

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

JOB #: 8449-2016-10-67-C

October 2016

Prepared for:

PEACE RIVER AREA MONITORING PROGRAM COMMITTEE
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Attention: ANTHONY TRAVERSE

DATE: **November 28, 2016**

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SUMMARY

In October 2016, Maxxam Analytics was contracted to manage the ambient air quality monitoring and maintenance activities at the Three Creeks 986b Station, near Peace River Oil Sands Area 2, Alberta. The monitoring station provides continuous meteorological measurements and air quality data for non-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.

For all parameters, four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure. For gas parameters, data collected at hour 11:00 was also invalidated as the analyzers were in recovery mode.

One canister event was recorded this month on October 5, at hour 18:40, at a concentration of 0.43 ppm.

The summary of results is presented on the following pages.

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

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

Monthly Continuous Data Summary

Peace River Area Monitoring Program Committee						MAXIMUM VALUES							OPERATIONAL TIME (%)
Three Creeks 986b Station						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDANCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (kph)	WIND DIRECTION (sector)	READING	DAY	
	1-hr	24-hr	1-hr	24-hr									
SO ₂ (ppb)	172	48	0	0	0.2	1.1	5	9	8.2	ESE	0.7	5	99.3
TRS (ppb)	-	-	-	-	0.3	2.7	2	20	3.3	S	0.5	2	99.3
THC (ppm)	-	-	-	-	2.00	2.17	16	17	2.6	ENE	2.05	3, 16	99.3
CH ₄ (ppm)	-	-	-	-	2.00	2.15	3, 3	7, 8	1.2, 1.0	NNW W	2.05	3	99.3
NMHC (ppm)	-	-	-	-	0.00	0.15	5	18	2.1	ENE	0.01	5, 16	99.3
RELATIVE HUMIDITY (%)	-	-	-	-	87	98	VAR	VAR	VAR	VAR	97	23	99.5
BAROMETRIC PRESSURE (inHg)	-	-	-	-	27.81	28.17	6	11	6.4	E	28.14	6	99.5
AMBIENT TEMPERATURE (°C)	-	-	-	-	-0.4	8.3	21	15	7.5	SW	3.0	20, 21	99.5
STATION TEMPERATURE (°C)	-	-	-	-	21.6	23.1	25	15	2.9	ENE	22.3	27	99.5
VECTOR WS (kph)	-	-	-	-	1.5	13.2	1	6	-	NE	8.3	14	99.5
VECTOR WD (sec)	-	-	-	-	66 (ENE)	-	-	-	-	-	-	-	99.5

NA-NOT AVAILABLE VAR-VARIOUS

**SOUR GAS PROCESSING INDUSTRY
MONTHLY REPORT SUMMARY**

Three Creeks 986b Station

Plant Name / Location

Peace River Area Monitoring Program Committee

Company

Licence Number	Report Date	
	YEAR	MONTH
N/A	2016	October

CONTINUOUS AMBIENT MONITORING								
			ONE - HOUR AVERAGE		24 - HOUR AVERAGE			
PARAMETER	STN No.	% TIME OPERATIONAL	MAXIMUM VALUES		NO. READINGS > REGULATION	MAXIMUM VALUES		NO. READINGS > REGULATION
SO ₂	1	99.3	0.0011	ppm	0	0.0007	ppm	0
TRS	1	99.3	0.0027	ppm	-	0.0005	ppm	-
THC	1	99.3	2.17	ppm	-	2.05	ppm	-
CH ₄	1	99.3	2.15	ppm	-	2.05	ppm	-
NMHC	1	99.3	0.15	ppm	-	0.01	ppm	-
RH	1	99.5	98	%	-	97	%	-
BP	1	99.5	28.17	inHg	-	28.14	inHg	-
Ambient TPX	1	99.5	8.3	°C	-	3.0	°C	-
Station TPX	1	99.5	23.1	°C	-	22.3	°C	-
Wind Speed	1	99.5	13.2	kph	-	8.3	kph	-
Wind Direction	1	99.5	-		-	-		-

SIGNATURE OF COMPANY REPRESENTATIVE

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Exceedance Summary Report

SO₂ 1-Hour Exceedances

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

SO₂ 24-Hour Exceedances

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

In accordance with EPEA and the Substance Release Regulation.

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

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1.0 Discussion

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

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 October 18. Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure. Data collected, at hour 11:00, was also invalidated as the analyzer was recovering from the power failure.

TOTAL REDUCED SULPHUR (TRS)

The routine monthly calibration was performed on October 18. Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure. Data collected, at hour 11:00, was also invalidated as the analyzer was recovering from the power failure.

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

The routine monthly calibration was performed on October 18. Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure. Data collected, at hour 11:00, was also invalidated as the analyzer was recovering from the power failure.

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. One canister event was recorded this month on October 5, at hour 18:40, at a concentration of 0.43 ppm.

WIND SPEED (WS) and WIND DIRECTION (WD)

The wind system is reported as vector wind speed and vector wind direction. The wind direction data included in this report represents where the wind was blowing from.

Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure.

RELATIVE HUMIDITY (RH)

Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure.

BAROMETRIC PRESSURE (BP)

Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure.

AMBIENT TEMPERATURE (AmbTPX)

Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure.

STATION TEMPERATURE (StnTPX)

Four hours of data are missing on October 25, from hours 07:00 to 10:00, due to a power failure.

2.0 Project Personnel

Anthony Traverse was the contact for Peace River Area Monitoring Program Committee and the Maxxam field technicians were Limin Li and Raja Ashraf.

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-00210: Ambient Sulphur Monitoring

There were no deviations from the prescribed methods.

The following instruments were used to perform the test program:

Sulphur Dioxide - Thermo 43C UV Fluorescent Analyzer
Total Reduced Sulphur - Thermo 43i UV Fluorescent Analyzer
Methane, Non-Methane Hydrocarbon - Thermo 55i FID Analyzer
Wind System - RM Young Unit
Relative Humidity - Campbell Scientific Unit
Barometric Pressure - Met One Unit
Ambient Temperature - Campbell Scientific 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

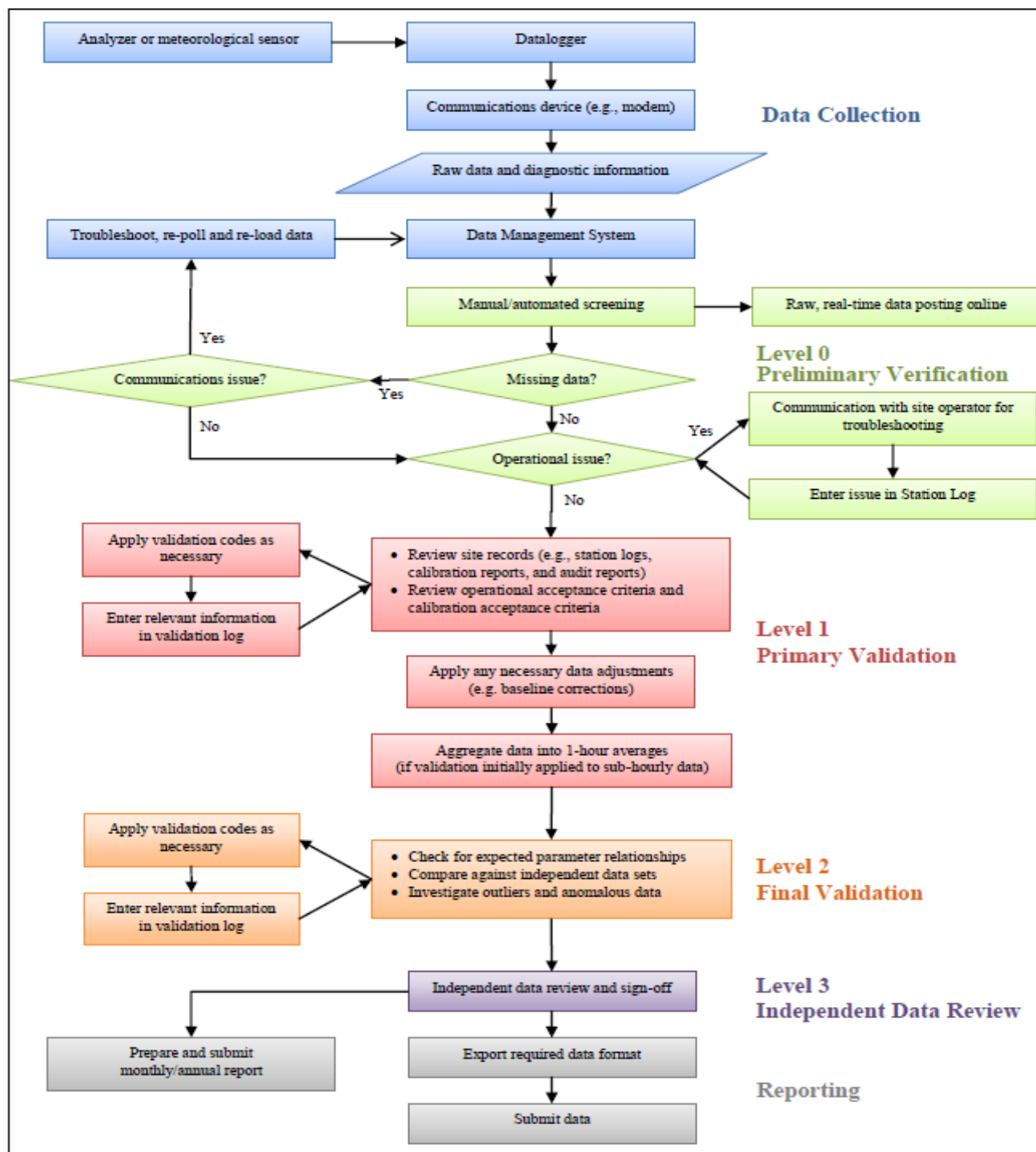
The purpose of Level 2 validation is to verify that there are no inconsistencies among related data, or among regional data measured at nearby sites.

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)

MST																										DAILY	DAILY	24-HOUR	RDGS.
HOUR START	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-HOUR	RDGS.	
HOUR END	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	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	24
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24
3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.0	0.5	0.3	S	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.1	0.0	0.5	0.1	24	
4	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.2	0.1	0.1	0.0	S	0.1	0.1	0.3	0.4	0.4	0.2	0.2	0.4	0.4	0.3	0.4	0.0	0.4	0.2	24	
5	0.4	0.5	0.4	0.7	0.8	0.7	0.8	0.9	0.9	1.1	1.0	S	0.9	1.0	0.9	1.0	0.7	0.7	0.7	0.9	0.6	0.5	0.3	0.6	0.3	1.1	0.7	24	
6	0.6	0.5	0.4	0.2	0.3	0.1	0.2	0.2	0.2	0.2	S	0.2	0.0	0.0	0.2	0.2	0.1	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.6	0.2	24	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	S	0.3	0.2	0.5	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.5	0.1	24	
8	0.1	0.4	0.2	0.3	0.2	0.1	0.1	0.3	S	0.1	0.2	0.4	0.5	0.4	0.6	0.8	0.8	0.6	0.7	0.8	0.7	0.6	0.6	0.6	0.1	0.8	0.4	24	
9	0.5	0.4	0.4	0.3	0.5	0.3	0.3	S	0.3	0.4	0.2	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.0	0.2	0.0	0.5	0.3	24	
10	0.0	0.1	0.1	0.2	0.0	0.0	S	0.1	0.0	0.0	0.1	0.1	0.3	0.1	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.4	0.2	0.0	0.4	0.2	24	
11	0.4	0.5	0.3	0.5	0.3	S	0.4	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.5	0.5	0.3	0.3	0.2	0.3	0.3	0.2	0.7	0.5	24	
12	0.3	0.2	0.2	0.2	S	0.2	0.0	0.1	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.3	0.1	24	
13	0.1	0.0	0.0	S	0.2	0.0	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.0	0.4	0.2	24	
14	0.1	0.3	S	0.2	0.1	0.3	0.0	0.4	0.2	0.2	0.3	0.4	0.2	0.4	0.5	0.2	0.3	0.3	0.1	0.2	0.3	0.2	0.0	0.1	0.0	0.5	0.2	24	
15	0.2	S	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
16	S	0.0	0.0	0.0	0.0	0.0	0.1	0.3	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	S	0.0	0.3	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	24	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	0.3	0.2	0.3	0.4	0.3	0.3	0.3	S	0.5	0.2	0.0	0.5	0.2	24
19	0.1	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.4	0.3	0.3	0.4	0.6	0.5	0.5	0.5	0.4	0.4	S	0.3	0.3	0.2	0.1	0.6	0.4	24	
20	0.2	0.4	0.2	0.3	0.3	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1	0.1	S	0.1	0.0	0.0	0.1	0.0	0.4	0.2	24	
21	0.1	0.2	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	S	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	24	
22	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.2	0.0	0.2	0.2	S	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	24	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24	
25	0.0	0.0	0.1	0.0	0.0	0.2	0.0	P	P	P	P	R	0.3	0.3	S	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.3	0.1	19	
26	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	S	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	24	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	24	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	S	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	24	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	S	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.2	0.3	0.3	0.0	0.3	0.1	24	
30	0.4	0.4	0.4	0.5	0.4	0.2	0.4	0.4	0.5	S	0.8	0.6	0.4	0.3	0.4	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.8	0.4	24	
31	0.3	0.4	0.0	0.1	0.2	0.1	0.1	0.0	S	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	24	
HOURLY MAX	0.6	0.5	0.4	0.7	0.8	0.7	0.8	0.9	0.9	1.1	1.0	0.6	0.9	1.0	0.9	1.0	0.8	0.7	0.7	0.9	0.7	0.6	0.6	0.6					
HOURLY AVG	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1					

STATUS FLAG CODES

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

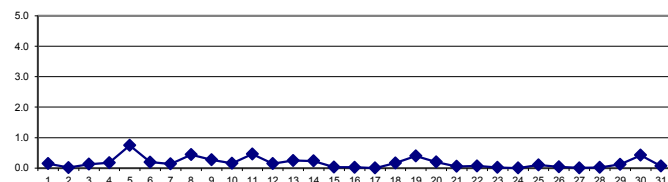
OBJECTIVE LIMIT:

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

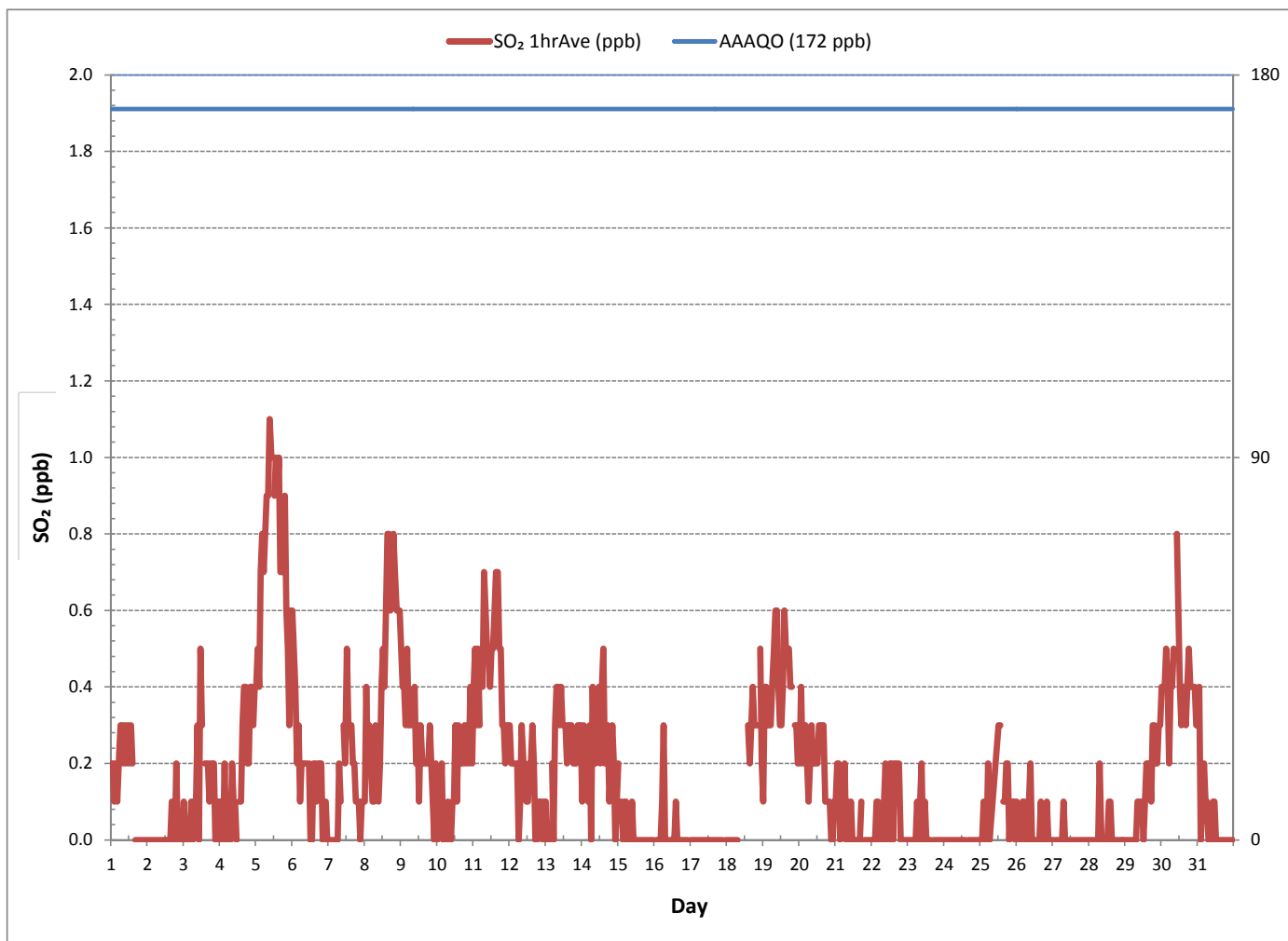
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDANCES:	0				
NUMBER OF 24-HR EXCEEDANCES:	0				
NUMBER OF NON-ZERO READINGS:	402				
MINIMUM 1-HR AVERAGE:	0.0	PPB @ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 1-HR AVERAGE:	1.1	PPB @ HOUR(S)	9	ON DAY(S)	5
MAXIMUM 24-HR AVERAGE:	0.7	PPB		ON DAY(S)	5
				VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	0.20		MONTHLY AVERAGE:	0.2	PPB

24 HOUR AVERAGES FOR October 2016



SULPHUR DIOXIDE Hourly Averages (SO_2 ppb)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

SULPHUR DIOXIDE Instantaneous Maximum (SO₂ ppb)

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-HOUR	
Hour Start	Hour End	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.	Rdgs.
Day																													
1	1.0	1.0	1.0	1.0	1.0	0.6	1.1	1.1	1.1	1.6	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	1.1	1.0	0.6	1.6	1.0	24
2	1.1	1.0	1.0	1.6	0.6	1.6	1.1	1.0	1.0	1.0	1.0	1.1	1.0	1.0	S	1.0	1.0	0.6	2.1	1.6	1.0	1.0	0.6	1.0	0.6	0.6	2.1	1.1	24
3	1.1	1.0	1.1	0.6	1.0	1.1	0.6	1.0	1.6	1.0	1.0	1.0	1.6	1.1	S	1.1	1.1	1.6	1.0	1.0	1.6	1.1	1.0	1.6	1.0	0.6	1.6	1.1	24
4	1.0	1.0	0.6	1.0	0.6	0.6	0.6	0.6	1.0	1.0	1.0	0.6	S	1.0	0.6	1.1	1.0	1.0	0.6	0.6	1.1	1.1	1.0	0.6	0.6	0.6	1.1	0.8	24
5	1.1	0.6	1.1	1.0	1.6	1.0	1.1	1.0	1.0	1.6	1.6	S	1.0	1.6	1.6	1.0	1.0	1.0	1.1	1.0	0.6	1.0	0.6	1.0	0.6	0.6	1.6	1.1	24
6	1.1	1.0	1.0	1.0	1.0	0.6	1.0	1.0	1.1	1.0	S	1.0	0.6	0.6	1.0	0.6	1.0	0.6	1.0	1.0	1.1	1.6	1.0	1.0	0.6	0.6	1.6	1.0	24
7	1.0	0.6	0.6	0.6	0.6	0.6	1.0	1.0	1.0	S	1.1	1.6	2.6	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	0.6	1.1	0.6	0.6	2.6	1.0	24	
8	1.1	1.1	1.0	1.1	1.0	0.6	0.6	1.0	S	0.6	1.1	1.0	1.6	1.1	1.6	1.0	1.1	1.0	1.1	1.6	1.6	1.6	1.0	1.0	0.6	0.6	1.6	1.1	24
9	1.6	0.6	1.1	0.6	0.6	1.0	0.6	S	1.1	0.6	0.6	1.0	0.6	0.6	0.6	1.6	1.0	1.0	1.0	0.6	0.6	1.1	0.6	0.6	0.6	0.6	1.6	0.8	24
10	1.0	0.6	1.0	0.6	1.0	0.6	S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	0.6	0.6	1.0	0.6	0.6	1.0	0.6	0.6	0.6	1.0	0.7	24
11	1.0	1.1	0.6	0.6	0.6	S	1.0	1.1	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.5	1.1	1.1	1.0	1.1	1.1	0.6	1.0	0.6	0.6	0.6	1.5	1.0	24
12	1.0	0.6	1.0	0.6	S	1.0	0.6	0.6	1.0	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	0.6	0.5	0.6	1.0	0.6	0.6	0.6	0.6	0.5	1.0	0.7	24
13	0.6	0.6	1.0	S	1.0	0.5	1.0	1.0	0.6	1.1	0.6	1.1	0.6	1.0	1.0	1.1	1.0	0.6	0.6	0.6	0.6	0.1	1.0	1.0	0.6	0.1	1.1	0.8	24
14	0.6	1.0	S	0.6	0.1	0.6	0.1	0.6	0.5	1.0	1.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	0.6	0.6	0.1	1.0	0.6	24
15	1.0	S	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.1	1.1	0.6	0.1	0.6	0.6	0.5	0.6	1.0	0.6	0.6	1.0	0.6	0.6	0.6	0.1	1.1	0.6	24
16	S	0.6	0.6	0.6	0.6	1.0	1.1	1.0	1.1	0.6	0.6	1.0	0.6	0.1	1.0	0.6	0.6	0.6	0.6	1.0	0.6	0.6	0.6	0.1	S	0.1	1.1	0.7	24
17	1.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	0.6	1.0	0.6	0.6	0.6	0.6	S	1.1	0.6	1.1	0.7	24
18	0.6	1.1	1.0	0.6	0.6	1.1	0.6	0.6	C	C	C	C	C	C	C	1.0	1.0	1.0	1.6	1.0	1.1	1.1	S	1.1	1.1	0.6	1.6	1.0	24
19	0.6	1.0	0.6	1.1	1.1	0.6	1.1	1.1	1.1	1.1	1.1	0.6	0.6	1.6	1.1	1.0	1.1	1.6	1.0	1.0	S	1.1	0.6	1.0	0.6	1.6	1.0	24	
20	1.1	1.1	1.1	1.0	1.0	0.6	1.0	1.1	1.1	1.0	1.1	1.6	1.1	1.6	1.0	1.6	1.6	1.1	1.0	S	1.6	1.1	1.1	1.0	0.6	1.6	1.2	24	
21	1.0	1.6	1.6	1.1	1.1	1.1	1.6	1.1	1.6	1.1	1.6	1.0	1.0	1.1	1.6	1.1	1.1	1.1	S	1.1	1.1	1.1	1.6	0.6	1.1	0.6	1.6	1.2	24
22	1.0	1.1	1.1	1.1	1.1	1.1	1.6	1.6	1.1	1.1	1.1	1.6	1.1	1.1	1.1	1.6	1.1	S	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.6	1.2	24
23	1.1	1.0	1.1	1.1	1.0	1.1	1.6	1.1	1.6	1.1	1.1	1.6	1.1	1.1	1.6	1.1	S	1.1	1.1	1.1	1.1	1.1	1.1	1.6	1.6	1.0	1.6	1.2	24
24	1.1	1.1	0.6	1.6	1.6	1.1	1.1	1.1	1.1	1.6	1.1	1.1	0.6	1.1	1.1	1.1	S	1.1	1.1	1.1	1.1	1.1	0.6	1.1	1.1	0.6	1.6	1.1	24
25	1.1	1.1	1.0	1.1	1.1	1.6	1.1	P	P	P	P	R	1.1	1.1	S	1.1	1.1	1.6	1.1	1.1	1.1	1.1	1.1	1.6	1.1	1.0	1.6	1.2	19
26	1.1	1.1	1.6	1.1	1.1	1.6	1.1	1.6	1.6	1.6	1.1	1.1	1.1	S	1.1	1.1	1.6	1.1	1.1	1.1	1.1	1.6	1.1	1.1	1.1	1.1	1.6	1.3	24
27	1.0	1.1	1.1	1.6	1.1	1.1	1.1	1.6	1.1	0.6	1.1	1.1	S	1.1	1.6	1.1	1.1	1.6	1.1	1.1	1.1	1.1	1.0	1.1	1.1	0.6	1.6	1.2	24
28	1.1	1.1	1.1	1.1	1.6	1.6	1.1	1.6	1.6	1.6	1.1	1.1	S	1.1	1.6	1.6	1.6	2.1	1.1	1.6	1.6	1.1	1.1	1.6	1.6	1.1	2.1	1.4	24
29	1.1	1.6	1.6	1.1	1.1	1.6	1.1	1.6	1.6	1.1	S	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.6	1.1	1.6	1.6	1.0	1.6	1.2	24
30	1.1	1.1	1.6	1.6	1.6	1.6	1.6	1.1	1.6	S	1.6	1.6	1.1	1.6	1.1	1.6	1.6	1.1	2.1	1.1	1.6	2.1	1.6	1.6	1.6	1.1	2.1	1.5	24
31	1.6	2.1	1.1	1.6	1.1	1.6	1.6	1.1	S	1.1	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.6	1.1	1.1	1.1	1.1	1.1	1.0	1.6	1.0	2.1	1.3	24
Hourly Max	1.6	2.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.6	1.6	1.6	1.6	2.1	1.6	2.1	1.6	1.6	2.1	1.6	1.6				
Hourly Avg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.0	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0				

