



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

**Continuous Ambient Air Quality Monitoring Program
Monthly Report
August 2017**

September 30, 2017

Alberta Environment
11th Floor, Oxbridge Place
9820-106 Street
Edmonton Alberta T5K 2J6

RE: Peace Airshed Zone Association (PAZA) – August 2017 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of August 2017.

This report is submitted by PAZA on behalf of the industrial member companies to satisfy the requirements of the following facility Operating Approvals:

Company	Facility	LSD	EPEA Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	10283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	67774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	147709-01-01
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	247673-00-00
	Ante Creek	02-26-068-25-W5	266694-00-00
	Gordondale	16-31-78-11-W6M	287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	10137-02-02
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00
	Gold Creek	13-26-067-05-W6	00010446-02-00

Company	Facility	LSD	EPEA Approval Number
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
Canfor Forest Products	Grande Prairie	SW-23-071-06-W6	152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Devon Canada	NW Belloy (Dunvegan)	16-36-079-03-W6	00009810-02-00
	Eaglesham (South)	02-14-077-25-W5	00047669-01-00
	North Normanville	03-36-079-23-W5	00047455-01-00
	West Culp	05-34-078-25-W6	00136284-00-00
	Cecil	08-15-084-08-W6	00010032-02-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	1464-02-03
Exshaw Oil Corporation	Spirit River	03-10-077-07-W6	344521-00-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00

Company	Facility	LSD	EPEA Approval Number
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	3-23-080-13-W6	00070203-01-01
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
TAQA North Ltd.	Valhalla	13-21-076-09-W6	00017620-01-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

Included in this report is a summary of the monthly continuous monitoring, detailed hourly average reports and multipoint calibration reports of all instruments. Operational summaries can be found on the “Monthly Continuous Data Summary” and “Continuous Network Equipment Summary” pages of the report.

Continuous Monitoring: Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Valleyview, and Rycroft-Portable.

During the month of August, the following events were noted:

Henry Pirker Station:

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station, with the exception of twelve 1-hour and two 24-hour PM_{2.5} exceedances recorded throughout the month, attributed to wildfire smoke in the region. AEP reference numbers: 328264, 328546.
- ◆ All analyzers and meteorological sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of August.

Evergreen Park Station:

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station, with the exception of nine 1-hour and one 24-hour PM_{2.5} exceedances recorded throughout the month, attributed to wildfire smoke in the region. AEP reference number: 328265.
- ◆ All analyzers and meteorological sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of August.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of eleven and one 24-hour 1-hour PM_{2.5} exceedances recorded throughout the month, attributed to wildfire smoke in the region. AEP reference numbers: 328268, 328583.
- ◆ All analyzers and meteorological sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of August.

Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station, with the exception of nineteen 1-hour and two 24-hour PM_{2.5} exceedances recorded throughout the month, attributed to wildfire smoke in the region. AEP reference numbers: 328267, 328545.
- ◆ All analyzers and meteorological sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of August.

Valleyview Station:

- ◆ The measured ambient air quality was within the AAAQO for the Valleyview station.
- ◆ All analyzers and meteorological sensors at the Valleyview station had an operational uptime greater than 90% for the month of August, with the exception of the relative humidity sensor which was not operational this month due to instrument malfunctioning.

Donnelly Station:

- ◆ The measured ambient air quality was within the AAAQO for the Donnelly station.
- ◆ All analyzers and meteorological sensors at the Donnelly station had an operational uptime greater than 90% for the month of August.

Rycroft-Portable Station:

- ◆ The measured ambient air quality was within the AAAQO for the Rycroft-Portable station, with the exception of twelve 1-hour and two 24-hour PM_{2.5} exceedances recorded throughout the month, attributed to wildfire smoke in the region. AEP reference numbers: 328266, 328543.
- ◆ All analyzers and meteorological sensors at the Rycroft-Portable station had an operational uptime greater than 90% for the month of August.

♦ **Passive Monitoring - 27 Stations throughout the PAZA zone:**

There were six duplicate sites sampled in the month of August: Grande Prairie Pinnacle and Henry Pirker (SO₂), Kinuso (O₃), Wembley and Boone Creek (NO₂), and Girouxville 4 (H₂S). The passive sample analyses were performed by MAXXAM Analytics Inc.

A summary of the passive data collected are reported as follows:

- Monthly average concentrations for SO₂ passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.1 ppb to 2.1 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for O₃ passives ranged from 23.2 ppb to 27.8 ppb, with a mean of 24.7 ppb.
- Monthly average concentrations for H₂S passives was 0.2 ppb.

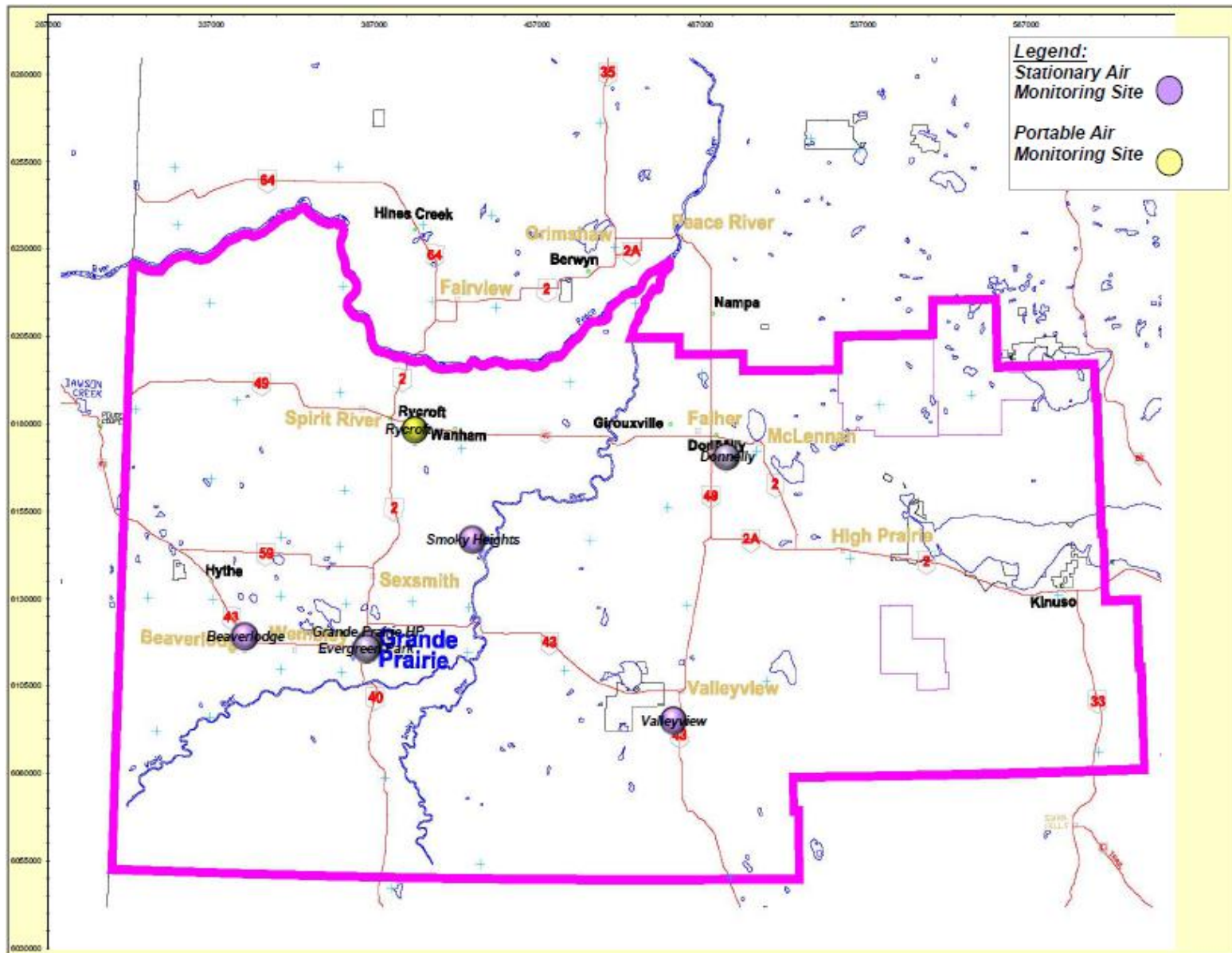
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Aug-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)	Calibration Date
	1-hr	24-hr			1-hr	24-hr						
SO ₂ (ppb)	172	48	Henry Pirker	0.2	0	0	6.9	Aug-25 22:00	1.2	Aug-25	100.0%	Aug-29
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	4.7	Aug-01 16:00	0.6	Aug-08	100.0%	Aug-25
SO ₂ (ppb)	172	48	Smoky Heights	0.3	0	0	4.5	Aug-15 09:00	0.7	Aug-25	99.7%	Aug-24
SO ₂ (ppb)	172	48	Beaverlodge	0.4	0	0	8.3	Aug-13 08:00	2.2	Aug-13	100.0%	Aug-16
SO ₂ (ppb)	172	48	Valleyview	0.8	0	0	11.3	Aug-26 18:00	3.5	Aug-19	100.0%	Aug-28
SO ₂ (ppb)	172	48	Donnelly	0.1	0	0	0.6	Aug-30 10:00	0.3	Aug-12	100.0%	Aug-21
SO ₂ (ppb)	172	48	Rycroft-Portable	0.2	0	0	1.7	Aug-17 21:00	0.5	Aug-05	100.0%	Aug-10
NO (ppb)			Henry Pirker	1.3	-	-	28.1	Aug-28 07:00	4.1	Aug-03	100.0%	Aug-29
NO ₂ (ppb)	159	106	Henry Pirker	4.9	0	0	20.5	Aug-21 05:00	8.9	Aug-30	100.0%	Aug-29
NO _x (ppb)			Henry Pirker	6.3	-	-	41.7	Aug-10 08:00	12.7	Aug-03	100.0%	Aug-29
NO (ppb)			Beaverlodge	0.4	-	-	11.8	Aug-08 07:00	1.5	Aug-08	100.0%	Aug-16
NO ₂ (ppb)	159	106	Beaverlodge	2.7	0	0	14.1	Aug-13 07:00	6.0	Aug-12	100.0%	Aug-16
NO _x (ppb)			Beaverlodge	3.1	-	-	19.6	Aug-08 07:00	6.5	Aug-12	100.0%	Aug-16
NO (ppb)			Rycroft-Portable	0.4	-	-	10.6	Aug-31 16:00	1.2	Aug-31	99.3%	Aug-10
NO ₂ (ppb)	159	106	Rycroft-Portable	1.9	0	0	10.1	Aug-30 20:00	3.8	Aug-30	99.3%	Aug-10
NO _x (ppb)			Rycroft-Portable	2.3	-	-	19.0	Aug-31 16:00	4.8	Aug-30	99.3%	Aug-10
O ₃ (ppb)	82		Henry Pirker	23.0	0	-	57.0	Aug-10 13:00	32.4	Aug-31	100.0%	Aug-29
O ₃ (ppb) - 8-hr			Henry Pirker		0				47.0	Aug-10		-
O ₃ (ppb)	82		Beaverlodge	23.6	0	-	47.0	Aug-08 18:00	33.4	Aug-11	100.0%	Aug-16
O ₃ (ppb) - 8-hr			Beaverlodge		0				45.8	Aug-11		-
O ₃ (ppb)	82		Rycroft-Portable	22.4	0	-	49.7	Aug-11 23:00	31.6	Aug-11	100.0%	Aug-10
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				46.5	Aug-12		-
CO (ppm)	13		Henry Pirker	0.18	0	-	3.4	Aug-13 09:00	0.9	Aug-13	100.0%	Aug-30
CO (ppm) - 8-hr	5		Henry Pirker		0				2.4	Aug-13		-

PAZA Monthly Continuous Data Summary – continued

Aug-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	1.9	-	-	3.6	Aug-03 01:00	2.2	Aug-03	100.0%	Aug-30
CH ₄ (ppm)			Henry Pirker	1.9	-	-	3.6	Aug-03 01:00	2.2	Aug-03	100.0%	Aug-30
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Aug-07 04:00	0.0	Aug-07	100.0%	Aug-30
THC (ppm)			Rycroft-Portable	1.9	-	-	2.0	Aug-08 07:00	2.0	Aug-06	97.2%	Aug-09
CH ₄ (ppm)			Rycroft-Portable	1.8	-	-	2.0	Aug-08 07:00	1.9	Aug-06	97.2%	Aug-09
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.0	Aug-16 14:00	0.0	Aug-16	97.2%	Aug-09
TRS (ppb)			Henry Pirker	0.2	-	-	0.7	Aug-08 00:00	0.4	Aug-07	100.0%	Aug-30
TRS (ppb)			Evergreen Park	0.2	-	-	1.3	Aug-02 08:00	0.4	Aug-13	100.0%	Aug-25
TRS (ppb)			Smoky Heights	0.2	-	-	2.3	Aug-08 07:00	0.4	Aug-08	100.0%	Aug-24
TRS (ppb)			Rycroft-Portable	0.2	-	-	1.1	Aug-03 21:00	0.4	Aug-13	100.0%	Aug-09
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	2.5	Aug-11 03:00	0.4	Aug-09	100.0%	Aug-28
H ₂ S (ppb)	10	3	Donnelly	0.2	0	0	1.1	Aug-03 21:00	0.4	Aug-15	93.3%	Aug-23
PM _{2.5} (µg/m ³)	80	30	Henry Pirker	12.2	12	1	448.4	Aug-13 09:00	148.2	Aug-13	100.0%	Jun-05
PM _{2.5} (µg/m ³)	80	30	Evergreen Park	7.7	9	1	394.0	Aug-13 09:00	75.1	Aug-13	99.7%	Aug-25
PM _{2.5} (µg/m ³)	80	30	Smoky Heights	11.1	11	1	787.6	Aug-13 11:00	173.3	Aug-13	97.9%	Jul-26
PM _{2.5} (µg/m ³)	80	30	Beaverlodge	14.4	19	2	784.0	Aug-13 08:00	204.8	Aug-13	100.0%	Jun-15
PM _{2.5} (µg/m ³)	80	30	Rycroft-Portable	6.8	12	2	310.9	Aug-13 09:00	72.2	Aug-13	99.6%	Jun-19
RH (%)			Henry Pirker	59.7	-	-	91.5	Aug-24 08:00	78.7	Aug-24	100.0%	-
RH (%)			Evergreen Park	65.0	-	-	99.6	Aug-02 08:00	85.5	Aug-24	100.0%	-
RH (%)			Beaverlodge	63.6	-	-	100.0	Aug-01 03:00	86.0	Aug-24	100.0%	-
RH (%)			Valleyview	-	-	-	-	-	-	-	0.0%	-
SR (W/m ²)			Henry Pirker	185.3	-	-	729.7	Aug-06 14:00	259.3	Aug-02	100.0%	-
Temp (°C)			Henry Pirker	17.2	-	-	30.7	Aug-11 16:00	22.5	Aug-11	100.0%	-
Temp (°C)			Evergreen Park	16.4	-	-	30.6	Aug-11 17:00	20.8	Aug-11	100.0%	-
Temp (°C)			Smoky Heights	16.1	-	-	29.2	Aug-11 16:00	21.2	Aug-11	99.7%	-
Temp (°C)			Beaverlodge	16.3	-	-	29.8	Aug-11 17:00	22.2	Aug-11	100.0%	-
Temp (°C)			Valleyview	16.3	-	-	28.4	Aug-10 16:00	21.3	Aug-12	100.0%	-
Temp (°C)			Donnelly	16.5	-	-	30.2	Aug-12 15:00	21.2	Aug-11	100.0%	-
Temp (°C)			Rycroft-Portable	16.9	-	-	30.4	Aug-10 15:00	21.8	Aug-11	100.0%	-

PAZA Monthly Continuous Data Summary – continued

Aug-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	9.1	-	-	34.0	Aug-25 17:00	21.2	Aug-25	100.0%	-
WSPD s (km/hr)			Evergreen Park	11.8	-	-	43.0	Aug-31 15:00	30.3	Aug-19	100.0%	-
WSPD s (km/hr)			Smoky Heights	12.9	-	-	44.0	Aug-31 16:00	26.1	Aug-31	99.7%	-
WSPD s (km/hr)			Beaverlodge	12.1	-	-	41.0	Aug-31 15:00	26.5	Aug-19	100.0%	-
WSPD s (km/hr)			Valleyview	3.7	-	-	21.0	Aug-03 18:00	9.4	Aug-19	100.0%	-
WSPD s (km/hr)			Donnelly	10.7	-	-	31.0	Aug-31 11:00	21.7	Aug-25	100.0%	-
WSPD s (km/hr)			Rycroft-Portable	9.1	-	-	35.0	Aug-19 17:00	17.0	Aug-19	99.7%	-
WSPD v (km/hr)			Henry Pirker	4.5	-	-	34.0	Aug-25 17:00	20.8	Aug-25	100.0%	-
WSPD v (km/hr)			Evergreen Park	7.4	-	-	42.0	Aug-18 19:00	59.6	Aug-19	100.0%	-
WSPD v (km/hr)			Smoky Heights	8.1	-	-	44.0	Aug-31 16:00	25.7	Aug-31	99.7%	-
WSPD v (km/hr)			Beaverlodge	5.6	-	-	41.0	Aug-31 15:00	26.1	Aug-19	100.0%	-
WSPD v (km/hr)			Valleyview	1.7	-	-	21.0	Aug-03 18:00	8.7	Aug-19	100.0%	-
WSPD v (km/hr)			Donnelly	6.3	-	-	31.0	Aug-31 11:00	20.8	Aug-25	100.0%	-
WSPD v (km/hr)			Rycroft-Portable	4.7	-	-	34.0	Aug-19 17:00	16.2	Aug-19	99.7%	-
WDIR			Henry Pirker	WSW	-	-	-	-	-	-	100.0%	-
WDIR			Evergreen Park	WSW	-	-	-	-	-	-	100.0%	-
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	99.7%	-
WDIR			Beaverlodge	WSW	-	-	-	-	-	-	100.0%	-
WDIR			Valleyview	W	-	-	-	-	-	-	100.0%	-
WDIR			Donnelly	SW	-	-	-	-	-	-	100.0%	-
WDIR			Rycroft-Portable	SSW	-	-	-	-	-	-	99.7%	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues:

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	No operational issues observed.
TRS	TEI	45C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Evergreen Park Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	Sharp	5030	Routine maintenance and analyzer malfunctioning resulted in an uptime of 99.7%.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

PAZA – Smoky Heights Station

General Station Issues

Power disruption at the station.

Parameter	Make	Model	Notes
SO ₂	TEI	43C	A power disruption at the station resulted in an uptime of 99.7%.
TRS	TEI	43i	A power disruption at the station resulted in an uptime of 99.7%.
PM _{2.5}	Sharp	5030	Analyzer malfunctioning, maintenance and the power disruption at the station resulted in an uptime of 97.9%.
ET	Met One	083D	A power disruption at the station resulted in an uptime of 99.7%.
WS / WD	Met One	010C/020C	A power disruption at the station resulted in an uptime of 99.7%.

PAZA – Beaverlodge Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Met One	50.5H	No operational issues observed.

PAZA – Valleyview Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	The relative humidity sensor was not operational for the month of August due to instrument malfunctioning.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Donnelly Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	Thermo	450i	Analyzer malfunctioning August 21-23 resulted in an uptime of 93.3%.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

PAZA – Portable-Rycroft

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	Analyzer maintenance resulted in an uptime of 99.3%.
O ₃	TEI	49i	No operational issues observed.
TRS	TEI	43i	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	Analyzer malfunctioning due to a low hydrogen cylinder resulted in an uptime of 97.2%.
PM _{2.5}	Sharp	5030	Routine analyzer maintenance resulted in an uptime of 99.6%.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	Intermittent analyzer malfunctioning resulted in an uptime of 99.7%.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

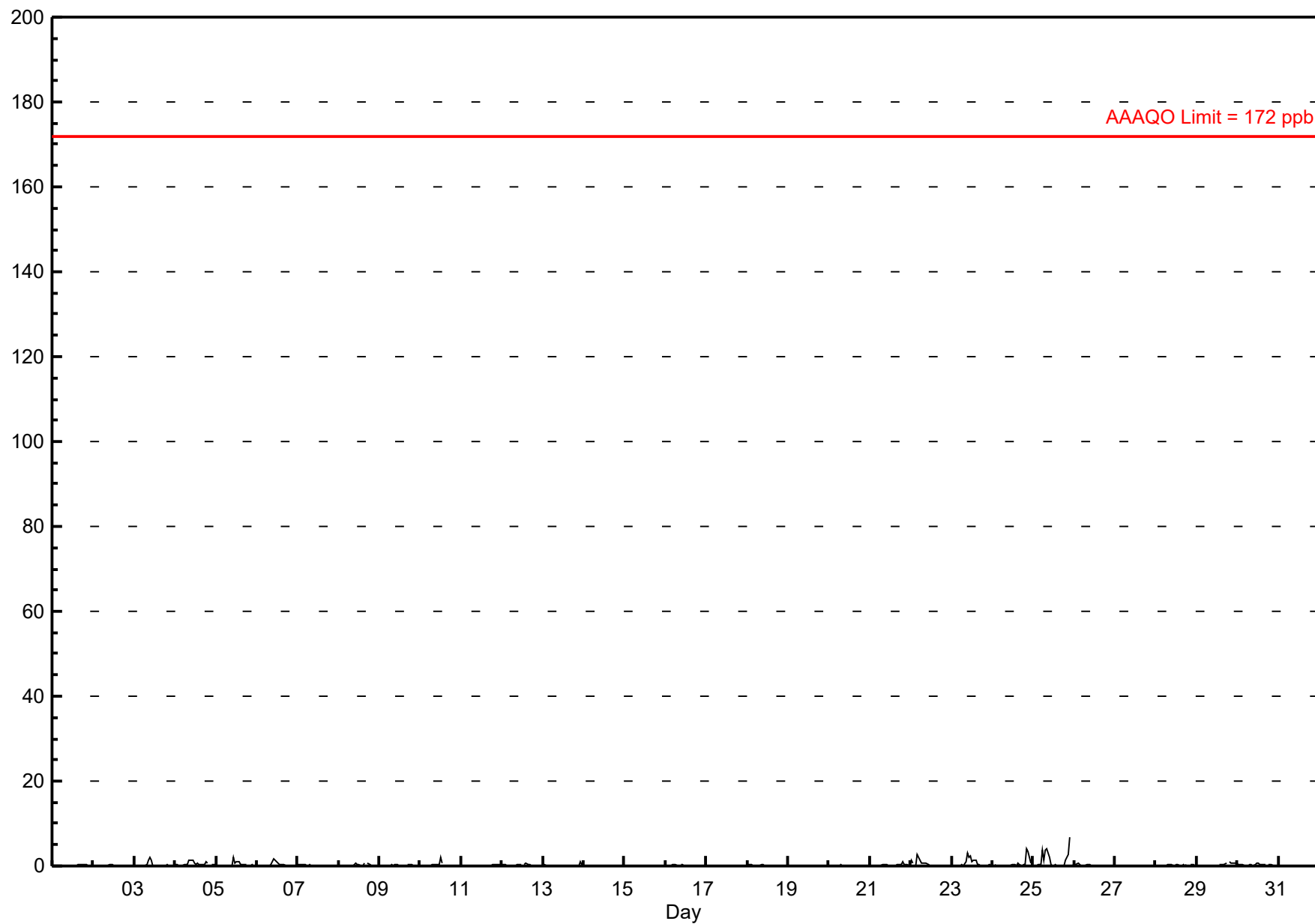
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																								
Maximum Value: 6.9 ppb on Aug 25 22:00		Maximum Daily Average: 1.2 ppb on Aug 25																								
Minimum Value: 0 ppb on Aug 2 07:00		Hours of Data: 706																								
Maximum Diurnal Average: 0.5 ppb at hour 10		Hours of Missing Data: 38																								
Monthly Average: 0.22 ppb		Hours of Calibration: 38																								
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 2.8		Percent Operational Time: 100.0																								
Minimum Daily Average: 0.0 ppb on Aug 31																										
Minimum Diurnal Average: 0.1 ppb at hour 4																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
3-Aug	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	2.2
4-Aug	0	0	0	0	0	0	0	0	1	2	1	1	0	1	0	0	0	0	1	1	A	0	0	0	0.5	1.5
5-Aug	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	0	A	0	0	0	0	0.3	1.9
6-Aug	0	0	0	0	0	0	0	0	0	1	2	1	1	0	1	0	0	0	A	0	0	0	0	0	0.3	1.7
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.5
8-Aug	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	A	1	0	0	0	0	0	0	0.2	0.8
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	2	1	A	0	0	0	0	0	0	0	0	0	0.2	2.0
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0.2	0.8
13-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0.1	1.2
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	1.1
22-Aug	1	1	A	0	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.7
23-Aug	0	A	0	0	0	0	0	0	1	3	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0.6	3.1
24-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	4	1	A	0.5	4.0
25-Aug	0	0	0	0	0	4	1	4	4	2	0	0	0	0	0	0	0	0	0	1	3	7	A	0	1.2	6.9
26-Aug	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.7
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
29-Aug	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	1	A	1	1	1	1	1	0.4	1.1
30-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - August 2017



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

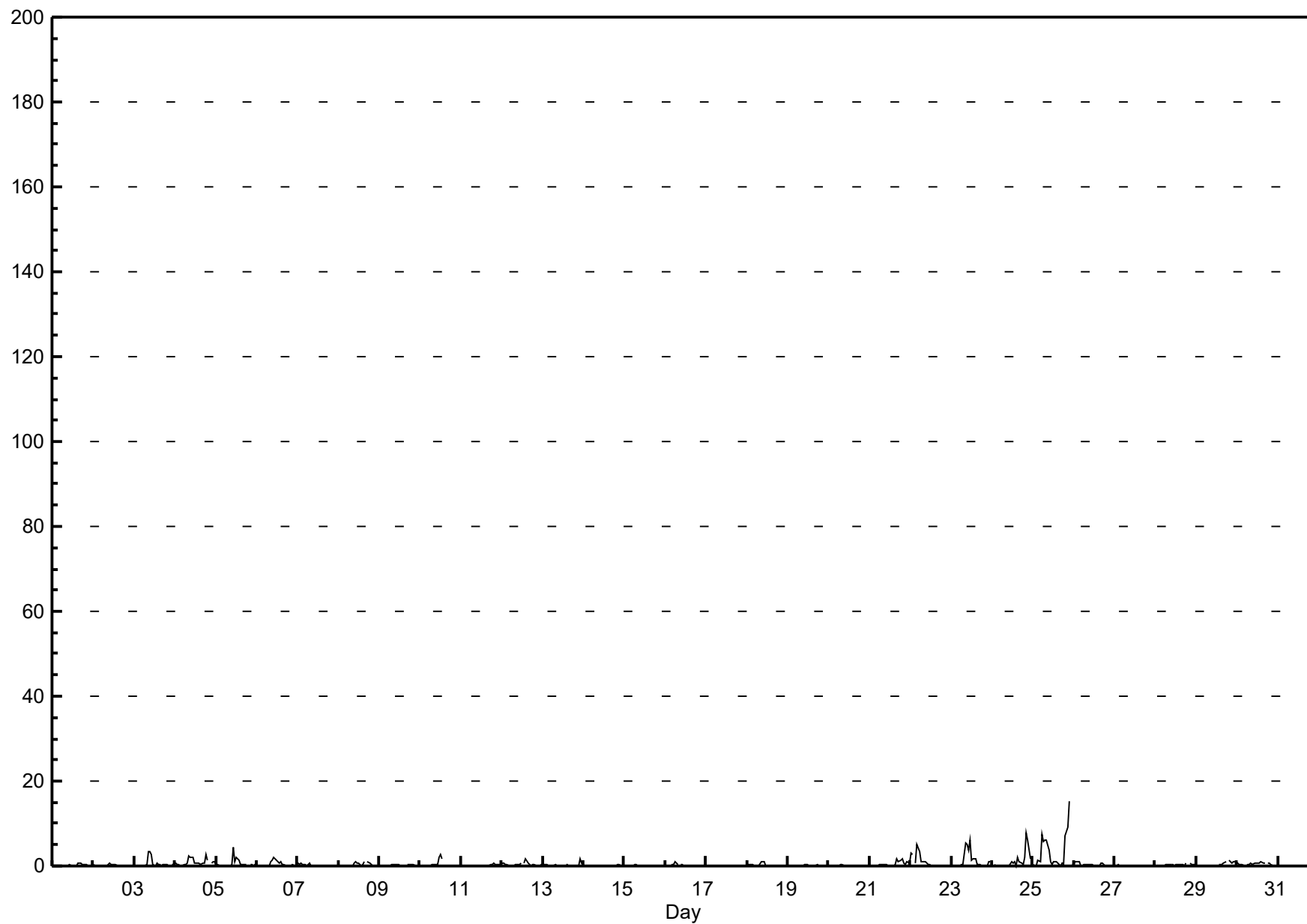
Henry Pirker - August 2017

Maximum Value: 15.1 ppb on Aug 25 22:00																				Maximum Daily Average: 3.0 ppb on Aug 25					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 31 22:00																				Minimum Daily Average: 0.0 ppb on Aug 31					Hours of Data: 706	
Maximum Diurnal Average: 0.9 ppb at hour 22																				Minimum Diurnal Average: 0.2 ppb at hour 3					Hours of Missing Data: 38	
Monthly Average: 0.46 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.9 P ₉₉ = 6.1					Hours of Calibration: 38	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0.2	0.6
2-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.7
3-Aug	0	0	0	0	0	0	0	0	3	3	3	0	0	1	0	0	0	0	0	0	0	A	0	1	0.6	3.5
4-Aug	1	0	0	0	0	0	0	1	2	2	2	1	1	1	1	0	1	1	3	1	A	1	1	1	0.9	2.6
5-Aug	0	0	0	0	0	0	0	0	0	0	4	1	2	1	0	0	0	0	0	A	0	0	0	0	0.6	4.4
6-Aug	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	0	0	0	A	0	0	0	0	0	0.5	2.0
7-Aug	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.7
8-Aug	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	A	1	1	0	0	0	0	0	0.3	1.0
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4
10-Aug	0	0	0	0	0	0	0	0	0	0	0	2	3	2	A	0	0	0	0	0	0	0	0	0	0.4	2.8
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0.2	0.5
12-Aug	1	1	0	0	0	0	0	0	0	0	0	1	A	1	2	1	0	0	0	0	0	0	0	0	0.4	1.6
13-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	2	1	0.2	1.7
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
16-Aug	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Aug	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	2	1	0	1	1	0.5	1.6
22-Aug	3	3	A	1	5	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	4.9
23-Aug	0	A	0	0	0	0	0	0	5	5	4	6	1	2	2	0	0	0	0	0	0	0	1	1	1.3	6.2
24-Aug	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	2	1	1	1	2	8	6	2	A	1.2	7.8
25-Aug	0	0	0	1	1	8	6	6	6	4	1	0	1	1	1	0	0	1	0	7	9	15	A	0	3.0	15.1
26-Aug	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0.3	1.0
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0.3	0.7
29-Aug	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	1	1	A	1	1	1	1	1	0.5	1.3
30-Aug	1	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0.5	0.9
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
0.3 0.3 0.2 0.2 0.3 0.5 0.4 0.5 0.8 0.8 0.8 0.6 0.5 0.4 0.3 0.3 0.3 0.3 0.3 0.6 0.8 0.9 0.4 0.3																									Diurnal Average	
2.9 2.6 1.0 1.4 4.9 7.6 5.8 6.2 6.0 5.0 4.4 6.2 2.8 1.6 1.6 2.0 1.6 1.2 2.6 7.0 9.3 15.1 1.7 1.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

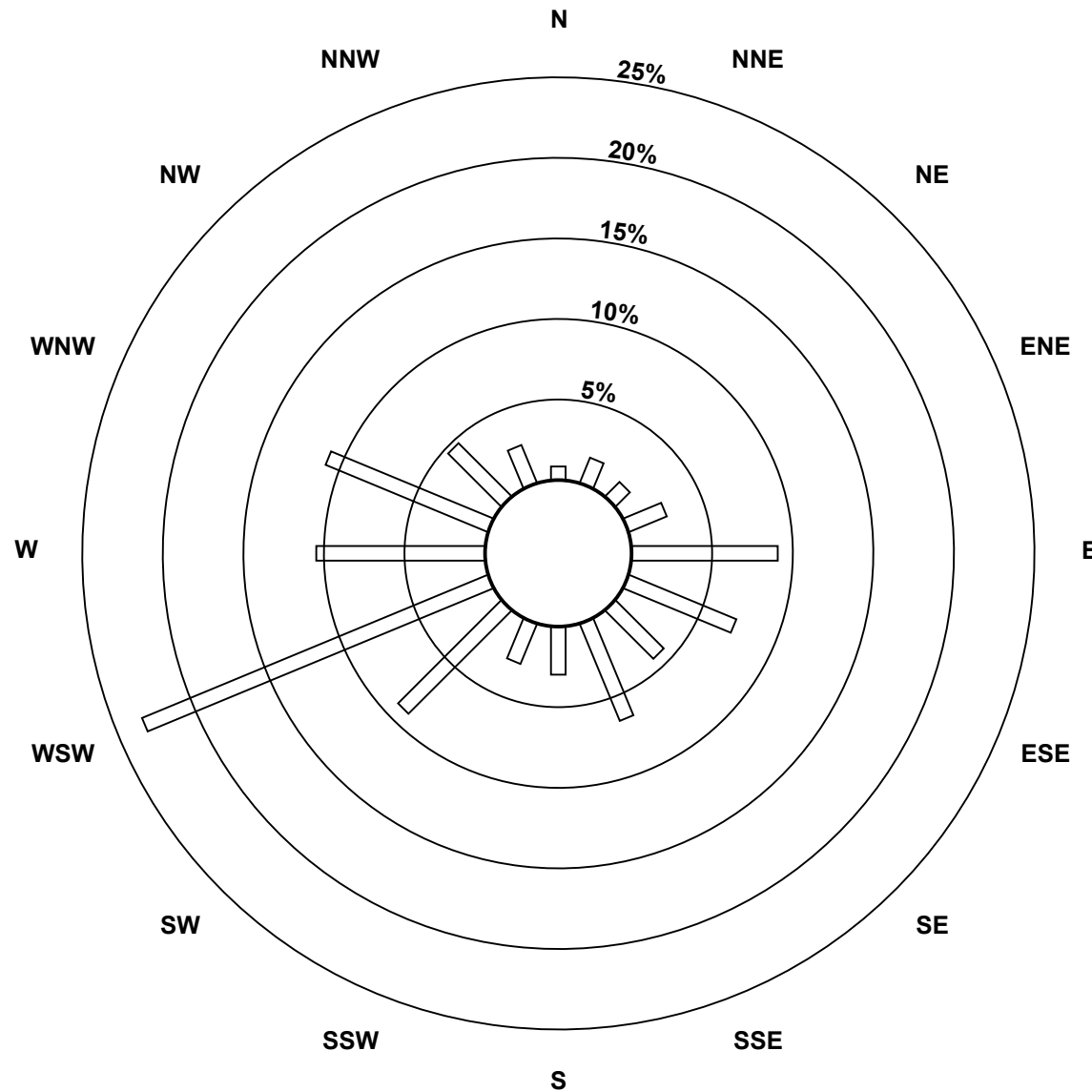
Henry Pirker - August 2017



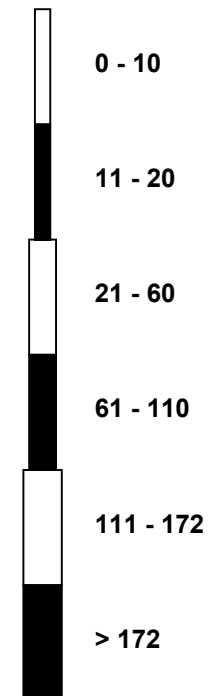
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - August 2017

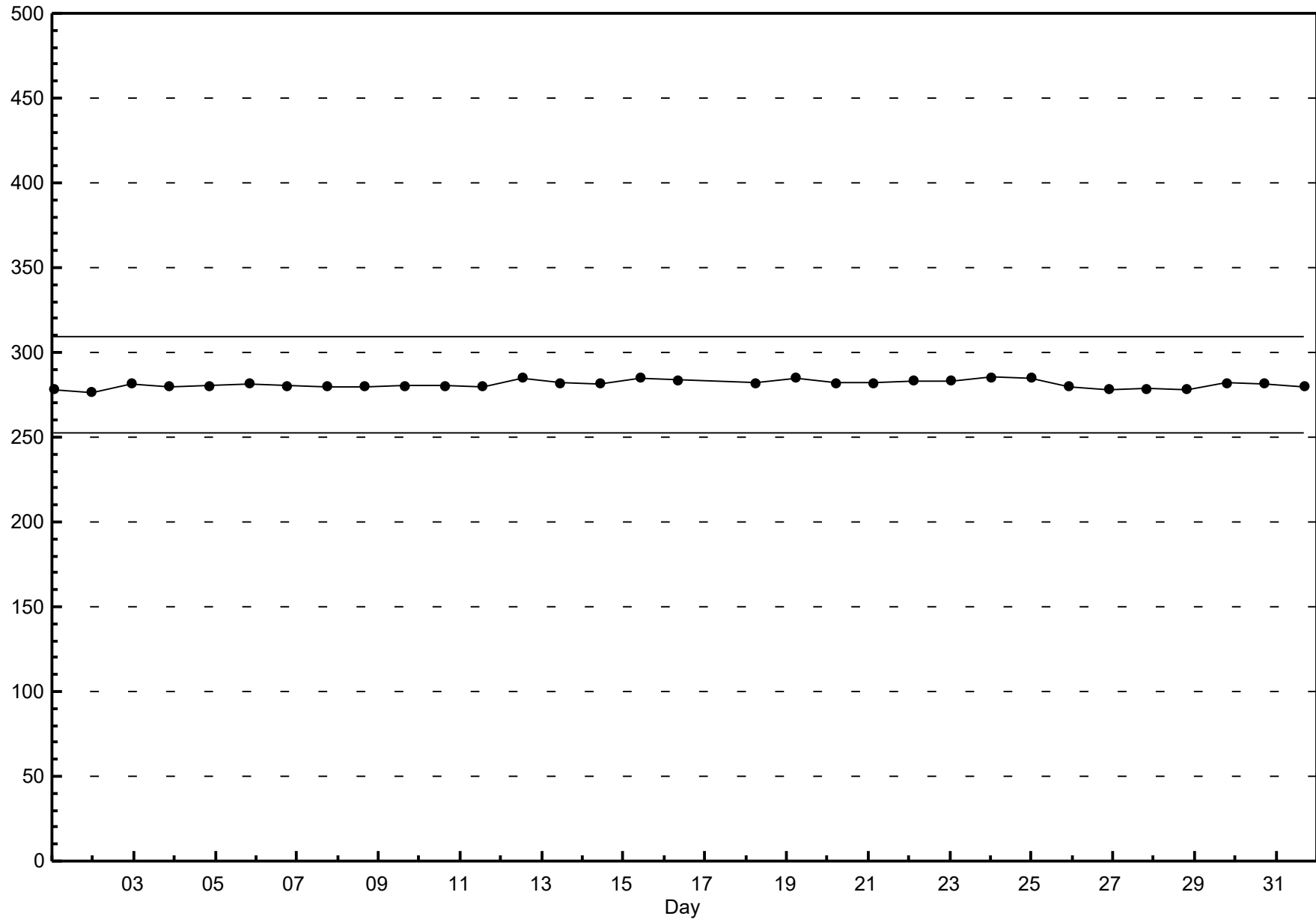


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - August 2017



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

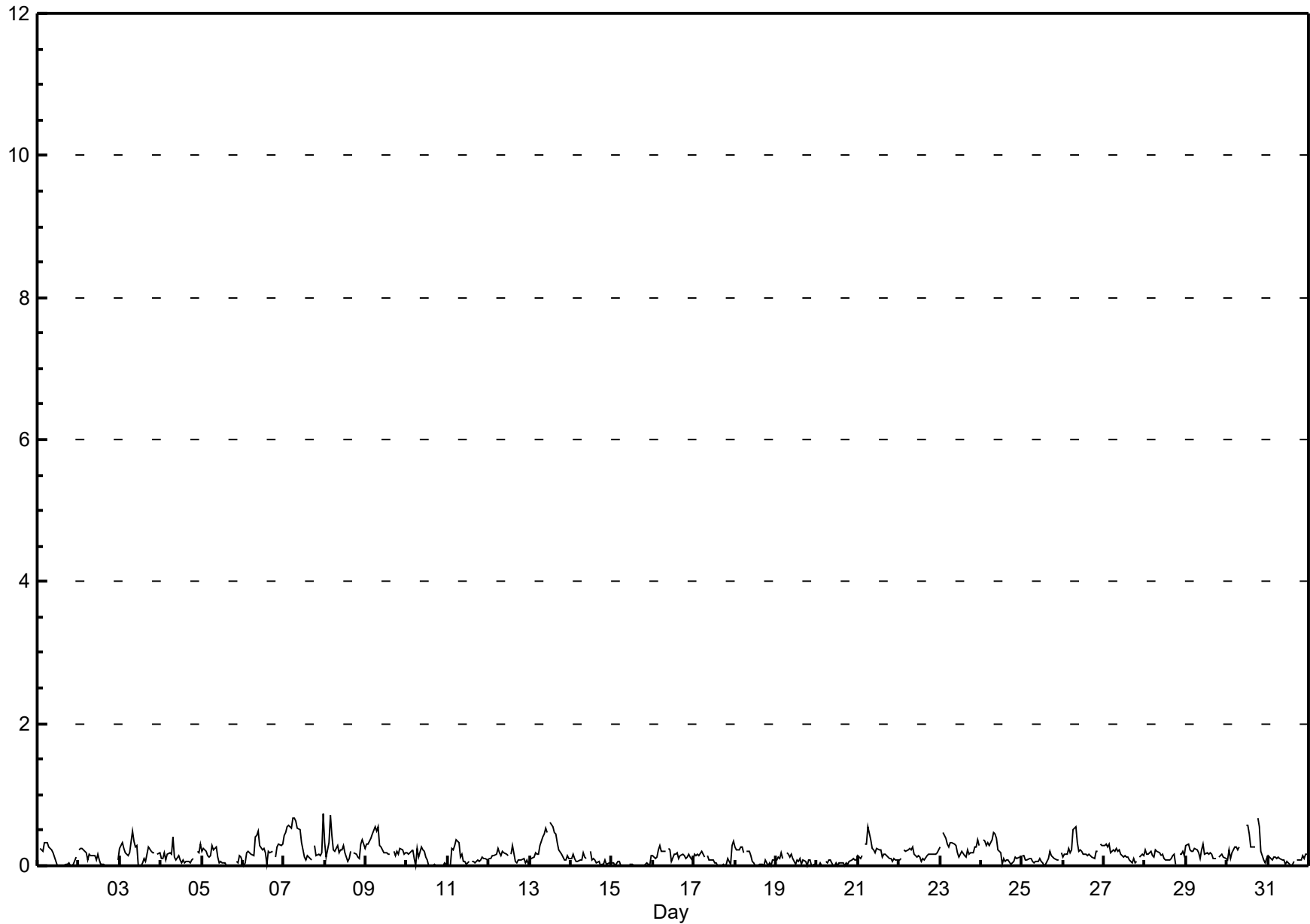
Henry Pirker - August 2017

Maximum Value: 0.7 ppb on Aug 8 00:00																				Maximum Daily Average: 0.4 ppb on Aug 7										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 1 12:00																				Minimum Daily Average: 0.0 ppb on Aug 15										Hours of Data: 708	
Maximum Diurnal Average: 0.3 ppb at hour 8																				Minimum Diurnal Average: 0.1 ppb at hour 16										Hours of Missing Data: 36	
Monthly Average: 0.16 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.6										Hours of Calibration: 36	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3					
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2					
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5					
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4					
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3					
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.5					
7-Aug	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0.4	0.7					
8-Aug	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.7					
9-Aug	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.6					
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.3					
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.4					
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3					
13-Aug	0	0	0	0	0	0	0	0	0	1	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6					
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1					
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3					
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4					
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3					
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1					
21-Aug	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3					
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5					
24-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5					
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2					
26-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5					
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3					
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2					
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3					
30-Aug	0	0	0	0	0	0	0	0	C	C	C	1	1	0	0	0	0	A	1	1	0	0	0	0	0.3	0.7					
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2					
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2																									Diurnal Average						
0.4 0.5 0.6 0.7 0.5 0.7 0.7 0.6 0.5 0.5 0.5 0.6 0.6 0.5 0.5 0.4 0.3 0.3 0.7 0.6 0.3 0.3 0.4 0.7																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2017



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

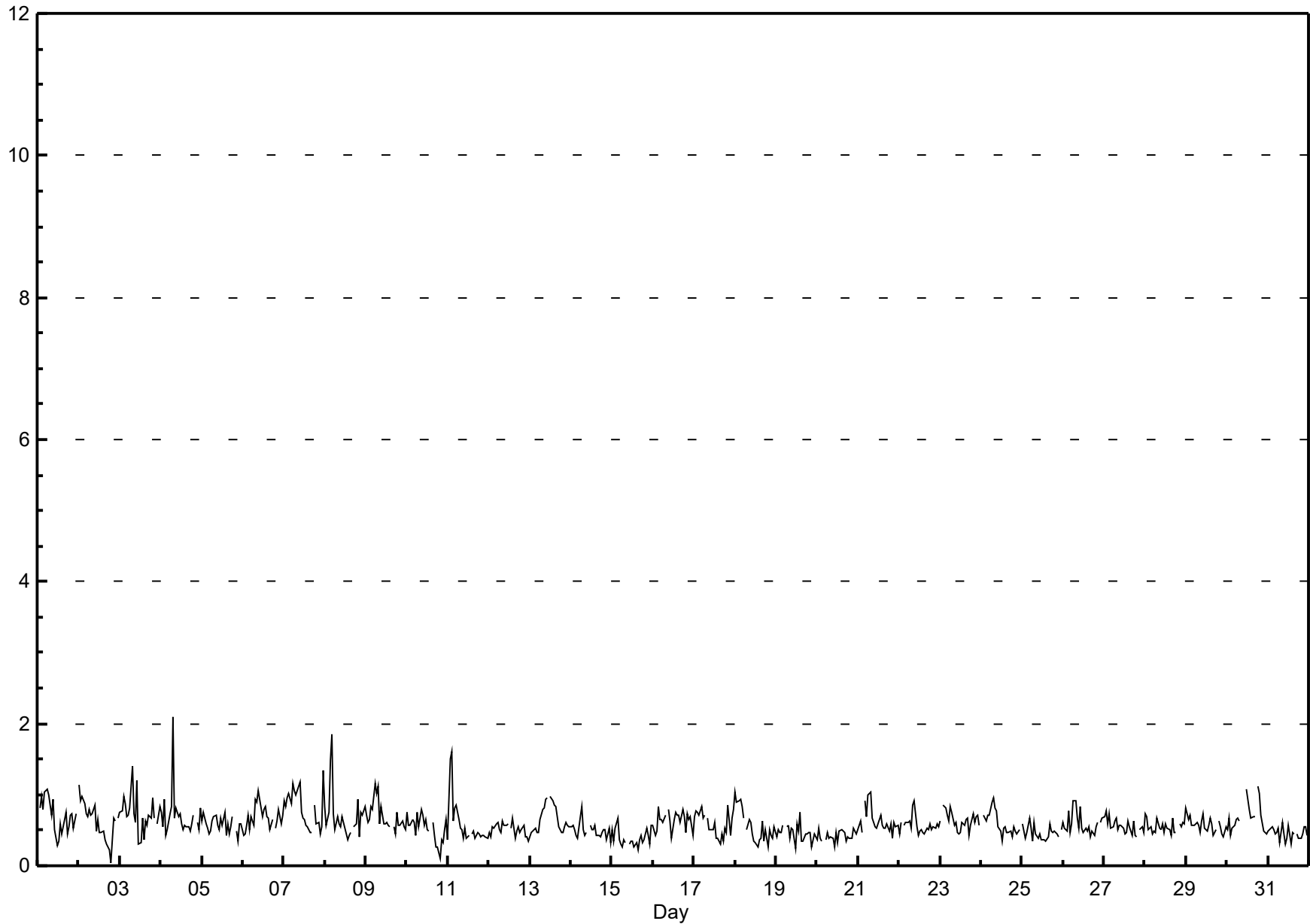
Henry Pirker - August 2017

Maximum Value: 2.1 ppb on Aug 4 08:00																				Maximum Daily Average: 0.8 ppb on Aug 7										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 2 20:00																				Minimum Daily Average: 0.4 ppb on Aug 15										Hours of Data: 708									
Maximum Diurnal Average: 0.8 ppb at hour 8																				Minimum Diurnal Average: 0.5 ppb at hour 18										Hours of Missing Data: 36									
Monthly Average: 0.59 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.3										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	1	1	1	1	A	A	0.7	1.1													
2-Aug	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	1	A	1	0.6	1.1													
3-Aug	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	A	1	1	0.7	1.4													
4-Aug	1	1	1	0	1	1	1	2	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	0.7	2.1													
5-Aug	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	0	1	1	A	0	0	1	1	0.6	0.8													
6-Aug	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.1													
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	0	1	1	0.8	1.3													
8-Aug	1	1	1	1	2	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	0	1	1	1	0.7	1.9													
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	0.7	1.2													
10-Aug	1	1	1	1	1	0	1	1	1	1	1	1	1	0	A	1	0	0	0	0	0	0	1	1	0.5	0.8													
11-Aug	0	2	2	1	1	1	1	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.6	1.6													
12-Aug	0	0	1	1	1	1	1	0	1	1	1	1	A	1	1	0	0	1	0	0	1	0	0	0	0.5	0.7													
13-Aug	0	0	0	1	0	0	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	1	0.7	1.0													
14-Aug	1	1	1	0	0	1	1	0	0	0	A	1	1	1	1	0	0	0	0	0	1	0	0	1	0.5	0.8													
15-Aug	1	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.4	0.7													
16-Aug	1	0	0	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	0	1	1	1	0	0.6	0.8													
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	1	0	1	0	1	0.6	0.9													
18-Aug	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0.6	1.0													
19-Aug	0	1	0	0	1	A	1	1	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0.5	0.8													
20-Aug	0	1	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0.4	0.5													
21-Aug	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0.6	1.0													
22-Aug	0	1	A	1	1	1	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	0.6	0.9													
23-Aug	1	A	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1	0.6	0.9													
24-Aug	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	1	A	0.6	1.0													
25-Aug	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	1	0.5	0.7													
26-Aug	1	1	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	A	1	1	0.6	0.9													
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	0	0	A	1	1	0	0.6	0.8													
28-Aug	1	1	1	1	0	0	0	1	1	1	1	0	1	1	0	0	1	0	0	A	1	1	1	1	0.6	0.7													
29-Aug	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	1	A	1	1	0	0	1	0.6	0.8													
30-Aug	1	1	0	1	1	1	1	1	C	C	C	1	1	1	1	1	1	A	1	1	1	0	0	0	0.7	1.1													
31-Aug	0	1	1	1	0	0	1	0	1	0	0	0	1	0	0	0	A	0	0	0	0	1	1	0	0.5	0.6													
0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.8 0.6 0.7 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.5 0.5 0.6																									Diurnal Average														
1.1 1.5 1.6 1.5 1.9 1.2 1.0 2.1 1.1 1.2 1.2 1.1 1.0 0.9 0.9 0.8 0.8 0.8 1.1 1.0 0.9 0.8 0.7 1.3																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

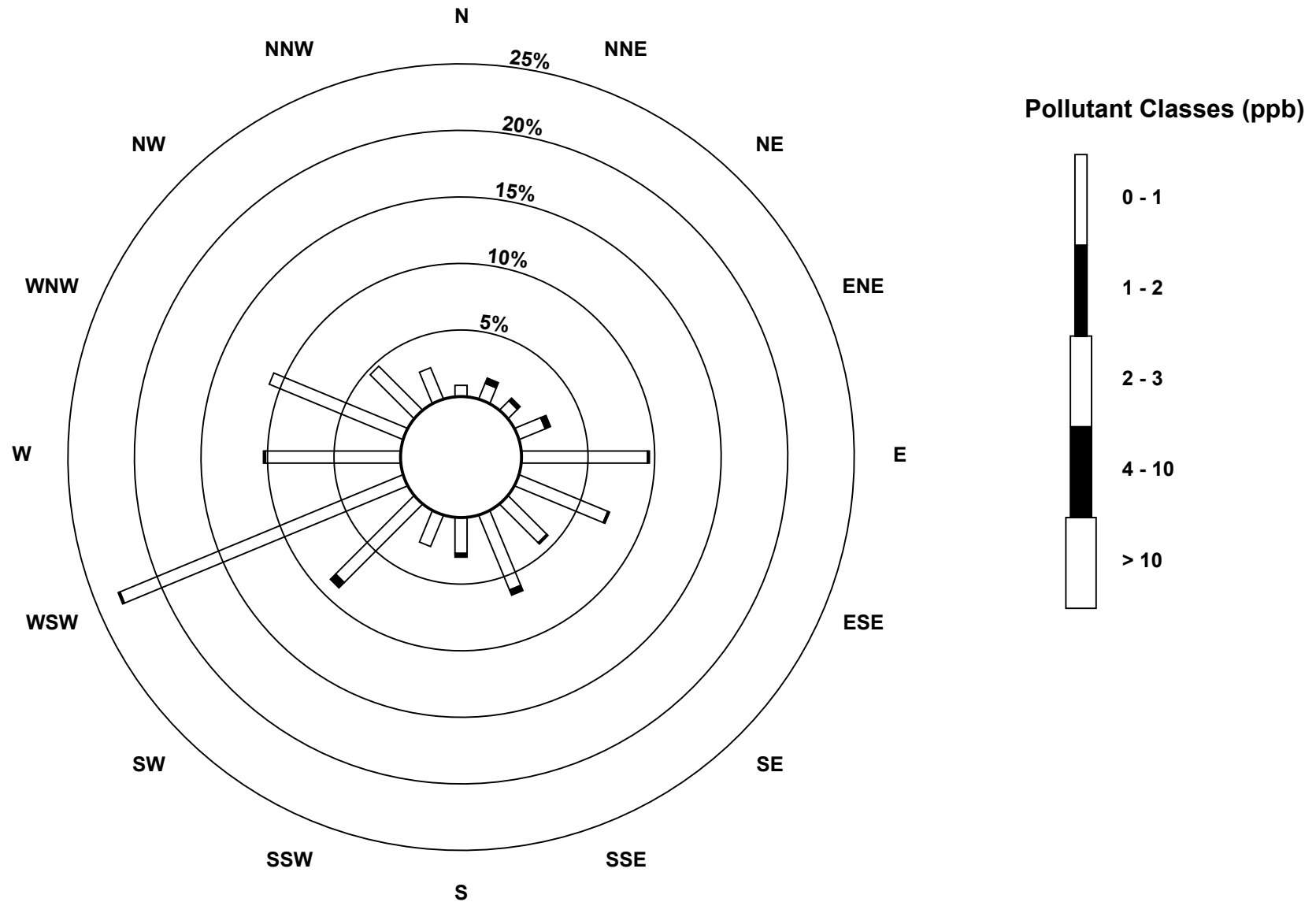
Henry Pirker - August 2017



Pollutant Rose

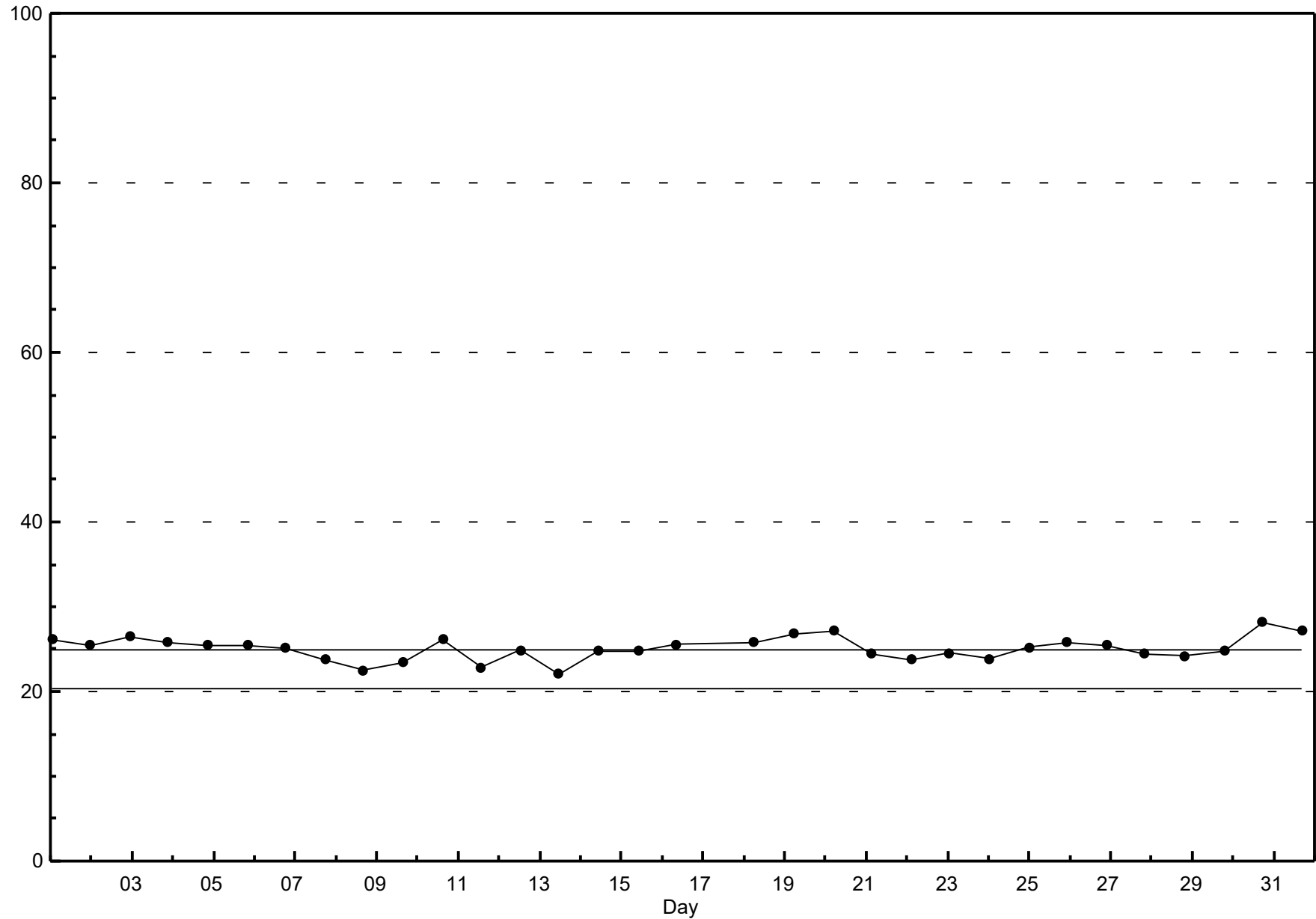
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2017



Span Responses

Total Reduced Sulphur (TRS)
Henry Pirker - August 2017



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

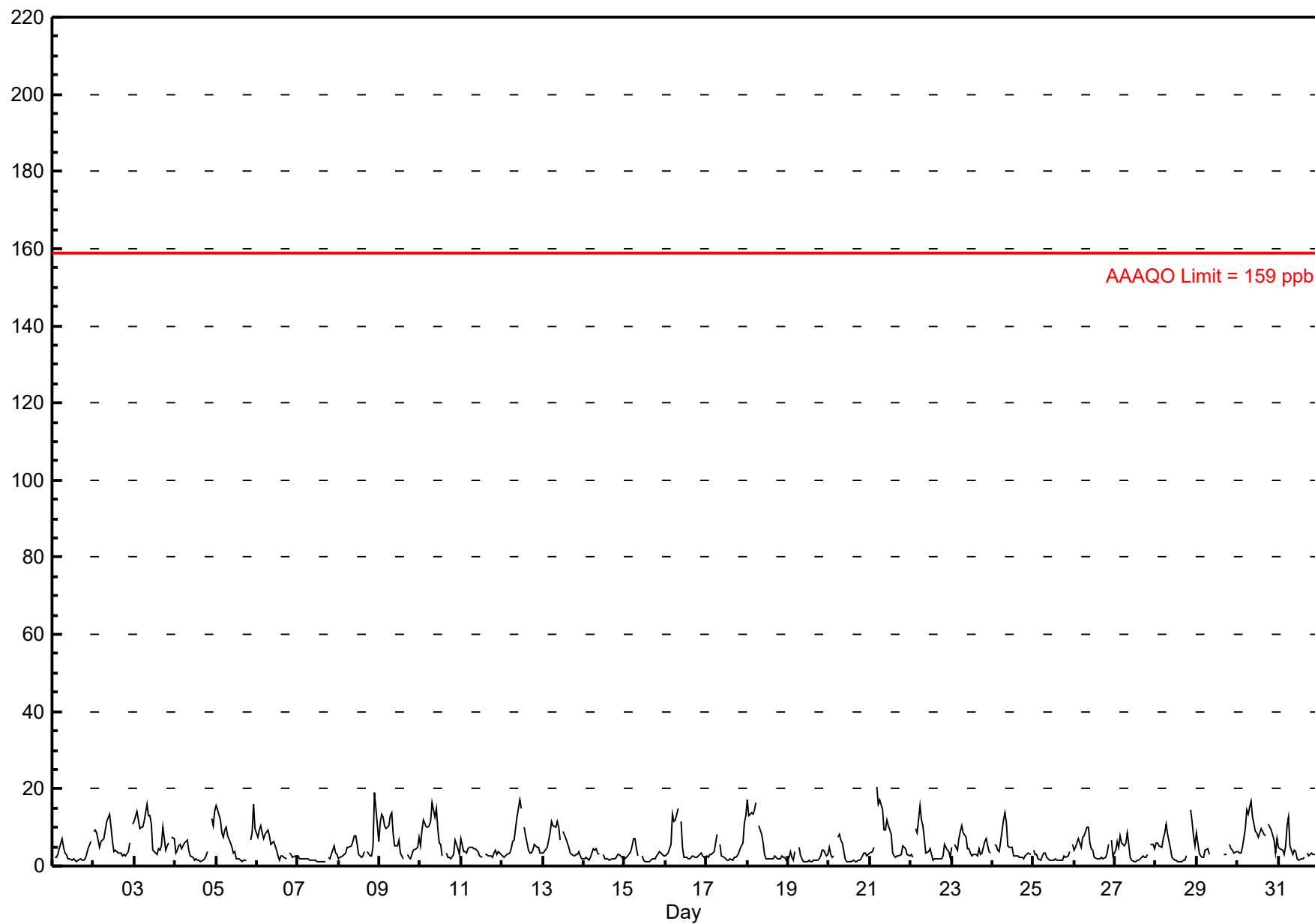
Henry Pirker - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 20.5 ppb on Aug 21 05:00 Maximum Daily Average: 8.9 ppb on Aug 30																								Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0		
Minimum Value: 1 ppb on Aug 20 13:00 Maximum Diurnal Average: 8.6 ppb at hour 7 Monthly Average: 4.92 ppb												Minimum Daily Average: 2.0 ppb on Aug 7 Minimum Diurnal Average: 2.5 ppb at hour 16 Percentiles: P ₁ = 1.1 P ₁₀ = 1.6 Q ₁ = 2.2 Median = 3.5 Q ₃ = 6.5 P ₉₀ = 10.5 P ₉₉ = 16.2														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	A	2	2	3	5	7	5	3	3	2	2	2	1	1	2	2	1	2	2	3	4	6	A	2.8	7.0	
2-Aug	9	9	9	5	6	7	7	9	11	13	10	6	4	4	3	3	3	3	3	4	6	A	11	6.5	13.3	
3-Aug	12	14	12	10	10	10	11	16	13	13	11	4	4	3	4	4	5	10	4	5	6	A	7	8.5	16.2	
4-Aug	3	4	5	5	4	6	6	7	4	3	2	2	2	1	1	1	1	2	3	4	A	12	11	14	4.5	14.0
5-Aug	16	15	12	9	8	9	10	8	6	5	3	4	2	2	1	1	1	2	2	A	7	8	16	10	6.8	16.0
6-Aug	7	9	10	9	7	8	10	8	5	6	6	4	2	2	3	3	2	2	A	3	3	2	3	3	5.1	10.4
7-Aug	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	A	2	2	4	5	3	3	3	2.0	5.3
8-Aug	2	2	3	3	3	5	5	5	6	8	8	6	3	2	3	4	A	4	3	3	5	19	15	7	5.3	19.2
9-Aug	11	13	13	10	10	11	13	14	8	5	5	7	3	2	2	A	3	2	2	3	4	5	5	8	6.9	13.7
10-Aug	5	9	12	10	10	10	11	16	13	15	10	6	6	3	A	3	2	2	2	3	7	6	5	3	7.3	16.3
11-Aug	7	4	4	3	5	5	5	4	4	4	4	2	2	A	3	3	3	3	2	3	4	3	4	3	3.7	7.0
12-Aug	3	2	3	3	3	4	6	7	10	13	17	15	A	10	8	4	3	4	4	6	5	5	3	3	6.1	17.3
13-Aug	3	4	5	7	9	11	11	10	11	10	7	A	9	7	6	5	3	3	3	3	3	4	3	2	6.0	11.4
14-Aug	2	2	2	2	2	4	4	4	3	3	A	3	2	2	2	2	2	2	2	2	3	3	2	2	2.5	4.5
15-Aug	2	2	2	4	5	7	7	5	3	A	3	2	1	1	1	2	2	2	2	3	4	3	3	3	2.9	7.2
16-Aug	3	3	5	6	13	12	12	15	A	12	5	2	2	2	2	2	3	2	2	3	3	3	3	2	5.0	14.7
17-Aug	2	2	3	3	4	6	8	A	6	3	2	2	2	2	2	2	2	2	3	3	5	6	11	13	4.0	13.2
18-Aug	17	13	14	14	15	16	A	10	8	6	3	2	2	2	2	2	2	2	2	2	3	2	2	1	6.2	17.3
19-Aug	2	4	2	2	4	A	5	3	2	1	1	1	1	1	2	2	2	2	2	2	4	4	3	3	2.3	4.9
20-Aug	5	3	2	3	A	7	8	7	6	2	1	1	1	1	1	1	1	2	2	2	3	3	3	3	2.9	8.2
21-Aug	3	4	5	A	21	16	17	15	9	9	12	11	8	3	2	2	3	2	3	5	5	4	3	3	7.2	20.5
22-Aug	3	2	A	10	9	16	12	10	7	3	4	4	3	2	2	2	2	2	2	2	6	4	4	2	4.9	15.5
23-Aug	5	A	6	4	7	9	11	8	8	4	4	3	3	3	3	3	4	3	3	6	7	5	4	3	5.1	10.6
24-Aug	A	6	5	4	4	6	12	14	11	5	5	5	3	3	2	3	2	2	2	2	3	3	3	A	4.8	13.7
25-Aug	4	3	3	2	2	3	3	3	2	2	2	1	2	2	2	2	1	2	2	2	3	4	A	6	2.4	5.5
26-Aug	4	5	7	6	5	7	8	10	10	6	4	4	2	2	2	2	2	2	2	4	6	A	7	3	4.7	10.1
27-Aug	4	6	5	8	6	5	6	8	6	2	2	1	1	1	2	2	2	2	2	3	A	5	6	5	4.0	8.4
28-Aug	6	6	5	5	7	8	11	8	4	2	2	1	1	1	1	1	1	2	3	A	14	12	8	5	5.1	14.5
29-Aug	8	3	3	2	2	4	4	3	C	C	C	C	C	C	C	C	3	3	A	6	5	4	3	4	--	8.4
30-Aug	4	3	3	5	10	15	13	15	17	13	9	9	8	8	10	8	8	A	11	10	9	7	3	7	8.9	16.8
31-Aug	5	4	4	3	5	10	13	5	3	4	4	2	2	2	2	2	A	3	3	3	3	3	3	4	4.0	12.7
5.5 5.4 5.5 5.3 6.7 8.3 8.6 8.4 6.9 6.0 5.1 3.9 2.8 2.6 2.6 2.5 2.5 2.5 2.7 3.5 4.8 5.4 5.2 4.8 17.3 14.5 14.0 13.6 20.5 16.4 17.2 16.3 16.8 15.0 17.3 14.8 9.0 10.0 9.6 8.3 7.8 10.3 10.8 10.0 14.5 19.2 16.0 14.0																								Diurnal Average	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - August 2017



Hourly Maximums

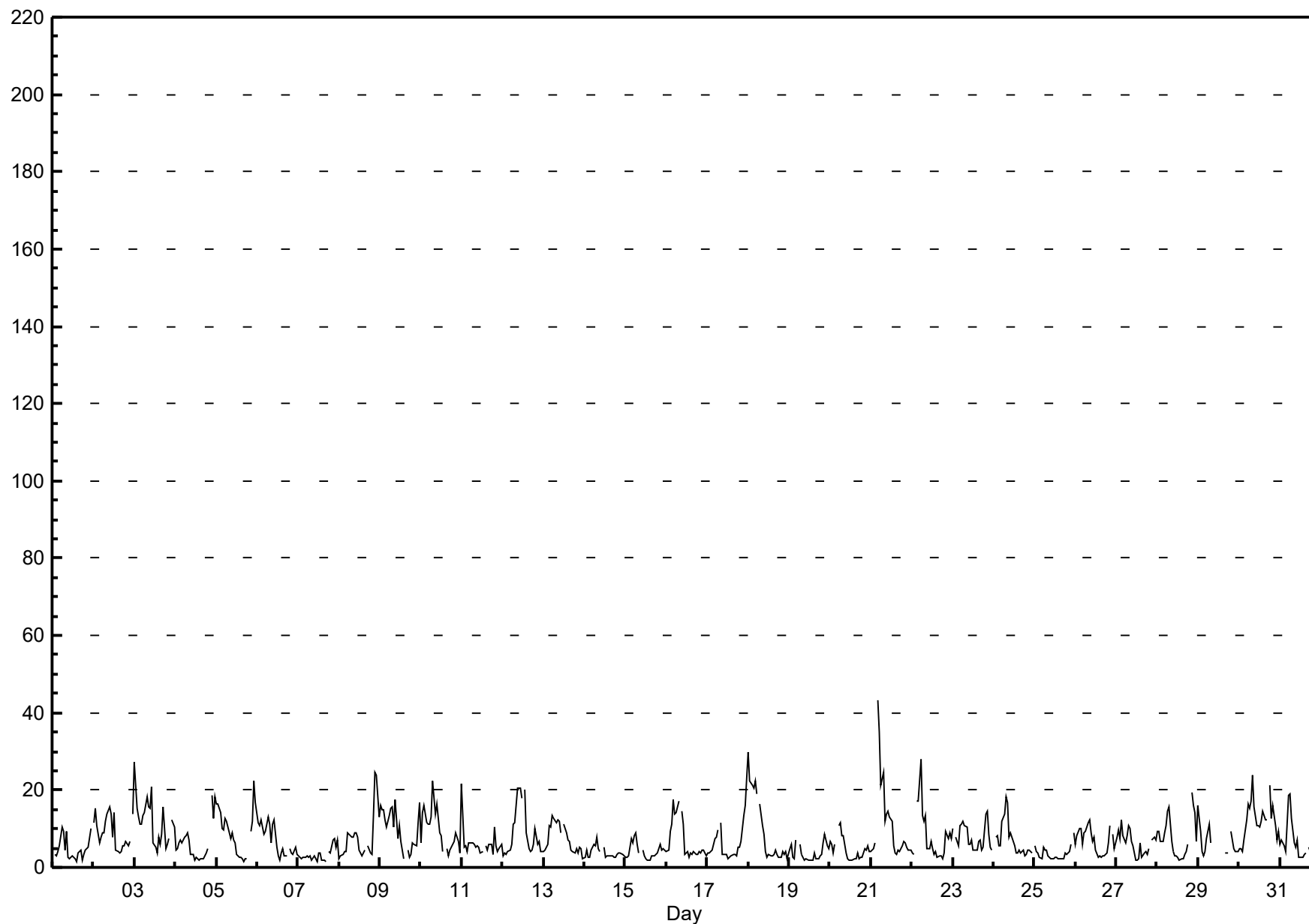
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - August 2017

Maximum Value: 43.1 ppb on Aug 21 05:00																				Maximum Daily Average: 12.3 ppb on Aug 30					Hours in Service: 744		
Minimum Value: 2 ppb on Aug 7 12:00																				Minimum Daily Average: 3.3 ppb on Aug 7					Hours of Data: 703		
Maximum Diurnal Average: 11.7 ppb at hour 6																				Minimum Diurnal Average: 4.0 ppb at hour 16					Hours of Missing Data: 41		
Monthly Average: 7.28 ppb																				Percentiles: P ₁ = 1.7 P ₁₀ = 2.6 Q ₁ = 3.5 Median = 5.5 Q ₃ = 10.2 P ₉₀ = 14.5 P ₉₉ = 24.4					Hours of Calibration: 41		
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Aug	A	3	3	4	6	10	9	4	9	3	2	3	3	2	2	4	5	2	3	4	5	5	10	A	4.7	10.3	
2-Aug	11	15	11	6	8	9	9	12	14	16	14	8	14	5	4	4	4	6	6	7	6	7	A	14	9.0	15.7	
3-Aug	27	15	13	11	11	13	14	18	16	15	21	6	5	4	8	6	9	16	5	6	7	A	12	10	11.8	27.3	
4-Aug	5	5	6	7	6	8	8	9	7	3	3	2	3	2	2	2	2	3	4	5	A	19	13	18	6.2	18.6	
5-Aug	17	16	14	10	10	13	12	10	8	9	7	6	3	3	3	2	2	2	2	A	9	12	22	17	9.1	22.4	
6-Aug	11	11	12	10	8	9	13	11	6	11	12	5	3	2	4	5	3	3	A	5	4	3	5	3	7.0	13.1	
7-Aug	3	3	2	3	3	3	3	3	2	3	2	2	4	4	2	2	2	A	4	4	7	7	5	7	3.3	7.3	
8-Aug	2	3	3	4	4	9	9	8	8	9	9	8	4	3	4	5	A	6	4	3	14	25	24	13	7.8	24.5	
9-Aug	16	15	15	12	10	14	15	16	11	17	8	11	7	4	2	A	4	3	3	6	6	6	12	17	10.0	17.5	
10-Aug	6	14	16	12	11	11	13	22	14	16	13	9	8	4	A	5	3	5	5	7	9	8	7	4	9.6	22.3	
11-Aug	22	5	5	4	6	6	6	6	5	5	5	4	4	A	6	5	6	6	3	10	6	4	5	6	6.1	21.5	
12-Aug	3	4	3	4	4	6	11	12	16	20	20	18	A	20	9	5	4	4	6	10	6	7	4	4	8.7	20.5	
13-Aug	4	4	6	11	11	13	13	11	12	12	9	A	11	9	7	7	5	4	4	5	4	5	5	2	7.5	13.5	
14-Aug	3	4	3	3	4	6	5	8	5	4	A	5	3	3	3	3	3	3	3	4	4	4	3	3	3.8	8.0	
15-Aug	2	3	3	8	6	8	9	6	4	A	4	3	2	2	2	3	3	3	3	4	6	5	5	4	4.3	8.8	
16-Aug	4	5	9	11	18	14	14	17	A	14	11	3	4	3	4	4	4	3	3	4	4	5	4	3	7.2	17.7	
17-Aug	4	4	4	4	7	8	10	A	12	3	3	3	2	2	3	3	3	3	5	5	7	13	16	23	6.5	23.3	
18-Aug	30	22	21	20	22	19	A	17	11	8	4	3	3	3	3	3	5	3	3	3	4	3	4	2	9.4	29.7	
19-Aug	5	6	2	2	7	A	6	3	3	2	2	2	2	2	2	4	2	2	3	3	6	9	5	5	3.8	8.6	
20-Aug	7	6	4	6	A	11	11	8	8	4	2	2	2	2	2	2	4	2	3	3	5	4	6	4	4.7	11.5	
21-Aug	4	5	6	A	43	35	21	24	12	14	15	13	12	6	4	3	5	4	5	7	6	5	4	4	11.2	43.1	
22-Aug	4	3	A	17	17	28	13	12	13	5	5	7	5	3	4	3	3	3	2	4	9	7	9	7	8.0	28.1	
23-Aug	10	A	8	5	11	11	12	11	10	6	6	7	5	4	4	7	7	4	5	14	14	9	5	4	7.9	14.4	
24-Aug	A	8	8	6	6	12	14	18	17	8	9	7	6	4	4	4	4	5	3	3	4	5	4	A	7.1	18.1	
25-Aug	6	4	4	3	2	5	5	5	3	2	2	2	3	3	2	2	2	2	4	3	4	6	A	9	3.6	9.1	
26-Aug	6	8	10	10	6	9	9	11	12	9	7	8	5	3	3	3	3	3	4	6	11	A	8	5	6.9	12.2	
27-Aug	8	10	7	12	8	6	8	11	10	7	6	2	2	2	6	3	4	4	3	5	A	7	8	7	6.3	12.1	
28-Aug	9	9	7	7	9	11	15	15	7	4	3	3	3	2	2	2	3	4	6	A	19	16	14	7	7.7	19.4	
29-Aug	16	9	4	3	4	8	11	6	C	C	C	C	C	C	C	C	C	4	4	A	9	7	5	4	4	--	16.1
30-Aug	5	5	4	7	12	16	15	17	24	16	11	11	11	12	15	12	12	A	21	12	16	11	7	9	12.3	24.0	
31-Aug	6	7	6	4	11	19	19	13	6	5	7	3	3	3	3	4	A	5	4	5	5	5	8	13	7.1	19.0	
8.8 7.7 7.4 7.6 9.8 11.7 11.1 11.5 9.8 8.7 7.7 5.6 4.8 4.1 4.0 4.0 4.1 4.0 4.5 5.7 7.4 7.8 8.2 8.0																									Diurnal Average		
29.7 22.2 21.3 20.5 43.1 35.2 21.2 24.5 24.0 20.4 21.0 17.9 14.2 20.0 14.6 12.3 12.1 15.7 21.2 13.6 19.4 24.5 23.9 23.3																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

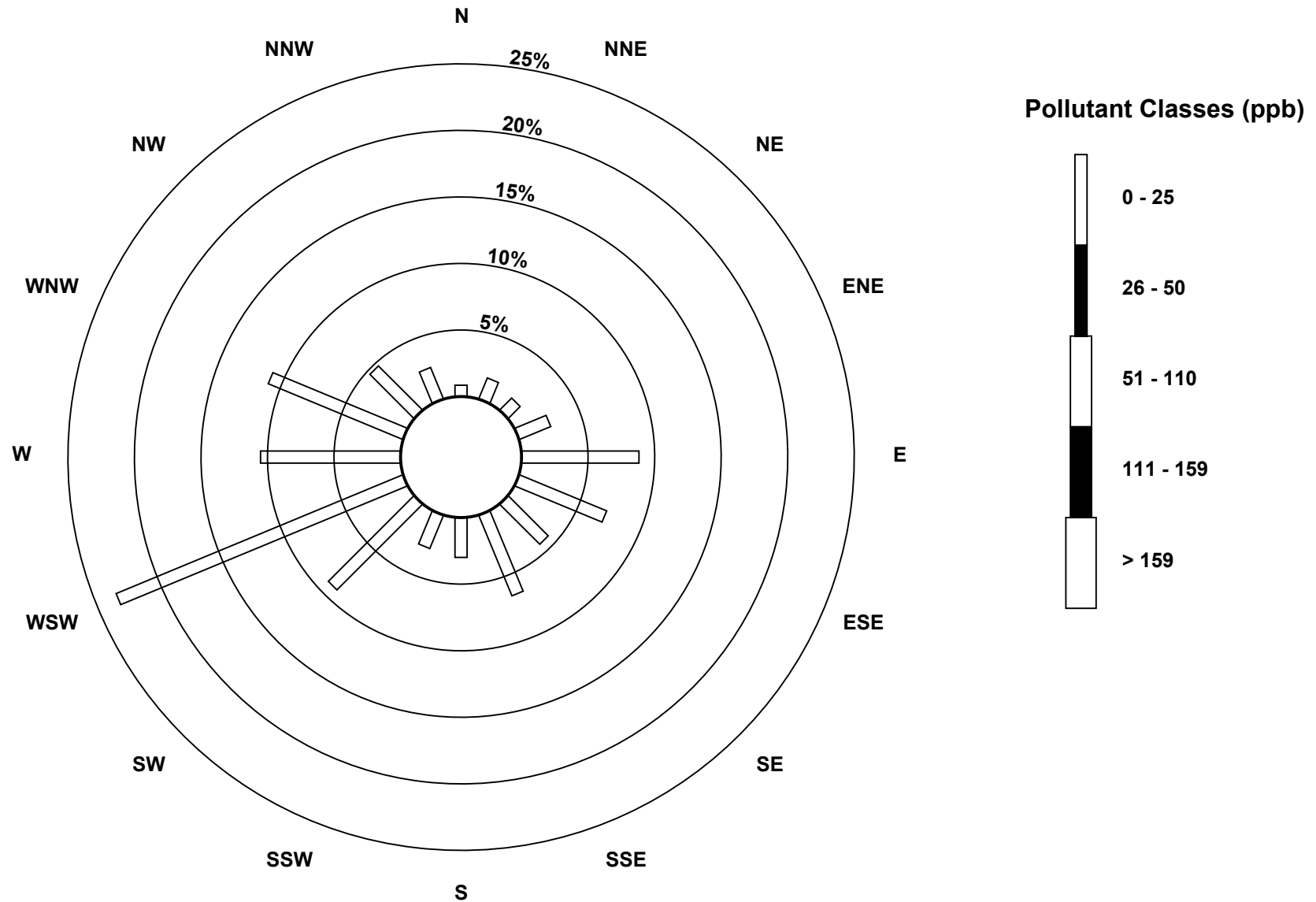
Nitrogen Dioxide (NO₂) - ppb
Henry Pirker - August 2017



Pollutant Rose

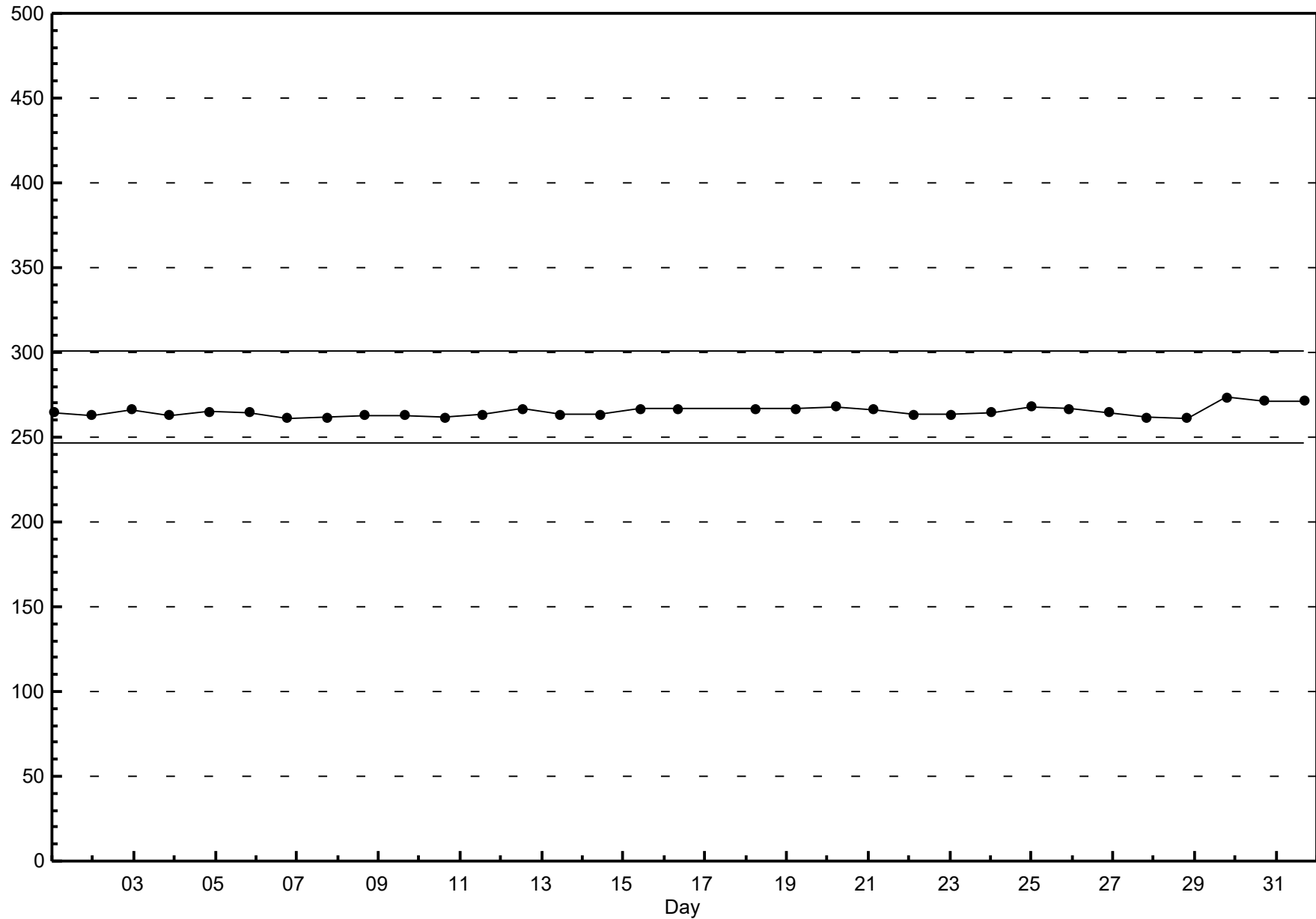
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - August 2017



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - August 2017



Hourly Averages

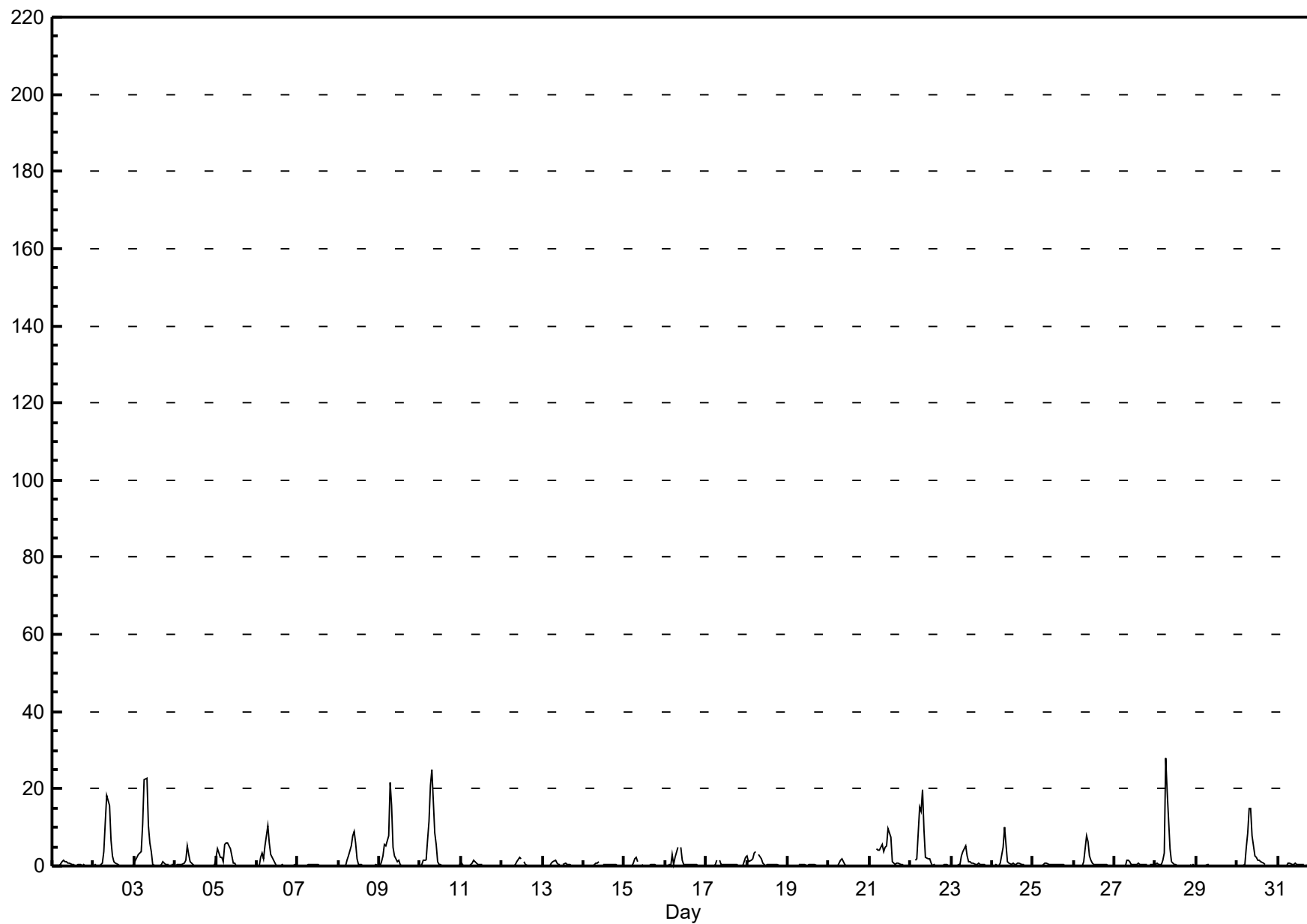
Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2017

Maximum Value: 28.1 ppb on Aug 28 07:00																					Maximum Daily Average: 4.1 ppb on Aug 3					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 5 17:00																					Minimum Daily Average: 0.1 ppb on Aug 19					Hours of Data: 703	
Maximum Diurnal Average: 6.6 ppb at hour 8																					Minimum Diurnal Average: 0.1 ppb at hour 22					Hours of Missing Data: 41	
Monthly Average: 1.27 ppb																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.7 P ₉₀ = 3.2 P ₉₉ = 18.9					Hours of Calibration: 41	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	0	0	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	1.5	
2-Aug	0	0	0	0	0	1	4	11	18	16	7	3	1	1	0	0	0	0	0	0	0	0	A	0	2.7	18.4	
3-Aug	1	2	3	3	4	11	23	23	11	6	4	0	0	0	0	0	1	0	0	0	0	A	0	0	4.1	22.8	
4-Aug	0	0	0	0	0	1	2	5	3	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.7	5.2	
5-Aug	2	5	2	2	1	6	6	6	5	3	1	1	0	0	0	0	0	0	0	A	0	0	0	0	1.7	6.0	
6-Aug	0	0	2	3	2	5	11	6	3	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1.6	10.5	
7-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.5	
8-Aug	0	0	0	0	0	1	3	5	8	9	6	2	0	0	0	0	A	0	0	0	0	0	0	0	1.6	9.1	
9-Aug	0	1	3	6	5	8	22	16	5	3	1	1	0	0	0	A	0	0	0	0	0	0	0	0	3.0	21.7	
10-Aug	0	0	1	2	7	12	21	25	8	6	1	0	0	0	A	0	0	0	0	0	0	0	0	0	3.7	25.1	
11-Aug	1	0	0	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	1.3	
12-Aug	0	0	0	0	0	0	0	0	0	1	2	2	A	1	0	0	0	0	0	0	0	0	0	0	0.3	2.2	
13-Aug	0	0	0	0	0	1	1	2	1	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.6	
14-Aug	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
15-Aug	0	0	0	0	0	1	2	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2	
16-Aug	0	0	0	0	3	0	2	5	A	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	5.0	
17-Aug	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.4	2.3	
18-Aug	3	1	2	2	3	4	A	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	3.6	
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
20-Aug	0	0	0	0	A	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0	
21-Aug	0	0	0	A	4	4	4	6	4	5	5	10	7	1	1	0	1	1	0	0	0	0	0	0	2.3	9.5	
22-Aug	0	0	A	1	2	15	14	20	9	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	3.0	19.6	
23-Aug	0	A	0	0	0	0	3	4	5	2	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1.0	5.1	
24-Aug	A	0	0	0	0	1	5	10	6	1	1	1	1	0	0	1	1	0	0	0	0	0	0	A	1.3	9.9	
25-Aug	0	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	A	0	0.3	0.8	
26-Aug	0	0	0	0	0	0	1	8	6	3	1	1	0	0	0	0	0	0	0	0	0	A	0	0	1.0	7.7	
27-Aug	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0.4	1.4	
28-Aug	0	1	0	0	1	3	28	19	5	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	2.7	28.1	
29-Aug	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	0	0	A	0	0	0	0	0	--	0.3	
30-Aug	0	0	0	0	0	5	8	15	15	8	3	2	1	1	1	1	0	A	0	0	0	0	0	0	2.7	15.1	
31-Aug	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.7	
0.3 0.4 0.5 0.7 1.2 2.7 5.5 6.6 4.3 2.7 1.5 1.0 0.6 0.4 0.3 0.3 0.3 0.3 0.2 0.1 0.1 0.1 0.1 0.2																								Diurnal Average			
2.7 4.5 3.1 5.8 6.9 15.3 28.1 25.1 18.4 15.7 6.8 9.5 7.3 1.4 1.2 0.7 0.7 1.0 0.4 0.5 0.3 0.3 1.2 2.3																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Nitrogen Oxide (NO) - ppb
Henry Pirker - August 2017



Hourly Maximums

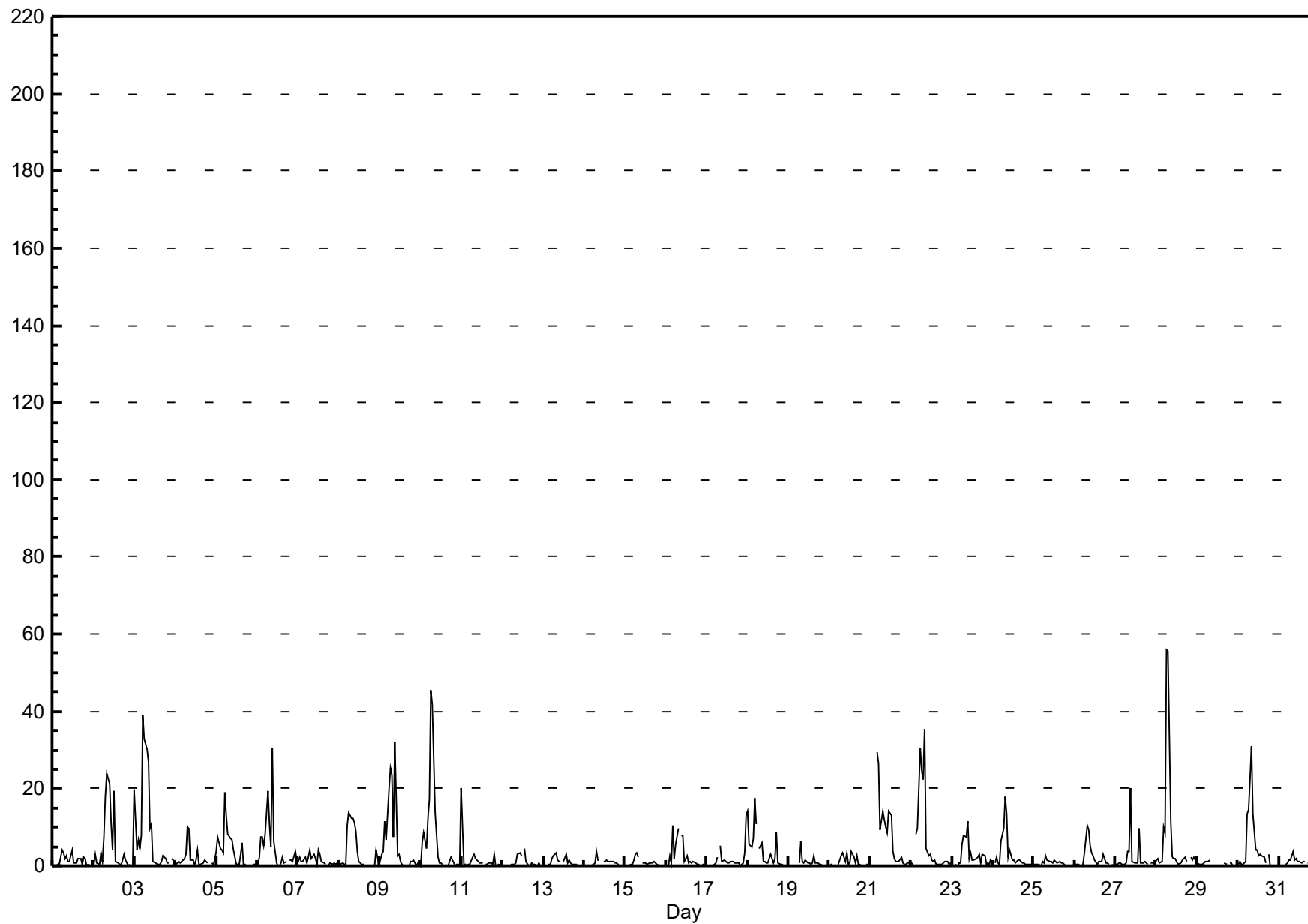
Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2017

Maximum Value: 56.0 ppb on Aug 28 07:00																					Maximum Daily Average: 8.9 ppb on Aug 3										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 14 04:00																					Minimum Daily Average: 0.8 ppb on Aug 25										Hours of Data: 703	
Maximum Diurnal Average: 11.9 ppb at hour 8																					Minimum Diurnal Average: 0.4 ppb at hour 22										Hours of Missing Data: 41	
Monthly Average: 3.21 ppb																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.3 Median = 0.9 Q ₃ = 2.6 P ₉₀ = 9.4 P ₉₉ = 31.5										Hours of Calibration: 41	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Aug	A	0	0	0	0	4	3	2	2	1	1	4	1	1	1	2	2	0	2	2	0	0	0	A	1.4	4.2						
2-Aug	0	3	1	0	3	1	7	18	24	21	11	4	19	1	1	0	0	2	3	1	0	0	A	0	5.3	23.8						
3-Aug	20	4	7	5	8	39	33	30	27	10	11	1	1	0	0	0	1	3	2	1	1	A	2	1	8.9	39.2						
4-Aug	0	1	1	1	1	2	3	10	10	1	2	0	1	4	0	0	1	2	1	1	A	1	0	2	2.0	10.0						
5-Aug	4	7	4	4	3	19	13	8	7	7	4	2	0	0	3	6	0	0	0	A	0	0	0	0	4.1	18.9						
6-Aug	0	2	7	8	5	8	19	11	5	31	6	1	0	0	1	2	1	1	A	1	1	1	4	1	5.1	30.5						
7-Aug	1	2	1	1	2	1	2	4	2	3	2	0	4	3	1	1	0	A	0	1	0	1	0	1	1.5	4.1						
8-Aug	0	0	1	0	0	10	14	12	12	11	9	4	1	0	0	0	A	0	0	0	0	0	4	0	3.6	13.8						
9-Aug	1	3	4	12	7	20	26	24	7	32	3	3	1	0	0	A	0	0	1	1	1	0	1	1	6.4	32.1						
10-Aug	0	6	9	5	12	17	45	42	14	8	2	1	1	0	A	0	0	1	2	1	0	0	1	0	7.3	45.4						
11-Aug	20	0	0	0	0	0	2	3	2	1	1	1	1	A	0	1	1	1	0	3	0	0	0	0	1.7	20.2						
12-Aug	0	0	0	0	0	0	0	0	1	3	3	2	A	5	1	0	0	1	0	0	0	1	0	0	0.9	4.6						
13-Aug	0	0	0	0	0	2	3	3	1	1	1	A	1	3	1	2	1	0	0	1	0	0	0	0	0.9	3.5						
14-Aug	0	0	0	0	0	0	1	4	1	2	A	1	1	2	1	1	1	1	1	1	0	0	0	0	0.8	3.9						
15-Aug	0	0	0	0	1	2	3	3	2	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.8	3.3						
16-Aug	0	0	3	1	10	2	6	10	A	8	8	1	2	1	1	1	1	1	1	0	0	0	0	0	2.4	10.4						
17-Aug	0	0	0	0	0	1	2	A	5	1	1	1	1	1	1	1	1	1	1	1	0	1	3	13	1.6	13.0						
18-Aug	14	6	5	7	17	11	A	5	6	1	1	1	1	3	2	1	2	9	1	0	0	0	0	0	4.0	17.5						
19-Aug	0	0	0	0	0	A	1	6	1	1	1	1	1	1	1	3	1	1	0	0	0	0	0	0	0.8	6.5						
20-Aug	0	0	0	0	A	0	2	3	3	1	3	0	1	4	2	1	3	0	0	0	0	0	0	0	1.0	3.6						
21-Aug	0	0	0	A	29	27	9	14	12	10	8	14	13	4	2	1	1	1	2	1	0	0	1	1	6.6	29.4						
22-Aug	1	0	A	8	10	31	25	22	35	4	3	3	2	1	1	0	0	0	0	1	1	1	0	1	6.6	35.4						
23-Aug	0	A	0	0	1	1	5	8	7	11	2	3	2	2	2	2	3	1	3	2	0	1	0	2	2.6	11.4						
24-Aug	A	1	2	1	0	7	10	18	13	2	4	1	2	1	1	1	1	1	1	0	0	1	0	A	3.1	18.0						
25-Aug	0	0	0	0	0	1	1	3	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0	0.8	2.6						
26-Aug	0	0	0	0	0	0	3	10	9	5	3	3	2	0	1	1	1	3	1	1	0	A	0	0	2.0	10.4						
27-Aug	0	1	1	1	0	0	1	4	4	20	1	1	1	1	10	1	1	1	1	1	A	1	1	1	2.2	20.2						
28-Aug	2	2	1	1	10	9	56	56	11	2	2	2	1	0	1	2	2	2	1	A	2	1	2	1	7.3	56.0						
29-Aug	1	0	0	0	1	1	1	1	C	C	C	C	C	C	C	C	C	1	0	A	1	1	0	0	--	1.4						
30-Aug	0	1	0	0	1	14	15	22	31	13	4	4	3	3	3	2	1	A	3	0	0	0	0	0	5.2	30.8						
31-Aug	0	0	0	0	0	1	2	1	4	1	2	1	1	1	1	1	A	1	1	0	0	0	0	0	0.8	3.8						
2.3 1.4 1.6 1.9 4.2 7.7 10.4 11.9 9.0 7.4 3.5 2.1 2.3 1.5 1.4 1.2 1.0 1.2 1.0 0.8 0.4 0.4 0.8 0.9																									Diurnal Average							
20.2 7.4 8.7 11.7 29.4 39.2 56.0 55.5 35.4 32.1 11.2 14.0 19.4 4.6 9.9 5.9 2.8 8.6 3.1 3.1 2.1 1.4 4.2 13.0																									Diurnal Maximum							
C - Calibration A - Automated Daily Zero Span																																

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Henry Pirker - August 2017



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

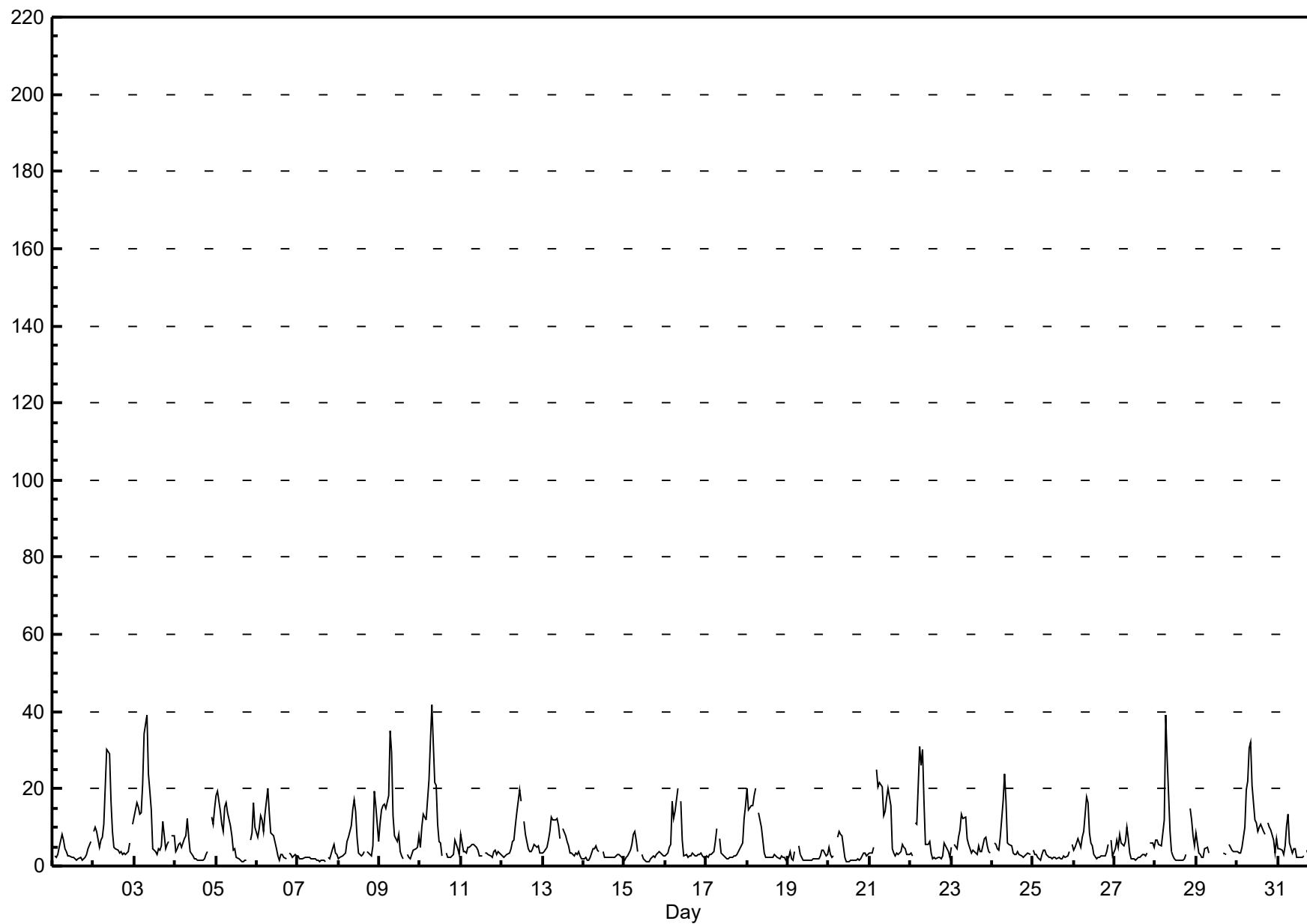
Henry Pirker - August 2017

Maximum Value: 41.7 ppb on Aug 10 08:00																				Maximum Daily Average: 12.7 ppb on Aug 3					Hours in Service: 744		
Minimum Value: 1 ppb on Aug 20 13:00																				Minimum Daily Average: 2.2 ppb on Aug 7					Hours of Data: 703		
Maximum Diurnal Average: 15.2 ppb at hour 8																				Minimum Diurnal Average: 2.8 ppb at hour 16					Hours of Missing Data: 41		
Monthly Average: 6.27 ppb																				Percentiles: P ₁ = 1.3 P ₁₀ = 1.9 Q ₁ = 2.5 Median = 3.8 Q ₃ = 7.6 P ₉₀ = 14.5 P ₉₉ = 31.9					Hours of Calibration: 41		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Aug	A	2	2	3	5	8	7	4	4	3	2	2	1	2	2	1	2	2	3	4	6	A	3.3	8.3			
2-Aug	9	10	9	5	7	8	11	21	30	29	17	9	5	4	3	4	3	3	4	6	A	11	9.3	30.1			
3-Aug	13	17	15	13	14	21	34	39	24	19	15	4	4	3	5	4	5	11	4	6	6	A	8	12.7	39.2		
4-Aug	4	4	6	6	5	7	8	12	7	4	3	2	2	2	1	1	1	2	3	4	A	13	11	5.3	14.7		
5-Aug	18	19	14	11	9	15	16	14	11	8	4	5	2	2	2	1	1	2	2	A	7	8	16	10	8.6	19.2	
6-Aug	7	10	13	12	9	14	20	14	9	8	8	4	2	2	3	3	2	2	A	3	3	2	3	3	6.8	20.2	
7-Aug	3	2	2	2	2	2	2	2	2	2	2	1	2	1	1	1	1	A	2	2	4	5	3	3	2.2	5.4	
8-Aug	2	2	3	3	3	6	8	10	14	17	14	8	3	2	3	4	A	4	3	3	5	19	16	6	6.9	19.4	
9-Aug	11	15	15	16	15	18	35	30	13	8	6	8	4	3	2	A	3	2	2	3	4	4	5	8	10.0	35.0	
10-Aug	5	10	13	12	17	22	33	42	21	21	11	6	6	3	A	3	2	2	2	3	7	5	5	3	11.1	41.7	
11-Aug	8	4	4	3	5	5	6	6	5	5	4	3	3	A	3	3	3	3	2	4	4	3	4	3	4.0	8.3	
12-Aug	2	2	3	3	3	4	6	7	10	14	20	17	A	11	8	4	4	4	4	6	5	5	3	3	6.5	19.8	
13-Aug	3	4	5	7	9	13	12	12	12	11	7	A	10	8	6	5	4	3	3	3	3	4	3	2	6.4	12.5	
14-Aug	2	2	2	2	2	5	4	5	4	4	A	4	2	2	2	2	2	2	2	3	3	3	2	2	2.8	5.3	
15-Aug	2	2	2	4	6	8	9	7	4	A	3	2	1	1	1	2	2	2	2	3	4	4	3	3	3.4	9.0	
16-Aug	3	3	5	6	17	12	14	20	A	17	7	3	3	2	3	3	3	3	3	3	3	3	3	2	6.0	20.0	
17-Aug	3	2	3	3	4	6	10	A	7	3	3	2	2	2	2	2	3	3	3	4	5	6	12	16	4.6	15.6	
18-Aug	20	14	16	16	18	20	A	14	10	7	3	2	2	2	2	2	3	3	2	2	3	2	2	1	7.3	20.3	
19-Aug	2	4	2	2	4	A	5	3	2	2	2	1	2	2	2	2	2	2	2	3	4	4	3	3	2.4	5.2	
20-Aug	5	3	2	2	A	7	9	8	8	2	1	1	1	1	2	1	1	2	2	2	3	3	3	3	3.2	9.0	
21-Aug	3	4	5	A	25	20	22	21	13	14	17	20	16	5	3	3	4	3	4	5	5	5	3	3	9.6	25.1	
22-Aug	3	2	A	11	11	31	26	30	17	5	6	6	4	2	2	2	2	2	2	3	6	4	4	2	8.0	31.0	
23-Aug	5	A	6	4	7	9	13	12	13	7	6	5	3	4	4	3	5	4	4	7	7	5	4	4	6.1	13.3	
24-Aug	A	6	6	4	4	7	17	24	17	6	6	5	3	3	3	4	3	3	2	3	3	3	3	A	6.1	23.8	
25-Aug	4	3	3	2	2	3	4	4	3	2	2	2	2	2	2	2	2	2	3	2	3	4	A	6	2.8	5.6	
26-Aug	4	5	7	6	5	8	9	18	17	8	6	5	3	2	2	2	3	3	3	4	6	A	7	3	5.8	18.0	
27-Aug	4	7	5	8	6	5	6	10	7	3	2	2	2	2	2	2	3	3	3	3	A	6	6	5	4.4	10.0	
28-Aug	7	7	5	5	9	12	39	28	9	4	3	2	2	1	1	1	2	2	3	A	15	12	8	5	7.9	39.3	
29-Aug	9	3	3	2	2	4	5	4	C	C	C	C	C	C	C	C	C	3	3	A	6	5	4	4	4	--	8.6
30-Aug	4	3	3	5	10	20	22	30	32	21	12	11	9	10	11	9	8	A	11	10	9	7	3	7	11.7	32.2	
31-Aug	5	4	4	3	5	11	14	6	3	5	4	2	2	2	2	3	A	4	3	3	3	3	3	4	4.3	13.6	
5.8 5.9 6.1 6.1 8.0 11.1 14.2 15.2 11.3 8.9 6.7 5.0 3.6 3.1 3.0 2.8 2.9 2.9 2.9 3.6 4.9 5.5 5.3 5.0																									Diurnal Average		
20.2 19.2 15.8 16.2 25.1 31.0 39.3 41.7 32.2 29.1 19.8 20.3 15.7 11.5 11.0 9.1 8.1 11.5 11.1 10.1 14.9 19.4 16.3 15.6																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - August 2017



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

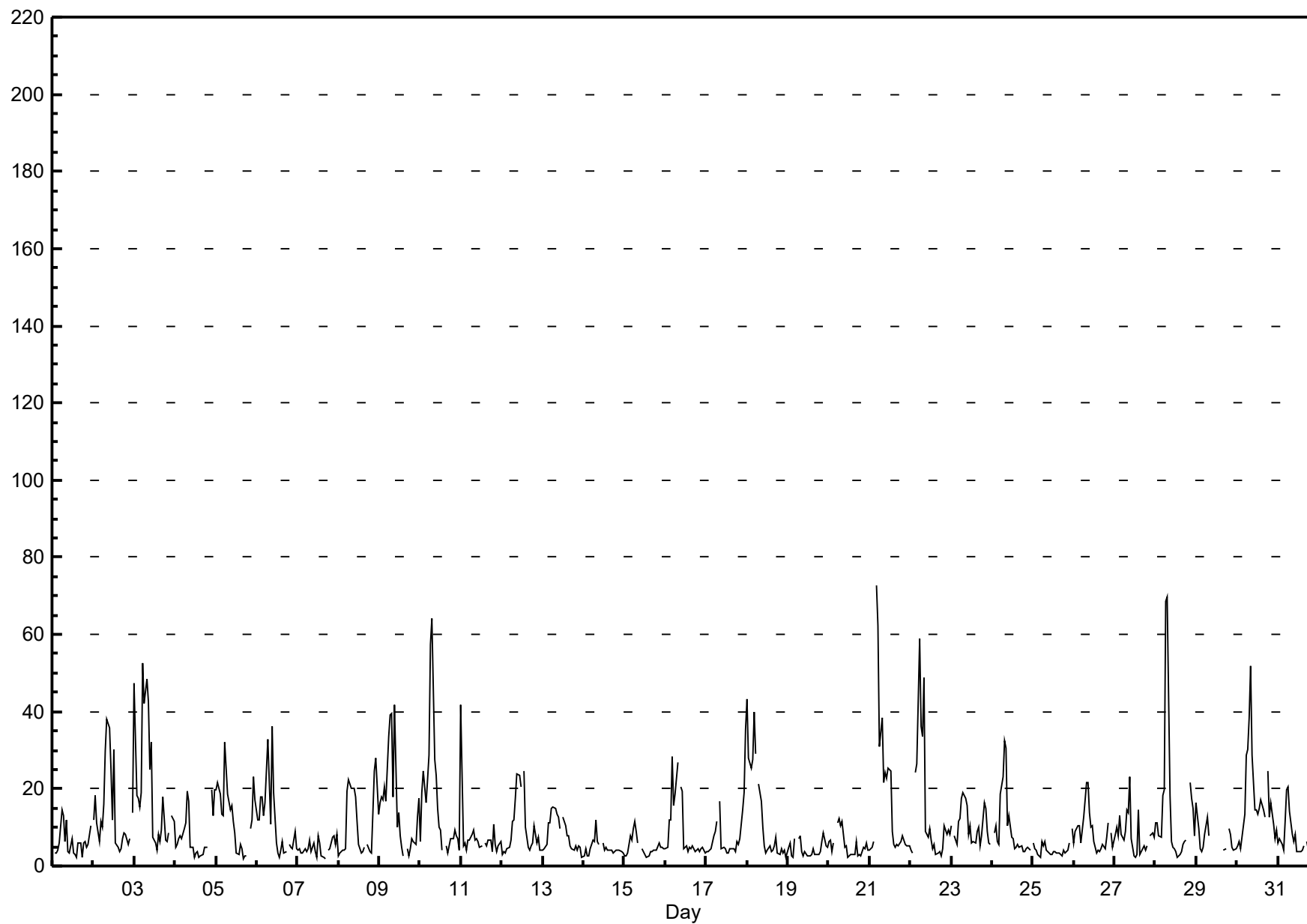
Henry Pirker - August 2017

Maximum Value: 72.8 ppb on Aug 21 05:00																				Maximum Daily Average: 20.3 ppb on Aug 3										Hours in Service: 744	
Minimum Value: 2 ppb on Aug 5 17:00																				Minimum Daily Average: 4.3 ppb on Aug 25										Hours of Data: 703	
Maximum Diurnal Average: 23.1 ppb at hour 8																				Minimum Diurnal Average: 5.0 ppb at hour 17										Hours of Missing Data: 41	
Monthly Average: 10.30 ppb																				Percentiles: P ₁ = 2.3 P ₁₀ = 3.2 Q ₁ = 4.2 Median = 6.3 Q ₃ = 12.6 P ₉₀ = 22.3 P ₉₉ = 56.5										Hours of Calibration: 41	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Aug	A	3	3	4	6	15	13	6	12	4	3	7	3	3	2	6	6	2	6	6	5	5	10	A	6.0	14.5					
2-Aug	12	18	11	6	12	10	16	30	38	36	25	12	30	6	5	4	4	7	9	8	6	7	A	14	14.1	37.9					
3-Aug	47	18	18	15	19	53	42	49	42	25	32	7	6	4	8	6	9	18	7	7	8	A	13	12	20.3	52.6					
4-Aug	5	6	7	8	7	10	11	19	17	5	5	2	3	4	2	3	3	5	5	5	A	20	13	20	8.0	19.8					
5-Aug	20	22	19	14	13	32	25	19	15	16	12	9	4	3	5	4	2	3	3	A	10	12	23	17	13.0	32.0					
6-Aug	12	12	18	18	13	16	33	22	11	36	19	6	3	2	4	6	3	4	A	6	5	5	9	4	11.6	36.3					
7-Aug	4	4	3	3	5	4	4	7	4	6	4	2	8	6	2	2	2	A	4	4	7	8	5	8	4.7	8.1					
8-Aug	2	3	4	4	4	19	22	20	20	20	18	12	6	3	4	5	A	6	4	3	14	25	28	13	11.3	27.9					
9-Aug	16	18	17	20	17	33	39	39	18	42	10	14	8	5	3	A	5	3	4	7	6	6	13	17	15.6	41.6					
10-Aug	6	19	25	16	22	29	57	64	28	23	15	10	9	4	A	5	3	5	7	7	9	8	7	4	16.7	64.0					
11-Aug	42	5	6	4	7	7	8	9	7	7	6	5	5	A	6	5	7	7	4	11	6	4	5	6	7.7	41.9					
12-Aug	3	4	3	4	5	7	12	12	17	24	24	21	A	25	10	5	4	5	6	10	6	7	4	4	9.6	24.7					
13-Aug	4	4	6	11	11	15	15	15	13	13	10	A	13	10	8	8	5	5	4	5	4	5	5	2	8.3	15.2					
14-Aug	3	4	2	3	5	7	6	12	6	6	A	6	4	5	4	4	4	4	4	4	4	4	4	3	4.6	12.0					
15-Aug	2	3	3	8	7	10	12	9	6	A	5	4	3	2	3	4	4	4	4	4	6	5	5	5	5.0	11.5					
16-Aug	4	5	12	12	28	16	19	27	A	20	19	4	5	4	5	4	5	4	4	4	4	5	5	3	9.5	28.3					
17-Aug	4	4	4	4	8	9	12	A	17	4	5	4	3	3	4	4	4	4	6	6	7	15	19	35	8.1	35.4					
18-Aug	43	28	25	28	40	29	A	21	17	10	5	3	4	5	4	4	5	7	3	3	5	3	4	2	13.1	43.3					
19-Aug	5	6	2	2	7	A	7	8	4	3	4	3	3	3	3	5	3	3	3	4	7	9	5	5	4.4	8.6					
20-Aug	7	7	4	6	A	11	12	10	11	5	5	2	3	3	3	3	6	3	3	3	5	4	6	4	5.5	12.2					
21-Aug	4	5	6	A	73	62	31	38	22	24	23	25	25	9	6	5	6	5	6	8	7	6	5	5	17.6	72.8					
22-Aug	4	4	A	24	27	59	36	34	49	9	7	10	7	4	6	3	3	4	3	4	10	8	9	8	14.5	59.1					
23-Aug	10	A	8	6	12	12	17	19	17	16	8	10	6	6	6	9	10	5	8	16	15	9	6	5	10.3	18.9					
24-Aug	A	9	10	6	6	18	23	32	30	10	13	8	7	5	5	6	5	5	4	4	5	5	4	A	10.0	32.3					
25-Aug	6	4	4	3	2	6	5	6	4	3	3	3	4	4	3	3	3	3	4	3	4	6	A	10	4.3	9.7					
26-Aug	6	9	10	10	6	9	13	22	22	14	10	10	6	3	4	4	4	6	4	7	11	A	9	5	8.9	21.6					
27-Aug	8	10	8	13	8	7	9	15	14	23	7	3	2	3	14	3	5	5	4	5	A	8	9	7	8.3	23.1					
28-Aug	11	11	8	7	18	20	69	70	18	6	5	4	4	2	3	4	5	6	7	A	22	17	15	8	14.8	69.6					
29-Aug	16	10	5	4	5	8	13	8	C	C	C	C	C	C	C	C	C	4	4	A	10	8	5	4	5	--	16.5				
30-Aug	5	6	4	7	13	29	30	38	52	29	15	15	13	15	17	15	13	A	25	13	16	11	7	9	17.3	52.0					
31-Aug	6	7	6	4	11	20	21	14	8	6	8	4	4	4	4	5	A	6	5	5	5	5	8	14	7.8	20.6					
11.0 8.9 8.8 9.2 13.9 19.3 21.1 23.1 18.6 15.3 11.2 7.7 6.9 5.3 5.3 5.0 5.0 5.1 5.5 6.3 7.8 8.1 8.9 8.8																									Diurnal Average						
47.3 28.1 25.5 27.5 72.8 62.1 68.7 69.6 52.0 41.6 32.1 25.4 30.1 24.7 17.0 14.5 12.8 17.9 24.5 16.4 21.7 24.8 27.9 35.4																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

Hourly Maximums

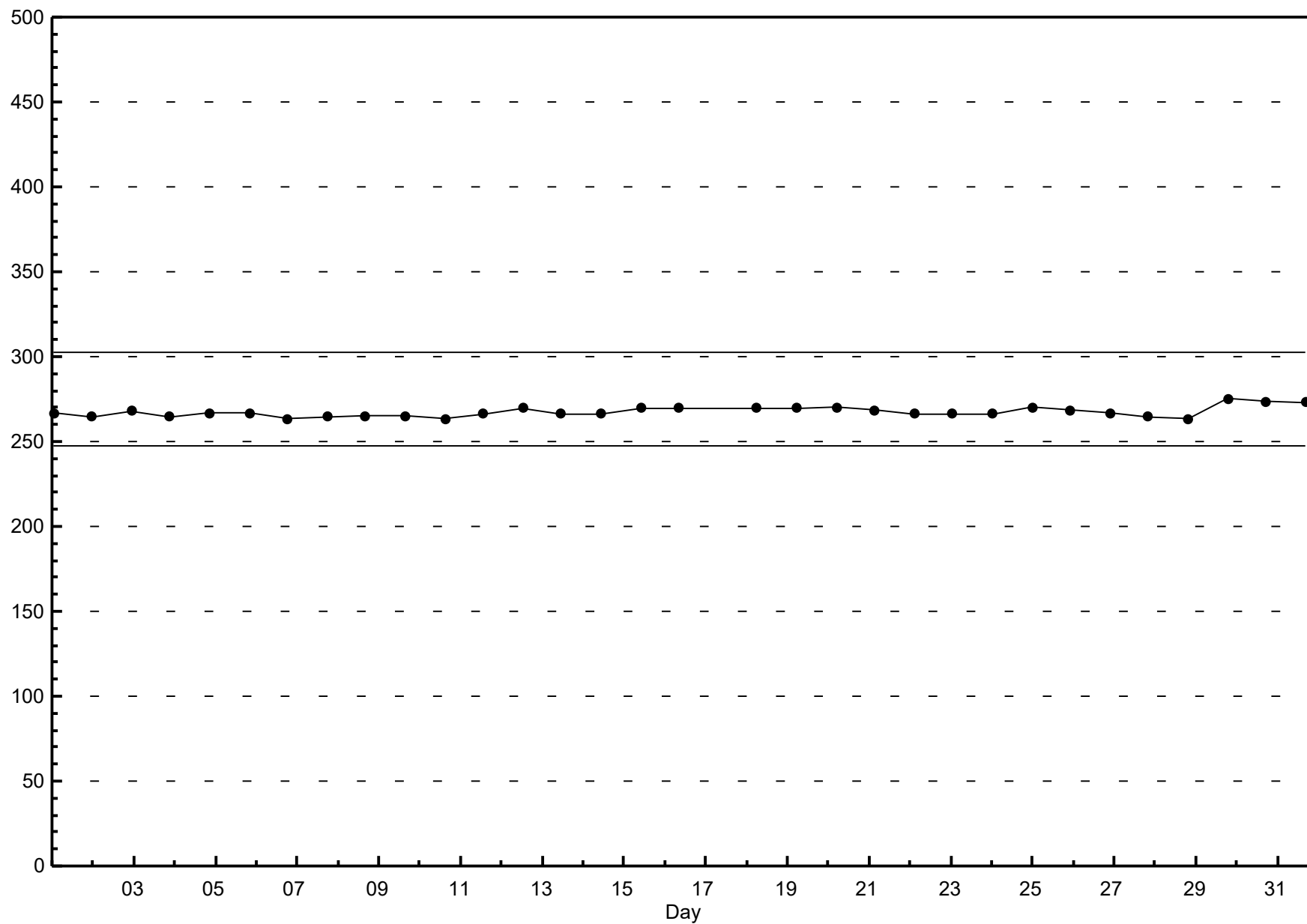
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - August 2017



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - August 2017



Hourly Averages

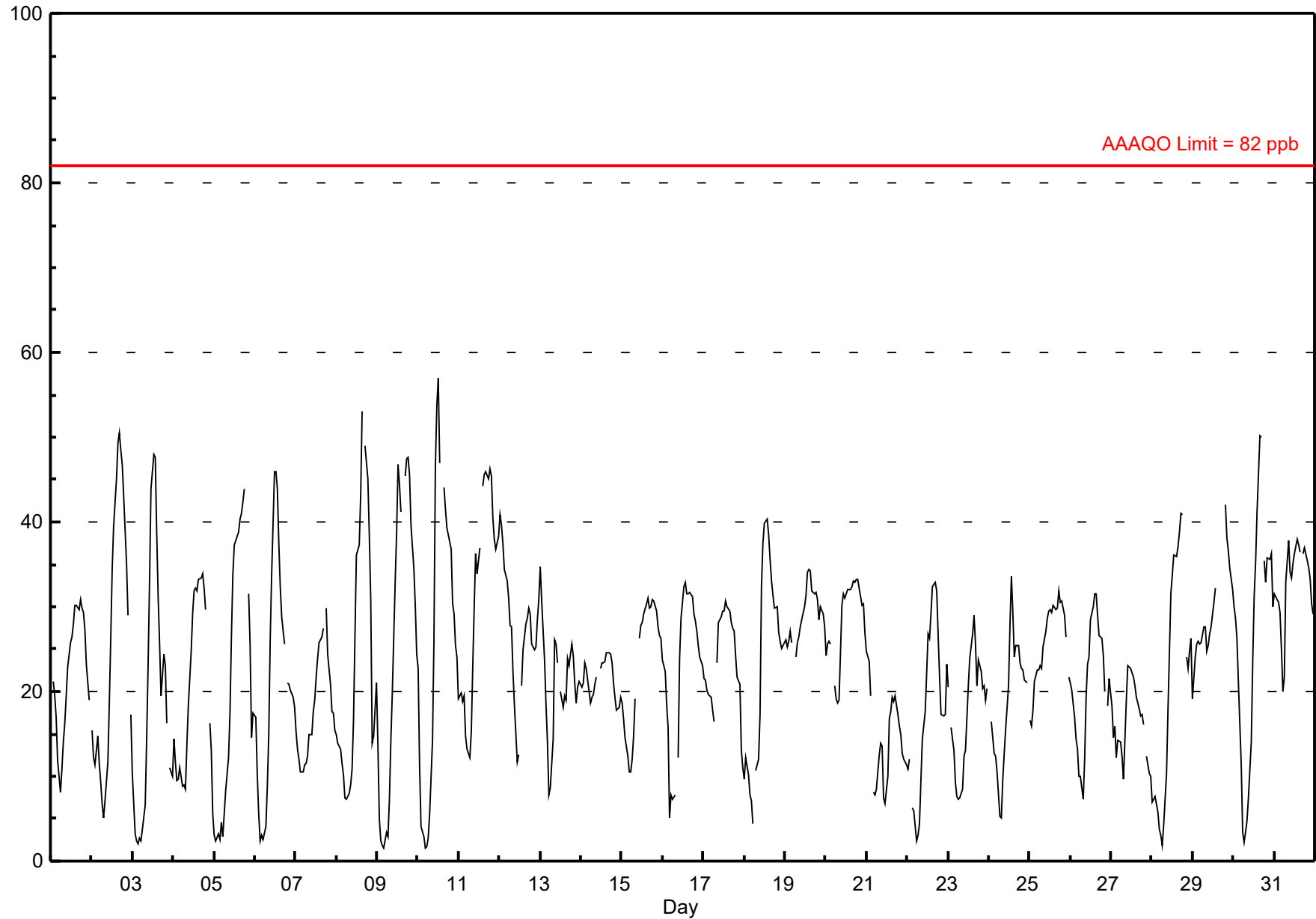
Ozone (O₃) - ppb

Henry Pirker - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 57.0 ppb on Aug 10 13:00 Maximum Daily Average: 32.4 ppb on Aug 31																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Aug 9 05:00 Maximum Diurnal Average: 33.1 ppb at hour 16 Monthly Average: 23.04 ppb												Minimum Daily Average: 14.5 ppb on Aug 21 Minimum Diurnal Average: 10.6 ppb at hour 6 Percentiles: P ₁ = 2.3 P ₁₀ = 7.8 Q ₁ = 14.5 Median = 23.3 Q ₃ = 30.4 P ₉₀ = 37.4 P ₉₉ = 48.8														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	A	21	20	17	12	8	11	14	16	19	23	26	26	28	30	30	31	30	29	27	23	19	A	22.3	30.8	
2-Aug	15	12	11	15	11	9	7	5	7	12	19	26	34	39	45	49	50	49	47	43	35	29	A	17	25.6	50.5
3-Aug	10	3	2	2	3	2	4	7	14	23	33	44	48	48	39	31	26	20	24	23	16	A	11	10	19.3	48.0
4-Aug	14	12	10	10	11	9	9	9	14	18	25	29	32	32	32	33	33	34	32	30	A	16	13	6	20.1	33.8
5-Aug	3	2	3	3	5	3	6	8	12	17	26	34	37	38	39	40	41	42	44	A	31	26	15	17	21.5	43.9
6-Aug	17	10	6	2	3	3	4	9	15	26	34	46	46	44	37	32	29	26	A	21	21	20	19	18	21.2	46.0
7-Aug	15	13	12	11	10	11	11	12	15	15	18	19	22	24	26	26	27	A	30	24	21	18	17	15	18.0	29.7
8-Aug	15	14	13	12	10	7	7	8	9	11	17	26	36	37	43	53	A	49	45	39	31	14	15	21	23.1	53.1
9-Aug	14	5	2	2	2	3	3	7	14	20	33	39	47	44	41	A	45	47	48	46	40	35	30	24	25.7	47.6
10-Aug	23	11	4	3	2	2	3	6	14	26	47	54	57	47	A	44	42	39	39	37	30	29	25	24	26.3	57.0
11-Aug	19	20	19	20	15	13	12	15	23	30	36	34	37	A	44	46	46	45	46	45	40	38	37	38	31.2	46.2
12-Aug	41	40	37	34	33	31	28	28	22	19	12	13	A	21	25	28	29	30	29	26	25	25	28	31	27.5	40.8
13-Aug	35	31	24	18	14	8	9	14	26	26	23	A	20	18	19	19	24	23	26	24	21	19	20	21	20.9	34.7
14-Aug	20	21	23	23	21	19	19	20	21	22	A	23	23	23	24	25	25	24	23	21	19	18	18	19	21.5	24.6
15-Aug	19	17	15	12	10	11	12	15	19	A	26	28	28	29	30	31	30	30	31	31	29	28	27	26	23.2	30.9
16-Aug	24	22	18	16	5	8	7	8	A	12	24	29	32	33	32	32	32	31	29	28	27	25	24	23	22.6	32.8
17-Aug	22	21	20	20	19	18	16	A	23	28	29	30	30	31	30	29	28	27	27	24	22	21	13	11	23.4	30.6
18-Aug	10	12	10	8	7	4	A	11	12	17	32	38	40	40	38	36	33	31	30	30	27	26	25	25	23.6	40.3
19-Aug	26	25	26	27	26	A	24	26	26	28	28	30	31	34	34	34	32	32	32	31	28	30	29	28	29.0	34.4
20-Aug	24	26	26	26	A	21	19	19	19	30	32	31	31	32	32	32	33	33	33	33	31	30	30	27	28.3	33.3
21-Aug	25	24	20	A	8	8	8	12	14	14	7	7	10	17	18	19	19	20	17	16	15	13	12	11	14.5	24.7
22-Aug	11	12	A	6	6	2	3	4	10	14	18	22	27	26	29	32	33	32	27	22	17	17	17	23	17.9	32.9
23-Aug	21	A	16	13	9	8	7	7	8	12	13	17	21	24	27	29	26	21	24	22	20	21	19	20	17.6	29.0
24-Aug	A	16	14	13	12	10	5	5	10	13	16	21	28	33	29	24	25	25	23	23	23	21	21	A	18.7	33.5
25-Aug	17	16	18	21	23	23	23	23	25	27	29	29	30	29	30	30	30	32	30	31	29	27	A	22	25.7	31.9
26-Aug	21	20	17	14	13	10	10	7	12	19	23	24	29	30	32	31	29	27	26	24	20	A	18	21	20.8	31.6
27-Aug	18	15	16	12	14	14	12	10	14	19	23	23	22	22	21	19	18	17	17	16	A	12	10	10	16.3	23.0
28-Aug	7	7	8	6	4	3	2	4	10	18	25	32	34	36	36	37	39	41	41	A	24	23	25	26	21.1	41.1
29-Aug	19	24	26	26	26	26	28	28	25	25	27	28	31	32	C	C	C	41	A	42	38	37	34	32	29.7	42.0
30-Aug	30	29	26	21	11	3	2	3	5	8	14	24	31	35	41	50	50	A	36	33	36	36	36	30	25.7	50.1
31-Aug	32	31	31	29	25	20	22	33	38	34	33	35	36	38	37	36	A	36	37	35	35	33	30	29	32.4	37.9
19.5 17.8 16.4 14.7 12.4 10.6 11.1 12.6 16.5 20.1 24.8 28.6 31.9 32.2 32.4 33.1 32.2 32.2 31.8 29.3 26.9 24.4 22.1 21.7																								Diurnal Average		
40.8 39.7 37.5 34.4 33.1 31.1 27.9 32.9 37.8 34.1 46.6 53.6 57.0 47.7 45.1 53.1 50.5 49.0 47.6 45.6 40.5 38.0 36.8 38.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - August 2017



Hourly Maximums

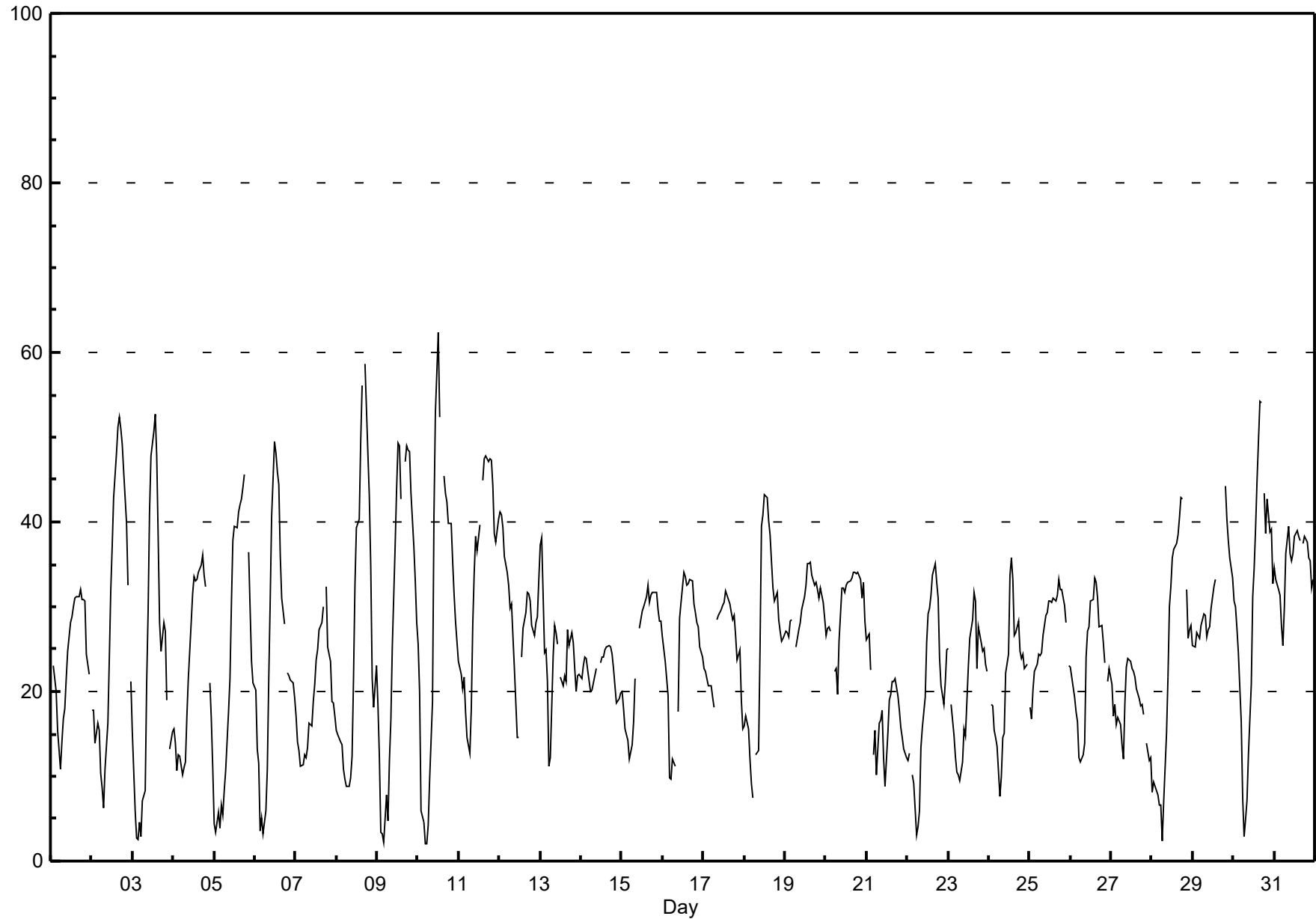
Ozone (O₃) - ppb

Henry Pirker - August 2017

Maximum Value: 62.4 ppb on Aug 10 13:00																				Maximum Daily Average: 34.8 ppb on Aug 31				Hours in Service: 744		
Minimum Value: 2 ppb on Aug 10 05:00																				Minimum Daily Average: 17.2 ppb on Aug 21				Hours of Data: 708		
Maximum Diurnal Average: 35.0 ppb at hour 16																				Minimum Diurnal Average: 12.9 ppb at hour 6				Hours of Missing Data: 36		
Monthly Average: 25.50 ppb																				Percentiles: P ₁ = 2.8 P ₁₀ = 10.9 Q ₁ = 17.6 Median = 25.4 Q ₃ = 32.4 P ₉₀ = 39.8 P ₉₉ = 52.2				Hours of Calibration: 36		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	23	22	20	15	11	14	17	18	21	25	28	29	30	31	31	31	32	31	31	31	24	22	A	24.4	32.0
2-Aug	18	18	14	16	15	10	9	6	11	16	24	32	37	43	48	51	52	51	49	46	40	33	A	21	28.7	52.3
3-Aug	15	6	3	3	5	3	7	8	21	29	41	48	51	53	48	38	28	25	28	27	19	A	13	15	23.2	52.7
4-Aug	16	14	11	12	12	10	11	12	17	21	28	31	34	33	33	34	35	36	34	32	A	21	17	11	22.4	36.0
5-Aug	4	3	6	4	7	5	8	11	18	22	30	38	39	39	41	42	43	44	46	A	36	30	23	21	24.4	45.6
6-Aug	20	13	12	4	5	3	6	11	22	31	41	50	48	46	44	36	31	28	A	22	22	21	21	19	24.2	49.5
7-Aug	17	14	13	11	11	13	12	13	16	16	19	21	24	25	27	28	30	A	32	25	24	19	19	17	19.4	32.4
8-Aug	15	15	14	14	11	10	9	9	10	12	22	33	39	40	49	56	A	59	48	43	35	22	18	23	26.3	58.7
9-Aug	18	12	3	3	2	8	5	12	17	25	37	44	49	49	43	A	47	49	48	48	43	37	33	28	28.8	49.3
10-Aug	26	20	6	5	2	2	4	10	19	41	53	58	62	52	A	45	43	42	40	40	35	31	28	26	30.0	62.4
11-Aug	24	22	20	22	18	15	13	18	28	34	38	37	40	A	45	47	48	47	47	47	44	39	38	40	33.5	47.9
12-Aug	41	41	39	36	34	33	30	30	26	23	15	15	A	24	28	29	32	32	31	28	27	28	29	33	29.6	41.2
13-Aug	37	38	25	25	21	11	12	24	28	27	26	A	22	21	22	21	27	25	27	26	23	20	22	22	24.0	38.2
14-Aug	22	23	24	24	23	20	20	21	22	23	A	23	24	24	25	25	25	25	24	23	21	19	19	20	22.6	25.4
15-Aug	20	18	16	14	12	13	14	16	22	A	28	29	30	30	31	33	31	31	32	32	32	30	28	28	24.7	32.6
16-Aug	26	24	22	19	10	10	12	11	A	18	29	30	34	34	33	33	33	33	30	29	28	28	25	24	25.0	34.1
17-Aug	23	22	22	21	21	19	18	A	29	29	30	30	30	32	31	30	29	28	29	27	24	25	19	16	25.4	31.9
18-Aug	16	17	16	12	9	7	A	12	13	25	40	41	43	43	40	38	35	32	31	32	28	27	26	26	26.5	43.2
19-Aug	27	27	26	28	28	A	25	26	27	28	30	31	33	35	35	35	34	33	33	32	31	32	31	29	30.3	35.3
20-Aug	27	27	28	27	A	22	23	20	26	32	32	32	33	33	33	33	34	34	34	34	33	31	33	28	30.0	34.1
21-Aug	26	27	23	A	12	15	10	16	17	18	12	9	15	19	20	21	21	22	19	18	16	15	13	12	17.2	26.8
22-Aug	12	13	A	10	9	3	4	6	13	16	19	26	29	30	31	34	35	33	31	24	21	18	21	25	20.2	35.1
23-Aug	25	A	18	15	12	11	10	9	12	16	15	19	23	26	28	32	31	23	28	26	25	25	23	22	20.6	31.7
24-Aug	A	18	18	16	15	14	8	10	15	15	22	24	34	36	33	27	27	28	25	24	24	23	23	A	21.7	35.8
25-Aug	18	17	20	22	23	24	24	25	27	29	29	31	31	31	31	31	31	33	32	32	30	28	A	23	27.1	33.2
26-Aug	23	22	19	18	16	12	12	14	24	27	28	31	31	33	33	31	28	28	26	23	A	21	23	23.2	33.3	
27-Aug	21	17	18	16	17	16	14	12	19	23	24	24	23	22	20	19	18	18	17	A	14	12	12	18.2	23.9	
28-Aug	8	9	9	8	7	7	2	7	15	22	30	32	36	37	38	38	41	43	43	A	32	26	27	28	23.7	42.9
29-Aug	25	25	27	27	26	28	29	29	27	27	28	30	32	33	C	C	C	44	A	44	40	38	36	33	31.4	44.3
30-Aug	31	30	28	25	16	7	3	5	7	13	21	31	35	39	45	54	54	A	43	39	43	39	39	33	29.5	54.2
31-Aug	35	33	32	31	28	25	30	36	40	36	35	36	38	39	38	38	A	37	38	38	36	35	32	33	34.8	39.5
21.9 20.3 18.4 16.9 14.8 12.9 13.3 15.2 19.7 23.7 28.3 31.3 34.2 34.3 34.7 35.0 34.3 34.3 33.8 31.4 29.9 26.8 24.6 23.9																								Diurnal Average		
41.2 40.8 39.4 35.9 34.1 32.6 29.9 36.3 39.5 40.7 52.9 57.5 62.4 52.7 49.5 56.0 54.1 58.7 49.2 48.4 44.3 38.8 39.1 40.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

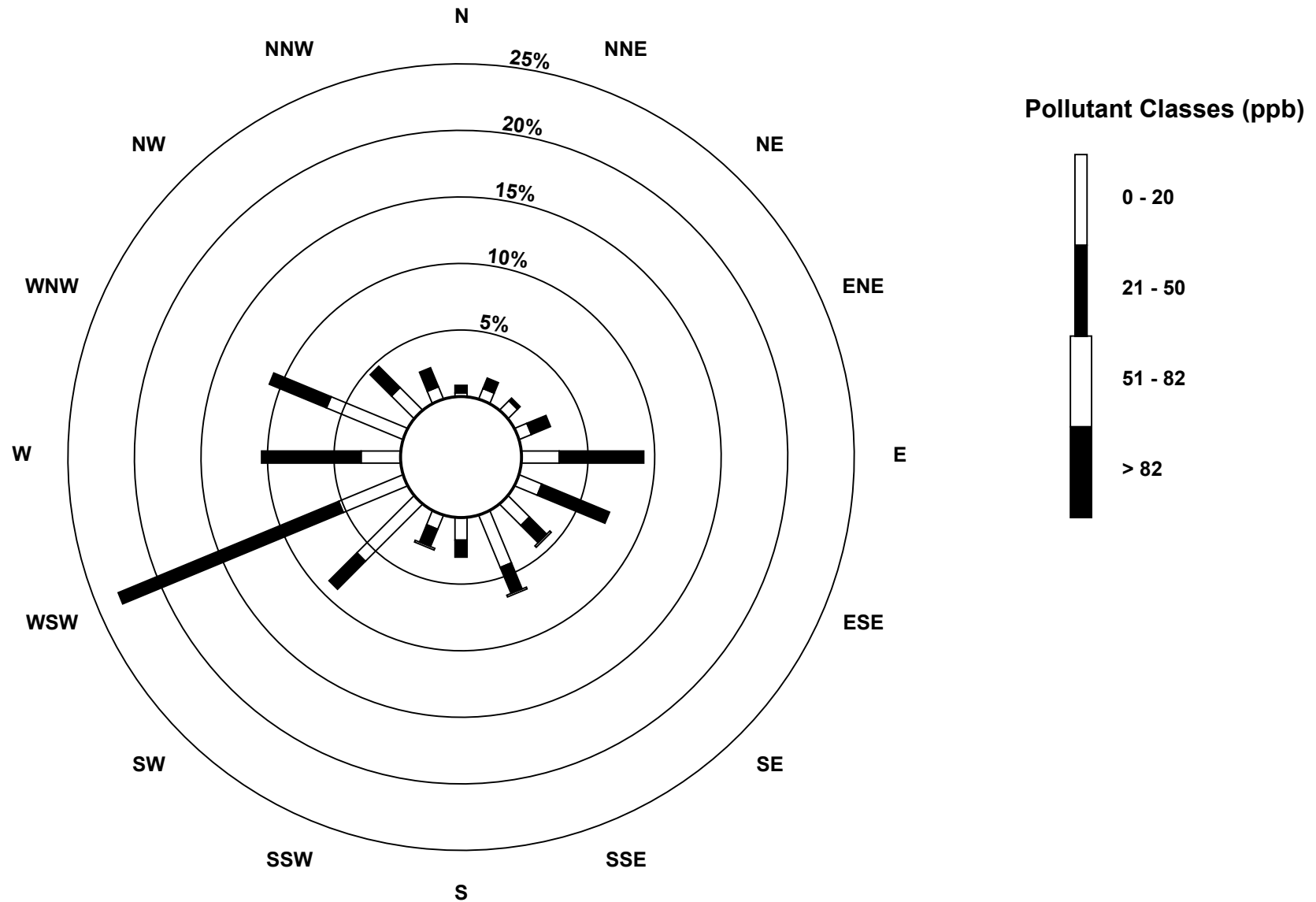
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - August 2017



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - August 2017



Eight Hour Running Averages

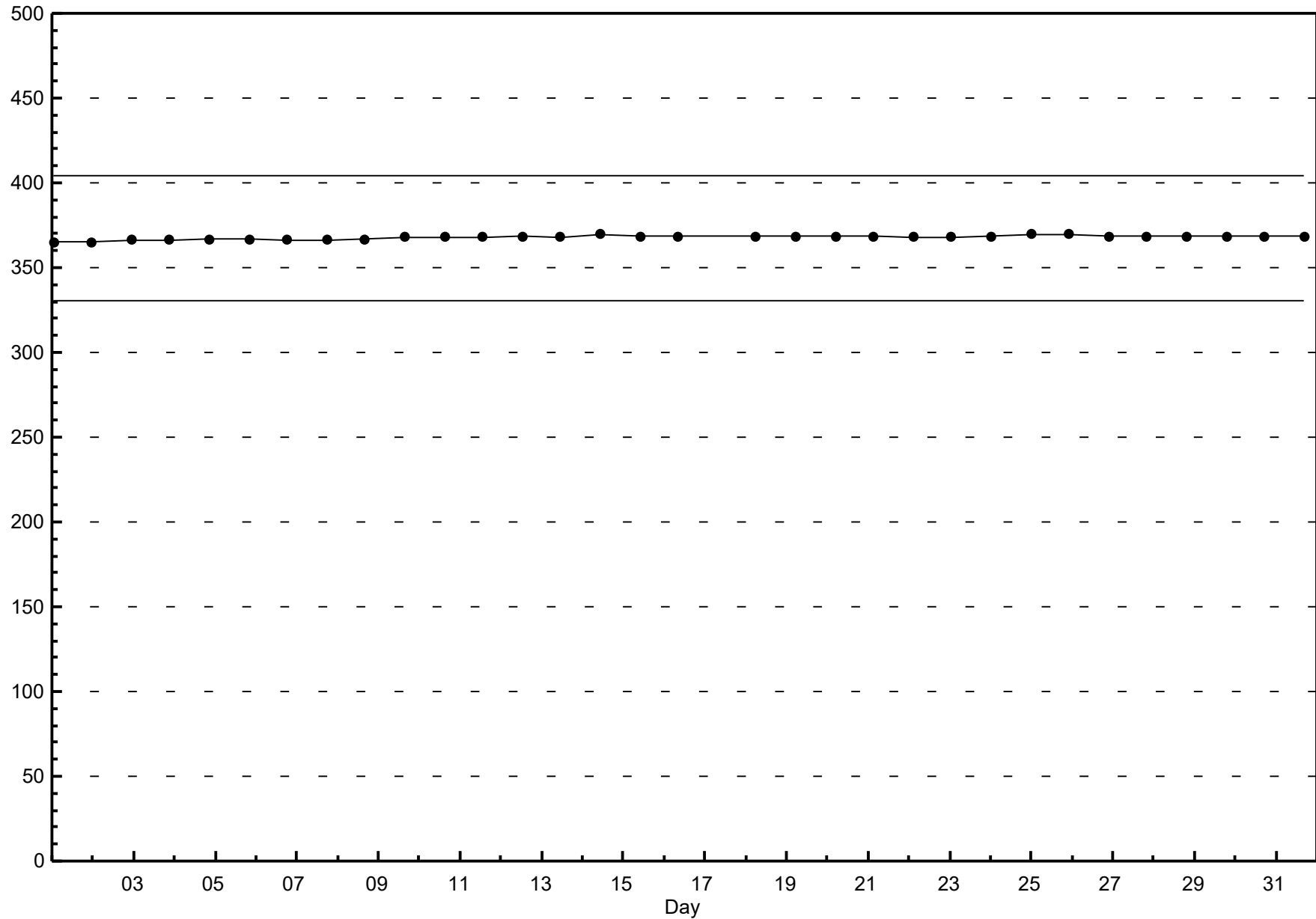
Ozone (O₃) - ppb

Henry Pirker - August 2017

Maximum Value: 47.0 ppb on Aug 10 18:00																								Hours in Service: 744	
Minimum Value: 3.7 ppb on Aug 5 07:00																								Hours of Data: 737	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 5.0 P ₁₀ = 10.5 Q ₁ = 15.9 Median = 22.8 Q ₃ = 28.9 P ₉₀ = 35.7 P ₉₉ = 44.5																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	24	23	22	20	19	17	16	15	15	15	15	16	18	20	23	25	27	28	29	29	29	29	27	27	29.4
2-Aug	25	22	20	18	15	13	12	11	10	10	11	12	15	19	23	29	34	39	43	45	45	43	43	39	44.7
3-Aug	33	26	20	14	10	6	6	4	5	7	11	16	22	28	32	35	36	36	35	32	28	26	22	19	36.4
4-Aug	17	16	14	12	11	11	11	10	10	11	13	15	18	21	24	27	29	31	32	32	32	30	27	23	32.4
5-Aug	19	15	10	7	6	5	4	4	5	7	10	14	18	22	27	31	34	37	39	40	39	38	34	31	40.3
6-Aug	27	23	17	16	12	9	8	7	6	8	12	17	23	28	32	35	37	37	37	34	30	27	24	22	37.1
7-Aug	20	18	18	16	15	14	13	12	12	12	13	14	15	17	19	21	22	23	25	26	26	25	23	22	25.6
8-Aug	20	19	17	16	14	13	12	11	10	10	12	15	19	23	29	32	37	41	43	42	39	35	30	43.2	
9-Aug	28	23	17	13	9	8	6	5	5	7	10	15	21	26	31	34	38	42	45	46	44	43	42	39	45.5
10-Aug	37	32	27	21	16	12	9	7	5	7	13	19	26	32	36	41	45	47	46	43	40	37	36	33	47.0
11-Aug	30	28	25	23	21	19	18	17	17	18	20	22	25	27	31	36	39	41	43	44	45	44	43	42	44.7
12-Aug	41	41	40	38	37	36	35	34	32	29	26	23	22	20	20	20	21	22	25	27	26	27	27	28	41.4
13-Aug	29	29	28	27	26	24	21	19	18	17	17	17	18	19	21	22	21	21	21	22	22	22	22	22	28.7
14-Aug	22	22	21	21	21	21	21	21	21	21	21	21	21	22	22	23	23	24	24	24	23	22	22	21	23.8
15-Aug	20	19	18	17	16	15	14	14	14	13	15	17	20	22	25	27	29	29	30	30	30	30	30	29	30.2
16-Aug	28	27	26	24	21	18	16	14	12	11	11	13	17	21	24	28	28	30	31	31	30	29	29	27	31.1
17-Aug	26	25	24	23	22	21	20	19	20	21	22	23	25	27	29	29	29	29	29	28	27	26	24	22	29.3
18-Aug	19	17	15	13	11	9	9	9	9	10	13	17	22	27	29	32	34	36	36	35	33	31	30	28	36.1
19-Aug	28	27	26	26	26	26	26	26	26	26	26	27	28	28	30	31	31	32	32	33	32	32	31	30	32.5
20-Aug	29	28	28	27	27	26	24	23	22	23	24	24	25	27	28	30	32	32	32	33	33	32	32	31	32.5
21-Aug	30	29	27	27	23	20	17	15	13	12	10	10	10	11	12	13	14	15	16	17	18	17	16	15	30.3
22-Aug	14	13	13	11	10	9	7	6	6	7	8	10	13	16	19	22	25	27	29	28	27	26	25	23	28.5
23-Aug	22	21	19	18	17	15	14	12	10	10	10	10	12	14	16	19	21	22	23	24	24	24	23	22	24.1
24-Aug	21	20	19	18	17	15	13	11	11	10	11	11	13	16	19	22	24	25	26	26	26	24	23	23	26.5
25-Aug	22	21	20	19	19	20	20	20	21	23	24	25	26	27	28	29	29	30	30	30	30	30	30	29	30.2
26-Aug	27	26	24	21	19	17	16	14	13	13	14	15	17	19	22	25	27	28	28	28	27	27	25	24	28.4
27-Aug	22	20	19	17	16	16	15	14	13	14	15	16	17	18	19	20	21	21	20	19	19	17	16	14	22.2
28-Aug	13	11	10	9	8	7	6	5	5	7	9	12	16	20	24	28	32	35	37	38	36	34	33	31	37.7
29-Aug	28	26	24	24	24	25	25	25	26	26	26	26	27	28	28	28	N	N	N	N	N	N	N	37	37.4
30-Aug	36	35	34	31	28	23	19	16	13	10	8	9	11	15	20	26	32	35	38	39	40	40	39	37	40.1
31-Aug	34	34	33	33	31	29	27	28	29	29	29	30	31	34	36	36	36	36	37	37	36	36	35	34	36.6
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - August 2017



Hourly Averages

Carbon Monoxide (CO) - ppm

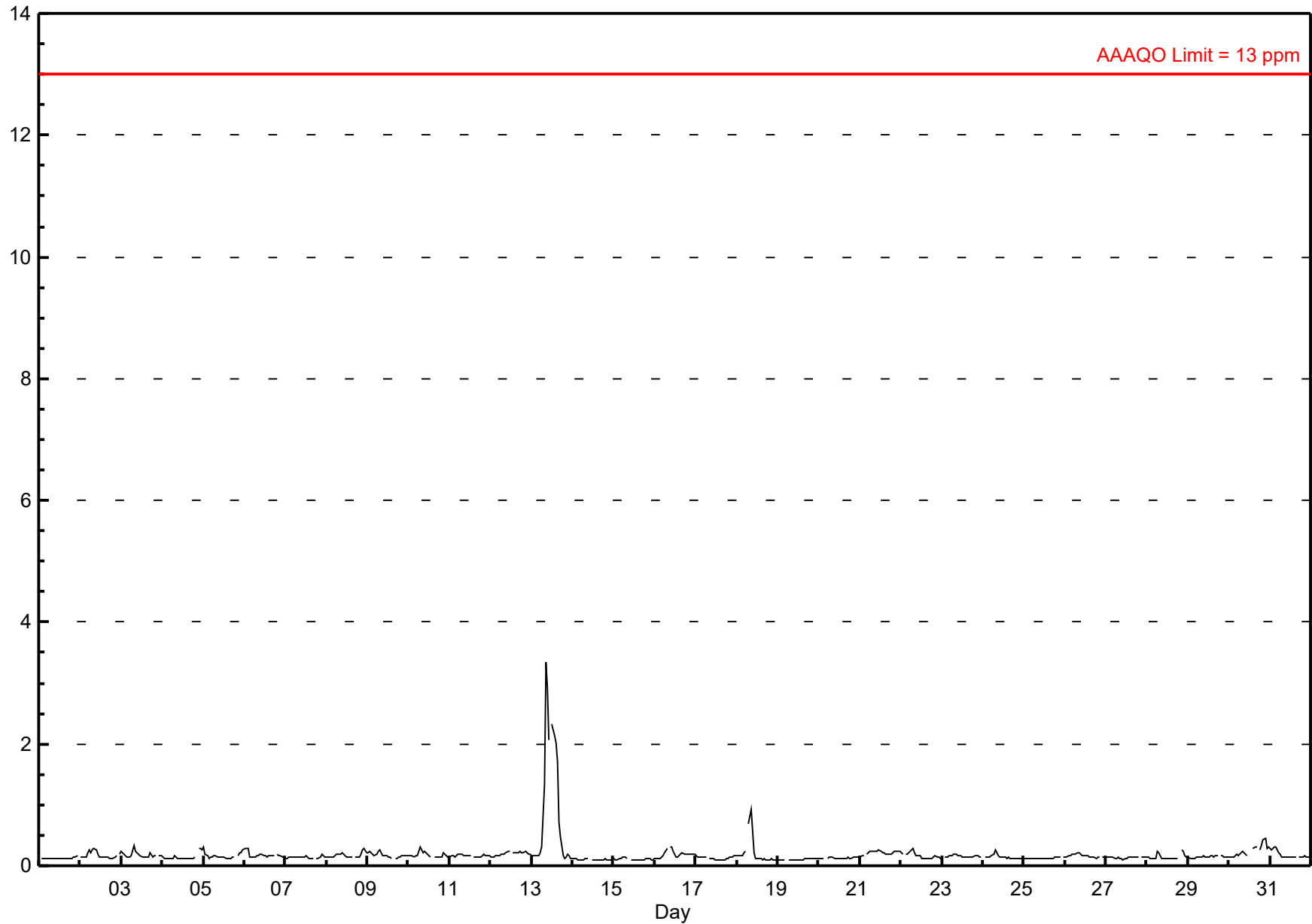
Henry Pirker - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.35 ppm on Aug 13 09:00 Maximum Daily Average: 0.93 ppm on Aug 13																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 0.1 ppm on Aug 14 05:00 Minimum Daily Average: 0.10 ppm on Aug 19 Maximum Diurnal Average: 0.30 ppm at hour 9 Minimum Diurnal Average: 0.14 ppm at hour 19 Monthly Average: 0.183 ppm Percentiles: P ₁ = 0.09 P ₁₀ = 0.11 Q ₁ = 0.12 Median = 0.15 Q ₃ = 0.18 P ₉₀ = 0.23 P ₉₉ = 1.52																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.12	0.16
2-Aug	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.17	0.29
3-Aug	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	A	0.2	0.2	0.18	0.33
4-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.3	0.3	0.3	0.14	0.29
5-Aug	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.16	0.31
6-Aug	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.18	0.29
7-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.1	0.14	0.19
8-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.17	0.29
9-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.17	0.25
10-Aug	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.18	0.31
11-Aug	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.19
12-Aug	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.25
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.3	3.3	2.9	2.1	A	2.3	2.1	2.0	1.7	0.7	0.5	0.2	0.1	0.1	0.2	0.2	0.1	0.93	3.35
14-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.12
15-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.14
16-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	A	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.31
17-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.13	0.17
18-Aug	0.2	0.2	0.2	0.2	0.2	0.2	A	0.7	0.9	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21	0.92
19-Aug	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.13
20-Aug	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.14
21-Aug	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.25
22-Aug	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.17	0.28
23-Aug	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.15	0.19
24-Aug	A	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.15	0.25
25-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.12	0.14
26-Aug	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.16	0.21
27-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.13	0.15
28-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.3	0.2	0.2	0.14	0.27
29-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.14	0.17
30-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	0.3	0.3	0.3	A	0.3	0.3	0.4	0.4	0.3	0.3	0.24	0.44
31-Aug	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.18	0.32
0.16 0.15 0.15 0.14 0.15 0.17 0.18 0.25 0.30 0.27 0.22 0.15 0.21 0.20 0.20 0.19 0.16 0.15 0.14 0.15 0.17 0.18 0.17 0.16																								Diurnal Average		
0.31 0.28 0.30 0.32 0.27 0.27 0.31 1.32 3.35 2.93 2.07 0.25 2.32 2.14 2.02 1.70 0.71 0.48 0.26 0.33 0.42 0.44 0.29 0.31																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - August 2017



Hourly Maximums

Carbon Monoxide (CO) - ppm

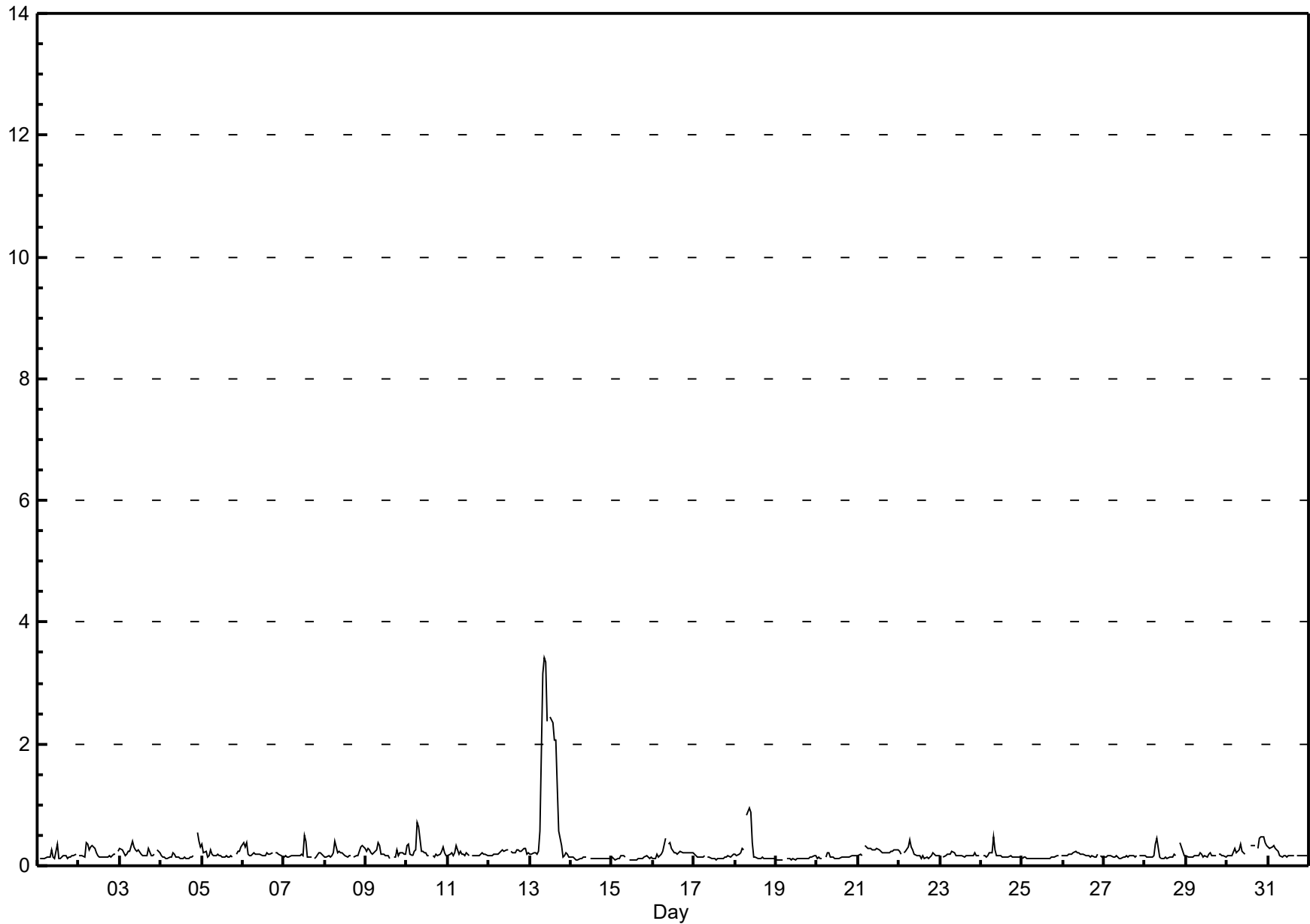
Henry Pirker - August 2017

Maximum Value: 3.43 ppm on Aug 13 09:00																					Maximum Daily Average: 1.13 ppm on Aug 13					Hours in Service: 744	
Minimum Value: 0.1 ppm on Aug 14 04:00																					Minimum Daily Average: 0.12 ppm on Aug 19					Hours of Data: 708	
Maximum Diurnal Average: 0.38 ppm at hour 8																					Minimum Diurnal Average: 0.16 ppm at hour 4					Hours of Missing Data: 36	
Monthly Average: 0.220 ppm																					Percentiles: P ₁ = 0.10 P ₁₀ = 0.12 Q ₁ = 0.14 Median = 0.17 Q ₃ = 0.21 P ₉₀ = 0.29 P ₉₉ = 1.91					Hours of Calibration: 36	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.4	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	A	0.16	0.35	
2-Aug	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	A	0.2	0.21	0.38	
3-Aug	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.3	0.2	0.22	0.40	
4-Aug	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.5	0.4	0.3	0.18	0.54	
5-Aug	0.4	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	A	0.2	0.2	0.2	0.3	0.19	0.35	
6-Aug	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.21	0.39	
7-Aug	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.18	0.49	
8-Aug	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	A	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.20	0.40	
9-Aug	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	A	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.21	0.39	
10-Aug	0.3	0.4	0.2	0.2	0.2	0.3	0.7	0.6	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.26	0.71	
11-Aug	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.34	
12-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.23	0.28	
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.6	3.2	3.4	3.4	2.4	A	2.4	2.3	2.1	2.1	1.3	0.6	0.3	0.1	0.2	0.2	0.2	0.1	1.13	3.43	
14-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.15	
15-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.13	0.18	
16-Aug	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.4	A	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.45	
17-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.14	0.20	
18-Aug	0.2	0.2	0.2	0.2	0.3	0.3	A	0.8	1.0	0.9	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.26	0.95	
19-Aug	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.12	0.16	
20-Aug	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.14	0.21	
21-Aug	0.2	0.2	0.2	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.24	0.32	
22-Aug	0.2	0.2	A	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.20	0.43	
23-Aug	0.2	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.23	
24-Aug	A	0.2	0.2	0.1	0.2	0.2	0.2	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	A	0.18	0.48	
25-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	A	0.2	0.13	0.17	
26-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	A	0.2	0.2	0.18	0.24	
27-Aug	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	A	0.2	0.2	0.2	0.15	0.17	
28-Aug	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.4	0.3	0.2	0.19	0.46	
29-Aug	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.17	0.20	
30-Aug	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	C	C	C	0.3	0.3	0.3	A	0.3	0.5	0.5	0.5	0.4	0.3	0.29	0.47	
31-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.34	
0.19 0.18 0.18 0.16 0.19 0.21 0.24 0.38 0.34 0.32 0.26 0.18 0.24 0.23 0.22 0.22 0.20 0.18 0.17 0.17 0.20 0.22 0.20 0.19																									Diurnal Average		
0.38 0.36 0.39 0.34 0.38 0.35 0.71 3.15 3.43 3.36 2.38 0.35 2.45 2.34 2.05 2.07 1.31 0.57 0.33 0.46 0.47 0.54 0.40 0.34																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

