19.5	16.4	12.2	14.5	16.7	17.2	12.2	25.8	19.6	24	
30	18.0	14.2	21.8	26.3	27.3	29.9	30.4	36.9	35.4	36.1	35.2	37.8	45.4	41.7	41.4	42.8	36.7	34.8	36.5	34.4	30.5	24.7	34.8	34.2	14.2	45.4	32.8	24	
31	20.9	20.9	25.6	20.5	14.9	8.3	6.2	7.1	6.5	6.6	9.1	11.8	10.5	20.9	19.1	14.4	8.6	6.7	5.9	2.8	8.4	9.7	8.1	3.7	2.8	25.6	11.6	24	
HOURLY MAX	48.3	42.5	44.4	40.1	43.8	42.6	53.4	47.6	44.6	41.5	38.4	49.7	50.6	49.3	41.4	55.9	59.2	34.8	45.2	34.4	34.1	34.9	44.0	40.4					
HOURLY AVG	17.6	17.3	17.5	17.2	17.4	17.8	18.3	18.7	19.2	18.7	18.4	19.9	21.5	21.4	20.3	19.8	16.9	15.6	15.8	15.3	16.5	15.8	16.2	16.4					

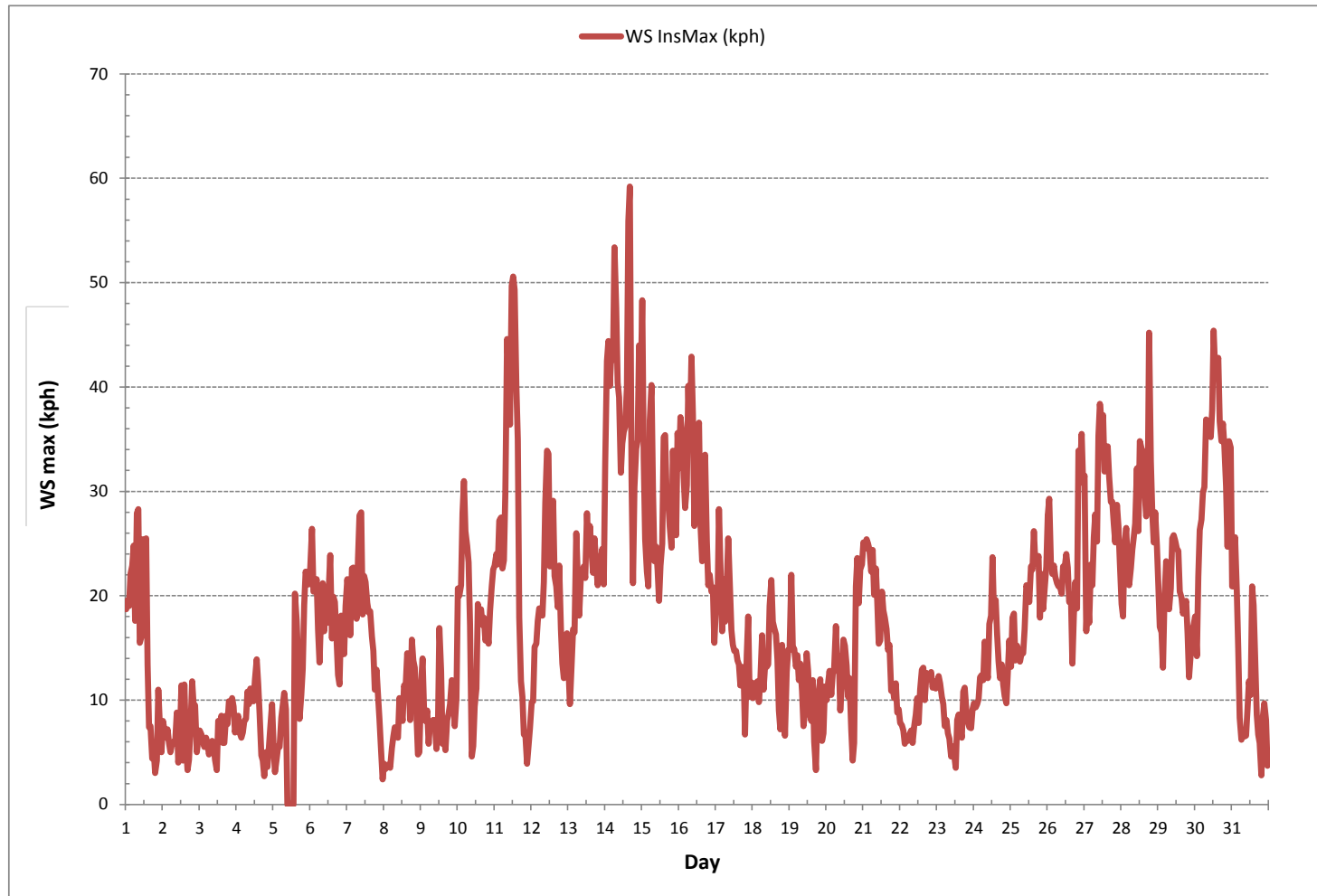
STATUS FLAG CODES

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:	59.2	kph	@ HOUR(S)	16	ON DAY(S)	14
					VAR-VARIOUS	
OPERATIONAL TIME:					739	hrs

WIND SPEED Instantaneous Maximum (WS kph)

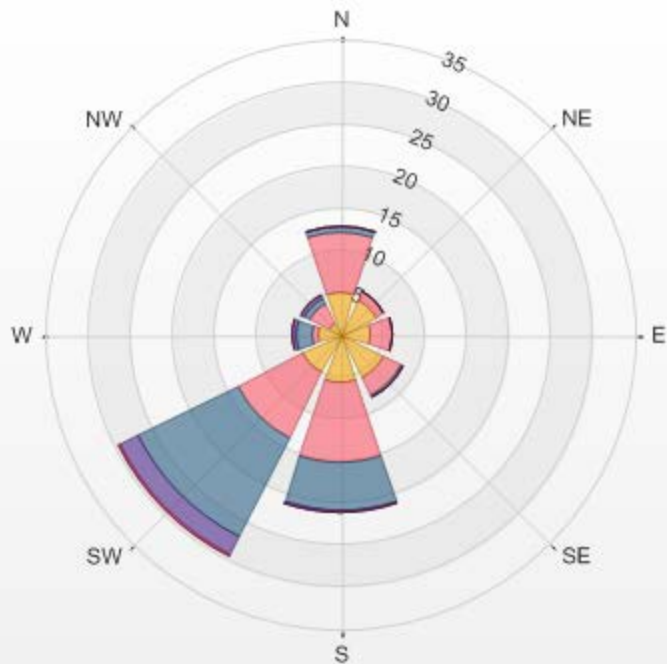


Wind: THREE CREEKS #842 TRAILER Monitor: WSP [kph] Monthly: 01/2017 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 4.86% Valid Data: 99.73%

Direction	1.8-6.0	6.0-12.0	12.0-20.0	20.0-29.0	29.0-39.0	>39.0	Total
N	5	7.16	0.68	0.14	0	0	12.98
NE	4.73	1.08	0	0	0	0	5.81
E	3.65	2.57	0	0	0	0	6.22
SE	5.68	2.43	0.14	0	0	0	8.25
S	5.81	9.46	5.54	0.41	0	0	21.22
SW	5	8.65	13.24	2.3	0.27	0	29.46
W	2.7	0.81	1.89	0.41	0	0	5.81
NW	1.49	2.7	0.68	0.54	0	0	5.41
Summary	34.06	34.86	22.17	3.8	0.27	0	95.16

% Icon	Classes (kph)	34		1.8-6.0	35		6.0-12.0	22		12.0-20.0	4		20.0-29.0	0		29.0-39.0	0		>39.0
--------	---------------	----	---	---------	----	---	----------	----	---	-----------	---	--	-----------	---	---	-----------	---	---	-------

THREE CREEKS #842 TRAILER 01/01/2017 00:00 - 31/01/2017 23:00 Calm: 4.86% Calm Wind Avg Speed: 1.17 (kph)



WIND DIRECTION



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
Three Creeks 842b Station - January 2017

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	NW	NW	WNW	NW	NW	NW	NW	NW	NW	NW	WNW	WNW	NW	NNW	NNW	WNW	NW	SSE	SE	ESE	ESE	SE	ESE	E	NW	24	
2	ENE	E	ENE	ENE	ENE	ENE	NE	ENE	ENE	ENE	E	ENE	NNE	WSW	WSW	WSW	SSW	SSE	SE	SE	SE	SSE	SE	SSE	ESE	24	
3	SE	SSE	SSE	SE	SSE	SSE	SE	SE	SE	SE	SSE	S	SSE	WSW	WSW	WSW	SW	SW	SSW	S	S	SSW	SW	S	S	24	
4	SSW	S	S	SSW	S	SSE	SE	SE	SSE	SSE	S	SSW	SSW	SSW	SW	SW	SSW	S	S	SW	WSW	WSW	WNW	NNE	S	24	
5	NE	N	NNW	NW	NNW	N	N	N	NNW	P	P	P	P	NE	ENE	ENE	NE	NE	ENE	ENE	E	E	E	E	NE	20	
6	E	E	E	E	E	E	E	E	E	E	E	E	ENE	E	E	E	ENE	NE	NNE	NNE	NNE	NNE	NNW	ENE	24		
7	NNW	NNW	NNW	NNW	N	N	N	N	N	N	N	N	N	N	N	N	N	N	NNW	N	N	NNW	N	E	N	24	
8	ENE	E	ESE	E	E	ESE	ESE	SE	ESE	SE	SSE	S	SW	SW	SW	SSW	SW	SW	SSW	SSW	SW	SSW	SSE	SSE	S	24	
9	SW	SW	SW	SW	SW	W	SSW	WSW	WSW	SW	WSW	WSW	NNW	W	WSW	SW	WSW	WSW	SW	SW	SSW	SSW	SSE	SE	SW	24	
10	SSE	S	SW	NNW	N	NNW	NNW	NNW	NNW	S	SW	SW	SW	SW	SW	SW	SSW	SW	SW	SSW	SSW	SSW	SSW	SSW	SW	24	
11	SW	SW	SW	SW	WSW	WSW	WSW	W	WNW	WNW	WNW	NNW	NNW	NNW	N	NNE	N	NE	E	E	ENE	SE	ESE	WNW	24		
12	SE	SE	SE	SE	SE	SSE	SE	SE	SSE	SSE	S	S	S	SSW	S	SSW	S	SSW	SW	SW	SW	SW	SSW	SSW	S	24	
13	S	SE	SSE	S	SSE	S	S	S	S	S	S	S	SSW	SSW	SSW	SW	SW	SSW	S	SSE	SSE	S	SSW	S	S	24	
14	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SSW	SW	SW	SW	WSW	WSW	SSW	S	S	SSW	SW	SW	SW	SW	24	
15	WSW	SW	SW	SW	SW	WSW	WSW	SW	WSW	SW	WSW	SW	SSW	SW	WSW	WSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	24
16	SW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	S	S	S	S	S	S	SSE	S	S	S	S	S	S	S	S	S	S	24
17	SSE	S	S	S	SSE	S	SSW	S	SSW	S	S	S	S	S	S	SSW	SSE	SE	SE	SE	SE	SE	E	ESE	S	24	
18	ESE	ESE	ESE	ESE	E	ESE	SE	SE	SSE	SSE	SE	SSE	S	SSW	SW	SSW	S	SE	ESE	SE	SE	ENE	N	N	SE	24	
19	N	N	N	NNE	NNE	NNE	NNE	NNE	NE	NNW	NNW	NNE	NE	NE	NNW	W	NW	SW	ESE	E	SW	S	S	S	NNE	24	
20	S	S	S	SSE	SSE	SSE	S	SSE	SSE	SSE	S	S	S	S	SSW	S	SSE	S	NNE	NNW	N	N	N	NNE	SSE	24	
21	NNE	N	N	N	N	N	N	N	N	NNE	N	N	N	N	N	N	NNE	N	N	N	N	N	N	NNE	N	N	24
22	NNE	N	N	N	N	N	NNE	N	NNE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	NE	ENE	ENE	ENE	E	NE	24	
23	E	E	E	E	ENE	ENE	NE	ENE	ENE	E	E	ESE	SSE	W	W	WSW	SW	SSE	SSE	SW	SSW	S	S	S	SE	24	
24	S	S	S	S	SSW	SSW	SSW	S	S	S	SSW	SSW	SSW	S	SSW	SSW	S	S	S	S	SE	SSE	SSE	SSE	S	24	
25	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	24
26	SW	SW	SW	SSW	SSW	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SSW	S	S	SSW	SW	WSW	WSW	WSW	WSW	SW	24	
27	WSW	SW	SSW	SW	SW	SSW	SSW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SSW	24	
28	S	SSE	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	S	SSW	SW	SW	SW	SW	SW	WSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	24
29	SSW	S	S	S	SSW	SSW	S	SSW	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	SSW	24	
30	WSW	WSW	W	NW	WNW	WNW	WNW	WNW	WNW	W	WNW	W	W	WNW	WNW	WNW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	WNW	24
31	N	N	NNE	N	N	NNW	WNW	W	WSW	WSW	W	WNW	W	WNW	NW	NW	WNW	SW	SW	S	SW	WSW	W	WSW	WNW	24	