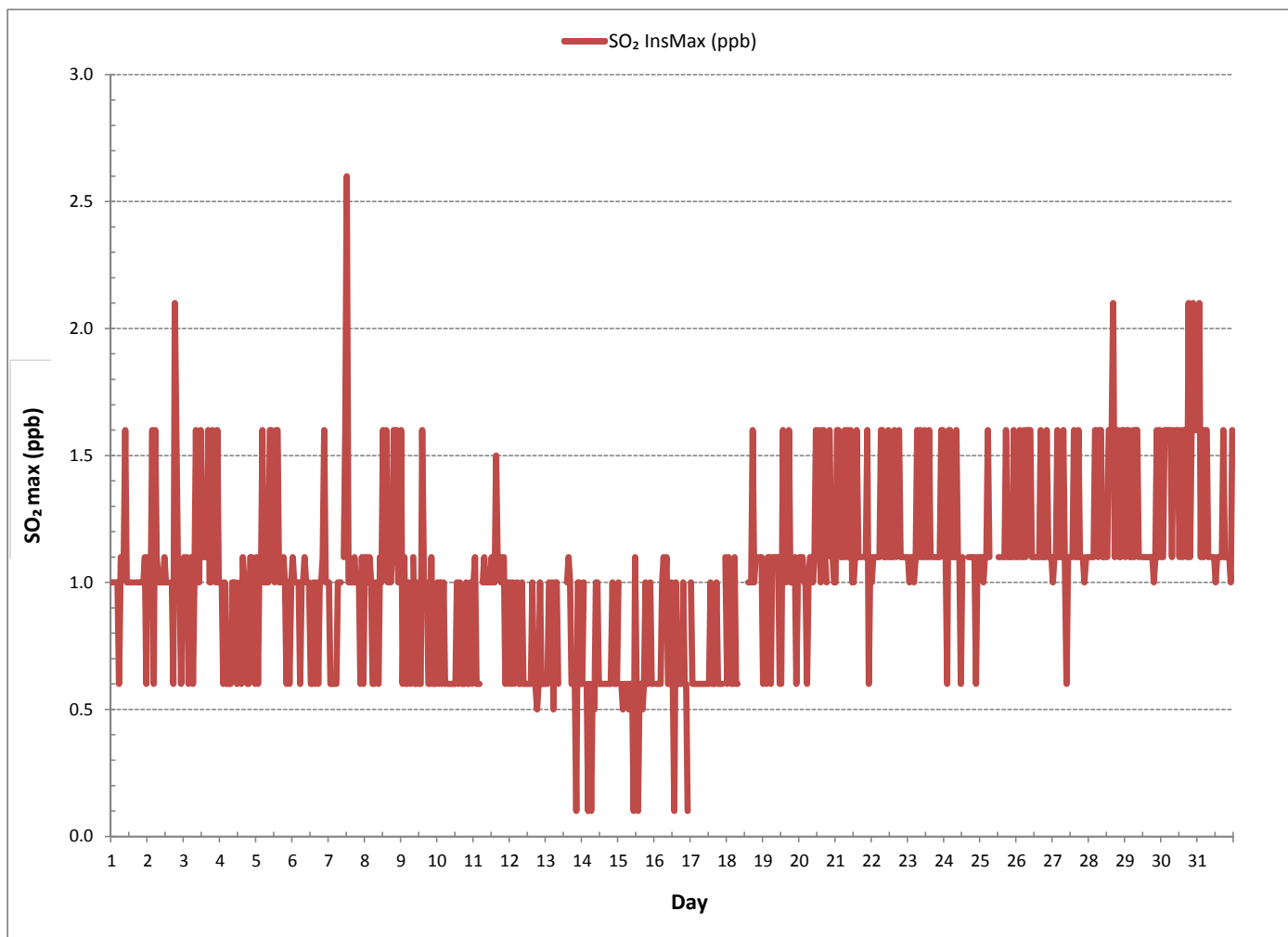
STATUS FLAG CODES

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:	2.6 PPB @ HOUR(S) 12 ON DAY(S) 7
VAR-VARIOUS	
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION:	0.34
OPERATIONAL TIME:	739 HRS

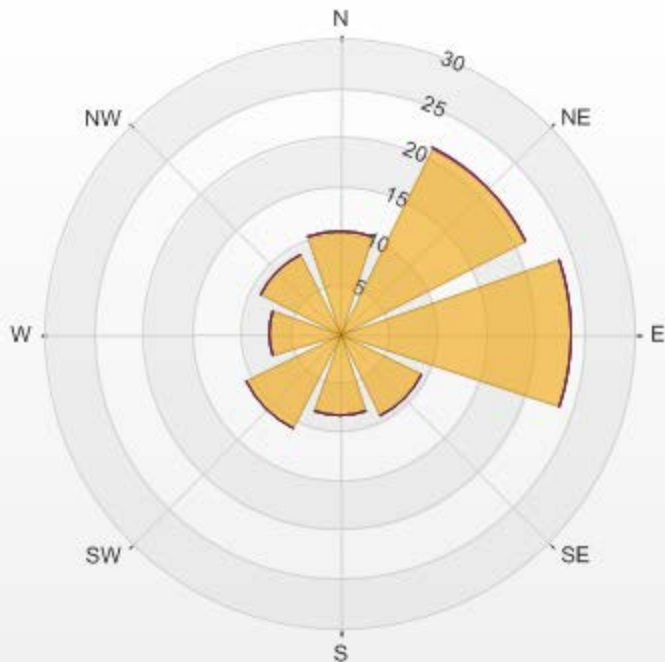
SULPHUR DIOXIDE Instantaneous Maximum (SO₂ ppb)



Wind: THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-SO2[ppb] Monthly: 2016/10 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.48% Calm Avg: 0.00 ppb

Direction	0-3	3-10	10-85	85-170	>170.0	Total
N	10.54	0	0	0	0	10.54
NE	21.08	0.14	0	0	0	21.22
E	23.65	0	0	0	0	23.65
SE	9.4	0	0	0	0	9.4
S	8.26	0	0	0	0	8.26
SW	10.68	0	0	0	0	10.68
W	7.12	0	0	0	0	7.12
NW	9.12	0	0	0	0	9.12
Summary	100	0.14	0	0	0	100

THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-SO2[ppb] 2016/10/01 00:00 - 2016/10/31 23:00 Calm: 0.00%



% Icon Classes (ppb)

100 0-3

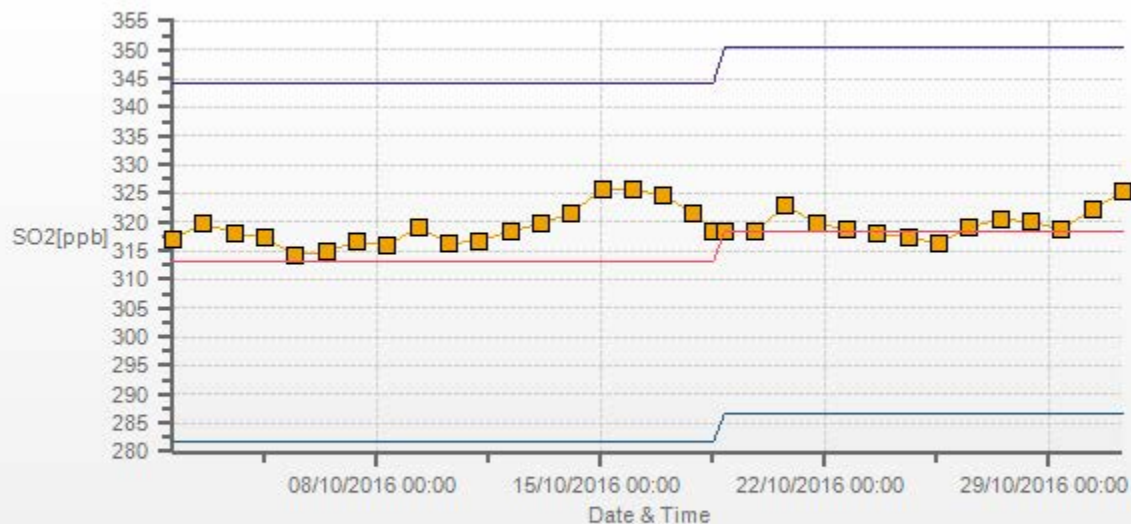
0 3-10

0 10-85

0 85-170

0 >170.0

SO2[ppb] Calibration: THREE CREEKS #986 TRAILER Monthly: 2016/10 Type: Span



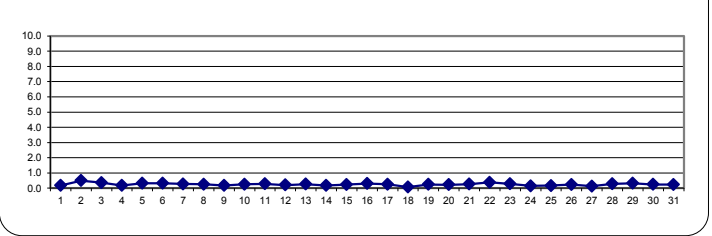
Span Meas Span Ref Span Low Span High

TOTAL REDUCED SULPHUR



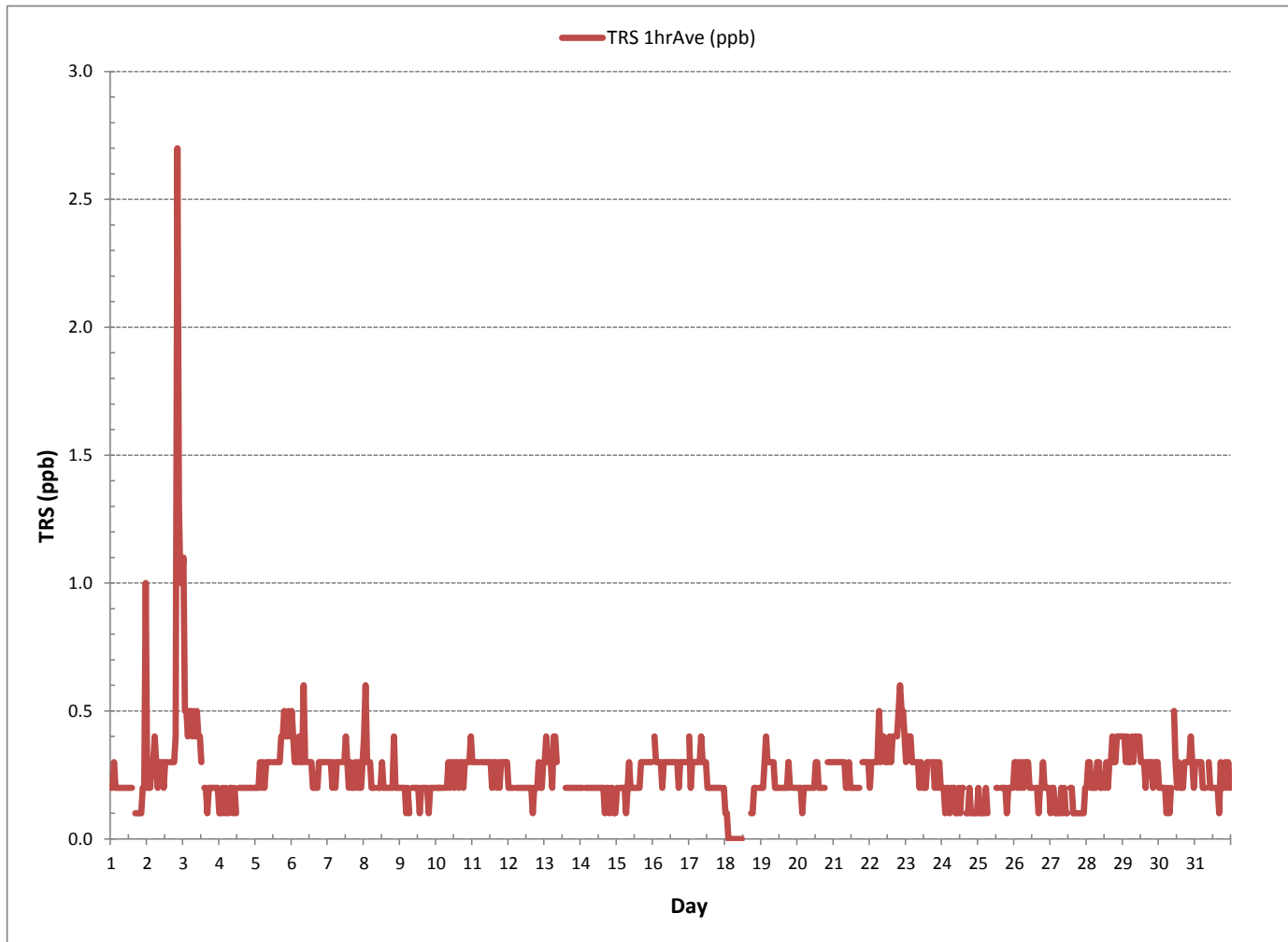
MST																													
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Daily	Daily	24-Hour		
Hour End	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	Min	Max	Avg	Rdgs	
Day																													
1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	S	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.3	0.2	24	
2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	S	0.3	0.3	0.3	0.3	0.4	2.7	1.3	1.0	1.0	0.2	2.7	0.5	24	
3	1.1	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.3	S	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.1	0.4	24	
4	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	S	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	24	
5	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	S	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.2	0.5	0.3	24	
6	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.6	0.3	S	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.6	0.3	24	
7	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	S	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.4	0.3	24	
8	0.4	0.6	0.3	0.3	0.3	0.2	0.2	0.2	S	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.6	0.3	24	
9	0.2	0.2	0.2	0.2	0.1	0.2	0.1	S	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	24	
10	0.2	0.2	0.2	0.2	0.2	0.2	S	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.2	0.4	0.3	24	
11	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	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	24	
12	0.2	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	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.1	0.3	0.2	24
13	0.3	0.4	0.3	S	0.3	0.2	0.4	0.4	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	24
14	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	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	24	
15	0.2	S	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.3	0.2	24	
16																													

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



NUMBER OF NON-ZERO READINGS:	692				
MINIMUM 1-HR AVERAGE	0.0	PPB	@ HOUR(S)	VAR	ON DAY(S) 18
MAXIMUM 1-HR AVERAGE:	2.7	PPB	@ HOUR(S)	20	ON DAY(S) 2
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S) 2
					VAR-VARIOUS
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		739 HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		99.3 %
STANDARD DEVIATION:	0.15		MONTHLY AVERAGE:		0.3 PPB

TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)

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-HOUR		
HOUR START		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	MIN.	MAX.	AVG.	RDGS.	
HOUR END		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		0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.0	S	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.1	24	
2		0.1	0.1	0.2	0.3	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	S	0.2	0.4	0.3	0.2	0.3	4.6	1.5	0.8	1.5	0.1	4.6	0.5	24	
3		1.4	0.4	0.4	0.4	0.4	0.9	0.4	0.5	0.4	0.3	0.4	0.3	0.1	S	0.2	0.1	0.2	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	1.4	0.4	24	
4		0.0	0.2	0.2	0.1	0.5	0.5	0.5	0.1	0.0	0.5	0.1	0.0	S	0.0	0.4	0.0	0.1	0.5	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0.5	0.2	24	
5		0.0	0.0	0.0	0.1	0.2	0.5	0.5	0.1	0.0	0.1	0.0	S	0.4	0.1	0.1	0.0	0.2	0.3	0.1	0.4	0.1	0.2	0.3	0.4	0.0	0.5	0.2	24	
6		0.5	0.3	0.1	0.1	0.3	0.5	0.2	0.1	0.4	0.1	S	0.0	0.1	0.1	0.0	0.0	0.5	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.2	24	
7		0.1	0.1	0.1	0.2	0.2	0.6	0.3	0.1	0.1	S	0.2	0.1	0.5	0.1	0.0	0.5	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.2	0.0	0.6	0.2	24	
8		0.3	1.0	0.2	0.2	0.1	0.6	0.0	0.1	S	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	1.0	0.2	24	
9		0.1	0.1	0.0	0.0	0.0	0.1	0.0	S	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	24	
10		0.2	0.0	0.1	0.2	0.0	0.4	S	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.5	0.1	24	
11		0.1	0.0	0.2	0.1	0.2	S	0.5	0.3	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.3	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.4	0.0	0.5	0.2	24	
12		0.1	0.1	0.1	0.3	S	0.4	0.4	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.4	0.0	0.1	0.0	0.0	0.1	0.0	0.4	0.1	24	
13		0.1	0.3	0.1	S	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.4	0.1	24	
14		0.0	0.3	S	0.0	0.1	0.2	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.3	0.1	24	
15		0.0	S	0.0	0.1	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.3	0.1	24	
16		S	0.4	0.2	0.0	0.1	0.5	0.2	0.1	0.1	0.7	0.1	0.4	0.1	0.2	0.1	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.2	S	0.0	0.7	0.2	24	
17		0.3	0.2	0.1	0.2	0.4	0.6	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.3	0.1	0.1	0.3	0.2	0.2	0.0	0.1	0.1	S	0.1	0.0	0.6	0.2	24	
18		0.2	0.1	0.2	0.1	0.5	0.8	0.1	0.1	0.1	0.1	0.1	0.0	C	C	C	C	C	C	0.6	0.6	0.4	S	0.5	0.5	0.0	0.8	0.3	24	
19		0.5	0.4	0.7	0.8	0.6	1.0	0.5	0.6	0.5	0.6	0.5	0.6	0.7	0.5	0.5	0.6	0.5	0.5	0.6	0.5	S	0.5	0.5	0.5	0.4	1.0	0.6	24	
20		0.5	0.5	0.5	0.4	0.7	0.9	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	1.0	0.6	0.5	S	0.6	0.5	0.6	0.6	0.4	1.0	0.6	24	
21		0.6	0.7	0.9	0.6	1.0	0.9	0.9	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.8	0.6	S	0.6	0.5	0.6	0.5	0.4	0.4	1.0	0.6	24	
22		0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.9	0.8	S	0.6	0.7	1.1	0.7	0.7	0.5	0.5	1.1	0.6	24	
23		0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.4	0.5	0.6	0.6	0.6	S	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	24
24		0.5	0.5	0.6	0.5	0.5	0.5	0.8	0.6	0.5	0.4	0.5	0.6	0.5	0.5	0.6	S	0.5	0.7	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.8	0.5	24	
25		0.6	0.6	0.5	0.5	0.6	1.0	0.9	P	P	P	P	R	0.6	0.6	S	0.7	1.0	0.6	0.7	0.5	0.6	0.9	0.8	0.6	0.5	1.0	0.7	19	
26		1.0	0.7	0.6	0.7	1.0	1.1	0.9	0.8	0.8	0.7	0.6	0.7	0.7	S	0.8	0.7	0.8	0.8	0.6	0.7	0.6	0.7	0.8	0.6	0.6	1.1	0.8	24	
27		0.8	0.8	0.7	0.6	0.6	0.7	0.6	0.8	0.6	0.6	0.6	0.6	S	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.5	0.8	0.6	24	
28		0.6	0.8	0.7	0.7	0.7	0.8	0.6	0.7	1.0	0.8	0.6	S	0.6	0.8	0.6	0.6	0.9	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.6	1.0	0.7	24	
29		0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.7	S	0.6	0.8	0.6	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.8	0.7	0.6	0.8	0.7	24	
30		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	S	0.9	0.7	0.7	0.7	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	0.9	0.7	24	
31		0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.6	S	0.7	0.6	0.6	0.6	0.7	0.6	0.5	1.1	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.5	1.1	0.6	24	
HOURLY MAX		1.4	1.0	0.9	0.8	1.0	1.1	0.9	0.8	1.0	0.8	0.9	0.7	0.8	0.8	0.8	0.9	1.1	0.8	0.8	0.8	4.6	1.5	0.8	1.5					
HOURLY AVG		0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.5	0.4	0.4	0.4					

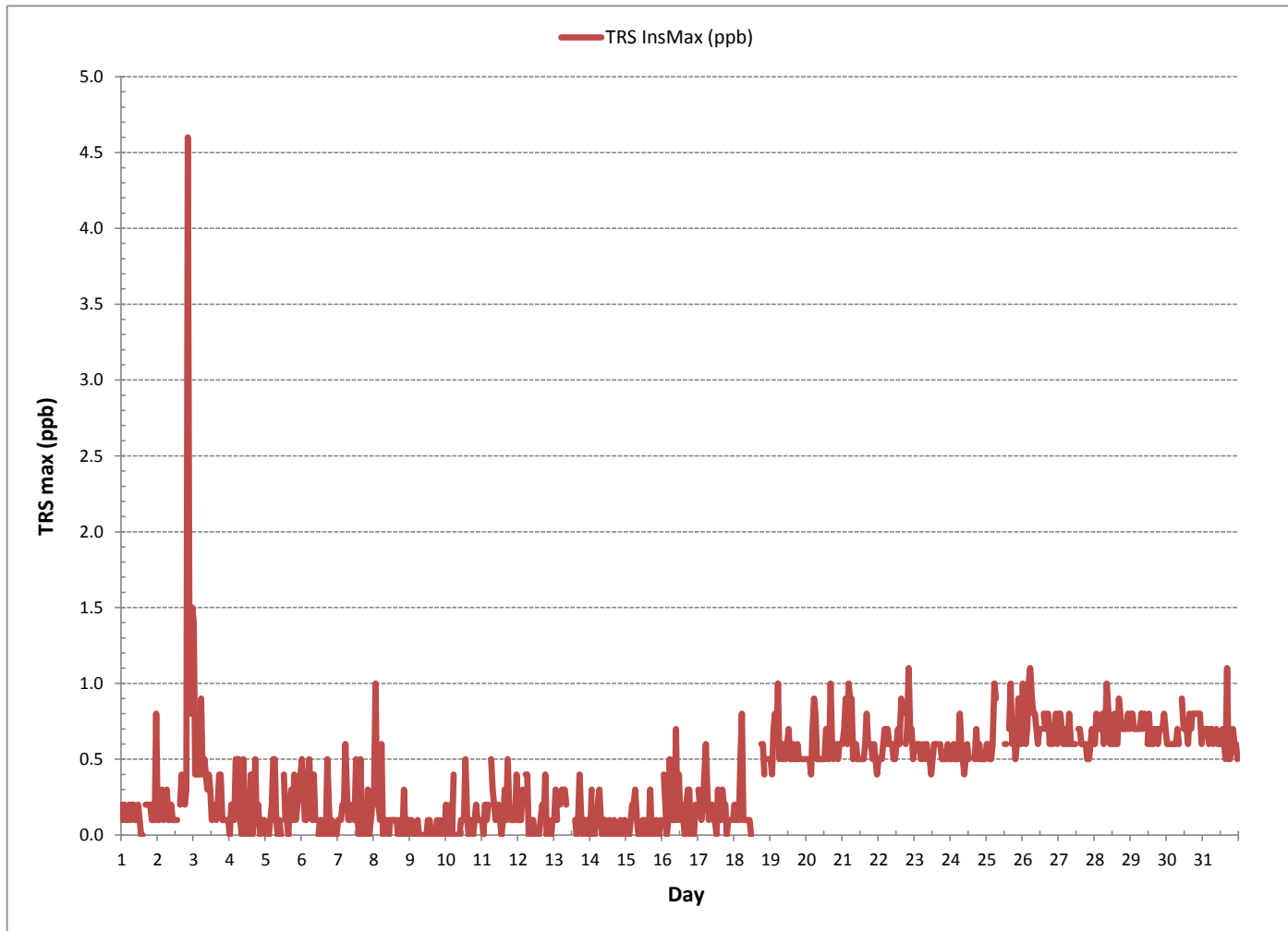
STATUS FLAG CODES

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:	598				
MAXIMUM INSTANTANEOUS VALUE:	4.6	PPB	@ HOUR(S)	20	ON DAY(S) 2
VAR-VARIOUS					
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	6	HRS			
STANDARD DEVIATION:	0.33				

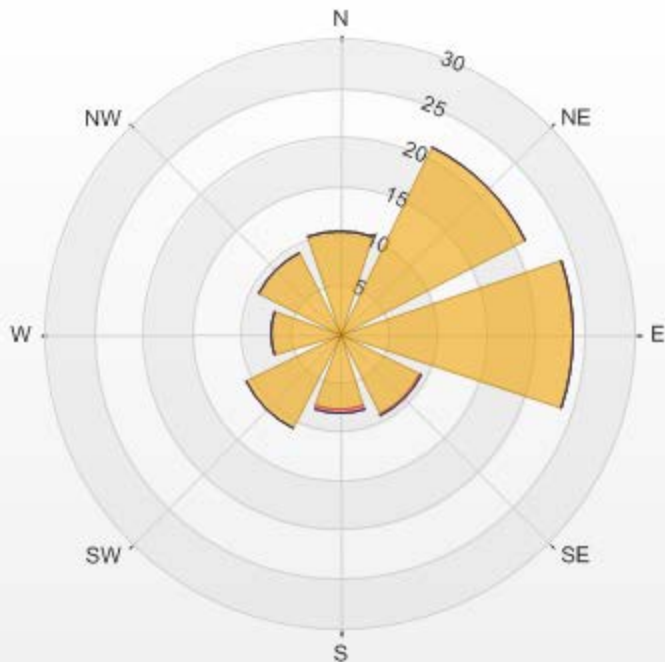
TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)



Wind: THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-TRS[ppb] Monthly: 2016/10 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.48% Calm Avg: 0.00 ppb

Direction	0-1	1-3	3-10	>10.0	Total
N	10.54	0	0	0	10.54
NE	21.23	0	0	0	21.23
E	23.79	0	0	0	23.79
SE	9.12	0.28	0	0	9.4
S	7.83	0.28	0	0	8.11
SW	10.68	0	0	0	10.68
W	6.98	0	0	0	6.98
NW	9.26	0	0	0	9.26
Summary	99.43	0.56	0	0	100

THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-TRS[ppb] 2016/10/01 00:00 - 2016/10/31 23:00 Calm: 0.00%



% Icon Classes (ppb)

99

0-1

1

1-3

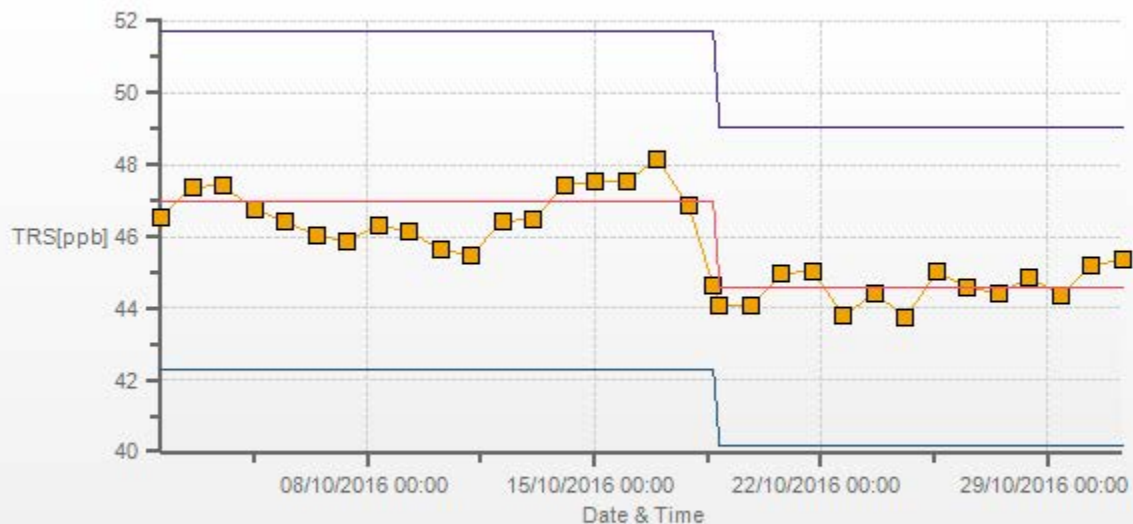
0

3-10

0

>10.0

TRS[ppb] Calibration: THREE CREEKS #986 TRAILER Monthly: 2016/10 Type: Span



Span Meas Span Ref Span Low Span High

TOTAL HYDROCARBON



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

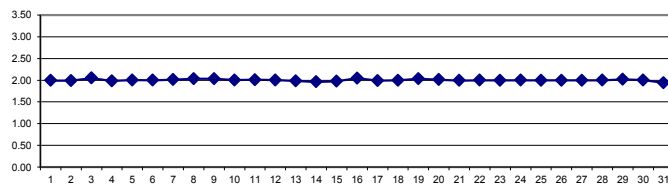
TOTAL HYDROCARBONS Hourly Averages (THC ppm)

