



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

June 30, 2017

Alberta Environment

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

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

Enclosed is the PAZA Ambient Monitoring Network Report for the month of May 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
Canfor Forest Products	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
	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 May, the following events were noted:

Henry Pirker Station:

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station.
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of May, with the exception of the THC/CH₄/NMHC analyzer. Instrument malfunctioning and maintenance due to a pump failure resulted in an uptime of 82.3%. AEP reference #326283

Evergreen Park Station:

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

Smoky Heights Station:

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

Beaverlodge Station:

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

Valleyview Station:

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

Donnelly Station:

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

Rycroft-Portable Station:

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

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

There were six duplicate sites sampled in the month of May: Wanham and Clairmont Lake (SO₂), Crooked Creek (O₃), Eaglesham and Clairmont Lake (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 0.2 ppb to 2.0 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for O₃ passives ranged from 29.1 ppb to 34.8 ppb, with a mean of 32.5 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.

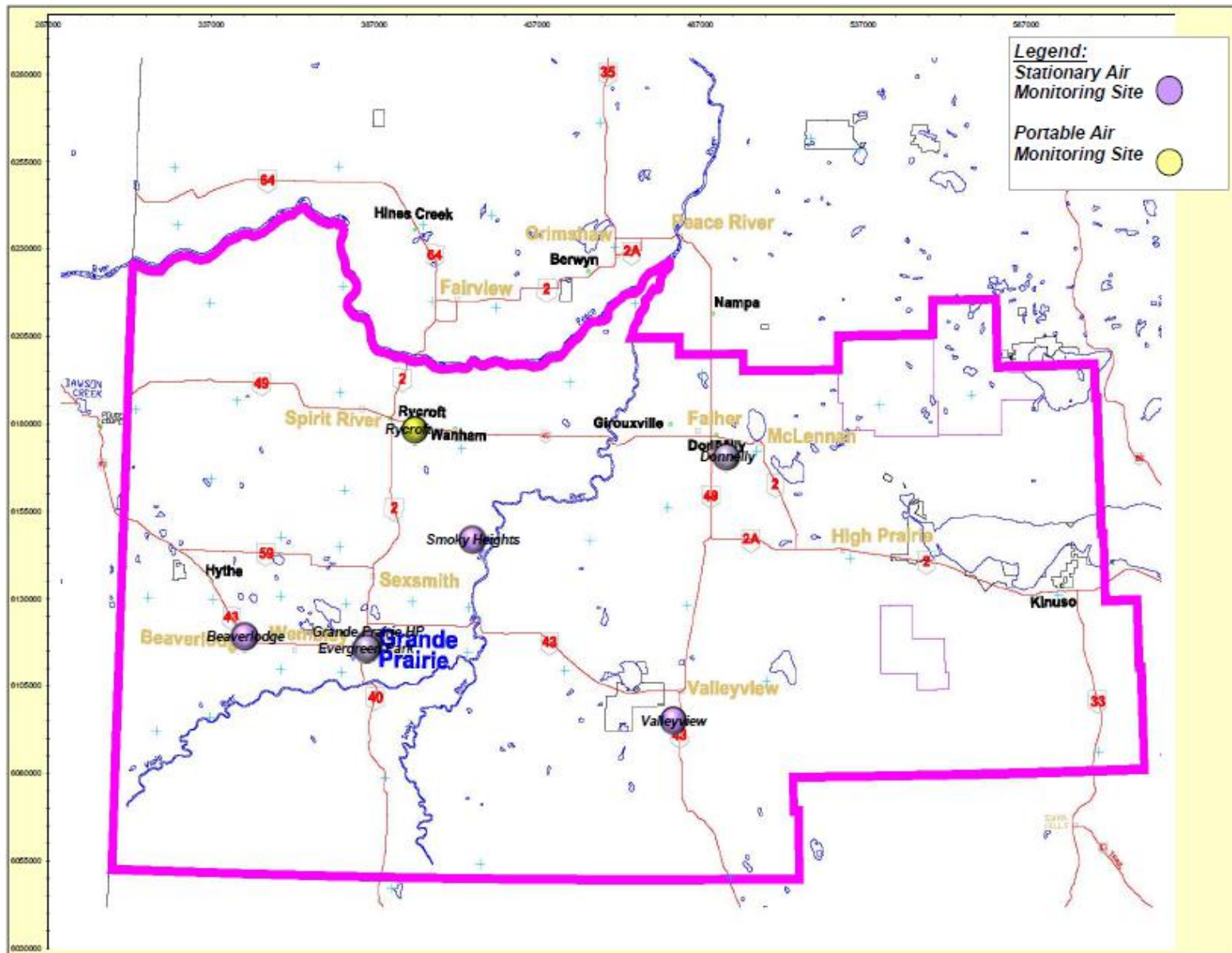
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

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

May-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	7.1	May-26 08:00	1.3	May-26	100.0%	May-17
SO ₂ (ppb)	172	48	Evergreen Park	0.1	0	0	2.8	May-13 13:00	0.5	May-30	100.0%	May-29
SO ₂ (ppb)	172	48	Smoky Heights	0.2	0	0	3.1	May-02 04:00	0.5	May-01	98.4%	May-18
SO ₂ (ppb)	172	48	Beaverlodge	0.2	0	0	4.2	May-30 03:00	1.5	May-30	99.2%	May-24
SO ₂ (ppb)	172	48	Valleyview	0.4	0	0	7.7	May-07 09:00	1.3	May-21	100.0%	May-07
SO ₂ (ppb)	172	48	Donnelly	0.1	0	0	2.1	May-29 14:00	0.5	May-29	100.0%	May-19
SO ₂ (ppb)	172	48	Rycroft-Portable	0.2	0	0	1.8	May-08 08:00	0.5	May-02	94.0%	May-09
NO (ppb)			Henry Pirker	0.6	-	-	18.9	May-03 08:00	2.3	May-03	100.0%	May-17
NO ₂ (ppb)	159	106	Henry Pirker	3.6	0	0	26.7	May-03 08:00	9.4	May-03	100.0%	May-17
NO _x (ppb)			Henry Pirker	4.5	-	-	46.2	May-03 08:00	12.1	May-03	100.0%	May-17
NO (ppb)			Beaverlodge	0.2	-	-	4.8	May-31 14:00	0.6	May-05	99.1%	May-24
NO ₂ (ppb)	159	106	Beaverlodge	1.5	0	0	8.0	May-05 09:00	3.5	May-05	99.1%	May-24
NO _x (ppb)			Beaverlodge	1.7	-	-	9.8	May-30 08:00	4.1	May-05	99.1%	May-24
NO (ppb)			Rycroft-Portable	0.1	-	-	0.9	May-01 08:00	0.2	May-01	93.8%	May-09
NO ₂ (ppb)	159	106	Rycroft-Portable	1.5	0	0	4.6	May-30 07:00	2.6	May-30	93.8%	May-09
NO _x (ppb)			Rycroft-Portable	1.6	-	-	5.2	May-30 07:00	2.7	May-30	93.8%	May-09
O ₃ (ppb)	82		Henry Pirker	32.7	0	-	65.0	May-30 13:00	47.4	May-10	100.0%	May-17
O ₃ (ppb) - 8-hr			Henry Pirker		0				57.9	May-10		-
O ₃ (ppb)	82		Beaverlodge	36.8	0	-	63.4	May-10 18:00	50.2	May-10	99.3%	May-24
O ₃ (ppb) - 8-hr			Beaverlodge		0				61.2	May-10		-
O ₃ (ppb)	82		Rycroft-Portable	32.2	0	-	54.9	May-10 18:00	43.1	May-30	94.0%	May-09
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				52.4	May-10		-
CO (ppm)	13		Henry Pirker	0.16	0	-	0.4	May-03 08:00	0.2	May-03	100.0%	May-17
CO (ppm) - 8-hr	5		Henry Pirker		0				0.3	May-03		-

PAZA Monthly Continuous Data Summary – continued

May-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.0	-	-	2.7	May-08 06:00	2.1	May-03	82.3%	May-26
CH ₄ (ppm)			Henry Pirker	2.0	-	-	2.7	May-08 06:00	2.1	May-03	82.3%	May-26
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	May-06 04:00	0.0	May-06	82.3%	May-26
THC (ppm)			Rycroft-Portable	1.9	-	-	2.0	May-21 05:00	2.0	May-20	91.1%	May-19
CH ₄ (ppm)			Rycroft-Portable	1.9	-	-	2.0	May-21 05:00	2.0	May-20	91.1%	May-19
NMHC (ppm)			Rycroft-Portable	0.0	-	-	0.0	May-22 23:00	0.0	May-22	91.1%	May-19
TRS (ppb)			Henry Pirker	0.2	-	-	0.8	May-08 08:00	0.4	May-31	100.0%	May-17
TRS (ppb)			Evergreen Park	0.4	-	-	0.8	May-31 04:00	0.5	May-31	100.0%	May-29
TRS (ppb)			Smoky Heights	0.2	-	-	0.8	May-02 05:00	0.3	May-21	98.4%	May-18
TRS (ppb)			Rycroft-Portable	0.2	-	-	0.7	May-29 07:00	0.4	May-29	93.4%	May-11
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	4.7	May-28 00:00	0.6	May-28	100.0%	May-07
H ₂ S (ppb)	10	3	Donnelly	0.1	0	0	3.3	May-27 23:00	0.4	May-10	100.0%	May-19
PM _{2.5} (µg/m ³)	80	30	Henry Pirker	4.5	0	0	53.1	May-30 10:00	17.3	May-30	98.9%	May-17
PM _{2.5} (µg/m ³)	80	30	Evergreen Park	3.4	0	0	47.3	Jun-01 00:00	11.0	May-30	99.9%	Mar-13
PM _{2.5} (µg/m ³)	80	30	Smoky Heights	5.4	0	0	77.0	May-18 05:00	16.7	May-19	98.4%	Mar-27
PM _{2.5} (µg/m ³)	80	30	Beaverlodge	3.5	0	0	26.1	May-31 13:00	15.7	May-30	99.3%	Mar-23
PM _{2.5} (µg/m ³)	80	30	Rycroft-Portable	2.1	0	0	26.5	May-21 20:00	8.1	May-30	94.0%	Mar-07
RH (%)			Henry Pirker	51.5	-	-	89.4	May-24 06:00	82.8	May-13	100.0%	-
RH (%)			Evergreen Park	55.4	-	-	99.0	May-24 07:00	92.0	May-13	100.0%	-
RH (%)			Beaverlodge	58.0	-	-	100.0	May-06 05:00	100.0	May-13	99.3%	-
RH (%)			Valleyview	41.9	-	-	96.3	May-15 05:00	86.3	May-13	100.0%	-
SR (W/m ²)			Henry Pirker	212.3	-	-	782.2	May-25 13:00	297.1	May-27	100.0%	-
Temp (°C)			Henry Pirker	13.1	-	-	27.9	May-30 14:00	21.1	May-30	100.0%	-
Temp (°C)			Evergreen Park	12.5	-	-	27.7	May-30 19:00	19.8	May-30	100.0%	-
Temp (°C)			Smoky Heights	12.2	-	-	27.4	May-30 16:00	20.2	May-30	98.4%	-
Temp (°C)			Beaverlodge	12.2	-	-	26.4	May-30 15:00	19.9	May-30	99.3%	-
Temp (°C)			Valleyview	13.1	-	-	29.4	May-30 17:00	20.7	May-30	100.0%	-
Temp (°C)			Donnelly	12.8	-	-	28.2	May-30 16:00	20.1	May-30	100.0%	-
Temp (°C)			Rycroft-Portable	12.7	-	-	28.4	May-30 16:00	20.9	May-30	97.0%	-

PAZA Monthly Continuous Data Summary – continued

May-2017 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	9.9	-	-	29.0	May-07 10:00	20.0	May-07	100.0%	-
WSPD s (km/hr)			Evergreen Park	12.8	-	-	49.0	May-07 10:00	30.7	May-07	100.0%	-
WSPD s (km/hr)			Smoky Heights	13.1	-	-	39.0	May-03 18:00	27.0	May-07	98.4%	-
WSPD s (km/hr)			Beaverlodge	12.1	-	-	34.0	May-07 10:00	20.0	May-07	99.3%	-
WSPD s (km/hr)			Valleyview	5.2	-	-	27.0	May-24 15:00	14.0	May-24	100.0%	-
WSPD s (km/hr)			Donnelly	12.0	-	-	40.0	May-03 17:00	19.9	May-07	100.0%	-
WSPD s (km/hr)			Rycroft-Portable	11.8	-	-	40.0	May-23 22:00	20.9	May-24	97.5%	-
WSPD v (km/hr)			Henry Pirker	4.0	-	-	29.0	May-07 10:00	19.4	May-07	100.0%	-
WSPD v (km/hr)			Evergreen Park	6.1	-	-	49.0	May-07 10:00	29.5	May-07	100.0%	-
WSPD v (km/hr)			Smoky Heights	5.7	-	-	39.0	May-03 18:00	26.5	May-07	98.4%	-
WSPD v (km/hr)			Beaverlodge	2.6	-	-	34.0	May-07 10:00	19.1	May-07	99.3%	-
WSPD v (km/hr)			Valleyview	1.9	-	-	27.0	May-24 15:00	13.1	May-24	100.0%	-
WSPD v (km/hr)			Donnelly	3.1	-	-	40.0	May-03 17:00	18.2	May-07	100.0%	-
WSPD v (km/hr)			Rycroft-Portable	2.8	-	-	40.0	May-23 22:00	18.8	May-24	97.5%	-
WDIR			Henry Pirker	WSW	-	-	-	-	-	-	100.0%	-
WDIR			Evergreen Park	W	-	-	-	-	-	-	100.0%	-
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	98.4%	-
WDIR			Beaverlodge	W	-	-	-	-	-	-	99.3%	-
WDIR			Valleyview	NW	-	-	-	-	-	-	100.0%	-
WDIR			Donnelly	SSW	-	-	-	-	-	-	100.0%	-
WDIR			Rycroft-Portable	WSW	-	-	-	-	-	-	97.5%	-

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	Instrument malfunctioning and maintenance May 25-31 resulted in an uptime of 82.3%. Malfunctioning was attributed to AEP reference #326283
TRS	TEI	45C	No operational issues observed.
PM _{2.5}	Sharp	5030	Instrument malfunctioning and maintenance resulted in an uptime of 98.9%. Malfunctioning was attributed to a spider on the detector.
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 resulted in an uptime of 99.9%.
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 on May 29.

Parameter	Make	Model	Notes
SO ₂	TEI	43C	A power disruption at the station resulted in an uptime of 98.4%.
TRS	TEI	43i	A power disruption at the station resulted in an uptime of 98.4%.
PM _{2.5}	Sharp	5030	A power disruption at the station resulted in an uptime of 98.4%.
ET	Met One	083D	A power disruption at the station resulted in an uptime of 98.4%.
WS / WD	Met One	010C/020C	A power disruption at the station resulted in an uptime of 98.4%.

PAZA – Beaverlodge Station

General Station Issues

Power disruption May 15.

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	A power disruption at the station resulted in an uptime of 99.2%.
NOx/NO/NO ₂	TEI	42C	A power disruption at the station and instrument malfunctioning resulted in an uptime of 99.1%.
O ₃	TEI	49C	A power disruption at the station resulted in an uptime of 99.3%.
PM _{2.5}	Sharp	5030	A power disruption at the station resulted in an uptime of 99.3%.
ET	n/a	n/a	A power disruption at the station resulted in an uptime of 99.3%.
RH	n/a	n/a	A power disruption at the station resulted in an uptime of 99.3%.
WS / WD	Met One	50.5H	A power disruption at the station resulted in an uptime of 99.3%.

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	No operational issues observed.
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	No operational issues observed.
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

Internal station temperature >30°C May 26-28, due to HVAC system failure. Analyzers were shut down May 27-28 until the system was repaired.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	Exceedance of the station temperature operating limits and analyzer shutdown (flagged as maintenance) resulted in an uptime of 94.0%.
NO _x /NO/NO ₂	TEI	42i	Exceedance of the station temperature operating limits and analyzer shutdown (flagged as maintenance) resulted in an uptime of 93.8%.
O ₃	TEI	49i	Exceedance of the station temperature operating limits and analyzer shutdown (flagged as maintenance) resulted in an uptime of 94.0%.
TRS	TEI	43i	Exceedance of the station temperature operating limits and analyzer shutdown (flagged as maintenance), as well as additional analyzer maintenance on May 11 resulted in an uptime of 93.4%.
THC/CH ₄ /NMHC	TEI	55i	Instrument malfunctioning due to a low hydrogen cylinder on May 1-2, as well as exceedance of the station temperature operating limits and analyzer shutdown (flagged as maintenance) resulted in an uptime of 91.1%.
PM _{2.5}	Sharp	5030	Exceedance of the station temperature operating limits and analyzer shutdown (flagged as maintenance) resulted in an uptime of 94.0%.
ET	Gill	Met Pak 3	Due to exceedance of the station temperature operating limits, all analyzers were shutdown, including meteorological parameters, resulting in an uptime of 97.0%.
WS / WD	Gill	Met Pak 3	Due to exceedance of the station temperature operating limits, all analyzers were shutdown, including meteorological parameters, resulting in an uptime of 97.5%.

PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

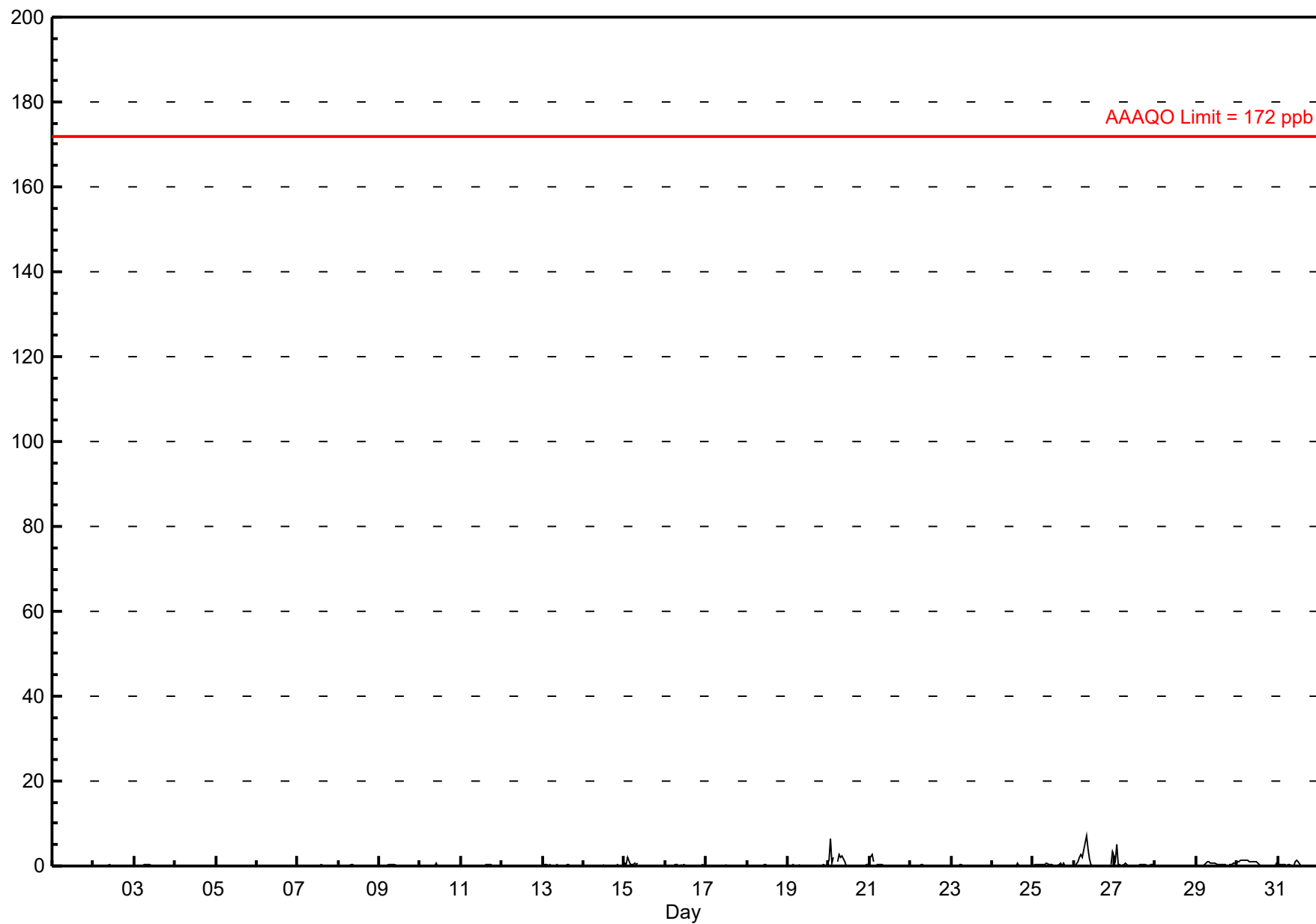
Henry Pirker - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.1 ppb on May 26 08:00 Maximum Daily Average: 1.3 ppb on May 26																				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 May 1 03:00 Maximum Diurnal Average: 0.6 ppb at hour 2 Monthly Average: 0.19 ppb																				Minimum Daily Average: 0.0 ppb on May 12 Minimum Diurnal Average: 0.0 ppb at hour 21 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.4 P ₉₉ = 2.5						
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-May	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
2-May	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
3-May	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
4-May	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-May	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	0.1
6-May	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	0.1
7-May	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-May	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-May	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-May	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.7
11-May	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	0.3
12-May	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
13-May	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	0.4
14-May	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-May	1	0	2	0	0	0	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
16-May	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-May	0	0	0	0	0	0	0	A	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
18-May	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-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.5
20-May	1	6	1	2	A	1	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	6.5
21-May	2	3	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.8
22-May	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	0.2
23-May	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	0.4
24-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0.1	0.6
25-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	A	0	0.3	0.8
26-May	0	0	1	2	3	2	4	7	4	2	0	0	0	0	0	0	0	0	0	0	0	A	0	3	1.3	7.1
27-May	1	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	5.2
28-May	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	0.1
29-May	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	1	1	0.4	1.1
30-May	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	1	0.7	1.5
31-May	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0.3	1.5
0.2 0.6 0.3 0.3 0.2 0.2 0.4 0.5 0.4 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.1 0.1 0.2																									Diurnal Average	
1.6 6.5 1.9 2.2 2.7 2.0 3.8 7.1 4.2 1.7 1.0 1.5 1.1 0.4 0.3 0.6 0.8 0.2 0.5 0.2 0.2 0.3 0.6 3.4																									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

Henry Pirker - May 2017



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

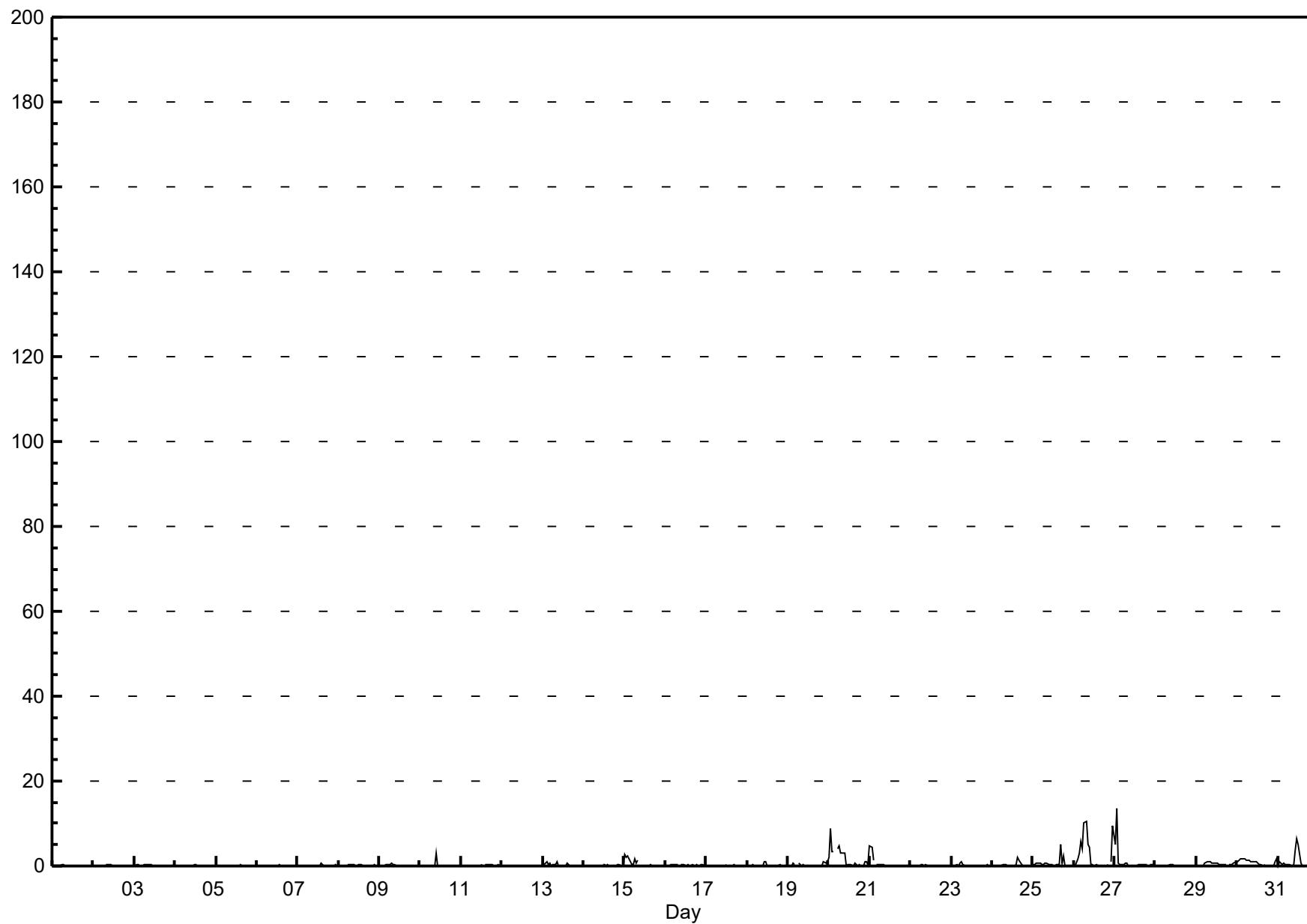
Henry Pirker - May 2017

Maximum Value: 13.5 ppb on May 27 02:00																				Maximum Daily Average: 2.5 ppb on May 26				Hours in Service: 744		
Minimum Value: 0 ppb on May 29 00:00																				Minimum Daily Average: 0.1 ppb on May 12				Hours of Data: 708		
Maximum Diurnal Average: 1.1 ppb at hour 2																				Minimum Diurnal Average: 0.1 ppb at hour 20				Hours of Missing Data: 36		
Monthly Average: 0.43 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 5.2				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-May	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-May	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
3-May	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-May	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
5-May	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-May	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	0.3
7-May	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	0.7
8-May	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
9-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.6
10-May	0	0	0	0	0	0	0	0	0	3	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	3.1
11-May	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-May	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-May	0	0	1	0	1	0	0	0	1	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0.3	1.2
14-May	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	0.4
15-May	3	2	2	1	0	0	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.8
16-May	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-May	0	0	0	0	0	0	0	A	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
18-May	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
19-May	0	0	0	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	1.2
20-May	2	9	3	3	A	4	5	3	3	3	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1.7	8.7
21-May	5	5	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.9
22-May	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-May	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
24-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	A	0.3	2.0
25-May	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	5	1	2	0	0	0	A	0	0.7	5.2
26-May	0	0	2	3	6	4	10	11	5	4	0	0	0	0	0	0	0	0	0	0	0	A	1	9	2.5	10.6
27-May	5	14	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1.1	13.5
28-May	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-May	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	1	1	0.5	1.2
30-May	1	1	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	1	2	0.9	1.6
31-May	0	1	0	1	0	0	0	0	0	0	4	6	5	1	0	0	A	0	0	0	0	0	0	0	0.9	6.3
0.7 1.1 0.5 0.5 0.4 0.5 0.9 0.8 0.6 0.6 0.4 0.5 0.4 0.2 0.2 0.2 0.4 0.1 0.2 0.1 0.1 0.2 0.3 0.6																								Diurnal Average		
5.2 13.5 3.4 3.5 5.6 4.0 10.1 10.6 5.1 4.4 3.6 6.3 5.0 0.6 0.7 2.0 5.2 0.5 2.4 0.3 0.3 1.1 1.1 9.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

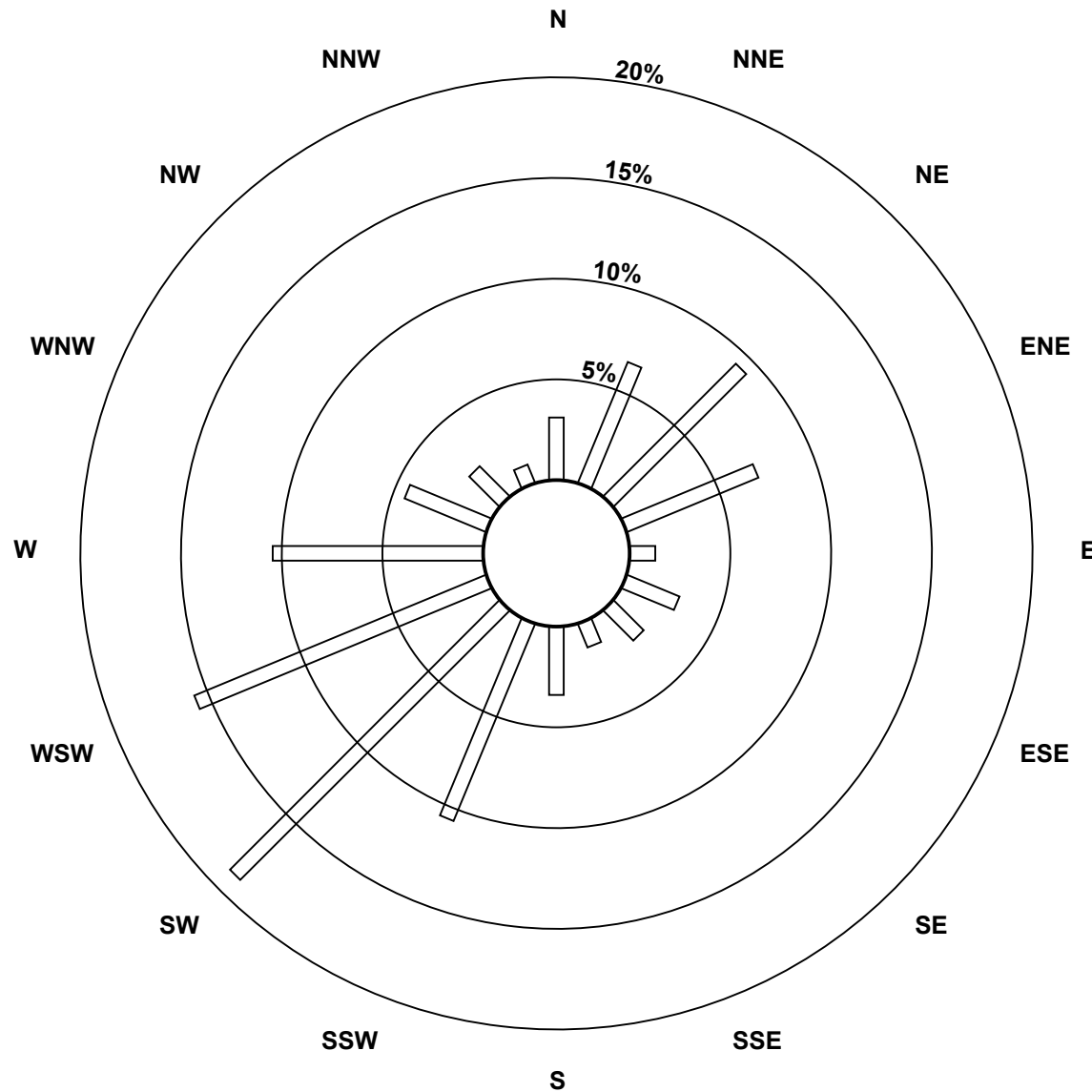
Henry Pirker - May 2017



Pollutant Rose

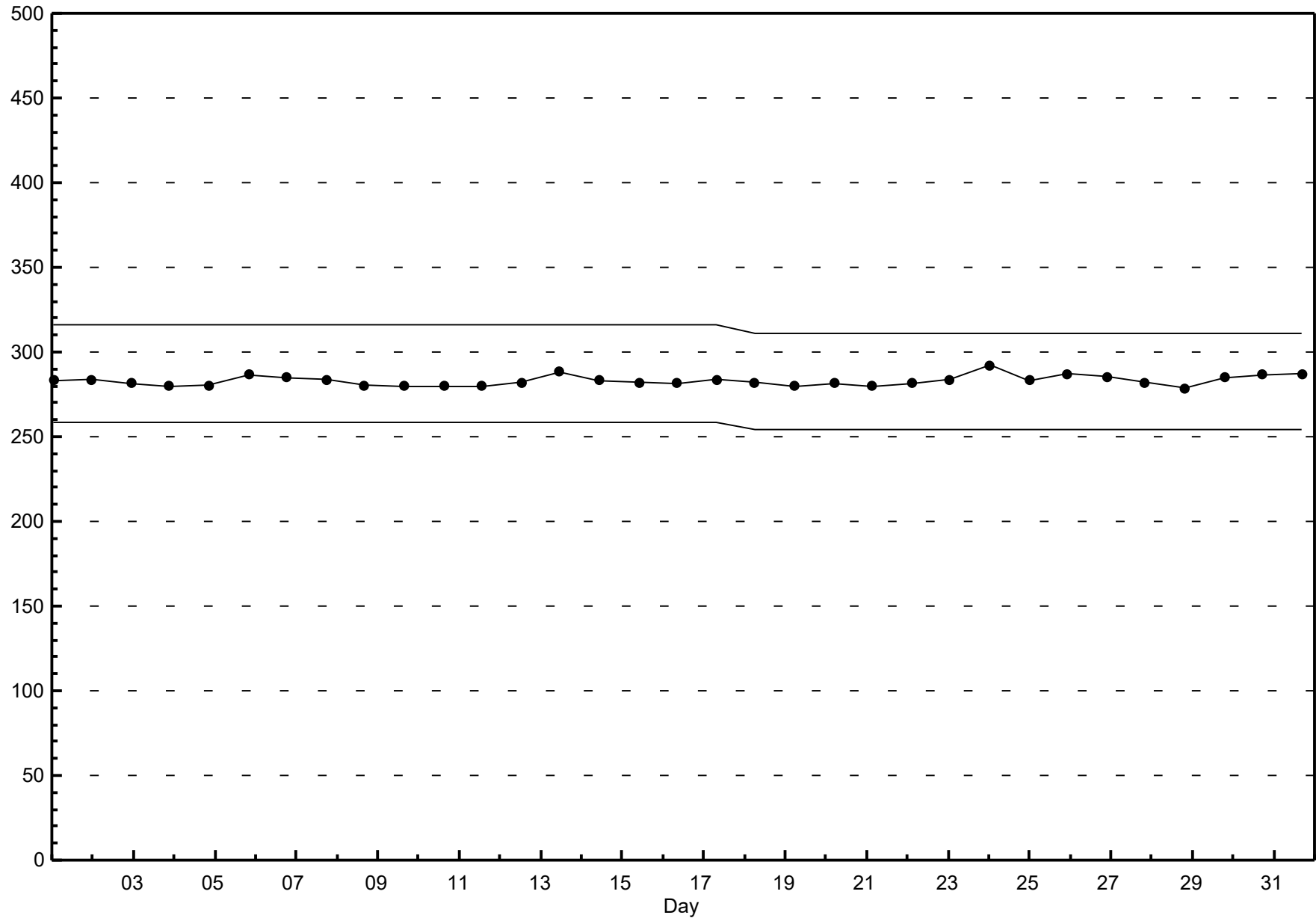
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - May 2017



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - May 2017



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

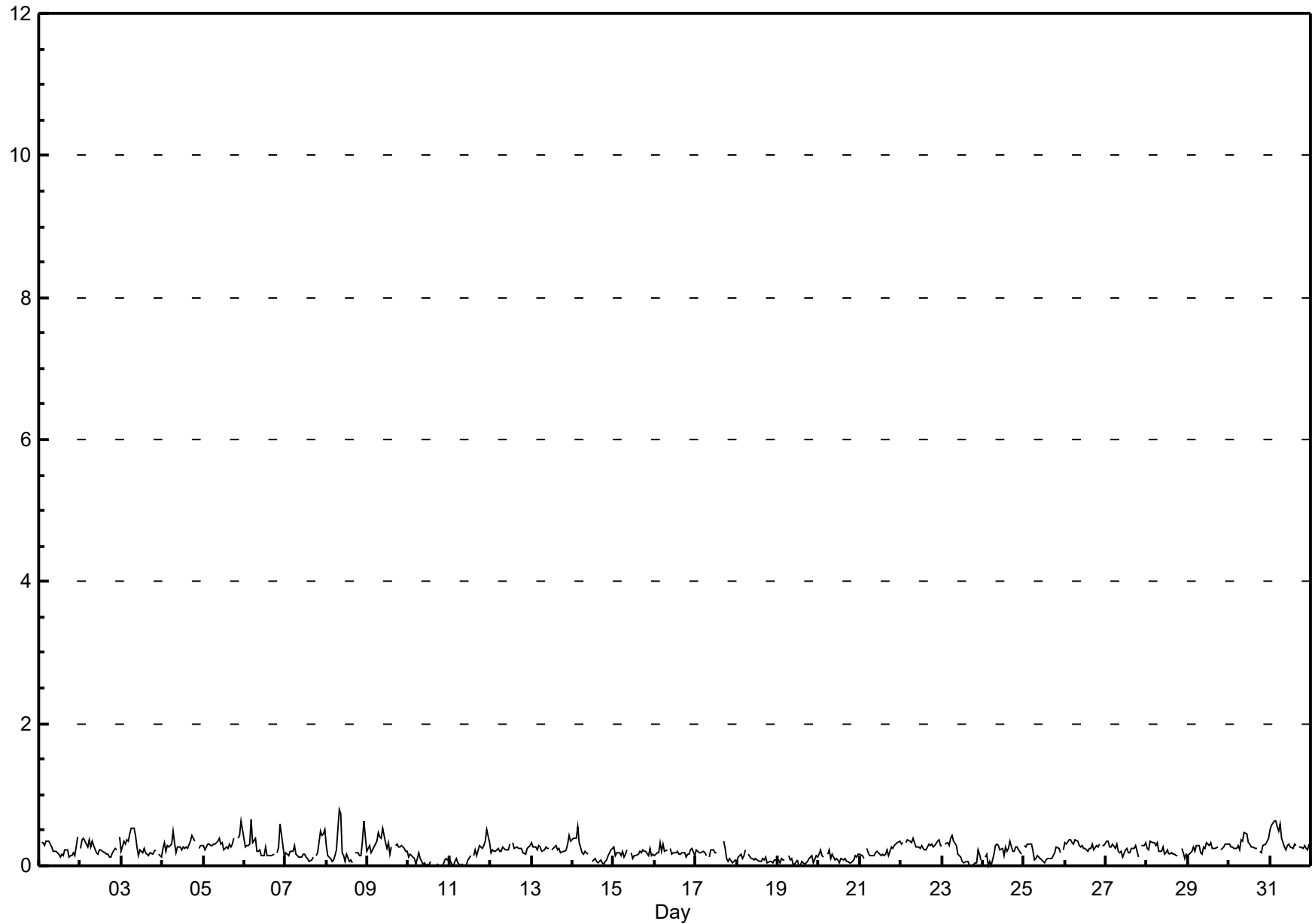
Henry Pirker - May 2017

Maximum Value: 0.8 ppb on May 8 08:00																				Maximum Daily Average: 0.4 ppb on May 31										Hours in Service: 744									
Minimum Value: 0 ppb on May 10 11:00																				Minimum Daily Average: 0.1 ppb on May 10										Hours of Data: 708									
Maximum Diurnal Average: 0.3 ppb at hour 23																				Minimum Diurnal Average: 0.2 ppb at hour 16										Hours of Missing Data: 36									
Monthly Average: 0.22 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-May	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-May	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-May	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5													
4-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0.3	0.6													
6-May	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.3	0.7													
7-May	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	0.5													
8-May	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0.2	0.8													
9-May	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5													
10-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0.1	0.5													
12-May	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-May	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	0.4													
14-May	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6													
15-May	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-May	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-May	0	0	0	0	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.2	0.3													
18-May	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-May	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	0.1													
20-May	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-May	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	0.4													
22-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4													
23-May	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	0.4													
24-May	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	0.3													
25-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4													
27-May	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-May	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-May	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-May	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	0.5													
31-May	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.6													
0.2 0.2 0.2 0.2 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 0.3 0.2																									Diurnal Average														
0.5 0.6 0.6 0.6 0.7 0.5 0.6 0.8 0.7 0.5 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.3 0.5 0.6 0.6 0.5																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - May 2017



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

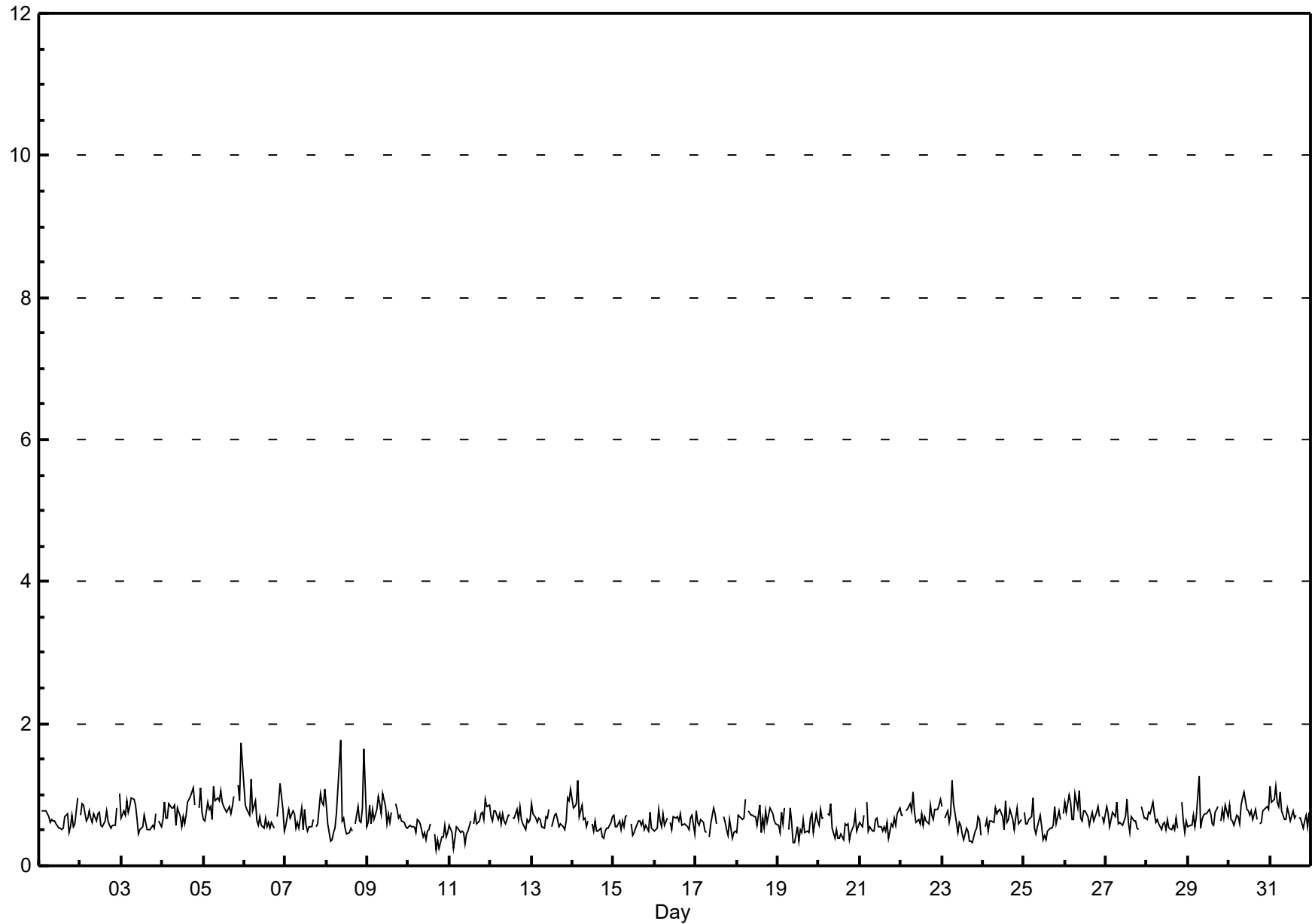
Henry Pirker - May 2017

Maximum Value: 1.8 ppb on May 8 09:00																				Maximum Daily Average: 0.9 ppb on May 5										Hours in Service: 744									
Minimum Value: 0 ppb on May 10 17:00																				Minimum Daily Average: 0.5 ppb on May 10										Hours of Data: 708									
Maximum Diurnal Average: 0.8 ppb at hour 23																				Minimum Diurnal Average: 0.6 ppb at hour 15										Hours of Missing Data: 36									
Monthly Average: 0.67 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.2										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-May	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	0.6	1.0													
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0													
3-May	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	A	1	1	0.7	1.0													
4-May	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-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	0.9	1.7													
6-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0.7	1.2													
7-May	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	0.7	1.1													
8-May	1	1	0	0	0	1	1	1	2	1	1	1	0	0	1	0	A	1	1	1	1	1	2	1	0.7	1.8													
9-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	0.7	1.0													
10-May	1	1	1	1	0	1	1	1	0	0	0	0	1	1	A	0	0	0	0	0	0	1	0	0	0.5	0.7													
11-May	1	0	0	0	1	1	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
12-May	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	0.7	0.8													
13-May	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1													
14-May	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	1	0	0	0	1	1	1	1	0.6	1.2													
15-May	1	1	1	1	1	1	1	1	1	A	1	0	0	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8													
16-May	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8													
17-May	1	1	1	1	1	0	0	A	0	1	1	1	1	C	C	C	1	1	1	0	1	0	0	0	0.6	0.8													
18-May	0	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0.7	0.9													
19-May	1	0	1	1	1	A	1	1	1	0	0	1	0	1	0	0	1	0	0	1	1	0	1	1	0.6	0.8													
20-May	1	1	1	1	A	1	1	1	1	0	1	0	0	0	0	1	1	1	0	0	1	1	0	1	0.6	0.9													
21-May	1	1	1	A	1	0	1	0	0	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	0.6	0.9													
22-May	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
23-May	1	A	1	1	1	1	1	1	1	0	1	1	0	0	1	0	0	0	0	0	1	1	1	0	0.6	1.2													
24-May	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9													
25-May	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1	A	1	0.6	1.0													
26-May	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-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	0.7	0.9													
28-May	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0.6	0.9													
29-May	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	1.3													
30-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0													
31-May	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													
0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.7 0.8 0.7																									Diurnal Average														
1.1 0.9 1.0 1.2 1.2 1.0 1.3 1.4 1.8 1.0 1.1 0.9 0.9 0.9 0.8 0.9 1.0 1.0 1.1 0.9 1.1 1.2 1.7 1.4																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

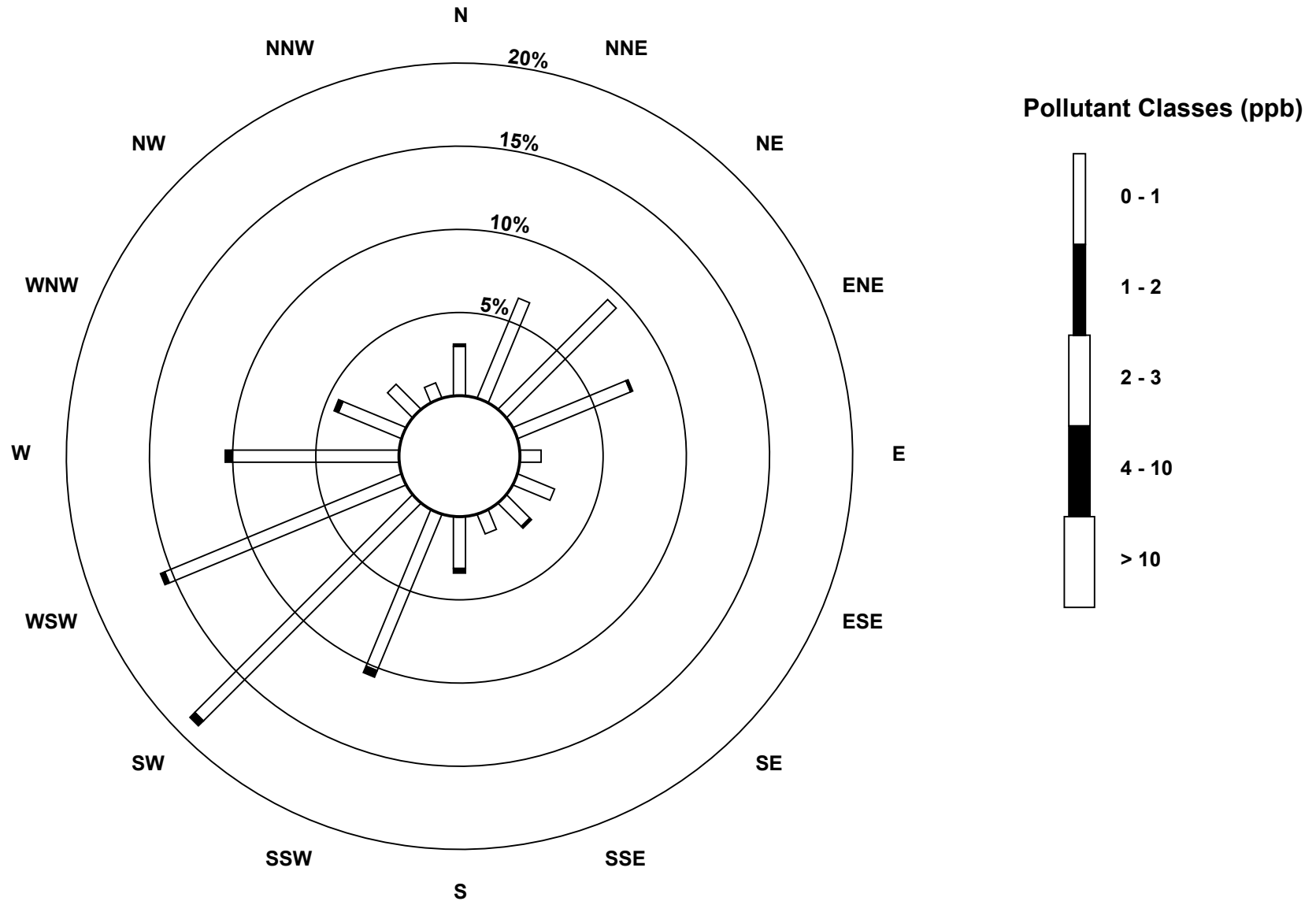
Henry Pirker - May 2017



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

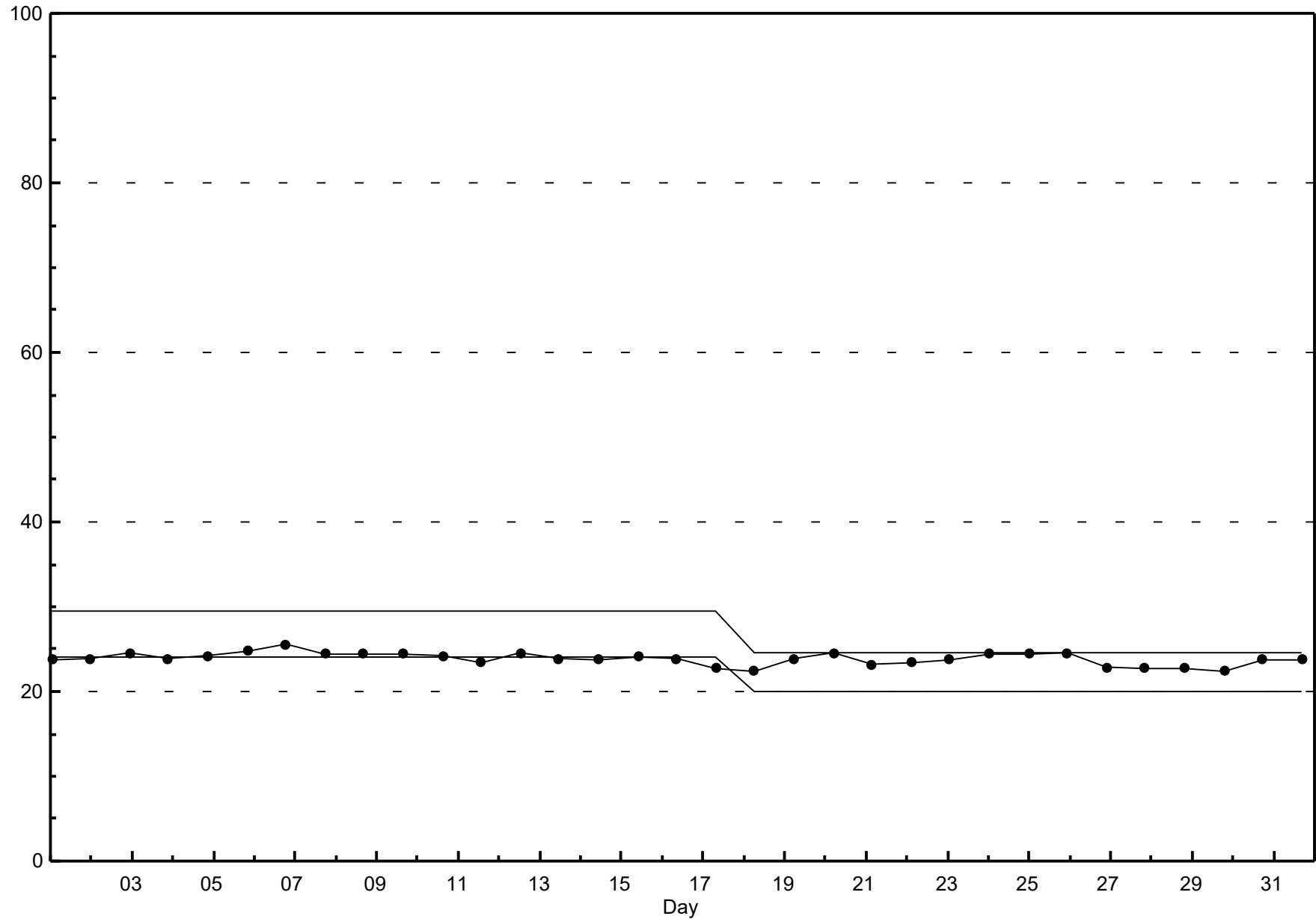
Henry Pirker - May 2017



Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - May 2017



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

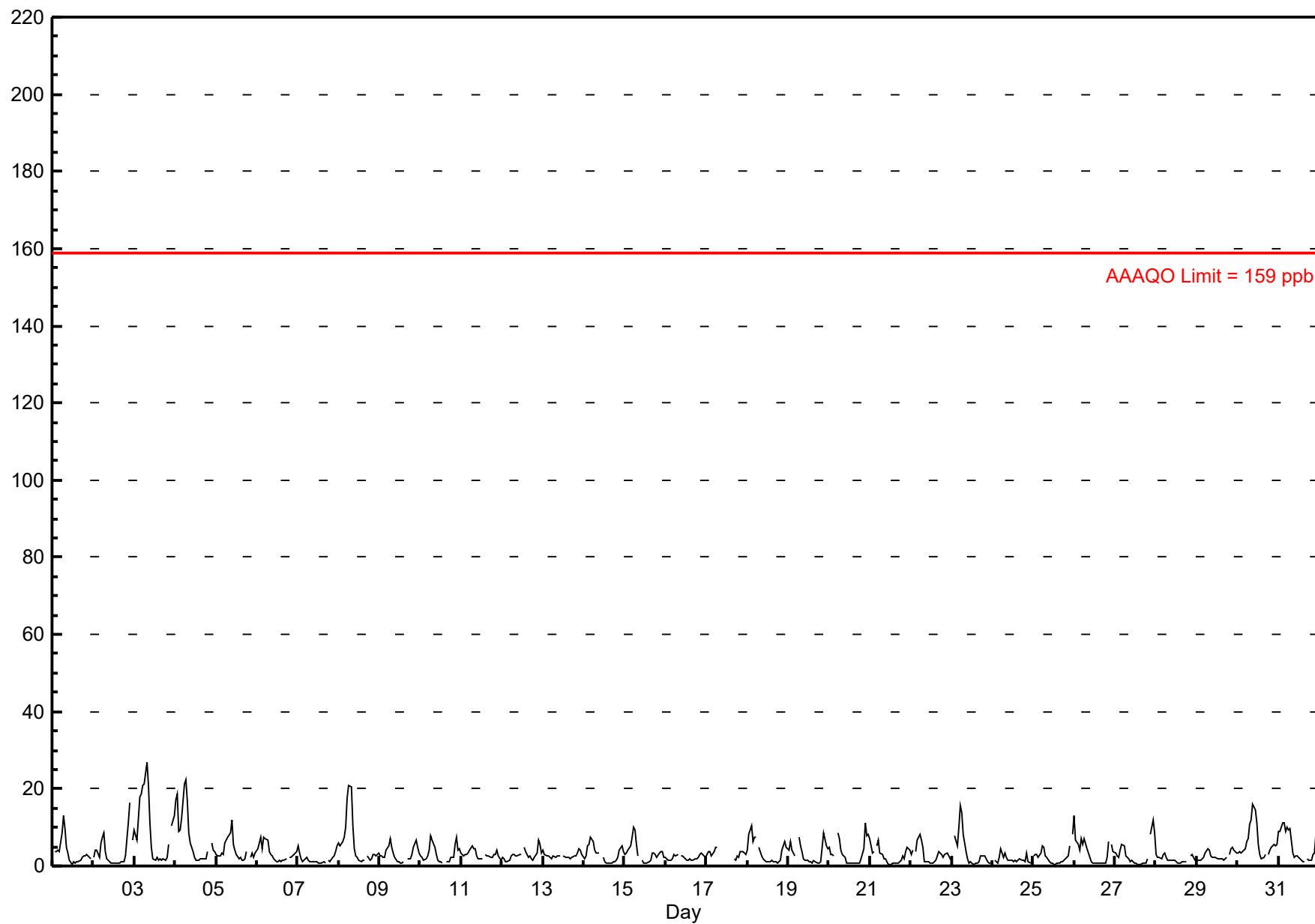
Henry Pirker - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 26.7 ppb on May 3 08:00 Maximum Daily Average: 9.4 ppb on May 3																				Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 41 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on May 23 14:00 Minimum Daily Average: 1.7 ppb on May 24 Maximum Diurnal Average: 7.5 ppb at hour 7 Minimum Diurnal Average: 1.3 ppb at hour 14 Monthly Average: 3.64 ppb Percentiles: P ₁ = 0.5 P ₁₀ = 0.9 Q ₁ = 1.5 Median = 2.6 Q ₃ = 4.3 P ₉₀ = 7.5 P ₉₉ = 20.7																										
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-May	A	4	4	4	4	8	13	10	5	3	1	1	1	1	1	1	2	2	3	3	3	3	2	A	3.6	13.2
2-May	2	4	4	2	6	7	9	4	2	1	1	1	1	1	1	1	1	1	1	3	11	16	A	7	3.7	16.4
3-May	9	7	12	18	19	21	21	27	21	11	5	2	2	2	1	2	1	2	1	2	6	A	11	13	9.4	26.7
4-May	17	19	9	9	12	21	22	17	8	6	4	2	1	2	1	2	2	2	2	4	A	6	4	4	7.7	22.4
5-May	3	3	3	3	3	6	7	8	8	12	5	4	3	2	2	1	2	2	4	A	2	3	2	3	4.0	11.9
6-May	5	6	7	4	7	7	7	4	3	3	2	1	1	1	1	2	2	2	A	2	2	3	3	4	3.4	7.4
7-May	5	3	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	A	2	1	2	3	4	5	1.9	5.2
8-May	6	5	6	7	10	17	21	20	10	4	3	2	2	1	1	2	A	3	1	2	3	3	3	3	5.9	21.0
9-May	3	2	2	2	4	5	7	5	3	2	1	1	1	1	1	A	2	2	2	3	5	7	5	3	3.1	7.1
10-May	3	2	1	2	3	4	8	7	5	3	2	1	1	1	A	1	1	1	2	2	6	8	4	4	3.1	7.7
11-May	4	3	3	3	3	4	5	5	4	3	2	2	2	A	3	2	3	2	2	3	3	4	2	2	3.0	5.1
12-May	2	2	1	1	1	3	3	3	3	3	3	3	A	5	4	2	3	2	2	2	3	7	6	3	2.9	6.9
13-May	4	3	3	3	2	2	3	2	3	3	2	A	3	2	2	2	2	2	3	3	3	4	4	3	2.7	4.5
14-May	2	3	5	6	7	6	4	3	3	3	A	2	1	1	1	1	1	1	1	1	2	4	5	4	3.0	7.4
15-May	3	3	4	5	7	10	9	6	2	A	1	1	1	1	1	2	3	3	3	2	3	4	4	2	3.5	10.1
16-May	2	2	2	2	2	3	2	3	A	3	3	2	2	1	2	2	2	2	2	2	3	3	3	2	2.2	3.3
17-May	3	4	4	3	4	5	5	A	C	C	C	C	C	C	C	C	2	2	3	2	4	4	3	3	--	4.8
18-May	4	8	10	6	8	7	A	5	3	2	1	1	1	1	2	1	1	1	1	2	4	5	6	5	3.7	10.4
19-May	4	6	4	4	3	A	8	5	4	2	2	1	1	1	1	1	1	1	1	1	5	9	5	4	3.2	8.6
20-May	5	3	3	3	A	9	7	4	3	2	1	1	1	1	1	1	1	1	1	2	4	11	8	8	3.4	11.1
21-May	7	3	4	A	5	7	4	3	2	2	1	0	0	1	1	1	1	1	1	3	2	4	5	4	2.6	6.9
22-May	3	4	A	4	7	8	7	5	1	1	1	1	1	1	1	2	4	3	3	2	3	4	3	2	3.0	8.2
23-May	2	A	8	5	10	16	14	8	4	2	1	1	1	0	1	1	1	3	3	3	2	1	1	1	3.8	15.6
24-May	A	1	1	1	2	4	2	3	2	2	1	1	1	1	1	1	2	2	2	1	3	1	1	A	1.7	4.4
25-May	2	3	3	2	3	5	5	3	2	1	1	1	1	0	1	1	1	1	1	2	3	5	A	8	2.4	8.3
26-May	13	7	6	4	7	6	7	4	3	2	1	1	1	1	1	1	1	1	1	2	6	A	5	4	3.7	12.9
27-May	3	3	2	4	6	5	2	2	2	1	2	1	1	1	0	0	1	1	1	2	A	8	12	8	3.0	12.0
28-May	3	2	2	2	3	3	2	1	2	1	2	1	1	1	1	1	1	1	1	A	3	3	2	1	1.8	3.2
29-May	1	2	2	2	2	3	4	4	3	2	2	2	2	2	2	2	2	2	A	3	4	5	4	3	2.7	4.9
30-May	4	4	3	4	5	6	7	11	12	16	14	11	5	3	2	2	3	A	3	4	5	6	5	6	6.1	16.1
31-May	9	9	11	11	9	10	9	10	3	2	3	3	2	2	1	1	A	2	1	2	3	3	8	12	5.5	12.3
4.6 4.3 4.4 4.2 5.5 7.4 7.5 6.4 4.4 3.4 2.3 1.8 1.4 1.3 1.3 1.3 1.6 1.7 1.8 2.2 3.8 5.0 4.5 4.6																								Diurnal Average		
17.3 18.7 12.2 17.7 18.6 21.2 22.4 26.7 20.8 16.1 14.4 11.1 5.4 4.9 3.7 2.5 3.8 3.5 3.7 4.2 11.1 16.4 12.0 13.1																								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

Henry Pirker - May 2017



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

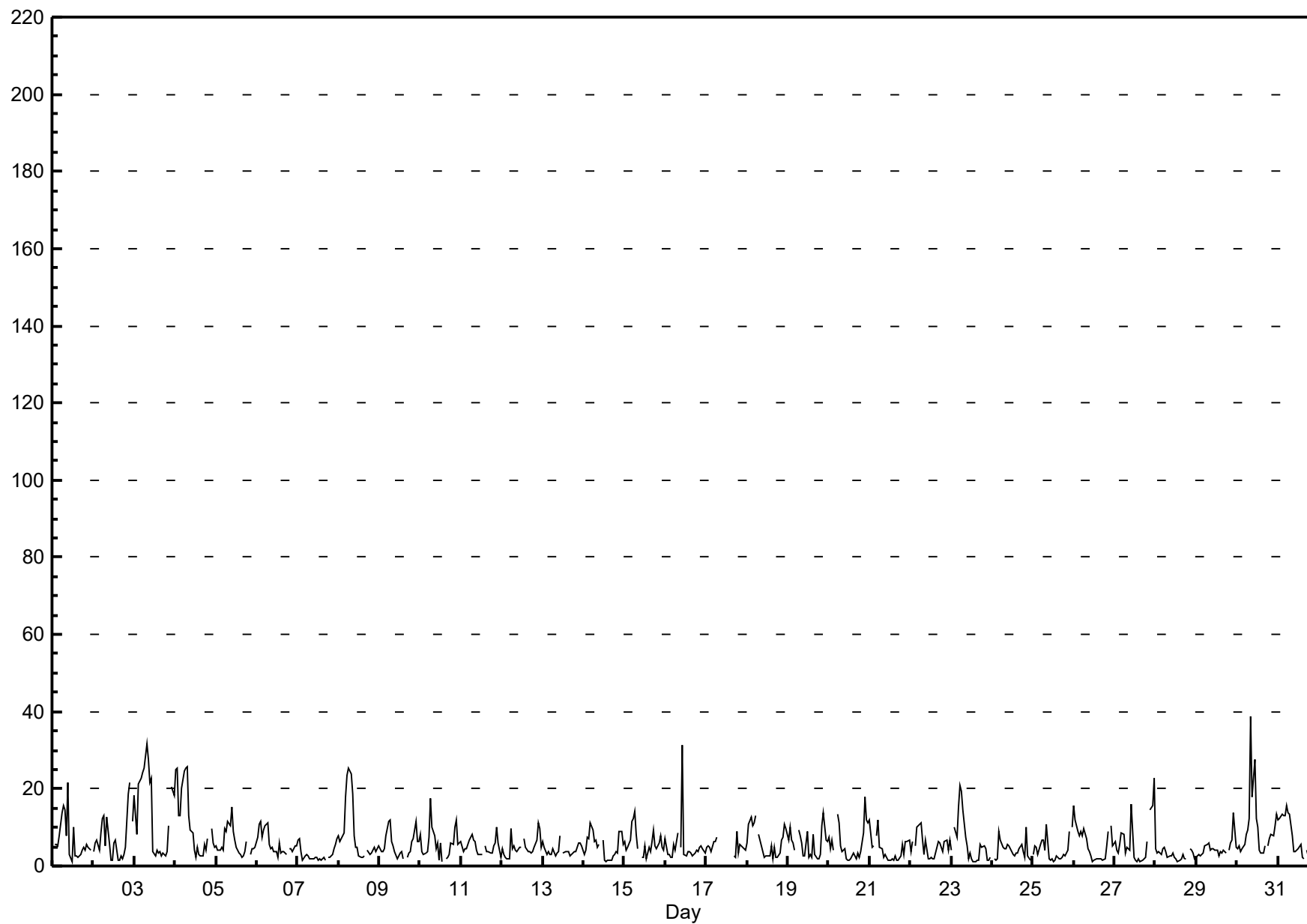
Henry Pirker - May 2017

Maximum Value: 38.9 ppb on May 30 09:00																				Maximum Daily Average: 14.1 ppb on May 3					Hours in Service: 744	
Minimum Value: 1 ppb on May 23 14:00																				Minimum Daily Average: 2.9 ppb on May 28					Hours of Data: 703	
Maximum Diurnal Average: 10.9 ppb at hour 6																				Minimum Diurnal Average: 2.8 ppb at hour 16					Hours of Missing Data: 41	
Monthly Average: 6.10 ppb																				Percentiles: P ₁ = 1.2 P ₁₀ = 1.9 Q ₁ = 2.9 Median = 4.5 Q ₃ = 7.1 P ₉₀ = 12.0 P ₉₉ = 25.1					Hours of Calibration: 41	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	A	6	5	5	8	14	16	14	8	22	3	1	10	2	2	2	3	4	5	4	5	5	4	A	6.8	21.5
2-May	4	6	7	4	9	12	13	5	13	5	1	1	6	7	2	1	2	2	3	5	19	22	A	11	7.0	21.7
3-May	18	8	21	22	23	24	25	32	28	22	23	4	3	4	3	4	3	3	4	10	A	20	18	14.1	31.7	
4-May	25	25	13	13	20	24	25	26	13	9	8	4	2	5	3	3	3	6	4	7	A	10	6	5	11.3	25.8
5-May	5	4	4	5	4	10	9	12	10	15	9	7	5	3	3	2	3	4	7	A	3	5	4	5	6.0	15.2
6-May	8	11	12	8	9	10	11	5	5	5	4	4	2	6	3	4	4	3	A	4	5	4	5	5	5.9	11.5
7-May	7	7	4	2	3	3	3	2	2	2	2	2	2	2	2	2	1	A	2	2	3	5	6	7	3.1	7.0
8-May	8	6	8	8	18	24	25	24	19	8	5	5	3	2	2	3	A	4	3	3	4	5	4	5	8.5	25.4
9-May	4	4	4	4	8	11	12	6	5	4	2	3	3	4	2	A	2	3	4	6	7	11	6	6	5.3	12.1
10-May	8	4	3	3	4	8	17	10	8	4	6	2	6	1	A	2	2	3	6	6	10	12	6	6	5.9	17.4
11-May	6	4	4	5	6	7	8	7	6	4	3	3	3	A	5	4	4	3	3	5	6	10	6	2	5.0	10.0
12-May	4	3	2	2	2	10	4	5	4	4	5	5	A	7	5	4	4	4	4	5	7	11	10	5	5.0	11.2
13-May	6	5	3	4	3	3	4	3	3	4	8	A	3	4	4	4	3	3	4	4	5	6	6	5	4.2	7.9
14-May	3	4	7	7	11	9	6	7	5	6	A	7	1	1	1	1	2	3	3	4	3	9	9	5	5.1	11.3
15-May	6	4	5	7	12	12	14	8	4	A	2	2	5	2	5	4	6	9	5	4	6	8	5	4	6.2	14.3
16-May	7	3	3	2	2	5	4	9	A	5	31	3	3	4	4	3	3	3	4	4	5	5	5	4	5.2	31.1
17-May	5	5	5	4	6	6	7	A	C	C	C	C	C	C	C	C	C	3	2	9	4	5	4	4	--	9.0
18-May	6	11	13	10	11	13	A	8	5	4	2	2	2	3	5	2	5	2	2	3	7	7	11	10	6.3	13.0
19-May	7	10	7	6	4	A	9	8	6	3	3	9	2	3	2	8	3	2	2	3	10	14	7	7	5.8	13.8
20-May	8	5	7	4	A	13	11	5	4	4	2	2	2	2	3	2	2	3	2	4	9	18	12	11	5.9	17.9
21-May	12	5	5	A	8	12	5	4	2	3	2	1	1	2	1	3	2	1	3	6	3	6	6	7	4.4	12.0
22-May	4	6	A	5	10	11	11	7	3	7	2	2	2	2	2	4	6	6	5	4	6	7	4	7	5.3	11.3
23-May	4	A	10	8	15	21	19	14	7	5	2	3	2	1	1	2	2	6	5	5	4	2	1	2	6.2	20.9
24-May	A	2	2	2	9	7	5	5	4	5	5	4	3	3	3	3	4	6	4	2	10	3	2	A	4.1	10.0
25-May	3	5	5	3	5	7	7	4	11	2	1	2	1	1	3	2	2	2	3	2	4	9	A	10	4.1	10.9
26-May	16	12	9	8	9	8	10	7	5	4	2	1	2	2	2	2	2	1	2	5	9	A	11	5	5.7	15.7
27-May	6	4	3	6	8	8	3	5	4	4	16	2	2	1	2	1	1	2	2	6	A	15	16	23	6.2	22.8
28-May	4	4	4	3	4	5	4	2	3	2	3	2	2	1	2	2	3	2	2	A	5	4	3	2	2.9	4.9
29-May	2	3	3	3	3	5	5	6	4	4	4	4	4	3	4	3	4	3	A	4	6	7	14	5	4.5	13.8
30-May	4	5	4	5	6	8	9	12	39	18	28	12	10	4	3	4	5	A	5	7	8	8	10	13	10.0	38.9
31-May	12	12	13	13	13	16	14	13	8	4	4	4	5	5	2	2	A	4	2	2	5	5	11	16	8.1	16.3
7.3 6.4 6.5 6.0 8.5 10.9 10.6 9.2 8.2 6.4 6.5 3.6 3.3 3.0 2.8 2.8 3.0 3.5 3.7 4.3 6.5 8.1 7.4 7.5																										Diurnal Average
24.9 25.2 21.2 21.8 22.7 24.5 25.4 31.7 38.9 21.8 31.1 12.4 10.2 6.9 5.1 8.2 6.4 9.3 9.0 7.1 18.5 21.7 20.4 22.8																										Diurnal Maximum
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

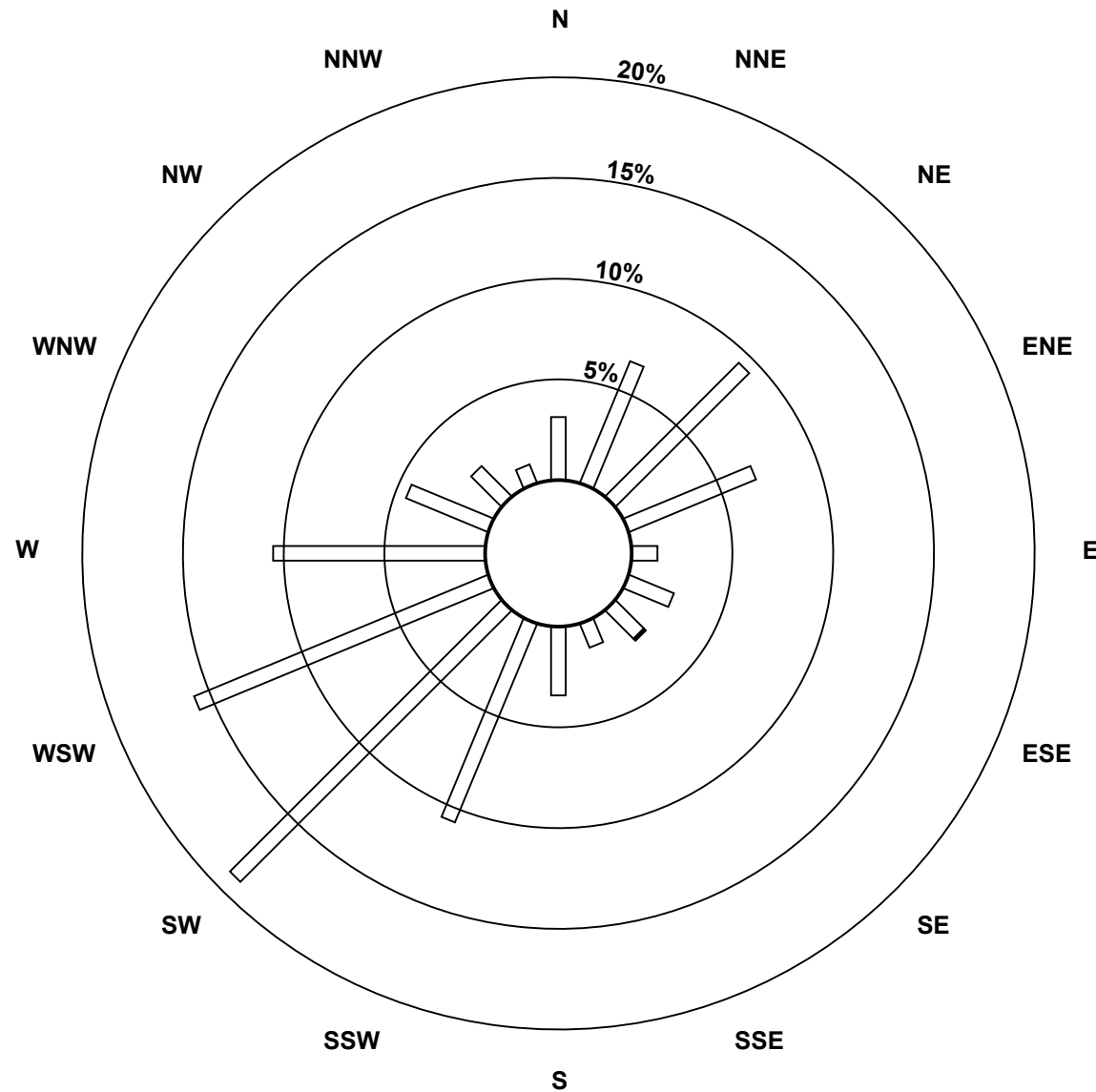
Henry Pirker - May 2017



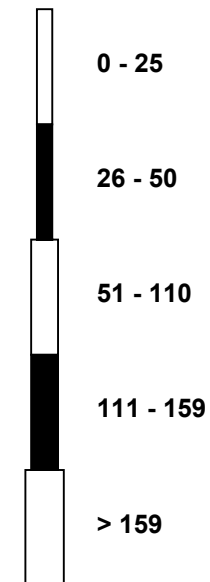
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - May 2017

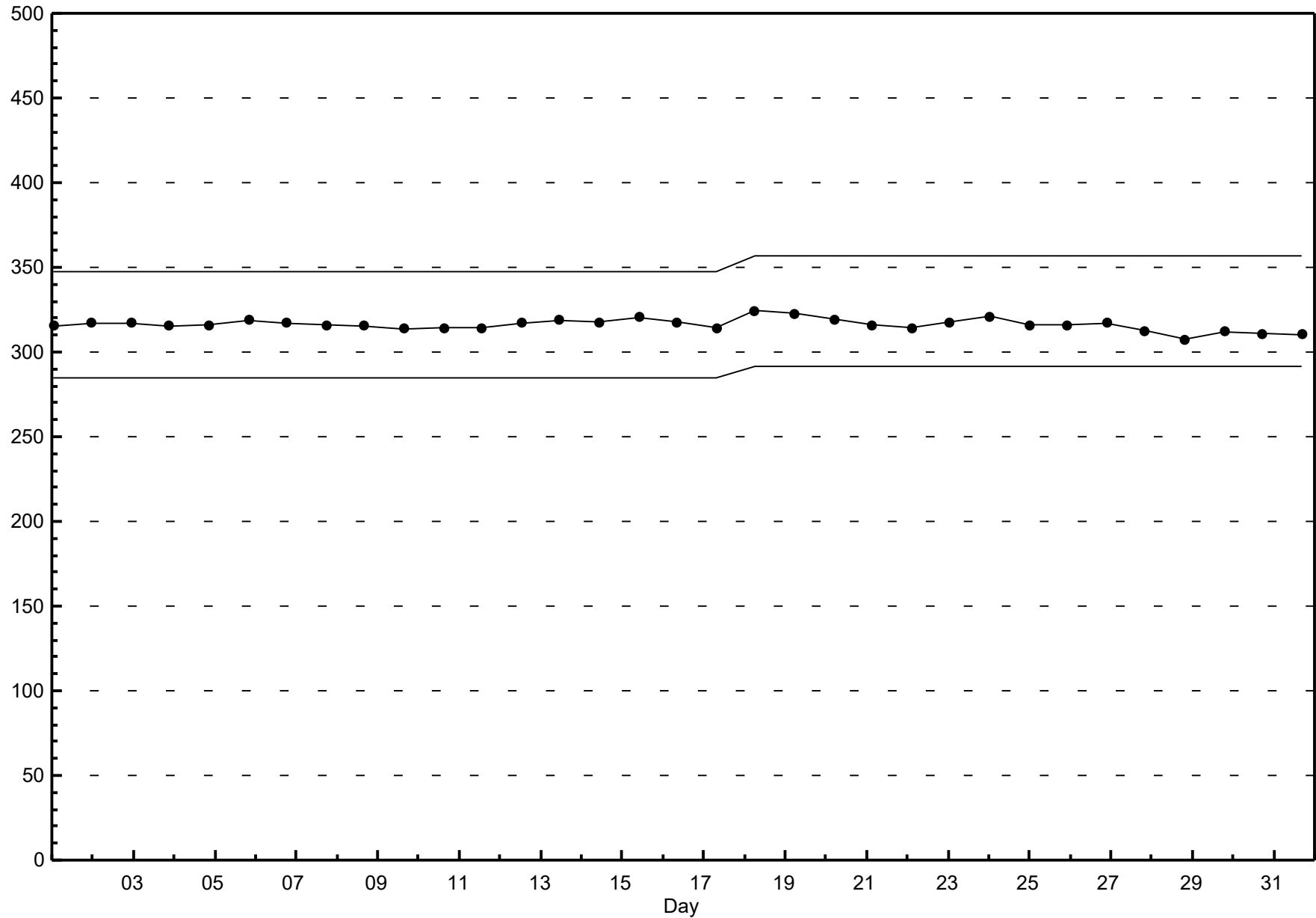


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - May 2017



Hourly Averages

Nitrogen Oxide (NO) - ppb

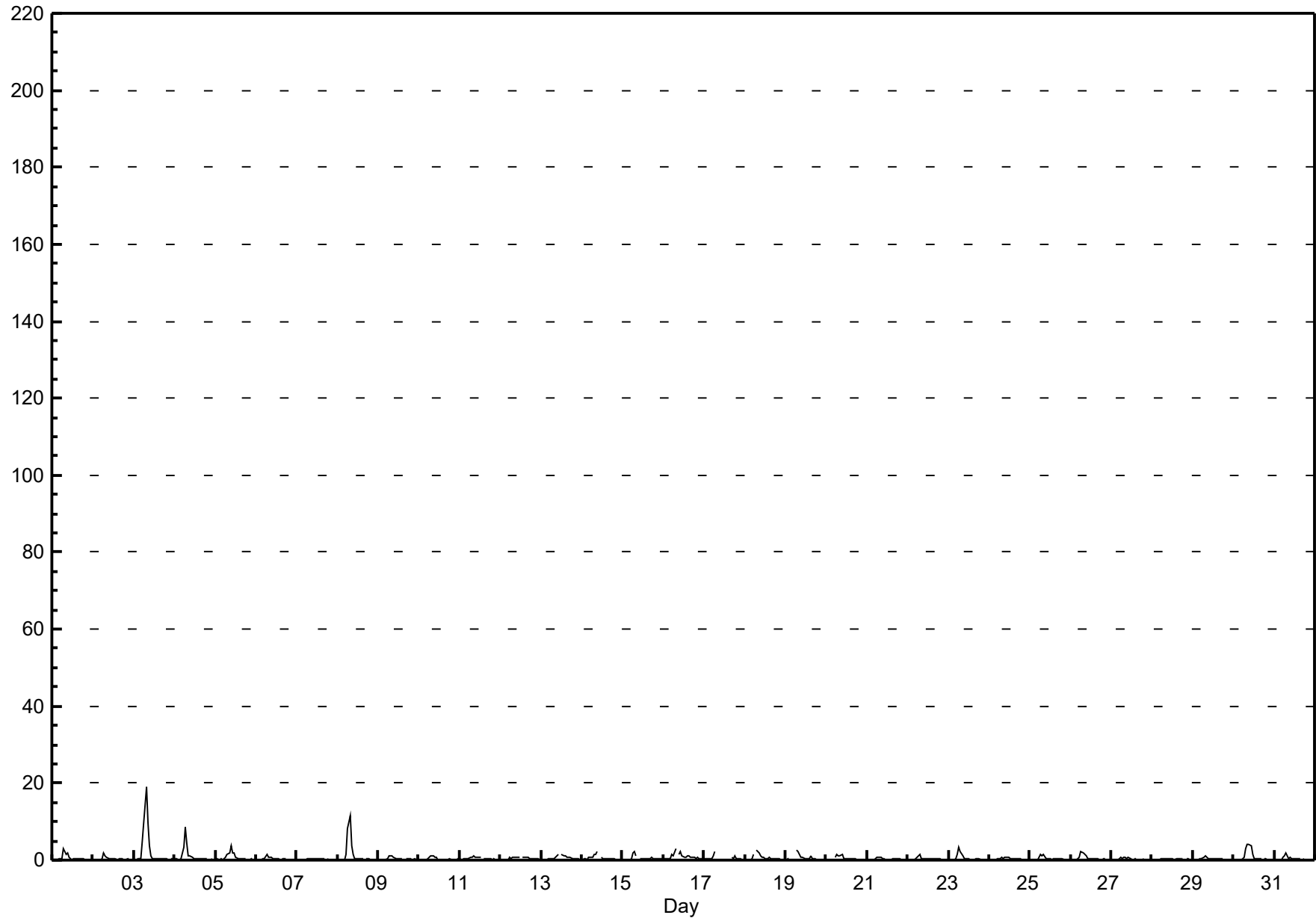
Henry Pirker - May 2017

Maximum Value: 18.9 ppb on May 3 08:00																				Maximum Daily Average: 2.3 ppb on May 3					Hours in Service: 744	
Minimum Value: 0 ppb on May 7 01:00																				Minimum Daily Average: 0.2 ppb on May 7					Hours of Data: 703	
Maximum Diurnal Average: 2.4 ppb at hour 8																				Minimum Diurnal Average: 0.1 ppb at hour 2					Hours of Missing Data: 41	
Monthly Average: 0.56 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 1.1 P ₉₉ = 3.0					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-May	A	0	0	0	0	0	3	2	2	2	1	0	0	0	0	0	0	1	0	0	0	0	0	A	0.6	2.8
2-May	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.7
3-May	0	0	0	0	0	5	10	19	10	4	1	1	0	0	0	0	0	0	0	0	0	A	0	0	2.3	18.9
4-May	0	0	0	0	0	3	9	4	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	1.1	8.6
5-May	0	0	0	0	0	0	1	1	2	4	2	2	1	1	1	0	0	0	0	A	0	0	0	0	0.7	3.6
6-May	0	0	0	0	0	1	2	1	1	1	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0.4	1.6
7-May	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-May	0	0	0	0	0	1	8	12	4	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	1.3	11.5
9-May	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	1.2
10-May	0	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	1.1
11-May	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0.4	1.0
12-May	0	0	0	0	0	1	0	1	1	1	1	1	A	1	1	1	1	1	0	1	0	0	0	0	0.5	0.9
13-May	0	0	0	0	0	0	0	1	1	1	2	A	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.5
14-May	0	0	0	0	1	1	1	1	1	2	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.4
15-May	0	0	0	0	0	1	2	2	1	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0.5	2.1
16-May	0	0	0	0	0	1	1	3	A	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0.9	3.0
17-May	0	0	0	1	1	1	2	A	C	C	C	C	C	C	C	C	1	0	1	0	0	0	0	0	--	2.1
18-May	0	0	0	0	0	1	A	3	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	2.6
19-May	0	0	0	0	0	A	3	2	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.6	2.7
20-May	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
21-May	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
22-May	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
23-May	0	A	0	0	0	1	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.5
24-May	A	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.8
25-May	0	0	0	0	0	1	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0.4	1.6
26-May	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.5	2.4
27-May	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.6
28-May	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
29-May	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	1.1
30-May	0	0	0	0	0	0	1	3	4	4	4	2	0	0	0	0	0	A	0	0	0	0	0	0	0.9	4.1
31-May	0	0	0	0	0	1	1	2	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	1.7
0.1 0.1 0.1 0.1 0.2 0.9 2.0 2.4 1.5 1.2 0.8 0.5 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.2 0.1 0.1 0.1																									Diurnal Average	
0.5 0.5 0.5 0.6 0.9 4.8 9.8 18.9 9.7 4.1 3.9 1.9 1.4 1.0 1.3 1.3 0.8 0.7 1.2 0.6 0.6 0.5 0.5 0.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - May 2017



Hourly Maximums

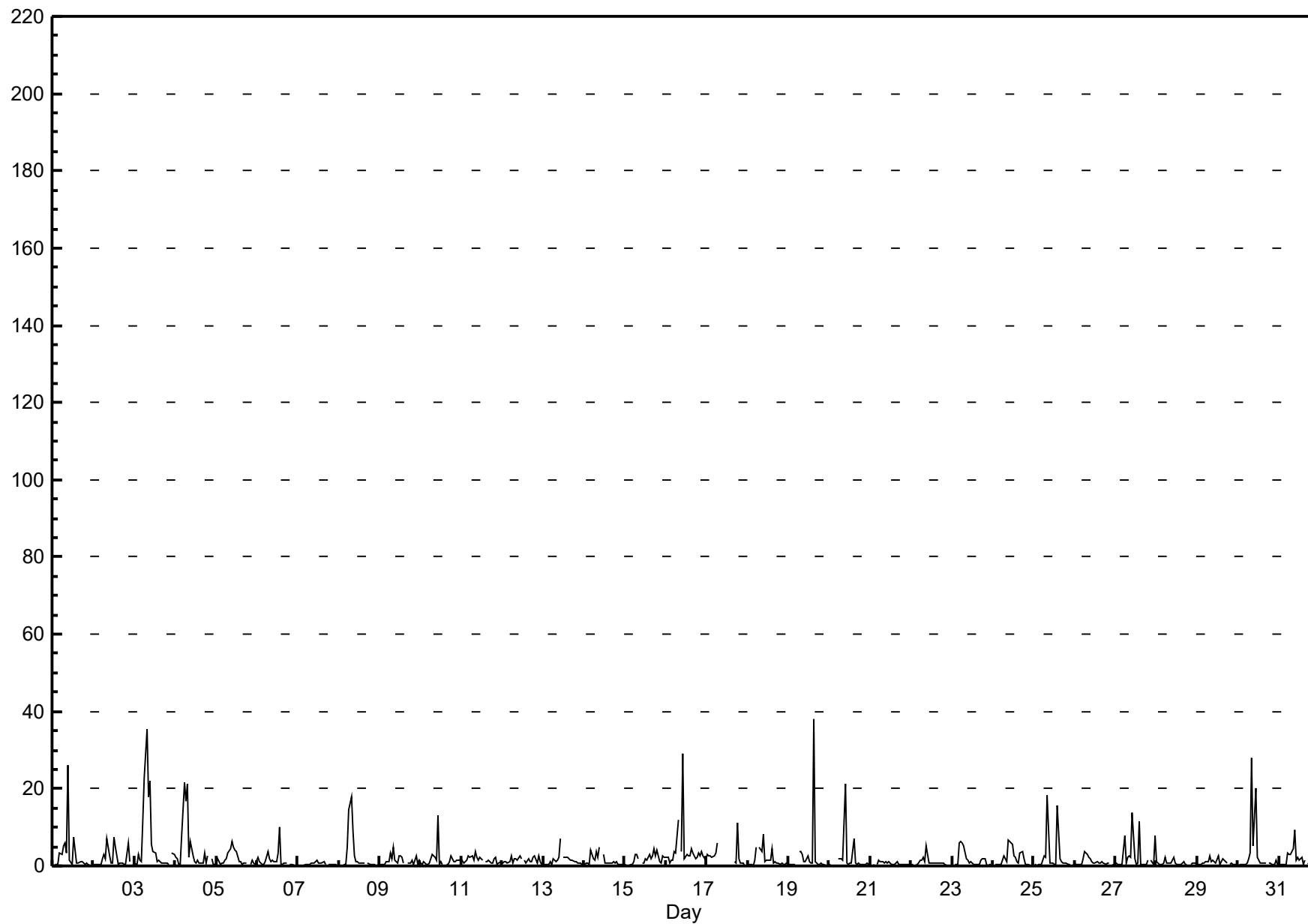
Nitrogen Oxide (NO) - ppb

Henry Pirker - May 2017

Maximum Value: 38.2 ppb on May 19 16:00																				Maximum Daily Average: 6.2 ppb on May 3					Hours in Service: 744				
Minimum Value: 0 ppb on May 24 23:00																				Minimum Daily Average: 0.5 ppb on May 7					Hours of Data: 703				
Maximum Diurnal Average: 5.3 ppb at hour 10																				Minimum Diurnal Average: 0.5 ppb at hour 4					Hours of Missing Data: 41				
Monthly Average: 2.02 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.9 Q ₃ = 2.0 P ₉₀ = 3.9 P ₉₉ = 21.5					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-May	A	0	0	0	3	3	5	6	3	26	1	0	7	4	1	1	1	1	1	0	1	0	0	A	3.0	26.0			
2-May	0	0	0	0	0	2	3	2	7	3	1	1	7	5	1	1	1	1	0	0	6	1	A	0	1.8	7.5			
3-May	1	0	3	1	1	11	23	36	18	22	5	4	3	1	2	1	1	1	1	1	0	A	3	3	6.2	35.5			
4-May	2	2	0	0	8	22	17	21	2	6	2	1	1	2	1	1	1	3	1	3	A	2	1	0	4.2	21.6			
5-May	1	2	0	1	1	1	2	4	5	7	5	4	4	1	1	1	1	1	1	A	0	2	1	0	1.9	6.5			
6-May	2	1	1	0	0	1	4	2	1	1	1	1	3	10	0	1	1	1	A	0	0	0	0	0	1.5	10.2			
7-May	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0.5	1.3			
8-May	0	0	0	0	0	5	15	18	9	2	1	1	1	1	1	1	A	1	0	0	0	0	0	0	2.5	17.9			
9-May	0	0	0	0	1	1	3	2	5	1	1	3	3	2	1	A	1	1	1	1	0	3	0	2	1.4	4.7			
10-May	1	0	1	0	0	1	2	3	2	1	13	0	1	0	A	0	0	1	3	1	1	1	1	2	1.7	12.9			
11-May	2	1	1	2	2	2	3	2	4	2	1	2	2	A	1	1	1	1	1	2	2	0	1	1	1.6	3.9			
12-May	1	1	1	1	1	2	1	2	2	1	3	2	A	1	1	2	1	1	2	3	1	3	1	0	1.5	2.8			
13-May	0	0	0	0	1	0	2	1	1	2	7	A	2	2	2	2	2	1	1	1	1	1	1	0	1.4	7.2			
14-May	0	1	1	0	4	2	1	4	2	5	A	3	1	1	1	1	1	1	1	1	0	0	0	0	1.3	4.9			
15-May	0	0	0	0	0	1	3	3	2	A	1	1	2	1	3	2	3	5	3	4	1	1	3	2	1.7	4.6			
16-May	2	2	1	1	1	4	3	12	A	4	29	2	3	3	3	5	3	2	2	3	2	4	3	1	4.2	29.2			
17-May	3	3	3	2	2	3	6	A	C	C	C	C	C	C	C	C	1	1	11	2	1	1	0	0	--	11.1			
18-May	0	0	0	0	1	5	A	5	4	8	1	1	1	1	5	1	1	1	1	1	1	0	0	1	1.8	8.2			
19-May	0	0	0	0	0	A	4	4	3	1	1	3	1	1	1	38	1	1	0	1	0	0	0	0	2.7	38.2			
20-May	1	0	0	0	A	2	2	2	1	21	1	1	1	1	7	1	1	1	0	0	0	0	1	0	1.9	21.2			
21-May	0	0	0	A	0	2	1	1	1	1	1	0	0	0	0	1	1	0	1	1	0	0	0	0	0.6	1.6			
22-May	0	0	A	0	0	1	2	2	1	5	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.9	5.2			
23-May	0	A	0	0	6	6	6	5	2	2	1	1	1	0	0	0	1	2	2	2	0	0	0	0	1.6	6.2			
24-May	A	0	0	0	0	1	2	2	1	7	6	6	3	2	1	1	3	4	2	1	1	0	0	A	2.0	6.9			
25-May	0	0	0	0	0	2	3	2	18	1	1	1	1	1	16	2	1	1	1	1	1	0	A	0	2.2	18.4			
26-May	1	0	0	0	0	2	4	3	2	2	1	1	1	1	1	1	1	1	0	1	1	A	0	0	1.0	3.9			
27-May	1	1	0	0	0	8	1	2	3	2	14	2	0	1	12	0	0	0	1	2	A	1	0	8	2.6	13.8			
28-May	1	1	1	0	1	2	1	1	1	1	2	1	1	0	1	1	1	1	0	A	1	1	1	1	0.8	2.1			
29-May	0	0	1	1	1	1	1	3	1	1	1	1	3	1	1	2	2	1	A	0	1	0	0	0	1.0	2.8			
30-May	0	0	0	0	0	1	2	3	28	5	20	2	1	1	1	1	1	A	1	1	0	0	2	0	3.1	27.9			
31-May	0	0	0	0	0	3	3	3	5	9	1	2	1	2	1	2	A	1	0	0	0	0	0	0	1.6	9.5			
0.7 0.6 0.6 0.5 1.3 3.3 4.1 5.1 4.7 5.3 4.3 1.7 1.9 1.7 2.2 2.3 1.1 1.2 1.3 1.1 0.8 0.8 0.7 0.9																									Diurnal Average				
3.1 2.6 2.8 2.1 7.7 21.6 22.9 35.5 27.9 26.0 29.2 5.6 7.5 10.2 15.6 38.2 3.3 4.6 11.1 4.3 6.0 3.7 3.5 8.0																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

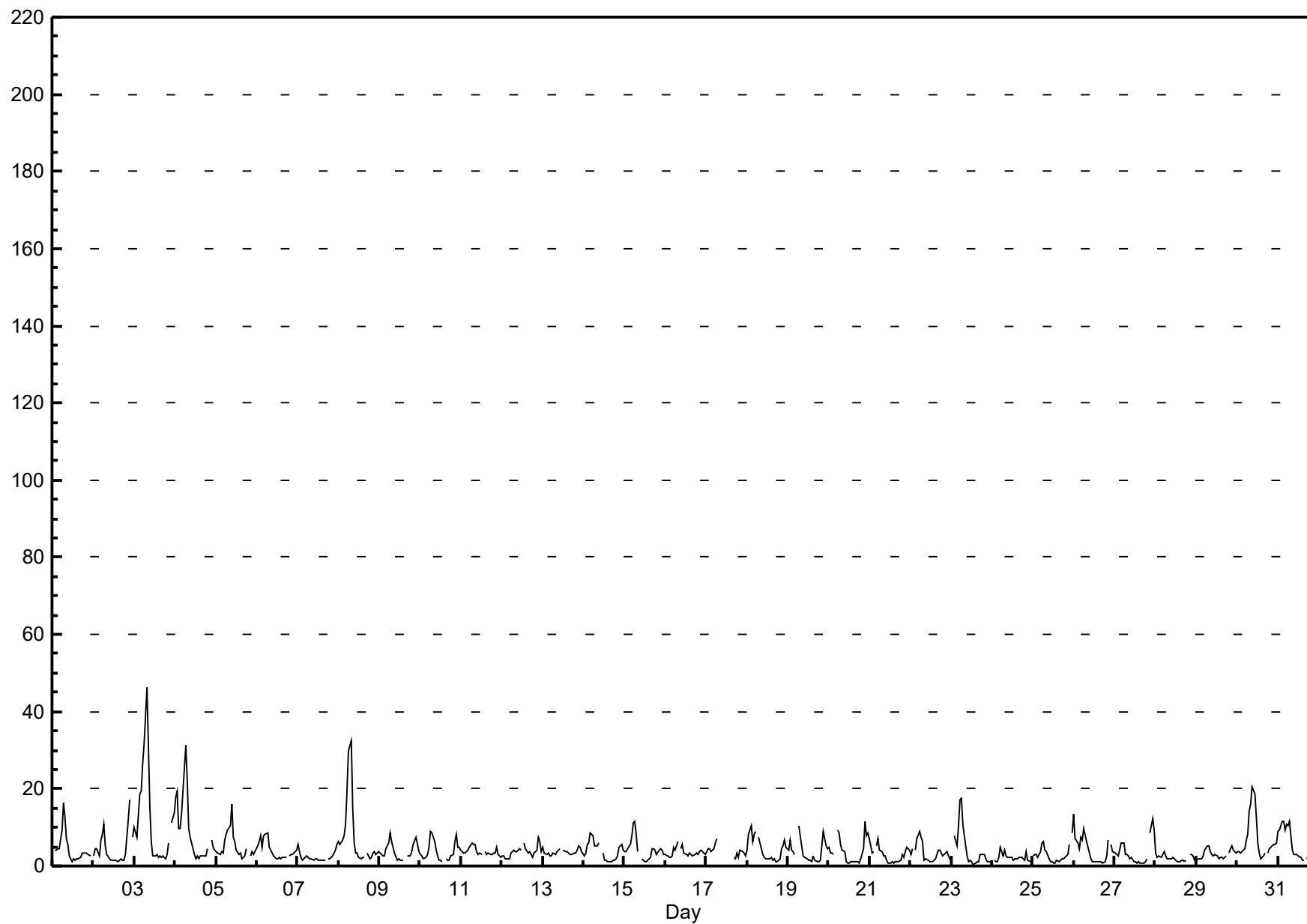
Henry Pirker - May 2017

Maximum Value: 46.2 ppb on May 3 08:00																				Maximum Daily Average: 12.1 ppb on May 3					Hours in Service: 744	
Minimum Value: 1 ppb on May 23 14:00																				Minimum Daily Average: 2.1 ppb on May 28					Hours of Data: 703	
Maximum Diurnal Average: 9.8 ppb at hour 7																				Minimum Diurnal Average: 1.9 ppb at hour 14					Hours of Missing Data: 41	
Monthly Average: 4.45 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.3 Q ₁ = 2.0 Median = 3.2 Q ₃ = 5.0 P ₉₀ = 8.6 P ₉₉ = 24.6					Hours of Calibration: 41	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	A	4	4	5	4	9	17	13	7	6	3	1	2	2	2	2	3	3	3	4	3	3	A	4.6	16.5	
2-May	3	5	5	3	7	8	11	5	3	2	1	1	1	1	1	1	2	2	2	3	12	17	A	7	4.5	
3-May	10	7	13	19	19	26	32	46	31	15	6	3	2	3	2	3	2	3	2	3	6	A	11	14	12.1	
4-May	18	19	10	10	13	25	31	22	10	7	5	3	2	2	2	3	3	3	3	4	A	7	5	4	9.2	
5-May	4	3	3	4	3	7	8	9	11	16	8	6	4	3	3	2	2	2	4	A	3	4	3	4	5.0	
6-May	5	7	8	5	8	8	9	5	4	4	2	2	2	2	2	2	2	2	A	3	3	3	4	4	4.1	
7-May	6	4	2	1	2	3	2	2	2	2	2	2	2	2	1	2	1	A	2	2	3	3	4	6	2.4	
8-May	6	5	7	8	11	19	30	33	15	6	3	3	2	2	2	2	A	3	2	2	4	4	3	4	7.7	
9-May	3	3	3	3	5	6	9	6	5	3	2	2	2	2	1	2	A	3	3	4	5	8	5	4	3.8	
10-May	3	3	2	2	3	5	9	9	6	4	3	2	2	1	A	2	2	2	3	3	6	8	5	5	3.8	
11-May	4	3	4	4	4	5	6	6	6	4	3	3	3	A	4	3	3	3	3	3	3	5	3	2	3.7	
12-May	3	2	2	2	2	3	4	4	4	4	4	4	A	6	5	3	4	3	2	3	4	8	7	4	3.7	
13-May	5	3	3	3	3	3	3	3	4	4	4	A	4	4	4	3	3	3	3	3	4	5	5	4	3.6	
14-May	3	3	6	6	9	8	5	5	5	6	A	3	2	1	1	1	1	2	2	2	3	5	6	4	3.8	
15-May	4	4	4	5	8	11	12	8	4	A	2	1	1	1	2	2	4	4	4	3	4	4	4	3	4.4	
16-May	3	2	2	2	3	5	4	6	A	4	5	4	3	3	3	3	3	3	3	3	4	4	4	3	3.4	
17-May	4	5	4	4	4	6	7	A	C	C	C	C	C	C	C	C	C	2	2	3	2	4	4	3	--	
18-May	4	8	11	6	8	9	A	7	4	3	2	2	2	2	2	1	2	1	1	2	5	5	7	5	4.3	
19-May	4	7	4	4	3	A	10	8	5	2	2	2	1	2	1	3	2	1	1	1	5	9	5	4	3.8	
20-May	5	3	3	3	A	9	9	5	4	4	1	1	1	1	1	1	1	1	1	2	5	11	8	9	3.9	
21-May	7	3	4	A	5	7	4	4	3	2	1	1	1	1	1	1	1	1	2	3	2	4	5	4	2.9	
22-May	3	4	A	4	7	9	8	6	1	2	1	1	1	1	1	2	4	4	4	3	3	4	3	2	3.4	
23-May	2	A	8	5	10	17	18	11	5	2	1	2	1	1	1	1	1	3	3	3	2	1	1	1	4.4	
24-May	A	1	1	1	2	5	3	4	3	2	2	2	1	2	2	2	2	2	2	1	4	1	1	A	2.2	
25-May	3	3	3	2	4	6	6	4	4	2	1	1	1	1	1	1	2	2	2	2	3	6	A	8	2.9	
26-May	13	7	6	4	7	7	10	6	5	3	2	1	1	1	1	1	1	1	1	3	7	A	6	4	4.3	
27-May	4	3	2	4	6	6	3	3	3	2	2	1	1	1	1	1	1	1	1	2	A	8	12	9	3.3	
28-May	3	2	3	2	3	4	3	2	2	2	2	2	1	1	1	1	1	1	1	A	3	3	3	2	2.1	
29-May	2	2	2	2	3	4	5	5	4	3	3	3	2	2	2	2	2	3	A	3	5	5	4	4	3.1	
30-May	4	4	3	4	5	7	8	14	16	20	18	13	6	3	2	2	3	A	3	4	5	6	5	6	7.1	
31-May	9	9	12	11	9	11	11	12	4	3	3	3	3	2	1	1	A	2	2	2	3	3	8	13	6.0	
5.0 4.7 4.8 4.6 6.0 8.6 9.8 9.1 6.1 4.8 3.3 2.6 2.0 1.9 1.9 1.9 2.2 2.2 2.3 2.7 4.2 5.4 4.9 4.9																									Diurnal Average	
18.1 19.5 13.2 18.6 19.5 26.3 31.5 46.2 31.1 20.4 18.5 12.8 6.0 6.0 4.6 3.4 4.3 4.4 4.4 4.4 12.0 17.1 12.4 13.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - May 2017



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

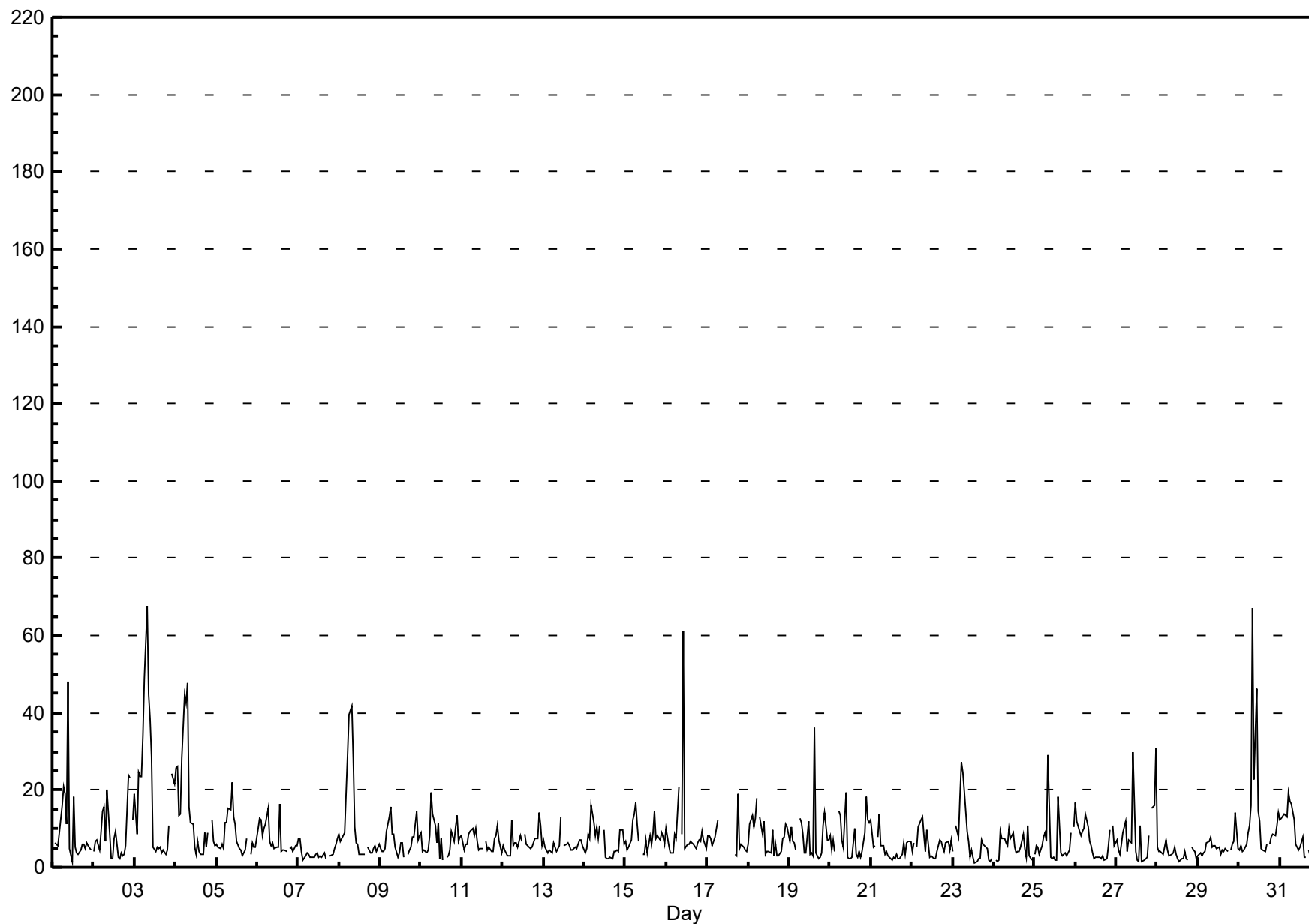
Henry Pirker - May 2017

Maximum Value: 67.4 ppb on May 3 08:00																				Maximum Daily Average: 20.0 ppb on May 3					Hours in Service: 744	
Minimum Value: 1 ppb on May 23 14:00																				Minimum Daily Average: 3.7 ppb on May 28					Hours of Data: 703	
Maximum Diurnal Average: 14.7 ppb at hour 7																				Minimum Diurnal Average: 4.1 ppb at hour 17					Hours of Missing Data: 41	
Monthly Average: 8.05 ppb																				Percentiles: P ₁ = 1.7 P ₁₀ = 2.7 Q ₁ = 4.0 Median = 5.8 Q ₃ = 9.1 P ₉₀ = 14.4 P ₉₉ = 45.6					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-May	A	6	6	6	9	16	21	19	11	48	5	2	18	5	4	3	4	6	6	5	6	5	5	A	9.8	48.1
2-May	4	7	7	5	9	15	15	7	20	9	2	2	7	9	2	2	4	3	4	5	24	23	A	12	8.6	23.9
3-May	19	9	25	23	23	34	49	67	45	38	29	5	4	5	5	5	4	5	4	4	11	A	24	22	20.0	67.4
4-May	26	26	14	14	28	45	42	48	15	11	11	5	3	7	4	3	3	9	5	9	A	12	7	5	15.4	47.6
5-May	6	5	5	6	5	11	12	15	15	22	13	11	7	5	4	3	4	4	7	A	4	6	5	5	7.9	22.1
6-May	10	13	12	8	10	11	15	7	6	6	5	5	5	16	4	4	5	4	A	5	5	4	6	6	7.5	16.5
7-May	7	7	4	2	3	4	3	3	3	3	3	4	3	3	3	4	2	A	3	3	3	5	6	8	3.8	7.6
8-May	8	7	8	9	19	29	40	42	28	10	6	6	4	3	3	3	A	5	4	4	5	6	4	6	11.3	41.9
9-May	5	4	4	5	9	13	16	9	9	5	3	4	6	6	3	A	3	5	5	8	8	14	7	8	6.9	15.7
10-May	9	4	4	4	4	8	19	14	11	6	11	2	8	2	A	3	3	5	9	7	11	14	7	8	7.5	19.4
11-May	8	5	6	6	8	9	10	8	10	7	4	5	5	A	7	5	5	4	4	7	8	11	7	4	6.6	10.7
12-May	6	4	4	3	3	12	5	6	6	5	8	7	A	8	6	5	5	5	6	8	7	14	11	6	6.6	14.3
13-May	7	5	4	4	4	4	6	4	5	6	13	A	6	6	6	6	4	4	5	5	6	7	7	6	5.7	13.0
14-May	4	5	9	7	16	11	8	10	7	11	A	10	2	2	2	3	2	4	4	4	4	10	10	6	6.6	15.9
15-May	7	4	5	7	12	14	17	11	7	A	3	3	7	4	8	6	9	14	7	8	7	9	8	6	8.0	16.8
16-May	10	6	4	4	4	9	7	21	A	9	61	5	6	6	7	6	6	5	6	7	7	9	7	5	9.4	61.0
17-May	8	8	8	6	8	10	12	A	C	C	C	C	C	C	C	C	3	3	19	5	6	5	4	4	--	19.1
18-May	6	11	13	11	13	18	A	13	9	12	3	4	4	4	10	3	6	3	3	4	7	8	11	10	8.0	18.0
19-May	7	11	7	6	5	A	13	12	9	4	4	12	3	4	3	36	4	2	2	4	11	14	7	7	8.0	36.0
20-May	8	5	7	4	A	14	13	7	5	19	3	2	2	3	10	3	2	4	3	4	9	18	12	11	7.4	19.3
21-May	12	5	6	A	8	14	5	6	3	4	3	3	2	2	2	3	2	2	3	6	3	6	7	7	5.0	13.9
22-May	4	6	A	5	11	12	13	8	4	10	3	3	3	2	2	4	7	7	5	4	6	7	4	7	6.0	13.1
23-May	4	A	11	8	18	27	25	20	9	7	2	4	3	1	2	2	2	7	6	5	5	2	2	2	7.6	27.0
24-May	A	2	2	2	9	8	7	6	6	10	8	9	5	4	4	4	5	9	5	3	11	3	2	A	5.6	10.7
25-May	3	5	5	3	6	8	9	7	29	2	2	3	2	2	18	4	3	3	4	3	5	9	A	10	6.3	29.0
26-May	17	12	9	8	9	10	14	10	7	6	4	2	2	3	3	2	3	2	2	6	10	A	11	6	6.8	16.7
27-May	7	4	3	6	9	12	4	7	7	6	30	4	2	2	11	1	2	2	3	8	A	15	16	31	8.4	31.1
28-May	5	4	4	3	5	7	4	3	3	4	5	3	2	2	2	2	4	2	2	A	5	5	4	2	3.7	7.1
29-May	3	4	3	4	4	6	7	8	5	6	6	5	5	3	5	4	5	4	A	4	6	7	14	5	5.3	14.3
30-May	5	6	4	5	6	9	11	16	67	23	46	14	12	5	4	4	6	A	6	8	9	8	11	14	12.9	67.1
31-May	12	13	14	13	13	19	17	16	12	6	5	5	5	8	3	3	A	5	3	3	5	5	11	17	9.3	19.3
8.2 7.1 7.2 6.5 9.7 14.0 14.7 14.3 12.8 10.8 10.4 5.2 5.0 4.6 5.1 4.8 4.1 4.7 5.0 5.4 7.4 9.0 8.1 8.5																								Diurnal Average		
25.7 26.0 24.6 23.4 28.4 44.9 48.9 67.4 67.1 48.1 61.0 14.5 18.2 16.5 18.5 36.0 8.9 14.4 19.1 9.1 23.9 23.2 24.4 31.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

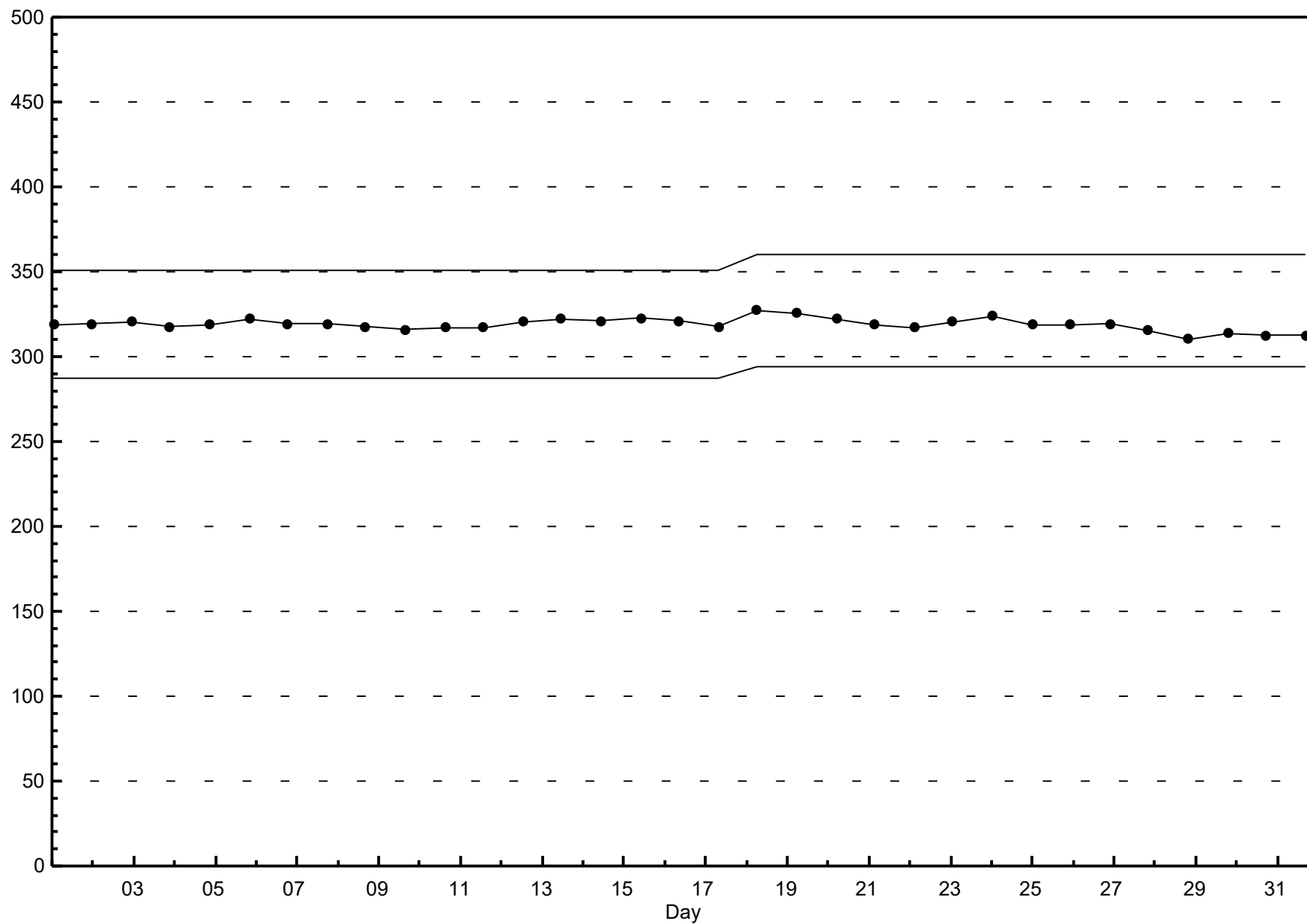
Henry Pirker - May 2017



Span Responses

Oxides of Nitrogen (NO_x)

Henry Pirker - May 2017



Hourly Averages

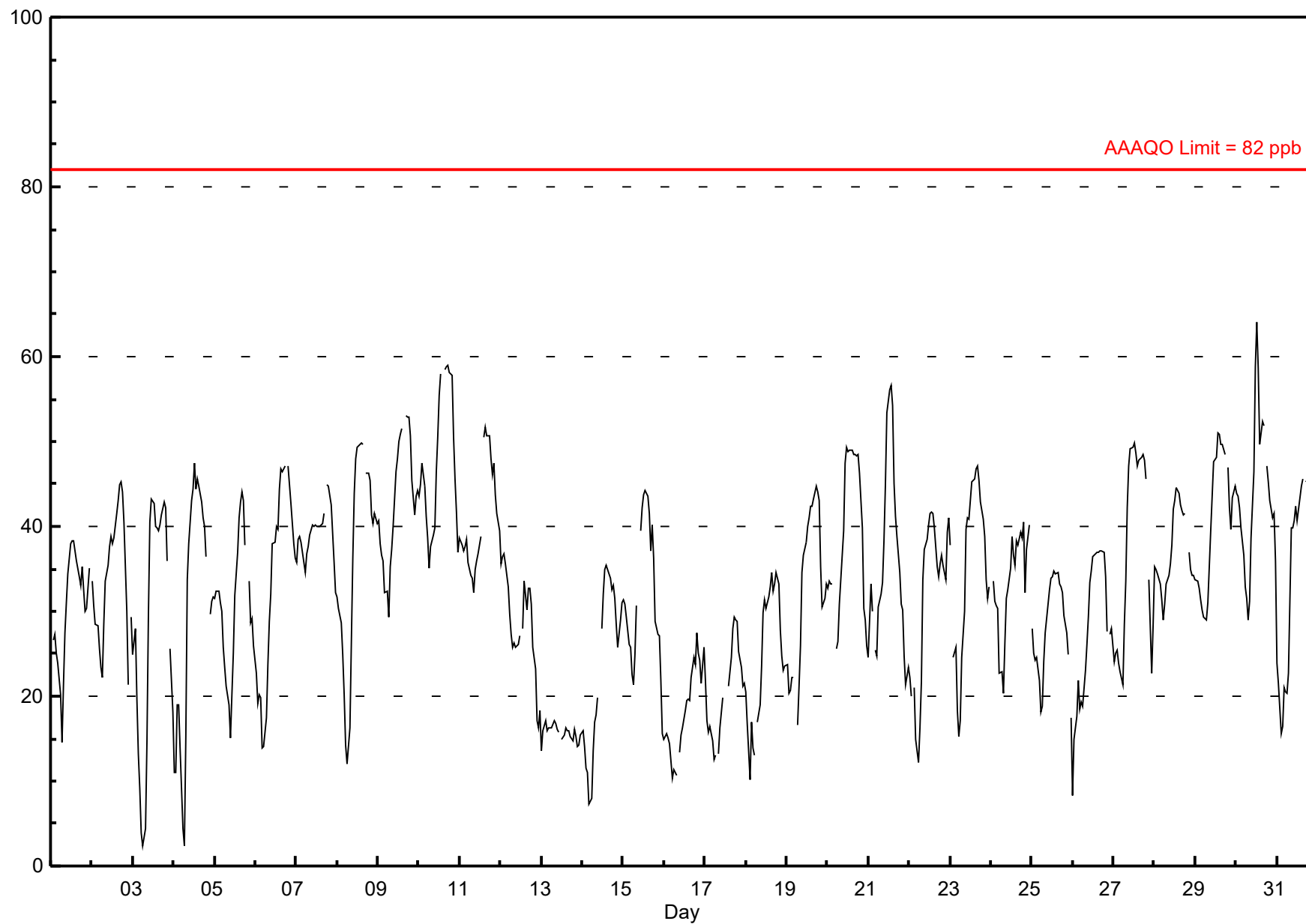
Ozone (O₃) - ppb

Henry Pirker - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 64.0 ppb on May 30 13:00 Maximum Daily Average: 47.4 ppb on May 10																				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 May 4 07:00 Maximum Diurnal Average: 41.3 ppb at hour 14 Monthly Average: 32.70 ppb										Minimum Daily Average: 15.7 ppb on May 13 Minimum Diurnal Average: 21.0 ppb at hour 6 Percentiles: P ₁ = 8.0 P ₁₀ = 16.3 Q ₁ = 24.5 Median = 33.6 Q ₃ = 41.0 P ₉₀ = 46.9 P ₉₉ = 58.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	A	27	27	25	24	20	15	21	27	31	34	38	38	37	36	34	33	35	32	30	30	35	A	30.4	38.4	
2-May	34	31	28	28	26	23	22	28	34	35	38	39	38	39	41	43	45	44	41	30	21	A	29	34.0	45.3	
3-May	25	28	20	13	9	4	2	4	15	29	41	43	43	40	39	40	41	43	42	36	A	26	18	27.9	43.3	
4-May	11	11	19	19	14	4	2	15	34	38	43	44	47	44	46	45	43	41	40	36	A	30	31	32	30.0	47.5
5-May	32	32	32	31	30	26	23	21	19	15	20	25	32	37	41	43	44	43	38	A	34	29	29	26	30.5	44.1
6-May	23	19	20	20	14	14	18	24	29	32	38	38	40	40	44	47	46	47	A	47	45	43	38	36	33.1	47.2
7-May	36	38	39	38	36	35	37	38	39	40	40	40	40	40	40	40	41	A	45	45	43	39	36	32	39.0	44.9
8-May	32	30	29	25	20	14	12	16	26	36	44	48	49	50	50	50	A	46	46	45	41	40	42	40	36.2	49.9
9-May	41	38	37	36	32	32	29	35	37	40	46	48	50	51	52	A	53	53	51	45	41	43	44	44	43.0	53.0
10-May	44	45	47	45	41	39	35	38	39	40	46	50	55	58	A	58	59	59	58	58	50	46	42	37	47.4	59.0
11-May	39	38	37	38	39	36	34	34	32	35	36	37	39	A	50	52	51	51	48	46	48	44	42	40	41.0	51.7
12-May	36	36	37	36	33	30	27	26	26	26	26	27	A	28	33	30	33	33	31	26	23	17	16	18	28.4	36.8
13-May	13	16	17	16	16	16	16	17	17	16	16	A	15	15	16	16	16	15	15	16	15	14	14	15	15.7	17.1
14-May	16	14	12	11	7	8	14	17	18	20	A	28	32	35	35	35	34	33	33	32	29	26	29	31	23.8	35.4
15-May	31	31	29	26	26	22	21	25	31	A	40	42	44	44	44	42	37	40	36	29	27	27	22	16	31.8	44.2
16-May	15	16	15	14	12	10	11	11	A	13	15	16	18	19	20	19	22	25	24	27	25	24	22	26	18.3	27.5
17-May	22	17	16	16	15	13	13	A	13	16	20	C	C	C	21	25	28	29	29	29	25	23	21	21	20.6	29.3
18-May	21	17	10	17	14	13	A	17	19	24	30	31	30	32	33	35	32	33	34	33	28	25	23	24	25.0	34.5
19-May	24	20	21	22	22	A	17	21	26	35	37	38	40	41	42	42	43	45	44	43	35	30	31	33	32.7	44.8
20-May	33	34	33	33	A	26	26	31	34	39	47	49	49	49	49	49	48	48	48	46	40	30	29	26	39.0	49.3
21-May	25	33	30	A	25	25	30	32	33	38	45	53	56	57	54	45	41	39	35	31	30	25	21	23	36.0	56.6
22-May	22	20	A	21	15	12	16	22	34	37	38	40	41	42	42	40	35	34	36	37	35	34	39	41	31.9	41.6
23-May	38	A	25	26	18	15	17	25	30	40	41	41	43	45	46	47	47	45	43	41	39	34	32	33	35.2	47.2
24-May	A	34	31	31	30	23	23	20	26	31	33	35	39	37	35	38	38	39	39	40	32	37	40	A	33.3	40.4
25-May	28	25	24	25	22	18	19	24	28	31	32	34	34	35	34	35	33	33	32	30	27	25	A	18	28.0	34.7
26-May	8	15	18	22	18	19	19	23	26	29	33	35	36	37	37	37	37	37	37	34	28	A	27	28	27.9	37.1
27-May	24	25	25	24	23	21	29	34	42	47	49	49	50	49	47	48	48	48	46	A	34	23	29	37.4	49.8	
28-May	35	35	34	33	31	29	31	33	34	36	38	42	43	45	44	43	42	41	42	A	37	35	34	34	37.0	44.6
29-May	34	33	33	31	30	29	29	31	35	39	44	48	48	51	51	50	50	49	A	47	42	40	43	45	40.5	51.1
30-May	44	43	42	40	37	33	32	29	31	39	46	59	64	59	50	52	52	A	47	45	43	41	41	36	43.7	64.0
31-May	24	22	16	16	21	20	20	23	40	40	41	42	41	43	45	46	A	45	45	44	41	39	31	23	33.4	45.5
27.8 27.4 26.8 26.0 23.4 21.0 21.3 24.5 29.1 32.3 36.6 40.1 41.2 41.3 40.7 40.8 40.5 40.4 39.6 38.6 34.6 31.8 31.1 29.4																								Diurnal Average		
43.9 44.8 47.4 44.8 41.1 38.7 36.7 37.7 42.2 47.1 49.1 58.8 64.0 58.7 54.3 58.5 58.8 59.0 58.2 57.8 50.4 45.6 43.5 44.7																								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 - May 2017



Hourly Maximums

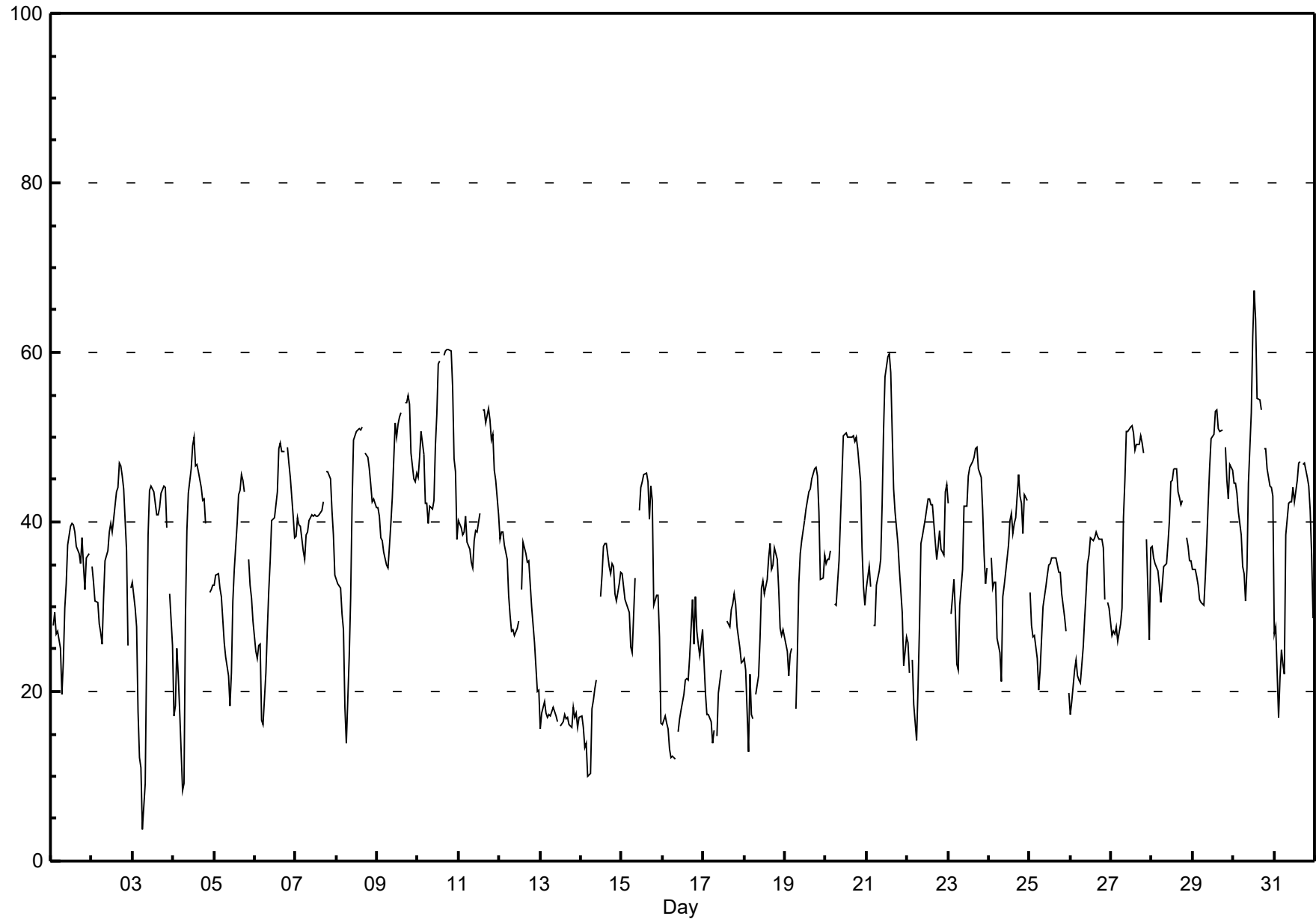
Ozone (O₃) - ppb

Henry Pirker - May 2017

Maximum Value: 67.3 ppb on May 30 13:00																					Maximum Daily Average: 49.9 ppb on May 10				Hours in Service: 744		
Minimum Value: 4 ppb on May 3 07:00																					Minimum Daily Average: 17.0 ppb on May 13				Hours of Data: 708		
Maximum Diurnal Average: 43.3 ppb at hour 14																					Minimum Diurnal Average: 24.0 ppb at hour 6				Hours of Missing Data: 36		
Monthly Average: 35.28 ppb																					Percentiles: P ₁ = 11.9 P ₁₀ = 18.8 Q ₁ = 27.5 Median = 35.7 Q ₃ = 43.3 P ₉₀ = 49.2 P ₉₉ = 60.2				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-May	A	28	29	27	27	25	20	24	30	33	37	40	40	40	39	37	36	35	38	35	32	36	36	A	32.8	39.9	
2-May	35	33	31	30	28	27	26	31	35	37	39	40	39	40	44	44	47	47	45	44	37	25	A	32	36.3	46.9	
3-May	33	30	28	18	12	11	4	9	25	38	44	44	44	42	41	41	42	43	44	44	39	A	32	25	31.8	44.3	
4-May	17	18	25	22	18	8	9	29	39	43	46	49	50	47	47	46	44	43	43	40	A	32	32	33	33.9	50.0	
5-May	33	34	34	32	31	28	26	24	22	18	22	31	34	40	43	44	46	45	44	A	36	33	31	28	32.9	45.6	
6-May	25	24	25	26	17	16	22	27	32	35	40	41	42	43	49	49	48	48	A	49	47	45	41	38	36.1	49.3	
7-May	38	41	40	39	37	36	38	39	40	41	41	41	41	41	41	41	42	A	46	46	45	41	38	34	40.3	46.0	
8-May	33	33	32	29	27	18	14	24	31	42	50	50	51	51	51	51	A	48	48	46	44	42	43	42	39.2	51.2	
9-May	42	41	38	38	36	35	35	37	40	43	52	50	52	52	53	A	54	54	55	54	48	45	45	46	45.4	54.9	
10-May	45	48	51	48	42	42	40	42	42	43	49	53	59	59	A	60	60	60	60	60	60	56	47	46	38	49.9	60.3
11-May	40	39	38	39	41	38	37	35	35	38	39	39	41	A	53	53	52	53	52	50	50	46	45	41	43.2	53.4	
12-May	38	39	39	37	36	31	29	27	27	27	27	28	A	32	38	36	35	35	33	30	26	23	20	20	31.0	38.8	
13-May	16	17	19	17	17	17	17	18	18	17	16	A	16	16	17	17	17	16	16	18	17	17	16	17	17.0	18.9	
14-May	17	16	13	14	10	10	18	19	20	21	A	31	34	37	37	37	35	34	35	35	32	31	33	34	26.2	37.4	
15-May	34	32	31	30	29	25	25	29	33	A	41	44	45	46	46	45	40	44	42	30	31	31	26	16	34.7	45.8	
16-May	16	17	16	16	13	12	12	12	A	15	17	18	20	21	21	21	24	31	26	31	27	26	24	27	20.2	31.2	
17-May	24	20	17	17	16	14	15	A	15	20	22	C	C	C	28	28	30	30	32	30	28	25	23	24	22.9	31.6	
18-May	24	23	13	22	17	17	A	20	22	26	32	33	31	33	36	37	34	35	37	36	32	28	27	27	27.9	37.4	
19-May	26	25	22	24	25	A	18	24	33	36	38	40	42	43	44	44	45	46	46	45	41	33	33	36	35.2	46.4	
20-May	35	36	36	37	A	30	30	33	35	45	50	50	50	50	50	50	50	50	50	49	45	37	32	30	41.7	50.4	
21-May	32	35	32	A	28	28	33	34	36	42	51	57	60	60	58	51	44	41	37	34	32	29	23	26	39.2	59.8	
22-May	26	22	A	24	18	14	20	28	37	38	40	41	43	43	42	42	38	36	37	39	37	36	44	44	34.3	44.4	
23-May	42	A	29	33	29	23	23	30	34	42	42	42	45	46	47	48	49	49	46	45	41	36	33	35	38.7	48.8	
24-May	A	36	32	33	33	26	25	21	31	33	34	37	40	41	39	40	40	46	43	42	39	43	43	A	36.2	45.6	
25-May	32	28	26	27	24	20	23	26	30	32	34	35	35	36	36	36	35	34	34	32	29	27	A	20	30.0	35.8	
26-May	17	19	23	24	22	21	21	25	29	32	35	36	38	38	38	39	38	38	38	37	31	A	31	30	30.4	38.9	
27-May	27	27	27	28	26	28	30	40	45	51	51	51	51	51	49	49	49	50	49	48	A	38	26	37	40.3	51.3	
28-May	37	36	35	34	33	30	32	35	35	38	40	45	45	46	46	44	43	42	42	A	38	37	35	35	38.5	46.3	
29-May	34	34	34	33	31	30	30	33	38	42	46	50	50	53	53	51	51	51	A	49	45	43	47	46	42.4	53.2	
30-May	45	45	43	41	38	35	34	31	35	45	53	62	67	64	55	54	53	A	49	49	46	44	44	43	46.7	67.3	
31-May	27	28	17	22	25	23	22	39	42	42	42	44	42	45	47	47	A	47	47	45	44	41	36	29	36.7	47.2	
30.6 30.0 29.2 28.7 26.2 24.0 24.2 28.2 32.2 35.2 39.1 42.1 43.0 43.3 42.9 42.7 42.1 42.5 41.9 41.1 37.7 35.1 33.9 32.2																									Diurnal Average		
45.3 47.7 50.6 47.9 42.2 42.2 39.8 41.8 44.8 50.7 52.9 61.9 67.3 63.8 57.7 59.6 60.2 60.3 60.3 60.2 55.9 47.5 46.7 46.1																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

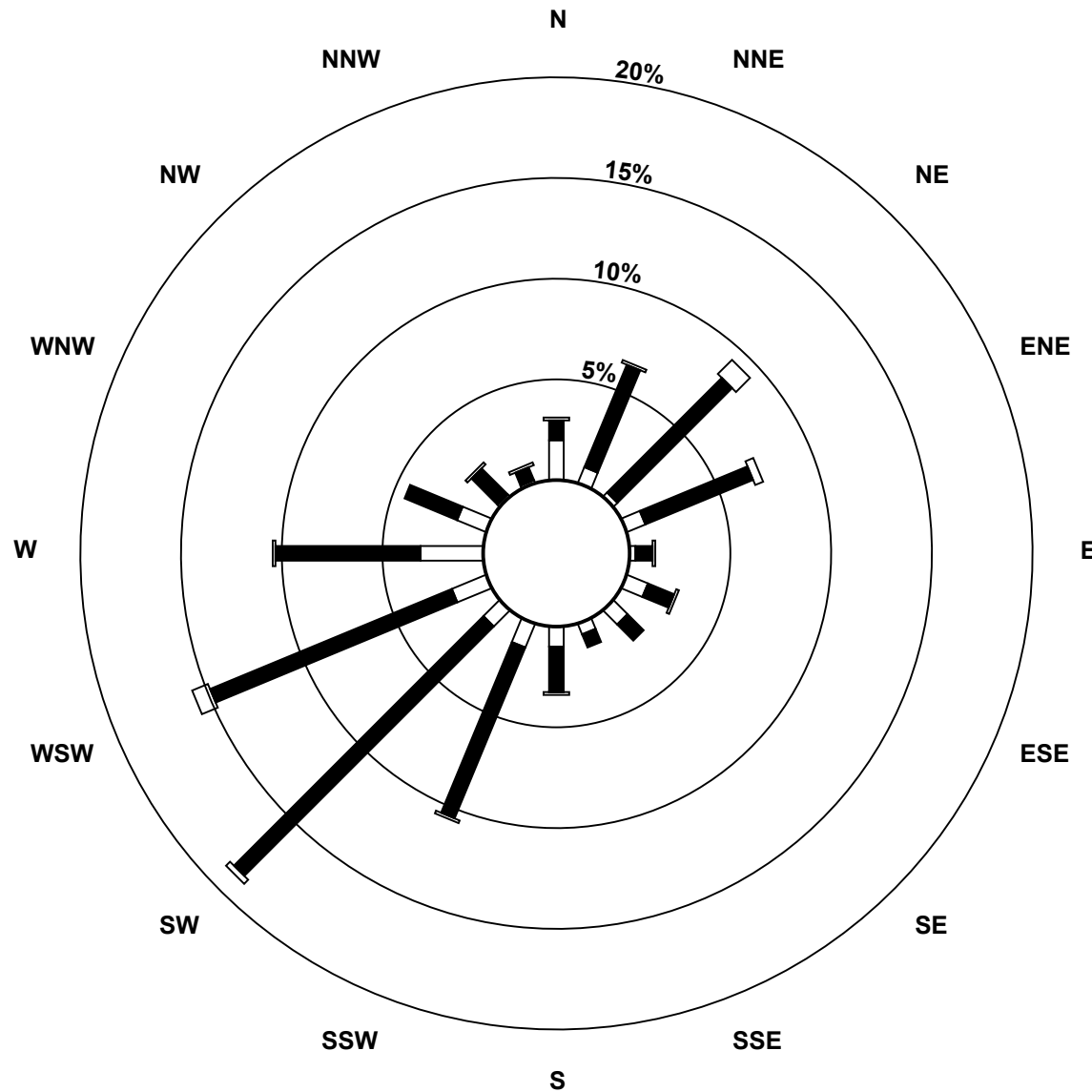
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - May 2017

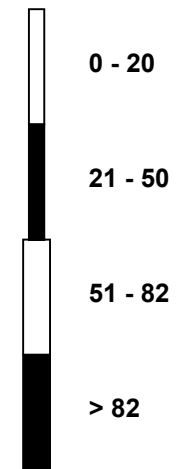


Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - May 2017



Pollutant Classes (ppb)



Eight Hour Running Averages

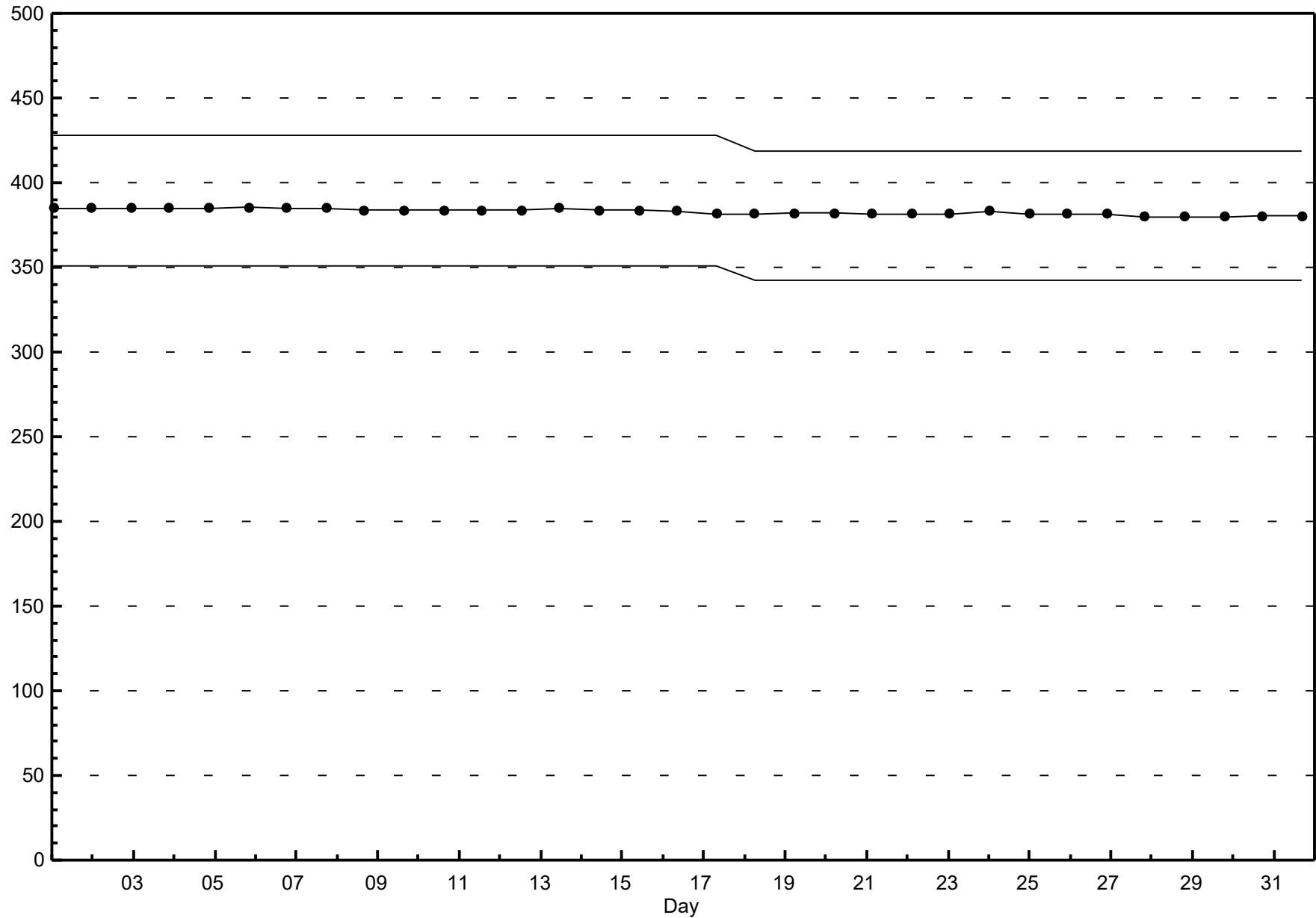
Ozone (O₃) - ppb

Henry Pirker - May 2017

Maximum Value: 57.9 ppb on May 10 20:00																					Hours in Service: 744				
Minimum Value: 11.9 ppb on May 3 09:00																					Hours of Data: 737				
Percentiles: P ₁ = 12.5 P ₁₀ = 18.2 Q ₁ = 25.9 Median = 33.2 Q ₃ = 40.2 P ₉₀ = 45.2 P ₉₉ = 54.5																					Hours of Missing Data: 7				
																					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-May	35	33	30	28	27	25	23	23	23	24	25	26	28	30	33	35	36	36	36	36	35	34	33	33	36.3
2-May	33	32	32	31	30	29	27	28	28	28	29	31	32	34	36	38	40	41	42	42	41	39	38	37	42.0
3-May	34	31	28	24	21	18	16	13	12	12	15	18	23	27	32	36	39	41	41	41	40	40	38	35	41.2
4-May	31	27	23	20	17	15	12	12	15	18	21	24	29	34	39	43	44	44	44	43	42	40	38	36	44.2
5-May	35	33	32	31	31	31	30	28	27	25	23	22	23	24	26	29	32	36	38	40	40	39	37	35	39.9
6-May	32	28	26	25	22	21	19	19	20	21	23	26	29	32	36	38	41	43	43	44	45	46	45	43	45.6
7-May	42	40	40	39	38	37	37	37	37	38	38	38	39	39	40	40	40	40	41	42	42	42	41	40	42.0
8-May	39	38	36	33	30	27	24	22	22	22	24	27	31	35	40	44	47	48	48	48	47	46	44	43	48.4
9-May	43	42	41	39	38	37	36	35	35	35	36	38	40	42	45	46	49	50	51	52	51	50	49	48	51.7
10-May	47	46	45	44	44	44	42	42	41	40	40	41	43	45	47	50	52	55	57	58	57	55	54	51	57.9
11-May	49	46	43	41	39	38	37	37	36	36	35	35	35	35	38	40	43	45	47	48	49	49	48	46	49.3
12-May	44	42	41	40	38	36	34	33	31	30	29	28	27	27	27	28	29	30	31	31	30	28	26	25	44.1
13-May	22	20	18	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	15	15	22.2
14-May	15	15	15	14	13	12	12	12	13	13	14	16	19	23	26	29	31	33	33	34	33	32	31	31	33.5
15-May	30	30	30	29	29	28	27	27	26	26	27	30	32	35	38	41	42	42	41	39	37	35	33	29	41.7
16-May	26	23	21	19	17	15	14	13	13	13	13	13	14	15	16	17	18	19	20	22	23	23	24	24	26.5
17-May	24	23	22	21	20	18	17	16	15	15	15	15	N	N	N	N	N	N	N	27	27	26	26	26	26.8
18-May	25	23	21	19	18	17	16	16	15	16	19	21	23	26	27	29	31	32	33	33	33	32	30	29	32.9
19-May	28	26	25	23	23	22	21	21	21	23	26	28	30	32	35	38	40	41	42	43	42	41	39	38	42.6
20-May	37	35	34	33	33	32	31	31	31	32	34	36	38	41	43	46	48	49	49	48	47	45	42	40	48.7
21-May	37	35	32	30	28	28	28	29	30	31	33	35	39	43	46	48	49	49	48	45	41	37	33	31	48.8
22-May	28	26	25	23	21	19	19	18	20	22	24	27	30	34	37	39	39	39	39	38	37	36	36	36	39.4
23-May	37	37	36	34	32	29	26	23	22	24	26	28	31	35	39	42	44	44	45	45	44	43	41	39	44.6
24-May	38	36	35	33	32	30	29	27	27	27	27	28	29	31	32	34	36	37	37	38	37	37	38	38	38.2
25-May	37	35	32	30	29	26	23	23	23	24	25	26	27	30	32	33	34	34	34	33	32	31	31	28	36.6
26-May	25	22	20	19	18	17	17	18	20	22	24	25	28	30	32	34	35	36	37	37	35	35	34	33	36.6
27-May	31	29	27	26	25	25	25	26	28	31	34	37	40	44	46	48	48	49	48	48	48	45	42	39	48.5
28-May	37	35	34	32	32	31	32	33	33	33	33	34	36	38	39	40	41	42	43	43	42	40	39	38	42.7
29-May	37	36	34	34	33	32	32	31	32	32	34	36	38	41	43	46	48	49	49	49	48	47	46	45	49.4
30-May	44	43	43	42	42	41	39	37	36	35	36	38	42	45	47	50	53	55	55	53	50	47	46	44	54.7
31-May	40	37	33	30	27	25	22	20	22	25	28	31	33	36	39	42	42	43	44	44	44	44	42	38	44.2
48.5 45.9 45.1 44.4 43.9 43.5 42.5 41.6 41.1 40.4 40.3 41.0 42.8 45.2 47.1 50.0 52.6 55.2 56.9 57.9 57.2 55.5 53.7 51.1																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - May 2017



Hourly Averages

Carbon Monoxide (CO) - ppm

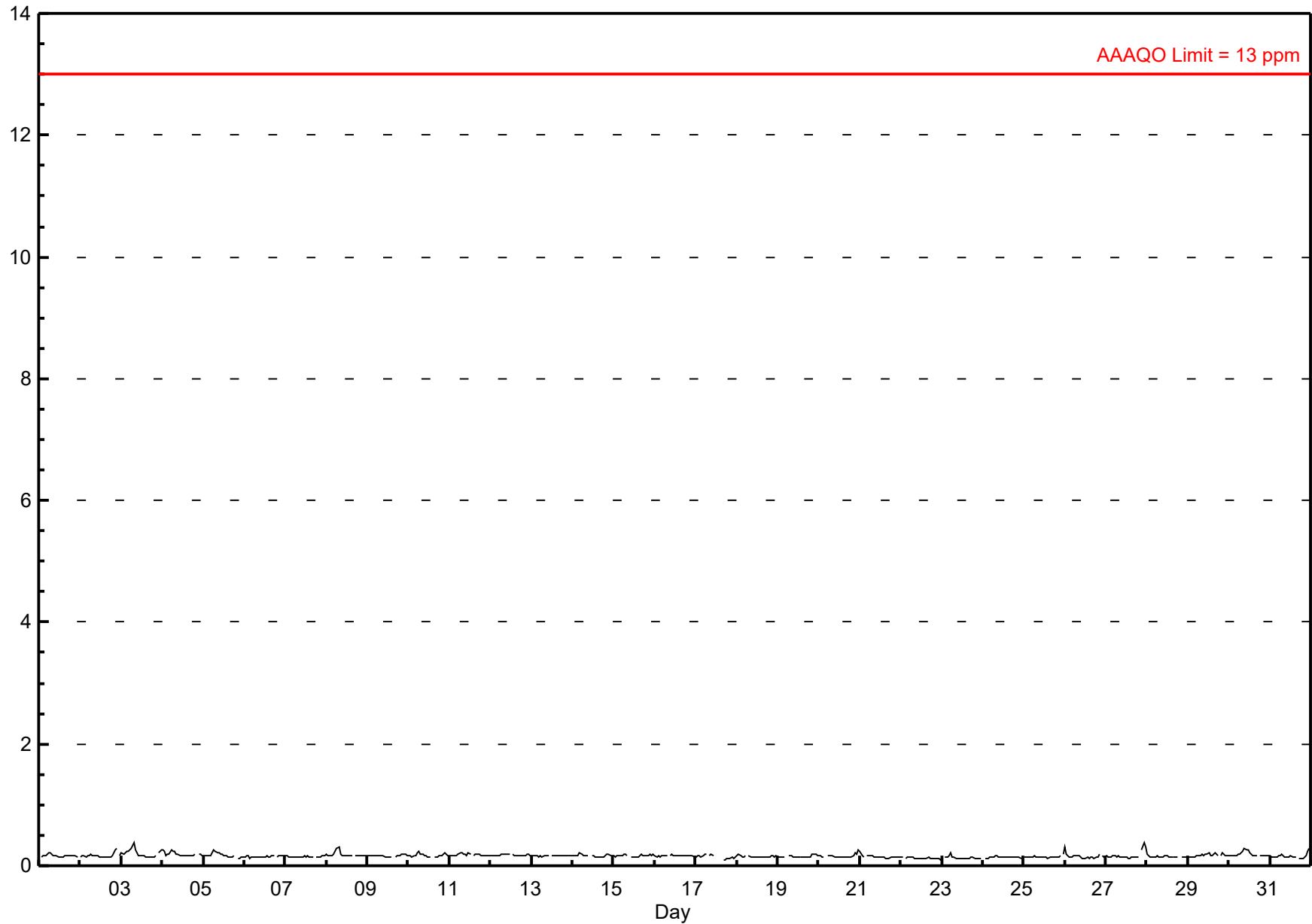
Henry Pirker - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.38 ppm on May 3 08:00 Maximum Daily Average: 0.21 ppm on May 3																					Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0					
Minimum Value: 0.1 ppm on May 17 18:00 Minimum Daily Average: 0.13 ppm on May 22 Maximum Diurnal Average: 0.19 ppm at hour 7 Minimum Diurnal Average: 0.15 ppm at hour 15 Monthly Average: 0.162 ppm Percentiles: P ₁ = 0.12 P ₁₀ = 0.13 Q ₁ = 0.15 Median = 0.16 Q ₃ = 0.17 P ₉₀ = 0.20 P ₉₉ = 0.29																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	A	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	0.1	A	0.16	0.22
2-May	0.1	0.2	0.2	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	0.1	0.1	0.2	0.3	0.3	A	0.2	0.17	0.29
3-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	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	0.3	0.21	0.38	
4-May	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	0.2	0.2	A	0.2	0.2	0.2	0.19	0.27
5-May	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	0.1	0.1	0.1	0.2	A	0.1	0.1	0.1	0.1	0.17	0.26
6-May	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.15	0.17
7-May	0.2	0.2	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	A	0.1	0.2	0.2	0.2	0.2	0.2	0.15	0.17
8-May	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	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	0.18	0.31
9-May	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.20
10-May	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	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.23
11-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.22
12-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.20
13-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.17
14-May	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.20
15-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	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	0.17	0.20
16-May	0.2	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.16	0.19
17-May	0.1	0.2	0.2	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.20
18-May	0.2	0.2	0.2	0.1	0.1	0.2	A	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	0.2	0.2	0.2	0.2	0.15	0.18
19-May	0.2	0.1	0.1	0.1	0.1	A	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	0.2	0.2	0.2	0.2	0.15	0.20
20-May	0.2	0.2	0.2	0.1	A	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	0.2	0.2	0.2	0.3	0.16	0.27
21-May	0.2	0.2	0.2	A	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	0.15	0.25
22-May	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	0.1	0.1	0.13	0.15
23-May	0.1	A	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	0.2	0.1	0.1	0.1	0.1	0.1	0.13	0.20
24-May	A	0.1	0.1	0.1	0.1	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	0.1	0.1	A	0.14	0.16
25-May	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	0.1	0.1	0.2	A	0.2	0.14	0.19
26-May	0.3	0.2	0.2	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	0.1	0.1	0.2	A	0.2	0.1	0.15	0.30
27-May	0.2	0.1	0.1	0.1	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	A	0.3	0.4	0.3	0.17	0.37
28-May	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.1	0.1	0.15	0.18
29-May	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	A	0.2	0.2	0.2	0.2	0.17	0.23
30-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.19	0.29
31-May	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.16	0.29
0.17 0.16 0.16 0.15 0.16 0.18 0.19 0.18 0.17 0.17 0.16 0.16 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.17 0.18 0.17 0.18																									Diurnal Average	
0.30 0.23 0.22 0.24 0.24 0.27 0.30 0.38 0.26 0.29 0.27 0.25 0.23 0.18 0.18 0.18 0.21 0.18 0.18 0.18 0.26 0.29 0.37 0.32																									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 - May 2017



Hourly Maximums

Carbon Monoxide (CO) - ppm

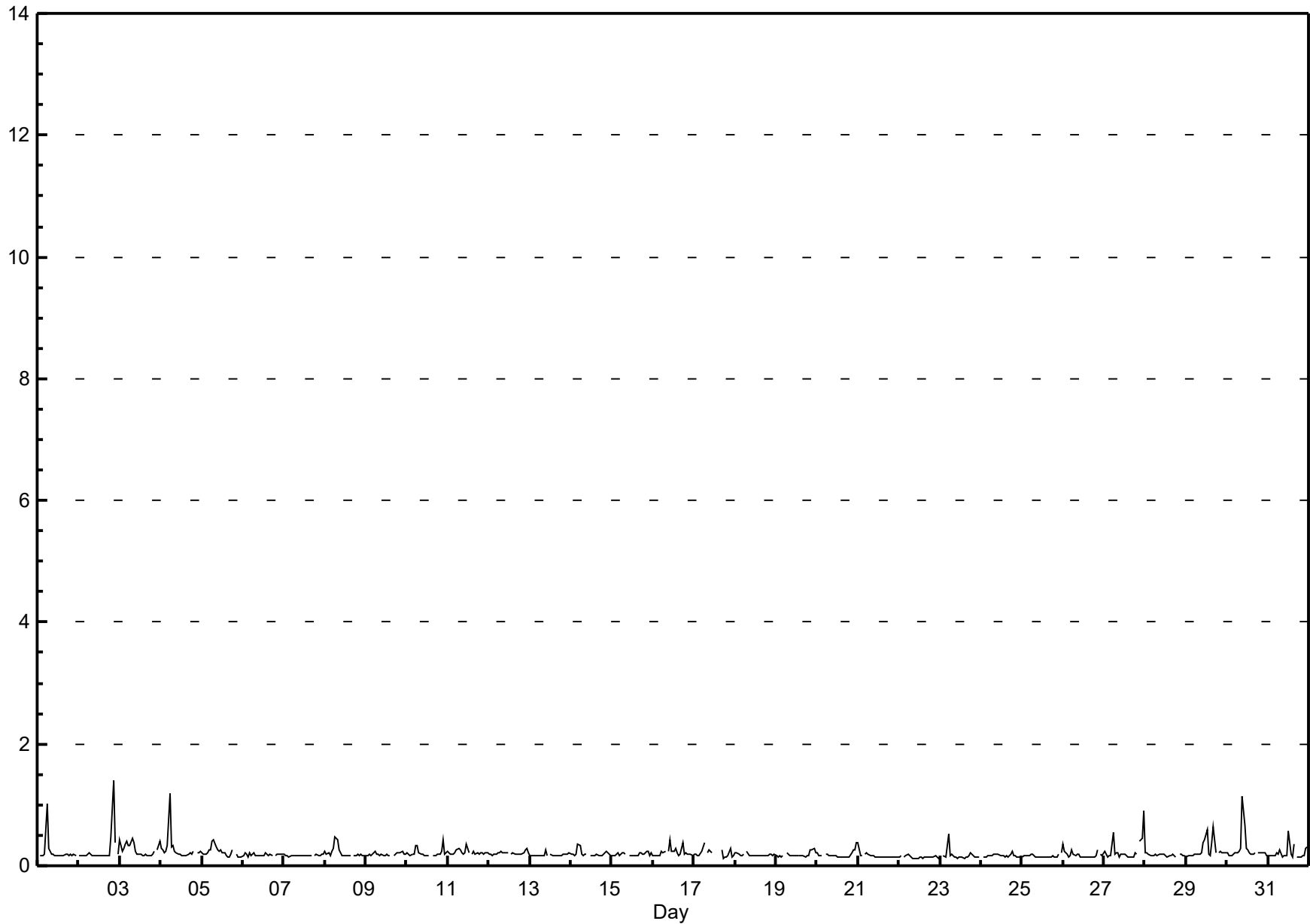
Henry Pirker - May 2017

Maximum Value: 1.39 ppm on May 2 21:00																					Maximum Daily Average: 0.27 ppm on May 30				Hours in Service: 744	
Minimum Value: 0.1 ppm on May 17 18:00																					Minimum Daily Average: 0.14 ppm on May 22				Hours of Data: 706	
Maximum Diurnal Average: 0.30 ppm at hour 6																					Minimum Diurnal Average: 0.16 ppm at hour 15				Hours of Missing Data: 38	
Monthly Average: 0.203 ppm																					Percentiles: P ₁ = 0.13 P ₁₀ = 0.15 Q ₁ = 0.16 Median = 0.18 Q ₃ = 0.21 P ₉₀ = 0.27 P ₉₉ = 0.62				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-May	A	0.2	0.2	0.2	0.2	1.0	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	0.2	0.2	A	0.22	1.03
2-May	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	0.5	1.4	0.4	A	0.2	0.25	1.39
3-May	0.4	0.2	0.3	0.4	0.4	0.3	0.3	0.5	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	A	0.3	0.4	0.27	0.46
4-May	0.3	0.3	0.2	0.2	0.3	1.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.27	1.19
5-May	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.1	0.2	0.2	0.23	0.42
6-May	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	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.18	0.21
7-May	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.19
8-May	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.4	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	0.22	0.48
9-May	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	0.2	0.2	0.2	0.2	0.19	0.24
10-May	0.2	0.2	0.2	0.2	0.2	0.3	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	0.4	0.2	0.2	0.21	0.42
11-May	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.35
12-May	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	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.21	0.28
13-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	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	0.2	0.18	0.27
14-May	0.2	0.2	0.2	0.2	0.4	0.3	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	0.2	0.2	0.20	0.35
15-May	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	0.2	0.2	0.2	0.19	0.25
16-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.43
17-May	0.2	0.2	0.2	0.2	0.2	0.3	0.4	A	0.2	0.3	0.2	C	C	C	C	C	0.3	0.1	0.2	0.1	0.2	0.3	0.1	0.2	0.21	0.38
18-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.23
19-May	0.2	0.1	0.2	0.1	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	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.18	0.27
20-May	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	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.19	0.38
21-May	0.4	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.17	0.37
22-May	0.2	0.2	A	0.1	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	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.14	0.18
23-May	0.1	A	0.2	0.2	0.3	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.17	0.52
24-May	A	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	0.1	0.2	0.2	0.2	0.2	0.2	0.1	A	0.17	0.23
25-May	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.16	0.21
26-May	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	A	0.2	0.2	0.18	0.36
27-May	0.2	0.2	0.2	0.2	0.2	0.5	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	A	0.4	0.4	0.9	0.25	0.90
28-May	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	A	0.2	0.2	0.2	0.2	0.18	0.21
29-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.6	0.2	0.2	0.4	0.6	0.2	A	0.2	0.2	0.2	0.2	0.2	0.26	0.64
30-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.1	0.7	0.3	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.27	1.13
31-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.4	A	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.21	0.57
0.21 0.18 0.18 0.18 0.21 0.30 0.23 0.23 0.20 0.22 0.20 0.19 0.20 0.17 0.16 0.18 0.19 0.18 0.18 0.19 0.24 0.22 0.20 0.23																									Diurnal Average	
0.43 0.27 0.28 0.36 0.41 1.19 0.48 0.46 0.37 1.13 0.66 0.43 0.59 0.27 0.21 0.38 0.64 0.39 0.26 0.49 1.39 0.42 0.44 0.90																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Carbon Monoxide (CO) - ppm

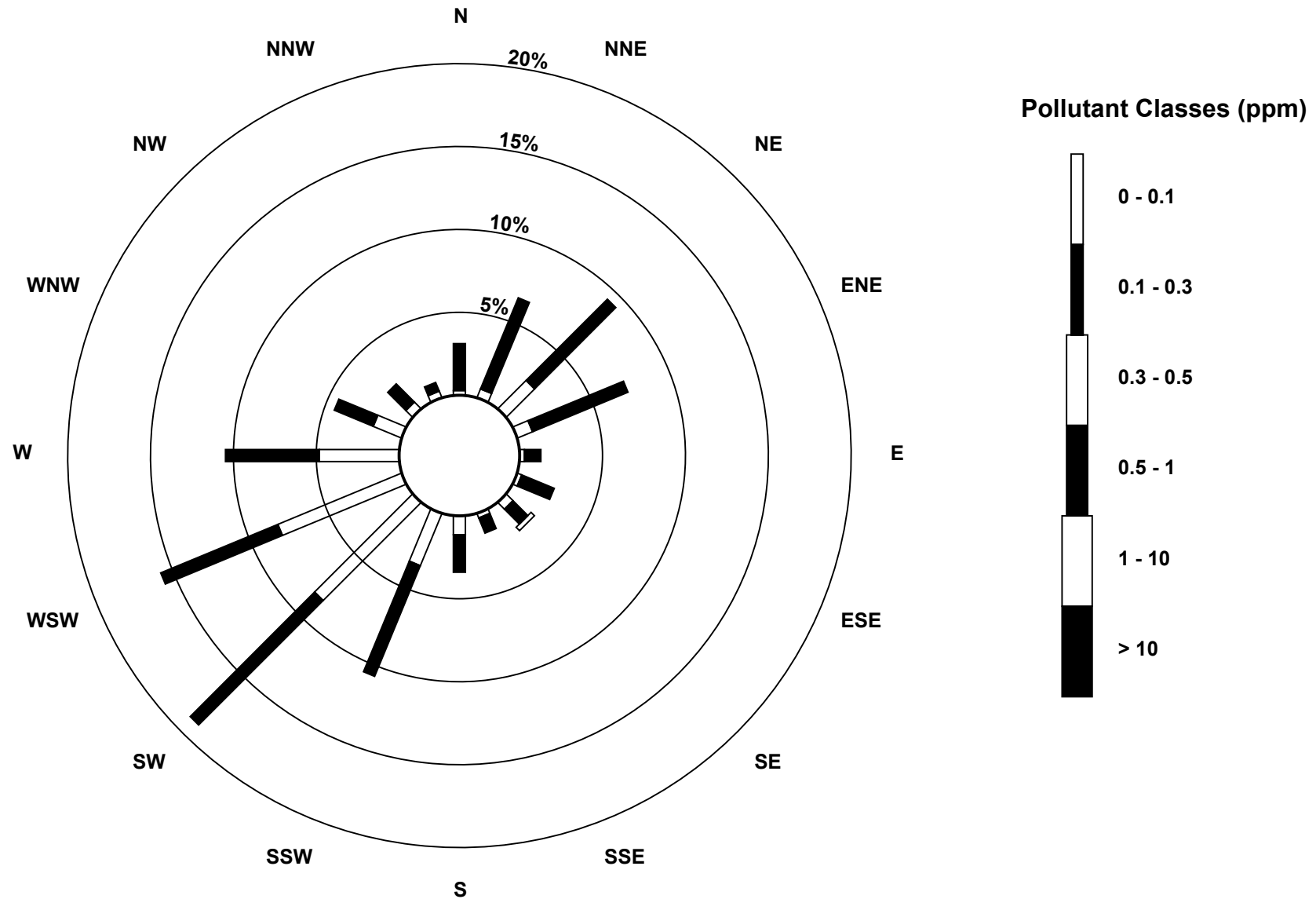
Henry Pirker - May 2017



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - May 2017



Eight Hour Running Averages

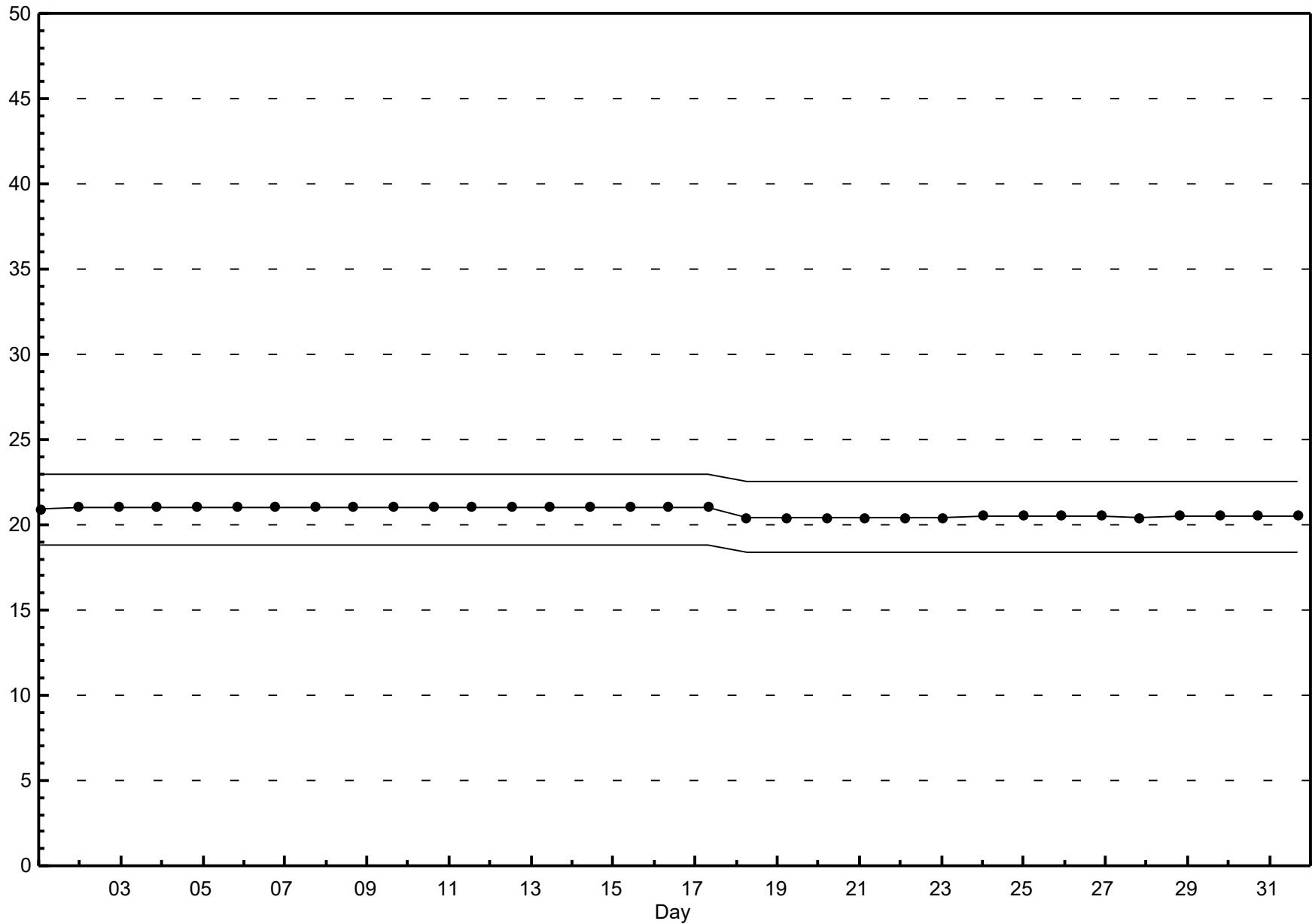
Carbon Monoxide (CO) - ppm

Henry Pirker - May 2017

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.26 ppm on May 3 10:00																				Hours in Service: 744 Hours of Data: 735 Hours of Missing Data: 9 Hours of Calibration: 9 Percent Operational Time: 100.0						
Minimum Value: 0.11 ppm on May 17 22:00																										
Percentiles: P ₁ = 0.12 P ₁₀ = 0.14 Q ₁ = 0.15 Median = 0.16 Q ₃ = 0.17 P ₉₀ = 0.19 P ₉₉ = 0.23																										
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-May	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	0.18	
2-May	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	0.2	0.19
3-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.26
4-May	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	0.2	0.23
5-May	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	0.1	0.1	0.1	0.1	0.21
6-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.16
7-May	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	0.2	0.16
8-May	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	0.2	0.21
9-May	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	0.2	0.17
10-May	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	0.2	0.18
11-May	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	0.2	0.19
12-May	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	0.2	0.18
13-May	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	0.2	0.17
14-May	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	0.2	0.18
15-May	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	0.2	0.18
16-May	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	0.2	0.17
17-May	0.2	0.2	0.2	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	N	N	N	N	0.1	0.18
18-May	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
19-May	0.2	0.2	0.2	0.2	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	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.16
20-May	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	0.2	0.2	0.2	0.17
21-May	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	0.1	0.1	0.1	0.20
22-May	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	0.1	0.14
23-May	0.1	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	0.1	0.1	0.1	0.1	0.15
24-May	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	0.1	0.15
25-May	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	0.2	0.15
26-May	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	0.1	0.1	0.1	0.1	0.18
27-May	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	0.1	0.2	0.2	0.2	0.22
28-May	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.23
29-May	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
30-May	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	0.2	0.23
31-May	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	0.2	0.2	0.17
0.22 0.23 0.23 0.23 0.23 0.22 0.23 0.26 0.26 0.26 0.26 0.25 0.24 0.23 0.23 0.22 0.21 0.20 0.19 0.18 0.18 0.18 0.18 0.19 0.22																										
Diurnal Maximums																										
N - Not Valid																										
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																										