Carbon Monoxide (CO) - ppm

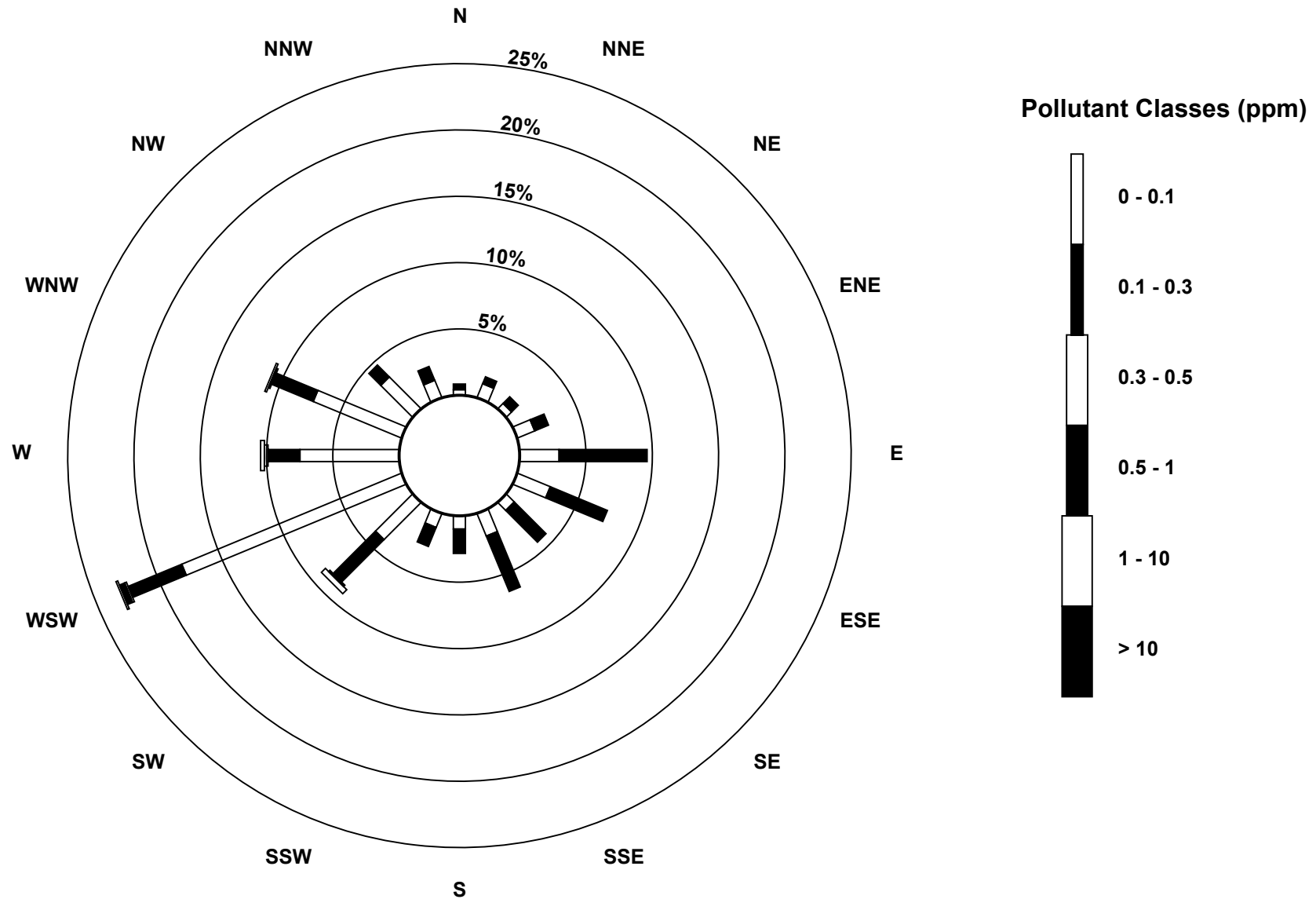
Henry Pirker - August 2017



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - August 2017



Eight Hour Running Averages

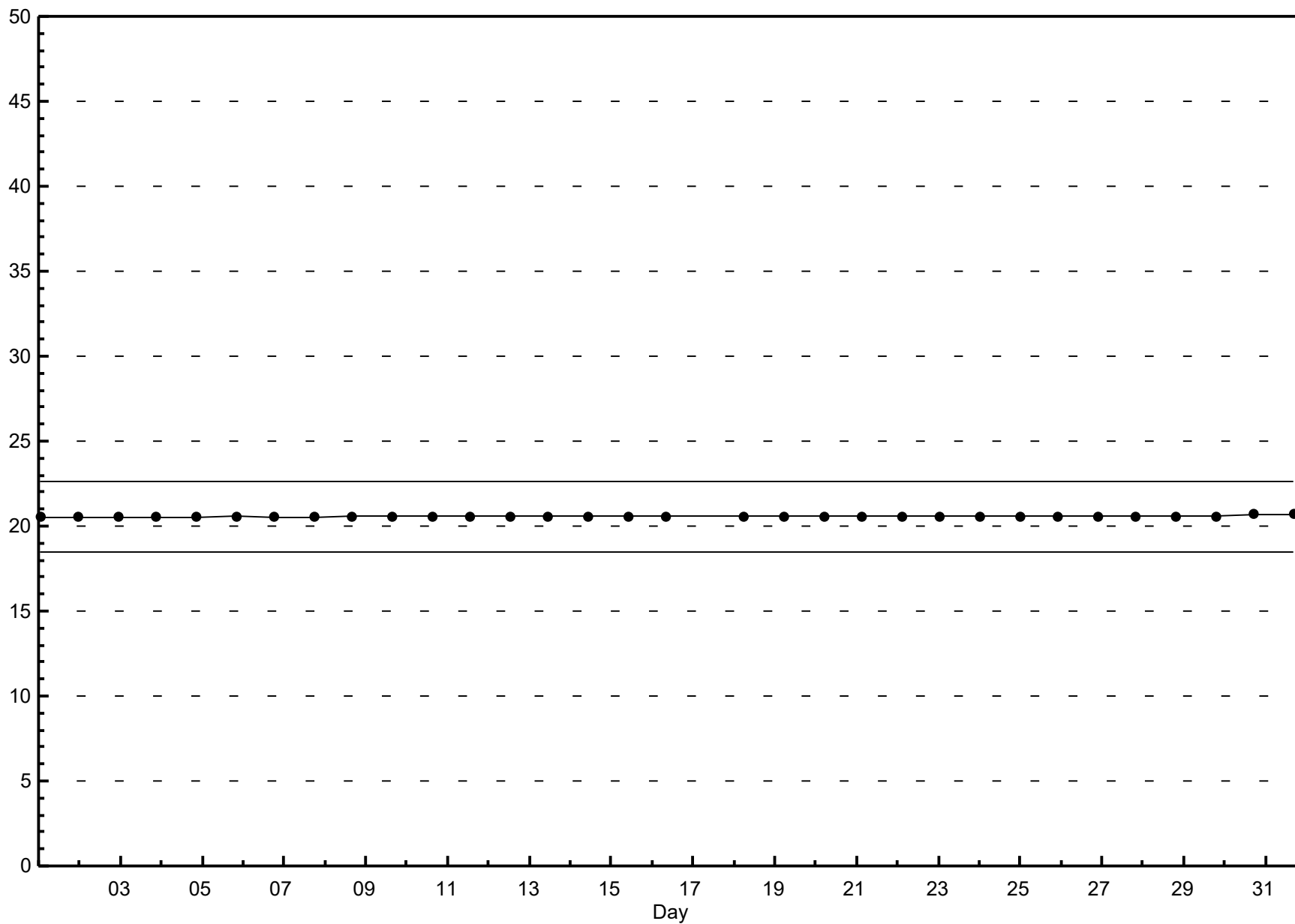
Carbon Monoxide (CO) - ppm

Henry Pirker - August 2017

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 2.36 ppm on Aug 13 16:00																								Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0		
Minimum Value: 0.10 ppm on Aug 15 17:00 Percentiles: P ₁ = 0.10 P ₁₀ = 0.11 Q ₁ = 0.13 Median = 0.15 Q ₃ = 0.18 P ₉₀ = 0.22 P ₉₉ = 1.35																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
2-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.23	
3-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	
4-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.19	
5-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.23	
6-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	
7-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16	
8-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.20	
9-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22	
10-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.22	
11-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	
12-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	1.1	1.3	1.5	1.8	2.1	2.3	2.4	2.0	1.6	1.4	1.2	0.9	0.7	0.5	0.3	2.36
14-Aug	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19	
15-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	
16-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	
17-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18	
18-Aug	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.43	
19-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	
20-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
21-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	
22-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.23	
23-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.17	
24-Aug	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18	
25-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
26-Aug	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.19	
27-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	
28-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.17	
29-Aug	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17	
30-Aug	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	N	0.3	0.3	0.3	0.34	
31-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.33	
0.33 0.32 0.33 0.33 0.31 0.28 0.27 0.34 0.74 1.08 1.32 1.48 1.79 2.06 2.31 2.36 1.98 1.63 1.36 1.21 0.94 0.69 0.46 0.34																										
Diurnal Maximums																										
N - Not Valid																										
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																										

Span Responses

Carbon Monoxide (CO)
Henry Pirker - August 2017



Hourly Averages

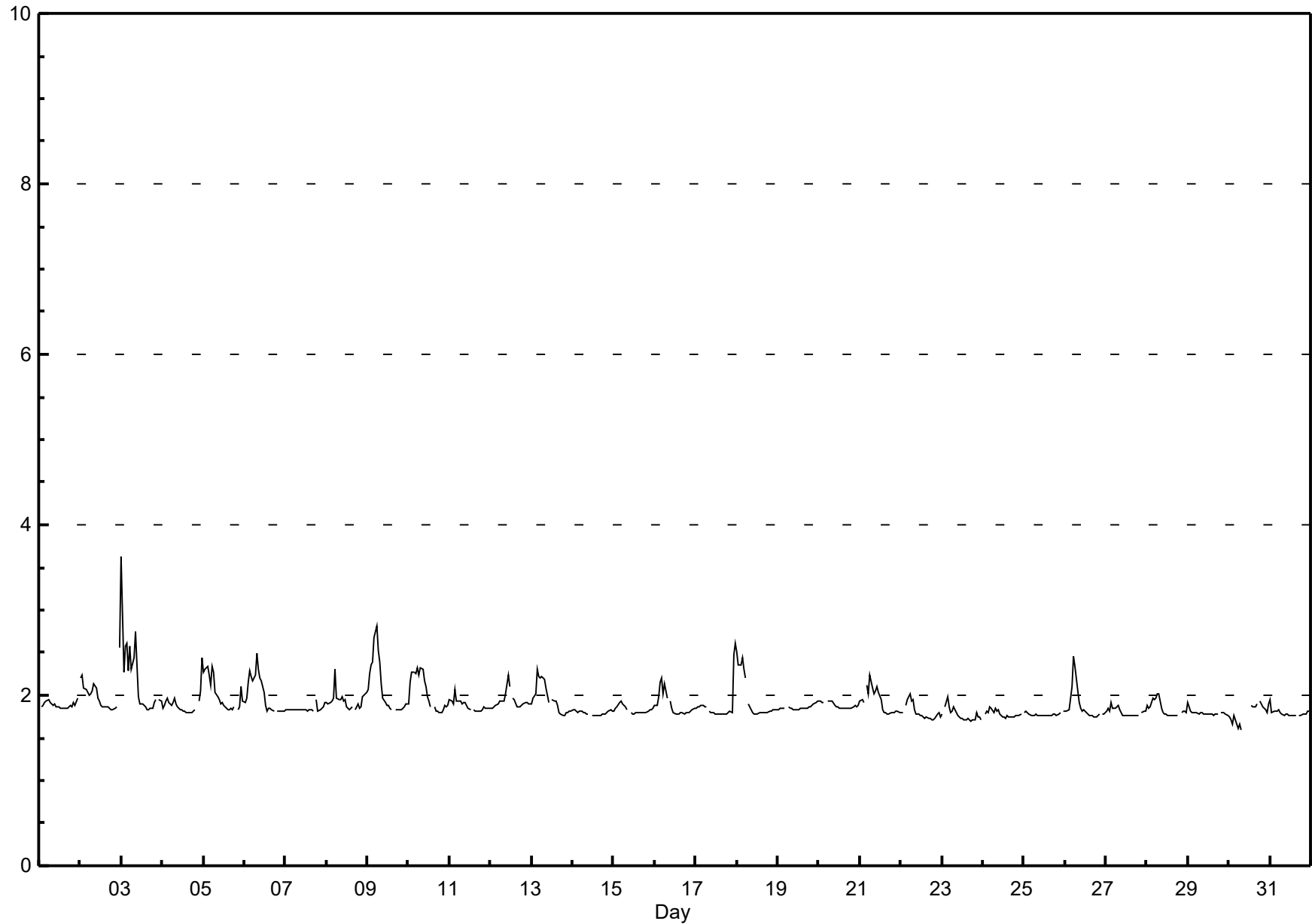
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2017

Maximum Value: 3.63 ppm on Aug 3 01:00																				Maximum Daily Average: 2.19 ppm on Aug 3					Hours in Service: 744		
Minimum Value: 1.6 ppm on Aug 30 08:00																				Minimum Daily Average: 1.77 ppm on Aug 23					Hours of Data: 706		
Maximum Diurnal Average: 2.03 ppm at hour 6																				Minimum Diurnal Average: 1.80 ppm at hour 18					Hours of Missing Data: 38		
Monthly Average: 1.894 ppm																				Percentiles: P ₁ = 1.71 P ₁₀ = 1.77 Q ₁ = 1.79 Median = 1.84 Q ₃ = 1.92 P ₉₀ = 2.11 P ₉₉ = 2.56					Hours of Calibration: 38		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.89	1.97
2-Aug	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	A	2.6	2.00	2.56
3-Aug	3.6	2.3	2.6	2.6	2.3	2.6	2.3	2.4	2.7	2.4	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2.0	A	1.9	1.9	2.19	3.63	
4-Aug	1.8	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	2.0	2.4	1.90	2.44	
5-Aug	2.3	2.3	2.3	2.2	2.1	2.3	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	A	1.8	1.9	2.1	1.9	2.01	2.35	
6-Aug	1.9	2.0	2.1	2.3	2.2	2.2	2.2	2.5	2.3	2.2	2.2	2.0	1.9	1.8	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	2.01	2.49	
7-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.8	1.8	1.8	1.9	1.9	1.84	1.95	
8-Aug	1.9	1.9	1.9	1.9	2.0	2.3	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.9	A	1.8	1.9	1.9	1.9	2.0	2.0	2.0	1.93	2.31	
9-Aug	2.1	2.3	2.3	2.4	2.7	2.8	2.5	2.4	2.1	2.0	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.08	2.81	
10-Aug	1.9	2.2	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.2	2.1	2.0	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.03	2.32	
11-Aug	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.88	2.07	
12-Aug	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.24	
13-Aug	1.9	2.0	2.0	2.3	2.2	2.2	2.2	2.2	2.1	2.0	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.96	2.30	
14-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.84	
15-Aug	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.93	
16-Aug	1.9	1.9	2.0	2.1	2.2	2.0	2.1	2.0	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.88	2.20	
17-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.5	2.6	1.88	2.61	
18-Aug	2.5	2.3	2.4	2.4	2.3	2.2	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.95	2.50	
19-Aug	1.8	1.8	1.9	1.8	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.93	
20-Aug	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.88	1.94	
21-Aug	1.9	1.9	1.9	A	2.1	2.0	2.2	2.1	2.0	2.0	2.1	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.92	2.24	
22-Aug	1.8	1.8	A	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.80	2.02	
23-Aug	1.8	A	1.9	2.0	1.9	1.8	1.8	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.77	1.99	
24-Aug	A	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	A	1.78	1.86	
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.78	1.81	
26-Aug	1.8	1.8	1.8	2.0	2.1	2.5	2.3	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.88	2.46	
27-Aug	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.81	1.92	
28-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.84	2.02	
29-Aug	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.79	1.92	
30-Aug	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.6	C	C	C	C	C	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	1.9	1.78	1.93	
31-Aug	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.95	
1.98 1.94 1.96 2.01 2.00 2.03 1.99 1.98 1.95 1.91 1.88 1.85 1.82 1.82 1.81 1.81 1.80 1.80 1.81 1.81 1.83 1.84 1.88 1.92																									Diurnal Average		
3.63 2.35 2.58 2.61 2.68 2.81 2.53 2.49 2.74 2.36 2.24 2.10 1.95 1.96 1.95 1.89 1.89 1.89 1.87 1.95 1.91 1.95 1.98 2.47 2.61																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Total Hydrocarbons (THC) - ppm
Henry Pirker - August 2017



Hourly Maximums

Total Hydrocarbons (THC) - ppm

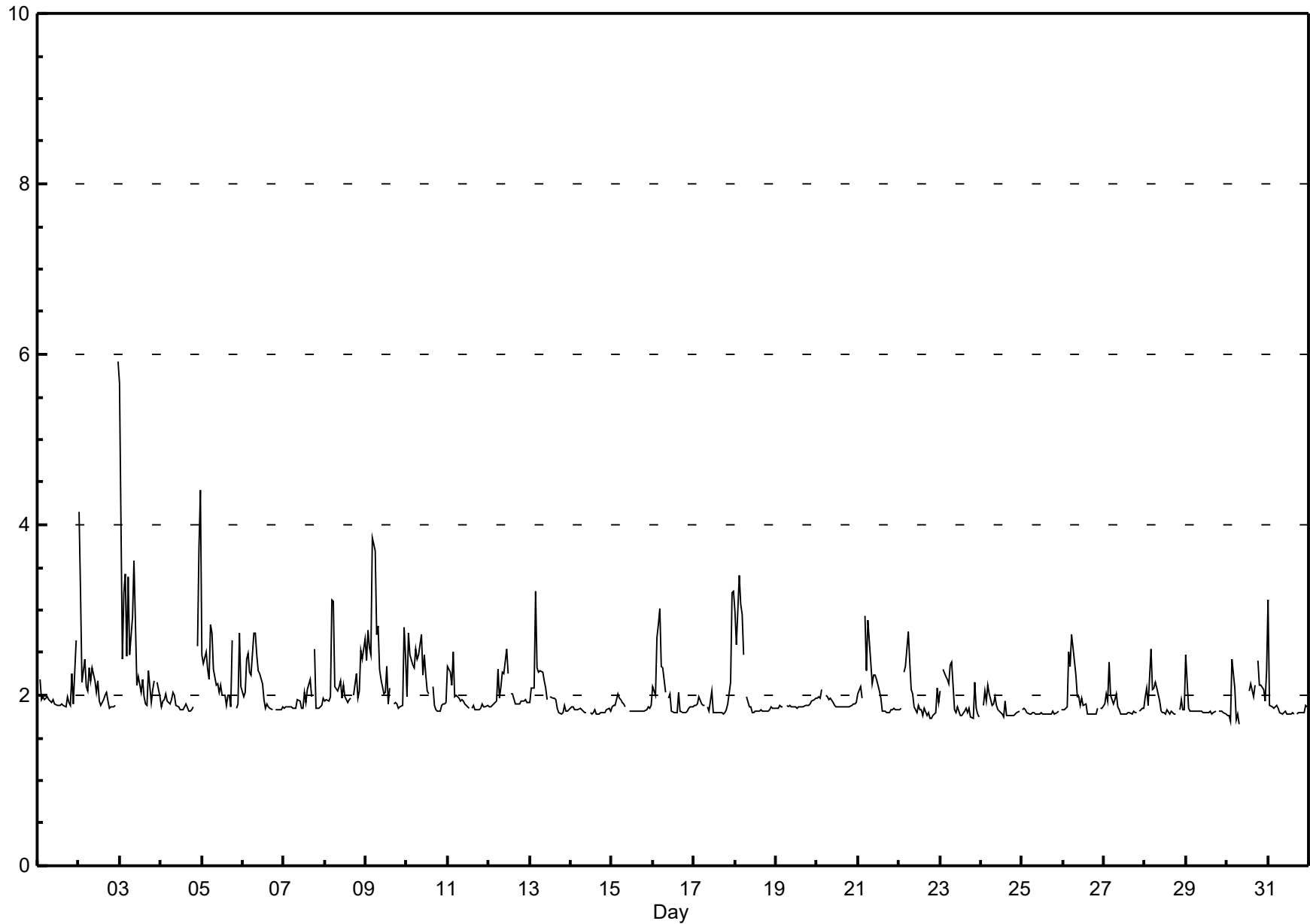
Henry Pirker - August 2017

Maximum Value: 5.91 ppm on Aug 3 00:00																					Maximum Daily Average: 2.58 ppm on Aug 3					Hours in Service: 744	
Minimum Value: 1.7 ppm on Aug 30 08:00																					Minimum Daily Average: 1.80 ppm on Aug 25					Hours of Data: 706	
Maximum Diurnal Average: 2.28 ppm at hour 4																					Minimum Diurnal Average: 1.84 ppm at hour 20					Hours of Missing Data: 38	
Monthly Average: 2.027 ppm																					Percentiles: P ₁ = 1.74 P ₁₀ = 1.79 Q ₁ = 1.82 Median = 1.89 Q ₃ = 2.06 P ₉₀ = 2.43 P ₉₉ = 3.67					Hours of Calibration: 38	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.3	1.9	2.6	A	1.98	2.64
2-Aug	4.1	3.2	2.2	2.4	2.1	2.1	2.3	2.2	2.3	2.2	2.0	2.2	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	5.9	2.37	5.91
3-Aug	5.7	2.4	3.2	3.4	2.5	3.4	2.5	2.9	3.6	2.9	2.1	2.2	2.0	2.2	2.0	1.9	1.9	2.3	1.9	2.1	2.2	A	2.2	2.0	2.58	5.67	
4-Aug	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.9	A	2.6	3.7	4.4	2.12	4.41	
5-Aug	2.5	2.4	2.5	2.3	2.2	2.8	2.7	2.3	2.1	2.1	2.0	2.1	2.0	2.0	1.9	2.0	2.0	1.9	2.6	A	1.9	1.9	2.7	2.1	2.22	2.83	
6-Aug	2.0	2.0	2.4	2.5	2.3	2.2	2.7	2.7	2.5	2.3	2.3	2.1	1.9	1.8	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.9	2.11	2.73	
7-Aug	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	2.0	1.9	2.1	2.2	2.0	A	2.5	1.8	1.8	1.9	1.9	2.0	1.94	2.54	
8-Aug	1.9	1.9	1.9	2.0	3.1	3.1	2.1	2.0	2.1	2.2	2.0	2.1	2.0	1.9	1.9	2.0	A	2.0	2.3	2.0	2.1	2.5	2.4	2.7	2.18	3.11	
9-Aug	2.4	2.8	2.6	2.5	3.8	3.7	2.7	2.8	2.3	2.2	2.0	2.0	2.3	1.9	2.1	A	1.9	1.9	1.9	1.8	1.9	1.9	2.8	2.5	2.38	3.85	
10-Aug	2.0	2.7	2.5	2.4	2.3	2.5	2.4	2.5	2.7	2.2	2.5	2.2	2.1	2.0	A	2.1	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.18	2.72	
11-Aug	2.3	2.3	2.1	2.5	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.97	2.52	
12-Aug	1.9	1.9	1.9	1.9	1.9	2.3	2.0	2.1	2.3	2.2	2.5	2.2	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.02	2.53	
13-Aug	1.9	2.1	2.1	3.2	2.3	2.3	2.3	2.3	2.2	2.1	1.9	A	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	2.05	3.21	
14-Aug	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.82	1.87	
15-Aug	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.86	2.02	
16-Aug	2.1	2.0	2.7	2.8	3.0	2.3	2.3	2.0	A	2.0	2.0	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.05	3.02	
17-Aug	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	3.2	3.2	1.99	3.22	
18-Aug	3.0	2.6	3.4	3.1	3.0	2.5	A	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	2.12	3.41	
19-Aug	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.88	1.96	
20-Aug	2.0	2.0	2.0	2.1	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.07	
21-Aug	2.0	2.1	2.0	A	2.9	2.3	2.9	2.4	2.1	2.2	2.2	2.2	2.1	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.07	2.94	
22-Aug	1.8	1.8	A	2.3	2.3	2.7	2.4	2.1	2.0	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	2.1	1.9	1.95	2.74	
23-Aug	2.0	A	2.3	2.2	2.2	2.1	2.3	2.4	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.7	1.7	2.2	1.8	1.8	1.7	1.95	2.40	
24-Aug	A	1.9	2.1	1.9	2.1	2.0	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.7	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.86	2.12	
25-Aug	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.80	1.86	
26-Aug	1.8	1.8	1.9	2.5	2.3	2.7	2.6	2.2	2.0	2.0	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.99	2.71	
27-Aug	1.9	2.0	1.9	2.4	2.0	1.9	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.88	2.39	
28-Aug	2.0	2.1	1.9	2.5	2.1	2.1	2.2	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	2.0	1.8	1.8	1.92	2.55	
29-Aug	2.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.83	2.47	
30-Aug	1.8	1.8	1.7	2.4	2.1	1.7	1.8	1.7	C	C	C	C	C	2.1	2.1	2.0	2.1	A	2.4	2.1	2.1	2.1	1.9	2.3	2.01	2.43	
31-Aug	3.1	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.87	3.11	
2.27 2.10 2.13 2.28 2.24 2.26 2.16 2.11 2.08 2.00 1.96 1.93 1.89 1.88 1.88 1.88 1.85 1.85 1.91 1.84 1.90 1.92 2.10 2.21																									Diurnal Average		
5.67 3.23 3.41 3.43 3.85 3.70 2.87 2.92 3.57 2.86 2.53 2.25 2.35 2.19 2.14 2.18 2.12 2.28 2.65 2.13 2.26 2.57 3.74 5.91																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

Total Hydrocarbons (THC) - ppm

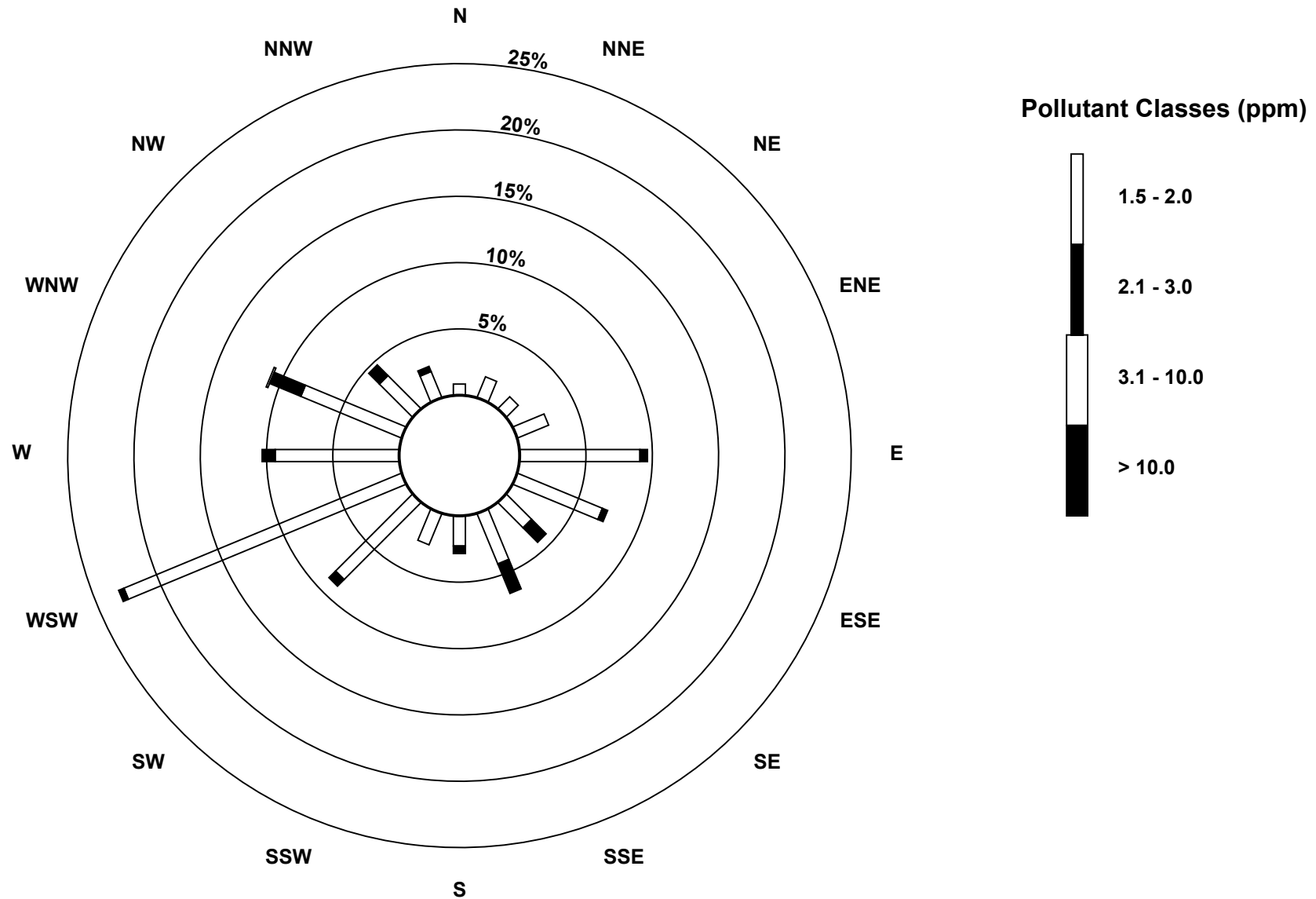
Henry Pirker - August 2017



Pollutant Rose

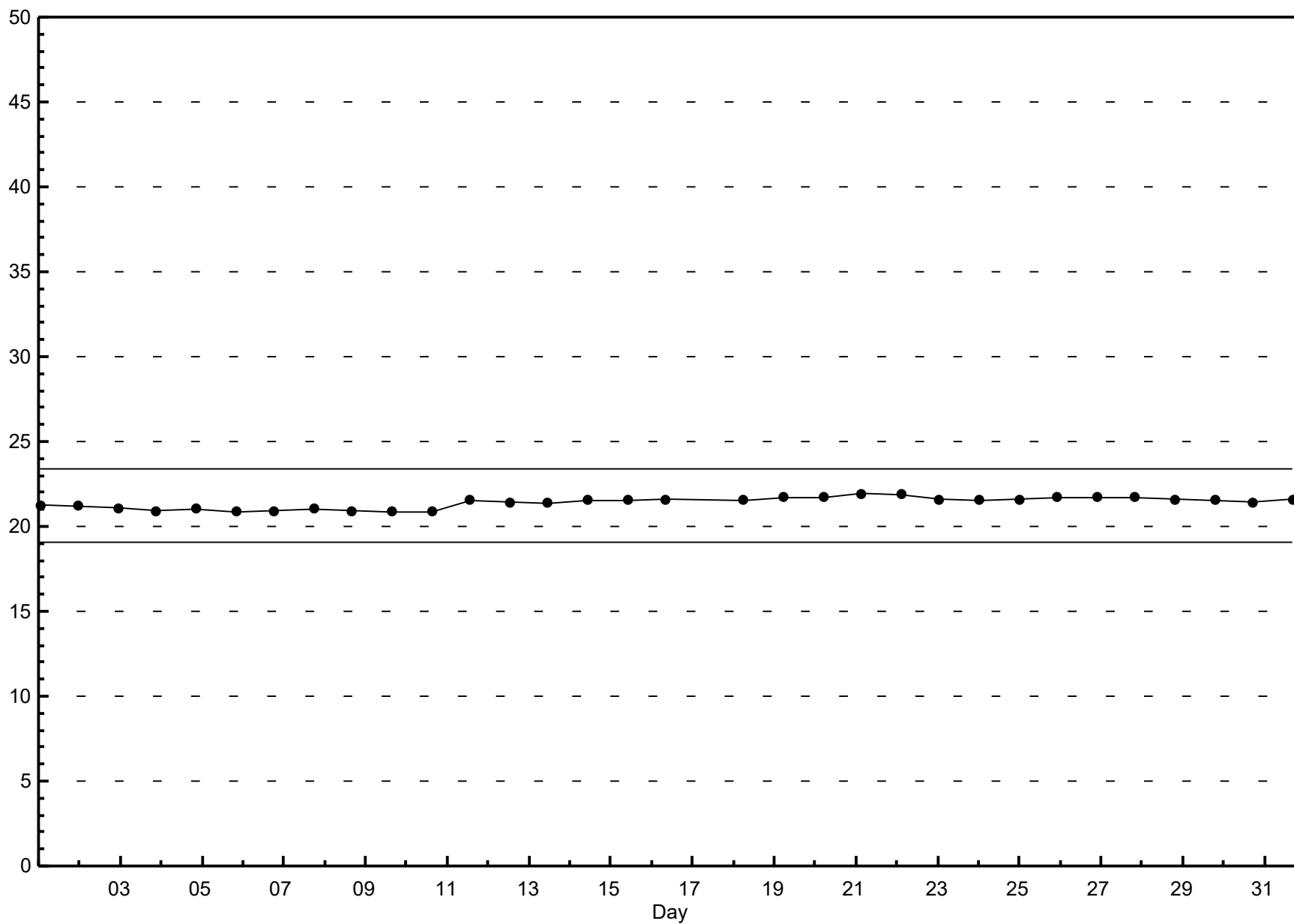
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2017



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - August 2017



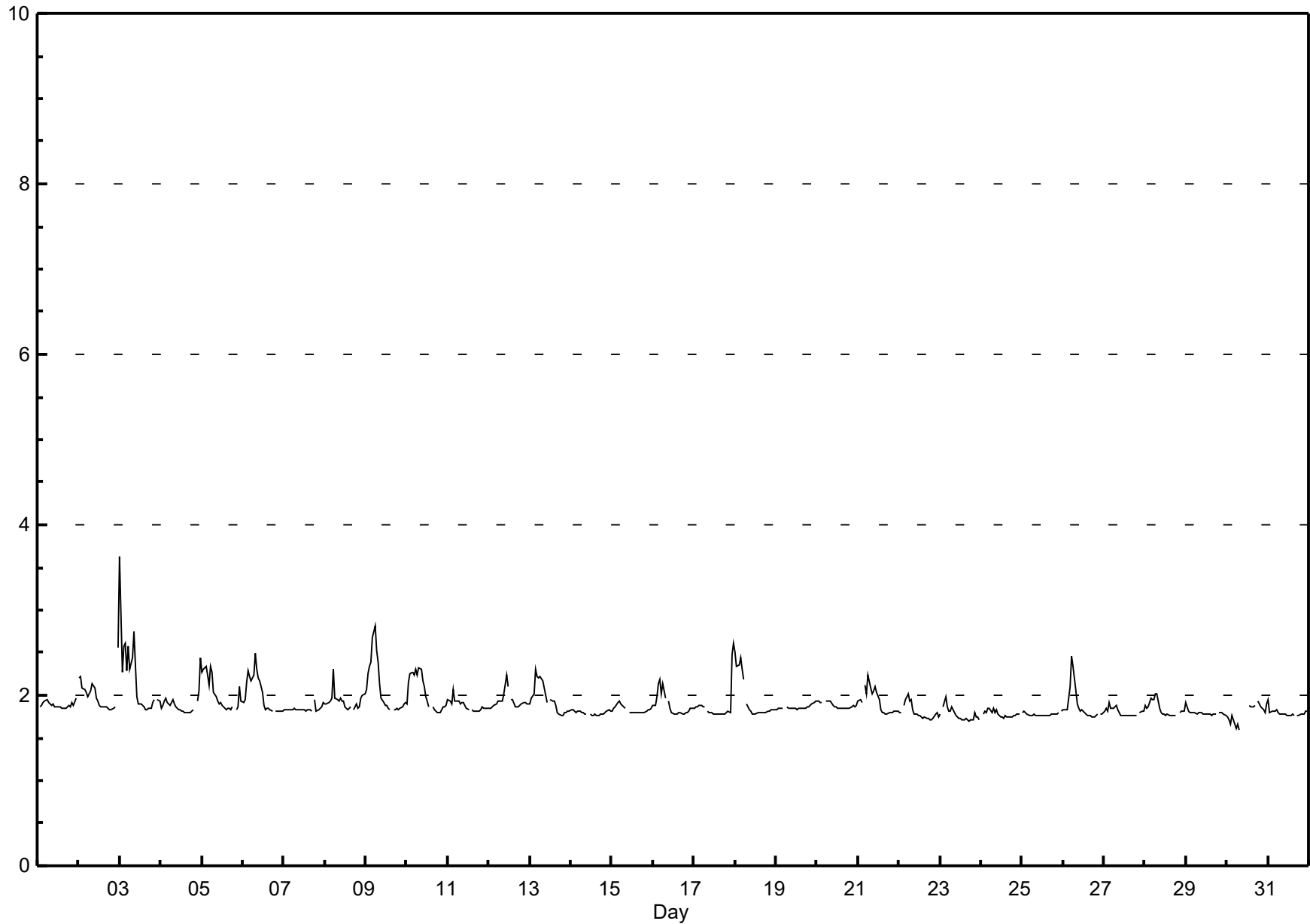
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - August 2017

Maximum Value: 3.64 ppm on Aug 3 01:00																				Maximum Daily Average: 2.19 ppm on Aug 3					Hours in Service: 744		
Minimum Value: 1.6 ppm on Aug 30 08:00																				Minimum Daily Average: 1.77 ppm on Aug 23					Hours of Data: 706		
Maximum Diurnal Average: 2.03 ppm at hour 6																				Minimum Diurnal Average: 1.80 ppm at hour 18					Hours of Missing Data: 38		
Monthly Average: 1.894 ppm																				Percentiles: P ₁ = 1.71 P ₁₀ = 1.77 Q ₁ = 1.79 Median = 1.84 Q ₃ = 1.92 P ₉₀ = 2.10 P ₉₉ = 2.56					Hours of Calibration: 38		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.89	1.97
2-Aug	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	A	2.6	2.00	2.56
3-Aug	3.6	2.3	2.6	2.6	2.3	2.6	2.3	2.4	2.7	2.4	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2.0	A	1.9	1.9	2.19	3.64	3.64
4-Aug	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	2.0	2.4	1.90	2.44	
5-Aug	2.3	2.3	2.3	2.2	2.1	2.3	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	A	1.8	1.9	2.1	1.9	2.01	2.34	
6-Aug	1.9	2.0	2.1	2.3	2.2	2.2	2.2	2.5	2.3	2.2	2.2	2.0	1.9	1.8	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	2.01	2.49	
7-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.8	1.8	1.8	1.9	1.9	1.84	1.95	
8-Aug	1.9	1.9	1.9	1.9	2.0	2.3	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.8	1.9	1.9	A	1.8	1.9	1.9	1.9	2.0	2.0	2.0	1.93	2.30	
9-Aug	2.1	2.3	2.3	2.4	2.7	2.8	2.5	2.4	2.1	2.0	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.08	2.81	
10-Aug	1.9	2.1	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.2	2.1	2.0	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.03	2.32	
11-Aug	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.88	2.07	
12-Aug	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.24	
13-Aug	1.9	2.0	2.0	2.3	2.2	2.2	2.2	2.2	2.1	2.0	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.96	2.30	
14-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.84	
15-Aug	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.93	
16-Aug	1.9	1.9	2.0	2.1	2.2	2.0	2.1	2.0	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.88	2.19	
17-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.5	2.6	1.88	2.61	
18-Aug	2.5	2.3	2.4	2.4	2.3	2.2	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.95	2.50	
19-Aug	1.8	1.8	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.93	
20-Aug	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.88	1.94	
21-Aug	1.9	1.9	1.9	A	2.1	2.0	2.2	2.1	2.0	2.0	2.1	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.92	2.23	
22-Aug	1.8	1.8	A	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.80	2.02	
23-Aug	1.8	A	1.9	2.0	1.9	1.8	1.8	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.77	1.98	
24-Aug	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	A	1.78	1.86	
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.78	1.81	
26-Aug	1.8	1.8	1.8	2.0	2.1	2.5	2.3	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.88	2.46	
27-Aug	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.81	1.92	
28-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.84	2.02	
29-Aug	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.79	1.92	
30-Aug	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.6	C	C	C	C	C	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	1.9	1.78	1.93	
31-Aug	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.95	
1.98 1.94 1.96 2.01 2.00 2.03 1.99 1.98 1.95 1.91 1.88 1.85 1.82 1.82 1.81 1.81 1.80 1.80 1.81 1.81 1.83 1.84 1.88 1.92																									Diurnal Average		
3.64 2.35 2.57 2.61 2.68 2.81 2.53 2.49 2.74 2.36 2.24 2.10 1.95 1.95 1.95 1.89 1.89 1.89 1.87 1.95 1.91 1.95 1.97 2.47 2.61																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - August 2017



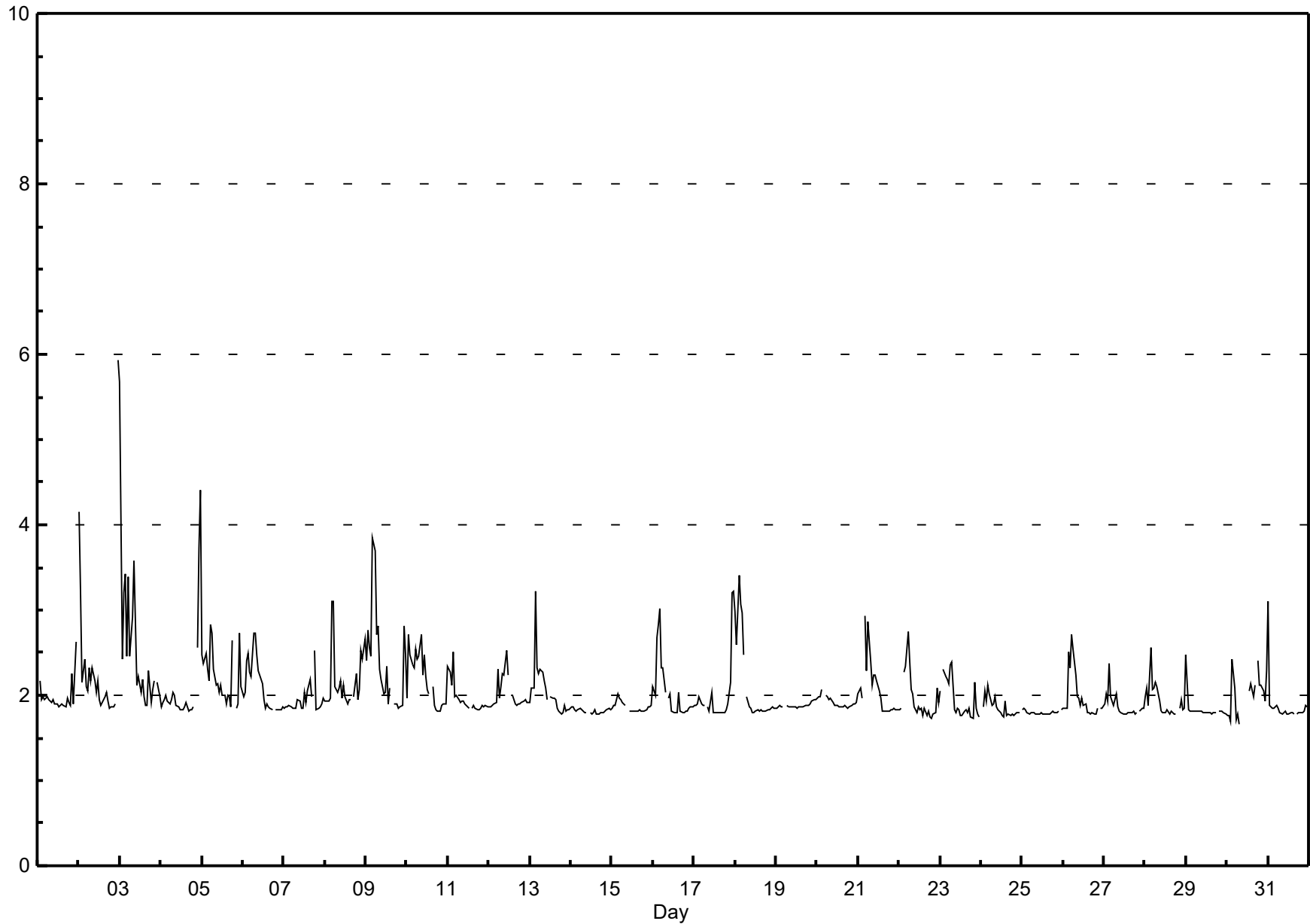
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - August 2017

Maximum Value: 5.93 ppm on Aug 3 00:00																					Maximum Daily Average: 2.58 ppm on Aug 3					Hours in Service: 744	
Minimum Value: 1.7 ppm on Aug 30 08:00																					Minimum Daily Average: 1.80 ppm on Aug 25					Hours of Data: 706	
Maximum Diurnal Average: 2.28 ppm at hour 4																					Minimum Diurnal Average: 1.85 ppm at hour 20					Hours of Missing Data: 38	
Monthly Average: 2.027 ppm																					Percentiles: P ₁ = 1.74 P ₁₀ = 1.79 Q ₁ = 1.82 Median = 1.88 Q ₃ = 2.06 P ₉₀ = 2.42 P ₉₉ = 3.67					Hours of Calibration: 38	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	2.2	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.3	1.9	2.6	A	1.98	2.63
2-Aug	4.2	3.2	2.1	2.4	2.1	2.1	2.3	2.2	2.3	2.2	2.0	2.2	1.9	1.9	1.9	2.0	2.0	1.9	1.8	1.9	1.9	1.9	A	5.9	2.36	5.93	
3-Aug	5.7	2.4	3.2	3.4	2.5	3.4	2.5	2.9	3.6	2.9	2.1	2.2	2.0	2.2	2.0	1.9	1.9	2.3	1.9	2.1	2.2	A	2.2	2.0	2.58	5.68	
4-Aug	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.9	A	2.6	3.7	4.4	2.11	4.41	
5-Aug	2.5	2.4	2.5	2.3	2.2	2.8	2.7	2.3	2.1	2.1	2.0	2.1	2.0	2.0	1.9	2.0	2.0	1.9	2.7	A	1.8	1.9	2.7	2.1	2.22	2.82	
6-Aug	2.0	2.0	2.4	2.5	2.3	2.2	2.7	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	2.11	2.73	
7-Aug	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	2.0	1.9	2.1	2.2	2.0	A	2.5	1.8	1.9	1.9	1.9	2.0	1.94	2.53	
8-Aug	1.9	1.9	1.9	2.0	3.1	3.1	2.1	2.0	2.1	2.2	2.0	2.1	2.0	1.9	1.9	2.0	A	2.0	2.3	2.0	2.1	2.5	2.4	2.7	2.18	3.10	
9-Aug	2.4	2.8	2.6	2.5	3.9	3.7	2.7	2.8	2.3	2.2	2.0	2.0	2.3	1.9	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	2.8	2.5	2.38	3.85	
10-Aug	2.0	2.7	2.5	2.4	2.3	2.5	2.4	2.5	2.7	2.2	2.5	2.2	2.1	2.0	A	2.1	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.17	2.72	
11-Aug	2.3	2.3	2.1	2.5	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.96	2.51	
12-Aug	1.9	1.9	1.9	1.9	1.9	2.3	2.0	2.1	2.3	2.2	2.5	2.2	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.53	
13-Aug	1.9	2.1	2.1	3.2	2.3	2.3	2.3	2.3	2.2	2.1	2.0	A	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	2.05	3.21	
14-Aug	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.82	1.87	
15-Aug	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.86	2.01	
16-Aug	2.1	2.0	2.7	2.8	3.0	2.3	2.3	2.0	A	2.0	2.0	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.05	3.02	
17-Aug	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	3.2	3.2	1.99	3.21	
18-Aug	3.0	2.6	3.4	3.1	3.0	2.5	A	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.12	3.40	
19-Aug	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.88	1.96	
20-Aug	2.0	2.0	2.0	2.1	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.06	
21-Aug	2.0	2.1	2.0	A	2.9	2.3	2.9	2.4	2.1	2.2	2.2	2.2	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.07	2.94	
22-Aug	1.8	1.8	A	2.3	2.3	2.7	2.4	2.1	2.0	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	2.1	1.9	1.95	2.74	
23-Aug	2.1	A	2.3	2.2	2.2	2.1	2.3	2.4	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	2.2	1.8	1.8	1.7	1.95	2.39	
24-Aug	A	1.9	2.1	1.9	2.1	2.0	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.7	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.86	2.11	
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.80	1.85	
26-Aug	1.8	1.8	1.9	2.5	2.3	2.7	2.6	2.2	2.0	2.0	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.99	2.71	
27-Aug	1.9	2.0	1.9	2.4	2.0	1.9	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.88	2.38	
28-Aug	2.0	2.1	1.9	2.6	2.1	2.1	2.1	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	2.0	1.8	1.8	1.93	2.55	
29-Aug	2.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.84	2.47	
30-Aug	1.8	1.8	1.7	2.4	2.1	1.7	1.8	1.7	C	C	C	C	C	2.0	2.1	2.0	2.1	A	2.4	2.1	2.1	2.1	1.9	2.3	2.00	2.42	
31-Aug	3.1	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.88	3.11	
2.27 2.09 2.13 2.28 2.24 2.26 2.15 2.11 2.08 2.00 1.96 1.93 1.89 1.88 1.88 1.88 1.85 1.85 1.91 1.85 1.90 1.92 2.10 2.21																										Diurnal Average	
5.68 3.22 3.40 3.42 3.85 3.69 2.87 2.91 3.57 2.87 2.53 2.25 2.35 2.19 2.13 2.19 2.12 2.28 2.65 2.12 2.26 2.56 3.73 5.93																										Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																											

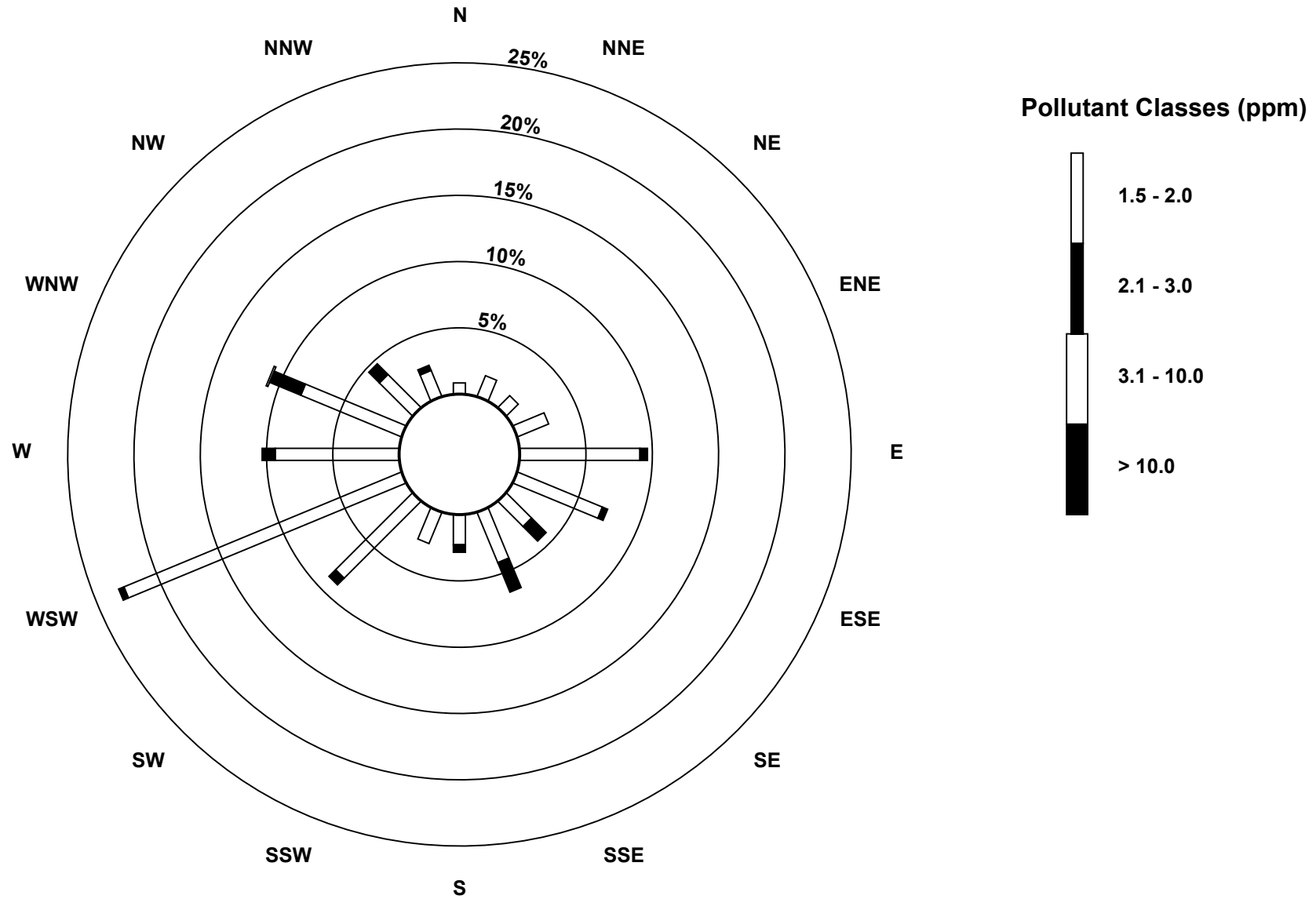
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - August 2017



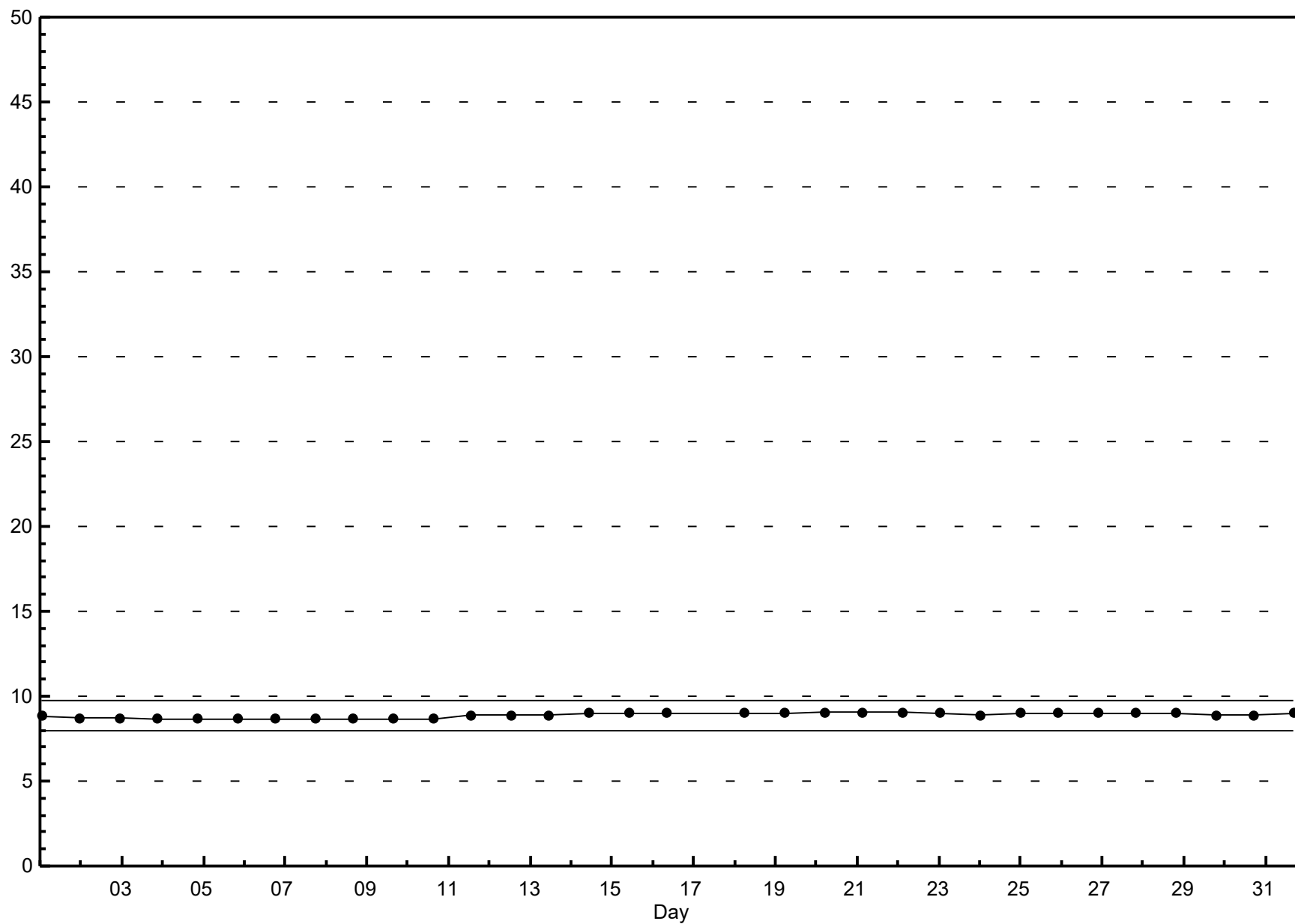
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - August 2017



Span Responses

Methane (CH₄)
Henry Pirker - August 2017

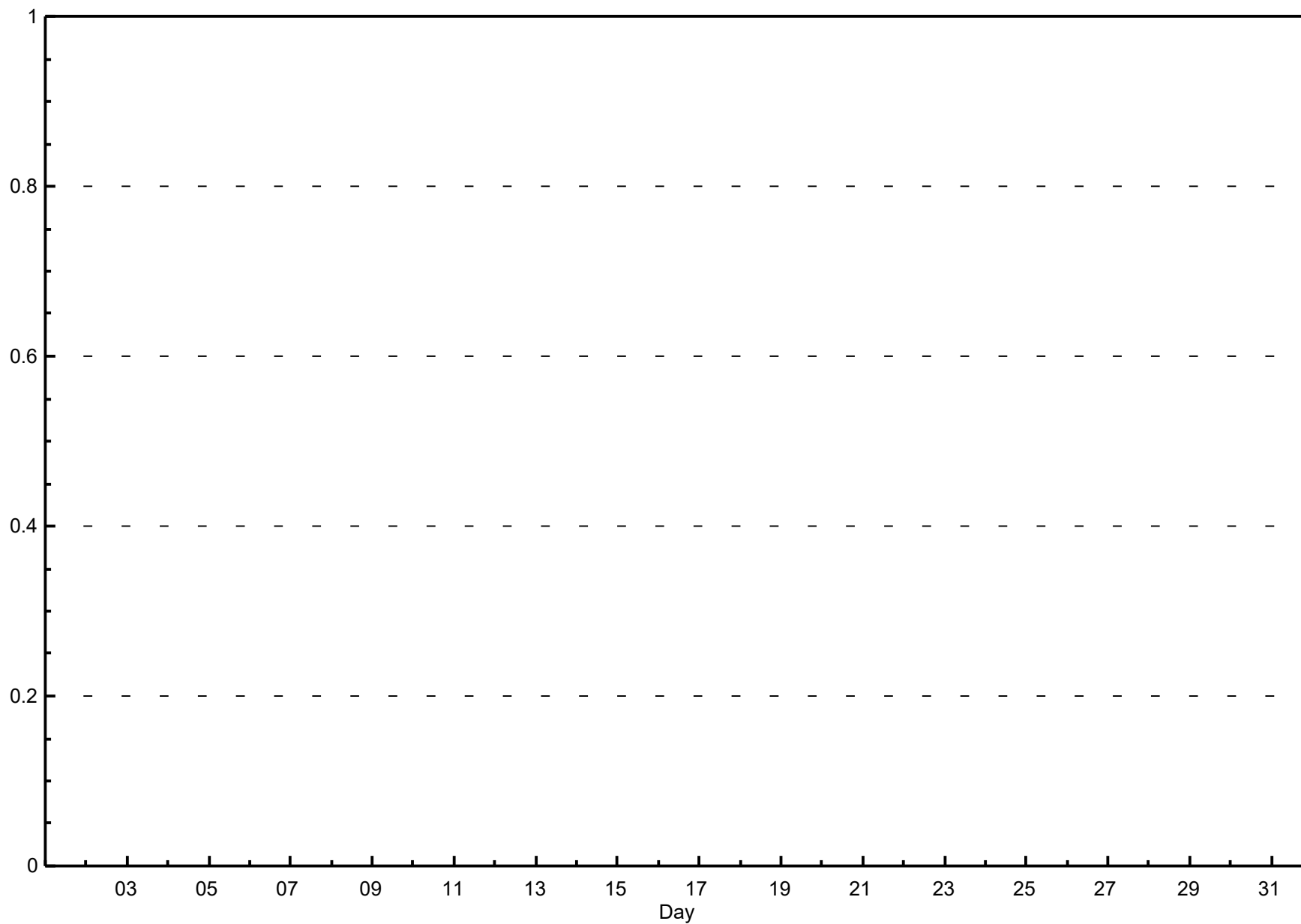


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - August 2017

Maximum Value: 0.00 ppm on Aug 7 04:00																					Maximum Daily Average: 0.00 ppm on Aug 7					Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 1 02:00																					Minimum Daily Average: 0.00 ppm on Aug 1					Hours of Data: 706	
Maximum Diurnal Average: 0.00 ppm at hour 7																					Minimum Diurnal Average: 0.00 ppm at hour 19					Hours of Missing Data: 38	
Monthly Average: 0.000 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00					Hours of Calibration: 38	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
2-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
3-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
4-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00	
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
8-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
9-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
19-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
20-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
21-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
22-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
23-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
24-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
25-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
26-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
27-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00	
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
0.00 0.00																									Diurnal Average		
0.00 0.00																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

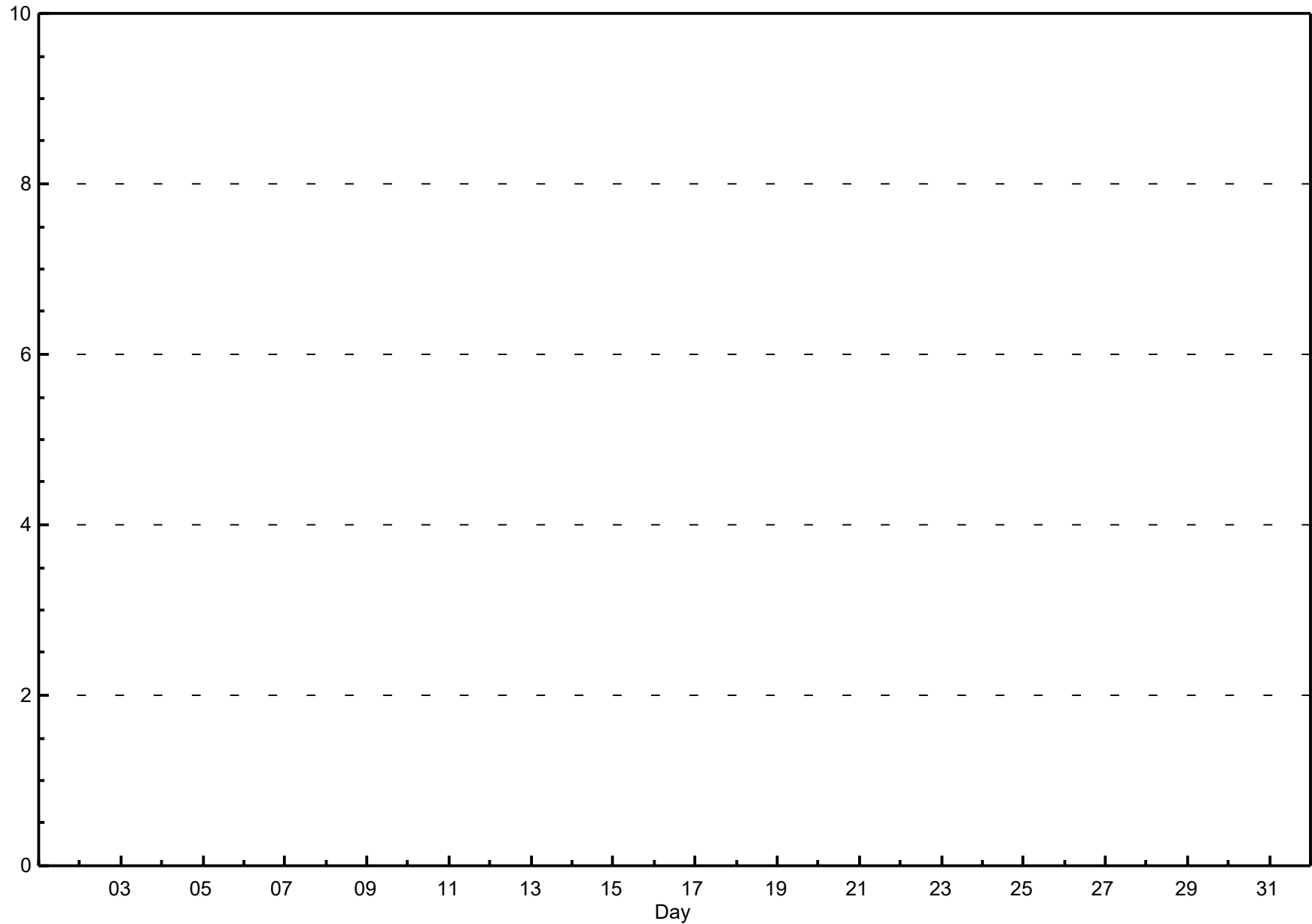
Henry Pirker - August 2017

Maximum Value: 0.00 ppm on Aug 6 18:00																					Maximum Daily Average: 0.00 ppm on Aug 7					Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 2 11:00																					Minimum Daily Average: 0.00 ppm on Aug 31					Hours of Data: 706	
Maximum Diurnal Average: 0.00 ppm at hour 12																					Minimum Diurnal Average: 0.00 ppm at hour 22					Hours of Missing Data: 38	
Monthly Average: 0.001 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00					Hours of Calibration: 38	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
2-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
3-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
4-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00	
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
8-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
9-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
19-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
20-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
21-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
22-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
23-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
24-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00	
25-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00	
26-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00	
27-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00	
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00	
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
0.00 0.00																									Diurnal Average		
0.00 0.00																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

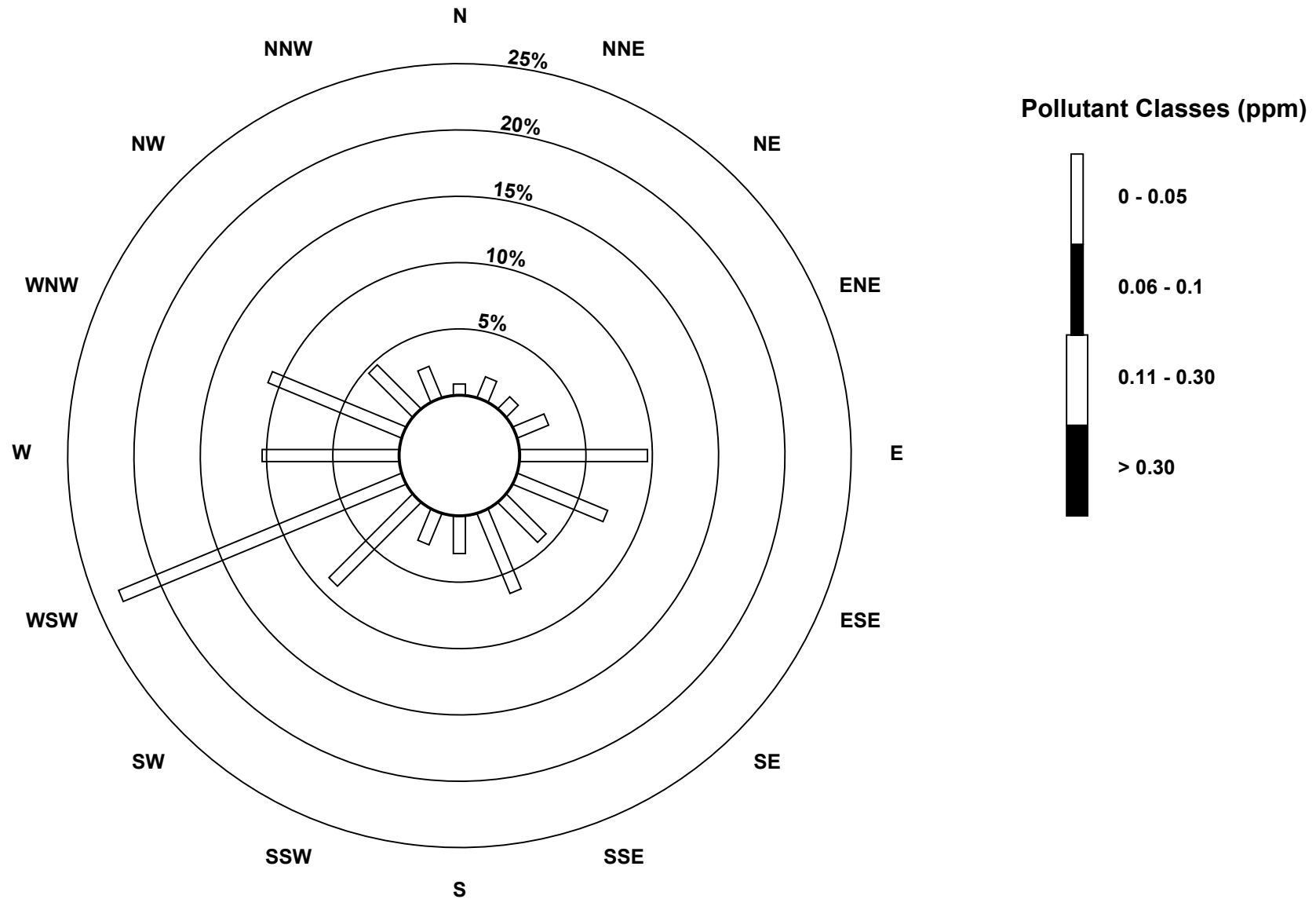
Henry Pirker - August 2017

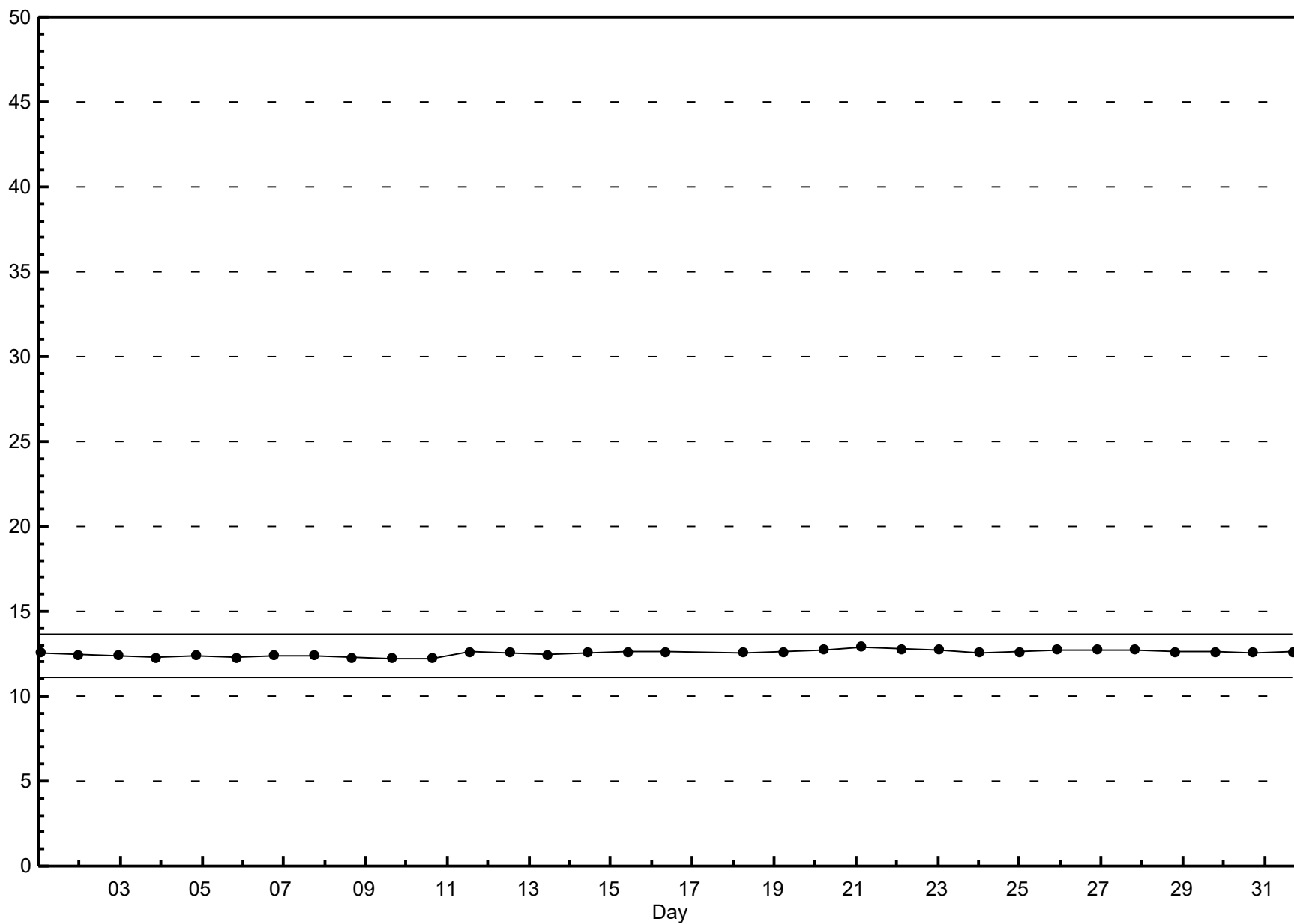


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - August 2017



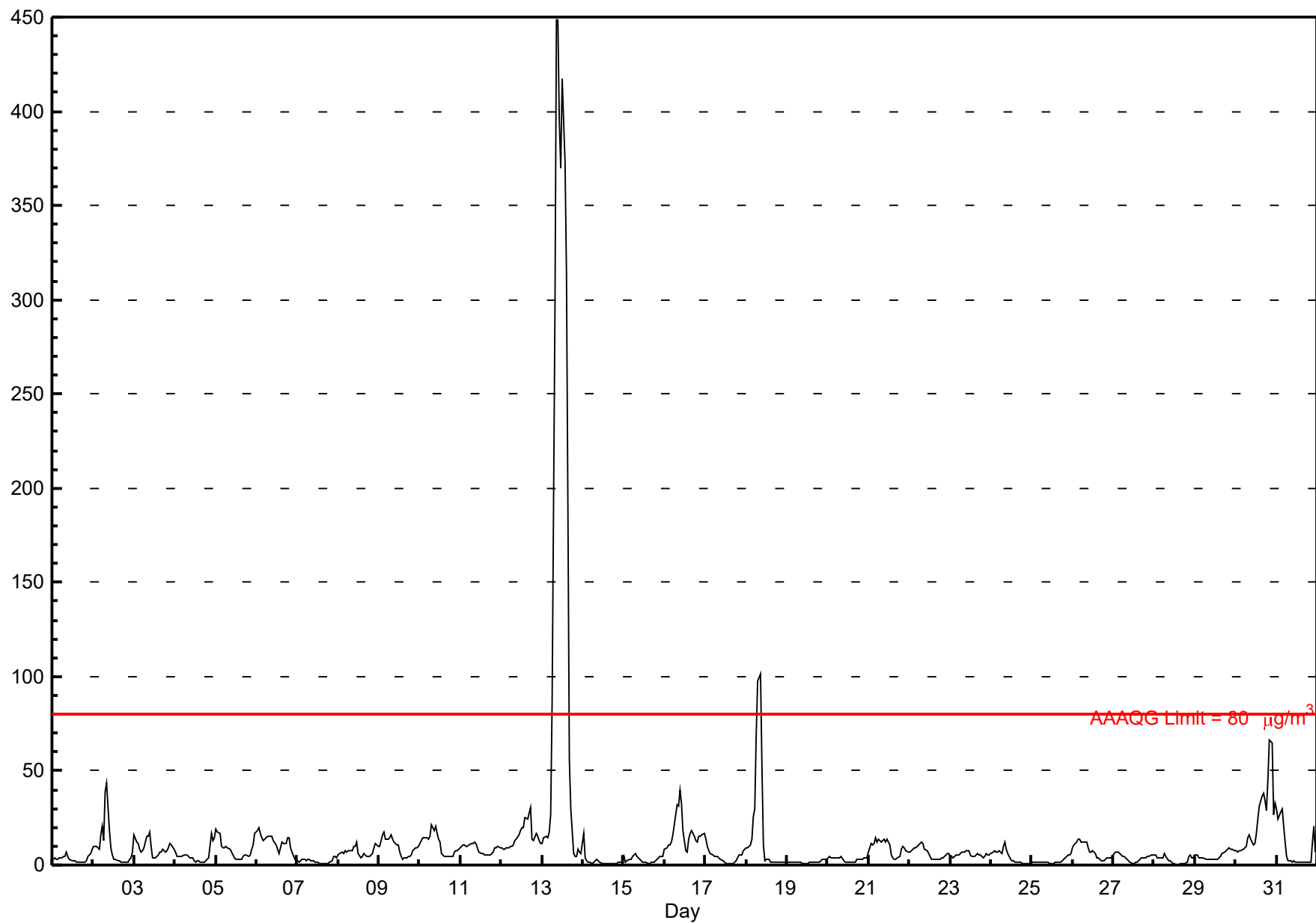


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Henry Pirker - August 2017

Number of Exceedences: 1-hr: 12 24-hr: 1 Maximum Value: 448.4 µg/m³ on Aug 13 09:00 Maximum Daily Average: 148.2 µg/m³ on Aug 13																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Aug 28 14:00 Maximum Diurnal Average: 27.2 µg/m³ at hour 9 Monthly Average: 12.24 µg/m³ Minimum Daily Average: 1.5 µg/m³ on Aug 19 Minimum Diurnal Average: 5.1 µg/m³ at hour 19 Percentiles: P ₁ = 0.5 P ₁₀ = 1.3 Q ₁ = 2.6 Median = 5.2 Q ₃ = 10.4 P ₉₀ = 16.5 P ₉₉ = 260.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	3	3	3	3	4	4	4	5	7	4	3	2	2	3	2	2	2	2	2	1	2	5	6	8	3.5	8.5
2-Aug	10	10	10	9	16	21	13	39	44	18	9	5	3	3	3	2	2	2	1	1	2	3	4	7	9.8	43.5
3-Aug	16	12	11	8	7	8	9	15	16	17	10	4	4	4	6	7	7	8	7	8	10	11	11	8	9.3	17.4
4-Aug	7	5	5	4	5	5	5	6	4	4	4	2	2	2	2	2	2	2	3	3	4	17	13	15	5.0	17.2
5-Aug	19	18	17	10	9	9	10	9	8	7	5	4	3	3	3	3	4	5	5	5	5	8	11	17	8.3	19.4
6-Aug	18	19	17	14	13	14	15	16	15	15	13	10	9	6	9	12	11	12	14	14	9	7	3	3	12.1	19.5
7-Aug	2	2	3	3	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	2	4	4	4	4	2.1	4.5
8-Aug	6	6	7	6	7	7	8	7	8	10	10	12	6	4	5	6	5	5	5	5	6	9	12	10	7.2	12.1
9-Aug	10	13	16	17	13	14	15	16	14	12	11	11	7	5	3	4	4	4	5	5	7	9	9	10	9.7	17.3
10-Aug	12	13	14	14	14	14	15	21	18	21	17	14	12	6	5	5	4	4	4	4	7	8	8	8	11.0	21.0
11-Aug	9	10	10	10	10	11	12	12	12	11	9	7	6	6	6	5	6	5	6	7	9	9	10	9	8.6	12.1
12-Aug	9	9	9	9	9	10	10	11	13	14	16	18	20	20	25	24	27	30	13	13	17	15	13	11	15.2	30.3
13-Aug	11	15	15	14	17	27	86	297	448	448	395	370	417	373	314	188	56	30	6	4	4	8	7	6	148.2	448.4
14-Aug	16	3	2	2	1	1	1	2	3	3	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1.9	16.5
15-Aug	5	2	2	3	3	4	5	6	5	3	2	2	2	1	1	1	1	1	1	2	3	4	4	5	2.9	5.8
16-Aug	9	9	11	11	12	16	21	32	31	40	33	18	8	7	14	17	18	15	13	12	15	15	16	17	17.1	39.8
17-Aug	13	10	8	6	6	5	5	5	4	3	2	1	1	1	1	1	1	1	2	4	5	5	7	9	4.4	13.5
18-Aug	9	9	11	14	26	30	69	98	102	52	11	2	3	3	1	1	1	2	2	1	1	1	1	1	18.8	101.7
19-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	1.5	2.8
20-Aug	4	4	4	4	4	4	4	4	4	3	2	2	2	1	2	2	2	3	3	3	3	4	4	4	3.1	4.4
21-Aug	7	11	11	11	14	13	13	12	13	14	12	14	11	6	4	3	3	4	4	9	10	9	8	7	9.3	14.1
22-Aug	7	8	8	9	9	10	11	12	11	9	8	6	4	3	3	3	3	3	3	3	4	6	6	6	6.5	12.5
23-Aug	5	4	4	5	5	5	6	7	7	7	8	7	5	5	4	5	6	5	5	4	4	6	6	5	5.5	8.0
24-Aug	6	7	8	7	7	8	6	10	13	8	6	3	3	2	1	1	1	1	1	1	1	1	1	1	4.4	12.5
25-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	4	5	6	6	2.1	6.2
26-Aug	10	11	12	14	14	12	12	12	12	9	7	7	8	6	4	3	3	2	2	3	4	4	4	4	7.5	13.8
27-Aug	6	7	7	7	6	5	4	4	3	2	1	1	1	1	2	2	4	4	4	4	5	5	5	5	4.0	7.2
28-Aug	5	5	4	3	4	4	6	5	2	2	1	1	1	0	0	0	0	1	1	2	4	6	4	4	2.7	6.2
29-Aug	6	5	4	4	4	4	3	3	3	3	3	3	3	3	4	5	6	7	7	8	9	8	8	8	5.0	9.0
30-Aug	8	7	8	8	8	9	10	15	16	14	11	11	17	24	31	37	38	35	29	45	67	65	27	33	23.9	66.7
31-Aug	29	25	28	30	21	12	4	2	3	2	3	2	2	1	1	2	1	2	1	1	2	12	20	7	8.9	29.7
9.1 8.6 8.7 8.5 8.9 9.3 12.6 22.2 27.2 24.5 19.9 17.6 18.2 16.3 14.8 11.2 7.3 6.4 5.1 5.8 7.4 8.9 7.8 7.8																								Diurnal Average		
29.5 24.8 27.9 29.7 25.7 29.5 86.2 296.7 448.4 448.4 395.4 370.2 417.4 372.8 313.6 187.9 55.7 34.6 29.2 45.3 66.7 65.1 26.7 32.8																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³																								Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³		



Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

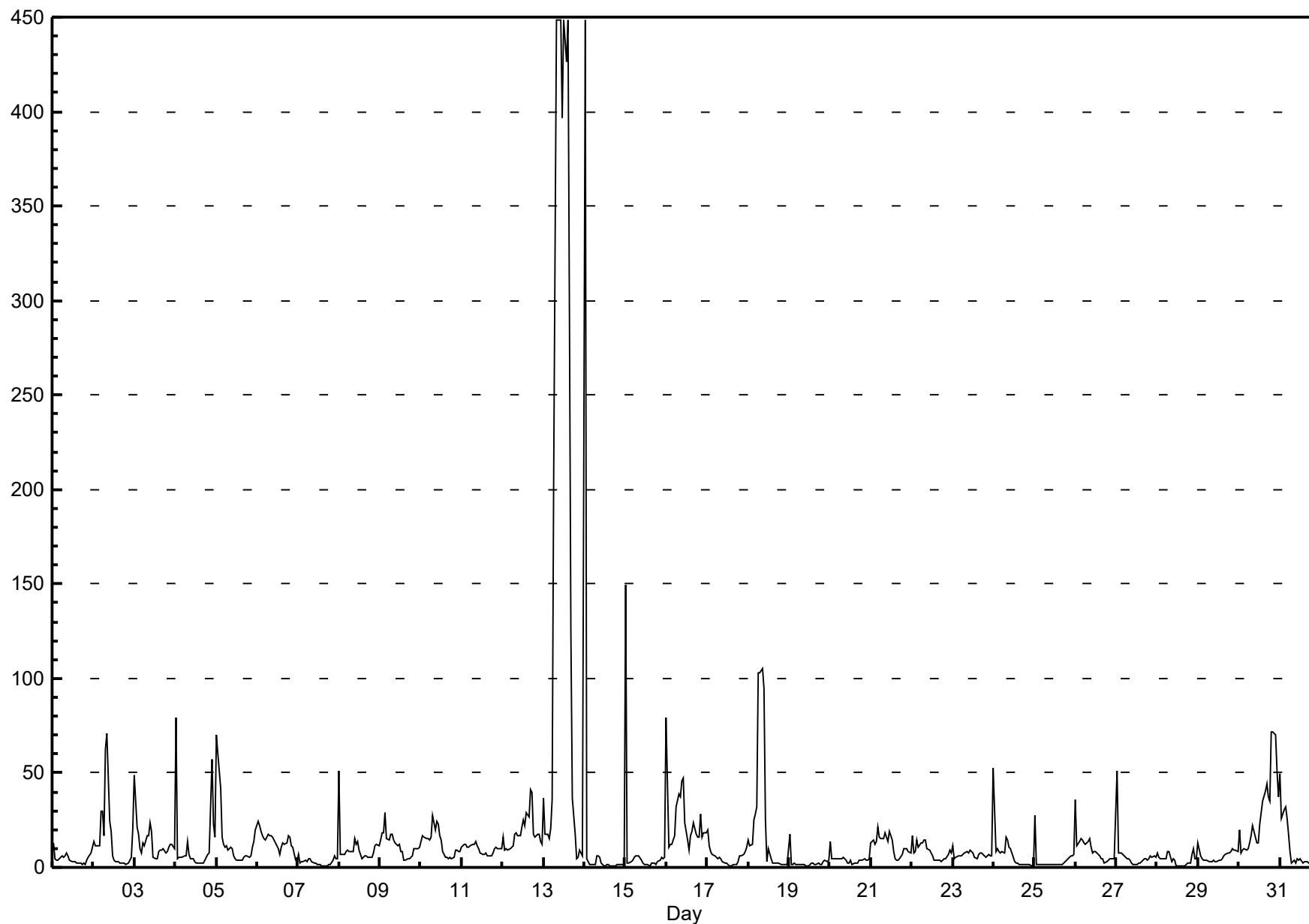
Henry Pirker - August 2017

Maximum Value: 448.5 μg/m ³ on Aug 13 08:00																					Maximum Daily Average: 181.6 μg/m ³ on Aug 13										Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 28 14:00																					Minimum Daily Average: 2.7 μg/m ³ on Aug 19										Hours of Data: 744	
Maximum Diurnal Average: 46.5 μg/m ³ at hour 1																					Minimum Diurnal Average: 6.6 μg/m ³ at hour 19										Hours of Missing Data: 0	
Monthly Average: 16.71 μg/m ³																					Percentiles: P ₁ = 0.8 P ₁₀ = 1.6 Q ₁ = 3.5 Median = 6.6 Q ₃ = 13.7 P ₉₀ = 23.9 P ₉₉ = 448.0										Hours of Calibration: 0	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Aug	13	5	4	4	4	6	5	6	8	6	4	3	3	3	3	2	2	2	2	1	4	5	7	11	4.7	12.7						
2-Aug	14	11	11	11	30	30	17	62	71	24	19	6	3	3	3	2	2	2	2	2	3	4	5	20	14.9	70.9						
3-Aug	49	22	17	10	8	13	12	17	17	23	19	5	4	5	8	9	9	10	8	9	11	12	12	10	13.3	49.1						
4-Aug	79	5	5	5	5	6	6	14	7	4	5	3	2	2	2	2	2	3	5	6	8	57	23	16	11.4	79.0						
5-Aug	70	60	42	16	12	10	11	9	11	10	6	5	4	4	4	4	5	6	6	5	6	11	14	20	14.7	70.3						
6-Aug	24	22	19	17	15	15	17	17	17	16	15	12	10	7	10	13	12	13	17	16	12	11	4	3	13.8	24.3						
7-Aug	7	2	3	3	4	3	4	4	3	3	2	2	2	1	1	1	1	1	1	2	4	6	5	5	2.9	7.2						
8-Aug	51	7	7	7	8	9	8	9	8	15	12	14	9	5	5	6	6	6	6	6	8	11	12	11	10.3	51.3						
9-Aug	15	18	18	29	15	14	17	18	15	13	12	12	9	8	3	4	4	5	5	6	10	10	10	11	11.7	29.2						
10-Aug	14	17	16	16	15	15	16	28	20	24	23	17	15	9	5	5	5	5	5	6	9	9	8	9	12.9	27.7						
11-Aug	11	12	12	11	11	12	12	12	14	12	10	7	7	7	8	6	6	6	8	10	10	10	10	10	9.7	13.8						
12-Aug	16	9	10	9	10	11	11	18	18	17	17	21	25	22	29	27	41	40	18	16	17	18	14	12	18.6	41.1						
13-Aug	36	18	17	15	20	36	198	449	449	449	448	397	449	427	448	292	125	37	17	5	6	9	8	6	181.6	448.5						
14-Aug	448	4	3	2	1	1	1	6	6	5	3	1	1	2	1	1	1	1	1	1	1	1	2	2	20.7	448.2						
15-Aug	149	2	3	3	4	5	6	6	6	4	3	2	2	2	1	2	2	2	2	3	4	5	5	6	9.5	149.4						
16-Aug	80	11	12	12	14	17	32	39	37	45	47	24	14	9	17	19	23	17	16	16	28	16	18	18	24.3	79.7						
17-Aug	20	11	8	7	6	5	5	5	4	3	2	2	1	1	1	1	1	2	3	6	6	7	8	11	5.4	20.0						
18-Aug	14	11	12	25	29	32	103	103	105	95	25	3	10	5	2	2	2	2	3	2	2	1	2	1	24.6	105.0						
19-Aug	17	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	3	3	3	4	2.7	17.5						
20-Aug	14	5	5	5	4	5	4	4	5	4	2	2	4	2	2	2	2	4	4	4	5	4	4	5	4.1	13.8						
21-Aug	13	14	12	14	22	16	15	15	18	16	14	19	15	9	5	4	4	4	7	10	10	10	9	8	11.7	21.7						
22-Aug	17	8	8	15	11	13	13	14	15	10	9	7	6	4	4	3	4	3	4	4	5	7	9	7	8.3	16.9						
23-Aug	12	5	5	6	6	6	7	8	8	8	9	8	7	6	5	7	7	7	6	5	6	7	6	6	6.9	11.8						
24-Aug	53	9	10	8	8	8	8	16	15	11	10	5	3	2	2	2	1	2	1	1	1	1	1	1	7.4	52.9						
25-Aug	27	2	2	1	2	1	1	2	1	1	1	1	1	1	1	2	2	2	3	4	5	6	6	7	3.5	27.3						
26-Aug	36	12	14	15	15	13	12	14	15	10	8	8	9	7	6	4	4	2	3	4	4	4	5	4	9.5	35.9						
27-Aug	51	7	8	8	7	5	5	5	4	3	2	1	1	2	2	3	4	5	4	5	6	6	6	5	6.4	51.1						
28-Aug	8	6	5	5	4	5	8	8	3	5	4	1	1	0	1	1	1	1	3	3	7	10	5	4	4.0	9.8						
29-Aug	13	6	5	4	4	4	3	3	3	3	3	3	4	4	4	6	7	7	8	9	10	9	9	8	5.9	13.0						
30-Aug	20	8	9	10	9	10	13	17	22	19	13	13	23	29	35	40	44	38	35	71	72	70	51	37	29.5	71.5						
31-Aug	50	26	30	32	26	17	8	3	4	2	4	3	4	2	3	3	3	3	2	2	2	38	27	17	13.0	49.9						
46.5 11.4 10.8 10.6 10.7 11.1 18.8 30.0 30.0 27.8 24.3 19.7 20.9 19.1 20.2 15.4 10.9 7.7 6.6 7.8 9.1 12.2 10.0 9.5																									Diurnal Average							
448.2 60.1 41.6 32.1 29.8 35.7 198.3 448.5 448.5 448.5 448.4 396.7 448.5 426.7 448.4 292.2 124.6 40.0 35.3 71.4 71.5 70.4 51.4 37.3																									Diurnal Maximum							

Hourly Maximums

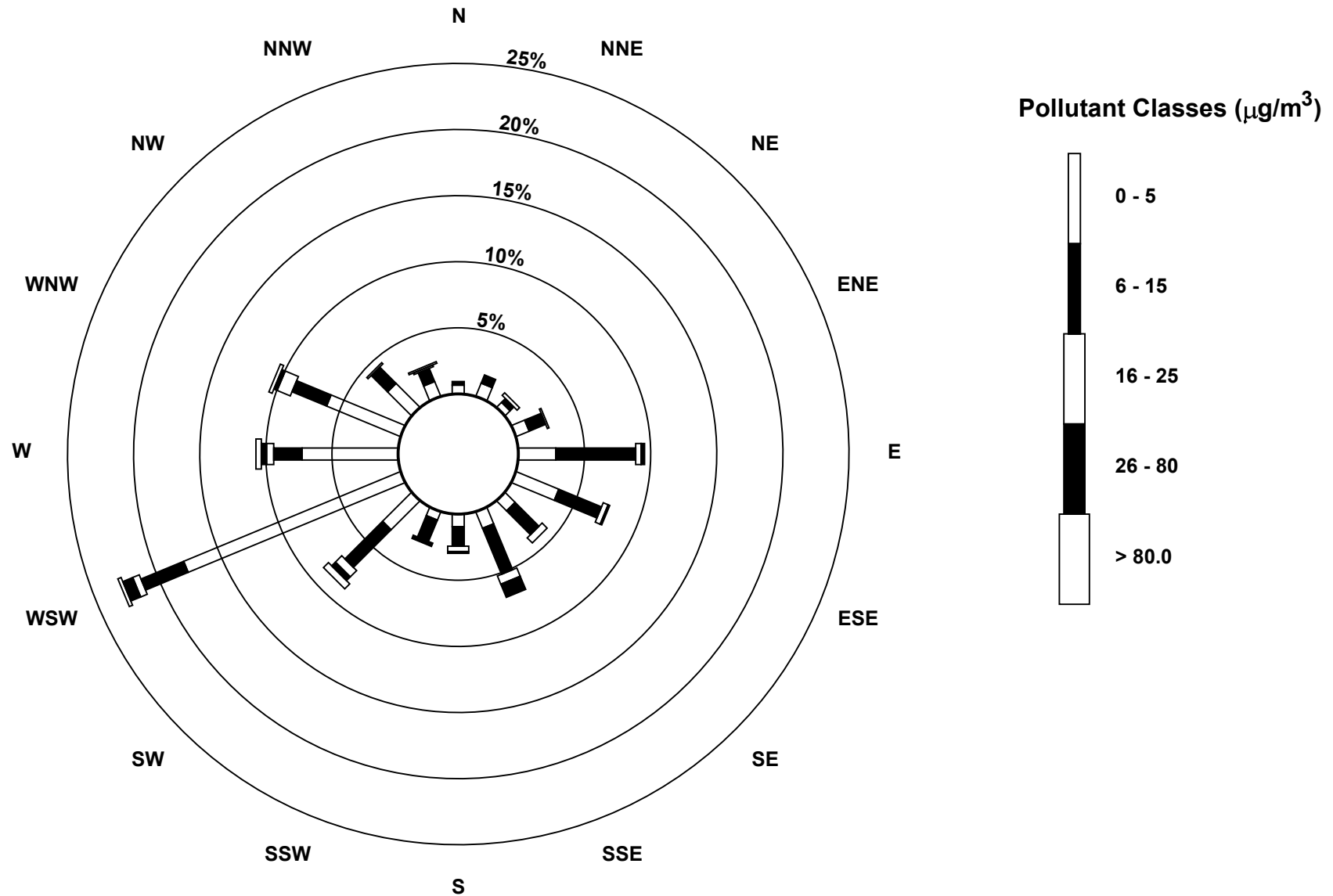
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - August 2017



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Henry Pirker - August 2017



Hourly Averages

External Temperature (ET) - °C

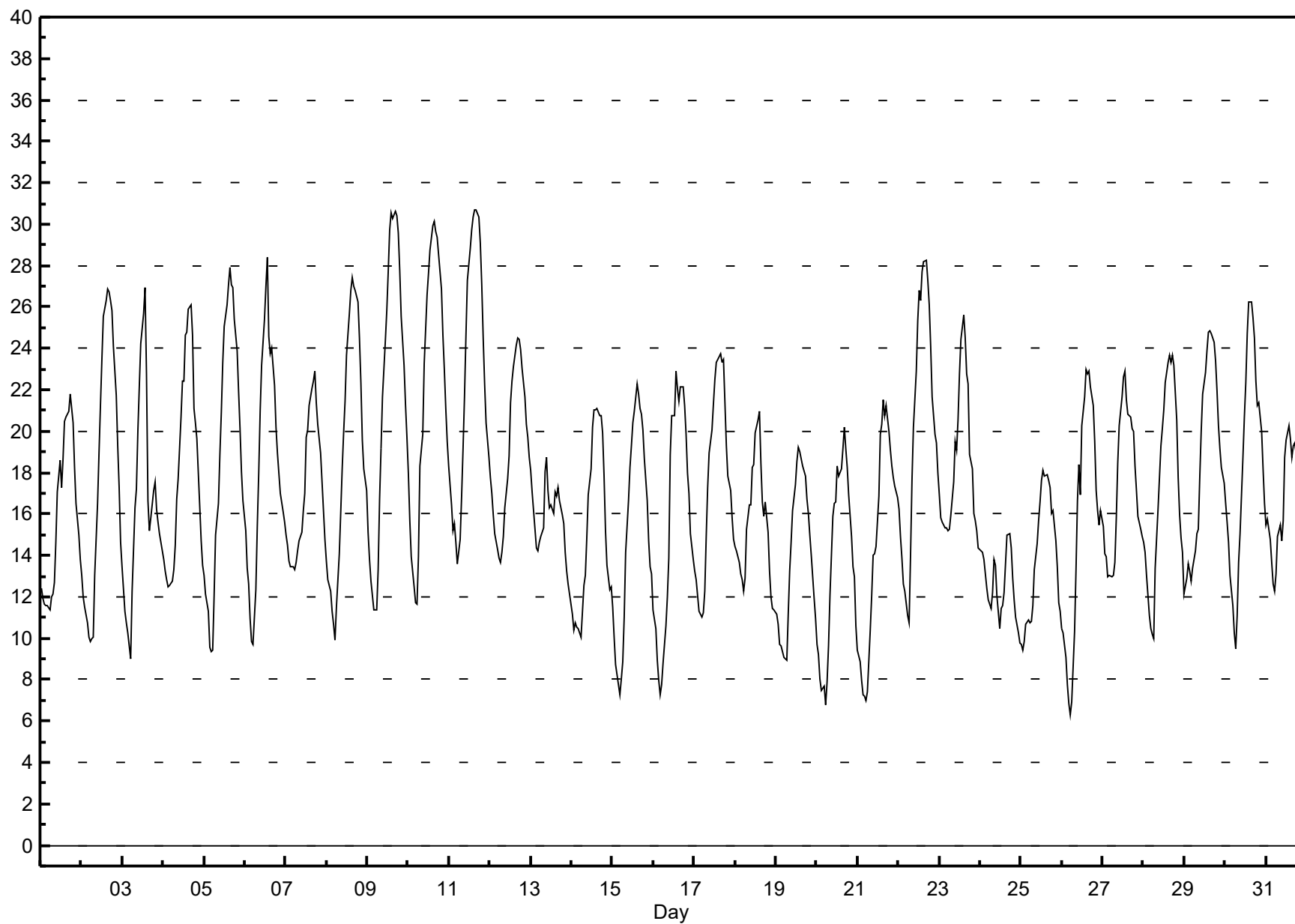
Henry Pirker - August 2017

Maximum Value: 30.7 °C on Aug 11 16:00																								Maximum Daily Average: 22.5 °C on Aug 11								Hours in Service: 744	
Minimum Value: 6 °C on Aug 26 06:00																								Minimum Daily Average: 12.6 °C on Aug 24								Hours of Data: 744	
Maximum Diurnal Average: 23.0 °C at hour 15																								Minimum Diurnal Average: 10.9 °C at hour 6								Hours of Missing Data: 0	
Monthly Average: 17.21 °C																								Percentiles: P ₁ = 7.3 P ₁₀ = 10.7 Q ₁ = 13.2 Median = 16.6 Q ₃ = 20.9 P ₉₀ = 24.6 P ₉₉ = 30.3								Hours of Calibration: 0	
																								Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Aug	12	12	12	12	12	11	12	12	13	15	17	19	17	19	20	21	21	22	21	20	18	17	15	14	15.9	21.8							
2-Aug	13	12	11	11	10	10	10	10	13	17	19	21	23	26	26	27	27	26	26	24	22	19	17	15	18.1	26.9							
3-Aug	13	11	11	10	10	9	12	16	17	20	22	24	26	27	23	17	15	16	17	18	16	16	15	14	16.5	27.0							
4-Aug	14	13	13	12	13	13	13	14	17	18	21	22	22	25	25	26	26	25	21	20	20	16	15	14	18.2	26.1							
5-Aug	13	12	11	10	9	9	12	15	16	19	21	23	25	26	27	28	27	27	25	24	22	20	18	17	19.1	27.9							
6-Aug	15	13	13	11	10	10	12	15	18	21	23	25	27	28	25	24	24	22	20	19	18	17	16	16	18.4	28.4							
7-Aug	15	14	14	13	13	13	14	14	15	15	16	17	20	20	21	22	22	23	21	20	19	18	16	15	17.2	22.9							
8-Aug	14	13	12	11	11	10	11	14	16	18	20	21	24	26	27	27	27	27	26	25	22	20	18	17	19.1	27.4							
9-Aug	15	14	13	12	11	11	13	17	19	22	24	26	28	30	31	30	31	30	30	28	26	23	21	20	21.8	30.6							
10-Aug	18	16	14	12	12	12	14	18	20	23	25	27	28	29	30	30	30	29	29	27	25	23	21	20	22.1	30.1							
11-Aug	18	16	15	16	15	14	15	17	19	22	25	27	29	30	30	31	31	30	29	27	24	22	20	19	22.5	30.7							
12-Aug	18	17	16	15	14	14	14	14	15	16	18	19	21	22	23	24	25	24	24	23	22	20	20	19	19.0	24.5							
13-Aug	18	17	15	14	14	15	15	15	18	19	17	16	16	16	17	17	17	17	16	16	14	13	13	12	15.7	18.7							
14-Aug	11	10	11	11	10	10	11	13	13	15	17	18	20	21	21	21	21	21	20	18	15	14	12	12	15.3	21.1							
15-Aug	12	10	9	8	7	8	9	11	14	17	18	19	20	21	22	22	21	21	20	19	17	15	13	13	15.2	22.3							
16-Aug	11	10	9	8	7	8	9	11	12	14	19	21	21	23	22	21	22	22	21	20	18	17	15	14	15.6	22.9							
17-Aug	13	13	12	11	11	11	12	15	17	19	20	21	22	23	23	24	23	23	21	19	18	17	16	15	17.6	23.8							
18-Aug	14	14	14	13	13	12	13	15	16	16	18	18	20	21	21	18	17	16	17	15	13	12	11	11	15.4	21.0							
19-Aug	11	11	10	10	9	9	9	11	13	15	16	17	19	19	19	19	18	18	17	16	15	14	12	11	14.1	19.2							
20-Aug	10	9	8	7	8	7	8	10	12	16	17	17	18	18	18	19	20	19	18	17	15	13	13	11	13.6	20.2							
21-Aug	9	9	8	7	7	7	7	10	12	14	14	14	17	20	20	22	21	21	20	19	18	18	17	17	14.6	21.5							
22-Aug	16	15	14	13	12	11	11	14	18	20	23	25	27	26	28	28	28	27	26	24	22	20	19	18	20.2	28.3							
23-Aug	17	16	16	15	15	15	15	16	18	19	19	21	23	24	26	25	23	22	19	18	16	16	15	14	18.5	25.6							
24-Aug	14	14	14	13	12	12	11	12	14	14	12	10	11	12	12	14	15	15	14	13	12	11	10	10	12.6	15.1							
25-Aug	10	9	10	11	11	11	11	12	13	15	16	17	18	18	18	18	18	17	16	16	15	13	12	11	13.9	18.1							
26-Aug	10	10	9	8	7	6	7	10	13	17	18	17	20	22	23	23	23	22	21	19	17	16	15	16	15.5	23.0							
27-Aug	15	14	14	13	13	13	13	14	16	18	20	22	23	23	22	21	21	20	20	18	17	16	15	15	17.3	22.9							
28-Aug	15	14	13	11	10	10	10	13	16	18	19	20	21	22	23	24	23	24	23	21	18	16	15	14	17.2	23.7							
29-Aug	12	13	14	13	13	13	14	15	15	18	20	22	23	24	25	25	25	24	23	22	20	19	18	17	18.7	24.9							
30-Aug	16	16	15	13	12	10	9	11	14	15	19	21	22	25	26	26	26	25	22	21	21	20	18	17	18.3	26.3							
31-Aug	15	16	15	14	13	12	13	15	15	15	16	19	20	20	20	19	19	19	19	17	16	15	12	12	16.0	20.2							
13.9 13.1 12.3 11.6 11.1 10.9 11.6 13.6 15.4 17.3 19.0 20.3 21.6 22.7 23.0 22.9 22.8 22.5 21.4 20.1 18.4 16.9 15.7 14.8																								Diurnal Average									
18.3 17.1 16.0 15.6 15.3 15.2 15.3 18.3 19.8 23.3 24.9 27.3 28.8 29.7 30.5 30.7 30.7 30.4 29.6 27.8 25.6 23.2 21.3 19.7																								Diurnal Maximum									

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - August 2017



Hourly Averages

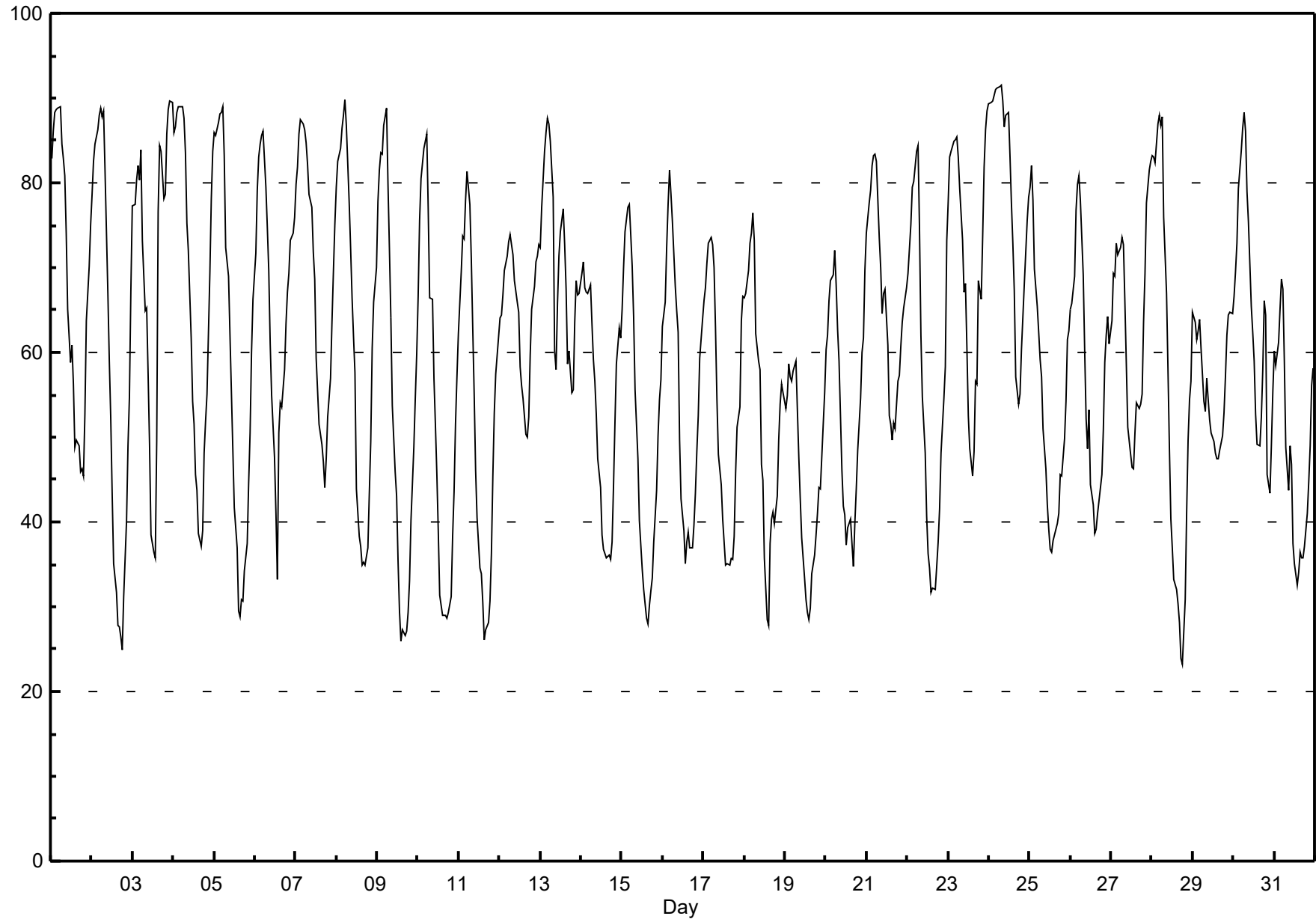
Relative Humidity (RH) - %

Henry Pirker - August 2017

Maximum Value: 91.5 % on Aug 24 08:00																								Maximum Daily Average: 78.7 % on Aug 24										Hours in Service: 744	
Minimum Value: 23 % on Aug 28 19:00																								Minimum Daily Average: 44.8 % on Aug 19										Hours of Data: 744	
Maximum Diurnal Average: 79.9 % at hour 6																								Minimum Diurnal Average: 41.3 % at hour 15										Hours of Missing Data: 0	
Monthly Average: 59.70 %																								Percentiles: P ₁ = 27.1 P ₁₀ = 35.6 Q ₁ = 45.5 Median = 60.2 Q ₃ = 73.6 P ₉₀ = 84.4 P ₉₉ = 89.6										Hours of Calibration: 0	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	83	86	88	89	89	89	85	83	81	74	65	59	61	56	49	50	49	46	46	45	53	64	70	75	68.1	88.9									
2-Aug	79	83	85	86	88	89	88	88	82	67	59	52	43	35	32	28	28	26	25	31	40	49	55	67	58.5	88.8									
3-Aug	77	77	80	82	80	84	73	65	65	57	49	39	36	36	50	77	84	84	78	79	86	89	90	89	71.1	89.7									
4-Aug	86	87	88	89	89	89	88	83	75	72	62	54	51	46	44	39	37	39	48	52	55	69	78	84	66.8	89.0									
5-Aug	86	86	87	88	88	89	83	72	69	62	55	48	42	37	30	29	31	31	34	38	45	50	60	66	58.6	89.0									
6-Aug	72	79	83	85	86	86	80	75	70	61	55	48	41	33	50	54	54	58	63	67	69	73	74	76	66.3	86.0									
7-Aug	80	82	86	87	87	86	85	82	79	77	72	69	59	55	52	49	47	44	48	52	57	64	69	75	68.5	87.4									
8-Aug	80	83	84	86	88	90	87	78	72	67	62	58	44	38	37	35	35	35	37	43	49	61	66	70	61.8	89.8									
9-Aug	78	82	83	83	87	89	80	72	64	54	46	43	35	29	26	27	27	27	29	33	40	49	55	60	54.1	88.7									
10-Aug	67	76	80	84	85	86	77	67	66	57	52	46	39	31	29	29	29	29	29	31	38	44	52	57	53.3	85.8									
11-Aug	62	70	74	73	78	81	77	71	63	55	46	40	35	34	30	26	27	28	31	36	45	53	57	62	52.3	81.3									
12-Aug	64	64	67	70	71	73	74	73	72	68	66	65	58	56	55	50	50	52	60	65	68	71	71	73	64.8	73.9									
13-Aug	72	77	84	86	88	87	85	78	60	58	66	71	74	77	73	67	59	60	55	56	64	68	67	67	70.8	87.6									
14-Aug	69	71	68	67	67	68	63	59	57	53	47	44	38	37	36	36	36	36	38	44	52	59	63	62	52.9	70.6									
15-Aug	65	70	74	77	77	74	70	64	56	48	40	37	34	32	29	28	30	32	33	38	44	50	54	57	50.6	77.4									
16-Aug	63	66	72	78	81	79	75	68	65	62	50	43	39	35	38	39	37	37	40	43	48	53	59	64	55.6	81.5									
17-Aug	66	68	71	73	74	73	70	63	54	48	44	40	38	35	35	35	36	36	38	46	51	53	64	67	53.2	73.6									
18-Aug	66	67	70	73	74	76	73	62	59	58	47	45	36	29	28	37	40	41	40	43	50	54	56	55	53.3	76.4									
19-Aug	53	55	59	57	57	58	59	53	48	43	38	33	31	29	28	30	34	36	38	41	44	44	52	55	44.8	59.1									
20-Aug	60	62	66	68	69	72	68	63	59	46	42	41	37	39	40	37	35	40	44	48	55	60	62	70	53.5	72.0									
21-Aug	74	78	79	82	83	83	83	74	70	65	67	67	61	53	52	50	52	51	57	57	61	64	65	68	66.4	83.3									
22-Aug	69	72	75	79	80	84	84	75	62	55	48	41	36	35	32	32	32	35	38	41	48	55	58	73	55.8	84.5									
23-Aug	78	83	84	85	85	85	83	79	73	67	68	61	53	49	45	48	57	56	68	66	74	82	86	88	71.0	88.5									
24-Aug	89	89	90	90	91	91	91	91	90	87	88	88	83	78	73	67	57	54	55	60	64	68	76	78	78.7	91.5									
25-Aug	80	82	78	70	65	62	59	57	51	46	42	39	37	36	38	39	40	41	46	45	50	54	62	63	53.4	82.0									
26-Aug	65	66	69	77	80	81	78	69	60	52	49	53	44	42	39	39	41	43	46	51	59	62	64	61	57.9	80.9									
27-Aug	64	69	69	73	72	72	74	73	66	59	51	48	46	46	50	54	53	54	55	64	69	78	81	83	63.5	82.6									
28-Aug	83	83	82	87	88	87	88	76	67	58	49	40	37	33	32	30	28	24	23	31	41	50	54	57	55.4	88.0									
29-Aug	65	64	62	63	64	60	54	53	57	54	52	50	49	48	47	47	48	50	53	57	62	64	65	65	56.5	64.8									
30-Aug	67	69	73	79	84	87	88	86	79	75	65	62	59	53	49	49	52	58	66	64	46	43	49	55	65.0	88.3									
31-Aug	60	58	61	65	69	67	59	49	44	49	47	37	35	33	34	36	36	36	37	41	45	49	56	58	48.4	68.7									
71.7 74.3 76.5 78.5 79.5 79.9 76.8 71.0 65.6 59.8 54.5 50.4 45.6 42.1 41.3 41.8 42.0 42.5 45.1 48.7 53.9 59.5 64.2 67.7																								Diurnal Average											
89.3 89.5 89.6 90.3 91.0 91.2 91.3 91.5 89.6 86.6 87.9 88.3 83.3 77.7 72.8 76.6 84.3 83.7 78.2 78.7 85.7 88.7 89.7 89.4																								Diurnal Maximum											

Hourly Averages

Relative Humidity (RH) - %
Henry Pirker - August 2017



Hourly Averages

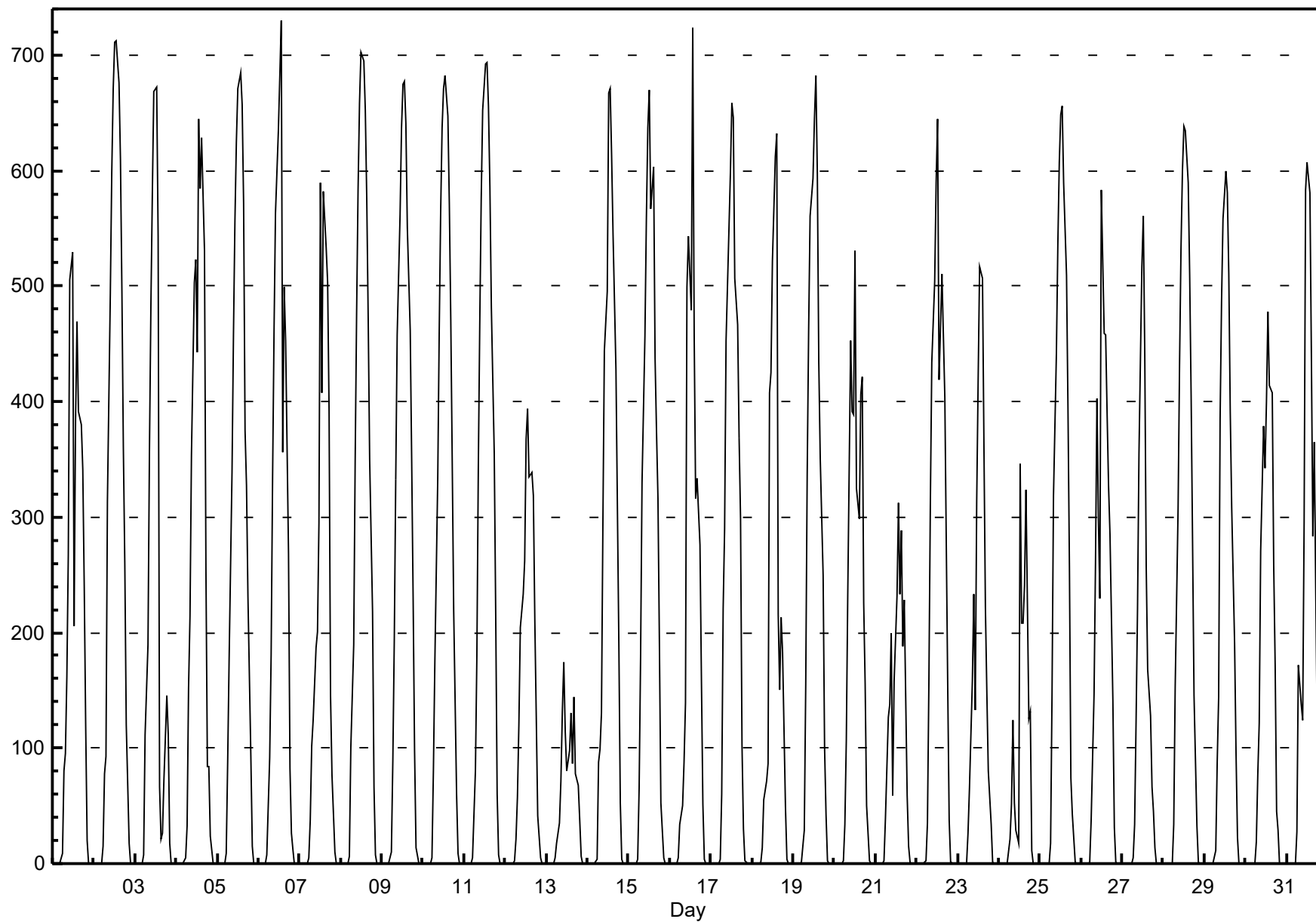
Solar Radiation (SR) - W/m²

Henry Pirker - August 2017

Maximum Value: 729.7 W/m ² on Aug 6 14:00																					Maximum Daily Average: 259.3 W/m ² on Aug 2					Hours in Service: 744	
Minimum Value: 0 W/m ² on Aug 1 01:00																					Minimum Daily Average: 53.2 W/m ² on Aug 13					Hours of Data: 744	
Maximum Diurnal Average: 548.8 W/m ² at hour 13																					Minimum Diurnal Average: 0.0 W/m ² at hour 23					Hours of Missing Data: 0	
Monthly Average: 185.26 W/m ²																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 66.8 Q ₃ = 352.8 P ₉₀ = 568.4 P ₉₉ = 692.3					Hours of Calibration: 0	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	0	0	0	9	80	96	161	267	505	529	206	384	469	391	380	341	239	119	19	1	0	0	174.8	528.9	
2-Aug	0	0	0	0	0	15	78	92	313	493	599	671	712	712	677	610	496	360	259	120	17	1	0	0	259.3	712.4	
3-Aug	0	0	0	0	0	8	112	190	356	481	579	668	673	543	67	21	27	73	146	112	18	0	0	0	169.7	672.6	
4-Aug	0	0	0	0	0	5	33	152	215	353	503	522	443	644	585	628	530	255	84	84	23	1	0	0	210.8	644.2	
5-Aug	0	0	0	0	0	9	88	176	339	458	556	624	671	685	657	572	375	328	231	93	15	0	0	0	245.0	685.4	
6-Aug	0	0	0	0	0	7	92	180	334	461	563	635	683	730	356	499	453	268	83	26	13	0	0	0	224.3	729.7	
7-Aug	0	0	0	0	0	5	37	102	125	187	201	295	589	407	582	534	503	391	146	76	11	0	0	0	174.6	588.9	
8-Aug	0	0	0	0	0	7	101	189	349	476	584	659	702	694	652	576	471	349	219	67	8	0	0	0	254.3	702.4	
9-Aug	0	0	0	0	0	10	89	193	333	458	562	637	674	677	641	551	462	350	231	98	14	0	0	0	249.2	677.2	
10-Aug	0	0	0	0	0	5	81	175	334	459	564	637	671	682	647	570	471	348	219	61	9	0	0	0	247.2	682.1	
11-Aug	0	0	0	0	0	5	80	180	342	468	575	652	693	693	656	586	482	354	217	60	8	0	0	0	252.1	693.3	
12-Aug	0	0	0	0	0	2	21	57	121	204	233	262	368	394	335	338	319	211	127	41	5	0	0	0	126.7	394.1	
13-Aug	0	0	0	0	0	4	18	35	71	132	174	114	80	98	130	87	144	78	67	37	7	0	0	0	53.2	174.5	
14-Aug	0	0	0	0	0	3	88	99	131	296	444	495	668	671	614	545	428	308	191	53	4	0	0	0	209.9	671.0	
15-Aug	0	0	0	0	0	4	66	179	330	457	558	637	670	567	604	438	374	317	189	52	5	0	0	0	226.9	670.1	
16-Aug	0	0	0	0	0	5	33	50	88	140	499	543	479	724	458	316	333	276	159	51	4	0	0	0	173.3	723.8	
17-Aug	0	0	0	0	0	3	61	220	290	453	549	598	659	646	507	467	369	299	103	31	2	0	0	0	219.0	658.6	
18-Aug	0	0	0	0	0	1	14	55	72	86	407	425	522	612	632	216	150	214	183	49	4	0	0	0	151.8	631.9	
19-Aug	0	0	0	0	0	2	29	156	337	462	561	594	644	682	598	434	351	250	100	43	2	0	0	0	218.6	682.4	
20-Aug	0	0	0	0	0	2	34	107	234	453	391	388	530	324	298	406	421	226	156	50	2	0	0	0	167.6	530.2	
21-Aug	0	0	0	0	0	2	38	127	138	199	59	158	232	312	234	289	189	228	59	14	1	0	0	0	94.9	311.9	
22-Aug	0	0	0	0	0	2	36	156	311	434	504	590	644	419	465	511	403	277	153	38	2	0	0	0	206.0	644.2	
23-Aug	0	0	0	0	0	0	26	65	158	234	134	314	419	517	507	361	222	148	81	34	1	0	0	0	134.1	516.7	
24-Aug	0	0	0	0	0	0	22	51	125	52	29	17	346	208	209	240	324	125	131	11	1	0	0	0	78.8	345.7	
25-Aug	0	0	0	0	0	0	17	148	319	441	536	607	648	656	589	510	394	258	75	42	1	0	0	0	218.4	656.0	
26-Aug	0	0	0	0	0	1	37	147	261	403	299	230	583	459	458	390	328	285	141	31	1	0	0	0	168.9	583.2	
27-Aug	0	0	0	0	0	1	5	34	123	221	355	516	560	441	258	168	128	67	46	14	0	0	0	0	122.4	560.2	
28-Aug	0	0	0	0	0	1	34	153	307	431	532	600	639	634	590	509	405	277	145	32	1	0	0	0	220.4	638.6	
29-Aug	0	0	0	0	0	0	12	88	145	386	486	559	599	581	510	391	309	190	95	22	0	0	0	0	182.3	599.4	
30-Aug	0	0	0	0	0	0	19	77	121	271	379	342	400	477	413	408	258	172	46	28	0	0	0	0	142.2	477.4	
31-Aug	0	0	0	0	0	0	28	172	138	125	296	584	608	581	440	284	365	239	117	19	0	0	0	0	166.5	607.6	
0.0 0.0 0.0 0.0 0.0 3.9 48.6 125.8 226.4 336.8 426.4 487.2 548.8 543.8 478.6 414.3 350.5 253.6 143.1 51.9 6.4 0.1 0.0 0.0																									Diurnal Average		
0.1 0.1 0.1 0.1 0.5 14.5 111.5 220.2 355.8 493.0 598.8 671.2 711.6 729.7 676.5 628.2 530.3 390.8 259.4 120.4 23.3 0.6 0.0 0.0																									Diurnal Maximum		

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	12	3	0	5	6	7	7	11	9	10	10	9	10	7	6	4	5	4	5	3	1	6	5	4	4.3	11.6
Dir	345	337	159	251	228	256	294	299	309	298	297	292	312	315	326	342	346	308	355	359	356	102	121	96	309.5	345.1
2 Spd	4	3	3	4	3	4	4	2	1	3	4	4	2	3	5	4	2	7	5	5	7	5	4	1	1.5	7.1
Dir	108	111	95	102	81	103	134	156	167	147	114	135	101	303	293	231	221	298	332	80	88	101	110	84	106.4	87.7
3 Spd	1	1	2	2	3	2	1	3	4	5	6	7	7	6	7	19	7	5	5	3	3	3	1	5	0.5	18.6
Dir	298	306	282	278	321	284	313	160	130	125	122	132	120	133	290	319	331	351	285	171	198	148	51	318	304.7	319.3
4 Spd	6	6	4	4	5	4	4	5	7	7	5	5	6	8	7	7	8	10	11	7	4	3	2	1	5.1	11.1
Dir	333	312	292	292	288	295	283	255	278	291	256	268	279	285	276	288	305	327	332	331	350	300	299	131	298.5	332.5
5 Spd	2	2	4	3	4	3	5	3	3	4	5	5	5	4	3	3	2	4	5	8	7	5	4	2	1.4	7.7
Dir	292	339	301	291	312	280	249	234	203	186	166	169	206	189	294	259	269	305	139	114	123	115	140	91	194.2	114.0
6 Spd	1	1	1	3	2	2	2	5	5	4	3	4	5	4	11	11	10	9	10	6	8	7	4	5	3.1	11.3
Dir	48	46	294	293	315	291	282	275	291	261	229	276	274	280	348	15	21	30	22	39	32	73	45	33	357.3	14.5
7 Spd	6	7	5	4	4	5	5	6	4	6	5	5	3	2	4	5	5	3	5	7	6	6	6	6	4.0	7.4
Dir	31	37	47	30	33	33	52	64	74	80	78	103	110	123	116	116	132	136	154	111	108	101	107	105	85.6	110.5
8 Spd	5	4	4	2	2	1	4	2	2	3	4	6	5	4	1	2	4	2	3	5	5	4	3	3	2.6	6.4
Dir	101	102	97	72	68	143	106	133	155	166	128	163	179	259	223	208	109	128	146	116	113	133	128	105	130.4	162.5
9 Spd	1	2	1	2	1	1	0	3	4	4	3	4	3	3	4	4	5	6	5	5	8	7	6	4	0.6	7.6
Dir	85	292	309	300	222	226	255	190	232	231	229	169	149	242	225	264	274	293	295	31	75	88	88	99	226.6	75.5
10 Spd	2	1	3	2	1	2	2	2	3	1	3	7	6	8	5	4	6	5	7	8	5	7	6	6	2.6	7.8
Dir	63	330	306	303	295	275	310	261	240	216	158	151	131	139	95	154	111	88	106	99	97	87	91	102	112.9	99.4
11 Spd	4	2	2	4	5	2	4	6	7	7	10	11	13	13	15	14	15	14	14	11	10	11	10	11	8.7	15.3
Dir	98	81	70	90	92	101	100	101	120	123	125	120	122	116	110	125	114	111	102	95	84	93	94	102	107.6	110.4
12 Spd	10	11	9	7	6	4	5	4	2	3	2	3	1	4	4	3	6	6	6	7	7	7	9	8	5.4	10.5
Dir	102	102	90	87	94	99	94	112	145	162	135	145	167	104	115	71	82	83	88	85	89	92	93	86	96.9	101.8
13 Spd	9	2	3	3	4	4	5	7	14	21	19	11	8	8	9	15	13	12	15	12	5	5	6	6	7.4	20.8
Dir	83	207	343	277	281	292	331	292	285	269	274	273	230	234	235	245	244	251	259	248	236	224	220	227	258.5	269.2
14 Spd	6	5	7	6	7	8	10	12	12	16	17	16	19	17	17	17	17	15	16	13	10	11	8	12	11.9	18.6
Dir	237	248	253	292	278	263	257	254	249	251	255	258	277	259	241	251	244	238	240	238	226	233	236	248	250.3	277.0
15 Spd	10	8	6	4	5	5	9	11	12	20	19	17	16	15	13	14	18	18	17	16	13	9	10	9	11.5	20.1
Dir	243	235	236	251	216	231	230	229	265	271	287	291	287	290	292	269	253	254	254	254	247	244	246	251	260.8	271.0
16 Spd	6	4	1	2	4	4	3	4	5	3	12	22	25	23	22	20	18	21	20	16	16	11	8	8	10.6	25.2
Dir	232	209	117	145	140	153	183	195	193	220	224	233	256	245	252	263	258	251	254	257	253	242	231	237	242.8	256.0
17 Spd	8	8	5	5	6	10	9	7	13	20	20	22	18	18	15	15	15	15	16	9	6	3	4	4	10.8	21.8
Dir	249	244	242	244	236	239	236	237	254	258	257	266	255	263	257	263	261	260	257	284	283	305	169	163	255.3	266.3
18 Spd	3	4	2	2	3	2	5	10	11	12	19	19	18	29	29	29	26	27	26	21	14	11	12	13	13.3	29.2
Dir	161	155	162	186	156	159	187	236	247	243	241	289	262	253	261	276	255	249	246	244	238	234	237	243	249.0	261.2
19 Spd	14	14	13	15	16	14	13	18	25	25	23	23	23	25	28	27	24	26	24	17	11	11	8	8	18.4	27.9
Dir	247	248	245	248	251	257	249	254	261	262	267	275	265	254	263	261	255	253	255	261	250	247	235	237	256.5	263.0
20 Spd	7	6	4	4	6	5	4	4	4	16	17	17	19	17	15	16	18	17	22	18	11	9	10	3	10.7	21.6
Dir	234	235	297	288	265	275	262	297	287	280	288	286	284	267	276	284	280	251	252	250	245	242	246	248	267.8	252.3
21 Spd	3	3	2	1	1	4	4	4	3	4	4	4	5	9	11	10	13	12	10	8	6	5	6	5	4.5	13.3
Dir	312	284	308	265	135	147	153	156	157	165	150	157	187	242	247	235	245	241	238	235	232	238	230	228	225.1	245.4
22 Spd	4	6	3	0	3	2	3	3	4	5	3	3	5	6	3	5	4	8	10	9	6	7	7	13	2.7	12.6
Dir	263	300	296	285	261	173	143	163	215	224	231	208	197	201	259	154	150	110	110	105	95	100	169	172	164.3	172.3

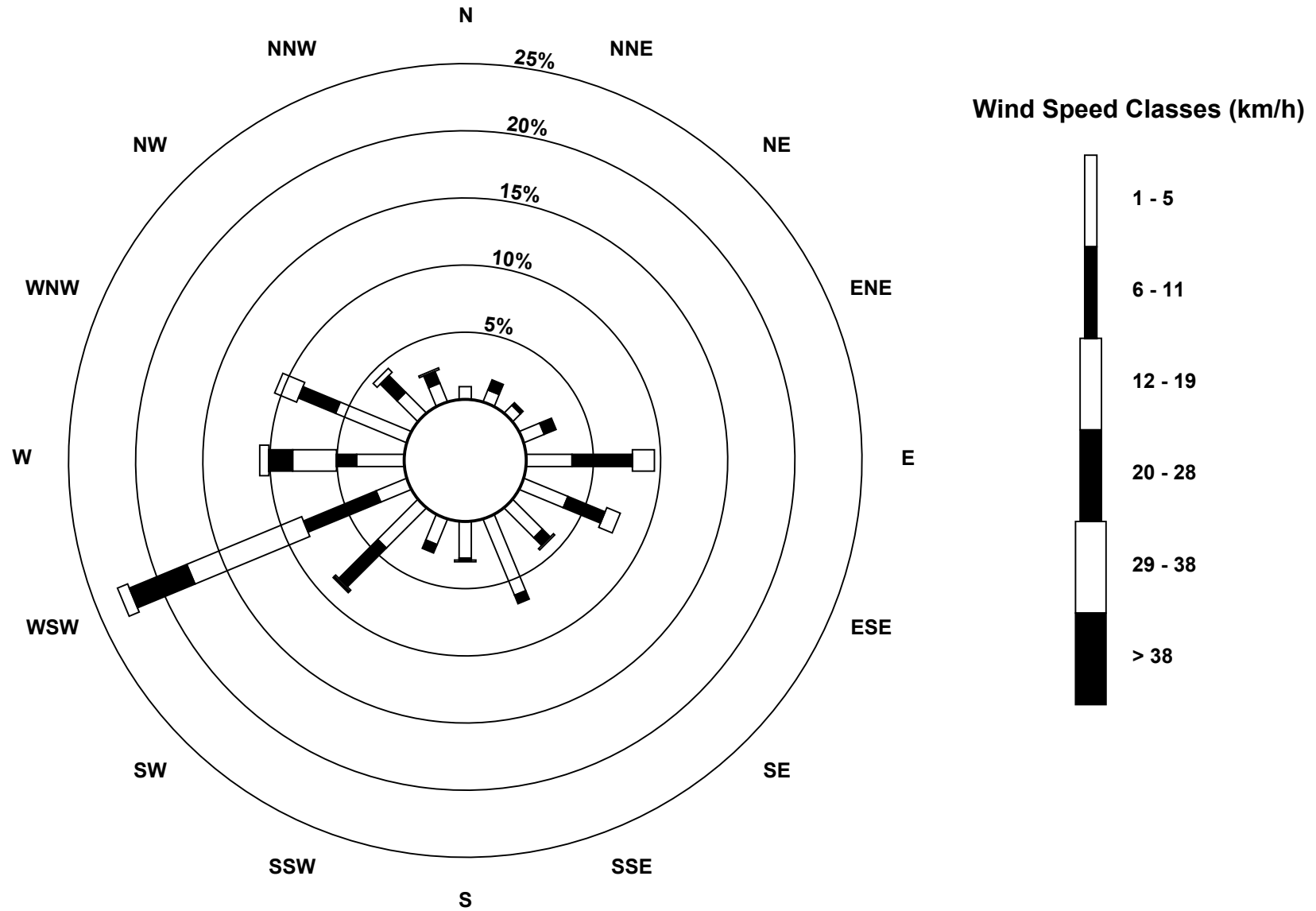
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	5	6	4	5	5	2	4	3	5	5	6	5	3	3	4	7	9	10	5	5	2	3	6	4	2.8	9.7	
Dir	185	165	159	174	187	216	235	231	235	233	212	206	210	195	174	152	137	122	320	10	182	136	241	15	185.5	122.5	
24 Spd	2	4	4	3	2	1	3	3	0	8	14	18	21	24	18	17	19	19	22	19	14	13	10	11	9.8	24.4	
Dir	168	95	196	161	149	298	340	352	90	301	302	247	273	257	264	246	262	254	256	254	249	244	257	254	258.5	257.3	
25 Spd	8	9	13	16	18	20	22	21	26	28	29	29	28	28	30	30	34	31	20	21	17	11	7	7	20.8	33.6	
Dir	246	251	241	241	253	250	246	243	250	252	258	258	257	256	256	260	264	254	260	256	251	247	242	242	253.5	264.2	
26 Spd	7	8	4	3	4	4	3	2	4	6	6	6	6	10	16	16	18	20	14	11	7	6	4	8	7.0	20.2	
Dir	245	245	231	178	163	155	142	167	173	200	208	169	204	215	239	253	245	255	238	252	253	229	232	222	229.7	254.6	
27 Spd	6	4	5	4	5	6	3	4	5	9	17	18	16	18	16	12	13	17	17	13	11	7	6	4	9.4	17.8	
Dir	233	235	230	235	266	295	292	245	281	293	288	277	259	268	279	276	258	266	257	260	247	238	237	262	265.0	267.8	
28 Spd	4	4	4	2	3	2	2	6	8	11	11	13	12	8	8	8	10	6	3	3	3	4	4	4	4.6	12.9	
Dir	268	250	298	297	324	292	328	315	305	307	302	308	315	306	314	310	317	343	14	61	82	74	66	59	317.5	308.1	
29 Spd	3	5	7	8	8	9	10	13	13	14	14	15	17	17	17	17	17	17	14	10	11	12	12	11	12.1	17.5	
Dir	114	83	90	79	76	81	78	84	92	99	94	92	102	102	96	96	91	87	83	78	81	87	88	92	90.1	96.3	
30 Spd	10	7	4	1	1	3	2	3	2	4	3	2	2	1	2	5	5	5	4	1	6	6	7	3	0.7	10.1	
Dir	90	78	69	36	344	305	270	289	233	206	259	251	190	148	153	119	149	159	152	230	265	275	296	253	201.4	89.6	
31 Spd	4	7	6	5	7	7	12	17	23	10	17	28	28	28	31	28	29	27	26	18	15	12	8	9	16.5	30.8	
Dir	249	284	253	262	276	276	257	243	251	239	245	254	259	253	256	253	260	251	250	244	247	241	227	238	252.2	255.6	
Spd	1.4	1.6	1.4	1.7	2.0	2.5	2.5	3.6	5.1	6.4	6.8	7.2	7.4	8.4	8.3	7.9	7.5	7.5	6.9	4.3	2.9	2.3	2.4	2.1	Diurnal Average		
Dir	235.0	240.9	248.0	249.1	251.0	253.0	243.9	242.9	251.4	254.2	256.3	254.1	255.0	250.2	260.1	260.7	255.4	253.6	253.1	247.4	231.3	201.6	203.0	206.1	Diurnal Maximum		
Spd	14.2	13.7	12.9	15.9	17.7	20.3	21.9	20.9	25.9	28.4	29.4	29.0	27.8	29.0	30.8	29.9	33.6	31.1	26.4	21.3	17.4	13.1	12.4	13.4	Diurnal Maximum		
Dir	246.7	247.8	244.6	240.9	252.8	250.3	246.5	243.4	250.4	252.5	257.6	258.0	258.6	252.7	255.6	260.3	264.2	254.4	249.6	244.3	250.7	244.1	88.2	242.8			
Maximum Speed Value: 34 km/h on Aug 25 17:00								Minimum Speed Value: 0 km/h on Aug 9 07:00												Hours in Service:				744			
Maximum Daily Speed Average: 20.8 km/h on Aug 25								Minimum Daily Speed Average: 0.5 km/h on Aug 8												Hours of Data:				744			
Maximum Diurnal Speed Average: 8.4 km/h at hour 14								Minimum Diurnal Speed Average: 1.4 km/h at hour 1												Hours of Missing Data:				0			
Monthly Average Velocity: 4.48 km/h 249.81 deg								Speed Percentiles: P ₁ = 0.9 P ₁₀ = 2.3 Q ₁ = 3.7 Median = 6.0 Q ₃ = 11.7 P ₉₀ = 18.0 P ₉₉ = 29.3												Percent Operational Time:				100.0			
All monthly, daily, and diurnal averages have been calculated using vector methods																											
Frequency Distribution																											
Speed Range (km/h)																											
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total														
North	13		5		3		0		0		0		21														
NorthEast	14		8		0		0		0		0		22														
East	42		57		19		0		0		0		118														
SouthEast	54		23		4		0		0		0		81														
South	41		12		1		0		0		0		54														
SouthWest	40		65		37		7		0		0		149														
West	55		41		70		44		13		0		223														
NorthWest	38		30		8		0		0		0		76														
Total	297		241		142		51		13		0		744														

Wind Rose

Wind Speed (WS) (km/h)
Henry Pirker - August 2017



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - August 2017

Maximum Speed: 34 km/h on Aug 25 17:00																				Maximum Daily Speed Average: 21.2 km/h on Aug 25										Hours in Service: 744																				
Minimum Speed: 1 km/h on Aug 21 04:00																				Minimum Daily Speed Average: 4.1 km/h on Aug 8										Hours of Data: 744																				
Maximum Diurnal Speed Average: 13.6 km/h at hour 18																				Minimum Diurnal Speed Average: 4.6 km/h at hour 4										Hours of Missing Data: 0																				
Monthly Average Speed: 9.07 km/h																				Percentiles: P ₁ = 1.5 P ₁₀ = 2.9 Q ₁ = 4.3 Median = 6.5 Q ₃ = 12.3 P ₉₀ = 18.7 P ₉₉ = 29.9										Percent Operational Time: 100.0																				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																										
1-Aug	12	5	4	6	6	7	8	11	9	10	11	10	10	8	7	5	6	5	5	4	2	6	5	4	6.9	11.8																								
2-Aug	4	3	3	4	3	4	4	2	2	3	4	5	4	5	6	4	4	7	5	6	7	5	4	2	4.2	7.2																								
3-Aug	2	2	2	2	3	2	1	3	4	5	7	8	8	7	12	19	8	9	6	4	3	3	3	5	5.4	18.8																								
4-Aug	6	6	4	4	6	4	4	5	7	7	6	6	6	9	8	9	9	11	11	7	4	3	3	2	6.1	11.2																								
5-Aug	2	3	4	3	4	3	5	4	4	5	5	6	6	6	6	4	4	5	5	8	7	6	4	3	4.6	8.1																								
6-Aug	1	1	2	3	3	3	2	5	5	4	3	5	5	5	13	12	10	10	10	6	8	7	5	6	5.6	13.2																								
7-Aug	6	7	6	4	5	5	5	6	4	6	5	6	5	6	5	7	6	5	5	8	6	6	6	6	5.6	7.7																								
8-Aug	5	5	4	2	2	1	4	3	3	4	5	7	6	6	5	4	5	4	4	6	5	4	3	3	4.1	7.3																								
9-Aug	2	3	2	3	1	3	1	3	4	4	4	5	4	6	6	6	6	6	6	6	8	7	6	4	4.4	7.7																								
10-Aug	2	2	4	2	2	2	2	2	3	3	4	7	7	8	6	6	7	6	8	8	5	7	6	6	4.8	8.2																								
11-Aug	4	2	2	4	5	3	4	7	7	7	11	11	14	13	16	14	15	15	14	11	10	11	10	11	9.3	15.6																								
12-Aug	10	11	9	7	6	4	5	4	2	3	3	4	3	5	4	4	6	6	7	8	7	7	9	9	6.0	10.6																								
13-Aug	9	7	4	4	5	4	5	7	15	21	19	11	8	9	9	15	13	13	15	12	5	6	6	6	9.5	21.0																								
14-Aug	6	6	7	7	7	8	11	12	12	16	17	17	19	18	18	17	17	16	16	13	11	11	9	13	12.6	19.1																								
15-Aug	10	8	7	5	5	5	9	12	13	20	19	18	17	15	13	15	18	19	17	16	13	9	10	9	12.6	20.4																								
16-Aug	6	5	2	2	4	4	3	4	5	3	13	22	26	24	23	20	18	21	20	16	16	12	8	8	12.0	25.6																								
17-Aug	8	8	5	5	7	10	9	8	14	21	21	22	19	19	16	16	16	15	17	9	6	3	5	4	11.8	22.4																								
18-Aug	3	5	3	2	4	3	6	11	12	12	20	22	20	29	30	29	27	27	26	22	14	11	12	14	15.1	29.7																								
19-Aug	14	14	13	15	16	15	13	19	25	25	24	24	24	26	29	28	25	27	25	17	11	11	8	9	18.9	28.5																								
20-Aug	7	6	4	4	6	5	5	4	5	16	18	17	20	17	16	16	19	18	22	18	11	9	10	4	11.6	21.8																								
21-Aug	4	3	2	1	2	4	4	4	4	4	4	5	6	10	12	11	14	13	10	8	6	6	6	6	6.1	14.1																								
22-Aug	5	7	4	2	4	2	3	3	4	5	4	4	6	7	4	6	6	8	10	9	6	7	9	14	5.9	13.7																								
23-Aug	8	6	5	5	5	3	4	3	5	5	6	6	4	4	5	7	10	10	13	6	6	10	8	6	6.2	12.8																								
24-Aug	5	6	4	3	2	3	4	3	4	8	15	19	21	25	18	17	20	20	22	19	14	13	11	11	11.9	24.6																								
25-Aug	8	9	13	16	18	20	22	21	26	29	30	29	28	28	31	30	34	31	20	21	17	11	7	7	21.2	33.9																								
26-Aug	7	8	4	4	4	4	3	2	4	6	6	6	7	10	17	17	19	20	14	11	7	6	4	8	8.3	20.5																								
27-Aug	6	5	5	4	5	6	3	4	7	9	17	18	16	18	16	13	13	17	17	13	11	7	6	5	10.1	18.2																								
28-Aug	4	5	6	3	3	2	2	6	8	12	12	13	12	9	9	9	10	7	4	3	4	4	4	4	6.5	13.2																								
29-Aug	4	6	8	8	8	9	11	13	13	14	14	15	18	18	17	18	17	17	14	11	11	12	13	12	12.5	17.9																								
30-Aug	10	8	5	2	2	4	2	3	3	5	4	3	3	2	3	6	6	5	4	3	7	7	7	4	4.4	10.2																								
31-Aug	4	7	6	5	7	8	12	17	23	11	18	28	28	29	31	28	30	28	27	18	15	12	8	9	17.0	31.3																								
																									6.0	5.7	4.9	4.6	5.1	5.2	5.7	6.8	8.3	9.9	11.2	12.2	12.3	12.9	13.3	13.3	13.5	13.6	12.9	10.5	8.5	7.7	7.0	6.8	Diurnal Average	
																									14.3	13.9	13.0	16.1	17.8	20.5	22.1	21.1	26.1	28.8	29.9	29.4	28.4	29.4	31.3	30.4	33.9	31.5	26.6	21.6	17.5	13.2	12.5	13.7	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																		

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - August 2017

Maximum Value: 95.4 deg on Aug 1 03:00																		Hours in Service: 744							
Minimum Value: 5.7 deg on Aug 11 00:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
Percentiles: P ₁ = 7.1 P ₁₀ = 9.0 Q ₁ = 11.1 Median = 16.4 Q ₃ = 32.0 P ₉₀ = 51.2 P ₉₉ = 86.7																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Aug	9	70	95	25	13	14	11	10	16	17	15	25	14	34	36	52	41	63	34	33	71	8	26	9	95.4
2-Aug	12	17	6	11	12	11	18	37	62	51	46	51	76	56	38	34	67	26	34	46	9	8	19	48	75.8
3-Aug	68	40	41	44	26	39	90	38	31	28	23	28	32	26	88	7	76	66	35	51	38	46	87	13	90.2
4-Aug	11	11	14	10	20	16	15	23	24	20	30	27	26	29	34	46	37	18	10	15	24	19	49	74	73.9
5-Aug	27	45	16	17	11	31	11	27	30	33	26	36	43	49	68	63	78	56	48	17	9	11	13	29	77.8
6-Aug	18	55	34	19	31	14	33	28	23	34	41	40	38	59	36	13	20	18	17	20	16	17	25	20	59.4
7-Aug	18	17	21	27	21	23	22	17	29	22	27	32	60	74	54	52	28	67	35	15	10	7	10	10	73.7
8-Aug	9	10	12	45	34	75	24	35	55	36	36	32	35	51	85	71	70	64	34	26	14	10	24	17	84.7
9-Aug	74	28	62	58	65	55	84	30	21	23	41	40	61	62	52	59	46	26	30	29	13	9	12	14	83.7
10-Aug	40	50	34	23	55	32	21	51	42	68	50	30	40	26	46	50	39	35	21	11	12	7	10	6	67.8
11-Aug	10	29	20	25	15	29	15	15	15	19	17	15	20	18	13	17	15	15	9	10	7	8	8	9	28.9
12-Aug	8	7	10	11	13	20	10	22	40	36	41	38	65	29	34	34	24	21	17	12	10	9	10	8	65.4
13-Aug	6	88	34	70	17	21	20	16	7	9	9	22	13	14	14	13	13	17	11	11	17	11	10	12	88.0
14-Aug	12	25	15	25	12	18	12	11	12	11	12	13	13	22	16	17	14	16	11	14	9	8	10	8	25.2
15-Aug	12	9	16	27	11	16	10	9	16	11	11	13	13	15	17	23	13	14	16	10	9	11	13	12	27.3
16-Aug	18	35	62	36	26	11	42	14	20	49	27	12	10	14	13	12	15	11	11	9	8	12	10	10	62.5
17-Aug	12	11	15	15	11	13	10	12	15	12	11	14	18	19	19	18	16	15	13	7	9	30	33	19	32.9
18-Aug	28	35	51	62	19	74	27	11	11	15	12	28	32	10	11	13	12	8	9	10	9	10	8	10	74.0
19-Aug	8	8	8	8	7	9	9	8	9	10	10	14	12	15	13	11	15	11	9	8	14	10	8	9	15.2
20-Aug	12	18	57	20	11	15	40	19	37	12	10	13	12	14	15	12	14	15	8	9	14	9	16	40	56.8
21-Aug	29	15	18	68	47	11	11	17	17	20	15	15	27	29	16	24	20	15	13	11	11	16	10	10	68.2
22-Aug	31	23	35	87	41	44	15	33	26	25	44	56	39	39	55	48	62	19	13	11	8	10	46	25	86.8
23-Aug	52	12	42	11	13	76	17	42	14	16	16	21	58	43	55	27	15	14	76	26	87	74	61	39	86.6
24-Aug	75	61	41	37	44	73	22	63	87	14	13	12	15	7	11	11	10	13	9	9	9	9	13	10	86.7
25-Aug	13	12	9	8	8	7	9	9	8	9	11	10	12	11	10	10	8	9	10	9	7	10	10	10	13.3
26-Aug	8	10	26	30	9	12	17	21	19	24	16	14	30	18	21	16	16	10	18	19	18	9	39	11	38.8
27-Aug	11	14	12	16	22	16	26	26	40	12	8	14	13	13	11	16	13	10	9	11	10	13	14	28	40.2
28-Aug	22	26	42	46	36	42	22	9	17	11	14	13	19	31	27	31	18	24	31	29	14	8	11	19	46.1
29-Aug	42	16	12	9	8	7	8	8	10	13	16	14	13	14	13	12	11	9	9	8	8	7	8	8	42.3
30-Aug	9	16	31	68	54	23	25	10	20	23	28	36	66	71	60	25	23	14	29	79	13	32	12	33	78.7
31-Aug	23	17	20	24	7	13	12	10	8	15	19	10	12	11	10	10	10	10	8	8	8	9	9	10	23.7
74.9 88.0 95.4 86.8 65.0 75.6 90.2 62.6 86.7 67.8 50.2 55.7 75.8 73.7 88.1 70.5 77.8 66.8 76.5 78.7 86.6 73.9 86.7 73.9																									

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

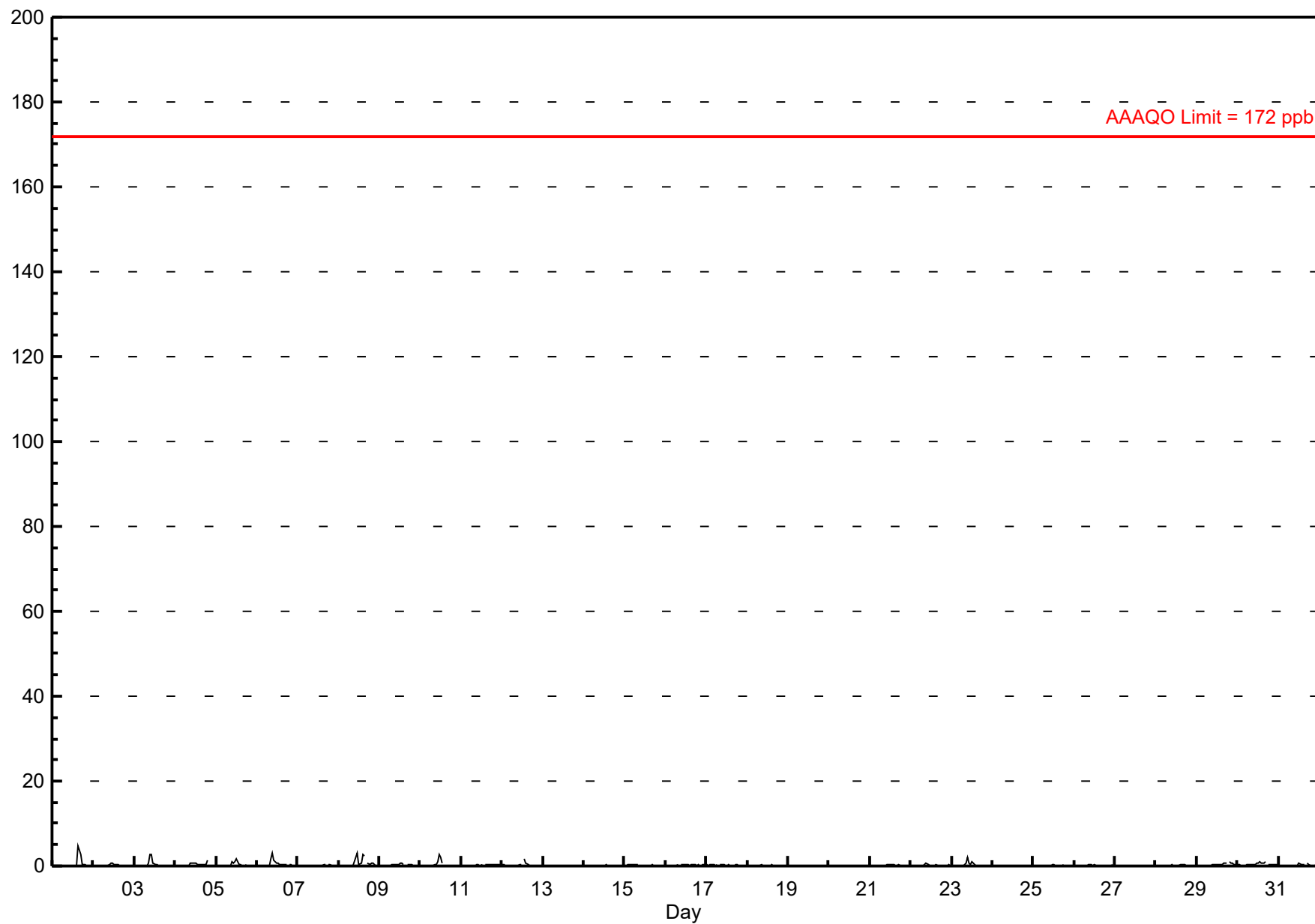
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Evergreen Park - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.7 ppb on Aug 1 16:00 Maximum Daily Average: 0.6 ppb on Aug 8																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 1 02:00 Maximum Diurnal Average: 0.5 ppb at hour 10 Monthly Average: 0.19 ppb																				Minimum Daily Average: 0.0 ppb on Aug 19 Minimum Diurnal Average: 0.0 ppb at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.5						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	0	0	0	0	0	0	0	0	0.4	4.7
2-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.7
3-Aug	0	0	0	0	0	0	0	0	1	3	3	1	0	0	0	0	0	0	0	0	0	A	0	0	0.3	2.8
4-Aug	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	A	0	0	0	0.3	1.4
5-Aug	0	0	0	0	0	0	0	0	0	1	1	1	2	0	0	0	0	0	0	A	0	0	0	0	0.3	1.6
6-Aug	0	0	0	0	0	0	0	0	2	3	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0.4	3.1
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
8-Aug	0	0	0	0	0	0	0	0	0	1	2	3	0	1	3	2	A	1	0	1	1	0	0	0	0.6	2.9
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0.2	0.8
10-Aug	0	0	0	0	0	0	0	0	0	0	1	3	2	1	A	0	0	0	0	0	0	0	0	0	0.3	2.6
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	0	0	0	0	0	0	0	0	0.2	1.6
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
22-Aug	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
23-Aug	0	A	0	0	0	0	0	0	1	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	2.0
24-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	A	0	0.1	0.4
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	1	1	0	0	0	0.3	0.9
30-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0.4	1.0
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0	0	0	0.1	0.5
0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.2 0.5 0.5 0.4 0.4 0.3 0.3 0.4 0.3 0.2 0.1 0.2 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.4 0.3 0.3 0.3 0.3 0.2 0.3 0.4 1.7 3.1 2.6 2.9 1.9 1.6 2.8 4.7 2.8 0.8 0.4 1.4 0.6 0.5 0.4 0.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - August 2017



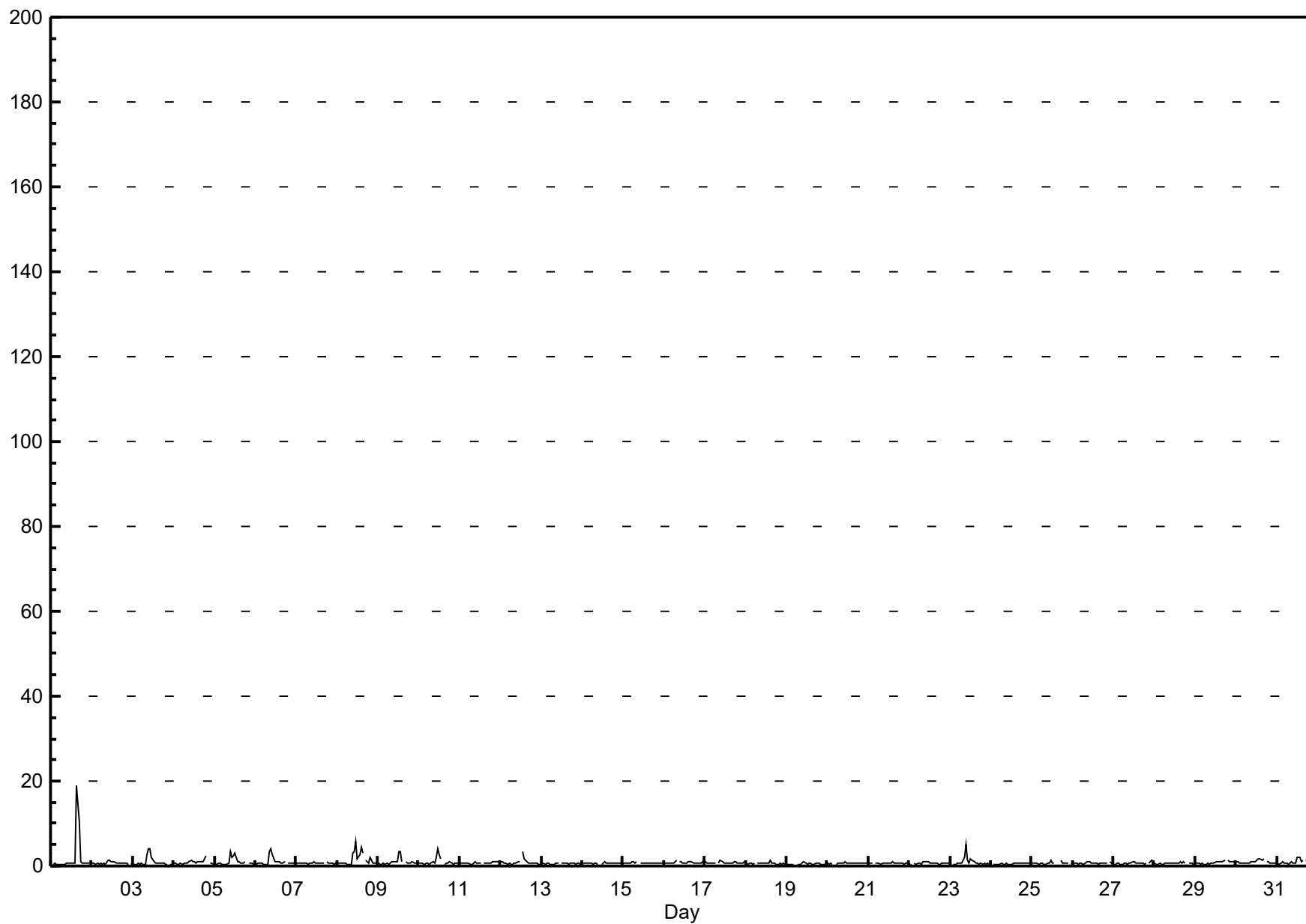
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Evergreen Park - August 2017

Maximum Value: 19.1 ppb on Aug 1 16:00																				Maximum Daily Average: 1.9 ppb on Aug 1										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 19 07:00																				Minimum Daily Average: 0.5 ppb on Aug 19										Hours of Data: 708									
Maximum Diurnal Average: 1.5 ppb at hour 16																				Minimum Diurnal Average: 0.5 ppb at hour 7										Hours of Missing Data: 36									
Monthly Average: 0.82 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.1 P ₉₉ = 4.0										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	0	1	0	0	0	0	0	0	1	1	1	1	1	1	19	10	1	1	1	1	1	1	A	1.9	19.1													
2-Aug	1	1	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	0.7	1.5													
3-Aug	0	0	0	1	0	1	0	0	3	4	4	2	1	1	1	1	1	1	1	0	0	A	0	0	1.0	4.0													
4-Aug	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	1	1	0	0.9	2.2													
5-Aug	0	0	1	1	0	0	0	0	1	3	2	2	3	1	1	1	1	1	1	A	1	1	1	0	1.0	3.3													
6-Aug	0	1	1	1	1	0	1	0	3	4	3	1	1	1	1	1	1	1	A	1	1	1	1	0	1.1	4.0													
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0.7	0.9													
8-Aug	0	1	1	1	1	1	0	0	1	3	4	6	2	3	4	3	A	1	1	2	1	1	1	1	1.6	5.9													
9-Aug	1	0	1	1	0	1	0	1	1	1	1	1	3	4	1	A	1	1	1	1	1	1	1	1	1.0	3.5													
10-Aug	1	1	1	0	1	1	0	1	1	1	2	4	3	2	A	0	1	1	1	1	0	1	1	1	1.0	3.9													
11-Aug	1	1	1	1	1	1	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.1													
12-Aug	1	1	1	1	0	1	0	0	1	1	1	1	A	3	2	1	1	1	1	1	1	1	0	0	0.8	3.5													
13-Aug	1	1	0	1	1	0	0	0	1	1	1	A	1	1	1	1	0	1	1	1	0	1	1	0	0.6	0.8													
14-Aug	1	1	1	1	1	1	1	1	1	0	A	0	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8													
15-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
16-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3													
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3													
18-Aug	1	0	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0.6	1.3													
19-Aug	0	0	0	0	0	A	0	0	0	1	1	1	0	1	1	0	0	1	1	1	0	0	0	1	0.5	1.0													
20-Aug	1	0	1	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
21-Aug	1	1	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.7	0.9													
22-Aug	0	0	A	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.7	1.0													
23-Aug	1	A	1	0	1	1	1	1	2	5	1	1	2	1	1	1	1	0	1	0	1	0	1	0	1.0	5.1													
24-Aug	A	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	A	0.5	0.8													
25-Aug	1	1	1	1	0	1	1	0	0	1	1	1	1	1	C	C	C	1	1	1	1	1	A	1	0.7	1.4													
26-Aug	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.1													
27-Aug	0	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	A	1	1	0	0.6	1.3													
28-Aug	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0.6	0.9													
29-Aug	1	1	1	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.4													
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	A	1	1	1	1	1	1	1.0	1.7													
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	A	1	1	0	1	1	1	1	0.9	2.1													
0.6 0.6 0.6 0.6 0.5 0.6 0.5 0.6 0.9 1.3 1.2 1.2 1.1 1.1 1.0 1.5 1.1 0.8 0.8 0.8 0.7 0.6 0.7 0.6																									Diurnal Average														
0.9 0.9 0.8 0.9 0.8 0.9 1.0 1.3 3.5 5.1 4.0 5.9 3.2 3.5 4.2 19.1 10.5 1.4 1.5 2.2 1.4 1.2 1.3 1.3																									Diurnal Maximum														
C - Calibration A - Automated Daily Zero Span																																							

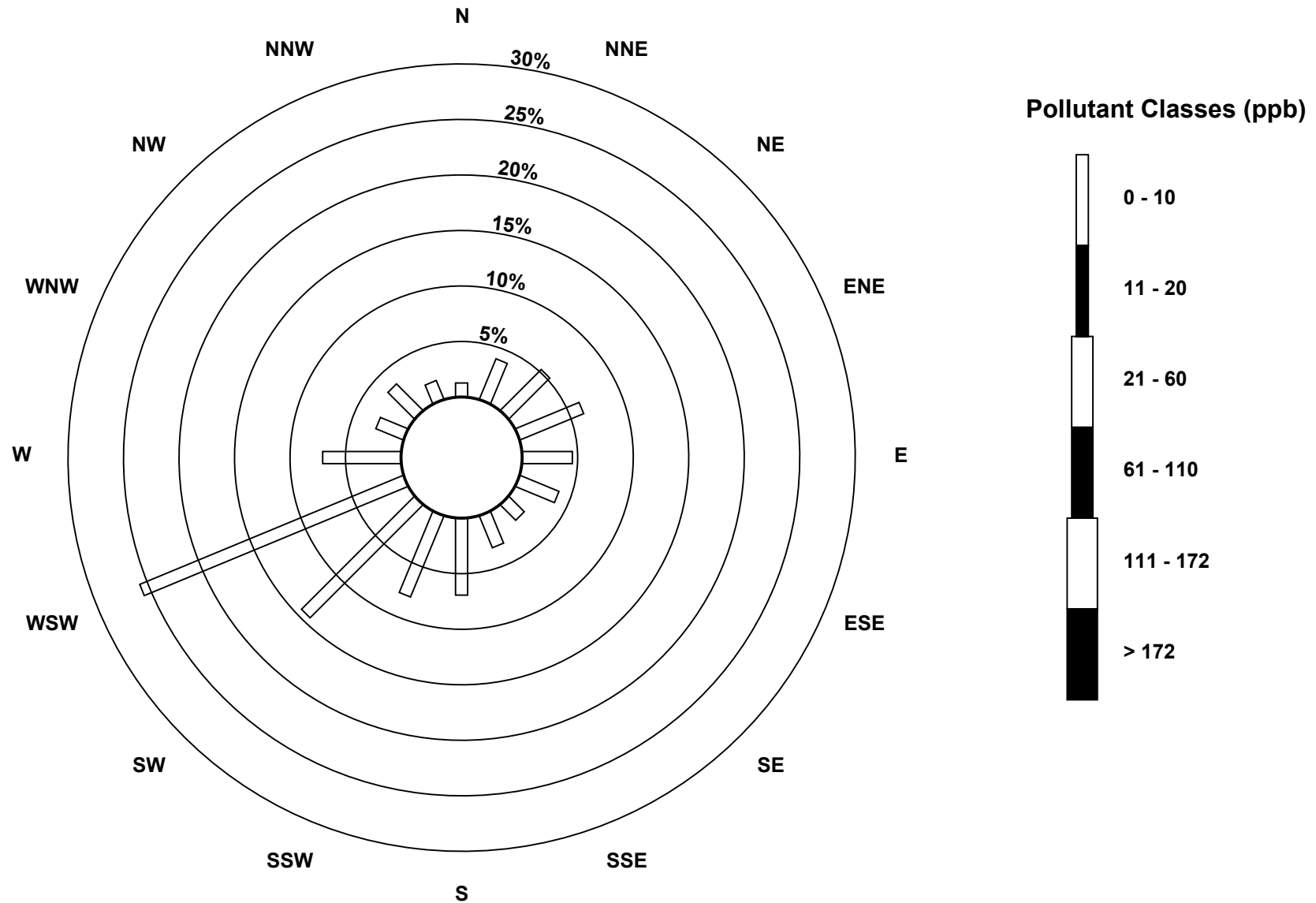
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - August 2017



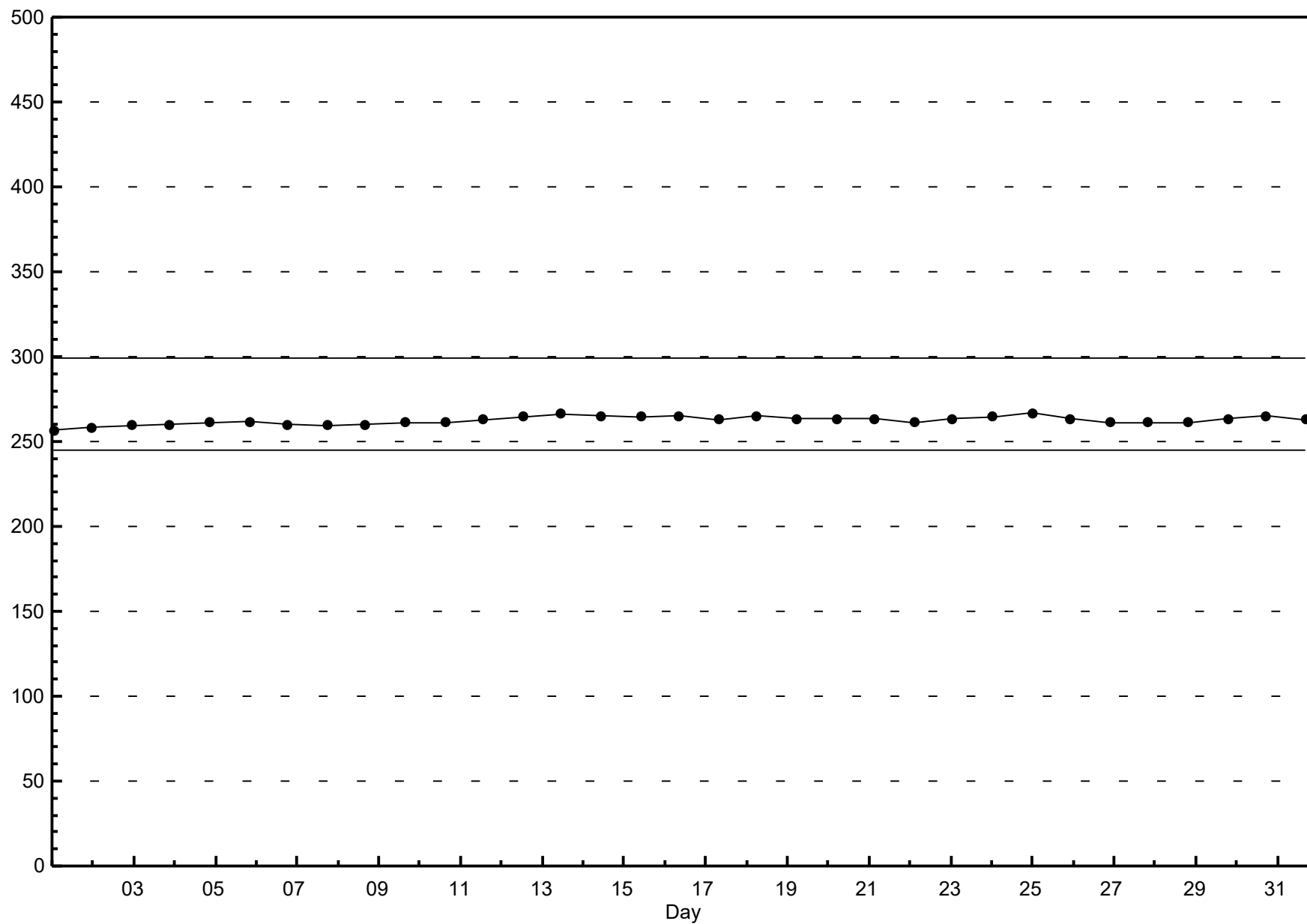
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - August 2017



