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AMBIENT AIR MONITORING MONTHLY DATA REPORT

PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

THREE CREEKS 842B STATION

JOB #: 8449-2017-06-80-C

June 2017

Prepared for:

PEACE RIVER AREA MONITORING PROGRAM COMMITTEE

Attention: LILY LIN

DATE: **July 26, 2017**

Prepared by: Maram Ghaleb

Maram Ghaleb, B.Sc.
Project Manager, Customer Service, Air Services

Reviewed by:

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

SUMMARY

In June 2017, Maxxam Analytics was contracted to manage the ambient air quality monitoring and maintenance activities at the Three Creeks 842b Station, near Peace River Oil Sands Area 2, Alberta. The monitoring station provides continuous meteorological measurements and air quality data for compliance parameters, as requested by the PRAMP Committee.

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

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

All Parameters (except wind data): One hour of downtime was recorded due to a power failure that occurred on June 28, at hour 08:00.

THC/CH_4/NMHC: The analyzer was replaced on June 14, in response to the ongoing situation where low-impact noise was being recorded on the NMHC parameter. Nine hours of downtime were recorded due to this event.

Wind System: The wind system malfunctioned on June 27, it was subsequently replaced on June 29. Thirty-five hours of wind data were discarded due to this event.

The summary of results is presented on the following pages.

Any deviations or modifications made to the sampling or analytical methods are outlined in Section 1.0, Discussion. On this basis, Maxxam Analytics is issuing this completed report to Peace River Area Monitoring Program Committee, Three Creeks 842b Station.

Should you have any questions concerning the results or if we can be of further assistance, please contact us at 403-219-3678 or toll-free at 1-800-386-7247.

Monthly Continuous Data Summary

Peace River Area Monitoring Program Committee Three Creeks 842b Station						MAXIMUM VALUES							OPERATIONAL TIME (%)
						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	1	1	8	7.9	SW	0	1	99.9
TRS (ppb)	-	-	-	-	0.19	0.73	18	5	4.3	SE	0.29	2	99.9
THC (ppm)	-	-	-	-	1.88	2.25	20	4	4.3	E	1.96	5	98.6
CH_4 (ppm)	-	-	-	-	1.88	2.25	20	4	4.3	E	1.96	5	98.6
NMHC (ppm)	-	-	-	-	0.00	0.00	1	0	2.2	SE	0.00	1	98.6
RELATIVE HUMIDITY (%)	-	-	-	-	60	96	11	4	4.0	NNW	83	14	99.9
BAROMETRIC PRESSURE (millibar)	-	-	-	-	940	954	24	5	0.9	E	953	24	99.9
AMBIENT TEMPERATURE (°C)	-	-	-	-	15.1	27.1	7	15	9.0	E	21.4	8	99.9
STATION TEMPERATURE (°C)	-	-	-	-	20.6	23.2	30	5	4.4	WNW	22.5	30	99.9
VECTOR WS (kph)	-	-	-	-	2.6	22.9	3	17	-	WSW	12.7	9	95.1
VECTOR WD (sec)	-	-	-	-	239 (WSW)	-	-	-	-	-	-	-	95.1

SOUR GAS PROCESSING INDUSTRY

MONTHLY REPORT SUMMARY

Three Creeks 842b Station	Peace River Area Monitoring Program Committee
Plant Name / Location	Company

Licence Number	Report Date	
	YEAR	MONTH
N/A	2017	June

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	99.9	0.001	ppm	0	0.000	ppm	0
TRS	1	99.9	0.001	ppm	-	0.000	ppm	-
THC	1	98.6	2.25	ppm	-	1.96	ppm	-
CH_4	1	98.6	2.25	ppm	-	1.96	ppm	-
NMHC	1	98.6	0.00	ppm	-	0.00	ppm	-
RH	1	99.9	96	%	-	83	%	-
BP	1	99.9	954	mb	-	953	mb	-
Ambient TPX	1	99.9	27.1	°C	-	21.4	°C	-
Station TPX	1	99.9	23.2	°C	-	22.5	°C	-
Wind Speed	1	95.1	23	kph	-	13	kph	-
Wind Direction	1	95.1	-		-	-		-

SIGNATURE OF COMPANY REPRESENTATIVE

FOR ALBERTA ENVIRONMENT USE ONLY

Exceedance Summary Report

SO_2 1-Hour Exceedances

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

SO_2 24-Hour Exceedances

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

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

TABLE OF CONTENTS

1.0 Discussion

This monthly report consists of continuous monitoring results for the following parameters: Sulphur Dioxide (SO_2), Total Reduced Sulphur (TRS), Total Hydrocarbon (THC), Methane (CH_4), 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 (December, 2016). The descriptions of the data verification and validation process can be found in Section 5 of this report. Instantaneous data, where applicable, is provided for reference purposes and has not undergone zero correction. The minimum and maximum statistics are highlighted in the data table and are for reference only. The highlighted cells are based on the software's interpretation of the exact position of the minimum or maximum value. The visual presentation of these statistics may not be the obvious choice in a data range due to rounding, truncating or analyzer specifications.
Hourly/minute data have been reviewed based on daily zero/span results and multi-point calibration results. Data may be considered invalid if a zero-corrected span check in excess of +/- 10% of the span concentration (established by the previous multi-point calibration) is encountered and/or significant differences in the calibration factor occurs (greater than 10%).

SULPHUR DIOXIDE (SO_2)

• Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime. This was incurred due to a power failure that occurred on June 28 at hour 08:00.

• The routine monthly calibration was performed on June 6.

• Seven instances of maximum instantaneous data were discarded this month due to brief power outages.

TOTAL REDUCED SULPHUR (TRS)

• Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime. This was incurred due to a power failure that occurred on June 28 at hour 08:00.

• The routine monthly calibration was performed on June 6.

• Seven instances of maximum instantaneous data were discarded this month due to brief power outages.

TOTAL HYDROCARBONS (THC), METHANE (CH_4) and NON-METHANE HYDROCARBONS (NMHC)

• Operational time, for the monitoring period was 98.6%, equivalent to ten hours of downtime.

• The routine monthly calibration was performed on June 6.

• The NMHC parameter was recording some noise when sampling ambient air over the past few weeks, and this was reflecting in the NMHC instantaneous maximum data. The situation was being monitored as this noise had minimal effect on hourly average and the analyzer was demonstrated to be operating within accepted limits. However, as this observation has persisted over an extended period of time, the Thermo 55i (s/n:1433563261) analyzer was replaced on June 14, following a successful shut-down calibration. A successful installation calibration was subsequently performed on Thermo 55i (s/n: 1236656188), the replacement analyzer. Nine hours of downtime were recorded due to this event.

• One hour of downtimewas recorded due to a power failure that occurred on June 28, at hour 08:00.

• Seven instances of maximum instantaneous data were discarded this month due to brief power outages.

• The canister sampler is programmed to draw in a whole air sample when the 5-minute average concentration of NMHC is above 0.30 ppm. A representative sample of ambient air is collected over a one-hour period when the canister event is triggered. No canister event was recorded this month.

WIND SPEED (WS) and WIND DIRECTION (WD)

• Operational time, for the monitoring period was 95.1%, equivalent to thirty-five hours of downtime. These were incurred due to a malfunction of the wind system that occurred on June 27. The wind system, RM Young (s/n: 92411), was replaced with RM Young (s/n: 110980) on May 29, followed by a successful intallation calibration.

• Five instances of maximum instantaneous data were discarded this month due to brief power outages.

• Wind data is reported as vector wind speed and vector wind direction. Wind direction is defined as the direction from which the wind is blowing from and is measured in degrees from true north.

RELATIVE HUMIDITY (RH)

• Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime. This was incurred due to a power failure that occurred on June 28 at hour 08:00.

BAROMETRIC PRESSURE (BP)

• Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime. This was incurred due to a power failure that occurred on June 28 at hour 08:00.

AMBIENT TEMPERATURE (AmbTPX)

• Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime. This was incurred due to a power failure that occurred on June 28 at hour 08:00.

STATION TEMPERATURE (StnTPX)

• Operational time, for the monitoring period was 99.9%, equivalent to one hour of downtime. This was incurred due to a power failure that occurred on June 28 at hour 08:00.

2.0 Project Personnel

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

3.0 Plant Monthly Required AMD Summary

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

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

4.0 Calculations and Results

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

5.0 Methods and Procedures

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

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

Maxxam AIR SOP-00208: RM Young Wind Monitor Calibration

Maxxam AIR SOP-00209: Ambient Sulphur Monitoring

There were no deviations from the prescribed methods.

The following instruments were used to perform the test program:

Sulphur Dioxide - API 100A UV Flourescent Analyzer

Total Reduced Sulphur - Thermo 43i UV Flourescent Analyzer

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

Wind System - RM Young Unit

Relative Humidity - RM Young Unit

Barometric Pressure - RM Young Unit

Ambient Temperature - RM Young Unit

Datalogger - ESC 8832

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

Level 0 Preliminary Verification

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

Level 1 Primary Validation

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

Level 2 Final Validation

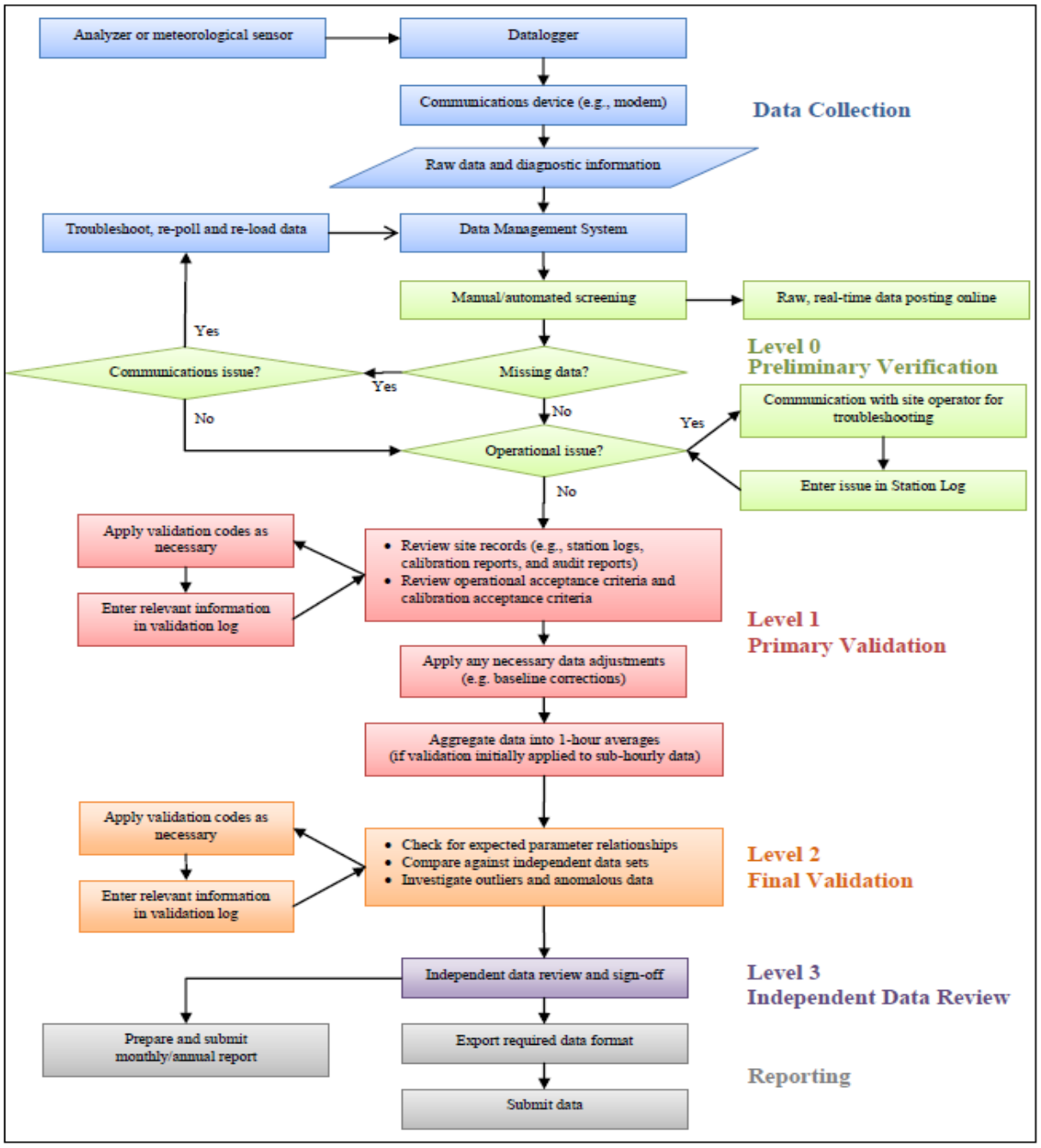
The purpose of Level 2 validation is to verify that there are no inconsistencies among related data, or among regional data measured at nearby sites.

Level 3 Independent Data Review

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

Post-Final Validation

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



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

APPENDIX I
CONTINUOUS MONITORING DATA RESULTS

SULPHUR DIOXIDE

SULPHUR DIOXIDE Hourly Averages (SO_2 ppb)

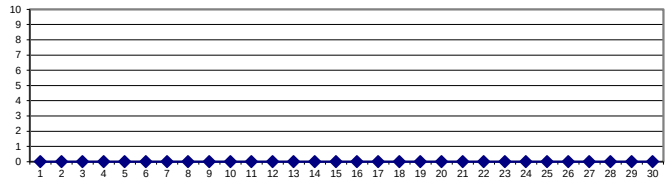
HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY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

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

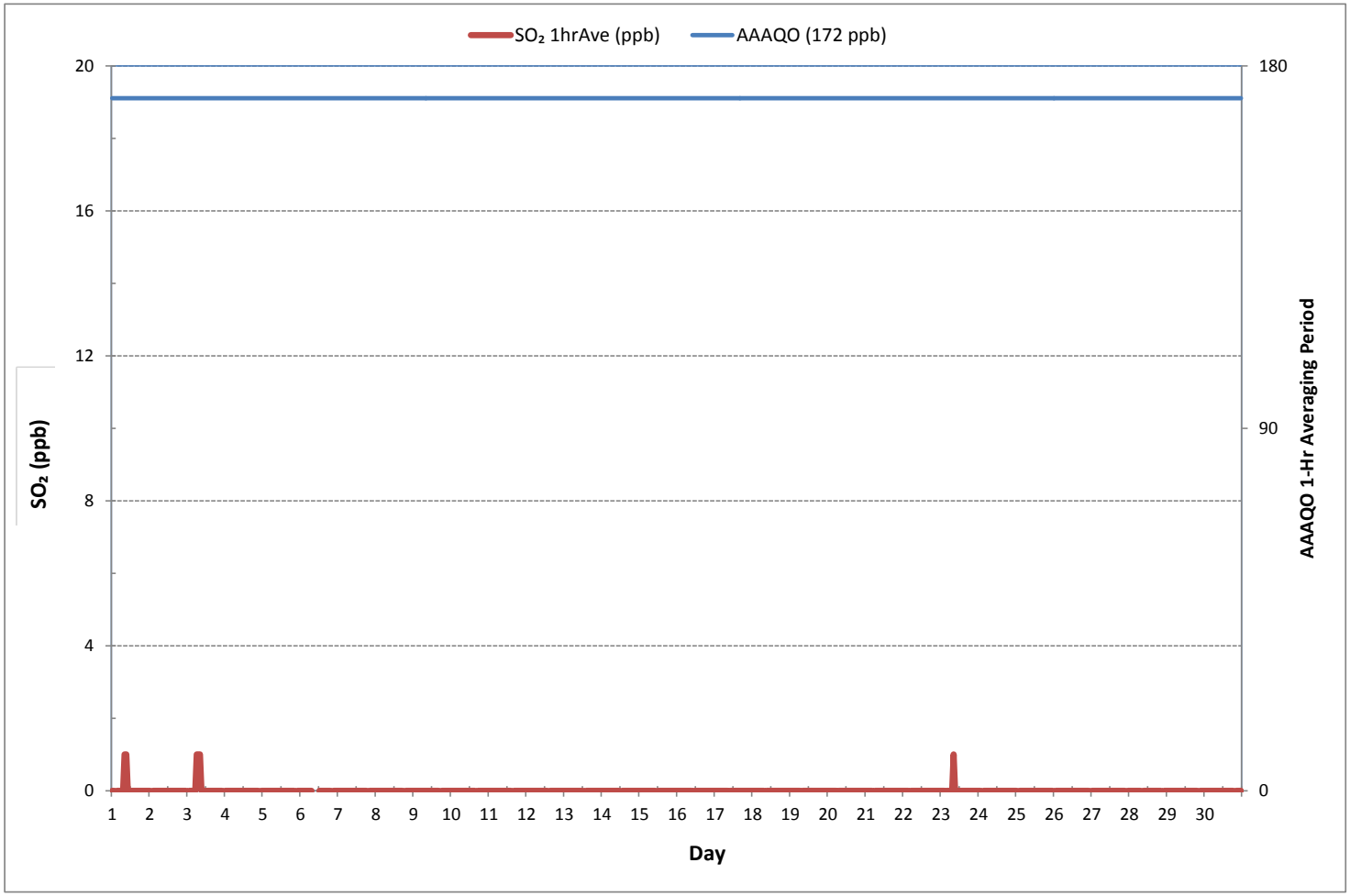
24 HR AVERAGES June 2017



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDANCES:			0			
NUMBER OF 24-HR EXCEEDANCES:			0			
NUMBER OF NON-ZERO READINGS:			6			
MINIMUM 1-HR AVERAGE	0	ppb	@ HOUR	0	ON DAY	1
MAXIMUM 1-HR AVERAGE:	1	ppb	@ HOUR	8	ON DAY	1
MAXIMUM 24-HR AVERAGE:	0	ppb			ON DAY	1
IZS CALIBRATION TIME:	32	hrs	OPERATIONAL TIME:		719	hrs
MONTHLY CALIBRATION TIME:	4	hrs	AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0		MONTHLY AVERAGE:		0	ppb

SULPHUR DIOXIDE Hourly Averages (SO_2 ppb)



SULPHUR DIOXIDE Instantaneous Maximum (SO_2 ppb)

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

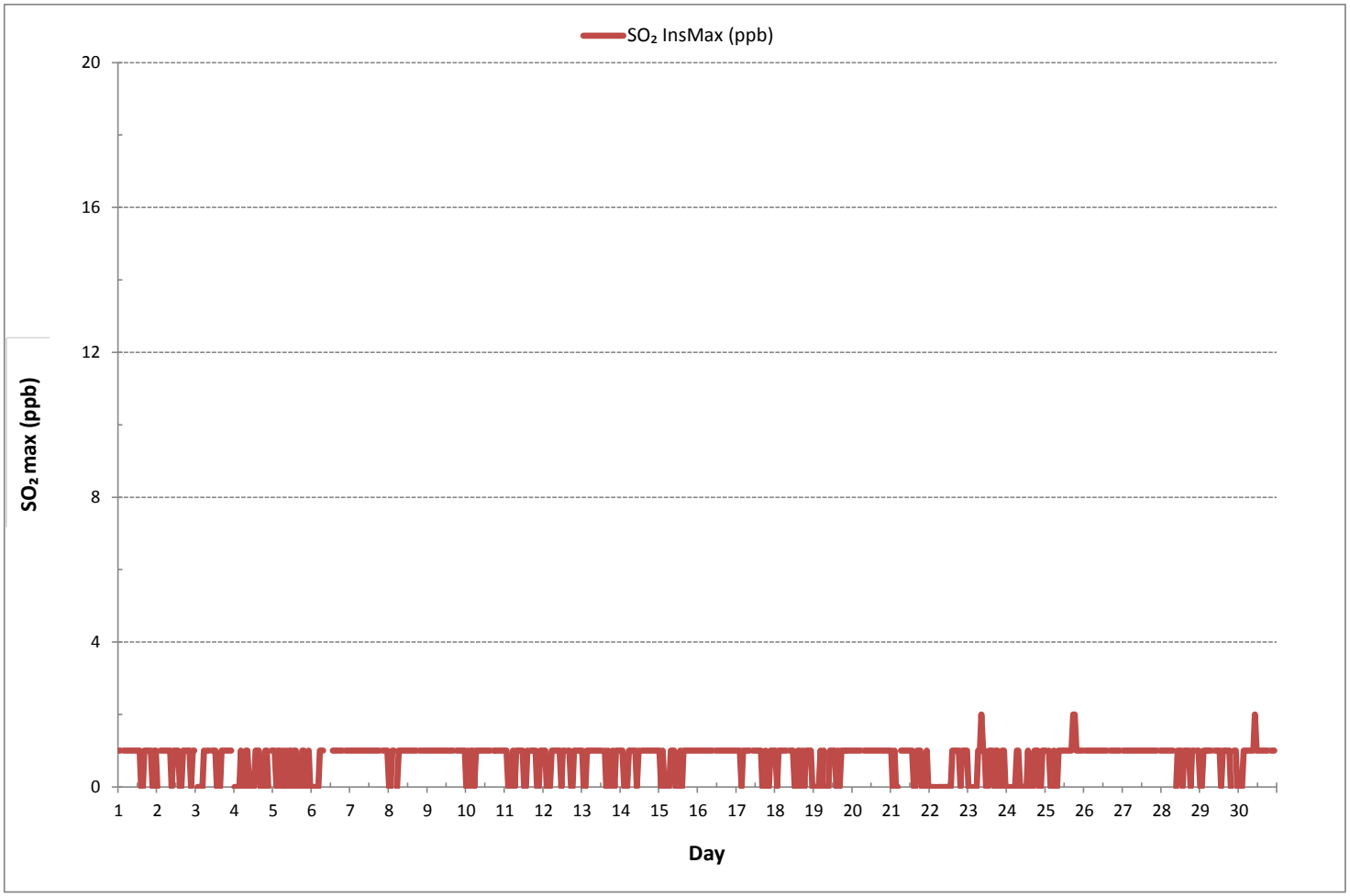
NUMBER OF NON-ZERO READINGS: 510

MAXIMUM INSTANTANEOUS VALUE: 2 ppb @ HOUR 8 ON DAY 23

IZS CALIBRATION TIME: 32 hrs
MONTHLY CALIBRATION TIME: 5 hrs
STANDARD DEVIATION: 0

OPERATIONAL TIME: 713 hrs

SULPHUR DIOXIDE Instantaneous Maximum (SO_2 ppb)



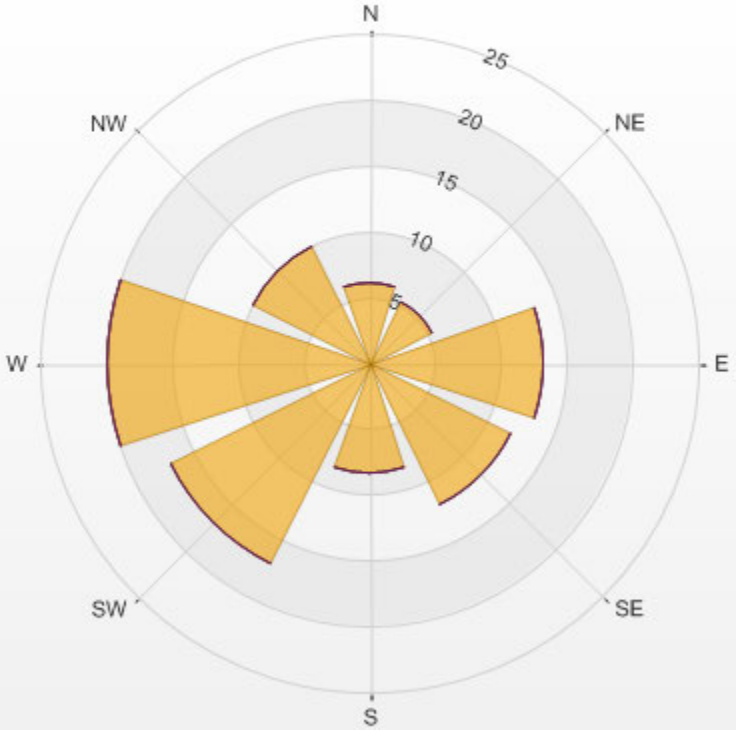
Wind: PRAMP_842
Poll.: PRAMP_842-SO2[ppb]
Monthly: 17/06
Type: PollutionRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

Calm: 7.96% Calm Avg: 0.05 [ppb]

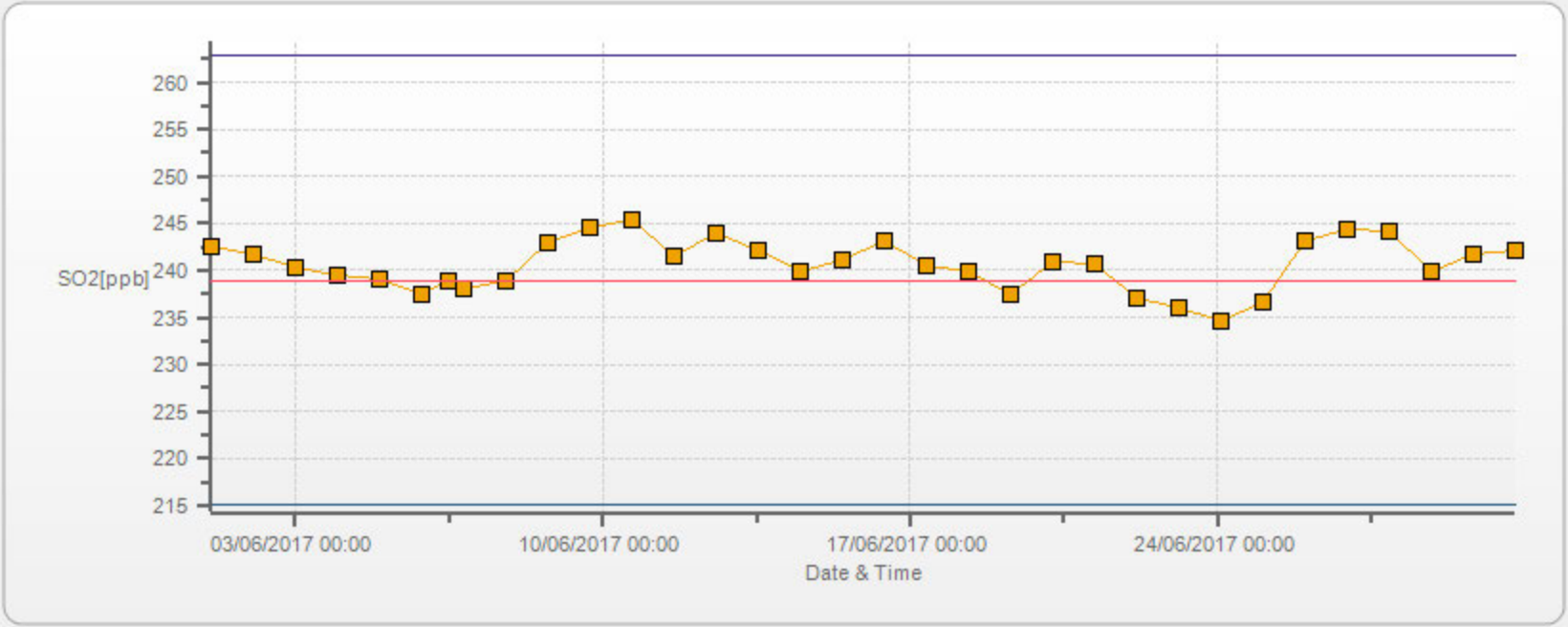
Direction	0-3	3-10	10-85	85-170	>170.0	Total
N	6.1	0.0	0.0	0.0	0.0	6.1
NE	5.3	0.0	0.0	0.0	0.0	5.3
E	13.3	0.0	0.0	0.0	0.0	13.3
SE	12.0	0.0	0.0	0.0	0.0	12.0
S	8.4	0.0	0.0	0.0	0.0	8.4
SW	17.0	0.0	0.0	0.0	0.0	17.0
W	20.0	0.0	0.0	0.0	0.0	20.0
NW	10.0	0.0	0.0	0.0	0.0	10.0
Summary	92.0	0.0	0.0	0.0	0.0	92.0

% Icon Classes (ppb)	92 0-3	0 3-10	0 10-85	0 85-170	0 >170.0

PRAMP_842 Poll.: PRAMP_842-SO2[ppb] 2017/06/01 00:00 - 2017/06/30 23:00 Calm: 7.96% Calm Poll Avg: 0.05[ppb]



SO2[ppb] Calibration: PRAMP_842 Monthly: 17/06 Type: Span



TOTAL REDUCED SULPHUR

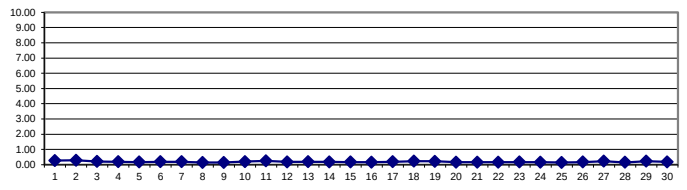
TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)

HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.
DAY																												
1	0.25	0.33	S	0.51	0.60	0.66	0.49	0.41	0.33	0.26	0.22	0.17	0.16	0.14	0.12	0.12	0.14	0.12	0.12	0.13	0.13	0.23	0.17	0.18	0.12	0.66	0.26	24
2	0.18	S	0.28	0.27	0.33	0.46	0.34	0.37	0.32	0.41	0.30	0.37	0.47	0.33	0.26	0.23	0.17	0.15	0.16	0.20	0.24	0.27	0.28	0.21	0.15	0.47	**0.29**	24
3	S	0.32	0.29	0.33	0.48	0.58	0.38	0.30	0.23	0.19	0.18	0.15	0.11	0.10	0.10	0.10	0.09	0.11	0.10	0.10	0.12	0.13	0.13	S	0.09	0.58	0.21	24
4	0.21	0.26	0.42	0.41	0.48	0.38	0.42	0.21	0.16	0.13	0.13	0.11	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.10	0.11	S	0.16	0.07	0.48	0.19	24
5	0.17	0.17	0.20	0.29	0.29	0.30	0.25	0.23	0.20	0.17	0.12	0.10	0.09	0.10	0.09	0.10	0.10	0.10	0.11	0.12	0.13	S	0.24	0.26	0.09	0.30	0.17	24
6	0.24	0.19	0.22	0.26	0.22	0.20	0.22	0.29	C	C	C	C	C	0.19	0.12	0.11	0.11	0.12	0.14	0.15	S	0.20	0.20	0.20	0.11	0.29	0.19	24
7	0.22	0.25	0.27	0.30	0.30	0.26	0.23	0.22	0.20	0.17	0.14	0.14	0.13	0.13	0.14	0.14	0.14	0.13	0.13	S	0.17	0.17	0.18	0.19	0.13	0.30	0.19	24
8	0.16	0.14	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.14	0.13	0.11	0.11	0.13	0.13	0.13	S	0.13	0.13	0.14	0.15	0.15	0.11	0.17	0.14	24
9	0.15	0.15	0.13	0.16	0.21	0.24	0.20	0.18	0.16	0.15	0.16	0.15	0.13	0.13	0.13	0.12	0.12	S	0.10	0.10	0.09	0.09	0.10	0.12	0.09	0.24	0.14	24
10	0.13	0.16	0.19	0.24	0.30	0.32	0.26	0.30	0.27	0.19	0.15	0.22	0.20	0.13	0.14	0.14	S	0.18	0.16	0.15	0.24	0.25	0.20	0.17	0.13	0.32	0.20	24
11	0.15	0.16	0.19	0.31	0.36	0.43	0.54	0.40	0.32	0.31	0.26	0.27	0.29	0.20	0.17	S	0.16	0.16	0.16	0.16	0.16	0.18	0.20	0.24	0.15	0.54	0.25	24
12	0.22	0.25	0.20	0.18	0.20	0.26	0.31	0.24	0.23	0.22	0.16	0.13	0.13	0.11	S	0.11	0.11	0.10	0.10	0.11	0.12	0.21	0.22	0.25	0.10	0.31	0.18	24
13	0.19	0.16	0.17	0.23	0.45	0.60	0.24	0.24	0.19	0.17	0.14	0.13	0.14	S	0.13	0.12	0.12	0.13	0.13	0.12	0.13	0.14	0.15	0.14	0.12	0.60	0.19	24
14	0.16	0.17	0.18	0.23	0.25	0.25	0.26	0.21	0.18	0.18	0.17	0.18	S	0.15	0.13	0.12	0.11	0.13	0.13	0.19	0.21	0.18	0.18	0.15	0.11	0.26	0.18	24
15	0.18	0.22	0.20	0.30	0.25	0.20	0.21	0.23	0.23	0.19	0.17	S	0.16	0.13	0.13	0.11	0.10	0.12	0.11	0.14	0.15	0.12	0.12	0.13	0.10	0.30	0.17	24
16	0.13	0.13	0.15	0.16	0.19	0.20	0.28	0.24	0.17	0.16	S	0.20	0.17	0.16	0.15	0.13	0.15	0.12	0.13	0.12	0.10	0.11	0.20	0.15	0.10	0.28	0.16	24
17	0.16	0.23	0.26	0.40	0.65	0.37	0.31	0.33	0.25	S	0.13	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.09	0.17	0.15	0.13	0.09	0.65	0.19	24
18	0.21	0.31	0.41	0.48	0.50	**0.73**	0.49	0.29	S	0.23	0.15	0.13	0.11	0.12	0.10	0.11	0.12	0.11	0.11	0.12	0.11	0.15	0.15	0.16	0.10	**0.73**	0.23	24
19	0.26	0.31	0.33	0.26	0.36	0.49	0.54	S	0.18	0.16	0.20	0.19	0.11	0.10	0.09	0.07	0.07	0.08	0.08	0.20	0.30	0.26	0.23	0.13	0.07	0.54	0.22	24
20	0.11	0.16	0.15	0.16	0.25	0.23	S	0.26	0.23	0.23	0.18	0.16	0.13	0.11	0.11	0.12	0.13	0.13	0.14	0.16	0.21	0.12	0.16	0.11	0.11	0.26	0.16	24
21	0.11	0.12	0.13	0.19	0.26	S	0.21	0.21	0.21	0.15	0.13	0.13	0.13	0.12	0.13	0.14	0.13	0.14	0.16	0.17	0.20	0.20	0.21	0.17	0.11	0.26	0.16	24
22	0.14	0.14	0.19	0.17	S	0.20	0.23	0.22	0.15	0.15	0.13	0.12	0.13	0.13	0.13	0.12	0.12	0.12	0.14	0.12	0.16	0.21	0.19	0.23	0.12	0.23	0.16	24
23	0.23	0.22	0.29	S	0.32	0.27	0.32	0.23	0.21	0.16	0.15	0.10	0.11	0.11	0.14	0.10	0.09	0.09	0.10	0.09	0.12	0.19	0.14	0.15	0.09	0.32	0.17	24
24	0.18	0.17	S	0.24	0.24	0.25	0.24	0.17	0.13	0.13	0.12	0.12	0.11	0.10	0.09	0.09	0.09	0.10	0.10	0.12	0.13	0.20	0.24	0.21	0.09	0.25	0.16	24
25	0.19	S	0.16	0.16	0.17	0.20	0.17	0.17	0.16	0.14	0.13	0.12	0.12	0.12	0.11	0.12	0.13	0.13	0.14	0.13	0.13	0.13	0.13	0.15	0.11	0.20	0.14	24
26	S	0.18	0.16	0.17	0.16	0.20	0.21	0.21	0.35	0.27	0.20	0.18	0.16	0.14	0.11	**0.04**	0.10	0.12	0.13	0.12	0.16	0.17	0.20	S	**0.04**	0.35	0.17	24
27	0.44	0.33	0.30	0.40	0.35	0.29	0.29	0.27	0.26	0.26	0.18	0.11	0.10	0.12	0.17	0.15	0.19	0.23	0.18	0.15	0.22	0.19	S	0.15	0.10	0.44	0.23	24
28	0.14	0.13	0.13	0.13	0.15	0.14	0.15	0.16	P	0.15	0.15	0.14	0.12	0.14	0.16	0.13	0.14	0.13	0.13	0.13	0.16	S	0.20	0.20	0.12	0.20	0.15	23
29	0.19	0.19	0.22	0.36	0.58	0.51	0.28	0.27	0.27	0.26	0.19	0.17	0.15	0.14	0.13	0.13	0.14	0.14	0.14	0.17	S	0.25	0.20	0.22	0.13	0.58	0.23	24
30	0.22	0.20	0.22	0.30	0.24	0.30	0.34	0.28	0.29	0.17	0.17	0.14	0.15	0.12	0.10	0.10	0.09	0.07	0.07	S	0.12	0.14	0.15	0.13	0.07	0.34	0.18	24
HOURLY MAX	0.44	0.33	0.42	0.51	0.65	0.73	0.54	0.41	0.35	0.41	0.30	0.37	0.47	0.33	0.26	0.23	0.19	0.23	0.18	0.20	0.30	0.27	0.28	0.26				
HOURLY AVG	0.19	0.21	0.22	0.27	0.32	0.33	0.30	0.25	0.22	0.20	0.17	0.16	0.15	0.13	0.13	0.12	0.12	0.12	0.12	0.14	0.15	0.18	0.18	0.17				