Span Responses

Carbon Monoxide (CO)
Henry Pirker - May 2017



Hourly Averages

Total Hydrocarbons (THC) - ppm

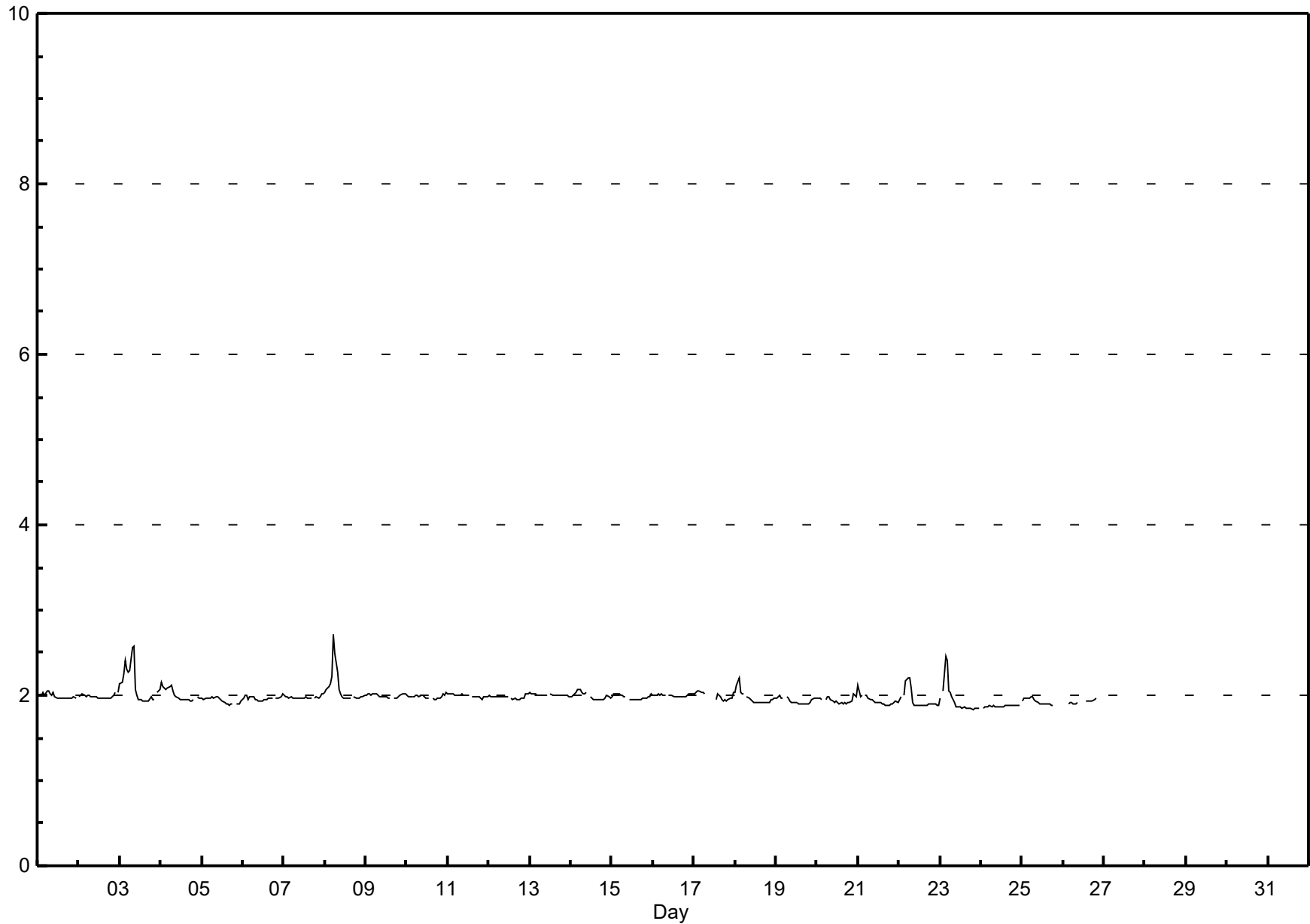
Henry Pirker - May 2017

Maximum Value: 2.71 ppm on May 8 06:00																					Maximum Daily Average: 2.11 ppm on May 3				Hours in Service: 744	
Minimum Value: 1.8 ppm on May 23 20:00																					Minimum Daily Average: 1.87 ppm on May 24				Hours of Data: 578	
Maximum Diurnal Average: 2.05 ppm at hour 6																					Minimum Diurnal Average: 1.93 ppm at hour 18				Hours of Missing Data: 166	
Monthly Average: 1.977 ppm																					Percentiles: P ₁ = 1.85 P ₁₀ = 1.89 Q ₁ = 1.94 Median = 1.97 Q ₃ = 2.00 P ₉₀ = 2.03 P ₉₉ = 2.39				Hours of Calibration: 34	
																					Percent Operational Time: 82.3					
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-May	A	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	A	1.99	2.06
2-May	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	A	2.0	1.99	2.03
3-May	2.1	2.2	2.3	2.4	2.3	2.3	2.3	2.6	2.6	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	A	2.0	2.1	2.11	2.58
4-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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	A	2.0	2.0	2.0	2.01	2.14
5-May	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	1.9	1.9	A	1.9	1.9	1.9	1.9	1.94	1.99
6-May	2.0	2.0	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	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.96	2.01
7-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.02
8-May	2.0	2.1	2.1	2.1	2.2	2.7	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.08	2.71
9-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.02
10-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.03
11-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.02
12-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.02
13-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.04
14-May	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.07
15-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.02
16-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	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	2.00	2.02
17-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	C	C	C	C	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.99	2.05
18-May	2.0	2.1	2.2	2.0	2.0	2.0	A	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	2.0	1.97	2.20
19-May	2.0	2.0	2.0	2.0	2.0	A	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	2.0	2.0	2.0	1.94	2.00
20-May	2.0	2.0	2.0	1.9	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	2.0	2.0	2.0	1.94	2.01
21-May	2.1	2.0	2.0	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	1.9	1.94	2.12
22-May	2.0	2.0	A	2.0	2.2	2.2	2.2	2.1	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	1.95	2.21
23-May	2.0	A	2.1	2.5	2.4	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.94	2.46
24-May	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	1.87	1.89
25-May	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	N	N	N	N	N	1.92	1.98
26-May	N	N	N	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.0	N	N	N	N	--	1.96
27-May	N	N	N	N	N	N	N	N	N	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
28-May	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-May	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
30-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
31-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
2.01 2.01 2.02 2.03 2.04 2.05 2.03 2.02 2.00 1.97 1.95 1.94 1.94 1.94 1.94 1.94 1.93 1.93 1.94 1.94 1.95 1.97 1.97 1.98																									Diurnal Average	
2.14 2.16 2.26 2.46 2.40 2.71 2.49 2.56 2.58 2.07 2.01 2.01 2.01 2.00 2.01 2.00 2.00 2.00 2.00 2.00 2.01 2.03 2.04 2.06																									Diurnal Maximum	
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span														

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - May 2017



Hourly Maximums

Total Hydrocarbons (THC) - ppm

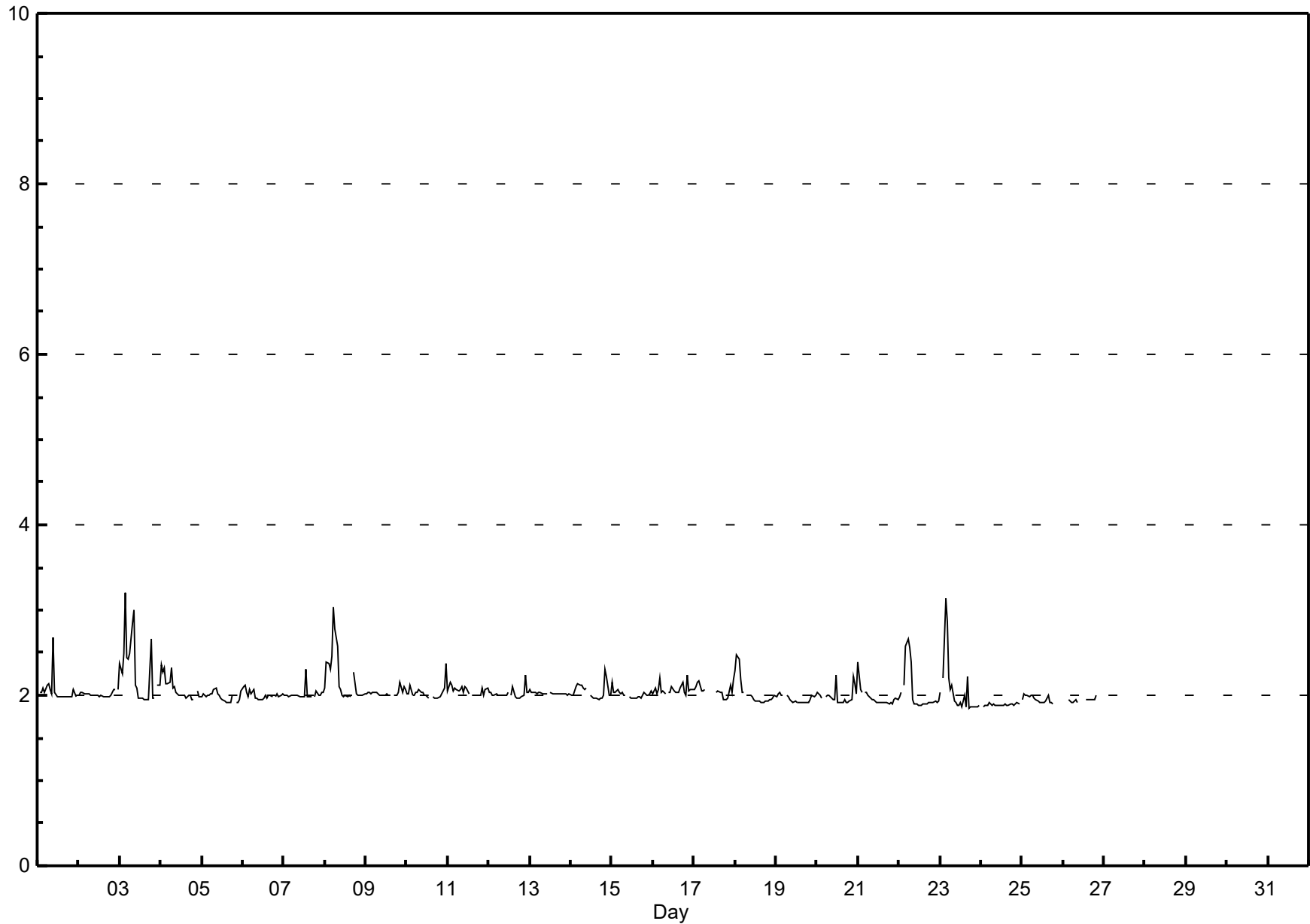
Henry Pirker - May 2017

Maximum Value: 3.21 ppm on May 3 04:00																				Maximum Daily Average: 2.27 ppm on May 3					Hours in Service: 744		
Minimum Value: 1.9 ppm on May 23 18:00																				Minimum Daily Average: 1.89 ppm on May 24					Hours of Data: 578		
Maximum Diurnal Average: 2.14 ppm at hour 4																				Minimum Diurnal Average: 1.96 ppm at hour 16					Hours of Missing Data: 166		
Monthly Average: 2.031 ppm																				Percentiles: P ₁ = 1.86 P ₁₀ = 1.92 Q ₁ = 1.96 Median = 2.00 Q ₃ = 2.04 P ₉₀ = 2.13 P ₉₉ = 2.85					Hours of Calibration: 34		
																									Percent Operational Time: 82.3		
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-May	A	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.05	2.68
2-May	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	2.1	2.1	A	2.1	2.01	2.08
3-May	2.4	2.3	2.5	3.2	2.4	2.4	2.5	2.9	3.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.7	2.0	2.0	A	2.1	2.1	2.27	3.21	
4-May	2.3	2.3	2.3	2.1	2.1	2.2	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.0	2.0	2.08	2.35	
5-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	2.1	1.98	2.09	
6-May	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.00	2.11	
7-May	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	2.3	2.0	2.0	2.0	A	2.0	2.1	2.0	2.0	2.0	2.0	2.01	2.30	
8-May	2.1	2.4	2.4	2.3	2.5	3.0	2.8	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.19	3.03	
9-May	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	A	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.03	2.15	
10-May	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.4	2.03	2.37	
11-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.05	2.15	
12-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.02	2.24	
13-May	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.06	
14-May	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.0	2.0	2.05	2.31	
15-May	2.2	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	A	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	2.01	2.16	
16-May	2.0	2.1	2.0	2.1	2.2	2.0	2.1	2.0	A	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.2	2.1	2.1	2.1	2.07	2.24	
17-May	2.1	2.1	2.2	2.2	2.1	2.1	2.1	A	2.0	C	C	C	C	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.05	2.19	
18-May	2.3	2.5	2.4	2.2	2.0	2.0	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	2.0	2.0	2.0	2.0	2.03	2.47	
19-May	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	1.96	2.03	
20-May	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.0	1.99	2.23	
21-May	2.4	2.1	2.0	A	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	2.0	2.0	1.9	1.97	2.39	
22-May	2.0	2.0	A	2.1	2.6	2.7	2.6	2.4	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	2.04	2.67	
23-May	2.0	A	2.2	3.1	2.9	2.2	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.05	3.14	
24-May	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	1.89	1.91	
25-May	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	2.0	1.9	1.9	1.9	N	N	N	N	N	1.95	2.02	
26-May	N	N	N	1.9	1.9	1.9	1.9	2.0	1.9	C	C	C	C	1.9	2.0	2.0	1.9	2.0	2.0	2.0	N	N	N	N	--	1.99	
27-May	N	N	N	N	N	N	N	N	N	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
28-May	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-May	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--	
30-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--	
31-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--	
2.09 2.09 2.10 2.14 2.12 2.12 2.11 2.09 2.04 2.02 1.98 1.98 1.96 1.97 1.97 1.96 1.97 1.97 1.99 1.97 2.01 2.03 2.01 2.04																								Diurnal Average			
2.39 2.47 2.49 3.21 2.87 3.03 2.78 2.85 3.00 2.68 2.10 2.23 2.05 2.30 2.10 2.04 2.22 2.27 2.67 2.05 2.31 2.24 2.14 2.37																								Diurnal Maximum			
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span															

Hourly Maximums

Total Hydrocarbons (THC) - ppm

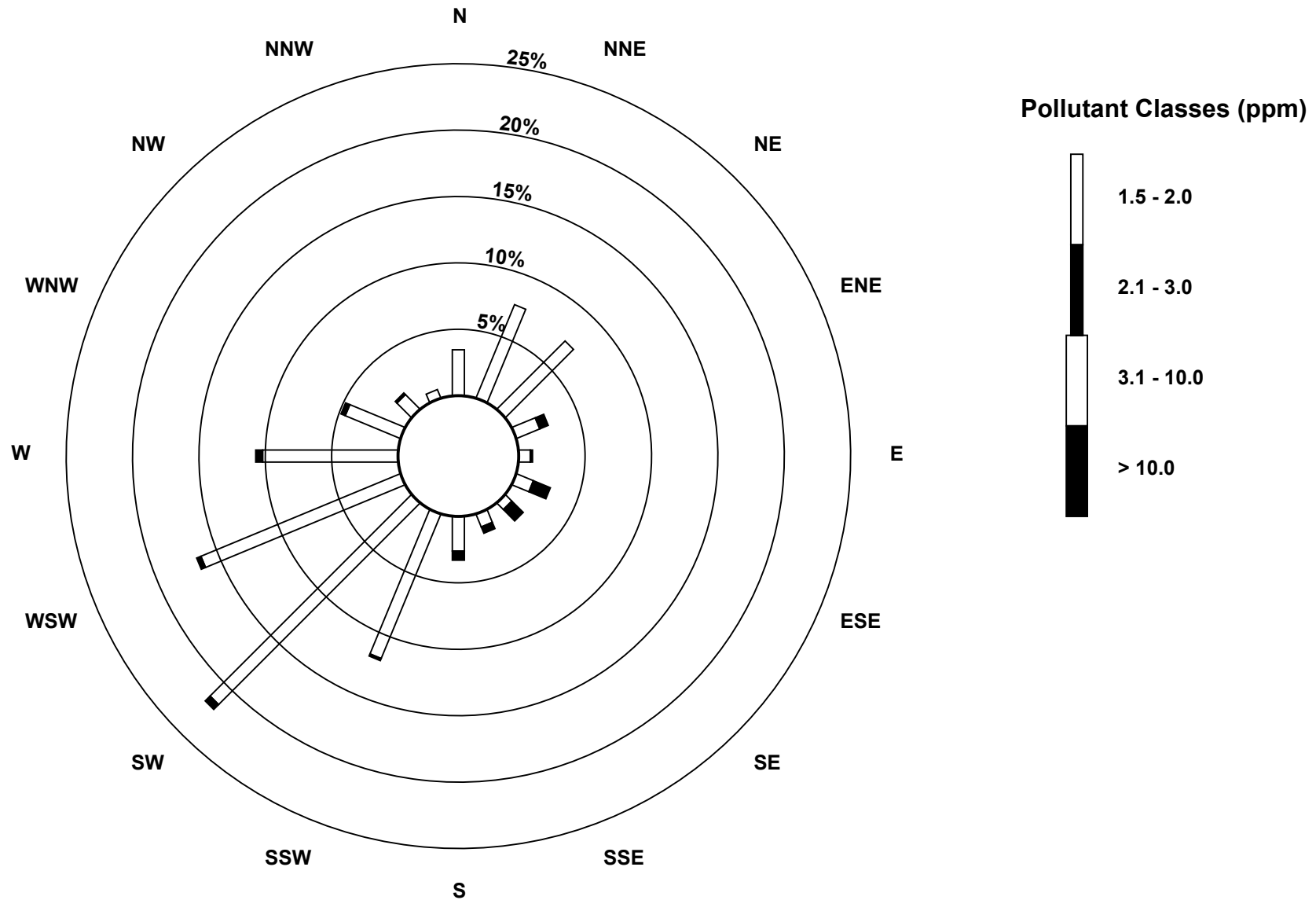
Henry Pirker - May 2017



Pollutant Rose

Total Hydrocarbons (THC) - ppm

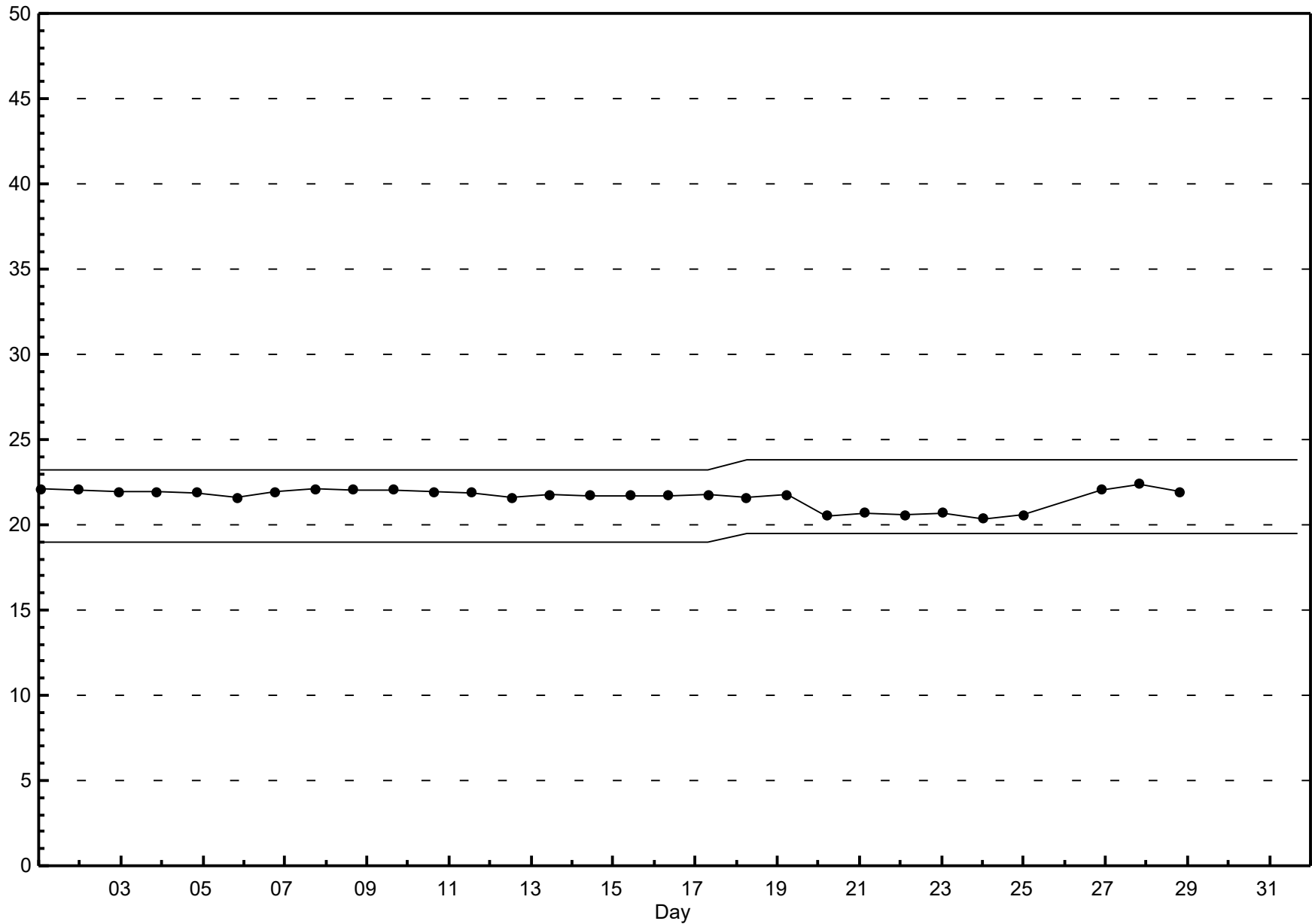
Henry Pirker - May 2017



Span Responses

Total Hydrocarbons (THC)

Henry Pirker - May 2017



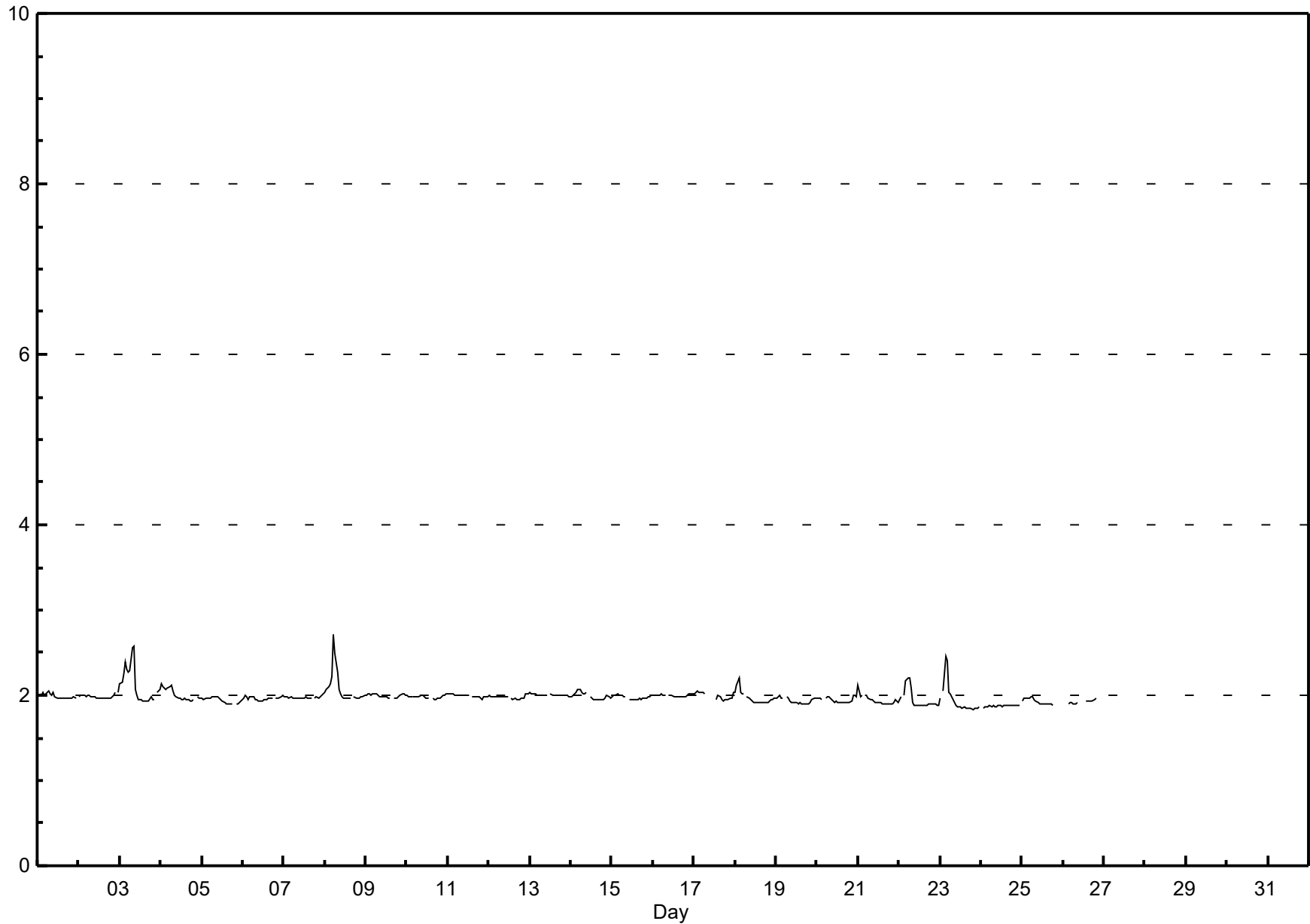
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - May 2017

Maximum Value: 2.71 ppm on May 8 06:00																				Maximum Daily Average: 2.11 ppm on May 3					Hours in Service: 744	
Minimum Value: 1.8 ppm on May 23 20:00																				Minimum Daily Average: 1.87 ppm on May 24					Hours of Data: 578	
Maximum Diurnal Average: 2.04 ppm at hour 6																				Minimum Diurnal Average: 1.93 ppm at hour 18					Hours of Missing Data: 166	
Monthly Average: 1.976 ppm																				Percentiles: P ₁ = 1.85 P ₁₀ = 1.89 Q ₁ = 1.94 Median = 1.97 Q ₃ = 2.00 P ₉₀ = 2.03 P ₉₉ = 2.39					Hours of Calibration: 34	
																				Percent Operational Time: 82.3						
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-May	A	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	A	1.99	2.06
2-May	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	A	2.0	1.98	2.03
3-May	2.1	2.2	2.3	2.4	2.3	2.3	2.3	2.6	2.6	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	A	2.0	2.1	2.11	2.58
4-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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	A	2.0	2.0	2.0	2.01	2.14
5-May	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	1.9	1.9	A	1.9	1.9	1.9	1.9	1.94	1.99
6-May	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.96	2.00
7-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.02
8-May	2.0	2.1	2.1	2.1	2.2	2.7	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.08	2.71
9-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.02
10-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.03
11-May	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	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.02
12-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.01
13-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.04
14-May	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.07
15-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.01
16-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	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	2.00	2.02
17-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	C	C	C	C	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.99	2.04
18-May	2.0	2.1	2.2	2.0	2.0	2.0	A	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	2.0	1.97	2.20
19-May	2.0	2.0	2.0	2.0	2.0	A	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	2.0	2.0	2.0	1.94	2.00
20-May	2.0	2.0	2.0	1.9	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	2.0	2.0	2.0	1.94	2.01
21-May	2.1	2.0	2.0	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	1.9	1.94	2.12
22-May	2.0	2.0	A	2.0	2.2	2.2	2.2	2.1	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	1.95	2.21
23-May	2.0	A	2.0	2.5	2.4	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.94	2.46
24-May	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	1.87	1.89
25-May	1.9	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	1.9	N	N	N	N	N	1.93	1.98
26-May	N	N	N	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.0	N	N	N	N	--	1.96
27-May	N	N	N	N	N	N	N	N	N	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
28-May	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-May	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
30-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
31-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
2.01 2.01 2.02 2.03 2.04 2.04 2.03 2.02 1.99 1.97 1.95 1.94 1.94 1.94 1.94 1.94 1.94 1.93 1.94 1.94 1.95 1.97 1.97 1.98																									Diurnal Average	
2.14 2.15 2.25 2.46 2.40 2.71 2.49 2.55 2.58 2.07 2.00 2.00 2.01 2.00 2.01 2.00 2.00 2.00 2.00 2.00 2.01 2.03 2.04 2.06																									Diurnal Maximum	
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - May 2017



Hourly Maximums

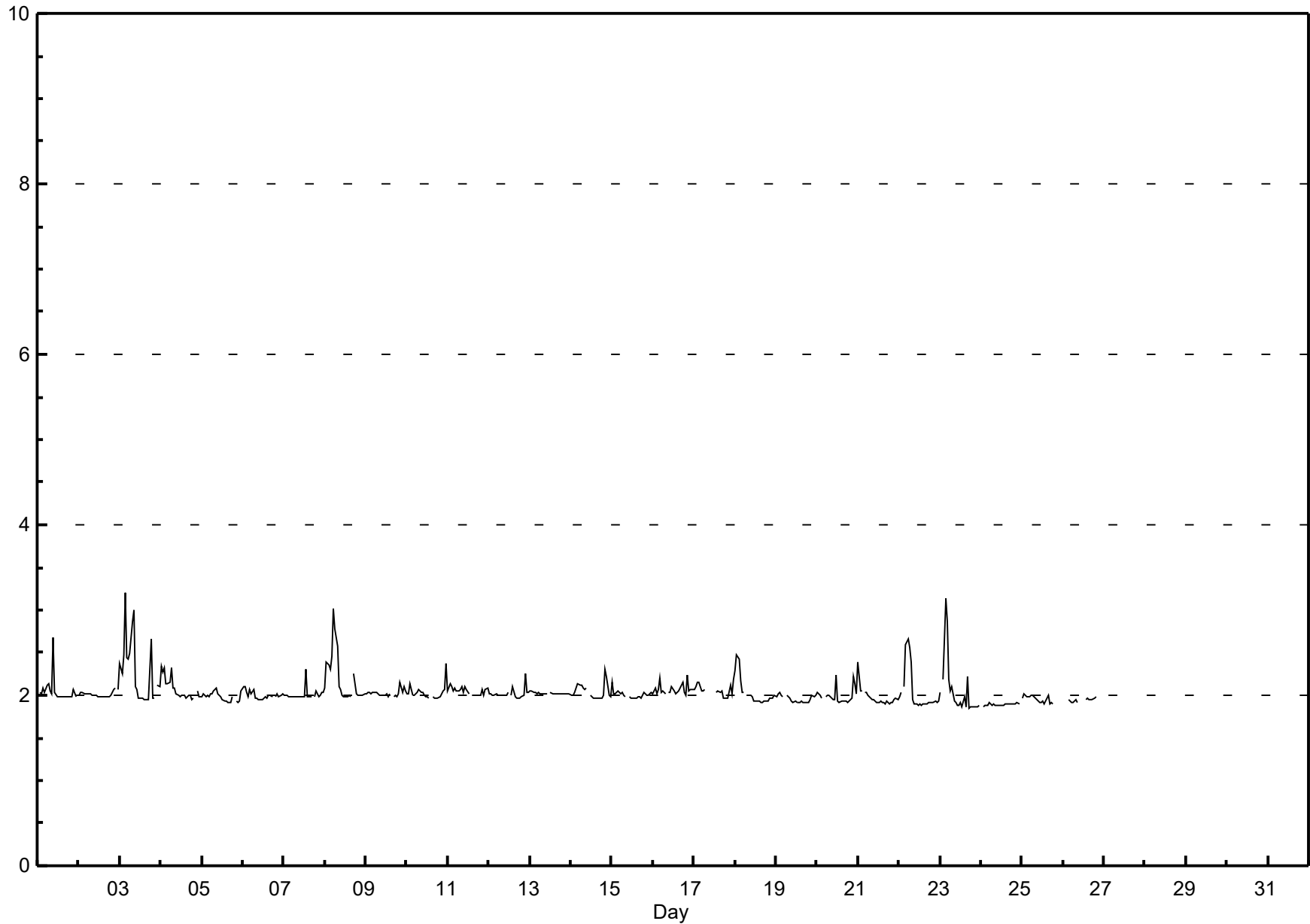
Methane (CH₄) - ppm

Henry Pirker - May 2017

Maximum Value: 3.20 ppm on May 3 04:00																				Maximum Daily Average: 2.27 ppm on May 3					Hours in Service: 744		
Minimum Value: 1.9 ppm on May 23 18:00																				Minimum Daily Average: 1.89 ppm on May 24					Hours of Data: 578		
Maximum Diurnal Average: 2.13 ppm at hour 4																				Minimum Diurnal Average: 1.96 ppm at hour 16					Hours of Missing Data: 166		
Monthly Average: 2.029 ppm																				Percentiles: P ₁ = 1.86 P ₁₀ = 1.92 Q ₁ = 1.96 Median = 1.99 Q ₃ = 2.04 P ₉₀ = 2.13 P ₉₉ = 2.86					Hours of Calibration: 34		
																				Percent Operational Time: 82.3							
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-May	A	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	A	2.05	2.68
2-May	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	2.1	2.1	A	2.1	2.01	2.08	
3-May	2.4	2.2	2.5	3.2	2.4	2.4	2.5	2.9	3.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7	2.0	2.0	A	2.1	2.1	2.27	3.20	
4-May	2.3	2.3	2.3	2.1	2.1	2.2	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.08	2.34	
5-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	2.0	1.98	2.08	
6-May	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.00	2.10	
7-May	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	2.3	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.30	
8-May	2.1	2.4	2.4	2.3	2.5	3.0	2.8	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.19	3.02	
9-May	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	A	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.02	2.15	
10-May	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.4	2.03	2.37	
11-May	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.05	2.14	
12-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.02	2.25	
13-May	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.02	2.06	
14-May	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.0	2.0	2.04	2.31	
15-May	2.2	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	A	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	2.01	2.16	
16-May	2.0	2.1	2.0	2.1	2.2	2.0	2.1	2.0	A	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.2	2.0	2.1	2.1	2.07	2.24	
17-May	2.1	2.1	2.2	2.2	2.1	2.1	2.1	A	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.05	2.19	
18-May	2.3	2.5	2.4	2.2	2.0	2.0	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	2.0	2.0	2.0	2.0	2.03	2.47	
19-May	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	1.96	2.03	
20-May	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.0	1.99	2.24	
21-May	2.4	2.1	2.0	A	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	2.0	2.0	1.9	1.97	2.39	
22-May	2.0	2.0	A	2.1	2.6	2.7	2.6	2.4	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	2.04	2.67	
23-May	2.0	A	2.2	3.1	2.9	2.2	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.05	3.13	
24-May	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	1.89	1.91	
25-May	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	2.0	1.9	1.9	1.9	N	N	N	N	N	1.95	2.01	
26-May	N	N	N	1.9	1.9	1.9	1.9	2.0	1.9	C	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	N	N	N	N	--	1.99	
27-May	N	N	N	N	N	N	N	N	N	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
28-May	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-May	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--	
30-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--	
31-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--	
2.09 2.08 2.10 2.13 2.12 2.12 2.10 2.09 2.04 2.02 1.98 1.98 1.96 1.97 1.97 1.96 1.97 1.97 1.99 1.97 2.01 2.03 2.01 2.04																									Diurnal Average		
2.39 2.47 2.48 3.20 2.86 3.02 2.78 2.86 3.00 2.68 2.10 2.24 2.05 2.30 2.10 2.05 2.22 2.26 2.66 2.05 2.31 2.25 2.13 2.37																									Diurnal Maximum		
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											

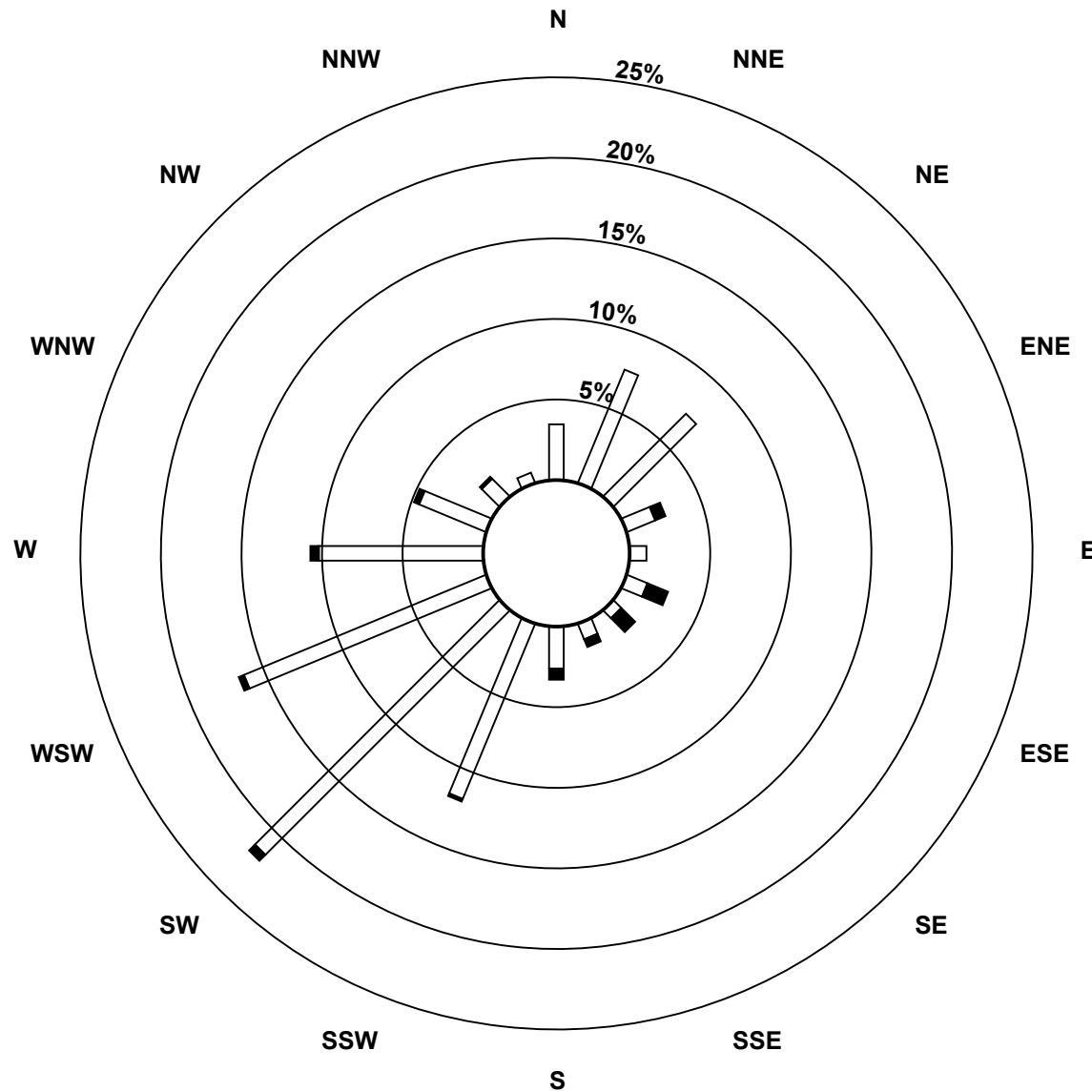
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - May 2017

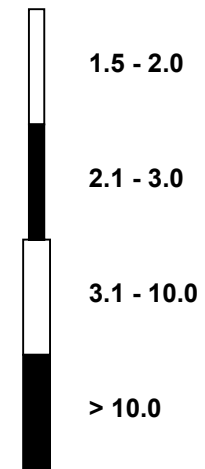


Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - May 2017

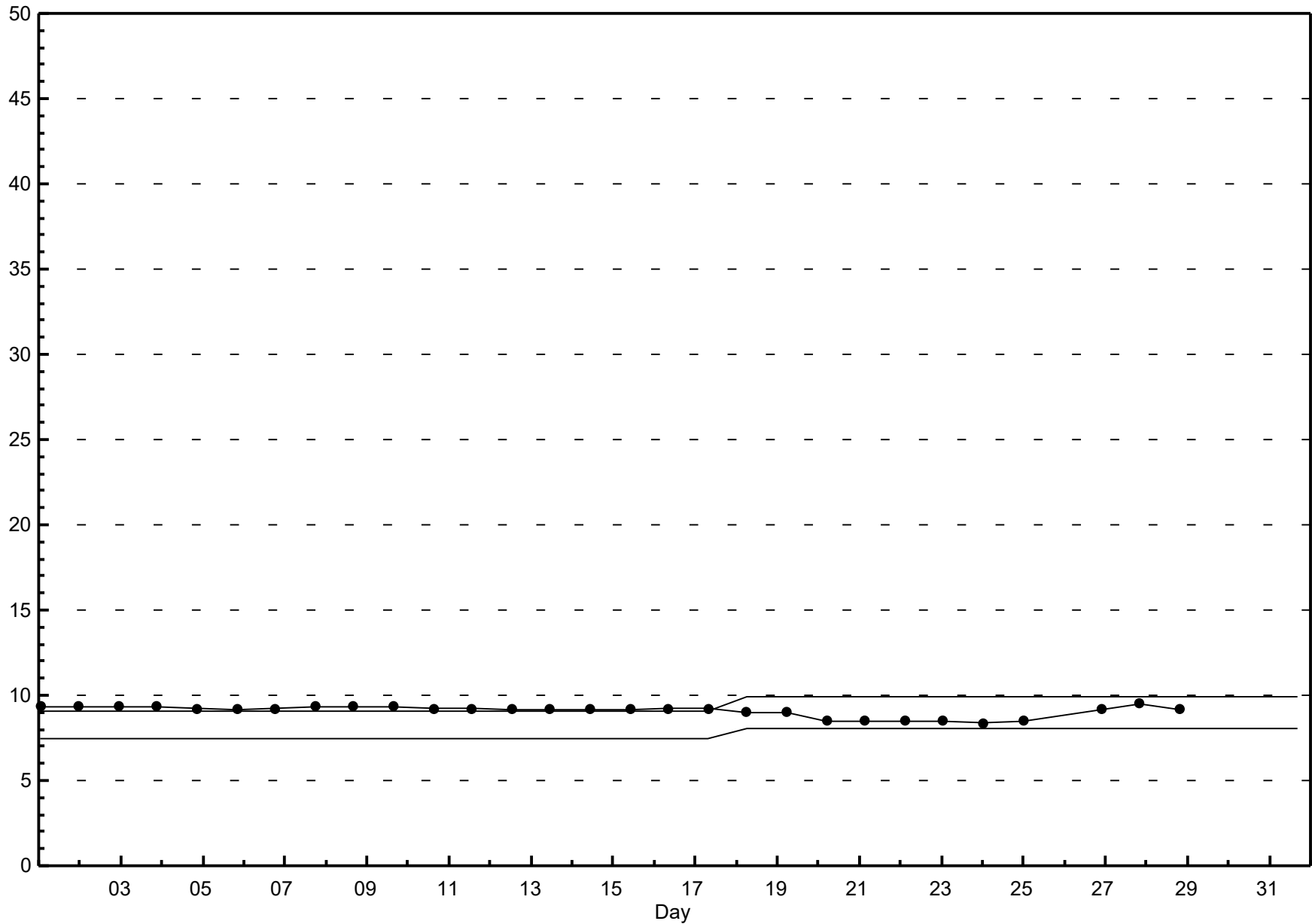


Pollutant Classes (ppm)



Span Responses

Methane (CH₄)
Henry Pirker - May 2017

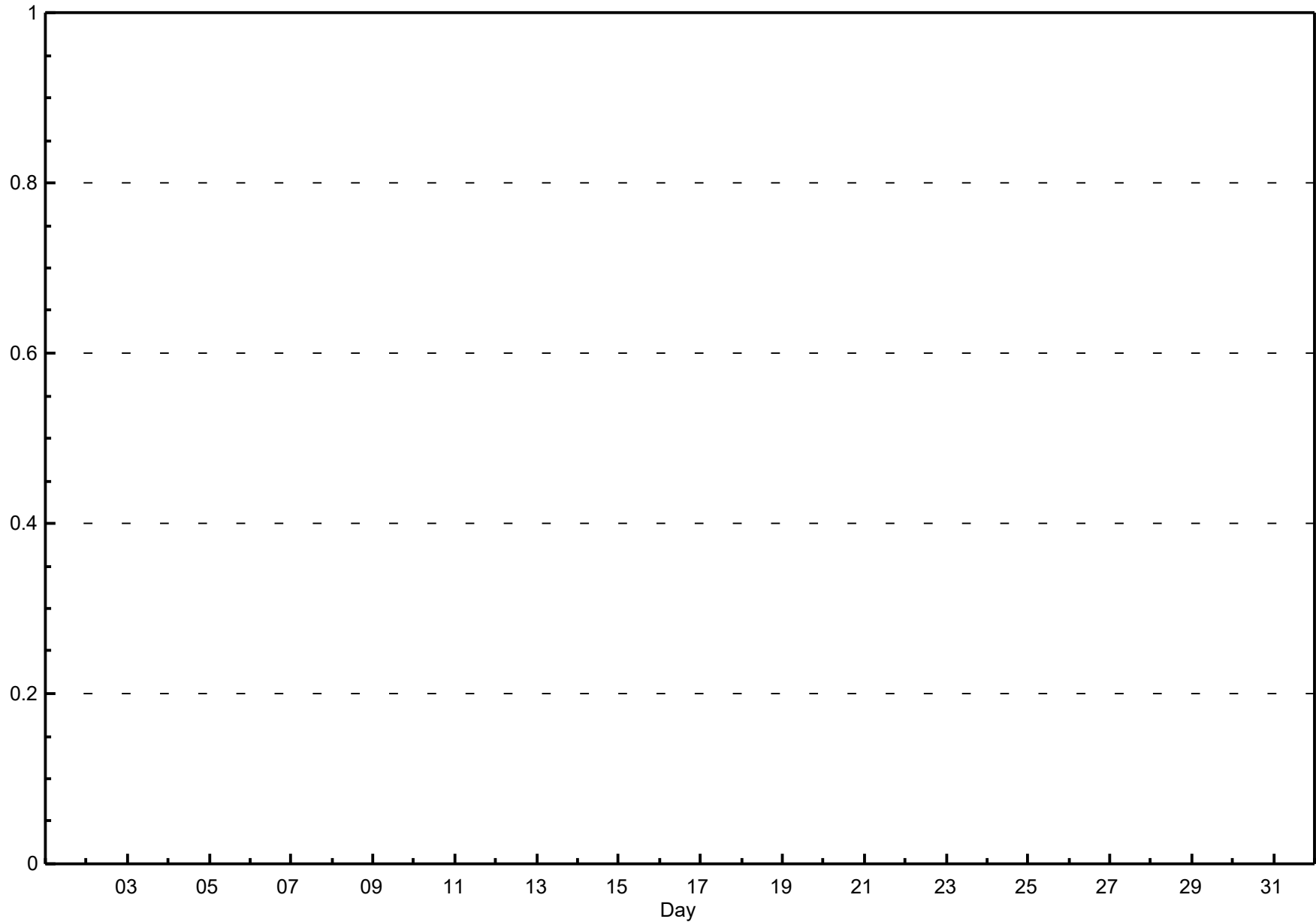


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - May 2017

Maximum Value: 0.00 ppm on May 6 04:00																					Maximum Daily Average: 0.00 ppm on May 6				Hours in Service: 744		
Minimum Value: 0.0 ppm on May 1 02:00																					Minimum Daily Average: 0.00 ppm on May 1				Hours of Data: 578		
Maximum Diurnal Average: 0.00 ppm at hour 8																					Minimum Diurnal Average: 0.00 ppm at hour 10				Hours of Missing Data: 166		
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: 34		
																					Percent Operational Time: 82.3						
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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	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-May	0.0	0.0	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-May	0.0	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-May	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-May	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-May	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-May	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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	C	C	C	C	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-May	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-May	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-May	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-May	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-May	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-May	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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00	0.00	
26-May	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	N	N	--	0.00
27-May	N	N	N	N	N	N	N	N	N	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
28-May	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-May	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
30-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
31-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
0.00 0.00																									Diurnal Average		
0.00 0.00																									Diurnal Maximum		
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span															



Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

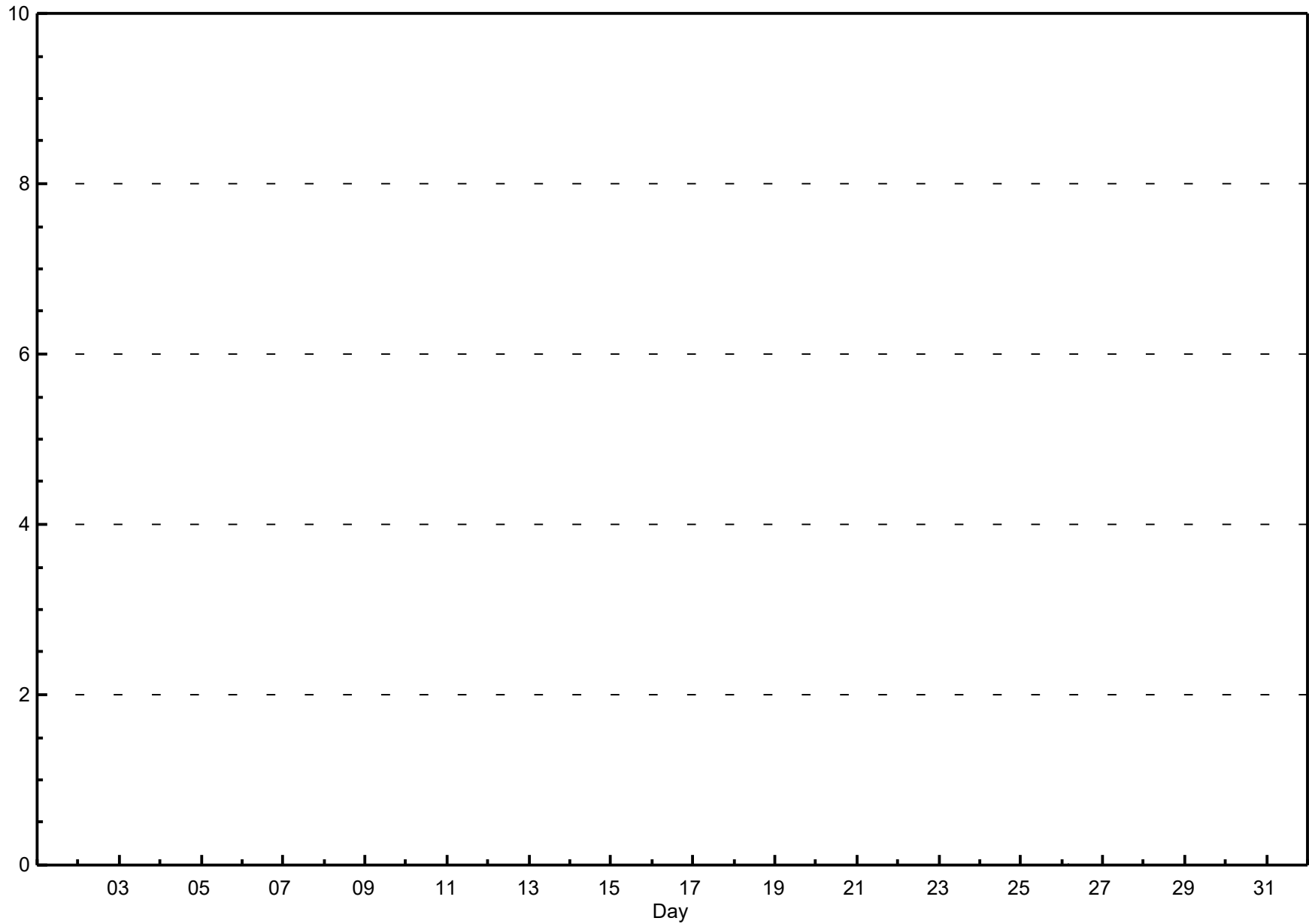
Henry Pirker - May 2017

Maximum Value: 0.02 ppm on May 26 04:00																				Maximum Daily Average: 0.00 ppm on May 5					Hours in Service: 744		
Minimum Value: 0.0 ppm on May 2 16:00																				Minimum Daily Average: 0.00 ppm on May 14					Hours of Data: 578		
Maximum Diurnal Average: 0.00 ppm at hour 4																				Minimum Diurnal Average: 0.00 ppm at hour 20					Hours of Missing Data: 166		
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: 34		
																				Percent Operational Time: 82.3							
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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	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-May	0.0	0.0	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-May	0.0	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-May	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-May	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-May	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-May	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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	C	C	C	C	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-May	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-May	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-May	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-May	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-May	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-May	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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00	0.00	
26-May	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	N	N	--	0.02
27-May	N	N	N	N	N	N	N	N	N	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
28-May	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-May	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
30-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
31-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
0.00 0.00																								Diurnal Average			
0.00 0.00 0.00 0.02 0.00																								Diurnal Maximum			
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span															

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

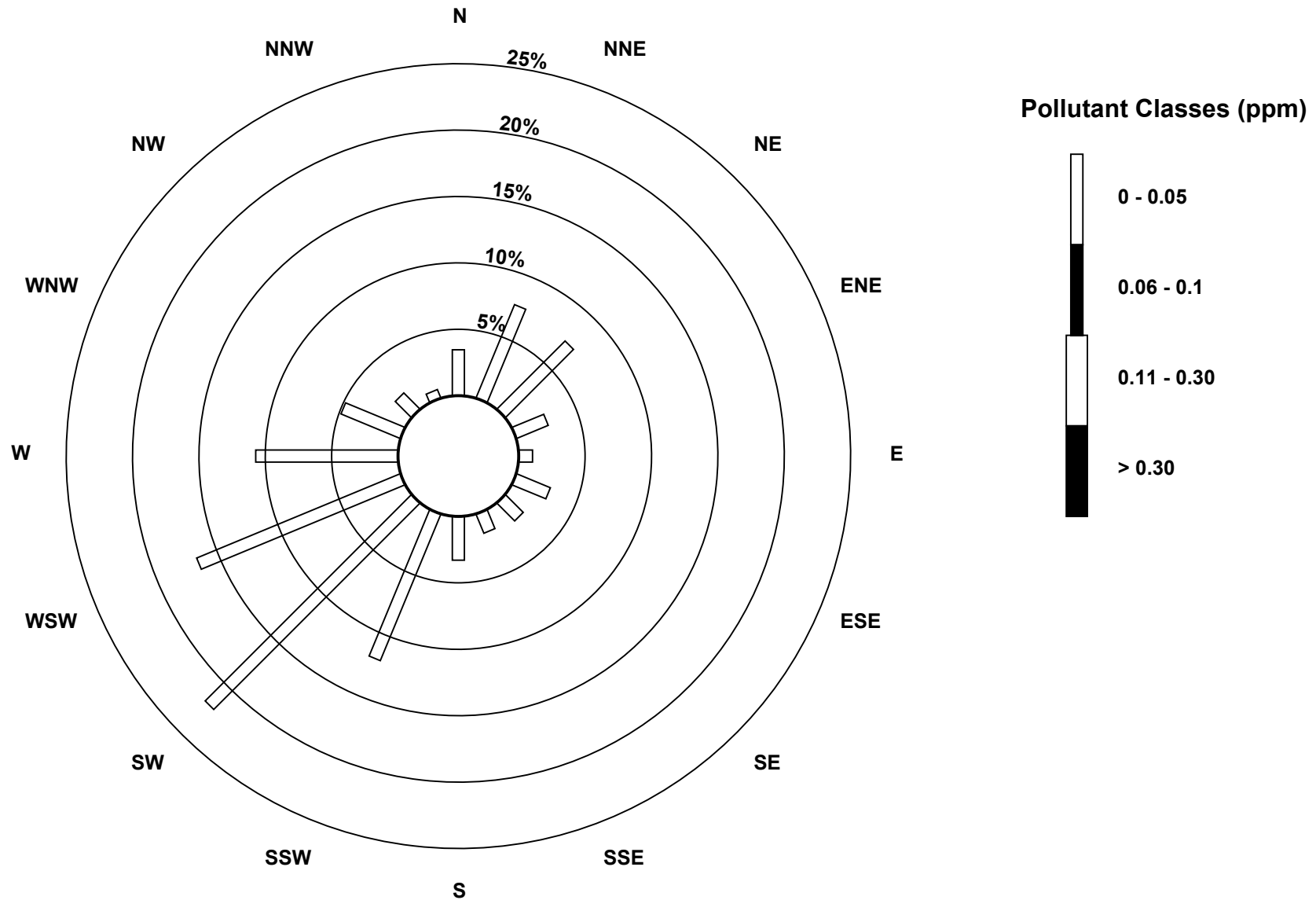
Henry Pirker - May 2017

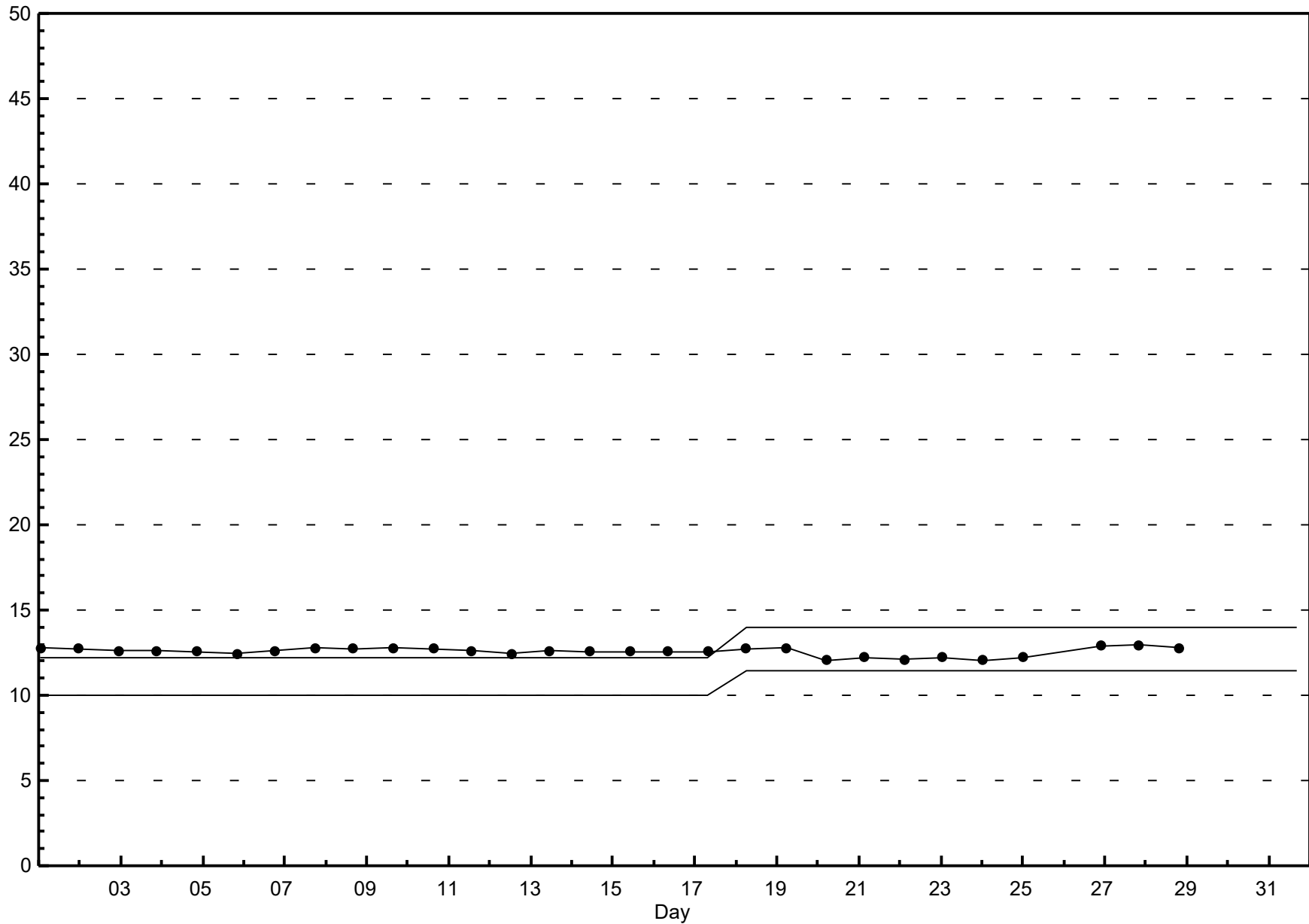


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - May 2017



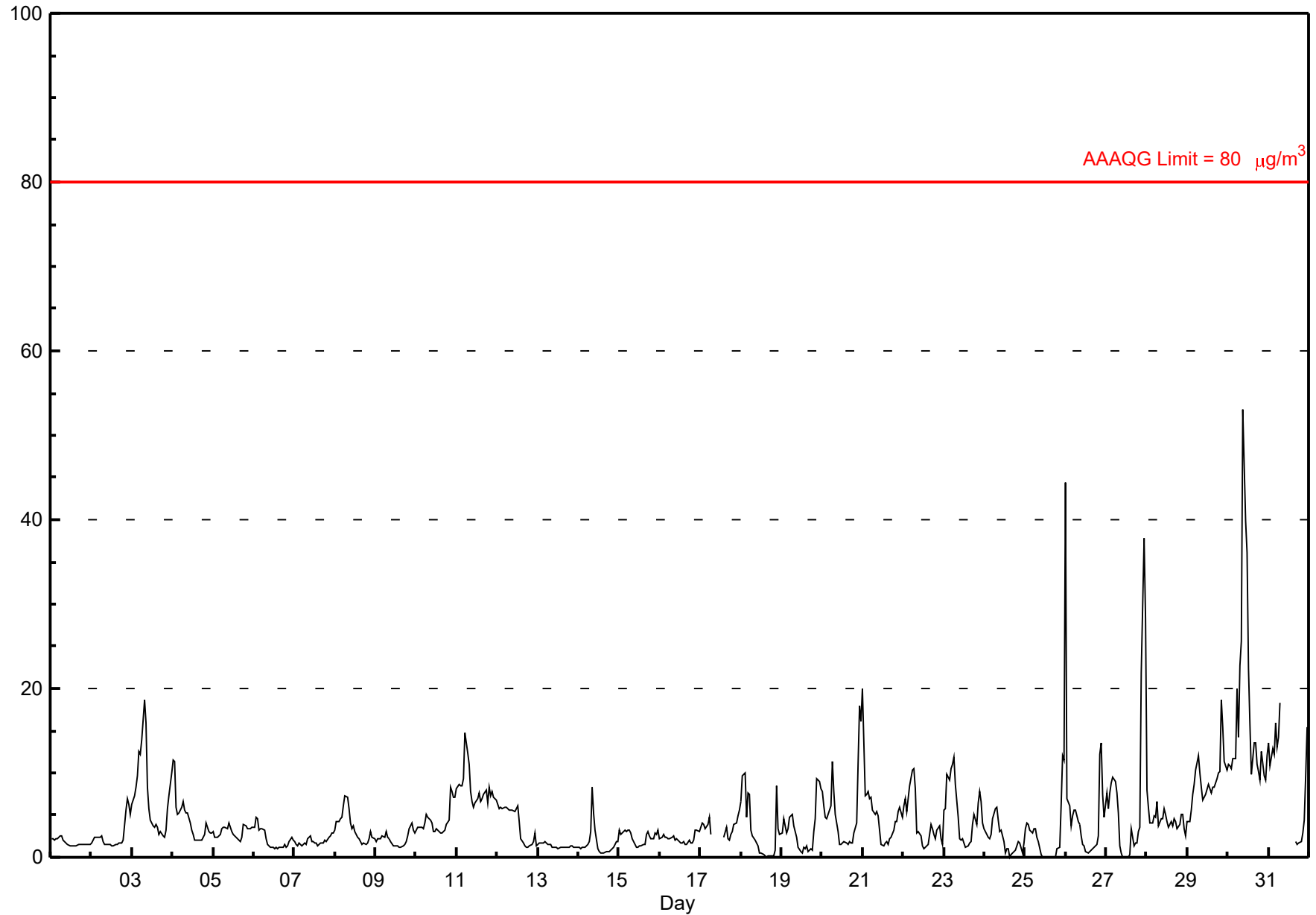


Hourly Averages

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

Henry Pirker - May 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 53.1 µg/m³ on May 30 10:00																				Maximum Daily Average: 17.3 µg/m³ on May 30					Hours in Service: 744 Hours of Data: 729	
Minimum Value: 0 µg/m³ on May 24 16:00 Maximum Diurnal Average: 6.7 µg/m³ at hour 1 Monthly Average: 4.49 µg/m³										Minimum Daily Average: 1.3 µg/m³ on May 13 Minimum Diurnal Average: 2.2 µg/m³ at hour 15 Percentiles: P ₁ = 0.0 P ₁₀ = 1.2 Q ₁ = 1.6 Median = 3.0 Q ₃ = 5.7 P ₉₀ = 9.6 P ₉₉ = 23.5										Hours of Missing Data: 15 Hours of Calibration: 7 Percent Operational Time: 98.9						
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-May	2	2	2	2	2	3	3	2	2	2	2	1	1	1	1	1	1	1	1	2	2	2	2	2	1.8	2.6
2-May	2	2	2	2	2	2	3	2	2	2	2	1	1	1	1	2	2	2	2	2	6	7	6	5	2.5	6.9
3-May	6	7	8	10	13	12	14	19	16	8	6	4	4	4	4	4	3	3	3	2	3	6	7	10	7.3	18.7
4-May	12	11	6	5	5	6	7	6	5	5	4	3	3	2	2	2	2	2	2	3	4	3	3	3	4.4	11.5
5-May	3	2	2	2	3	3	4	4	3	4	4	3	3	2	2	2	2	2	4	4	3	3	3	4	3.0	4.0
6-May	4	5	5	3	3	3	3	2	2	1	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2.1	4.8
7-May	2	1	1	2	1	1	2	2	2	3	2	2	2	2	1	2	2	2	2	2	2	2	3	3	1.9	2.9
8-May	3	4	4	5	5	6	7	7	6	4	3	4	3	2	2	2	2	2	1	2	2	3	2	2	3.5	7.3
9-May	2	2	2	2	2	2	3	2	2	2	1	1	1	1	1	1	1	2	2	3	3	4	3	3	2.2	4.0
10-May	3	4	4	4	3	4	5	5	4	4	3	3	3	3	3	3	3	3	4	4	8	8	7	7	4.3	8.2
11-May	8	9	8	8	9	15	12	11	8	7	6	7	7	8	7	7	8	8	6	8	7	8	7	7	8.1	14.8
12-May	6	6	6	6	6	6	6	6	6	6	5	6	6	4	2	2	1	1	1	1	2	2	3	1	4.0	6.3
13-May	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.9
14-May	1	1	1	1	1	1	2	3	8	5	3	1	1	1	1	1	1	1	1	1	1	1	2	2	1.7	8.3
15-May	3	3	3	3	3	3	3	3	2	1	1	1	1	1	1	2	3	3	2	2	2	3	3	3	2.4	3.3
16-May	2	2	3	2	2	2	2	2	3	2	2	2	2	2	2	2	1	2	2	2	2	3	3	3	2.2	3.3
17-May	4	4	4	3	4	5	3	C	C	C	C	C	C	C	2	4	2	2	3	3	4	4	5	6	--	5.5
18-May	7	10	10	5	8	8	3	2	2	2	1	1	0	0	0	0	0	0	0	0	1	9	3	3	3.1	10.0
19-May	3	5	4	3	3	5	5	4	3	2	1	1	1	1	1	1	1	1	1	3	5	9	9	8	3.3	9.3
20-May	8	6	5	5	6	6	11	8	5	3	2	2	2	2	2	2	2	2	2	3	4	11	18	16	5.4	18.0
21-May	20	7	7	8	7	7	6	5	5	5	3	2	1	2	2	2	2	2	3	4	4	5	6	5	5.1	19.9
22-May	6	7	5	7	9	10	11	8	3	3	3	1	1	1	1	2	4	3	3	2	3	4	2	1	4.2	10.5
23-May	6	6	10	9	10	11	12	9	5	2	2	2	2	1	1	2	2	4	5	4	6	8	7	4	5.4	11.8
24-May	3	3	2	2	3	5	6	6	4	3	3	2	1	1	1	0	0	1	1	1	2	2	1	2	2.2	6.0
25-May	3	4	4	3	3	3	3	2	2	0	0	0	0	0	0	0	0	0	0	1	1	6	12	12	2.5	12.0
26-May	44	7	6	4	5	6	6	4	4	3	2	1	1	1	1	1	1	1	2	2	12	14	7	5	5.7	44.4
27-May	8	6	8	9	9	9	8	5	1	0	0	0	0	0	0	3	1	2	2	3	4	22	38	28	6.9	37.8
28-May	8	6	4	4	5	5	7	4	5	5	6	5	4	4	4	4	5	4	3	4	5	5	3	3	4.6	7.9
29-May	4	4	6	7	9	10	12	10	8	7	7	7	9	8	8	8	8	9	10	10	19	15	11	10	9.1	18.7
30-May	11	11	11	12	12	20	14	23	26	53	40	36	22	16	10	14	14	11	10	9	13	10	9	12	17.3	53.1
31-May	14	11	13	12	16	13	14	18	N	N	M	M	M	M	M	M	2	2	2	2	3	4	10	15	--	18.3
6.7		5.2	5.1	4.9	5.5	6.3	6.3	6.2	5.0	5.0	4.0	3.5	2.9	2.5	2.2	2.5	2.5	2.6	2.7	3.0	4.4	6.0	6.5	6.0	Diurnal Average	
44.4		11.4	12.8	12.3	15.9	19.9	14.2	22.7	25.6	53.1	39.8	36.2	22.3	15.7	9.9	13.5	13.5	11.0	10.2	10.2	18.7	21.9	37.8	28.3	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 Maximums

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

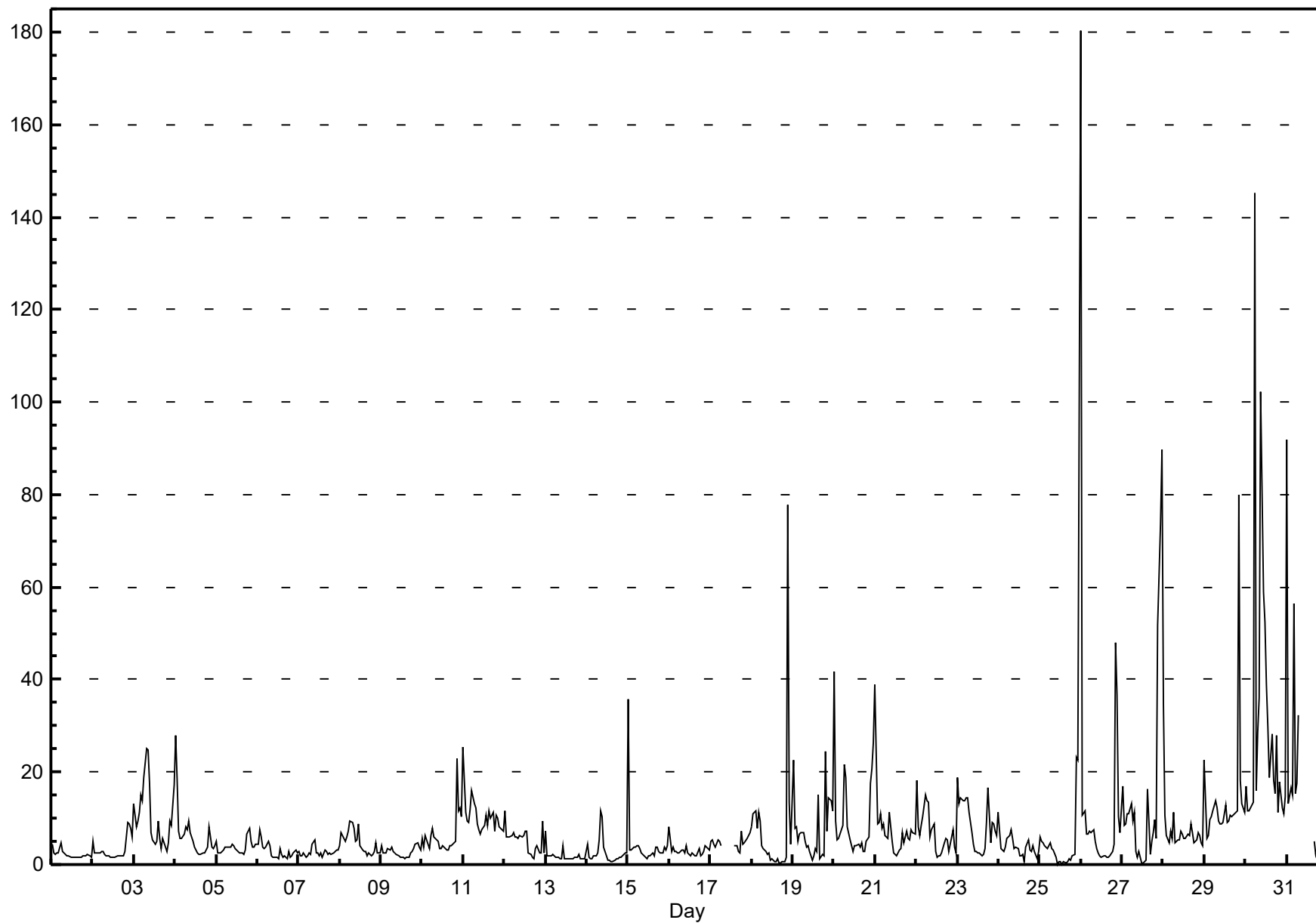
Henry Pirker - May 2017

Maximum Value: 180.4 µg/m ³ on May 26 01:00																				Maximum Daily Average: 31.2 µg/m ³ on May 30					Hours in Service: 744		
Minimum Value: 0 µg/m ³ on May 25 11:00																				Minimum Daily Average: 1.9 µg/m ³ on May 13					Hours of Data: 729		
Maximum Diurnal Average: 22.7 µg/m ³ at hour 1																				Minimum Diurnal Average: 3.5 µg/m ³ at hour 15					Hours of Missing Data: 15		
Monthly Average: 7.67 µg/m ³																				Percentiles: P ₁ = 0.5 P ₁₀ = 1.6 Q ₁ = 2.5 Median = 4.1 Q ₃ = 8.1 P ₉₀ = 13.8 P ₉₉ = 72.0					Hours of Calibration: 7		
																									Percent Operational Time: 98.9		
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-May	4	2	2	2	2	5	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.2	4.7	
2-May	5	2	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	9	9	8	6	3.2	9.1	
3-May	13	8	9	11	15	14	19	25	25	18	7	5	4	5	9	6	3	6	4	3	5	10	8	17	10.4	25.1	
4-May	28	19	7	6	6	7	8	8	10	7	5	4	3	3	2	2	2	2	3	4	8	4	3	4	6.4	27.9	
5-May	5	3	3	3	3	4	4	4	4	4	4	3	3	3	2	2	2	3	7	8	5	4	4	4	3.8	7.8	
6-May	4	7	6	4	4	4	5	4	2	2	2	2	1	3	2	2	2	1	3	2	2	3	3	3	3.0	7.5	
7-May	3	2	2	2	1	2	2	2	4	5	2	3	2	3	2	3	3	2	2	2	3	3	3	3	2.6	5.3	
8-May	4	7	6	5	6	7	10	9	8	5	5	9	4	3	3	3	2	2	2	2	3	5	3	3	4.7	9.5	
9-May	4	2	3	3	3	3	4	3	3	2	2	2	2	2	1	1	2	3	3	3	4	5	4	3	2.7	4.7	
10-May	6	4	6	4	4	6	8	6	5	5	4	3	4	4	3	3	4	4	4	5	23	12	12	11	6.2	22.8	
11-May	25	11	9	9	12	16	13	12	9	7	7	8	9	11	8	12	10	11	7	11	10	8	8	7	10.4	25.4	
12-May	12	6	6	6	6	7	6	6	6	6	6	6	7	7	2	2	2	1	3	4	2	2	9	3	5.2	11.6	
13-May	7	2	2	2	2	2	2	2	1	1	4	1	1	1	1	1	1	2	2	2	1	1	1	1	1.9	7.4	
14-May	4	2	1	1	2	2	3	5	12	10	4	2	1	1	1	1	1	1	1	2	2	2	2	2	2.7	11.6	
15-May	36	3	3	4	4	4	4	3	3	2	2	1	2	2	3	2	4	4	3	2	3	4	3	4	4.3	35.8	
16-May	8	3	4	3	3	2	2	3	3	2	4	2	2	3	2	2	2	4	2	2	3	4	4	3	3.0	8.1	
17-May	5	5	5	4	5	5	4	C	C	C	C	C	C	C	4	4	3	3	7	4	5	6	6	7	--	7.1	
18-May	8	11	12	8	11	9	4	3	3	2	3	1	1	1	1	1	0	0	1	1	2	78	13	4	7.4	77.6	
19-May	22	8	8	5	6	7	7	5	4	4	3	1	2	3	3	15	1	2	2	25	7	14	14	12	7.5	24.5	
20-May	42	9	5	6	7	8	22	19	8	5	4	3	4	4	4	4	5	3	3	5	6	18	21	26	10.0	41.6	
21-May	39	9	9	11	8	9	6	6	11	8	5	2	2	2	3	3	7	5	7	6	5	7	7	7	7.7	38.9	
22-May	18	8	6	9	10	15	14	13	6	8	9	3	2	2	2	2	5	6	5	3	4	8	4	2	6.8	18.3	
23-May	19	13	14	14	14	14	14	11	7	4	3	3	2	2	2	2	3	9	17	5	9	9	7	6	8.5	18.7	
24-May	11	3	3	3	4	6	6	7	6	4	4	3	2	2	2	1	4	5	3	3	4	3	1	3	3.9	11.4	
25-May	6	5	5	4	3	4	5	3	3	2	0	1	1	0	1	0	1	1	1	2	2	23	23	104	8.3	104.0	
26-May	180	11	12	7	7	7	7	8	5	4	3	2	2	2	2	2	2	2	3	4	48	37	10	7	15.4	180.4	
27-May	17	8	9	11	11	13	9	11	3	2	3	0	0	1	1	16	2	5	7	10	6	52	74	90	15.0	89.7	
28-May	35	11	6	5	7	6	11	5	5	5	7	7	6	6	7	6	9	7	5	5	7	6	5	4	7.6	34.8	
29-May	23	6	6	10	10	12	14	12	9	9	9	9	13	9	9	11	11	11	11	12	80	18	13	11	14.0	79.8	
30-May	17	12	12	12	13	145	16	28	36	102	59	52	39	30	19	28	18	15	28	11	18	12	11	15	31.2	145.1	
31-May	92	13	17	15	56	15	17	32	N	N	M	M	M	M	M	M	M	5	2	3	3	5	8	16	19	--	92.0
22.7 7.0 6.5 6.1 8.1 11.7 8.1 8.7 7.0 8.3 5.9 4.9 4.3 4.0 3.5 4.7 3.8 4.1 4.9 5.0 9.4 12.0 9.7 12.7																									Diurnal Average		
180.4 18.6 16.8 15.0 56.3 145.1 21.6 32.4 36.1 102.3 59.0 52.4 39.0 29.8 18.8 28.3 18.1 15.3 27.8 24.5 79.8 77.6 73.6 104.0																									Diurnal Maximum		
C - Calibration M - Maintenance N - Not Valid																											

Hourly Maximums

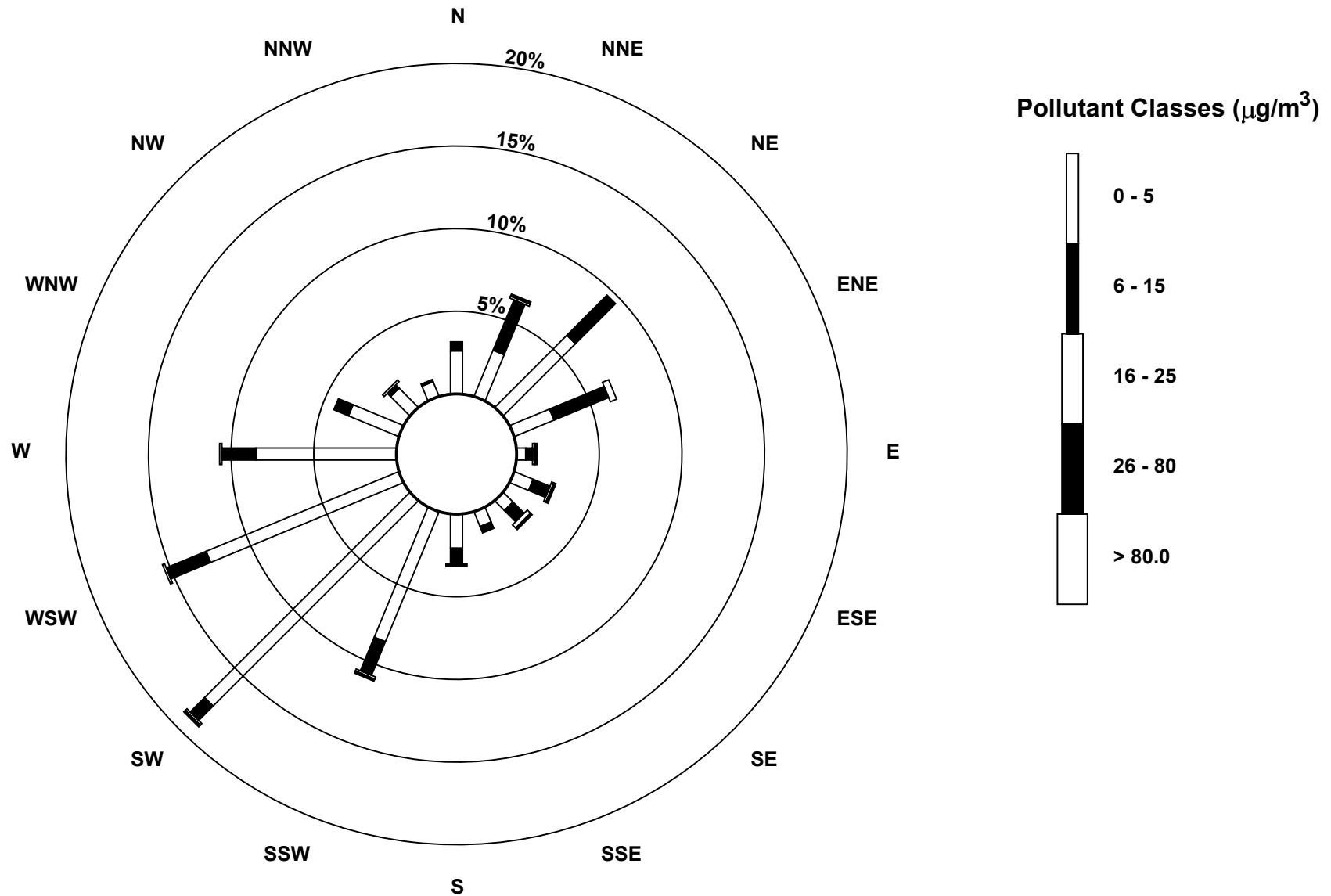
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - May 2017



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Henry Pirker - May 2017



Hourly Averages

External Temperature (ET) - °C

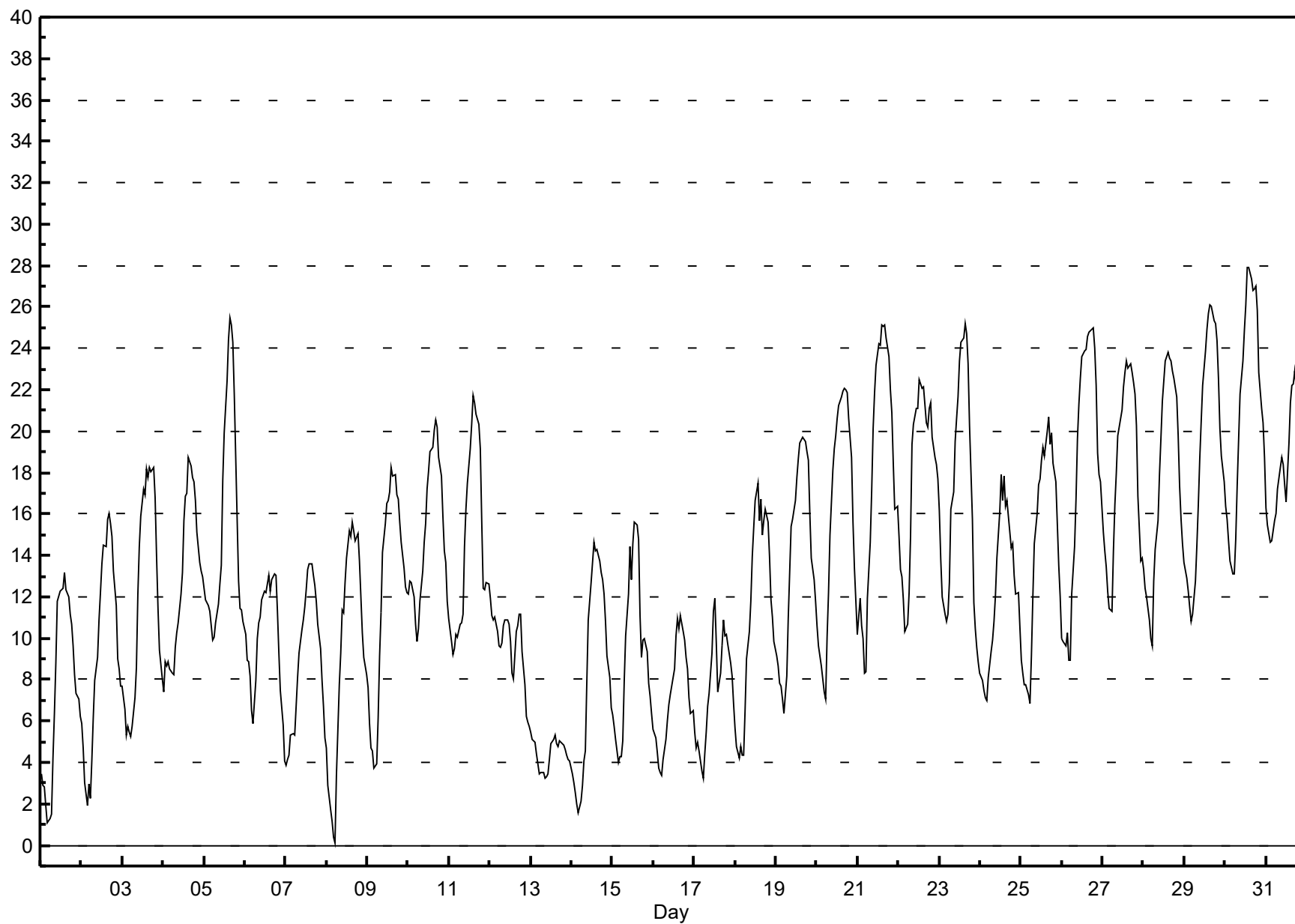
Henry Pirker - May 2017

Maximum Value: 27.9 °C on May 30 14:00																								Maximum Daily Average: 21.1 °C on May 30						Hours in Service: 744	
Minimum Value: 0 °C on May 8 06:00																								Minimum Daily Average: 4.4 °C on May 13						Hours of Data: 744	
Maximum Diurnal Average: 18.3 °C at hour 16																								Minimum Diurnal Average: 7.1 °C at hour 6						Hours of Missing Data: 0	
Monthly Average: 13.11 °C																								Percentiles: P ₁ = 1.7 P ₁₀ = 5.0 Q ₁ = 8.8 Median = 12.3 Q ₃ = 17.5 P ₉₀ = 22.0 P ₉₉ = 25.5						Hours of Calibration: 0	
																								Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-May	3	3	3	2	1	1	1	4	6	9	12	12	12	12	13	12	12	11	11	10	8	7	7	6	7.5	13.2					
2-May	6	5	3	2	3	2	4	6	8	9	11	12	14	14	14	16	16	15	13	12	9	9	9	8	9.4	16.0					
3-May	8	7	5	6	5	5	6	7	9	12	14	16	17	17	18	18	18	18	18	17	14	11	9	8	11.8	18.3					
4-May	7	9	9	9	9	8	8	10	10	11	12	13	16	17	17	19	18	18	18	17	15	14	13	13	12.8	18.7					
5-May	12	12	12	11	11	10	10	11	12	13	14	18	20	22	24	25	25	24	22	16	13	11	11	11	15.4	25.4					
6-May	10	9	9	8	6	6	8	10	11	11	12	12	12	13	13	12	13	13	13	11	9	7	6	4	10.0	13.1					
7-May	4	4	4	5	5	5	7	8	9	10	11	11	12	13	14	14	13	13	12	11	9	8	7	5	9.0	13.6					
8-May	5	3	2	1	0	0	3	8	9	11	11	13	14	15	15	16	15	15	15	14	12	10	9	8	9.3	15.6					
9-May	8	6	5	5	4	4	6	9	11	14	16	17	17	17	18	18	18	17	17	16	15	13	13	12	12.2	18.3					
10-May	12	13	13	12	11	10	10	12	13	15	16	17	18	19	19	20	21	20	19	18	16	14	14	12	15.1	20.6					
11-May	11	10	9	10	10	10	11	11	11	14	16	17	19	20	22	21	21	20	19	16	12	12	13	13	14.5	21.7					
12-May	12	11	11	11	10	10	10	10	11	11	11	11	10	8	8	10	11	11	11	9	8	6	6	6	9.7	12.0					
13-May	5	5	5	4	4	3	4	4	3	3	3	4	5	5	5	5	5	5	5	5	5	4	4	4	4.4	5.5					
14-May	3	3	3	2	2	2	3	4	5	8	11	13	14	15	14	14	14	13	13	12	11	9	8	7	8.4	14.6					
15-May	6	6	5	4	4	4	5	8	10	12	14	13	15	16	15	15	11	9	10	10	9	8	7	6	9.3	15.6					
16-May	6	5	4	4	3	3	4	5	6	7	7	8	9	10	11	10	11	10	10	9	9	7	6	7	7.2	11.1					
17-May	5	5	5	5	4	3	4	5	7	7	9	11	12	10	7	8	10	11	10	10	10	9	8	7	7.6	11.9					
18-May	6	5	4	5	4	4	7	9	10	12	14	15	17	17	16	17	15	16	16	16	14	12	11	10	11.3	17.5					
19-May	9	9	8	8	7	6	8	11	13	15	16	17	18	19	19	20	20	20	19	19	16	14	13	12	13.9	19.7					
20-May	11	10	9	9	7	7	10	12	15	18	19	20	21	21	22	22	22	22	22	21	19	16	13	12	15.8	22.1					
21-May	10	12	11	10	8	8	12	15	17	20	22	23	24	24	25	25	25	25	24	22	21	18	16	16	18.1	25.2					
22-May	15	13	13	12	10	11	12	15	19	20	21	21	22	22	22	22	20	20	21	21	20	19	18	18	17.9	22.5					
23-May	16	14	12	11	11	11	13	16	17	20	21	22	23	24	25	25	25	23	20	16	12	10	10	9	16.9	25.2					
24-May	8	8	7	7	7	8	9	10	11	12	14	16	18	17	18	16	17	15	14	15	13	12	12	11	12.3	17.9					
25-May	9	8	8	8	7	7	9	12	15	16	17	18	19	19	19	20	21	19	20	18	18	16	14	12	14.5	20.7					
26-May	10	10	10	10	9	9	12	14	17	20	21	23	24	24	24	25	25	25	25	24	22	19	18	18	18.2	25.0					
27-May	15	14	13	12	11	11	14	16	18	20	20	21	22	23	23	23	23	23	22	22	20	17	14	14	18.1	23.4					
28-May	13	12	12	11	10	10	13	14	16	18	20	21	22	23	24	24	23	23	23	22	20	17	16	15	17.5	23.8					
29-May	14	13	12	11	11	11	13	15	16	19	21	22	24	25	26	26	26	25	25	24	23	20	19	18	19.1	26.1					
30-May	16	16	15	14	13	13	15	17	20	22	23	25	26	28	28	27	27	27	27	26	23	21	20	19	21.1	27.9					
31-May	16	15	15	15	15	16	16	17	18	19	18	17	17	19	21	22	22	23	22	22	21	18	16	15	18.2	22.9					
9.5 8.8 8.2 7.8 7.2 7.1 8.6 10.5 12.0 13.8 15.1 16.1 17.1 17.8 18.1 18.3 18.1 17.7 17.3 16.1 14.4 12.6 11.6 10.7																								Diurnal Average							
16.4 15.7 14.7 14.7 15.2 15.7 16.0 17.4 19.6 21.8 23.4 24.9 26.1 27.9 27.9 27.4 26.8 26.8 27.0 25.8 22.9 21.1 20.4 18.7																								Diurnal Maximum							

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - May 2017



Hourly Averages

Relative Humidity (RH) - %

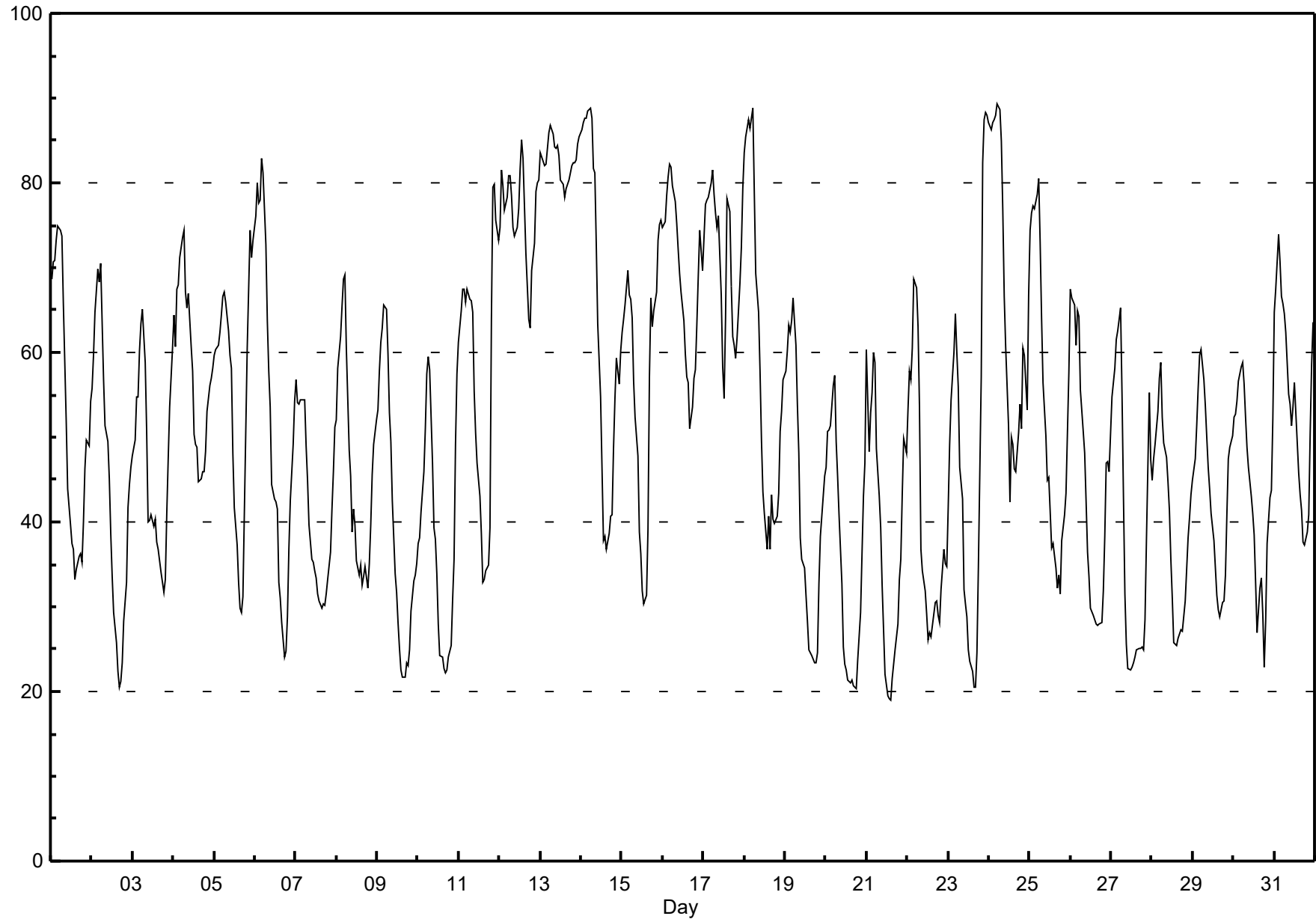
Henry Pirker - May 2017

Maximum Value: 89.4 % on May 24 06:00																								Maximum Daily Average: 82.8 % on May 13						Hours in Service: 744	
Minimum Value: 19 % on May 21 15:00																								Minimum Daily Average: 35.7 % on May 20						Hours of Data: 744	
Maximum Diurnal Average: 70.0 % at hour 6																								Minimum Diurnal Average: 36.0 % at hour 16						Hours of Missing Data: 0	
Monthly Average: 51.52 %																								Percentiles: P ₁ = 20.6 P ₁₀ = 27.8 Q ₁ = 35.7 Median = 50.5 Q ₃ = 65.1 P ₉₀ = 78.8 P ₉₉ = 87.6						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-May	69	71	71	73	75	74	74	66	59	52	44	40	37	37	33	34	36	36	35	40	46	50	49	54	52.3	74.9					
2-May	56	60	65	70	68	70	64	57	51	50	45	39	34	29	26	22	21	21	23	28	33	42	44	46	44.3	70.4					
3-May	48	50	55	55	60	63	65	59	51	40	40	41	40	40	38	37	35	34	32	33	41	47	53	61	46.5	65.1					
4-May	64	61	67	68	71	74	74	67	65	67	61	58	50	49	49	45	45	46	46	48	53	56	57	58	58.3	74.5					
5-May	60	60	61	62	64	67	67	66	63	60	58	48	42	37	33	30	29	31	41	61	67	74	71	73	55.2	74.5					
6-May	76	80	78	78	83	81	73	64	58	54	44	43	42	41	33	31	28	24	25	29	37	43	49	54	52.0	82.9					
7-May	57	54	54	54	54	54	49	45	40	36	35	34	33	32	31	30	30	30	31	33	36	41	46	51	41.3	56.7					
8-May	52	58	62	65	69	69	61	48	45	39	41	40	35	34	35	32	34	35	32	35	40	46	49	52	46.2	69.2					
9-May	53	58	61	63	66	65	60	53	50	43	34	32	28	25	23	22	22	23	23	25	30	33	34	35	39.9	65.7					
10-May	37	38	41	46	51	58	60	58	47	39	38	34	28	24	24	23	22	23	24	25	31	36	49	58	38.1	59.5					
11-May	61	65	67	68	66	67	66	66	65	55	51	47	43	39	33	33	34	35	39	64	80	80	76	73	57.2	79.8					
12-May	75	82	80	77	78	81	81	78	75	74	75	77	82	85	83	72	68	64	63	70	73	79	80	80	76.2	85.2					
13-May	84	83	82	82	84	86	87	86	84	84	84	83	80	80	78	79	80	80	82	82	82	83	85	85	82.8	86.7					
14-May	86	87	88	88	89	89	88	82	81	73	63	55	46	38	38	37	39	41	41	49	55	59	56	60	63.6	88.8					
15-May	62	64	66	70	67	66	64	57	52	48	39	36	32	30	31	39	57	66	63	65	67	73	75	76	56.9	75.5					
16-May	75	75	78	81	82	82	80	78	75	72	69	67	64	60	57	56	51	54	57	58	63	69	74	70	68.7	82.2					
17-May	74	77	78	78	80	82	79	76	75	76	67	58	55	64	78	77	68	62	61	59	62	68	72	79	71.0	81.6					
18-May	84	85	88	86	88	89	79	69	65	58	50	44	41	37	41	37	43	40	40	41	43	51	53	57	58.6	88.8					
19-May	58	60	63	62	64	67	61	54	48	38	36	35	31	28	25	25	24	23	23	25	33	38	43	46	42.0	66.5					
20-May	46	51	51	51	56	57	50	45	41	33	25	23	23	21	21	21	21	21	20	24	29	36	43	47	35.7	57.2					
21-May	60	48	53	55	60	59	49	43	39	33	27	22	20	19	19	21	23	25	28	33	36	43	50	48	38.1	60.4					
22-May	53	58	57	60	69	68	63	54	37	34	32	29	26	27	26	28	30	31	29	28	32	37	35	35	40.7	68.6					
23-May	42	49	54	60	64	60	56	47	43	32	30	29	25	24	22	20	20	25	35	57	82	87	88	88	47.5	88.3					
24-May	87	86	87	87	88	89	89	85	77	67	61	51	42	50	49	46	46	50	54	51	60	60	53	67	66.0	89.4					
25-May	74	77	77	77	79	81	73	64	56	50	45	45	41	37	37	35	32	34	32	38	41	43	50	58	53.2	80.5					
26-May	67	66	66	61	65	64	56	51	48	42	36	34	30	29	28	28	28	28	28	32	38	47	47	46	44.4	67.4					
27-May	55	56	58	62	63	65	55	43	31	26	23	23	23	24	25	25	25	25	25	25	29	38	55	47	38.5	65.3					
28-May	45	47	49	53	57	59	52	49	48	45	41	36	31	26	25	26	27	27	27	31	34	38	40	43	39.9	58.9					
29-May	45	47	51	56	60	60	57	54	50	46	44	41	38	35	31	30	29	30	31	34	41	47	49	50	44.0	60.3					
30-May	52	53	54	57	58	59	56	52	49	46	43	41	38	33	27	32	33	29	23	28	37	43	44	52	43.4	58.9					
31-May	65	67	74	71	67	66	65	62	55	54	51	54	56	49	46	43	41	38	37	39	41	51	59	64	54.7	73.9					
62.0 63.7 65.7 67.0 69.1 70.0 66.1 60.6 55.5 50.4 46.2 43.1 39.9 38.1 36.9 36.0 36.2 36.5 37.1 41.6 47.5 52.9 55.8 58.5																									Diurnal Average						
87.1 87.1 87.6 87.7 88.5 89.4 88.6 85.7 84.3 84.1 84.5 83.3 81.6 85.2 82.9 79.3 79.8 80.3 82.0 82.3 82.4 87.5 88.3 88.0																									Diurnal Maximum						

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - May 2017



Hourly Averages

Solar Radiation (SR) - W/m²

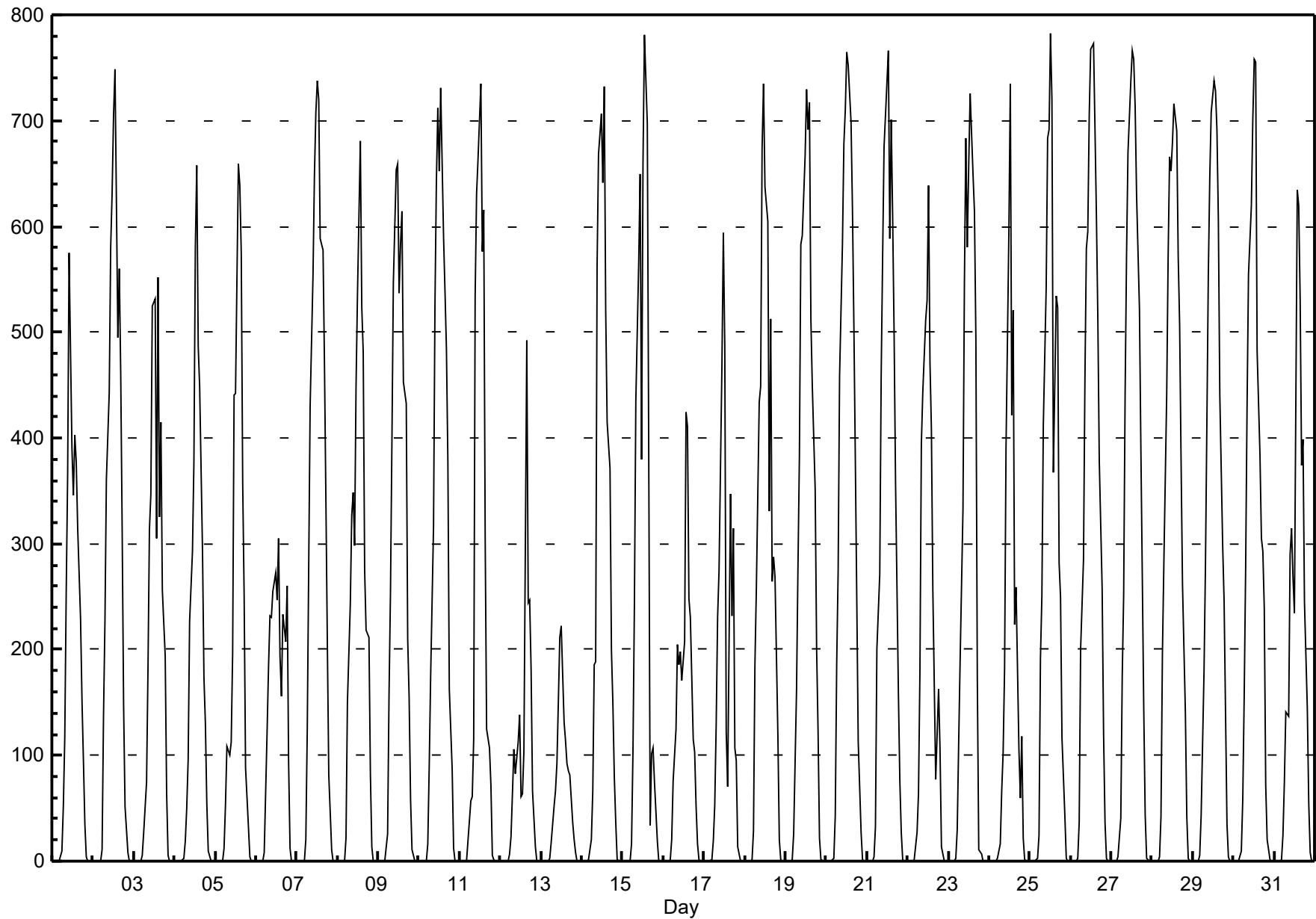
Henry Pirker - May 2017

Maximum Value: 782.2 W/m ² on May 25 13:00																								Maximum Daily Average: 297.1 W/m ² on May 27								Hours in Service: 744	
Minimum Value: 0 W/m ² on May 1 02:00																								Minimum Daily Average: 57.8 W/m ² on May 13								Hours of Data: 744	
Maximum Diurnal Average: 580.0 W/m ² at hour 13																								Minimum Diurnal Average: 0.0 W/m ² at hour 4								Hours of Missing Data: 0	
Monthly Average: 212.25 W/m ²																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 102.8 Q ₃ = 394.8 P ₉₀ = 635.4 P ₉₉ = 762.8								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-May	0	0	0	0	0	10	52	117	254	365	574	391	346	402	377	315	229	152	95	35	4	0	0	0	154.9	574.4							
2-May	0	0	0	0	0	11	137	226	360	443	580	632	706	749	495	560	460	313	147	52	8	0	0	0	245.0	748.5							
3-May	0	0	0	0	0	5	27	74	181	313	348	525	531	305	552	325	414	257	194	64	6	0	0	0	171.7	551.8							
4-May	0	0	0	0	0	2	18	51	96	227	293	377	580	657	486	448	293	173	130	54	9	0	0	0	162.3	657.0							
5-May	0	0	0	0	0	12	53	109	100	112	197	441	442	658	639	574	358	252	88	33	4	0	0	0	169.7	658.4							
6-May	0	0	0	0	0	8	122	183	232	231	255	273	247	306	193	156	233	207	260	93	13	0	0	0	125.5	305.6							
7-May	0	0	0	0	0	20	123	277	429	553	648	708	738	720	588	578	470	340	206	81	11	0	0	0	270.4	737.6							
8-May	0	0	0	0	0	22	150	243	326	349	298	449	535	681	523	482	275	218	211	83	13	0	0	0	202.5	681.1							
9-May	0	0	0	0	0	26	159	254	395	547	654	660	537	583	614	453	432	211	154	58	11	0	0	0	239.5	659.5							
10-May	0	0	0	0	0	17	90	175	316	524	642	712	652	731	590	538	485	379	163	87	13	0	0	0	254.7	730.9							
11-May	0	0	0	0	0	19	57	61	115	533	631	663	735	576	616	306	125	108	72	5	1	0	0	0	192.6	735.3							
12-May	0	0	0	0	0	7	22	63	106	82	113	139	61	64	105	492	244	247	181	66	13	0	0	0	83.6	491.9							
13-May	0	0	0	0	0	3	17	52	67	92	151	212	222	131	114	92	85	82	37	21	8	0	0	0	57.8	222.1							
14-May	0	0	0	0	1	21	67	186	188	563	668	707	641	732	521	415	371	199	149	79	36	1	0	0	231.0	732.1							
15-May	0	0	0	0	1	17	103	241	436	565	650	379	660	780	697	384	34	102	107	75	19	1	0	0	218.8	780.4							
16-May	0	0	0	0	1	21	76	125	205	186	199	171	208	424	411	248	230	115	103	52	17	1	0	0	116.3	423.8							
17-May	0	0	0	0	1	19	54	129	231	276	468	595	486	123	70	346	232	314	107	94	13	0	0	0	148.2	594.5							
18-May	0	0	0	0	1	28	186	258	433	449	673	735	637	605	331	512	265	287	269	119	21	1	0	0	242.1	734.8							
19-May	0	0	0	0	1	26	162	278	382	583	591	666	730	691	718	513	448	352	201	124	21	1	0	0	270.4	729.9							
20-May	0	0	0	0	3	43	187	274	458	582	677	711	764	752	698	614	502	378	245	112	27	1	0	0	292.9	764.2							
21-May	0	0	0	0	4	33	200	272	459	570	676	705	766	589	701	608	499	360	158	75	27	1	0	0	279.3	765.7							
22-May	0	0	0	0	2	28	64	179	395	444	511	530	639	472	408	256	77	121	163	106	14	1	0	0	183.7	638.8							
23-May	0	0	0	0	3	30	111	189	333	545	683	581	657	725	649	614	493	172	10	7	1	0	0	0	241.8	725.2							
24-May	0	0	0	0	0	3	16	67	103	182	390	596	735	422	520	223	259	106	60	118	22	1	0	0	159.3	735.1							
25-May	0	0	0	0	3	24	191	251	412	542	683	691	782	720	367	535	524	282	250	116	44	3	0	0	267.6	782.2							
26-May	0	0	0	0	3	37	201	285	456	579	595	705	768	773	692	610	513	379	258	121	37	3	0	0	292.3	773.0							
27-May	0	0	0	0	4	41	175	253	440	573	670	737	766	758	713	630	521	389	268	144	43	3	0	0	297.1	765.8							
28-May	0	0	0	0	4	43	196	281	442	573	666	652	680	716	690	572	508	380	262	141	42	3	0	0	285.4	715.9							
29-May	0	0	0	0	5	43	179	280	415	555	645	708	738	728	692	607	441	298	246	140	35	4	0	0	281.6	737.9							
30-May	0	0	0	0	9	58	156	276	430	555	619	701	758	756	483	384	306	292	239	72	21	2	0	0	254.8	757.7							
31-May	0	0	0	0	2	24	75	141	136	291	315	268	234	635	619	530	374	399	246	143	54	9	0	0	187.3	634.8							
0.0 0.0 0.0 0.0 1.6 22.6 110.5 188.7 301.1 418.8 508.5 549.0 580.0 579.4 512.0 449.1 345.2 253.6 170.3 82.9 19.6 1.2 0.0 0.0																									Diurnal Average								
0.0 0.1 0.0 0.0 9.0 58.2 201.1 284.6 459.1 583.2 683.1 737.2 782.2 780.4 717.8 629.8 523.7 398.8 268.5 144.4 54.0 8.7 0.0 0.1																									Diurnal Maximum								

Hourly Averages

Solar Radiation (SR) - W/m²

Henry Pirker - May 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - May 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	9	10	9	6	3	3	7	9	7	8	7	10	11	12	15	15	16	15	15	12	13	13	11	9.7	15.9
Dir	208	208	214	233	274	272	246	213	205	210	238	257	272	241	229	238	239	234	230	228	245	237	225	220	232.2	233.6
2 Spd	14	13	9	6	7	8	11	14	17	17	14	12	10	9	10	9	11	10	8	5	3	2	5	3	9.1	17.3
Dir	217	216	243	254	223	210	229	237	250	252	257	242	230	253	241	228	227	230	240	266	273	199	202	202	236.3	249.6
3 Spd	3	2	3	1	2	2	0	3	5	5	10	16	15	18	19	21	22	23	20	17	9	6	0	2	7.9	22.5
Dir	73	106	71	219	118	285	61	129	142	194	199	221	219	215	217	227	237	234	238	240	234	263	28	311	224.1	234.2
4 Spd	3	1	2	1	0	2	1	7	13	13	13	10	9	8	6	1	1	1	4	5	5	5	8	7	2.6	13.5
Dir	159	243	155	269	266	282	236	191	149	154	165	181	184	146	135	225	77	52	13	27	32	34	45	48	141.3	165.3
5 Spd	7	5	7	8	6	5	7	5	2	5	8	5	7	4	2	5	6	5	7	25	16	13	15	6	2.0	25.0
Dir	52	35	50	51	41	49	60	82	83	345	66	50	54	53	207	233	217	277	282	246	277	288	270	271	319.4	246.0
6 Spd	1	3	4	8	3	6	6	8	10	15	18	14	11	10	9	10	13	15	22	21	19	15	10	6	9.9	22.3
Dir	50	142	222	249	198	269	178	218	228	234	244	249	208	182	222	188	198	219	232	235	235	229	212	239	224.3	232.0
7 Spd	5	11	16	19	20	17	20	19	23	29	27	27	24	23	23	24	26	26	26	23	17	13	10	6	19.4	28.8
Dir	209	194	199	210	217	218	218	211	224	227	231	229	229	227	240	230	228	232	231	236	224	216	209	201	223.7	227.0
8 Spd	6	4	2	4	3	2	3	1	5	11	18	18	20	19	19	16	15	17	19	19	15	17	13	14	10.5	20.1
Dir	183	142	117	114	109	104	119	174	191	213	223	207	221	237	236	224	224	227	234	231	224	231	223	218	219.8	221.5
9 Spd	13	7	6	8	6	7	6	10	9	5	4	2	2	3	3	3	2	3	4	6	6	6	7	7	2.3	13.5
Dir	218	203	259	247	276	267	263	239	232	235	267	283	252	207	187	231	339	320	41	49	49	39	40	41	257.9	217.7
10 Spd	10	12	12	11	10	7	6	5	6	13	13	8	7	6	5	4	5	3	5	5	3	4	5	4	1.1	12.8
Dir	48	57	53	53	55	71	75	96	198	217	233	231	237	252	225	245	231	261	31	353	12	22	19	21	45.6	217.0
11 Spd	4	5	4	5	5	6	7	8	7	9	11	11	13	14	16	17	18	21	14	13	12	10	11	11	9.8	20.8
Dir	23	11	17	16	17	19	18	24	16	12	20	25	27	23	40	40	35	43	27	94	16	342	358	22	26.9	43.1
12 Spd	7	7	11	13	12	12	10	12	13	10	11	12	11	11	16	20	17	13	13	9	5	3	7	7	2.4	19.5
Dir	37	9	30	45	30	31	46	41	40	37	39	39	42	178	210	236	222	238	249	290	260	256	289	269	354.0	235.7
13 Spd	7	9	13	13	13	13	12	15	17	15	14	12	12	12	13	11	10	8	6	8	9	8	7	7	10.5	17.4
Dir	260	264	263	271	271	263	270	277	282	287	289	277	271	263	256	258	266	267	269	253	239	234	224	200	265.3	281.9
14 Spd	7	6	6	4	2	4	4	4	5	4	1	4	12	13	12	12	14	11	11	7	5	3	7	6	4.3	14.0
Dir	185	194	211	193	66	104	157	107	111	140	155	268	246	235	255	270	290	285	248	306	301	208	240	239	243.0	290.1
15 Spd	6	7	7	4	6	7	6	6	7	7	5	6	4	3	7	8	8	9	6	6	7	5	3	7	1.8	9.1
Dir	213	214	235	237	217	213	223	238	241	262	229	287	253	278	321	30	38	335	18	33	53	62	16	32	287.8	334.6
16 Spd	7	5	7	7	5	6	6	7	8	9	10	8	8	8	10	7	7	9	8	8	6	5	5	7	7.1	10.4
Dir	41	11	4	3	11	359	4	354	347	4	6	5	10	8	359	14	12	25	8	27	33	10	16	36	10.5	6.1
17 Spd	5	3	3	5	4	4	6	7	9	9	9	10	10	9	4	11	10	9	14	12	8	5	6	4	6.3	14.0
Dir	31	26	27	31	8	9	47	60	77	68	58	68	68	110	120	122	113	84	73	55	51	67	105	129	72.1	73.1
18 Spd	4	2	3	5	8	6	6	6	7	10	12	16	13	12	16	16	18	15	13	7	10	7	7	6	7.8	18.0
Dir	122	138	128	194	214	216	234	213	206	194	183	208	222	216	250	257	286	261	265	232	211	192	198	204	225.2	286.0
19 Spd	7	8	7	10	9	10	10	13	14	19	22	19	19	16	18	17	16	15	16	12	7	6	5	6	11.4	21.6
Dir	191	199	193	198	196	191	191	201	213	222	228	240	243	231	231	235	245	264	261	263	249	194	238	252	227.8	228.1
20 Spd	3	6	7	7	6	5	7	10	10	10	15	16	17	17	16	17	15	13	14	9	8	5	3	2	9.6	16.9
Dir	259	219	213	256	240	229	209	215	206	212	233	236	241	236	240	244	230	234	232	246	239	206	210	311	232.1	236.4
21 Spd	5	7	6	7	4	6	9	9	8	11	14	15	14	14	17	18	17	18	17	14	16	9	8	11	11.2	18.2
Dir	228	212	213	227	246	253	245	216	210	222	233	252	242	227	236	237	232	229	224	225	226	208	205	220	229.1	237.5
22 Spd	9	6	4	2	2	5	7	8	16	22	24	24	17	19	17	14	11	7	7	8	8	11	11	12	10.4	24.1
Dir	202	187	198	198	186	155	137	175	209	219	232	235	231	237	231	228	224	188	209	197	194	223	226	253	218.4	231.9



Hourly Averages

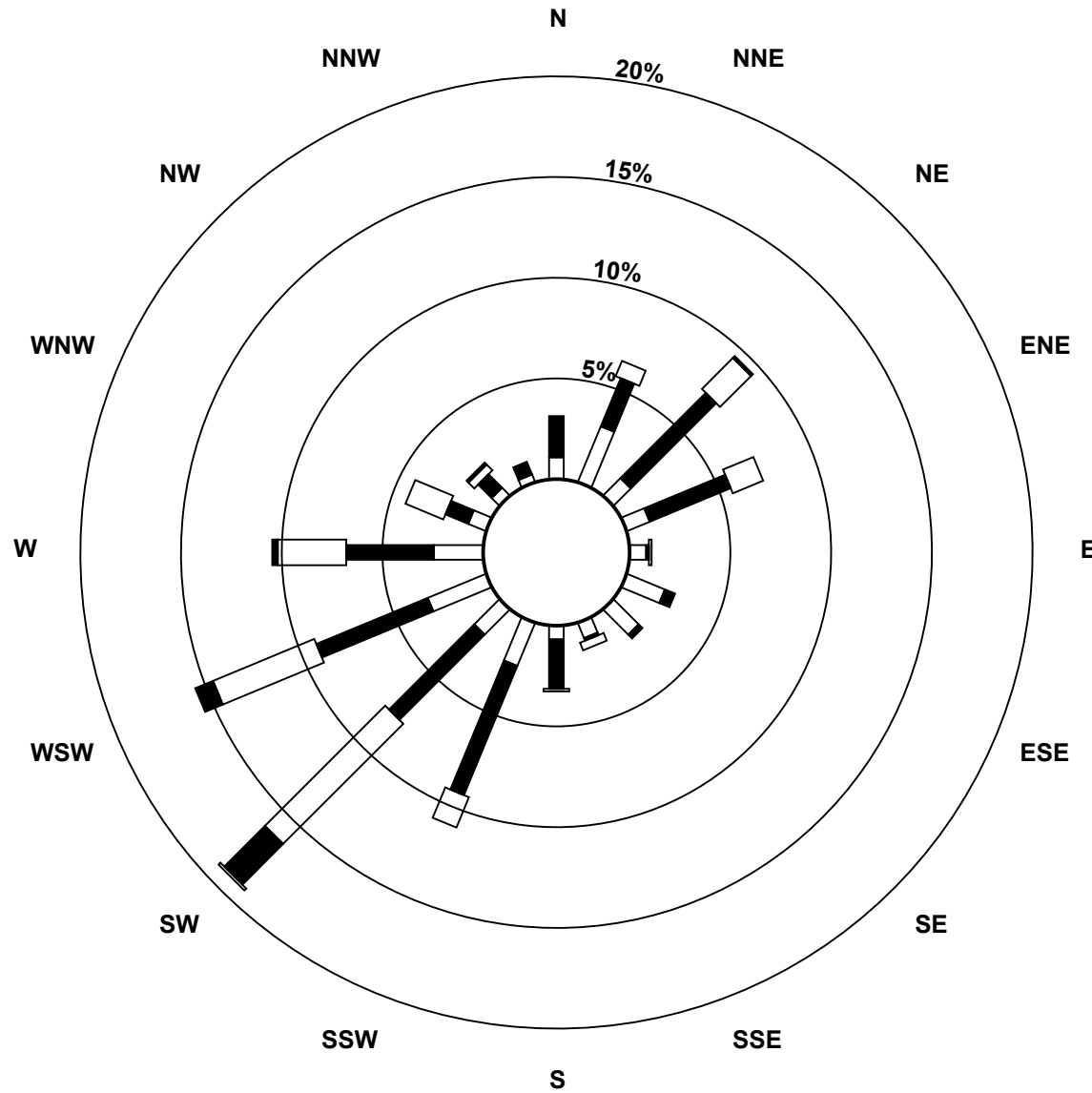
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - May 2017

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	1	1	2	2	3	5	5	6	16	17	13	10	6	5	3	5	10	9	13	24	19	24	20	7.1	24.1						
	Dir	250	199	95	132	262	265	282	253	284	230	237	227	233	253	166	274	67	33	323	288	248	267	263	247	255.3	262.9						
24 Spd		17	13	17	18	13	10	13	12	14	18	19	19	20	18	22	18	16	14	14	12	8	19	10	12	13.6	21.6						
	Dir	242	237	234	234	236	247	278	284	295	306	313	316	311	286	275	292	291	303	303	304	290	277	277	281	281.2	275.1						
25 Spd		11	8	8	8	8	6	7	6	4	4	5	8	9	8	8	6	11	12	13	12	7	5	3	4	6.3	13.2						
	Dir	276	278	275	277	281	282	266	252	238	244	240	228	243	241	241	219	214	212	228	213	195	175	131	115	238.7	228.3						
26 Spd		2	3	4	6	5	6	7	9	8	10	11	11	13	12	13	12	12	11	8	5	4	5	7	10	7.3	13.4						
	Dir	94	235	238	221	249	253	240	217	212	230	249	258	257	275	273	277	275	259	263	245	270	210	202	213	247.9	272.7						
27 Spd		4	6	7	4	4	8	11	7	7	5	8	7	3	5	7	9	9	10	9	7	6	2	0	4	4.9	11.0						
	Dir	237	276	257	243	237	273	274	315	331	315	319	327	336	270	261	262	246	257	276	325	1	21	136	27	287.0	273.9						
28 Spd		6	7	8	8	5	4	6	8	8	8	9	10	13	15	14	15	17	18	16	14	12	10	10	10	10.3	17.5						
	Dir	40	46	58	73	53	34	53	56	65	58	49	59	65	66	60	53	50	53	52	52	50	47	45	43	54.0	52.6						
29 Spd		11	11	11	8	8	10	11	12	11	11	10	11	13	14	14	14	14	11	13	12	8	7	9	8	10.7	14.4						
	Dir	47	53	53	51	43	50	69	75	64	78	77	77	65	70	58	62	61	57	55	56	62	68	71	65	62.3	62.4						
30 Spd		10	10	10	8	6	6	3	2	1	2	3	1	2	2	5	6	8	9	10	7	8	7	4	1	3.7	10.3						
	Dir	56	59	69	71	67	74	81	117	211	190	227	115	87	65	65	47	41	55	62	46	274	314	4	272	54.1	59.4						
31 Spd		3	5	3	7	5	7	5	5	13	13	19	17	11	6	6	8	8	11	9	4	2	5	4	4	5.5	19.0						
	Dir	237	284	250	263	247	287	286	274	251	250	229	229	222	175	192	173	211	222	172	350	141	131	124	119	227.0	229.4						
Spd		1.5	1.6	1.6	2.0	1.8	2.0	2.1	2.8	4.1	5.9	6.7	6.5	5.8	6.0	6.9	6.3	5.8	5.4	5.4	4.7	4.1	3.5	2.8	2.1	Diurnal Average							
Dir		212.9	215.7	228.9	239.4	252.1	260.4	241.1	225.8	228.3	233.8	240.7	244.6	243.4	233.4	240.3	242.4	245.3	252.0	255.5	259.3	252.7	248.1	243.7	246.3	Diurnal Maximum							
Spd		16.7	13.4	16.8	18.6	19.9	16.5	20.2	18.9	23.5	28.8	27.5	26.7	24.0	22.6	23.5	24.1	26.4	25.5	25.7	25.0	23.6	19.0	24.1	20.0	Diurnal Maximum							
Dir		241.6	236.6	233.9	209.5	217.3	218.3	217.7	210.7	223.9	227.0	231.2	228.8	229.1	227.2	240.3	229.7	227.8	231.6	231.4	246.0	247.9	276.7	262.9	246.8								
Maximum Speed Value: 29 km/h on May 7 10:00																								Minimum Speed Value: 0 km/h on May 4 05:00				Hours in Service:				744	
Maximum Daily Speed Average: 19.4 km/h on May 7																								Minimum Daily Speed Average: 1.1 km/h on May 4				Hours of Data:				744	
Maximum Diurnal Speed Average: 6.9 km/h at hour 15																								Minimum Diurnal Speed Average: 1.5 km/h at hour 1				Hours of Missing Data:				0	
Monthly Average Velocity: 4.01 km/h 242.57 deg																								Speed Percentiles: P ₁ = 1.0 P ₁₀ = 3.4 Q ₁ = 5.5 Median = 8.3 Q ₃ = 12.6 P ₉₀ = 17.1 P ₉₉ = 24.6				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				> 38				Total							
North		16				32				1				0				0				0				49							
NorthEast		19				74				34				1				0				0				128							
East		14				19				6				0				0				0				39							
SouthEast		28				5				2				0				0				0				35							
South		13				43				5				0				0				0				61							
SouthWest		31				98				98				34				1				0				262							
West		26				63				54				3				0				0				146							
NorthWest		5				11				7				1				0				0				24							
Total		152				345				207				39				1				0				744							

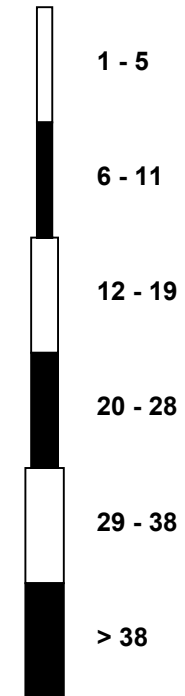
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - May 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - May 2017

Maximum Speed: 29 km/h on May 7 10:00																				Maximum Daily Speed Average: 20.0 km/h on May 7										Hours in Service: 744																				
Minimum Speed: 1 km/h on May 27 23:00																				Minimum Daily Speed Average: 6.1 km/h on May 4										Hours of Data: 744																				
Maximum Diurnal Speed Average: 12.9 km/h at hour 17																				Minimum Diurnal Speed Average: 6.6 km/h at hour 5										Hours of Missing Data: 0																				
Monthly Average Speed: 9.92 km/h																				Percentiles: P ₁ = 2.2 P ₁₀ = 4.1 Q ₁ = 6.0 Median = 8.6 Q ₃ = 13.1 P ₉₀ = 17.4 P ₉₉ = 25.0										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-May	8	9	10	9	6	3	4	7	9	8	9	8	10	12	13	15	15	16	15	15	12	13	13	11	10.5	16.3																								
2-May	15	13	10	6	8	8	12	14	17	17	15	13	11	11	11	10	12	10	8	5	3	2	5	3	10.0	17.5																								
3-May	4	2	3	4	3	2	2	4	5	5	11	16	16	18	19	22	22	23	21	17	10	6	2	3	10.0	22.9																								
4-May	3	3	3	2	2	3	3	7	13	13	14	10	9	9	7	4	4	3	5	5	5	5	8	7	6.1	13.9																								
5-May	7	5	7	8	6	5	7	5	4	6	9	6	8	6	6	6	7	6	8	25	17	13	16	7	8.3	25.5																								
6-May	3	4	5	9	4	6	7	8	10	15	18	14	12	11	10	12	14	16	23	22	19	15	10	6	11.3	22.7																								
7-May	5	11	16	19	20	17	20	19	24	29	28	27	24	23	24	25	27	26	26	23	17	13	10	6	20.0	29.3																								
8-May	6	4	3	4	4	3	3	2	6	12	18	19	21	20	20	17	16	17	19	20	15	17	13	14	12.1	20.6																								
9-May	14	8	7	8	7	7	6	10	9	6	5	5	6	6	5	5	6	4	6	6	6	7	7	7	6.8	13.5																								
10-May	10	12	12	12	10	8	7	5	8	13	13	9	8	8	7	6	6	6	5	6	4	5	6	4	7.9	13.5																								
11-May	4	5	5	5	5	7	7	8	7	10	11	11	13	15	17	18	18	21	14	16	12	10	11	11	10.9	21.0																								
12-May	7	7	11	13	12	12	10	12	13	10	11	13	11	15	18	20	17	13	14	9	6	4	7	7	11.4	20.3																								
13-May	7	9	13	13	13	14	12	15	18	15	14	12	13	12	13	12	10	8	6	8	9	8	7	8	11.2	17.6																								
14-May	8	6	6	4	3	4	4	6	6	5	3	5	13	13	13	13	14	11	12	8	5	4	7	6	7.5	14.3																								
15-May	6	7	7	5	6	7	6	6	7	7	6	7	6	6	8	9	8	10	7	7	8	5	3	8	6.7	9.6																								
16-May	8	5	7	7	5	6	7	7	9	9	11	9	8	8	10	8	8	9	9	8	7	5	6	7	7.6	10.7																								
17-May	5	3	3	5	4	4	6	8	10	9	9	10	10	11	6	11	10	9	14	12	9	6	6	5	7.7	14.2																								
18-May	4	3	3	6	8	7	7	6	8	11	12	17	14	13	19	17	18	16	13	9	10	7	7	6	10.0	18.6																								
19-May	7	8	7	10	9	10	10	13	15	20	22	19	19	17	19	17	16	15	16	12	7	6	7	6	12.8	22.1																								
20-May	4	6	8	8	6	6	7	10	10	10	16	17	17	17	17	17	16	14	14	10	8	5	5	2	10.4	17.5																								
21-May	5	7	6	7	4	6	9	9	8	12	15	16	15	15	18	19	18	18	18	14	16	10	8	11	11.7	18.9																								
22-May	9	6	4	3	2	5	7	8	17	22	24	24	18	20	17	14	11	7	7	8	8	11	12	12	11.6	24.5																								
23-May	5	3	2	3	3	4	5	5	6	16	17	15	12	7	6	5	7	10	11	15	24	19	24	20	10.1	24.2																								
24-May	17	14	17	18	13	10	13	12	14	18	19	19	20	19	23	18	16	14	15	12	8	19	11	12	15.5	22.6																								
25-May	11	8	8	8	8	7	7	7	5	4	6	9	9	9	8	8	12	12	14	12	7	5	4	4	8.1	13.6																								
26-May	2	3	4	6	6	6	8	10	9	10	11	12	13	13	14	12	13	12	9	6	5	5	7	10	8.5	14.2																								
27-May	5	7	7	5	5	9	11	8	8	6	8	7	6	7	8	10	10	10	10	8	6	3	1	5	7.0	11.1																								
28-May	6	7	8	8	5	4	6	8	8	8	9	11	13	15	15	15	18	18	16	14	12	10	10	10	10.6	17.8																								
29-May	11	11	11	8	8	10	11	12	11	11	11	12	14	14	14	15	14	12	13	12	8	7	9	8	11.1	14.9																								
30-May	10	10	10	8	7	6	3	2	2	3	3	4	4	4	6	7	8	9	10	7	9	7	4	4	6.1	10.3																								
31-May	3	5	3	7	5	8	5	5	13	13	19	17	11	7	8	9	9	12	10	10	5	5	4	4	8.2	19.4																								
																									7.0	6.8	7.3	7.6	6.6	6.8	7.5	8.4	9.9	11.5	12.8	12.7	12.4	12.3	12.8	12.7	12.9	12.5	12.5	11.7	9.6	8.3	8.0	7.6	Diurnal Average	
																									16.9	13.5	16.9	18.7	19.9	16.6	20.3	19.1	23.8	29.3	28.0	27.2	24.4	23.5	23.9	24.8	26.8	26.0	26.1	25.5	24.0	19.2	24.2	20.3	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																		

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - May 2017

Maximum Value: 96.7 deg on May 27 23:00																			Hours in Service: 744						
Minimum Value: 5.4 deg on May 1 21:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 6.1 P ₁₀ = 7.7 Q ₁ = 10.2 Median = 15.1 Q ₃ = 23.8 P ₉₀ = 46.0 P ₉₉ = 84.7																			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-May	14	8	7	12	20	41	36	13	9	17	24	30	20	20	20	10	17	12	13	13	5	6	9	7	41.0
2-May	6	7	29	25	18	10	12	8	9	11	13	21	30	31	23	28	22	24	19	10	17	61	9	16	61.0
3-May	33	45	27	84	33	55	81	26	19	17	19	13	18	14	15	10	9	11	10	9	14	18	91	56	91.4
4-May	36	72	86	73	86	38	80	22	11	11	14	16	18	31	42	73	94	82	27	12	12	13	7	8	93.6
5-May	7	9	8	7	10	15	15	26	68	41	21	27	20	58	81	54	35	39	29	30	16	7	7	69	81.3
6-May	71	42	35	13	28	19	26	24	14	9	9	13	27	23	30	35	21	14	11	7	7	10	9	21	71.5
7-May	9	7	6	7	6	6	6	10	10	10	11	11	11	16	11	13	10	11	11	7	9	6	9	7	15.6
8-May	6	13	24	7	48	70	18	73	23	16	12	17	13	16	15	16	12	13	11	10	7	7	8	6	73.4
9-May	6	13	29	8	18	14	17	9	15	26	53	78	79	81	64	57	74	51	53	15	9	8	8	8	80.9
10-May	7	9	9	8	6	13	16	22	49	18	17	29	40	52	50	64	49	70	35	29	16	16	17	15	70.0
11-May	14	14	16	14	15	13	14	10	15	14	15	17	14	15	15	13	10	8	14	40	15	14	16	11	40.0
12-May	13	16	18	10	11	11	11	10	9	11	10	12	9	56	27	16	14	11	15	14	16	39	13	11	56.5
13-May	14	10	7	9	7	7	7	7	7	8	9	12	10	10	9	10	7	12	17	11	8	12	9	15	17.0
14-May	8	10	12	35	79	27	35	44	25	44	87	43	23	21	22	22	12	15	31	26	53	47	12	15	86.6
15-May	15	14	16	20	12	9	17	19	20	21	40	36	67	80	50	30	31	20	17	19	17	23	21	17	79.6
16-May	12	15	16	15	18	14	15	14	14	16	14	18	18	21	16	26	24	18	16	15	15	15	15	10	26.1
17-May	11	14	16	11	18	16	14	14	14	15	17	21	19	38	61	13	16	20	10	8	7	36	13	19	61.5
18-May	37	31	21	35	9	15	18	30	18	16	17	17	20	20	33	18	11	14	17	36	9	10	10	9	36.6
19-May	7	8	7	7	9	7	6	10	9	12	11	11	11	19	19	16	19	14	9	9	13	8	46	16	46.4
20-May	36	20	21	24	9	22	12	10	11	15	16	16	18	14	19	13	22	20	12	14	11	15	46	64	64.2
21-May	17	8	9	10	9	9	12	12	15	14	15	14	17	23	17	16	17	10	10	10	8	9	11	8	23.4
22-May	10	10	25	56	40	20	28	29	14	9	10	10	13	11	14	12	18	12	18	12	12	9	10	5	56.1
23-May	13	76	81	69	66	30	13	43	32	11	11	23	30	57	43	64	52	19	34	25	11	7	6	8	80.7
24-May	10	8	8	8	11	14	7	7	8	6	7	8	13	18	17	7	17	20	24	7	12	10	15	8	23.8
25-May	7	7	7	8	8	9	10	19	31	38	34	25	25	28	22	51	18	13	14	13	10	11	22	9	51.4
26-May	28	47	19	8	11	7	16	11	12	17	13	16	20	20	19	16	17	16	17	11	24	19	11	11	47.0
27-May	50	24	23	24	35	21	8	29	18	30	29	33	78	68	31	31	26	16	13	24	16	19	97	36	96.7
28-May	11	8	10	7	20	16	11	15	19	17	20	19	17	14	16	12	9	10	9	8	6	8	9	7	19.9
29-May	6	7	7	8	9	9	11	10	13	16	18	21	16	20	16	16	15	13	9	9	8	8	7	9	20.8
30-May	6	6	8	9	28	15	28	49	65	61	39	82	69	73	44	28	16	16	12	15	40	25	15	86	85.5
31-May	49	27	35	15	30	15	15	22	10	15	11	12	15	27	33	27	30	20	21	79	57	9	16	23	78.7
71.5 76.4 86.4 84.0 86.4 69.8 81.1 73.4 68.4 60.8 86.6 82.0 79.3 80.9 81.3 73.5 93.6 82.0 53.3 78.7 57.0 61.0 96.7 85.5																									

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

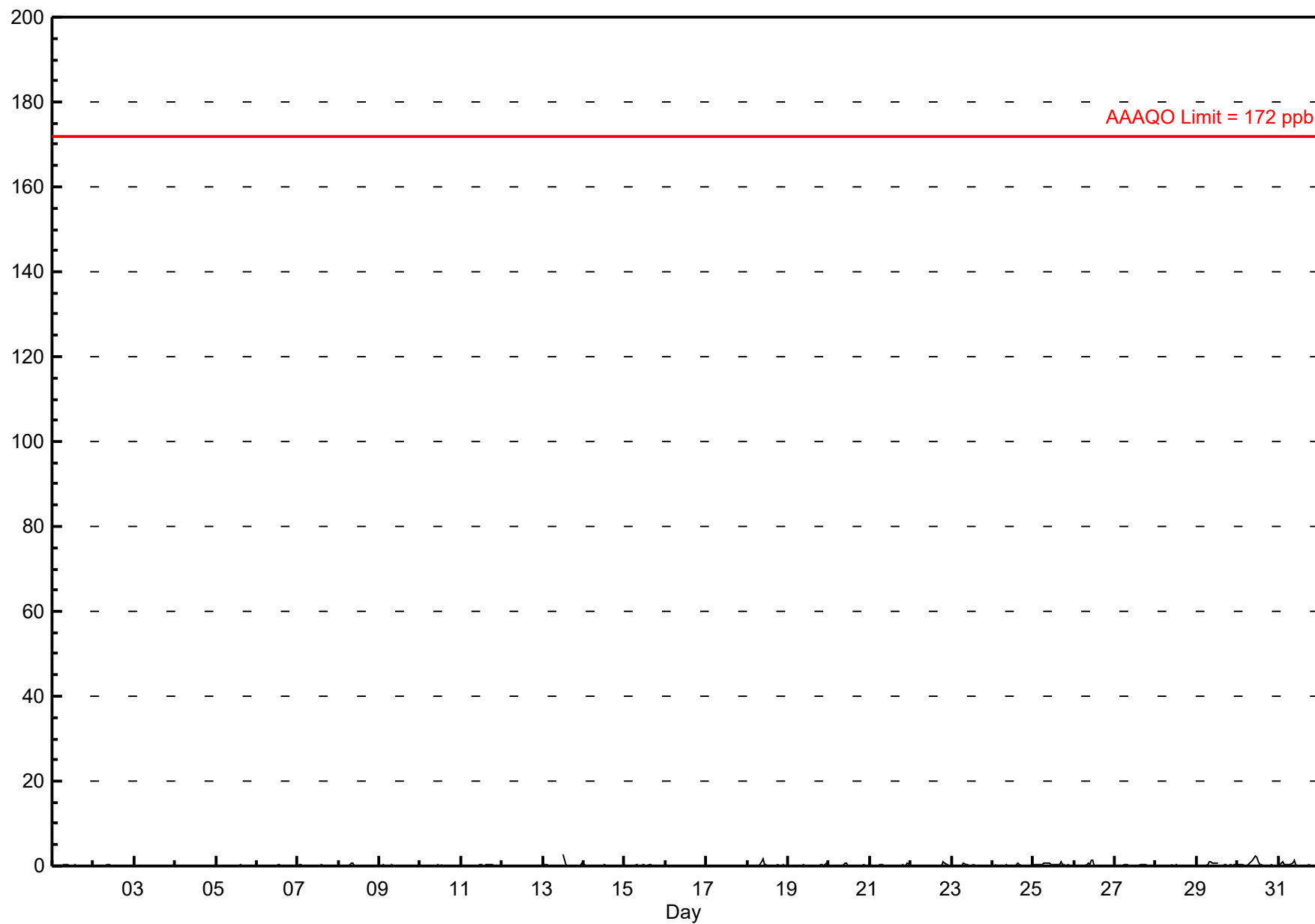
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - May 2017

Number of Exceedences (AAAQO):		1-hr: 0		24-hr: 0		Hours in Service: 744																					
Maximum Value: 2.8 ppb on May 13 13:00				Maximum Daily Average: 0.5 ppb on May 30		Hours of Data: 708																					
Minimum Value: 0 ppb on May 1 04:00				Minimum Daily Average: 0.0 ppb on May 17		Hours of Missing Data: 36																					
Maximum Diurnal Average: 0.3 ppb at hour 10				Minimum Diurnal Average: 0.1 ppb at hour 5		Hours of Calibration: 36																					
Monthly Average: 0.14 ppb				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 1.3		Percent Operational Time: 100.0																					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
2-May	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-May	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	0.1	
4-May	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	0.1	
5-May	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	
6-May	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	
7-May	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-May	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.6	
9-May	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-May	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	0.3	
11-May	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	0.4	
12-May	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	
13-May	0	0	0	0	0	0	0	0	0	0	0	A	3	0	0	0	0	0	0	0	0	0	0	1	0.2	2.8	
14-May	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	0.5	
15-May	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	0.4	
16-May	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	0.1	
17-May	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-May	0	0	0	0	0	0	A	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7	
19-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.7	
20-May	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
21-May	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	0.6	
22-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.1	0.9	
23-May	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
24-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0.2	0.6	
25-May	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	A	0	0.4	0.9	
26-May	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.3	
27-May	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	0.5	
28-May	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-May	0	0	0	0	0	0	0	1	1	1	1	1	1	C	C	C	0	0	A	0	0	0	0	0	0.4	1.1	
30-May	0	0	0	0	0	0	0	1	1	1	2	2	1	0	0	0	0	A	0	0	0	0	0	0	0.5	2.3	
31-May	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.4	
		0.1	0.1	0.1	0.1	0.1	0.1	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	0.1	0.1	0.1	Diurnal Average		
		0.5	0.3	0.9	0.5	0.5	0.5	0.6	1.1	1.0	1.7	2.3	2.0	2.8	0.4	0.5	0.6	0.9	0.3	0.3	0.9	0.6	0.5	0.7	0.7	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 - May 2017



Hourly Maximums

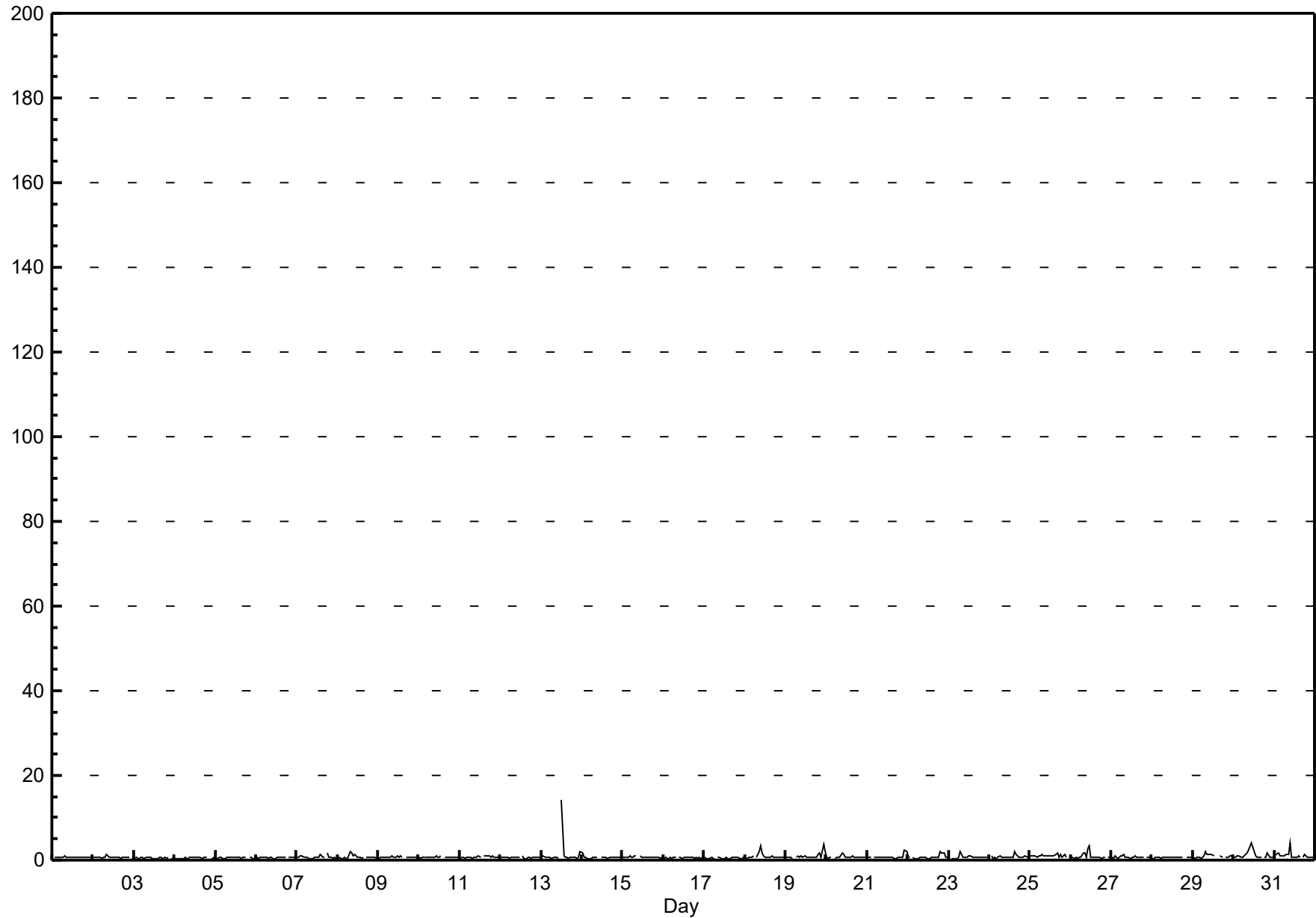
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - May 2017

Maximum Value: 14.1 ppb on May 13 13:00																				Maximum Daily Average: 1.3 ppb on May 13										Hours in Service: 744	
Minimum Value: 0 ppb on May 17 02:00																				Minimum Daily Average: 0.5 ppb on May 17										Hours of Data: 708	
Maximum Diurnal Average: 1.2 ppb at hour 13																				Minimum Diurnal Average: 0.6 ppb at hour 5										Hours of Missing Data: 36	
Monthly Average: 0.76 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 3.1										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-May	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	0.9					
2-May	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	0.6	1.4				
3-May	0	1	0	0	1	1	1	1	1	1	1	0	0	1	0	1	1	0	1	0	1	A	0	0	0.5	0.8					
4-May	0	0	1	1	0	0	1	0	0	1	1	1	1	1	1	1	0	1	1	1	A	0	0	1	0.5	0.7					
5-May	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	0.6	0.8					
6-May	1	0	1	1	1	1	1	0	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.8					
7-May	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	A	2	1	1	0	1	1	0.7	1.8					
8-May	1	1	0	0	1	0	0	2	2	1	1	1	1	1	0	1	A	1	1	1	1	1	1	0	0.7	2.1					
9-May	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	0.9					
10-May	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.1					
11-May	0	1	1	0	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
12-May	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0	1	1	1	1	0.6	0.9					
13-May	1	1	1	1	1	1	0	1	1	1	0	A	14	1	1	1	0	1	1	1	1	0	1	2	1.3	14.1					
14-May	2	1	1	0	0	0	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.6					
15-May	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.0					
16-May	1	1	0	0	1	0	1	1	A	1	1	0	1	1	1	1	1	1	0	1	0	1	0	1	0.6	0.8					
17-May	1	0	0	0	1	0	0	A	1	1	0	0	0	1	0	0	1	1	1	1	1	0	0	1	0.5	0.7					
18-May	1	0	1	1	1	1	1	A	1	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	3.3					
19-May	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	4	2	1.0	3.6					
20-May	1	0	1	1	A	0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.7					
21-May	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	2	2	0.7	2.3					
22-May	1	1	A	1	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	2	2	2	1	1	0.7	2.0					
23-May	0	A	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.9					
24-May	A	1	0	1	0	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	0.8	2.1					
25-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1.0	1.7					
26-May	1	1	1	1	0	1	1	2	2	1	3	3	1	1	1	1	1	1	0	1	1	A	1	1	0.9	3.3					
27-May	1	0	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.3					
28-May	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.8					
29-May	1	0	1	1	1	0	1	2	1	1	2	1	1	C	C	C	1	1	A	1	1	1	1	1	0.9	1.9					
30-May	1	1	1	1	1	1	1	1	2	2	4	3	2	1	1	1	1	A	1	1	2	1	1	1	1.2	4.0					
31-May	1	1	2	1	1	1	1	1	1	4	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	3.9					
0.6 0.6 0.7 0.6 0.6 0.6 0.7 0.9 0.9 1.0 1.0 0.9 1.2 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.8 0.7 0.8 0.8																									Diurnal Average						
1.6 1.2 1.7 1.0 1.0 1.2 1.2 2.1 2.2 3.9 4.0 3.3 14.1 1.1 1.3 2.1 1.7 0.8 1.8 2.0 1.6 1.5 3.6 2.2																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

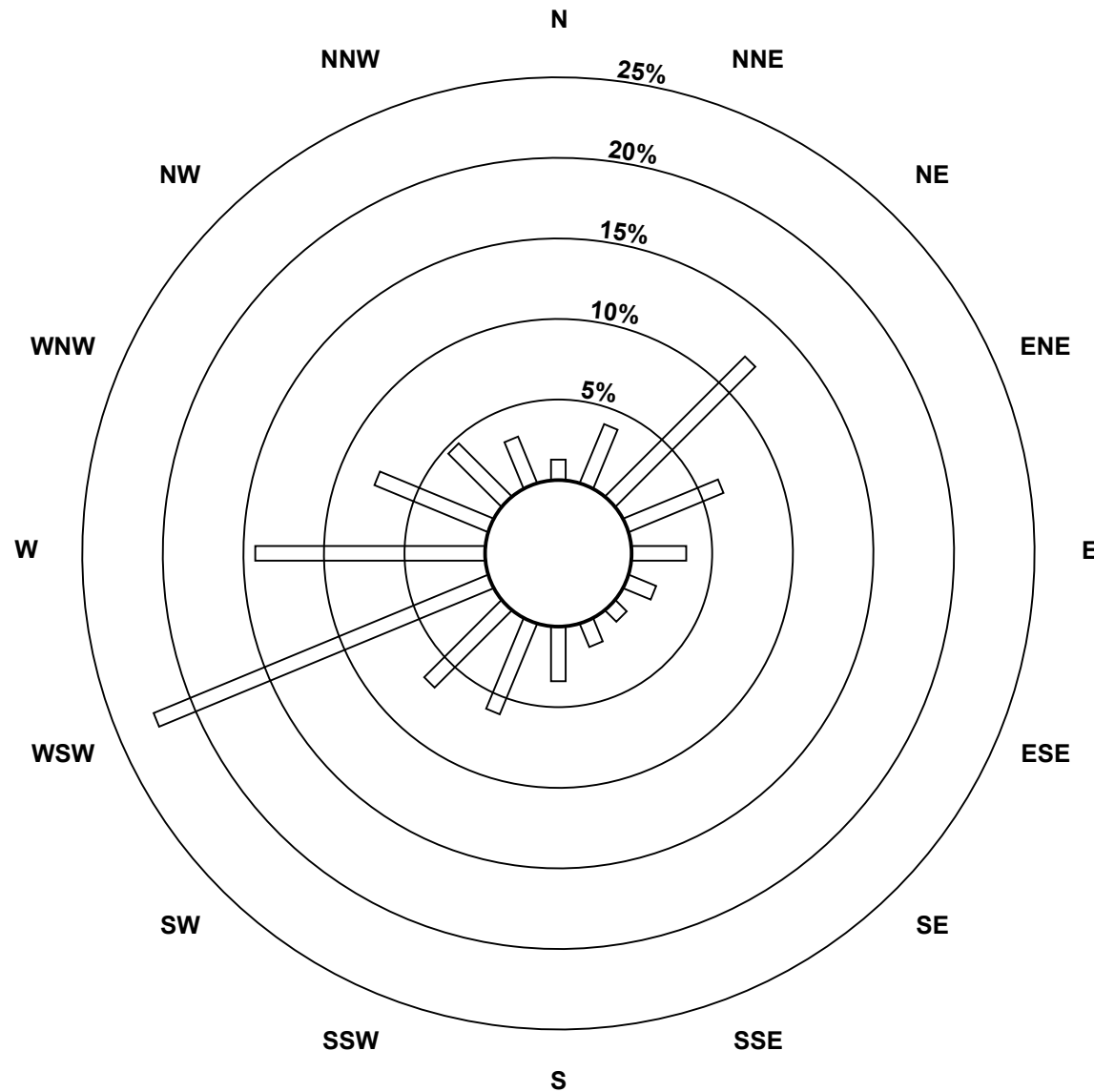
Hourly Maximums

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

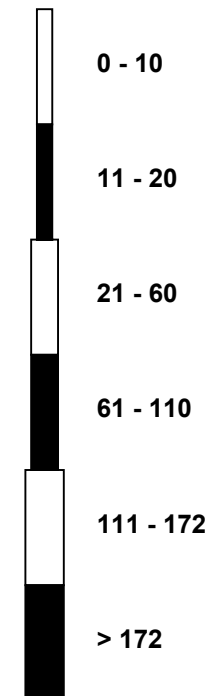


Pollutant Rose

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

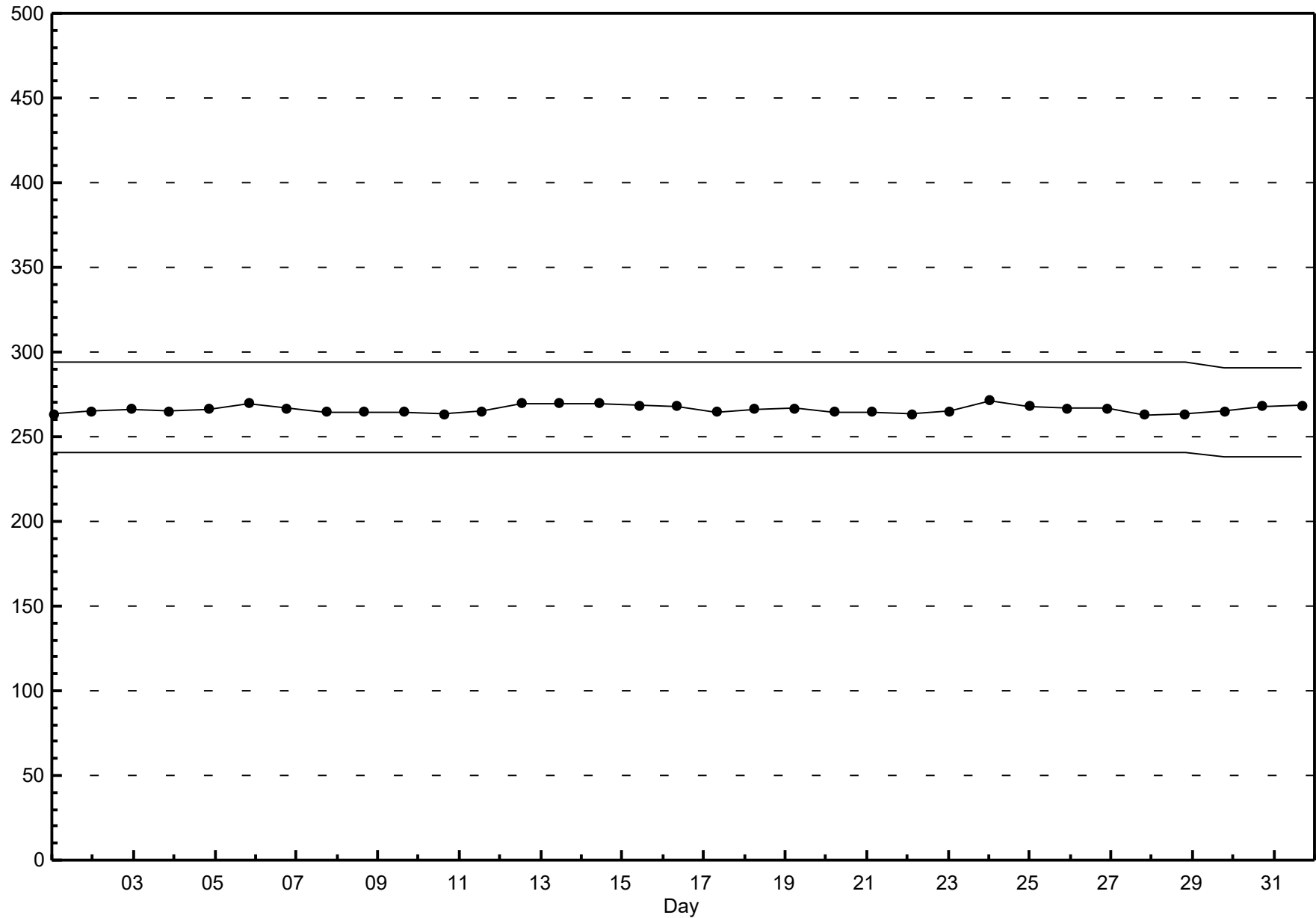


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - May 2017



Hourly Averages

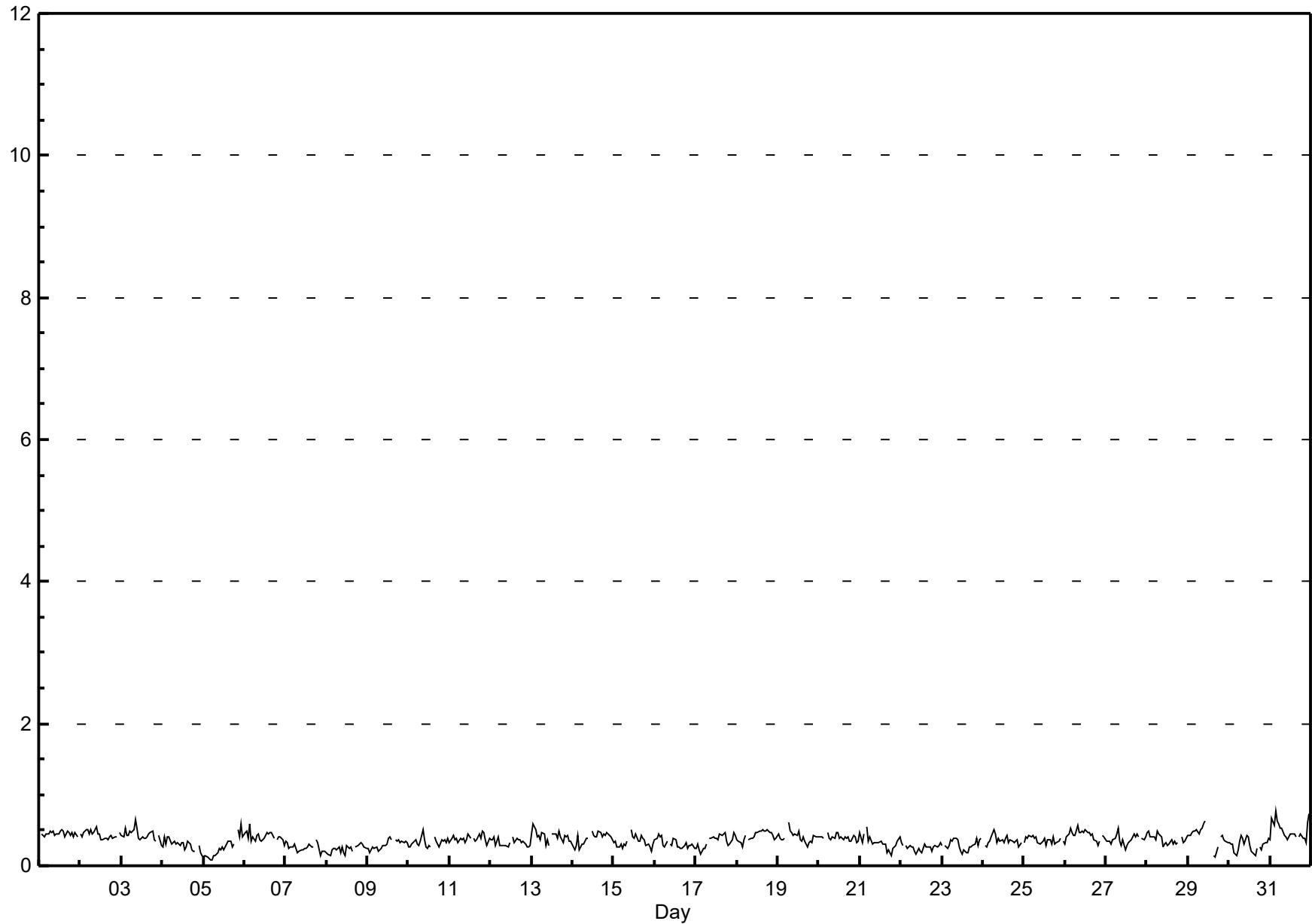
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - May 2017

Maximum Value: 0.8 ppb on May 31 04:00																				Maximum Daily Average: 0.5 ppb on May 31										Hours in Service: 744	
Minimum Value: 0 ppb on May 5 05:00																				Minimum Daily Average: 0.2 ppb on May 8										Hours of Data: 707	
Maximum Diurnal Average: 0.4 ppb at hour 8																				Minimum Diurnal Average: 0.3 ppb at hour 19										Hours of Missing Data: 37	
Monthly Average: 0.36 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.6										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-May	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0.5	0.5					
2-May	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.5					
3-May	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.6					
4-May	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					
5-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	0	0.3	0.6					
6-May	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.6					
7-May	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-May	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-May	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	0.4					
10-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5					
11-May	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
12-May	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	0.4					
13-May	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6					
14-May	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
15-May	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5					
16-May	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4					
17-May	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5					
18-May	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	0.5					
19-May	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6					
20-May	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	0.5					
21-May	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6					
22-May	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3					
23-May	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	0.4					
24-May	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5					
25-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.4					
26-May	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.4	0.6					
27-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5					
28-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5					
29-May	0	0	0	0	0	1	0	1	1	1	1	C	C	C	C	0	0	0	A	0	0	0	0	0	0.4	0.6					
30-May	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					
31-May	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0.5	0.8					
0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.4 0.4 0.3 0.3 0.4 0.3 0.4 0.4																									Diurnal Average						
0.5 0.7 0.6 0.8 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.7																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

Hourly Averages

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



Hourly Maximums

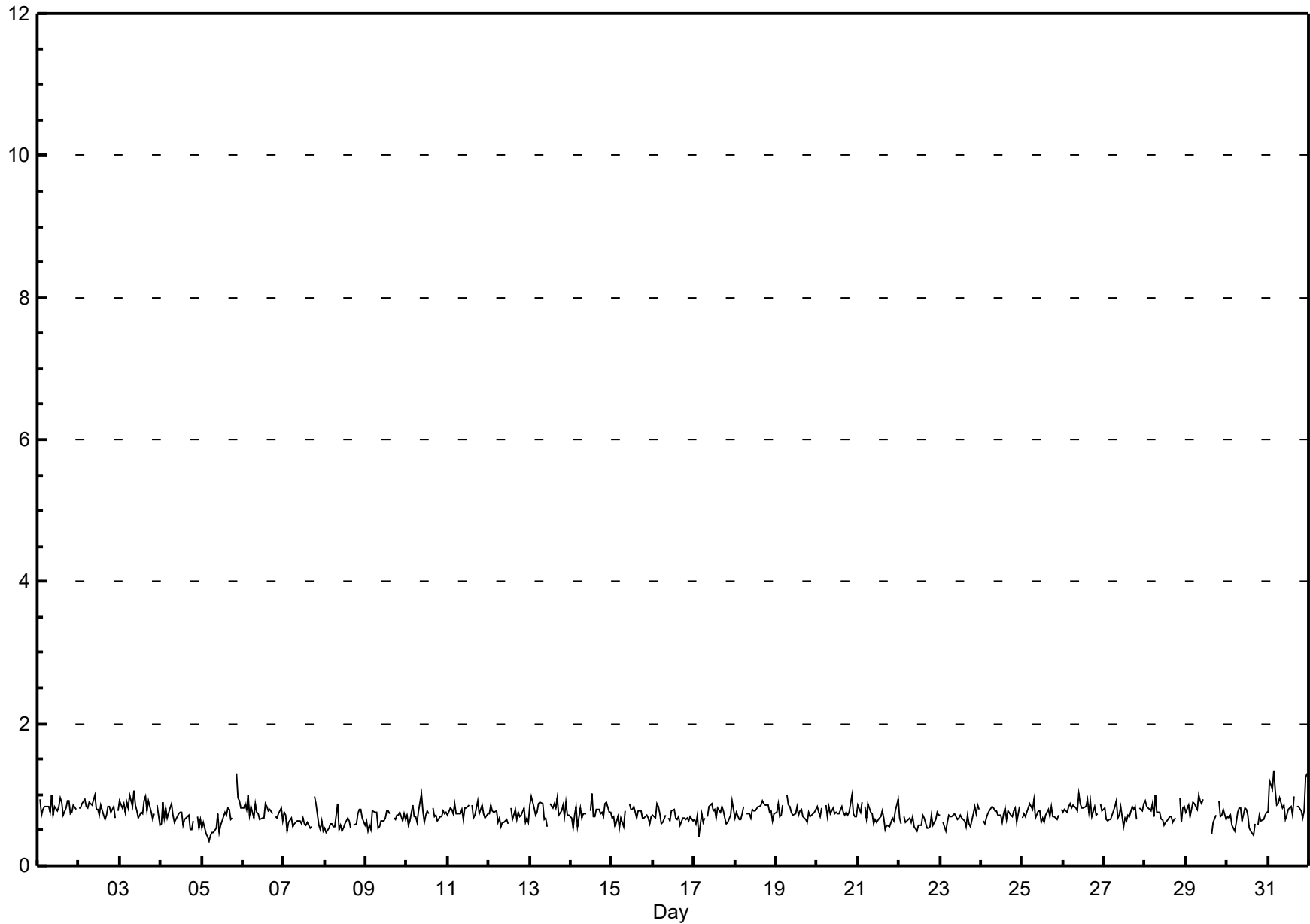
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - May 2017

Maximum Value: 1.3 ppb on May 31 04:00																				Maximum Daily Average: 0.9 ppb on May 31										Hours in Service: 744	
Minimum Value: 0 ppb on May 5 05:00																				Minimum Daily Average: 0.6 ppb on May 8										Hours of Data: 707	
Maximum Diurnal Average: 0.8 ppb at hour 23																				Minimum Diurnal Average: 0.7 ppb at hour 12										Hours of Missing Data: 37	
Monthly Average: 0.73 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.1										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-May	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	1.0					
2-May	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	1.0					
3-May	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					
4-May	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	0.9					
5-May	1	1	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.3					
6-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.0					
7-May	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0.6	1.0					
8-May	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.9					
9-May	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.8					
10-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.0					
11-May	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	0.9					
12-May	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
13-May	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-May	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	1.0					
15-May	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	0.9					
16-May	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
17-May	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
18-May	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	0.9					
19-May	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	1.0					
20-May	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-May	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
22-May	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8					
23-May	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8					
24-May	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					
25-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.9					
26-May	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	1.0					
27-May	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	0.9					
28-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.0					
29-May	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	0	1	1	A	1	1	1	1	1	0.8	1.0					
30-May	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	A	1	1	1	1	1	1	0.7	0.8					
31-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.3					
0.7 0.7 0.7 0.7 0.7 0.7 0.8 0.8 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.8 0.7 0.8 0.7																									Diurnal Average						
0.9 1.2 1.1 1.3 1.1 0.9 1.0 1.0 1.1 1.0 0.9 0.8 1.0 1.0 0.9 1.0 1.0 0.9 1.0 0.9 1.3 1.0 1.2 1.3																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