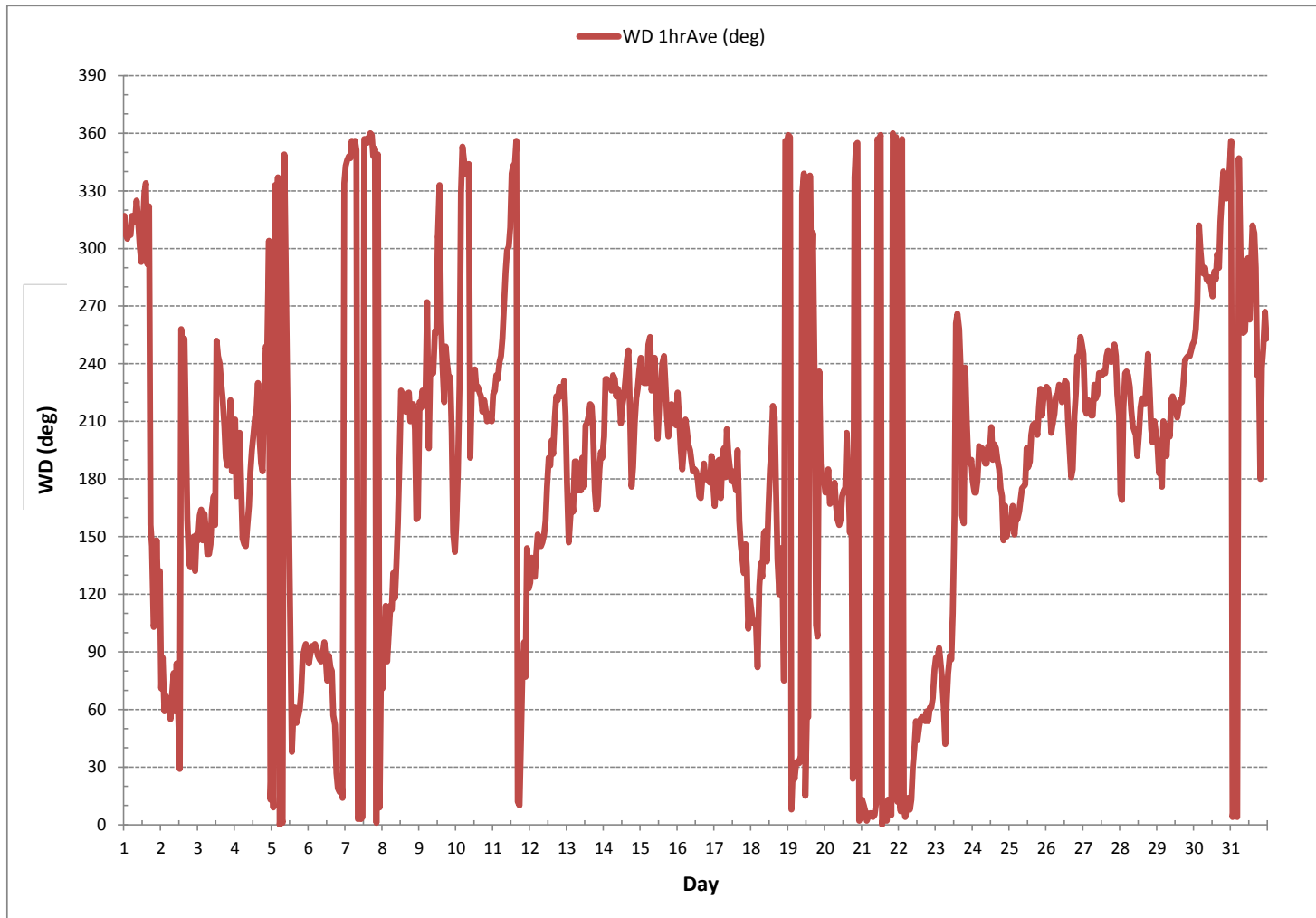
STATUS FLAG CODES

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:	October 12, 2016
DECLINATION :	MAGNETIC DECLINATION 15 DEGREE EAST

MONTHLY CALIBRATION TIME:	0	hrs	OPERATIONAL TIME:	740	hrs
STANDARD DEVIATION:	89		AMD OPERATION UPTIME:	99.5	%
			MONTHLY AVERAGE:	218	(SW)

WIND DIRECTION Hourly Averages (WD)



RELATIVE HUMIDITY



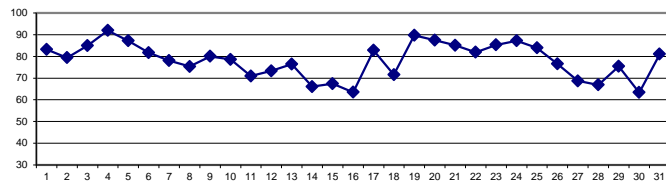
RELATIVE HUMIDITY Hourly Averages (RH %)

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	86	83	82	85	84	84	88	88	84	85	83	81	81	74	77	82	83	86	86	84	82	85	83	81	74	88	83	24
2	82	82	80	79	78	79	78	77	79	78	78	79	79	74	72	74	82	79	81	85	85	83	81	82	72	85	79	24
3	82	82	81	81	82	81	79	80	83	83	84	85	85	86	86	87	88	89	89	89	89	89	89	90	79	90	85	24
4	90	90	90	90	90	90	90	90	91	92	92	92	92	91	92	92	92	93	93	95	95	95	95	94	90	95	92	24
5	92	93	91	91	90	90	89	89	89	P	P	P	P	82	81	81	82	83	85	87	87	88	87	86	81	93	87	20
6	86	86	85	85	85	84	83	82	83	82	82	79	77	80	80	80	80	81	80	80	80	80	79	81	77	86	82	24
7	81	80	80	81	80	80	80	81	80	80	79	78	77	76	76	75	76	76	77	76	76	75	75	77	75	81	78	24
8	75	74	73	72	72	71	73	74	77	75	71	73	69	70	74	75	77	79	80	81	82	82	80	79	69	82	75	24
9	82	81	82	81	81	79	81	81	82	82	80	77	79	73	78	80	82	80	82	78	82	80	78	79	73	82	80	24
10	80	81	83	82	81	80	79	78	76	75	76	74	74	74	74	76	78	79	81	81	82	83	83	74	83	79	24	
11	84	84	83	81	79	77	75	74	73	72	69	69	80	64	52	46	49	60	65	72	74	73	74	73	46	84	71	24
12	74	75	74	73	73	71	74	77	79	80	77	71	67	67	68	67	70	75	73	75	75	74	75	75	67	80	73	24
13	75	80	82	83	83	81	79	84	82	82	77	78	72	69	69	71	72	71	71	76	76	75	72	73	69	84	76	24
14	73	69	69	68	66	65	61	62	64	67	67	67	64	63	63	59	58	61	66	70	69	73	72	69	58	73	66	24
15	66	70	71	71	73	70	66	70	72	72	69	63	62	61	60	59	64	64	67	68	68	71	71	70	59	73	67	24
16	68	64	65	66	65	64	58	58	57	58	62	61	58	58	59	62	60	59	60	61	62	65	82	91	57	91	63	24
17	94	92	86	82	88	85	84	88	79	80	81	82	78	77	80	73	81	82	83	82	82	82	84	73	94	83	24	
18	81	81	84	81	77	78	75	77	80	78	74	65	55	49	48	50	54	67	79	75	68	82	80	80	48	84	72	24
19	89	93	92	91	92	91	91	91	90	88	87	84	85	83	81	85	83	88	92	93	96	96	96	96	81	96	90	24
20	96	96	97	96	94	93	93	93	91	92	85	76	73	70	65	66	74	90	92	94	94	94	93	92	65	97	87	24
21	91	90	90	90	88	87	86	86	85	85	83	83	82	80	81	80	81	83	85	84	85	85	86	85	80	91	85	24
22	84	84	83	82	82	82	82	82	81	82	81	79	80	80	81	81	82	82	82	83	83	82	83	79	84	82	24	
23	85	85	87	86	84	82	81	81	82	85	86	83	81	83	82	85	85	87	89	90	89	89	90	90	81	90	85	24
24	90	90	90	90	90	91	91	92	92	91	87	82	80	75	75	75	78	86	90	90	91	92	93	92	75	93	87	24
25	90	90	88	90	89	89	89	90	89	88	85	82	79	76	73	73	76	78	81	83	83	83	84	85	73	90	84	24
26	85	84	84	82	85	83	84	84	85	82	79	76	73	72	68	67	72	78	73	73	70	67	66	66	66	85	77	24
27	65	69	71	71	71	71	74	71	72	73	68	66	64	63	64	64	66	68	68	69	70	70	71	70	63	74	69	24
28	77	81	74	76	79	76	73	70	67	66	64	63	58	54	55	56	61	61	65	68	68	69	70	54	81	67	24	
29	72	75	77	80	77	74	77	76	76	76	76	74	72	73	74	72	73	73	74	77	78	79	77	78	72	80	75	24
30	79	75	66	59	57	53	52	45	43	43	42	43	44	47	52	66	74	85	88	83	86	87	78	73	42	88	63	24
31	75	78	78	79	78	80	84	87	90	90	87	80	83	81	75	73	73	78	80	80	81	82	85	88	73	90	81	24
HOURLY MAX	96	96	97	96	94	93	93	93	92	92	92	92	92	91	92	92	92	93	93	95	96	96	96	96	96	96	96	24
HOURLY AVG	82	82	81	81	80	79	79	79	79	79	77	75	73	72	71	72	74	77	79	80	80	81	81	81	81	81	81	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

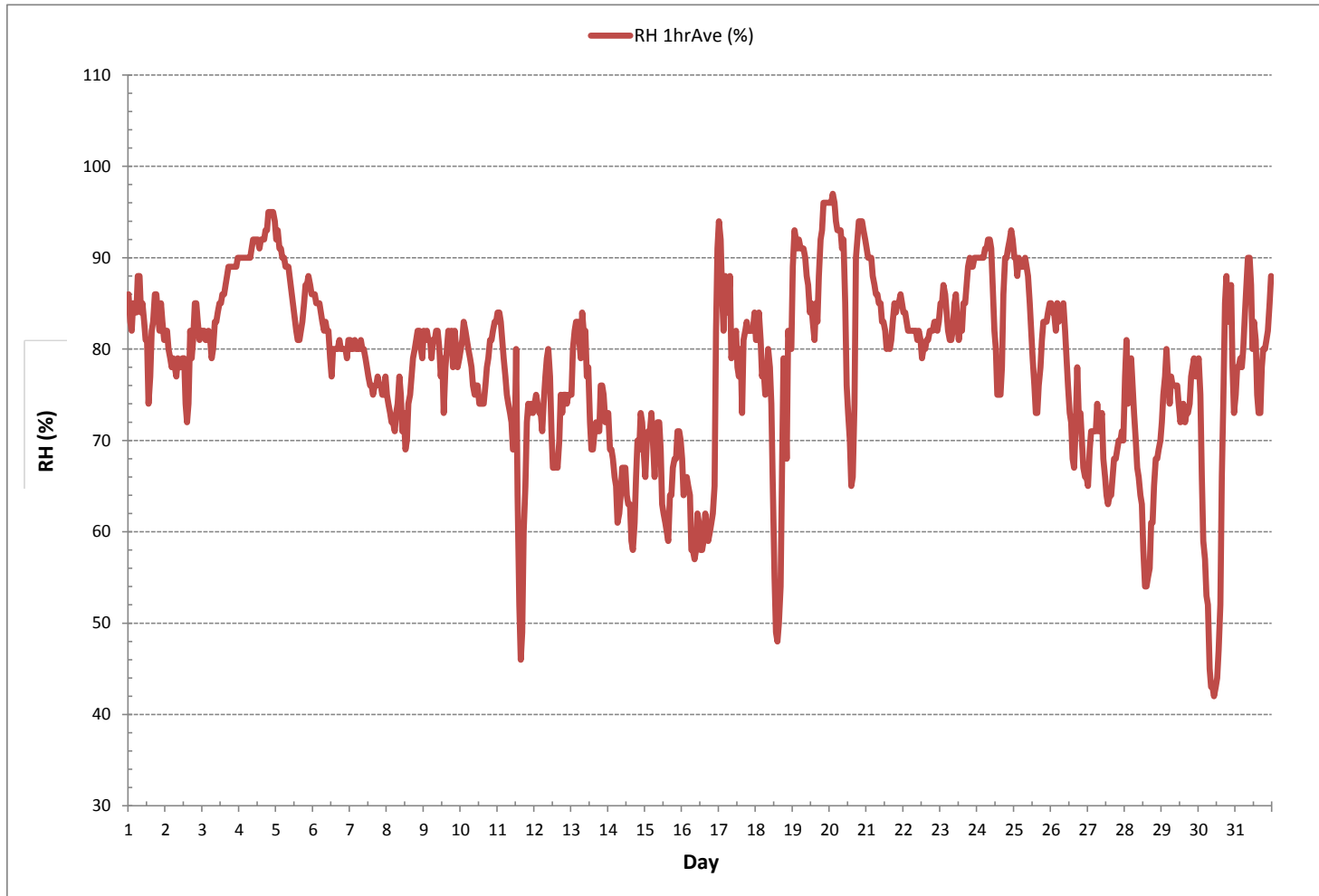
24 HR AVERAGES January 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	42	%	@ HOUR(S)	10	ON DAY(S)	30
MAXIMUM 1-HR AVERAGE:	97	%	@ HOUR(S)	2	ON DAY(S)	20
MAXIMUM 24-HR AVERAGE:	92	%			ON DAY(S)	4
					VAR-VARIOUS	
OPERATIONAL TIME:						740 hrs
AMD OPERATION UPTIME:						99.5 %
STANDARD DEVIATION:	10					MONTHLY AVERAGE: 78 %

RELATIVE HUMIDITY Hourly Averages (RH %)



BAROMETRIC PRESSURE



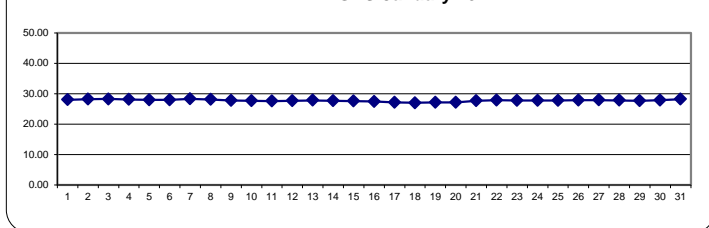
BAROMETRIC PRESSURE Hourly Averages (BP inHg)