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - August 2017



Hourly Averages

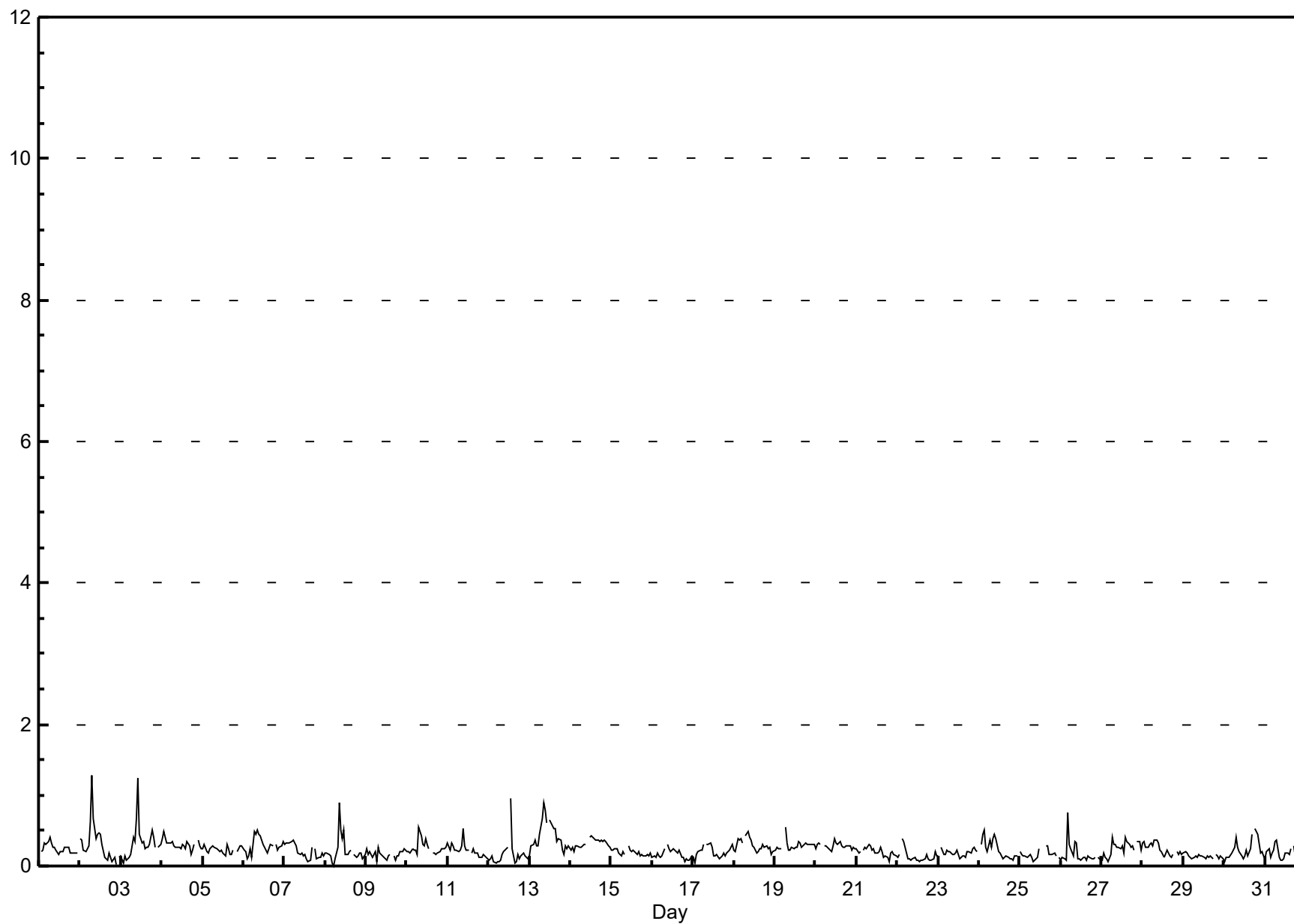
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2017

Maximum Value: 1.3 ppb on Aug 2 08:00																				Maximum Daily Average: 0.4 ppb on Aug 13										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 8 06:00																				Minimum Daily Average: 0.1 ppb on Aug 22										Hours of Data: 708									
Maximum Diurnal Average: 0.3 ppb at hour 8																				Minimum Diurnal Average: 0.2 ppb at hour 20										Hours of Missing Data: 36									
Monthly Average: 0.23 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.7										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4													
2-Aug	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.3													
3-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	A	0	0	0.3	1.2													
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5													
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3													
6-Aug	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.5													
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4													
8-Aug	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.9													
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3													
10-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6													
11-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5													
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0.2	1.0													
13-Aug	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0.4	0.9													
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5													
19-Aug	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5													
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4													
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3													
24-Aug	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5													
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	A	0	0.2	0.3													
26-Aug	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.8													
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4													
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4													
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2													
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.2	0.5													
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4													
0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2																									Diurnal Average														
0.4 0.5 0.4 0.5 0.8 0.4 0.6 1.3 0.9 0.8 1.2 0.5 0.7 1.0 0.5 0.5 0.5 0.4 0.5 0.5 0.5 0.4 0.4 0.3																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - August 2017



Hourly Maximums

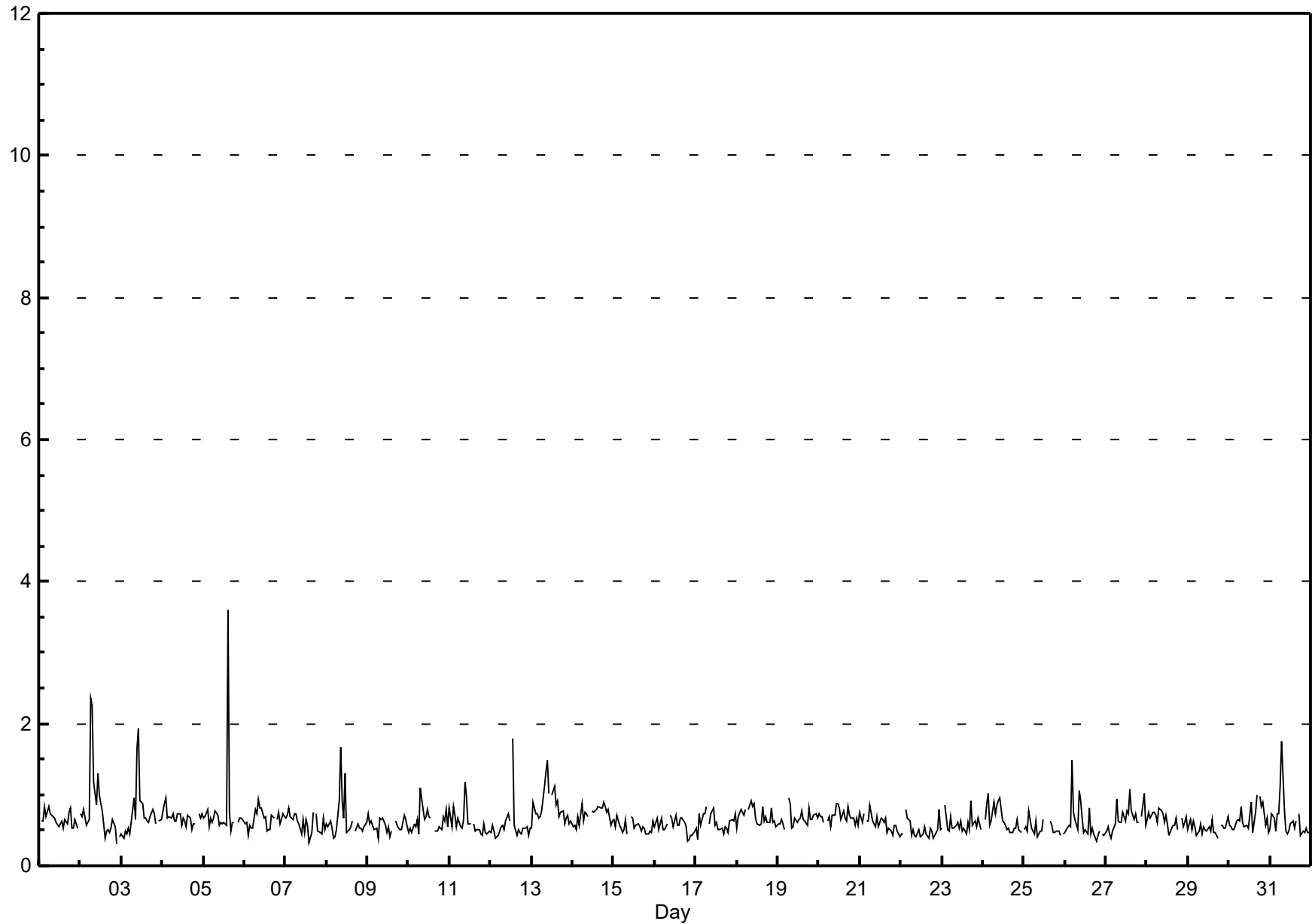
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2017

Maximum Value: 3.6 ppb on Aug 5 15:00																				Maximum Daily Average: 0.8 ppb on Aug 13										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 2 22:00																				Minimum Daily Average: 0.5 ppb on Aug 22										Hours of Data: 708									
Maximum Diurnal Average: 0.8 ppb at hour 8																				Minimum Diurnal Average: 0.6 ppb at hour 20										Hours of Missing Data: 36									
Monthly Average: 0.64 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.6										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.8													
2-Aug	1	1	1	1	1	1	2	2	1	1	1	1	1	1	0	0	0	0	1	1	1	0	A	0	0.8	2.4													
3-Aug	0	0	0	0	1	0	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.9													
4-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0													
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	0	1	1	A	1	1	1	1	0.8	3.6													
6-Aug	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	A	1	1	1	1	1	0.7	0.9													
7-Aug	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	0	1	A	1	0	0	0	1	1	0.6	0.8													
8-Aug	1	1	1	1	0	0	0	1	2	1	1	1	0	1	1	0	A	0	1	1	1	0	1	1	0.7	1.7													
9-Aug	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0	A	1	1	1	1	1	1	1	1	0.6	0.7													
10-Aug	0	1	0	1	1	1	0	1	1	1	1	1	1	1	A	0	0	0	1	1	1	1	1	1	0.6	1.1													
11-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0	0	1	0	0	0	0.6	1.2													
12-Aug	0	1	0	0	0	0	1	1	1	1	1	1	A	2	1	0	1	0	0	1	1	1	0	1	0.6	1.8													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5													
14-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
15-Aug	1	1	1	1	1	0	1	1	0	A	1	1	1	1	1	1	0	1	1	0	0	0	0	1	0.6	0.7													
16-Aug	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	0.7													
17-Aug	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0.6	0.8													
18-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
19-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
20-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
21-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	0	0.6	0.8													
22-Aug	0	0	A	1	1	1	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0	1	1	1	0.5	0.8													
23-Aug	1	A	1	1	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0.6	0.9													
24-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	A	0.7	1.0													
25-Aug	1	1	0	1	1	0	0	1	0	0	0	1	C	C	C	1	1	0	0	0	0	0	A	0	0.5	0.8													
26-Aug	0	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	0	0	0	A	0	0	0.6	1.5													
27-Aug	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.1													
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	0.6	0.8													
29-Aug	1	1	1	1	1	0	0	1	0	1	1	0	1	0	1	0	0	0	A	1	1	1	1	1	0.5	0.7													
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	0	0.7	1.0													
31-Aug	1	1	1	0	1	1	1	2	1	0	0	0	1	1	1	1	A	1	0	0	0	1	0	0	0.6	1.7													
Diurnal Average																									0.6	0.8													
Diurnal Maximum																									0.8	1.0													
C - Calibration																									A - Automated Daily Zero Span														

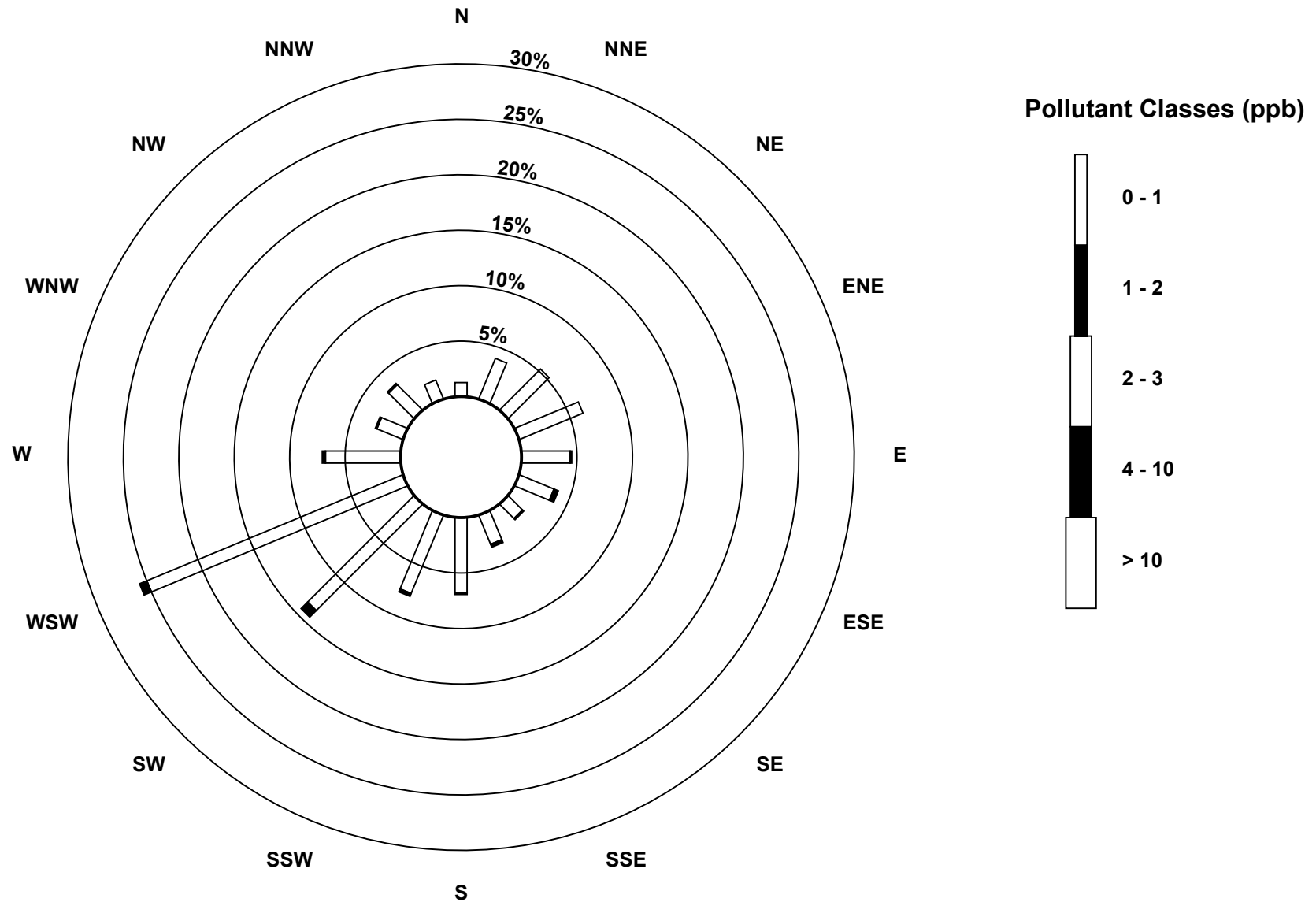
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - August 2017



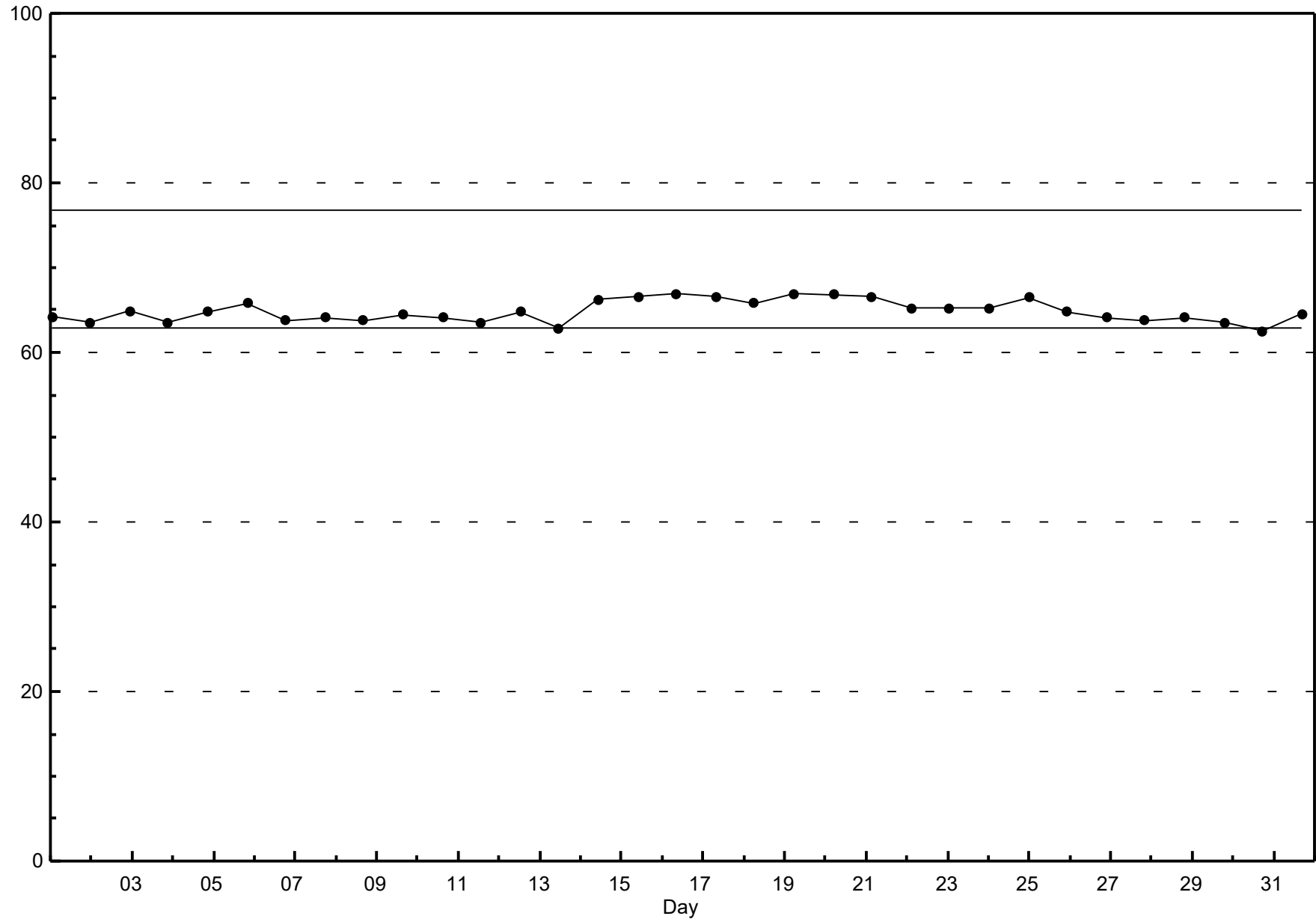
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - August 2017



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - August 2017



Hourly Averages

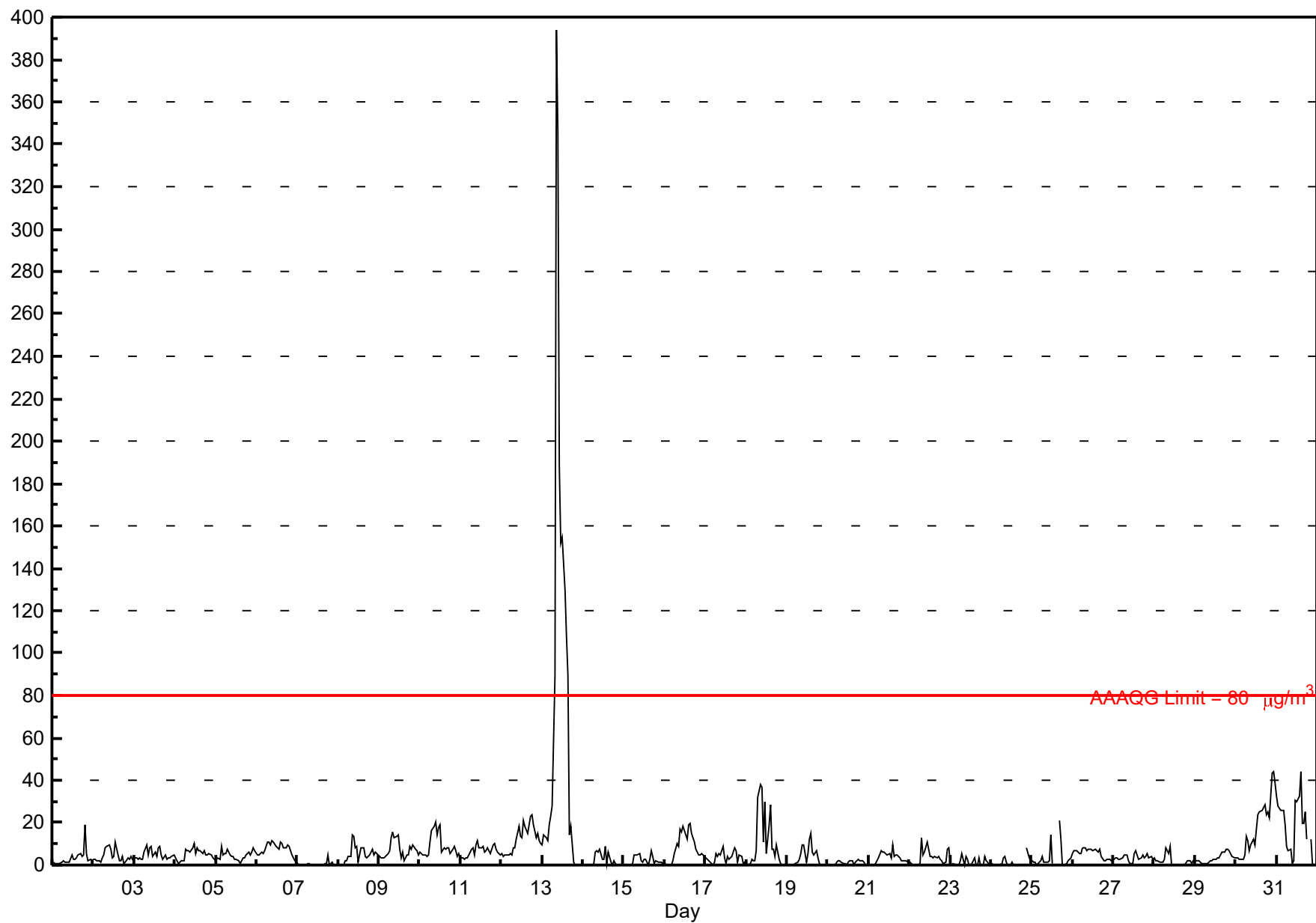
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - August 2017

Number of Exceedences: 1-hr: 9 24-hr: 1 Maximum Value: 394.0 µg/m³ on Aug 13 09:00 Minimum Value: 0 µg/m³ on Aug 7 02:00 Maximum Diurnal Average: 19.6 µg/m³ at hour 9 Monthly Average: 7.74 µg/m³																					Maximum Daily Average: 75.1 µg/m³ on Aug 13 Minimum Daily Average: 0.4 µg/m³ on Aug 7 Minimum Diurnal Average: 2.9 µg/m³ at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.4 Median = 3.8 Q ₃ = 7.3 P ₉₀ = 13.9 P ₉₉ = 87.9					Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 3 Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Aug	2	1	1	1	1	2	2	1	1	2	1	4	3	3	3	5	5	4	5	19	5	2	3	2	3.2	18.7	
2-Aug	3	3	2	2	1	3	5	8	8	10	8	4	4	11	4	2	2	4	1	1	3	2	4	3	4.1	11.1	
3-Aug	4	4	3	3	3	2	6	10	5	8	9	4	6	4	8	9	4	2	5	2	4	3	4	5	4.9	9.5	
4-Aug	3	2	1	1	2	2	8	7	7	6	8	10	5	8	7	7	6	7	5	5	5	5	3	3	5.1	10.0	
5-Aug	2	3	3	9	5	6	6	7	5	4	4	2	3	2	1	2	4	3	5	6	5	6	8	7	4.4	8.5	
6-Aug	5	5	6	6	5	7	11	11	10	11	11	9	8	8	11	10	8	8	10	9	7	5	2	1	7.6	11.4	
7-Aug	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5	0	1	0	0	0	0.4	4.6	
8-Aug	0	0	0	0	2	2	4	4	14	13	8	9	1	8	8	8	4	4	4	6	7	5	6	5	5.2	14.4	
9-Aug	4	4	3	4	4	6	7	13	16	13	14	14	7	3	6	2	5	5	9	7	10	7	7	5	7.2	15.7	
10-Aug	6	5	5	5	4	5	11	17	18	21	14	17	19	6	8	7	8	8	6	7	9	7	4	6	9.3	20.6	
11-Aug	3	3	3	3	3	5	8	8	4	9	12	8	8	9	6	6	8	5	8	10	10	7	6	5	6.6	11.7	
12-Aug	5	4	5	5	5	6	5	8	8	12	18	14	13	21	18	15	19	23	24	19	13	15	11	10	12.3	23.9	
13-Aug	10	14	13	11	19	23	28	89	394	346	189	152	155	130	108	89	15	19	1	0	0	0	0	0	75.1	394.0	
14-Aug	0	0	0	0	0	0	1	6	7	6	7	3	3	9	1	6	1	0	2	1	0	0	0	0	2.2	9.0	
15-Aug	0	0	0	0	0	1	5	5	5	5	2	1	3	3	0	3	7	4	1	2	1	2	1	1	2.1	7.0	
16-Aug	0	0	0	0	0	2	5	10	9	17	16	19	14	12	19	20	15	11	7	6	5	5	6	4	8.4	19.6	
17-Aug	3	3	2	1	0	1	5	4	6	5	9	4	1	4	3	4	6	8	7	1	4	4	1	1	3.7	9.1	
18-Aug	0	0	1	3	2	2	7	32	38	36	11	30	5	19	29	7	7	4	10	3	1	0	0	0	10.3	38.3	
19-Aug	0	0	0	0	0	0	2	2	5	10	9	2	6	12	15	6	5	7	3	1	0	0	0	0	3.5	14.8	
20-Aug	0	0	0	0	0	2	2	2	1	1	1	0	2	2	2	0	2	2	3	2	2	1	0	0	1.1	2.7	
21-Aug	0	0	0	0	1	2	3	7	6	6	5	5	6	3	10	4	5	5	3	2	2	2	2	1	3.3	9.5	
22-Aug	1	1	0	0	0	0	1	13	4	6	11	8	4	4	3	4	3	4	2	2	1	1	7	8	3.7	13.0	
23-Aug	1	0	1	0	0	0	2	5	0	4	3	0	0	0	4	0	0	3	0	0	4	2	2	0	1.3	5.4	
24-Aug	1	0	0	0	0	0	0	4	4	1	0	0	1	0	0	0	0	0	0	0	M	8	3	2	1.1	8.1	
25-Aug	2	2	1	0	1	2	4	1	1	1	2	14	0	C	C	C	21	12	0	0	1	2	3	3	3.5	21.0	
26-Aug	5	7	7	6	5	6	8	8	7	7	8	7	7	7	6	7	4	2	2	3	3	3	2	5.6	8.4		
27-Aug	2	3	3	3	3	4	4	5	5	2	0	1	5	7	5	3	4	5	4	4	5	3	4	3	3.6	6.7	
28-Aug	3	2	2	2	1	1	3	8	5	9	0	0	0	0	0	0	0	0	0	2	2	2	1	2	1.9	9.1	
29-Aug	2	2	2	2	1	1	1	1	1	2	2	3	3	3	4	5	6	6	7	7	7	6	4	3	3.3	7.2	
30-Aug	4	3	3	3	3	5	13	12	7	9	12	10	17	24	25	26	27	28	24	25	22	43	44	38	17.8	44.3	
31-Aug	33	27	26	26	25	19	9	6	7	1	2	31	30	33	44	20	19	25	12	N	12	1	0	0	17.7	43.9	
3.4 3.2 2.9 3.1 3.1 3.7 5.6 10.1 19.6 18.9 12.8 12.3 10.9 11.9 11.9 9.3 7.2 7.1 5.5 5.1 5.0 4.8 4.5 3.9																								Diurnal Average			
32.8 27.5 25.5 26.1 25.5 22.8 27.7 89.2 394.0 345.8 188.6 151.7 154.6 129.6 107.5 89.2 27.0 28.4 23.9 25.1 22.4 43.4 44.3 38.3																								Diurnal Maximum			
C - Calibration M - Maintenance N - Not Valid																											
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											

Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - August 2017



Hourly Maximums

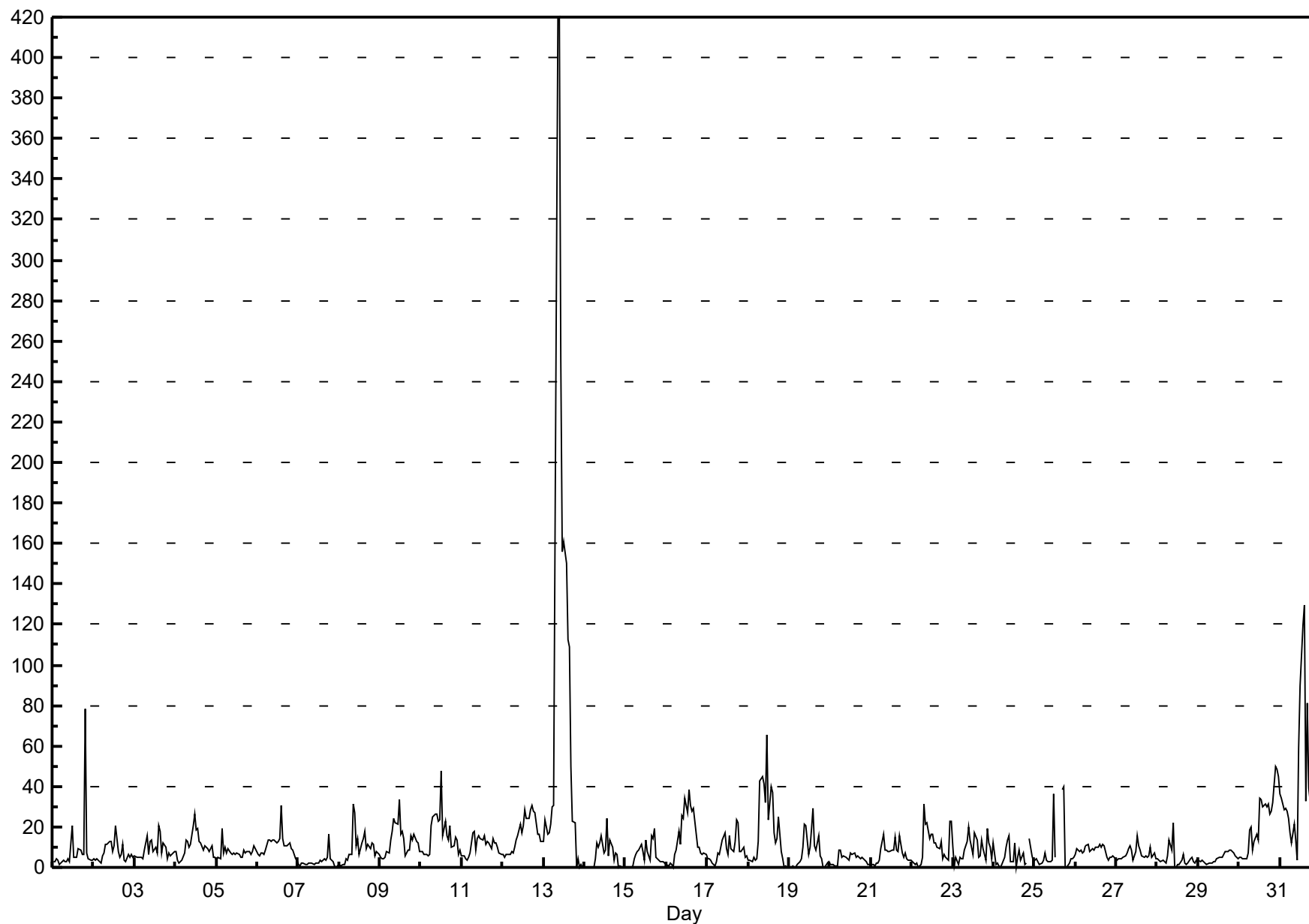
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - August 2017

Maximum Value: 419.8 µg/m³ on Aug 13 10:00																					Maximum Daily Average: 96.8 µg/m³ on Aug 13				Hours in Service: 744	
Minimum Value: 0 µg/m³ on Aug 13 20:00																					Minimum Daily Average: 2.9 µg/m³ on Aug 7				Hours of Data: 739	
Maximum Diurnal Average: 27.6 µg/m³ at hour 10																					Minimum Diurnal Average: 4.6 µg/m³ at hour 3				Hours of Missing Data: 5	
Monthly Average: 13.25 µg/m³																					Percentiles: P ₁ = 0.0 P ₁₀ = 1.7 Q ₁ = 3.9 Median = 7.3 Q ₃ = 13.3 P ₉₀ = 24.3 P ₉₉ = 145.4				Hours of Calibration: 3	
																					Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	3	4	3	2	3	4	3	3	4	3	20	5	5	5	10	8	7	6	78	7	4	4	4	8.3	78.0
2-Aug	4	4	4	3	2	5	7	11	12	12	13	8	11	21	8	5	6	11	4	3	7	5	6	5	7.3	20.5
3-Aug	6	5	5	5	5	4	8	15	6	13	13	8	10	7	21	18	7	12	10	4	7	6	6	8	8.8	20.8
4-Aug	8	4	2	3	4	7	13	13	10	12	20	26	18	19	13	12	9	11	10	9	8	11	5	5	10.5	26.4
5-Aug	4	5	4	20	7	10	7	9	7	6	7	6	7	6	5	5	8	7	8	8	6	8	11	10	7.6	19.6
6-Aug	6	6	7	7	7	9	14	13	13	13	14	12	13	14	31	14	11	11	11	12	10	9	4	3	10.9	30.8
7-Aug	2	1	2	2	1	1	2	2	2	2	2	2	2	3	3	4	3	5	16	4	3	1	0	1	2.9	16.4
8-Aug	1	1	2	1	4	4	7	6	32	27	11	14	6	12	14	18	10	11	9	12	11	6	8	6	9.7	31.5
9-Aug	5	5	5	5	8	7	13	18	24	22	21	34	17	18	15	6	8	8	15	14	16	13	12	8	13.2	33.7
10-Aug	8	8	6	6	6	6	20	25	26	26	23	23	47	16	22	15	14	21	10	11	15	13	7	9	16.0	47.4
11-Aug	5	5	4	4	5	7	17	18	8	14	15	14	14	15	12	13	12	9	14	12	12	10	7	6	10.6	17.6
12-Aug	6	5	7	6	7	8	7	10	14	16	21	17	20	29	24	24	29	30	28	27	17	17	13	13	16.4	30.3
13-Aug	13	24	16	17	21	30	31	295	420	420	250	156	161	150	112	109	50	23	22	0	4	0	1	0	96.8	419.8
14-Aug	0	0	0	0	0	0	4	12	10	12	15	7	9	24	5	13	10	3	7	6	0	1	0	0	5.9	24.4
15-Aug	0	0	0	0	0	4	6	8	8	11	8	4	13	8	4	15	14	19	5	4	3	3	3	2	6.0	19.5
16-Aug	1	1	2	1	0	7	8	18	12	26	24	34	27	39	31	28	29	16	10	10	7	7	7	6	14.6	38.6
17-Aug	4	4	3	2	1	3	7	6	10	13	17	9	6	16	9	8	13	23	22	8	8	10	5	6	8.9	23.5
18-Aug	3	4	3	5	4	4	13	43	45	42	32	65	24	40	37	17	12	14	25	8	4	0	1	0	18.5	65.5
19-Aug	0	0	1	0	0	2	3	4	10	21	20	6	10	19	29	11	9	16	6	4	0	0	2	2	7.3	28.9
20-Aug	2	1	1	1	1	8	9	5	6	5	4	4	7	6	7	5	5	5	4	5	4	3	2	1	4.2	8.8
21-Aug	1	1	1	2	2	4	9	16	8	9	8	8	9	9	15	9	8	16	7	5	7	5	3	4	6.9	16.1
22-Aug	3	2	1	2	0	1	5	31	21	22	14	17	16	12	12	10	9	13	4	7	5	4	22	23	10.7	31.3
23-Aug	11	1	5	1	5	4	4	9	12	20	13	10	6	17	14	5	6	14	10	4	19	12	10	4	8.9	20.1
24-Aug	12	2	2	0	0	2	5	10	13	15	3	3	12	0	5	9	3	7	2	2	M	14	5	3	5.7	15.4
25-Aug	4	4	3	1	2	4	7	4	3	3	3	36	5	C	C	C	38	40	0	0	2	4	4	5	8.2	39.6
26-Aug	7	9	8	9	7	8	11	12	8	9	9	8	10	10	11	10	11	11	5	4	5	5	6	5	8.2	11.6
27-Aug	4	4	4	4	5	5	7	10	11	9	4	8	15	11	9	6	5	6	5	5	10	5	7	4	6.8	15.4
28-Aug	5	4	3	3	3	2	5	13	9	22	0	0	1	1	4	6	2	2	2	4	5	3	2	3	4.4	22.0
29-Aug	4	3	3	3	2	2	2	2	2	3	3	4	5	5	5	7	8	8	9	9	8	7	5	4	4.7	8.6
30-Aug	5	5	4	4	4	7	19	20	9	13	17	13	35	34	30	31	30	31	27	28	32	50	48	45	22.5	50.1
31-Aug	36	34	28	29	28	24	17	12	22	13	4	59	90	120	130	33	81	39	33	N	64	7	2	4	39.5	129.5
5.5 5.0 4.6 4.8 4.6 6.3 9.5 21.7 25.6 27.6 19.7 20.6 20.3 22.9 21.3 15.8 15.1 14.5 11.2 10.2 10.3 7.7 7.1 6.4																									Diurnal Average	
36.2 34.3 28.4 29.3 28.1 29.8 30.6 294.5 419.5 419.8 250.4 155.6 160.8 150.2 129.5 108.7 81.4 39.6 32.7 78.0 64.3 50.1 48.2 45.0																									Diurnal Maximum	
C - Calibration M - Maintenance N - Not Valid																										

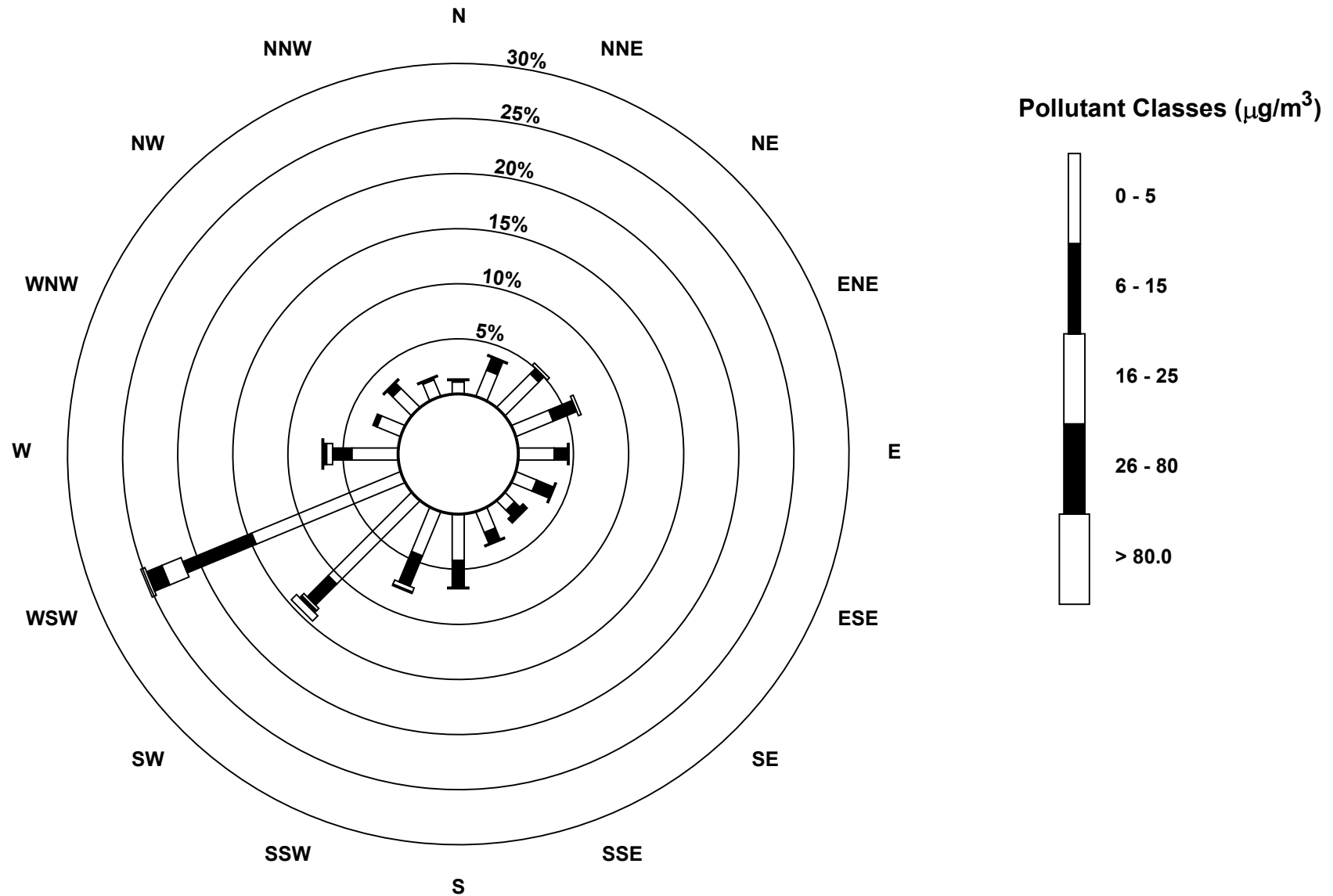
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - August 2017



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Evergreen Park - August 2017



Hourly Averages

External Temperature (ET) - °C

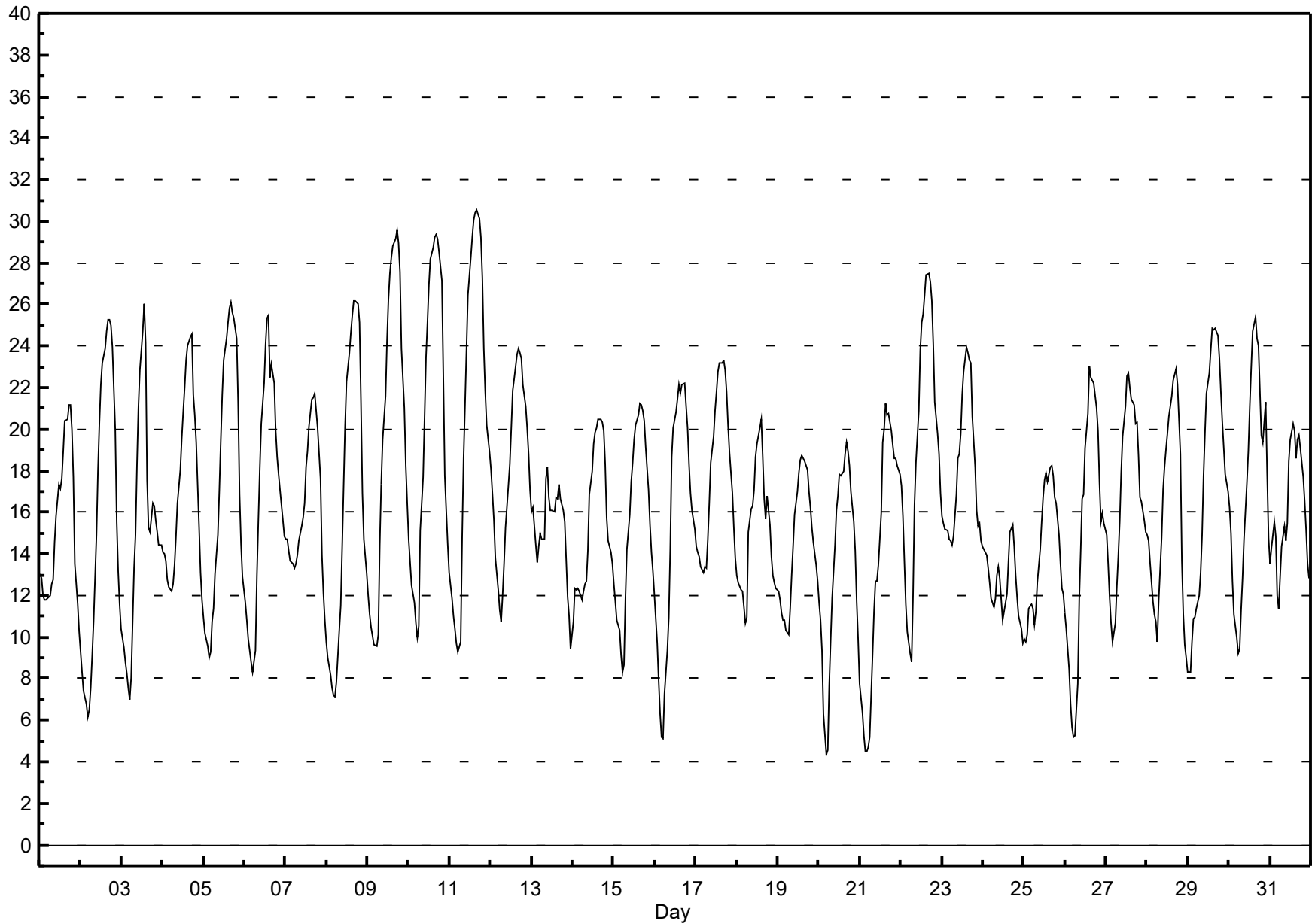
Evergreen Park - August 2017

Maximum Value: 30.6 °C on Aug 11 17:00																								Maximum Daily Average: 20.8 °C on Aug 11						Hours in Service: 744	
Minimum Value: 4 °C on Aug 20 05:00																								Minimum Daily Average: 12.6 °C on Aug 24						Hours of Data: 744	
Maximum Diurnal Average: 22.4 °C at hour 17																								Minimum Diurnal Average: 9.9 °C at hour 6						Hours of Missing Data: 0	
Monthly Average: 16.40 °C																								Percentiles: P ₁ = 5.2 P ₁₀ = 9.8 Q ₁ = 12.3 Median = 15.8 Q ₃ = 20.3 P ₉₀ = 23.9 P ₉₉ = 29.1						Hours of Calibration: 0	
																								Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	13	13	12	12	12	12	12	13	13	15	16	17	17	18	19	20	20	21	21	20	18	14	12	10	15.3	21.2					
2-Aug	9	8	7	7	6	6	8	9	11	15	18	20	22	23	24	25	25	25	25	24	20	16	13	12	15.8	25.3					
3-Aug	10	9	9	8	8	7	8	13	15	18	21	23	25	26	24	18	15	15	16	16	16	15	14	14	15.2	26.0					
4-Aug	14	14	14	13	12	12	13	13	15	16	18	20	21	22	23	24	24	25	22	21	19	15	13	12	17.3	24.5					
5-Aug	11	10	10	9	9	11	11	13	15	17	19	22	23	24	25	26	26	26	25	24	21	17	14	13	17.6	26.1					
6-Aug	12	11	10	9	9	8	9	13	16	18	20	22	24	25	25	22	23	22	20	19	18	17	16	15	16.8	25.5					
7-Aug	15	15	14	14	14	13	14	14	15	15	16	16	18	19	20	21	22	22	21	20	18	14	12	11	16.3	21.7					
8-Aug	10	9	8	8	7	7	8	10	11	14	17	20	22	24	25	25	26	26	25	21	17	15	13	13	16.5	26.1					
9-Aug	12	11	10	10	10	10	10	14	17	19	22	24	26	28	28	29	29	30	29	28	24	21	18	16	19.8	29.6					
10-Aug	15	14	12	12	11	10	11	15	18	21	23	25	27	28	29	29	29	29	29	27	22	18	16	15	20.2	29.4					
11-Aug	13	12	11	10	10	9	10	15	19	21	24	26	28	29	30	30	31	30	29	27	24	22	20	19	20.8	30.6					
12-Aug	18	17	16	14	12	11	11	12	14	15	17	18	20	22	22	24	24	24	23	22	21	20	19	17	18.0	23.9					
13-Aug	16	16	14	14	14	15	15	15	18	18	17	16	16	16	17	17	17	17	16	16	14	12	11	9	15.2	18.2					
14-Aug	11	12	12	12	12	12	12	13	13	14	17	18	19	20	20	20	20	20	20	18	16	15	14	14	15.6	20.5					
15-Aug	13	12	11	10	9	8	9	12	14	16	17	18	20	20	21	21	21	21	20	19	17	15	14	13	15.5	21.3					
16-Aug	12	10	8	6	5	5	7	9	11	14	19	20	21	21	22	22	22	22	21	20	18	17	16	15	15.2	22.2					
17-Aug	14	14	14	13	13	13	13	15	16	18	20	21	22	23	23	23	23	23	22	20	19	17	15	14	17.9	23.3					
18-Aug	13	13	12	12	11	11	11	15	16	16	17	19	19	20	20	19	17	16	17	15	14	13	13	12	15.1	20.5					
19-Aug	12	12	11	11	11	10	10	11	13	14	16	17	18	19	19	19	18	18	17	16	15	15	13	13	14.5	18.8					
20-Aug	12	11	9	6	4	5	8	10	12	14	16	17	18	18	18	19	19	19	18	17	16	14	12	10	13.4	19.4					
21-Aug	8	6	5	4	4	5	5	9	11	13	13	13	16	19	20	21	21	21	20	19	19	19	18	18	13.7	21.2					
22-Aug	17	16	14	12	10	9	9	12	16	18	21	24	25	26	26	27	28	27	26	24	21	20	19	17	19.3	27.5					
23-Aug	16	15	15	15	15	15	14	15	17	19	19	20	22	23	24	24	23	23	21	18	16	15	15	15	18.0	23.9					
24-Aug	14	14	14	13	13	12	11	12	13	13	13	11	11	12	12	14	15	15	14	13	12	11	10	10	12.6	15.4					
25-Aug	10	10	10	11	12	11	11	11	13	14	16	17	18	18	17	18	18	18	17	16	15	13	12	12	14.1	18.2					
26-Aug	11	10	8	7	6	5	5	8	12	14	17	17	19	21	23	22	22	22	21	20	17	16	16	15	14.8	23.0					
27-Aug	15	14	12	11	10	11	12	14	16	18	20	21	23	23	22	21	21	20	20	19	17	17	16	15	16.9	22.7					
28-Aug	15	15	14	12	11	11	10	12	15	17	18	19	20	21	22	22	23	23	22	19	14	11	10	9	15.9	22.9					
29-Aug	8	8	10	11	11	11	12	13	15	18	20	22	23	24	25	25	25	25	23	22	20	19	18	17	17.7	24.8					
30-Aug	16	15	13	11	10	9	9	11	13	15	17	19	21	23	25	25	24	24	22	20	19	21	18	15	17.3	25.4					
31-Aug	14	14	16	15	12	11	13	14	15	15	15	18	19	20	20	19	20	20	19	18	17	15	14	13	16.0	20.3					
12.9 12.2 11.5 10.7 10.1 9.9 10.3 12.4 14.4 16.3 18.0 19.4 20.7 21.7 22.3 22.3 22.4 22.2 21.4 20.1 18.0 16.1 14.7 13.6																								Diurnal Average							
18.0 16.9 15.6 15.1 14.7 15.0 14.7 15.1 18.6 21.2 23.8 26.5 28.3 29.2 30.1 30.4 30.6 30.1 29.2 27.5 23.9 21.8 20.2 18.8																								Diurnal Maximum							

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - August 2017



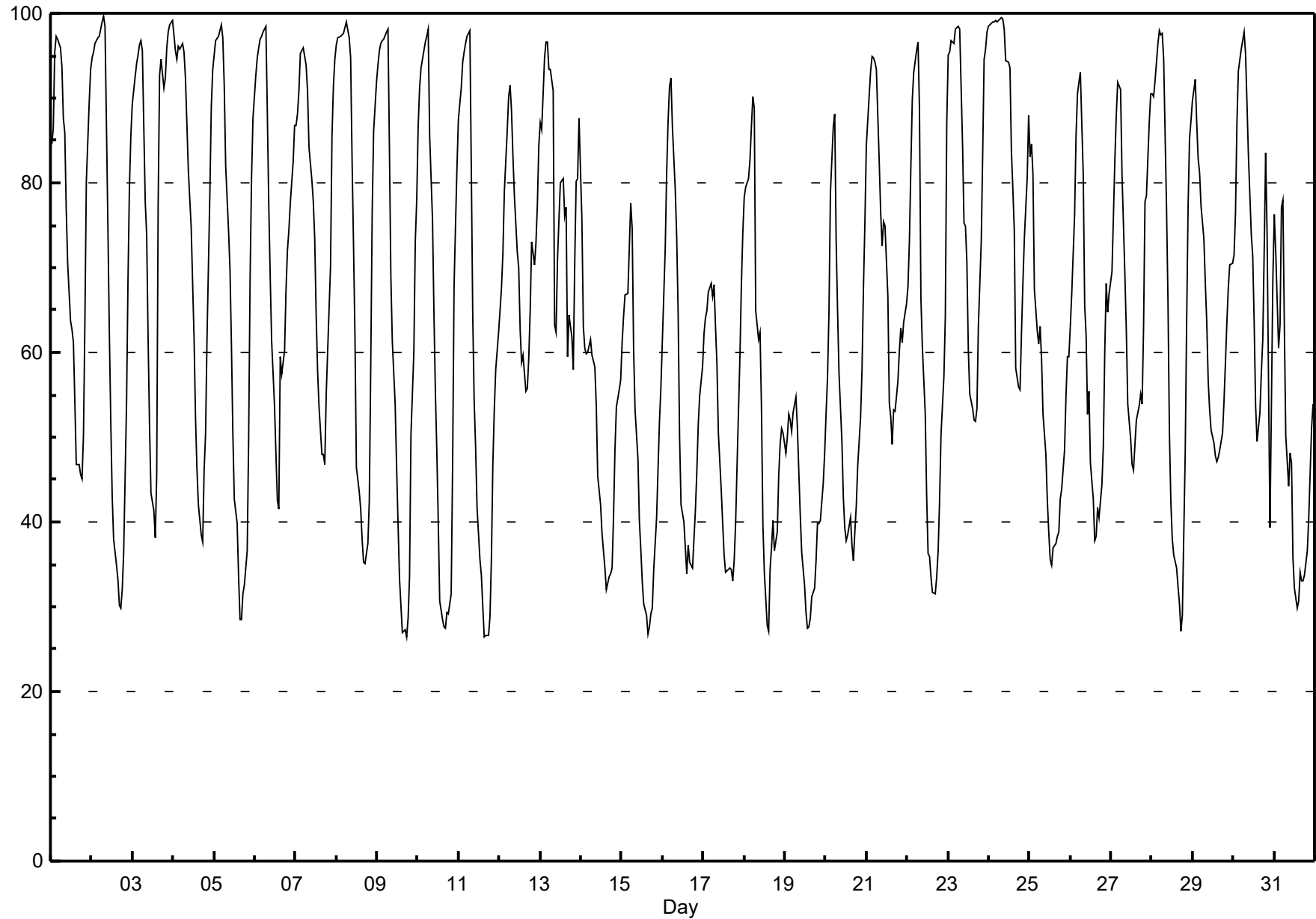
Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - August 2017

Maximum Value: 99.6 % on Aug 2 08:00																				Maximum Daily Average: 85.5 % on Aug 24										Hours in Service: 744	
Minimum Value: 26 % on Aug 9 18:00																				Minimum Daily Average: 41.3 % on Aug 19										Hours of Data: 744	
Maximum Diurnal Average: 89.1 % at hour 6																				Minimum Diurnal Average: 42.1 % at hour 17										Hours of Missing Data: 0	
Monthly Average: 64.96 %																				Percentiles: P ₁ = 27.1 P ₁₀ = 34.5 Q ₁ = 46.6 Median = 63.1 Q ₃ = 86.5 P ₉₀ = 95.9 P ₉₉ = 98.9										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	85	87	95	97	97	96	94	88	86	77	70	64	63	61	54	47	47	46	45	50	64	80	89	93	73.9	97.3					
2-Aug	95	95	97	97	97	98	99	100	99	75	63	52	43	38	35	33	30	30	32	36	54	69	80	86	68.0	99.6					
3-Aug	89	93	94	95	96	97	96	78	74	62	51	43	41	38	46	77	93	95	91	92	96	98	99	99	80.5	99.2					
4-Aug	97	96	95	96	96	96	95	92	87	81	75	68	62	52	46	42	39	38	46	50	62	79	89	93	73.9	97.5					
5-Aug	95	97	97	98	99	97	91	82	74	70	61	51	43	40	34	29	28	32	32	37	50	69	81	88	65.5	98.6					
6-Aug	93	95	96	97	97	98	98	88	78	69	61	54	48	43	42	59	57	60	67	72	74	78	82	87	74.7	98.4					
7-Aug	87	88	91	95	96	95	94	91	84	80	78	73	64	58	53	48	48	47	55	60	70	85	91	95	76.1	95.9					
8-Aug	96	97	97	98	98	98	99	97	95	83	73	62	46	44	42	38	35	35	38	43	58	76	86	92	71.9	98.9					
9-Aug	94	96	97	97	97	98	98	84	69	61	54	46	40	33	30	27	27	26	29	34	50	60	73	78	62.4	98.2					
10-Aug	87	91	94	96	97	97	98	86	76	65	55	48	40	31	28	28	27	29	29	32	47	68	75	82	62.7	98.2					
11-Aug	88	91	94	95	96	97	98	82	64	54	49	42	36	34	30	26	27	27	29	36	47	53	58	62	58.9	98.0					
12-Aug	65	68	72	79	86	90	91	88	83	78	72	70	63	59	60	55	56	59	65	73	70	73	77	84	72.4	91.4					
13-Aug	87	86	95	97	97	93	93	91	63	62	71	76	80	80	76	77	60	64	62	58	71	80	80	88	78.7	96.6					
14-Aug	76	63	61	60	60	62	60	59	58	54	45	42	39	37	35	32	33	34	35	41	49	53	56	57	49.9	75.5					
15-Aug	61	64	67	67	72	78	75	60	53	48	40	37	33	30	29	27	28	29	30	34	41	46	52	56	48.2	77.5					
16-Aug	61	72	81	87	91	92	87	79	74	65	50	42	40	37	34	37	35	34	38	41	46	52	55	58	57.9	92.5					
17-Aug	62	64	65	67	68	67	68	63	59	51	44	40	36	34	34	35	34	33	35	40	47	60	68	74	51.9	74.1					
18-Aug	78	79	80	83	87	90	89	65	62	62	54	40	34	28	27	34	37	40	37	39	45	49	51	50	55.9	90.1					
19-Aug	48	50	53	52	51	53	55	51	46	41	37	32	29	28	28	29	31	32	35	40	40	40	45	48	41.3	54.7					
20-Aug	53	57	65	79	87	88	73	65	58	49	43	39	38	38	41	37	35	39	42	47	52	58	68	75	55.2	88.1					
21-Aug	84	90	93	95	95	94	93	82	76	72	75	75	67	54	52	49	53	53	57	60	63	61	64	66	71.9	94.9					
22-Aug	68	73	82	90	93	96	97	89	67	61	53	43	36	36	33	32	32	34	37	43	50	57	64	87	60.4	96.6					
23-Aug	95	95	97	96	98	98	98	98	84	75	75	71	60	55	53	52	52	53	63	73	83	95	96	98	79.8	98.4					
24-Aug	98	99	99	99	99	99	99	100	99	98	94	94	94	84	79	74	58	56	56	62	68	73	81	88	85.5	99.5					
25-Aug	83	85	81	67	62	61	63	59	53	48	42	39	36	35	37	37	38	39	43	44	48	55	60	59	53.1	84.5					
26-Aug	63	67	76	86	91	92	93	81	66	62	53	56	47	43	38	38	42	40	44	49	60	68	65	67	61.9	93.1					
27-Aug	69	76	83	88	92	91	81	75	69	63	54	50	47	46	49	52	54	55	54	63	78	78	87	91	68.5	91.9					
28-Aug	91	90	92	96	98	97	98	95	77	66	51	42	38	36	35	32	30	27	29	48	64	77	85	87	65.9	97.9					
29-Aug	90	92	87	83	81	77	73	68	64	57	53	51	49	48	47	48	48	50	54	59	64	68	70	70	64.7	92.1					
30-Aug	71	76	87	93	96	97	98	95	89	83	74	71	64	54	50	53	58	62	72	84	74	39	54	68	73.4	97.8					
31-Aug	76	72	61	63	77	78	63	50	44	48	47	36	32	30	31	34	33	33	34	37	40	46	51	54	48.8	78.0					
80.2 82.1 84.6 86.7 88.6 89.1 87.4 80.0 71.9 65.2 58.6 53.2 48.0 43.9 42.2 42.6 42.1 43.0 45.6 50.8 58.9 65.9 72.0 76.8																									Diurnal Average						
98.4 98.9 99.0 99.0 99.2 99.0 99.3 99.6 99.3 98.1 94.3 94.3 93.6 83.8 79.4 77.4 92.7 94.5 91.1 92.4 95.9 97.8 98.6 99.2																									Diurnal Maximum						

Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	12	8	1	7	10	8	6	13	11	14	14	12	9	10	7	7	7	5	6	6	1	1	0	0	5.7	14.0
Dir	345	334	146	248	229	244	282	287	293	301	287	274	296	320	332	330	326	327	336	33	41	175	124	55	300.7	286.6
2 Spd	0	0	1	0	0	0	1	2	1	1	4	4	3	7	6	5	4	2	4	5	2	1	0	0	0.1	7.3
Dir	42	36	45	53	50	178	223	261	313	182	116	105	204	255	301	353	304	97	112	73	69	183	219	64	21.2	255.0
3 Spd	1	1	0	0	1	0	1	2	5	4	7	7	6	9	7	34	14	2	2	6	3	1	2	3	0.7	34.4
Dir	33	48	105	87	183	228	110	181	189	144	113	149	141	113	320	319	317	22	290	177	189	158	43	304	304.0	318.8
4 Spd	6	5	4	6	7	4	8	9	12	9	10	8	10	10	12	12	14	11	13	4	2	2	0	1	6.1	14.2
Dir	324	276	277	263	263	283	248	251	255	254	251	261	253	262	261	280	316	336	332	9	10	191	221	193	277.5	315.8
5 Spd	1	1	1	1	4	6	10	9	8	6	6	7	7	6	8	3	4	5	6	5	3	1	1	2	3.1	9.7
Dir	271	209	204	201	242	248	243	246	232	171	183	200	202	220	244	234	181	117	131	124	109	150	216	39	206.6	243.4
6 Spd	1	0	0	1	0	1	4	8	9	8	8	7	7	5	10	19	14	15	15	10	8	4	3	3	2.8	18.6
Dir	29	47	323	216	209	206	191	251	251	245	261	240	219	300	0	24	32	33	22	32	29	64	34	19	357.6	23.7
7 Spd	6	7	5	4	6	8	7	6	5	6	6	3	2	3	4	6	6	4	2	5	2	1	0	1	3.4	7.5
Dir	32	32	36	15	31	31	37	67	81	55	71	71	69	322	166	158	99	84	65	101	107	98	76	33	60.1	31.2
8 Spd	3	1	0	1	0	1	1	1	2	5	6	6	6	3	6	4	6	4	5	3	2	0	1	1	1.8	6.5
Dir	34	48	51	359	234	51	43	163	202	197	203	161	215	171	176	217	127	120	134	128	163	225	194	36	165.6	214.9
9 Spd	0	1	0	1	2	2	1	4	8	7	5	3	4	5	6	4	6	4	1	5	4	4	3	0	0.9	7.7
Dir	42	41	76	55	190	178	150	228	254	274	260	208	156	175	298	300	306	307	245	38	64	65	51	54	268.3	253.7
10 Spd	2	0	1	0	0	1	1	4	5	4	3	7	7	6	4	4	3	7	7	6	2	3	1	1	1.7	7.4
Dir	34	178	23	54	207	204	200	237	237	212	149	164	171	112	144	159	65	71	68	84	78	59	58	24	124.2	68.0
11 Spd	1	1	2	1	0	1	1	4	7	8	9	12	15	15	16	17	18	19	16	10	7	8	8	9	8.1	18.7
Dir	36	35	30	202	92	235	24	77	111	121	111	102	103	105	106	111	101	102	100	91	67	78	82	80	98.9	102.2
12 Spd	8	9	5	3	2	0	2	1	1	4	1	5	2	4	5	4	5	5	4	5	9	7	7	5	3.2	8.9
Dir	84	87	73	63	29	298	58	31	51	218	193	189	208	122	124	58	54	42	66	76	96	86	84	67	85.5	86.7
13 Spd	6	2	1	3	5	5	1	4	13	24	24	16	12	14	16	20	18	16	16	13	1	5	5	1	9.1	24.2
Dir	71	274	205	231	256	260	327	236	253	253	265	252	227	231	230	230	246	236	251	239	231	198	193	193	242.4	253.3
14 Spd	8	11	15	17	22	21	23	14	13	17	27	26	26	29	32	30	28	25	23	22	18	22	24	16	21.0	31.8
Dir	233	234	233	237	238	238	235	235	238	235	245	250	249	240	243	238	230	230	234	238	220	232	241	246	237.8	243.3
15 Spd	13	15	14	13	5	4	11	21	22	27	25	23	20	21	17	24	28	24	24	18	18	14	9	11	16.7	28.2
Dir	236	226	224	227	255	238	234	235	246	255	275	282	270	262	286	248	241	245	247	252	244	238	239	237	249.8	240.6
16 Spd	10	6	1	1	1	1	1	2	4	4	22	37	37	33	37	27	31	29	29	23	19	14	14	14	15.9	37.3
Dir	215	190	78	49	44	201	218	236	184	237	238	231	235	243	246	252	245	242	243	245	242	223	228	225	237.6	231.1
17 Spd	11	9	12	10	12	16	10	12	14	18	27	28	28	23	21	21	20	24	17	11	6	0	2	4	14.4	28.1
Dir	216	228	235	241	236	234	232	230	239	247	249	252	263	264	255	262	255	252	255	258	263	178	186	183	247.8	251.7
18 Spd	0	2	1	3	0	1	2	15	13	14	27	32	32	41	41	34	42	36	42	40	25	22	24	30	21.2	42.5
Dir	341	144	191	185	294	191	218	239	241	230	233	254	250	247	250	262	245	243	244	237	235	228	234	238	242.6	243.7
19 Spd	30	28	25	28	28	26	24	29	36	37	33	35	38	42	40	37	40	40	34	20	18	17	16	15	29.6	41.8
Dir	239	239	237	237	237	242	246	246	249	251	252	247	244	248	248	248	245	249	244	244	237	234	228	223	243.8	247.6
20 Spd	12	11	6	0	0	4	9	8	12	18	23	23	25	24	22	19	25	28	30	23	14	9	7	4	14.4	30.2
Dir	222	230	236	170	83	275	244	257	259	258	256	259	253	263	264	264	257	243	244	246	243	234	207	189	249.9	244.1
21 Spd	1	0	0	1	0	2	1	2	2	6	4	5	7	15	17	17	18	19	17	11	9	12	12	10	7.2	18.9
Dir	61	182	138	67	203	200	185	186	157	190	185	194	182	230	251	248	229	238	234	229	213	237	237	221	227.3	237.7
22 Spd	11	7	2	2	1	2	0	3	5	5	3	4	6	6	5	5	7	10	11	7	7	7	11	17	3.5	16.8
Dir	226	255	264	319	125	190	76	177	225	184	201	212	184	147	147	119	129	112	96	93	102	94	211	203	166.3	203.3

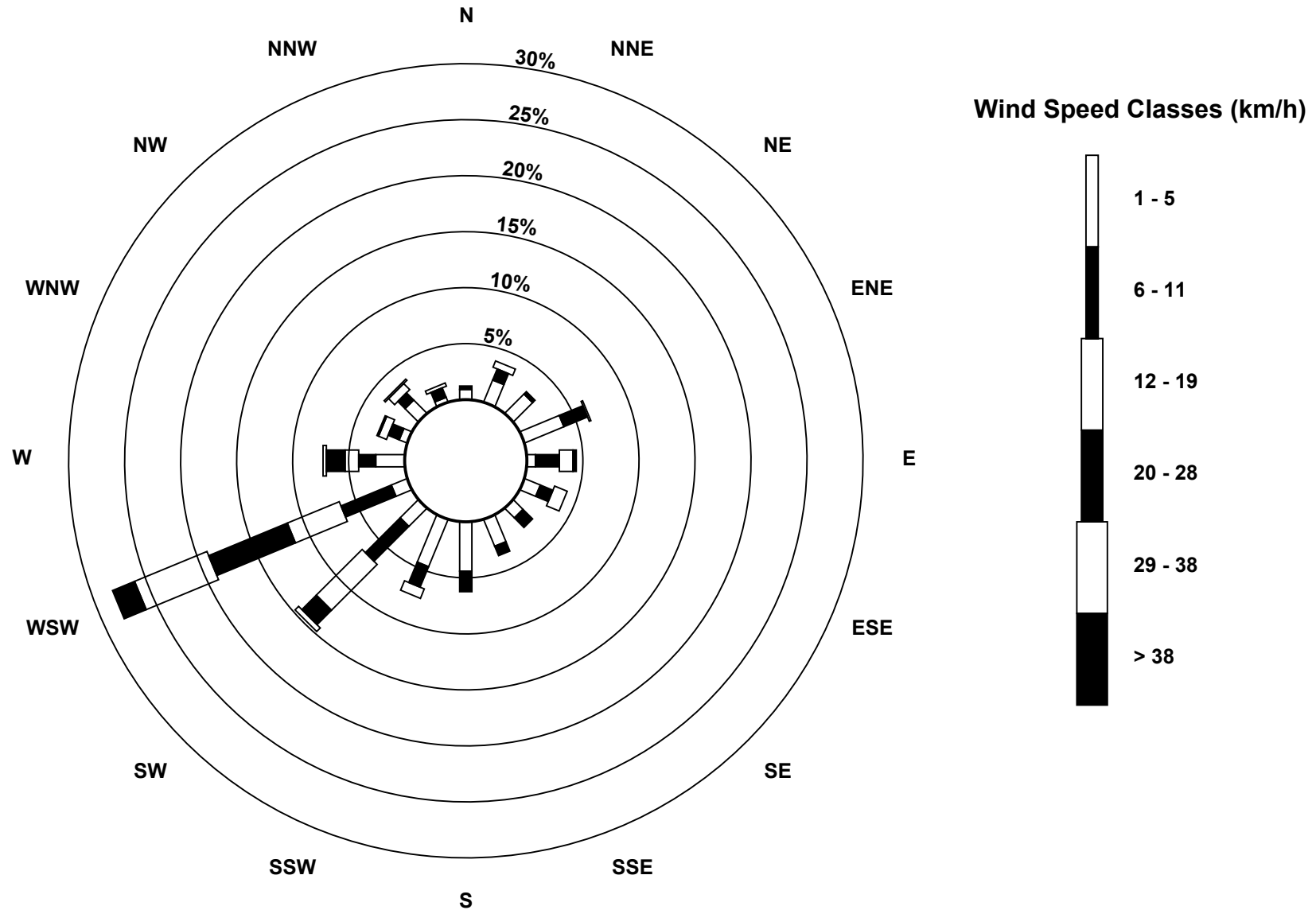
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	5	2	3	2	6	5	6	4	9	12	10	8	4	4	5	8	10	12	4	4	6	2	10	5	4.0	12.4
Dir	203	163	154	192	203	195	194	181	222	226	214	197	183	233	117	152	124	119	313	19	197	189	222	350	189.4	119.0
24 Spd	5	4	5	3	1	1	1	2	3	7	15	34	28	36	21	25	31	27	32	23	18	15	11	10	13.5	35.6
Dir	207	89	215	167	148	322	336	11	159	276	310	239	252	244	249	239	248	237	247	245	238	234	235	233	244.1	244.3
25 Spd	12	11	17	29	33	37	33	35	36	37	37	34	38	39	38	36	36	38	26	26	22	16	13	14	28.5	38.8
Dir	238	241	236	237	236	240	237	237	240	243	246	251	246	256	264	253	254	247	247	245	241	221	224	220	243.9	255.7
26 Spd	15	12	5	3	6	4	4	7	6	7	9	5	10	16	23	27	23	30	21	15	4	6	15	13	11.3	30.0
Dir	212	213	210	193	186	182	200	194	191	188	214	186	189	209	231	244	245	239	238	240	268	217	212	211	222.3	239.0
27 Spd	8	2	5	1	1	1	5	5	11	11	18	21	26	30	20	15	17	16	19	22	15	13	6	7	11.8	29.6
Dir	218	236	211	218	308	276	286	259	242	275	272	256	242	240	258	275	267	260	248	262	245	237	241	242	252.8	240.1
28 Spd	5	5	3	1	3	1	1	3	7	5	13	16	15	11	10	10	11	6	5	0	0	1	2	2	4.4	15.6
Dir	239	240	246	218	314	276	242	266	244	268	295	304	313	291	290	317	328	354	38	39	269	26	19	163	299.6	304.1
29 Spd	3	1	2	3	5	4	6	7	10	15	16	17	18	18	20	19	20	17	14	10	10	8	8	8	10.5	20.0
Dir	27	44	63	52	51	64	65	67	80	94	88	96	99	94	92	89	82	82	75	69	70	70	74	69	82.2	82.0
30 Spd	7	5	2	1	0	1	2	6	6	8	7	4	4	4	2	6	6	6	1	0	5	9	2	1	1.8	9.0
Dir	68	70	342	327	358	247	232	237	202	224	231	172	202	262	6	140	143	139	101	258	279	248	272	203	207.5	248.2
31 Spd	1	4	9	7	3	5	11	27	32	18	18	39	41	38	42	40	33	35	36	32	27	18	15	13	22.3	42.5
Dir	257	279	243	229	310	266	263	243	238	231	230	250	247	251	244	250	251	245	244	243	239	230	221	221	243.9	244.1
Spd	3.2	3.1	3.4	3.8	4.0	4.4	4.7	7.0	8.5	9.0	10.3	11.9	12.2	12.8	12.1	11.2	10.8	9.8	9.6	7.3	5.6	5.1	5.2	4.7	Diurnal Average	
Dir	232.7	234.5	231.1	234.7	238.2	240.6	240.6	239.9	238.0	240.5	246.8	242.4	239.5	243.9	250.5	255.3	249.1	240.3	245.0	241.6	232.6	222.0	223.0	223.2	Diurnal Maximum	
Spd	30.3	28.3	24.6	29.3	33.0	37.0	33.1	35.0	35.8	37.0	37.4	39.3	40.7	41.8	42.5	39.8	41.9	40.0	42.5	40.4	26.8	21.9	24.4	29.5	Diurnal Maximum	
Dir	238.9	239.5	236.5	236.5	235.6	239.6	237.1	236.9	248.8	251.4	245.9	250.5	247.2	247.6	244.1	250.4	245.1	248.6	243.7	237.5	239.2	228.4	234.0	238.5		
Maximum Speed Value: 42 km/h on Aug 18 19:00								Minimum Speed Value: 0 km/h on Aug 6 03:00												Hours in Service: 744						
Maximum Daily Speed Average: 29.6 km/h on Aug 19								Minimum Daily Speed Average: 0.1 km/h on Aug 2												Hours of Data: 744						
Maximum Diurnal Speed Average: 12.8 km/h at hour 14								Minimum Diurnal Speed Average: 3.1 km/h at hour 2												Hours of Missing Data: 0						
Monthly Average Velocity: 7.41 km/h 241.09 deg								Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.9 Q ₁ = 3.1 Median = 7.0 Q ₃ = 15.8 P ₉₀ = 27.5 P ₉₉ = 40.4												Percent Operational Time: 100.0						
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	14		3		2		0		0		0		19													
NorthEast	63		17		3		0		0		0		83													
East	27		32		15		3		0		0		77													
SouthEast	21		18		1		0		0		0		40													
South	64		27		0		0		0		0		91													
SouthWest	48		51		73		41		38		9		260													
West	23		30		24		30		13		9		129													
NorthWest	19		16		9		0		1		0		45													
Total	279		194		127		74		52		18		744													

Wind Rose

Wind Speed (WS) (km/h)
Evergreen Park - August 2017



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - August 2017

Maximum Speed: 43 km/h on Aug 31 15:00																				Maximum Daily Speed Average: 30.3 km/h on Aug 19					Hours in Service: 744	
Minimum Speed: 0 km/h on Aug 6 03:00																				Minimum Daily Speed Average: 3.9 km/h on Aug 2					Hours of Data: 744	
Maximum Diurnal Speed Average: 19.0 km/h at hour 16																				Minimum Diurnal Speed Average: 5.4 km/h at hour 4					Hours of Missing Data: 0	
Monthly Average Speed: 11.78 km/h																				Percentiles: P ₁ = 0.4 P ₁₀ = 1.4 Q ₁ = 4.1 Median = 8.5 Q ₃ = 16.7 P ₉₀ = 28.2 P ₉₉ = 41.5					Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	13	9	5	8	10	9	7	14	12	15	16	14	11	11	10	9	8	7	7	6	1	2	1	0	8.5	15.9
2-Aug	1	1	1	1	1	1	2	3	3	4	6	7	7	10	10	9	7	7	5	5	2	1	0	1	3.9	10.5
3-Aug	1	1	1	1	2	1	1	3	6	6	8	8	10	10	13	35	18	13	5	6	3	2	3	3	6.6	34.7
4-Aug	6	6	4	6	7	5	8	9	12	10	11	10	11	12	14	13	16	12	13	4	2	2	1	2	8.2	15.5
5-Aug	1	1	2	2	4	6	10	9	9	6	7	8	9	9	10	6	6	7	7	6	3	1	1	2	5.5	10.0
6-Aug	2	0	0	1	1	1	4	9	9	9	9	8	9	9	14	19	15	16	15	10	9	5	4	3	7.5	19.3
7-Aug	6	8	6	4	6	8	8	7	5	7	7	5	5	6	7	9	8	6	3	5	2	1	0	1	5.4	8.9
8-Aug	4	1	0	1	1	1	1	2	3	6	8	8	9	8	9	7	8	7	6	3	2	0	1	1	4.0	8.9
9-Aug	1	1	1	1	3	2	1	5	8	9	6	5	8	8	9	7	8	6	6	5	4	4	3	1	4.8	9.3
10-Aug	2	1	1	0	0	1	1	5	6	4	5	9	9	10	10	9	8	9	8	6	2	3	2	1	4.8	10.0
11-Aug	1	1	2	1	1	1	2	4	8	9	10	13	17	17	17	18	19	19	16	10	7	8	9	9	9.1	19.4
12-Aug	9	9	5	3	2	1	2	1	1	5	3	5	4	6	6	5	6	6	4	5	9	7	7	5	4.8	9.1
13-Aug	7	6	3	4	6	6	1	4	13	25	24	17	12	14	16	21	19	17	16	13	2	5	5	2	10.8	24.7
14-Aug	9	12	15	17	22	21	23	15	13	18	27	27	28	30	32	31	28	26	23	23	18	22	24	16	21.6	32.3
15-Aug	13	15	14	13	5	4	11	21	22	28	27	26	23	22	20	26	29	25	25	18	18	14	10	11	18.3	28.8
16-Aug	10	6	2	1	2	2	2	3	4	5	23	38	37	33	37	27	31	29	29	23	19	15	14	14	17.0	38.2
17-Aug	11	9	12	10	13	16	10	12	14	19	28	29	30	25	22	22	21	25	17	11	7	2	2	5	15.5	29.7
18-Aug	2	3	1	4	2	2	4	15	14	14	27	36	33	42	42	35	42	37	43	41	25	22	25	30	22.5	43.3
19-Aug	31	28	25	28	28	26	24	29	36	38	34	36	39	43	41	38	41	41	35	20	19	17	16	15	30.3	42.9
20-Aug	12	11	6	1	2	5	9	9	13	20	24	24	27	25	23	21	26	29	31	23	14	9	7	4	15.6	30.5
21-Aug	2	1	1	2	1	2	1	3	3	6	5	5	8	17	18	18	18	19	18	11	9	12	12	10	8.4	19.3
22-Aug	12	7	3	3	2	2	1	3	6	6	5	6	9	10	8	8	9	11	11	8	8	7	13	22	7.4	21.5
23-Aug	8	2	4	3	6	5	6	4	9	12	10	9	7	6	8	9	11	13	14	5	8	12	13	8	8.0	14.2
24-Aug	8	7	6	4	2	2	2	3	6	9	16	34	29	36	21	26	31	27	32	23	18	15	11	10	15.9	35.9
25-Aug	12	12	17	29	33	37	33	35	36	37	38	35	39	40	39	37	37	38	26	26	23	16	13	14	29.4	39.7
26-Aug	15	12	5	3	6	4	4	7	7	8	10	5	11	17	24	28	24	31	21	15	5	6	15	13	12.4	30.5
27-Aug	9	4	5	2	3	1	6	6	11	12	19	22	27	30	22	16	18	16	19	22	16	14	7	8	13.1	30.4
28-Aug	5	5	5	3	4	1	1	4	7	6	15	17	16	13	12	11	12	8	5	1	0	2	2	3	6.6	16.7
29-Aug	3	1	2	3	5	4	6	7	10	15	17	18	20	19	21	20	21	17	14	11	10	8	9	8	11.3	21.0
30-Aug	7	5	2	1	1	1	3	6	6	9	8	5	5	5	3	7	7	6	2	1	6	10	3	3	4.7	9.5
31-Aug	2	5	9	7	4	6	12	27	32	18	19	41	42	39	43	41	34	36	36	32	27	18	15	14	23.3	43.4
7.2 6.1 5.4 5.4 5.9 5.9 6.6 9.2 11.1 12.7 15.3 17.1 17.6 18.8 18.8 19.0 18.9 18.3 16.6 12.9 9.6 8.5 7.9 7.7																									Diurnal Average	
30.6 28.5 24.8 29.5 33.3 37.2 33.4 35.2 36.4 37.9 37.9 40.5 41.7 42.9 43.4 40.7 42.4 40.7 43.3 40.8 26.9 22.2 24.7 29.8																									Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using scalar methods

Hourly Standard Deviations

Wind Direction (WD) - deg
Evergreen Park - August 2017

Maximum Value: 97.9 deg on Aug 2 06:00																			Hours in Service: 744						
Minimum Value: 5.2 deg on Aug 27 00:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 6.9 P ₁₀ = 9.1 Q ₁ = 13.4 Median = 25.3 Q ₃ = 57.4 P ₉₀ = 79.2 P ₉₉ = 92.3																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	20	43	81	31	13	16	39	18	26	27	29	32	35	25	53	43	42	64	46	21	29	69	81	76	81.2
2-Aug	75	59	63	67	74	98	89	58	86	85	63	62	74	49	75	67	72	88	49	25	30	80	80	84	97.9
3-Aug	76	75	86	87	90	90	76	68	39	48	42	48	63	24	89	7	54	84	86	23	60	57	78	31	89.9
4-Aug	19	23	26	22	24	24	11	16	18	24	29	47	26	31	42	29	27	33	19	18	27	81	88	74	88.3
5-Aug	88	72	78	49	13	12	12	14	31	29	40	31	58	61	48	83	67	56	49	29	14	55	87	13	87.7
6-Aug	35	70	78	66	75	88	14	20	18	24	40	38	39	71	67	17	25	25	12	19	25	30	38	35	88.4
7-Aug	20	28	39	25	24	25	19	31	35	29	39	62	84	80	66	58	61	49	38	18	18	25	77	66	84.4
8-Aug	9	72	75	53	88	76	34	75	85	33	39	49	62	76	56	86	59	77	35	36	43	80	79	83	88.1
9-Aug	54	66	94	94	42	40	40	39	23	39	55	82	71	69	69	77	64	59	93	21	14	15	42	85	94.1
10-Aug	63	92	48	66	95	50	66	31	42	50	64	40	52	65	80	78	73	46	30	21	34	37	80	61	95.2
11-Aug	62	79	47	68	87	69	31	35	24	31	36	31	27	35	27	24	22	18	16	19	15	15	12	14	87.0
12-Aug	16	14	32	36	26	84	28	88	40	38	83	31	70	57	54	40	29	29	27	19	12	15	14	14	88.2
13-Aug	11	77	81	54	32	24	77	28	12	12	14	14	13	11	12	12	15	11	17	10	81	23	26	85	84.6
14-Aug	21	11	10	9	9	9	9	16	13	13	14	17	22	15	11	13	14	12	10	8	9	10	7	9	22.0
15-Aug	9	8	8	10	36	16	10	8	15	14	26	24	28	24	30	25	12	13	16	13	8	6	10	15	36.1
16-Aug	16	26	61	61	64	72	65	59	23	82	16	12	12	11	11	14	10	9	8	11	8	13	9	9	82.4
17-Aug	11	9	7	9	8	8	9	13	14	20	13	16	20	24	19	18	18	18	15	18	22	85	29	26	84.9
18-Aug	95	73	64	53	93	78	66	9	12	13	11	35	26	12	12	15	9	11	12	9	9	9	9	7	95.0
19-Aug	8	7	8	6	8	7	7	8	10	12	13	13	12	13	15	14	11	11	8	9	8	8	9	9	14.7
20-Aug	9	9	13	84	71	37	13	20	29	22	23	22	19	18	23	26	19	12	8	10	9	11	9	14	83.7
21-Aug	55	89	86	84	81	34	80	70	41	20	25	23	19	31	18	22	14	12	9	10	13	9	10	10	88.7
22-Aug	12	21	65	62	69	60	90	38	32	39	77	55	72	58	69	70	57	27	16	15	12	14	71	65	89.6
23-Aug	71	47	67	67	13	28	11	29	12	14	12	26	67	71	59	33	21	20	84	34	88	86	62	56	87.9
24-Aug	84	72	83	45	62	80	80	56	61	41	19	11	16	8	17	14	11	13	9	11	9	9	9	12	84.3
25-Aug	11	14	8	7	7	7	7	7	8	9	9	13	11	12	14	12	13	10	10	7	8	13	9	8	14.1
26-Aug	5	7	21	42	8	43	15	10	24	17	25	33	33	16	14	17	13	10	11	10	25	16	7	5	42.6
27-Aug	14	89	18	75	74	81	23	36	11	18	19	19	14	13	24	21	18	13	12	14	16	9	20	34	89.3
28-Aug	26	12	57	95	52	55	82	40	27	47	31	22	30	34	34	36	26	42	18	71	67	33	30	80	95.0
29-Aug	43	75	23	20	22	18	18	21	18	20	19	20	24	22	22	20	19	22	27	20	17	18	15	14	75.1
30-Aug	17	37	38	83	92	45	41	21	15	22	22	32	51	51	75	46	26	24	78	89	48	20	63	81	92.1
31-Aug	77	36	17	46	73	43	16	9	7	10	15	14	13	13	12	12	14	10	8	8	6	10	10	9	76.9
95.0 91.5 94.1 95.0 95.2 97.9 89.6 88.2 86.1 84.7 83.2 81.9 84.4 80.4 89.3 86.3 72.6 87.9 93.1 88.6 87.9 86.4 88.3 85.0																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

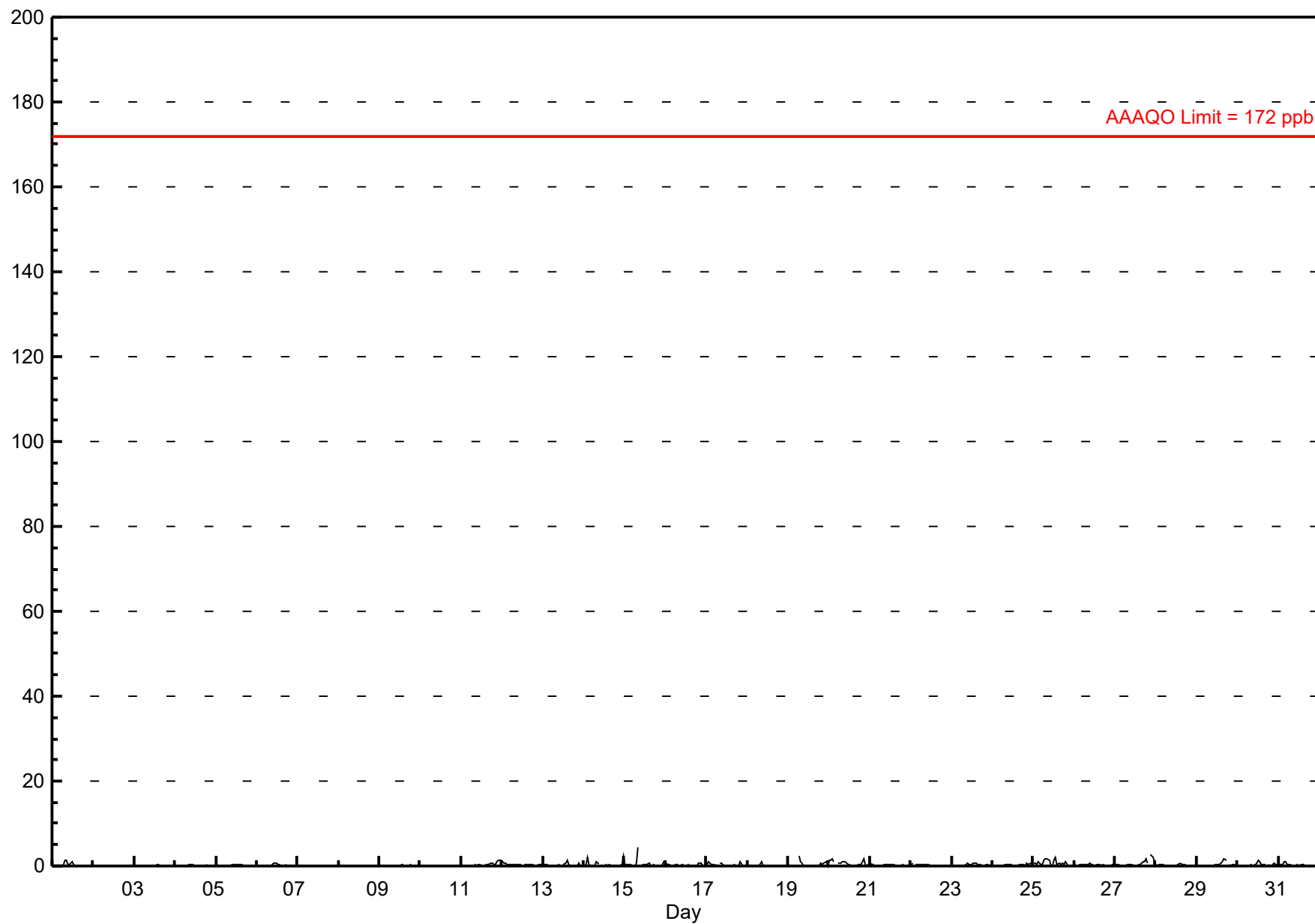
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.5 ppb on Aug 15 09:00 Maximum Daily Average: 0.7 ppb on Aug 25																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7						
Minimum Value: 0 ppb on Aug 1 04:00 Maximum Diurnal Average: 0.5 ppb at hour 9 Monthly Average: 0.26 ppb										Minimum Daily Average: 0.0 ppb on Aug 8 Minimum Diurnal Average: 0.1 ppb at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.9																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0.2	1.3
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.1
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3
6-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.7
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	1	1	1	0.3	1.3
12-Aug	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
13-Aug	0	0	0	0	0	0	0	0	0	1	0	A	0	1	1	0	0	0	0	0	0	1	0	0	0.3	1.2
14-Aug	0	0	2	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	2.5
15-Aug	0	0	0	0	0	0	0	1	5	A	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.5	4.5
16-Aug	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.3	0.8
17-Aug	0	1	1	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	1.0
18-Aug	0	0	0	0	0	P	P	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
19-Aug	0	0	0	0	0	A	2	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0.3	2.3
20-Aug	1	1	2	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0.6	1.8
21-Aug	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
22-Aug	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
23-Aug	0	A	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.7
24-Aug	A	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	1	0	1	A	0.2	0.7
25-Aug	1	1	0	1	0	0	1	2	2	1	0	0	1	2	0	1	0	1	0	1	0	0	A	0	0.7	2.0
26-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.7
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	A	3	2	1	0.5	2.6
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0.2	0.6
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	A	0	0	0	0	0	0.3	1.6
30-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	A	0	0	0	1	0	0	0.3	1.2
31-Aug	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	2	0.3	1.7
0.3 0.2 0.3 0.2 0.1 0.1 0.3 0.3 0.5 0.3 0.2 0.2 0.2 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.4																									Diurnal Average	
1.2 1.2 1.9 1.1 0.9 0.8 2.3 1.5 4.5 1.2 0.7 1.0 1.2 2.0 1.2 1.1 1.6 1.5 1.6 1.1 1.6 2.6 2.2 2.5																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - August 2017



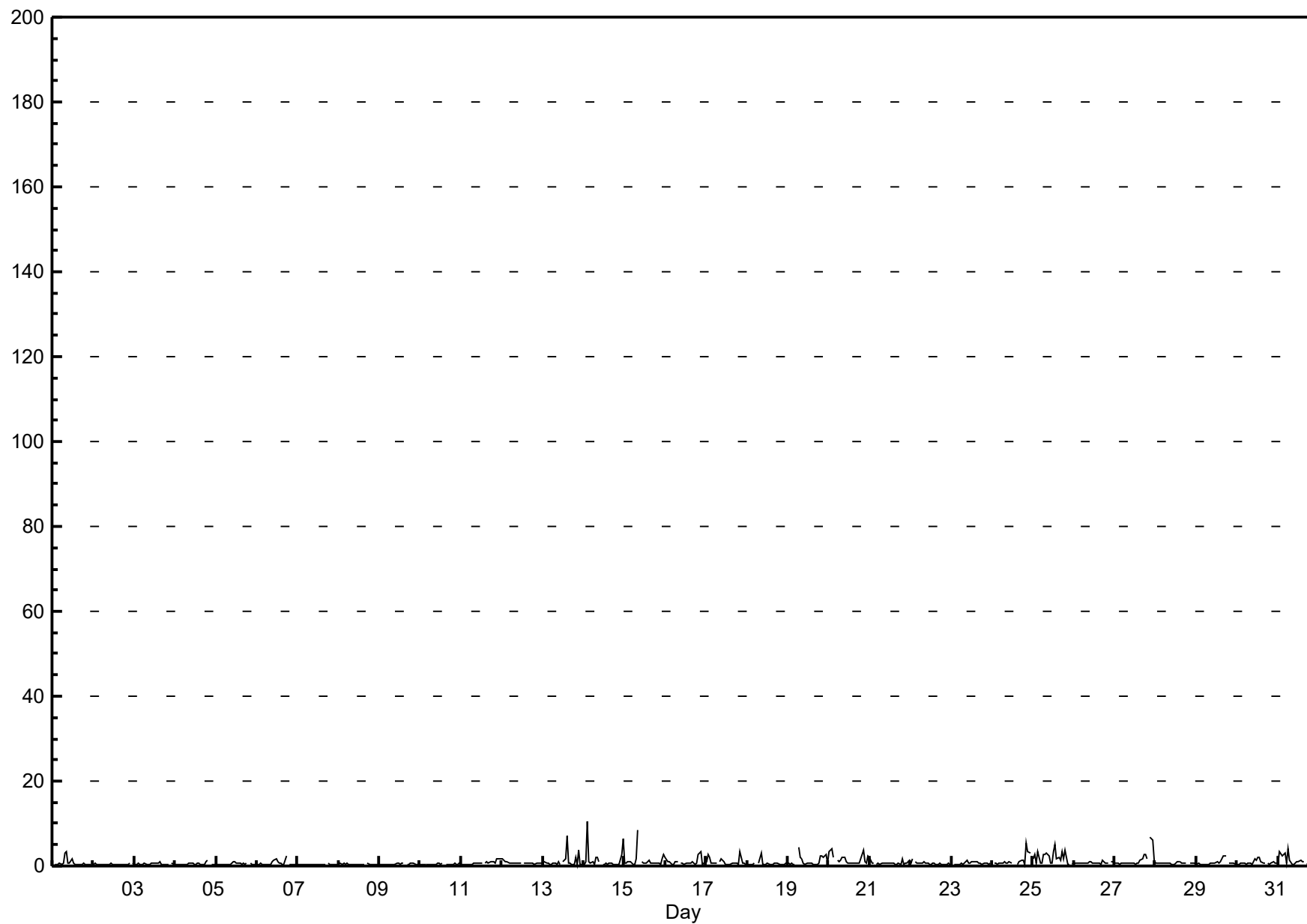
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Smoky Heights - August 2017

Maximum Value: 10.5 ppb on Aug 14 03:00																				Maximum Daily Average: 2.0 ppb on Aug 25					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 7 08:00																				Minimum Daily Average: 0.4 ppb on Aug 7					Hours of Data: 707	
Maximum Diurnal Average: 1.2 ppb at hour 9																				Minimum Diurnal Average: 0.5 ppb at hour 6					Hours of Missing Data: 37	
Monthly Average: 0.87 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.7 P ₉₉ = 6.0					Hours of Calibration: 35	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	1	0	1	3	3	1	1	2	1	0	0	0	0	0	1	0	0	0	0	A	0.8	3.4
2-Aug	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	A	1	0.4	0.6
3-Aug	0	0	1	0	1	0	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	A	1	0	0.5	0.9
4-Aug	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	1	1	A	0	0	0	0.6	1.5
5-Aug	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	0	1	0	1	A	1	0	0	0	0.5	0.9
6-Aug	0	0	1	0	0	0	0	0	0	1	1	2	1	1	1	0	0	2	A	0	0	0	0	0	0.7	2.5
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.4	0.5
8-Aug	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.4	0.6
9-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	A	0	0	1	1	1	0	0	0	0.5	0.7
10-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	1	A	0	0	0	0	0	1	0	0	1	0.4	0.6
11-Aug	1	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	2	0.8	1.8
12-Aug	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	0.8	1.6
13-Aug	1	1	1	1	0	0	1	1	0	1	0	A	1	2	7	1	1	0	0	2	0	4	0	0	1.1	7.1
14-Aug	0	1	11	1	1	1	0	2	2	1	A	1	0	1	1	1	1	0	0	0	0	0	3	6	1.5	10.5
15-Aug	1	1	1	1	1	0	1	2	8	A	1	1	1	1	1	1	1	1	1	1	1	0	2	3	1.2	8.4
16-Aug	2	1	1	1	0	0	1	1	A	1	1	0	1	1	1	1	1	0	1	3	3	3	0	1	1.1	3.4
17-Aug	1	3	2	1	1	1	1	A	1	2	1	0	0	0	0	1	1	1	1	0	4	1	1	0	0.9	3.5
18-Aug	0	0	0	0	1	P	P	1	3	0	0	0	1	0	0	0	1	1	1	0	0	0	0	1	0.6	3.1
19-Aug	1	0	1	0	0	A	4	2	2	1	0	1	1	1	1	0	0	0	1	2	2	2	3	1	1.1	4.4
20-Aug	3	4	4	2	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	4	1	1	2	1.6	4.0
21-Aug	2	1	1	A	0	1	0	1	1	1	1	1	1	1	1	0	1	1	0	2	0	1	1	1	0.8	2.1
22-Aug	1	2	A	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0.6	1.7
23-Aug	0	A	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0.7	1.2
24-Aug	A	1	1	0	1	1	1	1	1	1	1	1	C	C	C	0	1	1	1	0	6	3	3	A	1.2	5.6
25-Aug	2	3	1	4	1	1	3	3	3	2	1	1	3	5	2	2	1	3	2	4	0	0	A	1	2.0	5.0
26-Aug	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	0.7	1.2
27-Aug	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	2	3	3	2	A	7	6	1	1.5	6.6
28-Aug	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	A	1	1	1	1	0.6	1.1
29-Aug	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	A	1	1	1	1	0	0.8	2.3
30-Aug	0	0	1	1	1	0	1	1	1	0	2	1	2	2	1	1	1	A	1	0	1	1	1	1	0.8	2.0
31-Aug	1	3	2	3	3	1	4	1	0	0	1	1	1	1	1	1	A	0	1	0	0	1	1	7	1.5	6.7
0.8 1.0 1.1 0.8 0.6 0.5 0.9 0.9 1.2 0.8 0.7 0.7 0.8 0.9 0.9 0.7 0.7 0.9 0.7 0.9 1.0 1.1 1.0 1.2																								Diurnal Average		
3.3 3.8 10.5 3.6 3.1 1.4 4.4 3.1 8.4 2.3 1.8 1.6 3.4 5.0 7.1 2.2 2.3 3.4 2.6 3.6 5.6 6.6 6.1 6.7																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

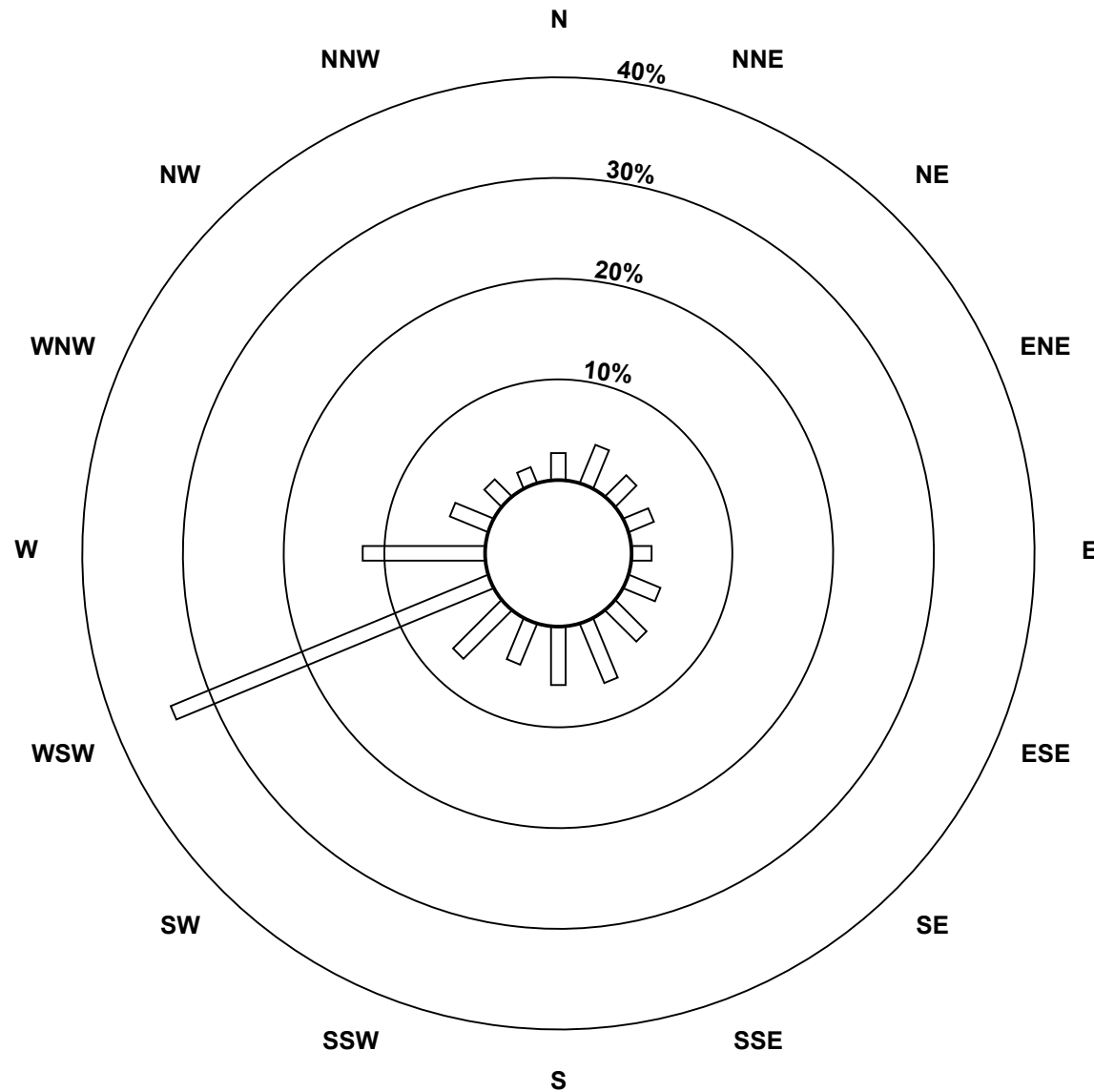
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - August 2017

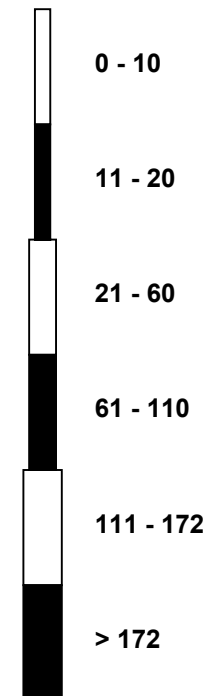


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - August 2017

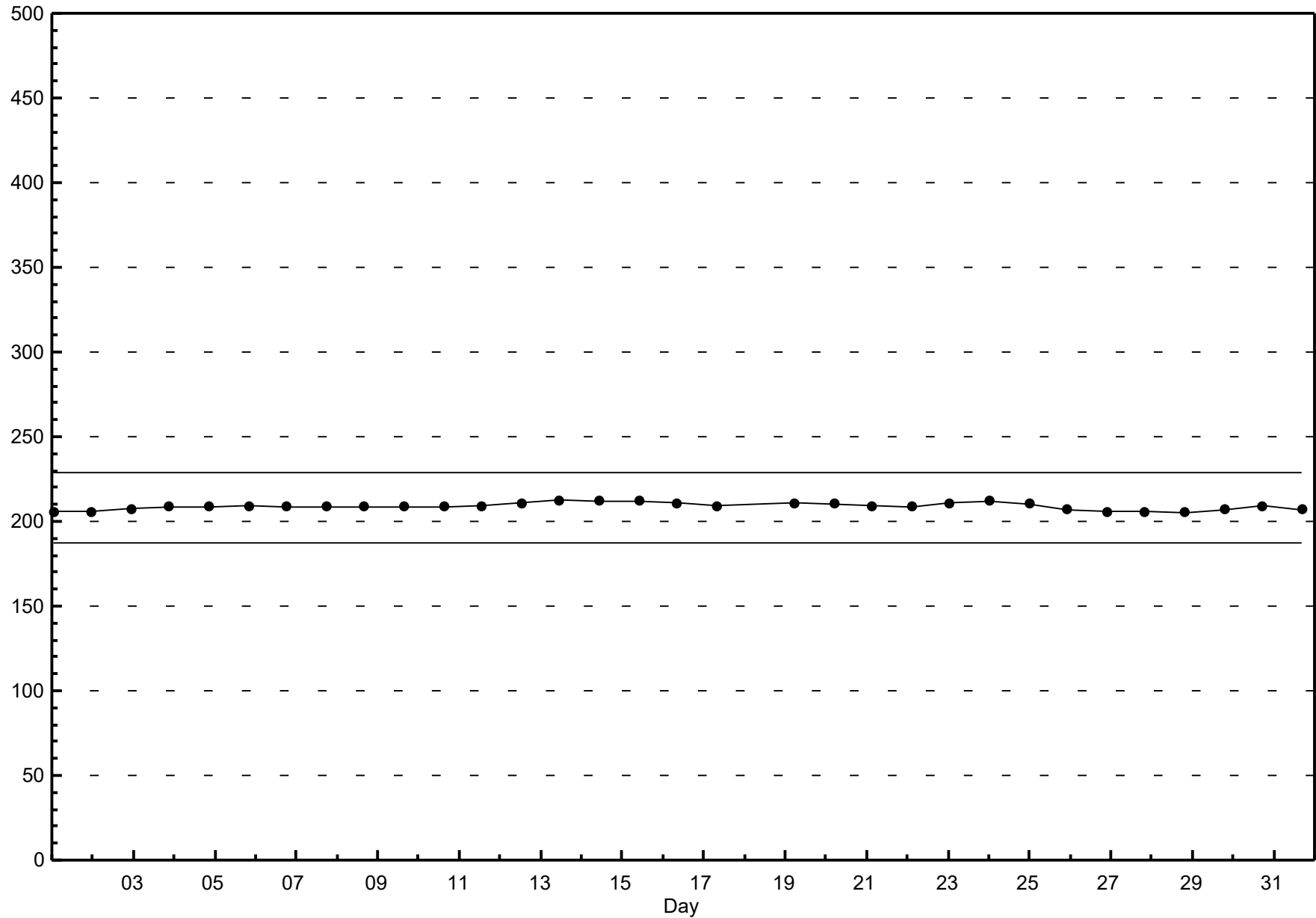


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - August 2017



Hourly Averages

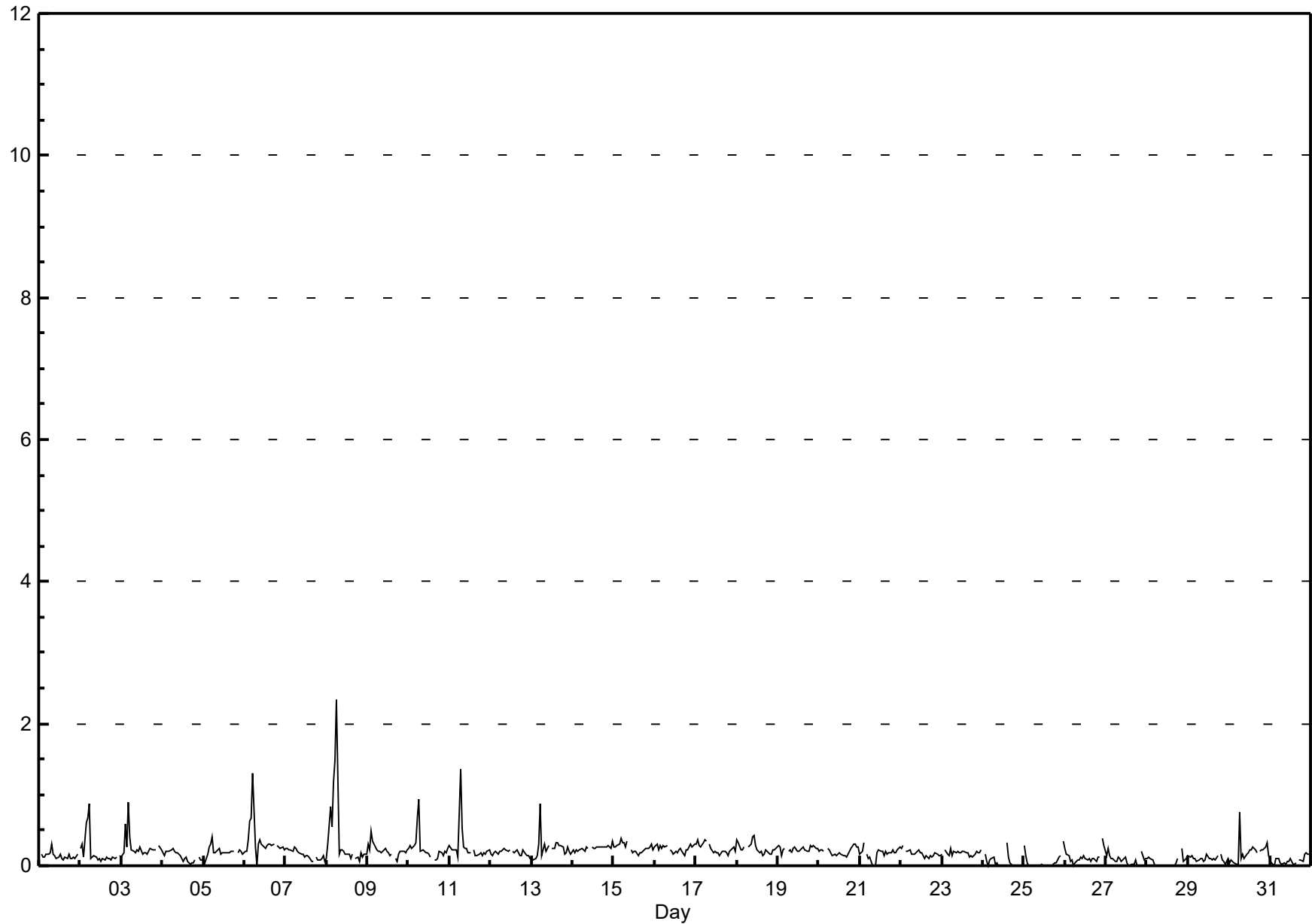
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2017

Maximum Value: 2.3 ppb on Aug 8 07:00																				Maximum Daily Average: 0.4 ppb on Aug 8					Hours in Service: 744				
Minimum Value: 0 ppb on Aug 6 08:00																				Minimum Daily Average: 0.0 ppb on Aug 28					Hours of Data: 706				
Maximum Diurnal Average: 0.3 ppb at hour 6																				Minimum Diurnal Average: 0.1 ppb at hour 17					Hours of Missing Data: 38				
Monthly Average: 0.19 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.9					Hours of Calibration: 36				
																									Percent Operational Time: 99.7				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3			
2-Aug	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.9			
3-Aug	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.9			
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2			
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4			
6-Aug	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	1.3			
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3			
8-Aug	0	0	1	1	1	1	2	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	2.3			
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.5			
10-Aug	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.9			
11-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	1.4			
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2			
13-Aug	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9			
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4			
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
18-Aug	0	0	0	0	0	P	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2			
24-Aug	A	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	A	0.1	0.3			
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4			
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4			
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2			
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.2			
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2			
30-Aug	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.7			
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2			
0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.2																									Diurnal Average				
0.4 0.4 0.8 0.6 1.2 1.5 2.3 0.5 0.3 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4																									Diurnal Maximum				
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																					

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - August 2017



Hourly Maximums

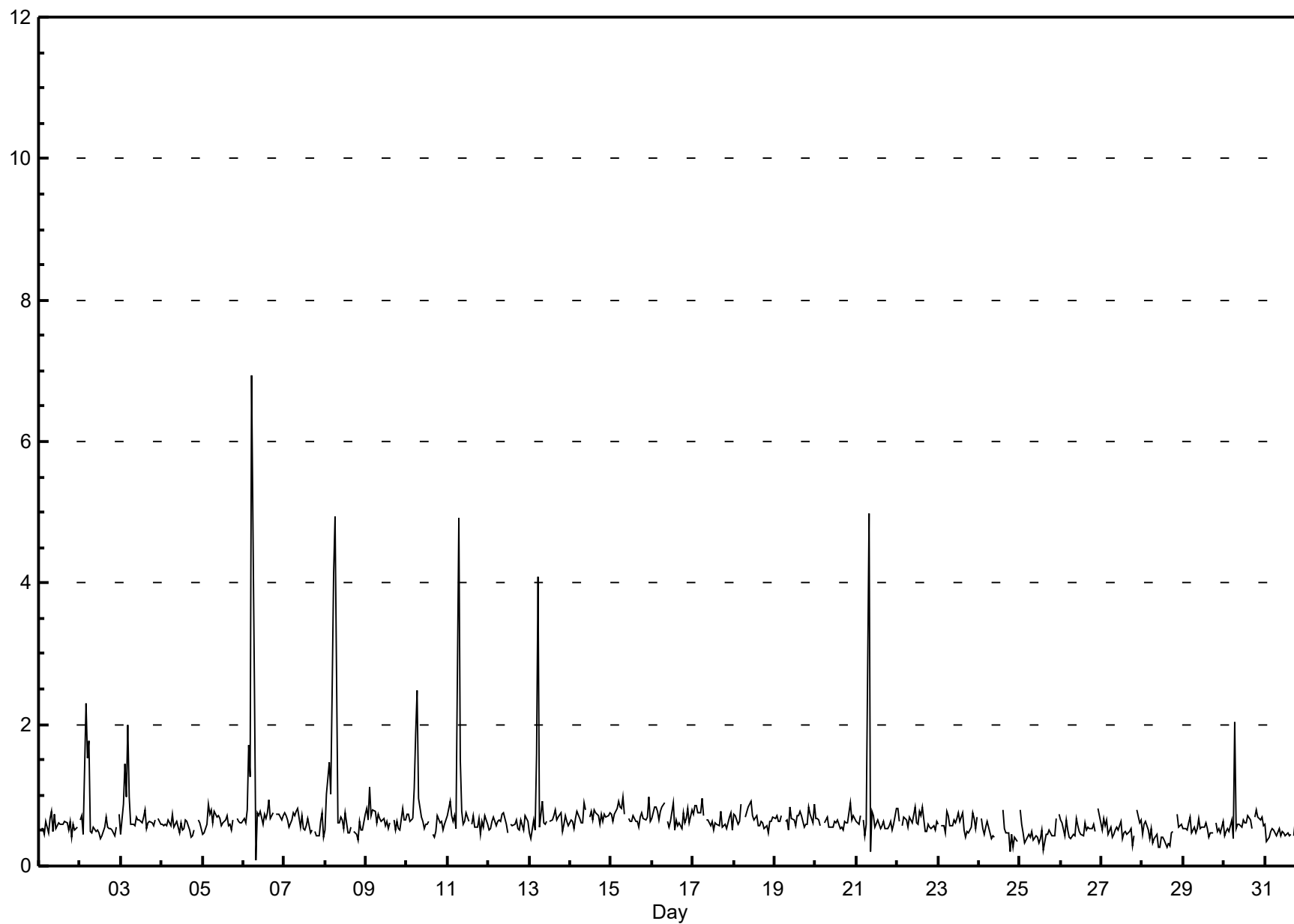
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2017

Maximum Value: 6.9 ppb on Aug 6 06:00																			Maximum Daily Average: 1.1 ppb on Aug 6																			Hours in Service: 744	
Minimum Value: 0 ppb on Aug 6 08:00																			Minimum Daily Average: 0.4 ppb on Aug 28																			Hours of Data: 706	
Maximum Diurnal Average: 1.2 ppb at hour 6																			Minimum Diurnal Average: 0.5 ppb at hour 18																			Hours of Missing Data: 38	
Monthly Average: 0.67 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.7																			Hours of Calibration: 36	
																																						Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	1	1	A	0.6	0.8													
2-Aug	1	1	0	2	2	2	0	0	1	0	1	0	0	1	1	1	1	1	1	1	0	1	A	1	0.7	2.3													
3-Aug	0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	2.0													
4-Aug	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	1	A	1	1	1	0.6	0.7													
5-Aug	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.9													
6-Aug	1	1	1	2	1	7	3	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.1	6.9													
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0	0	0	1	1	0	0.6	0.8													
8-Aug	1	1	1	1	2	4	5	1	1	1	1	1	1	0	0	1	A	0	0	0	1	1	1	1	1.1	4.9													
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.1													
10-Aug	1	1	1	1	1	2	2	1	1	1	1	1	1	1	A	0	0	0	1	1	1	1	1	1	0.8	2.5													
11-Aug	1	1	1	1	1	1	5	2	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	0.9	4.9													
12-Aug	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7													
13-Aug	0	0	1	1	2	4	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0.8	4.1													
14-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
15-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
16-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
18-Aug	1	1	1	1	1	P	P	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.7	0.9													
19-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
20-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
21-Aug	1	1	1	A	1	0	1	5	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.8	5.0													
22-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.6	0.8													
23-Aug	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0.6	0.8													
24-Aug	A	1	1	0	1	1	0	0	0	0	C	C	C	C	1	1	0	0	0	0	0	0	0	A	0.5	0.8													
25-Aug	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	A	1	0.5	0.8													
26-Aug	1	1	0	1	1	0	0	0	0	1	1	0	0	0	1	1	1	1	1	1	0	A	1	1	0.5	0.8													
27-Aug	0	1	1	1	0	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	A	1	1	1	0.5	0.8													
28-Aug	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.4	0.7													
29-Aug	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	0	A	1	0	1	0	1	0.5	0.7													
30-Aug	0	0	1	0	1	0	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	2.0													
31-Aug	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	0.5	0.8													
		0.6	0.6	0.7	0.7	0.8	1.2	1.1	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	Diurnal Average														
		0.8	1.0	1.5	2.3	2.5	6.9	4.9	5.0	0.9	0.9	0.9	0.7	0.9	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.9	0.8	1.0	0.9	Diurnal Maximum													
C - Calibration		P - Power Failure							A - Automated Daily Zero Span																														

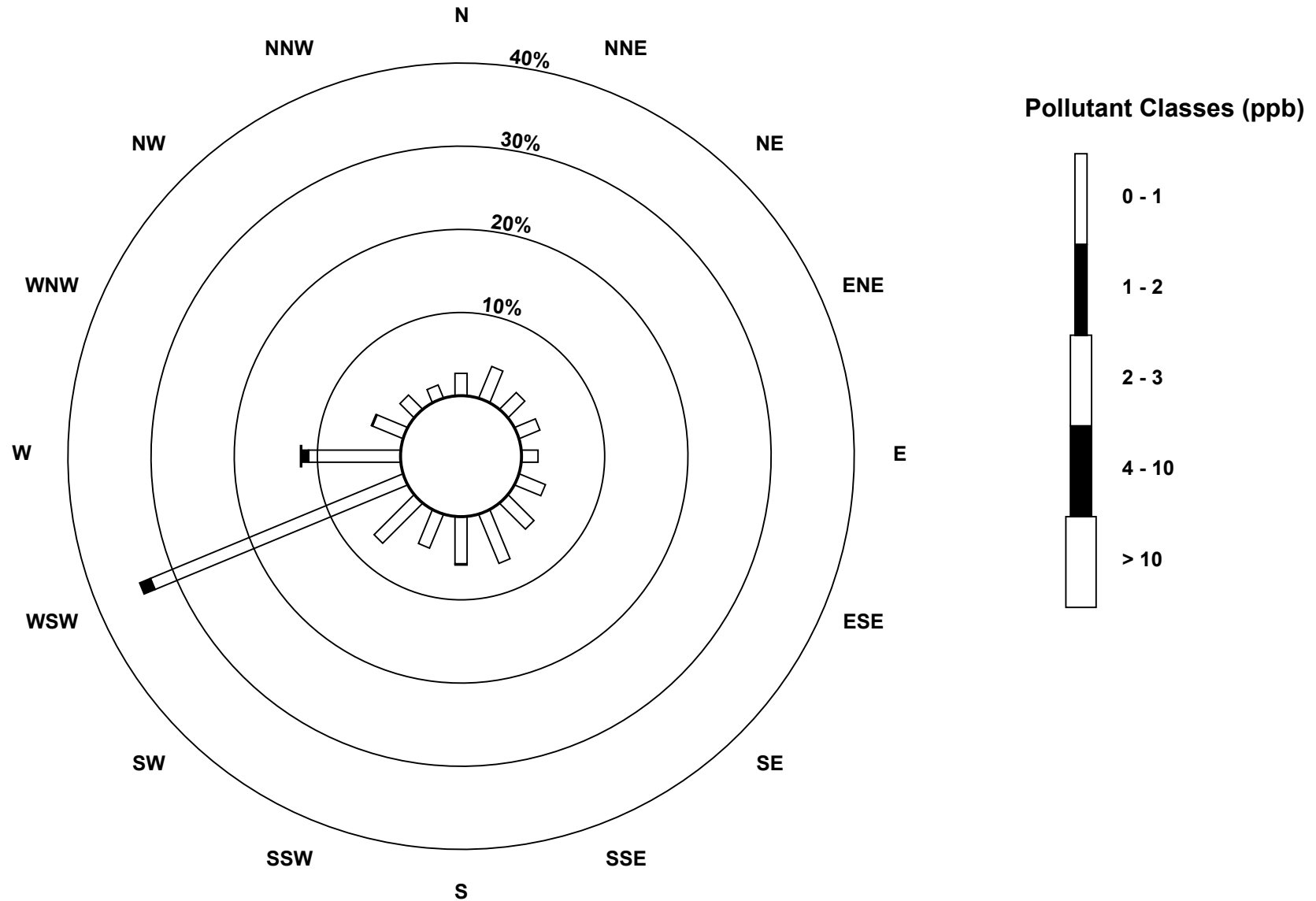
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - August 2017



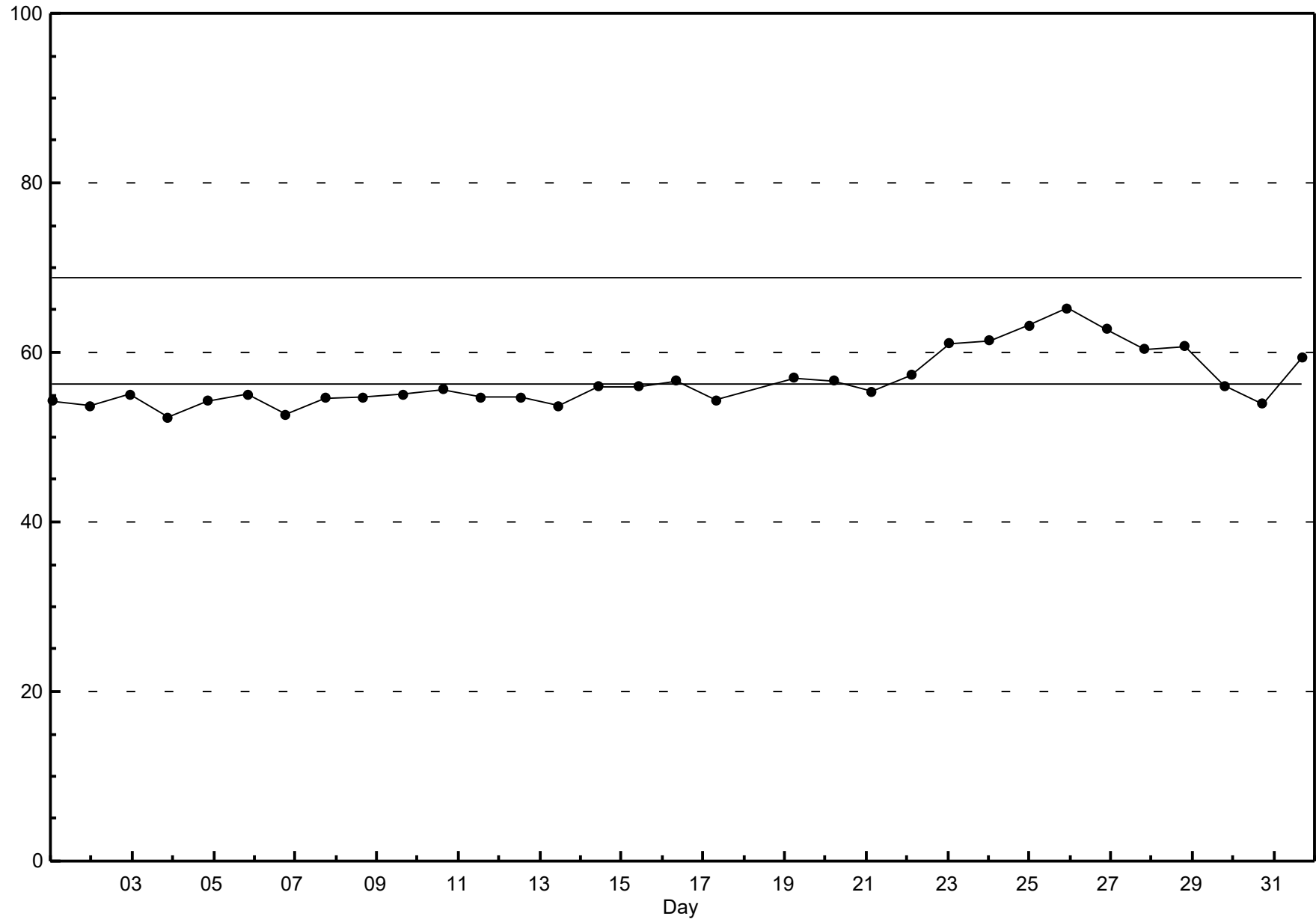
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - August 2017



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - August 2017

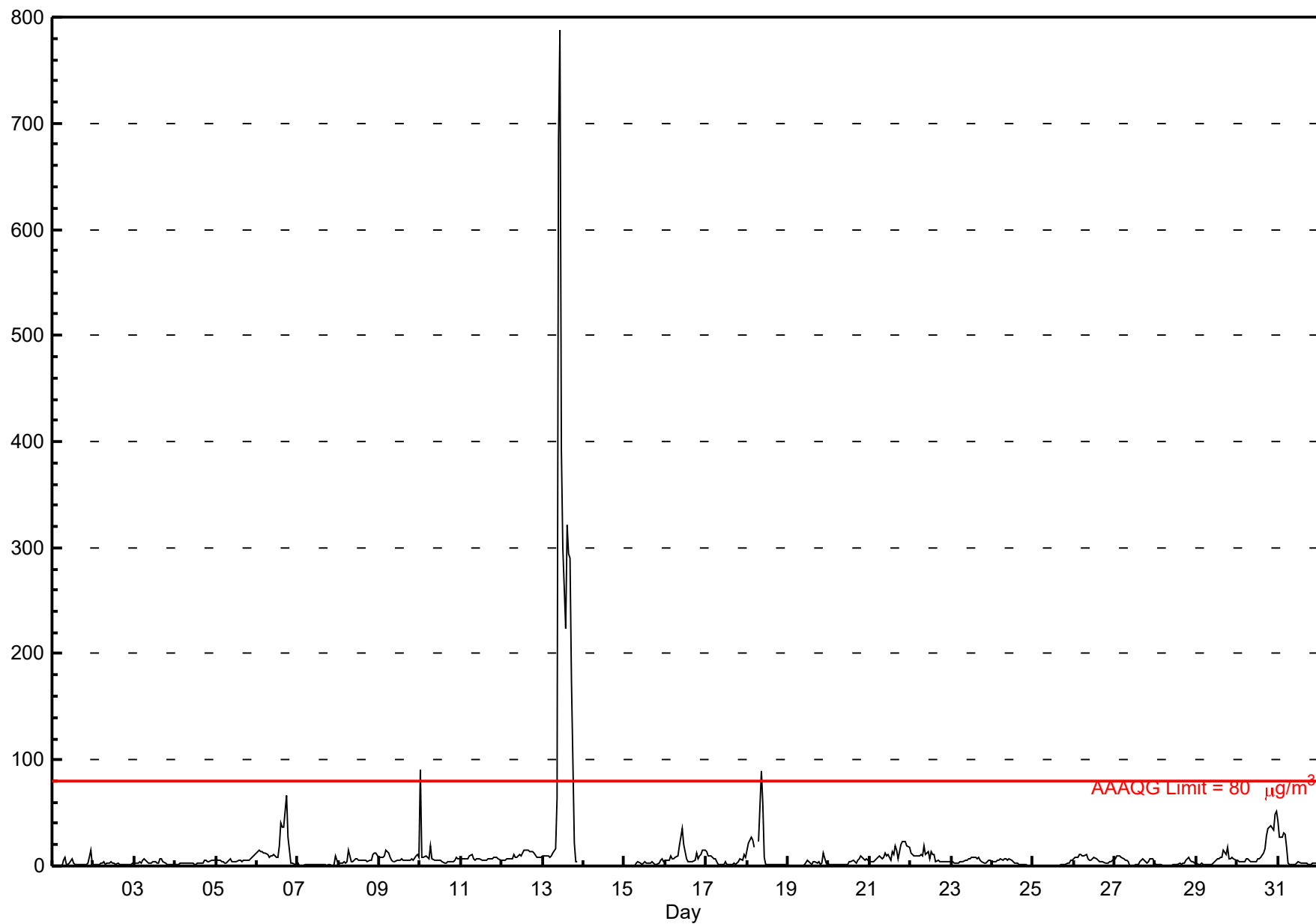


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - August 2017

Number of Exceedences: 1-hr: 11 24-hr: 1 Maximum Value: 787.6 µg/m³ on Aug 13 11:00 Minimum Value: 0 µg/m³ on Aug 1 02:00 Maximum Diurnal Average: 31.7 µg/m³ at hour 11 Monthly Average: 11.06 µg/m³																								Maximum Daily Average: 173.3 µg/m³ on Aug 13 Minimum Daily Average: 1.0 µg/m³ on Aug 25 Minimum Diurnal Average: 5.5 µg/m³ at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 0.7 Q ₁ = 1.8 Median = 4.5 Q ₃ = 7.7 P ₉₀ = 13.4 P ₉₉ = 286.2																								Hours in Service: 744 Hours of Data: 728 Hours of Missing Data: 16 Hours of Calibration: 0 Percent Operational Time: 97.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
1-Aug	0	0	0	0	0	0	5	8	2	1	3	7	3	2	1	1	1	1	1	1	3	16	1	2.4	15.6																								
2-Aug	1	1	1	2	2	2	3	2	3	3	4	3	2	2	2	1	1	1	1	1	1	2	3	1.9	3.7																								
3-Aug	3	3	3	4	3	5	7	5	3	2	3	4	4	3	3	6	6	4	2	2	1	1	1	3.3	6.5																								
4-Aug	2	1	2	2	3	3	3	3	3	3	2	2	2	2	2	2	3	5	6	4	4	5	5	3.1	5.8																								
5-Aug	6	6	5	4	4	3	3	3	7	4	4	4	4	5	5	5	5	6	6	6	7	8	10	5.4	11.1																								
6-Aug	14	15	14	13	13	13	11	8	9	9	10	8	8	20	41	36	36	67	27	15	3	2	1	0	16.4	66.9																							
7-Aug	3	0	0	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	9	5	1.5	8.9																								
8-Aug	3	3	3	4	3	3	15	5	4	5	6	6	6	6	5	5	5	5	6	11	12	12	8	6.1	14.9																								
9-Aug	8	8	8	9	14	12	8	5	4	4	6	6	5	7	6	5	6	5	5	6	6	9	11	8	7.2	14.5																							
10-Aug	91	7	8	9	8	7	19	7	5	6	5	6	5	4	3	3	4	3	4	4	6	8	7	6	9.9	90.8																							
11-Aug	7	7	7	7	7	9	11	7	6	7	7	7	6	5	5	5	7	7	7	8	8	8	6	6	6.9	11.0																							
12-Aug	6	5	6	6	7	7	7	10	8	8	11	10	12	15	15	16	14	14	13	12	8	8	8	8	9.8	15.5																							
13-Aug	9	9	9	9	9	9	12	16	63	683	788	391	300	224	321	294	290	174	21	4	4	N	N	N	173.3	787.6																							
14-Aug	N	N	N	N	N	N	N	N	N	N	M	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0.4																							
15-Aug	0	0	0	0	0	0	0	2	4	3	2	3	3	3	3	2	4	3	2	1	3	5	7	5	2.3	6.6																							
16-Aug	5	6	5	10	7	7	9	9	18	28	35	20	7	4	4	5	4	6	12	7	10	11	15	15	10.8	35.3																							
17-Aug	13	10	10	9	7	6	4	2	1	2	1	3	2	1	1	2	2	2	3	3	6	6	11	8	4.8	12.9																							
18-Aug	15	21	28	25	18	P	P	23	90	58	8	2	1	2	1	1	1	1	1	1	1	1	1	1	13.7	89.7																							
19-Aug	0	0	0	0	0	0	0	0	0	0	2	5	5	2	1	4	4	3	4	1	3	12	2	3	2.2	11.8																							
20-Aug	1	1	1	1	1	1	1	1	2	1	1	1	4	4	6	3	2	5	7	10	6	5	6	6	3.3	9.8																							
21-Aug	4	4	5	5	6	8	9	7	8	13	10	10	6	13	11	18	15	6	20	23	24	22	19	17	11.9	23.7																							
22-Aug	12	11	9	9	9	10	10	10	19	11	13	7	14	10	10	5	5	4	4	4	4	5	5	4	8.6	19.0																							
23-Aug	5	4	3	3	3	3	4	5	5	6	7	7	8	8	8	7	8	5	5	3	3	4	5	5	5.1	8.2																							
24-Aug	4	4	4	5	5	7	6	6	6	6	6	5	3	2	2	2	1	1	1	1	1	1	0	0	3.5	6.7																							
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	3	6	6	1.0	6.0																							
26-Aug	7	8	9	10	11	10	9	11	6	5	5	7	8	7	5	5	4	3	3	3	3	4	4	5	6.5	11.4																							
27-Aug	7	10	10	9	8	7	5	5	3	0	0	1	1	1	2	4	6	5	4	3	4	6	7	5	4.7	9.6																							
28-Aug	2	1	1	1	0	0	0	0	0	1	1	1	2	2	2	2	3	3	6	8	6	4	3	3	2.2	8.1																							
29-Aug	3	2	2	2	1	1	1	2	1	2	3	4	6	7	8	9	15	11	18	7	7	8	7	6	5.5	18.0																							
30-Aug	5	5	4	4	4	7	7	5	4	4	3	5	6	7	9	13	17	29	36	37	38	34	49	51	15.9	51.2																							
31-Aug	42	28	28	31	30	17	3	2	2	1	1	2	4	2	3	3	3	3	2	2	2	2	3	2	9.1	42.0																							
9.2 6.1 6.1 6.5 6.2 5.5 6.0 5.7 9.6 29.3 31.7 17.5 14.2 12.0 15.8 15.1 15.3 12.4 7.3 5.9 5.9 6.6 8.0 6.9																								Diurnal Average																									
90.8 27.5 27.7 31.1 30.3 17.0 18.7 22.7 89.7 682.9 787.6 391.4 300.0 224.2 321.1 294.3 289.8 174.4 35.8 36.5 37.9 34.0 49.2 51.2																								Diurnal Maximum																									
P - Power Failure M - Maintenance N - Not Valid Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																																																	



Hourly Maximums

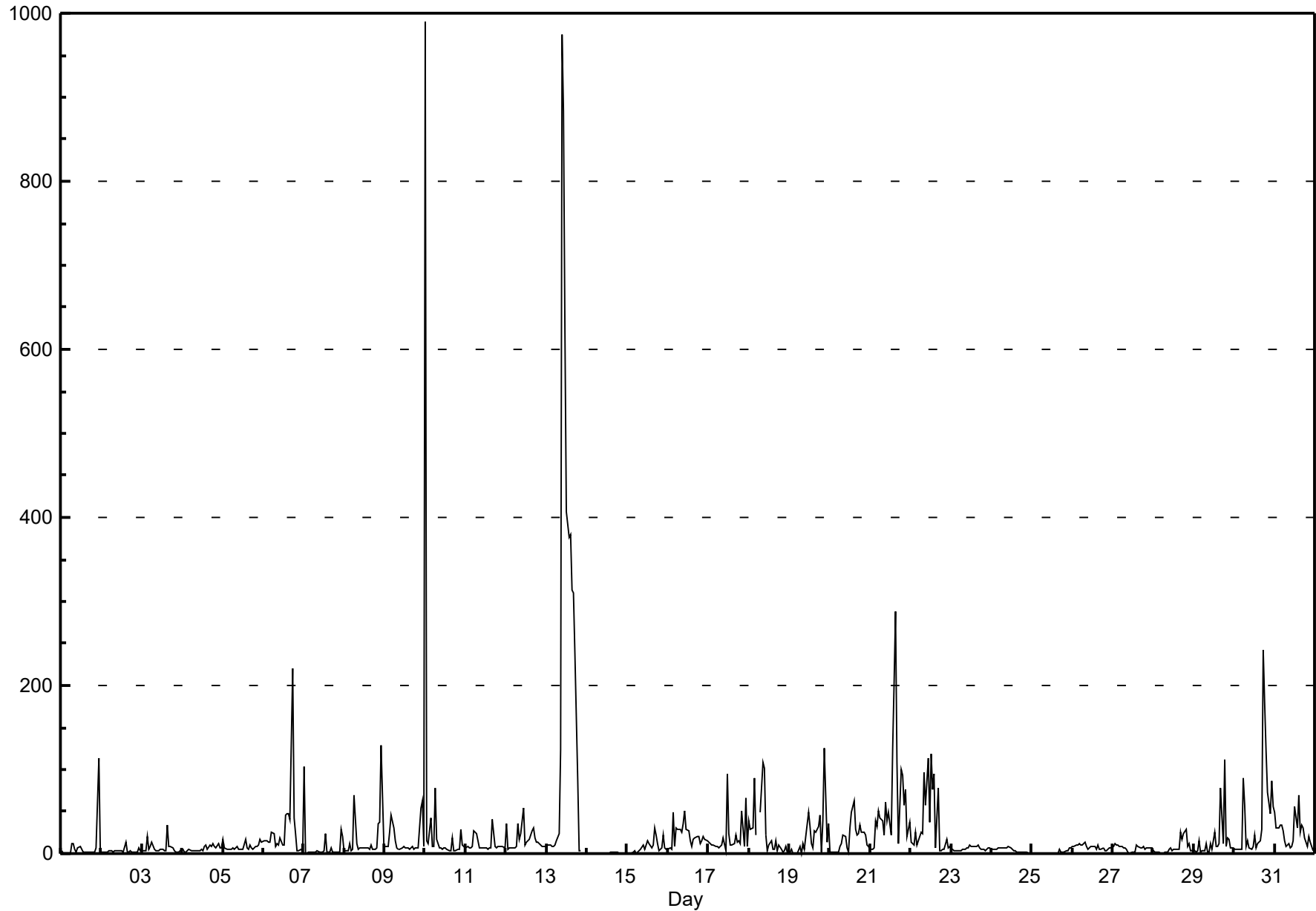
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - August 2017

Maximum Value: 990.0 µg/m³ on Aug 10 01:00																								Maximum Daily Average: 229.8 µg/m³ on Aug 13										Hours in Service: 744	
Minimum Value: 0 µg/m³ on Aug 1 02:00																								Minimum Daily Average: 1.4 µg/m³ on Aug 25										Hours of Data: 728	
Maximum Diurnal Average: 46.9 µg/m³ at hour 10																								Minimum Diurnal Average: 7.0 µg/m³ at hour 3										Hours of Missing Data: 16	
Monthly Average: 23.54 µg/m³																								Percentiles: P ₁ = 0.0 P ₁₀ = 1.2 Q ₁ = 4.1 Median = 7.3 Q ₃ = 16.1 P ₉₀ = 42.4 P ₉₉ = 373.4										Hours of Calibration: 0	
Percent Operational Time: 97.9																																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	4	0	0	0	0	0	11	13	4	2	6	9	4	2	1	1	1	1	1	1	1	6	114	2	7.8	113.8									
2-Aug	2	2	2	2	3	4	4	2	3	4	4	3	3	2	13	2	2	4	1	1	1	2	8	3	3.3	13.2									
3-Aug	3	3	3	20	4	8	14	6	4	3	4	5	5	4	4	34	8	8	7	3	2	2	1	4	6.6	33.9									
4-Aug	5	2	2	3	4	4	3	3	3	4	3	5	3	8	10	5	10	9	11	9	7	11	7	6	5.8	11.5									
5-Aug	17	7	6	5	5	4	6	6	8	5	5	5	5	18	6	5	10	6	6	8	8	10	17	14	7.9	17.6									
6-Aug	15	16	15	14	14	25	23	9	12	11	19	11	11	45	48	48	41	220	43	24	4	3	6	1	28.2	220.1									
7-Aug	104	0	0	1	1	1	2	2	4	2	2	2	4	24	1	1	7	1	1	1	1	1	29	20	8.9	103.5									
8-Aug	4	3	3	12	4	4	70	11	4	6	7	7	6	6	6	6	11	5	6	7	36	37	128	9	16.6	128.2									
9-Aug	8	9	9	25	46	31	15	7	5	5	8	8	6	7	6	6	8	6	6	7	6	54	62	9	15.0	62.3									
10-Aug	990	15	12	43	9	8	77	17	6	6	6	7	7	6	4	4	18	4	4	5	6	29	10	9	54.2	990.0									
11-Aug	7	8	7	8	8	27	23	15	7	7	8	7	7	6	6	7	41	8	8	9	9	8	8	7	10.6	40.5									
12-Aug	36	6	6	7	7	7	8	36	17	24	54	11	13	16	17	28	31	18	14	14	11	9	9	9	16.9	53.7									
13-Aug	9	10	10	9	9	10	15	24	123	975	883	625	407	376	379	314	311	239	88	4	4	N	N	N	229.8	975.0									
14-Aug	N	N	N	N	N	N	N	N	N	N	M	0	0	0	1	1	1	1	1	0	0	1	0	0	--	1.5									
15-Aug	0	0	0	1	3	0	1	3	5	11	4	10	16	12	6	11	30	22	11	4	7	22	8	6	8.1	29.8									
16-Aug	6	7	6	48	8	31	28	29	25	35	50	29	27	16	8	16	18	20	20	11	15	21	16	16	21.1	50.0									
17-Aug	14	11	10	11	8	9	7	8	10	19	4	95	24	10	10	11	21	14	15	12	50	9	66	9	19.0	95.2									
18-Aug	39	29	31	89	22	P	P	49	109	102	22	4	10	15	6	5	16	4	10	6	1	3	9	1	26.5	109.1									
19-Aug	1	4	0	0	0	0	8	0	12	5	20	49	33	12	7	27	25	33	46	2	39	125	14	35	20.7	125.1									
20-Aug	2	2	1	1	1	1	9	12	21	21	7	2	31	49	63	29	22	24	34	25	26	22	10	9	17.7	63.2									
21-Aug	5	5	7	39	32	51	42	38	22	61	40	49	22	125	203	288	109	13	100	94	58	76	21	38	64.0	287.5									
22-Aug	14	12	10	26	10	21	25	24	97	58	113	38	119	76	95	7	78	4	4	5	6	16	7	9	36.4	118.9									
23-Aug	5	5	3	3	3	4	4	5	6	7	7	10	9	9	9	9	11	6	6	5	4	5	6	6	6.1	11.0									
24-Aug	6	4	5	6	6	7	7	7	7	7	9	7	6	3	3	2	2	1	1	2	1	1	0	0	4.2	8.8									
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	5	1	1	2	3	4	6	6	1.4	6.3									
26-Aug	9	9	10	11	12	11	10	13	8	6	6	8	9	8	6	10	6	4	6	3	4	5	6	7	7.7	12.9									
27-Aug	9	12	10	10	9	8	7	7	5	2	0	2	2	2	11	8	7	8	8	4	6	7	8	6	6.6	11.9									
28-Aug	3	2	2	2	1	0	1	1	2	6	7	4	5	5	4	6	26	17	24	29	8	11	4	3	7.2	28.8									
29-Aug	4	2	4	15	2	3	3	12	1	2	13	5	25	8	9	12	78	12	111	9	19	17	7	7	15.8	111.4									
30-Aug	6	5	5	4	4	89	57	8	15	6	4	9	21	7	11	15	28	242	180	121	73	48	86	55	45.9	241.6									
31-Aug	50	31	31	35	34	27	15	8	11	7	9	16	56	31	69	25	34	30	18	8	20	13	9	4	24.6	69.1									
45.9 7.4 7.0 15.0 9.0 13.6 17.2 12.5 18.6 46.9 44.1 33.6 28.9 29.3 33.0 30.4 32.7 31.8 25.5 14.0 14.1 19.3 22.7 10.4																									Diurnal Average										
990.0 30.8 31.3 89.4 45.9 89.1 77.2 49.1 123.1 975.0 883.0 625.2 407.4 375.9 379.1 314.4 310.7 241.6 179.5 121.4 73.0 125.1 128.2 55.5																									Diurnal Maximum										
P - Power Failure M - Maintenance N - Not Valid																																			

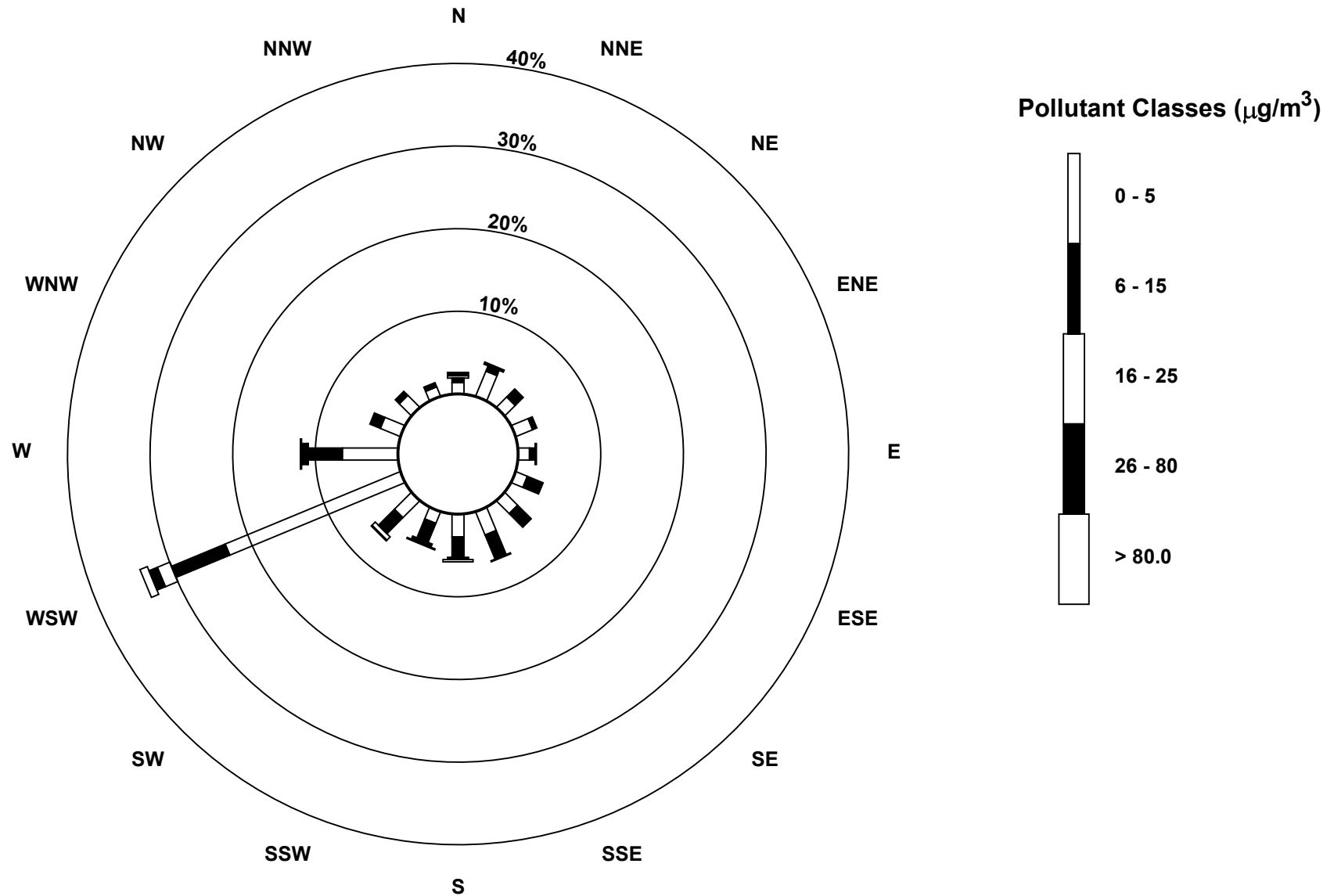
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - August 2017



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Smoky Heights - August 2017



Hourly Averages

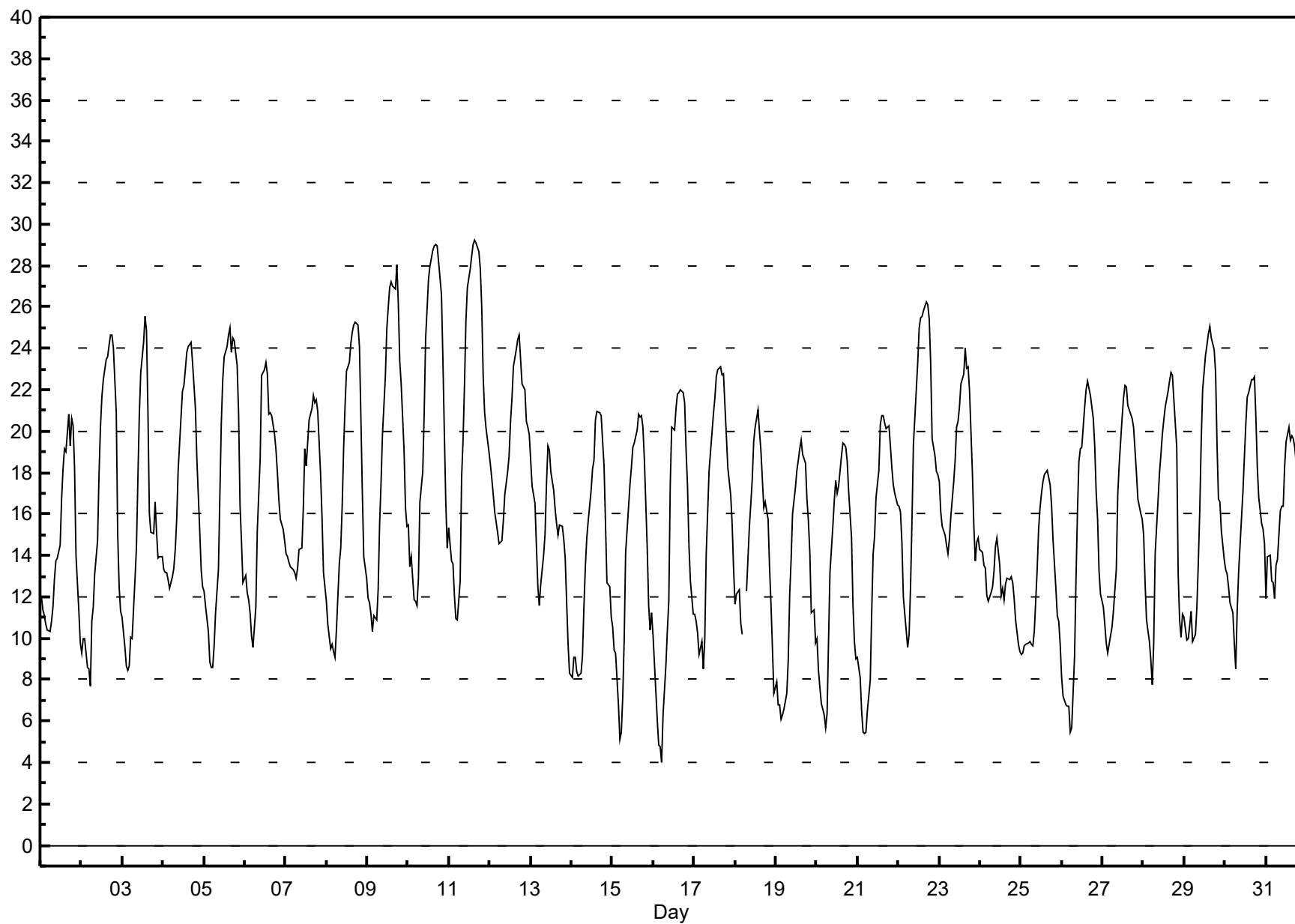
External Temperature (ET) - °C

Smoky Heights - August 2017

Maximum Value: 29.2 °C on Aug 11 16:00																				Maximum Daily Average: 21.2 °C on Aug 11										Hours in Service: 744	
Minimum Value: 4 °C on Aug 16 06:00																				Minimum Daily Average: 12.6 °C on Aug 24										Hours of Data: 742	
Maximum Diurnal Average: 22.1 °C at hour 16																				Minimum Diurnal Average: 9.5 °C at hour 6										Hours of Missing Data: 2	
Monthly Average: 16.12 °C																				Percentiles: P ₁ = 5.5 P ₁₀ = 9.5 Q ₁ = 11.8 Median = 15.8 Q ₃ = 20.4 P ₉₀ = 23.3 P ₉₉ = 28.5										Hours of Calibration: 0	
																														Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	12	11	11	11	10	10	11	11	13	14	14	14	17	18	19	19	21	19	21	20	18	14	11	10	14.6	20.8					
2-Aug	9	10	10	9	9	8	11	12	13	15	18	20	22	22	23	24	24	25	25	24	21	15	12	11	16.3	24.6					
3-Aug	11	10	9	8	9	10	10	13	14	18	21	23	24	26	25	21	16	15	15	17	15	14	14	14	15.4	25.6					
4-Aug	13	13	13	13	12	13	13	14	16	18	21	22	22	23	24	24	24	23	22	21	19	15	13	12	17.7	24.3					
5-Aug	12	12	10	9	9	9	10	11	13	17	20	23	24	24	25	25	24	25	24	23	21	16	15	13	17.2	25.0					
6-Aug	13	12	12	11	10	10	12	15	17	19	23	23	23	23	21	21	21	20	19	18	17	16	15	15	16.8	23.3					
7-Aug	14	14	14	13	13	13	13	13	14	14	16	19	18	19	21	21	22	21	22	21	18	16	13	13	16.5	21.7					
8-Aug	12	11	10	10	9	9	10	14	14	16	19	21	23	23	24	25	25	25	24	21	17	14	13	17.3	25.3						
9-Aug	12	12	11	10	11	11	12	15	17	20	23	25	26	27	27	27	27	28	26	23	22	19	16	15	19.4	28.1					
10-Aug	15	13	14	12	12	12	13	17	18	21	24	26	27	28	29	29	29	29	28	27	23	20	17	14	20.7	29.0					
11-Aug	15	14	14	12	11	11	13	18	20	22	25	27	28	28	29	29	29	29	28	26	23	21	20	19	21.2	29.2					
12-Aug	18	18	17	16	15	15	15	15	16	17	18	19	20	22	23	24	24	25	23	22	22	20	20	20	19.3	24.6					
13-Aug	19	17	16	14	12	12	13	14	15	17	19	19	18	17	16	16	15	15	15	15	14	12	10	8	15.0	19.3					
14-Aug	8	9	9	8	8	8	9	12	13	15	16	17	18	19	21	21	21	21	19	18	16	13	12	11	14.3	20.9					
15-Aug	11	9	9	7	5	5	7	10	14	16	17	18	19	19	20	21	21	21	20	19	14	12	10	11	14.1	20.9					
16-Aug	10	7	6	5	5	4	6	9	10	12	17	20	20	21	22	22	22	22	21	19	17	14	13	11	14.0	22.0					
17-Aug	11	11	10	9	10	9	10	14	16	18	20	21	22	23	23	23	23	23	21	20	18	17	16	13	16.7	23.1					
18-Aug	12	12	12	11	10	P	P	12	15	17	18	20	20	21	20	19	18	16	17	16	13	12	10	7	14.9	21.0					
19-Aug	8	7	7	6	6	7	7	9	12	14	16	17	18	19	19	20	19	18	17	16	14	11	11	10	12.8	19.6					
20-Aug	10	8	8	7	6	6	6	10	13	15	17	18	17	17	19	19	19	19	19	17	15	12	10	9	13.2	19.4					
21-Aug	9	8	6	5	5	5	7	8	11	14	15	17	18	20	21	21	20	20	20	19	18	17	17	16	14.2	20.8					
22-Aug	16	16	15	12	11	10	10	12	16	19	22	23	25	25	26	26	26	26	25	23	20	19	18	18	19.2	26.3					
23-Aug	18	16	15	15	14	14	15	16	18	19	20	20	21	22	23	24	23	23	22	18	15	14	15	15	18.1	24.0					
24-Aug	14	14	13	13	12	12	12	13	13	14	15	14	12	12	13	13	13	13	13	13	12	11	10	9	12.6	14.9					
25-Aug	9	9	10	10	10	10	10	10	10	13	15	16	17	18	18	18	18	17	16	15	12	11	11	10	13.0	18.1					
26-Aug	8	7	7	7	7	5	6	9	13	16	19	19	19	21	22	22	22	22	21	19	17	16	13	12	14.6	22.4					
27-Aug	11	11	10	9	10	11	11	12	13	17	18	21	22	22	22	21	21	21	20	19	18	17	16	16	16.2	22.2					
28-Aug	15	13	11	10	9	8	10	14	17	18	19	20	21	21	22	22	23	23	21	19	13	11	10	11	15.8	22.8					
29-Aug	11	10	10	11	11	10	10	11	14	16	20	22	24	24	25	25	24	24	23	19	17	17	15	14	16.9	25.0					
30-Aug	13	13	12	12	11	10	9	11	13	15	17	19	20	22	22	23	23	23	21	18	17	16	15	15	16.1	22.7					
31-Aug	12	14	14	13	13	12	13	14	16	16	16	18	20	20	20	20	20	19	18	17	14	13	12	10	15.6	20.2					
12.4 11.7 11.1 10.3 9.9 9.5 10.4 12.5 14.5 16.5 18.7 20.0 20.8 21.6 21.9 22.1 21.8 21.6 20.9 19.5 17.3 15.0 13.7 12.8																								Diurnal Average							
18.6 17.7 16.9 16.1 15.1 14.6 14.8 17.8 19.6 22.2 25.3 26.9 27.8 28.5 29.0 29.2 29.1 29.0 28.2 26.6 23.5 20.9 20.2 19.9																								Diurnal Maximum							
P - Power Failure																															

Hourly Averages

External Temperature (ET) - °C
Smoky Heights - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	18	11	3	6	7	6	8	9	6	5	6	7	6	4	3	5	4	5	4	4	4	3	2	2	3.0	18.3
Dir	341	4	88	272	256	232	242	250	296	342	338	288	314	354	297	357	45	47	60	56	76	85	352	310	325.5	341.4
2 Spd	3	2	2	5	5	2	1	4	6	6	7	8	6	5	4	6	4	2	3	3	5	0	1	4	2.1	7.7
Dir	264	182	233	257	263	278	201	202	173	161	150	155	131	127	103	105	126	144	109	70	85	104	18	319	151.9	154.7
3 Spd	4	2	3	4	6	5	6	7	7	5	7	9	9	8	6	16	15	6	3	4	3	2	2	5	1.2	16.4
Dir	338	327	248	272	256	229	221	185	154	171	152	164	133	128	89	308	315	51	283	239	73	321	309	316	231.2	307.7
4 Spd	5	4	7	2	6	7	5	0	5	2	1	3	8	9	9	9	11	14	10	8	6	3	3	3	4.6	14.1
Dir	99	259	254	252	261	256	263	314	240	264	7	289	291	318	318	321	330	327	343	310	307	33	310	332	304.7	327.4
5 Spd	1	7	4	3	4	3	3	4	5	8	8	8	9	6	5	6	7	7	8	7	3	1	2	2	3.5	8.6
Dir	284	262	236	235	177	189	221	181	167	173	163	153	145	194	183	154	87	117	140	136	114	76	300	277	166.0	145.0
6 Spd	1	2	5	6	3	2	5	8	5	3	3	7	10	12	14	15	15	15	12	13	10	6	7	8	5.1	15.1
Dir	246	259	257	265	253	237	247	199	216	181	36	358	356	358	359	5	8	21	24	22	23	31	17	14	0.8	20.7
7 Spd	8	9	9	9	9	9	8	7	9	8	4	6	6	5	3	5	7	5	5	4	6	8	2	2	5.4	9.5
Dir	14	19	22	19	16	26	14	17	35	38	36	49	58	68	74	79	81	75	77	57	66	96	148	199	43.7	16.3
8 Spd	3	4	6	6	5	4	5	6	7	8	8	9	7	8	6	7	6	6	6	5	3	2	2	1	3.3	8.6
Dir	189	240	260	257	254	259	266	189	156	153	146	152	163	120	128	114	120	112	152	148	143	253	358	345	164.7	151.6
9 Spd	3	1	4	2	3	5	5	7	7	8	7	7	9	7	10	11	5	5	7	6	6	2	2	4	2.5	11.0
Dir	247	286	258	226	231	229	224	184	206	169	165	180	154	142	104	103	88	100	62	44	61	25	287	274	150.1	102.7
10 Spd	4	5	3	1	3	3	3	5	7	6	6	9	6	5	4	2	5	4	6	6	8	4	1	2	2.1	8.8
Dir	256	262	274	347	261	282	260	189	166	151	154	147	171	146	97	179	152	102	69	68	85	106	347	280	148.7	147.5
11 Spd	3	3	4	3	2	1	3	2	7	11	15	19	21	22	21	22	22	23	20	14	11	14	17	16	10.8	22.8
Dir	236	251	267	282	319	284	276	190	162	145	137	133	131	129	125	131	121	124	118	117	121	123	132	138	131.6	124.3
12 Spd	15	15	10	8	6	10	11	6	5	8	12	9	8	9	7	5	3	5	8	7	10	10	12	11	6.6	14.9
Dir	145	150	149	159	179	181	175	189	182	188	183	161	166	154	165	237	307	41	32	47	124	124	132	131	153.0	144.9
13 Spd	8	3	8	2	4	10	9	7	5	9	20	17	20	15	12	10	12	11	18	21	17	9	9	11	9.6	21.0
Dir	139	195	173	255	291	257	257	236	245	248	265	253	237	251	237	182	173	198	235	248	248	239	224	229	234.6	248.2
14 Spd	14	16	19	18	15	12	13	20	21	28	26	27	24	21	22	22	24	25	22	21	18	15	17	20	19.8	27.7
Dir	248	260	256	254	249	231	232	239	245	250	256	260	261	251	259	253	244	238	237	241	243	244	255	259	249.1	250.1
15 Spd	23	19	16	12	11	8	12	13	22	28	19	17	14	15	19	20	16	20	23	17	12	12	14	14	15.8	27.9
Dir	256	256	252	238	233	225	230	237	247	259	293	294	303	279	270	260	272	254	248	240	247	253	252	250	257.5	259.1
16 Spd	13	11	7	7	9	9	7	5	9	10	15	30	29	28	27	27	37	25	22	18	17	14	14	15	16.1	36.7
Dir	266	262	259	258	254	229	201	192	208	204	213	239	253	253	251	262	258	270	249	252	248	244	248	256	248.4	258.2
17 Spd	15	17	17	15	16	13	11	14	19	26	33	36	31	26	29	26	24	24	23	20	15	11	8	6	19.5	35.8
Dir	257	258	262	262	258	251	246	238	238	251	259	262	264	246	253	252	251	253	258	258	237	225	212	269	252.9	262.0
18 Spd	8	8	2	4	5	P	P	5	16	24	30	29	25	37	35	34	36	32	36	32	27	19	14	13	21.2	36.6
Dir	266	258	216	224	243	P	P	223	251	239	236	257	251	238	262	257	258	244	243	243	241	239	239	245	246.9	237.9
19 Spd	17	16	17	19	19	22	24	25	31	31	35	32	34	34	34	35	40	34	25	21	16	11	14	13	24.8	40.4
Dir	239	235	243	244	255	252	246	244	251	256	262	260	255	262	254	258	259	261	256	249	259	252	246	243	253.5	259.0
20 Spd	18	15	14	16	16	17	18	19	21	20	20	23	18	17	24	19	20	20	17	14	17	13	14	16	17.3	23.9
Dir	251	253	252	247	249	247	245	248	246	243	247	255	269	285	266	278	288	272	271	260	250	246	259	261	258.1	265.5
21 Spd	15	17	12	9	9	10	8	7	8	8	9	11	13	18	21	20	18	21	23	15	12	11	10	10	11.7	23.4
Dir	252	261	248	210	203	187	194	196	200	172	161	179	208	234	248	239	251	249	258	253	239	239	248	236	232.3	257.7
22 Spd	10	11	11	10	12	11	10	6	11	13	17	17	15	13	11	12	11	11	10	8	9	9	5	12	8.0	17.5
Dir	243	251	246	254	255	248	242	199	185	210	233	242	240	256	214	162	142	141	141	144	137	117	167	220	213.0	242.1



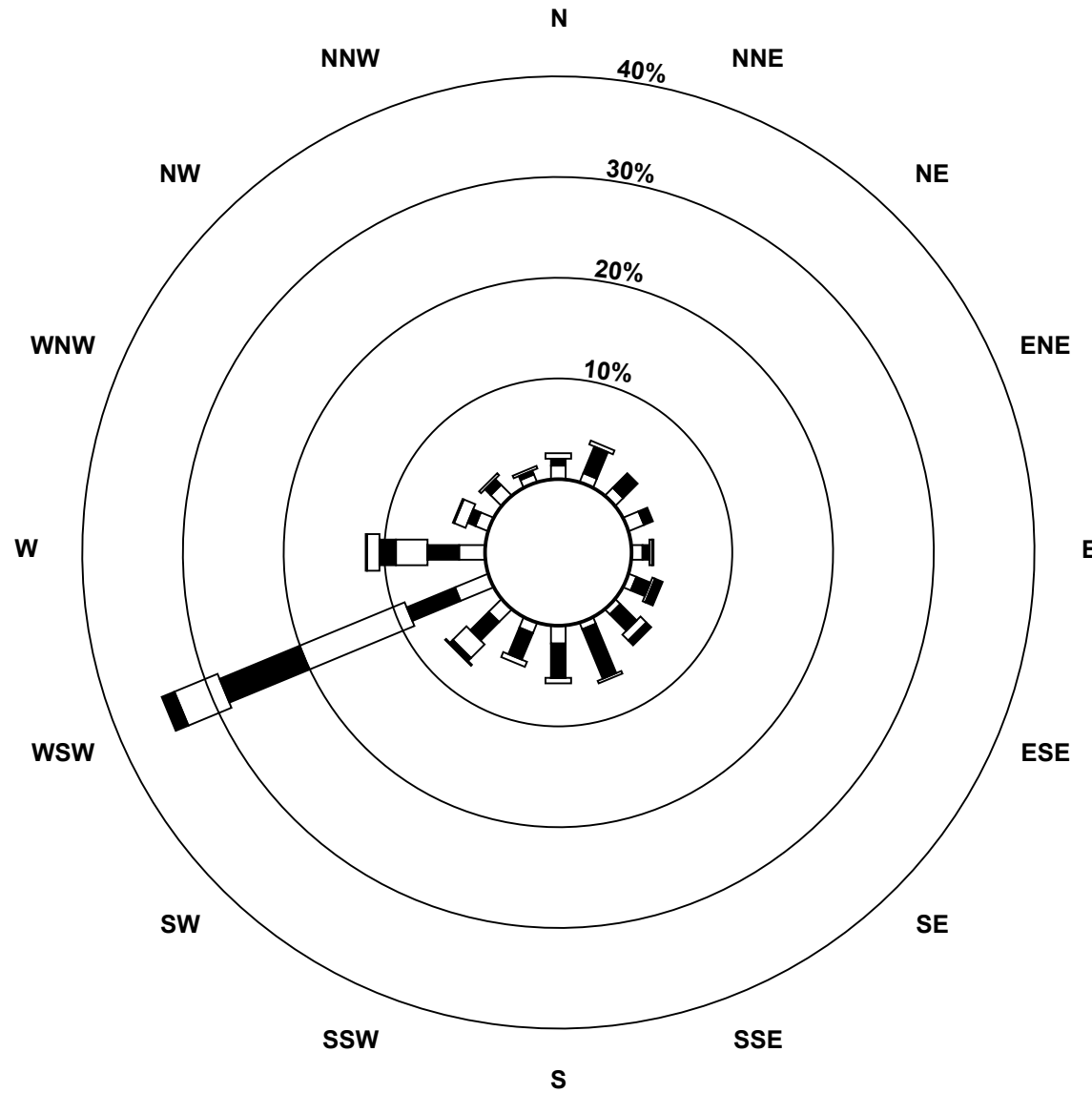
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - August 2017

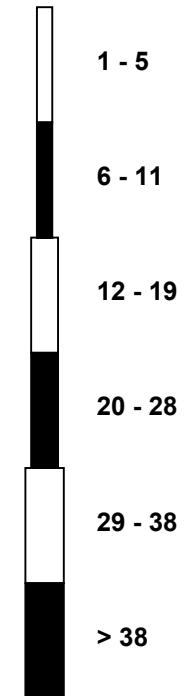
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	12	11	4	8	4	4	8	11	11	12	9	13	9	7	8	9	10	10	11	14	5	12	9	11	7.1	14.1
Dir	177	220	211	222	238	206	186	209	236	230	202	234	202	173	165	168	164	165	166	299	11	227	263	240	210.8	298.7
24 Spd	8	10	2	5	7	7	3	4	1	2	3	14	27	27	30	27	24	17	27	22	19	18	21	21	12.8	30.1
Dir	49	228	122	236	235	261	302	82	65	308	40	270	258	252	256	258	250	257	261	253	251	245	245	245	254.0	256.4
25 Spd	20	18	23	18	12	15	18	24	23	35	40	39	38	38	38	38	40	33	31	16	15	16	17	14	25.5	39.9
Dir	249	242	248	261	292	265	260	249	253	254	256	256	256	259	254	254	255	249	247	243	237	237	239	240	252.6	256.1
26 Spd	11	8	11	13	11	8	8	7	8	12	19	26	21	22	32	32	31	42	34	24	18	14	10	10	17.2	42.1
Dir	232	211	227	209	221	220	194	196	175	181	230	239	228	225	241	243	241	249	241	236	230	235	255	269	232.9	248.8
27 Spd	11	11	10	9	9	11	7	9	7	20	24	26	27	29	31	28	27	23	18	15	14	16	15	13	16.8	30.8
Dir	272	280	269	268	269	279	253	229	252	256	257	257	260	257	258	257	251	253	251	244	246	249	254	263	256.9	257.7
28 Spd	12	12	11	10	10	9	10	11	13	12	13	9	6	5	3	4	3	5	6	3	2	2	4	5	6.0	12.8
Dir	266	259	249	251	269	253	281	289	292	295	289	298	302	280	289	305	310	332	39	34	58	28	9	9	288.0	291.8
29 Spd	6	3	4	3	6	4	6	8	11	10	8	11	18	25	23	21	23	22	17	8	8	10	8	8	9.2	25.3
Dir	12	23	355	19	29	19	23	38	54	46	54	64	90	116	102	98	111	110	98	40	40	56	33	24	75.9	116.1
30 Spd	8	6	6	6	6	2	3	2	5	6	7	8	8	8	9	9	7	7	6	7	8	7	10	9	2.2	10.1
Dir	21	360	11	13	15	355	248	211	176	182	192	166	182	160	157	150	155	183	238	274	280	244	263	250	209.8	262.9
31 Spd	9	17	14	15	17	15	17	22	31	37	29	36	39	43	42	44	40	39	35	24	15	16	16	11	25.7	44.0
Dir	238	262	259	255	248	244	251	246	245	245	242	255	257	256	252	252	244	239	242	246	238	242	256	254	248.6	251.7
Spd	5.8	7.1	6.8	6.6	6.6	6.7	6.9	7.2	8.1	9.8	10.2	11.7	11.0	10.7	11.3	10.7	10.1	9.2	9.1	7.7	5.5	5.3	6.0	6.6	Diurnal Average	
Dir	254.3	254.0	250.0	250.7	254.3	244.9	241.2	229.5	232.1	234.8	239.6	244.5	243.7	241.2	246.0	247.6	247.1	242.3	242.6	249.8	239.6	232.0	246.2	251.3	Diurnal Maximum	
Spd	22.7	18.8	23.3	19.1	19.0	22.3	24.1	24.6	31.4	37.4	39.9	39.4	38.7	42.7	42.1	44.0	40.4	42.1	36.3	31.5	27.2	19.3	20.5	21.3	Diurnal Maximum	
Dir	256.4	256.4	248.1	244.3	255.2	252.0	245.5	244.5	251.0	245.0	256.1	255.9	257.3	255.7	252.3	251.7	259.0	248.8	243.1	242.8	241.1	239.3	245.2	245.3		
Maximum Speed Value: 44 km/h on Aug 31 16:00							Minimum Speed Value: 0 km/h on Aug 4 08:00													Hours in Service:				744		
Maximum Daily Speed Average: 25.7 km/h on Aug 31							Minimum Daily Speed Average: 1.2 km/h on Aug 2													Hours of Data:				742		
Maximum Diurnal Speed Average: 11.7 km/h at hour 12							Minimum Diurnal Speed Average: 5.3 km/h at hour 22													Hours of Missing Data:				2		
Monthly Average Velocity: 8.14 km/h 243.95 deg							Speed Percentiles: P ₁ = 1.0 P ₁₀ = 3.1 Q ₁ = 5.7 Median = 9.6 Q ₃ = 17.2 P ₉₀ = 25.7 P ₉₉ = 39.7													Percent Operational Time:				99.7		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
P - Power Failure																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	14		24		7		0		0		0		45													
NorthEast	14		29		2		0		0		0		45													
East	17		15		3		4		0		0		39													
SouthEast	6		46		11		8		0		0		71													
South	14		63		5		0		0		0		82													
SouthWest	20		40		61		29		15		2		167													
West	39		49		76		53		29		11		257													
NorthWest	17		11		7		1		0		0		36													
Total	141		277		172		95		44		13		742													