MST																									DAILY	DAILY	24-HOUR		
HOURLY START	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	MIN.	MAX.	AVG.	RDGS.	
HOURLY END	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59					
DAY																													
1	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	1.99	1.99	1.99	1.98	S	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.98	2.00	1.99	24	
2	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.98	S	1.98	1.99	1.99	2.00	2.01	2.00	2.02	2.03	2.03	1.97	2.03	1.99	24	
3	2.04	2.07	2.10	2.10	2.11	2.12	2.14	2.15	2.15	2.10	2.06	2.03	2.03	S	2.01	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.15	2.05	24	
4	2.00	1.99	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.98	1.99	1.99	1.99	1.99	2.00	1.99	2.00	2.00	1.97	2.00	1.99	24	
5	2.00	2.00	2.01	2.01	2.00	2.00	2.00	1.99	1.99	1.98	1.98	S	1.98	1.99	1.98	1.98	1.98	1.98	2.14	2.11	1.98	1.99	2.00	2.00	1.98	2.14	2.00	24	
6	2.00	2.01	2.00	1.99	1.99	2.00	2.00	1.99	2.00	1.99	S	1.98	1.98	1.99	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.01	2.00	2.01	1.98	2.01	2.00	24	
7	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.02	2.02	S	2.01	2.01	2.01	2.01	2.00	2.01	2.02	2.01	2.01	2.01	2.02	2.01	2.01	2.02	2.00	2.02	2.01	24	
8	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.02	S	2.02	2.02	2.03	2.03	2.03	2.05	2.04	2.05	2.06	2.07	2.04	2.03	2.06	2.06	2.06	2.06	2.01	2.07	2.03	24
9	2.05	2.05	2.06	2.06	2.06	2.07	2.05	S	2.04	2.04	2.03	2.02	2.02	2.02	2.03	2.02	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.07	2.03	24	
10	2.01	2.02	2.02	2.02	2.01	2.02	S	2.02	2.01	2.00	2.00	2.00	2.01	2.00	2.00	2.00	1.99	1.99	2.00	1.99	1.99	1.99	2.00	2.00	1.99	2.02	2.00	24	
11	2.00	1.99	2.00	2.01	2.00	S	2.00	2.01	2.01	2.02	2.02	2.02	2.01	2.01	2.02	2.01	2.00	1.99	2.00	2.01	2.01	2.02	2.03	2.04	1.99	2.04	2.01	24	
12	2.04	2.06	2.07	2.08	S	2.09	2.03	2.01	2.01	1.99	1.98	1.98	1.97	1.98	1.98	1.97	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.97	1.97	2.09	2.00	24	
13	1.97	1.98	1.97	S	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.98	1.98	1.97	1.97	1.99	1.98	24	
14	1.97	1.97	S	1.97	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.95	1.95	1.96	1.95	1.95	1.96	1.96	1.96	1.96	1.95	1.97	1.96	24	
15	1.96	S	1.96	1.96	1.96	1.97	1.97	1.98	1.97	1.97	1.98	1.98	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.96	1.99	1.98	24	
16	S	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.02	2.04	2.05	2.07	2.08	2.08	2.09	2.14	2.17	2.13	2.04	2.05	2.04	2.06	S	1.99	2.17	2.05	24	
17	2.02	1.99	1.98	1.98	1.98	1.99	1.99	1.99	2.00	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.99	S	1.99	1.98	2.02	1.99	24	
18	1.99	2.00	1.99	1.99	2.00	2.01	1.99	1.98	1.99	C	C	C	C	1.98	1.98	1.98	1.98	1.99	1.99	1.99	2.00	S	2.02	2.05	1.98	2.05	1.99	24	
19	2.06	2.07	2.08	2.08	2.09	2.04	2.05	2.07	2.08	2.07	2.05	2.04	2.03	2.02	2.01	2.00	1.98	1.98	1.99	1.99	S	2.00	1.99	1.99	1.98	2.09	2.03	24	
20	1.98	1.97	1.97	1.97	1.99	1.99	1.99	2.00	2.01	2.03	2.03	2.04	2.04	2.03	2.02	2.01	2.01	2.00	2.02	S	2.05	2.04	2.05	2.05	1.97	2.05	2.01	24	
21	2.05	2.04	2.03	2.01	2.03	2.06	2.06	2.04	2.02	2.00	1.99	1.97	1.96	1.96	1.96	1.95	1.95	1.95	S	1.94	1.94	1.95	1.96	2.00	1.94	2.06	1.99	24	
22	2.02	2.04	2.07	2.06	2.06	2.05	2.04	2.04	2.02	2.00	1.98	2.00	1.98	1.96	1.96	1.95	1.95	S	1.97	1.97	1.98	1.97	1.97	1.96	1.95	2.07	2.00	24	
23	1.97	1.98	1.99	2.00	2.00	2.01	2.02	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	S	1.99	1.98	1.98	1.98	1.99	2.00	1.99	1.97	2.02	1.99	24	
24	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.00	2.00	2.01	2.01	S	2.01	2.01	2.01	2.01	2.00	2.01	2.02	2.01	1.99	2.02	2.00	24	
25	2.01	2.01	2.01	2.01	2.00	1.99	2.00	P	P	P	P	R	2.00	1.99	S	1.99	1.99	2.00	1.99	1.99	1.99	2.00	1.99	1.99	1.99	2.01	2.00	19	
26	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.00	S	2.00	2.00	2.00	2.00	2.01	2.00	2.01	2.03	2.02	2.03	1.98	2.03	2.00	24
27	2.03	2.02	2.00	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.00	2.00	S	2.00	2.00	2.00	1.99	1.99	1.99	1.98	2.00	1.98	1.97	1.97	1.97	2.03	1.99	24	
28	1.97	1.97	1.98	1.98	1.99	1.98	1.99	2.00	2.00	2.00	2.00	S	2.00	2.00	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.01	2.01	2.01	1.97	2.02	2.00	24	
29	2.01	2.03	2.03	2.02	2.01	2.02	2.02	2.03	2.03	2.03	S	2.03	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.03	2.01	2.03	2.02	24	
30	2.03	2.03	2.03	2.02	2.01	2.01	2.01	2.01	2.01	S	2.03	2.00	1.99	1.99	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	2.03	2.00	24	
31	1.97	1.97	1.97	1.96	1.94	1.93	1.93	1.92	S	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.94	1.95	1.95	1.95	1.94	1.92	1.97	1.94	24
HOURLY MAX	2.06	2.07	2.10	2.10	2.11	2.12	2.14	2.15	2.15	2.10	2.06	2.05	2.07	2.08	2.08	2.09	2.14	2.17	2.14	2.11	2.05	2.06	2.06	2.06					
HOURLY AVG	2.00	2.01	2.01	2.01	2.00	2.01	2.01	2.01	2.01	2.00	2.00	2.00	2.00	1.99	2.00	1.99	1.99	2.00	2.00	2.00	2.00	2.00	2.00	2.00					

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

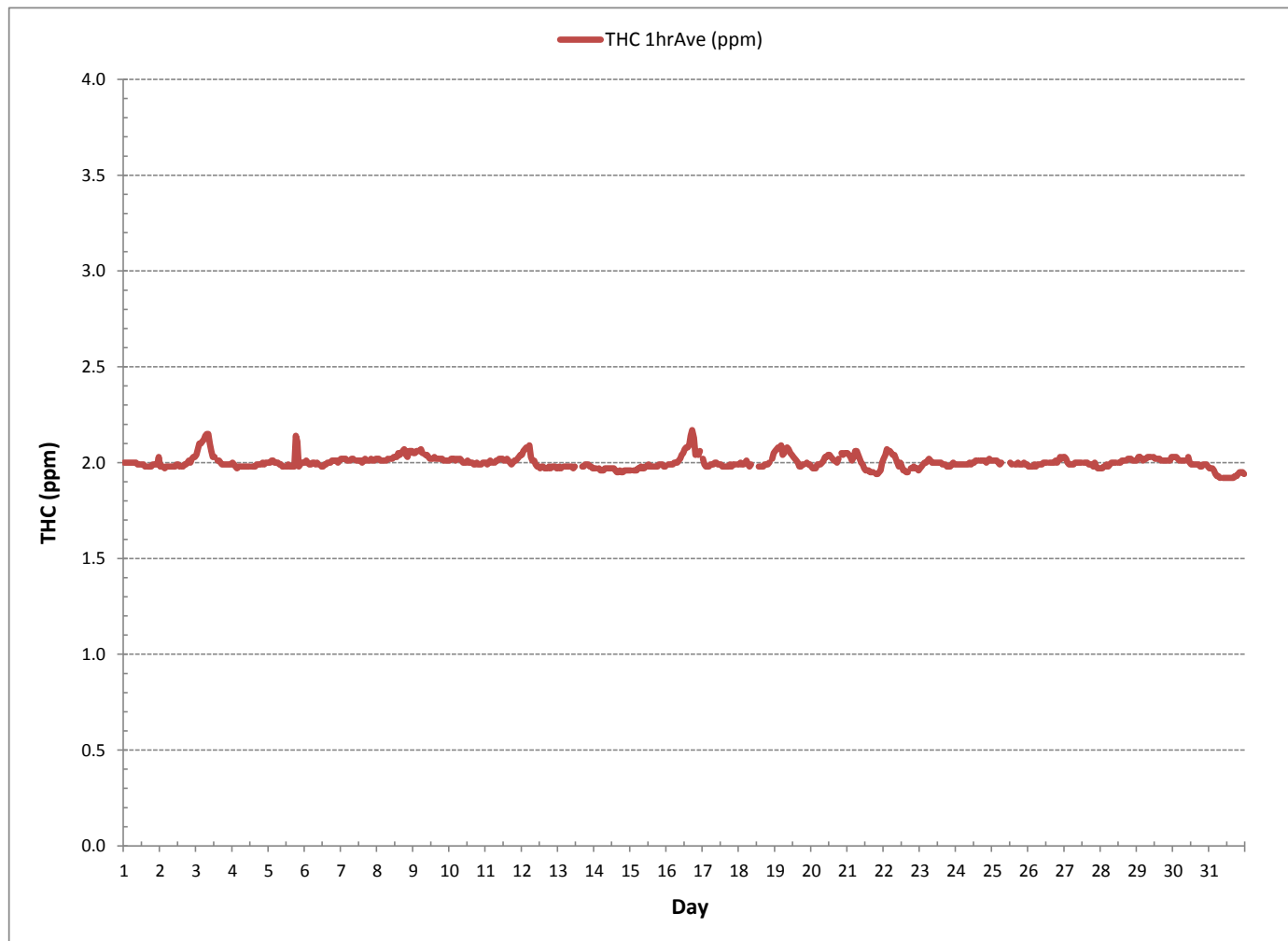
24 HOUR AVERAGES FOR October 2016



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		703			
MINIMUM 1-HR AVERAGE:	1.92	PPM	@ HOUR(S)	VAR	ON DAY(S) 31
MAXIMUM 1-HR AVERAGE:	2.17	PPM	@ HOUR(S)	17	ON DAY(S) 16
MAXIMUM 24-HR AVERAGE:	2.05	PPM	ON DAY(S) 3, 16		
VAR-VARIOUS					
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	0.03	MONTHLY AVERAGE:		2.00	PPM

TOTAL HYDROCARBONS Hourly Averages (THC ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)

MST																								DAILY	DAILY	24-HOUR	RDGS.	
HOUR START	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	MIN.	MAX.		AVG.
HOUR END	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59				
DAY																												
1	2.01	1.99	2.02	2.01	1.99	2.01	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.98	1.98	S	1.97	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.97	2.02	1.99	24
2	1.98	1.99	1.98	1.97	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.98	S	1.98	1.99	1.99	2.01	2.05	2.01	2.17	2.10	2.05	1.97	2.17	2.01	24
3	2.09	2.15	2.17	2.18	2.17	2.14	2.16	2.18	2.16	2.14	2.26	2.04	2.03	S	2.01	2.02	2.00	1.99	1.99	1.98	1.99	1.98	1.99	1.99	1.98	2.26	2.08	24
4	2.28	2.09	2.02	2.00	1.97	1.97	2.00	1.98	1.98	1.98	1.99	1.99	S	1.98	1.99	1.99	1.99	1.99	1.99	2.00	2.02	2.00	2.03	1.99	1.97	2.28	2.01	24
5	2.01	2.01	2.01	2.01	2.00	1.99	2.01	1.99	1.99	1.99	1.99	S	1.98	1.99	1.98	1.98	1.99	1.99	2.56	2.24	1.99	1.99	2.01	2.01	1.98	2.56	2.03	24
6	2.01	2.06	1.99	1.99	1.99	1.99	2.01	1.99	2.04	2.00	S	1.99	1.99	1.99	1.99	1.99	2.01	2.00	2.02	2.02	2.03	2.01	2.01	2.02	1.99	2.06	2.01	24
7	2.03	2.03	2.03	2.03	2.02	2.02	2.02	2.02	S	2.02	S	2.02	2.02	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.01	2.03	2.01	2.02	2.03	2.02	24
8	2.03	2.03	2.02	2.02	2.02	2.02	2.02	2.02	S	2.03	2.03	2.04	2.04	2.08	2.33	2.07	2.10	2.13	2.14	2.09	2.04	2.09	2.08	2.08	2.02	2.33	2.07	24
9	2.07	2.06	2.06	2.06	2.06	2.07	2.07	S	2.05	2.04	2.04	2.03	2.02	2.03	2.03	2.02	2.03	2.03	2.02	2.03	2.02	2.02	2.03	2.02	2.02	2.07	2.04	24
10	2.02	2.02	2.02	2.02	2.02	2.02	S	2.03	2.02	2.00	2.00	2.01	2.01	1.99	2.01	2.01	1.99	1.99	1.99	1.99	1.99	1.99	2.02	2.01	1.99	2.03	2.01	24
11	2.01	1.99	2.02	2.03	2.02	S	2.01	2.02	2.03	2.03	2.02	2.03	2.03	2.03	2.05	2.04	2.01	1.99	2.01	2.02	2.02	2.03	2.07	2.05	1.99	2.07	2.02	24
12	2.04	2.07	2.11	2.09	S	2.11	2.08	2.03	2.02	1.99	1.99	1.99	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.98	1.97	1.97	1.97	1.97	2.11	2.01	24
13	1.99	1.98	1.97	S	1.99	1.98	1.98	1.97	1.97	1.97	1.97	1.99	1.98	1.98	1.97	1.99	1.99	1.98	1.99	1.99	1.99	1.99	1.97	1.99	1.97	1.99	1.98	24
14	1.97	1.97	S	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.95	1.97	1.97	1.95	1.95	1.96	1.96	1.95	1.95	1.95	1.97	1.96	24
15	1.95	S	1.96	1.96	1.96	1.96	1.97	1.98	1.98	1.97	1.97	1.99	1.99	1.99	1.98	1.97	1.99	1.99	1.99	1.99	2.04	1.99	1.99	1.99	1.95	2.04	1.98	24
16	S	1.99	1.99	1.99	1.99	1.99	2.00	2.02	2.01	2.03	2.04	2.06	2.07	2.09	2.09	2.09	2.40	2.40	2.25	2.08	2.25	2.07	2.18	S	1.99	2.40	2.09	24
17	2.06	1.99	1.99	1.99	1.98	1.98	1.99	1.99	2.01	1.99	1.99	1.99	1.99	1.99	1.97	1.98	1.99	1.99	1.99	1.98	1.99	1.99	S	1.99	1.97	2.06	1.99	24
18	1.99	2.01	1.99	1.99	2.00	2.03	1.99	1.98	C	C	C	C	C	C	2.04	1.98	1.99	1.99	2.00	1.99	2.04	S	2.11	2.09	1.98	2.11	2.01	24
19	2.14	2.13	2.08	2.11	2.09	2.07	2.06	2.08	C	2.08	2.05	2.04	2.04	2.03	2.02	2.01	1.99	1.99	1.99	2.00	S	2.01	1.99	1.99	1.99	2.14	2.05	24
20	2.01	1.97	1.97	1.98	1.99	2.00	1.99	2.01	2.02	2.04	2.04	2.06	2.04	2.03	2.02	2.02	2.01	2.00	2.03	S	2.06	2.07	2.08	2.09	1.97	2.09	2.02	24
21	2.08	2.07	2.06	2.02	2.04	2.08	2.09	2.04	2.03	2.00	1.99	1.97	1.96	1.96	1.95	1.95	1.95	1.95	S	1.94	1.94	1.96	1.97	2.02	1.94	2.09	2.00	24
22	2.03	2.06	2.08	2.07	2.08	2.08	2.05	2.05	2.05	2.01	1.99	2.01	1.99	1.97	1.96	1.95	1.95	S	1.97	1.97	1.98	1.98	2.13	1.96	1.95	2.13	2.02	24
23	1.97	2.02	1.99	2.01	2.01	2.02	2.02	2.02	2.01	2.01	2.00	2.01	1.99	1.99	2.01	1.99	S	1.99	1.99	1.97	1.99	2.05	1.99	1.99	1.97	2.05	2.00	24
24	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	1.99	2.01	2.01	2.01	S	2.01	2.02	2.01	2.02	2.01	2.07	2.09	2.03	1.99	2.09	2.01	24
25	2.02	2.02	2.02	2.02	2.01	1.99	2.00	P	P	P	P	R	1.99	1.99	S	1.99	2.00	2.00	2.00	1.99	2.01	2.00	1.99	1.99	1.99	2.02	2.00	19
26	1.97	1.97	1.99	1.99	1.99	1.99	2.00	2.00	2.00	1.99	2.01	2.00	2.01	S	1.99	2.00	2.00	2.01	2.06	2.05	2.04	2.03	2.03	2.03	1.97	2.06	2.01	24
27	2.03	2.03	2.00	2.00	2.00	2.02	1.99	1.99	2.00	1.99	1.99	2.00	S	2.01	2.00	1.99	1.99	1.99	2.00	2.03	2.18	2.00	2.05	1.97	1.97	2.18	2.01	24
28	2.02	1.98	1.99	1.99	1.99	1.98	1.99	2.01	2.00	2.00	2.01	S	1.99	2.00	2.01	2.02	2.01	2.01	2.02	2.02	2.03	2.02	2.02	2.01	1.98	2.03	2.01	24
29	2.02	2.04	2.04	2.02	2.02	2.03	2.03	2.03	2.03	2.04	S	2.03	2.03	2.02	2.02	2.01	2.02	2.01	2.02	2.01	2.01	2.01	2.01	2.15	2.01	2.15	2.03	24
30	2.15	2.03	2.03	2.03	2.02	2.02	2.01	2.01	2.01	S	2.03	2.02	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.99	2.00	2.00	1.99	1.98	1.98	2.15	2.01	24
31	1.97	1.99	1.97	1.96	1.94	1.93	1.93	1.92	S	1.92	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.92	1.94	1.94	1.95	1.95	1.99	1.96	1.92	1.99	1.94	24
HOURLY MAX	2.28	2.15	2.17	2.18	2.17	2.14	2.16	2.18	2.16	2.14	2.26	2.06	2.07	2.09	2.33	2.09	2.40	2.40	2.56	2.24	2.25	2.17	2.18	2.15				
HOURLY AVG	2.03	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.02	2.01	2.01	2.01	2.00	2.00	2.01	2.00	2.01	2.01	2.03	2.01	2.02	2.01	2.03	2.01				

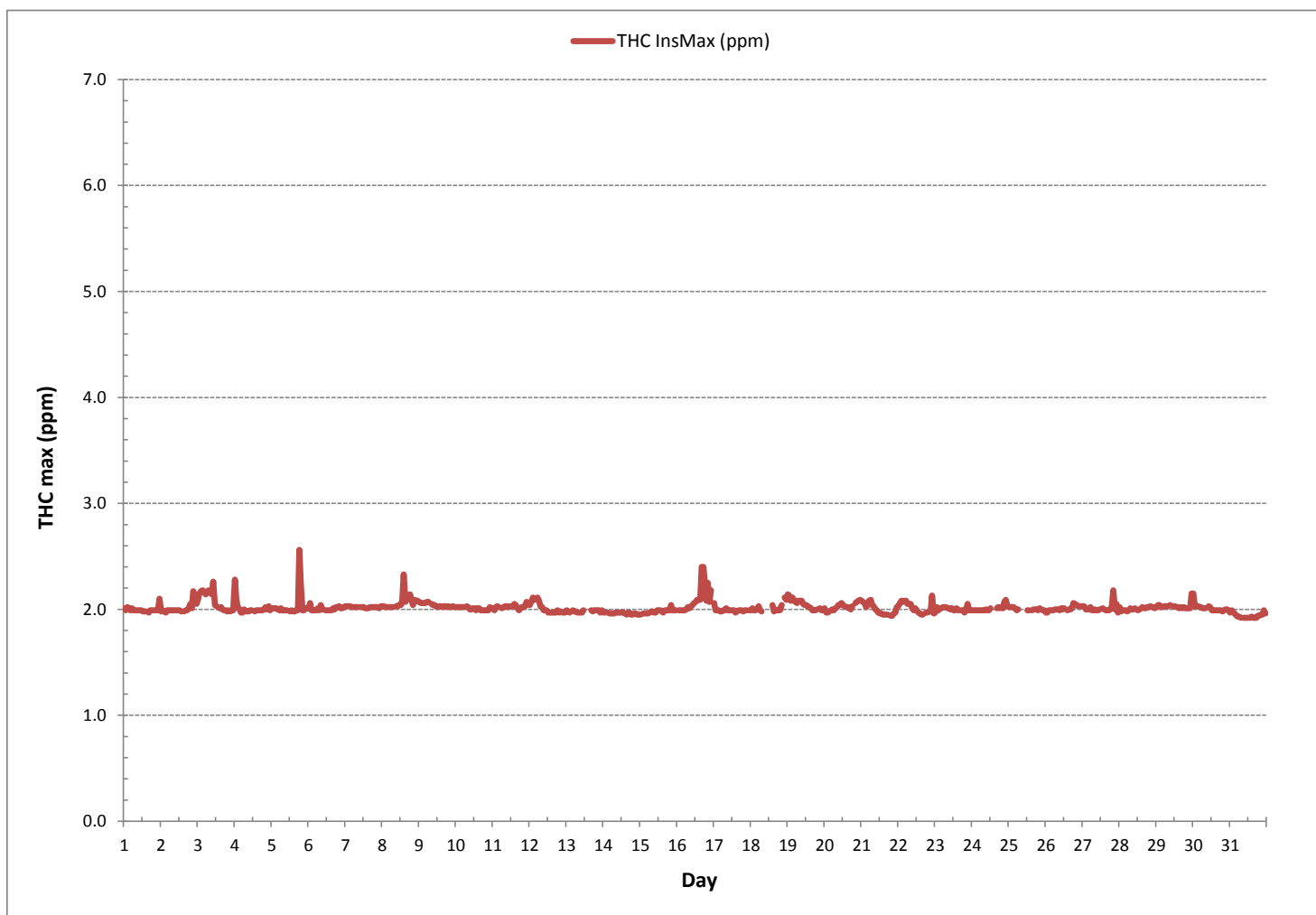
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	701				
MAXIMUM INSTANTANEOUS VALUE:	2.56	PPM	@ HOUR(S)	18	ON DAY(S) 5
				VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	6	HRS			
STANDARD DEVIATION:	0.06				

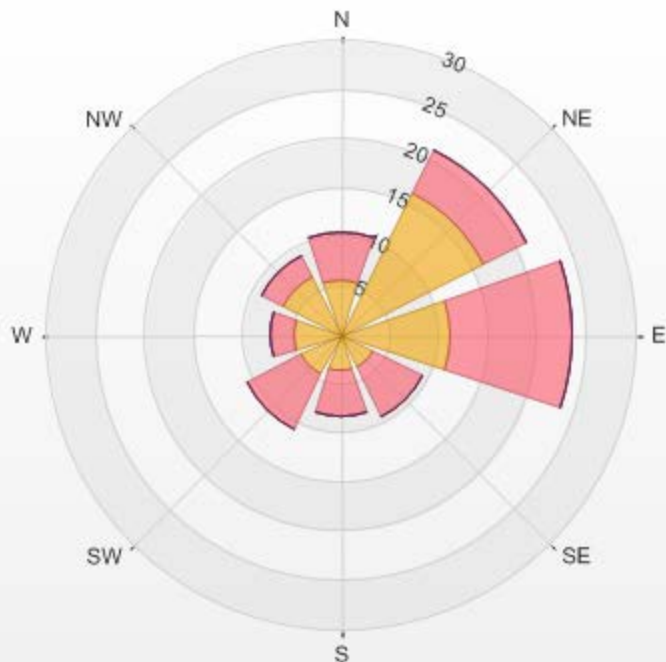
TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)



Wind: THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-THC[ppm] Monthly: 2016/10 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 ppm

Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	5.56	4.99	0	0	0	10.55
NE	16.26	4.85	0	0	0	21.11
E	11.13	12.55	0	0	0	23.68
SE	3.57	5.85	0	0	0	9.42
S	3.71	4.56	0	0	0	8.27
SW	4.56	6.13	0	0	0	10.69
W	4.85	2.28	0	0	0	7.13
NW	6.7	2.43	0	0	0	9.13
Summary	56.34	43.64	0	0	0	100

THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-THC[ppm] 2016/10/01 00:00 - 2016/10/31 23:00 Calm: 0.00%



% Icon Classes (ppm)									
56	0-2	44	2-3	0	3-5	0	5-10	0	>10.0

THC[ppm] Calibration: THREE CREEKS #986 TRAILER Monthly: 2016/10 Type: Span



Span Meas Span Ref Span Low Span High

METHANE

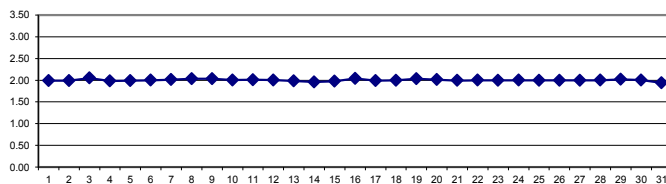
METHANE Hourly Averages (CH₄ ppm)