STATUS FLAG CODES

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

24 HR AVERAGES June 2017

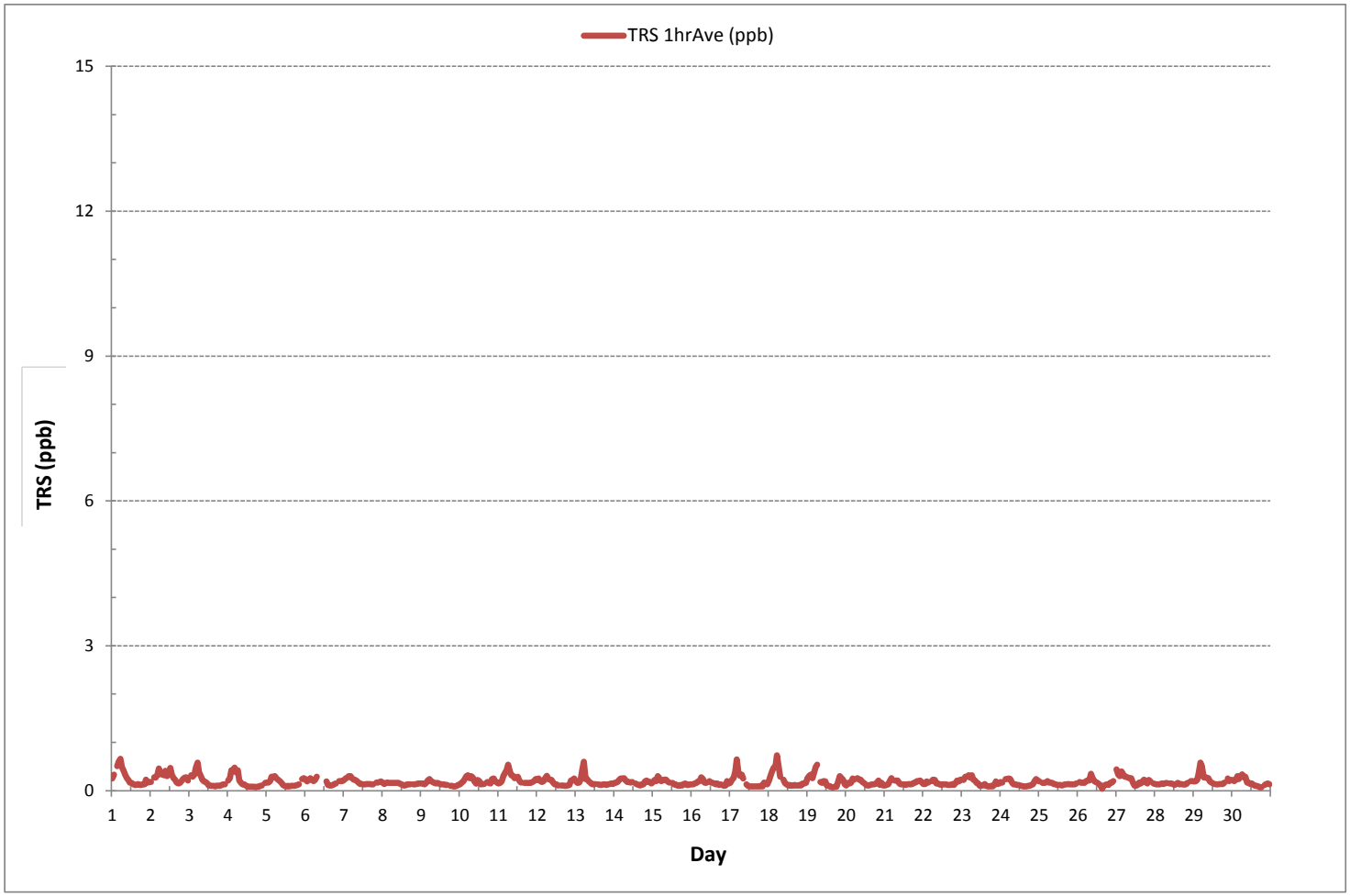


MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		682				
MINIMUM 1-HR AVERAGE	0.04	ppb	@ HOUR	15	ON DAY	26
MAXIMUM 1-HR AVERAGE:	0.73	ppb	@ HOUR	5	ON DAY	18
MAXIMUM 24-HR AVERAGE:	0.29	ppb			ON DAY	2

IZS CALIBRATION TIME:	32	hrs	OPERATIONAL TIME:	719	hrs
MONTHLY CALIBRATION TIME:	5	hrs	AMD OPERATION UPTIME:	99.9	%
STANDARD DEVIATION:	0.09		MONTHLY AVERAGE:	0.19	ppb

TOTAL REDUCED SULPHUR Hourly Averages (TRS ppb)



Maxxam
A Bureau Veritas Group Company

TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	0.20	0.28	S	0.43	0.67	0.62	0.51	0.36	0.28	0.17	0.15	0.09	0.05	0.05	0.02	0.02	0.07	0.04	0.05	0.05	0.02	0.49	0.07	0.12	0.02	0.67	0.21	24
2	0.14	S	0.28	0.20	0.36	0.70	0.49	0.41	0.30	0.46	0.30	0.33	0.54	0.33	0.17	0.17	0.09	0.07	0.05	0.12	0.17	0.17	0.25	0.17	0.05	0.70	0.27	24
3	S	0.35	0.30	0.35	0.51	0.57	P	0.22	0.17	P	0.12	0.09	0.05	0.05	0.02	0.04	0.02	0.02	0.04	0.05	0.09	0.07	0.09	S	0.02	0.57	0.16	22
4	0.28	0.25	0.75	0.46	0.59	0.56	0.43	0.36	0.15	0.09	0.09	0.07	0.07	0.07	0.07	0.09	0.07	0.07	0.07	0.12	0.09	0.09	S	0.25	0.07	0.75	0.22	24
5	0.17	0.20	0.28	0.28	0.36	0.38	0.25	0.25	0.20	0.17	0.12	0.07	0.09	0.09	0.07	0.09	0.07	0.09	0.09	0.09	0.12	S	0.28	0.33	0.07	0.38	0.18	24
6	0.25	0.22	0.25	0.28	0.30	0.28	0.30	0.43	C	C	C	C	C	0.67	0.20	0.17	0.15	0.20	0.17	0.17	S	0.25	0.28	0.22	0.15	0.67	0.27	24
7	0.28	0.28	0.30	0.38	0.36	0.30	0.28	0.28	0.22	0.17	0.17	0.15	0.14	0.17	0.15	0.17	0.15	0.15	0.15	S	0.17	0.17	0.20	0.17	0.14	0.38	0.22	24
8	0.17	0.15	0.17	0.22	P	0.17	0.20	0.17	0.22	0.20	0.20	0.17	0.15	0.15	0.17	0.17	0.17	0.17	S	0.17	0.15	0.17	0.19	0.17	0.15	0.22	0.18	23
9	0.15	0.17	0.15	0.17	0.30	0.25	0.25	0.17	0.17	0.15	0.15	0.15	0.15	0.12	0.12	0.12	0.15	S	0.09	0.09	0.09	0.07	0.12	0.15	0.07	0.30	0.15	24
10	0.15	0.17	0.25	0.30	0.51	0.33	0.28	0.33	0.28	0.20	0.15	0.25	0.22	0.12	0.17	0.17	S	0.25	0.17	0.17	0.30	0.28	0.22	0.17	0.12	0.51	0.24	24
11	0.20	0.17	0.20	0.56	0.72	0.67	0.67	0.56	0.38	0.41	0.28	0.30	0.36	0.22	0.20	S	0.17	0.17	0.17	0.17	0.17	0.20	0.25	0.33	0.17	0.72	0.33	24
12	0.22	0.25	0.25	0.22	0.22	0.28	0.33	0.28	0.25	0.25	0.20	0.15	0.12	0.12	S	0.15	0.12	0.15	0.12	0.12	0.14	0.28	0.28	0.28	0.12	0.33	0.21	24
13	0.22	0.22	0.20	0.30	0.75	0.75	0.30	0.28	0.17	0.17	0.17	0.17	0.15	S	0.15	0.15	0.12	0.12	0.15	0.12	0.17	0.17	0.17	0.15	0.12	0.75	0.23	24
14	0.17	0.20	0.28	0.30	0.30	0.28	0.28	0.22	0.20	0.17	0.17	0.38	S	0.17	0.15	0.15	0.14	0.17	0.17	0.25	0.25	0.20	0.22	0.17	0.14	0.38	0.22	24
15	0.22	0.28	0.25	0.46	0.30	0.25	0.28	0.28	0.28	0.25	0.22	S	0.22	0.17	0.17	0.17	0.17	0.17	0.15	0.20	0.25	0.15	0.15	0.17	0.15	0.46	0.23	24
16	0.17	0.17	0.17	0.20	0.22	0.25	0.30	0.28	0.20	0.15	S	0.22	0.20	0.17	0.17	0.15	0.17	0.20	0.17	0.12	0.15	0.12	0.43	0.20	0.12	0.43	0.20	24
17	0.20	0.33	0.30	0.59	1.06	0.51	0.36	0.41	0.36	S	0.20	0.15	0.15	0.15	0.15	0.15	0.12	0.14	0.15	0.15	0.17	0.33	0.22	0.20	0.12	1.06	0.28	24
18	0.28	0.46	0.51	0.56	0.62	0.98	0.75	0.38	S	0.36	0.25	0.22	0.20	0.17	0.20	0.17	0.20	0.17	0.17	0.17	0.20	0.25	0.22	0.25	0.17	0.98	0.34	24
19	0.36	0.49	0.49	0.38	0.59	0.85	0.80	S	0.28	0.33	0.30	0.33	0.20	0.20	0.15	0.15	0.15	0.17	0.17	0.43	0.43	0.41	0.30	0.22	0.15	0.85	0.36	24
20	0.17	0.30	0.22	0.28	0.33	0.36	S	0.33	0.30	0.30	0.25	0.22	0.17	0.20	0.17	0.17	0.17	0.20	0.17	0.22	0.36	0.17	0.30	0.17	0.17	0.36	0.24	24
21	0.17	0.17	0.17	0.22	0.41	S	0.25	0.25	0.25	0.20	0.20	0.15	0.17	0.17	0.17	0.15	0.17	0.15	0.20	0.20	0.23	0.25	0.25	0.20	0.15	0.41	0.21	24
22	0.15	0.17	0.20	0.20	S	0.25	0.28	0.28	0.15	0.17	0.15	0.14	0.17	0.17	0.17	0.15	0.17	0.20	0.17	0.17	0.25	0.28	0.25	0.36	0.14	0.36	0.20	24
23	0.30	0.30	0.51	S	0.43	0.38	0.41	0.30	0.28	0.25	0.22	0.20	0.17	0.20	0.22	0.17	0.17	0.17	0.17	0.15	0.28	0.36	0.25	0.28	0.15	0.51	0.27	24
24	0.28	0.28	S	0.33	0.36	0.30	0.33	0.25	0.28	0.20	0.20	0.20	0.20	0.17	0.12	0.15	0.15	0.15	0.17	0.17	0.25	0.25	0.30	0.28	0.12	0.36	0.23	24
25	0.25	S	0.22	0.20	0.20	0.23	0.20	0.20	0.20	0.15	0.14	0.17	0.15	0.14	0.14	0.15	0.17	0.15	0.17	0.17	0.15	0.15	0.17	0.17	0.14	0.25	0.18	24
26	S	0.17	0.17	0.20	0.20	0.22	0.25	0.25	0.41	0.33	0.22	0.20	0.22	0.17	0.12	P	0.12	0.17	0.17	0.20	0.20	0.20	0.30	S	0.12	0.41	0.21	23
27	0.56	0.38	0.38	0.46	0.54	0.41	0.38	0.36	0.30	0.30	0.28	0.15	0.12	0.20	0.26	0.20	0.28	0.33	0.28	0.20	0.41	0.23	S	0.20	0.12	0.56	0.31	24
28	0.20	0.17	0.17	0.17	0.23	0.17	0.18	0.20	P	0.20	0.18	0.17	0.12	0.15	0.20	0.15	0.17	0.15	0.15	0.15	0.15	S	0.25	0.20	0.12	0.25	0.18	23
29	0.22	0.20	0.25	0.46	0.67	0.57	0.36	0.25	P	0.25	0.20	0.17	0.17	0.15	0.12	0.15	0.15	0.15	0.15	0.15	S	0.28	0.22	0.23	0.12	0.67	0.25	23
30	0.22	0.28	0.30	0.38	0.25	0.41	0.38	0.33	0.46	0.20	0.22	0.15	0.22	0.12	0.12	0.12	0.09	0.09	0.15	S	0.12	0.17	0.17	P	0.09	0.46	0.23	23
HOURLY MAX	0.56	0.49	0.75	0.59	1.06	0.98	0.80	0.56	0.46	0.46	0.30	0.38	0.54	0.67	0.26	0.20	0.28	0.33	0.28	0.43	0.43	0.49	0.43	0.36				
HOURLY AVG	0.23	0.25	0.28	0.33	0.44	0.42	0.36	0.30	0.26	0.23	0.20	0.19	0.18	0.17	0.15	0.14	0.14	0.15	0.15	0.16	0.20	0.22	0.23	0.22				

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

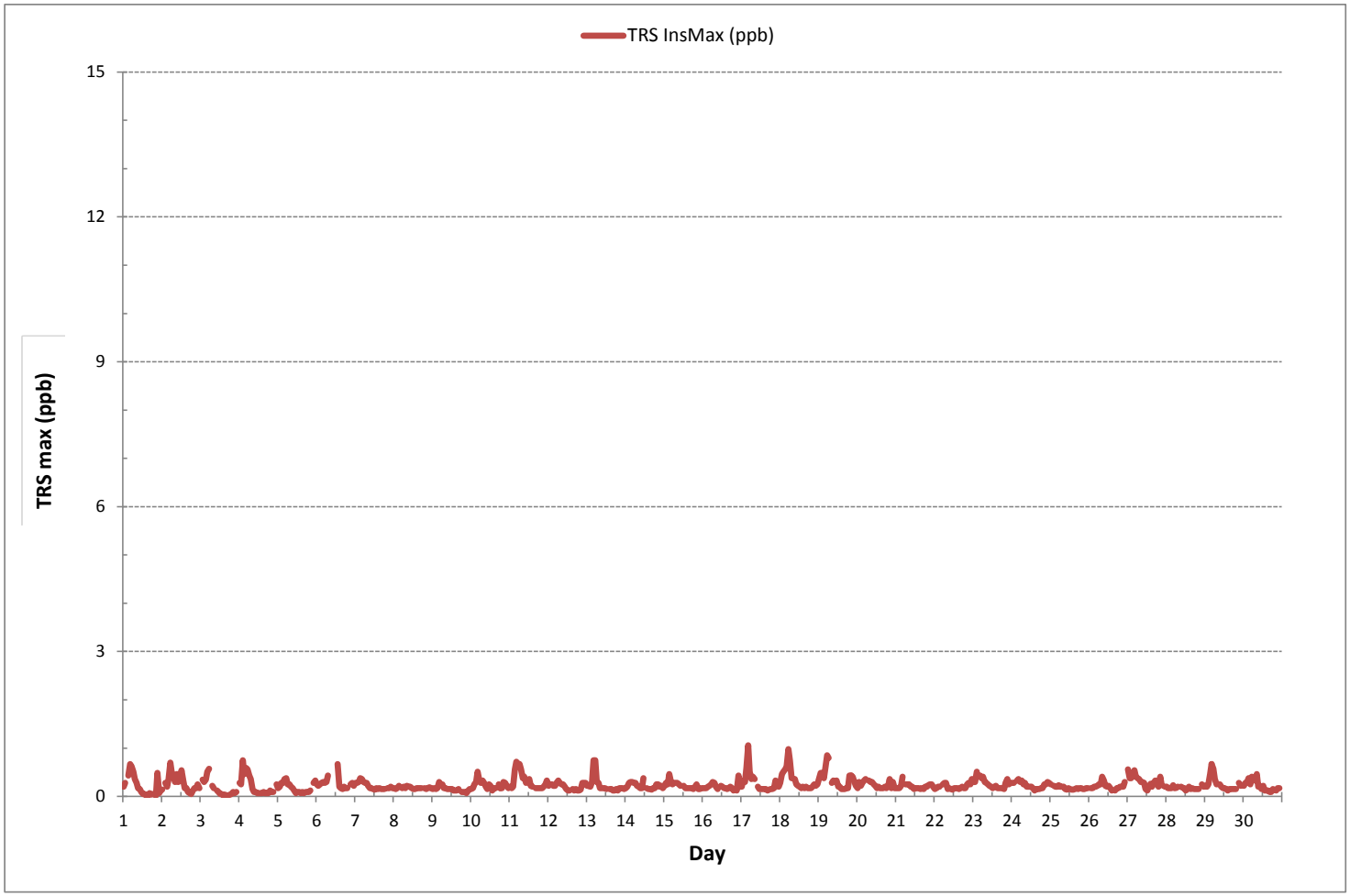
NUMBER OF NON-ZERO READINGS: 676

MAXIMUM INSTANTANEOUS VALUE: 1.06 ppb @ HOUR 4 ON DAY 17

IZS CALIBRATION TIME: 32 hrs
MONTHLY CALIBRATION TIME: 5 hrs
STANDARD DEVIATION: 0.13

OPERATIONAL TIME: 713 hrs

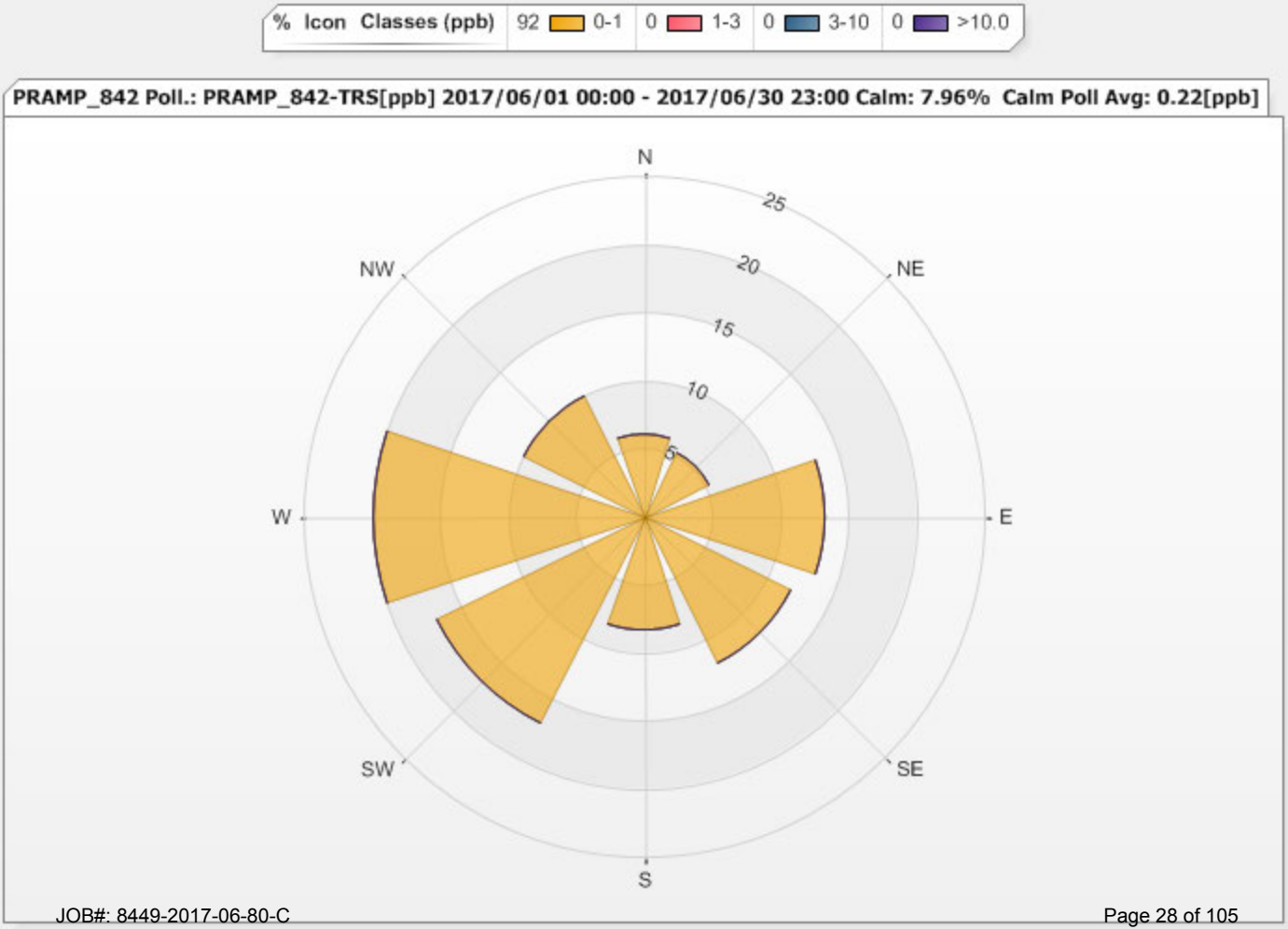
TOTAL REDUCED SULPHUR Instantaneous Maximum (TRS ppb)



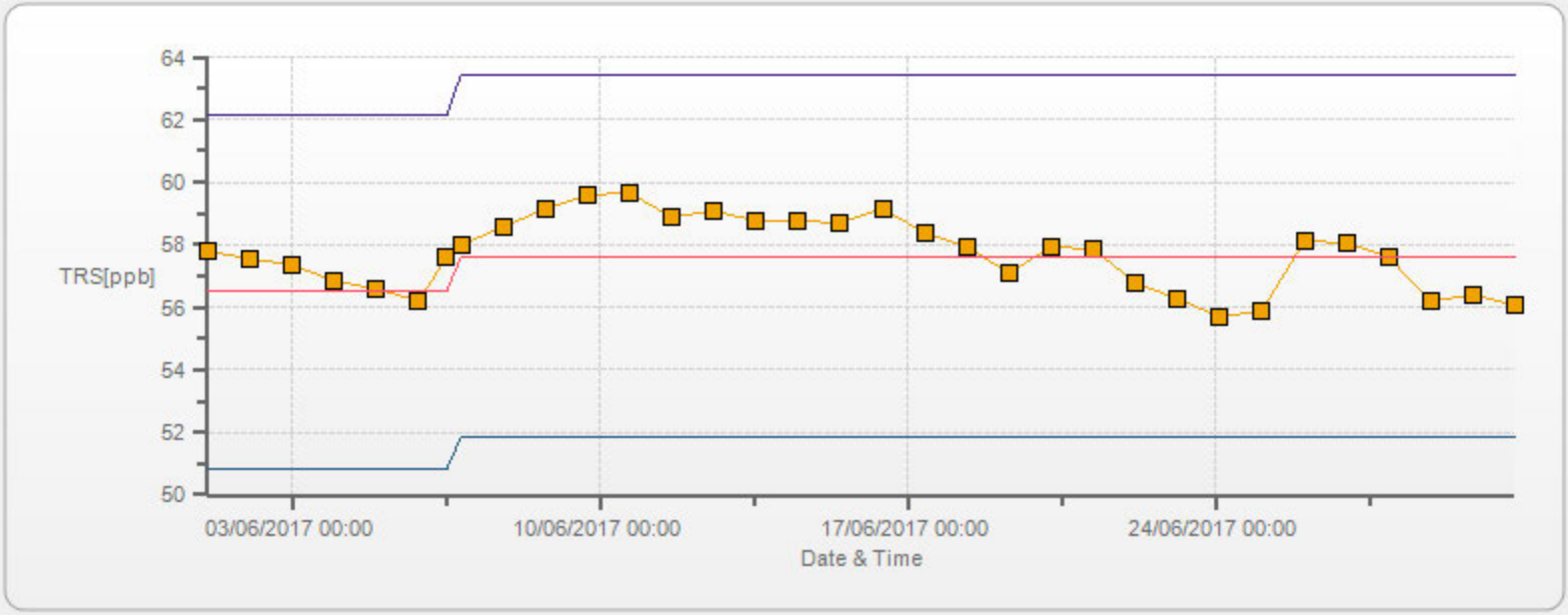
Wind: PRAMP_842
Poll.: PRAMP_842-TRS[ppb]
Monthly: 17/06
Type: PollutionRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

Calm: 7.96% Calm Avg: 0.22 [ppb]

Direction	0-1	1-3	3-10	>10.0	Total
N	6.1	0.0	0.0	0.0	6.1
NE	5.3	0.0	0.0	0.0	5.3
E	13.3	0.0	0.0	0.0	13.3
SE	12.0	0.0	0.0	0.0	12.0
S	8.4	0.0	0.0	0.0	8.4
SW	17.0	0.0	0.0	0.0	17.0
W	20.0	0.0	0.0	0.0	20.0
NW	10.0	0.0	0.0	0.0	10.0
Summary	92.0	0.0	0.0	0.0	92.0


% Icon Classes (ppb)
92 0-1
0 1-3
0 3-10
0 >10.0
PRAMP_842 Poll.: PRAMP_842-TRS[ppb] 2017/06/01 00:00 - 2017/06/30 23:00 Calm: 7.96% Calm Poll Avg: 0.22[ppb]
N
NE
E
SE
S
SW
W
NW
5
10
15
20
25

TRS[ppb] Calibration: PRAMP_842 Monthly: 17/06 Type: Span



TOTAL HYDROCARBON

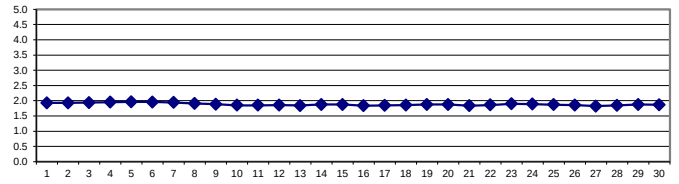
TOTAL HYDROCARBONS Hourly Averages (THC ppm)

HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.
DAY																												
1	1.96	1.96	S	1.98	1.98	1.98	1.96	1.95	1.94	1.93	1.92	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.93	1.91	1.91	1.90	1.98	1.93	24
2	1.91	S	1.93	1.93	1.94	1.94	1.94	1.95	1.93	1.91	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.95	1.96	1.93	1.91	1.96	1.93	24
3	S	1.95	1.95	1.97	1.97	1.98	1.96	1.95	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.93	1.93	1.93	S	1.92	1.98	1.94	24
4	1.94	1.96	2.02	2.03	2.01	1.99	2.00	1.96	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.93	1.93	1.94	S	1.95	1.92	2.03	1.95	24
5	1.96	1.96	1.99	2.01	2.00	2.03	2.00	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.95	1.95	S	1.98	1.97	1.93	2.03	**1.96**	24
6	2.00	1.99	2.02	2.02	2.02	2.03	2.01	2.00	1.96	1.95	1.94	C	C	C	C	C	1.87	1.87	1.88	1.88	S	1.93	1.95	1.92	1.87	2.03	1.96	24
7	1.97	2.03	2.10	2.10	2.00	2.02	1.96	1.93	1.94	1.91	1.88	1.89	1.88	1.88	1.88	1.88	1.88	1.89	1.89	S	1.92	1.94	1.96	1.96	1.88	2.10	1.94	24
8	1.91	1.92	1.92	1.94	1.92	1.93	1.93	1.93	1.91	1.91	1.89	1.88	1.87	1.88	1.87	1.88	1.87	1.88	S	1.88	1.91	1.90	1.93	1.97	1.87	1.97	1.91	24
9	1.97	1.92	1.93	1.93	1.91	1.93	1.91	1.89	1.89	1.88	1.88	1.88	1.87	1.87	1.86	1.86	1.85	S	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.97	1.88	24
10	1.85	1.85	1.85	1.86	1.87	1.88	1.86	1.87	1.86	1.85	1.85	1.85	1.85	1.84	1.85	1.84	S	1.84	1.84	1.84	1.84	1.85	1.85	1.85	1.84	1.88	1.85	24
11	1.85	1.85	1.84	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.86	1.85	1.85	1.85	S	1.84	1.85	1.85	1.84	1.85	1.85	1.86	1.88	1.84	1.88	1.85	24
12	1.88	1.86	1.85	1.86	1.86	1.88	1.88	1.88	1.87	1.86	1.85	1.84	1.85	1.84	S	1.84	1.84	1.83	1.83	1.83	1.84	1.86	1.86	1.87	1.83	1.88	1.85	24
13	1.84	1.84	1.83	1.85	1.87	1.88	1.86	1.87	1.85	1.84	1.84	1.84	1.84	S	1.84	1.83	1.84	1.83	1.83	1.84	1.84	1.84	1.84	**1.79**	**1.79**	1.88	1.84	24
14	1.82	1.85	1.85	1.87	1.88	1.87	1.87	1.87	1.87	C1	C1	C1	Y	Y	Y	C1	C1	C1	1.87	1.95	1.93	1.90	1.90	1.87	1.82	1.95	1.88	15
15	1.91	1.99	1.89	1.88	1.88	1.89	1.90	1.88	1.87	1.86	1.86	S	1.87	1.86	1.86	1.86	1.86	1.86	1.85	1.86	1.86	1.86	1.86	1.86	1.85	1.99	1.88	24
16	1.84	1.87	1.87	1.87	1.88	1.86	1.85	1.84	1.83	1.82	S	1.83	1.82	1.82	1.82	1.82	1.82	1.82	1.83	1.83	1.83	1.83	1.84	1.82	1.82	1.88	1.84	24
17	1.83	1.84	1.86	1.88	1.91	1.86	1.85	1.85	1.84	S	1.83	1.83	1.83	1.83	1.83	1.84	1.84	1.84	1.84	1.84	1.84	1.85	1.84	1.85	1.83	1.91	1.85	24
18	1.86	1.87	1.88	1.88	1.89	1.89	1.89	1.88	S	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.85	1.86	1.88	1.84	1.89	1.86	24
19	1.91	1.90	1.89	1.90	1.99	1.96	1.91	S	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.81	1.84	1.87	1.87	1.88	1.91	1.86	1.81	1.99	1.87	24
20	1.90	2.00	1.96	1.94	**2.25**	2.00	S	1.88	1.84	1.86	1.83	1.83	1.82	1.81	1.81	1.81	1.82	1.82	1.80	1.83	1.85	1.82	1.83	1.82	1.80	**2.25**	1.88	24
21	1.83	1.83	1.83	1.83	1.85	S	1.82	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.85	1.85	1.85	1.82	1.85	1.84	24
22	1.85	1.86	1.86	1.87	S	1.87	1.88	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.85	1.85	1.85	1.85	1.85	1.82	1.87	1.88	1.89	1.82	1.89	1.86	24
23	1.90	1.91	2.01	S	2.03	2.04	2.05	1.92	1.88	1.87	1.86	1.86	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.87	1.90	1.92	1.85	2.05	1.90	24
24	1.91	1.89	S	1.92	1.93	1.93	1.91	1.86	1.88	1.88	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.87	1.88	2.01	2.00	1.86	2.01	1.89	24
25	1.92	S	1.85	1.86	1.90	1.90	1.90	1.89	1.88	1.87	1.87	1.86	1.86	1.86	1.84	1.83	1.85	1.85	1.88	1.87	1.87	1.87	1.88	1.89	1.83	1.92	1.87	24
26	S	1.89	1.86	1.85	1.87	1.90	1.90	1.90	1.90	1.90	1.89	1.88	1.87	1.83	1.84	1.82	1.83	1.82	1.81	1.82	1.82	1.83	1.82	S	1.81	1.90	1.86	24
27	1.84	1.84	1.83	1.82	1.81	1.84	1.84	1.83	1.79	1.82	1.83	1.81	1.79	1.82	1.82	1.82	1.82	1.82	1.83	1.82	1.83	1.83	S	1.84	1.79	1.84	1.82	24
28	1.82	1.83	1.83	1.79	1.82	1.82	1.84	1.85	P	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.86	1.85	1.86	1.88	S	1.87	1.87	1.79	1.88	1.85	23
29	1.86	1.87	1.88	1.90	1.91	1.93	1.92	1.91	1.90	1.89	1.88	1.87	1.86	1.87	1.86	1.86	1.86	1.86	1.84	1.84	S	1.89	1.86	1.86	1.84	1.93	1.88	24
30	1.88	1.88	1.90	2.03	1.97	1.90	1.88	1.86	1.87	1.86	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.83	1.83	S	1.83	1.84	1.85	1.85	1.83	2.03	1.87	24
HOURLY MAX	2.00	2.03	2.10	2.10	2.25	2.04	2.05	2.00	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.95	1.95	1.95	2.01	2.00				
HOURLY AVG	1.89	1.90	1.90	1.91	1.93	1.92	1.91	1.89	1.88	1.88	1.87	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.87	1.87	1.87	1.89	1.89				

STATUS FLAG CODES

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

24 HR AVERAGES June 2017

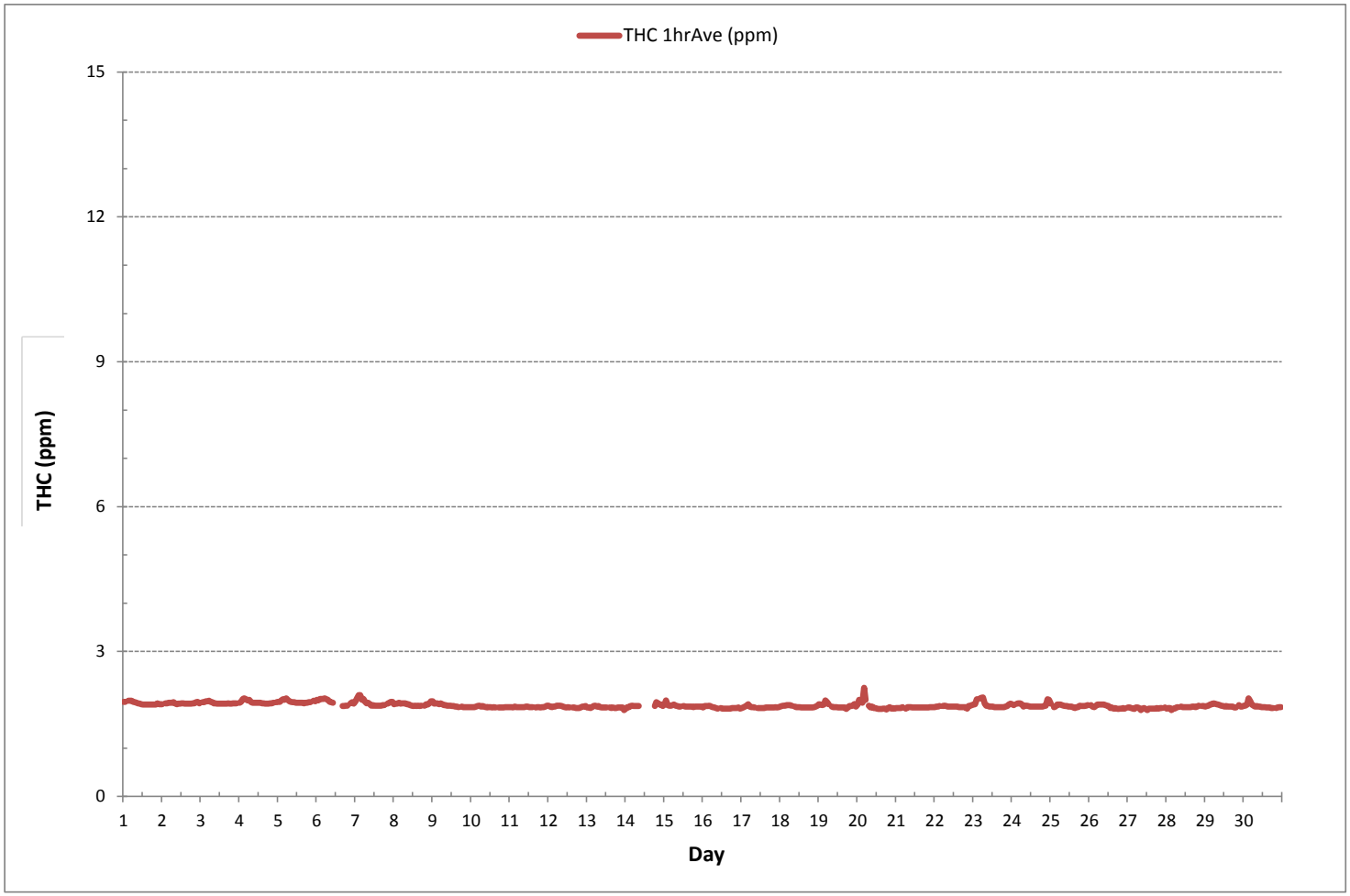


MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		674				
MINIMUM 1-HR AVERAGE	1.79	ppm	@ HOUR	23	ON DAY	13
MAXIMUM 1-HR AVERAGE:	2.25	ppm	@ HOUR	4	ON DAY	20
MAXIMUM 24-HR AVERAGE:	1.96	ppm			ON DAY	5