Wind Rose

Wind Speed (WS) (km/h)
Smoky Heights - August 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - August 2017

Maximum Speed: 44 km/h on Aug 31 16:00																								Maximum Daily Speed Average: 26.1 km/h on Aug 31										Hours in Service: 744			
Minimum Speed: 1 km/h on Aug 2 22:00																								Minimum Daily Speed Average: 4.6 km/h on Aug 2										Hours of Data: 742			
Maximum Diurnal Speed Average: 18.6 km/h at hour 15																								Minimum Diurnal Speed Average: 8.4 km/h at hour 6										Hours of Missing Data: 2			
Monthly Average Speed: 12.89 km/h																								Percentiles: P ₁ = 1.8 P ₁₀ = 3.9 Q ₁ = 6.5 Median = 9.8 Q ₃ = 17.4 P ₉₀ = 26.2 P ₉₉ = 40.0										Percent Operational Time: 99.7			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Aug	19	11	9	7	7	6	8	10	7	5	7	8	7	6	7	7	5	5	4	4	4	3	3	2	6.7	18.6											
2-Aug	3	3	2	5	5	2	2	5	7	6	7	8	7	6	7	7	5	4	3	4	5	1	2	4	4.6	8.4											
3-Aug	4	3	3	4	6	5	6	7	7	5	8	10	10	9	7	19	16	7	5	7	3	4	2	6	6.8	18.6											
4-Aug	6	4	7	3	7	7	5	3	6	5	5	5	9	9	10	10	11	14	11	8	6	4	4	3	6.8	14.5											
5-Aug	6	7	5	4	4	3	3	5	5	8	8	9	10	8	9	7	7	8	8	7	3	1	2	3	5.8	9.7											
6-Aug	1	2	5	6	3	2	5	8	6	5	4	7	10	13	14	15	15	15	13	13	10	6	7	8	8.2	15.3											
7-Aug	8	9	9	9	10	9	8	7	9	9	4	7	7	7	8	7	8	6	5	4	6	9	3	3	7.0	9.6											
8-Aug	3	4	6	6	6	4	5	6	7	9	8	9	8	9	7	8	8	6	6	5	3	2	3	3	5.9	9.3											
9-Aug	4	2	4	3	4	5	5	7	7	8	7	8	9	8	11	11	6	6	7	6	7	3	3	4	6.0	11.3											
10-Aug	4	5	4	1	3	3	3	5	7	6	6	9	8	8	5	6	6	6	7	6	8	4	1	2	5.2	9.2											
11-Aug	4	3	4	4	2	1	3	3	7	11	16	19	22	23	22	23	22	23	20	14	11	14	17	16	12.6	23.1											
12-Aug	15	15	11	8	6	10	11	6	6	8	12	9	8	9	7	6	5	5	8	7	11	10	12	11	9.0	15.0											
13-Aug	9	5	8	3	4	10	9	7	5	9	20	17	20	15	13	11	12	11	18	21	17	9	9	11	11.4	21.1											
14-Aug	14	16	19	18	15	12	13	21	21	28	26	28	24	21	23	22	24	25	22	21	18	15	17	20	20.2	27.9											
15-Aug	23	19	17	12	11	8	12	13	22	28	21	18	15	16	19	21	16	21	23	17	13	12	14	15	16.9	28.2											
16-Aug	13	11	7	7	9	9	8	5	9	10	17	30	29	28	28	28	37	25	22	18	17	14	14	15	17.1	37.1											
17-Aug	15	17	17	15	16	13	11	14	19	26	34	36	32	26	30	26	24	24	23	20	15	11	8	6	20.1	36.2											
18-Aug	9	9	4	4	6	P	P	6	16	25	31	31	26	37	35	35	36	32	37	32	27	19	14	13	22.0	37.1											
19-Aug	17	16	17	19	19	22	24	25	32	31	35	32	35	35	34	36	41	34	25	21	16	11	14	13	25.2	40.9											
20-Aug	18	15	15	16	16	17	18	19	21	20	20	24	20	18	25	20	21	21	17	14	17	13	14	16	18.1	24.5											
21-Aug	15	17	12	9	9	10	8	7	8	9	9	11	14	19	21	21	18	21	24	16	12	11	11	10	13.4	23.5											
22-Aug	10	11	11	10	12	11	10	7	11	13	18	18	16	14	13	13	11	12	10	8	9	9	5	12	11.4	17.8											
23-Aug	15	15	4	8	4	5	8	11	11	13	9	13	10	8	9	10	10	10	11	17	5	12	14	16	10.4	16.5											
24-Aug	10	12	5	9	7	7	6	5	3	3	5	16	28	27	30	27	24	18	27	22	19	18	21	21	15.5	30.3											
25-Aug	20	18	23	18	13	15	18	24	23	35	40	40	39	38	38	38	40	33	31	17	15	16	17	14	26.0	40.1											
26-Aug	11	8	11	13	12	10	8	7	8	13	20	26	22	23	32	32	32	42	34	24	18	14	10	10	18.4	42.5											
27-Aug	11	12	10	9	9	12	7	10	7	20	24	26	28	29	31	29	27	23	18	15	14	16	15	13	17.2	31.3											
28-Aug	12	12	11	11	10	9	10	11	13	13	13	10	7	6	5	6	5	6	6	3	2	3	4	5	8.0	13.0											
29-Aug	6	4	4	3	6	4	7	8	11	10	9	12	19	26	24	21	23	22	17	8	9	10	8	8	11.6	26.2											
30-Aug	8	6	6	7	6	2	3	2	5	6	7	8	9	9	9	9	7	7	6	7	8	7	10	9	6.9	10.3											
31-Aug	9	17	14	15	17	15	17	22	31	38	29	36	39	43	42	44	40	39	35	24	15	16	16	11	26.1	44.3											
10.3 9.9 9.2 8.6 8.6 8.4 8.8 9.5 11.5 14.1 15.4 17.5 17.6 17.9 18.6 18.5 18.1 17.2 16.3 13.3 11.1 9.6 9.5 9.9																									Diurnal Average												
22.8 18.8 23.4 19.1 19.0 22.3 24.1 24.7 31.5 37.7 40.1 40.0 39.1 43.2 42.4 44.3 40.9 42.5 36.6 31.6 27.2 19.3 20.6 21.3																									Diurnal Maximum												
P - Power Failure																																					
All monthly, daily, and diurnal averages have been calculated using scalar methods																																					

Hourly Standard Deviations

Wind Direction (WD) - deg
Smoky Heights - August 2017

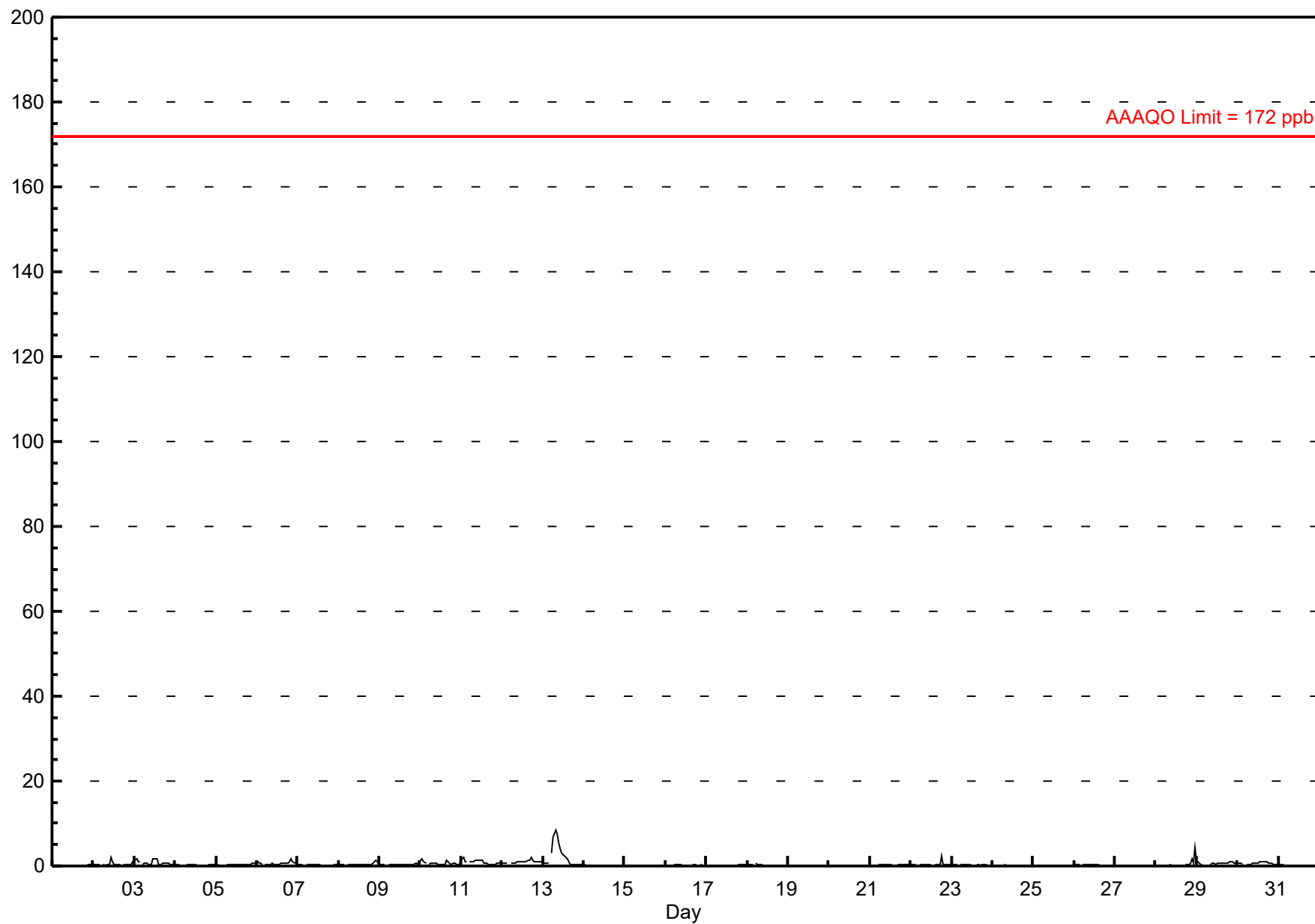
Maximum Value: 95.5 deg on Aug 4 08:00																		Hours in Service: 744							
Minimum Value: 2.1 deg on Aug 15 02:00																		Hours of Data: 742							
																		Hours of Missing Data: 2							
																		Hours of Calibration: 0							
Percentiles: P ₁ = 2.6 P ₁₀ = 4.8 Q ₁ = 7.4 Median = 11.6 Q ₃ = 22.9 P ₉₀ = 42.7 P ₉₉ = 81.7																		Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	11	10	72	30	11	15	10	9	31	22	22	23	38	59	72	37	40	20	21	14	16	20	56	31	71.8
2-Aug	23	43	24	7	7	18	50	14	20	17	20	24	46	49	55	39	45	80	35	27	12	70	35	10	80.3
3-Aug	10	67	33	17	26	10	10	13	16	24	19	20	22	26	42	33	24	39	58	63	76	77	48	24	76.8
4-Aug	50	14	10	69	23	16	16	96	20	75	75	70	35	30	26	27	15	12	11	8	14	45	56	24	95.5
5-Aug	93	16	36	47	24	25	24	26	15	14	15	21	33	47	81	41	20	34	14	5	16	57	27	35	93.4
6-Aug	40	15	6	11	23	32	13	12	19	85	60	21	18	22	11	14	13	11	11	8	9	8	11	9	85.3
7-Aug	9	9	10	9	8	10	13	16	14	17	32	38	36	40	75	50	32	40	27	10	7	17	41	23	75.2
8-Aug	18	21	4	9	11	7	8	24	14	13	18	23	33	41	56	40	40	24	16	8	22	35	43	62	62.5
9-Aug	25	64	17	41	23	12	14	12	19	13	21	28	28	36	35	14	34	29	11	7	14	38	48	13	63.6
10-Aug	16	12	49	62	8	27	21	12	11	19	27	19	39	54	61	83	39	54	18	6	14	76	37	54	83.2
11-Aug	29	22	9	36	20	92	25	70	11	11	11	13	11	12	14	11	11	9	6	9	9	6	5	4	92.2
12-Aug	6	5	7	17	22	11	8	7	11	9	7	12	13	14	16	26	50	11	11	13	21	10	11	13	50.0
13-Aug	14	52	30	58	45	8	13	14	24	9	9	14	6	8	13	23	16	12	6	5	3	10	5	14	57.5
14-Aug	6	5	4	2	4	6	5	6	7	7	7	10	12	9	13	11	11	8	7	5	3	4	4	3	12.8
15-Aug	2	2	4	5	10	5	7	4	8	9	19	17	19	23	13	13	17	12	10	4	7	4	5	3	22.9
16-Aug	6	6	6	8	12	10	15	14	9	10	26	11	9	8	10	16	8	10	9	5	4	5	6	4	26.5
17-Aug	3	2	2	3	3	7	4	6	7	9	11	8	12	12	12	10	9	10	6	4	7	8	7	25	25.2
18-Aug	17	37	46	35	35	P	P	25	5	6	6	23	16	10	10	9	6	7	7	5	4	3	4	7	46.4
19-Aug	5	6	3	4	3	4	3	4	5	5	9	11	11	10	9	12	9	9	10	6	3	6	6	5	12.4
20-Aug	3	5	7	9	3	4	3	4	7	9	10	14	27	13	13	23	19	15	8	9	3	5	4	3	27.2
21-Aug	6	3	9	13	9	5	8	11	12	12	13	19	13	20	14	10	6	11	6	9	4	3	7	5	20.3
22-Aug	7	5	5	6	6	5	19	14	12	9	11	12	21	20	35	22	20	15	6	4	12	7	28	16	35.3
23-Aug	34	44	31	9	31	45	10	12	9	9	20	12	23	31	31	25	9	8	20	35	34	16	82	68	81.7
24-Aug	49	45	66	74	19	11	61	43	71	73	90	27	10	8	7	6	6	13	6	7	6	8	4	4	89.5
25-Aug	5	6	5	7	24	6	6	4	5	6	6	10	9	9	8	8	7	8	6	10	3	3	3	6	24.2
26-Aug	8	17	5	8	14	29	9	11	13	16	16	8	15	17	9	10	9	7	6	6	4	8	4	9	28.8
27-Aug	13	8	11	9	7	10	15	12	10	4	6	8	11	10	10	8	5	6	6	9	5	5	7	6	15.2
28-Aug	7	10	5	15	11	5	10	17	8	11	15	26	48	49	85	47	63	32	9	11	24	31	17	3	84.7
29-Aug	7	67	26	29	18	15	14	19	9	8	15	23	17	16	12	14	6	6	11	18	12	8	14	7	67.1
30-Aug	6	12	9	11	20	41	38	25	18	15	19	14	23	19	12	13	13	12	28	7	10	15	8	13	41.4
31-Aug	10	8	10	10	10	14	6	7	6	6	7	8	9	8	7	6	7	6	4	4	5	4	4	11	13.8
93.4 67.1 71.8 74.1 45.4 92.2 60.9 95.5 71.0 85.3 89.5 70.3 48.3 58.7 84.7 83.2 62.8 80.3 58.1 62.6 76.4 76.8 81.7 68.1																									
P - Power Failure																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.3 ppb on Aug 13 08:00 Maximum Daily Average: 2.2 ppb on Aug 13																								Hours in Service: 744 Hours of Data: 710			
Minimum Value: 0 ppb on Aug 19 09:00 Minimum Daily Average: 0.0 ppb on Aug 19 Maximum Diurnal Average: 0.5 ppb at hour 9 Minimum Diurnal Average: 0.3 ppb at hour 4 Monthly Average: 0.38 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.9 P ₉₉ = 2.6																								Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
2-Aug	0	0	0	0	A	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	2.1
3-Aug	1	2	1	1	A	1	1	1	0	0	0	2	2	2	0	0	0	1	1	1	1	0	0	0	0.8	1.8	
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
5-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.7	
6-Aug	1	1	1	0	A	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	2	1	1	0	0.6	1.8	
7-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	1.2	
9-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.5	
10-Aug	1	2	1	1	A	0	1	1	1	1	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0.6	1.5	
11-Aug	1	2	1	1	A	1	1	1	1	2	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0.9	2.0	
12-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.0	1.9	
13-Aug	1	1	1	1	A	3	7	8	8	5	4	3	3	2	2	1	0	0	0	0	0	0	0	0	2.2	8.3	
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
15-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
16-Aug	0	0	0	0	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.3	
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
18-Aug	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
19-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
21-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
22-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0.3	2.3	
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
27-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4	0.4	4.5	
29-Aug	1	1	0	0	A	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.4	
30-Aug	1	1	1	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.6	1.0	
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
																								Diurnal Average			
																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2017



Hourly Maximums

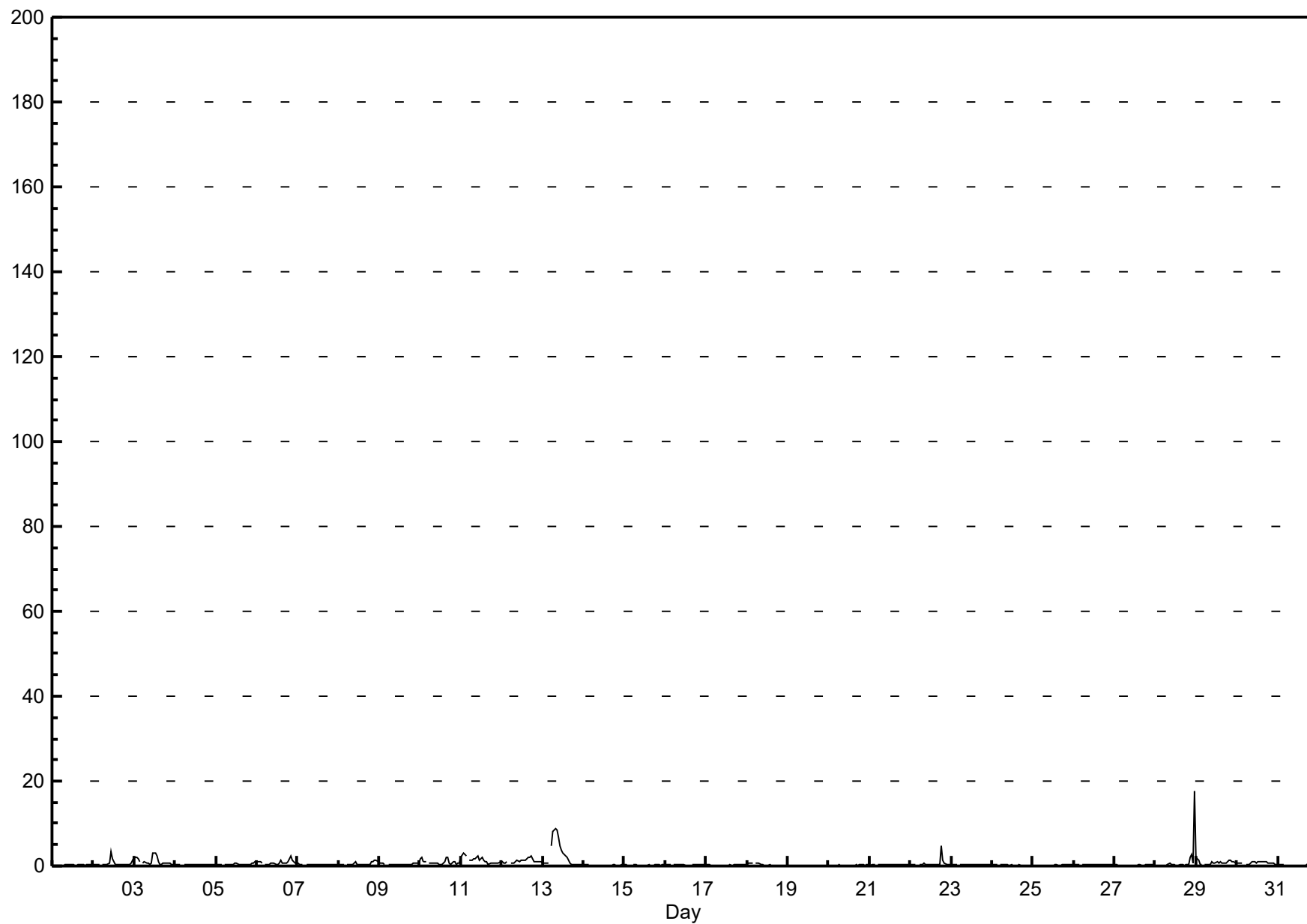
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - August 2017

Maximum Value: 17.7 ppb on Aug 29 00:00																				Maximum Daily Average: 2.6 ppb on Aug 13					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 19 04:00																				Minimum Daily Average: 0.1 ppb on Aug 19					Hours of Data: 710	
Maximum Diurnal Average: 1.0 ppb at hour 24																				Minimum Diurnal Average: 0.4 ppb at hour 18					Hours of Missing Data: 34	
Monthly Average: 0.56 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.1 P ₉₉ = 4.6					Hours of Calibration: 34	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-Aug	0	0	0	0	A	0	0	0	0	1	3	2	1	0	0	0	0	0	0	0	0	0	1	1	0.6	3.4
3-Aug	2	2	2	1	A	1	1	1	1	0	1	3	3	2	1	0	0	1	1	1	1	1	0	0	1.1	3.2
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0.4	1.0
6-Aug	1	1	1	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	0.9	2.5
7-Aug	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.6
8-Aug	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	1.4
9-Aug	1	1	1	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0.5	0.8
10-Aug	2	2	1	1	A	1	1	1	1	1	1	0	0	0	1	2	2	1	0	1	1	0	1	1	0.9	2.1
11-Aug	2	3	3	2	A	1	1	2	2	2	2	2	2	1	1	1	0	1	1	1	1	1	1	1	1.4	3.1
12-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1.2	2.2
13-Aug	1	1	1	1	A	5	8	9	8	7	5	4	3	3	2	1	1	0	0	0	0	0	0	0	2.6	8.8
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
15-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
16-Aug	0	0	0	0	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.5
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
18-Aug	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
19-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
21-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
22-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	5	1	1	0	0	0	0.6	4.7
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
27-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
28-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	3	1	18	1.2	17.7
29-Aug	2	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.0
30-Aug	1	1	1	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.2
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
0.6 0.6 0.5 0.4 -- 0.5 0.6 0.7 0.7 0.7 0.7 0.6 0.6 0.5 0.5 0.5 0.4 0.4 0.5 0.5 0.6 0.5 0.5 1.0																									Diurnal Average	
2.1 3.1 2.6 2.4 -- 4.8 8.2 8.8 8.3 6.8 4.7 3.6 3.0 2.5 2.0 2.0 2.1 2.2 4.7 1.6 2.5 2.7 1.4 17.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

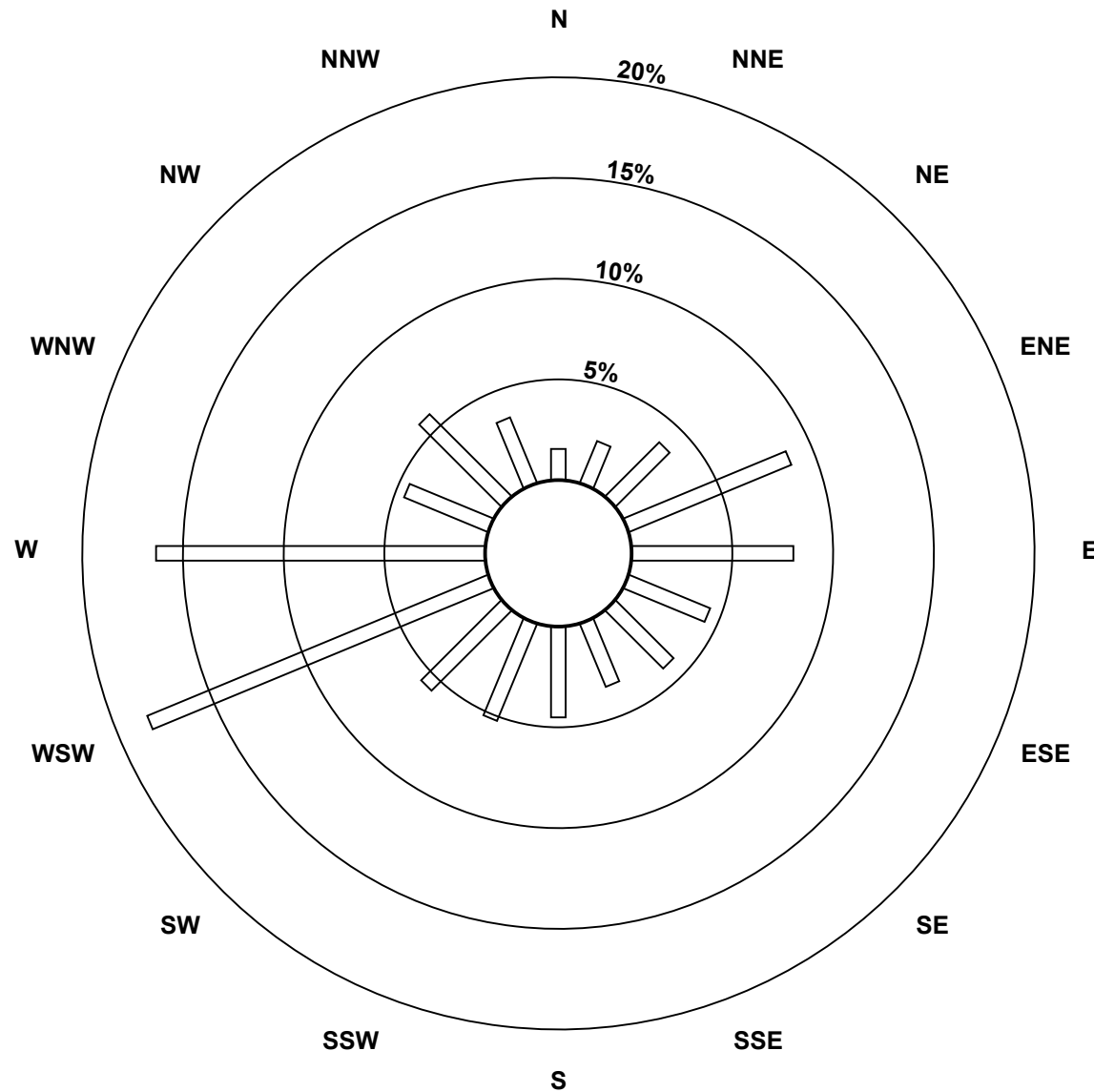
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2017

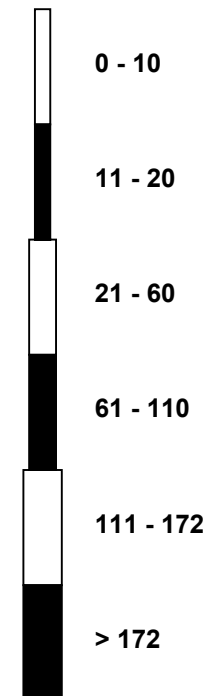


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2017

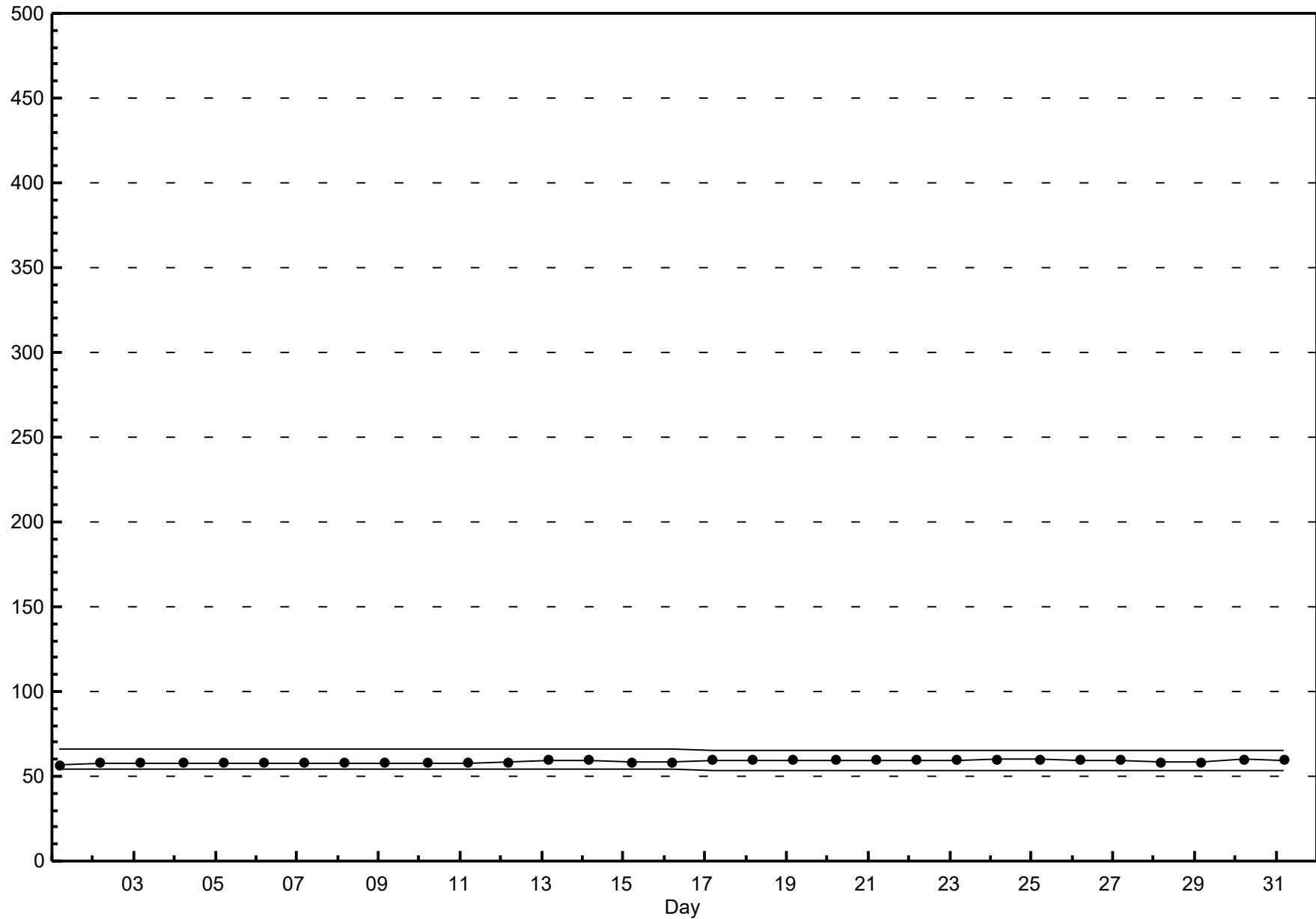


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - August 2017



Hourly Averages

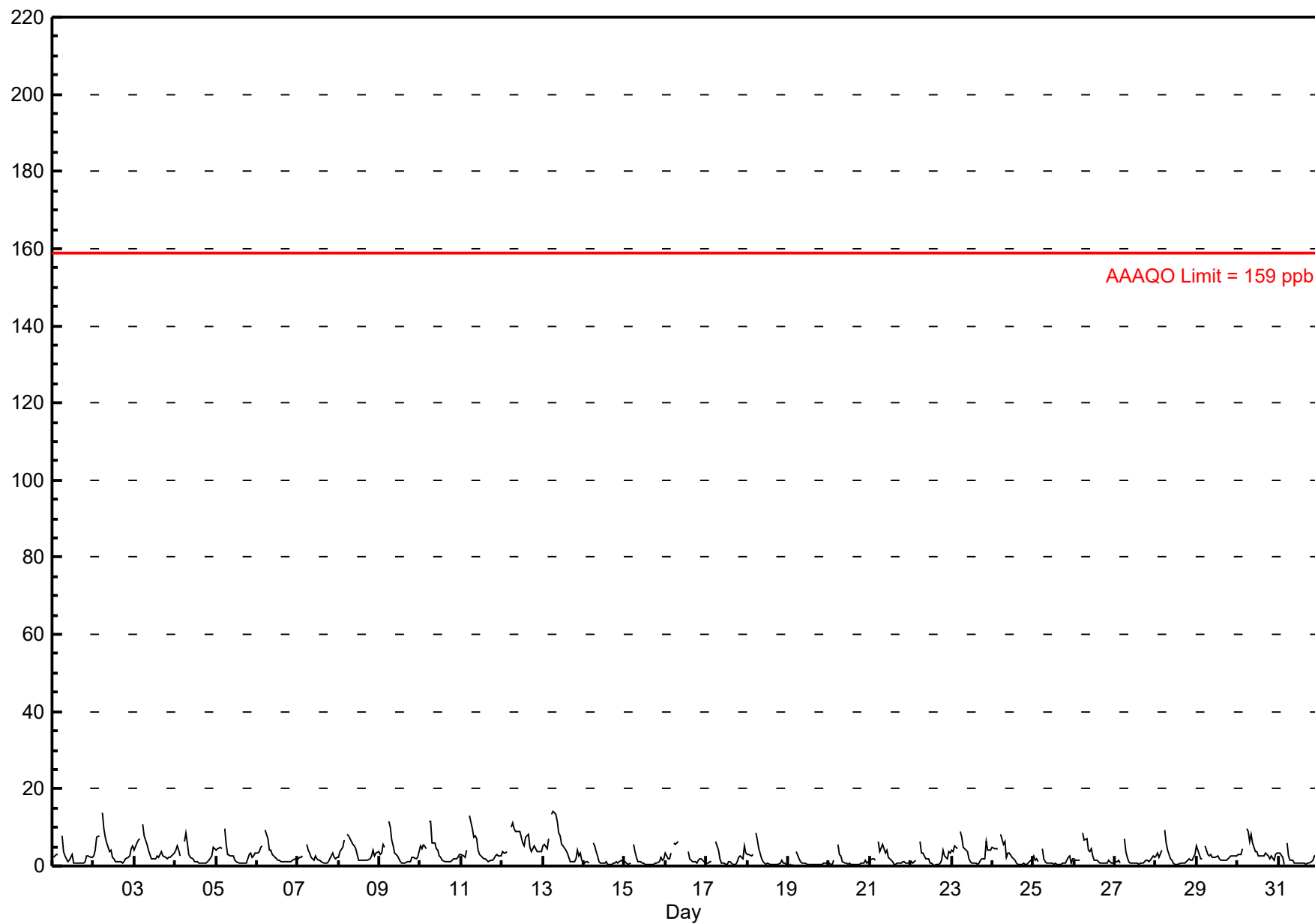
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 14.1 ppb on Aug 13 07:00 Maximum Daily Average: 6.0 ppb on Aug 12																				Hours in Service: 744 Hours of Data: 708						
Minimum Value: 0 ppb on Aug 22 15:00 Maximum Diurnal Average: 8.2 ppb at hour 6 Monthly Average: 2.69 ppb																				Minimum Daily Average: 0.7 ppb on Aug 19 Minimum Diurnal Average: 1.1 ppb at hour 18 Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.9 Q ₃ = 3.7 P ₉₀ = 6.0 P ₉₉ = 11.6		Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	3	3	3	A	8	4	3	2	1	1	3	1	1	1	1	1	1	1	1	3	2	2	2	2.1	8.0
2-Aug	3	4	7	8	A	14	10	7	6	4	4	2	2	1	1	1	1	1	1	2	2	3	4	5	4.1	13.7
3-Aug	4	6	7	7	A	11	8	6	4	3	2	2	2	3	2	3	4	3	2	2	2	2	3	3	3.9	10.8
4-Aug	4	5	4	3	A	6	9	6	3	2	2	1	1	1	1	1	1	1	1	1	2	3	5	5	2.9	8.5
5-Aug	4	4	5	5	A	10	6	3	3	3	3	1	1	1	1	1	1	1	1	3	4	2	3	3	2.9	9.6
6-Aug	3	4	5	5	A	9	7	4	4	3	2	2	2	1	1	1	1	1	1	1	1	2	2	1	2.8	9.4
7-Aug	2	2	2	3	A	6	4	3	2	1	3	2	1	1	1	1	1	1	1	2	4	2	2	2	2.1	5.6
8-Aug	2	4	5	7	A	8	8	6	6	5	5	3	1	1	1	2	2	2	2	3	4	3	3	4	3.7	8.2
9-Aug	3	3	6	5	A	11	10	7	5	3	3	2	1	1	1	1	1	1	1	2	2	2	2	4	3.4	11.4
10-Aug	5	5	5	5	A	12	11	6	6	4	4	3	2	2	1	1	1	1	1	2	2	2	2	3	3.7	11.7
11-Aug	3	3	2	4	A	13	10	7	8	7	4	3	2	2	2	1	1	1	2	2	3	3	3	2	3.8	12.9
12-Aug	4	3	3	4	A	10	11	10	9	9	9	7	6	5	7	8	5	4	4	5	4	4	4	4	6.0	11.0
13-Aug	5	5	4	7	A	13	14	14	12	9	8	6	5	4	3	2	1	1	1	2	4	3	3	2	5.6	14.1
14-Aug	1	1	1	1	A	6	5	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	6.1
15-Aug	1	1	1	1	A	6	4	2	1	1	1	1	1	1	0	0	1	0	1	1	1	2	2	2	1.3	5.6
16-Aug	3	2	2	3	A	6	6	6	C	C	C	C	C	4	2	1	1	1	1	2	2	2	1	1	2.6	6.2
17-Aug	1	1	1	1	A	6	5	4	2	1	1	1	0	1	1	0	0	0	1	2	2	2	5	3	1.9	6.2
18-Aug	3	3	2	3	A	8	7	5	2	1	1	0	1	0	1	1	0	0	0	1	1	1	1	0	1.8	8.4
19-Aug	0	0	0	0	A	4	2	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0.7	3.7
20-Aug	1	0	0	1	A	5	3	3	1	1	1	1	1	0	0	0	0	0	0	1	1	2	1	1	1.1	5.4
21-Aug	1	2	2	2	A	6	4	6	4	3	4	2	1	1	0	0	1	1	1	1	1	1	1	1	2.0	6.4
22-Aug	1	1	1	2	A	6	3	3	3	2	2	1	1	1	0	0	0	1	2	4	3	2	4	3	2.0	6.2
23-Aug	4	4	5	5	A	9	8	5	4	4	2	1	1	1	1	1	1	1	2	2	6	4	4	4	3.3	8.9
24-Aug	5	4	5	4	A	8	6	6	2	3	3	2	2	2	1	1	0	1	1	0	0	1	2	2	2.7	8.4
25-Aug	2	1	2	1	A	5	2	1	1	1	1	1	1	1	1	0	0	1	1	1	2	2	1	2	1.3	4.5
26-Aug	2	2	1	2	A	9	7	7	4	4	4	3	2	1	1	1	1	1	1	1	2	1	1	1	2.4	8.7
27-Aug	1	1	1	1	A	7	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	1.5	7.0
28-Aug	3	3	2	4	A	9	6	4	2	2	1	0	0	1	1	1	1	1	1	2	1	2	2	3	2.2	9.4
29-Aug	5	3	2	2	A	5	3	3	3	2	2	2	2	2	2	1	1	2	2	2	3	3	3	3	2.5	5.3
30-Aug	3	3	3	4	A	10	9	6	8	6	4	4	3	3	2	3	3	3	3	2	3	1	3	4	4.0	9.6
31-Aug	3	3	2	0	A	6	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1.6	5.8
2.7 2.8 3.0 3.3 -- 8.2 6.3 4.9 3.7 3.0 2.6 2.0 1.5 1.4 1.2 1.2 1.1 1.1 1.2 1.7 2.2 2.0 2.4 2.4 Diurnal Average																										
5.3 6.0 7.5 8.0 -- 13.7 14.1 13.5 11.7 8.8 9.0 7.5 6.0 5.4 7.4 8.3 4.7 3.7 4.3 5.4 6.3 4.0 5.3 5.1 Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2017



Hourly Maximums

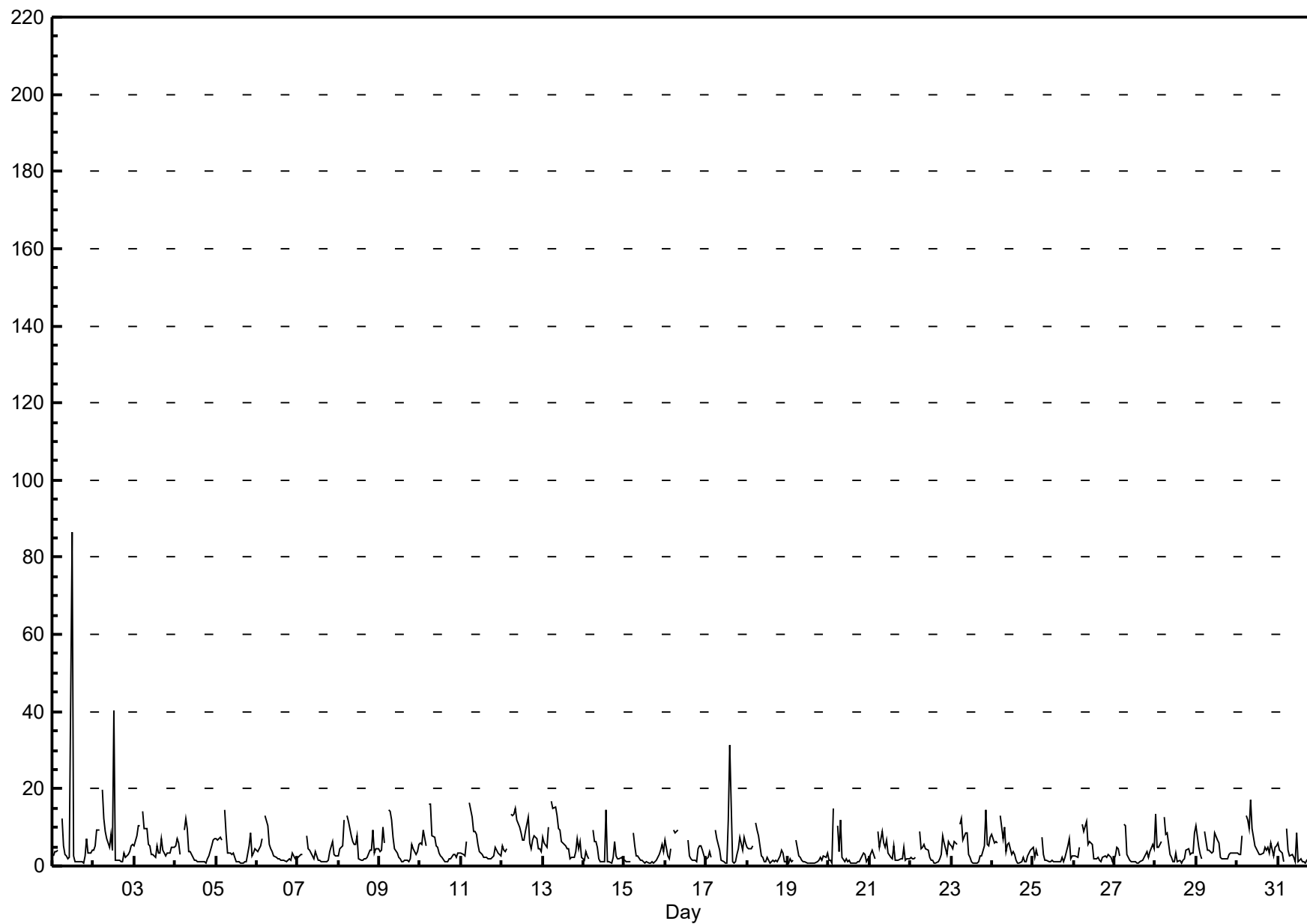
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - August 2017

Maximum Value: 86.5 ppb on Aug 1 12:00																				Maximum Daily Average: 8.0 ppb on Aug 12					Hours in Service: 744	
Minimum Value: 1 ppb on Aug 20 03:00																				Minimum Daily Average: 1.7 ppb on Aug 19					Hours of Data: 708	
Maximum Diurnal Average: 11.7 ppb at hour 6																				Minimum Diurnal Average: 1.7 ppb at hour 17					Hours of Missing Data: 36	
Monthly Average: 4.44 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 1.7 Median = 3.2 Q ₃ = 5.7 P ₉₀ = 9.2 P ₉₉ = 16.2					Hours of Calibration: 36	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	4	4	4	A	12	5	3	3	2	2	87	2	1	1	1	1	1	1	3	7	4	3	4	6.9	86.5
2-Aug	4	5	9	9	A	20	12	9	7	5	8	4	40	1	1	1	1	1	3	2	3	4	5	6	7.1	40.3
3-Aug	5	8	11	10	A	14	10	10	6	5	3	3	2	5	3	3	7	4	3	3	3	3	5	5	5.7	14.2
4-Aug	5	7	6	3	A	9	12	10	4	4	2	2	1	1	1	1	1	1	1	2	3	5	7	7	4.1	12.3
5-Aug	7	7	8	7	A	15	8	4	3	3	3	2	1	1	1	1	1	1	1	5	8	2	3	4	4.2	14.6
6-Aug	4	5	5	7	A	13	11	6	4	4	3	2	2	2	2	1	1	1	1	2	2	3	2	2	3.7	13.2
7-Aug	2	3	3	3	A	8	5	4	3	2	4	3	2	2	1	1	1	1	2	4	6	3	3	3	2.9	7.8
8-Aug	3	4	5	12	A	13	11	8	6	6	6	8	2	1	2	2	2	2	4	4	9	3	4	4	5.3	13.1
9-Aug	4	4	10	6	A	15	14	12	7	4	3	2	2	1	1	2	2	1	2	6	4	3	4	5	5.0	14.6
10-Aug	6	5	9	5	A	16	16	8	7	5	5	3	3	2	1	1	1	2	2	3	3	2	3	3	5.0	16.2
11-Aug	3	3	3	6	A	16	13	9	9	8	6	4	3	2	2	2	2	2	2	3	5	4	3	3	4.9	16.5
12-Aug	5	4	4	4	A	13	13	13	15	12	10	8	7	7	9	13	6	5	7	8	7	5	5	4	8.0	14.8
13-Aug	8	6	5	10	A	17	15	15	13	10	9	6	6	5	4	4	2	2	2	4	7	5	6	2	7.2	16.9
14-Aug	2	4	3	2	A	9	6	6	5	2	1	1	1	15	1	1	1	2	7	2	2	2	2	2	3.4	14.6
15-Aug	1	1	1	1	A	9	5	3	3	1	2	1	1	1	1	1	1	1	1	2	3	4	6	4	2.3	8.7
16-Aug	7	2	2	5	A	9	8	9	C	C	C	C	C	7	3	2	2	1	1	5	5	5	4	2	4.4	9.4
17-Aug	2	2	4	2	A	9	7	5	4	2	1	1	1	12	31	1	1	1	3	4	8	4	8	6	5.2	31.5
18-Aug	5	4	4	5	A	11	9	8	3	2	1	1	2	1	1	1	1	1	1	2	4	3	1	1	3.2	11.2
19-Aug	1	2	1	1	A	7	2	2	2	1	1	1	1	1	1	1	1	1	2	2	1	3	2	3	1.7	6.9
20-Aug	2	2	1	15	A	10	4	12	2	1	2	1	1	1	1	1	1	1	1	2	4	3	1	2	3.0	14.8
21-Aug	2	4	3	2	A	9	5	9	6	5	7	3	2	2	5	2	1	1	2	2	5	2	2	2	3.6	8.8
22-Aug	2	2	2	2	A	9	4	5	6	5	4	2	1	1	1	1	1	2	3	8	6	3	6	6	3.6	9.1
23-Aug	5	5	6	6	A	11	12	7	9	9	3	2	1	1	1	1	1	3	3	5	15	6	5	8	5.3	14.7
24-Aug	8	6	6	6	A	13	7	10	4	6	6	3	4	3	1	1	1	1	2	1	1	2	4	5	4.4	12.9
25-Aug	5	2	4	2	A	7	3	2	1	1	1	1	1	1	1	1	1	2	1	2	5	7	2	3	2.5	7.4
26-Aug	3	3	2	5	A	11	9	12	5	6	6	5	2	2	2	1	1	2	3	2	3	3	2	1	4.0	11.6
27-Aug	3	5	4	2	A	11	10	3	2	1	1	1	1	1	1	1	1	2	3	4	2	4	6	5	3.3	10.8
28-Aug	13	5	5	6	A	13	8	9	3	2	1	1	3	1	1	1	1	2	4	5	3	3	3	8	4.5	13.4
29-Aug	11	5	3	2	A	9	4	4	4	3	4	8	7	6	2	2	2	2	2	3	4	3	4	3	4.2	10.6
30-Aug	3	3	3	8	A	13	12	10	17	10	5	5	4	3	3	3	5	4	5	3	6	2	5	5	6.0	17.3
31-Aug	6	4	3	1	A	10	4	3	3	2	1	9	1	2	1	1	1	2	2	3	4	4	8	3	3.4	9.9
4.5 4.0 4.5 5.2 -- 11.7 8.6 7.3 5.5 4.3 3.7 6.0 3.6 3.0 2.9 1.9 1.7 1.8 2.4 3.4 4.8 3.5 4.0 3.9																									Diurnal Average	
13.4 7.8 10.5 14.8 -- 19.7 16.2 15.1 17.3 12.0 10.1 86.5 40.3 14.6 31.5 12.8 7.2 4.7 6.7 8.0 14.7 6.9 8.1 8.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

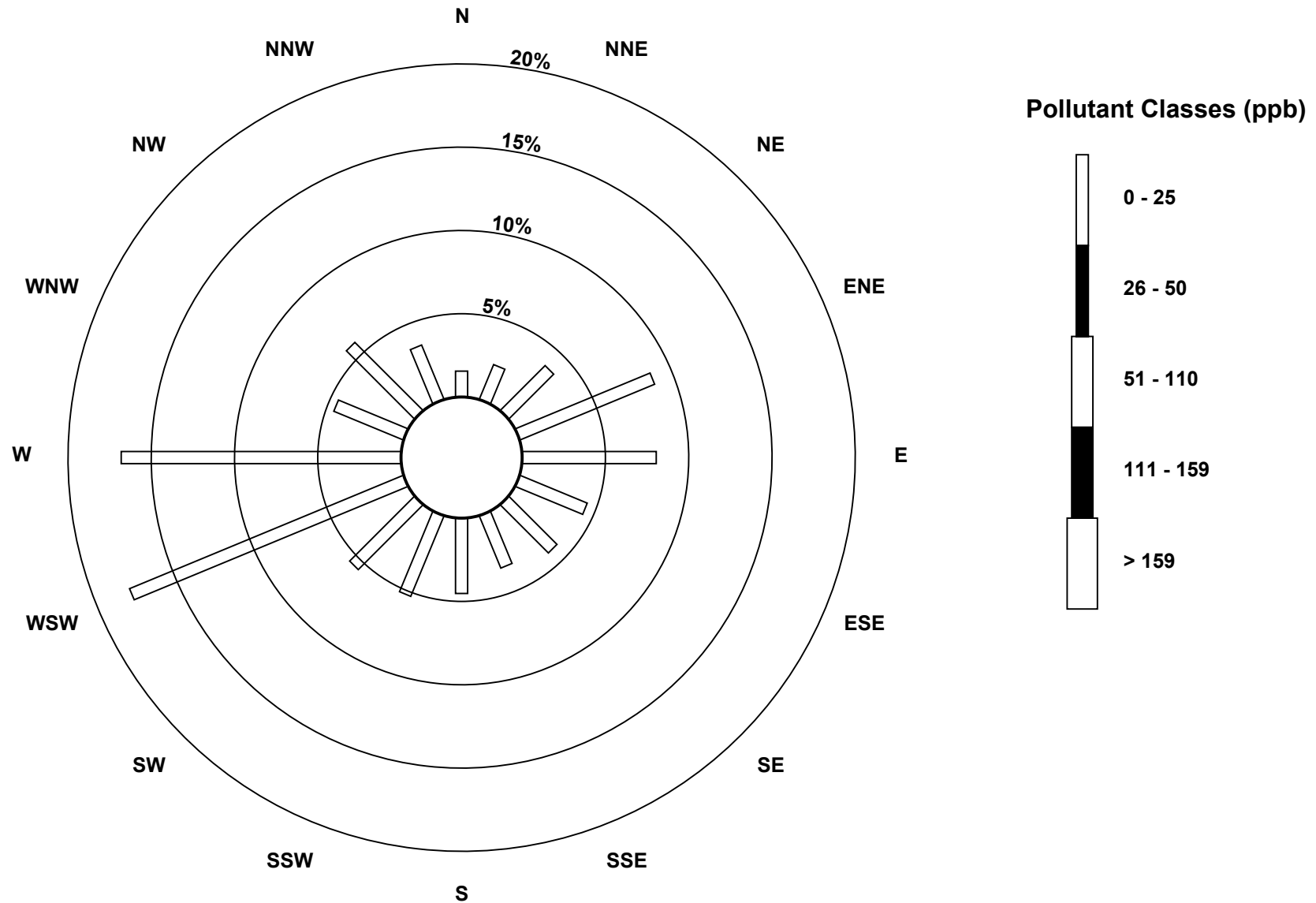
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2017



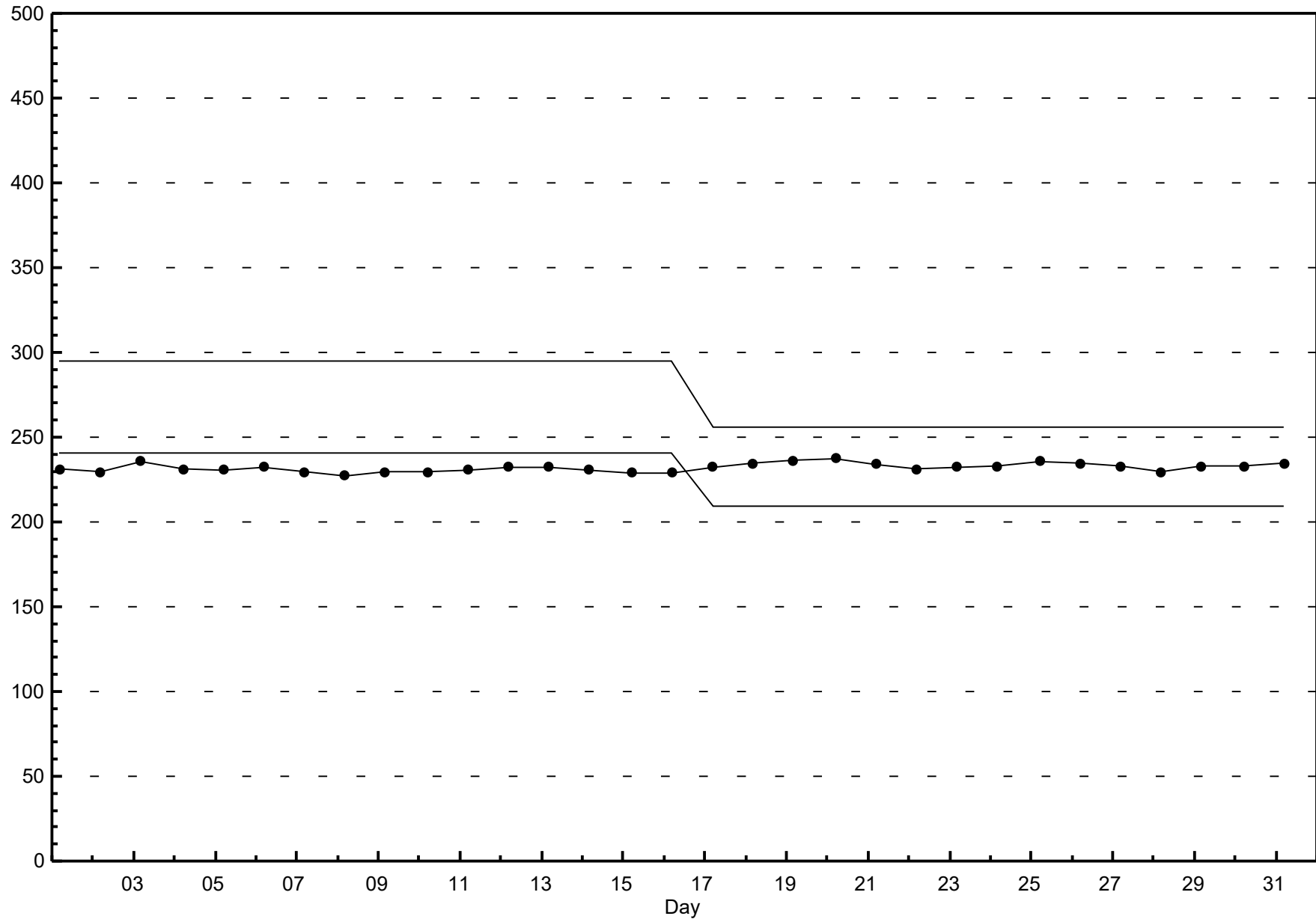
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2017



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - August 2017



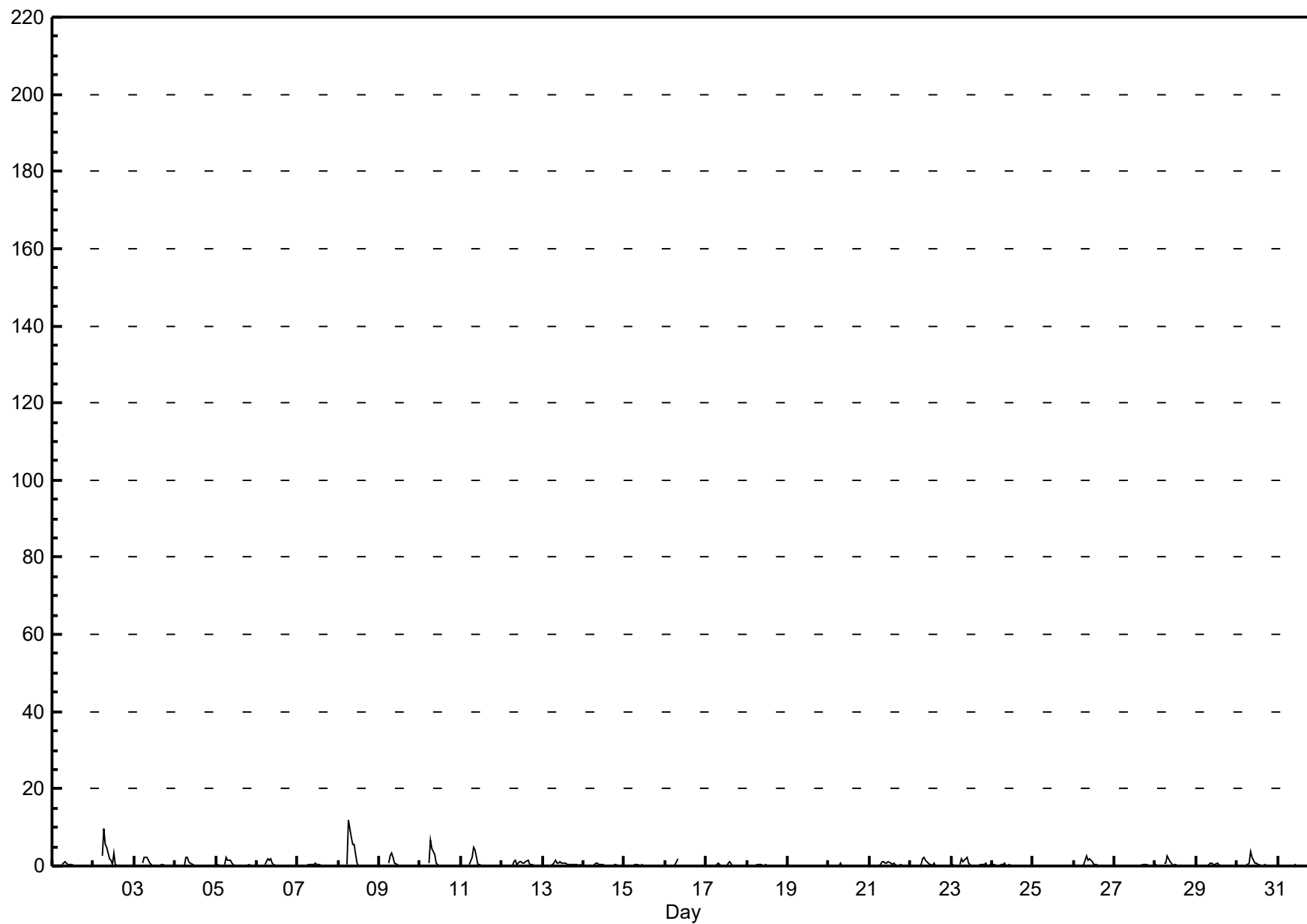
Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2017

Maximum Value: 11.8 ppb on Aug 8 07:00																				Maximum Daily Average: 1.5 ppb on Aug 8										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 3 04:00																				Minimum Daily Average: 0.0 ppb on Aug 19										Hours of Data: 708	
Maximum Diurnal Average: 1.7 ppb at hour 8																				Minimum Diurnal Average: 0.0 ppb at hour 3										Hours of Missing Data: 36	
Monthly Average: 0.38 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.9 P ₉₉ = 5.6										Hours of Calibration: 36	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0					
2-Aug	0	0	0	0	A	3	10	6	5	2	2	1	3	0	0	0	0	0	0	0	0	0	0	0	1.4	9.7					
3-Aug	0	0	0	0	A	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3					
4-Aug	0	0	0	0	A	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.4					
5-Aug	0	0	0	0	A	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1					
6-Aug	0	0	0	0	A	0	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0					
7-Aug	0	0	0	0	A	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6					
8-Aug	0	0	0	0	A	0	12	7	6	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1.5	11.8					
9-Aug	0	0	0	0	A	1	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.3					
10-Aug	0	0	0	0	A	1	7	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	6.7					
11-Aug	0	0	0	0	A	0	2	5	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	4.8					
12-Aug	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	0.5	1.5					
13-Aug	0	0	0	0	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.4					
14-Aug	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9					
15-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6					
16-Aug	0	0	0	0	A	0	0	2	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	1.9					
17-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	1.0					
18-Aug	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5					
19-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1					
20-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6					
21-Aug	0	0	0	0	A	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0.4	1.3					
22-Aug	0	0	0	0	A	0	0	2	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	2.1					
23-Aug	0	0	0	0	A	0	2	1	2	2	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0.5	2.1					
24-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8					
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
26-Aug	0	0	0	0	A	0	0	3	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7					
27-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
28-Aug	0	0	0	0	A	1	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6					
29-Aug	0	0	0	0	A	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9					
30-Aug	0	0	0	0	A	0	0	1	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.8					
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
0.0 0.0 0.0 0.1 -- 0.3 1.6 1.7 1.5 0.9 0.6 0.4 0.4 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0																									Diurnal Average						
0.3 0.2 0.1 0.2 -- 2.7 11.8 7.4 5.6 5.6 2.9 1.3 3.4 0.7 1.0 1.5 0.5 0.3 0.4 0.3 0.6 0.2 0.2 0.2																									Diurnal Maximum						
C - Calibration					A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2017



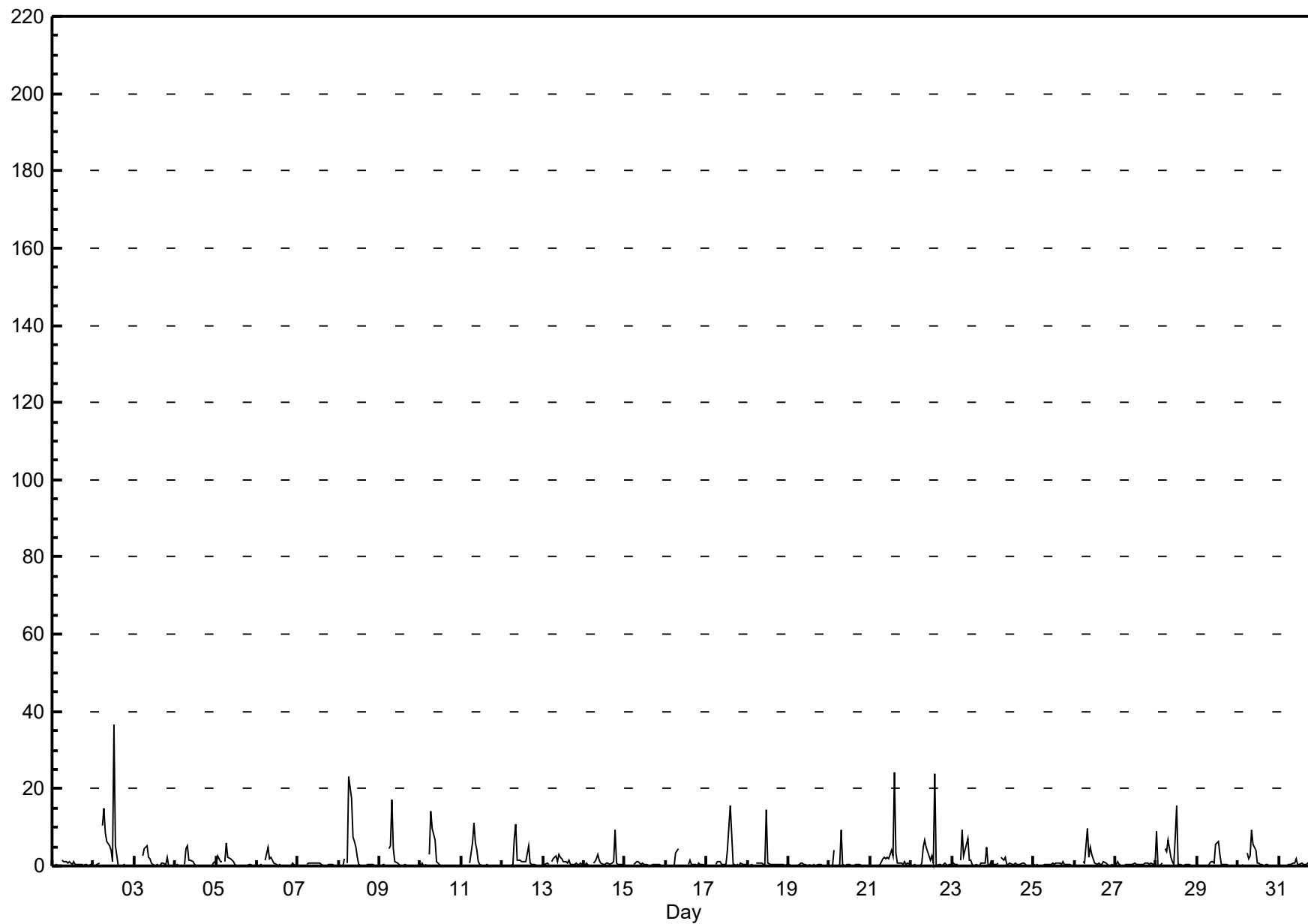
Hourly Maximums

Nitrogen Oxide (NO) - ppb Beaverlodge - August 2017

Maximum Value: 36.6 ppb on Aug 2 13:00																				Maximum Daily Average: 4.1 ppb on Aug 2					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 8 00:00																				Minimum Daily Average: 0.2 ppb on Aug 19					Hours of Data: 708	
Maximum Diurnal Average: 4.6 ppb at hour 8																				Minimum Diurnal Average: 0.2 ppb at hour 22					Hours of Missing Data: 36	
Monthly Average: 1.25 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.9 P ₉₀ = 2.9 P ₉₉ = 15.1					Hours of Calibration: 36	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	A	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0.5	1.4
2-Aug	0	0	0	1	A	10	15	9	6	5	4	1	37	5	0	0	0	0	0	0	0	0	0	0	4.1	36.6
3-Aug	0	0	0	0	A	3	4	5	2	2	1	0	0	0	0	0	1	1	0	2	0	0	0	0	1.0	5.1
4-Aug	0	0	0	0	A	0	4	5	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.8	5.2
5-Aug	0	3	1	1	A	1	6	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	6.0
6-Aug	0	0	0	0	A	1	5	2	2	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0.7	4.8
7-Aug	0	0	0	0	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.9
8-Aug	0	0	0	2	A	1	23	17	7	6	5	2	0	0	0	0	0	0	0	0	0	0	0	0	2.9	23.1
9-Aug	0	0	0	0	A	4	5	17	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	17.0
10-Aug	0	1	0	0	A	3	14	10	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	14.3
11-Aug	0	0	0	0	A	1	6	11	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	11.2
12-Aug	0	0	0	0	A	0	0	7	11	1	2	1	1	1	1	5	1	0	0	0	0	0	0	0	1.5	10.9
13-Aug	0	0	1	1	A	1	2	3	1	3	2	2	1	1	1	1	0	0	0	1	1	0	1	0	1.0	3.0
14-Aug	0	1	0	0	A	1	1	2	3	1	1	0	0	1	1	0	1	1	9	1	0	0	0	0	1.1	9.4
15-Aug	0	0	0	0	A	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
16-Aug	0	0	0	0	A	0	3	5	C	C	C	C	C	0	1	0	0	0	0	1	0	0	0	0	0.7	4.5
17-Aug	0	0	0	0	A	0	1	1	1	0	0	0	4	10	16	0	0	0	0	0	0	1	0	0	1.7	15.8
18-Aug	0	0	0	0	A	1	1	1	1	1	0	15	1	0	0	0	0	0	0	0	0	0	0	0	1.1	14.6
19-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
20-Aug	0	0	0	4	A	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	9.2
21-Aug	0	0	0	0	A	0	0	2	2	2	2	2	4	2	24	3	1	1	1	0	1	0	1	0	2.2	24.3
22-Aug	0	0	0	0	A	0	1	5	7	5	3	2	2	1	24	0	0	0	0	0	0	1	0	0	2.3	23.7
23-Aug	0	1	0	0	A	1	9	3	6	7	2	1	0	0	0	0	0	1	1	1	5	0	0	1	1.8	9.4
24-Aug	0	0	0	1	A	2	2	2	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0.6	2.2
25-Aug	0	0	0	0	A	0	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0.4	1.1
26-Aug	0	0	0	0	A	1	1	10	2	5	3	2	1	0	1	0	1	1	1	0	0	0	0	0	1.3	9.8
27-Aug	0	1	0	0	A	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	1	0	0	0.5	1.1
28-Aug	9	0	0	1	A	5	4	7	2	1	0	8	16	0	0	0	0	0	1	0	0	0	0	0	2.4	15.8
29-Aug	0	0	0	0	A	0	0	1	1	1	1	6	6	3	0	0	0	0	0	0	0	0	0	0	1.0	6.5
30-Aug	0	0	0	0	A	3	2	2	9	6	4	1	1	0	0	0	0	0	0	0	0	0	0	0	1.3	9.3
31-Aug	0	0	0	0	A	0	0	0	1	1	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0.4	2.0
0.5 0.3 0.2 0.4 -- 1.4 3.7 4.6 3.0 2.1 1.4 1.6 2.7 1.0 2.4 0.6 0.3 0.4 0.7 0.4 0.5 0.2 0.2 0.3																									Diurnal Average	
9.0 2.7 1.2 4.1 -- 10.4 23.1 17.4 10.9 7.0 4.8 14.6 36.6 10.1 24.3 5.3 0.9 1.3 9.4 2.1 4.9 0.7 0.7 0.9																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2017



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

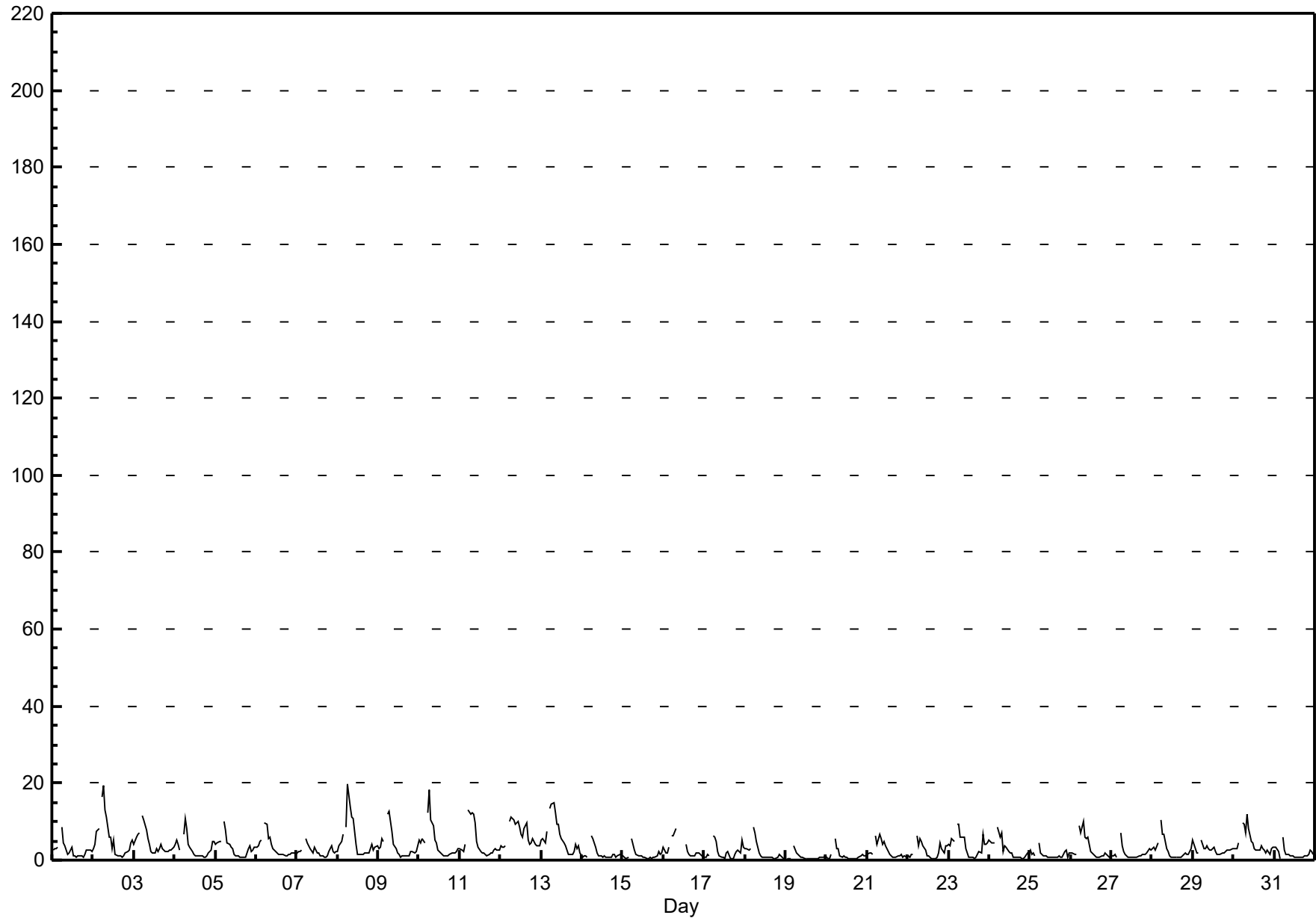
Beaverlodge - August 2017

Maximum Value: 19.6 ppb on Aug 8 07:00																				Maximum Daily Average: 6.5 ppb on Aug 12					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 19 01:00																				Minimum Daily Average: 0.8 ppb on Aug 19					Hours of Data: 708	
Maximum Diurnal Average: 8.5 ppb at hour 6																				Minimum Diurnal Average: 1.2 ppb at hour 18					Hours of Missing Data: 36	
Monthly Average: 3.10 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 2.1 Q ₃ = 4.0 P ₉₀ = 6.9 P ₉₉ = 13.3					Hours of Calibration: 36	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	2	3	3	3	A	9	4	4	3	2	2	3	1	1	1	1	1	1	1	1	3	3	2	2	2.4	8.5
2-Aug	3	4	8	8	A	16	20	13	11	6	6	3	5	1	1	1	1	1	1	2	2	3	4	5	5.5	19.5
3-Aug	4	6	7	7	A	11	10	8	6	4	2	2	2	3	2	3	4	3	2	2	2	2	3	3	4.3	11.5
4-Aug	4	5	4	3	A	7	11	8	4	3	2	1	1	1	1	1	1	1	1	1	2	3	5	5	3.2	10.9
5-Aug	4	5	5	5	A	10	8	4	4	4	3	2	1	1	1	1	1	1	1	3	4	2	3	3	3.2	10.0
6-Aug	3	4	5	5	A	10	9	6	6	4	3	2	2	2	1	1	1	1	1	1	1	2	2	2	3.3	9.8
7-Aug	2	2	2	3	A	6	5	4	3	2	3	2	2	2	1	1	1	1	1	2	4	2	2	2	2.4	5.7
8-Aug	2	4	5	7	A	9	20	14	11	11	8	4	2	1	1	2	2	2	2	3	4	3	3	4	5.3	19.6
9-Aug	3	3	6	5	A	12	13	10	8	4	3	2	1	1	1	1	1	1	1	2	2	2	2	4	3.8	12.7
10-Aug	5	5	5	5	A	12	18	11	9	5	4	3	2	2	1	1	1	1	1	2	2	2	2	3	4.5	18.2
11-Aug	3	3	2	4	A	13	12	12	12	10	5	3	2	2	2	1	1	1	2	2	3	3	3	3	4.5	13.1
12-Aug	4	3	3	4	A	10	11	11	10	9	10	8	7	6	8	10	5	4	4	5	4	4	4	4	6.5	11.1
13-Aug	5	5	4	7	A	14	15	15	12	9	9	7	6	5	4	3	2	1	2	2	4	3	4	2	6.0	14.9
14-Aug	1	1	1	1	A	6	6	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	6.3
15-Aug	1	1	1	1	A	6	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.4	5.7
16-Aug	3	2	2	3	A	6	6	8	C	C	C	C	C	4	2	1	1	1	1	2	2	2	1	1	2.8	8.1
17-Aug	1	1	1	1	A	6	6	5	2	1	1	1	1	2	2	1	0	1	1	2	3	2	5	3	2.1	6.2
18-Aug	3	3	3	3	A	9	7	5	2	1	1	1	1	1	1	1	1	0	0	1	2	1	1	0	2.0	8.6
19-Aug	0	0	0	0	A	4	2	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0.8	3.8
20-Aug	1	0	0	2	A	5	3	3	1	1	1	1	1	1	1	0	0	0	1	1	1	2	1	1	1.2	5.5
21-Aug	1	2	2	2	A	6	4	7	6	4	5	4	2	1	1	1	1	1	1	1	1	1	1	1	2.4	6.9
22-Aug	1	1	1	2	A	6	4	6	5	4	2	1	1	1	1	1	1	1	2	4	3	2	4	4	2.4	6.3
23-Aug	4	4	5	5	A	9	9	6	6	6	3	2	1	1	1	1	1	2	2	2	7	4	4	4	3.8	9.3
24-Aug	5	5	5	5	A	9	6	7	2	4	3	2	2	2	1	1	1	1	1	1	1	1	2	2	2.9	8.7
25-Aug	3	2	2	1	A	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	2	1.5	4.6
26-Aug	2	2	1	2	A	9	7	10	6	6	6	4	2	2	1	1	1	1	1	1	2	1	1	1	3.0	9.9
27-Aug	1	1	1	1	A	7	4	2	1	1	1	1	1	1	1	1	1	1	2	2	1	2	3	3	1.7	7.1
28-Aug	3	4	2	4	A	10	7	7	3	2	1	1	1	1	1	1	1	1	1	2	1	2	2	3	2.6	10.3
29-Aug	5	3	2	2	A	5	3	3	4	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	2.7	5.3
30-Aug	3	3	3	5	A	10	9	7	12	8	5	4	3	3	3	3	4	3	3	2	3	1	3	4	4.4	12.1
31-Aug	3	3	2	0	A	6	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1.7	5.9
2.8 2.9 3.1 3.3 -- 8.5 7.9 6.7 5.3 4.0 3.2 2.4 1.8 1.6 1.5 1.4 1.2 1.2 1.4 1.8 2.3 2.1 2.5 2.5																									Diurnal Average	
5.3 6.0 7.6 8.1 -- 16.5 19.6 14.9 12.4 10.8 10.1 8.5 6.9 6.1 8.4 9.8 5.2 4.0 4.5 5.4 6.9 4.2 5.3 5.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - August 2017



Hourly Maximums

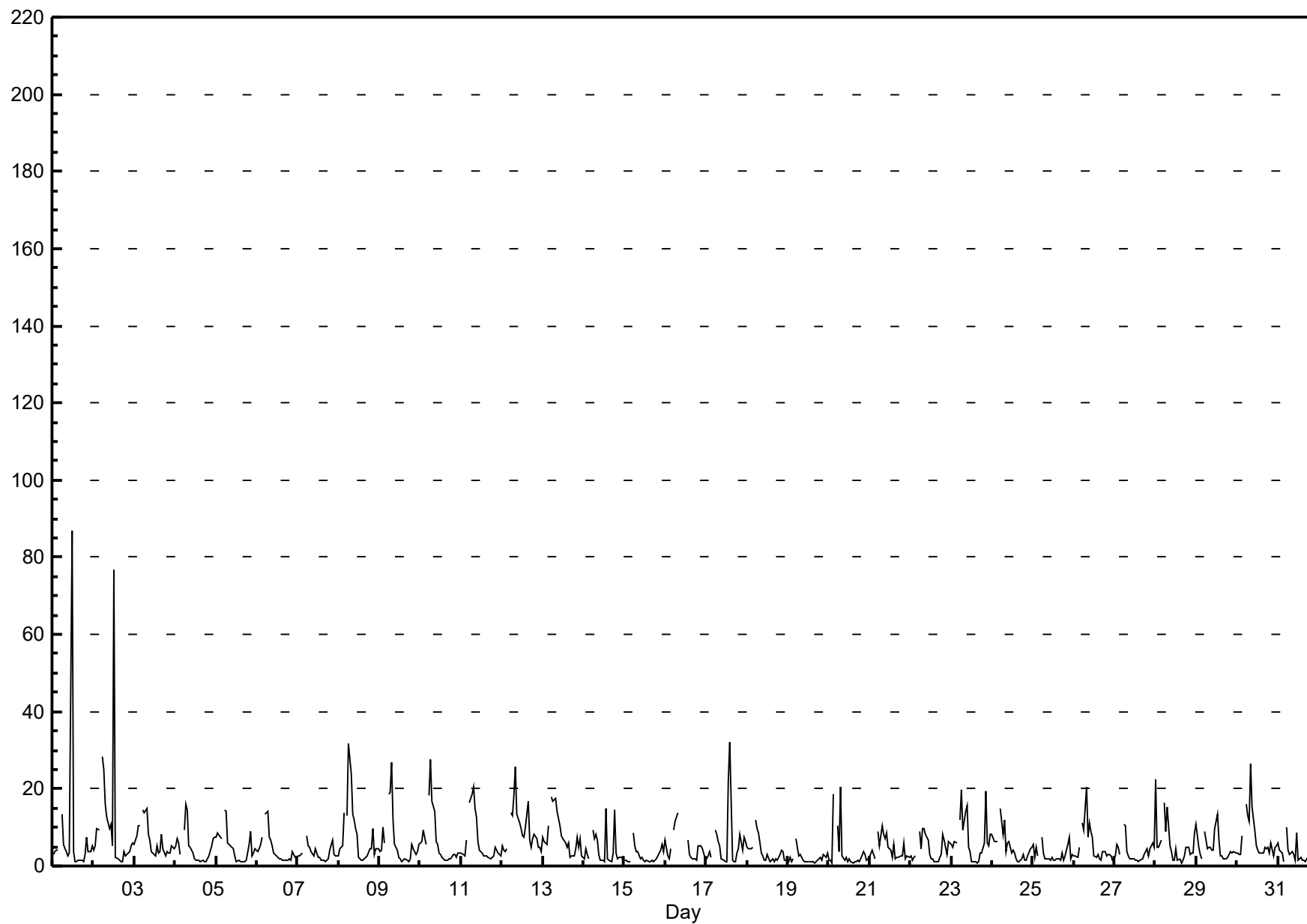
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - August 2017

Maximum Value: 86.7 ppb on Aug 1 12:00																				Maximum Daily Average: 10.7 ppb on Aug 2					Hours in Service: 744	
Minimum Value: 1 ppb on Aug 20 03:00																				Minimum Daily Average: 2.0 ppb on Aug 19					Hours of Data: 708	
Maximum Diurnal Average: 12.6 ppb at hour 6																				Minimum Diurnal Average: 2.0 ppb at hour 17					Hours of Missing Data: 36	
Monthly Average: 5.39 ppb																				Percentiles: P ₁ = 0.9 P ₁₀ = 1.3 Q ₁ = 2.0 Median = 3.5 Q ₃ = 6.4 P ₉₀ = 11.7 P ₉₉ = 26.5					Hours of Calibration: 36	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	4	4	4	A	13	6	4	4	3	3	87	4	1	1	2	1	2	1	3	7	4	4	5	7.4	86.7
2-Aug	4	5	10	9	A	29	25	16	13	10	11	5	77	2	2	2	1	1	4	2	3	4	5	6	10.7	76.8
3-Aug	5	8	11	10	A	14	14	15	8	7	4	3	2	5	3	4	8	5	3	4	3	3	5	5	6.5	15.0
4-Aug	5	7	6	3	A	9	16	15	5	5	3	2	2	1	1	1	1	1	1	2	3	5	7	7	4.8	15.9
5-Aug	7	9	8	7	A	15	14	6	5	5	4	2	1	1	1	1	1	1	1	5	9	3	3	4	5.0	14.5
6-Aug	4	5	5	7	A	13	14	8	7	5	3	3	2	2	2	2	2	1	2	2	2	4	2	2	4.2	14.1
7-Aug	3	3	3	3	A	8	5	5	4	3	4	3	2	2	1	1	1	1	2	4	7	3	3	3	3.2	8.0
8-Aug	3	4	5	14	A	13	32	24	13	12	10	8	2	2	2	2	2	3	4	4	10	3	4	4	7.8	31.7
9-Aug	4	4	10	6	A	19	19	27	12	5	4	2	2	1	1	2	2	1	2	6	4	3	4	5	6.3	26.9
10-Aug	6	6	9	6	A	18	28	17	14	6	5	4	3	2	1	1	1	2	2	3	3	2	3	3	6.4	27.5
11-Aug	4	3	3	7	A	16	19	20	15	13	6	4	3	3	2	3	2	2	2	3	5	4	3	3	6.3	20.3
12-Aug	5	4	4	4	A	14	13	18	26	13	11	10	8	8	10	17	7	5	7	8	7	5	5	4	9.2	25.6
13-Aug	8	6	6	11	A	18	17	18	14	12	11	8	7	6	5	6	2	3	3	5	8	5	7	3	8.0	17.8
14-Aug	2	4	3	2	A	9	7	8	7	3	1	2	1	15	2	2	1	3	14	3	2	2	2	2	4.3	15.0
15-Aug	2	2	1	1	A	9	5	4	4	2	2	2	1	1	1	1	2	1	2	2	3	4	6	4	2.6	8.7
16-Aug	7	2	2	5	A	9	12	14	C	C	C	C	C	7	3	2	2	2	1	5	5	5	4	2	5.0	13.8
17-Aug	2	2	4	2	A	9	8	6	5	2	2	1	1	22	32	2	1	1	3	4	8	4	7	6	6.0	32.0
18-Aug	5	4	5	5	A	12	10	9	3	3	1	1	3	1	2	2	1	2	1	3	4	4	1	2	3.6	11.9
19-Aug	1	2	1	2	A	7	3	3	2	1	1	1	1	1	1	1	1	1	2	2	1	3	2	3	2.0	7.0
20-Aug	2	2	1	19	A	10	4	20	3	1	2	1	2	1	1	1	1	1	1	2	4	3	1	2	3.7	20.4
21-Aug	2	4	3	2	A	9	5	11	8	7	9	5	4	2	6	2	2	2	3	2	6	2	3	2	4.4	10.6
22-Aug	3	2	2	3	A	9	4	10	10	8	7	3	2	2	1	1	1	2	3	8	7	3	6	6	4.5	9.9
23-Aug	6	5	6	6	A	12	20	9	14	16	5	4	1	1	1	1	1	3	3	6	20	6	5	8	6.9	19.8
24-Aug	8	6	6	6	A	15	8	12	4	6	6	3	4	3	2	1	1	2	3	2	1	3	4	5	4.9	14.9
25-Aug	5	2	5	3	A	8	3	2	2	2	1	2	1	2	2	2	1	3	2	3	5	7	2	3	3.0	7.6
26-Aug	3	3	2	5	A	11	9	21	8	11	9	8	3	2	3	2	2	4	4	3	3	3	3	1	5.2	20.6
27-Aug	3	5	5	3	A	11	11	4	3	2	2	2	1	1	1	2	2	3	4	5	3	5	6	5	3.7	10.8
28-Aug	22	5	5	7	A	17	9	15	5	4	2	1	4	1	2	1	1	2	5	5	3	3	3	9	5.7	22.4
29-Aug	11	5	3	2	A	9	4	5	5	4	4	10	13	7	2	2	2	2	2	3	4	3	4	3	4.8	13.5
30-Aug	3	3	3	8	A	16	13	12	26	15	9	5	4	3	3	3	5	4	5	4	6	3	5	5	7.2	26.5
31-Aug	6	4	3	1	A	10	4	3	4	3	2	9	1	2	2	2	1	2	2	4	4	4	8	3	3.6	10.0
4.9 4.2 4.6 5.5 -- 12.6 11.6 11.6 8.4 6.3 4.9 6.7 5.5 3.7 3.2 2.3 2.0 2.3 3.0 3.8 5.2 3.7 4.2 4.0																									Diurnal Average	
22.4 8.6 10.5 18.8 -- 28.5 31.7 26.9 26.5 15.6 11.3 86.7 76.8 22.0 32.0 16.6 8.1 4.9 14.5 8.3 19.6 7.3 8.3 8.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

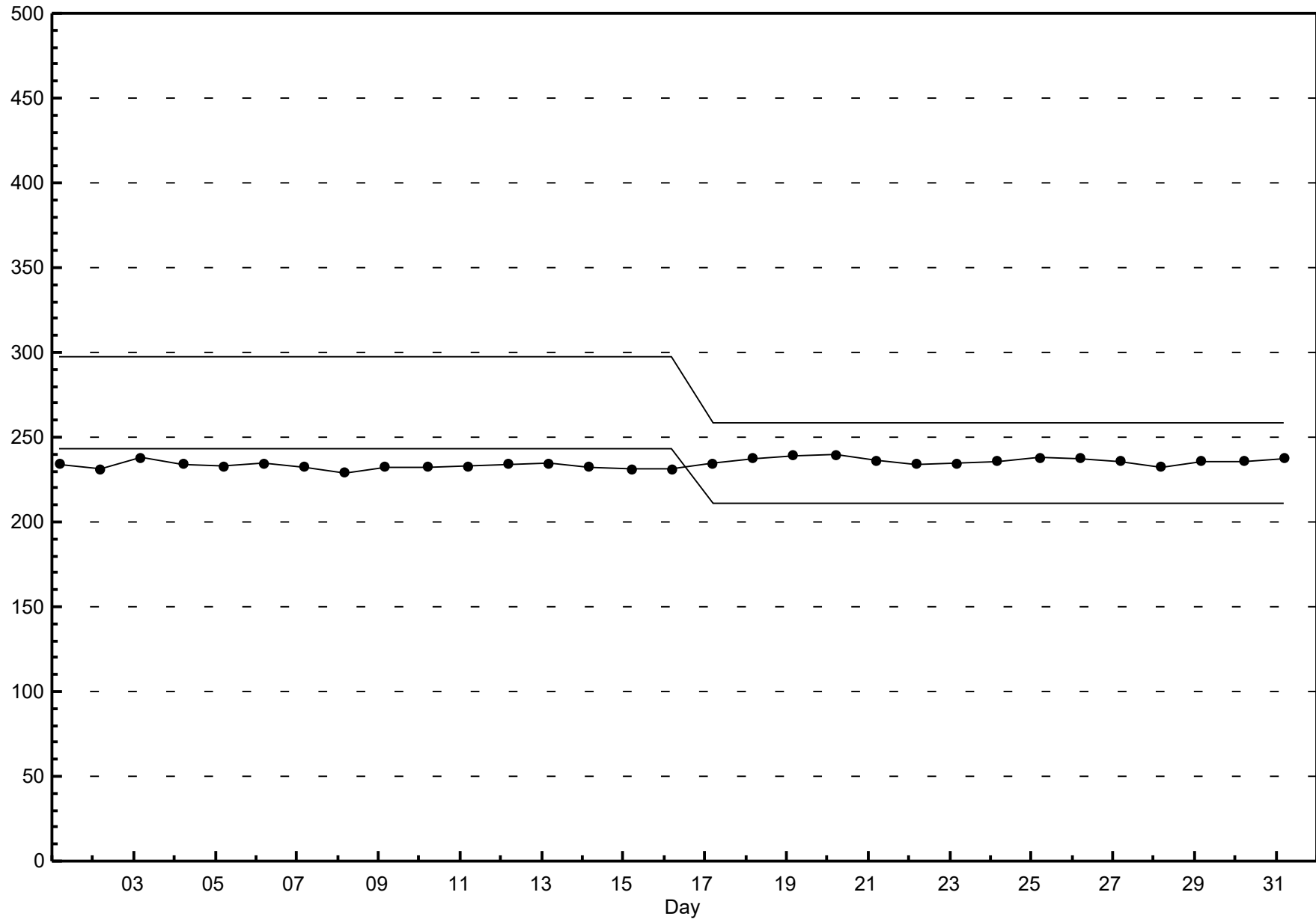
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - August 2017



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - August 2017



Hourly Averages

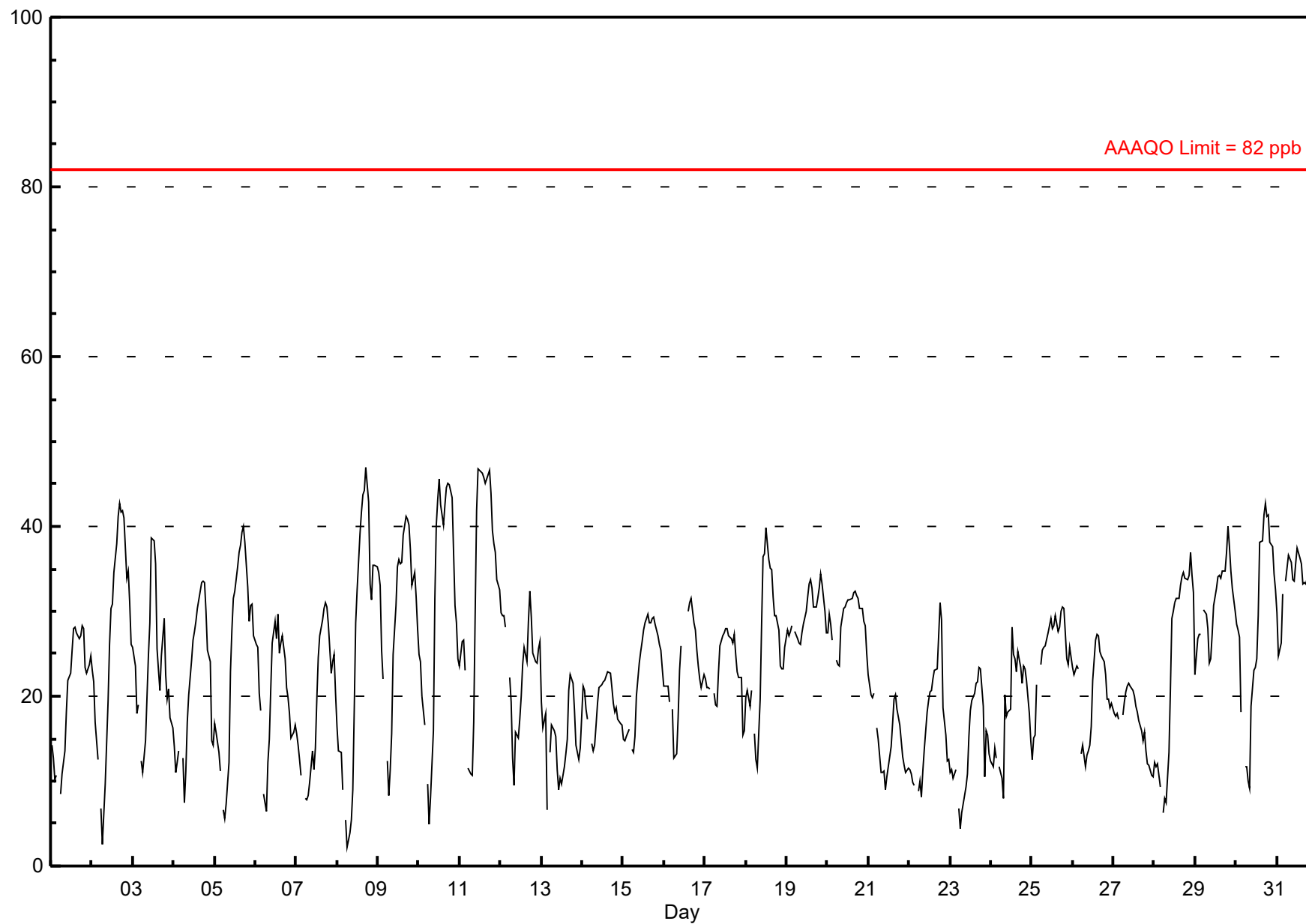
Ozone (O₃) - ppb

Beaverlodge - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 47.0 ppb on Aug 8 18:00 Maximum Daily Average: 33.4 ppb on Aug 11																								Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0			
Minimum Value: 2 ppb on Aug 8 07:00 Maximum Diurnal Average: 31.0 ppb at hour 18 Monthly Average: 23.58 ppb												Minimum Daily Average: 14.2 ppb on Aug 23 Minimum Diurnal Average: 13.5 ppb at hour 7 Percentiles: P ₁ = 5.5 P ₁₀ = 11.2 Q ₁ = 15.9 Median = 23.6 Q ₃ = 30.0 P ₉₀ = 35.6 P ₉₉ = 45.6															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	14	13	10	11	A	8	11	12	14	18	22	23	25	28	28	27	27	27	28	28	23	23	24	25	20.4	28.3	
2-Aug	23	22	17	13	A	7	3	6	10	20	26	30	31	35	38	41	43	42	42	41	34	35	31	26	26.6	42.7	
3-Aug	26	24	18	19	A	12	11	15	20	25	29	39	38	36	26	23	21	25	29	22	20	21	18	16	23.1	38.7	
4-Aug	14	11	12	14	A	13	7	11	17	20	24	27	28	29	30	31	33	34	33	30	25	24	15	14	21.6	33.6	
5-Aug	17	16	13	11	A	7	6	7	12	23	28	32	32	35	37	38	39	40	38	33	29	31	31	27	25.3	40.0	
6-Aug	26	26	20	18	A	8	6	12	15	21	26	29	27	30	25	26	27	24	21	20	18	15	16	17	20.6	29.6	
7-Aug	16	14	13	11	A	8	8	8	10	13	11	14	20	25	27	29	30	31	31	28	23	24	25	20	19.1	31.0	
8-Aug	16	14	13	9	A	5	2	4	5	9	19	29	33	39	42	44	44	47	43	33	31	35	35	35	25.5	47.0	
9-Aug	35	33	25	22	A	12	8	11	16	25	31	35	36	36	36	39	41	41	40	37	33	35	32	28	29.9	41.2	
10-Aug	25	24	20	17	A	10	5	8	16	32	40	43	46	43	40	42	45	45	45	43	37	31	29	24	30.8	45.6	
11-Aug	24	26	27	23	A	12	11	11	17	30	42	47	47	46	46	45	46	47	44	40	38	37	34	33	33.4	46.7	
12-Aug	30	30	29	28	A	22	19	13	9	16	15	17	20	24	26	24	29	32	29	25	24	24	26	26	23.4	32.4	
13-Aug	19	16	18	7	A	13	17	16	15	11	9	10	10	12	13	15	21	23	22	18	14	13	12	14	14.7	22.5	
14-Aug	21	21	18	17	A	14	14	14	17	19	21	21	22	22	22	23	23	21	19	18	19	17	17	17	19.0	22.8	
15-Aug	15	15	15	16	A	14	13	15	20	24	25	26	28	29	30	29	29	29	29	28	27	26	25	23	23.1	29.6	
16-Aug	21	21	21	19	A	19	13	13	18	23	26	C	C	C	30	31	32	29	28	26	24	22	21	23	22.9	31.6	
17-Aug	22	21	21	21	A	20	19	19	23	26	27	27	28	28	27	27	26	27	25	23	22	22	15	16	23.2	28.0	
18-Aug	20	21	19	21	A	16	13	12	20	29	37	37	40	36	35	35	32	29	30	28	24	23	23	26	26.2	39.9	
19-Aug	28	27	28	28	A	28	27	26	26	27	29	30	32	33	34	33	31	31	31	33	34	33	30	27	29.8	34.4	
20-Aug	27	30	29	27	A	24	24	24	28	30	30	31	31	31	31	32	32	32	31	30	30	29	28	25	29.1	32.3	
21-Aug	23	20	20	20	A	16	15	11	11	11	9	10	13	14	17	20	20	19	17	15	13	12	11	12	15.1	22.5	
22-Aug	11	11	10	10	A	9	10	8	11	14	18	20	20	21	22	23	23	27	31	29	19	15	12	13	16.8	31.1	
23-Aug	11	11	10	11	A	7	4	6	8	9	11	15	18	20	20	22	22	23	23	19	10	16	15	13	14.2	23.3	
24-Aug	12	12	14	13	A	12	10	8	20	18	18	19	28	25	24	23	25	23	22	24	23	22	18	15	18.6	28.1	
25-Aug	13	15	15	21	A	24	25	26	26	27	28	29	28	28	29	28	28	30	31	30	24	24	26	25	25.2	30.6	
26-Aug	23	23	24	23	A	13	14	12	13	14	14	17	22	27	27	27	25	25	24	23	20	20	19	19	20.3	27.3	
27-Aug	18	18	18	17	A	18	19	20	21	21	21	21	20	19	18	17	16	15	16	14	12	12	11	11	17.1	21.5	
28-Aug	12	12	12	9	A	6	8	7	13	21	29	30	31	31	32	33	34	35	34	34	34	37	34	32	24.4	36.9	
29-Aug	23	27	27	27	A	30	30	28	24	24	27	31	33	34	34	34	35	35	37	40	38	35	33	30	31.1	40.0	
30-Aug	28	28	27	18	A	12	12	10	9	19	23	23	24	29	38	38	41	43	41	41	38	38	34	32	28.2	42.8	
31-Aug	30	25	26	32	A	34	35	37	36	34	34	36	37	36	36	33	33	33	34	32	31	28	28	27	32.4	37.4	
20.7 20.1 19.1 17.8 -- 14.6 13.5 13.9 16.8 21.1 24.2 26.6 28.2 29.3 29.7 30.1 30.7 31.0 30.6 28.6 25.5 25.1 23.5 22.3																								Diurnal Average			
34.6 33.1 29.5 32.0 -- 33.5 35.0 36.6 35.7 33.7 41.9 46.7 46.5 46.2 45.8 45.1 45.7 47.0 44.9 43.3 38.2 37.7 35.4 35.3																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																											

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - August 2017



Hourly Maximums

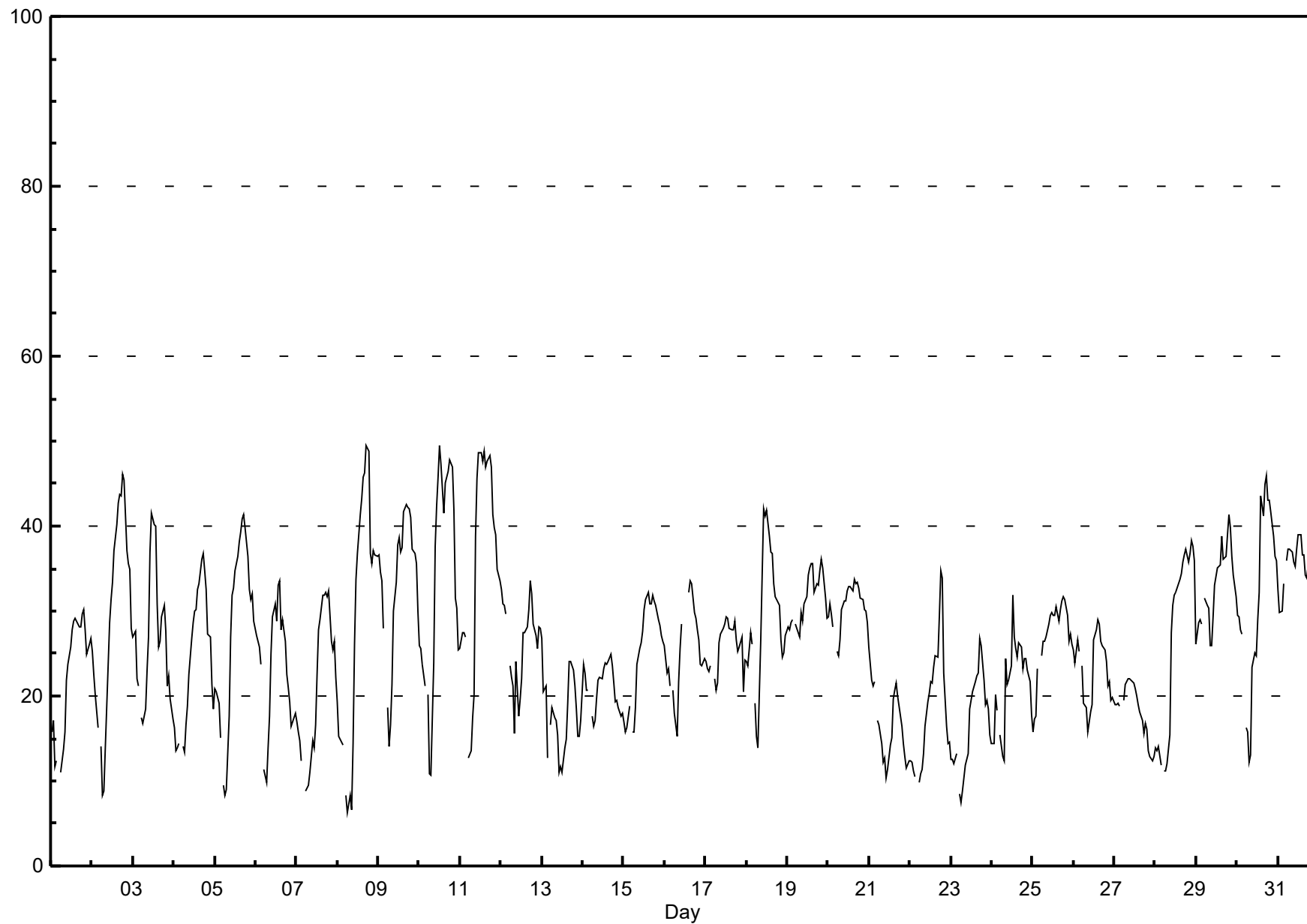
Ozone (O₃) - ppb

Beaverlodge - August 2017

Maximum Value: 49.5 ppb on Aug 8 18:00																								Maximum Daily Average: 36.0 ppb on Aug 11								Hours in Service: 744	
Minimum Value: 6 ppb on Aug 8 07:00																								Minimum Daily Average: 16.6 ppb on Aug 21								Hours of Data: 710	
Maximum Diurnal Average: 33.0 ppb at hour 18																								Minimum Diurnal Average: 16.5 ppb at hour 7								Hours of Missing Data: 34	
Monthly Average: 26.06 ppb																								Percentiles: P ₁ = 8.4 P ₁₀ = 13.8 Q ₁ = 19.0 Median = 26.4 Q ₃ = 32.0 P ₉₀ = 37.5 P ₉₉ = 48.2								Hours of Calibration: 34	
																																Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Aug	16	17	12	12	A	11	12	14	16	22	24	26	28	29	29	28	28	30	30	28	25	26	27	22.5	30.2								
2-Aug	25	23	20	16	A	14	8	9	14	24	29	31	33	37	40	43	44	43	46	45	37	36	35	28	29.6	46.1							
3-Aug	27	28	22	21	A	18	17	19	23	27	37	41	40	40	31	26	27	29	31	28	21	22	20	17	26.6	41.5							
4-Aug	16	14	14	14	A	14	13	17	19	23	27	29	30	30	33	33	36	37	35	33	27	27	21	19	24.3	36.8							
5-Aug	21	20	19	15	A	9	8	9	18	27	32	33	35	37	38	39	41	41	40	36	33	31	32	29	28.0	41.3							
6-Aug	27	26	26	24	A	11	10	14	18	25	29	31	29	33	34	28	29	26	23	21	19	16	17	18	23.2	33.6							
7-Aug	17	16	15	12	A	9	9	10	11	15	14	17	23	28	29	32	32	32	32	32	26	25	26	22	21.0	32.3							
8-Aug	19	15	14	14	A	8	6	8	7	14	26	34	37	41	43	46	46	50	49	37	36	37	37	36	28.8	49.5							
9-Aug	37	35	33	28	A	19	14	17	21	30	33	38	39	37	38	42	43	42	42	41	37	37	36	30	33.3	42.6							
10-Aug	26	26	24	21	A	20	11	11	24	38	42	46	49	47	41	45	46	46	48	47	42	32	30	25	34.2	49.4							
11-Aug	26	27	27	27	A	13	14	18	20	39	46	49	49	48	49	47	48	48	47	41	40	39	35	34	36.0	48.8							
12-Aug	33	31	31	30	A	24	22	21	16	24	18	20	22	27	27	28	30	34	32	28	27	26	28	28	26.3	33.6							
13-Aug	27	20	21	13	A	17	19	17	17	15	11	12	11	14	15	19	24	24	23	21	18	15	15	17	17.7	26.8							
14-Aug	24	23	21	21	A	18	16	17	20	22	22	22	23	24	24	24	25	24	22	19	20	19	18	18	21.0	24.9							
15-Aug	17	16	16	19	A	16	16	19	24	26	26	28	30	31	32	31	31	32	31	31	29	28	27	27	25.3	32.2							
16-Aug	26	23	23	21	A	21	18	15	22	26	29	C	C	C	32	34	33	30	29	28	27	24	24	24	25.3	33.5							
17-Aug	24	23	23	24	A	22	21	22	26	27	28	28	29	29	28	28	28	29	27	25	26	27	20	24	25.6	29.3							
18-Aug	24	23	28	26	A	19	15	14	27	34	42	41	42	39	37	37	33	32	31	31	27	25	25	27	29.5	42.0							
19-Aug	28	28	29	29	A	29	27	27	30	29	31	32	34	35	36	36	32	33	33	35	36	35	31	29	31.4	36.1							
20-Aug	29	31	30	28	A	25	25	27	30	31	31	32	33	33	32	34	33	33	33	31	31	30	30	29	30.5	33.7							
21-Aug	26	22	21	22	A	17	17	14	12	13	10	11	14	15	20	21	22	20	18	16	14	13	12	12	16.6	25.8							
22-Aug	12	12	11	11	A	10	11	11	13	16	19	20	22	22	23	25	25	30	35	34	23	17	14	15	18.7	34.8							
23-Aug	12	13	12	13	A	9	7	9	12	13	13	18	20	21	22	22	23	27	26	22	19	19	18	15	16.7	26.8							
24-Aug	14	14	20	18	A	15	13	12	24	21	22	24	32	27	26	25	26	26	23	24	24	23	22	18	21.5	31.9							
25-Aug	16	17	18	23	A	25	26	26	27	28	30	30	30	30	31	29	30	31	32	31	29	26	27	26	26.9	31.7							
26-Aug	25	24	27	25	A	24	19	19	16	17	18	19	27	28	29	29	26	26	25	24	21	22	19	20	23.0	29.0							
27-Aug	19	19	19	19	A	20	21	22	22	22	22	21	21	20	19	18	17	16	17	16	14	13	12	13	18.3	22.1							
28-Aug	14	14	14	12	A	11	11	12	15	28	31	32	32	33	34	34	36	37	37	36	37	38	38	36	27.0	38.4							
29-Aug	26	29	29	29	A	32	31	30	26	26	29	33	35	35	35	39	36	36	39	41	40	36	34	32	33.0	41.4							
30-Aug	30	29	28	27	A	16	16	12	13	23	25	25	29	32	44	41	45	46	43	43	42	39	36	36	31.3	45.9							
31-Aug	33	30	30	33	A	36	37	37	37	36	35	37	39	39	37	37	34	34	35	34	31	30	32	29	34.5	39.0							
23.1 22.1 21.8 20.9 -- 17.7 16.5 17.0 19.9 24.5 26.8 28.6 30.5 31.3 31.8 32.2 32.5 33.0 32.6 31.1 28.4 26.9 25.8 24.5																								Diurnal Average									
36.5 34.5 33.5 33.2 -- 36.0 37.4 37.3 37.0 38.9 45.6 48.7 49.4 47.7 48.8 47.0 47.6 49.5 48.9 47.0 41.8 39.0 37.6 36.4																								Diurnal Maximum									
C - Calibration A - Automated Daily Zero Span																																	

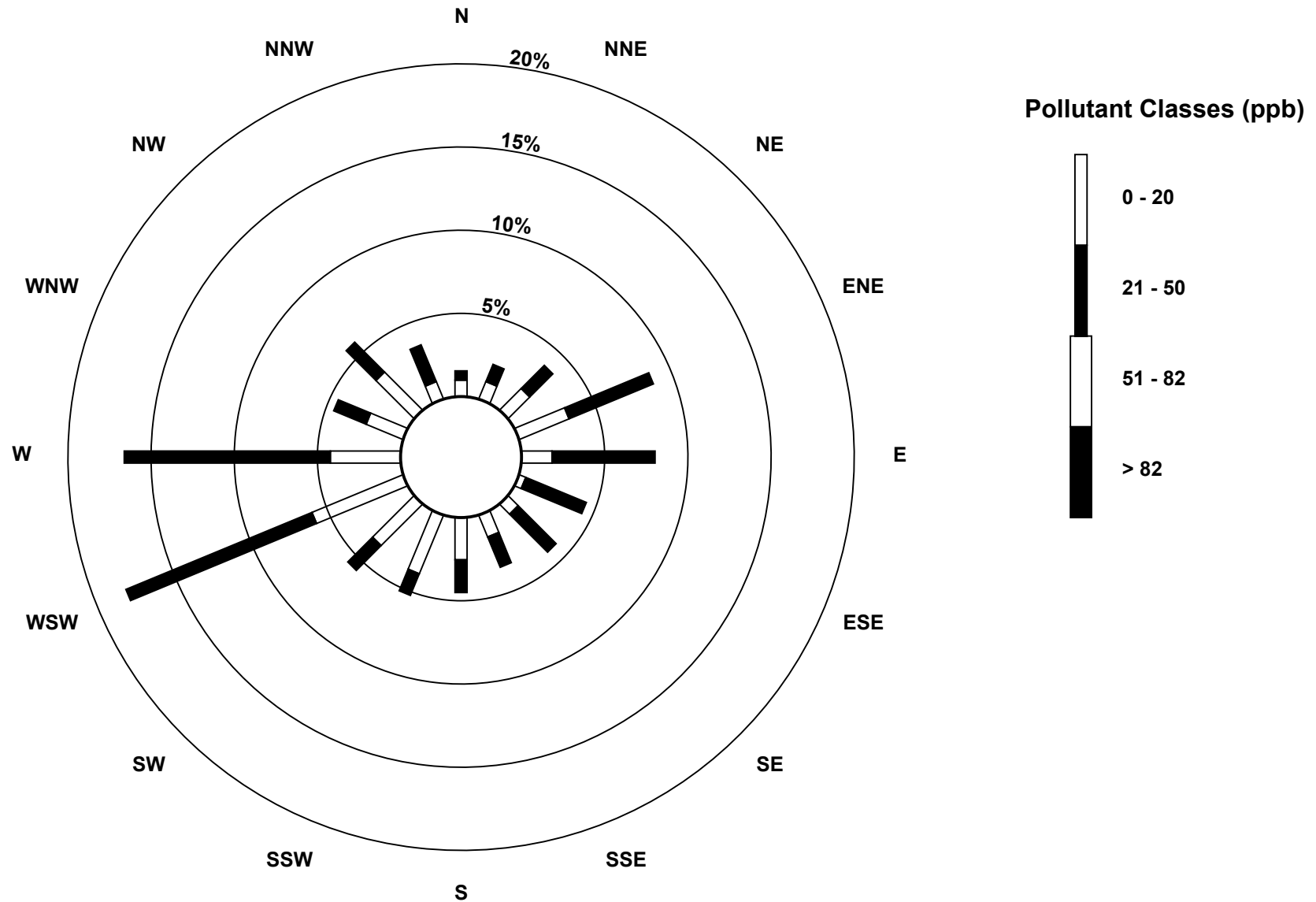
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - August 2017



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - August 2017



Eight Hour Running Averages

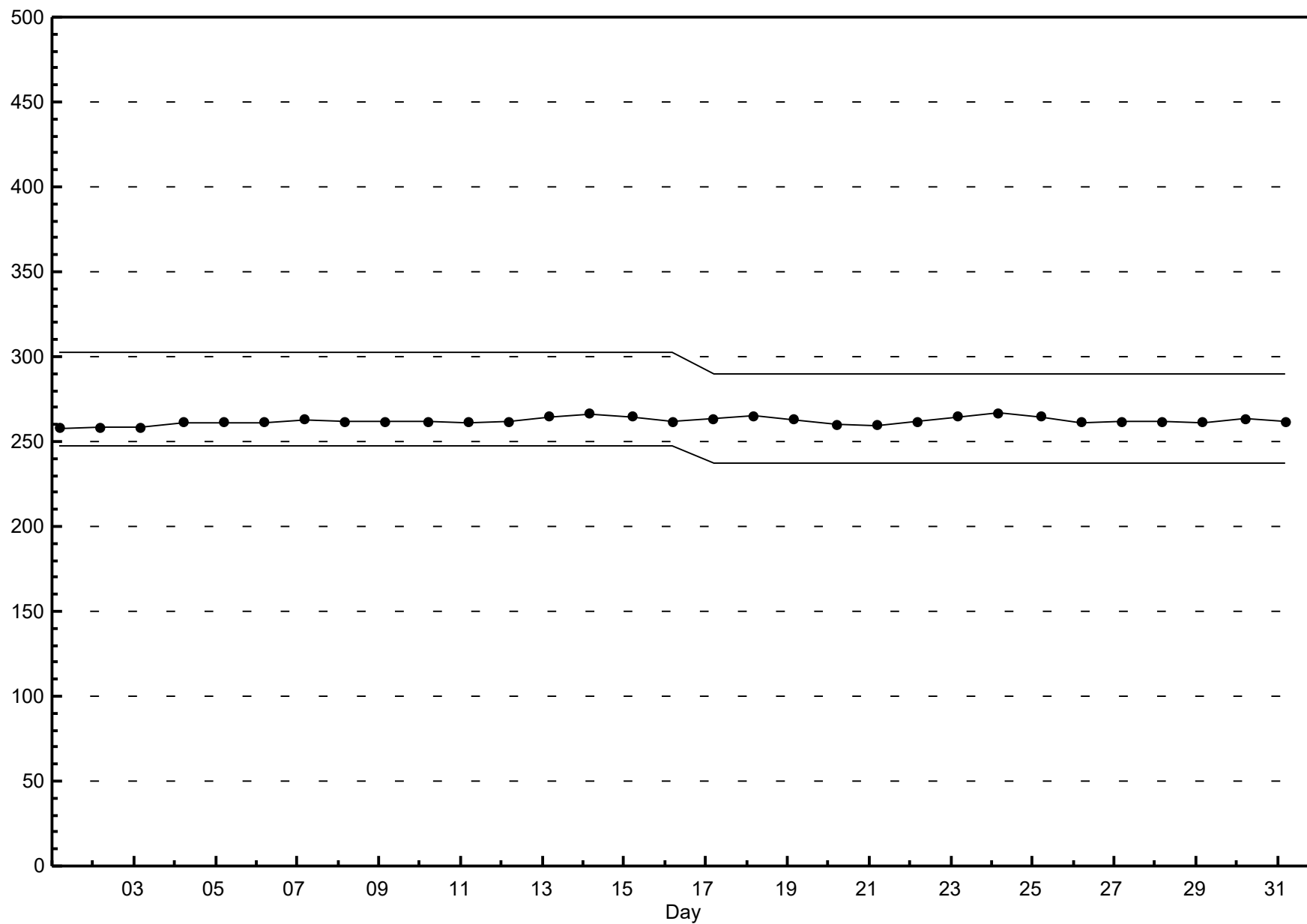
Ozone (O₃) - ppb

Beaverlodge - August 2017

Maximum Value: 45.8 ppb on Aug 11 19:00																								Hours in Service: 744	
Minimum Value: 6.9 ppb on Aug 8 10:00																								Hours of Data: 738	
																								Hours of Missing Data: 6	
Percentiles: P ₁ = 8.8 P ₁₀ = 13.0 Q ₁ = 17.0 Median = 22.5 Q ₃ = 28.8 P ₉₀ = 34.8 P ₉₉ = 43.3																								Hours of Calibration: 6	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	19	17	16	14	14	13	12	11	11	12	14	15	17	19	21	23	25	26	27	27	27	26	26	26	27.4
2-Aug	25	24	23	21	21	18	15	13	11	11	12	14	16	20	24	29	33	36	38	39	39	39	39	37	39.4
3-Aug	35	32	29	26	25	22	19	18	17	17	19	21	24	26	28	29	29	29	29	27	25	23	22	21	34.5
4-Aug	21	19	17	16	15	14	12	12	12	13	15	17	18	20	23	26	28	30	31	31	31	30	28	26	31.1
5-Aug	24	22	19	17	16	13	12	11	10	11	13	16	18	22	26	30	33	35	36	37	36	36	35	33	36.6
6-Aug	32	30	28	26	26	22	19	17	15	14	15	17	18	21	23	25	26	27	26	25	24	22	21	20	31.8
7-Aug	18	17	16	15	14	13	12	11	10	10	10	10	12	14	16	19	21	23	26	28	28	28	28	27	28.0
8-Aug	25	23	20	18	17	15	11	9	8	7	8	10	13	17	22	27	32	37	40	41	40	40	39	38	40.6
9-Aug	37	35	33	32	32	28	24	21	18	17	18	20	22	25	28	32	35	37	38	38	38	38	37	36	38.2
10-Aug	34	32	29	27	26	22	18	15	14	15	18	22	25	29	33	38	41	43	44	44	42	41	40	37	43.6
11-Aug	35	32	30	28	26	23	21	19	18	18	21	24	27	31	36	40	43	46	46	45	44	43	41	40	45.8
12-Aug	38	36	34	32	31	29	27	24	22	20	18	16	16	17	17	19	21	23	25	26	27	27	27	27	37.7
13-Aug	26	24	22	20	19	18	17	15	15	14	13	13	13	12	12	12	13	14	16	17	17	17	17	17	25.8
14-Aug	17	17	17	16	17	17	17	17	16	16	17	17	18	19	20	21	22	22	22	21	21	20	20	19	21.9
15-Aug	18	17	17	16	16	15	15	15	15	17	18	20	21	23	25	26	27	28	29	29	29	28	28	27	28.8
16-Aug	26	25	24	23	23	21	20	18	18	18	19	18	18	N	N	N	N	N	N	29	28	28	26	25	29.1
17-Aug	24	23	22	22	22	21	21	20	21	21	22	23	24	25	26	27	27	27	27	26	26	25	23	22	27.2
18-Aug	21	20	20	19	19	18	18	17	17	18	21	23	25	28	31	33	35	35	34	33	31	29	28	27	35.1
19-Aug	26	26	26	26	26	27	27	27	27	27	27	28	28	29	30	30	31	31	32	32	32	32	32	31	32.4
20-Aug	31	31	30	30	29	28	27	26	26	26	27	27	28	29	30	31	31	32	32	32	31	31	31	30	31.6
21-Aug	29	27	26	24	24	22	20	18	16	15	13	12	12	12	13	14	15	16	17	17	16	16	15	28.6	
22-Aug	14	13	12	11	11	10	10	10	10	10	11	13	14	15	17	19	20	22	23	25	24	24	22	21	24.6
23-Aug	20	18	15	13	12	11	10	9	8	8	8	9	10	12	14	15	17	19	20	21	20	19	19	18	20.8
24-Aug	17	15	14	13	14	13	12	12	13	13	14	15	17	18	20	22	22	23	24	24	24	23	22	21	24.3
25-Aug	20	19	18	18	17	17	18	20	22	24	25	26	27	27	28	28	28	29	29	29	29	28	28	27	29.0
26-Aug	27	26	25	24	24	22	21	19	17	16	15	14	15	16	18	20	22	23	24	25	25	24	23	22	26.6
27-Aug	21	20	19	18	18	18	18	18	19	19	20	20	20	20	20	20	19	18	18	17	16	15	14	13	20.8
28-Aug	13	12	12	11	11	10	10	10	10	11	14	16	18	21	24	28	30	32	32	33	33	34	34	34	34.3
29-Aug	33	32	31	30	30	29	28	27	28	27	27	28	28	29	29	30	32	33	34	35	36	36	36	35	35.9
30-Aug	34	34	32	30	28	25	22	19	16	15	15	15	17	19	22	26	30	33	35	37	39	40	39	39	39.9
31-Aug	37	35	33	32	31	30	31	31	32	33	34	35	35	35	36	35	35	35	35	34	34	33	32	31	37.3
37.7 35.5 33.7 32.3 31.6 30.5 30.6 31.2 32.0 33.3 34.3 34.8 35.1 35.5 35.6 39.8 43.4 45.6 45.8 44.9 43.8 42.7 41.2 39.6																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - August 2017

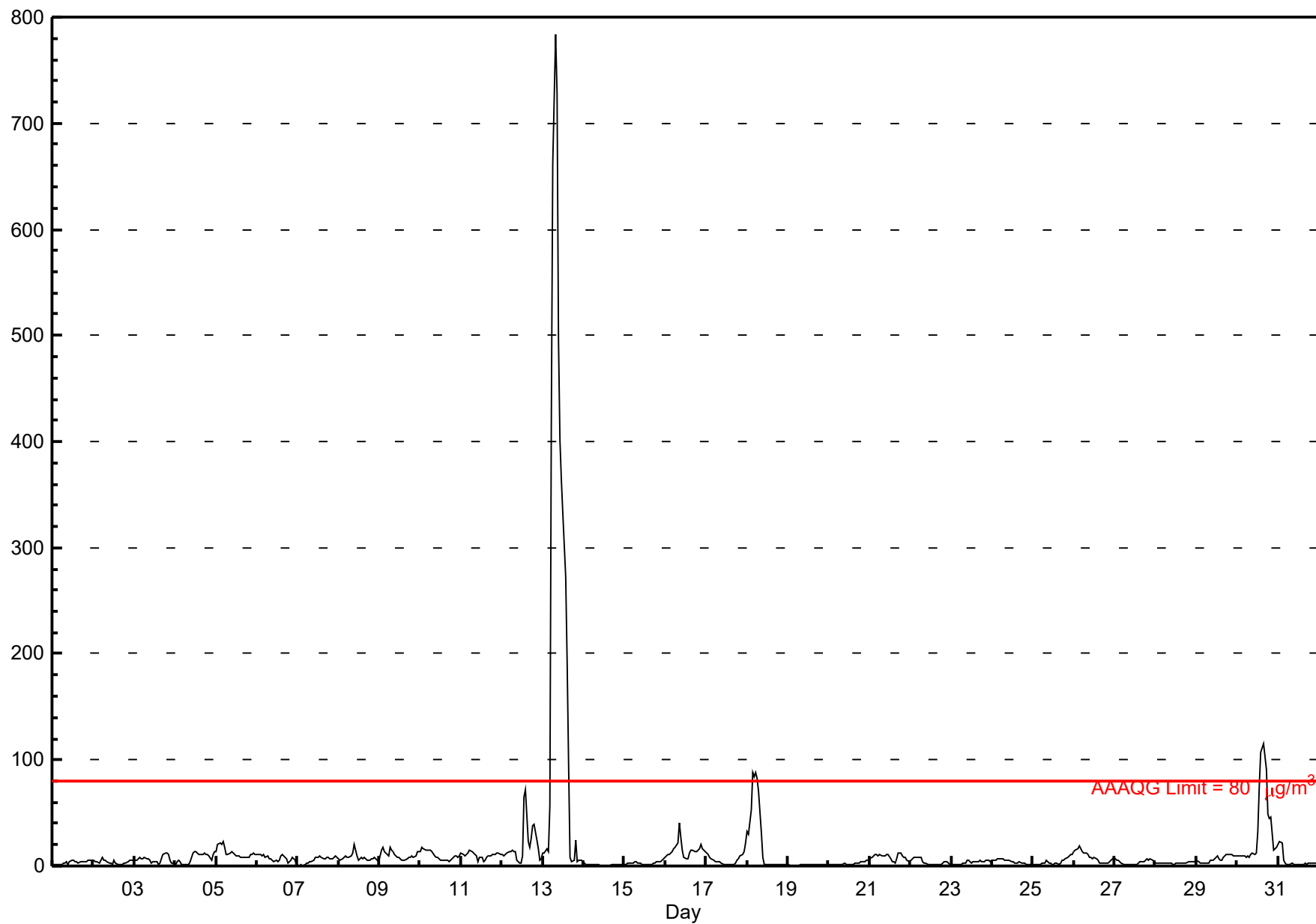


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - August 2017

Number of Exceedences: 1-hr: 19 24-hr: 2 Maximum Value: 784.0 µg/m³ on Aug 13 08:00 Maximum Daily Average: 204.8 µg/m³ on Aug 13																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Aug 7 01:00 Maximum Diurnal Average: 33.6 µg/m³ at hour 8 Monthly Average: 14.39 µg/m³ Minimum Daily Average: 0.9 µg/m³ on Aug 19 Minimum Diurnal Average: 6.9 µg/m³ at hour 24 Percentiles: P ₁ = 0.6 P ₁₀ = 1.3 Q ₁ = 2.2 Median = 5.3 Q ₃ = 10.0 P ₉₀ = 14.9 P ₉₉ = 326.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	2	2	2	2	2	2	2	2	4	2	4	5	5	4	4	3	4	5	4	4	5	5	5	5	3.4	5.4
2-Aug	5	4	4	3	5	8	5	5	4	3	2	2	6	2	2	1	1	2	3	4	5	5	5	5	3.7	8.0
3-Aug	6	6	6	8	7	7	7	6	7	5	3	4	4	4	2	2	7	11	12	13	11	6	3	3	6.3	12.7
4-Aug	2	4	5	4	2	1	1	1	1	4	13	14	13	12	11	11	11	12	10	11	10	6	11	13	7.7	14.2
5-Aug	13	20	22	21	24	17	10	11	12	14	13	11	10	10	9	8	9	8	8	8	10	11	12	10	12.6	23.7
6-Aug	11	12	11	10	11	8	9	7	6	5	3	5	4	5	10	10	10	7	2	3	6	8	6	1	7.1	11.5
7-Aug	0	1	1	1	1	3	3	4	4	6	9	8	9	10	8	7	7	8	8	7	7	8	10	8	5.7	10.1
8-Aug	6	5	7	8	9	8	9	9	13	20	15	9	6	7	7	6	5	5	7	7	8	7	5	5	8.2	20.5
9-Aug	9	14	18	14	12	10	17	15	13	12	8	8	7	5	6	6	7	8	8	9	8	10	13	14	10.5	17.9
10-Aug	13	18	17	16	14	15	15	13	9	9	9	7	6	6	5	5	5	5	5	8	9	9	8	9	9.8	17.6
11-Aug	12	11	10	10	13	15	13	13	11	9	4	9	8	4	6	8	9	10	11	10	11	12	12	11	10.1	14.9
12-Aug	11	9	11	12	14	14	15	13	14	6	2	2	9	65	71	23	17	26	39	39	24	17	5	7	19.4	71.2
13-Aug	12	12	16	14	57	416	661	784	728	495	401	363	332	272	192	97	9	4	5	25	4	5	5	5	204.8	784.0
14-Aug	3	2	1	1	1	1	1	1	2	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1.0	2.8
15-Aug	1	2	2	2	3	3	4	4	3	2	2	2	1	1	1	1	2	2	3	4	4	5	5	7	2.7	6.8
16-Aug	9	10	11	12	14	16	18	22	40	28	15	8	7	7	12	15	15	14	14	15	17	21	16	13	15.3	40.2
17-Aug	12	10	9	7	5	4	5	4	4	2	2	1	1	1	1	1	2	3	5	7	10	11	14	21	5.9	21.4
18-Aug	33	30	52	87	84	87	82	71	31	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	24.2	87.5
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	1.5
20-Aug	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	4	4	5	5	2.6	5.3
21-Aug	7	9	10	10	11	10	10	9	10	10	11	10	6	4	4	2	7	12	12	10	8	8	5	4	8.2	11.6
22-Aug	5	7	8	8	8	9	9	4	2	2	2	1	1	1	1	1	1	1	3	4	4	3	2	2	3.7	8.7
23-Aug	1	1	1	1	2	2	2	3	3	5	5	4	3	4	4	4	4	5	3	4	5	6	5	5	3.5	5.9
24-Aug	5	5	6	6	7	7	7	6	5	6	6	4	4	3	3	3	4	3	3	2	2	2	2	2	4.2	7.3
25-Aug	2	2	2	2	2	2	2	2	5	2	2	2	2	2	3	2	3	5	5	6	8	9	11	11	3.9	10.9
26-Aug	14	15	17	19	17	14	13	12	10	9	8	7	8	6	5	3	3	3	3	3	3	4	5	6	8.6	19.1
27-Aug	6	6	5	4	3	2	2	2	1	1	1	1	1	1	2	4	5	5	6	6	6	6	5	5	3.5	6.3
28-Aug	3	3	3	3	2	2	2	2	3	2	2	2	2	2	2	2	2	2	3	4	4	4	4	4	2.7	4.2
29-Aug	5	4	3	3	3	2	2	3	5	5	6	6	9	6	6	6	8	11	11	11	11	10	9	9	6.5	11.4
30-Aug	10	10	10	10	9	9	9	9	12	13	11	12	32	75	107	115	103	90	49	45	46	15	16	18	34.6	114.9
31-Aug	20	23	21	5	3	2	2	2	2	2	2	2	1	2	2	2	3	2	2	2	3	3	3	2	4.6	23.1
7.8 8.3 9.4 9.8 11.2 22.6 30.3 33.6 31.2 22.2 18.2 16.6 16.3 17.0 15.8 11.5 8.7 8.9 7.9 8.9 8.1 7.3 7.0 6.9																								Diurnal Average		
32.7 30.1 52.3 87.5 84.0 416.1 661.2 784.0 728.2 494.6 401.4 362.8 332.4 272.1 192.0 114.9 103.2 90.3 48.6 44.5 45.6 20.6 16.4 21.4																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

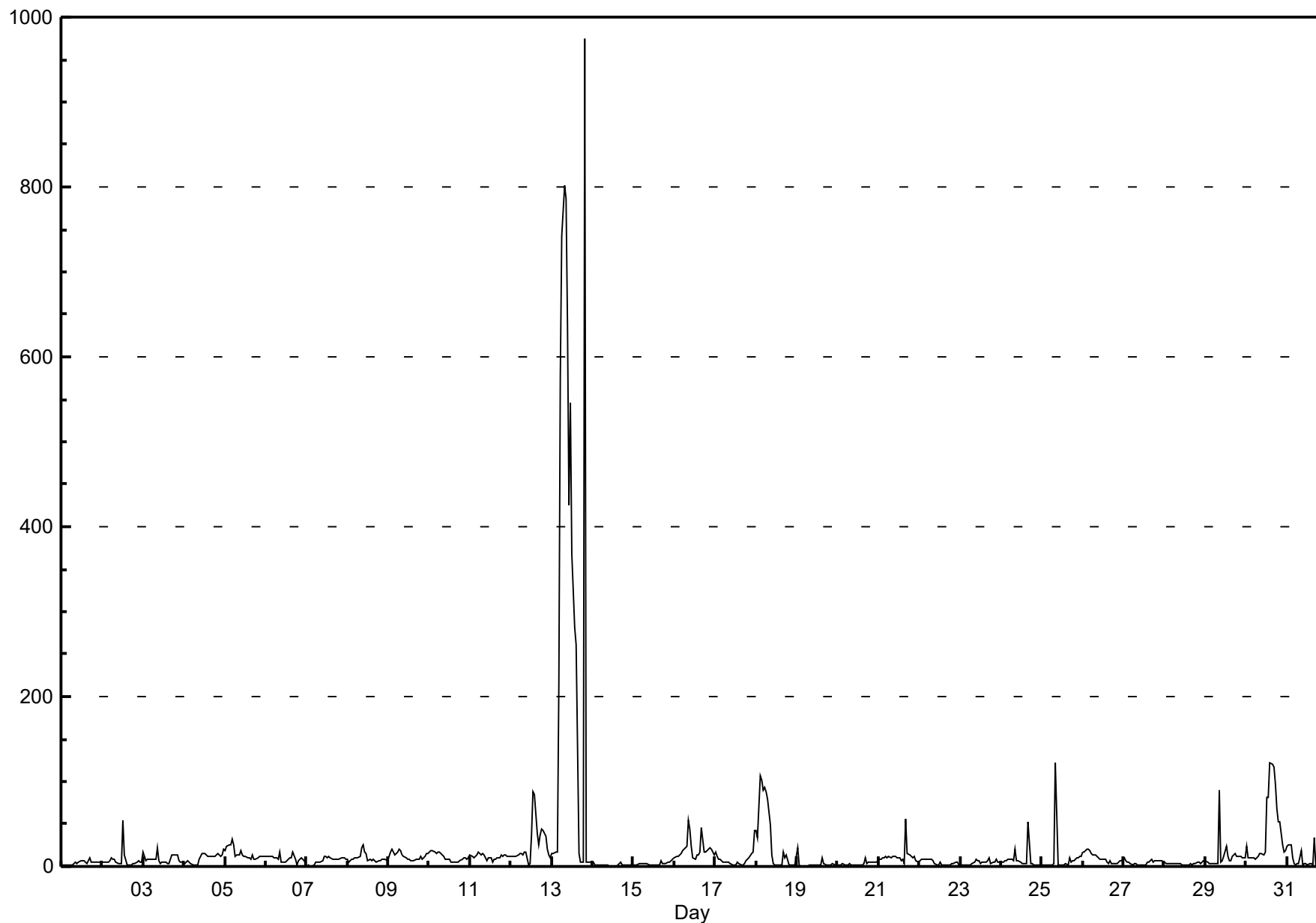


Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

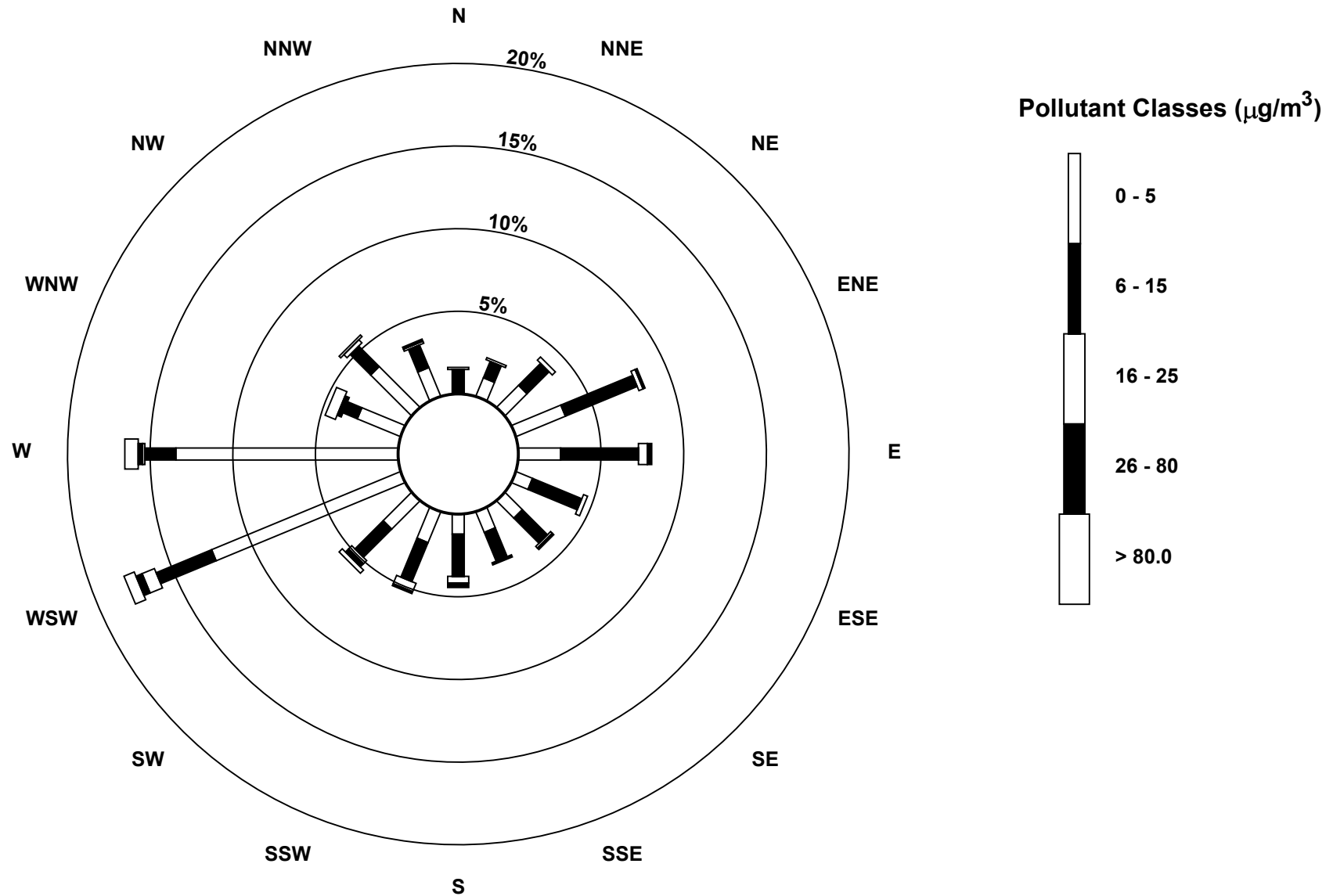
Beaverlodge - August 2017

Maximum Value: 974.0 μg/m ³ on Aug 13 20:00																					Maximum Daily Average: 286.1 μg/m ³ on Aug 13										Hours in Service: 744	
Minimum Value: 1 μg/m ³ on Aug 14 14:00																					Minimum Daily Average: 1.4 μg/m ³ on Aug 14										Hours of Data: 744	
Maximum Diurnal Average: 43.9 μg/m ³ at hour 9																					Minimum Diurnal Average: 8.4 μg/m ³ at hour 23										Hours of Missing Data: 0	
Monthly Average: 19.59 μg/m ³																					Percentiles: P ₁ = 0.7 P ₁₀ = 1.7 Q ₁ = 2.8 Median = 6.9 Q ₃ = 12.2 P ₉₀ = 19.0 P ₉₉ = 518.3										Hours of Calibration: 0	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
1-Aug	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	4.5	10.3						
2-Aug	6	5	5	4	7	10	8	9	5	3	3	3	55	14	2	2	2	2	3	4	4	6	6	6	6	7.2	55.1					
3-Aug	16	6	9	9	9	8	9	9	23	6	4	5	4	6	3	3	9	13	13	13	13	7	6	5	8.6	22.8						
4-Aug	4	6	6	5	3	2	2	2	2	9	15	15	15	13	12	12	12	13	12	13	16	11	14	20	9.8	20.3						
5-Aug	19	24	25	26	33	25	12	13	14	18	14	12	11	10	10	8	14	9	8	10	12	12	12	12	15.1	33.1						
6-Aug	11	12	12	12	12	11	10	9	17	5	5	6	6	8	10	11	18	9	2	8	9	10	8	3	9.3	17.6						
7-Aug	1	1	1	1	2	5	6	5	6	7	11	12	11	11	10	8	8	9	9	8	10	10	11	9	7.0	11.7						
8-Aug	8	6	9	9	11	10	10	12	21	25	16	15	7	9	8	8	7	6	7	7	8	9	9	7	10.2	24.7						
9-Aug	12	17	20	17	13	17	20	18	14	12	10	9	9	6	7	7	9	9	9	11	9	11	16	15	12.3	19.6						
10-Aug	16	18	19	17	16	17	17	16	11	9	9	9	9	6	6	6	6	5	7	9	11	11	9	10	11.1	18.6						
11-Aug	13	12	11	11	14	16	14	15	13	10	7	10	10	5	9	9	10	11	13	12	14	13	13	11	11.5	16.1						
12-Aug	12	11	12	12	14	14	15	14	17	17	2	3	38	87	84	39	25	37	45	42	36	20	14	10	25.9	87.4						
13-Aug	16	16	17	16	216	576	743	801	787	637	426	546	368	281	261	138	15	5	5	974	5	6	6	5	286.1	974.0						
14-Aug	4	2	2	1	1	1	1	1	2	2	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1.4	4.6						
15-Aug	1	2	2	3	3	3	4	4	4	2	2	2	2	2	1	2	6	3	3	4	5	6	7	9	3.5	8.8						
16-Aug	10	11	11	14	15	18	21	23	54	44	24	10	9	13	14	16	46	16	16	18	20	22	20	14	20.0	54.0						
17-Aug	17	11	9	8	5	5	6	5	5	4	2	2	2	5	3	1	2	4	7	9	11	15	17	42	8.2	41.9						
18-Aug	43	33	107	102	90	93	88	80	49	13	3	2	2	2	1	1	17	10	13	2	1	2	1	1	31.5	107.3						
19-Aug	22	1	1	1	1	1	1	1	2	1	1	1	1	2	1	11	3	1	1	2	1	3	2	2	2.7	21.5						
20-Aug	2	2	2	4	2	2	2	3	2	2	2	2	2	2	2	3	10	4	4	4	5	6	6	6	3.4	9.5						
21-Aug	8	9	10	11	11	11	11	10	12	11	12	11	10	6	8	4	56	16	14	11	10	12	6	5	12.0	55.5						
22-Aug	7	8	8	9	9	9	9	8	6	3	2	2	5	1	1	1	1	1	2	3	4	6	5	2	4.7	9.0						
23-Aug	2	1	1	1	2	2	2	4	5	8	6	6	4	5	5	4	6	10	4	5	6	9	6	5	4.6	10.0						
24-Aug	6	5	7	7	8	8	8	7	20	7	6	5	4	4	3	3	53	3	3	2	2	2	2	2	7.3	52.6						
25-Aug	2	2	2	2	2	2	2	3	122	2	2	2	2	2	3	2	9	6	6	7	10	10	11	12	9.6	121.5						
26-Aug	17	17	21	20	18	16	13	13	11	10	8	8	8	8	6	4	7	4	3	3	4	5	6	7	9.9	21.1						
27-Aug	10	6	6	5	3	2	3	4	2	1	1	1	1	2	4	5	8	6	7	7	6	7	7	6	4.5	10.5						
28-Aug	5	4	4	3	3	4	3	3	4	4	2	2	2	2	2	3	2	3	3	5	4	4	5	7	3.5	6.8						
29-Aug	7	5	3	3	3	3	3	3	89	6	8	11	23	12	6	7	12	15	12	12	12	12	10	10	12.0	89.1						
30-Aug	24	10	10	10	10	9	10	12	16	16	13	16	82	82	122	121	117	96	68	53	52	26	18	19	42.2	121.5						
31-Aug	24	25	25	11	4	2	3	3	18	2	3	3	2	3	3	2	34	2	3	3	6	4	3	3	8.0	34.0						
11.2 9.4 12.2 11.5 17.5 29.2 34.1 35.8 43.9 29.1 20.3 23.8 22.9 19.9 19.8 14.5 17.4 10.7 9.9 40.9 10.1 9.1 8.4 8.7																									Diurnal Average							
42.6 33.3 107.3 102.1 216.0 576.3 742.8 801.0 786.7 637.0 425.9 546.4 367.9 281.2 261.1 138.3 117.3 96.2 67.8 974.0 52.1 25.9 19.5 41.9																									Diurnal Maximum							



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Beaverlodge - August 2017



Hourly Averages

External Temperature (ET) - °C

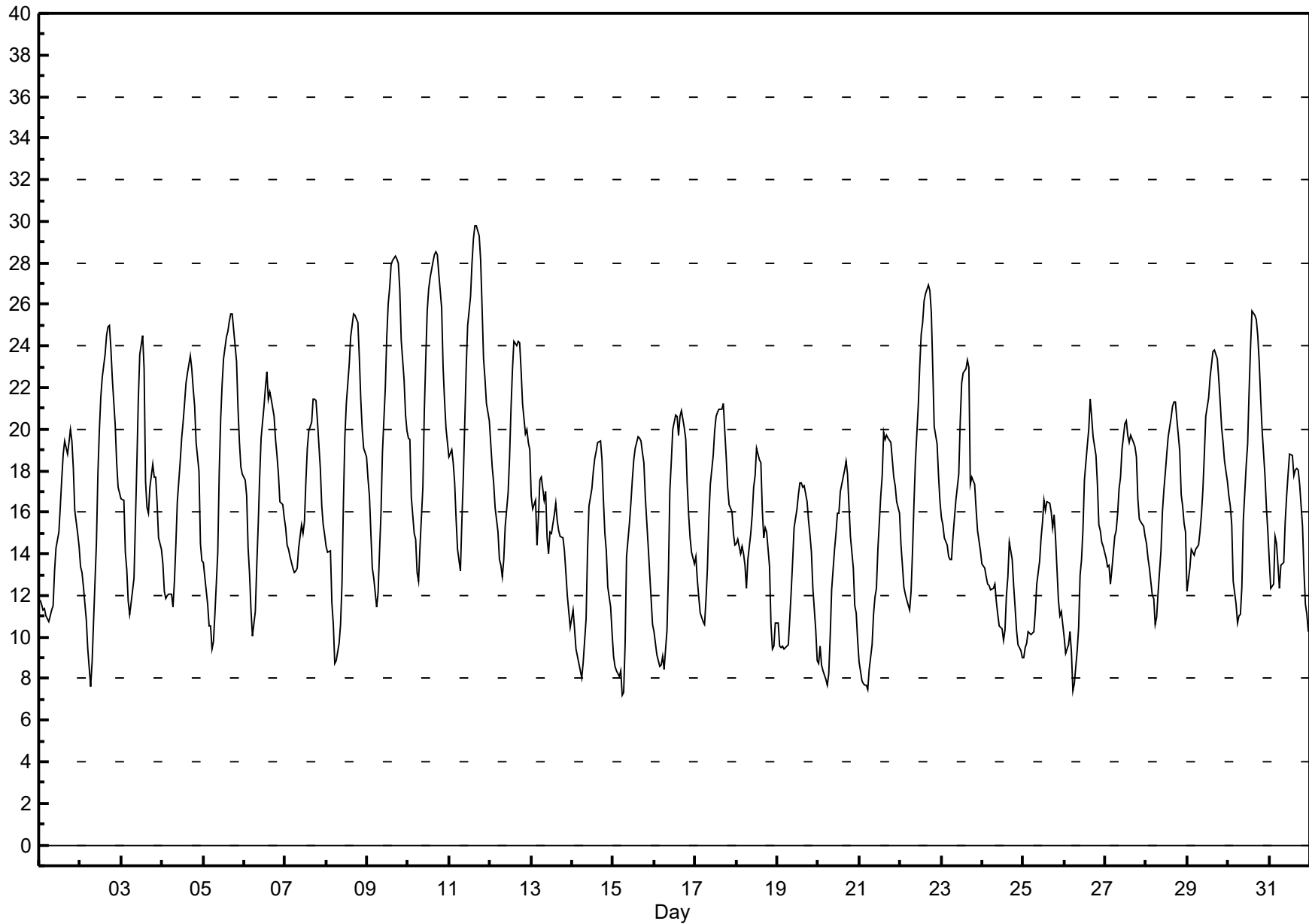
Beaverlodge - August 2017

Maximum Value: 29.8 °C on Aug 11 17:00																					Maximum Daily Average: 22.2 °C on Aug 11										Hours in Service: 744	
Minimum Value: 7 °C on Aug 15 06:00																					Minimum Daily Average: 11.7 °C on Aug 24										Hours of Data: 744	
Maximum Diurnal Average: 21.4 °C at hour 17																					Minimum Diurnal Average: 11.2 °C at hour 6										Hours of Missing Data: 0	
Monthly Average: 16.33 °C																					Percentiles: P ₁ = 7.7 P ₁₀ = 10.2 Q ₁ = 12.7 Median = 15.9 Q ₃ = 19.5 P ₉₀ = 23.1 P ₉₉ = 28.4										Hours of Calibration: 0	
																					Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Aug	12	12	11	11	11	11	11	11	12	13	14	15	16	18	19	19	19	19	20	19	18	16	15	14	14.9	20.0						
2-Aug	13	13	12	11	9	9	8	9	11	15	18	20	22	23	24	25	25	25	24	22	20	18	17	17	17.0	25.0						
3-Aug	17	17	14	13	12	11	12	13	16	18	21	24	24	23	17	16	16	17	18	18	18	16	15	14	16.7	24.5						
4-Aug	14	12	12	12	12	12	11	13	14	17	18	20	20	21	22	23	24	23	22	21	19	18	15	14	17.0	23.6						
5-Aug	14	13	12	11	11	9	10	11	14	18	20	22	23	24	25	25	26	26	25	23	21	19	18	18	18.2	25.6						
6-Aug	18	17	14	13	11	10	11	13	15	18	20	21	22	23	21	22	21	21	19	19	18	17	16	16	17.3	22.8						
7-Aug	15	14	14	14	13	13	13	13	14	15	15	16	17	19	20	20	21	21	21	20	18	16	15	15	16.5	21.4						
8-Aug	14	14	14	12	11	9	9	10	11	13	17	20	21	23	24	25	26	25	25	23	21	20	19	19	17.7	25.5						
9-Aug	18	17	15	13	13	11	12	14	16	19	22	24	26	27	28	28	28	28	28	27	24	22	21	20	20.9	28.3						
10-Aug	20	20	17	15	15	13	13	14	17	21	23	26	27	27	28	28	29	28	27	26	23	21	20	19	21.6	28.5						
11-Aug	19	19	18	17	16	14	13	16	18	20	23	25	26	28	29	30	30	29	28	26	23	22	21	20	22.2	29.8						
12-Aug	19	18	17	16	15	14	13	13	14	15	17	19	21	23	24	24	24	24	23	21	20	20	19	19	18.9	24.2						
13-Aug	17	16	17	14	16	18	18	17	17	15	14	15	15	16	16	16	15	15	15	14	13	12	11	10	15.0	17.7						
14-Aug	11	10	9	9	9	8	9	10	11	14	16	17	18	19	19	19	19	19	17	15	14	12	11	10	13.6	19.4						
15-Aug	9	9	8	8	8	7	7	10	14	15	16	18	19	19	20	20	19	19	18	17	14	13	12	11	13.8	19.7						
16-Aug	10	9	9	9	9	9	8	10	13	17	18	20	21	21	20	21	21	20	20	17	16	15	14	14	15.0	20.9						
17-Aug	14	13	12	11	11	11	12	13	16	17	19	20	21	21	21	21	21	20	19	17	16	16	15	14	16.2	21.3						
18-Aug	15	15	14	14	14	13	12	14	15	16	17	18	19	19	18	16	15	15	13	11	9	10	11	11	14.5	19.1						
19-Aug	11	10	9	10	9	10	10	11	12	14	15	16	17	17	17	17	17	17	16	15	14	12	10	9	13.1	17.4						
20-Aug	9	10	9	8	8	8	8	10	12	14	15	16	16	17	18	18	18	18	16	15	13	11	11	10	12.9	18.4						
21-Aug	9	8	8	8	8	8	8	10	11	12	12	14	17	18	20	20	20	20	19	19	18	17	16	16	13.9	19.8						
22-Aug	14	13	12	12	12	11	12	14	16	18	21	23	25	25	26	27	27	27	26	23	20	19	18	17	19.1	27.0						
23-Aug	16	15	15	14	14	14	14	15	17	17	18	20	22	23	23	23	23	17	18	17	16	15	15	14	17.3	23.3						
24-Aug	14	13	13	13	13	12	12	13	12	11	11	10	10	10	12	13	15	14	12	11	10	10	9	9	11.7	14.6						
25-Aug	9	9	10	10	10	10	10	11	13	14	15	16	17	16	17	16	16	15	16	15	12	11	11	11	12.9	16.6						
26-Aug	10	9	10	10	9	7	8	9	10	13	14	15	18	19	20	21	21	20	19	17	15	15	15	14	14.1	21.4						
27-Aug	14	13	13	13	13	15	15	16	17	18	19	20	20	20	19	20	19	19	19	17	16	16	15	15	16.7	20.4						
28-Aug	15	14	13	12	12	11	11	12	14	16	17	18	19	20	21	21	21	21	20	19	17	16	15	15	16.3	21.3						
29-Aug	12	13	14	14	14	14	14	15	16	17	19	21	22	23	23	24	24	23	22	21	20	19	18	17	18.4	23.8						
30-Aug	17	16	15	13	12	11	11	11	12	16	18	19	22	24	26	25	25	24	23	22	20	18	16	15	18.0	25.7						
31-Aug	14	12	13	15	14	13	12	13	14	16	17	18	19	19	18	18	18	18	17	15	13	12	11	10	15.0	18.8						
13.8 13.4 12.7 12.1 11.7 11.2 11.3 12.4 14.0 15.8 17.4 18.8 20.0 20.7 21.1 21.3 21.4 20.9 20.3 18.9 17.2 16.0 15.1 14.4																									Diurnal Average							
19.6 19.5 18.4 17.4 15.7 17.6 17.7 16.6 17.7 20.9 23.4 25.7 26.7 28.0 29.2 29.8 29.8 29.3 28.1 26.7 24.3 22.4 21.2 20.4																									Diurnal Maximum							

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - August 2017



Hourly Averages

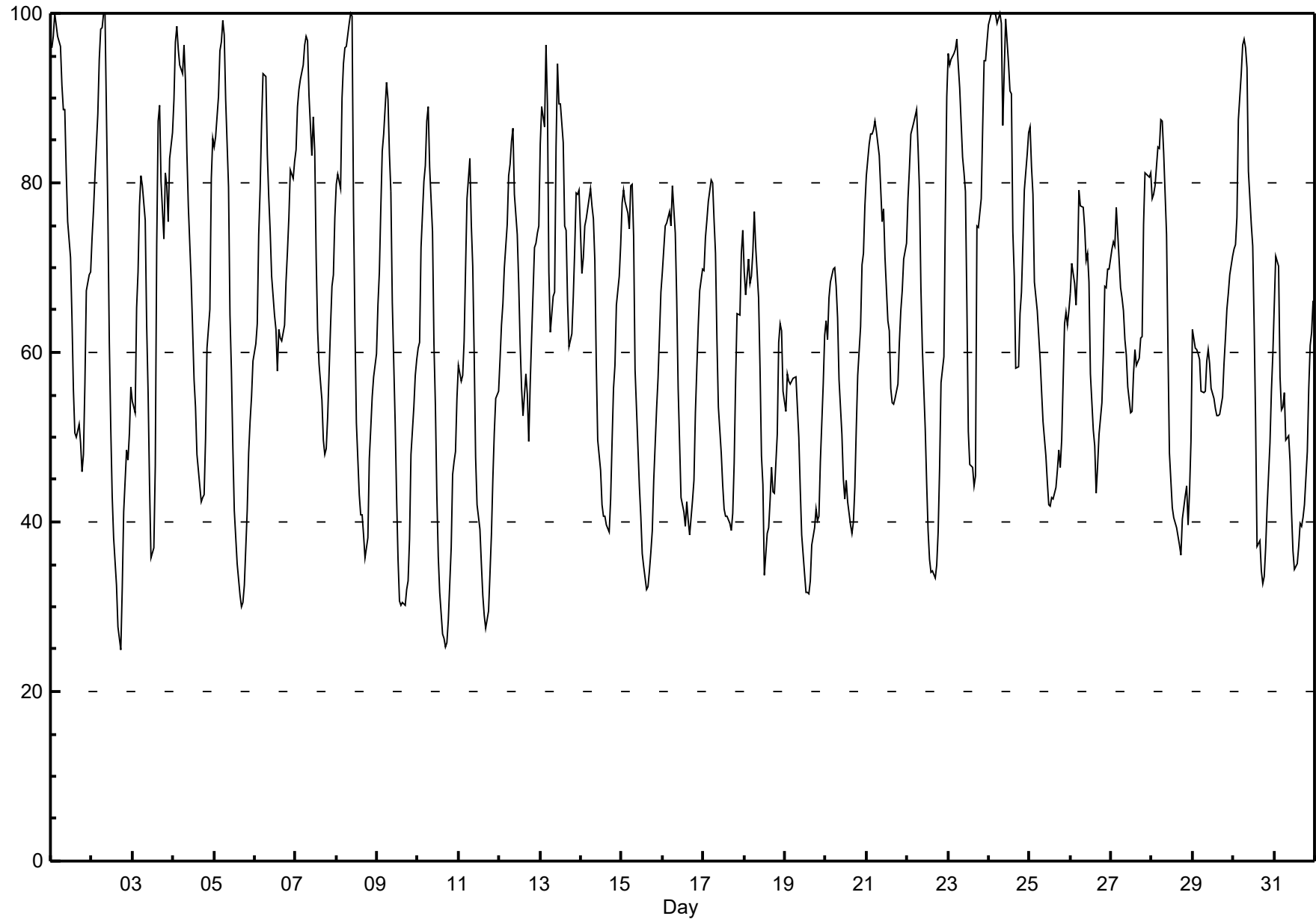
Relative Humidity (RH) - %

Beaverlodge - August 2017

Maximum Value: 100.0 % on Aug 1 03:00																					Maximum Daily Average: 86.0 % on Aug 24					Hours in Service: 744	
Minimum Value: 25 % on Aug 2 18:00																					Minimum Daily Average: 46.1 % on Aug 19					Hours of Data: 744	
Maximum Diurnal Average: 82.1 % at hour 6																					Minimum Diurnal Average: 44.3 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 63.59 %																					Percentiles: P ₁ = 27.5 P ₁₀ = 38.7 Q ₁ = 48.1 Median = 63.1 Q ₃ = 78.2 P ₉₀ = 89.8 P ₉₉ = 100.0					Hours of Calibration: 0	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	96	97	100	99	97	96	92	89	89	81	75	71	64	56	50	50	52	49	46	48	56	67	69	69	73.3	100.0	
2-Aug	74	77	81	88	95	98	98	100	100	76	61	51	43	38	33	28	26	25	32	41	49	47	51	56	61.1	100.0	
3-Aug	54	53	65	69	77	81	80	76	63	55	44	36	37	47	73	87	89	80	73	81	80	75	83	86	68.6	89.1	
4-Aug	90	97	99	96	94	93	96	92	84	77	68	63	57	54	48	46	42	43	43	50	61	65	80	85	71.8	98.6	
5-Aug	84	85	90	96	97	99	98	90	80	64	58	49	41	35	33	31	30	31	33	41	48	52	55	59	61.6	99.2	
6-Aug	61	63	74	79	87	93	93	83	78	74	69	64	63	58	63	62	61	63	68	72	76	81	80	83	72.9	92.8	
7-Aug	84	89	91	92	94	96	97	97	90	83	88	84	71	63	59	54	50	48	49	52	63	68	69	76	75.3	97.2	
8-Aug	80	81	79	90	94	96	96	99	100	100	77	63	52	43	41	41	38	36	38	47	51	55	57	60	67.2	100.0	
9-Aug	66	70	77	84	86	92	90	83	79	66	52	43	36	31	30	30	30	32	33	38	48	54	57	59	56.9	91.9	
10-Aug	60	61	72	80	82	87	89	82	74	61	54	43	36	32	27	26	25	26	29	37	46	47	48	55	53.3	89.0	
11-Aug	59	57	57	61	70	78	83	75	70	60	48	42	39	35	31	29	27	29	34	38	45	51	55	55	51.2	82.9	
12-Aug	59	63	66	70	75	81	82	85	86	79	74	68	61	56	52	57	55	50	56	62	72	73	74	75	68.0	86.5	
13-Aug	85	89	87	96	89	70	62	67	67	84	94	89	89	85	75	74	66	61	62	67	72	79	79	79	77.8	96.2	
14-Aug	69	71	75	76	77	79	77	76	71	59	50	46	42	41	41	40	39	43	49	56	58	66	69	73	60.1	79.3	
15-Aug	78	79	78	76	75	80	80	74	58	49	44	41	36	35	32	32	34	36	39	45	53	57	62	67	55.8	79.8	
16-Aug	69	75	75	76	77	75	80	74	66	56	49	43	41	39	42	40	39	43	45	53	58	63	67	70	59.0	79.7	
17-Aug	70	74	76	78	80	80	76	72	62	54	48	44	42	41	41	40	39	41	47	57	65	64	72	74	59.7	80.3	
18-Aug	70	67	71	68	69	72	77	72	66	58	48	44	34	39	39	43	47	44	43	50	61	63	62	55	56.8	76.6	
19-Aug	53	57	57	56	57	57	57	54	50	44	39	34	32	32	32	33	37	39	41	40	41	47	56	62	46.1	62.1	
20-Aug	64	62	66	68	70	70	68	64	57	50	45	43	45	42	40	39	40	44	51	57	63	70	72	77	57.0	77.2	
21-Aug	81	85	86	86	86	87	86	83	79	75	77	71	64	63	56	54	54	55	56	61	65	67	71	73	71.7	87.4	
22-Aug	78	82	86	86	87	89	84	79	68	60	51	45	39	36	34	34	33	35	39	46	56	59	76	90	61.4	90.2	
23-Aug	95	94	95	95	96	97	94	91	83	81	79	66	51	47	46	44	45	75	75	78	87	94	94	97	79.1	97.0	
24-Aug	99	100	100	100	100	99	100	99	87	93	99	94	91	91	74	69	58	58	65	67	73	79	83	86	86.0	100.0	
25-Aug	87	82	79	68	65	62	59	55	52	48	45	42	42	43	43	44	46	48	46	50	63	65	63	65	56.7	86.6	
26-Aug	67	71	68	66	70	79	77	77	75	71	72	68	57	51	49	43	47	50	54	60	68	68	70	70	64.5	79.1	
27-Aug	72	73	72	77	74	68	66	65	62	60	56	53	53	57	60	59	59	62	62	75	81	81	81	81	67.0	81.2	
28-Aug	78	79	80	84	84	87	87	84	74	60	48	45	42	40	39	38	37	36	40	43	44	40	44	49	57.7	87.4	
29-Aug	63	61	60	60	59	55	55	55	59	60	59	56	55	53	53	53	53	55	59	62	65	67	69	71	59.0	71.3	
30-Aug	72	73	76	87	93	96	97	96	93	81	75	73	63	52	37	38	34	33	34	37	42	49	55	60	64.4	96.9	
31-Aug	66	71	70	57	53	54	55	50	50	47	41	37	34	35	37	40	40	41	42	48	56	61	62	66	50.5	71.3	
73.6 75.3 77.7 79.6 80.9 82.1 81.7 78.6 73.3 66.7 60.9 55.2 50.0 47.3 45.5 45.1 44.3 45.5 47.9 53.6 60.2 63.7 67.3 70.5																									Diurnal Average		
98.7 100.0 100.0 100.0 99.9 99.2 100.0 100.0 100.0 99.7 99.2 94.2 90.9 90.6 74.9 87.2 89.1 80.2 74.7 81.2 86.7 94.4 94.4 96.7																									Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	8	3	7	7	9	9	9	11	13	10	10	12	10	5	5	8	8	4	4	4	3	5	5	3	5.3	12.6
Dir	17	299	273	295	297	292	311	315	313	322	318	296	307	333	319	284	283	336	56	40	72	68	70	79	318	313
2 Spd	5	4	4	2	2	0	1	3	2	2	4	3	4	2	5	2	2	5	10	10	5	7	6	5	2.8	10.5
Dir	68	75	71	294	37	173	233	62	172	241	153	173	134	135	77	210	45	49	57	92	89	73	75	79	84	92
3 Spd	6	5	2	4	2	3	3	3	4	6	10	14	10	3	16	12	3	12	8	8	8	12	8	10	1.3	15.7
Dir	78	80	189	217	29	48	72	147	179	182	134	138	131	123	339	21	326	307	283	251	310	341	343	342	358	339
4 Spd	10	3	6	8	6	5	5	8	7	8	8	7	7	7	6	9	8	16	14	10	5	4	2	1	6.3	15.7
Dir	324	282	314	315	322	324	301	311	312	308	323	342	328	325	330	333	342	16	6	2	6	336	219	38	334	16
5 Spd	4	3	1	4	2	1	2	3	3	3	3	3	5	6	1	5	5	4	7	7	6	7	8	6	2.0	7.5
Dir	54	63	87	23	239	209	96	193	196	267	204	237	170	193	39	61	112	144	165	147	94	65	72	72	122	72
6 Spd	4	3	2	1	3	3	11	7	8	8	9	10	11	10	20	17	16	16	12	11	12	7	9	9	6.9	19.6
Dir	65	39	20	49	255	40	315	338	315	309	314	323	325	344	14	14	31	35	40	49	46	71	63	66	13	14
7 Spd	9	9	3	6	9	7	7	4	3	6	5	5	6	7	8	7	6	5	4	5	6	6	7	7	3.5	9.4
Dir	49	47	19	16	33	23	79	68	98	121	201	179	165	178	159	140	167	173	139	146	97	67	62	69	99	47
8 Spd	8	7	4	3	3	1	1	1	1	2	4	5	2	4	4	5	6	7	7	8	6	6	5	4	3.1	7.9
Dir	76	78	63	142	235	38	152	227	251	187	180	170	126	125	115	146	150	155	163	138	100	72	64	74	124	76
9 Spd	4	6	1	1	4	1	1	2	4	3	3	3	3	5	3	9	4	5	3	5	5	6	11	9	2.1	11.4
Dir	92	65	258	75	50	198	309	87	178	175	217	171	223	250	24	66	54	310	4	42	63	62	89	88	76	89
10 Spd	7	3	2	1	5	1	1	1	2	3	4	5	8	9	9	10	8	8	9	10	8	8	10	9	4.7	10.2
Dir	80	81	240	48	40	34	214	161	194	181	160	135	136	139	120	93	89	124	111	78	76	76	78	76	102	93
11 Spd	6	8	8	3	4	3	5	3	3	8	17	16	19	18	18	20	23	20	19	16	16	23	19	19	11.8	23.3
Dir	80	75	85	174	175	215	286	63	192	139	128	120	120	116	111	110	106	111	107	97	85	95	100	99	108	106
12 Spd	18	16	8	6	2	1	2	3	1	1	1	3	3	4	5	10	13	12	10	8	8	12	15	13	6.2	17.9
Dir	97	94	105	111	201	202	222	325	346	352	200	134	148	126	155	126	106	87	99	70	40	83	99	102	100	97
13 Spd	6	4	6	7	3	5	9	12	18	18	10	12	12	14	21	16	17	18	15	9	5	9	6	1	9.1	21.2
Dir	270	357	5	282	340	315	303	283	280	268	281	258	228	250	257	237	237	261	251	231	200	225	237	138	261	257
14 Spd	11	12	9	11	8	2	4	6	8	16	25	24	27	24	27	27	22	25	22	17	16	12	7	6	14.7	27.4
Dir	243	228	233	224	229	184	205	208	219	255	261	262	277	273	236	238	254	238	235	231	243	245	238	234	245	236
15 Spd	8	9	9	4	3	2	6	6	16	26	23	21	16	15	20	25	25	27	22	22	14	13	10	4	13.5	27.2
Dir	251	248	241	236	212	134	205	197	263	277	282	280	280	280	277	262	253	245	249	241	251	266	262	242	259	245
16 Spd	5	1	2	3	3	2	3	3	10	25	31	33	32	33	31	27	32	29	27	14	12	11	12	13	14.9	32.9
Dir	217	135	79	89	110	105	78	173	216	243	241	252	241	262	267	262	260	265	261	251	245	245	247	247	251	252
17 Spd	10	8	7	7	10	11	7	5	13	26	26	27	29	29	25	28	26	24	16	9	2	1	3	3	14.4	29.3
Dir	250	249	240	246	251	256	274	240	252	264	259	258	250	276	268	266	267	269	267	283	340	226	212	211	261	250
18 Spd	2	1	1	10	9	8	6	12	20	25	25	17	39	29	32	34	31	32	33	19	10	14	16	21	18.1	39.1
Dir	186	230	175	279	292	242	225	261	247	239	259	271	246	269	282	265	251	251	250	246	234	245	249	252	255	246
19 Spd	25	15	17	19	23	23	24	28	30	34	32	34	37	38	37	36	36	34	26	24	20	15	12	11	26.1	38.2
Dir	267	264	263	256	265	266	266	264	267	272	272	276	272	266	265	269	257	251	259	263	263	254	258	248	265	266
20 Spd	10	13	10	10	9	3	6	9	18	24	24	24	22	25	23	24	27	28	22	15	15	8	6	1	15.2	28.0
Dir	264	274	283	280	287	334	308	274	271	271	282	280	273	270	281	265	261	257	257	257	256	250	250	75	270	257
21 Spd	2	4	3	3	4	3	3	2	3	3	4	5	11	12	18	25	23	21	19	12	11	15	12	12	6.9	25.1
Dir	85	78	91	74	85	89	89	106	144	179	162	177	224	239	257	270	259	254	262	262	251	254	255	259	250	270
22 Spd	8	4	3	2	1	3	3	4	4	6	5	8	8	10	10	9	10	11	13	13	12	12	14	6	4.4	13.6
Dir	250	253	74	79	120	73	65	54	229	193	177	229	248	198	179	193	180	159	138	116	99	100	214	195	169	214