MST																								DAILY	DAILY	24-HOUR			
HOURLY START	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	MIN.	MAX.	AVG.	RDGS.	
DAY	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					
1	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	1.99	1.99	1.99	1.99	1.98	S	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	1.99	1.98	2.00	1.99	24
2	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.98	S	1.98	1.99	1.98	2.00	2.01	2.00	2.01	2.03	2.03	1.97	2.03	1.99	24	
3	2.04	2.07	2.10	2.10	2.11	2.12	2.14	2.15	2.15	2.10	2.05	2.03	2.03	S	2.01	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.15	2.05	24
4	2.00	1.99	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.98	1.99	1.99	1.99	1.99	2.00	1.99	2.00	2.00	1.97	2.00	1.99	24	
5	2.00	2.00	2.01	2.01	2.00	2.00	2.00	1.99	1.99	1.98	1.98	S	1.98	1.99	1.98	1.98	1.98	1.98	1.99	1.99	1.98	1.99	2.00	2.00	1.98	2.01	1.99	24	
6	2.00	2.01	2.00	1.99	1.99	2.00	2.00	1.99	2.00	1.99	S	1.98	1.98	1.99	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.01	2.00	2.01	1.98	2.01	2.00	24	
7	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.02	2.02	S	2.01	2.01	2.01	2.01	2.00	2.01	2.02	2.01	2.01	2.01	2.02	2.01	2.01	2.02	2.00	2.02	2.01	24	
8	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.02	S	2.02	2.02	2.03	2.03	2.03	2.05	2.04	2.05	2.06	2.07	2.04	2.03	2.06	2.06	2.06	2.01	2.07	2.03	24	
9	2.05	2.05	2.06	2.06	2.06	2.06	2.07	2.05	S	2.04	2.04	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.07	2.03	24
10	2.01	2.02	2.02	2.02	2.02	2.01	2.02	S	2.02	2.01	2.00	2.00	2.00	2.01	2.00	2.00	2.00	1.99	1.99	2.00	1.99	1.99	1.99	2.00	2.00	1.99	2.02	2.00	24
11	2.00	1.99	2.00	2.01	2.00	S	2.00	2.01	2.01	2.02	2.02	2.02	2.01	2.01	2.02	2.01	2.00	1.99	2.00	2.01	2.01	2.02	2.03	2.04	1.99	2.04	2.01	24	
12	2.04	2.06	2.07	2.08	S	2.09	2.03	2.01	2.01	1.99	1.98	1.98	1.97	1.98	1.98	1.97	1.97	1.98	1.97	1.98	1.97	1.98	1.98	1.97	1.97	2.09	2.00	24	
13	1.97	1.98	1.97	S	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.97	1.97	1.99	1.98	24	
14	1.97	1.96	S	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.95	1.95	1.95	1.97	1.96	24	
15	1.95	S	1.96	1.96	1.96	1.97	1.97	1.98	1.97	1.97	1.97	1.98	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	1.95	1.99	1.98	24	
16	S	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.02	2.04	2.05	2.07	2.08	2.08	2.09	2.08	2.08	2.07	2.04	2.05	2.04	2.06	S	1.99	2.09	2.04	24	
17	2.02	1.99	1.98	1.98	1.98	1.99	1.99	1.99	2.00	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.99	S	1.99	1.98	2.02	1.99	24	
18	1.99	2.00	1.99	1.99	2.00	2.01	1.99	1.98	1.98	C	C	C	C	1.97	1.98	1.98	1.98	1.99	1.99	1.99	2.00	S	2.02	2.05	1.97	2.05	1.99	24	
19	2.06	2.07	2.08	2.08	2.09	2.04	2.05	2.07	2.08	2.07	2.05	2.04	2.03	2.02	2.01	2.00	1.98	1.98	1.98	1.99	1.99	S	2.00	1.99	1.99	1.98	2.09	2.03	24
20	1.98	1.97	1.97	1.97	1.99	1.99	1.99	2.00	2.01	2.03	2.03	2.03	2.04	2.03	2.01	2.01	2.01	2.00	2.02	S	2.04	2.04	2.05	2.05	1.97	2.05	2.01	24	
21	2.05	2.04	2.03	2.01	2.03	2.06	2.06	2.04	2.02	2.00	1.99	1.97	1.96	1.96	1.96	1.95	1.95	1.95	S	1.94	1.94	1.95	1.96	2.00	1.94	2.06	1.99	24	
22	2.02	2.04	2.07	2.06	2.06	2.05	2.04	2.04	2.02	2.00	1.98	2.00	1.98	1.96	1.96	1.95	1.95	S	1.97	1.97	1.98	1.97	1.97	1.96	1.95	2.07	2.00	24	
23	1.97	1.98	1.99	2.00	2.00	2.01	2.02	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	S	1.99	1.98	1.98	1.98	1.99	2.00	1.99	1.97	2.02	1.99	24	
24	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	1.99	2.00	2.00	2.00	2.01	S	2.01	2.01	2.01	2.01	2.00	2.01	2.02	2.01	1.99	2.02	2.00	24	
25	2.01	2.01	2.01	2.01	2.00	1.99	2.00	P	P	P	P	R	2.00	1.99	S	1.99	1.99	2.00	1.99	1.99	1.99	2.00	1.99	1.99	1.99	2.01	2.00	19	
26	1.98	1.98	1.98	1.98	1.99	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.00	S	2.00	2.00	2.00	2.00	2.00	2.00	2.01	2.03	2.02	1.98	2.03	2.00	24	
27	2.03	2.02	2.00	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.00	2.00	S	2.00	2.00	2.00	1.99	1.99	1.99	1.98	2.00	1.98	1.97	1.97	1.97	2.03	1.99	24	
28	1.97	1.97	1.98	1.98	1.99	1.98	1.99	2.00	2.00	2.00	2.00	S	1.99	2.00	2.00	2.01	2.00	2.01	2.02	2.02	2.02	2.01	2.01	2.01	1.97	2.02	2.00	24	
29	2.01	2.03	2.03	2.01	2.01	2.02	2.02	2.03	2.03	2.03	S	2.03	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.01	2.03	2.02	24	
30	2.03	2.03	2.03	2.02	2.01	2.01	2.01	2.01	2.01	S	2.03	2.00	1.99	1.99	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.98	1.98	2.03	2.00	24	
31	1.97	1.97	1.97	1.96	1.94	1.93	1.93	1.92	S	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.94	1.95	1.95	1.95	1.94	1.92	1.97	1.94	24
HOURLY MAX	2.06	2.07	2.10	2.10	2.11	2.12	2.14	2.15	2.15	2.10	2.05	2.05	2.07	2.08	2.08	2.09	2.08	2.08	2.07	2.04	2.05	2.06	2.06	2.06					
HOURLY AVG	2.00	2.01	2.01	2.01	2.00	2.01	2.01	2.01	2.01	2.00	2.00	2.00	2.00	1.99	2.00	1.99	1.99	1.99	2.00	1.99	2.00	2.00	2.00	2.00					

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

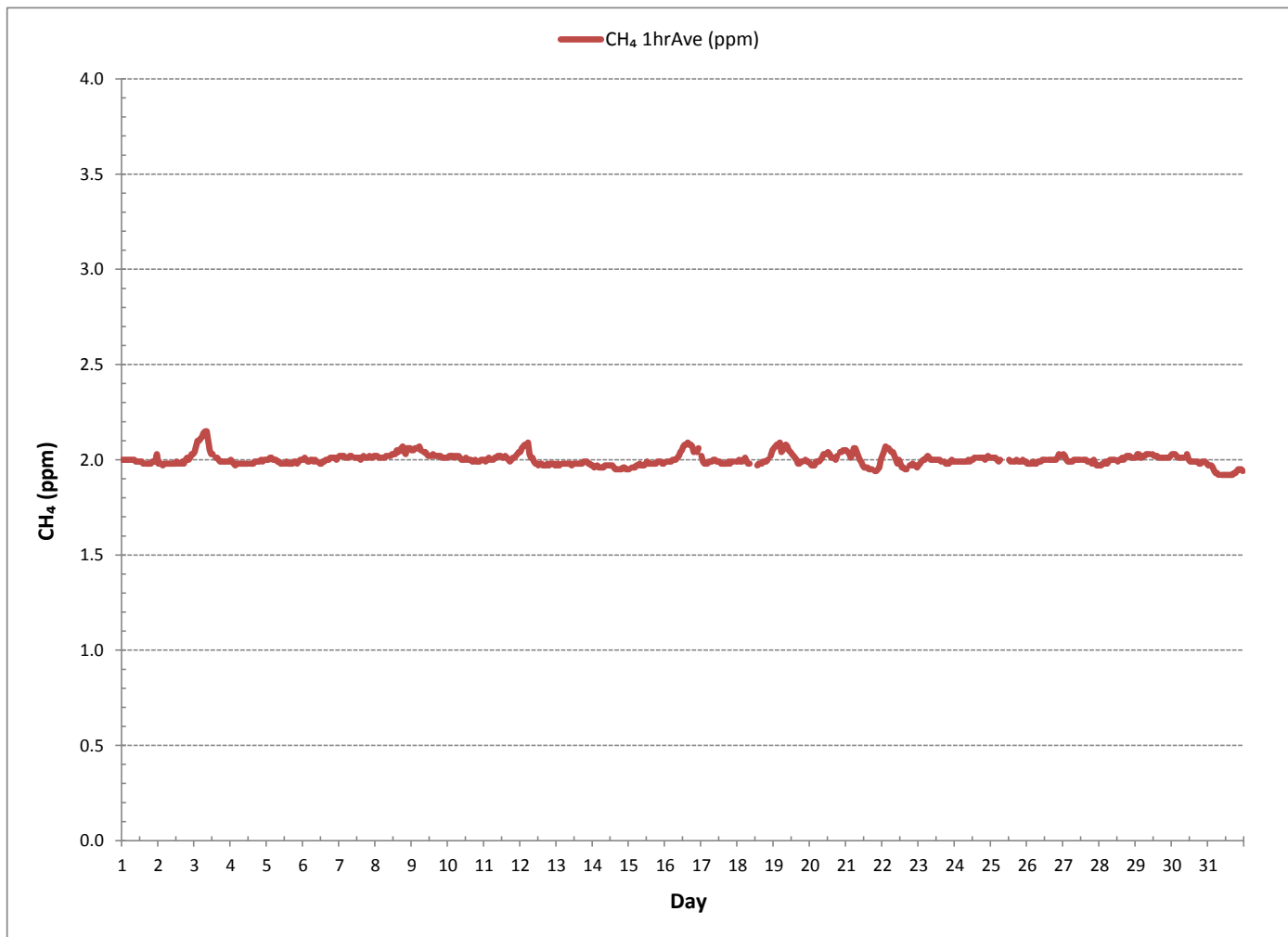
24 HOUR AVERAGES FOR October 2016



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	703				
MINIMUM 1-HR AVERAGE:	1.92	PPM @ HOUR(S)	VAR	ON DAY(S)	31
MAXIMUM 1-HR AVERAGE:	2.15	PPM @ HOUR(S)	7, 8	ON DAY(S)	3, 3
MAXIMUM 24-HR AVERAGE:	2.05	PPM		ON DAY(S)	3
				VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	0.03		MONTHLY AVERAGE:	2.00	PPM

METHANE Hourly Averages (CH₄ ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

METHANE MAX Instantaneous Maximum (CH₄ ppm)

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-HOUR		
HOUR START		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.	RDGS.	
DAY																														
1		2.01	2.01	2.03	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.00	2.00	2.00	1.99	S	1.99	1.99	1.99	1.99	2.00	2.00	2.01	2.00	2.00	1.99	2.03	2.00	24	
2		1.99	1.99	1.99	1.98	2.00	2.00	1.99	1.99	1.99	1.99	2.00	2.00	2.00	1.99	S	1.99	2.00	2.00	2.01	2.06	2.02	2.18	2.12	2.06	1.98	2.18	2.01	24	
3		2.11	2.17	2.18	2.19	2.18	2.16	2.17	2.19	2.17	2.14	2.15	2.04	2.04	S	2.02	2.03	2.02	2.00	2.00	2.00	2.00	2.00	2.01	2.00	2.00	2.19	2.09	24	
4		2.29	2.10	2.03	2.02	1.99	1.98	2.02	1.99	1.99	1.99	1.99	1.99	S	1.99	1.99	1.99	2.01	2.00	2.00	2.02	2.02	2.01	2.04	2.01	1.98	2.29	2.02	24	
5		2.02	2.02	2.02	2.02	2.01	2.01	2.02	2.01	2.00	1.99	2.01	S	1.99	1.99	1.99	1.99	2.00	1.99	2.04	2.00	2.00	2.00	2.02	2.01	1.99	2.04	2.01	24	
6		2.02	2.02	2.01	2.00	2.01	2.01	2.01	2.00	2.05	2.01	S	2.00	2.00	2.00	2.01	2.01	2.02	2.01	2.02	2.03	2.04	2.02	2.02	2.02	2.00	2.05	2.01	24	
7		2.03	2.03	2.03	2.03	2.02	2.03	2.02	2.03	2.03	S	2.03	2.02	2.02	2.02	2.02	2.02	2.03	2.02	2.03	2.03	2.03	2.02	2.02	2.04	2.02	2.04	2.03	24	
8		2.04	2.04	2.03	2.02	2.02	2.02	2.03	2.03	S	2.04	2.04	2.05	2.04	2.08	2.17	2.08	2.11	2.15	2.12	2.11	2.04	2.10	2.08	2.09	2.02	2.17	2.07	24	
9		2.07	2.07	2.07	2.07	2.07	2.08	2.08	S	2.05	2.05	2.05	2.03	2.03	2.04	2.04	2.03	2.03	2.04	2.03	2.03	2.03	2.02	2.03	2.03	2.02	2.08	2.05	24	
10		2.03	2.03	2.03	2.03	2.03	2.03	S	2.03	2.02	2.01	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.00	2.01	2.01	2.00	2.00	2.03	2.02	2.00	2.03	2.02	24	
11		2.02	2.01	2.03	2.03	2.03	S	2.02	2.02	2.03	2.04	2.03	2.04	2.03	2.03	2.05	2.05	2.01	2.00	2.01	2.02	2.02	2.04	2.08	2.06	2.00	2.08	2.03	24	
12		2.05	2.08	2.12	2.11	S	2.12	2.09	2.03	2.03	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.98	1.98	1.98	2.12	2.02	24	
13		2.01	1.99	1.98	S	1.99	1.99	1.99	1.98	1.98	1.99	1.98	1.99	2.00	1.99	1.98	1.99	1.99	2.00	1.99	2.00	2.00	1.99	1.99	1.99	1.98	2.01	1.99	24	
14		1.98	1.98	S	1.98	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.98	1.98	1.96	1.96	1.97	1.97	1.96	1.96	1.96	1.98	1.97	24	
15		1.97	S	1.97	1.97	1.98	1.98	1.98	1.99	1.99	1.98	1.98	1.98	1.99	2.01	2.00	1.99	1.99	1.99	1.99	1.99	1.99	2.04	2.00	1.99	1.99	2.04	1.99	24	
16		S	2.00	2.00	2.00	2.00	2.01	2.01	2.02	2.02	2.03	2.05	2.07	2.08	2.09	2.09	2.10	2.13	2.14	2.09	2.09	2.27	2.08	2.19	S	2.00	2.27	2.07	24	
17		2.06	2.00	1.99	1.99	1.99	2.00	2.00	2.01	2.01	2.01	2.00	2.00	1.99	1.99	1.99	1.99	1.99	1.99	2.01	1.99	2.00	2.01	S	2.01	1.99	2.06	2.00	24	
18		2.00	2.02	2.01	2.01	2.02	2.03	2.00	1.99	C	C	C	C	C	C	2.05	1.99	1.99	2.00	2.02	2.00	2.04	S	2.11	2.10	1.99	2.11	2.02	24	
19		2.17	2.15	2.09	2.12	2.11	2.08	2.06	2.09	2.09	2.08	2.06	2.05	2.04	2.04	2.02	2.02	2.00	1.99	1.99	2.02	S	2.02	2.01	2.00	1.99	2.17	2.06	24	
20		2.02	1.98	1.98	1.98	2.00	2.01	2.01	2.01	2.02	2.05	2.05	2.06	2.05	2.04	2.03	2.03	2.02	2.01	2.04	S	2.07	2.08	2.09	2.07	1.98	2.09	2.03	24	
21		2.09	2.07	2.06	2.03	2.05	2.08	2.10	2.05	2.04	2.01	2.00	1.98	1.97	1.97	1.97	1.96	1.96	1.97	S	1.95	1.96	1.97	1.98	2.03	1.95	2.10	2.01	24	
22		2.04	2.07	2.08	2.08	2.09	2.09	2.06	2.06	2.06	2.02	2.00	2.02	2.01	1.98	1.97	1.96	1.96	S	1.99	1.98	1.99	1.99	1.98	1.97	1.96	2.09	2.02	24	
23		1.98	2.02	2.01	2.02	2.01	2.03	2.03	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.01	S	2.00	2.00	1.98	1.99	2.00	2.01	2.01	1.98	2.03	2.01	24	
24		2.01	2.00	2.00	2.00	2.01	1.99	1.99	2.00	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	S	2.01	2.02	2.02	2.02	2.02	2.03	2.04	1.99	2.04	2.01	24	
25		2.02	2.02	2.03	2.02	2.02	2.01	2.01	P	P	P	P	R	2.01	2.01	S	2.00	2.00	2.02	2.02	2.00	2.01	2.01	2.00	2.00	2.00	2.03	2.01	19	
26		1.99	1.99	1.99	2.00	2.00	2.00	2.00	2.00	2.00	2.01	2.02	2.01	2.02	S	2.01	2.01	2.01	2.02	2.02	2.07	2.06	2.06	2.04	2.03	2.04	1.99	2.07	2.02	24
27		2.04	2.04	2.01	2.01	2.01	2.03	2.01	2.01	2.01	2.01	2.01	2.01	S	2.01	2.01	2.01	2.00	2.00	2.00	2.04	2.19	2.01	2.05	1.98	1.98	2.19	2.02	24	
28		2.03	1.98	1.99	2.00	2.00	2.00	2.00	2.01	2.01	2.01	2.01	S	2.00	2.01	2.02	2.02	2.02	2.03	2.03	2.03	2.03	2.02	2.03	2.02	1.98	2.03	2.01	24	
29		2.02	2.04	2.05	2.02	2.02	2.03	2.03	2.04	2.04	2.04	S	2.04	2.03	2.03	2.03	2.03	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.02	2.05	2.03	24	
30		2.05	2.04	2.04	2.03	2.03	2.03	2.02	2.02	2.02	S	2.04	2.03	2.01	2.00	2.00	2.01	2.00	2.01	2.00	1.99	2.00	2.01	2.01	2.01	1.99	2.05	2.02	24	
31		1.98	2.00	1.98	1.97	1.95	1.94	1.94	1.93	S	1.93	1.93	1.93	1.93	1.94	1.94	1.93	1.94	1.94	1.95	1.95	1.96	1.96	2.01	1.97	1.93	2.01	1.95	24	
HOURLY MAX		2.29	2.17	2.18	2.19	2.18	2.16	2.17	2.19	2.17	2.14	2.15	2.07	2.08	2.09	2.17	2.10	2.13	2.15	2.12	2.11	2.27	2.18	2.19	2.10					
HOURLY AVG		2.04	2.03	2.03	2.03	2.02	2.03	2.02	2.02	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.03	2.02	2.03	2.02				

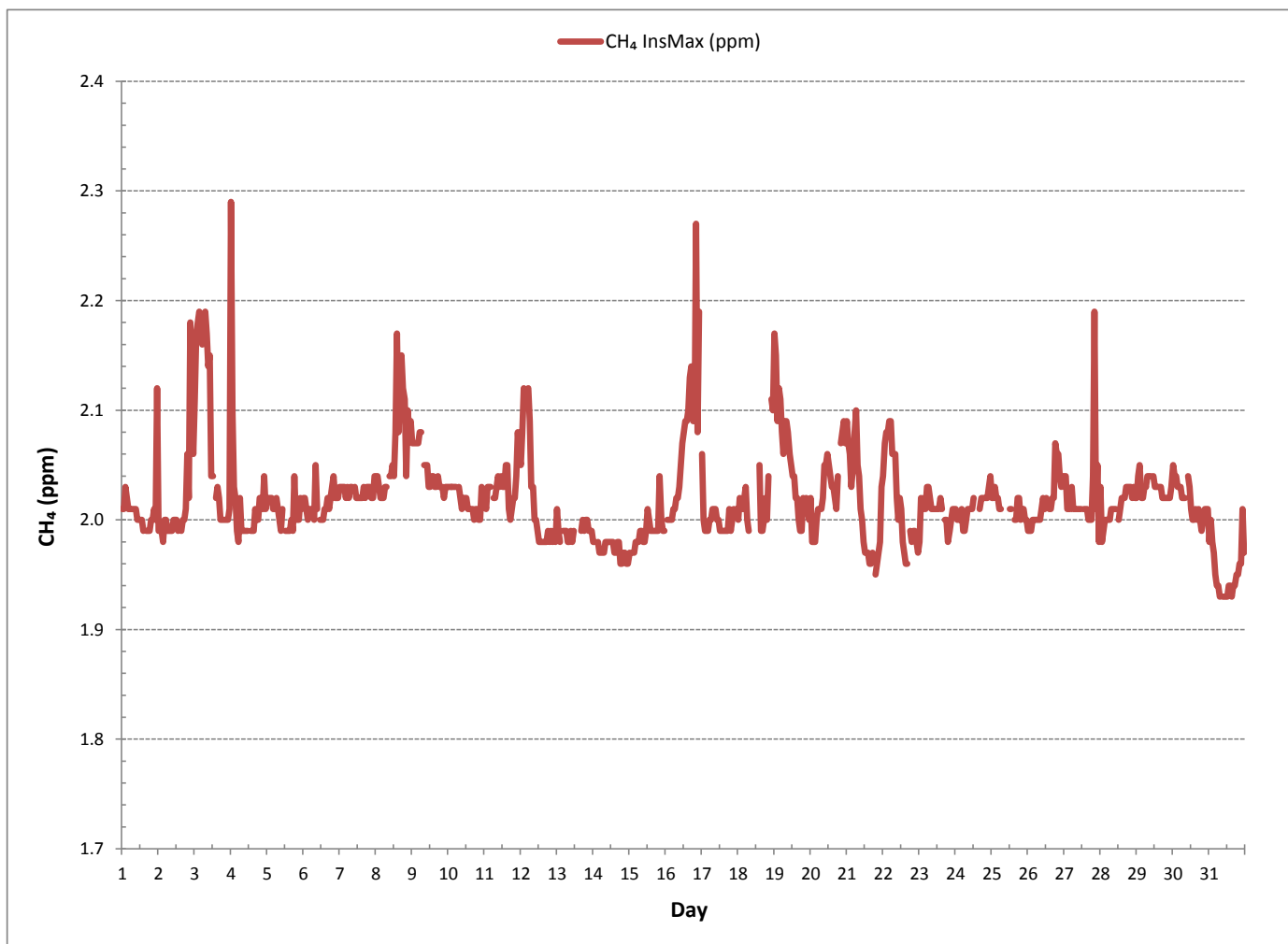
STATUS FLAG CODES

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:	2.29	PPM	@ HOUR(S)	0	ON DAY(S) 4
VAR-VARIOUS					
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	6	HRS			
STANDARD DEVIATION:	0.04				

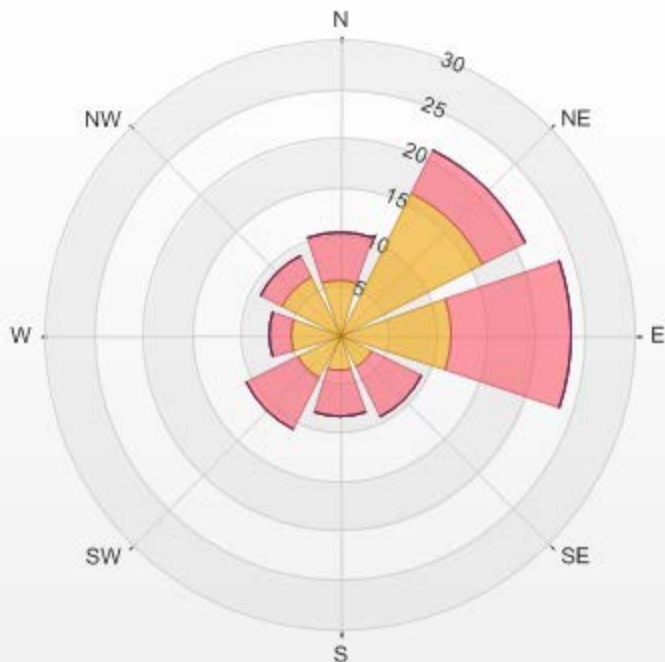
METHANE MAX Instantaneous Maximum (CH₄ ppm)



Wind: THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-CH4[ppm] Monthly: 2016/10 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 ppm

Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	5.56	4.99	0	0	0	10.55
NE	16.26	4.85	0	0	0	21.11
E	11.41	12.27	0	0	0	23.68
SE	3.57	5.85	0	0	0	9.42
S	3.71	4.56	0	0	0	8.27
SW	4.85	5.85	0	0	0	10.7
W	4.99	2.14	0	0	0	7.13
NW	6.7	2.43	0	0	0	9.13
Summary	57.05	42.94	0	0	0	100

THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-CH4[ppm] 2016/10/01 00:00 - 2016/10/31 23:00 Calm: 0.00%



%	Icon	Classes (ppm)
57		0-2
43		2-3
0		3-5
0		5-10
0		>10.0

CH4[ppm] Calibration: THREE CREEKS #986 TRAILER Monthly: 2016/10 Type: Span



Span Meas Span Ref Span Low Span High

NON-METHANE HYDROCARBON



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

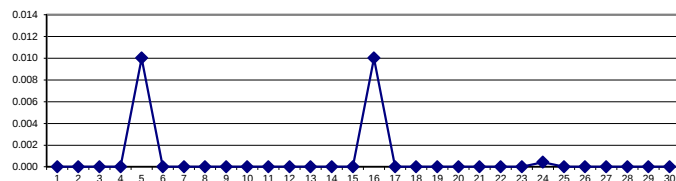
NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)

MST																									DAILY	DAILY	24-HOUR	RDGS.
Hour Start	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	Min.	Max.	Avg.	
Hour End	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	0.00	0.00	0.00	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
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	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
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	S	0.00	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	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.12	0.00	0.00	0.00	0.00	0.00	0.15	0.01	24
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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	24
10	0.00	0.00	0.00	0.00	0.00	S	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	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	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	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	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	0.06	0.08	0.07	0.00	0.00	0.00	0.00	S	0.00	0.08	0.01	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	S	0.00	0.00	0.00	0.00	24
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	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	S	0.00	0.00	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	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	S	0.00	0.00	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	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	S	0.00	0.00	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	24
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	P	P	P	R	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	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	0.00	24
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
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	0.00	24
Hourly Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.15	0.12	0.00	0.00	0.01	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	0.01	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