IZS CALIBRATION TIME:	31	hrs	OPERATIONAL TIME:	710	hrs
MONTHLY CALIBRATION TIME:	5	hrs	AMD OPERATION UPTIME:	98.6	%
STANDARD DEVIATION:	0.05		MONTHLY AVERAGE:	1.88	ppm

TOTAL HYDROCARBONS Hourly Averages (THC ppm)



TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)

HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.
DAY																												
1	2.07	2.02	S	2.07	2.03	2.00	1.99	1.96	1.96	1.95	1.94	1.93	1.92	1.92	1.91	1.92	1.91	1.92	1.92	1.92	1.92	2.01	1.93	1.93	1.91	2.07	1.96	24
2	1.93	S	1.96	1.95	2.02	1.97	1.95	1.97	1.95	1.93	1.93	1.95	1.95	1.94	1.93	1.94	1.94	1.93	1.94	1.98	1.98	1.97	1.97	1.96	1.93	2.02	1.95	24
3	S	1.99	1.98	2.00	2.00	2.00	P	1.96	1.95	P	1.95	1.97	1.93	1.93	1.93	1.94	1.94	1.95	1.94	1.94	1.94	1.95	1.94	S	1.93	2.00	1.96	22
4	1.96	2.01	2.12	2.07	2.06	2.01	2.02	1.99	1.96	1.95	1.95	1.95	1.96	2.02	1.94	1.94	1.94	1.93	1.93	1.95	1.95	1.95	S	1.99	1.93	2.12	1.98	24
5	1.99	1.97	2.05	2.07	2.05	2.08	2.15	1.99	1.97	1.97	1.97	1.95	1.96	1.96	1.96	1.94	1.94	1.99	1.95	1.96	1.97	S	2.00	2.01	1.94	2.15	1.99	24
6	2.03	2.00	2.11	2.04	2.04	2.06	2.03	2.03	1.98	2.01	2.02	C	C	C	C	C	1.87	1.87	2.02	1.90	S	2.02	2.00	1.95	1.87	2.11	2.00	24
7	2.13	2.15	2.30	2.19	2.06	2.16	2.03	1.94	1.96	1.95	1.91	1.95	2.03	1.89	2.01	1.91	1.94	2.02	1.98	S	2.00	2.04	2.10	2.12	1.89	2.30	2.03	24
8	1.95	1.93	1.94	1.98	P	1.94	1.94	2.06	1.94	1.99	1.91	1.90	1.89	2.06	1.92	1.99	1.89	2.08	S	1.90	2.02	1.97	1.98	2.13	1.89	2.13	1.97	23
9	2.13	1.94	1.97	2.15	1.94	2.09	1.93	1.91	1.92	1.91	1.96	1.89	1.89	1.96	1.87	1.87	1.86	S	1.90	1.86	1.86	1.89	1.86	1.86	1.86	2.15	1.93	24
10	1.86	1.90	1.91	1.98	1.89	2.01	1.89	1.87	1.87	1.86	1.89	1.86	1.93	1.85	1.86	1.85	S	1.85	1.85	1.85	1.85	1.86	1.86	1.86	1.85	2.01	1.88	24
11	1.86	1.93	1.86	1.93	1.92	1.89	1.86	1.91	1.87	1.97	1.86	1.87	1.91	1.86	1.85	S	1.86	1.85	1.86	1.85	1.86	1.86	1.91	1.91	1.85	1.97	1.88	24
12	1.91	1.87	1.87	1.87	1.87	1.89	1.90	1.90	1.87	1.89	1.86	1.85	1.86	1.84	S	1.84	1.85	1.84	1.94	1.86	1.85	1.90	1.89	1.89	1.84	1.94	1.87	24
13	1.87	1.86	1.93	1.87	1.89	1.91	1.89	1.87	1.86	1.85	1.85	1.84	1.85	S	1.85	1.87	1.90	1.85	1.84	1.84	1.92	1.85	1.84	1.86	1.84	1.93	1.87	24
14	1.92	1.89	1.86	1.87	1.92	1.89	1.87	2.04	1.94	C1	C1	C1	Y	Y	Y	C1	C1	C1	1.88	2.01	2.01	1.95	1.95	1.90	1.86	2.04	1.93	15
15	1.97	2.03	1.93	1.88	1.89	1.89	1.90	1.89	1.88	1.87	1.88	S	1.87	1.87	1.87	1.87	1.86	1.87	1.86	1.86	1.91	1.86	1.87	1.88	1.86	2.03	1.89	24
16	1.89	1.88	1.88	1.90	1.90	1.88	1.87	1.87	1.86	1.84	S	1.84	1.83	1.82	1.82	1.82	1.83	1.83	1.84	1.84	1.85	1.85	1.88	1.85	1.82	1.90	1.86	24
17	1.85	1.90	1.90	1.92	2.01	1.89	1.87	1.86	1.86	S	1.85	1.85	1.86	1.86	1.86	1.86	1.85	1.86	1.85	1.87	1.86	1.88	1.85	1.90	1.85	2.01	1.87	24
18	1.97	1.89	1.89	1.90	1.90	1.90	1.90	1.89	S	1.87	1.85	1.86	1.85	1.85	1.85	1.85	1.84	1.85	1.85	1.86	1.86	1.96	1.91	1.89	1.84	1.97	1.88	24
19	1.97	1.92	1.90	1.94	2.06	2.02	1.94	S	1.86	1.86	1.86	1.87	1.85	1.92	1.85	1.86	1.88	1.85	1.87	1.88	1.89	1.91	1.93	1.92	1.85	2.06	1.90	24
20	1.92	2.41	2.23	2.17	2.42	2.30	S	1.89	1.88	1.87	1.85	1.84	1.84	1.82	1.83	1.82	1.82	1.83	1.83	1.85	1.87	1.85	1.85	1.83	1.82	2.42	1.95	24
21	1.97	1.89	1.84	1.84	1.89	S	1.86	1.87	1.86	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.85	2.03	1.85	1.85	1.98	1.87	1.86	1.87	1.84	2.03	1.88	24
22	1.86	1.86	1.87	1.88	S	1.88	1.89	1.88	1.87	1.87	1.88	1.87	1.86	1.87	1.87	1.88	1.87	1.87	1.87	1.87	1.91	1.91	1.90	1.91	1.86	1.91	1.88	24
23	1.94	1.95	2.13	S	2.12	2.12	2.09	2.01	1.90	1.89	1.87	1.86	1.93	1.87	1.86	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.97	2.07	1.86	2.13	1.94	24
24	1.95	1.96	S	1.95	1.96	1.95	1.94	1.89	1.88	1.88	1.88	1.87	1.87	1.87	1.86	1.87	1.86	1.87	1.88	1.87	1.88	1.91	2.21	2.13	1.86	2.21	1.92	24
25	1.98	S	1.91	1.91	1.91	1.91	1.90	1.90	1.89	1.88	1.88	1.87	1.87	1.93	1.87	1.87	1.87	1.88	1.88	1.88	1.87	1.88	1.89	1.89	1.87	1.98	1.89	24
26	S	1.90	1.89	1.89	1.94	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.89	1.88	1.85	P	1.84	1.85	1.83	1.83	1.83	1.85	1.84	S	1.83	1.94	1.88	23
27	1.85	1.85	1.85	1.88	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.82	1.83	1.83	1.83	1.84	1.82	1.83	1.85	1.83	1.85	1.84	S	1.85	1.82	1.88	1.84	24
28	1.91	1.84	1.83	1.83	1.83	1.84	1.85	1.86	P	1.86	1.86	1.87	1.86	1.86	1.86	1.86	1.86	1.87	1.97	1.88	1.91	S	1.88	1.88	1.83	1.97	1.87	23
29	1.87	1.88	1.89	1.91	1.92	1.94	1.93	1.92	P	1.90	1.89	1.87	1.88	1.88	1.87	1.87	1.87	1.87	1.86	1.85	S	1.91	1.89	1.88	1.85	1.94	1.89	23
30	1.89	1.90	2.02	2.09	2.03	1.92	1.90	1.89	1.89	1.87	1.87	1.85	1.85	1.86	1.85	1.85	1.85	1.85	1.84	S	1.84	1.86	1.88	P	1.84	2.09	1.89	23
HOURLY MAX	2.13	2.41	2.30	2.19	2.42	2.30	2.15	2.06	1.98	2.01	2.02	1.97	2.03	2.06	2.01	1.99	1.94	2.08	2.02	2.01	2.02	2.04	2.21	2.13				
HOURLY AVG	1.94	1.95	1.96	1.96	1.98	1.97	1.93	1.92	1.90	1.90	1.89	1.88	1.89	1.89	1.88	1.88	1.87	1.89	1.89	1.88	1.90	1.91	1.92	1.93				

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

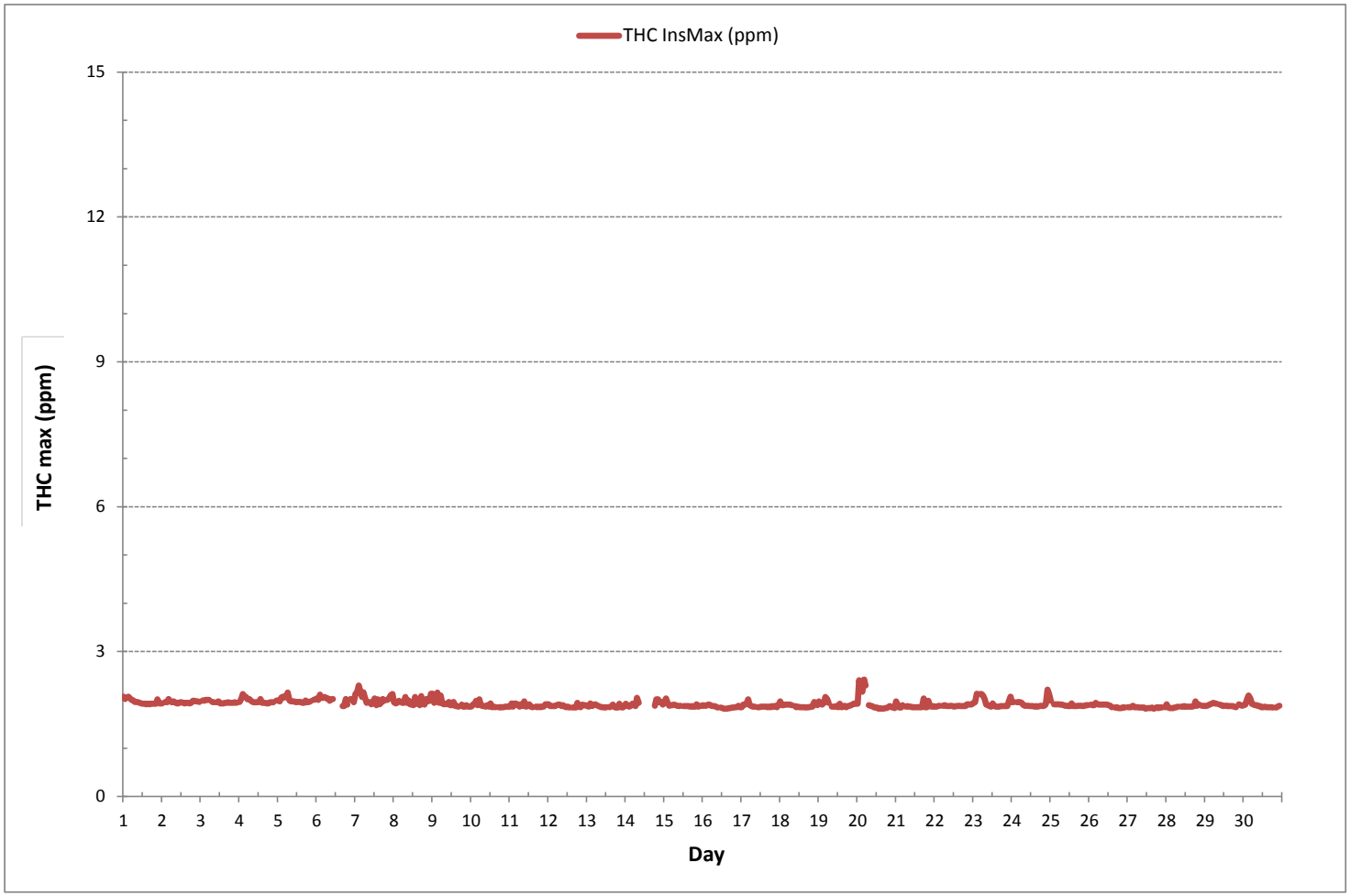
NUMBER OF NON-ZERO READINGS: 668

MAXIMUM INSTANTANEOUS VALUE: 2.42 ppm @ HOUR 4 ON DAY 20

IZS CALIBRATION TIME: 31 hrs
MONTHLY CALIBRATION TIME: 5 hrs
STANDARD DEVIATION: 0.08

OPERATIONAL TIME: 704 hrs

TOTAL HYDROCARBONS Instantaneous Maximum (THC ppm)



Wind: PRAMP_842
Poll.: PRAMP_842-THC55[ppm]
Monthly: 17/06
Type: PollutionRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

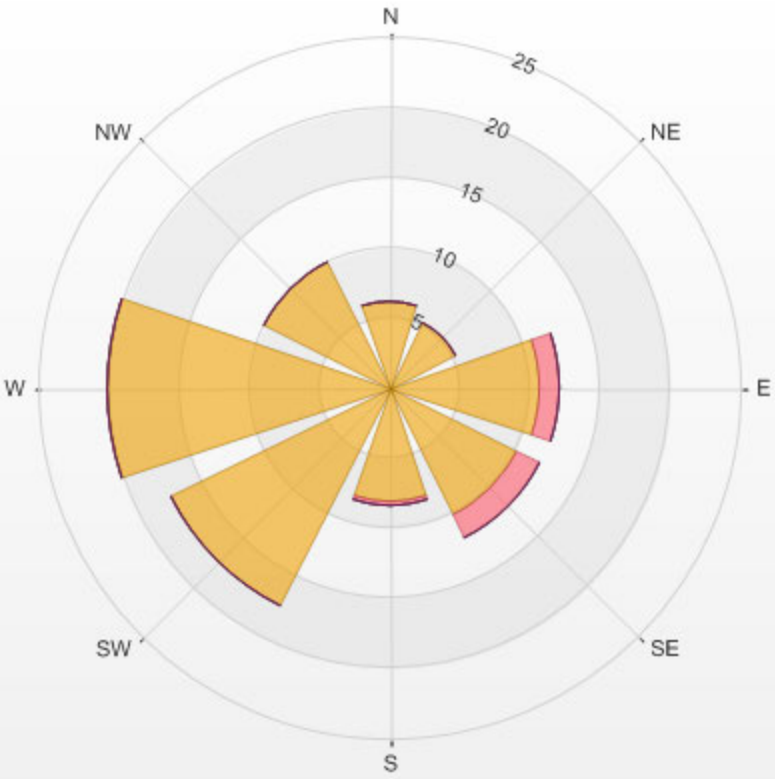
Calm: 8.37%

Calm Avg: 1.89 [ppm]

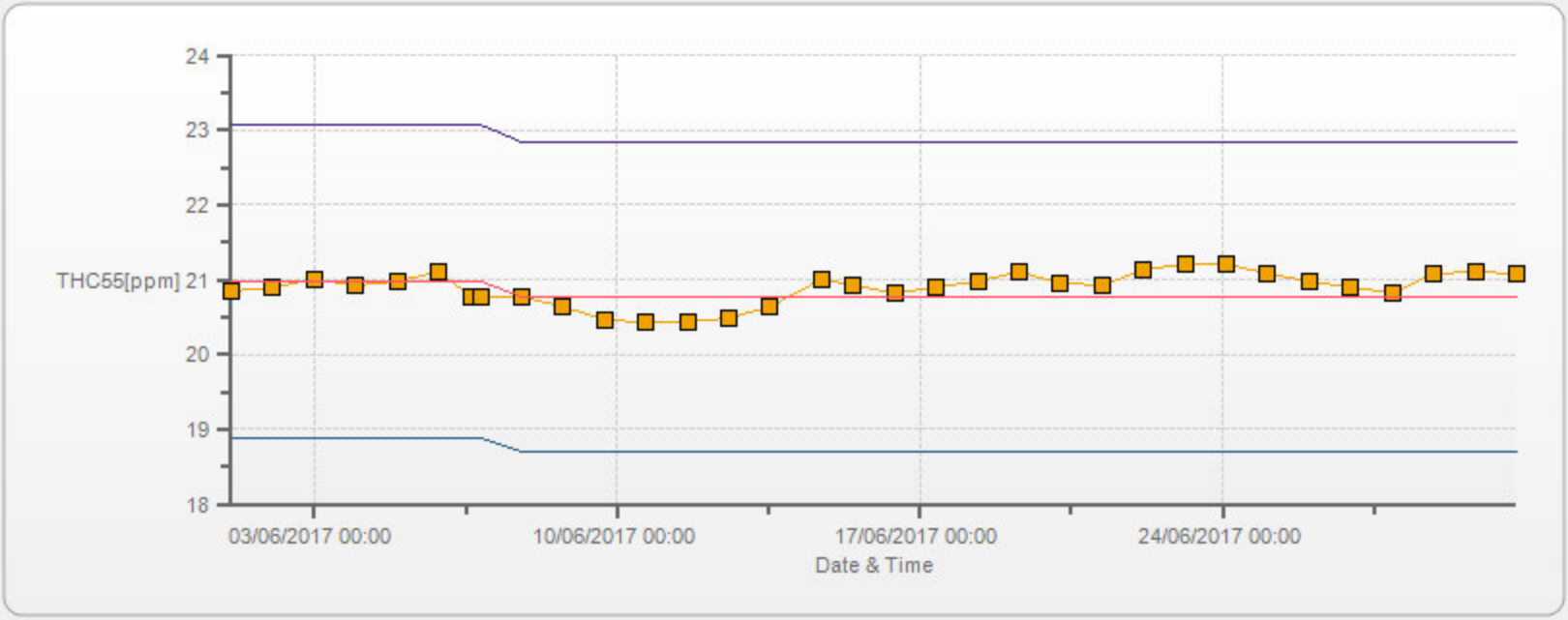
Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	6.2	0.0	0.0	0.0	0.0	6.2
NE	5.2	0.0	0.0	0.0	0.0	5.2
E	10.7	1.4	0.0	0.0	0.0	12.2
SE	10.1	1.9	0.0	0.0	0.0	12.0
S	8.1	0.3	0.0	0.0	0.0	8.4
SW	17.4	0.0	0.0	0.0	0.0	17.4
W	20.2	0.0	0.0	0.0	0.0	20.2
NW	10.1	0.0	0.0	0.0	0.0	10.1
Summary	88.0	3.6	0.0	0.0	0.0	91.6

% Icon Classes (ppm)	88 0-2	4 2-3	0 3-5	0 5-10	0 >10.0

PRAMP_842 Poll.: PRAMP_842-THC55[ppm] 2017/06/01 00:00 - 2017/06/30 23:00 Calm: 8.37% Calm Poll Avg: 1.89[ppm]



THC55[ppm] Calibration: PRAMP_842 Monthly: 17/06 Type: Span



METHANE

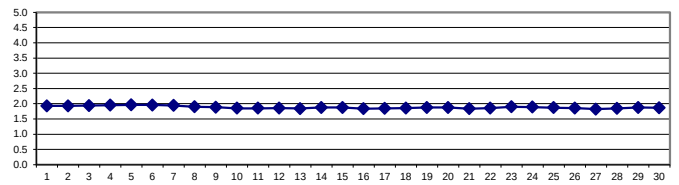
METHANE Hourly Averages (CH_4 ppm)

HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.
DAY																												
1	1.96	1.96	S	1.98	1.98	1.98	1.96	1.95	1.94	1.93	1.92	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.93	1.91	1.91	1.90	1.98	1.93	24
2	1.91	S	1.93	1.93	1.94	1.94	1.94	1.95	1.93	1.91	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.95	1.96	1.93	1.91	1.96	1.93	24
3	S	1.95	1.95	1.97	1.97	1.98	1.96	1.95	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.92	1.92	1.93	1.93	1.93	S	1.92	1.98	1.94	24
4	1.94	1.96	2.02	2.03	2.01	1.99	2.00	1.96	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.93	1.92	1.92	1.92	1.93	1.93	1.94	S	1.95	1.92	2.03	1.95	24
5	1.96	1.96	1.99	2.01	2.00	2.03	1.99	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.95	1.95	S	1.98	1.97	1.93	2.03	**1.96**	24
6	2.00	1.99	2.02	2.02	2.02	2.03	2.01	2.00	1.96	1.95	1.94	C	C	C	C	C	1.87	1.87	1.88	1.88	S	1.92	1.95	1.92	1.87	2.03	1.96	24
7	1.97	2.03	2.10	2.09	2.00	2.02	1.96	1.93	1.94	1.91	1.88	1.89	1.88	1.88	1.88	1.88	1.88	1.89	1.89	S	1.92	1.94	1.96	1.95	1.88	2.10	1.94	24
8	1.91	1.92	1.92	1.94	1.92	1.93	1.93	1.93	1.91	1.90	1.89	1.88	1.87	1.88	1.87	1.87	1.87	1.88	S	1.88	1.90	1.90	1.93	1.97	1.87	1.97	1.90	24
9	1.97	1.92	1.93	1.92	1.91	1.92	1.91	1.89	1.89	1.88	1.88	1.88	1.87	1.87	1.86	1.86	1.85	S	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.97	1.88	24
10	1.85	1.85	1.85	1.86	1.87	1.88	1.86	1.87	1.86	1.85	1.85	1.85	1.85	1.84	1.85	1.84	S	1.84	1.84	1.84	1.84	1.85	1.85	1.85	1.84	1.88	1.85	24
11	1.85	1.85	1.84	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.86	1.85	1.85	1.85	S	1.84	1.85	1.85	1.84	1.85	1.85	1.86	1.88	1.84	1.88	1.85	24
12	1.88	1.86	1.85	1.86	1.86	1.88	1.88	1.88	1.87	1.86	1.85	1.84	1.85	1.84	S	1.84	1.84	1.83	1.83	1.83	1.84	1.86	1.86	1.87	1.83	1.88	1.85	24
13	1.84	1.84	1.83	1.85	1.87	1.88	1.86	1.87	1.85	1.84	1.84	1.84	1.84	S	1.84	1.83	1.83	1.83	1.83	1.84	1.84	1.84	1.84	**1.79**	**1.79**	1.88	1.84	24
14	1.82	1.85	1.85	1.87	1.88	1.87	1.87	1.87	1.87	C1	C1	C1	Y	Y	Y	C1	C1	C1	1.87	1.95	1.93	1.90	1.90	1.87	1.82	1.95	1.88	15
15	1.91	1.99	1.89	1.88	1.88	1.89	1.90	1.88	1.87	1.86	1.86	S	1.87	1.86	1.86	1.86	1.86	1.86	1.85	1.86	1.86	1.86	1.86	1.86	1.85	1.99	1.88	24
16	1.84	1.87	1.87	1.87	1.88	1.86	1.85	1.84	1.83	1.82	S	1.83	1.82	1.82	1.82	1.82	1.82	1.82	1.83	1.83	1.83	1.83	1.84	1.82	1.82	1.88	1.84	24
17	1.83	1.84	1.86	1.88	1.91	1.86	1.85	1.85	1.84	S	1.83	1.83	1.83	1.83	1.83	1.84	1.84	1.84	1.84	1.84	1.84	1.85	1.84	1.85	1.83	1.91	1.85	24
18	1.86	1.87	1.88	1.88	1.89	1.89	1.89	1.88	S	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.85	1.86	1.88	1.84	1.89	1.86	24
19	1.91	1.90	1.89	1.90	1.99	1.96	1.91	S	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.81	1.84	1.87	1.87	1.88	1.91	1.86	1.81	1.99	1.87	24
20	1.90	2.00	1.96	1.94	**2.25**	2.00	S	1.88	1.84	1.86	1.83	1.83	1.82	1.81	1.81	1.81	1.82	1.82	1.80	1.83	1.85	1.82	1.83	1.82	1.80	**2.25**	1.88	24
21	1.83	1.83	1.83	1.83	1.85	S	1.82	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.85	1.85	1.85	1.82	1.85	1.84	24
22	1.85	1.86	1.86	1.87	S	1.87	1.88	1.87	1.86	1.86	1.86	1.86	1.85	1.86	1.86	1.85	1.85	1.85	1.85	1.85	1.82	1.87	1.88	1.89	1.82	1.89	1.86	24
23	1.90	1.91	2.00	S	2.03	2.04	2.05	1.92	1.88	1.87	1.86	1.85	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.87	1.90	1.92	1.85	2.05	1.90	24
24	1.91	1.89	S	1.92	1.93	1.93	1.91	1.86	1.88	1.88	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.87	1.88	2.01	2.00	1.86	2.01	1.89	24
25	1.92	S	1.85	1.86	1.90	1.90	1.90	1.89	1.88	1.87	1.87	1.86	1.86	1.86	1.84	1.83	1.85	1.85	1.88	1.87	1.87	1.87	1.88	1.89	1.83	1.92	1.87	24
26	S	1.89	1.85	1.85	1.87	1.90	1.90	1.90	1.90	1.90	1.89	1.88	1.87	1.83	1.83	1.82	1.83	1.82	1.81	1.82	1.82	1.83	1.82	S	1.81	1.90	1.86	24
27	1.84	1.84	1.83	1.82	1.81	1.84	1.84	1.83	1.79	1.82	1.82	1.81	1.79	1.82	1.82	1.82	1.82	1.82	1.83	1.82	1.83	1.83	S	1.84	1.79	1.84	1.82	24
28	1.82	1.83	1.83	1.79	1.82	1.82	1.84	1.85	P	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.85	1.86	1.88	S	1.87	1.87	1.79	1.88	1.85	23
29	1.86	1.87	1.88	1.90	1.91	1.93	1.92	1.91	1.90	1.89	1.88	1.87	1.86	1.87	1.86	1.86	1.86	1.86	1.84	1.84	S	1.89	1.86	1.86	1.84	1.93	1.88	24
30	1.88	1.88	1.90	2.03	1.97	1.90	1.88	1.86	1.87	1.86	1.86	1.85	1.85	1.85	1.84	1.84	1.84	1.83	1.83	S	1.83	1.84	1.85	1.85	1.83	2.03	1.87	24
HOURLY MAX	2.00	2.03	2.10	2.09	2.25	2.04	2.05	2.00	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.95	1.95	1.95	2.01	2.00				
HOURLY AVG	1.89	1.90	1.90	1.91	1.93	1.92	1.91	1.89	1.88	1.88	1.87	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.87	1.87	1.87	1.89	1.88				

STATUS FLAG CODES

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

24 HR AVERAGES June 2017

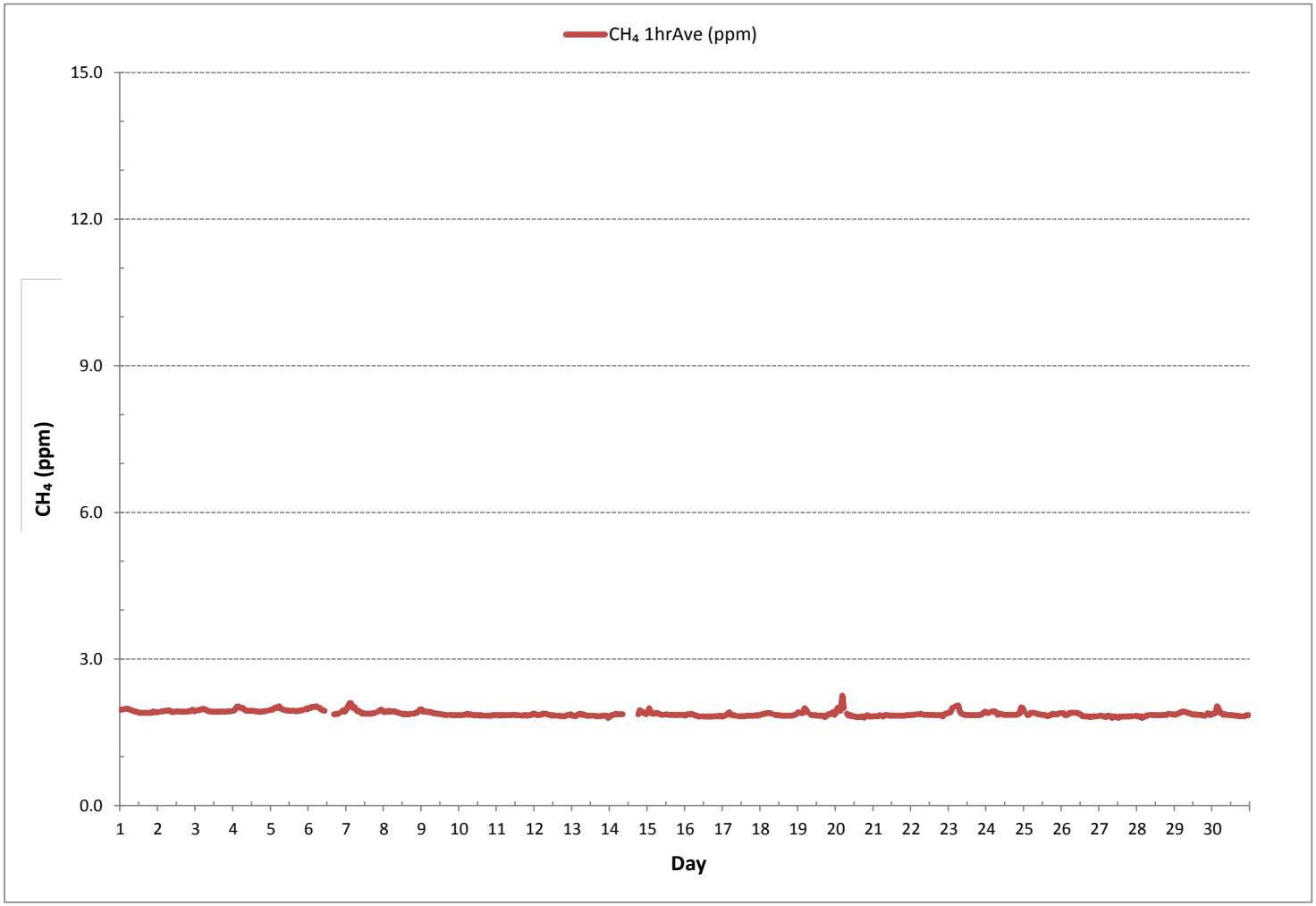


MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		674				
MINIMUM 1-HR AVERAGE	1.79	ppm	@ HOUR	23	ON DAY	13
MAXIMUM 1-HR AVERAGE:	2.25	ppm	@ HOUR	4	ON DAY	20
MAXIMUM 24-HR AVERAGE:	1.96	ppm			ON DAY	5

IZS CALIBRATION TIME:	31	hrs	OPERATIONAL TIME:	710	hrs
MONTHLY CALIBRATION TIME:	5	hrs	AMD OPERATION UPTIME:	98.6	%
STANDARD DEVIATION:	0.05		MONTHLY AVERAGE:	1.88	ppm

METHANE Hourly Averages (CH_4 ppm)