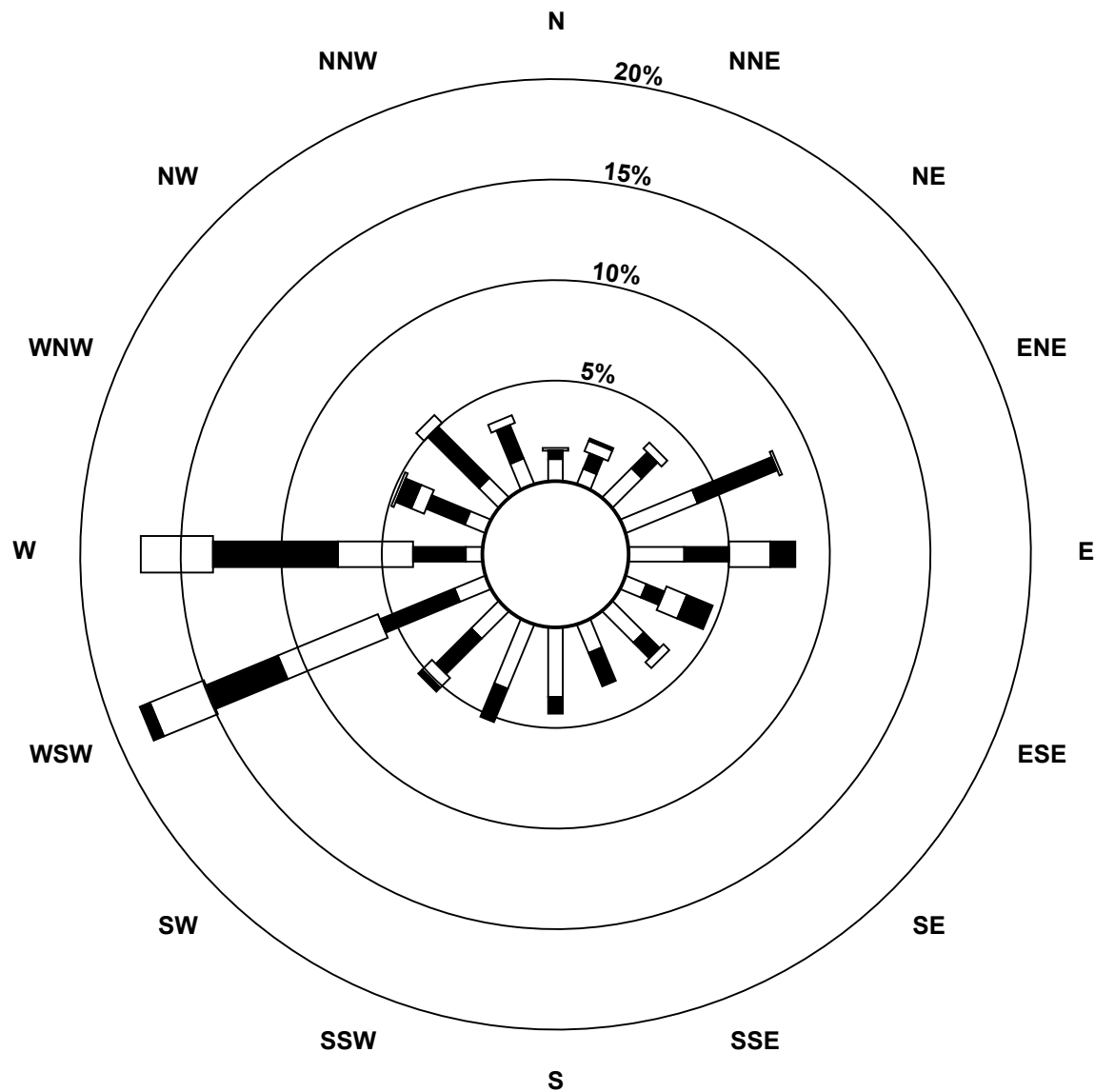
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - August 2017

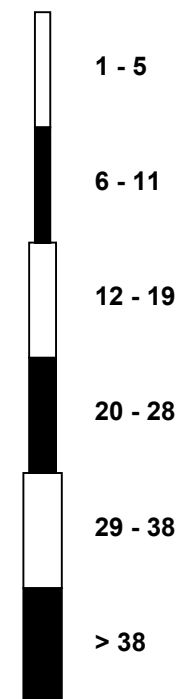
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	10	7	3	3	4	4	1	1	1	6	7	8	13	10	6	6	2	5	8	7	5	9	3	5	2.4	13.5
Dir	167	168	142	72	165	200	60	71	276	171	195	235	266	248	255	267	191	160	69	42	209	206	32	81	200	266
24 Spd	9	6	5	3	3	5	7	8	12	2	17	22	18	19	22	24	27	29	23	26	20	12	6	5	11.2	29.1
Dir	168	149	187	70	350	11	359	312	346	353	259	285	259	260	264	257	267	261	252	253	248	259	277	266	264	261
25 Spd	5	5	8	20	25	28	29	32	36	37	36	36	35	35	38	37	35	28	30	27	12	9	11	8	24.8	38.3
Dir	274	311	265	260	262	262	257	256	260	257	257	262	257	260	260	253	251	252	260	257	238	229	232	218	257	260
26 Spd	4	1	1	6	2	4	1	5	3	6	6	7	8	13	17	30	36	28	26	17	4	8	17	14	10.1	35.8
Dir	229	132	345	230	83	204	210	207	203	197	209	183	199	234	255	261	253	251	243	245	243	224	237	253	240	253
27 Spd	13	7	6	13	12	12	10	13	20	22	28	28	29	21	22	25	24	15	15	12	9	9	7	2	15.2	28.6
Dir	237	271	253	252	263	271	287	272	272	275	266	260	268	282	277	264	257	255	257	243	241	262	273	320	265	268
28 Spd	8	7	6	4	3	1	3	4	8	11	13	13	10	8	6	8	8	8	7	6	9	8	7	8	4.6	13.0
Dir	261	267	303	261	329	294	332	334	316	311	315	311	327	335	334	13	34	33	61	62	42	46	62	62	346	315
29 Spd	3	8	10	11	13	18	22	25	22	20	21	23	22	24	23	22	26	23	20	19	19	22	22	17	18.6	25.6
Dir	137	81	110	100	99	98	92	94	98	107	113	112	113	105	106	103	94	91	82	78	85	96	97	94	98	94
30 Spd	8	5	0	3	1	2	6	4	4	4	5	4	4	7	11	8	8	12	14	20	23	17	11	5	5.8	22.6
Dir	86	103	321	318	112	7	331	314	285	304	219	167	210	239	273	295	280	290	282	280	290	300	307	268	286	290
31 Spd	5	5	3	14	16	19	20	30	25	32	37	38	36	39	41	37	39	32	24	18	14	9	7	10	22.3	40.9
Dir	209	183	212	276	275	277	264	250	254	253	260	262	265	257	253	246	250	245	249	244	258	244	238	245	254	253
Spd	1.2	0.2	1.3	3.2	3.1	2.8	3.3	4.2	7.1	9.4	10.1	10.0	10.8	10.5	10.7	10.6	10.5	9.6	7.5	5.0	2.4	1.3	1.2	0.8	Diurnal Average	
Dir	224	180	256	264	273	274	282	265	262	257	256	257	253	258	265	259	252	252	250	246	255	238	214	163	Diurnal Maximum	
Spd	25.2	15.6	17.2	19.7	25.0	28.5	28.8	32.1	36.5	37.1	37.0	38.0	39.1	38.6	40.9	37.0	38.5	34.1	33.0	26.6	22.6	22.6	21.7	20.6	Diurnal Maximum	
Dir	267	94	263	260	262	262	257	256	260	257	260	262	246	257	253	246	250	251	250	257	290	95	97	252		
Maximum Speed Value: 41 km/h on Aug 31 15:00																								Hours in Service: 744		
Maximum Daily Speed Average: 26.1 km/h on Aug 19																								Hours of Data: 744		
Maximum Diurnal Speed Average: 10.8 km/h at hour 13																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Aug 2 06:00																								Percent Operational Time: 100.0		
Minimum Daily Speed Average: 1.3 km/h on Aug 2																										
Minimum Diurnal Speed Average: 0.2 km/h at hour 2																										
Monthly Average Velocity: 5.58 km/h 256.8 deg																										
Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.5 Q ₁ = 4.4 Median = 8.1 Q ₃ = 16.4 P ₉₀ = 26.2 P ₉₉ = 37.7																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	13	13	7	1	0	0	34																			
NorthEast	31	27	4	0	0	0	62																			
East	43	40	19	19	0	0	121																			
SouthEast	25	17	6	3	0	0	51																			
South	38	30	0	0	0	0	68																			
SouthWest	37	36	21	11	4	1	110																			
West	11	46	52	70	46	5	230																			
NorthWest	19	41	8	0	0	0	68																			
Total	217	250	117	104	50	6	744																			

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - August 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - August 2017

Maximum Speed: 41 km/h on Aug 31 15:00																				Maximum Daily Speed Average: 26.5 km/h on Aug 19										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 30 05:00																				Minimum Daily Speed Average: 5.0 km/h on Aug 2										Hours of Data: 744	
Maximum Diurnal Speed Average: 18.9 km/h at hour 16																				Minimum Diurnal Speed Average: 5.9 km/h at hour 3										Hours of Missing Data: 0	
Monthly Average Speed: 12.12 km/h																				Percentiles: P ₁ = 1.8 P ₁₀ = 3.4 Q ₁ = 5.2 Median = 8.7 Q ₃ = 17.2 P ₉₀ = 26.5 P ₉₉ = 38.1										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	9	7	7	7	9	9	9	11	13	11	11	13	11	7	7	9	8	5	5	5	3	5	5	4	7.9	12.8					
2-Aug	5	4	4	3	2	3	3	3	2	3	5	5	5	5	6	5	5	6	11	11	5	7	6	5	5.0	11.1					
3-Aug	6	5	5	4	4	4	4	4	4	7	11	14	11	11	16	13	8	12	8	8	9	12	9	10	8.3	16.1					
4-Aug	10	4	6	8	6	5	5	8	7	8	9	8	8	8	8	10	10	16	14	10	5	5	3	3	7.7	16.3					
5-Aug	4	3	1	5	2	2	3	3	4	3	5	6	7	8	6	6	7	6	8	7	6	7	8	6	5.2	7.8					
6-Aug	4	3	3	2	4	4	11	7	8	8	10	11	11	11	20	18	16	16	13	11	12	8	10	9	9.5	20.0					
7-Aug	9	9	4	6	9	7	8	6	5	6	6	6	7	8	9	8	8	7	6	6	6	7	7	7	6.9	9.5					
8-Aug	8	7	4	3	4	3	2	3	3	3	5	6	5	5	6	6	7	8	7	8	7	6	5	4	5.2	7.9					
9-Aug	4	7	2	3	4	2	2	3	4	4	4	5	6	6	7	9	5	6	4	5	6	6	12	9	5.1	11.5					
10-Aug	7	3	3	1	5	3	2	2	2	3	4	6	8	10	10	11	8	8	9	10	8	8	10	9	6.4	10.9					
11-Aug	6	8	8	4	4	3	6	3	4	9	17	18	20	19	19	21	24	20	19	16	16	23	19	19	13.5	23.7					
12-Aug	18	16	9	7	2	1	3	4	4	3	3	3	3	4	5	11	13	13	10	8	9	12	15	13	7.9	17.9					
13-Aug	10	6	6	8	5	5	10	12	19	18	11	12	12	14	21	16	17	18	15	9	5	9	6	4	11.2	21.4					
14-Aug	11	12	10	11	8	3	4	6	8	16	25	25	27	25	28	28	23	25	23	17	16	12	7	6	15.7	27.9					
15-Aug	8	9	9	5	4	3	7	7	17	26	23	22	17	17	20	26	25	28	22	22	14	13	10	5	15.0	27.6					
16-Aug	5	3	3	4	4	3	4	3	11	25	32	33	32	33	32	28	32	30	27	14	12	11	12	13	16.8	33.4					
17-Aug	10	8	8	8	10	11	8	6	13	26	27	28	30	29	26	29	27	24	16	9	3	3	3	4	15.2	29.9					
18-Aug	3	2	4	11	9	8	6	13	20	26	29	21	40	32	33	35	31	33	33	19	10	14	16	21	19.5	39.5					
19-Aug	25	15	18	19	23	23	24	29	30	34	32	35	38	39	37	37	36	34	27	24	20	15	12	11	26.5	38.7					
20-Aug	10	13	10	10	9	4	6	9	18	25	24	25	22	25	24	24	27	28	23	15	15	8	7	3	16.0	28.3					
21-Aug	3	4	3	4	4	3	3	4	4	3	4	6	11	12	18	25	23	21	19	12	11	15	12	12	9.8	25.2					
22-Aug	8	5	3	3	3	3	3	4	5	6	6	9	11	11	12	11	11	11	13	13	12	12	15	7	8.2	14.5					
23-Aug	10	7	4	5	5	4	2	2	3	7	7	8	14	11	8	7	3	13	8	7	7	11	8	8	7.1	13.9					
24-Aug	10	7	5	5	4	6	7	10	13	9	18	23	19	19	22	25	28	29	23	26	20	13	6	5	14.7	29.4					
25-Aug	5	6	9	20	25	29	29	32	37	37	36	37	36	36	39	37	35	28	30	27	12	9	11	8	25.4	38.7					
26-Aug	4	3	4	6	2	4	3	6	3	6	6	8	9	14	17	30	36	28	26	17	5	9	17	14	11.6	36.0					
27-Aug	13	7	8	13	12	12	11	13	20	22	28	28	29	22	22	25	24	15	16	12	9	9	8	4	15.9	28.9					
28-Aug	8	8	7	6	3	5	4	4	9	11	13	13	11	8	7	8	9	8	8	6	9	8	8	9	7.9	13.3					
29-Aug	4	9	10	11	13	18	22	25	22	20	21	23	23	25	24	23	26	23	20	19	19	22	22	17	19.1	25.8					
30-Aug	8	5	2	4	1	3	6	4	4	5	5	5	5	7	12	8	8	13	14	20	23	17	11	6	8.3	22.8					
31-Aug	5	5	3	14	16	19	20	30	25	33	37	38	37	39	41	37	39	32	25	18	14	10	7	10	23.1	41.0					
8.2 6.8 5.9 7.0 6.9 6.9 7.6 9.0 10.9 13.7 15.3 16.1 16.9 16.8 18.2 18.9 18.7 18.2 16.1 13.3 10.6 10.5 9.8 8.6																									Diurnal Average						
25.2 15.6 17.6 19.8 25.1 28.5 28.9 32.2 36.6 37.3 37.3 38.4 39.5 39.0 41.0 37.3 38.7 34.4 33.4 26.7 22.8 22.6 21.8 20.8																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - August 2017

Maximum Value: 97.1 deg on Aug 28 06:00																		Hours in Service: 744							
Minimum Value: 3.0 deg on Aug 14 22:00																		Hours of Data: 744							
Percentiles: P ₁ = 3.5 P ₁₀ = 5.3 Q ₁ = 7.9 Median = 14.8 Q ₃ = 34.9 P ₉₀ = 59.6 P ₉₉ = 88.5																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	34	75	9	8	5	10	9	9	10	17	19	23	26	47	57	37	19	40	27	11	24	10	11	15	75.5
2-Aug	8	11	28	55	37	94	76	14	38	55	42	56	55	90	49	79	85	34	20	15	11	9	8	10	94.1
3-Aug	9	10	64	17	80	60	52	20	38	25	13	14	17	85	13	24	90	15	17	10	33	6	6	6	89.6
4-Aug	10	56	28	6	10	10	14	8	16	22	20	33	37	37	56	26	39	17	7	9	21	44	73	85	84.9
5-Aug	14	29	46	59	67	65	41	14	25	46	51	74	51	43	93	43	46	64	18	14	20	5	3	8	93.1
6-Aug	8	17	44	85	38	55	22	35	16	16	24	20	21	29	12	16	11	9	7	8	6	27	26	8	85.3
7-Aug	9	8	37	18	12	16	27	50	46	18	20	26	27	38	33	28	36	49	50	27	27	6	4	6	50.2
8-Aug	3	5	7	41	46	74	68	81	82	46	30	42	87	44	62	42	39	21	16	7	26	9	12	13	86.9
9-Aug	17	18	80	82	25	62	74	34	20	27	52	52	63	57	75	28	61	42	36	6	23	20	7	8	82.2
10-Aug	5	24	83	72	12	89	74	60	32	28	46	45	28	33	38	26	33	17	8	5	5	5	3	5	89.0
11-Aug	11	7	12	38	18	18	39	15	39	27	11	39	11	14	17	13	10	7	6	8	7	4	3	3	39.1
12-Aug	4	4	21	22	37	85	35	57	71	66	78	45	45	22	29	14	12	13	8	14	38	11	3	6	85.0
13-Aug	67	47	22	35	65	21	20	5	8	9	15	13	6	7	7	9	6	10	8	9	19	13	37	78	77.7
14-Aug	19	8	11	11	13	60	14	15	10	16	11	12	10	13	10	9	13	6	5	4	3	3	15	19	59.8
15-Aug	12	6	4	65	52	54	15	22	18	7	11	15	28	22	17	14	11	10	7	4	8	4	14	59	64.9
16-Aug	13	67	40	17	39	35	61	19	23	7	7	10	9	9	8	12	9	8	6	9	4	6	5	4	67.4
17-Aug	8	9	19	19	4	7	12	28	15	7	12	12	11	10	14	9	10	7	6	8	58	82	23	61	82.1
18-Aug	54	75	76	12	12	21	29	21	5	5	33	35	9	23	13	10	8	9	8	5	8	5	4	6	76.4
19-Aug	4	8	14	5	4	4	5	5	6	7	8	9	10	9	12	10	9	8	6	5	4	4	5	5	13.6
20-Aug	6	5	6	5	7	27	12	15	6	9	12	11	13	12	14	9	12	8	7	6	8	6	59	88	88.3
21-Aug	51	10	22	28	12	36	30	49	48	31	16	24	17	12	14	7	9	7	8	5	5	3	4	5	51.4
22-Aug	7	74	26	51	66	11	30	25	59	28	44	36	50	28	34	47	26	21	14	6	5	7	24	34	73.7
23-Aug	6	26	49	58	45	45	54	66	82	36	18	27	18	33	44	40	69	66	18	14	77	32	86	51	86.2
24-Aug	33	33	39	66	49	35	17	43	15	81	8	15	14	7	9	10	11	9	5	4	7	11	14	19	80.6
25-Aug	29	23	16	5	4	4	5	5	5	5	7	8	10	9	9	8	8	6	6	4	7	7	16	11	28.9
26-Aug	29	61	73	23	38	39	74	27	34	21	13	26	30	24	13	8	6	6	6	4	90	50	7	5	89.8
27-Aug	8	23	32	5	13	10	7	9	6	7	7	9	9	9	12	7	5	4	7	6	20	17	20	78	77.6
28-Aug	35	16	25	41	42	97	47	30	11	12	13	21	25	33	44	25	24	14	11	6	6	7	9	38	97.1
29-Aug	28	7	7	5	6	7	5	4	7	6	10	10	10	10	12	10	8	7	6	5	4	5	4	4	28.0
30-Aug	14	30	83	84	72	76	67	51	22	22	30	44	40	20	26	22	22	25	11	8	6	4	9	39	84.0
31-Aug	27	28	54	6	10	8	9	4	5	6	7	8	10	8	5	7	6	6	9	4	9	7	21	15	53.9
67.5 75.5 83.4 85.3 80.0 97.1 75.7 80.9 82.2 80.6 77.9 73.5 86.9 89.6 93.1 78.5 89.6 66.4 50.2 26.9 89.8 82.1 86.2 88.3																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

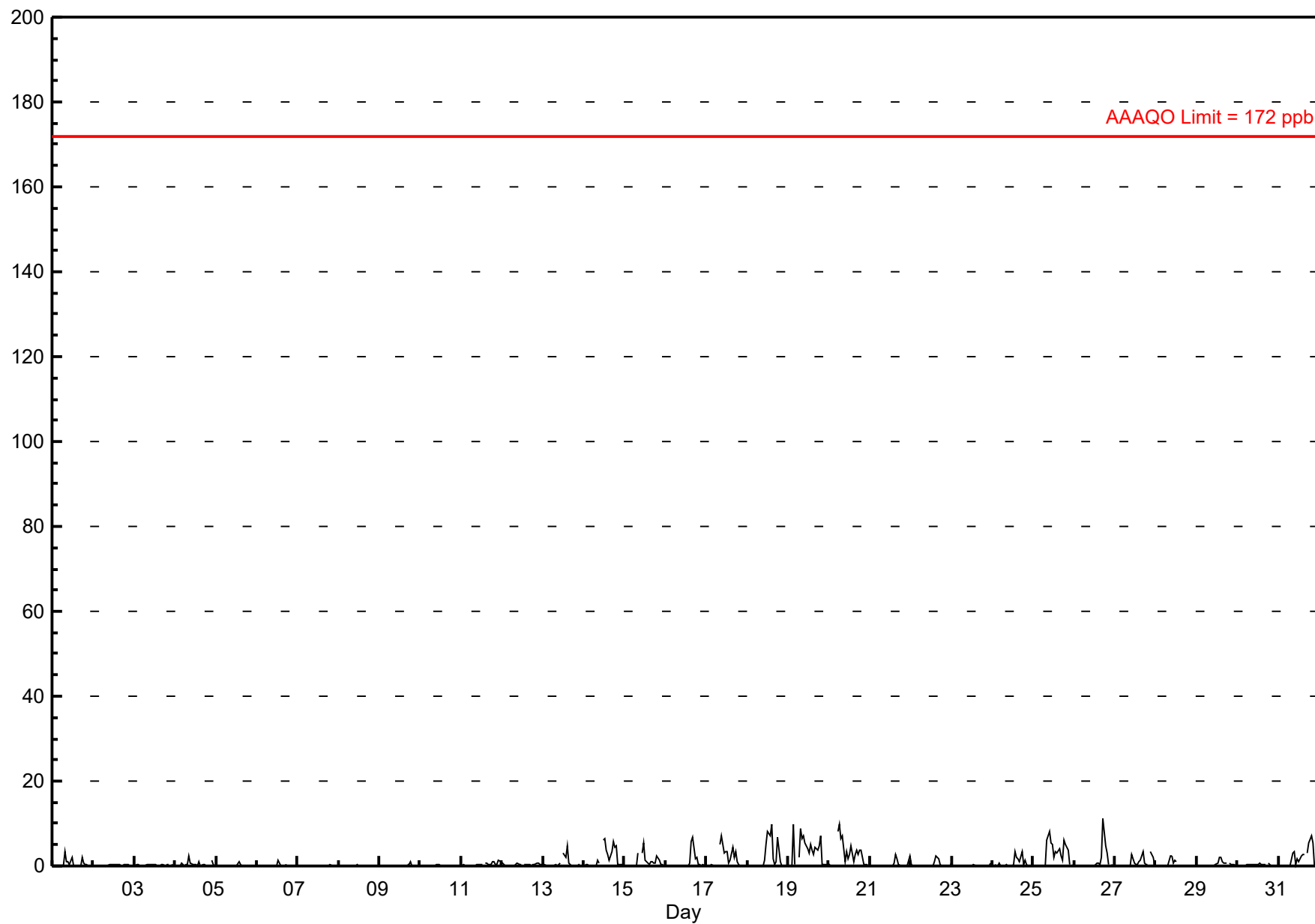
Sulphur Dioxide (SO₂) - ppb

Valleyview - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.3 ppb on Aug 26 18:00 Maximum Daily Average: 3.5 ppb on Aug 19																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 5 12:00 Maximum Diurnal Average: 1.5 ppb at hour 19 Monthly Average: 0.81 ppb										Minimum Daily Average: 0.0 ppb on Aug 7 Minimum Diurnal Average: 0.1 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 2.9 P ₉₉ = 8.3																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	0	0	3	1	1	0	2	0	0	0	0	0	2	1	0	0	0	0	A	0.6	3.3
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.4
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5
4-Aug	0	0	0	0	1	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	A	1	0	0	0.4	2.4
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0.1	0.9
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0.1	1.2
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0.1	0.9
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.3
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	1	1	0	0	1	1	0.4	1.2
12-Aug	1	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0.3	0.7
13-Aug	0	0	0	0	0	0	0	0	0	0	1	A	3	2	5	1	0	0	0	0	0	0	0	0	0.6	4.9
14-Aug	0	0	0	0	0	0	0	0	1	1	A	6	6	4	3	2	3	6	4	5	0	0	0	0	1.8	6.5
15-Aug	0	0	0	0	0	0	0	0	3	A	3	5	1	1	0	1	1	1	1	3	1	0	0	0	1.0	5.3
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	6	7	2	2	0	0	0	0	0	0.8	6.8
17-Aug	0	0	0	0	0	0	0	A	5	7	3	3	3	1	2	4	2	3	1	0	0	0	0	0	1.6	7.1
18-Aug	0	0	0	0	0	0	A	0	0	0	1	5	8	7	10	2	0	1	7	1	0	0	0	0	1.9	9.8
19-Aug	0	0	0	10	0	A	2	9	6	7	6	4	3	5	4	3	5	4	5	7	0	0	0	0	3.5	9.8
20-Aug	0	0	0	0	A	8	10	6	7	1	3	2	3	5	1	3	4	3	4	4	0	0	0	0	2.8	9.9
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	3	2	0	0	0	0	0	0	2	0.4	2.7
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0.3	2.2
23-Aug	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	1.1
24-Aug	A	0	0	0	1	0	0	0	0	0	0	0	0	4	2	2	1	3	0	1	0	0	0	A	0.7	3.5
25-Aug	0	0	0	0	0	0	0	0	6	8	5	5	2	3	3	4	2	1	6	5	4	0	A	0	2.5	8.3
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	11	5	3	0	A	0	0	1.1	11.3
27-Aug	0	0	0	0	0	0	0	0	0	0	3	1	0	0	1	1	3	1	0	0	A	3	2	0	0.7	3.4
28-Aug	0	0	0	0	0	0	0	0	2	2	1	1	1	C	C	C	0	0	0	A	0	0	0	0	0.4	2.4
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1	A	1	0	0	0	0	0.4	1.9
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0	0	0.2	0.6
31-Aug	0	0	0	0	0	0	0	0	3	4	0	2	1	2	3	3	A	3	5	7	6	0	0	0	1.7	7.2
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2017



Hourly Maximums

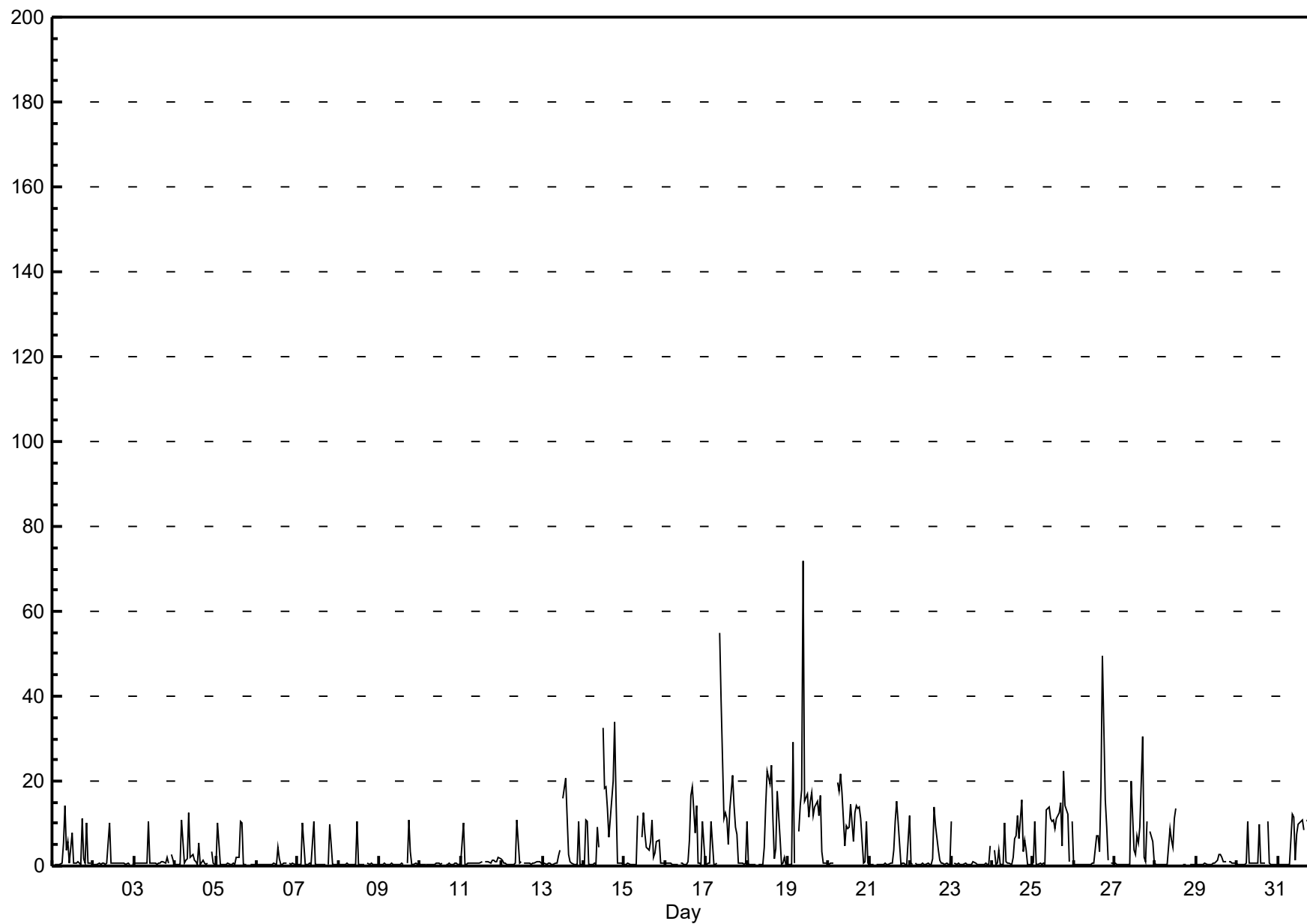
Sulphur Dioxide (SO₂) - ppb

Valleyview - August 2017

Maximum Value: 71.9 ppb on Aug 19 10:00																					Maximum Daily Average: 12.8 ppb on Aug 19				Hours in Service: 744	
Minimum Value: 0 ppb on Aug 6 01:00																					Minimum Daily Average: 0.5 ppb on Aug 10				Hours of Data: 708	
Maximum Diurnal Average: 6.8 ppb at hour 18																					Minimum Diurnal Average: 0.8 ppb at hour 3				Hours of Missing Data: 36	
Monthly Average: 3.62 ppb																					Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.6 Q ₃ = 3.6 P ₉₀ = 11.8 P ₉₉ = 29.5				Hours of Calibration: 36	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	1	5	14	4	6	1	8	1	1	1	1	0	11	2	1	10	1	1	A	3.1	14.1
2-Aug	1	0	0	1	0	1	1	0	1	10	1	1	1	1	1	1	1	1	1	0	1	0	A	0	1.0	10.3
3-Aug	1	1	1	1	1	1	1	1	11	1	1	1	1	0	1	1	1	1	1	2	1	A	3	1	1.3	10.6
4-Aug	0	0	0	0	11	1	1	2	12	2	3	1	1	0	5	0	1	1	0	1	A	3	1	0	2.1	12.4
5-Aug	0	10	0	0	0	0	0	1	0	0	1	0	2	2	10	10	0	0	0	A	0	0	0	0	1.8	10.4
6-Aug	0	0	0	0	0	0	0	0	0	0	1	0	4	2	0	0	1	1	A	1	0	1	0	0	0.6	4.3
7-Aug	0	0	0	10	0	0	0	1	0	10	0	0	0	0	0	0	0	A	0	10	0	0	0	0	1.7	10.4
8-Aug	0	0	0	0	0	1	1	0	1	0	0	10	0	0	0	0	A	1	0	1	0	0	0	0	0.9	10.3
9-Aug	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	A	1	11	3	0	0	1	0	1	1.0	10.7
10-Aug	1	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	1	1	1	0	1	1	1	0	0.5	0.6
11-Aug	1	10	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	2	2	1.3	10.0
12-Aug	1	1	1	0	0	0	0	0	1	11	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1.1	10.9
13-Aug	1	1	0	1	1	0	0	1	1	2	4	A	16	21	12	3	1	1	0	0	0	10	0	0	3.3	20.6
14-Aug	0	11	10	0	0	0	1	0	9	4	A	32	18	19	14	7	15	20	34	16	1	1	1	0	9.3	33.9
15-Aug	0	1	1	0	0	0	0	0	12	A	7	12	8	5	4	6	11	2	3	6	6	1	1	1	3.8	12.5
16-Aug	1	1	1	1	0	0	0	0	A	1	1	0	0	1	6	17	19	8	14	1	1	0	11	0	3.6	18.6
17-Aug	0	1	1	11	0	0	1	A	55	39	11	13	11	5	13	21	14	9	7	1	1	1	0	1	9.4	54.9
18-Aug	10	0	0	0	0	0	A	0	0	0	4	14	22	19	24	11	2	4	18	7	0	1	2	0	6.1	23.6
19-Aug	0	0	0	29	1	A	8	14	18	72	15	17	11	15	17	12	14	15	12	17	3	1	1	1	12.8	71.9
20-Aug	0	1	1	1	A	20	18	22	17	5	9	9	9	15	6	13	14	14	14	11	1	1	10	1	9.1	21.5
21-Aug	0	0	0	A	0	0	0	0	0	1	0	0	1	1	4	11	15	11	0	1	1	1	1	12	2.6	15.2
22-Aug	1	0	A	1	0	0	0	1	0	0	1	0	0	2	14	10	4	1	1	1	0	1	0	0	1.7	14.0
23-Aug	11	A	1	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	5	1.1	10.6
24-Aug	A	4	0	1	4	0	0	10	1	1	1	0	2	6	7	12	6	16	3	6	4	0	0	A	3.9	15.6
25-Aug	1	10	0	0	1	0	1	0	13	14	11	11	11	9	11	12	15	5	22	14	12	1	A	10	8.1	22.3
26-Aug	1	0	0	0	0	0	0	0	0	0	0	1	1	7	7	3	19	49	16	9	1	A	1	1	5.2	49.5
27-Aug	1	0	0	0	0	1	0	0	0	0	20	4	3	7	5	9	31	2	1	10	A	8	6	1	4.9	30.6
28-Aug	0	0	0	0	0	0	0	0	9	6	5	11	13	C	C	C	0	0	0	A	0	0	0	0	2.5	13.5
29-Aug	0	0	0	0	0	1	0	0	0	0	1	1	1	3	3	2	1	1	A	1	1	1	1	1	0.9	2.9
30-Aug	0	0	0	0	0	1	11	1	1	1	1	1	1	10	1	1	1	A	10	1	0	0	0	0	1.8	10.5
31-Aug	0	0	0	0	0	0	0	0	12	12	1	8	10	10	11	8	A	10	11	16	13	0	0	0	5.5	16.4
1.2 1.9 0.8 2.1 0.9 1.1 1.8 2.4 6.1 6.7 3.4 5.3 5.0 5.6 6.2 6.0 6.5 6.8 6.2 4.7 2.2 1.3 1.5 1.4																									Diurnal Average	
10.6 10.8 10.4 29.2 11.0 19.8 17.6 21.5 54.9 71.9 20.1 32.4 22.2 20.6 23.6 21.5 30.6 49.5 33.9 16.5 13.1 10.5 10.6 12.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

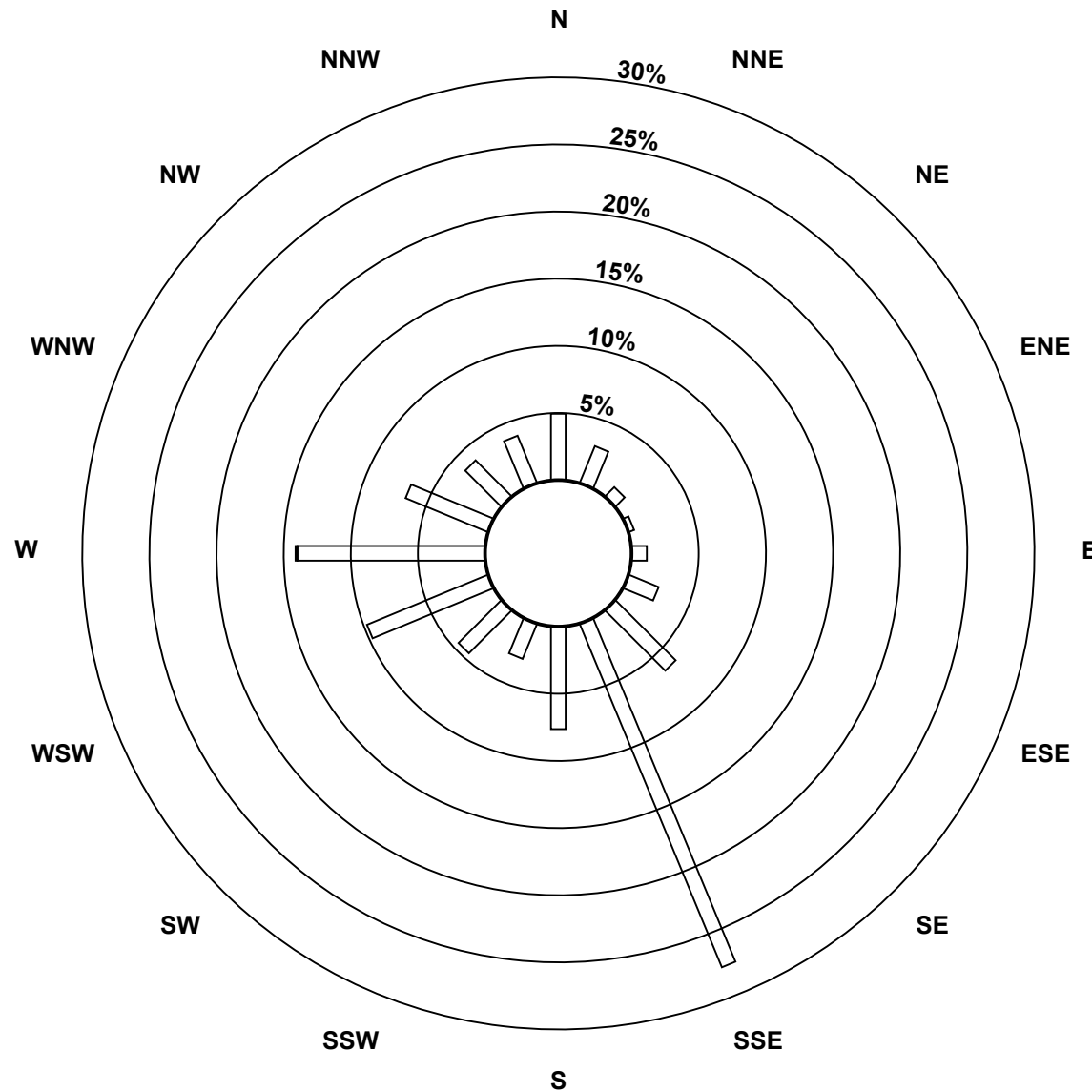
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2017

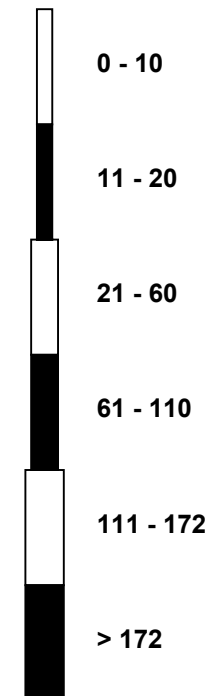


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2017

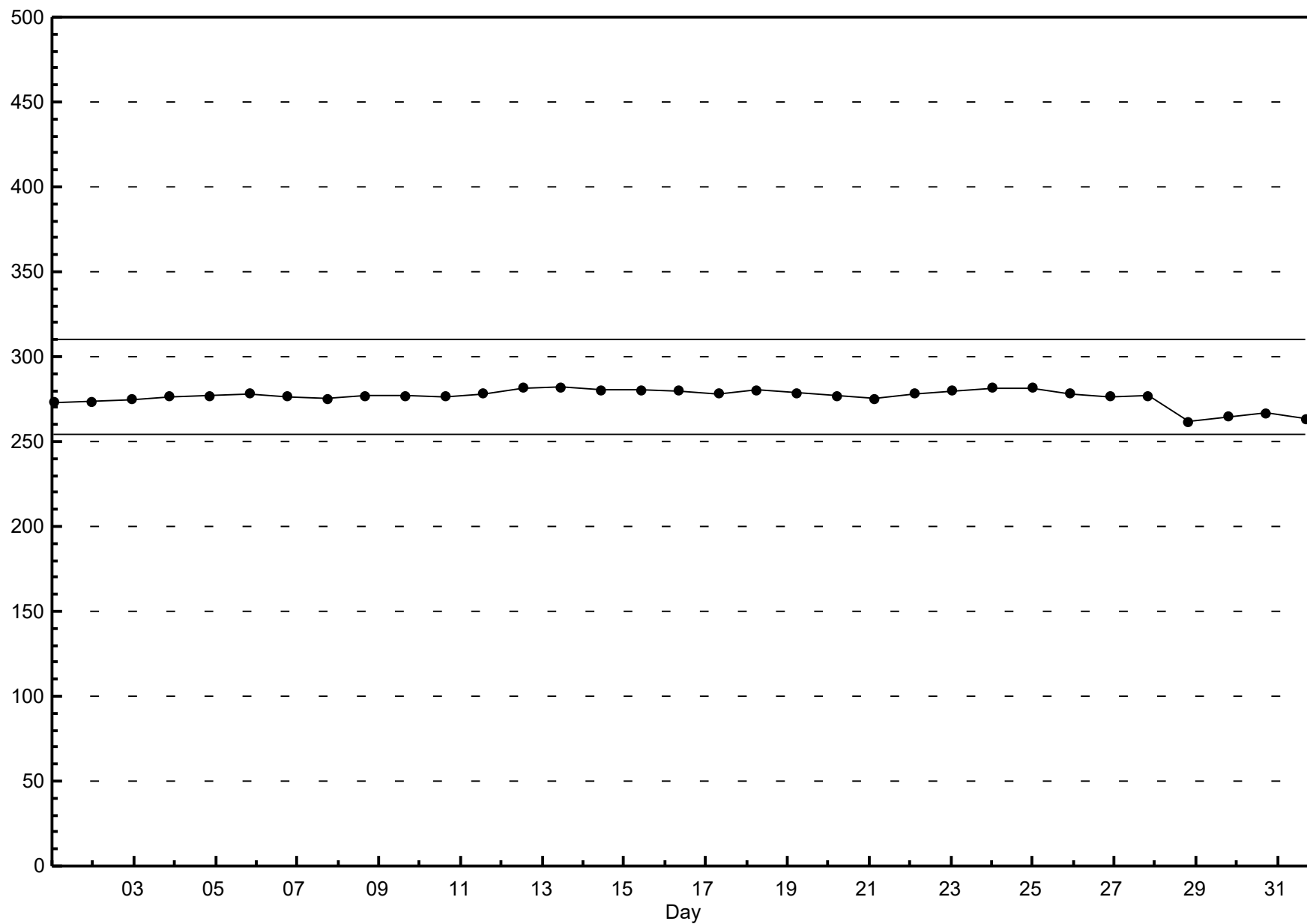


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - August 2017



Hourly Averages

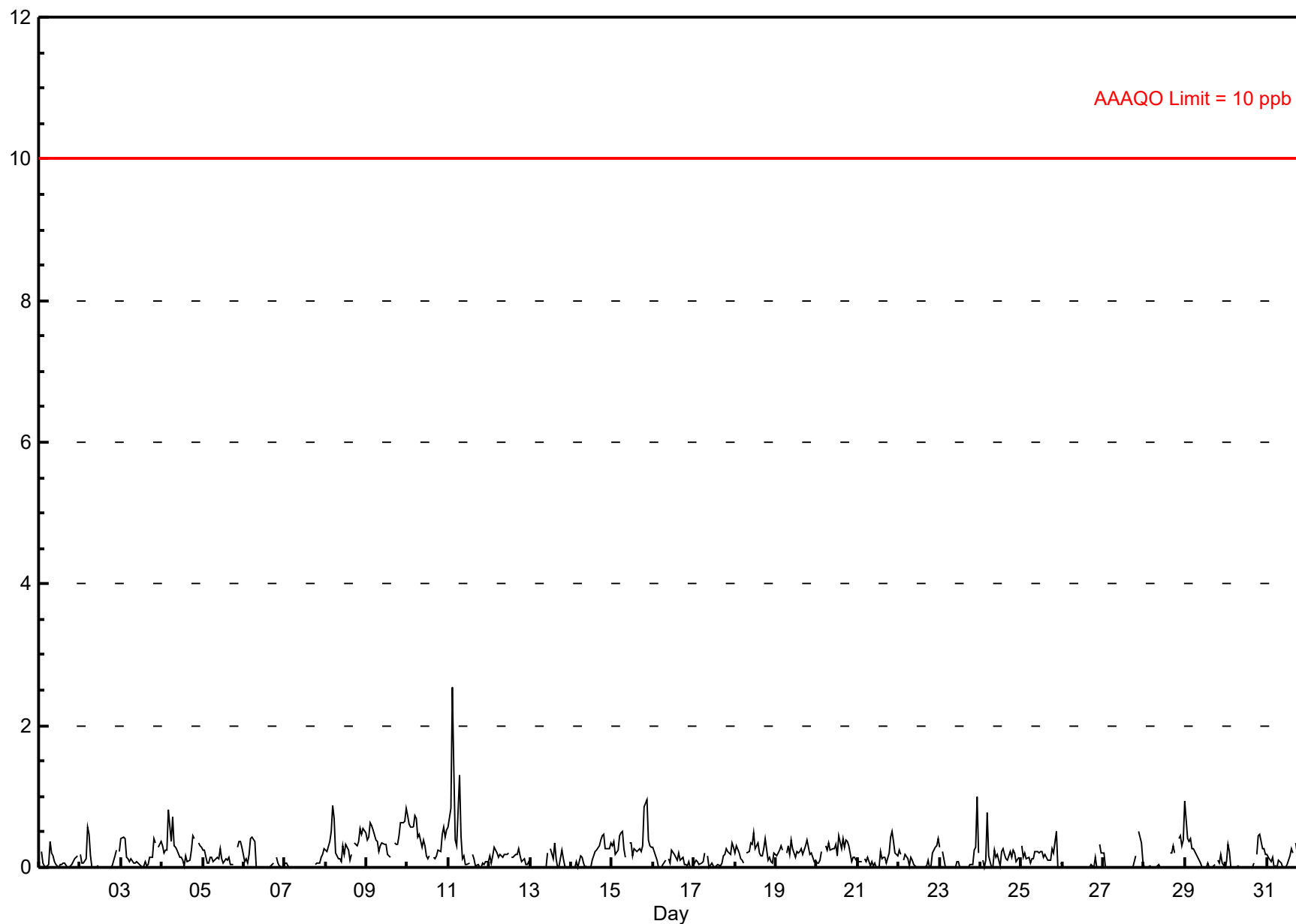
Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.5 ppb on Aug 11 03:00 Maximum Daily Average: 0.4 ppb on Aug 9																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Aug 1 05:00 Maximum Diurnal Average: 0.3 ppb at hour 21 Monthly Average: 0.17 ppb										Minimum Daily Average: 0.0 ppb on Aug 26 Minimum Diurnal Average: 0.1 ppb at hour 13 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.8																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4	
2-Aug	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.6	
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4	
4-Aug	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.8	
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4	
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4	
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.3	
8-Aug	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	1	0	0.3	0.9
9-Aug	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	0.4	0.8	
10-Aug	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	1	0.4	0.7	
11-Aug	1	1	3	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	2.5	
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
13-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
15-Aug	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.4	0.9	
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	1.0	
24-Aug	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.8	
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0.2	0.5	
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.3	
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.1	0.5	
28-Aug	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	A	0	0	0	0	0.1	0.5	
29-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.9	
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.5	
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3	
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.3 0.2 0.3 0.2																									Diurnal Average		
0.9 0.8 2.5 1.4 0.9 0.7 1.3 0.5 0.3 0.4 0.3 0.5 0.3 0.4 0.3 0.4 0.3 0.4 0.4 0.8 0.9 0.6 1.0 0.8																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2017



Hourly Maximums

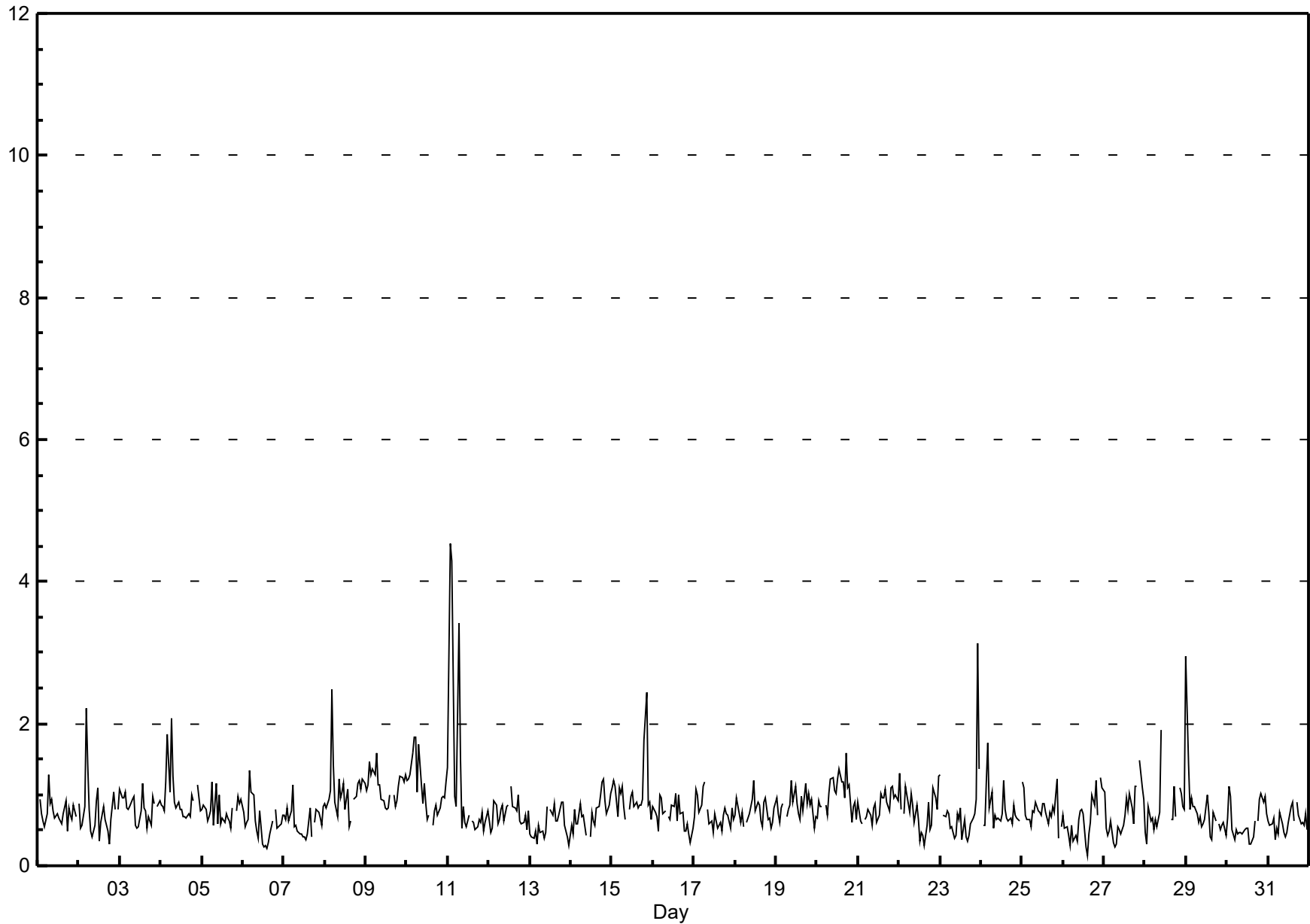
Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2017

Maximum Value: 4.5 ppb on Aug 11 02:00																				Maximum Daily Average: 1.3 ppb on Aug 11					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 26 15:00																				Minimum Daily Average: 0.6 ppb on Aug 13					Hours of Data: 706	
Maximum Diurnal Average: 1.0 ppb at hour 5																				Minimum Diurnal Average: 0.7 ppb at hour 15					Hours of Missing Data: 38	
Monthly Average: 0.81 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.2 P ₉₉ = 2.4					Hours of Calibration: 38	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	0.8	1.3
2-Aug	1	1	1	1	2	1	1	0	0	1	1	1	0	1	1	1	1	0	0	1	1	1	A	1	0.8	2.2
3-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.2	
4-Aug	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	2.1
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2
6-Aug	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	1	A	1	1	1	1	1	0.6	1.3
7-Aug	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	A	1	1	1	1	1	1	0.6	1.1
8-Aug	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	2.5
9-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.6
10-Aug	1	1	1	2	2	2	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	1.8
11-Aug	1	5	4	3	1	1	3	2	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1.3	4.5
12-Aug	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
13-Aug	0	0	0	0	0	1	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0.6	0.9
14-Aug	1	0	1	1	1	1	1	1	1	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
15-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1.0	2.4
16-Aug	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	0.7	1.0
17-Aug	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	0.7	1.2
18-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
19-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
20-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.0	1.6
21-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
22-Aug	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0.8	1.3
23-Aug	1	A	1	1	1	1	1	1	0	0	1	1	1	0	1	0	0	0	1	1	1	1	3	1	0.8	3.1
24-Aug	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.7
25-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	0.8	1.2
26-Aug	1	1	1	0	0	1	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	A	1	1	0.6	1.2
27-Aug	1	1	0	0	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.5
28-Aug	0	0	1	1	1	1	1	1	1	2	C	C	C	C	C	1	1	1	1	A	1	1	1	1	0.8	1.9
29-Aug	3	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	A	1	1	1	1	0	0.8	2.9
30-Aug	1	1	1	1	0	1	0	0	0	0	1	1	1	0	0	0	1	A	1	1	1	1	1	1	0.6	1.1
31-Aug	1	1	1	1	0	1	0	1	1	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.9
0.9 0.9 0.9 0.8 1.0 0.9 0.9 0.8 0.7 0.7 0.8 0.7 0.7 0.8 0.7 0.7 0.7 0.8 0.8 0.9 0.9 0.8 0.9 0.8																									Diurnal Average	
2.9 4.5 4.3 2.6 2.5 1.8 3.4 1.7 1.2 1.9 1.2 1.2 1.2 1.4 1.2 1.2 1.1 1.6 1.2 1.8 2.4 1.5 3.1 1.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

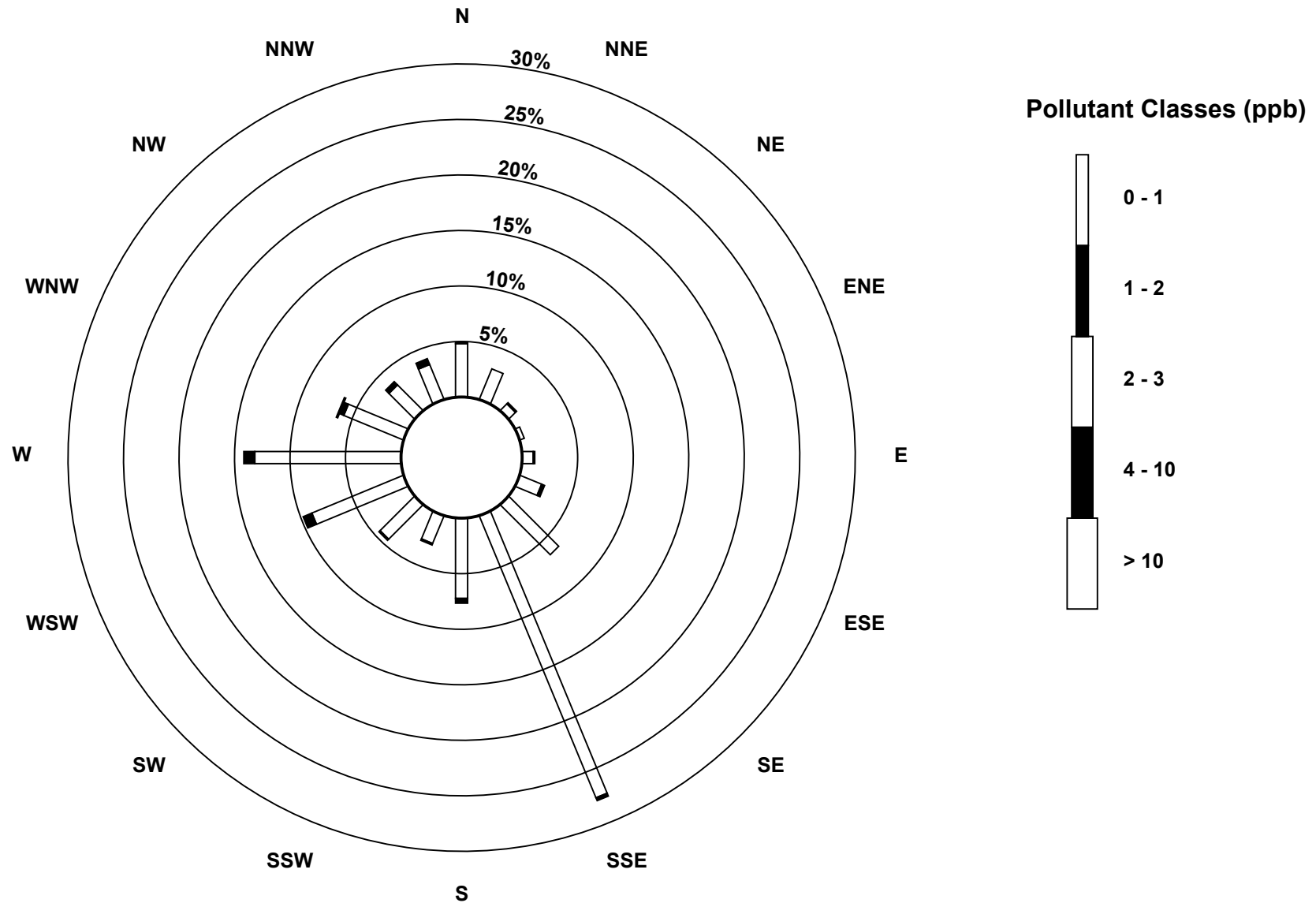
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2017



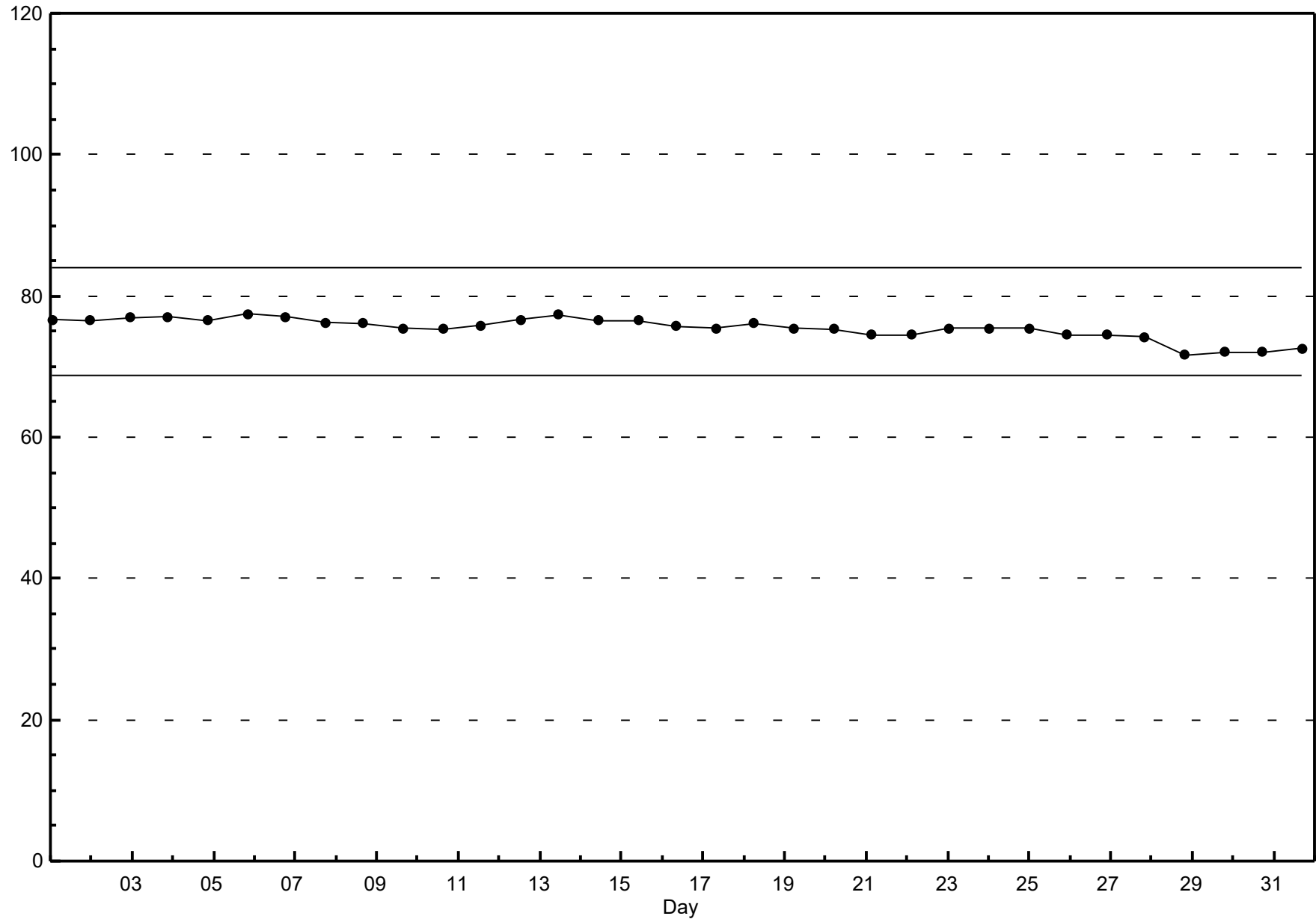
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2017



Span Responses

Hydrogen Sulphide (H₂S)
Valleyview - August 2017



Hourly Averages

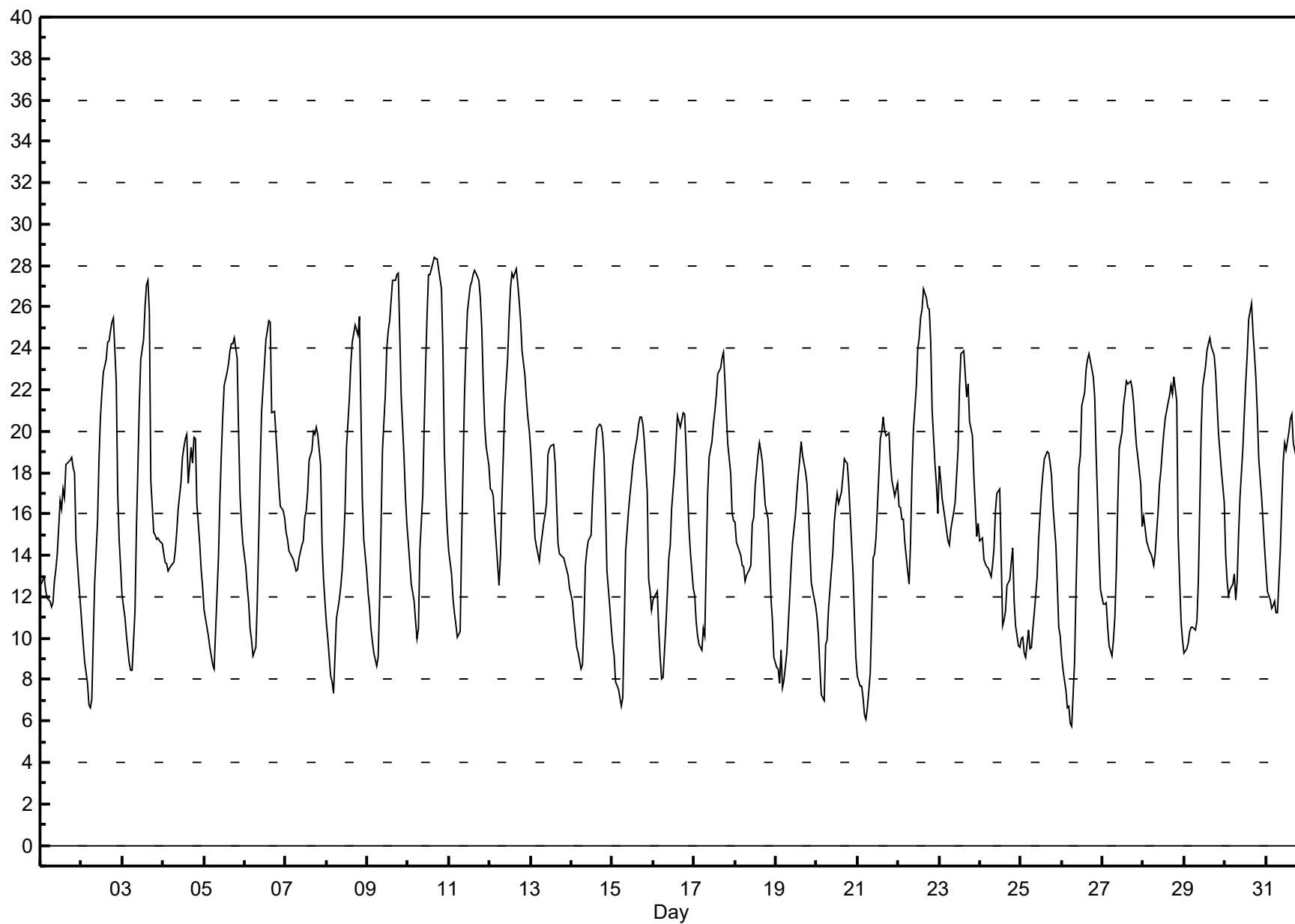
External Temperature (ET) - °C

Valleyview - August 2017

Maximum Value: 28.4 °C on Aug 10 16:00																								Maximum Daily Average: 21.3 °C on Aug 12								Hours in Service: 744			
Minimum Value: 6 °C on Aug 26 07:00																								Minimum Daily Average: 13.2 °C on Aug 24								Hours of Data: 744			
Maximum Diurnal Average: 22.2 °C at hour 16																								Minimum Diurnal Average: 10.4 °C at hour 6								Hours of Missing Data: 0			
Monthly Average: 16.34 °C																								Percentiles: P ₁ = 6.7 P ₁₀ = 9.7 Q ₁ = 12.4 Median = 16.0 Q ₃ = 19.9 P ₉₀ = 23.9 P ₉₉ = 27.8								Hours of Calibration: 0			
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	13	13	13	12	12	12	12	12	13	13	14	17	16	17	17	18	19	19	19	18	18	15	13	12	14.8	18.7									
2-Aug	11	10	9	8	7	7	7	10	13	16	19	21	22	23	23	24	24	25	25	26	22	17	15	13	16.5	25.5									
3-Aug	12	11	10	9	9	8	8	11	15	18	21	23	24	26	27	27	26	18	15	15	15	15	15	15	16.5	27.3									
4-Aug	14	14	14	13	13	14	14	14	15	16	18	19	19	20	20	17	19	18	20	20	17	15	13	13	16.1	19.9									
5-Aug	11	11	10	10	9	9	9	10	14	17	19	21	22	23	23	24	24	24	24	24	20	17	16	15	16.9	24.5									
6-Aug	13	12	12	10	10	9	10	12	15	18	21	23	24	25	25	25	21	21	20	19	17	16	16	16	17.2	25.3									
7-Aug	15	15	14	14	14	14	13	13	14	15	15	16	16	17	19	19	20	20	20	20	18	15	13	12	15.8	20.2									
8-Aug	11	10	8	8	7	9	11	12	12	13	15	16	19	22	23	24	25	25	25	26	21	17	15	13	16.1	25.5									
9-Aug	12	12	10	10	9	9	9	12	15	19	22	24	25	25	26	27	27	28	28	25	22	19	17	15	18.6	27.6									
10-Aug	15	14	13	12	11	10	10	14	17	20	23	26	28	28	28	28	28	28	28	27	24	19	17	15	20.1	28.4									
11-Aug	14	13	12	11	11	10	10	15	18	22	24	26	27	27	28	28	28	27	26	25	22	20	19	18	20.1	27.8									
12-Aug	17	17	17	16	14	13	14	17	19	21	24	25	27	28	27	28	27	26	25	24	23	22	21	20	21.3	27.8									
13-Aug	19	18	15	14	14	14	14	16	16	16	19	19	19	19	18	17	15	14	14	14	14	13	13	12	15.7	19.4									
14-Aug	12	11	10	10	9	9	9	11	13	14	15	15	17	18	19	20	20	20	20	19	16	13	12	11	14.3	20.3									
15-Aug	10	9	8	8	7	7	7	10	14	16	17	18	18	19	20	20	21	21	20	19	17	13	12	11	14.3	20.7									
16-Aug	12	12	12	10	9	8	8	11	12	14	15	16	18	20	21	20	20	21	21	19	17	15	14	12	14.9	20.9									
17-Aug	12	11	10	10	9	10	10	14	17	19	20	20	21	22	23	23	24	24	22	21	19	18	16	16	17.1	23.8									
18-Aug	16	15	14	14	14	13	13	13	13	14	16	16	17	19	19	19	19	18	16	16	14	12	11	9	14.9	19.4									
19-Aug	9	8	8	9	8	8	9	11	12	13	15	16	17	18	19	20	19	18	17	16	14	13	12	12	13.3	19.5									
20-Aug	11	10	9	7	7	10	10	11	12	14	16	16	17	17	17	18	19	19	18	18	15	13	11	9	13.5	18.7									
21-Aug	8	8	8	7	6	6	7	8	11	14	14	15	18	20	20	21	20	20	20	19	18	17	17	18	14.1	20.7									
22-Aug	16	16	16	16	15	13	13	15	18	20	22	24	25	25	26	27	26	26	26	24	21	18	17	16	20.1	26.9									
23-Aug	18	18	17	16	15	15	15	15	16	17	18	19	22	24	24	23	22	22	20	20	18	16	15	16	18.3	23.9									
24-Aug	15	15	14	14	13	13	13	14	14	16	17	17	14	11	11	11	13	13	14	14	12	11	10	10	13.2	17.2									
25-Aug	10	10	9	9	10	9	10	10	11	13	15	16	17	18	19	19	19	18	18	16	15	13	11	10	13.6	19.0									
26-Aug	9	8	7	7	7	6	6	9	12	15	18	19	21	22	23	23	24	23	23	22	19	17	14	12	15.3	23.7									
27-Aug	12	12	12	11	10	9	10	11	13	16	19	20	21	22	22	22	22	22	21	20	19	19	17	15	16.6	22.4									
28-Aug	16	15	15	14	14	14	14	14	16	17	18	19	20	21	21	22	22	22	23	21	15	13	11	10	16.9	22.6									
29-Aug	9	10	10	10	11	11	10	11	13	16	20	22	23	24	24	24	24	24	23	21	20	19	18	17	17.2	24.5									
30-Aug	14	13	12	12	13	13	12	13	15	17	19	21	22	24	25	26	25	24	23	21	19	17	16	14	17.9	26.1									
31-Aug	13	12	12	11	12	12	11	11	14	17	19	19	19	20	21	21	19	19	19	18	16	15	14	13	15.7	20.8									
12.9 12.3 11.6 11.0 10.6 10.4 10.5 12.2 14.4 16.4 18.1 19.5 20.6 21.3 21.9 22.2 21.9 21.5 21.1 20.2 17.9 15.8 14.5 13.5																								Diurnal Average	Diurnal Maximum										
19.1 17.8 16.9 15.8 15.2 14.7 14.5 16.6 18.9 21.7 24.0 25.7 27.6 27.6 28.1 28.4 28.3 28.3 27.8 26.9 24.0 21.6 20.7 20.1																																			

Hourly Averages

External Temperature (ET) - °C
Valleyview - August 2017



Hourly Averages

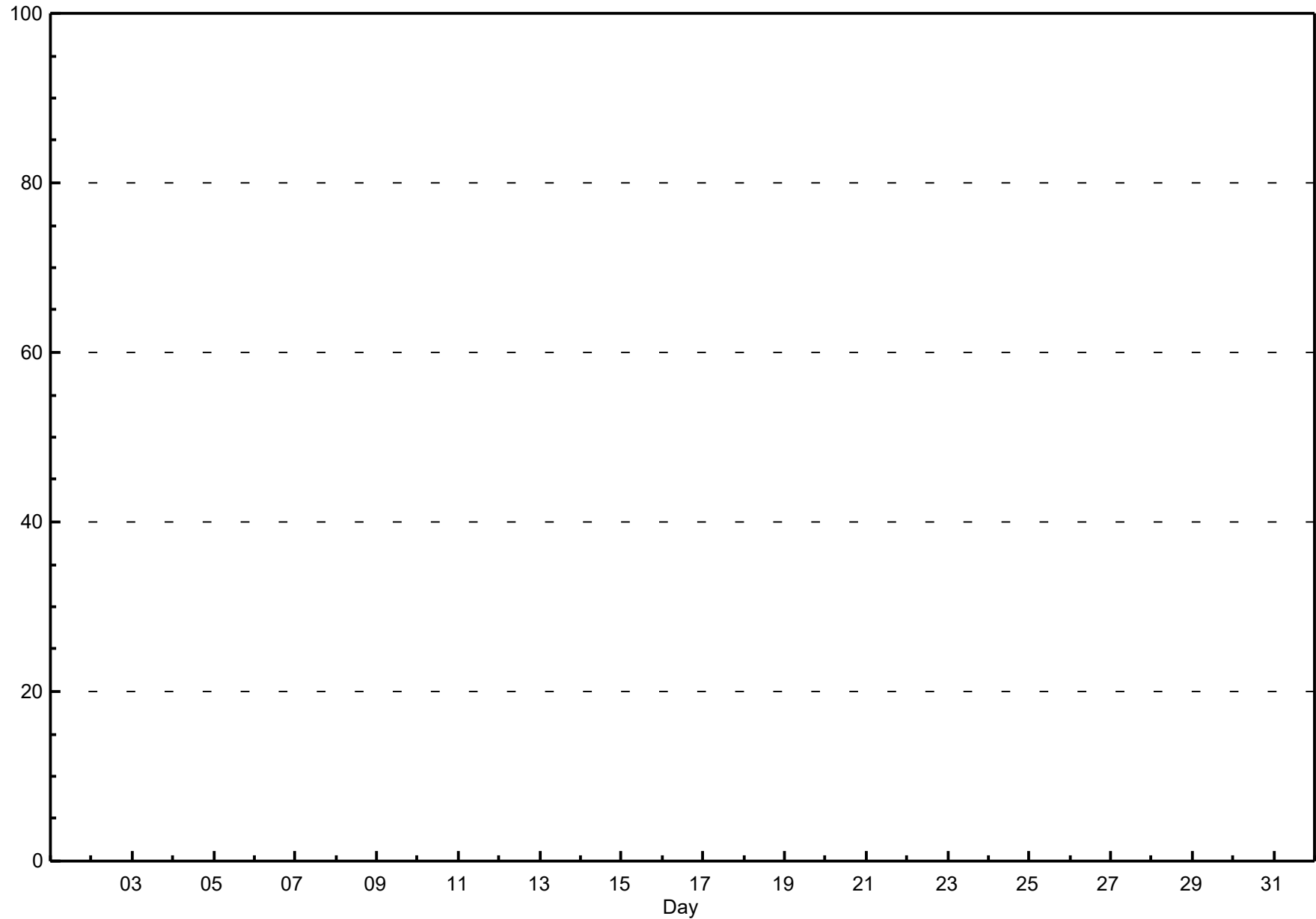
Relative Humidity (RH) - %

Valleyview - August 2017

Maximum Value: -- % on Aug 1 00:00										Maximum Daily Average: -- % on Jul 31										Hours in Service: 744							
Minimum Value: -- % on Aug 1 00:00										Minimum Daily Average: -- % on Jul 31										Hours of Data: 0							
Maximum Diurnal Average: -- % at hour 0										Minimum Diurnal Average: -- % at hour 0										Hours of Missing Data: 744							
Monthly Average: -- %										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.0										Hours of Calibration: 0							
																				Percent Operational Time: 0.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
5-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
6-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
7-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
8-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
9-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
10-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
11-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
12-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
14-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
15-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
18-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
19-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
20-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
22-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
23-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
24-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
25-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
26-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
27-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
28-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
29-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
30-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
31-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
																								Diurnal Average			
																								Diurnal Maximum			
N - Not Valid																											

Hourly Averages

Relative Humidity (RH) - %
Valleyview - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	1	6	5	7	4	1	3	4	2	2	3	1	4	2	4	2	2	3	1	1	0	0	0	0	1.5	6.9
Dir	13	345	347	352	17	308	269	268	273	292	279	220	233	246	312	339	347	266	133	122	104	150	246	159	311	352
2 Spd	0	0	0	0	0	0	0	1	0	1	2	3	3	2	2	1	1	1	1	0	0	0	0	0	0.7	2.9
Dir	175	223	231	313	299	301	259	167	233	166	159	160	159	146	153	165	166	138	115	108	124	185	207	279	160	160
3 Spd	1	1	0	0	0	0	0	0	1	1	1	0	1	1	1	1	3	21	10	1	2	2	2	1	1.4	20.6
Dir	326	314	37	180	186	243	272	339	134	143	147	160	35	104	80	92	342	323	324	312	323	239	252	3	325	323
4 Spd	3	3	1	3	1	0	0	2	3	4	4	7	6	5	2	3	1	1	1	1	1	1	0	0	1.5	7.1
Dir	359	0	2	289	275	263	174	334	275	294	316	318	306	302	300	132	171	130	137	133	256	191	115	313	309	318
5 Spd	0	0	1	1	1	0	1	1	1	1	1	0	0	2	3	3	3	4	1	0	0	0	0	0	0.3	3.5
Dir	357	166	165	157	153	252	164	154	178	172	171	176	24	37	23	344	1	333	327	76	64	248	160	218	8	333
6 Spd	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	6	14	13	11	9	9	7	4	2	3.0	14.0
Dir	262	250	269	246	243	22	246	230	168	166	164	146	352	51	33	360	10	3	4	7	4	1	354	305	6	10
7 Spd	4	4	6	6	5	6	6	6	5	7	5	6	4	4	2	2	1	2	2	1	0	0	0	0	3.2	6.6
Dir	14	5	6	8	16	3	2	6	5	8	18	21	11	23	25	23	69	75	103	97	108	161	98	256	15	8
8 Spd	0	0	1	0	0	1	2	3	4	3	3	3	2	1	1	1	1	1	1	0	0	0	0	0	1.1	3.6
Dir	203	253	307	269	230	154	161	160	159	152	146	146	141	184	176	161	129	118	118	129	36	184	174	241	153	159
9 Spd	0	0	0	0	0	0	0	0	1	1	1	0	2	2	2	1	2	2	1	1	0	0	0	0	0.3	2.0
Dir	71	298	340	206	318	287	229	197	180	156	167	150	313	357	54	50	30	42	90	83	339	293	330	117	49	30
10 Spd	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	4	4	1	1	0	0	0	0	0.2	4.2
Dir	239	84	104	304	239	312	229	163	151	145	141	128	194	88	20	344	329	335	19	105	136	3	243	178	356	329
11 Spd	0	0	0	0	0	0	0	0	1	3	4	6	5	7	7	7	7	7	7	5	5	5	5	4	3.5	7.4
Dir	246	238	300	261	303	213	263	156	147	158	152	156	153	144	144	149	144	143	145	145	146	152	158	156	149	143
12 Spd	5	4	2	0	0	1	3	4	6	5	5	6	5	6	6	4	5	4	4	3	5	5	5	5	4.2	6.3
Dir	154	156	161	229	247	161	160	161	161	159	158	155	159	159	159	155	145	149	150	146	155	157	156	154	156	161
13 Spd	2	1	2	1	1	1	1	1	1	1	4	7	6	7	6	5	2	1	2	1	1	1	1	1	1.4	6.8
Dir	155	192	260	170	176	165	162	164	161	166	302	294	279	289	272	243	236	155	153	173	197	156	164	159	244	294
14 Spd	1	1	1	2	1	1	1	2	3	2	5	7	10	9	9	8	9	9	9	5	1	1	1	1	3.4	10.3
Dir	165	158	154	153	153	153	153	151	247	240	245	256	274	282	271	263	280	272	281	265	231	176	167	161	261	274
15 Spd	1	1	1	1	1	2	1	1	7	13	14	14	12	11	11	12	10	7	8	7	1	1	1	1	4.9	13.9
Dir	155	149	143	156	154	154	151	155	256	272	280	271	289	283	301	287	293	299	284	277	243	170	172	162	278	280
16 Spd	1	1	0	1	1	1	2	1	2	2	2	2	3	5	13	11	11	10	9	5	4	2	2	1	3.0	13.0
Dir	160	158	170	172	180	171	156	160	155	158	158	155	157	230	246	260	261	258	252	245	238	226	227	187	235	246
17 Spd	1	1	1	1	1	1	0	0	3	7	11	11	10	7	7	7	5	4	2	0	2	0	1	1	3.0	11.3
Dir	209	154	156	157	149	160	158	144	266	274	273	275	272	284	264	266	277	273	241	222	233	200	157	157	265	275
18 Spd	0	1	1	0	0	1	0	1	1	0	7	10	7	9	13	8	4	7	10	11	5	2	2	2	3.8	12.5
Dir	169	160	158	181	177	170	261	184	215	176	286	277	265	271	263	254	241	268	271	254	231	226	228	156	258	263
19 Spd	2	2	1	7	2	7	10	12	15	16	14	12	13	14	14	15	16	17	11	9	4	2	3	1	8.7	17.1
Dir	177	184	163	255	210	248	258	266	273	277	275	271	260	269	264	277	273	276	272	266	250	213	227	182	266	276
20 Spd	1	1	1	1	2	8	8	10	9	10	11	12	11	10	7	10	11	9	8	6	1	3	0	0	5.9	12.4
Dir	197	209	184	161	210	255	258	274	277	282	282	289	274	276	287	285	275	275	275	263	226	238	163	150	272	289
21 Spd	1	1	2	1	1	1	2	2	2	1	2	2	2	2	6	7	7	4	0	1	0	0	1	2	1.4	6.8
Dir	159	161	159	162	161	162	156	156	158	157	159	157	160	189	253	270	256	251	166	152	166	174	179	262	211	256
22 Spd	1	0	1	0	0	1	0	2	1	2	2	2	3	2	2	1	1	1	2	1	0	1	1	1	0.6	3.5
Dir	157	166	160	164	166	165	167	159	158	151	156	180	247	213	251	302	28	126	128	103	28	327	308	333	181	247

Hourly Averages

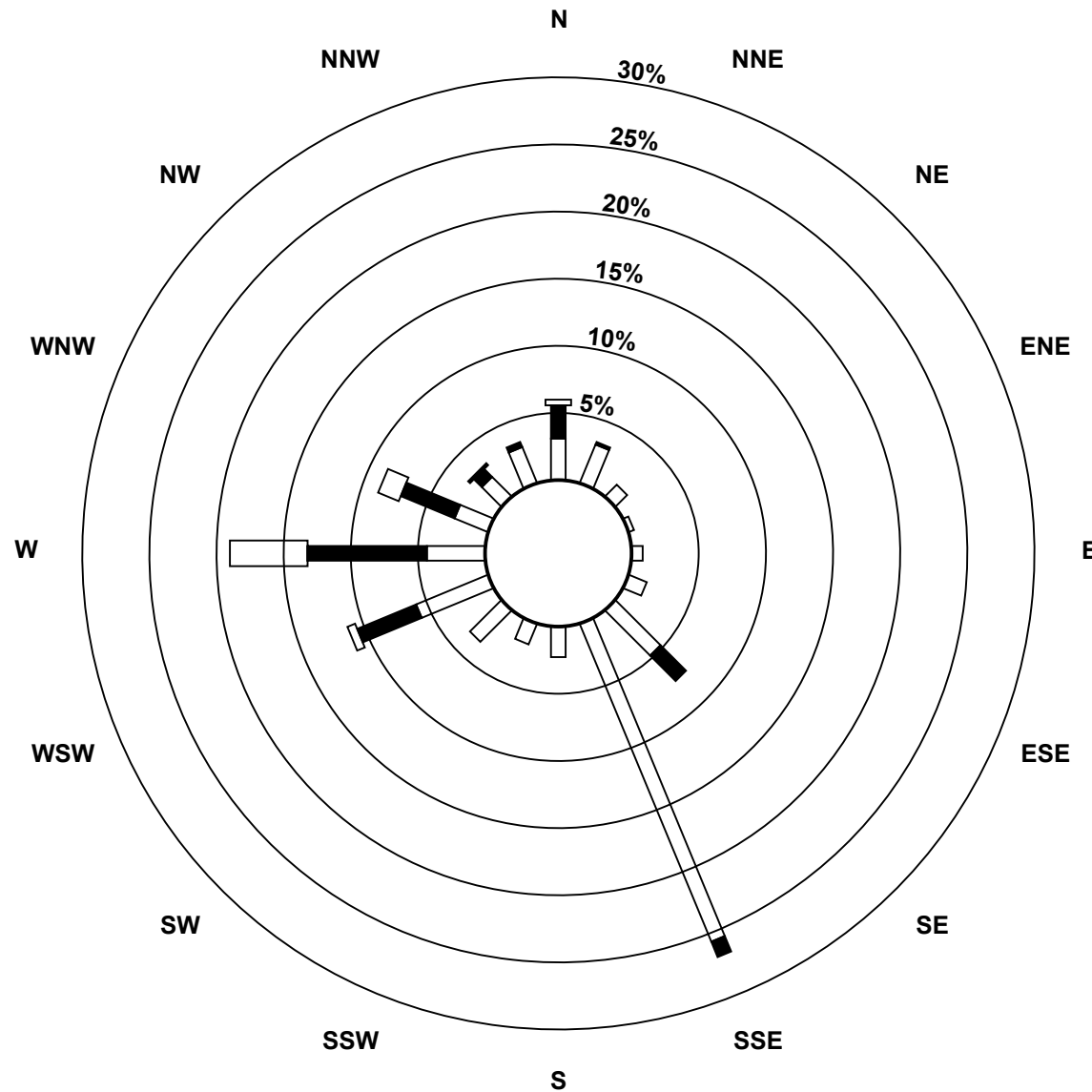
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
23 Spd	6	2	1	2	1	1	1	1	0	1	1	2	1	2	2	2	2	1	2	1	0	0	1	8	0.5	7.8			
Dir	288	21	182	239	210	160	164	150	104	164	151	158	162	133	130	157	139	159	138	305	349	226	285	291	212	291			
24 Spd	4	4	5	2	1	0	2	0	4	5	4	4	14	15	11	7	9	6	3	2	1	7	4	1	3.7	14.7			
Dir	9	321	11	262	246	152	257	259	336	353	336	333	287	266	261	278	255	256	248	237	226	252	237	175	281	266			
25 Spd	1	1	1	4	8	1	3	9	9	11	17	16	13	13	14	15	14	14	11	8	3	1	1	1	7.4	16.9			
Dir	170	218	177	232	241	211	245	254	263	281	279	275	258	264	281	281	284	285	276	275	261	219	170	156	270	279			
26 Spd	1	1	1	1	2	0	1	3	3	3	2	2	3	7	6	9	13	9	8	4	0	0	1	0	2.5	12.8			
Dir	153	159	161	163	164	173	158	155	157	156	157	157	235	254	247	248	256	269	269	267	208	358	171	138	237	256			
27 Spd	0	1	1	0	0	1	1	1	1	1	3	7	7	5	4	5	5	4	3	1	2	4	3	1	2.0	6.8			
Dir	181	173	172	169	202	164	164	164	158	157	276	286	290	298	270	281	288	282	304	311	244	268	287	168	274	286			
28 Spd	1	0	0	1	0	0	0	1	3	5	6	6	7	6	5	7	5	5	1	0	1	0	1	1	2.0	6.9			
Dir	210	172	153	157	161	155	140	199	265	283	299	294	306	303	302	336	338	13	3	172	11	245	360	320	310	336			
29 Spd	0	0	0	0	1	1	1	1	2	2	4	7	9	9	9	8	8	9	7	4	3	3	2	0	3.3	9.5			
Dir	344	359	236	14	34	359	346	7	28	118	139	142	142	142	141	137	140	137	140	141	143	147	146	134	137	141			
30 Spd	0	0	0	1	2	1	1	2	3	4	3	2	2	1	1	0	0	0	0	1	0	0	1	0	1.0	3.5			
Dir	322	335	150	147	153	182	164	159	161	157	159	162	157	184	157	235	359	290	338	150	309	157	163	147	162	157			
31 Spd	0	0	0	1	1	1	1	1	3	8	14	16	16	15	16	18	18	15	14	11	9	8	3	2	7.5	18.1			
Dir	164	182	246	154	149	152	160	159	257	280	284	280	282	270	266	269	266	266	263	266	258	255	237	227	267	269			
Spd	0.1	0.1	0.1	0.4	0.4	0.5	0.8	1.1	1.7	2.0	3.0	3.3	3.9	3.8	4.0	3.9	3.7	3.7	2.5	1.7	0.9	0.9	0.8	0.5	Diurnal Average				
Dir	189	340	45	255	205	226	226	229	247	262	268	267	265	264	263	271	276	284	271	258	239	227	207	200	Diurnal Maximum				
Spd	5.7	5.8	5.9	6.9	8.3	7.7	9.7	11.9	15.5	15.9	16.9	16.0	16.0	15.5	15.7	18.1	18.0	20.6	13.6	11.4	8.9	7.8	5.4	7.8	Diurnal Maximum				
Dir	288	345	6	352	241	255	258	266	273	277	279	280	282	270	266	269	266	323	263	254	4	255	158	291					
Maximum Speed Value: 21 km/h on Aug 3 18:00																		Minimum Speed Value: 0 km/h on Aug 3 03:00										Hours in Service: 744	
Maximum Daily Speed Average: 8.7 km/h on Aug 19																		Minimum Daily Speed Average: 0.2 km/h on Aug 10										Hours of Data: 744	
Maximum Diurnal Speed Average: 4.0 km/h at hour 15																		Minimum Diurnal Speed Average: 0.1 km/h at hour 2										Hours of Missing Data: 0	
Monthly Average Velocity: 1.73 km/h 262.0 deg																		Speed Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.7 Median = 1.6 Q ₃ = 5.0 P ₉₀ = 9.4 P ₉₉ = 15.6										Percent Operational Time: 100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																													
Frequency Distribution																													
Speed Range (km/h)																													
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38																					Total			
North	47	15	3	0	0																					65			
NorthEast	20	0	0	0	0																					20			
East	21	0	0	0	0																					21			
SouthEast	133	21	0	0	0																					154			
South	162	7	0	0	0																					169			
SouthWest	80	3	1	0	0																					84			
West	51	74	45	0	0																					170			
NorthWest	47	13	0	1	0																					61			
Total	561	133	49	1	0																					744			

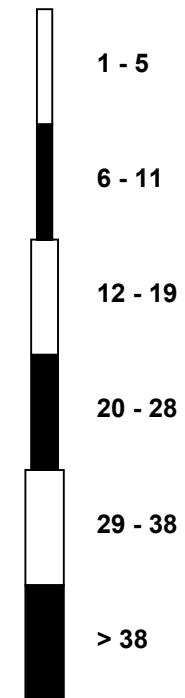
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - August 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - August 2017

Maximum Speed: 21 km/h on Aug 3 18:00																				Maximum Daily Speed Average: 9.4 km/h on Aug 19										Hours in Service: 744	
Minimum Speed: 0 km/h on Aug 8 04:00																				Minimum Daily Speed Average: 1.1 km/h on Aug 9										Hours of Data: 744	
Maximum Diurnal Speed Average: 6.7 km/h at hour 17																				Minimum Diurnal Speed Average: 1.4 km/h at hour 3										Hours of Missing Data: 0	
Monthly Average Speed: 3.66 km/h																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.8 Median = 2.0 Q ₃ = 5.3 P ₉₀ = 9.7 P ₉₉ = 16.0										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	1	6	6	7	4	1	3	4	3	2	3	2	5	3	4	3	3	3	1	1	0	0	0	0	2.9	7.2					
2-Aug	0	0	0	0	0	0	1	1	1	1	2	3	3	3	3	2	3	2	1	0	0	0	0	0	1.1	3.2					
3-Aug	1	1	0	0	0	0	0	0	1	2	1	1	2	2	2	2	3	21	10	3	2	2	2	2	2.5	20.9					
4-Aug	3	3	2	3	2	0	1	2	3	5	5	8	7	5	4	3	2	1	1	1	4	1	0	0	2.7	7.6					
5-Aug	1	0	1	1	1	1	1	1	1	1	1	1	1	2	4	4	3	4	1	0	0	0	0	0	1.3	3.7					
6-Aug	0	0	0	0	0	0	0	1	1	2	1	1	2	3	3	6	14	13	11	10	9	7	4	2	3.9	14.4					
7-Aug	4	4	6	6	5	6	6	6	5	7	5	6	4	4	3	3	2	3	2	2	0	0	0	0	3.8	6.8					
8-Aug	0	0	1	0	0	1	2	3	4	4	3	3	3	2	2	2	2	1	1	0	0	0	0	0	1.5	3.7					
9-Aug	0	1	1	0	0	0	0	1	1	1	1	1	2	2	3	2	2	2	2	1	0	0	0	0	1.1	2.6					
10-Aug	0	0	0	0	0	0	0	0	1	1	2	1	1	2	2	2	5	4	2	1	0	0	0	0	1.2	4.5					
11-Aug	0	0	0	0	0	0	0	1	1	3	4	6	5	7	7	7	7	8	7	6	5	5	5	4	3.7	7.5					
12-Aug	5	4	2	1	0	1	3	4	6	6	6	6	5	6	6	4	5	4	4	4	5	5	5	5	4.3	6.4					
13-Aug	2	1	2	1	1	1	1	1	1	2	4	7	6	7	6	5	2	1	2	1	2	2	1	1	2.6	7.0					
14-Aug	1	1	1	2	1	1	1	2	4	3	5	7	11	10	10	9	9	9	10	6	2	1	1	1	4.4	10.7					
15-Aug	1	1	1	1	1	2	1	1	8	13	14	14	13	12	11	12	11	8	8	7	2	1	1	1	6.0	14.3					
16-Aug	1	1	1	1	1	1	2	1	2	2	2	2	3	6	14	11	11	10	9	5	4	2	2	1	3.9	13.6					
17-Aug	1	1	1	1	1	1	0	0	4	7	11	12	11	8	8	7	5	4	2	1	2	0	1	1	3.8	11.9					
18-Aug	0	1	1	1	1	1	1	1	1	1	8	10	7	9	13	8	4	8	10	12	5	3	3	2	4.6	12.9					
19-Aug	2	2	1	7	2	7	10	12	16	16	15	12	14	15	15	15	17	17	11	9	5	2	3	1	9.4	17.4					
20-Aug	1	1	1	1	2	8	8	10	10	10	11	13	12	10	8	11	11	9	8	6	1	3	0	0	6.6	13.2					
21-Aug	1	1	2	1	1	1	2	2	3	2	2	2	2	3	7	7	7	4	0	1	0	0	1	3	2.3	7.2					
22-Aug	1	0	1	1	0	1	0	2	1	2	2	3	4	4	3	2	1	1	2	1	0	1	1	2	1.5	4.0					
23-Aug	7	3	1	2	1	1	1	1	0	1	1	2	2	3	2	2	2	1	3	2	1	1	1	8	2.0	8.5					
24-Aug	5	7	6	2	2	1	2	0	5	5	4	4	14	15	12	8	9	6	4	2	1	7	4	1	5.3	15.1					
25-Aug	1	1	1	5	9	1	3	9	9	12	17	16	13	14	15	16	15	14	11	9	4	1	1	1	8.2	17.3					
26-Aug	1	1	1	1	2	1	1	3	3	3	2	2	5	8	7	9	13	10	8	4	0	1	1	1	3.6	13.1					
27-Aug	0	1	1	0	1	1	1	1	1	1	4	8	7	5	4	6	5	5	3	1	2	4	4	1	2.9	8.0					
28-Aug	1	1	0	1	0	0	1	1	3	5	6	7	8	6	7	7	6	5	1	0	1	0	1	1	3.1	7.7					
29-Aug	1	1	1	1	1	1	1	1	2	2	5	7	9	10	10	8	8	9	7	4	3	3	2	0	4.0	9.7					
30-Aug	1	0	1	1	2	1	1	2	3	4	3	2	2	1	1	0	0	0	1	1	0	1	1	0	1.3	3.6					
31-Aug	0	1	1	1	1	1	1	1	4	8	14	16	16	16	16	19	18	16	14	11	9	8	3	2	8.3	18.6					
1.5 1.5 1.4 1.6 1.4 1.4 1.9 2.5 3.5 4.3 5.4 6.1 6.5 6.6 6.7 6.5 6.7 6.6 5.1 3.5 2.3 1.9 1.7 1.5																									Diurnal Average						
6.8 6.9 6.1 7.2 8.7 7.9 9.8 12.2 15.7 16.2 17.3 16.5 16.5 15.9 16.1 18.6 18.3 20.9 13.8 11.5 9.1 7.9 5.4 8.5																									Diurnal Maximum						

All monthly, daily, and diurnal averages have been calculated using scalar methods

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - August 2017

Maximum Value: 99.2 deg on Aug 11 00:00																			Hours in Service: 744						
Minimum Value: 6.0 deg on Aug 21 03:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 7.8 P ₁₀ = 11.1 Q ₁ = 15.8 Median = 29.2 Q ₃ = 56.2 P ₉₀ = 73.1 P ₉₉ = 93.6																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Aug	76	41	58	16	66	47	22	22	49	36	28	67	42	59	19	57	62	65	21	22	69	86	71	57	86.3
2-Aug	37	61	62	39	61	52	78	57	69	56	27	27	30	52	47	73	56	51	58	68	88	68	67	91	90.8
3-Aug	43	43	95	53	61	66	54	69	57	44	71	86	77	64	76	56	36	10	56	98	54	42	34	40	97.7
4-Aug	13	14	37	20	70	73	51	60	25	29	27	22	24	30	80	37	57	42	23	29	82	46	72	88	88.1
5-Aug	89	59	19	32	13	55	26	28	45	59	76	86	89	48	36	43	41	21	33	69	91	81	67	48	90.6
6-Aug	62	61	44	60	58	92	70	51	47	34	57	74	90	63	58	41	13	9	11	12	14	10	29	62	91.7
7-Aug	25	11	10	11	14	8	11	13	14	17	19	20	21	25	72	57	71	46	38	31	54	53	88	82	87.7
8-Aug	60	83	22	73	63	65	22	13	11	12	14	37	51	69	73	55	61	50	23	68	79	76	59	65	82.6
9-Aug	93	83	99	62	85	73	88	63	53	56	45	91	50	58	62	68	51	55	50	28	89	78	91	63	98.6
10-Aug	74	62	69	74	89	62	58	63	32	47	52	71	67	81	94	93	29	20	58	25	44	90	90	99	99.2
11-Aug	68	51	89	63	69	85	46	73	49	20	14	13	13	12	13	12	10	10	10	10	9	9	9	9	88.9
12-Aug	7	12	33	71	72	35	8	9	10	9	11	11	11	10	10	12	11	9	11	10	11	10	9	10	72.2
13-Aug	18	49	60	41	46	53	22	35	25	37	25	14	16	18	18	21	40	16	12	28	45	23	25	10	60.5
14-Aug	12	11	11	12	17	43	26	13	58	50	42	16	16	18	26	30	27	16	16	15	27	16	16	10	58.3
15-Aug	14	28	24	32	14	11	7	29	22	18	14	14	19	18	19	17	20	19	13	11	38	18	18	12	38.2
16-Aug	9	11	20	15	17	12	15	19	16	14	21	11	13	46	19	16	12	26	14	12	14	28	27	22	46.0
17-Aug	31	11	9	11	8	18	29	62	70	22	17	20	19	31	37	21	34	30	42	42	31	55	21	25	69.8
18-Aug	16	19	25	55	63	70	59	37	60	50	36	12	22	18	15	21	30	31	14	9	25	42	42	11	70.4
19-Aug	21	19	20	31	20	14	10	11	11	10	14	18	18	16	19	14	14	11	13	11	19	37	35	31	36.9
20-Aug	34	32	29	10	32	12	10	13	12	15	17	25	21	16	19	24	16	14	16	15	28	26	27	34	34.3
21-Aug	16	13	6	7	8	8	7	10	14	24	12	14	18	34	27	21	13	30	36	13	15	23	30	57	56.9
22-Aug	19	24	11	17	29	8	16	11	24	22	26	50	39	72	57	76	56	27	18	31	91	40	90	86	91.1
23-Aug	38	76	64	42	45	35	33	31	90	36	50	30	37	32	28	13	18	24	42	90	85	94	69	43	93.9
24-Aug	29	77	54	76	69	60	52	90	16	25	20	20	20	15	37	46	14	14	37	44	42	11	27	22	90.2
25-Aug	18	40	38	32	28	75	61	11	9	11	12	12	16	16	16	17	17	13	11	12	24	33	20	12	74.5
26-Aug	16	10	31	16	22	46	28	8	13	22	23	16	50	27	42	29	14	15	15	30	84	75	69	58	83.6
27-Aug	70	19	30	44	53	21	22	15	19	18	57	40	23	27	38	26	16	16	23	48	37	16	32	26	70.3
28-Aug	36	57	36	15	21	21	53	39	50	17	25	38	36	28	44	23	40	19	43	53	95	77	50	68	95.5
29-Aug	76	82	81	88	65	78	36	35	24	56	14	13	11	11	11	12	10	10	10	10	11	12	46	70	87.8
30-Aug	78	91	83	21	9	40	43	9	17	12	14	16	34	40	50	73	42	60	64	60	77	59	49	66	90.6
31-Aug	34	67	72	24	51	33	28	14	49	28	14	14	15	13	15	13	11	13	11	8	10	8	24	40	71.9
93.1 90.6 98.6 87.8 88.6 91.7 88.0 90.2 90.4 59.0 75.9 90.7 89.8 81.2 93.7 92.8 71.5 64.9 63.6 97.7 95.5 93.9 90.7 99.2																									

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

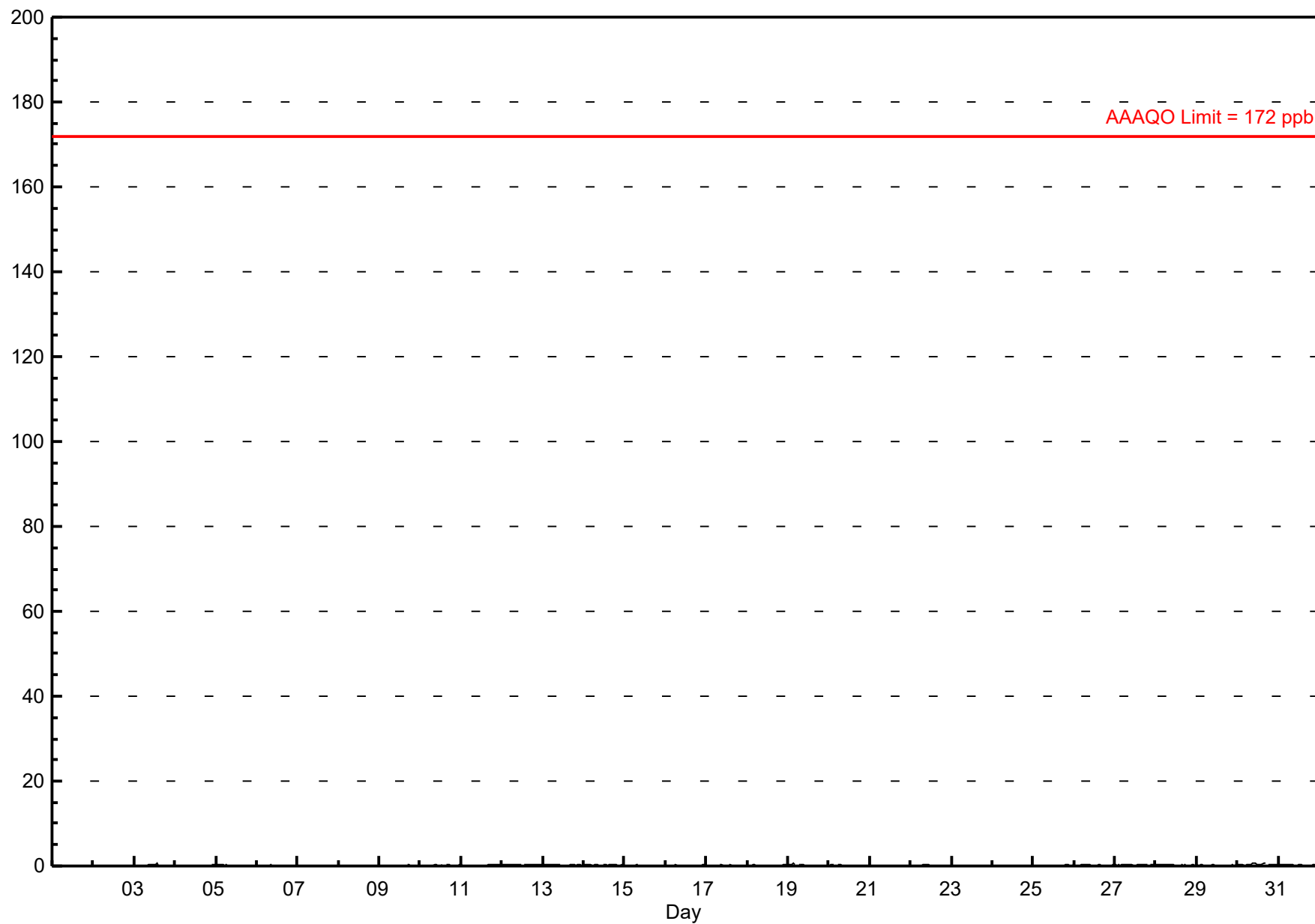
Sulphur Dioxide (SO₂) - ppb

Donnelly - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.6 ppb on Aug 30 10:00 Maximum Daily Average: 0.3 ppb on Aug 12																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 1 02:00 Maximum Diurnal Average: 0.2 ppb at hour 9 Monthly Average: 0.12 ppb										Minimum Daily Average: 0.0 ppb on Aug 1 Minimum Diurnal Average: 0.1 ppb at hour 13 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.0
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0.1	0.5
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.2
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
13-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
19-Aug	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0.0	0.1
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
24-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.2
30-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	A	0	0	0	0	0	0	0.3	0.6
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2																									Diurnal Average	
0.4 0.4 0.4 0.5 0.4 0.3 0.4 0.5 0.5 0.6 0.5 0.5 0.4 0.5 0.4 0.6 0.5 0.5 0.4 0.4 0.4 0.4 0.5 0.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

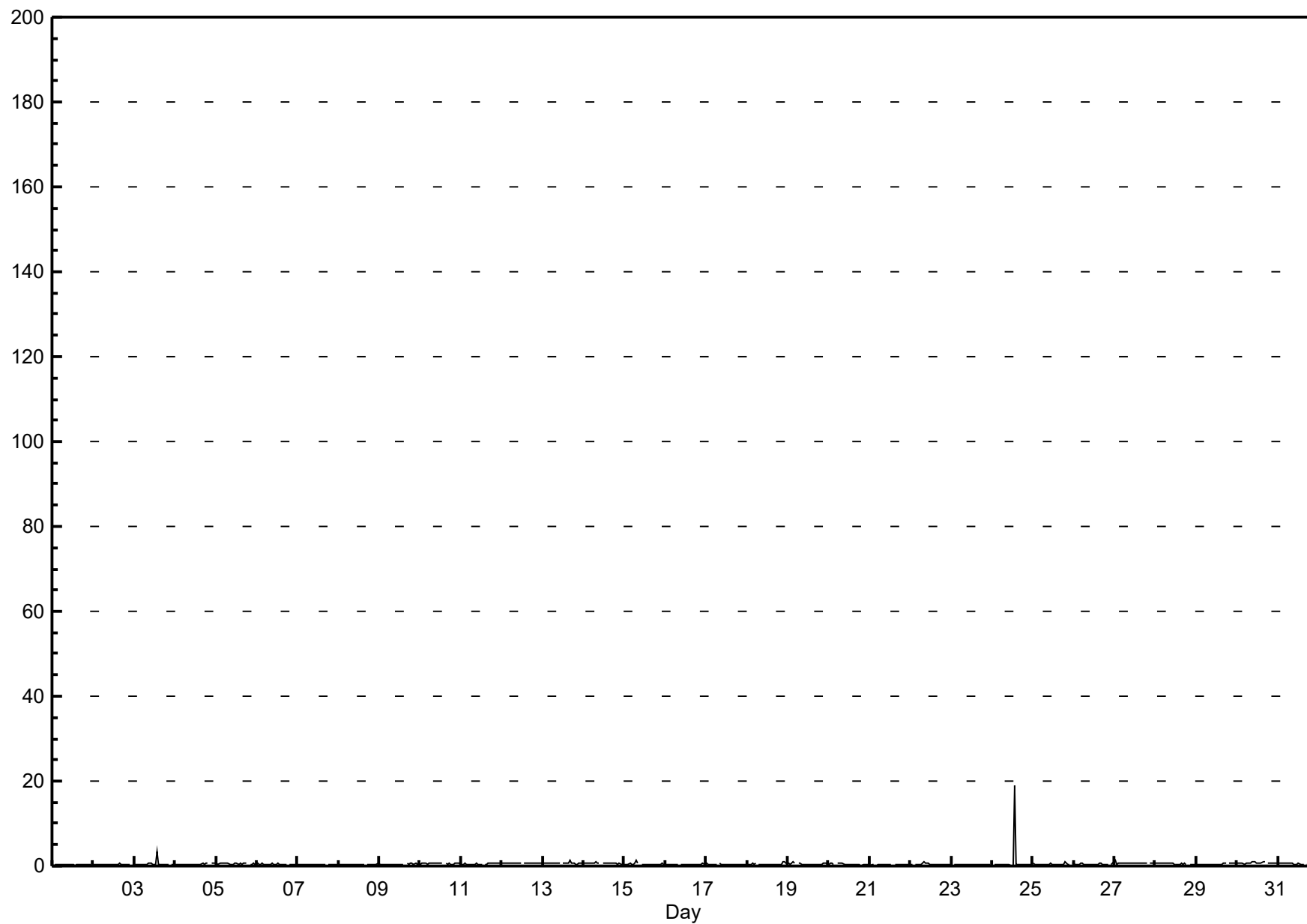
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Donnelly - August 2017



Hourly Maximums

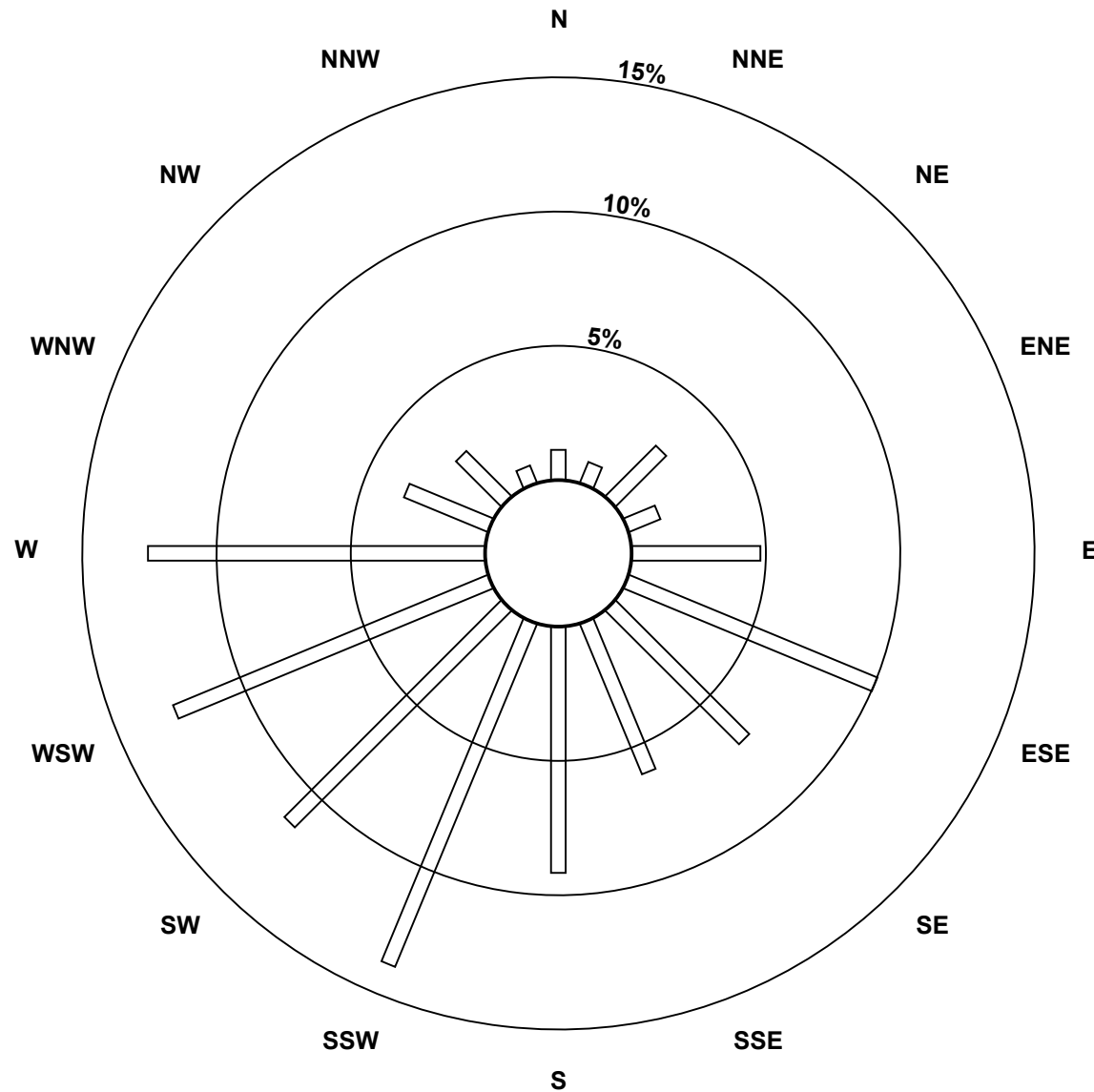
Sulphur Dioxide (SO₂) - ppb
Donnelly - August 2017



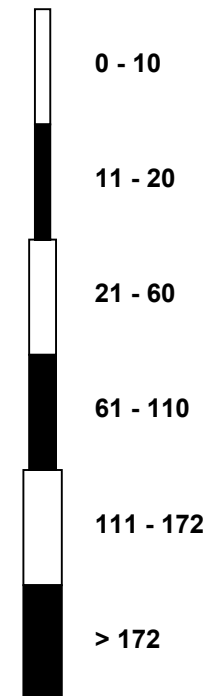
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Donnelly - August 2017

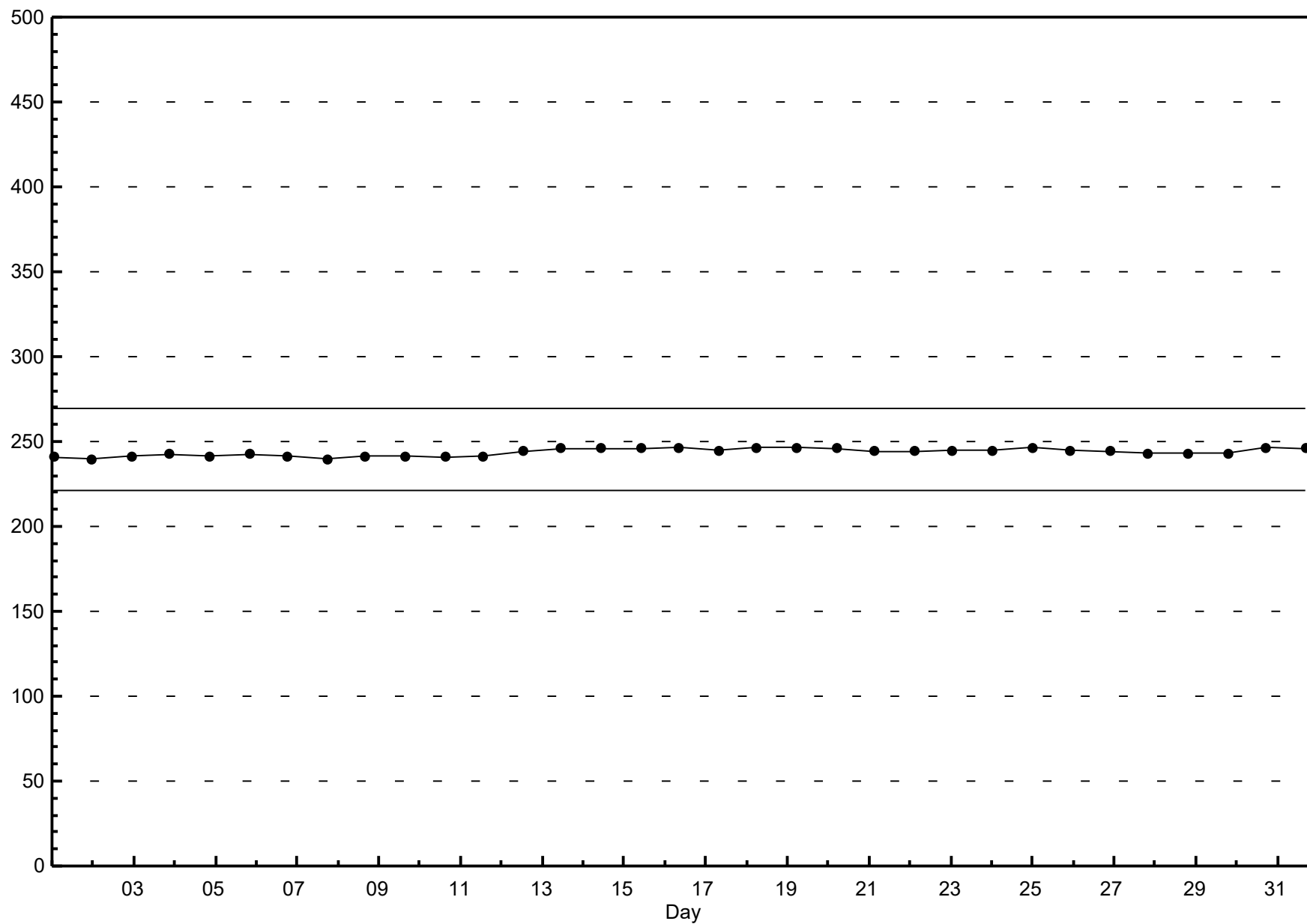


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Donnelly - August 2017



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

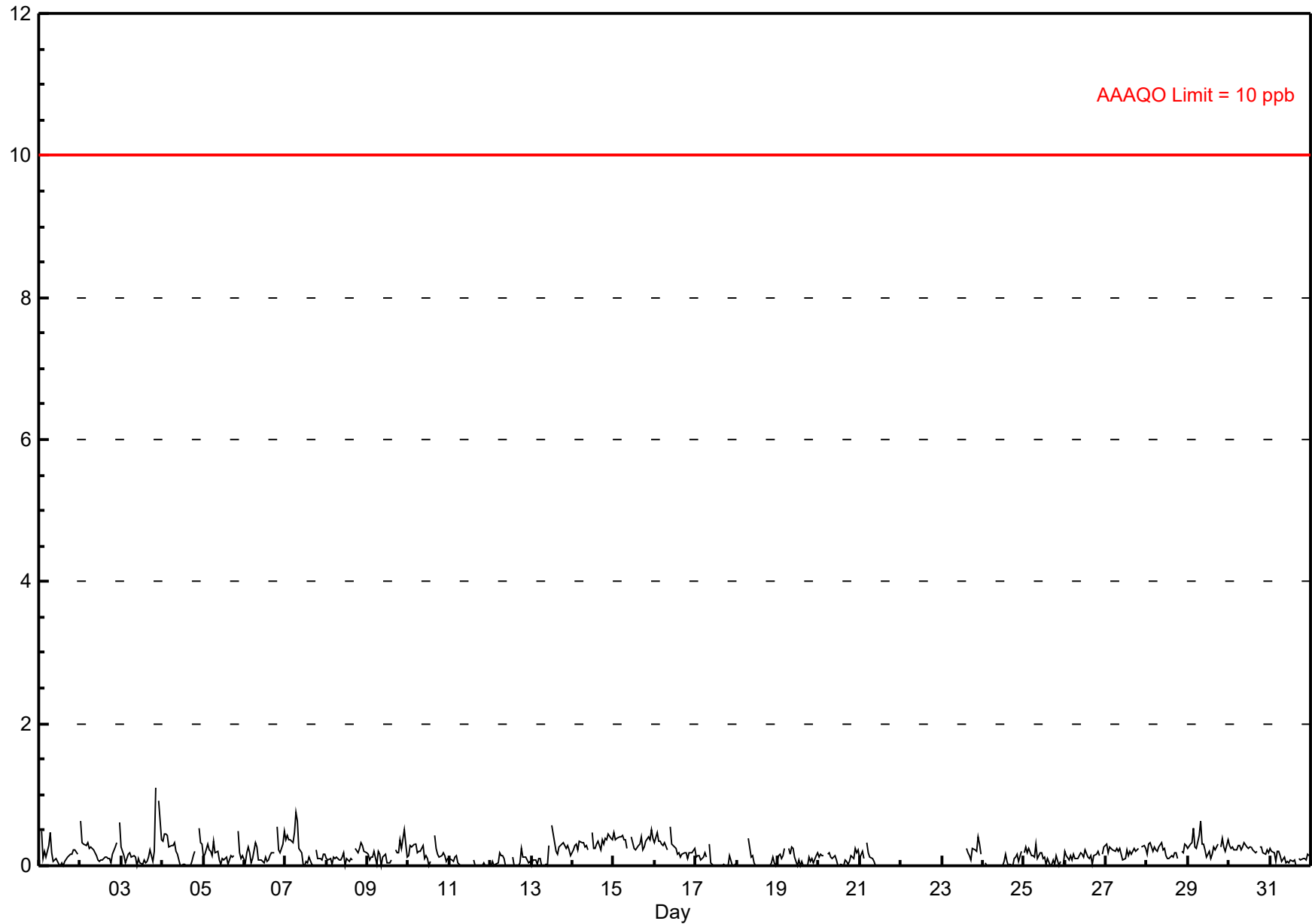
Donnelly - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.1 ppb on Aug 3 21:00 Maximum Daily Average: 0.4 ppb on Aug 15																				Hours in Service: 744 Hours of Data: 662 Hours of Missing Data: 82 Hours of Calibration: 32 Percent Operational Time: 93.3							
Minimum Value: 0 ppb on Aug 1 13:00 Minimum Daily Average: 0.0 ppb on Aug 11 Maximum Diurnal Average: 0.2 ppb at hour 21 Minimum Diurnal Average: 0.1 ppb at hour 12 Monthly Average: 0.17 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.6																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5	
2-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.2	0.6	
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0.2	1.1	
4-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.2	0.5	
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5	
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.2	0.5	
7-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.8	
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3	
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0.2	0.5	
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4	
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
13-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5	
16-Aug	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4	
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
21-Aug	0	0	0	A	0	0	0	0	0	0	0	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.3	
22-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
23-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	C	0	0	0	0	0	0	0	0	0	0	--	0.4	
24-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.2	
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3	
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3	
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3	
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3	
29-Aug	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6	
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3	
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2	
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.2																									Diurnal Average		
0.6 0.5 0.5 0.5 0.4 0.5 0.8 0.6 0.3 0.5 0.4 0.5 0.6 0.3 0.3 0.4 0.4 0.4 0.3 0.5 1.1 0.5 0.9 0.6																									Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Donnelly - August 2017



Hourly Maximums

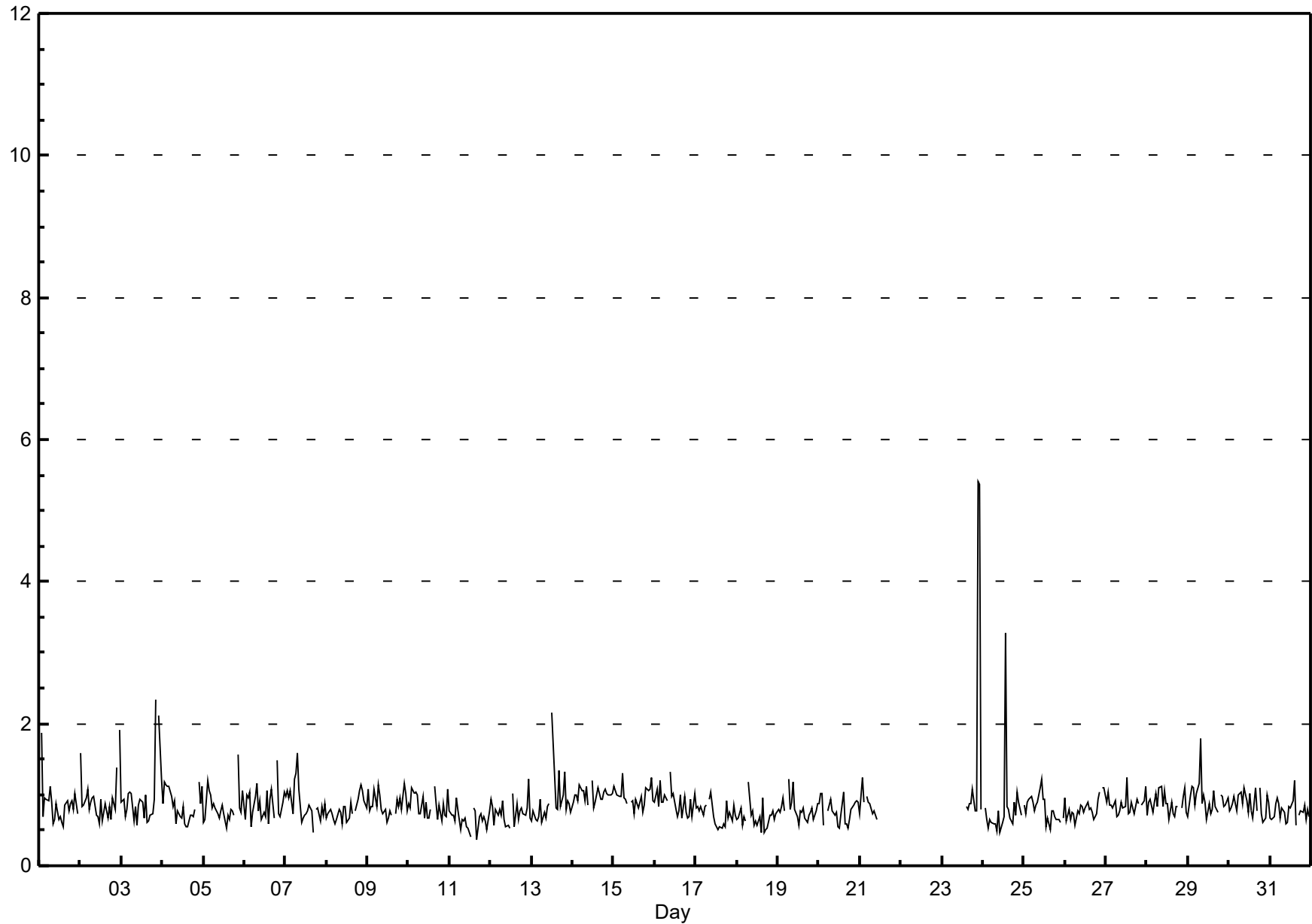
Hydrogen Sulphide (H₂S) - ppb

Donnelly - August 2017

Maximum Value: 5.4 ppb on Aug 23 22:00																				Maximum Daily Average: 1.0 ppb on Aug 14										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 11 17:00																				Minimum Daily Average: 0.7 ppb on Aug 11										Hours of Data: 662									
Maximum Diurnal Average: 1.1 ppb at hour 23																				Minimum Diurnal Average: 0.7 ppb at hour 18										Hours of Missing Data: 82									
Monthly Average: 0.86 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 1.9										Hours of Calibration: 32									
																				Percent Operational Time: 93.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.9													
2-Aug	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	0.9	1.9													
3-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	2	1	1.0	2.3													
4-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2													
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	0.8	1.6													
6-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.5													
7-Aug	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	0.9	1.6													
8-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.1													
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2													
10-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1													
11-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	0	1	1	1	1	1	1	1	0.7	0.9													
12-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	0.9	2.2													
14-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2													
15-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
16-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3													
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
18-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0.7	1.2													
19-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
20-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0													
21-Aug	1	1	1	A	1	1	1	1	1	1	1	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.2													
22-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--													
23-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	C	1	1	1	1	1	1	1	5	5	1	--	5.4													
24-Aug	A	1	1	1	1	1	1	1	0	1	0	1	1	3	1	1	1	1	1	1	1	1	1	A	0.8	3.3													
25-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.2													
26-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.1													
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2													
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.1													
29-Aug	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.8													
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.1													
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.2													
0.8 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.8 0.8 0.8 0.7 0.8 0.9 0.8 0.8 0.7 0.7 0.8 0.9 0.9 1.0 1.1 0.9																									Diurnal Average														
1.6 1.9 1.2 1.2 1.1 1.3 1.3 1.8 1.1 1.3 1.2 1.2 2.2 3.3 1.2 1.1 1.3 1.0 1.1 1.5 2.3 5.4 5.4 1.9																									Diurnal Maximum														
C - Calibration				N - Not Valid				A - Automated Daily Zero Span																															

Hourly Maximums

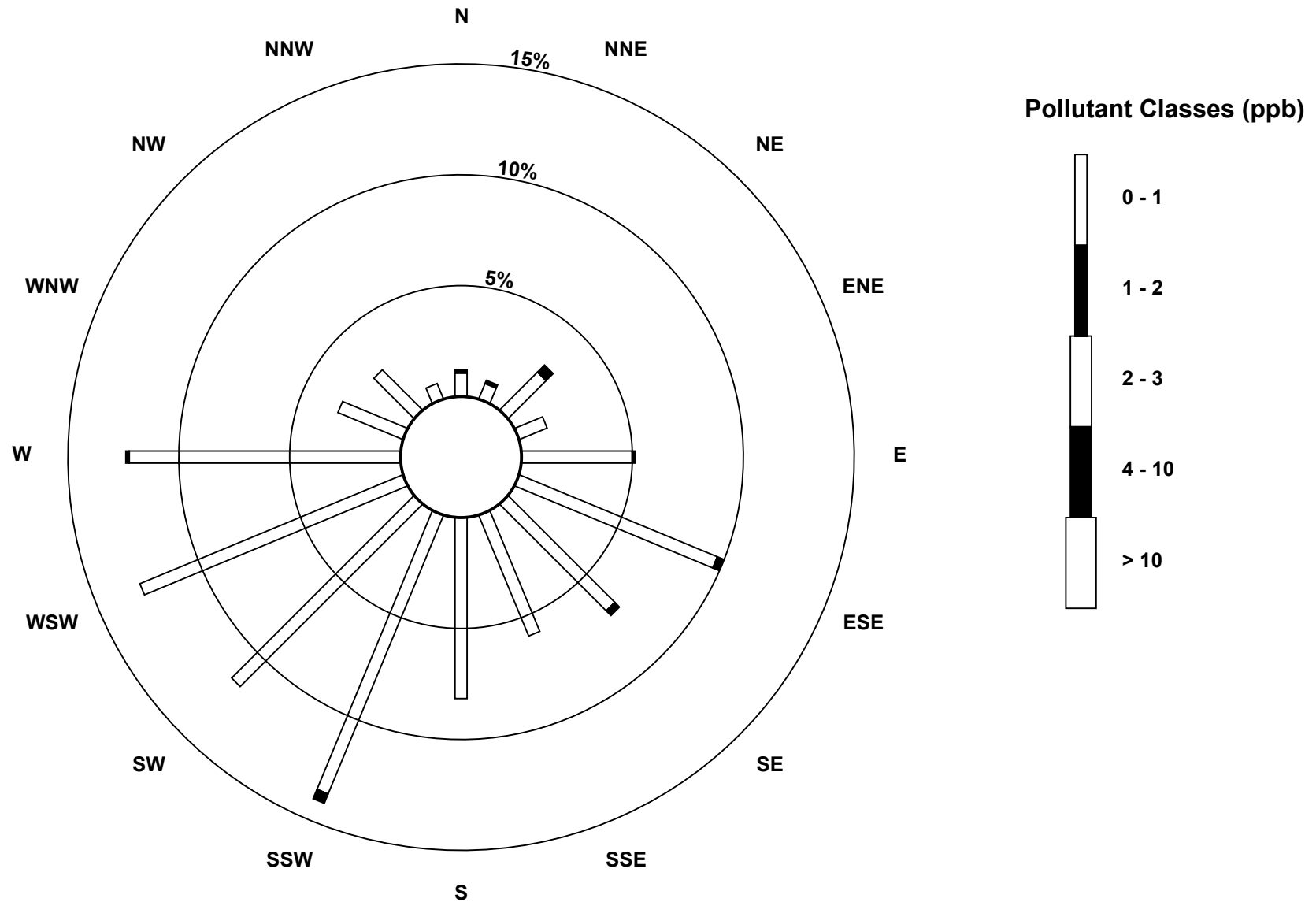
Hydrogen Sulphide (H₂S) - ppb
Donnelly - August 2017



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

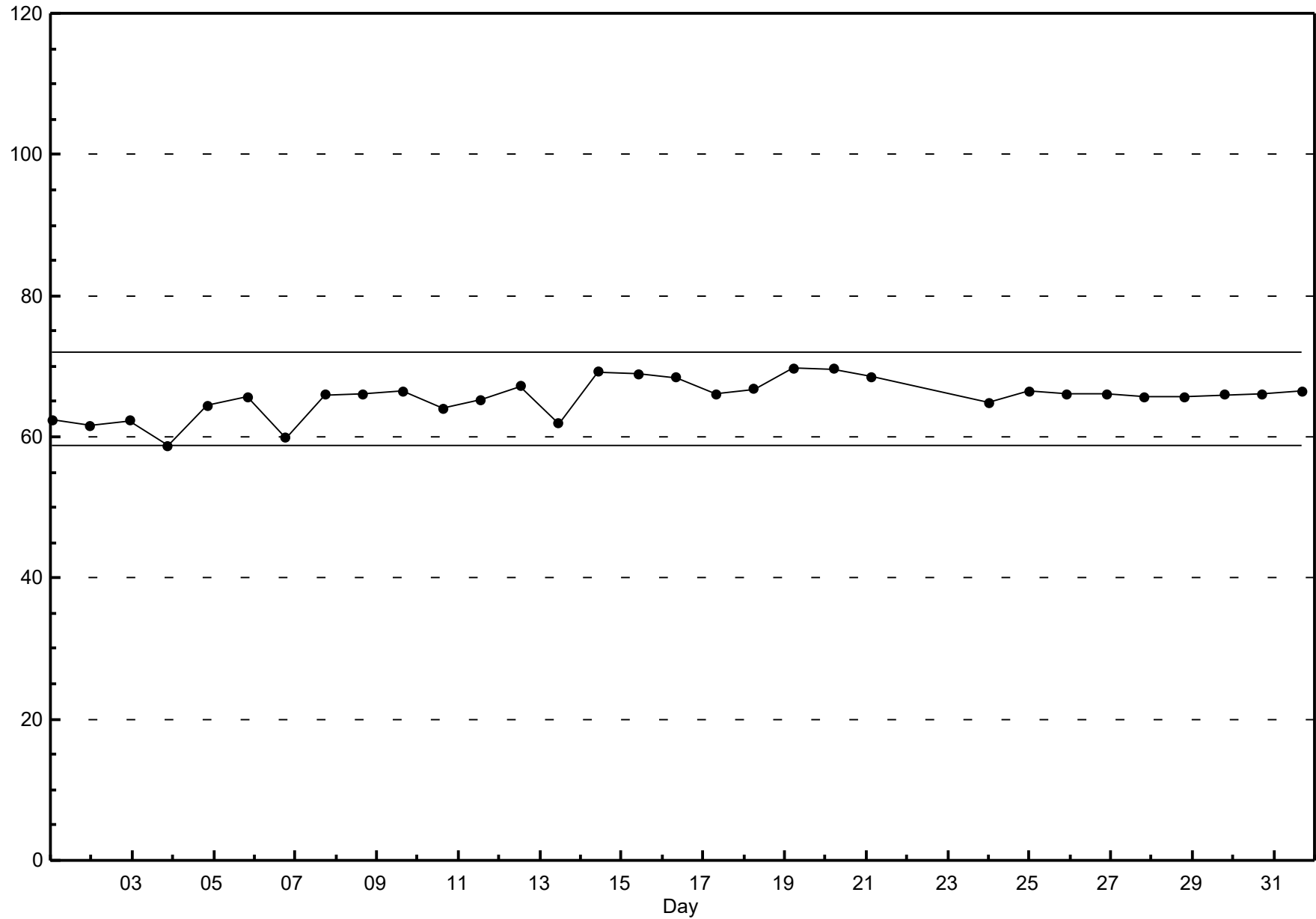
Donnelly - August 2017



Span Responses

Hydrogen Sulphide (H_2S)

Donnelly - August 2017



Hourly Averages

External Temperature (ET) - °C

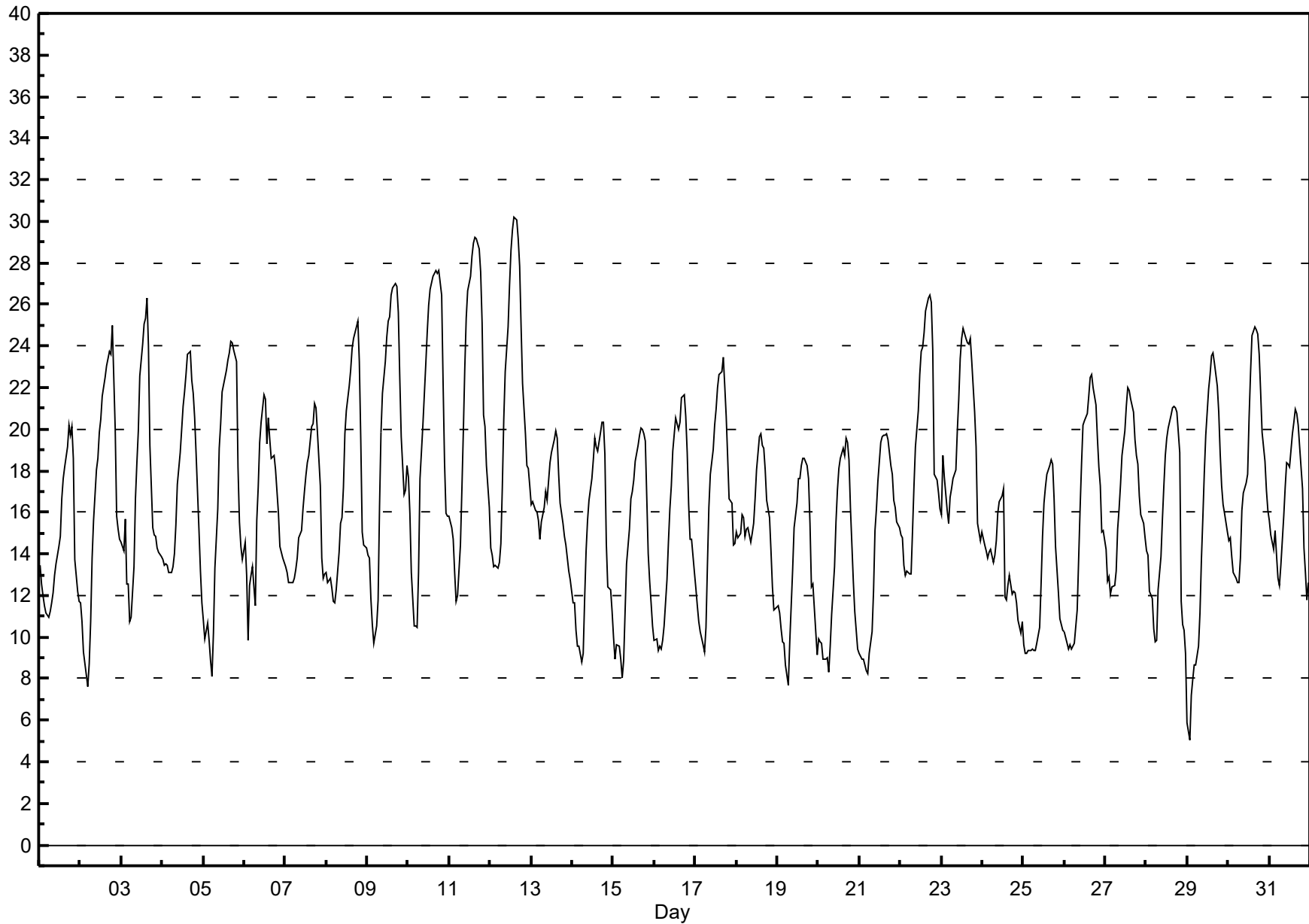
Donnelly - August 2017

Maximum Value: 30.2 °C on Aug 12 15:00																				Maximum Daily Average: 21.2 °C on Aug 11										Hours in Service: 744	
Minimum Value: 5 °C on Aug 29 02:00																				Minimum Daily Average: 12.7 °C on Aug 25										Hours of Data: 744	
Maximum Diurnal Average: 22.1 °C at hour 17																				Minimum Diurnal Average: 11.2 °C at hour 6										Hours of Missing Data: 0	
Monthly Average: 16.52 °C																				Percentiles: P ₁ = 8.1 P ₁₀ = 10.0 Q ₁ = 12.8 Median = 16.1 Q ₃ = 19.8 P ₉₀ = 23.6 P ₉₉ = 28.8										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	13	13	12	12	11	11	11	12	12	13	14	14	15	17	18	18	19	20	20	20	19	14	12	12	14.6	20.2					
2-Aug	12	11	9	8	8	9	11	14	16	18	19	20	20	22	22	23	23	24	24	25	20	16	15	15	16.7	25.0					
3-Aug	15	14	16	13	13	11	11	13	17	18	20	23	24	25	25	26	24	19	15	15	15	14	14	14	17.2	26.3					
4-Aug	14	13	14	13	13	13	13	14	15	17	19	20	21	22	23	24	24	22	22	21	19	15	13	12	17.3	23.7					
5-Aug	11	10	11	10	9	8	10	13	16	19	20	22	22	23	23	24	24	24	24	23	18	16	14	14	17.0	24.2					
6-Aug	15	13	10	12	13	13	11	16	17	19	20	22	21	19	21	20	19	19	18	17	16	14	14	14	16.4	21.7					
7-Aug	13	13	13	13	13	13	13	14	15	15	16	17	18	18	19	20	20	21	21	20	17	14	13	13	15.9	21.3					
8-Aug	13	13	13	12	12	12	12	14	15	16	17	20	21	22	23	24	24	25	25	23	20	15	14	14	17.5	25.2					
9-Aug	14	14	12	11	10	11	12	16	20	22	23	24	25	25	26	27	27	27	26	22	20	17	17	18	19.4	27.0					
10-Aug	18	16	13	11	11	10	13	18	20	22	23	25	26	27	27	27	28	27	28	26	22	18	16	16	20.3	27.7					
11-Aug	16	15	15	13	12	12	14	17	20	23	25	27	27	28	29	29	29	29	28	25	21	20	18	16	21.2	29.2					
12-Aug	14	14	13	13	13	14	15	17	20	23	25	27	29	30	30	30	29	28	25	22	20	18	18	17	21.0	30.2					
13-Aug	16	17	16	16	16	15	16	16	17	17	18	18	19	19	20	20	18	16	15	15	14	14	13	13	16.4	19.9					
14-Aug	12	12	10	10	10	9	9	12	14	16	17	18	19	20	19	19	20	20	20	19	15	12	12	11	14.7	20.3					
15-Aug	10	9	10	10	9	8	9	11	14	15	17	17	18	18	19	20	20	20	20	19	14	13	12	11	14.2	20.0					
16-Aug	10	10	9	10	9	10	11	13	15	16	17	19	21	20	20	20	22	22	21	19	16	15	15	13	15.5	21.6					
17-Aug	12	12	11	10	10	9	10	13	16	18	19	20	21	22	23	23	23	22	21	19	17	16	14	14	16.5	23.5					
18-Aug	15	15	15	16	16	15	15	15	15	15	15	17	18	20	20	19	19	18	17	16	14	12	11	11	15.8	19.8					
19-Aug	11	11	10	10	10	9	8	10	12	13	15	16	18	18	18	19	19	18	18	15	12	13	10	9	13.4	18.6					
20-Aug	10	10	10	9	9	9	8	10	11	13	16	17	18	19	19	19	20	19	19	16	13	11	10	9	13.5	19.6					
21-Aug	9	9	9	9	8	8	9	10	12	15	16	17	19	20	20	20	20	19	18	18	17	16	16	15	14.6	19.8					
22-Aug	15	15	13	13	13	13	13	15	17	19	21	23	24	24	25	26	26	26	26	24	18	18	17	16	19.1	26.4					
23-Aug	16	19	18	16	15	17	17	18	18	20	21	23	24	25	24	24	24	24	23	21	19	15	15	15	19.7	24.9					
24-Aug	15	14	14	14	14	14	14	14	15	16	17	17	17	12	12	12	13	12	12	12	12	11	10	11	13.5	17.1					
25-Aug	10	9	9	9	9	9	9	9	10	10	13	15	16	17	18	18	19	18	17	14	12	11	11	10	12.7	18.6					
26-Aug	10	10	9	10	9	10	10	11	14	16	18	20	20	21	22	22	23	22	21	20	18	17	15	15	16.0	22.6					
27-Aug	14	13	13	12	12	13	13	15	16	17	19	20	21	22	22	21	21	19	19	18	17	16	15	15	16.8	22.0					
28-Aug	14	14	12	12	10	10	10	12	14	16	17	19	20	20	21	21	21	21	21	19	12	11	10	9	15.2	21.1					
29-Aug	6	5	7	8	9	9	10	11	14	16	18	20	22	23	24	24	23	22	21	19	17	16	16	15	15.5	23.7					
30-Aug	15	15	14	13	13	13	13	14	16	17	17	18	21	23	24	25	25	25	24	22	20	18	17	16	18.1	24.9					
31-Aug	16	15	14	15	14	13	12	13	16	17	18	18	18	20	20	21	21	20	19	17	14	13	12	13	16.3	20.9					
13.0 12.6 12.1 11.6 11.3 11.2 11.7 13.6 15.4 17.0 18.4 19.7 20.7 21.3 21.8 22.1 22.1 21.7 20.8 19.4 16.7 14.8 13.9 13.4																									Diurnal Average						
17.7 18.7 17.7 16.1 15.8 16.7 17.1 17.7 20.5 22.9 25.3 27.0 28.6 29.6 30.2 30.0 29.2 28.6 27.6 26.4 22.2 20.1 18.2 18.2																									Diurnal Maximum						

Hourly Averages

External Temperature (ET) - °C

Donnelly - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	12	12	8	6	1	3	6	9	8	7	8	8	4	4	5	3	3	2	4	2	1	4	5	5	2.7	12.4
Dir	47	304	273	289	297	212	227	234	239	261	244	227	281	260	315	341	358	303	278	301	148	147	127	126	263	47
2 Spd	5	3	1	4	5	4	3	4	8	4	8	10	9	6	5	7	7	6	5	1	2	3	4	5	3.8	9.9
Dir	131	130	220	72	85	79	79	131	149	132	165	189	205	195	194	176	204	184	186	141	110	118	117	119	158	189
3 Spd	4	4	12	3	3	5	4	3	5	6	6	5	6	6	7	6	2	17	12	12	3	8	3	4	1.6	17.2
Dir	116	149	179	140	126	68	86	85	142	151	148	114	114	101	89	103	264	298	329	39	197	300	38	197	112	298
4 Spd	5	0	7	7	4	3	4	8	9	7	9	10	12	11	11	11	11	10	10	6	2	1	2	2	4.4	12.0
Dir	209	126	237	263	265	297	267	259	275	300	290	304	302	305	313	313	323	32	43	44	57	20	125	102	305	302
5 Spd	3	3	3	1	1	1	1	4	3	3	5	3	5	4	3	5	3	3	2	2	4	6	4	3	0.9	6.3
Dir	81	100	107	157	114	282	61	60	273	165	191	162	223	246	260	275	298	322	0	79	134	131	126	132	166	131
6 Spd	5	3	1	6	6	7	2	4	7	2	5	5	11	11	12	13	13	14	12	8	7	5	4	5	3.1	13.5
Dir	154	162	129	180	189	179	64	184	213	261	311	286	307	342	348	351	353	3	7	7	10	55	41	38	350	3
7 Spd	5	5	4	7	7	6	8	8	8	7	5	4	1	4	4	4	4	3	3	5	5	7	7	6	2.3	8.0
Dir	44	48	43	45	51	43	49	50	52	47	40	29	170	212	266	233	228	187	168	192	173	141	145	155	78	52
8 Spd	6	7	7	13	12	13	14	8	4	6	7	6	7	8	7	6	6	5	2	3	4	4	6	4	6.2	13.6
Dir	162	157	163	176	179	180	180	161	162	166	188	157	182	197	198	191	187	193	187	41	120	124	128	126	171	180
9 Spd	3	3	3	3	4	3	3	2	3	7	6	6	5	3	3	3	3	4	2	2	4	6	7	7	2.6	7.4
Dir	124	124	96	101	88	79	59	165	149	139	149	161	165	169	177	312	313	319	5	140	125	135	143	159	136	159
10 Spd	9	6	2	4	2	2	1	1	2	4	5	5	4	5	5	6	6	6	4	3	3	5	5	4	1.5	9.3
Dir	178	175	151	85	106	104	146	16	307	287	263	272	304	305	272	277	287	281	269	236	169	156	97	106	240	178
11 Spd	2	2	2	5	4	4	3	6	8	8	9	12	11	10	10	10	9	8	8	6	5	15	7	4	6.7	14.8
Dir	112	155	83	81	90	79	107	114	110	117	120	136	146	141	126	112	108	105	106	110	118	135	120	113	119	135
12 Spd	4	6	7	8	7	7	7	7	8	11	14	18	15	16	16	13	12	9	3	4	4	5	8	9	8.7	17.9
Dir	111	108	107	108	110	111	109	113	127	138	140	148	148	146	140	140	137	135	98	108	109	96	108	108	128	148
13 Spd	10	9	8	9	7	5	7	11	11	10	10	10	14	11	13	14	18	14	11	12	14	11	10	12	6.6	18.3
Dir	108	109	108	117	113	112	158	194	242	259	276	294	277	263	264	259	235	227	209	189	209	212	197	197	218	235
14 Spd	10	12	10	10	11	11	9	14	17	20	18	17	17	15	17	19	17	12	8	9	11	13	13	12	12.2	19.5
Dir	195	202	203	197	205	211	211	222	239	251	254	257	263	247	249	251	263	271	267	226	206	207	218	214	234	251
15 Spd	10	10	11	9	9	11	11	17	18	20	21	25	20	18	18	18	18	12	9	3	4	9	11	11	11.1	24.5
Dir	208	193	204	204	205	207	208	224	242	258	271	269	278	284	274	272	272	287	273	249	167	191	191	196	245	269
16 Spd	11	9	12	11	13	14	14	16	16	16	16	17	23	18	15	13	12	12	11	13	10	13	15	13	12.2	23.2
Dir	192	186	188	185	186	180	180	186	187	192	207	224	241	243	259	251	248	249	258	257	224	219	228	218	217	241
17 Spd	11	9	9	9	8	9	9	11	16	20	20	18	18	15	16	15	15	16	11	8	7	9	11	13	11.5	20.2
Dir	211	206	204	205	200	202	208	216	243	257	256	266	264	246	261	261	265	246	247	245	249	238	201	191	238	256
18 Spd	12	14	13	12	13	11	10	15	11	13	17	20	21	23	20	24	23	25	25	24	20	18	19	19	15.5	25.4
Dir	184	189	182	184	178	180	181	186	199	204	235	234	265	255	247	273	255	241	236	234	234	223	222	228	226	236
19 Spd	19	19	16	16	18	16	12	16	20	24	26	24	26	22	23	25	22	22	26	16	12	16	12	13	17.9	26.2
Dir	228	231	222	223	235	232	212	231	247	256	259	264	268	263	271	270	286	277	272	260	235	229	213	210	250	272
20 Spd	14	14	13	11	12	10	9	11	14	17	17	17	19	18	18	18	21	20	17	11	9	12	12	9	12.7	20.7
Dir	219	219	220	221	222	220	219	219	246	263	264	268	272	272	281	281	270	264	256	248	215	196	200	202	246	270
21 Spd	10	11	12	12	13	12	11	12	12	10	9	12	14	14	14	15	10	4	1	2	3	6	7	9	8.9	15.5
Dir	193	190	189	187	187	188	190	189	196	199	198	188	219	226	241	233	255	268	129	160	114	179	192	188	202	233
22 Spd	10	8	11	12	11	11	10	9	11	9	8	9	14	12	7	9	8	7	5	4	4	5	6	8	6.0	13.5
Dir	194	200	192	187	189	185	191	209	230	242	264	259	244	268	276	282	241	207	178	130	122	110	108	107	212	244



Hourly Averages

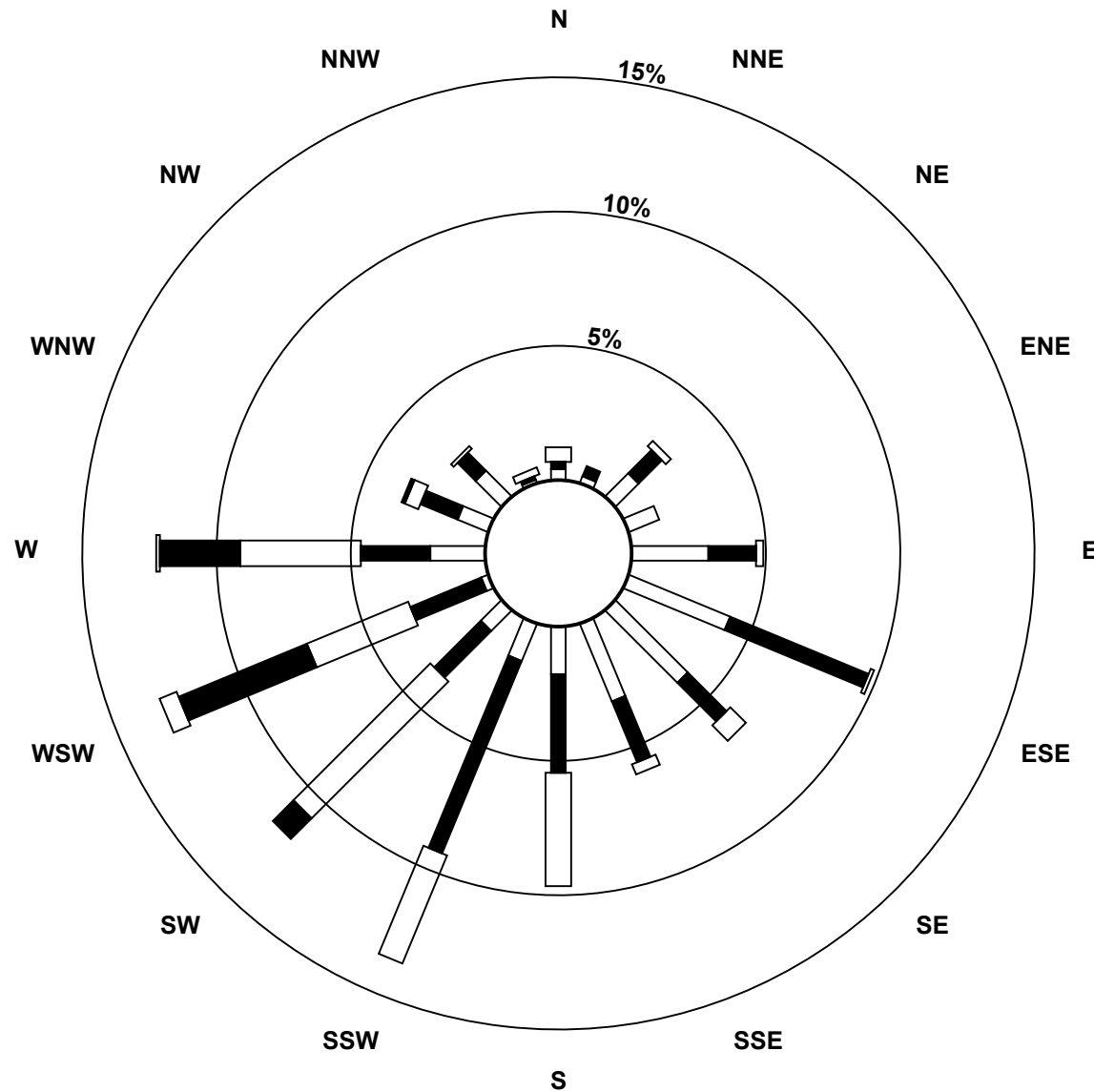
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
23 Spd	6	15	5	1	3	9	8	12	14	14	11	9	7	6	12	9	6	5	4	5	4	3	2	2	4.6	15.1				
Dir	132	178	154	286	174	163	167	170	182	224	248	270	284	260	272	279	240	221	156	129	131	97	218	138	206	178				
24 Spd	15	10	4	6	5	9	3	6	4	1	6	8	3	26	21	22	21	18	14	13	16	18	12	16	8.2	25.5				
Dir	250	312	129	90	194	120	210	254	182	222	28	28	77	258	259	244	250	254	242	223	225	228	225	230	241	258				
25 Spd	21	22	21	28	29	25	22	17	18	19	22	25	28	25	23	27	27	26	23	12	15	13	14	15	20.8	28.9				
Dir	228	226	236	242	259	256	258	241	232	235	248	254	263	259	257	252	254	252	242	238	219	208	210	212	244	259				
26 Spd	15	14	14	12	13	13	13	15	15	16	16	23	24	23	24	26	30	25	23	24	20	19	16	14	17.7	30.3				
Dir	212	208	212	203	197	200	194	198	201	199	217	248	240	236	233	244	249	249	239	241	239	232	221	228	227	249				
27 Spd	13	13	15	12	14	15	16	18	12	15	16	21	28	26	23	14	15	13	10	12	10	8	10	10	13.9	28.0				
Dir	226	208	213	213	221	223	215	223	248	247	248	257	264	265	265	278	269	271	247	240	247	250	213	233	244	264				
28 Spd	10	12	9	9	5	6	8	6	8	8	12	13	13	12	12	11	10	7	4	0	5	5	5	4	5.8	13.1				
Dir	235	251	255	231	204	214	209	229	273	274	264	266	279	275	279	289	298	310	314	72	122	124	121	126	258	266				
29 Spd	0	3	4	2	2	3	5	7	8	9	9	10	11	12	13	12	11	11	9	8	7	7	8	8	7.4	12.7				
Dir	335	80	82	107	108	104	99	100	104	104	107	97	102	94	102	94	96	95	97	97	99	100	106	107	99	102				
30 Spd	8	7	6	7	6	6	7	6	9	11	12	10	10	11	8	7	4	5	3	5	11	12	9	7	6.2	12.3				
Dir	108	102	101	98	107	110	110	120	145	165	180	190	180	196	200	217	178	160	162	168	178	186	196	212	163	186				
31 Spd	6	8	10	11	9	13	13	13	21	27	31	29	25	24	25	29	29	27	19	17	16	16	14	16	17.3	31.1				
Dir	203	194	204	198	198	218	209	221	244	251	258	256	260	256	272	269	255	260	251	235	219	214	212	228	243	258				
Spd	5.8	5.8	6.0	5.5	5.6	5.6	5.7	6.9	7.5	7.7	8.5	8.9	10.0	10.0	9.4	9.6	9.5	8.0	5.9	4.4	5.2	6.2	6.1	6.3	Diurnal Average					
Dir	195	198	197	193	195	193	194	202	218	229	239	244	252	251	257	260	258	258	250	228	205	196	189	194						
Spd	20.8	22.1	20.6	28.4	28.9	25.2	21.9	18.2	20.9	27.3	31.1	29.2	28.1	25.6	25.2	28.9	30.3	26.8	26.2	24.0	20.0	19.1	19.4	19.0	Diurnal Maximum					
Dir	228	226	236	242	259	256	258	223	244	251	258	256	263	265	272	269	249	260	272	241	239	232	222	228						
Maximum Speed Value: 31 km/h on Aug 31 11:00																					Minimum Speed Value: 0 km/h on Aug 29 01:00					Hours in Service:				744
Maximum Daily Speed Average: 20.8 km/h on Aug 25																					Minimum Daily Speed Average: 0.9 km/h on Aug 5					Hours of Data:				744
Maximum Diurnal Speed Average: 10.0 km/h at hour 13																					Minimum Diurnal Speed Average: 4.4 km/h at hour 20					Hours of Missing Data:				0
Monthly Average Velocity: 6.31 km/h 225.8 deg																					Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.2 Q ₁ = 5.1 Median = 9.4 Q ₃ = 13.6 P ₉₀ = 19.7 P ₉₉ = 28.0					Percent Operational Time:				100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																														
Frequency Distribution																														
Speed Range (km/h)																														
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																	
North	6		3		5		0		0		0		14																	
NorthEast	11		16		2		0		0		0		29																	
East	42		46		3		0		0		0		91																	
SouthEast	51		34		11		0		0		0		96																	
South	26		68		48		0		0		0		142																	
SouthWest	12		49		95		25		1		0		182																	
West	19		34		51		46		8		0		158																	
NorthWest	15		11		6		0		0		0		32																	
Total	182		261		221		71		9		0		744																	

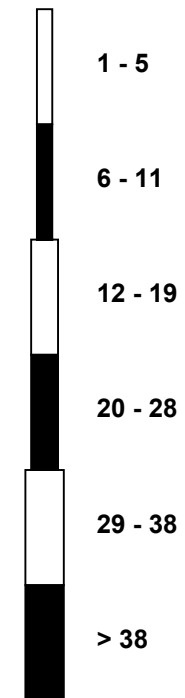
Wind Rose

Wind Speed (WS) (km/h)

Donnelly - August 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - August 2017

Maximum Speed: 31 km/h on Aug 31 11:00																				Maximum Daily Speed Average: 21.7 km/h on Aug 25										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 5 07:00																				Minimum Daily Speed Average: 3.7 km/h on Aug 5										Hours of Data: 744	
Maximum Diurnal Speed Average: 14.4 km/h at hour 13																				Minimum Diurnal Speed Average: 8.0 km/h at hour 21										Hours of Missing Data: 0	
Monthly Average Speed: 10.67 km/h																				Percentiles: P ₁ = 1.5 P ₁₀ = 3.7 Q ₁ = 5.7 Median = 9.6 Q ₃ = 13.8 P ₉₀ = 19.9 P ₉₉ = 28.8										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	13	13	9	6	5	4	6	9	9	8	9	8	4	5	5	5	4	4	5	2	1	5	5	5	6.2	13.4					
2-Aug	5	4	2	4	5	4	3	4	8	5	9	10	10	7	6	8	8	6	5	1	2	3	4	5	5.3	10.4					
3-Aug	4	5	13	4	4	5	4	3	5	6	7	5	6	6	7	6	5	19	14	12	7	9	4	5	6.9	18.5					
4-Aug	5	3	7	7	5	3	4	8	10	8	9	10	13	12	11	12	11	12	10	6	2	1	3	2	7.2	12.5					
5-Aug	3	3	3	2	1	2	1	4	3	4	6	4	6	6	4	6	4	4	3	2	4	6	4	3	3.7	6.3					
6-Aug	5	3	2	6	6	7	3	4	7	3	6	5	11	11	12	13	13	14	12	8	7	5	4	6	7.3	13.7					
7-Aug	6	5	5	8	8	6	8	8	8	7	6	5	4	5	4	5	4	4	4	5	5	7	7	6	5.8	8.3					
8-Aug	6	7	7	13	12	13	14	8	5	6	7	7	8	9	8	7	6	5	3	3	4	4	7	4	7.2	13.7					
9-Aug	3	3	3	3	4	3	3	3	4	7	6	6	6	5	4	5	4	4	2	2	4	6	7	7	4.5	7.4					
10-Aug	9	6	4	5	3	2	1	1	3	4	6	5	5	6	5	7	7	7	4	4	4	5	6	4	4.6	9.3					
11-Aug	3	3	4	6	4	4	3	6	8	8	9	12	12	10	11	10	10	9	8	6	5	15	7	4	7.3	14.9					
12-Aug	4	6	7	8	8	7	7	7	8	12	14	18	15	16	16	13	12	9	3	4	4	5	8	9	9.2	18.1					
13-Aug	10	9	8	9	7	5	7	11	11	10	11	10	14	12	13	15	18	15	11	12	14	11	10	12	11.0	18.4					
14-Aug	10	12	10	10	11	11	9	14	17	20	19	18	17	16	18	19	18	12	8	9	11	13	13	12	13.5	19.8					
15-Aug	10	10	11	10	9	11	12	17	18	20	22	25	20	18	18	18	19	13	9	3	4	10	11	11	13.6	24.9					
16-Aug	11	9	12	11	13	14	14	16	16	16	16	17	24	19	16	13	13	12	11	13	10	13	15	13	14.0	23.7					
17-Aug	11	9	9	9	8	9	9	11	16	20	21	19	18	16	16	16	15	17	11	8	7	9	11	13	12.9	20.5					
18-Aug	12	14	13	12	13	11	10	15	11	13	17	20	22	23	21	24	24	25	25	24	20	18	20	19	17.8	25.5					
19-Aug	19	19	16	16	18	16	12	16	20	25	26	24	26	23	24	25	22	22	26	16	13	16	12	13	19.4	26.4					
20-Aug	14	14	13	11	12	10	9	11	14	17	17	17	20	19	19	18	21	21	17	11	10	12	12	9	14.5	21.0					
21-Aug	10	11	12	12	13	12	11	12	12	11	9	13	15	15	15	16	11	4	2	3	4	6	7	9	10.1	15.8					
22-Aug	10	8	11	12	11	11	10	9	11	10	9	11	14	12	9	9	9	8	5	4	4	5	6	8	9.0	13.8					
23-Aug	7	15	7	6	3	9	8	12	14	15	11	10	8	7	12	9	7	5	4	5	4	3	4	6	8.1	15.1					
24-Aug	19	11	6	7	12	13	9	6	5	3	7	9	4	26	21	22	22	18	14	13	16	18	12	16	12.8	26.2					
25-Aug	21	22	21	29	29	25	22	17	18	19	22	25	28	25	24	28	27	26	23	12	15	13	14	15	21.7	28.9					
26-Aug	16	14	14	12	13	13	13	15	15	17	17	24	25	23	24	27	31	25	23	24	20	19	16	14	18.9	30.5					
27-Aug	13	13	15	12	14	15	16	19	12	15	16	22	28	26	23	15	15	13	10	12	10	8	10	11	15.1	28.3					
28-Aug	10	12	9	9	5	6	8	6	8	9	12	14	14	13	13	12	10	7	4	2	5	5	5	4	8.4	13.6					
29-Aug	2	3	5	3	2	3	5	7	8	9	9	10	11	12	13	12	11	11	9	8	7	7	8	8	7.7	12.9					
30-Aug	8	7	6	7	6	6	7	6	10	11	12	10	10	11	9	7	5	5	3	6	11	12	9	8	8.0	12.4					
31-Aug	6	8	10	11	10	13	13	13	21	28	31	30	26	25	26	29	29	27	19	17	16	16	14	17	19.0	31.3					
9.1 9.0 8.8 9.0 8.8 8.9 8.5 9.6 10.8 11.7 12.8 13.7 14.4 14.1 13.8 13.9 13.4 12.3 10.0 8.3 8.0 9.3 8.9 9.0																									Diurnal Average						
20.9 22.1 20.7 28.9 28.9 25.2 22.0 18.6 21.0 27.6 31.3 29.6 28.5 26.2 25.6 29.1 30.5 26.9 26.3 24.0 20.0 19.2 19.5 19.1																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - August 2017