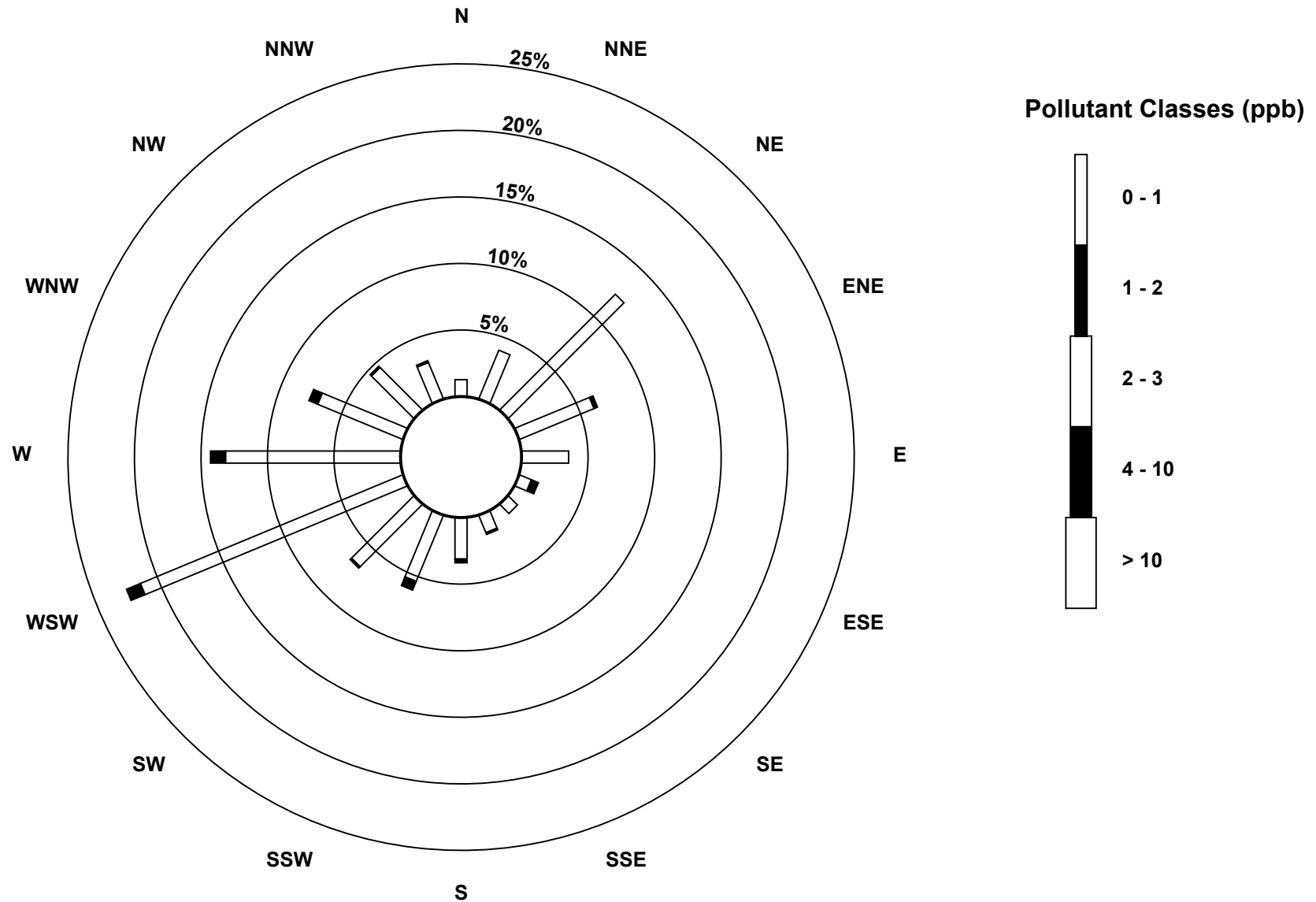
Hourly Maximums

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



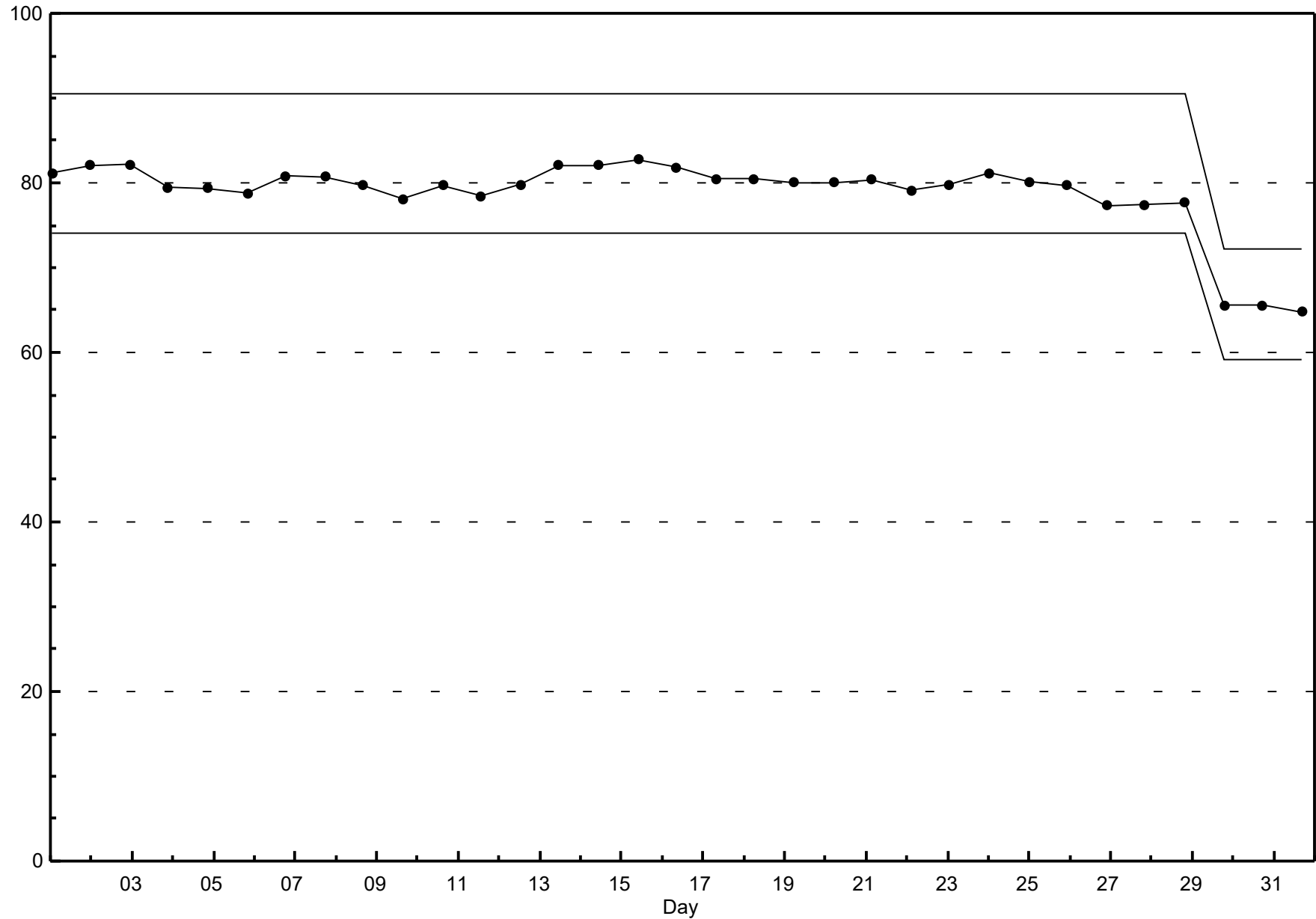
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - May 2017

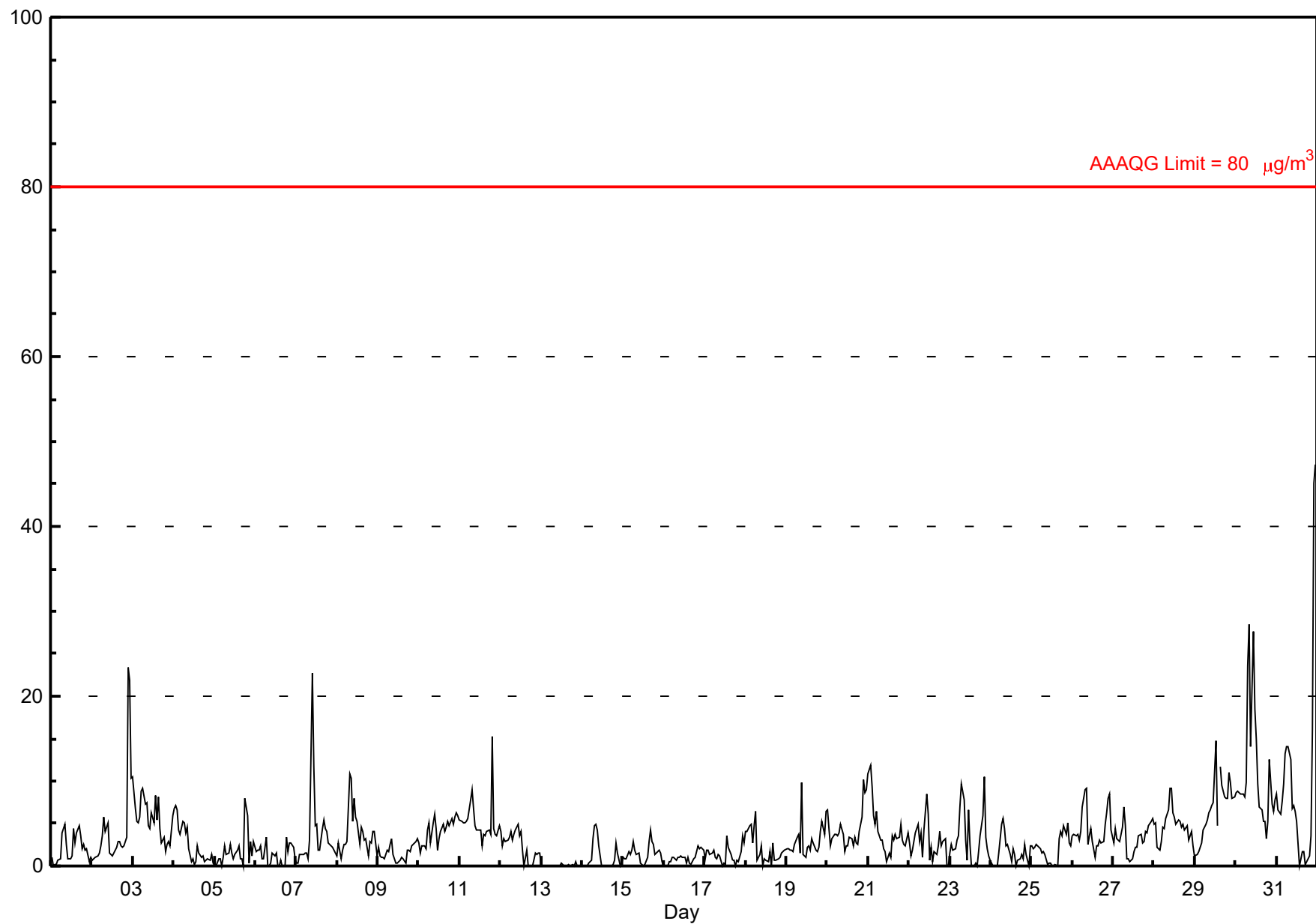


Hourly Averages

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

Evergreen Park - May 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 47.3 µg/m³ on Jun 1 00:00 Maximum Daily Average: 11.0 µg/m³ on May 30																				Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9						
Minimum Value: 0 µg/m³ on May 1 02:00 Maximum Diurnal Average: 5.0 µg/m³ at hour 23 Monthly Average: 3.44 µg/m³																				Minimum Daily Average: 0.1 µg/m³ on May 13 Minimum Diurnal Average: 2.2 µg/m³ at hour 15 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 1.0 Median = 2.5 Q ₃ = 4.5 P ₉₀ = 7.2 P ₉₉ = 22.0						
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-May	1	0	0	0	1	1	4	4	5	3	1	1	1	4	3	4	5	4	2	3	2	2	1	1	2.1	5.0
2-May	1	1	1	1	2	2	4	6	4	5	2	1	1	2	2	3	3	2	2	2	3	23	22	10	4.4	23.3
3-May	10	7	5	5	6	9	9	7	7	5	4	6	5	8	5	8	4	3	3	2	2	3	2	6	5.6	10.5
4-May	7	7	7	4	4	5	5	4	5	2	1	1	0	0	2	2	1	1	0	1	1	1	1	0	2.6	7.2
5-May	0	0	1	1	0	1	2	1	2	3	1	1	1	2	2	1	1	0	8	6	0	3	1	3	1.7	8.0
6-May	2	2	2	2	1	1	3	0	0	0	1	1	2	0	0	1	0	0	3	2	3	3	2	1	1.3	3.5
7-May	0	0	1	1	1	1	1	1	3	23	12	5	5	2	2	4	5	4	4	3	2	2	2	2	3.7	22.6
8-May	1	3	1	2	3	2	3	11	10	5	8	6	5	2	5	4	3	3	1	3	3	4	4	1	3.9	10.9
9-May	2	1	1	1	1	2	2	2	3	1	0	0	0	1	1	1	0	2	2	2	2	3	3	3	1.6	3.3
10-May	3	2	2	2	2	4	5	3	5	6	4	2	3	4	5	4	5	5	5	6	5	6	6	6	4.2	6.2
11-May	5	5	5	5	5	6	8	9	7	5	4	4	4	2	4	4	4	4	4	15	4	4	4	5	5.3	15.3
12-May	4	2	3	3	3	3	4	3	4	4	5	4	4	2	0	2	0	0	0	0	2	1	2	1	2.4	4.9
13-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	0.6
14-May	0	0	0	0	0	1	3	5	5	4	2	0	0	0	0	0	0	0	0	1	3	1	0	0	1.1	5.0
15-May	1	1	1	2	1	2	3	2	1	2	0	0	0	0	1	3	4	3	2	1	2	2	2	1	1.5	4.3
16-May	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	1	1	2	2	2	2	2	1.0	2.4
17-May	1	2	2	1	2	2	1	1	1	1	0	0	0	3	2	1	1	1	0	1	1	2	4	3	1.3	3.5
18-May	4	4	5	5	3	5	6	1	1	2	0	1	1	1	2	0	3	1	1	1	1	2	2	2	2.1	6.4
19-May	2	2	2	2	2	3	3	4	2	10	1	1	2	2	2	3	3	2	2	2	4	5	4	6	2.9	9.9
20-May	7	4	2	3	4	4	3	4	5	4	2	2	2	3	3	2	3	3	2	4	6	10	9	9	4.2	10.1
21-May	11	12	9	6	5	7	4	3	3	2	2	0	2	1	3	3	4	3	3	5	3	3	2	4	4.2	11.8
22-May	3	1	2	3	4	5	3	4	1	4	8	6	1	2	0	2	1	2	4	2	3	3	0	0	2.7	8.5
23-May	2	2	2	2	3	3	7	10	8	3	1	7	3	0	0	0	0	2	4	6	10	3	2	1	3.3	10.4
24-May	1	0	0	0	0	1	5	6	4	2	3	1	1	2	1	0	1	1	1	1	3	1	0	2	1.6	5.6
25-May	2	2	2	2	2	2	1	2	1	0	0	0	0	0	0	0	3	4	3	5	4	5	3	2	2.0	5.1
26-May	4	4	4	4	3	4	7	9	9	3	4	4	3	1	2	2	3	3	3	5	6	8	9	4	4.4	9.2
27-May	3	4	3	3	3	5	7	5	1	1	1	1	2	2	2	4	4	3	3	4	4	5	5	6	3.3	7.0
28-May	5	5	2	2	3	5	4	6	7	9	9	6	6	5	5	5	5	5	4	5	3	4	4	2	4.8	9.1
29-May	1	1	2	2	3	4	5	5	6	7	7	7	15	5	M	12	9	8	8	8	11	10	8	8	6.7	14.8
30-May	9	9	9	9	8	8	10	24	28	14	28	18	15	10	7	7	5	5	3	5	13	7	6	8	11.0	28.4
31-May	8	7	6	8	10	13	14	14	13	7	7	6	5	0	1	2	2	0	0	1	4	16	45	47	9.8	47.3
3.2 2.9 2.7 2.7 2.7 3.6 4.5 5.0 4.9 4.4 3.9 3.1 2.9 2.2 2.2 2.7 2.7 2.4 2.6 3.3 3.6 4.6 5.0 4.8																								Diurnal Average		
10.8 11.8 9.3 8.5 9.7 13.2 14.1 23.6 28.4 22.6 27.6 18.5 14.8 9.6 6.9 11.7 9.4 8.2 8.0 15.3 12.6 23.3 45.2 47.3																								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 Maximums

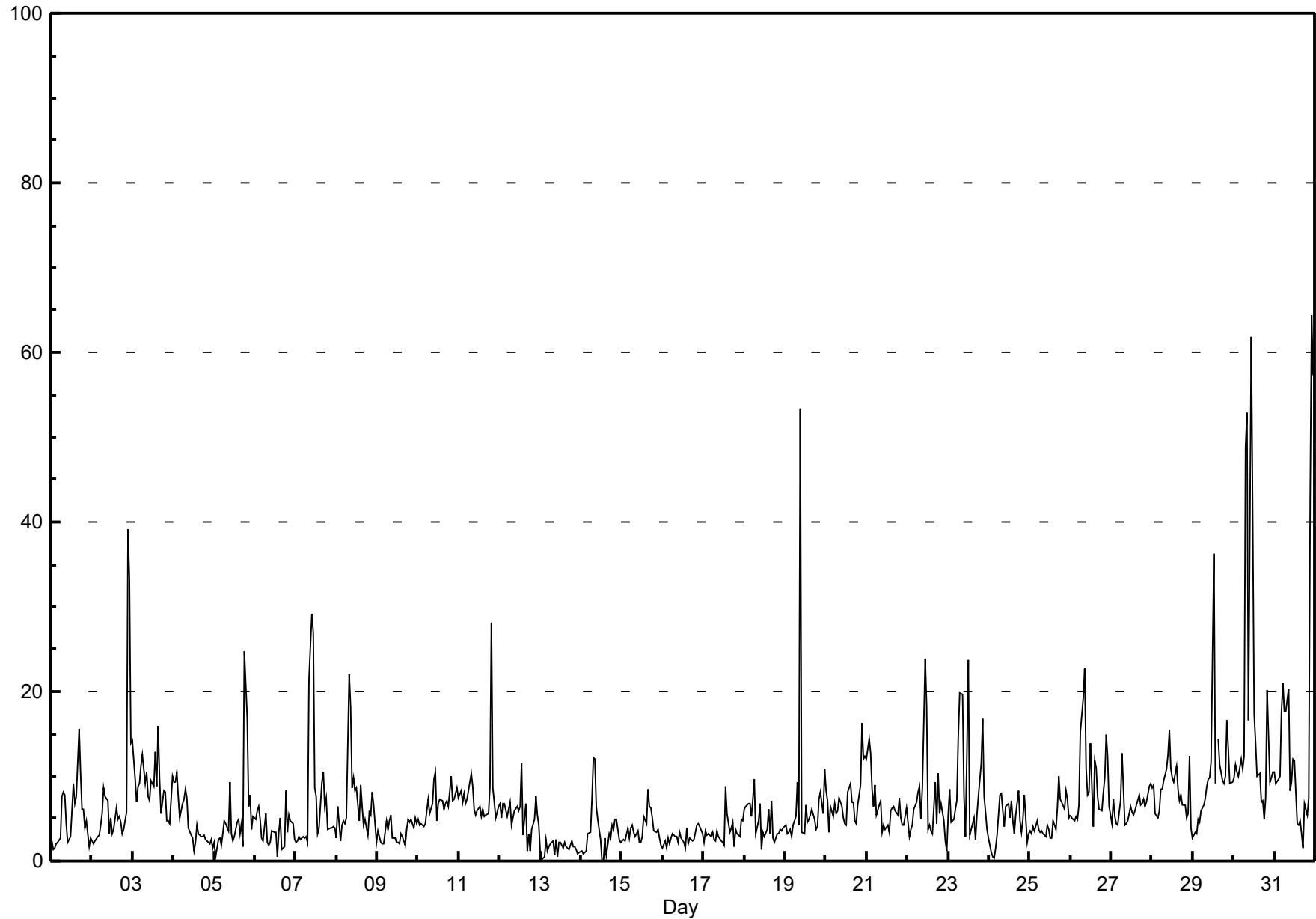
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - May 2017

Maximum Value: 64.5 μg/m³ on May 31 23:00																								Maximum Daily Average: 17.7 μg/m³ on May 30										Hours in Service: 744	
Minimum Value: 0 μg/m³ on May 14 13:00																								Minimum Daily Average: 1.5 μg/m³ on May 13										Hours of Data: 743	
Maximum Diurnal Average: 9.8 μg/m³ at hour 9																								Minimum Diurnal Average: 4.6 μg/m³ at hour 3										Hours of Missing Data: 1	
Monthly Average: 6.67 μg/m³																								Percentiles: P ₁ = 0.5 P ₁₀ = 2.2 Q ₁ = 3.2 Median = 5.1 Q ₃ = 7.8 P ₉₀ = 11.3 P ₉₉ = 37.2										Hours of Calibration: 0	
Percent Operational Time: 99.9																																			
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-May	2	1	2	2	2	3	8	8	8	4	2	3	6	9	7	8	16	10	6	6	4	5	2	3	5.2	15.5									
2-May	2	2	2	3	3	4	6	9	8	7	3	5	3	4	6	5	5	5	3	4	6	39	33	14	7.5	39.1									
3-May	14	10	7	9	9	11	13	9	11	8	7	10	9	13	9	16	10	6	8	8	5	5	4	10	9.1	15.9									
4-May	9	9	11	8	5	7	7	8	7	4	3	3	1	2	4	3	3	3	3	2	2	2	3	1	4.7	10.5									
5-May	2	0	2	3	2	3	5	4	4	9	3	2	3	5	5	3	4	2	25	17	6	8	4	5	5.3	24.7									
6-May	5	6	6	5	3	2	6	2	2	2	3	3	3	1	3	5	1	2	8	3	5	5	4	3	3.8	8.3									
7-May	2	2	3	3	3	3	3	2	22	29	27	9	8	3	4	9	11	6	7	4	4	4	4	4	7.3	29.1									
8-May	3	6	2	4	5	4	5	22	18	9	10	8	9	5	9	6	4	5	3	6	5	8	7	2	6.9	22.1									
9-May	4	3	2	2	2	5	4	5	5	3	3	2	2	2	3	3	2	4	5	5	5	4	5	4	3.5	5.5									
10-May	5	4	4	4	4	6	7	6	7	10	11	5	7	7	7	6	7	7	6	10	7	7	8	9	6.7	10.6									
11-May	8	8	7	8	7	7	9	10	9	6	5	6	6	5	6	5	5	6	9	28	9	7	5	6	7.9	28.1									
12-May	7	5	7	7	5	6	7	4	5	6	6	6	6	12	3	7	1	3	1	4	5	8	5	4	5.4	11.5									
13-May	1	0	0	2	1	2	2	2	1	3	0	2	2	2	2	2	2	1	2	2	2	1	1	1	1.5	2.6									
14-May	1	1	1	1	3	3	7	12	12	6	5	3	0	0	3	1	3	3	4	4	5	5	3	2	3.7	12.2									
15-May	2	3	2	4	3	4	4	3	3	4	2	2	3	5	4	8	6	6	5	3	3	4	3	2	3.8	8.4									
16-May	2	2	1	3	2	3	3	3	3	2	3	3	2	2	4	2	3	2	2	3	4	4	4	3	2.8	4.4									
17-May	2	3	3	3	3	3	3	2	4	3	2	2	2	9	6	3	4	5	2	4	3	3	5	5	3.5	8.8									
18-May	6	6	7	7	5	7	10	3	5	7	1	3	3	4	6	3	7	3	2	3	3	4	4	4	4.7	9.7									
19-May	4	3	3	4	3	4	5	9	4	53	3	3	7	5	5	5	6	5	4	4	7	8	6	11	7.2	53.4									
20-May	8	7	3	6	5	7	6	6	8	6	5	4	4	8	9	7	7	5	4	7	9	16	12	12	7.2	16.2									
21-May	12	14	13	8	6	9	5	7	7	3	4	4	4	3	6	6	6	6	5	7	5	4	4	6	6.6	14.5									
22-May	5	3	4	4	6	7	8	9	5	9	24	18	4	4	4	3	9	4	10	6	7	5	2	1	6.7	24.0									
23-May	5	8	5	5	6	7	15	20	20	8	3	13	24	3	4	5	3	6	8	12	17	8	6	4	8.8	23.8									
24-May	3	1	1	0	1	3	8	8	6	4	6	7	5	7	5	3	5	8	5	3	5	8	2	3	4.5	8.4									
25-May	4	3	4	4	5	4	3	3	3	3	4	4	3	3	5	4	6	10	7	7	6	8	7	5	4.8	10.1									
26-May	5	5	5	5	5	7	15	19	23	11	8	8	14	4	12	11	8	6	6	8	10	15	12	6	9.5	22.7									
27-May	4	7	5	4	4	7	13	8	4	4	5	6	6	5	6	7	8	7	7	7	6	7	9	9	6.5	12.7									
28-May	9	9	6	5	6	9	8	10	11	13	15	11	10	9	11	8	7	8	7	7	5	6	12	4	8.5	15.4									
29-May	3	3	3	5	5	6	7	7	9	10	10	12	36	9	M	14	11	10	9	10	17	13	9	9	9.9	36.2									
30-May	10	11	11	10	12	11	12	49	53	17	62	40	17	14	10	10	7	7	5	7	20	9	10	11	17.7	61.8									
31-May	11	9	10	10	18	21	18	18	20	8	9	12	12	4	4	5	3	1	7	5	7	43	64	57	15.7	64.5									
5.2 5.2 4.6 4.8 4.8 6.0 7.4 9.3 9.8 8.7 8.3 7.1 7.1 5.4 5.7 6.0 5.8 5.2 6.0 6.7 6.6 8.8 8.4 7.2																								Diurnal Average											
14.2 14.5 12.7 10.1 17.6 21.0 17.6 48.8 52.9 53.4 61.8 40.1 36.2 14.0 11.8 15.9 15.5 10.3 24.7 28.1 20.2 42.8 64.5 57.2																								Diurnal Maximum											
M - Maintenance																																			

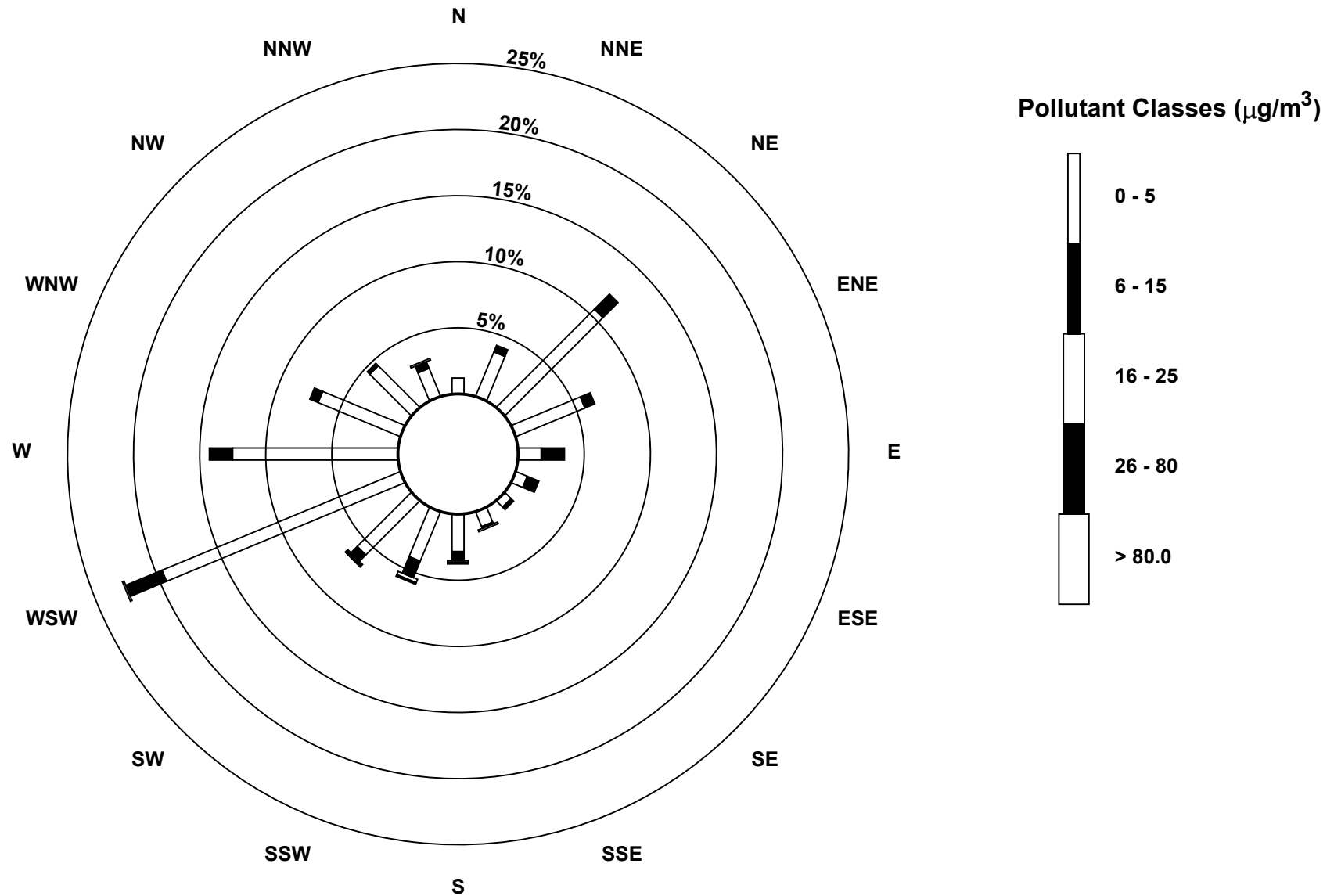
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

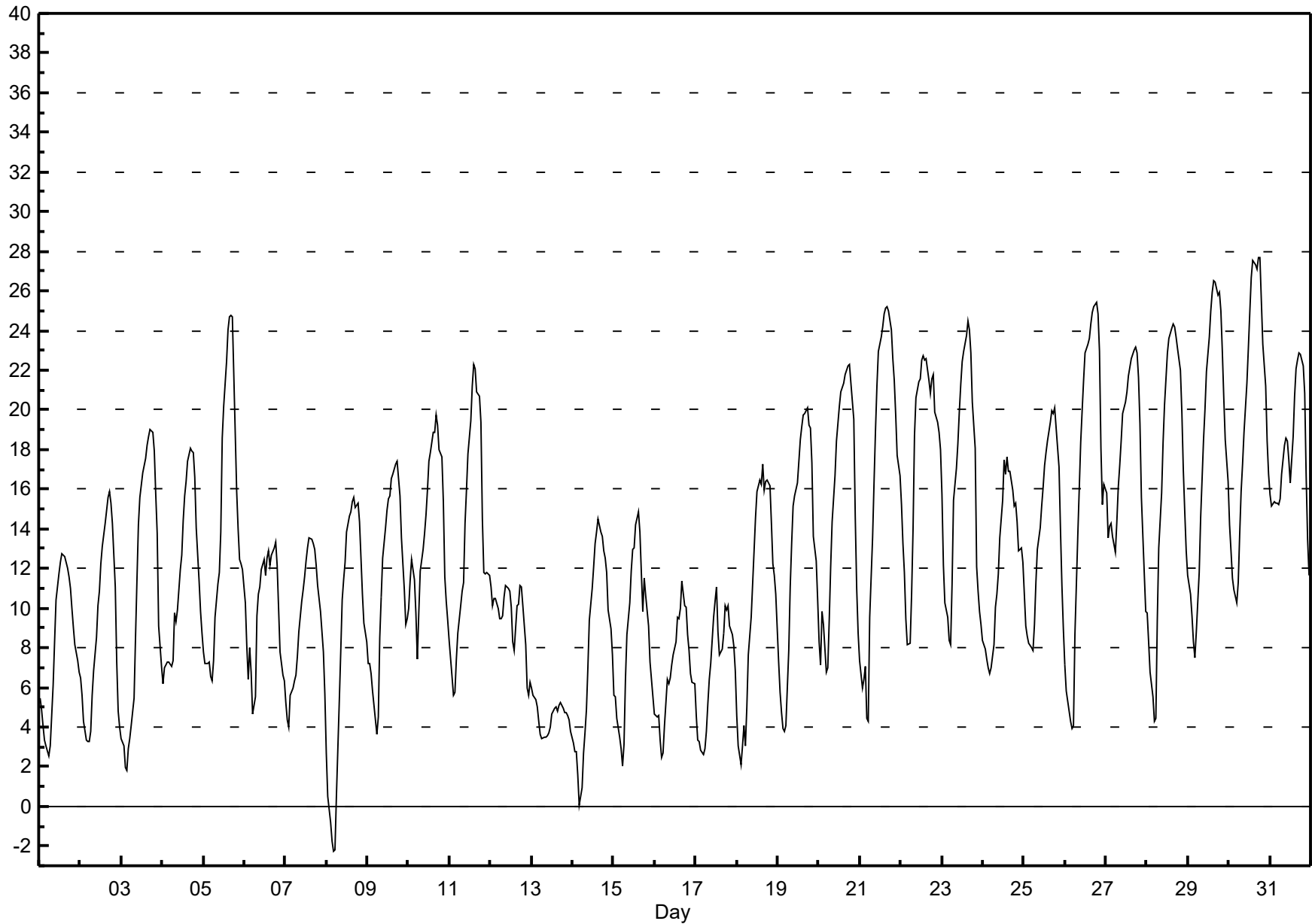
Evergreen Park - May 2017

Maximum Value: 27.7 °C on May 30 19:00																								Maximum Daily Average: 19.8 °C on May 30										Hours in Service: 744	
Minimum Value: -2 °C on May 8 05:00																								Minimum Daily Average: 4.5 °C on May 13										Hours of Data: 744	
Maximum Diurnal Average: 18.2 °C at hour 17																								Minimum Diurnal Average: 5.8 °C at hour 6										Hours of Missing Data: 0	
Monthly Average: 12.53 °C																								Percentiles: P ₁ = 0.9 P ₁₀ = 4.4 Q ₁ = 7.4 Median = 11.8 Q ₃ = 17.2 P ₉₀ = 21.9 P ₉₉ = 26.5										Hours of Calibration: 0	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
1-May	5	5	4	3	3	3	3	5	6	8	10	12	12	13	13	13	12	12	11	10	9	8	7	7	8.1	12.7									
2-May	7	6	4	3	3	3	4	6	7	9	10	11	12	13	14	15	16	16	15	14	11	7	5	4	8.9	15.9									
3-May	3	3	2	2	3	3	4	5	9	11	14	16	17	17	18	18	19	19	19	18	16	14	9	7	11.1	19.0									
4-May	6	7	7	7	7	7	7	10	9	10	12	13	14	16	16	17	18	18	18	17	14	11	10	9	11.7	18.0									
5-May	8	7	7	7	7	6	7	10	11	12	14	19	20	22	24	25	25	25	22	16	14	12	12	12	14.3	24.7									
6-May	10	8	6	8	7	5	6	10	11	11	12	12	12	13	13	12	13	13	13	12	10	8	7	6	9.9	13.3									
7-May	5	4	4	6	6	6	7	8	9	10	11	12	12	13	14	13	13	13	12	11	10	9	8	6	9.2	13.5									
8-May	3	1	-1	-2	-2	-2	0	5	8	10	11	12	14	15	15	15	16	15	15	14	12	11	9	8	8.5	15.6									
9-May	7	7	7	6	5	4	4	9	11	13	14	15	15	16	17	17	17	17	17	16	14	11	9	9	11.5	17.4									
10-May	10	11	12	11	10	7	10	12	13	14	15	16	17	18	19	19	20	19	18	18	15	12	10	9	14.0	19.8									
11-May	8	7	6	6	7	9	10	11	11	14	16	18	19	21	22	22	21	21	19	14	12	12	12	12	13.8	22.3									
12-May	11	10	10	10	10	9	9	10	11	11	11	11	10	8	8	10	10	11	11	10	8	6	6	6	9.5	11.1									
13-May	6	6	5	5	4	4	3	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	4	4	4.5	6.0									
14-May	3	3	3	2	0	1	3	4	5	7	9	11	12	13	14	15	14	14	13	13	12	10	9	8	8.1	14.5									
15-May	6	6	4	3	3	2	3	6	9	10	12	13	13	14	15	14	12	10	11	11	9	7	6	6	8.6	14.8									
16-May	5	4	5	3	2	3	4	6	6	6	7	8	8	10	9	10	11	10	10	9	8	7	6	6	6.8	11.4									
17-May	5	3	3	3	3	3	4	5	6	7	10	10	11	9	8	8	9	10	10	10	9	9	8	7	7.0	11.1									
18-May	5	3	2	3	4	3	5	8	10	11	13	15	16	16	16	17	16	16	16	16	14	12	12	11	10.8	17.3									
19-May	7	6	5	4	4	4	8	11	13	15	16	16	17	18	19	20	20	20	19	19	17	14	12	10	13.2	20.1									
20-May	8	7	10	9	7	7	9	12	14	17	18	19	20	21	21	22	22	22	22	21	20	15	11	9	15.2	22.3									
21-May	7	6	6	7	4	4	10	14	16	19	21	23	24	24	25	25	25	25	24	23	21	20	18	17	17.0	25.2									
22-May	15	13	12	9	8	8	11	14	19	21	21	22	23	23	23	23	21	21	22	22	20	19	19	18	17.7	22.7									
23-May	16	12	10	10	8	8	11	15	17	18	20	21	22	23	24	24	24	24	23	20	18	12	11	10	9	16.2	24.4								
24-May	8	8	7	7	7	7	8	10	11	12	14	15	18	17	18	17	17	16	15	15	14	13	13	12	12.4	17.6									
25-May	11	9	9	8	8	8	9	11	13	14	15	16	17	18	18	19	20	20	20	19	17	14	11	9	13.9	20.1									
26-May	7	6	5	4	4	4	9	14	16	18	20	22	23	23	24	24	25	25	25	25	23	18	15	16	16.5	25.4									
27-May	16	14	14	14	14	13	14	16	17	18	20	20	21	22	22	23	23	23	23	22	19	16	12	10	17.7	23.2									
28-May	10	8	7	6	4	4	9	13	16	18	20	22	23	24	24	24	24	24	23	22	20	17	15	13	16.3	24.4									
29-May	12	11	10	8	7	9	12	15	17	19	20	22	24	25	26	27	26	26	26	25	23	21	18	16	18.4	26.5									
30-May	14	13	12	11	10	11	14	16	17	19	21	23	25	27	28	27	27	28	28	25	23	21	18	17	19.8	27.7									
31-May	16	15	15	15	15	15	15	17	18	19	18	17	16	19	21	22	23	23	23	22	21	17	13	12	17.8	22.9									
8.4 7.4 6.9 6.5 5.9 5.8 7.5 10.0 11.6 13.1 14.5 15.6 16.6 17.2 17.8 18.1 18.2 18.0 17.6 16.5 14.6 12.4 10.8 9.8																								Diurnal Average											
15.8 15.2 15.4 15.3 15.3 15.2 15.5 16.8 18.7 20.6 21.4 23.1 24.9 26.6 27.5 27.4 27.1 27.7 27.7 25.5 23.3 21.2 18.9 18.0																								Diurnal Maximum											

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - May 2017



Hourly Averages

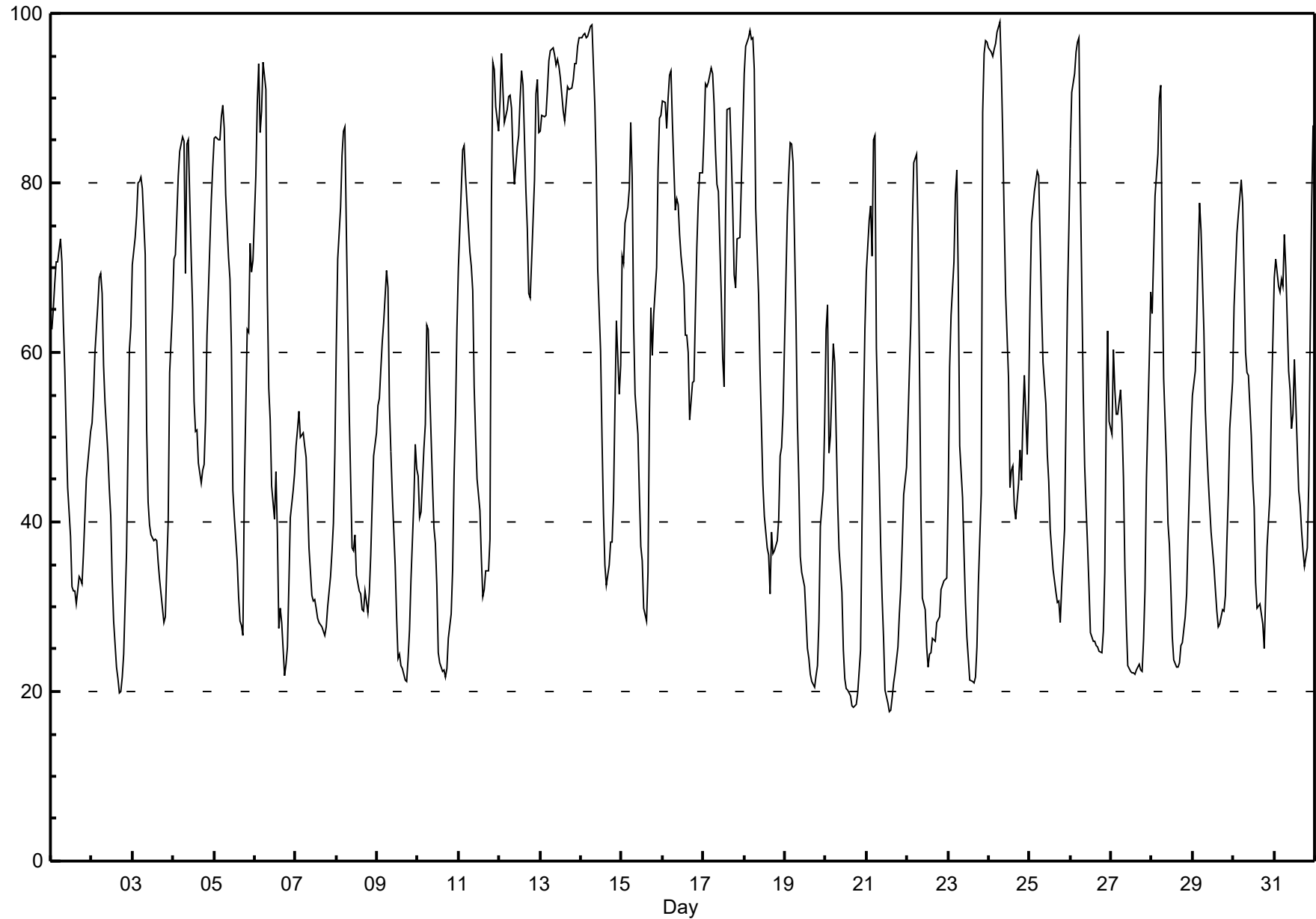
Relative Humidity (RH) - %

Evergreen Park - May 2017

Maximum Value: 99.0 % on May 24 07:00																								Hours in Service: 744		
Maximum Daily Average: 92.0 % on May 13																								Hours of Data: 744		
Minimum Value: 18 % on May 21 14:00																								Hours of Missing Data: 0		
Maximum Diurnal Average: 81.5 % at hour 6																								Hours of Calibration: 0		
Monthly Average: 55.39 %																								Percent Operational Time: 100.0		
Minimum Daily Average: 37.0 % on May 20																										
Minimum Diurnal Average: 35.3 % at hour 16																										
Percentiles: P ₁ = 19.3 P ₁₀ = 25.3 Q ₁ = 34.1 Median = 52.2 Q ₃ = 76.1 P ₉₀ = 89.5 P ₉₉ = 97.3																										
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-May	63	65	68	71	71	73	71	64	58	51	44	38	32	32	30	34	33	33	36	41	45	49	51	49.3	73.4	
2-May	52	55	60	66	69	69	67	59	54	48	44	41	33	28	23	22	20	20	22	24	36	49	60	63	45.1	69.3
3-May	70	74	76	80	80	81	79	72	51	42	40	38	38	38	35	33	32	28	29	35	40	58	65	52.1	80.6	
4-May	71	72	76	81	84	85	85	69	85	85	71	65	54	51	51	47	45	46	47	52	62	73	78	82	67.3	85.4
5-May	85	85	85	85	88	89	86	79	71	69	60	44	41	35	31	28	28	27	44	63	62	73	70	71	62.5	89.1
6-May	81	89	94	86	88	94	91	67	56	52	44	40	46	39	28	30	28	22	23	25	33	41	44	46	53.6	94.2
7-May	49	51	53	50	50	49	48	43	37	31	31	31	30	29	28	28	27	27	28	30	34	36	40	48	37.7	53.0
8-May	61	71	77	83	86	87	74	53	45	37	37	39	34	32	32	30	29	32	29	32	36	42	48	51	49.0	86.6
9-May	54	55	58	61	64	70	68	54	48	43	35	29	24	24	23	23	21	24	27	33	42	49	46	41.5	69.7	
10-May	45	40	41	49	51	63	63	56	44	39	37	33	25	23	22	23	22	23	26	29	34	45	53	63	39.6	63.2
11-May	70	79	84	84	81	78	72	70	67	56	50	45	41	36	31	32	34	34	38	78	94	93	89	86	63.5	94.2
12-May	90	95	91	87	89	90	90	89	83	80	84	86	90	93	92	79	75	67	66	71	80	90	92	86	84.8	95.3
13-May	86	88	88	88	91	94	96	96	95	94	95	94	92	89	87	89	91	91	91	92	94	94	96	97	92.0	97.2
14-May	97	98	98	97	97	98	99	94	89	82	70	60	50	41	35	33	35	38	38	43	54	64	55	58	67.5	98.7
15-May	71	71	75	77	79	87	81	63	55	50	43	37	35	30	28	34	53	65	60	65	70	82	88	88	62.0	88.0
16-May	90	89	86	90	93	93	87	77	78	77	74	71	68	62	62	60	52	56	57	65	72	78	81	81	75.0	93.2
17-May	86	92	91	92	93	93	89	84	80	79	67	59	56	76	89	89	83	77	69	68	73	74	80	86	80.2	93.5
18-May	93	96	97	98	97	97	93	77	67	58	51	44	41	37	36	32	39	36	37	38	40	48	49	53	60.6	97.9
19-May	68	76	81	85	85	82	64	52	45	36	34	32	29	25	24	22	21	21	22	23	28	39	44	52	45.4	84.7
20-May	63	66	48	50	61	59	51	43	37	32	25	21	20	20	19	18	18	18	19	20	25	40	53	63	37.0	65.6
21-May	69	76	77	71	85	86	61	46	37	31	26	20	19	18	18	19	21	22	25	29	32	37	43	46	42.3	85.6
22-May	52	58	64	75	82	83	74	59	41	31	30	25	23	24	25	26	26	28	28	29	32	33	33	33	42.3	83.3
23-May	43	58	64	71	79	82	69	49	43	36	30	26	24	21	21	21	22	25	33	43	88	95	97	97	51.6	96.9
24-May	96	95	95	96	96	98	99	93	85	75	67	57	44	46	47	42	40	45	49	45	52	57	48	54	67.6	99.0
25-May	66	75	77	79	81	81	73	65	59	54	48	45	39	37	34	32	30	31	28	32	39	52	66	75	54.2	81.3
26-May	84	91	93	95	97	97	80	55	47	42	37	32	27	26	26	25	25	25	25	27	34	53	62	52	52.4	97.1
27-May	50	60	56	53	53	56	52	45	35	28	23	22	22	22	22	22	23	22	22	26	32	45	59	67	38.3	67.2
28-May	65	71	79	83	90	92	71	57	47	40	37	32	26	24	23	23	23	25	26	29	31	38	45	51	47.0	91.5
29-May	55	58	63	71	78	74	62	53	49	45	42	39	35	32	29	28	28	30	30	31	38	43	51	57	46.7	77.6
30-May	65	70	74	76	80	78	69	60	58	57	50	45	42	33	30	30	29	28	25	31	37	43	54	61	51.1	80.3
31-May	69	71	68	67	69	68	74	70	58	56	51	53	59	49	44	42	39	37	35	37	44	62	77	87	57.7	86.8
69.7 73.9 75.4 77.3 80.2 81.5 75.4 64.9 58.2 52.8 47.7 43.4 40.0 37.8 36.4 35.3 35.3 35.6 36.3 40.9 48.3 56.4 61.6 65.0																								Diurnal Average		
97.1 97.5 97.7 97.9 97.2 98.5 99.0 96.0 95.0 94.0 94.6 93.7 92.3 93.2 91.5 89.3 91.3 91.0 91.2 92.3 94.2 95.3 96.9 97.2																								Diurnal Maximum		

Hourly Averages

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



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - May 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	20	16	12	13	11	7	8	11	14	13	12	15	15	18	17	19	20	22	21	19	17	16	18	17	15.3	22.3
Dir	248	245	245	244	247	267	245	256	249	259	271	253	265	268	266	256	270	256	261	253	258	252	249	243	255.5	255.6
2 Spd	17	18	19	14	15	19	17	23	23	23	18	16	17	13	17	17	14	11	9	6	1	1	2	1	13.2	23.4
Dir	247	247	240	246	248	243	251	255	257	259	298	282	264	271	268	264	265	281	297	292	287	205	187	198	260.4	255.4
3 Spd	2	1	1	1	1	2	1	2	4	9	20	25	23	28	21	29	28	28	27	21	15	6	2	3	11.4	29.2
Dir	85	221	72	268	145	203	68	196	190	199	235	243	252	245	252	253	258	257	260	263	248	245	10	193	248.5	253.3
4 Spd	1	3	1	0	2	1	2	11	13	16	17	16	11	9	7	4	2	4	8	7	5	5	5	4	3.1	17.2
Dir	202	190	185	191	194	311	162	222	199	200	204	199	220	187	169	255	1	30	34	43	46	45	50	54	192.4	203.5
5 Spd	4	6	4	2	4	2	1	1	2	5	5	7	8	4	4	12	9	8	4	33	18	17	8	3	1.7	33.0
Dir	54	54	61	41	43	71	60	27	347	65	67	73	50	24	225	233	179	184	185	264	307	317	262	195	295.6	264.5
6 Spd	2	2	1	7	3	2	3	14	19	23	24	18	18	14	26	21	15	27	29	28	23	17	18	21	15.0	29.2
Dir	97	189	268	267	255	299	173	240	246	254	255	260	239	234	227	228	223	247	256	250	252	249	227	230	243.2	255.8
7 Spd	16	19	20	34	32	32	29	30	36	49	43	39	37	32	36	41	38	39	33	28	22	20	12	6	29.5	48.7
Dir	219	219	217	234	241	243	241	241	246	248	256	252	256	263	249	247	258	250	263	263	251	242	244	224	247.4	247.9
8 Spd	3	1	1	0	1	1	2	3	7	14	24	33	35	26	28	29	24	23	23	29	23	17	16	11	15.3	34.6
Dir	188	197	195	180	239	185	200	249	274	247	253	239	242	262	247	235	245	246	261	258	248	255	240	247	247.7	242.0
9 Spd	8	16	13	6	6	4	7	12	13	12	8	8	7	8	6	7	9	4	7	5	4	5	5	6	3.9	16.1
Dir	244	238	240	275	259	279	333	260	255	258	284	278	295	339	347	12	321	37	69	68	51	52	52	52	289.9	237.7
10 Spd	8	8	13	10	4	1	1	2	11	23	19	17	12	9	13	13	1	6	7	7	6	4	5	6	2.3	22.9
Dir	63	79	75	65	73	105	150	150	256	250	263	262	260	280	267	308	67	27	38	32	33	44	46	40	309.1	249.9
11 Spd	4	2	1	5	6	6	10	8	10	14	19	19	22	23	22	23	22	22	21	10	15	20	19	12	13.4	22.7
Dir	30	22	14	40	45	46	53	54	52	55	43	41	44	45	54	52	55	64	47	124	51	27	36	49	48.9	45.4
12 Spd	4	9	11	14	15	13	7	10	10	9	10	13	9	23	23	26	23	15	14	11	3	2	5	6	2.4	25.8
Dir	60	34	49	63	55	57	53	55	56	60	56	49	61	224	242	252	243	266	285	321	331	310	330	313	342.7	251.9
13 Spd	10	11	12	13	16	15	16	16	19	20	18	15	12	15	15	11	5	9	10	10	11	8	9	12	11.5	20.2
Dir	290	293	292	303	299	289	285	289	299	317	314	316	301	299	288	287	304	251	263	239	239	246	230	213	286.8	317.1
14 Spd	6	4	6	2	2	1	2	4	6	5	2	7	13	16	15	16	16	12	15	7	3	5	6	8	5.3	16.4
Dir	205	233	247	213	93	156	231	133	125	178	256	321	285	268	266	294	316	327	262	289	320	272	278	246	274.4	293.7
15 Spd	4	7	5	5	5	3	6	9	14	10	7	2	6	13	11	3	13	17	13	11	8	3	2	7	2.8	17.0
Dir	242	230	259	303	300	243	217	256	262	264	255	344	12	316	327	302	47	31	43	52	90	49	56	54	332.5	31.0
16 Spd	6	6	8	9	6	7	9	14	15	15	14	15	14	15	13	11	13	11	13	8	5	5	5	5	10.0	15.5
Dir	51	38	39	34	32	24	32	27	33	38	50	41	40	37	38	33	47	54	44	48	46	44	42	48	39.7	32.5
17 Spd	4	3	3	4	4	5	5	6	7	8	9	12	10	14	6	7	7	7	13	9	6	5	7	4	5.4	13.8
Dir	44	33	55	51	49	55	64	70	102	98	106	105	89	181	146	154	128	86	85	74	66	105	163	145	99.9	180.9
18 Spd	1	1	0	3	7	2	5	10	9	15	22	27	23	19	22	21	27	14	14	11	14	10	14	9	10.4	27.4
Dir	160	194	19	231	249	299	233	237	241	233	209	237	242	232	283	276	320	291	300	257	227	212	212	216	250.6	319.9
19 Spd	1	5	2	3	4	6	11	17	24	32	31	26	25	26	25	27	22	22	14	14	9	6	7	3	14.4	31.6
Dir	189	184	172	213	205	230	235	238	241	248	252	254	251	267	263	249	262	263	277	268	245	216	227	333	251.3	248.4
20 Spd	4	4	13	8	4	6	11	16	19	18	19	24	22	19	24	25	26	22	17	17	9	2	2	3	13.4	26.3
Dir	197	251	240	276	285	268	252	249	250	256	255	267	268	264	261	264	252	252	255	249	257	222	197	33	256.9	252.0
21 Spd	1	1	3	3	0	2	5	11	14	20	19	21	20	25	24	27	27	26	24	24	23	15	8	9	14.3	27.4
Dir	177	209	238	239	200	303	281	271	268	257	264	265	262	247	257	264	261	254	246	244	244	236	223	240	254.3	260.9
22 Spd	6	8	2	2	2	4	6	6	14	32	33	31	28	23	19	17	15	10	7	6	12	13	12	8	12.3	32.8
Dir	243	211	191	31	199	183	171	209	209	242	249	263	260	263	260	251	247	237	246	262	215	236	251	252	244.5	249.1

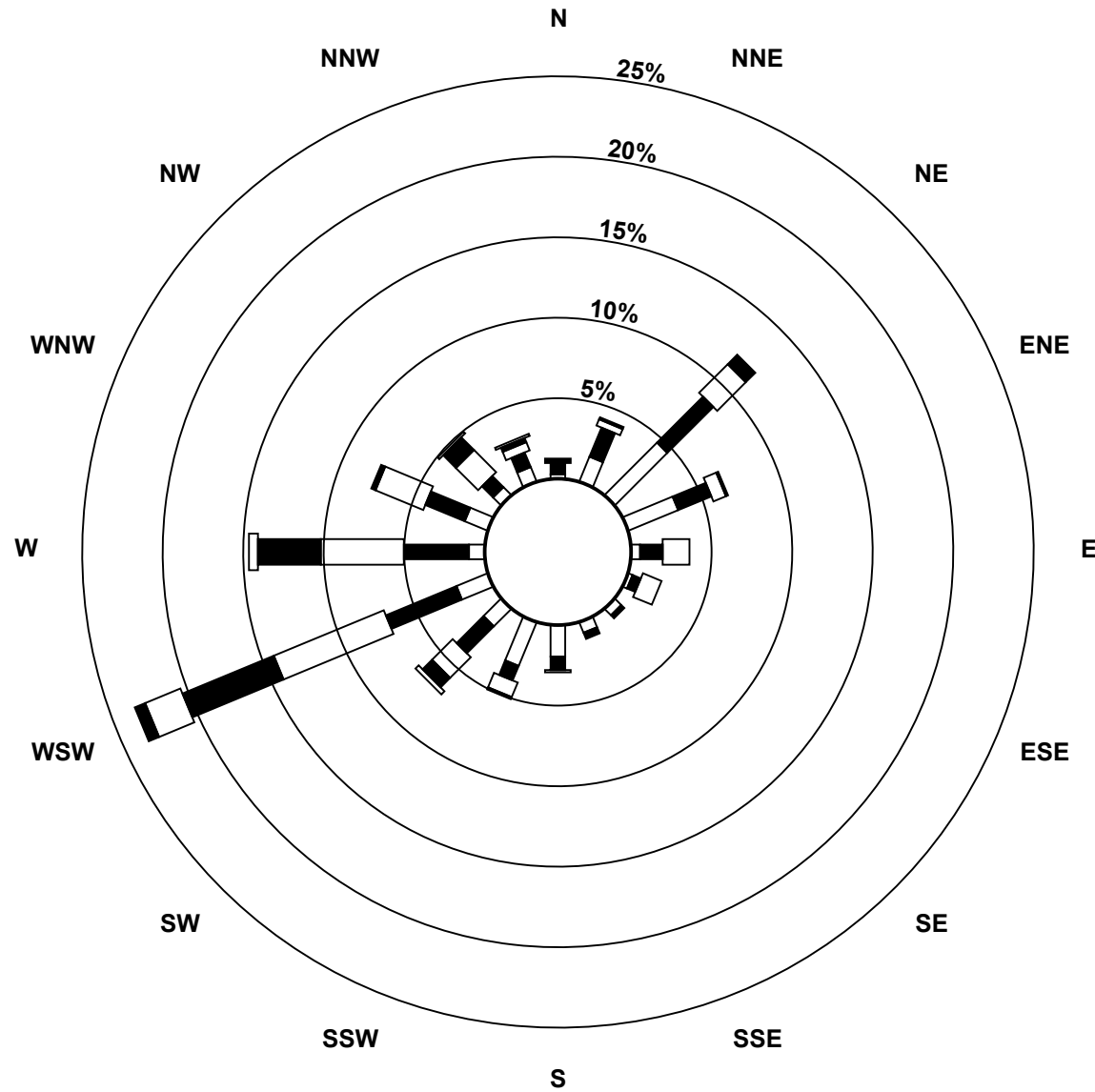
Hourly Averages

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

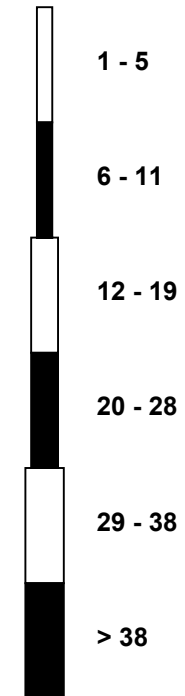
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	2	6	3	0	1	2	2	5	5	11	16	20	16	11	7	3	7	11	9	14	25	19	22	24	6.6	24.9	
Dir	221	187	182	349	320	145	194	247	238	236	247	244	237	294	269	21	27	48	32	330	269	304	288	270	274.1	268.8	
24 Spd	18	18	21	25	21	16	10	20	23	19	21	21	22	23	33	30	26	22	20	14	14	25	12	18	18.0	32.7	
Dir	280	258	260	262	275	264	282	316	323	327	343	355	353	332	312	327	321	325	325	342	322	312	311	318	312.0	311.7	
25 Spd	14	9	12	10	6	5	8	9	8	7	10	13	11	12	10	12	18	18	16	16	10	7	1	0	9.1	17.7	
Dir	311	302	311	304	271	283	288	273	253	238	252	262	267	287	273	286	257	248	256	251	219	203	177	53	267.8	256.7	
26 Spd	0	0	0	1	2	1	2	9	15	19	19	16	18	16	15	15	11	10	10	8	6	2	4	8	8.1	19.2	
Dir	178	38	35	203	208	208	284	260	259	259	262	266	290	289	295	287	282	282	300	258	265	272	236	235	272.1	262.4	
27 Spd	12	4	9	10	8	10	10	11	11	10	8	8	8	6	10	15	11	8	12	10	9	2	1	3	6.0	14.8	
Dir	228	293	254	266	275	275	283	327	10	4	360	355	345	357	304	272	278	300	315	19	25	15	199	47	312.3	272.3	
28 Spd	4	3	1	1	3	3	3	5	6	8	9	12	14	18	16	15	17	18	19	15	12	6	6	5	9.0	19.0	
Dir	57	62	64	75	47	52	48	51	97	80	87	95	94	98	91	88	86	78	83	75	71	59	58	50	80.4	82.7	
29 Spd	6	5	5	4	5	6	8	13	12	12	14	16	17	16	15	17	14	11	12	14	8	7	5	5	9.7	17.1	
Dir	58	67	60	52	50	58	86	102	101	115	120	109	122	111	104	90	101	81	84	92	99	105	79	77	96.2	122.2	
30 Spd	4	4	4	3	2	1	1	3	5	6	4	5	7	11	8	10	8	8	10	4	9	4	4	4	2.3	10.7	
Dir	63	54	65	67	64	53	133	192	228	197	222	339	324	336	31	40	49	53	62	59	294	328	33	217	23.4	336.2	
31 Spd	2	3	5	8	7	6	3	1	9	15	26	26	18	11	15	10	15	15	12	9	3	1	1	1	8.7	26.1	
Dir	260	253	254	269	249	302	151	264	266	266	256	250	242	248	241	230	243	262	244	225	163	160	184	193	249.3	250.2	
Spd	2.5	2.9	3.0	3.5	3.1	3.0	2.9	5.4	7.1	9.6	10.0	9.8	9.2	9.7	10.6	10.6	8.5	7.3	6.6	6.9	5.5	4.2	3.3	2.9	Diurnal Average		
Dir	256.1	246.3	254.3	271.3	270.7	270.2	258.8	261.4	257.9	254.5	260.5	264.0	267.0	269.7	267.4	267.3	273.9	274.1	285.2	271.4	264.6	274.8	258.1	257.2	Diurnal Maximum		
Spd	19.5	18.5	21.1	33.9	32.0	32.4	28.7	30.3	35.8	48.7	43.0	38.7	37.4	32.4	36.3	41.4	37.6	38.7	33.0	33.0	24.9	24.9	22.2	23.7	Diurnal Maximum		
Dir	248.0	218.5	260.1	234.3	240.6	243.1	240.6	241.3	246.5	247.9	256.4	251.7	255.7	263.5	249.5	247.0	258.4	250.1	262.8	264.5	268.8	311.6	287.8	270.2			
Maximum Speed Value: 49 km/h on May 7 10:00																									Hours in Service: 744		
Maximum Daily Speed Average: 29.5 km/h on May 7																									Hours of Data: 744		
Maximum Diurnal Speed Average: 10.6 km/h at hour 15																									Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on May 18 03:00																											
Minimum Daily Speed Average: 1.7 km/h on May 30																											
Minimum Diurnal Speed Average: 2.5 km/h at hour 1																											
Monthly Average Velocity: 6.12 km/h 265.87 deg																									Percent Operational Time: 100.0		
Speed Percentiles: P ₁ = 0.4 P ₁₀ = 2.2 Q ₁ = 5.0 Median = 10.0 Q ₃ = 17.0 P ₉₀ = 23.4 P ₉₉ = 37.2																											
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	11	10	2	3	0	0	26																				
NorthEast	52	60	23	10	0	0	145																				
East	11	20	22	0	0	0	53																				
SouthEast	9	5	3	0	0	0	17																				
South	43	10	4	0	0	0	57																				
SouthWest	27	38	44	24	12	1	146																				
West	18	51	78	62	14	4	227																				
NorthWest	13	18	31	9	2	0	73																				
Total	184	212	207	108	28	5	744																				

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - May 2017

Maximum Speed: 49 km/h on May 7 10:00																				Maximum Daily Speed Average: 30.7 km/h on May 7										Hours in Service: 744	
Minimum Speed: 0 km/h on May 26 00:00																				Minimum Daily Speed Average: 6.3 km/h on May 30										Hours of Data: 744	
Maximum Diurnal Speed Average: 19.3 km/h at hour 16																				Minimum Diurnal Speed Average: 6.6 km/h at hour 1										Hours of Missing Data: 0	
Monthly Average Speed: 12.79 km/h																				Percentiles: P ₁ = 0.8 P ₁₀ = 2.9 Q ₁ = 5.9 Median = 11.3 Q ₃ = 18.1 P ₉₀ = 24.5 P ₉₉ = 39.0										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-May	20	16	12	13	12	8	8	11	15	14	14	16	17	20	19	20	23	23	21	19	17	16	18	17	16.2	22.7					
2-May	17	18	19	14	16	19	17	24	23	24	21	19	20	17	19	19	17	13	11	6	1	2	2	1	14.9	23.9					
3-May	2	2	2	3	1	2	2	3	4	9	20	25	24	29	22	30	29	29	28	22	15	6	3	3	13.1	30.2					
4-May	2	3	2	2	2	2	5	12	14	16	18	17	13	13	10	8	7	5	8	7	5	5	5	4	7.7	17.9					
5-May	4	6	4	2	4	3	3	3	3	9	6	9	9	9	9	15	11	9	6	34	20	18	8	5	8.8	34.1					
6-May	3	3	2	9	4	3	4	14	19	24	24	20	20	15	28	22	17	27	30	29	23	17	19	21	16.5	29.7					
7-May	16	19	20	34	32	33	29	31	36	49	44	40	39	34	38	43	39	39	34	28	22	20	12	6	30.7	49.4					
8-May	3	1	1	1	2	2	2	4	7	15	25	34	35	28	30	30	26	24	25	30	23	17	17	11	16.3	35.4					
9-May	9	16	13	7	7	5	7	13	14	13	12	12	10	10	11	9	11	6	8	5	4	5	6	6	9.1	16.1					
10-May	8	9	13	10	4	3	2	3	13	24	20	18	15	12	15	16	10	11	7	7	6	4	5	6	10.1	23.5					
11-May	4	2	1	5	6	6	10	9	11	14	20	20	23	24	23	24	23	23	21	17	16	20	20	12	14.8	23.8					
12-May	5	9	12	14	16	14	8	11	10	9	10	13	9	25	26	27	24	16	15	12	4	3	6	6	12.8	27.0					
13-May	11	12	13	14	17	16	16	16	19	21	18	16	13	16	16	11	6	10	11	10	11	9	9	12	13.4	20.7					
14-May	6	4	7	3	3	1	3	6	7	7	6	9	14	18	18	19	18	13	17	8	6	7	7	8	8.9	19.1					
15-May	4	7	5	6	5	4	6	9	15	12	10	10	10	15	13	10	16	18	14	11	9	3	2	7	9.2	17.6					
16-May	6	6	8	9	6	7	10	14	16	16	15	16	15	16	14	12	15	12	14	8	6	5	5	5	10.6	16.1					
17-May	4	3	3	5	5	5	5	7	8	9	11	14	12	16	9	8	7	8	13	9	6	6	8	4	7.7	15.6					
18-May	3	2	1	3	8	3	5	10	11	16	23	28	24	20	26	24	28	16	16	13	15	10	14	10	13.6	28.5					
19-May	1	5	2	4	4	6	12	17	24	33	32	28	27	28	27	30	24	24	15	15	9	6	7	4	16.0	32.8					
20-May	4	5	13	11	5	7	11	16	20	19	21	25	25	25	27	27	27	23	18	18	10	2	2	4	15.1	27.4					
21-May	1	2	3	3	0	3	5	12	14	20	21	23	22	26	25	29	29	27	24	24	23	15	9	9	15.4	28.8					
22-May	6	8	3	2	3	4	7	8	16	33	34	32	29	24	21	18	16	10	8	7	12	13	12	8	13.8	33.6					
23-May	2	6	3	3	2	3	4	6	6	11	16	21	17	14	9	11	9	12	9	20	26	20	23	24	11.6	26.0					
24-May	18	19	22	25	22	16	11	21	24	19	22	22	23	25	34	30	27	24	21	15	14	26	12	18	21.2	33.7					
25-May	14	9	12	10	7	6	9	10	10	9	12	15	15	15	14	15	19	18	17	17	11	7	1	0	11.3	18.9					
26-May	1	0	1	1	2	1	2	10	15	20	20	18	20	18	18	18	13	12	11	8	7	3	4	9	9.7	20.4					
27-May	12	6	10	11	9	11	11	13	12	11	10	12	12	9	13	17	14	10	14	11	9	3	1	3	10.1	17.1					
28-May	4	3	2	2	3	3	4	6	7	9	10	13	16	19	18	17	19	19	20	16	12	7	6	5	10.1	19.8					
29-May	6	6	5	4	5	6	9	14	13	13	15	17	18	18	16	18	15	12	13	14	9	7	6	5	11.0	18.4					
30-May	5	4	4	3	3	1	2	3	7	7	5	7	8	12	9	10	9	10	11	4	10	7	4	5	6.3	11.9					
31-May	3	6	6	9	7	7	3	3	10	16	26	27	19	13	16	11	17	16	13	10	3	1	1	1	10.2	26.9					
6.6 6.9 7.2 7.8 7.0 6.8 7.4 10.9 13.7 16.8 18.2 19.2 18.5 18.8 19.1 19.3 18.2 16.7 15.9 14.6 11.8 9.4 8.2 7.8																									Diurnal Average						
19.7 18.7 21.6 34.1 32.2 32.7 28.9 30.6 36.4 49.4 44.1 39.7 39.1 34.0 37.5 42.5 39.3 39.5 33.8 34.1 26.0 25.8 23.3 24.4																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - May 2017

Maximum Value: 98.3 deg on May 10 17:00																				Hours in Service: 744					
Minimum Value: 5.2 deg on May 7 02:00																				Hours of Data: 744					
																				Hours of Missing Data: 0					
Percentiles: P ₁ = 6.4 P ₁₀ = 9.8 Q ₁ = 14.6 Median = 21.6 Q ₃ = 38.5 P ₉₀ = 59.1 P ₉₉ = 92.0																				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-May	7	7	9	8	17	24	16	15	13	18	29	25	29	30	30	18	30	12	14	10	9	9	10	8	30.5
2-May	8	8	6	15	8	7	10	9	13	20	29	32	31	46	35	26	39	35	37	17	77	40	44	52	77.1
3-May	34	82	58	86	59	50	68	75	28	14	18	12	16	16	20	15	18	17	14	14	8	15	69	45	86.5
4-May	72	19	80	95	39	78	90	30	15	7	16	18	38	55	43	71	83	39	14	14	9	9	8	9	95.0
5-May	10	8	12	55	21	43	68	79	65	53	39	37	41	75	81	48	47	27	66	26	27	18	32	63	80.7
6-May	78	54	73	43	57	63	41	13	10	13	14	25	29	31	29	15	27	15	10	11	10	10	11	7	77.8
7-May	7	5	9	6	7	7	8	9	10	10	13	13	18	18	15	13	17	12	12	11	10	7	7	13	17.8
8-May	18	54	39	88	67	95	77	51	28	17	15	12	12	21	21	14	19	14	19	12	9	12	7	10	95.3
9-May	9	6	7	17	15	53	9	36	25	26	55	69	50	43	70	51	48	67	36	22	11	7	7	9	70.1
10-May	23	21	22	14	43	70	72	39	63	13	22	28	45	51	45	56	98	58	26	14	6	6	6	7	98.3
11-May	19	22	26	13	8	11	14	13	16	19	17	24	19	19	19	17	17	18	16	56	21	8	12	16	56.1
12-May	24	13	22	18	14	17	21	19	22	24	16	20	26	41	30	18	18	19	24	21	52	64	22	31	64.4
13-May	15	17	15	18	15	15	14	15	15	12	15	15	19	17	15	17	26	34	23	12	9	13	18	8	34.1
14-May	9	41	22	53	37	66	74	55	40	49	84	67	27	28	30	31	30	29	27	36	63	59	22	18	84.1
15-May	21	9	24	32	22	33	16	20	23	38	61	91	58	42	39	83	49	16	22	20	25	30	47	14	91.5
16-May	13	14	13	10	14	13	16	23	22	19	22	22	18	18	28	30	32	24	18	19	25	16	15	16	32.2
17-May	9	19	13	9	10	20	22	27	30	32	48	31	34	36	53	26	30	49	18	20	18	42	24	23	53.3
18-May	95	70	90	44	32	41	21	13	39	20	12	17	17	19	29	26	17	30	26	36	18	8	6	9	94.6
19-May	57	7	40	36	13	10	7	9	10	15	14	20	20	24	25	28	24	26	21	19	13	8	11	42	57.1
20-May	11	58	7	48	35	18	10	10	14	20	26	19	27	40	28	20	17	18	19	11	21	24	25	52	58.1
21-May	63	83	40	21	68	53	22	20	18	16	22	23	24	17	19	22	18	15	12	8	9	7	7	10	83.4
22-May	15	8	61	60	59	16	24	77	24	12	12	15	15	19	21	16	16	10	21	25	9	13	13	15	76.8
23-May	44	7	54	94	68	73	61	41	46	19	18	20	21	51	52	92	42	32	27	50	18	19	19	14	94.4
24-May	16	14	13	12	16	12	18	10	8	9	19	18	24	25	15	10	17	24	24	18	13	19	16	9	25.4
25-May	16	18	9	13	22	21	19	27	31	48	40	32	43	49	46	42	20	15	18	12	12	14	59	73	73.4
26-May	76	81	92	25	17	46	43	21	14	19	19	29	29	29	31	35	33	43	30	20	27	53	58	8	92.1
27-May	10	49	18	26	19	21	27	31	26	35	46	52	51	72	50	32	40	39	27	28	12	47	83	35	82.6
28-May	16	16	41	62	20	13	30	41	34	36	43	27	31	29	34	29	24	22	18	21	18	18	15	15	62.1
29-May	14	16	15	12	15	27	23	22	28	35	28	25	28	23	27	29	27	28	22	20	14	13	20	12	34.8
30-May	17	11	16	27	54	57	79	43	49	52	64	60	41	31	39	22	29	35	30	22	33	48	14	69	79.4
31-May	72	67	33	24	23	71	40	89	22	19	13	14	14	29	23	36	26	21	22	21	21	66	69	69	88.8
94.6 83.4 92.1 95.0 68.4 95.3 90.2 88.8 65.4 53.2 84.1 91.5 57.9 74.6 80.7 92.1 98.3 67.4 66.2 56.1 77.1 65.6 82.6 73.4																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

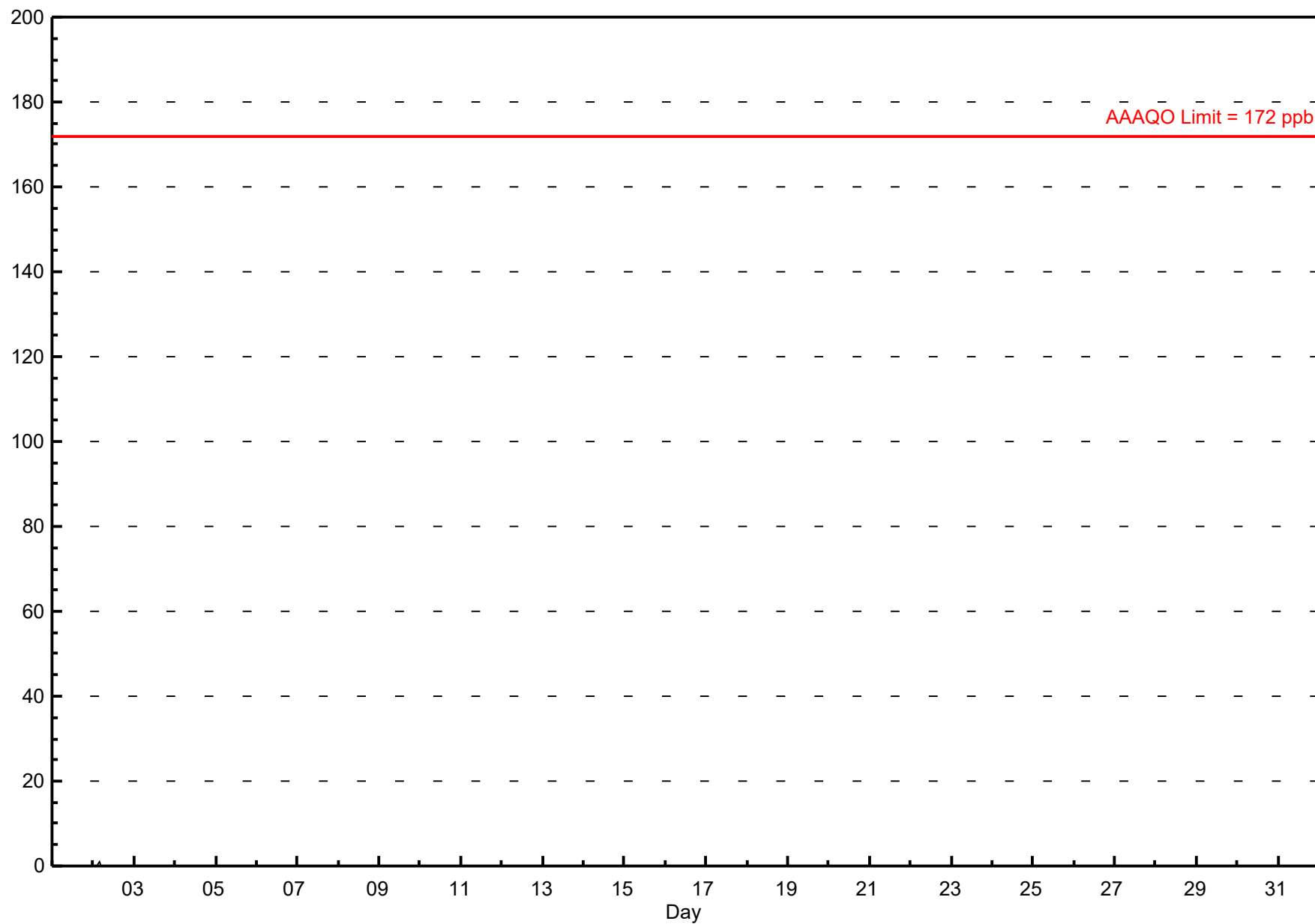
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.9 ppb on May 2 04:00 Maximum Daily Average: 0.0 ppb on May 2																			Hours in Service: 744 Hours of Data: 697 Hours of Missing Data: 47 Hours of Calibration: 35 Percent Operational Time: 98.4							
Minimum Value: 0 ppb on May 1 02:00 Maximum Diurnal Average: 0.0 ppb at hour 4 Monthly Average: 0.00 ppb																			Minimum Daily Average: 0.0 ppb on May 1 Minimum Diurnal Average: 0.0 ppb at hour 1 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							
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-May	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-May	0	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	0.9
3-May	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
4-May	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
5-May	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
6-May	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
7-May	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
8-May	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
9-May	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	0.2
10-May	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
11-May	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
12-May	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
13-May	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
14-May	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
15-May	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
16-May	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
17-May	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
18-May	0	0	0	0	0	0	A	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
19-May	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
20-May	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
21-May	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	0.1
22-May	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
23-May	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
24-May	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
25-May	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
26-May	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
27-May	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
28-May	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
29-May	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	--	0.0
30-May	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
31-May	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																									Diurnal Average	
0.0 0.0 0.0 0.9 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0																									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 - May 2017



Hourly Maximums

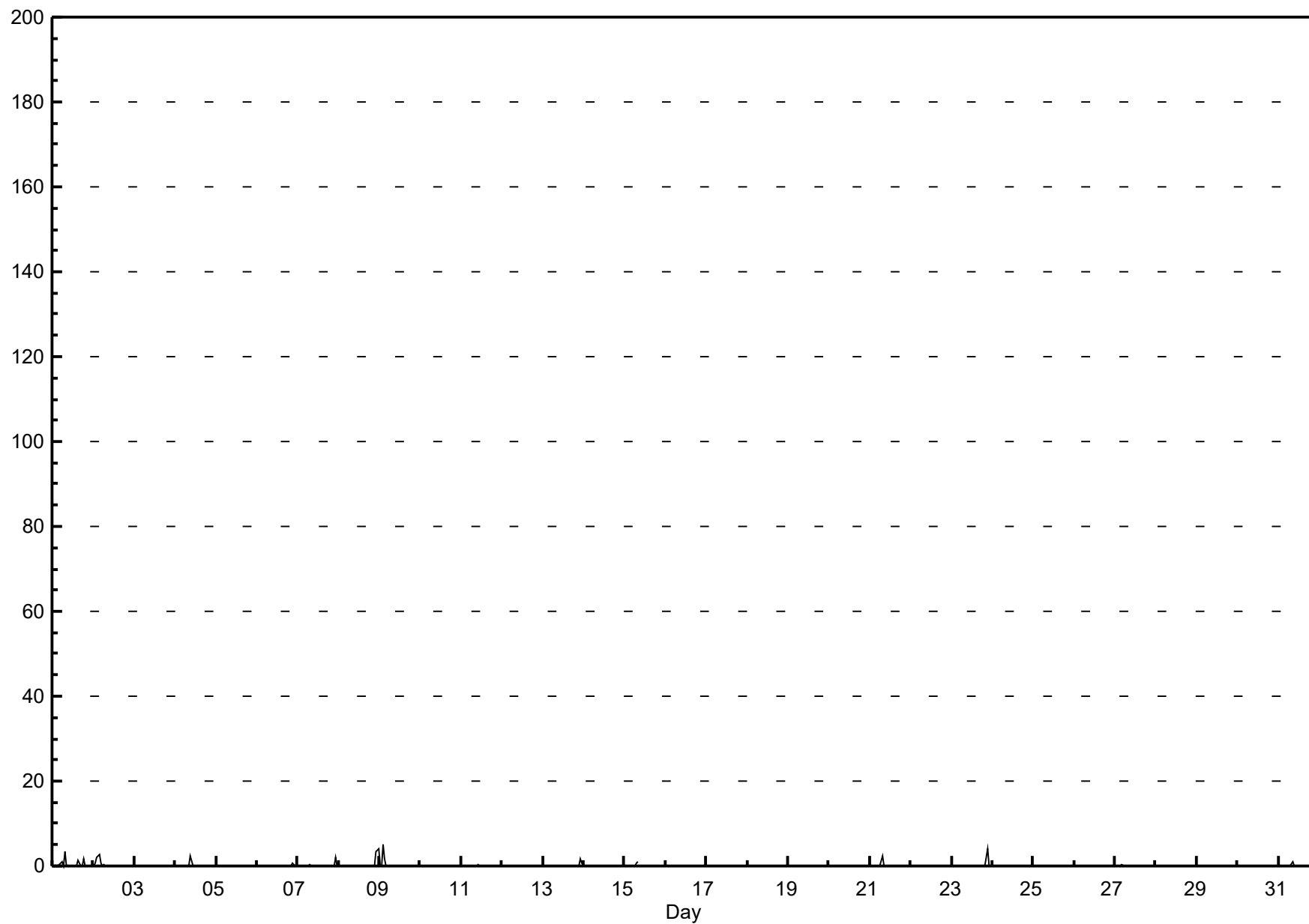
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - May 2017

Maximum Value: 5.1 ppb on May 9 03:00																				Maximum Daily Average: 0.4 ppb on May 1										Hours in Service: 744	
Minimum Value: 0 ppb on May 1 02:00																				Minimum Daily Average: 0.0 ppb on May 3										Hours of Data: 697	
Maximum Diurnal Average: 0.2 ppb at hour 23																				Minimum Diurnal Average: 0.0 ppb at hour 1										Hours of Missing Data: 47	
Monthly Average: 0.07 ppb																				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 = 2.1										Hours of Calibration: 35	
																				Percent Operational Time: 98.4											
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-May	A	0	0	0	0	1	0	3	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	A	0.4	3.4					
2-May	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	2.8					
3-May	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					
4-May	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	2.3					
5-May	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					
6-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.0	0.6					
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	2	0	0.1	2.0					
8-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	4	4	0.3	4.0					
9-May	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	5.1					
10-May	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					
11-May	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	0.3					
12-May	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					
13-May	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	2	1	0.1	1.6					
14-May	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					
15-May	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1					
16-May	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					
17-May	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					
18-May	0	0	0	0	0	0	A	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0					
19-May	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					
20-May	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					
21-May	0	0	0	A	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	2.3					
22-May	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					
23-May	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0.3	4.1					
24-May	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					
25-May	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					
26-May	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					
27-May	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	0.3					
28-May	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					
29-May	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	P	P	P	P	P	P	0	0	0	--	0.0					
30-May	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					
31-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.9					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration				P - Power Failure				A - Automated Daily Zero Span																							

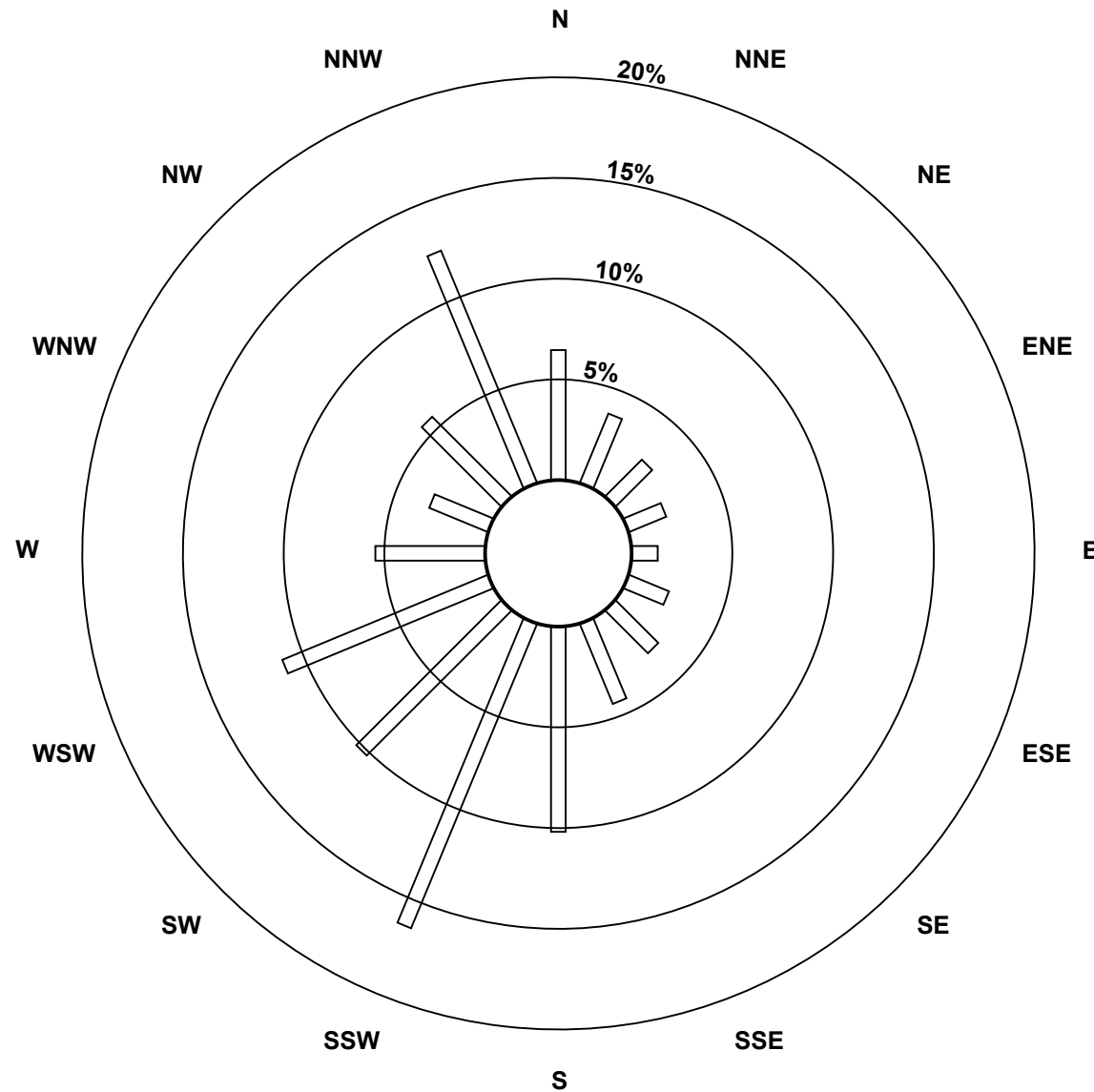
Hourly Maximums

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

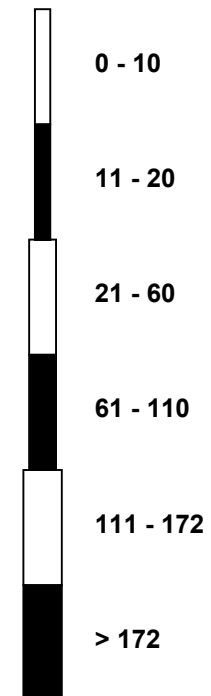


Pollutant Rose

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

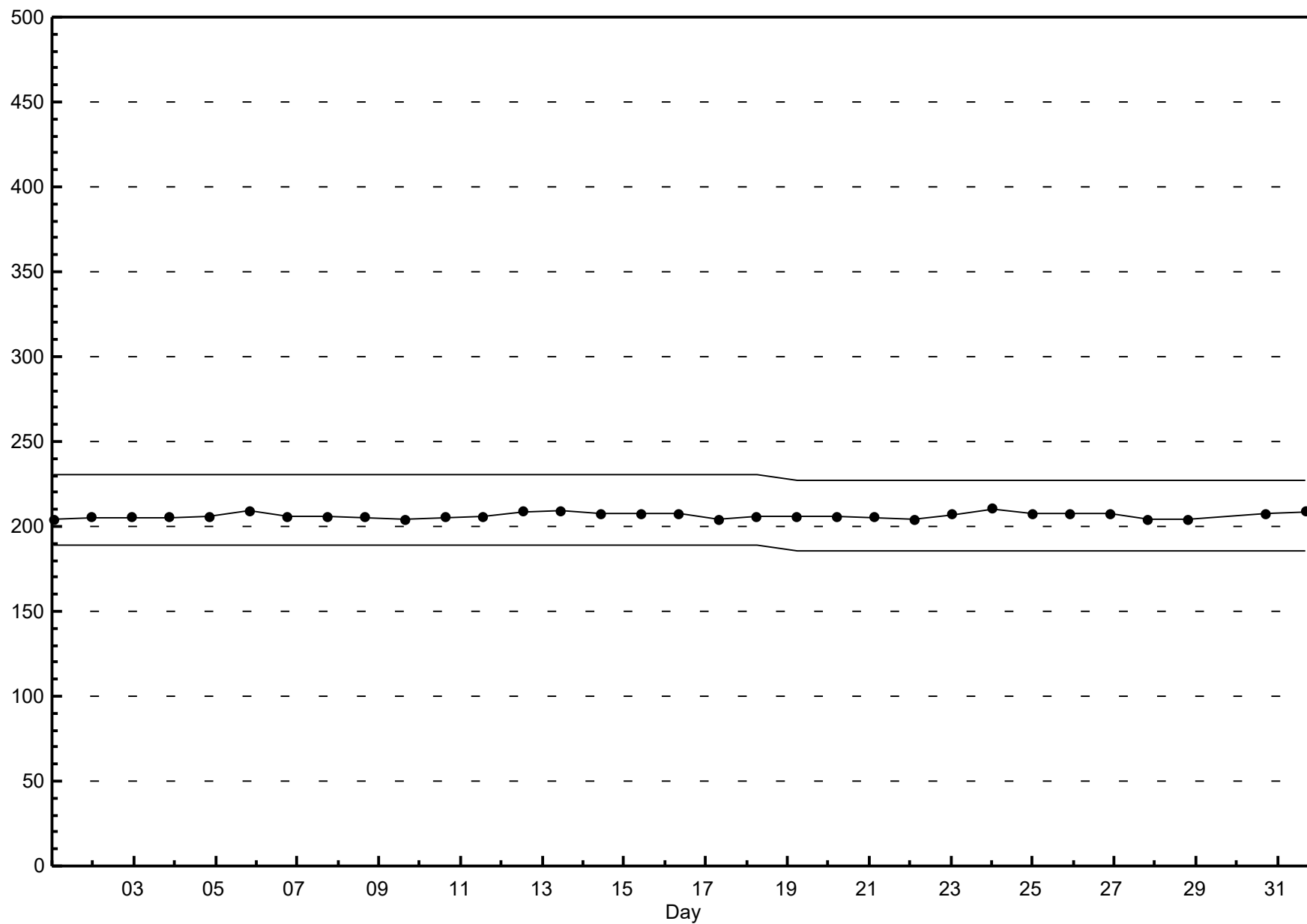


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - May 2017



Hourly Averages

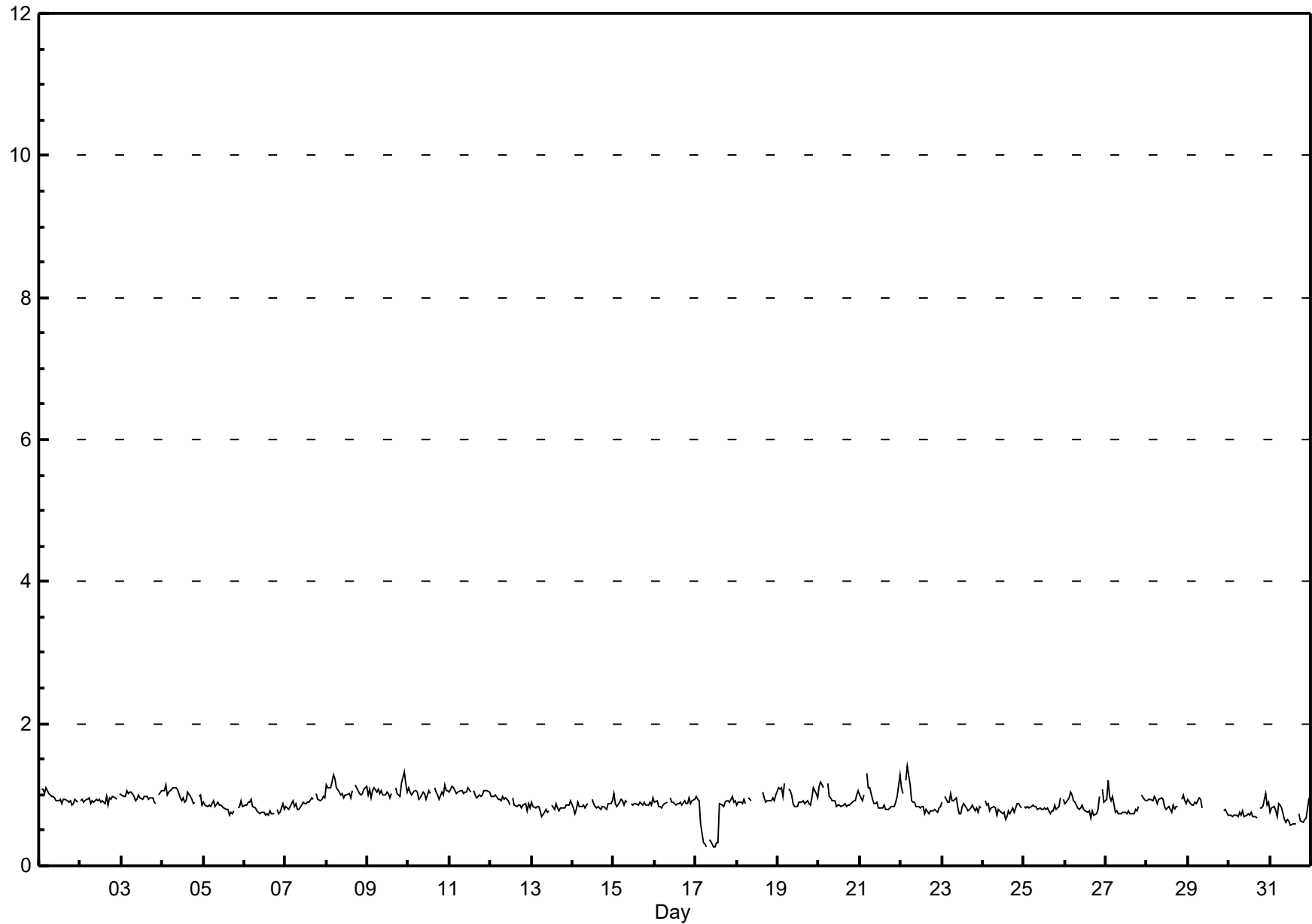
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.4 ppb on May 22 05:00 Maximum Daily Average: 1.1 ppb on May 8																				Hours in Service: 744 Hours of Data: 694 Hours of Missing Data: 50 Hours of Calibration: 38 Percent Operational Time: 98.4						
Minimum Value: 0 ppb on May 17 11:00 Minimum Daily Average: 0.7 ppb on May 17 Maximum Diurnal Average: 0.9 ppb at hour 2 Minimum Diurnal Average: 0.8 ppb at hour 14 Monthly Average: 0.89 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.0 P ₉₀ = 1.1 P ₉₉ = 1.2																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.1
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.0
3-May	1	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	1.1
4-May	1	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	1.1
5-May	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	0.9
6-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	0.9
7-May	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	1.0
8-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.3
9-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.3
10-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	1.1
11-May	1	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	1.1
12-May	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
13-May	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	0.9
14-May	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
15-May	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
16-May	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	1.0
17-May	1	1	1	1	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.7	1.0
18-May	1	1	1	1	1	1	1	A	1	1	C	C	C	C	C	C	1	1	1	1	1	1	1	1	--	1.0
19-May	1	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	1.2
20-May	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
21-May	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
22-May	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
23-May	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
24-May	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	0.9
25-May	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	0.9
26-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.1
27-May	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	1.2
28-May	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	1.0
29-May	1	1	1	1	1	1	1	1	1	1	P	P	P	P	P	P	P	P	P	P	P	P	1	1	--	1.0
30-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0
31-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.9
0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.8 0.8 0.8 0.8 0.8 0.9 0.8 0.9 0.9 0.9 0.9 0.9 0.9 0.9 1.1 1.2 1.1 1.2 1.4 1.2 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.0 1.1 1.1 1.1 1.1 1.1 1.1 1.2 1.3 1.2 1.3																								Diurnal Average	Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

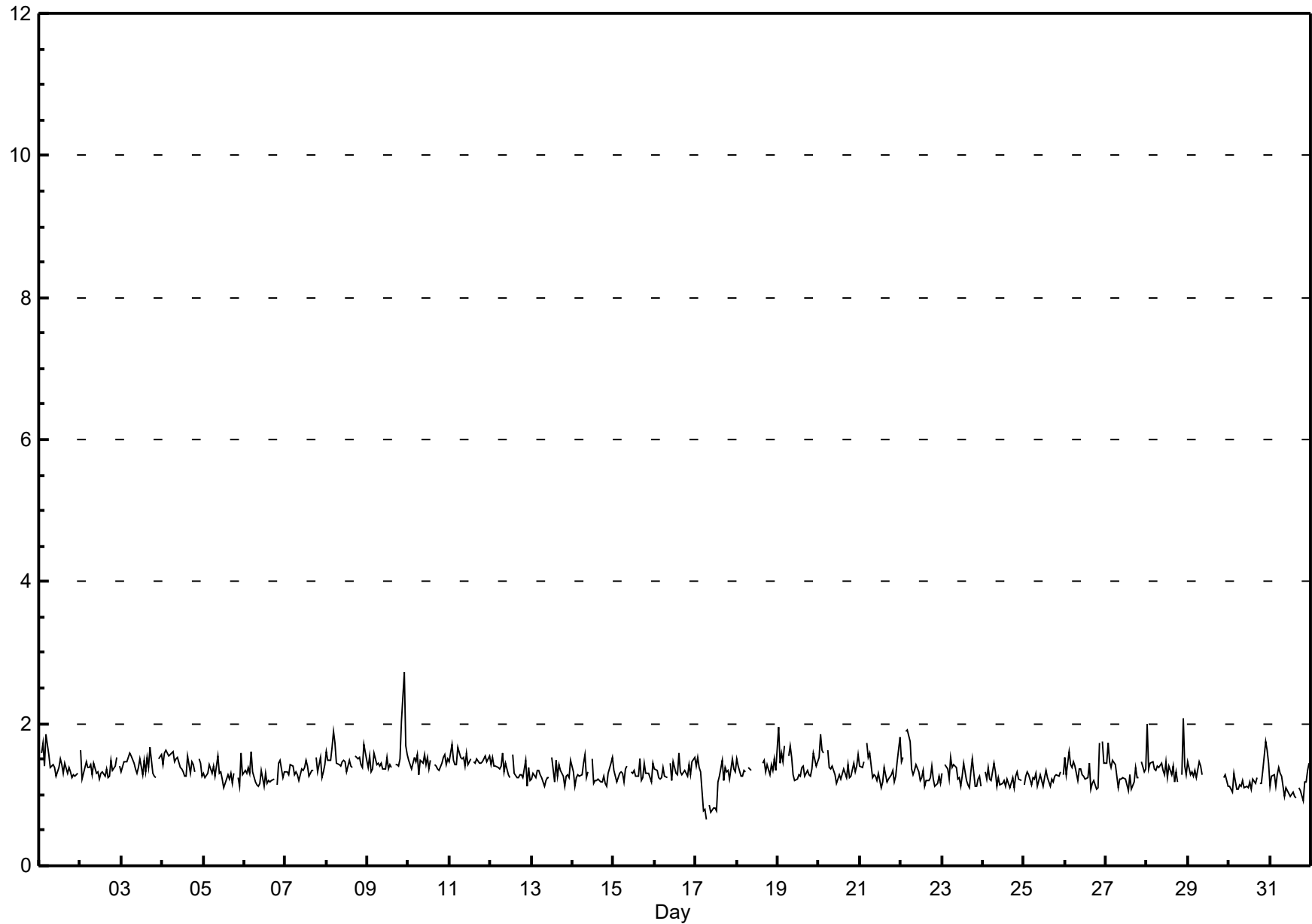
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - May 2017

Maximum Value: 2.7 ppb on May 9 22:00																				Maximum Daily Average: 1.5 ppb on May 9										Hours in Service: 744																				
Minimum Value: 1 ppb on May 17 07:00																				Minimum Daily Average: 1.1 ppb on May 31										Hours of Data: 694																				
Maximum Diurnal Average: 1.4 ppb at hour 1																				Minimum Diurnal Average: 1.3 ppb at hour 13										Hours of Missing Data: 50																				
Monthly Average: 1.34 ppb																				Percentiles: P ₁ = 0.8 P ₁₀ = 1.1 Q ₁ = 1.2 Median = 1.3 Q ₃ = 1.4 P ₉₀ = 1.5 P ₉₉ = 1.9										Hours of Calibration: 38																				
																				Percent Operational Time: 98.4																														
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-May	A	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.4	1.8																								
2-May	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	1.4	1.6																								
3-May	1	1	1	1	2	2	2	1	1	1	1	2	1	1	1	2	1	2	1	1	1	A	2	2	1.4	1.7																								
4-May	1	2	2	2	2	2	2	1	2	2	1	1	1	1	1	2	1	1	1	1	A	2	1	1	1.4	1.6																								
5-May	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1.3	1.6																								
6-May	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.3	1.6																								
7-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	2	1	1	1	1.4	1.5																								
8-May	2	1	1	2	2	2	1	1	1	1	1	1	1	1	1	A	A	2	1	2	1	1	2	1	1.5	1.9																								
9-May	1	2	1	1	2	1	1	1	1	1	1	2	1	1	1	A	1	1	1	2	2	3	2	2	1.5	2.7																								
10-May	1	1	1	2	1	2	1	1	1	2	1	2	1	1	A	1	1	1	1	1	2	2	1	2	1.5	1.6																								
11-May	1	2	1	1	1	2	2	2	2	1	2	1	2	A	1	1	2	1	1	1	2	2	1	2	1.5	1.7																								
12-May	1	2	1	1	1	1	1	2	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1.4	1.6																								
13-May	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1.3	1.5																								
14-May	1	1	1	1	1	1	1	2	1	1	A	2	1	1	1	1	1	1	1	1	1	1	2	1	1.3	1.6																								
15-May	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.3	1.5																								
16-May	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1.3	1.6																								
17-May	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	1.5																								
18-May	1	1	1	1	1	1	A	1	1	C	C	C	C	C	C	1	1	1	1	1	1	2	1	1	--	1.5																								
19-May	2	1	2	1	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.4	2.0																								
20-May	2	2	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.4	1.9																								
21-May	1	1	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.4	1.8																								
22-May	1	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	1.9																								
23-May	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.3	1.5																								
24-May	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.2	1.4																								
25-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.2	1.3																								
26-May	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	2	1	1.3	1.8																								
27-May	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.3	1.7																								
28-May	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.4	2.1																								
29-May	1	1	1	1	1	1	1	1	1	P	P	P	P	P	P	P	P	P	P	P	P	1	1	1	--	1.5																								
30-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	1	1.2	1.8																								
31-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.5																								
																									1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	Diurnal Average		
																									2.0	1.9	1.7	1.9	1.9	1.8	1.6	1.7	1.5	1.6	1.6	1.5	1.5	1.6	1.6	1.5	1.5	1.7	1.5	1.5	2.0	2.7	1.8	1.8	Diurnal Maximum	
C - Calibration																									P - Power Failure					A - Automated Daily Zero Span																				

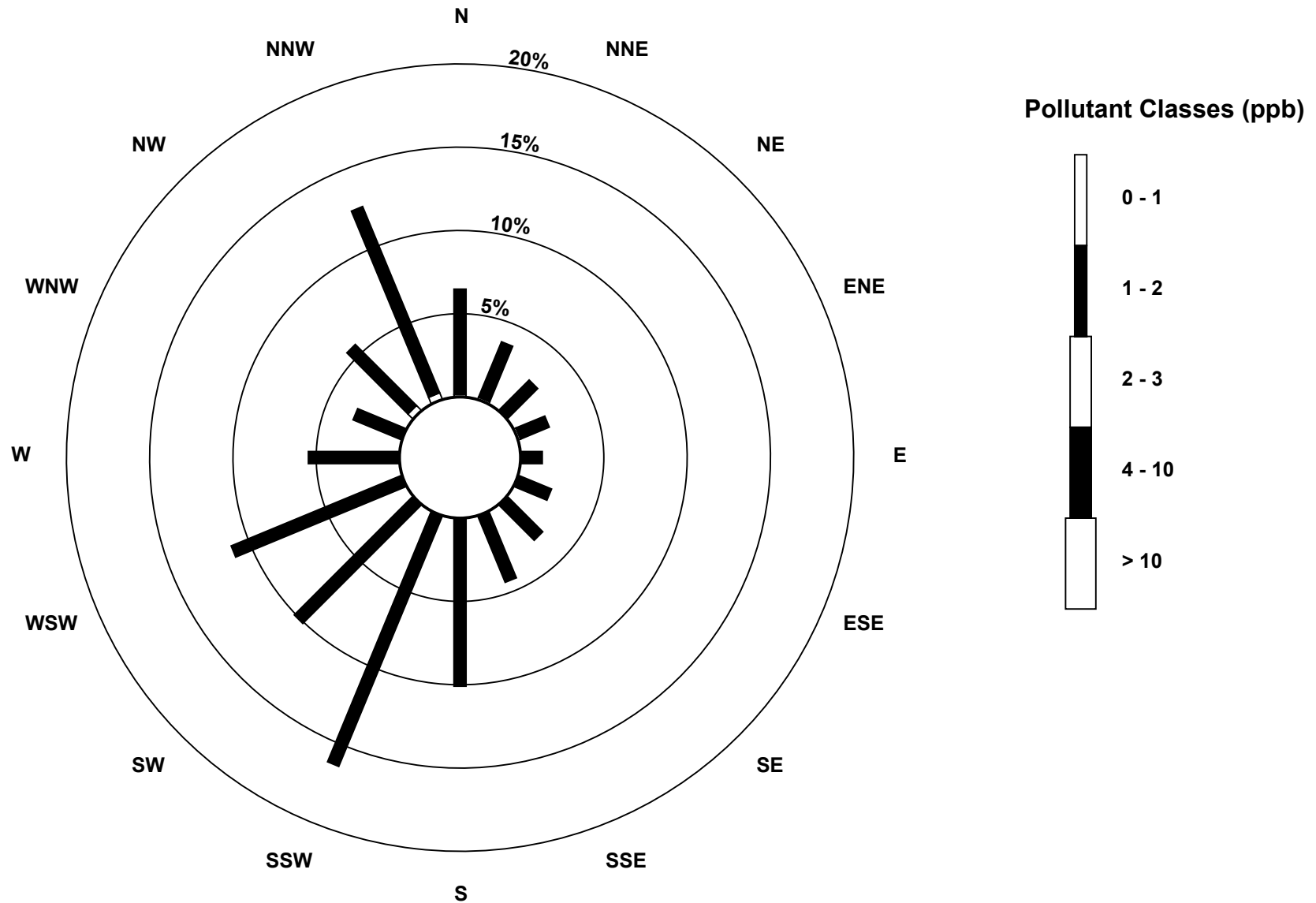
Hourly Maximums

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



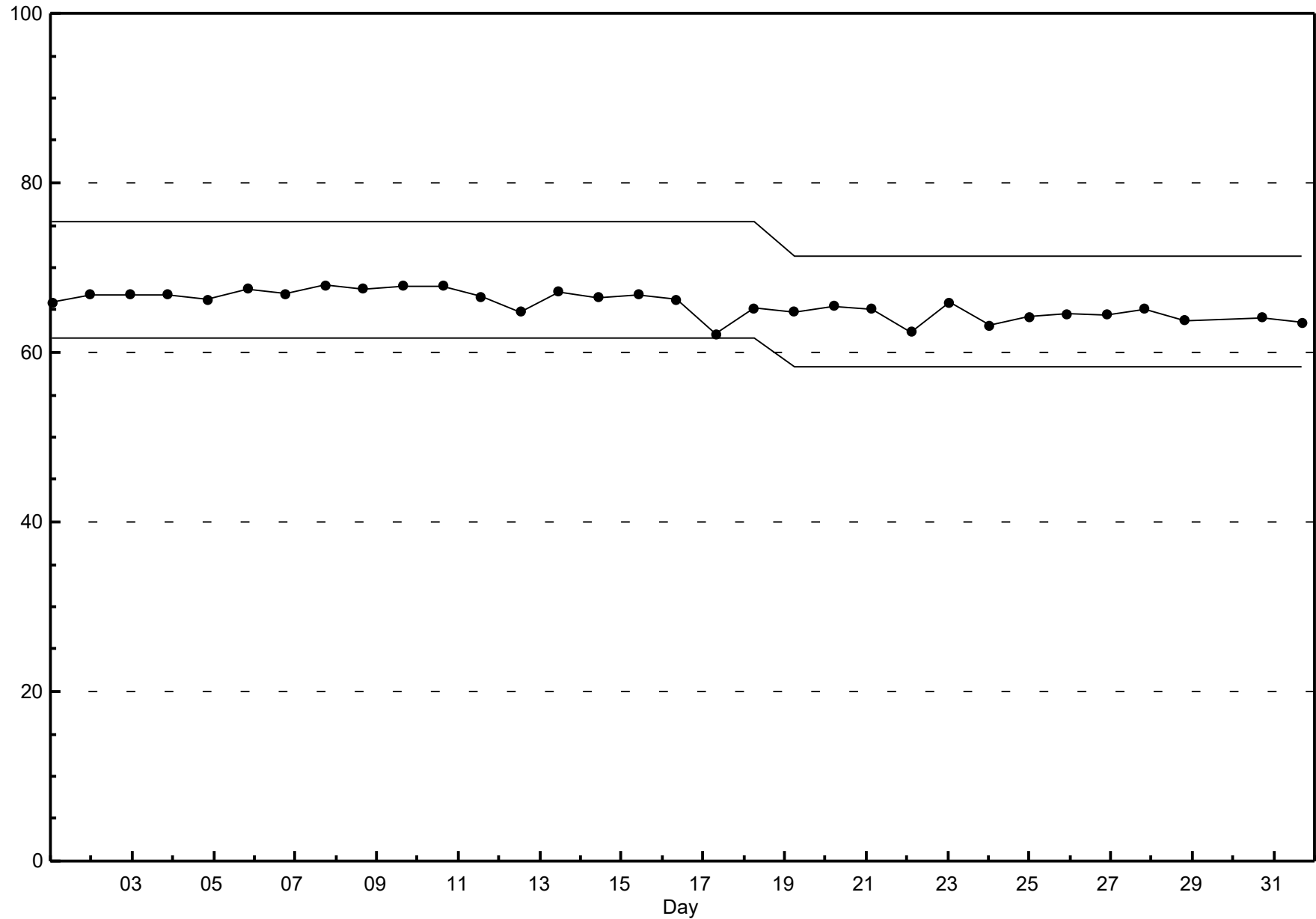
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - May 2017



Hourly Averages

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

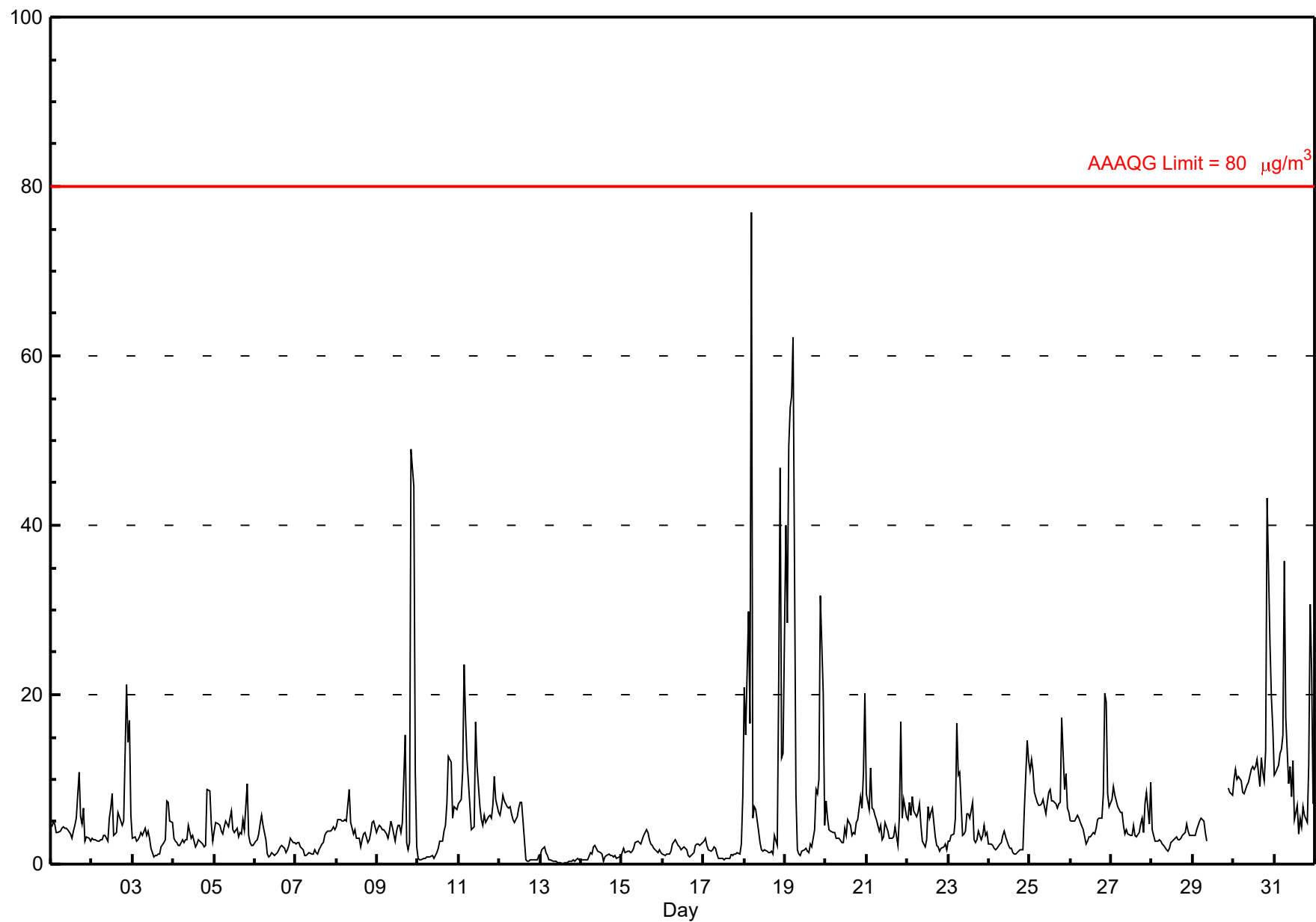
Smoky Heights - May 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 77.0 µg/m³ on May 18 05:00																								Maximum Daily Average: 16.7 µg/m³ on May 19												Hours in Service: 744 Hours of Data: 732 Hours of Missing Data: 12 Hours of Calibration: 0 Percent Operational Time: 98.4			
Minimum Value: 0 µg/m³ on May 13 14:00 Maximum Diurnal Average: 10.6 µg/m³ at hour 22 Monthly Average: 5.39 µg/m³												Minimum Daily Average: 0.6 µg/m³ on May 13 Minimum Diurnal Average: 3.4 µg/m³ at hour 16 Percentiles: P ₁ = 0.3 P ₁₀ = 1.1 Q ₁ = 2.0 Median = 3.6 Q ₃ = 6.0 P ₉₀ = 10.6 P ₉₉ = 45.0																											
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-May	4	5	5	4	4	4	4	4	4	4	4	4	3	4	5	5	11	6	5	7	3	3	3	3	4.4	10.8													
2-May	3	3	3	3	3	3	3	3	3	3	5	7	8	3	4	6	6	5	5	5	21	14	17	6	5.9	21.2													
3-May	3	3	3	3	3	4	3	4	3	4	3	2	1	1	1	1	1	2	3	3	7	7	5	5	3.1	7.4													
4-May	3	3	3	2	2	3	2	3	3	5	3	3	3	2	2	3	3	2	2	2	9	9	5	3	3.3	8.9													
5-May	4	5	5	5	4	4	4	5	4	5	6	4	4	4	3	4	4	5	4	10	3	3	2	2	4.3	9.5													
6-May	3	3	4	5	6	5	3	1	1	1	1	1	1	1	2	2	2	2	1	2	2	3	3	2	2.3	5.7													
7-May	2	3	2	2	2	1	1	1	1	1	1	2	1	1	2	2	3	3	4	4	4	4	4	4	2.3	4.5													
8-May	4	5	5	5	5	5	5	9	5	4	4	4	3	3	2	3	4	4	3	3	4	5	5	4	4.3	8.8													
9-May	4	5	4	4	4	3	3	4	5	4	3	4	5	5	4	5	15	3	2	3	49	45	11	2	8.1	49.0													
10-May	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	4	5	7	13	12	5	7	7	6	3.5	12.8													
11-May	7	8	11	24	17	12	7	4	4	4	17	12	7	5	5	6	5	6	6	5	7	10	8	6	8.4	23.5													
12-May	6	7	8	7	7	7	7	6	5	5	6	7	7	7	5	1	0	0	0	0	0	0	0	1	4.2	8.1													
13-May	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0.6	2.0													
14-May	0	1	0	1	1	1	1	2	2	2	2	1	1	0	1	1	1	1	1	1	1	1	1	1	1.0	2.1													
15-May	1	2	1	1	2	1	2	2	2	3	3	2	3	3	4	4	3	2	2	2	2	1	2	1	2.2	4.0													
16-May	1	1	1	1	1	2	2	3	3	2	2	2	2	2	2	1	1	1	1	2	2	2	2	3	1.8	2.9													
17-May	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	8	1.7	8.0													
18-May	21	15	30	17	77	5	7	6	4	3	2	2	2	2	1	1	1	1	3	2	22	47	13	13	12.3	77.0													
19-May	40	28	49	54	55	62	8	2	1	1	1	2	2	1	1	2	2	4	9	8	10	32	20	5	16.7	62.3													
20-May	7	5	4	4	4	4	3	3	3	3	2	4	3	5	5	3	4	4	5	5	8	7	11	20	5.2	20.2													
21-May	8	6	11	7	7	6	5	4	5	3	3	5	4	3	3	3	3	4	2	6	17	5	8	6	5.6	16.8													
22-May	5	7	6	8	6	6	6	7	5	3	2	3	7	5	6	7	3	2	2	2	2	2	2	2	4.4	8.1													
23-May	3	3	3	4	5	17	10	11	3	4	4	6	6	5	7	3	3	3	4	3	3	5	3	4	5.1	16.6													
24-May	2	2	2	2	2	2	2	2	3	4	3	2	2	2	1	1	1	1	2	2	2	6	15	12	3.2	14.6													
25-May	11	12	11	9	7	7	7	7	8	6	7	9	9	7	7	7	7	7	7	17	9	11	7	6	8.4	17.4													
26-May	5	5	5	5	6	5	5	4	3	2	3	3	3	4	4	4	5	5	5	8	20	19	8	7	6.1	20.1													
27-May	8	9	8	7	7	6	6	5	4	4	4	3	3	5	3	3	4	5	5	4	7	8	5	10	5.5	9.6													
28-May	4	3	3	3	3	3	2	2	2	2	2	3	3	3	3	3	3	3	3	4	5	4	3	3	2.9	4.7													
29-May	3	3	4	5	5	5	5	4	3	P	P	P	P	P	P	P	P	P	P	P	P	9	9	8	--	8.9													
30-May	10	11	10	10	10	8	8	9	9	10	11	12	11	11	12	9	13	11	10	13	43	26	20	16	13.1	43.2													
31-May	11	11	12	13	14	15	36	17	10	12	8	12	5	7	4	5	4	7	6	5	12	31	23	7	11.9	35.7													
6.1 5.8 7.1 7.0 8.7 6.8 5.3 4.4 3.6 3.5 3.8 4.0 3.7 3.6 3.4 3.4 3.9 3.6 3.9 4.7 9.4 10.6 7.2 5.7																								Diurnal Average															
39.9 28.4 49.4 53.9 77.0 62.3 35.7 17.3 9.5 11.6 16.9 12.2 11.2 11.5 12.4 9.1 15.3 10.9 12.8 17.4 49.0 46.8 22.9 20.2																								Diurnal Maximum															
P - Power Failure 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}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - May 2017



Hourly Maximums

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

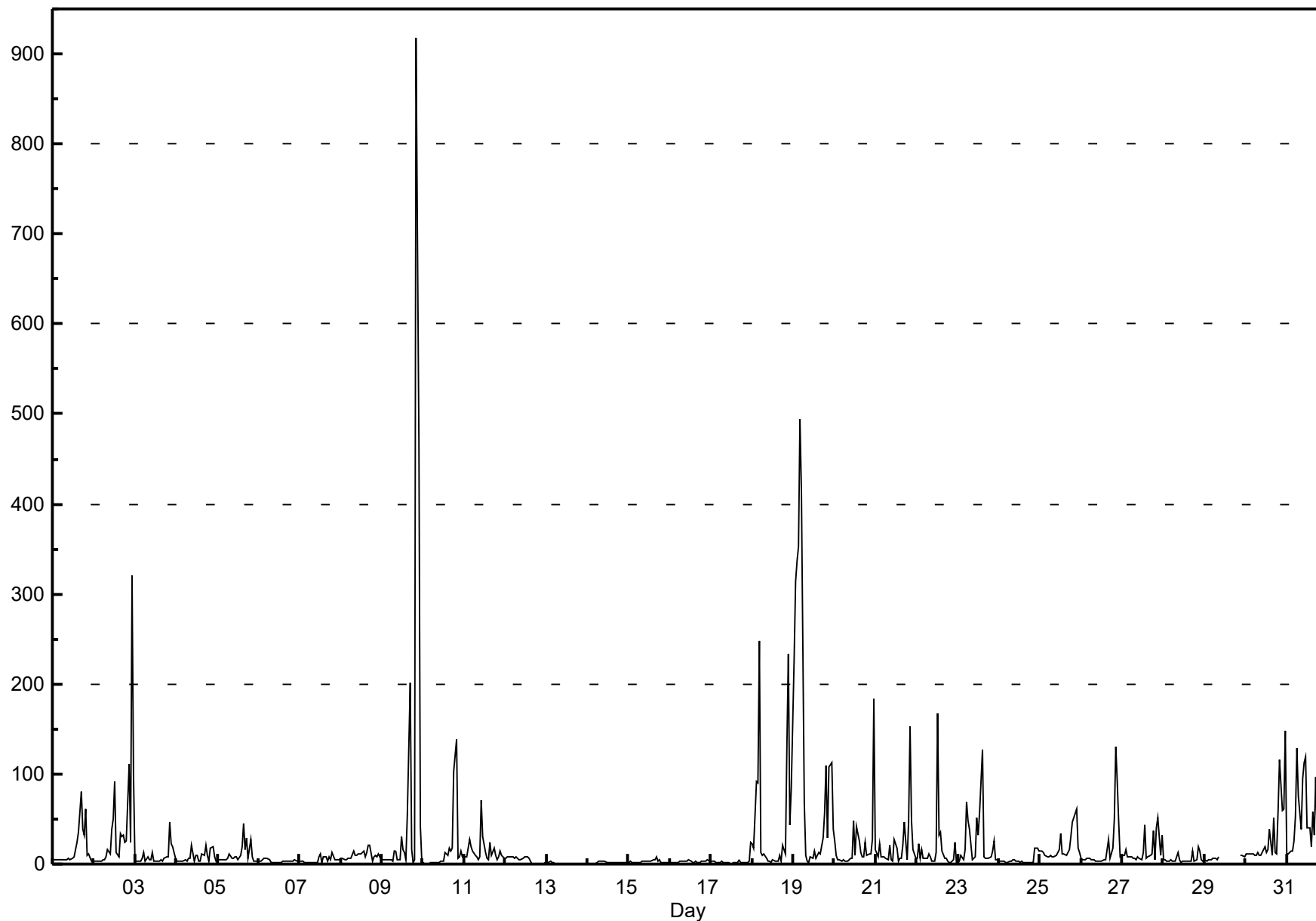
Smoky Heights - May 2017

Maximum Value: 917.0 μg/m ³ on May 9 21:00																					Maximum Daily Average: 115.5 μg/m ³ on May 19										Hours in Service: 744	
Minimum Value: 0 μg/m ³ on May 13 13:00																					Minimum Daily Average: 0.8 μg/m ³ on May 13										Hours of Data: 732	
Maximum Diurnal Average: 64.8 μg/m ³ at hour 21																					Minimum Diurnal Average: 7.3 μg/m ³ at hour 9										Hours of Missing Data: 12	
Monthly Average: 20.49 μg/m ³																					Percentiles: P ₁ = 0.5 P ₁₀ = 1.4 Q ₁ = 2.9 Median = 6.1 Q ₃ = 13.9 P ₉₀ = 43.5 P ₉₉ = 308.6										Hours of Calibration: 0	
																					Percent Operational Time: 98.4											
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-May	5	5	5	4	4	5	5	5	5	7	5	6	8	16	24	36	81	39	31	62	10	11	3	3	16.1	81.1						
2-May	3	3	3	3	3	4	6	9	16	11	38	50	92	12	9	34	31	33	24	26	111	25	321	100	40.3	321.2						
3-May	4	4	3	3	7	13	4	9	5	5	12	4	4	3	4	5	3	7	8	8	47	22	20	7	8.6	46.9						
4-May	4	3	3	3	3	5	4	7	6	21	3	10	9	2	4	11	10	21	9	4	18	19	9	4	7.9	20.7						
5-May	5	5	5	5	5	4	6	10	6	7	8	8	4	10	20	44	16	29	6	28	9	3	3	3	10.3	44.4						
6-May	3	3	4	6	6	6	4	2	1	1	2	2	2	2	3	2	3	2	2	4	4	4	3	3	3.1	6.3						
7-May	3	3	3	2	2	1	1	2	2	1	2	8	12	2	7	8	3	9	6	12	4	5	5	5	4.5	12.2						
8-May	6	6	6	6	7	6	7	15	10	10	11	11	11	15	9	13	21	21	3	8	9	9	12	5	9.7	21.2						
9-May	5	5	5	5	5	5	3	14	14	5	4	30	16	13	4	54	201	16	2	4	917	470	42	3	76.8	917.0						
10-May	1	1	1	1	1	1	1	1	1	1	3	3	4	13	10	17	15	18	104	139	6	8	14	7	15.5	139.2						
11-May	8	9	17	28	20	15	10	8	6	9	71	31	13	7	5	25	9	17	10	6	8	15	9	7	15.0	71.3						
12-May	7	8	9	8	7	7	7	6	6	5	6	7	8	8	7	1	0	0	1	1	1	1	1	1	4.7	8.5						
13-May	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0.8	2.4						
14-May	1	1	1	1	1	2	3	2	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.5	2.9						
15-May	2	2	2	2	2	2	2	2	3	3	3	3	3	4	5	5	9	3	5	2	2	2	2	2	2.9	8.8						
16-May	1	1	1	1	1	2	3	4	3	2	2	5	3	2	2	3	1	2	2	3	3	3	4	3	2.5	5.1						
17-May	4	4	3	2	2	2	2	2	2	1	1	1	1	1	1	1	5	1	2	2	1	1	3	24	2.8	23.7						
18-May	23	18	91	89	248	12	10	12	6	3	2	2	5	2	3	3	9	3	21	11	132	233	44	83	44.5	247.9						
19-May	228	314	337	352	494	415	68	9	3	2	8	7	14	7	10	13	10	29	56	110	29	108	113	39	115.5	494.2						
20-May	26	10	5	4	4	5	3	4	4	6	6	49	10	42	25	12	9	7	24	10	11	12	27	184	20.7	184.1						
21-May	17	8	22	8	7	7	6	5	21	4	4	28	17	3	6	7	21	46	4	47	154	48	16	6	21.4	153.5						
22-May	6	23	7	17	7	6	7	11	8	3	3	13	167	32	35	14	6	7	2	2	2	4	24	2	17.0	167.3						
23-May	4	3	10	4	16	70	49	39	6	6	8	52	33	58	128	9	6	7	7	8	14	25	5	5	23.7	127.5						
24-May	3	3	3	2	2	2	3	3	4	4	4	3	2	2	1	1	1	2	2	2	2	17	18	14	4.2	17.6						
25-May	14	14	12	10	8	8	9	9	9	9	14	17	33	11	12	10	13	15	31	47	57	61	17	13	18.8	61.1						
26-May	6	5	6	6	7	6	6	5	4	3	3	4	4	4	4	17	28	6	17	50	131	92	47	8	19.5	130.7						
27-May	9	10	16	8	7	8	7	7	5	8	6	5	12	44	7	8	10	11	37	4	41	52	9	32	15.1	51.8						
28-May	6	4	3	3	5	3	3	4	12	4	2	3	3	3	4	3	4	15	4	4	19	15	4	4	5.6	18.9						
29-May	5	4	5	5	6	6	6	4	9	P	P	P	P	P	P	P	P	P	P	P	P	10	9	9	--	9.5						
30-May	12	12	11	11	12	9	9	12	10	10	15	19	12	16	38	10	52	12	11	58	116	59	61	148	30.7	147.8						
31-May	11	12	14	14	26	53	129	76	39	94	113	119	40	41	19	58	31	97	29	50	87	194	112	28	61.9	194.2						
14.0 16.3 19.8 19.8 29.8 22.3 12.3 9.6 7.3 8.3 12.1 16.6 18.2 12.6 13.5 14.2 20.3 15.9 15.4 23.7 64.8 49.3 31.0 24.2																									Diurnal Average							
228.4 313.6 336.6 352.0 494.2 415.0 129.0 76.4 38.8 94.3 112.8 118.5 167.3 57.9 127.5 58.4 200.8 96.5 103.8 139.2 917.0 469.8 321.2 184.1																									Diurnal Maximum							
P - Power Failure																																

Hourly Maximums

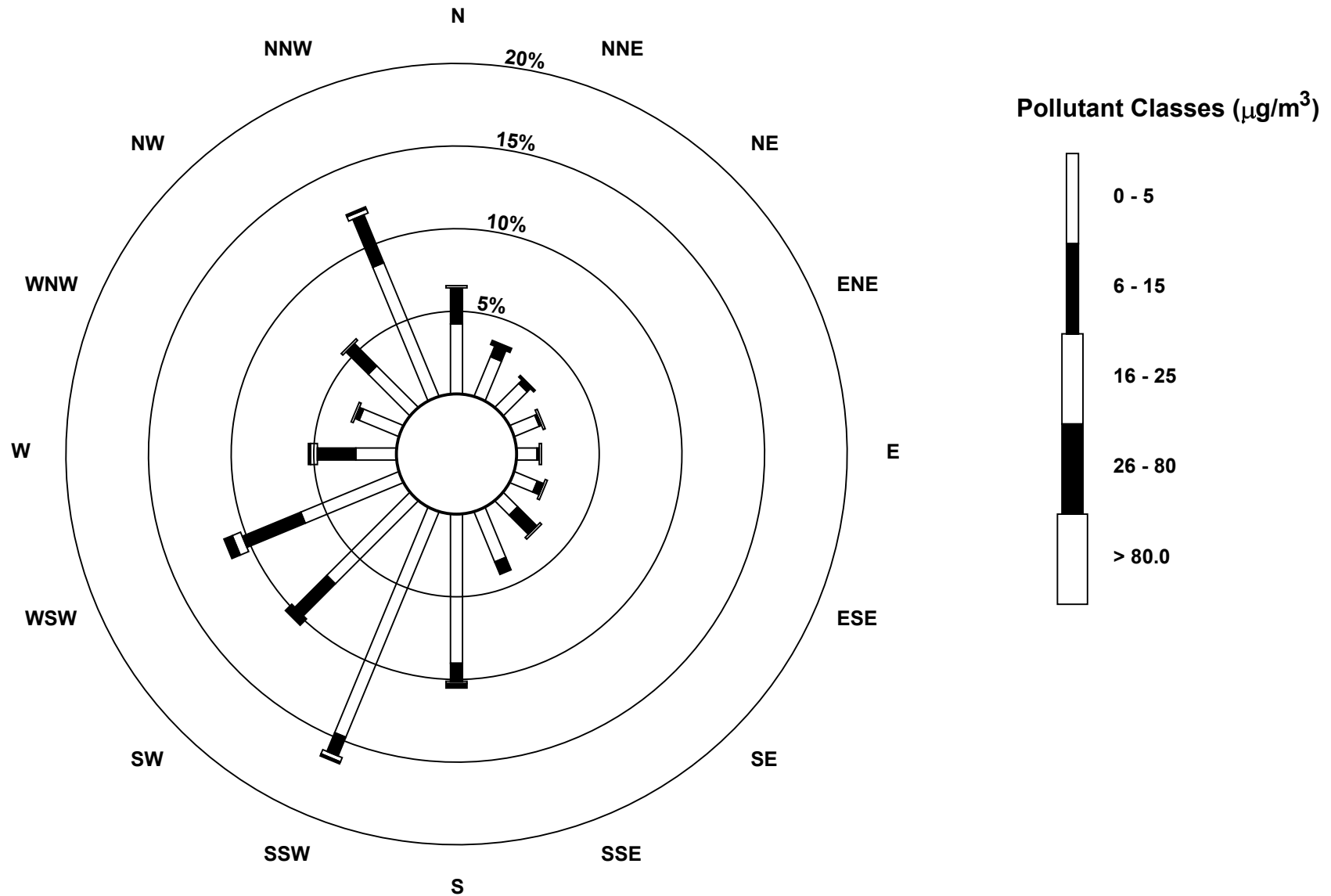
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - May 2017



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

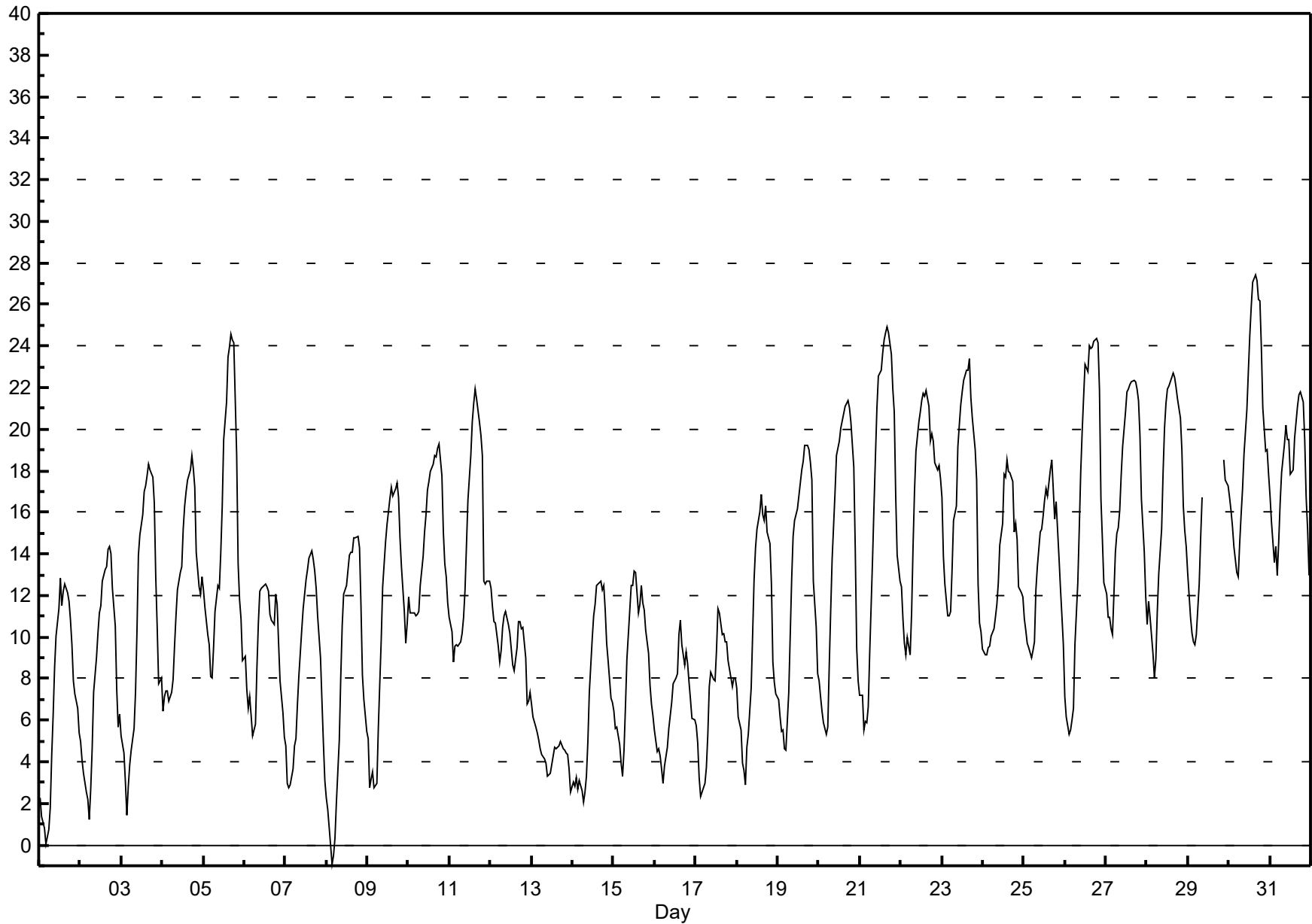
Smoky Heights - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.4 °C on May 30 16:00 Maximum Daily Average: 20.2 °C on May 30																								Hours in Service: 744 Hours of Data: 732 Hours of Missing Data: 12 Hours of Calibration: 0 Percent Operational Time: 98.4			
Minimum Value: -1 °C on May 8 04:00 Minimum Daily Average: 4.5 °C on May 13 Maximum Diurnal Average: 17.4 °C at hour 17 Minimum Diurnal Average: 6.4 °C at hour 5 Monthly Average: 12.24 °C Percentiles: P ₁ = 1.0 P ₁₀ = 4.5 Q ₁ = 7.7 Median = 11.7 Q ₃ = 16.8 P ₉₀ = 21.0 P ₉₉ = 24.0																											
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-May	2	1	1	1	0	1	2	4	6	9	10	11	13	12	12	13	12	12	11	10	8	7	7	5	7.0	12.9	
2-May	5	4	3	3	2	1	3	5	7	9	10	11	12	13	13	13	14	14	14	12	11	7	6	6	8.3	14.4	
3-May	5	4	3	1	3	4	5	6	7	10	14	15	16	17	17	18	18	18	18	16	13	10	8	8	10.6	18.3	
4-May	6	7	7	7	7	7	8	10	11	12	13	13	15	16	17	18	18	19	18	17	14	12	12	13	12.5	18.8	
5-May	12	11	10	10	8	8	10	11	12	12	14	16	19	21	23	24	25	24	24	19	14	12	11	9	15.0	24.6	
6-May	9	7	7	7	6	5	6	9	11	12	12	13	13	12	12	11	11	11	12	12	10	8	6	5	9.4	12.6	
7-May	5	3	3	3	4	5	5	7	8	10	11	12	13	13	14	14	14	13	12	11	9	7	5	3	8.5	14.2	
8-May	2	2	0	-1	-1	0	2	5	8	11	12	12	12	14	14	14	15	15	15	14	11	8	7	5	8.3	14.8	
9-May	5	3	3	4	3	3	6	8	10	12	15	15	16	17	17	17	17	17	17	15	13	11	10	11	11.0	17.4	
10-May	12	11	11	11	11	11	11	12	14	15	16	17	17	18	18	19	19	19	19	18	15	14	13	12	14.7	19.3	
11-May	11	10	9	10	10	10	10	10	11	12	14	17	19	20	21	22	21	20	20	19	13	13	13	13	14.4	21.9	
12-May	12	11	11	11	10	9	9	10	11	11	11	10	9	9	8	10	11	11	10	10	9	7	7	7	9.8	12.3	
13-May	7	6	6	5	5	5	4	4	4	3	3	3	4	5	5	5	5	5	5	5	4	4	4	3	4.5	6.8	
14-May	3	3	3	3	3	3	2	3	3	5	7	10	11	12	13	13	13	12	12	11	10	9	7	7	7.4	12.7	
15-May	6	6	6	5	4	3	5	7	9	11	12	12	13	13	11	12	12	12	11	10	9	8	7	6	8.8	13.1	
16-May	6	5	5	4	4	3	4	5	6	6	7	8	8	8	10	11	10	9	9	9	8	7	6	6	6.7	10.8	
17-May	6	5	3	2	3	3	4	5	8	8	8	8	9	11	11	10	10	10	10	9	8	8	8	8	7.3	11.3	
18-May	8	6	6	4	4	3	5	5	8	10	13	14	15	16	17	16	16	16	15	15	13	9	8	7	10.3	16.9	
19-May	7	6	5	6	5	5	7	10	13	15	16	16	17	17	18	18	19	19	19	18	18	13	10	8	12.7	19.2	
20-May	8	7	6	6	5	6	9	11	14	17	19	19	19	20	21	21	21	21	21	20	18	14	9	8	14.2	21.3	
21-May	7	7	6	6	6	7	9	14	16	19	21	23	23	24	24	25	25	25	24	22	21	17	14	13	16.5	24.9	
22-May	12	11	10	9	10	9	11	14	17	19	20	21	21	22	22	22	21	19	20	19	18	18	18	18	16.8	21.8	
23-May	17	14	13	11	11	11	13	16	16	19	20	21	22	22	23	23	23	22	21	19	18	13	11	10	17.0	23.4	
24-May	9	9	9	9	10	10	10	11	12	13	14	15	18	18	19	18	18	17	15	15	15	12	12	12	13.4	18.5	
25-May	11	10	10	9	9	9	10	12	13	15	15	16	17	17	17	18	18	17	16	17	14	12	11	10	13.5	18.5	
26-May	7	6	5	6	6	7	10	13	15	18	20	22	23	23	24	24	24	24	24	24	22	17	15	13	16.2	24.4	
27-May	12	11	11	10	10	14	15	15	16	18	19	21	22	22	22	22	22	22	22	21	20	17	14	12	17.1	22.4	
28-May	11	12	11	9	8	9	11	13	15	18	20	21	22	22	22	23	23	22	21	21	19	16	15	14	16.6	22.7	
29-May	13	11	10	10	10	10	13	15	17	P	P	P	P	P	P	P	P	P	P	P	19	18	17	--	18.6		
30-May	17	16	15	14	13	13	14	16	17	19	21	23	25	26	27	27	27	27	26	26	24	21	19	19	18	20.2	27.4
31-May	17	16	14	14	13	15	16	18	19	20	19	20	18	18	20	20	21	22	22	21	20	17	15	13	17.8	21.8	
8.7 7.8 7.1 6.8 6.4 6.7 8.0 9.8 11.4 13.0 14.3 15.2 16.0 16.6 17.1 17.3 17.4 17.1 16.8 15.8 13.8 11.7 10.5 9.7																								Diurnal Average			
16.8 16.1 15.3 14.4 13.1 14.5 16.4 17.9 19.3 20.2 21.0 22.8 24.5 25.9 27.1 27.4 27.2 26.2 26.2 24.2 21.9 19.0 19.0 17.9																								Diurnal Maximum			
P - Power Failure																											

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - May 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - May 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	13	13	15	15	13	15	4	11	8	8	9	9	13	25	17	9	21	17	18	11	7	16	19	14	12.8	25.3
Dir	217	217	214	217	211	215	210	184	179	162	179	178	178	182	204	231	215	215	220	242	211	209	211	207	205.9	182.1
2 Spd	12	14	14	15	16	15	18	16	17	19	19	14	13	14	14	16	14	16	14	8	4	3	4	7	12.2	19.3
Dir	204	195	199	202	199	205	199	199	249	252	246	247	226	211	193	193	188	181	182	189	205	184	190	202	208.1	245.6
3 Spd	5	2	6	6	4	6	6	7	9	11	15	21	31	29	29	27	35	39	31	25	13	5	7	11	14.8	38.6
Dir	212	56	225	219	133	177	145	133	133	154	176	182	192	195	194	188	197	200	201	215	218	190	180	216	191.9	200.3
4 Spd	11	9	9	8	4	6	6	7	13	14	18	16	13	13	10	9	4	2	4	2	2	5	6	9	5.7	17.6
Dir	219	207	192	209	231	158	148	145	190	168	164	170	173	174	153	151	164	64	115	48	327	339	347	23	172.8	163.8
5 Spd	9	8	7	5	3	2	3	2	4	7	5	6	6	5	3	8	11	10	2	19	27	8	3	4	2.8	27.0
Dir	351	329	328	311	277	342	341	346	342	334	338	334	352	329	129	160	188	198	346	208	227	216	242	177	261.1	226.8
6 Spd	3	7	10	10	3	8	10	20	25	26	25	23	21	19	19	18	12	10	11	24	23	28	22	25	15.7	27.9
Dir	185	195	203	210	171	207	176	199	200	202	207	208	211	185	218	206	166	103	143	207	211	205	201	193	198.7	205.3
7 Spd	25	16	15	14	18	25	21	26	33	36	38	36	32	32	32	34	36	37	34	29	23	18	18	16	26.5	38.3
Dir	191	190	171	181	188	199	198	201	209	210	210	210	209	201	200	201	195	195	199	197	193	199	211	214	200.3	209.7
8 Spd	11	10	10	8	8	6	7	10	12	18	27	26	26	30	28	26	23	24	24	21	18	16	18	17	17.1	29.9
Dir	214	212	210	175	172	163	171	171	182	184	208	189	183	193	215	219	195	194	201	204	206	208	207	213	198.4	193.1
9 Spd	15	12	16	19	20	18	12	15	12	7	7	11	10	9	7	2	2	1	6	10	3	4	6	8	6.0	20.3
Dir	215	200	203	212	215	210	181	179	169	105	109	180	167	183	130	185	190	35	83	70	30	333	328	355	186.2	215.4
10 Spd	9	4	1	4	11	14	9	9	12	7	8	8	12	13	12	12	12	6	4	2	7	8	8	9	0.9	13.5
Dir	23	43	171	354	54	49	49	76	89	103	178	186	197	190	201	194	209	212	232	314	337	322	333	337	131.8	48.9
11 Spd	7	8	9	8	9	10	13	16	19	19	18	22	23	23	26	26	24	23	25	19	8	13	14	16	15.2	25.9
Dir	346	340	327	318	328	328	330	335	334	341	339	347	358	3	11	13	16	13	6	22	184	314	339	349	352.2	12.8
12 Spd	13	14	20	21	20	18	17	19	17	16	13	12	16	12	3	21	23	22	17	16	8	5	5	11	5.6	22.5
Dir	351	359	352	355	347	346	351	359	8	5	9	359	3	3	212	214	196	187	185	201	171	190	284	301	336.4	196.1
13 Spd	11	11	9	9	12	11	14	15	14	13	8	8	9	8	6	5	3	3	4	7	4	4	11	8	6.7	14.6
Dir	297	297	295	303	284	268	250	256	268	268	307	307	290	301	299	304	291	190	190	208	183	192	205	178	268.7	256.0
14 Spd	7	7	3	4	2	9	7	7	9	8	8	12	16	14	10	11	9	9	11	9	5	4	3	6	3.1	15.7
Dir	152	159	200	171	171	149	157	149	152	188	233	203	211	226	337	319	323	323	330	310	307	295	252	211	229.0	211.1
15 Spd	8	11	11	6	8	9	10	10	11	8	7	9	10	9	16	15	17	14	12	11	9	8	11	9	5.0	16.8
Dir	224	215	219	210	219	208	209	205	204	223	337	325	312	325	290	302	346	352	349	13	9	345	346	358	297.1	346.1
16 Spd	9	9	11	10	11	10	11	11	12	12	12	12	11	12	11	12	6	7	11	6	7	9	6	5	9.4	12.4
Dir	356	343	336	340	334	324	335	341	335	345	343	343	338	352	336	6	348	34	12	340	313	5	333	347	344.6	342.9
17 Spd	6	7	6	6	7	6	7	7	7	7	8	8	7	6	9	10	6	9	10	1	3	3	7	7	5.4	10.5
Dir	348	346	323	334	334	334	330	344	14	57	8	311	319	312	356	9	272	357	330	47	337	343	51	126	347.5	8.8
18 Spd	6	7	4	7	7	11	15	16	12	12	19	24	22	20	24	20	19	21	21	14	8	6	8	7	11.0	24.1
Dir	120	139	178	203	188	166	192	195	188	174	180	187	187	200	219	278	263	256	254	258	257	223	231	250	213.3	219.2
19 Spd	10	12	10	8	10	7	14	19	23	30	32	29	27	24	22	22	24	19	13	2	2	4	7	10	15.4	32.1
Dir	247	253	232	235	236	232	235	237	235	229	249	251	253	255	252	243	251	264	278	321	328	238	260	260	247.6	249.0
20 Spd	14	17	16	17	16	2	6	6	8	14	29	25	29	27	24	25	23	21	9	8	4	5	3	8	13.2	28.7
Dir	262	258	258	258	258	239	189	180	200	217	251	259	261	265	256	248	249	247	328	343	351	337	297	260	256.2	261.5
21 Spd	9	8	5	14	12	5	4	7	15	18	20	14	14	19	21	23	20	25	23	17	16	10	11	16	13.3	24.6
Dir	269	257	223	256	252	70	168	215	230	234	228	252	247	228	227	244	250	255	252	266	285	266	249	258	246.7	254.9
22 Spd	14	9	11	8	8	7	9	11	19	27	27	34	37	31	29	29	26	13	11	14	16	19	21	18	17.9	37.0
Dir	265	257	250	234	214	201	189	215	223	235	239	252	258	260	246	247	249	219	225	213	218	228	236	235	239.2	257.7

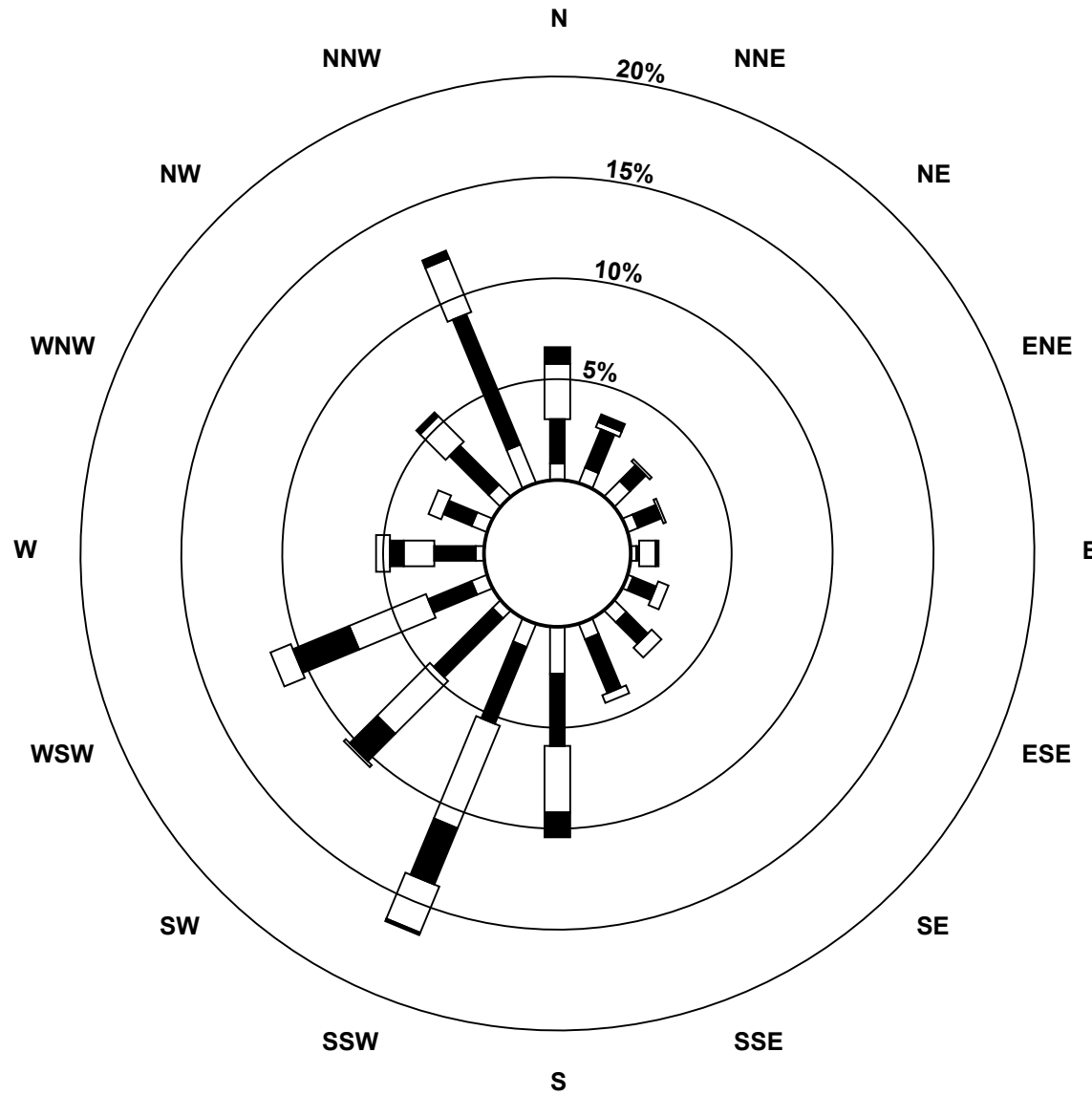
Hourly Averages

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

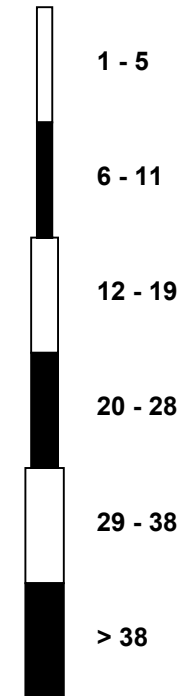
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	13	9	9	10	8	11	12	7	7	29	28	29	22	16	6	6	3	7	12	10	12	26	16	8	10.5	29.0	
Dir	250	278	284	182	255	261	268	260	206	265	254	260	269	264	257	250	314	16	19	355	0	274	257	290	269.7	265.0	
24 Spd	8	4	6	14	14	12	13	18	22	19	19	16	17	20	19	16	15	16	27	15	9	12	18	13	14.1	26.7	
Dir	240	179	297	302	316	320	334	326	326	330	335	343	349	340	342	359	337	326	307	320	334	309	307	323	325.6	307.2	
25 Spd	11	14	13	10	12	9	9	7	6	2	8	14	16	17	18	21	23	5	7	4	5	6	6	8	6.8	23.3	
Dir	326	323	325	333	322	333	326	350	346	279	259	254	242	231	225	233	242	320	43	87	224	234	239	260	275.0	242.0	
26 Spd	7	6	8	9	9	10	12	9	9	5	4	5	5	6	4	5	5	0	3	5	1	5	8	12	4.1	11.9	
Dir	246	198	215	196	202	192	213	216	215	147	151	154	126	109	43	177	210	86	51	19	358	241	261	262	205.0	212.9	
27 Spd	13	15	18	17	15	15	15	15	14	14	15	11	9	9	8	10	11	10	10	9	6	7	7	5	8.6	18.1	
Dir	255	259	259	247	255	320	345	345	352	355	354	1	0	335	334	322	336	347	342	336	352	337	39	16	323.5	258.7	
28 Spd	6	6	5	5	5	7	8	9	7	7	12	14	11	11	13	14	17	20	19	15	11	10	9	10	9.2	20.4	
Dir	23	66	73	4	3	19	18	24	35	56	72	86	111	112	98	102	88	86	81	80	69	57	64	67	72.3	86.0	
29 Spd	8	5	7	7	7	7	6	9	12	P	P	P	P	P	P	P	P	P	P	P	P	13	16	17	--	17.0	
Dir	56	22	18	21	19	24	32	103	109	P	P	P	P	P	P	P	P	P	P	P	P	113	122	135	--	135.0	
30 Spd	17	16	14	13	9	6	10	9	8	7	7	6	5	3	2	3	2	2	2	4	3	2	3	2	5.7	17.3	
Dir	144	141	144	144	142	157	160	164	149	132	145	167	155	142	199	130	103	94	39	28	21	53	142	71	141.4	143.7	
31 Spd	2	4	6	1	8	10	6	7	13	21	29	35	28	21	17	19	17	16	14	10	8	5	5	6	12.3	34.9	
Dir	297	271	225	351	222	261	260	247	248	268	261	254	243	250	246	234	228	236	235	222	220	206	256	268	246.3	253.8	
Spd	4.5	4.1	5.0	4.9	4.6	3.4	3.3	4.0	5.1	6.7	8.7	9.4	9.3	8.9	8.4	8.5	8.6	5.6	4.1	3.9	4.1	4.4	4.5	4.3	Diurnal Average		
Dir	245.4	241.4	242.7	243.1	248.3	238.8	231.6	220.1	224.6	234.0	239.4	238.9	235.7	231.4	234.1	235.6	230.6	228.8	247.0	237.4	237.7	245.6	245.1	247.0	Diurnal Maximum		
Spd	24.8	17.0	20.0	21.4	20.3	25.5	21.0	26.5	32.6	36.3	38.3	35.8	37.0	31.8	32.4	33.9	36.2	38.6	33.8	28.8	27.0	27.9	21.5	24.6	Diurnal Maximum		
Dir	191.2	258.3	352.2	355.4	215.4	199.3	198.2	200.7	208.9	210.4	209.7	210.0	257.7	201.4	199.5	201.5	195.1	200.3	199.3	196.9	226.8	205.3	200.9	193.2			
Maximum Speed Value: 39 km/h on May 3 18:00								Minimum Speed Value: 0 km/h on May 26 18:00												Hours in Service:				744			
Maximum Daily Speed Average: 26.5 km/h on May 7								Minimum Daily Speed Average: 0.9 km/h on May 26												Hours of Data:				732			
Maximum Diurnal Speed Average: 9.4 km/h at hour 12								Minimum Diurnal Speed Average: 3.3 km/h at hour 7												Hours of Missing Data:				12			
Monthly Average Velocity: 5.70 km/h 237.09 deg								Speed Percentiles: P ₁ = 1.6 P ₁₀ = 4.3 Q ₁ = 7.1 Median = 10.7 Q ₃ = 16.4 P ₉₀ = 24.1 P ₉₉ = 35.4												Percent Operational Time:				98.4			
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	15		45		35		14		0		0		109														
NorthEast	12		19		2		0		0		0		33														
East	6		11		10		2		0		0		29														
SouthEast	10		24		7		0		0		0		41														
South	21		46		45		23		13		1		149														
SouthWest	10		53		63		32		7		1		166														
West	7		26		37		21		12		0		103														
NorthWest	14		59		24		5		0		0		102														
Total	95		283		223		97		32		2		732														

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - May 2017

Maximum Speed: 39 km/h on May 3 18:00																				Maximum Daily Speed Average: 27.0 km/h on May 7										Hours in Service: 744	
Minimum Speed: 2 km/h on May 31 01:00																				Minimum Daily Speed Average: 7.1 km/h on May 30										Hours of Data: 732	
Maximum Diurnal Speed Average: 17.8 km/h at hour 13																				Minimum Diurnal Speed Average: 9.6 km/h at hour 21										Hours of Missing Data: 12	
Monthly Average Speed: 13.07 km/h																				Percentiles: P ₁ = 2.5 P ₁₀ = 5.2 Q ₁ = 7.5 Median = 11.3 Q ₃ = 16.8 P ₉₀ = 24.5 P ₉₉ = 35.8										Percent Operational Time: 98.4	
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-May	14	13	15	15	14	15	5	11	8	9	10	10	14	27	18	14	21	17	18	12	7	16	19	14	14.0	26.6					
2-May	12	14	14	15	16	15	18	16	17	19	20	15	13	15	16	17	15	17	14	9	4	3	4	7	13.6	19.9					
3-May	5	2	6	6	5	8	6	8	10	12	15	21	31	30	30	27	35	39	32	25	13	5	8	11	16.2	38.8					
4-May	11	9	10	8	4	6	7	7	14	14	18	16	14	13	11	10	6	4	5	2	2	6	6	9	9.0	17.9					
5-May	9	8	7	5	4	3	3	3	5	7	6	7	6	6	9	10	12	10	3	21	27	9	4	5	7.9	27.4					
6-May	4	8	10	11	4	8	11	21	25	26	25	23	21	19	19	19	13	11	16	25	23	28	22	25	17.3	28.1					
7-May	25	16	15	14	18	26	21	27	33	37	39	36	32	32	33	34	37	37	34	29	23	18	18	16	27.0	38.6					
8-May	12	10	10	9	8	6	7	10	12	18	27	27	27	31	29	26	23	24	24	21	18	16	18	17	17.9	30.7					
9-May	15	13	16	19	20	18	13	15	12	8	8	12	12	11	9	7	5	4	7	10	3	5	6	9	10.7	20.3					
10-May	9	6	6	5	12	14	9	9	12	8	9	10	13	14	13	14	13	7	5	5	7	8	9	9	9.4	14.4					
11-May	8	8	9	8	9	10	13	16	19	19	19	23	23	24	26	26	25	24	26	20	17	13	15	17	17.4	26.5					
12-May	14	15	21	22	20	18	17	19	17	16	14	12	16	12	15	22	23	22	18	16	8	6	5	11	15.8	22.8					
13-May	11	11	9	9	12	11	14	15	14	13	9	8	9	8	6	5	3	4	4	7	5	6	11	8	8.8	14.7					
14-May	7	8	3	4	2	9	7	7	10	9	9	12	16	15	11	12	9	9	11	9	5	4	3	7	8.3	16.4					
15-May	9	11	11	6	8	9	10	10	11	11	8	9	10	10	16	16	18	15	13	11	9	8	11	9	10.8	17.8					
16-May	9	9	11	10	11	10	12	11	12	12	13	12	12	12	12	13	7	8	11	7	7	9	6	5	10.1	13.4					
17-May	7	7	6	6	7	6	7	7	8	7	9	9	7	6	10	11	8	12	10	3	3	4	8	7	7.3	12.1					
18-May	6	7	6	7	7	11	15	17	13	12	19	25	23	21	25	23	21	22	21	14	8	6	9	8	14.5	25.2					
19-May	10	12	10	8	10	8	14	20	23	30	33	29	28	25	23	22	25	20	13	3	3	5	7	10	16.3	33.2					
20-May	14	17	16	17	16	5	6	6	8	15	29	26	29	27	25	25	24	22	12	8	4	5	3	8	15.4	29.3					
21-May	9	8	5	14	13	11	10	7	15	18	21	15	15	20	22	24	21	25	23	17	16	10	11	16	15.1	24.8					
22-May	14	9	11	8	9	7	10	12	19	27	28	34	37	32	30	29	26	14	12	14	16	19	21	18	19.0	37.2					
23-May	13	9	9	10	9	11	12	8	9	29	29	30	23	18	9	7	7	7	12	11	12	27	16	10	14.0	29.7					
24-May	8	5	8	14	14	12	14	18	23	19	19	16	18	21	20	17	15	16	27	16	10	12	18	13	15.6	26.9					
25-May	12	14	13	11	12	9	9	7	7	5	9	14	17	18	18	21	24	15	8	5	6	7	6	8	11.4	23.7					
26-May	7	7	9	9	9	10	12	9	9	6	5	6	7	8	5	7	6	5	6	5	2	5	8	12	7.2	12.0					
27-May	14	15	18	17	15	15	16	15	14	14	15	11	10	10	9	11	11	11	9	6	7	7	5		12.1	18.2					
28-May	6	7	6	5	5	7	8	9	7	7	12	15	13	12	14	15	17	21	19	15	11	10	9	10	10.9	20.8					
29-May	8	5	7	7	8	7	6	10	12	P	P	P	P	P	P	P	P	P	P	P	P	13	16	17	--	17.1					
30-May	17	16	14	13	9	7	10	9	8	8	8	7	6	5	4	3	3	3	3	4	3	4	3	2	7.1	17.3					
31-May	2	5	7	4	8	11	7	7	13	21	29	35	28	22	18	19	18	17	15	10	8	5	5	6	13.3	35.1					
10.3 9.9 10.3 10.3 10.2 10.5 10.7 11.9 13.5 15.2 17.1 17.6 17.8 17.5 16.9 17.0 16.3 15.4 14.4 12.1 9.6 9.6 10.1 10.7																								Diurnal Average							
24.8 17.0 20.7 21.6 20.3 25.5 21.1 26.6 32.8 36.7 38.6 36.2 37.2 32.3 33.0 34.4 36.6 38.8 34.0 29.0 27.4 28.1 21.6 24.7																								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 - May 2017

Maximum Value: 96.4 deg on May 26 18:00																		Hours in Service: 744							
Minimum Value: 1.9 deg on May 9 05:00																		Hours of Data: 732							
Percentiles: P ₁ = 2.5 P ₁₀ = 5.6 Q ₁ = 8.2 Median = 12.6 Q ₃ = 22.2 P ₉₀ = 38.6 P ₉₉ = 83.5																		Hours of Missing Data: 12							
																		Hours of Calibration: 0							
																		Percent Operational Time: 98.4							
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-May	9	10	3	5	7	6	73	9	20	28	21	35	30	20	24	60	11	12	5	14	20	2	3	3	72.8
2-May	3	5	4	3	4	5	6	19	10	12	16	16	17	20	27	22	22	15	10	7	15	13	10	14	27.3
3-May	12	52	20	8	28	36	22	12	7	19	11	15	9	9	7	9	8	6	7	6	5	28	25	11	51.8
4-May	12	11	18	8	47	23	25	17	8	10	10	11	20	20	41	29	69	71	25	51	28	18	11	12	70.6
5-May	18	5	6	29	39	54	43	57	27	12	22	24	29	45	84	43	22	20	68	48	10	41	45	50	83.6
6-May	51	25	6	33	63	10	22	8	6	7	7	9	11	18	18	24	30	10	45	9	5	6	4	4	62.8
7-May	4	3	5	6	4	4	4	5	6	8	8	8	10	9	11	10	9	6	6	6	3	6	2	2	11.2
8-May	10	7	5	20	8	8	8	6	11	9	9	8	10	13	11	10	12	8	9	8	2	4	4	4	20.1
9-May	5	10	4	4	2	9	15	6	14	28	33	29	36	48	41	93	85	90	42	7	23	24	5	21	93.1
10-May	12	59	83	34	20	9	21	15	14	24	34	34	27	25	27	28	24	39	47	63	14	7	12	6	82.8
11-May	25	17	8	7	8	6	7	6	11	10	17	11	12	13	10	12	11	11	7	14	60	16	18	8	59.8
12-May	24	26	15	8	8	7	7	9	9	8	8	14	9	9	88	19	9	12	9	10	12	28	31	12	87.9
13-May	7	7	11	11	7	13	5	8	7	13	15	13	13	14	15	16	39	38	29	14	20	53	11	11	53.2
14-May	6	19	24	13	24	12	24	16	20	31	29	19	18	28	23	14	20	20	12	11	14	15	30	37	37.5
15-May	16	10	6	7	9	7	11	11	11	55	32	17	21	25	16	14	19	14	13	10	16	11	10	10	54.7
16-May	9	10	7	7	7	8	6	8	10	11	11	13	14	18	24	23	32	33	14	29	13	10	14	15	32.6
17-May	11	9	18	12	13	11	6	14	25	25	33	14	14	24	25	15	43	37	9	76	22	48	21	18	76.1
18-May	5	17	41	10	13	15	9	10	17	12	12	11	16	20	18	30	26	10	12	6	7	22	17	26	40.6
19-May	13	7	6	15	9	19	5	5	6	6	15	12	13	18	18	15	10	20	18	52	52	43	15	9	52.1
20-May	4	2	3	2	4	79	16	17	15	15	9	16	12	11	17	11	12	12	35	12	12	9	24	8	79.3
21-May	5	9	22	5	16	73	64	18	8	8	11	21	20	14	13	14	16	8	9	10	5	19	8	5	73.1
22-May	8	8	4	11	22	14	14	13	10	6	9	9	7	14	13	8	5	17	5	7	4	7	7	5	22.1
23-May	9	16	29	19	15	6	6	28	38	9	11	16	15	30	66	32	66	13	9	26	19	16	7	35	66.3
24-May	13	37	79	9	8	13	12	8	9	8	7	13	15	9	19	16	18	14	7	10	8	8	4	8	78.7
25-May	8	7	8	17	9	19	8	18	27	86	36	18	15	14	9	8	11	71	25	34	22	15	10	5	86.3
26-May	12	15	7	10	7	5	6	10	13	39	61	49	50	54	46	46	55	96	80	13	74	18	6	11	96.4
27-May	6	4	4	3	9	24	13	9	11	21	15	21	26	41	30	29	19	21	15	13	10	18	13	9	40.9
28-May	8	29	27	14	15	5	7	7	13	17	15	17	34	23	20	25	15	11	7	7	7	11	9	6	33.7
29-May	10	31	5	5	6	5	10	22	10	P	P	P	P	P	P	P	P	P	P	P	P	11	5	6	31.4
30-May	6	5	6	5	12	24	13	12	16	19	29	36	43	66	73	28	56	23	24	10	12	70	46	21	73.2
31-May	55	37	37	93	27	12	30	19	12	8	8	7	10	13	20	10	13	12	10	9	6	8	9	4	93.5
55.4 59.5 82.8 93.5 62.8 79.3 72.8 56.8 37.9 86.3 61.0 48.6 50.4 66.1 87.9 93.1 84.7 96.4 79.7 76.1 74.1 70.3 45.7 49.8																									
P - Power Failure																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