METHANE MAX Instantaneous Maximum (CH_4 ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	2.00	1.97	S	2.06	2.04	2.00	1.99	1.96	1.96	1.95	1.94	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	2.01	1.93	1.93	1.91	2.06	1.95	24
2	1.93	S	1.96	1.95	1.96	1.97	1.95	1.97	1.95	1.92	1.93	1.94	1.95	1.94	1.93	1.94	1.94	1.93	1.94	1.94	1.96	1.97	1.97	1.95	1.92	1.97	1.95	24
3	S	1.99	1.98	2.00	2.00	2.01	P	1.96	1.94	P	1.94	1.93	1.93	1.93	1.93	1.94	1.93	1.94	1.93	1.94	1.94	1.95	1.94	S	1.93	2.01	1.95	22
4	1.96	2.01	2.12	2.06	2.06	2.01	2.02	1.99	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.93	1.95	1.94	1.95	S	2.00	1.93	2.12	1.98	24
5	1.99	1.97	2.05	2.07	2.05	2.07	2.02	1.99	1.97	1.96	1.97	1.95	1.96	1.95	1.95	1.94	1.94	1.99	1.95	1.96	1.97	S	2.01	2.02	1.94	2.07	**1.99**	24
6	2.03	2.01	2.04	2.04	2.04	2.05	2.03	2.03	1.97	1.96	2.00	C	C	C	C	C	1.88	1.88	1.89	1.90	S	2.01	2.00	1.94	1.88	2.05	1.98	24
7	2.02	2.08	2.30	2.19	2.06	2.05	2.04	1.94	1.97	1.95	1.90	1.95	1.89	1.89	1.89	1.90	1.91	1.91	1.90	S	1.94	1.96	1.98	1.99	1.89	2.30	1.98	24
8	1.93	1.93	1.93	1.97	P	1.95	1.95	1.94	1.93	1.92	1.91	1.89	1.89	1.90	1.90	1.89	1.88	1.90	S	1.89	1.94	1.92	1.98	2.00	1.88	2.00	1.92	23
9	2.00	1.94	1.96	1.95	1.94	1.94	1.92	1.91	1.91	1.91	1.90	1.89	1.89	1.89	1.88	1.87	1.87	S	1.86	1.86	1.86	1.86	1.86	1.87	1.86	2.00	1.90	24
10	1.86	1.86	1.88	1.88	1.89	1.91	1.89	1.88	1.88	1.86	1.86	1.86	1.86	1.86	1.86	1.86	S	1.85	1.86	1.85	1.85	1.86	1.86	1.86	1.85	1.91	1.87	24
11	1.86	1.86	1.87	1.93	1.90	1.88	1.86	1.88	1.87	1.87	1.87	1.88	1.87	1.87	1.86	S	1.86	1.86	1.87	1.86	1.86	1.86	1.88	1.91	1.86	1.93	1.87	24
12	1.90	1.88	1.87	1.87	1.88	1.89	1.90	1.90	1.88	1.88	1.86	1.85	1.86	1.84	S	1.85	1.85	1.85	1.93	1.84	1.86	1.89	1.89	1.89	1.84	1.93	1.87	24
13	1.87	1.86	1.84	1.88	1.88	1.91	1.88	1.88	1.87	1.86	1.85	1.85	1.86	S	1.85	1.88	1.86	1.85	1.84	1.85	1.85	1.86	1.85	1.84	1.84	1.91	1.86	24
14	1.86	1.89	1.86	1.88	1.92	1.88	1.88	1.89	1.89	C1	C1	C1	Y	Y	Y	C1	C1	C1	1.88	2.01	2.00	1.93	1.95	1.90	1.86	2.01	1.91	15
15	1.96	2.03	1.92	1.88	1.89	1.89	1.90	1.89	1.88	1.87	1.87	S	1.87	1.87	1.87	1.86	1.86	1.87	1.86	1.86	1.87	1.86	1.87	1.88	1.86	2.03	1.89	24
16	1.89	1.88	1.88	1.90	1.90	1.88	1.87	1.87	1.86	1.83	S	1.84	1.83	1.82	1.82	1.82	1.83	1.83	1.84	1.84	1.84	1.85	1.88	1.85	1.82	1.90	1.85	24
17	1.85	1.90	1.90	1.92	2.01	1.89	1.87	1.86	1.86	S	1.85	1.85	1.86	1.86	1.86	1.86	1.85	1.86	1.85	1.87	1.86	1.88	1.85	1.86	1.85	2.01	1.87	24
18	1.87	1.87	1.89	1.89	1.90	1.90	1.90	1.89	S	1.87	1.85	1.85	1.85	1.85	1.84	1.85	1.84	1.85	1.85	1.86	1.86	1.96	1.91	1.89	1.84	1.96	1.87	24
19	1.97	1.92	1.90	1.94	2.06	2.02	1.94	S	1.86	1.86	1.86	1.87	1.85	1.92	1.85	1.86	1.86	1.85	1.87	1.88	1.89	1.91	1.93	1.93	1.85	2.06	1.90	24
20	1.92	2.40	2.22	2.16	**2.42**	2.30	S	1.89	1.88	1.87	1.85	1.84	1.84	1.82	1.83	1.82	1.82	1.83	1.83	1.85	1.87	1.85	1.84	1.83	1.82	**2.42**	1.95	24
21	1.97	1.89	1.84	1.84	1.89	S	1.86	1.87	1.86	1.86	1.85	1.85	1.85	1.85	1.85	1.85	1.85	2.02	1.85	1.85	1.97	1.87	1.86	1.86	1.84	2.02	1.87	24
22	1.86	1.86	1.87	1.88	S	1.88	1.89	1.88	1.87	1.87	1.87	1.87	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.87	1.91	1.91	1.90	1.91	1.86	1.91	1.88	24
23	1.94	1.94	2.13	S	2.12	2.12	2.09	2.01	1.90	1.88	1.87	1.86	1.87	1.87	1.86	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.97	2.06	1.86	2.13	1.94	24
24	1.95	1.95	S	1.95	1.95	1.94	1.93	1.89	1.88	1.88	1.87	1.87	1.87	1.87	1.86	1.87	1.86	1.87	1.87	1.87	1.88	1.91	2.20	2.13	1.86	2.20	1.92	24
25	1.97	S	1.91	1.91	1.91	1.91	1.90	1.90	1.89	1.88	1.88	1.87	1.87	1.93	1.87	1.87	1.87	1.87	1.88	1.88	1.87	1.88	1.88	1.89	1.87	1.97	1.89	24
26	S	1.90	1.89	1.90	1.94	1.91	1.90	1.90	1.91	1.90	1.90	1.90	1.89	1.87	1.85	P	1.84	1.85	1.83	1.83	1.83	1.85	1.84	S	1.83	1.94	1.88	23
27	1.85	1.85	1.85	1.87	1.85	1.85	1.85	1.83	1.84	1.84	1.84	1.82	1.83	1.83	1.83	1.84	1.82	1.83	1.85	1.83	1.85	1.84	S	1.85	1.82	1.87	1.84	24
28	1.84	1.83	1.83	1.83	1.83	1.84	1.85	1.86	P	1.86	1.86	1.87	1.86	1.86	1.86	1.86	1.86	1.87	1.97	1.88	1.91	S	1.88	1.88	1.83	1.97	1.86	23
29	1.87	1.88	1.89	1.91	1.92	1.94	1.93	1.91	P	1.90	1.89	1.87	1.88	1.88	1.87	1.87	1.87	1.87	1.86	1.85	S	1.90	1.89	1.88	1.85	1.94	1.89	23
30	1.89	1.90	2.02	2.08	2.02	1.92	1.90	1.89	1.89	1.87	1.87	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.84	S	1.84	1.86	1.87	P	1.84	2.08	1.89	23
HOURLY MAX	2.03	2.40	2.30	2.19	2.42	2.30	2.09	2.03	1.97	1.96	2.00	1.95	1.96	1.95	1.95	1.94	1.94	2.02	1.97	2.01	2.00	2.01	2.20	2.13				
HOURLY AVG	1.92	1.94	1.95	1.95	1.97	1.96	1.93	1.91	1.90	1.89	1.89	1.88	1.88	1.88	1.87	1.87	1.87	1.88	1.88	1.88	1.89	1.90	1.92	1.92				

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

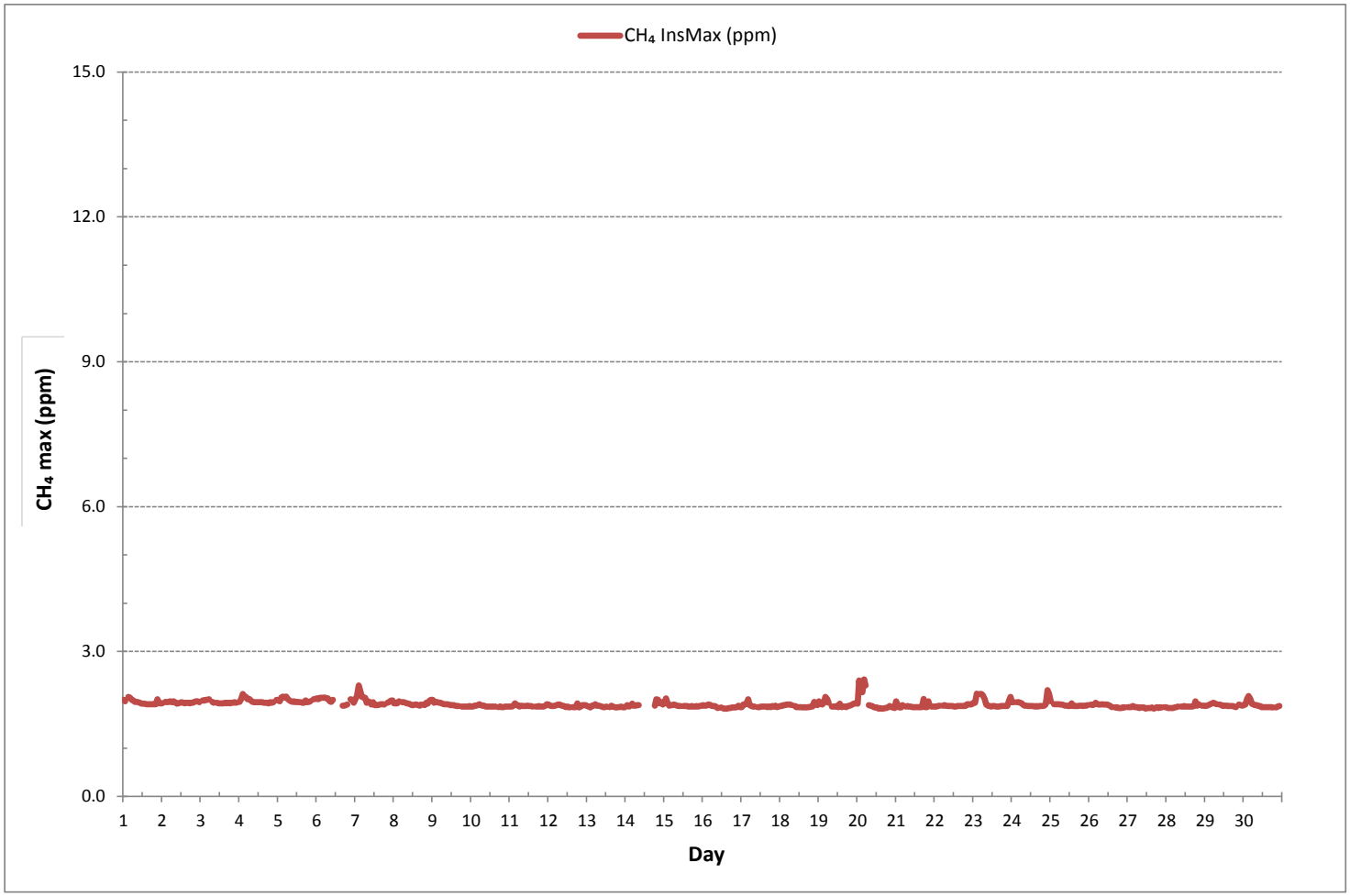
NUMBER OF NON-ZERO READINGS: 668

MAXIMUM INSTANTANEOUS VALUE: 2.42 ppm @ HOUR 4 ON DAY 20

IZS CALIBRATION TIME: 31 hrs
MONTHLY CALIBRATION TIME: 5 hrs
STANDARD DEVIATION: 0.07

OPERATIONAL TIME: 704 hrs

METHANE MAX Instantaneous Maximum (CH_4 ppm)

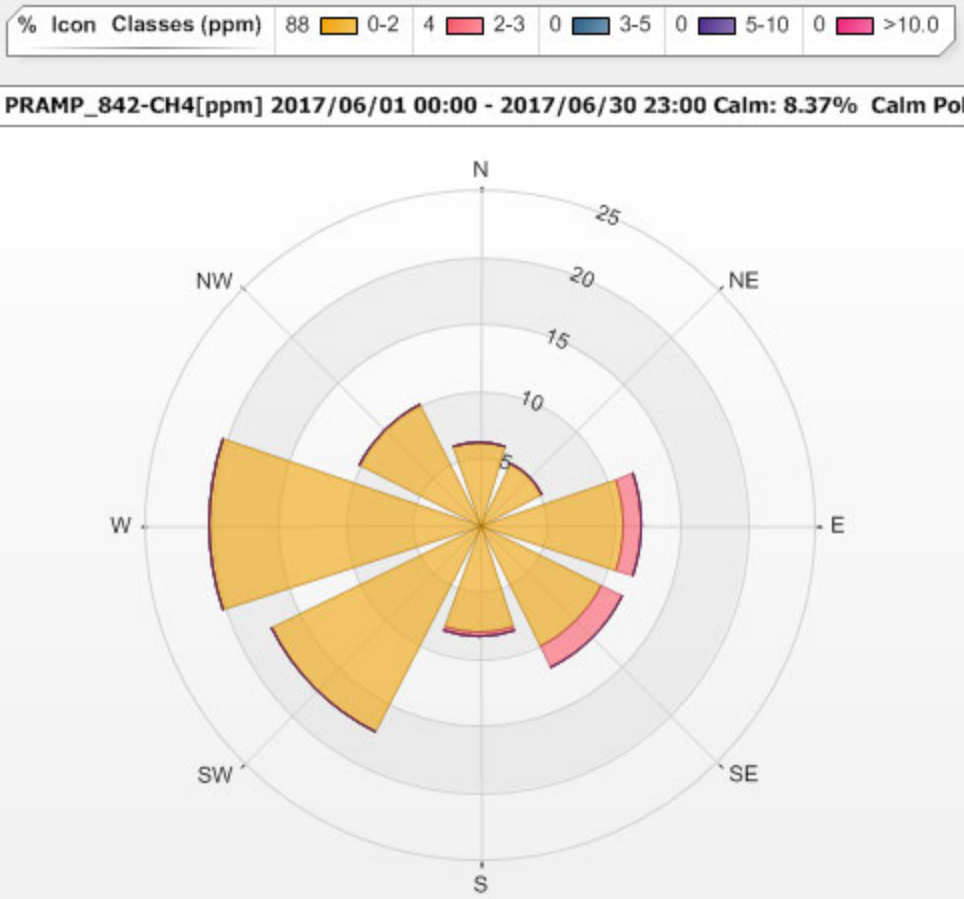


Wind: PRAMP_842
Poll.: PRAMP_842-CH4[ppm]
Monthly: 17/06
Type: PollutionRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

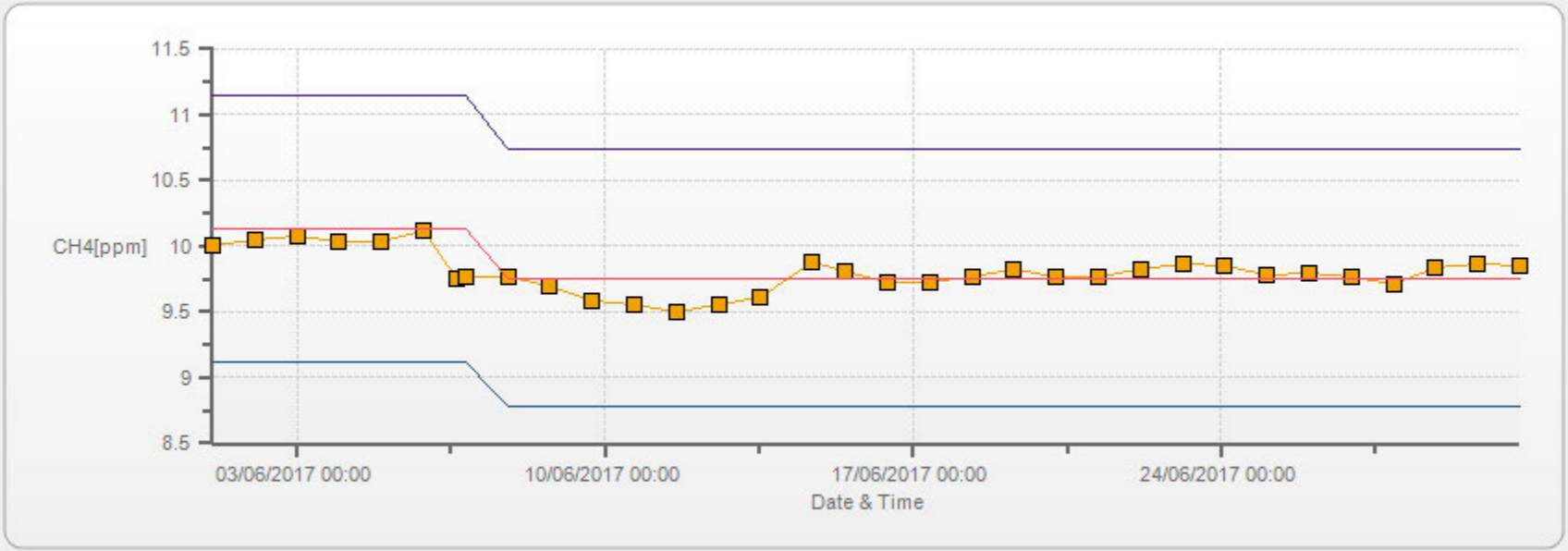
Calm: 8.37%

Calm Avg: 1.89 [ppm]

Direction	0-2	2-3	3-5	5-10	>10.0	Total
N	6.2	0.0	0.0	0.0	0.0	6.2
NE	5.2	0.0	0.0	0.0	0.0	5.2
E	10.7	1.4	0.0	0.0	0.0	12.2
SE	10.1	1.9	0.0	0.0	0.0	12.0
S	8.1	0.3	0.0	0.0	0.0	8.4
SW	17.4	0.0	0.0	0.0	0.0	17.4
W	20.2	0.0	0.0	0.0	0.0	20.2
NW	10.1	0.0	0.0	0.0	0.0	10.1
Summary	88.0	3.6	0.0	0.0	0.0	91.6


% Icon Classes (ppm)
88 0-2
4 2-3
0 3-5
0 5-10
0 >10.0
PRAMP_842 Poll.: PRAMP_842-CH4[ppm] 2017/06/01 00:00 - 2017/06/30 23:00 Calm: 8.37% Calm Poll Avg: 1.89[ppm]
N
NE
E
SE
S
SW
W
NW
25
20
15
10
5

CH4[ppm] Calibration: PRAMP_842 Monthly: 17/06 Type: Span



NON-METHANE HYDROCARBON

Maxxam
A Bureau Veritas Group Company

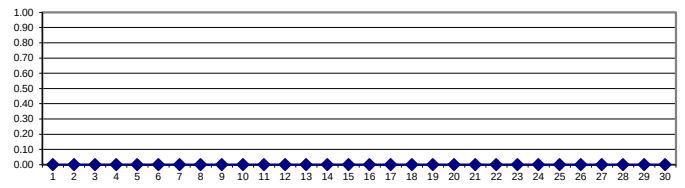
NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)

HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.
DAY																											
1	**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
2	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
3	**S**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	0.00	0.00	0.00	24
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	0.00	0.00	0.00	0.00	0.00	24
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**C**	**C**	**C**	**C**	**C**	0.00	0.00	0.00	0.00	**S**	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	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
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**C1**	**C1**	**C1**	**Y**	**Y**	**Y**	**C1**	**C1**	**C1**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15
15	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
16	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
17	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
18	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
19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	**S**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	0.00	0.00	0.00	24
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	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	**P**	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	23
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**S**	0.00	0.00	0.00	0.00	0.00	0.00	24
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
HOURLY AVG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

STATUS FLAG CODES

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

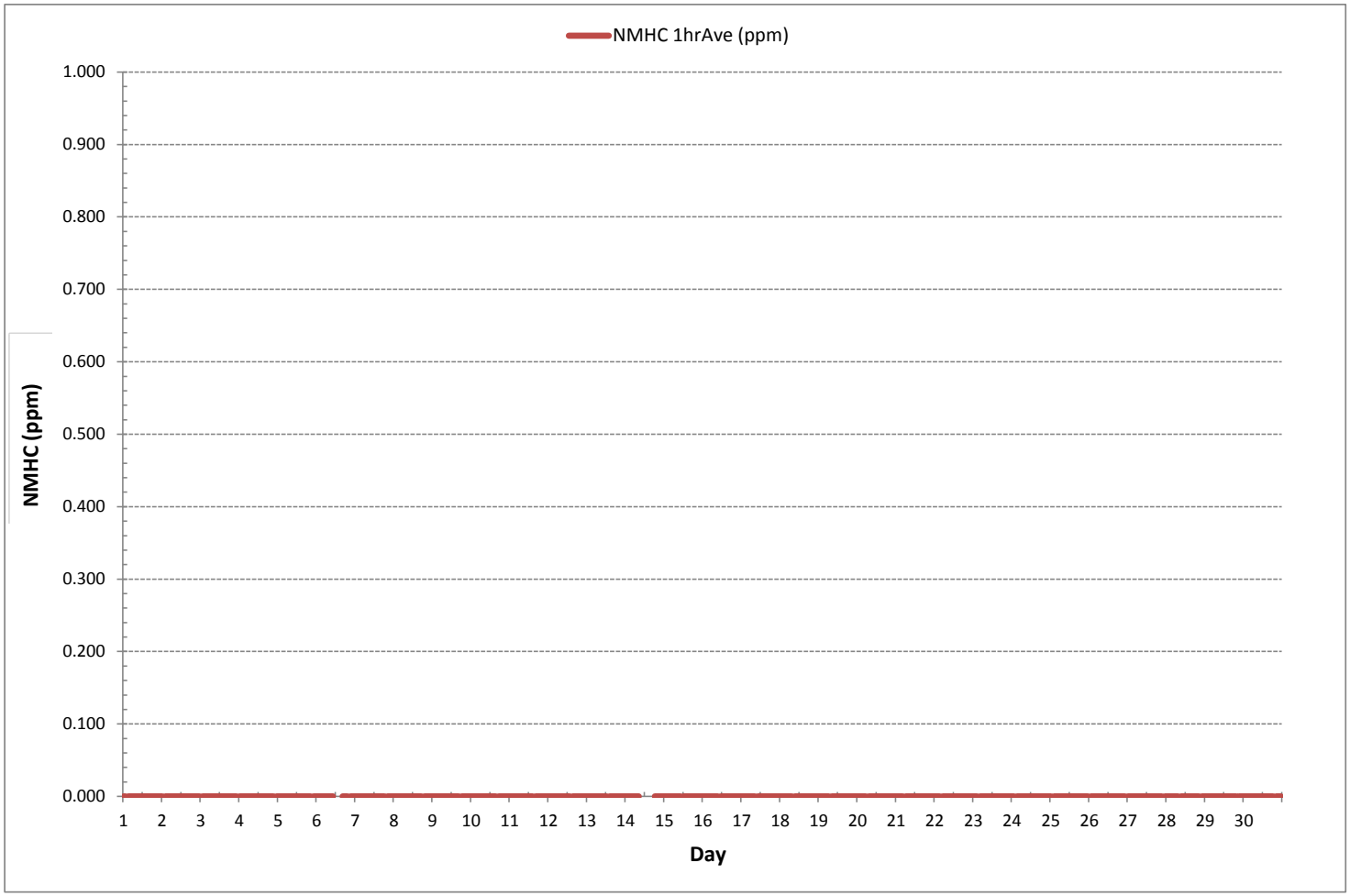
24 HR AVERAGES June 2017



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:			0				
MINIMUM 1-HR AVERAGE	0.00	ppm	@ HOUR	0	ON DAY		1
MAXIMUM 1-HR AVERAGE:	0.00	ppm	@ HOUR	0	ON DAY		1
MAXIMUM 24-HR AVERAGE:	0.00	ppm			ON DAY		1
IZS CALIBRATION TIME:	31	hrs	OPERATIONAL TIME:			710	hrs
MONTHLY CALIBRATION TIME:	5	hrs	AMD OPERATION UPTIME:			98.6	%
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:			0.00	ppm

NON-METHANE HYDROCARBONS Hourly Averages (NMHC ppm)



NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	0.10	0.05	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	0.02	0.00	0.10	0.00	0.00	0.00	0.10	0.01	24
2	0.00	S	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.08	0.01	24
3	S	0.00	0.00	0.00	0.03	0.01	P	0.00	0.00	P	0.03	0.04	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	0.04	0.01	22
4	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	S	0.00	0.00	0.08	0.01	24
5	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.01	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	S	0.00	0.00	0.00	0.16	0.01	24
6	0.01	0.00	0.09	0.02	0.00	0.00	0.00	0.01	0.01	0.07	0.08	C	C	C	C	C	0.01	0.00	0.14	0.00	S	0.10	0.00	0.00	0.00	0.14	0.03	24
7	0.14	0.14	0.00	0.09	0.00	0.15	0.01	0.00	0.00	0.04	0.03	0.01	0.15	0.00	0.14	0.03	0.03	0.13	0.09	S	0.07	0.14	0.16	0.17	0.00	0.17	0.07	24
8	0.04	0.00	0.01	0.06	P	0.00	0.00	0.12	0.00	0.07	0.00	0.02	0.02	0.18	0.03	0.11	0.01	0.18	S	0.01	0.11	0.06	0.00	0.14	0.00	0.18	0.05	23
9	0.15	0.00	0.03	0.22	0.00	0.17	0.01	0.00	0.03	0.00	0.08	0.00	0.00	0.09	0.01	0.00	0.00	S	0.04	0.00	0.00	0.03	0.00	0.00	0.00	0.22	0.04	24
10	0.00	0.05	0.06	0.12	0.00	0.13	0.02	0.00	0.01	0.00	0.05	0.01	0.08	0.02	0.01	0.01	S	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.13	0.03	24
11	0.00	0.08	0.00	0.01	0.06	0.00	0.00	0.07	0.00	0.12	0.00	0.00	0.06	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.12	0.02	24
12	0.03	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.02	0.01	0.00	0.00	S	0.00	0.01	0.01	0.00	0.03	0.00	0.02	0.01	0.00	0.00	0.03	0.01	24
13	0.01	0.00	0.10	0.00	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.02	S	0.00	0.00	0.07	0.00	0.00	0.00	0.07	0.00	0.00	0.06	0.00	0.10	0.02	24
14	0.08	0.00	0.00	0.00	0.00	0.00	0.01	0.17	0.07	C1	C1	C1	Y	Y	Y	C1	C1	C1	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.17	0.02	15
15	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	S	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	24
16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.02	0.00	24
17	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	S	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.05	0.01	24
18	0.11	0.02	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.03	0.00	0.00	0.00	0.11	0.01	24
19	0.02	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.04	0.00	24
20	0.01	0.02	0.00	0.00	0.11	0.00	S	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.01	24
21	0.00	0.02	0.00	0.01	0.00	S	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	24
22	0.00	0.00	0.00	0.01	S	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.01	0.00	0.02	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.03	0.00	24
23	0.00	0.00	0.01	S	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.08	0.01	24
24	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	0.04	0.00	0.04	0.00	24
25	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	24
26	S	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	P	0.01	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.01	0.00	23
27	0.00	0.00	0.02	0.01	0.00	0.01	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	0.01	S	0.00	0.00	0.02	0.00	24
28	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.09	0.00	23
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.01	0.00	0.00	0.00	0.01	0.00	23
30	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.03	P	0.00	0.03	0.00	23
HOURLY MAX	0.15	0.14	0.10	0.22	0.11	0.17	0.16	0.17	0.07	0.12	0.08	0.04	0.15	0.18	0.14	0.11	0.07	0.18	0.14	0.06	0.11	0.14	0.16	0.17				
HOURLY AVG	0.03	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02				

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

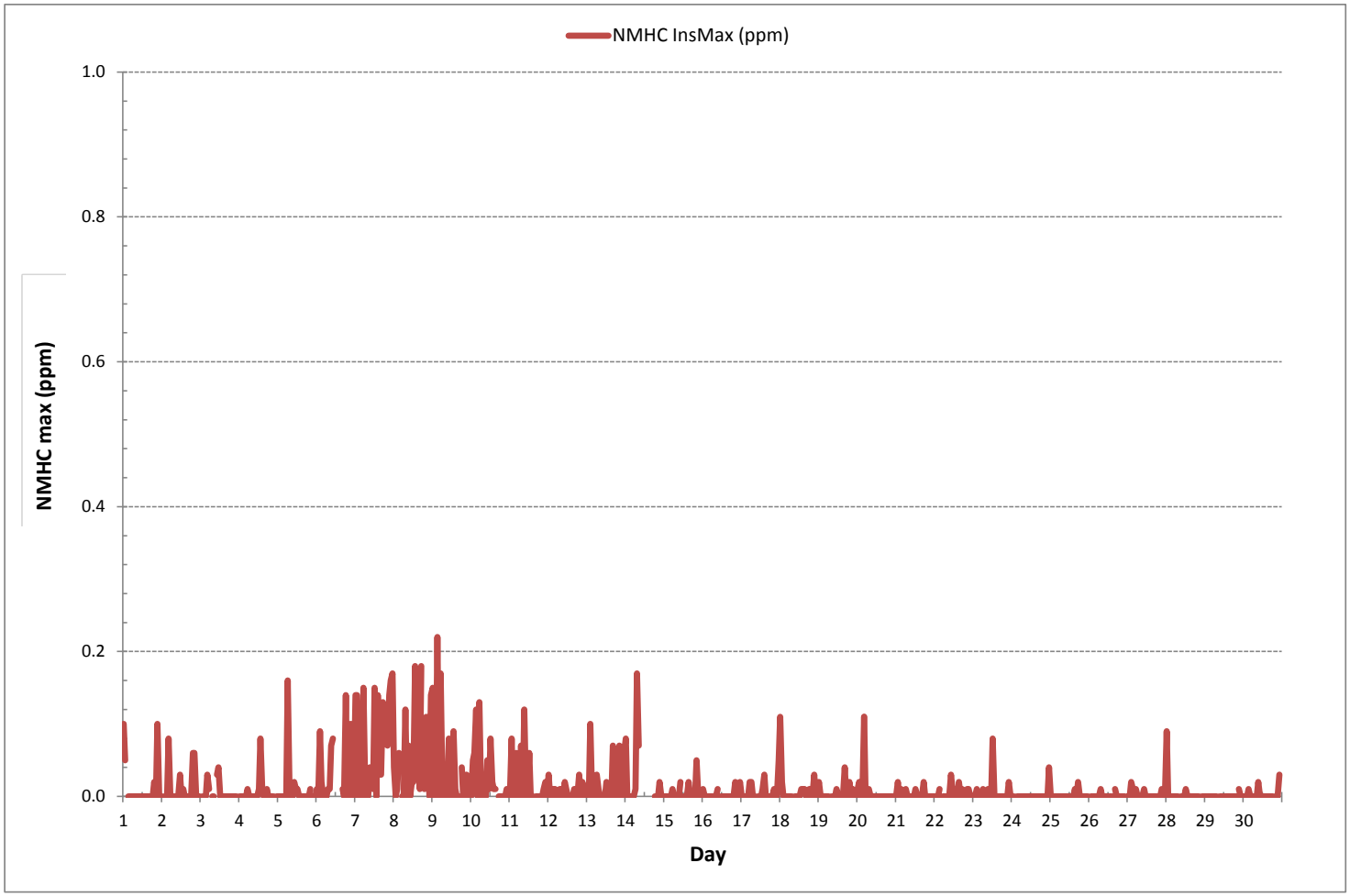
NUMBER OF NON-ZERO READINGS: 191

MAXIMUM INSTANTANEOUS VALUE: 0.22 ppm @ HOUR 3 ON DAY 9

IZS CALIBRATION TIME: 31 hrs
MONTHLY CALIBRATION TIME: 5 hrs
STANDARD DEVIATION: 0.03

OPERATIONAL TIME: 704 hrs

NON-METHANE HYDROCARBONS Instantaneous Maximum (NMHC ppm)



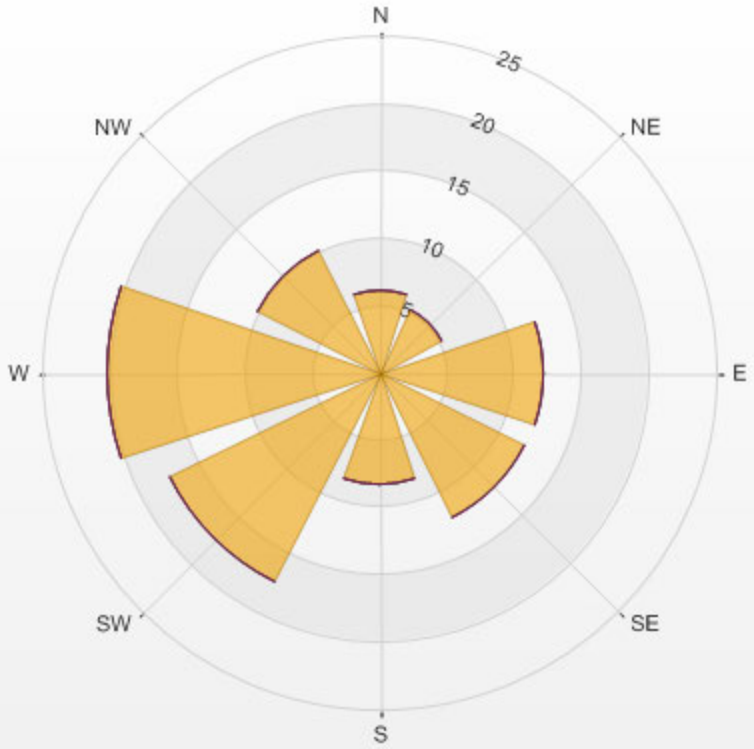
Wind: PRAMP_842
Poll.: PRAMP_842-NMHC[ppm]
Monthly: 17/06
Type: PollutionRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

Calm: 8.37% Calm Avg: 0.00 [ppm]

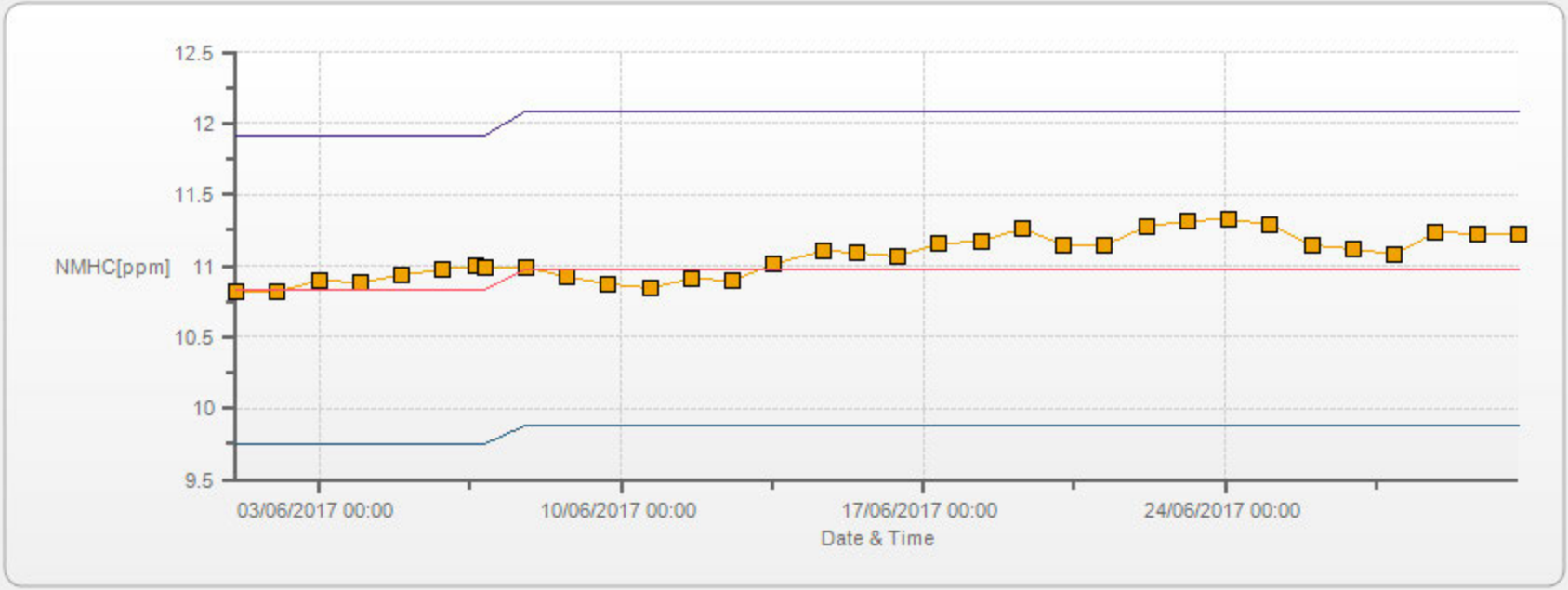
Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	6.2	0.0	0.0	0.0	0.0	6.2
NE	5.2	0.0	0.0	0.0	0.0	5.2
E	12.2	0.0	0.0	0.0	0.0	12.2
SE	12.0	0.0	0.0	0.0	0.0	12.0
S	8.4	0.0	0.0	0.0	0.0	8.4
SW	17.4	0.0	0.0	0.0	0.0	17.4
W	20.2	0.0	0.0	0.0	0.0	20.2
NW	10.1	0.0	0.0	0.0	0.0	10.1
Summary	91.6	0.0	0.0	0.0	0.0	91.6

% Icon Classes (ppm)	92 0-0.1	0 0.1-0.3	0 0.3-1	0 1-2	0 >2.0

PRAMP_842 Poll.: PRAMP_842-NMHC[ppm] 2017/06/01 00:00 - 2017/06/30 23:00 Calm: 8.37% Calm Poll Avg: 0.00[ppm]