Maximum Value: 93.8 deg on Aug 1 05:00																			Hours in Service: 744						
Minimum Value: 1.7 deg on Aug 21 05:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 2.8 P ₁₀ = 4.4 Q ₁ = 6.8 Median = 11.4 Q ₃ = 20.7 P ₉₀ = 42.4 P ₉₉ = 82.2																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	11	52	14	26	94	62	13	7	17	18	15	19	42	37	53	66	53	69	43	26	79	14	18	9	93.8
2-Aug	4	7	71	22	11	17	18	20	10	28	21	21	18	40	43	36	39	17	14	65	31	13	10	6	71.5
3-Aug	17	26	5	25	40	30	10	22	15	30	20	28	21	22	19	18	93	22	31	15	65	27	43	73	92.6
4-Aug	29	81	31	15	24	15	9	8	15	19	18	14	17	13	20	18	17	34	10	6	31	31	48	53	81.1
5-Aug	32	24	43	67	40	61	30	33	51	73	33	58	49	46	49	39	44	41	41	23	8	4	6	19	73.4
6-Aug	13	72	65	17	11	47	56	56	24	54	33	41	17	12	13	10	12	9	7	12	8	12	13	16	72.4
7-Aug	18	12	21	8	9	9	7	13	15	13	36	45	88	46	42	59	35	46	57	13	12	6	4	6	87.6
8-Aug	5	6	4	4	3	3	5	21	29	28	20	23	27	26	26	30	31	41	47	30	23	7	22	24	46.7
9-Aug	16	26	15	19	20	18	23	74	36	13	18	28	37	67	63	68	53	25	52	44	9	7	6	8	73.7
10-Aug	7	19	73	31	26	16	67	29	26	32	23	34	44	31	39	22	28	18	11	20	13	8	31	15	72.9
11-Aug	51	70	84	29	17	14	31	11	7	12	16	10	18	18	20	12	11	12	10	10	10	5	5	10	83.6
12-Aug	10	6	9	7	6	8	9	10	12	9	8	8	10	10	8	7	5	10	20	11	12	14	9	7	19.6
13-Aug	7	7	7	12	8	12	19	10	12	10	9	9	7	9	9	15	7	9	10	7	6	6	8	5	19.5
14-Aug	2	4	7	4	4	5	5	8	7	9	14	15	14	21	15	11	11	10	13	10	5	7	5	3	20.9
15-Aug	4	4	3	4	6	5	3	7	9	9	12	11	10	13	16	13	12	10	5	17	11	12	6	3	16.6
16-Aug	4	6	3	3	3	3	3	4	5	5	14	12	12	12	7	7	12	10	5	6	14	4	4	5	14.4
17-Aug	4	7	13	6	4	4	4	7	10	7	10	15	15	19	20	14	12	8	5	13	9	13	8	2	19.5
18-Aug	6	3	4	5	3	5	8	7	15	16	6	5	18	9	12	13	10	7	5	4	4	4	5	4	18.4
19-Aug	4	4	5	4	4	5	6	5	6	6	11	11	10	11	8	14	9	9	5	4	9	6	9	5	13.7
20-Aug	6	3	4	7	5	6	5	8	12	9	15	14	16	19	15	12	9	9	5	5	14	5	4	9	18.6
21-Aug	4	4	3	2	2	4	4	4	5	12	10	14	17	23	14	12	15	26	75	57	53	36	6	3	74.5
22-Aug	3	4	3	3	5	4	5	10	10	22	25	34	13	17	37	24	39	29	15	36	6	11	8	7	38.7
23-Aug	33	5	53	83	88	14	8	10	8	15	15	21	29	36	10	12	30	24	29	10	36	28	61	71	88.3
24-Aug	36	21	57	30	64	54	74	43	37	83	18	21	46	13	10	10	15	10	8	6	5	5	12	8	83.5
25-Aug	6	4	4	10	4	3	4	10	4	5	7	7	9	10	13	8	7	10	5	10	3	5	7	6	13.4
26-Aug	7	4	2	4	3	6	5	5	7	9	15	10	8	12	12	12	7	6	5	4	5	5	9	7	14.5
27-Aug	5	5	5	5	6	7	5	13	7	9	9	11	7	8	9	10	8	6	7	4	4	12	10	11	12.5
28-Aug	10	4	5	17	27	28	5	18	14	18	15	15	20	19	20	21	16	15	14	62	7	6	6	18	62.2
29-Aug	77	22	23	36	42	19	15	12	13	11	11	12	12	12	11	12	10	10	11	12	10	12	11	8	77.1
30-Aug	12	14	13	12	8	8	8	11	9	11	14	9	16	16	25	21	16	14	13	10	4	6	6	21	25.2
31-Aug	11	8	4	4	16	6	5	13	6	9	7	9	11	11	9	7	9	6	10	6	5	4	3	4	16.0
77.1 81.1 83.6 82.8 93.8 61.9 74.5 73.7 51.0 83.5 36.2 57.9 87.6 67.4 63.2 67.9 92.6 69.1 74.5 64.6 78.6 36.1 60.9 73.3																									

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

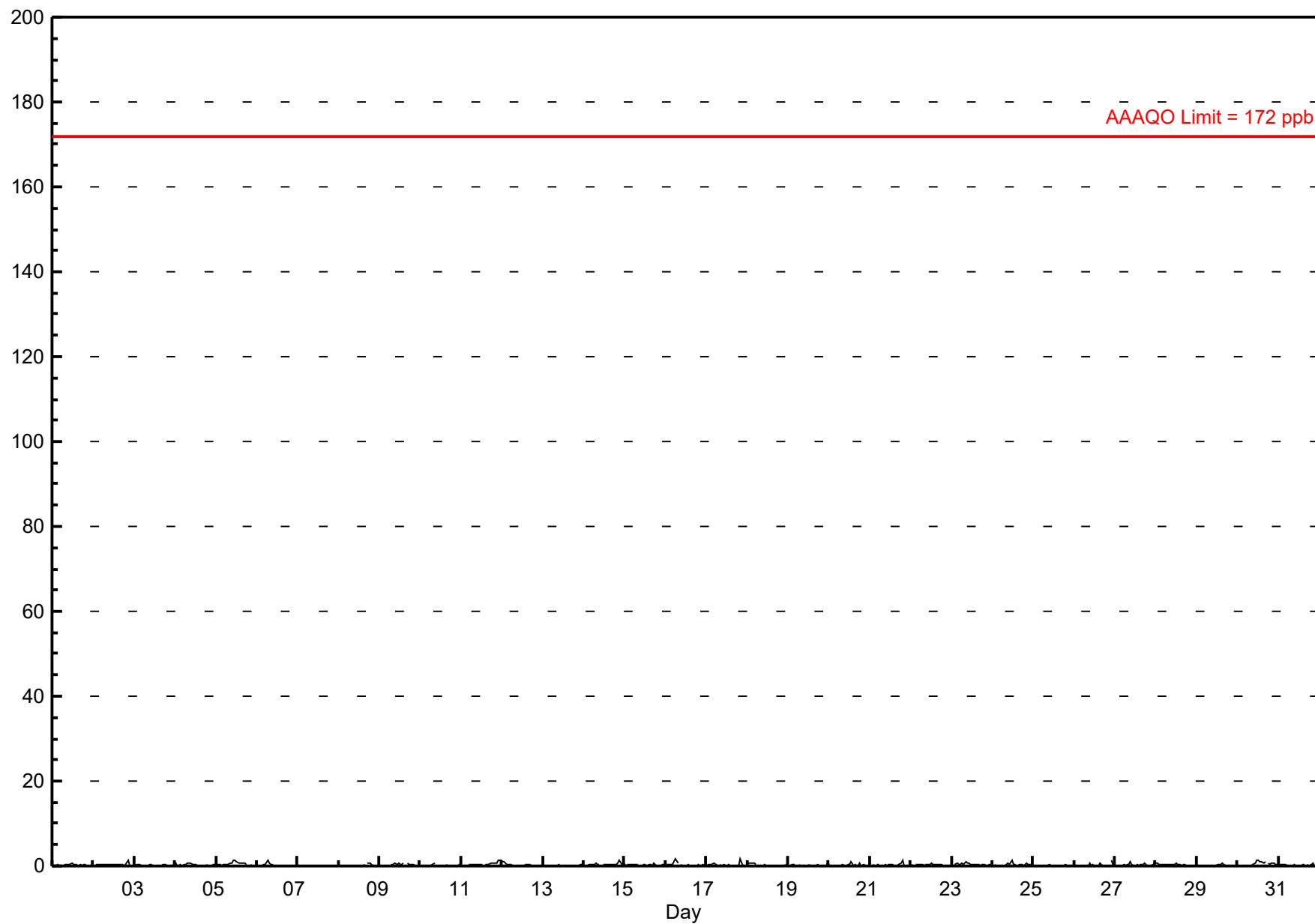
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.7 ppb on Aug 17 21:00 Maximum Daily Average: 0.5 ppb on Aug 5																					Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 3 21:00 Maximum Diurnal Average: 0.3 ppb at hour 12 Monthly Average: 0.24 ppb										Minimum Daily Average: 0.0 ppb on Aug 7 Minimum Diurnal Average: 0.2 ppb at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.4																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Aug	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0.3	1.3
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
4-Aug	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.7
5-Aug	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0.5	1.5
6-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.4
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0.1	0.8
9-Aug	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0.3	0.7
10-Aug	0	0	0	0	0	0	0	0	1	C	C	C	C	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.6
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	0.5	1.4	
12-Aug	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
13-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Aug	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	1	0.4	1.3	
15-Aug	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.7
16-Aug	0	0	0	0	0	1	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
17-Aug	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.3	1.7
18-Aug	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.9	
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0.2	1.1
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	1.4
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
23-Aug	0	A	0	1	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
24-Aug	A	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	A	0	0.3	1.3
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
26-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	A	1	0	0	0.2	1.4
27-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	A	0	0	0	1	0	0.3	1.1
28-Aug	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	A	0	0	0	0	0	0.3	0.6
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0.1	0.6
30-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	0	1	1	0	0	0	0.4	1.3
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0.2	0.6
0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.3 0.3 0.2 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.2																								Diurnal Average			
1.2 0.9 0.8 0.6 0.6 1.1 1.6 0.7 1.0 1.1 1.5 1.4 1.3 1.2 0.9 0.6 1.1 0.8 0.8 1.4 1.7 1.3 1.4 1.4																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - August 2017



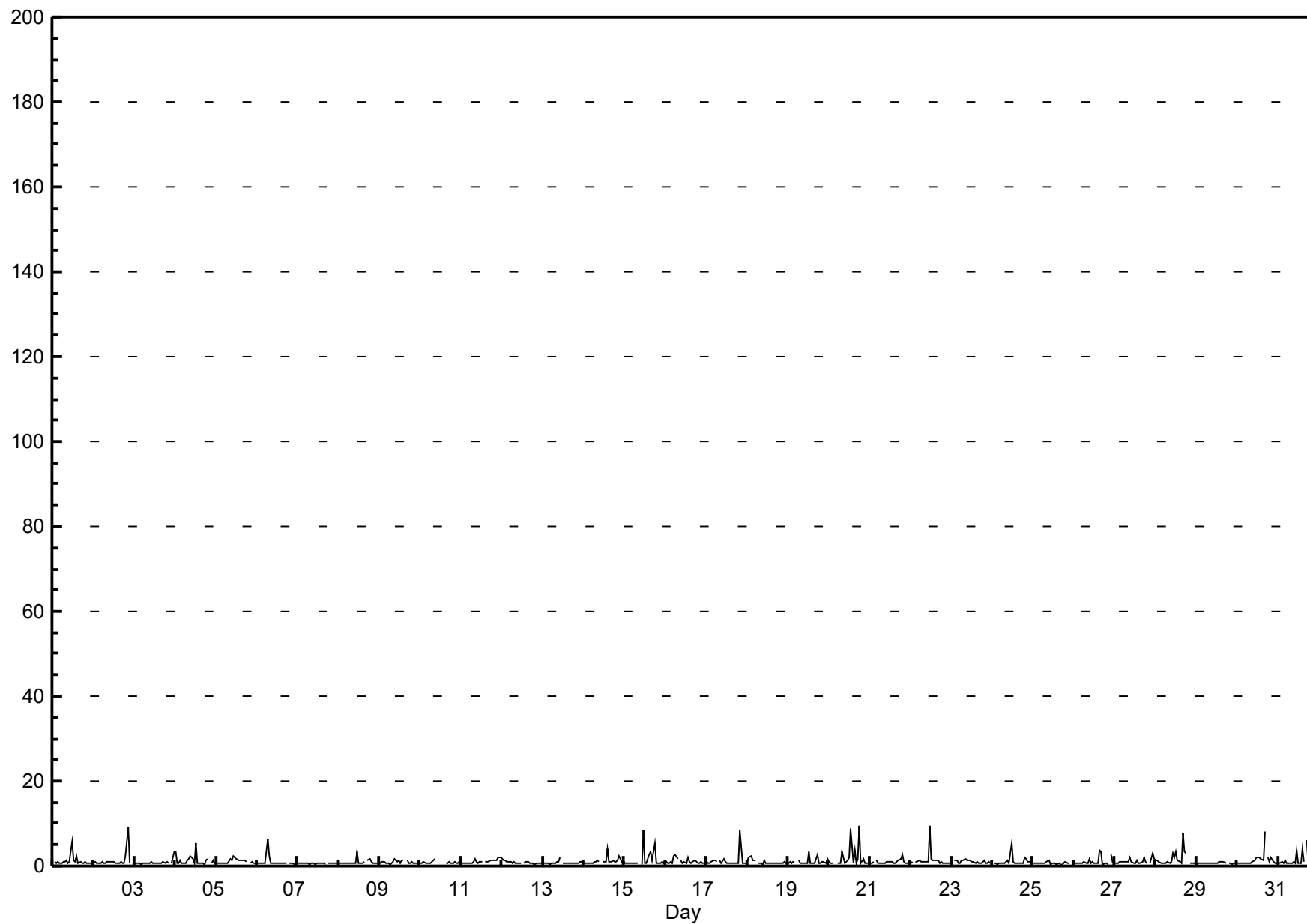
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Portable Rycroft - August 2017

Maximum Value: 9.6 ppb on Aug 22 12:00																				Maximum Daily Average: 1.9 ppb on Aug 20										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 26 21:00																				Minimum Daily Average: 0.6 ppb on Aug 7										Hours of Data: 707									
Maximum Diurnal Average: 2.1 ppb at hour 12																				Minimum Diurnal Average: 0.8 ppb at hour 22										Hours of Missing Data: 37									
Monthly Average: 1.11 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 1.1 P ₉₀ = 1.7 P ₉₉ = 8.2										Hours of Calibration: 37									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	1	1	1	1	1	1	1	1	1	1	6	1	1	2	1	1	1	1	1	1	1	1	A	1.2	5.7													
2-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	9	1	A	1	1.2	9.3													
3-Aug	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	3	0.9	3.3													
4-Aug	3	1	1	1	1	1	1	1	2	2	2	1	5	1	1	1	1	0	1	2	A	1	1	1	1.4	5.5													
5-Aug	1	1	1	1	1	1	1	1	2	1	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1.1	2.3													
6-Aug	1	1	1	1	1	1	7	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1.0	6.5													
7-Aug	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.7													
8-Aug	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	A	1	2	1	1	1	1	1	0.9	3.3													
9-Aug	1	1	1	1	1	1	0	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.5													
10-Aug	1	1	1	1	1	1	1	1	2	C	C	C	C	1	A	1	1	1	1	1	1	1	1	1	0.8	1.7													
11-Aug	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	1.1	2.1													
12-Aug	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	0.9	1.8													
13-Aug	1	1	1	1	0	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.1													
14-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	4	1	1	1	1	1	1	2	1	1	1.1	4.0													
15-Aug	1	1	1	1	1	1	1	1	1	A	0	8	1	1	3	3	1	3	5	1	1	1	1	1	1.7	8.4													
16-Aug	1	1	1	1	1	2	3	2	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	2.6													
17-Aug	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	8	1	1	1	1.2	8.4													
18-Aug	1	2	2	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.2													
19-Aug	1	1	1	1	1	A	1	1	1	1	1	1	3	1	1	1	1	3	1	1	1	1	1	2	1.0	3.3													
20-Aug	1	1	1	1	A	1	1	1	4	1	1	1	2	9	1	4	1	2	9	1	2	1	1	1	1.9	9.5													
21-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1.0	2.6													
22-Aug	1	1	A	1	1	1	1	1	1	1	1	10	2	1	1	1	1	1	1	1	1	1	1	1	1.4	9.6													
23-Aug	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8													
24-Aug	A	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	2	2	1	1	A	1.1	5.5													
25-Aug	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	0	1	1	1	1	A	1	0.7	1.2													
26-Aug	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	4	3	0	1	1	0	A	3	1	1.1	3.8													
27-Aug	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	A	1	3	2	1.1	3.2													
28-Aug	1	1	1	1	1	1	1	1	1	1	3	2	3	1	1	1	8	4	3	A	1	1	1	1	1.6	7.9													
29-Aug	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	0.7	1.1													
30-Aug	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	8	A	2	1	2	1	1	1	1.4	8.2													
31-Aug	1	1	1	1	1	1	1	1	1	1	1	4	1	1	4	1	A	6	1	2	3	1	1	1	1.4	6.0													
0.9 0.8 0.8 0.8 0.8 0.9 1.0 0.9 1.1 1.0 1.1 2.1 1.3 1.2 1.2 1.1 1.4 1.4 1.4 1.0 1.5 0.8 1.0 1.0																									Diurnal Average														
3.3 2.1 2.2 1.3 1.4 2.3 6.5 2.3 3.5 2.3 3.1 9.6 5.5 8.7 4.1 3.8 8.2 6.0 9.5 2.6 9.3 2.3 3.2 3.3																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

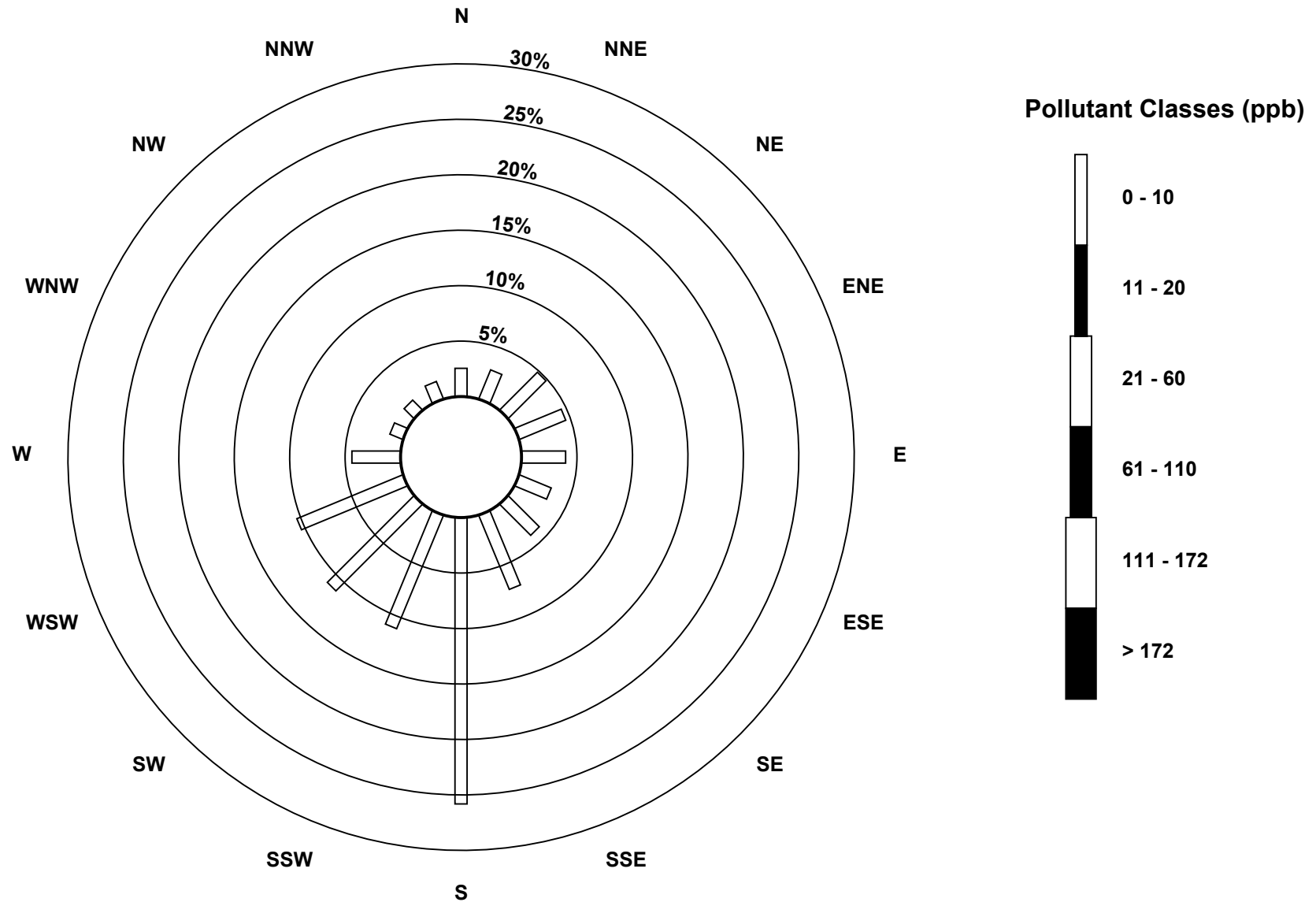
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - August 2017



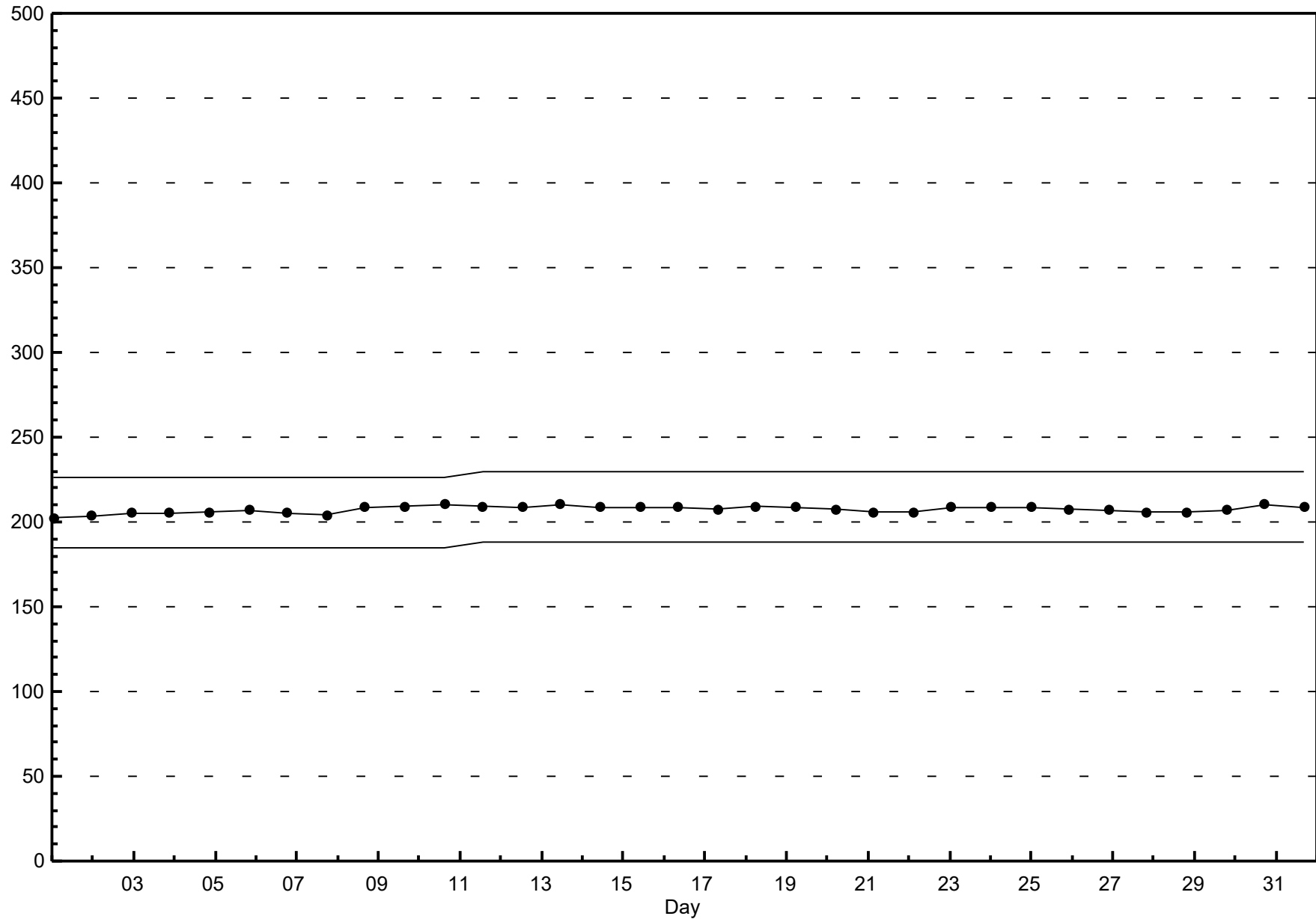
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - August 2017



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - August 2017



Hourly Averages

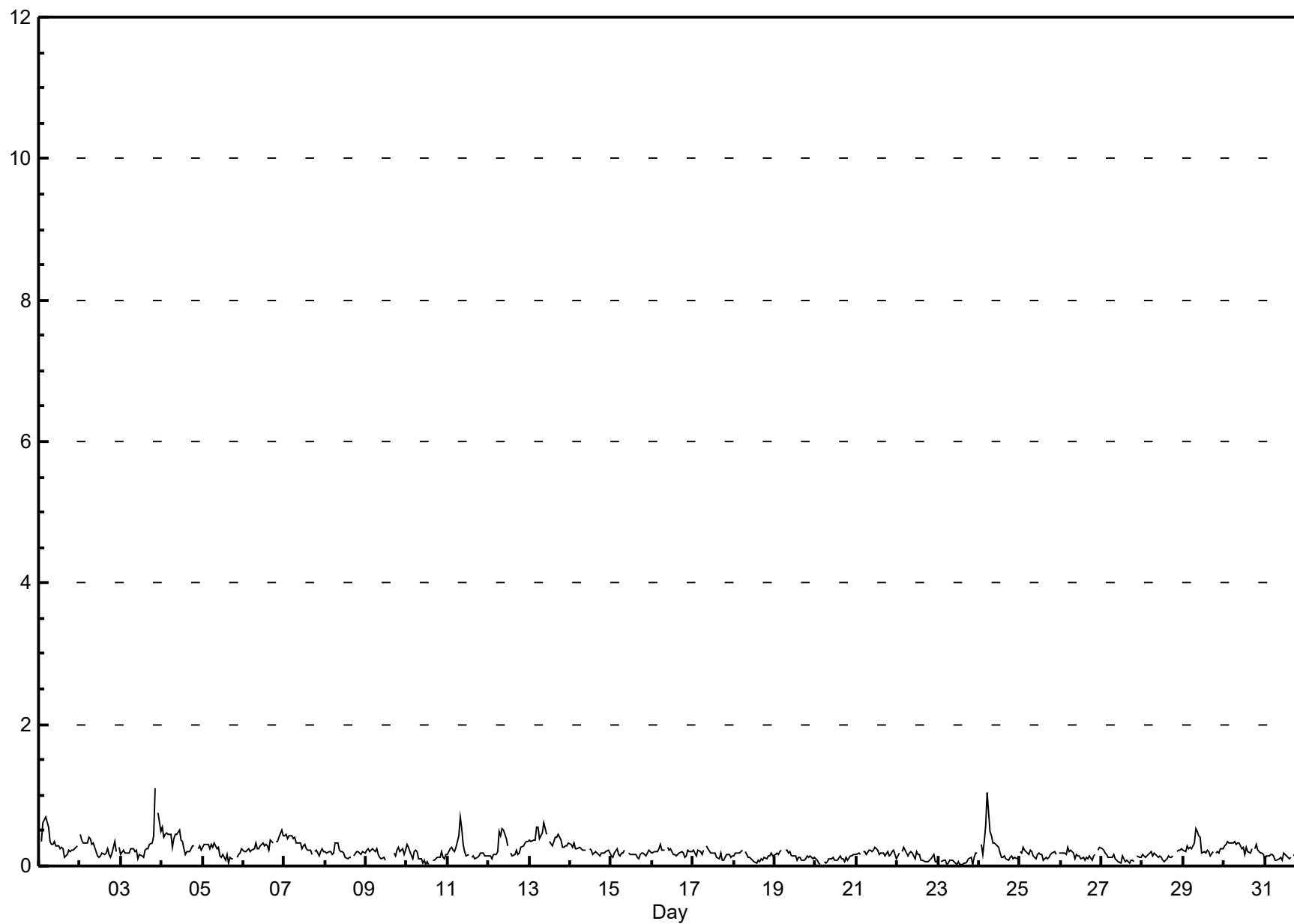
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - August 2017

Maximum Value: 1.1 ppb on Aug 3 21:00																				Maximum Daily Average: 0.4 ppb on Aug 13				Hours in Service: 744		
Minimum Value: 0 ppb on Aug 10 14:00																				Minimum Daily Average: 0.1 ppb on Aug 23				Hours of Data: 708		
Maximum Diurnal Average: 0.3 ppb at hour 6																				Minimum Diurnal Average: 0.1 ppb at hour 16				Hours of Missing Data: 36		
Monthly Average: 0.21 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.3 P ₉₉ = 0.6				Hours of Calibration: 36		
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.7
2-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4
3-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0.3	1.1
4-Aug	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.6
5-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3
6-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0.3	0.5
7-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4
8-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3
9-Aug	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0.2	0.3
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.3
11-Aug	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.7
12-Aug	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
13-Aug	0	0	0	0	1	1	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
14-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
21-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
22-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
23-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Aug	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	1.0
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3
29-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.5
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.3
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2																									Diurnal Average	
0.6 0.4 0.6 0.7 0.7 1.0 0.5 0.7 0.6 0.5 0.5 0.4 0.3 0.3 0.3 0.4 0.4 0.5 0.4 0.4 1.1 0.4 0.7 0.5																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - August 2017



Hourly Maximums

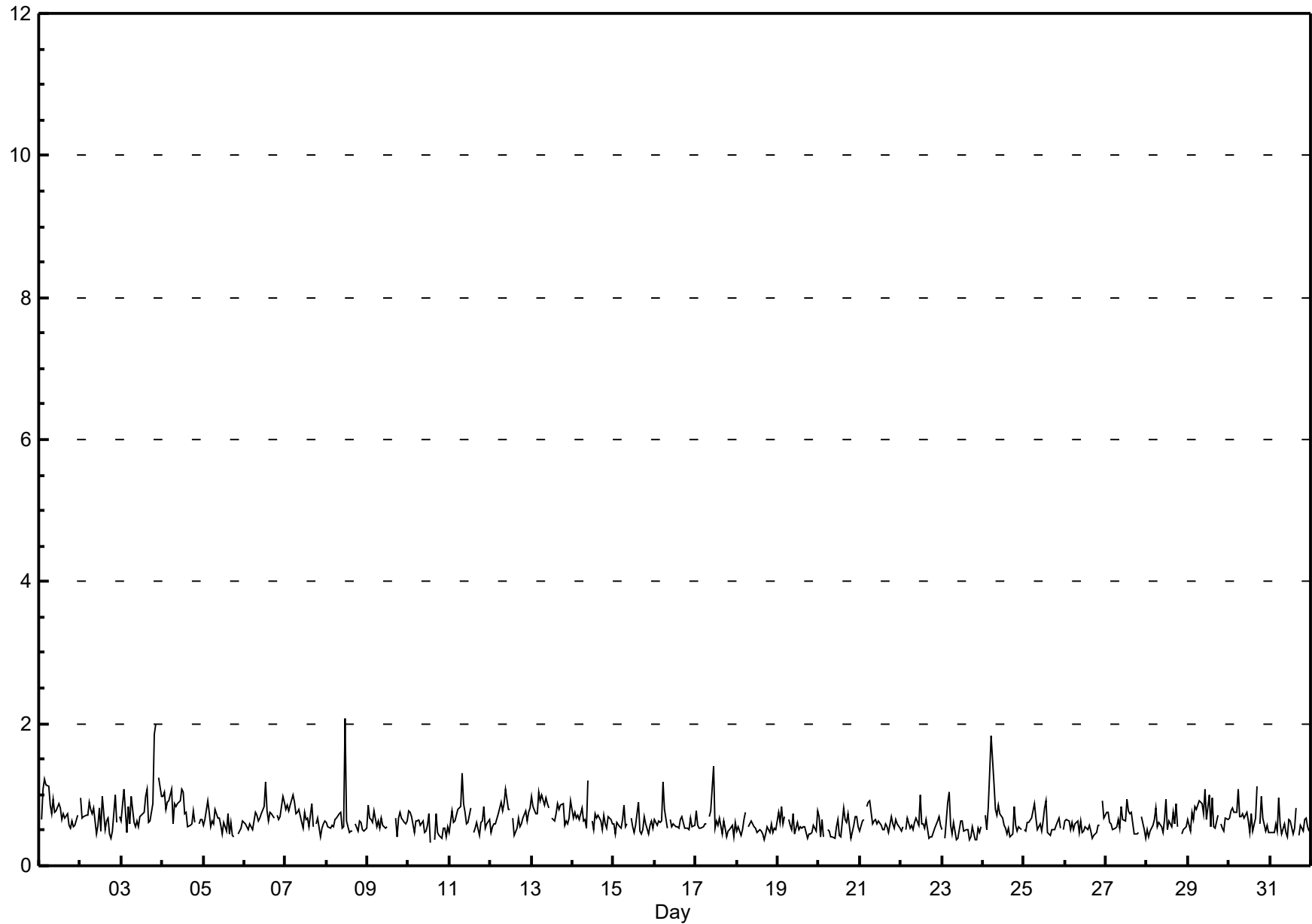
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - August 2017

Maximum Value: 2.1 ppb on Aug 8 12:00																				Maximum Daily Average: 0.9 ppb on Aug 3										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 10 14:00																				Minimum Daily Average: 0.5 ppb on Aug 18										Hours of Data: 708	
Maximum Diurnal Average: 0.8 ppb at hour 6																				Minimum Diurnal Average: 0.5 ppb at hour 18										Hours of Missing Data: 36	
Monthly Average: 0.65 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.3										Hours of Calibration: 36	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.2					
2-Aug	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	1	1	A	1	0.7	1.0					
3-Aug	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	1	1	0.9	2.0					
4-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1					
5-Aug	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	0	A	0	0	1	1	0.6	0.9					
6-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.2					
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	0.7	1.0					
8-Aug	1	1	1	1	1	1	1	1	1	1	1	2	1	0	0	0	A	1	0	1	1	1	0	1	0.6	2.1					
9-Aug	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	0	1	1	1	1	1	1	0.6	0.9					
10-Aug	1	1	1	0	1	1	1	1	1	0	0	1	1	0	A	0	1	0	0	0	1	1	0	1	0.6	0.8					
11-Aug	0	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0	1	1	1	1	1	1	0.7	1.3					
12-Aug	0	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	0.7	1.1					
13-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0					
14-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2					
15-Aug	1	0	1	1	1	1	1	1	1	A	1	1	0	1	1	0	0	1	1	1	0	1	1	1	0.6	0.9					
16-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2					
17-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	0	0	1	1	0	1	0.6	1.4					
18-Aug	0	1	0	1	1	1	A	1	1	1	1	1	0	1	0	0	0	0	1	0	1	0	1	1	0.5	0.7					
19-Aug	1	1	1	1	1	A	1	1	0	1	0	1	1	1	1	1	1	0	0	0	0	1	0	1	0.6	0.8					
20-Aug	1	0	1	0	A	1	0	0	0	0	1	1	0	0	1	1	1	1	1	0	1	1	1	1	0.5	0.8					
21-Aug	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	0.9					
22-Aug	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0.6	1.0					
23-Aug	1	A	0	1	1	1	0	1	0	0	1	1	1	0	0	1	0	0	1	0	0	1	0	1	0.5	1.0					
24-Aug	A	1	1	1	1	2	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	1	1	A	0.7	1.8					
25-Aug	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	1	A	1	1	0.6	0.9					
26-Aug	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0	0	0	0	1	1	A	1	1	0.6	0.9					
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	1	1	0	0.6	0.9					
28-Aug	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	0	1	1	1	0.6	0.9					
29-Aug	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	0.7	1.1					
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	A	1	1	1	0	1	0	0.7	1.1					
31-Aug	0	0	0	1	0	1	1	0	1	0	0	1	1	0	1	1	A	0	1	0	1	1	1	0	0.6	0.9					
0.7 0.6 0.7 0.6 0.7 0.8 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.6 0.6 0.6 0.6 0.6 0.5 0.6 0.6 0.6 0.6 0.6 0.6																									Diurnal Average						
1.0 1.1 1.1 1.2 1.3 1.8 1.2 1.3 1.0 1.2 1.4 2.1 1.2 1.0 1.0 1.1 1.1 0.9 0.9 1.9 2.0 0.7 1.2 1.0																									Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																															

Hourly Maximums

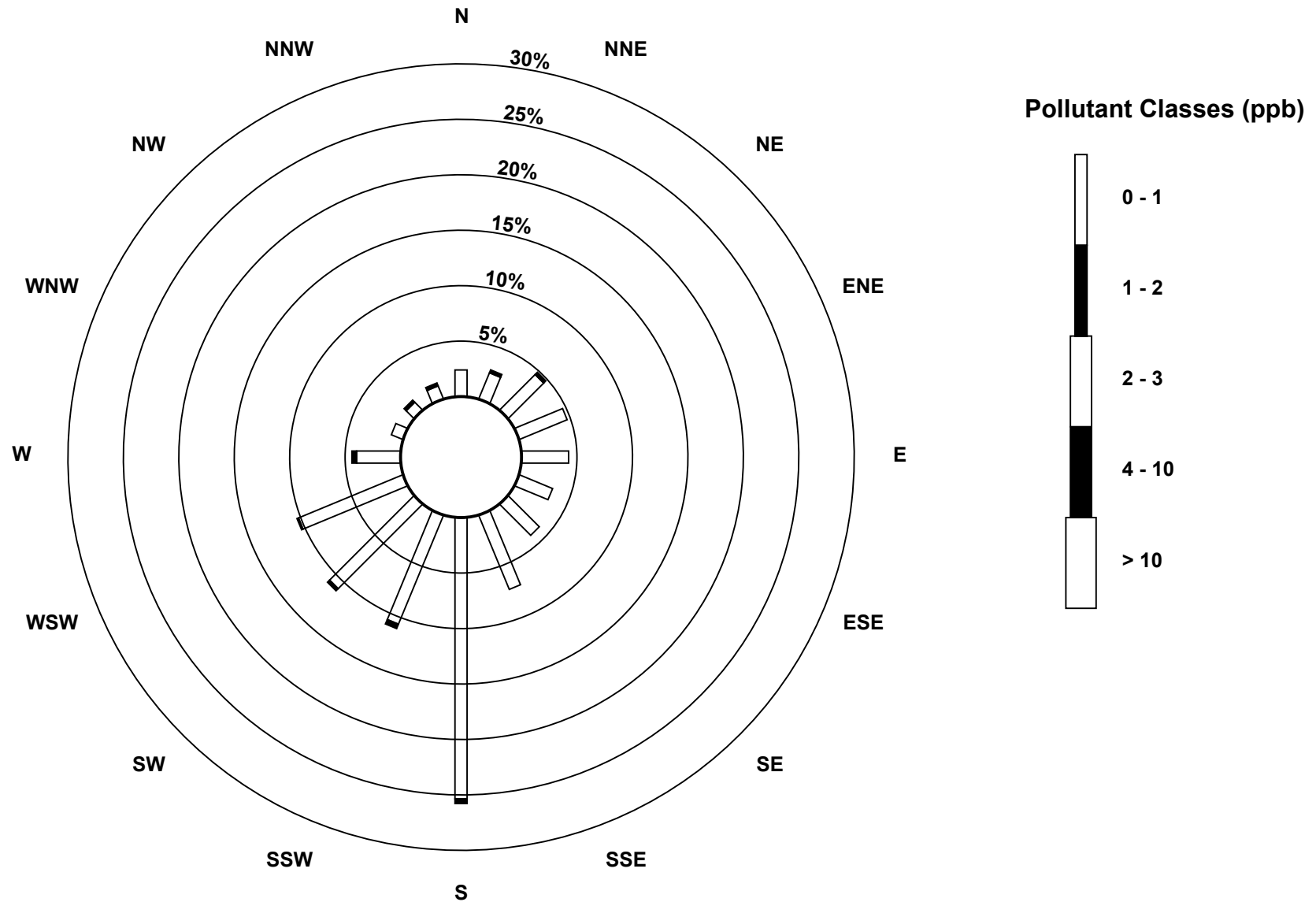
Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - August 2017



Pollutant Rose

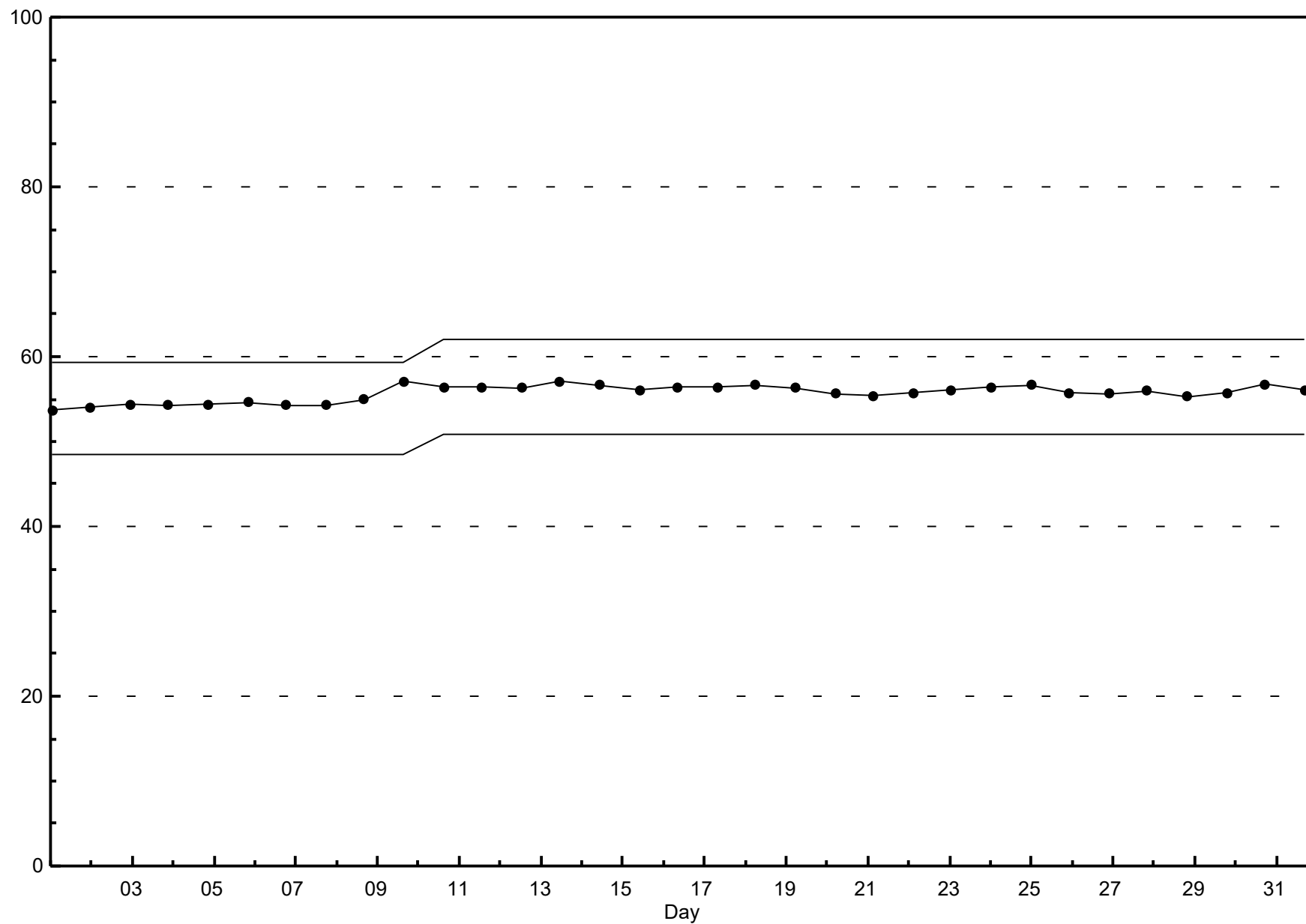
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - August 2017



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - August 2017



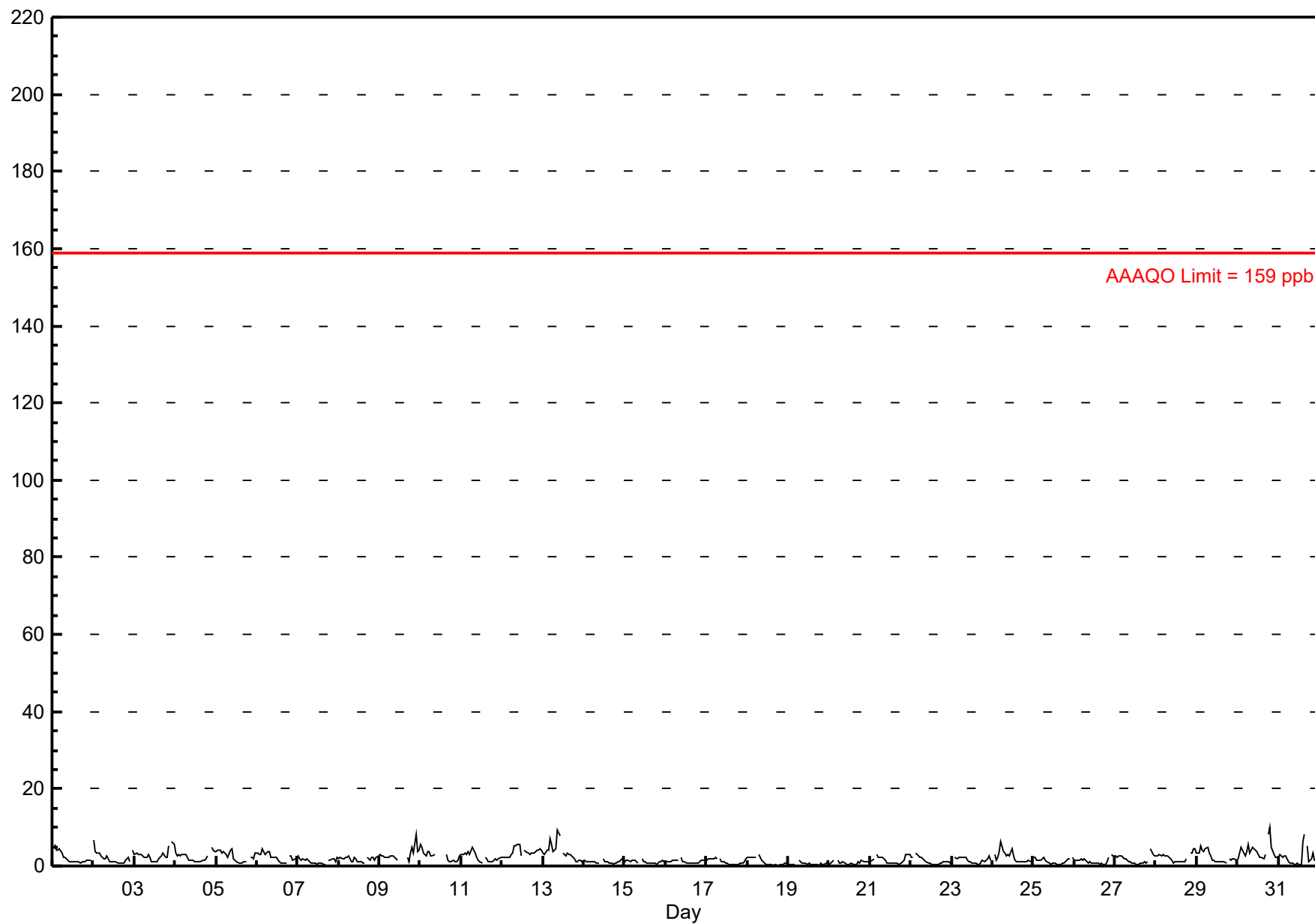
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb Portable Rycroft - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.1 ppb on Aug 30 20:00 Maximum Daily Average: 3.8 ppb on Aug 30																				Hours in Service: 744 Hours of Data: 702 Hours of Missing Data: 42 Hours of Calibration: 37 Percent Operational Time: 99.3							
Minimum Value: 0 ppb on Aug 19 19:00 Maximum Diurnal Average: 2.7 ppb at hour 5 Monthly Average: 1.93 ppb										Minimum Daily Average: 0.6 ppb on Aug 19 Minimum Diurnal Average: 1.0 ppb at hour 14 Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.6 Q ₃ = 2.6 P ₉₀ = 3.7 P ₉₉ = 7.4																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	6	4	4	4	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	A	2.0	5.7	
2-Aug	7	4	3	3	2	2	2	2	3	1	1	1	1	1	1	1	1	1	1	1	2	1	A	4	2.0	6.6	
3-Aug	3	3	3	3	3	2	2	2	3	2	1	1	1	1	2	2	2	3	2	2	5	A	6	6	2.7	6.2	
4-Aug	3	3	3	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	2	3	A	5	4	4	2.3	4.8	
5-Aug	4	4	4	3	4	3	3	2	4	4	2	2	1	1	1	1	1	1	1	A	2	2	2	3	2.4	4.3	
6-Aug	3	3	3	4	4	3	4	4	2	2	2	2	1	1	1	1	1	1	A	3	3	2	2	2	2.3	4.3	
7-Aug	3	2	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	A	2	1	2	2	1	2	1.3	2.6	
8-Aug	2	2	2	2	2	2	3	1	1	2	2	1	1	1	1	1	A	2	1	2	2	1	2	3	1.7	2.6	
9-Aug	3	3	3	2	2	2	2	2	3	2	1	M	M	M	M	M	2	1	3	5	3	8	4	4	3.0	8.1	
10-Aug	6	5	3	3	4	4	3	3	3	C	C	C	C	C	A	3	1	1	1	1	1	1	2	3	2.6	5.6	
11-Aug	3	3	3	3	4	3	5	4	3	2	1	1	1	A	2	2	1	1	1	2	2	2	2	2	2.3	4.7	
12-Aug	2	2	2	2	2	3	3	5	5	6	5	3	A	4	4	3	3	3	3	3	4	4	5	4	3.6	5.8	
13-Aug	3	3	4	4	7	6	4	5	9	8	8	A	3	2	3	3	3	3	2	1	1	2	1	1	3.8	9.2	
14-Aug	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	2	2	1.1	1.8	
15-Aug	1	1	1	1	2	2	1	1	1	A	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1.1	1.8	
16-Aug	1	1	1	1	1	1	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.2	
17-Aug	1	2	2	2	2	2	2	A	2	1	1	1	1	0	0	0	0	0	0	0	1	1	1	2	1.1	2.1	
18-Aug	2	2	2	2	2	2	A	3	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1.0	3.1	
19-Aug	0	0	0	0	0	A	2	1	1	1	1	0	1	0	0	0	1	0	0	1	1	1	1	1	0.6	1.6	
20-Aug	0	1	1	1	A	2	1	1	1	1	0	0	0	1	0	0	0	1	1	1	1	1	1	1	0.8	1.5	
21-Aug	1	2	2	A	3	2	2	2	2	2	1	1	1	1	1	1	1	0	1	1	2	3	3	3	1.6	3.1	
22-Aug	2	2	A	3	3	2	2	2	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1.3	3.5	
23-Aug	2	A	2	2	2	2	2	2	2	2	1	1	1	1	1	0	0	1	1	1	2	2	2	2	1.5	2.4	
24-Aug	A	3	2	2	4	6	4	3	2	3	3	5	2	1	1	1	1	1	1	1	1	1	1	A	2.3	6.2	
25-Aug	2	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	2	1.3	2.4	
26-Aug	2	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	2	A	3	2	1.2	2.9	
27-Aug	2	2	3	2	2	2	2	1	1	1	1	1	0	0	1	1	1	1	1	1	A	4	3	3	1.6	4.4	
28-Aug	3	3	3	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	2	A	3	3	4	4	2.2	4.5	
29-Aug	3	3	5	4	4	5	5	3	2	2	1	1	1	1	1	1	1	1	A	2	2	2	2	1	2.3	5.1	
30-Aug	2	3	5	4	3	4	5	3	4	5	4	4	3	2	2	2	3	A	8	10	5	3	2	2	3.8	10.1	
31-Aug	2	3	2	3	3	2	1	1	1	1	0	1	1	1	6	8	A	5	1	2	3	2	1	1	2.2	8.4	
2.4 2.5 2.5 2.5 2.7 2.6 2.5 2.2 2.3 2.1 1.6 1.3 1.1 1.0 1.2 1.3 1.1 1.3 1.4 1.8 2.0 2.1 2.2 2.4																								Diurnal Average			
6.6 5.7 5.1 4.3 6.9 6.2 5.5 5.2 9.2 8.5 7.7 4.5 3.4 4.2 6.4 8.4 3.1 5.2 8.1 10.1 5.1 8.1 6.2 5.6																								Diurnal Maximum			
C - Calibration M - Maintenance A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																											

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - August 2017



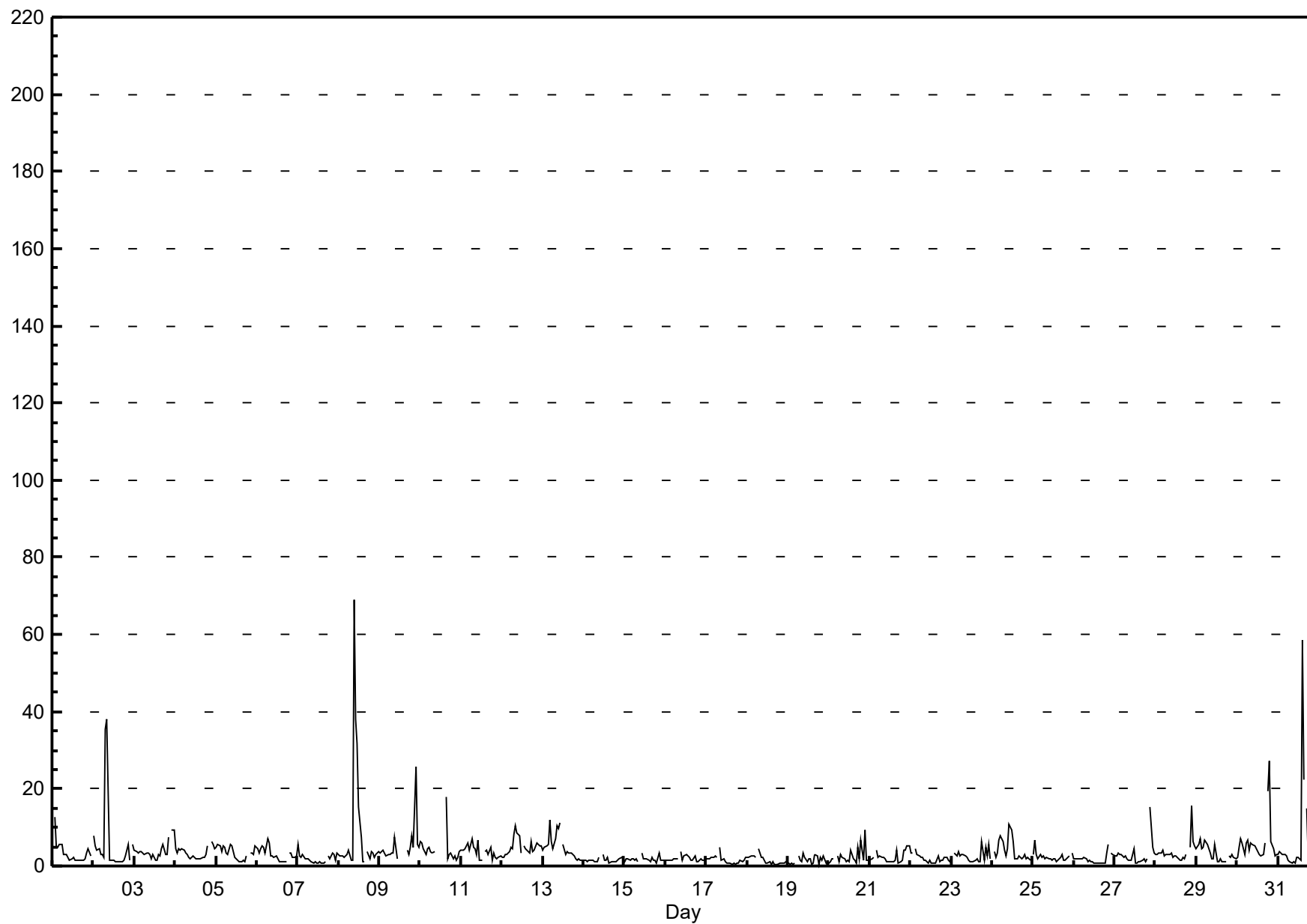
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb Portable Rycroft - August 2017

Maximum Value: 69.0 ppb on Aug 8 10:00																				Maximum Daily Average: 9.1 ppb on Aug 8										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 18 18:00																				Minimum Daily Average: 1.5 ppb on Aug 19										Hours of Data: 702									
Maximum Diurnal Average: 5.4 ppb at hour 10																				Minimum Diurnal Average: 1.9 ppb at hour 14										Hours of Missing Data: 42									
Monthly Average: 3.44 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 1.0 Q ₁ = 1.5 Median = 2.4 Q ₃ = 3.7 P ₉₀ = 5.6 P ₉₉ = 24.6										Hours of Calibration: 37									
																				Percent Operational Time: 99.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	13	5	5	6	5	3	3	3	2	2	2	2	2	2	1	2	2	2	2	3	5	3	A	3.3	12.6													
2-Aug	8	5	4	4	3	3	2	35	38	2	1	1	1	1	1	1	1	1	1	3	6	2	A	6	5.7	37.9													
3-Aug	4	4	3	4	4	3	3	4	3	3	2	3	1	1	3	2	4	5	3	3	7	A	9	10	3.9	9.5													
4-Aug	5	4	5	4	4	4	3	3	2	2	3	2	2	2	2	2	2	2	3	5	A	7	6	5	3.4	6.5													
5-Aug	5	5	5	4	5	5	3	3	5	5	4	2	2	1	1	1	1	1	2	A	3	4	3	5	3.4	5.4													
6-Aug	5	3	4	5	5	3	7	6	3	3	2	3	2	1	1	1	1	1	A	4	3	2	2	2	3.1	7.1													
7-Aug	6	3	2	3	2	2	2	1	1	1	1	1	1	1	1	1	1	A	3	2	3	3	2	3	1.9	5.6													
8-Aug	3	3	2	2	3	3	4	2	2	69	38	32	15	7	1	1	A	4	2	4	3	2	3	4	9.1	69.0													
9-Aug	4	4	4	3	3	3	3	3	3	8	2	M	M	M	M	M	4	3	5	8	5	26	5	5	5.3	25.7													
10-Aug	6	6	4	3	5	5	4	3	4	C	C	C	C	C	A	18	2	3	3	2	3	2	2	4	4.3	17.8													
11-Aug	4	4	5	5	6	4	7	5	5	3	7	2	1	A	4	4	3	5	1	3	2	2	2	3	3.8	7.2													
12-Aug	2	2	3	3	4	5	4	8	10	9	8	3	A	5	4	4	4	6	4	4	6	5	5	5	5.0	10.4													
13-Aug	4	5	5	6	12	6	5	7	10	10	11	A	6	3	4	3	3	3	3	2	1	2	2	2	5.0	12.0													
14-Aug	2	1	1	2	1	1	1	1	1	2	A	3	1	1	2	1	1	1	1	1	1	2	2	2	1.5	3.1													
15-Aug	1	2	2	2	2	2	2	2	1	A	3	2	2	2	1	1	2	1	2	1	3	1	2	1	1.7	3.3													
16-Aug	1	1	1	1	2	2	2	2	A	4	2	3	3	3	2	2	2	3	1	1	2	2	2	2	1.9	3.8													
17-Aug	2	2	2	2	2	2	2	A	5	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.6	4.9													
18-Aug	2	2	2	3	3	2	A	4	2	2	2	1	1	1	0	1	0	0	0	1	1	1	1	1	1.5	4.4													
19-Aug	1	0	1	1	1	A	2	1	1	4	2	1	2	2	0	1	3	3	0	2	1	3	1	1	1.5	3.5													
20-Aug	1	1	2	2	A	3	1	3	2	2	1	2	1	4	2	1	1	5	2	7	2	9	1	1	2.4	9.3													
21-Aug	2	2	2	A	4	2	3	2	2	2	1	1	1	1	1	1	4	1	1	1	4	4	5	5	2.4	5.3													
22-Aug	3	4	A	5	3	3	2	2	2	1	1	2	1	1	1	1	3	1	1	2	2	2	2	1	1.9	4.6													
23-Aug	2	A	3	3	4	3	3	3	2	2	2	1	1	1	1	2	1	1	6	2	5	3	6	2	2.5	6.4													
24-Aug	A	4	2	3	7	8	6	4	3	4	11	9	6	2	2	2	3	2	2	3	2	2	1	A	4.0	10.7													
25-Aug	3	7	3	2	3	2	3	2	2	2	2	2	2	2	1	2	2	3	2	2	2	3	A	4	2.4	6.8													
26-Aug	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	3	6	A	3	3	1.8	5.6													
27-Aug	3	3	3	3	3	2	3	2	1	1	1	5	1	1	1	1	1	2	1	2	A	15	5	3	2.8	15.4													
28-Aug	3	3	4	3	4	3	3	3	3	3	2	3	3	2	1	1	2	2	3	A	5	16	6	5	3.6	15.5													
29-Aug	4	6	7	5	5	7	6	4	3	2	2	6	1	1	2	1	1	1	A	3	2	3	2	2	3.3	6.9													
30-Aug	2	5	7	6	3	6	7	4	6	6	5	4	4	3	3	3	6	A	19	27	7	5	3	3	6.2	27.1													
31-Aug	3	4	3	3	3	3	1	1	1	1	1	2	2	2	59	22	A	15	2	4	17	8	2	1	6.9	58.5													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																															

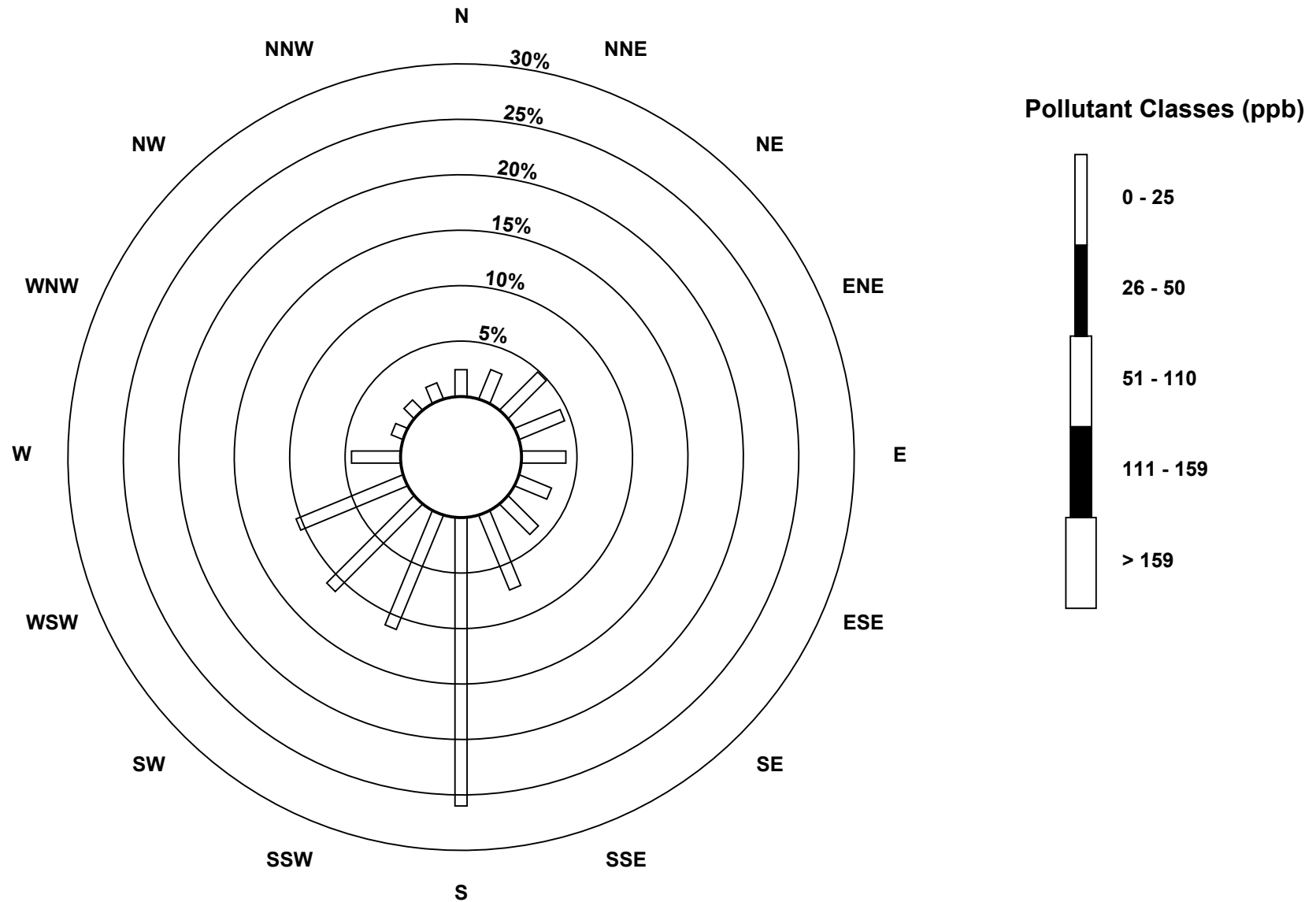
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - August 2017



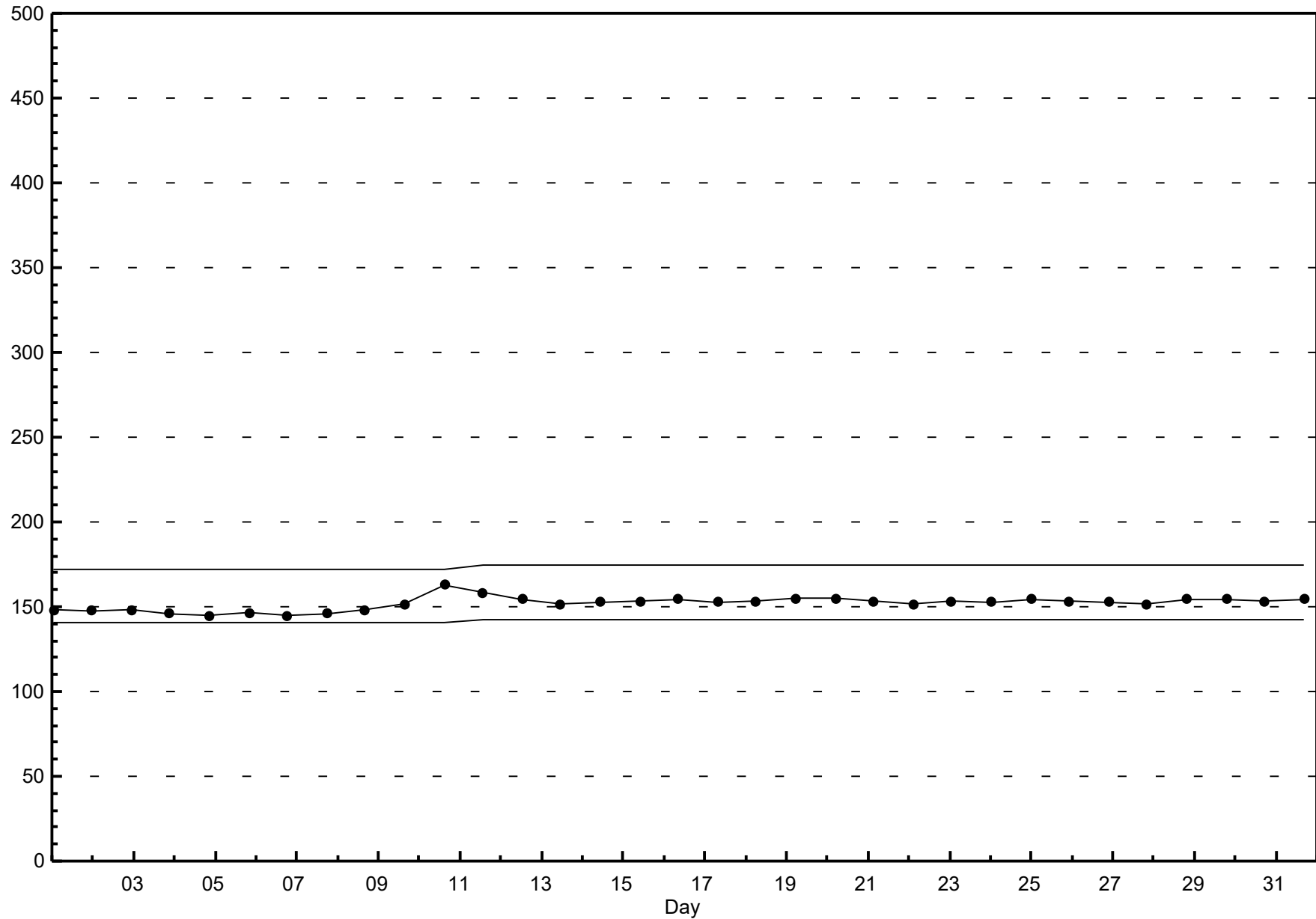
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - August 2017



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - August 2017



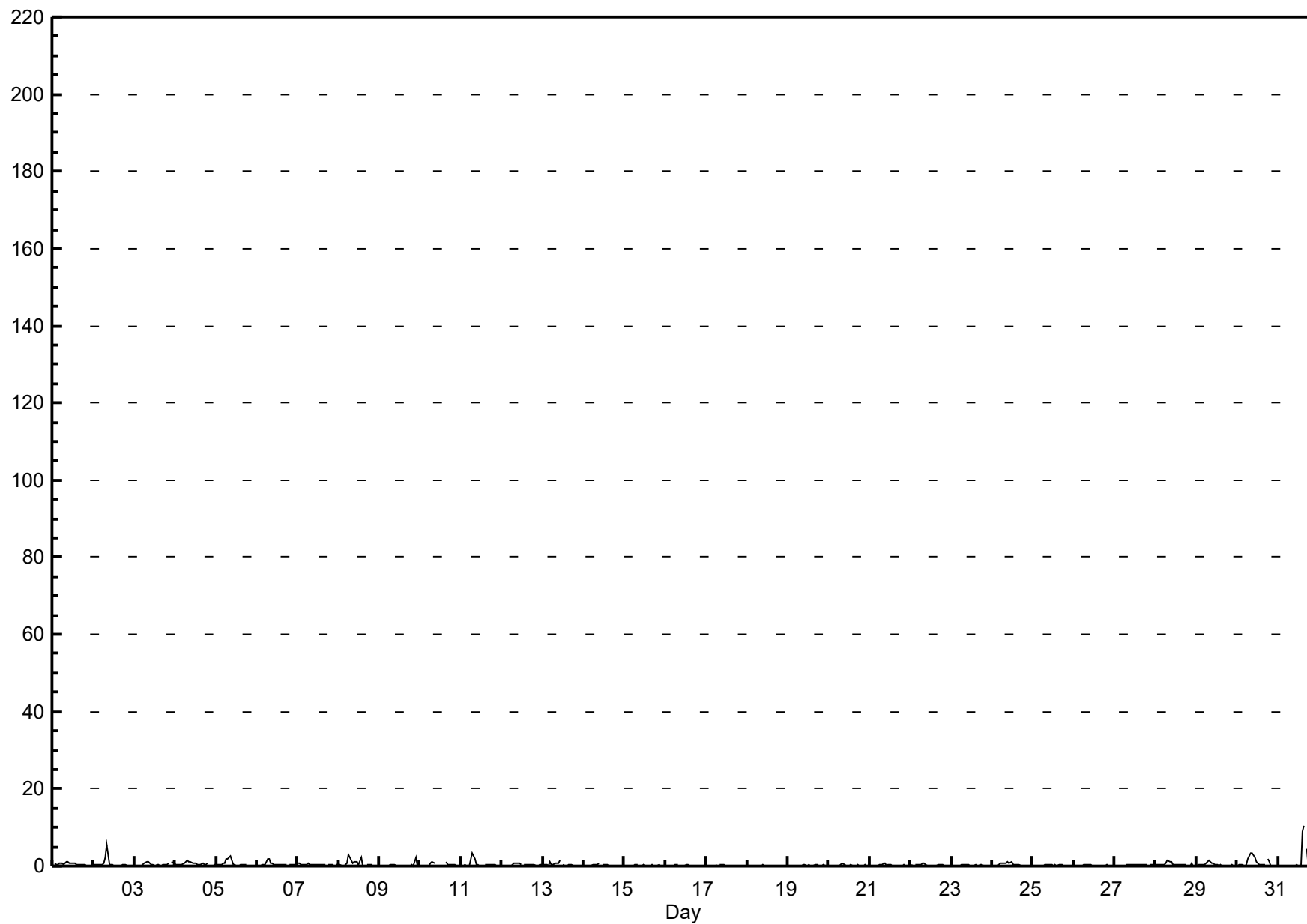
Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Rycroft - August 2017

Maximum Value: 10.6 ppb on Aug 31 16:00																				Maximum Daily Average: 1.2 ppb on Aug 31					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 5 21:00																				Minimum Daily Average: 0.1 ppb on Aug 18					Hours of Data: 702	
Maximum Diurnal Average: 1.0 ppb at hour 9																				Minimum Diurnal Average: 0.1 ppb at hour 23					Hours of Missing Data: 42	
Monthly Average: 0.36 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.8 P ₉₉ = 3.3					Hours of Calibration: 37	
																				Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0.5	1.1
2-Aug	0	0	0	0	0	0	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.6	5.4
3-Aug	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	A	1	1	0.4	1.2
4-Aug	1	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	A	0	0	0	0.6	1.5
5-Aug	0	0	0	0	1	1	2	2	2	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	2.5
6-Aug	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.4	1.8
7-Aug	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
8-Aug	0	0	0	0	0	1	3	2	1	1	1	0	2	0	0	0	A	0	0	0	0	0	0	0	0.6	3.1
9-Aug	0	0	0	0	0	0	0	0	1	0	0	M	M	M	M	M	0	0	0	0	0	2	0	0	0.2	2.2
10-Aug	0	0	0	0	0	0	1	1	1	C	C	C	C	C	A	1	0	0	0	0	0	0	0	0	0.3	1.2
11-Aug	0	0	0	0	0	0	3	3	2	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.5	3.3
12-Aug	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
13-Aug	0	0	0	0	1	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
14-Aug	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
15-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
16-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
17-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
18-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
20-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
21-Aug	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8
22-Aug	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
23-Aug	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
24-Aug	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.4	1.1
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.4
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.2	0.5
28-Aug	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0.4	1.4
29-Aug	0	0	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.3
30-Aug	0	0	0	0	0	0	2	2	3	3	2	1	1	0	0	0	0	A	2	1	0	0	0	0	0.9	3.4
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	11	A	4	0	0	1	0	0	0	1.2	10.6
0.1 0.2 0.2 0.2 0.2 0.3 0.8 0.9 1.0 0.7 0.5 0.4 0.2 0.3 0.5 0.6 0.2 0.4 0.3 0.2 0.2 0.2 0.1 0.1																									Diurnal Average	
0.6 0.6 0.5 0.5 1.2 0.8 3.3 2.6 5.4 3.4 2.3 1.3 0.7 2.3 9.0 10.6 0.7 4.4 1.9 1.2 0.9 2.2 1.0 0.7																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Rycroft - August 2017



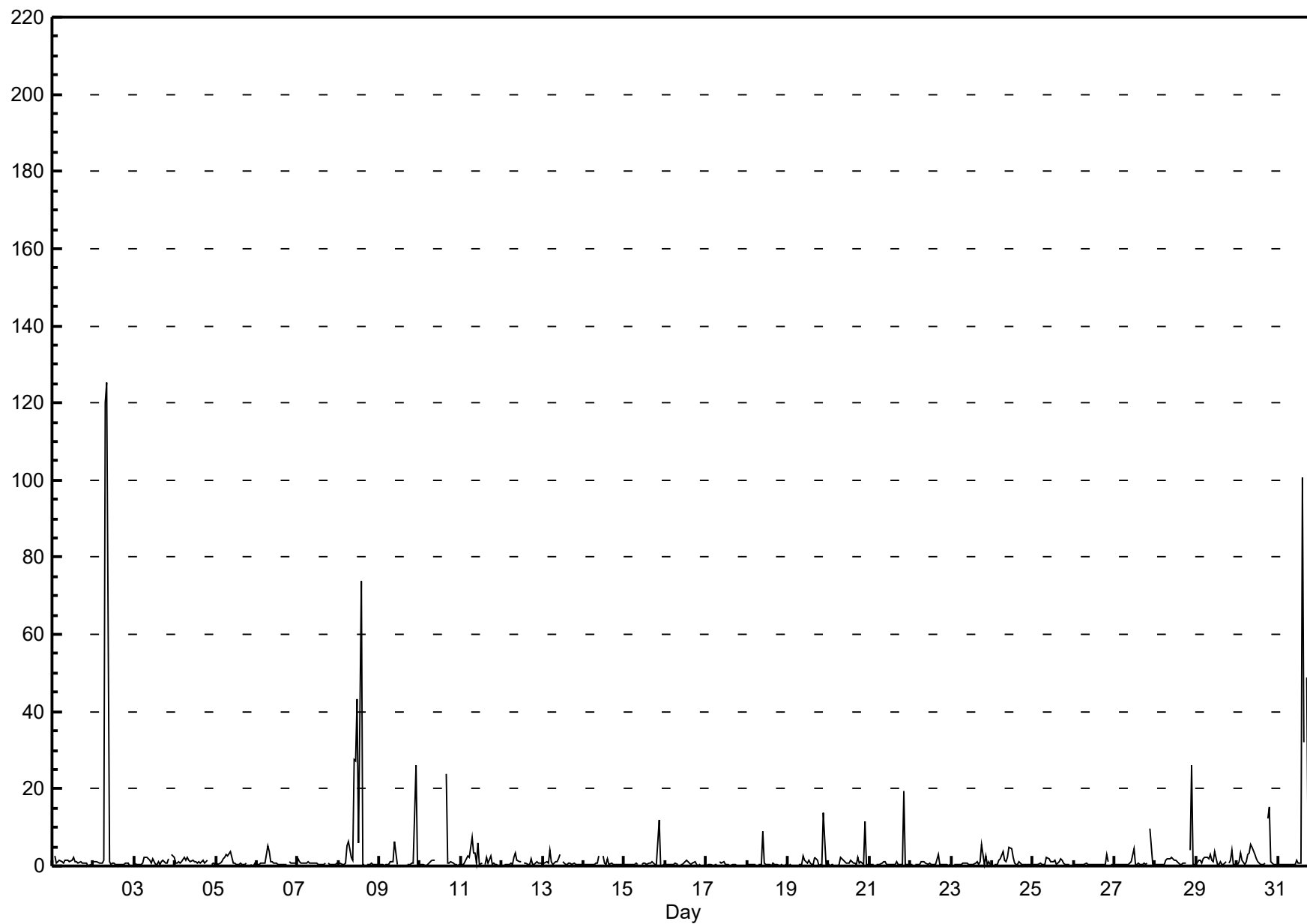
Hourly Maximums

Nitrogen Oxide (NO) - ppb Portable Rycroft - August 2017

Maximum Value: 125.2 ppb on Aug 2 09:00																				Maximum Daily Average: 11.3 ppb on Aug 2					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 5 22:00																				Minimum Daily Average: 0.3 ppb on Aug 17					Hours of Data: 702	
Maximum Diurnal Average: 5.7 ppb at hour 9																				Minimum Diurnal Average: 0.4 ppb at hour 23					Hours of Missing Data: 42	
Monthly Average: 1.99 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 1.1 P ₉₀ = 2.3 P ₉₉ = 31.5					Hours of Calibration: 37	
																									Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	3	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	0	0	A	1.1	2.7
2-Aug	1	1	1	1	1	1	2	120	125	1	1	1	1	1	0	0	0	0	0	1	1	0	A	1	11.3	125.2
3-Aug	1	0	0	0	0	1	2	2	2	2	1	2	0	0	1	0	1	1	1	1	2	A	3	2	1.1	3.1
4-Aug	1	1	1	1	1	2	2	2	2	1	2	1	1	1	1	1	2	1	1	1	A	0	1	1	1.2	2.4
5-Aug	1	1	1	1	2	2	3	3	4	2	1	1	0	0	1	1	0	0	1	A	0	0	0	1	1.1	3.7
6-Aug	1	0	1	1	1	1	5	4	1	1	1	1	0	0	0	0	0	1	A	1	1	1	1	1	1.0	5.4
7-Aug	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	A	1	0	0	0	0	1	0.7	1.8
8-Aug	1	1	1	0	1	5	6	2	1	28	27	43	6	74	0	0	A	0	0	1	0	0	0	0	8.7	73.8
9-Aug	0	1	0	0	0	0	1	1	1	6	0	M	M	M	M	M	0	0	0	1	1	26	0	0	2.1	25.9
10-Aug	0	1	0	0	1	1	1	2	2	C	C	C	C	C	A	24	1	1	1	1	1	0	0	0	1.9	24.0
11-Aug	0	0	1	2	3	2	7	3	3	1	6	0	1	A	0	2	1	2	1	1	0	0	0	0	1.7	7.3
12-Aug	0	0	0	0	0	1	1	2	3	1	1	1	A	1	1	0	0	2	1	1	1	1	1	1	0.9	3.2
13-Aug	1	1	1	1	4	1	0	1	1	2	3	A	1	0	0	1	1	0	1	0	0	0	0	0	0.9	4.0
14-Aug	0	0	0	0	0	0	0	1	1	3	A	3	1	0	2	0	1	0	0	0	0	0	0	0	0.6	2.7
15-Aug	0	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	0	0	12	0	0	0	0.9	12.1
16-Aug	0	0	0	0	0	0	1	1	A	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0.5	1.4
17-Aug	0	0	0	0	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
18-Aug	0	0	0	0	0	0	A	0	0	9	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0.6	8.9
19-Aug	0	0	0	0	0	A	0	0	0	3	1	1	2	1	0	1	2	2	0	0	0	14	0	0	1.2	13.8
20-Aug	0	0	0	0	A	0	0	2	2	1	1	1	1	1	1	1	0	2	1	1	0	11	0	0	1.2	11.5
21-Aug	0	0	0	A	0	0	0	1	1	1	0	1	0	0	0	0	1	0	0	0	19	0	0	1	1.3	19.4
22-Aug	0	0	A	1	0	0	1	1	1	1	0	1	0	0	0	0	3	0	1	1	0	0	0	0	0.6	2.9
23-Aug	0	A	0	0	0	0	1	1	1	1	1	0	0	0	1	1	0	1	6	0	3	0	1	0	0.8	5.7
24-Aug	A	1	0	0	2	2	4	1	1	2	5	4	2	1	1	1	1	0	0	0	0	0	0	A	1.3	4.8
25-Aug	0	0	0	0	1	0	0	1	2	2	1	1	1	2	0	1	2	1	1	0	0	0	A	0	0.8	2.2
26-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	1	A	0	0	0.5	2.8
27-Aug	0	0	0	0	0	0	0	0	0	1	1	5	0	0	1	0	1	1	0	1	A	10	1	0	1.1	9.6
28-Aug	0	0	0	0	0	0	2	2	2	2	2	1	2	1	1	1	1	1	1	A	4	26	0	1	2.2	25.9
29-Aug	0	2	2	1	2	2	2	2	3	1	1	4	0	0	1	0	0	1	A	1	1	4	0	0	1.4	4.0
30-Aug	0	1	3	2	1	1	3	3	6	5	3	2	1	1	1	0	1	A	12	15	1	0	0	0	2.7	15.3
31-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	101	32	A	49	1	0	35	5	0	0	10.0	100.6
0.4 0.6 0.6 0.5 0.8 0.9 1.6 5.4 5.7 2.8 2.2 2.8 1.0 3.3 4.0 2.4 0.8 2.5 1.1 1.1 3.0 3.5 0.4 0.4																									Diurnal Average	
1.8 2.7 3.3 1.8 4.0 5.1 7.3 119.9 125.2 27.7 27.0 43.1 6.0 73.8 100.6 32.0 2.9 48.8 12.2 15.3 35.4 25.9 3.1 2.2																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Portable Rycroft - August 2017



Hourly Averages

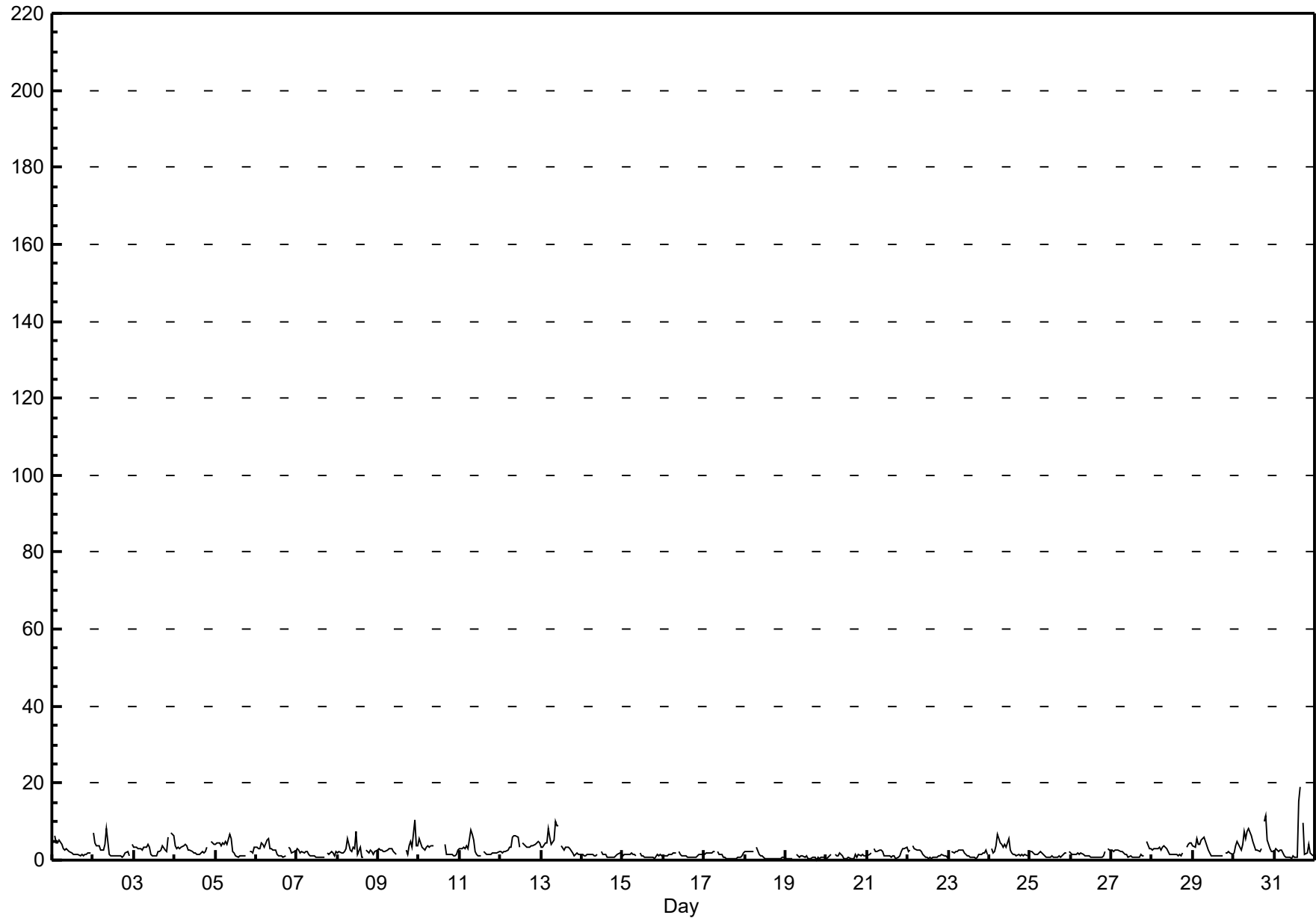
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - August 2017

Maximum Value: 19.0 ppb on Aug 31 16:00																				Maximum Daily Average: 4.8 ppb on Aug 30										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 19 19:00																				Minimum Daily Average: 0.7 ppb on Aug 19										Hours of Data: 702									
Maximum Diurnal Average: 3.3 ppb at hour 7																				Minimum Diurnal Average: 1.3 ppb at hour 13										Hours of Missing Data: 42									
Monthly Average: 2.28 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 1.8 Q ₃ = 3.0 P ₉₀ = 4.2 P ₉₉ = 9.4										Hours of Calibration: 37									
																				Percent Operational Time: 99.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	A	6	4	4	5	4	3	3	3	3	2	2	2	2	1	1	1	1	1	1	2	2	2	A	2.5	6.3													
2-Aug	7	4	4	4	3	3	3	4	8	2	1	1	1	1	1	1	1	1	1	2	2	1	A	4	2.6	8.1													
3-Aug	3	3	3	3	3	3	3	3	4	3	1	1	1	1	2	2	3	4	3	2	6	A	7	6	3.2	7.2													
4-Aug	4	3	3	3	3	4	4	4	3	3	2	2	2	1	1	1	2	2	2	3	A	5	4	4	2.9	4.9													
5-Aug	4	4	4	4	4	4	5	4	7	6	2	2	1	1	1	1	1	1	1	A	2	2	2	3	2.9	6.8													
6-Aug	3	3	3	5	4	3	5	5	3	3	2	3	2	1	1	1	1	1	A	3	3	2	2	2	2.7	5.4													
7-Aug	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	2	2	2	2	1	2	1.6	3.2													
8-Aug	2	2	2	2	2	3	6	3	2	3	8	2	3	1	1	A	2	2	3	2	1	2	3	2.6	7.6														
9-Aug	3	3	3	2	2	2	3	3	3	2	1	M	M	M	M	M	2	1	4	5	3	10	4	4	3.2	10.4													
10-Aug	6	5	3	3	3	4	4	4	4	C	C	C	C	C	A	4	2	1	1	2	1	1	2	3	2.8	5.6													
11-Aug	3	3	4	3	4	3	8	7	5	2	2	1	1	A	2	2	1	1	1	2	2	2	2	2	2.8	8.0													
12-Aug	2	2	2	2	2	3	3	6	6	6	6	3	A	5	4	4	3	4	4	4	4	4	5	4	3.9	6.4													
13-Aug	4	3	4	4	8	6	4	5	10	9	9	A	4	3	4	3	3	3	2	1	1	2	1	1	4.2	10.0													
14-Aug	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	2	2	1.3	2.1													
15-Aug	1	1	2	1	2	2	2	1	1	A	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1.2	1.9													
16-Aug	1	1	1	1	1	2	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.4													
17-Aug	1	2	2	2	2	2	2	A	2	1	1	1	1	0	0	0	0	0	0	0	1	1	1	2	1.1	2.3													
18-Aug	2	2	2	2	2	2	A	3	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1.1	3.2													
19-Aug	0	0	0	0	0	A	2	1	1	1	1	1	1	0	0	0	1	1	0	1	0	1	1	1	0.7	1.7													
20-Aug	0	1	1	1	A	2	1	1	2	1	1	0	0	1	0	1	0	1	1	2	1	1	1	1	1.0	1.9													
21-Aug	1	2	2	A	3	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	2	3	3	3	1.8	3.3													
22-Aug	2	2	A	4	3	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.7													
23-Aug	2	A	2	2	2	2	3	3	3	2	2	1	1	1	1	1	1	1	2	1	2	2	3	2	1.6	2.8													
24-Aug	A	3	2	2	4	7	5	4	3	4	3	6	3	2	1	2	1	1	1	1	1	1	1	A	2.7	6.9													
25-Aug	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	2	1.4	2.4													
26-Aug	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	A	3	3	1.4	3.0													
27-Aug	3	2	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	5	3	3	1.8	4.9													
28-Aug	3	3	3	3	3	3	3	4	3	2	1	1	1	1	1	1	1	1	2	A	3	4	5	4	2.6	4.6													
29-Aug	4	4	6	4	4	5	6	5	4	3	2	1	1	1	1	1	1	1	A	2	2	2	2	2	2.7	5.9													
30-Aug	2	4	5	4	3	4	7	6	7	8	6	5	4	3	3	2	3	A	10	11	5	3	2	2	4.8	11.5													
31-Aug	2	3	2	3	3	2	1	1	1	1	1	1	1	1	15	19	A	10	1	2	4	2	1	1	3.3	19.0													
2.6 2.7 2.6 2.6 2.9 2.9 3.3 3.1 3.2 2.7 2.1 1.8 1.3 1.3 1.7 1.9 1.3 1.6 1.7 2.0 2.2 2.3 2.3 2.5																									Diurnal Average														
7.0 6.3 5.7 4.6 8.2 6.9 8.0 6.8 10.0 9.1 9.1 7.6 3.6 4.6 15.5 19.0 3.3 9.6 10.1 11.5 6.0 10.4 7.2 6.3																									Diurnal Maximum														
C - Calibration				M - Maintenance						A - Automated Daily Zero Span																													

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Portable Rycroft - August 2017



Hourly Maximums

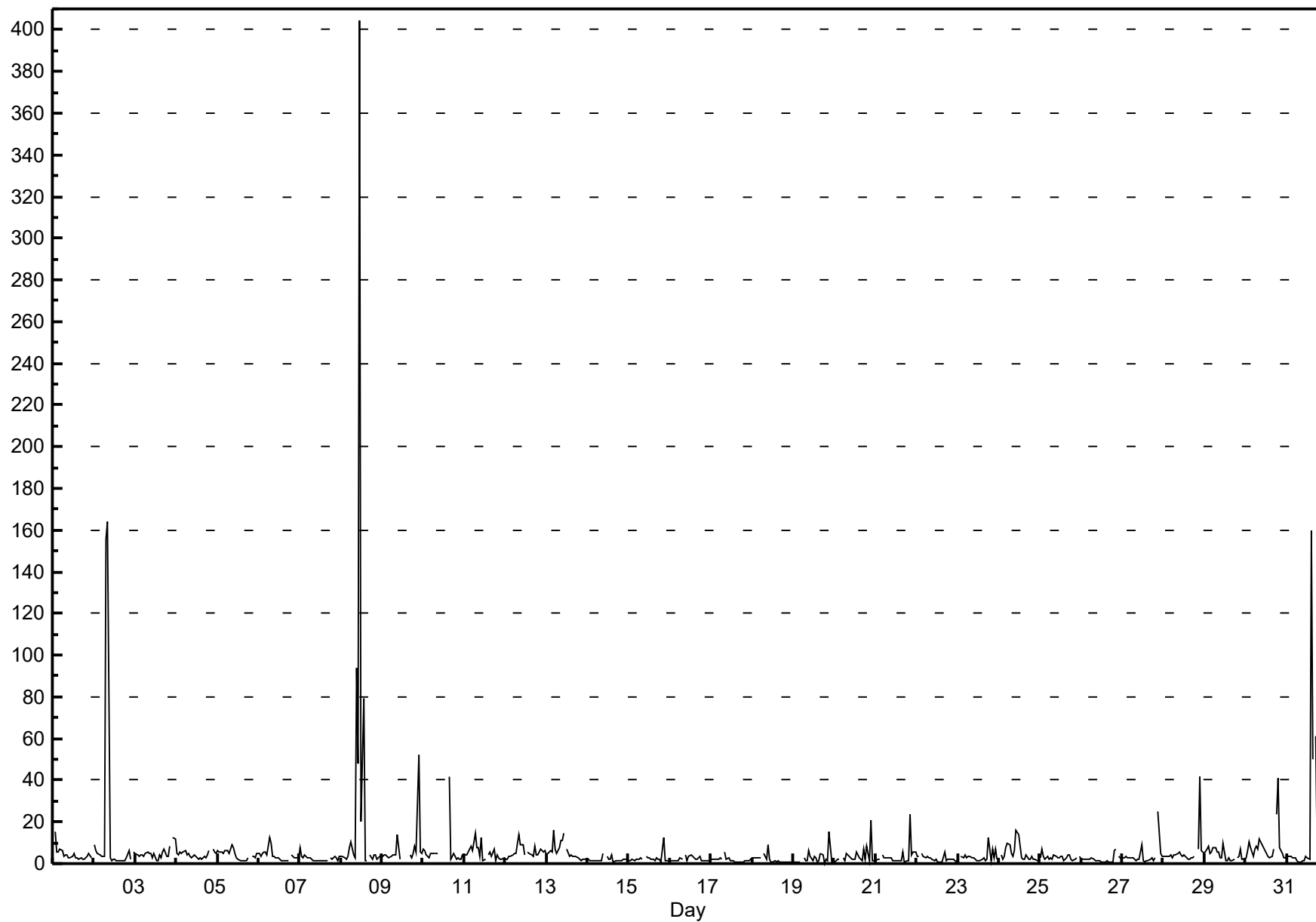
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - August 2017

Maximum Value: 404.5 ppb on Aug 8 12:00																				Maximum Daily Average: 31.0 ppb on Aug 8										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 19 19:00																				Minimum Daily Average: 1.7 ppb on Aug 17										Hours of Data: 702	
Maximum Diurnal Average: 17.9 ppb at hour 12																				Minimum Diurnal Average: 2.9 ppb at hour 17										Hours of Missing Data: 42	
Monthly Average: 5.66 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 1.2 Q ₁ = 1.8 Median = 2.9 Q ₃ = 4.6 P ₉₀ = 7.6 P ₉₉ = 51.8										Hours of Calibration: 37	
																														Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Aug	A	15	5	5	7	6	4	4	4	3	3	3	5	3	2	2	3	4	5	3	A	4.2	15.5								
2-Aug	9	7	5	4	4	3	4	156	164	3	2	2	2	2	1	1	1	6	2	A	6	16.9	163.7								
3-Aug	5	4	4	4	4	4	5	6	5	5	3	5	2	2	4	3	5	7	3	4	9	A	13	12	5.0	12.6					
4-Aug	5	4	6	5	5	6	4	5	4	3	4	3	3	2	3	2	4	3	4	7	A	7	6	5	4.3	6.8					
5-Aug	6	6	5	5	6	6	6	5	9	7	5	3	2	2	1	2	2	2	3	A	4	4	3	5	4.2	9.0					
6-Aug	5	3	5	5	5	4	13	10	3	3	3	3	2	2	1	1	1	2	A	4	4	3	3	3	3.8	12.5					
7-Aug	7	3	3	4	3	3	3	2	1	1	1	1	1	1	1	1	2	A	3	2	4	3	2	4	2.4	7.4					
8-Aug	4	3	3	2	3	8	11	4	3	94	48	20	79	1	1	A	4	2	5	4	2	3	4	31.0	404.5						
9-Aug	4	4	5	3	3	3	4	4	4	14	2	M	M	M	M	M	4	3	5	8	5	52	6	5	7.3	51.9					
10-Aug	7	6	4	3	5	5	5	5	5	C	C	C	C	C	A	42	2	4	5	2	3	2	2	4	6.1	41.9					
11-Aug	4	4	6	7	9	6	15	8	8	4	13	2	2	A	4	6	4	7	2	4	2	2	2	3	5.3	14.6					
12-Aug	2	2	3	3	4	5	5	10	14	9	9	4	A	6	5	4	4	8	4	4	7	6	6	6	5.7	13.6					
13-Aug	4	5	6	6	16	7	5	8	11	11	14	A	7	3	4	4	4	4	3	2	1	2	2	2	5.7	16.2					
14-Aug	2	2	1	2	2	2	2	2	1	5	A	4	2	2	4	1	2	1	2	1	2	2	2	2	1.9	5.1					
15-Aug	1	2	2	2	2	2	2	3	2	A	3	3	3	2	2	2	3	2	2	1	12	1	2	1	2.4	12.3					
16-Aug	1	1	1	2	2	2	2	2	A	4	2	3	5	4	3	2	2	4	1	1	2	2	2	2	2.2	4.5					
17-Aug	2	2	2	2	2	2	2	A	6	2	3	1	1	1	0	1	1	1	1	1	2	1	1	2	1.7	5.8					
18-Aug	2	2	2	3	3	2	A	5	2	9	2	1	1	1	0	2	0	0	0	1	1	1	1	1	1.9	9.3					
19-Aug	1	1	1	1	1	A	2	2	1	6	4	2	4	2	0	1	5	4	0	2	1	15	1	1	2.5	15.1					
20-Aug	1	1	2	2	A	3	1	5	4	3	2	2	2	5	3	2	1	7	2	8	2	21	1	1	3.6	20.9					
21-Aug	1	2	2	A	4	2	3	3	3	3	2	2	1	1	1	2	6	1	1	2	24	4	6	6	3.5	23.5					
22-Aug	4	4	A	5	3	3	3	3	2	2	1	2	1	1	1	1	6	1	2	2	2	2	2	1	2.4	5.6					
23-Aug	2	A	3	3	4	3	3	3	3	2	2	2	1	1	2	3	1	2	12	2	7	3	7	2	3.3	12.2					
24-Aug	A	4	2	3	8	10	9	5	4	6	16	14	9	2	2	2	4	2	2	3	2	2	1	A	5.1	15.7					
25-Aug	3	7	3	2	4	2	3	2	4	4	3	3	3	3	1	3	4	4	2	2	2	3	A	3	3.0	6.8					
26-Aug	2	2	2	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	1	6	7	A	3	3	2.1	6.6					
27-Aug	3	3	3	3	3	3	3	2	2	2	2	9	1	1	1	1	2	3	2	3	A	25	5	4	3.7	25.2					
28-Aug	3	3	4	3	4	3	4	4	5	5	4	4	4	3	2	2	3	3	3	A	7	42	7	6	5.5	41.5					
29-Aug	5	7	8	5	6	8	8	6	6	3	3	9	2	1	3	2	1	2	A	3	4	7	2	2	4.4	9.4					
30-Aug	2	6	10	8	3	7	9	7	12	11	8	6	5	3	3	3	7	A	23	41	8	5	3	3	8.3	41.1					
31-Aug	3	4	3	3	3	3	2	1	1	1	1	4	3	2	160	50	A	61	3	4	53	13	2	1	16.5	159.5					
3.5 4.0 3.8 3.5 4.3 4.1 4.7 9.4 9.8 7.8 5.6 17.9 3.3 5.0 7.5 5.0 2.9 5.0 3.4 4.5 6.5 8.2 3.3 3.4																									Diurnal Average						
8.8 15.5 10.4 7.7 16.2 9.7 14.6 155.8 163.7 93.7 47.9 404.5 19.8 79.3 159.5 50.1 6.6 61.2 23.5 41.1 52.5 51.9 12.6 11.8																									Diurnal Maximum						
C - Calibration M - Maintenance A - Automated Daily Zero Span																															

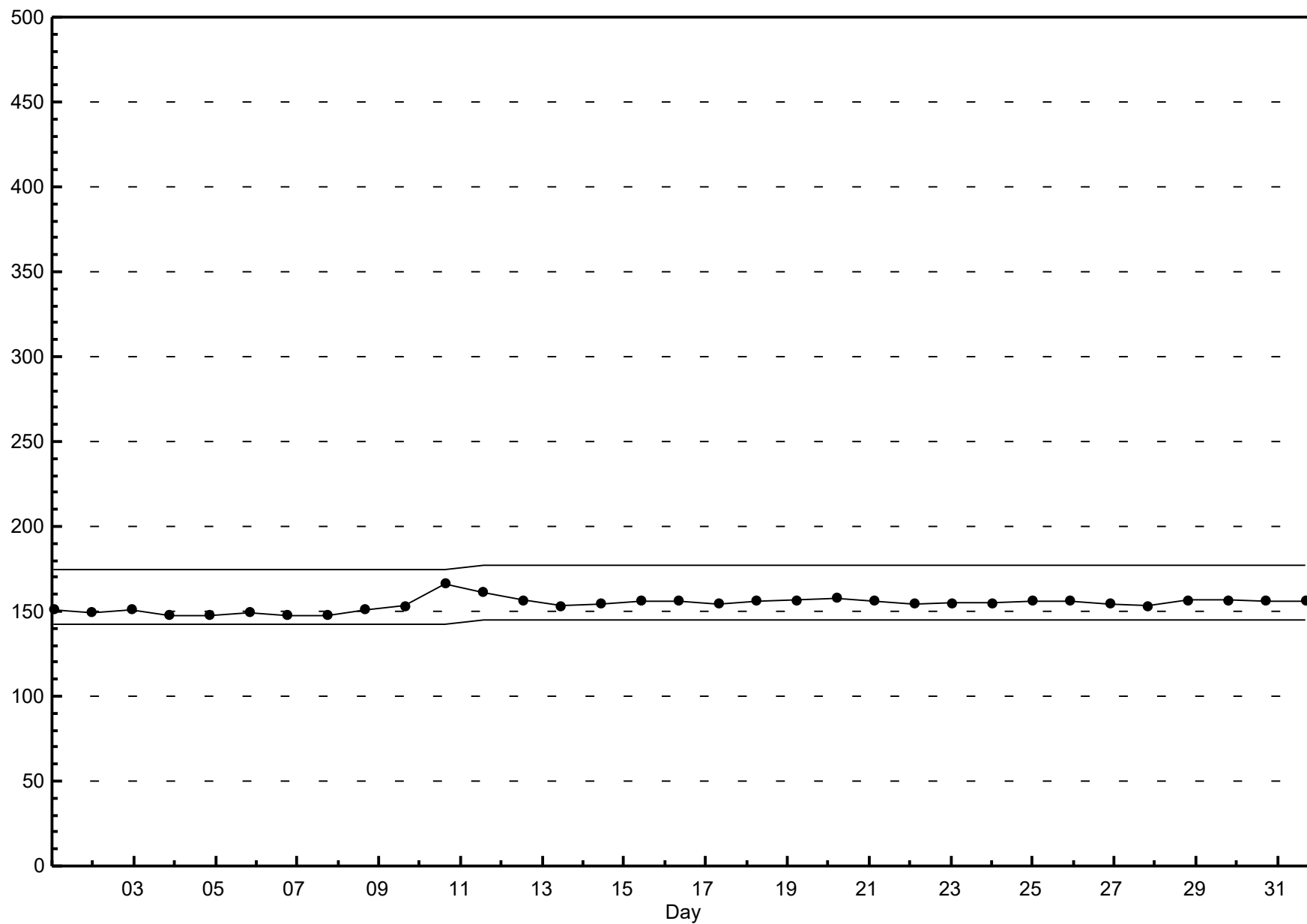
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Portable Rycroft - August 2017



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - August 2017



Hourly Averages

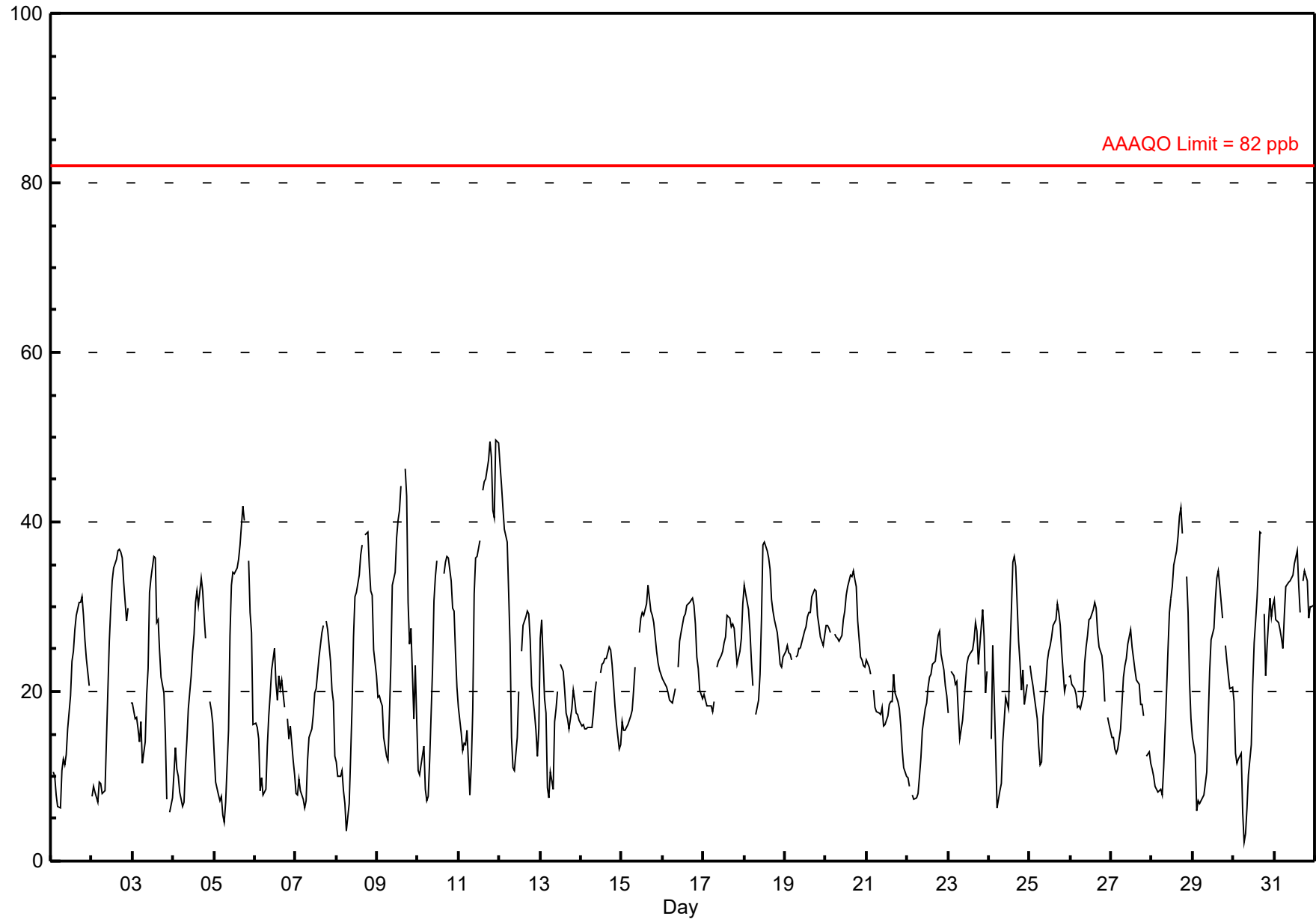
Ozone (O₃) - ppb

Portable Rycroft - August 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 49.7 ppb on Aug 11 23:00 Maximum Daily Average: 31.6 ppb on Aug 11																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 2 ppb on Aug 30 07:00 Maximum Diurnal Average: 30.9 ppb at hour 17 Monthly Average: 22.41 ppb										Minimum Daily Average: 16.1 ppb on Aug 6 Minimum Diurnal Average: 13.1 ppb at hour 7 Percentiles: P ₁ = 5.7 P ₁₀ = 9.9 Q ₁ = 16.1 Median = 22.4 Q ₃ = 28.8 P ₉₀ = 34.0 P ₉₉ = 46.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	A	11	10	8	6	6	11	12	11	13	16	19	24	25	27	29	31	31	31	29	26	24	21	A	19.1	31.1
2-Aug	8	9	8	7	9	9	8	8	8	20	26	30	33	35	36	37	37	36	36	33	28	30	A	19	22.1	36.8
3-Aug	19	17	17	16	14	16	12	14	20	23	32	33	36	36	28	28	25	22	20	15	7	A	6	7	20.1	35.9
4-Aug	10	13	11	10	8	6	7	11	14	18	22	25	27	30	32	30	33	32	29	26	A	19	18	16	19.5	33.3
5-Aug	13	9	8	7	8	5	5	7	15	27	32	34	34	35	36	37	40	42	40	A	35	29	27	16	23.5	41.8
6-Aug	16	16	14	8	10	8	8	14	17	20	23	25	21	19	22	20	21	18	A	17	14	16	12	10	16.1	25.0
7-Aug	8	8	10	8	7	6	7	12	15	16	17	20	20	22	24	27	28	A	28	27	24	20	19	12	16.8	28.4
8-Aug	12	10	10	11	8	7	3	7	12	18	27	31	32	34	36	37	A	38	39	35	32	31	25	22	22.5	38.9
9-Aug	19	20	19	18	14	12	12	17	23	33	34	38	40	41	44	A	46	43	31	26	27	17	23	17	26.7	46.3
10-Aug	11	10	11	14	8	7	8	12	22	31	33	35	C	C	C	34	35	36	36	33	30	29	25	20	22.9	35.9
11-Aug	18	15	13	14	14	15	8	11	18	31	36	36	38	A	44	45	45	47	49	48	41	41	50	49	31.6	49.7
12-Aug	47	44	42	39	38	32	26	15	11	11	15	20	A	25	28	29	29	29	26	21	17	15	12	16	25.5	46.8
13-Aug	26	29	19	17	9	8	11	9	16	18	20	A	23	22	20	18	17	16	18	20	19	18	17	17	17.6	28.5
14-Aug	16	16	16	16	16	16	16	18	20	21	A	22	23	23	24	24	25	25	23	21	18	16	13	14	19.2	25.2
15-Aug	17	15	15	16	17	17	18	20	23	A	27	29	29	29	30	32	31	29	29	28	25	23	23	22	23.7	32.5
16-Aug	21	21	21	20	19	19	19	20	A	23	26	27	29	29	30	30	30	31	30	28	24	23	20	19	24.3	31.1
17-Aug	20	19	18	18	18	18	19	A	23	24	24	25	26	27	29	29	28	28	27	25	23	25	26	30	23.8	30.3
18-Aug	32	32	30	27	24	21	A	17	19	22	28	37	38	37	36	34	31	29	29	27	25	23	23	24	28.0	37.7
19-Aug	25	25	25	24	24	A	24	24	25	25	26	27	28	29	29	29	31	32	32	29	28	26	25	27	27.0	32.1
20-Aug	28	28	27	27	A	27	26	26	26	27	28	30	31	32	34	34	34	33	32	28	24	24	23	23	28.4	34.2
21-Aug	24	23	22	A	20	18	18	17	17	18	16	16	17	19	19	19	22	20	19	18	16	13	11	10	17.9	23.7
22-Aug	10	9	A	8	7	8	8	10	12	15	18	19	21	22	22	23	24	25	27	27	24	23	21	19	17.4	27.1
23-Aug	17	A	22	22	21	21	18	14	17	19	21	23	24	24	25	26	28	27	23	28	30	26	20	22	22.6	29.7
24-Aug	A	14	25	19	13	6	8	9	14	17	19	18	25	30	35	36	35	26	23	20	23	18	21	A	20.7	36.0
25-Aug	23	22	21	19	17	14	11	12	17	21	23	25	25	26	28	29	30	29	28	25	20	21	A	22	22.0	30.4
26-Aug	22	21	20	20	18	18	18	19	23	25	27	28	29	30	30	30	27	25	24	22	19	A	17	16	23.0	30.4
27-Aug	15	15	13	13	13	16	19	22	23	24	26	27	25	24	23	21	21	19	18	17	A	12	13	12	18.7	27.2
28-Aug	11	10	9	8	8	9	8	11	20	25	29	31	32	35	37	38	41	42	39	A	34	29	21	17	23.6	41.7
29-Aug	15	13	6	7	7	7	8	9	11	17	22	26	28	31	33	34	33	29	A	25	24	22	20	21	19.4	34.3
30-Aug	19	13	11	12	13	6	2	3	6	10	14	21	26	28	31	39	39	A	29	22	25	31	29	30	20.0	38.9
31-Aug	31	29	28	27	26	25	29	32	33	33	33	34	35	37	33	29	A	33	34	33	29	30	30	30	31.0	36.6
19.0 17.8 17.4 16.0 14.5 13.4 13.1 14.5 17.7 21.4 24.7 27.1 28.2 28.8 30.1 30.3 30.9 30.1 29.3 26.0 24.6 23.3 21.0 20.0 46.8 44.3 41.7 39.2 37.7 31.7 28.9 32.3 32.8 33.0 35.7 38.2 40.2 41.3 44.2 44.8 46.3 47.3 49.4 47.6 41.4 40.5 49.7 49.3																								Diurnal Average	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - August 2017



Hourly Maximums

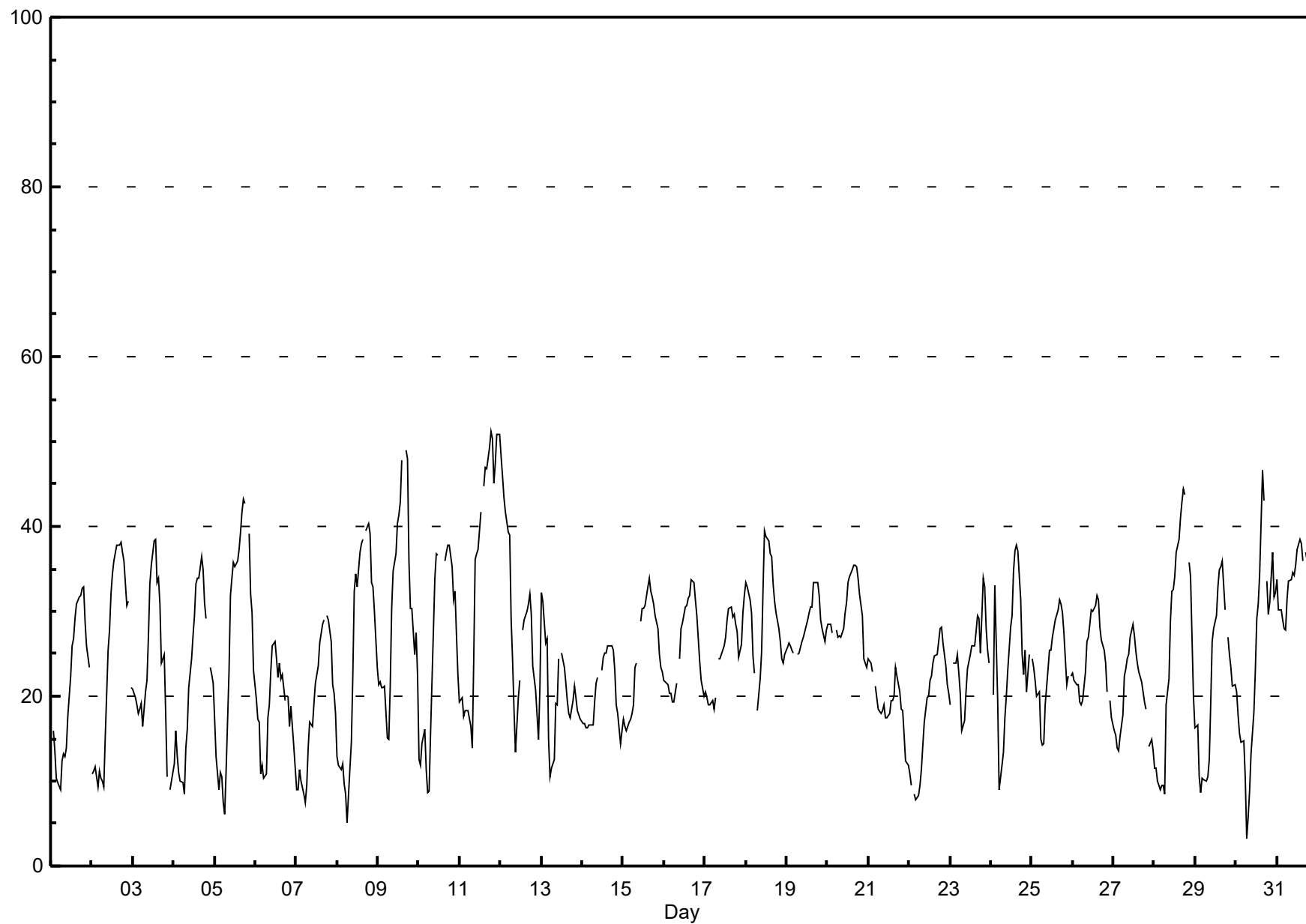
Ozone (O₃) - ppb

Portable Rycroft - August 2017

Maximum Value: 51.2 ppb on Aug 11 19:00																					Maximum Daily Average: 34.9 ppb on Aug 11					Hours in Service: 744	
Minimum Value: 3 ppb on Aug 30 07:00																					Minimum Daily Average: 18.5 ppb on Aug 6					Hours of Data: 709	
Maximum Diurnal Average: 32.9 ppb at hour 17																					Minimum Diurnal Average: 15.2 ppb at hour 7					Hours of Missing Data: 35	
Monthly Average: 24.68 ppb																					Percentiles: P ₁ = 8.3 P ₁₀ = 11.8 Q ₁ = 18.4 Median = 24.5 Q ₃ = 31.0 P ₉₀ = 36.4 P ₉₉ = 47.9					Hours of Calibration: 35	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	16	13	10	10	9	12	13	13	14	18	22	26	27	29	31	32	32	33	33	29	26	23	A		21.4	32.8
2-Aug	11	11	12	9	11	10	10	9	15	25	28	32	34	36	38	38	38	38	37	36	31	31	A	21		24.4	38.1
3-Aug	21	20	19	18	18	19	16	20	22	27	33	35	38	38	33	34	31	24	25	18	10	A	9	11		23.5	38.4
4-Aug	12	16	13	11	10	10	8	14	16	21	24	27	30	33	34	34	36	35	31	29	A	23	22	21		22.3	36.5
5-Aug	17	13	9	11	10	7	6	11	23	32	34	36	35	36	37	39	42	43	43	A	39	32	30	23		26.5	43.3
6-Aug	20	17	17	11	12	10	11	17	19	23	26	26	24	22	24	22	22	19	A	20	17	19	14	12		18.5	26.4
7-Aug	9	9	11	10	9	7	9	14	17	16	19	21	22	23	26	28	29	A	29	29	26	21	20	18		18.6	29.5
8-Aug	13	12	11	12	10	8	5	11	14	22	32	34	33	37	38	38	A	39	40	39	33	33	30	23		24.8	40.4
9-Aug	21	22	21	21	21	15	15	21	30	35	37	40	41	43	48	A	49	48	36	30	30	25	27	22		30.5	49.0
10-Aug	13	12	14	16	11	9	9	16	28	34	37	37	C	C	C	36	37	38	38	35	31	32	27	23		25.3	37.8
11-Aug	19	20	18	18	18	18	16	14	24	36	37	37	42	A	45	47	47	49	51	50	45	48	51	51		34.9	51.2
12-Aug	48	46	43	42	39	39	29	24	18	13	20	22	A	28	29	30	31	32	30	24	21	18	15	21		28.8	48.3
13-Aug	32	31	26	27	15	10	11	13	19	19	24	A	25	23	21	20	18	17	19	21	20	18	18	17		20.3	32.3
14-Aug	17	17	16	16	17	17	17	19	22	22	A	23	25	25	25	26	26	26	25	23	19	18	14	16		20.4	26.0
15-Aug	17	16	16	17	17	18	19	23	24	A	29	30	30	31	33	34	32	32	31	29	28	25	23	23		25.2	33.9
16-Aug	22	22	21	20	20	19	19	21	A	24	28	29	31	31	32	32	34	33	31	29	27	24	22	20		25.7	33.7
17-Aug	20	20	19	19	19	18	20	A	24	24	25	26	27	29	30	31	29	30	29	28	25	26	30	32		25.2	31.8
18-Aug	33	33	31	30	25	23	A	18	22	25	33	39	39	38	37	36	33	31	30	28	26	24	24	25		29.8	39.5
19-Aug	26	26	26	25	25	A	25	25	26	26	27	28	29	30	30	30	33	33	33	32	29	28	26	28		28.2	33.4
20-Aug	28	28	28	28	A	28	27	27	27	28	30	31	33	34	35	35	35	35	34	32	29	24	24	23		29.8	35.4
21-Aug	24	24	23	A	21	20	18	18	18	19	17	17	18	19	19	20	23	22	20	18	18	15	12	12		19.2	24.5
22-Aug	11	9	A	8	8	8	9	11	14	17	20	20	22	22	24	25	25	26	28	28	26	24	21	20		18.6	28.1
23-Aug	19	A	24	24	25	23	20	16	17	20	23	24	25	26	26	28	29	29	25	34	33	28	25	24		24.7	34.0
24-Aug	A	20	33	26	19	9	12	13	17	20	23	28	29	35	37	38	37	31	25	23	25	20	25	A		24.9	37.8
25-Aug	24	23	22	20	20	15	14	14	19	23	25	25	27	28	29	30	31	31	30	27	21	22	A	22		23.8	31.4
26-Aug	23	22	21	21	19	19	19	23	26	27	28	30	30	31	32	31	28	27	25	24	20	A	19	17		24.6	31.9
27-Aug	16	15	14	13	15	18	22	23	24	25	27	28	27	25	24	23	22	20	19	18	A	14	15	14		20.2	28.5
28-Aug	12	11	10	9	10	10	9	19	22	29	32	33	34	37	38	41	43	44	44	A	36	34	27	20		26.2	44.4
29-Aug	16	17	10	9	10	10	10	10	12	19	26	28	29	33	35	35	36	30	A	27	25	23	21	21		21.5	35.9
30-Aug	21	18	16	15	15	10	3	6	9	13	18	23	29	31	34	47	43	A	34	30	31	37	32	32		23.7	46.6
31-Aug	34	30	30	29	28	28	31	34	34	34	34	35	37	38	38	36	A	37	36	35	31	31	31	32		33.3	38.4
20.7 19.9 19.7 18.2 17.0 15.5 15.2 17.4 20.6 23.9 27.2 29.0 30.1 30.7 32.1 32.5 32.9 32.2 31.4 28.6 27.0 25.7 23.5 22.3																									Diurnal Average		
48.3 45.8 43.4 41.6 39.4 39.0 31.3 33.6 33.6 36.1 36.9 40.3 41.7 42.9 47.9 47.0 49.0 49.3 51.2 50.3 45.0 47.5 50.8 50.8																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

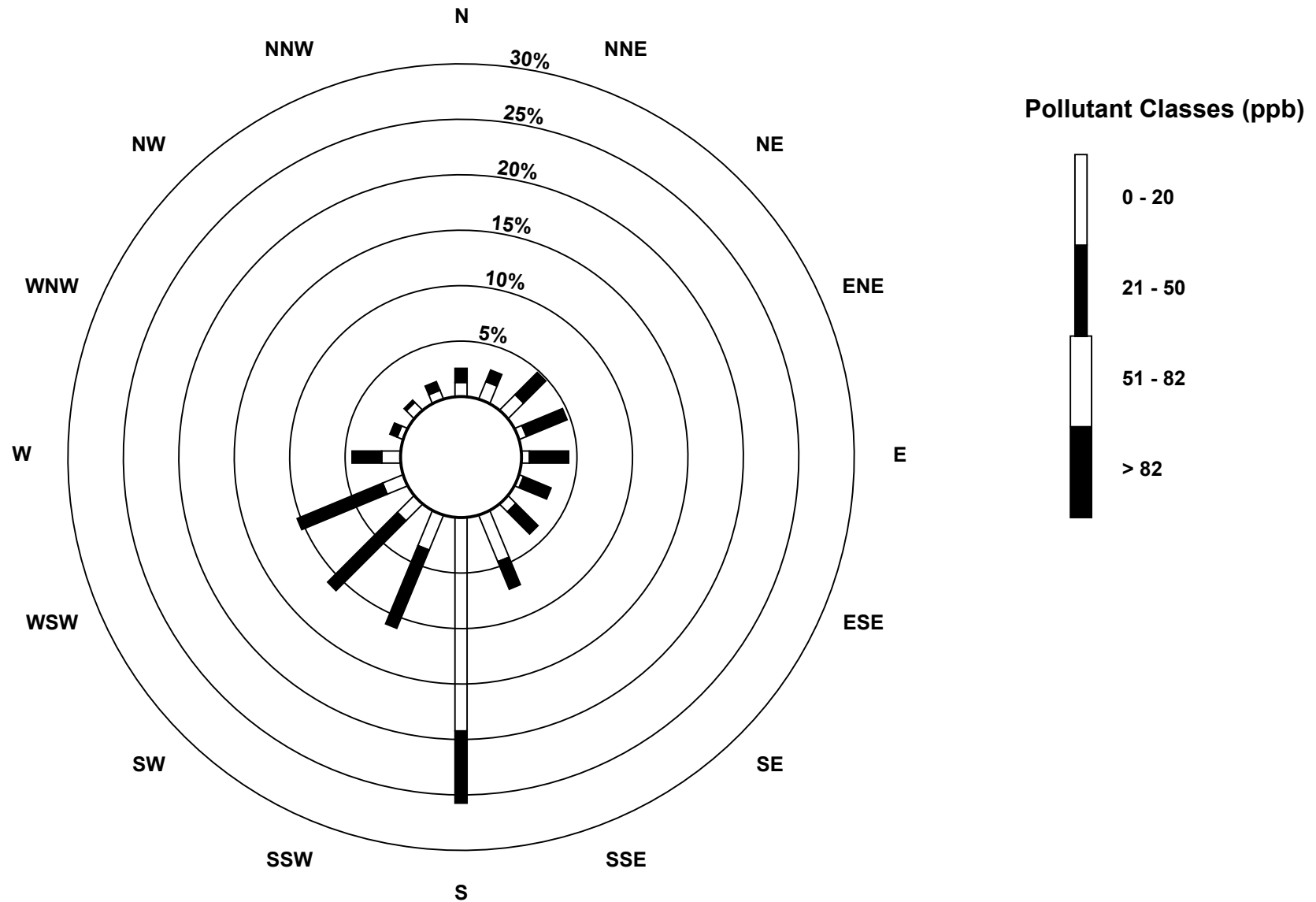
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - August 2017



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - August 2017



Eight Hour Running Averages

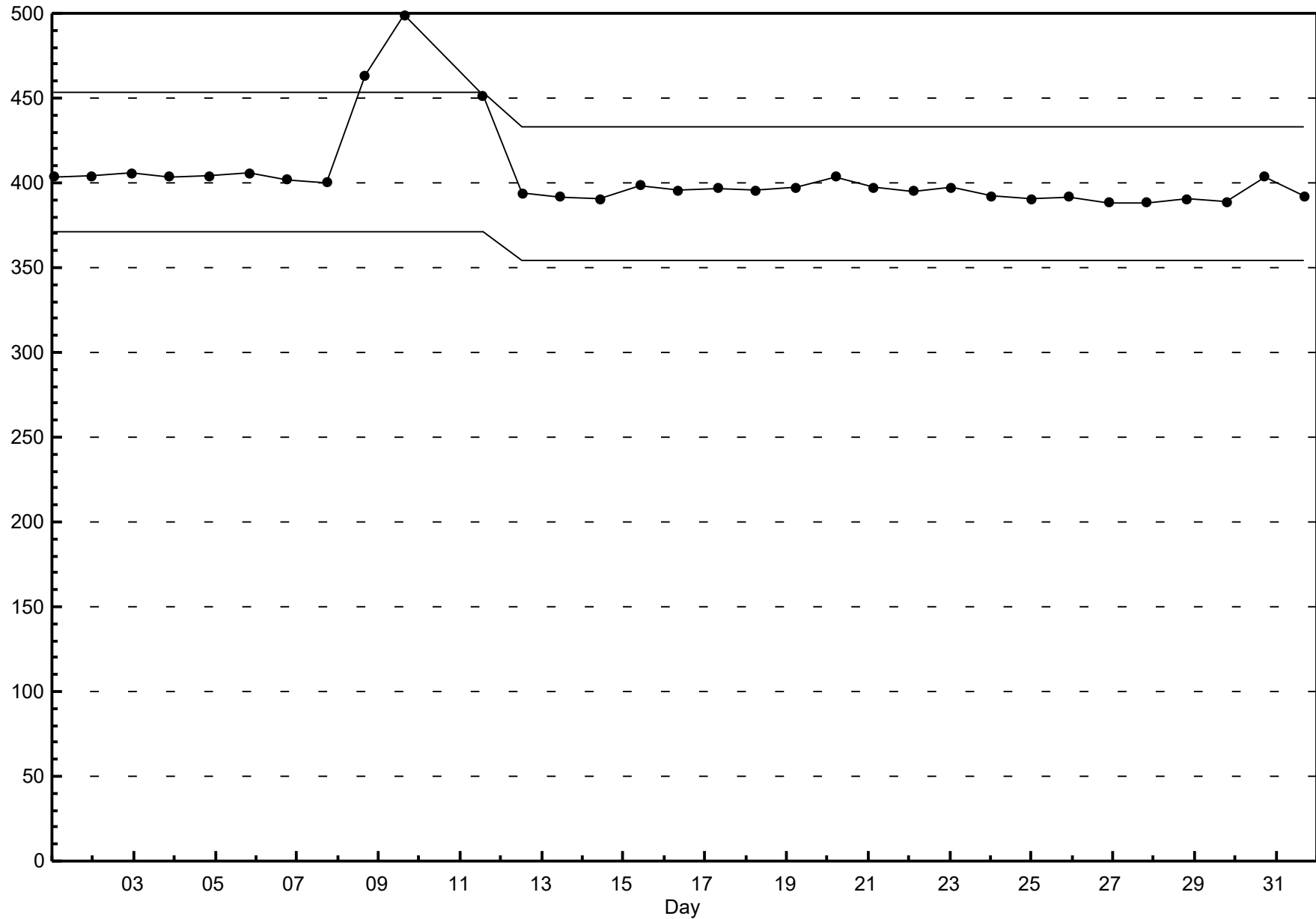
Ozone (O₃) - ppb

Portable Rycroft - August 2017

Maximum Value: 46.5 ppb on Aug 12 01:00																								Hours in Service: 744
Minimum Value: 7.7 ppb on Aug 5 08:00																								Hours of Data: 738
Percentiles: P ₁ = 8.3 P ₁₀ = 12.0 Q ₁ = 17.1 Median = 22.1 Q ₃ = 27.7 P ₉₀ = 31.5 P ₉₉ = 45.0																								Hours of Missing Data: 6
																								Hours of Calibration: 6
																								Percent Operational Time: 100.0
Day	Hourly Period Ending At (MST)																							Daily Maximum
1-Aug	22	19	17	16	14	12	10	9	9	10	10	12	14	16	18	20	23	25	27	28	29	28	27	28.5
2-Aug	24	21	18	15	12	10	8	8	8	10	12	15	18	21	24	28	32	34	35	35	35	34	31	35.2
3-Aug	29	26	23	21	19	17	16	15	16	16	18	20	23	26	28	29	30	30	29	26	23	21	15	30.1
4-Aug	13	11	10	9	9	9	9	10	10	11	12	14	16	19	22	25	27	29	30	30	30	29	25	30.4
5-Aug	22	19	16	13	12	11	9	8	8	10	13	17	20	24	27	31	34	36	37	38	38	37	33	37.8
6-Aug	29	26	22	20	17	14	12	12	12	12	13	15	17	18	20	21	21	21	21	20	19	18	15	29.4
7-Aug	14	12	12	11	10	9	8	8	9	10	11	13	14	16	18	20	22	23	24	25	26	25	23	25.7
8-Aug	20	19	17	15	13	11	9	8	9	10	12	14	17	21	25	28	31	34	35	36	36	36	32	35.8
9-Aug	30	28	25	23	21	19	17	16	17	19	21	23	26	30	34	36	40	41	41	39	37	33	29	41.0
10-Aug	24	20	18	16	14	13	11	10	12	14	17	20	21	24	N	N	N	N	N	N	34	33	31	33.9
11-Aug	28	26	23	21	19	17	15	14	14	16	18	21	24	25	31	35	39	41	43	45	46	45	46	46.3
12-Aug	46	46	45	44	44	43	40	35	31	27	23	21	18	17	18	20	22	25	27	27	26	24	21	46.5
13-Aug	20	20	19	19	18	17	17	16	15	13	13	13	15	17	18	20	20	19	19	19	19	18	18	20.4
14-Aug	18	18	17	17	16	16	16	16	16	17	17	18	19	20	22	23	23	24	24	24	23	22	19	23.8
15-Aug	18	17	16	16	15	15	16	17	18	18	20	21	23	25	27	28	30	30	30	30	29	29	26	29.9
16-Aug	25	24	23	22	21	21	20	20	20	20	21	22	23	25	26	28	28	29	30	30	29	28	26	29.8
17-Aug	24	23	21	20	19	19	19	19	19	20	21	21	23	24	25	26	26	27	27	27	27	27	27	27.3
18-Aug	27	28	28	28	28	28	28	26	24	23	24	26	28	29	31	33	34	34	33	31	29	28	26	33.8
19-Aug	26	25	25	24	24	24	24	24	24	24	25	25	26	26	27	27	28	29	30	30	30	29	29	29.9
20-Aug	28	28	27	27	27	27	27	27	27	27	27	27	28	28	29	30	31	32	33	32	31	30	28	32.5
21-Aug	26	25	24	23	23	22	21	20	19	19	18	18	17	17	17	18	18	18	19	19	19	18	16	26.4
22-Aug	15	13	12	11	10	9	8	8	9	10	11	12	14	16	17	19	20	22	23	24	24	24	24	24.4
23-Aug	23	23	22	21	21	21	20	19	19	19	19	19	20	20	21	22	24	25	25	26	26	27	26	26.7
24-Aug	25	23	24	23	20	17	16	14	14	14	13	13	15	17	21	24	27	28	28	29	28	27	24	28.7
25-Aug	22	21	21	21	20	19	18	17	16	16	17	17	19	20	22	24	26	27	28	28	27	26	25	27.6
26-Aug	24	23	21	21	20	20	20	20	20	20	21	22	24	25	26	28	28	28	28	27	26	25	21	28.2
27-Aug	20	18	17	15	14	15	15	16	17	18	19	21	23	24	24	24	24	23	22	21	20	19	16	24.2
28-Aug	15	13	12	11	10	10	9	9	10	12	15	18	21	24	28	31	34	36	37	38	38	37	32	37.8
29-Aug	28	24	19	18	14	11	10	9	8	9	11	13	16	19	22	25	28	29	30	30	30	29	25	30.5
30-Aug	23	20	19	18	16	14	12	10	8	8	8	9	11	14	17	22	26	28	30	31	30	31	29	30.9
31-Aug	28	28	28	29	29	28	28	28	29	29	30	31	32	33	34	33	33	33	34	33	33	32	31	33.7
46.5 46.1 45.2 44.1 43.6 42.6 39.5 35.2 30.7 29.2 29.9 30.7 31.8 33.2 33.9 36.3 39.5 41.5 43.4 45.1 45.6 45.0 45.7 46.3																								
Diurnal Maximums																								
N - Not Valid																								

Span Responses

Ozone (O₃)
Portable Rycroft - August 2017



Hourly Averages

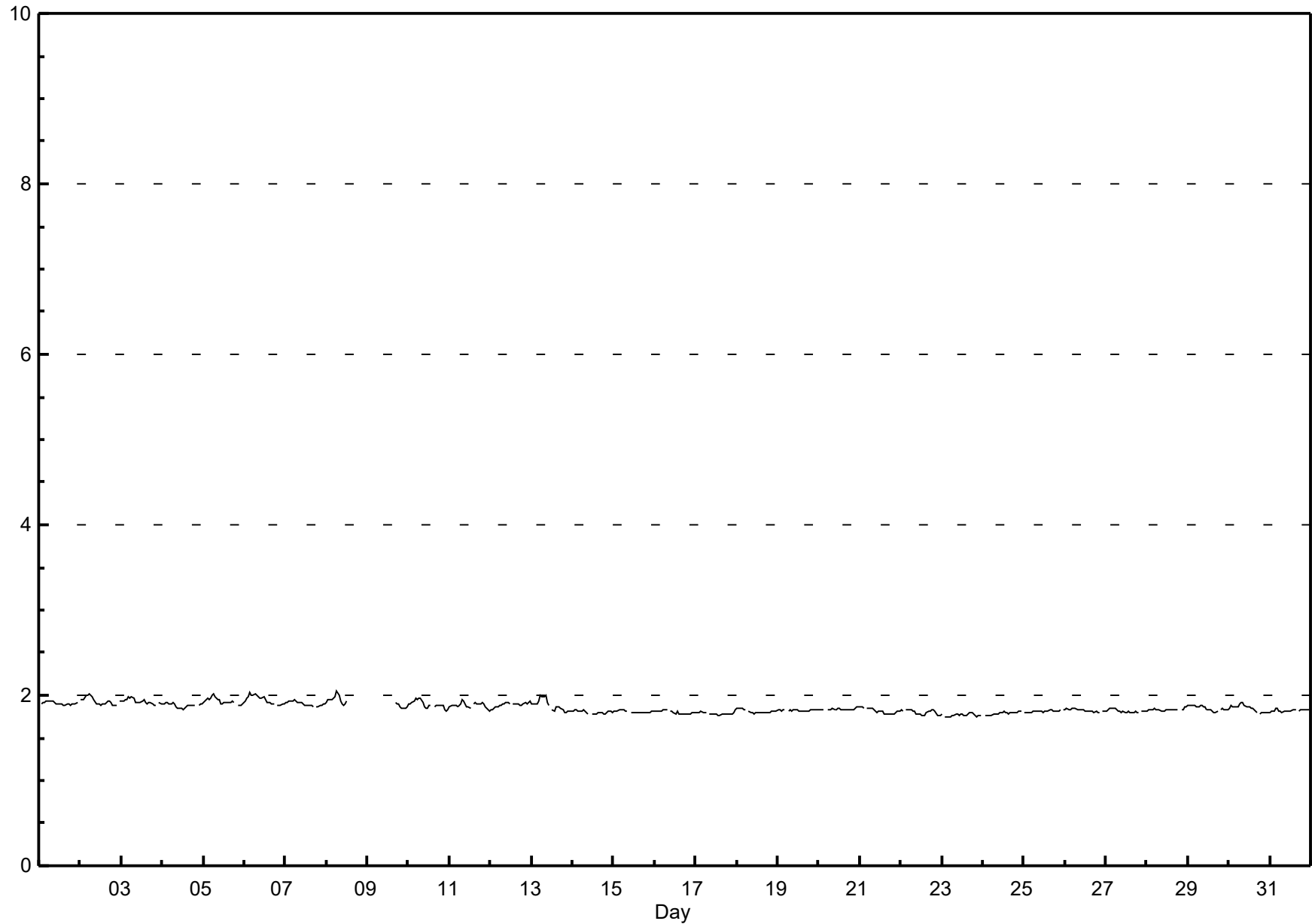
Total Hydrocarbons (THC) - ppm

Portable Rycroft - August 2017

Maximum Value: 2.04 ppm on Aug 8 07:00																					Maximum Daily Average: 1.95 ppm on Aug 6					Hours in Service: 744	
Minimum Value: 1.7 ppm on Aug 23 04:00																					Minimum Daily Average: 1.77 ppm on Aug 23					Hours of Data: 686	
Maximum Diurnal Average: 1.88 ppm at hour 7																					Minimum Diurnal Average: 1.83 ppm at hour 20					Hours of Missing Data: 58	
Monthly Average: 1.850 ppm																					Percentiles: P ₁ = 1.76 P ₁₀ = 1.78 Q ₁ = 1.81 Median = 1.83 Q ₃ = 1.89 P ₉₀ = 1.93 P ₉₉ = 2.01					Hours of Calibration: 37	
																										Percent Operational Time: 97.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.90	1.94	
2-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.93	2.02	
3-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.93	1.98	
4-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.88	1.91	
5-Aug	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.93	2.01	
6-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.95	2.04	
7-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.94	
8-Aug	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	N	N	--	2.04	
9-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	N	N	N	N	N	N	N	N	--	1.91	
10-Aug	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.89	1.97	
11-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.88	1.95	
12-Aug	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93	
13-Aug	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	A	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.88	1.99	
14-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.83	
15-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.83	
16-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.84	
17-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.83	
18-Aug	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.85	
19-Aug	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.84	
20-Aug	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.84	1.86	
21-Aug	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.86	
22-Aug	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.83	
23-Aug	1.8	A	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.77	1.80	
24-Aug	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.79	1.81	
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.81	1.83	
26-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.82	1.85	
27-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.82	1.85	
28-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.83	1.87	
29-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.85	1.88	
30-Aug	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.92	
31-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.84	
1.85 1.86 1.86 1.87 1.87 1.88 1.88 1.88 1.87 1.85 1.85 1.84 1.84 1.84 1.83 1.84 1.84 1.84 1.83 1.83 1.83 1.83 1.84 1.84																								Diurnal Average			
1.94 1.96 1.98 2.04 2.01 2.02 2.04 2.01 1.99 1.97 1.96 1.98 1.95 1.94 1.92 1.91 1.93 1.94 1.92 1.91 1.91 1.90 1.92 1.93																								Diurnal Maximum			
C - Calibration N - Not Valid A - Automated Daily Zero Span																											

Hourly Averages

Total Hydrocarbons (THC) - ppm
Portable Rycroft - August 2017



Hourly Maximums

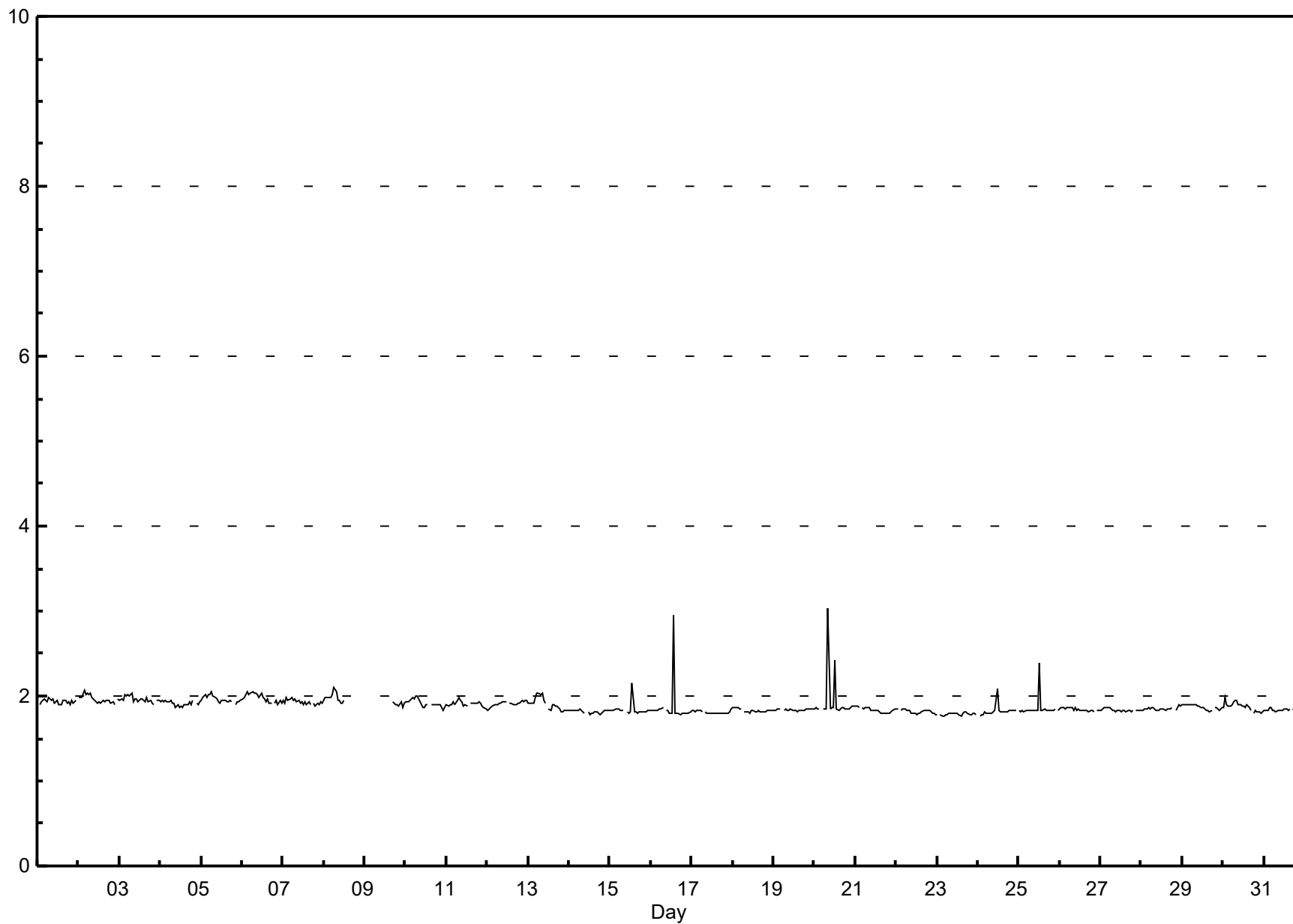
Total Hydrocarbons (THC) - ppm

Portable Rycroft - August 2017

Maximum Value: 3.03 ppm on Aug 20 09:00																					Maximum Daily Average: 1.98 ppm on Aug 6				Hours in Service: 744	
Minimum Value: 1.8 ppm on Aug 23 04:00																					Minimum Daily Average: 1.79 ppm on Aug 23				Hours of Data: 686	
Maximum Diurnal Average: 1.93 ppm at hour 9																					Minimum Diurnal Average: 1.85 ppm at hour 20				Hours of Missing Data: 58	
Monthly Average: 1.879 ppm																					Percentiles: P ₁ = 1.78 P ₁₀ = 1.80 Q ₁ = 1.82 Median = 1.86 Q ₃ = 1.92 P ₉₀ = 1.96 P ₉₉ = 2.08				Hours of Calibration: 37	
																					Percent Operational Time: 97.2					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.94	1.99
2-Aug	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	A	2.0	1.96	2.07
3-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.96	2.04
4-Aug	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.91	1.95
5-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.96	2.05
6-Aug	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.98	2.06
7-Aug	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.99
8-Aug	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	N	--	2.09
9-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	N	N	N	N	N	N	N	--	1.93
10-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.92	2.00
11-Aug	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.91	1.97
12-Aug	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.91	1.96
13-Aug	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.91	2.04
14-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.85
15-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	2.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	2.15
16-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.8	1.8	1.8	1.8	3.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	2.95
17-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.85
18-Aug	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.86
19-Aug	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.84	1.86
20-Aug	1.8	1.9	1.8	1.9	A	1.9	1.9	1.8	3.0	1.8	1.9	1.9	2.4	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.93	3.03
21-Aug	1.9	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.88
22-Aug	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.85
23-Aug	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.81
24-Aug	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.82	2.08
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.85	2.38
26-Aug	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.84	1.87
27-Aug	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.83	1.86
28-Aug	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.8	1.9	1.9	1.85	1.89
29-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.8	1.8	1.9	1.87	1.90
30-Aug	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.87	1.98
31-Aug	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.86
1.88 1.88 1.89 1.89 1.90 1.90 1.91 1.91 1.93 1.88 1.87 1.87 1.90 1.91 1.86 1.86 1.86 1.86 1.86 1.85 1.86 1.86 1.86 1.86 1.86																								Diurnal Average		
1.99 1.99 2.02 2.07 2.03 2.04 2.09 2.05 3.03 2.02 1.98 2.08 2.43 2.95 1.95 1.96 1.98 1.95 1.95 1.94 1.96 1.93 1.95 1.96																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

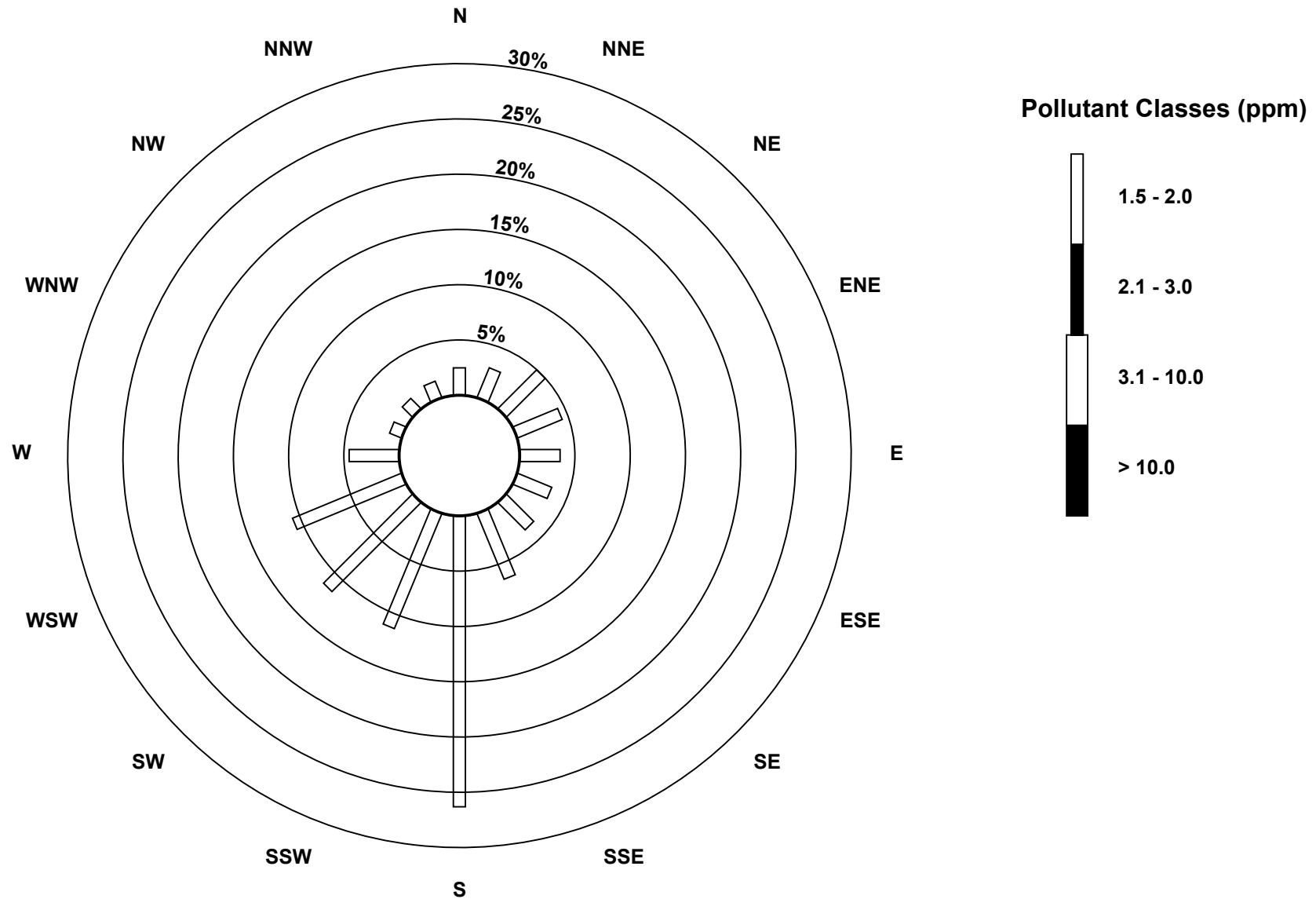
Hourly Maximums

Total Hydrocarbons (THC) - ppm
Portable Rycroft - August 2017



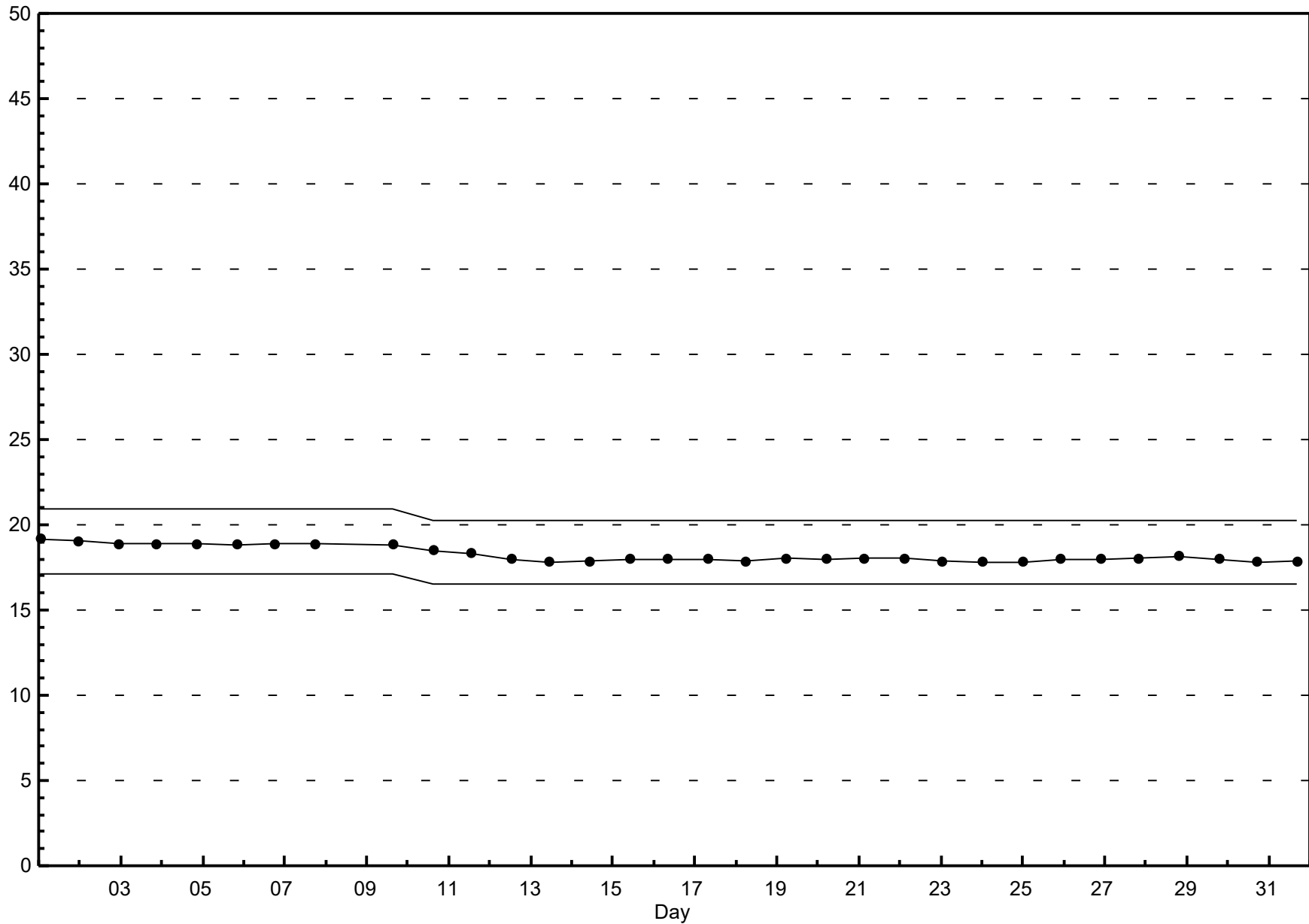
Pollutant Rose

Total Hydrocarbons (THC) - ppm
Portable Rycroft - August 2017



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - August 2017



Hourly Averages

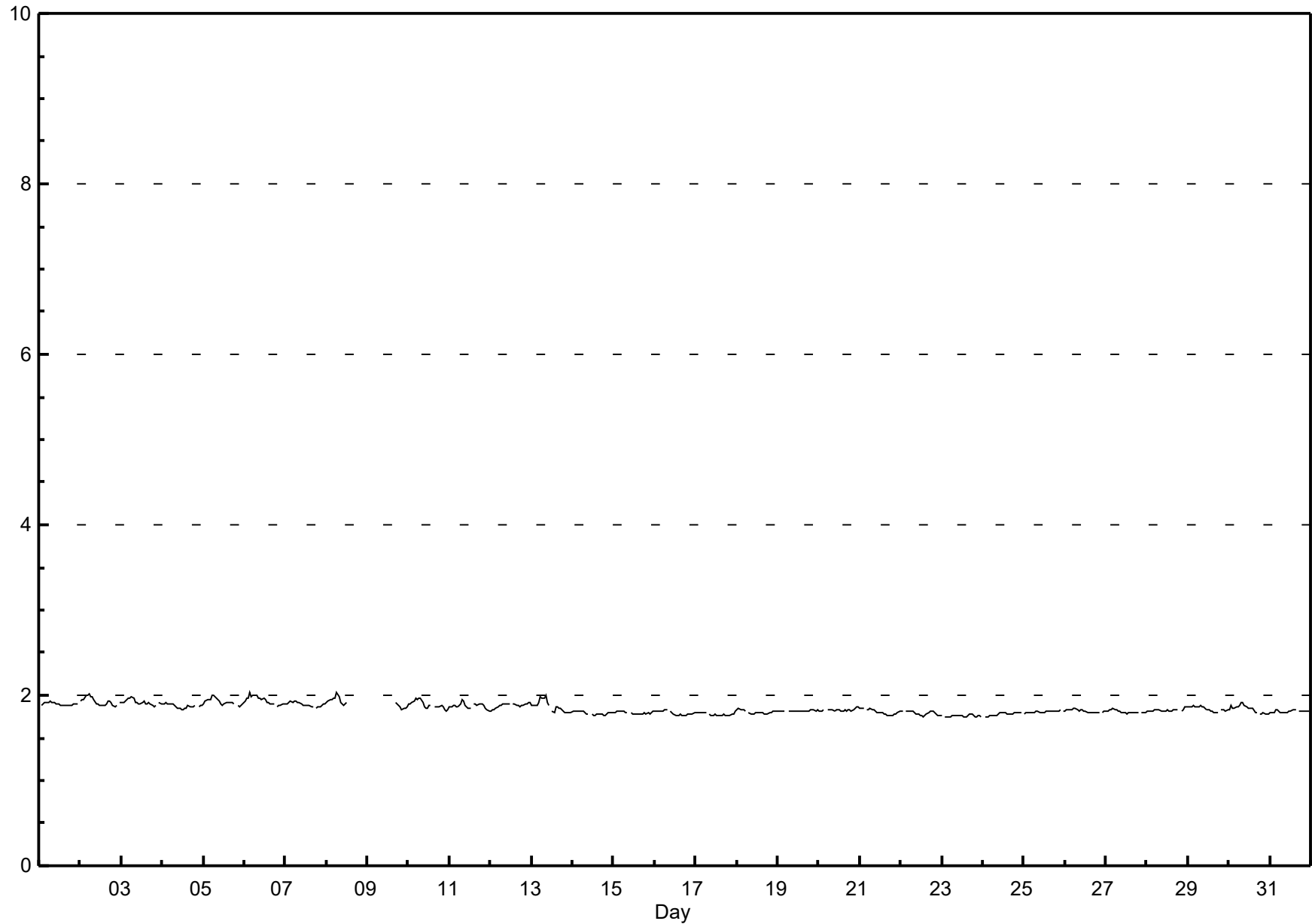
Methane (CH₄) - ppm

Portable Rycroft - August 2017

Maximum Value: 2.04 ppm on Aug 8 07:00																				Maximum Daily Average: 1.94 ppm on Aug 6				Hours in Service: 744		
Minimum Value: 1.7 ppm on Aug 23 04:00																				Minimum Daily Average: 1.76 ppm on Aug 23				Hours of Data: 686		
Maximum Diurnal Average: 1.88 ppm at hour 7																				Minimum Diurnal Average: 1.82 ppm at hour 20				Hours of Missing Data: 58		
Monthly Average: 1.843 ppm																				Percentiles: P ₁ = 1.75 P ₁₀ = 1.77 Q ₁ = 1.80 Median = 1.83 Q ₃ = 1.89 P ₉₀ = 1.92 P ₉₉ = 2.00				Hours of Calibration: 37		
																				Percent Operational Time: 97.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.90	1.93
2-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.93	2.01
3-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	1.98
4-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.87	1.91
5-Aug	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.92	2.00
6-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.94	2.03
7-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.94
8-Aug	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	N	N	--	2.04
9-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	N	N	N	N	N	N	N	--	1.91
10-Aug	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.89	1.97
11-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.88	1.95
12-Aug	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.92
13-Aug	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	A	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	2.00
14-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.82
15-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.82
16-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.83
17-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.78	1.82
18-Aug	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.84
19-Aug	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.83
20-Aug	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.83	1.86
21-Aug	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.85
22-Aug	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.82
23-Aug	1.8	A	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.7	1.76	1.79
24-Aug	A	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.78	1.80	
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.80	1.82	
26-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.82	1.84	
27-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.81	1.84	
28-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.83	1.86
29-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.84	1.88
30-Aug	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.91
31-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.84
1.85 1.85 1.86 1.86 1.87 1.87 1.88 1.87 1.86 1.84 1.84 1.83 1.83 1.83 1.83 1.83 1.83 1.83 1.83 1.82 1.83 1.82 1.83 1.83																								Diurnal Average		
1.94 1.96 1.97 2.03 2.00 2.01 2.04 2.00 2.00 1.97 1.95 1.97 1.94 1.94 1.91 1.91 1.93 1.93 1.91 1.90 1.90 1.89 1.91 1.92																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - August 2017



Hourly Maximums

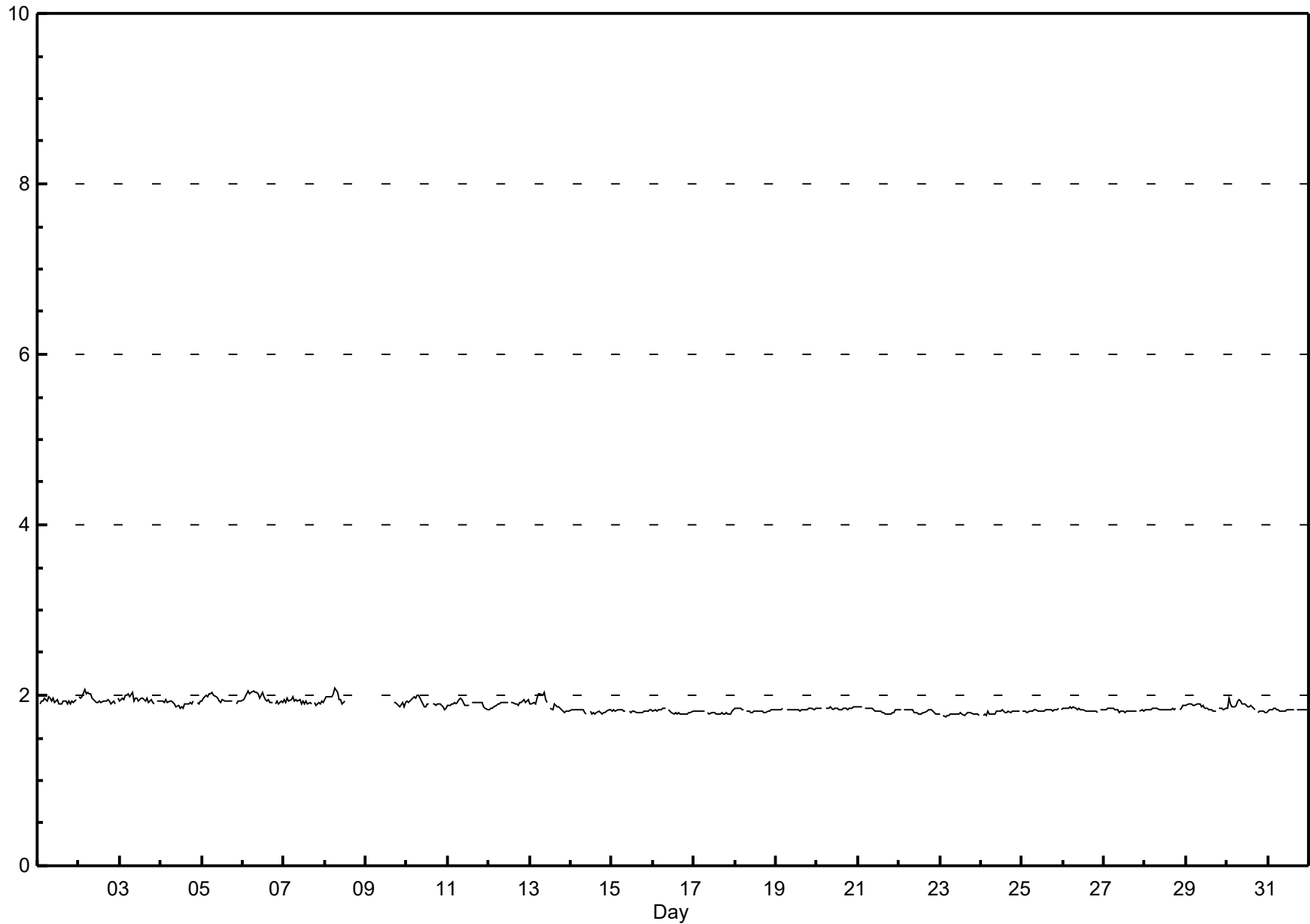
Methane (CH₄) - ppm

Portable Rycroft - August 2017

Maximum Value: 2.08 ppm on Aug 8 07:00																				Maximum Daily Average: 1.97 ppm on Aug 6				Hours in Service: 744		
Minimum Value: 1.8 ppm on Aug 23 04:00																				Minimum Daily Average: 1.78 ppm on Aug 23				Hours of Data: 686		
Maximum Diurnal Average: 1.90 ppm at hour 7																				Minimum Diurnal Average: 1.85 ppm at hour 20				Hours of Missing Data: 58		
Monthly Average: 1.866 ppm																				Percentiles: P ₁ = 1.76 P ₁₀ = 1.79 Q ₁ = 1.82 Median = 1.84 Q ₃ = 1.91 P ₉₀ = 1.96 P ₉₉ = 2.03				Hours of Calibration: 37		
																				Percent Operational Time: 97.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.93	1.99
2-Aug	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.96	2.06
3-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.95	2.03
4-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.91	1.95
5-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.95	2.03
6-Aug	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.97	2.05
7-Aug	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.98
8-Aug	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	N	N	N	N	N	--	2.08
9-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	N	N	N	N	N	N	N	--	1.92
10-Aug	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.91	2.00
11-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.90	1.97
12-Aug	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.90	1.95
13-Aug	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.90	2.04
14-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.84
15-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.84
16-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.84
17-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.84
18-Aug	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.85
19-Aug	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.85
20-Aug	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.84	1.87
21-Aug	1.9	1.9	1.9	A	1.9	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.87
22-Aug	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.84
23-Aug	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.78	1.80
24-Aug	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.80	1.83
25-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.82	1.84
26-Aug	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.83	1.86
27-Aug	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.83	1.86
28-Aug	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.8	1.9	1.9	1.84	1.89
29-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.8	1.8	1.8	1.86	1.90
30-Aug	1.8	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.87	1.97
31-Aug	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.85
1.87 1.88 1.88 1.89 1.89 1.89 1.90 1.90 1.88 1.87 1.86 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.86																								Diurnal Average		
1.99 1.99 2.02 2.06 2.02 2.03 2.08 2.04 2.04 2.02 1.97 2.03 1.98 1.96 1.95 1.96 1.97 1.95 1.95 1.94 1.95 1.93 1.95 1.96																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