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	27.93	27.94	27.96	27.97	27.98	28.00	28.00	28.01	28.02	28.02	28.04	28.03	28.03	28.02	28.03	28.03	28.04	28.05	28.05	28.05	28.06	28.06	28.07	28.08	27.93	28.08	28.02	24	
2	28.10	28.11	28.13	28.15	28.17	28.20	28.23	28.25	28.26	28.28	28.29	28.30	28.29	28.28	28.27	28.26	28.30	28.31	28.32	28.31	28.31	28.30	28.30	28.29	28.10	28.32	28.25	24	
3	28.28	28.29	28.29	28.30	28.29	28.28	28.29	28.29	28.28	28.28	28.29	28.29	28.28	28.29	28.28	28.28	28.27	28.28	28.27	28.26	28.25	28.24	28.22	28.21	28.21	28.30	28.27	24	
4	28.20	28.20	28.19	28.18	28.18	28.17	28.16	28.14	28.14	28.13	28.12	28.11	28.09	28.08	28.06	28.05	28.05	28.05	28.04	28.04	28.03	28.02	28.02	28.01	28.01	28.20	28.10	24	
5	28.00	27.99	27.99	27.99	27.98	27.97	27.97	27.97	27.97	P	P	P	P	27.99	27.99	27.99	28.00	28.01	28.01	28.01	27.99	27.98	27.96	27.95	27.95	27.95	28.01	27.98	20
6	27.93	27.93	27.93	27.93	27.92	27.92	27.93	27.93	27.94	27.95	27.95	27.96	27.96	27.96	27.97	27.99	28.01	28.03	28.06	28.08	28.10	28.12	28.14	28.17	27.92	28.17	27.99	24	
7	28.19	28.21	28.24	28.26	28.28	28.29	28.30	28.32	28.32	28.34	28.36	28.36	28.36	28.34	28.33	28.33	28.32	28.32	28.31	28.31	28.30	28.29	28.28	28.28	28.19	28.36	28.30	24	
8	28.28	28.27	28.27	28.27	28.26	28.24	28.21	28.19	28.18	28.19	28.18	28.16	28.12	28.09	28.07	28.09	28.08	28.07	28.03	28.02	28.01	28.00	27.98	27.96	27.93	28.28	28.12	24	
9	27.90	27.89	27.88	27.87	27.85	27.83	27.81	27.80	27.79	27.79	27.79	27.77	27.76	27.75	27.75	27.74	27.75	27.75	27.74	27.73	27.70	27.69	27.67	27.65	27.65	27.90	27.78	24	
10	27.62	27.58	27.57	27.61	27.68	27.73	27.78	27.81	27.82	27.82	27.83	27.84	27.85	27.86	27.87	27.86	27.86	27.87	27.87	27.86	27.85	27.83	27.82	27.81	27.80	27.77	27.87	27.83	24
11	27.51	27.48	27.46	27.44	27.43	27.43	27.42	27.41	27.43	27.44	27.47	27.51	27.57	27.64	27.69	27.76	27.82	27.85	27.87	27.88	27.88	27.88	27.88	27.88	27.88	27.88	27.88	27.88	24
12	27.88	27.86	27.84	27.83	27.81	27.78	27.75	27.74	27.73	27.71	27.68	27.64	27.63	27.61	27.62	27.62	27.63	27.66	27.67	27.70	27.71	27.72	27.74	27.76	27.61	27.88	27.72	24	
13	27.77	27.79	27.80	27.80	27.81	27.82	27.82	27.83	27.84	27.85	27.86	27.87	27.86	27.86	27.87	27.87	27.87	27.86	27.85	27.83	27.82	27.81	27.80	27.77	27.77	27.87	27.83	24	
14	27.79	27.78	27.79	27.77	27.76	27.74	27.72	27.72	27.73	27.74	27.72	27.72	27.69	27.69	27.68	27.67	27.68	27.69	27.65	27.63	27.61	27.60	27.59	27.59	27.59	27.59	27.79	27.70	24
15	27.59	27.59	27.59	27.60	27.60	27.60	27.61	27.61	27.61	27.61	27.61	27.63	27.64	27.64	27.63	27.63	27.64	27.65	27.66	27.66	27.66	27.66	27.65	27.65	27.65	27.59	27.66	27.63	24
16	27.65	27.63	27.62	27.60	27.57	27.54	27.53	27.50	27.48	27.48	27.48	27.46	27.44	27.43	27.40	27.38	27.35	27.33	27.30	27.26	27.23	27.20	27.19	27.17	27.17	27.65	27.43	24	
17	27.15	27.15	27.14	27.16	27.16	27.16	27.17	27.17	27.17	27.17	27.17	27.18	27.18	27.17	27.16	27.17	27.15	27.13	27.12	27.12	27.09	27.07	27.07	27.07	27.07	27.18	27.15	24	
18	27.05	27.05	27.04	27.03	27.01	27.00	26.99	26.99	27.00	27.00	27.00	27.01	27.00	27.01	27.00	27.00	27.01	27.01	27.01	27.01	27.03	27.03	27.04	27.07	26.99	27.07	27.02	24	
19	27.08	27.09	27.11	27.12	27.13	27.13	27.12	27.12	27.12	27.14	27.14	27.12	27.11	27.11	27.10	27.11	27.12	27.12	27.12	27.11	27.12	27.12	27.11	27.11	27.08	27.14	27.12	24	
20	27.12	27.13	27.13	27.14	27.13	27.14	27.14	27.14	27.15	27.16	27.18	27.19	27.19	27.19	27.19	27.21	27.22	27.22	27.24	27.26	27.28	27.30	27.32	27.35	27.12	27.35	27.20	24	
21	27.37	27.39	27.42	27.45	27.48	27.51	27.53	27.56	27.59	27.62	27.65	27.67	27.69	27.71	27.73	27.75	27.77	27.79	27.81	27.82	27.84	27.86	27.87	27.88	27.37	27.88	27.66	24	
22	27.88	27.89	27.90	27.91	27.92	27.91	27.91	27.90	27.90	27.90	27.90	27.90	27.89	27.88	27.86	27.85	27.84	27.84	27.84	27.83	27.83	27.82	27.82	27.82	27.82	27.82	27.92	27.87	24
23	27.81	27.81	27.80	27.80	27.80	27.79	27.80	27.80	27.80	27.81	27.81	27.81	27.80	27.79	27.78	27.77	27.77	27.77	27.77	27.77	27.76	27.76	27.75	27.75	27.75	27.75	27.81	27.79	24
24	27.75	27.75	27.75	27.74	27.75	27.76	27.77	27.77	27.77	27.78	27.77	27.77	27.78	27.78	27.78	27.78	27.78	27.80	27.81	27.81	27.82	27.82	27.82	27.82	27.82	27.74	27.82	27.78	24
25	27.81	27.81	27.81	27.82	27.82	27.82	27.81	27.81	27.82	27.82	27.82	27.82	27.82	27.83	27.82	27.82	27.82	27.83	27.83	27.83	27.83	27.84	27.84	27.84	27.85	27.80	27.85	27.82	24
26	27.86	27.87	27.88	27.89	27.90	27.90	27.90	27.91	27.92	27.92	27.94	27.94	27.93	27.93	27.92	27.91	27.90	27.89	27.89	27.89	27.91	27.92	27.94	27.94	27.86	27.94	27.91	24	
27	27.96	27.97	27.97	27.98	27.98	27.99	27.98	27.96	27.94	27.92	27.92	27.92	27.91	27.90	27.90	27.90	27.91	27.92	27.93	27.93	27.94	27.94	27.94	27.94	27.90	27.99	27.94	24	
28	27.94	27.93	27.91	27.90	27.89	27.88	27.87	27.85	27.83	27.83	27.82	27.82	27.80	27.80	27.80	27.81	27.79	27.79	27.80	27.81	27.81	27.80	27.80	27.81	27.79	27.94	27.84	24	
29	27.80	27.79	27.78	27.76	27.76	27.75	27.74	27.73	27.72	27.71	27.70	27.70	27.68	27.66	27.64	27.62	27.61	27.60	27.60	27.59	27.59	27.60	27.61	27.62	27.59	27.80	27.68	24	
30	27.63	27.66	27.68	27.71	27.73	27.75	27.76	27.78	27.80	27.82	27.84	27.85	27.86	27.87	27.88	27.90	27.91	27.93	27.95	27.97	27.99	28.01	28.04	28.07	27.63	28.07	27.85	24	
31	28.09	28.11	28.12	28.14	28.15	28.16	28.17	28.18	28.18	28.19	28.20	28.20	28.20	28.19	28.20	28.21	28.22	28.23	28.23	28.23	28.24	28.25	28.26	28.28	28.09	28.28	28.19	24	
HOURLY MAX	28.28	28.29	28.29	28.30	28.29	28.29	28.30	28.32	28.32	28.34	28.36	28.36	28.36	28.34	28.33	28.33	28.32	28.32	28.32	28.31	28.31	28.30	28.30	28.29					
HOURLY AVG	27.77	27.77	27.77	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.79	27.79	27.79	27.79	27.79	27.78	27.78	27.79					

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

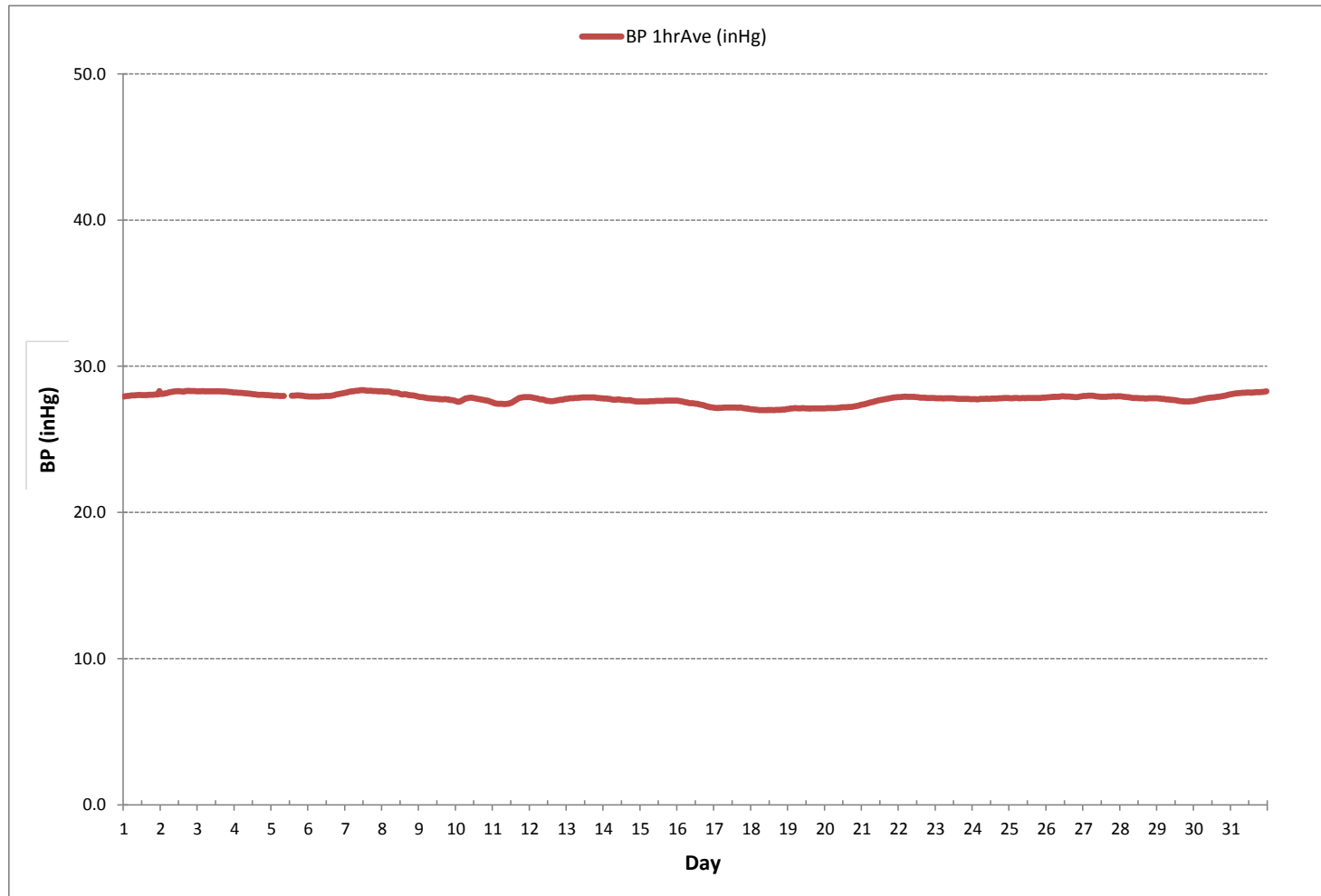
24 HR AVERAGES January 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	26.99 inHg	@ HOUR(S)	6, 7	ON DAY(S)	18, 18
MAXIMUM 1-HR AVERAGE:	28.36 inHg	@ HOUR(S)	VAR	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	28.30 inHg			ON DAY(S)	7
				VAR-VARIOUS	
		OPERATIONAL TIME:		740	hrs
		AMD OPERATION UPTIME:		99.5	%
STANDARD DEVIATION:	0.34	MONTHLY AVERAGE:		27.78	inHg

BAROMETRIC PRESSURE Hourly Averages (BP inHg)



AMBIENT TEMPERATURE



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 842b Station - January 2017

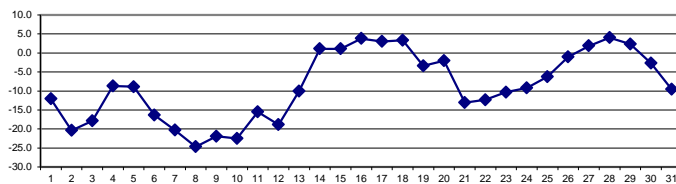
AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)