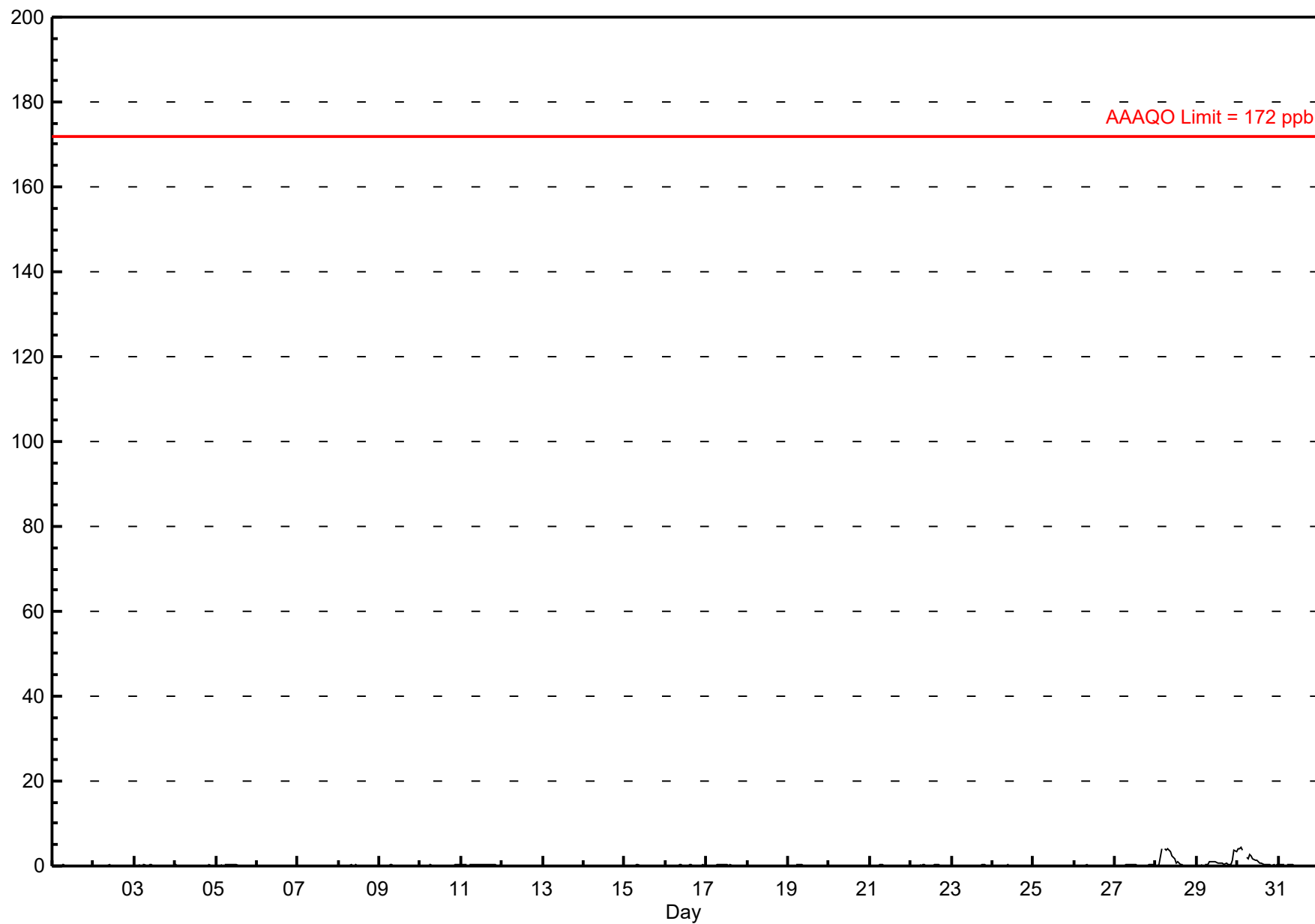
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.2 ppb on May 30 03:00 Maximum Daily Average: 1.5 ppb on May 30																				Hours in Service: 744 Hours of Data: 704						
Minimum Value: 0 ppb on May 1 16:00 Minimum Daily Average: 0.0 ppb on May 14 Maximum Diurnal Average: 0.4 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 20 Monthly Average: 0.20 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 3.7																				Hours of Missing Data: 40 Hours of Calibration: 34 Percent Operational Time: 99.2						
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-May	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	0.3
2-May	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
3-May	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
4-May	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
5-May	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
6-May	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
7-May	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
8-May	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
9-May	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
10-May	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
11-May	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
12-May	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
13-May	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
14-May	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
15-May	0	0	0	0	A	0	0	0	0	0	P	P	P	P	P	P	0	0	0	0	0	0	0	0	--	0.2
16-May	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
17-May	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-May	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
19-May	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-May	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-May	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
22-May	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
23-May	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
24-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.1	0.2
25-May	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-May	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
27-May	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
28-May	0	0	0	4	A	4	4	4	3	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	1.3	4.1
29-May	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	4	3	0.8	3.7
30-May	4	4	4	4	A	2	2	3	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1.5	4.2
31-May	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
0.2 0.2 0.2 0.3 -- 0.3 0.3 0.4 0.3 0.3 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2																									Diurnal Average	
3.9 4.0 4.2 3.9 -- 4.0 3.8 4.1 3.2 2.3 2.2 1.8 0.9 1.0 0.8 0.6 0.5 0.6 0.5 0.3 0.4 1.4 3.7 3.4																									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
Beaverlodge - May 2017



Hourly Maximums

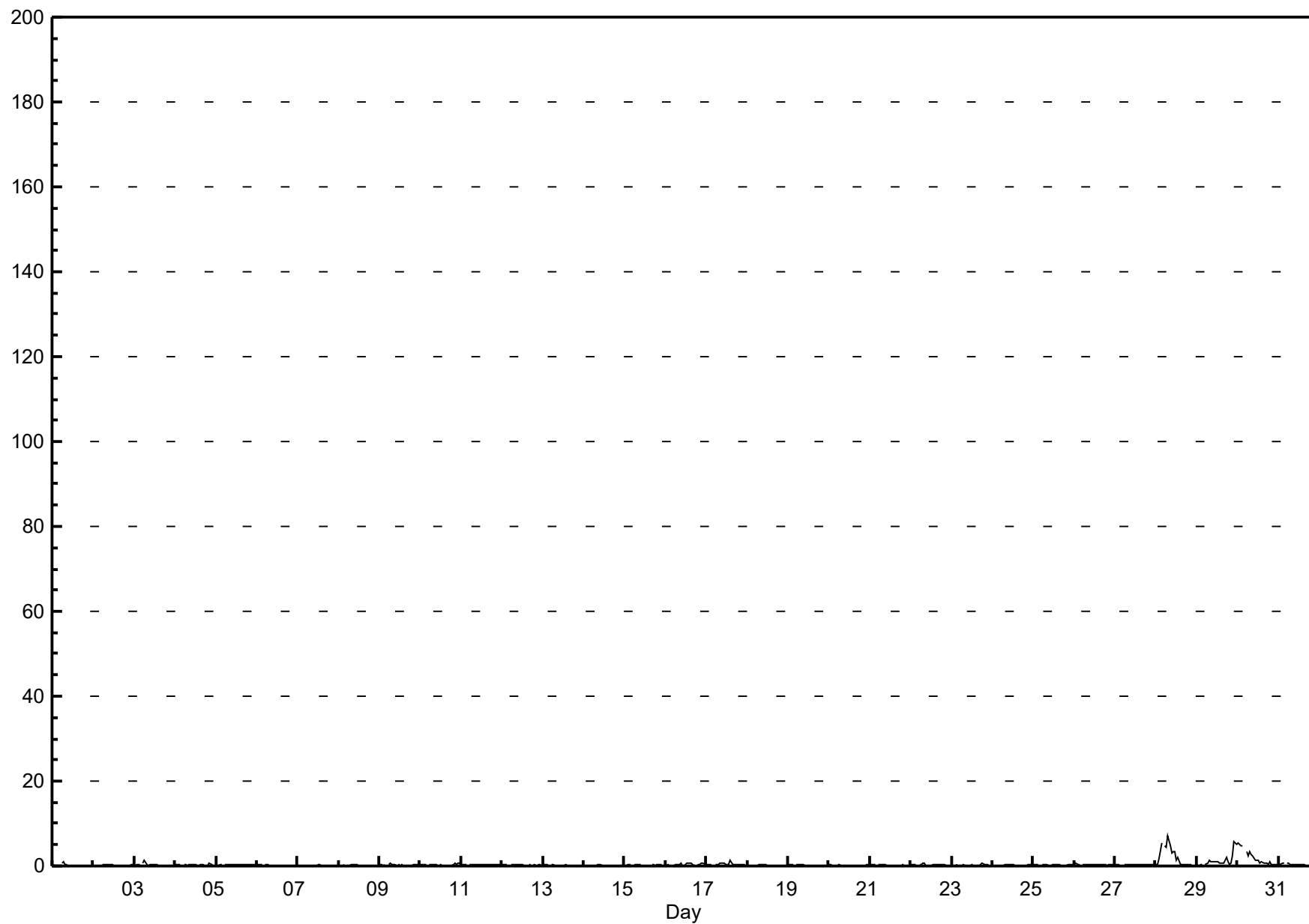
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - May 2017

Maximum Value: 7.1 ppb on May 28 08:00																				Maximum Daily Average: 2.0 ppb on May 30										Hours in Service: 744	
Minimum Value: 0 ppb on May 7 04:00																				Minimum Daily Average: 0.1 ppb on May 14										Hours of Data: 704	
Maximum Diurnal Average: 0.6 ppb at hour 8																				Minimum Diurnal Average: 0.2 ppb at hour 17										Hours of Missing Data: 40	
Monthly Average: 0.36 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 4.9										Hours of Calibration: 34	
																				Percent Operational Time: 99.2											
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-May	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1					
2-May	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					
3-May	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3					
4-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8					
5-May	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					
6-May	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					
7-May	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					
8-May	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					
9-May	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6					
10-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.3	0.5					
11-May	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					
12-May	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					
13-May	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					
14-May	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-May	0	0	0	0	A	0	0	0	0	0	P	P	P	P	P	P	0	0	0	0	0	0	0	0	--	0.3					
16-May	0	0	0	0	A	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0.3	0.8					
17-May	0	0	0	0	A	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	1.2					
18-May	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					
19-May	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					
20-May	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-May	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					
22-May	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					
23-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.5					
24-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.2	0.4					
25-May	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					
26-May	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
27-May	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					
28-May	0	0	2	5	A	5	5	7	5	3	4	3	1	2	0	0	0	0	0	0	0	0	0	0	1.9	7.1					
29-May	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	2	1	0	1	3	6	5	1.2	5.6					
30-May	6	5	5	5	A	4	3	3	3	2	2	1	1	1	1	1	1	1	0	1	0	0	0	0	2.0	5.5					
31-May	0	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	1.0					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration					P - Power Failure					A - Automated Daily Zero Span																					

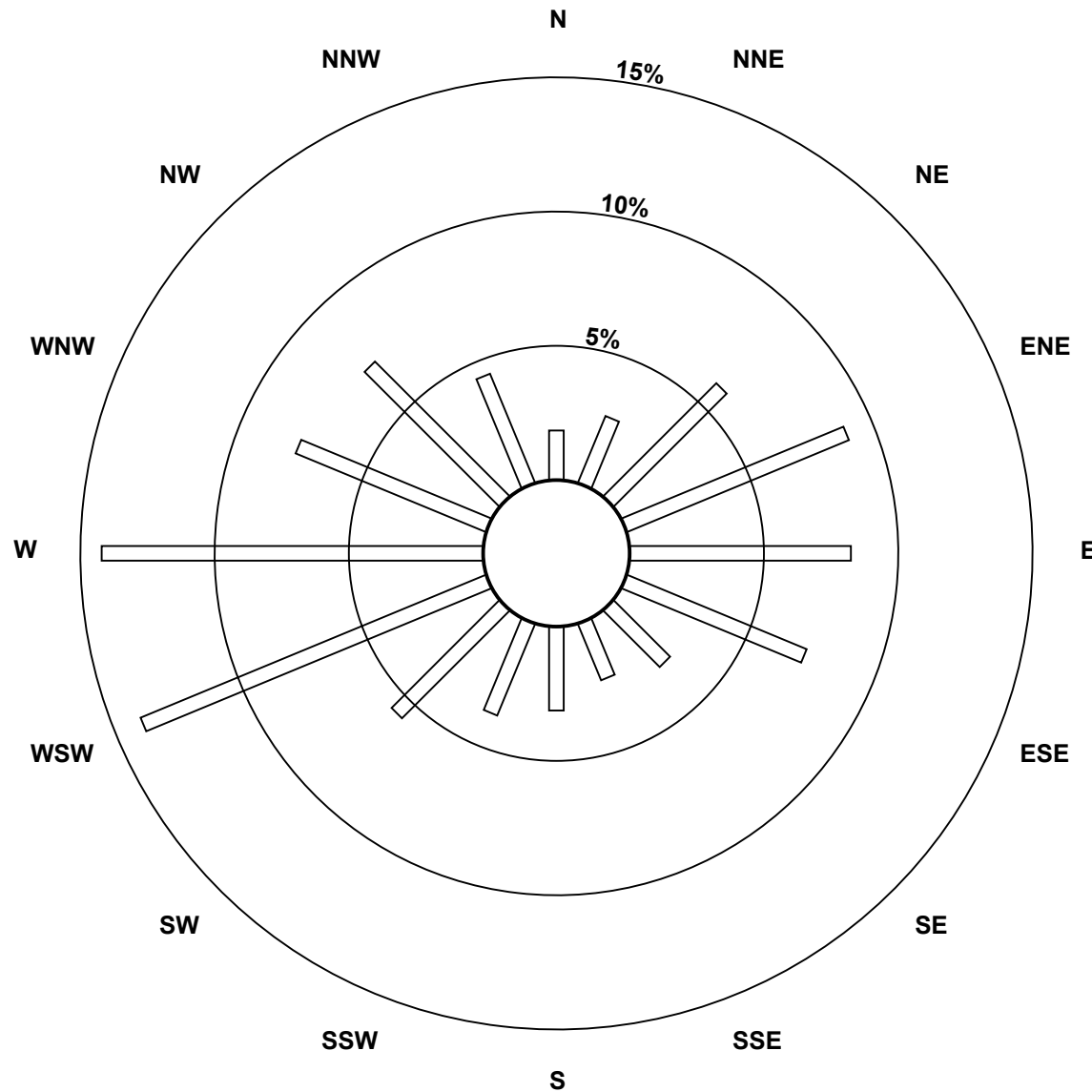
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - May 2017

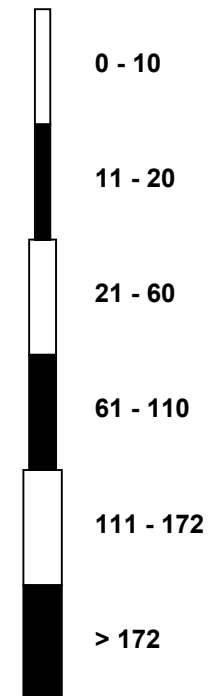


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - May 2017

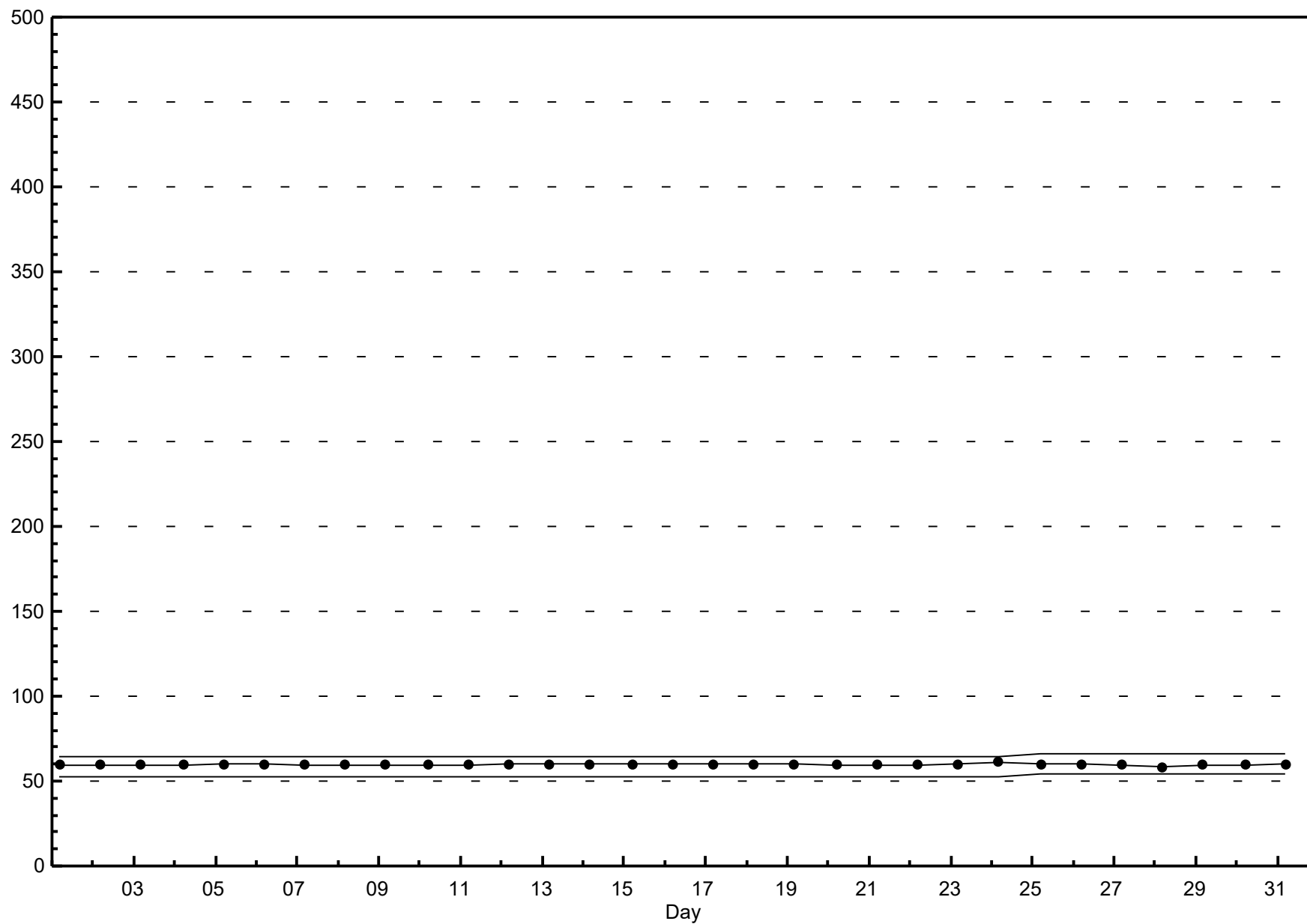


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - May 2017



Hourly Averages

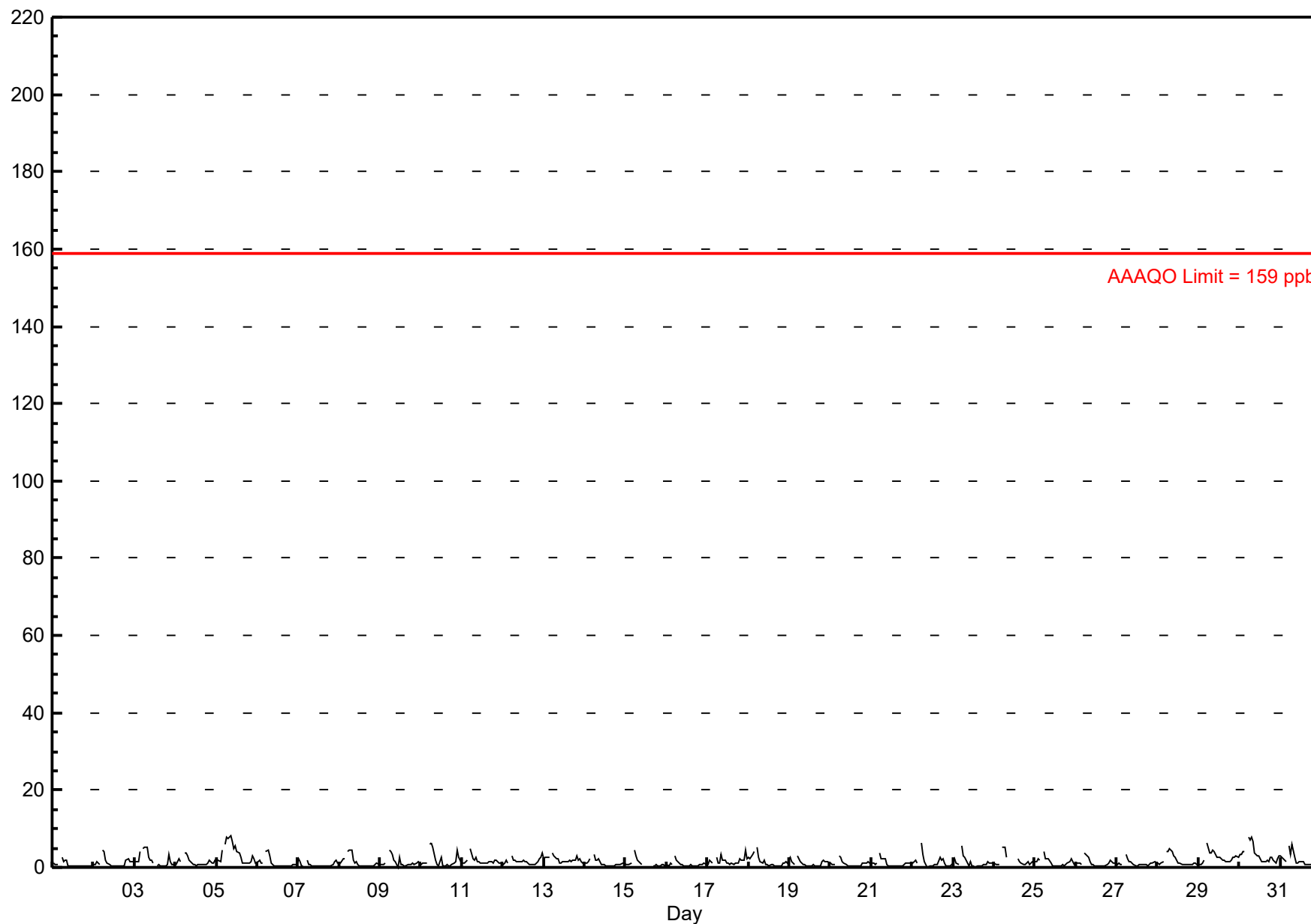
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.0 ppb on May 5 09:00 Maximum Daily Average: 3.5 ppb on May 5																				Hours in Service: 744 Hours of Data: 700 Hours of Missing Data: 44 Hours of Calibration: 37 Percent Operational Time: 99.1							
Minimum Value: 0 ppb on May 9 11:00 Maximum Diurnal Average: 4.3 ppb at hour 6 Monthly Average: 1.53 ppb										Minimum Daily Average: 0.7 ppb on May 1 Minimum Diurnal Average: 0.7 ppb at hour 16 Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.1 Q ₃ = 1.9 P ₉₀ = 3.3 P ₉₉ = 6.7																	
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-May	1	1	1	1	A	3	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	2.7	
2-May	1	1	1	1	A	4	4	2	1	1	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1.2	4.4	
3-May	2	2	1	4	A	5	5	5	3	2	2	1	N	1	1	0	0	1	0	1	3	1	1	1	1.9	5.2	
4-May	1	1	2	1	A	4	4	3	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1.4	3.9	
5-May	2	2	1	4	A	6	8	7	8	7	5	6	4	4	3	1	1	1	1	1	2	3	2	1	3.5	8.0	
6-May	1	2	1	1	A	4	5	3	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1.1	4.6	
7-May	2	1	0	0	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0.7	2.1	
8-May	1	1	2	2	A	4	4	4	2	1	2	1	0	0	0	0	0	0	0	1	0	1	1	1	1.3	4.5	
9-May	1	1	1	1	A	4	4	3	2	2	0	3	1	1	0	1	1	1	1	1	1	1	1	1	1.4	4.4	
10-May	1	1	1	1	A	6	6	5	2	1	1	1	3	0	0	1	1	0	1	1	1	4	3	2	1.9	6.4	
11-May	1	1	2	2	A	5	2	2	3	2	1	1	1	1	1	1	2	1	1	2	2	1	1	1	1.6	4.7	
12-May	1	1	2	1	A	3	2	2	1	1	2	2	2	2	2	1	1	1	1	1	1	2	3	4	1.6	3.7	
13-May	2	2	3	3	A	4	3	2	2	1	1	2	1	1	2	2	2	2	2	3	2	2	1	1	2.0	3.7	
14-May	1	1	1	2	A	3	2	2	2	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1.1	3.5	
15-May	1	1	1	1	A	5	3	2	2	1	P	P	P	P	P	P	P	1	0	1	0	0	1	1	0	--	4.5
16-May	1	0	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.8	3.0	
17-May	1	2	1	1	A	3	1	1	3	2	2	1	1	1	1	1	1	1	1	2	2	2	4	2	1.6	4.3	
18-May	2	2	3	4	A	5	3	1	1	2	1	1	0	1	1	0	0	1	1	0	1	1	2	1	1.5	5.1	
19-May	3	2	1	1	A	3	2	1	1	1	1	0	0	0	1	0	0	1	1	2	2	1	2	1	1.1	2.9	
20-May	1	1	1	1	A	3	2	2	1	1	0	0	0	0	0	0	0	0	0	1	1	1	2	1	0.9	2.8	
21-May	1	1	1	1	A	4	2	2	2	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1.1	3.6	
22-May	1	1	2	1	A	6	3	2	1	0	1	0	0	1	1	1	3	2	2	1	0	0	0	1	1.3	6.2	
23-May	1	2	1	1	A	6	3	3	1	1	1	0	0	0	0	0	0	0	1	1	2	1	1	1	1.2	5.7	
24-May	1	1	1	1	A	5	5	3	C	C	C	C	C	C	C	2	2	1	1	1	2	1	1	1	--	5.4	
25-May	1	1	2	2	A	4	2	2	2	1	1	1	0	0	0	0	0	1	1	1	2	2	1	1	1.3	4.0	
26-May	1	1	1	1	A	4	3	3	2	1	1	0	0	0	0	0	1	1	1	1	2	2	1	1	1.2	3.7	
27-May	1	1	1	1	A	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.5	
28-May	1	1	1	1	A	4	4	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.7	4.8	
29-May	1	1	1	2	A	6	4	4	4	4	3	3	2	2	2	2	2	2	1	2	2	2	3	3	2.6	6.3	
30-May	3	3	4	4	A	8	7	8	7	4	3	3	2	1	1	1	2	2	2	2	2	1	2	3	3.4	7.8	
31-May	3	3	2	1	A	5	3	6	3	1	1	1	1	1	1	1	1	1	1	1	2	4	2	2	2.1	6.1	
1.4 1.4 1.5 1.6 -- 4.3 3.4 2.9 2.2 1.5 1.2 1.2 1.0 0.8 0.8 0.7 0.8 0.7 0.8 1.1 1.4 1.5 1.5 1.3																									Diurnal Average		
3.2 3.5 4.0 4.4 -- 7.8 7.8 7.7 8.0 6.7 4.8 5.7 4.1 3.8 2.6 1.8 2.6 1.9 2.5 2.9 3.3 4.3 4.3 3.7																									Diurnal Maximum		
C - Calibration P - Power Failure N - Not Valid 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 - May 2017



Hourly Maximums

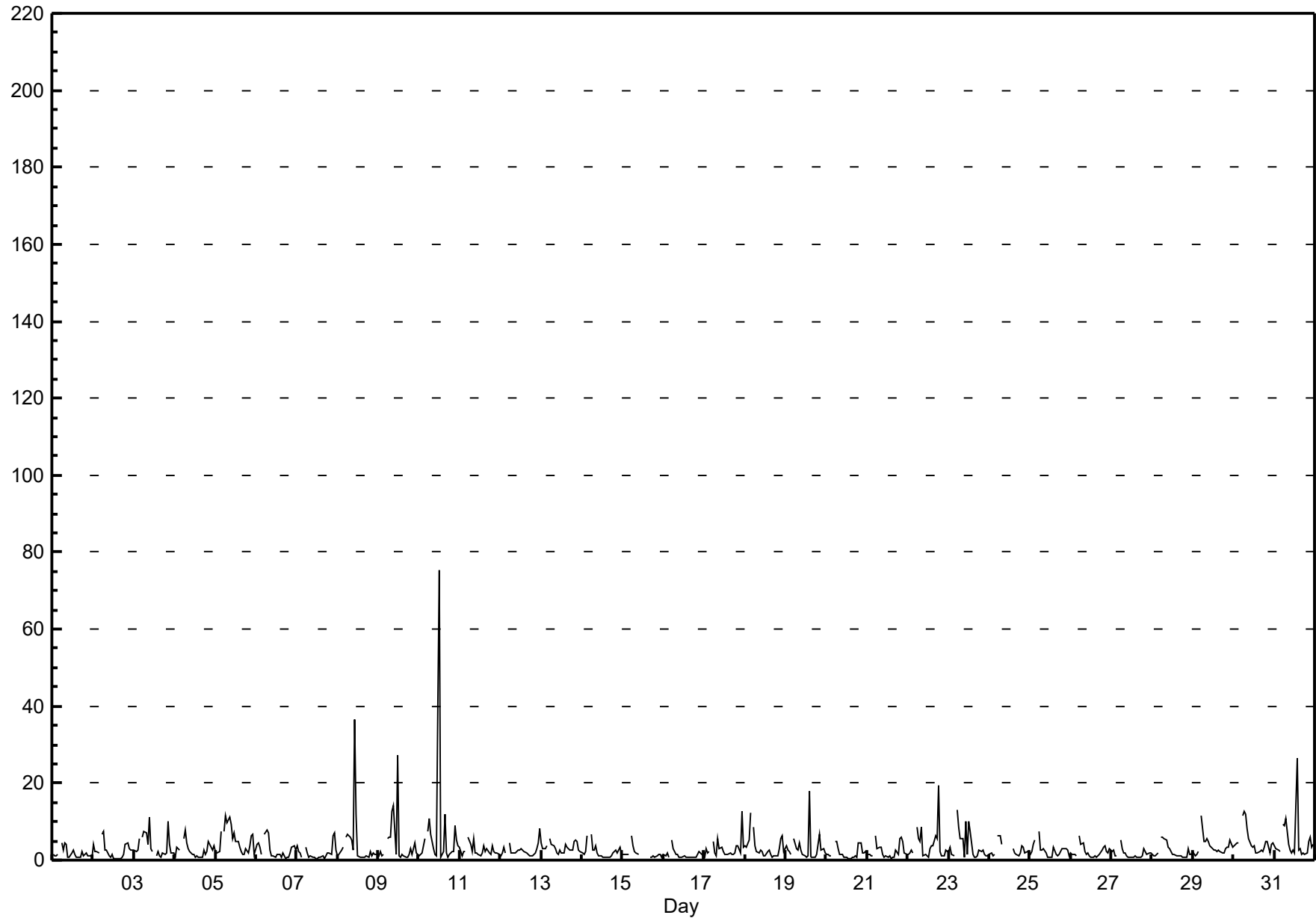
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - May 2017

Maximum Value: 75.2 ppb on May 10 13:00																				Maximum Daily Average: 8.6 ppb on May 10					Hours in Service: 744	
Minimum Value: 0 ppb on May 20 15:00																				Minimum Daily Average: 1.4 ppb on May 16					Hours of Data: 700	
Maximum Diurnal Average: 6.8 ppb at hour 6																				Minimum Diurnal Average: 1.4 ppb at hour 17					Hours of Missing Data: 44	
Monthly Average: 3.13 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.9 Q ₁ = 1.3 Median = 2.0 Q ₃ = 3.6 P ₉₀ = 5.9 P ₉₉ = 17.2					Hours of Calibration: 37	
																									Percent Operational Time: 99.1	
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-May	2	1	1	1	A	4	3	4	4	1	1	2	2	1	1	1	1	2	1	2	2	1	1	1	1.7	4.4
2-May	4	2	2	2	A	7	7	3	3	1	1	1	1	0	1	0	1	1	2	4	5	3	3	3	2.4	7.5
3-May	3	2	3	6	A	6	7	7	4	11	3	2	N	1	2	1	1	2	2	2	10	4	2	2	3.7	11.4
4-May	1	3	3	2	A	6	8	5	3	2	1	1	1	1	1	1	1	3	2	2	5	4	3	4	2.6	7.8
5-May	2	2	2	7	A	7	12	10	11	9	6	7	5	5	3	2	1	1	3	2	4	6	7	1	5.1	11.7
6-May	4	4	3	2	A	7	8	7	3	1	1	1	1	2	2	1	2	0	1	1	2	3	4	3	2.7	7.7
7-May	4	2	2	1	A	4	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	6	7	2	1.9	7.0
8-May	1	2	3	3	A	6	7	6	5	3	37	12	1	1	1	1	1	1	1	2	1	2	1	2	4.3	36.6
9-May	1	2	1	2	A	6	6	6	13	14	1	27	1	1	1	1	1	1	1	3	1	4	2	2	4.3	27.2
10-May	1	2	2	6	A	7	11	7	3	2	1	40	75	1	2	12	2	1	1	2	2	9	5	4	8.6	75.2
11-May	3	1	2	2	A	6	4	2	6	2	2	2	1	2	4	2	3	2	1	4	2	2	2	1	2.6	5.9
12-May	1	2	3	2	A	4	2	2	2	2	3	3	3	3	2	2	2	1	1	1	2	3	4	8	2.5	8.4
13-May	4	3	3	4	A	6	4	4	3	2	2	3	2	2	4	4	3	3	3	5	5	5	3	2	3.3	5.6
14-May	2	1	2	6	A	7	2	3	4	2	1	1	1	1	1	1	1	1	2	2	3	2	3	2	2.2	6.6
15-May	1	2	1	2	A	6	4	2	2	1	P	P	P	P	P	P	P	1	1	1	1	1	1	1	--	6.3
16-May	1	1	2	1	A	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.4	5.2
17-May	1	3	2	2	A	5	2	1	6	3	3	2	1	1	1	2	2	1	2	4	4	2	13	3	2.9	12.8
18-May	4	3	5	12	A	9	4	2	2	3	2	1	1	2	3	2	1	1	1	1	3	6	6	2	3.3	12.3
19-May	4	3	2	1	A	6	3	3	4	3	2	1	1	1	18	1	1	1	1	4	7	3	3	2	3.2	18.0
20-May	1	1	1	1	A	5	5	3	2	2	1	1	1	1	0	1	1	1	1	4	4	2	2	2	1.9	4.9
21-May	2	1	1	1	A	6	3	3	4	2	1	1	1	1	0	1	1	3	2	5	6	5	2	1	2.3	6.3
22-May	2	2	2	2	A	9	6	5	9	1	2	1	1	3	4	4	6	6	19	2	1	1	3	2	4.0	19.5
23-May	2	3	1	1	A	13	9	6	6	1	10	1	10	7	2	1	1	1	3	2	2	2	1	1	3.8	13.2
24-May	1	2	1	1	A	6	6	4	C	C	C	C	C	C	3	2	2	1	2	4	3	2	2	2	--	6.5
25-May	2	2	4	5	A	7	3	3	3	2	1	1	1	1	3	2	1	1	2	3	3	3	3	1	2.4	7.3
26-May	2	2	1	1	A	6	4	4	2	1	2	1	1	1	1	1	1	2	3	3	4	2	2	3	2.2	6.4
27-May	2	2	1	1	A	5	3	2	2	1	1	1	1	1	1	1	1	1	1	3	2	2	2	2	1.7	5.3
28-May	1	1	1	2	A	6	6	5	5	4	3	2	1	1	1	1	1	1	1	1	1	3	1	1	2.3	6.1
29-May	2	1	2	2	A	12	5	5	6	5	4	3	3	3	2	3	2	2	2	3	3	3	5	3	3.5	11.6
30-May	4	4	5	4	A	12	13	12	8	5	4	3	4	2	2	2	3	2	4	5	5	2	4	4	4.8	12.9
31-May	4	3	3	2	A	9	9	11	4	3	2	3	2	27	3	3	1	2	2	2	5	6	3	4	4.9	26.6
2.2 2.2 2.2 2.8 -- 6.8 5.5 4.5 4.3 3.0 3.4 4.3 4.4 2.5 2.3 1.8 1.4 1.5 2.2 2.6 3.3 3.3 3.3 2.3																									Diurnal Average	
4.5 4.4 5.4 12.3 -- 13.2 12.9 11.9 12.7 14.2 36.6 39.9 75.2 26.6 18.0 12.0 6.3 5.6 19.5 5.5 10.0 9.1 12.8 8.4																									Diurnal Maximum	
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										

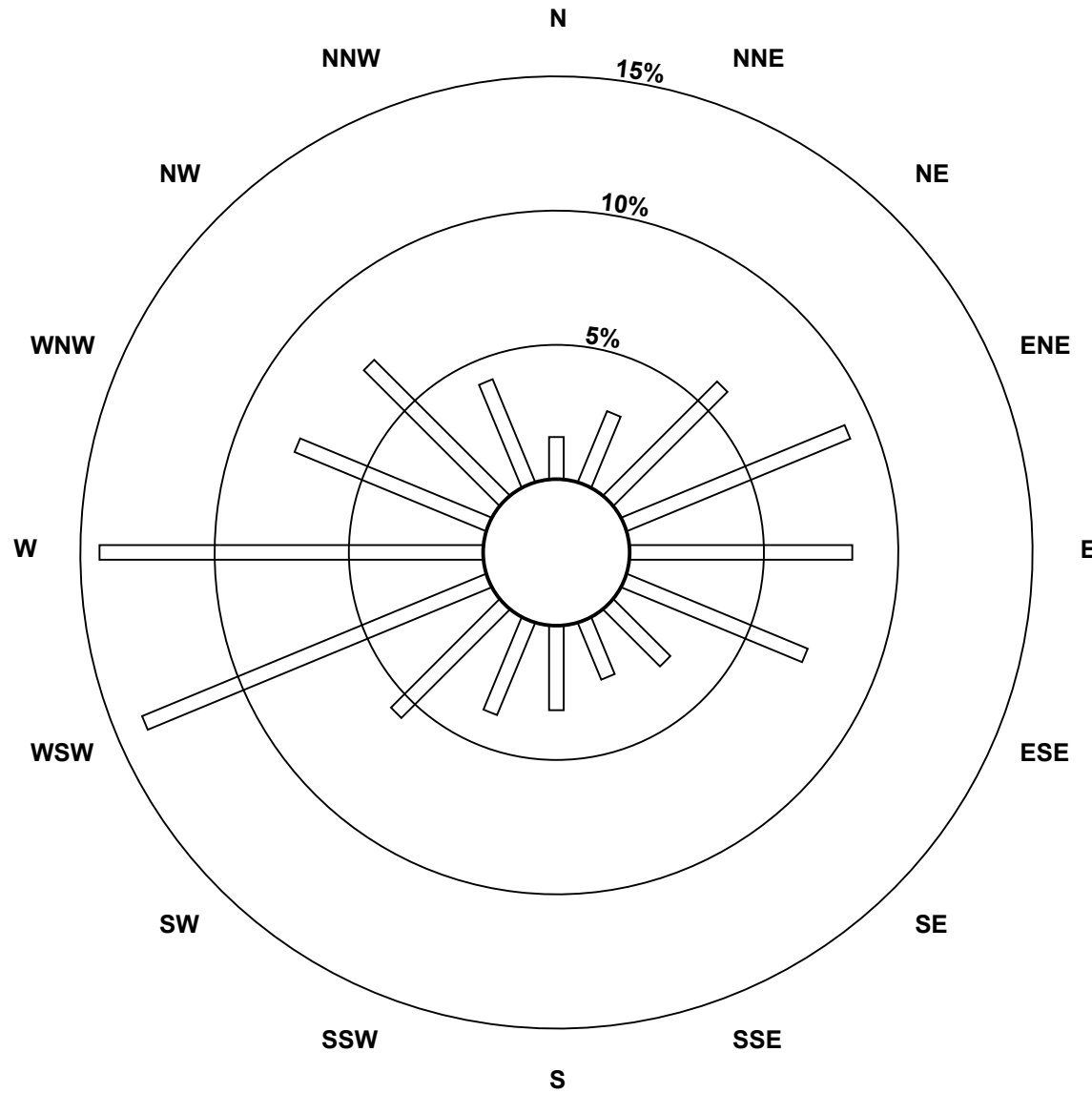
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - May 2017

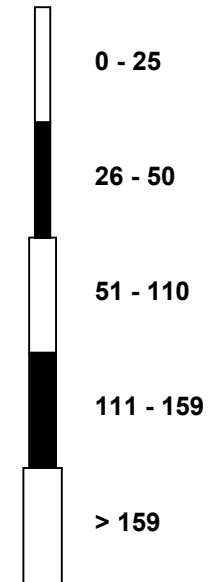


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - May 2017

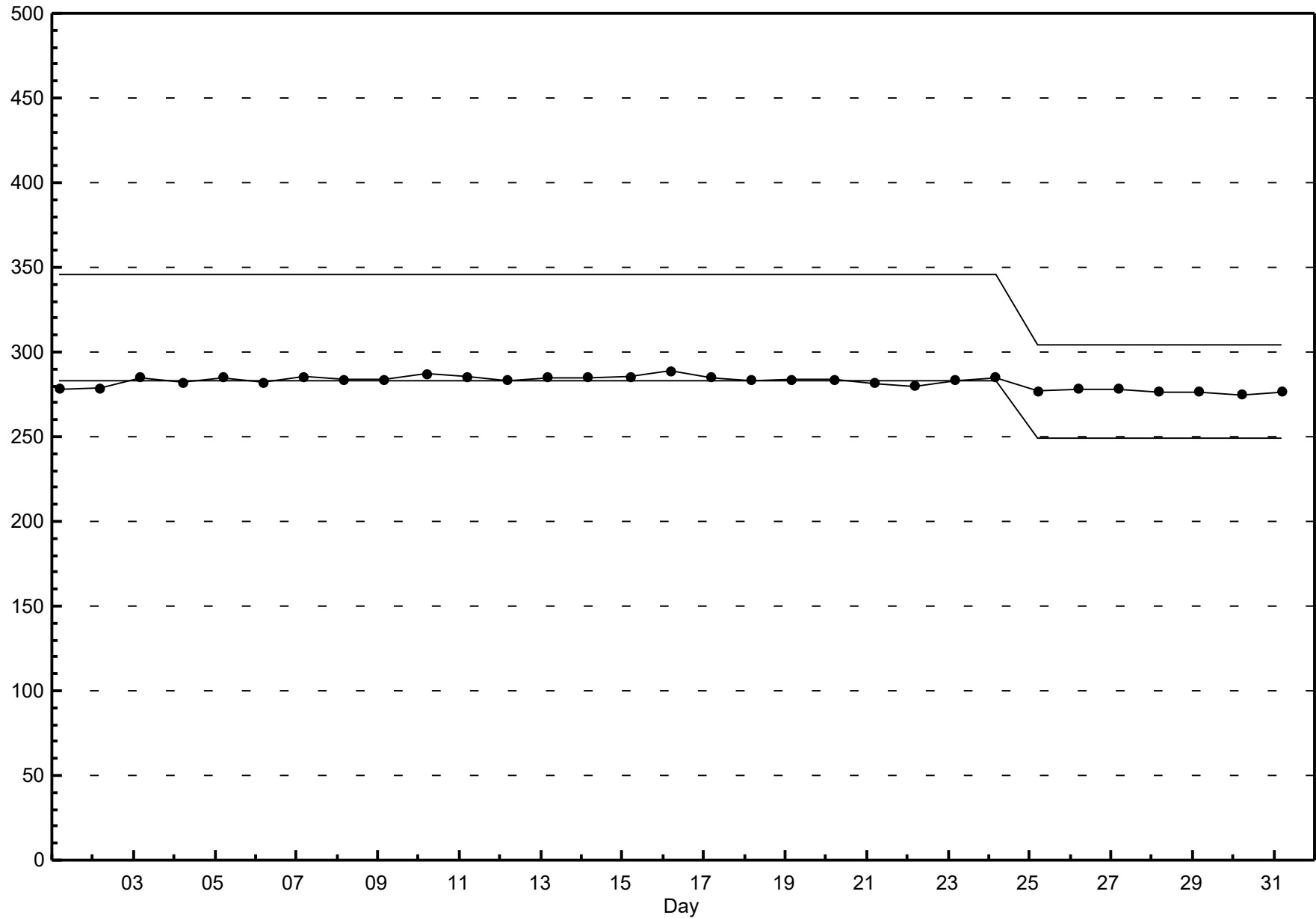


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - May 2017



Hourly Averages

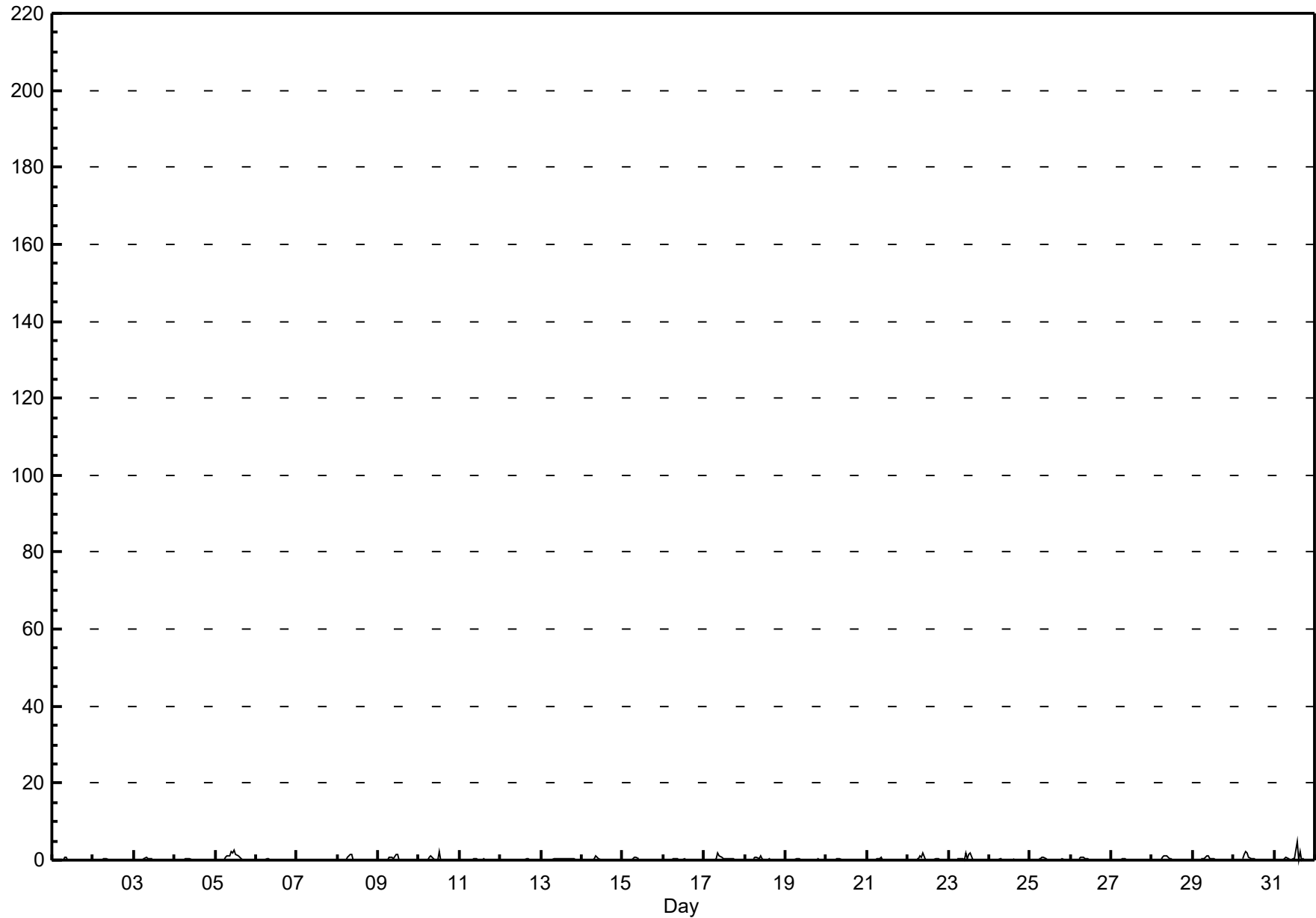
Nitrogen Oxide (NO) - ppb

Beaverlodge - May 2017

Maximum Value: 4.8 ppb on May 31 14:00																			Maximum Daily Average: 0.6 ppb on May 5										Hours in Service: 744	
Minimum Value: 0 ppb on May 1 04:00																			Minimum Daily Average: 0.0 ppb on May 7										Hours of Data: 700	
Maximum Diurnal Average: 0.6 ppb at hour 9																			Minimum Diurnal Average: 0.0 ppb at hour 4										Hours of Missing Data: 44	
Monthly Average: 0.19 ppb																			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 = 2.0										Hours of Calibration: 37	
																			Percent Operational Time: 99.1											
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-May	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7				
2-May	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5				
3-May	0	0	0	0	A	0	0	1	1	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6				
4-May	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				
5-May	0	0	0	0	A	0	1	1	1	2	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0.6	2.6				
6-May	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5				
7-May	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				
8-May	0	0	0	0	A	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7				
9-May	0	0	0	0	A	0	1	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7				
10-May	0	0	0	0	A	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0.2	2.2				
11-May	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				
12-May	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				
13-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.5				
14-May	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1				
15-May	0	0	0	0	A	0	1	1	1	0	P	P	P	P	P	P	0	0	0	0	0	0	0	0	--	0.7				
16-May	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				
17-May	0	0	0	0	A	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9				
18-May	0	0	0	0	A	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0				
19-May	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	0.5				
20-May	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	0.5				
21-May	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6				
22-May	0	0	0	0	A	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0				
23-May	0	0	0	0	A	0	0	0	0	0	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0.3	1.7				
24-May	0	0	0	0	A	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	--	0.2				
25-May	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	0.8				
26-May	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				
27-May	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				
28-May	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3				
29-May	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1				
30-May	0	0	0	0	A	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1				
31-May	0	0	0	0	A	0	0	1	0	0	0	0	0	5	0	2	0	0	0	0	0	0	0	0	0.5	4.8				
0.0 0.0 0.0 0.0 -- 0.1 0.4 0.6 0.6 0.4 0.4 0.3 0.3 0.4 0.1 0.2 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0																									Diurnal Average					
0.1 0.1 0.1 0.1 -- 0.5 1.5 2.1 1.9 2.1 1.7 2.6 2.2 4.8 0.7 2.3 0.4 0.4 0.5 0.3 0.2 0.1 0.1 0.1																									Diurnal Maximum					
C - Calibration					P - Power Failure					N - Not Valid					A - Automated Daily Zero Span															

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - May 2017



Hourly Maximums

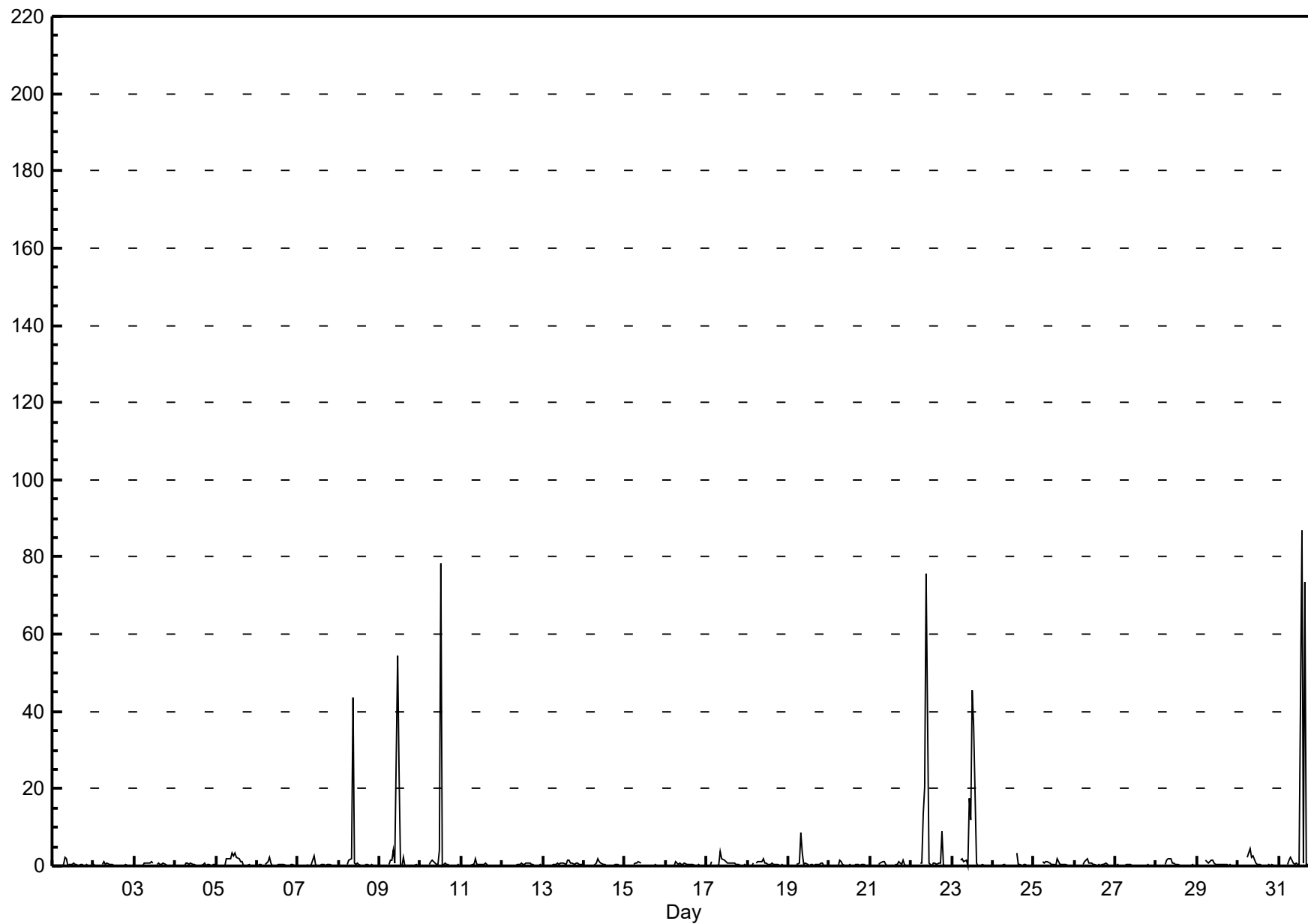
Nitrogen Oxide (NO) - ppb

Beaverlodge - May 2017

Maximum Value: 86.8 ppb on May 31 14:00																				Maximum Daily Average: 7.4 ppb on May 31					Hours in Service: 744	
Minimum Value: 0 ppb on May 17 00:00																				Minimum Daily Average: 0.2 ppb on May 27					Hours of Data: 700	
Maximum Diurnal Average: 4.8 ppb at hour 13																				Minimum Diurnal Average: 0.1 ppb at hour 24					Hours of Missing Data: 44	
Monthly Average: 1.28 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.3 P ₉₉ = 42.6					Hours of Calibration: 37	
																									Percent Operational Time: 99.1	
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-May	0	0	0	0	A	0	0	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1
2-May	0	0	0	0	A	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
3-May	0	0	0	0	A	0	1	1	1	1	1	1	N	0	1	0	0	1	0	0	0	0	0	0	0.4	1.0
4-May	0	0	0	0	A	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.8
5-May	0	0	0	0	A	0	2	2	2	4	2	3	2	2	1	1	0	0	0	0	0	0	0	0	1.0	3.5
6-May	0	0	0	0	A	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1
7-May	0	0	0	0	A	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.5
8-May	0	0	0	0	A	0	2	2	44	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2.2	43.6
9-May	0	0	0	0	A	0	1	2	4	1	54	24	0	0	2	0	0	0	0	0	0	0	0	0	3.9	54.4
10-May	0	0	0	0	A	0	1	1	1	0	0	4	78	0	1	0	0	0	0	0	0	0	0	0	3.9	78.3
11-May	0	0	0	0	A	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	1.7
12-May	0	0	0	0	A	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0.3	0.7
13-May	0	0	0	0	A	0	0	0	1	0	1	1	1	0	1	2	1	1	0	1	1	0	0	0	0.5	1.5
14-May	0	0	0	0	A	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7
15-May	0	0	0	0	A	0	1	1	1	1	P	P	P	P	P	P	0	0	0	0	0	0	0	0	--	1.0
16-May	0	0	0	0	A	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
17-May	0	0	0	1	A	0	0	0	4	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.7	3.8
18-May	0	0	0	1	A	1	1	1	1	2	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.5	1.9
19-May	0	0	0	0	A	0	1	9	3	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0.8	8.5
20-May	0	0	0	0	A	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
21-May	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0.4	1.4
22-May	0	0	0	0	A	1	1	13	21	76	1	0	0	1	1	0	1	1	9	0	0	0	0	0	5.5	75.7
23-May	0	0	0	0	A	2	2	1	2	0	17	12	46	36	1	0	0	0	0	0	0	0	0	0	5.2	45.6
24-May	0	0	0	0	A	0	0	0	C	C	C	C	C	C	3	0	0	0	0	0	0	0	0	0	--	3.4
25-May	0	0	0	0	A	1	1	1	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0.5	2.0
26-May	0	0	0	0	A	0	1	2	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	1.7
27-May	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	0.5
28-May	0	0	0	0	A	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.9
29-May	0	0	0	0	A	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.7
30-May	0	0	0	0	A	2	4	4	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	4.4
31-May	0	0	0	0	A	0	2	2	1	0	1	0	0	87	1	74	0	0	0	0	0	0	0	0	7.4	86.8
0.1 0.1 0.1 0.2 -- 0.5 1.0 1.8 3.4 3.3 3.0 1.8 4.8 4.5 0.7 2.8 0.3 0.3 0.5 0.3 0.2 0.2 0.2 0.1																									Diurnal Average	
0.4 0.4 0.3 1.0 -- 2.3 3.5 13.4 43.6 75.7 54.4 23.7 78.3 86.8 3.4 73.5 0.8 1.0 8.8 1.4 0.7 0.4 0.3 0.3																									Diurnal Maximum	
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - May 2017



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

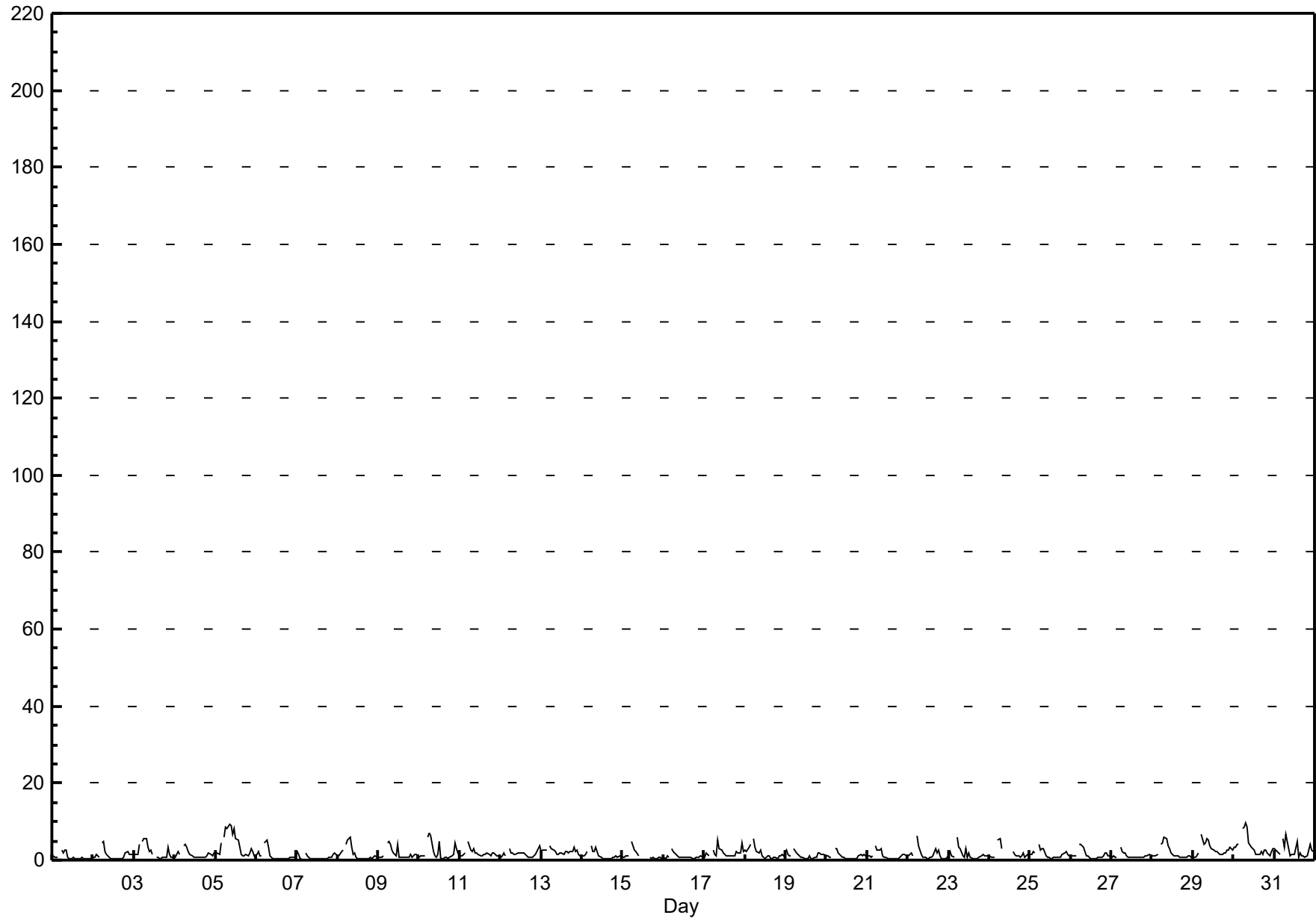
Beaverlodge - May 2017

Maximum Value: 9.8 ppb on May 30 08:00																			Maximum Daily Average: 4.1 ppb on May 5										Hours in Service: 744	
Minimum Value: 0 ppb on May 2 15:00																			Minimum Daily Average: 0.8 ppb on May 7										Hours of Data: 700	
Maximum Diurnal Average: 4.4 ppb at hour 6																			Minimum Diurnal Average: 0.9 ppb at hour 18										Hours of Missing Data: 44	
Monthly Average: 1.73 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 1.2 Q ₃ = 2.1 P ₉₀ = 3.7 P ₉₉ = 8.3										Hours of Calibration: 37	
																													Percent Operational Time: 99.1	
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-May	1	1	1	1	A	3	2	3	3	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0.9	2.8				
2-May	1	1	1	1	A	4	5	2	1	1	1	0	0	0	0	0	0	0	1	2	2	2	2	2	1.3	4.7				
3-May	2	2	2	4	A	5	6	6	3	2	2	1	N	1	1	1	0	1	1	1	3	1	1	1	2.0	5.7				
4-May	1	1	2	1	A	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1.5	4.1				
5-May	2	2	1	4	A	6	8	8	9	9	7	8	6	5	3	2	1	1	1	1	2	3	2	1	4.1	9.4				
6-May	1	2	1	1	A	4	5	3	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1.2	5.1				
7-May	2	1	0	0	A	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	2	2	1	0.8	2.2				
8-May	1	1	2	2	A	4	5	6	3	1	2	1	0	0	0	0	0	0	1	0	1	1	1	1	1.6	6.0				
9-May	1	1	1	1	A	5	5	4	3	2	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1.6	4.8				
10-May	1	1	1	1	A	6	7	6	2	1	1	1	5	0	1	1	1	0	1	1	1	4	3	2	2.2	7.0				
11-May	1	1	2	2	A	5	2	2	3	2	2	1	1	1	1	1	2	1	1	2	2	1	1	1	1.7	4.8				
12-May	1	1	2	1	A	3	2	2	1	1	2	2	2	2	2	1	1	1	1	1	1	2	3	4	1.7	3.8				
13-May	2	3	3	3	A	4	3	3	2	1	1	2	2	2	2	2	2	2	2	3	2	2	2	1	2.3	3.8				
14-May	1	1	2	2	A	4	2	2	3	2	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1.3	3.6				
15-May	1	1	1	1	A	5	4	3	2	1	P	P	P	P	P	P	1	1	1	1	0	1	1	1	--	4.7				
16-May	1	0	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.9	3.1				
17-May	1	2	1	1	A	3	1	1	5	3	3	2	1	1	1	1	1	1	1	2	2	2	4	2	1.9	5.2				
18-May	2	2	3	4	A	5	3	2	2	3	1	1	0	1	1	0	0	1	1	0	1	1	2	1	1.8	5.4				
19-May	3	2	1	1	A	3	2	1	1	1	1	1	0	0	1	0	0	1	1	2	2	1	2	1	1.2	3.1				
20-May	1	1	1	1	A	3	3	2	1	1	1	0	0	0	0	0	0	0	0	1	1	1	2	1	1.0	2.9				
21-May	1	1	1	1	A	4	3	3	3	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1.2	3.7				
22-May	1	2	2	1	A	7	4	3	1	1	1	0	0	1	1	1	3	2	3	1	0	0	0	1	1.6	6.5				
23-May	1	2	1	1	A	6	3	3	1	1	3	1	2	1	0	0	0	1	1	1	2	1	1	1	1.5	5.9				
24-May	1	1	1	1	A	5	6	3	C	C	C	C	C	C	2	2	1	1	1	1	2	1	1	1	--	5.6				
25-May	1	2	2	2	A	4	3	3	3	1	1	1	1	0	1	1	1	1	1	1	2	2	1	1	1.5	4.2				
26-May	1	1	1	1	A	4	4	3	2	1	1	1	1	0	1	0	1	1	1	1	2	2	1	1	1.4	4.0				
27-May	1	1	1	1	A	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.5				
28-May	1	1	1	1	A	4	5	6	6	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2.0	6.1				
29-May	1	1	1	2	A	7	4	5	5	5	4	3	3	2	2	2	2	2	2	2	3	3	3	3	2.8	6.6				
30-May	3	4	4	4	A	8	9	10	9	4	3	3	3	2	2	2	2	2	3	3	2	1	2	3	3.7	9.8				
31-May	3	3	2	1	A	6	3	7	3	1	1	2	2	5	1	2	1	1	1	1	3	4	3	2	2.5	6.8				
1.4 1.4 1.5 1.7 -- 4.4 3.8 3.5 2.9 1.9 1.6 1.5 1.3 1.1 1.0 0.9 0.9 0.9 1.0 1.2 1.5 1.6 1.6 1.4 Daily Average																														
3.3 3.5 4.0 4.4 -- 8.3 8.6 9.8 9.4 8.8 6.5 8.3 5.7 5.1 3.3 2.4 2.9 2.4 2.8 3.2 3.4 4.4 4.4 3.8 Daily Maximum																														
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																														

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - May 2017



Hourly Maximums

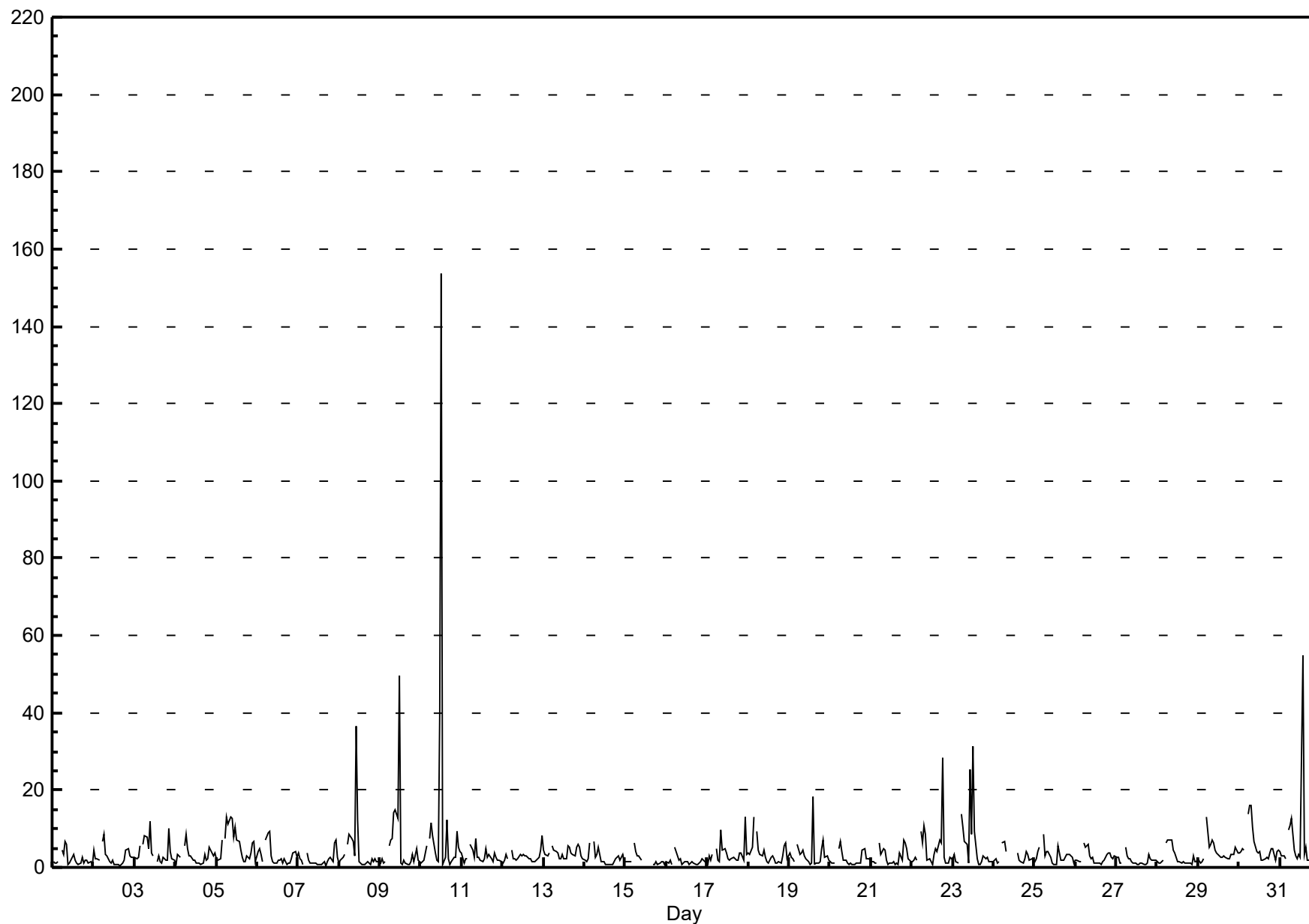
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - May 2017

Maximum Value: 153.5 ppb on May 10 13:00																				Maximum Daily Average: 12.2 ppb on May 10										Hours in Service: 744	
Minimum Value: 1 ppb on May 2 16:00																				Minimum Daily Average: 1.6 ppb on May 16										Hours of Data: 700	
Maximum Diurnal Average: 8.3 ppb at hour 13																				Minimum Diurnal Average: 1.7 ppb at hour 17										Hours of Missing Data: 44	
Monthly Average: 3.77 ppb																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.0 Q ₁ = 1.4 Median = 2.3 Q ₃ = 4.0 P ₉₀ = 6.9 P ₉₉ = 26.9										Hours of Calibration: 37	
																				Percent Operational Time: 99.1											
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-May	2	1	1	1	A	4	3	7	6	1	1	2	3	2	1	1	2	1	2	2	2	1	1	1	2.1	6.6					
2-May	5	2	2	2	A	7	8	3	3	1	1	2	1	2	1	1	1	1	2	4	5	3	3	3	2.6	8.4					
3-May	3	2	3	6	A	6	8	8	5	12	4	3	N	1	3	2	1	2	2	2	10	4	2	2	4.1	11.9					
4-May	1	3	3	3	A	6	9	5	3	3	2	2	1	1	1	1	1	3	2	2	5	4	3	4	2.9	8.6					
5-May	2	2	2	7	A	7	13	11	13	13	8	10	7	7	4	3	2	1	3	2	4	6	7	1	5.9	13.1					
6-May	4	5	3	2	A	7	9	9	3	1	1	1	2	2	2	1	2	1	1	1	2	4	4	3	3.0	9.2					
7-May	4	2	2	1	A	4	2	1	1	1	1	1	1	1	1	1	1	1	2	3	1	6	7	3	2.1	7.1					
8-May	1	2	3	3	A	6	8	8	7	3	37	12	1	1	1	1	1	1	1	2	1	2	1	2	4.6	36.7					
9-May	1	2	1	2	A	6	7	7	14	15	13	50	1	1	2	1	1	1	2	3	1	5	2	1	6.1	49.6					
10-May	1	2	2	6	A	8	11	8	4	2	1	40	153	1	3	12	2	1	2	2	2	9	5	4	12.2	153.5					
11-May	4	1	2	2	A	6	4	3	7	3	2	2	1	2	5	3	3	2	2	4	3	2	2	1	2.9	7.3					
12-May	1	2	3	2	A	4	2	2	2	2	3	3	3	3	3	2	2	1	2	1	2	3	4	8	2.8	8.4					
13-May	5	3	3	4	A	6	5	4	4	2	2	3	2	2	5	5	4	3	3	5	6	5	3	2	3.8	5.9					
14-May	2	2	2	6	A	7	3	3	5	3	2	1	1	1	1	1	1	1	2	3	3	2	3	2	2.4	6.7					
15-May	1	2	1	2	A	6	4	3	3	2	P	P	P	P	P	P	1	1	1	1	1	1	1	1	--	6.4					
16-May	1	1	2	1	A	5	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.6	5.1					
17-May	1	3	2	3	A	5	2	2	10	4	5	4	2	2	2	3	2	2	2	4	4	2	13	3	3.5	13.0					
18-May	4	3	5	13	A	9	4	3	3	4	3	1	1	3	3	2	1	1	1	1	3	6	6	2	3.7	13.0					
19-May	4	3	2	1	A	6	4	4	5	3	2	1	1	1	18	1	1	1	2	5	7	3	3	2	3.4	18.1					
20-May	1	1	1	1	A	5	7	4	2	2	1	1	1	1	1	1	1	1	1	5	5	2	2	2	2.1	6.6					
21-May	2	1	1	1	A	6	3	5	5	2	1	1	1	1	1	1	1	4	2	7	6	5	2	2	2.6	6.9					
22-May	2	2	3	2	A	9	6	11	9	2	2	1	1	3	5	4	7	6	28	3	1	1	3	2	4.9	28.3					
23-May	2	3	2	1	A	14	10	7	6	1	25	9	31	9	2	1	1	1	3	2	3	2	1	1	6.0	31.2					
24-May	1	2	1	2	A	6	7	4	C	C	C	C	C	C	4	2	2	1	2	4	3	2	2	2	--	6.6					
25-May	2	2	4	5	A	8	3	4	4	3	1	1	1	1	5	2	2	2	3	3	3	3	3	1	2.9	8.4					
26-May	2	2	1	1	A	6	5	6	3	2	3	1	1	1	1	1	1	2	3	4	4	3	2	3	2.5	6.4					
27-May	2	3	1	1	A	5	3	2	2	1	1	1	1	1	1	1	1	1	1	3	2	2	2	2	1.8	5.3					
28-May	1	1	1	2	A	6	7	7	7	4	4	3	2	2	1	1	1	1	1	1	1	3	1	2	2.7	7.2					
29-May	2	1	2	2	A	13	5	6	7	6	4	4	3	3	2	3	2	2	2	3	3	3	5	4	3.9	13.1					
30-May	4	4	5	5	A	14	16	16	10	7	4	4	4	2	2	2	3	2	4	5	5	2	4	5	5.5	16.2					
31-May	4	3	3	2	A	10	11	13	4	3	2	3	3	55	3	5	2	2	2	2	5	6	4	4	6.6	54.8					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration					P - Power Failure					N - Not Valid					A - Automated Daily Zero Span																

Hourly Maximums

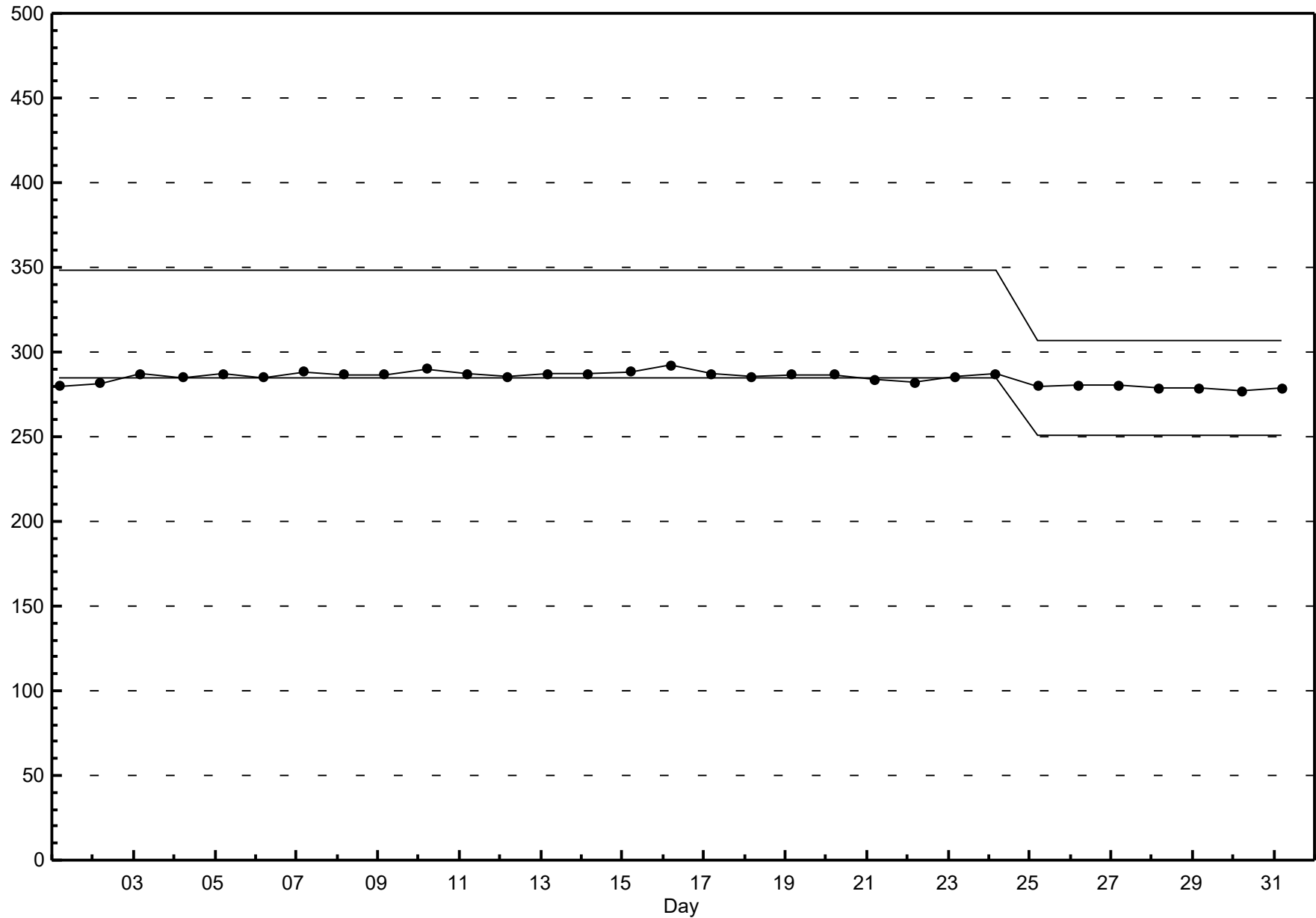
Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - May 2017



Span Responses

Oxides of Nitrogen (NO_x)

Beaverlodge - May 2017



Hourly Averages

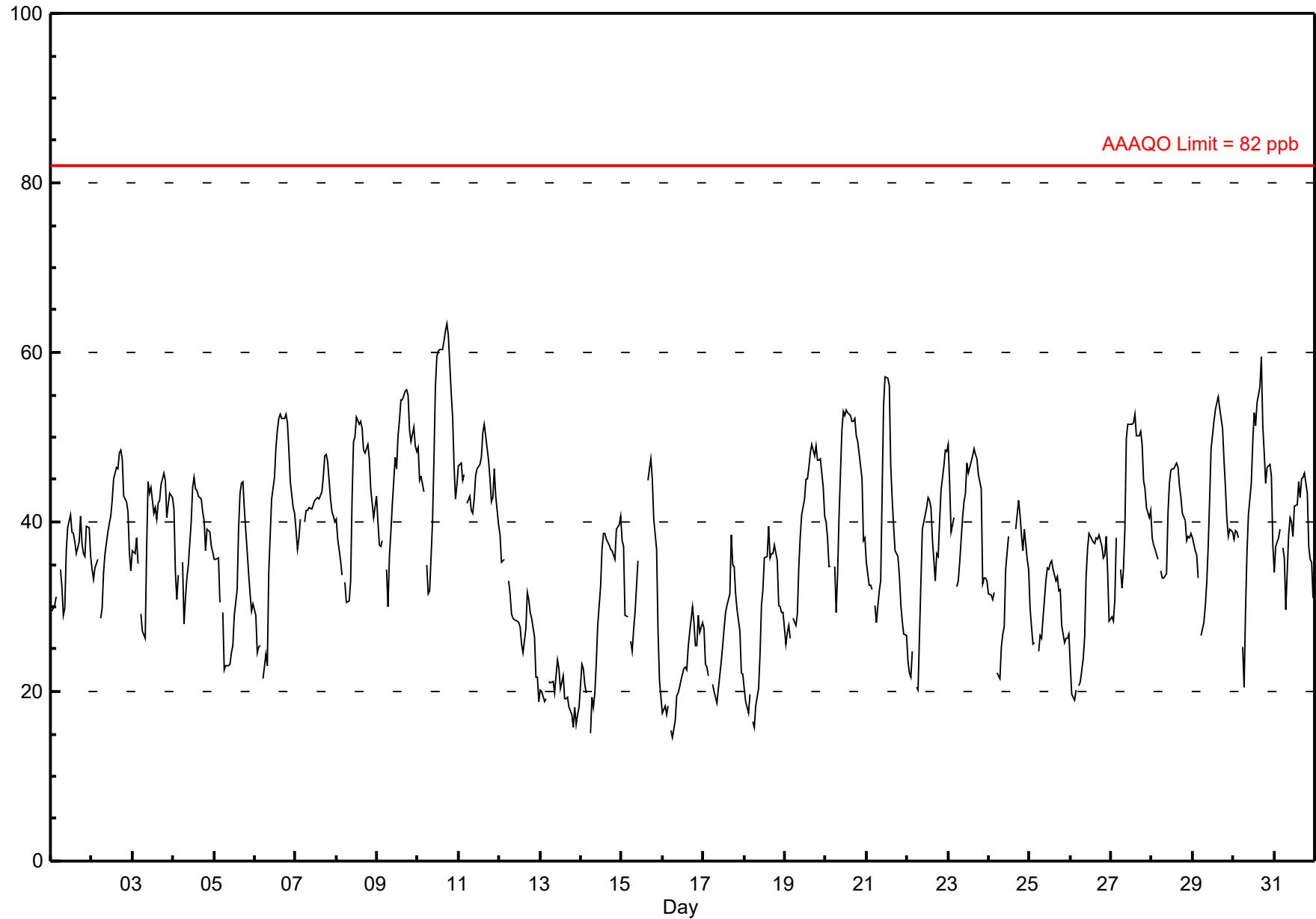
Ozone (O₃) - ppb

Beaverlodge - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 63.4 ppb on May 10 18:00 Maximum Daily Average: 50.2 ppb on May 10																								Hours in Service: 744 Hours of Data: 704		
Minimum Value: 15 ppb on May 16 07:00 Minimum Daily Average: 19.6 ppb on May 13 Maximum Diurnal Average: 43.6 ppb at hour 17 Minimum Diurnal Average: 27.3 ppb at hour 7 Monthly Average: 36.81 ppb Percentiles: P ₁ = 16.3 P ₁₀ = 22.3 Q ₁ = 29.4 Median = 37.3 Q ₃ = 43.8 P ₉₀ = 49.7 P ₉₉ = 60.1																								Hours of Missing Data: 40 Hours of Calibration: 35 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-May	29	30	30	31	A	34	32	29	30	36	39	41	39	39	38	36	38	41	37	36	36	40	39	36	35.5	40.9
2-May	34	33	35	36	A	29	30	34	36	39	40	41	43	45	46	46	48	48	47	43	42	41	36	34	39.5	48.4
3-May	37	36	38	35	A	29	27	26	37	45	43	44	41	42	40	42	43	44	46	45	41	42	43	43	39.6	45.7
4-May	42	34	31	34	A	35	28	31	33	35	40	44	45	44	44	43	43	41	40	37	39	39	37	37	38.0	45.2
5-May	36	36	36	31	A	29	23	23	23	23	25	25	29	32	39	43	45	45	41	36	34	31	29	30	32.4	44.8
6-May	29	25	25	25	A	22	24	23	34	39	43	45	49	51	52	53	52	52	53	52	48	45	42	41	40.1	52.7
7-May	39	37	38	40	A	40	41	41	42	42	42	42	43	43	44	45	48	48	47	43	41	41	40	42.1	47.9	
8-May	40	38	35	34	A	33	31	31	33	43	50	50	52	52	51	48	48	49	47	44	42	40	43	42.9	52.4	
9-May	40	37	37	38	A	34	30	36	39	42	48	46	50	52	54	54	55	56	55	51	49	51	49	48	45.8	55.6
10-May	49	45	45	44	A	35	32	32	40	47	56	60	60	60	60	61	62	63	62	55	52	47	43	44	50.2	63.4
11-May	47	47	45	46	A	42	43	41	41	43	45	46	47	48	51	51	50	47	45	42	43	46	43	40	45.2	51.5
12-May	38	35	35	36	A	33	32	29	29	29	28	28	28	26	25	27	32	31	29	29	26	22	22	19	29.0	38.4
13-May	20	20	19	19	A	21	21	21	20	22	24	23	20	22	19	19	19	18	17	16	18	16	17	18	19.6	23.6
14-May	23	23	21	20	A	15	19	18	20	23	28	32	37	39	39	38	37	37	37	36	36	39	40	41	30.3	40.7
15-May	38	37	29	29	A	26	25	27	29	35	P	P	P	P	P	45	46	47	45	40	37	27	21	19	33.6	47.5
16-May	18	18	17	18	A	15	15	17	19	20	21	21	23	23	22	25	27	30	28	26	25	29	27	28	22.3	29.9
17-May	27	23	23	22	A	21	20	19	19	20	24	25	27	29	30	32	38	35	35	32	30	27	22	22	26.2	38.4
18-May	20	19	17	20	A	16	16	18	20	24	30	32	36	36	39	36	36	36	37	35	30	30	29	29	28.0	39.5
19-May	26	27	28	26	A	29	28	29	35	38	41	43	45	45	46	48	49	48	49	47	47	47	44	41	39.4	49.1
20-May	40	38	35	35	A	35	29	34	41	51	53	53	53	53	53	52	52	52	50	50	47	45	38	38	44.5	53.2
21-May	35	33	32	32	A	30	28	32	33	43	54	57	57	56	47	43	39	37	36	34	30	28	27	27	37.8	57.2
22-May	24	22	22	25	A	21	20	27	33	39	41	42	43	43	42	38	33	36	36	40	44	47	49	48	35.3	48.6
23-May	49	45	39	41	A	32	33	35	41	42	43	47	46	46	48	49	48	47	46	44	33	33	33	33	41.4	49.2
24-May	31	31	31	32	A	22	22	25	27	28	34	38	C	C	C	C	39	43	41	38	37	39	36	34	33.1	42.5
25-May	30	28	26	26	A	25	27	26	29	33	35	34	35	35	34	33	34	32	32	28	26	26	26	27	29.8	35.4
26-May	23	20	19	20	A	21	21	24	27	34	37	39	38	38	37	38	38	38	37	36	36	38	34	28	31.3	38.6
27-May	29	28	31	38	A	34	32	34	39	50	52	52	51	52	53	50	50	51	49	45	44	42	41	41	42.9	52.7
28-May	38	37	37	36	A	34	33	33	34	41	45	46	46	46	47	46	44	43	41	40	38	38	38	39	40.1	47.0
29-May	38	37	36	33	A	27	28	30	33	37	43	49	52	53	54	55	53	51	47	44	40	38	39	39	41.6	54.7
30-May	38	39	39	38	A	25	20	30	36	41	44	49	53	51	54	56	59	51	48	45	46	47	45	37	43.2	59.5
31-May	34	37	38	39	A	37	36	30	39	41	40	38	42	42	45	43	45	45	46	43	37	36	35	31	39.0	45.8
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - May 2017



Hourly Maximums

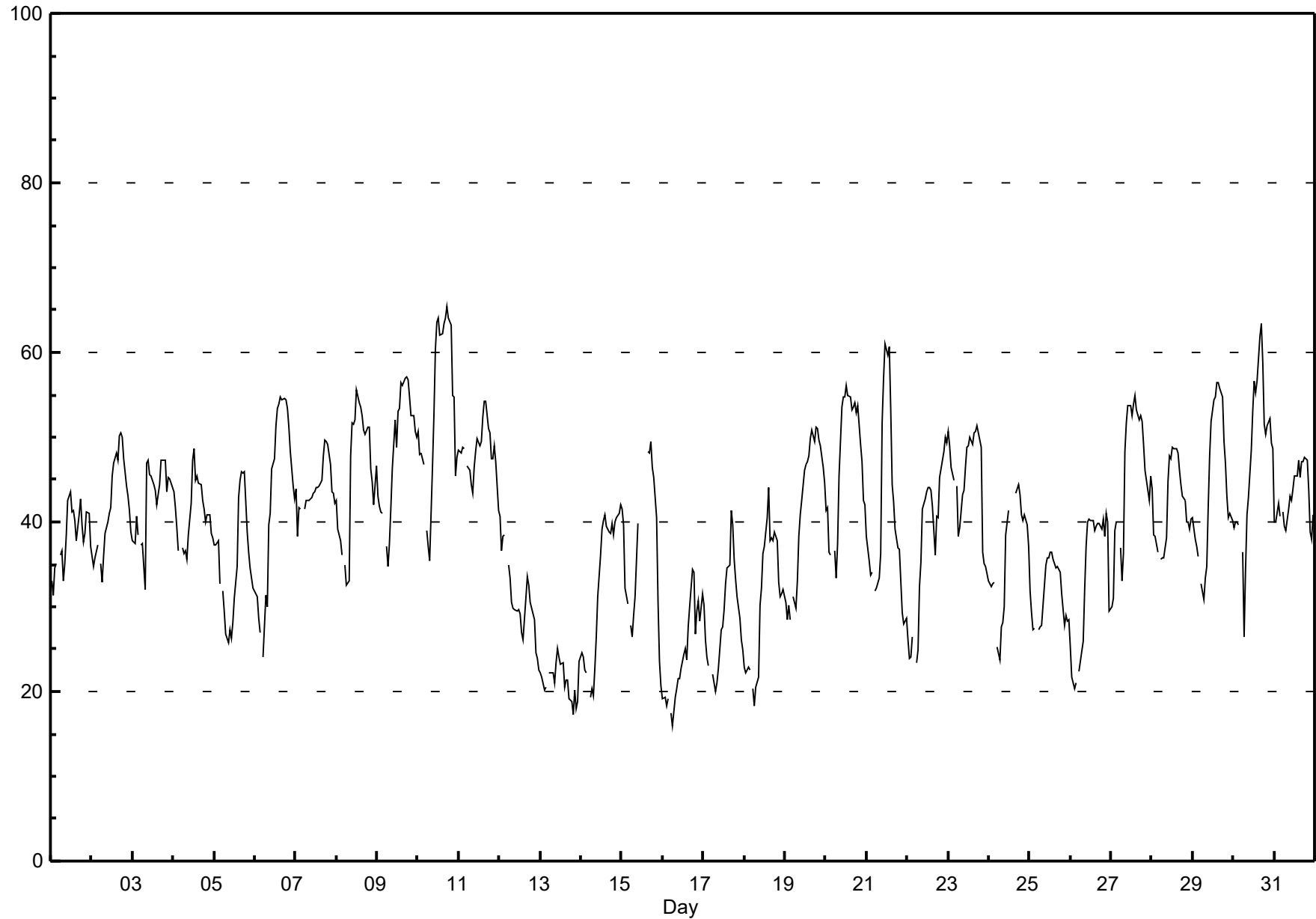
Ozone (O₃) - ppb

Beaverlodge - May 2017

Maximum Value: 65.4 ppb on May 10 18:00																				Maximum Daily Average: 53.9 ppb on May 10					Hours in Service: 744		
Minimum Value: 16 ppb on May 16 07:00																				Minimum Daily Average: 21.3 ppb on May 13					Hours of Data: 704		
Maximum Diurnal Average: 45.8 ppb at hour 17																				Minimum Diurnal Average: 30.8 ppb at hour 7					Hours of Missing Data: 40		
Monthly Average: 39.55 ppb																				Percentiles: P ₁ = 18.6 P ₁₀ = 24.4 Q ₁ = 32.5 Median = 40.1 Q ₃ = 47.1 P ₉₀ = 52.6 P ₉₉ = 63.3					Hours of Calibration: 35		
																				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-May	33	31	35	35	A	36	37	33	35	38	43	44	41	41	40	38	41	43	40	38	39	41	41	37	38.2	43.5	
2-May	36	35	36	37	A	35	33	36	39	40	41	42	45	47	48	47	50	51	50	48	44	43	41	39	41.8	50.6	
3-May	38	37	41	38	A	37	37	32	47	47	46	45	44	44	42	43	44	47	47	47	44	45	45	44	42.8	47.4	
4-May	44	42	39	37	A	37	36	37	36	38	42	47	49	45	45	45	44	43	42	40	41	41	39	38	41.1	48.6	
5-May	37	37	38	33	A	32	29	27	26	27	26	28	31	35	43	45	46	46	46	39	37	35	33	32	35.1	46.0	
6-May	32	31	29	27	A	24	31	30	40	41	46	48	51	53	54	55	54	55	54	53	51	48	44	43	43.3	54.8	
7-May	44	38	42	42	A	41	43	43	43	43	43	44	44	44	45	48	50	50	49	47	44	43	42	42	44.1	49.7	
8-May	43	39	38	36	A	35	33	33	48	52	52	52	56	54	53	53	51	50	51	51	46	45	42	47	46.0	55.6	
9-May	43	42	41	41	A	37	35	38	42	46	52	49	53	53	56	56	57	57	57	55	53	53	51	50	48.5	57.1	
10-May	51	48	48	47	A	39	37	35	47	53	60	64	64	62	62	63	64	65	64	63	55	55	45	48	53.9	65.4	
11-May	49	48	49	49	A	47	46	44	43	46	48	50	49	49	52	54	54	51	50	47	47	49	47	41	48.4	54.3	
12-May	41	37	38	38	A	35	33	31	30	30	29	30	29	27	26	31	34	32	31	30	29	25	24	23	30.9	40.7	
13-May	22	22	20	20	A	22	22	22	21	23	25	24	23	23	20	21	21	19	19	17	20	18	19	24	21.3	25.0	
14-May	25	24	23	22	A	19	20	20	23	27	31	36	39	40	41	39	39	39	40	38	40	40	41	42	32.5	42.0	
15-May	42	40	32	30	A	28	26	29	31	40	P	P	P	P	P	48	48	49	46	45	40	31	24	21	36.2	49.5	
16-May	19	19	18	19	A	17	16	19	20	21	21	23	24	25	24	28	30	34	34	27	30	31	28	32	24.4	34.4	
17-May	30	26	24	23	A	22	21	20	21	23	27	28	30	33	35	35	41	40	36	33	31	29	26	25	28.6	41.3	
18-May	23	22	23	23	A	20	18	20	22	30	32	36	37	41	44	38	38	38	39	38	33	31	31	32	30.8	44.1	
19-May	31	28	30	28	A	31	30	33	38	41	43	46	47	47	48	50	51	49	51	51	50	49	46	45	41.9	51.3	
20-May	41	42	36	36	A	37	33	37	45	54	55	55	56	55	55	53	54	54	53	54	49	47	43	42	47.2	56.2	
21-May	38	35	34	34	A	32	32	33	36	52	57	61	60	61	53	44	42	39	37	37	33	29	28	29	40.7	61.0	
22-May	26	24	24	26	A	23	25	32	35	42	43	44	44	44	44	42	36	41	41	45	46	48	50	49	38.0	50.0	
23-May	51	49	46	45	A	44	38	39	43	44	46	49	49	50	49	51	51	51	50	49	36	35	35	34	45.0	51.4	
24-May	33	32	33	33	A	25	24	28	28	30	38	41	C	C	C	C	43	44	43	41	40	41	40	37	35.5	44.4	
25-May	32	29	27	27	A	27	28	28	30	35	36	36	37	36	36	35	35	34	34	32	28	29	28	28	31.6	36.5	
26-May	25	22	20	21	A	22	24	26	32	37	40	40	40	40	39	39	40	40	39	40	38	41	40	30	33.8	41.1	
27-May	30	31	39	40	A	37	33	36	48	52	54	54	53	54	55	53	52	53	52	49	46	45	43	45	45.8	54.9	
28-May	44	39	38	37	A	36	36	36	38	45	48	48	49	49	49	48	46	44	43	43	40	40	39	40	42.3	48.8	
29-May	40	38	37	36	A	33	31	33	35	42	48	52	54	55	56	56	56	55	50	47	43	41	41	40	44.3	56.4	
30-May	39	40	40	40	A	36	26	34	41	43	48	53	57	55	57	62	63	59	52	50	51	52	49	49	47.7	63.4	
31-May	40	40	42	41	A	41	39	39	41	43	43	44	45	45	47	45	47	47	48	47	44	39	38	41	42.9	47.6	
36.1 34.4 34.2 33.6 -- 31.9 30.8 31.8 35.6 39.5 42.1 43.6 44.8 45.1 45.5 45.4 45.8 45.8 44.7 43.3 41.0 40.0 38.2 37.6																								Diurnal Average			
50.7 49.0 48.8 48.6 -- 46.7 46.1 44.4 48.3 53.6 60.3 63.5 64.0 62.0 62.2 63.3 64.0 65.4 64.1 63.2 54.8 54.7 50.6 50.1																								Diurnal Maximum			
C - Calibration					P - Power Failure					A - Automated Daily Zero Span																	

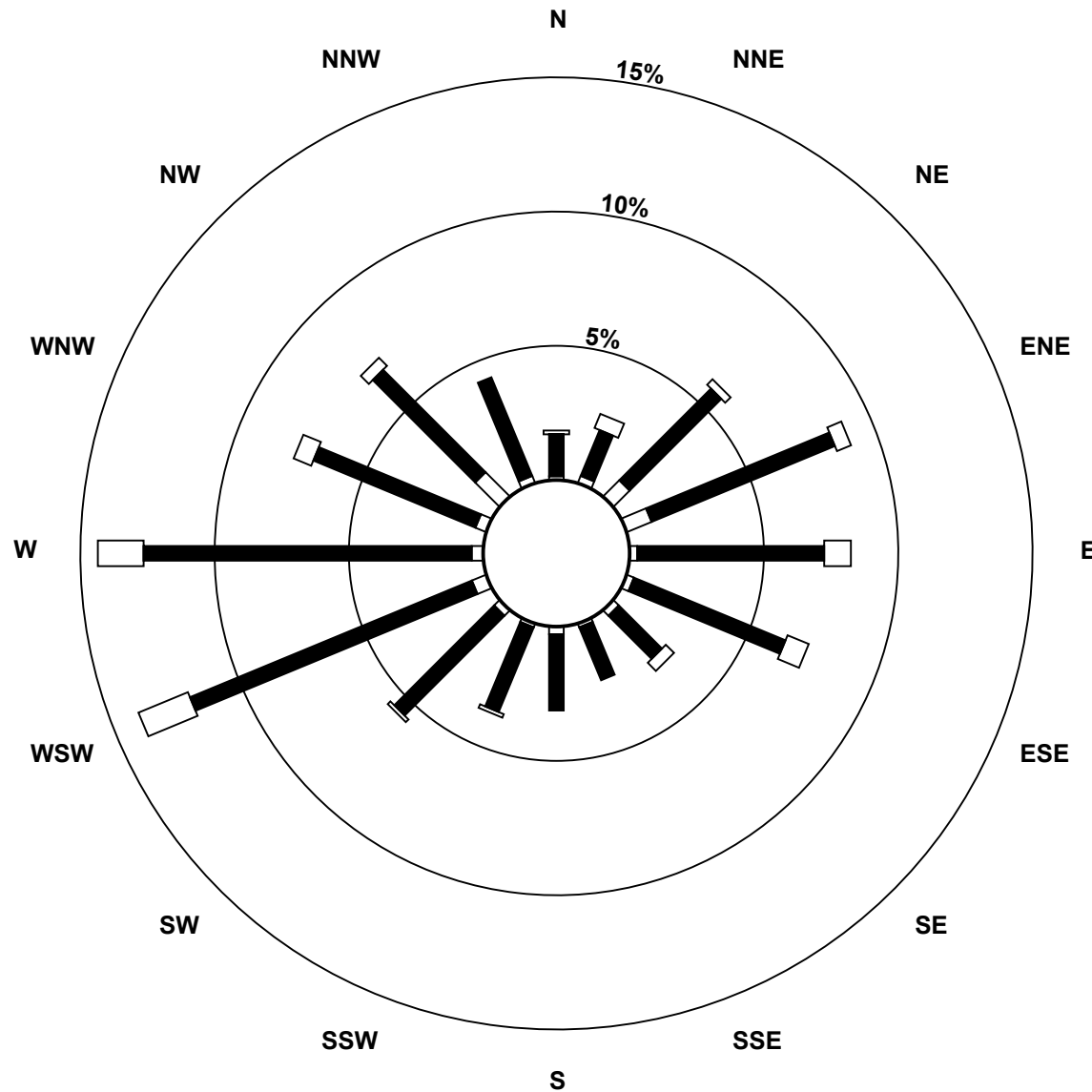
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - May 2017

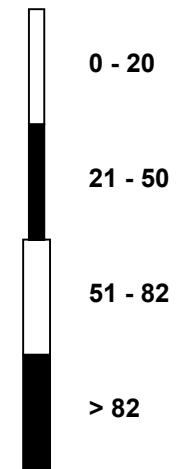


Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - May 2017



Pollutant Classes (ppb)



Eight Hour Running Averages

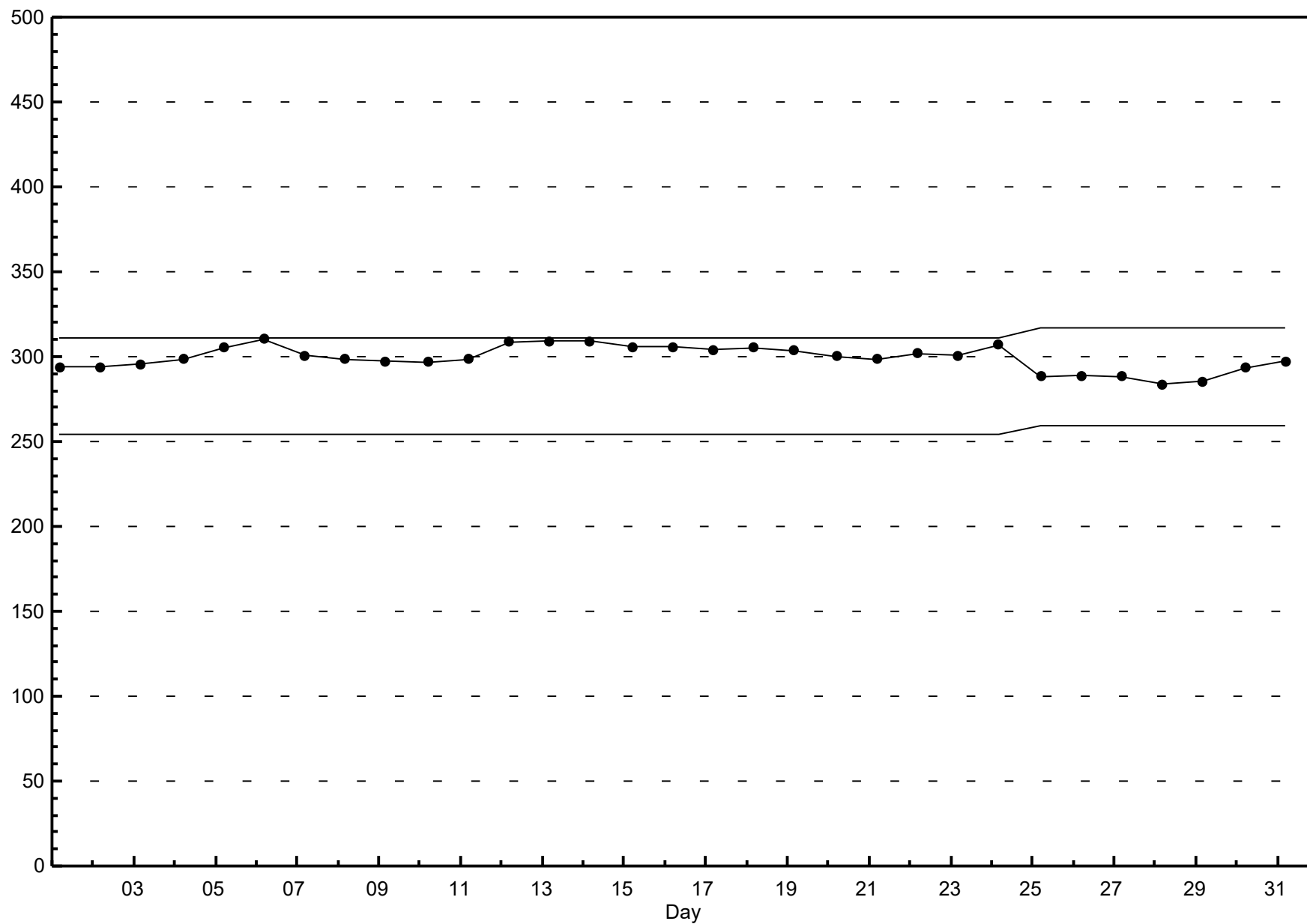
Ozone (O₃) - ppb

Beaverlodge - May 2017

Maximum Value: 61.2 ppb on May 10 19:00																				Hours in Service: 744						
Minimum Value: 16.9 ppb on May 16 08:00																				Hours of Data: 728						
Percentiles: P ₁ = 17.9 P ₁₀ = 23.4 Q ₁ = 30.6 Median = 37.3 Q ₃ = 43.0 P ₉₀ = 47.9 P ₉₉ = 54.1																				Hours of Missing Data: 16						
																				Hours of Calibration: 8						
																				Percent Operational Time: 98.9						
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-May	39	37	35	34	33	33	32	31	31	32	33	35	35	36	36	37	38	39	39	38	38	38	38	38	38	38.8
2-May	37	37	36	36	36	35	33	33	33	34	35	35	36	38	40	42	43	45	46	46	46	45	44	43	43	45.9
3-May	41	40	39	38	37	35	34	33	33	34	35	36	37	38	40	42	43	42	43	43	43	43	43	43	43	43.3
4-May	43	42	40	39	38	37	35	34	32	32	34	35	36	38	40	41	42	43	43	42	41	41	40	39	39	43.2
5-May	38	37	37	36	36	34	32	30	29	27	25	24	25	25	27	30	33	35	37	39	39	39	38	37	37	39.5
6-May	35	32	30	29	28	27	26	25	25	27	30	33	35	38	42	46	48	50	51	52	52	51	50	48	48	51.7
7-May	46	45	43	41	40	40	39	40	40	41	41	41	42	42	42	42	43	44	44	45	45	45	45	44	44	46.4
8-May	43	42	41	39	38	37	36	34	33	34	36	38	40	43	45	48	50	50	50	50	49	48	46	45	45	50.4
9-May	44	43	41	40	40	39	37	36	36	37	38	39	41	43	46	48	50	52	53	53	53	53	53	52	52	53.5
10-May	51	50	49	48	47	45	43	40	39	39	41	43	45	48	52	56	58	60	61	61	60	58	56	54	54	61.2
11-May	52	50	47	46	45	45	45	44	44	43	43	43	44	44	45	47	48	48	48	48	47	47	46	45	45	51.7
12-May	43	42	40	40	39	37	36	34	33	32	31	30	29	28	28	27	28	28	28	28	28	28	27	26	26	43.1
13-May	25	23	22	21	20	20	20	20	20	20	21	22	21	22	21	21	21	21	20	19	19	18	18	18	18	24.7
14-May	18	19	19	20	20	20	20	20	19	19	20	22	24	27	29	32	34	36	37	37	37	37	37	38	38	37.8
15-May	38	38	37	36	36	34	32	30	29	29	29	N	N	N	N	N	N	N	N	N	43	41	39	35	35	43.5
16-May	32	28	25	22	20	18	17	17	17	17	18	18	19	20	21	22	23	24	25	25	26	27	27	28	28	31.9
17-May	28	27	26	26	26	24	23	22	21	21	21	22	22	23	24	26	28	30	31	32	33	32	31	30	30	32.5
18-May	28	26	24	22	21	20	19	18	18	19	21	22	24	27	30	32	34	35	36	37	36	35	34	33	33	36.5
19-May	32	31	29	28	28	28	28	27	29	30	32	35	36	38	40	43	44	46	47	47	48	48	48	47	47	47.8
20-May	45	44	42	41	40	38	36	35	35	37	40	42	44	46	49	51	52	52	52	52	51	50	48	46	46	52.5
21-May	44	42	40	37	36	34	33	32	31	33	36	40	42	45	47	49	50	49	46	44	40	37	34	32	32	49.5
22-May	30	28	27	26	25	24	23	23	24	27	29	32	33	36	39	40	40	40	39	39	39	39	40	42	42	41.6
23-May	44	45	45	45	45	43	41	39	38	38	38	39	40	42	44	45	46	47	47	47	45	43	42	40	40	47.1
24-May	38	36	34	32	32	31	29	28	27	27	27	28	28	29	N	N	N	N	N	N	N	39	39	38	38	39.5
25-May	37	35	33	32	31	29	28	27	26	27	29	30	30	32	33	34	34	34	34	33	32	31	30	29	29	37.2
26-May	28	26	24	23	23	22	22	21	22	24	26	29	30	32	34	36	37	38	38	38	37	37	37	36	36	37.9
27-May	35	33	33	33	32	32	32	32	34	37	40	42	43	45	48	50	51	51	51	50	49	48	46	45	45	51.2
28-May	44	42	41	39	39	38	37	36	35	35	37	38	39	41	42	44	45	45	45	44	43	42	41	40	40	45.5
29-May	39	39	38	37	37	35	34	33	32	32	33	35	37	41	44	47	49	51	52	51	50	48	46	44	44	51.8
30-May	42	41	40	39	39	37	34	33	33	33	34	35	37	41	45	48	51	52	53	52	51	51	50	47	47	52.8
31-May	44	42	41	41	40	38	37	36	36	37	37	37	38	38	39	41	42	43	43	44	43	42	41	40	40	44.3
51.7 49.7 48.5 47.6 47.3 45.0 44.8 44.4 43.6 43.0 43.1 43.2 45.2 48.3 51.9 55.6 58.4 60.4 61.2 60.7 59.7 58.0 55.8 53.7																										
Diurnal Maximums																										
N - Not Valid																										

Span Responses

Ozone (O₃)
Beaverlodge - May 2017

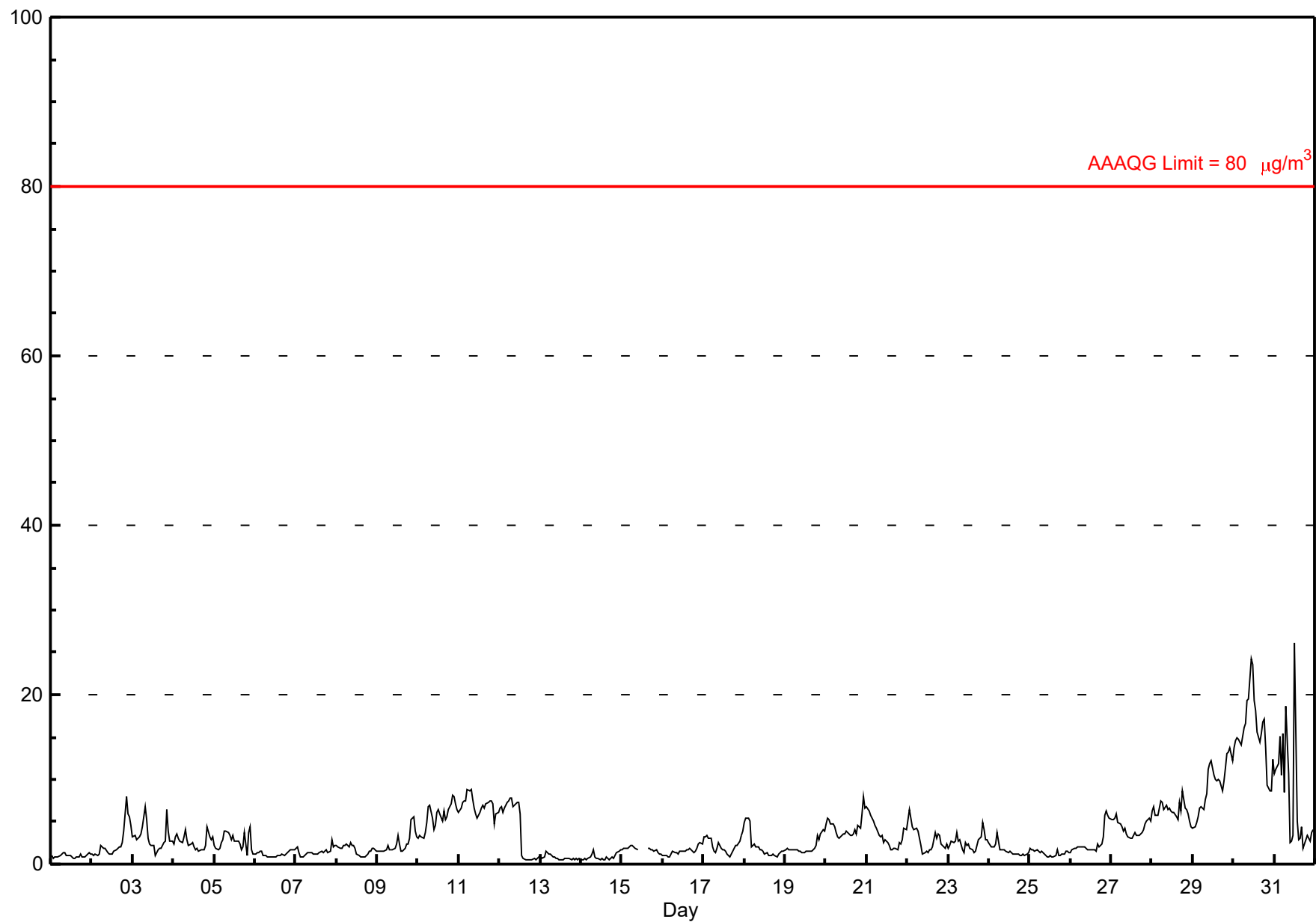


Hourly Averages

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

Beaverlodge - May 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 26.1 µg/m³ on May 31 13:00 Maximum Daily Average: 15.7 µg/m³ on May 30																								Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3		
Minimum Value: 0 µg/m³ on May 14 14:00 Maximum Diurnal Average: 4.2 µg/m³ at hour 8 Monthly Average: 3.51 µg/m³ Minimum Daily Average: 0.8 µg/m³ on May 13 Minimum Diurnal Average: 2.7 µg/m³ at hour 16 Percentiles: P ₁ = 0.5 P ₁₀ = 0.9 Q ₁ = 1.4 Median = 2.1 Q ₃ = 4.5 P ₉₀ = 7.3 P ₉₉ = 18.2																										
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-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
2-May	1	1	1	1	1	2	2	2	2	1	1	1	1	2	2	2	2	2	3	4	8	6	6	5	2.4	8.0
3-May	3	3	3	3	3	4	4	7	5	3	2	2	2	1	1	2	2	2	3	3	6	4	3	3	3.1	6.8
4-May	2	3	3	3	3	3	3	4	3	2	2	2	2	2	2	2	2	2	2	2	4	3	3	3	2.6	4.5
5-May	2	2	2	2	2	3	4	4	4	3	3	3	3	3	3	2	2	2	4	1	4	4	2	1	2.7	4.4
6-May	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	1.8
7-May	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1	2	3	2	2	1.5	2.9
8-May	2	2	2	2	2	2	2	2	3	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	1.7	2.5
9-May	2	1	1	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3	5	6	4	3	2.4	5.6
10-May	3	3	3	3	4	5	7	7	6	4	5	6	6	6	5	6	5	6	6	7	8	8	7	6	5.6	8.2
11-May	6	7	7	7	7	9	9	9	8	7	6	5	6	7	7	7	7	7	7	7	7	5	6	6	6.9	8.9
12-May	7	7	6	7	7	8	8	8	7	7	7	7	6	1	1	1	1	1	0	1	1	1	1	1	4.1	7.9
13-May	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
14-May	1	1	1	1	1	1	1	2	1	1	1	0	1	0	1	1	0	1	1	1	1	1	2	2	0.8	1.8
15-May	2	2	2	2	2	2	2	2	2	2	P	P	P	P	P	2	2	2	2	2	2	1	1	1	1.7	2.2
16-May	1	1	1	1	1	1	2	1	1	1	1	2	2	2	2	2	2	1	1	1	2	2	3	2	1.5	2.6
17-May	3	3	3	3	3	2	2	1	2	3	2	2	2	1	1	1	1	1	2	2	2	3	3	4	2.2	3.9
18-May	5	5	5	5	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2.1	5.4
19-May	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2	1	2	2	2	3	3	4	4	4	2.0	4.0
20-May	5	5	5	5	5	4	4	3	3	3	4	4	4	4	3	3	4	4	3	5	4	6	8	7	4.4	8.0
21-May	7	6	6	5	5	5	4	3	3	3	3	3	3	2	2	2	2	2	2	3	2	3	4	4	3.5	6.8
22-May	5	6	5	4	4	4	4	3	2	1	1	1	1	2	2	2	4	3	4	3	2	2	2	2	3.0	6.4
23-May	2	2	3	3	3	4	3	3	2	1	3	2	2	2	2	1	2	2	3	3	5	4	3	3	2.6	4.9
24-May	2	2	2	2	2	4	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	3.8
25-May	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	2	1	1.3	1.9
26-May	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	6	6	6	5	2.6	6.3
27-May	5	5	5	6	5	5	4	4	4	4	3	3	3	3	4	3	3	4	4	4	5	5	5	5	4.3	5.8
28-May	6	7	6	6	7	7	7	6	7	6	7	6	6	6	6	5	7	6	9	7	6	6	5	4	6.3	8.7
29-May	4	4	5	6	7	7	6	8	8	11	12	12	11	10	10	10	10	9	10	11	13	13	14	12	9.3	13.8
30-May	14	15	15	15	14	15	16	17	19	19	24	24	19	18	16	14	15	17	17	14	9	9	9	12	15.7	24.2
31-May	11	11	12	15	11	15	8	19	11	2	3	3	26	5	3	3	4	2	2	3	3	3	4	4	7.7	26.1
3.6 3.8 3.7 3.8 3.6 4.0 3.8 4.2 3.8 3.3 3.5 3.5 4.0 3.0 2.7 2.7 2.9 2.9 3.2 3.3 3.8 3.8 3.7 3.6																								Diurnal Average		
13.8 14.5 14.9 15.2 14.1 15.5 16.2 18.7 19.4 19.4 24.2 23.6 26.1 18.1 15.6 14.4 15.4 16.8 17.1 13.7 13.0 13.2 13.8 12.4																								Diurnal Maximum		
P - Power Failure																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

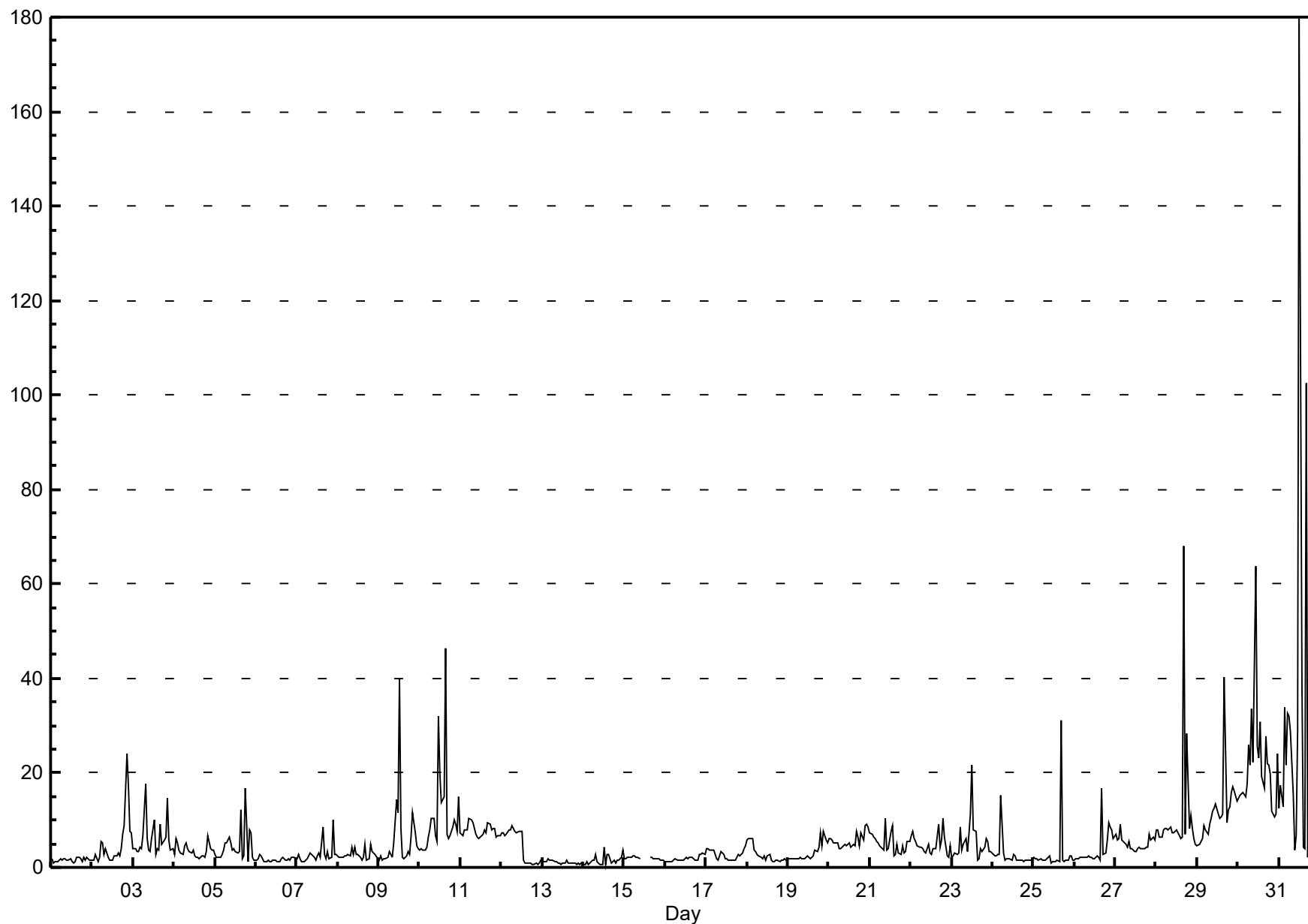


Hourly Maximums

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

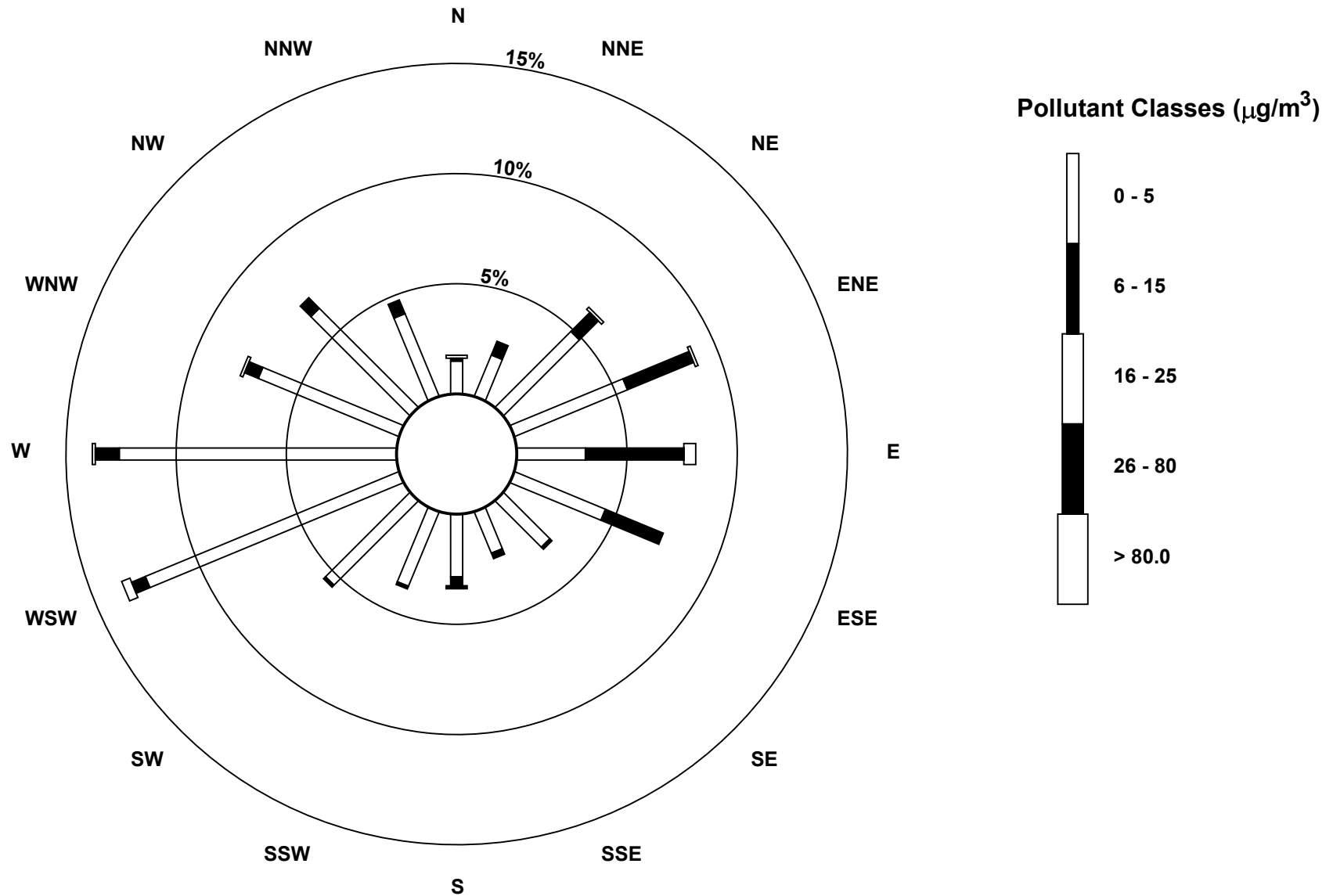
Beaverlodge - May 2017

Maximum Value: 179.7 $\mu\text{g}/\text{m}^3$ on May 31 13:00																					Maximum Daily Average: 26.1 $\mu\text{g}/\text{m}^3$ on May 31					Hours in Service: 744	
Minimum Value: 1 $\mu\text{g}/\text{m}^3$ on May 14 02:00																					Minimum Daily Average: 1.1 $\mu\text{g}/\text{m}^3$ on May 13					Hours of Data: 739	
Maximum Diurnal Average: 12.7 $\mu\text{g}/\text{m}^3$ at hour 13																					Minimum Diurnal Average: 3.9 $\mu\text{g}/\text{m}^3$ at hour 18					Hours of Missing Data: 5	
Monthly Average: 5.78 $\mu\text{g}/\text{m}^3$																					Percentiles: P ₁ = 0.7 P ₁₀ = 1.4 Q ₁ = 1.9 Median = 3.4 Q ₃ = 6.5 P ₉₀ = 10.9 P ₉₉ = 39.9					Hours of Calibration: 0	
																										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-May	2	1	1	1	1	2	1	2	2	1	2	2	1	1	1	2	2	2	1	2	2	2	1	2	1.6	2.2	
2-May	1	2	3	1	2	6	5	3	4	2	1	1	2	2	2	3	2	4	7	9	24	17	8	7	5.0	24.0	
3-May	4	4	3	3	4	4	7	18	6	4	3	6	10	3	4	4	9	5	6	6	15	6	4	4	5.9	17.8	
4-May	3	6	5	4	3	3	5	5	4	3	3	4	2	2	2	2	2	2	2	3	7	4	4	4	3.5	6.6	
5-May	3	2	2	2	3	4	5	5	6	5	4	4	3	3	3	12	2	2	17	1	8	7	2	1	4.5	16.8	
6-May	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2	2	1.7	2.6	
7-May	2	3	2	1	1	2	2	2	3	2	2	1	2	3	2	9	3	2	3	2	2	10	3	3	2.8	10.0	
8-May	2	2	2	2	2	2	3	2	4	3	4	3	3	2	2	2	5	2	2	5	3	3	3	2	2.8	4.9	
9-May	2	2	2	2	2	2	3	3	2	5	14	12	40	8	2	2	2	3	3	6	12	7	5	4	6.1	40.1	
10-May	4	4	4	4	4	7	8	10	10	7	6	32	20	14	15	46	7	6	7	9	10	9	8	15	11.0	46.5	
11-May	7	7	8	8	8	10	10	10	8	7	6	6	7	7	8	7	9	9	8	8	8	6	7	7	7.8	10.2	
12-May	7	7	7	7	8	8	9	8	8	7	8	8	8	2	1	1	1	1	1	1	1	1	1	1	4.6	8.8	
13-May	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.9	
14-May	1	1	1	1	1	1	2	3	1	1	1	1	4	1	3	3	1	1	1	1	2	2	2	4	1.6	4.3	
15-May	2	2	2	2	2	2	2	2	2	2	P	P	P	P	P	2	2	2	2	2	2	2	1	1	2.0	2.4	
16-May	1	1	1	1	1	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	1.9	2.9	
17-May	4	4	4	4	4	3	2	2	2	3	3	2	2	2	2	1	1	2	2	3	2	3	4	5	2.7	4.6	
18-May	6	6	6	6	4	3	3	2	2	2	2	2	2	3	1	1	1	1	1	1	1	2	2	2	2.7	6.1	
19-May	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	3	4	7	5	8	6	5	3.1	7.5	
20-May	6	6	6	5	5	5	4	4	4	5	5	5	5	4	5	5	8	7	5	7	6	9	9	8	5.7	9.2	
21-May	7	7	7	6	5	5	5	4	4	10	4	4	8	9	2	3	5	3	3	5	3	3	6	6	5.1	10.2	
22-May	7	8	6	6	5	4	4	4	3	3	5	3	3	4	4	4	9	4	6	10	6	2	2	5	4.9	10.5	
23-May	2	2	3	3	3	9	4	5	6	3	7	11	22	8	8	2	2	4	3	4	6	5	3	3	5.4	21.5	
24-May	3	2	2	3	3	15	3	2	2	2	2	2	3	2	1	1	1	1	1	2	1	1	2	2	2.5	15.4	
25-May	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2	1	31	1	1	1	1	2	2	2	2.9	31.1	
26-May	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	17	3	3	6	10	9	8	6	3.9	16.8	
27-May	7	6	6	9	6	5	5	4	6	4	4	3	3	4	4	4	4	4	4	4	7	6	6	6	5.1	9.0	
28-May	8	8	6	6	8	8	8	8	9	7	7	8	8	7	6	7	68	7	28	8	11	8	6	5	10.9	68.1	
29-May	5	5	6	6	9	8	7	9	10	12	12	13	11	10	11	11	40	10	12	13	16	17	16	14	11.8	40.4	
30-May	15	15	16	16	15	18	26	22	34	22	64	26	23	31	19	17	28	22	22	20	12	11	11	24	21.9	63.9	
31-May	13	17	13	34	22	33	32	29	15	4	7	29	180	39	4	4	103	2	17	11	7	3	5	5	26.1	179.7	
4.2 4.5 4.3 4.9 4.5 5.8 5.6 5.7 5.4 4.4 6.2 6.5 12.7 6.0 4.2 5.3 12.1 3.9 5.8 5.3 6.3 5.6 4.6 5.1																									Diurnal Average		
14.6 17.4 15.7 34.0 21.5 32.6 32.0 28.6 33.5 22.2 63.9 32.0 179.7 38.7 19.3 46.5 102.6 22.0 28.4 19.8 24.0 17.1 16.1 24.2																									Diurnal Maximum		
P - Power Failure																											



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - May 2017



Hourly Averages

External Temperature (ET) - °C

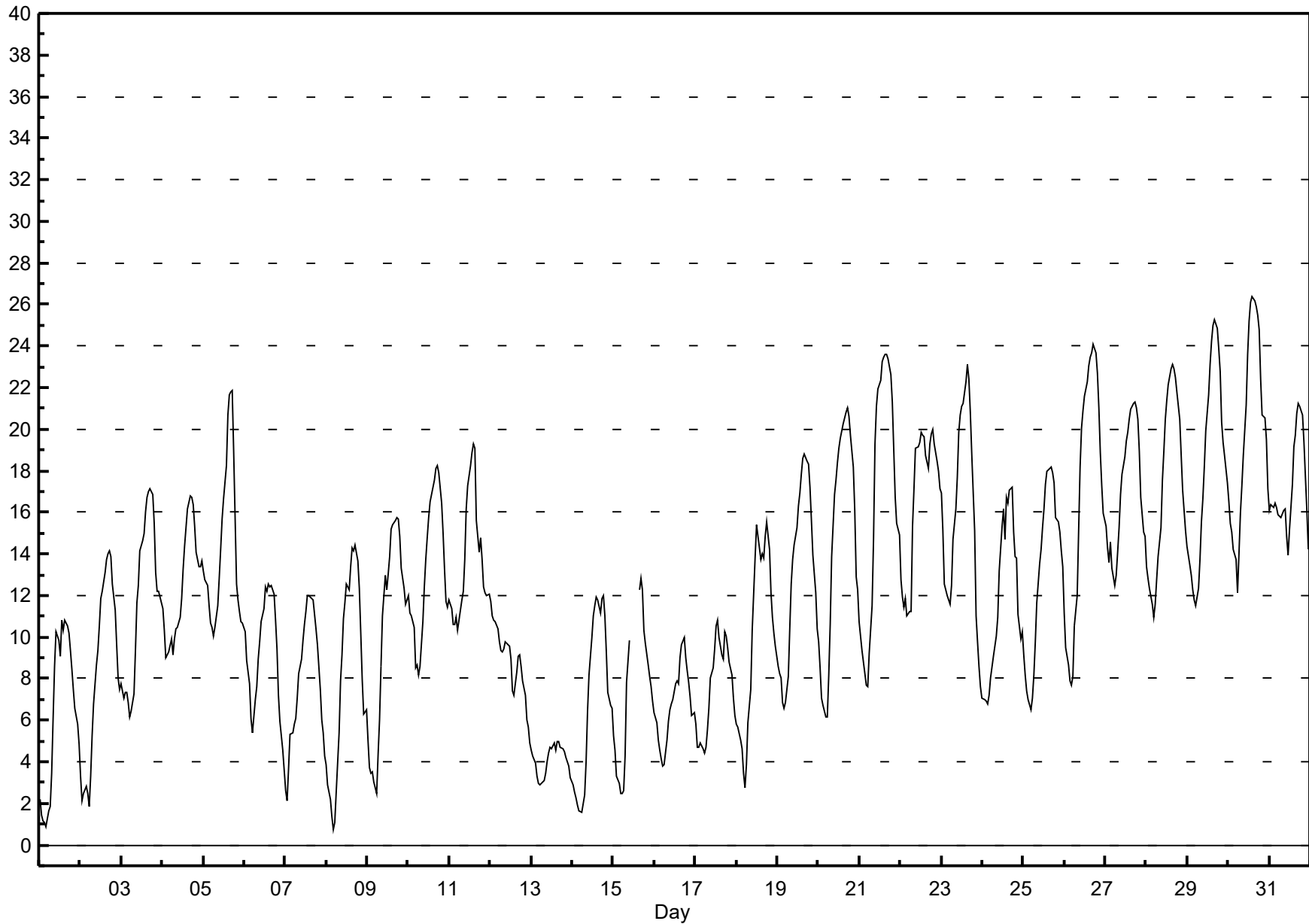
Beaverlodge - May 2017

Maximum Value: 26.4 °C on May 30 15:00																				Maximum Daily Average: 19.9 °C on May 30					Hours in Service: 744	
Minimum Value: 1 °C on May 8 05:00																				Minimum Daily Average: 4.1 °C on May 13					Hours of Data: 739	
Maximum Diurnal Average: 16.7 °C at hour 17																				Minimum Diurnal Average: 7.1 °C at hour 6					Hours of Missing Data: 5	
Monthly Average: 12.15 °C																				Percentiles: P ₁ = 1.6 P ₁₀ = 4.6 Q ₁ = 7.9 Median = 11.8 Q ₃ = 16.2 P ₉₀ = 20.5 P ₉₉ = 25.2					Hours of Calibration: 0	
																									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-May	2	1	1	1	1	2	2	3	6	9	10	10	9	11	10	11	11	10	9	8	8	7	6	5	6.4	10.8
2-May	3	2	3	3	2	2	3	5	7	9	9	11	12	12	13	14	14	14	14	13	11	10	8	7	8.4	14.1
3-May	8	7	7	7	7	6	6	7	9	12	13	14	15	15	16	17	17	17	17	15	13	12	12	12	11.7	17.1
4-May	11	10	9	9	9	10	9	10	10	10	11	12	13	14	15	16	17	17	16	15	14	13	13	14	12.5	16.8
5-May	13	13	12	12	11	10	10	10	12	13	14	16	17	18	21	22	22	22	19	13	12	11	11	11	14.3	21.8
6-May	10	9	8	8	6	5	7	8	9	10	11	11	12	12	13	12	13	12	11	9	7	6	5	4	9.1	12.5
7-May	3	2	4	5	5	6	6	7	8	9	10	11	11	12	12	12	12	11	10	10	7	6	5	4	7.9	12.0
8-May	4	3	2	1	1	1	3	5	8	9	11	12	13	12	13	14	14	14	14	12	10	8	6	7	8.2	14.4
9-May	5	4	3	4	3	2	4	6	9	11	13	12	13	14	15	15	16	16	16	15	13	12	12	12	10.2	15.8
10-May	12	11	11	10	9	9	8	9	11	12	14	15	16	17	17	18	18	18	18	16	15	13	12	11	13.3	18.3
11-May	12	11	11	11	11	10	11	12	12	14	16	17	18	19	19	19	16	14	15	14	12	12	12	12	13.8	19.3
12-May	12	11	11	11	10	10	9	9	9	10	10	10	9	7	7	8	9	9	9	8	7	6	6	5	8.8	11.7
13-May	5	4	4	3	3	3	3	3	3	4	4	5	5	5	5	5	5	5	5	4	4	4	4	3	4.1	5.0
14-May	3	3	2	2	2	2	2	2	4	6	8	10	11	11	12	12	11	12	12	11	9	7	7	7	7.0	12.0
15-May	5	5	3	3	2	2	3	4	8	10	P	P	P	P	P	12	13	12	10	10	9	8	8	7	7.1	12.8
16-May	6	6	5	5	4	4	4	5	6	6	7	7	8	8	8	9	10	10	9	8	8	7	6	6	6.7	10.0
17-May	6	5	5	5	5	4	5	6	7	8	8	9	11	11	10	9	9	10	10	9	9	8	7	6	7.6	10.8
18-May	6	6	5	5	3	3	4	6	7	10	12	14	15	14	14	14	14	15	16	14	12	11	10	10	10.0	15.5
19-May	9	8	8	7	7	7	8	10	13	14	14	15	16	17	18	19	19	18	18	17	16	14	12	10	13.1	18.8
20-May	10	9	7	7	6	6	8	11	14	17	18	18	19	20	20	21	21	21	21	20	18	16	13	12	14.6	21.0
21-May	11	9	9	8	8	8	9	12	15	19	21	22	22	23	23	24	24	23	23	21	19	17	15	15	16.7	23.6
22-May	13	12	11	12	11	11	11	15	17	19	19	19	20	20	20	19	18	19	20	20	19	18	18	17	16.6	20.0
23-May	17	15	13	12	12	12	13	15	16	18	20	21	21	21	22	23	22	21	19	15	11	10	9	8	16.0	23.1
24-May	7	7	7	7	7	8	9	10	10	11	13	15	16	15	17	16	17	17	15	14	14	11	10	10	11.8	17.2
25-May	9	8	7	7	6	7	8	10	12	14	14	15	16	17	18	18	18	18	17	16	16	15	14	13	13.1	18.2
26-May	11	9	9	8	8	8	11	12	15	18	20	21	22	22	23	23	24	24	24	23	21	19	17	16	17.0	24.1
27-May	15	14	14	15	13	12	13	14	15	17	18	19	19	20	20	21	21	21	21	20	19	17	15	15	17.1	21.3
28-May	13	13	12	12	11	12	13	14	15	18	19	20	21	22	23	23	23	22	22	20	19	17	16	15	17.3	23.1
29-May	14	13	13	12	12	12	12	14	16	17	18	20	22	23	24	25	25	25	24	23	20	19	19	17	18.3	25.2
30-May	16	15	15	14	14	12	14	16	17	19	21	24	25	26	26	26	26	25	25	22	21	21	19	17	19.9	26.4
31-May	16	16	16	16	16	16	16	16	16	16	15	14	15	17	19	20	21	21	21	21	19	18	16	14	17.2	21.2
9.3 8.5 8.0 7.8 7.3 7.1 7.9 9.2 10.8 12.5 13.7 14.6 15.4 15.9 16.5 16.7 16.7 16.7 16.0 14.8 13.3 12.1 11.1 10.4																									Diurnal Average	
17.0 16.3 16.3 16.4 16.2 15.9 15.8 16.0 17.3 19.3 21.2 23.6 25.2 26.1 26.4 26.2 25.9 25.5 24.8 22.7 21.0 20.5 19.5 17.4																									Diurnal Maximum	
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - May 2017



Hourly Averages

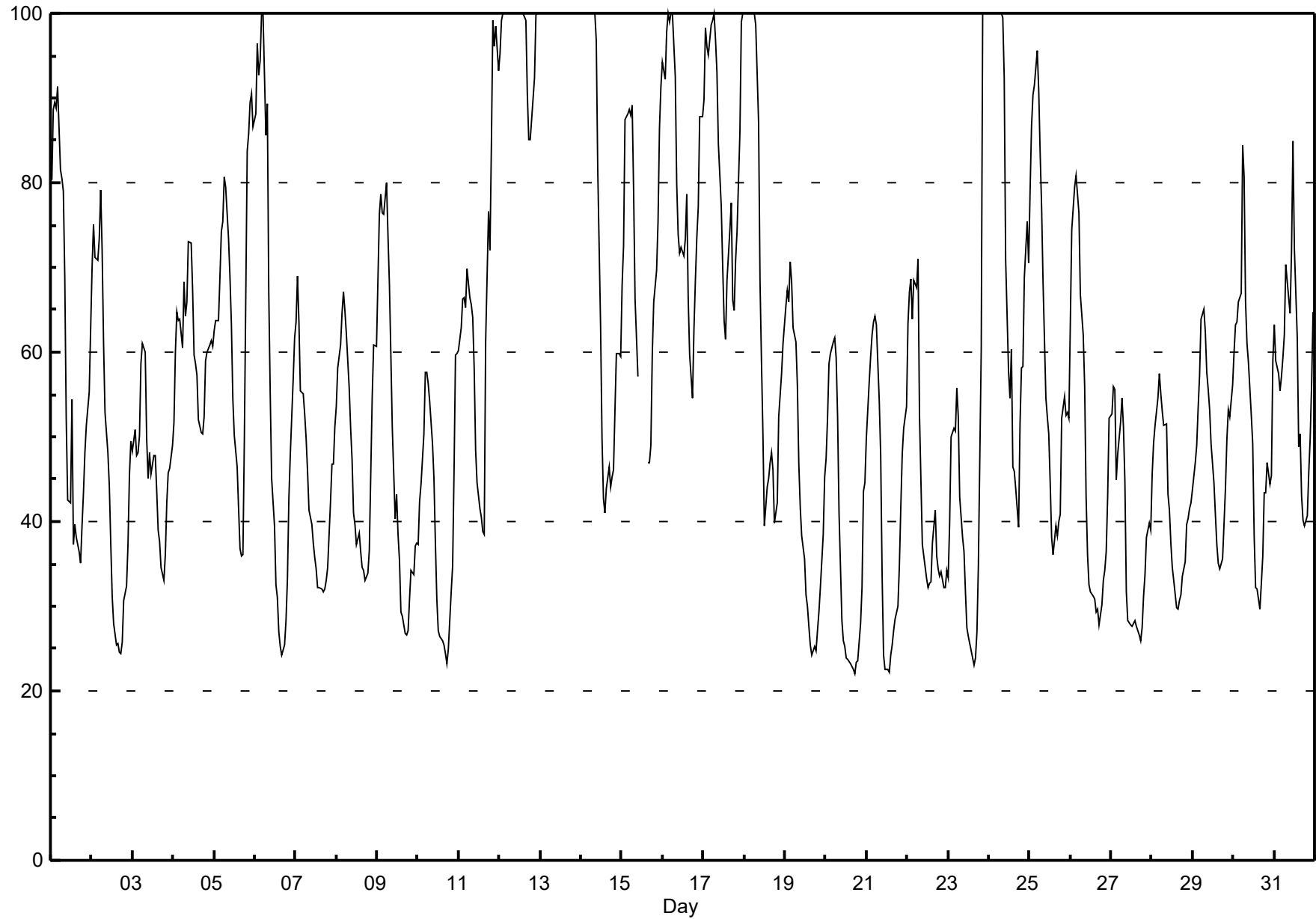
Relative Humidity (RH) - %

Beaverlodge - May 2017

Maximum Value: 100.0 % on May 6 05:00																						Maximum Daily Average: 100.0 % on May 13										Hours in Service: 744	
Minimum Value: 22 % on May 20 18:00																						Minimum Daily Average: 37.8 % on May 20										Hours of Data: 739	
Maximum Diurnal Average: 76.2 % at hour 6																						Minimum Diurnal Average: 40.6 % at hour 18										Hours of Missing Data: 5	
Monthly Average: 57.97 %																						Percentiles: P ₁ = 23.3 P ₁₀ = 29.8 Q ₁ = 38.9 Median = 54.3 Q ₃ = 72.4 P ₉₀ = 99.9 P ₉₉ = 100.0										Hours of Calibration: 0	
																						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-May	80	89	89	89	91	82	80	79	69	52	43	42	54	37	40	38	37	35	39	43	48	51	55	63	59.4	91.4							
2-May	70	75	71	71	73	79	72	61	53	48	44	38	31	28	25	26	25	24	26	31	32	37	45	50	47.3	79.2							
3-May	48	51	48	48	50	59	61	60	50	45	48	46	48	48	43	39	38	35	33	36	42	46	46	49	46.5	61.0							
4-May	52	60	65	64	64	60	68	64	66	73	73	67	60	59	57	52	51	50	52	59	60	61	61	61	60.8	73.1							
5-May	63	64	64	69	74	75	81	80	73	69	63	54	50	46	42	37	36	36	49	84	86	89	90	87	65.0	90.4							
6-May	88	96	93	94	100	100	86	89	67	55	45	39	33	31	27	25	24	25	28	33	43	48	57	62	57.9	100.0							
7-May	64	69	64	55	55	53	50	46	41	40	37	36	34	32	32	32	32	33	35	42	47	47	51	44.1	69.0								
8-May	53	58	61	65	67	65	62	56	51	47	41	40	37	39	36	35	34	33	34	37	46	55	61	61	48.9	67.1							
9-May	69	76	79	76	76	80	74	68	60	51	40	43	39	35	29	29	27	27	27	31	34	34	37	37	49.1	80.0							
10-May	37	42	44	50	58	58	56	54	49	45	37	31	27	26	26	25	24	23	25	32	35	46	60	60	40.5	59.8							
11-May	60	63	66	66	65	70	66	66	64	58	48	45	42	41	39	38	61	77	72	85	99	96	99	93	65.8	99.2							
12-May	95	99	100	100	100	100	100	100	100	100	100	100	100	100	100	99	91	85	85	87	92	100	100	100	97.2	100.0							
13-May	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0							
14-May	100	100	100	100	100	100	100	100	100	97	82	63	50	43	41	44	46	44	45	46	53	60	60	60	72.2	100.0							
15-May	68	72	87	88	89	88	89	79	66	57	P	P	P	P	P	47	47	49	60	66	70	75	87	91	72.4	91.4							
16-May	94	92	98	100	99	100	100	92	80	74	72	72	71	73	79	66	60	55	63	68	74	77	88	88	80.6	100.0							
17-May	90	98	96	95	99	99	100	97	93	85	77	70	64	62	68	74	78	66	65	71	74	86	99	100	83.6	100.0							
18-May	100	100	100	100	100	100	100	99	87	68	59	51	39	44	45	47	48	46	40	42	52	55	57	61	68.4	100.0							
19-May	65	67	66	71	68	63	61	56	47	42	38	36	31	30	28	25	24	25	25	27	29	32	38	45	43.4	70.6							
20-May	47	52	59	60	61	62	59	52	41	28	26	25	24	24	23	23	22	22	23	24	28	32	44	45	37.8	61.8							
21-May	50	56	60	62	64	64	63	54	48	33	24	22	23	22	24	25	27	29	30	35	42	48	51	54	42.1	64.3							
22-May	63	67	69	64	69	68	71	53	45	37	35	33	32	33	33	37	41	36	34	34	34	32	32	34	45.3	71.1							
23-May	33	40	50	51	51	56	52	43	38	36	32	27	26	26	24	23	24	27	35	60	100	100	100	100	48.1	100.0							
24-May	100	100	100	100	100	100	100	100	99	92	71	58	55	60	46	46	44	39	52	58	58	69	75	70	74.7	100.0							
25-May	79	87	90	91	96	91	84	77	68	55	52	50	45	38	36	39	38	40	41	52	55	53	53	52	60.9	95.6							
26-May	63	74	79	81	79	76	67	62	56	43	36	33	32	31	31	29	30	28	30	33	34	36	43	52	48.3	80.9							
27-May	53	56	56	45	48	52	55	51	45	32	28	28	28	28	28	28	27	26	27	31	34	38	40	39	38.3	55.9							
28-May	46	49	51	55	57	55	53	51	51	43	41	37	35	33	30	30	31	31	34	35	40	40	42	42	42.2	57.4							
29-May	44	47	49	53	57	64	65	62	58	56	53	49	45	41	37	35	34	36	40	44	50	53	52	56	49.2	65.2							
30-May	60	63	64	66	67	84	81	66	61	59	53	49	38	32	32	30	33	36	43	43	47	44	45	59	52.3	84.4							
31-May	63	59	57	55	57	59	62	70	66	65	72	85	72	62	49	50	43	40	39	41	46	50	56	65	57.7	84.9							
67.7 71.7 73.4 73.7 75.3 76.2 74.8 70.6 64.3 57.6 52.4 49.0 45.5 43.4 41.7 41.1 41.1 40.6 42.9 48.5 54.1 57.8 62.0 64.1																									Diurnal Average								
100.0 100.0																									Diurnal Maximum								
P - Power Failure																																	

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - May 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - May 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	2	1	1	5	3	3	2	6	10	11	15	13	12	13	15	7	4	5	4	5	4	4	6	4.1	15.1
Dir	142	209	21	149	42	61	66	160	208	248	265	267	337	267	255	256	264	288	244	229	248	230	163	176	256	267
2 Spd	5	5	5	8	7	4	7	17	17	17	14	14	14	10	15	15	16	16	13	10	8	6	1	4	8.7	17.1
Dir	136	108	286	279	263	271	288	283	287	298	300	275	262	257	262	255	237	246	259	246	253	257	259	80	267	298
3 Spd	2	6	4	4	4	4	2	4	7	11	15	17	20	18	19	25	21	14	12	5	2	4	9	6	6.8	25.4
Dir	142	67	85	146	196	90	26	191	192	216	222	240	259	257	258	261	261	270	290	314	320	356	314	333	257	261
4 Spd	5	4	2	2	2	6	1	4	13	23	20	18	14	11	6	5	6	8	10	9	9	12	11	19	4.6	23.2
Dir	336	292	282	102	43	322	299	180	209	210	200	202	210	187	165	190	149	137	120	96	72	71	89	104	165	210
5 Spd	15	11	8	7	2	1	5	9	2	8	8	7	10	3	5	7	1	4	17	22	10	8	9	11	1.3	22.3
Dir	105	82	113	130	305	259	150	107	52	341	22	112	12	34	93	214	227	53	276	286	297	285	288	310	342	286
6 Spd	8	5	12	4	5	7	9	6	12	16	22	19	22	20	27	29	26	24	31	23	11	18	13	3	14.4	31.1
Dir	299	209	300	309	205	228	268	189	262	279	272	271	242	241	240	243	251	251	245	245	226	248	236	190	250	245
7 Spd	8	14	18	22	10	10	12	20	25	34	33	31	31	30	29	30	25	31	18	14	8	11	6	1	19.1	34.1
Dir	205	232	248	254	254	255	244	245	254	255	257	260	255	268	274	275	269	254	243	234	218	256	244	231	255	255
8 Spd	1	3	5	4	5	3	2	3	8	20	27	31	28	19	22	26	25	18	17	10	7	6	4	6	10.4	30.7
Dir	200	76	110	123	112	112	147	200	226	236	237	249	252	258	243	257	256	261	259	251	226	182	138	245	243	249
9 Spd	2	3	3	3	3	3	2	5	6	6	5	8	4	6	5	4	5	4	6	7	8	9	11	15	2.4	14.6
Dir	150	121	107	159	185	139	128	178	186	218	270	339	349	312	220	127	133	126	109	93	70	57	76	84	107	84
10 Spd	9	4	3	4	6	6	6	6	15	14	11	9	11	7	8	6	6	4	7	9	10	14	14	13	1.2	15.1
Dir	81	91	56	140	182	146	175	217	273	277	271	259	269	275	243	243	204	242	123	42	31	26	25	59	286	273
11 Spd	12	10	8	10	11	5	7	11	14	12	18	21	27	29	32	30	11	21	22	5	14	22	23	28	15.1	32.3
Dir	77	68	2	30	38	345	80	92	70	82	72	72	78	77	71	68	180	50	37	100	41	55	41	56	63	71
12 Spd	30	20	13	7	17	24	23	22	18	16	16	16	9	21	23	20	18	17	12	12	9	4	5	6	5.8	29.7
Dir	67	55	59	61	79	74	77	73	78	80	77	68	113	237	252	279	269	278	321	333	323	27	350	322	47	67
13 Spd	6	10	11	14	11	11	13	14	16	17	17	16	11	13	11	11	12	10	8	7	10	6	10	10	10.7	17.4
Dir	334	312	309	313	304	321	317	306	301	295	309	314	343	316	322	308	306	316	306	280	270	258	245	252	305	309
14 Spd	9	8	4	5	2	6	6	7	10	5	9	14	14	15	12	11	4	6	9	15	13	13	8	8	6.7	15.0
Dir	288	307	296	273	134	108	167	172	145	218	238	242	249	262	271	281	259	294	293	256	259	255	260	268	256	256
15 Spd	5	5	3	4	4	3	3	4	3	4	P	P	P	P	P	18	11	17	23	18	9	7	14	15	4.3	22.9
Dir	229	253	85	178	185	185	172	190	136	230	P	P	P	P	P	265	92	83	61	78	70	62	75	64	86	61
16 Spd	19	12	14	17	15	10	10	12	16	18	18	18	19	16	15	13	12	13	16	10	9	8	14	13	13.7	19.0
Dir	66	58	48	54	48	16	17	43	44	43	53	55	42	31	40	41	44	57	57	55	57	52	57	74	48	42
17 Spd	13	12	11	12	12	10	9	11	13	15	19	18	16	20	20	26	24	22	21	17	10	11	9	2	13.4	25.9
Dir	71	37	51	59	66	56	75	78	119	100	113	108	107	124	124	112	119	116	120	118	101	109	124	143	103	112
18 Spd	2	1	4	6	4	3	3	8	11	11	23	18	22	16	14	10	12	11	10	18	11	9	7	6	7.5	23.1
Dir	49	141	288	292	256	243	189	220	213	210	227	234	262	279	295	350	357	318	271	263	238	250	238	239	259	227
19 Spd	5	8	11	9	6	12	13	19	26	26	24	23	23	23	20	20	20	17	19	11	12	8	4	1	14.2	25.8
Dir	202	211	222	233	225	249	240	243	249	259	265	261	266	261	269	275	282	285	279	289	280	265	237	287	260	259
20 Spd	5	5	3	3	2	5	2	2	3	19	20	20	22	19	19	19	18	17	18	14	8	7	3	1	8.3	22.1
Dir	49	50	101	63	67	52	104	165	245	284	290	270	267	273	264	274	280	283	266	287	273	263	52	281	278	267
21 Spd	5	6	4	4	4	3	2	3	4	9	23	19	17	21	22	23	24	21	24	20	13	10	8	7	9.6	24.2
Dir	58	64	65	72	84	70	135	155	183	277	284	285	271	263	275	269	258	272	285	271	266	253	249	272	272	285
22 Spd	2	2	3	2	3	6	9	17	27	16	13	24	26	22	20	14	12	10	14	21	23	8	4	6	11.0	26.6
Dir	117	157	85	114	124	194	229	236	244	258	251	256	254	253	238	244	220	207	224	244	262	271	221	64	242	244

Hourly Averages

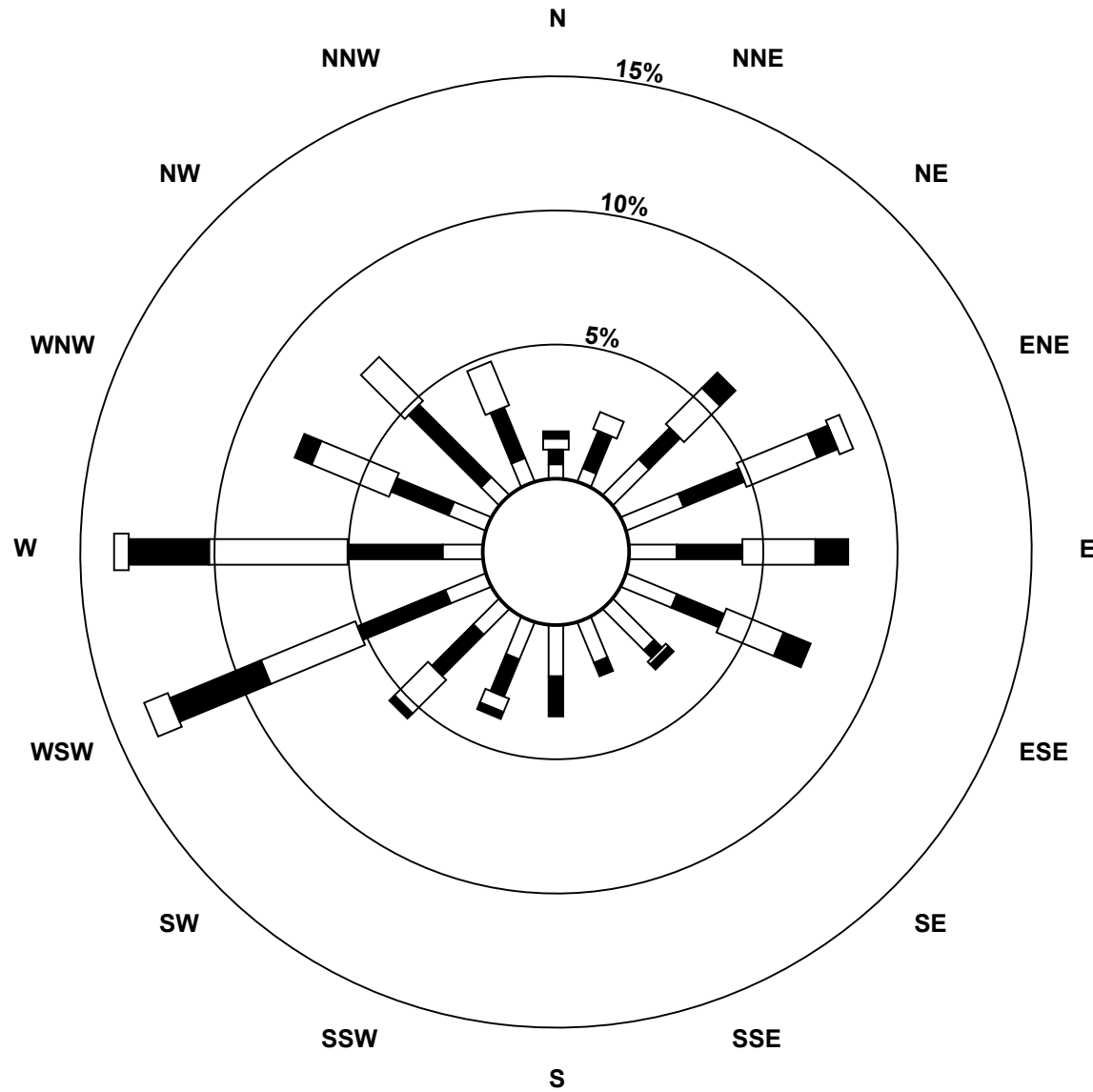
Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - May 2017

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	4	2	2	5	9	11	19	18	21	22	16	8	2	3	7	10	9	7	14	19	18	17	8.0	22.3
Dir	304	310	192	54	293	281	338	300	272	265	254	270	286	278	332	46	37	43	359	333	318	314	311	299	298	270
24 Spd	16	17	17	11	5	9	15	18	18	16	18	21	19	14	17	17	17	18	20	8	10	14	12	10	12.6	21.2
Dir	288	269	264	261	298	318	327	334	334	333	357	353	345	341	348	18	336	336	11	342	333	27	311	328	333	353
25 Spd	12	13	12	7	9	8	8	6	7	3	6	3	4	4	10	20	19	16	18	11	4	4	2	3	5.4	20.1
Dir	326	330	325	341	341	345	334	326	307	282	250	270	249	272	256	228	222	237	233	224	194	167	121	180	269	228
26 Spd	4	4	4	4	4	3	2	3	2	9	16	15	12	12	10	11	12	15	16	12	10	8	10	13	6.4	16.3
Dir	62	79	71	61	64	65	93	167	205	278	285	289	294	307	302	311	287	286	274	273	271	282	255	257	287	274
27 Spd	9	1	2	7	6	8	14	17	14	14	11	7	4	6	4	6	6	8	10	7	7	11	7	6	6.4	16.9
Dir	260	327	280	298	295	320	318	325	327	350	357	11	26	319	321	324	318	17	35	30	24	34	40	42	345	325
28 Spd	11	3	15	17	14	9	12	12	12	14	16	20	22	24	23	24	26	25	22	23	20	15	5	7	16.1	26.0
Dir	82	116	99	102	103	106	119	123	112	116	100	103	100	102	99	97	91	88	88	89	87	87	72	75	97	91
29 Spd	6	5	11	9	2	4	11	9	12	14	10	12	17	18	20	22	21	19	17	15	10	11	14	12	12.1	22.0
Dir	86	113	80	99	154	172	106	67	134	119	118	101	108	102	106	106	99	101	94	90	82	89	101	92	102	106
30 Spd	15	13	8	7	4	2	2	3	5	4	2	4	6	4	8	12	11	12	12	12	7	10	3	8	4.7	14.7
Dir	96	94	82	94	113	334	11	254	265	242	238	87	56	78	94	97	82	99	90	121	58	34	303	302	85	96
31 Spd	4	11	11	7	4	7	7	11	14	18	16	7	10	11	13	16	17	14	13	11	8	3	3	4	6.6	18.3
Dir	348	313	320	328	338	312	314	288	285	263	258	207	169	189	222	218	227	224	213	213	220	231	59	39	250	263
Spd	3.0	1.7	1.6	0.9	1.1	1.1	0.8	1.7	4.4	6.6	7.2	6.6	6.0	6.4	6.1	6.1	5.2	3.4	3.3	3.2	2.4	1.9	1.4	2.1	Diurnal Average	
Dir	61	38	14	34	56	4	347	256	253	264	266	267	270	264	260	263	254	277	284	265	294	345	5	37	Diurnal Maximum	
Spd	29.7	20.5	18.0	22.2	17.1	24.3	23.3	22.1	26.6	34.1	32.7	30.9	31.2	30.4	32.3	29.8	26.0	30.8	31.1	23.3	22.5	21.6	22.8	27.8	Diurnal Maximum	
Dir	67	55	248	254	79	74	77	73	244	255	257	260	255	268	71	68	91	254	245	89	262	55	41	56		
Maximum Speed Value: 34 km/h on May 7 10:00																								Hours in Service: 744		
Maximum Daily Speed Average: 19.1 km/h on May 7																								Hours of Data: 739		
Maximum Diurnal Speed Average: 7.2 km/h at hour 11																								Hours of Missing Data: 5		
Minimum Speed Value: 1 km/h on May 21 00:00																								Percent Operational Time: 99.3		
Minimum Daily Speed Average: 1.2 km/h on May 9																										
Minimum Diurnal Speed Average: 0.8 km/h at hour 7																										
Monthly Average Velocity: 2.55 km/h 276.9 deg																										
Speed Percentiles: P ₁ = 1.2 P ₁₀ = 3.2 Q ₁ = 5.6 Median = 10.5 Q ₃ = 16.3 P ₉₀ = 21.5 P ₉₉ = 30.6																										
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	6	20	6	3	0	0	35																			
NorthEast	26	27	29	8	1	0	91																			
East	24	27	47	21	3	0	122																			
SouthEast	30	13	9	5	0	0	57																			
South	26	14	3	1	0	0	44																			
SouthWest	18	34	30	16	2	0	100																			
West	21	49	66	50	9	0	195																			
NorthWest	13	43	38	1	0	0	95																			
Total	164	227	228	105	15	0	739																			

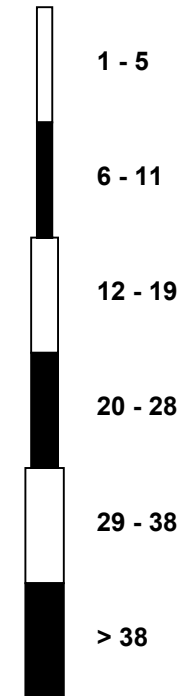
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - May 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - May 2017

Maximum Speed: 34 km/h on May 7 10:00																				Maximum Daily Speed Average: 20.0 km/h on May 7										Hours in Service: 744	
Minimum Speed: 2 km/h on May 8 00:00																				Minimum Daily Speed Average: 6.4 km/h on May 9										Hours of Data: 739	
Maximum Diurnal Speed Average: 17.5 km/h at hour 16																				Minimum Diurnal Speed Average: 6.6 km/h at hour 5										Hours of Missing Data: 5	
Monthly Average Speed: 12.09 km/h																				Percentiles: P ₁ = 2.4 P ₁₀ = 4.1 Q ₁ = 6.5 Median = 11.1 Q ₃ = 16.8 P ₉₀ = 22.1 P ₉₉ = 31.1										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-May	3	3	3	2	5	3	3	3	7	11	12	16	15	13	13	16	8	6	7	5	5	4	4	6	7.3	15.9					
2-May	5	7	5	8	7	5	7	17	17	18	14	15	16	13	17	17	16	16	14	10	8	7	5	5	11.1	17.5					
3-May	3	6	4	4	5	4	7	4	7	12	15	18	20	19	20	26	21	15	12	7	6	5	9	6	10.6	25.9					
4-May	5	5	4	2	3	6	6	6	14	23	20	18	14	12	8	6	7	9	11	9	9	12	11	19	10.0	23.3					
5-May	15	11	9	8	5	3	6	10	8	10	10	10	10	5	7	9	5	4	18	23	10	9	10	11	9.2	22.6					
6-May	9	7	12	5	6	8	9	6	12	16	22	19	23	21	28	30	26	24	31	23	11	18	13	3	16.0	31.5					
7-May	8	15	18	22	10	11	13	21	25	34	33	31	32	31	30	30	25	31	18	14	9	11	6	2	20.0	34.4					
8-May	3	4	5	4	5	4	3	4	9	21	27	31	29	20	23	27	25	19	18	10	8	7	6	7	13.2	31.0					
9-May	4	5	4	4	4	4	3	5	6	7	7	8	6	7	7	7	6	6	6	7	8	9	11	15	6.4	14.6					
10-May	9	4	4	6	8	7	8	7	15	15	12	10	12	9	10	9	8	5	8	10	10	14	14	13	9.5	15.5					
11-May	12	10	8	10	11	5	8	11	15	13	18	22	27	29	32	30	20	22	22	12	15	22	23	28	17.8	32.5					
12-May	30	21	13	9	17	24	23	22	18	16	16	17	18	21	25	21	19	17	13	12	9	4	6	6	16.6	29.8					
13-May	6	10	11	14	11	11	13	14	16	17	18	16	11	13	11	11	12	10	8	7	10	6	10	11	11.7	17.5					
14-May	9	8	5	5	2	6	7	7	10	6	9	15	15	15	13	13	9	6	10	15	13	13	8	8	9.5	15.4					
15-May	6	5	3	4	4	4	3	4	3	5	P	P	P	P	P	18	16	18	23	18	9	7	14	15	9.5	23.3					
16-May	19	13	14	17	15	11	10	12	16	18	18	18	19	17	16	13	12	13	17	11	9	9	14	13	14.3	19.4					
17-May	13	12	12	12	12	10	9	11	14	15	19	18	17	22	22	26	24	23	21	17	10	11	9	5	15.2	26.4					
18-May	3	2	5	6	4	4	4	8	11	11	23	20	22	18	15	13	13	13	11	18	11	9	8	6	10.8	23.3					
19-May	5	8	11	9	6	12	13	19	26	26	25	24	24	23	22	20	21	18	19	12	12	8	4	3	15.5	26.2					
20-May	5	5	3	3	4	5	2	3	5	20	20	21	23	20	20	20	19	18	18	15	8	7	3	4	11.3	22.6					
21-May	5	6	5	4	4	3	3	4	5	10	23	20	18	22	23	24	24	22	24	20	13	10	8	7	12.8	24.3					
22-May	2	3	3	3	3	6	10	18	27	16	14	24	26	23	20	14	12	11	14	22	23	8	5	7	13.0	26.8					
23-May	5	3	4	3	3	6	10	12	19	18	22	23	17	9	5	6	8	14	12	10	14	19	18	17	11.6	22.8					
24-May	16	17	17	11	6	9	15	18	18	16	18	22	20	16	17	18	19	19	23	9	11	14	12	10	15.5	22.9					
25-May	12	13	12	7	9	8	9	7	7	5	7	6	7	7	12	20	19	16	18	11	5	4	3	4	9.5	20.5					
26-May	4	4	4	4	4	3	3	3	4	9	16	15	13	13	11	12	13	16	17	13	10	8	10	13	9.2	16.6					
27-May	9	4	4	7	6	8	14	17	14	14	12	10	7	9	7	8	9	8	10	7	7	11	7	6	9.0	17.0					
28-May	11	3	15	17	14	9	12	13	13	14	17	21	23	24	24	24	26	26	23	23	20	15	5	7	16.6	26.2					
29-May	7	6	11	9	2	5	11	11	13	14	10	12	17	19	21	22	21	19	17	15	10	11	14	13	13.0	22.3					
30-May	15	13	8	7	4	4	4	4	5	4	3	5	7	6	8	12	11	12	12	14	9	10	4	9	8.0	14.8					
31-May	7	11	11	7	5	7	8	11	14	18	16	8	10	12	13	17	17	14	13	11	8	5	3	5	10.5	18.4					
8.6 7.8 8.0 7.6 6.6 6.9 8.3 10.0 12.7 14.6 16.6 17.1 17.2 16.2 16.7 17.5 15.9 15.1 15.8 13.2 10.4 9.9 9.0 9.2																									Diurnal Average						
29.8 20.5 18.2 22.3 17.1 24.4 23.4 22.1 26.8 34.4 33.0 31.4 31.8 31.2 32.5 30.3 26.2 31.2 31.5 23.4 22.9 22.0 23.0 28.5																									Diurnal Maximum						
P - Power Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - May 2017

Maximum Value: 94.7 deg on May 23 15:00																			Hours in Service: 744						
Minimum Value: 2.1 deg on May 28 04:00																			Hours of Data: 739						
Percentiles: P ₁ = 3.5 P ₁₀ = 6.1 Q ₁ = 9.4 Median = 14.8 Q ₃ = 30.2 P ₉₀ = 53.2 P ₉₉ = 85.4																			Hours of Missing Data: 5						
																			Hours of Calibration: 0						
																			Percent Operational Time: 99.3						
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-May	48	49	67	66	16	18	29	51	37	24	20	18	26	42	26	18	33	52	61	48	32	31	30	13	66.9
2-May	25	69	13	12	8	60	8	5	8	14	15	22	31	43	25	27	13	13	11	6	7	11	85	36	84.6
3-May	50	13	17	34	45	32	78	30	22	16	12	22	11	17	17	12	14	22	14	44	74	36	7	12	78.2
4-May	9	38	79	17	65	11	85	61	9	6	8	10	14	23	53	53	61	22	16	11	6	4	10	2	85.3
5-May	4	6	20	11	90	87	38	26	83	48	57	49	14	57	65	40	87	45	37	9	22	19	17	6	89.6
6-May	33	60	15	70	43	14	13	20	13	9	8	13	14	16	13	12	8	15	8	9	18	14	12	46	70.5
7-May	11	7	8	6	14	12	9	7	12	7	8	10	12	13	13	13	15	11	13	14	27	9	14	63	63.1
8-May	70	20	8	19	19	21	48	40	21	16	10	8	14	16	11	12	12	25	21	15	29	33	43	32	70.1
9-May	61	54	46	17	44	33	33	26	21	45	53	15	50	39	50	64	42	60	28	19	12	4	7	4	63.9
10-May	34	45	45	50	40	22	40	21	13	17	21	37	34	55	59	63	55	59	48	19	3	3	4	14	62.7
11-May	7	11	11	20	18	19	30	9	11	20	12	12	12	8	6	5	60	16	9	69	27	13	6	13	69.5
12-May	6	5	31	44	6	5	4	4	5	6	5	13	65	10	23	17	15	15	17	9	17	40	31	11	64.5
13-May	13	7	6	5	8	7	9	6	6	6	6	6	18	12	13	18	12	8	11	20	5	9	8	27	26.8
14-May	5	9	18	13	58	17	25	20	19	34	22	20	28	18	40	27	66	22	13	11	5	4	9	7	65.8
15-May	24	27	19	42	18	17	24	26	43	55	P	P	P	P	P	12	71	19	10	8	15	14	9	7	70.8
16-May	6	10	7	5	6	7	12	12	10	11	9	9	11	10	14	12	19	15	12	7	14	9	7	4	18.9
17-May	6	8	5	5	6	11	18	14	12	12	9	12	16	25	21	12	7	9	7	6	7	6	10	83	83.1
18-May	50	77	56	11	12	68	60	11	10	21	8	27	14	42	21	50	22	32	61	6	6	12	13	64	76.9
19-May	34	10	13	13	14	9	6	5	6	11	17	16	13	14	24	16	15	10	10	14	5	6	41	86	85.9
20-May	14	29	34	25	63	12	30	23	52	11	13	18	13	20	17	17	19	13	14	12	8	6	34	89	88.6
21-May	14	13	24	21	21	20	32	23	37	41	11	18	15	13	16	14	11	15	6	9	8	5	13	24	40.9
22-May	53	30	28	39	26	14	27	16	6	13	20	7	7	14	8	5	7	8	6	11	9	35	46	45	53.0
23-May	9	70	43	29	72	46	29	19	8	15	11	12	19	36	95	86	60	47	53	73	7	6	6	6	94.7
24-May	9	4	6	19	33	9	8	6	7	7	12	13	13	26	14	19	23	11	27	24	23	16	9	6	32.6
25-May	4	4	9	24	13	12	11	31	25	51	48	74	60	74	45	11	13	10	10	8	21	11	26	37	74.2
26-May	14	26	18	7	13	17	39	14	63	21	12	21	20	24	27	24	26	11	10	7	9	15	6	4	62.5
27-May	6	67	78	16	19	19	6	6	13	15	25	51	75	61	52	48	63	23	12	7	7	6	8	35	77.9
28-May	22	32	10	2	4	11	7	9	15	12	15	9	7	9	8	10	8	7	5	4	4	11	26	15	32.2
29-May	29	51	10	10	33	32	15	37	20	14	27	16	12	12	10	9	7	6	4	3	6	4	3	5	50.9
30-May	3	5	14	17	37	60	54	69	27	38	73	48	41	63	21	12	14	10	5	36	44	13	53	41	72.8
31-May	50	12	6	16	44	10	22	20	8	7	11	30	11	22	22	12	12	16	10	11	11	66	58	45	65.6
	70.1	76.9	78.5	70.5	89.6	87.3	85.3	69.1	83.4	55.4	72.8	73.8	75.2	74.2	94.7	85.6	87.4	60.2	61.1	73.1	74.0	65.6	84.6	88.6	
P - Power Failure																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