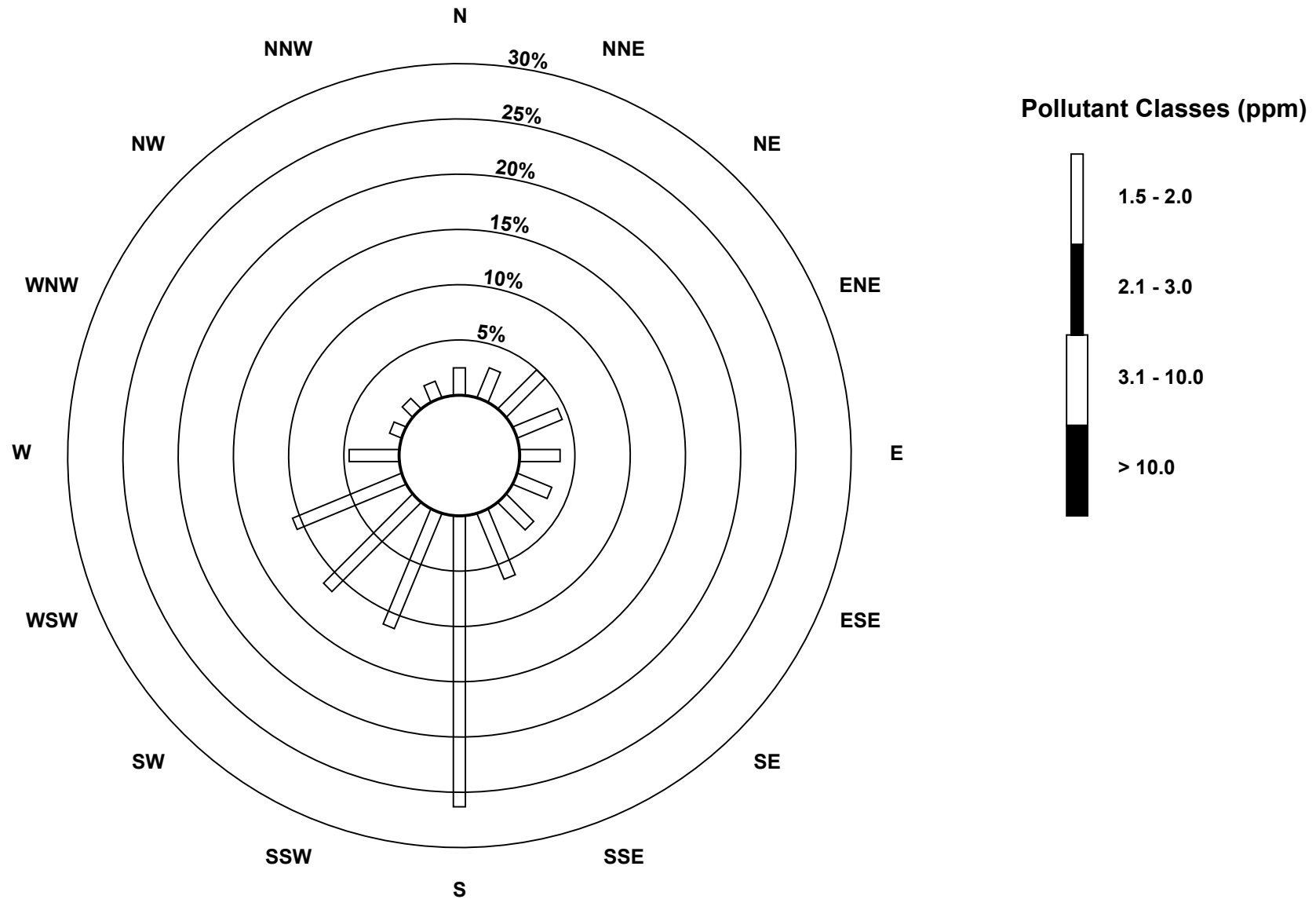
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - August 2017



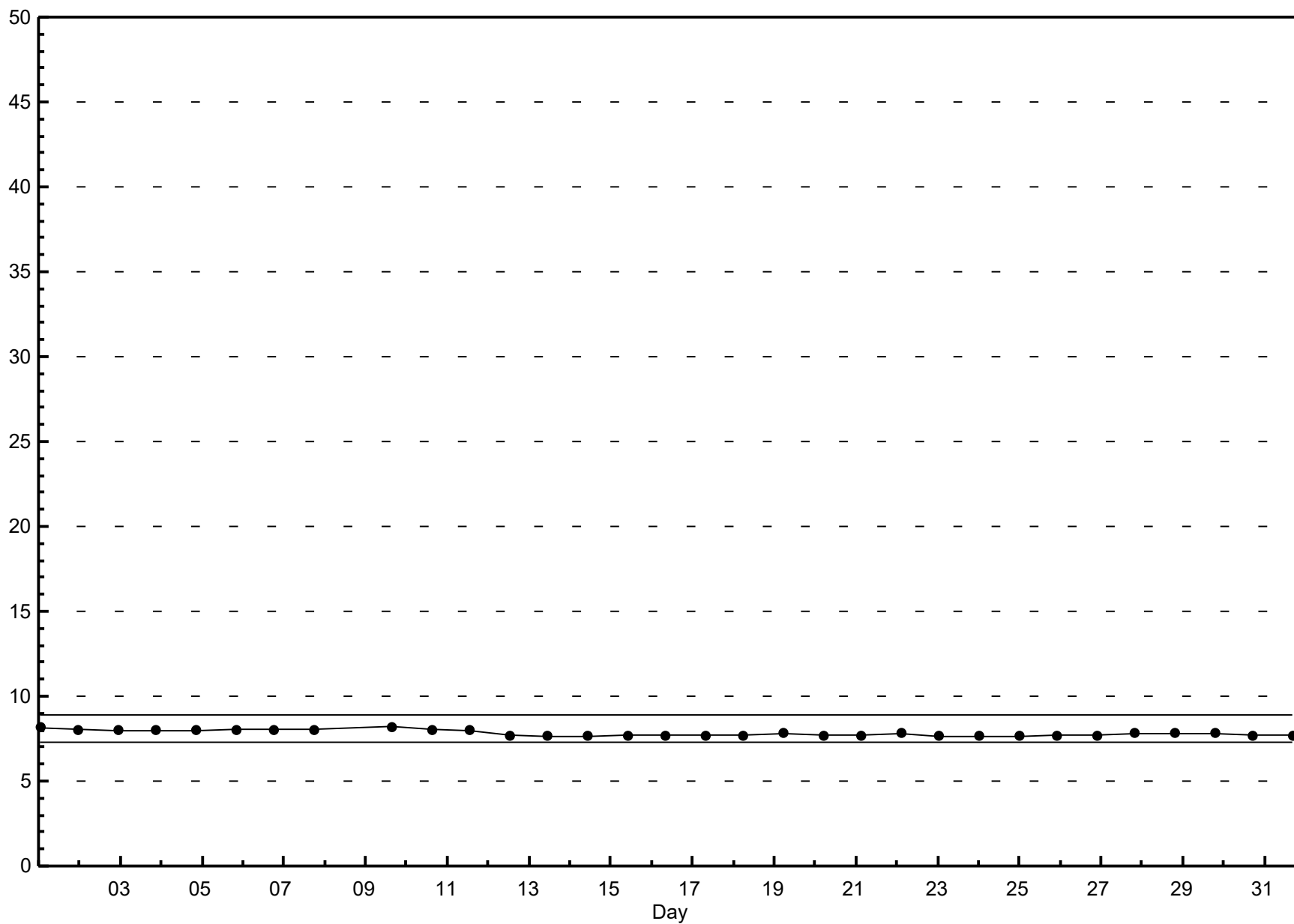
Pollutant Rose

Methane (CH₄) - ppm
Portable Rycroft - August 2017



Span Responses

Methane (CH₄)
Portable Rycroft - August 2017

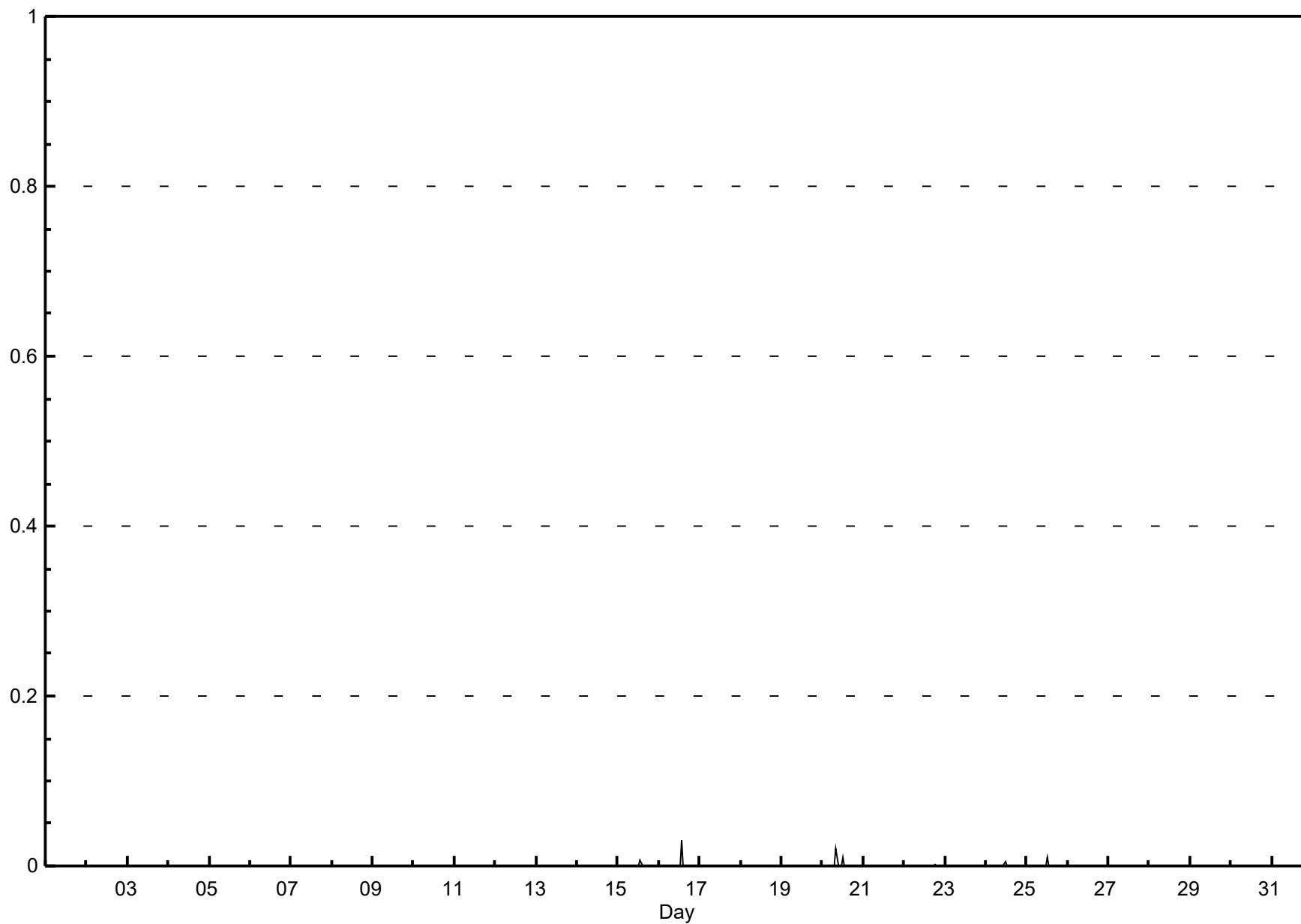


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - August 2017

Maximum Value: 0.03 ppm on Aug 16 14:00																					Maximum Daily Average: 0.00 ppm on Aug 16				Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 1 02:00																					Minimum Daily Average: 0.00 ppm on Aug 1				Hours of Data: 686	
Maximum Diurnal Average: 0.00 ppm at hour 14																					Minimum Diurnal Average: 0.00 ppm at hour 11				Hours of Missing Data: 58	
Monthly Average: 0.000 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00				Hours of Calibration: 37	
																					Percent Operational Time: 97.2					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
2-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
3-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
4-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
9-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.03
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.02
21-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
23-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
25-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.01
26-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
27-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
0.00 0.00																									Diurnal Average	
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.02 0.00 0.00 0.00 0.01 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

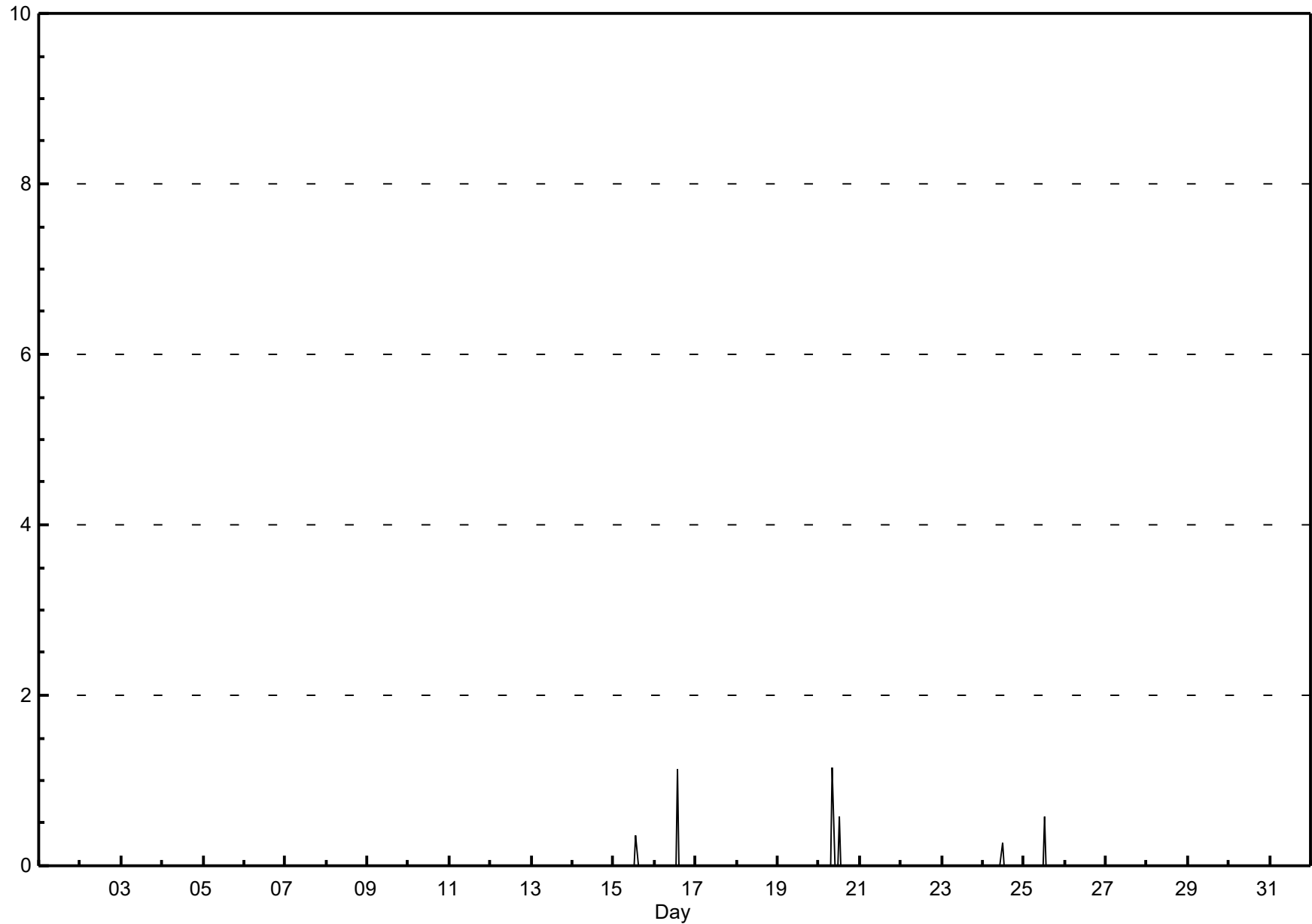
Portable Rycroft - August 2017

Maximum Value: 1.16 ppm on Aug 20 09:00																					Maximum Daily Average: 0.08 ppm on Aug 20				Hours in Service: 744	
Minimum Value: 0.0 ppm on Aug 1 02:00																					Minimum Daily Average: 0.00 ppm on Aug 1				Hours of Data: 686	
Maximum Diurnal Average: 0.05 ppm at hour 14																					Minimum Diurnal Average: 0.00 ppm at hour 23				Hours of Missing Data: 58	
Monthly Average: 0.006 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = -0.10				Hours of Calibration: 37	
																					Percent Operational Time: 97.2					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
2-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
3-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
4-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
5-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
6-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
9-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	N	N	N	N	N	N	N	N	--	0.00
10-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.36
16-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	1.14
17-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
18-Aug	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Aug	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Aug	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	1.16
21-Aug	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Aug	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
23-Aug	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Aug	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.01	0.28
25-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.03	0.58
26-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
27-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
28-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
29-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
30-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.04 0.00 0.00 0.01 0.04 0.05 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Average	
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.16 0.00 0.00 0.28 0.58 1.14 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

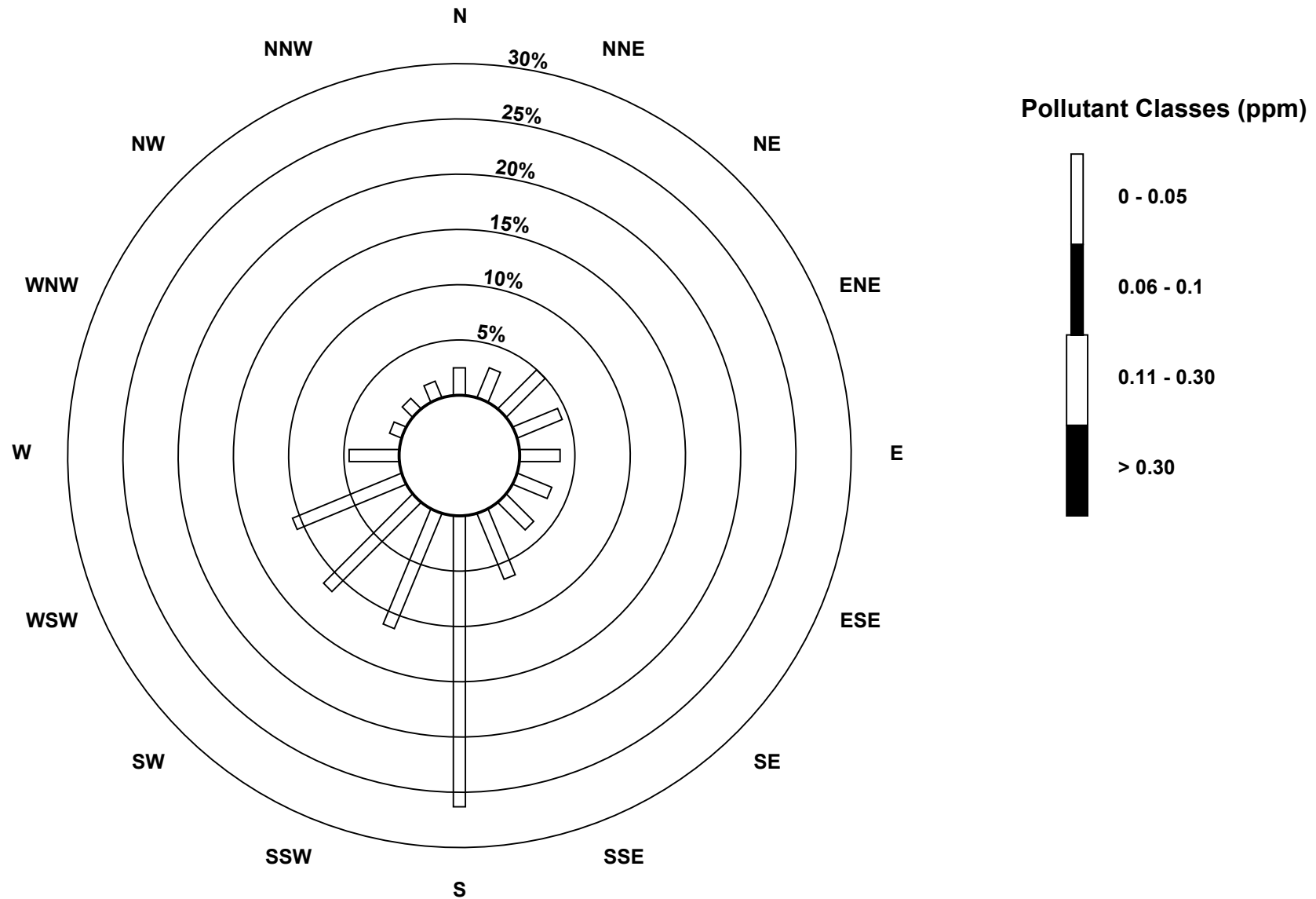
Portable Rycroft - August 2017

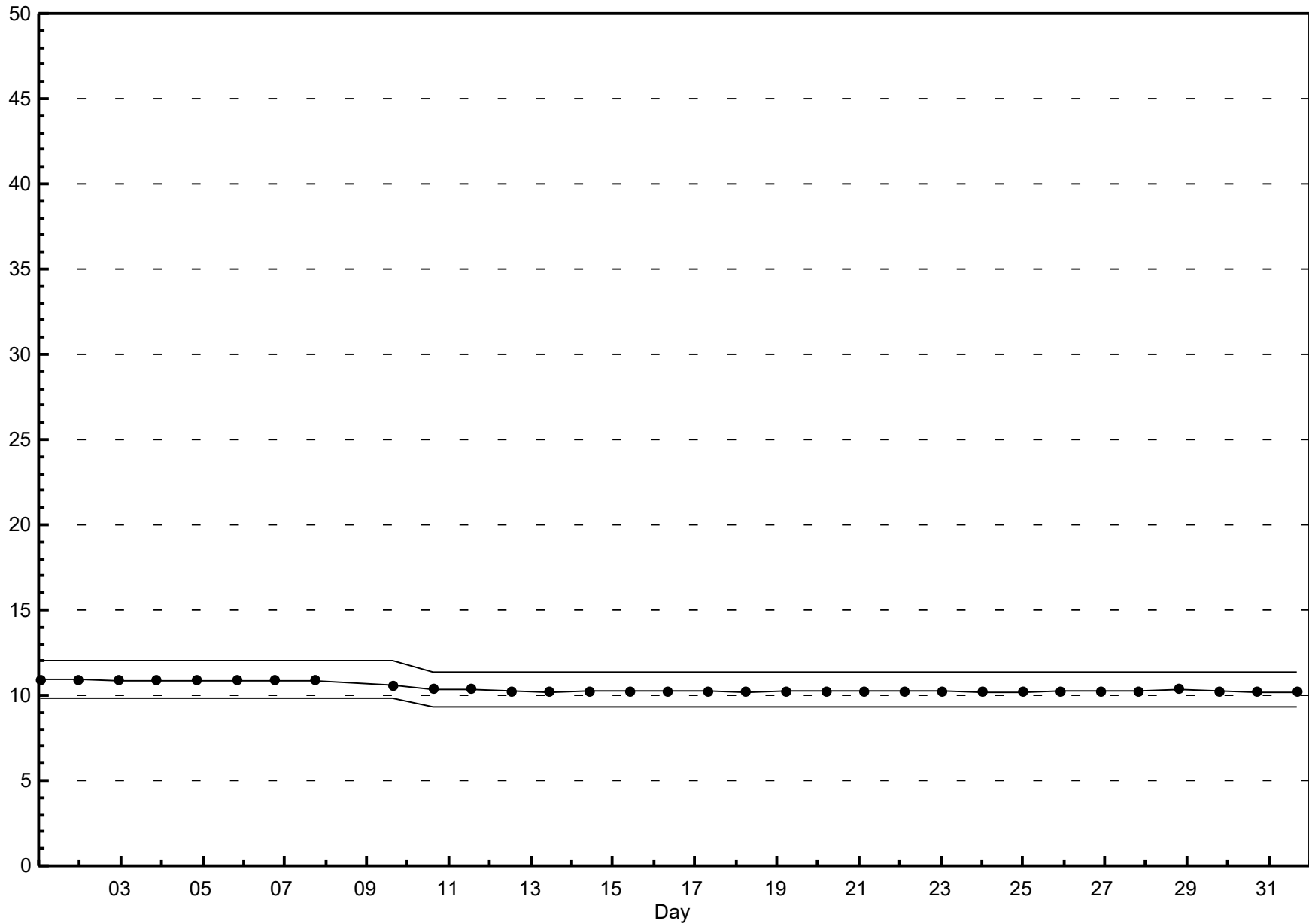


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Portable Rycroft - August 2017





Hourly Averages

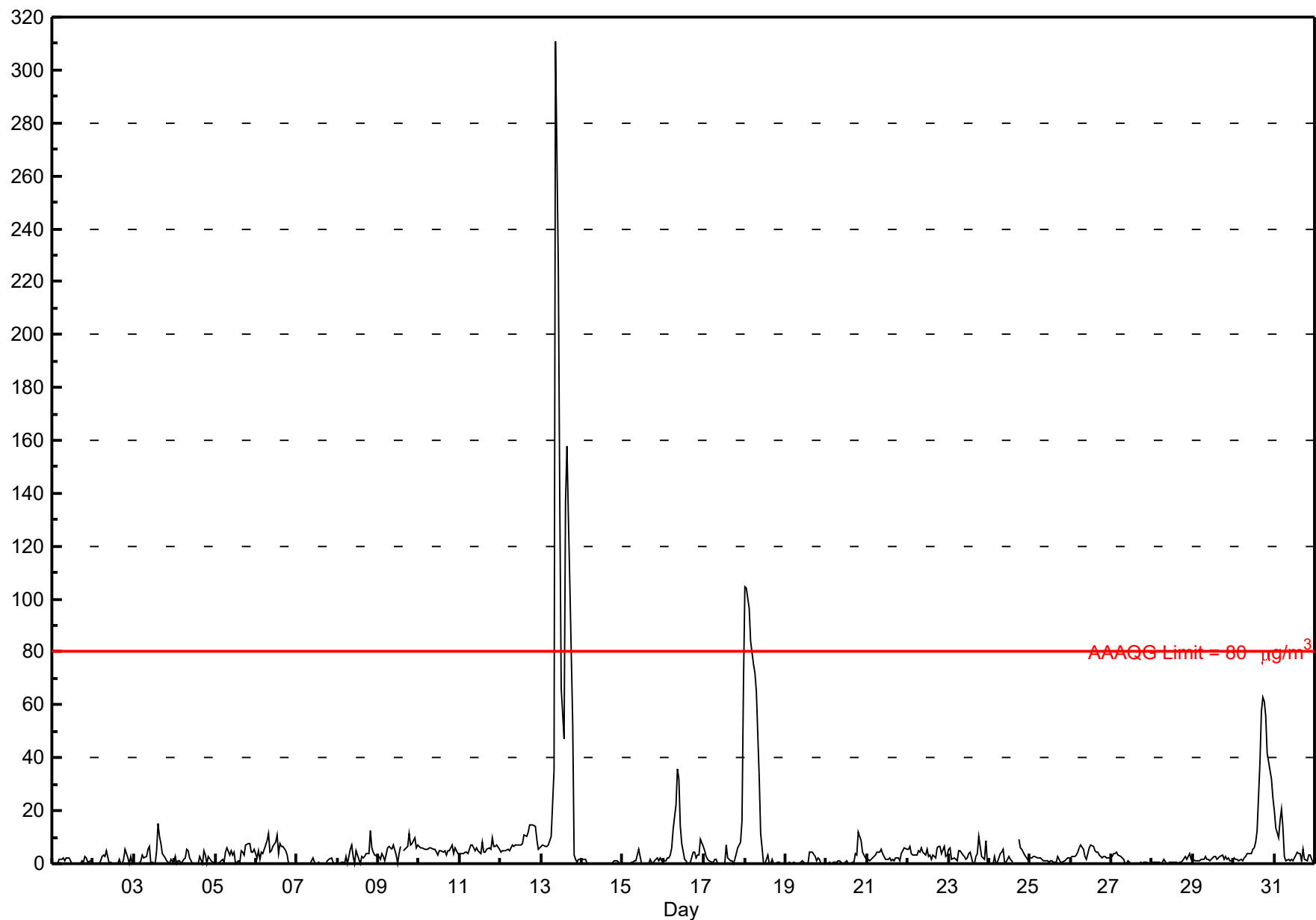
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - August 2017

Number of Exceedences: 1-hr: 12 24-hr: 2 Maximum Value: 310.9 µg/m³ on Aug 13 09:00 Maximum Daily Average: 72.2 µg/m³ on Aug 13																								Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6		
Minimum Value: 0 µg/m³ on Aug 1 02:00 Maximum Diurnal Average: 15.1 µg/m³ at hour 9 Monthly Average: 6.75 µg/m³ Minimum Daily Average: 0.3 µg/m³ on Aug 7 Minimum Diurnal Average: 4.1 µg/m³ at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.6 Median = 2.2 Q ₃ = 4.9 P ₉₀ = 7.8 P ₉₉ = 125.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	1	2	2	1	2	2	2	0	0	0	0	0	1	1	3	2	1	1	0	0	0.9	2.8
2-Aug	0	0	0	0	1	3	3	3	5	0	0	0	0	0	0	2	0	0	2	6	2	0	3	0	1.2	5.6
3-Aug	0	0	0	0	1	3	2	3	6	6	0	0	0	5	15	10	8	4	2	1	1	0	2	0	2.9	15.4
4-Aug	3	0	1	1	0	2	2	5	5	2	0	0	0	0	0	3	0	5	3	0	3	1	0	1	1.5	5.5
5-Aug	0	0	1	1	1	1	4	6	3	5	3	4	0	1	0	5	4	3	7	8	8	4	4	5	3.3	7.8
6-Aug	2	5	2	4	4	5	9	11	4	5	6	8	11	4	7	7	6	5	3	0	0	0	0	0	4.6	11.2
7-Aug	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	1	1	2	0	0	0	0.3	2.0
8-Aug	1	0	1	0	0	3	0	5	7	3	0	5	3	0	3	2	2	4	4	12	6	4	3	3	3.0	12.3
9-Aug	2	2	4	2	1	6	7	6	6	7	3	0	4	6	M	5	6	6	11	7	7	10	6	7	5.2	11.4
10-Aug	6	6	6	6	6	5	6	6	6	5	4	3	5	5	5	5	3	5	5	7	4	6	5	4	5.1	6.8
11-Aug	4	4	4	4	4	4	7	7	6	5	6	5	4	8	5	4	5	6	6	10	6	7	7	5	5.5	9.7
12-Aug	5	5	5	5	5	5	6	7	7	7	7	7	7	7	11	10	12	14	15	15	14	9	6	6	8.2	14.8
13-Aug	6	7	6	7	7	9	10	35	311	267	224	136	66	47	137	158	131	106	53	3	1	1	2	2	72.2	310.9
14-Aug	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0.4	1.6
15-Aug	0	0	0	0	0	0	1	1	1	5	3	0	0	0	0	0	2	0	0	1	2	1	2	1	0.9	5.3
16-Aug	1	1	2	2	3	6	13	22	36	32	14	8	2	1	0	0	1	4	4	2	3	3	9	7	7.4	35.7
17-Aug	5	3	1	1	1	1	2	2	0	0	0	0	0	7	2	1	1	0	2	4	6	8	16	67	5.4	67.5
18-Aug	105	104	96	84	80	75	72	65	33	11	6	0	0	3	0	0	1	0	0	0	1	0	0	0	30.8	104.9
19-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	4	4	4	3	1	2	2	0	0	0	1.0	4.3
20-Aug	0	0	0	0	0	1	1	1	1	0	0	1	1	0	0	1	1	4	3	12	9	5	3	2	1.9	11.7
21-Aug	2	1	1	2	3	3	4	4	6	4	3	2	1	2	1	2	1	2	2	1	4	5	6	6	2.9	5.8
22-Aug	6	6	4	3	3	4	5	4	6	5	3	6	3	3	2	3	2	6	6	6	4	6	3	3	4.3	6.5
23-Aug	6	6	2	2	2	1	5	5	3	2	2	2	4	5	0	0	3	4	11	3	2	2	9	1	3.3	10.5
24-Aug	0	0	0	3	0	1	4	4	5	1	1	3	2	1	0	M	M	9	6	6	4	3	2	3	2.6	9.5
25-Aug	2	2	3	3	2	2	2	2	1	1	1	1	1	1	1	1	3	1	1	1	1	1	2	2	1.6	2.8
26-Aug	2	3	3	4	4	6	7	6	3	2	4	6	7	7	5	4	4	3	2	3	3	2	2	2	3.9	7.1
27-Aug	3	4	4	4	3	3	2	1	0	0	1	0	0	0	0	0	0	1	0	1	1	1	0	1	1.2	4.5
28-Aug	1	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	1	3	2	3	4	2	0.9	3.6
29-Aug	2	1	1	1	1	1	1	3	2	2	1	2	3	3	2	2	3	3	2	3	2	2	1	1	1.8	3.2
30-Aug	2	2	1	1	2	1	2	3	4	4	4	5	6	8	12	39	57	63	61	56	42	35	32	25	19.5	63.2
31-Aug	20	14	10	16	21	14	3	1	2	1	2	1	2	4	4	4	1	5	2	1	3	3	1	1	5.6	20.5
6.0 5.7 5.2 5.1 5.1 5.3 5.9 7.2 15.1 12.5 9.8 6.6 4.2 4.2 7.2 9.0 8.7 8.7 7.0 5.7 4.7 4.1 4.2 5.0																								Diurnal Average		
104.9 104.1 96.4 84.2 79.8 75.3 72.3 65.1 310.9 267.3 224.0 136.1 65.9 47.3 136.9 157.7 130.7 105.9 61.2 55.9 41.5 35.5 32.2 67.5																								Diurnal Maximum		
M - Maintenance																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - August 2017



Hourly Maximums

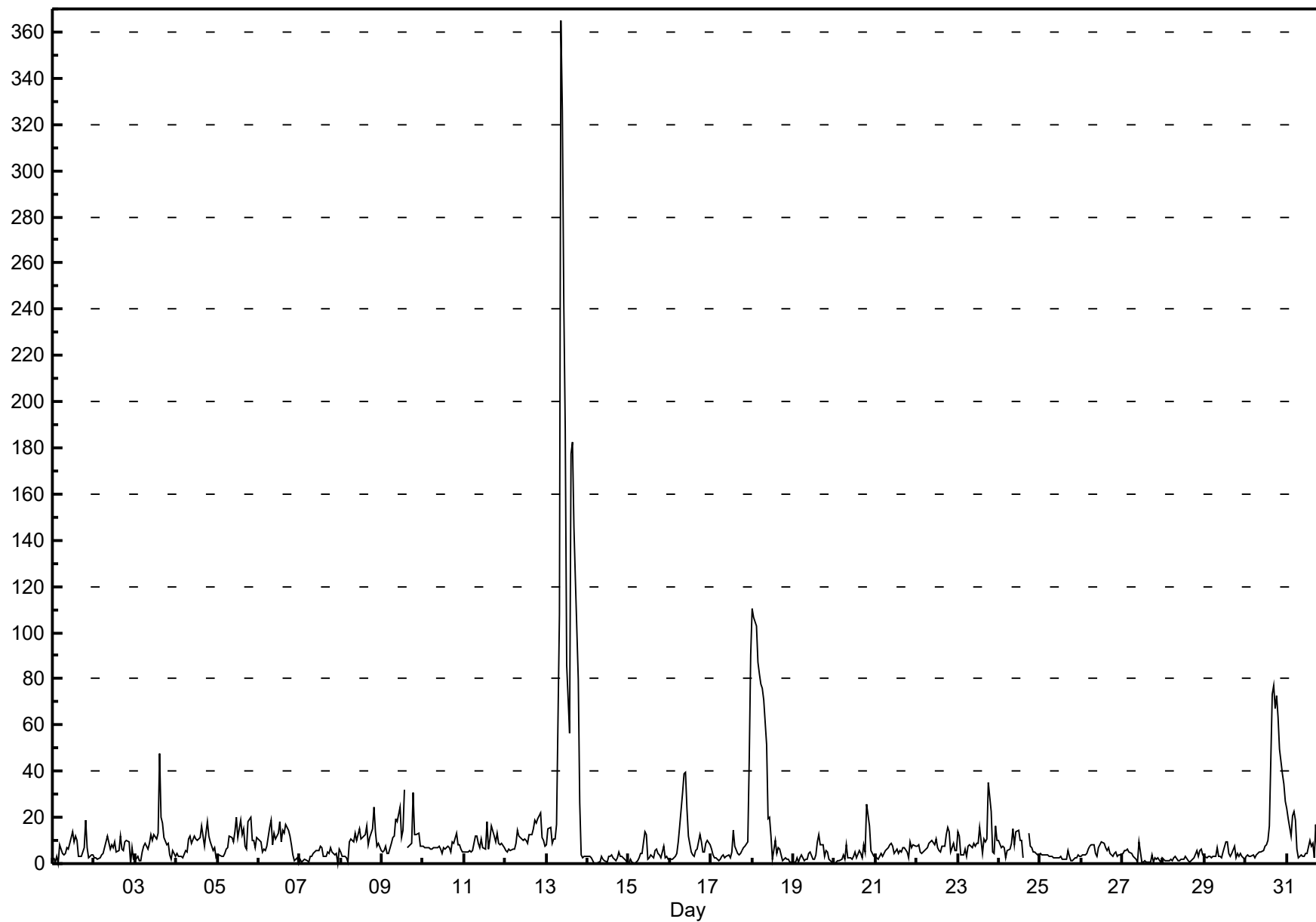
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - August 2017

Maximum Value: 364.7 μg/m ³ on Aug 13 09:00																					Maximum Daily Average: 91.8 μg/m ³ on Aug 13							Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 1 04:00																					Minimum Daily Average: 2.0 μg/m ³ on Aug 14							Hours of Data: 741	
Maximum Diurnal Average: 21.1 μg/m ³ at hour 9																					Minimum Diurnal Average: 6.6 μg/m ³ at hour 22							Hours of Missing Data: 3	
Monthly Average: 11.32 μg/m ³																					Percentiles: P ₁ = 0.2 P ₁₀ = 1.8 Q ₁ = 3.1 Median = 5.8 Q ₃ = 9.8 P ₉₀ = 16.5 P ₉₉ = 116.5							Hours of Calibration: 0	
																					Percent Operational Time: 99.6								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Aug	3	1	3	0	8	5	4	4	7	6	9	14	10	12	10	3	3	5	7	19	7	2	4	3	6.2	18.6			
2-Aug	3	3	2	3	4	4	7	10	12	6	8	7	9	5	6	12	6	6	10	10	10	0	7	2	6.2	12.0			
3-Aug	1	3	1	1	5	8	9	6	9	12	10	13	10	13	48	20	17	11	8	8	4	2	6	3	9.6	47.5			
4-Aug	4	3	3	3	2	6	5	11	12	9	12	10	10	11	11	16	8	13	18	12	10	5	7	3	8.5	18.3			
5-Aug	3	4	3	3	4	7	7	12	11	9	14	20	12	19	13	15	8	6	18	20	10	10	7	11	10.2	20.2			
6-Aug	10	10	5	6	6	8	16	19	8	13	11	13	18	9	15	13	17	14	12	8	4	1	3	0	10.0	19.0			
7-Aug	2	1	2	2	1	1	3	3	5	5	6	6	7	7	3	3	5	5	7	5	4	4	0	7	3.8	7.4			
8-Aug	5	3	3	2	0	10	11	9	13	10	12	15	11	12	13	16	8	11	15	24	14	8	9	6	10.0	24.5			
9-Aug	5	6	8	4	4	9	11	12	19	18	25	11	15	32	M	7	8	9	31	13	12	13	7	8	12.5	31.8			
10-Aug	7	7	7	7	6	6	7	7	7	8	6	4	7	7	8	7	5	10	8	13	8	8	7	5	7.1	12.9			
11-Aug	5	5	5	6	5	6	12	12	9	7	11	7	6	18	6	11	17	12	10	13	9	8	9	7	8.9	18.2			
12-Aug	5	5	6	6	6	7	9	14	12	11	10	10	10	9	12	13	15	19	17	19	22	11	10	8	11.2	22.2			
13-Aug	8	15	16	9	10	10	17	108	365	326	242	188	86	56	177	183	146	123	80	26	4	3	3	3	91.8	364.7			
14-Aug	3	3	2	1	0	0	1	1	3	2	1	0	3	3	4	2	1	2	5	3	3	2	1	0	2.0	4.8			
15-Aug	0	2	1	0	1	1	2	4	4	14	12	2	2	4	3	6	6	4	4	3	8	2	3	2	3.8	13.9			
16-Aug	2	2	3	3	4	9	16	30	39	40	24	12	5	4	3	6	6	13	9	5	5	9	10	8	11.2	39.8			
17-Aug	6	4	3	3	2	2	3	4	3	3	3	2	5	15	7	4	4	4	6	7	7	10	45	90	10.0	90.2			
18-Aug	110	107	103	87	82	78	76	71	52	19	20	12	2	10	5	7	7	4	1	3	2	2	1	1	35.8	110.4			
19-Aug	0	1	2	1	2	4	1	2	2	4	5	2	2	4	10	13	8	8	3	6	5	2	1	0	3.6	12.6			
20-Aug	0	0	1	1	2	4	2	8	2	3	2	3	5	3	6	4	2	8	5	26	16	6	4	3	4.9	25.8			
21-Aug	3	2	3	4	3	4	6	7	8	9	8	5	6	4	6	5	7	7	5	3	10	7	8	8	5.7	9.7			
22-Aug	7	8	5	5	5	6	7	9	10	10	8	11	7	6	5	8	7	13	16	14	5	9	5	5	7.9	15.7			
23-Aug	14	12	4	4	6	3	7	8	7	9	7	9	9	15	4	11	9	11	35	23	5	4	17	10	10.1	34.9			
24-Aug	10	7	8	7	3	5	6	9	15	8	14	14	10	10	2	M	M	13	8	7	5	5	4	4	7.9	15.3			
25-Aug	4	4	4	4	4	3	3	3	3	3	3	2	3	2	2	2	6	3	1	2	2	3	4	3	3.0	5.6			
26-Aug	3	4	4	4	7	8	8	8	4	3	7	8	9	9	7	6	7	5	3	4	5	3	4	4	5.5	9.3			
27-Aug	4	6	6	7	5	4	3	2	2	1	9	1	1	1	1	1	1	4	0	3	2	2	1	3	2.9	9.5			
28-Aug	2	1	2	1	2	1	2	3	1	2	2	2	2	3	1	0	1	2	2	6	3	5	6	4	2.4	6.3			
29-Aug	3	2	3	3	3	3	3	7	3	3	3	5	9	9	4	3	5	7	3	4	3	4	3	2	4.2	9.5			
30-Aug	3	4	3	3	4	3	4	4	5	5	6	8	8	10	16	73	77	67	73	63	50	39	35	27	24.5	77.1			
31-Aug	24	19	12	21	22	19	6	3	4	3	3	4	5	10	8	9	2	17	3	3	6	13	3	2	9.2	23.9			
8.4 8.1 7.5 6.8 7.1 7.8 8.8 13.2 21.1 18.8 16.5 13.6 9.8 10.7 13.8 15.9 14.0 14.1 13.7 12.0 8.4 6.6 7.5 7.8																									Diurnal Average				
110.4 106.5 103.0 87.4 82.1 77.7 75.8 107.6 364.7 326.0 242.4 188.2 86.0 56.2 177.4 182.8 145.5 122.9 80.0 63.1 49.8 39.1 45.3 90.2																									Diurnal Maximum				
M - Maintenance																													

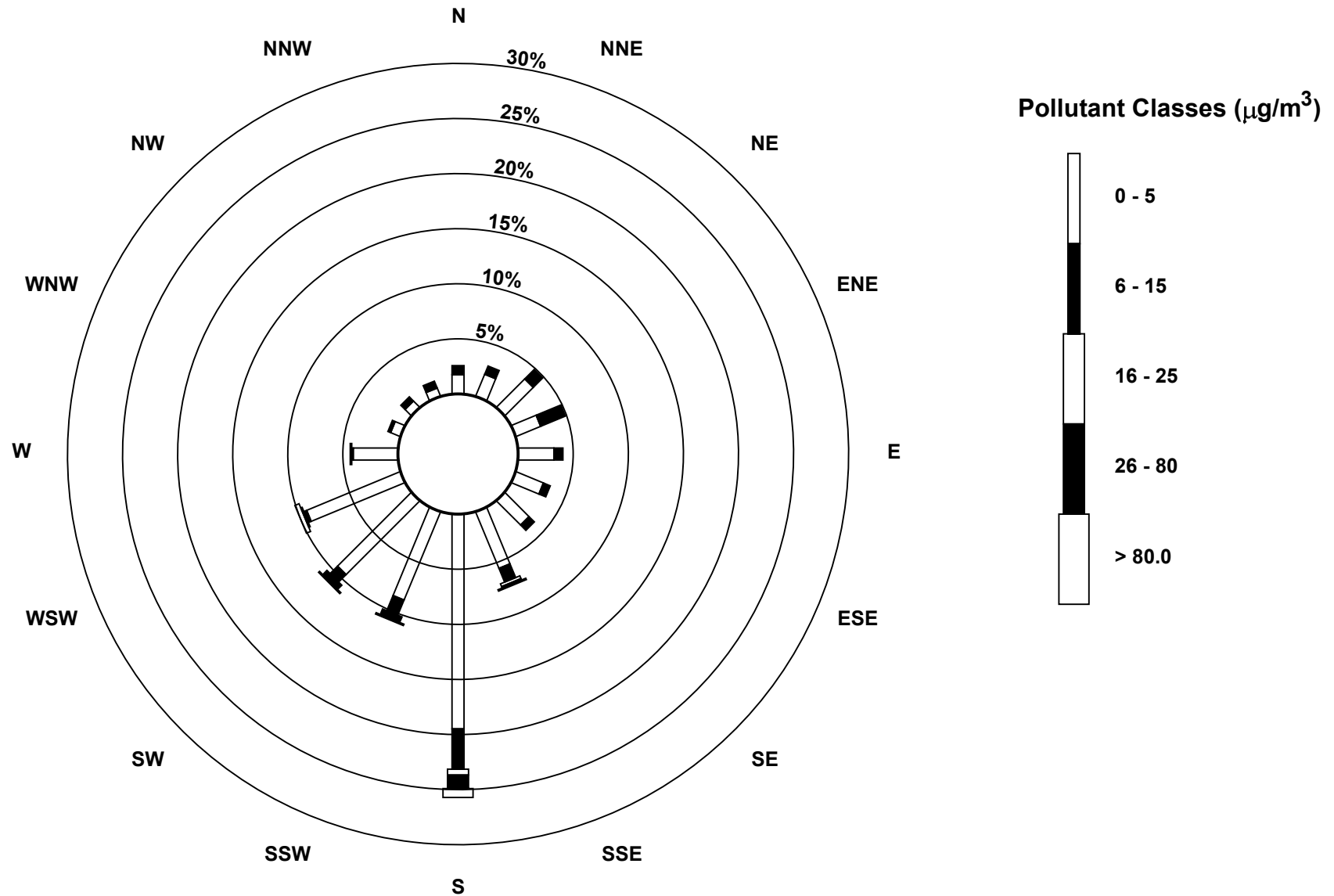
Hourly Maximums

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - August 2017



Pollutant Rose

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - August 2017



Hourly Averages

External Temperature (ET) - °C

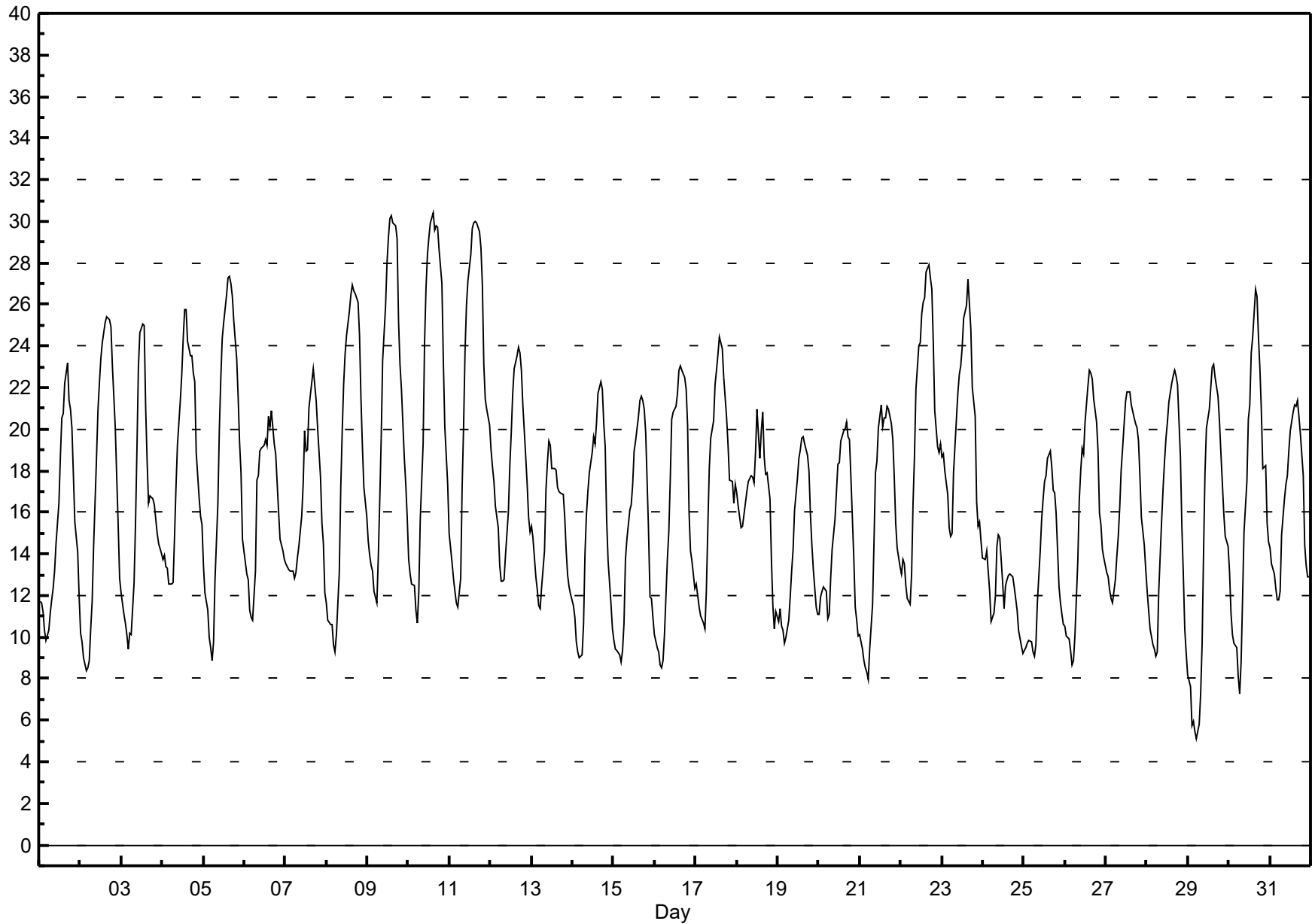
Portable Rycroft - August 2017

Maximum Value: 30.4 °C on Aug 10 15:00																								Maximum Daily Average: 21.8 °C on Aug 11										Hours in Service: 744	
Minimum Value: 5 °C on Aug 29 06:00																								Minimum Daily Average: 12.4 °C on Aug 24										Hours of Data: 744	
Maximum Diurnal Average: 23.0 °C at hour 16																								Minimum Diurnal Average: 10.6 °C at hour 6										Hours of Missing Data: 0	
Monthly Average: 16.88 °C																								Percentiles: P ₁ = 7.6 P ₁₀ = 10.1 Q ₁ = 12.4 Median = 16.6 Q ₃ = 20.7 P ₉₀ = 24.1 P ₉₉ = 29.9										Hours of Calibration: 0	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	12	12	11	10	10	10	11	12	12	13	15	16	19	21	21	22	23	21	21	20	18	16	14	12	15.5	23.2									
2-Aug	10	10	9	8	8	9	10	12	14	19	21	22	23	24	25	25	25	25	25	23	20	18	15	13	17.3	25.4									
3-Aug	12	11	11	10	9	10	10	13	15	19	23	25	25	25	21	19	16	17	17	16	16	15	14	14	16.0	25.1									
4-Aug	14	14	13	13	13	13	13	15	17	19	21	23	24	26	26	24	24	24	23	22	19	17	16	15	18.6	25.7									
5-Aug	13	12	11	10	10	9	10	13	16	20	22	24	25	26	27	27	27	26	25	23	22	19	18	15	18.9	27.3									
6-Aug	14	13	13	11	11	11	13	18	18	19	19	19	20	19	21	20	21	19	19	17	16	15	14	14	16.4	20.9									
7-Aug	13	13	13	13	13	13	13	14	14	16	17	20	19	19	21	22	23	22	21	20	18	15	14	12	16.7	22.9									
8-Aug	12	11	11	11	10	9	10	13	17	20	22	24	25	26	26	27	27	27	26	25	21	19	17	16	18.7	26.9									
9-Aug	15	14	13	13	12	12	14	17	20	23	26	28	29	30	30	30	30	29	25	23	22	19	17	16	21.1	30.3									
10-Aug	14	13	13	12	11	11	12	16	19	24	27	28	29	30	30	30	30	30	29	27	23	20	19	17	21.4	30.4									
11-Aug	15	14	13	12	12	11	13	17	20	24	26	27	28	30	30	30	30	29	29	27	23	21	21	20	21.8	30.0									
12-Aug	19	18	18	16	15	13	13	13	13	14	16	18	20	22	23	24	24	24	23	21	19	17	16	15	18.0	24.0									
13-Aug	15	15	13	12	12	11	12	14	17	18	19	19	18	18	18	17	17	17	17	16	14	13	12	12	15.4	19.4									
14-Aug	12	11	10	9	9	9	11	14	16	17	18	19	20	19	20	22	22	22	20	19	16	14	12	10	15.4	22.2									
15-Aug	10	9	9	9	9	9	11	14	15	16	16	17	19	19	21	21	22	21	21	20	15	12	12	11	14.9	21.6									
16-Aug	10	10	9	9	9	9	10	14	15	18	20	21	21	22	23	23	23	22	22	20	16	14	14	12	16.0	23.1									
17-Aug	13	12	11	11	11	10	12	15	18	20	20	22	23	24	24	24	23	22	21	19	18	17	16	17	17.6	24.5									
18-Aug	17	16	15	15	16	16	17	17	18	18	17	19	21	19	20	21	19	18	18	17	14	11	10	11	16.7	21.0									
19-Aug	11	11	11	10	10	10	11	12	13	14	16	18	19	19	20	20	19	19	18	16	14	13	11	11	14.4	19.6									
20-Aug	11	12	12	12	12	11	11	13	14	16	17	18	18	19	20	20	20	20	19	18	14	11	11	10	15.0	20.3									
21-Aug	10	9	9	9	8	8	9	12	15	18	18	20	21	20	21	21	21	21	20	20	18	16	14	13	15.4	21.2									
22-Aug	13	14	14	12	12	12	13	16	19	22	24	24	26	26	26	28	28	27	27	24	21	19	19	19	20.2	27.9									
23-Aug	19	19	18	17	15	15	15	18	20	22	23	23	24	25	26	27	26	25	22	21	17	15	16	15	20.0	27.2									
24-Aug	14	14	14	13	12	11	11	12	14	15	15	13	11	12	13	13	13	13	12	12	11	10	10	9	12.4	14.9									
25-Aug	9	10	10	10	10	9	9	10	12	14	16	17	17	18	19	19	18	17	17	16	12	12	11	11	13.4	18.9									
26-Aug	11	10	10	9	9	9	10	14	17	18	19	19	20	22	23	23	22	21	20	19	16	15	14	14	16.0	22.8									
27-Aug	13	13	12	12	12	13	14	15	16	18	19	21	22	22	22	21	21	20	20	19	18	16	14	13	16.9	21.8									
28-Aug	12	11	10	10	9	9	9	12	16	17	18	20	20	21	22	23	23	23	22	19	15	13	10	9	15.6	22.8									
29-Aug	8	8	6	6	5	5	6	7	10	14	18	20	21	22	23	23	23	22	20	19	17	16	15	14	14.5	23.1									
30-Aug	13	11	10	10	9	8	7	9	12	15	18	20	21	24	24	27	26	24	23	21	18	18	15	15	16.7	26.8									
31-Aug	14	14	13	12	12	12	12	15	17	17	18	19	20	21	21	21	21	21	20	18	14	13	13	13	16.3	21.4									
12.8 12.3 11.8 11.3 10.8 10.6 11.4 13.6 15.8 17.9 19.5 20.8 21.6 22.3 22.8 23.0 22.8 22.2 21.4 19.9 17.2 15.5 14.4 13.5																								Diurnal Average											
19.0 18.8 18.0 16.9 15.9 16.4 17.0 17.9 20.4 24.2 26.8 28.4 29.2 30.2 30.4 30.0 29.9 29.7 28.8 27.0 23.3 21.5 21.0 20.2																								Diurnal Maximum											

Hourly Averages

External Temperature (ET) - °C

Portable Rycroft - August 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	2	1	3	3	4	3	7	7	7	9	8	7	5	5	5	3	5	5	3	4	4	2	6	4	2.3	9.5
Dir	155	208	201	198	208	189	230	236	264	259	259	252	266	270	235	311	346	24	81	41	75	119	144	175	240.2	259.2
2 Spd	5	4	4	4	5	5	3	4	2	5	5	4	5	5	4	4	3	2	2	5	3	3	5	5	3.3	5.4
Dir	180	167	187	178	163	159	172	178	115	101	118	103	133	124	123	122	95	139	113	73	73	109	169	178	139.1	177.7
3 Spd	5	6	6	6	7	4	4	5	6	6	6	6	6	12	15	5	1	6	3	2	1	1	4	6	1.7	14.7
Dir	177	178	173	182	172	158	156	81	60	61	107	94	93	55	359	14	47	221	174	51	331	222	269	245	109.5	359.4
4 Spd	5	5	5	7	3	5	4	7	6	7	7	8	8	7	6	10	12	8	2	4	3	5	2	4	4.7	11.9
Dir	259	253	254	242	236	225	203	252	263	267	267	263	274	301	271	283	261	272	352	261	180	173	89	150	257.0	260.9
5 Spd	5	6	6	2	4	5	7	4	3	1	2	2	3	2	6	7	7	6	6	3	3	4	5	3	1.4	7.2
Dir	168	181	172	124	183	170	179	164	182	208	108	76	135	118	350	355	350	357	17	66	81	140	142	164	135.8	355.3
6 Spd	4	5	6	6	6	8	5	4	6	7	7	5	11	13	11	13	13	10	7	7	8	9	8	5	3.6	13.1
Dir	173	177	194	175	162	175	198	276	289	297	302	313	349	348	344	352	7	3	11	2	5	11	20	36	345.2	352.3
7 Spd	7	4	6	5	6	4	4	10	11	7	5	8	11	9	11	6	2	7	5	6	5	3	3	3	5.1	11.3
Dir	353	346	3	338	318	311	332	22	38	24	33	11	14	21	34	13	14	23	51	65	67	79	141	177	19.5	37.7
8 Spd	5	5	6	6	5	3	2	2	3	3	5	4	4	4	3	3	5	4	5	6	3	4	6	6	3.0	6.2
Dir	175	184	183	179	178	155	187	110	10	69	116	105	102	90	98	138	117	93	83	70	76	131	162	165	130.3	70.1
9 Spd	5	5	4	5	6	5	5	4	3	2	2	1	2	9	7	8	8	6	6	7	2	4	4	5	0.1	8.5
Dir	161	159	163	144	155	169	188	193	164	139	80	63	299	358	336	319	341	356	344	22	24	239	175	172	142.9	358.2
10 Spd	5	7	7	7	5	8	7	4	3	2	2	3	4	4	6	5	4	4	7	3	0	2	3	5	2.6	7.5
Dir	189	182	177	171	189	180	177	177	179	83	57	84	112	133	63	74	58	35	40	79	162	165	172	166	141.5	179.9
11 Spd	6	5	2	1	2	1	1	2	3	6	8	9	10	9	11	11	13	9	7	7	8	5	5	6	5.1	12.5
Dir	176	181	151	249	350	53	322	316	24	76	117	95	89	105	82	88	82	94	91	77	81	84	106	103	93.1	81.8
12 Spd	8	5	3	3	3	4	7	1	2	1	1	4	6	4	4	4	3	5	6	6	2	6	5	8	3.4	7.9
Dir	134	139	129	95	77	66	73	317	43	329	59	66	49	64	96	128	103	72	52	56	19	55	44	42	74.7	134.3
13 Spd	10	6	3	1	4	5	7	4	12	22	22	25	18	8	5	5	6	6	10	10	8	10	10	12	6.9	24.9
Dir	53	69	285	65	225	183	185	191	234	242	244	247	238	234	200	182	178	183	184	184	175	173	174	174	210.6	247.0
14 Spd	9	9	11	10	10	9	9	8	7	22	21	17	17	13	13	8	8	11	7	5	8	10	7	8	9.4	22.1
Dir	182	181	170	171	170	175	179	191	209	240	239	239	239	231	243	205	218	237	222	192	182	180	185	176	209.3	240.0
15 Spd	11	9	10	9	9	8	8	10	26	33	27	20	16	21	22	19	15	14	8	5	5	8	9	9	11.4	33.0
Dir	172	176	178	182	177	182	186	226	241	263	272	253	247	251	252	245	246	252	241	204	191	174	180	176	231.9	262.6
16 Spd	8	7	9	10	10	12	10	10	11	12	11	11	15	16	18	22	25	24	19	7	4	6	8	8	10.5	24.9
Dir	176	163	162	167	169	167	173	181	183	191	209	219	233	243	240	242	243	241	241	225	195	189	186	185	211.5	242.8
17 Spd	8	8	8	9	8	8	9	9	12	24	20	11	15	13	13	11	11	9	9	8	4	6	5	10	9.5	23.8
Dir	186	187	184	177	179	180	183	165	224	242	242	224	236	229	229	200	195	201	213	220	210	191	190	187	209.7	242.4
18 Spd	11	12	8	6	9	11	11	11	15	13	19	27	21	26	22	16	16	14	13	9	9	8	8	7	12.3	26.7
Dir	184	169	148	176	182	172	187	192	190	194	231	235	229	234	228	216	222	224	219	206	194	192	190	195	208.5	235.2
19 Spd	5	7	7	7	7	6	6	12	24	28	24	25	27	26	32	31	34	32	28	12	5	6	7	6	16.2	34.4
Dir	206	209	199	206	196	210	207	225	235	241	240	239	244	243	247	244	241	245	244	233	204	192	189	194	234.9	241.2
20 Spd	5	13	16	17	22	17	11	24	31	29	22	22	20	20	19	17	20	21	17	9	5	8	7	8	15.8	30.5
Dir	209	229	231	233	240	236	228	243	253	256	249	255	252	257	254	249	260	248	260	244	199	184	185	175	243.4	253.4
21 Spd	10	9	8	7	6	6	6	7	8	8	7	9	12	11	14	8	13	7	6	4	5	7	7	6	6.6	13.6
Dir	171	170	167	164	161	146	153	161	166	181	192	199	222	234	249	270	239	220	218	207	189	185	184	172	196.9	248.7
22 Spd	7	7	7	7	7	8	8	6	8	8	9	9	7	8	8	5	7	6	3	5	3	5	7	10	6.3	10.5
Dir	171	167	171	167	171	168	169	182	168	183	216	209	212	203	195	195	184	142	102	131	139	142	143	160	174.8	159.9

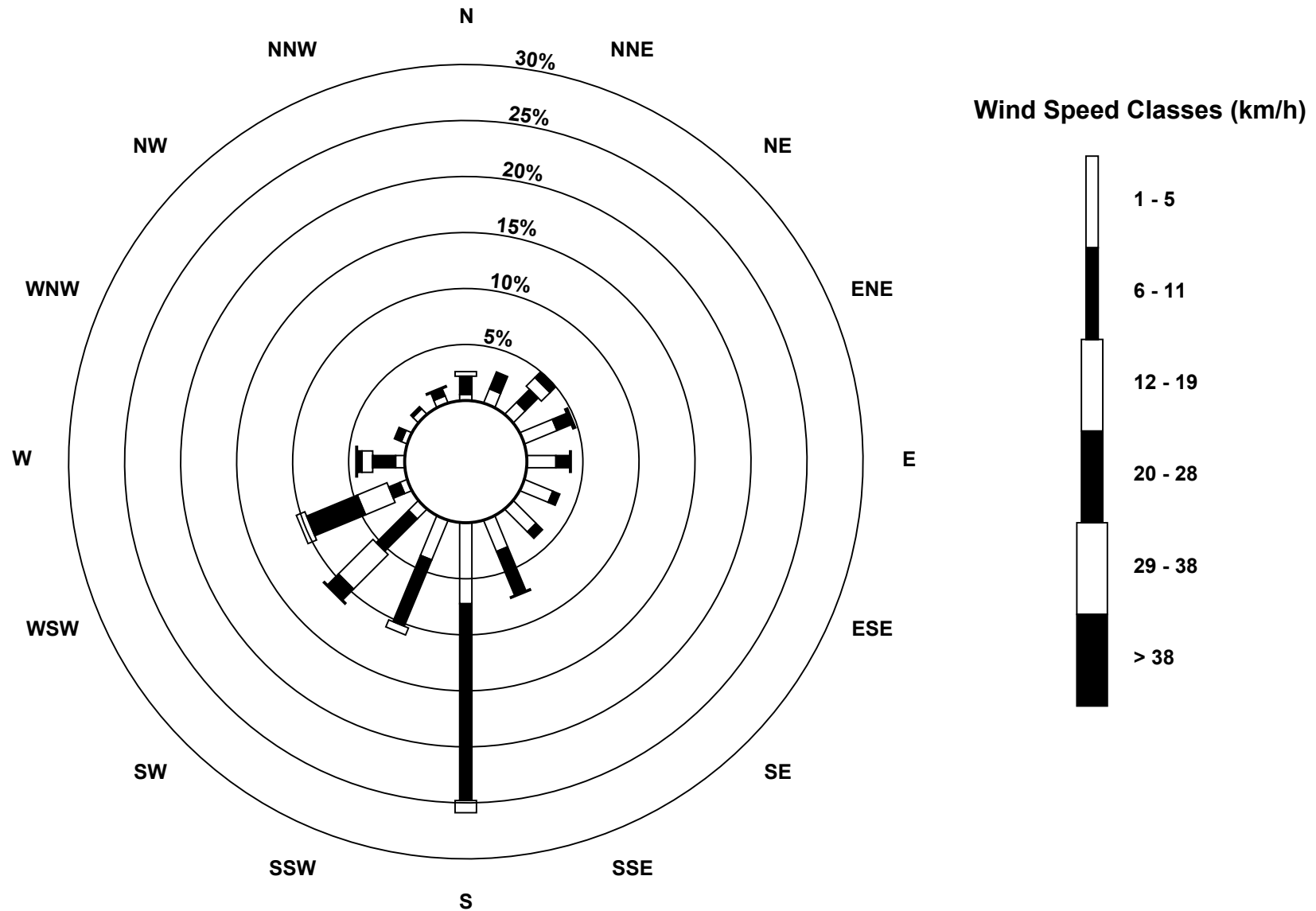
Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - August 2017

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
23 Spd	6	8	7	4	3	7	8	9	5	5	4	7	7	5	8	7	9	5	7	11	7	6	7	7	5.9	11.2					
Dir	160	156	159	159	86	163	169	177	186	189	197	182	167	134	239	210	217	195	166	170	144	163	203	184	176.8	169.6					
24 Spd	2	7	3	2	0	2	4	4	2	4	10	17	17	20	24	24	22	9	10	6	6	7	8	6	7.6	24.3					
Dir	70	124	170	127	310	187	163	144	178	248	278	245	235	235	237	238	239	229	221	204	210	211	199	218	226.7	238.4					
25 Spd	10	10	16	14	12	4	3	4	6	9	16	19	21	28	23	24	29	20	11	7	8	11	10	10	12.4	29.2					
Dir	229	223	243	272	265	235	187	165	188	217	230	233	232	241	233	236	235	237	225	198	188	181	181	186	227.9	234.7					
26 Spd	10	11	9	9	8	7	7	7	9	8	9	11	11	13	13	11	12	12	11	N	9	12	8	10	9.5	13.0					
Dir	185	183	189	185	185	180	176	186	194	213	207	216	200	211	214	209	212	205	202	N	188	179	182	178	196.1	213.6					
27 Spd	10	10	9	9	8	13	14	12	8	7	13	16	15	13	10	8	12	N	11	10	7	4	6	6	9.2	15.8					
Dir	183	184	186	187	178	172	180	187	194	212	227	231	227	223	215	213	232	N	228	230	234	188	178	190	205.4	231.1					
28 Spd	6	6	5	5	7	5	6	5	16	22	18	15	13	12	12	12	11	9	5	5	4	5	6	5	6.5	21.5					
Dir	190	191	190	193	184	187	185	191	251	260	267	259	251	252	261	266	271	277	293	28	71	153	172	188	241.8	259.9					
29 Spd	7	2	0	5	1	3	4	4	8	11	14	17	22	24	23	22	21	21	20	19	16	14	15	16	11.8	23.7					
Dir	175	193	320	185	89	18	33	42	33	43	49	52	52	55	56	57	57	53	53	56	56	53	50	52	54.4	55.0					
30 Spd	8	2	1	5	6	3	5	5	2	1	1	1	2	3	6	5	6	3	5	4	4	6	6	6	1.4	7.8					
Dir	47	286	358	34	53	182	175	173	207	208	137	89	63	58	58	221	262	194	220	229	199	180	160	165	165.5	46.6					
31 Spd	9	7	7	8	8	11	9	8	9	13	21	24	25	24	19	16	15	28	15	8	9	9	7	7	12.0	27.8					
Dir	163	178	174	180	173	177	183	201	203	221	233	240	239	238	233	220	225	239	226	218	187	188	190	193	216.3	239.1					
Spd	5.0	5.5	5.2	4.8	4.7	5.3	5.4	4.7	5.5	7.3	7.5	7.7	7.1	6.5	6.5	6.0	6.6	5.4	3.6	1.7	2.4	4.2	4.5	5.2	Diurnal Average						
Dir	175.6	181.2	187.5	187.4	188.2	180.3	182.6	197.4	222.1	237.7	238.5	236.0	235.5	240.8	245.8	238.9	239.3	239.3	226.8	175.5	160.4	166.5	168.3	171.3	Diurnal Maximum						
Spd	10.8	13.1	15.8	16.9	22.5	16.9	13.7	23.6	30.5	33.0	27.0	26.7	26.6	28.1	31.5	31.1	34.4	31.6	28.4	18.8	15.8	13.8	15.5	15.5	Diurnal Maximum						
Dir	183.8	229.0	242.7	233.1	239.7	235.8	180.0	243.1	253.4	262.6	272.5	235.2	244.3	240.6	246.9	244.2	241.2	245.1	244.1	55.5	56.1	52.8	50.3	52.4							
Maximum Speed Value: 34 km/h on Aug 19 17:00																		Minimum Speed Value: 0 km/h on Aug 29 03:00												Hours in Service: 744	
Maximum Daily Speed Average: 16.2 km/h on Aug 19																		Minimum Daily Speed Average: 0.1 km/h on Aug 30												Hours of Data: 742	
Maximum Diurnal Speed Average: 7.7 km/h at hour 12																		Minimum Diurnal Speed Average: 1.7 km/h at hour 20												Hours of Missing Data: 2	
Monthly Average Velocity: 4.65 km/h 211.14 deg																		Speed Percentiles: P ₁ = 1.0 P ₁₀ = 3.0 Q ₁ = 4.8 Median = 7.0 Q ₃ = 10.5 P ₉₀ = 17.3 P ₉₉ = 28.0												Percent Operational Time: 99.7	
All monthly, daily, and diurnal averages have been calculated using vector methods																															
N - Not Valid																															
Frequency Distribution																															
Speed Range (km/h)																															
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																		
North	9		27		4		0		0		0		40																		
NorthEast	23		25		9		7		0		0		64																		
East	39		19		2		0		0		0		60																		
SouthEast	31		19		0		0		0		0		50																		
South	58		202		16		0		0		0		276																		
SouthWest	19		57		51		39		7		0		173																		
West	9		21		15		12		3		0		60																		
NorthWest	12		7		0		0		0		0		19																		
Total	200		377		97		58		10		0		742																		

Wind Rose

Wind Speed (WS) (km/h)
Portable Rycroft - August 2017



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - August 2017

Maximum Speed: 35 km/h on Aug 19 17:00																				Maximum Daily Speed Average: 17.0 km/h on Aug 19										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 10 21:00																				Minimum Daily Speed Average: 4.7 km/h on Aug 12										Hours of Data: 742	
Maximum Diurnal Speed Average: 13.4 km/h at hour 15																				Minimum Diurnal Speed Average: 5.7 km/h at hour 21										Hours of Missing Data: 2	
Monthly Average Speed: 9.10 km/h																				Percentiles: P ₁ = 1.9 P ₁₀ = 3.7 Q ₁ = 5.3 Median = 7.4 Q ₃ = 10.7 P ₉₀ = 17.9 P ₉₉ = 28.2										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	3	2	3	4	4	4	7	7	8	10	8	8	6	6	6	5	6	6	4	5	4	2	6	4	5.2	9.6					
2-Aug	5	4	4	4	5	5	3	4	3	6	6	6	7	7	6	6	5	4	4	5	3	3	5	5	4.8	7.1					
3-Aug	5	6	6	6	7	4	4	5	6	6	7	7	7	13	15	11	9	7	3	3	3	4	4	6	6.4	14.8					
4-Aug	5	6	5	7	4	5	4	7	6	7	7	9	9	9	7	11	12	8	4	5	4	5	6	5	6.5	12.1					
5-Aug	5	6	6	4	4	6	7	4	3	2	4	4	5	4	7	8	8	6	6	3	3	4	5	3	4.9	8.2					
6-Aug	4	5	7	7	6	8	6	5	7	8	7	5	11	13	11	13	13	10	8	7	9	9	8	5	8.0	13.4					
7-Aug	7	4	6	5	6	4	5	10	12	8	6	8	11	10	11	7	5	8	6	6	5	3	3	3	6.7	11.6					
8-Aug	5	5	6	6	5	4	3	3	3	4	6	6	6	6	5	6	5	5	6	6	3	4	6	6	5.0	6.3					
9-Aug	5	5	4	5	6	5	5	4	4	3	4	4	6	9	8	9	9	7	6	8	4	4	4	6	5.7	9.4					
10-Aug	5	7	7	7	5	8	7	4	4	3	5	5	6	6	9	8	6	5	7	4	1	2	3	6	5.4	9.1					
11-Aug	6	5	5	2	2	2	3	2	4	6	9	10	11	10	12	12	13	10	8	7	8	6	6	7	6.7	13.1					
12-Aug	8	6	4	4	3	5	7	3	2	2	2	5	6	4	4	5	4	5	6	6	3	6	5	8	4.7	8.0					
13-Aug	10	7	5	5	4	5	7	5	12	22	22	25	18	8	5	5	6	6	10	10	8	10	10	12	9.9	25.2					
14-Aug	9	9	11	10	10	9	9	8	7	22	21	18	18	13	14	9	9	11	8	5	8	10	7	9	10.9	22.3					
15-Aug	11	9	10	9	9	8	8	11	26	33	28	20	16	22	22	20	16	14	9	5	5	8	9	9	14.0	33.4					
16-Aug	8	7	9	11	10	12	11	10	11	12	11	12	16	16	18	23	25	25	19	7	4	6	8	8	12.5	25.2					
17-Aug	8	8	8	9	8	8	9	11	13	24	20	12	15	14	14	12	11	9	9	8	4	6	6	11	10.7	24.0					
18-Aug	11	12	8	6	10	11	12	11	15	13	20	27	21	26	22	16	16	15	13	10	9	8	8	7	13.6	27.0					
19-Aug	5	7	7	7	7	6	7	12	24	28	24	25	27	27	32	32	35	32	29	12	5	6	7	6	17.0	34.7					
20-Aug	5	13	16	17	23	17	11	24	31	29	22	23	21	20	20	18	20	21	18	9	5	8	7	8	16.9	30.7					
21-Aug	10	9	8	7	6	6	6	7	8	9	8	10	13	11	14	9	13	7	6	4	5	7	7	6	8.1	14.3					
22-Aug	7	7	7	7	7	8	8	6	8	8	10	10	8	9	9	7	8	6	4	5	3	5	7	11	7.3	10.6					
23-Aug	6	8	7	5	5	7	8	9	5	5	5	8	8	6	10	8	10	5	7	12	7	6	7	8	7.2	11.6					
24-Aug	3	8	7	3	3	2	5	4	3	5	10	17	17	20	24	24	22	10	10	6	6	7	8	6	9.6	24.4					
25-Aug	10	10	16	14	12	4	4	4	6	9	16	19	21	28	23	24	29	21	11	7	8	11	10	10	13.6	29.4					
26-Aug	10	11	9	10	9	7	7	7	9	8	9	11	11	13	13	11	12	12	N	9	12	8	10		9.9	13.2					
27-Aug	10	10	9	9	8	13	14	12	8	7	13	16	15	13	10	8	12	N	11	10	7	4	6	6	10.1	16.1					
28-Aug	6	6	5	5	7	5	6	5	16	22	19	15	14	12	13	12	12	9	6	6	5	6	6	5	9.2	21.7					
29-Aug	7	4	3	5	1	4	4	4	8	11	15	17	22	24	23	22	21	21	20	19	16	14	16	16	13.2	23.9					
30-Aug	8	4	2	5	6	3	5	5	3	2	3	3	3	3	6	10	8	3	5	4	4	7	6	6	4.8	10.0					
31-Aug	9	7	7	8	9	11	10	8	9	13	21	24	26	25	20	16	16	28	15	8	9	9	7	7	13.3	28.1					
7.1 7.0 7.1 6.8 6.8 6.6 6.7 7.1 9.1 11.2 11.9 12.6 12.9 13.2 13.4 12.4 12.8 11.2 9.2 7.1 5.7 6.6 6.8 7.3																									Diurnal Average						
10.9 13.2 16.1 17.0 22.5 17.1 13.8 23.7 30.7 33.4 27.5 27.0 26.9 28.3 31.8 31.6 34.7 31.8 28.6 18.9 15.8 13.9 15.5 15.6																									Diurnal Maximum						
N - Not Valid																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable Rycroft - August 2017

Maximum Value: 96.4 deg on Aug 3 17:00																		Hours in Service: 744							
Minimum Value: 2.7 deg on Aug 27 06:00																		Hours of Data: 742							
																		Hours of Missing Data: 2							
Percentiles: P ₁ = 3.7 P ₁₀ = 5.2 Q ₁ = 8.2 Median = 13.8 Q ₃ = 25.1 P ₉₀ = 50.3 P ₉₉ = 82.6																		Hours of Calibration: 0							
																		Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	52	68	31	22	18	27	13	16	16	12	16	22	46	35	51	58	39	25	22	40	11	18	8	16	68.4
2-Aug	11	19	8	8	17	13	16	11	38	36	43	56	58	55	47	48	59	61	66	9	33	26	20	8	66.3
3-Aug	9	9	6	5	8	14	13	34	12	22	31	25	28	19	9	85	96	29	36	44	77	67	37	13	96.4
4-Aug	21	19	16	13	29	32	18	19	19	20	22	24	24	35	51	37	12	22	78	32	24	12	64	32	77.6
5-Aug	16	11	5	51	8	22	10	15	43	70	62	66	59	75	41	35	36	28	13	27	23	10	12	44	74.7
6-Aug	25	5	26	23	12	10	36	35	17	13	20	31	14	11	18	13	13	7	11	14	16	10	12	16	35.5
7-Aug	11	9	11	7	8	26	23	10	12	23	42	25	12	14	17	41	78	33	34	11	6	21	16	12	77.8
8-Aug	6	9	6	6	8	58	59	38	40	46	35	61	61	51	78	66	45	36	18	9	20	20	19	12	77.7
9-Aug	8	11	14	11	16	14	15	18	38	60	78	86	85	27	41	44	35	21	9	26	52	27	19	16	86.5
10-Aug	9	8	24	10	19	6	4	11	35	66	67	70	56	54	63	70	59	45	13	40	78	46	13	18	77.9
11-Aug	6	7	81	71	55	64	77	40	33	32	18	23	27	27	22	24	18	19	20	11	14	26	29	22	80.6
12-Aug	9	30	65	36	42	24	12	75	49	83	66	24	19	39	35	26	27	18	12	17	54	15	29	7	83.2
13-Aug	10	47	64	83	27	20	6	21	14	3	6	8	9	27	17	24	19	12	5	5	5	4	4	4	82.8
14-Aug	5	5	3	4	5	4	9	9	19	9	12	16	16	16	25	18	20	17	16	12	5	4	5	6	24.7
15-Aug	3	5	4	5	4	6	5	26	7	9	12	14	15	9	13	17	18	17	26	13	9	6	7	5	26.4
16-Aug	5	12	8	4	4	4	8	5	5	8	15	19	15	12	16	10	10	8	6	17	11	9	5	3	18.9
17-Aug	5	5	5	5	5	6	7	31	22	8	11	19	21	20	17	16	9	11	11	14	17	8	15	8	30.6
18-Aug	5	9	9	14	8	8	5	7	5	6	23	10	9	8	8	9	13	25	10	11	5	4	5	7	25.1
19-Aug	11	13	11	13	13	19	13	17	5	6	8	10	11	11	9	11	7	7	6	10	12	9	6	7	18.6
20-Aug	15	5	5	6	3	9	9	6	6	8	10	13	15	14	17	16	12	9	9	11	17	5	5	8	17.2
21-Aug	4	5	5	11	8	7	7	8	11	16	11	25	20	18	19	18	13	17	18	16	8	7	6	7	24.8
22-Aug	5	5	5	4	5	4	6	15	10	17	20	22	22	21	35	65	31	37	26	23	34	8	11	8	64.8
23-Aug	37	27	24	28	50	10	8	7	18	21	19	21	29	50	41	38	24	21	10	17	10	11	25	55	55.3
24-Aug	77	31	57	49	82	32	22	12	59	42	24	17	17	6	5	5	7	14	11	15	14	15	12	16	82.4
25-Aug	11	10	12	10	7	14	24	30	17	15	9	11	10	9	9	9	7	7	10	11	5	5	6	5	30.0
26-Aug	4	5	5	5	5	11	9	8	12	14	12	11	8	10	9	9	11	8	12	N	4	4	5	6	14.5
27-Aug	4	5	4	4	5	3	5	4	9	14	15	12	12	13	14	13	15	N	16	8	15	9	6	11	16.5
28-Aug	6	6	7	5	5	5	5	19	7	8	13	19	22	24	21	21	19	15	24	35	37	17	7	6	36.7
29-Aug	4	79	83	39	68	28	17	20	13	7	22	11	8	8	8	8	8	6	5	5	5	8	5	5	82.8
30-Aug	10	69	53	19	22	19	8	12	36	57	76	77	52	46	15	86	46	17	26	28	17	24	20	9	85.8
31-Aug	10	7	9	8	12	8	14	14	10	13	9	10	9	11	15	10	13	9	7	20	5	4	9	10	20.1
77.0 79.3 82.8 82.8 82.4 64.2 76.5 75.2 58.6 83.2 78.4 86.5 85.3 74.7 77.7 85.8 96.4 61.4 77.6 43.7 77.9 66.5 64.1 55.3																									
N - Not Valid																									

PAZA

Monthly Passive Data Summary

This map displays the Peace River region, including the Peace River, Spirit River, and various creeks and lakes. It shows the locations of numerous monitoring sites, marked with black dots and labeled with names such as Silver Valley, Forth Creek, Spirit River, Rycroft, Wapiti, and others. The map also includes a legend for 'Passive Air Monitoring Site' and a scale bar indicating distances in kilometers.

PAZA Passive Results for August 2017

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
5a	Boone Creek			0.4		
5b	Boone Creek			0.3		
24a	Wembley			0.9		
24b	Wembley			0.9		
27a	Grande Prairie I	0.3				
27b	Grande Prairie I	0.3				
47a	Kinuso		23.6			
47b	Kinuso		22.8			
49a	Grande Prairie HP	BDL				
49b	Grande Prairie HP	BDL				
64a	Girouxville 4				0.2	
64b	Girouxville 4				0.2	
2	Bay Tree	0.2	27.8	0.8		13-16-078-13 W6M
4	Gordondale	0.3		0.8		04-34-078-10 W6M
5	Boone Creek	0.2		0.4		16-36-074-11 W6M
9	Spirit River	0.2		0.7		08-12-079-07 W6M
14	Sylvester	0.1		0.3		08-06-069-12 W6M
16	Beaverlodge	0.2		0.9		15-36-071-10 W6M
18	Saddle Hills	0.3		0.4		04-25-074-07 W6M
19	Wanham	0.2		0.4		16-22-077-03 W6M
21	Eaglesham	0.1		0.6		16-21-079-25 W5M
24	Wembley	0.2		0.9		12-31-070-08 W6M
25	Pinto Creek	0.1		0.4		04-24-069-11 W6M
27	Grande Prairie I	0.3		2.1		08-15-071-06 W6M
28	Clairmont Lake	0.2		1.1		09-06-073-04 W6M
29	Smoky Heights	0.3		0.7		04-06-075-02 W6M
32	Gold Creek	0.2		1.4		06-33-067-05 W6M
35	Jean Cote	0.2		0.4		12-35-079-21 W5M
36	Guy	0.1		0.3	Damaged	03-04-076-22 W5M
37	Crooked Creek	0.1	23.2	0.7		16-01-071-26 W5M
39	Clouston Creek	0.2		0.4		12-01-073-22 W5M
40	McLennan	0.1		0.5		03-29-077-19 W5M
43	High Prairie	0.1		0.4		16-13-074-17 W5M
44	Peavine	0.1		0.1		03-05-079-15 W5M
46	Little Smoky	0.1		1.3		12-01-065-21 W5M
47	Kinuso	0.1	23.2	0.3		12-10-073-10 W5M
49	Grande Prairie HP	BDL		BDL		17-26-071-06 W6M
50	East Prairie	0.1		0.2		13-02-072-15 W5M
63	Girouxville 3				0.2	14-02-077-23 W5M
64	Girouxville 4				0.2	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for August 2017

Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂	Hydrogen Sulphide H ₂ S
	ppb	ppb	ppb	ppb

Passive Summary for August 2017 (PAZA Zone)				
Mean	0.2	24.7	0.7	0.2
Standard Deviation	0.1	2.7	0.4	0.0
Minimum	0.1	23.2	0.1	0.2
Minimum At	Guy (#36)	Crooked Creek (#37)	Peavine (#44)	Girouxville 4 (#64a)
Maximum	0.3	27.8	2.1	0.2
Maximum At	Gordondale (#4)	Bay Tree (#2)	Grande Prairie I (#27)	Girouxville 3 (#63)

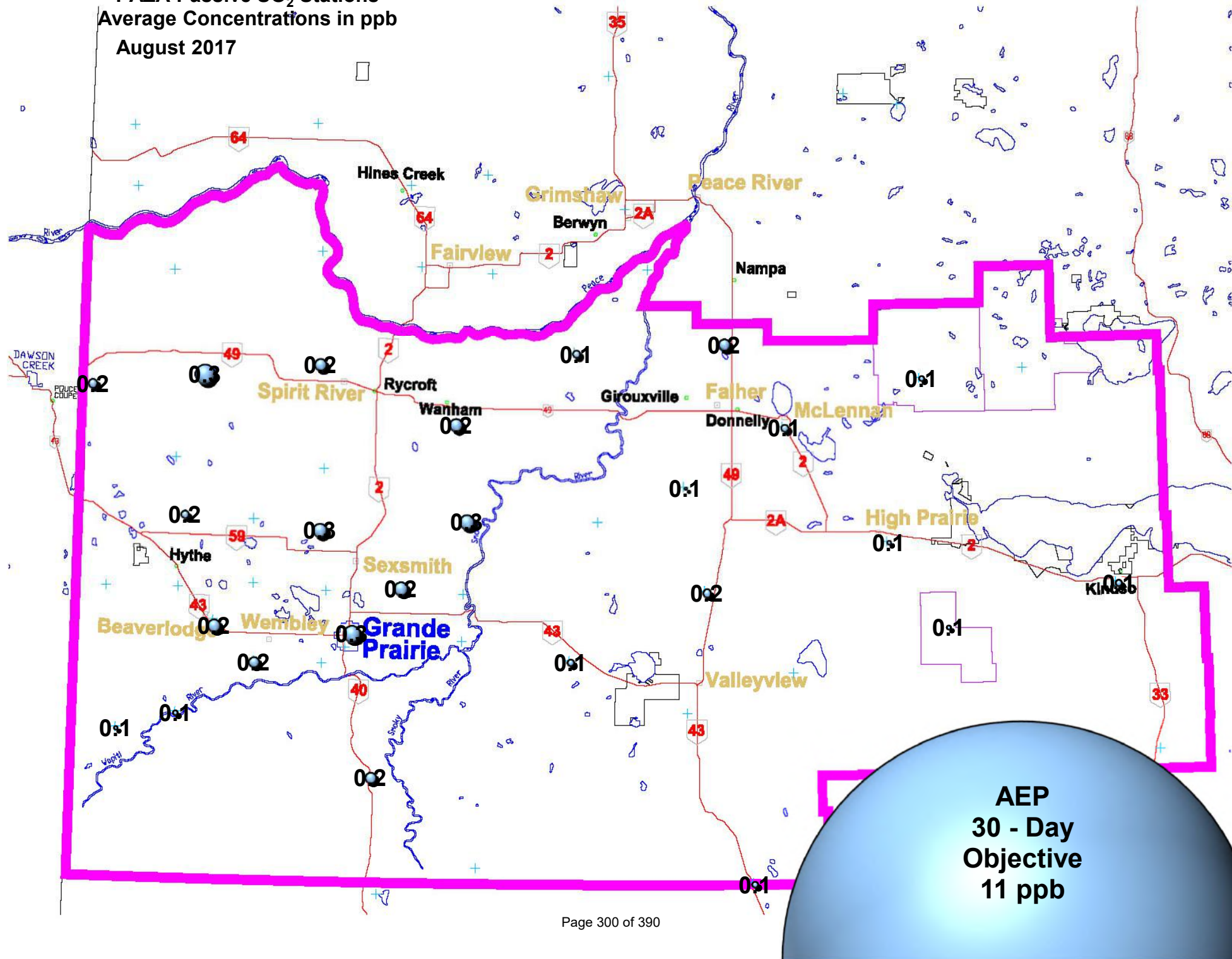
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	NO ₂
PAZA Beaverlodge station	0.4	2.7
PAZA Beaverlodge passive	0.2	0.9

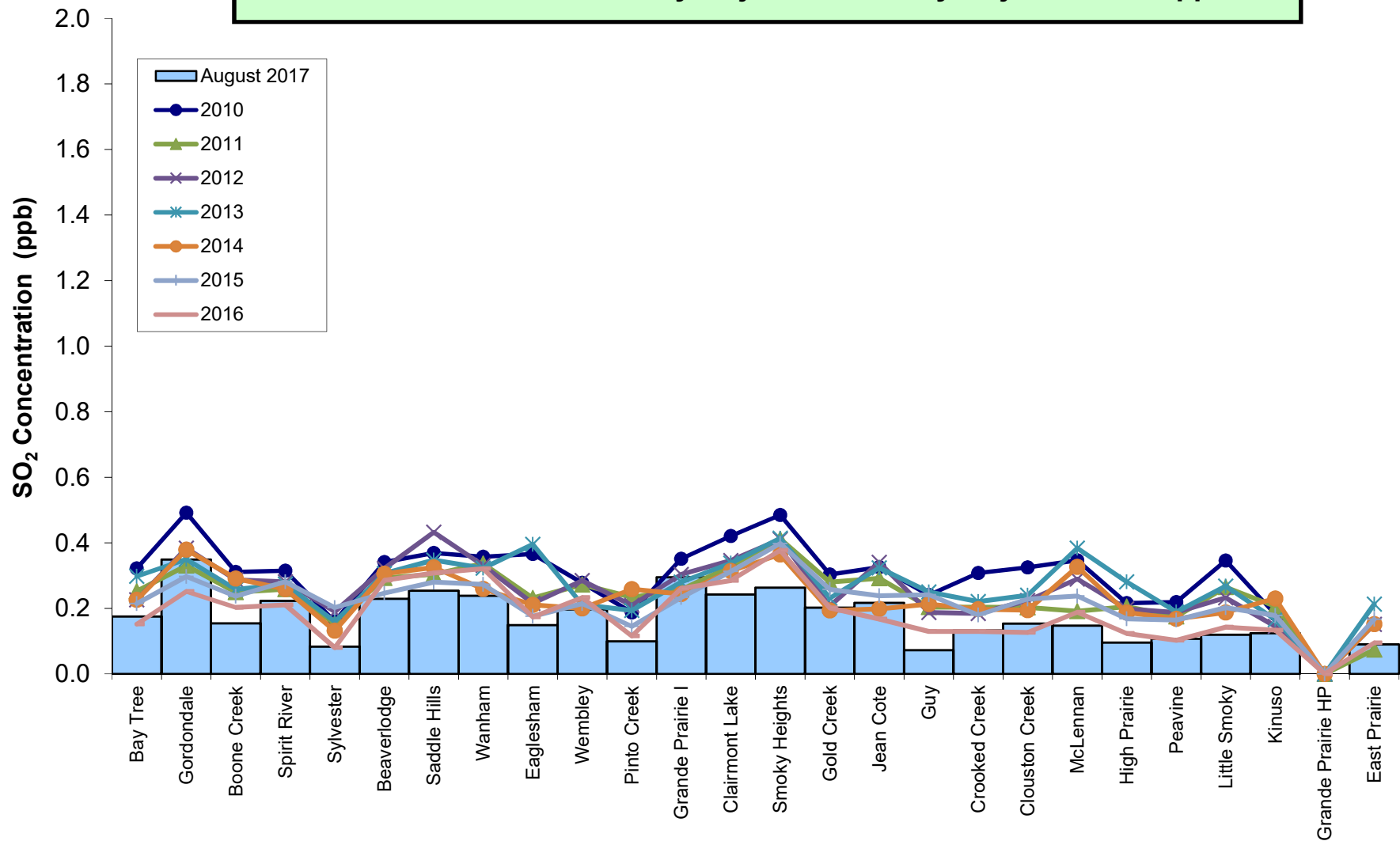
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	NO ₂
PAZA Henry Pirker station	0.2	4.9
PAZA Grande Prairie passive	0.3	2.1

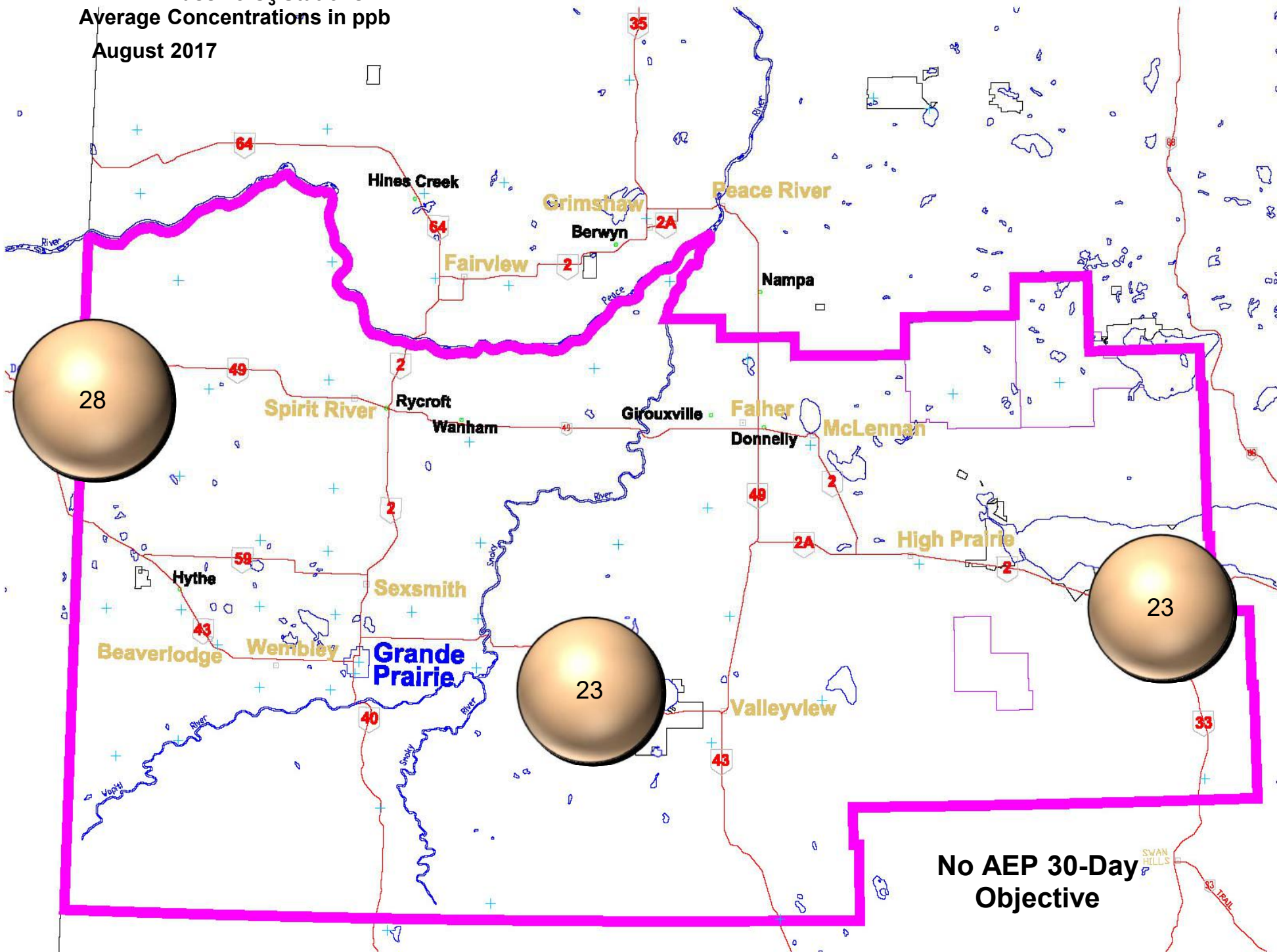
PAZA Passive SO₂ Stations
Average Concentrations in ppb
August 2017



Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb

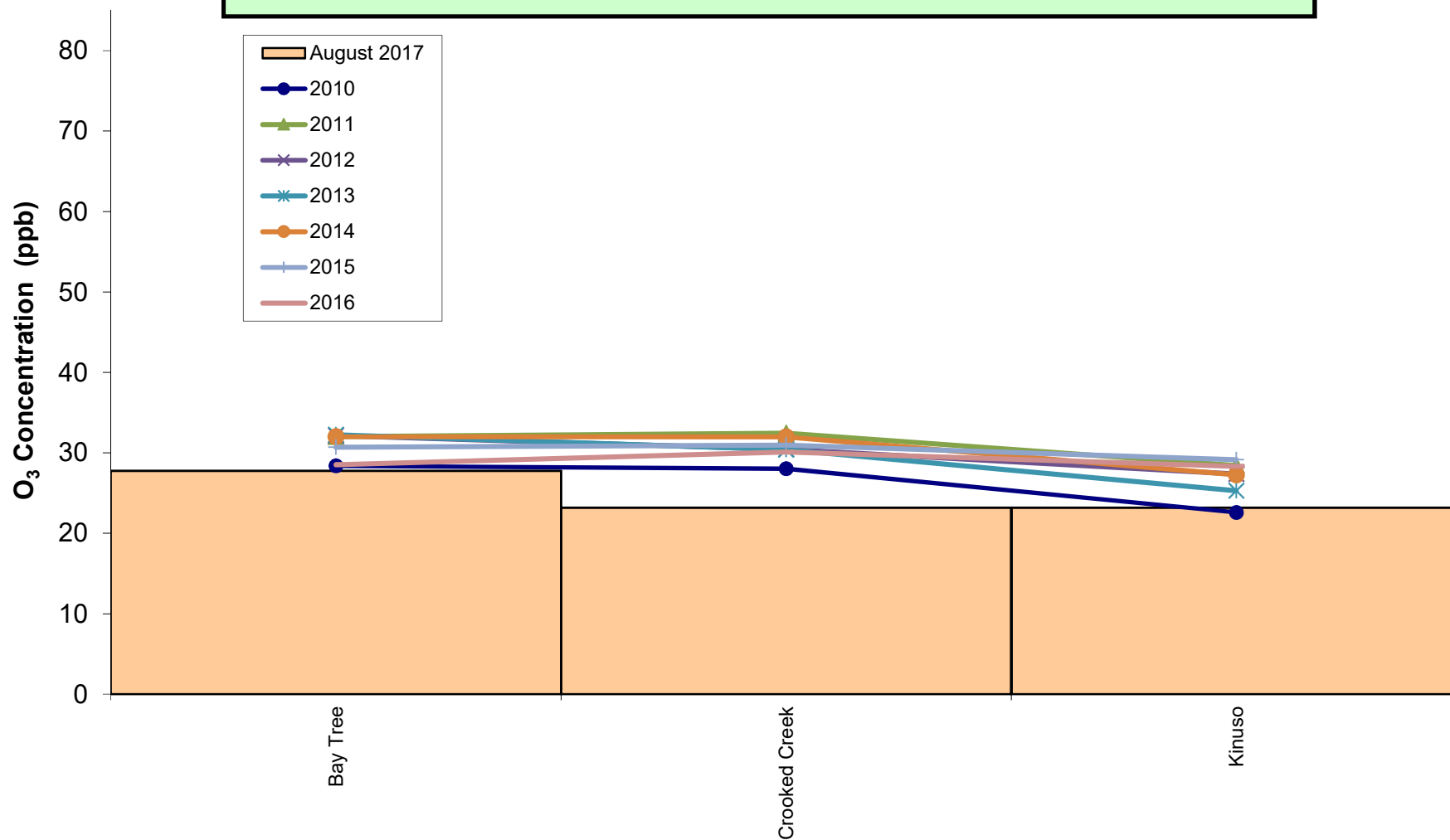


PAZA Passive O₃ Stations
Average Concentrations in ppb
August 2017

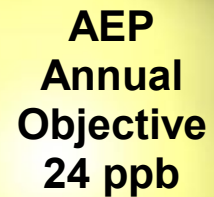


**No AEP 30-Day
Objective**

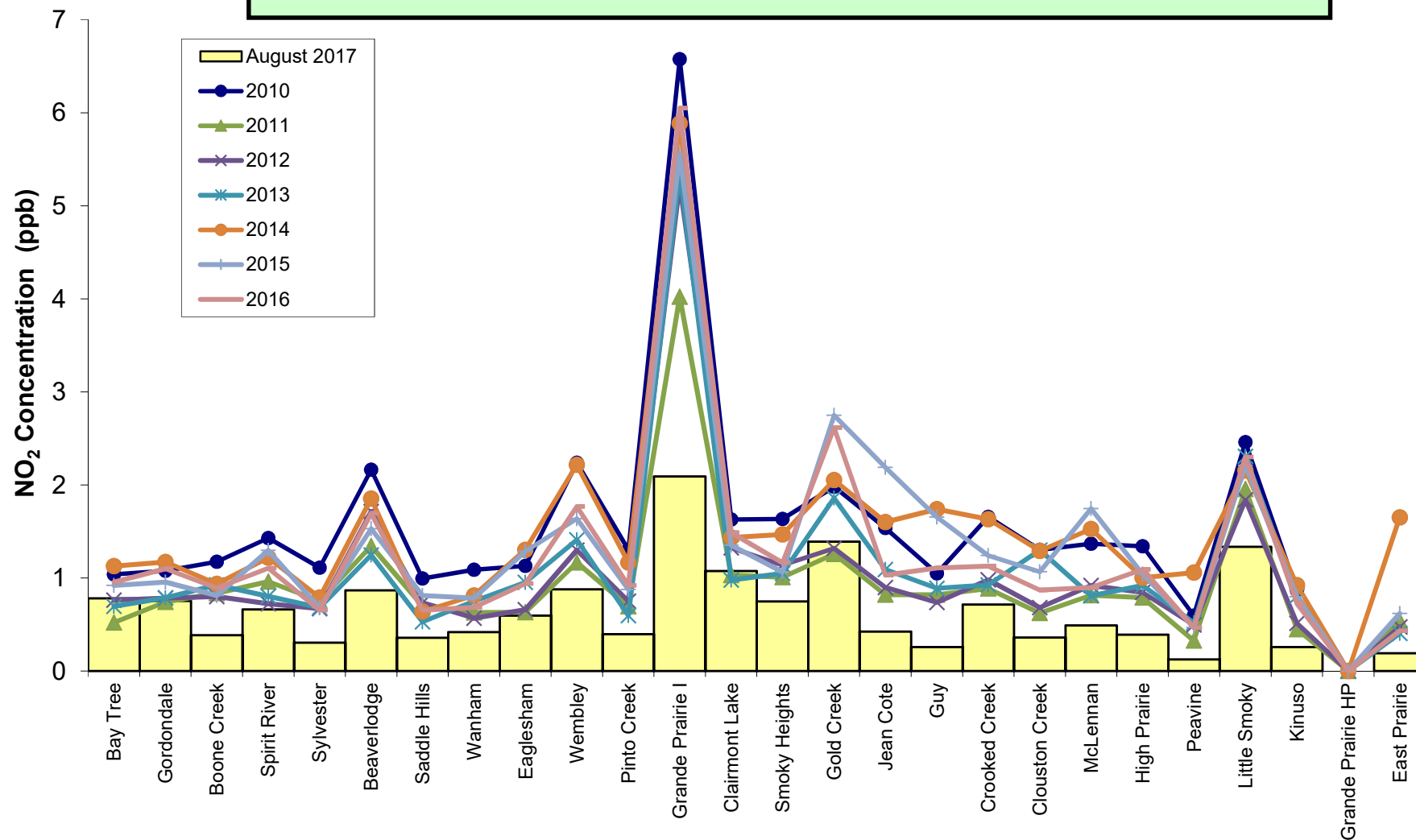
Alberta Ambient Air Quality Objective - No Annual O₃ Objective



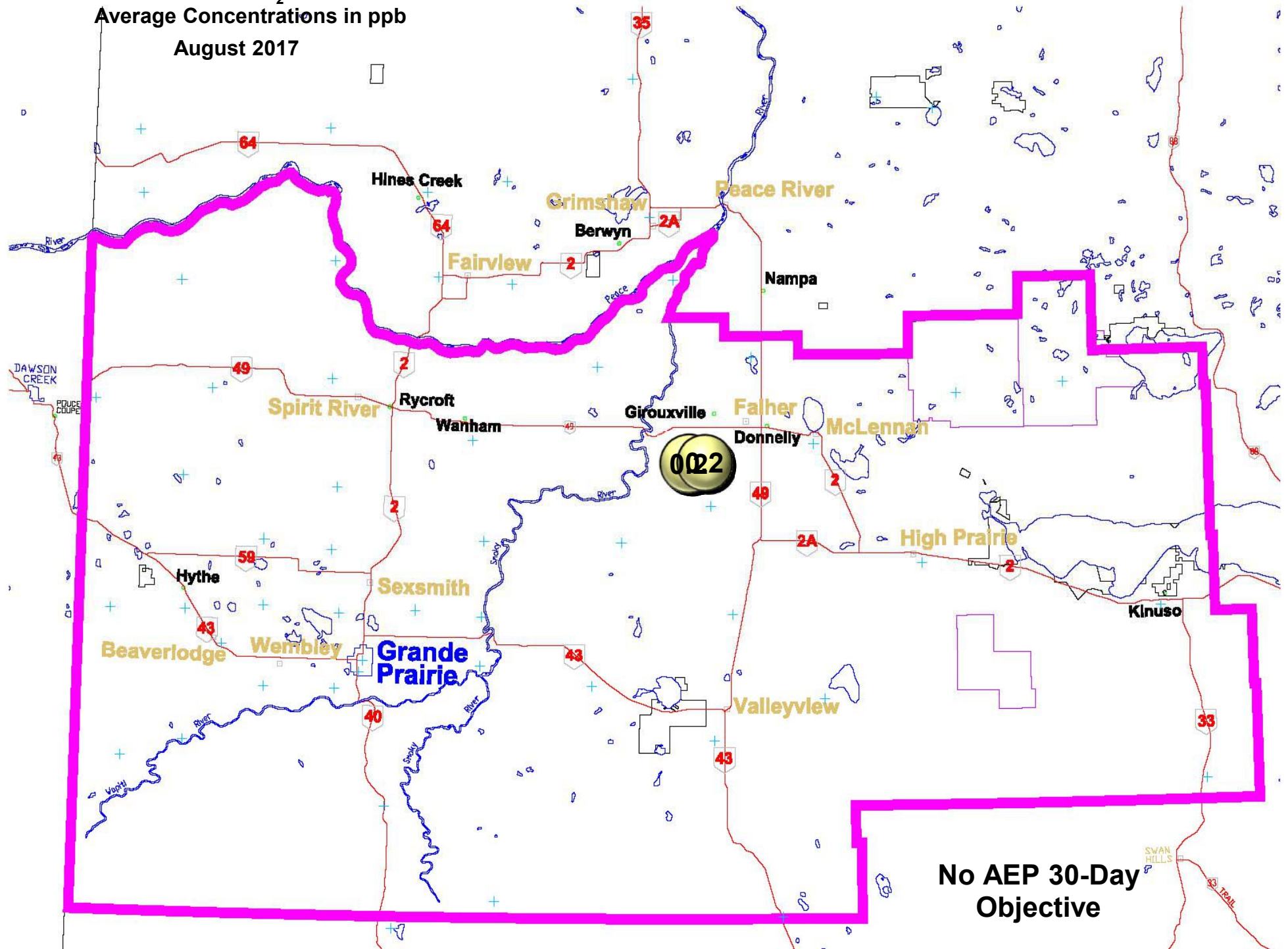
August 2017

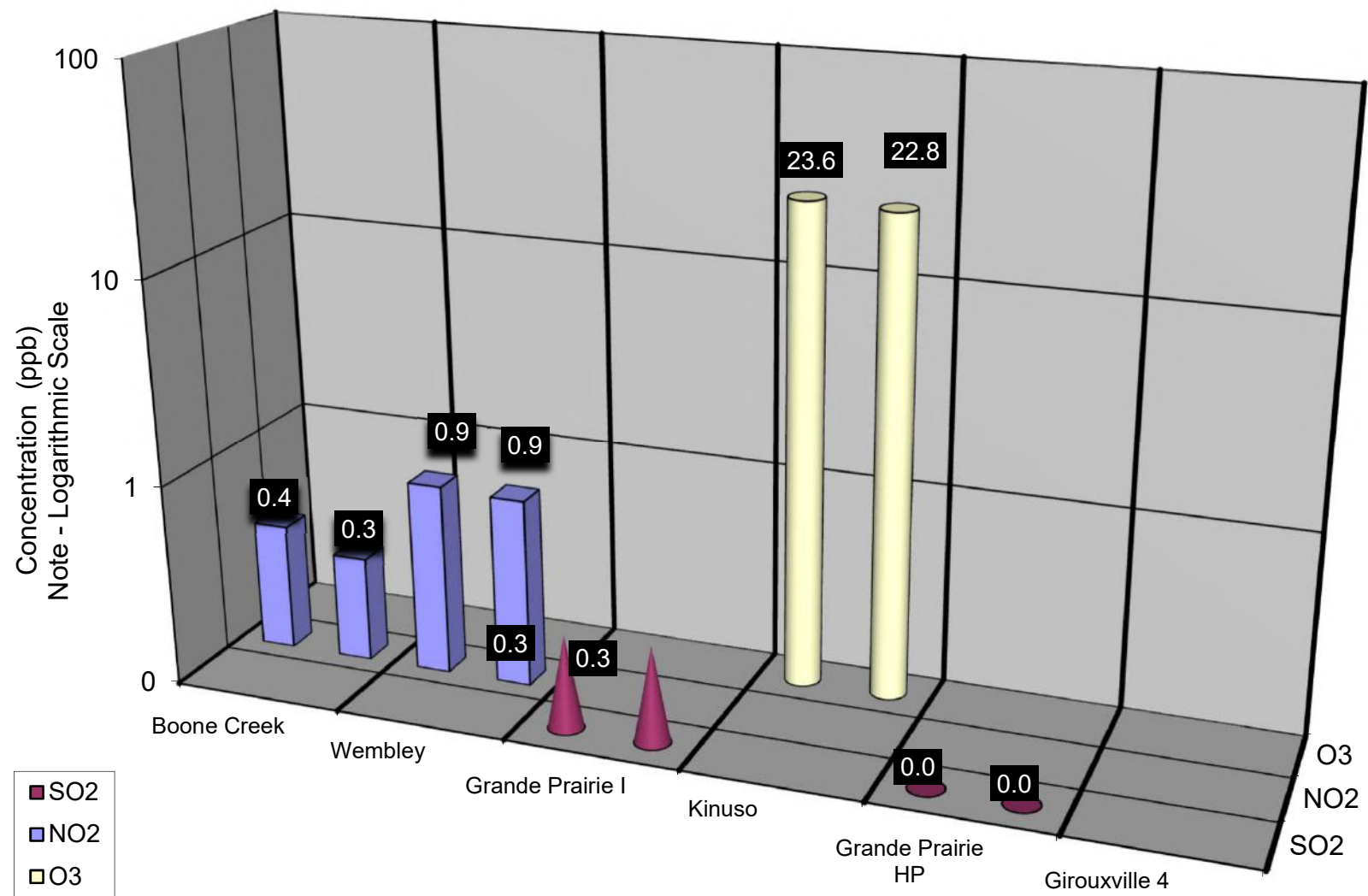


Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 24 ppb



**PAZA Passive H₂S Stations
Average Concentrations in ppb
August 2017**





Duplicate Summary Chart

August 2017 Calibration Reports

**PAZA - Henry Pirker Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, CO, THC, and TRS**

**PAZA – Evergreen Park Station with the following calibrations:
SO₂, TRS and PM_{2.5}**

**PAZA – Smoky Heights Station with the following calibrations:
SO₂ and TRS**

**PAZA – Beaverlodge Station with the following calibrations:
SO₂, NO, NO₂, NO_x, and O₃**

**PAZA – Valleyview Station with the following calibrations:
SO₂ and H₂S**

**PAZA – Donnelly Station with the following calibrations:
SO₂ and H₂S**

**PAZA – Rycroft Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, THC, and TRS**

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:30	End Time (MST)	11:00
Barometric Pressure	920.0 mbar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	49.4 ppm	Cal Gas Cert Date	02/21/2020
		Cal Gas Cylinder #	EY0000751
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.992588	Calculated slope	1.001255
Calculated intercept	-0.131089	Calculated intercept	-3.377579
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.40		1.40	
Coefficient	0.903		0.897	
Pressure	673.1	mm Hg	670.4	mm Hg
Flow	0.444	lpm	0.442	lpm
Lamp intensity	83	Hz	82	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
5141	0.00	0.0	0.1	N/A
5141	41.30	393.7	394.0	0.9992
5141	19.93	190.8	198.4	0.9617
5141	9.77	93.7	98.3	0.9531
5141	0.00	0.0	0.1	As Found Zero
5141	40.01	381.5	395.7	As Found Span
Average Correction Factor				0.9714

Calculated value of As Found Response: 392.5 ppb Percent Change of As Found: -2.9%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	288.1	ppb	278.8	ppb

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



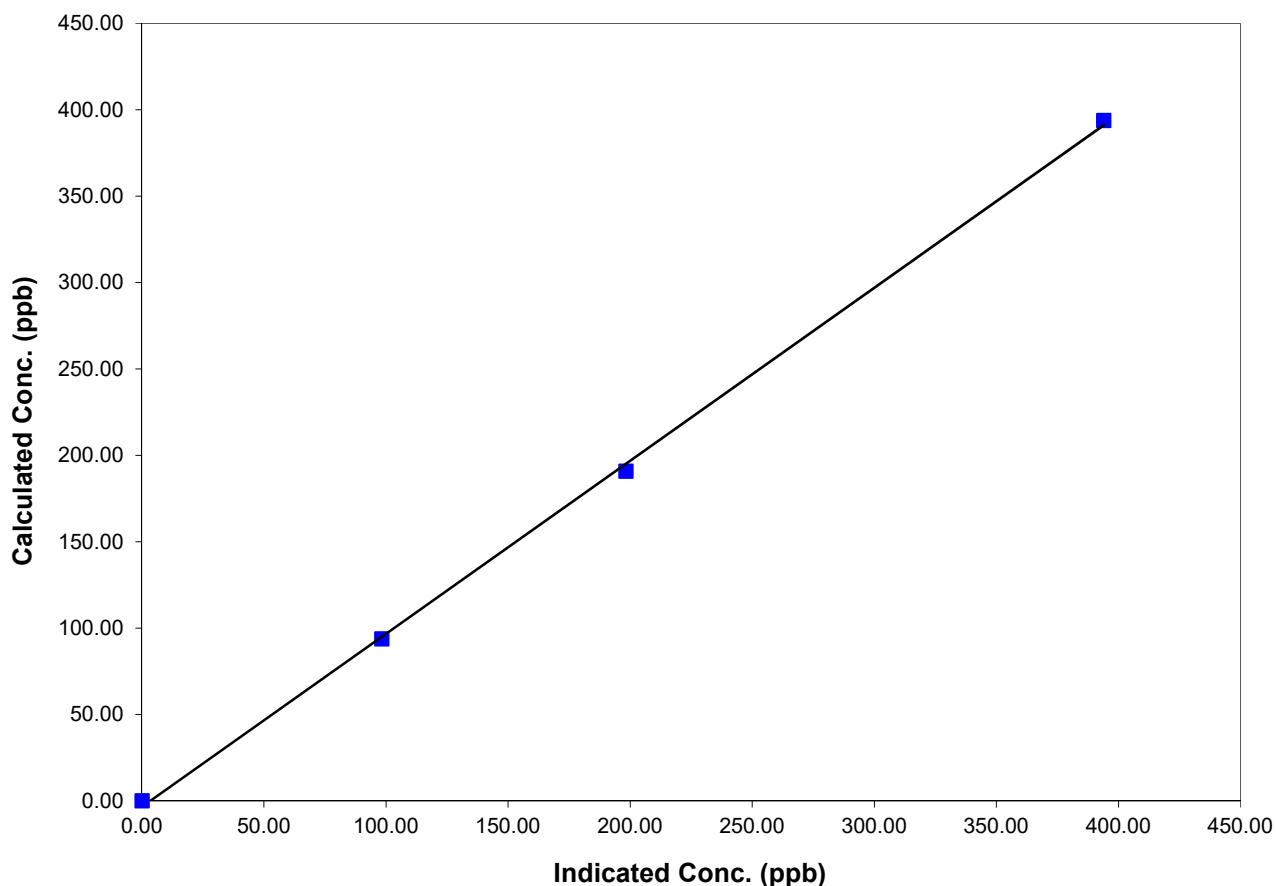
Station Information

Calibration Date	August 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:30	End Time (MST)	11:00
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

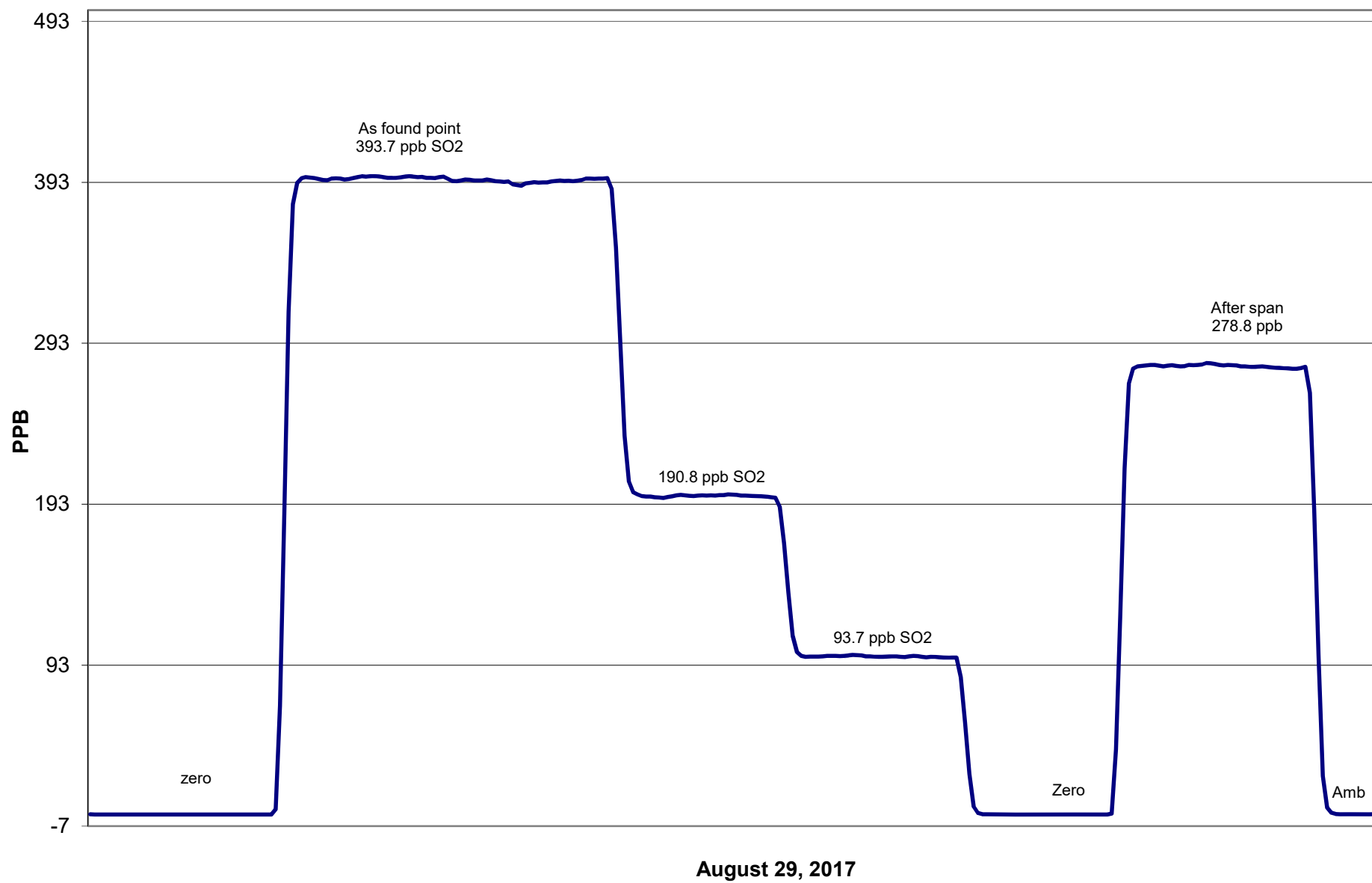
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999543
393.7	394.0	0.9992		
190.8	198.4	0.9617		
93.7	98.3	0.9531	Slope	1.001255
			Intercept	-3.377579

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network

NO_x-NO-NO₂

PAZA



Station Information

Calibration Date	August 29, 2017		Previous Calibration	July 6, 2017	
Station Number	1		Station Location	Henry Pirker	
Reason:	☒ Routine	☐ Installation	☐ Removal	Other:	
Start Time (MST)	8:30		End Time (MST)	15:40:00 PM	
Barometric Pressure	0.920	mbar	Station Temperature	22.0	Deg C
Calibrator	Envionics		Serial Number	906535067(AMU 197%)	
NO Cal Gas Conc	50.4	ppm	Cal Gas Expiry Date	02/21/2020	
NOx Cal Gas Conc	50.5	ppm	Cal Gas Serial #	EY0000751	

DACS Information

DACS make		CR3000		DACS serial No.		5408	
	Parameter	NO2	NOx	NO			
Before	Data Slope	0.982194	1.000137	0.999574			
	Data Offset	-1.393465	-1.081225	-1.038669			
After	Data Slope	0.996876	0.992420	0.993265			
	Data Offset	-0.214225	-0.972460	-0.985448			
Channel #		8	6	7			
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC			

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	7.7	mV	8.0	mV
NOx bkgnd	7.9	mV	8.2	mV
NO coefficient	1.020		1.061	
NOx coefficient	1.000		1.000	
NO2 conv temp	325.0	Deg C	326.0	Deg C
Cooler Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-844.4	mV	-844.4	mV
R Cell Press	203.8	in Hg	202.6	in Hg
Sample Flow	0.582	LPM	0.580	LPM

Notes:

Span adjustment made

Started calibration with one calibrator, finished with the spare instrument due to the ozone lamp issue on the first unit.

Calibration Report

Parameter **NOX-NO-NO2**
Air Monitoring Network **PAZA**



Station Information

Calibration Date: August 29, 2017 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	5141	0.00	0.0	0.0	0.0	0.0	0.1	0.0	N/A	N/A
1	5141	41.30	402.5	401.7	0.8	405.3	404.3	0.7	0.9931	0.9935
2	5141	19.91	194.8	194.4	0.4	200.1	199.2	0.5	0.9737	0.9761
3	5141	9.77	95.8	95.6	0.2	97.0	96.7	0.3	0.9877	0.9882
AFZ	5141	0.00	0.0	0.0	0.0	0.0	0.1	0.0	0.0000	0.0000
AFS	5141	42.28	411.9	411.1	0.8	386.1	384.8	1.3	1.0668	1.0684
Average Correction Factor									0.9848	0.9860

As Found Concentrations: NO_x= 385.1 NO= 383.5 As Found Percent Change NO_x= -6.5% NO= -6.7%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.1	0.1	0.0	0.0	0.1	0.0	N/A	N/A	N/A	N/A
NO point	401.5	401.5	0.0	404.0	401.5	2.2	0.9938	1.0000	N/A	N/A
300	401.5	94.7	306.8	403.0	94.7	307.9	0.9964	1.0000	0.9965	100.4%
200	401.5	191.8	209.8	403.2	191.8	210.6	0.9959	1.0000	0.9961	100.4%
100	401.5	288.1	113.5	403.4	288.1	114.4	0.9954	1.0000	0.9920	100.8%
Average Correction Factor							0.9959	1.0000	0.9949	100.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	0.1	ppb	0.0	0.0	0.1	ppb
Auto span	276.1	273.8	2.2	ppb	275.7	273.2	2.3	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



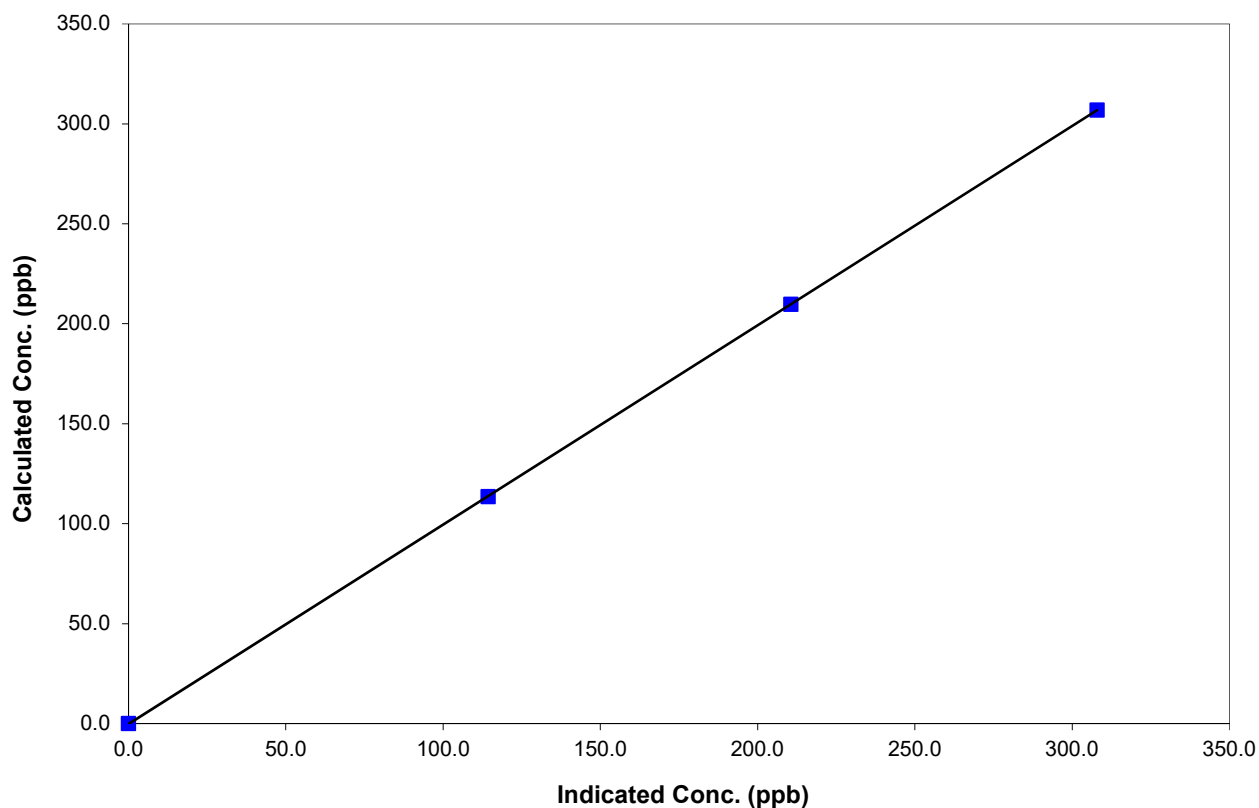
Station Information

Calibration Date	August 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:30	End Time (MST)	15:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999997
306.8	307.9	0.9965		
209.8	210.6	0.9961		
113.5	114.4	0.9920	Slope	0.996876
			Intercept	-0.214225

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



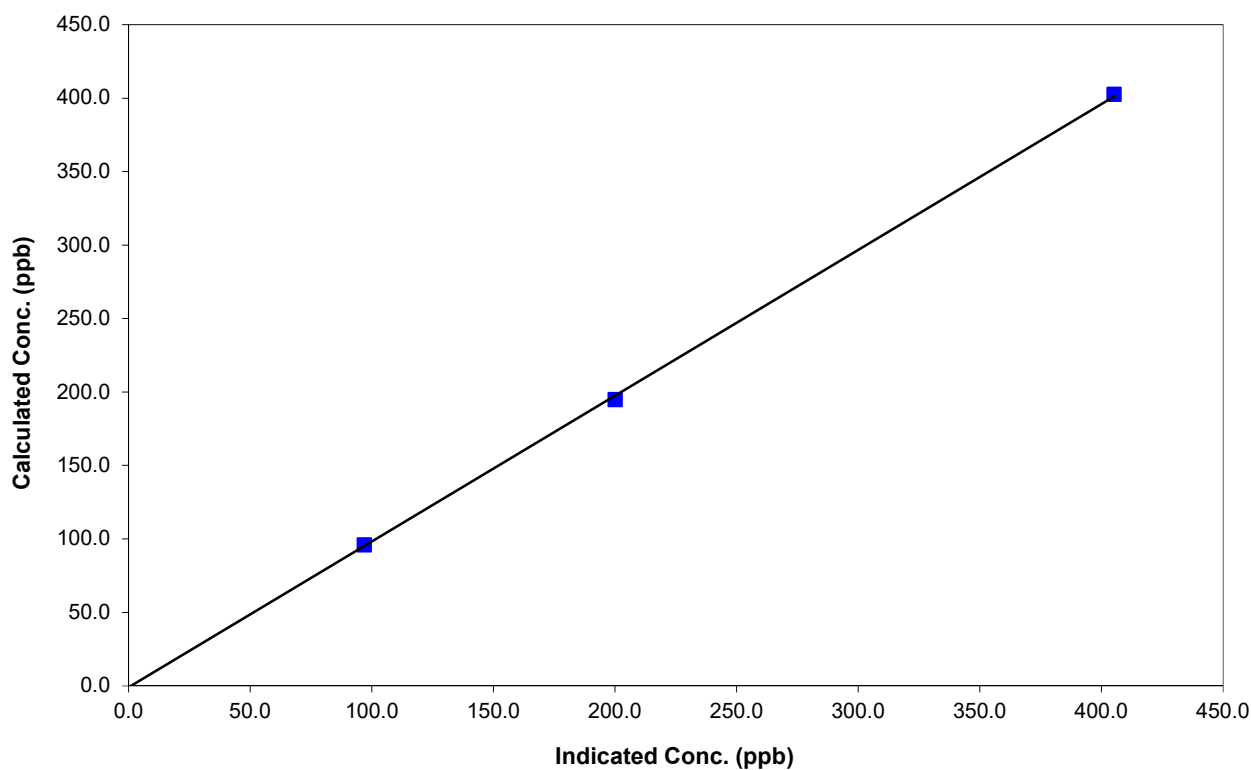
Station Information

Calibration Date	August 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:30	End Time (MST)	15:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999883
402.5	405.3	0.9931		
194.8	200.1	0.9737		
95.8	97.0	0.9877	Slope	0.992420
			Intercept	-0.972460

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



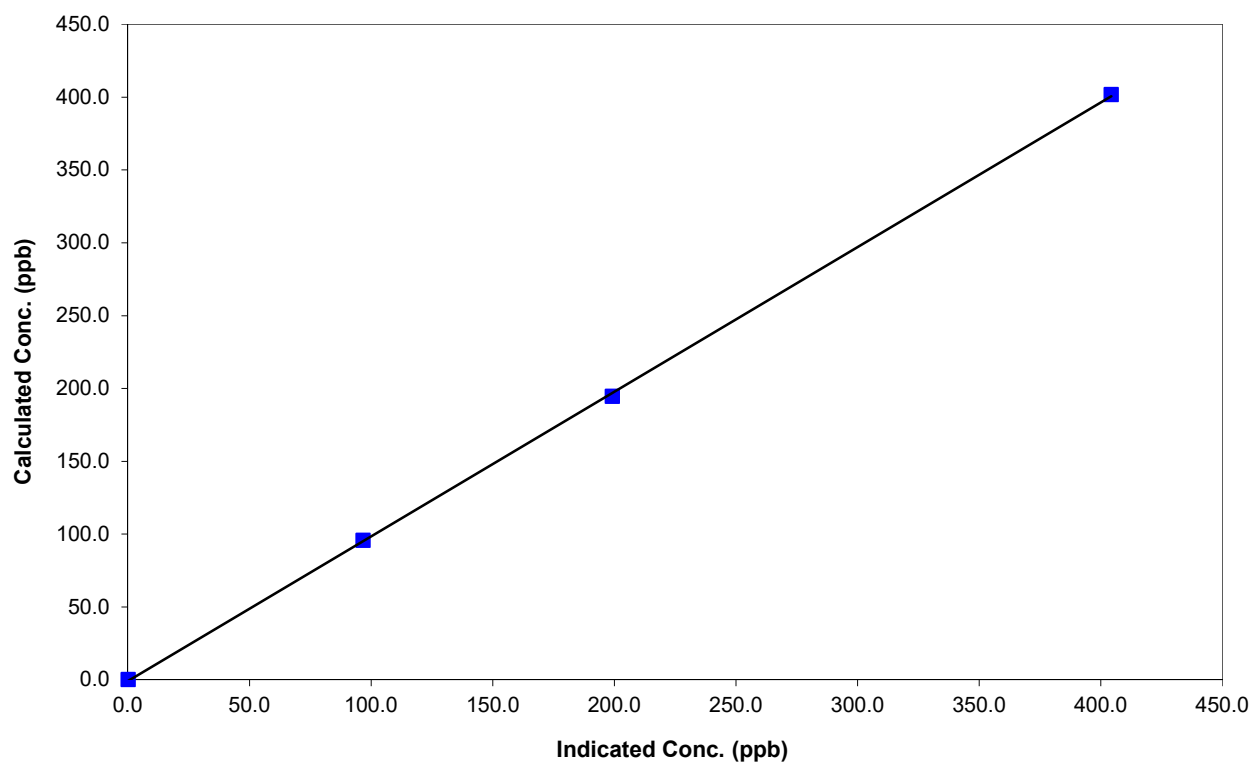
Station Information

Calibration Date	August 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:30	End Time (MST)	15:40:00 PM
Analyzer make	42i	Analyzer serial #	906535087

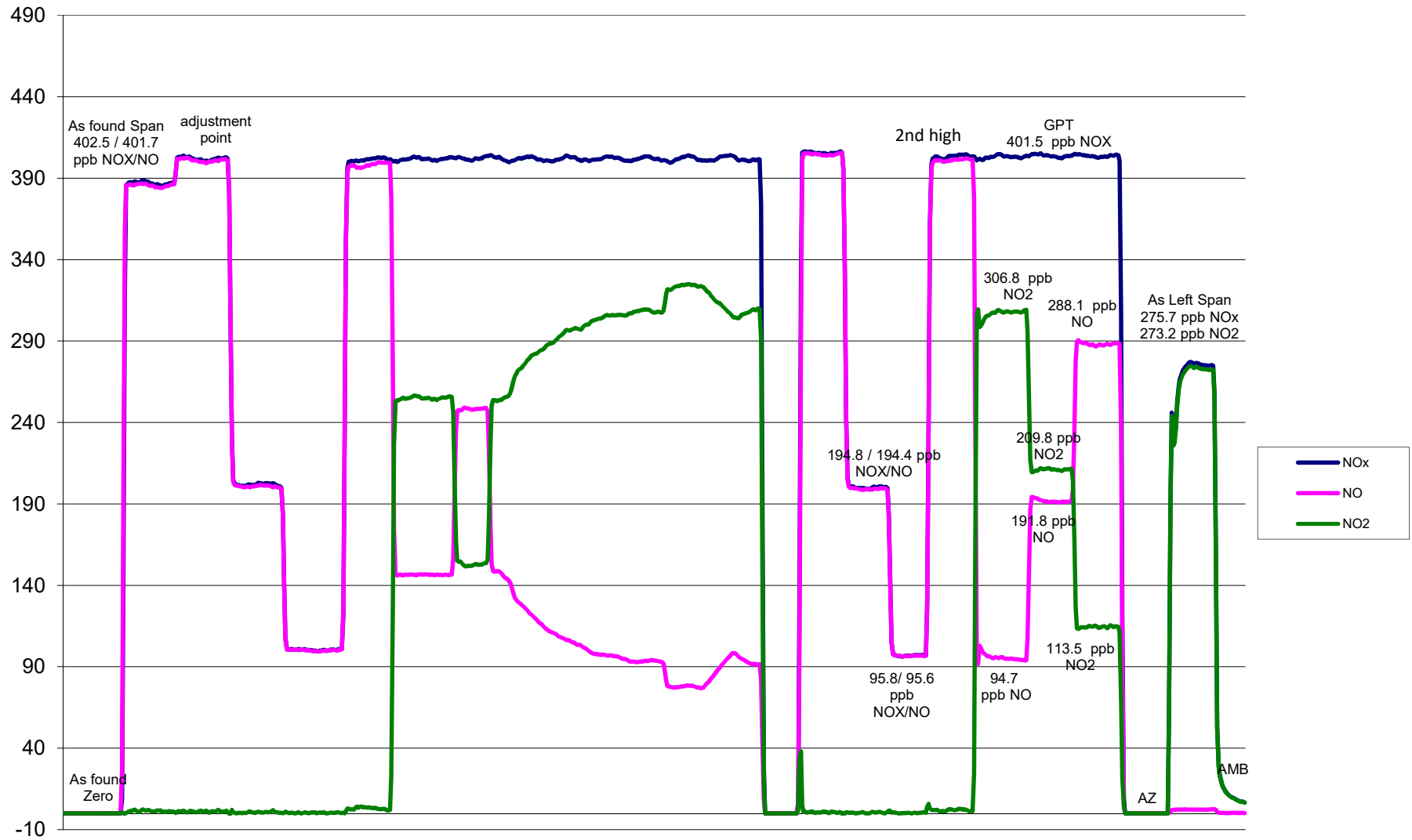
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999910
401.7	404.3	0.9935		
194.4	199.2	0.9761		
95.6	96.7	0.9882	Slope	0.993265
			Intercept	-0.985448

NO Calibration Curve



NO_x Calibration



August 29, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	September 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	14:45:00 PM	End Time (MST)	16:45:00 PM
Barometric Pressure	920.0 mm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.996219	Calculated slope	0.995583
Calculated intercept	0.186935	Calculated intercept	0.847902

Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.60	ppb	-0.60	ppb
slope	1.007		1.007	
Lamp temp	53.7	mV	53.7	mV
Lamp Intensity A/B	67780/73345	mV	67123/73768	mV
Pressure	693.4	mm Hg	695.2	mm Hg
Flow A	0.732	ccm	0.732	ccm
Flow B	0.733	ccm	0.733	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5141	0.0	0.0	-0.5	N/A
5141	0.3	306.8	307.5	0.9978
5141	0.2	209.8	209.9	0.9996
5141	0.1	113.5	112.7	1.0074
5141	0.0	0.0	-0.5	As found zero
5141	0.3	306.8	307.5	As found span
Average Correction Factor				1.0016

Calculated value of As Found Response: 307.1 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.1	ppb	-0.1	ppb
Auto span	367.9	ppb	369.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



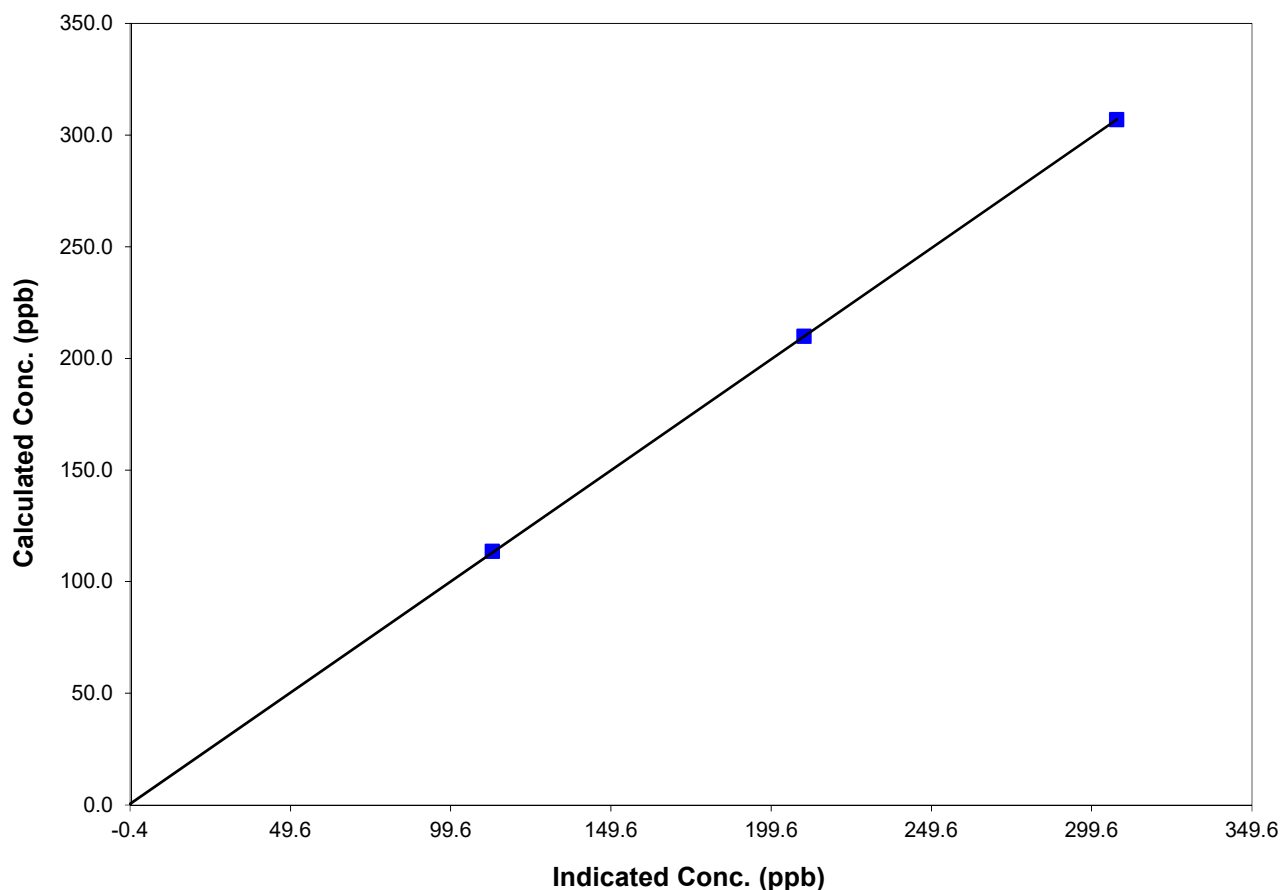
Station Information

Calibration Date	September 29, 2017	Previous Calibration	July 6, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:45:00 PM	End Time (MST)	16:45:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

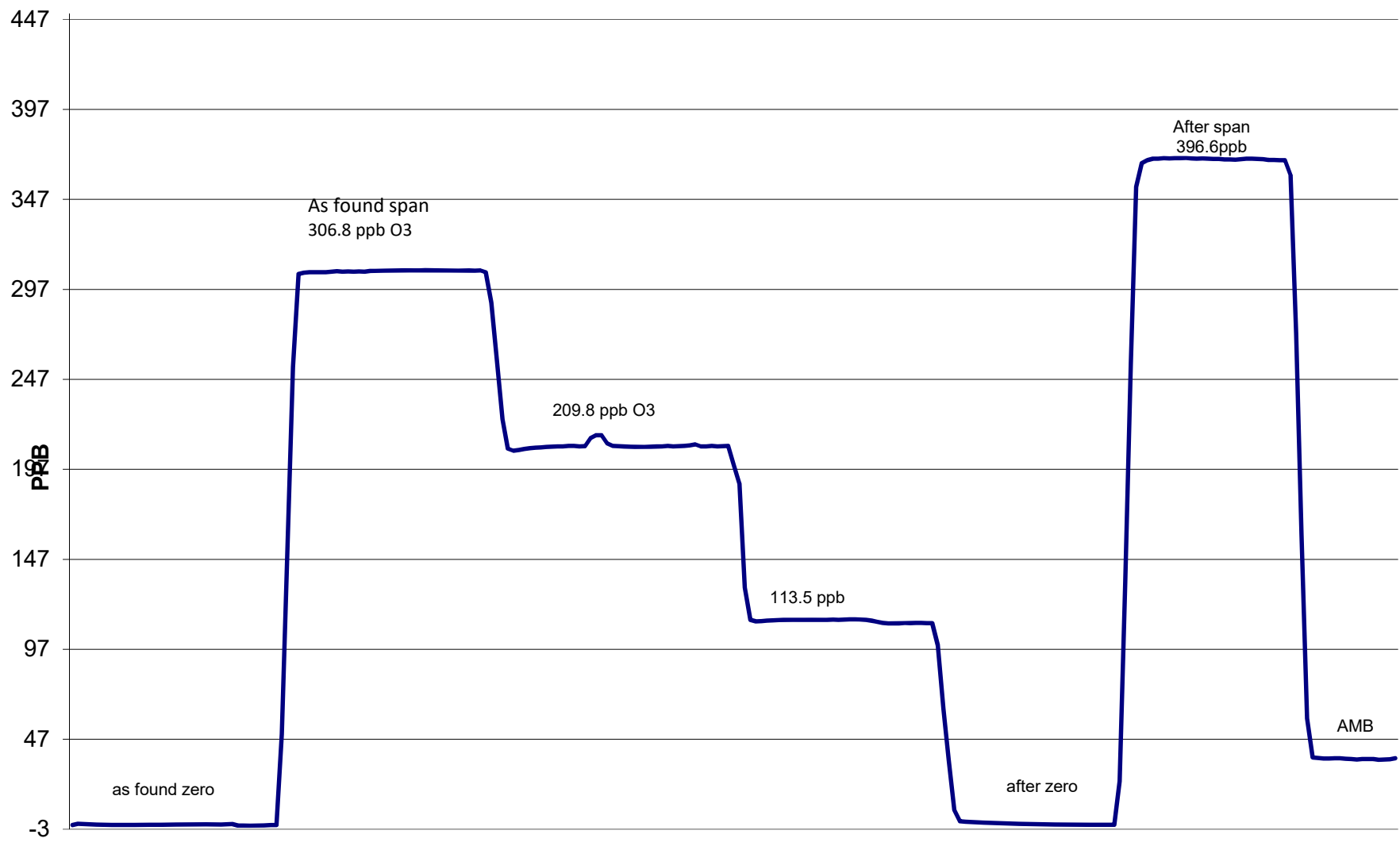
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	NA	Correlation Coefficient	0.999993
306.8	307.5	0.9978		
209.8	209.9	0.9996		
113.5	112.7	1.0074	Slope	0.995583
			Intercept	0.847902

O3 Calibration Curve



O3 Calibration



September 29, 2017

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 9, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:25	End Time (MST)	13:45:00 PM
Barometric Pressure	0.915 mBar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.997165	Calculated slope	1.001699
Calculated intercept	-0.205616	Calculated intercept	-0.273276
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	8.327		8.327	
CO span setting	1.061		1.061	
Sample pressure	696.6	mm Hg	696.2	mm Hg
Sample Flow	0.437	LPM	0.440	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5156	0.00	0.00	0.11	N/A
5156	72.61	40.36	40.48	0.9968
5156	36.33	20.33	20.63	0.9856
5156	18.32	10.29	10.72	0.9596
5156	0.00	0.00	0.11	As Found Zero
5156	72.61	40.36	40.48	As Found Span
Average Correction Factor				0.9807

Calculated value of As Found Response: 40.050 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.07	ppm	0.12	ppm
Auto span	20.59	ppm	20.67	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



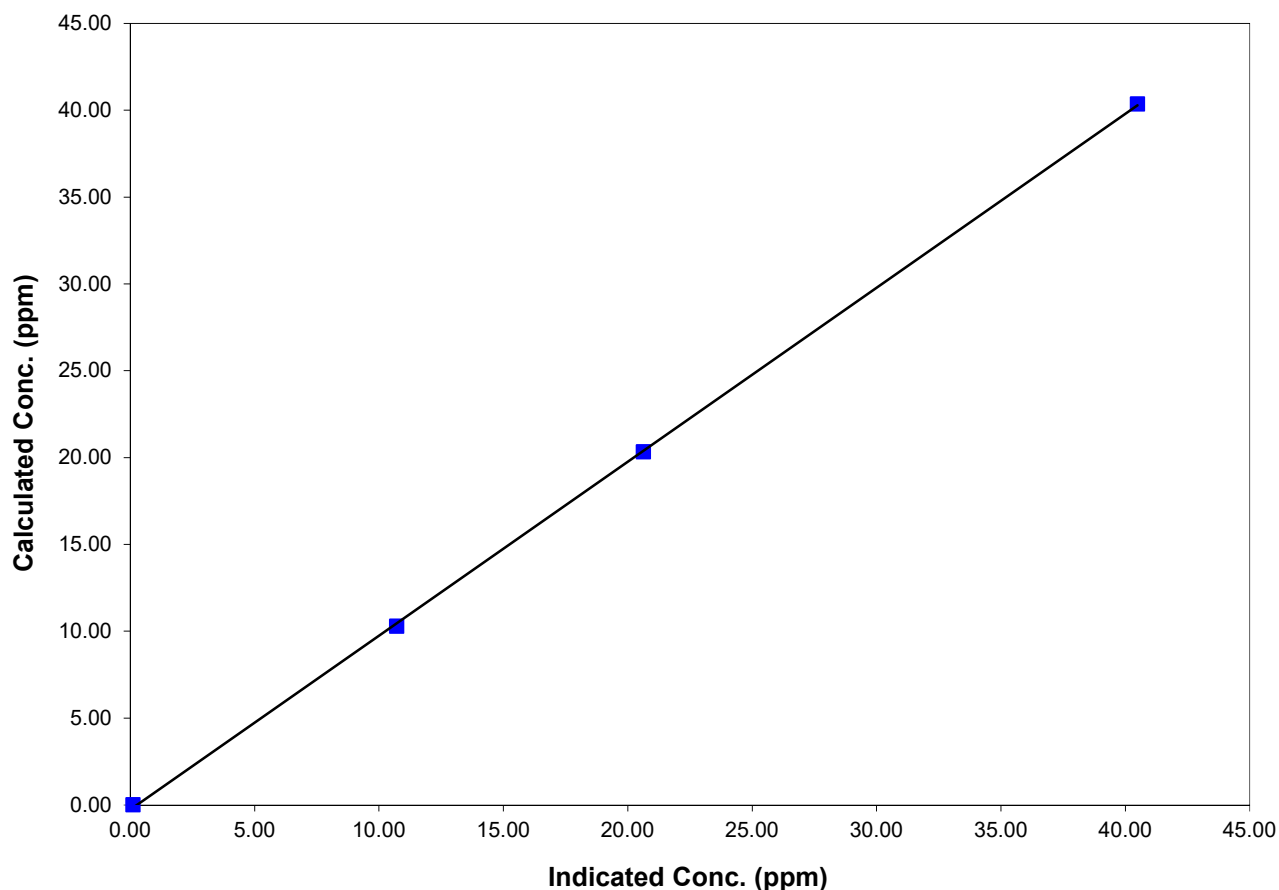
Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 9, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:25	End Time (MST)	13:45:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

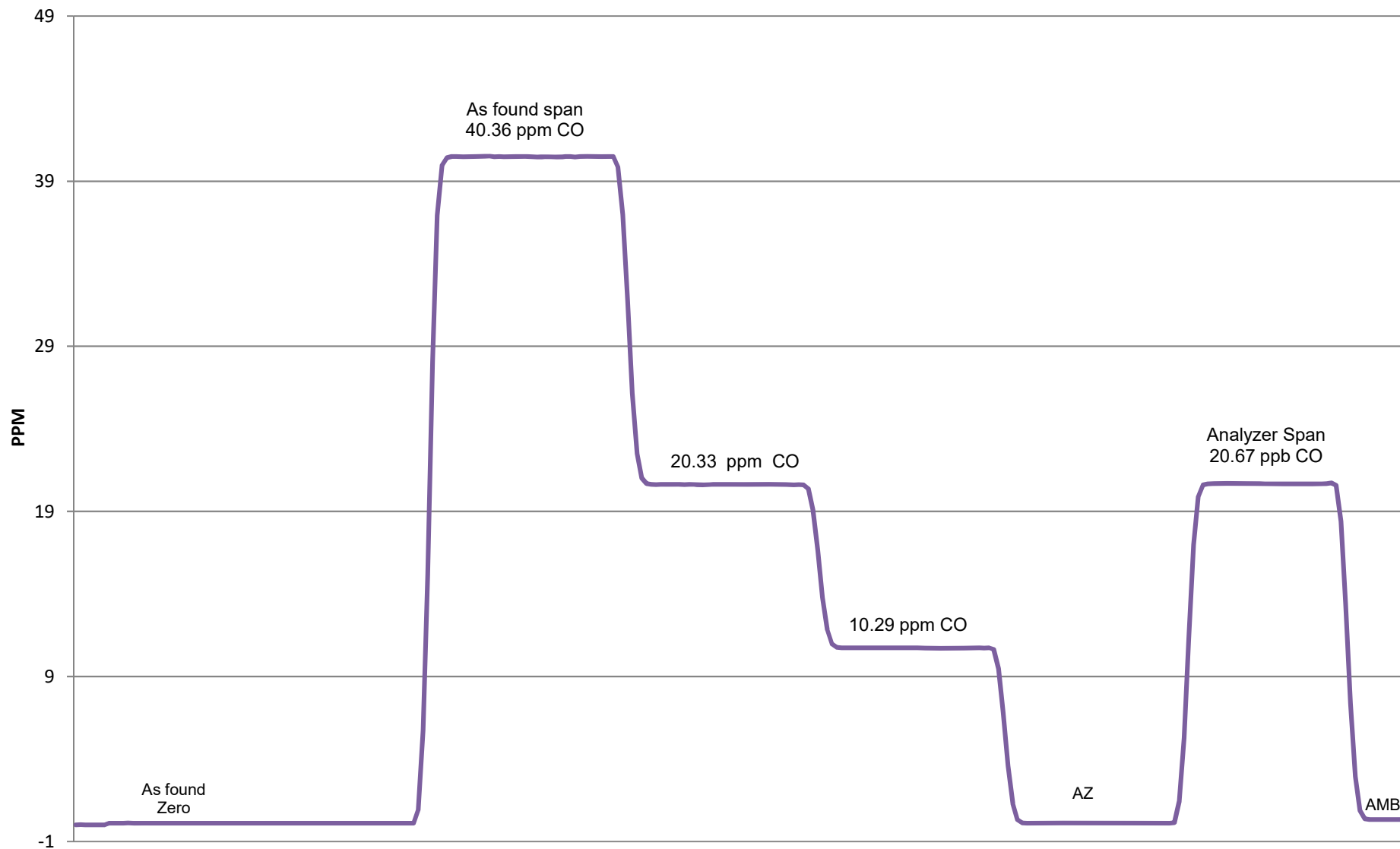
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.113	N/A	Correlation Coefficient	0.999925
40.356	40.484	0.9968		
20.333	20.630	0.9856		
10.289	10.722	0.9596	Slope	1.001699
			Intercept	-0.273276

CO Calibration Curve



CO Calibration



August 30, 2017

Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 9, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:Mair

Start Time (MST)	10:05	End Time (MST)	12:41
Barometric Pressure	0.919 mBar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	7/5/2015
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make	TEI 55I	Analyzer serial #	1134650658
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	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	27.8	PSI	27.8	PSI
Fuel pressure	42.1	PSI	42.1	PSI
Carrier pressure	30.3	PSI	30.3	PSI
CH4 cal factor	5.22		5.22	E ⁻⁴
NMHC cal factor	1.51		1.51	E ⁻⁴
Rt	12.31	Sec	12.31	Sec
Pk Index	23.43		23.43	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2004	0.00	0.00	0.03	N/A
2005	70.65	13.14	12.93	1.0163
2005	42.43	8.00	7.64	1.0474
2005	16.23	3.10	2.99	1.0378
2005	0.00	0.00	0.03	As Found Zero
2005	70.65	13.14	12.93	As Found Span
Average Correction Factor				1.0338

Calculated value of As Found Response: 12.884 ppm Percent Change of As Found: 1.9%

	Before		After
Calculated slope	0.997452	Calculated slope	1.020666
Calculated intercept	0.024205	Calculated intercept	0.041197

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	8.82	ppm	8.95	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2005	0.00	0.00	0.02	N/A
2005	70.65	19.38	19.19	1.0097
2005	42.43	11.80	11.28	1.0462
2005	16.23	4.57	4.31	1.0615
2005	0.00	0.00	0.02	As Found Zero
2005	70.65	19.38	19.18	As Found Span
Average Correction Factor				1.0391

Calculated value of As Found Response: 19.159 ppm Percent Change of As Found: 1.1%

	Before		After
Calculated slope	0.993865	Calculated slope	1.010877
Calculated intercept	0.117869	Calculated intercept	0.143400

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.34	ppm	12.58	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2004	0.00	0.00	0.04	N/A
2005	70.65	32.51	32.09	1.0132
2005	42.43	19.80	18.89	1.0479
2005	16.23	7.67	7.29	1.0523
2005	0.00	0.00	0.04	As Found Zero
2005	70.65	32.51	32.08	As Found Span
Average Correction Factor				1.0378

Calculated value of As Found Response: 32.046 ppm Percent Change of As Found: 1.4%

	Before		After
Calculated slope	0.995769	Calculated slope	1.015591
Calculated intercept	0.150487	Calculated intercept	0.189125

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.16	ppm	21.52	ppm

Notes: Hydrogen cylinder replaced
No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



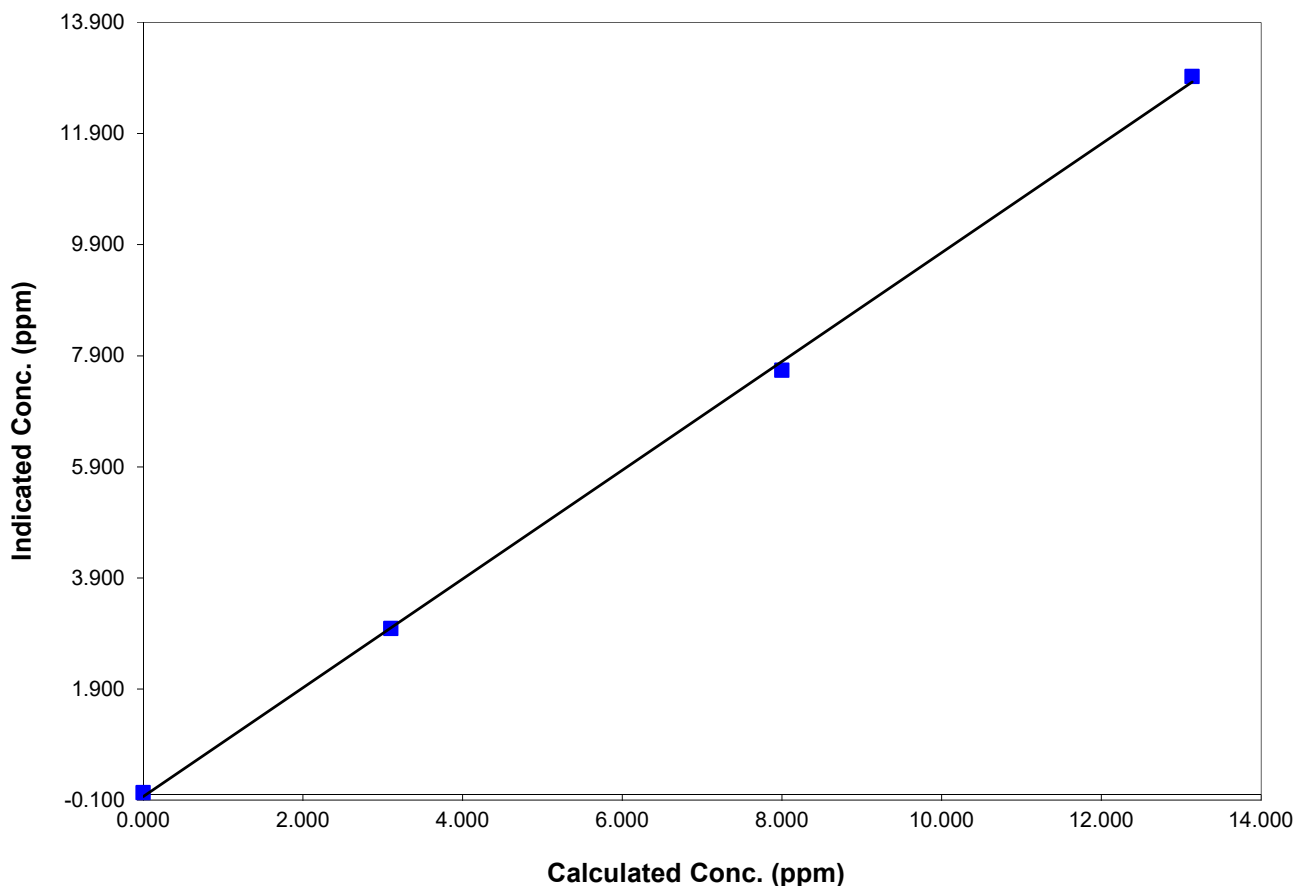
Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 9, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	12:41
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.033	N/A		
13.138	12.928	1.0163	Correlation Coefficient	0.999580
7.999	7.638	1.0474		
3.099	2.987	1.0378	Slope	1.020666
			Intercept	0.041197

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



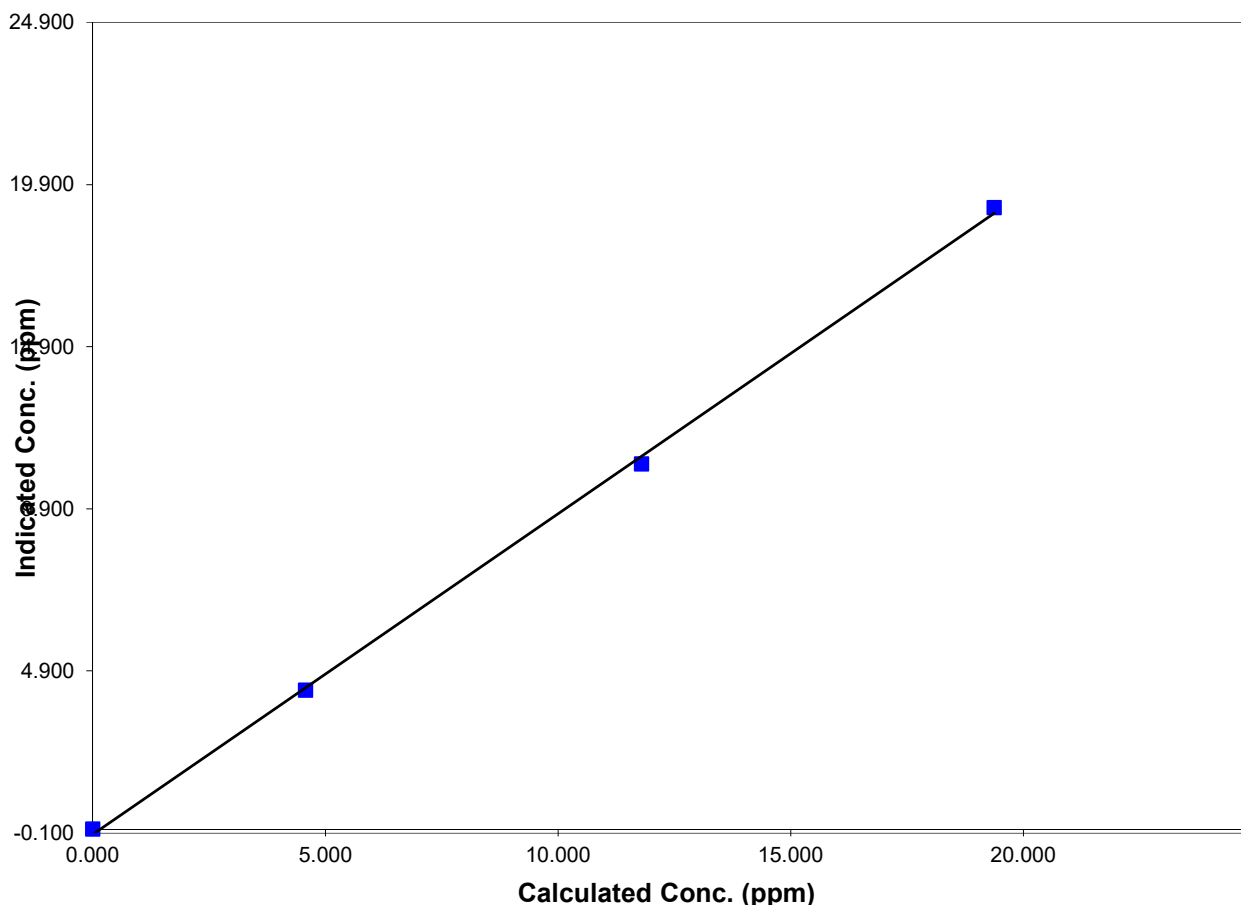
Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 9, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	12:41
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.020	N/A	Correlation Coefficient	0.999423
19.376	19.190	1.0097		
11.797	11.276	1.0462		
4.571	4.306	1.0615	Slope	1.010877
			Intercept	0.143400

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



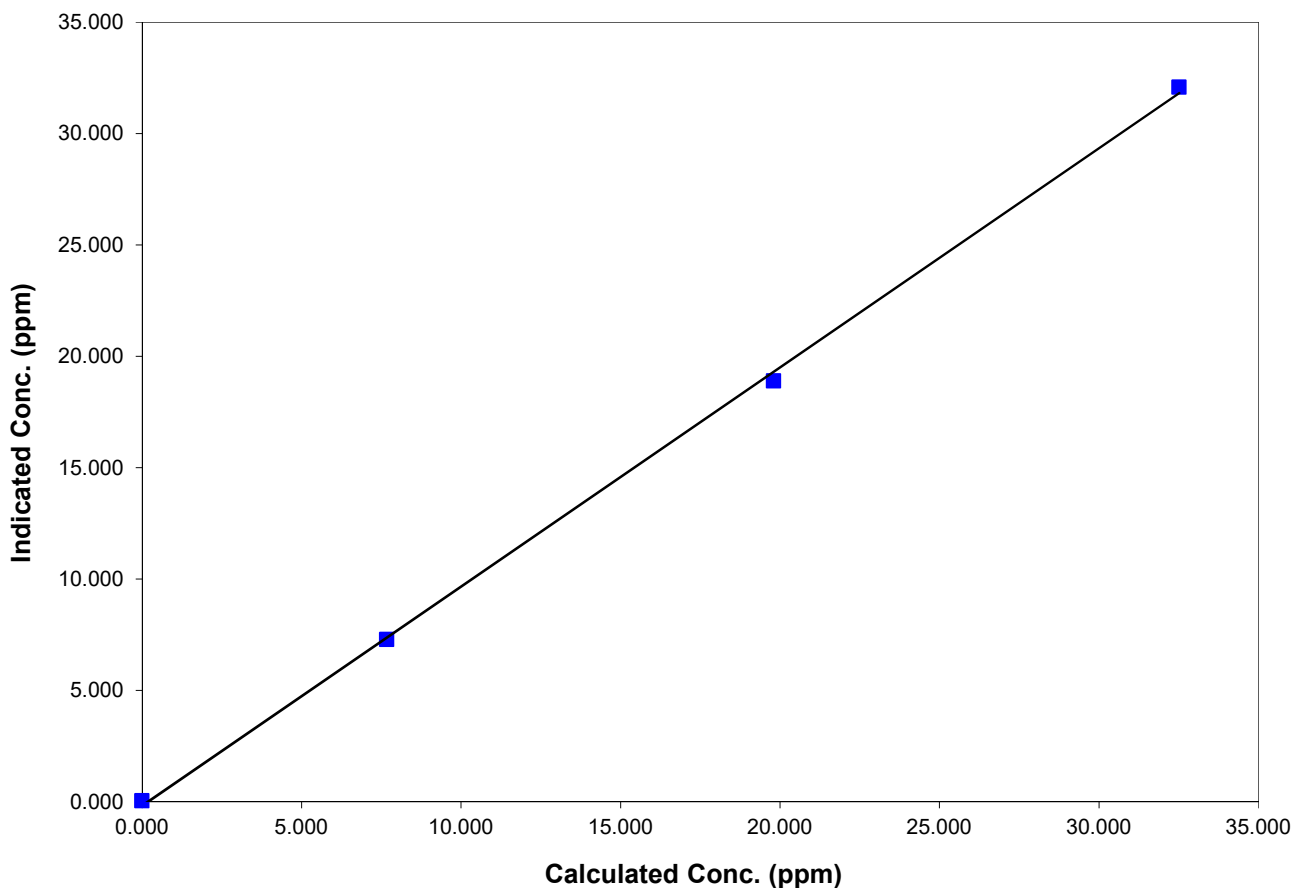
Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 9, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:05	End Time (MST)	12:41
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

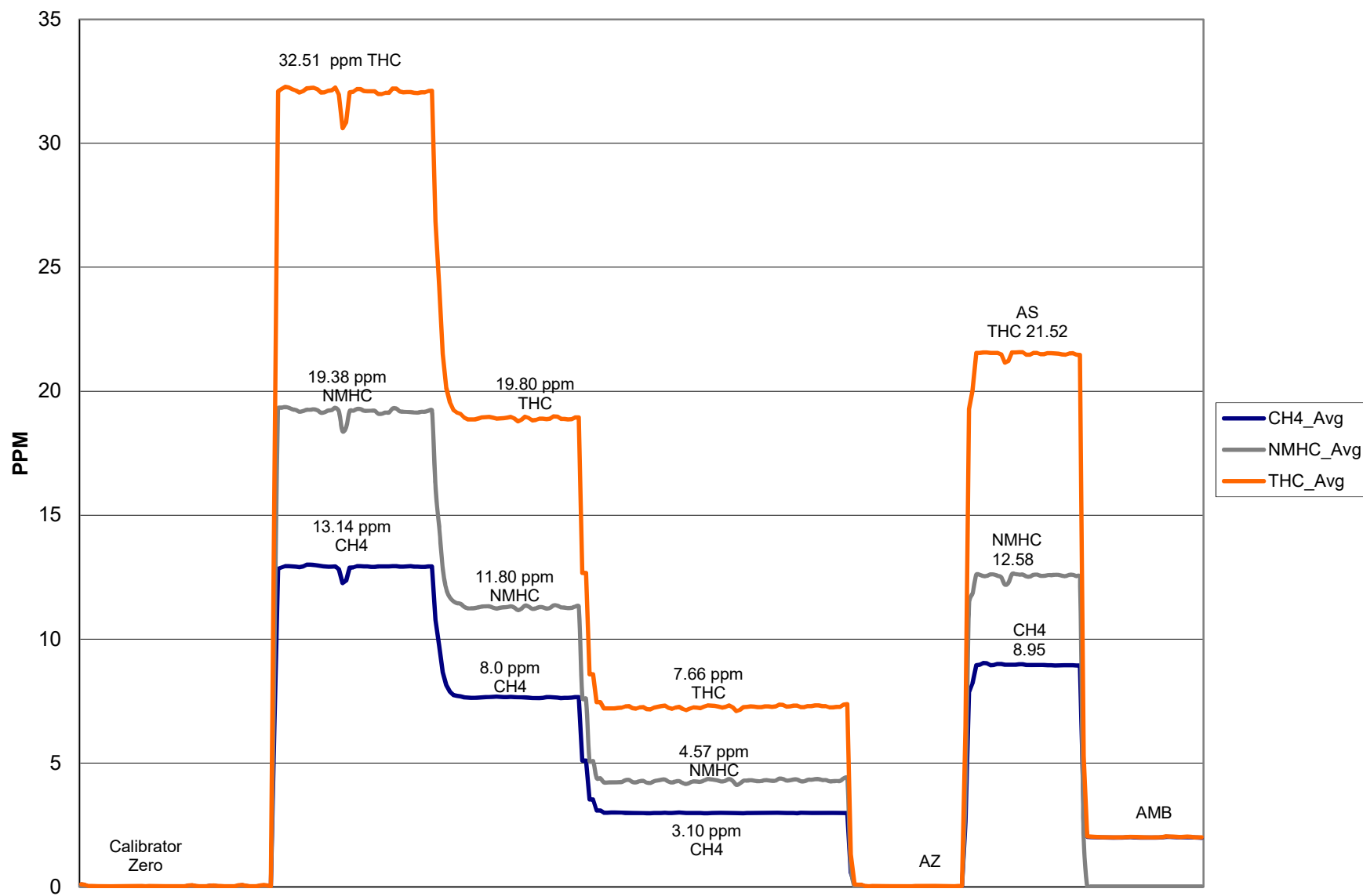
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.045	N/A	Correlation Coefficient	0.999492
32.514	32.091	1.0132		
19.796	18.891	1.0479		
7.670	7.289	1.0523	Slope	1.015591
			Intercept	0.189125