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	-9.9	-9.6	-9.5	-9.9	-10.3	-9.9	-9.7	-9.7	-10.1	-10.8	-11.1	-10.0	-10.0	-9.4	-10.1	-11.1	-11.7	-13.9	-15.4	-15.4	-17.5	-17.7	-17.8	-18.8	-18.8	-18.8	-9.4	-12.1	24
2	-19.9	-17.3	-16.5	-16.8	-18.8	-21.5	-23.1	-23.2	-24.6	-23.2	-21.7	-19.1	-16.9	-14.6	-14.8	-16.0	-20.3	-23.8	-23.7	-23.0	-22.9	-22.3	-22.7	-21.8	-24.6	-14.6	-20.4	24	
3	-21.8	-22.0	-22.0	-22.9	-22.5	-22.3	-24.1	-23.9	-20.7	-20.2	-18.8	-17.2	-16.2	-16.4	-15.8	-15.0	-14.3	-14.2	-14.1	-13.8	-13.5	-13.0	-12.5	-12.0	-24.1	-12.0	-17.9	24	
4	-11.4	-11.2	-10.8	-10.9	-12.4	-12.7	-12.9	-11.9	-10.9	-10.1	-9.4	-8.6	-8.0	-7.4	-7.2	-7.2	-7.2	-7.0	-6.6	-6.1	-5.4	-5.3	-4.7	-4.2	-12.9	-4.2	-8.7	24	
5	-4.3	-5.1	-4.9	-5.3	-5.4	-5.3	-5.6	-5.9	-6.0	P	P	P	P	-7.4	-8.3	-8.6	-9.5	-12.1	-14.2	-14.1	-14.3	-13.7	-13.9	-14.1	-14.3	-4.3	-8.9	20	
6	-14.6	-14.9	-15.3	-15.7	-15.9	-16.2	-16.7	-17.4	-18.0	-17.9	-17.4	-16.5	-15.4	-15.1	-14.5	-14.4	-15.1	-16.5	-16.3	-16.6	-17.0	-17.5	-17.8	-19.6	-19.6	-14.4	-16.3	24	
7	-20.2	-20.1	-20.0	-20.3	-20.7	-20.7	-20.6	-19.9	-19.6	-19.7	-19.4	-19.1	-18.9	-18.8	-18.9	-19.1	-19.6	-20.0	-20.2	-20.5	-20.9	-21.1	-23.3	-25.9	-18.8	-20.3	24		
8	-27.6	-29.0	-29.9	-30.5	-31.0	-31.7	-30.9	-28.7	-26.0	-26.6	-23.5	-21.6	-20.0	-20.0	-20.1	-19.9	-20.2	-20.4	-20.7	-20.9	-21.4	-22.7	-23.8	-24.6	-31.7	-19.9	-24.7	24	
9	-22.4	-21.1	-21.1	-20.9	-20.8	-20.2	-20.4	-20.2	-20.4	-20.7	-20.4	-19.3	-19.2	-19.1	-20.9	-21.8	-23.2	-24.9	-24.7	-26.3	-24.0	-23.9	-25.1	-25.4	-26.3	-19.1	-21.9	24	
10	-23.9	-21.7	-19.8	-19.9	-21.4	-21.8	-23.4	-24.9	-25.9	-28.1	-26.7	-24.6	-23.0	-22.6	-23.0	-22.9	-23.3	-23.3	-23.0	-22.1	-20.8	-19.9	-17.9	-16.6	-28.1	-16.6	-22.5	24	
11	-15.8	-14.9	-13.7	-12.8	-12.0	-10.7	-9.3	-9.0	-7.7	-7.4	-7.4	-7.8	-9.2	-11.5	-12.7	-13.2	-15.6	-19.5	-21.7	-24.8	-26.5	-28.6	-29.7	-30.3	-30.3	-7.4	-15.5	24	
12	-30.0	-27.9	-26.1	-25.4	-24.5	-23.4	-22.6	-22.2	-21.4	-19.8	-17.6	-15.5	-14.6	-14.2	-14.4	-14.5	-14.9	-16.3	-15.7	-16.2	-14.9	-13.7	-13.7	-13.7	-30.0	-13.7	-18.9	24	
13	-13.7	-16.9	-17.5	-17.0	-16.1	-14.0	-13.0	-14.7	-13.4	-12.9	-10.3	-9.9	-7.7	-6.4	-6.1	-6.1	-6.2	-5.5	-5.5	-6.7	-6.5	-5.9	-4.7	-4.9	-17.5	-4.7	-10.1	24	
14	-3.9	-1.2	-0.6	-0.3	0.1	0.4	1.1	1.2	1.2	1.0	0.9	0.9	1.7	2.1	2.5	3.4	3.8	2.8	1.3	1.0	1.7	1.4	1.4	2.1	-3.9	3.8	1.1	24	
15	2.4	1.1	0.7	0.5	0.1	0.8	1.8	0.7	-0.1	-0.1	0.5	1.9	2.1	2.5	2.9	3.3	2.0	1.8	0.8	0.3	0.3	-0.1	0.0	0.3	-0.1	3.3	1.1	24	
16	0.8	1.8	1.5	1.2	1.6	2.2	3.3	3.5	4.4	3.9	2.8	4.1	5.6	5.9	5.8	5.3	5.4	6.0	5.5	5.3	4.9	4.4	3.3	2.6	0.8	6.0	3.8	24	
17	2.2	2.3	3.1	3.3	1.8	2.5	2.3	1.0	3.5	3.3	3.0	3.1	3.9	4.2	4.0	4.8	3.4	3.0	2.8	2.9	3.1	3.5	3.1	2.4	1.0	4.8	3.0	24	
18	2.6	1.7	1.3	2.2	3.0	2.9	3.6	3.6	3.0	3.6	4.1	6.1	8.3	8.8	8.6	8.0	6.5	2.9	-0.3	0.6	1.3	-2.0	-0.9	0.6	-2.0	8.8	3.3	24	
19	-0.7	-1.9	-2.5	-3.3	-4.0	-4.5	-5.3	-5.6	-5.6	-5.9	-6.6	-5.6	-5.0	-3.0	-1.1	-3.8	-3.9	-4.3	-1.4	0.2	-1.8	-2.2	-1.9	-1.4	-6.6	0.2	-3.4	24	
20	-1.8	-1.9	-2.6	-2.5	-2.3	-2.8	-2.4	-2.8	-2.9	-3.4	-1.3	1.3	2.6	3.4	4.4	3.3	1.3	-2.6	-4.1	-4.5	-5.6	-6.4	-7.4	-8.3	-8.3	4.4	-2.1	24	
21	-8.8	-9.7	-10.5	-10.9	-11.3	-11.7	-12.3	-12.7	-13.3	-13.4	-13.6	-13.5	-13.6	-13.4	-13.5	-13.6	-14.1	-14.4	-14.6	-14.7	-14.8	-15.1	-15.1	-15.1	-15.1	-8.8	-13.1	24	
22	-14.8	-14.6	-14.6	-14.4	-14.2	-14.1	-14.0	-14.0	-13.7	-13.1	-12.4	-11.3	-10.1	-9.9	-10.0	-10.2	-10.6	-10.9	-11.1	-11.1	-11.5	-11.7	-11.8	-11.7	-14.8	-9.9	-12.3	24	
23	-11.8	-11.5	-11.7	-11.5	-11.1	-10.8	-11.0	-11.2	-11.4	-11.4	-11.2	-10.5	-9.6	-9.6	-8.9	-9.4	-9.6	-9.8	-9.5	-9.4	-9.3	-9.2	-9.1	-9.0	-11.8	-8.9	-10.3	24	
24	-8.8	-8.7	-8.7	-8.9	-9.1	-9.3	-10.0	-11.0	-11.8	-12.2	-10.8	-8.8	-8.2	-7.1	-6.4	-5.7	-6.4	-8.5	-10.1	-10.4	-10.4	-10.1	-9.6	-9.1	-12.2	-5.7	-9.2	24	
25	-9.1	-8.8	-8.9	-9.8	-9.1	-9.8	-10.0	-10.4	-10.2	-9.8	-8.1	-5.9	-4.5	-3.3	-2.3	-2.0	-2.7	-3.4	-4.1	-4.1	-3.7	-3.4	-3.6	-3.8	-10.4	-2.0	-6.3	24	
26	-3.5	-3.4	-3.2	-2.8	-3.7	-3.1	-3.3	-3.4	-3.6	-3.1	-2.4	-1.3	0.0	0.5	1.4	1.6	0.4	-1.1	0.6	0.5	1.5	2.2	2.0	1.7	-3.7	2.2	-1.1	24	
27	1.5	0.3	-0.4	-0.4	-0.4	-0.4	0.6	0.4	0.1	1.6	2.3	3.1	3.5	3.8	4.0	3.8	3.5	3.4	3.3	3.0	2.9	2.6	2.8	-0.4	4.0	1.9	24		
28	0.8	0.0	2.0	1.8	1.3	2.0	3.2	3.7	4.2	4.5	4.8	5.1	6.2	7.0	7.0	6.8	6.2	5.0	5.5	4.8	3.8	3.9	3.8	3.5	0.0	7.0	4.0	24	
29	3.0	2.4	2.1	1.3	2.1	2.9	2.2	2.4	2.1	2.3	2.3	2.9	3.3	3.3	3.2	3.3	3.0	2.7	2.3	1.7	1.3	1.0	1.0	0.8	0.8	3.3	2.3	24	
30	0.5	0.2	0.4	0.4	0.0	-0.1	-0.5	-1.3	-1.9	-2.4	-1.8	-1.8	-1.4	-1.5	-2.0	-2.9	-3.5	-4.4	-5.2	-5.9	-6.6	-7.0	-7.9	-8.9	-8.9	0.5	-2.7	24	
31	-9.1	-9.9	-10.0	-9.7	-9.6	-9.9	-10.3	-10.8	-11.0	-10.9	-10.1	-9.3	-9.3	-8.5	-7.9	-7.5	-7.9	-8.7	-8.8	-8.5	-8.6	-8.9	-10.5	-13.0	-13.0	-7.5	-9.5	24	
HOURLY MAX	3.0	2.4	3.1	3.3	3.0	2.9	3.6	3.7	4.4	4.5	4.8	6.1	8.3	8.8	8.6	8.0	6.5	6.0	5.5	5.3	4.9	4.4	3.8	3.5					
HOURLY AVG	-9.5	-9.5	-9.3	-9.4	-9.6	-9.5	-9.5	-9.6	-9.4	-9.5	-8.7	-7.7	-6.8	-6.4	-6.3	-6.5	-7.2	-8.3	-8.7	-8.9	-8.9	-9.1	-9.3	-9.5					

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

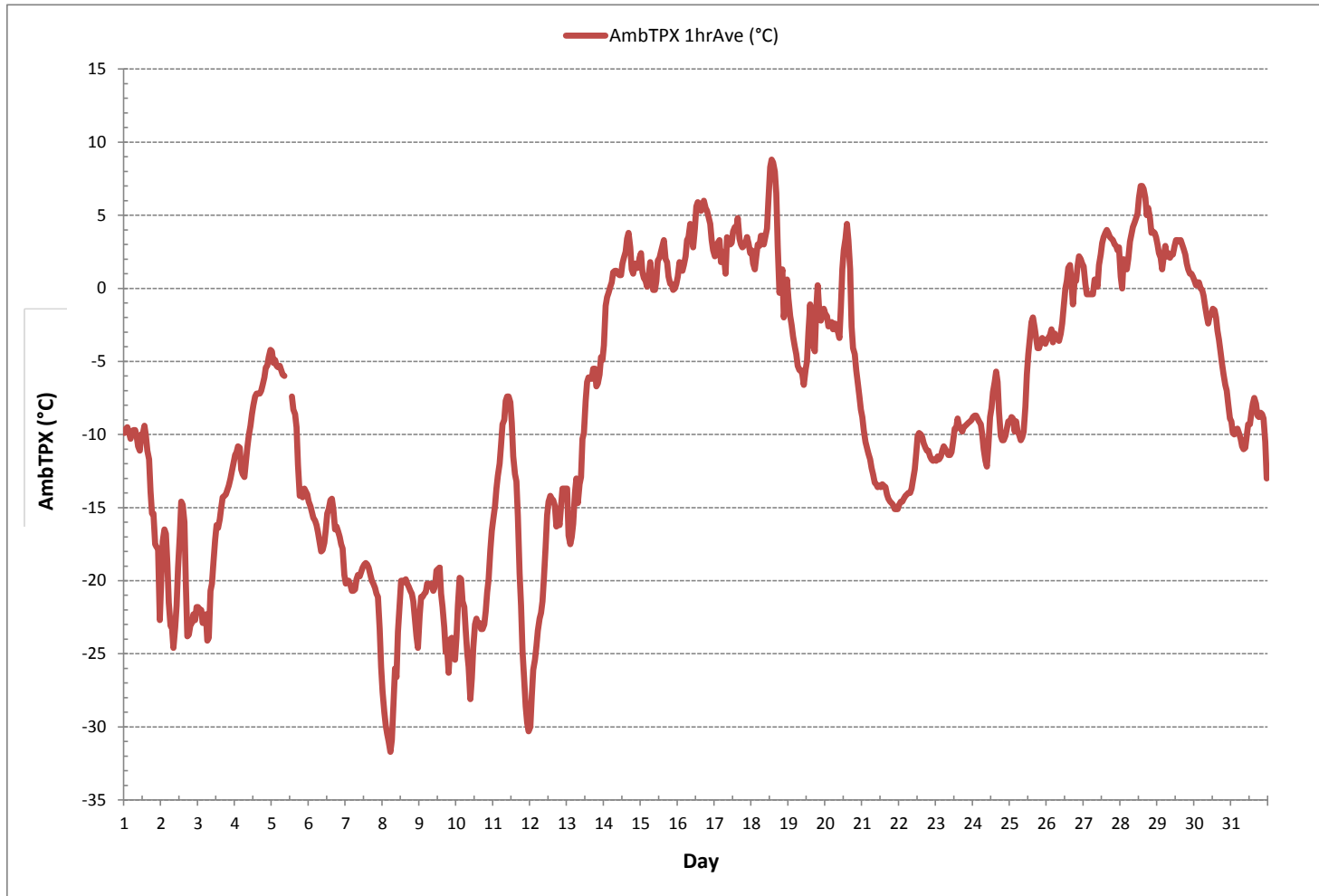
24 HR AVERAGES January 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-31.7 °C	@ HOUR(S)	5	ON DAY(S)	8
MAXIMUM 1-HR AVERAGE:	8.8 °C	@ HOUR(S)	13	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	4.0 °C			ON DAY(S)	28
				VAR-VARIOUS	
OPERATIONAL TIME:				740	hrs
AMD OPERATION UPTIME:				99.5	%
STANDARD DEVIATION:	9.3	MONTHLY AVERAGE:		-8.6	°C

AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)



STATION TEMPERATURE



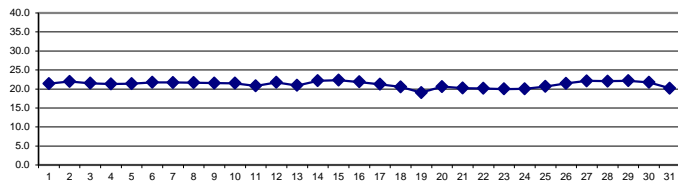
STATION TEMPERATURE Hourly Averages (StnTPX °C)