NMHC[ppm] Calibration: PRAMP_842 Monthly: 17/06 Type: Span



WIND SPEED

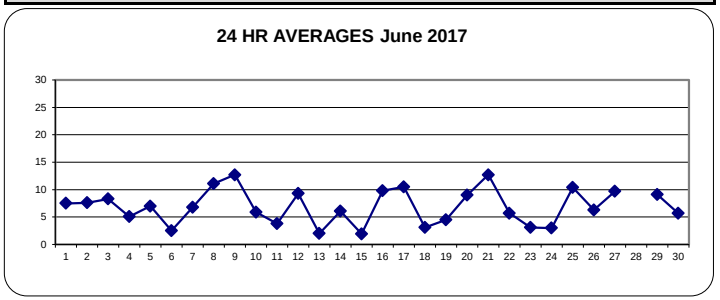
Maxxam
A Bureau Veritas Group Company

WIND SPEED Hourly Averages (WS kph)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	2.2	3.2	3.7	4.1	4.1	4.2	5.7	6.1	7.9	11.1	14.7	16.4	12.4	11.7	11.7	11.9	13.2	18.2	13.3	11.9	9.9	5.0	3.5	4.6	2.2	18.2	7.5	24
2	5.4	3.5	3.9	11.7	13.2	13.9	13.0	9.7	11.4	9.6	10.1	6.5	7.9	10.3	13.4	18.6	15.3	13.9	8.2	2.9	1.5	1.2	6.0	6.5	1.2	18.6	7.6	24
3	4.5	7.1	2.3	3.8	2.5	4.4	4.7	6.4	7.6	10.1	10.5	12.0	11.0	16.7	17.8	18.8	16.1	**22.9**	18.0	16.3	9.1	8.3	7.8	2.6	2.3	**22.9**	8.3	24
4	1.5	0.9	1.1	2.1	2.6	3.6	2.1	6.9	10.9	14.3	14.1	10.2	11.0	9.9	8.7	7.5	8.4	5.7	7.1	6.0	7.2	6.9	5.1	2.6	0.9	14.3	5.1	24
5	3.2	3.5	2.8	1.8	1.4	0.6	2.1	6.2	8.6	7.8	13.3	17.3	16.9	14.6	13.4	15.5	13.5	14.0	14.0	11.4	6.2	2.4	1.9	1.8	0.6	17.3	7.0	24
6	3.6	3.5	3.5	3.1	3.4	3.4	2.2	4.8	2.2	1.3	1.8	2.3	3.1	6.8	5.4	2.4	0.5	5.2	8.6	6.8	4.4	3.7	4.8	2.9	0.5	8.6	2.5	24
7	2.3	5.8	6.6	5.6	7.9	5.2	5.4	5.5	4.4	6.6	9.4	8.1	7.1	7.5	10.6	9.0	10.2	6.8	8.5	10.1	7.2	6.5	5.9	6.9	2.3	10.6	6.8	24
8	9.9	9.3	8.8	8.4	10.9	11.7	11.4	11.6	12.2	12.6	15.1	17.2	16.7	14.5	10.7	11.4	12.5	12.3	11.1	9.9	9.3	8.8	6.4	6.3	6.3	17.2	11.1	24
9	7.3	8.2	7.4	7.4	7.5	7.6	10.2	14.9	18.5	15.5	15.7	17.5	15.9	15.9	16.3	17.1	17.7	17.3	17.4	14.9	12.9	11.2	11.5	10.0	7.3	18.5	**12.7**	24
10	7.4	6.0	5.6	2.6	2.4	4.5	4.7	5.7	4.0	6.6	7.7	5.9	8.8	7.5	7.7	4.6	1.8	1.6	12.0	15.1	11.6	10.7	11.6	11.2	1.6	15.1	5.9	24
11	7.2	3.4	5.9	3.6	4.0	1.7	0.9	2.4	2.4	5.3	5.9	6.6	8.0	7.5	9.1	11.4	9.9	10.6	9.0	6.4	5.6	3.3	5.0	4.7	0.9	11.4	3.8	24
12	8.4	9.0	12.1	13.6	15.0	13.1	9.5	12.6	14.4	17.7	19.9	19.2	15.8	14.7	13.6	15.2	15.6	12.4	12.2	9.2	7.8	4.8	4.3	3.6	3.6	19.9	9.3	24
13	4.3	5.5	5.7	2.5	2.7	2.4	5.9	7.7	5.2	1.6	0.8	6.0	5.6	9.1	8.0	8.3	8.7	8.3	13.1	11.1	7.5	7.5	5.8	4.3	0.8	13.1	2.0	24
14	3.2	4.7	5.3	3.0	3.3	5.3	6.9	9.6	8.7	9.6	9.3	9.2	11.1	11.5	12.4	11.8	7.1	4.2	3.5	1.8	4.1	3.2	2.9	5.8	1.8	12.4	6.1	24
15	4.5	3.9	1.8	1.2	**0.4**	1.3	1.3	5.9	6.2	5.8	5.8	4.2	3.4	1.4	2.5	1.6	3.8	3.2	6.4	4.6	3.6	5.8	7.4	7.2	**0.4**	7.4	1.9	24
16	8.3	7.5	7.0	6.1	4.7	9.0	9.1	11.6	12.1	11.8	14.2	14.1	12.5	17.6	20.4	20.8	20.7	21.1	20.0	16.0	13.7	9.8	6.7	6.4	4.7	21.1	9.8	24
17	1.8	1.0	1.7	0.5	2.0	4.1	6.6	9.8	10.0	7.2	12.8	17.3	19.8	21.5	21.3	21.1	19.8	16.6	16.5	12.4	14.1	6.8	6.5	3.2	0.5	21.5	10.5	24
18	4.2	6.4	8.2	7.7	2.8	4.3	4.9	8.6	3.1	6.8	13.5	17.0	17.3	17.4	8.6	10.6	10.6	4.2	1.2	7.6	5.3	1.5	1.0	1.4	1.0	17.4	3.1	24
19	0.8	2.3	3.0	3.1	3.3	3.5	4.2	7.4	9.5	9.1	7.3	7.0	7.9	8.0	8.9	7.1	6.4	6.4	9.9	5.2	1.5	1.4	1.6	4.8	0.8	9.9	4.5	24
20	4.0	3.6	5.8	3.9	4.3	3.6	7.7	7.6	10.6	11.3	13.5	12.9	13.0	14.1	17.6	20.7	21.3	19.6	16.1	10.2	12.2	14.5	15.5	15.1	3.6	21.3	9.0	24
21	17.6	14.8	12.5	10.9	7.3	9.2	10.9	13.8	19.0	13.6	15.0	16.1	19.0	22.1	22.2	20.5	16.8	14.1	10.1	8.3	6.8	6.7	5.9	6.5	5.9	22.2	12.7	24
22	5.8	6.6	3.6	3.4	2.5	2.9	6.6	10.2	9.9	10.5	11.2	8.7	7.5	7.7	11.4	10.9	6.4	9.1	8.1	2.4	0.6	0.6	1.7	0.6	0.6	11.4	5.7	24
23	1.2	1.6	2.0	2.1	2.2	2.6	2.1	1.5	4.5	7.4	8.3	8.2	6.7	10.2	12.2	9.9	8.7	10.8	11.5	5.5	1.9	0.8	0.9	0.5	0.5	12.2	3.1	24
24	2.7	1.4	2.7	1.7	1.2	0.9	2.4	4.5	5.6	7.4	7.6	8.1	6.2	8.2	8.7	7.2	6.9	5.8	1.7	3.5	2.7	3.9	3.0	2.3	0.9	8.7	3.0	24
25	1.7	4.5	4.7	5.0	5.2	6.0	5.8	6.6	9.3	10.4	14.0	15.0	16.3	14.1	16.6	14.7	16.3	16.7	13.8	16.4	12.7	10.9	9.8	10.8	1.7	16.7	10.4	24
26	9.2	10.3	18.0	8.6	3.6	7.3	12.0	10.2	9.7	9.3	8.4	7.8	7.5	7.6	10.6	6.5	5.1	11.5	14.1	8.0	7.3	4.1	10.0	5.2	3.6	18.0	6.3	24
27	6.6	6.4	4.8	3.6	8.0	8.4	7.1	9.5	7.7	12.0	11.9	10.7	16.6	21.9	16.8	16.6	12.9	8.3	12.5	12.9	11.5	**X**	**X**	**X**	3.6	21.9	9.7	21
28	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**				
29	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**C**	**C**	12.6	13.1	13.8	15.2	14.5	13.7	13.7	8.0	10.4	0.9	4.2	3.6	0.9	3.3	0.9	15.2	9.1	16
30	2.0	1.9	2.3	3.7	2.6	4.4	3.8	4.8	7.4	7.4	12.2	14.3	13.7	11.6	8.2	6.4	3.8	5.2	3.0	1.2	2.3	2.6	5.0	6.8	1.2	14.3	5.7	24
HOURLY MAX	17.6	14.8	18.0	13.6	15.0	13.9	13.0	14.9	19.0	17.7	19.9	19.2	19.8	22.1	22.2	21.1	21.3	22.9	20.0	16.4	14.1	14.5	15.5	15.1				
HOURLY AVG	1.1	1.6	2.2	2.2	1.5	1.9	2.1	3.0	3.9	4.4	5.5	5.8	5.8	6.2	6.3	6.0	5.4	5.2	4.0	2.4	1.3	0.8	0.5	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

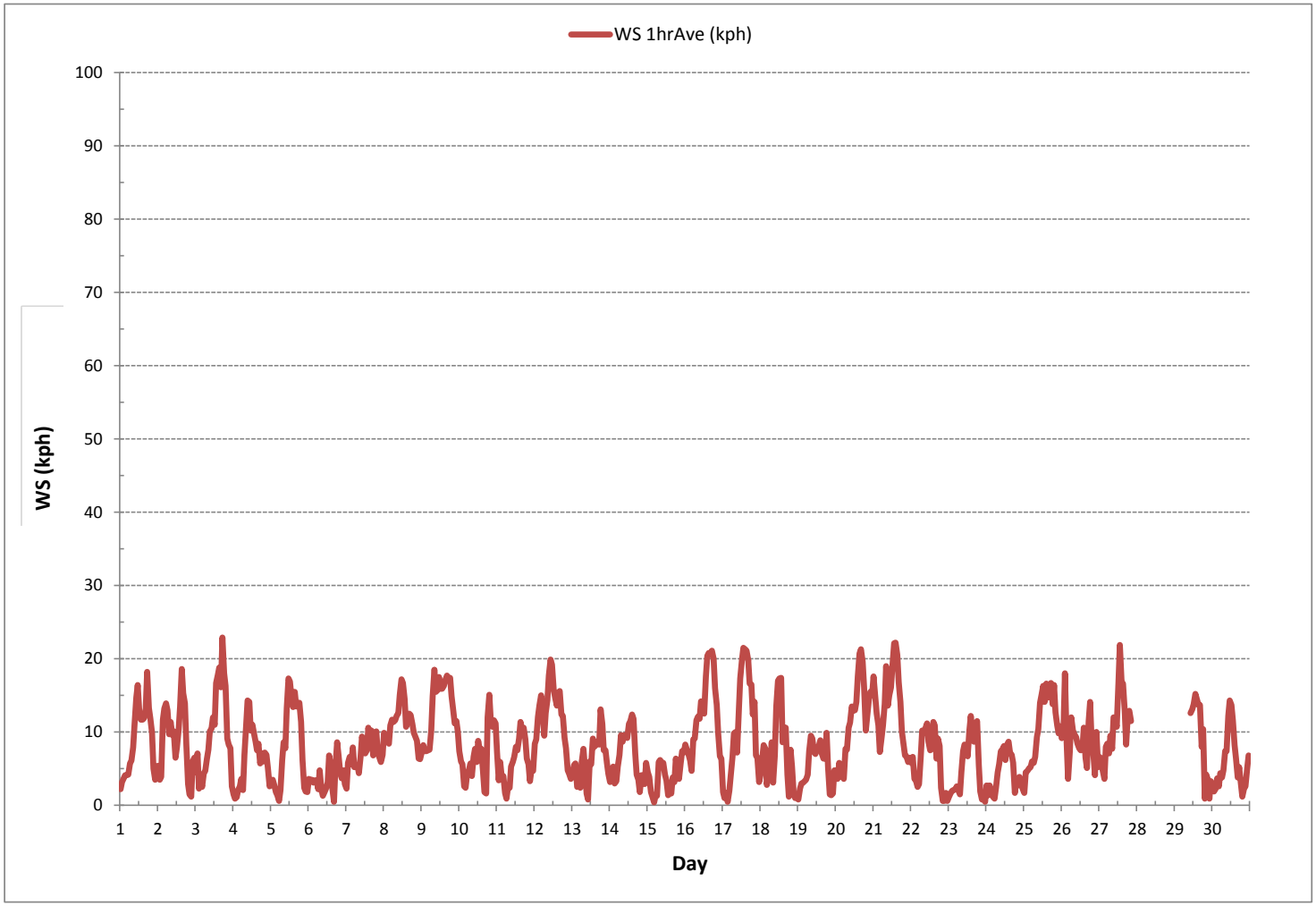


LAST CALIBRATION:	June 29, 2017
DECLINATION :	MAGNETIC DECLINATION 15 DEGREE EAST

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:			683				
MINIMUM 1-HR AVERAGE	0.4	kph	@ HOUR	4	ON DAY	15	
MAXIMUM 1-HR AVERAGE:	22.9	kph	@ HOUR	17	ON DAY	3	
MAXIMUM 24-HR AVERAGE:	12.7	kph			ON DAY	9	
			OPERATIONAL TIME:			685	hrs
MONTHLY CALIBRATION TIME:	2	hrs	AMD OPERATION UPTIME:			95.1	%
STANDARD DEVIATION:	5.0		MONTHLY AVERAGE:			2.6	kph

WIND SPEED Hourly Averages (WS kph)



WIND SPEED Instantaneous Maximum (WS kph)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	9.1	7.7	8.0	7.5	9.0	6.7	11.2	13.0	16.1	20.9	29.7	33.0	26.6	29.8	26.8	28.7	30.6	34.0	26.9	23.9	22.4	11.9	7.2	11.0	6.7	34.0	18.8	24
2	11.7	9.8	13.2	22.4	23.9	25.9	26.8	17.2	20.7	17.5	19.6	12.8	21.1	23.4	32.4	38.1	31.3	28.5	19.1	9.3	6.1	6.4	11.4	16.9	6.1	38.1	19.4	24
3	14.3	16.0	10.4	7.8	8.7	7.7	P	11.8	17.5	P	25.0	23.4	34.2	34.7	36.3	36.9	32.4	**48.8**	38.8	33.1	25.7	14.8	16.9	9.0	7.7	**48.8**	22.9	22
4	8.2	3.3	4.4	4.2	7.2	11.9	4.6	15.8	21.5	30.9	27.5	24.6	42.5	25.3	22.4	23.1	22.2	22.8	18.9	15.5	14.5	11.6	9.2	7.0	3.3	42.5	16.6	24
5	6.8	8.5	7.1	6.2	4.4	3.2	8.5	15.2	17.9	17.2	36.2	37.6	35.8	35.0	38.3	38.5	34.4	30.4	31.5	23.3	15.9	6.0	4.1	4.6	3.2	38.5	19.4	24
6	8.1	5.5	6.9	6.5	7.0	11.4	6.2	9.9	7.7	8.7	16.2	16.9	22.7	25.7	18.5	17.7	15.4	20.7	24.3	17.2	16.2	8.0	15.9	10.4	5.5	25.7	13.5	24
7	11.4	10.2	11.0	12.9	13.6	11.9	11.3	12.2	12.7	23.5	25.0	23.4	21.3	24.1	29.0	24.3	28.5	21.2	22.8	33.8	25.9	19.7	14.4	17.7	10.2	33.8	19.2	24
8	25.7	26.1	23.1	24.6	P	31.9	31.0	28.9	34.8	32.9	39.9	45.0	42.2	44.7	35.1	38.9	38.5	33.2	32.7	28.5	24.8	22.0	17.6	14.2	14.2	45.0	31.1	23
9	21.2	22.1	19.6	18.4	20.2	24.2	28.3	40.8	47.8	38.2	43.0	44.6	44.5	42.8	45.7	43.5	41.0	42.1	44.2	35.3	39.9	30.6	32.5	27.2	18.4	47.8	**34.9**	24
10	19.2	13.2	14.2	8.4	6.7	12.7	11.7	12.4	13.1	16.0	20.9	21.5	24.9	25.4	24.1	15.9	8.7	16.4	40.6	35.9	27.8	28.6	27.3	31.0	6.7	40.6	19.9	24
11	20.7	9.5	12.5	8.6	10.0	5.2	6.2	8.8	7.4	10.6	15.3	14.8	15.6	17.0	22.2	22.8	20.3	22.0	19.7	12.7	8.5	7.5	9.7	9.2	5.2	22.8	13.2	24
12	17.5	19.2	23.2	28.6	26.2	26.8	20.8	26.3	27.8	34.7	35.7	41.1	39.3	32.9	31.6	32.9	33.1	28.7	26.6	18.4	16.2	9.6	9.4	7.8	7.8	41.1	25.6	24
13	7.0	12.3	11.1	7.8	8.7	8.5	13.0	13.3	12.7	9.6	12.7	17.6	22.6	22.5	26.2	23.5	21.7	29.5	31.6	24.4	21.1	18.6	15.6	14.8	7.0	31.6	16.9	24
14	9.4	17.2	14.9	11.6	11.0	12.9	23.2	27.2	29.7	26.0	26.1	29.8	29.6	30.0	32.8	35.7	21.0	13.6	13.3	5.9	13.4	13.9	11.5	17.8	5.9	35.7	19.9	24
15	14.4	12.0	8.4	4.3	3.8	4.7	5.2	10.8	12.9	12.6	12.7	11.3	11.5	16.3	10.8	7.3	10.5	10.9	19.3	12.7	12.2	17.9	26.3	20.8	3.8	26.3	12.1	24
16	23.7	19.1	19.2	15.1	11.1	17.7	17.1	20.9	22.8	24.9	27.4	29.5	31.4	40.5	43.0	44.2	38.8	44.8	43.2	36.7	28.8	19.5	18.5	19.7	11.1	44.8	27.4	24
17	6.4	6.1	5.7	2.3	5.8	9.9	13.3	17.2	20.6	20.9	31.2	34.1	42.8	42.1	47.7	41.1	40.9	40.1	32.4	26.4	30.0	16.8	11.5	10.8	2.3	47.7	23.2	24
18	7.8	11.1	14.3	13.4	12.1	9.8	14.5	24.6	15.0	39.2	27.8	38.1	35.8	40.2	34.0	43.7	33.8	18.7	16.8	20.0	16.9	4.6	3.4	3.8	3.4	43.7	20.8	24
19	2.8	4.7	5.1	7.3	7.3	7.8	8.5	16.4	18.0	17.5	21.9	26.0	25.1	24.2	24.6	19.3	19.5	13.9	29.1	21.0	5.4	7.3	7.7	10.8	2.8	29.1	14.6	24
20	9.1	8.1	11.3	11.0	8.3	12.9	14.7	13.8	17.4	22.4	24.9	25.1	31.0	32.4	34.8	43.8	43.4	37.8	32.7	23.4	29.0	29.9	39.3	35.7	8.1	43.8	24.7	24
21	46.0	30.7	29.5	21.0	15.6	19.2	20.0	35.8	36.3	30.7	35.3	38.7	42.7	45.2	41.4	39.9	36.1	30.0	27.5	19.1	13.9	12.2	14.9	16.7	12.2	46.0	29.1	24
22	14.1	16.9	8.9	7.9	5.9	8.0	18.4	19.2	23.6	28.3	26.5	26.4	21.1	27.7	37.5	33.1	24.1	23.4	22.7	10.1	2.7	7.6	6.6	5.1	2.7	37.5	17.7	24
23	4.5	6.0	6.7	5.1	5.0	7.0	4.8	8.5	13.2	19.2	19.9	24.3	21.3	24.8	27.9	21.6	22.6	31.1	28.4	19.4	7.8	8.9	7.3	3.4	3.4	31.1	14.5	24
24	7.0	4.5	8.3	5.5	3.3	3.6	7.5	15.3	15.3	16.7	22.3	20.2	24.1	24.4	25.8	24.6	25.8	17.8	10.2	10.1	9.0	5.3	6.3	7.7	3.3	25.8	13.4	24
25	8.4	12.1	12.5	12.0	12.9	14.6	16.9	21.1	24.3	29.4	31.3	31.3	30.8	31.8	35.4	33.7	33.6	39.0	33.2	40.1	33.4	29.7	26.7	29.9	8.4	40.1	26.0	24
26	25.8	25.0	41.3	38.0	20.2	13.0	23.9	21.9	20.1	18.3	21.1	15.5	15.6	21.3	27.9	P	12.0	40.9	42.1	19.0	19.0	29.6	20.8	16.6	12.0	42.1	23.9	23
27	15.4	13.7	10.3	9.3	19.5	16.8	15.2	19.1	19.0	24.8	24.7	23.5	34.8	47.0	36.0	29.6	30.3	28.6	23.8	30.0	27.3	X	X	X	9.3	47.0	23.7	21
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
29	X	X	X	X	X	X	X	X	C	C	22.2	25.0	25.0	30.8	25.8	27.9	28.1	32.3	44.0	31.2	11.3	11.3	25.9	8.9	8.9	44.0	25.0	16
30	6.3	8.2	8.4	10.4	8.0	9.0	8.1	12.0	15.1	15.2	23.7	28.4	25.5	26.1	23.5	19.3	13.4	14.9	8.2	5.6	7.8	9.1	14.4	P	5.6	28.4	13.9	23
HOURLY MAX	46.0	30.7	41.3	38.0	26.2	31.9	31.0	40.8	47.8	39.2	43.0	45.0	44.5	47.0	47.7	44.2	43.4	48.8	44.2	40.1	39.9	30.6	39.3	35.7				
HOURLY AVG	13.6	12.8	13.2	12.1	10.9	12.7	14.5	18.2	20.0	22.5	25.7	27.0	29.0	30.6	30.9	30.3	27.3	28.1	27.7	22.1	18.4	15.0	15.4	14.4				

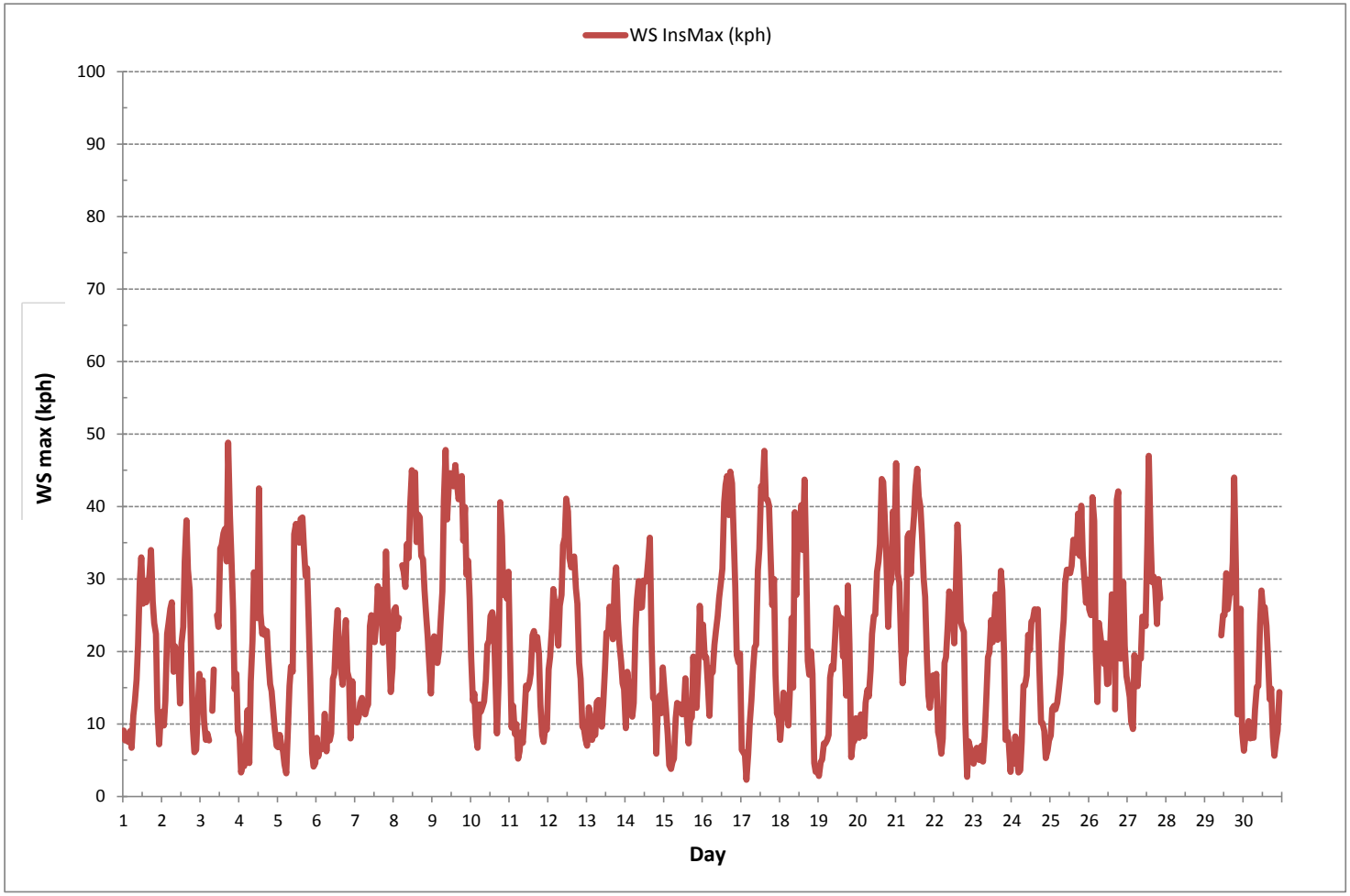
STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS VALUE:	48.8	kph	@ HOUR	17	ON DAY	3
OPERATIONAL TIME:					680	hrs

WIND SPEED Instantaneous Maximum (WS kph)



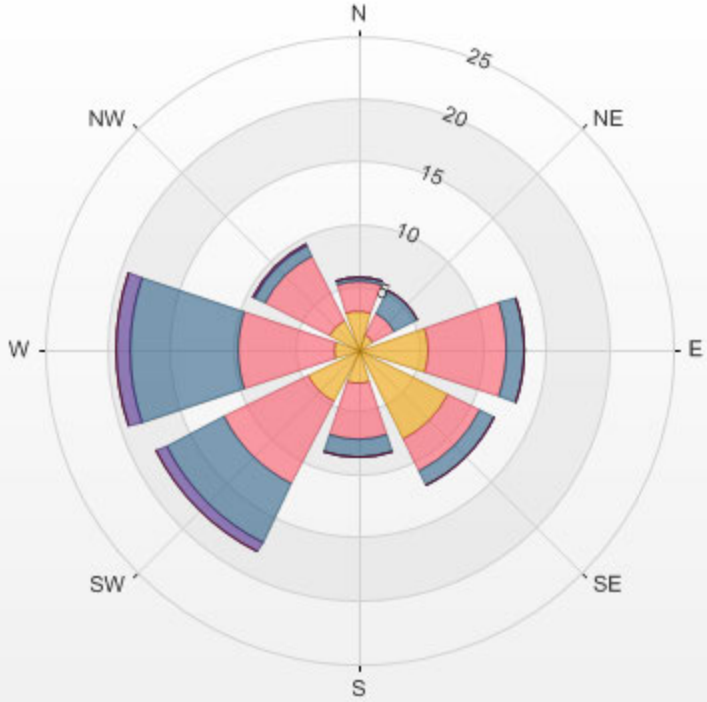
Wind: PRAMP_842
Monitor: WSP [kph]
Monthly: 17/06
Type: WindRose
Direction: Blowing From (Wind Frequency)
Based On 1 Hr.

Calm: 8.05%

Direction	1.8-6.0	6.0-12.0	12.0-20.0	20.0-29.0	29.0-39.0	>39.0	Total
N	3.1	2.5	0.3	0.0	0.0	0.0	5.9
NE	1.3	1.9	2.1	0.0	0.0	0.0	5.3
E	5.6	6.3	1.3	0.0	0.0	0.0	13.2
SE	7.9	2.9	1.3	0.0	0.0	0.0	12.2
S	2.8	4.4	1.5	0.0	0.0	0.0	8.6
SW	4.5	7.5	5.1	0.9	0.0	0.0	18.0
W	2.1	7.6	8.6	1.0	0.0	0.0	19.3
NW	2.6	5.7	1.0	0.2	0.0	0.0	9.5
Summary	29.9	38.8	21.2	2.1	0.0	0.0	91.9

%	Icon	Classes (kph)	30	1.8-6.0	39	6.0-12.0	21	12.0-20.0	2	20.0-29.0	0	29.0-39.0	0	>39.0

PRAMP_842 2017/06/01 00:00 - 2017/06/30 23:00 Calm: 8.05% Calm Wind Avg Speed: 1.23(kph)



WIND DIRECTION

WIND DIRECTION Hourly Averages (WD)

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

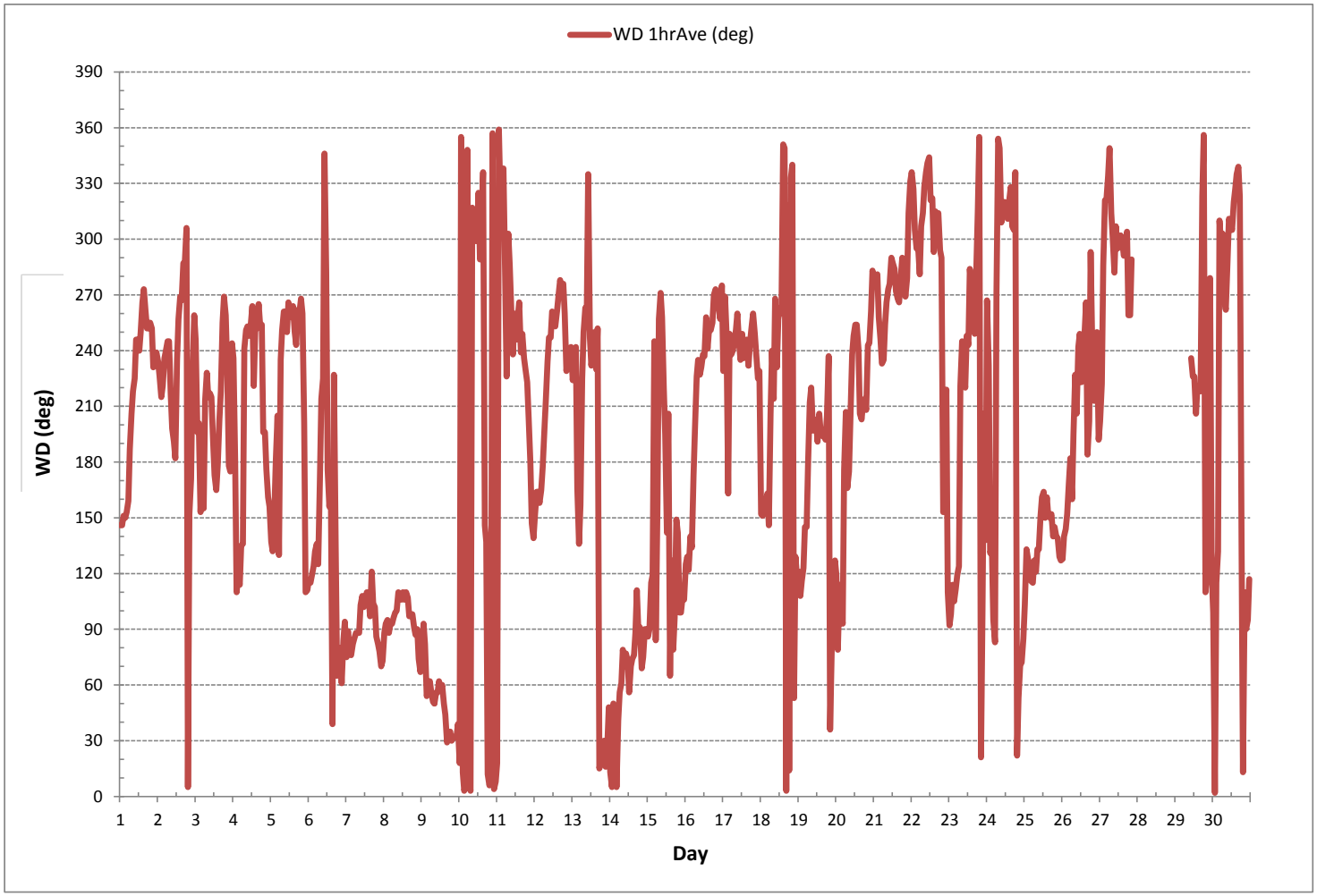
STATUS FLAG CODES

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:	June 29, 2017
DECLINATION :	MAGNETIC DECLINATION 15 DEGREE EAST

MONTHLY CALIBRATION TIME:	2	hrs	OPERATIONAL TIME:	685	hrs
STANDARD DEVIATION:	89		AMD OPERATION UPTIME:	95.1	%
			MONTHLY AVERAGE:	239 (WSW)	

WIND DIRECTION Hourly Averages (WD)



RELATIVE HUMIDITY

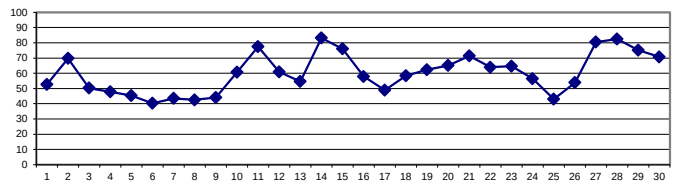
RELATIVE HUMIDITY Hourly Averages (RH %)

HR START (MST) / HR END (MST)	0:00 0:59	1:00 1:59	2:00 2:59	3:00 3:59	4:00 4:59	5:00 5:59	6:00 6:59	7:00 7:59	8:00 8:59	9:00 9:59	10:00 10:59	11:00 11:59	12:00 12:59	13:00 13:59	14:00 14:59	15:00 15:59	16:00 16:59	17:00 17:59	18:00 18:59	19:00 19:59	20:00 20:59	21:00 21:59	22:00 22:59	23:00 23:59	DAILY MIN.	DAILY MAX.	24-HR AVG.	RDGS.
DAY																												
1	75	73	73	82	86	87	79	67	56	45	38	37	36	33	34	34	32	33	34	34	38	47	53	58	32	87	53	24
2	60	68	73	71	70	65	65	76	86	88	89	88	80	68	62	56	53	53	57	58	73	86	68	60	53	89	70	24
3	59	70	75	83	83	82	69	58	52	45	39	33	28	27	30	27	26	30	33	33	44	49	59	72	26	83	50	24
4	75	88	91	91	90	80	69	46	40	33	31	29	26	25	24	26	26	24	25	29	33	40	48	59	24	91	48	24
5	62	63	74	79	83	87	72	56	44	35	29	23	22	22	22	21	20	**19**	20	23	28	47	68	71	**19**	87	45	24
6	71	63	70	65	62	58	57	46	34	28	25	23	23	22	23	24	22	22	23	26	29	49	51	50	22	71	40	24
7	60	61	64	68	64	62	55	47	40	32	29	29	28	28	29	27	27	31	29	33	40	48	56	58	27	68	44	24
8	51	52	55	59	59	59	55	50	42	35	30	26	26	26	27	35	40	38	38	36	41	42	47	52	26	59	43	24
9	50	46	46	51	63	61	53	47	45	42	39	38	36	34	35	37	40	38	38	38	39	44	48	52	34	63	44	24
10	59	68	73	79	89	87	67	54	51	49	43	40	32	29	28	29	29	51	57	74	91	93	92	92	28	93	61	24
11	93	94	95	95	**96**	96	92	85	85	83	77	74	72	64	62	56	57	59	60	62	68	75	78	82	56	**96**	78	24
12	80	81	82	83	85	85	83	76	70	61	49	46	48	43	44	45	42	41	42	43	47	59	60	66	41	85	61	24
13	66	67	66	73	79	79	66	59	52	44	40	38	36	32	31	30	31	43	45	48	55	69	78	84	30	84	55	24
14	88	93	94	93	95	95	92	85	81	80	76	66	61	63	66	67	70	75	89	93	93	94	94	93	61	95	**83**	24
15	94	94	95	95	95	95	95	95	92	84	77	73	71	63	61	55	54	57	48	55	65	65	70	76	48	95	76	24
16	76	75	79	81	83	84	82	79	69	63	56	53	54	47	41	40	37	35	36	41	37	42	48	51	35	84	58	24
17	65	79	88	90	93	86	75	66	56	46	41	37	30	27	26	22	21	21	22	22	27	38	45	50	21	93	49	24
18	70	60	63	65	75	69	64	60	60	59	47	41	35	32	37	49	61	55	47	47	51	74	89	92	32	92	58	24
19	94	95	95	95	96	94	76	58	53	47	41	37	38	34	34	33	34	37	38	60	75	85	80	66	33	96	62	24
20	67	77	77	74	81	78	83	92	89	81	69	61	53	49	46	53	60	55	60	66	46	43	47	55	43	92	65	24
21	59	64	65	73	82	84	81	67	58	56	53	54	53	53	59	63	69	72	84	90	92	94	95	94	53	95	71	24
22	92	91	92	94	94	94	86	76	69	62	53	46	45	43	38	39	35	33	33	31	54	74	74	87	31	94	64	24
23	90	92	92	94	95	95	82	64	56	51	42	36	37	41	48	55	42	38	42	49	61	74	86	90	36	95	65	24
24	86	85	87	89	93	94	83	61	52	49	46	41	34	30	28	28	27	28	29	31	42	65	74	71	27	94	56	24
25	70	58	60	63	68	68	59	51	43	38	32	29	27	26	25	27	29	29	31	31	34	39	45	51	25	70	43	24
26	56	56	54	54	67	67	64	59	57	55	56	50	43	35	27	22	31	39	50	58	71	71	71	79	22	79	54	24
27	83	84	86	89	84	77	75	72	69	66	60	58	59	68	79	83	89	90	90	92	94	95	95	94	58	95	80	24
28	94	94	94	95	95	95	95	95	**P**	94	90	87	79	72	68	66	60	77	66	60	67	79	88	87	60	95	82	23
29	87	88	92	95	95	96	92	84	79	71	60	53	50	45	42	46	48	55	84	84	89	89	90	90	42	96	75	24
30	92	94	95	94	94	95	94	90	84	80	74	70	62	57	49	48	45	42	41	38	52	68	70	70	38	95	71	24
HOURLY MAX	94	95	95	95	96	96	95	95	92	94	90	88	80	72	79	83	89	90	90	93	94	95	95	94				
HOURLY AVG	74	76	78	80	83	82	75	67	61	57	51	47	44	41	41	41	42	44	46	50	56	65	69	72				