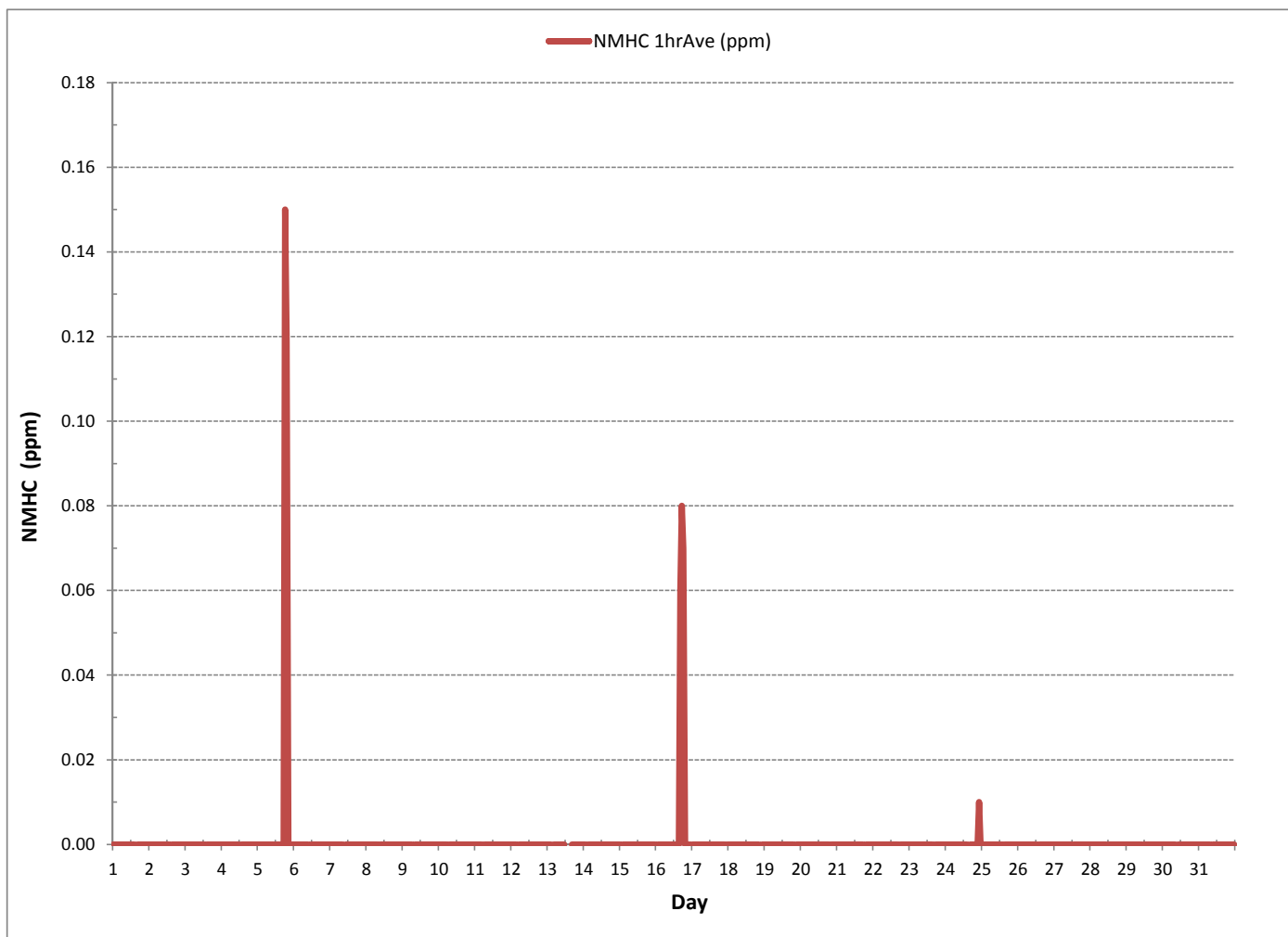
24 HOUR AVERAGES FOR October 2016



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:	0.15	PPM	@ HOUR(S)	18	5
MAXIMUM 24-HR AVERAGE:	0.01	PPM			5, 16
					VAR-VARIOUS
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	0.01		MONTHLY AVERAGE:	0.00	PPM

NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)





PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)

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-HOUR	RDGS.	
Hour Start	Hour End	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	0.01	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	24
2		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	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
3		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.01	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.01	24
4		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
5		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.04	24
6		0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	24
7		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
8		0.00	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	0.16	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.01	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	0.00	0.00	24
10		0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
11		0.00	0.00	0.00	0.00	0.00	S	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	24
12		0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.01	0.00	0.00	0.01	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	0.00	0.00	24
16		S	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.18	0.00	0.00	0.00	0.00	S	0.00	0.28	0.03	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	S	0.00	0.00	0.00	0.00	0.00	24
18		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	C	0.00	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
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	S	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.00	0.00	24
21		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.17	0.00	0.00	0.17	0.01	24		
23		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.06	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	S	0.00	0.00	0.00	0.01	0.00	0.06	0.08	0.00	0.00	0.08	0.01	24		
25		0.00	0.00	0.00	0.00	0.00	0.00	P	P	P	P	R	0.00	0.00	S	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	19	
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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
27		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	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	0.01	S	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.13	0.01	24		
30		0.13	0.00	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	0.13	0.01	24	
31		0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
Hourly Max		0.13	0.06	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.13	0.01	0.01	0.00	0.16	0.00	0.28	0.28	0.58	0.26	0.00	0.06	0.17	0.13					
Hourly Avg		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.03	0.01	0.00	0.00	0.01	0.01					

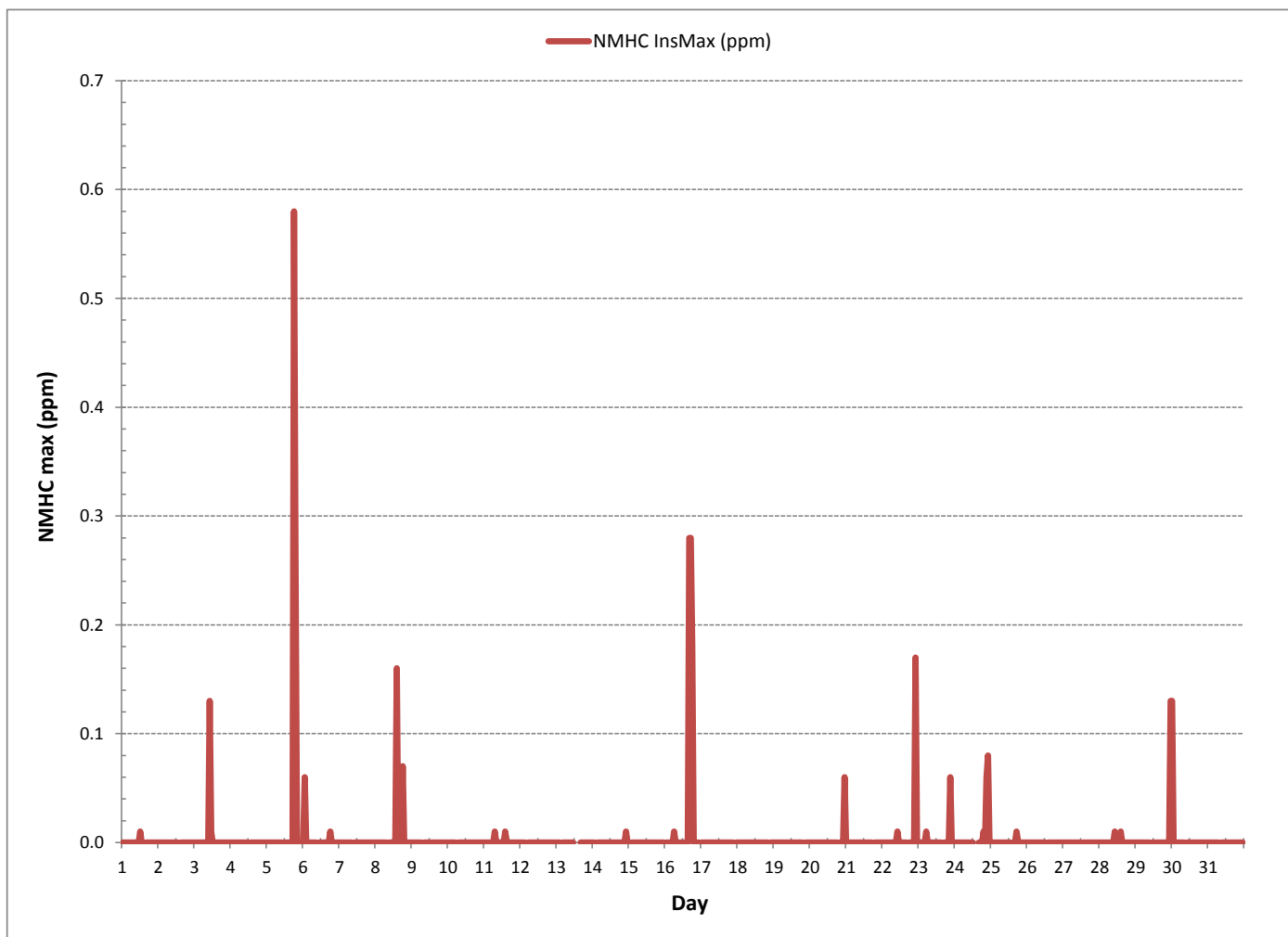
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	29
MAXIMUM INSTANTANEOUS VALUE:	0.58 PPM @ HOUR(S) 18 ON DAY(S) 5
VAR-VARIOUS	
IZS CALIBRATION TIME:	32 HRS
MONTHLY CALIBRATION TIME:	6 HRS
OPERATIONAL TIME:	739 HRS
STANDARD DEVIATION:	0.03

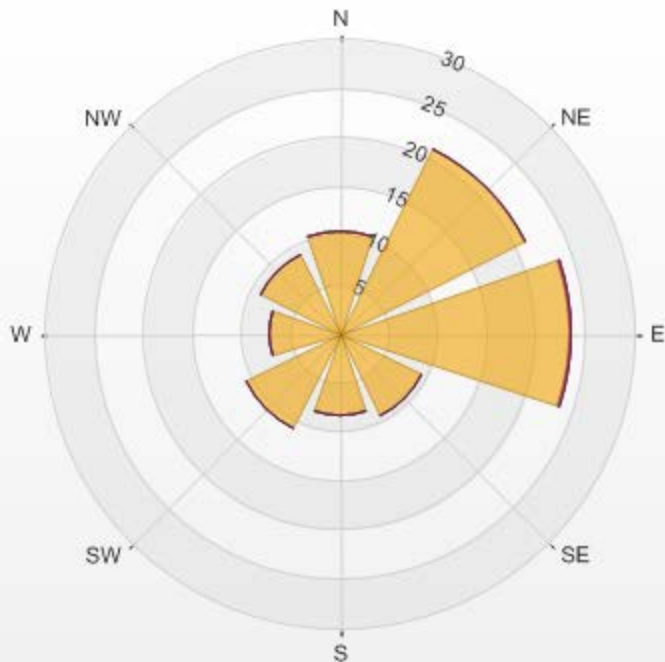
NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)



Wind: THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-NMHC[ppm] Monthly: 2016/10 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 ppm

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	10.56	0	0	0	0	10.56
NE	21.11	0	0	0	0	21.11
E	23.4	0.29	0	0	0	23.69
SE	9.42	0	0	0	0	9.42
S	8.27	0	0	0	0	8.27
SW	10.7	0	0	0	0	10.7
W	7.13	0	0	0	0	7.13
NW	9.13	0	0	0	0	9.13
Summary	100	0.29	0	0	0	100

THREE CREEKS #986 TRAILER Poll.: THREE CREEKS #986 TRAILER-NMHC[ppm] 2016/10/01 00:00 - 2016/10/31 23:00 Calm: 0.00%



% Icon Classes (ppm)

100 0-0.1

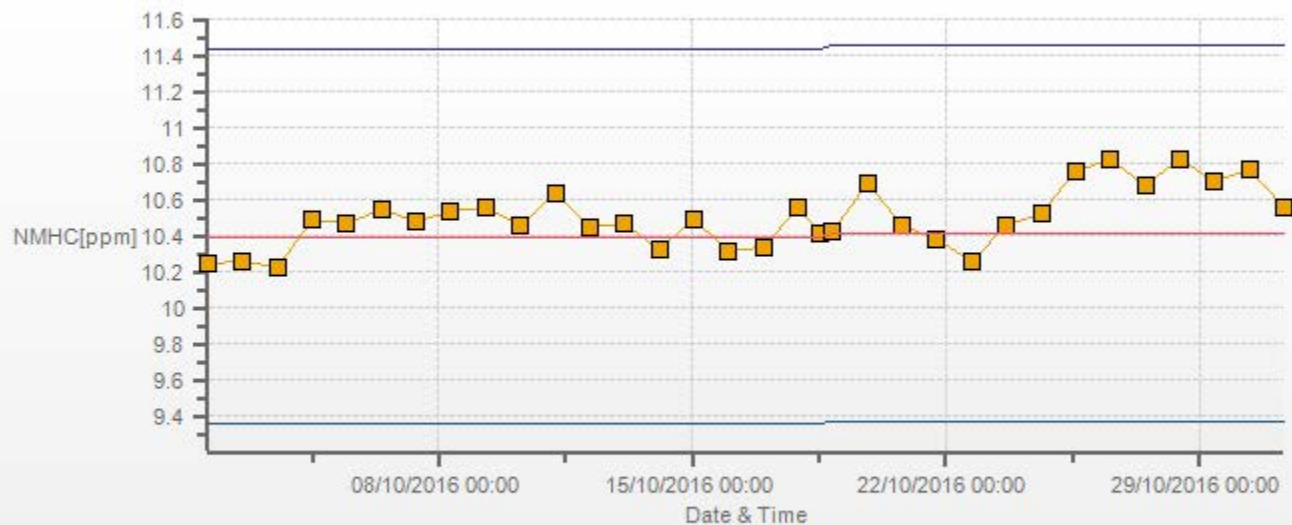
0 0.1-0.3

0 0.3-1

0 1-2

0 >2.0

NMHC[ppm] Calibration: THREE CREEKS #986 TRAILER Monthly: 2016/10 Type: Span



Span Meas Span Ref Span Low Span High

WIND SPEED

WIND SPEED Hourly Averages (WS kph)

MST																								DAILY	DAILY	24-HOUR		
HOURLY START	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	MIN.	MAX.	AVG.	RDGS.
HOURLY END	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	9.9	9.2	10.6	9.7	12.1	13.2	11.6	11.1	10.0	10.2	8.9	6.9	10.9	12.8	9.2	7.1	4.8	5.0	3.8	3.2	3.4	4.8	5.4	3.2	13.2	8.0	24
2	6.0	6.3	8.0	9.2	8.5	6.8	5.4	6.4	6.3	7.3	8.5	7.4	7.9	9.9	9.2	7.3	6.0	5.8	3.4	1.1	3.3	1.5	1.3	1.5	1.1	9.9	5.0	24
3	1.5	2.3	0.9	1.6	1.3	1.5	1.1	1.2	1.0	1.7	6.3	8.5	5.7	8.4	6.9	7.0	5.7	5.1	5.6	5.0	4.0	2.9	6.1	5.6	0.9	8.5	2.8	24
4	6.0	6.1	7.1	10.0	8.0	9.6	8.5	9.8	9.0	8.8	10.5	9.6	7.6	10.0	8.6	8.9	9.8	8.2	6.8	4.2	3.7	3.7	2.5	4.5	2.5	10.5	7.2	24
5	5.5	4.6	4.8	6.1	7.7	7.5	7.7	7.5	8.3	8.2	8.4	8.3	8.1	7.4	5.6	6.3	5.0	3.8	2.1	3.2	4.5	3.6	2.7	1.4	1.4	8.4	5.6	24
6	1.5	2.8	4.6	3.5	3.6	3.6	2.9	4.0	4.2	6.1	6.8	6.4	5.0	4.1	5.7	6.0	7.5	5.2	3.5	2.6	3.2	4.9	5.3	5.1	1.5	7.5	4.3	24
7	2.9	2.8	5.9	7.2	7.3	7.6	9.0	10.9	11.3	8.7	10.0	9.1	10.7	10.0	8.6	9.3	8.1	6.4	4.9	6.0	5.2	6.6	4.9	4.9	2.8	11.3	7.1	24
8	4.8	4.6	4.6	5.2	4.9	3.9	4.5	5.2	5.6	7.2	6.1	4.8	5.6	6.0	5.9	5.3	6.6	6.1	5.7	4.9	4.5	4.9	5.7	5.9	3.9	7.2	5.2	24
9	4.6	4.6	4.1	2.3	3.3	4.3	4.0	4.4	4.2	4.5	6.8	8.4	11.0	9.9	10.5	9.4	6.6	6.5	5.9	5.9	5.6	5.8	5.0	4.0	2.3	11.0	5.3	24
10	3.5	3.9	3.6	3.1	2.5	2.4	1.9	1.5	1.0	2.4	2.9	4.5	5.4	5.8	6.3	3.6	3.6	3.7	4.5	3.5	4.4	3.6	2.5	2.4	1.0	6.3	1.1	24
11	3.7	1.9	2.0	2.5	3.3	4.6	4.6	3.0	4.9	5.4	6.1	7.1	7.2	7.6	6.5	5.8	4.6	3.4	2.4	1.7	1.6	1.6	0.5	1.3	0.5	7.6	3.2	24
12	1.4	0.2	0.8	0.5	0.5	1.5	3.0	2.1	2.8	4.1	5.0	4.8	6.0	6.1	5.0	3.2	3.7	3.4	1.5	3.5	4.3	4.6	4.3	5.2	0.2	6.1	2.6	24
13	3.7	3.7	5.4	5.4	5.6	5.8	5.9	5.9	6.0	6.5	6.4	6.8	9.4	9.1	8.8	9.3	7.0	9.2	7.7	8.4	8.4	7.2	5.9	6.2	3.7	9.4	6.6	24
14	6.2	6.4	5.7	7.2	7.9	7.3	8.4	10.9	10.0	11.0	7.6	8.9	9.1	9.8	9.5	8.7	8.9	8.7	10.1	9.3	8.2	7.0	8.1	6.4	5.7	11.0	8.3	24
15	5.2	4.6	2.8	2.5	3.0	2.7	3.1	3.5	3.1	3.5	3.1	3.1	0.9	2.0	3.2	3.8	3.8	3.5	3.4	3.5	3.8	3.6	4.0	5.5	0.9	5.5	2.4	24
16	6.1	8.0	6.1	6.7	9.0	9.6	6.9	4.6	6.4	5.4	4.9	4.4	3.9	3.9	2.8	2.9	3.6	2.6	1.5	2.2	2.1	2.3	2.3	1.8	1.5	9.6	3.9	24
17	6.4	7.8	5.8	8.4	9.2	9.7	9.2	9.3	4.3	6.8	7.9	8.3	11.0	11.3	10.0	9.0	7.3	6.4	5.2	3.2	2.9	3.0	3.8	3.1	2.9	11.3	6.9	24
18	2.3	3.6	3.6	4.6	2.6	3.5	3.8	2.6	1.8	1.9	0.7	1.7	0.5	3.6	3.9	2.3	2.6	2.0	1.8	1.3	1.2	1.4	0.8	0.7	0.5	4.6	1.1	24
19	1.0	1.1	2.0	2.4	3.6	5.6	5.6	5.7	7.0	7.3	6.9	7.1	7.8	7.5	9.7	8.5	8.1	6.3	4.6	6.2	6.6	4.7	5.8	8.6	1.0	9.7	4.8	24
20	6.8	3.6	7.8	8.2	5.0	4.0	5.3	5.6	4.0	4.4	4.3	3.9	4.1	3.1	5.4	6.3	3.8	3.0	5.2	5.6	3.6	3.4	3.4	3.6	3.0	8.2	3.8	24
21	4.2	3.7	3.7	4.5	4.4	4.8	5.1	5.1	6.0	6.3	6.7	7.7	7.5	8.7	8.2	7.5	6.5	5.4	6.2	3.4	1.9	3.1	2.7	3.9	1.9	8.7	4.7	24
22	3.7	4.2	3.2	2.5	0.4	1.4	1.4	2.8	1.7	2.3	5.6	2.8	3.4	3.8	4.0	4.1	4.5	3.2	4.0	3.7	4.5	3.0	3.3	2.1	0.4	5.6	2.3	24
23	1.3	1.6	1.8	2.6	3.9	3.9	3.8	3.9	5.2	4.8	4.4	5.3	6.3	5.2	4.4	5.6	4.1	4.4	6.2	5.1	5.3	4.9	5.2	5.5	1.3	6.3	3.8	24
24	4.5	3.4	4.8	5.0	5.9	4.9	5.1	3.9	3.1	3.5	4.9	4.7	4.2	3.9	4.3	4.9	7.6	5.2	2.9	6.0	6.2	5.9	7.5	6.6	2.9	7.6	4.7	24
25	4.7	4.3	4.7	4.6	4.5	4.9	5.4	P	P	P	P	4.8	5.8	5.1	3.8	2.9	0.7	1.5	2.1	3.0	4.5	5.2	7.3	6.7	0.7	7.3	2.3	20
26	6.5	5.8	4.2	5.3	5.7	7.1	5.5	2.2	2.1	2.9	2.3	3.7	3.5	3.5	2.8	1.9	0.8	1.6	1.4	1.3	2.2	3.3	3.2	3.0	0.8	7.1	2.0	24
27	2.9	3.4	5.6	4.4	3.8	4.7	5.9	5.1	5.1	4.8	7.0	7.6	6.8	6.1	5.3	4.9	3.2	2.3	2.3	2.6	3.7	3.5	6.9	5.3	2.3	7.6	4.5	24
28	4.5	3.6	2.3	2.0	4.8	4.6	4.5	3.3	3.6	2.8	3.5	3.9	4.9	5.3	5.6	4.7	5.1	4.0	3.7	4.4	4.3	5.2	5.4	6.4	2.0	6.4	3.1	24
29	4.6	4.6	5.6	6.1	4.6	3.6	4.7	5.4	5.5	5.8	5.5	5.2	5.6	4.3	4.2	4.3	2.3	2.2	2.5	1.3	4.0	2.0	2.0	2.2	1.3	6.1	3.1	24
30	1.5	2.9	2.5	1.5	1.9	1.5	2.6	1.4	1.1	4.2	3.3	5.1	5.5	4.6	4.3	4.1	5.4	5.8	7.2	7.2	6.4	8.5	6.8	7.9	1.1	8.5	2.8	24
31	5.5	5.5	6.7	11.4	7.9	8.7	7.9	6.6	5.3	7.4	7.3	7.7	6.6	6.7	6.3	6.1	6.4	5.6	3.4	2.9	4.6	6.3	4.9	7.0	2.9	11.4	5.7	24
HOURLY MAX	9.7	9.9	9.2	11.4	9.7	12.1	13.2	11.6	11.3	11.0	10.5	9.6	11.0	11.3	12.8	9.4	9.8	9.2	10.1	9.3	8.4	8.5	8.1	8.6				
HOURLY AVG	1.7	1.7	1.7	1.6	1.8	1.7	1.8	1.7	1.6	1.6	1.6	1.1	1.0	1.0	0.9	1.2	1.4	1.4	1.2	1.6	1.5	1.6	1.8	2.0				

STATUS FLAG CODES

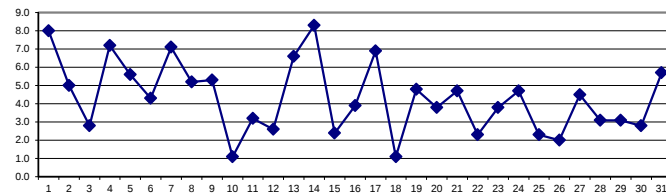
C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

LAST CALIBRATION: May 3, 2016
DECLINATION : MAGNETIC DECLINATION 15 DEGREE EAST

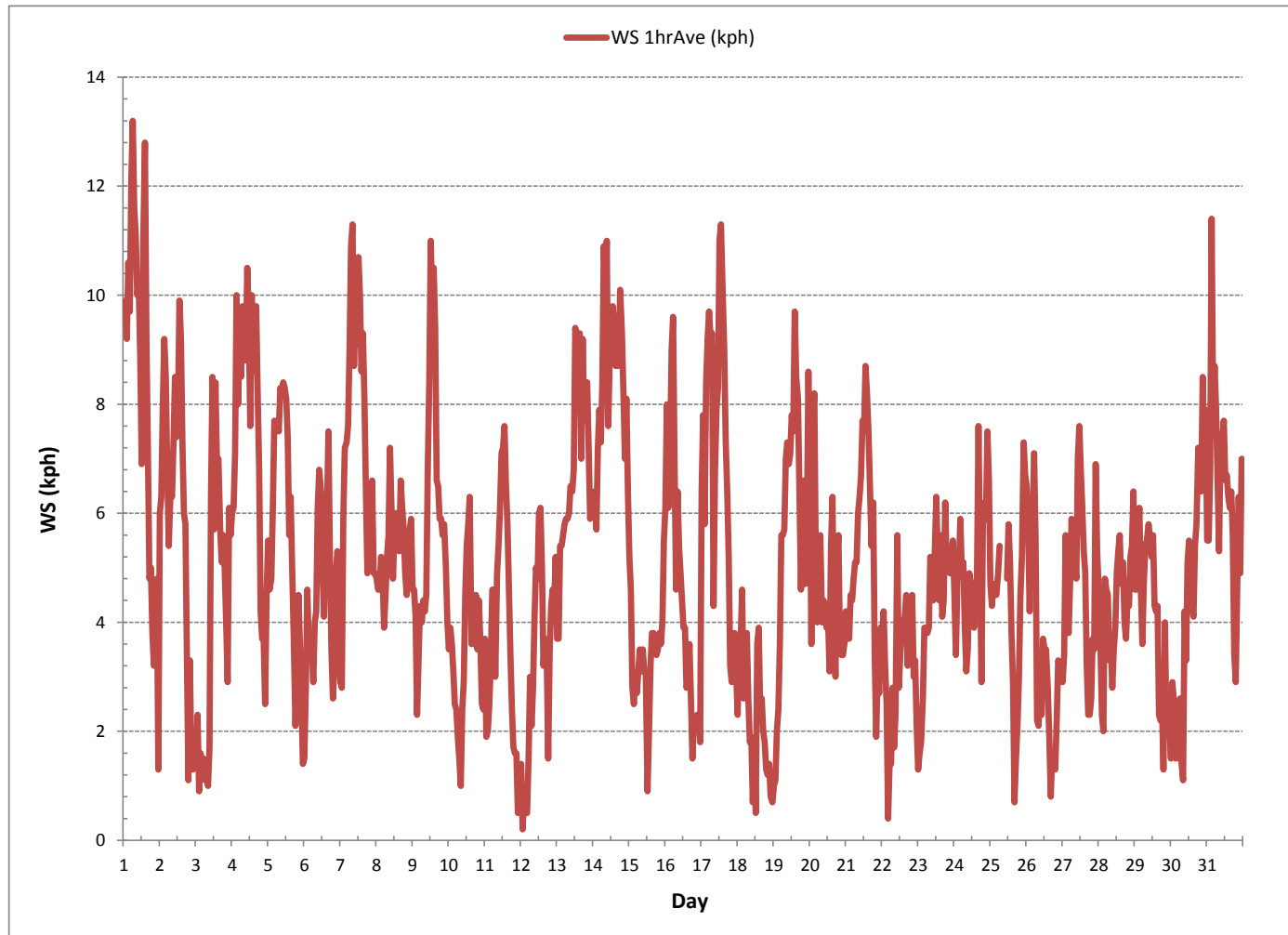
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		740				
MINIMUM 1-HR AVERAGE	0.2	kph	@ HOUR(S)	1	ON DAY(S)	12
MAXIMUM 1-HR AVERAGE:	13.2	kph	@ HOUR(S)	6	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	8.3	kph			ON DAY(S)	14
			VAR-VARIOUS			
MONTHLY CALIBRATION TIME:		0	HRS	OPERATIONAL TIME:		740 HRS
				AMD OPERATION UPTIME:		99.5 %
STANDARD DEVIATION:	2.43		MONTHLY AVERAGE:		1.5	kph