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	21.7	21.4	21.3	21.3	21.2	21.5	21.1	21.3	21.5	21.2	21.2	21.2	21.3	21.3	21.0	20.9	21.2	21.4	21.5	21.7	21.6	21.8	21.9	21.9	21.9	20.9	21.9	21.4	24				
2	22.1	21.8	21.7	21.7	21.8	21.9	22.2	22.2	22.2	22.1	22.1	21.8	21.6	21.4	21.3	21.5	21.7	22.2	22.4	22.5	22.4	22.3	22.3	22.1	21.3	22.5	22.0	24					
3	22.0	22.2	22.2	22.3	22.3	22.1	22.1	22.1	21.8	21.7	21.5	21.5	21.1	20.8	21.0	20.9	21.0	20.7	20.5	21.0	21.2	21.4	20.9	21.4	20.5	22.3	21.5	24					
4	21.1	21.3	21.4	20.7	20.9	21.5	21.5	21.3	21.5	21.6	20.4	21.4	22.0	22.0	22.0	21.9	21.4	22.2	20.9	21.1	20.8	20.8	21.0	21.1	20.4	22.2	21.3	24					
5	21.3	21.4	21.4	21.3	21.3	21.2	20.9	21.1	21.1	P	P	P	P	R	22.8	21.0	20.9	21.3	21.2	21.4	21.7	21.9	21.7	21.7	20.9	22.8	21.4	20					
6	21.8	21.8	21.9	21.9	21.8	21.9	21.7	21.9	22.0	22.0	22.0	21.9	21.6	21.6	21.5	21.5	21.3	21.5	21.4	21.4	21.6	21.6	21.7	21.5	21.3	22.0	21.7	24					
7	21.3	21.6	21.7	21.5	21.5	21.8	21.9	21.6	21.6	21.4	21.7	21.6	21.6	20.6	22.2	22.0	22.9	22.8	22.6	20.7	21.8	21.2	21.4	21.6	20.6	22.9	21.7	24					
8	21.9	22.0	22.0	22.0	22.1	22.3	22.3	22.1	21.9	21.9	21.8	21.4	21.0	21.1	20.9	21.2	21.3	21.2	21.3	21.3	21.5	21.4	21.6	21.8	20.9	22.3	21.6	24					
9	21.6	21.4	21.4	21.6	21.5	21.1	21.5	21.2	21.3	21.4	21.3	21.2	21.2	21.0	21.3	21.2	21.7	21.7	22.0	22.2	21.9	21.8	21.9	22.0	21.0	22.2	21.5	24					
10	22.2	22.0	21.4	21.1	20.9	20.8	21.1	21.2	21.4	22.0	22.0	21.8	21.6	21.2	21.2	21.3	21.4	21.7	21.9	21.7	21.7	21.6	21.7	21.1	20.8	22.2	21.5	24					
11	21.2	20.9	20.7	20.8	20.6	20.7	20.8	20.5	20.4	20.0	19.9	19.8	19.6	19.6	19.9	20.3	20.8	21.3	21.5	21.8	21.9	22.1	22.2	22.2	19.6	22.2	20.8	24					
12	22.5	22.3	22.2	22.5	22.3	22.6	22.4	22.4	22.5	22.8	22.8	21.7	20.7	20.8	20.7	21.1	20.8	21.2	21.2	21.3	21.3	21.2	21.3	21.3	20.7	22.8	21.7	24					
13	21.4	21.4	21.8	21.7	21.8	21.7	21.1	21.5	21.4	21.7	21.1	20.9	20.4	19.9	20.1	20.0	20.2	20.4	20.6	20.7	20.8	20.8	20.1	20.4	19.9	21.8	20.9	24					
14	20.4	21.2	21.5	22.2	22.1	22.1	22.3	22.2	22.2	22.1	22.4	22.3	22.4	22.4	22.5	22.3	22.5	22.4	22.4	22.6	22.3	22.3	22.3	22.3	20.4	22.6	22.2	24					
15	22.1	22.3	22.4	22.5	22.4	22.3	22.4	22.4	22.5	22.2	22.3	22.4	21.9	22.2	22.0	22.3	22.2	22.4	22.5	22.2	22.4	22.4	22.5	22.2	21.9	22.5	22.3	24					
16	22.4	22.4	22.2	22.4	22.2	22.3	22.0	21.5	21.5	21.5	21.6	21.7	21.6	21.6	21.6	21.9	21.9	21.6	22.1	21.6	21.8	21.8	21.4	21.6	21.4	22.4	21.8	24					
17	21.4	21.4	21.5	21.3	21.0	21.4	21.1	20.6	21.1	21.1	21.1	21.2	21.7	21.4	21.5	21.5	21.3	21.2	21.2	21.0	21.1	21.5	20.9	20.8	20.6	21.7	21.2	24					
18	20.5	20.3	20.0	20.0	20.3	20.5	20.8	21.0	20.9	21.3	20.7	21.8	21.2	21.0	21.4	21.4	21.6	21.2	20.6	19.9	19.7	19.1	18.6	19.1	18.6	21.8	20.5	24					
19	19.2	19.2	18.8	18.9	19.1	19.0	19.1	19.2	19.2	19.2	19.3	19.4	19.2	19.0	19.0	18.8	19.0	19.0	18.9	18.8	18.6	18.8	18.9	18.9	18.6	19.4	19.0	24					
20	19.0	19.2	19.1	19.1	19.2	19.4	19.2	19.1	19.3	20.1	20.9	22.6	21.5	21.0	21.0	21.8	22.1	22.2	22.2	22.3	21.6	21.4	20.8	20.1	19.0	22.6	20.6	24					
21	20.3	20.3	20.3	20.2	20.2	20.0	20.2	20.2	20.2	20.2	20.2	20.2	20.0	20.1	20.2	19.9	20.2	20.2	20.2	20.4	20.3	20.2	20.2	20.3	19.9	20.4	20.2	24					
22	20.3	20.1	20.1	20.3	20.2	20.1	20.3	20.1	20.3	20.1	20.2	20.2	20.0	20.0	19.9	20.0	20.1	20.0	20.2	20.1	20.2	20.2	20.0	20.2	19.9	20.3	20.1	24					
23	20.2	20.2	20.1	20.1	20.2	20.1	20.1	20.2	20.1	20.0	20.1	20.0	19.8	19.6	19.4	19.6	19.7	20.0	20.0	20.0	20.1	20.0	20.0	20.0	19.4	20.2	20.0	24					
24	20.1	20.0	20.1	20.2	20.2	20.1	20.2	20.1	20.2	20.3	20.1	19.4	19.0	19.2	19.5	20.0	20.1	20.3	20.1	20.4	20.3	20.3	20.3	20.4	19.0	20.4	20.0	24					
25	20.2	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.3	19.8	19.8	19.9	20.7	21.5	21.7	21.8	21.6	21.4	21.4	21.3	21.0	21.0	20.7	19.8	21.8	20.7	24					
26	20.7	20.8	20.9	21.1	21.2	21.2	21.1	20.9	20.6	20.4	20.8	21.4	21.4	21.6	21.8	22.1	21.9	22.2	22.2	22.2	22.1	22.2	22.2	20.4	22.2	21.5	24						
27	22.3	22.2	22.1	22.3	22.1	22.2	22.2	22.1	22.0	22.1	21.9	22.0	21.9	21.8	21.9	22.0	22.1	22.0	22.2	22.2	22.2	22.4	22.4	22.2	21.8	22.4	22.1	24					
28	22.4	22.4	22.3	22.2	22.2	22.2	22.1	21.9	22.0	21.9	22.0	21.8	21.6	21.5	21.6	21.6	21.6	22.1	22.2	22.1	22.2	22.3	22.1	22.2	21.5	22.4	22.0	24					
29	22.0	22.2	22.3	22.3	22.3	22.3	22.2	22.1	22.1	22.2	22.0	22.1	21.9	21.9	22.0	22.0	21.9	22.1	22.3	22.3	22.4	22.4	22.2	22.4	21.9	22.4	22.2	24					
30	22.3	22.4	22.5	22.2	22.4	22.4	22.2	22.3	22.2	22.3	22.1	22.0	21.9	21.7	21.8	22.0	22.0	21.7	21.6	21.0	20.5	20.1	20.1	20.1	20.1	20.1	22.5	21.7	24				
31	20.3	20.5	20.3	20.4	20.3	20.3	20.2	20.4	20.2	20.3	20.2	19.9	19.9	19.8	19.8	19.7	19.9	20.2	20.1	20.3	20.1	20.3	20.3	20.4	19.7	20.5	20.2	24					
HOURLY MAX	22.5	22.4	22.5	22.5	22.4	22.6	22.4	22.4	22.5	22.8	22.8	22.6	22.4	22.4	22.8	22.3	22.9	22.8	22.6	22.6	22.4	22.4	22.5	22.4									
HOURLY AVG	21.2	21.3	21.2	21.2	21.2	21.3	21.2	21.2	21.2	21.3	21.2	21.2	21.0	20.9	21.1	21.1	21.2	21.4	21.3	21.3	21.3	21.2	21.2	21.2									

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

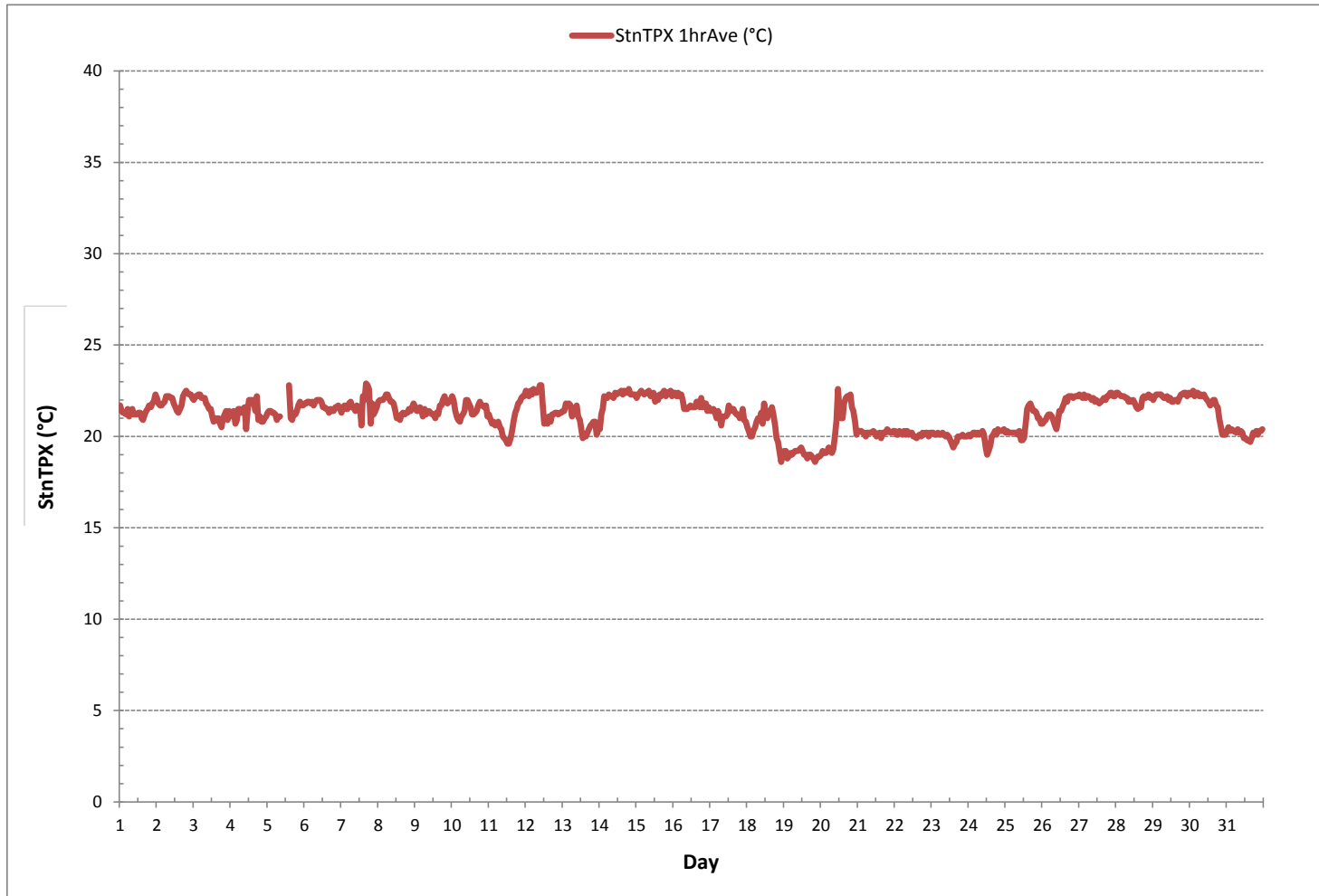
24 HR AVERAGES January 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	18.6 °C	@ HOUR(S)	22 , 20	ON DAY(S)	18 , 19
MAXIMUM 1-HR AVERAGE:	22.9 °C	@ HOUR(S)	16	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	22.3 °C			ON DAY(S)	14
				VAR-VARIOUS	
		OPERATIONAL TIME:		740	hrs
		AMD OPERATION UPTIME:		99.5	%
STANDARD DEVIATION:	0.9	MONTHLY AVERAGE:		21.2	°C

STATION TEMPERATURE Hourly Averages (StnTPX °C)



APPENDIX II
EQUIPMENT CALIBRATION RESULTS

SULPHUR DIOXIDE



API 100A Sulphur Dioxide Analyzer Calibration

Date: January 4, 2017	Barometric Pressure: 28.07 inHg
Company/Airshed: PRAMP	Station Temperature °C: 22
Location/Station Name: 842b	Weather Conditions: Mainly cloudy with light snow
Parameter: Sulphur Dioxide	Calibration Purpose: routine monthly
Start Time 24 hr. (mst): 14:02	Performed By/Reviewer: Raja Abid / Trina Whitsitt
End Time 24 hr. (mst): 17:16	Cal Gas Expiry Date: May 23, 2019
Calibration Method: Gas Dilution	Converter Model & s/n (if applicable): n/a

Analyzer:	ID# or Serial Number: 838	Range ppb: 500
	Last Calibration Date: December 20, 2016	As Found C.F.: 1.006
	Previous C.F.: 1.000	New C.F.: 1.000

Calibrator:	Standard Calibration Points for Ranges								
Flow Meter ID's: n/a	<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								
Make & Model: EnviroNics 6100									
Serial #: 5212									
Cal Gas Cylinder I.D. #: LL 119513									
Cal Gas Conc. (ppm): 50.6									

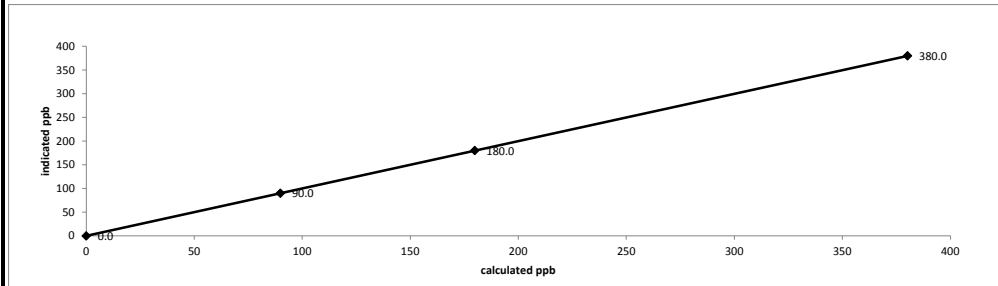
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:	Indicated Concentration:	Correction Factors (C.F.):
Point	Diluent	Cal Gas	Total	(ppb)	(ppb)	
as found zero	5995	0.00	5995	0.0	0.0	n/a
as found high	5950	45.04	5995	380.2	378.0	1.006
adjusted zero	5995	0.00	5995	0.0	0.0	n/a
adjusted high	5950	45.04	5995	380.2	380.0	1.000
mid	5976	21.32	5997	179.9	180.0	0.999
low	5986	10.65	5997	89.9	90.0	0.999
calibrator zero	5995	0.00	5995	0.0	0.0	n/a
Average C.F. =						0.999

Linear Regression/Calibration Results:

Correlation Coefficient = 1.000	LIMITS
Slope = 1.001	> or = 0.995
b (Intercept as % of full scale) = -0.02%	.95-1.05
% change in C.F. from last cal = -0.57%	± 3% F.S.
	± 10%

API 100A Sulphur Dioxide Analyzer Calibration

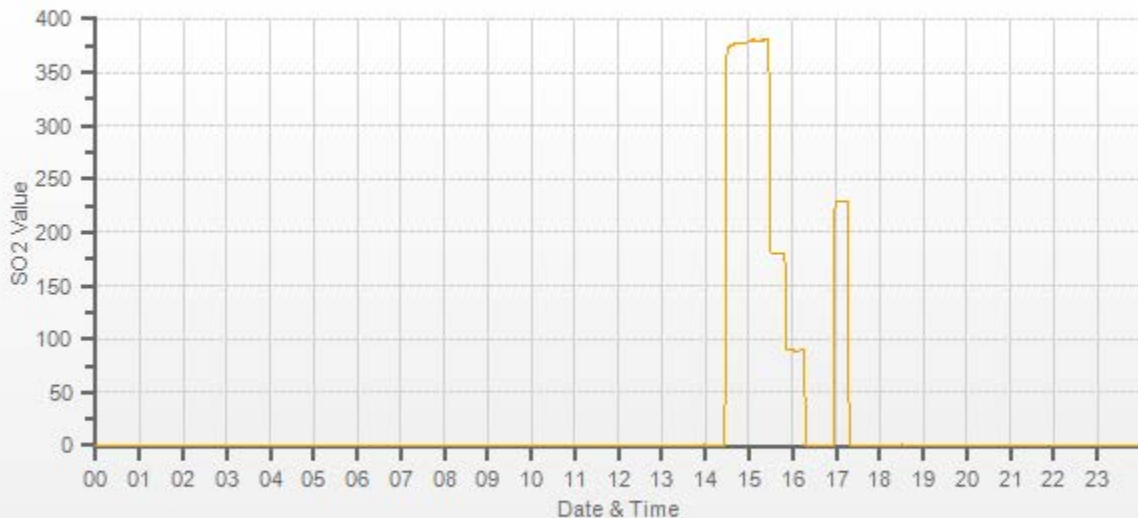


As found:	As left:
SLOPE: 1.028	SLOPE: 1.032
OFFSET: 19.1	OFFSET: 19.1
HVPS: 686	HVPS: 686
DCPS: 2545	DCPS: 2540
RCELL TEMP: 51.1	RCELL TEMP: 49.6
BOX TEMP: 31.2	BOX TEMP: 31.2
PMT TEMP: 7.2	PMT TEMP: 7.2
IZS TEMP: 60.2	IZS TEMP: 60.0
Converter Temp: n/a	Converter Temp: n/a
PRES: 26.8	PRES: 26.3
SAMP FL: 650	SAMP FL: 635
PMT: 58.1	PMT: 57.7
UV LAMP: 2398	UV LAMP: 2362
LAMP RATIO: 96.6	LAMP RATIO: 95.6
STR. LGT: 9.8	STR. LGT: 9.8
DRK PMT: 34.1	DRK PMT: 34.4
DRK LMP: -6.9	DRK LMP: -6.9
Expected Value: 235.2	Expected Value: 229.1

Comments:

The analyzer sample inlet filter was changed.

No zero adjustment was required/made. As found zero value copied to adjusted zero value for linearity calculation purposes.



— SO2[ppb]

TOTAL REDUCED SULPHUR



Thermo 43i Total Reduced Sulphur Analyzer Calibration

Date:	January 4, 2017	Barometric Pressure:	28.04 inHg
Company/Airshed:	PRAMP	Station Temperature °C:	22
Location/Station Name:	842b	Weather Conditions:	Mainly cloudy with light snow
Parameter:	Total Reduced Sulphur	Calibration Purpose:	shut down
Start Time 24 hr. (mst):	10:04	Performed By/Reviewer:	Raja Abid Trina Whitsitt
End Time 24 hr. (mst):	12:27	Cal Gas Expiry Date:	December 1, 2018
Calibration Method:	Gas Dilution	Converter Model & s/n (if applicable):	WATLOW 05572

Analyzer:			
ID# or Serial Number:	122654720	Range ppb:	100
Last Calibration Date:	December 8, 2016	As Found C.F.:	1.021
Previous C.F.:	1.001	New C.F.:	n/a

Calibrator:		Standard Calibration Points for Ranges	SO ₂ Scrubber Check (10 mins.)
Flow Meter ID's:	n/a		Start/End Time 24 hr.: 10:30:00-10:40
Make & Model:	API 700		Target Concentration (ppb): 380
Serial #:	830		Result (ppb): 0
Cal Gas Cylinder I.D. #:	BLM 002197		Zero Corrected Result (ppb): 0
Cal Gas Conc. (ppm):	10.3		

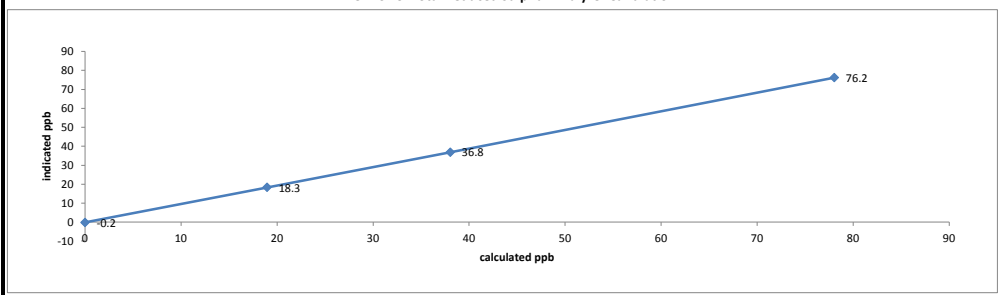
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:		Indicated Concentration:		Correction Factors (C.F.):	
Point	Diluent	Cal Gas	Total	(ppb)	(ppb)				
as found zero	7497	0.00	7497	0.0	-0.2	n/a			
as found high	7440	56.80	7497	78.0	76.2	1.021			
mid	7471	27.70	7499	38.0	36.8	1.028			
low	7482	13.80	7496	19.0	18.3	1.025			
Average C.F.=						1.025			

Linear Regression/Calibration Results:

Correlation Coefficient = 1.000 LIMITS > or = 0.995
 Slope = 1.021 0.90-1.10
 b (Intercept as % of full scale) = 0.28% ± 3% F.S.
 % change in C.F. from last cal = -2.04% ± 10%

Thermo 43i Total Reduced Sulphur Analyzer Calibration



As found:	As left:
BKG: 11.9	BKG: n/a
COEF: 0.970	COEF: n/a
PMT: -649.7	PMT: n/a
FLASH: 921	FLASH: n/a
INTERNAL: 32.6	INTERNAL: n/a
CHAMBER: 45.0	CHAMBER: n/a
PERM OVEN GAS: 45.00	PERM OVEN GAS: n/a
PERM OVEN HEATER: 44.33	PERM OVEN HEATER: n/a
PRESSURE: 636.9	PRESSURE: n/a
SAMPLE FLOW: 0.381	SAMPLE FLOW: n/a
LAMP INTENSITY: 91	LAMP INTENSITY: n/a
CONVERTER: 851	CONVERTER: n/a
CONVERTER SET: 850	CONVERTER SET: n/a
0 n/a	0 n/a
0 n/a	0 n/a
0 n/a	0 n/a
0 n/a	0 n/a
0 n/a	0 n/a
Expected Value: n/a	Expected Value: n/a

Comments: The analyzer sample inlet filter was changed. The analyzer cooling fan filter(s) were cleaned.

Shutdown calibration performed to readjust the thermocouple wire of the converter. Low point interrupted by daily z/s check, restarted at 12:06.



Thermo 43i Total Reduced Sulphur Analyzer Calibration

Date:	January 4, 2017	Barometric Pressure:	28.07 inHg
Company/Airshed:	PRAMP	Station Temperature °C:	22
Location/Station Name:	842	Weather Conditions:	Mainly cloudy with light snow
Parameter:	Total Reduced Sulphur	Calibration Purpose:	post repair
Start Time 24 hr. (mst):	15:38	Performed By/Reviewer:	Raja Abid Trina Whitsitt
End Time 24 hr. (mst):	18:52	Cal Gas Expiry Date:	December 1, 2018
Calibration Method:	Gas Dilution	Converter Model & s/n (if applicable):	WATLOW 05572

Analyzer:		Range ppb:	100
ID# or Serial Number:	122654720	As Found C.F.:	n/a
Last Calibration Date:	December 8, 2016	New C.F.:	1.000
Previous C.F.:	1.001		

Calibrator:		Standard Calibration Points for Ranges
Flow Meter ID's:	n/a	
Make & Model:	API 700	
Serial #:	830	
Cal Gas Cylinder I.D. #:	BLM 002197	
Cal Gas Conc. (ppm):	10.3	

Point	ppb
High	78
Mid	38
Low	19

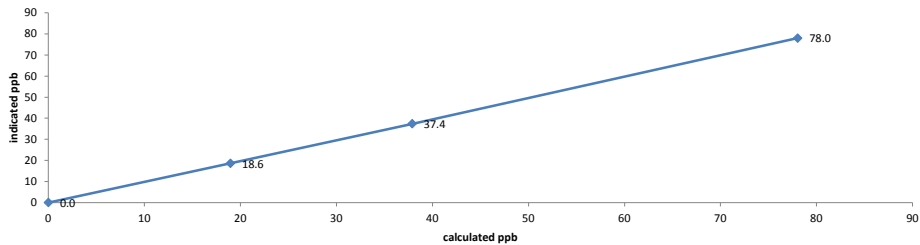
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:	Indicated Concentration:	Correction Factors (C.F.):
Point	Diluent	Cal Gas	Total	(ppb)	(ppb)	
adjusted zero	7495	0.00	7495	0.0	0.0	n/a
adjusted high	7440	56.80	7497	78.0	78.0	1.000
mid	7473	27.60	7501	37.9	37.4	1.013
low	7480	13.80	7494	19.0	18.6	1.020
calibrator zero	7495	0.00	7495	0.0	0.0	n/a
Average C.F.=						1.011

Linear Regression/Calibration Results:

Correlation Coefficient =	1.000	LIMITS
Slope =	0.999	> or = 0.995
b (Intercept as % of full scale) =	0.24%	± 3% F.S.
% change in C.F. from last cal =	n/a	± 10%

Thermo 43i Total Reduced Sulphur Analyzer Calibration



As found:	As left:
BKG: 11.9	BKG: 12.0
COEF: 0.970	COEF: 0.947
PMT: -649.7	PMT: -649.4
FLASH: 921	FLASH: 921
INTERNAL: 34.0	INTERNAL: 33.2
CHAMBER: 44.9	CHAMBER: 45.3
PERM OVEN GAS: 45.00	PERM OVEN GAS: 44.99
PERM OVEN HEATER: 44.34	PERM OVEN HEATER: 44.33
PRESSURE: 636.0	PRESSURE: 635.7
SAMPLE FLOW: 0.381	SAMPLE FLOW: 0.381
LAMP INTENSITY: 91	LAMP INTENSITY: 90
CONVERTER: 845	CONVERTER: 850
CONVERTER SET: 845	CONVERTER SET: 850
Expected Value: 58.1	Expected Value: 59.0

Comments:



— TRS[ppb]



Thermo 43i Total Reduced Sulphur Analyzer Calibration

Date:	January 7, 2017	Barometric Pressure:	28.2 inHg
Company/Airshed:	PRAMP	Station Temperature °C:	22
Location/Station Name:	842	Weather Conditions:	Cloudy & overcast
Parameter:	Total Reduced Sulphur	Calibration Purpose:	post repair
Start Time 24 hr. (mst):	17:27	Performed By/Reviewer:	Russell Kirchner Trina Whitsitt
End Time 24 hr. (mst):	20:20	Cal Gas Expiry Date:	December 1, 2018
Calibration Method:	Gas Dilution	Converter Model & s/n (if applicable):	CDN-101 s/n 552

Analyzer:		Range ppb:	100
ID# or Serial Number:	1226154720	As Found C.F.:	n/a
Last Calibration Date:	January 4, 2017	New C.F.:	1.000
Previous C.F.:	1.000		

Calibrator:		Standard Calibration Points for Ranges
Flow Meter ID's:	n/a	
Make & Model:	API 700	
Serial #:	831	
Cal Gas Cylinder I.D. #:	BLM001927	
Cal Gas Conc. (ppm):	10.3	

Point	ppb
High	78
Mid	38
Low	19

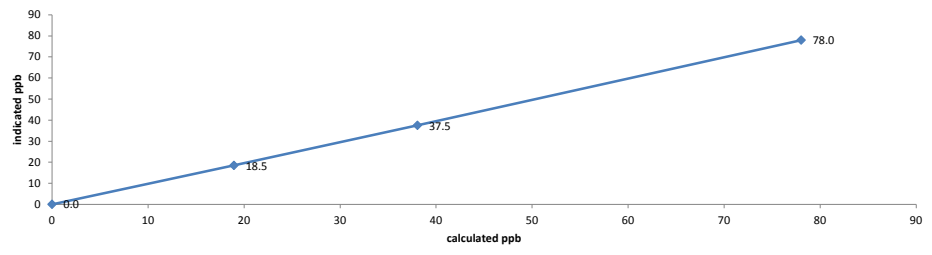
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:	Indicated Concentration:	Correction Factors (C.F.):
Point	Diluent	Cal Gas	Total	(ppb)	(ppb)	
adjusted zero	7496	0.00	7496	0.0	0.0	n/a
adjusted high	7442	56.80	7499	78.0	78.0	1.000
mid	7469	27.70	7497	38.1	37.5	1.015
low	7484	13.80	7498	19.0	18.5	1.025
calibrator zero	7496	0.00	7496	0.0	-0.4	n/a
Average C.F.=						1.013

Linear Regression/Calibration Results:

Correlation Coefficient =	1.000	LIMITS
Slope =	0.999	> or = 0.995
b (Intercept as % of full scale) =	0.30%	± 3% F.S.
% change in C.F. from last cal =	n/a	± 10%

Thermo 43i Total Reduced Sulphur Analyzer Calibration



As found:	As left:
BKG: 11.2	BKG: 14.1
COEF: 0.947	COEF: 0.989
PMT: -649.7	PMT: -649.7
FLASH: 920	FLASH: 923
INTERNAL: 31.1	INTERNAL: 32.6
CHAMBER: 45.1	CHAMBER: 45.1
PERM OVEN GAS: 45.01	PERM OVEN GAS: 45.00
PERM OVEN HEATER: 44.34	PERM OVEN HEATER: 44.33
PRESSURE: 713.7	PRESSURE: 641.0
SAMPLE FLOW: 0.432	SAMPLE FLOW: 0.384
LAMP INTENSITY: 91	LAMP INTENSITY: 91
CONVERTER: 850	CONVERTER: 850
CONVERTER SET: 850	CONVERTER SET: 850
Expected Value: 58.1	Expected Value: 59.0