STATUS FLAG CODES

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

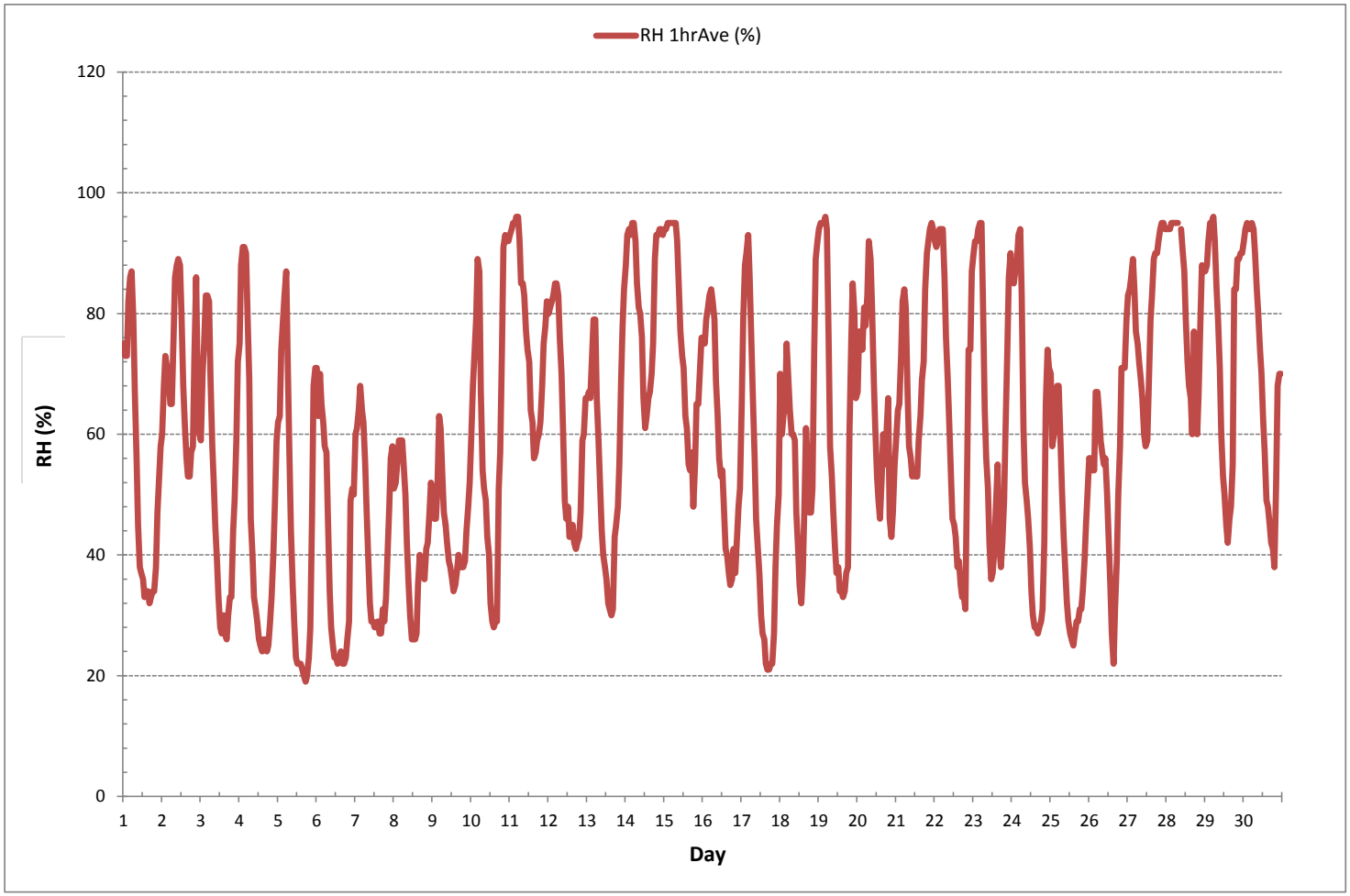
24 HR AVERAGES June 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	19	%	@ HOUR	17	ON DAY	5
MAXIMUM 1-HR AVERAGE:	96	%	@ HOUR	4	ON DAY	11
MAXIMUM 24-HR AVERAGE:	83	%			ON DAY	14
			OPERATIONAL TIME:		719	hrs
			AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	22		MONTHLY AVERAGE:		60	%

RELATIVE HUMIDITY Hourly Averages (RH %)



BAROMETRIC PRESSURE

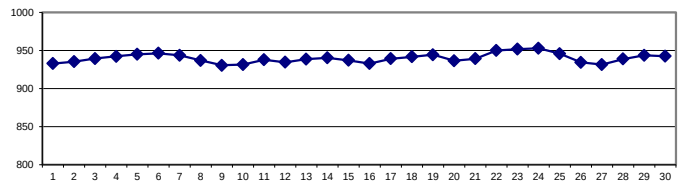
BAROMETRIC PRESSURE Hourly Averages (BP mbar)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	933	933	933	933	933	933	933	933	933	933	933	933	933	932	932	932	932	932	932	932	932	933	933	933	932	933	933	24
2	933	933	933	934	934	934	934	935	935	935	935	935	935	935	935	935	936	936	937	937	937	938	938	939	933	939	935	24
3	939	939	939	940	940	940	940	940	940	940	939	939	938	938	938	938	938	938	938	939	940	940	941	941	938	941	939	24
4	941	942	942	942	942	942	943	943	943	943	943	942	942	942	942	942	942	941	941	942	942	943	943	943	941	943	942	24
5	943	943	943	944	944	944	945	945	945	945	945	945	945	945	945	945	945	945	945	946	946	947	947	947	943	947	945	24
6	947	947	948	948	948	949	949	949	948	948	948	947	946	946	945	945	944	944	944	944	944	944	944	944	944	949	946	24
7	944	945	944	944	945	945	945	945	945	944	944	944	944	943	943	943	943	942	942	942	942	942	942	942	942	945	944	24
8	941	941	941	941	940	940	939	939	939	938	938	937	936	936	936	935	935	934	934	933	933	933	933	932	932	941	937	24
9	932	932	932	932	931	931	930	930	930	930	930	930	929	929	929	929	930	929	930	930	931	931	932	932	929	932	930	24
10	932	932	932	932	932	932	932	932	932	931	931	930	930	930	929	929	929	929	930	932	933	934	935	935	929	935	931	24
11	936	936	937	937	937	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	937	937	936	938	938	24
12	936	936	935	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	934	935	936	936	934	936	934	24
13	936	937	937	937	937	938	938	939	939	939	939	939	939	938	938	938	938	938	939	939	939	940	940	940	936	940	938	24
14	940	940	940	940	941	941	941	941	941	941	941	940	940	940	940	940	940	940	940	940	940	940	940	940	940	941	940	24
15	939	939	939	939	939	939	939	939	939	939	938	938	938	937	937	936	936	935	934	934	934	933	933	933	933	939	937	24
16	932	932	932	932	932	932	933	933	933	933	933	933	933	932	932	932	932	933	933	933	934	934	935	936	932	936	933	24
17	936	937	937	938	939	939	940	940	941	940	940	940	940	940	940	939	939	939	939	939	939	939	939	939	936	941	939	24
18	939	939	939	939	940	940	940	940	940	941	940	940	940	940	941	942	943	944	944	944	945	945	946	946	939	946	942	24
19	946	946	947	946	946	947	947	947	947	946	946	945	945	944	944	943	943	942	942	942	942	941	941	940	940	947	944	24
20	940	939	939	938	938	938	938	938	937	937	936	936	935	935	935	935	935	935	935	935	935	935	935	936	935	940	936	24
21	937	937	937	938	938	937	937	937	937	937	937	937	938	938	939	940	940	940	941	942	942	943	944	944	937	944	939	24
22	945	946	947	948	949	949	950	951	951	951	951	951	951	951	951	951	950	950	950	950	950	950	951	951	945	951	950	24
23	951	951	951	951	951	952	952	952	952	952	952	952	951	951	951	952	951	951	952	952	952	952	952	952	951	952	952	24
24	952	953	953	953	953	**954**	954	954	954	954	954	954	954	954	953	953	953	952	952	952	952	952	951	951	951	**954**	**953**	24
25	951	951	951	950	950	950	950	949	949	948	948	947	947	946	945	944	943	942	941	941	940	939	939	938	938	951	946	24
26	937	937	935	934	935	935	935	935	935	935	934	934	934	934	933	933	933	934	934	933	933	933	934	933	933	937	934	24
27	933	932	932	932	933	933	933	932	932	932	932	931	931	932	932	931	931	931	930	929	**928**	928	929	930	**928**	933	931	24
28	931	932	933	933	934	935	935	936	**P**	938	939	939	940	940	941	941	941	942	942	943	943	944	944	944	931	944	939	23
29	944	944	944	944	944	944	944	944	944	944	944	944	944	944	943	943	943	943	943	943	944	943	944	943	943	944	944	24
30	943	943	943	942	943	943	943	943	943	943	943	943	943	943	943	942	942	942	942	942	941	942	942	942	941	943	943	24
HOURLY MAX	952	953	953	953	953	954	954	954	954	954	954	954	954	954	953	953	953	952	952	952	952	952	952	952				
HOURLY AVG	940	940	940	940	940	940	940	940	941	940	940	940	940	940	939	939	939	939	939	939	940	940	940	940				

STATUS FLAG CODES

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

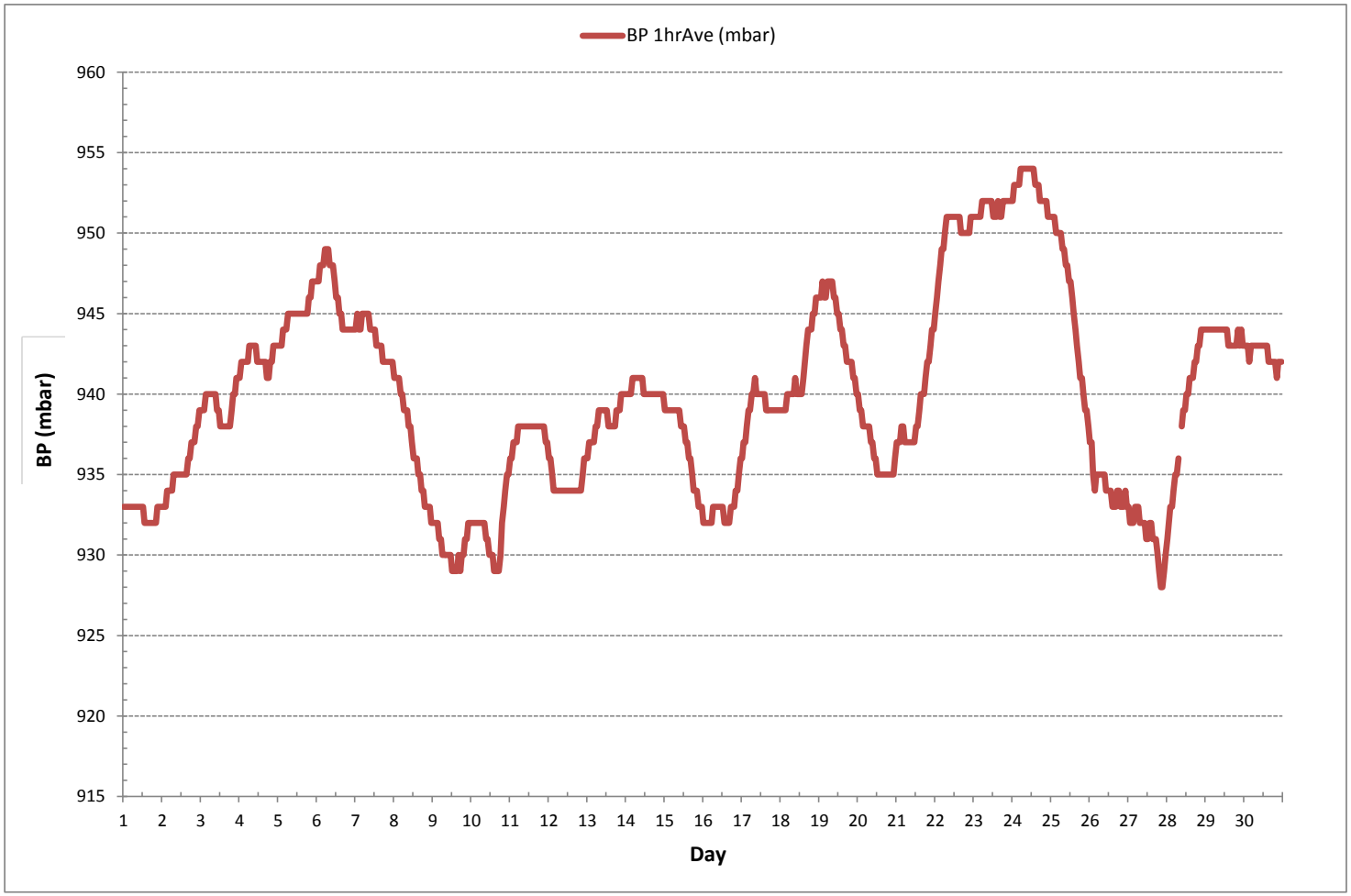
24 HR AVERAGES June 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	928	mbar	@ HOUR	20	ON DAY	27
MAXIMUM 1-HR AVERAGE:	954	mbar	@ HOUR	5	ON DAY	24
MAXIMUM 24-HR AVERAGE:	953	mbar			ON DAY	24
			OPERATIONAL TIME:		719	hrs
			AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	6		MONTHLY AVERAGE:		940	mbar

BAROMETRIC PRESSURE Hourly Averages (BP mbar)



AMBIENT TEMPERATURE

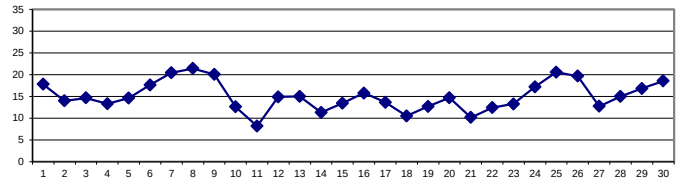
AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	11.2	11.7	11.5	9.5	9.0	9.5	12.7	15.4	18.3	20.7	22.1	22.5	23.3	23.7	24.0	23.8	23.9	23.1	22.9	22.3	20.2	17.0	14.7	14.1	9.0	24.0	17.8	24
2	13.7	12.5	11.7	12.9	13.1	13.6	13.4	12.2	11.4	11.4	11.9	12.6	13.9	16.0	17.0	17.5	17.5	17.3	17.4	18.7	15.6	11.9	11.3	11.2	11.2	18.7	14.0	24
3	10.9	7.9	7.0	5.0	4.7	5.6	10.1	13.0	14.8	16.7	18.7	20.5	21.8	21.8	21.2	21.1	21.1	20.3	19.0	18.0	16.0	14.8	12.2	9.4	4.7	21.8	14.7	24
4	7.7	4.6	3.3	1.9	2.0	3.7	8.1	11.9	13.3	14.9	15.8	17.3	18.6	18.8	19.5	19.3	20.0	20.5	19.8	19.3	18.0	15.4	13.5	11.4	1.9	20.5	13.3	24
5	10.5	9.7	7.5	6.6	5.8	4.9	9.6	12.8	15.2	17.3	18.5	19.3	19.8	20.3	21.1	21.0	21.2	21.2	20.7	20.1	18.5	13.5	8.9	7.4	4.9	21.2	14.6	24
6	6.3	6.7	5.5	6.2	6.7	8.9	11.8	15.6	18.5	21.1	22.8	23.9	24.4	24.6	24.2	25.1	25.6	24.6	25.5	24.2	22.7	17.1	15.6	15.6	5.5	25.6	17.6	24
7	13.1	13.6	12.8	11.8	11.9	12.5	15.3	19.1	22.6	24.7	25.1	25.7	25.4	25.7	26.0	**27.1**	26.0	24.8	24.8	24.3	22.6	20.3	18.1	17.0	11.8	**27.1**	20.4	24
8	17.8	17.0	16.2	15.3	15.5	15.9	17.4	19.3	21.6	23.5	25.1	26.2	26.9	26.9	25.7	24.4	23.7	24.5	24.0	23.7	22.6	21.7	20.4	18.7	15.3	26.9	**21.4**	24
9	18.9	19.5	19.2	18.3	16.1	15.9	18.0	20.2	21.1	22.2	23.0	23.7	24.8	25.2	25.0	23.6	22.9	22.9	21.5	20.3	18.4	15.2	13.0	11.6	11.6	25.2	20.0	24
10	9.5	7.1	6.1	4.4	2.1	3.6	9.4	13.9	15.2	15.7	16.9	17.6	21.0	20.5	21.2	21.2	20.4	17.1	15.7	12.3	9.3	8.6	7.4	5.9	2.1	21.2	12.6	24
11	4.8	3.5	2.6	1.8	2.1	3.1	5.6	7.5	7.7	7.9	9.0	10.0	10.4	11.4	11.8	12.3	12.4	12.1	11.6	11.5	10.8	9.8	8.3	7.8	1.8	12.4	8.2	24
12	8.6	9.2	9.8	10.1	10.0	10.2	11.1	13.1	14.2	15.8	17.5	18.0	18.1	18.8	18.8	18.7	20.3	20.4	19.4	19.2	18.1	14.7	12.8	10.6	8.6	20.4	14.9	24
13	9.9	9.3	9.2	7.2	5.7	6.5	10.3	12.4	14.5	17.3	19.7	19.3	19.9	20.6	21.3	21.6	21.6	20.2	20.8	19.6	17.7	13.6	11.3	9.8	5.7	21.6	15.0	24
14	8.0	6.4	7.2	6.6	6.5	9.2	10.4	11.0	11.7	11.6	11.9	15.2	16.5	15.8	15.0	14.4	14.0	13.4	12.0	11.6	11.5	11.0	10.6	10.2	6.4	16.5	11.3	24
15	9.8	9.6	9.4	9.4	9.5	9.7	10.0	10.3	11.3	12.7	13.5	14.0	14.8	16.6	17.3	18.1	18.7	17.8	18.2	16.6	15.1	14.0	13.4	12.9	9.4	18.7	13.4	24
16	13.4	13.7	13.3	12.8	12.2	12.3	12.7	13.3	14.5	15.7	16.9	17.6	17.4	18.3	19.8	19.7	19.8	19.4	18.8	17.9	16.2	14.8	14.2	13.7	12.2	19.8	15.8	24
17	10.5	7.8	6.0	5.2	5.5	8.2	10.6	12.3	13.8	15.4	16.1	16.5	17.4	17.9	18.4	18.8	18.9	19.0	18.5	18.1	16.9	13.9	11.5	9.9	5.2	19.0	13.6	24
18	6.5	6.9	5.8	5.2	3.4	5.0	7.7	9.0	9.9	10.6	13.0	13.9	15.4	16.7	17.6	14.9	12.6	14.0	15.5	15.5	14.2	9.3	5.3	3.7	3.4	17.6	10.5	24
19	2.6	2.4	2.1	**1.4**	1.4	3.4	8.8	12.3	13.6	15.1	16.6	18.0	18.5	20.3	20.3	20.2	20.0	19.3	18.3	15.8	14.7	13.0	12.8	13.7	**1.4**	20.3	12.7	24
20	13.1	11.4	10.5	11.4	10.5	11.9	12.6	12.3	13.4	15.2	17.1	18.3	19.6	19.8	18.8	17.8	16.2	15.9	15.5	14.9	15.0	14.6	13.8	13.2	10.5	19.8	14.7	24
21	12.1	11.0	10.5	9.5	8.4	8.0	7.4	9.0	10.6	11.6	13.1	12.9	13.0	13.1	11.9	11.1	10.3	10.3	9.0	8.4	8.3	8.3	8.3	7.9	7.4	13.1	10.2	24
22	6.0	4.7	4.1	3.1	3.0	3.6	7.3	10.4	12.4	14.0	15.5	17.0	17.2	17.5	18.6	18.7	20.0	20.6	19.6	20.4	16.3	11.2	10.4	7.0	3.0	20.6	12.4	24
23	5.7	5.0	4.2	3.4	2.7	4.2	9.6	14.2	16.3	17.6	19.0	20.0	20.5	18.9	16.9	16.3	19.2	20.6	20.4	18.7	15.4	12.5	9.1	7.8	2.7	20.6	13.3	24
24	9.3	9.9	9.2	7.6	6.3	6.9	11.4	16.7	19.1	20.0	21.3	22.5	23.7	24.2	25.2	25.4	24.8	24.4	24.2	23.9	21.0	14.2	11.1	10.5	6.3	25.4	17.2	24
25	10.4	13.1	12.8	12.4	11.6	11.8	15.3	18.6	21.0	22.5	23.7	24.7	25.4	26.1	26.5	26.7	26.6	26.2	26.1	25.4	24.1	22.1	20.7	19.8	10.4	26.7	20.6	24
26	19.0	18.9	19.3	19.0	15.6	16.4	17.7	19.5	20.8	21.9	22.2	23.2	24.0	25.4	25.5	25.4	23.4	20.7	18.6	16.9	15.2	14.7	14.5	13.8	13.8	25.5	19.7	24
27	12.6	12.2	11.9	11.1	11.4	11.9	12.6	12.9	12.9	13.8	15.8	16.6	16.4	15.4	14.2	13.5	12.9	11.4	11.3	11.1	11.0	11.2	11.1	10.4	10.4	16.6	12.7	24
28	10.3	10.1	9.7	9.6	9.9	10.6	11.3	11.8	**P**	13.1	14.5	15.9	17.7	19.9	19.8	20.6	21.1	16.6	19.5	20.3	17.7	15.4	14.9	14.5	9.6	21.1	15.0	23
29	13.1	12.8	11.5	10.2	10.1	10.4	13.0	14.9	16.6	18.8	20.9	22.2	22.9	23.6	24.1	23.9	24.1	21.6	15.7	15.6	15.0	14.6	14.2	14.1	10.1	24.1	16.8	24
30	13.9	13.6	13.4	13.3	12.6	13.3	13.9	14.8	16.5	17.2	18.9	20.1	21.5	23.0	24.5	23.5	24.1	25.3	23.1	25.6	22.4	17.6	16.4	16.1	12.6	25.6	18.5	24
HOURLY MAX	19.0	19.5	19.3	19.0	16.1	16.4	18.0	20.2	22.6	24.7	25.1	26.2	26.9	26.9	26.5	27.1	26.6	26.2	26.1	25.6	24.1	22.1	20.7	19.8				
HOURLY AVG	10.6	10.1	9.4	8.7	8.2	9.0	11.5	13.7	15.3	16.5	17.9	18.8	19.7	20.2	20.4	20.2	20.1	19.5	18.9	18.3	16.7	14.2	12.7	11.7				

STATUS FLAG CODES

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

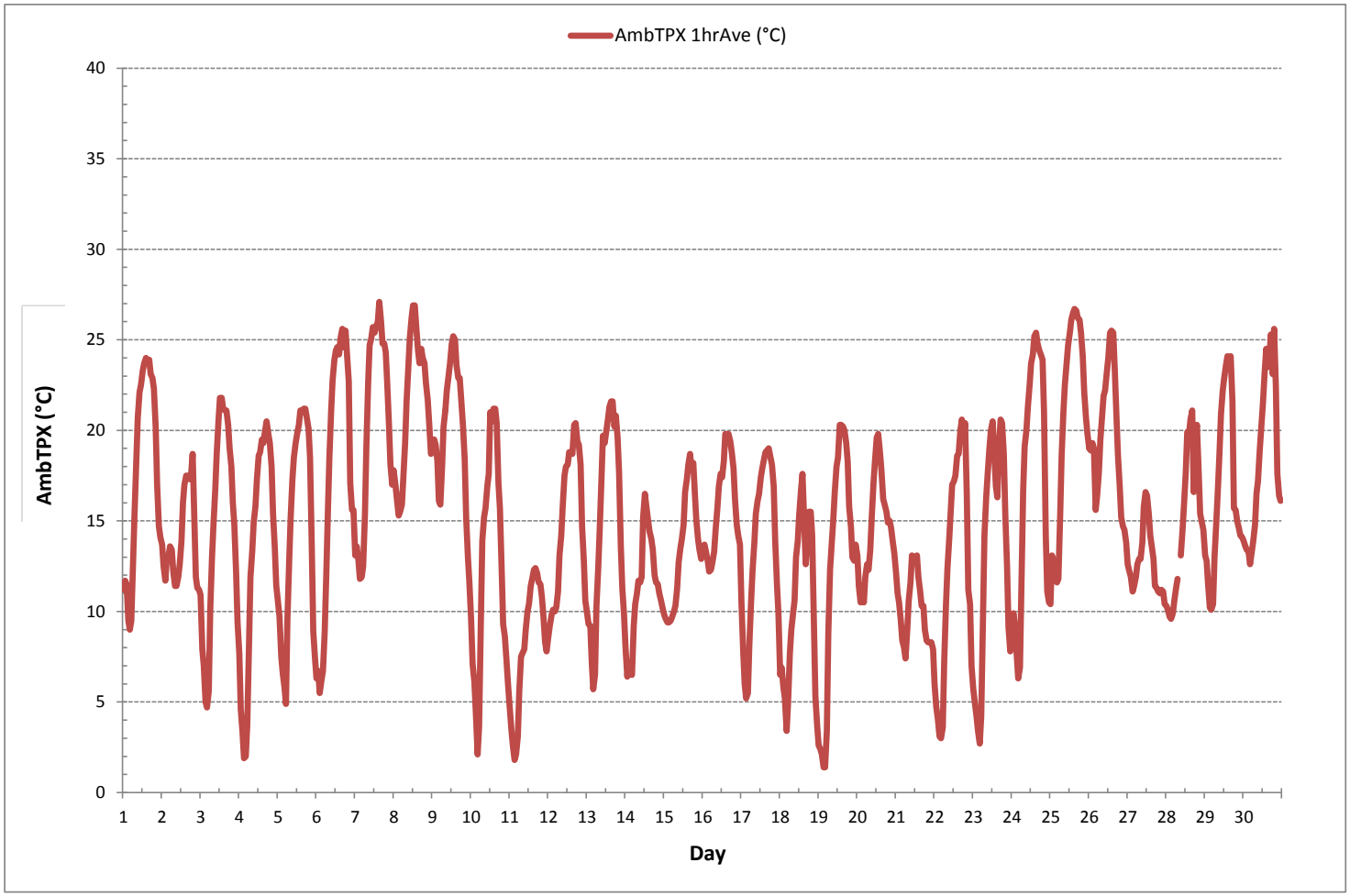
24 HR AVERAGES June 2017



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	1.4	°C	@ HOUR	3	ON DAY	19	
MAXIMUM 1-HR AVERAGE:	27.1	°C	@ HOUR	15	ON DAY	7	
MAXIMUM 24-HR AVERAGE:	21.4	°C			ON DAY	8	
			OPERATIONAL TIME:			719	hrs
			AMD OPERATION UPTIME:			99.9	%
STANDARD DEVIATION:	5.8		MONTHLY AVERAGE:			15.1	°C

AMBIENT TEMPERATURE Hourly Averages (AmbTPX °C)



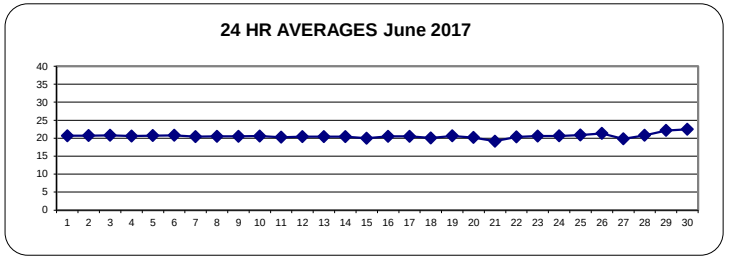
STATION TEMPERATURE

STATION TEMPERATURE Hourly Averages (StnTPX °C)

HR START (MST)	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	24-HR	RDGS.
HR END (MST)	0:59	1:59	2:59	3:59	4:59	5:59	6:59	7:59	8:59	9:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	MIN.	MAX.	AVG.	
DAY																												
1	20.7	20.7	20.7	21.5	20.7	21.5	20.2	20.5	20.6	20.5	20.5	20.5	20.7	20.8	20.6	20.5	20.8	20.8	20.9	20.8	20.4	20.5	20.5	20.8	20.2	21.5	20.7	24
2	20.7	20.9	20.9	20.8	20.5	20.7	20.8	20.8	20.5	20.5	20.8	20.9	21.0	20.8	20.6	20.4	20.6	20.7	20.6	20.5	20.6	20.9	21.0	20.5	20.4	21.0	20.7	24
3	20.7	21.5	22.1	22.1	22.0	21.7	20.7	20.6	20.5	20.3	20.3	20.5	20.6	20.6	20.5	20.4	20.5	20.4	20.5	20.5	20.6	20.8	20.6	20.5	20.3	22.1	20.8	24
4	20.2	21.1	21.2	21.0	20.3	20.9	21.7	20.4	20.2	20.5	20.3	20.6	20.4	20.5	20.4	20.6	20.7	20.7	20.5	20.4	20.7	20.3	20.7	20.1	20.1	21.7	20.6	24
5	20.9	20.1	21.7	21.7	20.8	21.5	21.3	20.7	20.3	20.4	20.4	20.4	20.5	20.4	20.6	20.8	20.8	20.7	20.8	20.9	20.4	20.5	20.2	20.0	20.0	21.7	20.7	24
6	20.7	21.6	21.8	21.9	22.0	20.8	20.2	20.5	20.5	20.3	20.7	20.7	21.1	20.8	20.8	21.1	20.7	20.6	20.6	20.5	20.5	20.3	20.1	20.3	20.1	22.0	20.8	24
7	20.5	20.5	20.3	20.1	20.5	20.4	20.3	20.2	20.2	20.2	20.4	20.2	20.6	20.5	20.6	20.7	20.5	20.8	20.6	20.7	20.6	20.5	20.4	20.6	20.1	20.8	20.5	24
8	20.3	20.5	20.6	20.4	20.8	20.2	20.6	20.3	20.3	20.7	20.2	20.7	20.6	20.5	20.7	20.6	20.5	20.7	20.8	20.5	20.6	20.6	20.6	20.6	20.2	20.8	20.5	24
9	20.5	20.6	20.4	20.5	20.4	20.4	20.4	20.4	20.3	20.5	20.5	20.5	20.7	20.5	20.9	20.5	20.6	20.7	20.6	20.5	20.3	20.4	20.3	20.6	20.3	20.9	20.5	24
10	19.9	19.9	21.4	19.8	21.6	21.9	20.9	20.3	20.3	20.4	20.5	20.3	20.5	20.6	20.4	20.6	20.7	20.4	20.2	20.4	20.6	20.9	20.7	21.2	19.8	21.9	20.6	24
11	21.2	19.8	19.5	19.7	19.6	19.5	20.2	20.8	20.2	21.0	20.6	20.5	20.3	20.6	20.3	20.6	20.2	20.2	20.6	20.4	20.3	20.2	21.0	19.7	19.5	21.2	20.3	24
12	20.8	19.9	20.6	20.6	20.4	20.4	20.5	20.6	20.4	20.6	20.3	20.4	20.4	20.4	20.6	20.5	20.6	20.7	20.4	20.5	20.4	20.2	20.6	20.3	19.9	20.8	20.5	24
13	19.9	19.7	21.3	19.8	20.9	21.4	19.9	20.2	20.5	20.3	20.4	20.3	20.4	20.7	20.8	20.6	20.6	20.6	20.4	20.5	20.4	20.4	20.4	20.5	19.7	21.4	20.5	24
14	20.6	21.0	21.0	21.1	20.9	20.3	20.8	20.8	20.3	20.6	20.7	21.3	21.7	20.7	20.4	20.1	20.8	20.3	20.1	20.1	19.5	19.2	**18.8**	18.8	**18.8**	21.7	20.4	24
15	18.8	18.9	18.8	18.9	18.9	18.8	18.8	19.3	19.2	19.2	19.8	20.3	20.8	20.8	20.8	20.9	21.5	21.5	21.4	21.3	21.0	20.5	20.2	19.9	18.8	21.5	20.0	24
16	19.8	19.8	19.7	19.5	19.2	19.0	19.1	19.2	19.7	20.2	21.0	21.3	21.3	21.2	21.5	21.5	21.5	21.7	21.7	21.3	21.3	20.8	20.3	19.9	19.0	21.7	20.5	24
17	19.3	19.4	19.6	19.7	19.6	19.6	19.1	19.1	19.6	20.3	20.4	21.0	21.2	21.5	21.3	21.7	21.5	21.8	21.9	21.8	21.7	21.2	20.0	19.2	19.1	21.9	20.5	24
18	19.7	19.8	19.8	19.8	20.0	19.9	19.7	19.6	19.4	19.1	19.6	19.5	19.8	20.5	20.9	20.9	20.6	20.3	20.7	21.1	21.2	20.3	19.6	19.9	19.1	21.2	20.1	24
19	20.0	20.0	20.1	20.1	20.1	19.9	19.6	19.3	19.3	19.9	20.7	21.3	21.4	21.4	21.6	21.9	21.9	21.7	21.7	21.2	21.0	20.8	20.4	20.1	19.3	21.9	20.6	24
20	19.8	19.4	18.8	19.1	19.0	18.9	19.1	19.0	19.4	20.1	20.7	21.4	21.5	21.6	21.5	21.2	21.2	21.1	20.9	21.1	20.6	20.2	19.7	19.3	18.8	21.6	20.2	24
21	19.1	19.0	19.2	19.3	19.2	19.3	19.3	19.4	19.4	19.1	19.0	19.0	19.0	19.0	19.1	19.3	19.3	19.2	19.3	19.1	19.2	19.3	19.1	19.2	19.0	19.4	19.2	24
22	19.3	19.5	19.8	19.9	20.1	20.0	19.7	19.5	19.2	19.1	19.3	19.8	20.3	20.3	21.1	21.6	21.8	21.7	21.8	21.9	21.8	21.0	20.1	19.2	19.1	21.9	20.3	24
23	19.4	19.6	19.7	19.9	20.0	19.9	19.3	19.3	20.2	20.7	21.3	21.1	21.3	21.6	21.5	21.2	21.5	21.8	21.7	21.7	22.0	21.2	19.9	19.1	19.1	22.0	20.6	24
24	18.9	19.0	19.1	19.1	19.3	19.4	19.1	19.6	20.4	20.7	21.1	21.4	21.4	21.5	21.6	22.1	21.8	21.8	21.9	21.8	21.9	21.4	20.8	20.1	18.9	22.1	20.6	24
25	19.3	19.0	18.8	18.9	18.9	19.0	19.3	20.5	21.2	21.3	21.6	21.9	21.7	21.8	22.1	21.7	21.9	21.9	21.9	21.9	21.9	21.7	21.5	21.7	18.8	22.1	20.9	24
26	21.1	21.6	21.5	21.3	20.8	20.9	21.3	21.4	21.4	21.6	21.6	21.6	21.8	21.9	21.8	21.8	21.8	21.7	21.3	21.4	20.9	20.6	20.7	20.7	20.6	21.9	21.4	24
27	20.3	19.9	19.5	19.2	18.9	18.8	19.0	19.0	19.1	19.5	20.3	21.0	21.2	20.9	20.9	20.7	20.8	20.3	19.9	19.6	19.3	19.1	19.4	19.3	18.8	21.2	19.8	24
28	19.2	19.1	19.1	19.0	19.0	19.1	18.9	20.8	**P**	22.5	22.3	22.0	21.8	21.7	20.7	21.0	21.5	21.6	21.7	20.9	21.3	21.6	21.9	22.1	18.9	22.5	20.8	23
29	22.0	22.2	22.4	22.5	22.5	22.5	22.1	21.7	20.9	22.1	21.8	21.9	21.6	21.5	21.6	21.8	21.6	22.1	22.6	22.6	22.9	22.9	23.0	23.1	20.9	23.1	22.2	24
30	23.1	23.1	23.1	23.0	23.1	**23.2**	23.1	23.1	22.7	22.5	22.3	22.4	22.3	22.1	21.9	21.6	21.8	21.8	21.5	21.8	21.9	22.4	22.8	22.9	21.5	**23.2**	**22.5**	24
HOURLY MAX	23.1	23.1	23.1	23.0	23.1	23.2	23.1	23.1	22.7	22.5	22.3	22.4	22.3	22.1	22.1	22.1	21.9	22.1	22.6	22.6	22.9	22.9	23.0	23.1				
HOURLY AVG	20.2	20.2	20.4	20.3	20.3	20.3	20.2	20.2	20.2	20.5	20.6	20.8	20.9	20.9	20.9	21.0	21.0	21.0	21.0	20.9	20.9	20.7	20.5	20.3				