24 HOUR AVERAGES FOR October 2016

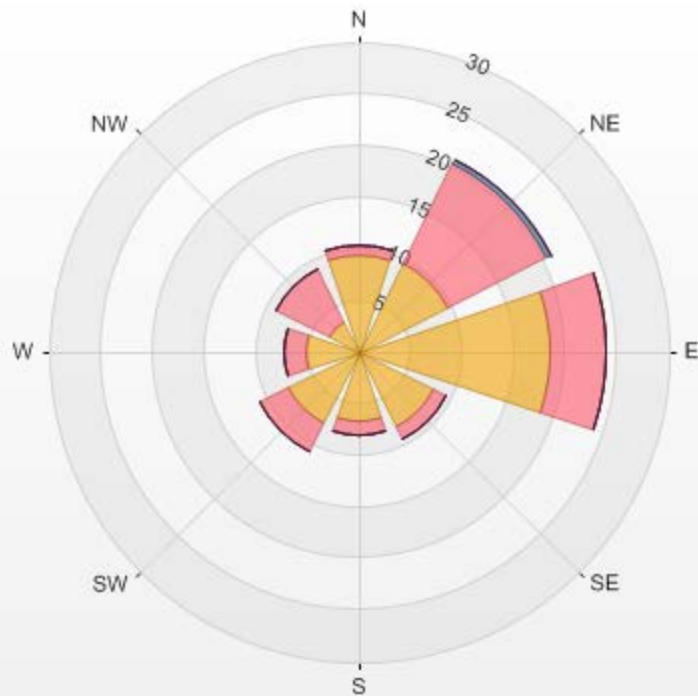


WIND SPEED Hourly Averages (WS kph)



Wind: THREE CREEKS #986 TRAILER Monitor: WSP [kph] Monthly: 2016/10 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.
 Calm: 0.00% Valid Data: 99.60% Calm Avg: 0.00

Direction	0.0-6.0	6.0-12.0	12.0-20.0	20.0-29.0	29.0-39.0	>39.0	Total
N	9.46	0.95	0	0	0	0	10.41
NE	9.59	10.81	0.41	0	0	0	20.81
E	18.51	5.54	0	0	0	0	24.05
SE	8.11	1.35	0	0	0	0	9.46
S	6.76	1.35	0	0	0	0	8.11
SW	7.7	3.11	0	0	0	0	10.81
W	5.14	2.16	0	0	0	0	7.3
NW	3.11	5.95	0	0	0	0	9.06
Summary	68.38	31.22	0.41	0	0	0	100



WIND DIRECTION



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

WIND DIRECTION Hourly Averages (WD)

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

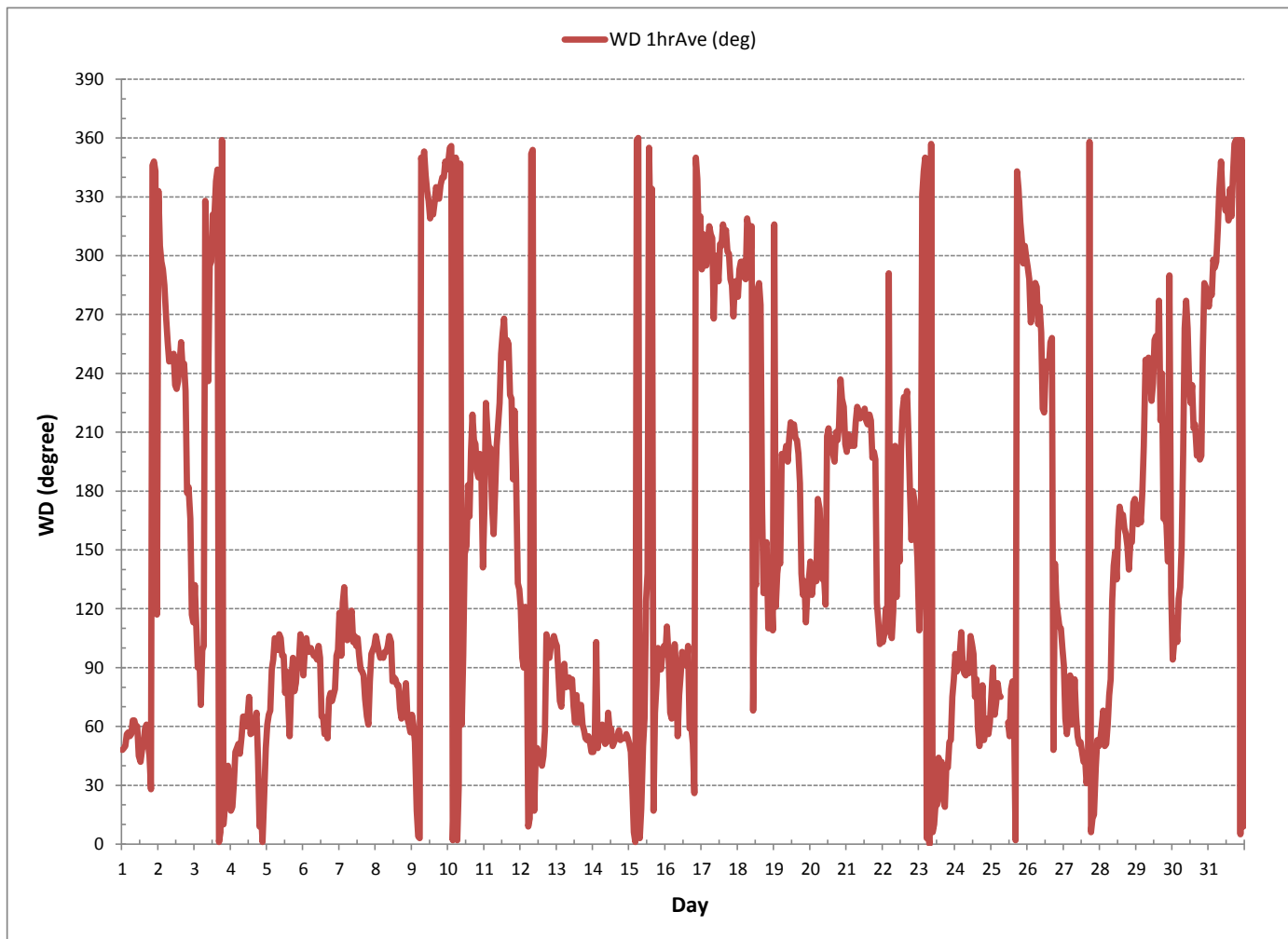
STATUS FLAG CODES

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 13, 2016
DECLINATION :	MAGNETIC DECLINATION 15 DEGREE EAST

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	740	HRS
STANDARD DEVIATION:	100.72		AMD OPERATION UPTIME:	99.5	%
			MONTHLY AVERAGE	66 (ENE)	

WIND DIRECTION Hourly Averages (WD)



RELATIVE HUMIDITY

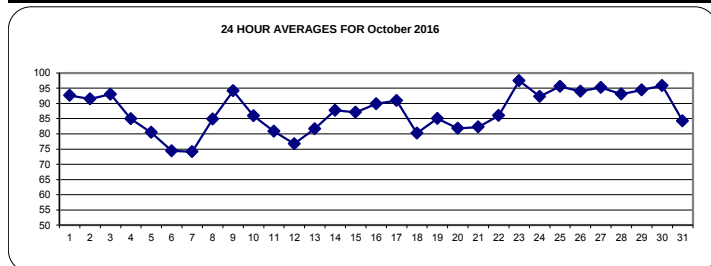
RELATIVE HUMIDITY Hourly Averages (RH %)

MST																													
Hour Start	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-Hour		
Hour End	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.	Rdgs.	
Day																													
1	94	94	92	90	90	90	90	90	89	88	87	91	90	91	93	94	95	95	96	96	97	97	97	97	97	87	97	93	24
2	98	98	98	98	98	98	98	98	98	97	92	90	86	77	74	76	81	85	87	91	93	95	95	94	74	94	98	91	24
3	94	93	93	93	92	92	92	92	94	94	89	91	89	92	92	92	93	94	95	96	96	96	95	93	89	96	93	24	
4	93	95	94	93	94	92	91	89	87	84	82	77	74	74	71	70	72	74	79	85	89	92	93	95	70	95	85	24	
5	94	94	94	94	93	92	91	89	86	81	76	73	68	65	64	62	61	68	75	75	79	82	86	89	61	94	80	24	
6	88	90	88	90	91	89	89	88	85	81	78	70	64	58	52	48	48	53	60	71	75	72	77	81	48	91	74	24	
7	84	88	89	88	85	82	81	81	79	76	73	67	64	60	59	59	60	63	67	70	72	75	78	79	59	89	74	24	
8	80	80	79	79	81	81	80	82	82	80	83	80	82	88	87	86	88	89	90	91	93	91	92	92	79	93	85	24	
9	92	91	94	95	96	95	95	95	95	94	94	94	93	93	92	93	92	93	95	95	95	96	96	96	91	96	94	24	
10	95	96	95	95	94	93	95	95	94	86	84	80	79	75	76	77	73	77	81	82	82	80	87	91	73	96	86	24	
11	90	86	86	87	89	89	89	90	90	85	79	73	69	65	65	64	59	65	75	85	89	90	90	91	59	91	81	24	
12	91	92	91	90	90	90	90	90	86	78	68	61	57	55	50	50	50	60	75	71	75	78	82	82	50	92	77	24	
13	83	81	80	82	82	81	81	81	81	81	79	76	74	74	74	75	75	79	88	90	91	91	91	90	74	91	82	24	
14	89	88	88	89	90	89	89	89	89	89	88	86	87	86	86	86	88	87	86	86	88	87	88	88	86	90	88	24	
15	88	89	90	91	91	91	91	91	90	88	84	75	74	79	81	84	85	87	88	89	89	90	91	93	74	93	87	24	
16	90	87	88	88	89	90	92	94	93	90	89	86	83	86	86	86	89	90	92	93	93	94	94	94	83	94	90	24	
17	96	97	97	97	97	97	96	97	95	91	88	83	84	86	86	85	86	88	90	90	92	92	87	85	83	97	91	24	
18	86	86	85	83	84	83	83	82	80	75	71	68	71	70	73	73	74	76	83	85	88	89	88	89	68	89	80	24	
19	90	91	91	90	91	94	94	93	93	90	83	76	71	69	68	68	68	77	87	90	93	92	93	88	68	94	85	24	
20	84	86	83	85	91	92	89	88	87	82	82	76	75	71	66	68	75	79	79	83	83	87	85	88	66	92	82	24	
21	93	95	94	95	96	96	95	95	93	86	78	72	65	62	60	57	59	71	77	78	84	89	91	93	57	96	82	24	
22	88	85	87	81	84	88	89	88	83	79	70	74	75	83	84	85	86	89	92	92	95	95	96	96	70	96	86	24	
23	96	95	96	97	97	97	97	97	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	97	95	98	97	24	
24	97	97	96	95	94	94	94	95	95	94	92	90	89	88	89	89	91	91	90	91	91	91	91	91	88	97	92	24	
25	91	91	92	94	96	96	94	P	P	P	P	95	94	94	96	96	97	97	98	98	98	98	98	98	91	98	96	20	
26	98	98	98	98	98	97	96	95	95	93	90	89	90	90	88	87	91	94	95	96	97	94	94	95	87	98	94	24	
27	96	96	96	96	95	96	97	96	95	96	96	95	94	92	93	93	94	95	95	95	96	96	97	92	97	97	95	24	
28	97	97	97	96	96	96	96	95	95	93	90	87	88	87	87	88	90	92	93	94	94	95	95	95	87	97	93	24	
29	95	96	96	96	94	94	96	96	95	95	94	94	92	92	91	92	92	93	93	94	95	96	97	98	91	98	94	24	
30	98	96	95	95	96	96	96	96	96	97	98	98	98	98	93	91	92	94	96	97	98	98	96	92	91	98	96	24	
31	89	91	91	90	87	87	88	85	84	83	81	81	80	81	81	82	81	80	81	82	84	86	86	86	80	91	84	24	
Hourly Max	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98				
Hourly Avg	91.5	91.6	91.4	91.3	91.6	91.5	91.4	91.1	90.2	87.7	84.9	82.4	80.7	80.1	79.3	79.1	80.1	83.0	86.3	88.0	89.6	90.3	91.1	91.4					

STATUS FLAG CODES

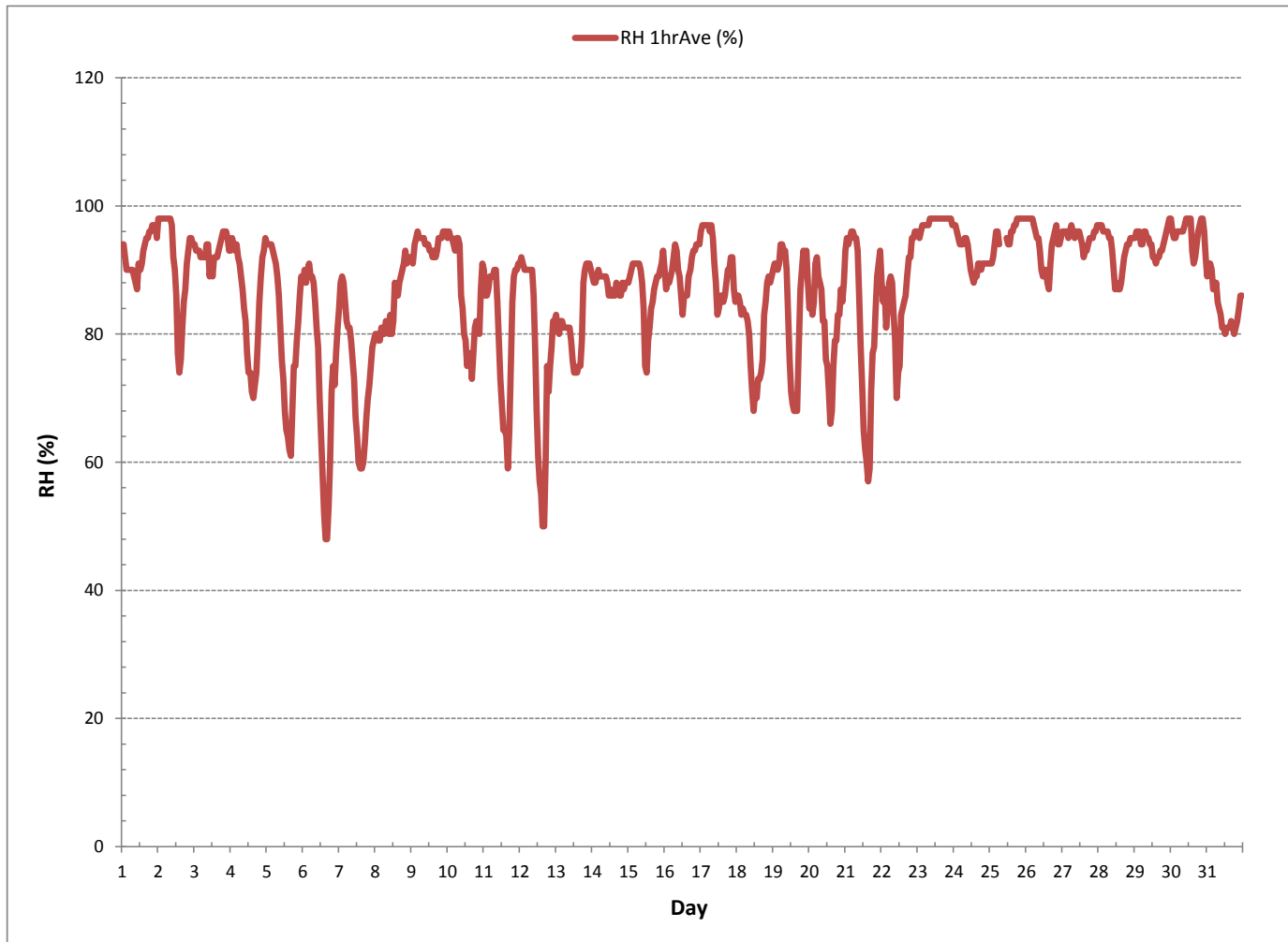
C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE

MONTHLY SUMMARY



MINIMUM 1-HR AVERAGE:	48	%	@ HOUR(S)	15 , 16	ON DAY(S)	6 , 6
MAXIMUM 1-HR AVERAGE:	98	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	97	%			ON DAY(S)	23
					VAR-VARIOUS	
			OPERATIONAL TIME:			740 HRS
			AMD OPERATION UPTIME:			99.5 %
STANDARD DEVIATION:	9.57		MONTHLY AVERAGE:			87 %

RELATIVE HUMIDITY Hourly Averages (RH %)



BAROMETRIC PRESSURE



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

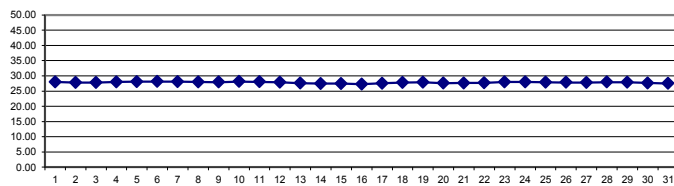
BAROMETRIC PRESSURE Hourly Averages (BP inHg)

MST																									DAILY	DAILY	24-HOUR			
HOURLY	END	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	MIN.	MAX.	AVG.	RDGS.	
DAY		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					
1		28.14	28.12	28.11	28.10	28.08	28.07	28.05	28.04	28.03	28.01	27.99	27.97	27.95	27.93	27.91	27.89	27.89	27.89	27.88	27.88	27.88	27.87	27.86	27.85	27.85	27.85	28.14	27.97	24
2		27.84	27.84	27.83	27.82	27.82	27.82	27.82	27.81	27.81	27.81	27.81	27.81	27.80	27.79	27.79	27.78	27.78	27.78	27.77	27.77	27.77	27.77	27.77	27.77	27.77	27.77	27.84	27.80	24
3		27.76	27.76	27.76	27.76	27.75	27.74	27.75	27.75	27.76	27.77	27.77	27.79	27.80	27.81	27.82	27.83	27.83	27.83	27.84	27.85	27.86	27.87	27.88	27.89	27.74	27.89	27.80	24	
4		27.89	27.91	27.91	27.93	27.95	27.95	27.95	27.96	27.97	27.97	27.98	27.99	27.99	28.00	28.01	28.00	28.01	28.01	28.02	28.03	28.03	28.04	28.04	28.04	27.89	28.04	27.98	24	
5		28.04	28.04	28.05	28.05	28.06	28.06	28.06	28.07	28.07	28.07	28.07	28.06	28.06	28.06	28.05	28.04	28.05	28.06	28.06	28.07	28.07	28.08	28.08	28.09	28.04	28.09	28.06	24	
6		28.09	28.09	28.09	28.09	28.10	28.11	28.12	28.13	28.14	28.15	28.16	28.17	28.16	28.16	28.15	28.14	28.15	28.16	28.16	28.16	28.16	28.16	28.14	28.14	28.09	28.17	28.14	24	
7		28.13	28.12	28.12	28.11	28.09	28.08	28.07	28.07	28.06	28.04	28.04	28.04	28.04	28.03	28.03	28.02	28.01	28.03	28.04	28.04	28.03	28.03	28.04	28.04	28.01	28.13	28.06	24	
8		28.04	28.04	28.04	28.04	28.04	28.04	28.03	28.03	28.02	28.01	27.99	27.98	27.97	27.95	27.94	27.93	27.92	27.91	27.90	27.90	27.89	27.88	27.87	27.86	27.86	28.04	27.97	24	
9		27.86	27.86	27.86	27.86	27.86	27.86	27.86	27.87	27.88	27.89	27.90	27.91	27.91	27.92	27.93	27.95	27.96	27.97	27.99	28.00	28.01	28.02	28.03	28.04	27.86	28.04	27.93	24	
10		28.05	28.06	28.07	28.08	28.09	28.10	28.11	28.12	28.14	28.15	28.16	28.16	28.16	28.16	28.15	28.16	28.16	28.15	28.14	28.14	28.14	28.14	28.13	28.12	28.05	28.16	28.13	24	
11		28.11	28.10	28.10	28.09	28.09	28.08	28.07	28.06	28.06	28.06	28.05	28.04	28.03	28.02	28.01	28.00	27.98	27.98	27.97	27.96	27.94	27.94	27.93	27.93	27.93	28.11	28.03	24	
12		27.91	27.91	27.91	27.91	27.90	27.91	27.91	27.92	27.93	27.93	27.94	27.94	27.94	27.94	27.93	27.92	27.91	27.91	27.91	27.89	27.89	27.88	27.87	27.85	27.85	27.94	27.91	24	
13		27.84	27.82	27.79	27.77	27.74	27.72	27.70	27.67	27.66	27.64	27.63	27.61	27.58	27.57	27.55	27.54	27.53	27.51	27.51	27.51	27.51	27.51	27.51	27.50	27.50	27.84	27.62	24	
14		27.47	27.46	27.50	27.47	27.44	27.44	27.43	27.42	27.41	27.41	27.42	27.41	27.41	27.40	27.40	27.40	27.41	27.42	27.43	27.43	27.43	27.44	27.43	27.43	27.40	27.50	27.43	24	
15		27.44	27.44	27.44	27.44	27.44	27.45	27.46	27.47	27.47	27.47	27.47	27.47	27.47	27.46	27.46	27.45	27.44	27.45	27.44	27.43	27.43	27.41	27.38	27.37	27.35	27.47	27.44	24	
16		27.33	27.33	27.31	27.28	27.25	27.23	27.23	27.24	27.24	27.24	27.25	27.26	27.26	27.27	27.29	27.30	27.31	27.31	27.33	27.33	27.34	27.34	27.35	27.35	27.23	27.35	27.29	24	
17		27.37	27.38	27.38	27.39	27.40	27.42	27.44	27.46	27.48	27.49	27.50	27.52	27.54	27.56	27.58	27.60	27.61	27.63	27.64	27.65	27.67	27.68	27.69	27.70	27.37	27.70	27.53	24	
18		27.71	27.71	27.72	27.72	27.73	27.74	27.75	27.75	27.77	27.78	27.79	27.80	27.80	27.80	27.81	27.81	27.82	27.82	27.83	27.84	27.84	27.84	27.85	27.86	27.71	27.86	27.79	24	
19		27.87	27.88	27.89	27.89	27.90	27.90	27.91	27.92	27.94	27.94	27.95	27.96	27.96	27.96	27.95	27.94	27.93	27.93	27.92	27.90	27.87	27.85	27.82	27.79	27.79	27.96	27.91	24	
20		27.77	27.77	27.74	27.72	27.69	27.68	27.66	27.65	27.63	27.62	27.61	27.61	27.60	27.59	27.58	27.57	27.56	27.56	27.57	27.56	27.56	27.57	27.58	27.60	27.56	27.77	27.63	24	
21		27.61	27.61	27.62	27.63	27.63	27.63	27.64	27.65	27.66	27.67	27.67	27.67	27.67	27.66	27.66	27.66	27.65	27.65	27.64	27.64	27.63	27.63	27.63	27.63	27.61	27.67	27.64	24	
22		27.63	27.62	27.62	27.62	27.62	27.62	27.63	27.63	27.65	27.66	27.67	27.68	27.69	27.71	27.72	27.74	27.76	27.77	27.79	27.80	27.82	27.83	27.85	27.87	27.62	27.87	27.71	24	
23		27.88	27.90	27.91	27.93	27.94	27.95	27.96	27.97	27.98	28.00	28.01	28.01	28.01	28.02	28.02	28.02	28.02	28.03	28.03	28.03	28.03	28.04	28.04	27.88	28.04	27.99	24		
24		28.03	28.03	28.02	28.02	28.01	28.00	28.00	28.00	28.00	28.00	27.99	27.98	27.98	27.96	27.96	27.95	27.94	27.94	27.95	27.95	27.93	27.94	27.93	27.93	27.93	28.03	27.98	24	
25		27.92	27.92	27.91	27.90	27.89	27.88	27.88	P	P	P	P	27.85	27.84	27.84	27.84	27.84	27.83	27.83	27.83	27.83	27.83	27.84	27.84	27.85	27.83	27.92	27.86	20	
26		27.85	27.85	27.86	27.86	27.87	27.87	27.87	27.87	27.87	27.87	27.86	27.86	27.85	27.86	27.84	27.83	27.82	27.80	27.78	27.78	27.78	27.77	27.77	27.75	27.75	27.87	27.83	24	
27		27.74	27.73	27.71	27.71	27.69	27.69	27.69	27.70	27.70	27.71	27.70	27.71	27.72	27.72	27.73	27.75	27.76	27.78	27.79	27.80	27.81	27.82	27.82	27.83	27.69	27.83	27.74	24	
28		27.84	27.87	27.88	27.89	27.89	27.90	27.90	27.91	27.93	27.94	27.95	27.96	27.96	27.95	27.95	27.95	27.96	27.95	27.95	27.93	27.93	27.93	27.92	27.92	27.84	27.96	27.92	24	
29		27.91	27.91	27.90	27.90	27.89	27.88	27.87	27.86	27.86	27.86	27.86	27.87	27.87	27.86	27.85	27.84	27.84	27.84	27.83	27.82	27.81	27.81	27.80	27.79	27.79	27.91	27.86	24	
30		27.78	27.77	27.76	27.74	27.72	27.71	27.70	27.70	27.69	27.69	27.68	27.68	27.66	27.65	27.64	27.62	27.60	27.58	27.56	27.54	27.52	27.51	27.50	27.49	27.49	27.78	27.65	24	
31		27.48	27.48	27.47	27.46	27.47	27.47	27.47	27.47	27.46	27.47	27.48	27.49	27.48	27.48	27.49	27.50	27.51	27.52	27.53	27.53	27.54	27.54	27.56	27.58	27.46	27.58	27.50	24	
HOURLY MAX		28.14	28.12	28.12	28.11	28.10	28.11	28.12	28.13	28.14	28.15	28.16	28.17	28.16	28.16	28.15	28.16	28.16	28.15	28.16	28.16	28.16	28.16	28.16	28.14	28.14				
HOURLY AVG		27.82	27.82	27.82	27.81	27.81	27.81	27.81	27.81	27.81	27.81	27.81	27.82	27.81	27.81	27.81	27.81	27.80	27.81	27.81	27.81	27.81	27.80	27.80	27.80	27.80				