Comments:



— TRS[ppb]



Thermo 43i Total Reduced Sulphur Analyzer Calibration

Date: January 20, 2017	Barometric Pressure: 27.15 inHg
Company/Airshed: PRAMP	Station Temperature °C: 20
Location/Station Name: 842b	Weather Conditions: Mainly sunny
Parameter: Total Reduced Sulphur	Calibration Purpose: repeat
Start Time 24 hr. (mst): 10:05	Performed By/Reviewer: Raja Abid / Trina Whitsitt
End Time 24 hr. (mst): 13:14	Cal Gas Expiry Date: December 1, 2018
Calibration Method: Gas Dilution	Converter Model & s/n (if applicable): WATLOW 05572

Analyzer:	Range ppb: 100
ID# or Serial Number: 1226154720	As Found C.F.: 0.985
Last Calibration Date: January 7, 2017	New C.F.: 1.000
Previous C.F.: 1.000	

Calibrator:	Standard Calibration Points for Ranges								
Flow Meter ID's: n/a	<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
Point	ppb								
High	78								
Mid	38								
Low	19								
Make & Model: Envionics 6100									
Serial #: 5212									
Cal Gas Cylinder I.D. #: BLM 002197									
Cal Gas Conc. (ppm): 10.3									

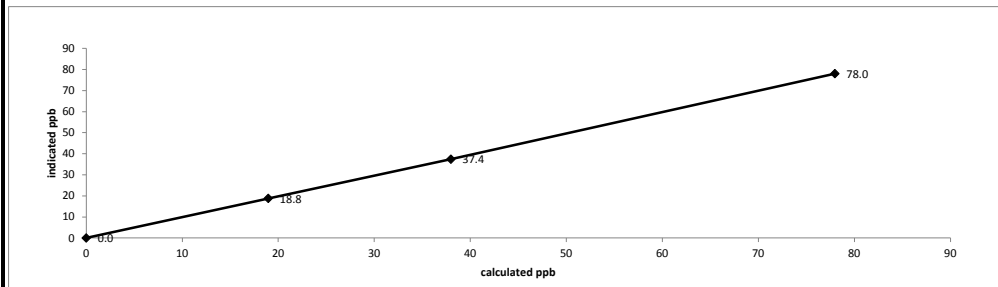
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:	Indicated Concentration:	Correction Factors (C.F.):
Point	Diluent	Cal Gas	Total	(ppb)	(ppb)	
as found zero	7493	0.00	7493	0.0	-1.9	n/a
as found high	7441	56.76	7498	78.0	77.3	0.985
adjusted zero	7493	0.00	7493	0.0	0.0	n/a
adjusted high	7441	56.76	7498	78.0	78.0	1.000
mid	7468	27.64	7496	38.0	37.4	1.016
low	7480	13.80	7494	19.0	18.8	1.009
calibrator zero	7493	0.00	7493	0.0	0.4	n/a
Average C.F. =						1.008

Linear Regression/Calibration Results:

Correlation Coefficient = 1.000	LIMITS > or = 0.995
Slope = 1.000	.95-1.05
b (Intercept as % of full scale) = 0.19%	± 3% F.S.
% change in C.F. from last cal = 1.55%	± 10%

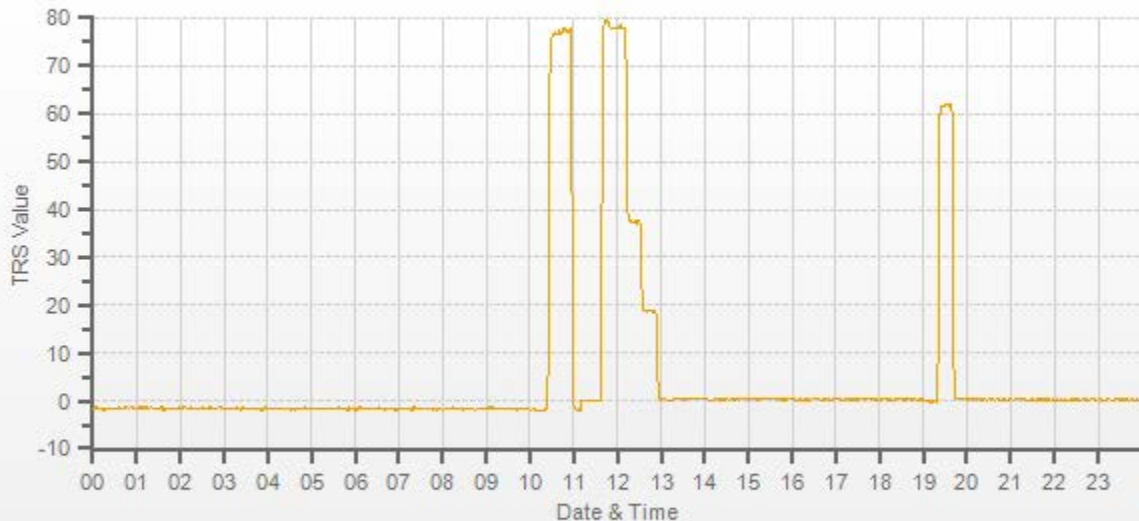
Thermo 43i Total Reduced Sulphur Analyzer Calibration



<p style="text-align: center;">As found:</p> BKG: 14.4 COEF: 0.989 PMT: -650.1 FLASH: 919 INTERNAL: 32.2 CHAMBER: 44.9 PERM OVEN GAS: 45.00 PERM OVEN HEATER: 44.34 PRESSURE: 616.0 SAMPLE FLOW: 0.372 LAMP INTENSITY: 91 CONVERTER: 850 CONVERTER SET: 850 Expected Value: 59.0	<p style="text-align: center;">As left:</p> BKG: 12.0 COEF: 0.953 PMT: -649.7 FLASH: 919 INTERNAL: 32.3 CHAMBER: 45.0 PERM OVEN GAS: 44.99 PERM OVEN HEATER: 44.32 PRESSURE: 615.7 SAMPLE FLOW: 0.371 LAMP INTENSITY: 91 CONVERTER: 850 CONVERTER SET: 850 Expected Value: 61.7
--	---

Comments:

10:06-10:56 AS found performed.



— TRS[ppb]

TOTAL HYDROCARBON



Thermo 55i Methane/Non-Methane Analyzer Calibration

Header information including Date (January 4, 2017), Company (PRAMP), Location (842b), Barometric Pressure (28.07 inHg), Station Temperature (22), Weather Conditions (Mainly cloudy with light snow), Calibration Purpose (routine monthly), and Cal Gas Expiry Date (January 9, 2021).

Analyzer and Correction Factors section. Includes Analyzer ID# (1433563261), Measured Flow (1208), Last Calibration Date (December 8, 2016), and Correction Factors for CH4, NMHC, and THC.

Calibrator information including Flow Meter ID (n/a), Make & Model (EnviroNics 6100), Serial # (5212), and Standard Calibration Points for Analyzer Range of 20/20/40 ppm.

Table of Calibrator Flow Rates (cc/min) and Correction Factors. Columns include Point, Diluent, Cal Gas, Total Flow, Calculated CH4, NMHC, THC, and Indicated values for CH4, NMHC, and THC.

Linear Regression/Calibration Results section. Includes Correlation Coefficient (1.000), Slope (0.999), and b (Intercept as % of full scale) (0.12%).

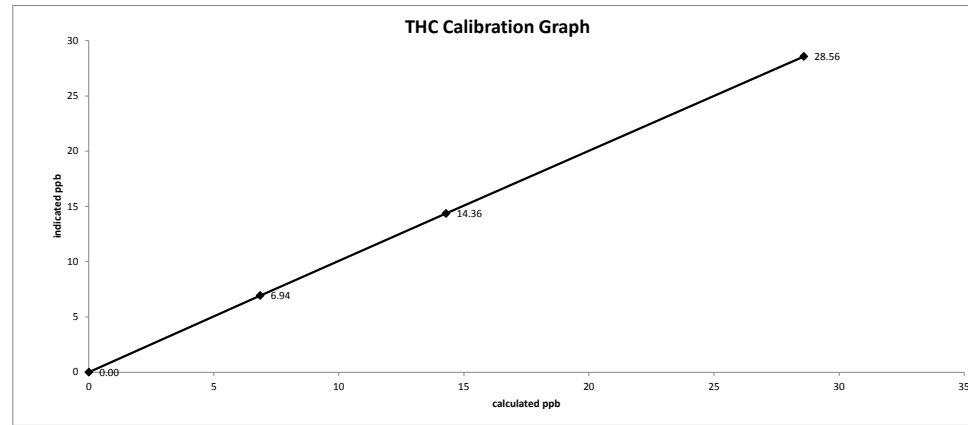
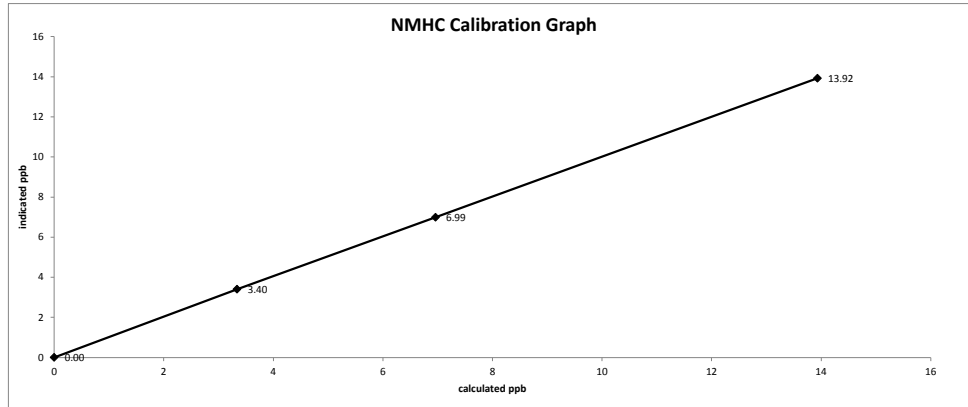
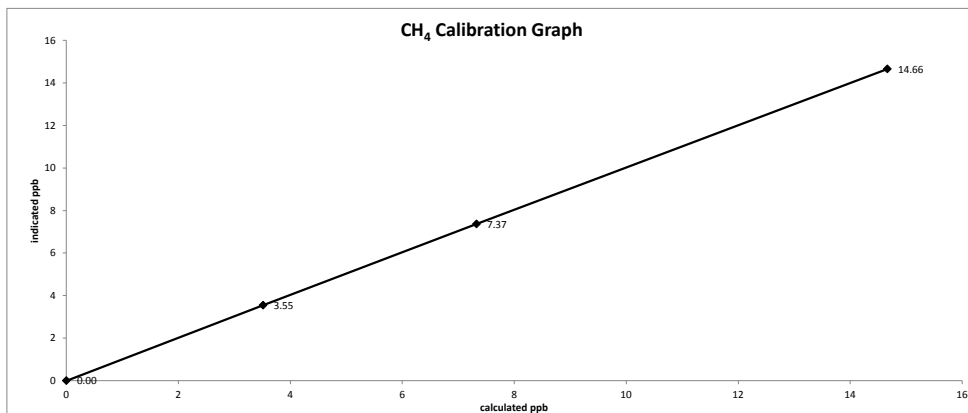
Interface Board Voltages, Temperatures, Cylinder Pressures, Internal Pressures, FID Status, Flame and Power Stats, Calibration History, and Expected Values. Includes various sensor readings and calibration parameters.

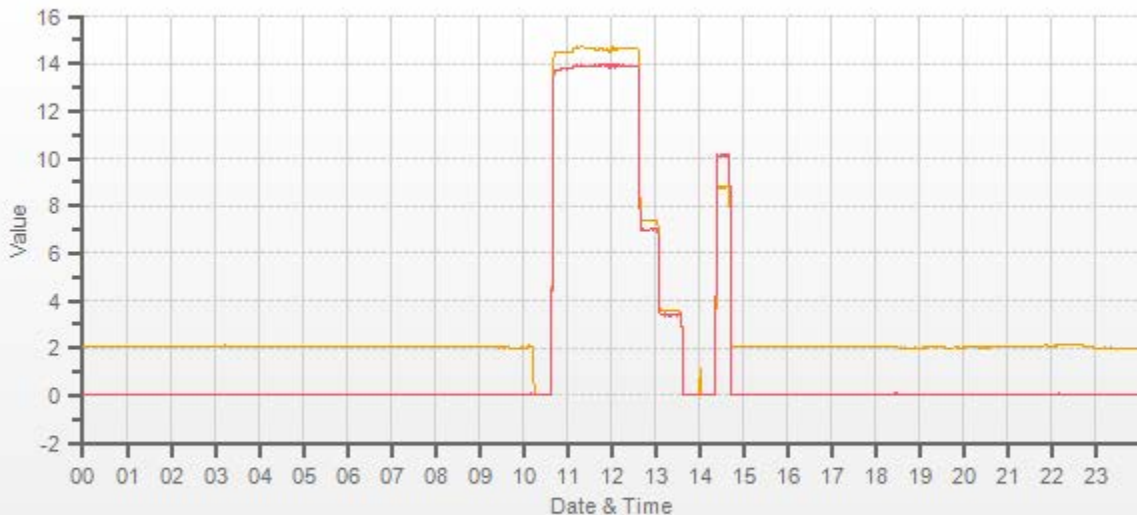
Comments: The analyzer sample inlet filter was changed. No zero adjustment was required/made. As found zero values were copied to adjusted zero values for linearity calculation purposes.

10:09-10:10: Flow check performed. 4:01-14:02 Drift in calibrator zero was due to disconnecting the calibration set up and start IZS.