STATUS FLAG CODES

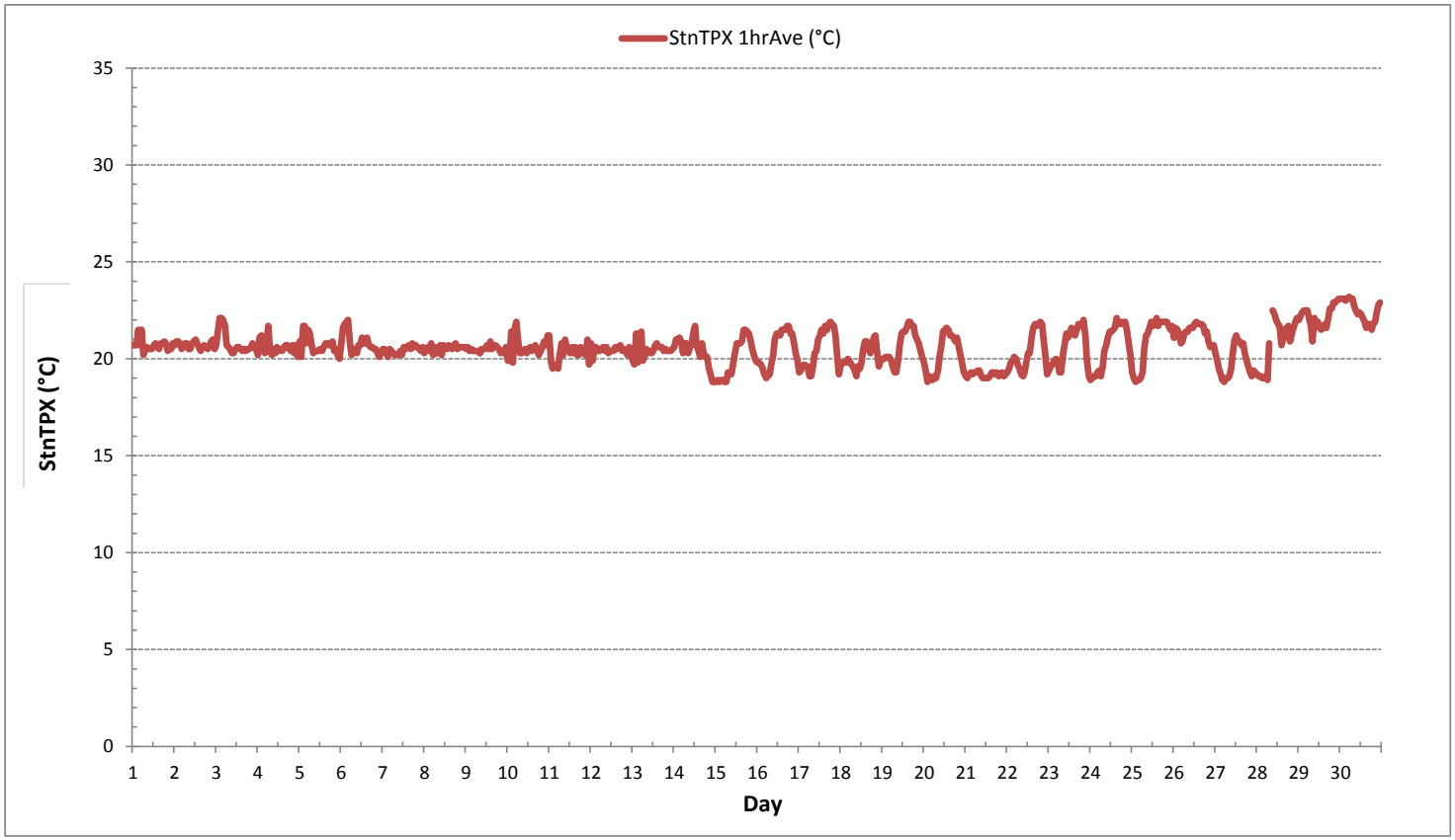
C	- MONTHLY CALIBRATION	Q	- QUALITY ASSURANCE
C1	- REPEAT CALIBRATION	R	- RECOVERY
Y	- MAINTENANCE	X	- MACHINE MALFUNCTION
S	- DAILY ZERO/SPAN CHECK	G	- OUT FOR REPAIR
S1	- REPEAT ZERO/SPAN CHECK	P	- POWER FAILURE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	18.8	°C	@ HOUR	22	ON DAY	14	
MAXIMUM 1-HR AVERAGE:	23.2	°C	@ HOUR	5	ON DAY	30	
MAXIMUM 24-HR AVERAGE:	22.5	°C			ON DAY	30	
			OPERATIONAL TIME:			719	hrs
			AMD OPERATION UPTIME:			99.9	%
STANDARD DEVIATION:	0.9		MONTHLY AVERAGE:			20.6	°C

STATION TEMPERATURE Hourly Averages (StnTPX °C)



APPENDIX II
EQUIPMENT CALIBRATION RESULTS

SULPHUR DIOXIDE

API 100A Sulphur Dioxide Analyzer Calibration

Date:	June 6, 2017	**Barometer ID #/Last Cert. Date/B.P.:**	Brunton 5490, December 4, 2016 — 27.96 inHg
Company/Airshed:	PRAMP	**Thermometer ID #/Last Cert. Date/Temp:**	fisher Scientific 160348895, April 8, 2017 — 21.4 degrees
Location/Station Name:	842B	**Weather Conditions:**	Mainly sunny
Parameter:	Sulphur Dioxide	**Calibration Purpose:**	routine monthly
Start Time 24 hr. (mst):	8:30	**Performed By/Reviewer:**	Limin Li — Trina Whitsitt
End Time 24 hr. (mst):	12:10	**Cal Gas Expiry Date:**	December 8, 2019
Calibration Method:	Gas Dilution	**Converter Model & s/n (if applicable):**	n/a

Analyzer:

ID# or Serial Number:	838	**Range ppb:**	500
Last Calibration Date:	May 10, 2017	**As Found C.F.:**	0.999
Previous C.F.:	0.998	**New C.F.:**	0.999

Calibration Standards:

Low Flow Meter ID/Cert. Date:	Defender 1 Low ID# 152019 November 21, 2016
High Flow Meter ID/Cert. Date:	Defender 1 High ID# 148944 November 21, 2016
Calibrator ID/Cert. Date:	Sabio 2010 17200415, May 16, 2017
Cal Gas Cylinder I.D. # :	EY0000769
Cal Gas Conc. (ppm):	50.5

Standard Calibration Points for Ranges

Point	ppb
High	380
Mid	180
Low	90

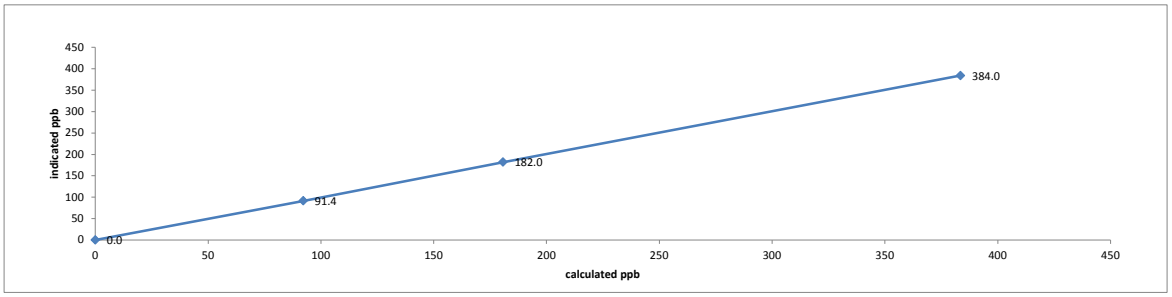
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:	Indicated Concentration:	Correction Factors (C.F.):
Point	**Diluent**	**Cal Gas**	**Total**	**(ppb)**	**(ppb)**	
as found zero	4952	0.00	4952	0.0	-0.1	n/a
as found high	4914	37.61	4952	383.5	384.0	0.999
adjusted zero	4952	0.00	4952	0.0	0.0	n/a
adjusted high	4914	37.61	4952	383.5	384.0	0.999
mid	4989	17.92	5007	180.7	182.0	0.993
low	5009	9.16	5018	92.2	91.4	1.009
calibrator zero	4952	0.00	4952	0.0	0.2	n/a
					Average C.F.=	1.000

Linear Regression/Calibration Results:

		LIMITS
Correlation Coeffecient =	**1.000**	**> or = 0.995**
Slope =	**0.998**	**.95-1.05**
b (Intercept as % of full scale)=	**0.03%**	**± 3% F.S.**
% change in C.F. from last cal=	**-0.06%**	**± 10%**

API 100A Sulphur Dioxide Analyzer Calibration



As found:		As left:	
Slope:	1.049	Slope:	1.049
Offset:	19.3	Offset:	19.3
Hvps:	685	Hvps:	685
Dcps:	2545	Dcps:	2545
Rcell Temp:	50.8	Rcell Temp:	50.8
Box Temp:	29.1	Box Temp:	29.1
Pmt Temp:	7.3	Pmt Temp:	7.3
Izs Temp:	60.1	Izs Temp:	60.1
Converter Temp:	667.2	Converter Temp:	667.2
Pres:	26.7	Pres:	26.7
Samp Fl:	647	Samp Fl:	647
Pmt:	55.7	Pmt:	55.7
Uv Lamp:	2146	Uv Lamp:	2146
Lamp Ratio:	87	Lamp Ratio:	87
Str Lgt:	10.1	Str Lgt:	10.1
Drk Pmt:	33.2	Drk Pmt:	33.2
Drk Lmp:	-7.1	Drk Lmp:	-7.1
Expected Value:	238.9	Expected Value:	238.9

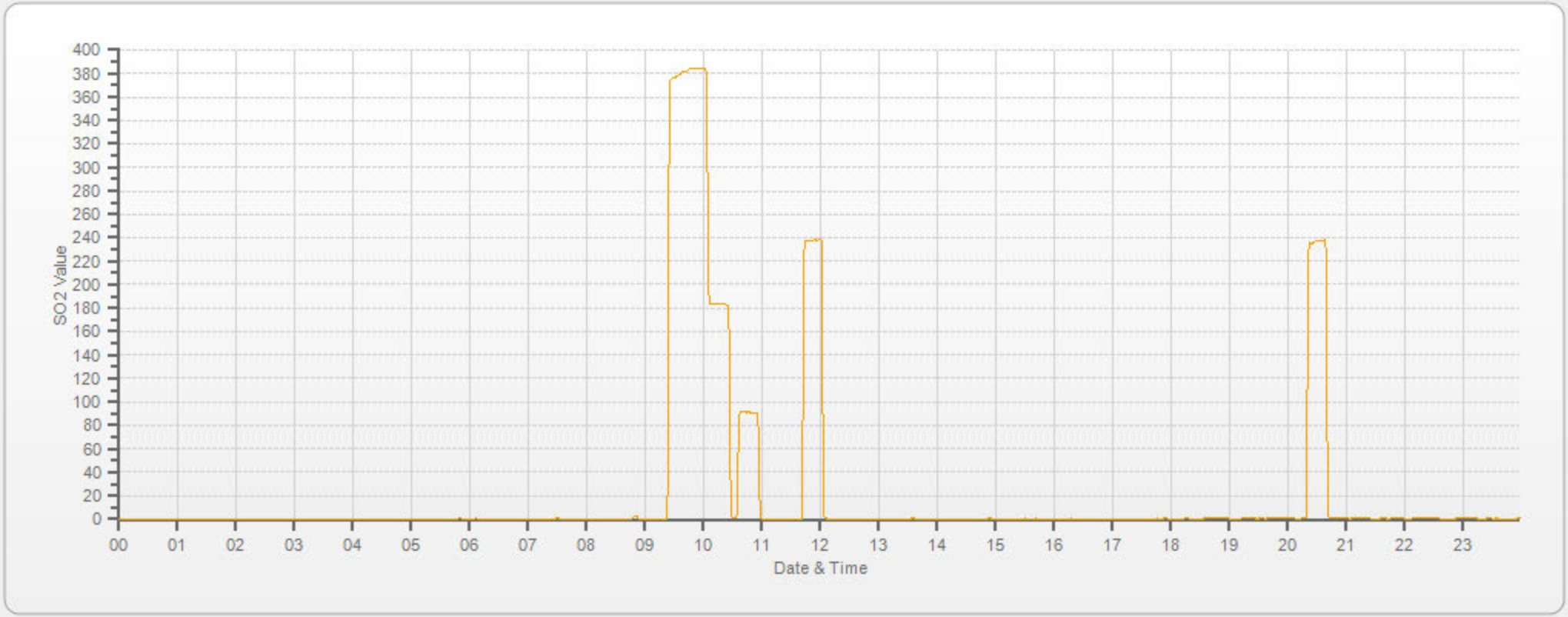
Comments:

The analyzer sample inlet filter was changed.

No high point adjustment was required/made. The "as found" high value was copied to the "adjusted zero" value field for linearity calculation purposes.

Flow measurements performed after mid-point.

SO2[ppb] Station: PRAMP_842 Daily: 17.06.06 Type: AVG 1 Min. [1 Min.]



TOTAL REDUCED SULPHUR

Thermo 43i Total Reduced Sulphur Analyzer Calibration

Date:	June 6, 2017		**Barometer ID #/Last Cert. Date/B.P.:**	Brunton 5490, December 4, 2016	27.96 inHg
Company/Airshed:	PRAMP		**Thermometer ID #/Last Cert. Date/Temp:**	fisher Scientific 160348895, April 8, 2017	21.4 degrees
Location/Station Name:	842B		**Weather Conditions:**	Mainly sunny	
Parameter:	Total Reduced Sulphur		**Calibration Purpose:**	routine monthly	
Start Time 24 hr. (mst):	8:30		**Performed By/Reviewer:**	Limin Li	Trina Whitsitt
End Time 24 hr. (mst):	13:00		**Cal Gas Expiry Date:**	January 6, 2018	
Calibration Method:	Gas Dilution		**Converter Model & s/n (if applicable):**	CDNOVA CDN-101 & s/n:553	

Analyzer:

ID# or Serial Number:	1162460023	**Range ppb:**	100
Last Calibration Date:	May 10, 2017	**As Found C.F.:**	1.030
Previous C.F.:	1.000	**New C.F.:**	1.000

Calibration Standards:

Low Flow Meter ID/Cert. Date:	Defender 1 Low ID# 152019 November 21, 2016
High Flow Meter ID/Cert. Date:	Defender 1 High ID# 148944 November 21, 2016
Calibrator ID/Cert. Date:	Environics 2000 1991, March 16, 2017
Cal Gas Cylinder I.D. # :	BLM002508
Cal Gas Conc. (ppm):	10.2

Standard Calibration Points for Ranges

Point	ppb
High	78
Mid	38
Low	19

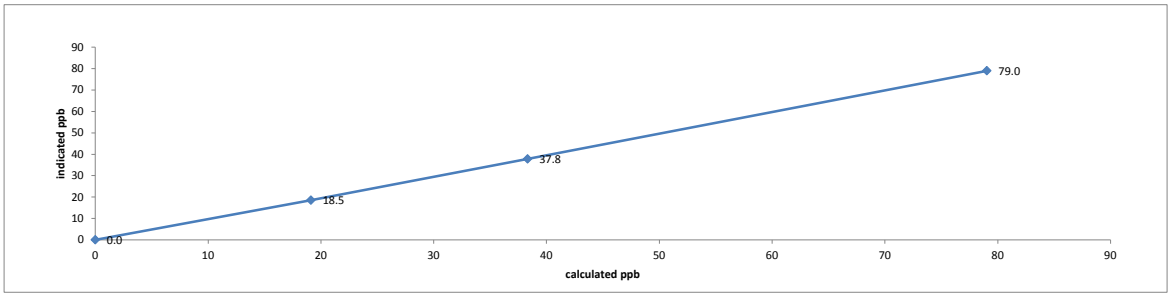
ALL POINTS ARE 15 MINUTES OF STABILITY AS OF SEPTEMBER 23, 2015

Calibrator Flow Rates (cc/min)				Calculated Concentration:	Indicated Concentration:	Correction Factors (C.F.):
Point	**Diluent**	**Cal Gas**	**Total**	**(ppb)**	**(ppb)**	
as found zero	7486	0.00	7486	0.0	-0.1	n/a
as found high	7414	57.90	7472	79.0	76.6	1.030
adjusted zero	7486	0.00	7486	0.0	0.0	n/a
adjusted high	7414	57.90	7472	79.0	79.0	1.000
mid	7468	28.17	7496	38.3	37.8	1.014
low	7490	14.07	7504	19.1	18.5	1.034
calibrator zero	7486	0.00	7486	0.0	0.0	n/a
					Average C.F.=	1.016

Linear Regression/Calibration Results:

		LIMITS
Correlation Coeffecient =	**1.000**	**> or = 0.995**
Slope =	**0.998**	**.95-1.05**
b (Intercept as % of full scale)=	**0.36%**	**± 3% F.S.**
% change in C.F. from last cal=	**-3.05%**	**± 10%**

Thermo 43i Total Reduced Sulphur Analyzer Calibration



	As found:	As left:
Bkg:	2.54	2.52
Coef:	0.825	0.850
Pmt:	-725.6	-725.6
Flash:	983	988
Internal:	29.1	29.3
Chamber:	45.1	45.1
Perm Oven Gas:	45.00	45.00
Perm Oven Heater:	44.11	44.11
Pressure:	667.2	665.4
Sample Flow:	0.410	0.408
Lamp Intensity:	90	90
Converter:	850	850
Converter Set:	850	850
Averaging Time:	120	120
Expected Value:	56.5	57.6

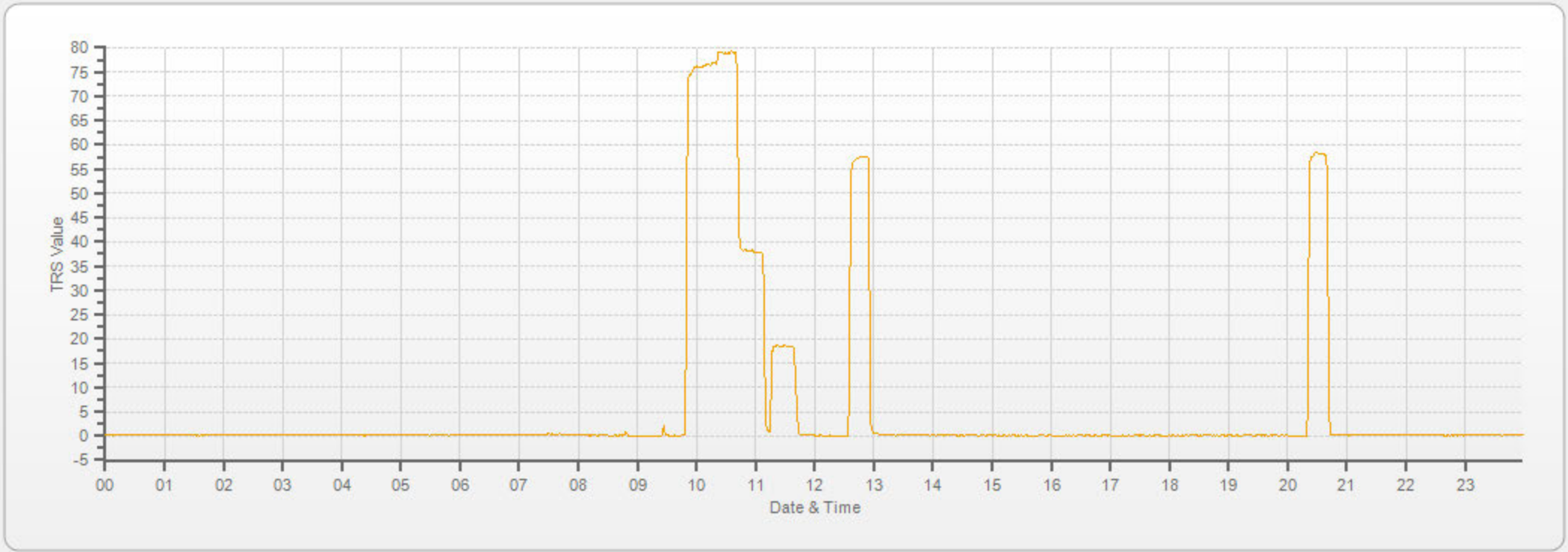
Comments:

The analyzer sample inlet filter was changed.

The analyzer cooling fan filter(s) were cleaned.

Flow measurements performed after mid-point

TRS[ppb] Station: PRAMP_842 Daily: 17.06.06 Type: AVG 1 Min. [1 Min.]



TOTAL HYDROCARBON

Thermo 55i Methane/Non-Methane Analyzer Calibration

Date:	June 6, 2017	**Barometer ID #/Last Cert. Date/B.P.:**	fisher Scientific 05544, December 5, 2016 — 27.96 inHg
Company/Airshed:	PRAMP	**Thermometer ID #/Last Cert. Date/Temp:**	fisher Scientific 160348895, April 8, 2017 — 21 degrees
Location/Station Name:	842B	**Weather Conditions:**	Mainly sunny
Parameter:	CH_4 / NMHC / THC	**Calibration Purpose:**	routine monthly
Start/End Time 24 hr. (mst):	11:30/15:55	**Performed By/Reviewer:**	Limin Li — Trina Whitsitt
Calibration Method:	Gas Dilution	**Cal Gas Expiry Date:**	November 24, 2022

Analyzer:

ID# or Serial Number:	1433563261
Measured Flow:	1.130 lpm
Last Calibration Date:	May 10, 2017
Range ppm:	20 CH4/20 NMHC/40 THC

Correction Factors:

	Previous C.F.:	As Found C.F.:	New C.F.:
CH_4 =	0.997	0.964	1.002
NMHC =	0.999	1.004	1.001
THC =	0.998	0.983	1.002

Calibration Standards:

Low Flow Meter ID/Cert. Date:	Defender 1 Low ID# 152019 November 21, 2016		
High Flow Meter ID/Cert. Date:	Defender 1 High ID# 148944 November 21, 2016		
Calibrator ID/Cert. Date:	Sabio 2010 17200415, May 16, 2017		
Cal Gas Cylinder I.D. # :	LL165367		
CH4 Cylinder Conc.=	590.0	207.0	**=C_3H_8 Cylinder Conc.**
CH_4 as C_3H_8=	569.3	1159.3	**=total CH_4 equivilant**

Standard Calibration Points for Analyzer Range of 20/20/40 ppm

Point	CH4	NMHC	THC
High	**13.00**	**13.00**	**26.00**
Mid	**7.00**	**7.00**	**14.00**
Low	**3.00**	**3.00**	**6.00**

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

Calibrator Flow Rates (cc/min)				Calculated	Calculated	Calculated	Indicated	Indicated	Indicated	Correction Factors:		
Point	**Diluent**	**Cal Gas**	**Total Flow**	**CH_4 (ppm)**	**NMHC (ppm)**	**THC (ppm)**	**Indicated CH_4 (ppm)**	**NMHC (ppm)**	**THC (ppm)**	**CH_4**	**NMHC**	**THC**
as found zero	2503	0.00	2503	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a
as found high	2513	62.25	2575	14.26	13.76	28.02	14.80	13.70	28.50	0.964	1.004	0.983
adjusted zero	2503	0.00	2503	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a
adjusted high	2513	62.25	2575	14.26	13.76	28.02	14.23	13.75	27.98	1.002	1.001	1.002
mid	2505	31.45	2536	7.32	7.06	14.38	7.33	7.04	14.37	0.998	1.003	1.000
low	2507	14.23	2521	3.33	3.21	6.54	3.34	3.28	6.62	0.997	0.980	0.988
calibrator zero	2503	0.00	2503	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a
									Average C.F.=	0.999	0.994	0.997

Linear Regression/Calibration Results:

	CH_4	NMHC	THC	LIMITS
Correlation Coeffecient =	**1.000**	**1.000**	**1.000**	**> or = 0.995**
Slope =	**0.998**	**0.997**	**0.997**	**.95-1.05**
b (Intercept as % of full scale)=	**0.06%**	**0.13%**	**0.10%**	**± 3% F.S.**
% change in C.F. from last cal=	**3.34%**	**-0.55%**	**1.47%**	**± 10%**

		As found:				As left:
Interface Board Voltages:	Bias Supply:	-300.9		Calibration History cnt'd:	NM Peak Area:	85969
Temperatures:	Detector Oven:	175.1		Crucial Settings:	Methane Start:	8
	Filter:	175.1			Methane End:	16
	Column Oven:	75.1			Backflush:	18
	Internal:	29.4			NMHV Start:	26
Cylinder Pressures/reg.:	Carrier:	1000	50		NMHC End:	56
	Fuel:	2100	50	Run History>1:	Date:	06JUN2017
	Span Gas:	1600	16		Time:	10:29
	Zero Air Generator:	45			CH_4 PK HT:	2654
Internal Pressures:	Carrier:	28.6			CH_4 RT:	12.4
	Fuel:	37.6			CH_4 Baseline:	1917
	Air:	34.3			CH_4 LOD:	325
FID Status:	Status:	LIT			CH_4 SD:	108
	Counts:	25474			CH_4 CONC:	1.90
	Flame:	350.1			NM PK HT:	169
	Det Base:	175.1			NM Peak Area:	32
Flame and Power Stats:	Last Power On:	07Apr2017 07:56:39			NM CONC:	0
	Flameouts:	1			NM Base Start:	1875
	Det Oven at Start:	160.5			NM Base End:	1909
	Col Oven at Start:	72.5			NM LOD:	18
Calibration History:	Time:	10MAY17 12:51			NM Start IDX:	17
	Type:	SPAN			NM End IDX:	46
	Status:	GOOD			NM Max Slope:	1.3e+01
	Check/Adjust:	ADJUST			NM Min Slope:	-1.1e+01
	CH_4 Span Conc:	13.41			NM PT Count:	0
	CH_4 SP Ratio:	0.000716		Expected Values:	Previous CH4:	10.14
	CH_4 RT:	12.4			Previous NMHC	10.83
	CH_4 PK IDX:	22			Previous THC:	20.98
	CH_4 PK HT:	18738			New CH4:	10.14
	NM Span Conc:	12.99			New NMHC	10.83
	NM SP Ratio:	0.000151			New THC:	20.98

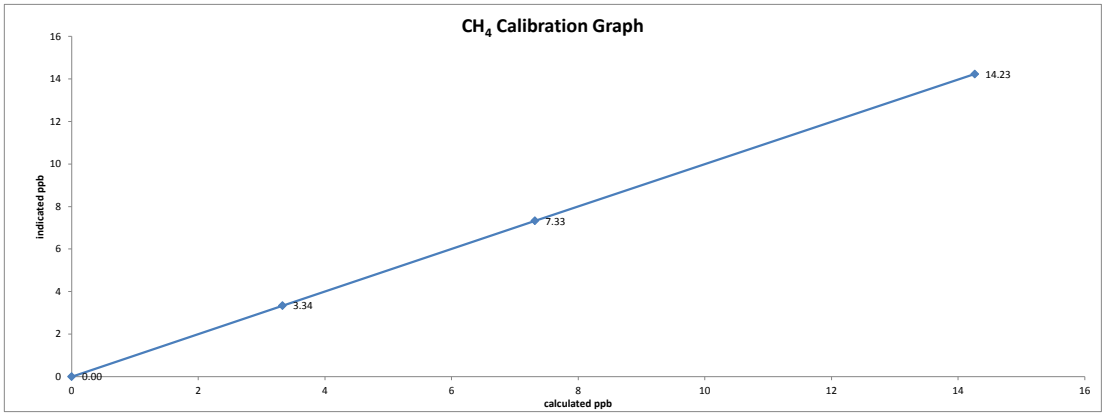
Comments:

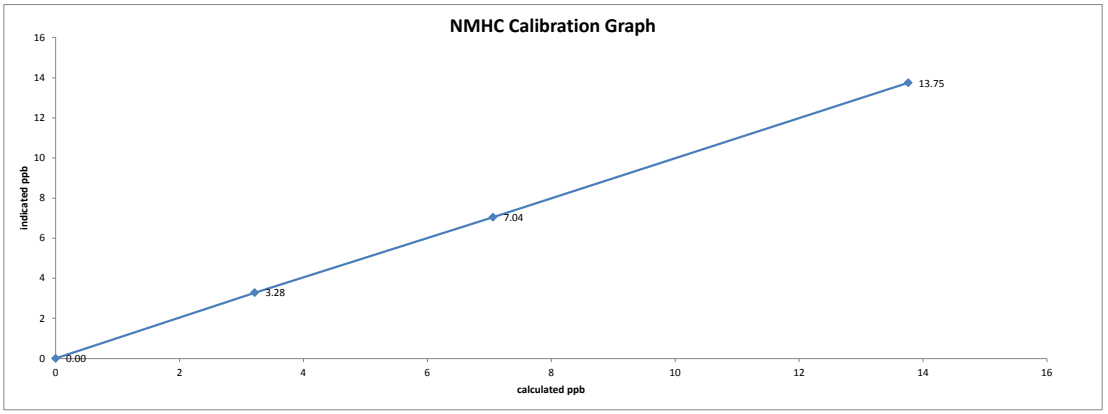
The analyzer sample inlet filter was changed.

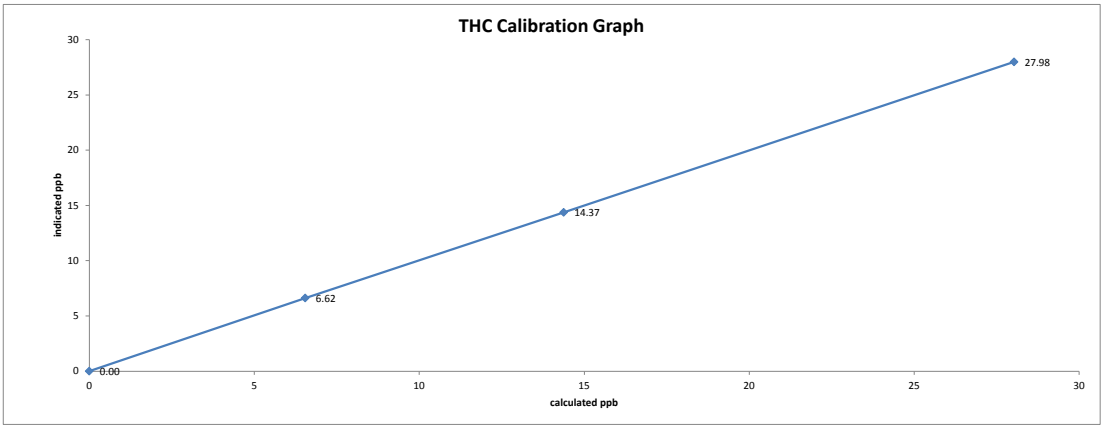
No zero adjustment was required/made. As found zero values were copied to adjusted zero values for linearity calculation purposes.

The analyzer cooling fan filter(s) were cleaned.

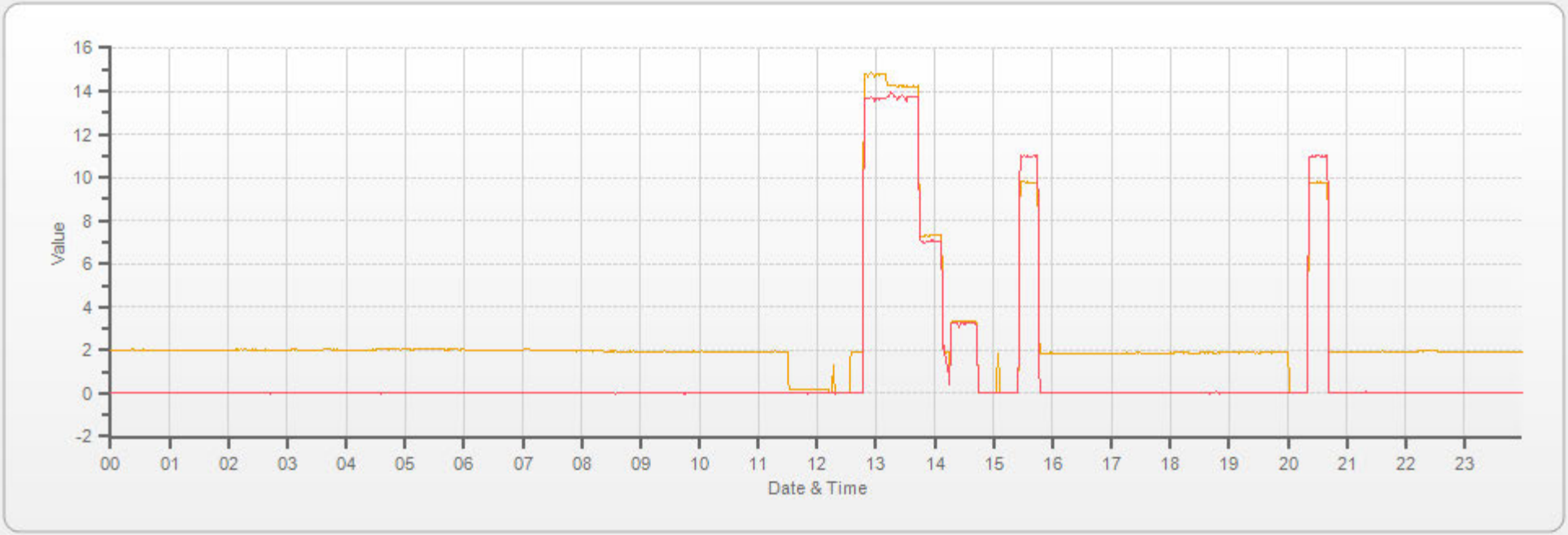
Date:	June 6, 2017	Start/End Time 24 hr. (mst):	11:30/15:55
Company/Airshed:	PRAMP	Calibration Purpose:	routine monthly
Location/Station Name:	842B	Calibration Method:	Gas Dilution







Station: PRAMP_842 Daily: 17.06.06 Type: AVG 1 Min. [1 Min.]