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
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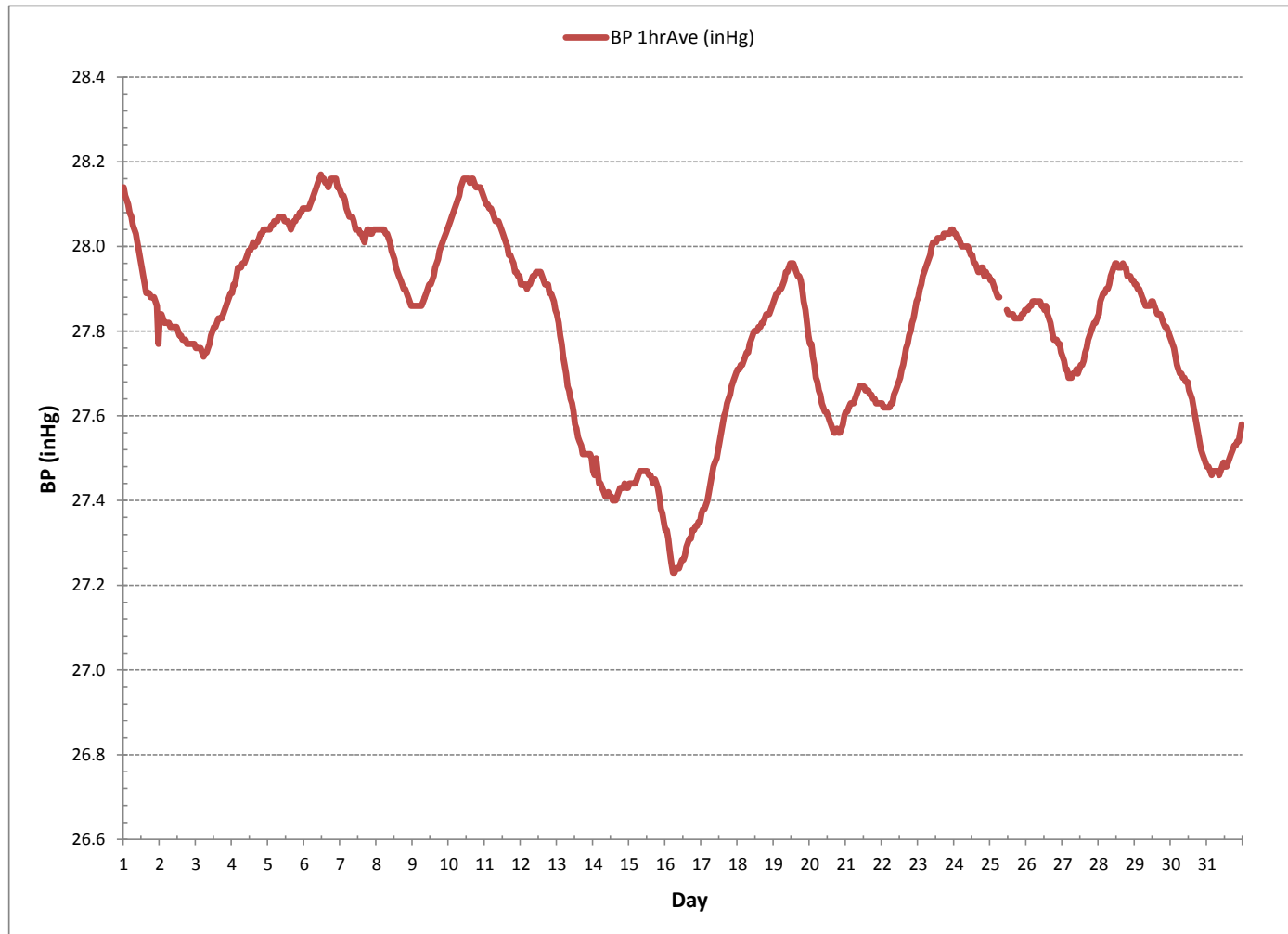
24 HOUR AVERAGES FOR October 2016



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	27.23	inHg	@ HOUR(S)	5 , 6	ON DAY(S)	16 , 16
MAXIMUM 1-HR AVERAGE:	28.17	inHg	@ HOUR(S)	11	ON DAY(S)	6
MAXIMUM 24-HR AVERAGE:	28.14	inHg			ON DAY(S)	6
					VAR-VARIOUS	
					OPERATIONAL TIME:	740 HRS
					AMD OPERATION UPTIME:	99.5 %
STANDARD DEVIATION:	0.22				MONTHLY AVERAGE:	27.81 inHg

BAROMETRIC PRESSURE Hourly Averages (BP inHg)



AMBIENT TEMPERATURE



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

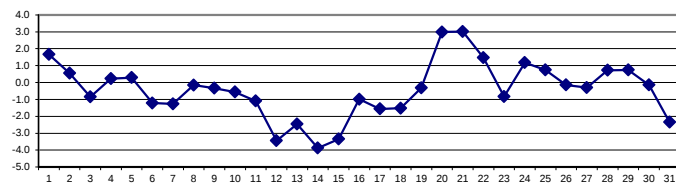
AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)

MST		Forecast from 0000 to 2359 (UTC -07:00)																												
Hour Start	Hour End	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-Hour Avg.	RDGS.	
Day		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					
1		2.3	2.5	2.6	2.5	2.2	2.0	1.6	1.6	1.7	1.8	1.9	1.9	2.3	2.1	1.7	1.6	1.7	1.6	1.3	1.0	0.7	0.5	0.4	0.4	0.4	0.4	2.6	1.7	24
2		0.2	0.1	0.0	-0.2	-0.1	0.0	0.1	0.3	0.4	0.8	0.9	1.0	1.6	3.3	3.3	2.8	2.6	2.4	2.4	0.9	-1.1	-2.0	-3.0	-3.6	-3.6	3.3	0.5	24	
3		-4.0	-4.2	-4.3	-4.7	-5.0	-5.0	-4.7	-4.9	-2.8	0.6	2.8	2.0	2.7	1.9	1.8	1.4	0.9	0.7	0.6	0.5	0.6	0.8	1.0	0.7	-5.0	2.8	-0.9	24	
4		-0.1	-0.7	-0.8	-0.8	-0.6	-0.7	-0.6	-0.4	-0.1	0.3	0.5	1.4	2.5	2.3	2.7	2.9	2.6	2.2	1.3	-0.3	-1.3	-2.2	-3.0	-1.8	-3.0	2.9	0.2	24	
5		-1.3	-1.6	-1.7	-1.2	-1.0	-0.9	-0.8	-0.8	-0.4	0.8	1.6	2.3	3.2	3.8	3.7	3.6	3.3	1.9	0.4	0.1	-0.7	-1.4	-2.6	-3.3	-3.3	3.8	0.3	24	
6		-3.4	-4.4	-3.6	-4.2	-4.1	-4.5	-5.1	-4.6	-3.1	-2.0	-1.3	0.3	1.5	2.9	3.6	4.6	4.3	2.9	0.9	-1.3	-2.0	-1.2	-2.3	-3.1	-5.1	4.6	-1.2	24	
7		-4.2	-5.0	-4.4	-2.8	-2.6	-2.6	-2.7	-2.8	-2.5	-2.1	-1.0	0.0	0.5	1.7	1.8	1.6	1.3	0.6	-0.2	-0.6	-0.8	-1.0	-1.3	-1.3	-5.0	1.8	-1.3	24	
8		-1.2	-1.1	-1.0	-1.2	-1.5	-1.5	-1.3	-1.3	-0.8	-0.1	0.2	1.1	0.8	0.9	1.1	1.1	0.7	0.4	0.4	0.3	0.1	0.2	0.0	0.0	-1.5	1.1	-0.2	24	
9		-0.1	-0.1	-0.2	-0.2	-0.2	-0.4	-0.6	-0.6	-0.4	-0.2	-0.2	0.0	0.1	0.0	0.1	-0.1	-0.2	-0.4	-0.6	-0.6	-0.7	-0.8	-0.9	-0.9	-0.9	0.1	-0.3	24	
10		-1.3	-1.1	-1.0	-1.1	-1.6	-3.2	-2.8	-2.2	-1.4	-0.5	0.2	1.0	1.3	1.7	1.6	1.3	1.0	0.7	0.3	-0.1	-0.2	-0.6	-2.4	-3.0	-3.2	1.7	-0.6	24	
11		-1.7	-1.1	-1.1	-2.0	-3.9	-4.5	-5.0	-5.5	-3.4	-1.3	0.2	1.5	2.3	3.0	3.6	3.8	4.5	2.7	0.4	-2.0	-2.4	-3.9	-4.8	-5.8	-5.8	4.5	-1.1	24	
12		-6.6	-6.5	-6.2	-7.0	-7.9	-8.2	-7.9	-7.9	-6.5	-3.7	-2.3	-0.2	0.7	1.6	2.1	3.5	2.9	0.6	-2.6	-2.7	-3.5	-4.3	-5.2	-4.8	-8.2	3.5	-3.4	24	
13		-5.5	-4.9	-4.6	-4.7	-4.0	-3.3	-3.0	-2.9	-2.7	-2.4	-1.7	-0.7	-0.2	-0.1	-0.2	-0.6	-0.7	-1.1	-1.8	-2.2	-2.5	-2.8	-3.0	-3.5	-5.5	-0.1	-2.5	24	
14		-3.8	-3.9	-4.1	-4.2	-4.4	-4.4	-4.3	-4.2	-4.1	-4.0	-3.6	-3.4	-3.4	-3.0	-3.1	-3.2	-3.3	-3.6	-4.0	-4.3	-4.4	-4.5	-4.6	-4.6	-4.6	-3.0	-3.9	24	
15		-4.7	-4.7	-5.2	-6.3	-6.6	-6.9	-7.0	-7.2	-5.9	-4.9	-3.1	-0.7	-0.1	-0.6	-0.9	-0.9	-1.0	-1.2	-1.3	-1.5	-1.5	-1.8	-2.8	-3.5	-7.2	-0.1	-3.3	24	
16		-2.2	-1.8	-1.9	-1.9	-1.8	-1.6	-1.7	-1.9	-1.8	-1.3	-0.8	-0.2	0.4	0.4	0.4	0.5	0.0	-0.3	-0.7	-0.9	-1.0	-1.2	-1.3	-1.2	-2.2	0.5	-1.0	24	
17		-1.4	-1.7	-1.8	-1.9	-2.0	-2.1	-2.1	-2.1	-2.3	-2.0	-1.5	-0.9	-0.8	-1.0	-0.9	-0.8	-0.9	-1.2	-1.5	-1.4	-1.9	-1.9	-1.7	-1.8	-2.3	-0.8	-1.6	24	
18		-2.0	-2.3	-2.5	-2.5	-2.6	-2.6	-2.8	-2.9	-2.6	-1.9	-1.2	0.0	-0.3	-0.3	-0.6	-0.5	-0.3	-0.5	-1.2	-1.2	-1.4	-1.4	-1.4	-1.5	-2.9	0.0	-1.5	24	
19		-1.6	-1.6	-1.6	-3.5	-6.5	-3.9	-4.0	-4.8	-3.7	-1.8	0.3	2.0	3.4	4.4	4.9	5.2	5.1	3.0	-0.1	-0.9	-1.0	-0.4	-1.1	0.6	-6.5	5.2	-0.3	24	
20		1.8	1.5	2.1	1.1	-0.8	-0.5	0.9	1.6	1.9	3.1	3.5	4.9	4.8	5.7	6.6	6.4	4.7	3.8	3.8	3.4	3.2	2.4	3.1	2.6	-0.8	6.6	3.0	24	
21		2.5	2.8	2.7	1.9	1.7	1.4	1.1	1.1	1.5	3.3	4.8	6.0	7.0	7.6	8.1	8.3	7.4	4.3	2.7	1.9	-0.1	-1.4	-2.3	-2.2	-2.3	8.3	3.0	24	
22		-0.4	0.1	0.2	1.1	0.4	-0.1	0.0	0.0	0.8	1.5	3.8	3.6	4.5	4.6	5.1	5.2	4.7	3.3	2.3	0.9	-0.7	-1.5	-1.9	-2.2	-2.2	5.2	1.5	24	
23		-3.3	-4.0	-2.6	-1.9	-1.4	-1.6	-1.3	-1.1	-1.1	-1.0	-0.9	-0.8	-0.6	-0.4	-0.2	-0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	-4.0	0.5	-0.8	24	
24		0.5	0.7	0.9	1.1	0.9	0.8	0.7	0.7	0.9	1.1	1.3	1.5	1.7	1.8	1.8	1.8	1.4	1.3	1.3	1.2	1.2	1.3	1.3	1.2	0.5	1.8	1.2	24	
25		1.3	1.4	1.2	1.1	1.0	1.0	1.0	P	P	P	P	1.3	1.4	1.3	1.0	0.9	0.6	0.3	0.2	0.1	0.1	-0.1	-0.2	-0.2	-0.2	1.4	0.7	20	
26		-0.2	-0.2	-0.2	-0.2	-0.3	-0.6	-0.8	-1.2	-1.6	-0.7	0.2	0.4	0.6	0.7	0.9	1.0	0.6	0.1	-0.9	-0.5	-0.2	0.1	-0.2	-0.2	-1.6	1.0	-0.1	24	
27		-0.3	-0.3	-0.4	-0.4	-0.3	-0.4	-0.6	-0.6	-0.6	-0.6	-0.4	-0.4	-0.3	-0.2	0.1	0.0	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.6	0.1	-0.3	24	
28		-0.2	-0.1	0.0	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	0.3	0.9	1.4	1.7	1.9	2.1	1.9	1.6	1.3	1.2	1.0	0.9	0.7	0.9	0.9	-0.3	2.1	0.7	24	
29		0.9	0.9	0.9	1.0	1.3	1.4	1.3	1.2	1.0	0.9	0.7	0.9	1.0	1.1	1.2	0.9	0.9	0.6	0.7	0.3	0.1	-0.3	-0.6	-0.6	-0.6	1.4	0.7	24	
30		-0.5	-0.4	-0.6	-0.7	-0.6	-0.7	-0.8	-0.9	-0.8	-0.9	-0.8	-0.6	-0.4	-0.2	0.3	0.7	0.7	0.6	0.5	0.8	0.9	0.4	0.2	0.2	-0.9	0.9	-0.2	24	
31		0.1	-0.3	-0.5	-1.1	-1.3	-1.5	-1.7	-2.2	-2.3	-2.5	-2.6	-2.6	-2.4	-2.3	-2.4	-2.6	-2.7	-3.0	-3.1	-3.4	-3.3	-3.8	-4.2	-4.6	-4.6	0.1	-2.3	24	
Hourly Max		2.5	2.8	2.7	2.5	2.2	2.0	1.6	1.6	1.9	3.3	4.8	6.0	7.0	7.6	8.1	8.3	7.4	4.3	3.8	3.4	3.2	2.4	3.1	2.6					
Hourly Avg		-1.3	-1.4	-1.3	-1.4	-1.7	-1.8	-1.8	-1.9	-1.4	-0.6	0.1	0.8	1.2	1.5	1.7	1.7	1.4	0.8	0.1	-0.4	-0.7	-1.0	-1.4	-1.5					

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

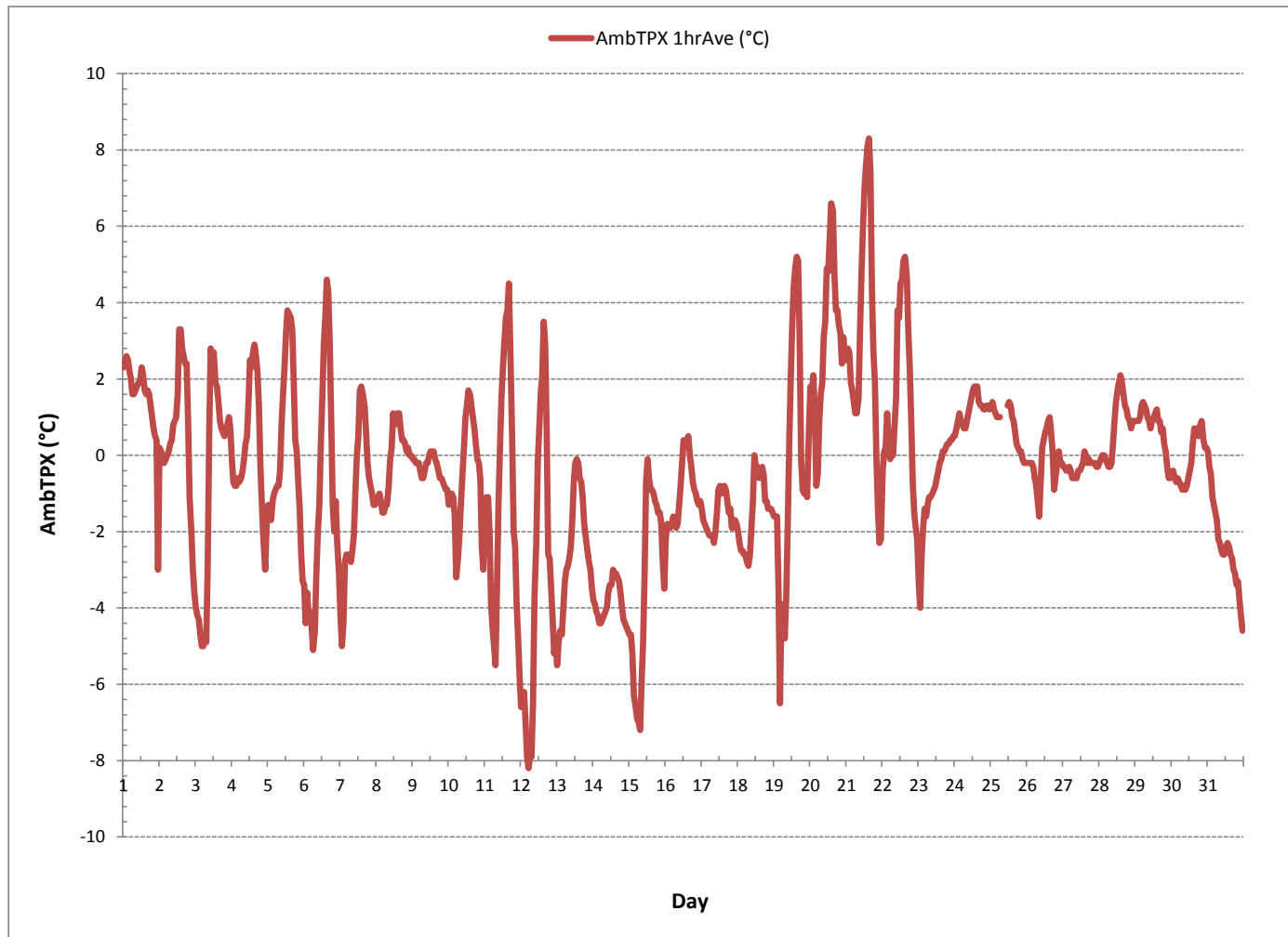
24 HOUR AVERAGES FOR October 2016



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-8.2	°C	@ HOUR(S)	5	ON DAY(S)	12
MAXIMUM 1-HR AVERAGE:	8.3	°C	@ HOUR(S)	15	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	3.0	°C			ON DAY(S)	20, 21
					VAR-VARIOUS	
OPERATIONAL TIME:					740	HRS
AMD OPERATION UPTIME:					99.5	%
STANDARD DEVIATION:	2.44		MONTHLY AVERAGE:		-0.4	°C

AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)



STATION TEMPERATURE



PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Three Creeks 986b Station - October 2016

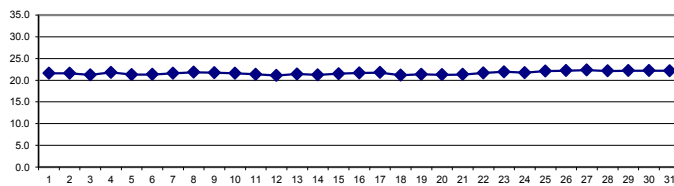
STATION TEMPERATURE Hourly Averages (StnTPX °C)

MST																													
Hour Start	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-HOUR		
Hour End	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.	RDGS.	
DAY																													
1	21.8	22.1	22.3	20.4	21.1	21.5	21.7	21.8	21.8	22.0	22.1	22.2	20.2	21.1	21.5	21.8	22.1	22.3	20.6	21.3	21.9	22.3	21.7	20.6	20.2	22.3	21.6	24	
2	21.6	21.9	22.1	22.2	22.3	22.4	21.9	20.5	21.6	22.0	22.3	20.7	21.0	22.1	20.5	20.0	21.5	22.1	20.1	21.3	21.9	22.0	22.0	21.9	20.0	22.4	21.6	24	
3	21.7	21.6	21.4	21.2	21.7	21.4	21.5	21.5	21.2	21.6	22.4	20.7	20.4	20.3	20.2	20.0	20.7	22.0	20.6	21.0	21.9	22.3	20.9	20.9	20.0	22.4	21.2	24	
4	21.8	22.1	22.2	22.1	22.1	22.1	22.0	21.9	21.9	22.0	22.0	22.1	21.1	20.0	21.4	21.6	20.0	21.2	21.9	22.3	22.4	22.4	22.3	22.2	20.0	22.4	21.8	24	
5	21.9	21.8	21.7	21.6	21.5	21.6	21.6	21.6	21.6	21.8	22.2	21.0	20.3	20.0	19.9	19.8	19.9	21.7	21.1	20.7	21.6	21.8	21.9	21.8	19.8	22.2	21.3	24	
6	21.7	21.5	21.3	21.6	21.5	21.4	21.6	21.6	21.5	21.4	21.7	21.9	22.4	20.4	20.3	20.3	20.1	19.9	20.5	21.7	21.9	21.8	21.7	21.5	19.9	22.4	21.3	24	
7	21.3	21.1	21.6	21.1	21.5	21.3	21.1	21.4	21.3	21.2	21.3	21.4	21.7	22.1	21.1	20.1	21.5	22.1	22.3	22.3	22.3	22.2	22.2	22.2	20.1	22.3	21.6	24	
8	22.2	22.2	22.2	22.2	22.2	22.1	22.1	22.2	22.3	22.4	22.3	20.2	21.4	22.0	21.7	20.3	21.5	21.9	22.1	22.3	22.1	20.3	21.4	21.8	20.2	22.4	21.8	24	
9	22.0	22.2	22.3	22.2	20.3	21.5	21.9	22.2	21.9	20.3	21.6	22.1	22.3	21.4	20.5	21.7	22.1	22.3	22.2	20.3	21.5	21.8	22.0	22.2	20.3	22.3	21.7	24	
10	22.3	22.2	20.3	21.4	21.8	21.8	21.9	21.9	21.9	22.1	22.3	20.5	21.1	22.0	20.8	20.6	21.8	21.9	20.3	21.5	21.9	22.1	22.1	22.0	20.3	22.3	21.6	24	
11	22.0	22.1	22.2	22.2	22.1	22.0	21.7	21.3	21.2	21.6	22.4	21.2	20.2	20.0	19.8	19.7	21.7	20.5	20.4	21.6	21.8	21.7	21.5	21.3	19.7	22.4	21.3	24	
12	21.0	21.5	21.2	21.2	21.4	21.3	21.3	21.3	21.4	21.1	21.4	21.9	22.1	20.1	19.7	19.5	19.7	21.7	20.9	21.0	21.3	21.2	21.0	21.5	19.5	22.1	21.1	24	
13	21.1	21.4	21.3	21.3	21.2	21.4	21.0	21.5	21.1	21.1	21.1	21.2	21.3	21.5	21.7	21.7	21.8	21.8	21.8	21.7	21.6	21.5	21.5	21.4	21.0	21.8	21.4	24	
14	21.2	21.1	21.1	21.0	21.6	21.1	21.5	21.1	21.3	21.3	21.2	21.2	21.4	21.1	21.0	21.0	20.9	21.3	21.3	20.9	21.5	21.1	21.4	21.2	20.9	21.6	21.2	24	
15	21.1	21.4	21.1	21.0	21.4	21.1	21.3	21.3	21.0	21.5	21.3	21.7	22.2	21.6	20.6	21.9	22.3	22.2	20.6	21.6	21.9	21.9	21.9	21.7	20.6	22.3	21.5	24	
16	21.7	21.8	21.7	21.6	21.5	21.4	21.4	21.5	21.5	21.6	21.8	22.0	22.3	21.7	20.6	22.0	22.5	20.4	21.5	22.0	22.2	22.4	22.5	20.4	20.4	22.5	21.7	24	
17	21.5	21.7	21.8	21.8	21.8	21.7	21.7	21.6	21.7	21.8	21.9	22.0	22.2	22.2	22.3	22.4	21.4	20.6	21.1	21.5	21.6	21.8	21.9	22.0	20.6	22.4	21.8	24	
18	22.0	22.1	22.1	22.0	22.1	22.1	22.0	21.8	20.7	20.3	20.5	20.4	20.1	20.4	20.5	20.2	20.7	20.1	21.1	21.6	21.8	21.4	20.3	21.3	20.1	22.1	21.2	24	
19	21.6	21.8	22.0	22.1	21.9	21.7	21.5	21.4	19.1	20.9	21.8	22.4	20.9	20.1	20.1	20.2	20.0	19.9	21.7	21.9	22.3	22.4	22.4	22.3	19.1	22.4	21.4	24	
20	22.4	22.7	21.0	21.1	22.0	22.2	22.4	22.6	21.4	20.7	22.2	21.0	20.0	19.6	19.6	19.6	20.5	22.2	20.2	20.5	22.1	22.4	20.1	21.6	19.6	22.7	21.3	24	
21	22.4	21.2	20.6	22.1	22.6	21.3	21.0	22.0	22.3	22.3	20.4	20.4	20.5	20.5	20.5	20.4	20.5	20.3	20.3	20.5	22.1	22.5	22.6	22.5	20.3	22.6	21.3	24	
22	22.5	22.6	22.7	21.6	20.9	22.0	22.4	22.6	21.9	20.8	22.2	21.1	19.9	21.4	21.7	20.2	20.1	22.1	20.9	21.1	22.1	22.3	22.3	22.3	19.9	22.7	21.7	24	
23	22.1	21.9	21.9	21.9	22.1	22.2	22.3	22.4	22.5	22.5	22.1	20.6	21.8	22.1	22.4	22.6	20.1	21.5	22.0	22.3	22.5	21.9	20.6	21.8	20.1	22.6	21.9	24	
24	22.2	22.4	22.6	21.2	21.0	21.9	22.3	22.5	20.8	21.3	22.1	22.5	21.0	20.9	22.0	21.9	20.2	21.7	22.3	22.6	20.5	21.3	21.9	22.2	20.2	22.6	21.7	24	
25	22.5	21.4	20.7	21.8	22.2	22.5	21.4	P	P	P	P	22.6	22.5	22.6	22.9	23.1	21.3	21.4	22.4	22.7	22.9	21.3	21.5	22.0	20.7	23.1	22.1	20	
26	22.2	22.4	22.7	22.8	22.8	22.8	22.8	22.9	23.0	20.6	21.7	22.7	21.1	21.1	22.6	21.4	21.1	22.4	22.7	22.9	22.3	21.0	22.2	22.5	20.6	23.0	22.2	24	
27	22.7	22.9	22.9	22.9	22.9	23.0	21.0	21.7	22.2	22.3	22.4	22.5	22.6	22.7	22.9	21.0	21.9	22.4	22.7	22.9	21.4	21.6	22.3	22.5	22.6	21.0	23.0	22.3	24
28	22.7	22.8	22.9	21.7	21.3	22.2	22.4	22.5	22.6	22.8	22.5	20.7	22.3	22.8	20.6	21.8	22.7	21.8	21.2	22.4	22.7	22.9	21.0	21.7	20.6	22.9	22.1	24	
29	22.4	22.7	22.9	23.0	20.6	21.8	22.4	22.7	22.9	21.1	21.5	22.4	22.7	21.8	20.7	22.0	22.6	22.9	21.2	21.3	22.3	22.6	22.8	22.9	20.6	23.0	22.2	24	
30	22.5	20.7	21.9	22.3	22.5	22.7	22.8	22.9	23.0	20.5	21.8	22.2	22.5	22.7	22.9	20.5	21.7	22.3	22.6	22.8	23.0	23.0	21.9	20.7	20.5	23.0	22.2	24	
31	21.9	22.2	22.4	22.2	22.2	22.2	22.2	22.2	22.4	22.4	22.2	22.2	22.1	22.1	22.1	22.1	22.1	22.2	22.2	22.2	22.1	22.0	21.9	21.8	21.8	22.4	22.2	24	
HOURLY MAX	22.7	22.9	22.9	23.0	23.0	22.8	22.8	22.9	23.0	22.8	22.5	22.7	22.7	22.9	22.9	23.1	22.7	22.9	22.9	22.9	23.0	23.0	22.8	22.9					
HOURLY AVG	21.9	21.9	21.8	21.8	21.8	21.7	21.8	21.8	21.9	21.7	21.5	21.8	21.5	21.4	21.3	21.1	21.0	21.2	21.6	21.4	21.7	22.0	21.9	21.7	21.8				