Date: January 4, 2017
Company/Airshed: PRAMP
Location/Station Name: 842b

Start/End Time 24 hr. (mst): 10:04/14:46
Calibration Purpose: routine monthly
Calibration Method: Gas Dilution





CH4[ppm] NMHC[ppm]

WIND SYSTEM

Meteorological Sensor Audit

Location Information

Company:	Three Creek	Performed By:	Limin Li
Audit Location:	842B	Reviewed By:	not yet reviewed
Audit Date:	October 12, 2016	Start Time (mst):	16:30
Previous Audit Date:	n/a	End Time (mst):	17:30

Wind Speed Sensor Information

Calibrator Information

Sensor make:	RM Young	Make:	RM Young
Sensor model:	5305VK. SN:92411	Model:	18802
Calibrator:	See calibrator information " Make"	I.D.#/Serial#:	4309
Voltage range:	0-1V/output single range: 0-200kph	Certification Date:	October 9, 2013

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	17.6	17.6	17.5	1.003
2000	35.3	35.1	35.1	1.005
3000	52.9	52.6	52.6	1.007
4000	70.6	70.1	70.1	1.007
5000	88.2	87.6	87.6	1.007
6000	105.8	105.1	105.1	1.007
7000	123.5	122.6	122.6	1.007
8000	141.1	140.1	140.1	1.007
9000	158.8	157.6	157.6	1.007
10000	176.4	175.0	175.0	1.008
		The audit meets AMD requirements.	Average Correction Factor=	1.006

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

Generated Wind Direction	Indicated Wind Direction	Degrees Difference
0	0.4	-0.4
45	46.5	-1.5
90	91.0	-1.0
135	135.5	-0.5
180	180.2	-0.2
225	224.2	0.8
270	268.3	1.7
315	313.0	2.0
355	351.4	3.6
The audit meets AMD requirements.		Average Degrees Difference= 1.3

Recommendations: The wind calibrator is non-Maxxam property.

CALIBRATORS

Company <u>Maxxam</u>		Operator: <u>Mike</u>	
Calibrator:		Flow Measurement Device:	
Make/Model	<u>Envionics 6100</u>	Make/Model	<u>Bios Defender 530</u>
Serial Number	<u>5212</u>	Serial Number	<u>Hi148944 Lo 152019</u>
Last Verification Date	<u>February 3, 2016</u>	Temperature (°C)	<u>24.6</u>
NO Cylinder S/N	<u>EY0000597</u>	Barometric Pressure	<u>701.4mmHg</u>
NO [PPM]	<u>49.0</u>	NOx [PPM]	<u>49.0</u>
Expiry Date	<u>December 8, 2019</u>		

Dilution Flow (sccm)		
Pt. #1 <u>4919</u>	Pt. #2 <u>4934</u>	Pt. #3 <u>4960</u>
Gas Flow (sccm)		
Pt. #1 <u>79.2</u>	Pt. #2 <u>38.3</u>	Pt. #3 <u>19.1</u>

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO ₂	NOx	NO	NOx
4987	0.0	0.0000	0.0000	0.0000	0.0002	0.0002	Limit ± 10%	
4998	79.2	0.7765	0.7765	0.7801	-0.0003	0.7798	0%	0%
4977	38.3	0.3775	0.3775	0.3790	0.0000	0.3790	0%	0%
4979	19.1	0.1880	0.1880	0.1888	-0.0001	0.1887	0%	0%
Absolute Average Percent Difference							0%	0%

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)=	1.0046	0.90-1.10		m (Slope)=	1.0041
b (Intercept % of FS)=	-0.0080	± 3% F.S.		b (Intercept % of FS)=	0.0057

Flow	O ₃ Conc	NO Decrease	NO	NO ₂	NOx	% Diff. Vs Audit gas	
4998	0.000	0.0000	0.7799	-0.0008	0.7790	NO ₂	% Diff. Limit
4998	0.500	0.4949	0.2850	0.4909	0.7776	-1%	± 10%
4998	0.275	0.2765	0.5034	0.2742	0.7776	-1%	± 10%
4998	0.100	0.1003	0.6796	0.0989	0.7786	-1%	± 10%
Absolute Average Percent Difference						1%	± 10%

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

NO ₂		LIMITS	
Correlation=	1.0000	≥ 0.995	
m (Slope)=	0.9936	0.90-1.10	
b (Intercept % of FS)=	-0.0733	± 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>February 13, 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: February 14, 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>830</u>	Serial Number	<u>Hi148944 Lo 152019</u>
Last Verification Date	<u>January 19, 2016</u>	Temperature (°C)	<u>24.6</u>
SO ₂ Cylinder Conc.	<u>50.5</u>	Barometric Pressure	<u>701.4mmHg</u>
SO ₂ Cylinder S/N	<u>EY0000769</u>		
Expiry Date	<u>December 8, 2019</u>		

Flow Measurements

Pt. No. 1 78.0 **Pt. No. 2** 37.7 **Pt. No. 3** 18.6

Calibrator Flow (sccm)	Calculated Concentration (ppm)	Indicated Concentration (ppm)	% Difference	
			vs Audit Gas	% Diff. Limit
4978	0.0000	0.0000		
4974	0.7920	0.7912	0%	± 10%
4978	0.3825	0.3825	0%	± 10%
4975	0.1900	0.1908	0%	± 10%
Absolute Average Percent Difference			0%	± 10%

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

<u>SO₂</u>		<u>LIMITS</u>
Correlation=	1.0000	≥ 0.995
m (Slope)=	0.9986	0.90-1.10
b (Intercept % of FS)=	0.0477	± 3% F.S.

AENV Standards		SO₂ Analyzer	
Audit Calibrator		Make/Model	<u>Themro 43i</u>
Make/Model	<u>R&R MFC 201</u>	Serial/AMU Number	<u>1623</u>
Serial/AMU Number	<u>1690</u>	Last Calibration Date	<u>January 31, 2017</u>
SO ₂		Full Scale (ppm)	<u>1.0</u>
SRM Gas Cylinder No.	<u>CAL016625</u>	Expiry Date	<u>January 5, 2019</u>
Cylinder Conc. (ppm)	<u>98.07</u>		

COMMENTS: Analyzer verified prior to audit

Auditor: Shea Beaton Date: February 14, 2017
 Operator Signature: [Signature] 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>831</u>	Serial Number	<u>Hi148944 Lo 152019</u>
Last Verification Date	<u>January 19, 2016</u>	Temperature (°C)	<u>24.6</u>
SO ₂ Cylinder Conc.	<u>50.5</u>	Barometric Pressure	<u>701.4mmHg</u>
SO ₂ Cylinder S/N	<u>EY0000769</u>		
Expiry Date	<u>December 8, 2019</u>		

Flow Measurements

Pt. No. 1 77.3 **Pt. No. 2** 37.5 **Pt. No. 3** 18.8

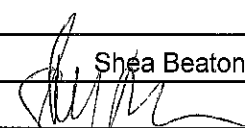
Calibrator Flow (sccm)	Calculated Concentration (ppm)	Indicated Concentration (ppm)	% Difference	
			vs Audit Gas	% Diff. Limit
Zero Air	0.0000	0.0001		
4995	0.7815	0.7889	1%	± 10%
5003	0.3785	0.3840	1%	± 10%
5007	0.1896	0.1911	1%	± 10%
Absolute Average Percent Difference			1%	± 10%

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

SO ₂		LIMITS	
Correlation=	1.0000	≥	0.995
m (Slope)=	1.0097		0.90-1.10
b (Intercept % of FS)=	0.0341	±	3% F.S.

AENV Standards		SO ₂ Analyzer	
Audit Calibrator		Make/Model	<u>Themro 43i</u>
Make/Model	<u>R&R MFC 201</u>	Serial/AMU Number	<u>1623</u>
Serial/AMU Number	<u>1690</u>	Last Calibration Date	<u>January 31, 2017</u>
SO ₂		Full Scale (ppm)	<u>1.0</u>
SRM Gas Cylinder No.	<u>CAL016625</u>	Expiry Date	<u>January 5, 2019</u>
Cylinder Conc. (ppm)	<u>98.07</u>		

COMMENTS: Analyzer verified prior to audit

Auditor: Shea Beaton
Operator Signature: 

Date: February 14, 2017
Location: McIntyre Center Edmonton

CALIBRATION GASES



Calibration Gas Audit

Single Component Cylinder Gas

File No. 2016-086CGA

Company: Maxxam Operator's Name: Chris Wesson
 Cylinder #: LL119513 Concentration PPM: 50.6 Tolerance(%) 1 Certified By: Praxair

Reference Calibrator and Gas:

Make/Model: Teco 146i
 Serial Number: AMU 1809
 Last Verification Date: June 17, 2016
 Gas Type: SO2 Conc. 98.07
 Cylinder Number: CAL016625

Flow Measurement Device:

Make/Model: Bios DC2
 Serial Number: AMU 1659
 Temp. °C: 23.0 C
 B.P. 700 mmhg

Reference Analyzer:

Make/Model: Teco 43C Serial/AMU Number: 1623
 Instrument Settings: Zero: 8.7 Span: 1.027 Range: 1.0
 Last Calibration: Date: June 17/16 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	0.000	0.01654	60.462	50.1
4976	82.3	0.828	0.01654	60.462	50.1
4985	40.8	0.411	0.00818	122.181	50.2
4965	20.2	0.203	0.00407	245.792	49.9
Average Cylinder Concentration:					50.1

Previous Stated Concentration PPM: 50.6

Percent variance from Stated: 1.1

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: June 17, 2016
 Location: McIntyre Center Edmonton



Calibration Gas Audit

Single Component Cylinder Gas

File No. 2015-112CGA

Company: Maxxam Operator's Name: Chris Wesson
 Cylinder #: BLM002197 Concentration PPM: 10.3 Tolerance(%): 2 Certified By: Air Liquide

Reference Calibrator and Gas:

Make/Model: R&R MFC 201
 Serial Number: AMU 1690
 Last Verification Date: February 2, 2016
 Gas Type: H2S Conc. 20.43
 Cylinder Number: CAL015584

Flow Measurement Device:

Make/Model: Bios DC-2
 Serial Number: Bios D
 Temp. °C: 24.5
 B.P. 702mmHg

Reference Analyzer:

Make/Model: Thermo 450i Serial/AMU Number: 1980
 Instrument Settings: Zero: 15.3 Span: 1.126 Range: 0.1
 Last Calibration: Date: 1-Feb-16 C.F. 1.000 Done By: SB

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5017	0.0	0.000	0.00751	133.140	10.4
5054	37.96	0.078	0.00751	133.140	10.4
5055	17.78	0.037	0.00352	284.308	10.4
5029	9.07	0.019	0.00180	554.465	10.3
Average Cylinder Concentration:					10.3

Previous Stated Concentration PPM: 10.3

Percent variance from Stated: 0.5

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: Shea Beaton
 Operator Signature: *[Signature]*

Date: February 2, 2016
 Location: McIntyre Center Edmonton



Calibration Gas Audit

Single Component Cylinder Gas

File No. 2015-109CGA

Company: Maxxam Operator's Name: Chris Wesson
 Cylinder #: BLM001927 Concentration PPM: 10.3 Tolerance(%) 2 Certified By: Air Liquide

Reference Calibrator and Gas:

Make/Model: R&R MFC 201
 Serial Number: AMU 1690
 Last Verification Date: February 2, 2016
 Gas Type: H2S Conc. 20.43
 Cylinder Number: CAL015584

Flow Measurement Device:

Make/Model: Bios DC-2
 Serial Number: Bios D
 Temp. °C: 24.5
 B.P. 702mmHg

Reference Analyzer:

Make/Model: Thermo 450i Serial/AMU Number: 1980
 Instrument Settings: Zero: 15.3 Span: 1.126 Range: 0.1
 Last Calibration: Date: 1-Feb-16 C.F. 1.000 Done By: SB

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
5025	0.0	0.000	0.00748	283.417	10.3
5058	37.84	0.078	0.00748	133.668	10.4
5059	17.85	0.036	0.00353	283.417	10.3
5031	9.15	0.019	0.00182	549.836	10.2
Average Cylinder Concentration:					10.3

Previous Stated Concentration PPM: 10.3

Percent variance from Stated: 0.1

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: Shea Beaton
 Operator Signature: [Signature]

Date: February 2, 2016
 Location: McIntyre Center Edmonton



Calibration Gas Audit

CH₄ / C₃H₈ Cylinder Gas

File No. 2013-298CGA

Company: Maxxam Operators name: Theo
 Cylinder #: LL19638 Conc CH₄ (PPM) 880/304 Tolerance (%) 2 Certified By: Praxair

Reference Calibrator and Gas:
 Make/Model R&R MFC 201
 Serial Number AMU 1690
 Last Verification Date October 17, 2013
 Gas Type CH₄ Conc. 999.2
 Cylinder Number D751932
 Gas Type C₃H₈ Conc. 246.5
 Cylinder Number XF0037998

Flow Measurement Device:
 Make/Model Bios DC2
 Serial Number AMU 1659
 Temp. °C 21.0 C
 B.P. 706 mmhg

Reference Analyzer:
 Make/Model Teco 55C Serial/AMU Number: 1625
 Instrument Settings Zero: N/A Span: N/A Range: 20
 Last Calibration: Date: Oct 17/13 C.F. 1.000 Done By: Al Clark

Calibrator Flows (scm)		Indicated Conc. (ppm)		Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration	
Dilution	Gas	CH ₄	C ₃ H ₈			CH ₄	C ₃ H ₈
3500	0.0	0.04	0.00	0.01481	67.534	889	309
3505	51.9	13.16	12.58	0.01481	67.534	889	309
3487	22.2	5.64	5.43	0.00637	157.072	886	310
3458	10.8	2.80	2.73	0.00312	320.185	897	318
Average Cylinder Concentration:						890	312

<u>CH₄</u>	<u>C₃H₈</u>
Previous Stated Concentration PPM: <u>880</u>	<u>304</u>
Percent variance from Stated: <u>1.2</u>	<u>2.7</u>

Cylinder gas tolerances based on CH₄ only

- 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 Date: October 17, 2013
 Operator Signature: *Al Clark* Location: McIntyre Center Edmonton

***APPENDIX III
REPORT CERTIFICATION FORM***

Report Certification Form

Alberta Airshed (if applicable)	EPA Approval or Code of Practice Registration # (if applicable)
NO	NA
Company Name (if applicable)	Industrial Operation Name (if applicable)
Peace River Area Monitoring Program Committee	Three Creeks 842b 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

22-02-2017




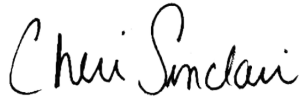
Report Issued Date (dd-mm-yyyy)

APPENDIX IV
DATA VALIDATION CERTIFICATION FORM



Validation Certificate Form

Client: <u>Peace River Area Monitoring Program Committee</u>	Project #: <u>8449-2017-01-80-C</u>
Site: <u>Three Creeks 842b Station</u>	Contact: <u>Mike Bisaga</u>

Level 0 Preliminary Verification	<u></u>	Date <u>16-Feb-17</u>
Level 1 Primary Validation	<u></u>	Date <u>16-Feb-17</u>
Level 2 Final Validation	<u></u>	Date <u>22-Feb-17</u>
Level 3 Independent Data Review	<u></u>	Date <u>23-Feb-17</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.