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 7, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:35	End Time (MST)	11:15
Barometric Pressure	0.919 mBar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.3 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.996411	Calculated slope	0.982921
Calculated intercept	0.785801	Calculated intercept	0.825255
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.094		1.094	
Background	12.9		13.0	
Pressure	662.2	mm Hg	657.8	mm Hg
Flow	0.438	ccm	0.438	ccm
Lamp Voltage	893	V	893	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5153	0.00	0.00	0.16	N/A
5153	41.25	81.80	82.76	0.9884
5153	20.23	40.28	39.60	1.0171
7298	9.86	13.90	12.46	1.1156
5153	0.00	0.00	0.16	As Found Zero
5153	41.25	81.80	82.76	As Found Span
Average Correction Factor				1.0404

Calculated value of As Found Response: 83.1 ppb Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	0.03	ppb	0.15	ppb
Auto span	28.70	ppb	29.17	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



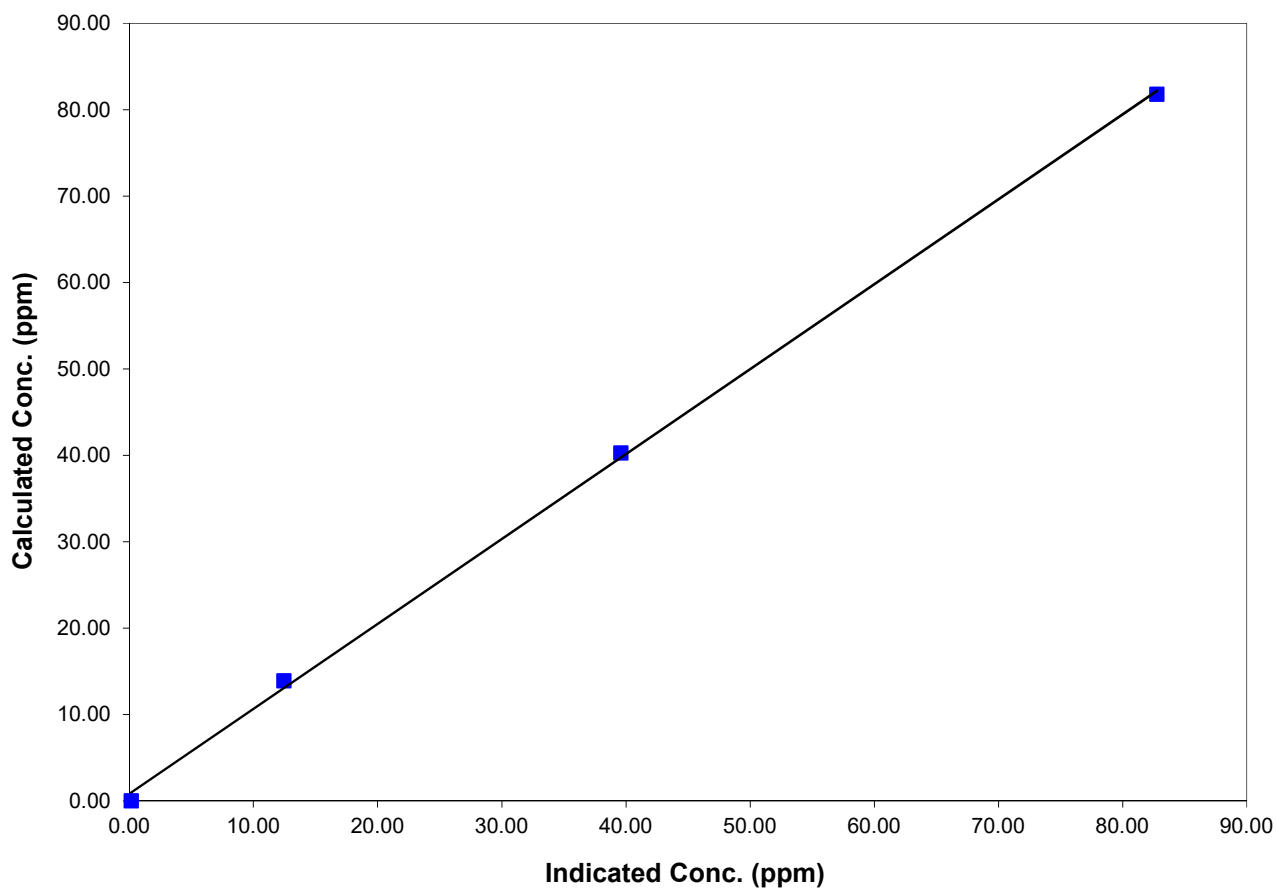
Station Information

Calibration Date	August 30, 2017	Previous Calibration	July 7, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:35	End Time (MST)	11:15
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

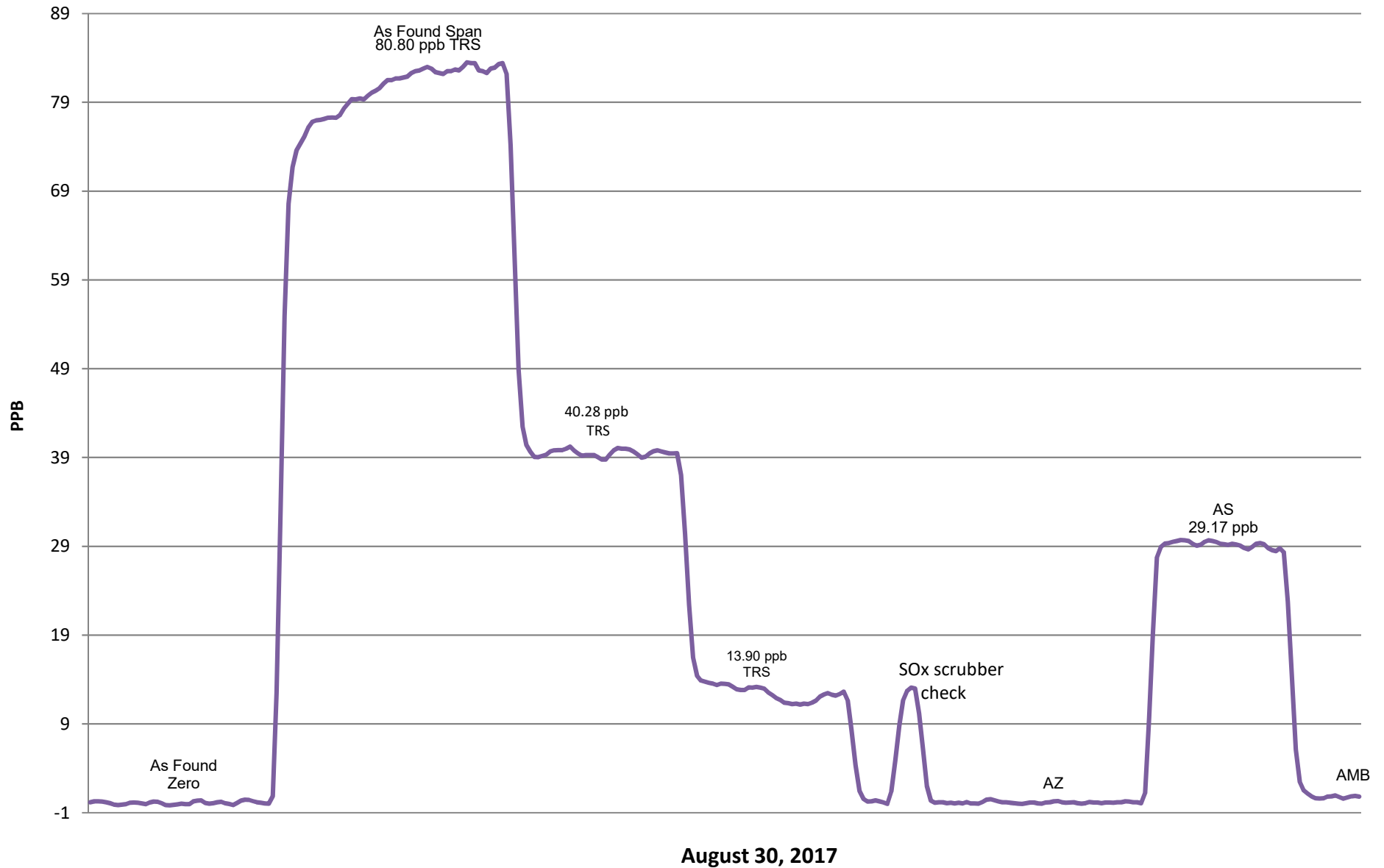
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.158	N/A	Correlation Coefficient	0.999468
81.797	82.761	0.9884		
40.278	39.601	1.0171		
13.897	12.457	1.1156	Slope	0.982921
			Intercept	0.825255

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	August 25 2017	Previous Calibration	July 27 2017
Station Number	2	Station Location	Evergreen Park
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	14:05:00 PM	End Time (MST)	16:15:00 PM
Barometric Pressure	0.920 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	02/21/2020
Correction factor	0.031061	Cal Gas Cylinder #	EY0000740
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.992409	Calculated slope	0.998889
Calculated intercept	-0.087032	Calculated intercept	-3.226125
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.5	
coefficient	1.230		1.230	
Lamp Voltage	830	volts	832	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	666.2	mm Hg	666.3	mm Hg
Sample Flow	0.442	ccm	0.442	ccm
Lamp Intensity	89	%	89	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5152	0.0	0.00	1.0	N/A
5152	41.24	397.1	399.7	0.9934
5152	20.33	196.5	200.8	0.9790
5152	9.81	95.0	100.9	0.9422
5152	0.0	0.0	1.0	As Found Zero
5152	41.24	398.0	399.7	As Found Span
Average Correction Factor				0.9715

Calculated value of As Found Response: 395.627 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	1.0	ppm	1.0	ppm
Auto span	262.1	ppm	264.0	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



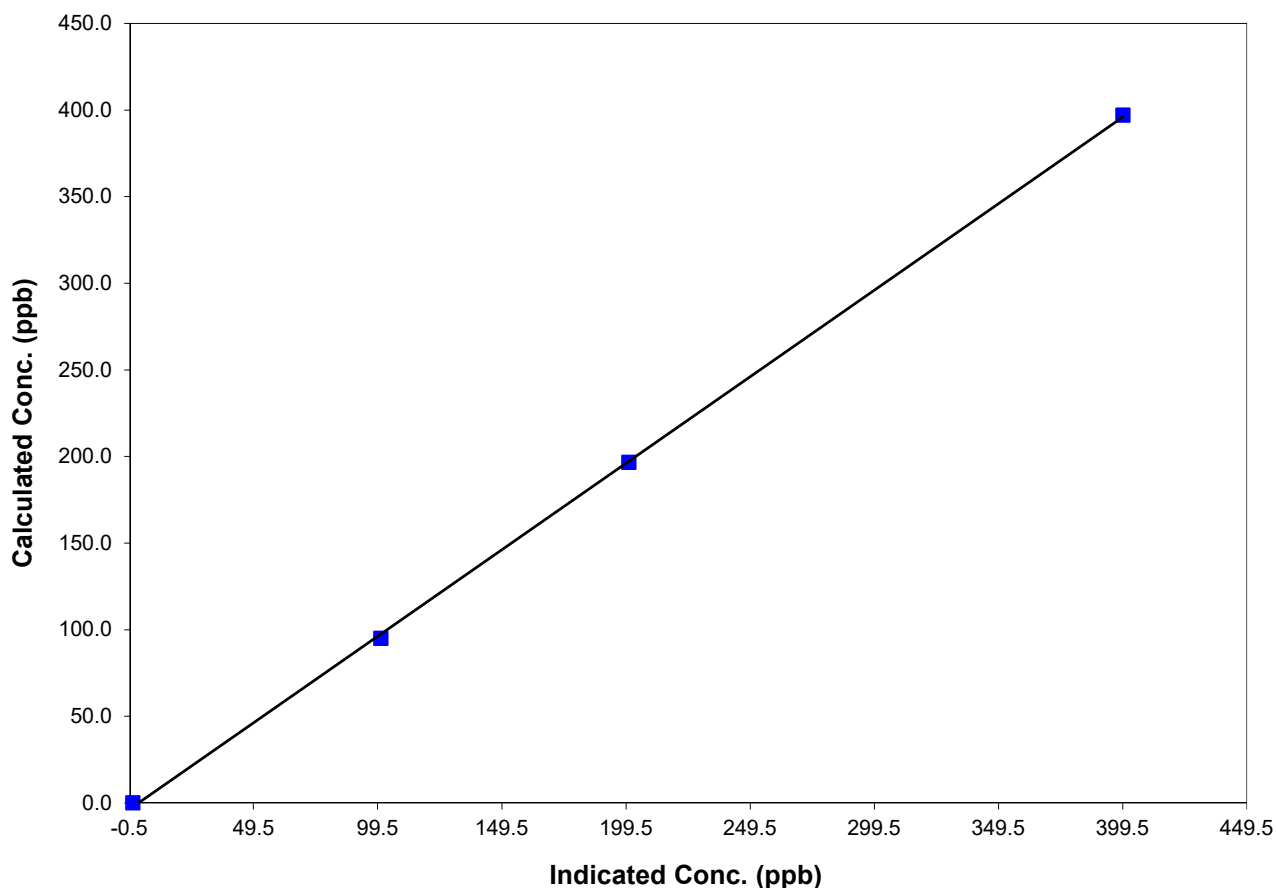
Station Information

Calibration Date	August 25 2017	Previous Calibration	July 27 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	14:05:00 PM	End Time (MST)	16:15:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

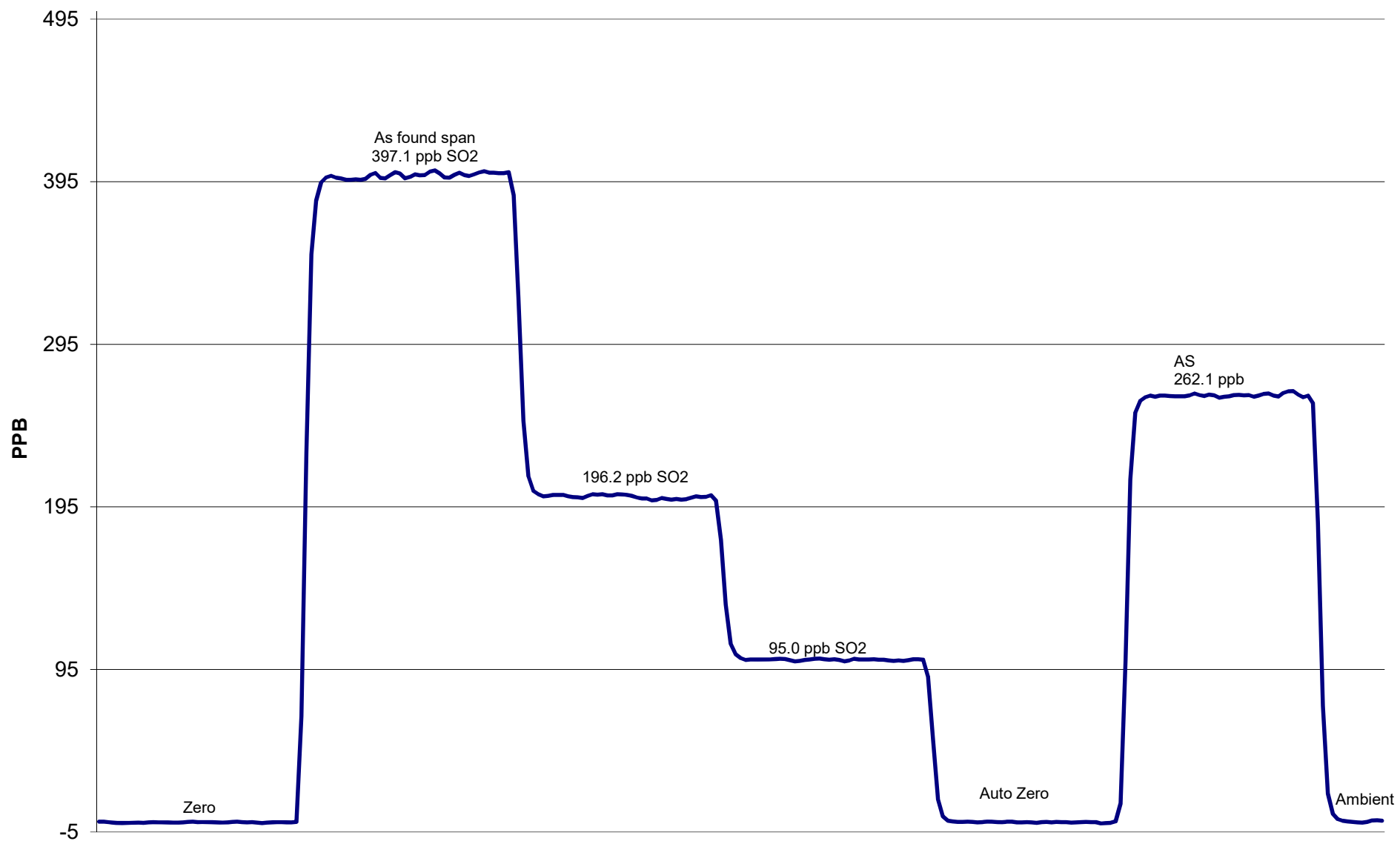
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	N/A	Correlation Coefficient	0.999851
397.1	399.7	0.9934		
196.5	200.8	0.9790		
95.0	100.9	0.9422	Slope	0.998889
			Intercept	-3.226125

SO2 Calibration Curve



SO2 Calibration



August 25 2017

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	August 25 2017	Previous Calibration	July 27 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:30	End Time (MST)	15:15:00 PM
Barometric Pressure	0.920 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	10.3 ppm	Cal Gas Expiry Date	2/28/2020
Correction factor	0.031061	Cal Gas Cylinder #	EY0000340
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.006657	Calculated slope	1.001195
Calculated intercept	0.087003	Calculated intercept	-0.575288
Analyzer make	TEI Model 43C	Analyzer serial #	3.199E+13

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	17.3	ppb	17	ppb
coefficient	1.006		0.901	
Lamp Voltage	983	volts	984	volts
Chamber Temp	44.7	Deg C	44.7	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	635.1	mm Hg	632.6	mm Hg
Sample Flow	0.632	ccm	0.632	ccm
Lamp Intensity	36,972	mv	36,792	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5152	0.00	0.00	0.1	N/A
5152	41.24	81.79	82.0	0.9973
5152	20.33	40.48	41.4	0.9781
7251	9.81	13.92	14.8	0.9379
5152	9.81		0.3	Sox Test
5152	0.00	0.00	0.1	As Found Zero
5152	41.24	81.79	83.2	As Found Span
Average Correction Factor				0.9711

Calculated value of As Found Response: 83.78 ppm Percent Change of As Found: **-2.4%**

	before calibration		after calibration	
Auto zero	0.1	ppm	0.1	ppm
Auto span	66.0	ppm	65.3	ppm

Notes: Span adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



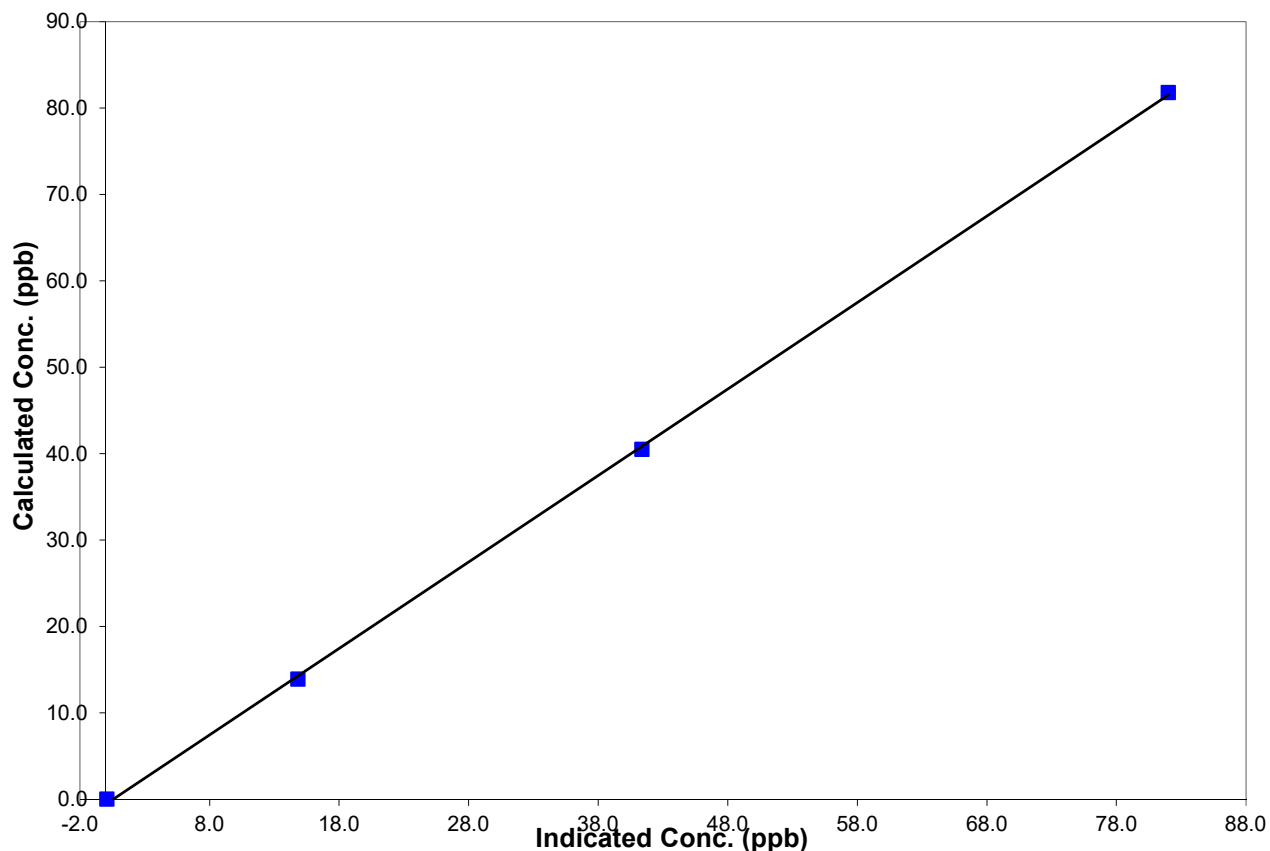
Station Information

Calibration Date	August 25 2017	Previous Calibration	July 27 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:30	End Time (MST)	15:15:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

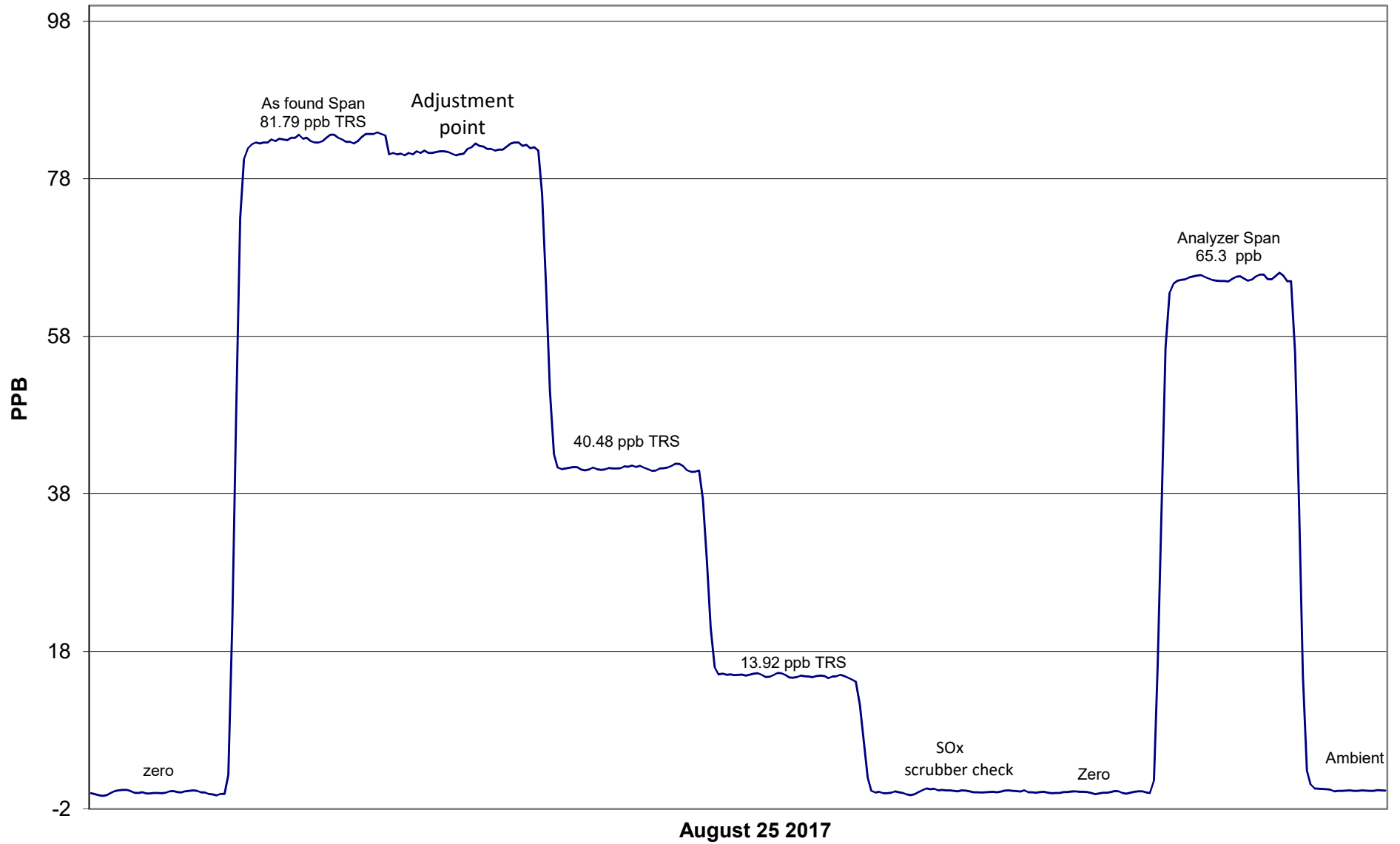
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999851
81.8	82.0	0.9973		
40.5	41.4	0.9781		
13.9	14.8	0.9379	Slope	1.001195
			Intercept	-0.575288

TRS Calibration Curve



TRS Calibration



AB TEOM PM2.5 Calibration



STATION: Evergreen Park
 LOCATION: PAZA - Grande Prairie

OPERATOR: Dmytro Dolotii
 DATE: 25-Aug-17

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	24634
Site Number	2
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

(vs. specified depth of 15.5 cm from top of flow tube to top of concentric 1/2 in. tube)

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	
Previous Calibration	13-Feb-17

PUMP CAPACITY CHECK *	PASS
-----------------------	------

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.010	-0.200
PUMP OFF	0.000	-0.060
NET	0.010	-0.140
LIMITS	<0.15	<0.60

	Ambient Temp. (^o C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	16147	13.67	3.000
INDICATED (I)	18.5	0.923		13.69	3.000
MEASURED (AF)	18.3	0.923		13.74	3.110
MEASURED (M)	18.3	0.923	16250	13.74	3.110
DIFFERENCE (M-I)	-0.2	0.000	0.6%	0.07	0.11
LIMITS	± 2^o C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data

Weight: 0.11014

Serial #: CVK 2123

COMMENTS: Pass.

Replaced the filter on the the main fow pass

Sample Head Inspection/Cleaning:

PM10:Cleaned
 PM2.5:Cleaned

Large In Line Filter Inspection & Or Cleaning:

Main:Good
 Aux: Good

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	August 24, 2017	Previous Calibration	July 26, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:15	End Time (MST)	14:35:00 PM
Barometric Pressure	0.925 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Cert Date	02/21/2020
Correction factor	0.031230	Cal Gas Cylinder #	EY0000740
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.991623	Calculated slope	0.993663
Calculated intercept	0.260448	Calculated intercept	-2.290633
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	13.8		13.6	
coefficient	0.933		0.919	
Lamp Voltage	940	volts	941	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	661.8	mm Hg	664.8	mm Hg
Sample Flow	0.443	lpm	0.445	lpm
Lamp Intensity	88	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5154	0.0	0.00	0.3	N/A
5154	41.18	396.33	399.9	0.9911
5154	20.13	194.53	199.8	0.9734
5154	9.82	95.08	99.5	0.9554
5154	0.0	0.00	0.3	As Found Zero
5154	41.18	396.33	402.2	As Found Span
Average Correction Factor				0.9733

Calculated value of As Found Response: 398.819 ppm Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	210.0	ppb	209.3	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



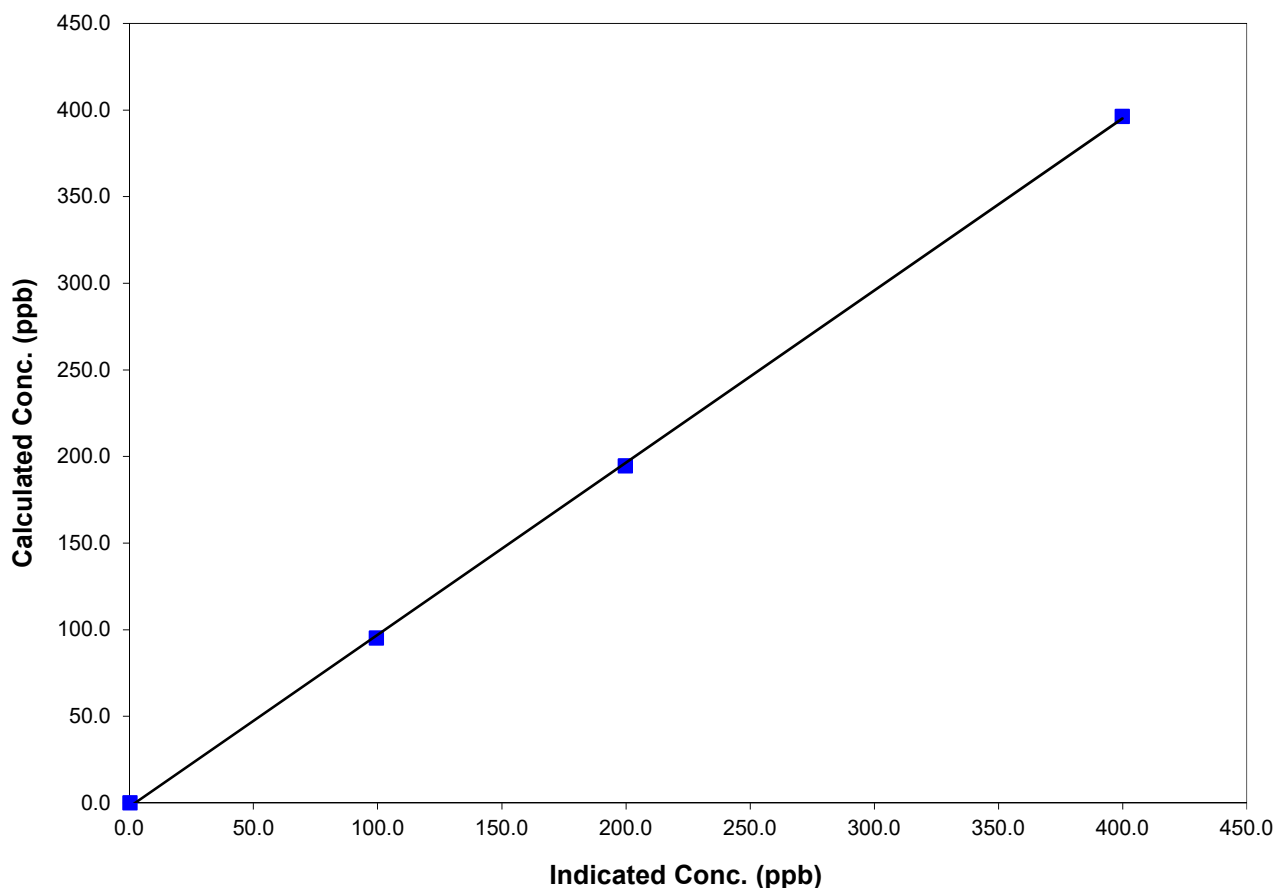
Station Information

Calibration Date	August 24, 2017	Previous Calibration	July 26, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:15	End Time (MST)	14:35:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

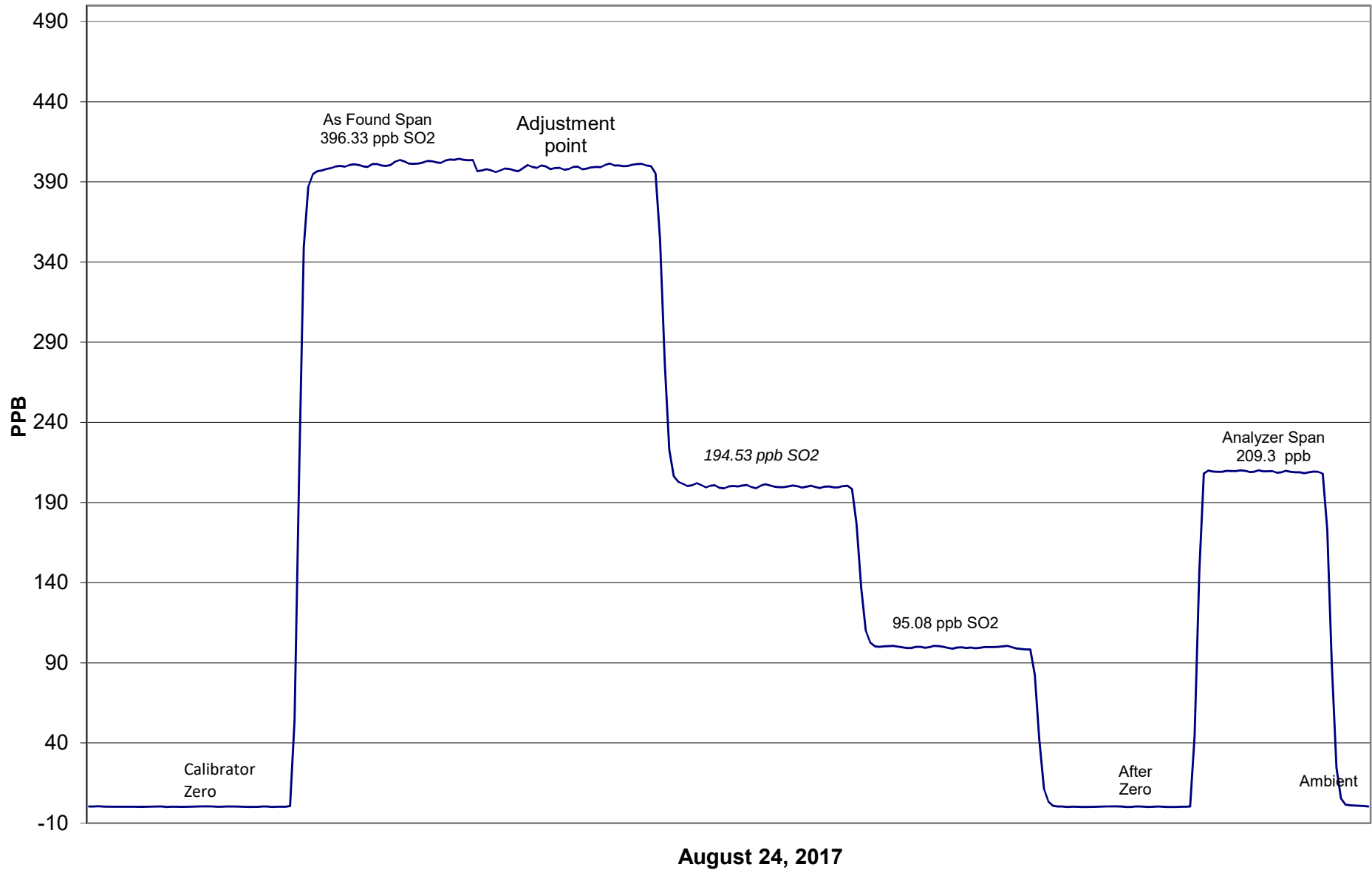
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999872
396.3	399.9	0.9911		
194.5	199.8	0.9734		
95.1	99.5	0.9554	Slope	0.993663
			Intercept	-2.290633

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	August 24, 2017	Previous Calibration	July 26, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:15	End Time (MST)	13:25:00 PM
Barometric Pressure	0.923 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	2/28/2020
Correction factor	0.031163	Cal Gas Cylinder #	EY0000340
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.982458	Calculated slope	0.981333
Calculated intercept	0.393763	Calculated intercept	0.127141

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.9	ppb	14.9	ppb
coefficient	0.981		0.981	
Lamp Voltage	802	volts	803	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	668.5	mm Hg	670.1	mm Hg
Sample Flow	0.418	lpm	0.418	lpm
Lamp Intensity	92	mv	92	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5154	0.0	0.00	-0.2	N/A
5154	41.18	80.85	82.2	0.9830
5154	20.13	39.68	40.3	0.9845
7251	9.82	13.80	14.0	0.9849
5154	9.20			Sox test
5154	0.0	0.00	-0.2	As Found Zero
5154	41.18	80.85	72.3	As Found Span
Average Correction Factor				0.9842

Calculated value of As Found Response: 71.57 ppm Percent Change of As Found: 11.5%

	before calibration		after calibration	
Auto zero	-0.2	ppm	-0.2	ppm
Auto span	66.0	ppm	67.3	ppm

Notes: No adjustment made
Replaced Sox scrubber materail.

Calibration Performed By: Dmytro Dolotii.

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



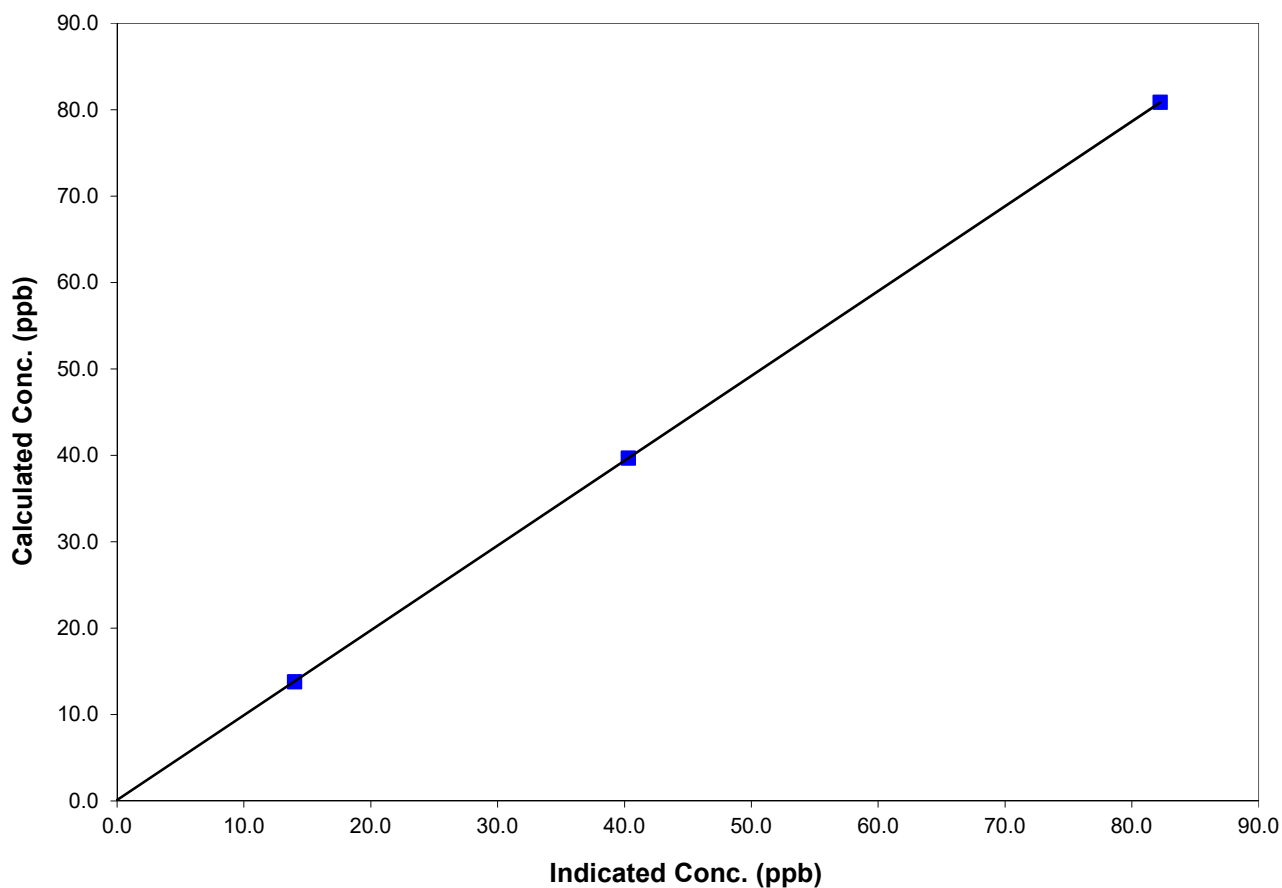
Station Information

Calibration Date	August 24, 2017	Previous Calibration	July 26, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:15	End Time (MST)	13:25:00 PM
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

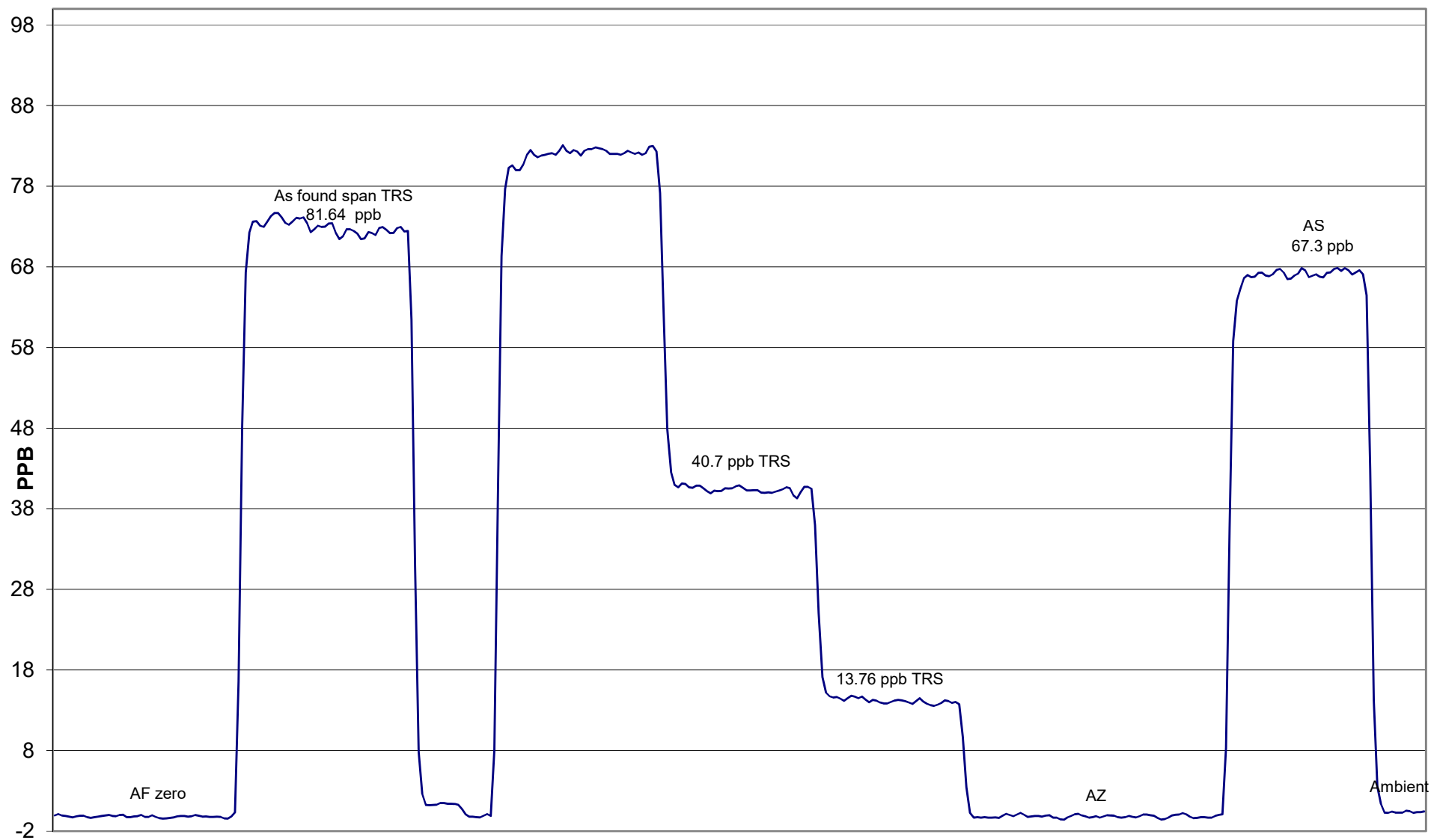
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999997
80.9	82.2	0.9830		
39.7	40.3	0.9845		
13.8	14.0	0.9849	Slope	0.981333
			Intercept	0.127141

TRS Calibration Curve



Smokey Heights TRS Calibration



August 24, 2017

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	13:00:00 PM	End Time (MST)	15:40
Barometric Pressure	0.909 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
Cal Gas Concentration	10.5 ppm	Cal Gas Expiry Date	1/12/2019
Gas Cert Reference	FF16108		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001067	Calculated slope	1.001067
Calculated intercept	-0.197319	Calculated intercept	-0.197319
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.46		2.5	
Coefficient	0.943		0.956	
PMT	-767.5	V	-768.5	V
UV Lamp Voltage	1114	V	1111	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	665.8	mm Hg	663.7	mm Hg
Sample Flow	0.457	LPM	0.492	LPM
Lamp Intensity	96	%	96	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4995	39.94	83.3	83.4	0.9989
4995	19.95	41.8	42.0	0.9947
4995	9.97	20.9	21.0	0.9953
4995	0.00	0.0	0.2	As found zero
4995	39.94	83.3	85.7	As found span
Average Correction Factor				0.9963

Calculated value of As Found Response: 85.402 ppm Percent Change of As Found: -2.5%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	57.7	ppb	57.7	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



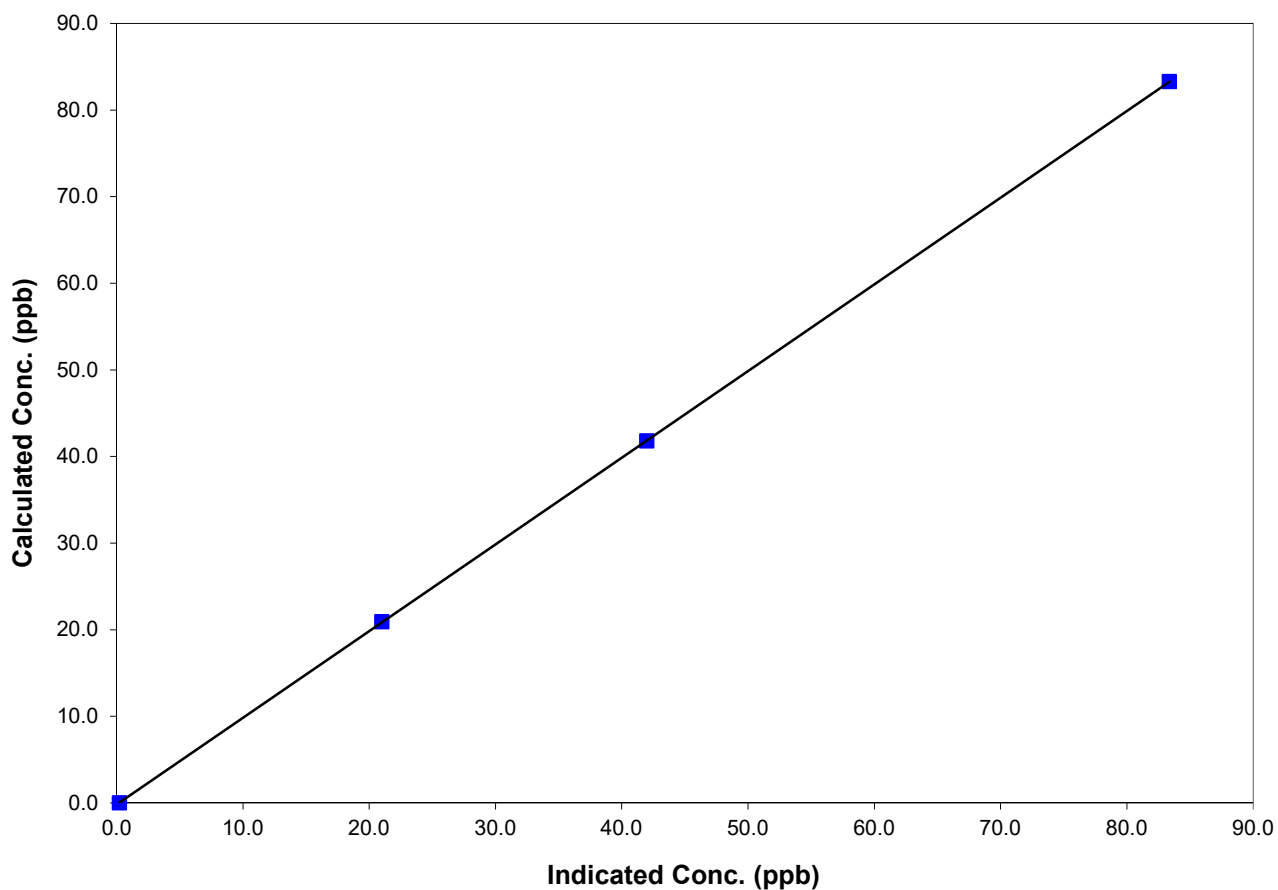
Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:00:00 PM	End Time (MST)	15:40
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

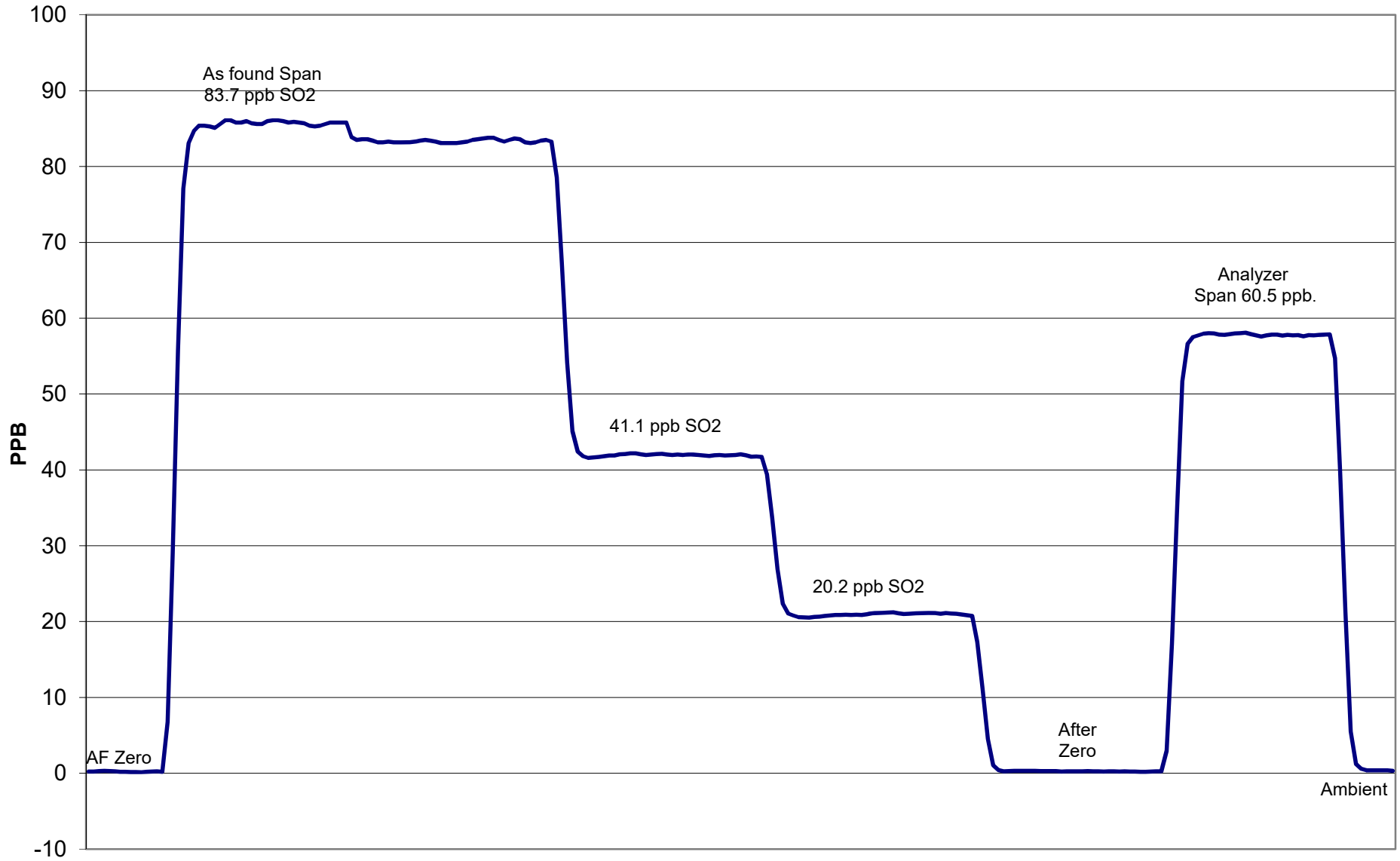
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999997
83.3	83.4	0.9989		
41.8	42.0	0.9947		
20.9	21.0	0.9953	Slope	1.001067
			Intercept	-0.197319

SO2 Calibration Curve



SO2 Calibration



August 16, 2017

Parameter

Air Monitoring Network

NO_x-NO-NO₂

PAZA



Station Information

Calibration Date	August 16, 2017		Previous Calibration	July 24, 2017	
Station Number	4		Station Location	Beaverlodge	
Reason:	☒ Routine	☐ Installation	☐ Removal	Other:	
Start Time (MST)	7:55		End Time (MST)	12:25	
Barometric Pressure	0.909	Atm	Station Temperature	20.0	Deg C
Calibrator	EnviroNics 6100		Serial Number	3016	
NO Cal Gas Conc	50.4	ppm	Cal Gas Expiry Date	February 2, 2019	
NOx Cal Gas Conc	50.5	ppm	Cal Gas Serial #	EY0000751	

DACS Information

DACS make	CR3000	DACS serial No.	5237	
Parameter		NO2	NOx	NO
Before	Data Slope	1.000057	0.998828	0.997105
	Data Offset	0.115753	2.035072	2.094997
After	Data Slope	1.000057	0.998828	0.997105
	Data Offset	0.115753	2.035072	2.094997
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.9	mV	3.0	mV
NOx bkgnd	3.7	mV	3.8	mV
NO coefficient	0.944		0.971	
NOx coefficient	0.999		0.994	
NO2 conv temp	322.1	Deg C	322.1	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-743.3	mV	-743.3	mV
R Cell Press	193.6	in Hg	195.0	in Hg
Sample Flow	0.746	LPM	0.732	LPM

Notes: Span adjustments made

Calibration Report

Parameter **NOX-NO-NO2**
Air Monitoring Network **PAZA**



Station Information

Calibration Date: August 16, 2017 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	N/A	N/A
1	4995	39.94	400.6	399.8	0.8	399.9	399.9	-0.7	1.0018	0.9998
2	4995	19.95	200.9	200.5	0.4	198.5	197.9	-0.3	1.0119	1.0130
3	4995	9.97	100.6	100.4	0.2	96.4	96.5	-0.3	1.0437	1.0401
AFZ	4995	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	0.0000	0.0000
AFS	4995	39.94	400.6	399.8	0.8	429.4	428.6	0.0	0.9328	0.9329
Average Correction Factor									1.0192	1.0176

As Found Concentrations: NO_x= 431.0 NO= 429.4 As Found Percent Change NO_x= 7.6% NO= 7.4%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	398.5	398.5	0.0	398.1	398.5	-1.1	1.0009	1.0000	N/A	N/A
300	398.5	90.8	307.7	398.8	90.8	307.4	0.9992	1.0000	1.0007	99.9%
200	398.5	188.9	209.5	399.2	188.9	209.5	0.9981	1.0000	1.0001	100.0%
100	398.5	286.9	111.6	399.0	286.9	111.5	0.9988	1.0000	1.0012	99.9%
Average Correction Factor							0.9987	1.0000	1.0006	99.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	-0.2	ppb	-0.4	-0.3	-0.2	ppb
Auto span	286.9	284.0	2.0	ppb	263.4	260.6	1.8	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



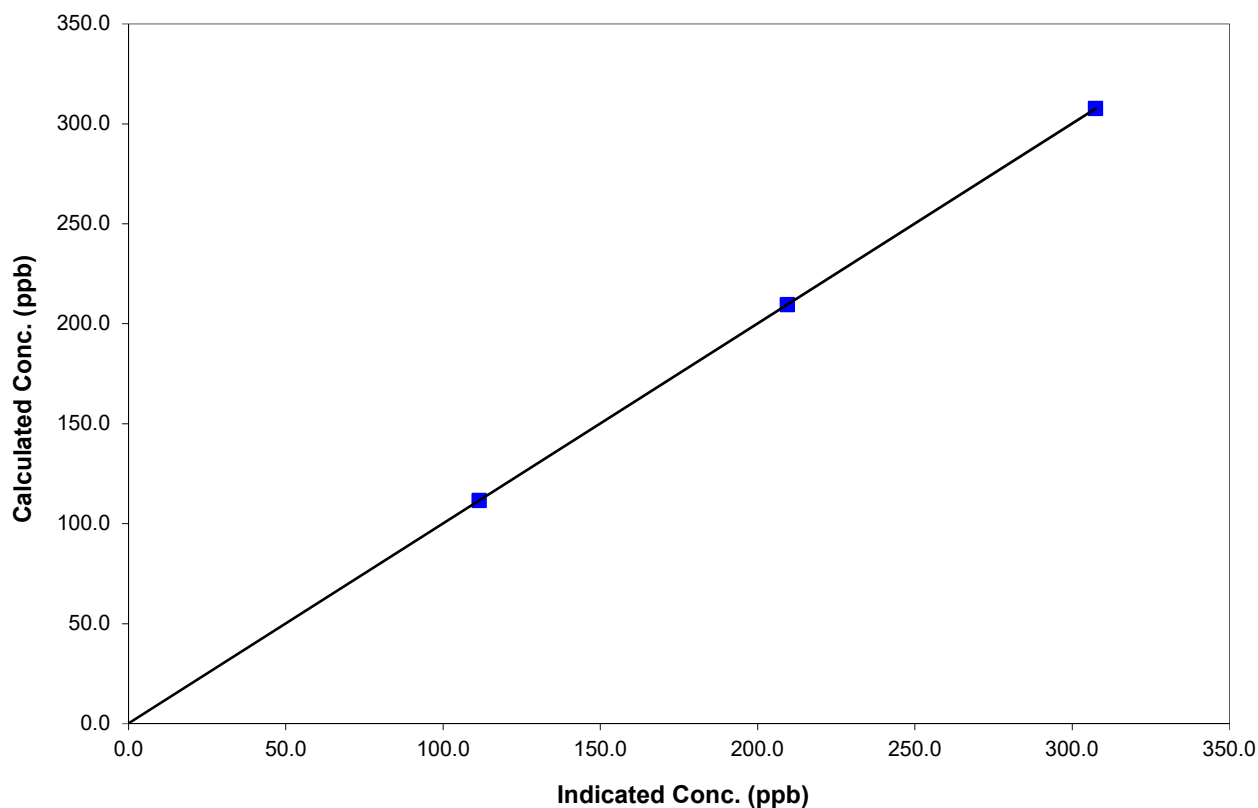
Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:55	End Time (MST)	12:25
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	1.000000
307.7	307.4	1.0007		
209.5	209.5	1.0001		
111.6	111.5	1.0012	Slope	1.000057
			Intercept	0.115753

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



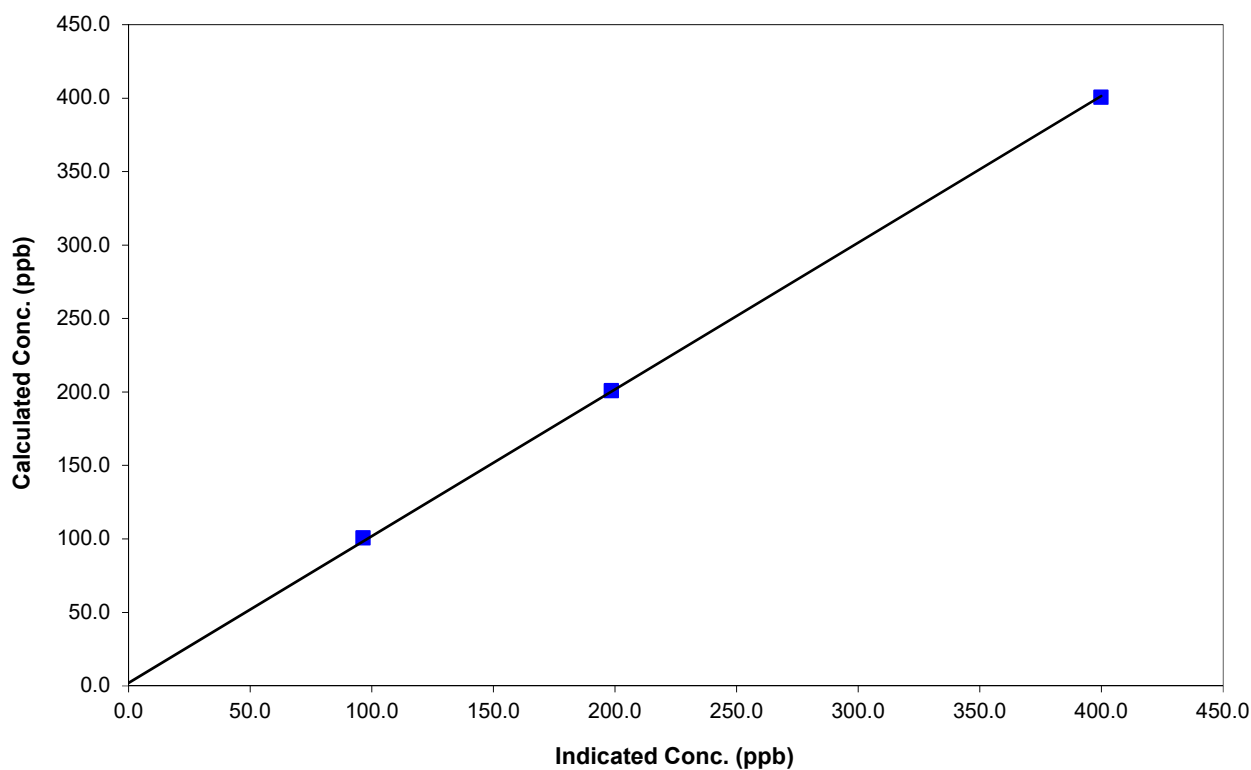
Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:55	End Time (MST)	12:25
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999882
400.6	399.9	1.0018		
200.9	198.5	1.0119		
100.6	96.4	1.0437	Slope	0.998828
			Intercept	2.035072

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



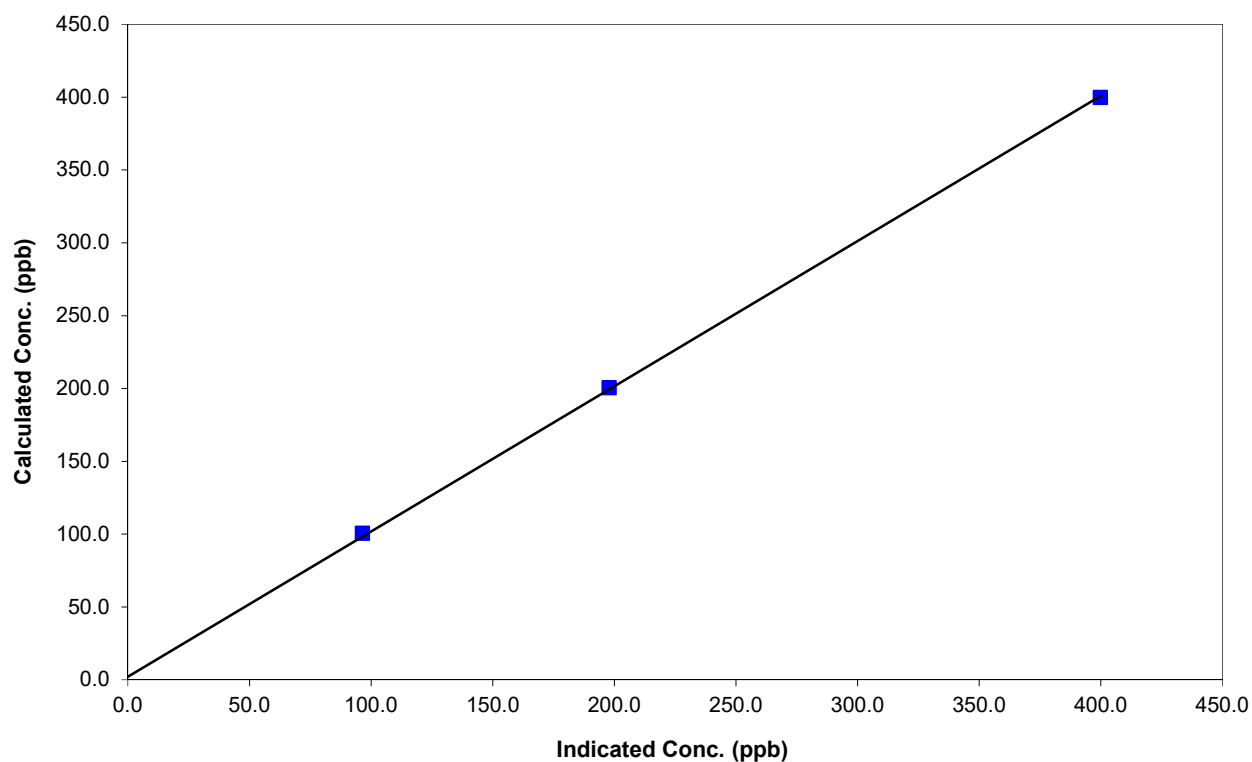
Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:55	End Time (MST)	12:25
Analyzer make	TEI 42i	Analyzer serial #	906535068

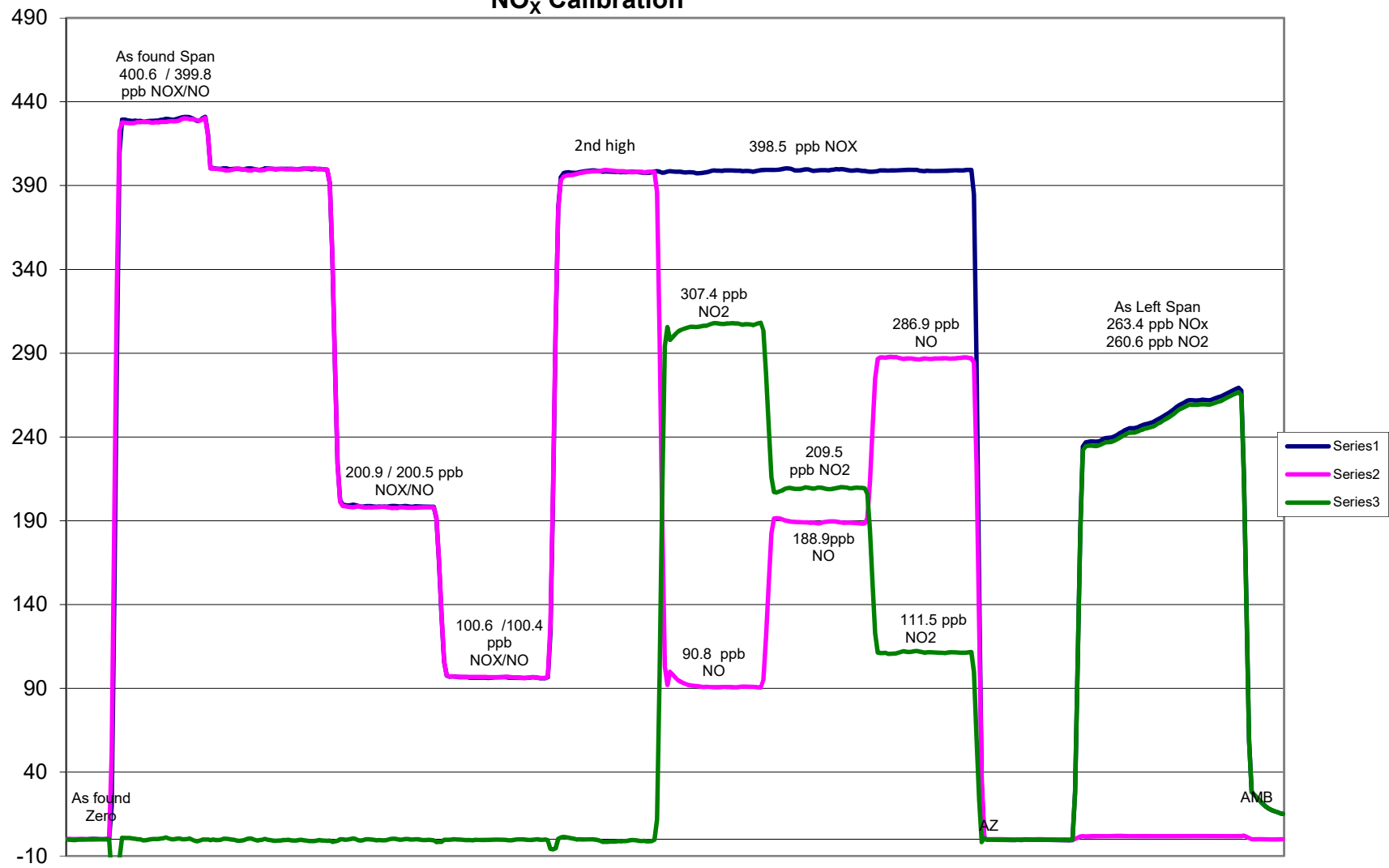
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999877
399.8	399.9	0.9998		
200.5	197.9	1.0130		
100.4	96.5	1.0401	Slope	0.997105
			Intercept	2.094997

NO Calibration Curve



NO_x Calibration



August 16, 2017

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:40	End Time (MST)	13:55
Barometric Pressure	0.909 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.999439	Calculated slope	0.999439
Calculated intercept	-0.142833	Calculated intercept	-0.142833

Analyzer make Teco 49i Analyzer serial # 1136451236,AMU 1879

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.20	ppb	-0.20	ppb
slope	1.004		1.021	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	59212/67779	mV	58774/67386	mV
Pressure	685.1	mm Hg	687.5	mm Hg
Flow A	0.798	LPM	0.8	LPM
Flow B	0.745	LPM	0.747	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5143	0.00	0.0	0.2	N/A
5143	0.30	308.0	308.9	0.9970
5143	0.20	210.0	209.1	1.0042
5143	0.10	111.0	111.7	0.9937
5143	0.00	0.0	0.2	As found zero
5143	0.30	308.0	331.0	As found span
Average Correction Factor				0.9983

Calculated value of As Found Response: 330.5 ppm Percent Change of As Found: 7.3%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.3	ppb
Auto span	272.9	ppb	259.2	ppb

Notes: _____

Calibration Performed By: Grover Christiansen.

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



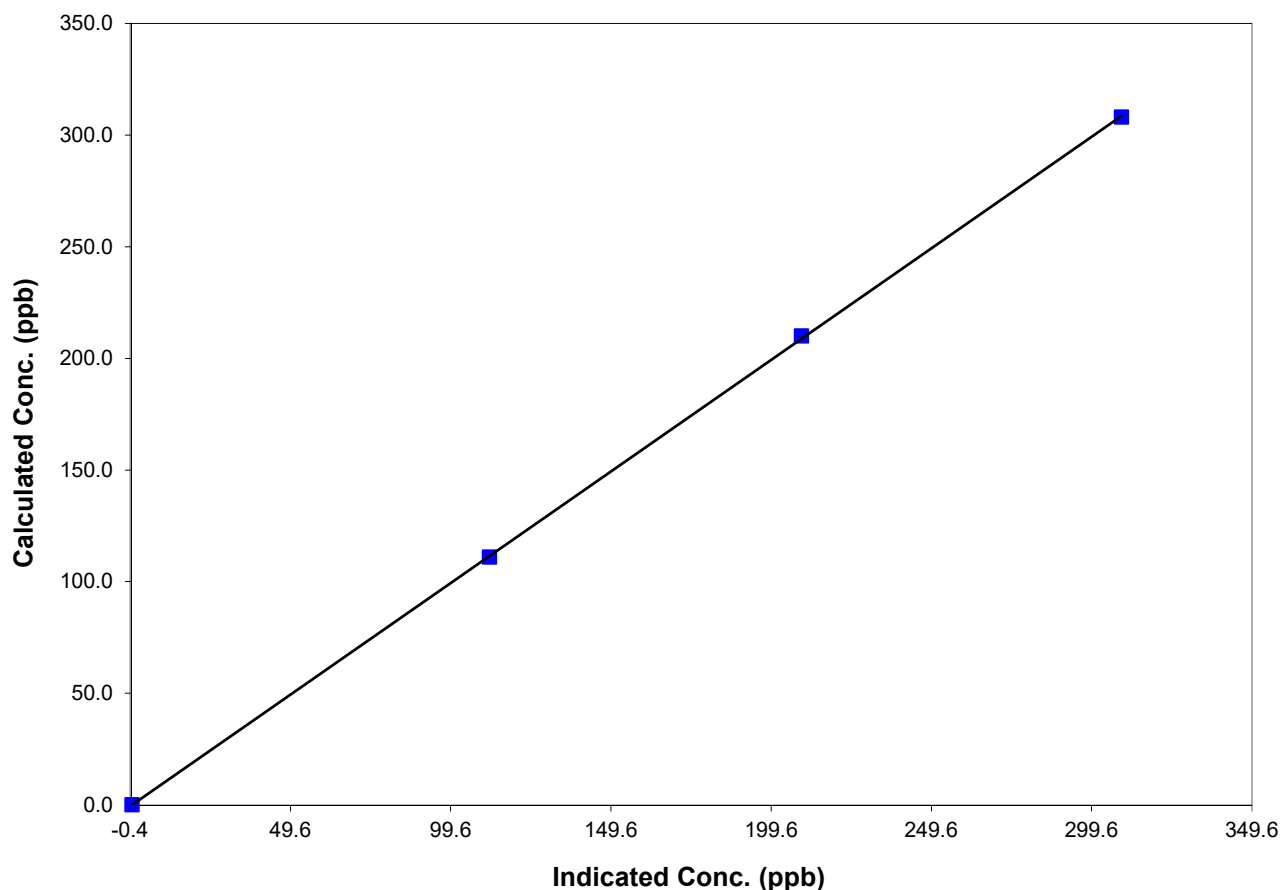
Station Information

Calibration Date	August 16, 2017	Previous Calibration	July 24, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:40	End Time (MST)	13:55
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

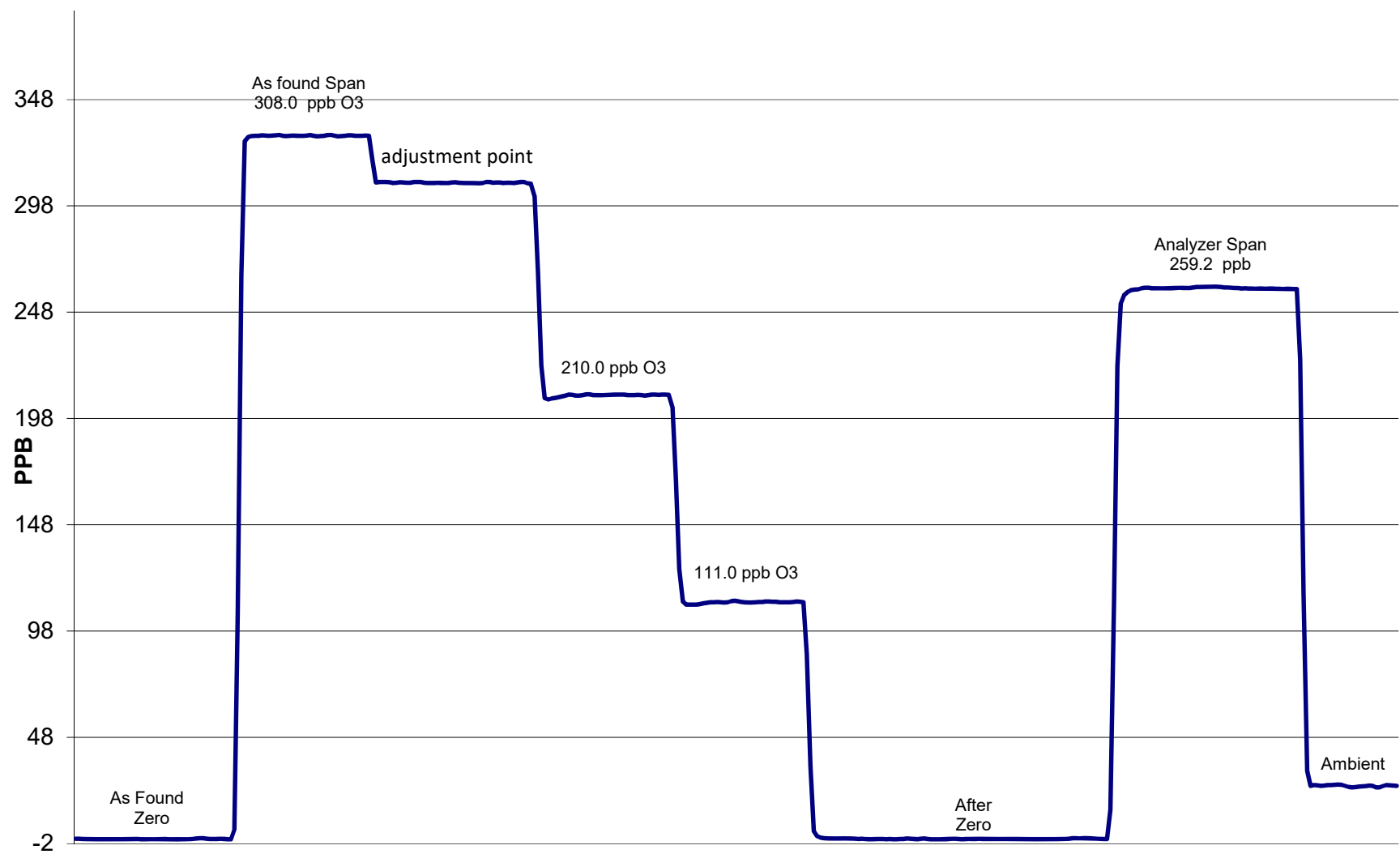
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA	Correlation Coefficient	0.999964
308.0	308.9	0.9970		
210.0	209.1	1.0042		
111.0	111.7	0.9937	Slope	0.999439
			Intercept	-0.142833

O3 Calibration Curve



O3 Calibration



August 16, 2017

Calibration Report

Parameter SO2
Air Monitoring Network

PAZA



Station Information

Calibration Date	August 28 2017	Previous Calibration	July 21 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:50	End Time (MST)	
Barometric Pressure	0.927 atm	Station Temperature	23.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Exp Date	February 18, 2019
Gas Cylinder Num.	LL105132		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.002481	Calculated slope	1.000118
Calculated intercept	2.597389	Calculated intercept	-2.300570
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	7.4		7	
Coefficient	0.872		0.827	
UV Lamp Voltage	791	LPM	791	LPM
Chamber Temp	45	V	45	V
Perm Gas Temp	45	C	45	C
Pressure	679.7	in Hg	681.2	in Hg
Sample Flow	0.456	LPM	0.460	LPM
Lamp Intensity	90	Hz	92	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5150	0.00	0.0	0.1	N/A
5150	41.22	397.0	398.0	0.9975
5150	20.30	196.3	200.1	0.9809
5150	9.80	95.0	99.2	0.9573
5150	0.00	0.0	0.1	As found zero
5150	41.22	397.0	418.6	As found span
Average Correction Factor				0.9786

Calculated value of As Found Response: 422.1 ppm Percent Change of As Found: -6.3%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.1	ppm
Auto span	279.5	ppm	262.6	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



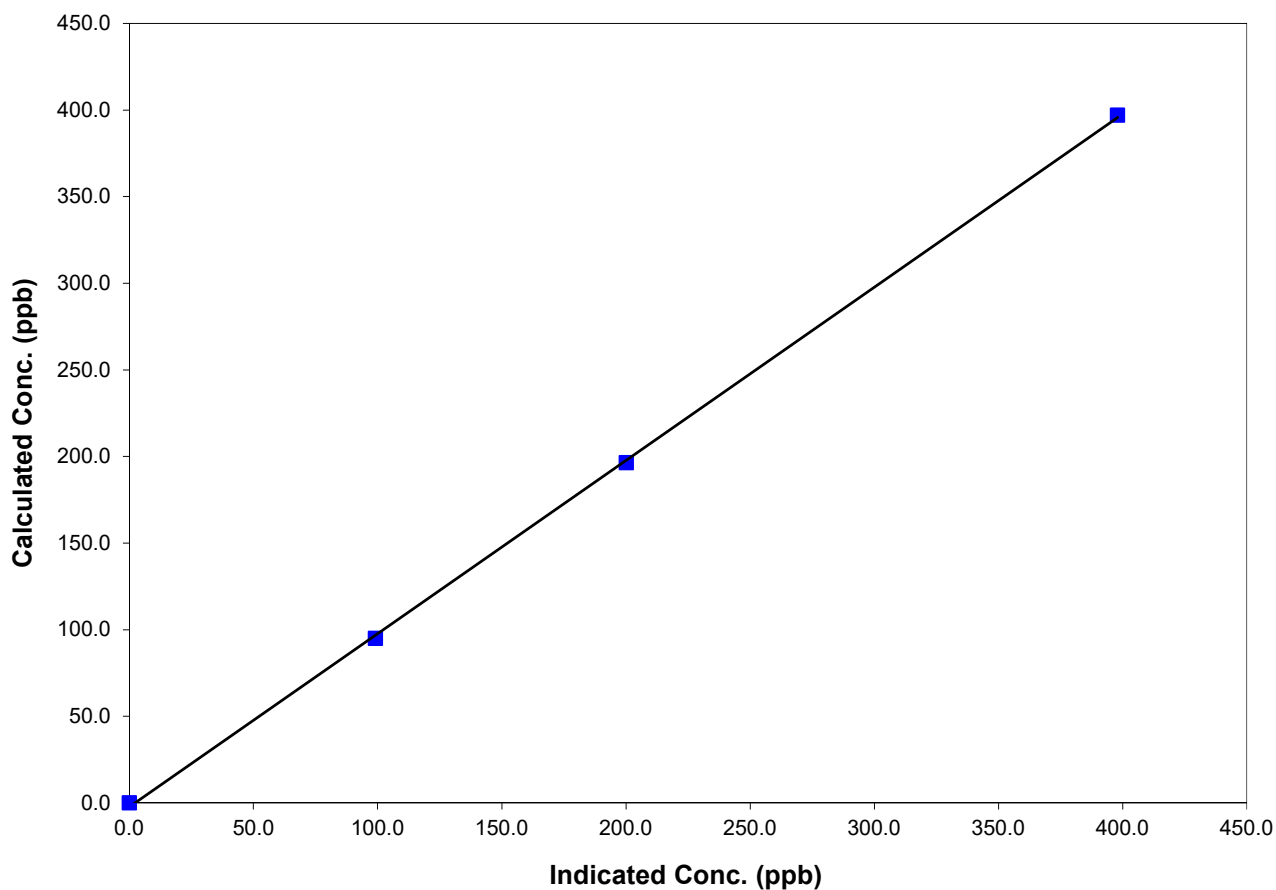
Station Information

Calibration Date	August 28 2017	Previous Calibration	July 21 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:50	End Time (MST)	0:00
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

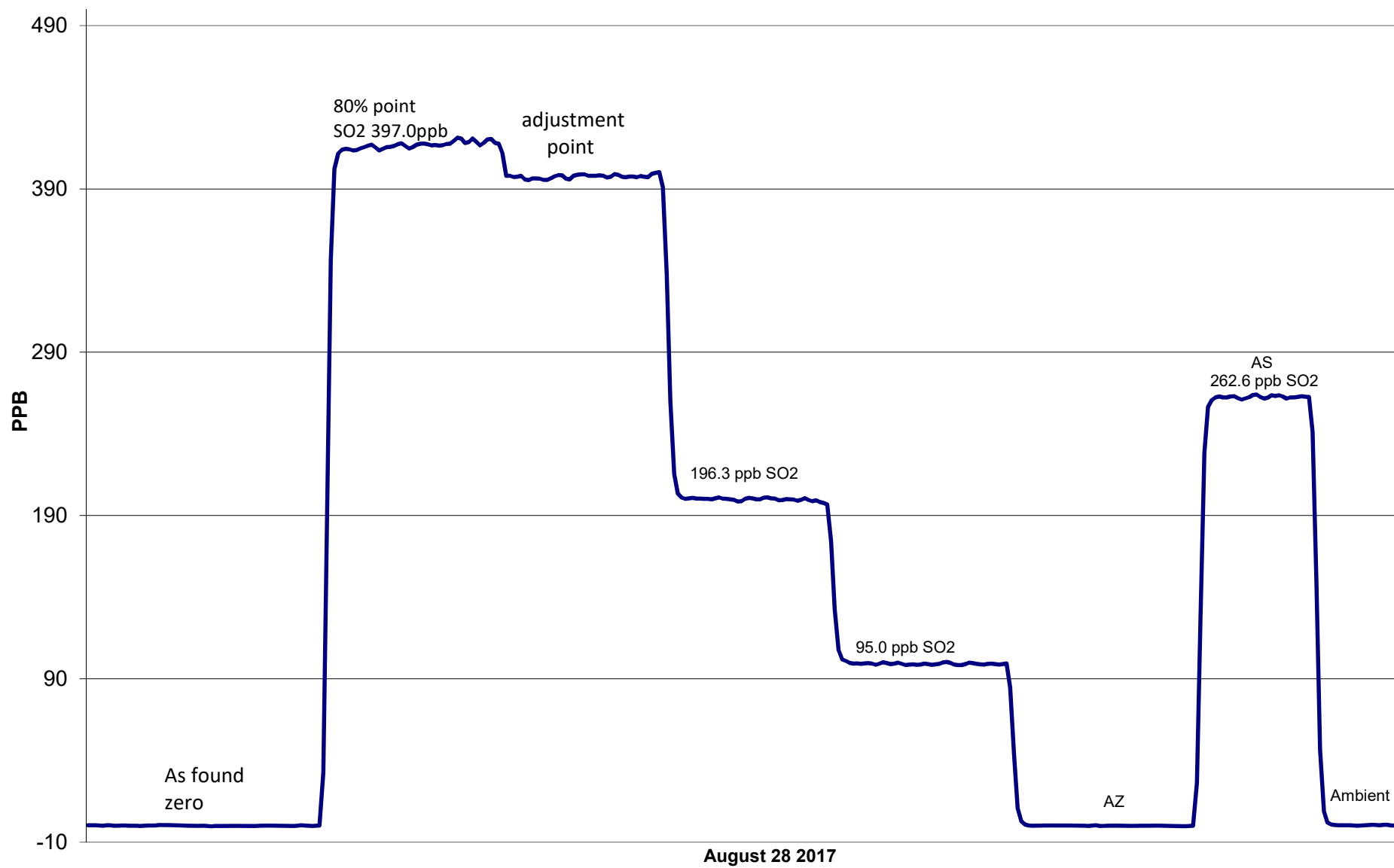
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999853
397.0	398.0	0.9975		
196.3	200.1	0.9809		
95.0	99.2	0.9573	Slope	1.000118
			Intercept	-2.300570

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	August 28 2017	Previous Calibration	July 21 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	10:40	End Time (MST)	14:20:00 PM
Barometric Pressure	0.927 atm	Station Temperature	23.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	10.3 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.992390	Calculated slope	0.999708
Calculated intercept	-0.020717	Calculated intercept	-0.637794
Analyzer make	TEI Model 450i-APHAA	Analyzer serial #	1170050144

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	14.3	ppb	12.8	ppb
Coefficient	1.029		0.980	
Lamp Voltage	757	V	756	V
Chamber Temp	45	c	45	c
Convertor	326.2	c	326.5	c
Pressure	564.60	mm Hg	567.60	mm Hg
Sample Flow	0.937	ccm	0.941	lpm
Lamp Intensity	89	%	89	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5150	0.00	0.0	0.0	N/A
5150	41.22	81.8	82.1	0.9957
5150	20.30	40.4	41.5	0.9751
7251	9.81	13.9	15.2	0.9180
5150	0.00	0.0	-0.5	As found zero
5150	41.22		84.9	As found span
Average Correction Factor				0.9629

Calculated value of As Found Response: 84.72 ppm Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	0.5	ppm	0.6	ppm
Auto span	51.8	ppm	72.0	ppm

Notes: Zero/span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



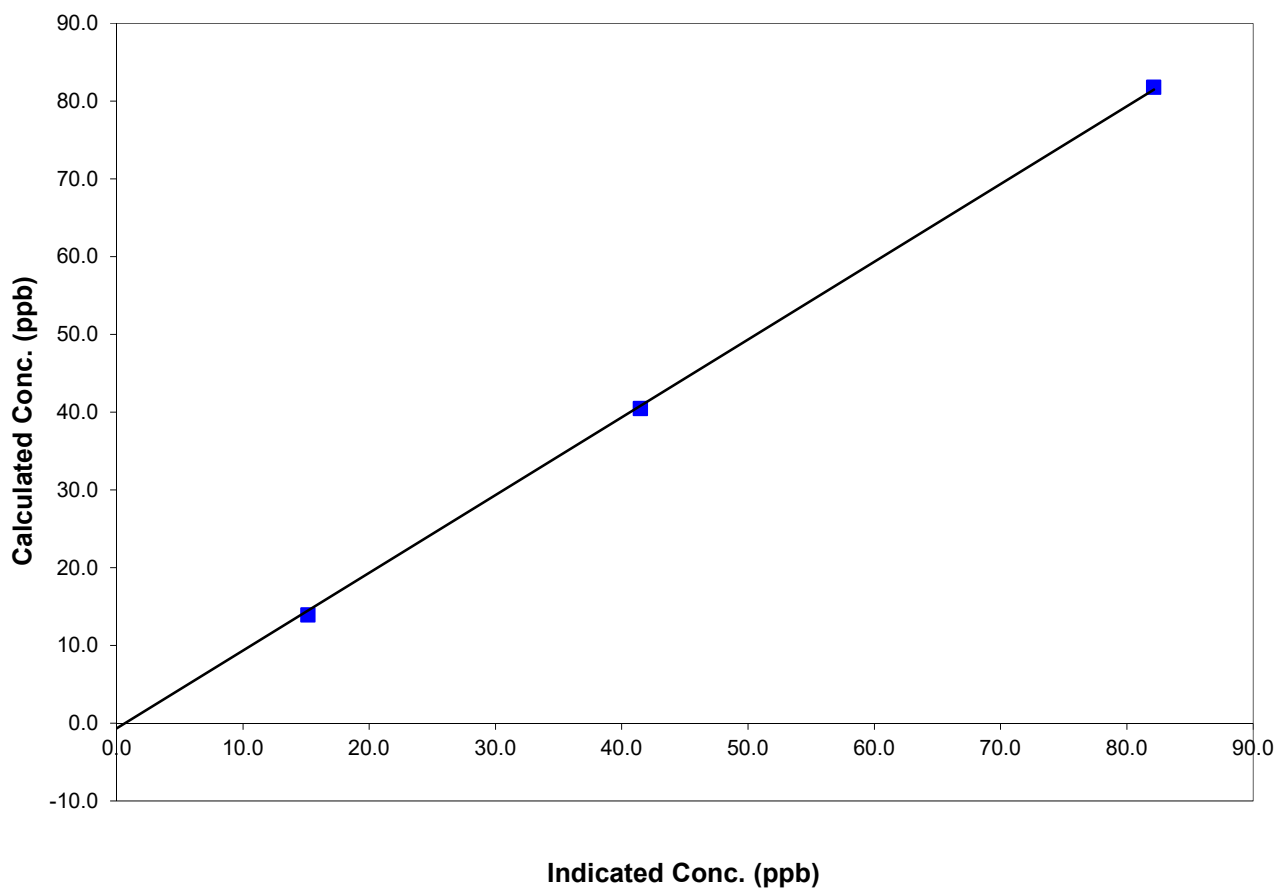
Station Information

Calibration Date	August 28 2017	Previous Calibration	July 21 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:40	End Time (MST)	14:20:00 PM
Analyzer make/model	TEI Model 450i-APHAA	Analyzer serial #	1170050144

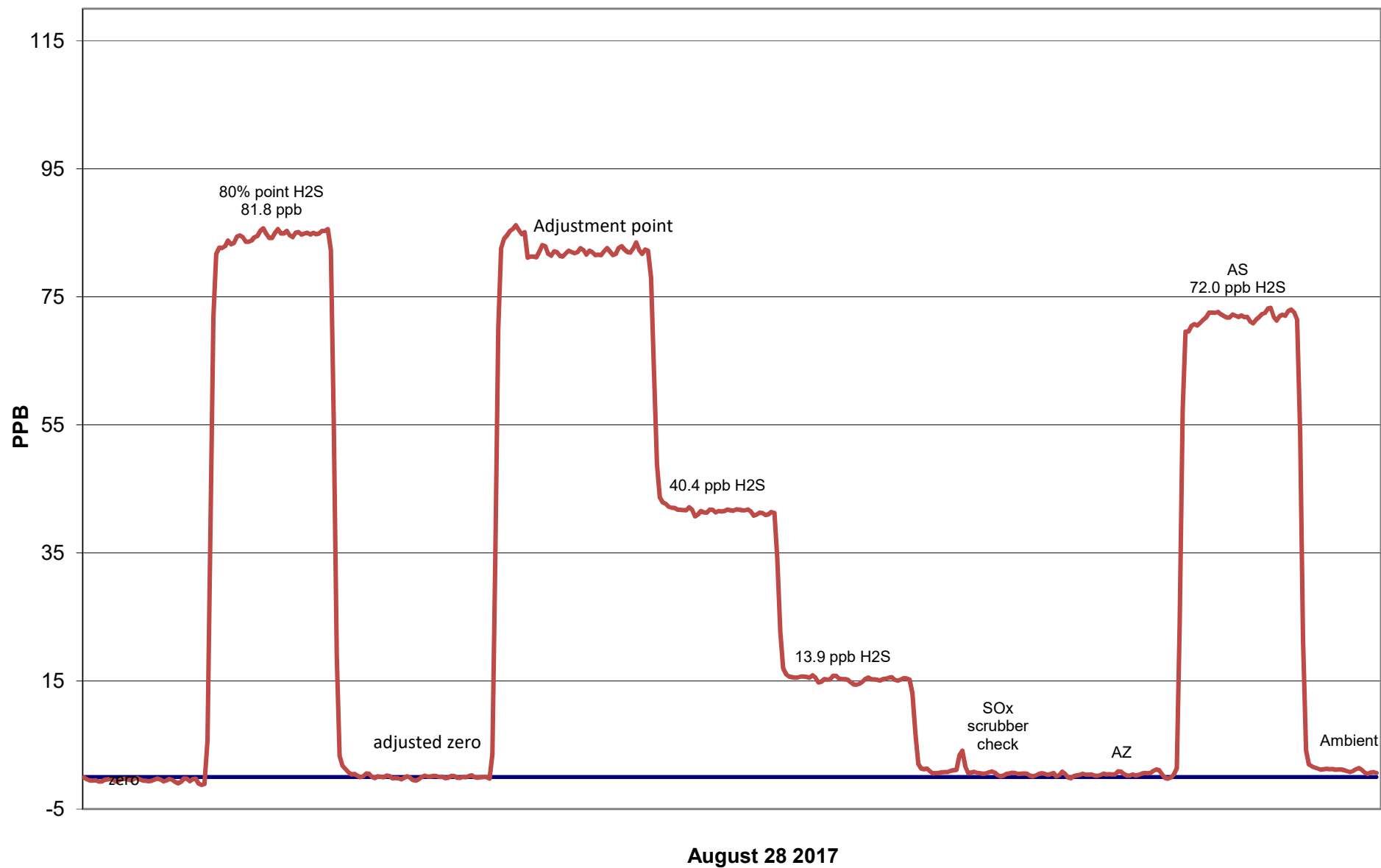
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999726
81.8	82.1	0.9957		
40.4	41.5	0.9751		
13.9	15.2	0.9180	Slope	0.999708
			Intercept	-0.637794

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	August 21, 2017	Previous Calibration	July 25, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	12:50	End Time (MST)	14:50:00 PM
Barometric Pressure	0.923 mm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	02/21/2020
Correction factor	0.031163	Cal Gas Cylinder #	EY0000740
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.995850	Calculated slope	0.997611
Calculated intercept	-0.906455	Calculated intercept	-2.881267
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.9		6.9	
coefficient	1.056		1.052	
Lamp Voltage	840	volts	840	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	677.6	mm Hg	677.9	mm Hg
Sample Flow	0.437	ccm	0.441	ccm
Lamp Intensity	97	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5146	0.0	0.00	0.4	N/A
5146	41.25	397.6	399.5	0.9952
5146	20.10	194.5	201.1	0.9675
5146	9.87	95.7	100.1	0.9565
5146	0.0	0.0	0.4	As Found Zero
5146	41.25	397.6	399.5	As Found Span
Average Correction Factor				0.9730

Calculated value of As Found Response: 396.599 ppm Percent Change of As Found: **0.3%**

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	242.4	ppm	243.1	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



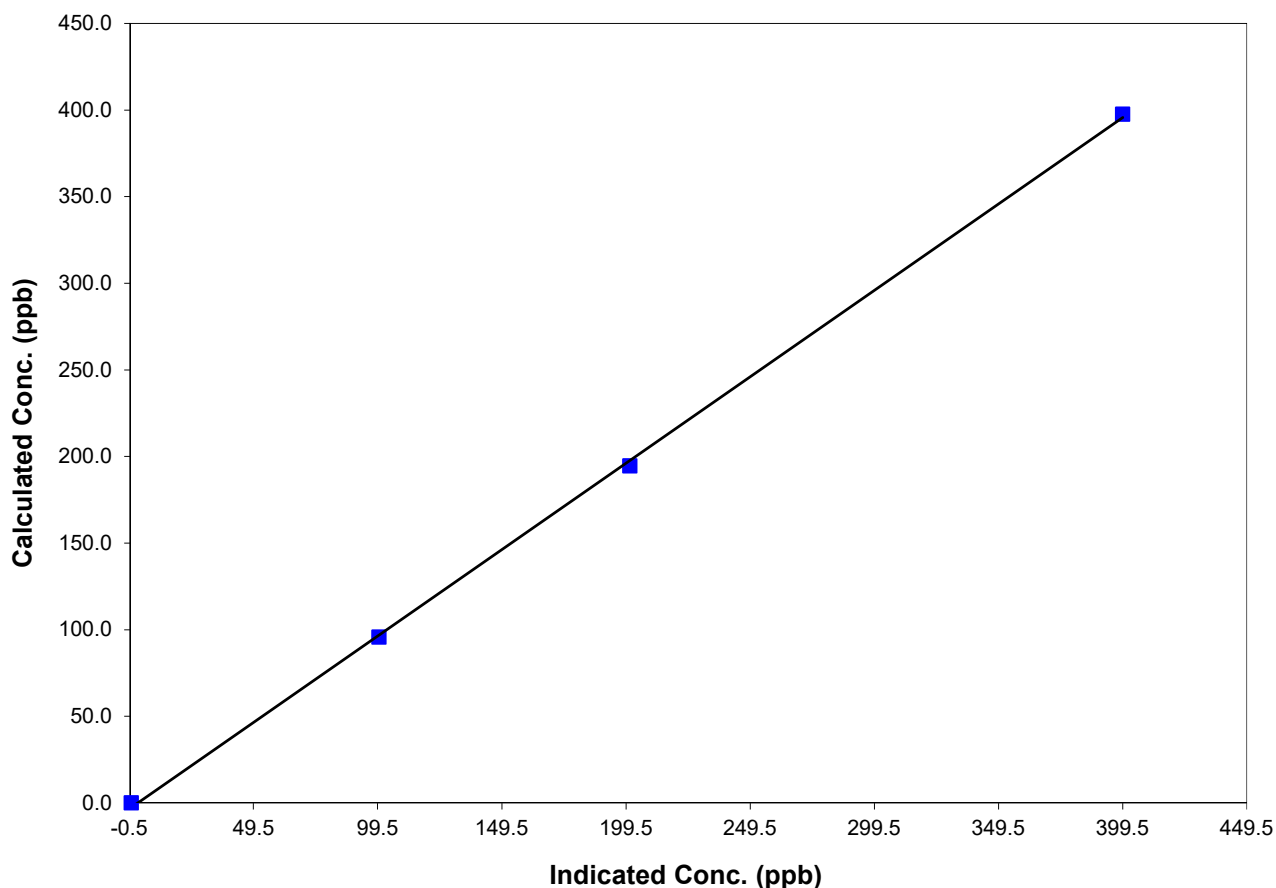
Station Information

Calibration Date	August 21, 2017	Previous Calibration	July 25, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	12:50	End Time (MST)	14:50:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

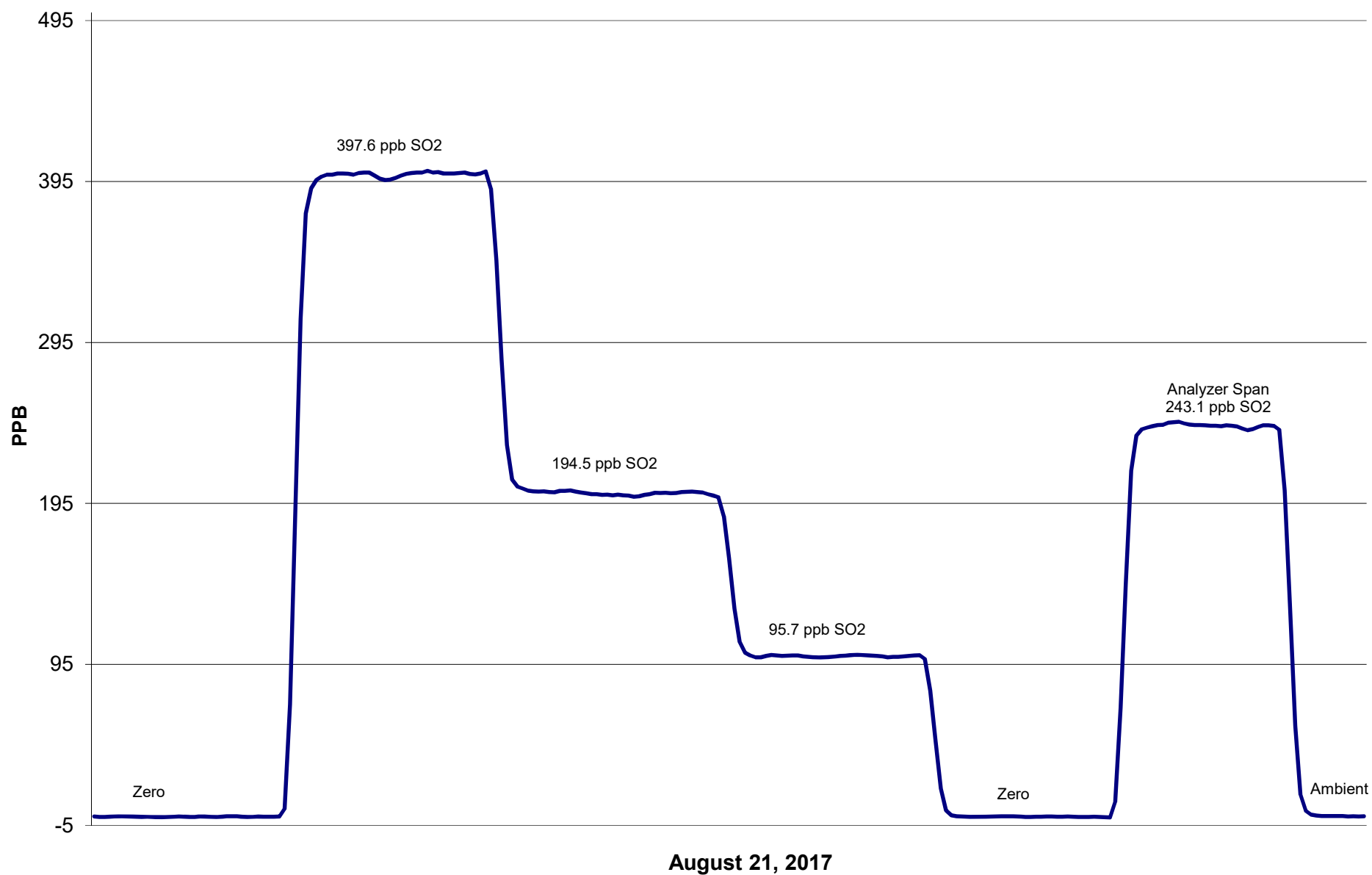
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999752
397.6	399.5	0.9952		
194.5	201.1	0.9675		
95.7	100.1	0.9565	Slope	0.997611
			Intercept	-2.881267

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	August 21, 2017	Previous Calibration	July 25, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
Start Time (MST)	12:15	End Time (MST)	14:15:00 PM
Barometric Pressure	0.925 mm	Station Temperature	21.5 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	10.3 ppm	Cal Gas Expiry Date	2/28/2020
Correction factor	0.031283	Cal Gas Cylinder #	EY0000340
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.014035	Calculated slope	1.018649
Calculated intercept	-0.233156	Calculated intercept	-1.025692
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16.5	ppb	16.5	ppb
coefficient	1.048		1.048	
Lamp Voltage	803	volts	803	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	489.3	mm Hg	489.5	mm Hg
Sample Flow	0.746	lpm	0.746	lpm
Lamp Intensity	91	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5146	0.00	0.00	0.7	N/A
5146	41.10	81.61	80.9	1.0092
5146	20.08	40.03	40.8	0.9813
7250	9.87	14.00	14.8	0.9461
5146	0.00	0.00	0.7	As Found Zero
5146	41.25	81.91	80.9	As Found Span
Average Correction Factor				0.9788

Calculated value of As Found Response: 81.04 ppm Percent Change of As Found: **1.1%**

	before calibration		after calibration	
Auto zero	-0.2	ppm	0.1	ppm
Auto span	68.7	ppm	66.2	ppm

Notes: Rebuilt oxydizer, replaced scrubber material, installed and calibrated the system

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



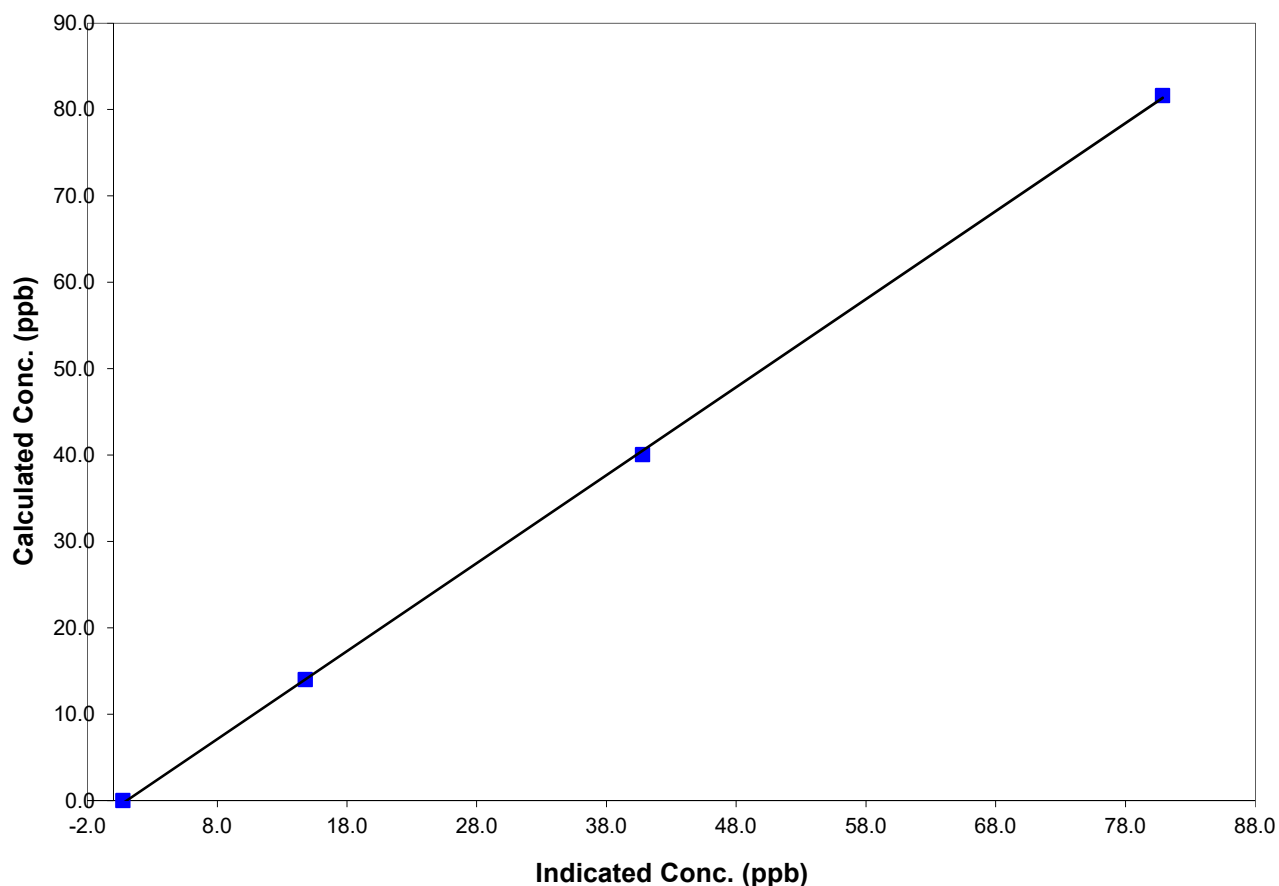
Station Information

Calibration Date	August 21, 2017	Previous Calibration	July 25, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	12:15	End Time (MST)	14:15:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

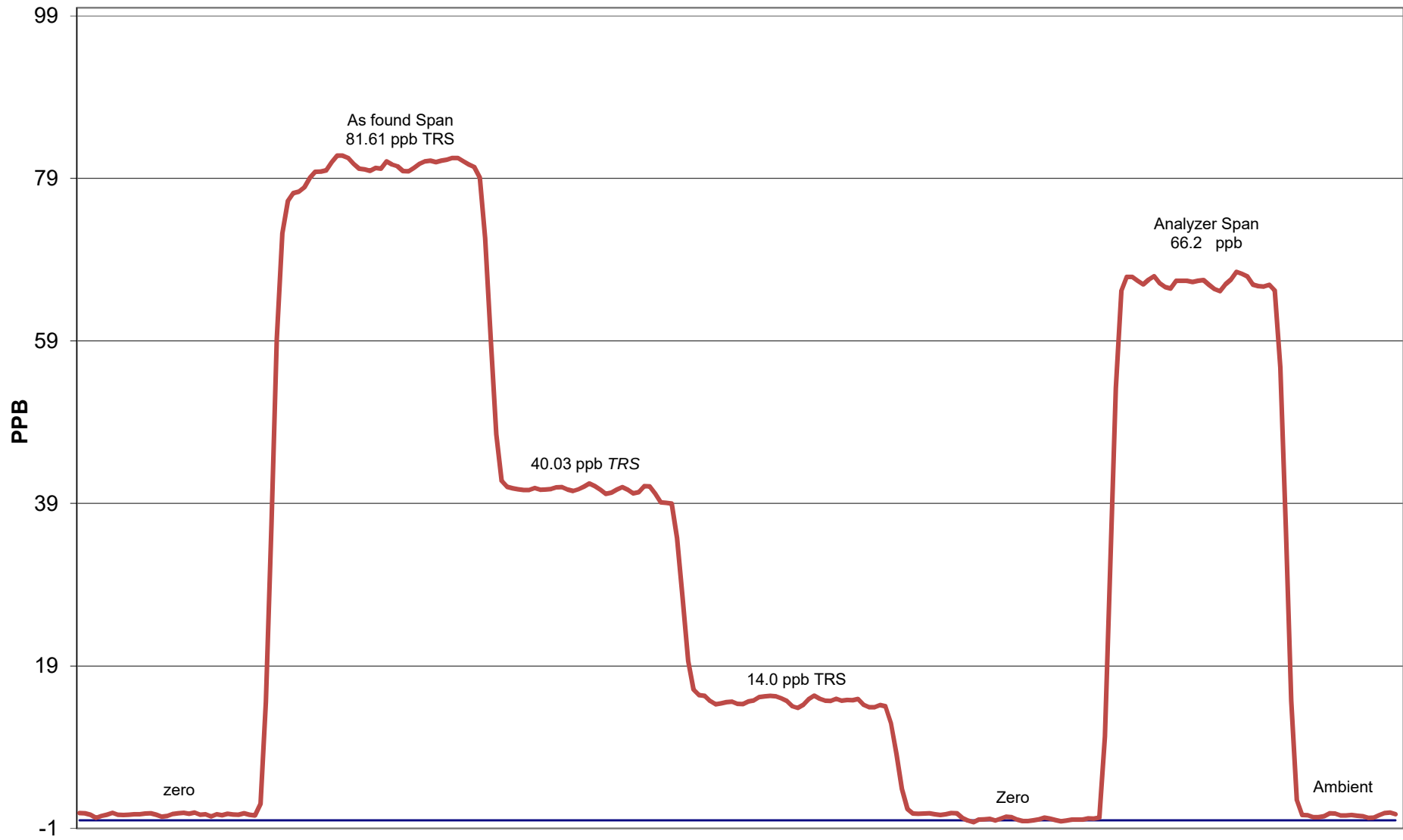
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A	Correlation Coefficient	0.999896
81.6	80.9	1.0092		
40.0	40.8	0.9813		
14.0	14.8	0.9461	Slope	1.018649
			Intercept	-1.025692

TRS Calibration Curve



H2S Calibration



August 21, 2017

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	August 10, 2017	Previous Calibration	July 5, 2017
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:50	End Time (MST)	12:15
Barometric Pressure	0.933 Atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.4 ppm	Cal Gas Expiry Date	02/21/2020
Gas Cert Reference	EY0000751		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.004932	Calculated slope	1.007215
Calculated intercept	-0.191065	Calculated intercept	-0.837404
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.8		23.8	
Coefficient	1.056		1.056	
UV Lamp Voltage	888	V	890	V
Chamber Temp	44.8	C	44.7	C
Perm Gas Temp	45	C	45	C
Pressure	679.5	mm Hg	679.7	mm Hg
Sample Flow	0.469	LPM	0.469	LPM
Lamp Intesity	30401	Hz	30568	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5144	0.00	0.0	0.8	N/A
5144	41.26	393.1	391.6	1.0039
5144	20.62	197.2	195.3	1.0101
5144	9.73	93.3	94.4	0.9880
5144	0.00	0.0	0.8	As found zero
5144	41.26	393.1	391.6	As found span
Average Correction Factor				1.0007

Calculated value of As Found Response: 392.504 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	205.6	ppm	207.2	ppm

Notes: No adjustment made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



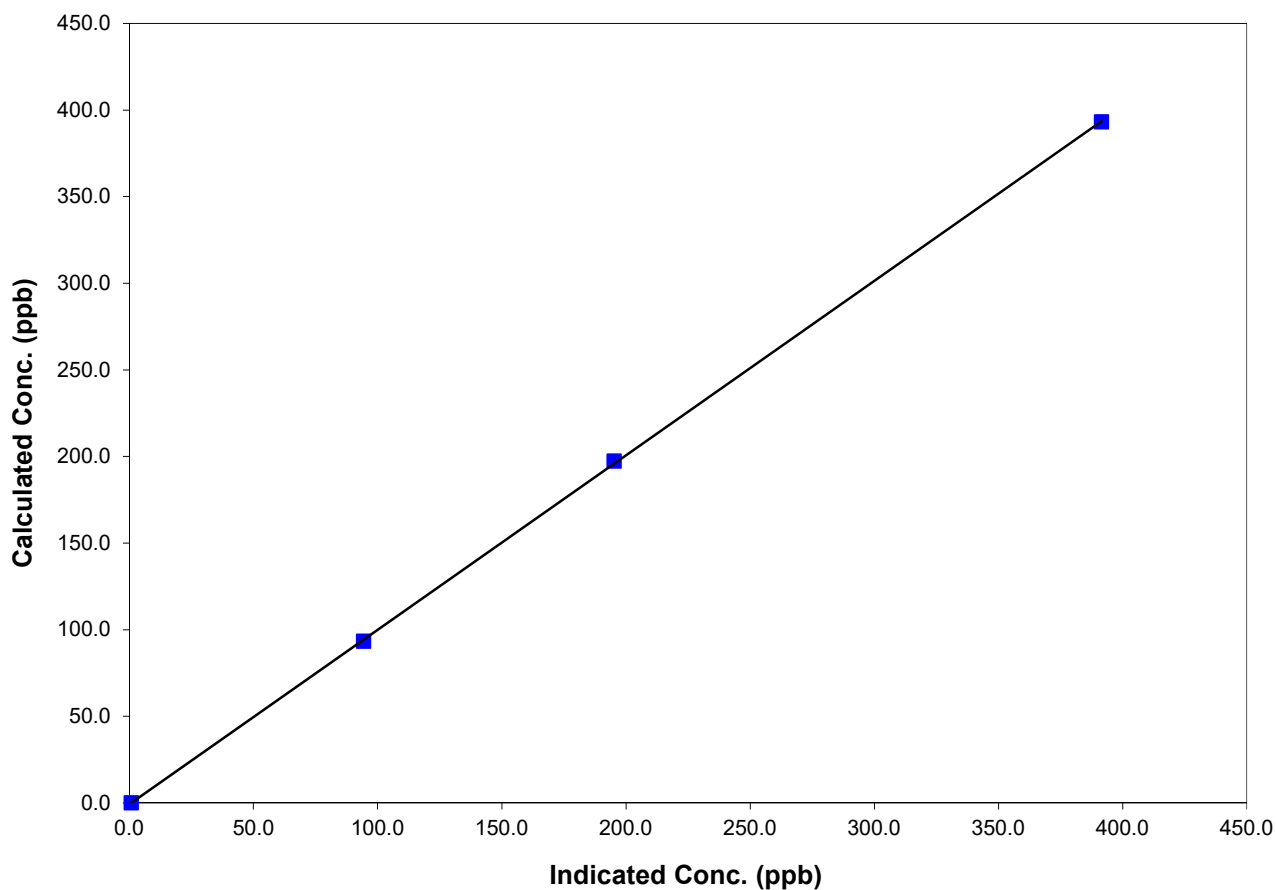
Station Information

Calibration Date	August 10, 2017	Previous Calibration	July 5, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	12:15
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

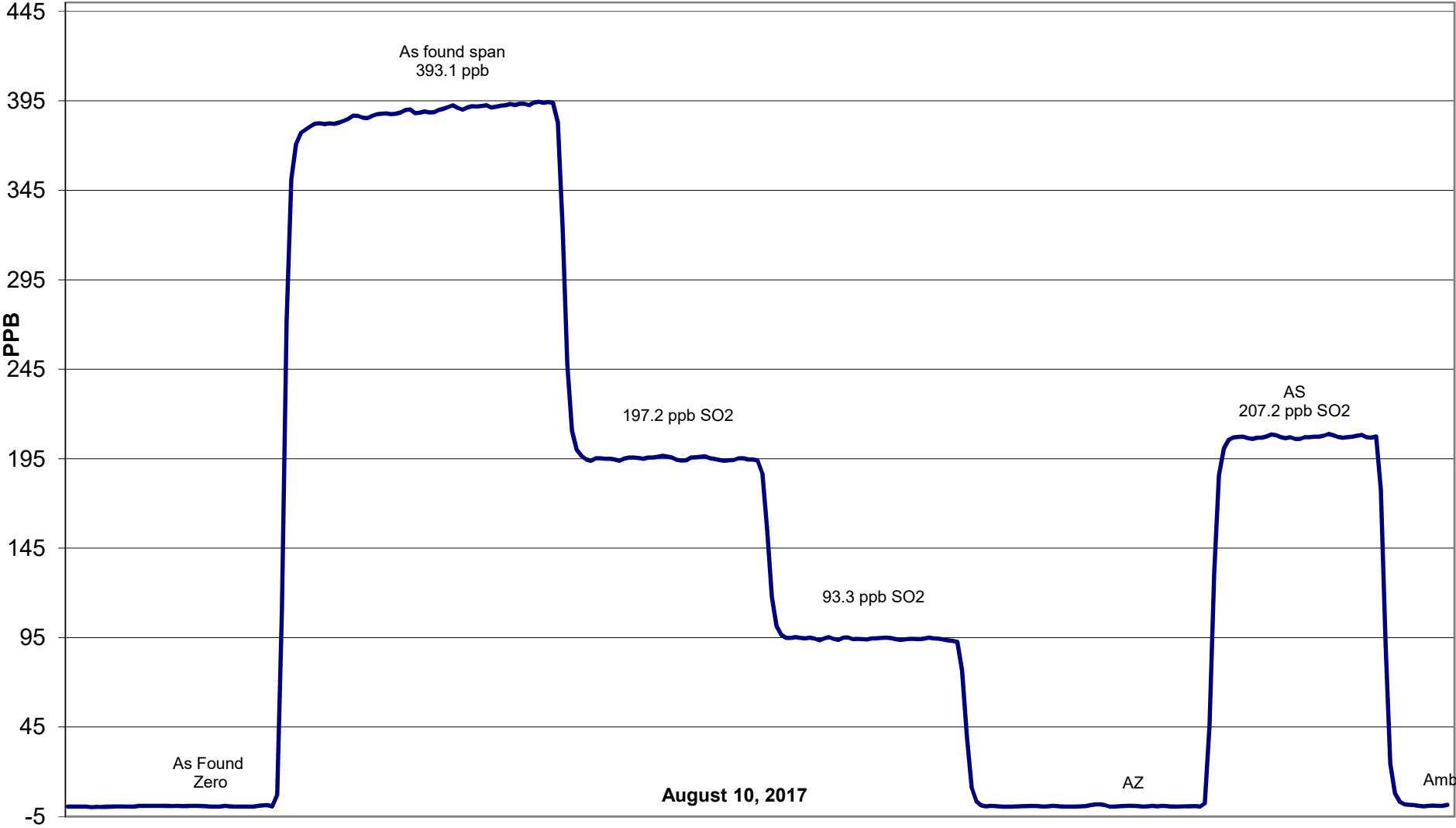
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999963
393.1	391.6	1.0039		
197.2	195.3	1.0101		
93.3	94.4	0.9880	Slope	1.007215
			Intercept	-0.837404

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	August 10, 2017	Previous Calibration	July 5, 2017
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Installation	☐ Removal
Start Time (MST)	9:50	End Time (MST)	13:35:00 PM
Barometric Pressure	0.933	Station Temperature	22.0
Calibrator	EnviroNics	Serial Number	6586
NO Cal Gas Conc	50.4	Cal Gas Expiry Date	02/21/2020
NO _x Cal Gas Conc	50.5	Cal Gas Serial #	EY0000740

DACS Information

DACS make	CR3000	DACS serial No.	5407
Parameter	NO ₂	NO _x	NO
Before	Data Slope	0.984596	0.978585
	Data Offset	-1.601592	-0.659614
After	Data Slope	0.997665	1.007288
	Data Offset	0.653780	-0.047458
Channel #	8	6	7
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011
Test Point	before	after	
Concentration range	0-500	ppb	0-500
NO offset	5.8	mV	5.8
NO _x bkgnd	5.9	mV	5.9
NO coefficient	0.962		0.962
NO _x coefficient	1.001		1.001
NO ₂ conv temp	326.6	Deg C	323.2
PMT Temp	-3.0	Deg C	-3.0
PMT Volt	-835.1	mV	-835.1
R Cell Press	176.3	in Hg	175.4
Sample Flow	1.560	LPM	1.560

Notes: No adjustment made.

Analyzer showing high flow alarm but runs good, has stable base line and consistent spans.
Ran checks & talked to the manufacture about the issue. Determined that flow sensor needs

Calibration Report

Parameter **NOX-NO-NO2**
Air Monitoring Network **PAZA**



Station Information

Calibration Date: August 10, 2017 Station Location: Rycroft

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	5144	0.00	0.0	0.0	0.0	0.3	0.2	0.2	N/A	N/A
1	5144	41.26	401.8	401.0	0.8	399.8	397.5	0.8	1.0052	1.0090
2	5144	20.62	201.6	201.2	0.4	198.1	196.5	1.0	1.0177	1.0242
3	5144	9.73	95.3	95.2	0.2	95.7	94.8	1.0	0.9959	1.0035
AFZ	5144	0.00	0.0	0.0	0.0	0.3	0.2	0.2	0.0000	0.0000
AFS	5144	41.26	401.8	401.0	0.8	399.8	397.5	0.8	1.0052	1.0090
Average Correction Factor									1.0062	1.0123

As Found Concentrations: NO_x= 390.2 NO= 390.3 As Found Percent Change NO_x= -2.9% NO= -2.7%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.2	0.2	0.0	0.3	0.2	0.2	N/A	N/A	N/A	N/A
NO point	396.5	396.5	0.0	398.9	396.5	0.5	0.9941	1.0000	N/A	N/A
300	396.5	103.4	293.1	398.7	103.4	293.8	0.9944	1.0000	0.9979	100.2%
200	396.5	195.3	201.2	398.0	195.3	200.8	0.9962	1.0000	1.0018	99.8%
100	396.5	287.1	109.4	396.7	287.1	107.7	0.9995	1.0000	1.0152	98.5%
Average Correction Factor							0.9967	1.0000	1.0050	99.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.3	0.1	0.4	ppb	0.7	0.3	0.5	ppb
Auto span	158.1	156.0	1.5	ppb	154.1	151.5	2.0	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



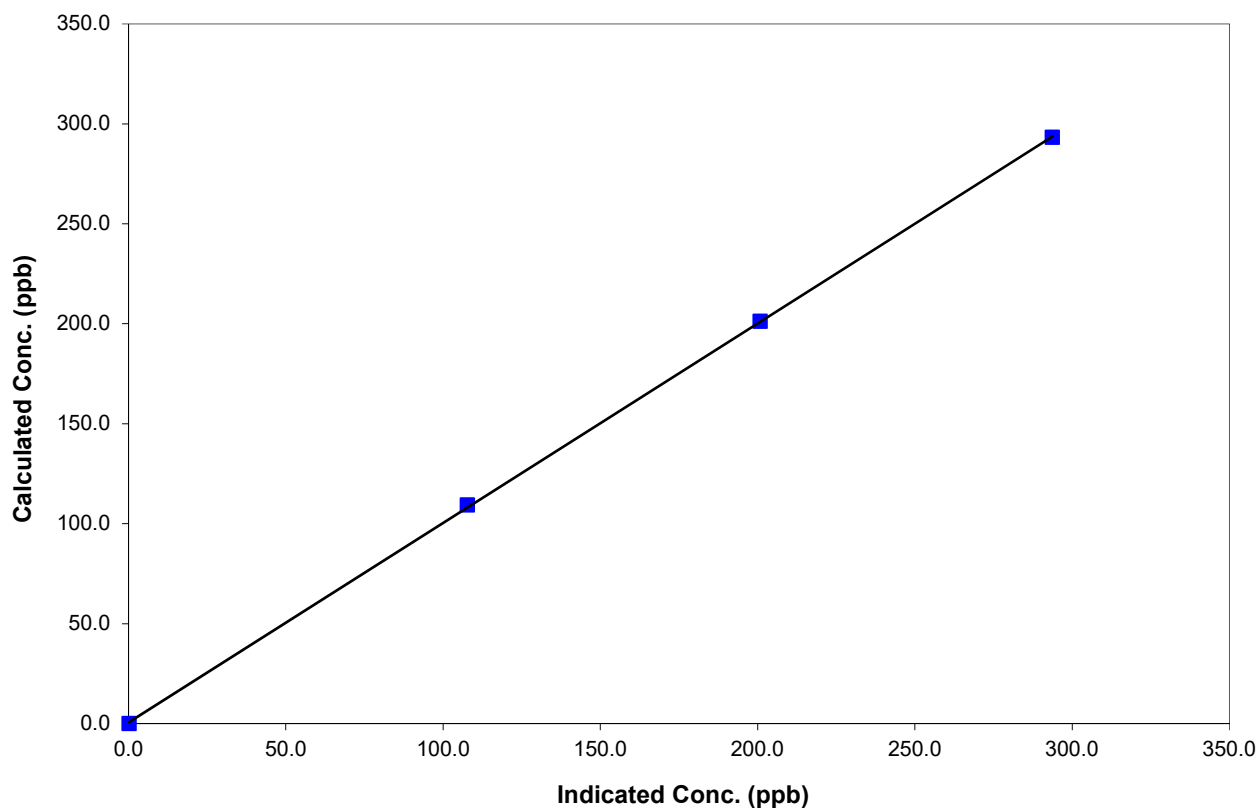
Station Information

Calibration Date	August 10, 2017	Previous Calibration	July 5, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	13:35:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999944
293.1	293.8	0.9979		
201.2	200.8	1.0018		
109.4	107.7	1.0152	Slope	0.997665
			Intercept	0.653780

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



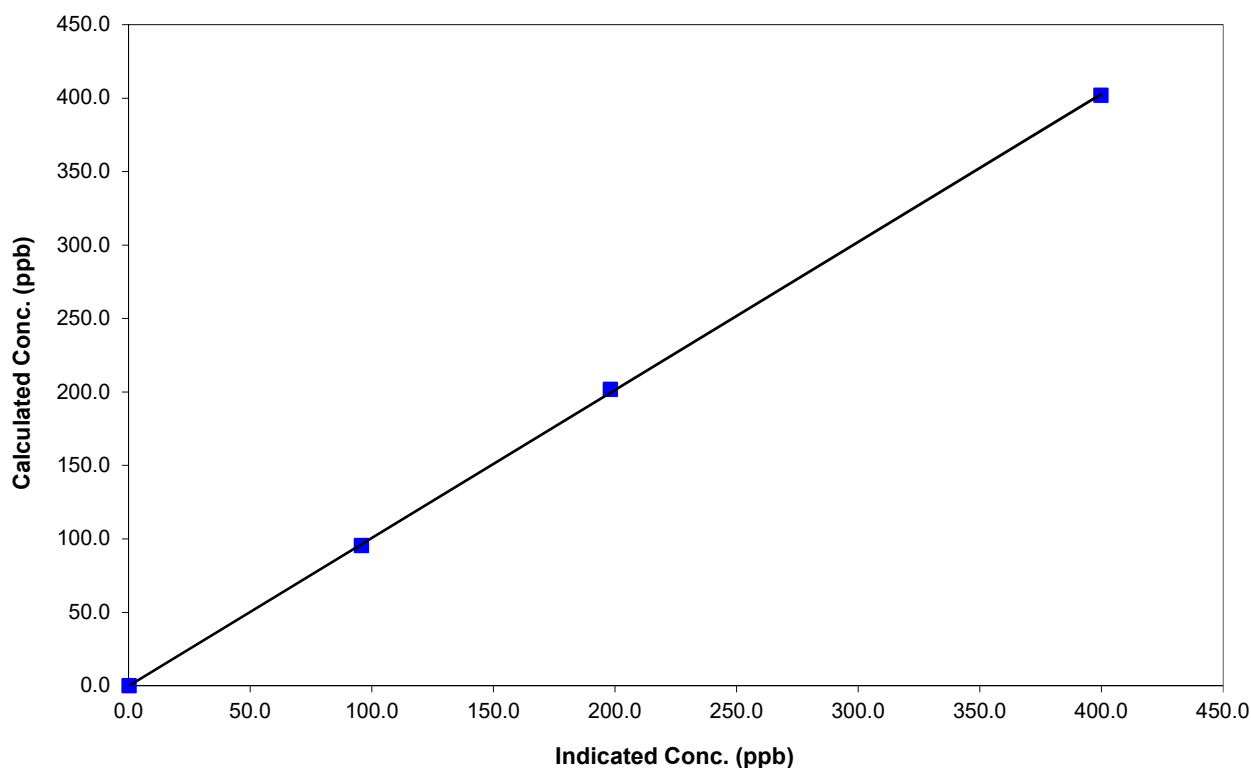
Station Information

Calibration Date	August 10, 2017	Previous Calibration	July 5, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	13:35:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999930
401.8	399.8	1.0052		
201.6	198.1	1.0177		
95.3	95.7	0.9959	Slope	1.007288
			Intercept	-0.047458

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



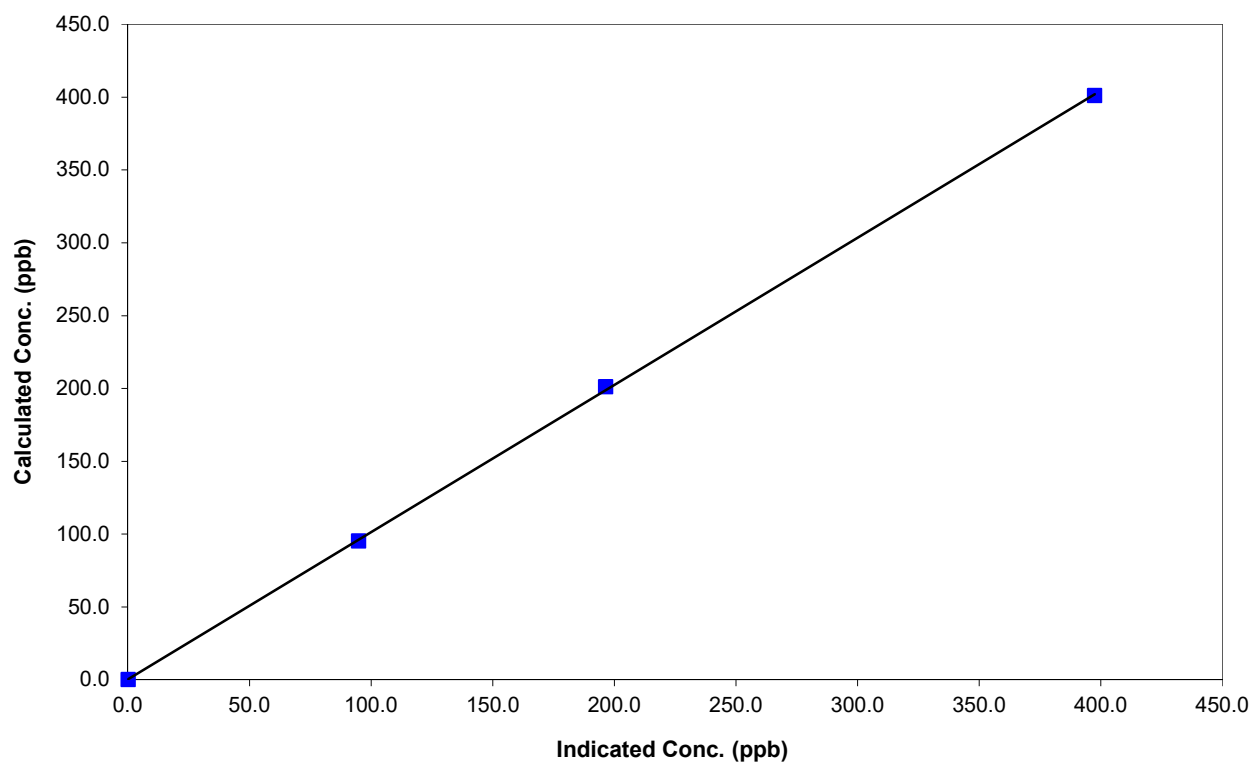
Station Information

Calibration Date	August 10, 2017	Previous Calibration	July 5, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:50	End Time (MST)	13:35:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

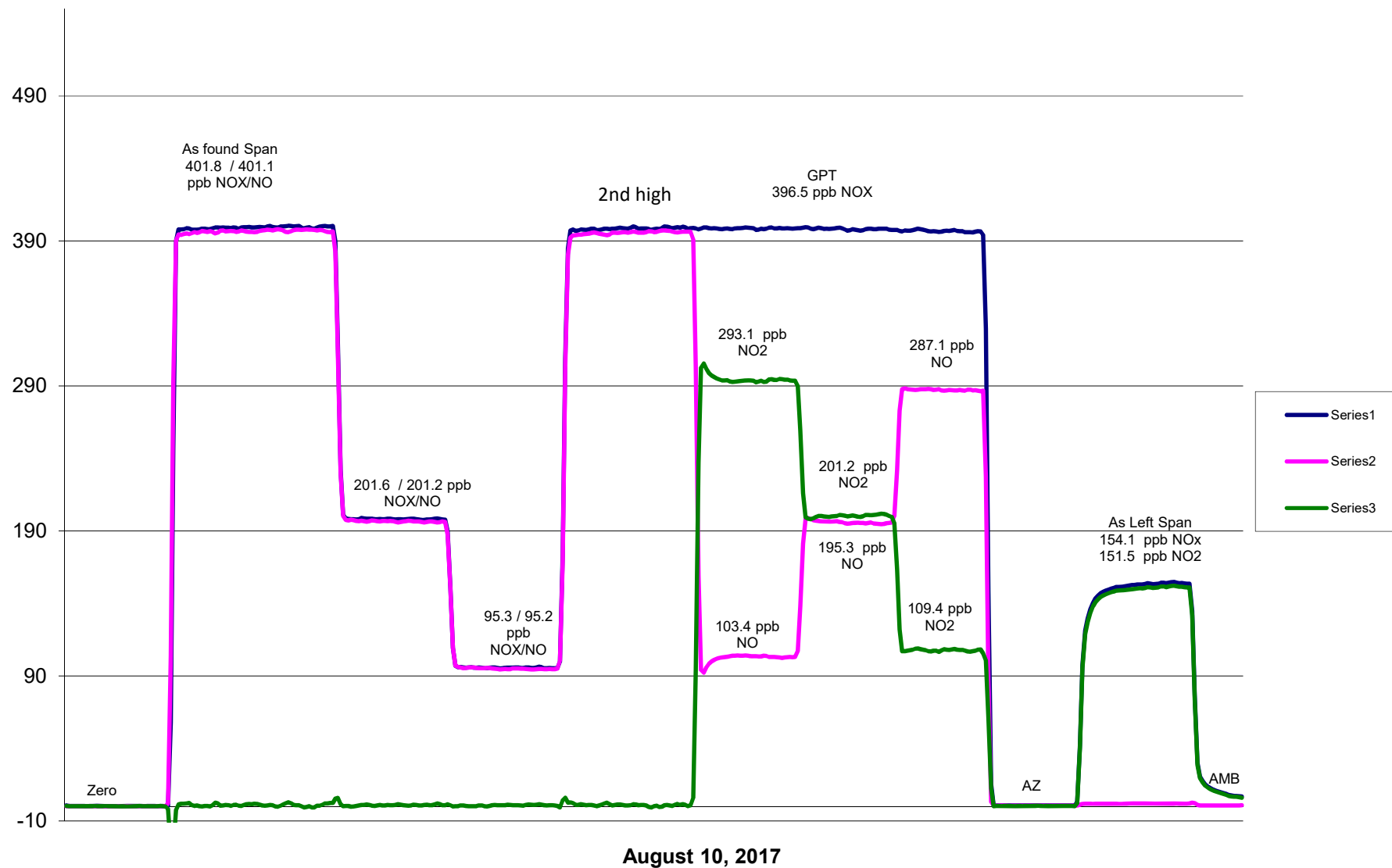
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999913
401.0	397.5	1.0090		
201.2	196.5	1.0242		
95.2	94.8	1.0035	Slope	1.010727
			Intercept	0.274200

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	August 10 2017	Previous Calibration	July 5 2017
Station Number	10	Station Location	Rycroft
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:30	End Time (MST)	15:00:00 PM
Barometric Pressure	0.933 atm	Station Temperature	22.0 Deg C
Calibrator	Envionics 6103	Serial Number	6586

DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.004365	Calculated slope	0.998023
Calculated intercept	-2.360534	Calculated intercept	0.391514

Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240
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	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.5	ppb	-0.5	ppb
Span	0.998		0.968	
Cell A intensity	65207	Hz	67429	Hz
Cell B intensity	66353	Hz	68516	Hz
Pressure	674.50	in Hg	676.10	in Hg
Cell A Flow	0.707	ccm	0.709	ccm
Cell B Flow	0.698	cmm	0.699	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5144	0.00	0.0	0.4	N/A
5144	0.30	293.1	294.8	0.9942
5144	0.20	201.2	199.1	1.0107
5144	0.10	109.4	109.0	1.0035
5144	0.00	0.0	0.4	As found zero
5144	0.30	293.1	302.9	As found span
Average Correction Factor				1.0028

Calculated value of As Found Response: 301.4 ppm Percent Change of As Found: 2.8%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.5	ppb
Auto span	409.3	ppb	499.4	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



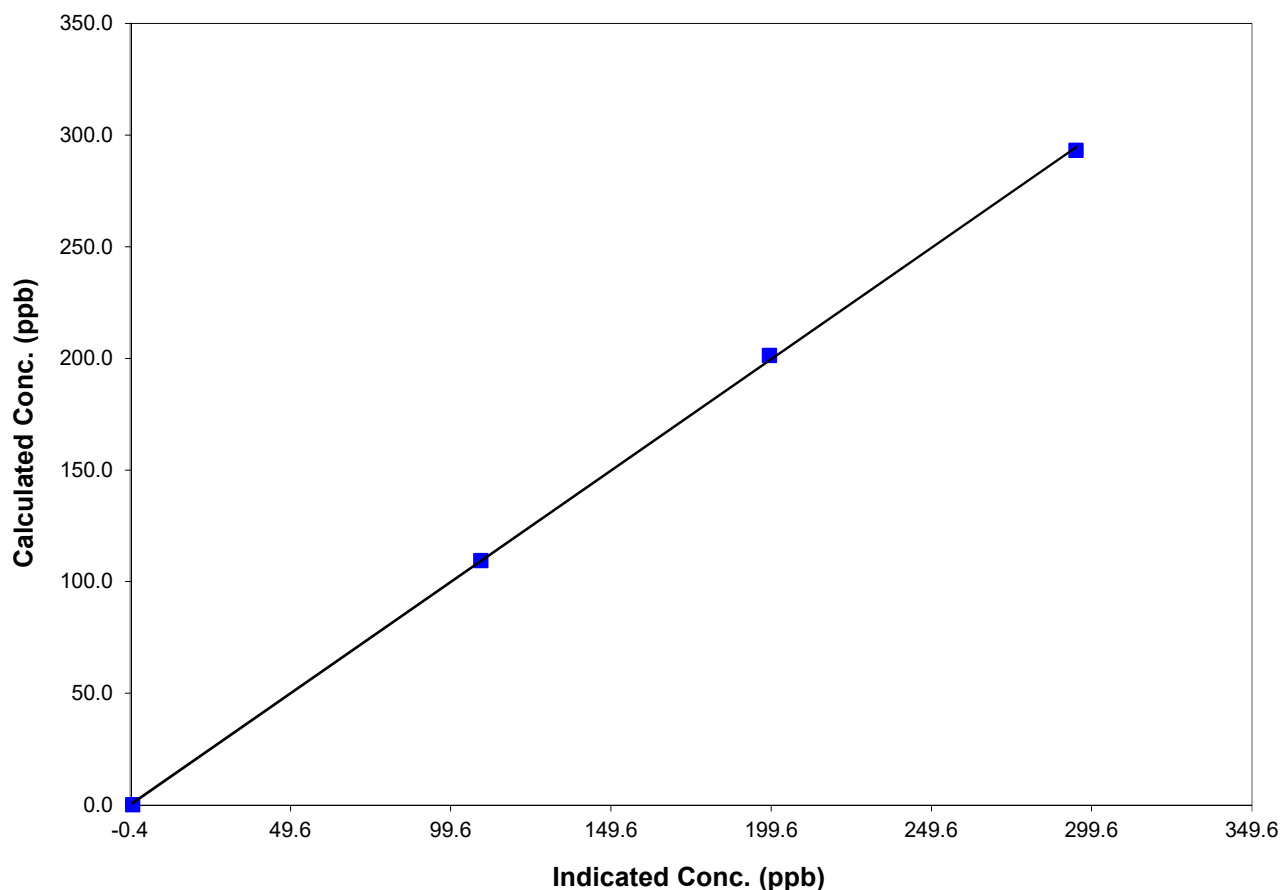
Station Information

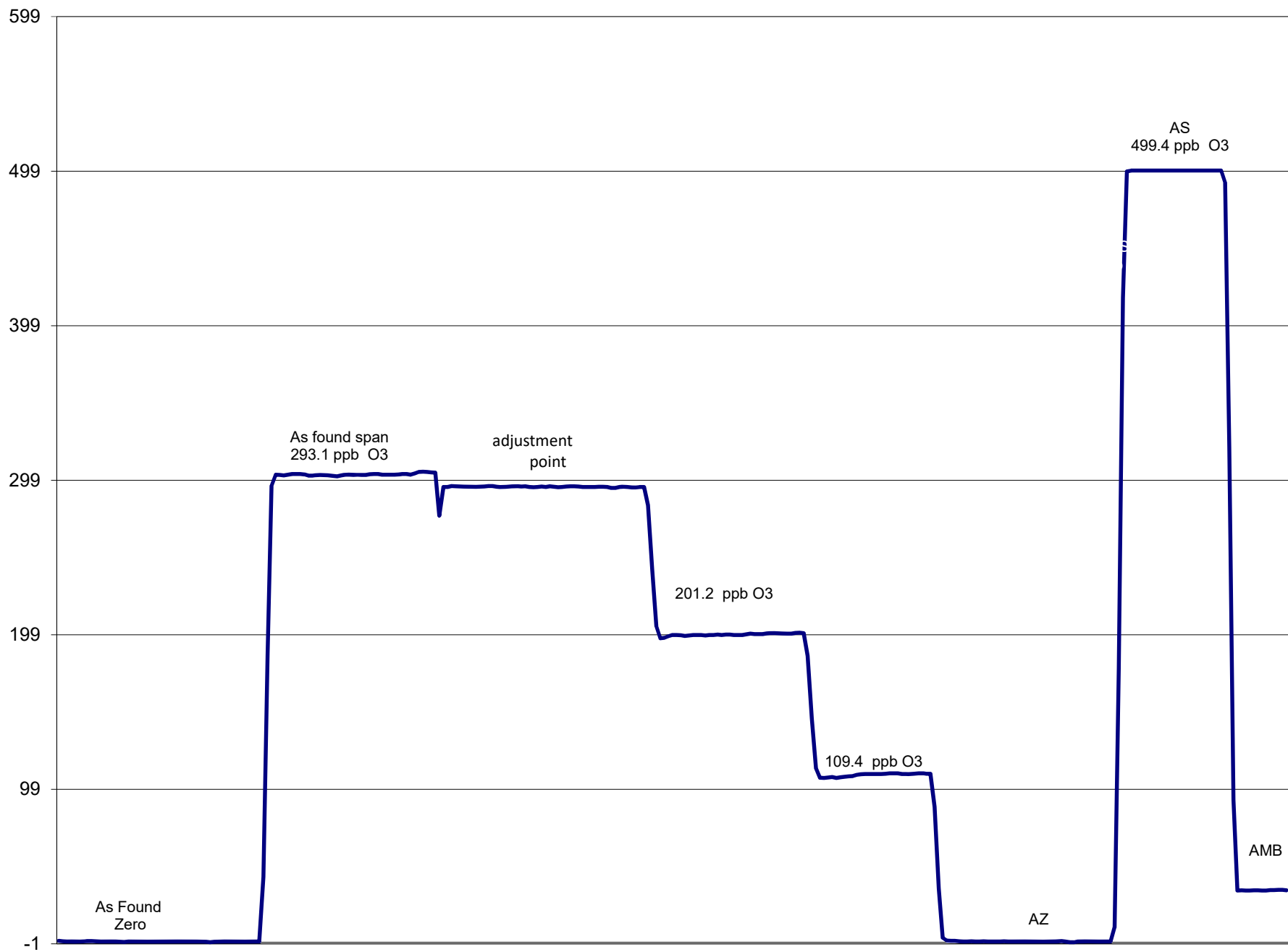
Calibration Date	August 10 2017	Previous Calibration	July 5 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	12:30	End Time (MST)	15:00:00 PM
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	NA	Correlation Coefficient	0.999840
293.1	294.8	0.9942		
201.2	199.1	1.0107		
109.4	109.0	1.0035	Slope	0.998023
			Intercept	0.391514

O3 Calibration Curve





August 10 2017

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	August 9, 2017	Previous Calibration	July 4, 2017
Station Number	1	Station Location	Rycroft
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	10:15	End Time (MST)	13:35:00 PM
Barometric Pressure	0.928 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	3/28/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34988
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 12,13,14

Analyzer make TEI 55I-A3PHAA Analyzer serial # 1151980005

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	34.7	PSI	34.7	PSI
Fuel pressure	49.4	PSI	49.4	PSI
Carrier pressure	40.1	PSI	40.1	PSI
CH4 cal factor				E ⁻⁴
NMHC cal factor				E ⁻⁴
Rt		Sec		Sec
Pk Index				

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2002	0.00	0.00	0.00	N/A
2002	66.12	12.92	12.96	0.9964
2002	42.10	8.32	8.33	0.9986
2002	16.30	3.26	3.22	1.0133
2002	0.00	0.00	0.00	As Found Zero
2002	66.12	12.92	13.56	As Found Span
Average Correction Factor				1.0028

Calculated value of As Found Response: 13.659 ppm Percent Change of As Found: -5.8%

	Before		After
Calculated slope	1.002939	Calculated slope	0.995264
Calculated intercept	0.056413	Calculated intercept	0.024838

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	8.03	ppm	8.17	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2002	0.00	0.00	0.00	N/A
1997	66.12	17.71	17.75	0.9983
2002	42.10	11.38	11.25	1.0120
2002	16.30	4.46	4.20	1.0624
2002	0.00	0.00	0.00	As Found Zero
2002	66.12	17.67	18.33	As Found Span
Average Correction Factor				1.0242

Calculated value of As Found Response: 18.470 ppm Percent Change of As Found: -4.5%

	Before		After
Calculated slope	1.002186	Calculated slope	0.994781
Calculated intercept	0.101639	Calculated intercept	0.134661

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	10.87	ppm	10.61	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2002	0.00	0.00	0.00	N/A
2002	66.12	30.59	30.76	0.9944
2002	42.10	19.71	19.58	1.0062
2002	16.30	7.73	7.45	1.0371
2002	0.00	0.00	0.00	As Found Zero
2002	66.12	30.59	31.94	As Found Span
Average Correction Factor				1.0126

Calculated value of As Found Response: 32.067 ppm Percent Change of As Found: -4.8%

	Before		After
Calculated slope	0.998590	Calculated slope	0.992555
Calculated intercept	0.170722	Calculated intercept	0.163538

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	18.88	ppm	18.79	ppm

Notes: Hydrogen & nitrogen cylinders replaced.
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



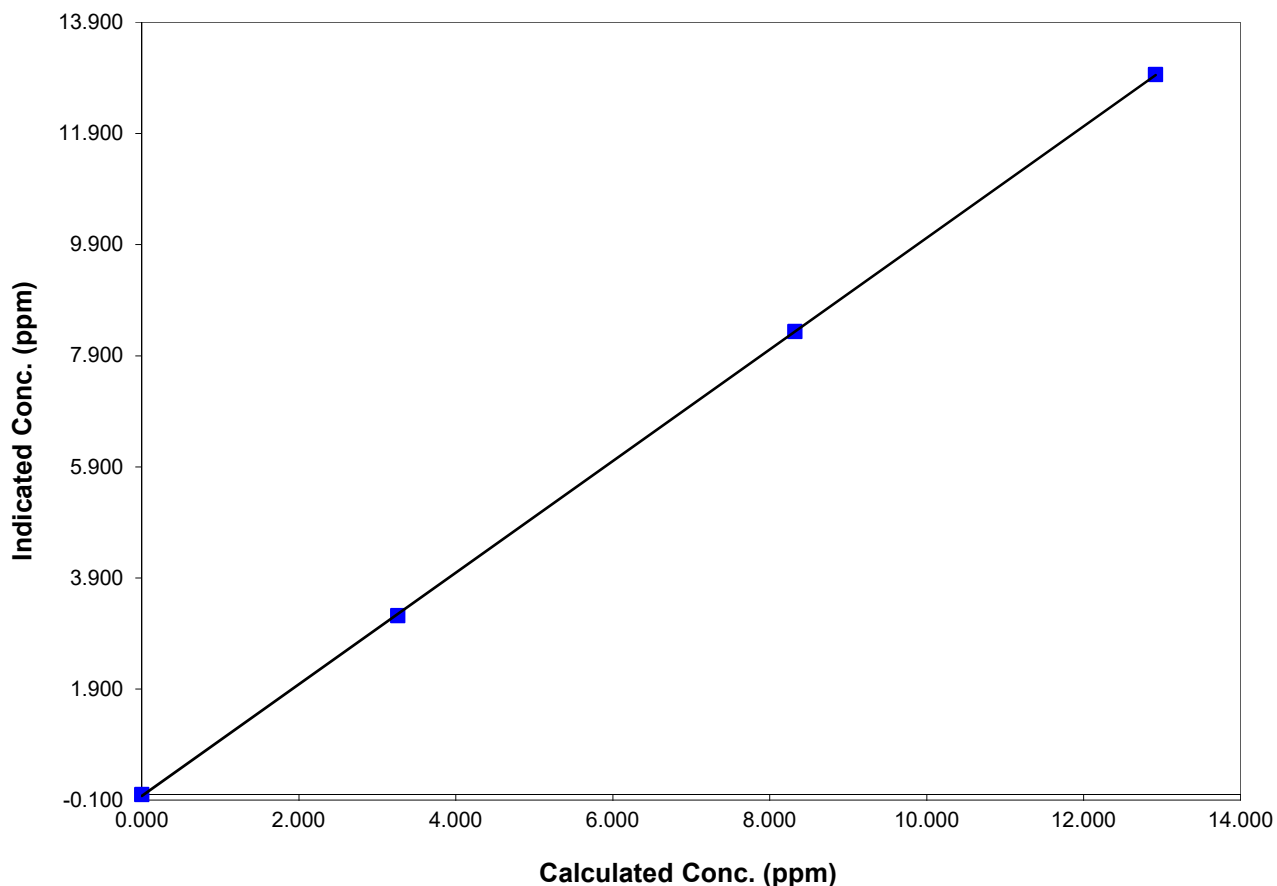
Station Information

Calibration Date	August 9, 2017	Previous Calibration	July 4, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	10:15	End Time (MST)	13:35:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999981
12.916	12.963	0.9964		
8.321	8.333	0.9986		
3.263	3.220	1.0133	Slope	0.995264
			Intercept	0.024838

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



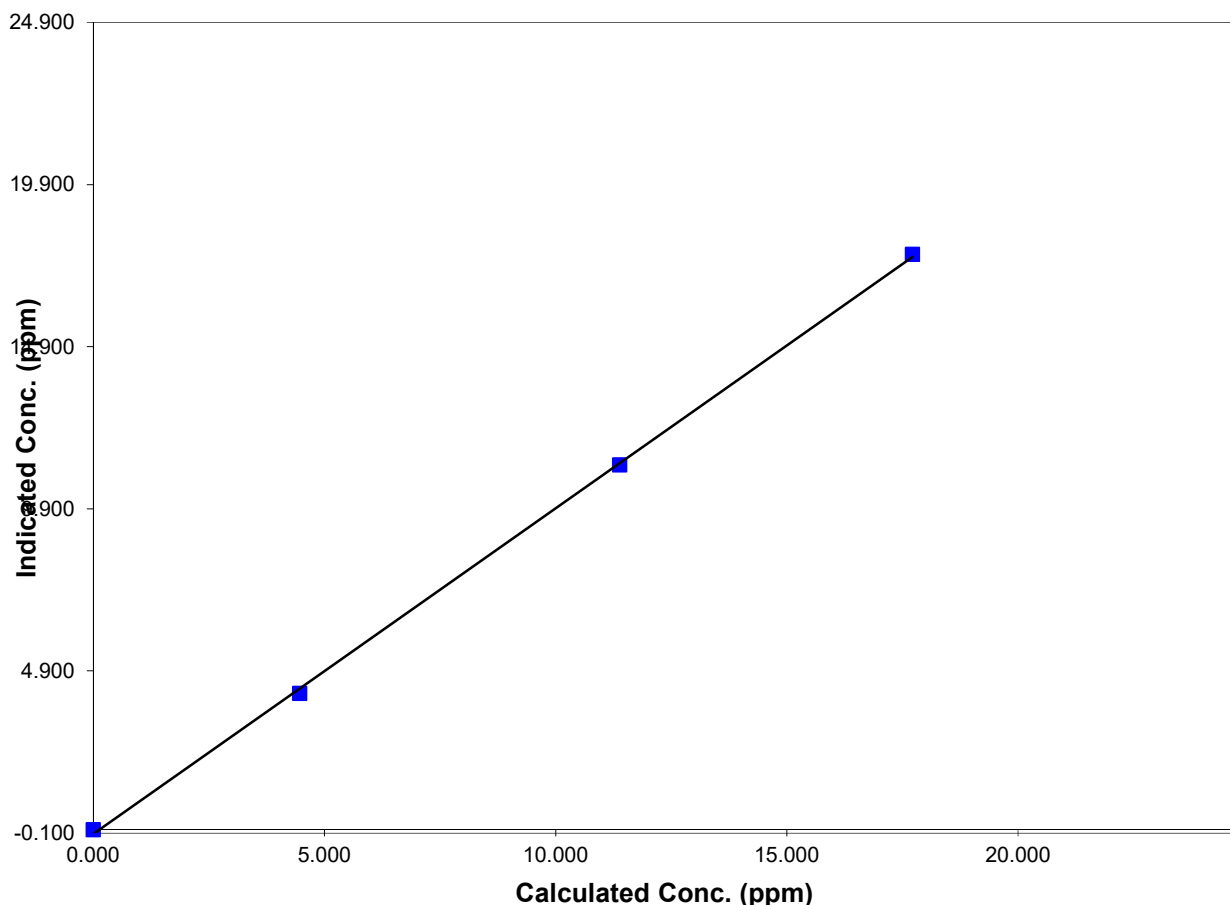
Station Information

Calibration Date	August 9, 2017	Previous Calibration	July 4, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	10:15	End Time (MST)	13:35:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999728
17.715	17.746	0.9983		
11.384	11.249	1.0120		
4.464	4.202	1.0624	Slope	0.994781
			Intercept	0.134661

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



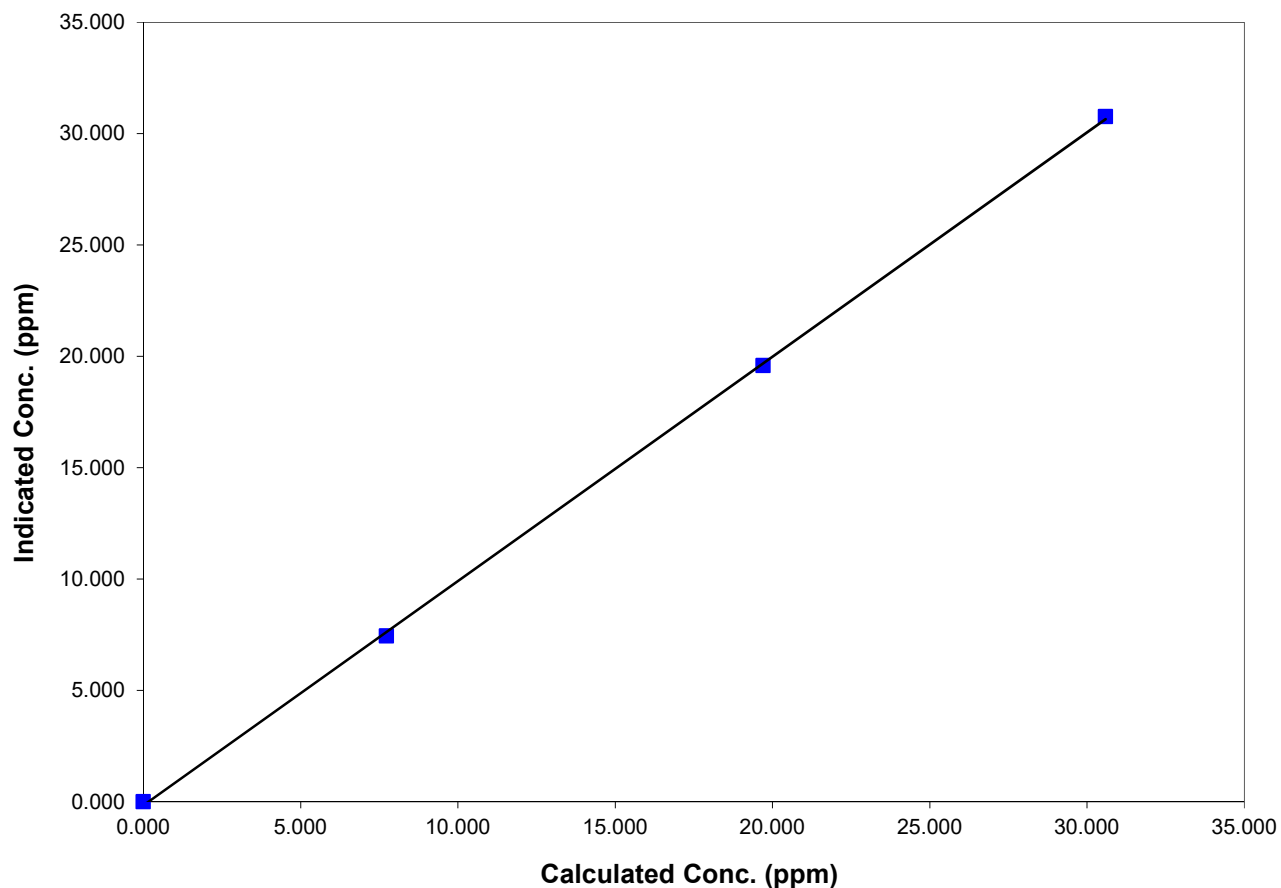
Station Information

Calibration Date	August 9, 2017	Previous Calibration	July 4, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	10:15	End Time (MST)	13:35:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

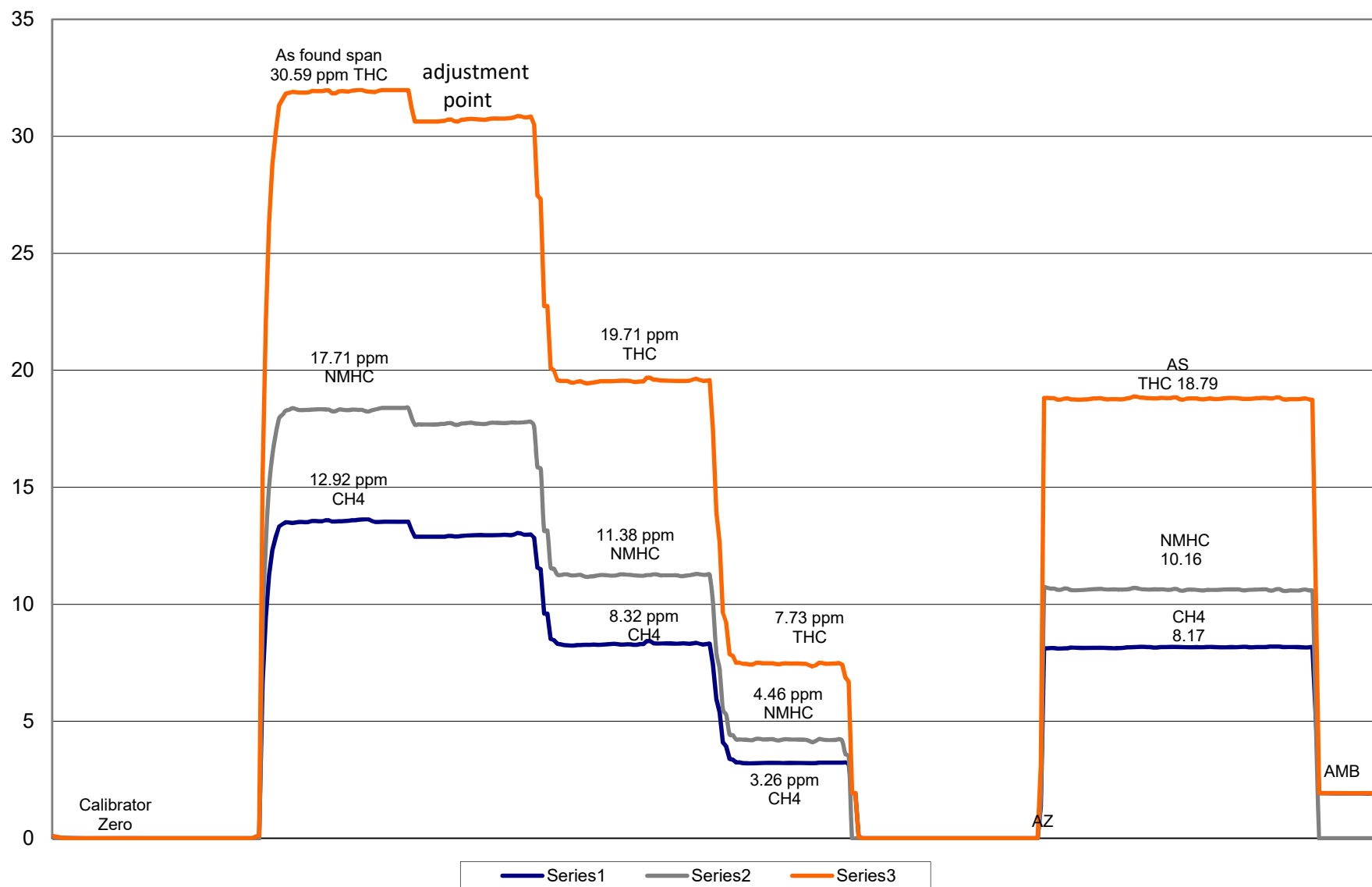
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.002	N/A	Correlation Coefficient	0.999856
30.588	30.761	0.9944		
19.705	19.583	1.0062		
7.727	7.451	1.0371	Slope	0.992555
			Intercept	0.163538

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter **TRS**
Air Monitoring Network

PAZA



Station Information

Calibration Date	August 9, 2017	Previous Calibration	July 4, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:20 PM	End Time (MST)	15:15:00 PM
Barometric Pressure	0.928 mbar	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	10.3 ppm	Cal Gas Expiry Date	2/2/2020
Gas Cert Reference	EY0000340		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.013802	Calculated slope	0.980977
Calculated intercept	0.192884	Calculated intercept	0.462952
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	11.0	ppb	11.0	ppb
Coefficient	1.084		1.107	
Lamp Voltage	775	V	773	V
Chamber Temp	45	C	45.01	C
Perm gas Temp	45	C	45	C
Pressure	676.1	mmHg	680.4	mmHg
Sample Flow	0.389	lpm	0.393	lpm
Lamp Intensity	86	Hz	86	Hz

Calibration Data

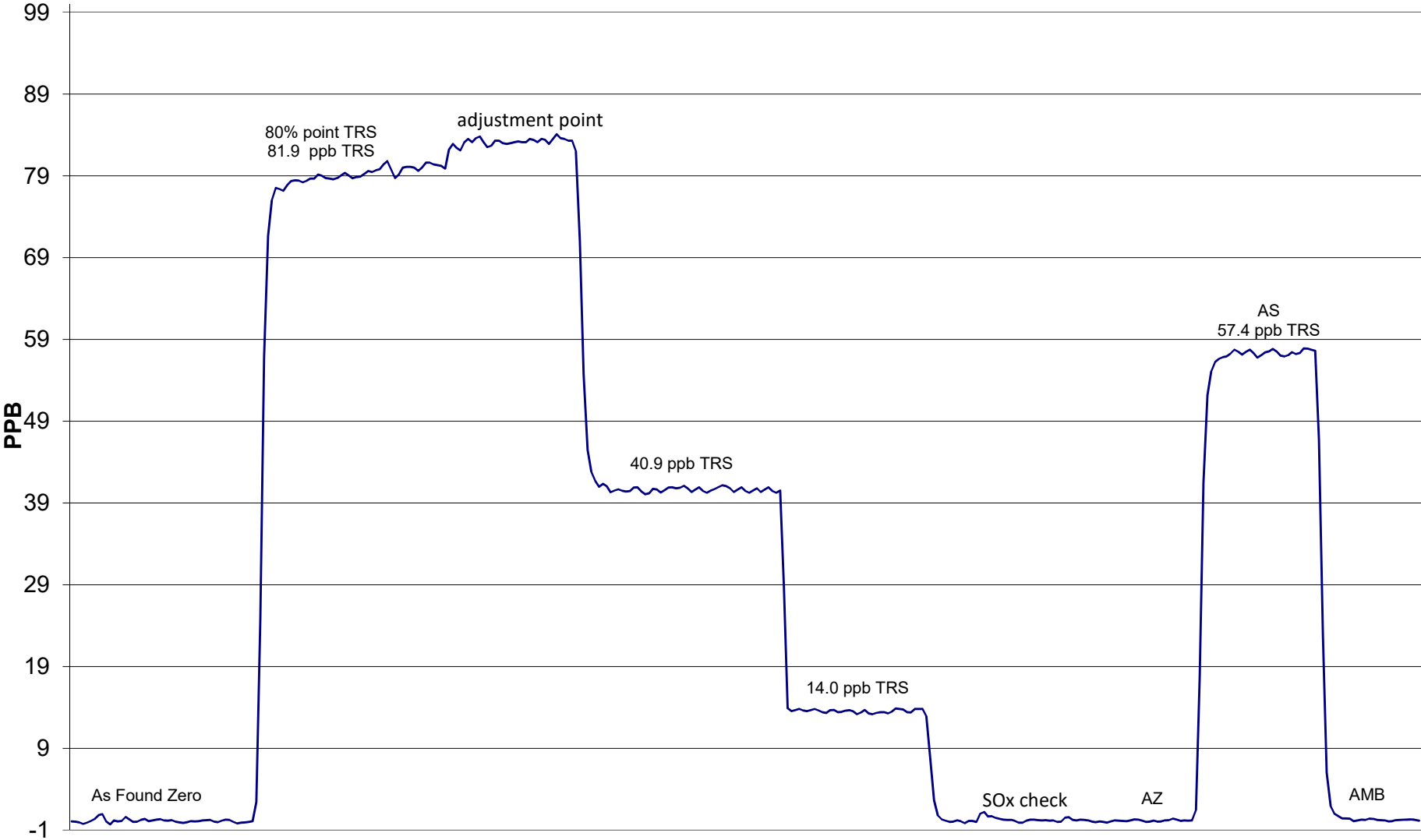
Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5147	0.0	0.0	0.1	N/A
5147	41.23	81.9	83.3	0.9829
5147	20.53	40.9	40.7	1.0052
7226	9.82	14.0	13.5	1.0374
			0.4	Sox Test
5147	0.00	0.0	0.1	As found zero
5147	41.23	81.9	79.2	As found span
Average Correction Factor				1.0085

Calculated value of As Found Response: 80.48 ppm Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.2	ppm
Auto span	55.1	ppm	57.4	ppm

Notes: Slight span adjustment made

TRS Calibration



August 9, 2017