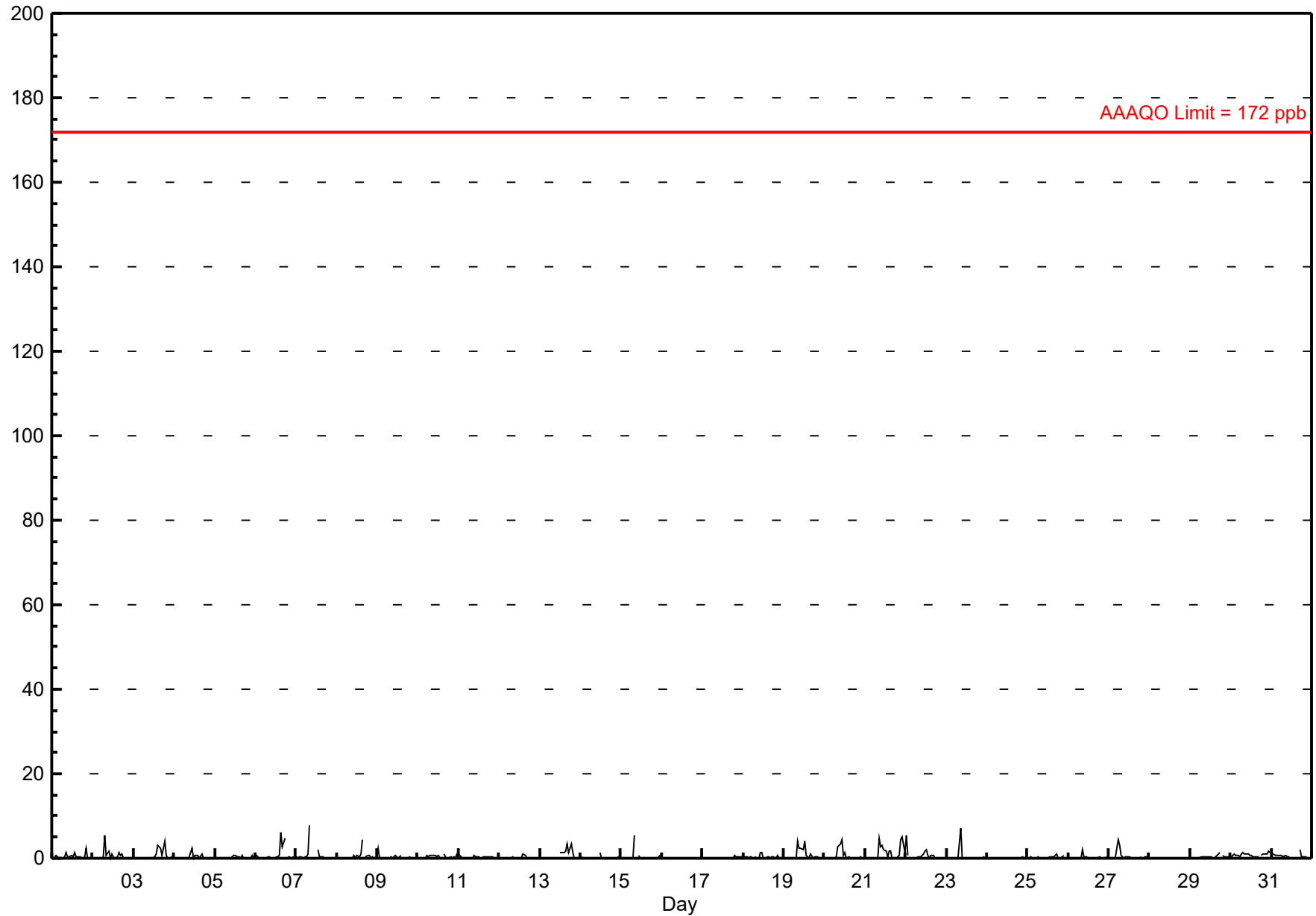
Sulphur Dioxide (SO₂) - ppb

Valleyview - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.7 ppb on May 7 09:00 Maximum Daily Average: 1.3 ppb on May 21																			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 May 2 22:00 Maximum Diurnal Average: 1.3 ppb at hour 9 Monthly Average: 0.41 ppb																			Minimum Daily Average: 0.0 ppb on May 28 Minimum Diurnal Average: 0.1 ppb at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.1 P ₉₉ = 4.8							
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-May	A	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	2	0	0	A	0.4	2.3
2-May	0	0	0	0	0	0	0	5	1	2	0	1	0	0	0	1	1	1	0	0	0	0	A	0	0.6	5.4
3-May	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	2	1	4	1	0	A	0	0	0.7	4.0
4-May	0	0	0	0	0	0	0	0	0	0	2	0	1	1	1	0	1	0	0	0	A	0	0	0	0.3	2.2
5-May	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	A	0	0	1	0	0.2	0.8
6-May	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	3	5	A	0	0	0	0	0	0.8	6.2
7-May	0	0	0	0	0	0	0	1	8	C	C	C	C	2	0	1	0	A	0	0	0	0	0	0	0.7	7.7
8-May	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	4	A	0	1	1	0	0	0	0	0.4	4.2
9-May	2	0	0	0	0	0	0	0	0	0	1	0	0	1	1	A	0	0	0	0	0	0	0	0	0.2	2.3
10-May	0	0	0	0	0	1	0	1	1	1	1	1	1	0	A	1	0	0	0	0	0	0	0	1	0.4	1.0
11-May	1	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	1.0
12-May	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0.1	1.2
13-May	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	2	3	1	4	1	0	0	0	0	0.7	3.5
14-May	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.2
15-May	0	0	0	0	0	0	0	0	5	A	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	5.5
16-May	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-May	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.5
18-May	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0.3	1.4
19-May	0	0	0	0	0	A	0	0	4	2	2	2	4	1	0	0	1	0	0	0	0	0	0	0	0.8	4.1
20-May	0	0	0	0	A	0	0	0	3	4	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0.7	4.5
21-May	0	0	0	A	0	0	0	0	5	3	3	2	2	0	2	2	0	0	0	0	1	4	5	1	1.3	5.0
22-May	5	1	A	0	0	0	0	0	0	0	1	2	2	1	0	1	1	0	0	0	0	0	0	0	0.6	5.5
23-May	0	A	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	7.0
24-May	A	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	0.3
25-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	A	0	0.2	1.1
26-May	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	2.0
27-May	0	0	0	0	0	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	4.4
28-May	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	0.1
29-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0.3	1.2
30-May	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	A	1	1	1	1	2	1	0.8	1.6
31-May	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	A	2	0	0	0	0	0	0	0.4	1.9
0.4 0.2 0.1 0.1 0.1 0.2 0.2 0.4 1.3 0.5 0.7 0.5 0.6 0.4 0.4 0.8 0.5 0.5 0.4 0.3 0.3 0.3 0.4 0.2																									Diurnal Average	
5.5 1.1 1.0 0.8 0.5 4.4 2.9 5.4 7.7 3.5 4.5 2.2 4.1 2.2 2.9 6.2 3.5 4.8 4.0 1.4 2.3 4.4 5.0 1.5																									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 - May 2017



Hourly Maximums

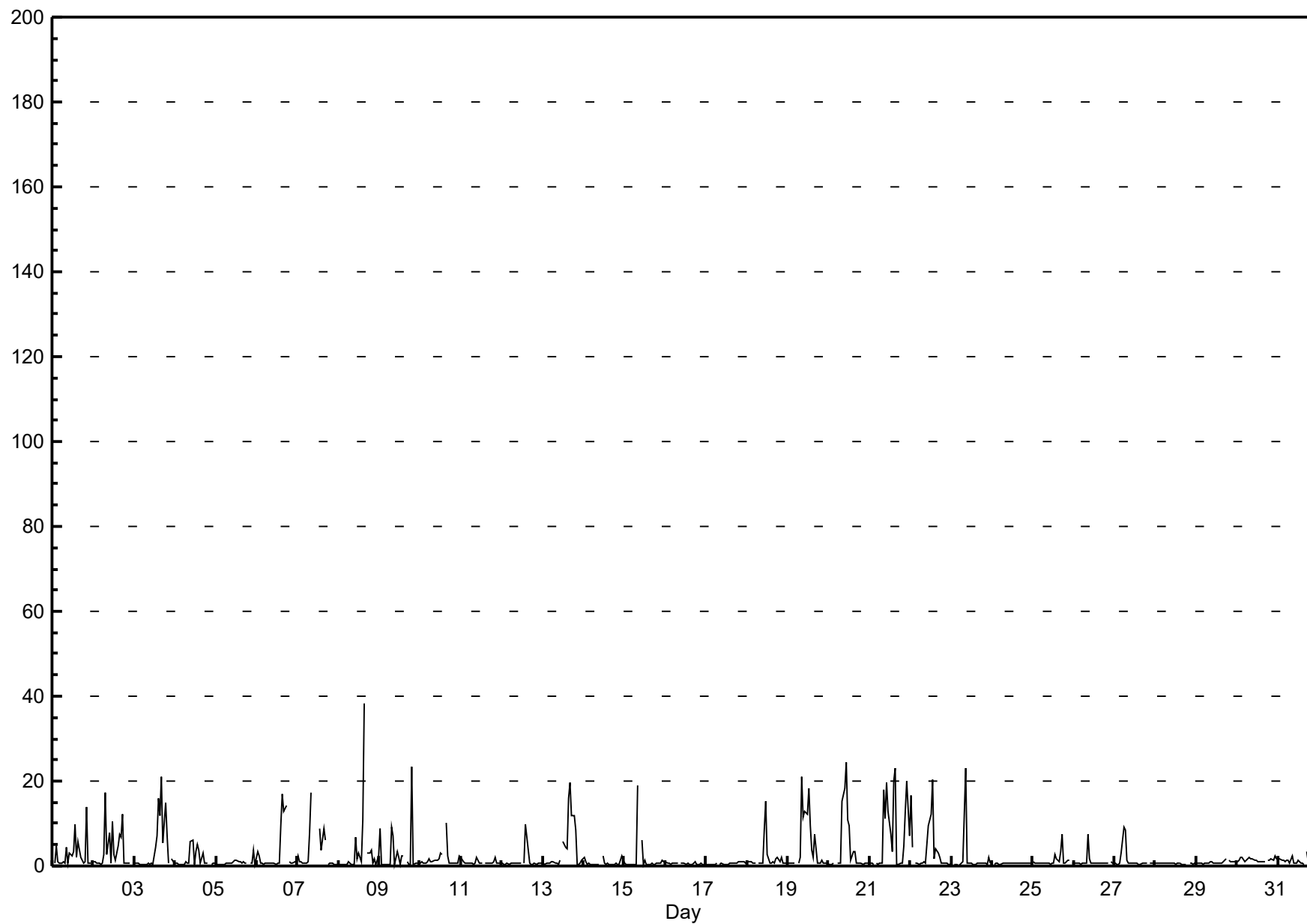
Sulphur Dioxide (SO₂) - ppb

Valleyview - May 2017

Maximum Value: 38.2 ppb on May 8 16:00																				Maximum Daily Average: 7.2 ppb on May 21					Hours in Service: 744				
Minimum Value: 0 ppb on May 23 05:00																				Minimum Daily Average: 0.5 ppb on May 24					Hours of Data: 707				
Maximum Diurnal Average: 5.4 ppb at hour 16																				Minimum Diurnal Average: 0.6 ppb at hour 5					Hours of Missing Data: 37				
Monthly Average: 2.23 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.7 Q ₃ = 1.3 P ₉₀ = 6.8 P ₉₉ = 21.0					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-May	A	1	5	1	1	1	1	1	4	1	3	2	3	10	2	6	2	1	1	1	14	1	1	A	2.7	14.0			
2-May	1	1	1	1	0	1	3	17	3	8	1	10	3	1	5	7	7	12	1	1	1	1	A	1	3.7	17.1			
3-May	1	1	1	0	0	0	0	0	1	0	1	0	4	7	16	12	21	6	15	7	1	A	2	1	4.2	21.0			
4-May	1	1	0	0	0	0	1	1	1	6	6	0	3	5	4	1	3	1	1	1	A	0	1	1	1.6	6.1			
5-May	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	4	1	0.8	3.8			
6-May	3	2	1	1	0	1	1	1	1	1	1	0	1	1	10	17	13	14	A	1	1	1	1	1	3.1	17.1			
7-May	2	1	1	1	1	1	1	8	17	C	C	C	C	9	4	9	6	A	0	1	1	0	0	0	3.3	17.2			
8-May	0	0	0	0	0	0	1	0	0	0	7	2	3	1	11	38	A	3	3	4	1	2	0	2	3.5	38.2			
9-May	9	0	0	0	0	0	0	9	7	0	3	2	0	2	2	A	1	0	0	23	0	1	1	1	2.9	23.4			
10-May	1	1	1	1	1	2	1	1	1	1	1	2	3	3	A	10	3	1	1	1	1	1	1	2	1.7	10.0			
11-May	2	1	1	1	1	1	1	0	1	2	1	1	1	A	1	1	1	1	1	1	2	1	1	1	0.9	2.2			
12-May	1	0	0	1	0	1	1	1	1	1	1	1	A	1	10	4	1	0	0	1	0	1	1	1	1.2	9.7			
13-May	1	0	1	1	1	1	1	1	1	0	1	A	6	5	4	16	20	12	12	9	0	0	1	1	4.0	19.8			
14-May	2	1	0	1	0	0	0	0	0	0	A	2	1	0	1	0	0	0	0	1	0	0	2	1	0.7	2.3			
15-May	1	0	0	0	0	0	0	0	19	A	6	0	1	0	0	0	1	0	0	1	1	1	1	1	1.6	18.9			
16-May	1	1	1	0	1	1	1	1	A	1	1	1	0	1	0	0	0	1	0	0	0	1	0	0	0.6	1.1			
17-May	0	0	0	0	0	0	1	A	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0			
18-May	1	1	1	1	1	1	A	1	1	1	8	15	3	1	1	1	1	2	2	1	2	1	1	1	2.0	15.3			
19-May	1	1	1	1	1	A	1	2	21	11	13	12	18	10	4	2	7	1	1	1	1	1	1	1	4.8	21.0			
20-May	0	0	0	1	A	1	1	1	15	18	24	11	9	1	3	3	1	1	1	1	0	1	1	1	4.2	24.4			
21-May	1	1	0	A	1	0	1	1	18	11	20	13	8	4	20	23	0	0	1	1	5	13	20	7	7.2	23.0			
22-May	17	4	A	1	1	0	1	1	1	1	10	11	12	20	2	4	3	2	1	1	1	1	0	0	4.1	20.3			
23-May	1	A	0	0	0	0	1	1	23	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1.6	23.1			
24-May	A	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.5	0.8			
25-May	1	1	1	1	1	1	1	1	1	1	0	1	1	3	2	1	3	8	1	1	1	1	A	1	1.3	7.5			
26-May	1	1	1	1	0	1	1	1	8	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	7.5			
27-May	1	0	0	1	3	9	8	1	1	1	1	1	1	1	0	0	1	1	1	1	A	1	1	1	1.5	9.2			
28-May	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	A	1	1	0	1	0.6	0.7			
29-May	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	0.8	1.7			
30-May	1	1	2	2	1	1	2	2	2	2	1	1	1	1	1	1	1	A	1	1	2	1	2	2	1.4	2.3			
31-May	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	0	A	3	1	1	1	1	1	1	1.2	3.3			
1.8 0.9 0.8 0.7 0.6 0.9 1.1 1.8 5.1 2.6 4.0 3.3 3.1 3.0 3.5 5.4 3.5 2.6 1.6 2.2 1.4 1.2 1.6 1.1																									Diurnal Average				
16.8 4.4 4.6 2.0 3.0 9.2 8.5 17.1 23.1 18.3 24.4 15.3 18.1 20.3 20.0 38.2 21.0 14.2 15.0 23.4 14.0 12.9 20.1 7.3																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

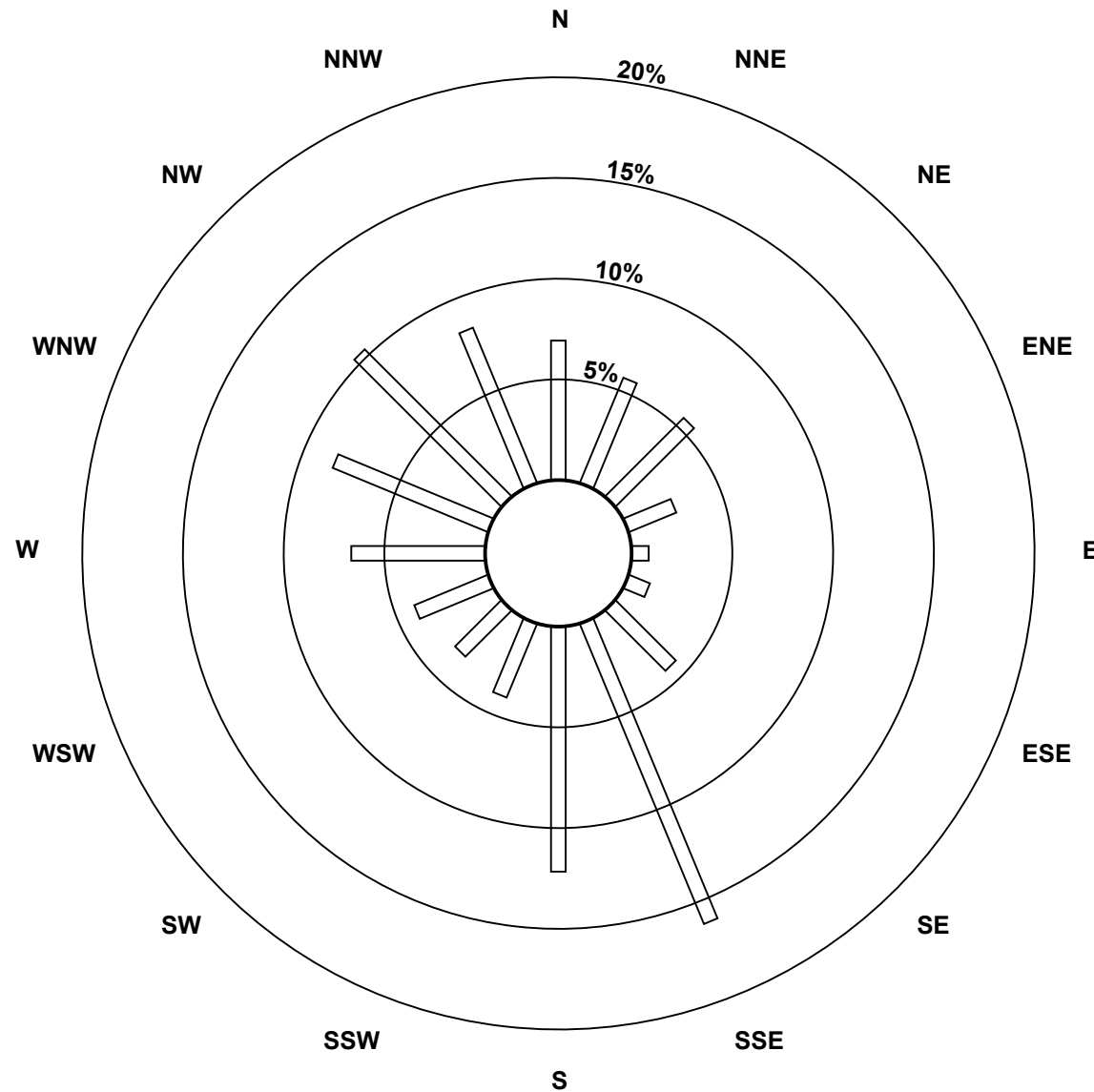
Sulphur Dioxide (SO₂) - ppb
Valleyview - May 2017



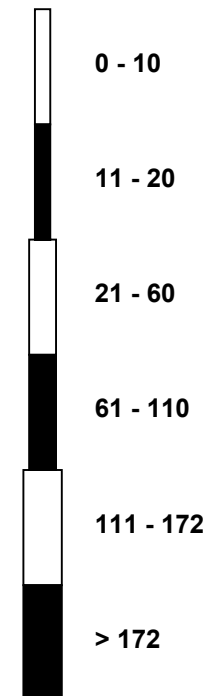
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Valleyview - May 2017

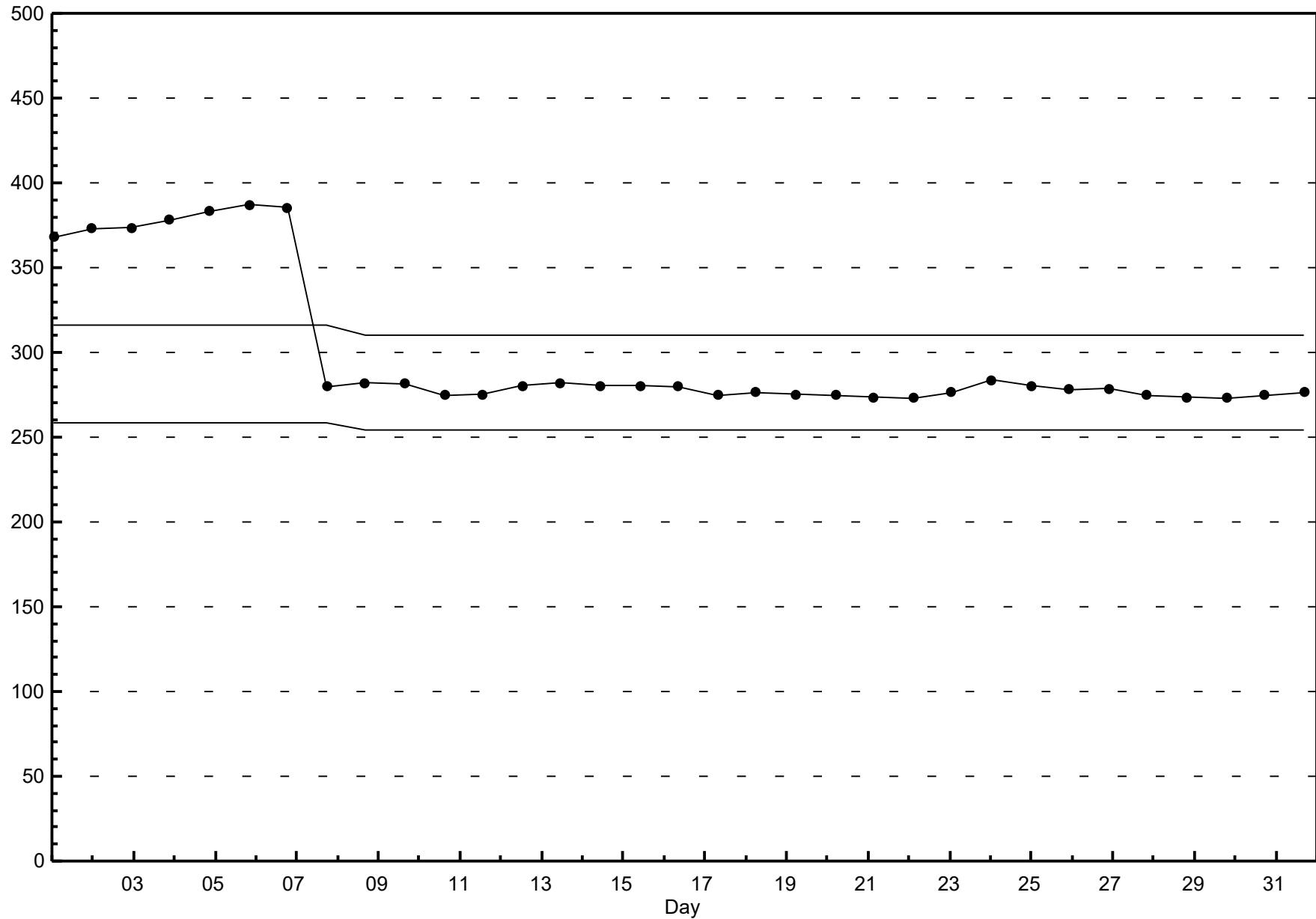


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - May 2017



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

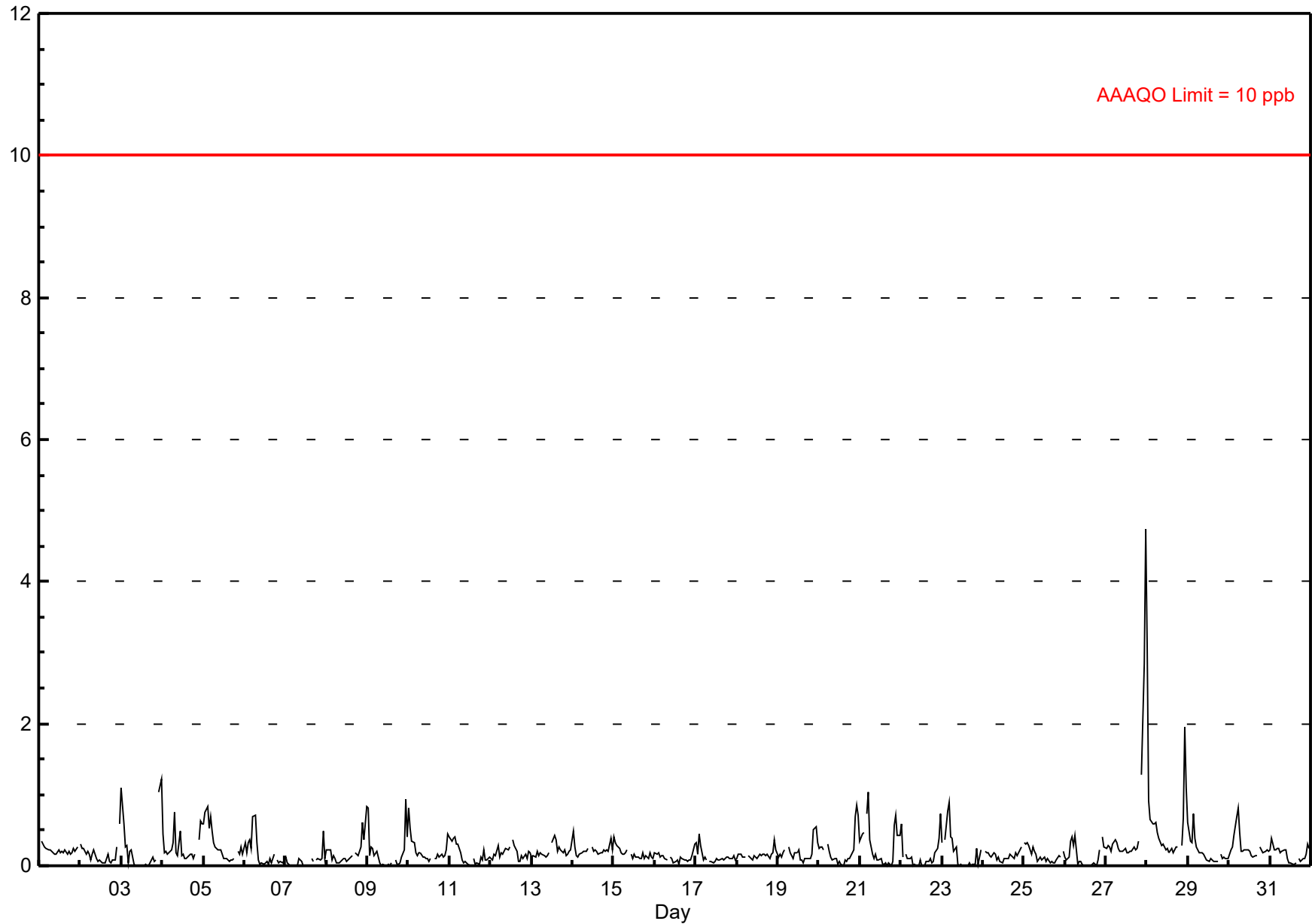
Valleyview - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.7 ppb on May 28 00:00 Maximum Daily Average: 0.6 ppb on May 28																				Hours in Service: 744 Hours of Data: 708							
Minimum Value: 0 ppb on May 3 09:00 Minimum Daily Average: 0.1 ppb on May 7 Maximum Diurnal Average: 0.5 ppb at hour 24 Minimum Diurnal Average: 0.1 ppb at hour 16 Monthly Average: 0.21 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.0																				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-May	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	0.3	
2-May	0	0	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-May	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.2	1.2
4-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.3	0.8
5-May	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.8
6-May	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.7
7-May	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	A	0	0	0	0	0	0	0	0.1	0.5
8-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	1	0.2	0.8
9-May	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0.2	0.9
10-May	1	1	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	0.8
11-May	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	0.1	0.4
12-May	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	0.2	0.4
13-May	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	0.2	0.4
14-May	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	0.2	0.5
15-May	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	0.4
16-May	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	0.3
17-May	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	0.1	0.5
18-May	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	0.4
19-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.5
20-May	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	0.9
21-May	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.3	1.0
22-May	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.7
23-May	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
24-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
25-May	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-May	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	0.4
27-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	3	5	0.6	4.7	
28-May	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	2	1	0.6	3.1	
29-May	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.7
30-May	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.8
31-May	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	0.4
0.5 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 0.1 0.1 0.1 0.1 0.2 0.3 0.5 0.5																								Diurnal Average			
3.1 0.9 0.8 0.8 0.9 1.0 0.7 0.8 0.3 0.3 0.5 0.3 0.3 0.4 0.4 0.2 0.3 0.3 0.3 0.4 0.6 1.3 2.9 4.7																								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 - May 2017



Hourly Maximums

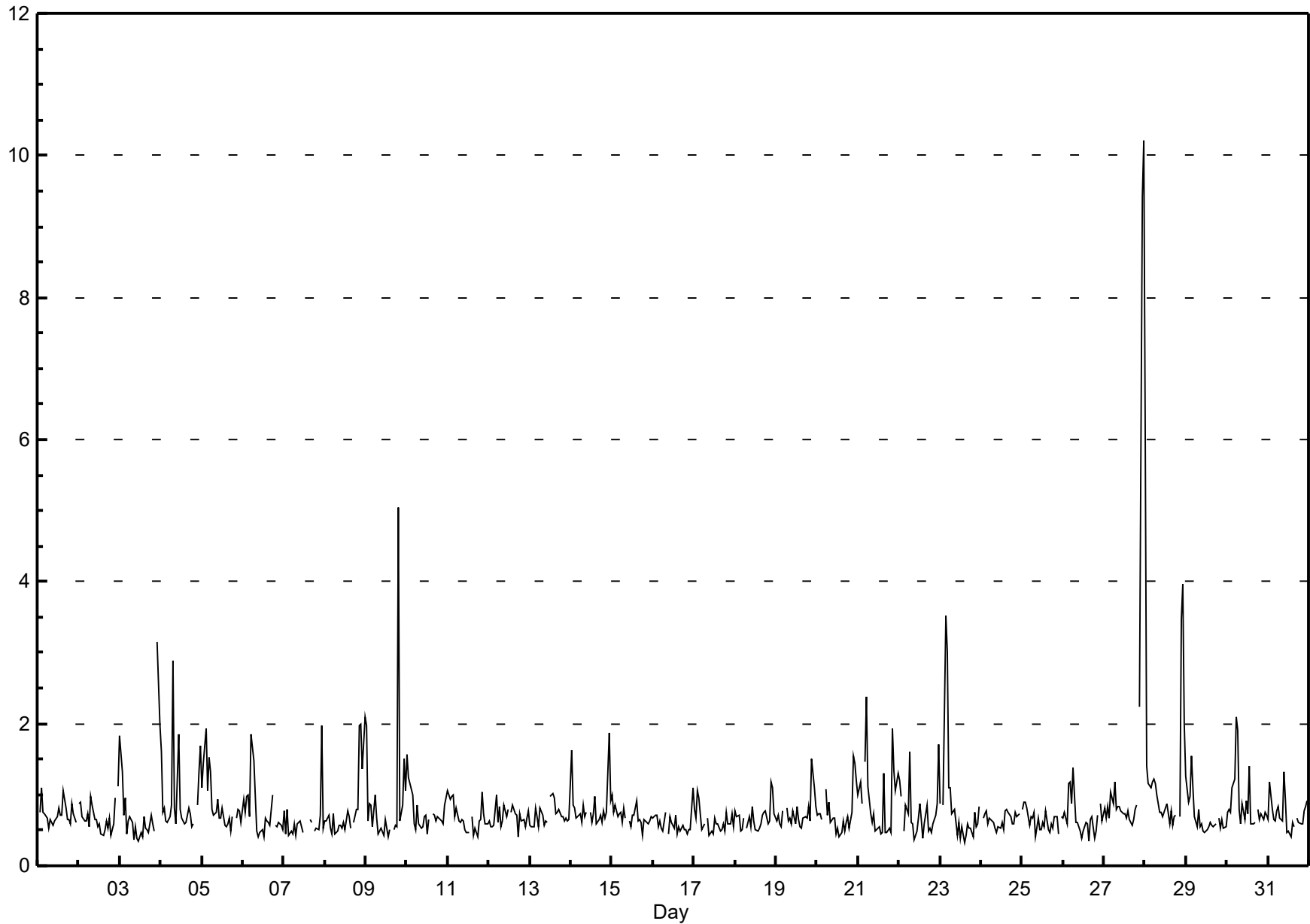
Hydrogen Sulphide (H₂S) - ppb

Valleyview - May 2017

Maximum Value: 10.2 ppb on May 28 00:00																				Maximum Daily Average: 1.6 ppb on May 27					Hours in Service: 744	
Minimum Value: 0 ppb on May 23 15:00																				Minimum Daily Average: 0.6 ppb on May 16					Hours of Data: 708	
Maximum Diurnal Average: 1.4 ppb at hour 23																				Minimum Diurnal Average: 0.6 ppb at hour 12					Hours of Missing Data: 36	
Monthly Average: 0.80 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.1 P ₉₉ = 3.5					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-May	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	0.7	1.1
2-May	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	A	1	0.7	1.1
3-May	2	1	1	1	0	1	1	1	0	1	0	0	0	0	1	1	1	0	1	1	0	A	3	2	0.8	3.2
4-May	2	1	1	1	1	1	1	3	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	2	1.0	2.9
5-May	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	0.9	1.9
6-May	1	1	1	1	1	2	1	1	0	0	0	1	0	1	1	1	1	1	A	1	1	1	1	1	0.7	1.8
7-May	1	0	1	0	0	0	1	0	1	1	1	0	C	C	C	1	1	A	0	1	1	1	2	1	0.6	2.0
8-May	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	2	2	1	2	0.8	2.1
9-May	2	1	1	1	1	1	1	0	0	1	0	1	1	0	1	A	1	1	1	5	1	1	2	1	0.9	5.1
10-May	2	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	0.8	1.6
11-May	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	0	1	0	1	1	1	1	1	1	0.7	1.0
12-May	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	0.7	1.0
13-May	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
14-May	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	0.8	1.9
15-May	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	1.0
16-May	1	1	1	1	1	1	0	1	A	0	1	1	1	1	0	1	0	1	1	0	0	1	1	1	0.6	1.1
17-May	1	1	1	1	1	1	1	A	1	0	0	0	1	1	1	0	1	1	0	1	1	1	1	1	0.6	1.1
18-May	1	1	1	0	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1.2	1.2
19-May	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0.7	1.5
20-May	1	1	1	1	A	1	1	1	1	1	1	0	1	0	0	1	0	1	1	1	1	2	1	1	0.7	1.5
21-May	1	1	1	A	1	2	1	1	1	1	0	1	1	0	0	1	0	0	1	0	2	1	1	1	0.9	2.4
22-May	1	1	A	0	1	1	2	1	1	0	0	1	1	1	0	1	1	0	1	0	1	1	1	2	0.8	1.7
23-May	1	A	1	4	3	1	1	1	1	1	0	1	0	1	0	0	1	1	1	0	1	1	1	1	0.9	3.5
24-May	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.8
25-May	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	A	1	0.6	0.9
26-May	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	0	0	1	A	1	1	0.7	1.4
27-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	9	10	1.6	10.2
28-May	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	3	4	2	1.4	6.0
29-May	1	1	1	2	1	1	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.5
30-May	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	2.1
31-May	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	A	1	1	1	1	1	1	1	0.7	1.3
1.2 0.8 0.9 0.9 0.9 0.9 0.9 0.8 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.8 0.7 1.0 1.4 1.3																									Diurnal Average	
6.0 1.4 1.9 3.5 3.0 2.4 1.9 2.9 0.9 1.3 1.9 0.9 1.0 1.4 1.0 1.3 0.9 1.0 0.8 5.1 2.0 3.5 9.4 10.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

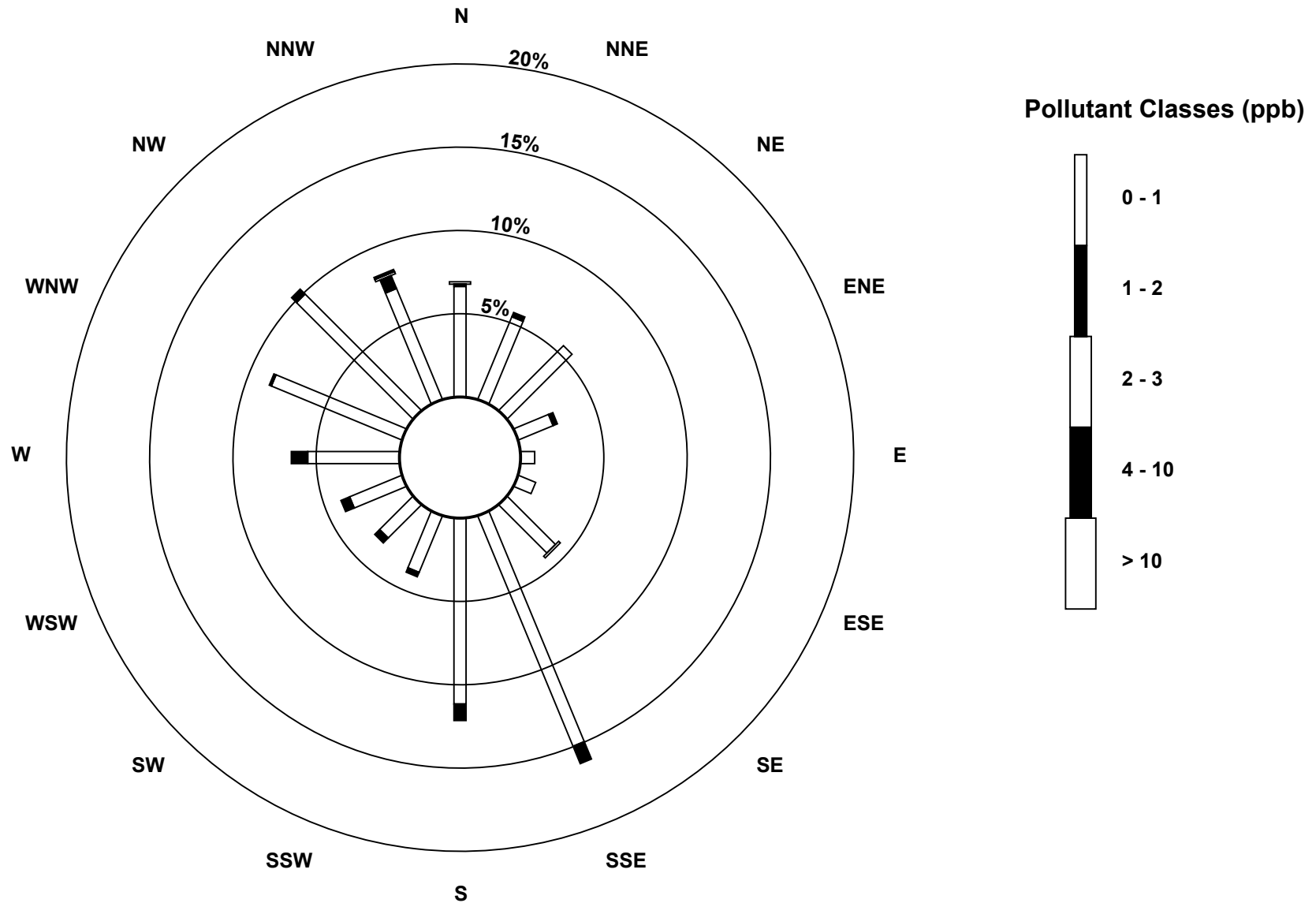
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - May 2017



Pollutant Rose

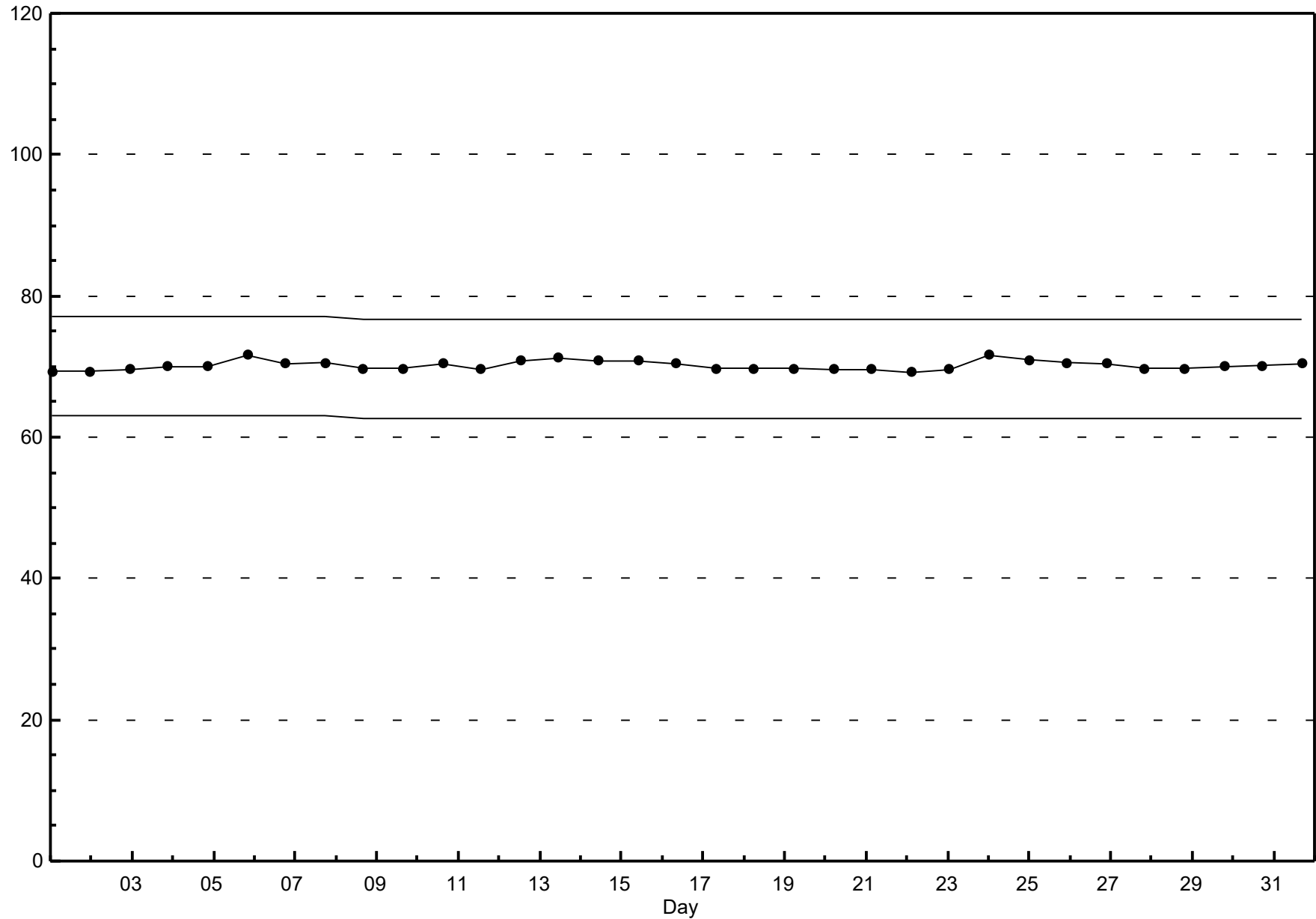
Hydrogen Sulphide (H₂S) - ppb
Valleyview - May 2017



Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - May 2017



Hourly Averages

External Temperature (ET) - °C

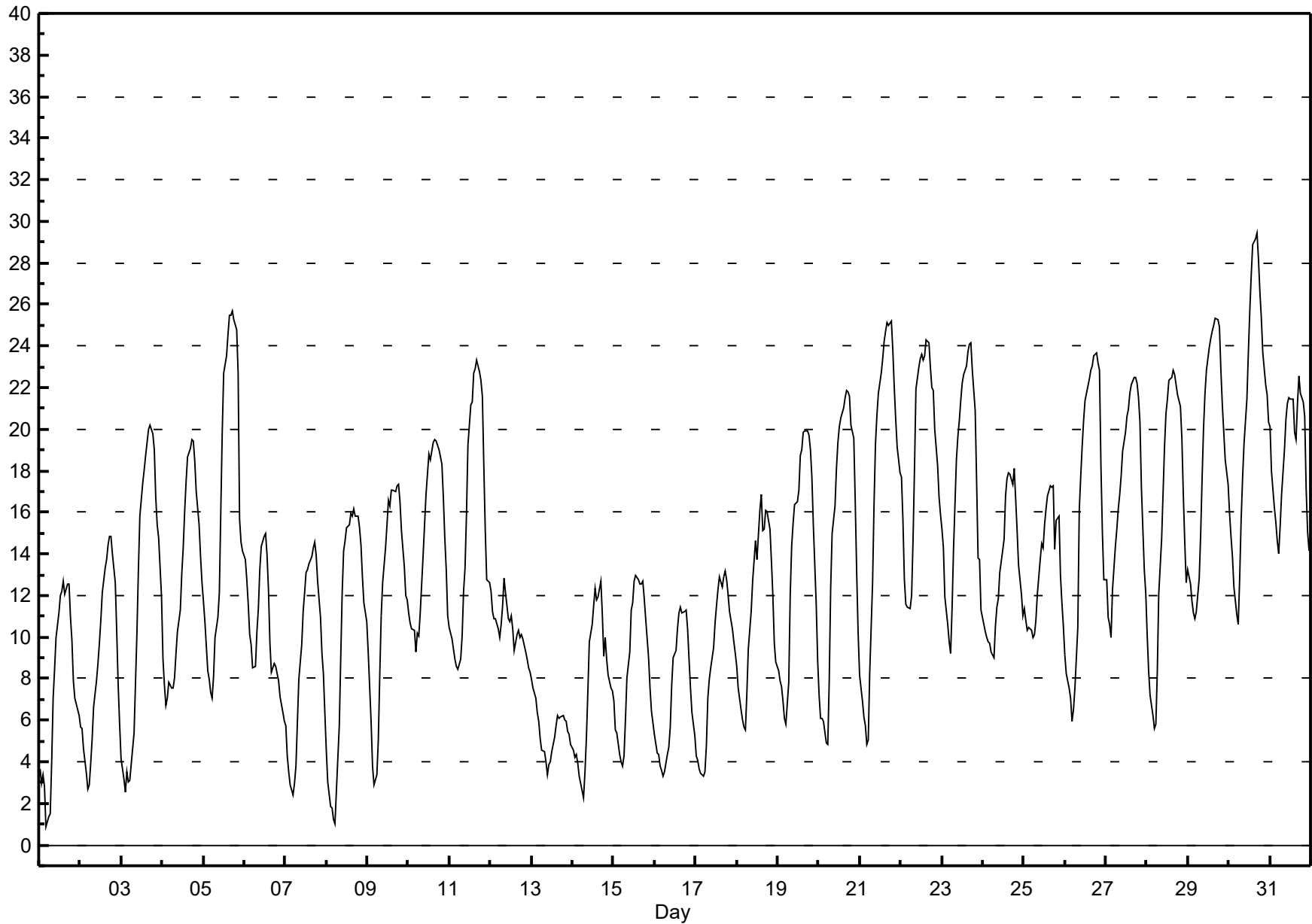
Valleyview - May 2017

Maximum Value: 29.4 °C on May 30 17:00																								Maximum Daily Average: 20.7 °C on May 30						Hours in Service: 744	
Minimum Value: 1 °C on May 1 05:00																								Minimum Daily Average: 5.5 °C on May 13						Hours of Data: 744	
Maximum Diurnal Average: 18.2 °C at hour 17																								Minimum Diurnal Average: 6.7 °C at hour 6						Hours of Missing Data: 0	
Monthly Average: 13.07 °C																								Percentiles: P ₁ = 2.3 P ₁₀ = 5.0 Q ₁ = 8.3 Median = 12.3 Q ₃ = 17.6 P ₉₀ = 22.1 P ₉₉ = 24.9						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-May	4	3	3	3	1	1	2	4	7	8	10	11	12	12	13	12	13	13	11	10	8	7	7	6	7.5	12.7					
2-May	6	6	5	3	3	3	4	5	7	8	9	10	11	12	13	14	14	15	15	14	13	10	8	6	8.8	14.9					
3-May	4	3	3	4	3	3	4	5	8	10	13	16	17	18	19	19	20	20	20	19	17	15	15	12	12.0	20.2					
4-May	9	8	7	7	8	8	8	8	9	10	11	13	14	16	17	19	19	19	19	18	17	15	14	13	12.8	19.5					
5-May	12	11	8	8	7	7	8	10	11	12	16	20	23	24	25	25	25	26	25	25	23	16	15	14	16.4	25.7					
6-May	14	13	12	10	10	9	9	10	11	13	14	15	15	14	12	10	8	9	9	8	8	7	6	6	10.5	15.0					
7-May	6	4	4	3	2	3	4	6	8	10	11	12	13	13	14	14	14	15	14	13	11	9	8	6	9.0	14.6					
8-May	5	3	2	2	1	1	3	6	9	12	14	15	15	15	16	16	16	16	16	15	14	13	12	11	10.3	16.2					
9-May	9	8	6	4	3	3	5	8	11	13	14	15	17	16	17	17	17	17	17	17	15	13	12	12	12.0	17.4					
10-May	11	11	10	10	9	10	10	11	14	15	17	18	19	19	19	20	19	19	19	18	17	15	13	11	14.8	19.5					
11-May	10	10	9	9	9	8	9	10	12	13	16	19	21	21	23	23	23	23	22	22	18	15	13	13	15.5	23.3					
12-May	12	11	11	11	10	10	11	12	13	12	11	11	11	10	9	10	10	10	10	10	9	9	9	8	10.4	12.8					
13-May	8	8	7	6	6	5	5	4	4	3	4	4	5	5	6	6	6	6	6	6	6	5	5	5	5.5	7.9					
14-May	5	4	4	4	3	3	2	4	5	7	10	11	12	12	12	12	13	11	9	10	9	8	8	7	7.7	12.7					
15-May	7	6	5	4	4	4	4	6	8	9	11	12	13	13	13	13	13	13	12	11	9	8	6	6	8.7	13.0					
16-May	5	4	4	4	4	3	4	4	5	6	8	9	9	10	11	11	11	11	11	10	9	8	6	5	7.3	11.4					
17-May	4	4	4	3	3	4	5	7	8	9	10	11	11	12	13	12	13	13	13	12	11	10	10	9	8.8	13.1					
18-May	9	8	7	6	6	6	7	9	11	13	14	15	14	16	17	15	15	16	16	15	14	12	10	9	11.5	16.8					
19-May	8	8	8	7	6	6	8	12	14	15	16	17	17	19	19	20	20	20	20	19	18	15	12	9	13.8	19.9					
20-May	7	6	6	6	5	5	8	12	15	16	18	19	20	21	21	22	22	22	22	20	20	17	13	10	14.7	21.9					
21-May	8	7	6	6	5	5	8	13	16	19	21	22	23	23	24	25	25	25	25	24	22	20	19	18	17.1	25.2					
22-May	18	16	13	12	11	11	12	15	18	22	23	23	24	23	24	24	24	23	22	22	20	18	17	16	18.8	24.3					
23-May	15	14	12	11	10	9	11	14	18	20	20	21	22	23	23	24	24	24	23	21	17	14	14	11	17.3	24.2					
24-May	11	10	10	10	10	9	9	11	11	12	13	14	15	17	18	18	18	17	18	17	15	13	12	11	13.3	18.1					
25-May	11	11	10	10	10	10	10	11	12	14	14	14	15	16	17	17	17	17	14	16	16	13	12	11	13.3	17.3					
26-May	9	8	8	7	6	6	8	10	16	18	19	20	21	22	22	23	23	24	24	23	23	18	15	13	16.1	23.7					
27-May	13	11	11	10	12	14	15	16	17	18	19	20	21	21	22	22	22	22	22	21	20	17	13	12	17.2	22.5					
28-May	10	8	7	6	6	6	8	12	15	17	19	21	21	22	22	23	23	22	22	21	20	17	15	13	15.6	22.8					
29-May	13	13	12	11	11	11	13	15	18	20	22	23	24	24	25	25	25	25	25	23	21	20	18	17	18.9	25.3					
30-May	16	15	14	12	11	11	13	16	18	19	21	24	26	27	29	29	29	28	27	25	24	22	22	20	20.7	29.4					
31-May	20	18	16	16	15	14	15	17	19	21	21	21	21	21	20	19	21	23	22	21	21	17	15	14	18.7	22.6					
9.7 8.6 7.8 7.3 6.8 6.7 7.7 9.8 11.9 13.4 14.9 16.0 16.8 17.4 17.9 18.0 18.2 18.2 17.7 17.0 15.6 13.5 12.0 10.8																								Diurnal Average							
20.1 18.0 16.3 15.5 14.6 14.4 15.4 16.8 19.0 21.9 23.0 23.7 25.7 27.4 28.9 29.2 29.4 28.2 26.6 25.3 23.6 22.2 21.7 20.3																								Diurnal Maximum							

Hourly Averages

External Temperature (ET) - °C

Valleyview - May 2017



Hourly Averages

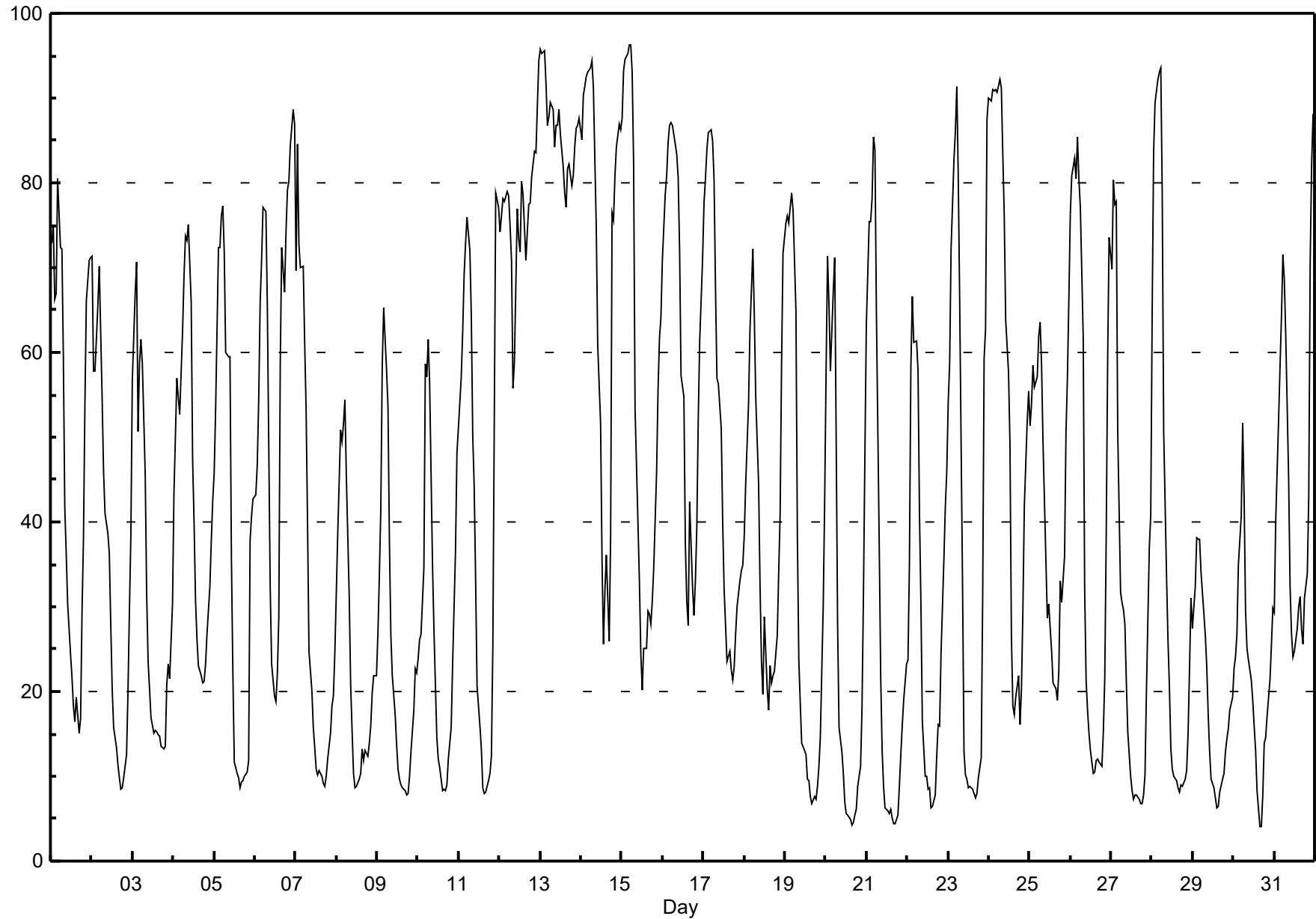
Relative Humidity (RH) - %

Valleyview - May 2017

Maximum Value: 96.3 % on May 15 05:00																					Maximum Daily Average: 86.3 % on May 13					Hours in Service: 744	
Minimum Value: 4 % on May 30 16:00																					Minimum Daily Average: 19.3 % on May 29					Hours of Data: 744	
Maximum Diurnal Average: 71.7 % at hour 5																					Minimum Diurnal Average: 19.0 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 41.92 %																					Percentiles: P ₁ = 5.0 P ₁₀ = 9.1 Q ₁ = 16.0 Median = 34.5 Q ₃ = 67.2 P ₉₀ = 83.3 P ₉₉ = 94.0					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-May	73	75	66	67	81	72	72	60	42	36	30	24	22	18	16	19	15	17	29	38	54	66	71	71	47.3	80.6	
2-May	71	58	58	65	70	62	55	46	41	39	36	28	20	16	13	11	10	9	9	10	13	20	30	38	34.5	71.3	
3-May	57	67	71	51	59	62	59	46	32	24	20	17	15	15	15	15	14	13	14	21	23	22	30	32.2	70.7		
4-May	43	50	57	55	53	62	69	74	73	75	66	47	40	31	26	23	22	21	21	23	27	32	38	43	44.6	75.0	
5-May	46	53	72	72	76	77	72	60	60	59	36	22	12	10	10	9	9	10	10	10	12	38	41	43	38.3	77.3	
6-May	43	47	54	66	71	77	77	66	49	32	23	20	19	22	29	59	72	67	74	79	80	84	89	87	57.8	88.7	
7-May	70	85	73	70	70	61	53	40	25	20	16	13	11	10	11	10	9	9	10	12	15	18	20	25	31.4	84.6	
8-May	32	38	51	49	51	54	45	31	21	15	10	9	9	10	10	13	12	13	12	14	16	20	22	22	24.2	54.5	
9-May	27	34	41	59	65	58	53	38	27	22	17	14	11	10	9	9	8	8	8	10	13	18	23	22	25.1	65.2	
10-May	24	26	27	34	59	57	62	56	35	27	21	15	12	11	8	8	8	9	12	16	23	30	37	48	27.7	61.5	
11-May	51	57	62	69	73	76	72	64	50	44	33	21	16	13	9	8	8	9	10	12	25	52	79	77	41.4	78.7	
12-May	74	76	78	78	79	78	75	71	56	59	77	73	72	80	79	71	74	77	78	81	84	84	89	94	76.5	94.4	
13-May	96	95	96	92	87	88	90	89	84	87	87	89	86	82	79	77	82	82	80	81	84	86	87	88	86.3	95.7	
14-May	85	90	91	93	93	94	94	91	83	75	61	52	36	26	32	36	26	38	76	76	81	84	87	86	70.3	94.4	
15-May	88	93	95	95	96	96	93	82	53	40	33	25	20	25	25	29	29	28	31	35	46	56	62	64	55.8	96.3	
16-May	71	79	81	85	87	87	87	85	83	81	72	57	55	37	31	28	42	32	29	33	39	52	61	71	61.1	87.1	
17-May	78	80	84	86	86	85	80	68	57	56	51	40	32	28	24	25	23	21	23	27	30	33	34	35	49.4	86.2	
18-May	38	44	54	63	67	72	65	55	45	33	24	20	29	20	18	23	21	22	22	27	34	41	59	72	40.2	72.2	
19-May	75	76	75	77	79	77	65	38	24	19	14	13	13	10	10	8	7	8	7	9	11	15	30	43	33.3	78.8	
20-May	58	71	66	58	67	71	50	28	16	13	10	7	6	5	5	4	5	5	6	9	11	18	32	48	27.9	71.3	
21-May	63	75	75	78	85	84	65	37	22	13	9	6	6	6	6	5	4	4	5	9	13	16	19	23	30.4	85.4	
22-May	24	35	58	67	61	61	58	41	31	16	10	10	8	9	6	6	8	12	16	16	24	36	42	46	29.2	66.6	
23-May	54	59	72	83	86	91	81	66	32	13	10	10	9	9	9	8	7	8	10	12	31	59	63	88	40.4	91.4	
24-May	90	90	91	91	91	91	92	91	83	76	64	58	49	27	18	17	19	22	16	20	30	42	52	55	57.3	92.1	
25-May	51	54	58	56	57	62	64	58	49	36	29	30	27	25	21	20	19	22	33	30	36	51	57	66	42.2	66.2	
26-May	76	81	83	81	85	80	77	62	32	21	18	15	13	10	10	12	12	12	11	15	22	38	59	73	41.7	85.5	
27-May	70	80	78	78	51	32	31	30	28	21	15	10	8	7	8	8	7	7	7	8	10	20	37	41	28.8	80.4	
28-May	65	84	90	92	93	94	79	51	34	26	20	13	11	10	9	9	8	9	9	10	11	15	23	31	37.3	93.6	
29-May	27	32	38	38	38	34	29	27	23	17	13	10	9	7	6	6	8	10	10	13	14	16	18	19	19.3	38.1	
30-May	23	24	27	35	41	52	43	30	25	24	21	19	16	13	8	4	4	8	14	15	17	21	25	30	22.4	51.8	
31-May	29	40	52	58	64	72	69	62	45	32	27	24	25	27	30	31	27	26	31	34	43	71	82	88	45.4	88.1	
57.2 62.9 66.9 69.0 71.7 71.6 66.9 56.1 43.8 37.2 31.4 26.1 23.0 20.3 19.0 19.8 20.1 20.6 23.3 25.7 31.3 40.5 47.9 53.8																									Diurnal Average		
95.7 95.3 95.7 95.2 96.3 96.3 94.4 91.2 84.3 86.8 86.9 88.6 85.7 81.9 78.8 77.2 81.6 82.2 79.6 80.9 84.3 86.4 89.1 94.4																									Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Valleyview - May 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - May 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	2	1	2	1	2	2	5	7	6	5	6	6	2	10	7	4	4	2	4	3	2	1	1.9	9.6
Dir	215	180	218	167	182	181	154	167	270	310	312	289	342	267	270	285	308	350	68	261	225	167	224	166	280	285
2 Spd	1	2	1	1	1	4	6	9	11	13	14	12	11	12	9	7	6	6	5	2	1	0	0	0	4.8	13.8
Dir	168	224	190	188	185	244	247	265	286	288	309	292	303	294	303	299	304	299	325	54	77	150	246	171	289	309
3 Spd	0	0	1	1	0	0	0	2	3	3	3	4	6	10	9	9	7	10	10	8	4	1	4	1	3.0	9.7
Dir	329	206	155	231	218	195	195	178	170	179	180	177	246	249	269	264	281	292	277	292	328	344	307	176	264	277
4 Spd	1	1	1	2	1	0	2	3	3	2	6	5	3	0	0	2	2	5	5	4	3	2	3	2	0.8	5.7
Dir	194	178	173	165	190	83	321	245	181	210	285	308	339	303	289	156	286	16	29	52	40	30	346	346	337	285
5 Spd	1	1	1	1	0	1	1	1	0	3	1	3	3	3	4	3	2	5	4	4	4	16	4	3	0.8	15.8
Dir	28	63	223	231	249	211	214	178	88	342	352	335	180	177	153	149	170	141	172	176	229	315	302	305	232	315
6 Spd	1	2	1	1	1	1	0	4	7	9	12	17	15	15	14	11	7	2	1	2	2	1	1	1	4.1	16.6
Dir	241	231	223	176	173	336	183	321	323	315	321	333	318	304	298	262	253	273	110	165	186	180	184	189	301	333
7 Spd	1	1	2	2	2	3	2	3	13	13	15	15	12	11	13	13	13	13	14	13	10	4	3	1	6.9	15.0
Dir	206	186	172	177	178	173	174	237	270	281	285	287	260	273	292	298	295	292	302	319	319	305	253	210	284	287
8 Spd	1	2	2	3	2	3	4	3	3	2	3	11	10	11	11	10	12	8	7	7	4	1	4	7	4.1	11.8
Dir	206	199	179	178	188	179	166	165	171	163	243	299	288	299	281	268	289	303	287	289	286	258	287	281	273	289
9 Spd	3	1	1	1	1	1	1	2	6	3	0	2	3	4	1	4	2	4	3	2	1	0	2	2	0.4	6.1
Dir	262	182	242	176	194	195	186	201	301	328	211	187	188	281	311	51	14	18	49	74	58	22	1	34	327	301
10 Spd	1	2	1	2	4	3	0	1	5	6	5	3	1	6	6	6	6	7	6	7	5	4	3	5	1.6	7.2
Dir	334	312	242	339	44	83	69	138	158	167	166	267	289	341	327	286	311	345	30	44	43	46	20	341	1	44
11 Spd	4	3	3	0	1	0	2	4	1	2	5	4	8	5	10	10	12	11	9	5	3	11	10	9	3.9	11.7
Dir	358	341	341	339	358	73	37	33	44	0	31	61	66	108	125	125	124	125	121	132	51	117	65	27	88	124
12 Spd	12	11	6	3	3	3	2	2	4	5	6	7	6	5	7	2	1	1	1	1	3	1	4	4	1.8	11.6
Dir	11	12	21	26	14	24	25	21	118	115	126	125	128	134	254	287	171	157	133	104	37	15	351	11	51	11
13 Spd	4	4	5	3	1	4	6	5	4	6	5	4	7	7	6	5	6	6	8	5	1	1	2	2	3.1	8.2
Dir	28	35	23	37	351	327	323	327	342	314	294	295	276	281	280	273	270	255	260	243	192	188	210	251	296	260
14 Spd	1	1	1	1	1	1	2	1	2	2	2	3	7	11	14	11	11	1	1	1	1	1	1	1	1.7	13.9
Dir	301	142	168	187	211	212	150	167	154	146	135	353	324	333	338	349	357	183	129	43	194	93	188	194	341	338
15 Spd	1	1	1	1	1	1	1	1	3	5	3	7	7	5	9	14	10	6	6	5	8	6	4	5	3.4	13.7
Dir	347	220	220	174	171	153	157	146	276	310	336	325	328	6	13	19	33	56	49	44	37	42	29	22	16	19
16 Spd	4	4	4	5	5	5	5	5	5	6	6	9	11	6	8	9	2	5	10	9	9	5	2	3	5.5	10.8
Dir	12	6	3	4	1	1	7	27	359	355	359	9	9	43	43	44	127	30	38	36	35	40	45	337	21	9
17 Spd	2	2	1	3	3	1	2	2	5	4	6	7	6	7	8	6	8	6	6	7	5	5	6	5	3.7	8.3
Dir	348	19	323	354	22	35	57	119	129	161	163	156	163	165	162	149	159	142	164	159	150	153	151	159	151	159
18 Spd	4	3	1	1	2	2	3	3	3	4	6	7	4	5	4	6	5	1	1	4	1	1	0	3	2.2	7.0
Dir	157	156	157	177	171	175	168	173	220	222	261	280	210	182	203	201	165	252	301	338	174	174	189	165	203	280
19 Spd	2	1	2	1	1	2	2	3	9	8	11	10	11	7	6	5	9	12	11	9	4	1	0	1	4.2	11.8
Dir	170	174	172	171	173	169	164	210	257	254	280	278	275	242	283	245	297	315	315	319	311	292	155	185	276	315
20 Spd	1	1	2	0	0	1	1	2	6	6	7	10	9	11	10	10	8	11	10	7	2	1	0	1	4.0	11.3
Dir	170	164	164	175	165	171	156	224	259	265	278	297	284	315	297	307	315	330	330	333	329	342	183	171	301	330
21 Spd	1	0	0	0	0	0	0	2	4	4	8	10	8	8	9	9	8	10	11	8	4	5	6	4	4.4	10.9
Dir	164	187	181	58	198	226	215	165	256	302	280	283	278	292	300	285	323	320	320	304	279	270	264	260	291	320
22 Spd	5	1	1	1	1	1	2	3	3	4	10	11	11	11	9	4	5	5	1	0	1	1	1	0	2.6	10.8
Dir	270	216	164	160	158	160	157	159	160	231	259	278	283	295	306	301	296	338	33	48	160	216	268	64	275	283

Hourly Averages

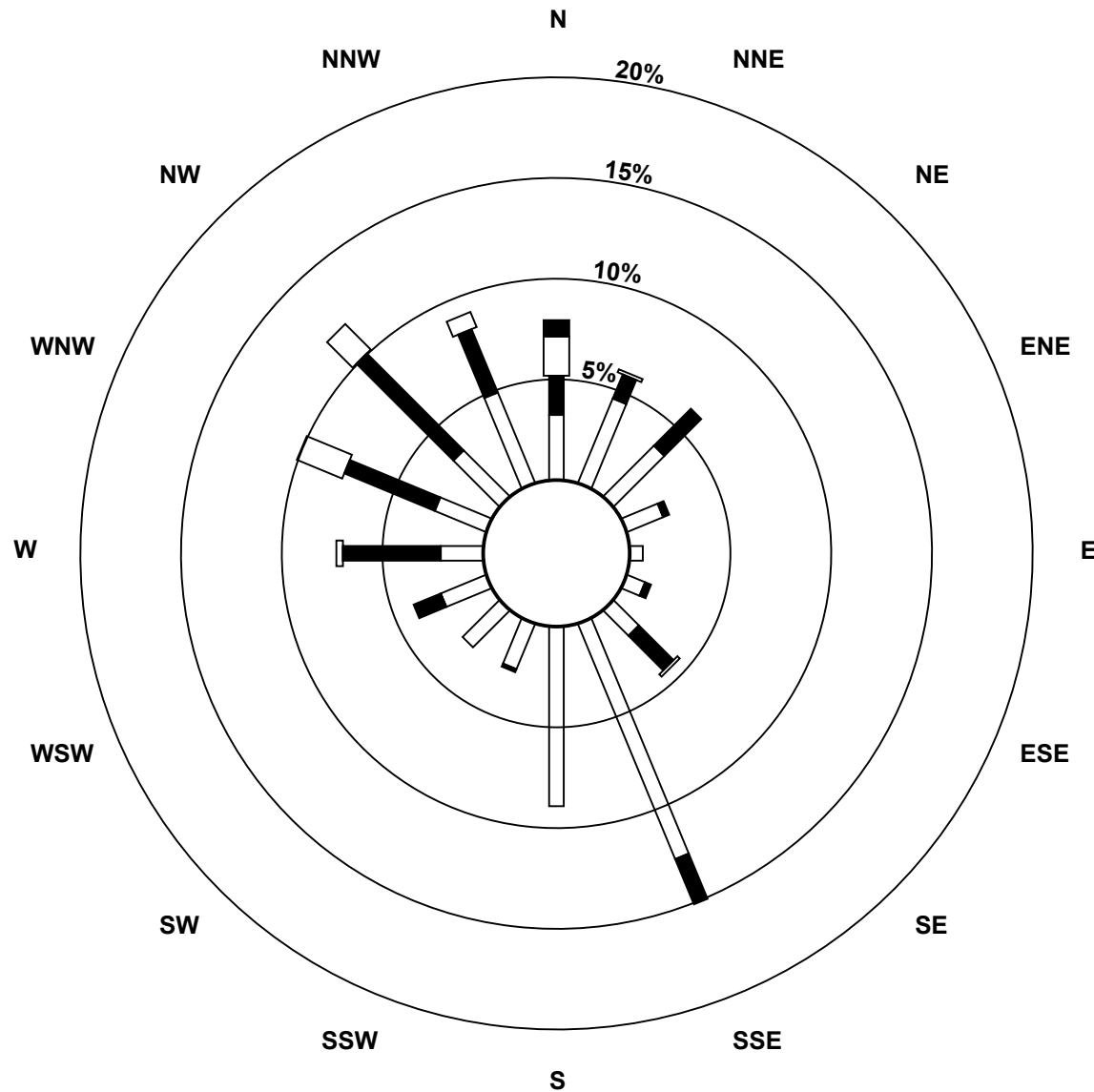
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - May 2017

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	1	1	1	0	0	0	1	1	3	8	8	3	5	5	4	4	4	5	6	8	12	10	10	13	3.3	12.8					
Dir	157	176	176	253	161	173	191	230	327	325	325	335	341	11	12	53	67	50	45	11	330	35	304	313	350	313					
24 Spd	13	15	12	12	6	5	9	9	11	13	18	19	20	23	27	26	21	16	16	12	9	6	4	4	13.1	26.7					
Dir	334	328	314	303	344	323	321	3	360	358	355	359	353	1	350	356	3	355	360	352	332	324	323	310	347	350					
25 Spd	6	4	3	6	5	4	5	7	6	5	8	9	10	6	7	6	4	5	8	0	1	1	1	1	4.1	9.5					
Dir	321	320	331	345	332	309	312	337	336	351	1	323	312	302	320	310	336	29	22	17	220	187	172	159	332	312					
26 Spd	1	1	1	0	1	1	1	2	1	8	7	6	8	10	9	9	8	8	7	4	0	0	1	1	3.2	10.5					
Dir	157	163	168	169	164	159	157	154	287	313	317	306	324	303	305	331	329	328	325	335	323	164	170	162	315	303					
27 Spd	1	1	1	1	2	11	5	9	9	14	15	15	13	12	8	8	9	9	9	7	3	1	1	1	5.9	14.9					
Dir	164	156	153	157	253	278	301	322	335	349	356	356	353	3	358	340	341	336	355	12	2	319	331	341	344	356					
28 Spd	0	0	0	1	0	0	0	0	1	2	3	3	2	3	7	5	6	6	5	3	2	1	2	0	2.0	6.8					
Dir	137	154	154	168	165	179	305	45	49	61	79	91	63	79	43	58	56	48	67	82	102	23	352	189	62	43					
29 Spd	3	2	2	2	2	3	4	4	4	6	7	6	6	7	7	7	6	6	6	5	5	5	4	3	4.7	7.5					
Dir	148	153	156	153	152	151	152	147	154	148	146	144	146	127	134	134	142	142	147	148	144	146	158	162	145	134					
30 Spd	2	2	2	1	1	0	1	5	5	7	5	4	3	3	2	1	1	1	2	5	6	3	4	3	2.7	6.5					
Dir	164	167	167	178	260	266	183	162	163	158	161	164	166	162	173	113	111	90	157	157	147	153	155	152	159	158					
31 Spd	3	2	1	1	1	1	1	1	5	8	11	12	12	12	9	5	5	1	1	0	0	0	0	1	3.0	12.3					
Dir	159	238	203	165	176	169	167	169	281	316	310	304	291	312	314	308	312	250	147	133	167	163	180	159	298	312					
Spd	0.8	0.6	0.3	0.3	0.1	0.5	0.4	0.4	1.9	2.9	3.9	4.8	4.5	4.4	4.5	3.4	3.2	3.1	2.8	2.0	1.3	0.7	0.7	0.9	Diurnal Average						
Dir	332	329	300	292	347	262	258	266	283	304	308	311	307	308	315	317	324	339	351	353	351	25	317	317	Diurnal Maximum						
Spd	13.4	14.9	12.1	12.2	6.0	10.7	9.1	9.2	12.6	14.1	18.0	19.4	20.1	23.1	26.7	26.2	21.3	15.9	15.8	13.3	12.0	15.8	10.2	12.8	Diurnal Maximum						
Dir	334	328	314	303	344	278	321	3	270	349	355	359	353	1	350	356	3	355	360	319	330	315	65	313							
Maximum Speed Value: 27 km/h on May 24 15:00																		Minimum Speed Value: 0 km/h on May 31 21:00												Hours in Service: 744	
Maximum Daily Speed Average: 13.1 km/h on May 24																		Minimum Daily Speed Average: 0.4 km/h on May 9												Hours of Data: 744	
Maximum Diurnal Speed Average: 4.8 km/h at hour 12																		Minimum Diurnal Speed Average: 0.1 km/h at hour 5												Hours of Missing Data: 0	
Monthly Average Velocity: 1.89 km/h 317.2 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.6 Q ₁ = 1.3 Median = 3.7 Q ₃ = 6.9 P ₉₀ = 10.7 P ₉₉ = 16.8												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	49		29		14		6		0		0		98																		
NorthEast	46		27		0		0		0		0		73																		
East	18		1		0		0		0		0		19																		
SouthEast	56		29		3		0		0		0		88																		
South	159		14		0		0		0		0		173																		
SouthWest	49		4		0		0		0		0		53																		
West	34		48		15		0		0		0		97																		
NorthWest	45		72		26		0		0		0		143																		
Total	456		224		58		6		0		0		744																		

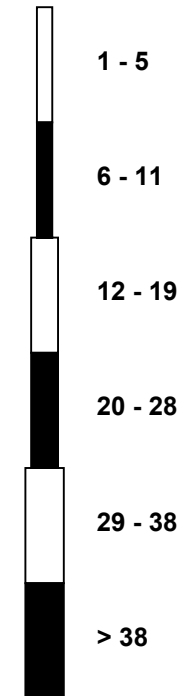
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - May 2017



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - May 2017

Maximum Speed: 27 km/h on May 24 15:00																			Maximum Daily Speed Average: 14.0 km/h on May 24										Hours in Service: 744	
Minimum Speed: 0 km/h on May 31 21:00																			Minimum Daily Speed Average: 2.9 km/h on May 28										Hours of Data: 744	
Maximum Diurnal Speed Average: 9.1 km/h at hour 15																			Minimum Diurnal Speed Average: 1.9 km/h at hour 5										Hours of Missing Data: 0	
Monthly Average Speed: 5.19 km/h																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.9 Q ₁ = 1.7 Median = 4.2 Q ₃ = 7.4 P ₉₀ = 11.2 P ₉₉ = 16.9										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-May	2	1	2	1	2	1	2	2	6	7	7	7	7	8	4	11	7	6	5	5	6	4	2	1	4.3	10.7				
2-May	1	2	1	1	1	5	6	9	11	14	14	13	12	13	10	8	7	7	6	2	1	0	0	0	6.1	14.2				
3-May	1	0	1	1	0	1	1	2	3	3	4	4	7	10	10	9	8	10	10	8	4	1	4	1	4.3	10.5				
4-May	1	1	1	2	1	1	3	4	3	3	6	6	3	4	4	4	4	5	6	5	3	2	4	2	3.2	6.1				
5-May	1	1	1	1	0	1	2	1	1	3	2	3	4	4	5	4	3	6	4	4	5	16	4	4	3.4	16.0				
6-May	1	2	1	2	1	1	1	5	8	10	12	17	16	15	15	11	7	2	1	2	2	1	1	1	5.7	17.0				
7-May	1	1	2	2	2	3	3	4	13	14	15	16	13	11	13	14	13	14	14	14	10	4	4	1	8.4	15.6				
8-May	1	2	2	3	2	3	4	3	3	3	6	13	11	12	12	10	13	9	7	7	4	2	4	7	5.9	12.6				
9-May	3	1	1	1	1	1	1	3	7	4	4	4	4	5	5	4	3	5	4	2	1	0	2	2	3.0	6.7				
10-May	1	2	2	4	4	3	1	2	5	6	5	4	5	6	7	7	7	8	6	7	5	5	3	5	4.6	7.6				
11-May	4	3	3	1	1	1	3	4	2	3	5	5	9	6	11	11	12	12	9	6	9	12	11	10	6.3	12.1				
12-May	12	11	6	3	3	3	2	3	4	6	6	7	6	5	9	3	2	1	1	1	3	2	4	4	4.4	11.9				
13-May	4	5	5	3	1	5	6	5	4	6	6	5	8	8	7	5	6	6	8	5	1	1	2	2	4.7	8.5				
14-May	2	1	1	1	2	2	2	2	2	2	2	4	8	12	14	11	12	6	3	1	1	1	3	1	3.9	14.3				
15-May	2	2	1	1	1	1	1	1	3	5	5	8	9	7	10	14	10	7	6	6	8	7	4	5	5.1	14.0				
16-May	4	4	4	5	6	5	6	5	5	6	6	9	12	7	9	10	4	6	10	9	9	5	2	3	6.3	11.6				
17-May	2	2	1	3	3	1	2	3	6	5	6	8	7	8	8	7	9	6	6	7	5	5	6	5	4.9	8.6				
18-May	4	3	1	1	2	2	3	3	4	5	8	8	7	6	5	7	5	4	2	4	1	1	0	3	3.8	7.9				
19-May	2	1	2	1	1	2	2	4	9	9	12	11	12	8	8	6	10	12	11	9	4	2	0	1	5.9	12.3				
20-May	1	1	2	0	0	1	1	3	7	7	8	11	10	12	11	10	9	12	10	7	2	1	0	1	5.3	11.8				
21-May	1	0	0	0	0	1	0	2	5	5	9	11	9	9	10	10	9	10	11	8	4	5	6	5	5.4	11.2				
22-May	5	1	1	1	1	1	2	3	3	5	11	11	11	11	9	5	6	5	2	1	1	1	2	2	4.3	11.4				
23-May	2	1	1	0	1	1	1	1	4	8	9	5	6	6	6	5	5	6	6	9	13	11	11	13	5.4	13.0				
24-May	14	15	13	13	7	6	10	9	11	14	18	20	20	24	27	27	22	16	16	12	10	6	4	4	14.0	27.1				
25-May	6	4	3	6	5	4	5	7	7	6	8	10	10	7	8	6	5	6	9	1	1	1	1	1	5.3	10.5				
26-May	1	1	1	0	1	1	1	2	3	9	8	7	9	11	10	10	8	9	8	4	0	0	1	1	4.4	11.3				
27-May	1	1	1	1	3	11	7	9	10	14	15	15	14	12	9	10	10	10	9	7	3	1	1	1	7.3	15.3				
28-May	1	0	0	1	0	0	1	1	2	3	3	4	4	4	7	6	7	6	5	4	2	2	2	1	2.9	7.5				
29-May	3	2	2	2	2	3	4	4	4	6	7	7	6	7	7	8	7	6	6	6	5	5	4	3	4.9	7.7				
30-May	2	2	2	1	1	0	2	5	5	7	5	4	4	3	3	2	2	1	2	5	6	3	4	3	3.1	6.6				
31-May	3	3	1	1	1	1	1	1	5	8	12	13	13	13	10	5	6	2	1	1	0	0	0	1	4.2	12.9				
2.9 2.5 2.1 2.1 1.9 2.3 2.7 3.6 5.3 6.6 7.8 8.6 8.9 8.9 9.1 8.4 7.7 7.1 6.6 5.4 4.2 3.4 3.2 3.0																									Diurnal Average					
13.6 15.0 12.7 13.0 6.8 10.8 9.7 9.4 12.9 14.4 18.3 19.7 20.3 23.5 27.1 26.5 21.9 16.3 16.3 13.6 12.8 16.0 11.2 13.0																									Diurnal Maximum					
All monthly, daily, and diurnal averages have been calculated using scalar methods																														

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - May 2017

Maximum Value: 100.1 deg on May 9 11:00																								Hours in Service: 744	
Minimum Value: 3.4 deg on May 8 04:00																								Hours of Data: 744	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 7.2 P ₁₀ = 10.4 Q ₁ = 14.2 Median = 23.5 Q ₃ = 42.4 P ₉₀ = 63.8 P ₉₉ = 89.8																								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-May	21	20	49	33	10	44	31	28	37	21	41	57	40	41	69	34	22	48	25	74	45	10	39	57	74.4
2-May	19	24	8	8	7	17	9	16	15	21	14	20	25	19	31	34	39	40	43	19	27	52	62	61	62.1
3-May	79	64	54	66	80	94	54	18	11	13	17	21	35	24	25	22	32	25	21	15	22	75	15	41	94.2
4-May	26	44	20	17	44	59	31	40	7	35	19	24	45	96	95	64	74	28	25	21	11	35	29	41	96.4
5-May	57	36	48	22	75	28	35	52	70	21	82	53	61	32	26	43	58	22	15	25	24	10	42	26	82.0
6-May	38	42	40	50	46	84	80	55	20	22	18	14	20	14	19	14	23	85	72	18	11	13	20	52	84.6
7-May	40	15	12	11	12	9	13	36	13	16	18	16	22	23	17	17	20	15	14	12	8	15	15	13	40.0
8-May	13	8	9	3	7	11	8	12	16	66	65	29	30	25	29	20	22	19	16	15	12	29	22	8	66.1
9-May	47	41	58	24	16	23	17	41	26	59	100	74	57	56	95	43	56	44	43	24	26	35	11	22	100.1
10-May	47	29	65	77	31	22	95	48	14	12	25	47	91	30	39	36	35	20	22	13	11	13	21	7	94.5
11-May	5	7	13	79	83	82	26	16	70	68	25	49	30	27	14	13	9	8	10	38	78	27	25	20	83.1
12-May	15	8	13	15	22	13	31	33	24	20	11	10	9	11	43	58	36	35	58	47	35	77	27	14	76.7
13-May	25	19	25	27	43	29	10	16	19	17	21	44	16	12	15	24	18	14	19	26	23	22	22	60	59.8
14-May	75	45	29	16	38	55	11	17	20	42	44	42	29	19	14	13	23	76	83	74	30	50	80	58	83.0
15-May	86	48	53	12	28	23	13	35	50	33	66	26	35	55	24	14	16	37	25	14	9	8	19	11	86.0
16-May	12	12	10	11	9	10	12	17	13	16	21	24	33	40	26	28	61	56	15	10	9	9	14	15	60.5
17-May	13	15	10	16	18	21	31	40	14	20	16	17	14	16	14	18	17	14	10	10	12	10	10	12	39.6
18-May	10	11	23	11	9	20	12	19	37	40	41	32	51	25	37	36	17	78	86	66	90	50	36	7	90.3
19-May	8	6	8	12	7	4	8	38	21	23	16	17	19	39	42	41	25	17	15	10	11	67	46	43	66.6
20-May	55	25	10	23	35	26	14	46	25	26	24	28	34	23	22	25	25	17	15	8	25	71	57	34	70.6
21-May	14	49	35	77	53	48	67	29	31	54	21	23	34	30	30	31	26	22	14	15	12	12	12	19	76.5
22-May	12	51	16	12	16	11	8	8	19	43	23	22	18	18	22	43	26	24	73	71	54	44	63	89	88.6
23-May	28	24	27	66	31	83	71	67	92	24	21	73	52	57	54	58	38	35	25	23	22	31	41	11	91.9
24-May	9	9	18	22	30	60	21	12	9	9	9	10	9	10	9	10	14	13	13	13	9	9	18	13	59.7
25-May	14	12	13	11	18	12	13	14	19	33	23	28	25	26	27	38	62	48	43	91	24	18	17	9	90.5
26-May	8	16	9	52	23	12	46	12	79	22	19	32	25	22	15	24	28	26	16	12	71	43	33	15	79.0
27-May	22	18	12	16	64	10	45	14	18	11	12	13	20	19	28	35	22	20	12	10	13	70	77	28	76.9
28-May	87	82	89	52	61	64	73	74	51	55	44	49	71	70	29	41	34	31	29	43	32	61	32	89	88.7
29-May	12	12	10	31	12	12	12	14	15	13	16	16	18	16	17	15	18	15	12	10	11	10	12	11	30.6
30-May	11	13	14	57	59	64	39	12	13	12	17	20	19	39	49	72	59	47	22	14	11	14	10	10	72.4
31-May	29	55	48	32	38	35	23	37	37	18	16	15	19	18	17	24	31	85	44	40	80	34	72	49	85.0
87.5 81.7 88.7 79.1 83.1 94.2 94.5 73.9 91.9 68.4 100.1 74.5 91.0 96.4 94.9 72.4 74.0 85.0 86.3 90.5 90.3 76.7 79.5 88.6																									

PAZA

Donnelly Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

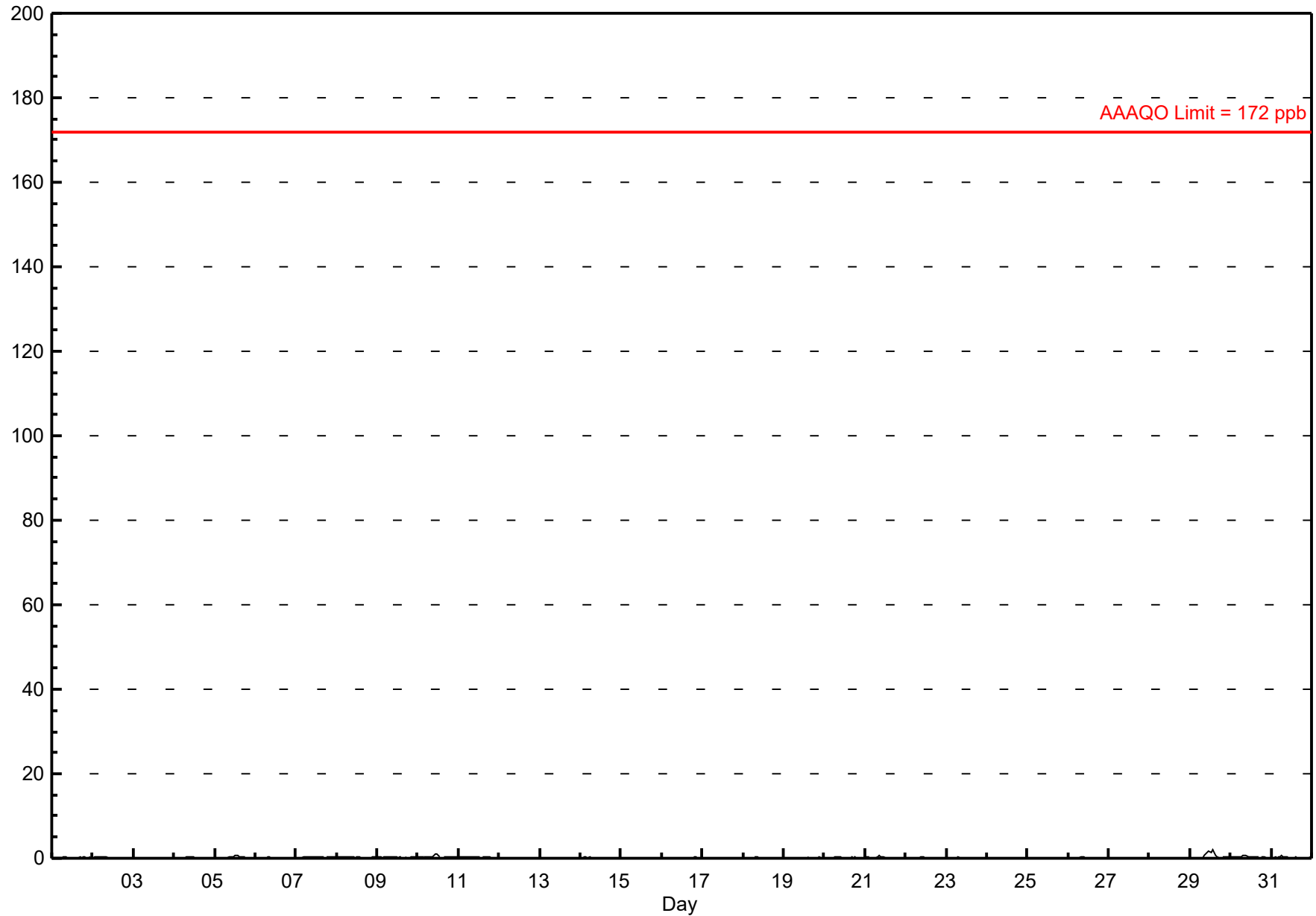
Donnelly - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.1 ppb on May 29 14:00 Maximum Daily Average: 0.5 ppb on May 29																				Hours in Service: 744 Hours of Data: 707							
Minimum Value: 0 ppb on May 1 14:00 Minimum Daily Average: 0.0 ppb on May 13 Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 18 Monthly Average: 0.13 ppb 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 = 0.8																				Hours of Missing Data: 37 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-May	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-May	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	
3-May	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	0.1	
4-May	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	
5-May	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0.2	0.8	
6-May	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-May	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-May	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	
9-May	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-May	0	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0.4	0.9	
11-May	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-May	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	
13-May	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	0.1	
14-May	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-May	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-May	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	0.2	
17-May	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	0.2	
18-May	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-May	0	0	0	0	0	A	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
20-May	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-May	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
22-May	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-May	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-May	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-May	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	
26-May	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-May	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	0.1	
28-May	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	0.1	
29-May	0	0	0	0	0	0	0	0	1	1	1	2	1	2	1	1	0	0	A	0	0	0	0	0	0	0.5	2.1
30-May	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.5
31-May	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5	
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 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average		
0.3 0.4 0.4 0.3 0.3 0.4 0.5 0.5 0.6 0.9 1.3 1.6 1.4 2.1 1.3 0.7 0.3 0.4 0.4 0.4 0.4 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

Donnelly - May 2017



Hourly Maximums

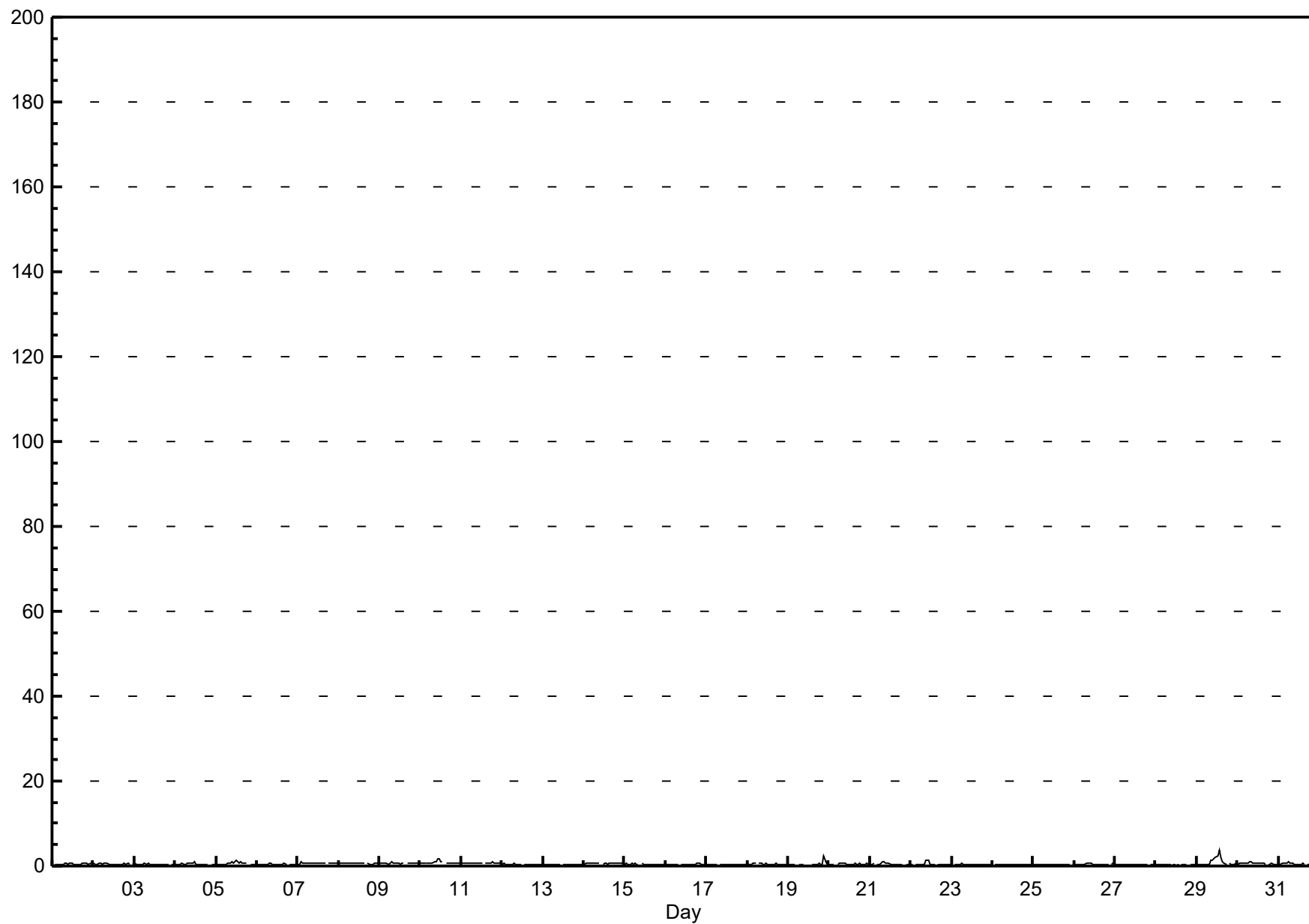
Sulphur Dioxide (SO₂) - ppb

Donnelly - May 2017

Maximum Value: 3.6 ppb on May 29 14:00																				Maximum Daily Average: 1.0 ppb on May 29										Hours in Service: 744									
Minimum Value: 0 ppb on May 21 22:00																				Minimum Daily Average: 0.3 ppb on May 28										Hours of Data: 707									
Maximum Diurnal Average: 0.6 ppb at hour 9																				Minimum Diurnal Average: 0.4 ppb at hour 18										Hours of Missing Data: 37									
Monthly Average: 0.49 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.4 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 1.6										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-May	A	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	1	1	1	1	0	1	A	0.5	0.6													
2-May	1	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	A	0	0.5	0.7													
3-May	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.6													
4-May	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.9													
5-May	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0.6	1.3													
6-May	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0.4	0.6													
7-May	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	0.9													
8-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	1	1	1	0.6	0.8													
9-May	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	0.6	1.0													
10-May	1	1	1	1	1	1	1	1	1	1	2	2	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.7													
11-May	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
12-May	0	1	1	0	0	0	0	1	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0.5	0.6													
13-May	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5													
14-May	0	1	1	1	1	1	1	1	1	1	A	0	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.7													
15-May	1	1	0	0	1	0	1	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5													
16-May	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.4	0.7													
17-May	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5													
18-May	1	0	0	1	1	1	A	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0.5	0.8													
19-May	0	0	0	0	0	A	0	0	0	0	C	C	C	C	0	0	0	0	1	0	0	3	1	0	0.5	2.5													
20-May	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0.5	0.7													
21-May	0	0	1	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2													
22-May	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4													
23-May	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6													
24-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.5													
25-May	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													
26-May	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	1	0.4	0.8													
27-May	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-May	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	0.5													
29-May	0	0	0	0	0	0	0	0	1	2	2	2	2	4	2	1	1	0	A	1	0	0	0	1	1.0	3.6													
30-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	1	0	0	0	0.6	1.0													
31-May	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1	0	A	0	0	1	0	0	0	1	0.5	1.0													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration																																							
A - Automated Daily Zero Span																																							

Hourly Maximums

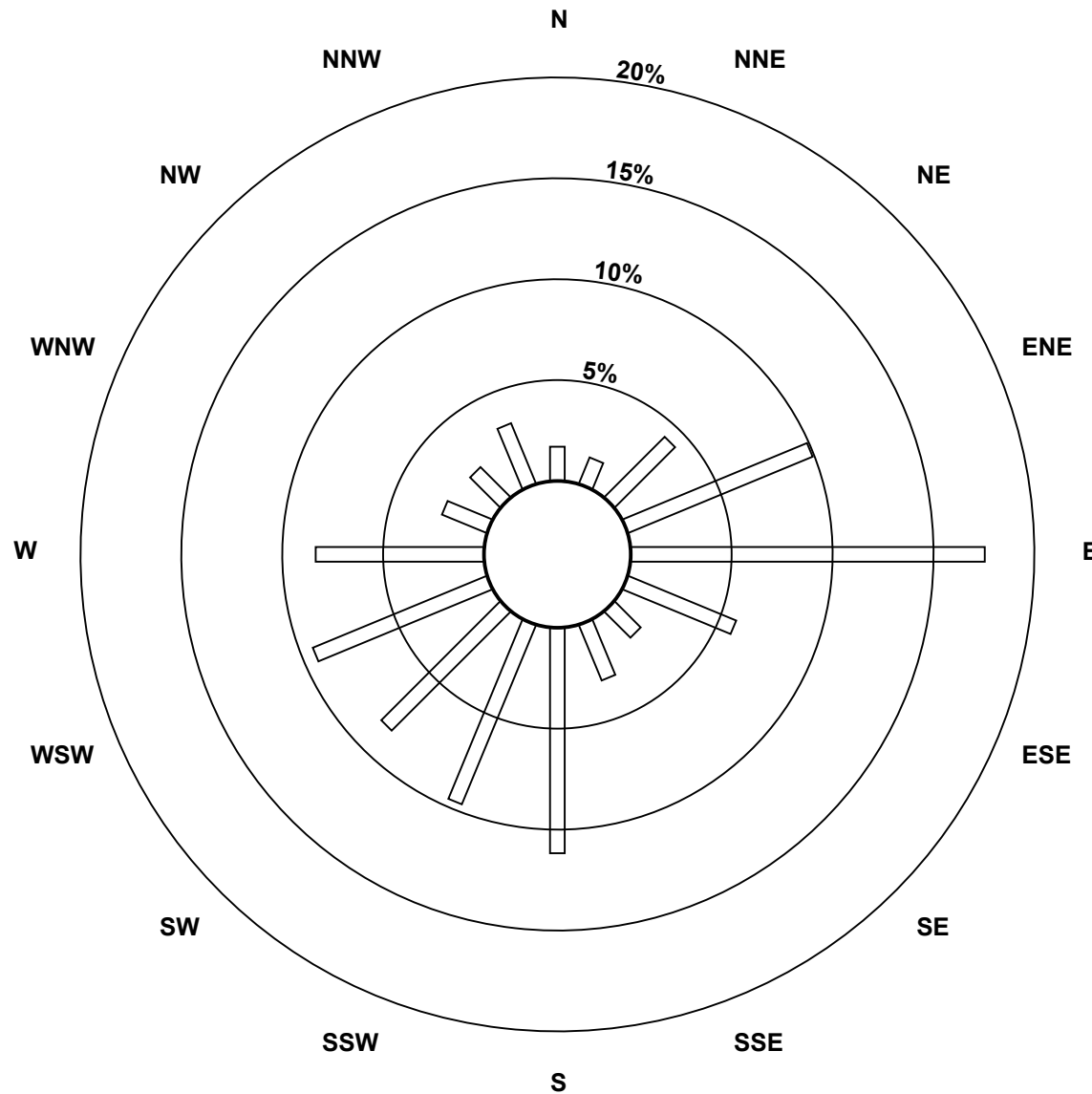
Sulphur Dioxide (SO₂) - ppb
Donnelly - May 2017



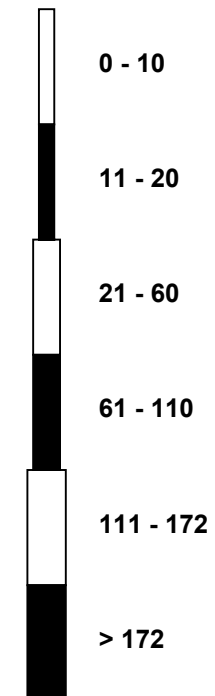
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Donnelly - May 2017

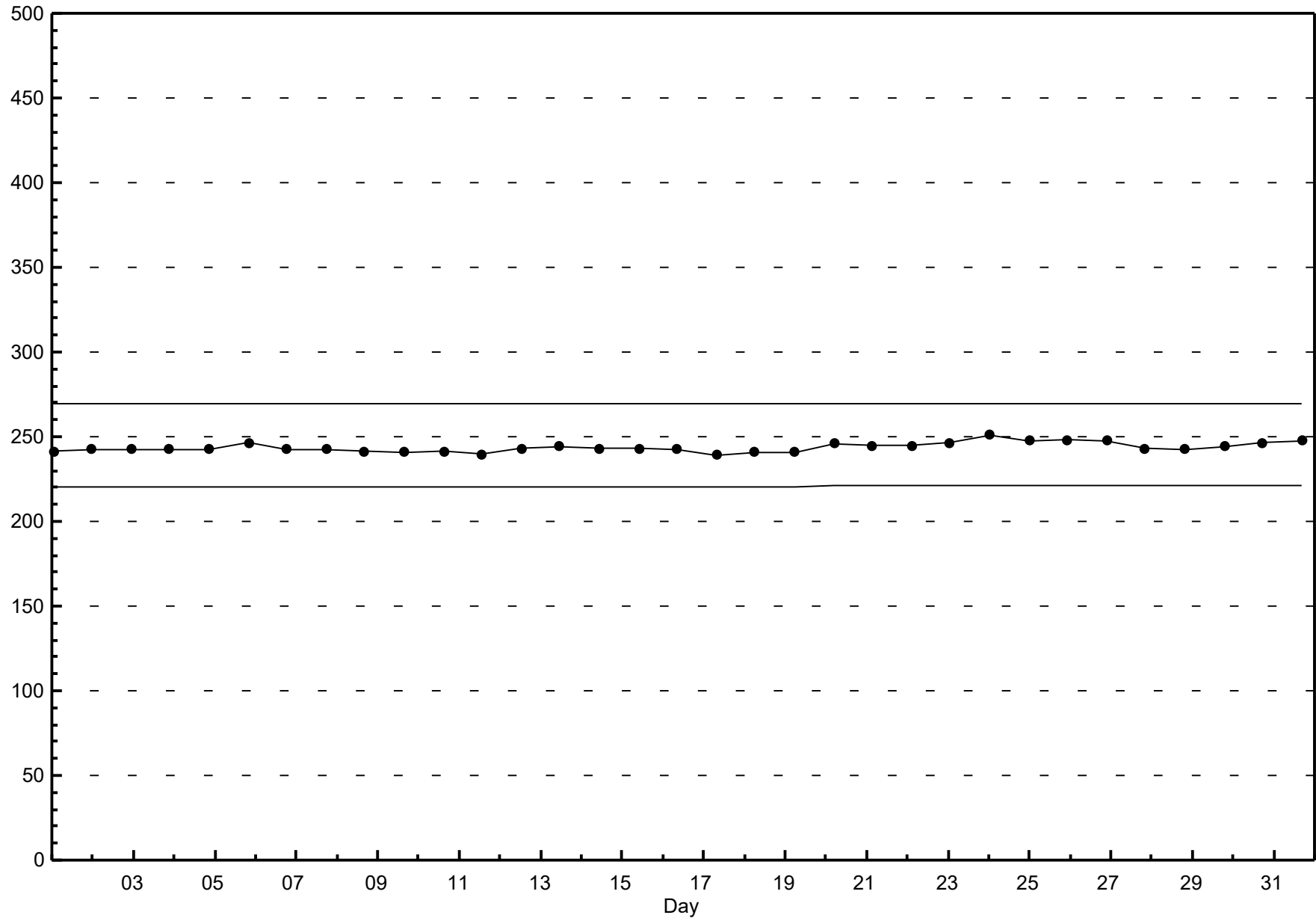


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Donnelly - May 2017



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

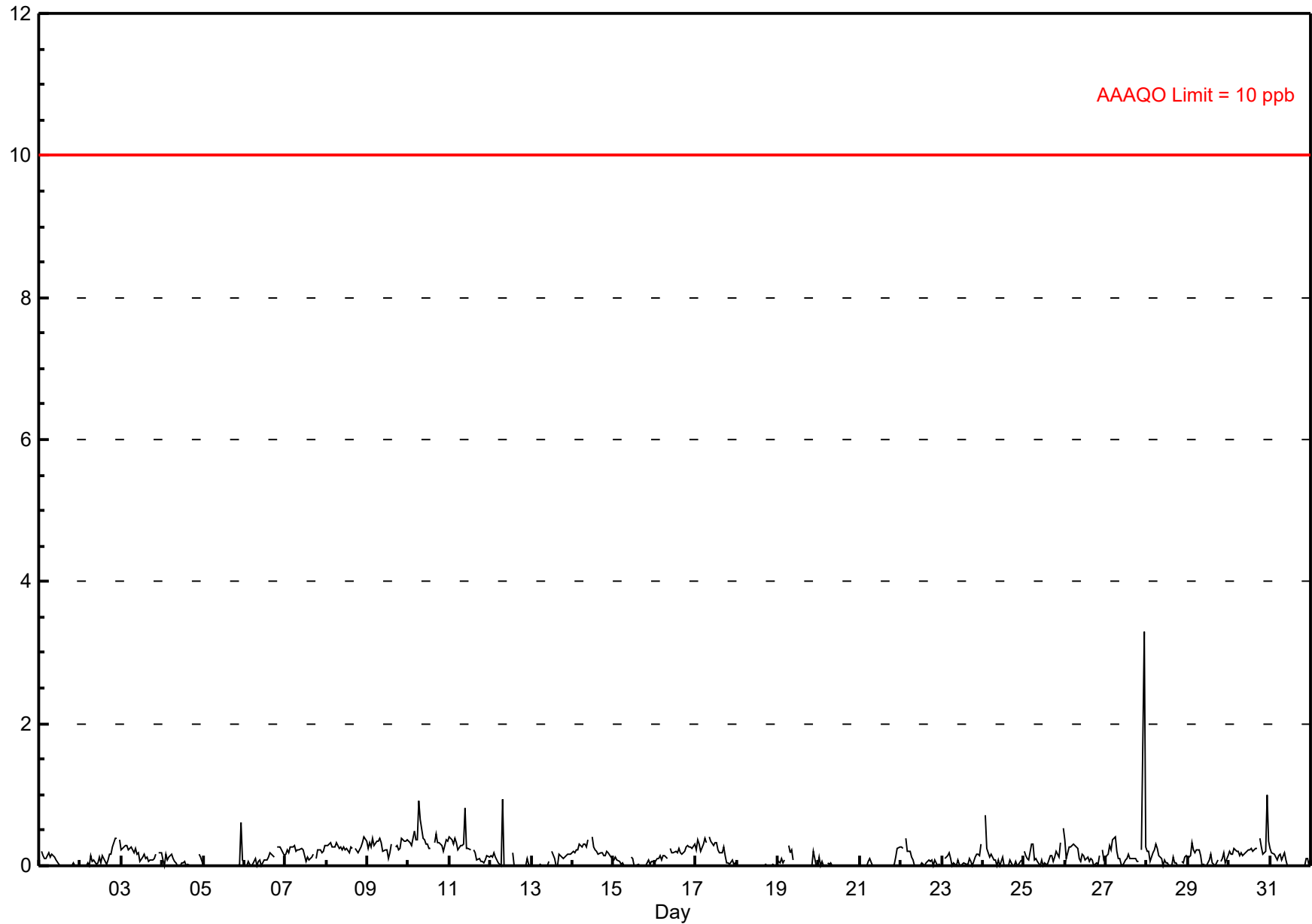
Donnelly - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 3.3 ppb on May 27 23:00																				Maximum Daily Average: 0.4 ppb on May 10		Hours of Data: 707					
Minimum Value: 0 ppb on May 1 13:00																				Minimum Daily Average: 0.0 ppb on May 18		Hours of Missing Data: 37					
Maximum Diurnal Average: 0.3 ppb at hour 23																				Minimum Diurnal Average: 0.1 ppb at hour 15		Hours of Calibration: 37					
Monthly Average: 0.14 ppb																				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 = 0.6		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-May	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-May	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-May	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	
4-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0.0	0.6	
6-May	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	0.3	
7-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4	
9-May	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	0.4	
10-May	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.9	
11-May	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	0.8	
12-May	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9	
13-May	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	0.2	
14-May	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-May	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-May	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-May	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-May	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	
19-May	0	0	0	0	0	A	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
20-May	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-May	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	0.3	
22-May	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-May	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	0.3	
24-May	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.7	
25-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.1	0.5	
26-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	3	0	0.3	3.3	
28-May	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	
29-May	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	0.3	
30-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.3	1.0	
31-May	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	
0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.3 0.2																									Diurnal Average		
0.4 0.7 0.3 0.5 0.4 0.4 0.9 0.9 0.4 0.8 0.3 0.4 0.3 0.2 0.3 0.3 0.4 0.3 0.4 0.3 0.4 0.4 3.3 0.5																									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

Donnelly - May 2017

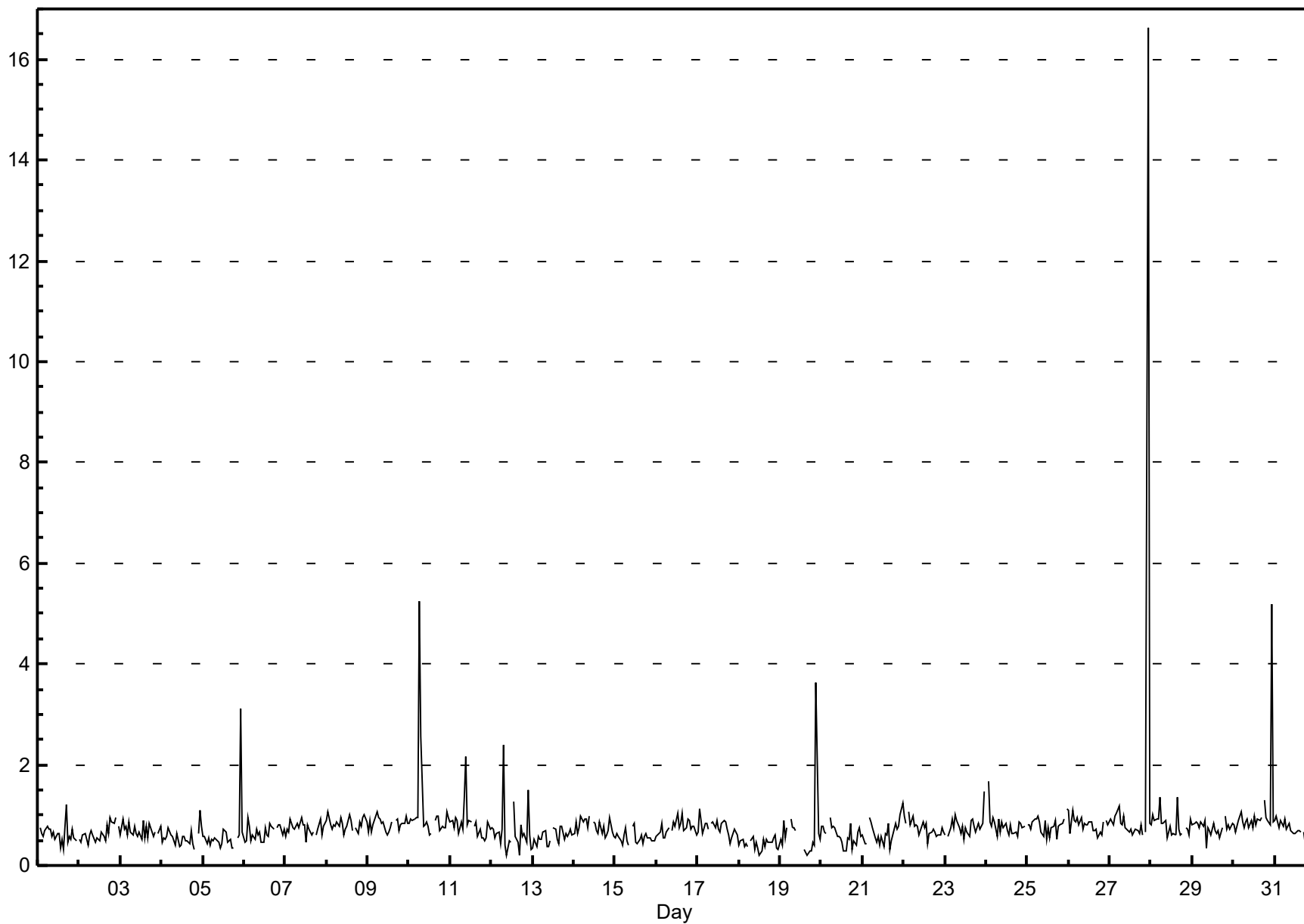


214 of 391

Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

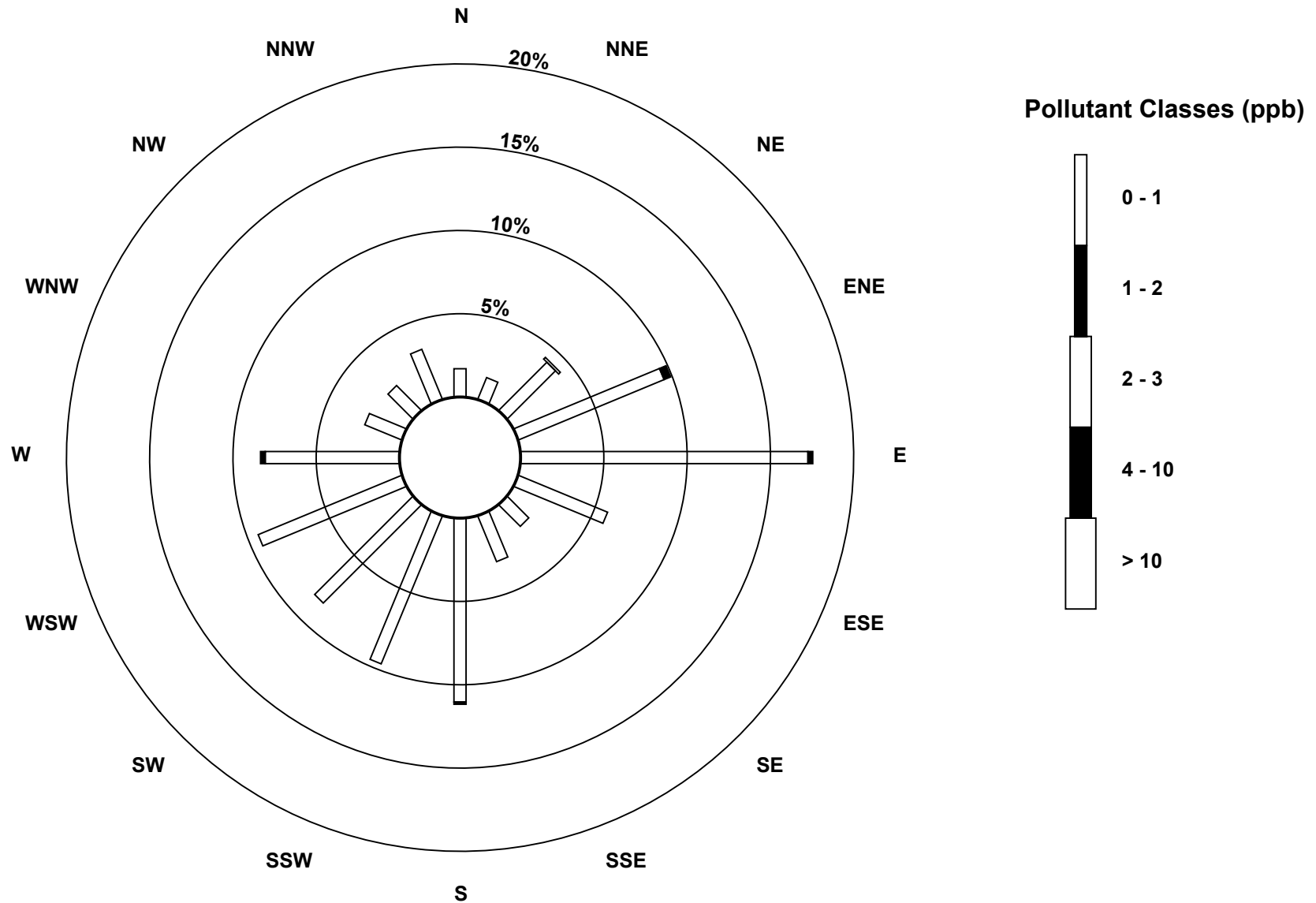
Donnelly - May 2017



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

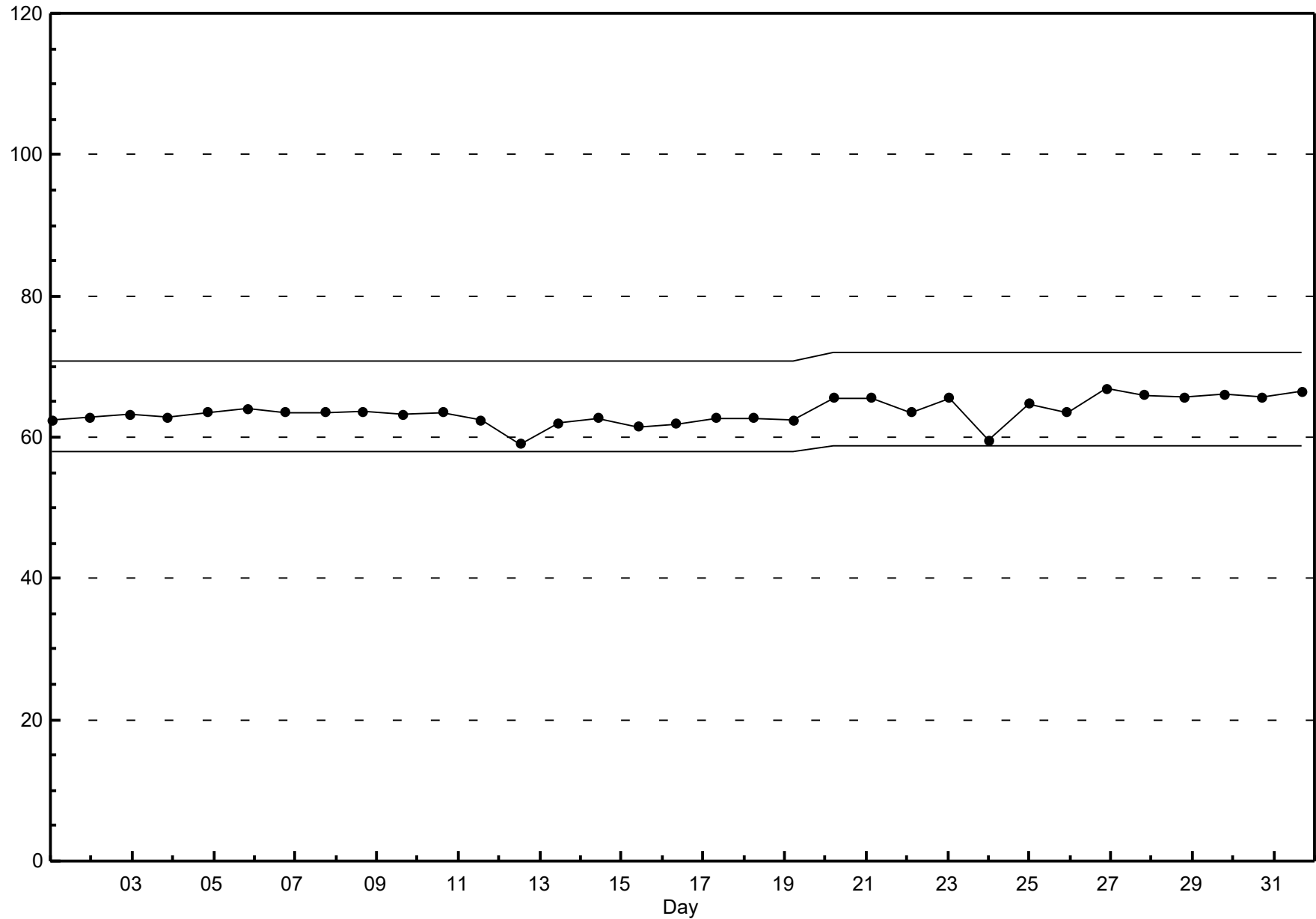
Donnelly - May 2017



Span Responses

Hydrogen Sulphide (H_2S)

Donnelly - May 2017



Hourly Averages

External Temperature (ET) - °C

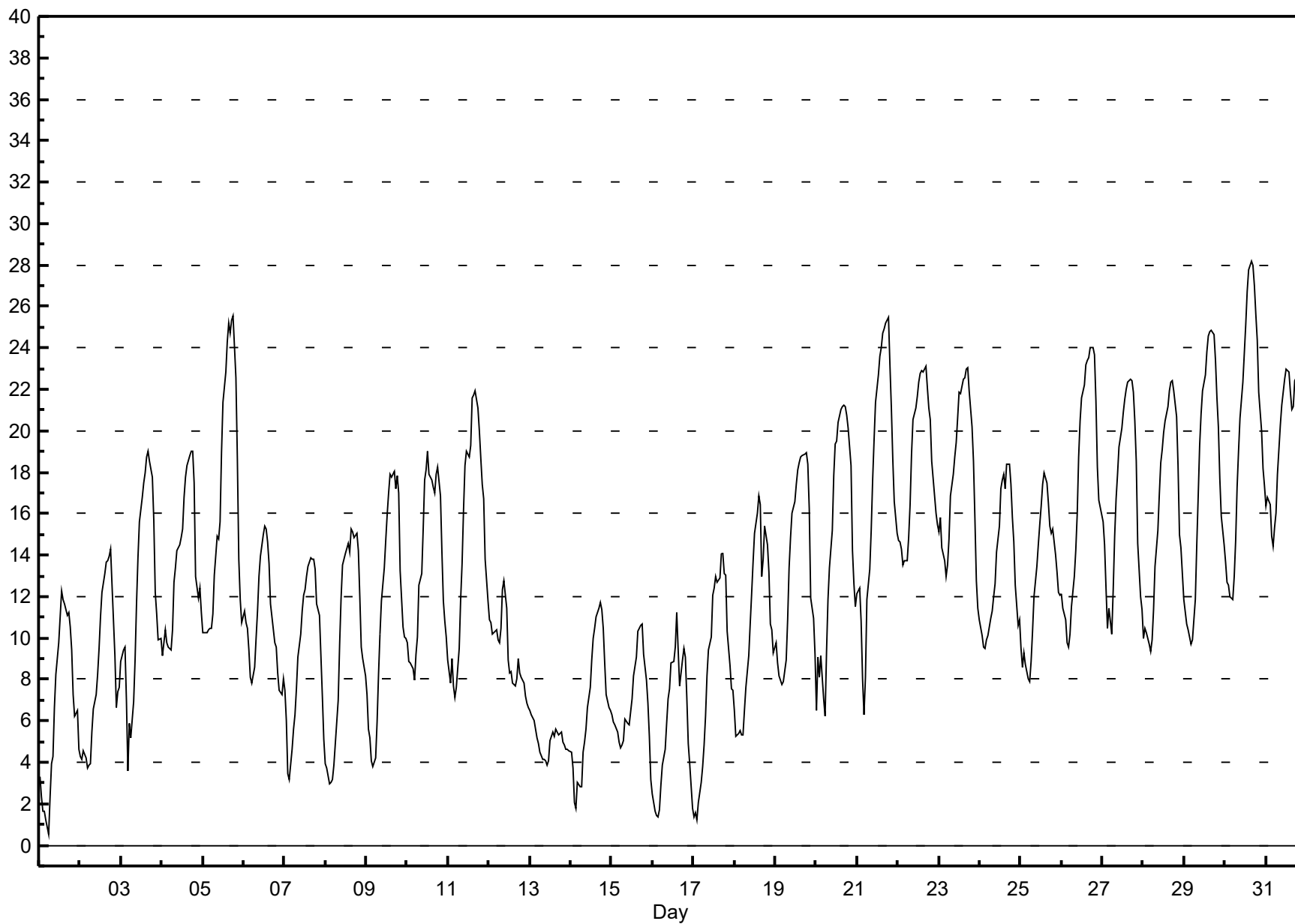
Donnelly - May 2017

Maximum Value: 28.2 °C on May 30 16:00																				Maximum Daily Average: 20.1 °C on May 30					Hours in Service: 744	
Minimum Value: 1 °C on May 1 06:00																				Minimum Daily Average: 5.0 °C on May 13					Hours of Data: 744	
Maximum Diurnal Average: 17.6 °C at hour 16																				Minimum Diurnal Average: 7.4 °C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.81 °C																				Percentiles: P ₁ = 1.6 P ₁₀ = 5.0 Q ₁ = 8.3 Median = 12.1 Q ₃ = 17.4 P ₉₀ = 21.6 P ₉₉ = 25.4					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-May	3	2	2	2	1	1	2	4	4	7	8	10	11	12	12	12	11	11	11	9	7	6	6	5	6.6	12.3
2-May	4	4	5	4	4	4	4	5	7	7	8	9	11	12	13	14	14	14	14	13	9	7	7	8	8.4	14.3
3-May	9	9	10	7	4	6	5	7	9	12	14	16	17	17	18	19	19	19	18	16	12	11	10	10	12.2	19.0
4-May	9	10	10	10	10	9	10	13	13	14	15	15	15	17	18	18	19	19	19	17	13	12	12	11	13.7	19.0
5-May	10	10	10	10	10	10	11	13	15	15	16	19	21	23	24	25	25	25	26	23	19	14	12	11	16.6	25.5
6-May	11	11	10	9	8	8	9	10	11	13	14	15	15	15	15	14	12	10	10	10	8	7	7	8	10.9	15.4
7-May	7	6	3	3	5	6	6	8	9	10	11	12	12	13	13	14	14	14	13	12	11	9	7	5	9.4	13.9
8-May	4	4	3	3	3	4	5	7	10	12	13	14	14	15	14	15	15	15	15	14	12	10	9	8	9.9	15.3
9-May	7	6	5	4	4	4	6	8	10	12	13	15	16	17	18	18	18	17	18	17	13	11	10	10	11.5	18.0
10-May	10	9	9	9	8	9	10	13	13	15	18	18	19	18	18	17	17	18	18	17	14	12	11	10	13.7	19.0
11-May	9	8	9	8	7	8	9	12	14	16	18	19	19	19	22	22	22	21	20	19	17	17	14	12	15.0	21.9
12-May	11	11	10	10	10	10	10	10	12	13	11	9	8	8	8	8	8	9	8	8	8	7	7	7	9.3	12.8
13-May	7	6	6	6	5	5	4	4	4	4	4	4	5	5	5	6	5	5	5	5	5	5	5	5	5.0	6.5
14-May	4	4	2	2	3	3	3	5	5	6	7	8	9	10	10	11	11	12	11	10	9	7	7	7	6.9	11.7
15-May	6	6	6	5	5	5	5	5	6	6	6	6	7	8	9	10	10	11	11	9	8	7	5	3	6.9	10.7
16-May	2	2	1	1	2	3	4	5	6	7	8	9	9	10	11	9	8	9	9	9	7	5	4	2	5.9	11.2
17-May	1	2	1	2	3	4	5	6	8	9	10	12	12	13	13	13	14	14	13	13	10	9	8	7	8.5	14.1
18-May	6	5	5	6	5	5	6	8	9	11	12	14	15	16	17	16	13	14	15	15	13	11	10	9	10.7	16.9
19-May	10	9	8	8	8	8	9	11	13	15	16	17	17	18	18	19	19	19	19	18	16	12	11	9	13.6	18.9
20-May	6	9	8	9	7	6	9	12	13	15	18	19	20	20	21	21	21	21	21	20	18	14	13	11	14.8	21.3
21-May	12	12	11	8	6	8	12	13	15	18	20	21	23	24	24	25	25	25	25	23	21	19	17	15	17.6	25.5
22-May	15	15	14	14	14	14	15	16	19	21	21	22	22	23	23	23	23	22	21	21	19	17	16	15	18.4	23.1
23-May	15	16	14	14	13	14	15	17	18	19	19	21	22	22	22	23	23	23	22	20	19	16	13	11	17.9	23.1
24-May	11	10	10	10	10	10	11	11	12	13	14	15	17	18	18	17	18	18	17	16	15	13	11	11	13.6	18.4
25-May	9	9	9	9	8	8	9	10	12	13	14	15	16	17	18	17	17	15	15	15	14	13	12	12	12.9	18.0
26-May	12	11	11	10	10	10	11	13	14	16	19	21	22	22	23	23	23	24	24	24	21	18	17	16	17.3	24.0
27-May	16	14	12	10	11	10	12	15	17	18	19	20	21	22	22	22	22	22	22	20	19	15	12	11	16.9	22.5
28-May	10	10	10	10	9	10	11	13	15	17	18	19	20	20	21	22	22	22	22	21	18	15	14	13	16.1	22.4
29-May	12	11	10	10	10	10	12	15	17	19	21	22	23	24	25	25	25	25	23	22	20	18	16	15	17.8	24.8
30-May	14	13	13	12	12	13	15	17	19	21	22	24	25	27	28	28	28	27	26	24	22	20	18	17	20.1	28.2
31-May	16	17	16	15	14	15	16	18	20	21	22	23	23	23	22	21	21	22	23	22	21	17	16	17	19.2	22.9
9.1 8.7 8.2 7.7 7.4 7.7 8.8 10.5 11.9 13.3 14.5 15.5 16.4 17.0 17.5 17.6 17.5 17.5 17.3 16.2 14.2 12.0 10.8 10.1																									Diurnal Average	
16.4 16.8 16.4 14.9 14.4 15.3 16.0 17.9 20.2 21.2 22.3 23.8 25.1 26.7 27.8 28.2 28.0 27.0 25.6 24.4 21.9 20.0 18.1 17.3																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Donnelly - May 2017



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - May 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	7	11	10	9	10	10	8	10	5	6	6	4	3	9	18	11	20	9	5	5	6	4	7	11	5.7	20.3
Dir	202	196	187	190	188	201	198	249	252	235	249	332	273	247	219	209	271	311	351	290	358	96	160	185	225	271
2 Spd	10	12	11	13	13	14	14	19	21	19	17	19	17	20	18	16	15	12	7	3	4	5	6	10	10.2	20.6
Dir	194	207	208	228	225	203	210	243	260	264	275	265	267	261	262	251	267	255	241	203	97	102	105	115	242	260
3 Spd	11	13	15	7	4	5	3	10	9	9	14	18	22	25	26	33	40	30	29	16	10	8	11	10	12.8	39.5
Dir	135	144	130	109	111	154	115	168	175	183	190	205	211	227	224	229	233	234	231	250	247	252	221	188	211	233
4 Spd	12	10	12	13	13	11	9	14	17	18	14	14	15	12	15	7	6	5	3	4	4	4	6	9	7.8	18.5
Dir	183	191	198	193	182	176	189	221	237	249	241	206	208	206	202	195	170	160	169	53	70	92	90	88	199	249
5 Spd	8	11	12	12	12	12	8	10	8	10	11	9	8	8	10	9	11	6	8	6	2	29	11	13	5.6	28.9
Dir	86	88	90	91	90	88	83	89	89	95	94	92	83	81	86	99	157	136	166	105	161	262	274	207	107	262
6 Spd	15	10	10	9	8	6	9	8	13	15	16	22	22	28	27	24	23	19	10	5	12	15	17	23	13.3	27.6
Dir	212	222	208	196	230	211	208	233	253	278	271	266	266	258	257	249	242	232	218	140	175	179	194	226	236	258
7 Spd	22	18	14	15	16	19	23	28	30	27	22	21	19	19	21	24	23	19	14	4	22	19	15	13	18.2	29.6
Dir	226	220	190	185	200	219	227	236	253	247	250	240	263	263	246	234	252	253	257	264	227	218	209	196	234	253
8 Spd	14	14	14	13	14	13	13	15	16	17	21	22	23	23	25	16	20	20	18	10	12	12	13	9	14.2	25.2
Dir	181	179	173	171	165	169	170	175	183	222	238	238	242	238	232	230	238	238	233	230	206	192	206	227	213	232
9 Spd	12	11	11	14	13	14	13	12	14	12	11	10	7	8	7	5	7	5	1	2	2	4	4	5	6.8	14.1
Dir	206	179	172	171	179	179	185	210	244	241	220	205	233	197	176	235	214	179	197	51	89	90	105	94	194	179
10 Spd	6	6	8	9	6	3	6	5	7	10	11	10	10	7	5	4	11	15	11	6	6	5	6	5	6.1	14.9
Dir	92	91	90	90	110	131	97	69	86	101	104	90	103	119	187	202	8	34	50	78	90	85	89	76	86	34
11 Spd	5	5	6	8	8	7	8	9	10	11	12	14	13	19	22	21	23	26	27	26	24	18	7	12	14.0	27.3
Dir	73	76	75	61	64	68	66	78	70	69	70	66	70	60	61	64	63	60	59	58	59	68	90	57	64	59
12 Spd	18	16	19	17	16	15	15	14	14	14	14	12	14	14	15	14	14	17	13	11	10	7	6	6	13.0	19.1
Dir	46	43	48	59	64	63	65	67	69	80	80	78	82	86	86	88	87	88	103	93	88	78	77	77	73	48
13 Spd	7	4	7	6	10	7	7	13	11	11	12	8	5	5	5	7	8	8	8	8	5	4	4	5	3.1	12.5
Dir	83	77	61	55	52	60	55	45	53	37	36	28	58	82	98	124	211	230	229	218	214	195	193	176	74	45
14 Spd	6	9	10	8	6	8	9	5	6	8	9	11	11	14	11	12	10	10	10	10	5	4	5	7	3.3	13.6
Dir	184	189	193	178	164	205	205	214	266	262	257	257	272	286	328	314	320	326	339	21	37	47	71	92	270	286
15 Spd	8	6	6	6	7	5	4	5	6	5	7	5	8	9	10	7	7	8	7	6	10	12	8	4	6.7	12.3
Dir	102	93	93	98	103	106	92	94	91	89	94	89	69	63	60	71	65	58	62	74	64	58	61	60	77	58
16 Spd	5	4	6	6	7	7	10	11	11	13	15	11	14	12	9	10	8	6	14	6	3	5	3	2	8.0	14.6
Dir	42	59	52	57	54	51	47	47	51	48	41	51	40	40	62	9	21	32	41	77	71	66	80	70	47	41
17 Spd	3	5	6	5	4	5	7	8	9	12	11	10	11	9	7	9	10	9	9	9	5	6	10	10	7.5	12.0
Dir	65	65	64	57	64	80	90	96	100	103	99	79	68	78	94	108	114	114	115	114	94	93	112	117	95	103
18 Spd	9	8	8	6	4	5	9	14	14	16	14	16	17	19	23	10	10	19	17	14	13	14	13	15	10.0	22.7
Dir	104	90	92	95	95	100	151	170	192	201	208	212	219	207	194	250	265	177	177	159	163	177	172	173	182	194
19 Spd	15	16	17	16	16	15	15	18	22	26	23	22	22	23	24	19	18	18	19	13	6	5	5	2	13.4	26.0
Dir	162	170	175	173	174	177	181	202	227	233	237	240	227	225	223	248	257	268	276	279	251	164	164	143	219	233
20 Spd	5	8	6	10	1	4	9	14	14	13	17	21	18	15	18	19	19	19	17	13	8	5	8	7	9.0	21.2
Dir	60	133	102	163	132	167	199	226	247	237	257	267	248	247	259	271	275	281	281	277	246	222	189	176	248	267
21 Spd	10	10	7	1	3	2	5	12	13	13	11	12	13	15	16	17	14	12	12	8	4	6	7	8	7.6	16.5
Dir	176	177	177	102	70	113	194	202	209	238	237	239	245	252	279	274	269	249	269	282	254	223	228	193	237	274
22 Spd	12	14	13	12	14	16	18	19	19	22	27	25	25	25	26	26	32	30	17	13	11	13	18	18	17.7	31.6
Dir	188	173	175	179	179	177	175	173	196	212	231	220	226	221	231	239	236	237	228	212	190	176	191	194	209	236



Hourly Averages

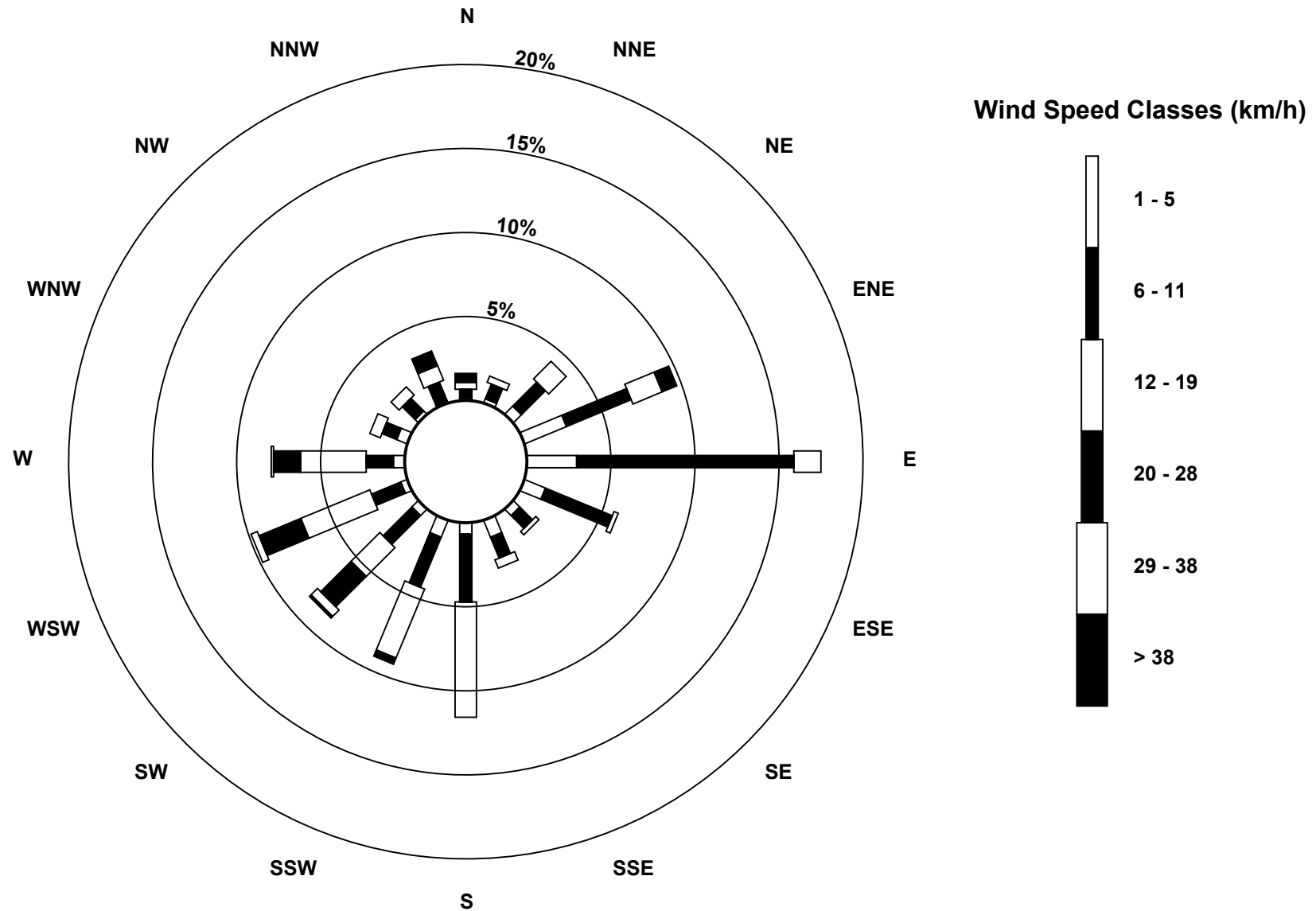
Wind Speed (km/h)
Wind Direction (deg)
Donnelly - May 2017

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	12	8	5	11	11	10	18	24	25	23	14	12	13	8	7	7	9	17	17	9	10	6	3	5.1	25.4							
Dir	178	179	210	253	168	179	196	244	266	264	259	238	258	290	275	292	339	16	23	30	29	354	110	29	262	264							
24 Spd	12	16	16	12	10	10	10	14	18	20	21	22	23	24	23	25	24	22	17	16	14	9	4	8	14.7	25.1							
Dir	257	262	279	296	311	313	335	340	345	343	342	343	335	336	339	4	353	347	348	324	340	339	317	334	332	4							
25 Spd	7	3	6	5	5	7	8	8	8	8	10	10	12	14	14	18	18	6	2	6	11	11	12	13	5.9	18.4							
Dir	346	325	331	282	278	287	311	320	320	292	286	286	270	260	272	274	250	294	204	174	176	173	174	173	264	274							
26 Spd	13	14	13	4	4	5	6	14	12	8	5	4	4	5	7	9	8	4	15	10	7	9	14	14	6.5	15.4							
Dir	175	178	180	195	184	192	202	224	237	246	260	285	279	297	280	259	273	282	252	271	252	185	175	171	221	252							
27 Spd	15	15	3	6	8	8	9	17	20	20	19	18	16	17	17	17	17	14	13	14	12	9	6	6	8.2	20.3							
Dir	172	177	18	184	227	261	348	4	0	354	351	343	331	309	306	302	301	320	338	8	17	31	52	55	336	354							
28 Spd	4	4	6	8	9	7	9	10	11	10	9	9	7	7	7	6	7	8	8	8	6	6	8	9	7.5	10.9							
Dir	72	91	90	91	91	90	94	94	94	101	96	74	83	81	80	80	109	108	103	98	96	94	91	93	92	94							
29 Spd	8	7	8	9	9	9	7	7	9	8	9	9	10	10	10	11	11	11	10	10	10	9	7	6	8.8	11.4							
Dir	91	91	89	91	91	93	92	92	97	99	106	88	90	94	100	86	89	90	91	92	94	95	94	92	93	89							
30 Spd	6	7	9	9	9	5	5	9	9	9	8	11	11	10	11	10	8	8	7	6	6	6	4	6	7.4	10.9							
Dir	94	92	94	94	96	79	81	110	110	120	110	117	122	125	131	148	129	97	92	92	96	107	95	94	108	122							
31 Spd	9	7	5	3	5	8	8	8	12	21	23	25	25	30	24	19	17	15	16	13	7	4	5	8	9.4	29.7							
Dir	93	96	115	114	107	145	216	281	261	259	273	264	260	250	259	237	225	209	232	219	223	166	150	159	238	250							
Spd	5.0	5.6	4.7	4.4	4.3	4.4	4.0	3.8	4.0	5.0	4.9	5.1	5.5	6.3	6.4	6.1	6.6	3.6	2.2	0.4	1.6	2.7	4.6	4.9	Diurnal Average								
Dir	158	162	148	147	147	160	167	199	234	243	252	248	249	248	241	250	255	254	257	62	139	155	160	158	Diurnal Maximum								
Spd	22.4	18.4	19.1	16.9	16.1	19.0	23.2	27.8	29.6	27.0	27.1	25.2	25.1	29.7	27.1	33.0	39.5	30.3	29.2	25.8	23.6	28.9	17.8	22.6	Diurnal Maximum								
Dir	226	220	48	59	200	219	227	236	253	247	231	264	260	250	257	229	233	234	231	58	59	262	191	226									
Maximum Speed Value: 40 km/h on May 3 17:00																								Minimum Speed Value: 1 km/h on May 9 19:00				Hours in Service:				744	
Maximum Daily Speed Average: 18.2 km/h on May 7																								Minimum Daily Speed Average: 3.1 km/h on May 15				Hours of Data:				744	
Maximum Diurnal Speed Average: 6.6 km/h at hour 17																								Minimum Diurnal Speed Average: 0.4 km/h at hour 20				Hours of Missing Data:				0	
Monthly Average Velocity: 3.08 km/h 206.8 deg																								Speed Percentiles: P ₁ = 2.4 P ₁₀ = 4.9 Q ₁ = 6.9 Median = 10.3 Q ₃ = 14.6 P ₉₀ = 20.5 P ₉₉ = 29.5				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		2		12		9		10		0		0		33																			
NorthEast		11		34		25		8		0		0		78																			
East		27		140		25		0		0		0		192																			
SouthEast		7		22		4		0		0		0		33																			
South		15		48		70		4		0		0		137																			
SouthWest		3		34		53		38		5		1		134																			
West		9		26		49		22		3		0		109																			
NorthWest		3		14		9		2		0		0		28																			
Total		77		330		244		84		8		1		744																			

Wind Rose

Wind Speed (WS) (km/h)

Donnelly - May 2017



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - May 2017

Maximum Speed: 40 km/h on May 3 17:00																				Maximum Daily Speed Average: 19.9 km/h on May 7										Hours in Service: 744	
Minimum Speed: 2 km/h on May 21 04:00																				Minimum Daily Speed Average: 7.1 km/h on May 15										Hours of Data: 744	
Maximum Diurnal Speed Average: 16.3 km/h at hour 15																				Minimum Diurnal Speed Average: 8.5 km/h at hour 23										Hours of Missing Data: 0	
Monthly Average Speed: 11.98 km/h																				Percentiles: P ₁ = 3.1 P ₁₀ = 5.3 Q ₁ = 7.4 Median = 10.7 Q ₃ = 14.9 P ₉₀ = 20.7 P ₉₉ = 29.7										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-May	7	11	10	9	10	10	8	11	5	7	7	5	6	10	18	13	22	9	5	7	6	5	7	11	9.1	21.7					
2-May	10	12	11	13	13	14	14	19	21	19	18	20	18	21	18	17	16	13	7	4	4	5	6	11	13.4	20.9					
3-May	11	14	15	7	5	6	4	10	9	10	15	19	23	25	27	33	40	31	29	16	10	9	11	10	16.2	39.8					
4-May	12	10	12	13	13	11	9	15	17	19	14	15	15	12	15	9	7	6	5	4	4	4	6	9	10.7	18.7					
5-May	8	11	12	12	12	12	8	11	8	10	11	9	8	9	11	9	12	7	9	6	8	30	12	14	10.8	29.9					
6-May	15	10	11	9	8	7	10	9	14	15	17	22	22	28	28	25	24	20	10	6	12	15	18	23	15.7	27.9					
7-May	23	19	14	15	16	19	23	28	30	28	22	21	19	19	21	24	24	19	15	6	22	19	15	13	19.9	30.1					
8-May	14	14	14	13	14	13	14	15	16	17	22	22	24	24	26	17	20	20	18	11	12	12	13	10	16.5	25.8					
9-May	13	11	11	14	13	14	13	12	14	13	11	11	9	10	9	9	8	5	3	3	3	4	4	5	9.3	14.4					
10-May	6	6	8	9	8	4	6	6	8	10	12	10	12	11	10	7	11	15	12	6	6	6	6	5	8.3	15.3					
11-May	5	5	7	8	8	7	8	9	10	11	12	15	13	19	22	21	23	26	27	26	24	18	8	12	14.3	27.3					
12-May	18	16	19	17	16	15	15	14	14	15	14	12	14	15	15	14	14	17	13	11	10	8	7	6	13.6	19.2					
13-May	7	4	7	6	10	7	7	13	11	11	12	8	6	5	5	7	9	8	8	8	5	4	5	5	7.5	12.6					
14-May	6	9	10	8	7	8	9	5	7	9	9	12	12	14	11	12	11	11	10	10	5	4	5	7	8.8	14.3					
15-May	8	6	6	6	8	5	5	5	6	5	7	6	8	10	10	7	7	8	7	6	10	12	8	4	7.1	12.4					
16-May	5	4	6	6	7	7	10	11	11	13	15	12	14	12	10	12	9	7	14	7	3	5	3	2	8.6	14.8					
17-May	3	5	6	5	4	5	7	8	9	12	11	10	12	10	7	10	11	9	10	10	5	6	10	10	8.1	12.2					
18-May	9	8	8	6	4	5	10	14	14	16	15	17	19	20	23	14	13	19	17	14	13	14	13	15	13.4	23.2					
19-May	15	16	17	16	16	15	15	18	23	26	24	23	22	24	24	20	18	19	19	13	6	5	5	4	16.8	26.2					
20-May	7	8	8	11	3	5	9	14	14	14	17	22	19	17	19	20	19	19	17	13	8	6	8	7	12.8	21.8					
21-May	10	10	7	2	3	2	5	13	13	13	12	13	14	16	17	17	15	14	13	8	5	7	7	8	10.1	17.1					
22-May	12	14	13	12	14	16	18	19	19	23	27	26	25	25	27	26	32	30	18	13	11	13	18	18	19.6	31.8					
23-May	11	12	9	6	11	11	10	19	25	26	23	14	14	14	10	9	7	10	17	17	12	12	6	7	13.0	25.8					
24-May	12	16	17	13	10	10	10	15	18	20	22	22	24	24	23	26	24	23	18	16	15	9	5	8	16.5	25.5					
25-May	7	4	6	5	5	7	8	8	8	8	11	11	14	15	15	19	18	10	3	6	11	11	12	13	9.8	18.9					
26-May	13	14	13	5	4	5	6	14	12	9	6	6	7	9	10	12	10	5	16	10	7	10	14	14	9.6	15.7					
27-May	15	15	5	6	8	8	10	17	20	21	20	19	16	18	18	18	18	15	14	14	12	9	6	6	13.7	20.6					
28-May	4	4	6	8	9	7	9	10	11	10	9	9	8	8	9	7	7	9	8	8	6	6	9	9	7.9	11.0					
29-May	8	7	8	9	9	9	7	7	9	8	9	9	11	10	10	11	12	11	10	10	10	9	7	6	9.0	11.6					
30-May	6	7	9	9	9	5	5	9	9	9	9	11	11	10	11	11	9	8	7	6	6	6	4	6	8.0	11.3					
31-May	9	7	6	4	5	9	10	8	13	21	23	26	26	30	24	20	17	16	17	14	7	5	5	8	13.6	30.2					
9.9 9.9 10.0 9.1 9.1 9.0 9.7 12.4 13.5 14.4 14.7 14.8 15.0 16.0 16.3 15.3 15.7 14.2 12.7 10.0 9.0 9.2 8.5 9.2																									Diurnal Average						
22.6 18.5 19.2 16.9 16.5 19.1 23.2 27.9 30.1 27.5 27.5 25.6 25.5 30.2 27.7 33.4 39.8 30.8 29.4 25.8 23.6 29.9 17.9 22.7																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Donnelly - May 2017

Maximum Value: 87.0 deg on May 10 16:00																		Hours in Service: 744							
Minimum Value: 1.6 deg on May 19 06:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 2.2 P ₁₀ = 4.9 Q ₁ = 7.4 Median = 11.5 Q ₃ = 17.8 P ₉₀ = 31.4 P ₉₉ = 70.7																		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-May	12	8	3	8	5	9	16	13	23	39	42	51	64	42	19	31	21	17	25	76	35	38	25	6	75.8
2-May	13	6	6	14	6	8	3	15	10	14	10	15	15	18	18	17	21	21	25	54	13	6	3	8	54.4
3-May	4	4	5	21	36	35	33	8	9	12	9	13	12	12	10	9	6	11	7	5	5	17	10	9	35.8
4-May	4	3	8	8	7	7	8	11	9	10	13	14	13	24	19	44	53	43	60	16	12	8	5	5	60.1
5-May	6	4	4	4	5	4	7	7	10	7	6	12	17	13	16	18	21	37	31	17	49	14	21	17	49.1
6-May	10	8	15	7	23	22	17	23	15	12	15	11	11	10	13	15	15	15	22	35	6	2	11	5	34.8
7-May	7	6	13	6	12	5	4	5	10	11	12	13	12	13	12	12	10	9	23	45	10	5	6	6	45.4
8-May	4	2	3	4	3	3	4	4	10	14	15	13	16	13	13	22	11	10	10	14	7	8	6	18	22.2
9-May	17	10	8	2	3	4	4	12	14	15	23	32	48	57	47	71	39	17	81	34	12	9	6	5	80.9
10-May	5	5	4	4	43	71	22	14	16	15	16	19	29	56	83	87	21	15	16	12	8	12	6	8	87.0
11-May	7	11	8	4	3	5	6	9	11	9	11	11	8	6	8	7	7	7	3	3	3	15	29	5	29.3
12-May	4	7	3	5	5	4	4	5	11	10	7	7	8	7	7	7	7	7	10	5	12	8	9	10	12.1
13-May	10	11	6	12	7	13	10	6	6	11	6	10	23	22	18	12	29	13	12	10	9	10	18	10	28.9
14-May	8	6	4	18	15	10	8	17	21	19	18	16	21	18	21	19	15	23	16	7	7	9	17	6	23.3
15-May	10	8	7	10	12	21	20	12	15	21	10	15	11	10	15	16	14	17	16	14	14	5	8	11	21.5
16-May	3	6	7	6	6	6	5	5	9	9	9	12	15	22	19	34	41	49	38	21	22	15	14	14	49.3
17-May	7	9	5	6	11	12	8	8	11	12	11	14	12	17	18	21	19	18	12	14	7	7	5	7	21.1
18-May	12	5	7	9	9	11	25	6	16	12	14	16	20	21	12	50	41	8	6	13	8	3	3	8	50.0
19-May	4	4	3	2	3	2	3	11	10	9	14	17	13	16	13	18	14	16	11	10	32	7	4	66	65.5
20-May	44	21	47	12	84	46	5	13	12	14	16	14	18	27	19	15	14	11	7	9	20	27	7	9	84.4
21-May	4	5	6	63	38	20	35	10	10	13	20	22	25	21	18	15	22	30	17	6	32	16	21	8	62.7
22-May	7	5	5	3	4	3	2	6	10	8	10	12	12	13	13	11	7	6	10	14	6	5	6	3	14.4
23-May	23	8	31	42	5	7	8	20	11	10	10	21	36	20	39	44	40	28	10	11	48	34	21	69	69.2
24-May	7	9	8	6	9	11	10	9	5	5	6	7	9	9	10	11	8	8	9	9	9	12	20	9	20.0
25-May	12	40	14	16	10	12	10	13	16	23	24	26	26	19	24	14	18	67	69	15	3	7	2	2	69.2
26-May	4	4	2	20	16	32	13	9	14	19	41	71	64	62	63	45	37	68	13	7	15	10	3	2	70.9
27-May	2	22	63	34	8	10	27	8	7	10	11	16	15	19	19	20	16	20	16	9	4	10	12	8	62.9
28-May	13	14	9	7	6	9	8	8	9	11	13	18	23	32	32	40	27	19	14	9	10	9	7	7	39.8
29-May	8	8	11	8	8	7	14	14	10	13	14	15	16	19	17	11	12	12	11	10	8	6	7	7	19.2
30-May	8	9	7	7	11	23	28	14	12	14	15	14	13	15	16	21	24	12	16	19	8	11	20	11	28.2
31-May	7	13	34	25	18	24	31	18	12	10	8	10	11	10	13	12	15	17	13	8	7	31	6	6	34.1
43.5 39.8 62.9 62.7 84.4 70.6 34.8 22.8 22.6 38.7 41.5 70.9 64.5 62.0 83.4 87.0 52.9 68.1 80.9 75.8 49.1 37.8 29.3 69.2																									

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

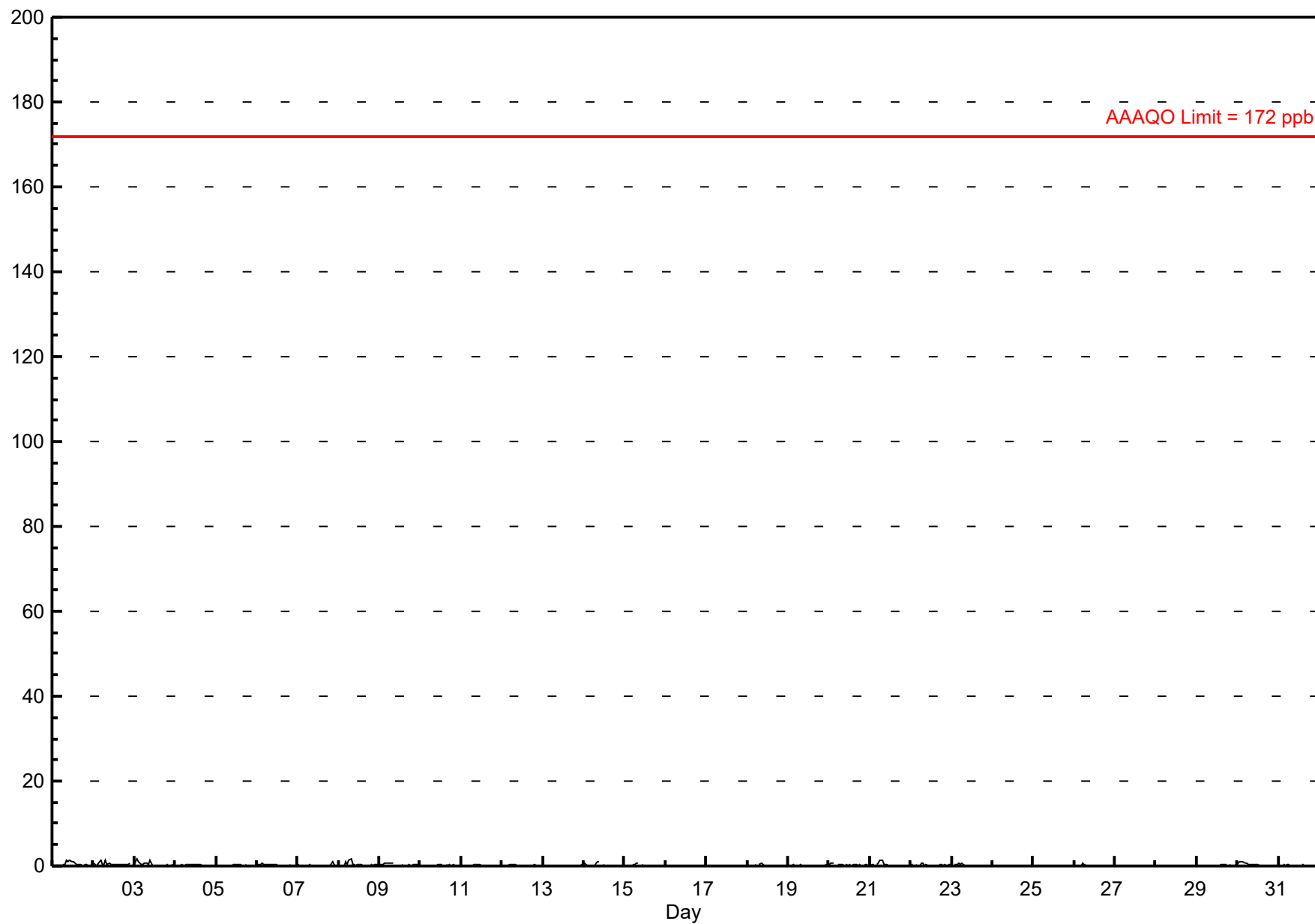
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.8 ppb on May 8 08:00 Maximum Daily Average: 0.5 ppb on May 2																				Hours in Service: 744 Hours of Data: 664 Hours of Missing Data: 80 Hours of Calibration: 35 Percent Operational Time: 94.0						
Minimum Value: 0 ppb on May 1 18:00 Maximum Diurnal Average: 0.4 ppb at hour 8 Monthly Average: 0.18 ppb										Minimum Daily Average: 0.0 ppb on May 24 Minimum Diurnal Average: 0.1 ppb at hour 19 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 = 1.3																
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-May	A	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0.4	1.5
2-May	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0.5	1.4
3-May	0	2	1	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	1.6
4-May	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
5-May	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.1	0.5
6-May	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.6
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0.1	1.1
8-May	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.8
9-May	0	0	0	1	1	1	1	1	1	C	C	C	C	0	0	A	0	0	0	0	0	0	0	0	0.4	0.8
10-May	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	0.4
11-May	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-May	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-May	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	0.3
14-May	1	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
15-May	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
16-May	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
17-May	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
18-May	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
19-May	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-May	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
21-May	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
22-May	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
23-May	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
24-May	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
25-May	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
26-May	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	--	0.7
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	0	0	0	0	0	0	A	0	0	0	0	--	0.1
29-May	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	0.5
30-May	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.9
31-May	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
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span T - Exceeds temp limit																										
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 - May 2017



Hourly Maximums

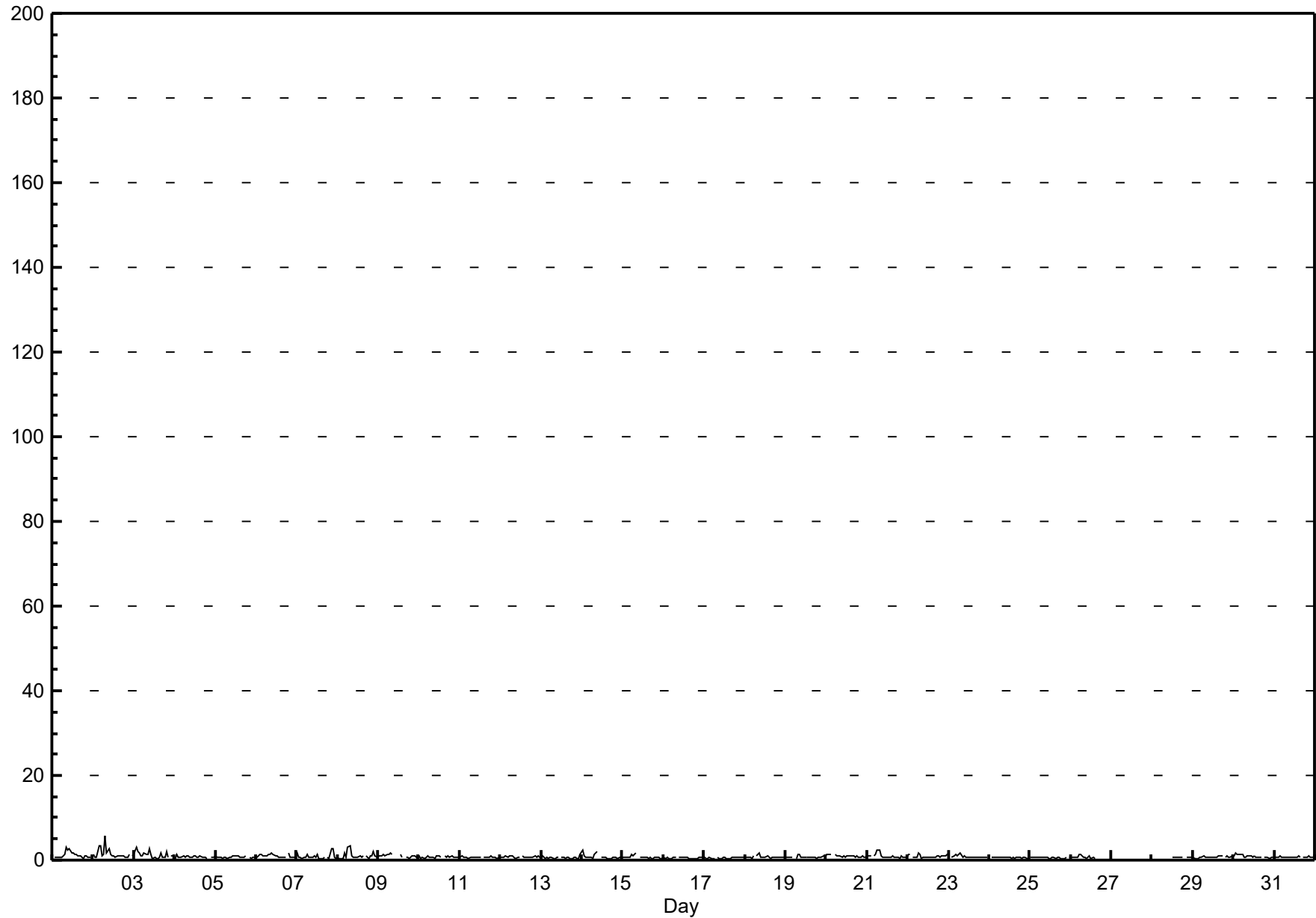
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - May 2017

Maximum Value: 5.9 ppb on May 2 08:00																			Maximum Daily Average: 1.5 ppb on May 2										Hours in Service: 744	
Minimum Value: 0 ppb on May 25 13:00																			Minimum Daily Average: 0.6 ppb on May 16										Hours of Data: 664	
Maximum Diurnal Average: 1.3 ppb at hour 8																			Minimum Diurnal Average: 0.6 ppb at hour 19										Hours of Missing Data: 80	
Monthly Average: 0.84 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.3 P ₉₉ = 3.0										Hours of Calibration: 35	
																													Percent Operational Time: 94.0	
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-May	A	1	1	1	1	1	1	1	3	2	3	2	1	1	1	1	1	1	0	1	1	1	1	A	1.2	3.0				
2-May	1	1	1	3	3	1	1	6	2	3	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.5	5.9				
3-May	1	3	2	2	1	1	2	1	1	3	1	1	1	0	0	1	2	1	1	2	1	A	1	1	1.3	3.0				
4-May	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	0.8	1.2				
5-May	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0.7	1.1				
6-May	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1.0	1.8				
7-May	2	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	1	A	1	0	3	3	1	0	0.9	2.8				
8-May	1	0	0	0	2	1	3	3	1	1	1	1	1	1	1	1	A	1	0	1	1	2	1	1	1.1	3.3				
9-May	1	1	1	1	1	1	1	2	1	C	C	C	C	1	1	A	1	1	0	1	1	1	1	1	1.1	1.7				
10-May	1	0	1	0	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.0				
11-May	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	0.7	1.0				
12-May	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
13-May	1	1	0	1	0	1	1	0	0	1	1	A	1	1	0	1	1	0	0	1	1	0	0	1	0.6	1.4				
14-May	2	1	1	1	1	1	0	1	2	2	A	1	1	1	1	0	0	0	1	1	1	0	1	0	0.8	2.2				
15-May	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	0	1	0	0	1	1	1	0	0	0.7	1.8				
16-May	1	0	1	0	0	0	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0.6	0.8				
17-May	1	0	0	1	0	0	0	A	1	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0.6	0.8				
18-May	1	1	1	1	0	1	A	1	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.8				
19-May	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.8	1.2				
20-May	1	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	1.5				
21-May	1	1	1	A	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.9	2.4				
22-May	1	1	A	1	1	1	2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8				
23-May	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6				
24-May	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0	1	1	0	A	0.6	0.7				
25-May	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	0	0	1	A	1	0.6	0.7				
26-May	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	T	T	T	T	T	T	T	T	T	--	1.4				
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--				
28-May	M	M	M	M	M	M	M	M	M	M	M	M	1	1	1	1	1	1	1	A	1	1	1	1	--	0.6				
29-May	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.2				
30-May	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	0.9	1.7				
31-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.1				
		0.9	0.9	0.8	0.9	0.9	1.0	1.3	1.0	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.8	0.8	0.8	0.7	0.7	Diurnal Average					
		2.2	3.0	2.1	3.3	3.5	3.0	5.9	3.0	2.8	2.6	1.7	1.8	1.4	1.3	1.1	1.6	1.0	1.1	2.2	2.8	2.8	1.1	1.4	Diurnal Maximum					
C - Calibration		M - Maintenance						A - Automated Daily Zero Span								T - Exceeds temp limit														