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

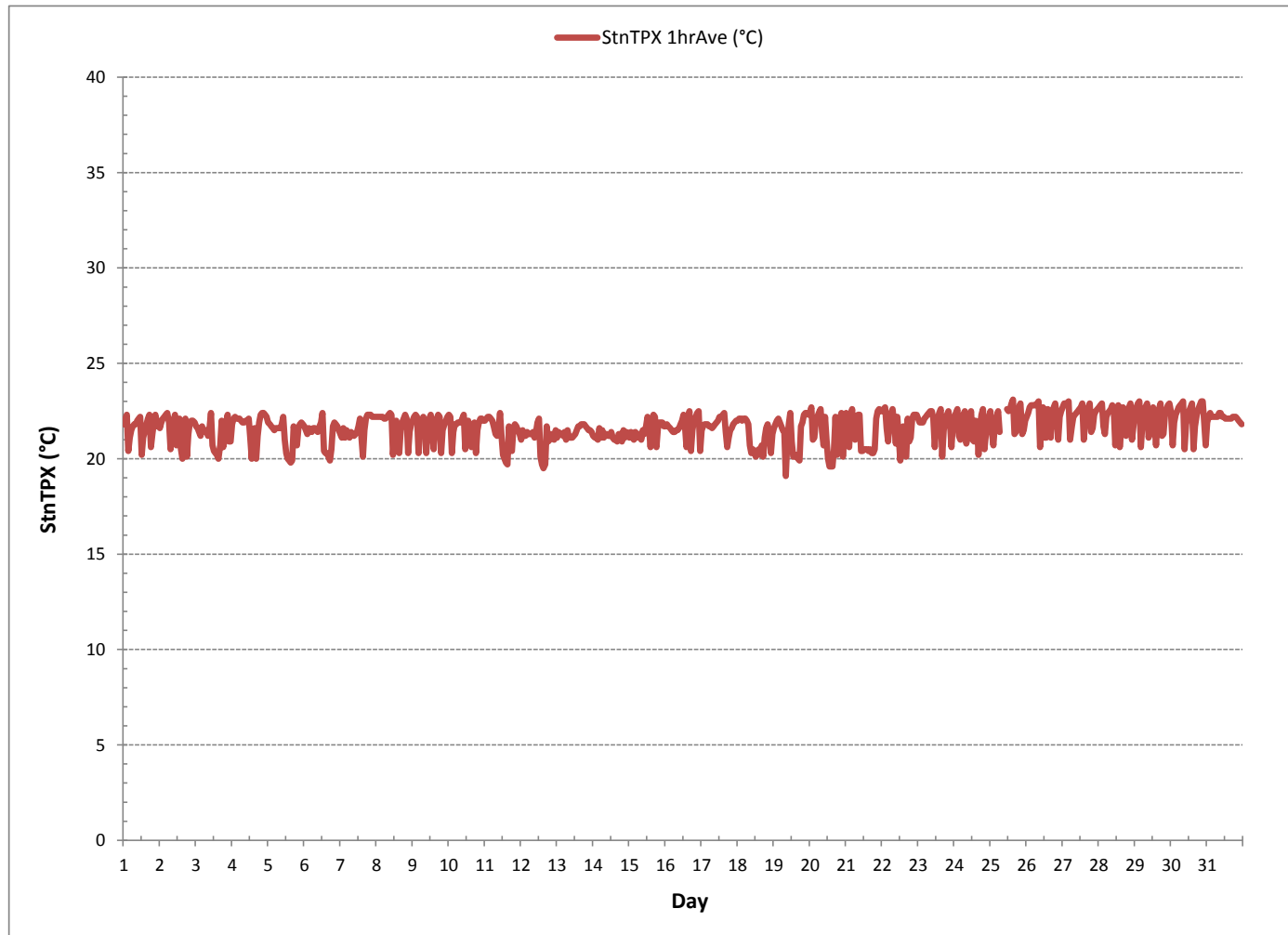
24 HOUR AVERAGES FOR October 2016



MONTHLY SUMMARY

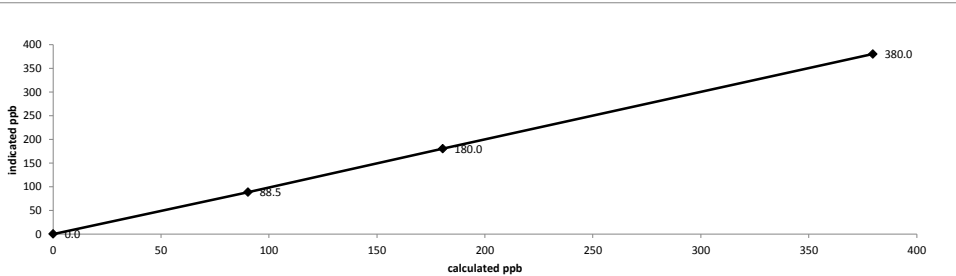
MINIMUM 1-HR AVERAGE:	19.1	°C	@ HOUR(S)	8	ON DAY(S)	19
MAXIMUM 1-HR AVERAGE:	23.1	°C	@ HOUR(S)	15	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	22.3	°C			ON DAY(S)	27
					VAR-VARIOUS	
					OPERATIONAL TIME:	740 HRS
					AMD OPERATION UPTIME:	99.5 %
STANDARD DEVIATION:	0.76				MONTHLY AVERAGE:	21.6 °C

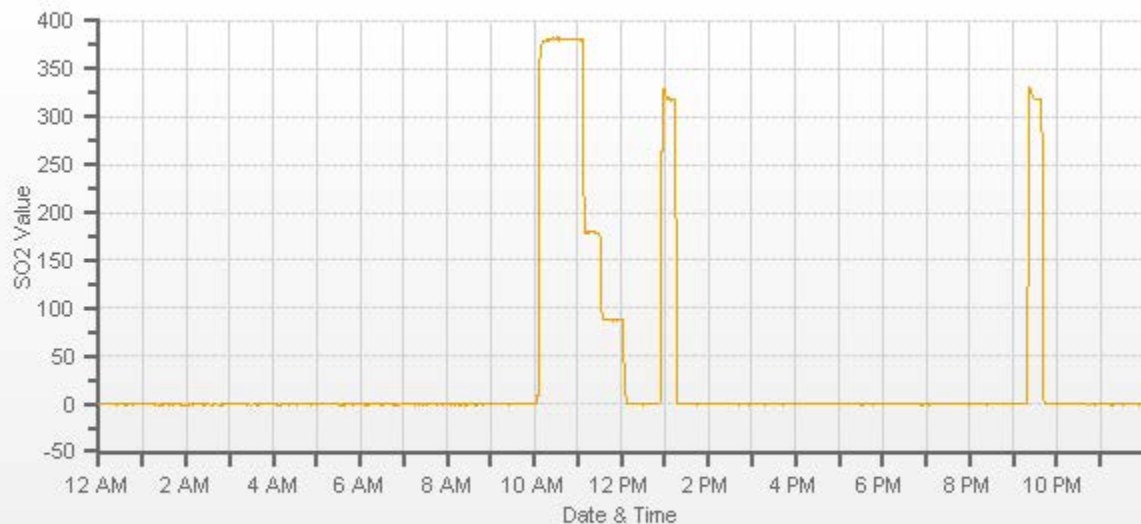
STATION TEMPERATURE Hourly Averages (StnTPX °C)



APPENDIX II
EQUIPMENT CALIBRATION RESULTS

SULPHUR DIOXIDE

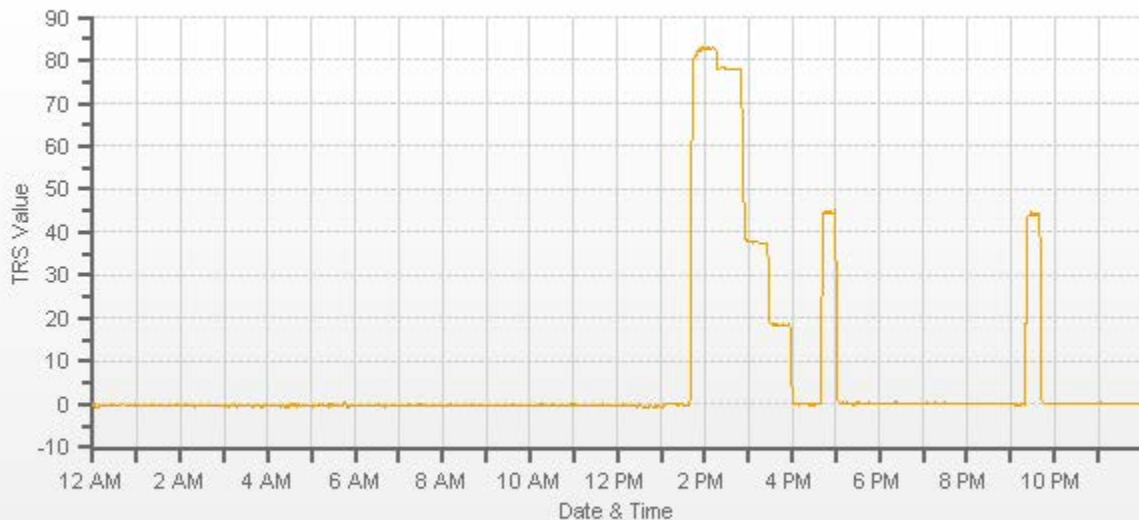
 Thermo 43C Sulphur Dioxide Analyzer Calibration																																																																							
Date: October 18, 2016 Company/Airshed: PRAMP Location/Station Name: 986b Parameter: Sulphur Dioxide Start Time 24 hr. (mst): 9:19 End Time 24 hr. (mst): 13:19 Calibration Method: Gas Dilution	Barometric Pressure: 27.77 inHg Station Temperature °C: 21 Weather Conditions: Mainly cloudy with light snow Calibration Purpose: routine monthly Performed By/Reviewer: Raja Abid Trina Whitsitt Cal Gas Expiry Date: May 23, 2019 Converter Model & s/n (if applicable): n/a																																																																						
Analyzer: ID# or Serial Number: 43C-62339-335 Last Calibration Date: September 13, 2016 Previous C.F.: 1.000																																																																							
Range ppb: 500 As Found C.F.: 0.992 New C.F.: 0.999																																																																							
Station SO2 Analyzer Range? 500 ppb																																																																							
Calibrator: Flow Meter ID's: n/a Make & Model: API 700 Serial #: 830 Cal Gas Cylinder I.D. #: LL 119513 Cal Gas Conc. (ppm): 50.6	Standard Calibration Points for Ranges <table border="1" style="margin: 5px;"> <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> SO2 Scrubber Check (10 mins.) Start/End Time 24 hr.: Target Concentration (ppb): 380 Result (ppb): 3 Zero Corrected Result (ppb): 3 **warning-initial zero must be done for corrected result, corrected result must not be greater than 2 ppb**	Point	ppb	High	380	Mid	180	Low	90																																																														
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Comments: The analyzer sample inlet filter was changed. The analyzer cooling fan filter(s) were cleaned.																																																																							



— SO2[ppb]

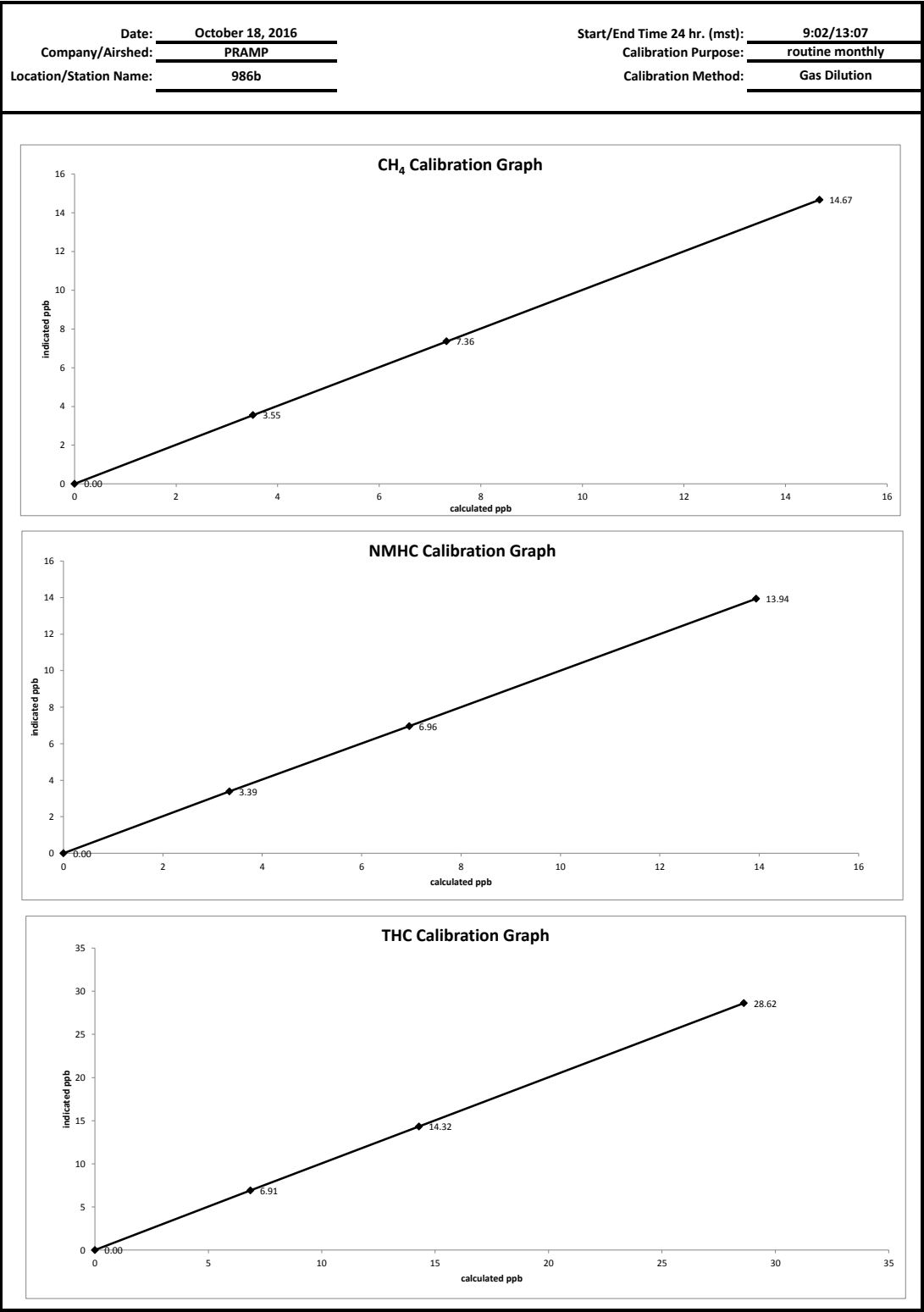
TOTAL REDUCED SULPHUR

Thermo 43i Total Reduced Sulphur Analyzer Calibration																																																																							
Date: October 18, 2016 Company/Airshed: PRAMP Location/Station Name: 986b Parameter: Total Reduced Sulphur Start Time 24 hr. (mst): 12:30 End Time 24 hr. (mst): 17:04 Calibration Method: Gas Dilution	Barometric Pressure: 27.77 inHg Station Temperature °C: 21 Weather Conditions: Mainly cloudy with light snow Calibration Purpose: routine monthly Performed By/Reviewer: Raja Abid Trina Whitsitt Cal Gas Expiry Date: December 1, 2018 Converter Model & s/n (if applicable): CD NOVA CDN 101#516																																																																						
Analyzer: ID# or Serial Number: 1314057760 Last Calibration Date: September 21, 2016 Previous C.F.: 1.000																																																																							
Range ppb: 100 As Found C.F.: 0.937 New C.F.: 1.000																																																																							
Station SO2 Analyzer Range? 500 ppb																																																																							
Calibrator: Flow Meter ID's: n/a Make & Model: Environics 6100 Serial #: 5212 Cal Gas Cylinder I.D. #: BLM 002197 Cal Gas Conc. (ppm): 10.3	Standard Calibration Points for Ranges <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Point</th> <th>ppb</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>78</td> </tr> <tr> <td>Mid</td> <td>38</td> </tr> <tr> <td>Low</td> <td>19</td> </tr> </tbody> </table> SO2 Scrubber Check (10 mins.) Start/End Time 24 hr.: 13:26-13:36 Target Concentration (ppb): 380 Result (ppb): 0 Zero Corrected Result (ppb): 0 **warning-initial zero must be done for corrected result, corrected result must not be greater than 2 ppb**	Point	ppb	High	78	Mid	38	Low	19																																																														
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CONVERTER:	820																																																																						
CONVERTER SET:	820																																																																						
Expected Value:	44.6																																																																						
Comments: The analyzer sample inlet filter was changed. The analyzer cooling fan filter(s) were cleaned.																																																																							



— TRS[ppb]

TOTAL HYDROCARBON





CH4[ppm] NMHC[ppm]

WIND SYSTEM



Meteorological Sensor Audit

Station Information

Company:	Three Creeks	Performed By:	Chris Wesson
Location:	Three Creeks 986B	Reason:	Audit
Audit Date:	03-May-16	Start Time (mst):	08:33
Previous Audit Date:	NA	End Time (mst):	08:55

Wind Speed

Sensor make:	RM Young	Sensor height:	15
Sensor model:	5103VK	Serial Number:	43711
Calibrator:	RM Young	Variable speed motor:	CA 03309
Voltage range:	0-1	Output signal range:	0-200 kph

Wind Speed Audit Data

RPM	Wind Speed Actual	Indicated WS - CW	Indicated WS-CCW	Correction Factor
0	0.0	0.04	0.06	-
1000	17.6	17.76	17.67	0.99
2000	35.28	35.32	35.39	1.00
3000	52.92	52.98	53	1.00
4000	70.56	70.65	70.67	1.00
5000	88.2	88.32	88.34	1.00
6000	105.84	106	106	1.00
7000	123.48	123.6	123.6	1.00
8000	141.12	141.3	141.3	1.00
9000	158.76	158.9	159	1.00
10000	176.4	176.6	176.6	1.00
Average Correction Factor:				1.00

Wind Direction

Sensor make:	RM Young	Sensor height:	15
Sensor model:	5103VK	Serial Number:	43711
Calibrator:	RM Young	Variable speed motor:	NA
Voltage range:	0-1	Output signal range:	0-360 Deg

Wind Direction Audit Data

Wind Direction	Indicated	Correction Factor
0	0.1	NA
45	45.0	1.00
90	90.4	1.00
135	135.1	1.00
180	180.4	1.00
225	225.0	1.00
270	270.8	1.00
315	316.1	1.00
360	360.0	1.00
		NA
Average Correction Factor:		1.00

Remarks: The wind system was audited at Maxxam shop

Audit Performed by: Chris Wesson

CALIBRATORS

Company: Maxxam

Operator: Christopher Wesson
Calibrator:

Make/Model API 700
 Serial Number 830
 Last Verification Date December 2014
 SO₂ Cylinder Conc. 50.3
 SO₂ Cylinder S/N LL42475

Flow Measurement Device:

Make/Model N/A
 Serial Number N/A
 Temperature (°C) N/A
 Barometric Pressure N/A

Flow Measurements

Pt. No. 1 77.5 Pt. No. 2 37.8 Pt. No. 3 18.9

Calibrator Flow (scem)	Calculated Concentration (ppm)	Indicated Concentration (ppm)	% Difference	
			vs Audit Gas	% Diff. Limit
Zero Air	0.000	0.000		
4998	0.780	0.746	-4%	± 10%
5002	0.380	0.365	-4%	± 10%
4997	0.190	0.182	-4%	± 10%
Absolute Average Percent Difference			4%	± 10%

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

SO₂
 Correlation= 1.0000
 m (Slope)= 0.9565
 b (Intercept % of FS)= 0.0436

LIMITS
 ≥ 0.995
 0.90-1.10
 ± 3% F.S.

AENV Standards
Audit Calibrator

Make/Model R&R MFC 201
 Serial/AMU Number AMU 1690

SO₂ Analyzer

Make/Model Teco 43C
 Serial/AMU Number AMU 1623
 Last Calibration Date January 19, 2016
 Full Scale (ppm) 1.0

COMMENTS:

Gas was check for accuracy - 1% low from stated cylinder gas concentration.
 Flows are not measured at each pt - AMD not being followed as per section 5.0.
 Checked SO₂ high pt using a Sabio 2010 - found a significantly higher response.
 Both MFC's need to be re-calibrated.

Auditor: Al Clark

Date: January 19, 2016

Operator Signature: 

Location: McIntyre Center Edmonton

Company <u>Maxxam</u>		Operator: <u>Chris Wesson</u>	
Calibrator:		Flow Measurement Device:	
Make/Model	<u>EnviroNics 6100</u>	Make/Model	<u>Bios Definer 220</u>
Serial Number	<u>5212</u>	Serial Number	<u>High - 128686, Low 129069</u>
Last Verification Date	<u>December 18, 2014</u>	Temperature (°C)	<u>NA</u>
NO Cylinder S/N	<u>LL119317</u>	Barometric Pressure	<u>NA</u>
NO/NOx Concentration	<u>50.3/50.3</u>		

Dilution Flow (sccm)			
Pt. #1	<u>77.4</u>	Pt. #2	<u>37.7</u>
Pt. #3	<u>18.9</u>		
Gas Flow (sccm)			
Pt. #1	<u>5000</u>	Pt. #2	<u>5000</u>
Pt. #3	<u>5000</u>		

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO ₂	NOx	NO	NOx
4995	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
5000	77.4	0.780	0.780	0.785	0.001	0.786	1%	1%
4996	37.7	0.379	0.379	0.380	0.000	0.380	0%	0%
4991	18.9	0.190	0.190	0.190	0.000	0.190	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)=	1.0068	0.90-1.10		m (Slope)=	1.0081
b (Intercept % of FS)=	-0.0783	± 3% F.S.		b (Intercept % of FS)=	-0.0981

Flow	O ₂ Conc	NO Decrease	NO	NO ₂	NOX	% Diff. Vs Audit gas	
5000	0	0.000	0.785	-0.001	0.784	NO ₂	% Diff. Limit
5000	0.5	0.500	0.285	0.499	0.784	0%	± 10%
5000	0.25	0.257	0.528	0.258	0.786	1%	± 10%
5000	0.1	0.101	0.684	0.104	0.788	4%	± 10%
Absolute Average Percent Difference						2%	± 10%

LINEAR REGRESSION ANALYSIS

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

NO₂		LIMITS
Correlation=	1.0000	≥ 0.995
m (Slope)=	0.9974	0.90-1.10
b (Intercept % of FS)=	0.1057	± 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 1, 2016</u>
		Full Scale (ppm)	<u>1</u>

COMMENTS: Flow values above were the calibrator displayed values; flows were also measured using certified flow meters (Maxxam-owned); the target concentrations were as follows: High 0.771ppm, Mid 0.377ppm, Low 0.189ppm; % Diff High 2%, Mid 1%, low 1%

Auditor: Shel Beaton
 Operator Signature: [Signature]

Date: February 3, 2016
 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			
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: [Signature]

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			
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: _____

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				
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

CH₄
Previous Stated Concentration PPM: 880
Percent variance from Stated: 1.2

C₃H₈
304
2.7

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: [Signature] 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 986b Station
Name of the Representative of the Person Responsible (Last, First, Middle)	Position / Title of the Representative of the Person Responsible
Wunmi Adekanmbi	Project Manager, Customer Service, Air Services
Is an External Party Certifying the Report? (If 'Yes', fill in the fields below for the external person.)	
☐ Yes ☒ 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

22-11-2016

Report Issued Date (dd-mm-yyyy)

APPENDIX IV
DATA VALIDATION CERTIFICATION FORM

Validation Certificate Form

Client: Peace River Area Monitoring Program Committee

Project #: 8449-2016-10-67-C

Site: Three Creeks 986b Station

Contact: Anthony Traverse

Level 0 Preliminary Verification

Chris Smith

Date 15-Nov-16

Level 1 Primary Validation

Chris Smith

Date 15-Nov-16

Level 2 Final Validation

Chris Smith

Date 22-Nov-16

Level 3 Independent Data Review

Chris Smith

Date 28-Nov-16

Post-Final Validation

NA

Date NA

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.