Thermo 55i Methane/Non-Methane Analyzer Calibration

Date:	June 14, 2017	**Barometer ID #/Last Cert. Date/B.P.:**	fisher Scientific 05544, December 5, 2016 — 27.73 inHg
Company/Airshed:	PRAMP	**Thermometer ID #/Last Cert. Date/Temp:**	fisher Scientific 160348895, April 8, 2017 — 21 degrees
Location/Station Name:	842B	**Weather Conditions:**	Mainly cloudy with clear breaks
Parameter:	CH_4 / NMHC / THC	**Calibration Purpose:**	shut down
Start/End Time 24 hr. (mst):	09:15/11:15	**Performed By/Reviewer:**	Limin Li — Trina Whitsitt
Calibration Method:	Gas Dilution	**Cal Gas Expiry Date:**	November 24, 2022

Analyzer:

ID# or Serial Number:	1433563261
Measured Flow:	1.130 lpm
Last Calibration Date:	June 6, 2017
Range ppm:	20 CH4/20 NMHC/40 THC

Correction Factors:

	Previous C.F.:	As Found C.F.:	New C.F.:
CH_4 =	1.002	1.028	n/a
NMHC =	1.001	1.011	n/a
THC =	1.002	1.020	n/a

Calibration Standards:

Low Flow Meter ID/Cert. Date:	Defender 1 Low ID# 152019 November 21, 2016		
High Flow Meter ID/Cert. Date:	Defender 1 High ID# 148944 November 21, 2016		
Calibrator ID/Cert. Date:	Sabio 2010 17200415, May 16, 2017		
Cal Gas Cylinder I.D. # :	LL165367		
CH4 Cylinder Conc.=	590.0	207.0	**=C_3H_8 Cylinder Conc.**
CH_4 as C_3H_8=	569.3	1159.3	**=total CH_4 equivilant**

Standard Calibration Points for Analyzer Range of 20/20/40 ppm

Point	CH4	NMHC	THC
High	**13.00**	**13.00**	**26.00**
Mid	**7.00**	**7.00**	**14.00**
Low	**3.00**	**3.00**	**6.00**

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

Calibrator Flow Rates (cc/min)										Correction Factors:		
Point	**Diluent**	**Cal Gas**	**Total Flow**	**Calculated CH_4 (ppm)**	**Calculated NMHC (ppm)**	**Calculated THC (ppm)**	**Indicated CH_4 (ppm)**	**Indicated NMHC (ppm)**	**Indicated THC (ppm)**	**CH_4**	**NMHC**	**THC**
as found zero	2459	0.00	2459	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a
as found high	2463	60.00	2523	14.03	13.54	27.57	13.65	13.39	27.04	1.028	1.011	1.020
mid	2458	31.16	2489	7.39	7.13	14.51	7.26	7.10	14.36	1.017	1.004	1.011
low	2459	14.25	2473	3.40	3.28	6.68	3.36	3.32	6.68	1.012	0.988	1.000
									Average C.F.=	1.019	1.001	1.010

Linear Regression/Calibration Results:

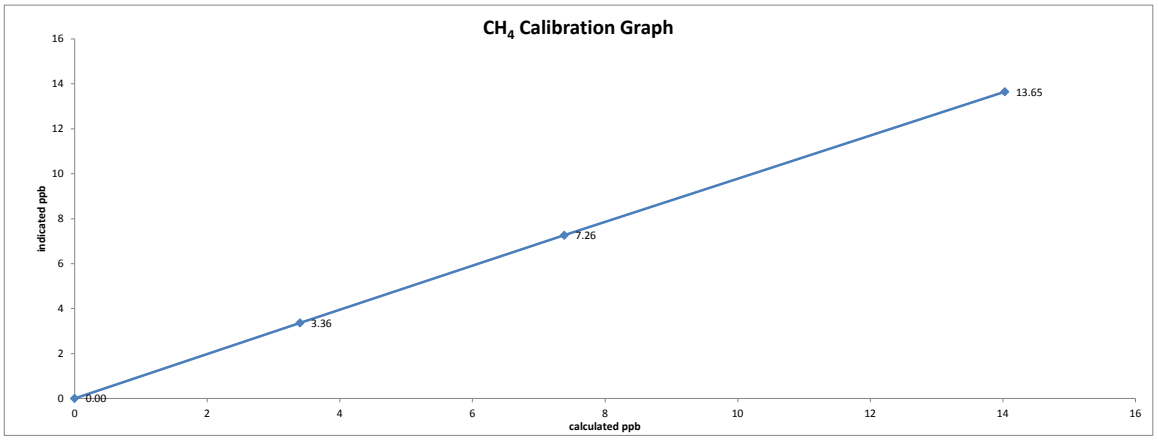
	CH_4	NMHC	THC	LIMITS
Correlation Coeffecient =	**1.000**	**1.000**	**1.000**	**> or = 0.995**
Slope =	**0.972**	**0.988**	**0.980**	**0.90-1.10**
b (Intercept as % of full scale)=	**0.18%**	**0.20%**	**0.19%**	**± 3% F.S.**
% change in C.F. from last cal=	**-2.59%**	**-1.00%**	**-1.75%**	**± 10%**

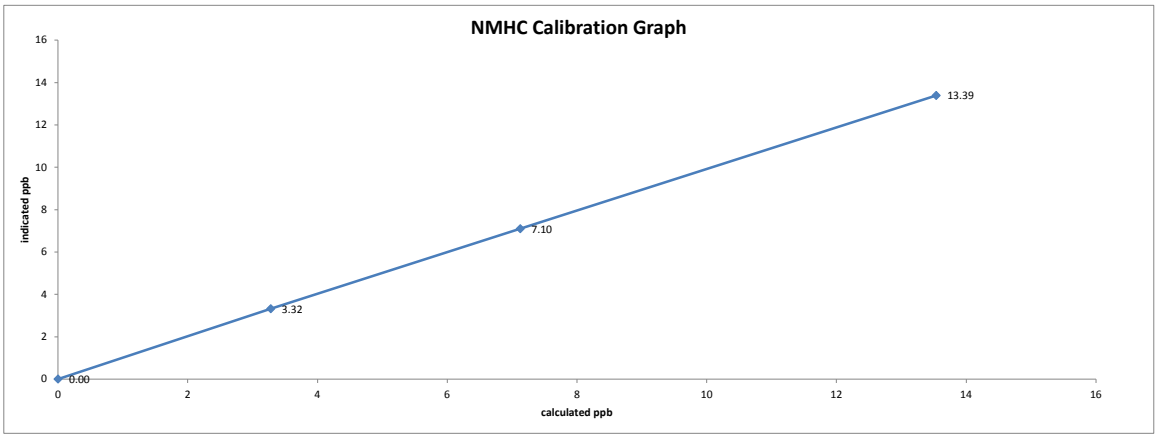
		As found:				As left:
Interface Board Voltages:	Bias Supply:	-299.9		Calibration History cnt'd:	NM Peak Area:	90586
Temperatures:	Detector Oven:	175		Crucial Settings:	Methane Start:	8
	Filter:	175			Methane End:	16
	Column Oven:	75			Backflush:	18
	Internal:	26.6			NMHV Start:	26
Cylinder Pressures/reg.:	Carrier:	800	50		NMHC End:	56
	Fuel:	1800	50	Run History>1:	Date:	17JUN2017
	Span Gas:	1450	16		Time:	09:22
	Zero Air Generator:	45			CH_4 PK HT:	0
Internal Pressures:	Carrier:	28.6			CH_4 RT:	13.2
	Fuel:	37.6			CH_4 Baseline:	1811
	Air:	34.3			CH_4 LOD:	43
FID Status:	Status:	LIT			CH_4 SD:	14
	Counts:	22559			CH_4 CONC:	0.00
	Flame:	348.2			NM PK HT:	0
	Det Base:	175			NM Peak Area:	0
Flame and Power Stats:	Last Power On:	07Apr2017 07:56:39			NM CONC:	0.00
	Flameouts:	1			NM Base Start:	1827
	Det Oven at Start:	160.5			NM Base End:	1859
	Col Oven at Start:	72.5			NM LOD:	25
Calibration History:	Time:	06June17 13:03			NM Start IDX:	22
	Type:	SPAN			NM End IDX:	93
	Status:	GOOD			NM Max Slope:	1.2e+00
	Check/Adjust:	ADJUST			NM Min Slope:	-6.8e-01
	CH_4 Span Conc:	14.26			NM PT Count:	0
	CH_4 SP Ratio:	0.000691		Expected Values:	Previous CH4:	9.76
	CH_4 RT:	12.4			Previous NMHC	10.98
	CH_4 PK IDX:	22			Previous THC:	20.77
	CH_4 PK HT:	20626			New CH4:	9.76
	NM Span Conc:	13.76			New NMHC	10.98
	NM SP Ratio:	0.000152			New THC:	20.77

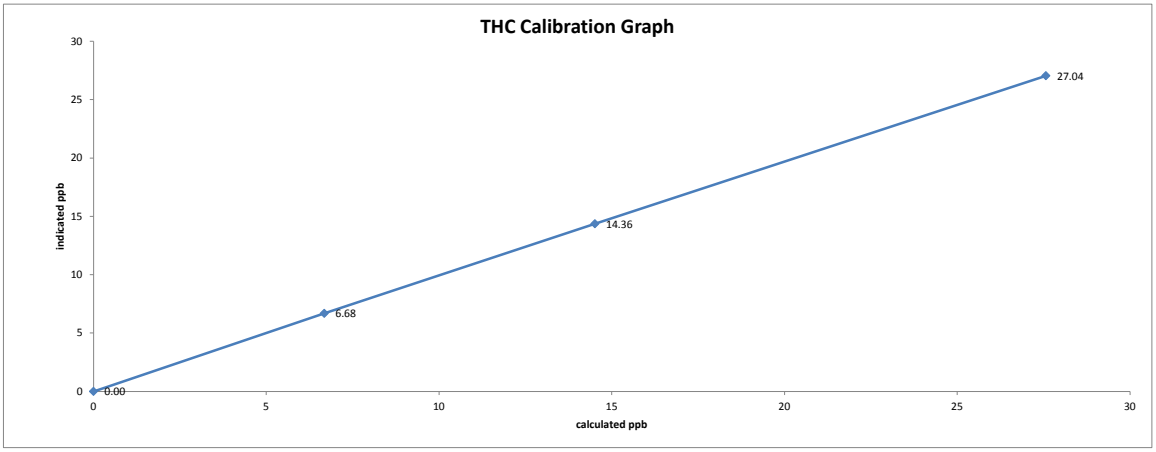
Comments:

Flow measurements performed after mid-point

Date:	June 14, 2017	Start/End Time 24 hr. (mst):	09:15/11:15
Company/Airshed:	PRAMP	Calibration Purpose:	shut down
Location/Station Name:	842B	Calibration Method:	Gas Dilution







Thermo 55i Methane/Non-Methane Analyzer Calibration

Date:	June 14, 2017	**Barometer ID #/Last Cert. Date/B.P.:**	fisher Scientific 05544, December 5, 2016	27.70 inHg
Company/Airshed:	PRAMP	**Thermometer ID #/Last Cert. Date/Temp:**	fisher Scientific 160348895, April 8, 2017	21 degrees
Location/Station Name:	842B	**Weather Conditions:**	Mix of sun and clouds	
Parameter:	CH_4 / NMHC / THC	**Calibration Purpose:**	as found	
Start/End Time 24 hr. (mst):	14:50/17:50	**Performed By/Reviewer:**	Limin Li	not yet reviewed
Calibration Method:	Gas Dilution	**Cal Gas Expiry Date:**	November 24, 2022	

Analyzer:

ID# or Serial Number:	1236656188
Measured Flow:	1.212 lpm
Last Calibration Date:	n/a
Range ppm:	20 CH4/20 NMHC/40 THC

Correction Factors:

	Previous C.F.:	As Found C.F.:	New C.F.:
CH_4 =	n/a	1.000	n/a
NMHC =	n/a	1.000	n/a
THC =	n/a	1.000	n/a

Calibration Standards:

Low Flow Meter ID/Cert. Date:	Defender 1 Low ID# 152019 November 21, 2016		
High Flow Meter ID/Cert. Date:	Defender 1 High ID# 148944 November 21, 2016		
Calibrator ID/Cert. Date:	Sabio 2010 17200415, May 16, 2017		
Cal Gas Cylinder I.D. # :	LL165367		
CH4 Cylinder Conc.=	590.0	207.0	**=C_3H_8 Cylinder Conc.**
CH_4 as C_3H_8=	569.3	1159.3	**=total CH_4 equivilant**

Standard Calibration Points for Analyzer Range of 20/20/40 ppm

Point	CH4	NMHC	THC
High	**13.00**	**13.00**	**26.00**
Mid	**7.00**	**7.00**	**14.00**
Low	**3.00**	**3.00**	**6.00**

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

Calibrator Flow Rates (cc/min)										Correction Factors:		
Point	**Diluent**	**Cal Gas**	**Total Flow**	**Calculated CH_4 (ppm)**	**Calculated NMHC (ppm)**	**Calculated THC (ppm)**	**Indicated CH_4 (ppm)**	**Indicated NMHC (ppm)**	**Indicated THC (ppm)**	**CH_4**	**NMHC**	**THC**
as found zero	2472	0.00	2472	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a
as found high	2473	60.16	2533	14.01	13.52	27.53	14.01	13.52	27.53	1.000	1.000	1.000
									Average C.F.=	n/a	n/a	n/a

Linear Regression/Calibration Results:

	CH_4	NMHC	THC	LIMITS
Correlation Coeffecient =	**n/a**	**n/a**	**n/a**	**> or = 0.995**
Slope =	**n/a**	**n/a**	**n/a**	**.95-1.05**
b (Intercept as % of full scale)=	**n/a**	**n/a**	**n/a**	**± 3% F.S.**
% change in C.F. from last cal=	**n/a**	**n/a**	**n/a**	**± 10%**

		As found:				As left:
Interface Board Voltages:	Bias Supply:	-287.8		Calibration History cnt'd:	NM Peak Area:	84568
Temperatures:	Detector Oven:	175		Crucial Settings:	Methane Start:	8
	Filter:	175			Methane End:	16
	Column Oven:	75			Backflush:	18
	Internal:	29.8			NMHV Start:	24
Cylinder Pressures/reg.:	Carrier:	800	50		NMHC End:	56
	Fuel:	1800	50	Run History>1:	Date:	17JUN2017
	Span Gas:	1450	16		Time:	16:24
	Zero Air Generator:	48			CH_4 PK HT:	0
Internal Pressures:	Carrier:	30.5			CH_4 RT:	12.0
	Fuel:	40.0			CH_4 Baseline:	1449
	Air:	24.8			CH_4 LOD:	25
FID Status:	Status:	LIT			CH_4 SD:	8
	Counts:	32906			CH_4 CONC:	0.00
	Flame:	335.7			NM PK HT:	0
	Det Base:	175			NM Peak Area:	0
Flame and Power Stats:	Last Power On:	14JUN2017 11:10:35			NM CONC:	0.00
	Flameouts:	1			NM Base Start:	1438
	Det Oven at Start:	152.0			NM Base End:	1442
	Col Oven at Start:	113.2			NM LOD:	13
Calibration History:	Time:	14JUN17 15:01			NM Start IDX:	37
	Type:	SPAN			NM End IDX:	76
	Status:	GOOD			NM Max Slope:	3.7e-01
	Check/Adjust:	ADJUST			NM Min Slope:	-2.0e-01
	CH_4 Span Conc:	14.01			NM PT Count:	0
	CH_4 SP Ratio:	0.000732		Expected Values:	Previous CH4:	9.76
	CH_4 RT:	12.4			Previous NMHC	10.98
	CH_4 PK IDX:	22			Previous THC:	20.77
	CH_4 PK HT:	19128			New CH4:	9.76
	NM Span Conc:	13.52			New NMHC	10.98
	NM SP Ratio:	0.00016			New THC:	20.77

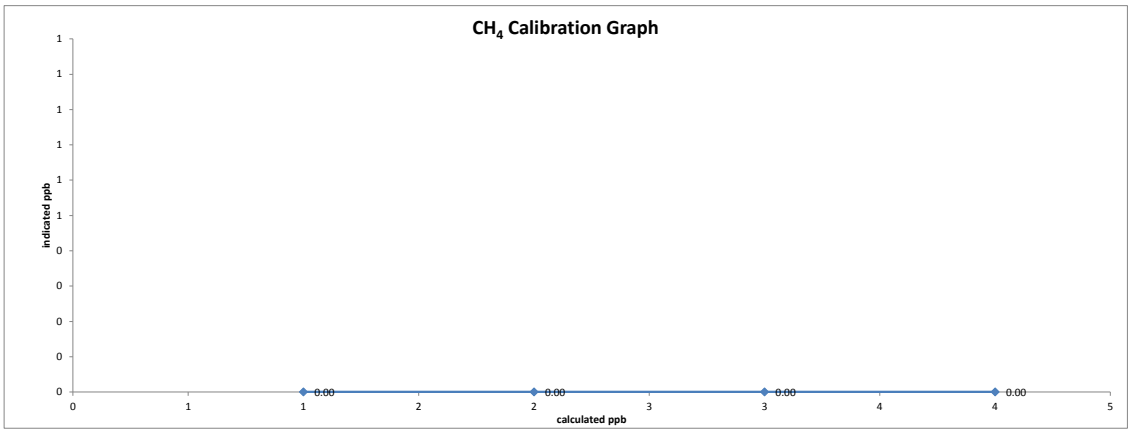
Comments:

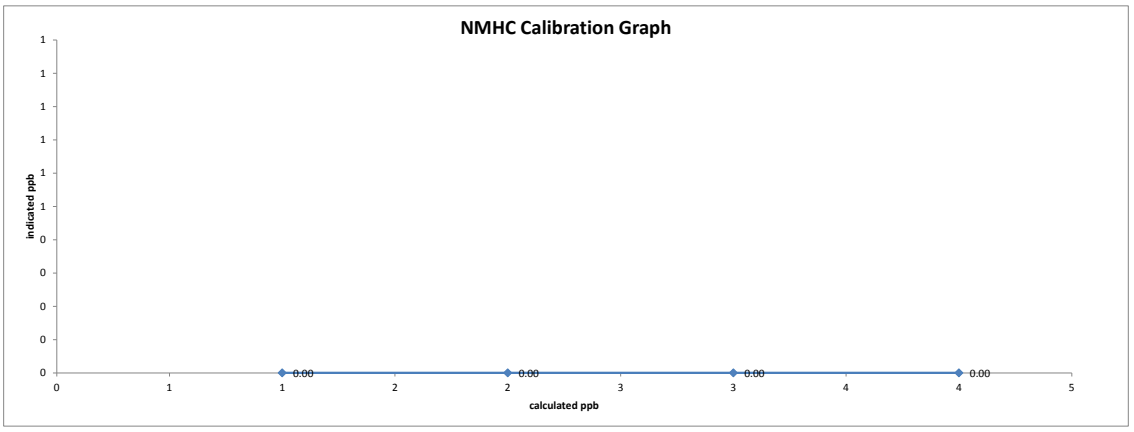
A column conditioning was performed.

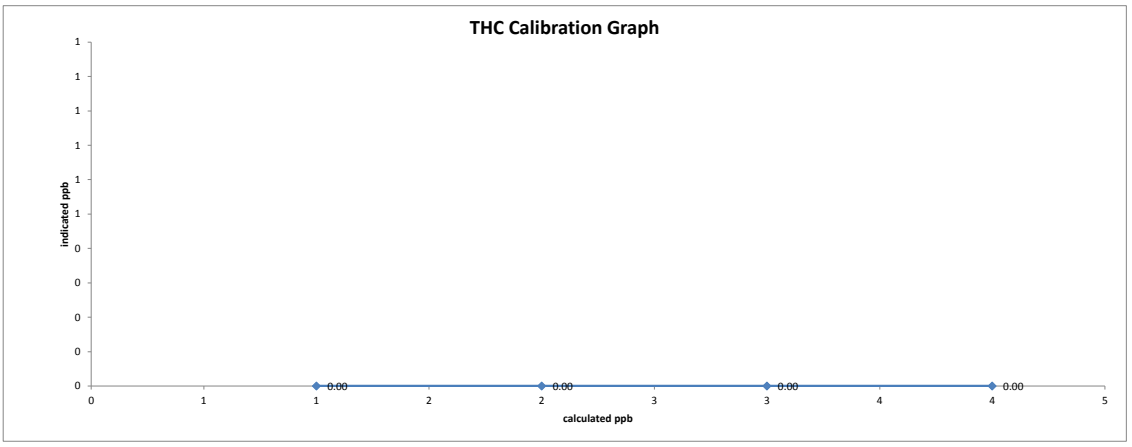
Flow measurements performed after mid-point

Around 3 hours column conditioning was performed before the installation calibration.

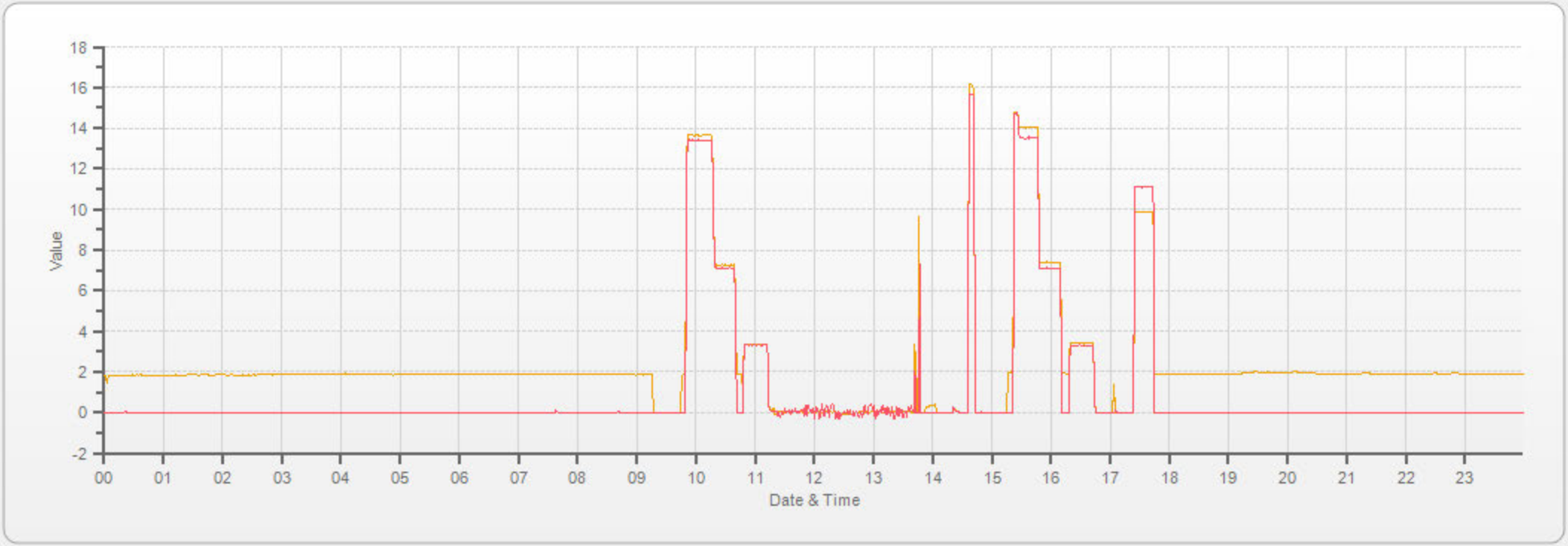
Date:	June 14, 2017	Start/End Time 24 hr. (mst):	14:50/17:50
Company/Airshed:	PRAMP	Calibration Purpose:	as found
Location/Station Name:	842B	Calibration Method:	Gas Dilution







Station: PRAMP_842 Daily: 17.06.14 Type: AVG 1 Min. [1 Min.]



WIND SYSTEM

Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	**Performed By:**	Limin Li
Audit Location:	842b	**Reviewed By:**	Trina Whitsitt
Audit Date:	April 5, 2017	**Start /EndTime (mst):**	16:35 / 18:10

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1 V
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200 km/h
Serial #:	92411	**Direction Voltage Output Range:**	0-1 V
Previous Cal/Audit Date:	February 14, 2017	**Direction Unit Output Range:**	0-360 degrees

Wind Calibrator Information

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

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.5	18.5	0.995
2000	36.9	36.9	36.9	1.000
3000	55.3	55.4	55.4	0.999
4000	73.7	73.8	73.8	0.999
5000	92.2	92.2	92.2	1.000
6000	110.6	110.7	110.7	0.999
7000	129.0	129.1	129.1	0.999
8000	147.4	147.5	147.5	0.999
9000	165.9	165.9	165.9	1.000
10000	184.3	184.3	184.3	1.000
		The audit meets AMD requirements.	**Average Correction Factor=**	**0.999**

Wind Direction Audit Data **+/- 5° of the absolute average degrees difference for all points is the limit**

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	1	351	0.8	3.6	2.2
30	330	31	327	-1.3	2.9	2.1
60	300	62	297	-1.7	3.0	2.3
90	270	91	268	-1.1	1.9	1.5
120	240	121	239	-0.7	1.5	1.1
150	210	150	209	-0.2	0.7	0.4
180	180	181	180	-0.6	-0.2	0.4
210	150	210	150	0.1	0.3	0.2
240	120	239	120	0.9	-0.3	0.6
270	90	268	91	1.6	-0.7	1.2
300	60	297	61	3.1	-1.3	2.2
330	30	327	31	3.0	-1.1	2.1
355	0	351	1	3.6	0.6	2.1
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**1.4**

Comments: Adjust wind speed gain before calibration.

Meteorological Sensor Audit/Calibration

Location Information

Company:	PRAMP	**Performed By:**	Chris Wesson
Audit Location:	842b	**Reviewed By:**	Trina Whitsitt
Audit Date:	June 29, 2017	**Start /EndTime (mst):**	8:20 / 08:34
Calibration Purpose:	installation	**Weather Conditions:**	A few clouds

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1V
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200 km/h
Serial #:	110980	**Direction Voltage Output Range:**	0-1V
Previous Cal/Audit Date:	n/a or unknown	**Direction Unit Output Range:**	0-360°

Wind Calibrator Information

Calibrator Make/ Model:	RM Young	**Serial #:**	CA 4039
Maxxam Unit ID #:	n/a	**Certification Date:**	February 24, 2017

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

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.1	-
1000	18.4	18.4	18.5	1.000
2000	36.9	36.8	36.8	1.002
3000	55.3	55.2	55.2	1.001
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.4	110.4	1.002
7000	129.0	128.7	128.7	1.002
8000	147.4	147.2	147.2	1.002
9000	165.9	165.5	165.5	1.002
10000	184.3	184.3	183.9	1.001
		The audit meets AMD requirements.	**Average Correction Factor=**	**1.002**

Wind Direction Audit Data **+/- 5° of the absolute average degrees difference for all points is the limit**

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	1	355	0.8	-0.1	0.5
30	330	30	330	0.3	0.1	0.2
60	300	60	300	-0.1	-0.2	0.1
90	270	90	270	0.1	-0.2	0.1
120	240	121	240	-0.7	-0.3	0.5
150	210	150	210	0.5	0.0	0.3
180	180	180	180	0.4	-0.3	0.4
210	150	210	150	-0.4	0.1	0.3
240	120	240	120	-0.1	0.4	0.3
270	90	270	91	-0.2	-0.9	0.5
300	60	300	60	-0.3	-0.1	0.2
330	30	331	30	-0.5	-0.2	0.4
355	0	354	0	0.6	0.2	0.4
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**0.3**

Comments:

CALIBRATORS

Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2017-073A

Company Maxxam **Operator:** Micheal Espiritu

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

Dilution Flow (sccm)

Pt. #1 5000 Pt. #2 5000 Pt. #3 5000

Gas Flow (sccm)

Pt. #1 80 Pt. #2 40 Pt. #3 20

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
5028	0.0	0.000	0.000	0.000	0.000	0.000	Limit ± 10%	
4930	78.7	0.783	0.783	0.809	-0.012	0.797	3%	2%
4936	38.6	0.383	0.383	0.396	-0.006	0.390	3%	2%
4935	19.4	0.193	0.193	0.199	-0.003	0.196	3%	2%
						Absolute Average Percent Difference	3%	2%

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

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

Flow	O_3 Conc (LC)	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
4930	0.000	0.000	0.806	-0.013	0.795	NO_2	% Diff. Limit
4930	1.425	0.523	0.283	0.511	0.794	0%	± 10%
4930	0.825	0.278	0.528	0.266	0.795	0%	± 10%
4930	0.386	0.095	0.711	0.085	0.796	3%	± 10%
					Absolute Average Percent Difference	1%	± 10%

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

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9998	**0.90-1.10**
b (Intercept % of FS)=	-1.1702	**± 3% F.S.**

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

COMMENTS: Contains 50.4 ppm SO2.

Auditor: Al Clark Date: May 16, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibrator Performance Audit

Oxides Of Nitrogen

File No. 2016-527A

Company Maxxam **Operator:** Mike

Calibrator:				**Flow Measurement Device:**	
Make/Model	Environics 2000			Make/Model	Bios Defender 530
Serial Number	1991			Serial Number	Hi148944 Lo 152019
Last Verification Date	March 31, 2016			Temperature (°C)	24.5
NO Cylinder S/N	EY0000597			Barometric Pressure	699
NO [PPM]	49.0	NOx [PPM]	49.0		
Expiry Date	December 8, 2019				

Dilution Flow (sccm)

Pt. #1 4902 Pt. #2 4935 Pt. #3 4957

Gas Flow (sccm)

Pt. #1 79.3 Pt. #2 38.7 Pt. #3 19.4

Calibrator Flow (sccm)		Calculated Conc.(ppm)		Indicated Conc.(ppm)			% Difference vs Audit Gas	
Dilution	Gas	NO	NOx	NO	NO_2	NOx	NO	NOx
4976	0.0	0.0000	0.0000	0.0001	0.0000	0.0001	Limit ± 10%	
4981	79.3	0.7801	0.7801	0.7898	0.0000	0.7898	1%	1%
4972	38.7	0.3814	0.3814	0.3841	0.0002	0.3843	1%	1%
4976	19.4	0.1910	0.1910	0.1913	0.0003	0.1916	0%	0%
					Absolute Average Percent Difference		1%	1%

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

NO		**LIMITS**	**NOx**	
Correlation=	1.0000	**≥ 0.990**	Correlation=	1.0000
m (Slope)=	1.0130	**0.90-1.10**	m (Slope)=	1.0129
b (Intercept % of FS)=	-0.1190	**± 3% F.S.**	b (Intercept % of FS)=	-0.1029

Flow	O_3 Conc	NO Decrease	NO	NO2	NOX	% Diff. Vs Audit gas	
4981	0.000	0.0000	0.7925	-0.0001	0.7924	NO_2	% Diff. Limit
4981	0.400	0.5347	0.2578	0.5279	0.7857	-1%	± 10%
4981	0.200	0.2490	0.5435	0.2478	0.7913	0%	± 10%
4981	0.090	0.1090	0.6835	0.1095	0.7927	1%	± 10%
				Absolute Average Percent Difference		0%	± 10%

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

NO_2		**LIMITS**
Correlation=	1.0000	**≥ 0.995**
m (Slope)=	0.9864	**0.90-1.10**
b (Intercept % of FS)=	0.1136	**± 3% F.S.**

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

COMMENTS: Gas has ~50ppm SO2

Auditor: Shea Beaton Date: March 16, 2017

Operator Signature: Location: McIntyre Center Edmonton

CALIBRATION GASES

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2016-436CGA

Company: Maxxam **Operator's Name:** Chris

Cylinder #: EY0000769 Concentration PPM: 50.5 Tolerance(%) 1.6 Certified By: Praxair

Expiry Date: December 8, 2019

Reference Calibrator and Gas:

Make/Model: Thermo 146i
Serial Number: AMU 1809
Last Verification Date: January 26, 2017
Gas Type: SO2 Conc. 98.07
Cylinder Number: CAL016625
Expiry Date: January 5, 2019

Flow Measurement Device:

Make/Model: Bios Befiner 220
Serial Number: AMU1941
Temp.°C: 24.4
B.P. 704.7

Reference Analyzer:

Make/Model: Themro 43C Serial/AMU Number: AMU 1623

Instrument Settings: Zero: 9.5 Span: 1.023 Range: 1.0

Last Calibration: Date: 25-Jan-17 C.F. 1.000 Done By: SB

Calibrator Flows (sccm)		Indicated Concentration (PPM)	Gas Flow/ Dilution Flow	Concentration Factor	Cylinder Concentration
Dilution	Gas				
4911	0.0	0.000			
4918	77.4	0.801	0.01574	63.540	50.9
4918	38.5	0.398	0.00783	127.740	50.9
4915	19.2	0.196	0.00391	255.990	50.0
				Average Cylinder Concentration:	**50.6**

Previous Stated Concentration PPM: 50.5

Percent variance from Stated: **0.2**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

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

Auditor: Shea Beaton Date: January 26, 2017

Operator Signature: Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

Single Component Cylinder Gas

File No. 2015-338CGA

Company: Maxxam **Operator's Name:** Limin Li

Cylinder #: BLM002508 Concentration PPM: 10.2 Tolerance(%) 2 Certified By: Air Liquide

Reference Calibrator and Gas:

Make/Model: R&R MFC 201
Serial Number: AMU1690
Last Verification Date: March 31, 2015
Gas Type: H2S Conc. 20.43
Cylinder Number: CAL015106

Flow Measurement Device:

Make/Model: Bios DC2
Serial Number: AMU 1659
Temp.°C: 23.0 C
B.P. 689 mmhg

Reference Analyzer:

Make/Model: Teco 450i Serial/AMU Number: 1980
Instrument Settings: Zero: 14.5 Span: 1.035 Range: 0.1
Last Calibration: Date: Mar 31/15 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated	Gas Flow/	Concentration	Cylinder
Dilution	Gas	Concentration (PPM)	Dilution Flow	Factor	Concentration
5000	0.0	0.0000			
5080	38.2	0.0725	0.00752	132.984	9.6
5078	17.9	0.0340	0.00353	283.687	9.6
5066	9.1	0.0170	0.00180	556.703	9.5
				Average Cylinder Concentration:	**9.6**

Previous Stated Concentration PPM: 10.2

Percent variance from Stated: **6.0**

Meets Manufacturer Tolerance. Use manufacturers stated concentration [ ] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [X]

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

Auditor: Al Clark Date: March 31, 2015

Operator Signature: Al Clark Location: McIntyre Center Edmonton

Alberta Government

Calibration Gas Audit

CH4 / C3H8 Cylinder Gas

File No. 2015-029CGA

Company: Maxxam **Operators name:** Limin Li

Cylinder #: LL165367 Conc CH4 (PPM) 590/207 Tolerance (%) 2 Certified By: Praxair

Reference Calibrator and Gas:

Make/Model	R&R MFC 201		
Serial Number	AMU 1691		
Last Verification Date	May 21, 2015		
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 1650
Temp.°C	24.0 C
B.P.	703 mmhg

Reference Analyzer:

Make/Model: Teco 55C Serial/AMU Number: 1643

Instrument Settings Zero: N/A Span: N/A Range: 20

Last Calibration: Date: May 21/15 C.F. 1.000 Done By: Al Clark

Calibrator Flows (sccm)		Indicated Conc. (ppm)		Gas Flow/	Concentration	Cylinder Concentration	
Dilution	Gas	CH4	C3H8	Dilution Flow	Factor	CH4	C3H8
2600	0.0	0.00	0.00				
2569	51.5	12.06	11.37	0.02005	49.883	602	206
3549	22.3	3.77	3.57	0.00628	159.148	600	207
3523	10.4	1.77	1.70	0.00295	338.750	600	209
					Average Cylinder Concentration:	**600**	**207**

	CH4	**C3H8**
Previous Stated Concentration PPM:	590	207
Percent variance from Stated:	**1.8**	**0.2**

Cylinder gas tolerances based on CH4 only

Meets Manufacturer Tolerance. Use manufacturers stated concentration [X] **COMMENTS:**

< =5% Outside Manufacturer Tolerance. Use manufacturers concentration [ ]

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

Auditor: Al Clark Date: May 21, 2015

Operator Signature: Location: McIntyre Center Edmonton

APPENDIX IV
REPORT CERTIFICATION FORM

Report Certification Form

Alberta Airshed (if applicable)	**EPA Approval or Code of Practice Registration #** (if applicable)
YES	**NA**
Company Name (if applicable)	**Industrial Operation Name** (if applicable)
Peace River Area Monitoring Program Committee	**Three Creeks 842b Station**
Name of the Representative of the Person Responsible (Last, First, Middle)	**Position / Title of the Representative of the Person Responsible**
Maram Ghaleb	**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.

Maram Ghaleb

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

July 26, 2017

Report Issued Date (dd-mm-yyyy)

APPENDIX V
DATA VALIDATION CERTIFICATION FORM

Validation Certificate Form

Client:	Peace River Area Monitoring Program Committee	**Project #:**	8449-2017-06-80-C
Site:	Three Creeks 842b Station	**Contact:**	Karla Reesor

Level 0 Preliminary Verification	Maram Ghaleb	**Date**	June 30, 2017
Level 1 Primary Validation	Maram Ghaleb	**Date**	June 30, 2017
Level 2 Final Validation	Maram Ghaleb	**Date**	July 18, 2017
Level 3 Independent Data Review		**Date**	July 20, 2017
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.