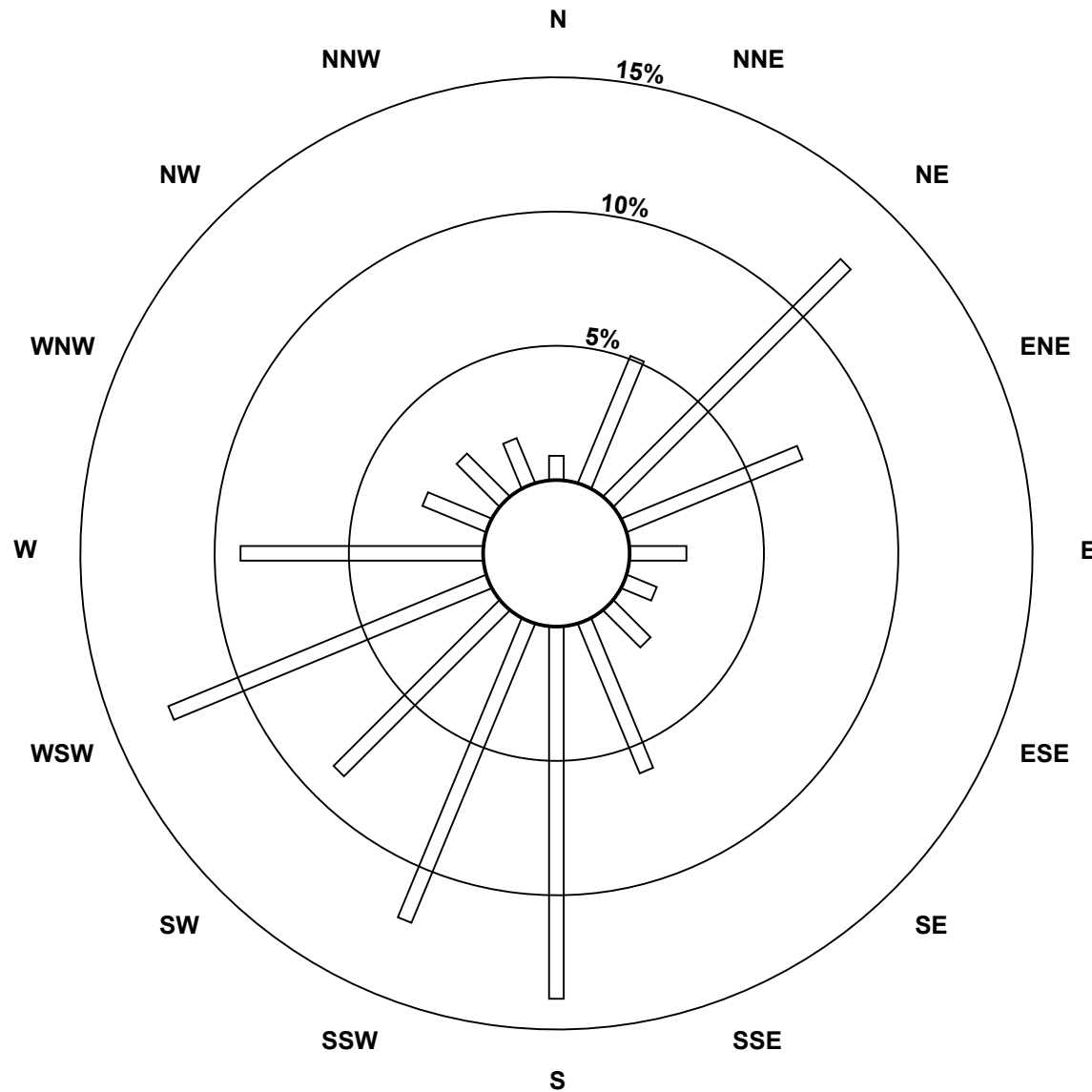
Hourly Maximums

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

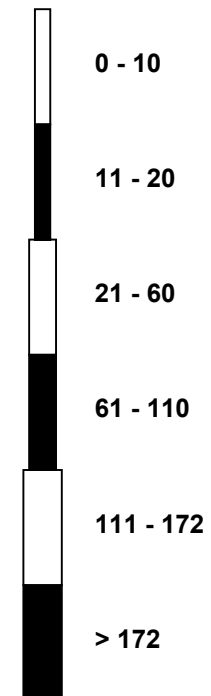


Pollutant Rose

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

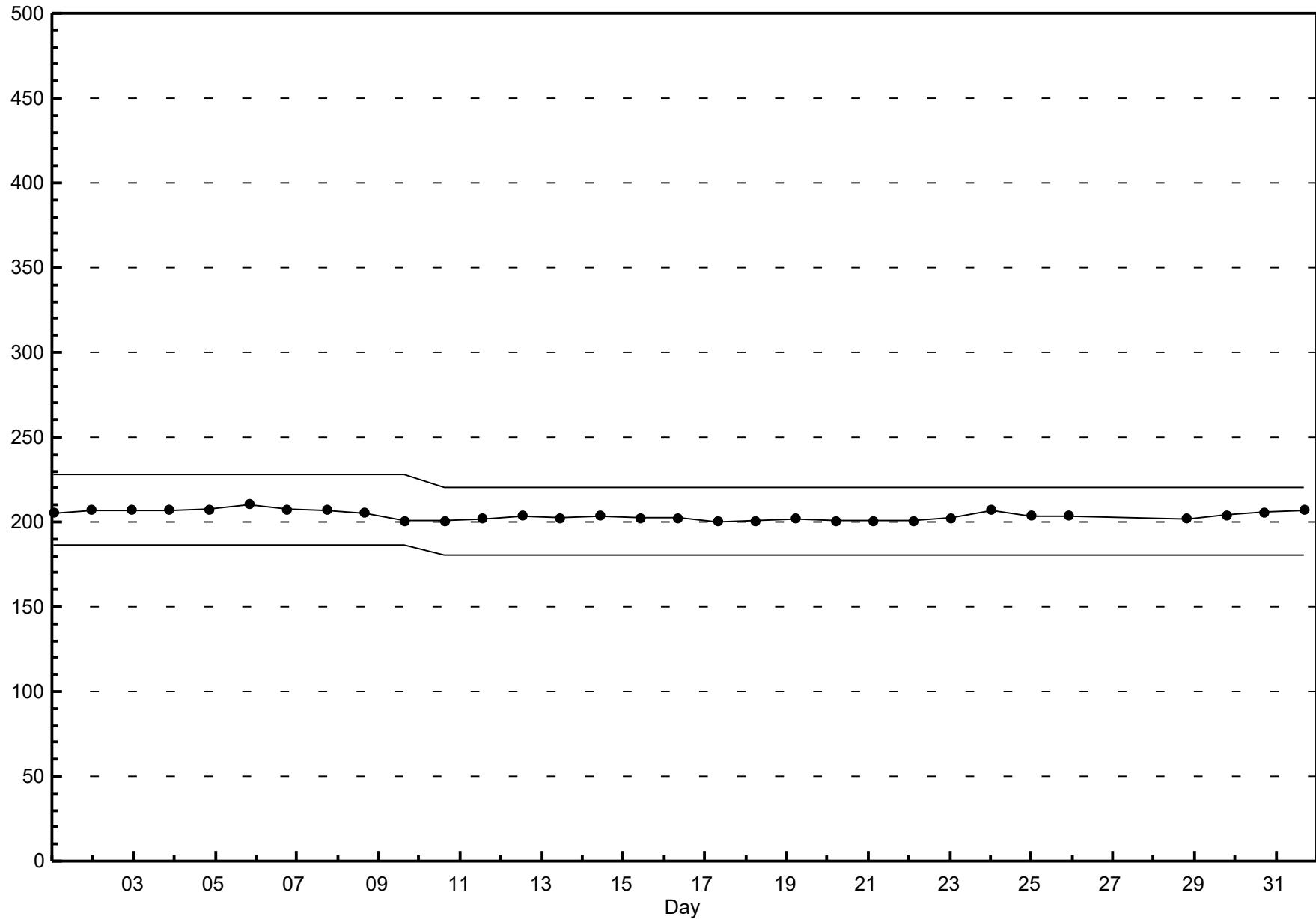


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - May 2017



Hourly Averages

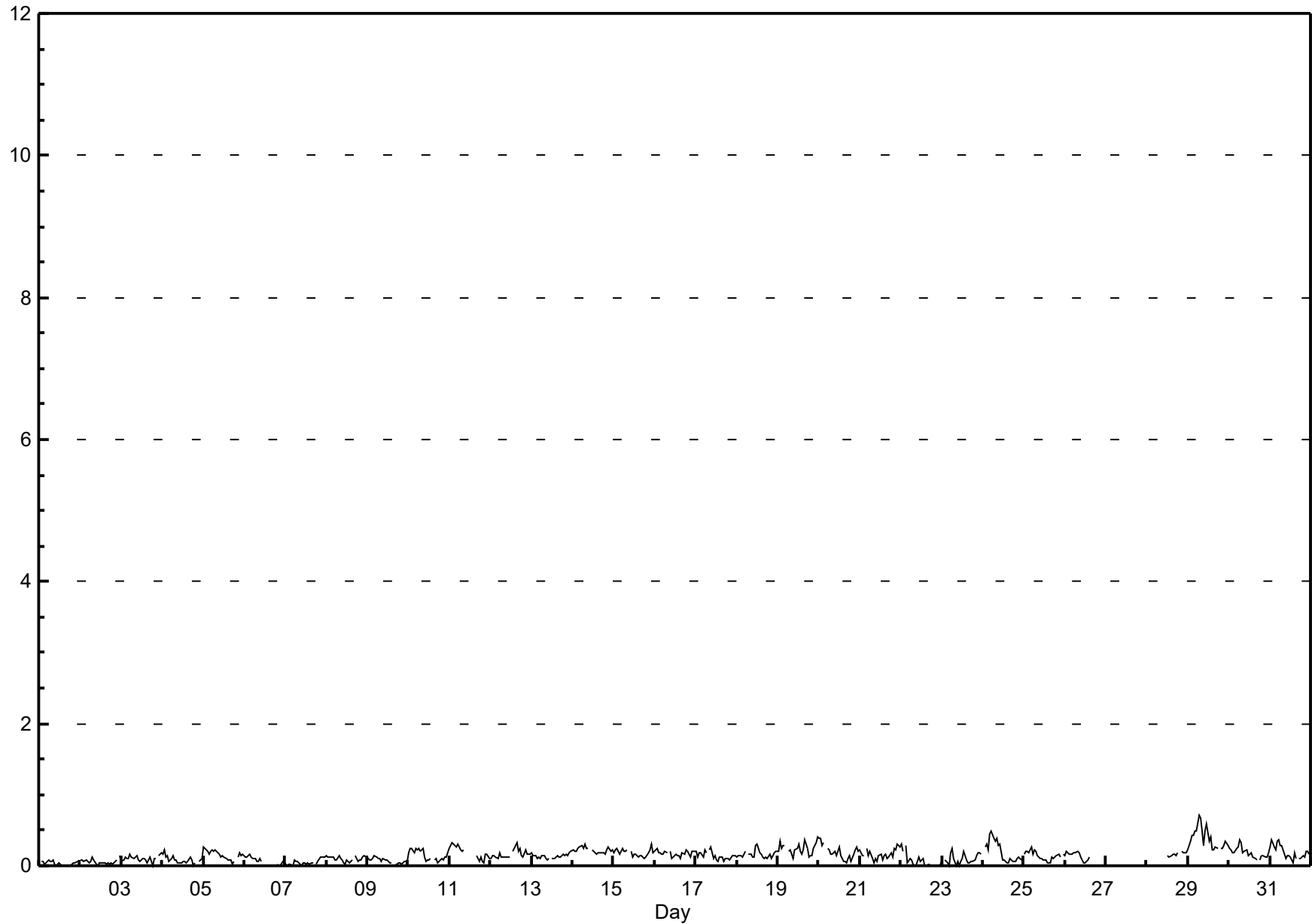
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - May 2017

Maximum Value: 0.7 ppb on May 29 07:00																				Maximum Daily Average: 0.4 ppb on May 29				Hours in Service: 744		
Minimum Value: 0 ppb on May 1 11:00																				Minimum Daily Average: 0.0 ppb on May 1				Hours of Data: 659		
Maximum Diurnal Average: 0.2 ppb at hour 7																				Minimum Diurnal Average: 0.1 ppb at hour 19				Hours of Missing Data: 85		
Monthly Average: 0.15 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 = 0.5				Hours of Calibration: 36		
																								Percent Operational Time: 93.4		
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-May	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
2-May	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-May	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-May	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-May	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-May	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	A	0	0	0	0	0	0.1	0.2
7-May	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-May	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	0.1
9-May	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	0.1
10-May	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-May	0	0	0	0	0	0	0	0	0	M	M	M	M	C	C	C	0	0	0	0	0	0	0	0	--	0.3
12-May	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-May	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	0.2
14-May	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-May	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-May	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	0.2
17-May	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-May	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	0.3
19-May	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-May	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-May	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-May	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-May	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	0.3
24-May	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-May	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-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	--	0.2
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--
28-May	M	M	M	M	M	M	M	M	M	M	M	M	0	0	0	0	0	0	0	A	0	0	0	0	--	0.2
29-May	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.7
30-May	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
31-May	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 0.2 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 0.2																									Diurnal Average	
0.4 0.4 0.4 0.4 0.5 0.5 0.7 0.7 0.5 0.3 0.5 0.6 0.4 0.4 0.2 0.3 0.4 0.2 0.2 0.2 0.3 0.3 0.3 0.4																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span T - Exceeds temp limit																										

Hourly Averages

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



Hourly Maximums

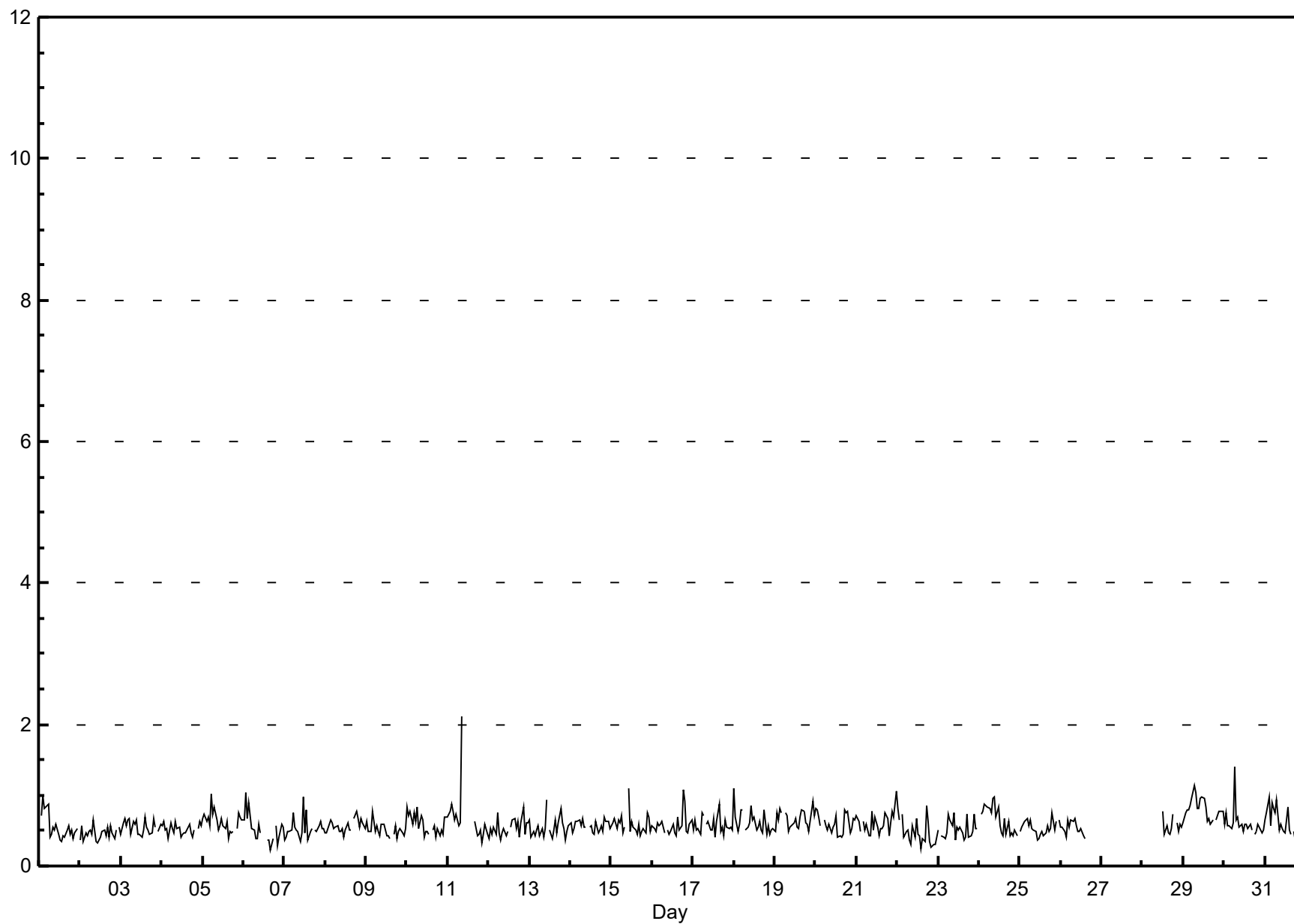
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - May 2017

Maximum Value: 2.1 ppb on May 11 09:00																			Maximum Daily Average: 0.8 ppb on May 29										Hours in Service: 744	
Minimum Value: 0 ppb on May 6 17:00																			Minimum Daily Average: 0.5 ppb on May 2										Hours of Data: 659	
Maximum Diurnal Average: 0.7 ppb at hour 6																			Minimum Diurnal Average: 0.5 ppb at hour 15										Hours of Missing Data: 85	
Monthly Average: 0.58 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.1										Hours of Calibration: 36	
																													Percent Operational Time: 93.4	
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-May	A	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	1	0	1	0	0	1	A	0.6	1.0				
2-May	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	0	1	A	1	0.5	0.6				
3-May	0	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	0	0	1	1	A	0	1	0.6	0.7				
4-May	1	1	1	1	0	1	1	0	1	1	1	0	0	0	0	1	1	0	0	1	A	1	1	1	0.5	0.6				
5-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	1	1	1	1	0.6	1.0				
6-May	1	1	1	1	1	1	1	0	0	1	0	C	C	C	0	0	0	0	A	1	0	0	1	1	0.5	1.0				
7-May	0	0	0	0	1	1	1	1	0	0	0	1	0	1	0	0	1	A	1	0	1	1	1	1	0.5	1.0				
8-May	0	0	1	1	1	1	1	1	0	0	1	0	1	1	1	0	A	1	1	1	1	1	1	1	0.6	0.8				
9-May	1	0	0	0	1	0	1	0	0	1	1	1	0	0	0	A	0	1	0	0	1	0	0	1	0.5	0.8				
10-May	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	1	1	0	1	0	1	0	1	1	0.6	0.8				
11-May	1	1	1	1	1	1	1	1	2	M	M	M	M	C	C	C	1	0	0	1	0	0	1	0	--	2.1				
12-May	0	1	0	1	0	1	0	0	0	1	0	0	A	1	1	1	1	1	0	1	1	0	1	1	0.5	0.8				
13-May	1	0	0	0	0	1	0	1	0	1	1	A	1	0	1	1	0	1	1	1	1	0	0	1	0.5	0.9				
14-May	1	0	1	1	1	1	1	1	1	1	A	1	1	0	0	1	0	1	1	0	1	1	1	1	0.6	0.7				
15-May	1	1	1	1	1	1	1	0	1	A	1	0	1	1	1	0	1	0	0	1	0	1	1	0	0.6	1.1				
16-May	1	1	0	1	1	1	1	0	A	1	0	0	1	0	0	1	1	1	1	1	0	0	1	1	0.6	1.1				
17-May	1	1	1	1	0	1	1	A	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	0.6	0.9				
18-May	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	0.6	1.1				
19-May	0	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.7	0.9				
20-May	1	1	1	1	A	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	0	1	1	1	0.6	0.8				
21-May	1	1	0	A	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0.6	1.1				
22-May	1	1	A	1	0	0	1	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0.5	0.9				
23-May	1	A	0	0	0	0	1	1	1	1	0	1	1	1	0	0	0	1	0	0	0	1	1	1	0.5	0.8				
24-May	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0	0	1	0	A	0.7	1.0				
25-May	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	1	1	A	1	1	0.5	0.8				
26-May	1	1	0	0	1	1	1	1	1	1	0	0	1	0	0	T	T	T	T	T	T	T	T	T	--	0.7				
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--				
28-May	M	M	M	M	M	M	M	M	M	M	M	M	1	0	1	0	0	1	1	A	1	0	1	1	--	0.8				
29-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.1				
30-May	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	0	0	1	1	0	1	0.6	1.4				
31-May	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	A	0	0	1	1	1	1	1	0.6	1.0				
																								Diurnal Average	Diurnal Maximum					
																								0.6	1.1					
																								1.1	1.0					
C - Calibration				M - Maintenance				A - Automated Daily Zero Span				T - Exceeds temp limit																		

Hourly Maximums

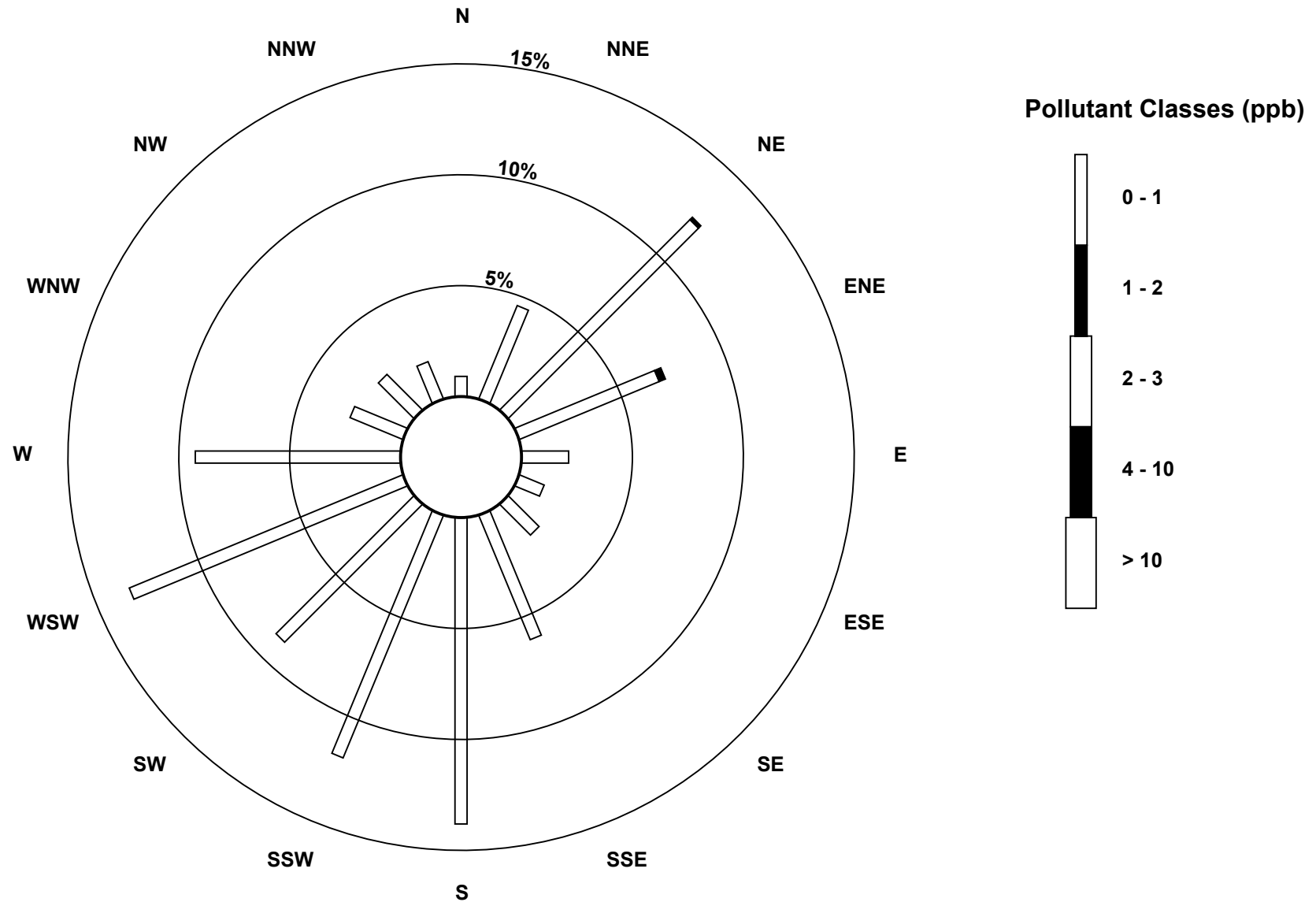
Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - May 2017



Pollutant Rose

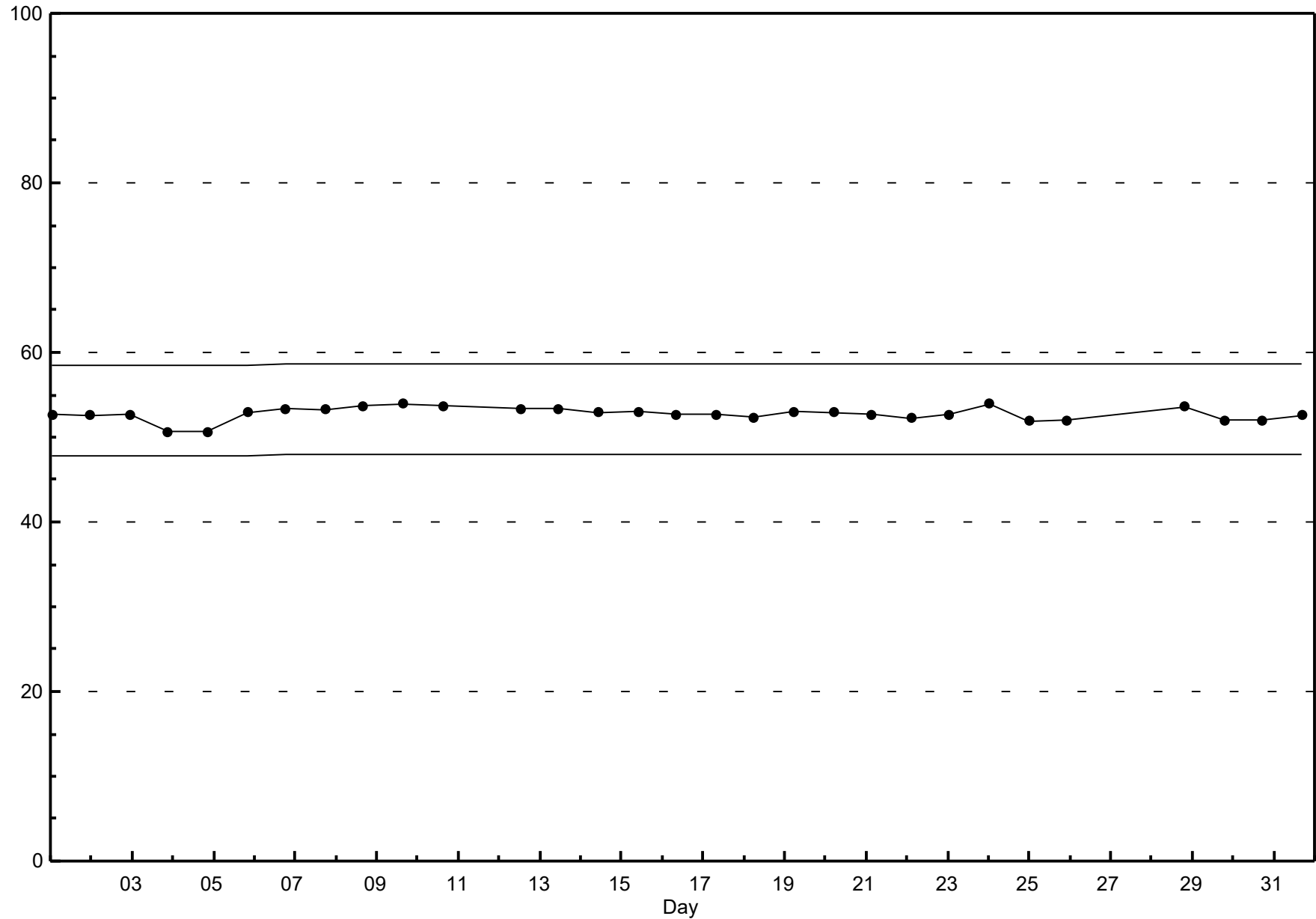
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - May 2017



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - May 2017



Hourly Averages

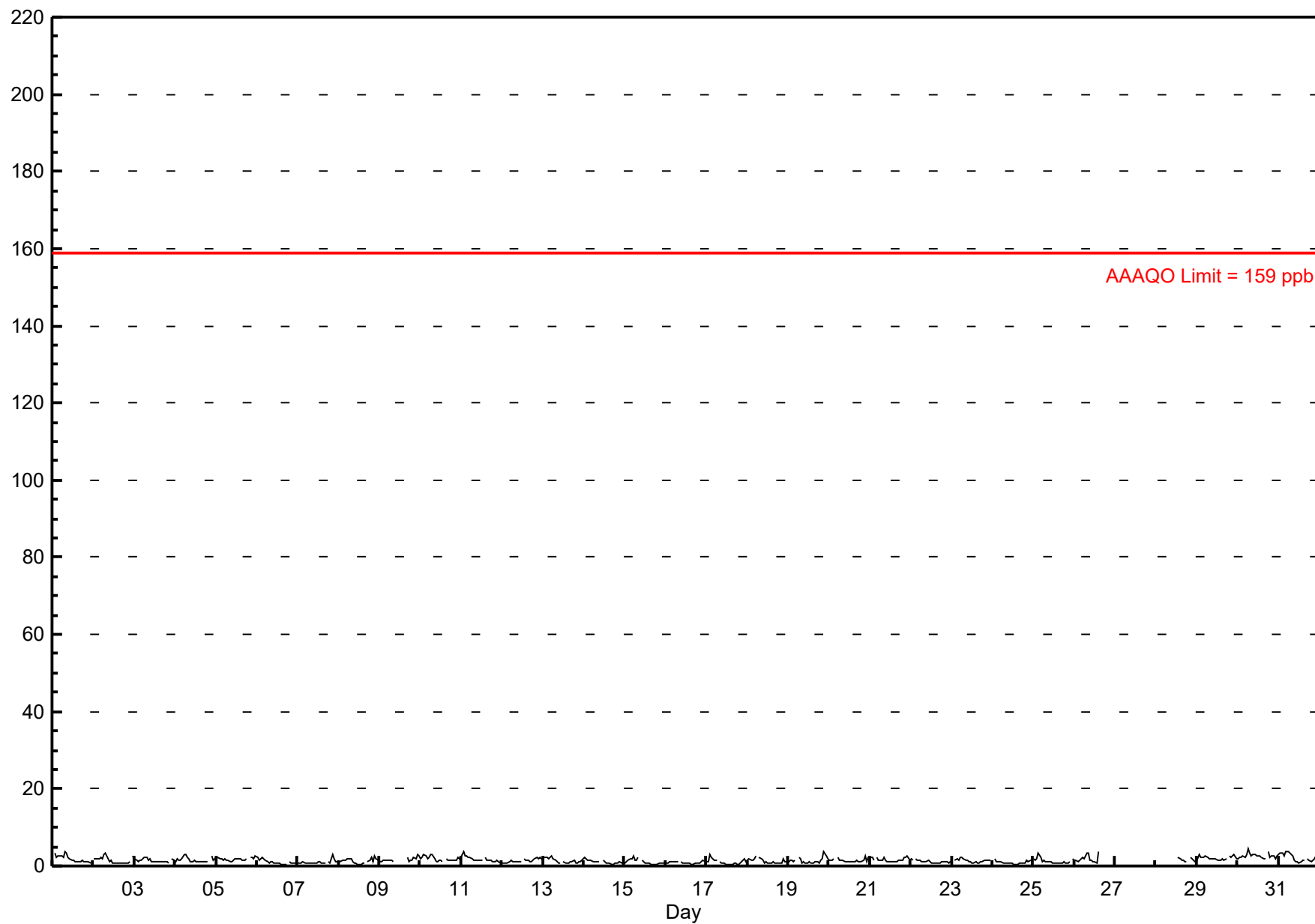
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.6 ppb on May 30 07:00 Maximum Daily Average: 2.6 ppb on May 30																			Hours in Service: 744 Hours of Data: 662 Hours of Missing Data: 82 Hours of Calibration: 36 Percent Operational Time: 93.8																														
Minimum Value: 0 ppb on May 15 18:00 Maximum Diurnal Average: 2.0 ppb at hour 6 Monthly Average: 1.47 ppb																			Minimum Daily Average: 0.9 ppb on May 24 Minimum Diurnal Average: 1.0 ppb at hour 14 Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.3 Q ₃ = 1.8 P ₉₀ = 2.4 P ₉₉ = 3.6																														
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-May	A	3	2	3	3	3	2	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1.9	3.6																							
2-May	2	2	2	2	2	2	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1.5	3.2																							
3-May	2	2	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1.4	2.2																							
4-May	1	2	2	1	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	1.6	2.9																							
5-May	2	2	2	2	2	2	1	2	1	1	1	2	2	2	2	2	1	1	2	A	2	2	2	3	1.8	2.7																							
6-May	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1.0	2.2																							
7-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	3	2	1	1	1.0	2.9																							
8-May	1	1	2	1	2	2	2	2	1	1	1	1	1	1	1	1	A	1	1	2	1	2	2	1	1.3	2.4																							
9-May	1	1	1	2	2	2	1	2	1	C	C	C	C	C	2	A	2	1	1	1	2	2	3	3	1.7	3.0																							
10-May	2	2	3	3	2	2	3	3	2	1	1	1	1	1	A	2	1	1	1	1	1	2	2	2	1.8	3.1																							
11-May	2	4	3	3	2	2	2	1	1	1	1	2	2	A	2	2	2	1	1	1	1	1	1	1	1.8	3.6																							
12-May	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	2	2	2	2	1.4	2.3																							
13-May	2	2	2	2	2	2	2	2	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1.4	2.5																							
14-May	2	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1.1	2.2																							
15-May	1	1	1	2	2	3	2	2	2	A	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1.1	2.5																							
16-May	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0.9	1.5																							
17-May	1	1	3	2	2	1	1	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	2	1	1.0	2.8																							
18-May	1	2	2	1	2	3	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.3	2.8																							
19-May	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2	1.4	3.8																							
20-May	1	1	1	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	2	1.4	2.8																							
21-May	2	2	1	A	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	3	2	1.6	2.5																							
22-May	2	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.0																							
23-May	1	A	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1.4	2.3																							
24-May	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	A	0.9	1.7																							
25-May	2	1	2	3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.3	3.2																							
26-May	1	1	1	1	2	2	2	3	3	2	1	1	1	1	4	T	T	T	T	T	T	T	T	T	--	3.8																							
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--																							
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	2	2	1	1	1	1	A	2	2	1	1	--	2.3																							
29-May	1	3	2	2	2	3	2	2	2	2	2	2	1	1	1	2	2	2	A	3	2	3	3	2	2.0	2.9																							
30-May	2	2	2	2	2	3	5	3	3	3	3	3	3	2	2	2	2	A	4	2	3	3	2	2	2.6	4.6																							
31-May	3	3	3	3	4	4	4	3	2	1	1	1	1	1	1	2	A	2	1	1	2	2	3	3	2.2	3.7																							
																									1.6	1.8	1.8	1.8	1.9	2.0	1.9	1.9	1.6	1.3	1.2	1.1	1.1	1.0	1.2	1.1	1.1	1.1	1.2	1.2	1.4	1.8	1.7	1.6	Diurnal Average
																									3.0	3.6	3.4	3.2	3.7	3.7	4.6	3.6	3.4	2.9	3.1	2.8	2.6	2.4	3.8	2.0	2.1	1.8	3.6	2.5	2.9	3.8	3.0	2.7	Diurnal Maximum
C - Calibration																									M - Maintenance					A - Automated Daily Zero Span					T - Exceeds temp limit														
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																																																	

Hourly Averages

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



Hourly Maximums

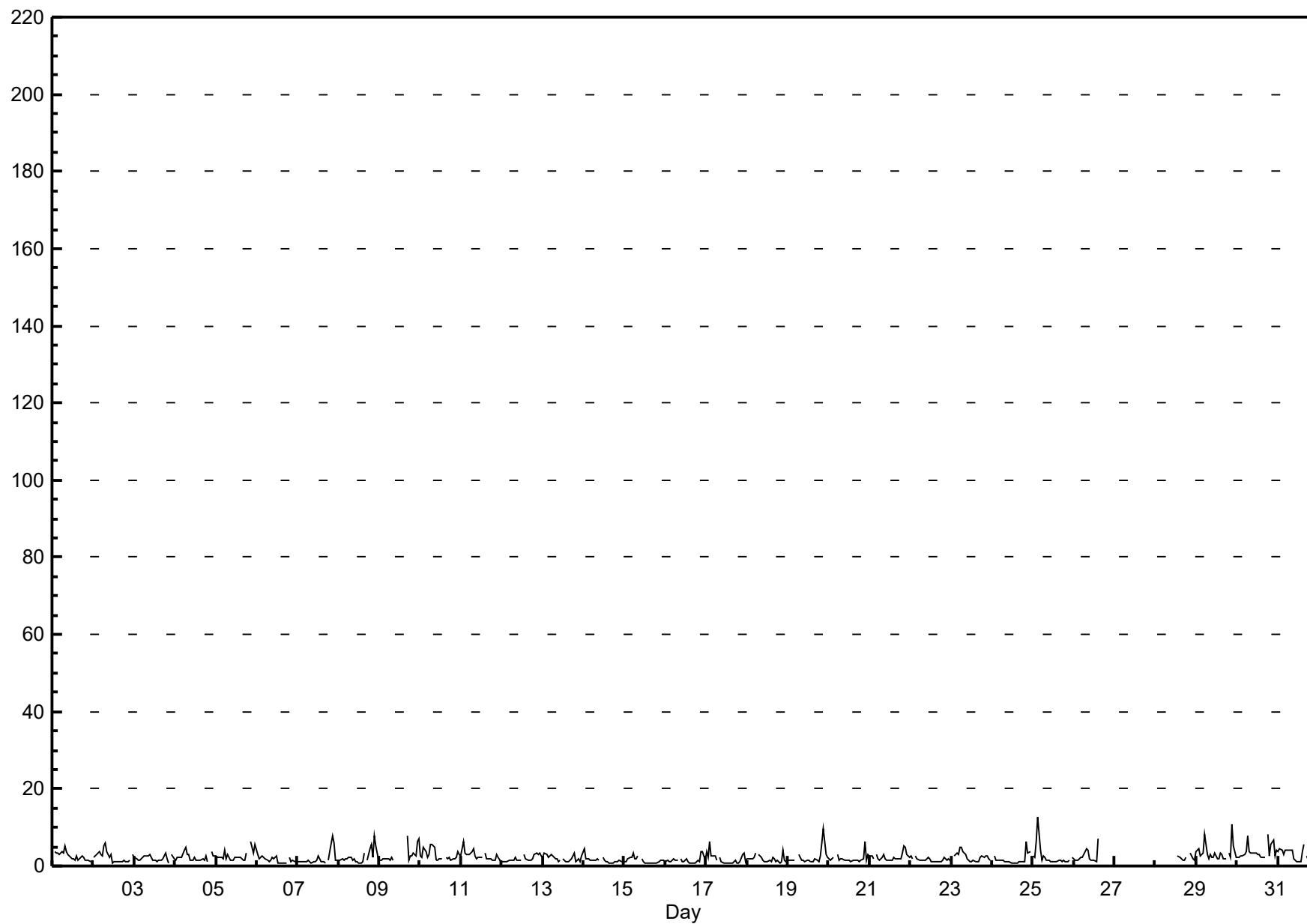
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - May 2017

Maximum Value: 12.5 ppb on May 25 04:00																				Maximum Daily Average: 3.6 ppb on May 30					Hours in Service: 744	
Minimum Value: 1 ppb on May 6 17:00																				Minimum Daily Average: 1.4 ppb on May 15					Hours of Data: 662	
Maximum Diurnal Average: 3.8 ppb at hour 22																				Minimum Diurnal Average: 1.4 ppb at hour 14					Hours of Missing Data: 82	
Monthly Average: 2.23 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 1.3 Median = 1.8 Q ₃ = 2.6 P ₉₀ = 3.8 P ₉₉ = 7.8					Hours of Calibration: 36	
																				Percent Operational Time: 93.8						
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-May	A	4	3	3	3	4	3	5	4	3	2	2	1	3	2	2	3	2	2	2	1	1	A	A	2.6	5.2
2-May	2	3	3	4	3	2	5	6	4	2	3	1	1	1	1	1	1	1	1	1	1	1	A	3	2.3	5.8
3-May	2	2	2	2	2	2	3	3	3	3	2	2	1	1	1	1	2	2	3	2	1	A	3	2	2.0	3.3
4-May	2	2	2	2	2	4	5	3	3	2	1	2	1	1	1	1	2	1	3	1	A	4	2	2	2.2	4.7
5-May	3	2	2	2	2	4	2	3	2	1	2	2	2	2	2	2	2	2	3	A	6	5	3	6	2.7	6.5
6-May	3	2	2	3	2	2	1	1	2	2	2	3	1	1	1	1	1	1	A	2	1	2	1	1	1.6	2.9
7-May	1	1	1	1	1	1	2	1	1	1	1	1	3	2	1	1	1	A	2	4	8	6	1	1	1.9	7.8
8-May	2	2	2	2	2	2	2	2	1	2	1	1	1	1	5	3	A	2	4	5	2	8	5	2	2.4	7.8
9-May	1	1	2	2	2	2	2	2	1	C	C	C	C	C	1	A	8	1	3	3	4	2	6	7	3.0	7.7
10-May	3	2	5	4	2	3	6	6	5	2	2	2	2	2	A	2	2	2	2	2	2	2	4	3	2.8	5.7
11-May	3	6	3	3	3	3	4	4	3	2	2	2	2	A	3	2	2	2	1	1	1	3	2	1	2.6	6.3
12-May	1	1	1	1	2	2	1	2	2	1	1	1	A	3	2	2	1	2	2	3	3	3	3	3	1.9	3.3
13-May	2	3	3	2	2	3	2	2	2	1	2	A	2	1	1	1	1	2	3	1	1	2	1	3	2.0	3.5
14-May	4	2	2	2	2	1	1	1	2	1	A	2	1	1	1	1	1	1	1	1	1	2	1	1	1.5	4.3
15-May	1	1	2	2	2	3	2	2	3	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	3.4
16-May	1	1	1	1	2	2	2	1	A	2	1	1	2	1	1	1	1	1	1	1	1	4	4	1	1.5	3.8
17-May	4	2	6	3	2	2	2	A	2	1	1	1	1	1	1	1	1	2	1	1	1	3	3	1	1.8	6.5
18-May	2	2	2	2	2	4	A	3	2	2	1	1	1	1	1	2	2	1	1	1	1	4	1	1	1.8	4.0
19-May	2	2	2	2	2	A	3	2	1	2	1	2	2	1	1	1	2	1	1	2	6	10	3	2	2.3	9.7
20-May	2	2	2	2	A	3	2	2	2	1	1	1	2	1	1	1	2	2	1	2	2	6	1	3	1.9	6.5
21-May	3	2	2	A	3	2	2	2	3	2	1	1	1	2	2	2	2	2	2	3	5	5	3	2	2.4	5.3
22-May	2	2	A	3	2	2	1	2	1	1	2	2	1	1	1	1	1	1	1	1	2	2	2	1	1.6	2.6
23-May	1	A	3	3	3	5	5	4	3	2	1	1	1	1	1	1	1	2	2	2	3	3	2	2	2.3	5.0
24-May	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	3	4	A	1.6	6.4
25-May	2	2	6	13	4	2	2	2	1	2	1	1	1	1	1	2	2	1	1	1	1	2	A	2	2.4	12.5
26-May	2	2	1	2	2	2	3	4	4	2	2	1	1	1	7	T	T	T	T	T	T	T	T	T	--	7.1
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	3	2	2	2	1	2	A	3	3	2	1	--	3.4
29-May	4	5	3	3	3	8	3	2	3	2	2	3	2	2	3	3	2	2	A	3	2	11	5	2	3.4	10.8
30-May	2	2	3	3	3	4	8	4	3	3	3	3	3	3	2	2	2	A	8	2	6	7	3	4	3.6	8.4
31-May	4	4	4	3	4	4	4	4	4	2	2	1	1	1	4	6	A	2	2	1	4	2	3	3	3.1	5.6
2.2 2.4 2.5 2.7 2.4 2.8 2.8 2.7 2.4 1.8 1.7 1.6 1.5 1.4 1.9 1.7 1.7 1.5 2.1 2.0 2.8 3.8 2.7 2.3																								Diurnal Average		
4.3 6.3 6.5 12.5 4.2 8.4 7.7 5.8 5.0 3.3 3.5 3.3 3.0 3.1 7.1 5.6 7.7 2.6 8.4 5.5 7.8 10.8 6.2 6.9																								Diurnal Maximum		
C - Calibration M - Maintenance A - Automated Daily Zero Span T - Exceeds temp limit																										

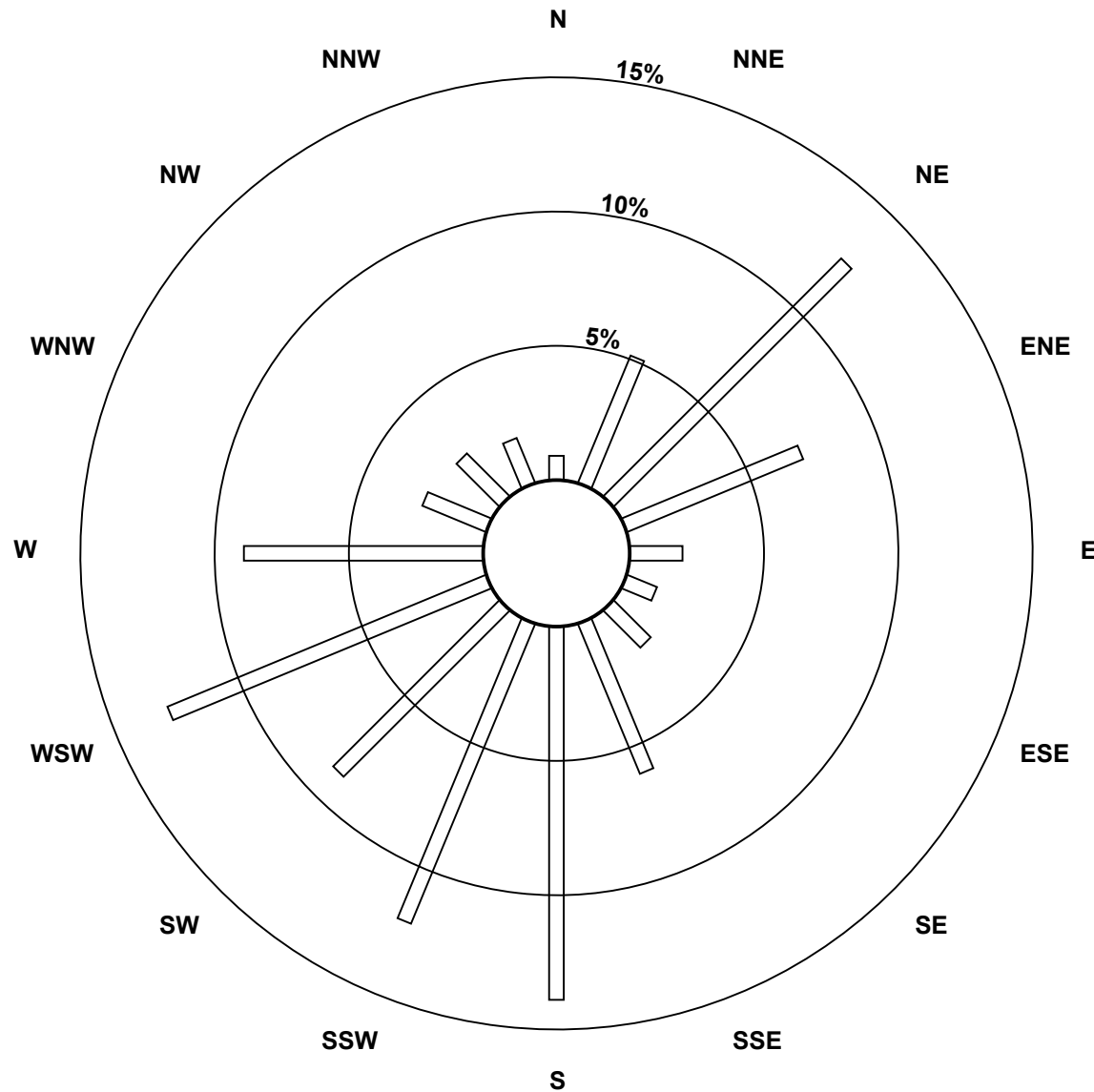
Hourly Maximums

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



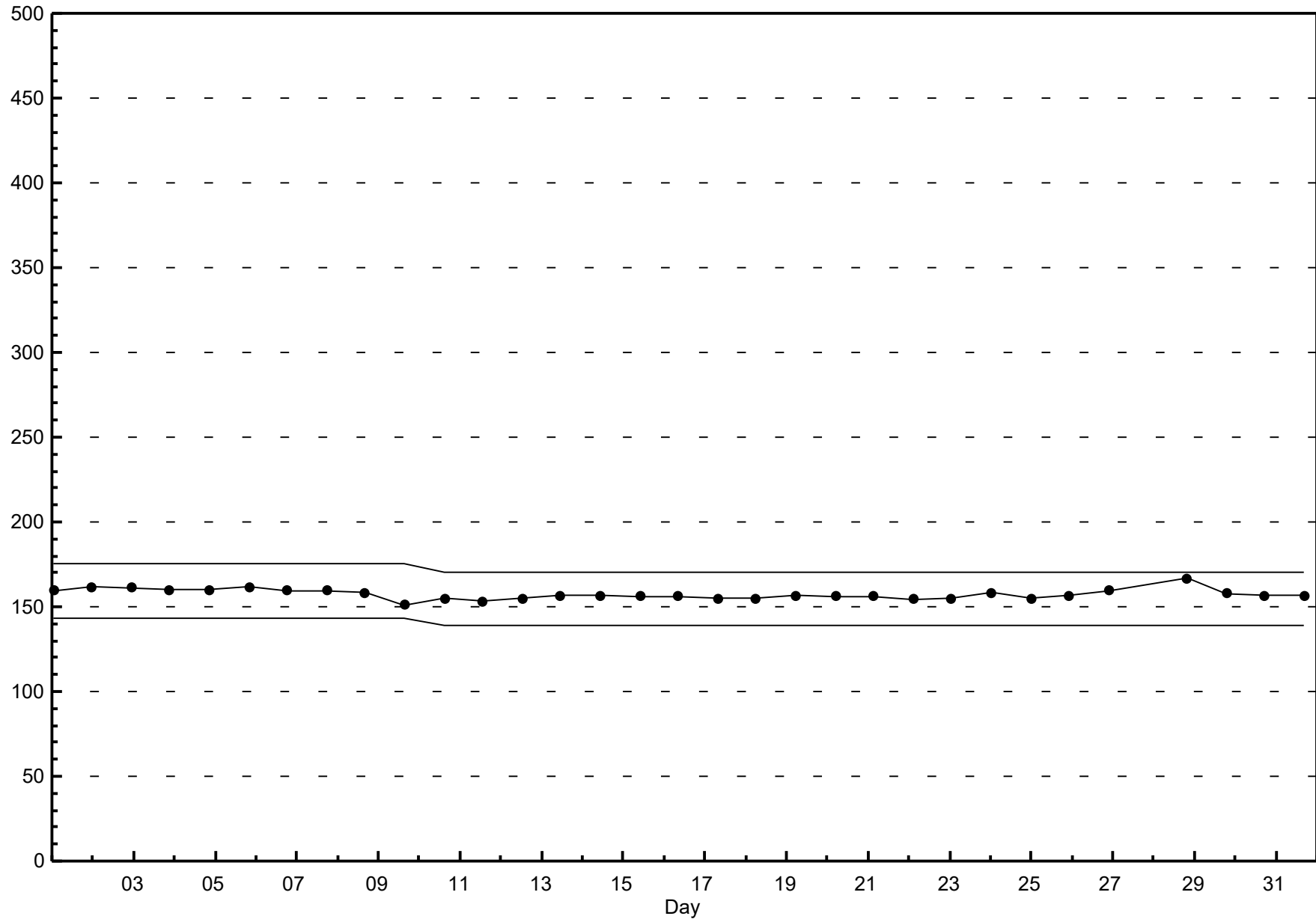
Pollutant Rose

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



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - May 2017



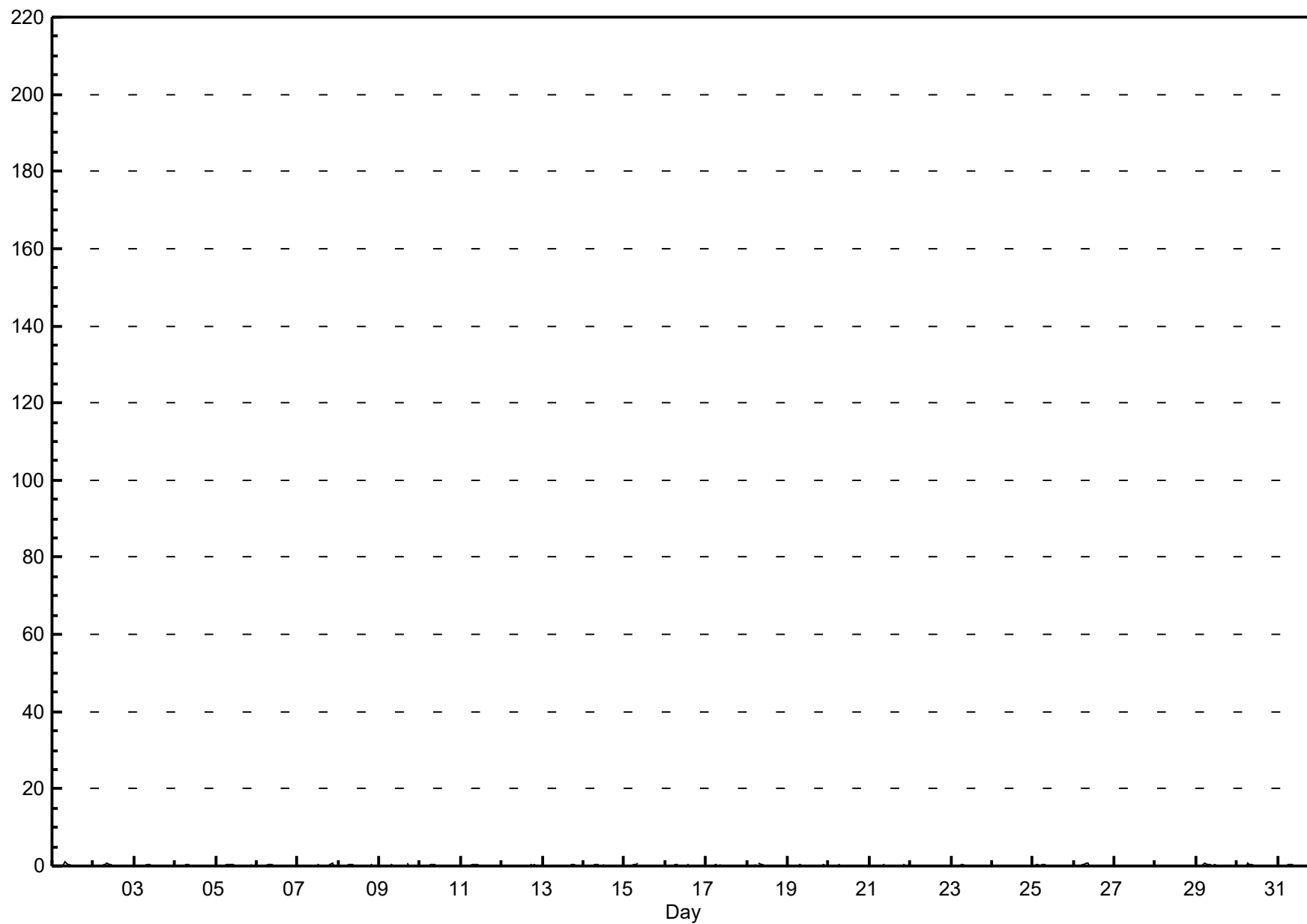
Hourly Averages

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

Maximum Value: 0.9 ppb on May 1 08:00																			Maximum Daily Average: 0.2 ppb on May 1										Hours in Service: 744	
Minimum Value: 0 ppb on May 21 12:00																			Minimum Daily Average: 0.0 ppb on May 24										Hours of Data: 662	
Maximum Diurnal Average: 0.3 ppb at hour 8																			Minimum Diurnal Average: 0.1 ppb at hour 16										Hours of Missing Data: 82	
Monthly Average: 0.12 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.7										Hours of Calibration: 36	
																													Percent Operational Time: 93.8	
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-May	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.9				
2-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.7				
3-May	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				
4-May	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				
5-May	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-May	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				
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0.1	0.6				
8-May	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-May	0	0	0	0	0	0	0	0	0	C	C	C	C	C	1	A	1	0	0	0	0	0	0	0	0.2	0.8				
10-May	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	0.4				
11-May	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	0.3				
12-May	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-May	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	0.2				
14-May	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-May	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7				
16-May	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-May	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-May	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6				
19-May	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	0.5				
20-May	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-May	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	0.2				
22-May	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	0.2				
23-May	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	0.3				
24-May	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-May	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	0.5				
26-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	--	0.9				
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--				
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	0	0	0	0	0	0	A	0	0	0	0	--	0.1				
29-May	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.6				
30-May	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.7				
31-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0.1	0.7				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration				M - Maintenance				A - Automated Daily Zero Span								T - Exceeds temp limit														

Hourly Averages

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



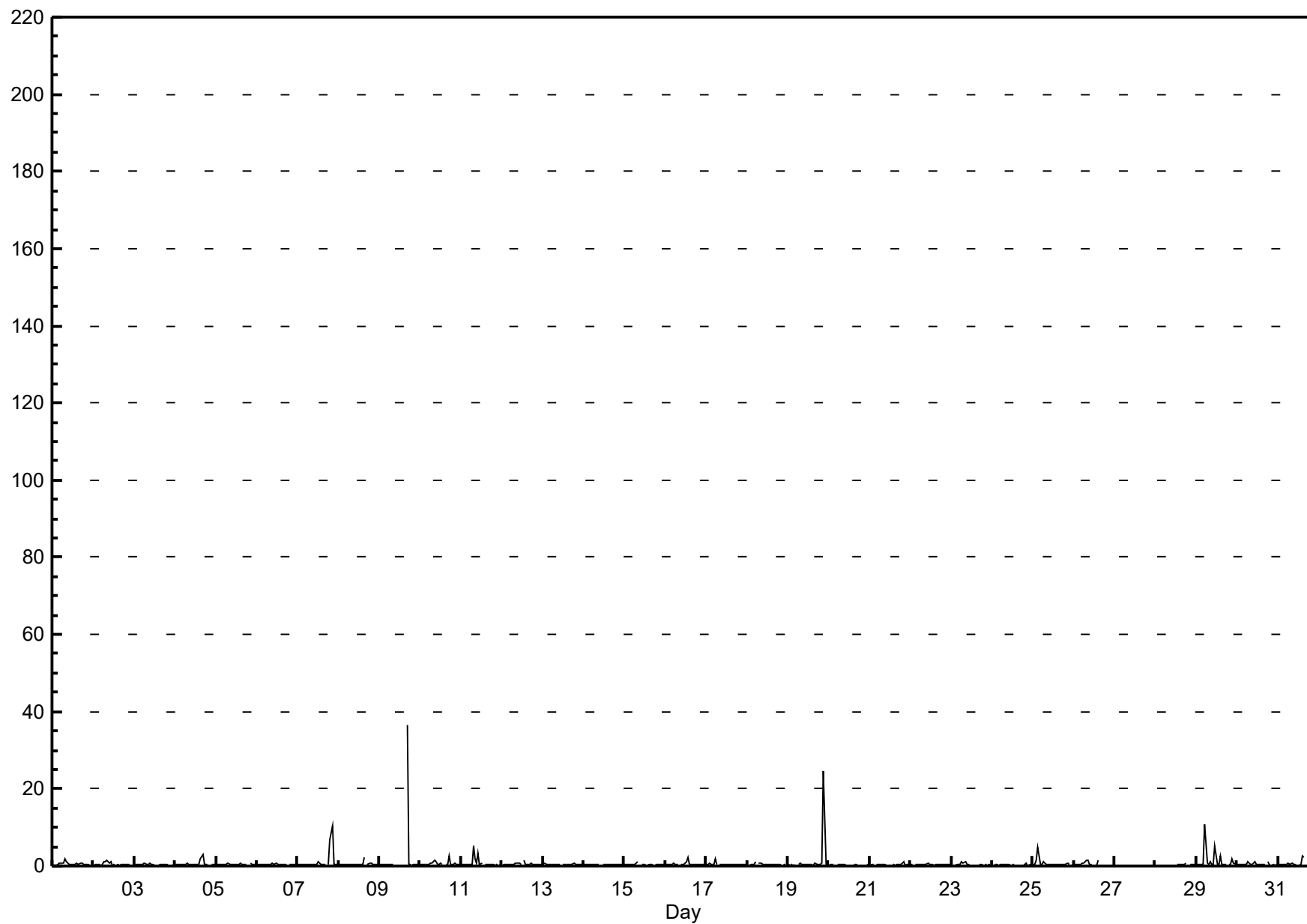
Hourly Maximums

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

Maximum Value: 36.6 ppb on May 9 17:00																				Maximum Daily Average: 3.3 ppb on May 9										Hours in Service: 744	
Minimum Value: 0 ppb on May 23 22:00																				Minimum Daily Average: 0.2 ppb on May 20										Hours of Data: 662	
Maximum Diurnal Average: 1.8 ppb at hour 21																				Minimum Diurnal Average: 0.2 ppb at hour 1										Hours of Missing Data: 82	
Monthly Average: 0.60 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 6.3										Hours of Calibration: 36	
																				Percent Operational Time: 93.8											
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-May	A	0	0	0	1	1	1	2	1	1	0	0	0	0	1	0	1	1	0	0	0	0	0	A	0.5	1.8					
2-May	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.5					
3-May	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.7					
4-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	3	0	0	0	A	0	0	0	0.5	2.9					
5-May	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	A	1	0	0	0	0.4	0.8					
6-May	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.8					
7-May	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	7	11	0	0	0	1.0	10.5					
8-May	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	A	0	1	1	0	0	0	0	0.4	2.4					
9-May	0	0	0	0	0	0	0	0	0	C	C	C	C	C	19	A	37	0	0	0	0	0	0	0	3.3	36.6					
10-May	0	0	0	0	0	0	1	1	2	1	0	0	1	0	A	0	0	3	0	0	1	0	0	0	0.5	2.7					
11-May	0	0	0	0	0	0	0	5	2	1	3	0	1	A	0	0	0	0	0	0	0	0	0	0	0.7	5.0					
12-May	0	0	0	0	0	0	0	0	1	1	1	0	A	1	0	0	0	1	0	0	0	0	0	0	0.4	1.3					
13-May	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0.3	0.8					
14-May	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-May	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9					
16-May	0	0	0	0	0	1	0	0	A	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0.4	2.3					
17-May	0	0	1	0	0	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8					
18-May	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9					
19-May	0	0	0	0	0	A	A	1	0	0	0	0	0	0	0	0	1	0	0	0	1	25	0	0	1.4	24.8					
20-May	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	0.5					
21-May	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.3	1.0					
22-May	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6					
23-May	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1					
24-May	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0.2	0.8					
25-May	0	0	1	5	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0.6	4.7					
26-May	0	0	0	0	0	1	1	2	1	0	0	0	0	0	2	T	T	T	T	T	T	T	T	T	--	1.6					
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--					
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	0	0	0	0	0	1	A	0	0	0	0	--	0.8					
29-May	0	0	0	0	0	11	1	1	1	1	0	5	0	1	3	0	0	0	A	0	0	2	1	0	1.2	10.8					
30-May	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	A	1	0	0	0	0	0	0.4	1.1					
31-May	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	2	A	0	0	0	30	0	0	0	1.8	29.8					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration				M - Maintenance				A - Automated Daily Zero Span						T - Exceeds temp limit																	

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

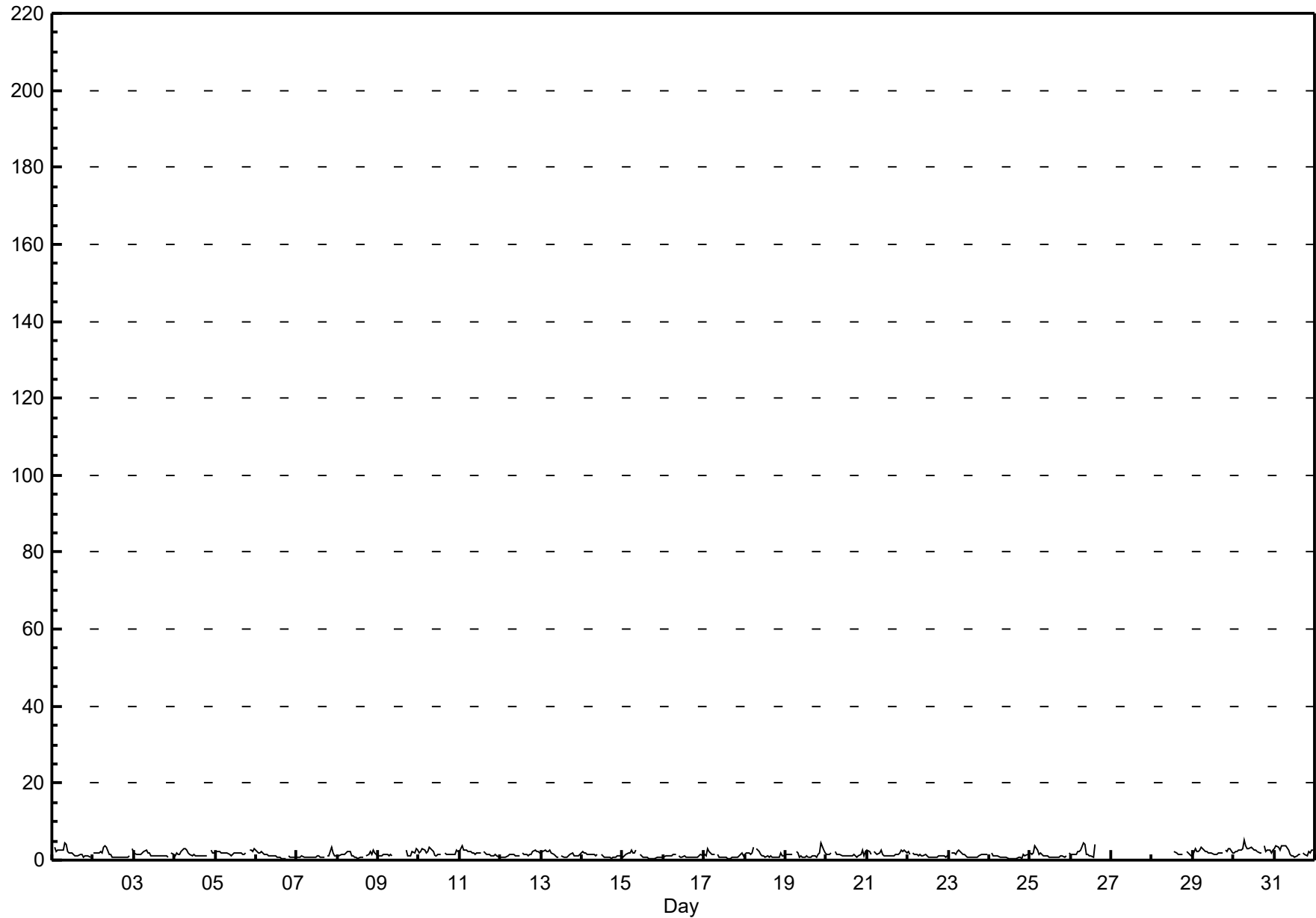
Portable Rycroft - May 2017

Maximum Value: 5.2 ppb on May 30 07:00																			Maximum Daily Average: 2.7 ppb on May 30										Hours in Service: 744	
Minimum Value: 0 ppb on May 15 18:00																			Minimum Daily Average: 0.9 ppb on May 24										Hours of Data: 662	
Maximum Diurnal Average: 2.2 ppb at hour 8																			Minimum Diurnal Average: 1.1 ppb at hour 14										Hours of Missing Data: 82	
Monthly Average: 1.55 ppb																			Percentiles: P ₁ = 0.5 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.4 Q ₃ = 1.9 P ₉₀ = 2.6 P ₉₉ = 4.0										Hours of Calibration: 36	
																			Percent Operational Time: 93.8											
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-May	A	3	2	3	3	3	3	4	4	2	2	2	2	1	1	1	1	2	1	1	1	1	1	A	2.0	4.5				
2-May	2	2	2	2	3	2	3	4	3	1	2	1	1	1	1	1	1	1	1	1	1	1	A	3	1.6	3.5				
3-May	2	2	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1.5	2.4				
4-May	1	2	2	1	2	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	1.7	3.0				
5-May	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	1	2	A	3	3	2	3	1.9	2.9				
6-May	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.2	2.4				
7-May	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	3	2	1	1	1.1	3.5				
8-May	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	A	1	2	2	1	2	2	1	1.4	2.5				
9-May	1	1	1	1	1	1	1	2	1	C	C	C	C	C	2	A	3	1	1	1	2	2	3	3	1.6	2.8				
10-May	2	2	3	3	2	2	3	3	2	1	1	2	1	1	A	2	2	2	1	1	2	2	2	2	1.9	3.2				
11-May	2	4	3	3	3	2	2	2	2	2	2	2	2	A	2	2	2	1	1	1	1	1	1	1	1.9	3.8				
12-May	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	2	2	2	2	2	2	1.5	2.4				
13-May	2	2	3	2	2	3	2	2	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1.5	2.6				
14-May	2	2	2	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.2				
15-May	1	1	1	2	2	3	2	2	3	A	2	1	1	1	1	1	0	0	0	1	1	1	1	1	1.2	2.7				
16-May	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.0	1.6				
17-May	1	1	3	2	2	2	2	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	2	1	1.1	2.9				
18-May	1	2	2	2	2	3	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.4	3.2				
19-May	1	2	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2	1.5	4.3				
20-May	2	1	2	2	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	3	1	2	1.4	2.8				
21-May	2	2	1	A	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	3	2	3	2	1.7	2.6				
22-May	2	1	A	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.1				
23-May	1	A	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.4	2.6				
24-May	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	2	1	2	A	0.9	1.7				
25-May	2	1	2	4	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.4	3.7				
26-May	2	1	1	2	2	2	3	4	4	2	1	1	1	1	4	T	T	T	T	T	T	T	T	T	--	4.3				
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--				
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	2	2	2	1	1	1	A	2	2	1	1	--	2.3				
29-May	1	3	2	2	3	3	3	2	2	2	2	2	2	1	2	2	2	2	2	A	3	2	3	3	2	2.1	3.3			
30-May	2	2	2	3	2	3	5	4	3	3	3	3	3	3	2	2	2	A	4	2	3	3	2	2	2.7	5.2				
31-May	3	4	3	3	4	4	4	4	3	2	1	1	1	1	2	2	A	2	1	1	2	2	3	3	2.3	3.9				
1.6 1.8 1.8 1.9 1.9 2.1 2.1 2.2 1.8 1.4 1.3 1.2 1.1 1.1 1.2 1.1 1.1 1.1 1.2 1.2 1.5 1.8 1.7 1.7																									Diurnal Average					
3.1 3.8 3.4 3.7 3.8 3.9 5.2 4.5 4.1 3.1 3.2 2.8 2.7 2.5 4.1 2.0 2.6 1.8 3.7 2.6 3.5 4.3 3.0 2.9																									Diurnal Maximum					
C - Calibration				M - Maintenance				A - Automated Daily Zero Span				T - Exceeds temp limit																		

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - May 2017



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

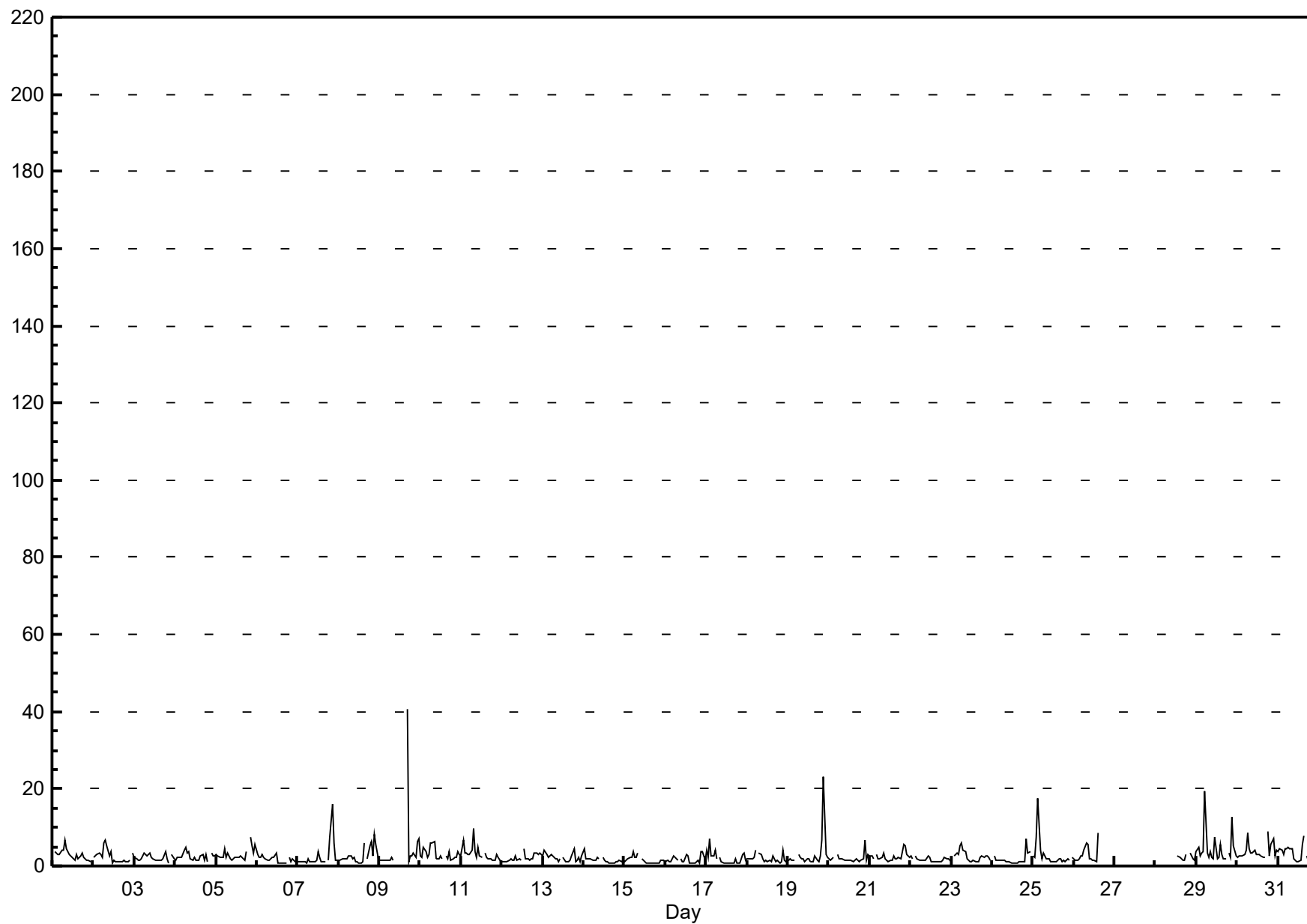
Portable Rycroft - May 2017

Maximum Value: 40.7 ppb on May 9 17:00																				Maximum Daily Average: 5.0 ppb on May 9										Hours in Service: 744	
Minimum Value: 1 ppb on May 15 19:00																				Minimum Daily Average: 1.5 ppb on May 15										Hours of Data: 662	
Maximum Diurnal Average: 4.4 ppb at hour 22																				Minimum Diurnal Average: 1.6 ppb at hour 14										Hours of Missing Data: 82	
Monthly Average: 2.57 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.0 Q ₁ = 1.4 Median = 2.0 Q ₃ = 2.9 P ₉₀ = 4.3 P ₉₉ = 12.3										Hours of Calibration: 36	
																				Percent Operational Time: 93.8											
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-May	A	4	3	3	3	4	4	7	4	4	3	2	2	1	3	2	3	3	2	2	1	1	1	A	2.9	6.8					
2-May	2	2	3	3	3	2	6	7	5	2	4	1	1	1	1	1	1	1	1	1	1	1	A	3	2.5	6.7					
3-May	2	2	2	2	2	3	3	3	3	4	2	2	1	1	1	1	2	2	4	2	1	A	3	2	2.1	3.7					
4-May	2	2	2	2	2	4	5	3	4	2	1	2	1	1	1	3	3	1	3	1	A	3	3	3	2.4	4.9					
5-May	3	3	2	2	2	4	2	3	2	2	2	2	2	2	3	2	2	2	4	A	7	5	4	6	2.9	7.3					
6-May	3	2	2	3	2	2	2	1	2	2	2	3	1	1	1	1	1	1	A	2	1	2	1	1	1.7	3.3					
7-May	1	1	1	1	1	1	2	1	1	1	1	2	4	2	1	1	1	A	2	8	16	6	1	1	2.5	16.1					
8-May	2	2	2	2	2	2	3	3	2	2	1	1	1	1	6	A	41	2	5	6	2	8	5	2	2.6	8.0					
9-May	1	1	2	2	2	2	2	2	1	C	C	C	C	C	10	A	1	1	3	3	3	2	6	7	5.0	40.7					
10-May	2	2	5	4	2	3	6	6	6	2	2	2	3	2	A	3	2	4	2	2	2	2	4	3	3.0	6.4					
11-May	3	7	3	3	3	3	4	10	4	2	5	2	2	A	3	2	2	2	1	1	1	3	2	1	3.1	9.5					
12-May	1	1	1	1	1	2	2	2	3	2	2	2	A	4	2	2	2	2	2	3	3	3	3	3	2.1	4.4					
13-May	3	4	3	2	3	3	3	2	2	1	2	A	2	1	1	1	2	3	4	1	1	2	1	3	2.2	4.3					
14-May	4	2	2	2	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	2	1	1	1.6	4.4					
15-May	1	1	2	2	2	4	2	2	3	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.7					
16-May	1	1	1	1	2	2	2	2	A	2	1	1	3	3	1	1	1	1	1	1	1	4	4	1	1.7	3.9					
17-May	4	2	7	3	3	4	2	A	2	1	1	1	1	1	1	1	1	2	1	1	1	3	3	1	2.0	7.0					
18-May	2	2	2	2	2	4	A	4	3	2	1	1	1	2	1	2	2	1	2	1	1	4	1	1	1.9	4.0					
19-May	2	2	2	2	2	A	3	2	2	2	1	2	2	1	1	1	3	1	1	3	7	23	3	2	3.0	23.2					
20-May	2	2	2	2	A	3	2	2	2	2	1	1	2	1	1	1	2	2	1	2	2	7	2	3	2.0	6.6					
21-May	3	3	2	A	3	2	2	2	3	2	2	1	1	2	3	2	2	2	2	4	6	5	3	2	2.5	5.6					
22-May	3	2	A	3	2	2	2	2	1	1	3	2	1	1	1	1	1	1	1	1	2	2	2	1	1.7	2.8					
23-May	1	A	3	3	3	5	6	4	4	2	1	1	1	2	1	1	1	2	3	2	3	3	2	2	2.5	5.8					
24-May	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	3	4	A	1.7	7.1					
25-May	2	2	7	17	4	2	3	3	2	2	1	1	1	1	1	2	2	1	1	1	2	2	A	2	2.8	17.4					
26-May	2	2	2	2	3	3	4	6	5	2	2	2	1	1	9	T	T	T	T	T	T	T	T	T	--	8.6					
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--					
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	3	2	2	2	2	3	A	3	3	2	1	--	3.4					
29-May	4	5	3	3	4	19	3	2	4	2	2	7	2	2	6	3	2	2	A	3	2	13	5	2	4.4	19.3					
30-May	2	2	3	3	3	4	9	4	3	3	4	3	3	3	2	2	2	A	9	3	6	7	3	4	3.8	9.0					
31-May	4	5	4	3	4	4	5	4	4	2	2	1	1	1	6	8	A	2	2	1	30	2	3	3	4.5	30.1					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration				M - Maintenance				A - Automated Daily Zero Span				T - Exceeds temp limit																			

Hourly Maximums

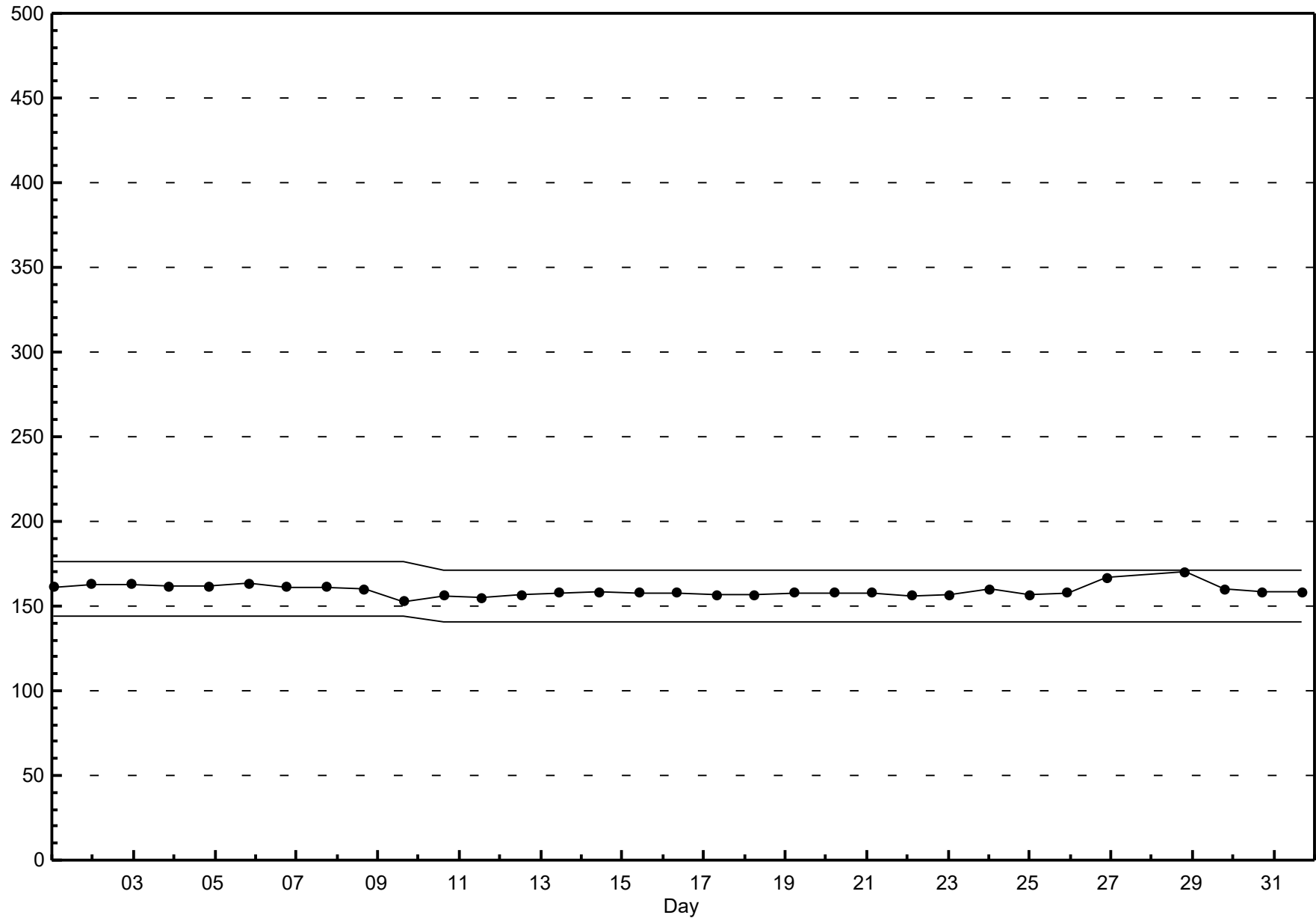
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - May 2017



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - May 2017



Hourly Averages

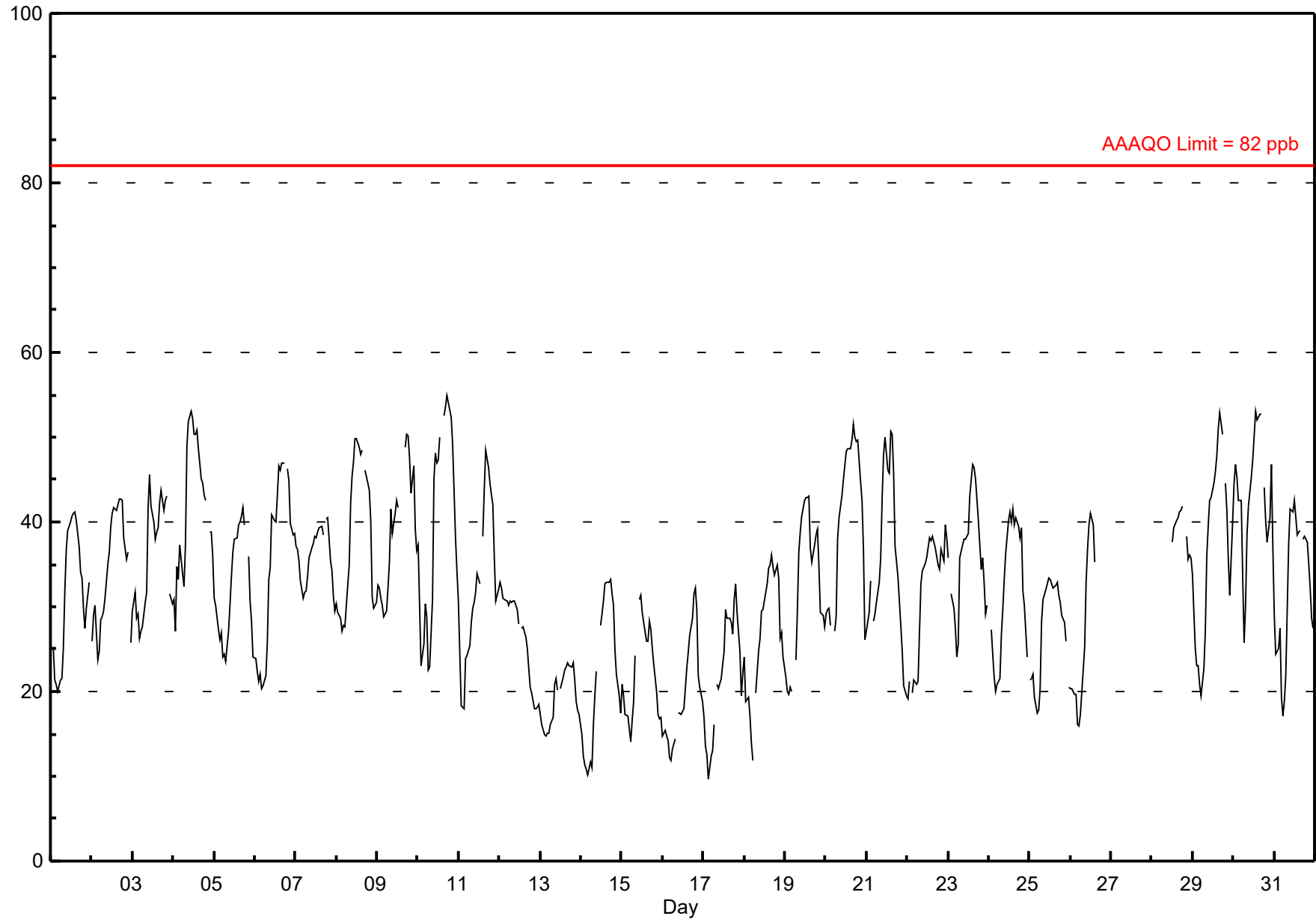
Ozone (O₃) - ppb

Portable Rycroft - May 2017

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 54.9 ppb on May 10 18:00 Maximum Daily Average: 43.1 ppb on May 30																								Hours in Service: 744 Hours of Data: 666 Hours of Missing Data: 78 Hours of Calibration: 33 Percent Operational Time: 94.0			
Minimum Value: 10 ppb on May 17 04:00 Minimum Daily Average: 19.3 ppb on May 13 Maximum Diurnal Average: 40.0 ppb at hour 17 Minimum Diurnal Average: 22.6 ppb at hour 6 Monthly Average: 32.22 ppb Percentiles: P ₁ = 11.5 P ₁₀ = 19.0 Q ₁ = 24.5 Median = 31.7 Q ₃ = 39.7 P ₉₀ = 45.8 P ₉₉ = 52.7																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	A	25	21	21	20	21	22	25	32	37	39	40	41	41	41	40	37	34	33	30	27	30	33	A	31.4	41.2	
2-May	26	29	30	24	25	29	29	30	31	35	36	39	41	42	41	42	43	43	43	38	36	36	A	26	34.4	42.7	
3-May	30	32	29	29	26	27	28	30	32	42	46	42	40	38	39	39	42	44	41	42	43	A	31	30	35.7	45.6	
4-May	31	27	35	33	37	34	32	37	49	52	53	52	50	50	51	49	45	45	43	43	A	39	39	36	41.8	53.0	
5-May	31	30	27	26	27	24	24	24	27	30	34	36	38	38	40	40	41	42	40	A	36	31	28	24	32.1	41.7	
6-May	24	22	21	22	20	21	22	26	33	35	41	40	40	43	47	46	47	47	A	46	45	40	38	39	35.0	47.0	
7-May	37	37	35	33	31	32	32	33	36	37	38	38	38	39	39	39	38	A	40	40	35	34	31	29	35.8	40.4	
8-May	30	29	29	27	28	28	30	35	42	45	47	50	50	49	48	48	A	46	45	44	40	31	30	31	38.4	49.9	
9-May	33	32	31	30	29	29	32	35	42	39	41	43	42	C	C	A	49	50	50	48	43	47	39	37	39.0	50.4	
10-May	37	30	23	26	30	29	23	23	31	45	48	47	47	50	A	53	53	55	54	52	49	44	38	34	40.1	54.9	
11-May	31	18	18	18	24	24	25	28	30	31	32	34	33	A	38	44	49	46	45	43	42	36	31	32	32.6	48.5	
12-May	33	32	31	31	31	30	31	31	31	31	30	28	A	27	28	26	25	23	21	20	18	18	18	18	26.5	33.0	
13-May	17	16	15	15	15	15	16	17	21	21	20	A	20	22	23	23	23	23	23	23	21	19	18	17	19.3	23.5	
14-May	15	12	11	11	10	12	11	16	19	22	A	28	29	31	33	33	33	33	31	30	25	22	19	18	21.9	33.1	
15-May	21	20	17	17	16	14	17	19	24	A	31	31	29	28	26	26	28	27	25	23	20	17	17	17	22.2	31.3	
16-May	15	15	15	14	12	12	13	14	A	18	18	17	18	20	23	25	27	29	32	32	30	22	20	19	19.9	32.2	
17-May	17	14	12	10	12	13	16	A	21	20	21	23	25	30	29	29	28	27	31	33	29	25	20	22	22.0	32.8	
18-May	24	19	19	17	14	12	A	20	25	26	29	30	31	33	35	35	36	35	34	35	33	26	27	24	26.9	36.2	
19-May	22	20	20	20	20	A	24	29	36	39	41	42	43	43	43	37	35	37	38	39	35	29	29	28	32.6	43.1	
20-May	29	30	30	28	A	27	29	38	41	43	45	47	48	49	49	50	51	50	49	50	45	42	37	26	40.5	51.5	
21-May	27	29	33	A	28	29	30	33	36	43	48	50	46	46	51	50	46	37	34	31	28	25	21	19	35.6	50.8	
22-May	19	21	A	20	21	21	21	27	33	34	35	36	37	38	38	38	37	36	35	34	37	35	40	38	31.8	39.7	
23-May	36	A	31	30	28	24	26	36	37	38	38	38	39	43	47	47	45	43	40	34	36	33	29	30	35.9	46.8	
24-May	A	27	24	22	20	21	22	27	30	33	36	40	41	40	42	40	41	39	38	39	32	30	24	A	32.2	41.6	
25-May	21	21	22	19	18	18	20	28	31	32	33	33	33	33	32	33	33	31	31	29	28	26	A	21	27.2	33.4	
26-May	20	20	20	20	16	16	17	22	25	33	37	40	41	40	35	T	T	T	T	T	T	T	T	T	--	40.9	
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--	
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	38	39	40	40	41	41	42	A	38	36	36	36	--	41.9
29-May	34	25	23	23	21	19	23	27	36	40	42	43	45	46	48	51	53	50	A	45	41	36	31	40	36.6	52.8	
30-May	45	47	45	43	43	34	26	30	38	42	45	47	50	53	52	53	53	A	44	40	38	41	47	37	43.1	53.0	
31-May	29	24	25	27	19	17	19	22	37	41	41	41	43	38	39	39	A	38	38	38	35	32	29	27	32.2	42.5	
27.2 25.2 24.8 23.4 22.9 22.6 23.5 27.2 32.3 35.1 37.3 38.5 38.4 38.9 39.1 39.8 40.0 39.0 37.8 37.1 34.5 31.5 29.6 28.0																								Diurnal Average			
44.6 46.7 45.3 42.6 42.6 33.9 32.3 37.9 48.8 51.8 53.0 52.3 50.3 53.0 52.1 52.7 53.5 54.9 54.1 52.4 49.2 46.5 46.7 40.0																								Diurnal Maximum			
C - Calibration M - Maintenance A - Automated Daily Zero Span T - Exceeds temp limit																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																											

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - May 2017



Hourly Maximums

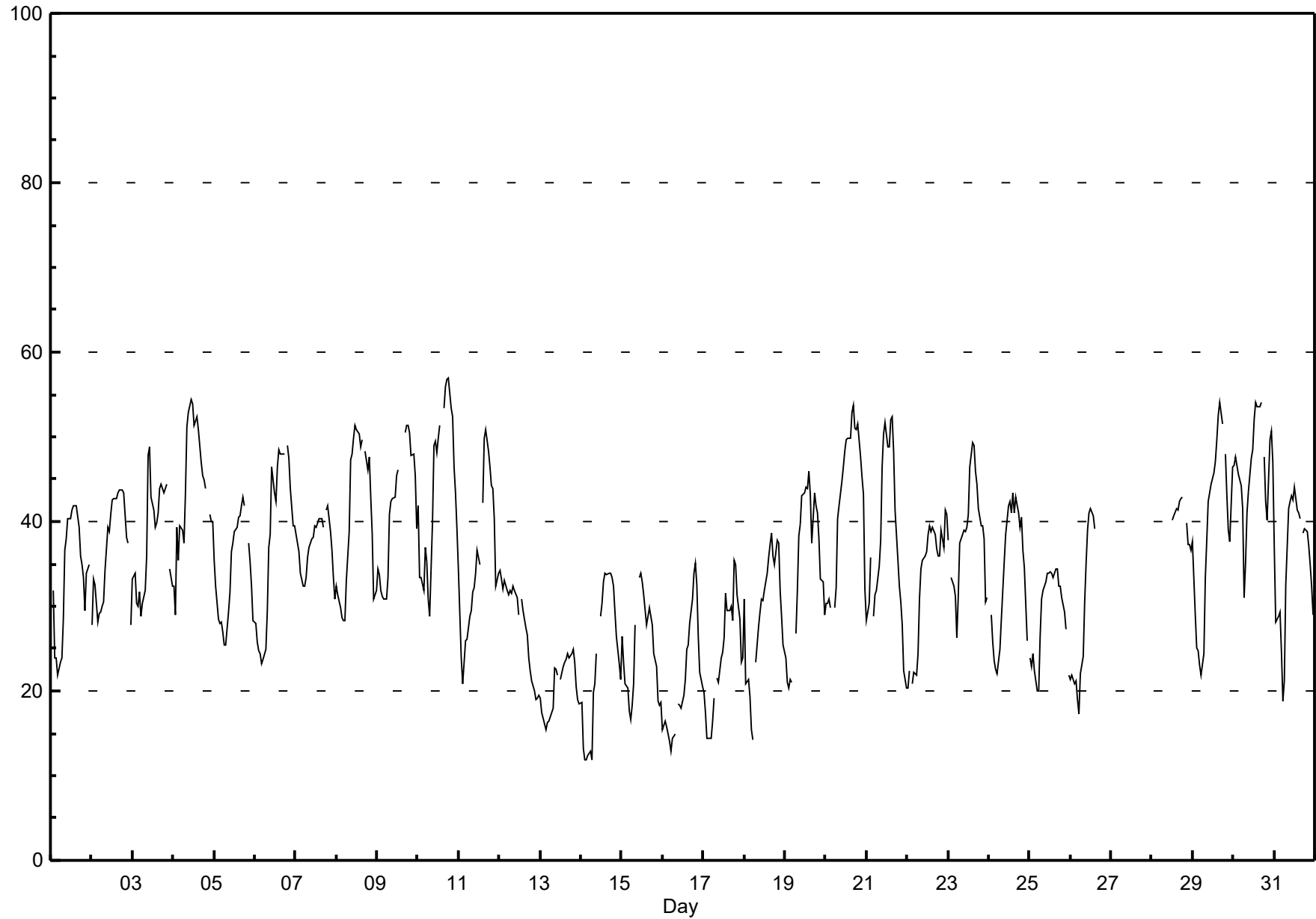
Ozone (O₃) - ppb

Portable Rycroft - May 2017

Maximum Value: 56.9 ppb on May 10 19:00																				Maximum Daily Average: 46.2 ppb on May 30										Hours in Service: 744	
Minimum Value: 12 ppb on May 14 04:00																				Minimum Daily Average: 20.6 ppb on May 13										Hours of Data: 666	
Maximum Diurnal Average: 41.6 ppb at hour 16																				Minimum Diurnal Average: 24.9 ppb at hour 6										Hours of Missing Data: 78	
Monthly Average: 34.47 ppb																				Percentiles: P ₁ = 13.8 P ₁₀ = 20.9 Q ₁ = 27.9 Median = 34.0 Q ₃ = 41.9 P ₉₀ = 48.0 P ₉₉ = 54.1										Hours of Calibration: 33	
																				Percent Operational Time: 94.0											
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-May	A	32	24	24	22	23	24	28	37	38	40	40	41	42	42	39	36	35	33	30	34	35	A	A	33.7	41.9					
2-May	28	33	33	28	29	29	30	31	34	39	39	41	43	43	43	44	44	44	43	38	37	A	A	28	36.7	43.8					
3-May	33	34	30	30	32	29	30	32	36	48	49	43	41	39	40	41	44	44	43	44	44	A	A	34	32	38.0	48.8				
4-May	32	29	39	35	39	39	37	43	51	53	54	54	51	52	52	51	47	45	45	44	A	A	41	40	40	44.2	54.4				
5-May	35	32	28	28	28	27	25	25	29	32	36	37	39	39	41	41	42	43	42	A	37	35	32	28	34.1	42.9					
6-May	28	26	25	24	23	24	25	29	37	38	46	43	42	46	48	48	48	48	A	49	47	44	39	39	37.8	48.9					
7-May	38	37	36	34	32	32	33	36	37	38	38	39	39	40	40	40	39	A	41	42	39	37	33	31	37.2	41.9					
8-May	32	31	30	29	28	28	33	39	47	48	50	51	51	50	49	50	A	48	46	48	43	39	31	32	40.6	51.3					
9-May	34	34	32	31	31	31	33	41	42	43	43	45	46	C	C	A	50	51	51	50	48	48	45	39	41.5	51.4					
10-May	42	33	33	32	37	35	31	29	40	49	49	48	50	51	A	53	56	57	57	53	52	46	43	39	44.2	56.9					
11-May	34	24	21	23	26	26	29	30	32	32	34	37	35	A	42	50	51	48	46	44	44	40	32	34	35.4	50.8					
12-May	34	33	32	33	32	31	32	31	32	32	31	29	A	31	29	27	27	24	22	21	20	19	19	19	28.0	34.2					
13-May	19	17	16	15	16	16	17	18	23	23	22	A	21	23	23	24	24	24	24	25	23	20	19	18	20.6	24.9					
14-May	19	13	12	12	12	13	12	20	21	24	A	29	30	33	34	34	34	34	33	32	29	26	23	21	24.0	33.9					
15-May	26	23	21	20	18	17	18	21	28	A	33	34	33	31	28	29	30	29	28	24	23	19	18	19	24.8	33.9					
16-May	15	16	16	15	14	13	14	15	A	18	18	18	19	21	25	25	28	31	34	35	33	26	22	20	21.5	35.1					
17-May	20	17	14	14	14	16	19	A	21	21	24	25	26	31	29	30	30	28	35	35	31	28	23	24	24.3	35.4					
18-May	31	21	21	19	15	14	A	23	28	29	31	31	32	34	36	37	39	36	35	38	38	32	29	25	29.3	38.6					
19-May	24	21	20	21	21	A	27	32	38	40	43	43	44	44	46	43	37	43	42	41	38	33	33	29	35.0	45.9					
20-May	30	30	31	30	A	30	32	40	42	45	46	48	50	50	50	53	54	51	51	52	48	45	43	32	42.7	53.8					
21-May	28	30	36	A	29	31	32	35	38	46	50	52	49	49	52	52	48	41	35	32	31	28	22	20	37.7	52.3					
22-May	20	22	A	21	22	22	24	31	34	35	36	36	38	40	39	39	38	37	36	36	39	37	41	41	33.3	41.4					
23-May	38	A	33	32	31	26	31	37	38	39	39	39	41	46	49	49	46	44	41	39	39	38	30	31	38.3	49.4					
24-May	A	29	26	23	22	22	25	28	32	35	38	42	42	41	43	41	43	41	39	40	37	35	26	A	34.2	43.4					
25-May	24	23	24	22	20	20	26	31	32	33	34	34	34	34	33	34	34	32	32	31	29	27	A	22	29.0	34.4					
26-May	21	22	21	21	19	17	22	24	31	35	39	41	42	41	39	T	T	T	T	T	T	T	T	T	--	41.6					
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	--	--					
28-May	M	M	M	M	M	M	M	M	M	M	M	M	40	41	42	41	42	43	43	A	40	37	37	37	--	42.8					
29-May	38	29	25	25	23	22	24	33	38	42	43	44	46	47	50	53	54	52	A	48	43	39	38	46	39.2	54.1					
30-May	47	48	47	46	44	42	31	35	41	44	47	48	52	54	54	54	54	A	48	42	40	50	51	47	46.2	54.1					
31-May	37	28	29	29	25	19	21	33	42	42	43	43	44	41	41	40	A	39	39	39	37	35	32	29	35.1	44.1					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration																															
M - Maintenance																															
A - Automated Daily Zero Span																															
T - Exceeds temp limit																															

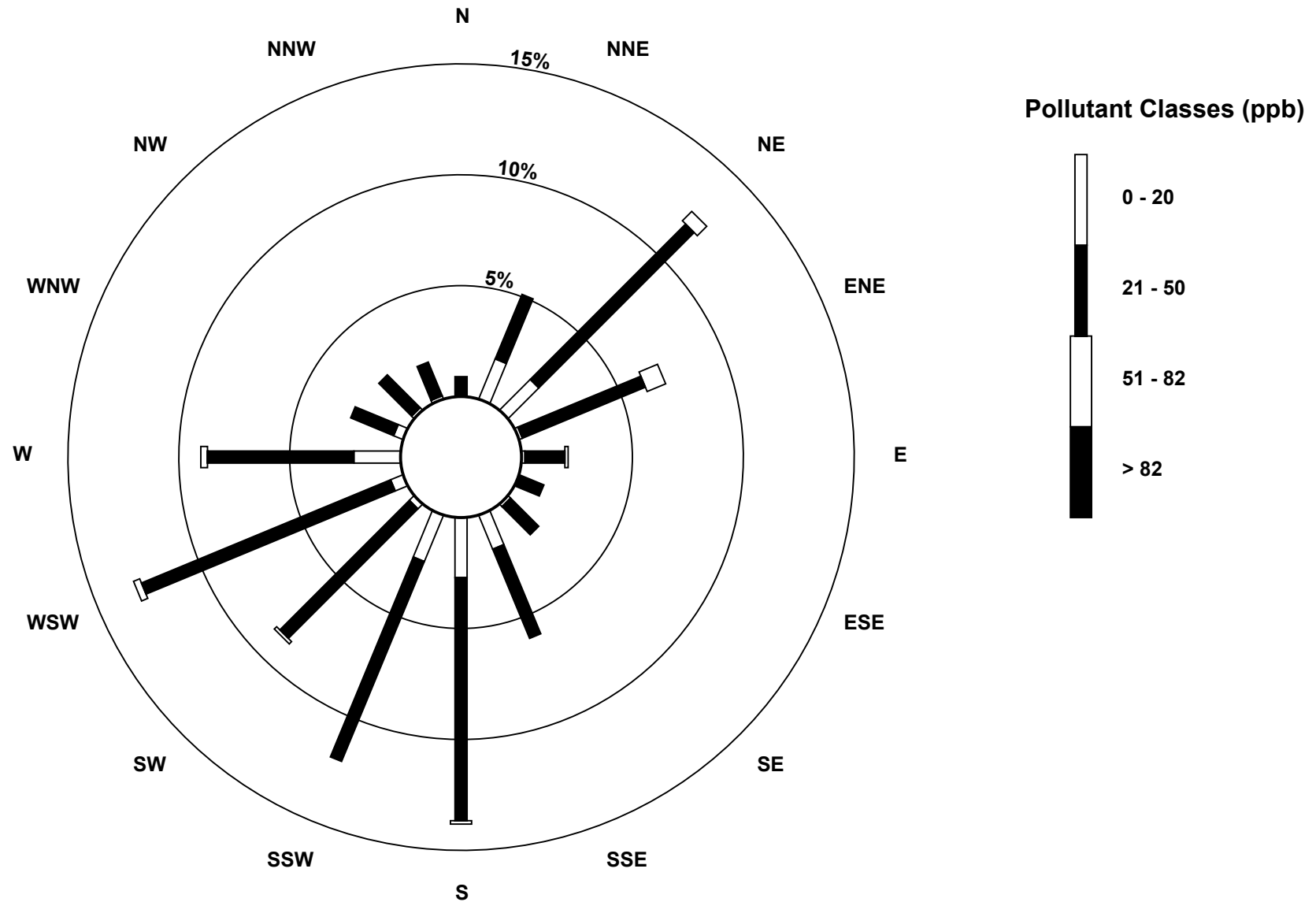
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - May 2017



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - May 2017



Eight Hour Running Averages

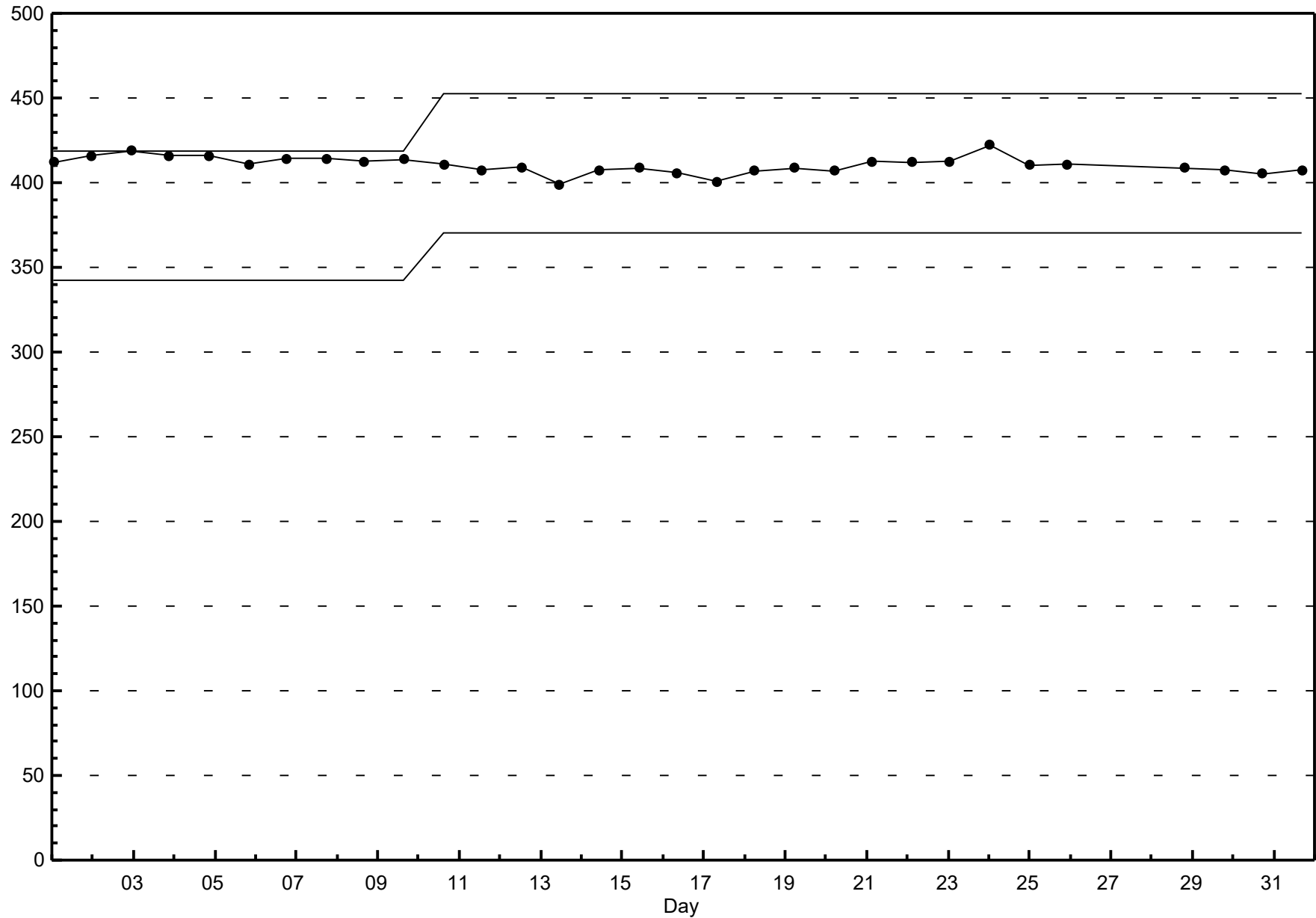
Ozone (O₃) - ppb

Portable Rycroft - May 2017

Maximum Value: 52.4 ppb on May 10 21:00																							Hours in Service:		744
Minimum Value: 12.3 ppb on May 14 08:00																							Hours of Data:		690
																							Hours of Missing Data:		54
Percentiles: P ₁ = 14.0 P ₁₀ = 20.0 Q ₁ = 25.8 Median = 32.2 Q ₃ = 38.8 P ₉₀ = 43.8 P ₉₉ = 50.5																							Hours of Calibration:		6
																							Percent Operational Time:		93.6
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-May	39	36	33	30	27	25	23	22	23	25	27	29	32	34	37	39	39	39	38	37	36	34	33	32	39.5
2-May	30	30	29	28	28	28	27	28	28	29	30	32	34	35	37	39	40	41	42	42	41	40	40	38	41.7
3-May	36	34	32	31	30	28	28	29	29	30	32	34	36	37	39	40	41	41	41	41	41	42	40	39	41.5
4-May	38	35	34	33	32	32	32	33	36	39	41	43	45	47	49	51	50	49	48	47	46	45	43	41	50.8
5-May	39	37	35	33	32	30	28	27	26	26	27	28	30	31	33	35	37	39	39	40	39	38	37	34	39.7
6-May	32	29	27	26	24	23	22	22	23	25	27	30	32	35	38	41	42	44	44	45	46	45	44	43	45.9
7-May	42	40	40	38	36	35	34	34	34	34	34	35	35	36	37	38	38	39	39	39	39	38	37	36	41.7
8-May	35	34	32	31	30	29	29	29	31	33	35	38	41	44	46	47	48	48	48	47	46	43	41	38	48.3
9-May	37	36	34	32	31	31	31	31	33	33	35	36	38	39	40	N	N	N	N	N	N	48	47	45	47.8
10-May	44	41	38	35	34	31	29	28	27	29	32	34	37	39	42	46	49	50	51	52	52	51	50	48	52.4
11-May	45	40	36	31	28	26	24	23	23	25	26	28	30	30	32	34	37	39	41	42	44	43	42	40	44.7
12-May	38	37	35	33	32	31	31	31	31	31	31	30	30	30	29	29	28	27	25	24	23	22	21	20	38.5
13-May	19	18	18	17	17	16	16	16	16	17	18	18	19	20	21	21	22	22	22	23	23	22	22	21	22.7
14-May	20	19	17	16	14	13	12	12	13	14	15	17	20	22	25	28	30	31	31	32	31	30	28	26	31.6
15-May	25	23	21	20	19	18	17	17	18	18	20	22	24	26	27	28	29	28	28	27	26	24	23	22	28.5
16-May	20	19	17	16	15	15	14	14	14	14	14	15	16	17	18	20	21	22	24	26	27	27	27	26	27.2
17-May	25	23	21	18	16	15	14	13	14	15	16	18	20	22	24	25	26	26	28	29	29	29	28	27	29.3
18-May	26	25	24	22	20	18	18	18	18	19	20	22	25	28	28	30	32	33	33	34	34	34	33	31	34.4
19-May	29	28	26	24	22	22	21	22	24	27	30	33	36	37	40	41	40	40	40	39	38	37	35	34	40.5
20-May	33	32	31	30	29	29	29	30	32	34	36	38	40	42	45	46	48	49	49	49	49	48	47	44	49.5
21-May	41	38	36	34	32	30	29	30	31	33	35	37	39	41	44	46	47	47	45	43	40	38	34	30	47.4
22-May	27	25	23	22	21	20	20	22	23	25	27	29	30	33	35	36	37	37	37	37	37	36	37	37	36.9
23-May	36	36	36	35	34	32	30	30	30	31	32	33	34	37	39	41	42	42	43	42	42	41	38	36	42.6
24-May	35	33	31	29	27	25	24	23	24	25	26	29	31	34	36	38	39	40	40	40	39	38	35	35	40.1
25-May	32	29	27	24	22	21	20	21	22	24	25	27	29	30	32	32	33	33	32	32	31	30	30	28	32.7
26-May	27	25	23	22	20	19	19	19	20	21	23	26	29	32	34	36	38	T	T	T	T	T	T	T	37.5
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	N	N	N	--
28-May	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	40	40	40	40	40	39	39	40.4
29-May	38	35	33	31	29	27	25	24	25	26	29	31	34	38	41	44	46	47	48	48	48	46	44	42	48.1
30-May	41	41	41	41	41	41	40	39	38	38	38	38	39	41	45	48	49	50	50	49	47	46	45	43	50.5
31-May	39	37	35	33	31	28	25	23	24	26	28	30	33	35	38	40	40	40	39	39	38	37	36	34	40.4
44.7 41.4 41.2 40.9 41.1 40.9 40.2 38.9 38.2 38.7 41.0 43.4 45.0 47.0 49.3 50.8 50.3 50.5 51.3 52.1 52.4 51.5 49.8 47.5																									
Diurnal Maximums																									
N - Not Valid T - Exceeds temp limit																									

Span Responses

Ozone (O₃)
Portable Rycroft - May 2017



Hourly Averages

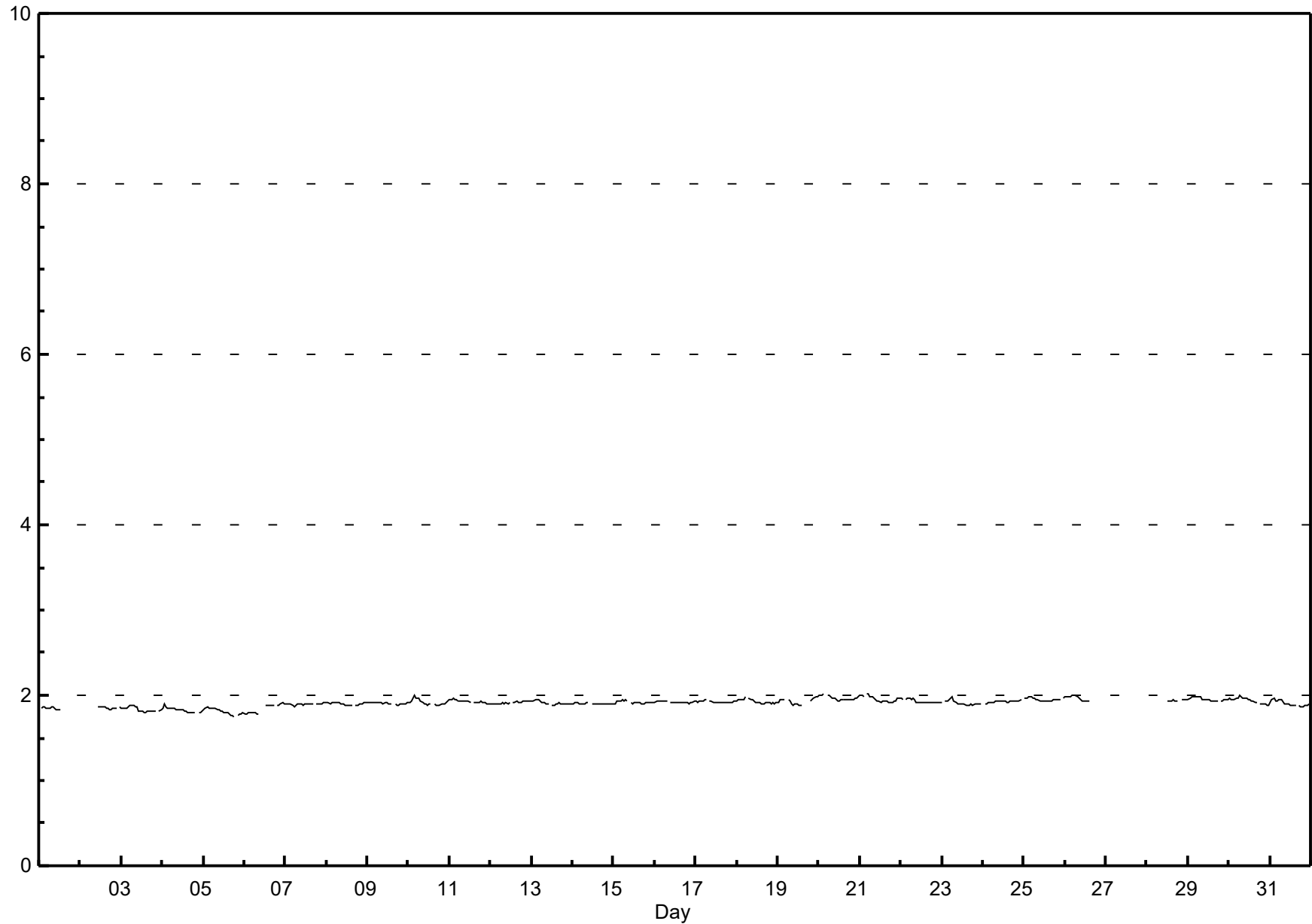
Total Hydrocarbons (THC) - ppm

Portable Rycroft - May 2017

Maximum Value: 2.01 ppm on May 21 05:00																				Maximum Daily Average: 1.97 ppm on May 20				Hours in Service: 744			
Minimum Value: 1.8 ppm on May 5 19:00																				Minimum Daily Average: 1.81 ppm on May 5				Hours of Data: 641			
Maximum Diurnal Average: 1.93 ppm at hour 6																				Minimum Diurnal Average: 1.89 ppm at hour 19				Hours of Missing Data: 103			
Monthly Average: 1.909 ppm																				Percentiles: P ₁ = 1.78 P ₁₀ = 1.84 Q ₁ = 1.89 Median = 1.91 Q ₃ = 1.94 P ₉₀ = 1.96 P ₉₉ = 2.00				Hours of Calibration: 37			
																				Percent Operational Time: 91.1							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	A	1.8	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	N	N	N	N	N	N	N	N	N	N	N	N	--	1.87
2-May	N	N	N	N	N	N	N	N	N	N	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	1.8	1.8	--	1.86
3-May	1.9	1.9	1.8	1.8	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	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.89	
4-May	1.8	1.9	1.9	1.9	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	A	1.8	1.8	1.8	1.83	1.90	
5-May	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	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.81	1.86	
6-May	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.84	1.91	
7-May	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	1.92	
8-May	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	1.9	1.90	1.92	
9-May	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	1.9	1.9	1.90	1.92	
10-May	1.9	1.9	1.9	2.0	2.0	2.0	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	1.9	1.9	1.9	1.92	2.00	
11-May	1.9	2.0	2.0	2.0	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	1.93	1.96	
12-May	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	1.9	1.9	1.9	1.9	1.9	1.91	1.93	
13-May	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	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95	
14-May	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	1.9	1.9	1.9	1.9	1.9	1.90	1.92	
15-May	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	1.9	1.9	1.9	1.92	1.94	
16-May	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	1.9	1.9	1.9	1.9	1.92	1.93	
17-May	1.9	1.9	1.9	1.9	1.9	2.0	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	1.92	1.96	
18-May	1.9	1.9	1.9	1.9	2.0	2.0	A	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	1.93	1.99	
19-May	1.9	1.9	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	2.0	2.0	2.0	2.0	1.93	1.99	
20-May	2.0	2.0	2.0	2.0	A	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	2.0	2.0	2.0	2.0	2.0	1.97	2.01	
21-May	2.0	2.0	2.0	A	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	2.0	2.0	2.0	1.96	2.01	
22-May	2.0	1.9	A	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	1.9	1.9	1.9	1.9	1.9	1.93	1.97	
23-May	1.9	A	1.9	1.9	1.9	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	1.9	1.9	1.91	1.98	
24-May	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	A	1.93	1.94		
25-May	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	1.9	1.9	1.9	1.9	A	2.0	1.95	1.98		
26-May	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	T	T	T	T	T	T	T	T	T	--	2.00		
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	--	--		
28-May	M	M	M	M	M	M	M	M	M	M	M	M	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	--	1.95		
29-May	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	1.95	1.99		
30-May	2.0	1.9	2.0	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	A	1.9	1.9	1.9	1.9	1.9	1.94	1.99		
31-May	1.9	1.9	2.0	1.9	1.9	2.0	1.9	2.0	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	1.96		
1.92 1.92 1.92 1.92 1.93 1.93 1.93 1.92 1.91 1.91 1.90 1.90 1.90 1.90 1.90 1.90 1.89 1.89 1.89 1.89 1.90 1.90 1.90 1.91 1.91																								Diurnal Average			
2.00 2.01 2.00 2.01 2.01 2.01 1.99 1.99 1.97 1.97 1.96 1.95 1.95 1.94 1.95 1.95 1.95 1.94 1.95 1.95 1.95 1.95 1.96 1.98 1.99																								Diurnal Maximum			
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span				T - Exceeds temp limit											

Hourly Averages

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



Hourly Maximums

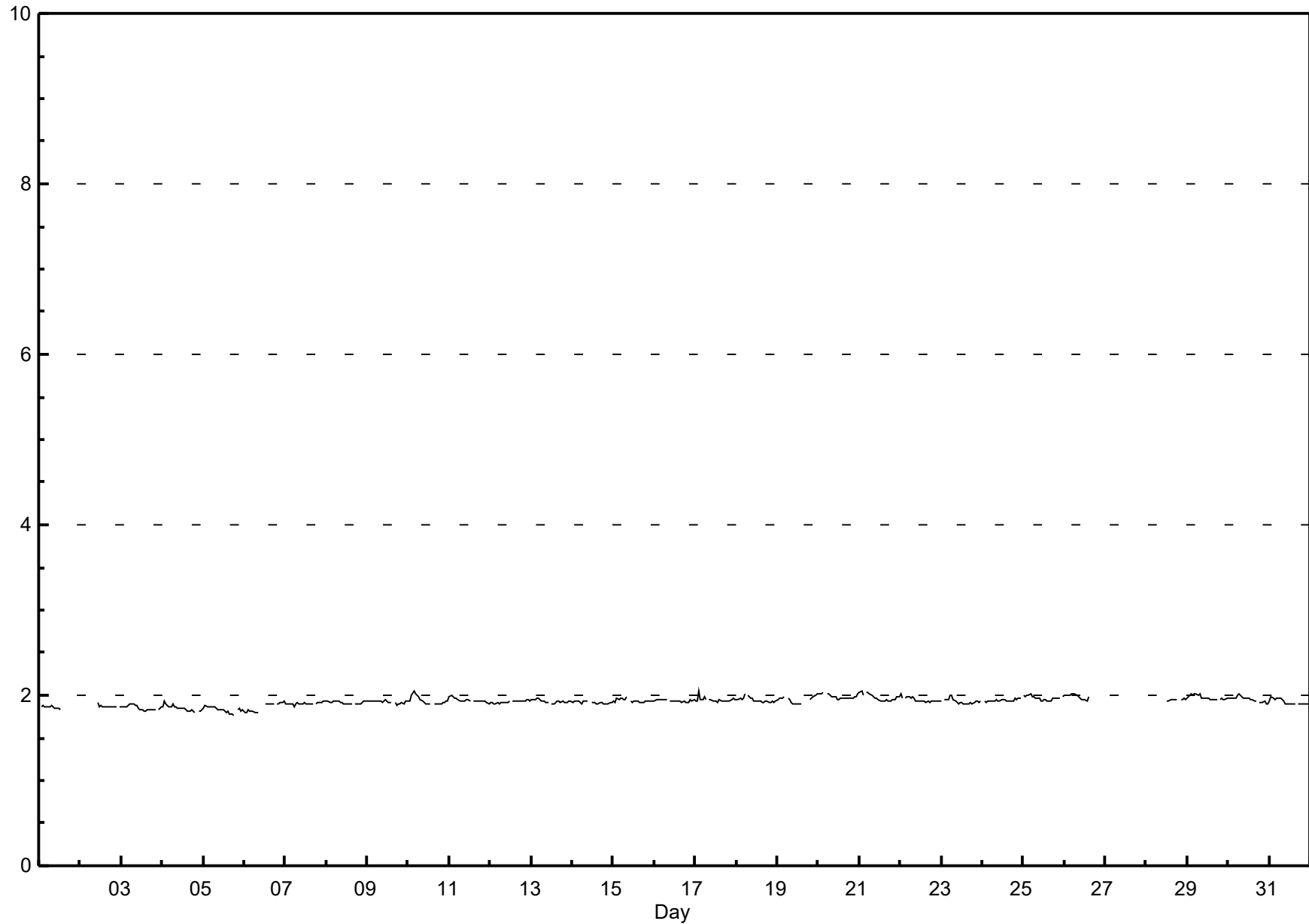
Total Hydrocarbons (THC) - ppm

Portable Rycroft - May 2017

Maximum Value: 2.05 ppm on May 21 02:00																				Maximum Daily Average: 1.98 ppm on May 20					Hours in Service: 744	
Minimum Value: 1.8 ppm on May 5 19:00																				Minimum Daily Average: 1.83 ppm on May 5					Hours of Data: 641	
Maximum Diurnal Average: 1.95 ppm at hour 6																				Minimum Diurnal Average: 1.91 ppm at hour 19					Hours of Missing Data: 103	
Monthly Average: 1.926 ppm																				Percentiles: P ₁ = 1.80 P ₁₀ = 1.86 Q ₁ = 1.90 Median = 1.93 Q ₃ = 1.95 P ₉₀ = 1.99 P ₉₉ = 2.04					Hours of Calibration: 37	
																									Percent Operational Time: 91.1	
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-May	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	N	N	N	N	N	N	N	N	N	N	N	--	1.88
2-May	N	N	N	N	N	N	N	N	N	N	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	--	1.91
3-May	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	1.8	1.8	1.8	A	1.8	1.9	1.85	1.90
4-May	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	1.8	1.8	1.8	A	1.8	1.8	1.8	1.85	1.93
5-May	1.8	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	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.83	1.88
6-May	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.86	1.93
7-May	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	1.91	1.94
8-May	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	1.9	1.91	1.94
9-May	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	1.9	1.9	1.92	1.95
10-May	1.9	1.9	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	1.9	1.9	1.9	1.9	1.94	2.04
11-May	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.00
12-May	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	1.9	1.9	2.0	2.0	1.9	1.93	1.95
13-May	2.0	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.93	1.96
14-May	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	1.9	1.9	1.9	1.9	1.9	1.92	1.93
15-May	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	1.94	1.97
16-May	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	1.9	1.9	1.9	1.9	1.93	1.94
17-May	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	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	2.0	1.9	1.94	2.05
18-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	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	1.94	2.01
19-May	1.9	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	2.0	2.0	2.0	2.0	2.0	1.95	2.03
20-May	2.0	2.0	2.0	2.0	A	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	1.98	2.04
21-May	2.0	2.0	2.0	A	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	2.0	1.9	2.0	2.0	1.97	2.05
22-May	2.0	2.0	A	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	1.9	1.95	2.01
23-May	1.9	A	1.9	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	1.9	1.9	1.9	1.9	1.9	1.93	2.00
24-May	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	A	1.94	1.96
25-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	1.97	2.01
26-May	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	1.9	2.0	T	T	T	T	T	T	T	T	T	--	2.02
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--
28-May	M	M	M	M	M	M	M	M	M	M	M	M	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	--	1.96
29-May	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	1.9	1.9	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	1.97	2.01
30-May	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	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.01
31-May	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.98
1.94 1.94 1.95 1.94 1.94 1.95 1.94 1.94 1.93 1.92 1.92 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.91 1.92 1.92 1.92 1.92 1.93																								Diurnal Average		
2.04 2.05 2.05 2.04 2.04 2.04 2.01 2.01 1.99 1.99 1.99 1.97 1.96 1.96 1.98 1.96 1.96 1.96 1.96 1.96 1.97 1.99 2.00 2.03																								Diurnal Maximum		
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span				T - Exceeds temp limit										

Hourly Maximums

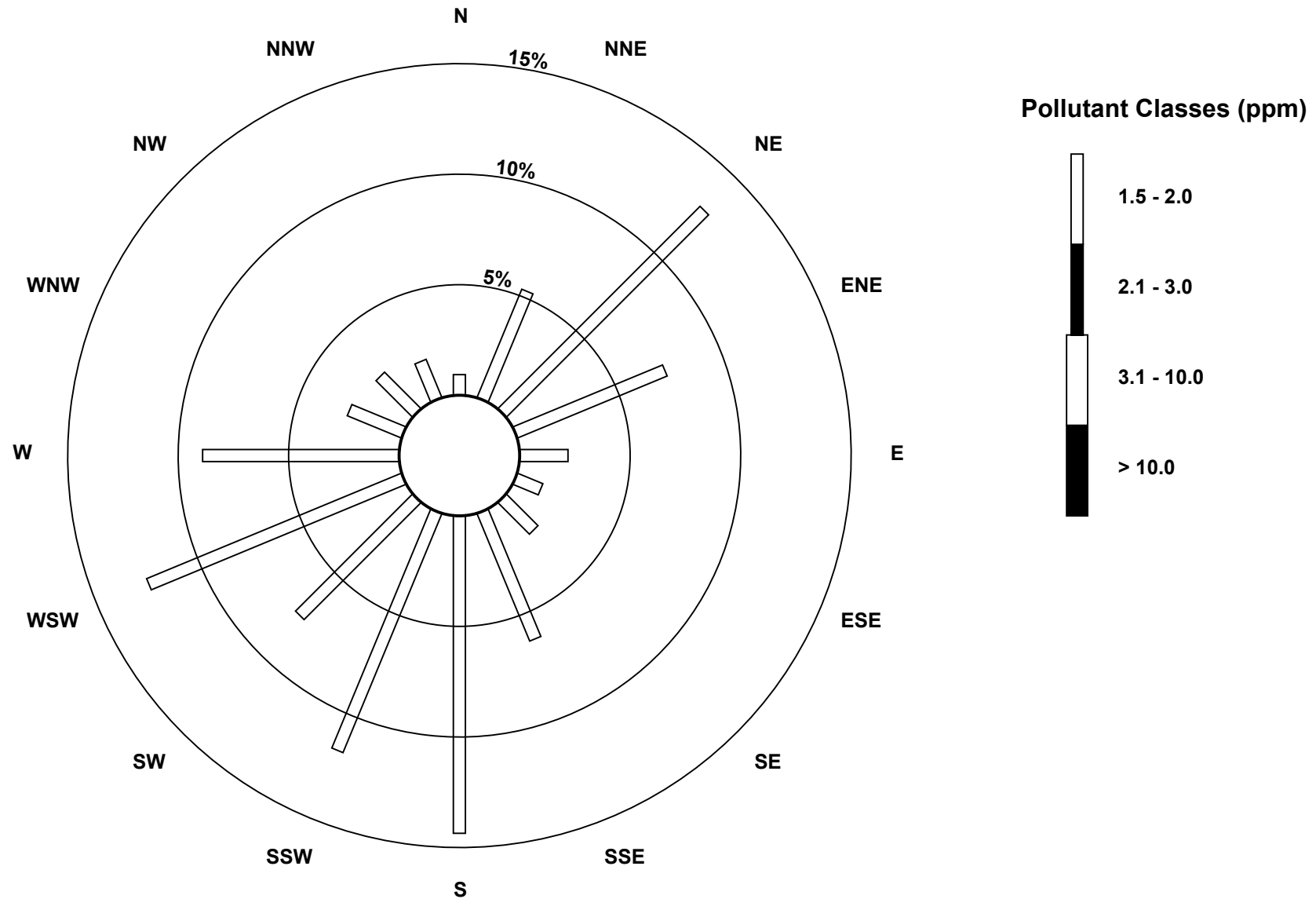
Total Hydrocarbons (THC) - ppm
Portable Rycroft - May 2017



Pollutant Rose

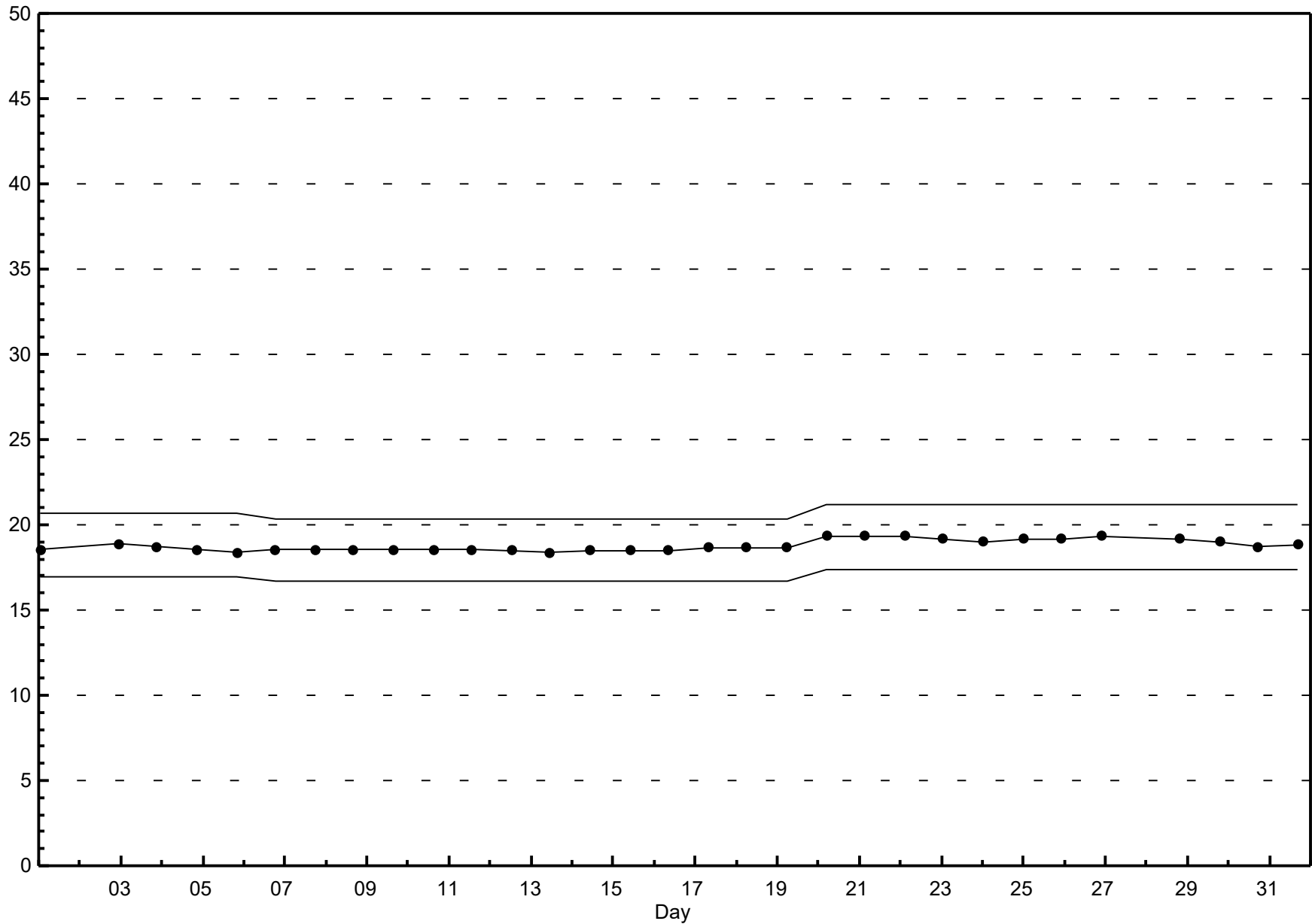
Total Hydrocarbons (THC) - ppm

Portable Rycroft - May 2017



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - May 2017



Hourly Averages

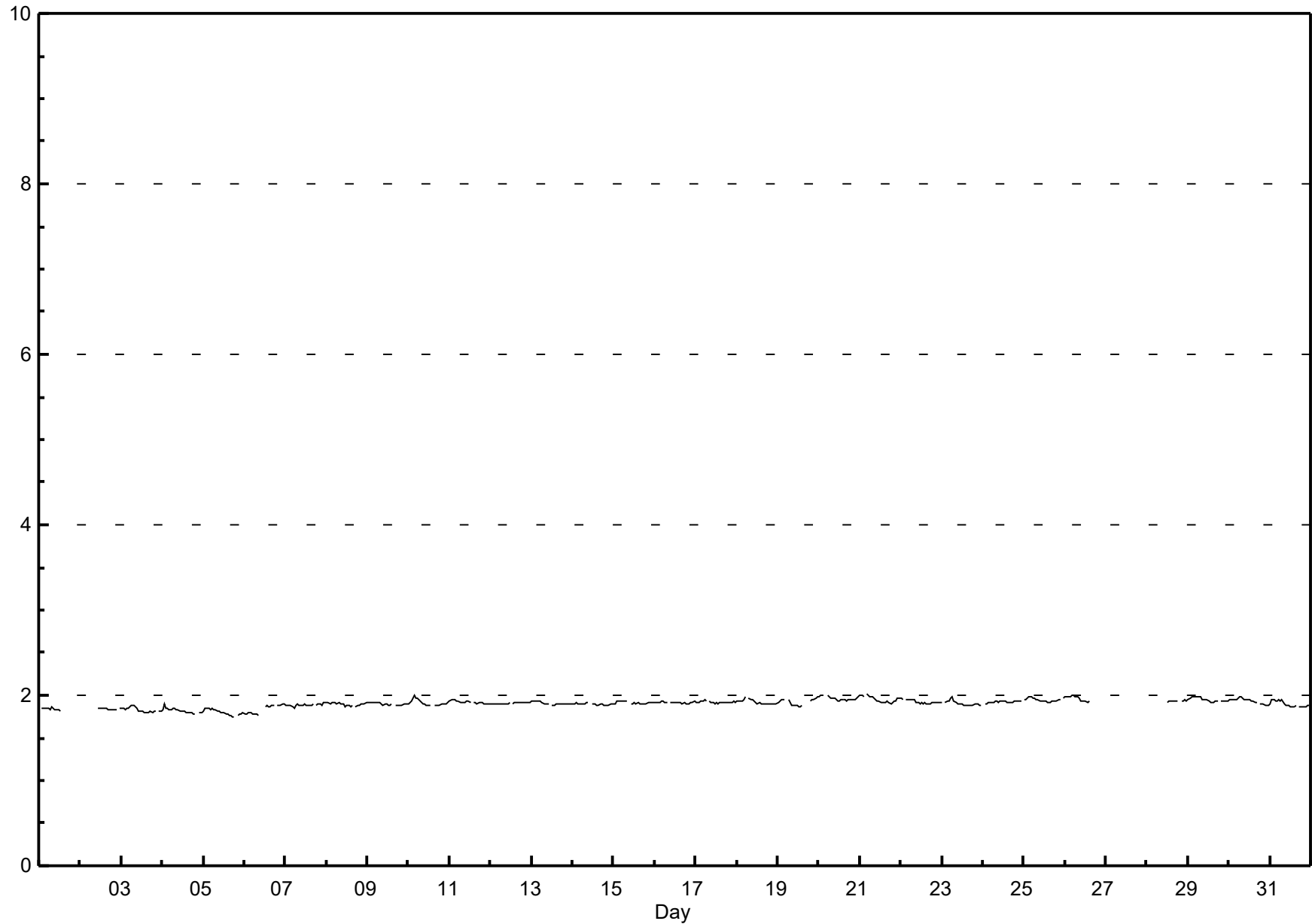
Methane (CH₄) - ppm

Portable Rycroft - May 2017

Maximum Value: 2.01 ppm on May 21 05:00																					Maximum Daily Average: 1.96 ppm on May 20				Hours in Service: 744		
Minimum Value: 1.7 ppm on May 5 19:00																					Minimum Daily Average: 1.80 ppm on May 5				Hours of Data: 641		
Maximum Diurnal Average: 1.92 ppm at hour 6																					Minimum Diurnal Average: 1.88 ppm at hour 19				Hours of Missing Data: 103		
Monthly Average: 1.903 ppm																					Percentiles: P ₁ = 1.77 P ₁₀ = 1.84 Q ₁ = 1.89 Median = 1.91 Q ₃ = 1.93 P ₉₀ = 1.96 P ₉₉ = 2.00				Hours of Calibration: 37		
																					Percent Operational Time: 91.1						
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-May	A	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	N	N	N	N	N	N	N	N	N	N	N	N	--	1.86
2-May	N	N	N	N	N	N	N	N	N	N	1.8	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	--	1.85
3-May	1.8	1.8	1.8	1.8	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	1.8	1.8	1.8	1.8	A	1.8	1.8	1.83	1.88	
4-May	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	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.82	1.89	
5-May	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	1.8	1.8	1.7	A	1.8	1.8	1.8	1.8	1.80	1.85	
6-May	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.84	1.90	
7-May	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	1.92	
8-May	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	1.9	1.89	1.91	
9-May	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	1.9	1.9	1.90	1.92	
10-May	1.9	1.9	1.9	2.0	2.0	2.0	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	1.9	1.9	1.9	1.91	2.00	
11-May	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95	
12-May	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	1.9	1.9	1.9	1.9	1.9	1.91	1.92	
13-May	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	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.94	
14-May	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	1.9	1.9	1.9	1.9	1.9	1.90	1.91	
15-May	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	1.9	1.9	1.9	1.91	1.94	
16-May	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	1.9	1.9	1.9	1.9	1.91	1.93	
17-May	1.9	1.9	1.9	1.9	1.9	2.0	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	1.92	1.95	
18-May	1.9	1.9	1.9	1.9	2.0	2.0	A	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	1.98	
19-May	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	2.0	2.0	2.0	1.92	1.98	
20-May	2.0	2.0	2.0	2.0	A	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	2.0	1.9	2.0	2.0	2.0	1.96	2.00	
21-May	2.0	2.0	2.0	A	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	2.0	2.0	1.95	2.01	
22-May	2.0	1.9	A	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	1.9	1.9	1.9	1.92	1.97	
23-May	1.9	A	1.9	1.9	1.9	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	1.9	1.9	1.90	1.98	
24-May	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	1.92	1.94	
25-May	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	1.9	1.9	1.9	1.9	1.9	A	2.0	1.94	1.98	
26-May	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	T	T	T	T	T	T	T	T	T	--	2.00	
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--	
28-May	M	M	M	M	M	M	M	M	M	M	M	M	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	--	1.94	
29-May	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	1.9	1.95	1.99	
30-May	2.0	1.9	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.99	
31-May	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95	
1.91 1.92 1.92 1.92 1.92 1.92 1.92 1.92 1.91 1.90 1.90 1.89 1.89 1.89 1.89 1.89 1.89 1.89 1.88 1.89 1.90 1.90 1.90 1.90																								Diurnal Average			
2.00 2.00 2.00 2.00 2.01 2.01 1.99 1.98 1.97 1.97 1.96 1.95 1.95 1.94 1.94 1.94 1.94 1.94 1.95 1.94 1.95 1.95 1.96 1.97 1.98																								Diurnal Maximum			
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span				T - Exceeds temp limit											

Hourly Averages

Methane (CH₄) - ppm
Portable Rycroft - May 2017



Hourly Maximums

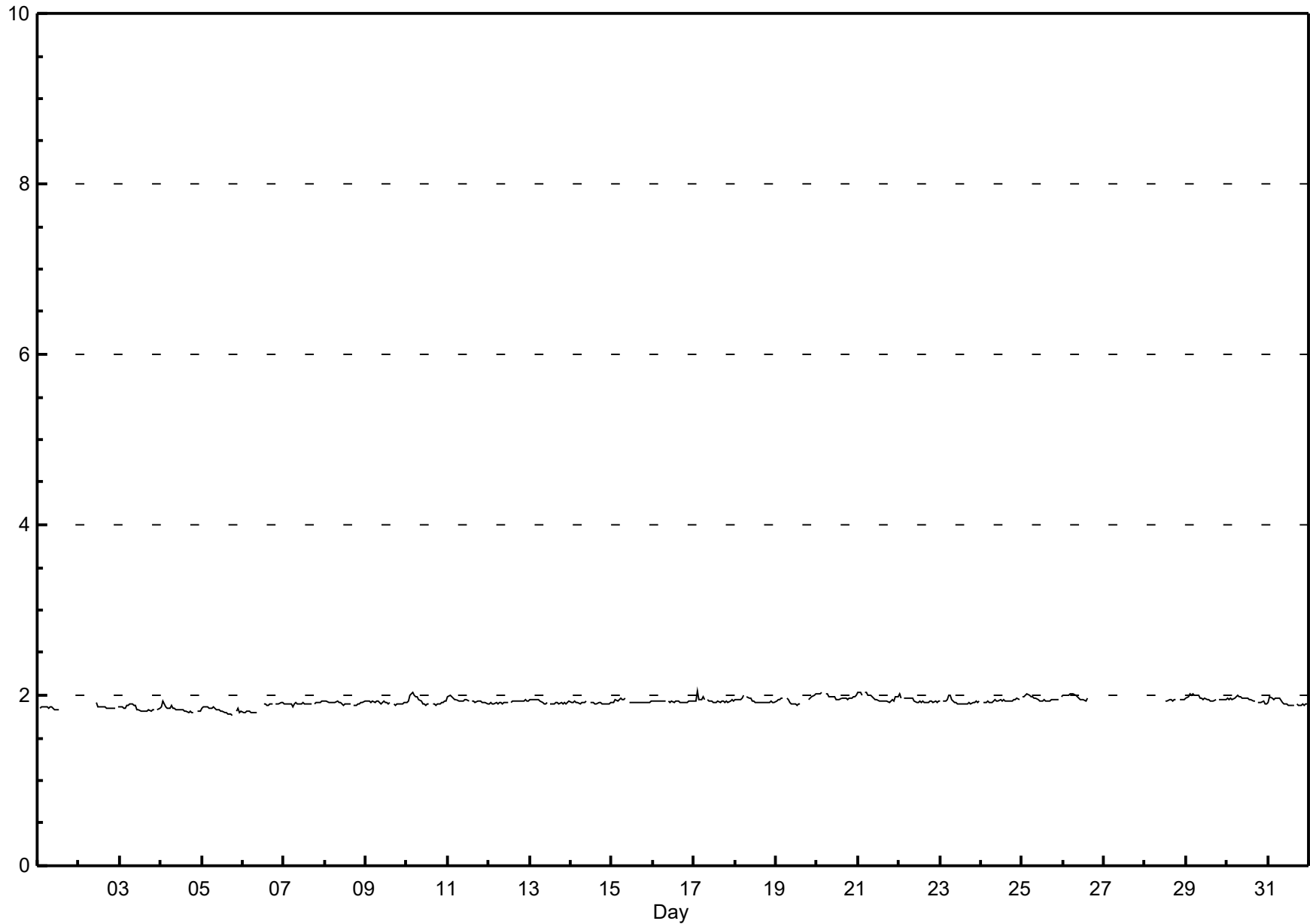
Methane (CH₄) - ppm

Portable Rycroft - May 2017

Maximum Value: 2.05 ppm on May 17 03:00																				Maximum Daily Average: 1.98 ppm on May 20					Hours in Service: 744	
Minimum Value: 1.8 ppm on May 5 19:00																				Minimum Daily Average: 1.82 ppm on May 5					Hours of Data: 641	
Maximum Diurnal Average: 1.94 ppm at hour 3																				Minimum Diurnal Average: 1.90 ppm at hour 19					Hours of Missing Data: 103	
Monthly Average: 1.920 ppm																				Percentiles: P ₁ = 1.80 P ₁₀ = 1.85 Q ₁ = 1.90 Median = 1.92 Q ₃ = 1.95 P ₉₀ = 1.98 P ₉₉ = 2.03					Hours of Calibration: 37	
																									Percent Operational Time: 91.1	
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-May	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	N	N	N	N	N	N	N	N	N	N	N	--	1.87
2-May	N	N	N	N	N	N	N	N	N	N	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	--	1.91
3-May	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	1.8	1.8	1.8	A	1.8	1.8	1.85	1.90
4-May	1.9	1.9	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	1.8	1.8	1.8	A	1.8	1.8	1.8	1.84	1.93
5-May	1.8	1.9	1.9	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	A	1.8	1.8	1.8	1.8	1.82	1.87
6-May	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.85	1.92
7-May	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	1.93
8-May	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	1.9	1.91	1.93
9-May	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	1.9	1.9	1.92	1.94
10-May	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.03
11-May	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.00
12-May	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	1.9	1.9	1.9	1.9	1.9	1.92	1.94
13-May	1.9	1.9	1.9	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	1.9	1.9	1.9	1.9	1.9	1.92	1.95
14-May	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	1.9	1.9	1.9	1.9	1.9	1.91	1.93
15-May	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	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	1.93	1.96
16-May	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	1.9	1.9	1.9	1.9	1.93	1.94
17-May	1.9	1.9	2.0	1.9	1.9	2.0	2.0	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	2.0	1.9	1.94	2.05
18-May	1.9	2.0	2.0	2.0	2.0	2.0	A	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	1.94	2.00
19-May	1.9	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	1.94	2.02
20-May	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.03
21-May	2.0	2.0	2.0	A	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	2.0	1.9	2.0	2.0	1.97	2.04
22-May	2.0	2.0	A	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	1.9	1.94	2.01
23-May	1.9	A	1.9	1.9	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	1.9	1.9	1.92	1.99
24-May	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	2.0	2.0	A	1.94	1.96
25-May	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	2.0	2.0	2.0	2.0	2.0	A	2.0	1.96	2.01
26-May	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	2.0	T	T	T	T	T	T	T	T	T	--	2.02
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--
28-May	M	M	M	M	M	M	M	M	M	M	M	M	1.9	1.9	1.9	2.0	1.9	2.0	1.9	A	2.0	2.0	2.0	2.0	--	1.96
29-May	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	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.97	2.01
30-May	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	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.01
31-May	1.9	2.0	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.97
1.93 1.94 1.94 1.94 1.94 1.94 1.94 1.94 1.92 1.92 1.91 1.91 1.90 1.91 1.91 1.90 1.90 1.90 1.90 1.91 1.91 1.92 1.92 1.92 1.92																								Diurnal Average		
2.03 2.04 2.05 2.03 2.03 2.03 2.01 2.00 1.99 1.99 1.98 1.97 1.96 1.95 1.97 1.96 1.96 1.96 1.96 1.96 1.96 1.96 1.99 1.99 2.02 2.02																								Diurnal Maximum		
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span				T - Exceeds temp limit										

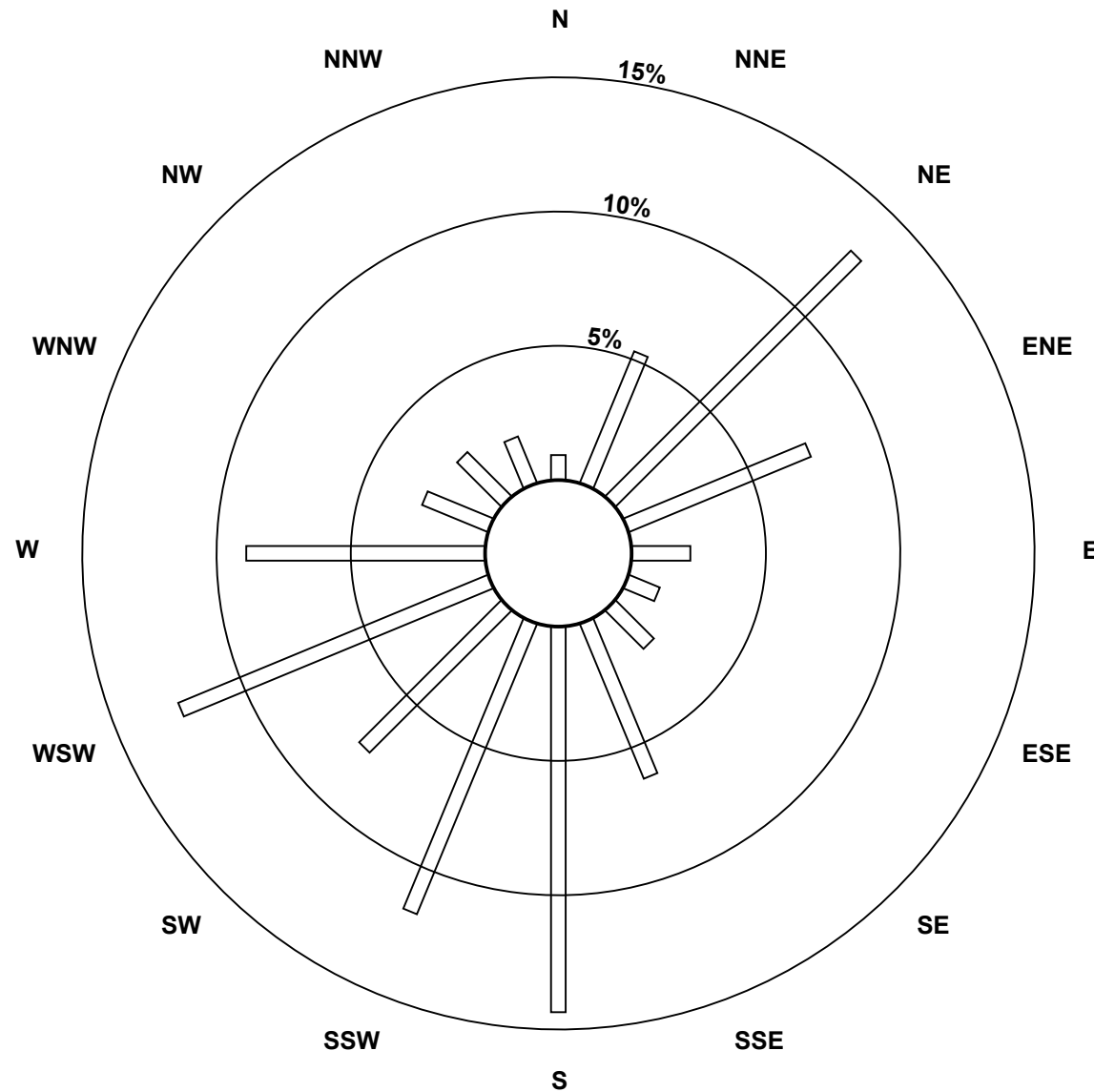
Hourly Maximums

Methane (CH₄) - ppm
Portable Rycroft - May 2017



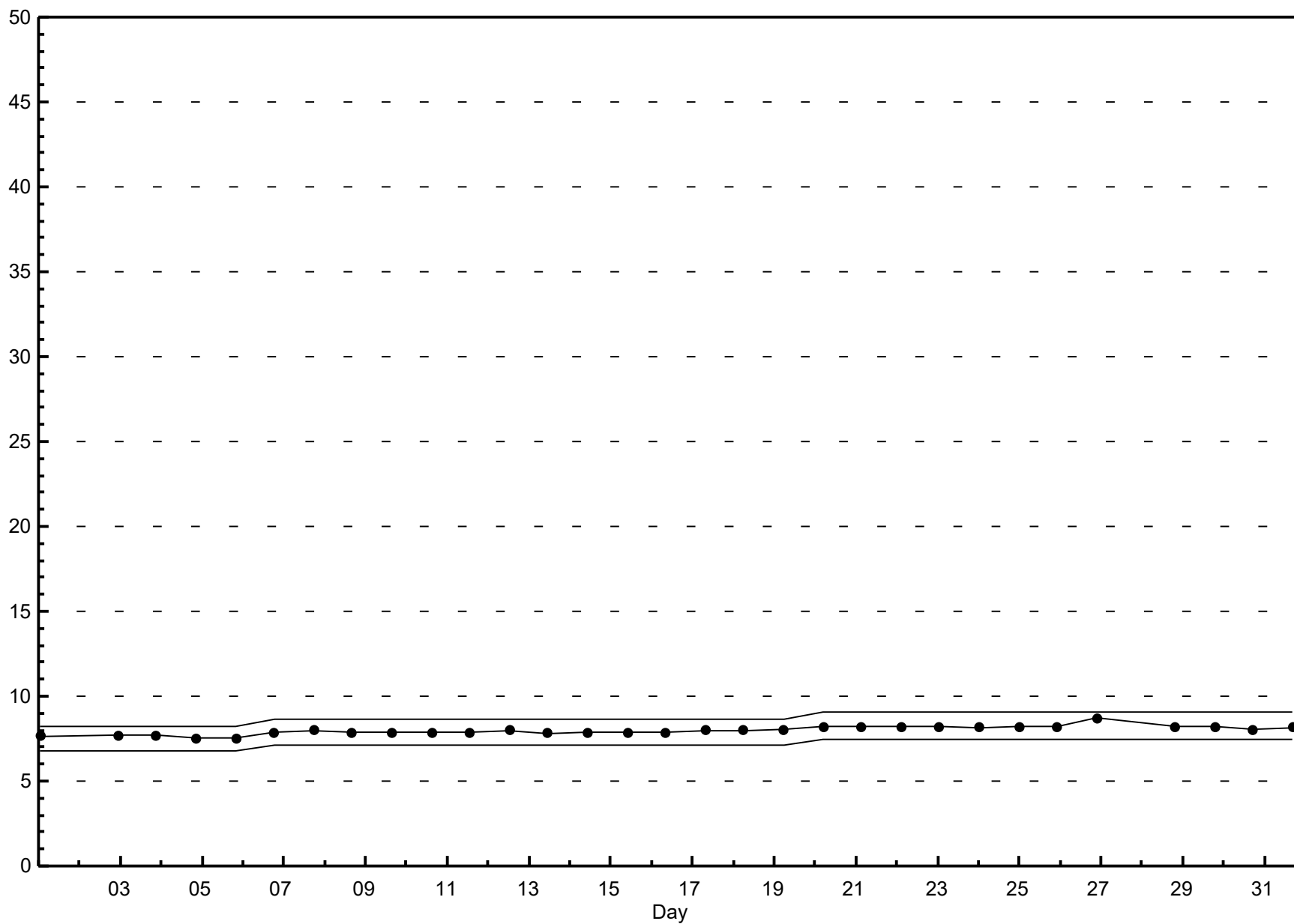
Pollutant Rose

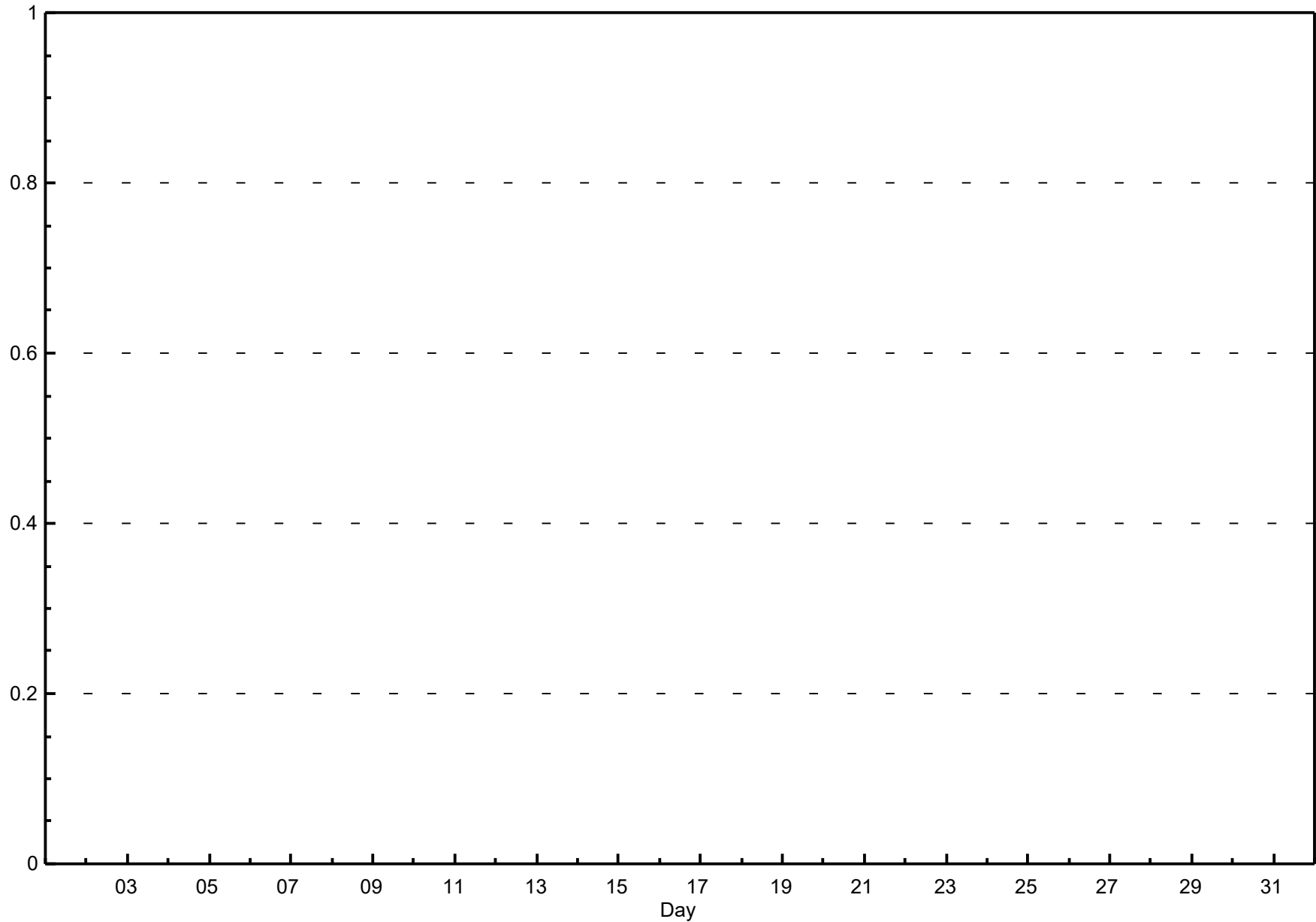
Methane (CH₄) - ppm
Portable Rycroft - May 2017



Span Responses

Methane (CH₄)
Portable Rycroft - May 2017





Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

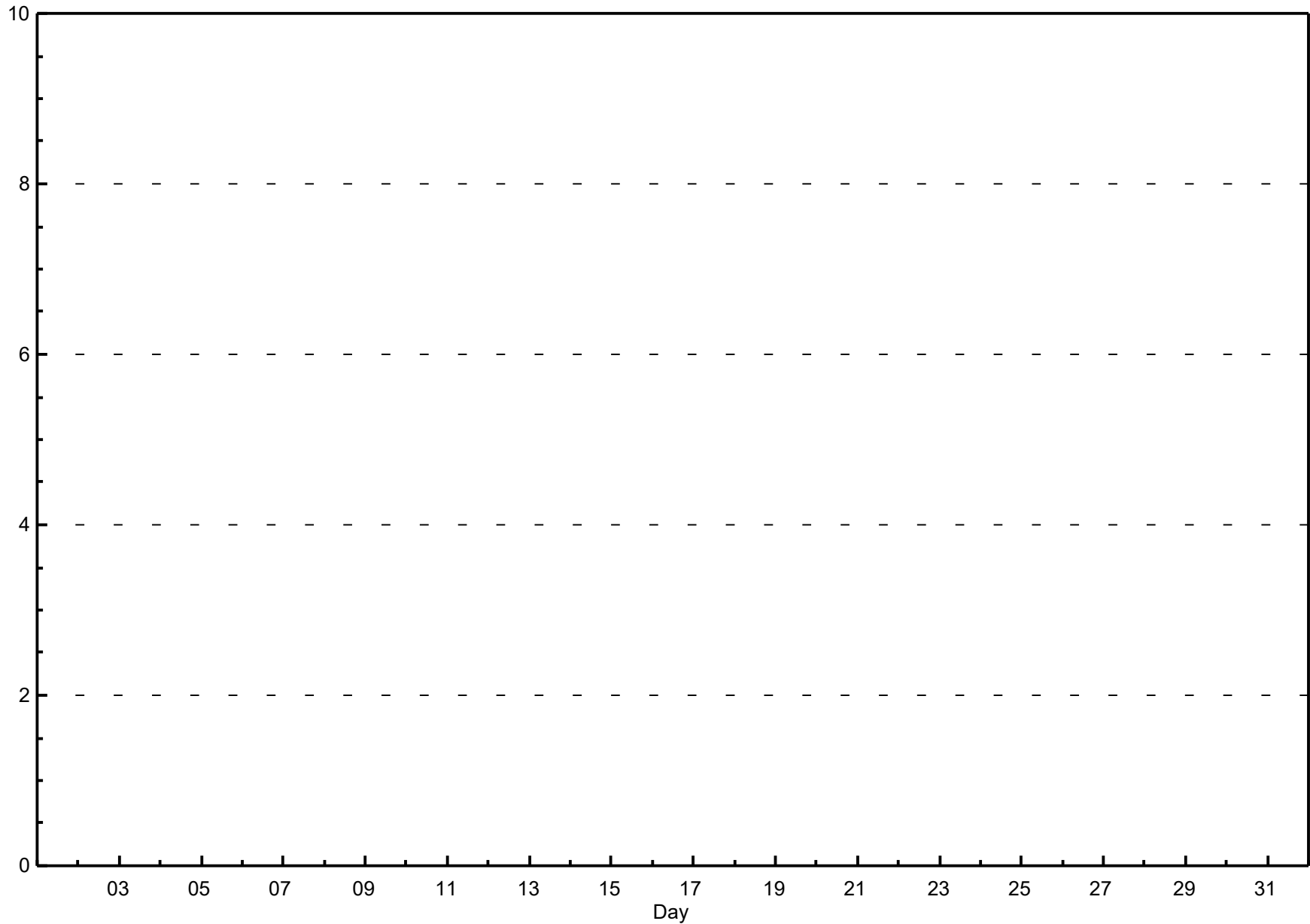
Portable Rycroft - May 2017

Maximum Value: 0.00 ppm on May 26 15:00																				Maximum Daily Average: 0.00 ppm on May 20					Hours in Service: 744	
Minimum Value: 0.0 ppm on May 1 02:00																				Minimum Daily Average: 0.00 ppm on May 3					Hours of Data: 641	
Maximum Diurnal Average: 0.00 ppm at hour 15																				Minimum Diurnal Average: 0.00 ppm at hour 5					Hours of Missing Data: 103	
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: 91.1						
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-May	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	N	N	N	N	N	N	N	N	N	N	N	--	0.00
2-May	N	N	N	N	N	N	N	N	N	N	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
3-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
4-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	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-May	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	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-May	0.0	0.0	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-May	0.0	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-May	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-May	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-May	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-May	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-May	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-May	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-May	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-May	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	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-May	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-May	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-May	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-May	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-May	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	T	T	T	T	T	T	T	--	0.00
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--
28-May	M	M	M	M	M	M	M	M	M	M	M	M	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
29-May	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	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					M - Maintenance					N - Not Valid					A - Automated Daily Zero Span					T - Exceeds temp limit						

Hourly Maximums

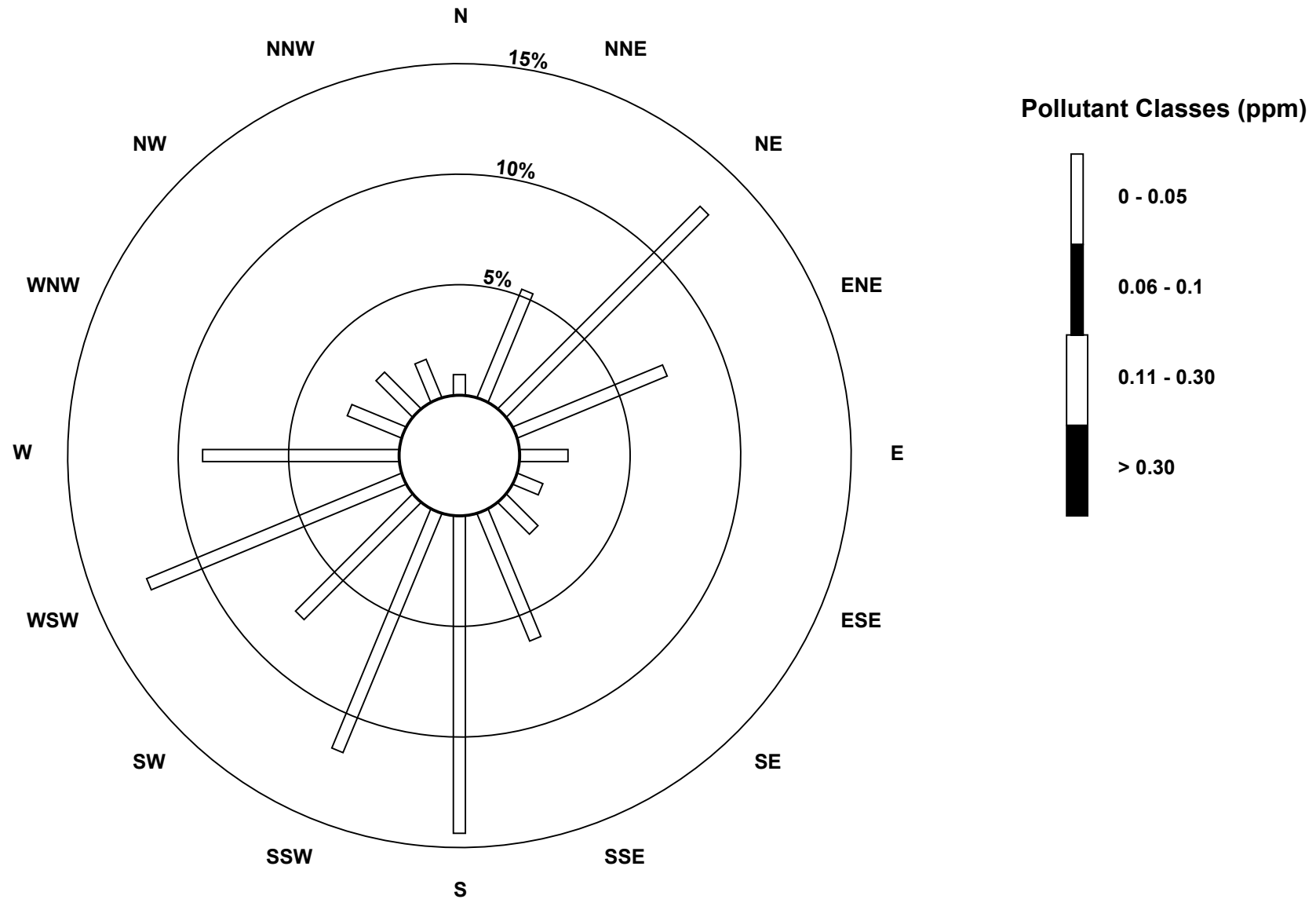
Non Methane Hydrocarbon (NMHC) - ppm

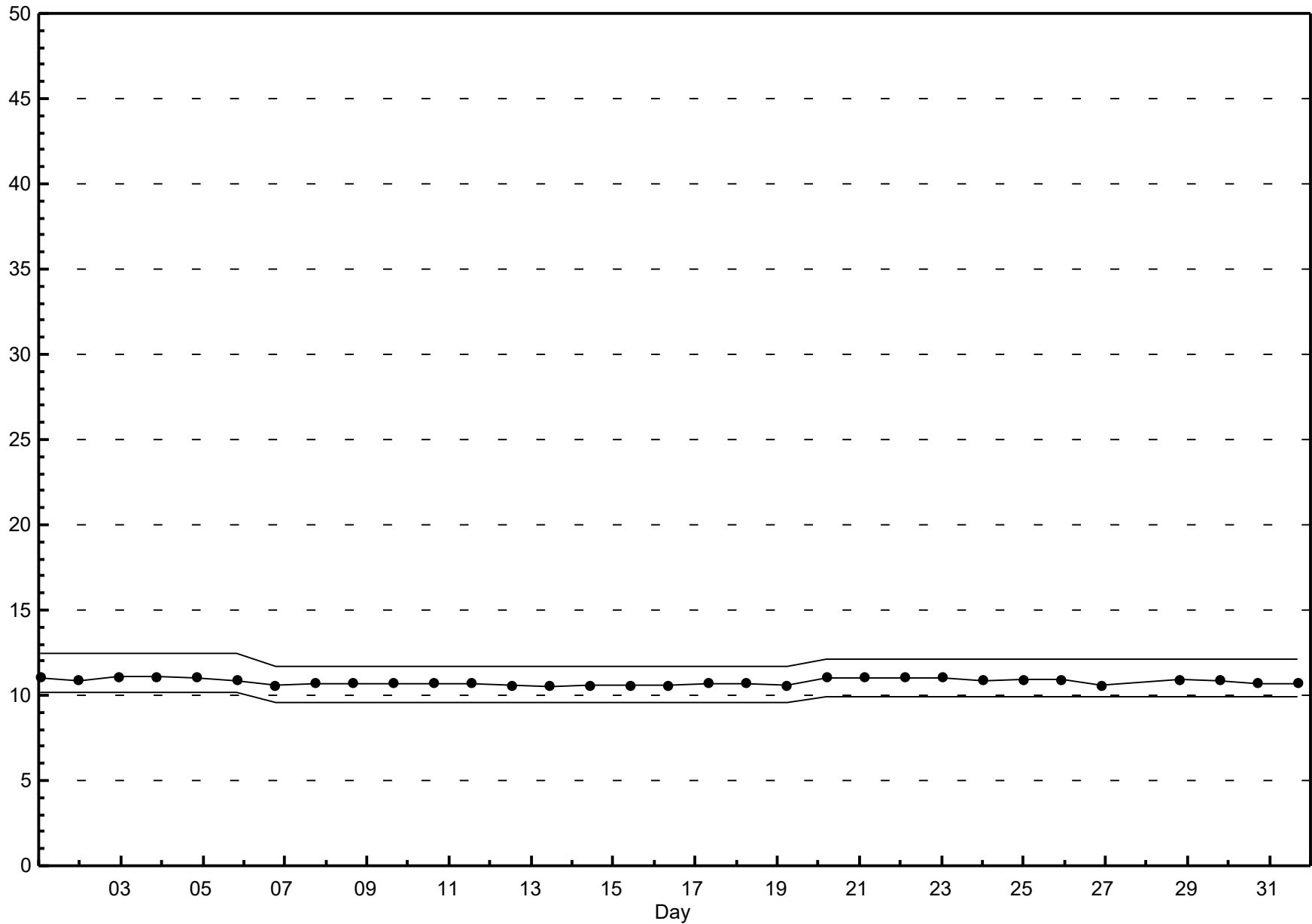
Portable Rycroft - May 2017



Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm
Portable Rycroft - May 2017





Hourly Averages

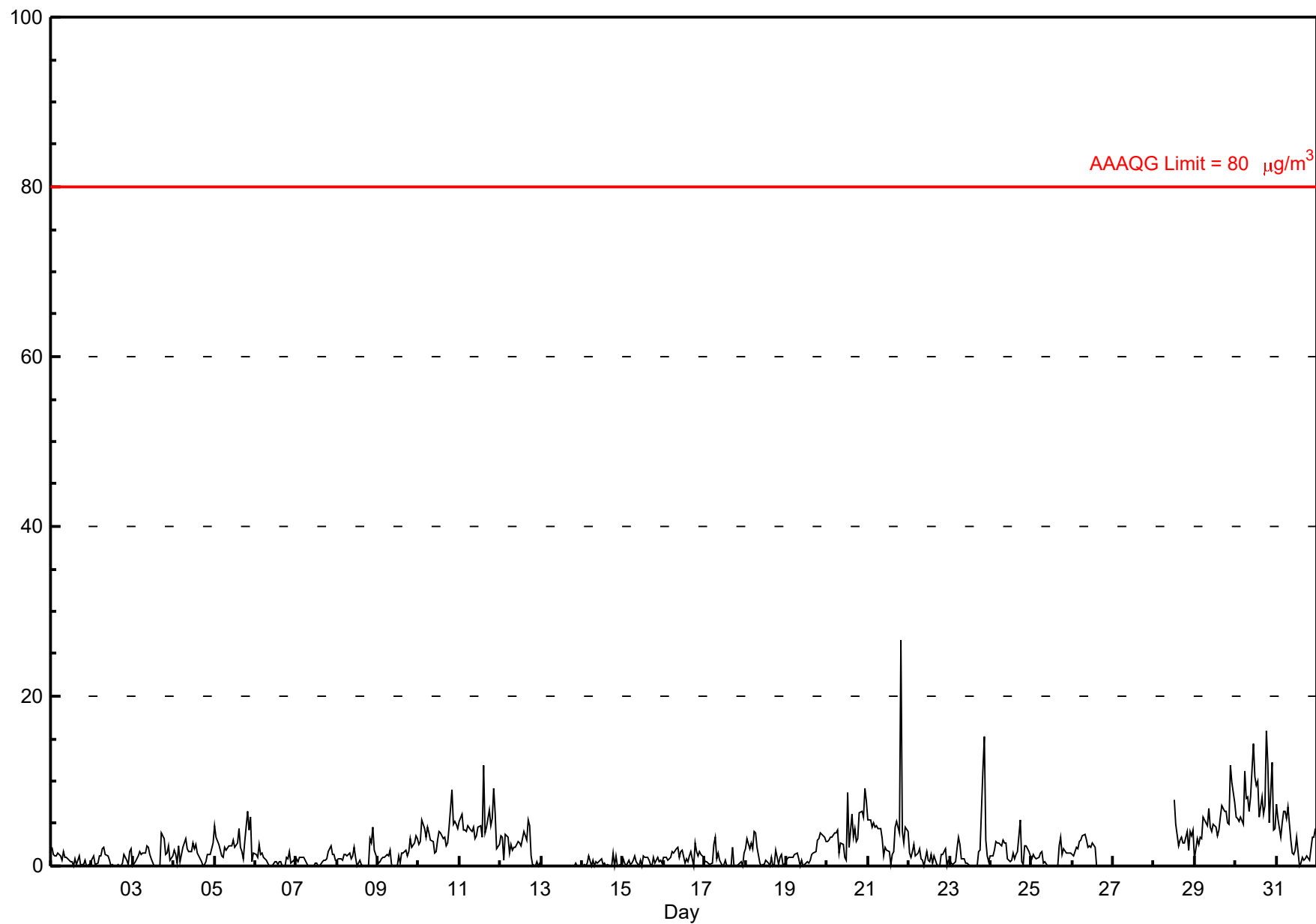
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - May 2017

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 26.5 µg/m³ on May 21 20:00 Maximum Daily Average: 8.1 µg/m³ on May 30																					Hours in Service: 744 Hours of Data: 699 Hours of Missing Data: 45 Hours of Calibration: 0 Percent Operational Time: 94.0						
Minimum Value: 0 µg/m³ on May 1 14:00 Maximum Diurnal Average: 3.7 µg/m³ at hour 20 Monthly Average: 2.13 µg/m³										Minimum Daily Average: 0.0 µg/m³ on May 13 Minimum Diurnal Average: 1.5 µg/m³ at hour 10 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.5 Median = 1.4 Q ₃ = 3.0 P ₉₀ = 5.0 P ₉₉ = 11.8																	
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-May	2	1	1	1	1	1	1	2	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	0	0	0.8	2.1
2-May	1	1	0	0	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	1	1	0	2	2	0.8	2.2	
3-May	0	0	1	1	2	1	2	2	2	2	1	1	0	0	0	0	0	4	3	1	1	2	1	1	1.2	3.9	
4-May	2	1	0	2	1	2	3	3	2	2	2	3	2	3	1	1	1	0	0	0	1	1	2	3	1.6	3.2	
5-May	5	3	3	2	1	1	2	2	2	2	2	3	2	3	4	2	2	1	3	6	4	6	0	1	2.7	6.5	
6-May	1	1	3	1	2	1	1	0	0	0	0	1	1	0	1	1	0	0	1	1	2	0	1	0	0.7	2.6	
7-May	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	1	1	1	0.7	2.4	
8-May	1	1	1	1	1	1	1	1	1	1	2	1	0	1	0	0	0	0	0	3	3	5	2	1	1.2	4.5	
9-May	0	1	1	1	1	1	1	2	0	0	0	0	1	0	2	2	2	1	2	3	2	3	3	3	1.4	3.5	
10-May	3	3	5	4	3	5	4	3	3	1	2	3	4	4	3	3	2	3	5	9	5	5	5	4	3.8	8.9	
11-May	5	6	4	4	4	5	4	4	5	3	4	5	5	3	12	4	5	7	5	6	9	6	2	3	4.9	11.9	
12-May	4	3	1	4	3	1	2	2	2	2	3	3	2	3	4	3	5	5	1	0	0	1	0	0	2.3	5.3	
13-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3	
14-May	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	0	0.4	1.6	
15-May	1	0	0	1	0	0	1	1	1	0	1	0	1	1	1	1	0	0	1	0	1	1	1	0	0.6	1.1	
16-May	1	1	1	1	1	2	2	2	2	1	2	2	0	1	1	1	2	0	3	2	1	2	1	1	1.3	2.6	
17-May	1	1	0	0	0	3	3	1	1	1	0	0	1	0	0	0	2	0	0	0	0	1	0	1	0.7	3.3	
18-May	2	3	2	3	2	4	4	2	0	0	0	0	1	0	0	1	0	0	2	0	1	1	0	0	1.2	4.1	
19-May	1	1	1	1	1	1	2	1	0	1	0	0	0	0	1	1	2	2	3	3	4	4	3	3	1.5	3.9	
20-May	3	3	3	3	4	4	4	2	3	3	1	1	9	2	6	3	4	3	3	6	6	6	9	8	4.1	9.1	
21-May	5	5	5	5	5	5	4	4	3	1	2	2	2	0	1	2	5	5	4	27	4	3	5	4	4.5	26.5	
22-May	2	1	2	3	1	2	2	1	1	0	2	1	0	1	0	1	0	0	0	1	1	2	0	1	1.0	2.5	
23-May	1	0	0	1	2	3	3	1	1	0	0	0	0	0	0	0	0	2	2	11	15	3	1	0	2.0	15.3	
24-May	1	1	2	3	3	3	2	3	3	3	1	1	1	1	1	1	2	5	1	0	2	2	2	1	1.9	5.3	
25-May	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	2	3	1	2	1	1	2	2	1.0	3.4	
26-May	1	1	2	2	3	3	3	4	3	2	2	2	3	2	0	T	T	T	T	T	T	T	T	T	--	3.8	
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--	
28-May	M	M	M	M	M	M	M	M	M	M	M	M	8	5	2	3	3	3	3	4	2	4	4	4	--	7.7	
29-May	1	3	3	3	3	6	5	5	7	5	4	5	5	4	4	6	7	6	6	5	5	12	10	7	5.3	11.8	
30-May	6	6	5	6	5	11	8	8	7	8	14	10	10	10	6	8	6	7	16	12	5	12	4	4	8.1	16.0	
31-May	7	6	3	5	6	6	6	7	3	1	1	2	3	0	0	1	1	1	1	1	2	3	3	4	3.2	7.3	
																									Diurnal Average		
																									Diurnal Maximum		
M - Maintenance T - Exceeds temp limit Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											

Hourly Averages

PM2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - May 2017



Hourly Maximums

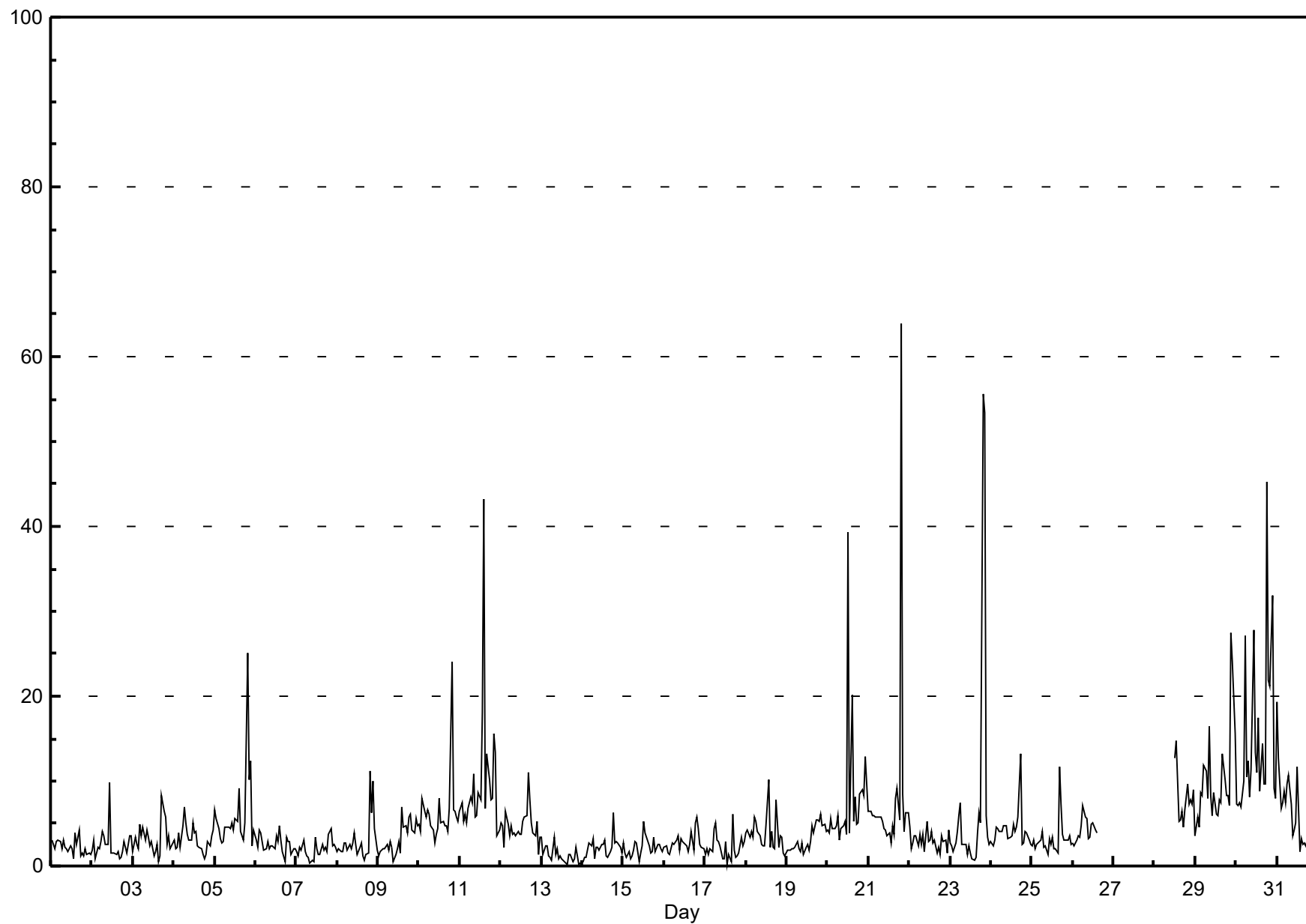
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - May 2017

Maximum Value: 64.0 μg/m³ on May 21 20:00																				Maximum Daily Average: 14.9 μg/m³ on May 30										Hours in Service: 744	
Minimum Value: 0 μg/m³ on May 13 23:00																				Minimum Daily Average: 1.3 μg/m³ on May 13										Hours of Data: 699	
Maximum Diurnal Average: 10.2 μg/m³ at hour 20																				Minimum Diurnal Average: 3.2 μg/m³ at hour 3										Hours of Missing Data: 45	
Monthly Average: 4.74 μg/m³																				Percentiles: P ₁ = 0.4 P ₁₀ = 1.4 Q ₁ = 2.1 Median = 3.3 Q ₃ = 5.3 P ₉₀ = 8.3 P ₉₉ = 28.3										Hours of Calibration: 0	
																				Percent Operational Time: 94.0											
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-May	3	3	2	3	3	3	2	3	2	2	2	2	1	4	3	4	1	1	1	1	2	1	1	1	2.2	4.3					
2-May	2	3	1	2	2	3	4	4	3	3	10	2	2	2	1	2	1	1	2	3	2	3	4	4	2.5	9.8					
3-May	2	3	3	2	5	4	5	3	4	3	2	3	1	2	3	1	1	8	6	6	3	4	2	3	3.2	8.3					
4-May	3	2	2	4	2	5	7	5	4	3	3	5	4	4	2	2	2	1	1	1	3	2	4	4	3.2	7.0					
5-May	7	6	4	3	3	3	5	5	5	4	5	4	6	5	9	4	4	3	5	25	10	12	2	4	5.9	25.1					
6-May	3	2	4	4	3	2	2	3	2	2	2	2	4	3	5	3	2	1	3	3	3	1	2	2	2.6	4.7					
7-May	2	1	2	2	3	2	1	1	0	1	1	3	2	1	1	3	2	2	2	4	4	2	2	2	2.0	4.4					
8-May	2	2	2	2	3	3	2	3	2	3	4	3	1	2	3	1	1	1	2	11	6	10	4	2	3.0	11.2					
9-May	1	2	2	2	2	3	2	3	2	0	1	2	3	2	7	5	5	4	6	6	4	4	6	5	3.2	7.0					
10-May	5	4	8	6	6	7	6	5	4	3	4	4	8	5	5	5	5	4	7	24	7	6	6	5	6.2	24.2					
11-May	6	7	5	6	5	7	8	7	11	6	6	9	8	18	43	7	13	10	8	8	16	13	3	4	9.8	43.2					
12-May	5	5	2	6	5	4	5	4	4	4	4	4	4	5	6	6	11	8	5	4	4	5	1	3	4.7	10.9					
13-May	3	1	2	2	1	1	1	3	1	2	1	1	1	1	0	0	1	1	1	1	2	1	0	0	1.3	3.4					
14-May	1	1	1	2	3	2	3	1	2	2	2	3	3	3	1	1	2	2	6	3	3	3	2	2	2.2	6.3					
15-May	3	2	1	2	1	1	2	3	3	1	2	2	5	4	3	2	2	2	3	2	3	3	2	2	2.2	5.2					
16-May	2	2	2	1	2	3	3	3	4	2	3	3	2	2	2	3	4	2	5	6	4	3	2	2	2.8	5.8					
17-May	1	2	1	2	2	4	5	3	3	2	1	1	3	0	1	0	6	2	1	1	2	3	2	3	2.2	6.1					
18-May	4	4	3	4	3	6	5	4	4	3	2	2	5	10	2	4	2	2	8	2	3	3	2	1	3.8	10.2					
19-May	2	2	2	2	2	2	3	2	2	3	1	2	3	2	3	5	4	5	5	5	6	5	5	4	3.2	6.0					
20-May	4	4	6	4	4	5	6	3	4	5	5	4	39	4	20	5	8	5	5	8	9	8	13	10	7.9	39.3					
21-May	6	6	6	6	6	6	6	6	5	4	4	4	4	3	5	4	8	9	5	64	9	4	6	6	8.0	64.0					
22-May	5	2	3	4	4	2	4	3	4	2	5	3	3	4	3	3	2	2	1	3	3	3	2	4	3.0	5.3					
23-May	3	2	2	3	4	6	7	3	3	3	1	2	2	1	1	1	4	6	5	56	53	6	3	3	7.4	55.6					
24-May	3	2	3	4	4	4	4	5	5	5	3	3	3	5	4	5	6	13	2	3	4	4	3	3	4.2	13.3					
25-May	2	3	2	3	3	3	4	2	2	1	3	2	3	2	2	2	12	7	4	3	3	3	3	3	3.3	11.7					
26-May	3	2	3	4	3	5	7	6	6	3	3	5	5	4	T	T	T	T	T	T	T	T	T	T	--	7.1					
27-May	T	T	T	T	T	T	T	T	T	T	T	T	T	T	M	M	M	M	M	M	M	M	M	M	--	--					
28-May	M	M	M	M	M	M	M	M	M	M	M	M	M	13	15	5	5	6	5	7	10	7	8	7	9	--	14.7				
29-May	3	6	5	9	8	12	11	8	16	8	6	9	6	6	8	7	13	10	8	8	7	27	24	16	10.1	27.4					
30-May	7	7	8	7	10	27	10	12	8	11	28	13	11	17	9	14	10	10	45	22	21	32	9	8	14.9	45.3					
31-May	19	13	7	8	9	8	10	11	7	4	4	5	12	2	3	3	3	2	3	2	4	6	5	5	6.4	19.4					
3.9 3.5 3.2 3.7 3.8 4.8 4.8 4.2 4.2 3.3 4.1 3.7 5.5 4.5 5.5 3.6 4.9 4.5 5.6 10.2 7.1 6.5 4.5 4.1																									Diurnal Average						
19.4 12.7 8.0 8.7 10.0 27.1 11.2 12.4 16.5 11.4 27.9 13.3 39.3 18.2 43.2 14.4 13.2 13.3 45.3 64.0 53.3 31.9 24.1 15.6																									Diurnal Maximum						
M - Maintenance T - Exceeds temp limit																															

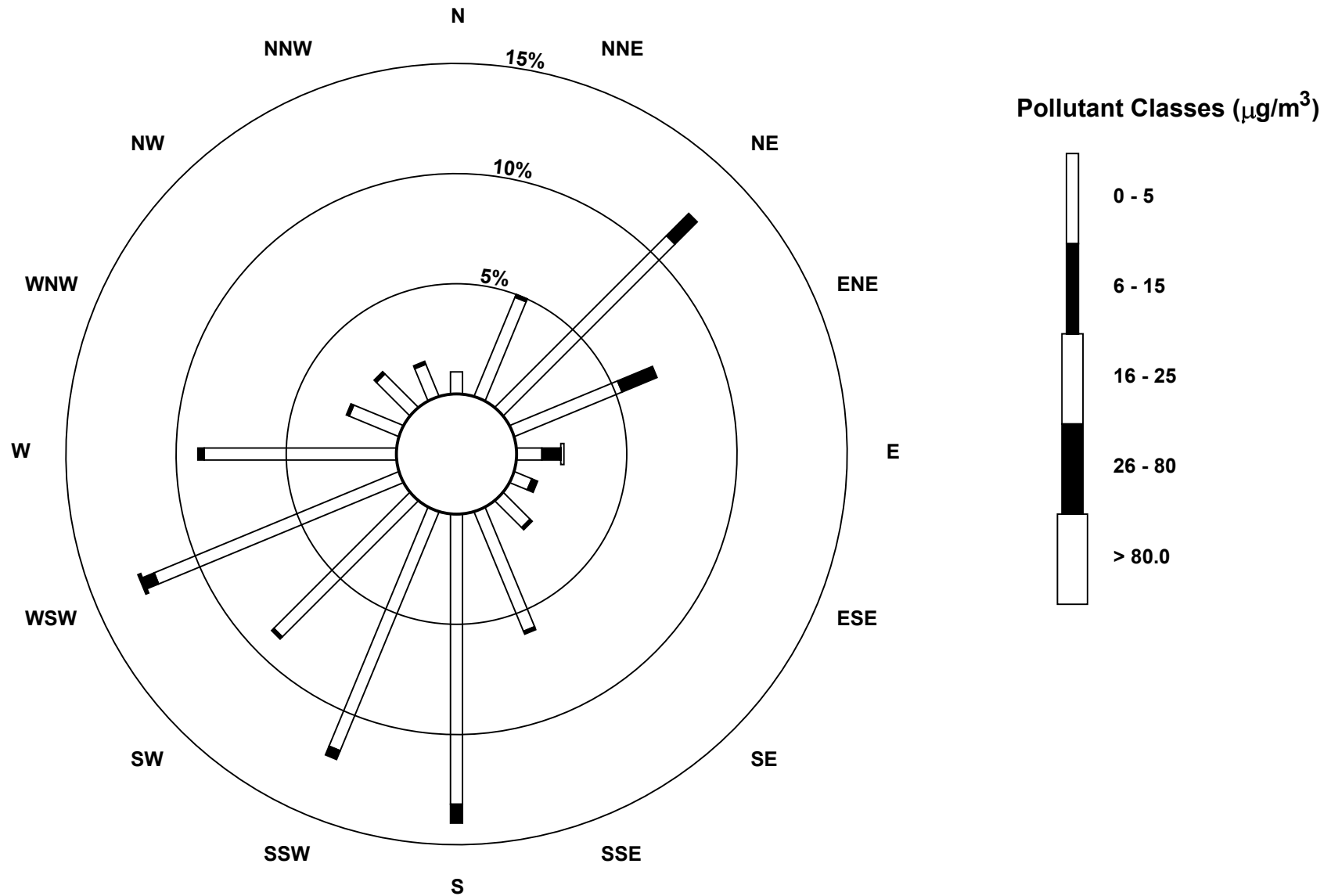
Hourly Maximums

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



Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C

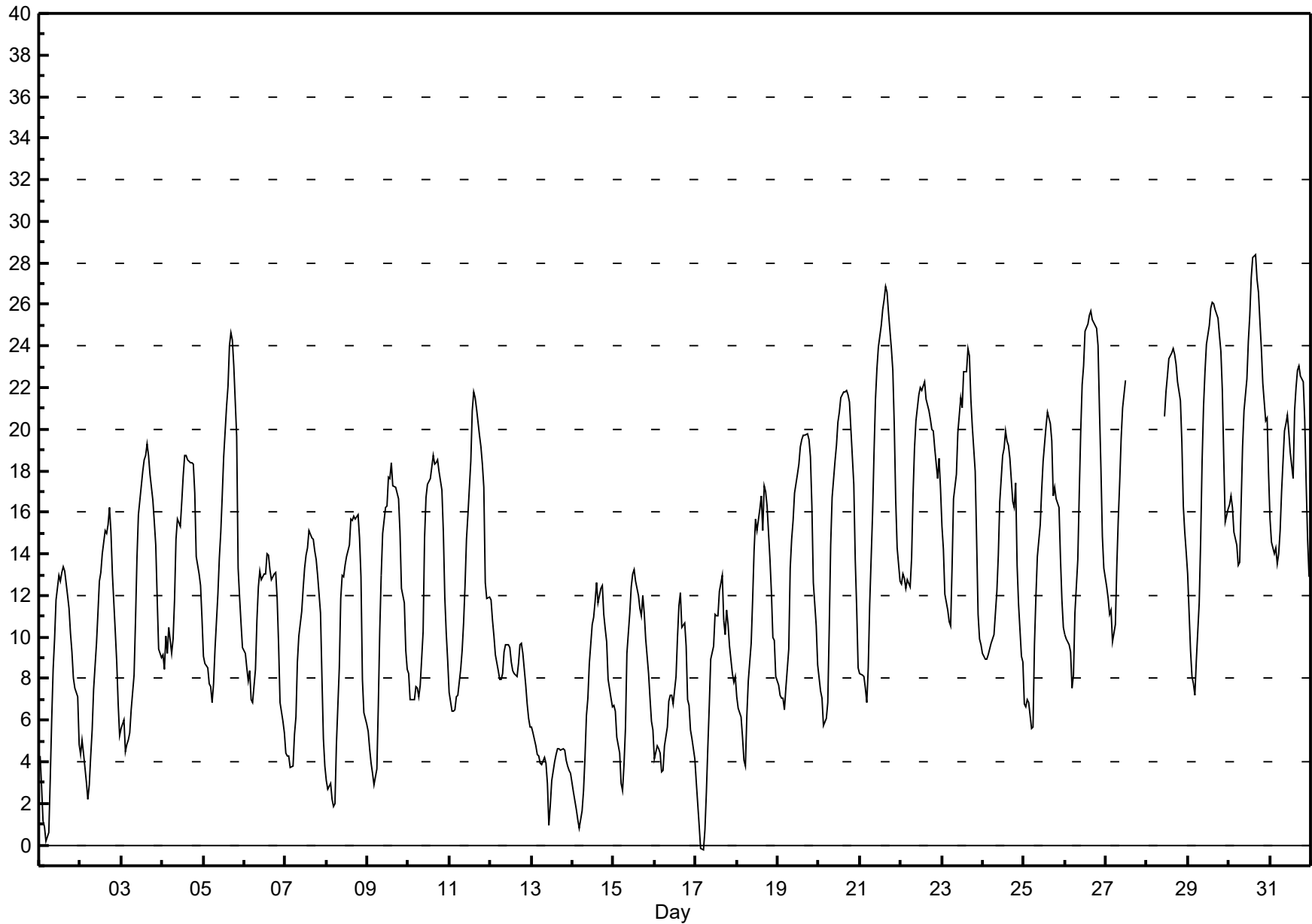
Portable Rycroft - May 2017

Maximum Value: 28.4 °C on May 30 16:00																								Maximum Daily Average: 20.9 °C on May 30						Hours in Service: 744	
Minimum Value: 0 °C on May 17 05:00																								Minimum Daily Average: 4.0 °C on May 13						Hours of Data: 722	
Maximum Diurnal Average: 18.2 °C at hour 15																								Minimum Diurnal Average: 6.3 °C at hour 5						Hours of Missing Data: 22	
Monthly Average: 12.72 °C																								Percentiles: P ₁ = 0.9 P ₁₀ = 4.5 Q ₁ = 7.8 Median = 12.2 Q ₃ = 17.5 P ₉₀ = 21.8 P ₉₉ = 26.5						Hours of Calibration: 0	
																								Percent Operational Time: 97.0							
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-May	4	3	1	1	0	1	3	6	8	10	12	13	13	13	13	13	12	11	10	9	8	8	7	5	7.7	13.4					
2-May	4	5	4	3	2	3	4	6	7	10	11	13	13	14	15	15	15	16	15	13	10	9	7	5	9.2	16.2					
3-May	6	6	4	5	5	5	7	8	11	14	16	17	18	19	19	19	19	18	17	16	14	12	9	9	12.1	19.3					
4-May	9	8	10	9	10	9	10	12	15	16	15	17	18	19	19	19	18	18	18	17	14	13	12	11	14.0	18.7					
5-May	9	9	9	8	8	7	8	9	12	14	15	17	19	21	22	24	25	24	23	20	13	12	11	10	14.4	24.6					
6-May	9	8	8	8	7	7	8	11	12	13	13	13	13	14	14	13	13	13	13	12	10	7	6	5	10.5	14.0					
7-May	4	4	4	4	4	5	6	9	10	11	12	13	14	14	15	15	15	14	14	13	11	8	5	4	9.6	15.1					
8-May	3	3	3	2	2	2	5	9	12	13	13	13	14	14	16	16	16	16	16	15	13	8	6	6	9.8	15.9					
9-May	5	5	4	3	3	4	7	10	13	15	16	16	18	18	18	17	17	17	17	15	12	12	9	8	11.7	18.4					
10-May	8	7	7	7	8	8	7	8	10	15	17	17	17	18	19	18	18	19	18	17	15	12	10	9	12.8	18.7					
11-May	7	6	6	7	7	7	8	9	11	12	15	16	18	21	22	21	21	20	19	18	17	13	12	12	13.6	21.8					
12-May	12	11	10	9	8	8	8	8	9	10	10	9	9	8	8	8	9	10	10	9	8	7	6	6	8.7	11.8					
13-May	6	5	5	4	4	4	4	4	4	3	1	2	3	4	4	5	5	5	5	5	4	4	4	3	4.0	5.7					
14-May	3	2	2	1	1	2	3	4	6	7	9	11	11	12	13	12	12	12	11	10	10	8	7	7	7.3	12.6					
15-May	7	6	5	4	3	3	4	6	9	11	12	13	13	13	12	11	11	12	11	10	8	7	6	6	8.5	13.2					
16-May	4	5	5	4	4	4	5	6	7	7	7	7	8	10	11	12	10	11	10	7	7	5	5	4	6.9	12.1					
17-May	3	2	1	0	0	1	3	5	7	9	10	11	11	11	12	13	11	10	11	11	10	8	8	8	7.2	13.0					
18-May	7	7	6	5	4	4	6	8	10	12	14	16	15	16	17	15	17	17	16	14	12	10	10	8	11.1	17.3					
19-May	8	7	7	7	6	8	9	13	15	16	17	18	18	19	20	20	20	20	19	19	16	13	11	9	13.9	19.8					
20-May	8	7	7	6	6	7	10	14	17	18	19	20	21	22	22	22	22	22	21	20	17	14	11	8	15.1	21.9					
21-May	8	8	8	8	7	9	12	16	19	21	23	24	25	26	26	27	27	26	24	23	20	17	14	13	17.9	26.9					
22-May	13	13	13	12	13	12	14	17	19	20	22	22	22	22	22	21	21	20	20	20	19	18	19	17	18.0	22.2					
23-May	15	14	12	11	11	11	13	17	18	20	21	21	21	23	23	24	24	21	20	18	15	11	10	10	16.8	23.9					
24-May	9	9	9	9	9	10	10	11	12	14	17	19	19	20	19	19	19	17	16	17	13	12	9	9	13.6	19.9					
25-May	7	7	7	7	6	6	10	12	14	15	17	18	19	20	21	20	19	17	17	17	16	14	12	10	13.7	20.8					
26-May	10	10	10	9	8	8	11	14	17	20	22	23	25	25	26	26	25	25	25	24	21	18	15	13	17.9	25.7					
27-May	12	12	11	11	10	11	13	16	18	20	21	22	M	M	M	M	M	M	M	M	M	M	M	M	--	22.3					
28-May	M	M	M	M	M	M	M	M	M	M	M	21	22	23	23	24	24	24	23	22	21	19	16	15	14	--	23.9				
29-May	13	9	8	8	7	9	12	15	18	21	23	24	25	26	26	26	26	25	24	24	22	18	16	16	18.4	26.1					
30-May	16	17	16	15	14	13	14	16	19	21	22	24	25	27	28	28	27	27	25	24	22	20	21	18	20.9	28.4					
31-May	16	15	14	14	14	14	15	17	20	20	21	20	19	18	21	22	23	23	23	22	20	17	15	13	18.1	23.0					
8.2 7.7 7.2 6.8 6.3 6.6 8.3 10.5 12.6 14.3 15.6 16.5 16.9 17.6 18.2 18.2 18.0 17.6 17.0 16.0 14.0 11.6 10.2 9.2																									Diurnal Average						
16.4 16.8 16.2 15.1 14.4 14.0 15.2 17.0 19.9 21.5 22.9 24.2 25.5 27.3 28.3 28.4 27.2 26.6 25.2 24.0 22.2 20.4 20.5 17.9																									Diurnal Maximum						
M - Maintenance																															

Hourly Averages

External Temperature (ET) - °C

Portable Rycroft - May 2017



Hourly Averages

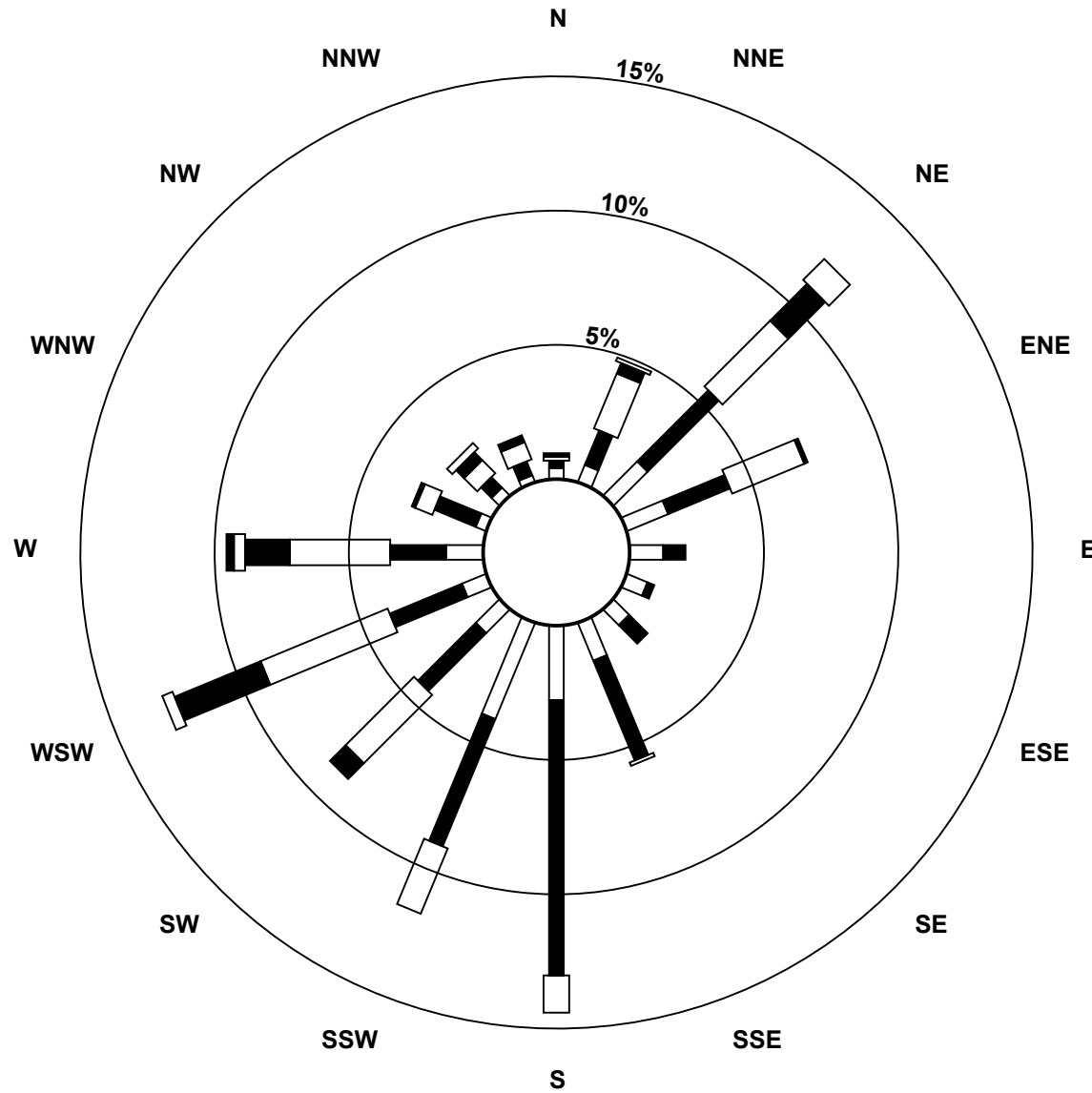
Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - May 2017

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	13	7	6	7	7	7	1	2	2	5	5	2	7	10	8	15	23	16	11	5	6	10	8	5	7.2	23.0
Dir	230	212	195	192	196	182	198	233	253	262	276	211	222	218	230	237	257	250	229	198	198	227	222	206	227.5	257.4
2 Spd	5	10	6	5	9	16	17	20	22	27	23	18	15	13	10	4	4	1	3	5	7	8	6	4	9.6	27.2
Dir	201	233	214	202	226	237	246	252	253	257	260	265	248	254	256	241	280	288	185	188	169	160	184	199	241.3	257.0
3 Spd	8	8	8	8	7	7	8	7	8	11	16	16	15	18	16	15	25	32	27	25	20	9	7	7	11.7	32.1
Dir	153	156	162	142	179	155	158	151	177	201	199	207	214	218	209	210	239	247	247	234	233	221	176	181	210.9	246.7
4 Spd	9	6	10	8	14	12	6	5	21	18	12	8	10	9	10	11	8	5	5	3	4	5	6	4	5.8	20.8
Dir	189	206	224	217	233	254	204	216	250	255	257	220	208	208	188	177	167	150	137	114	56	70	69	62	214.6	249.8
5 Spd	6	7	8	6	5	8	10	6	7	8	11	5	5	10	6	5	6	7	7	9	23	10	6	5	2.1	23.0
Dir	33	46	59	57	66	52	67	37	50	32	41	89	353	21	75	86	127	148	265	238	244	248	268	234	41.9	244.2
6 Spd	6	8	6	6	7	9	7	9	17	14	16	10	15	12	14	17	16	14	11	12	12	11	17	14	10.9	16.9
Dir	138	155	194	206	154	175	187	203	235	233	227	210	190	206	205	191	181	188	208	204	202	196	187	196	198.6	234.6
7 Spd	11	14	12	14	11	14	12	11	19	19	19	23	22	19	16	20	24	26	18	15	6	10	8	9	14.7	25.6
Dir	191	190	198	188	197	223	218	215	230	233	236	241	242	243	232	231	238	236	229	227	211	192	197	191	223.3	236.0
8 Spd	8	10	9	8	9	8	10	11	13	14	15	15	12	14	13	13	11	10	13	18	15	8	9	9	10.7	18.1
Dir	173	179	182	178	175	174	180	184	220	200	205	212	200	202	215	203	198	202	227	245	241	202	193	187	202.7	245.3
9 Spd	11	9	8	8	8	7	7	8	16	5	6	7	10	6	2	5	5	4	2	3	5	4	4	6	3.4	15.8
Dir	171	173	176	178	177	175	171	226	271	273	253	243	248	272	256	184	176	221	206	35	59	76	56	48	205.6	271.4
10 Spd	9	4	3	4	8	5	8	4	9	12	9	13	14	17	14	10	11	10	12	17	12	9	9	8	8.8	17.4
Dir	55	44	281	17	48	73	22	269	342	28	31	37	28	42	50	58	59	43	56	49	52	53	56	48	41.8	48.9
11 Spd	1	4	5	5	4	4	13	17	12	16	20	23	28	33	34	34	33	36	35	35	20	5	16	25	17.9	35.7
Dir	2	262	263	288	323	13	26	27	30	29	28	30	27	30	36	47	47	40	40	37	60	32	22	37	33.8	40.1
12 Spd	29	27	29	27	25	26	27	25	27	28	25	25	24	23	19	18	17	15	8	9	9	9	14	10	16.4	28.6
Dir	42	45	47	46	42	43	47	46	44	45	46	35	38	50	56	53	56	54	162	238	276	285	270	275	41.8	46.5
13 Spd	8	10	15	17	17	18	17	16	14	12	5	9	9	8	5	2	3	5	6	8	6	4	3	3	8.1	17.6
Dir	268	264	263	264	266	267	270	266	313	346	306	288	293	302	340	313	258	236	243	266	282	254	219	206	276.1	267.2
14 Spd	3	3	4	4	4	4	3	3	4	6	7	8	7	8	9	12	11	8	3	1	2	3	4	4	1.4	11.9
Dir	197	197	163	180	136	173	150	168	171	228	227	270	316	298	298	338	348	358	104	168	192	164	153	149	256.6	338.2
15 Spd	2	1	5	5	4	5	5	5	4	9	9	8	13	14	20	19	13	15	17	16	12	13	15	13	6.8	20.2
Dir	53	184	201	208	224	196	176	177	274	305	345	352	30	37	46	45	39	36	49	52	41	40	36	43	37.5	45.6
16 Spd	9	9	11	13	7	9	12	14	16	18	19	16	14	14	15	14	16	8	12	21	12	4	4	4	11.8	20.8
Dir	30	16	28	24	19	19	15	16	10	22	16	27	36	38	31	17	34	53	59	8	44	7	28	29	25.3	7.9
17 Spd	3	1	2	1	3	7	7	10	11	13	14	16	16	13	10	15	11	11	9	5	3	2	7	6	6.5	16.5
Dir	49	62	345	207	55	55	48	38	42	47	55	57	71	68	55	52	143	155	117	114	140	38	50	126	69.2	56.9
18 Spd	5	2	6	4	4	4	6	6	6	8	11	11	11	12	12	22	17	19	14	12	5	10	4	8	7.6	22.5
Dir	128	95	156	190	212	209	184	182	178	181	195	202	237	252	220	250	237	240	227	193	185	262	163	158	214.3	250.3
19 Spd	11	11	10	9	9	10	11	9	19	27	20	19	17	20	22	25	29	23	15	13	5	5	8	8	12.2	28.7
Dir	167	169	171	182	177	187	187	204	230	246	256	243	241	252	255	260	259	264	278	272	240	186	174	174	234.6	259.4
20 Spd	9	9	7	4	7	7	6	13	18	25	25	24	26	26	26	28	30	23	14	11	4	3	7	7	12.3	30.0
Dir	173	172	177	186	169	177	184	244	251	252	250	258	256	264	265	263	264	273	299	310	296	209	174	181	250.6	264.5
21 Spd	9	10	9	9	10	8	6	5	7	18	20	19	19	11	18	15	19	31	26	24	18	6	7	5	11.2	30.9
Dir	171	166	159	161	171	170	175	191	265	262	262	258	253	249	264	263	256	261	254	244	249	224	190	195	239.4	260.6
22 Spd	7	10	11	9	13	8	9	10	9	13	27	20	24	17	13	11	12	14	12	9	8	9	13	6	11.0	26.7
Dir	186	169	169	176	163	167	177	197	204	227	243	233	234	226	202	209	195	182	174	176	194	188	224	215	203.7	243.3

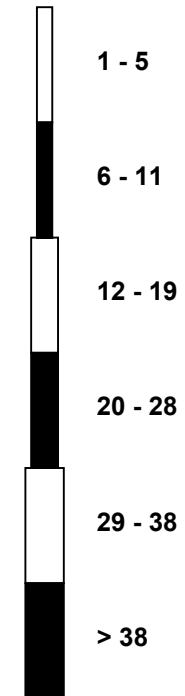
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
23 Spd	5	6	5	6	6	3	5	17	16	23	23	16	13	9	13	11	12	18	16	9	24	40	34	29	12.0	39.9					
Dir	194	192	197	175	185	203	209	245	242	255	259	245	261	246	256	295	314	344	339	346	251	260	258	252	259.2	259.6					
24 Spd	28	26	18	13	13	18	14	14	19	22	23	27	30	30	28	23	21	39	22	18	10	14	10	12	18.8	39.0					
Dir	260	266	270	268	266	273	289	299	309	324	335	329	319	324	310	314	297	273	280	306	281	267	285	276	295.2	272.8					
25 Spd	13	15	13	10	8	4	4	9	7	7	8	7	7	13	16	16	7	13	6	8	8	7	8	9	5.9	15.8					
Dir	257	255	257	247	249	200	210	258	255	248	246	241	233	254	249	249	307	52	103	150	145	143	166	175	235.8	248.9					
26 Spd	10	11	11	8	5	5	4	8	10	12	7	5	5	11	15	15	15	19	14	10	7	4	7	8	6.6	19.3					
Dir	169	166	166	167	191	179	174	241	262	271	283	257	271	301	277	272	257	265	271	281	254	174	173	179	241.8	264.9					
27 Spd	8	10	7	5	14	12	11	9	13	10	13	13	12	M	M	M	M	M	M	M	M	M	M	M	--	14.3					
Dir	181	174	189	230	265	254	256	280	289	293	332	307	297	M	M	M	M	M	M	M	M	M	M	M	--	264.7					
28 Spd	M	M	M	M	M	M	M	M	11	11	10	11	10	9	12	10	12	11	14	10	9	9	10	12	--	14.1					
Dir	M	M	M	M	M	M	M	M	58	69	82	77	88	86	69	81	76	79	72	77	70	67	67	64	--	71.8					
29 Spd	11	7	10	10	7	4	5	4	5	8	13	15	16	11	13	13	13	14	13	12	13	8	9	4	9.7	16.2					
Dir	56	36	42	44	42	38	36	67	90	82	71	70	69	82	72	74	73	71	72	73	68	58	51	65	64.8	69.1					
30 Spd	7	4	5	2	4	1	4	5	4	7	9	4	4	4	4	5	7	3	2	1	2	9	3	5	3.1	9.2					
Dir	60	105	90	138	116	154	42	77	60	52	59	99	122	66	81	36	50	85	83	81	168	201	45	140	82.8	201.2					
31 Spd	5	7	3	5	6	7	5	4	14	19	13	16	10	8	9	12	10	9	10	8	7	6	5	6	7.7	19.4					
Dir	175	219	203	219	183	180	206	184	241	242	230	227	216	203	203	189	196	204	180	184	169	163	158	149	204.0	241.9					
Spd	2.8	3.6	3.3	2.9	3.1	3.1	1.8	3.0	5.3	5.9	5.2	4.5	4.4	3.8	3.3	3.3	3.8	4.6	2.5	2.2	2.7	3.2	2.1	2.4	Diurnal Average						
Dir	174.5	189.9	190.0	190.6	198.8	204.5	198.8	242.7	267.5	273.0	275.2	271.5	271.5	282.8	273.2	266.8	257.6	262.1	251.2	264.9	227.9	221.9	198.7	177.6	Diurnal Maximum						
Spd	28.6	27.0	28.6	27.4	25.0	25.5	27.2	25.3	27.1	28.0	26.7	27.0	30.3	33.2	33.8	34.2	33.4	39.0	35.1	34.9	23.9	39.9	33.8	28.8	Diurnal Maximum						
Dir	42.4	45.4	46.5	46.4	41.6	42.6	47.1	46.5	44.0	44.8	243.3	328.7	319.4	30.4	36.1	47.1	47.4	272.8	40.4	37.5	251.1	259.6	257.5	252.0							
Maximum Speed Value: 40 km/h on May 23 22:00																								Minimum Speed Value: 1 km/h on May 30 06:00				Hours in Service: 744			
Maximum Daily Speed Average: 18.8 km/h on May 24																								Minimum Daily Speed Average: 1.4 km/h on May 30				Hours of Data: 725			
Maximum Diurnal Speed Average: 5.9 km/h at hour 10																								Minimum Diurnal Speed Average: 1.8 km/h at hour 7				Hours of Missing Data: 19			
Monthly Average Velocity: 2.82 km/h 243.16 deg																								Speed Percentiles: P ₁ = 1.3 P ₁₀ = 4.1 Q ₁ = 6.4 Median = 9.6 Q ₃ = 14.5 P ₉₀ = 22.1 P ₉₉ = 33.4				Percent Operational Time: 97.5			
All monthly, daily, and diurnal averages have been calculated using vector methods																															
M - Maintenance																															
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		11		12		1		0		0		30																		
NorthEast	21		43		43		19		9		0		135																		
East	13		14		18		0		0		0		45																		
SouthEast	12		21		1		0		0		0		34																		
South	29		121		26		0		0		0		176																		
SouthWest	20		50		50		19		1		0		140																		
West	12		35		49		28		7		2		133																		
NorthWest	3		11		9		6		3		0		32																		
Total	116		306		208		73		20		2		725																		

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - May 2017

Maximum Speed: 40 km/h on May 23 22:00																						Maximum Daily Speed Average: 20.9 km/h on May 24										Hours in Service: 744	
Minimum Speed: 1 km/h on May 30 20:00																						Minimum Daily Speed Average: 5.3 km/h on May 30										Hours of Data: 725	
Maximum Diurnal Speed Average: 15.7 km/h at hour 18																						Minimum Diurnal Speed Average: 8.2 km/h at hour 4										Hours of Missing Data: 19	
Monthly Average Speed: 11.78 km/h																						Percentiles: P ₁ = 2.3 P ₁₀ = 4.6 Q ₁ = 6.8 Median = 10.2 Q ₃ = 15.0 P ₉₀ = 22.4 P ₉₉ = 33.9										Percent Operational Time: 97.5	
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-May	13	8	7	7	7	7	4	3	3	6	6	6	7	11	9	15	23	16	11	5	6	10	8	5	8.5	23.1							
2-May	5	10	6	5	9	16	17	20	22	27	24	18	16	14	12	7	6	4	4	5	7	8	6	5	11.4	27.4							
3-May	8	8	8	8	7	7	9	7	8	11	17	16	15	19	16	16	25	32	27	25	20	9	7	7	13.9	32.3							
4-May	9	6	10	8	14	13	6	6	21	19	12	9	11	10	11	11	9	6	5	4	5	5	6	4	9.1	20.9							
5-May	6	7	8	6	5	8	10	7	7	9	11	7	5	11	7	8	8	8	7	11	24	11	7	6	8.5	23.7							
6-May	6	8	6	7	7	9	7	9	17	15	16	10	15	12	15	17	16	14	11	12	13	11	17	14	11.9	17.1							
7-May	11	14	12	14	11	14	12	11	19	20	20	23	22	19	17	20	24	26	18	15	6	10	8	9	15.7	25.8							
8-May	8	10	9	8	9	8	10	11	14	15	15	15	13	14	14	13	11	11	15	18	16	8	9	9	11.8	18.3							
9-May	11	9	8	8	8	7	7	10	16	6	8	8	11	7	7	7	6	4	3	3	5	4	5	7	7.2	16.2							
10-May	9	4	4	4	8	6	9	5	9	12	10	15	15	17	15	11	12	10	13	17	13	9	9	8	10.3	17.4							
11-May	2	5	5	5	5	5	13	17	12	16	20	23	28	33	34	35	34	36	35	35	20	9	17	25	19.6	35.9							
12-May	29	27	29	28	25	26	27	25	27	28	25	25	24	23	19	19	17	15	10	9	9	10	14	10	20.9	28.8							
13-May	9	11	15	17	17	18	17	16	15	13	8	9	9	8	5	3	4	5	6	8	6	4	4	3	9.5	17.8							
14-May	3	3	4	4	4	4	4	3	5	6	8	9	8	9	11	12	12	9	4	2	3	3	4	4	5.7	12.4							
15-May	3	2	5	6	5	5	6	5	5	9	10	10	14	15	21	20	14	15	18	16	12	13	15	13	10.7	21.0							
16-May	9	9	11	13	7	9	12	14	16	19	19	17	14	15	16	14	16	8	13	21	13	4	4	4	12.4	21.4							
17-May	4	2	2	2	3	7	7	10	11	13	15	17	16	13	11	15	15	12	9	6	4	3	7	8	8.9	16.9							
18-May	6	3	6	4	4	4	6	6	7	9	11	11	11	13	14	23	17	19	14	13	6	10	6	8	9.7	23.0							
19-May	11	11	10	9	9	10	11	9	20	27	21	19	18	21	22	26	29	24	16	13	5	5	8	8	15.0	29.0							
20-May	9	9	8	4	7	7	6	13	18	25	25	24	27	26	26	29	30	23	14	12	4	4	7	7	15.2	30.3							
21-May	9	10	9	9	10	8	6	5	7	19	21	20	19	12	18	16	19	31	26	24	18	6	7	5	14.0	31.1							
22-May	7	10	11	9	13	8	9	10	9	14	27	20	25	17	13	11	12	14	12	9	8	10	14	6	12.4	26.9							
23-May	5	6	5	7	7	3	6	18	16	24	23	16	14	10	13	12	13	18	16	9	25	40	34	29	15.3	40.0							
24-May	28	26	18	13	13	18	14	14	20	23	24	28	31	30	29	24	22	40	23	19	11	14	10	12	20.9	39.6							
25-May	13	15	13	10	8	4	5	9	7	7	9	8	9	14	16	16	13	13	6	8	8	7	8	9	9.8	16.4							
26-May	10	11	11	8	5	6	4	8	11	13	8	7	7	11	16	15	16	20	14	11	7	4	7	8	9.9	19.6							
27-May	8	10	7	6	14	12	11	10	13	11	13	14	13	M	M	M	M	M	M	M	M	M	M	M	--	14.3							
28-May	M	M	M	M	M	M	M	M	11	12	11	11	12	10	12	10	12	12	14	10	9	9	10	12	--	14.2							
29-May	11	7	10	10	7	4	6	5	6	8	13	16	17	12	13	14	14	14	13	12	13	8	9	5	10.3	16.6							
30-May	7	5	5	4	4	3	4	5	5	7	9	5	6	5	5	6	7	3	2	1	2	13	4	6	5.3	12.7							
31-May	6	8	4	5	6	7	6	6	15	20	13	16	10	8	10	12	11	9	10	8	7	6	5	6	8.9	19.6							
9.1 9.2 9.0 8.2 8.6 8.8 9.0 9.9 12.7 14.8 15.2 14.6 14.9 14.7 14.9 15.3 15.6 15.7 13.1 12.0 10.1 8.9 9.2 8.8																									Diurnal Average								
28.6 27.1 28.8 27.6 25.0 25.6 27.3 25.4 27.3 28.1 26.9 27.5 30.7 33.5 34.3 34.7 33.8 39.6 35.2 35.0 24.8 40.0 33.8 28.8																									Diurnal Maximum								
M - Maintenance																																	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																	

Hourly Standard Deviations

Wind Direction (WD) - deg

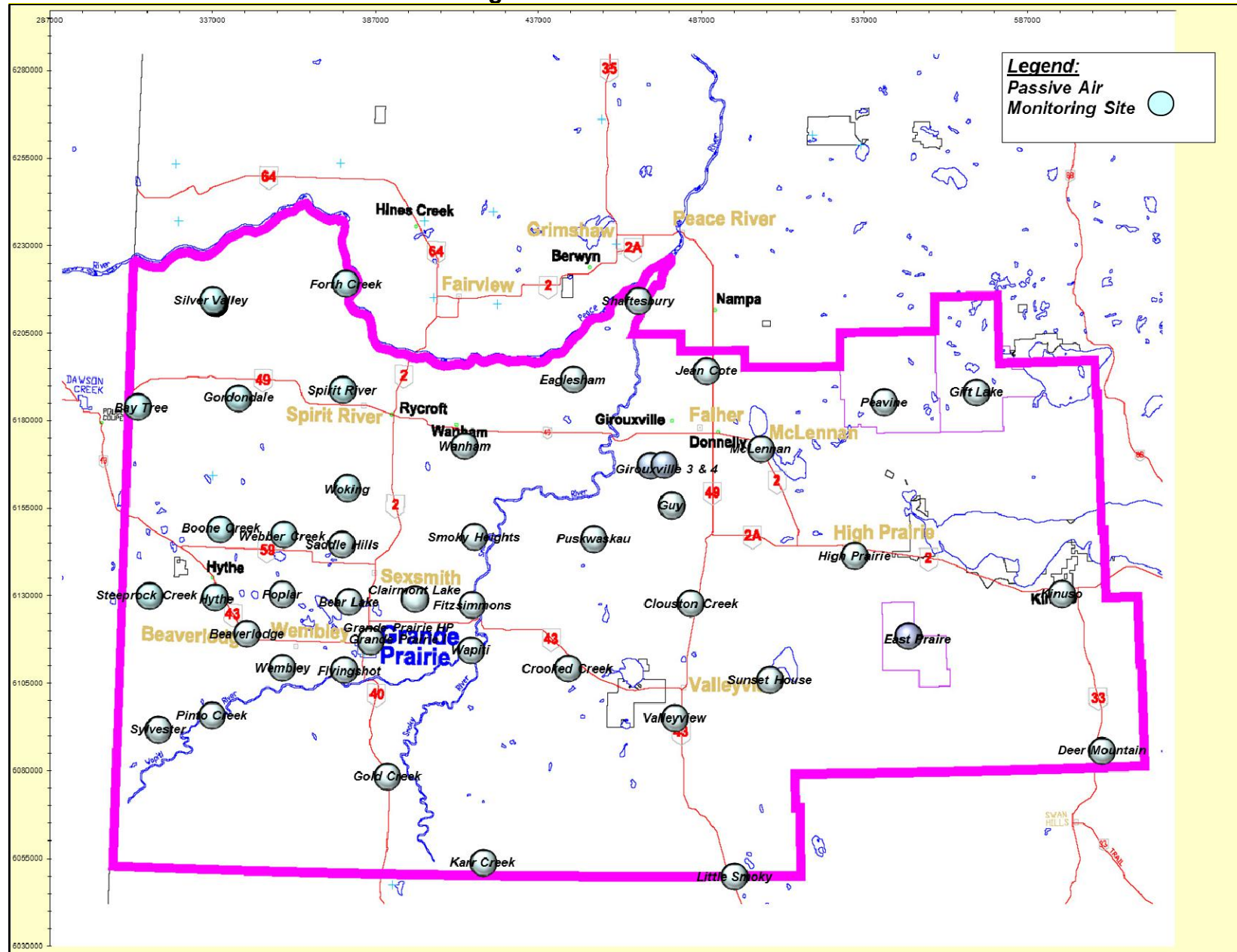
Portable Rycroft - May 2017

Maximum Value: 93.6 deg on May 30 06:00																			Hours in Service: 744						
Minimum Value: 2.2 deg on May 21 05:00																			Hours of Data: 725						
Percentiles: P ₁ = 2.8 P ₁₀ = 4.9 Q ₁ = 7.4 Median = 12.6 Q ₃ = 21.4 P ₉₀ = 37.8 P ₉₉ = 72.4																			Hours of Missing Data: 19						
																			Hours of Calibration: 0						
																			Percent Operational Time: 97.5						
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-May	8	15	8	10	5	12	82	39	52	56	34	86	34	25	38	16	6	7	12	11	17	7	7	4	85.9
2-May	6	14	6	7	15	2	8	7	6	7	11	13	18	21	34	57	72	83	65	32	14	9	20	15	83.4
3-May	9	19	11	4	18	13	12	7	15	6	9	10	7	12	11	10	6	7	5	4	3	14	16	8	18.8
4-May	6	9	7	5	7	14	18	19	6	10	13	32	22	24	26	22	24	38	32	20	26	14	6	15	38.4
5-May	13	9	5	35	22	9	9	25	17	18	16	37	36	28	48	67	40	38	22	62	14	19	30	27	67.5
6-May	18	11	24	35	13	12	10	19	9	10	8	9	7	9	16	10	10	15	7	6	3	7	4	4	35.0
7-May	6	5	5	3	9	4	9	10	10	10	13	12	10	13	16	9	8	8	8	6	5	5	2	6	15.9
8-May	8	8	5	6	3	4	5	6	23	17	11	12	11	8	17	17	16	12	30	7	8	15	5	9	30.1
9-May	6	3	4	4	6	5	9	28	14	42	53	51	37	37	83	43	35	31	53	33	12	6	11	10	83.4
10-May	8	58	58	36	31	41	30	63	25	15	38	37	21	15	19	35	20	18	13	5	9	9	8	13	62.6
11-May	53	19	11	28	9	31	4	7	10	10	12	7	7	8	10	10	9	6	4	3	19	70	11	5	69.9
12-May	4	6	6	6	4	5	4	4	6	5	6	5	5	7	6	12	9	10	44	19	17	14	8	12	44.1
13-May	15	19	6	4	7	9	5	6	18	22	43	7	11	16	22	40	49	14	13	21	14	24	12	10	48.6
14-May	11	8	20	8	24	19	33	38	37	19	26	28	21	25	33	18	19	21	52	55	41	23	11	35	54.5
15-May	54	75	12	17	13	11	9	9	56	20	30	33	22	21	16	15	17	11	13	7	6	4	4	9	75.2
16-May	5	5	5	4	5	7	5	10	9	9	6	15	13	21	13	13	15	22	20	15	21	18	19	19	21.7
17-May	31	50	18	68	37	16	17	10	16	18	18	14	17	18	22	18	46	10	16	23	66	61	15	45	68.0
18-May	47	47	16	13	16	16	8	13	20	18	15	13	30	25	30	15	13	11	16	16	28	15	46	9	47.3
19-May	4	3	5	3	6	3	6	9	8	9	15	16	17	18	16	14	8	11	11	9	15	12	4	4	18.0
20-May	3	2	34	41	9	6	15	9	5	8	11	9	12	12	12	11	8	16	10	7	13	39	7	5	41.2
21-May	3	3	8	10	2	4	8	18	22	14	13	15	15	26	15	37	15	7	6	5	6	17	7	7	36.8
22-May	9	4	4	4	3	11	12	8	10	17	7	10	9	13	9	8	11	5	6	5	8	6	11	17	17.2
23-May	14	6	6	7	29	14	19	9	9	12	9	18	20	30	15	30	32	10	4	11	43	4	4	3	42.7
24-May	4	4	6	6	7	5	5	5	7	6	10	12	9	11	12	10	11	10	10	7	21	9	14	6	21.4
25-May	4	3	4	6	11	14	22	15	21	23	35	47	42	21	18	13	55	16	24	9	6	5	10	4	55.5
26-May	6	3	3	5	12	26	27	7	16	17	32	68	62	22	22	22	18	12	18	8	14	27	8	13	68.2
27-May	6	5	39	50	5	7	5	16	10	20	22	22	21	M	M	M	M	M	M	M	M	M	M	M	49.5
28-May	M	M	M	M	M	M	M	M	11	17	17	20	26	27	26	23	19	20	10	10	6	4	8	5	27.2
29-May	14	11	5	3	6	42	8	36	26	23	14	16	15	20	18	17	14	9	8	8	5	6	9	42	42.3
30-May	18	51	32	79	30	94	29	27	43	27	26	48	57	51	58	42	22	19	19	44	34	63	40	34	93.6
31-May	29	33	27	19	10	6	26	41	10	8	12	7	12	16	17	11	19	19	13	13	5	8	11	9	41.0
54.1 75.2 57.7 78.9 37.1 93.6 82.1 62.6 55.6 56.4 52.8 85.9 62.1 51.0 83.4 67.5 72.1 83.4 64.9 61.9 66.0 69.9 46.5 44.6																									
M - Maintenance																									

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for May 2017

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
19a	Wanham	0.2				
19b	Wanham	0.3				
21a	Eaglesham			0.2		
21b	Eaglesham			BDL		
28a	Clairmont Lake	0.2		0.6		
28b	Clairmont Lake	0.2		0.6		
37a	Crooked Creek		32.6			
37b	Crooked Creek		37.0			
64a	Girouxville 4				0.2	
64b	Girouxville 4				0.2	
2	Bay Tree	0.2	33.5	0.5		13-16-078-13 W6M
4	Gordondale	0.2		0.6		04-34-078-10 W6M
5	Boone Creek	0.1		0.4		16-36-074-11 W6M
9	Spirit River	0.2		1.2		08-12-079-07 W6M
14	Sylvester	0.1		0.6		08-06-069-12 W6M
16	Beaverlodge	0.2		0.6		15-36-071-10 W6M
18	Saddle Hills	0.2		0.4		04-25-074-07 W6M
19	Wanham	0.2		0.2		16-22-077-03 W6M
21	Eaglesham	0.2		0.2		16-21-079-25 W5M
24	Wembley	0.2		0.8		12-31-070-08 W6M
25	Pinto Creek	0.1		0.3		04-24-069-11 W6M
27	Grande Prairie I	0.2		2.0		08-15-071-06 W6M
28	Clairmont Lake	0.2		0.6		09-06-073-04 W6M
29	Smoky Heights	0.2		0.4		04-06-075-02 W6M
32	Gold Creek	0.3		1.3		06-33-067-05 W6M
35	Jean Cote	0.2		1.0		12-35-079-21 W5M
36	Guy	0.2		0.6	0.1	03-04-076-22 W5M
37	Crooked Creek	0.1	34.8	0.7		16-01-071-26 W5M
39	Clouston Creek	0.2		0.5		12-01-073-22 W5M
40	McLennan	0.2		0.8		03-29-077-19 W5M
43	High Prairie	0.1		0.9		16-13-074-17 W5M
44	Peavine	0.1		0.2		03-05-079-15 W5M
46	Little Smoky	0.2		0.9		12-01-065-21 W5M
47	Kinuso	0.1	29.1	0.6		12-10-073-10 W5M
50	East Prairie	0.1		0.2		13-02-072-15 W5M
63	Girouxville 3				0.3	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 May 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 May 2017 (PAZA Zone)				
Mean	0.2	32.5	0.7	0.2
Standard Deviation	0.1	3.0	0.4	0.1
Minimum	0.1	29.1	0.2	0.1
Minimum At	Pinto Creek (#25)	Kinuso (#47)	Eaglesham (#21a)	Guy (#36)
Maximum	0.3	34.8	2.0	0.3
Maximum At	Gold Creek (#32)	Crooked Creek (#37)	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	0.2	1.5
PAZA Beaverlodge passive	0.2	0.6

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

	SO ₂	NO ₂
PAZA Henry Pirker station	0.2	3.6
PAZA Grande Prairie passive	0.2	2.0

May 2017 Calibration Reports

**PAZA - Henry Pirker Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS, and PM_{2.5}**

**PAZA – Evergreen Park Station with the following calibrations:
SO₂ and TRS**

**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	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	7:50	End Time (MST)	11:10
Barometric Pressure	721.000 mm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	50 ppm	Cal Gas Cert Date	October 5, 2018
		Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.001127	Calculated slope	0.996973
Calculated intercept	3.386263	Calculated intercept	4.191676
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.40		1.39	
Coefficient	0.903		0.903	
Pressure	675.8	mm Hg	679.2	mm Hg
Flow	0.446	lpm	0.448	lpm
Lamp intensity	82	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)
4941	0.00	0.0	0.1	N/A
4987	40.01	398.0	397.2	1.0019
4967	20.05	201.0	194.7	1.0322
4944	10.06	101.5	93.7	1.0832
4941	0.00	0.0	0.1	As Found Zero
4987	40.01	398.0	397.2	As Found Span
Average Correction Factor				1.0391

Calculated value of As Found Response: 400.9 ppb Percent Change of As Found: -0.7%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.1	ppb
Auto span	283.3	ppb	280.8	ppb

Notes: No adjustment made
Zero air canister replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



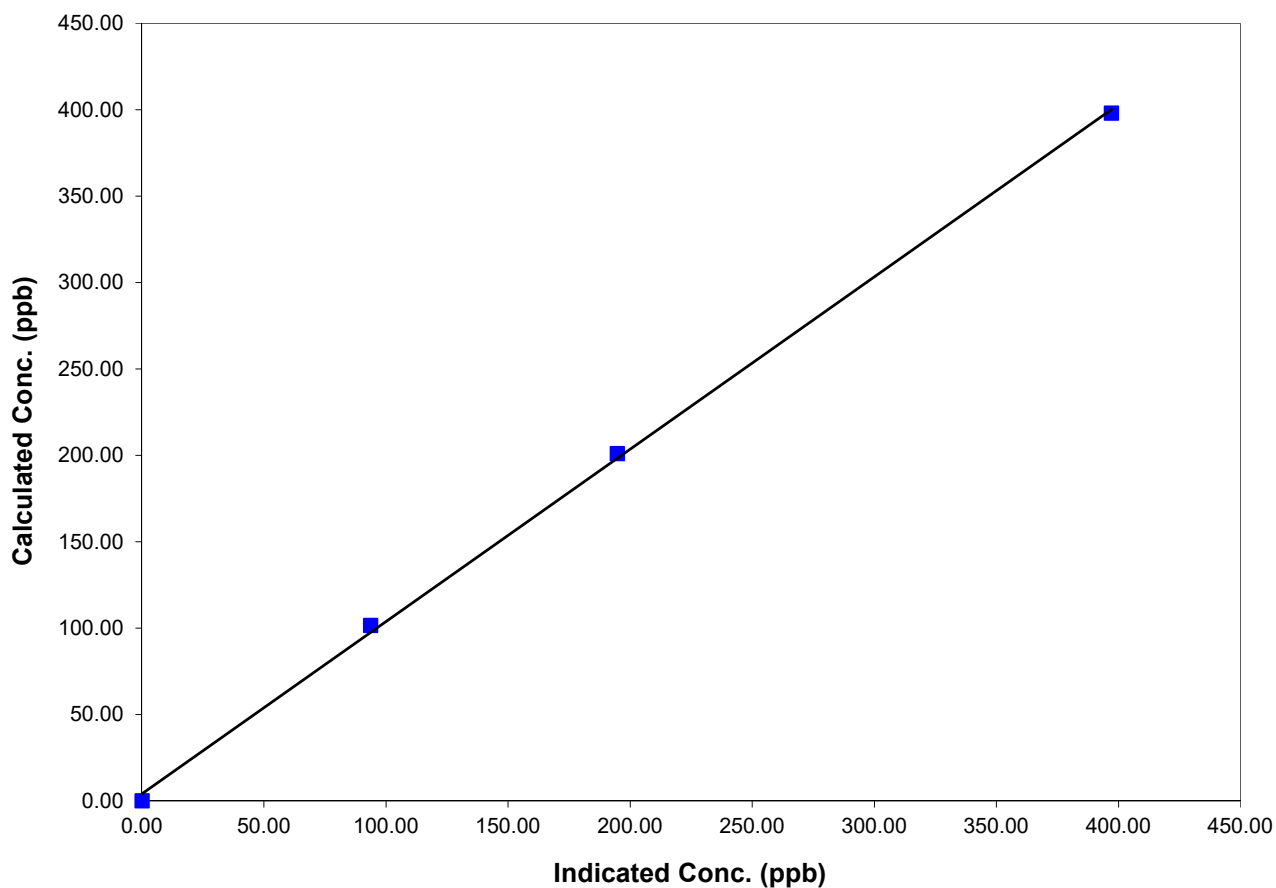
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:50	End Time (MST)	11:10
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

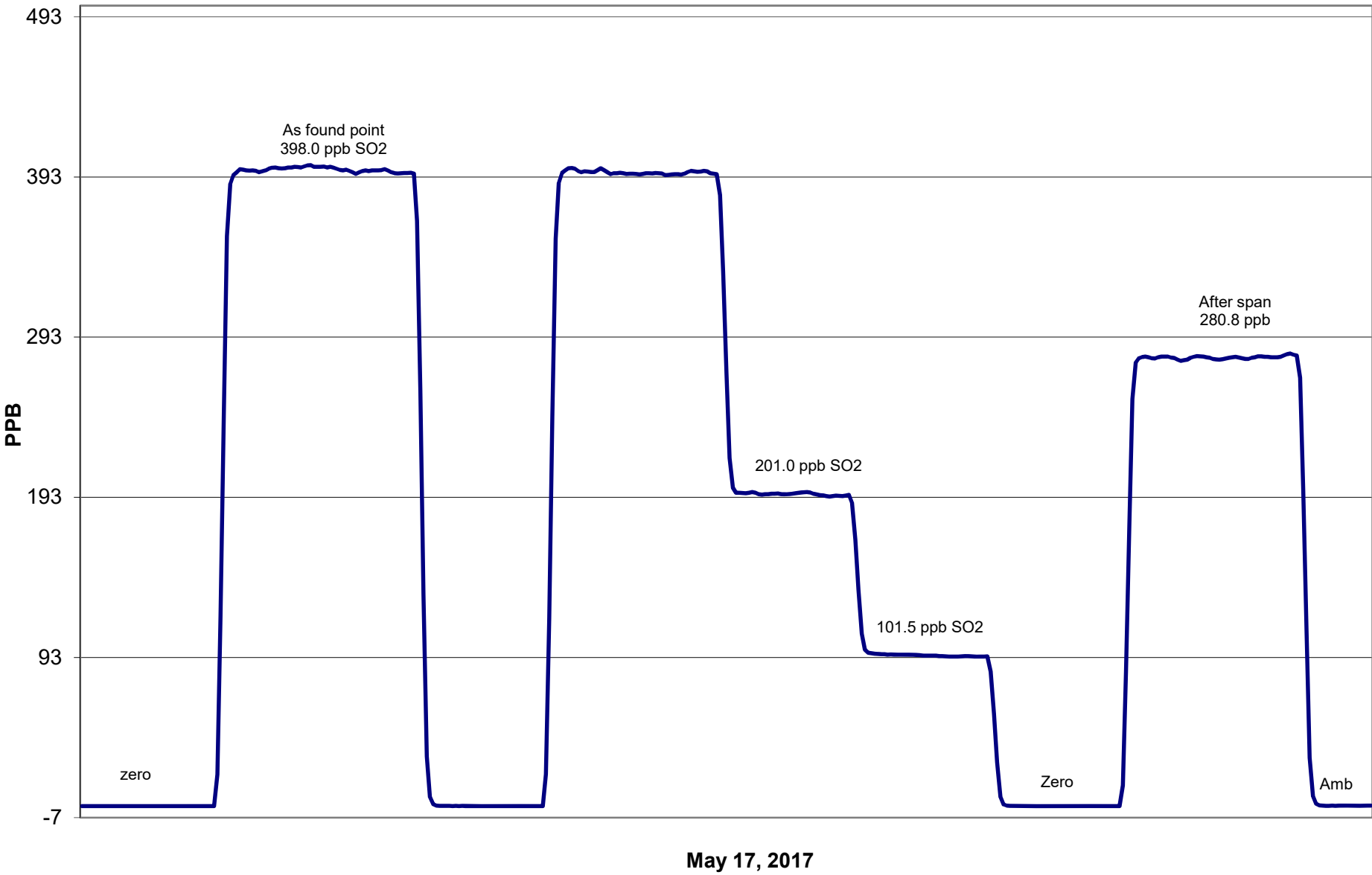
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999467
398.0	397.2	1.0019		
201.0	194.7	1.0322		
101.5	93.7	1.0832	Slope	0.996973
			Intercept	4.191676

SO2 Calibration Curve



SO2 Calibration



Calibration Report

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



Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Start Time (MST)	7:55	End Time (MST)	12:55
Barometric Pressure	721.000 mm	Station Temperature	20.5 Deg C
Calibrator	Envionics	Serial Number	906535067(AMU 197)
NO Cal Gas Conc	48.6 ppm	Cal Gas Expiry Date	October 5, 2018
NOx Cal Gas Conc	48.9 ppm	Cal Gas Serial #	LL103793

DACS Information

DACS make	CR3000	DACS serial No.	5408
	Parameter	NO2	NOx
Before	Data Slope	1.005983	1.001695
	Data Offset	1.145800	3.331528
After	Data Slope	1.005948	1.001463
	Data Offset	-0.609957	3.775082
	Channel #	8	6
	Voltage Range	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
NO offset	6.1	mV	7.3
NOx bkgnd	6.6	mV	8.0
NO coefficient	0.970		1.006
NOx coefficient	1.000		1.000
NO2 conv temp	322.4	Deg C	322.2
Cooler Temp	-2.9	Deg C	-2.9
PMT Volt	-844.3	mV	-844.4
R Cell Press	177.7	in Hg	175.9
Sample Flow	0.585	LPM	0.580

Notes: Zero & span adjustments made
Sample pump is getting week, will need a replacement soon.

Calibration Report

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



Station Information

Calibration Date: May 17, 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	4953	0.00	0.0	0.0	0.0	0.0	0.2	0.0	N/A	N/A
1	4990	40.03	389.2	386.8	2.4	386.4	386.7	0.0	1.0070	1.0003
2	4978	20.02	195.9	194.7	1.2	190.5	190.5	0.0	1.0285	1.0220
3	4944	10.06	99.3	98.7	0.6	91.4	91.7	0.0	1.0864	1.0761
AFZ	4953	0.00	0.0	0.0	0.0	1.7	1.0	0.7	0.0000	0.0000
AFS	4990	40.03	389.2	386.8	0.8	374.2	374.3	0.1	1.0399	1.0333
Average Correction Factor									1.0406	1.0328

As Found Concentrations: NO_x= 376.5 NO= 374.5 As Found Percent Change NO_x= -3.2% NO= -3.2%

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	1.0	1.0	0.0	0.0	0.2	0.0	N/A	N/A	N/A	N/A
NO point	387.6	387.6	0.0	387.6	387.6	-0.1	1.0002	1.0000	N/A	N/A
300	387.6	42.7	345.0	385.8	42.7	342.9	1.0046	1.0000	1.0060	99.4%
200	387.6	154.6	233.0	388.1	154.6	232.9	0.9987	1.0000	1.0004	100.0%
100	387.6	275.5	112.1	389.1	275.5	112.6	0.9962	1.0000	0.9957	100.4%
Average Correction Factor							0.9998	1.0000	1.0007	99.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	1.0	0.1	1.0	ppb	0.0	0.0	0.1	ppb
Auto span	331.1	327.4	3.2	ppb	327.1	324.6	2.1	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



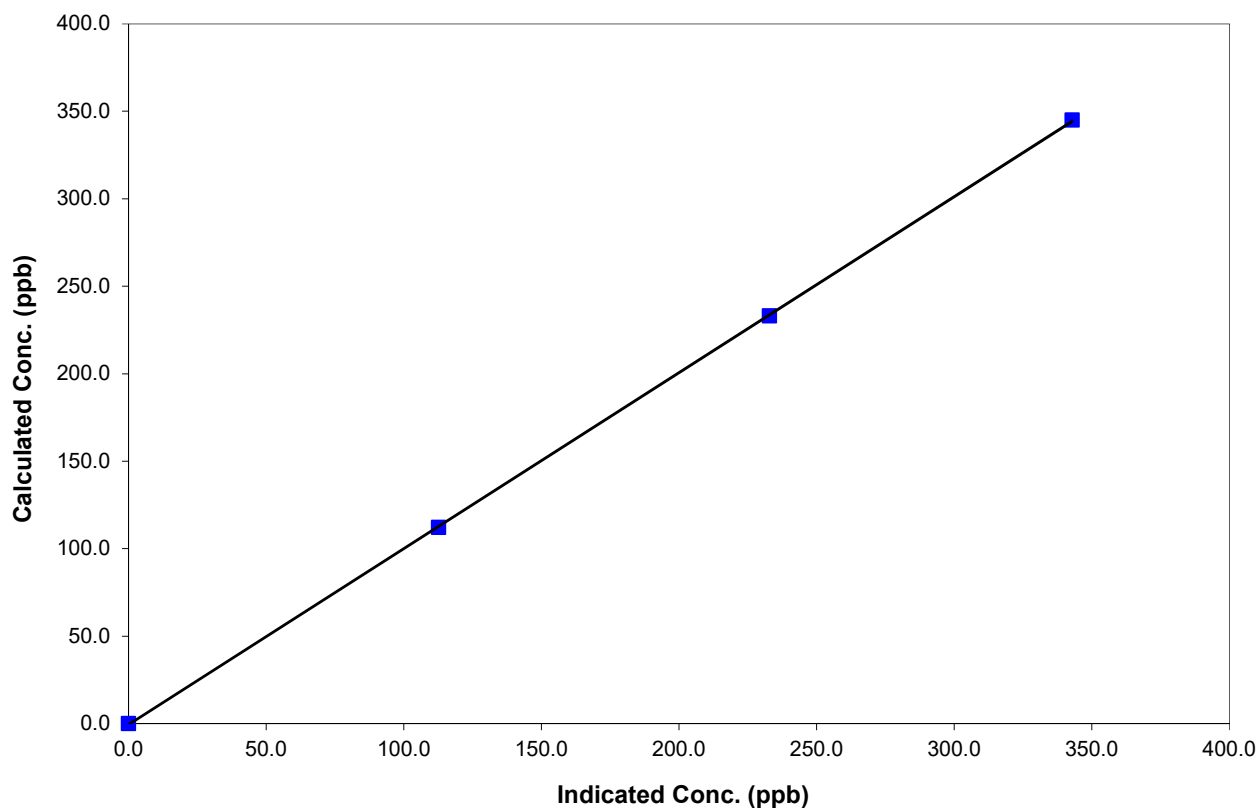
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:55	End Time (MST)	12:55
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	0.999977
345.0	342.9	1.0060		
233.0	232.9	1.0004		
112.1	112.6	0.9957	Slope	1.005948
			Intercept	-0.609957

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



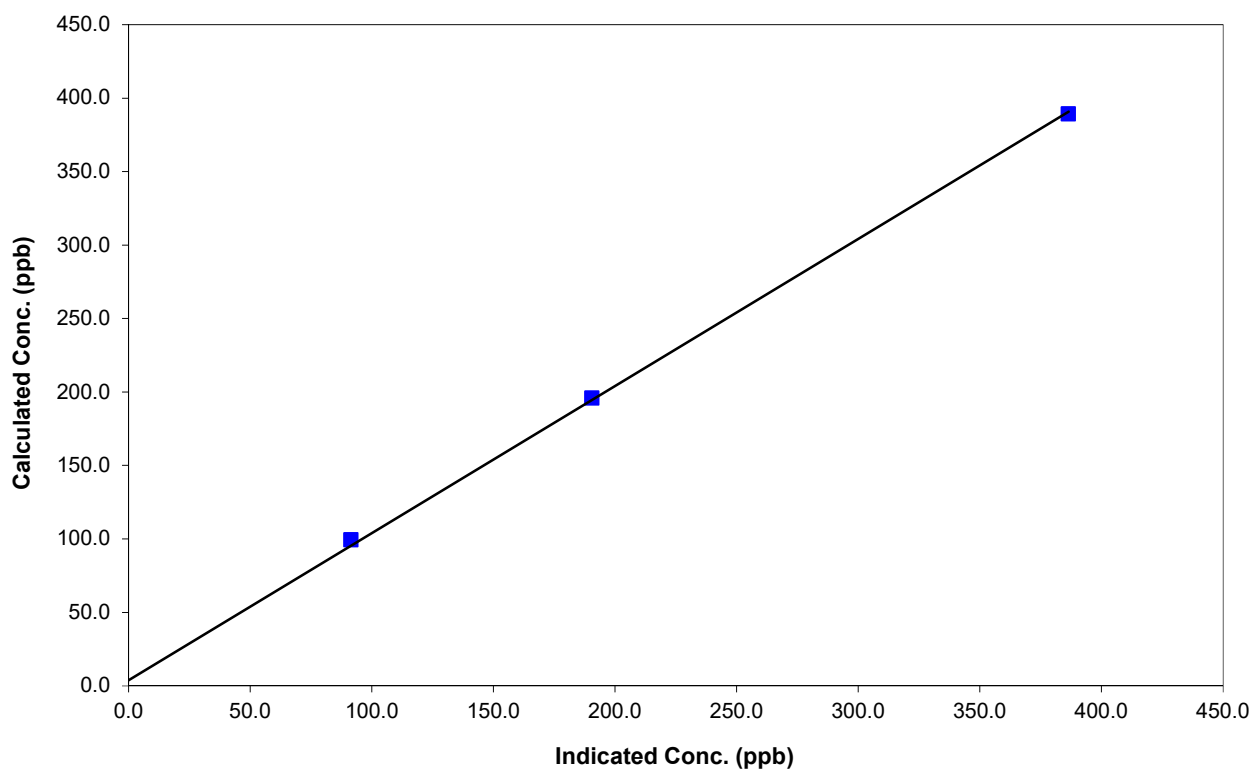
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:55	End Time (MST)	12:55
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	0.999584
389.2	386.4	1.0070		
195.9	190.5	1.0285		
99.3	91.4	1.0864	Slope	1.001463
			Intercept	3.775082

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



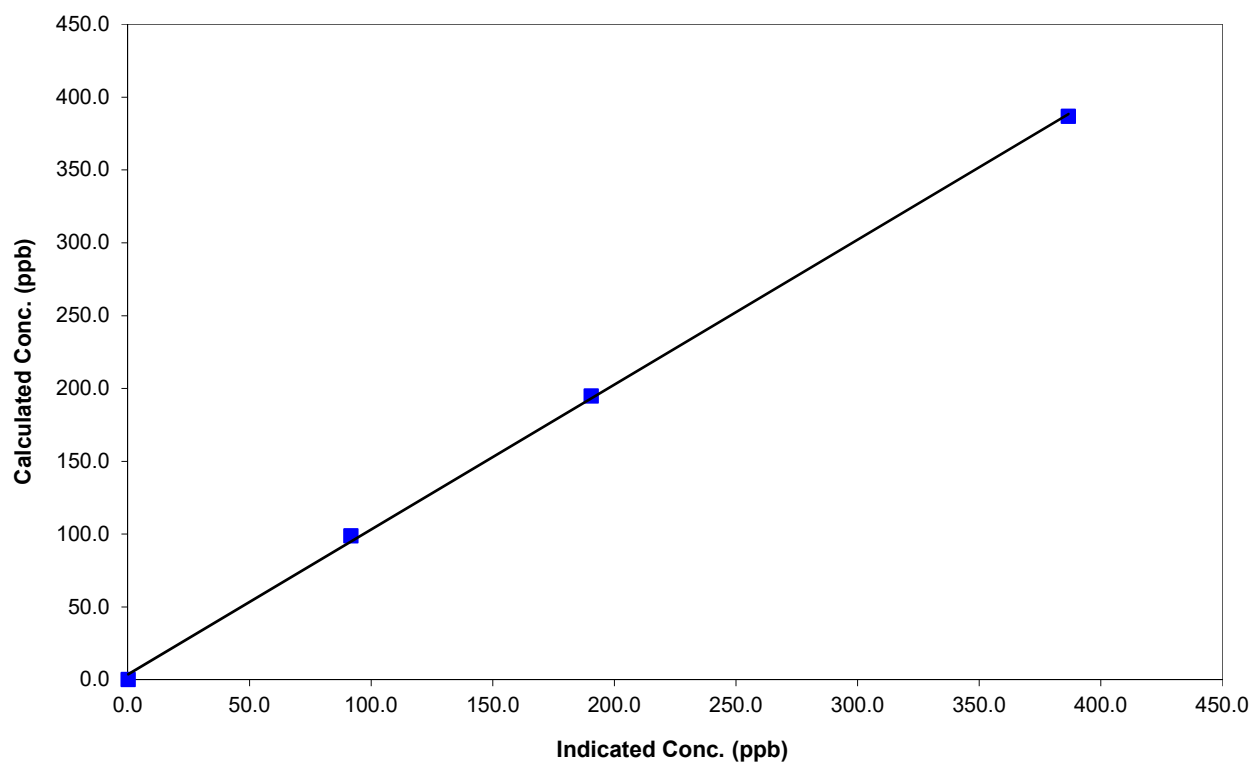
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:55	End Time (MST)	12:55
Analyzer make	42i	Analyzer serial #	906535087

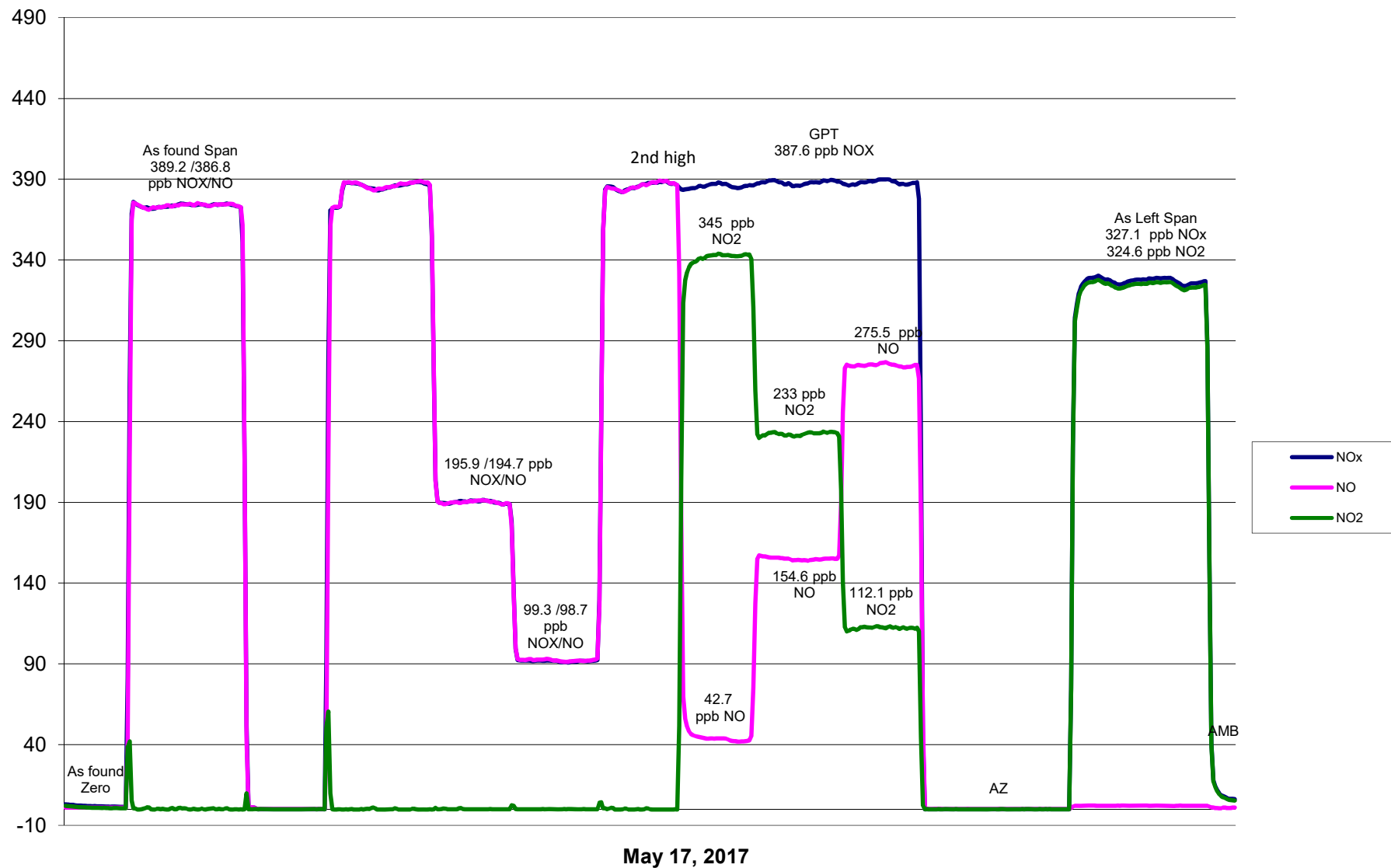
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999588
386.8	386.7	1.0003		
194.7	190.5	1.0220		
98.7	91.7	1.0761	Slope	0.995361
			Intercept	3.555221

NO Calibration Curve



NO_x Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	23:40	End Time (MST)	14:05:00 PM
Barometric Pressure	721.000 mm	Station Temperature	23.0 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	0.989010	Calculated slope	1.015903
Calculated intercept	2.838425	Calculated intercept	0.513746

Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)
---------------	----------	-------------------	-----------------------

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	0.20	ppb	0.20	ppb
slope	1.030		1.030	
Lamp temp	53.6	mV	53.7	mV
Lamp Intensity A/B	69768/75774	mV	69383/75492	mV
Pressure	696.1	mm Hg	699.7	mm Hg
Flow A	0.735	ccm	0.735	ccm
Flow B	0.735	ccm	0.737	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)
4981	0.0	0.0	-0.3	N/A
4990	0.3	345.0	339.8	1.0154
4979	0.2	233.0	227.7	1.0234
4984	0.1	112.1	110.2	1.0175
4981	0.0	0.0	-0.3	As found zero
4990	0.3	345.0	339.8	As found span
Average Correction Factor				1.0187

Calculated value of As Found Response: 339.2 ppm Percent Change of As Found: -1.7%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.0	ppb
Auto span	386.2	ppb	380.5	ppb

Notes: No adjustment made. First point took a bit longer to stabilize due to the conditioning issue.

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



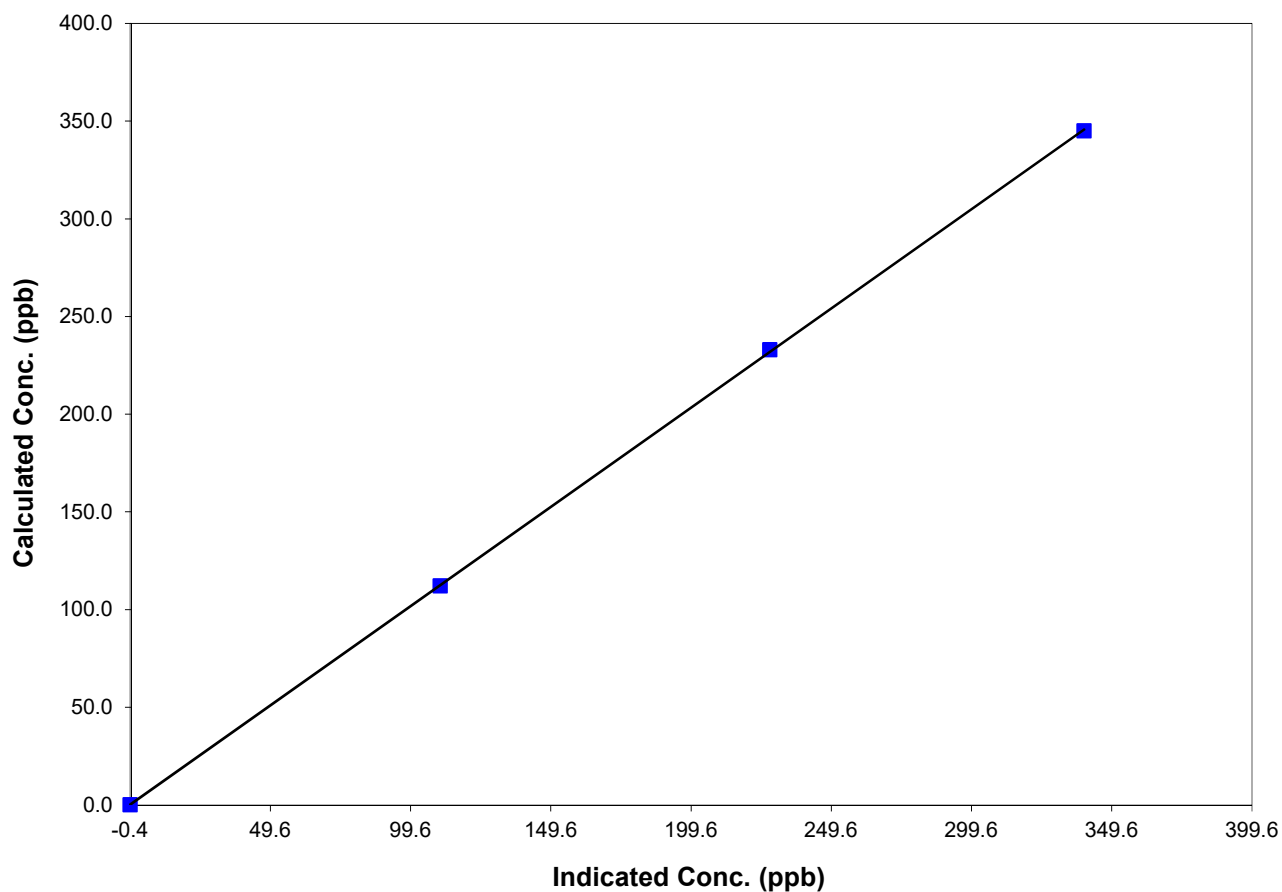
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 18, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	23:40	End Time (MST)	14:05:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

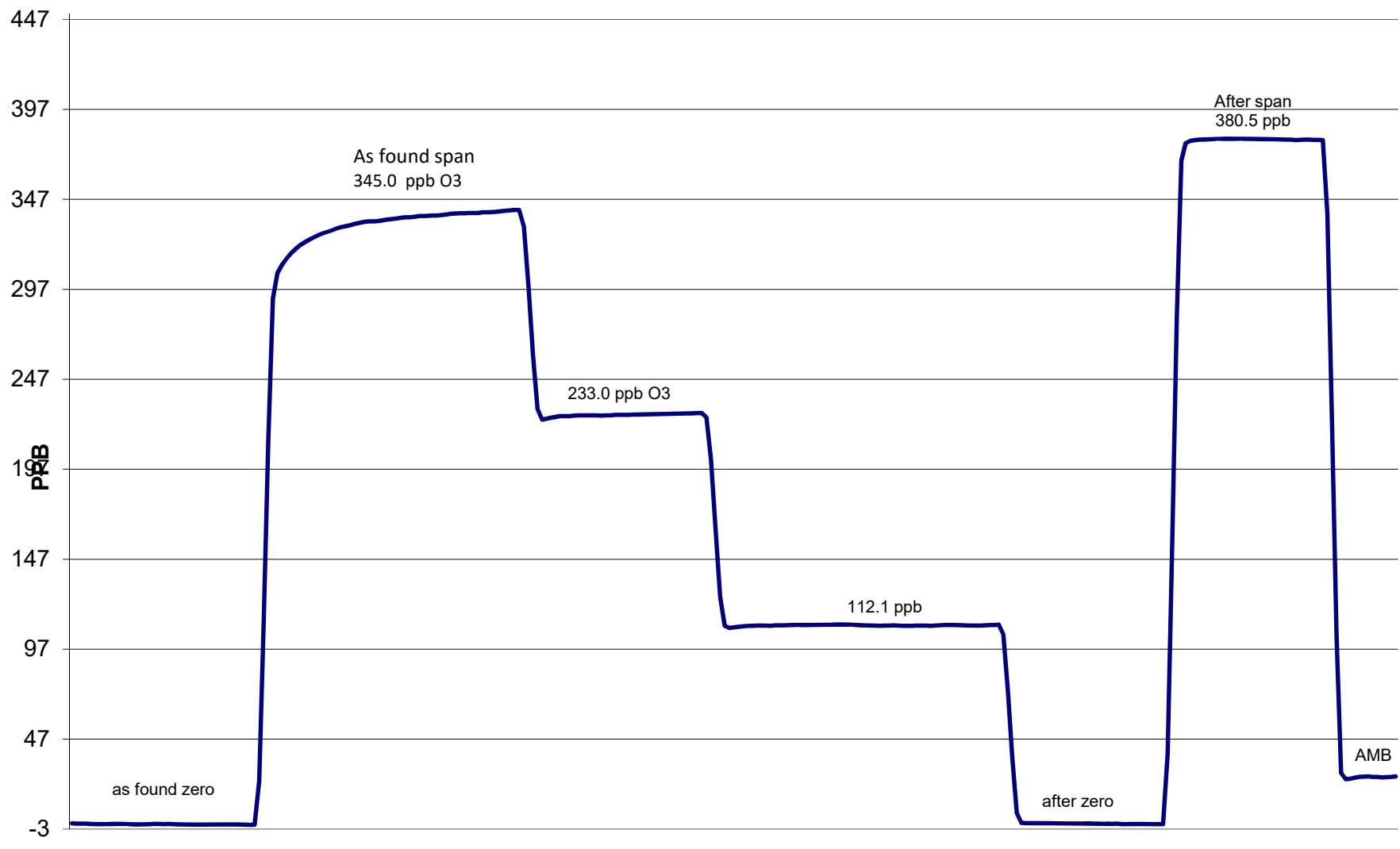
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	NA	Correlation Coefficient	0.999970
345.0	339.8	1.0154		
233.0	227.7	1.0234		
112.1	110.2	1.0175	Slope	1.015903
			Intercept	0.513746

O3 Calibration Curve



O3 Calibration



May 17, 2017

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 19, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:30	End Time (MST)	15:42
Barometric Pressure	724.0 mm/hg	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	0.997174	Calculated slope	1.002648
Calculated intercept	-0.134220	Calculated intercept	-0.104016
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	8.305		8.294	
CO span setting	1.082		1.061	
Sample pressure	702.2	mm Hg	697.1	mm Hg
Sample Flow	0.450	LPM	0.445	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)
4995	0.00	0.00	0.02	N/A
4995	69.95	40.13	40.07	1.0016
4995	34.97	20.20	20.35	0.9927
4995	17.96	10.41	10.53	0.9887
4995	0.00	0.00	0.02	As Found Zero
4995	69.95	40.13	40.81	As Found Span
Average Correction Factor				0.9943

Calculated value of As Found Response: 40.532 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	-0.04	ppm	-0.08	ppm
Auto span	20.87	ppm	20.36	ppm

Notes: Slight zero and span adjustment made.

Calibration Performed By: Grover Christainsen

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



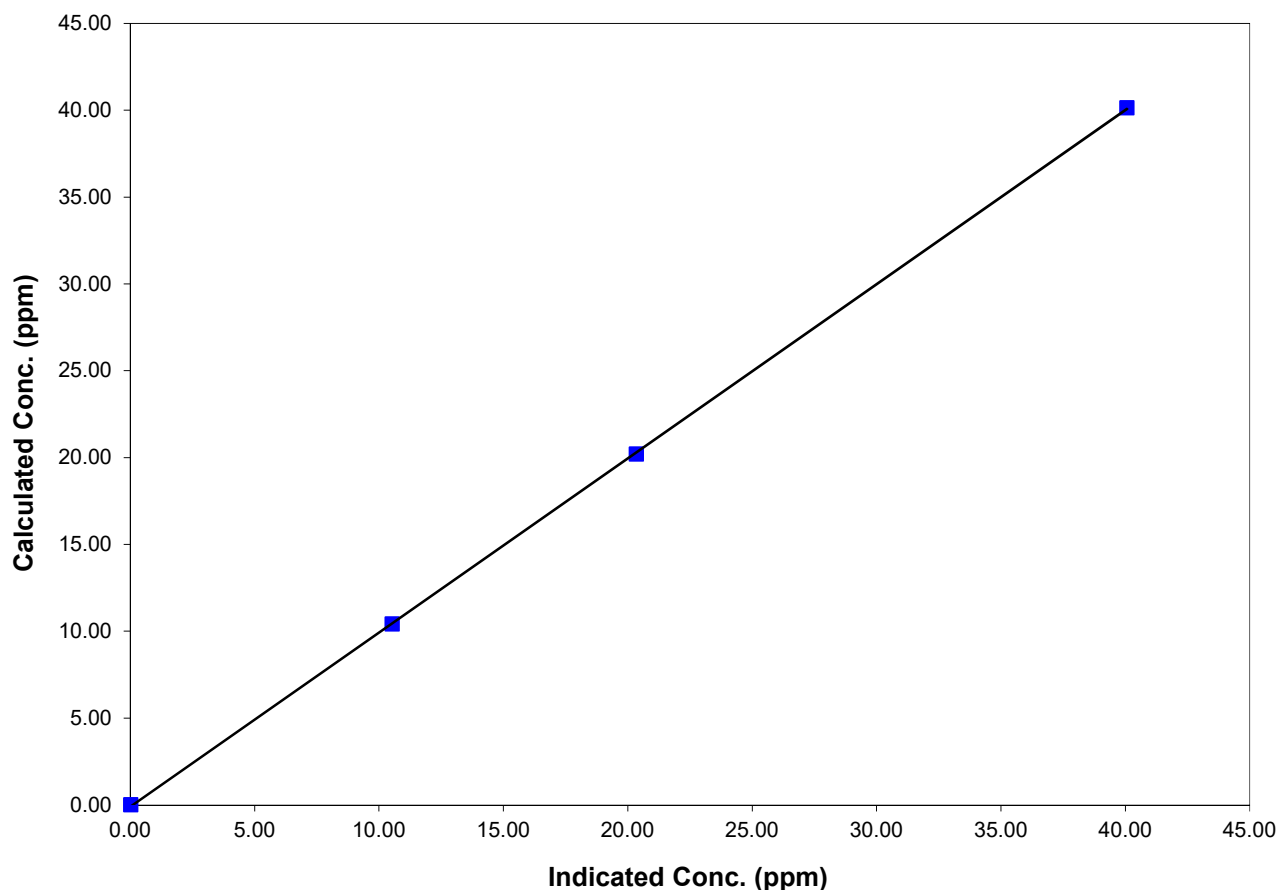
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 19, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:30	End Time (MST)	15:42
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

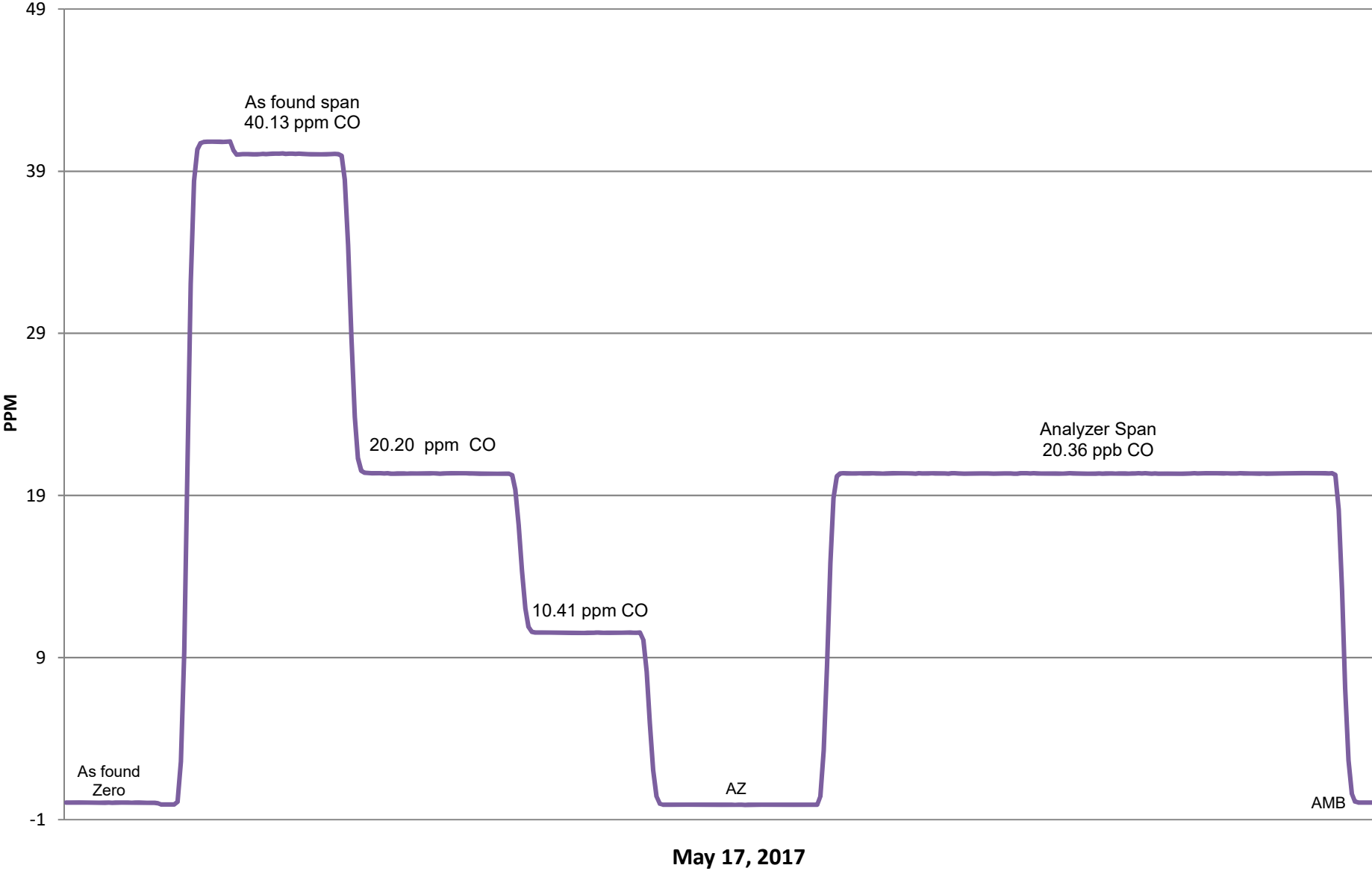
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.024	N/A	Correlation Coefficient	0.999975
40.134	40.070	1.0016		
20.203	20.352	0.9927		
10.411	10.531	0.9887	Slope	1.002648
			Intercept	-0.104016

CO Calibration Curve



CO Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 8, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	9:00	End Time (MST)	12:15
Barometric Pressure	724.00 mm/hg	Station Temperature	23.0 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

	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)
1996	0.00	0.00	0.00	N/A
1996	68.95	12.89	12.91	0.9982
1996	40.96	7.76	7.74	1.0025
1996	15.97	3.06	3.02	1.0161
1996	0.00	0.00	0.00	As Found Zero
1996	68.93	12.89	13.26	As Found Span
Average Correction Factor				1.0056

Calculated value of As Found Response: 13.259 ppm Percent Change of As Found: -2.9%

	Before		After
Calculated slope	0.998348	Calculated slope	0.997217
Calculated intercept	0.021783	Calculated intercept	0.027709

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.00	ppm
Auto span	8.69	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)
1996	0.00	0.00	0.00	N/A
1996	68.95	19.01	19.03	0.9986
1996	40.96	11.45	11.34	1.0094
1996	15.97	4.52	4.18	1.0810
1996	0.00	0.00	0.00	As Found Zero
1996	68.93	19.00	18.77	As Found Span
Average Correction Factor				1.0297

Calculated value of As Found Response: 18.759 ppm Percent Change of As Found: 1.3%

	Before		After
Calculated slope	0.999817	Calculated slope	0.992876
Calculated intercept	-0.006634	Calculated intercept	0.166343

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.00	ppm
Auto span	11.92	ppm	12.70	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)
1996	0.00	0.00	0.00	N/A
1996	68.95	31.90	31.93	0.9990
1996	40.96	19.21	19.07	1.0073
1996	15.97	7.58	7.19	1.0540
1996	0.00	0.00	0.00	As Found Zero
1996	68.93	31.89	32.01	As Found Span
Average Correction Factor				1.0201

Calculated value of As Found Response: 32.018 ppm Percent Change of As Found: -0.4%

	Before		After
Calculated slope	0.999504	Calculated slope	0.995245
Calculated intercept	0.023341	Calculated intercept	0.193381

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.00	ppm
Auto span	20.60	ppm	21.65	ppm

Notes: Span adjustment made, run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



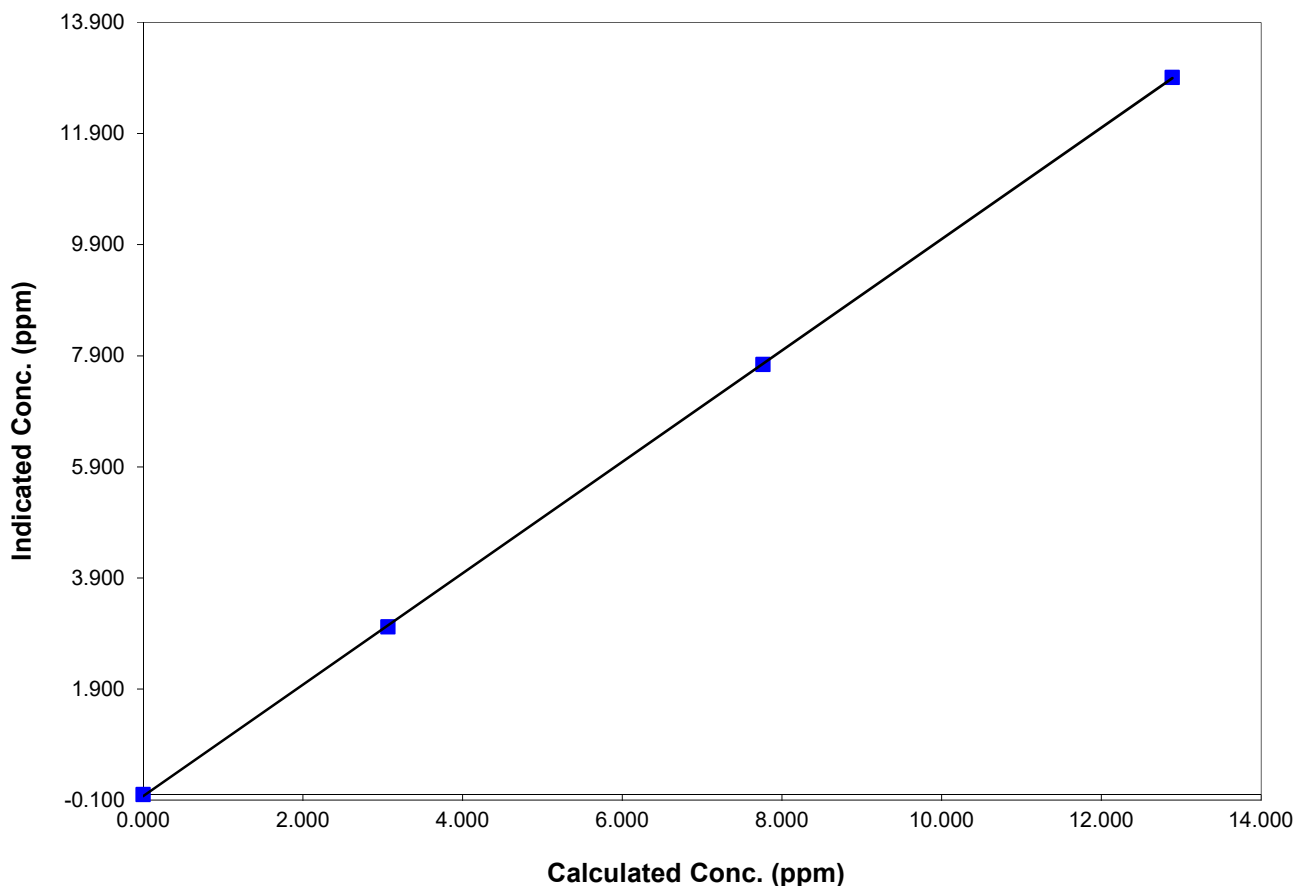
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 8, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	12:15
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	0.000	N/A	Correlation Coefficient	0.999979
12.889	12.912	0.9982		
7.762	7.743	1.0025		
3.064	3.015	1.0161	Slope	0.997217
			Intercept	0.027709

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



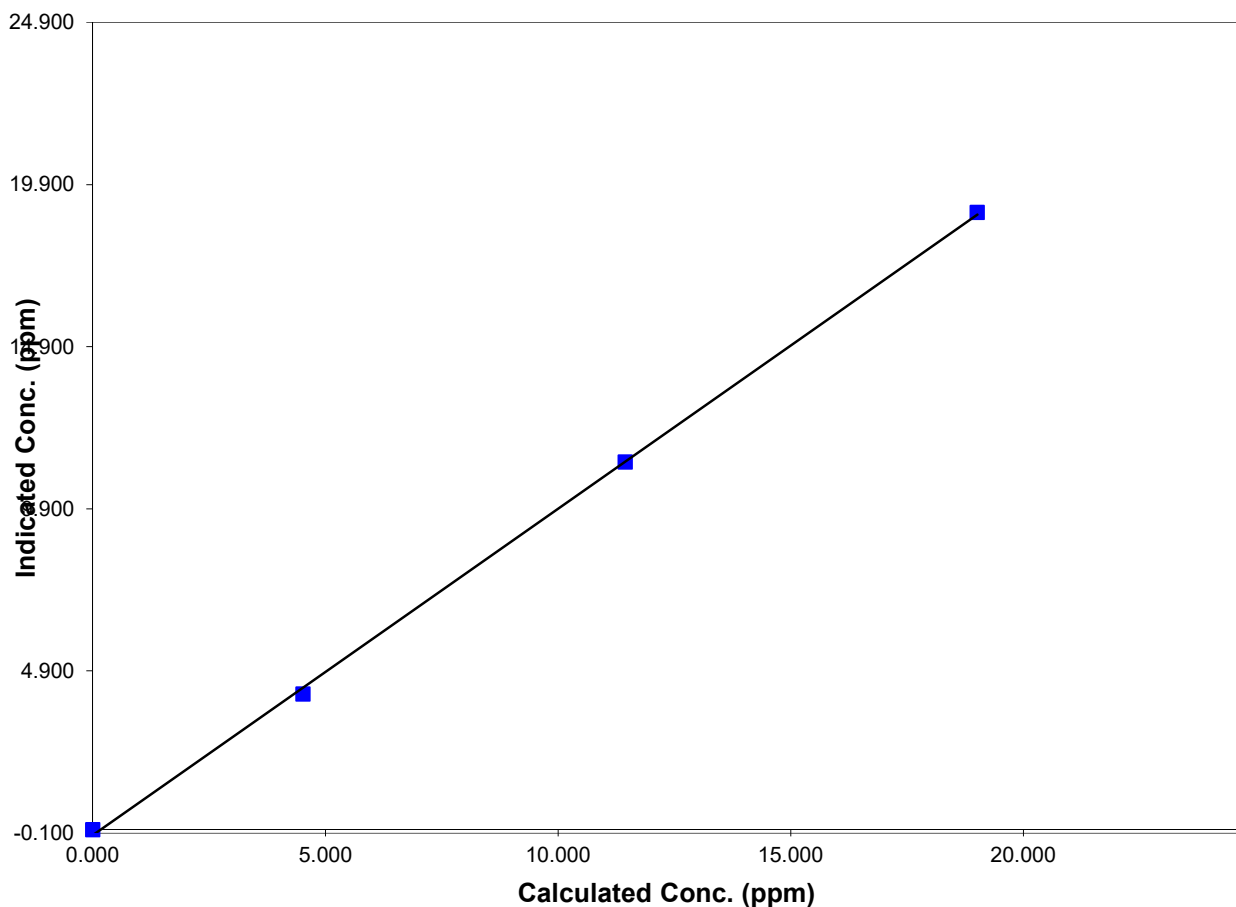
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 8, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	12:15
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	0.000	N/A	Correlation Coefficient	0.999651
19.008	19.034	0.9986		
11.447	11.340	1.0094		
4.518	4.180	1.0810	Slope	0.992876
			Intercept	0.166343

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



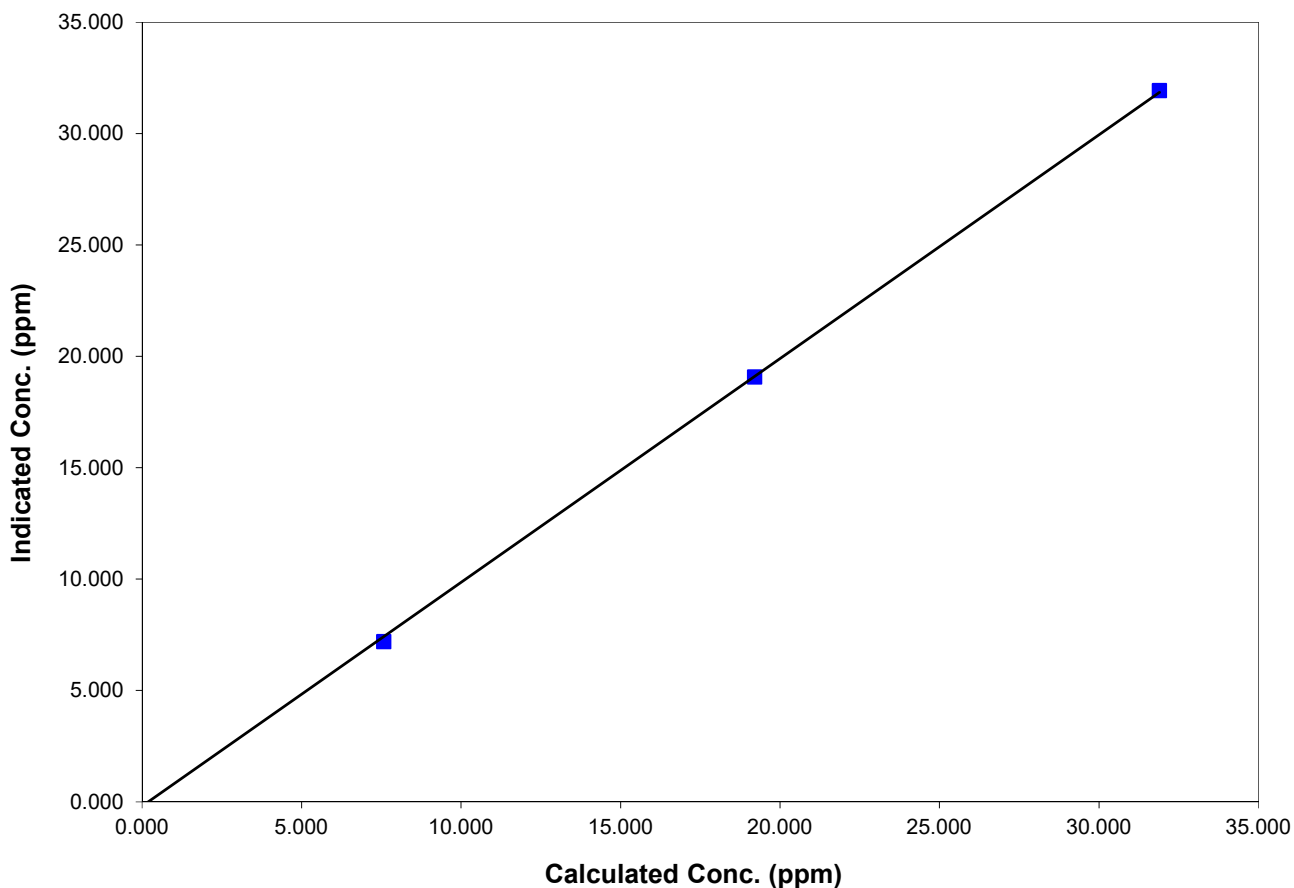
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 8, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	12:15
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

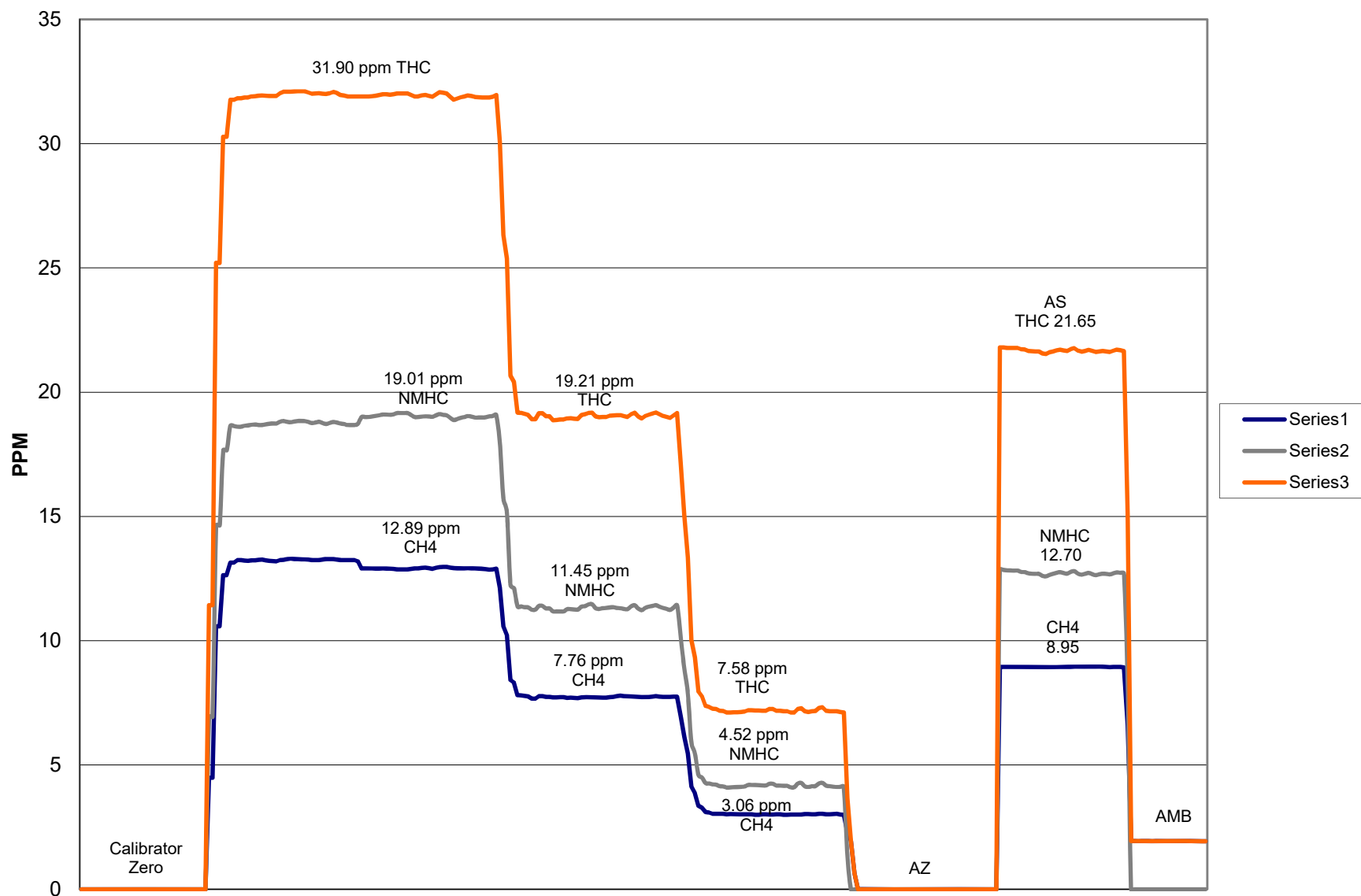
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.001	N/A	Correlation Coefficient	0.999834
31.896	31.929	0.9990		
19.209	19.069	1.0073		
7.582	7.194	1.0540	Slope	0.995245
			Intercept	0.193381

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	May 26, 2017	Previous Calibration	May 17, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	9:20	End Time (MST)	12:30
Barometric Pressure	724.00 mm/hg	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
---------------	---------	-------------------	------------

	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)
1996	0.00	0.00	0.02	N/A
1996	68.95	12.89	12.93	0.9969
1996	40.96	7.76	7.74	1.0030
1996	15.97	3.06	3.02	1.0149
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	12.89	12.33	As Found Span
Average Correction Factor				1.0049

Calculated value of As Found Response: 12.306 ppm Percent Change of As Found: 4.5%

	Before		After
Calculated slope	0.997217	Calculated slope	0.997297
Calculated intercept	0.027709	Calculated intercept	0.018020

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.03	ppm
Auto span	8.95	ppm	9.16	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)
1996	0.00	0.00	0.02	N/A
1996	68.95	19.01	18.99	1.0011
1996	40.96	11.45	11.34	1.0097
1996	15.97	4.52	4.20	1.0757
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	19.00	18.64	As Found Span
Average Correction Factor				1.0288

Calculated value of As Found Response: 18.655 ppm Percent Change of As Found: 1.8%

	<u>Before</u>		<u>After</u>
Calculated slope	0.992876	Calculated slope	0.996469
Calculated intercept	0.166343	Calculated intercept	0.137775

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.02	ppm
Auto span	12.70	ppm	12.78	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)
1996	0.00	0.00	0.03	N/A
1996	68.95	31.90	31.89	1.0003
1996	40.96	19.21	19.05	1.0081
1996	15.97	7.58	7.21	1.0510
1996	0.00	0.00	0.04	As Found Zero
1996	68.93	31.89	30.96	As Found Span
Average Correction Factor				1.0198

Calculated value of As Found Response: 30.966 ppm Percent Change of As Found: 2.9%

	<u>Before</u>		<u>After</u>
Calculated slope	0.995245	Calculated slope	0.997649
Calculated intercept	0.193381	Calculated intercept	0.159158

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.02	ppm
Auto span	21.65	ppm	21.94	ppm

Notes: Hydrogen cylinder repalced
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



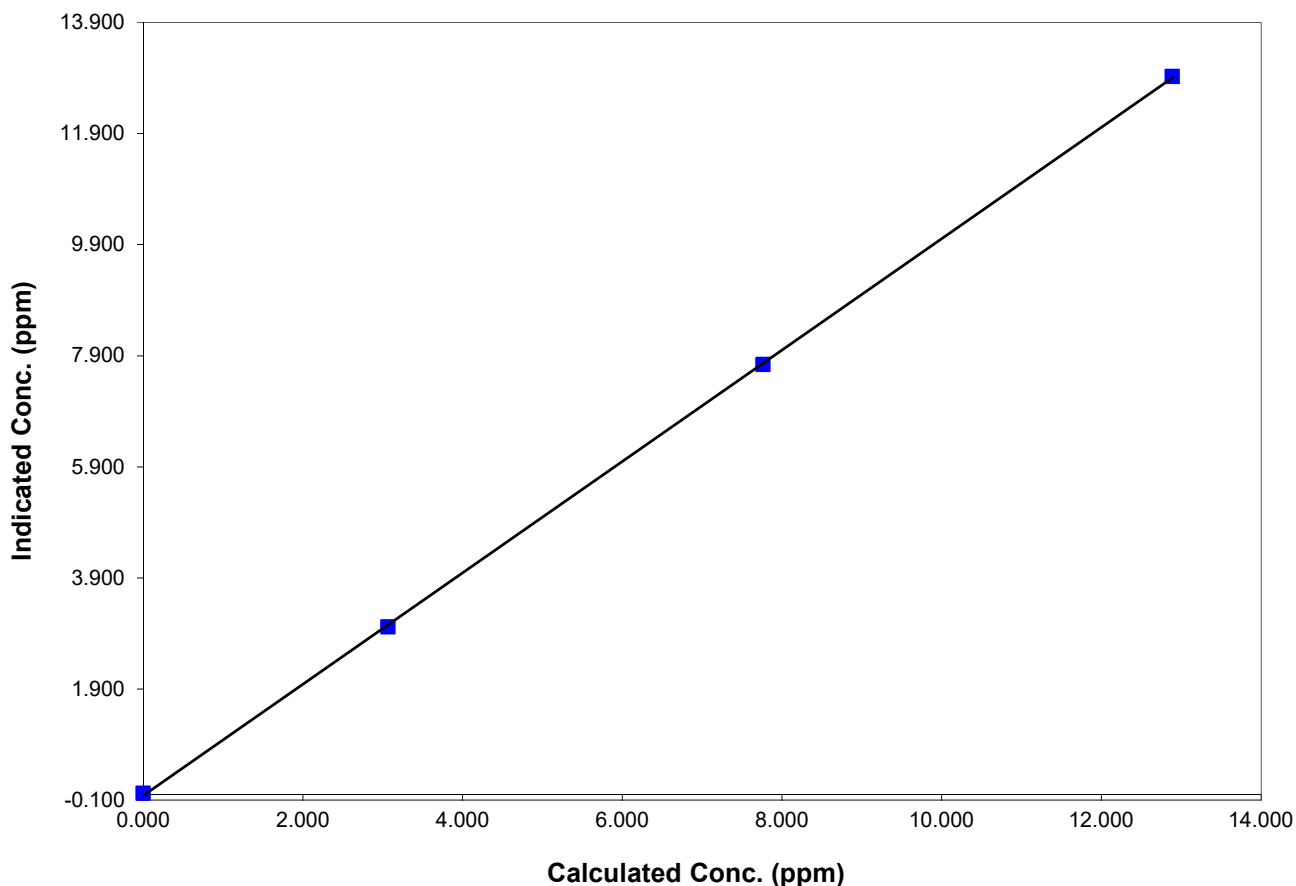
Station Information

Calibration Date	May 26, 2017	Previous Calibration	May 17, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:20	End Time (MST)	12:30
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		
12.889	12.929	0.9969	Correlation Coefficient	0.999959
7.762	7.739	1.0030		
3.064	3.019	1.0149	Slope	0.997297
			Intercept	0.018020

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



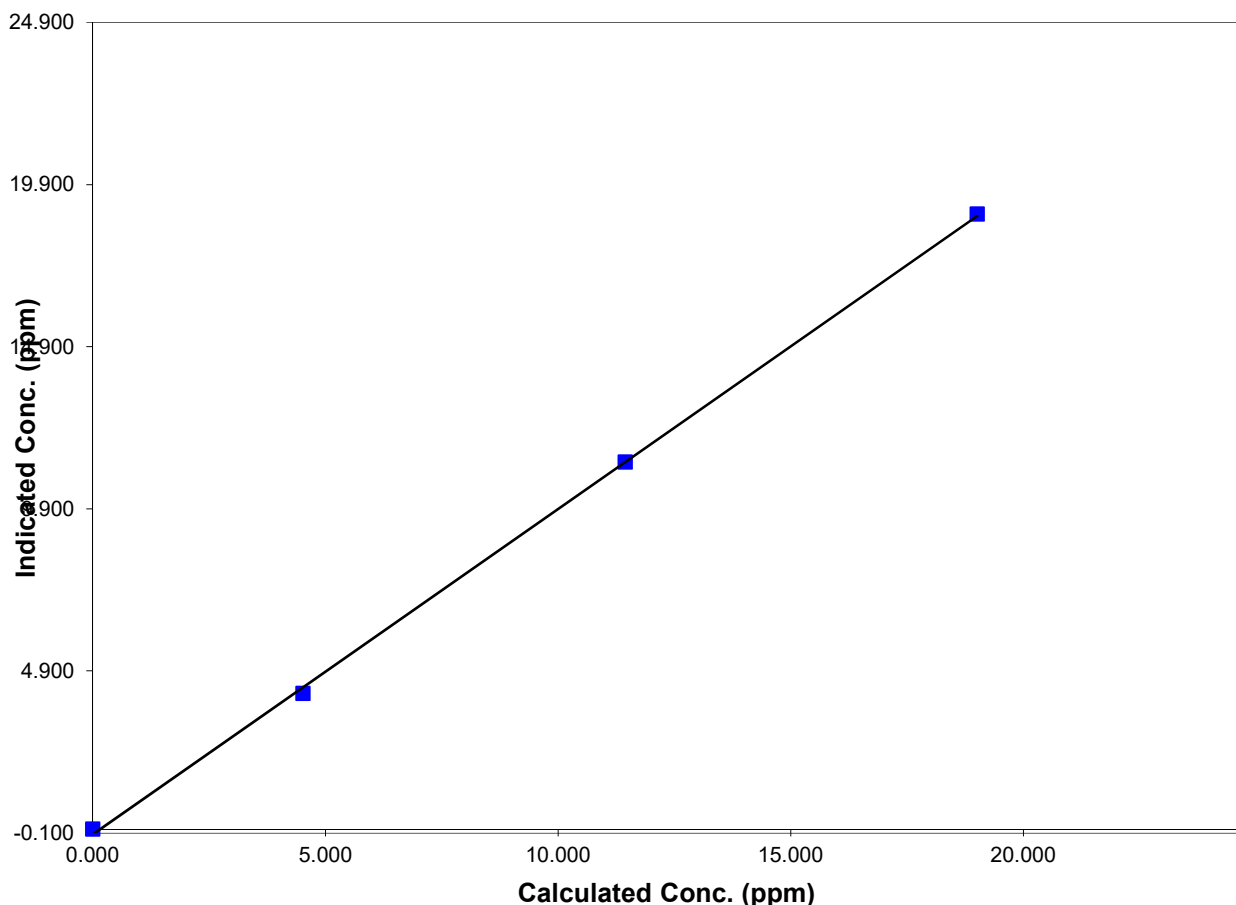
Station Information

Calibration Date	May 26, 2017	Previous Calibration	May 17, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:20	End Time (MST)	12:30
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	0.019	N/A	Correlation Coefficient	0.999684
19.008	18.987	1.0011		
11.447	11.337	1.0097		
4.518	4.200	1.0757	Slope	0.996469
			Intercept	0.137775

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



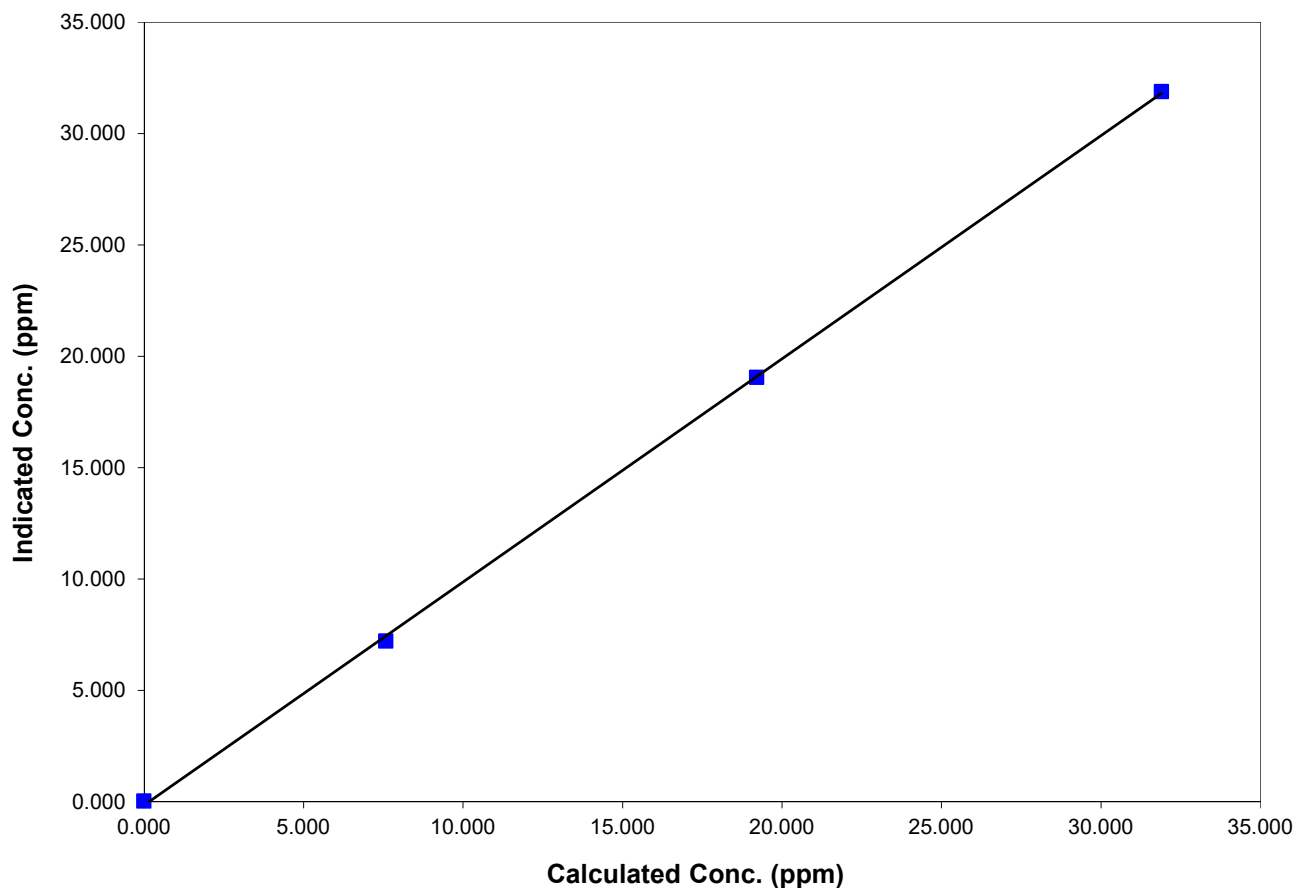
Station Information

Calibration Date	May 26, 2017	Previous Calibration	May 17, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:20	End Time (MST)	12:30
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

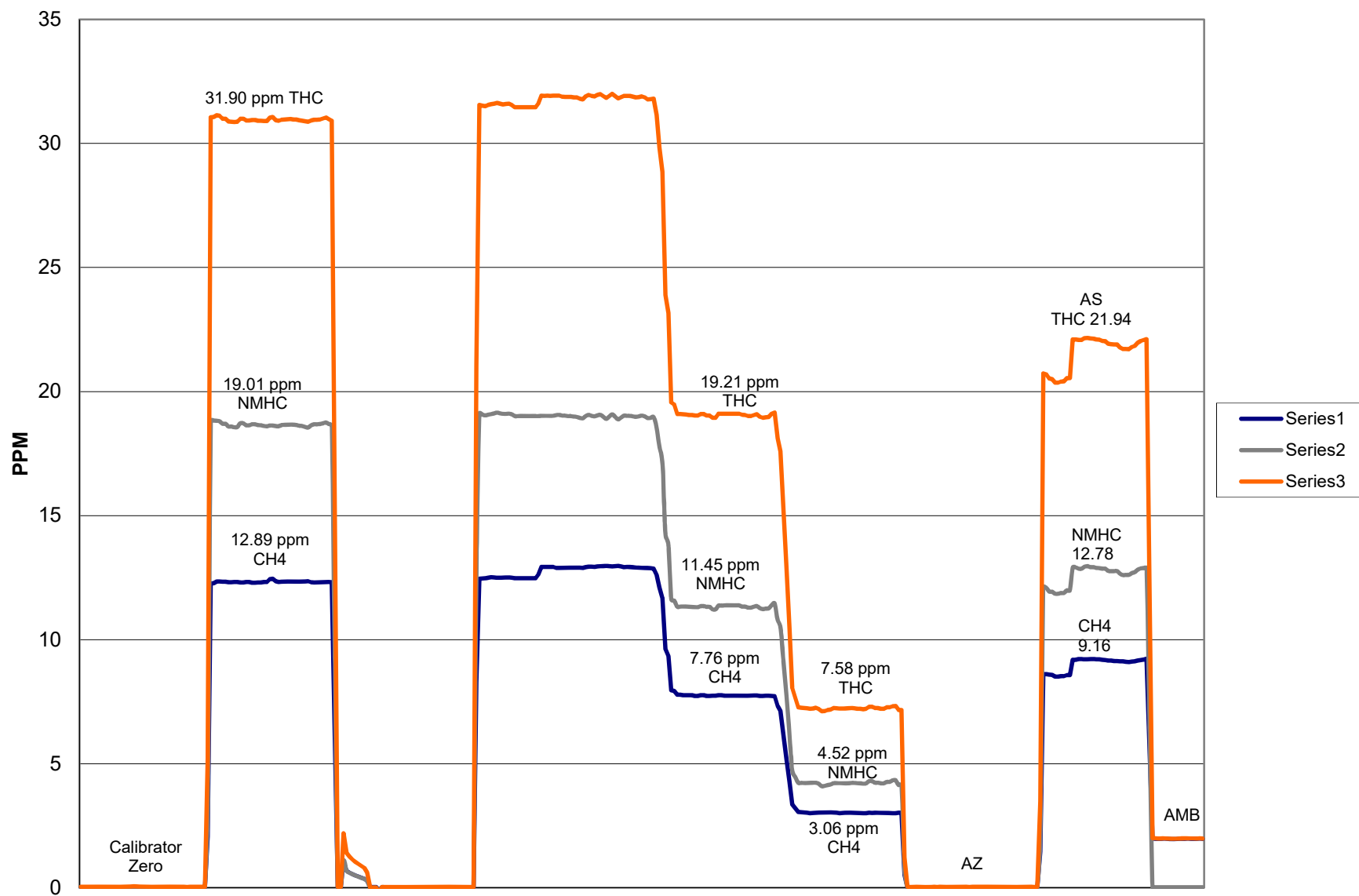
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A	Correlation Coefficient	0.999837
31.896	31.887	1.0003		
19.209	19.054	1.0081		
7.582	7.214	1.0510	Slope	0.997649
			Intercept	0.159158

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 19, 2017
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:47	End Time (MST)	16:08
Barometric Pressure	724.00 mm/Hg	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.2 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	0.982858	Calculated slope	0.986253
Calculated intercept	0.756586	Calculated intercept	1.932066

Analyzer make	TEI 45C	Analyzer serial #	630718528
---------------	---------	-------------------	-----------

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.165		1.151	
Background	14.5		14.5	
Pressure	670.9	mm Hg	660.2	mm Hg
Flow	0.443	ccm	0.443	ccm
Lamp Voltage	901	V	901	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)
4995	0.00	0.00	-0.04	N/A
4995	39.94	80.91	81.13	0.9973
4995	19.97	40.62	37.26	1.0902
6995	9.97	14.52	11.76	1.2345
4995	0.00	0.00	-0.04	As Found Zero
4995	39.94	80.91	79.56	As Found Span
Average Correction Factor				1.1073

Calculated value of As Found Response: 79.0 ppb Percent Change of As Found: 2.4%

	before calibration		after calibration	
Auto zero	-0.26	ppb	0.07	ppb
Auto span	27.34	ppb	25.59	ppb

Notes: Slight span adjustment made
Analyzer needs parts requested from the Ministry.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



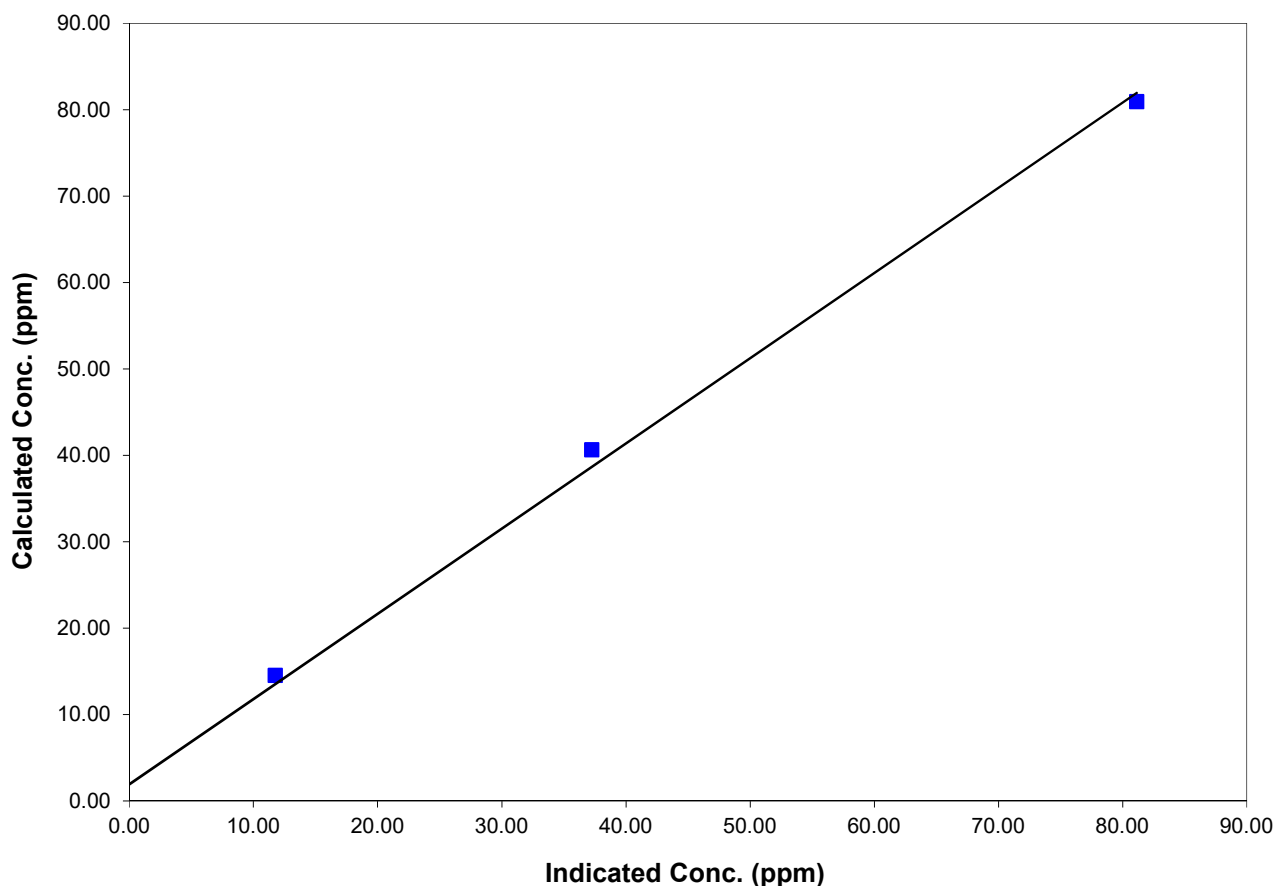
Station Information

Calibration Date	May 17, 2017	Previous Calibration	April 19, 2017
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:47	End Time (MST)	16:08
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

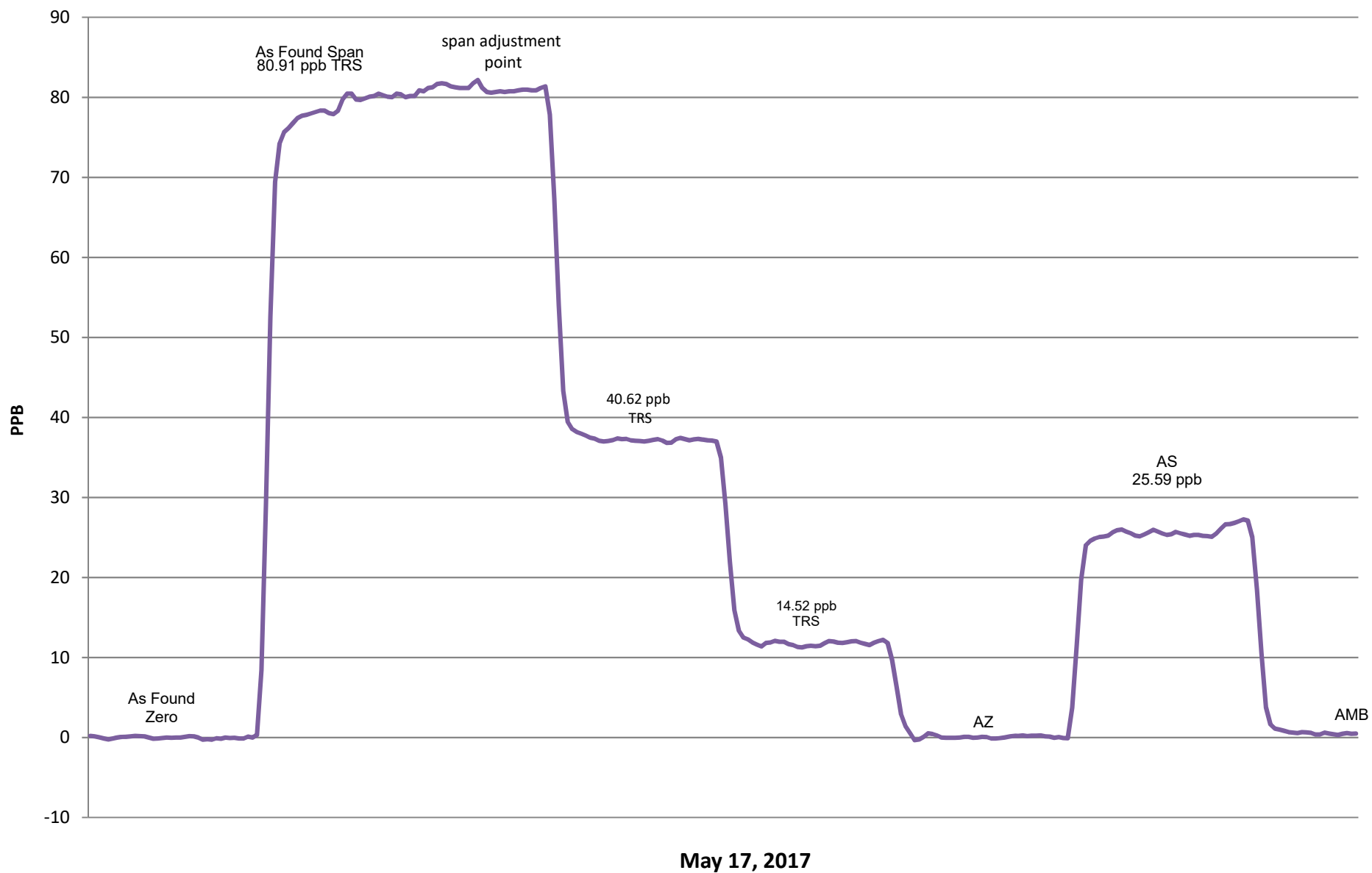
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.040	N/A	Correlation Coefficient	0.997515
80.912	81.131	0.9973		
40.617	37.257	1.0902		
14.517	11.759	1.2345	Slope	0.986253
			Intercept	1.932066

TRS Calibration Curve



TRS Calibration



SHARP 5030 PM2.5 Calibration



STATION: Henry Pirker
 LOCATION: Muskoseepi Park
 START TIME (MST): 8:20
 END TIME (MST): _____

OPERATOR: Dmytro Dolotii
 Last calibration date: December 20 2017
 Calibration date: May 17 2017

MONITOR INFO / PARAMETER VALUES:

Make/Model SHARP 5030
 Configuration PM 2.5
 Serial Number N-759

Audit Device Model Delta cal
 Audit Device S/N N402807
 Certification Date 01-Oct-15

AUDIT / CALIBRATION RESULTS:

	Ambient Temp. (°C)	Ambient Pres. (mbar)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
<i>As Found Data</i>					
Audit values (I)	12.0	928	16.67	16.67	14:55
MEASURED (AF)	12.0	928	17.20	17.21	15:02
AF Difference (AF-I)	0.0	0	-0.53	0.54	0:07
<i>Adjusted Data</i>					
MEASURED (M)	12.0	928	17.20	17.21	14:55
Adj Difference (M-I)	0.0	0	0.53	0.54	0:00
LIMITS	± 4.0 °C	13.33 mbar	0.8 L/min	± 1.0 L/min	±2 min

	As found	Adjusted
Nephelometer zero	1	0
Foil calibration	7017	7516

Sample Head Inspect/Cleaning: Cleaned sample head
 Status of sampling tape: 60% full
 Nozzle Inspection / cleanliness: Nozzel is clean, sample tape looks good.

COMMENTS:

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	May 29 2017	Previous Calibration	April 6 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	13:45:00 PM	End Time (MST)	16:05:00 PM
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	8/2/2019
Correction factor	0.031171	Cal Gas Cylinder #	LL105132
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.991197	Calculated slope	0.993766
Calculated intercept	1.853052	Calculated intercept	2.869526
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.7		11.8	
coefficient	1.256		1.252	
Lamp Voltage	828	volts	835	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.7	mm Hg	662.8	mm Hg
Sample Flow	0.446	ccm	0.441	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)
4999	0.0	0.00	0.9	N/A
5010	40.07	396.7	398.4	0.9959
5008	20.19	200.8	196.6	1.0211
5012	10.05	100.1	94.5	1.0592
5010	0.0	0.0	0.9	As Found Zero
4999	39.93	400.3	398.4	As Found Span
Average Correction Factor				1.0254

Calculated value of As Found Response: 395.769 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.9	ppm	1.0	ppm
Auto span	269.6	ppm	265.4	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



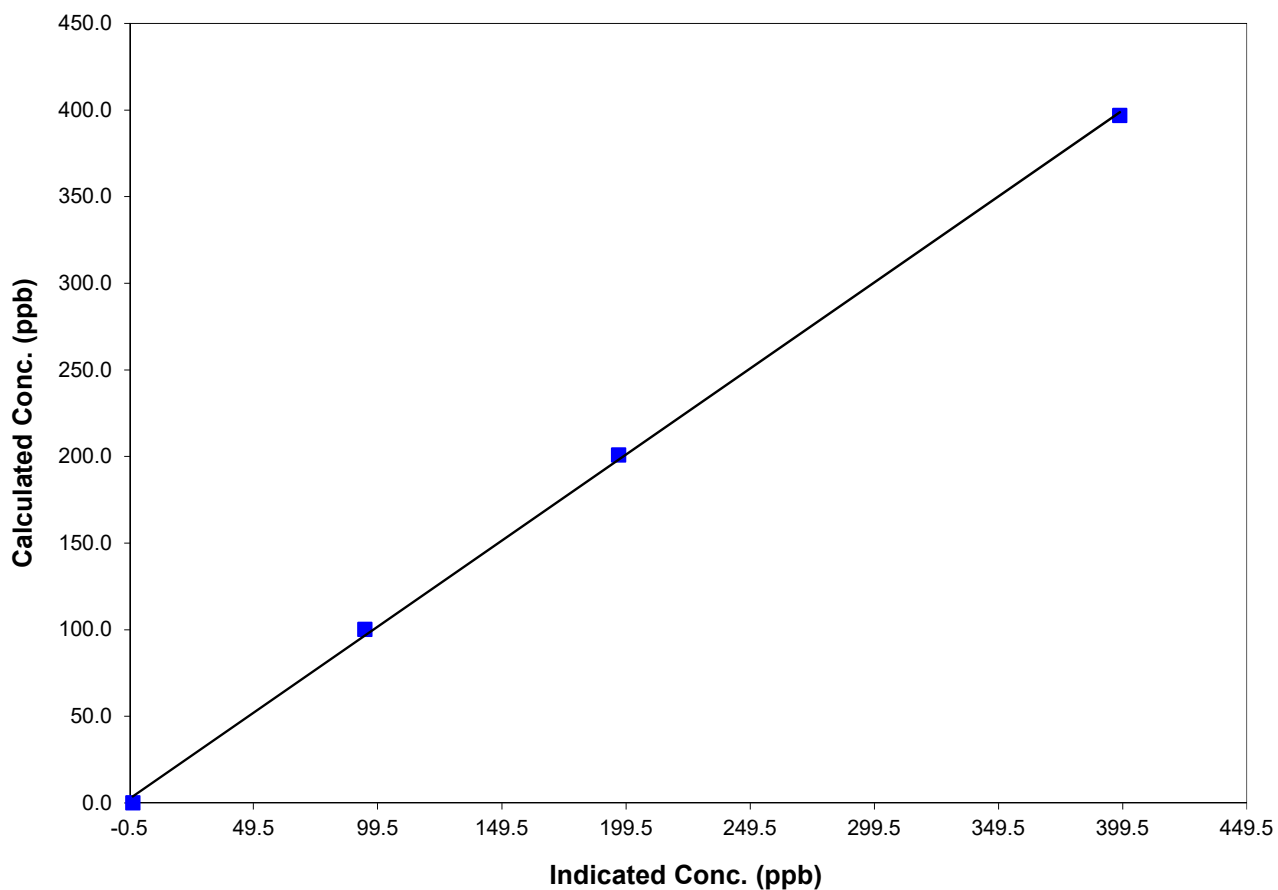
Station Information

Calibration Date	May 29 2017	Previous Calibration	April 6 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	13:45:00 PM	End Time (MST)	16:05:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

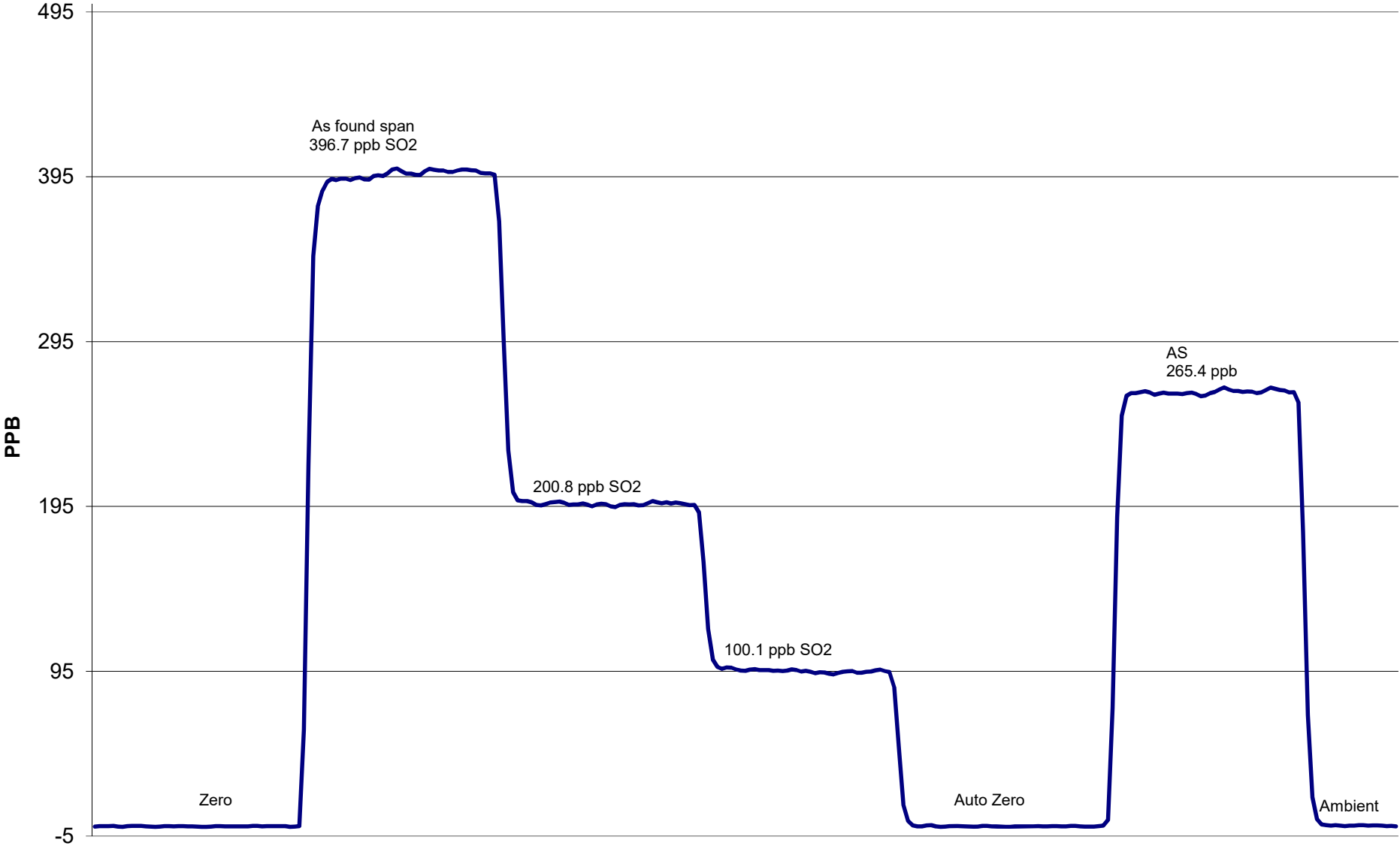
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999584
396.7	398.4	0.9959		
200.8	196.6	1.0211		
100.1	94.5	1.0592	Slope	0.993766
			Intercept	2.869526

SO2 Calibration Curve



SO2 Calibration



May 29 2017

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	May 29 2017	Previous Calibration	April 6 2017
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	11:20	End Time (MST)	14:45:00 PM
Barometric Pressure	0.918 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Correction factor	0.031205	Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.003160	Calculated slope	1.004259
Calculated intercept	-0.052982	Calculated intercept	0.605794

Analyzer make	TEI Model 43C	Analyzer serial #	3.199E+13
---------------	---------------	-------------------	-----------

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.8	ppb	17.3	ppb
coefficient	0.961		1.006	
Lamp Voltage	985	volts	983	volts
Chamber Temp	44.7	Deg C	44.6	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	653.5	mm Hg	636.4	mm Hg
Sample Flow	0.537	ccm	0.631	ccm
Lamp Intensity	37,065	mv	37,137	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)
4999	0.00	0.00	0.0	N/A
5010	40.19	81.17	80.5	1.0084
4999	20.04	40.73	39.6	1.0287
6991	10.07	14.67	13.5	1.0898
4998	9.98		-0.1	Sox Test
4999	0.00	0.00	0.4	As Found Zero
5010	40.19	81.17	77.0	As Found Span
Average Correction Factor				1.0423

Calculated value of As Found Response: 76.83 ppm Percent Change of As Found: **5.4%**

	before calibration		after calibration	
Auto zero	0.4	ppm	-0.2	ppm
Auto span	85.3	ppm	65.5	ppm

Notes: Slight span adjustment made
Sox scrubber check performed
Sample pump replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



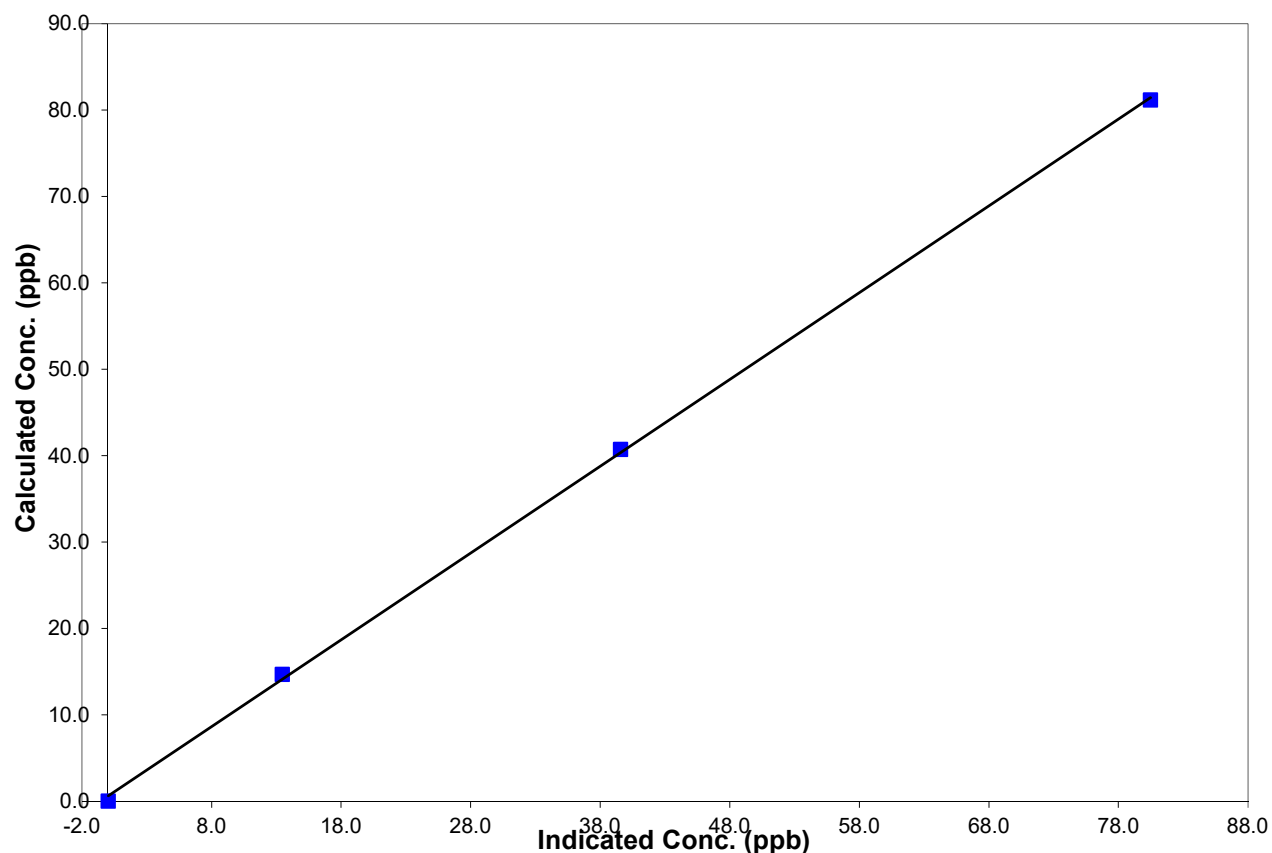
Station Information

Calibration Date	May 29 2017	Previous Calibration	April 6 2017
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:20	End Time (MST)	14:45:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

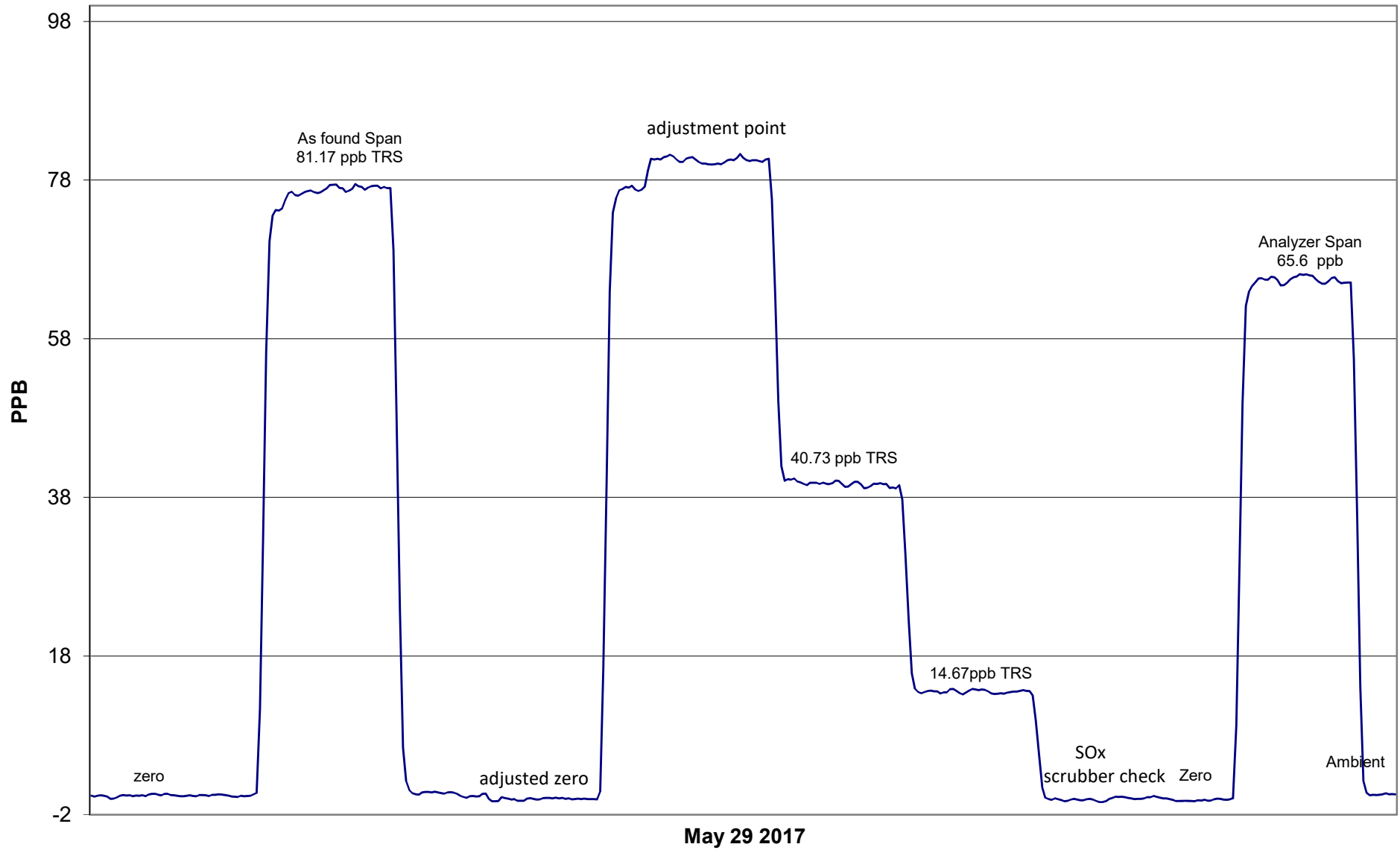
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999761
81.2	80.5	1.0084		
40.7	39.6	1.0287		
14.7	13.5	1.0898	Slope	1.004259
			Intercept	0.605794

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	May 18, 2017	Previous Calibration	April 26, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	8:25	End Time (MST)	11:37
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Cert Date	2/8/2019
Correction factor	0.031341	Cal Gas Cylinder #	LL105132
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.998429	Calculated slope	0.993308
Calculated intercept	1.783593	Calculated intercept	1.509586
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	13.6		13.6	
coefficient	0.925		0.925	
Lamp Voltage	945	volts	940	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.5	mm Hg	668.4	mm Hg
Sample Flow	0.449	lpm	0.447	lpm
Lamp Intensity	87	%	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)
4991	0.0	0.00	0.0	N/A
4991	39.97	397.24	399.1	0.9954
4995	19.97	199.10	198.3	1.0041
4995	9.97	99.60	97.2	1.0248
4991	0.0	0.00	0.0	As Found Zero
4991	39.97	397.24	399.1	As Found Span
Average Correction Factor				1.0081

Calculated value of As Found Response: 400.270 ppm Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.0	ppb
Auto span	210.1	ppb	205.2	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



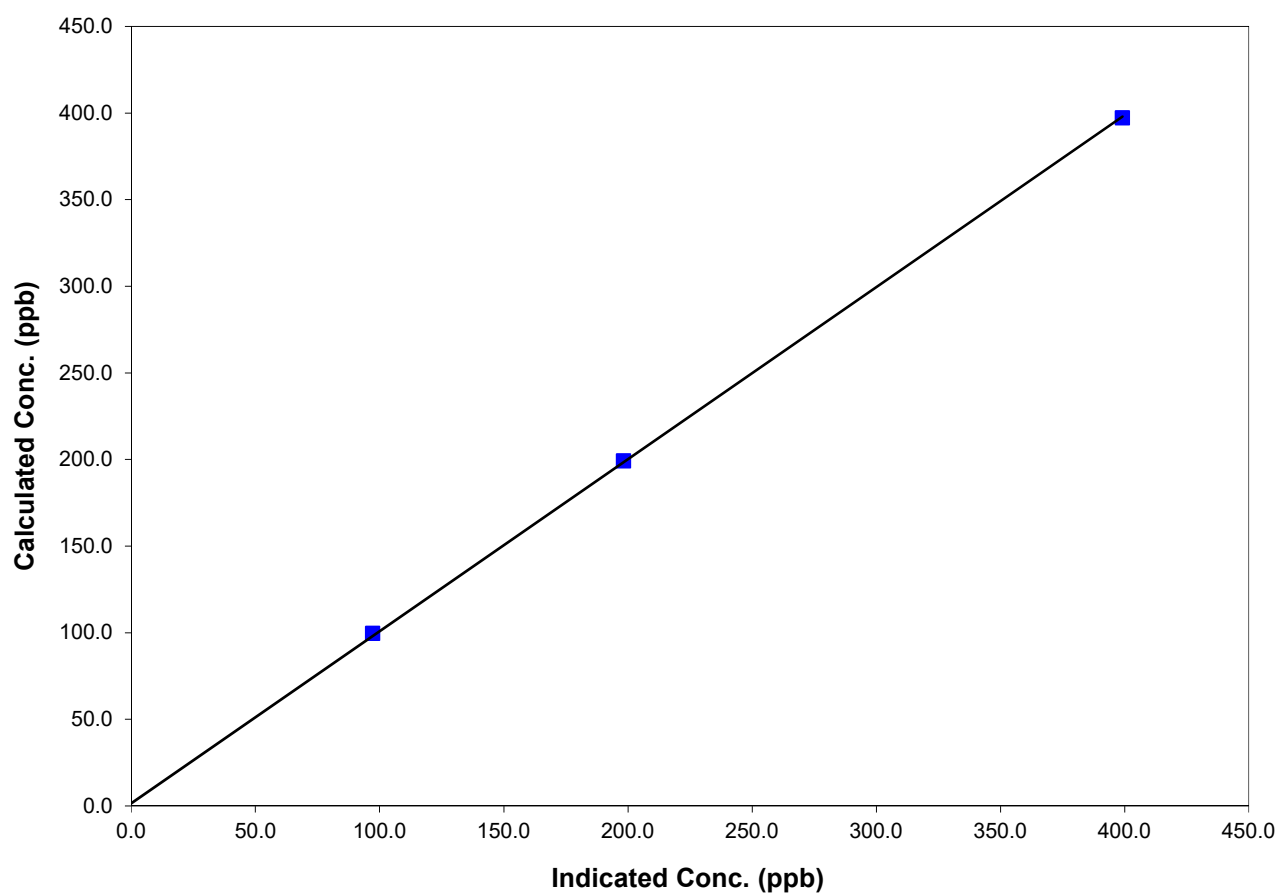
Station Information

Calibration Date	May 18, 2017	Previous Calibration	April 26, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:25	End Time (MST)	11:37
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

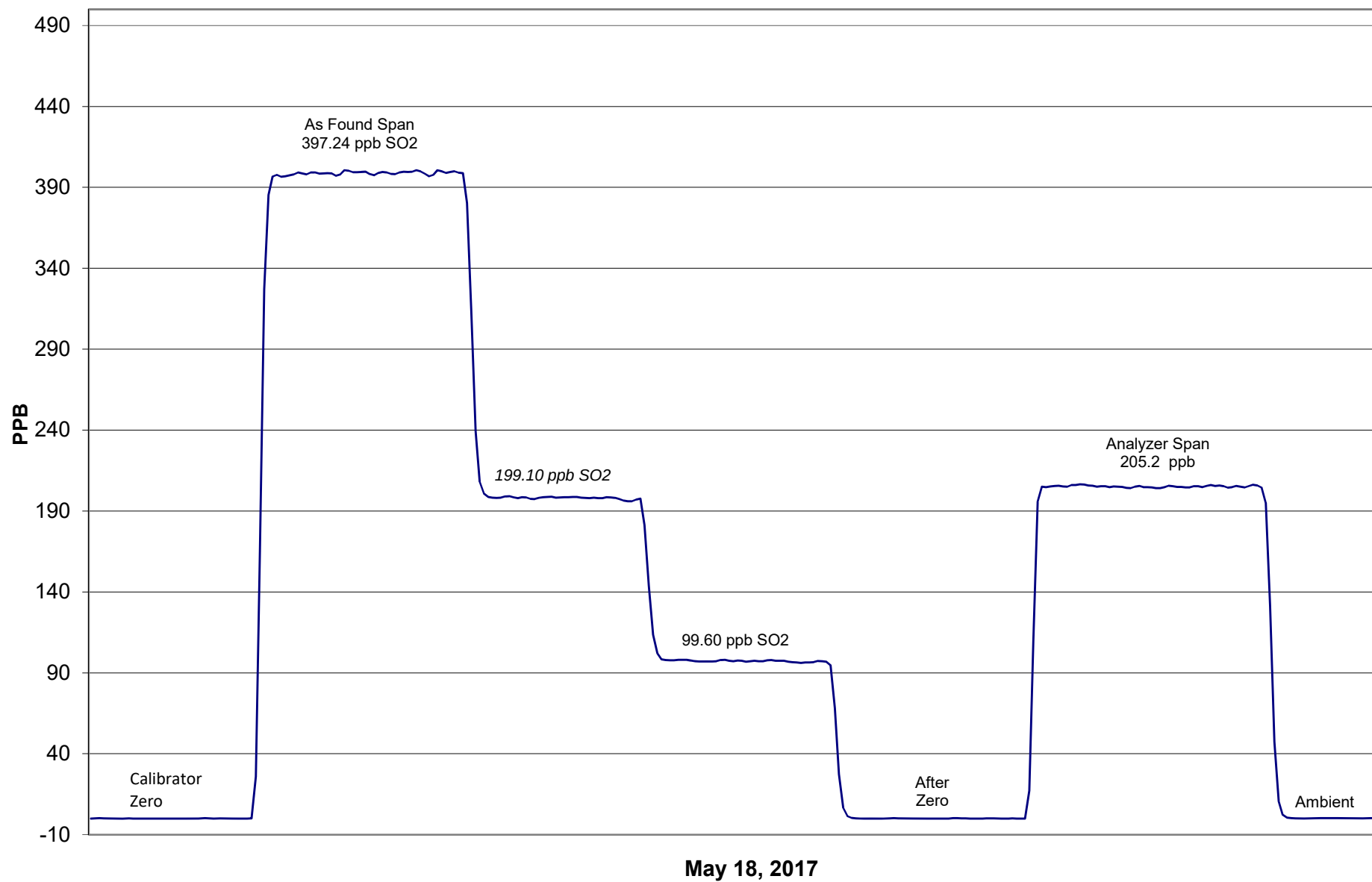
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999936
397.2	399.1	0.9954		
199.1	198.3	1.0041		
99.6	97.2	1.0248	Slope	0.993308
			Intercept	1.509586

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	May 18, 2017	Previous Calibration	April 26, 2017
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	9:20	End Time (MST)	14:35
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031341	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.976444	Calculated slope	0.983774
Calculated intercept	1.181733	Calculated intercept	0.629419

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.9	ppb	15.2	ppb
coefficient	0.981		1.000	
Lamp Voltage	800	volts	809	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	675	mm Hg	673.4	mm Hg
Sample Flow	0.424	lpm	0.422	lpm
Lamp Intensity	90	mv	93	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)
4991	0.0	0.00	0.0	N/A
4996	39.97	80.96	82.1	0.9864
4995	19.97	40.62	39.9	1.0186
6995	9.97	14.52	13.8	1.0483
4990	9.95		0.2	Sox test
4991	0.0	0.00	0.0	As Found Zero
4996	39.97	80.96	82.1	As Found Span
Average Correction Factor				1.0177

Calculated value of As Found Response: 81.34 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.1	ppm
Auto span	70.3	ppm	70.3	ppm

Notes: As found 80% around 80 ppb, lower points non linear. Adjusted slope, flash lamp, and PMT. Leak check showed no leaks. Following adj analyzer was more linear.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



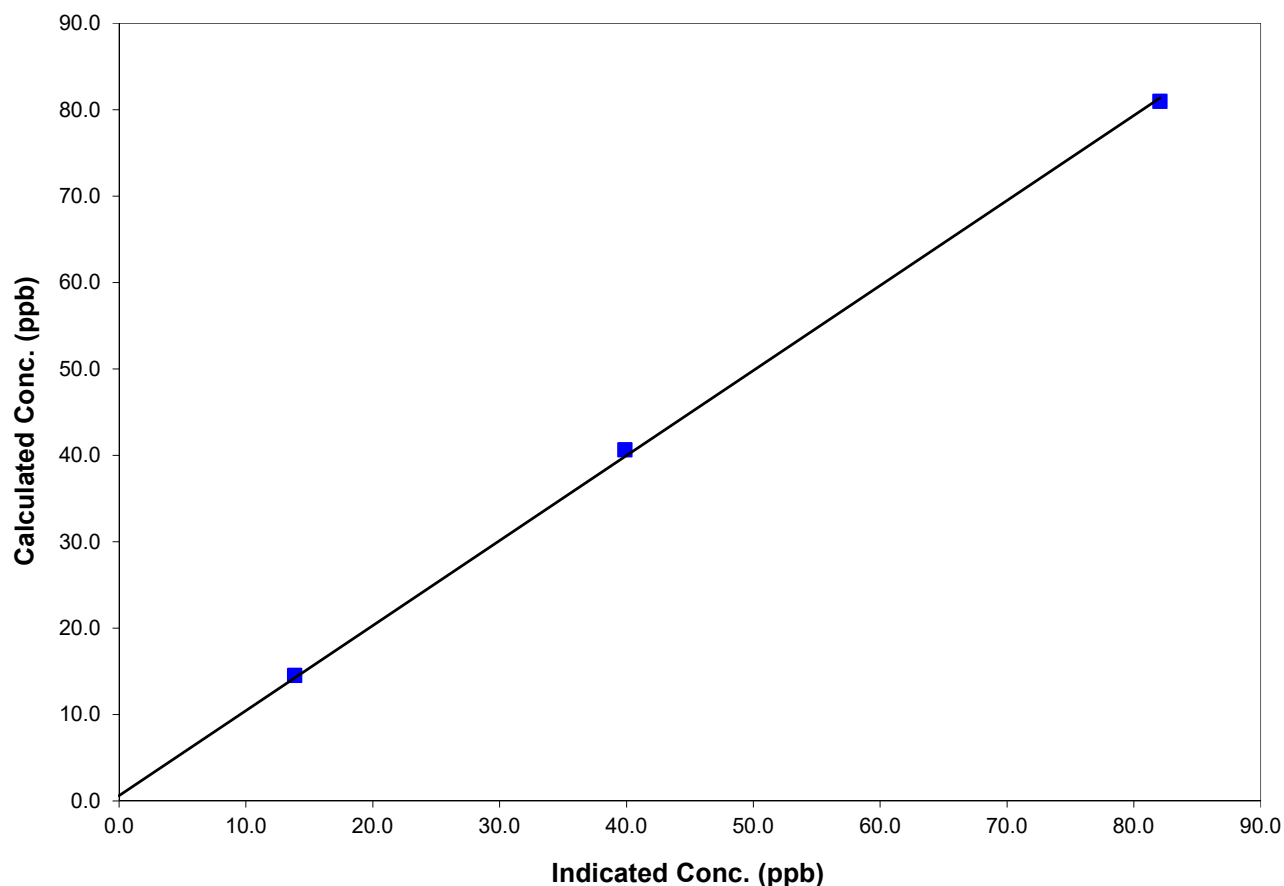
Station Information

Calibration Date	May 18, 2017	Previous Calibration	April 26, 2017
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:20	End Time (MST)	14:35
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

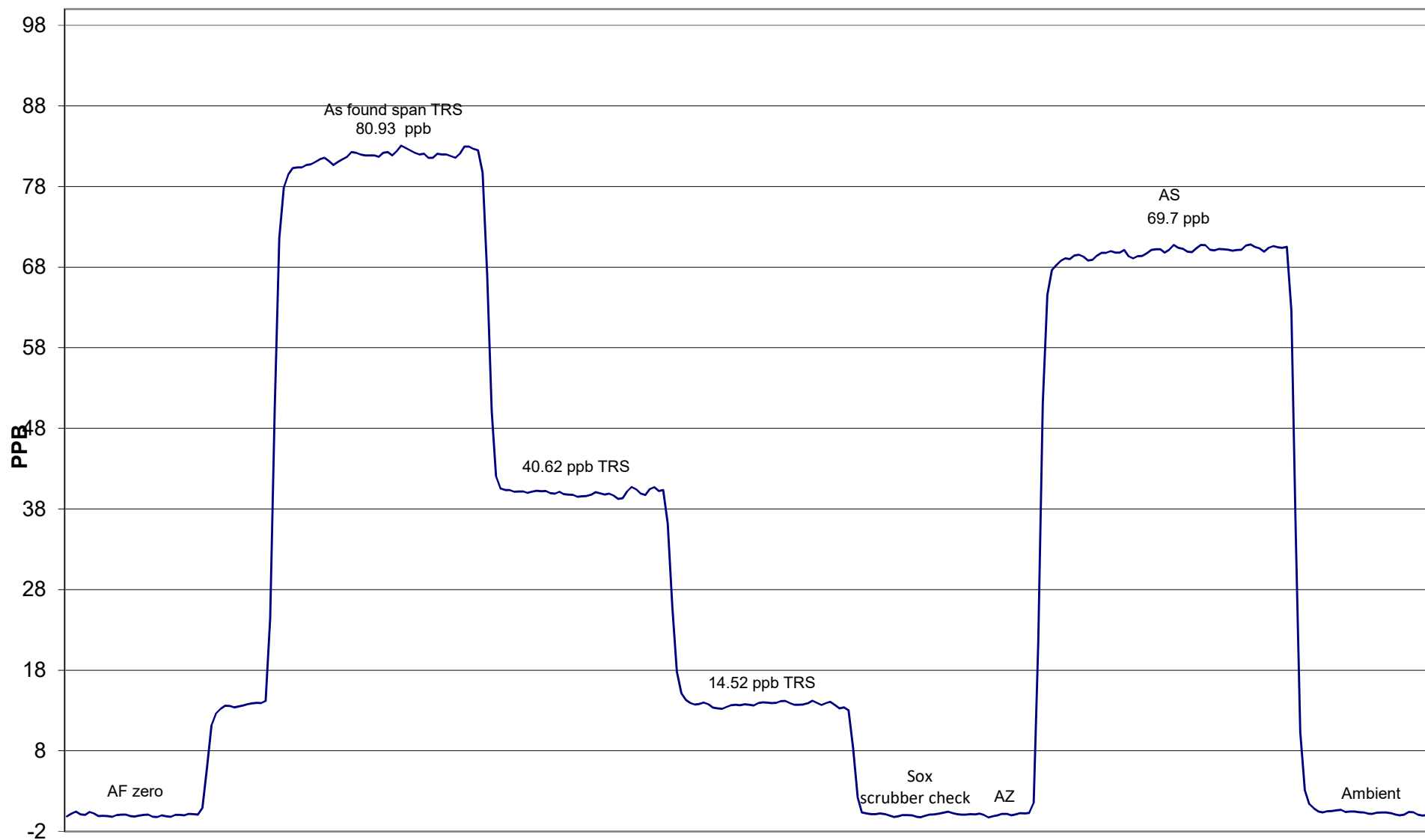
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999687
81.0	82.1	0.9864		
40.6	39.9	1.0186		
14.5	13.8	1.0483	Slope	0.983774
			Intercept	0.629419

TRS Calibration Curve



Smokey Heights TRS Calibration



May 18, 2017

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	14:30:00 PM	End Time (MST)	16:30:00 PM
Barometric Pressure	0.908 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	1.007261	Calculated slope	1.002487
Calculated intercept	-0.060057	Calculated intercept	0.101150
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.55		2.56	
Coefficient	0.969		0.969	
PMT	-768.3	V	-767.5	V
UV Lamp Voltage	1114	V	1114	V
Chamber Temp	44.7	Deg C	45	Deg C
Pressure	655.3	mm Hg	669.1	mm Hg
Sample Flow	0.457	LPM	0.457	LPM
Lamp Intensity	95	%	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)
4989	0.00	0.0	0.2	N/A
4992	39.91	83.3	83.1	1.0026
4995	19.90	41.7	41.5	1.0041
4991	9.96	20.9	20.3	1.0293
4989	0.00	0.0	0.2	As found zero
4989	39.84	83.2	83.1	As found span
Average Correction Factor				1.0120

Calculated value of As Found Response: 83.386 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.4	ppb
Auto span	59.5	ppb	60.2	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



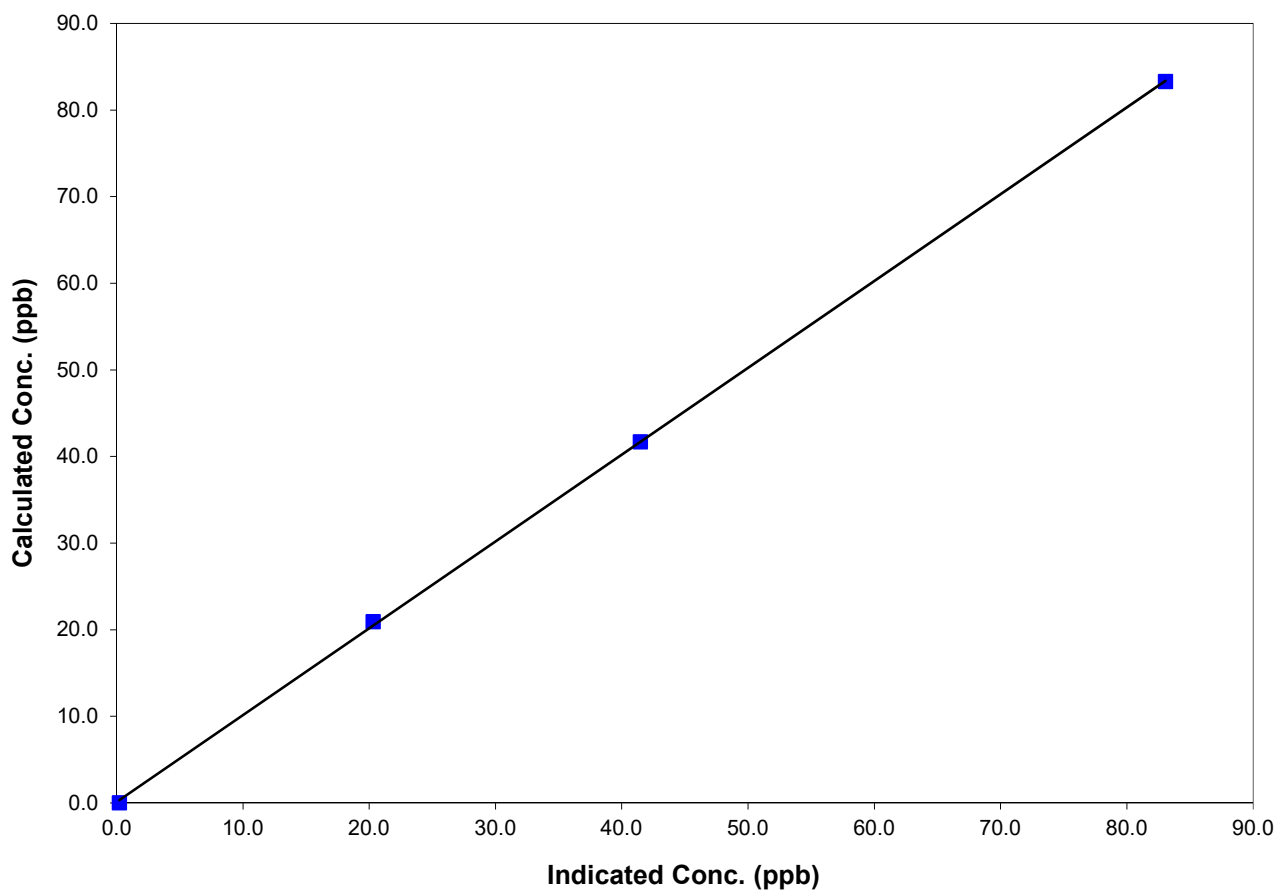
Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:30:00 PM	End Time (MST)	16:30:00 PM
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

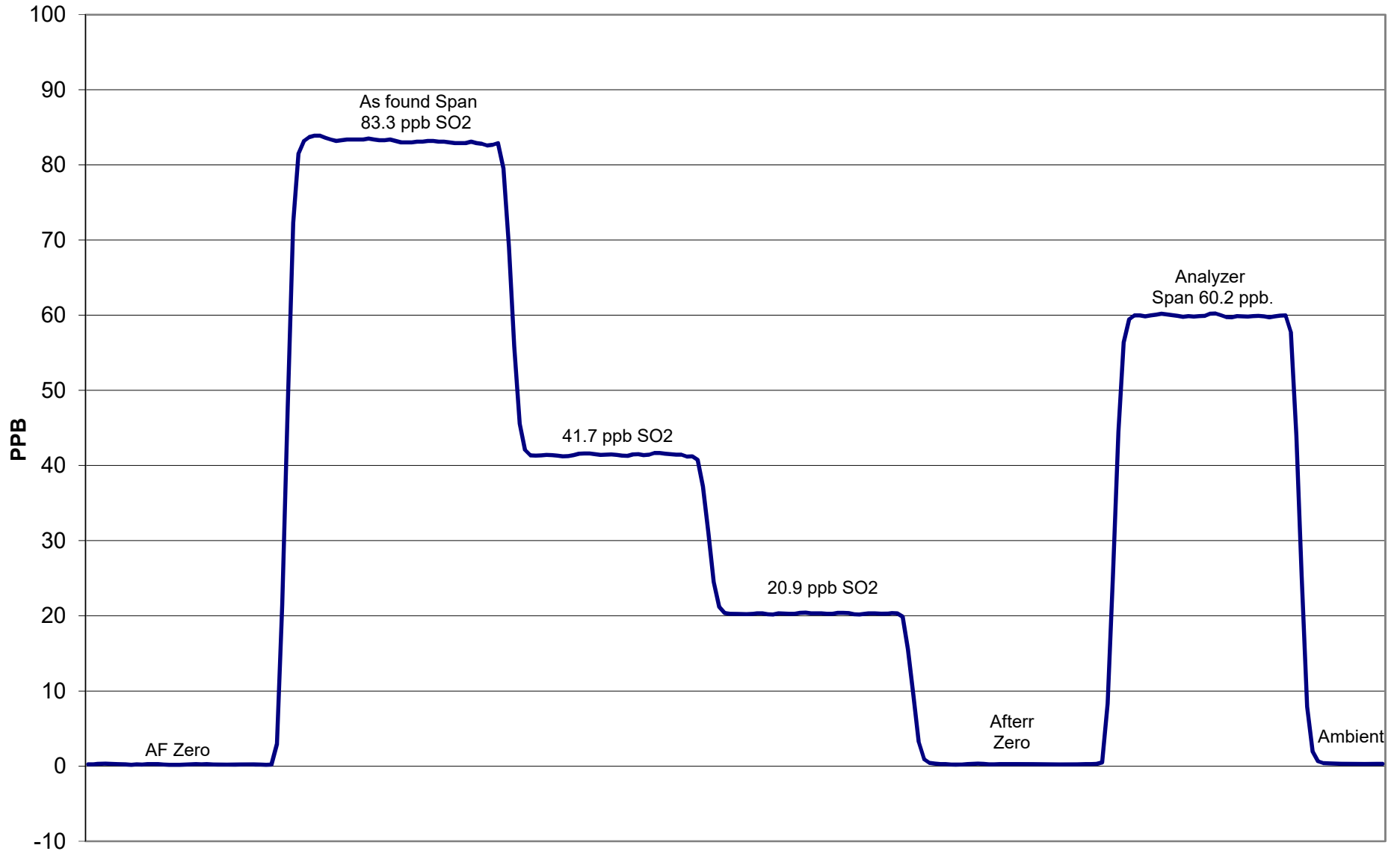
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999919
83.3	83.1	1.0026		
41.7	41.5	1.0041		
20.9	20.3	1.0293	Slope	1.002487
			Intercept	0.101150

SO2 Calibration Curve



SO2 Calibration



May 24, 2017

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017		
Station Number	4	Station Location	Beaverlodge		
Reason:	Routine	Installation	Removal		
Other:					
Start Time (MST)	8:55	End Time (MST)	13:35:00 PM		
Barometric Pressure	0.908	Atm	Station Temperature	20.0	Deg C
Calibrator	Envionics		Serial Number	3474	
NO Cal Gas Conc	48.6	ppm	Cal Gas Expiry Date	August 2, 2019	
NOx Cal Gas Conc	48.9	ppm	Cal Gas Serial #	LL105132	

DACS Information

DACS make	CR3000	DACS serial No.	5237	
Parameter		NO2	NOx	NO
Before	Data Slope	1.000046	1.002625	0.995401
	Data Offset	-0.332433	2.458175	2.522904
After	Data Slope	0.999877	0.993792	0.985978
	Data Offset	-0.135845	2.600771	3.053500
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	2.8	mV	2.8	mV
NOx bkgnd	3.1	mV	3.0	mV
NO coefficient	1.032		1.032	
NOx coefficient	0.999		0.999	
NO2 conv temp	326.8	Deg C	326.8	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-742.6	mV	-743.0	mV
R Cell Press	194.1	in Hg	198.7	in Hg
Sample Flow	0.735	LPM	0.736	LPM

Notes: Slight span adjustment made

Calibration Report

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



Station Information

Calibration Date: May 24, 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	4973	0.00	0.0	0.0	0.0	0.2	-0.2	0.3	N/A	N/A
1	4984	39.99	389.2	386.8	2.4	390.4	390.8	-1.2	0.9970	0.9899
2	4981	20.02	195.8	194.6	1.2	192.9	192.3	-0.2	1.0146	1.0119
3	4990	10.01	97.9	97.3	0.6	93.2	93.1	-0.1	1.0506	1.0450
AFZ	4973	0.00	0.0	0.0	0.0	0.2	-0.2	0.3	0.0000	0.0000
AFS	4993	39.92	387.9	385.5	0.8	396.8	396.9	-0.8	0.9774	0.9712
Average Correction Factor									1.0208	1.0156

As Found Concentrations: NO_x= 400.2 NO= 397.8 As Found Percent Change NO_x= 3.2% NO= 3.2%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 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	0.2	-0.2	0.3	N/A	N/A	N/A	N/A
NO point	389.9	389.9	0.0	389.8	389.9	-0.9	1.0002	1.0000	N/A	N/A
300	389.9	50.5	339.4	391.0	50.5	339.6	0.9972	1.0000	0.9995	100.1%
200	389.9	160.4	229.5	391.0	160.4	229.8	0.9971	1.0000	0.9988	100.1%
100	389.9	278.9	111.1	390.6	278.9	111.0	0.9983	1.0000	1.0008	99.9%
Average Correction Factor							0.9975	1.0000	0.9997	100.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.1	-0.1	ppb	-0.1	0.0	-0.2	ppb
Auto span	292.3	289.7	1.7	ppb	289.4	286.7	1.8	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



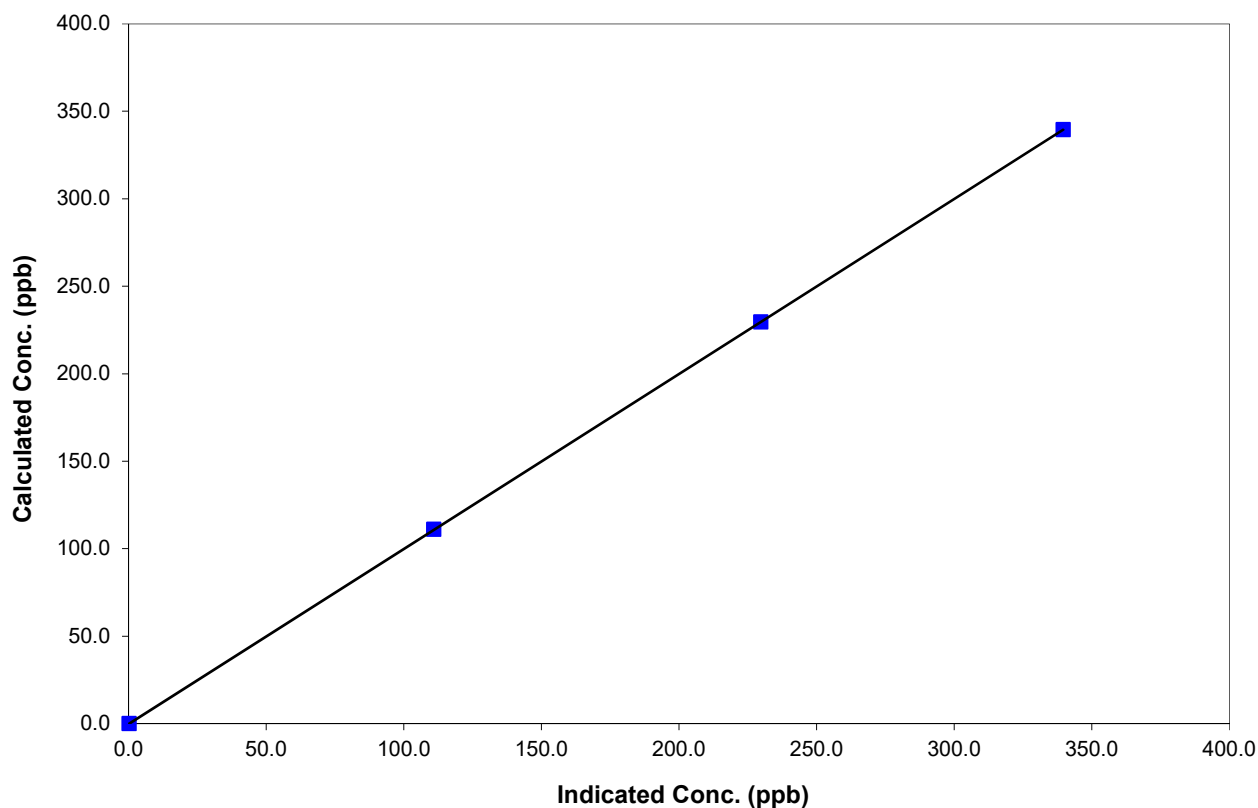
Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	13:35:00 PM
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	0.3	N/A	Correlation Coefficient	0.999999
339.4	339.6	0.9995		
229.5	229.8	0.9988		
111.1	111.0	1.0008	Slope	0.999877
			Intercept	-0.135845

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



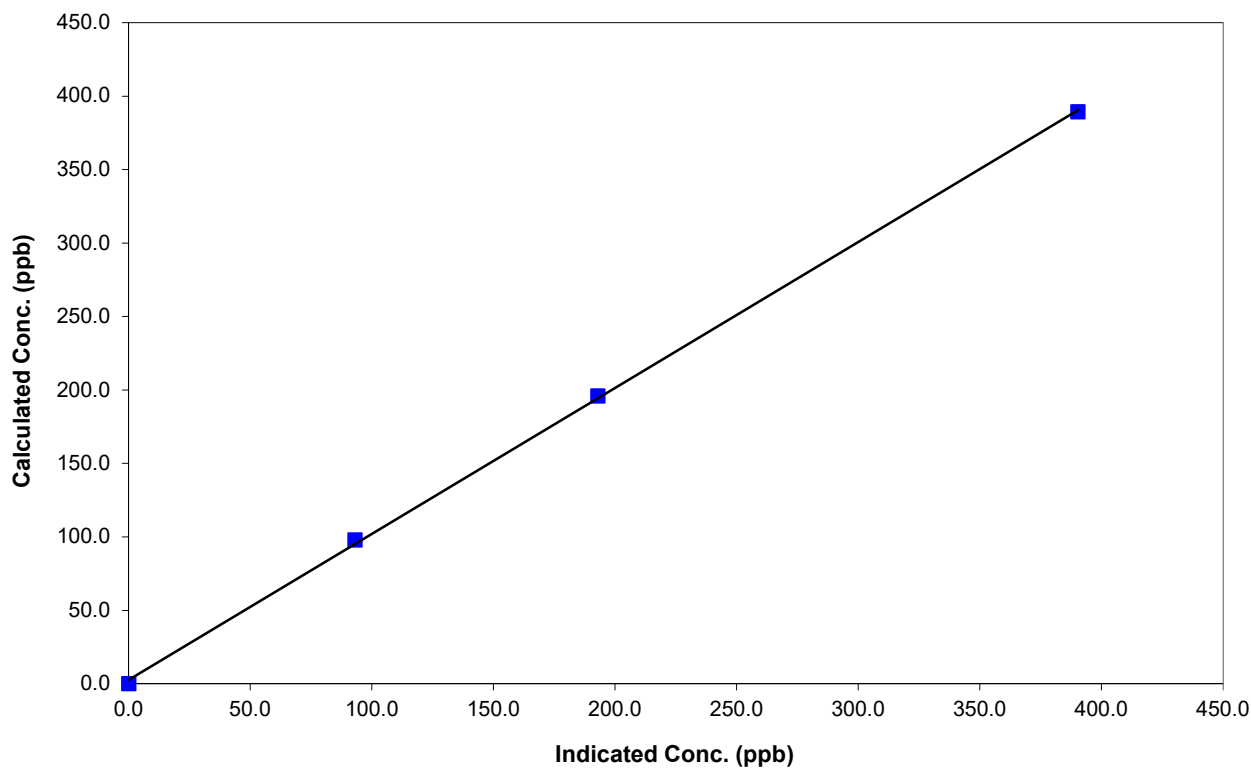
Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	13:35:00 PM
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	0.2	N/A	Correlation Coefficient	0.999773
389.2	390.4	0.9970		
195.8	192.9	1.0146		
97.9	93.2	1.0506	Slope	0.993792
			Intercept	2.600771

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



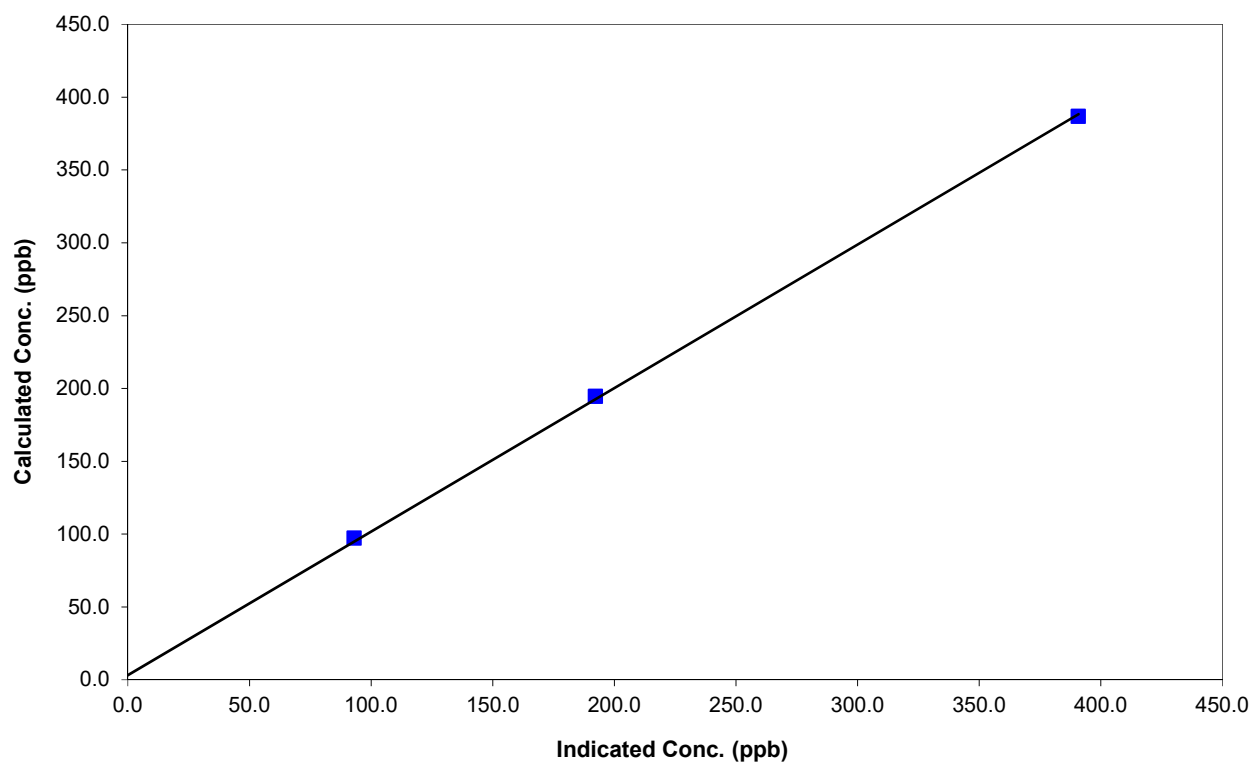
Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:55	End Time (MST)	13:35:00 PM
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	-0.2	N/A	Correlation Coefficient	0.999754
386.8	390.8	0.9899		
194.6	192.3	1.0119		
97.3	93.1	1.0450	Slope	0.985978
			Intercept	3.053500

NO Calibration Curve



NO_x Calibration

The graph displays three data series (Series1, Series2, Series3) across various concentration levels. The y-axis ranges from -10 to 490. The x-axis represents concentration levels.

Key Labels and Data Points:

- As found Span:** 389.2 / 386.8 ppb NO_x/NO
- adjustment point:** 195.8 / 194.6 ppb NO_x/NO
- 2nd high:** 388.9 ppb NO_x
- As Left Span:** 289.4 ppb NO_x, 286.7 ppb NO₂
- Other Labels:** As found Zero, AZ, AMB

Series Data Points (Approximate):

Concentration Level (ppb)	Series1 (ppb)	Series2 (ppb)	Series3 (ppb)
As found Zero	~0	~0	~0
195.8 / 194.6	~195	~195	~195
97.9 / 97.3	~98	~98	~98
388.9	~389	~389	~389
339.4	~339	~339	~339
278.9	~279	~279	~279
229.5	~229	~229	~229
160.4	~160	~160	~160
111.1	~111	~111	~111
50.5	~50	~50	~50
As Left Span	~289	~289	~289

346 of 391

Calibration Report



Parameter 03
Air Monitoring Network PAZA

Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:12	End Time (MST)	15:25:00 PM
Barometric Pressure	0.908 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
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	1.008737	Calculated slope	0.994480
Calculated intercept	-0.216666	Calculated intercept	0.147455

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

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.188		1.137	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	57472/66318	mV	60812/68846	mV
Pressure	671.8	mm Hg	674.8	mm Hg
Flow A	0.794	LPM	0.795	LPM
Flow B	0.733	LPM	0.735	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5018	0.00	0.0	0.5	N/A
5015	0.30	339.4	342.3	0.9916
5020	0.20	229.5	229.1	1.0018
5016	0.10	111.1	111.3	0.9982
5018	0.00	0.0	0.5	As found zero
5018	0.30	339.4	364.3	As found span
Average Correction Factor				0.9972

Calculated value of As Found Response: 366.7 ppm Percent Change of As Found: 8.0%

	before calibration		after calibration	
Auto zero	0.8	ppb	0.7	ppb
Auto span	295.3	ppb	286.1	ppb

Notes: Cleaned the cells
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



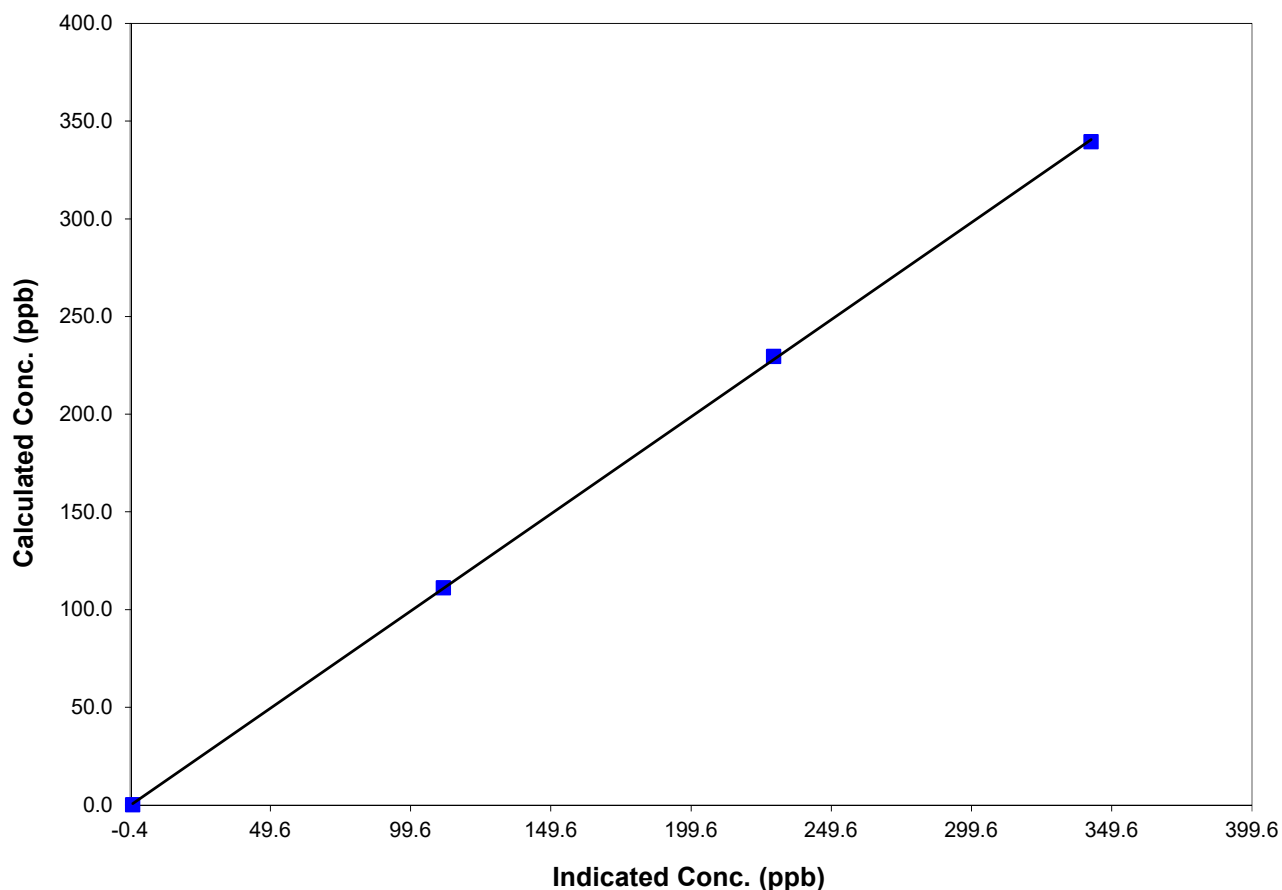
Station Information

Calibration Date	May 24, 2017	Previous Calibration	April 4, 2017
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:12	End Time (MST)	15:25:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

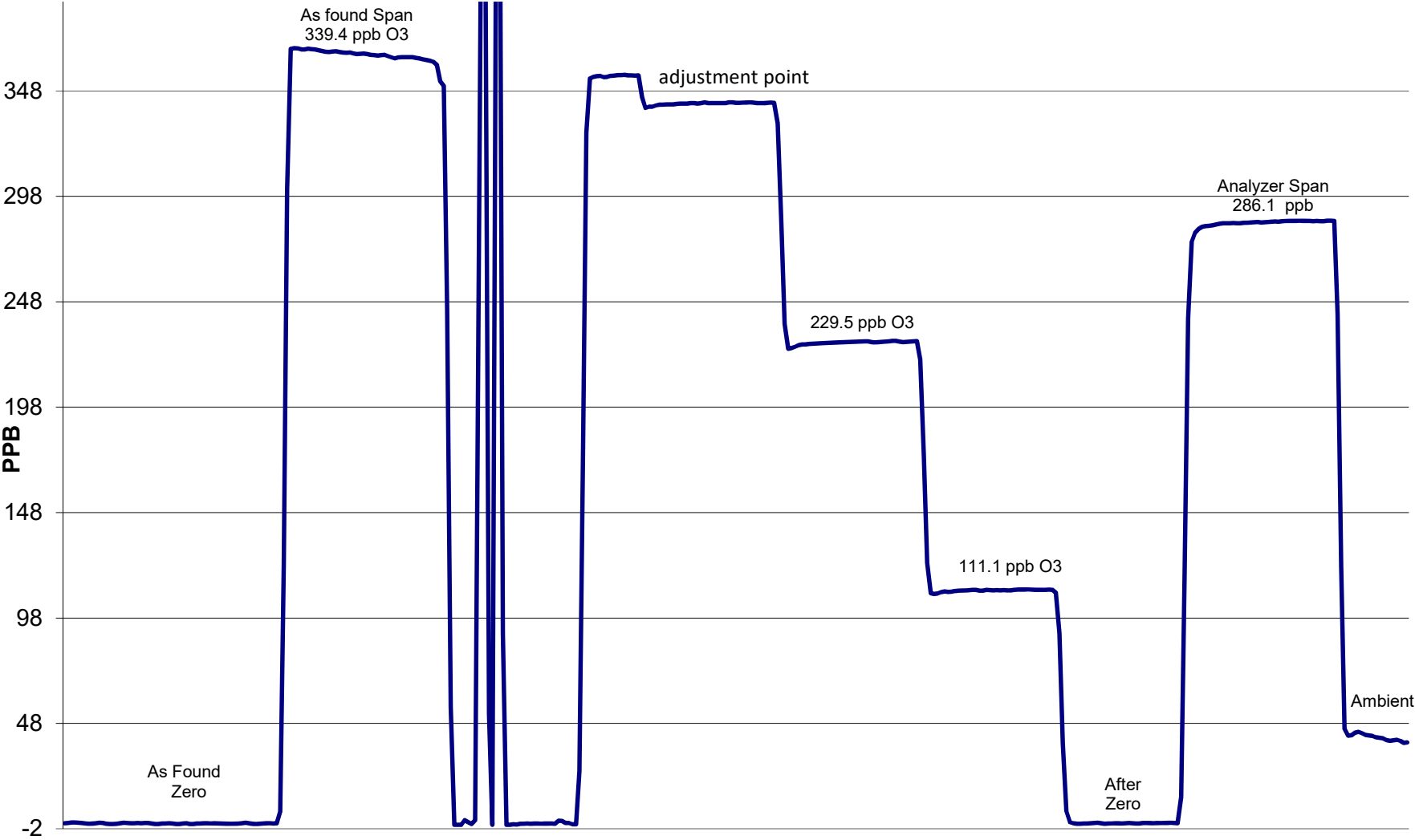
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA	Correlation Coefficient	0.999935
339.4	342.3	0.9916		
229.5	229.1	1.0018		
111.1	111.3	0.9982	Slope	0.994480
			Intercept	0.147455

O3 Calibration Curve



O3 Calibration



May 24, 2017

Calibration Report



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	May 7 2017	Previous Calibration	April 5 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	8:58	End Time (MST)	
Barometric Pressure	0.922 atm	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	3016
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	1.009342	Calculated slope	0.997921
Calculated intercept	3.250415	Calculated intercept	2.460587
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	16.5		16.9	
Coefficient	1.021		1.010	
UV Lamp Voltage	739	LPM	740	LPM
Chamber Temp	43	V	43	V
Perm Gas Temp	45	C	45	C
Pressure	681.9	in Hg	672.2	in Hg
Sample Flow	0.353	LPM	0.485	LPM
Lamp Intensity	47505	Hz	47425	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)
4995	0.00	0.0	-0.4	N/A
4995	39.94	396.6	396.0	1.0015
4995	19.97	199.1	196.0	1.0160
4995	9.97	99.6	95.3	1.0452
4995	0.00	0.0	0.0	As found zero
4995	39.94	396.6	403.1	As found span
Average Correction Factor				1.0209

Calculated value of As Found Response: 410.1 ppm Percent Change of As Found: -3.4%

	before calibration		after calibration	
Auto zero	0.5	ppm	-0.5	ppm
Auto span	288.8	ppm	281.4	ppm

Notes: Run as found, drop to zero, turn off analyzer and replace internal pump diaphragm.

Allow stabilize, restart calibration.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



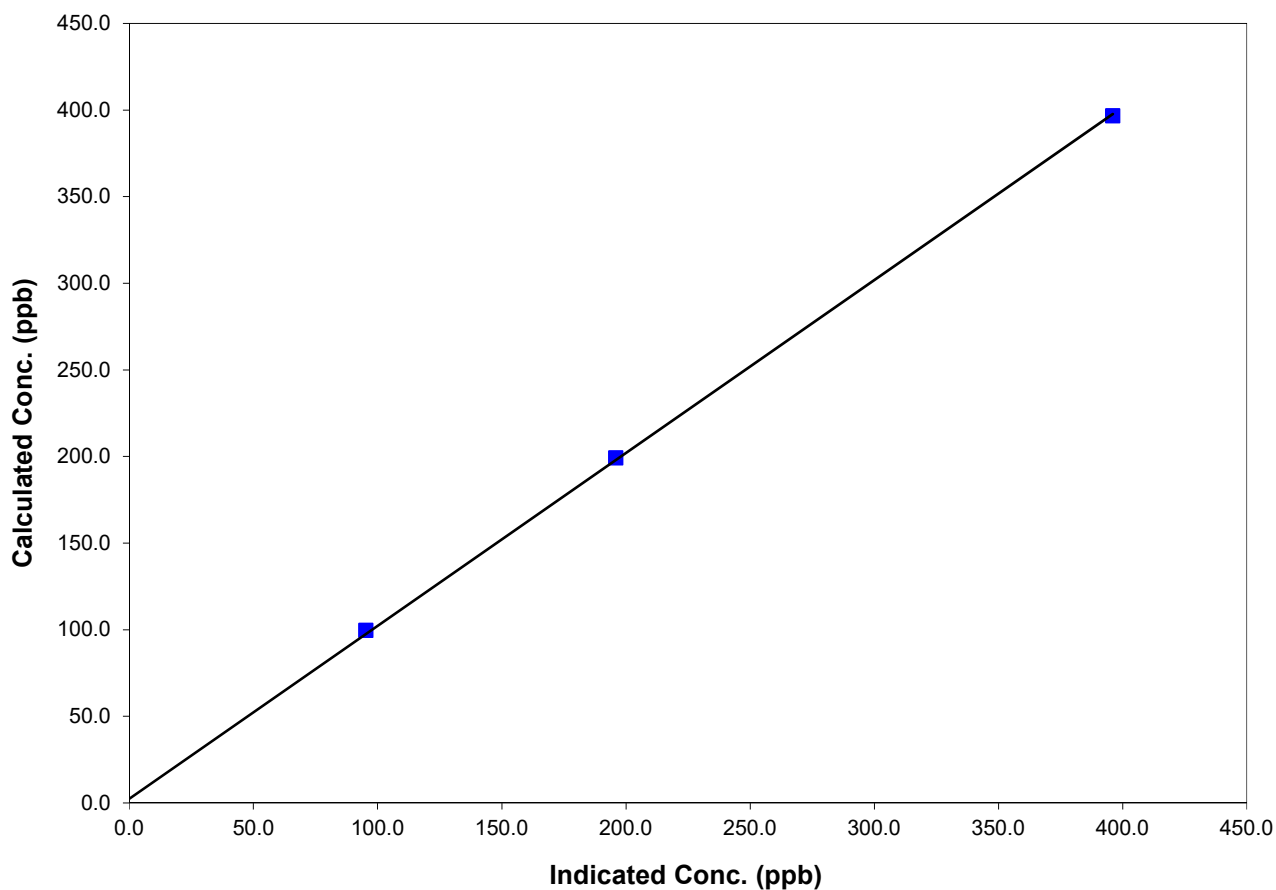
Station Information

Calibration Date	May 7 2017	Previous Calibration	April 5 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	8:58	End Time (MST)	0:00
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

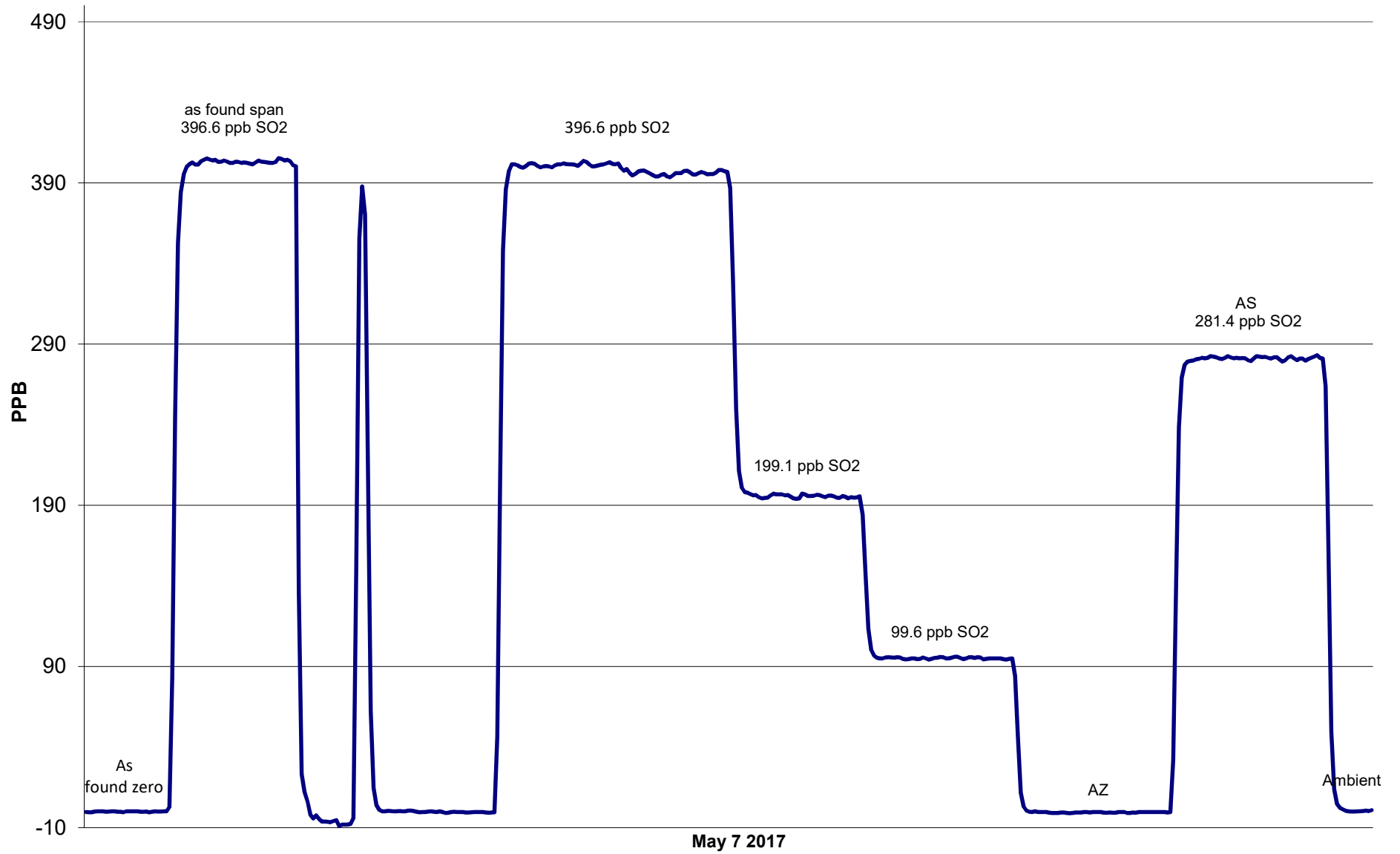
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
396.6	396.0	1.0015	Correlation Coefficient	0.999874
199.1	196.0	1.0160		
99.6	95.3	1.0452	Slope	0.997921
			Intercept	2.460587

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	May 7 2017	Previous Calibration	April 5 2017
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	11:55	End Time (MST)	14:28
Barometric Pressure	0.925 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	10.2 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	0.995810	Calculated slope	0.965364
Calculated intercept	0.745926	Calculated intercept	0.318692
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	9.2	ppb	9.2	ppb
Coefficient	0.873		0.873	
Lamp Voltage	791	V	792	V
Chamber Temp	45	c	45	c
Perm Oven Temp	45	c	45	c
Pressure	519.60	mm Hg	519.60	mm Hg
Sample Flow	0.360	ccm	0.360	lpm
Lamp Intensity	91	%	91	%

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)
4995	0.00	0.0	0.1	N/A
4995	39.94	80.9	83.7	0.9665
4995	19.97	40.6	41.4	0.9818
6995	9.97	14.5	14.4	1.0071
4995	9.97		0.2	Sox Test
4995	0.00	0.0	0.1	As found zero
4995	39.94	80.9	83.7	As found span
Average Correction Factor				0.9851

Calculated value of As Found Response: 84.01 ppm Percent Change of As Found: -3.8%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.3	ppm
Auto span	71.7	ppm	71.2	ppm

Notes: No adjustment made

Points are noisy due to aging 340 coverter. Replacement analyzer with internal coverter has been ordered and received. It will be checked at the shop and installed next month.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



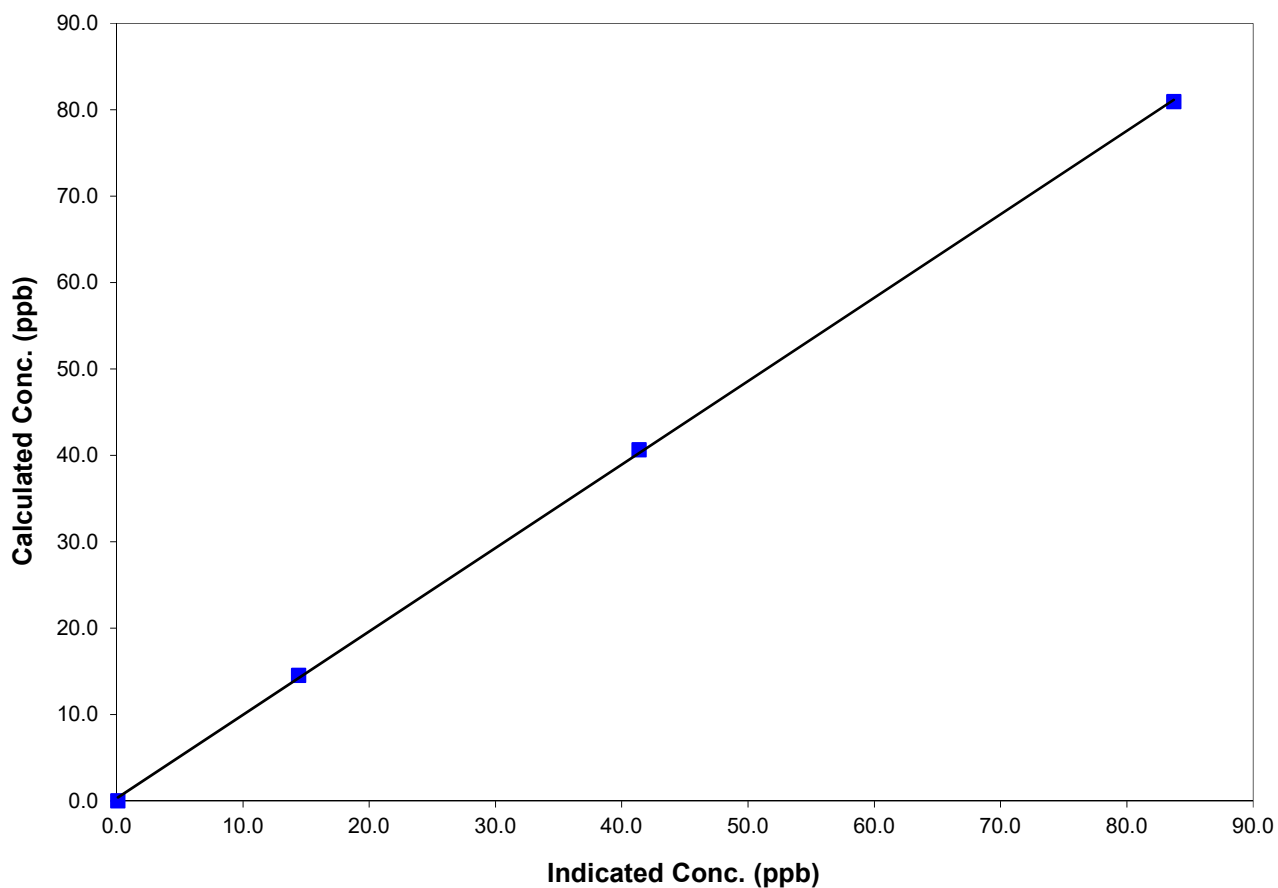
Station Information

Calibration Date	May 7 2017	Previous Calibration	April 5 2017
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:55	End Time (MST)	14:28
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

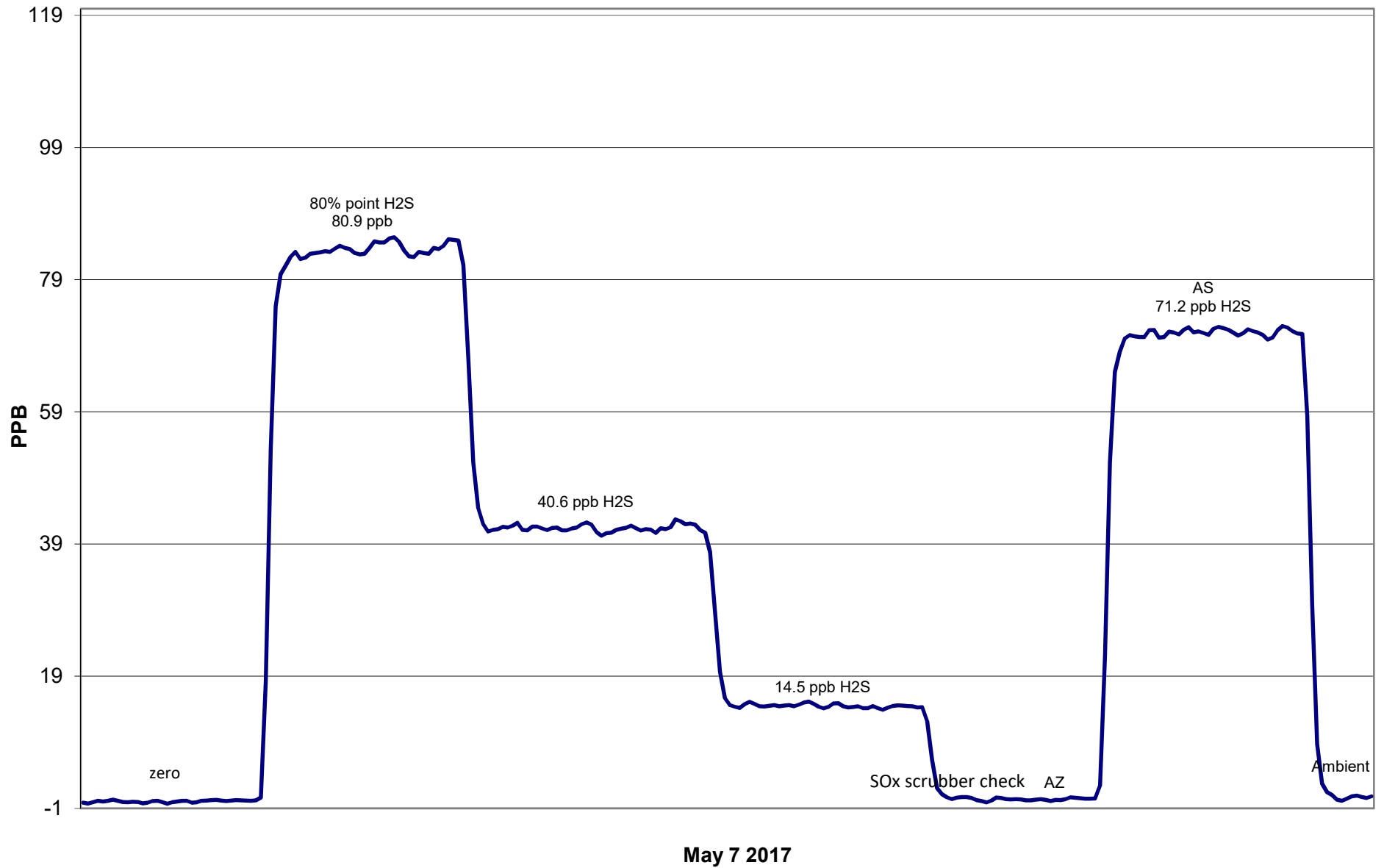
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999885
80.9	83.7	0.9665		
40.6	41.4	0.9818	Slope	0.965364
14.5	14.4	1.0071		
			Intercept	0.318692

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO₂

Air Monitoring Network PAZA



Station Information

Calibration Date	May 19, 2017	Previous Calibration	April 25, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:40	End Time (MST)	13:40:00 PM
Barometric Pressure	0.921 mm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	2/8/2019
Correction factor	0.031095	Cal Gas Cylinder #	LL105132
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.997172	Calculated slope	0.991984
Calculated intercept	0.356045	Calculated intercept	2.075128
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.1		6.9	
coefficient	1.030		1.052	
Lamp Voltage	842	volts	842	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	675.8	mm Hg	677	mm Hg
Sample Flow	0.436	ccm	0.437	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)
4997	0.0	0.00	0.5	N/A
4997	39.97	396.8	399.2	0.9940
4994	19.94	198.8	197.0	1.0096
4994	9.93	99.2	95.5	1.0393
4997	0.0	0.0	0.1	As Found Zero
4997	39.97	396.8	390.5	As Found Span
Average Correction Factor				1.0143

Calculated value of As Found Response: 389.577 ppm Percent Change of As Found: **1.8%**

	before calibration		after calibration	
Auto zero	0.7	ppm	0.4	ppm
Auto span	244.3	ppm	245.1	ppm

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



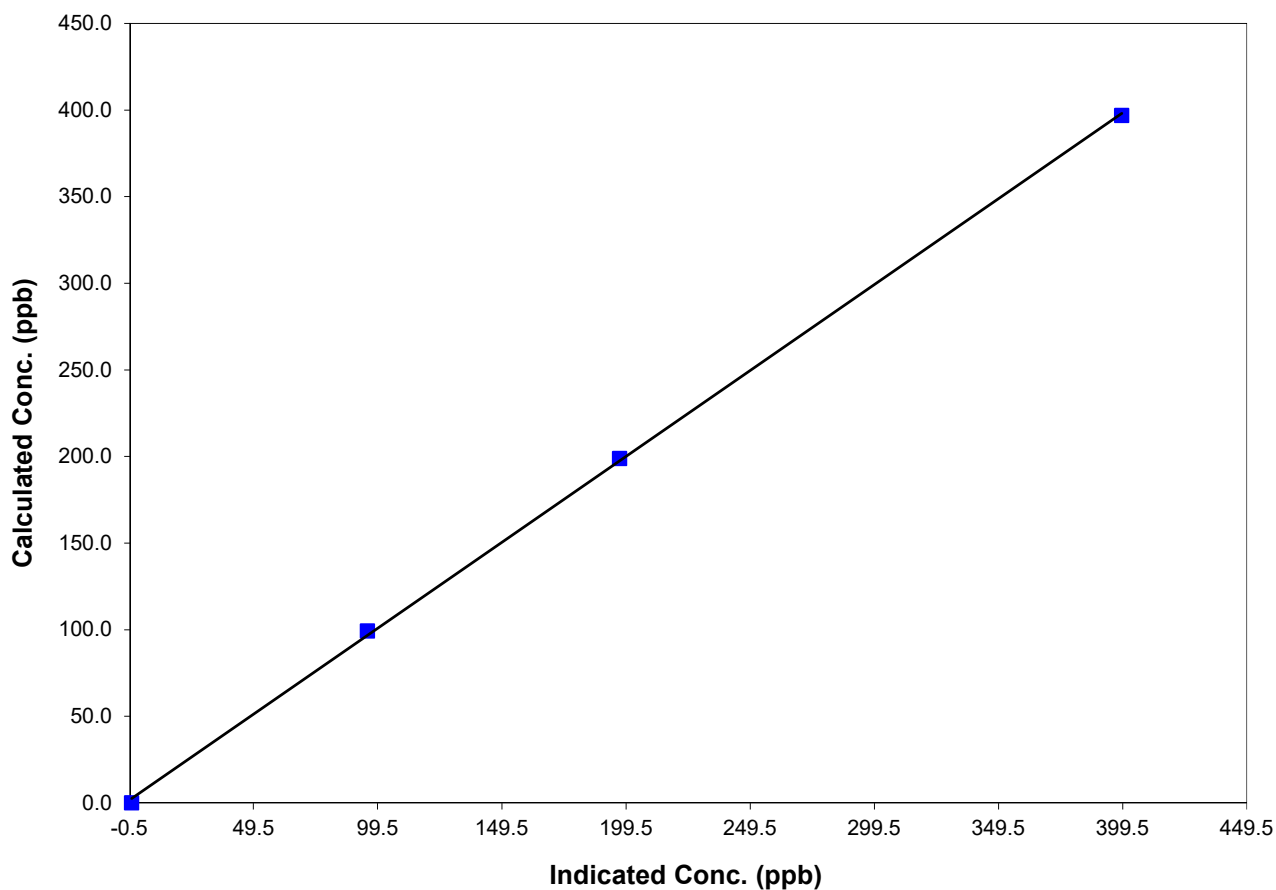
Station Information

Calibration Date	May 19, 2017	Previous Calibration	April 25, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	10:40	End Time (MST)	13:40:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

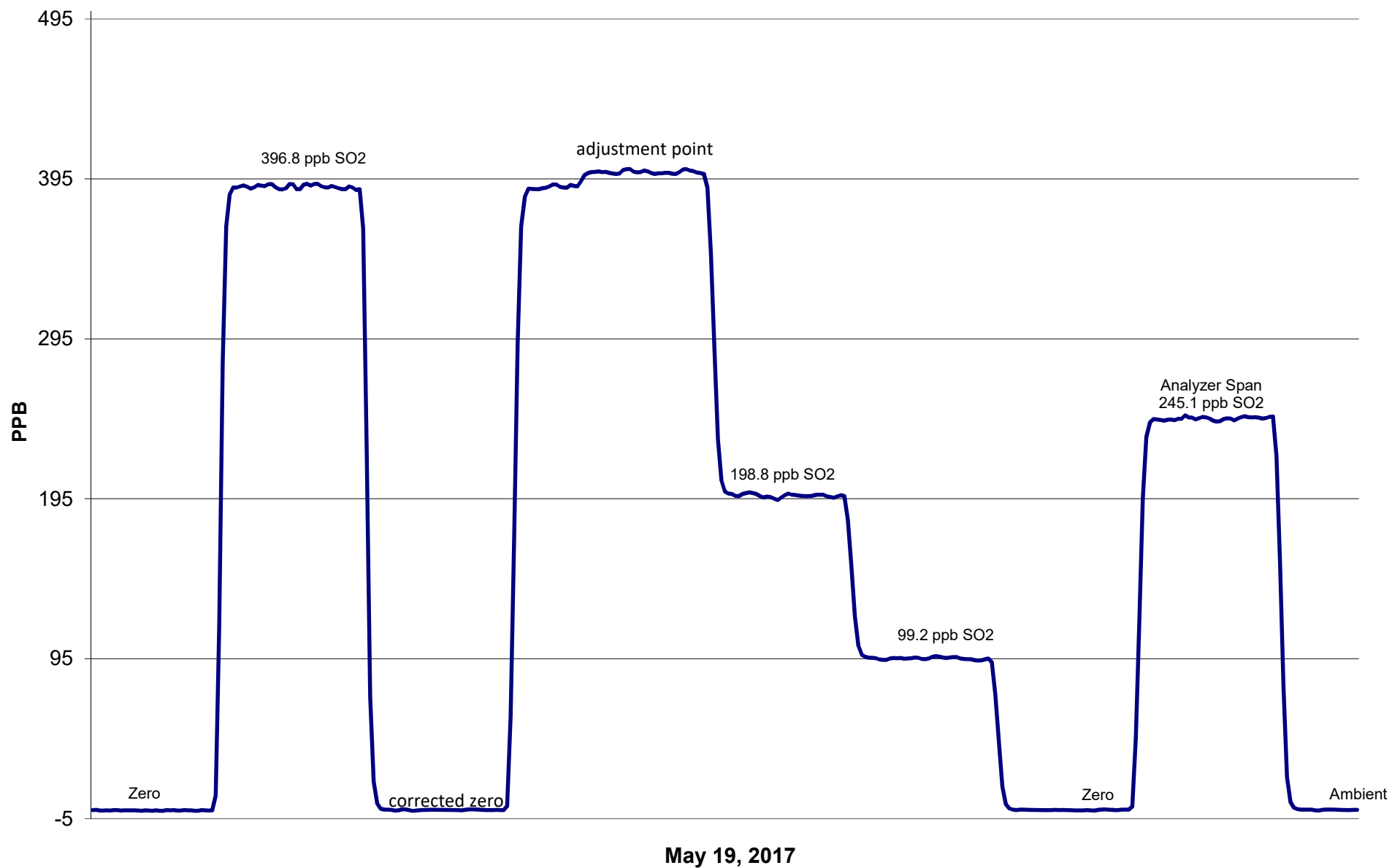
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999813
396.8	399.2	0.9940		
198.8	197.0	1.0096		
99.2	95.5	1.0393	Slope	0.991984
			Intercept	2.075128

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	May 19, 2017	Previous Calibration	April 25, 2017
Station Number	1	Station Location	Donnelly
Reason:	Routine	Install	Removal
Start Time (MST)	10:40	End Time (MST)	13:55:00 PM
Barometric Pressure	0.928 mm	Station Temperature	18.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	3/23/2019
Correction factor	0.031762	Cal Gas Cylinder #	EY0000380
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.005607	Calculated slope	0.994493
Calculated intercept	0.572512	Calculated intercept	0.885156
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	16.3	ppb	17.4	ppb
coefficient	1.027		1.074	
Lamp Voltage	806	volts	805	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	486.6	mm Hg	488.1	mm Hg
Sample Flow	0.730	lpm	0.735	lpm
Lamp Intensity	90	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)
4997	0.00	0.00	-0.4	N/A
4999	39.95	80.87	80.6	1.0027
4993	19.96	40.61	39.6	1.0243
6991	9.97	14.53	13.3	1.0948
4997	0.00	0.00	-0.4	As Found Zero
4999	39.95	80.87	76.6	As Found Span
Average Correction Factor				1.0406

Calculated value of As Found Response: 77.95 ppm Percent Change of As Found: **3.6%**

	before calibration		after calibration	
Auto zero	-0.5	ppm	-0.5	ppm
Auto span	63.4	ppm	66.0	ppm

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



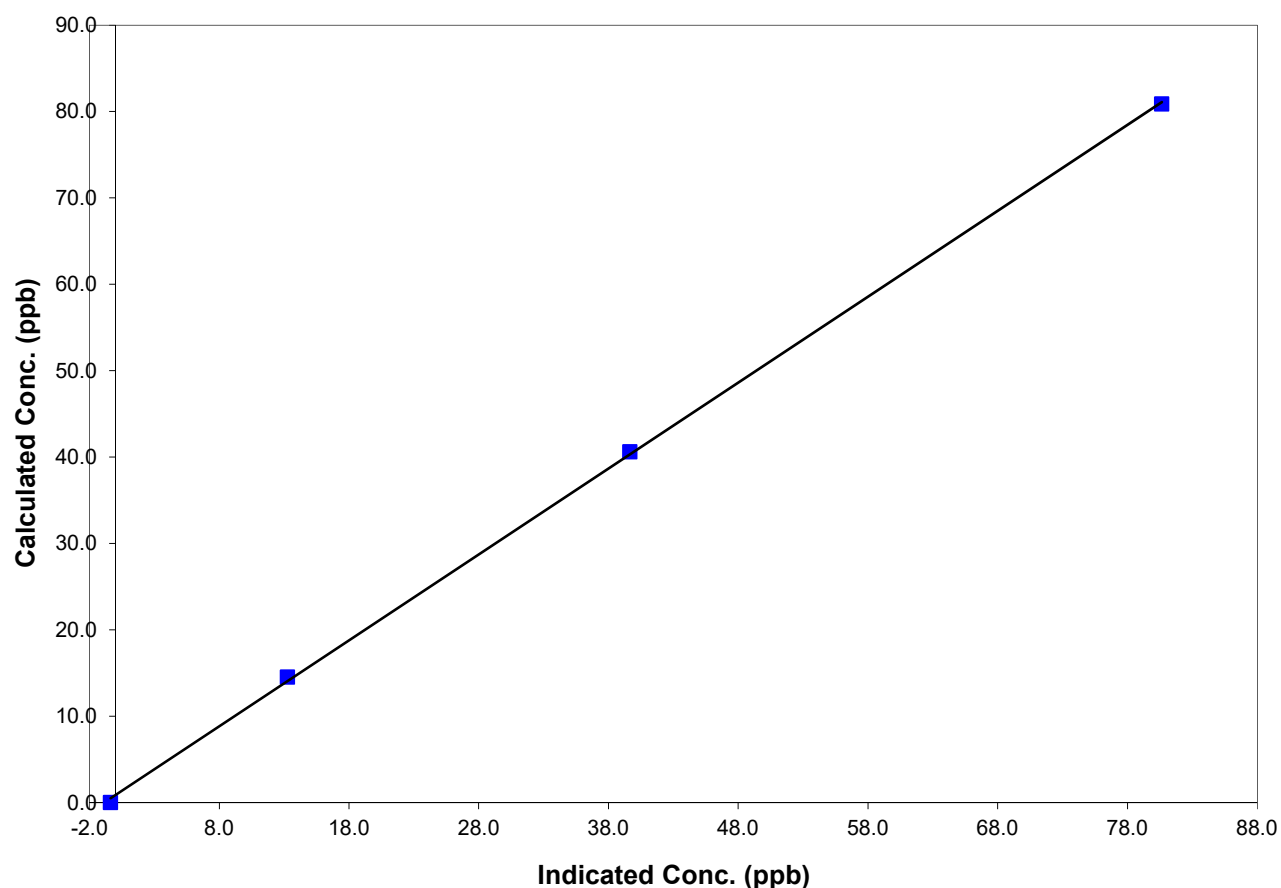
Station Information

Calibration Date	May 19, 2017	Previous Calibration	April 25, 2017
Station Number	1	Station Location	Donnely
Start Time (MST)	10:40	End Time (MST)	13:55:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

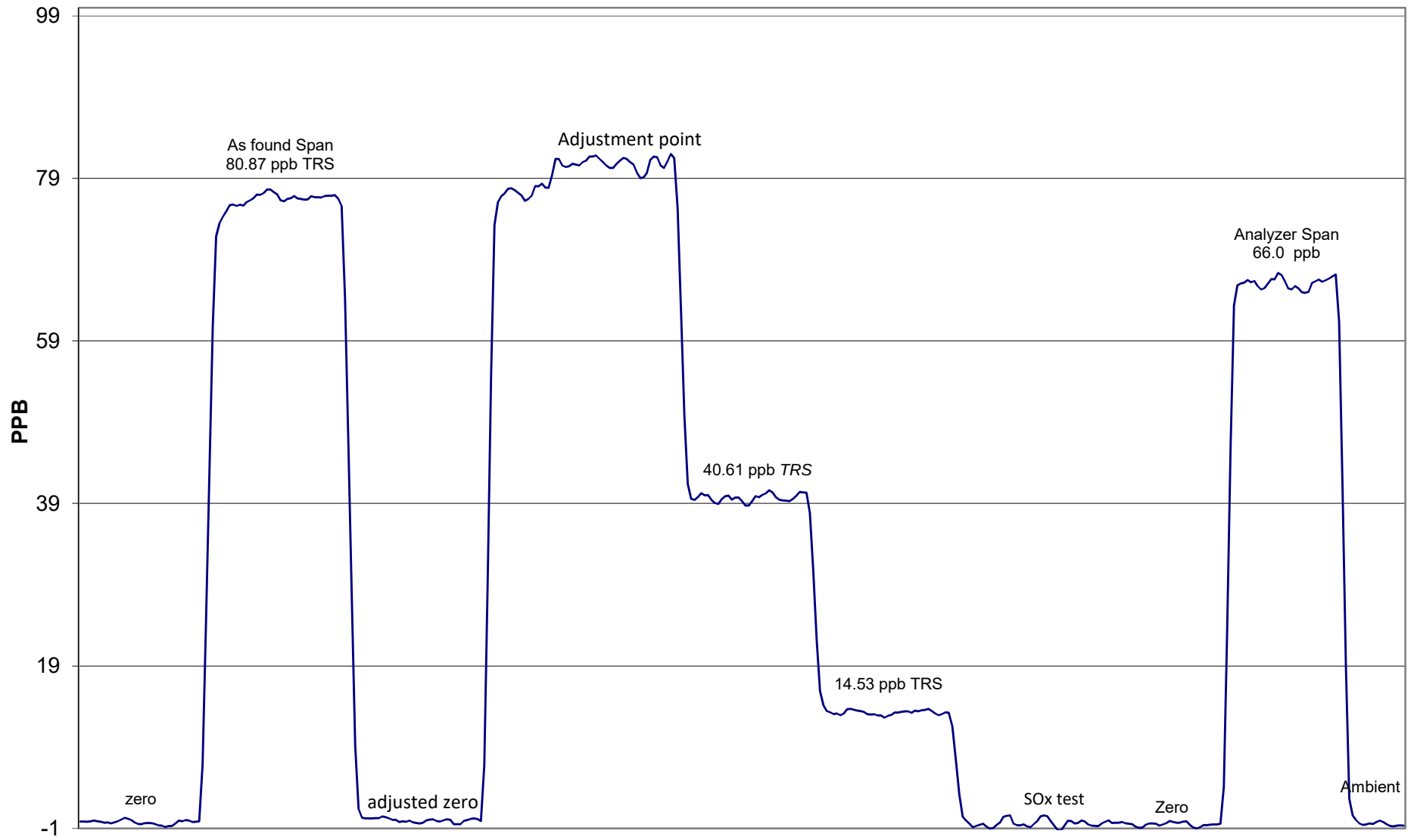
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A	Correlation Coefficient	0.999839
80.9	80.6	1.0027		
40.6	39.6	1.0243		
14.5	13.3	1.0948	Slope	0.994493
			Intercept	0.885156

TRS Calibration Curve



H2S Calibration



May 19, 2017

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	May 9, 2017	Previous Calibration	April 20, 2017
Station Number	10	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:00	End Time (MST)	12:25
Barometric Pressure	0.929 Atm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	50 ppm	Cal Gas Expiry Date	8/2/2019
Gas Cert Reference	LL105132		
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	0.977109	Calculated slope	0.997772
Calculated intercept	3.220115	Calculated intercept	2.549186
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.5		23.7	
Coefficient	1.066		1.046	
UV Lamp Voltage	892	V	892	V
Chamber Temp	44.4	C	44.4	C
Perm Gas Temp	45	C	45	C
Pressure	679.8	mm Hg	677.5	mm Hg
Sample Flow	0.469	LPM	0.468	LPM
Lamp Intesity	30372	Hz	30376	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)
4995	0.00	0.0	-0.4	N/A
4995	39.94	396.6	396.1	1.0014
4995	19.97	199.1	195.7	1.0176
4995	9.97	99.6	95.3	1.0451
4995	0.00	0.0	-0.4	As found zero
4995	39.94	396.6	404.2	As found span
Average Correction Factor				1.0213

Calculated value of As Found Response: 398.557 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	207.9	ppm	199.7	ppm

Notes: Span adjustment made. Third dilution point interrupted by auto zero. Place back in sample and run third point.

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



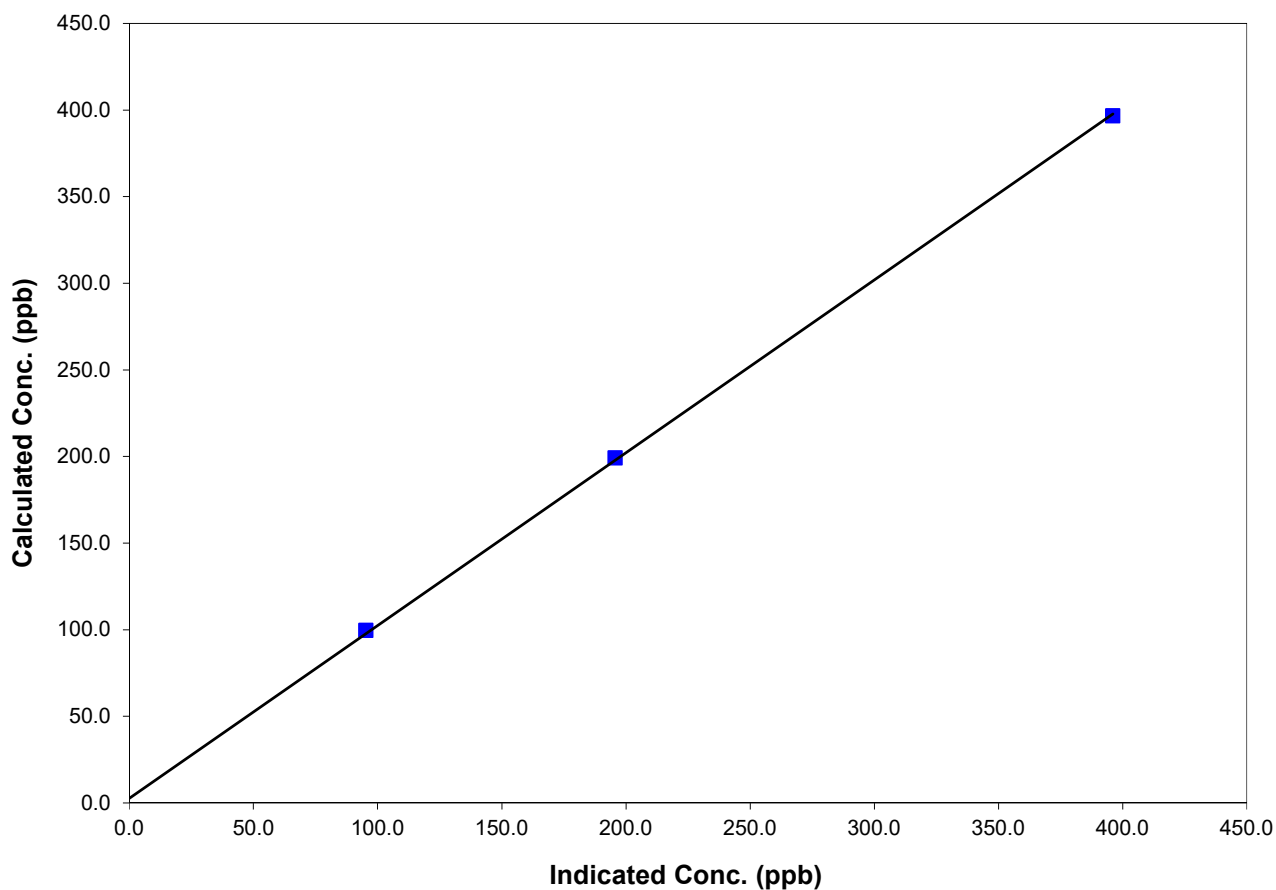
Station Information

Calibration Date	May 9, 2017	Previous Calibration	April 20, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:00	End Time (MST)	12:25
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

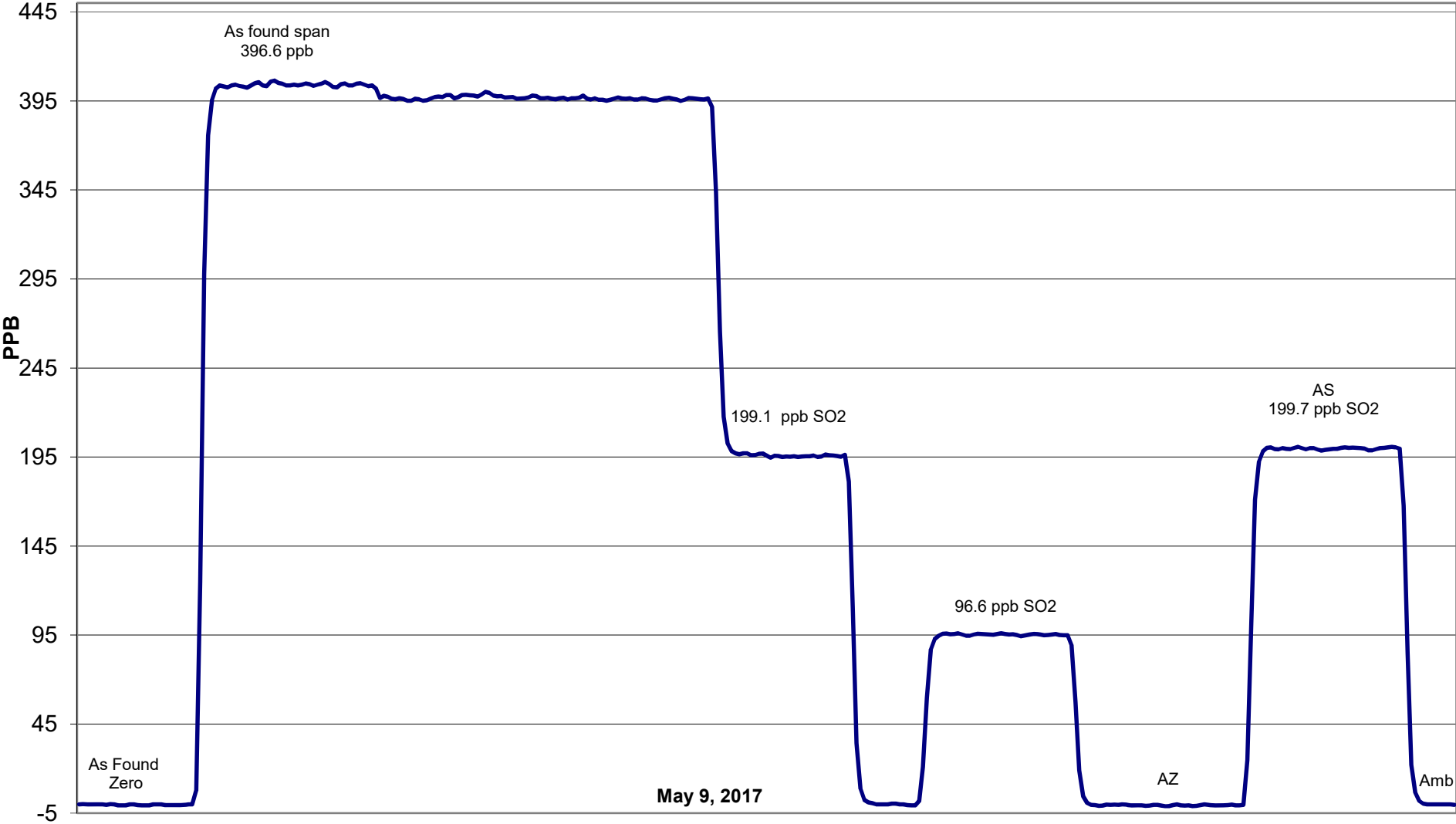
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A	Correlation Coefficient	0.999866
396.6	396.1	1.0014		
199.1	195.7	1.0176		
99.6	95.3	1.0451	Slope	0.997772
			Intercept	2.549186

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Station Information				
Calibration Date	May 9, 2017		Previous Calibration	April 20, 2017
Station Number	10		Station Location	Rycroft
Reason:	Routine	Installation	Removal	Other: _____
Start Time (MST)	9:00		End Time (MST)	13:45
Barometric Pressure	0.929	Atm	Station Temperature	20.5 Deg C
Calibrator	Environics		Serial Number	6586
NO Cal Gas Conc	48.6	ppm	Cal Gas Expiry Date	August 2, 2019
NOx Cal Gas Conc	48.9	ppm	Cal Gas Serial #	LL105132

DACS Information

DACS make		CR3000		DACS serial No.		5407	
	Parameter	NO2	NOx	NO			
Before	Data Slope	0.995752	0.996612	0.996089			
	Data Offset	-0.132461	3.568925	3.797016			
After	Data Slope	0.992105	0.999607	0.998162			
	Data Offset	2.105293	1.635174	1.589196			
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	ppb
NO offset	5.9	mV	5.8	mV
NOx bkgnd	6.0	mV	5.9	mV
NO coefficient	0.975		0.956	
NOx coefficient	0.999		1.001	
NO2 conv temp	323.2	Deg C	323.2	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-835.1	mV	-835.1	mV
R Cell Press	173.8	in Hg	174.7	in Hg
Sample Flow	0.821	LPM	0.827	LPM

Notes: Slight span adjust.

Calibration Report

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



Station Information

Calibration Date: May 9, 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	4995	0.00	0.0	0.0	0.0	-0.1	0.0	-2.6	N/A	N/A
1	4995	39.94	387.9	385.5	2.4	387.1	385.4	0.0	1.0021	1.0003
2	4995	19.97	194.7	193.5	1.2	192.7	191.5	0.4	1.0104	1.0107
3	4995	9.97	97.4	96.8	0.6	94.0	93.9	0.3	1.0361	1.0313
AFZ	4995	0.00	0.0	0.0	0.0	-0.1	0.0	0.0	0.0000	0.0000
AFS	4995	39.94	387.9	385.5	0.8	395.3	393.6	0.0	0.9813	0.9794
Average Correction Factor									1.0162	1.0141

As Found Concentrations: NO_x= 397.6 NO= 395.9 As Found Percent Change NO_x= 2.5% 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	0.0	0.0	0.0	-0.1	0.0	-2.6	N/A	N/A	N/A	N/A
NO point	384.7	384.7	0.0	387.0	384.7	0.3	0.9942	1.0000	N/A	N/A
300	384.7	68.7	316.0	386.2	68.7	316.0	0.9962	1.0000	1.0002	100.0%
200	384.7	167.8	216.9	386.5	167.8	216.8	0.9955	1.0000	1.0005	99.9%
100	384.7	268.5	116.2	386.2	268.5	115.7	0.9962	1.0000	1.0045	99.6%
Average Correction Factor							0.9960	1.0000	1.0017	99.8%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.3	-0.2	-0.3	ppb	0.1	0.0	0.1	ppb
Auto span	161.5	160.1	0.6	ppb	146.3	144.7	0.9	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



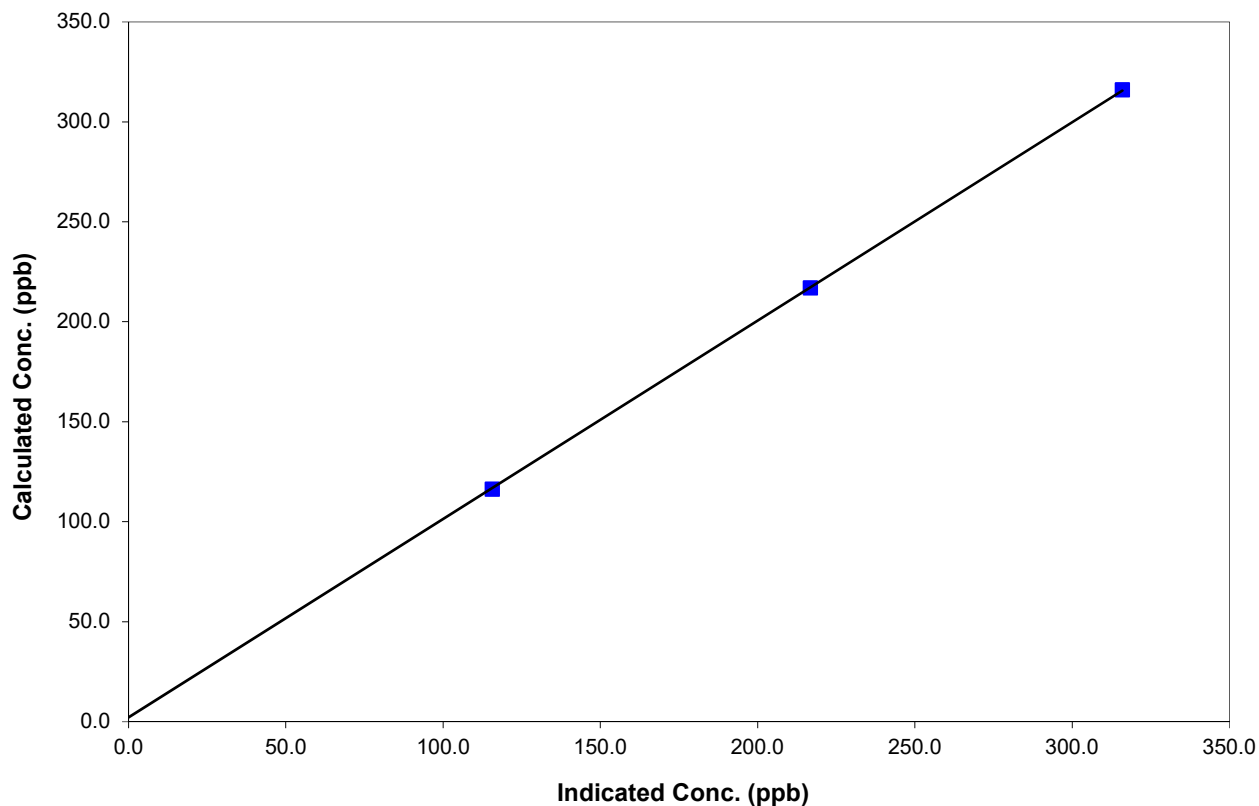
Station Information

Calibration Date	May 9, 2017	Previous Calibration	April 20, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:00	End Time (MST)	13:45
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	-2.6	N/A	Correlation Coefficient	0.999982
316.0	316.0	1.0002		
216.9	216.8	1.0005		
116.2	115.7	1.0045	Slope	0.992105
			Intercept	2.105293

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



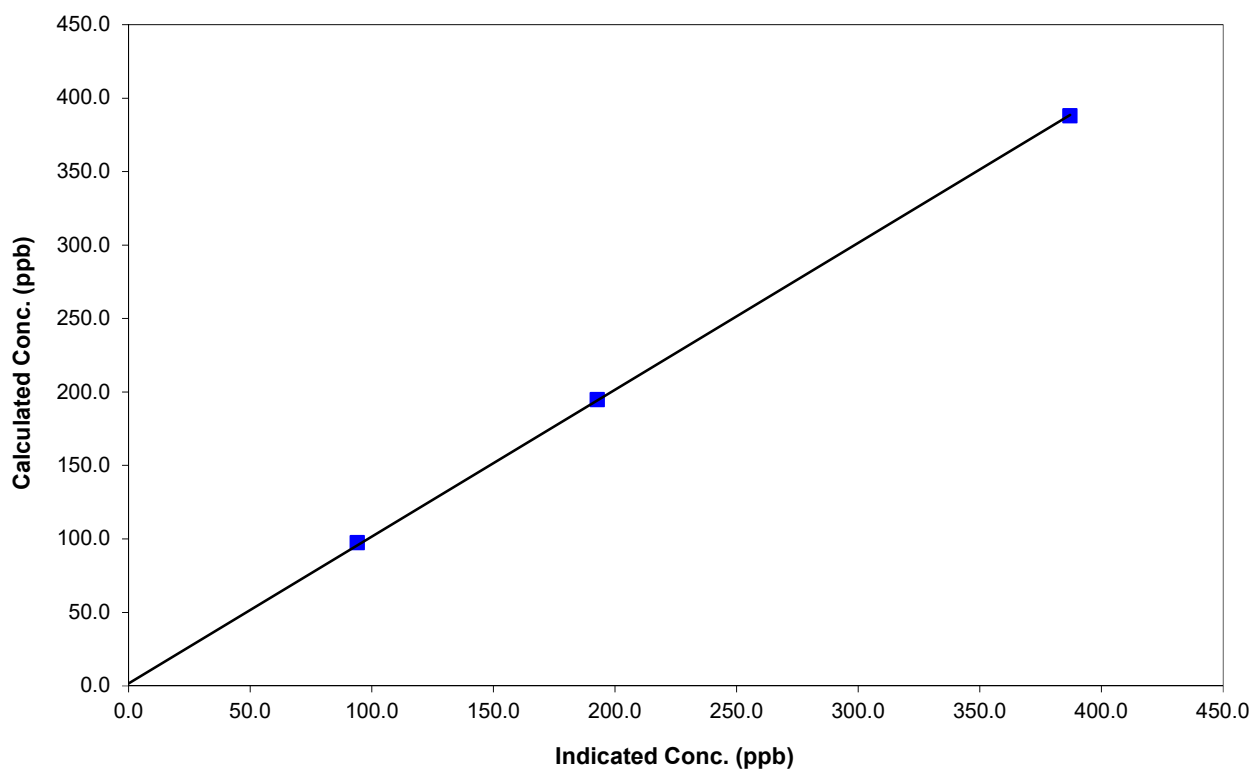
Station Information

Calibration Date	May 9, 2017	Previous Calibration	April 20, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:00	End Time (MST)	13:45
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	-0.1	N/A	Correlation Coefficient	0.999923
387.9	387.1	1.0021		
194.7	192.7	1.0104		
97.4	94.0	1.0361	Slope	0.999607
			Intercept	1.635174

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



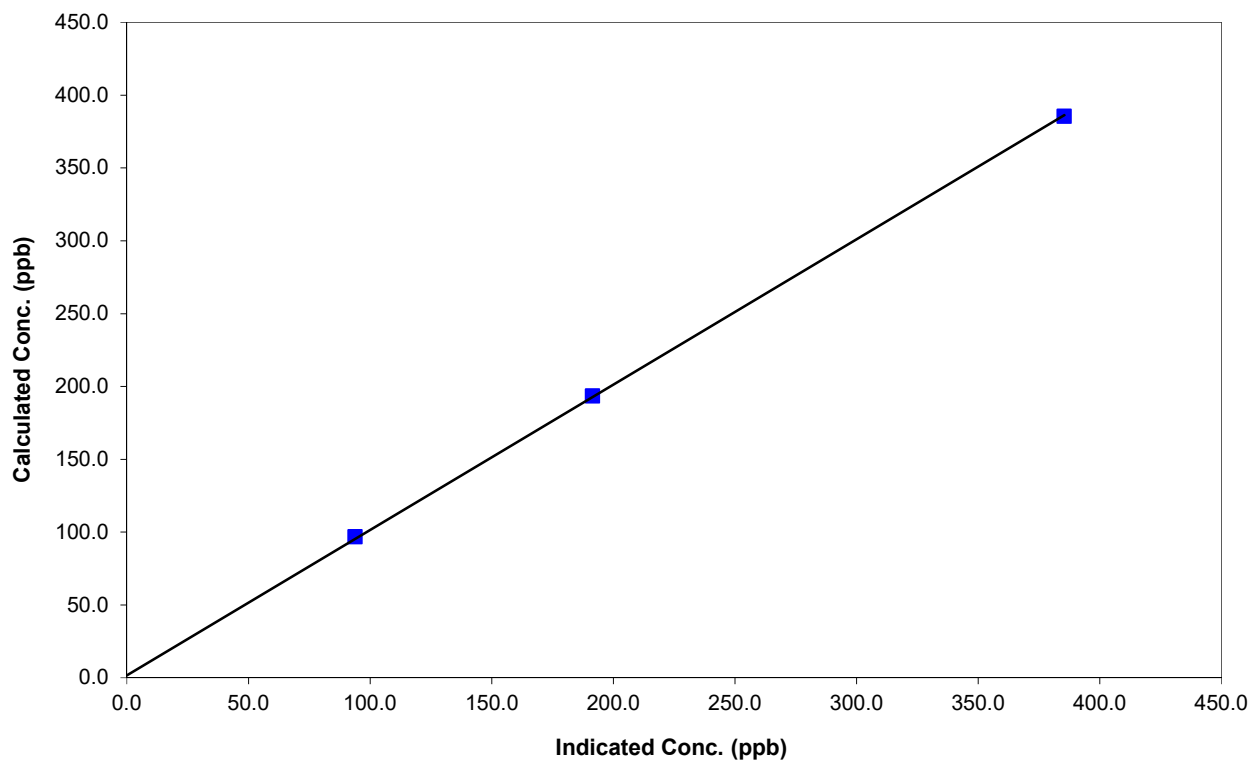
Station Information

Calibration Date	May 9, 2017	Previous Calibration	April 20, 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:00	End Time (MST)	13:45
Analyzer make	TEI 42i	Analyzer serial #	0701120011

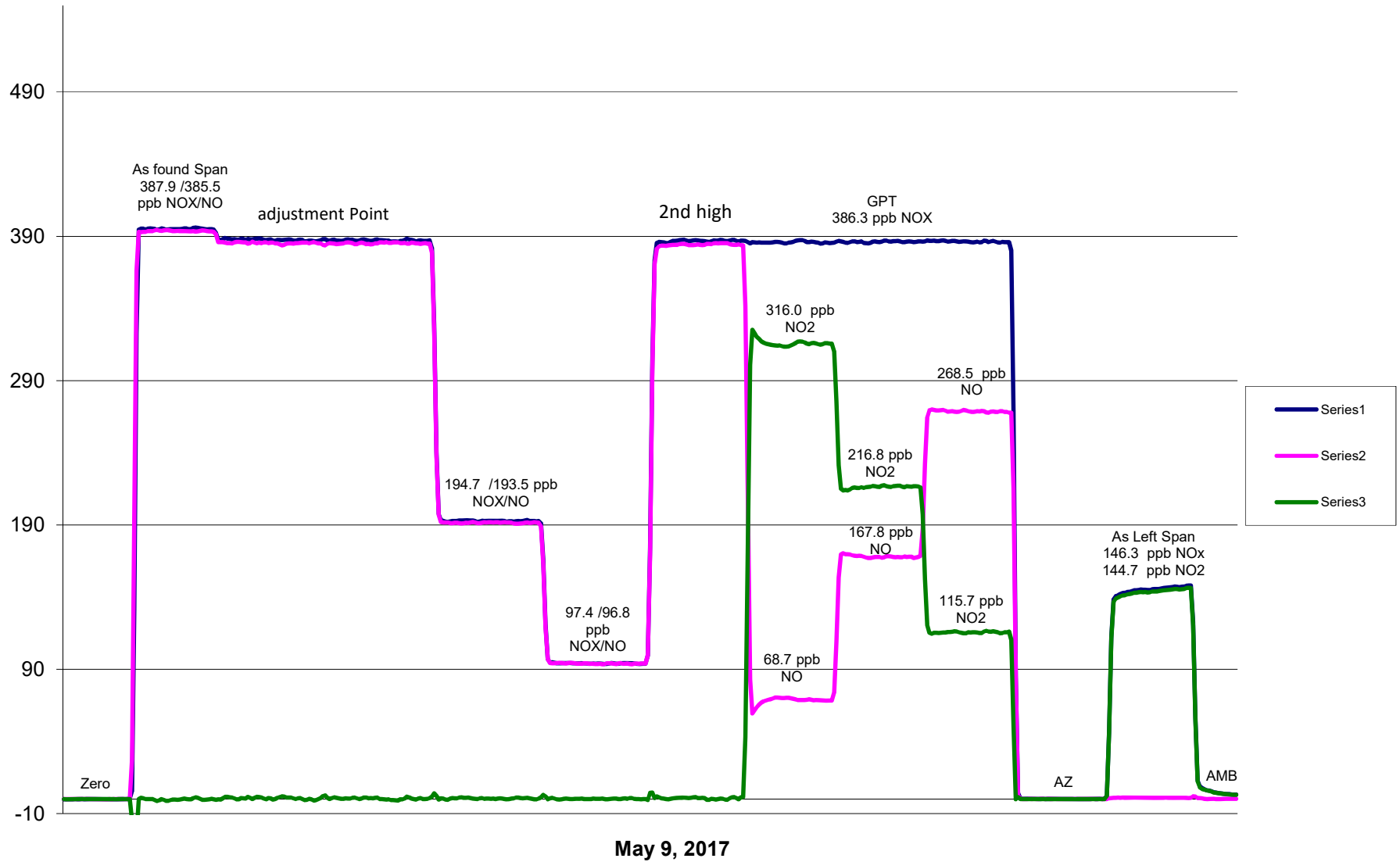
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999926
385.5	385.4	1.0003		
193.5	191.5	1.0107		
96.8	93.9	1.0313	Slope	0.998162
			Intercept	1.589196

NO Calibration Curve



NO_x Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	May 9 2017	Previous Calibration	April 20 2017
Station Number	10	Station Location	Rycroft
Reason:	☐ Routine	☒ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:45	End Time (MST)	14:45
Barometric Pressure	0.929 atm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.000041	Calculated slope	0.999159
Calculated intercept	0.070848	Calculated intercept	0.915841
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.5	ppb	-0.5	ppb
Span	0.998		0.998	
Cell A intensity	72613	Hz	77523	Hz
Cell B intensity	72526	Hz	75498	Hz
Pressure	673.20	in Hg	673.60	in Hg
CellA Flow	0.708	ccm	0.708	ccm
Cell B Flow	0.700	cmm	0.701	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)
4995	0.00	0.0	0.0	N/A
4995	0.30	316.0	316.3	0.9991
4995	0.20	216.9	215.3	1.0075
4995	0.10	116.2	114.4	1.0153
4995	0.00	0.0	0.0	As found zero
4995	0.30	316.0	316.3	As found span
Average Correction Factor				1.0073

Calculated value of As Found Response: 316.4 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.0	ppb
Auto span	390.8	ppb	410.4	ppb

Notes: No adjustments made. Initiated Level 1 for after internal span. Scheduled auto cal should engage about 15:00 MST, the value from that auto cal will be entered as the after span on calibration report.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



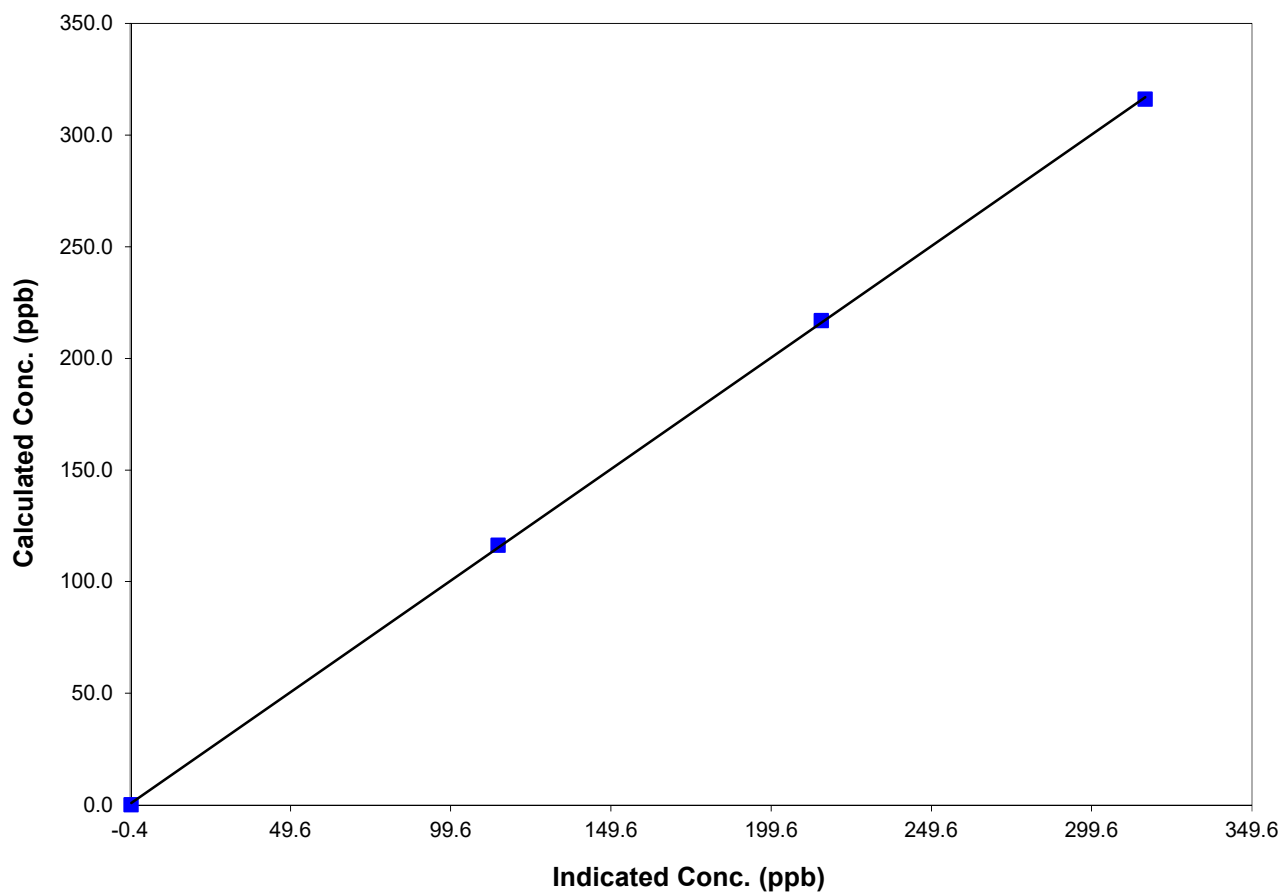
Station Information

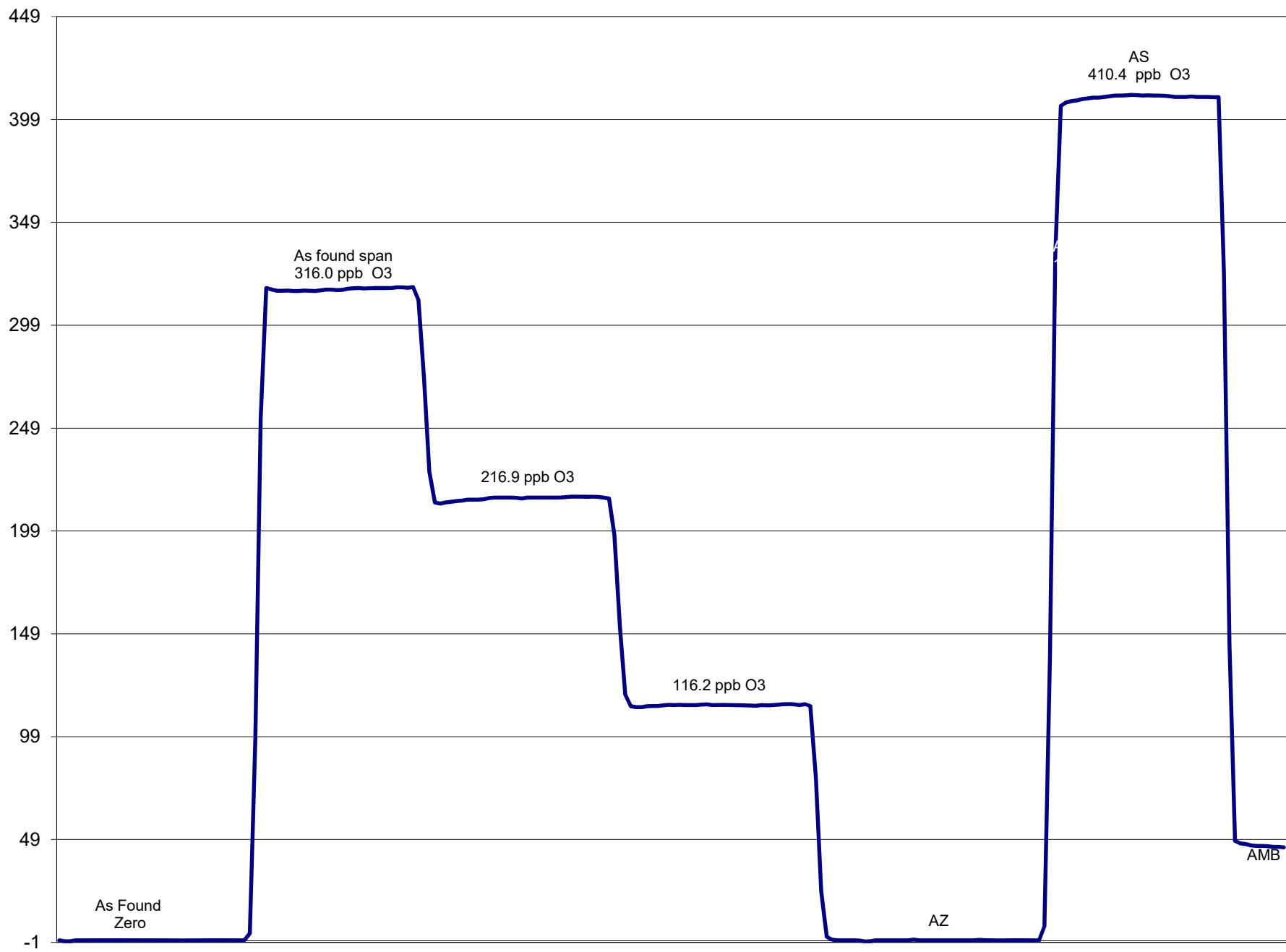
Calibration Date	May 9 2017	Previous Calibration	April 20 2017
Station Number	10	Station Location	Rycroft
Start Time (MST)	12:45	End Time (MST)	14:45
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA	Correlation Coefficient	0.999940
316.0	316.3	0.9991		
216.9	215.3	1.0075		
116.2	114.4	1.0153	Slope	0.999159
			Intercept	0.915841

O3 Calibration Curve





May 9 2017

Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	May 6, 2017	Previous Calibration	April 21, 2017
Station Number	1	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:

Start Time (MST)	8:40	End Time (MST)	11:45
Barometric Pressure	0.921 atm	Station Temperature	19.0 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)
1996	0.00	0.00	0.00	N/A
1997	65.95	12.92	12.92	0.9996
1997	40.97	8.12	8.05	1.0091
1997	15.98	3.21	3.12	1.0274
1996	0.00	0.00	0.00	As Found Zero
1997	65.95	12.92	12.34	As Found Span
Average Correction Factor				1.0120

Calculated value of As Found Response: 12.972 ppm Percent Change of As Found: -0.4%

	Before		After
Calculated slope	1.047115	Calculated slope	0.998607
Calculated intercept	0.050224	Calculated intercept	0.046794

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	7.59	ppm	7.87	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)
1996	0.00	0.00	0.00	N/A
1997	65.95	17.67	17.66	1.0005
1997	40.97	11.11	11.02	1.0082
1997	15.98	4.39	4.17	1.0532
1996	0.00	0.00	0.00	As Found Zero
1997	65.95	17.67	18.12	As Found Span
Average Correction Factor				1.0206

Calculated value of As Found Response: 17.655 ppm Percent Change of As Found: 0.1%

	Before		After
Calculated slope	0.967559	Calculated slope	0.996888
Calculated intercept	0.119944	Calculated intercept	0.105604

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.24	ppm	10.55	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)
1996	0.00	0.00	0.00	N/A
1997	65.95	30.59	30.63	0.9985
1997	40.97	19.23	19.07	1.0085
1997	15.98	7.60	7.32	1.0382
1996	0.00	0.00	0.00	As Found Zero
1997	65.95	30.59	30.51	As Found Span
Average Correction Factor				1.0151

Calculated value of As Found Response: 30.614 ppm Percent Change of As Found: -0.1%

	Before		After
Calculated slope	0.997839	Calculated slope	0.996542
Calculated intercept	0.168812	Calculated intercept	0.148529

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	18.81	ppm	18.42	ppm

Notes: Span adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



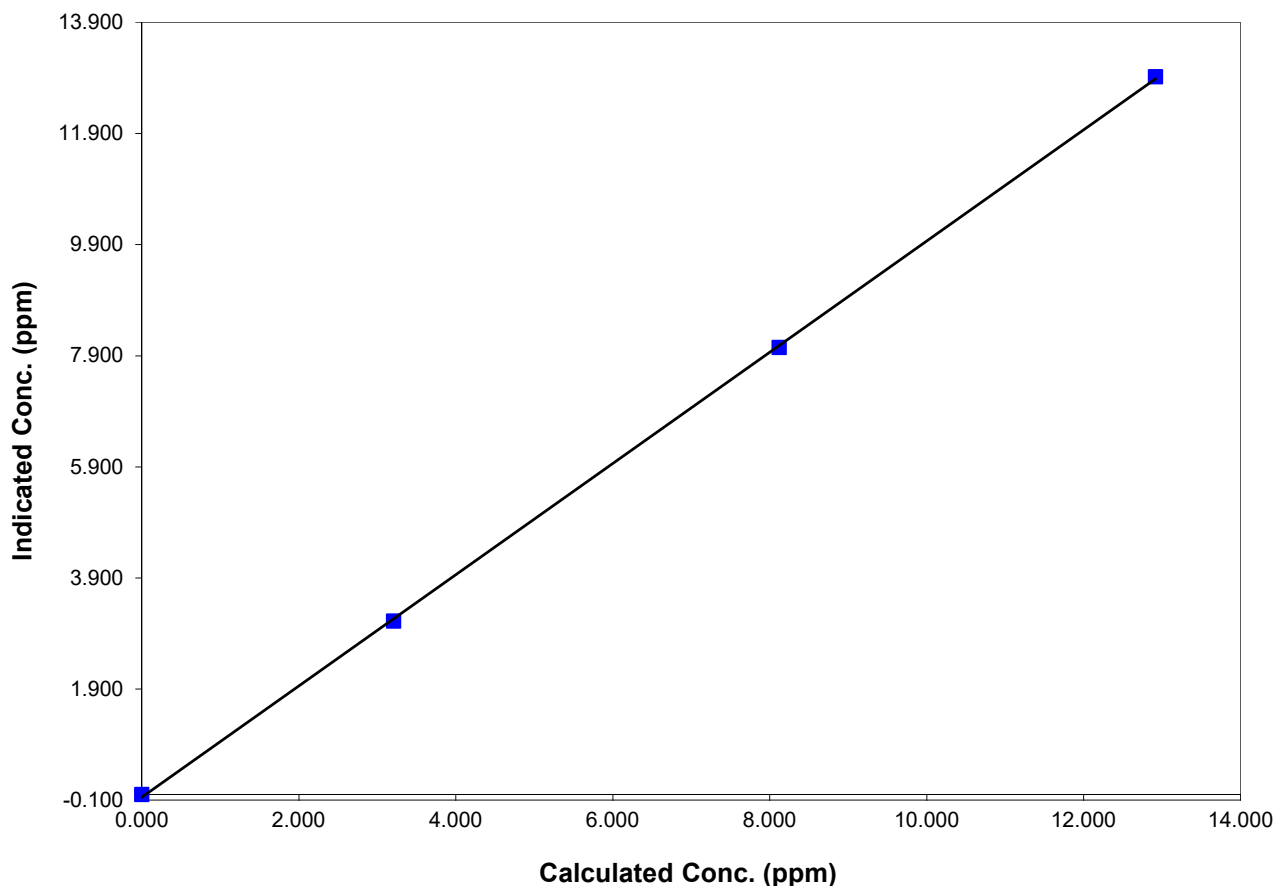
Station Information

Calibration Date	May 6, 2017	Previous Calibration	April 21, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	8:40	End Time (MST)	11:45
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	0.000	N/A	Correlation Coefficient	0.999931
12.915	12.920	0.9996		
8.122	8.049	1.0091		
3.207	3.122	1.0274	Slope	0.998607
			Intercept	0.046794

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



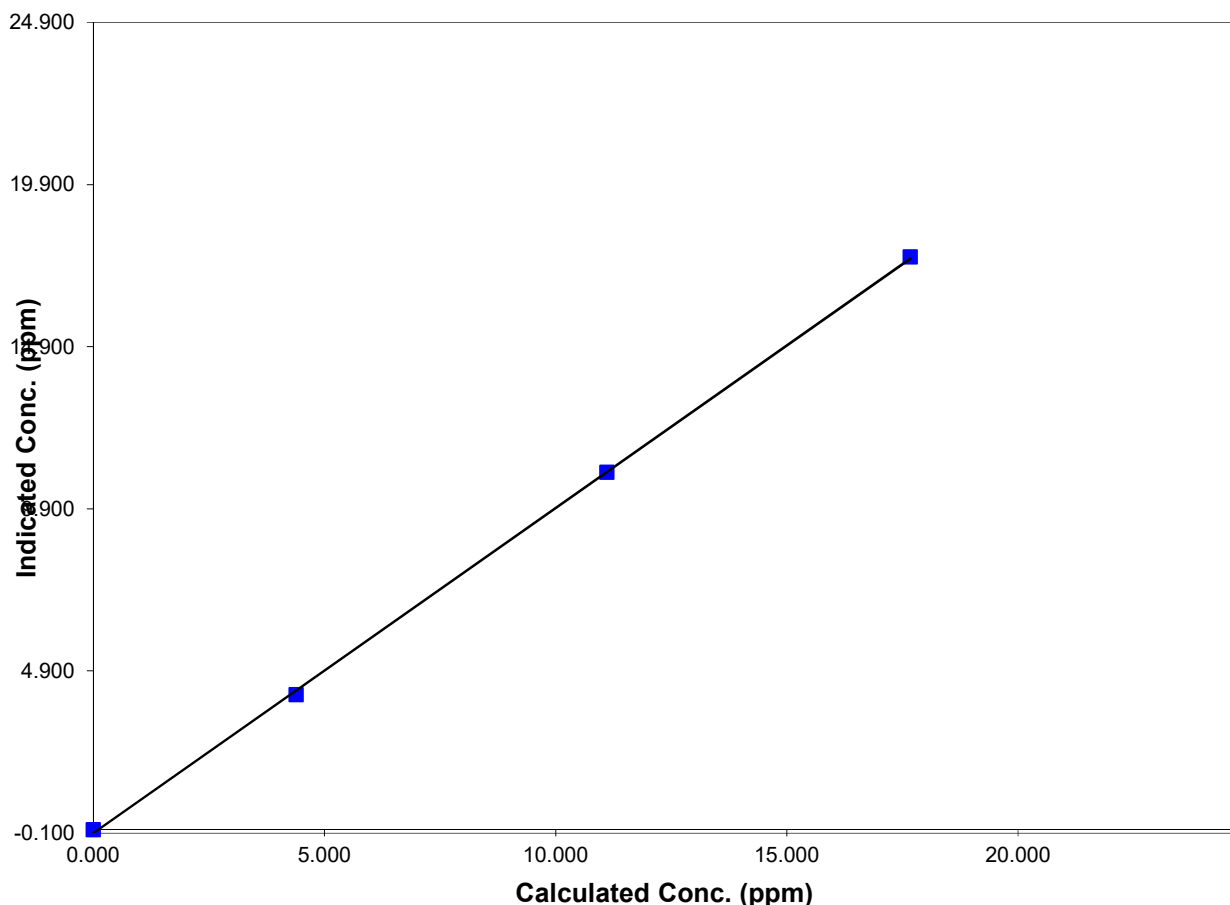
Station Information

Calibration Date	May 6, 2017	Previous Calibration	April 21, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	8:40	End Time (MST)	11:45
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	0.000	N/A	Correlation Coefficient	0.999834
17.671	17.662	1.0005		
11.112	11.022	1.0082		
4.388	4.166	1.0532	Slope	0.996888
			Intercept	0.105604

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



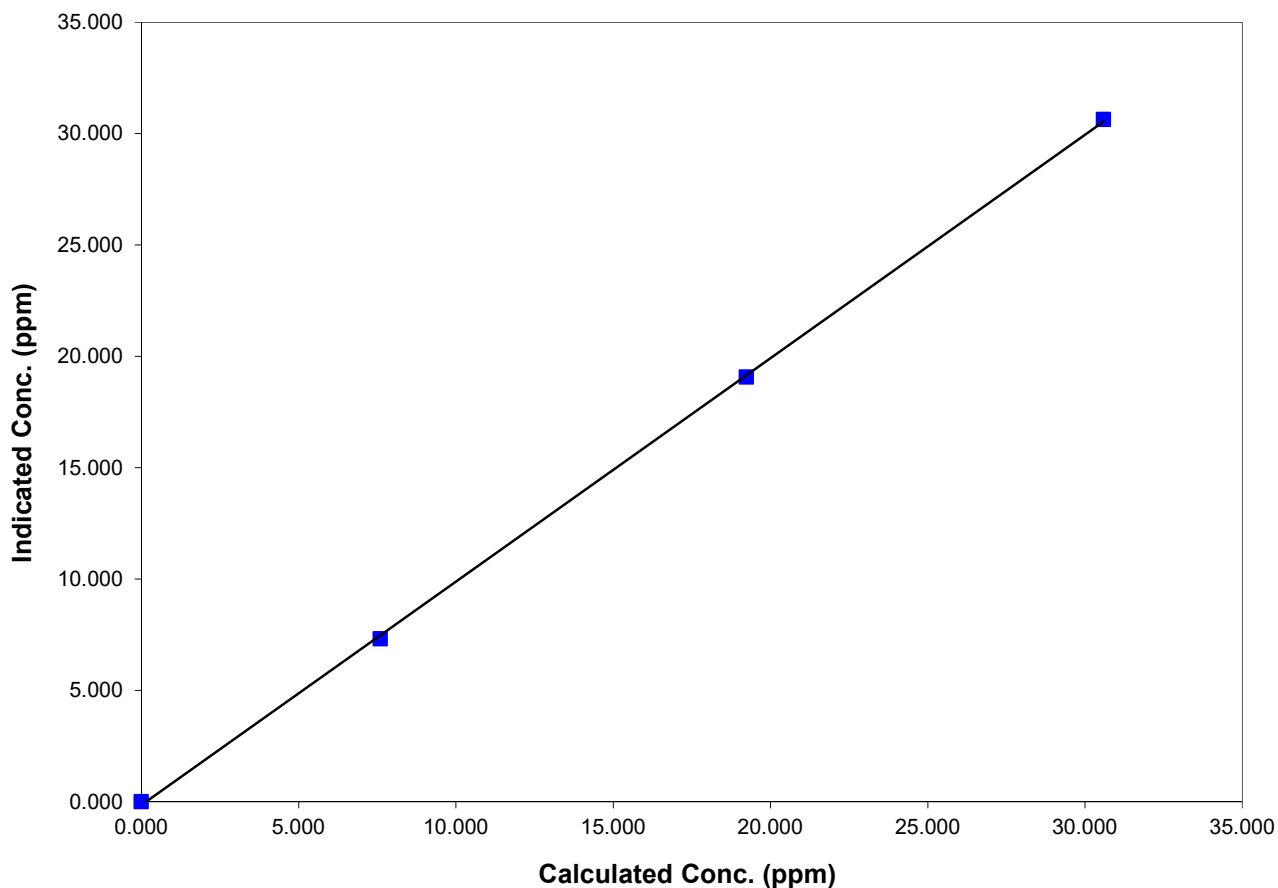
Station Information

Calibration Date	May 6, 2017	Previous Calibration	April 21, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	8:40	End Time (MST)	11:45
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

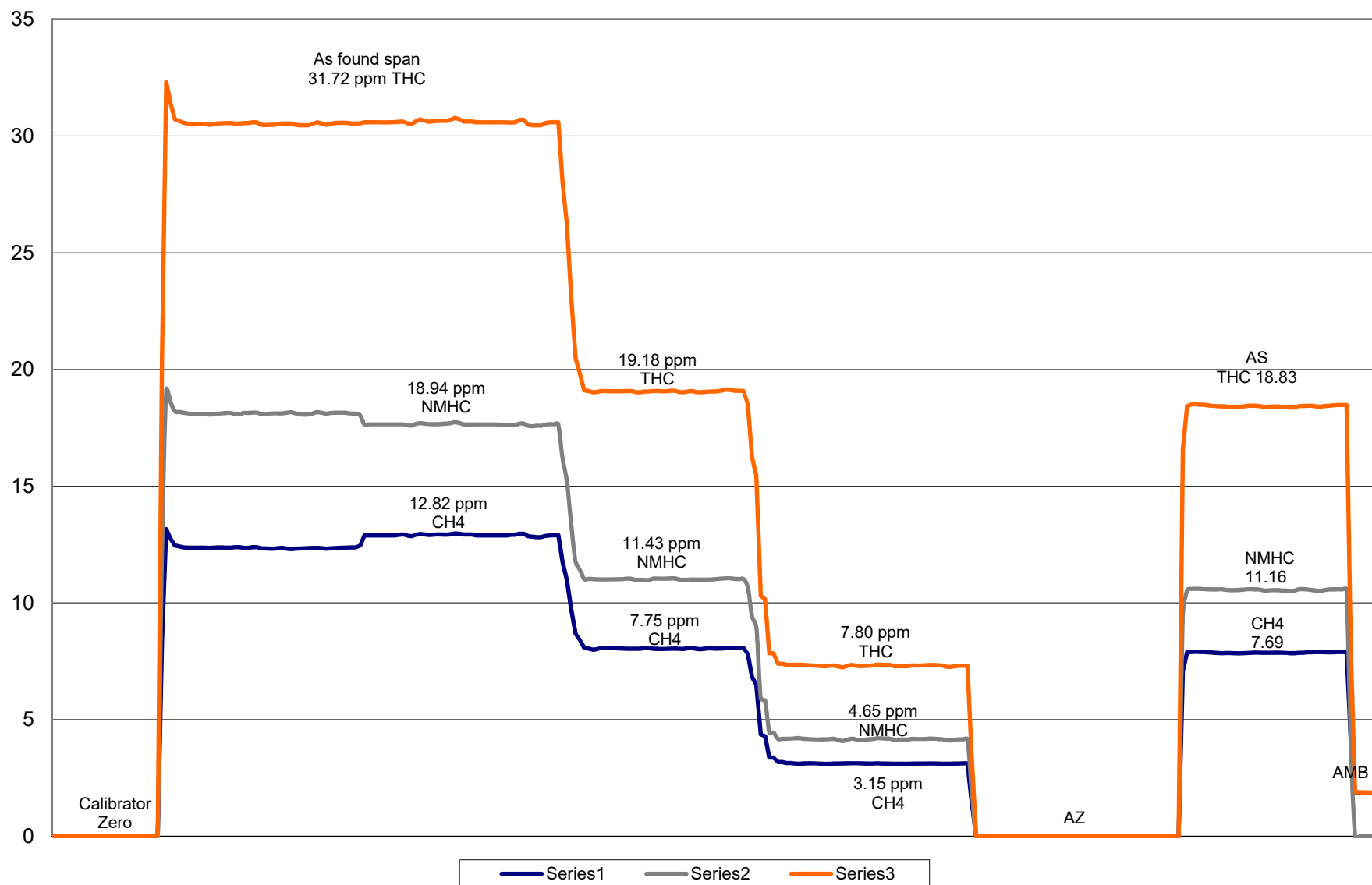
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999887
30.586	30.631	0.9985		
19.234	19.071	1.0085		
7.595	7.316	1.0382	Slope	0.996542
			Intercept	0.148529

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report



Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA

Station Information

Calibration Date	May 19, 2017	Previous Calibration	May 6, 2017
Station Number	1	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:

Start Time (MST)	15:07:00 PM	End Time (MST)	18:30:00 PM
Barometric Pressure	0.921 atm	Station Temperature	19.0 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)
1996	0.00	0.00	0.01	N/A
1997	65.95	12.92	12.94	0.9982
1997	40.97	8.12	8.08	1.0050
1997	15.98	3.21	3.10	1.0338
1996	0.00	0.00	0.01	As Found Zero
1997	65.95	12.92	12.49	As Found Span
Average Correction Factor				1.0123

Calculated value of As Found Response: 13.121 ppm Percent Change of As Found: -1.6%

	Before		After
Calculated slope	1.047115	Calculated slope	0.996438
Calculated intercept	0.050224	Calculated intercept	0.050087

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.01	ppm
Auto span	7.59	ppm	8.20	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)
1996	0.00	0.00	0.00	N/A
1997	65.95	17.67	17.68	0.9996
1997	40.97	11.11	11.05	1.0058
1997	15.98	4.39	4.15	1.0583
1996	0.00	0.00	0.00	As Found Zero
1997	65.95	17.67	17.11	As Found Span
Average Correction Factor				1.0212

Calculated value of As Found Response: 16.674 ppm Percent Change of As Found: 5.6%

	Before		After
Calculated slope	0.967559	Calculated slope	0.995250
Calculated intercept	0.119944	Calculated intercept	0.113431

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.00	ppm
Auto span	11.24	ppm	10.97	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)
1996	0.00	0.00	0.01	N/A
1997	65.95	30.59	30.66	0.9975
1997	40.97	19.23	19.13	1.0055
1997	15.98	7.60	7.27	1.0445
1996	0.00	0.00	0.01	As Found Zero
1997	65.95	30.59	29.64	As Found Span
Average Correction Factor				1.0158

Calculated value of As Found Response: 29.733 ppm Percent Change of As Found: 2.8%

	Before		After
Calculated slope	0.997839	Calculated slope	0.994808
Calculated intercept	0.168812	Calculated intercept	0.159413

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.00	ppm	0.01	ppm
Auto span	18.81	ppm	19.16	ppm

Notes: Hydrogen cylinder swap
Slight span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



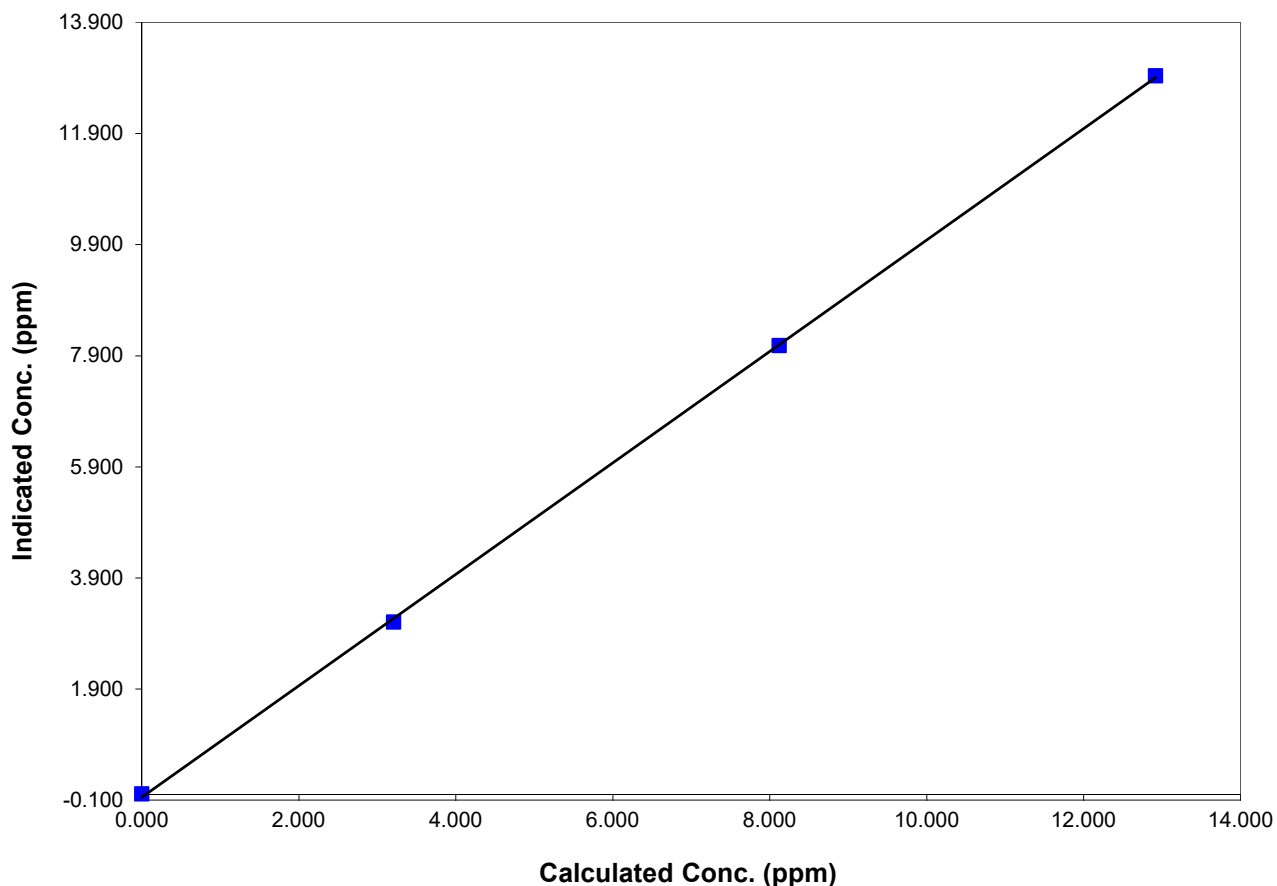
Station Information

Calibration Date	May 19, 2017	Previous Calibration	May 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	15:07:00 PM	End Time (MST)	18:30:00 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	0.007	N/A	Correlation Coefficient	0.999909
12.915	12.939	0.9982		
8.122	8.082	1.0050	Slope	0.996438
3.207	3.102	1.0338		
			Intercept	0.050087

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



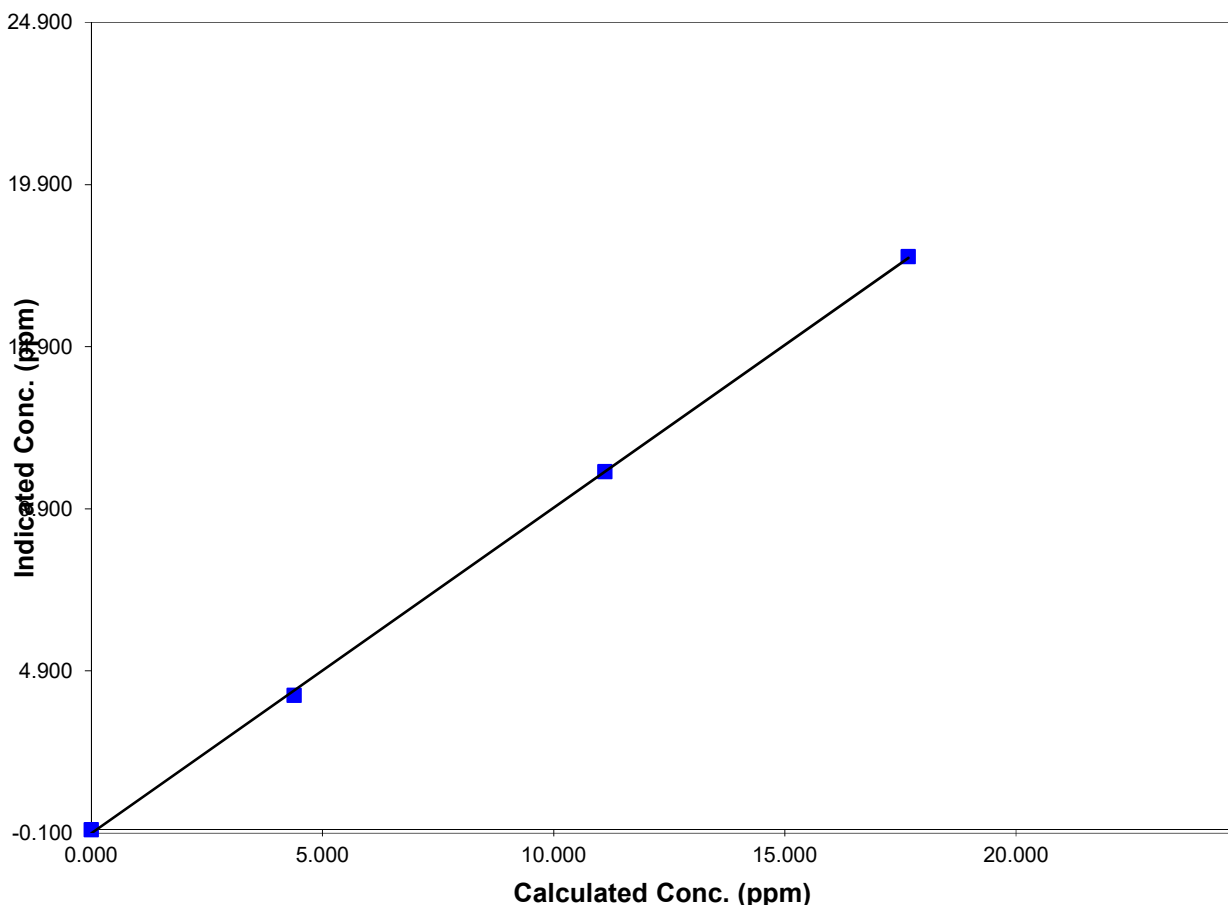
Station Information

Calibration Date	May 19, 2017	Previous Calibration	May 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	15:07:00 PM	End Time (MST)	18:30:00 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	0.999798
17.671	17.678	0.9996		
11.112	11.048	1.0058		
4.388	4.146	1.0583	Slope	0.995250
			Intercept	0.113431

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



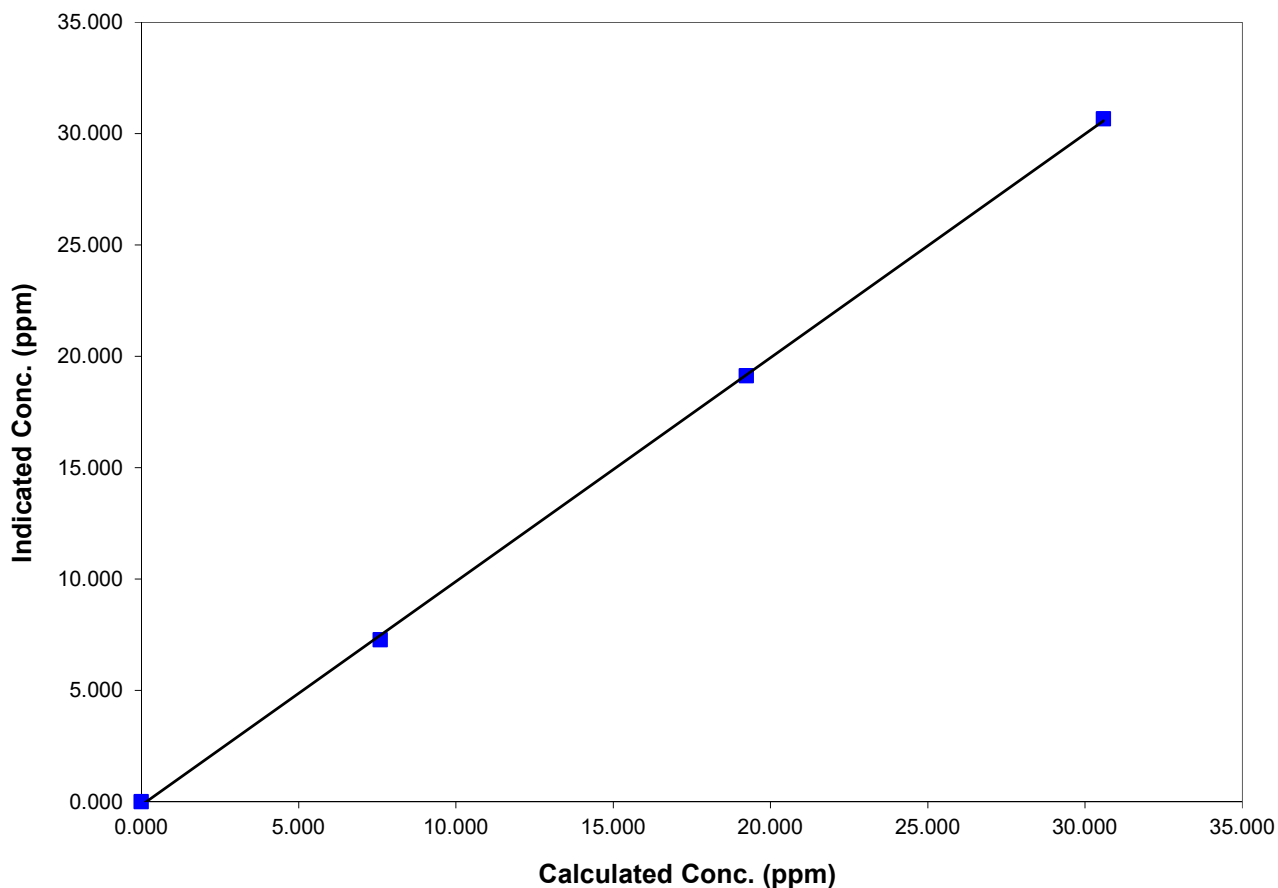
Station Information

Calibration Date	May 19, 2017	Previous Calibration	May 6, 2017
Station Number	1	Station Location	Rycroft
Start Time (MST)	15:07:00 PM	End Time (MST)	18:30:00 PM
Analyzer make/model	TEI 55I-A3PHAA	Analyzer serial #	1151980005

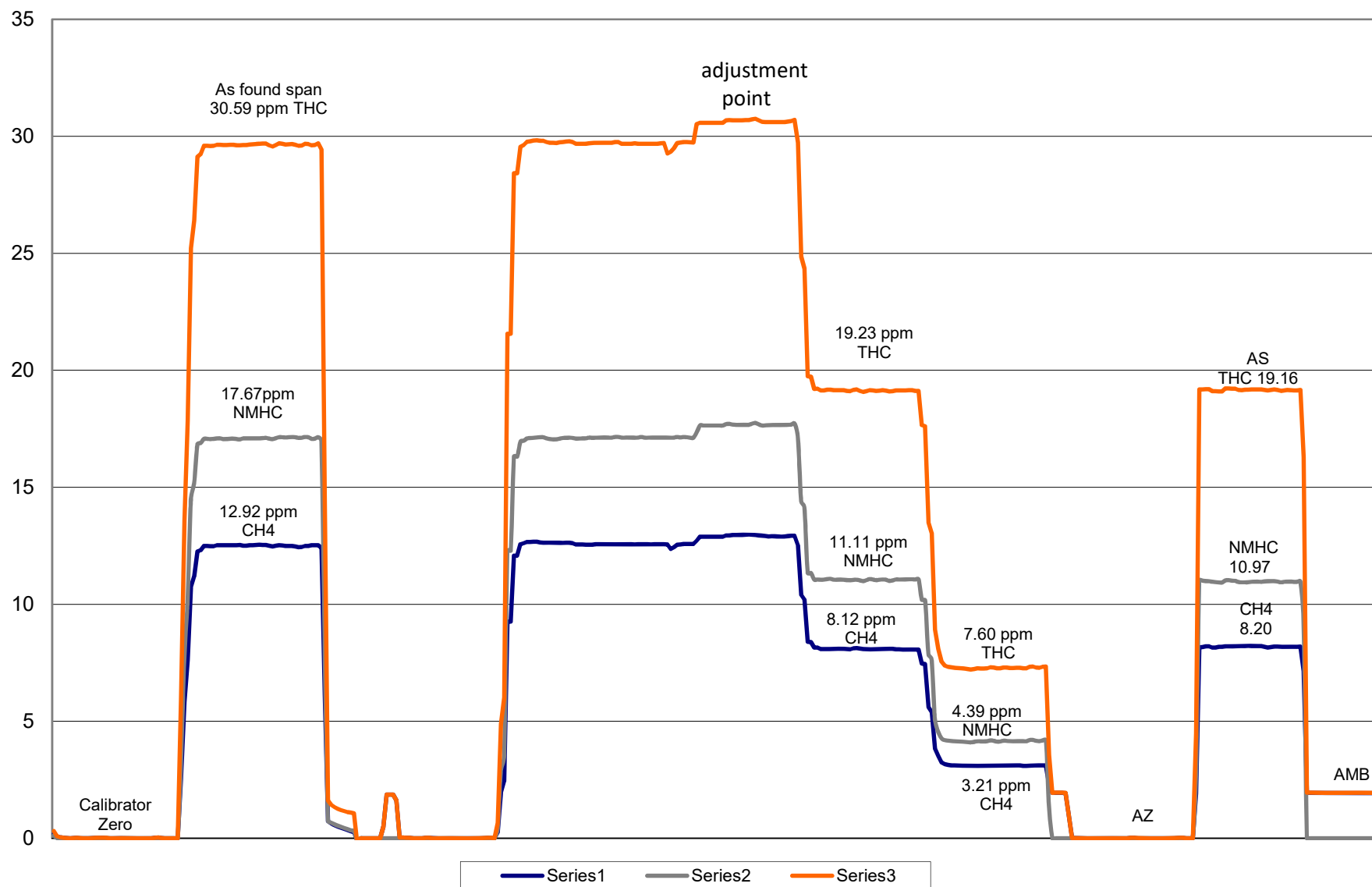
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.011	N/A	Correlation Coefficient	0.999856
30.586	30.662	0.9975		
19.234	19.129	1.0055		
7.595	7.272	1.0445	Slope	0.994808
			Intercept	0.159413

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	May 6, 2017	Previous Calibration	April 20, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	☒ Routine	☐ Install	☐ Removal
		☒ Other:	Troubleshooting
Start Time (MST)	11:15 AM	End Time (MST)	13:40
Barometric Pressure	0.921 Atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.991797	Calculated slope	0.991654
Calculated intercept	1.480607	Calculated intercept	0.928254
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.7	ppb	12.2	ppb
Coefficient	1.043		1.064	
Lamp Voltage	779	V	780	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	669.3	mmHg	669.9	mmHg
Sample Flow	0.388	lpm	0.391	lpm
Lamp Intensity	88	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)
4995	0.0	0.0	0.4	N/A
4995	39.93	80.9	81.5	0.9930
4995	19.97	40.6	38.5	1.0559
6995	9.98	14.5	13.1	1.1109
			0.0	Sox Test
4995	0.00	0.0	0.4	As found zero
4995	39.93	80.9	79.7	As found span
Average Correction Factor				1.0532

Calculated value of As Found Response: 80.07 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.4	ppm
Auto span	51.5	ppm	54.4	ppm

Notes: Slight zero adjustment made. Slight span adjustment made, run adjustment point.

Internal pump diaphragm needs to be replaced soon.

Leak checks OK. Cal looks better than the last one but still coming in a little low on second and third cal points.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



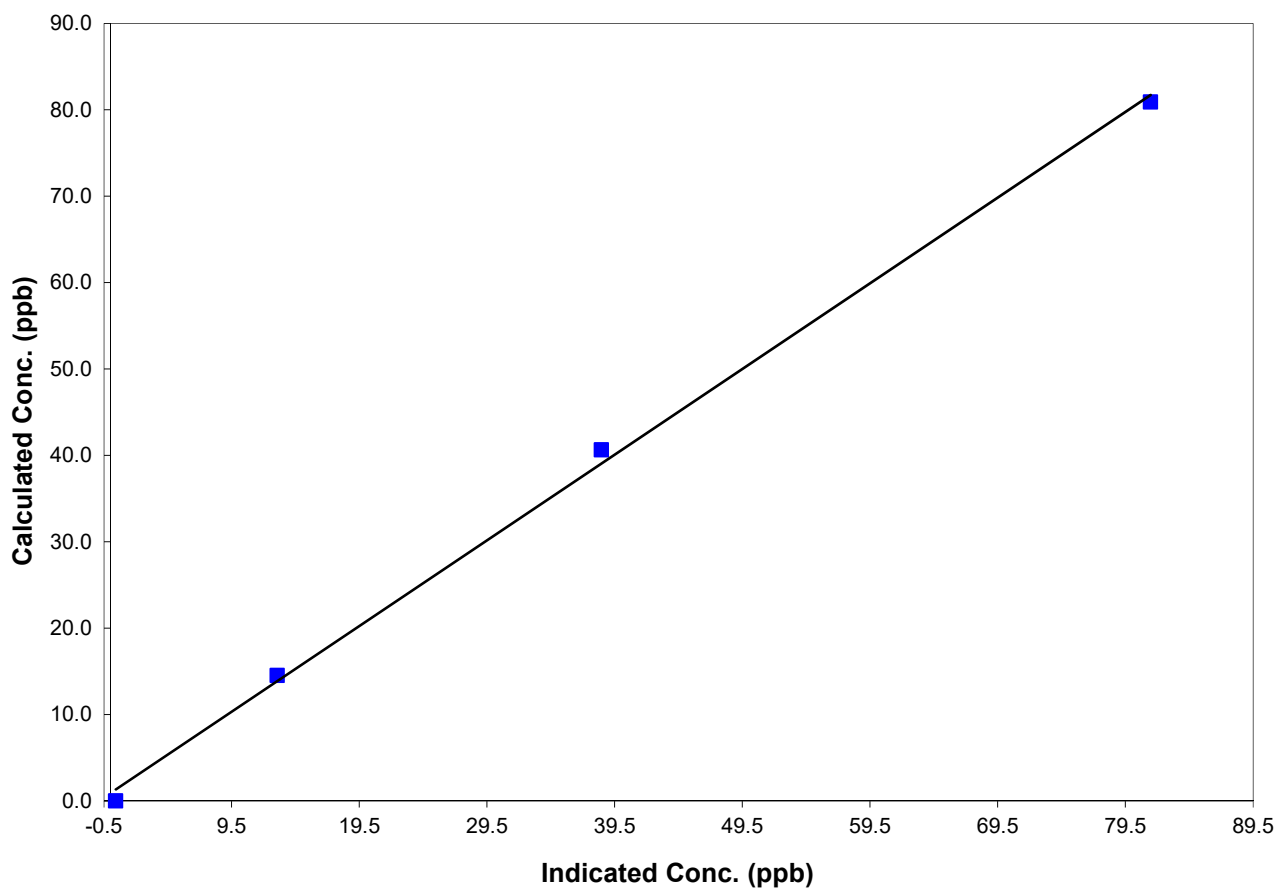
Station Information

Calibration Date	May 6, 2017	Previous Calibration	April 20, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	11:15	End Time (MST)	13:40
Analyzer make/model	TEI 43I	Analyzer serial #	1153630152

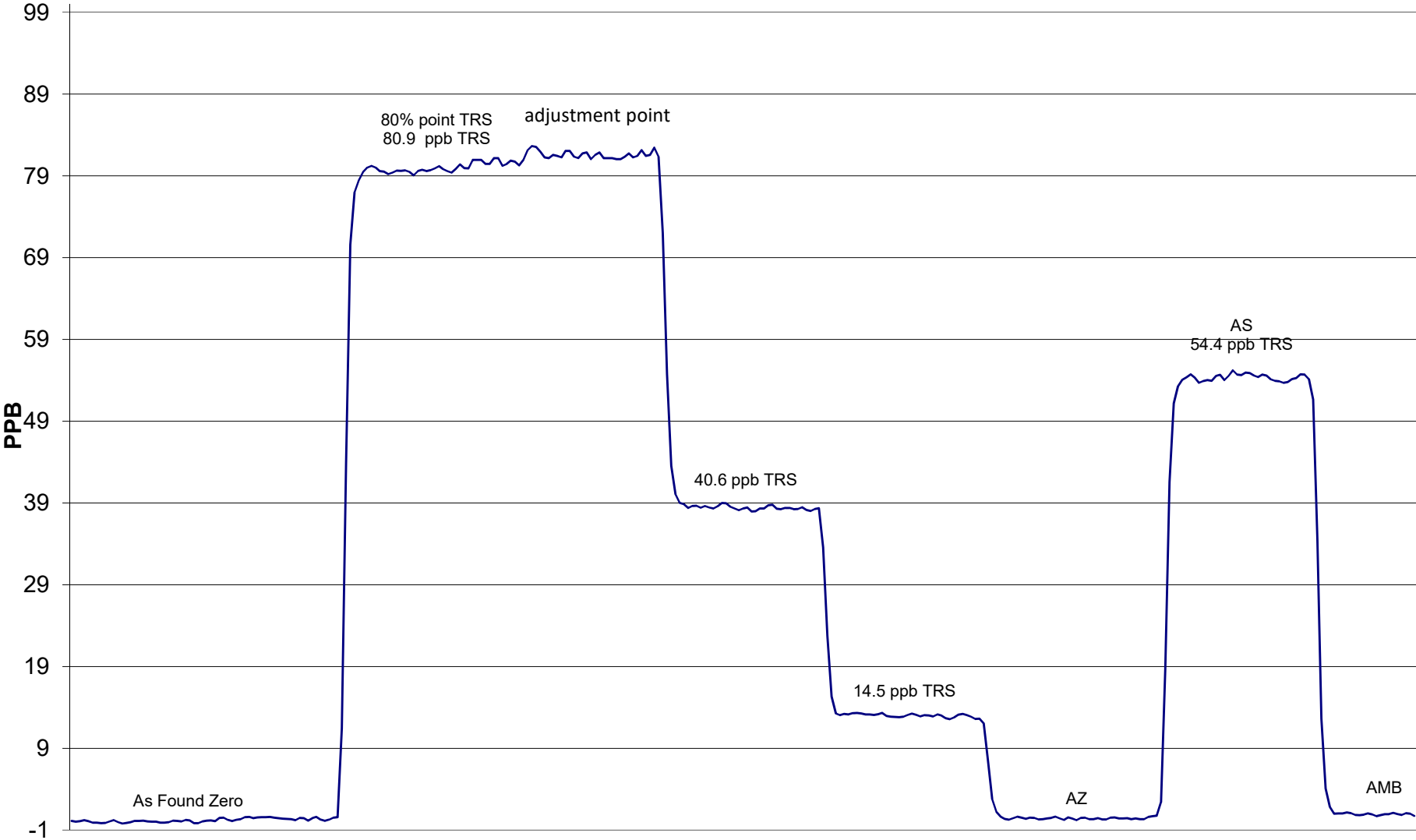
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.998603
80.9	81.5	0.9930		
40.6	38.5	1.0559		
14.5	13.1	1.1109	Slope	0.991654
			Intercept	0.928254

TRS Calibration Curve



TRS Calibration



May 6, 2017

Calibration Report

Parameter **TRS**
Air Monitoring Network

PAZA



Station Information

Calibration Date	May 11, 2017	Previous Calibration	May 6, 2017
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	☐ Routine	☐ Install	☐ Removal
			☒ Other: Troubleshooting
Start Time (MST)	9:00 AM	End Time (MST)	15:35
Barometric Pressure	0.921 Atm	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
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	0.991654	Calculated slope	0.982761
Calculated intercept	0.928254	Calculated intercept	-0.118094
Analyzer make	TEI 43I	Analyzer serial #	1153630152

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.2	ppb	10.8	ppb
Coefficient	1.064		1.056	
Lamp Voltage	780	V	779	V
Chamber Temp	45	C	45	C
Perm gas Temp	45	C	45	C
Pressure	669.9	mmHg	671.8	mmHg
Sample Flow	0.391	lpm	0.389	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)
4995	0.0	0.0	0.7	N/A
4995	39.93	80.9	82.7	0.9782
4995	19.97	40.6	41.1	0.9888
6995	9.98	14.5	14.4	1.0068
			0.7	Sox Test
4995	0.00	0.0	0.7	As found zero
4995	39.93	80.9	82.7	As found span
Average Correction Factor				0.9913

Calculated value of As Found Response: 82.22 ppm Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.6	ppm
Auto span	54.4	ppm	54.1	ppm

Notes: Perform leak checks analyzer & Oxidizer, reposition thermocouple. Found small leak oxidizer.
Submit 80% point and find honey spot on oxidizer temp setting, adjust PMT down. Drop to zero and perform analog out cal on analyzer. Allow zero to stabilize, slight adjust and submit 80% point.
Calibrate. Auto span kicked in during 80% point, place back in sample.

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



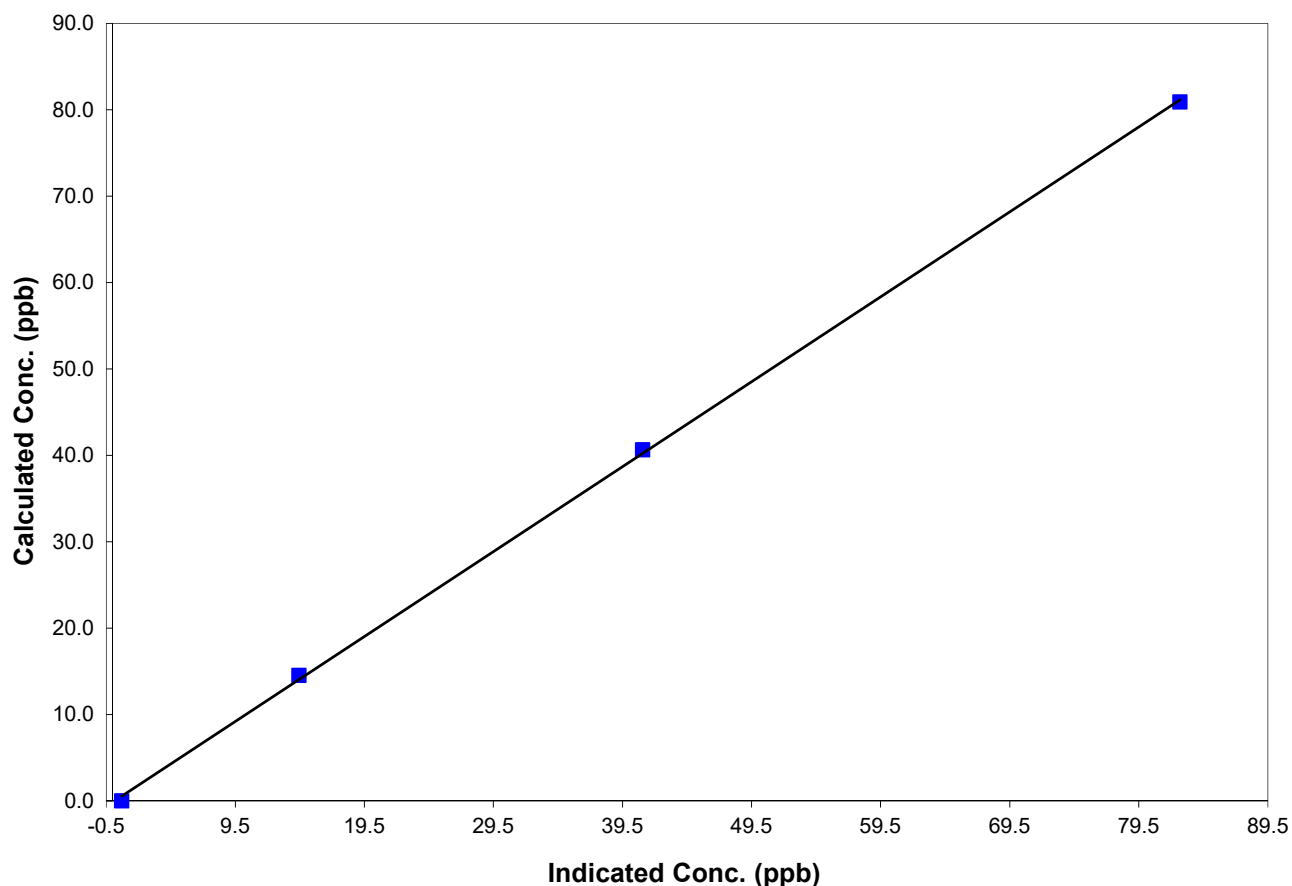
Station Information

Calibration Date	May 11, 2017	Previous Calibration	May 6, 2017
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	9:00	End Time (MST)	15:35
Analyzer make/model	TEI 43I	Analyzer serial #	1153630152

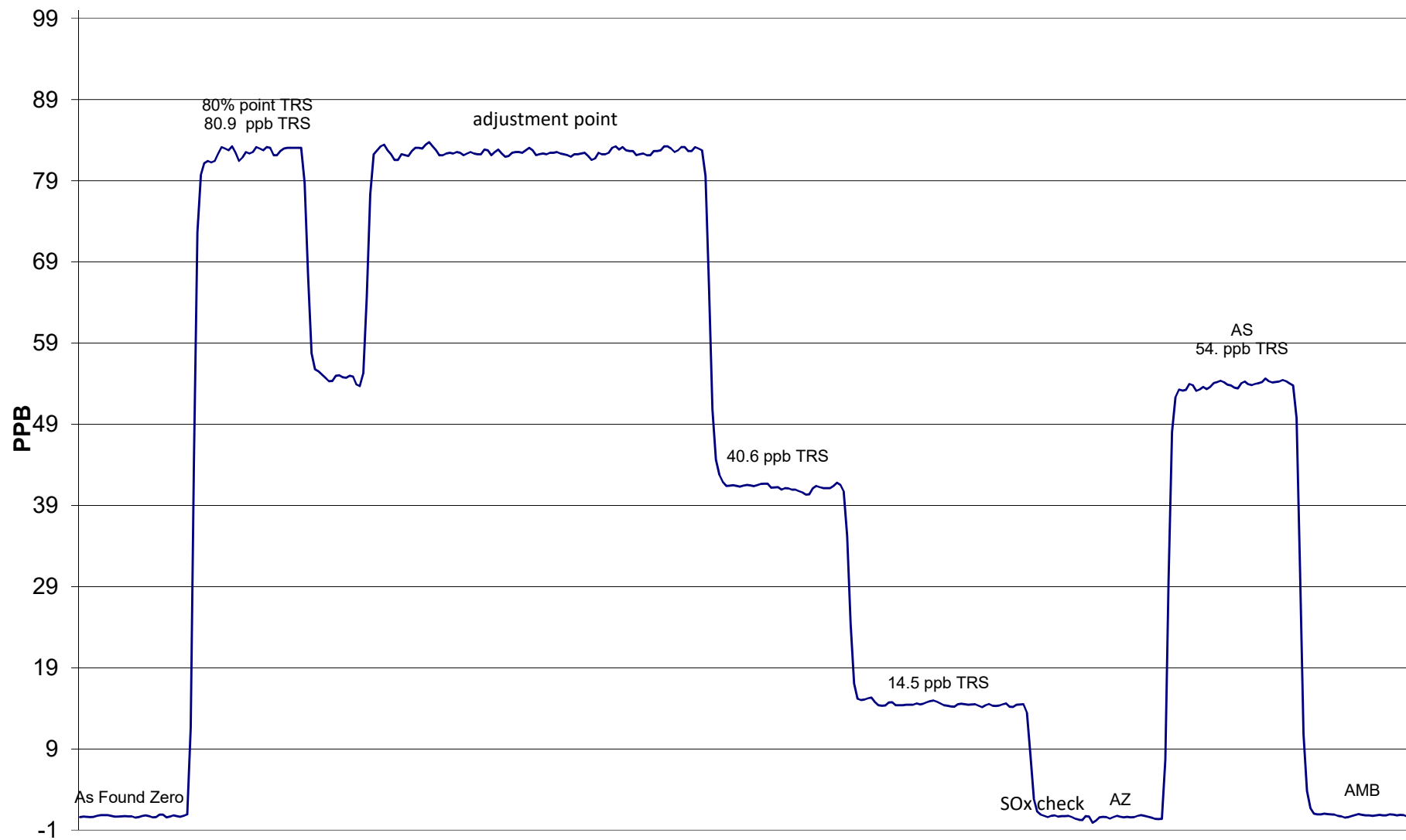
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A	Correlation Coefficient	0.999802
80.9	82.7	0.9782		
40.6	41.1	0.9888		
14.5	14.4	1.0068	Slope	0.982761
			Intercept	-0.118094

TRS Calibration Curve



TRS Calibration



May 11, 2017